

Product Range

Type 546
Manual and Actuated
Ball Valves
DN10 to DN100



List of Abbreviations

ANSI	American National Standard Institute
ASTM	American Society for Testing and Materials
BS	British Standard
DIN	Deutsche Industrie-Normen
ISO	International Standardization Organization
ABS	Acrylnitrile-Butadiene-Styrene
PVC-U	Polyvinyl chloride, unplasticized
PVC-C	Polyvinyl chloride, post-chlorinated
PP-H	Polypropylene, Homopolymeride
PE	Polyethylene
PVDF	Polyvinylidene fluoride
EPDM	Ethylene-Propylene-Rubber
FPM	Fluororubber
PTFE	Polytetrafluoroethylene
d	Pipe outer diameter
DN	Nominal diameter
PN	Nominal pressure at 20 °C, water
kg	Weight in kilograms
®	Registered trademark

The technical data are not binding and not expressly warranted characteristics of the goods. They are subject to change. Our General Conditions of Sale apply.

Dimensions

All dimensions are given in mm.

Table of Contents

Ball valve type 546 in PVC-U

standard executions	7
silicone free executions	32
configurator, order sample	38
with electric actuator type 107	40
with electric actuator type 130, 134	50
configurator, order sample	62
with pneumatic actuator type 230, 234	65
configurator, order sample	98

Ball valve type 546 in PVC-C

standard executions	101
silicone free executions	113
configurator	117
with electric actuator type 107	118
with electric actuator type 130	124
configurator, order sample	132
with pneumatic actuator type 230, 234	135
configurator, order sample	156

Ball valve type 546 in ABS

standard executions	158
configurator	167
with electric actuator type 107	168
with electric actuator type 130, 134	174
configurator, order sample	180
with pneumatic actuator type 230, 234	182
configurator, order sample	200

Ball valve type 546 in PP-H

standard executions	203
silicone free executions	221
configurator, order sample	226
with electric actuator type 107	228
with electric actuator type 131	234
configurator, order sample	248
with pneumatic actuator type 231	250
configurator, order sample	280

Ball valve type 546 in PVDF

standard executions	282
configurator	293
with electric actuator type 107	294
with electric actuator type 132	302
configurator, order sample	310
with pneumatic actuator type 232	312
configurator, order sample	336

Valve ends

	338
--	-----

Spare parts and accessories for electric/pneumatic actuators

	355
--	-----

New product:

Ball valve type 546 now in DN65 - DN100



Materials / pressure rating:

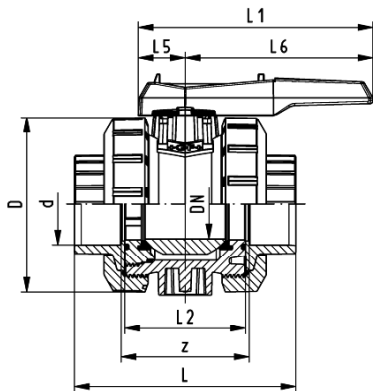
- PVC-U (PN16)
- PVC-C (PN16)
- ABS (PN10)
- PP-H (PN10)

Options:

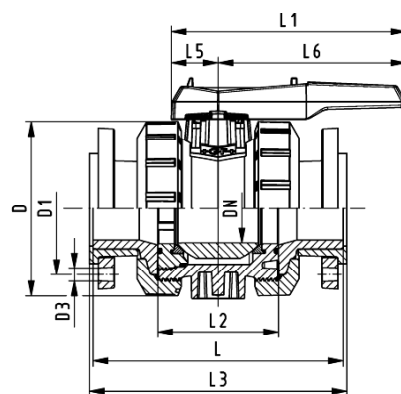
- with or without threaded inserts for easy mounting of the valve available
- electrical positioning feedback with different integrated switches
- lockable handle with ratchet function (5°-pitch)
- valve can be configured individually

Valve ends:

- fusion and cement sockets ISO/DIN, ASTM, BS, JIS
- fusion and cement spigots ISO/DIN
- threaded socket Rp, Rc, NPT
- backing flanges ISO/DIN, ANSI, BS, JIS
- butt fusion spigots SDR11 and SDR17.6
- PE100 electro fusion spigots resp. butt fusion spigots SDR11 und SDR17.6



Execution: e.g. fusion/cement socket



execution: e.g. backing flange PVC-U

Code numbers and dimensions please see ball valve type 546.

New product:

Ball valve type 130 - 134 now in DN65 - DN100

Configuration:

- Ball valve type 546 DN65 to DN100 in PVC-U, PVC-C, ABS, PP-H
- Electrical actuator EA31 in 24V AC/DC or 100-230V 50-60Hz
- Flange connection for the actuator according to ISO 5211

Equipment electric actuator:

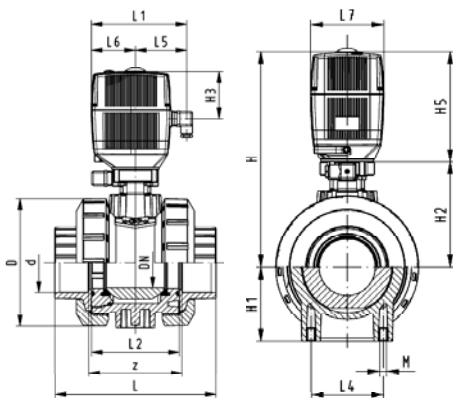
- With integrated emergency override
- With optical position indication
- Actuating angle 90°
- Control time 15 sec/90°

Options and accessories:

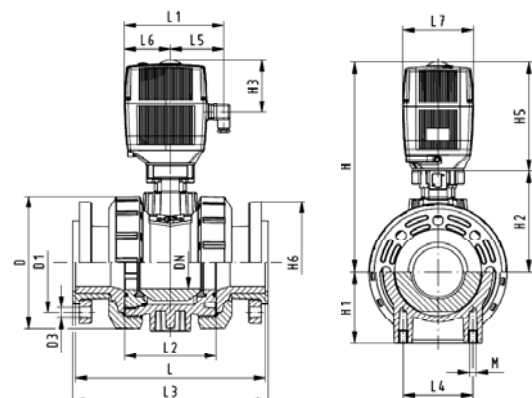
- Electrical positioning feedback in the multifunctional module

Accessories for actuator EA31:

- Heating element
- Fail-safe return with battery
- Additional mechanical or inductive limit switches
- Monitoring print for cycle time extension, cycle time monitoring, cycle counter, motor current monitoring
- Position signalization 4-20 mA
- Positioner PE25



Execution: e.g. with cement socket



execution: e.g. with backing flange

Code numbers and dimensions please see ball valve type 130 - 134.

New product:

Ball valve type 230 - 234 now in DN65 - DN100

Configuration:

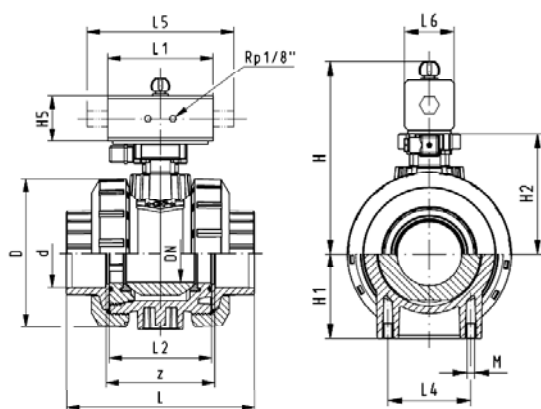
- Ball valve type 546 DN65 to DN100 in PVC-U, PVC-C, ABS, PP-H
- Flange connection for the actuator according to ISO 5211
- pneumatic actuators PA30-45

Working principles for pneumatic actuators:

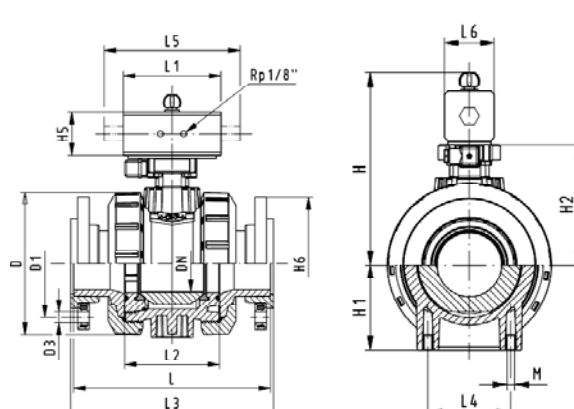
- fail-safe to close (FC)
- fail-safe to open (FO)
- Double acting (DA)
- Acting angle 90°
- Control time 0.5-2 sec/90°

Options and accessories:

- Electrical positioning feedback in the multifunction module
- Namur mounting console to mount the limit switches on top of the actuator
- Solenoid valves for activation of the actuator



Execution: e.g. cement socket

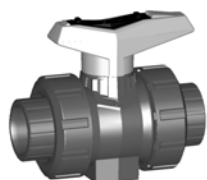


execution: e.g. backing flange

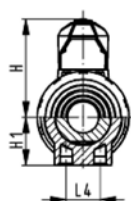
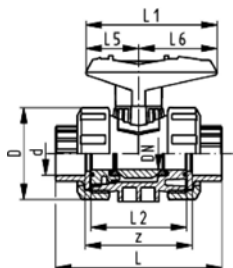
Code numbers and dimensions please see ball valve type 230 - 234

Ball valves

Ball valve type 546 PVC-U With solvent cement sockets metric



DN10/15 - 50



Model:

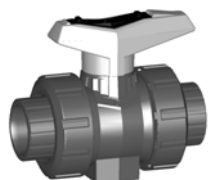
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

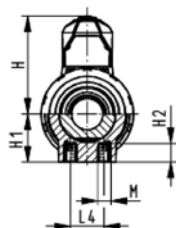
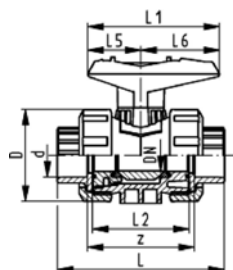
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	16	71	161 546 001	161 546 011	0.150	
20	15	16	185	161 546 002	161 546 012	0.150	
25	20	16	350	161 546 003	161 546 013	0.230	
32	25	16	700	161 546 004	161 546 014	0.330	
40	32	16	1000	161 546 005	161 546 015	0.600	
50	40	16	1600	161 546 006	161 546 016	0.800	
63	50	16	3100	161 546 007	161 546 017	1.460	
 75	65	16	5000	161 546 008	161 546 018	4.900	
 90	80	16	7000	161 546 009	161 546 019	7.400	
 110	100	16	11000	161 546 010	161 546 020	11.600	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
16	50	57	27	92	77	56	25	32	45	64	
20	50	57	27	95	77	56	25	32	45	64	
25	58	67	30	110	97	65	25	39	58	72	
32	68	73	36	123	97	71	25	39	58	79	
40	84	90	44	146	128	85	45	54	74	94	
50	97	97	51	157	128	89	45	54	74	95	
63	124	116	64	183	152	101	45	66	87	107	
 75	166	149	85	233	270	136	70	64	206	144	
 90	200	161	105	254	270	141	70	64	206	151	
 110	238	178	123	301	320	164	120	64	256	174	



DN10/15 - 50



Ball valve type 546 PVC-U With mounting inserts With solvent cement sockets metric

Model:

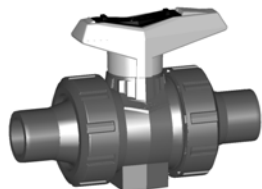
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

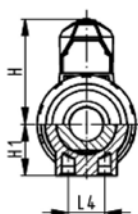
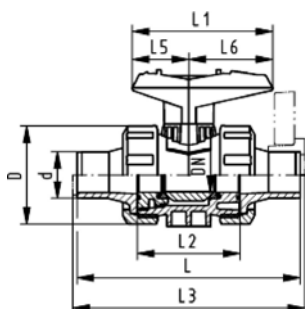
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	16	71	161 546 061	161 546 071	0.150	
20	15	16	185	161 546 062	161 546 072	0.150	
25	20	16	350	161 546 063	161 546 073	0.230	
32	25	16	700	161 546 064	161 546 074	0.330	
40	32	16	1000	161 546 065	161 546 075	0.600	
50	40	16	1600	161 546 066	161 546 076	0.800	
63	50	16	3100	161 546 067	161 546 077	1.460	
 75	65	16	5000	161 546 068	161 546 078	4.900	
 90	80	16	7000	161 546 069	161 546 079	7.400	
 110	100	16	11000	161 546 070	161 546 080	11.600	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	57	27	12	92	77	56	25	32	45	6	64	
20	50	57	27	12	95	77	56	25	32	45	6	64	
25	58	67	30	12	110	97	65	25	39	58	6	72	
32	68	73	36	12	123	97	71	25	39	58	6	79	
40	84	90	44	15	146	128	85	45	54	74	8	94	
50	97	97	51	15	157	128	89	45	54	74	8	95	
63	124	116	64	15	183	152	101	45	66	87	8	107	
 75	166	149	85	15	233	270	136	70	64	206	8	144	
 90	200	161	105	15	254	270	141	70	64	206	8	151	
 110	238	178	123	22	301	320	164	120	64	256	12	174	



DN10/15 - 50



Ball valve type 546 PVC-U With solvent cement spigots metric

Model:

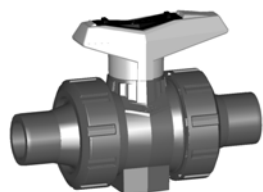
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

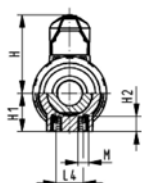
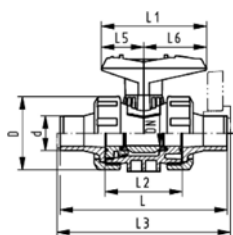
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	16	71	161 546 041	161 546 051	0.155	
20	15	16	185	161 546 042	161 546 052	0.155	
25	20	16	350	161 546 043	161 546 053	0.240	
32	25	16	700	161 546 044	161 546 054	0.345	
40	32	16	1000	161 546 045	161 546 055	0.615	
50	40	16	1600	161 546 046	161 546 056	0.840	
63	50	16	3100	161 546 047	161 546 057	1.545	
 75	65	16	5000	161 546 048	161 546 058	5.100	
 90	80	16	7000	161 546 049	161 546 059	7.500	
 110	100	16	11000	161 546 050	161 546 060	11.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
16	50	57	27	114	77	56		25	32	45	
20	50	57	27	124	77	56	130	25	32	45	
25	58	67	30	144	97	65	150	25	39	58	
32	68	73	36	154	97	71	160	25	39	58	
40	84	90	44	174	128	85	180	45	54	74	
50	97	97	51	194	128	89	200	45	54	74	
63	124	116	64	224	152	101	230	45	66	87	
 75	166	149	85	284	270	136	290	70	64	206	
 90	200	161	105	300	270	141	310	70	64	206	
 110	238	178	123	340	320	164	350	120	64	256	



DN10/15 - 50



Ball valve type 546 PVC-U With mounting inserts With solvent cement spigots metric

Model:

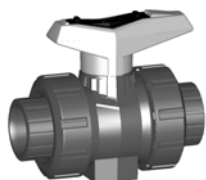
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

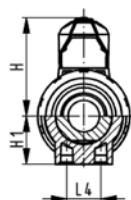
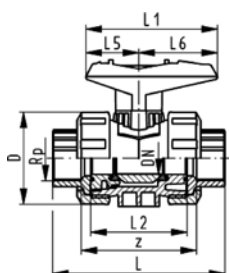
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	16	71	161 546 721	161 546 731	0.157	
20	15	16	185	161 546 722	161 546 732	0.157	
25	20	16	350	161 546 723	161 546 733	0.242	
32	25	16	700	161 546 724	161 546 734	0.347	
40	32	16	1000	161 546 725	161 546 735	0.620	
50	40	16	1600	161 546 726	161 546 736	0.845	
63	50	16	3100	161 546 727	161 546 737	1.550	
 75	65	16	5000	161 546 728	161 546 738	5.100	
 90	80	16	7000	161 546 729	161 546 739	7.500	
 110	100	16	11000	161 546 730	161 546 740	11.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	
16	50	57	27	12	114	77	56	130	25	32	45	M6	
20	50	57	27	12	124	77	56	130	25	32	45	M6	
25	58	67	30	12	144	97	65	150	25	39	58	M6	
32	68	73	36	12	154	97	71	160	25	39	58	M6	
40	84	90	44	15	174	128	85	180	45	54	74	M8	
50	97	97	51	15	194	128	89	200	45	54	74	M8	
63	124	116	64	15	224	152	101	230	45	66	87	M8	
 75	166	149	85	15	284	270	136	290	70	64	206	M8	
 90	200	161	105	15	300	270	141	310	70	64	206	M8	
 110	238	178	123	22	340	320	164	350	120	64	256	M12	



DN10/15 - 50



Ball valve type 546 PVC-U With threaded sockets Rp

Model:

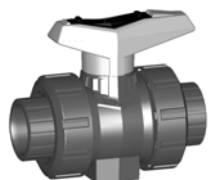
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

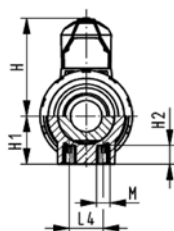
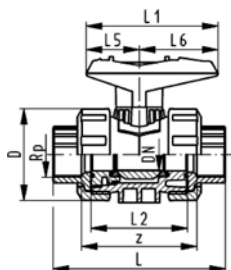
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	71	161 546 021	161 546 031	0.150	
1/2	15	10	185	161 546 022	161 546 032	0.150	
3/4	20	10	350	161 546 023	161 546 033	0.230	
1	25	10	700	161 546 024	161 546 034	0.330	
1 1/4	32	10	1000	161 546 025	161 546 035	0.600	
1 1/2	40	10	1600	161 546 026	161 546 036	0.800	
2	50	10	3100	161 546 027	161 546 037	1.460	
2 1/2	65	10	5000	161 546 028	161 546 038	5.000	
3	80	10	7000	161 546 029	161 546 039	7.500	
4	100	10	11000	161 546 030	161 546 040	11.700	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
3/8	50	57	27	95	77	56	25	32	45	69	
1/2	50	57	27	100	77	56	25	32	45	67	
3/4	58	67	30	114	97	65	25	39	58	78	
1	68	73	36	127	97	71	25	39	58	85	
1 1/4	84	90	44	146	128	85	45	54	74	100	
1 1/2	97	97	51	152	128	89	45	54	74	106	
2	124	116	64	177	152	101	45	66	87	121	
2 1/2	166	149	85	233	270	136	70	64	206	144	
3	200	161	105	254	270	141	70	64	206	151	
4	238	178	123	301	320	164	120	64	256	174	



DN10/15 - 50



Ball valve type 546 PVC-U With mounting inserts With threaded sockets Rp

Model:

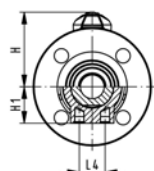
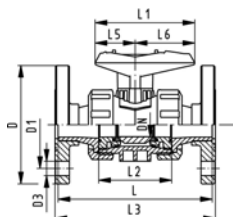
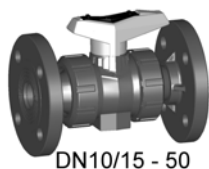
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
$\frac{3}{8}$	10	10	71	161 546 741	161 546 751	0.152	
$\frac{1}{2}$	15	10	185	161 546 742	161 546 752	0.152	
$\frac{3}{4}$	20	10	350	161 546 743	161 546 753	0.232	
1	25	10	700	161 546 744	161 546 754	0.332	
1 $\frac{1}{4}$	32	10	1000	161 546 745	161 546 755	0.605	
1 $\frac{1}{2}$	40	10	1600	161 546 746	161 546 756	0.805	
2	50	10	3100	161 546 747	161 546 757	1.465	
 2 $\frac{1}{2}$	65	10	5000	161 546 748	161 546 758	5.000	
 3	80	10	7000	161 546 749	161 546 759	7.500	
 4	100	10	11000	161 546 750	161 546 760	11.700	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
$\frac{3}{8}$	50	57	27	12	95	77	56	25	32	45	M6	69	
$\frac{1}{2}$	50	57	27	12	100	77	56	25	32	45	M6	67	
$\frac{3}{4}$	58	67	30	12	114	97	65	25	39	58	M6	78	
1	68	73	36	12	127	97	71	25	39	58	M6	85	
1 $\frac{1}{4}$	84	90	44	15	146	128	85	45	54	74	M8	100	
1 $\frac{1}{2}$	97	97	51	15	152	128	89	45	54	74	M8	106	
2	124	116	64	15	177	152	101	45	66	87	M8	121	
 2 $\frac{1}{2}$	166	149	85	15	233	270	136	70	64	206	M8	144	
 3	200	161	105	15	254	270	141	70	64	206	M8	151	
 4	238	178	123	22	301	320	164	120	64	256	M12	174	



Ball valve type 546 PVC-U With PVC-U fixed flanges serrated metric

Model:

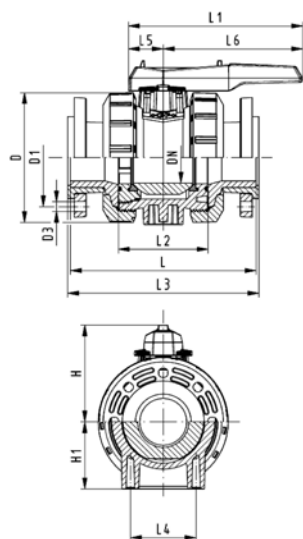
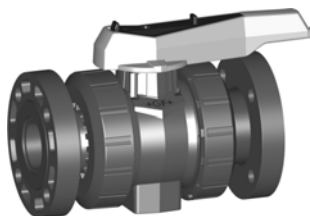
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts
- Overall length according to EN 558-1
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	16	185	800 000 182	800 000 192	0.370	
25	20	16	350	800 000 183	800 000 193	0.510	
32	25	16	700	800 000 184	800 000 194	0.740	
40	32	16	1000	800 000 185	800 000 195	1.230	
50	40	16	1600	800 000 186	800 000 196	1.610	
63	50	16	3100	800 000 187	800 000 197	2.710	

d [mm]	D [mm]	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
20	95	65	14	57	27	124	77	56	130	25	32	45	
25	105	75	14	67	30	144	97	65	150	25	39	58	
32	115	85	14	73	36	154	97	71	160	25	39	58	
40	140	100	18	90	44	174	128	85	180	45	54	74	
50	150	110	18	97	51	194	128	89	200	45	54	74	
63	165	125	18	116	64	224	152	101	230	45	66	87	



Ball valve type 546 PVC-U With mounting inserts With backing flanges PVC-U metric

Model:

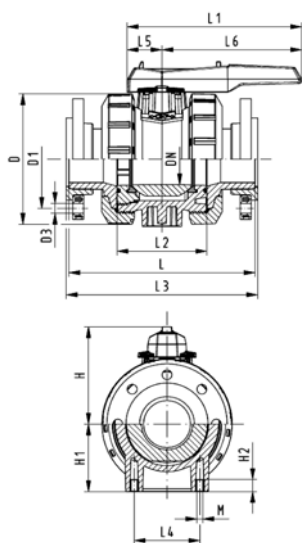
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	161 546 108	161 546 118	7.200	
 90	80	10	7000	161 546 109	161 546 119	10.600	
 110	100	10	11000	161 546 110	161 546 120	16.500	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	
 75	166	149	85	15	284	270	136	70	64	206	M8	
 90	200	161	105	15	300	270	141	70	64	206	M8	
 110	238	178	123	22	340	320	164	120	64	256	M12	



Ball valve type 546 PVC-U With mounting inserts With backing flanges PP-st metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

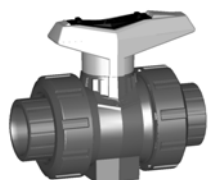
d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	16	5000	161 546 948	161 546 958	9.100	
 90	80	16	7000	161 546 949	161 546 959	12.400	
 110	100	16	11000	161 546 950	161 546 960	18.500	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
 75	166	149	85	284	270	136	290	70	64	206	
 90	200	161	105	300	270	141	310	70	64	206	
 110	238	178	123	340	320	164	350	120	64	256	

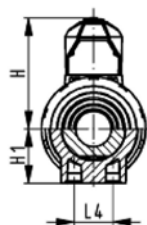
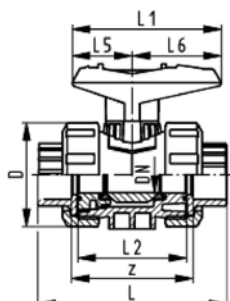
Ball valves

Ball valve type 546 PVC-U

With solvent cement sockets Inch BS



DN10/15 - 50



Model:

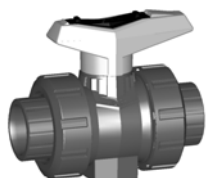
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

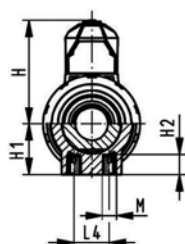
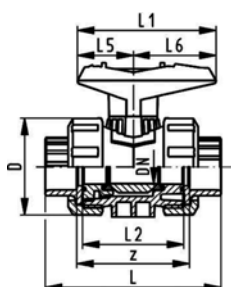
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	16	71	161 546 201	161 546 211	0.150	
1/2	15	16	185	161 546 202	161 546 212	0.150	
3/4	20	16	350	161 546 203	161 546 213	0.230	
1	25	16	700	161 546 204	161 546 214	0.330	
1 1/4	32	16	1000	161 546 205	161 546 215	0.585	
1 1/2	40	16	1600	161 546 206	161 546 216	0.815	
2	50	16	3100	161 546 207	161 546 217	1.490	
 2 1/2	65	16	5000	161 546 008	161 546 018	4.900	
 3	80	16	7000	161 546 209	161 546 219	7.400	
 4	100	16	11000	161 546 210	161 546 220	11.600	

Inch	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
3/8	50	57	27	92	77	56	25	32	45	60	
1/2	50	57	27	95	77	56	25	32	45	60	
3/4	58	67	30	110	97	65	25	39	58	69	
1	68	73	36	123	97	71	25	39	58	75	
1 1/4	84	90	44	146	128	85	45	54	74	89	
1 1/2	97	97	51	157	128	89	45	54	74	97	
2	124	116	64	183	152	101	45	66	87	110	
 2 1/2	166	149	85	233	270	136	70	64	206	144	
 3	200	161	105	254	270	141	70	64	206	151	
 4	238	178	123	301	320	164	120	64	256	174	



DN10/15 - 50



Ball valve type 546 PVC-U With mounting inserts With solvent cement sockets inch BS

Model:

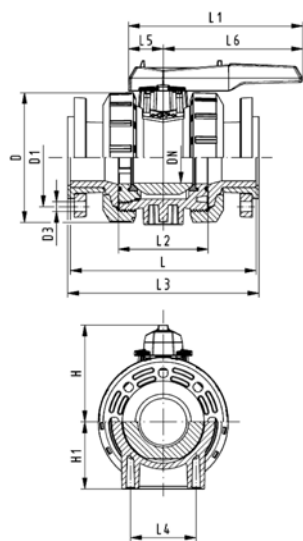
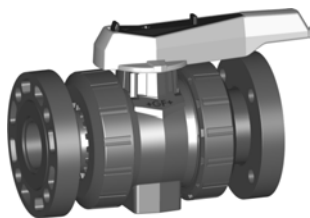
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	16	71	161 546 241	161 546 251	0.150	
1/2	15	16	185	161 546 242	161 546 252	0.150	
3/4	20	16	350	161 546 243	161 546 253	0.230	
1	25	16	700	161 546 244	161 546 254	0.330	
1 1/4	32	16	1000	161 546 245	161 546 255	0.585	
1 1/2	40	16	1600	161 546 246	161 546 256	0.815	
2	50	16	3100	161 546 247	161 546 257	1.490	
 2 1/2	65	16	5000	161 546 068	161 546 078	4.900	
3	80	16	7000	161 546 249	161 546 259		
4	100	16	11000	161 546 250	161 546 260		

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
3/8	50	57	27	12	92	77	56	25	32	45	6	67	
1/2	50	57	27	12	95	77	56	25	32	45	6	61	
3/4	58	67	30	12	110	97	65	25	39	58	6	70	
1	68	73	36	12	123	97	71	25	39	58	6	76	
1 1/4	84	90	44	15	146	128	85	45	54	74	8	90	
1 1/2	97	97	51	15	157	128	89	45	54	74	8	94	
2	124	116	64	15	183	152	101	45	66	87	8	107	
 2 1/2	166	149	85	15	233	270	136	70	64	206	8	144	
3	200	161	105	15	254	270	141	70	64	206	8	151	
4	238	178	123	22	301	320	164	120	64	256	12	174	



Ball valve type 546 PVC-U With mounting inserts With backing flanges PVC-U ASTM/ANSI

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimension: ANSI/ASME B 16.5 class 150 (ASTM D 4024), BS EN 1759

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 2 1/2	65	10	5000	161 546 168	161 546 178	7.300	
 3	80	10	7000	161 546 169	161 546 179	10.600	
 4	100	10	11000	161 546 170	161 546 180	16.400	

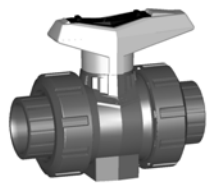
Inch	D [mm]	D1 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	H [mm]	H1 [mm]	M	
 2 1/2	166	140	19	284	270	136	290	70	64	206	149	85	8	
 3	200	152	19	300	270	141	310	70	64	206	161	105	8	
 4	238	191	19	340	320	164	350	120	64	256	178	123	12	

Ball valves

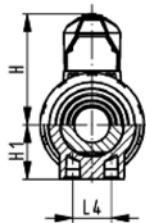
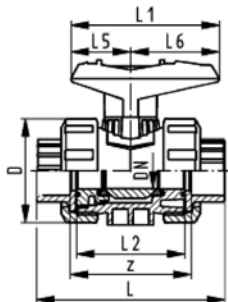
Ball valve type 546 PVC-U

With solvent cement sockets Inch ASTM

Inclusive 2 threaded valve ends NPT



DN10/15 - 50



Model:

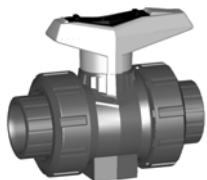
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts
- Threaded valve ends are only enclosed for DN10/15-50

Option:

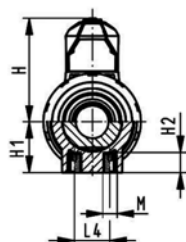
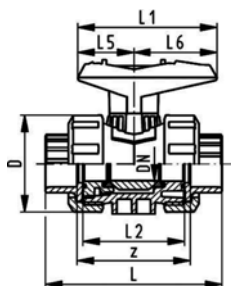
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	16	71	161 546 301	161 546 311	0.180	
1/2	15	16	185	161 546 302	161 546 312	0.190	
3/4	20	16	350	161 546 303	161 546 313	0.290	
1	25	16	700	161 546 304	161 546 314	0.425	
1 1/4	32	16	1000	161 546 305	161 546 315	0.730	
1 1/2	40	16	1600	161 546 306	161 546 316	0.990	
2	50	16	3100	161 546 307	161 546 317	1.775	
2 1/2	65	16	5000	161 546 308	161 546 318	4.900	
3	80	16	7000	161 546 309	161 546 319	7.400	
4	100	16	11000	161 546 310	161 546 320	11.500	

Inch	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
3/8	50	57	27	105	77	56	25	32	45	67	
1/2	50	57	27	105	77	56	25	32	45	61	
3/4	58	67	30	121	97	65	25	39	58	70	
1	68	73	36	133	97	71	25	39	58	76	
1 1/4	84	90	44	154	128	85	45	54	74	90	
1 1/2	97	97	51	164	128	89	45	54	74	94	
2	124	116	64	183	152	101	45	66	87	107	
2 1/2	166	149	85	233	270	136	70	64	206	144	
3	200	161	105	254	270	141	70	64	206	151	
4	238	178	123	301	320	164	120	64	256	174	



DN10/15 - 50



Ball valve type 546 PVC-U

With mounting inserts

With solvent cement sockets Inch ASTM

Inclusive 2 threaded valve ends NPT

Model:

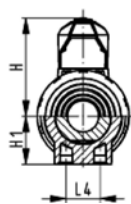
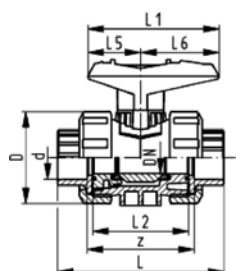
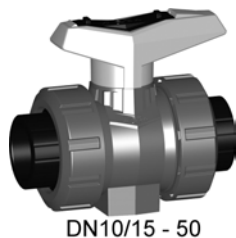
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Threaded valve ends are only enclosed for DN10/15-50

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	16	71	161 546 341	161 546 351	0.184	
1/2	15	16	185	161 546 342	161 546 352	0.194	
3/4	20	16	350	161 546 343	161 546 353	0.294	
1	25	16	700	161 546 344	161 546 354	0.429	
1 1/4	32	16	1000	161 546 345	161 546 355	0.740	
1 1/2	40	16	1600	161 546 346	161 546 356	1.000	
2	50	16	3100	161 546 347	161 546 357	1.785	
 2 1/2	65	16	5000	161 546 348	161 546 358	4.900	
 3	80	16	7000	161 546 349	161 546 359	7.400	
 4	100	16	11000	161 546 350	161 546 360	11.500	

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
3/8	50	57	27	12	105	77	56	25	32	45	6	67	
1/2	50	57	27	12	105	77	56	25	32	45	6	61	
3/4	58	67	30	12	121	97	65	25	39	58	6	70	
1	68	73	36	12	133	97	71	25	39	58	6	76	
1 1/4	84	90	44	15	154	128	85	45	54	74	8	90	
1 1/2	97	97	51	15	164	128	89	45	54	74	8	94	
2	124	116	64	15	183	152	101	45	66	87	8	107	
 2 1/2	166	149	85	15	233	270	136	70	64	206	8	144	
 3	200	161	105	15	254	270	141	70	64	206	8	151	
 4	238	178	123	22	301	320	164	120	64	256	12	174	



Ball valve type 546 PVC-U With fusion sockets PE 100 metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

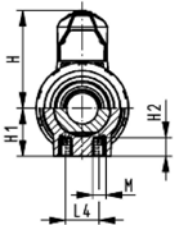
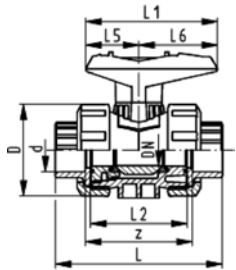
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	16	71	800 000 101	800 000 111	0.170	
20	15	16	185	800 000 102	800 000 112	0.170	
25	20	16	350	800 000 103	800 000 113	0.240	
32	25	16	700	800 000 104	800 000 114	0.340	
40	32	16	1000	800 000 105	800 000 115	0.610	
50	40	16	1600	800 000 106	800 000 116	0.850	
63	50	16	3100	800 000 107	800 000 117	1.550	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
16	50	57	27	93	77	56	25	32	45	67	
20	50	57	27	95	77	56	25	32	45	66	
25	58	67	30	108	97	65	25	39	58	77	
32	68	73	36	119	97	71	25	39	58	83	
40	84	90	44	137	128	85	45	54	74	99	
50	97	97	51	147	128	89	45	54	74	105	
63	124	116	64	168	152	101	45	66	87	113	



DN10/15 - 50



Ball valve type 546 PVC-U With mounting inserts With fusion sockets PE 100 metric

Model:

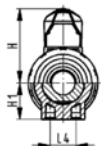
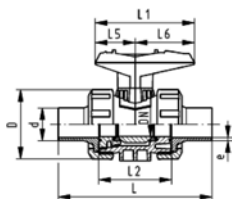
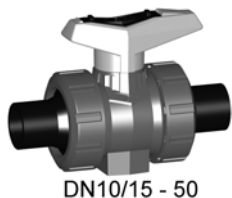
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	16	71	161 546 761	161 546 771	0.150	
20	15	16	185	161 546 762	161 546 772	0.150	
25	20	16	350	161 546 763	161 546 773	0.220	
32	25	16	700	161 546 764	161 546 774	0.310	
40	32	16	1000	161 546 765	161 546 775	0.550	
50	40	16	1600	161 546 766	161 546 776	0.750	
63	50	16	3100	161 546 767	161 546 777	1.360	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	57	27	12	93	77	56	25	32	45	M6	67	
20	50	57	27	12	95	77	56	25	32	45	M6	66	
25	58	67	30	12	108	97	65	25	39	58	M6	77	
32	68	73	36	12	119	97	71	25	39	58	M6	83	
40	84	90	44	15	137	128	85	45	54	74	M8	99	
50	97	97	51	15	147	128	89	45	54	74	M8	105	
63	124	116	64	15	168	152	101	45	66	87	M8	113	



Ball valve type 546 PVC-U

With butt fusion spigots PE 100 SDR11 metric

Model:

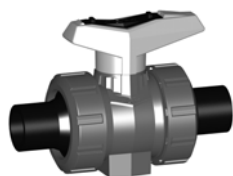
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

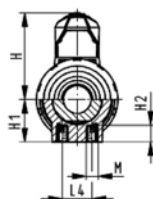
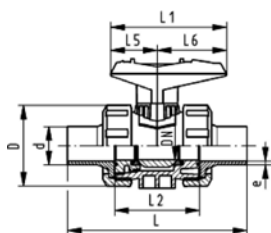
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	16	185	800 000 142	800 000 152	0.160	
25	20	16	350	800 000 143	800 000 153	0.240	
32	25	16	700	800 000 144	800 000 154	0.340	
40	32	16	1000	800 000 145	800 000 155	0.600	
50	40	16	1600	800 000 146	800 000 156	0.830	
63	50	16	3100	800 000 147	800 000 157	1.560	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]	
20	50	57	27	130	77	56	25	32	45	1,9	
25	58	67	30	134	97	65	25	39	58	2,3	
32	68	73	36	150	97	71	25	39	58	3	
40	84	90	44	171	128	85	45	54	74	3,7	
50	97	97	51	191	128	89	45	54	74	4,6	
63	124	116	64	220	152	101	45	66	87	5,8	



DN10/15 - 50



Ball valve type 546 PVC-U

With mounting inserts

With butt fusion spigots PE 100 SDR11 metric

Model:

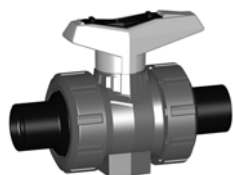
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

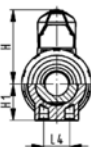
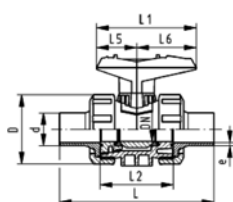
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	16	185	161 546 782	161 546 792	0.150	
25	20	16	350	161 546 783	161 546 793	0.220	
32	25	16	700	161 546 784	161 546 794	0.310	
40	32	16	1000	161 546 785	161 546 795	0.550	
50	40	16	1600	161 546 786	161 546 796	0.750	
63	50	16	3100	161 546 787	161 546 797	1.360	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]	
20	50	57	27	12	130	77	56	25	32	45	M6	1,9	
25	58	67	30	12	134	97	65	25	39	58	M6	2,3	
32	68	73	36	12	150	97	71	25	39	58	M6	3	
40	84	90	44	15	171	128	85	45	54	74	M8	3,7	
50	97	97	51	15	191	128	89	45	54	74	M8	4,6	
63	124	116	64	15	220	152	101	45	66	87	M8	5,8	



DN10/15 - 50



Ball valve type 546 PVC-U

With butt fusion spigots PE 100 SDR17.6 metric

Model:

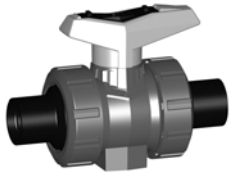
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

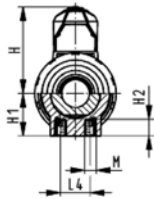
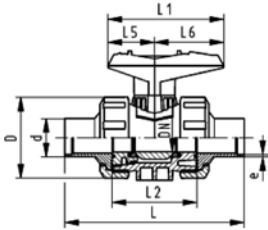
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
40	32	10	1000	800 000 125	800 000 135	0.600	
50	40	10	1600	800 000 126	800 000 136	0.830	
63	50	10	3100	800 000 127	800 000 137	1.560	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]	
40	84	90	44	171	128	85	45	54	74	2,3	
50	97	97	51	191	128	89	45	54	74	2,9	
63	124	116	64	220	152	101	45	66	87	3,6	



DN10/15 - 50



Ball valve type 546 PVC-U

With mounting inserts

With butt fusion spigots PE 100 SDR17.6 metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

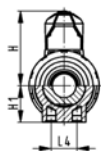
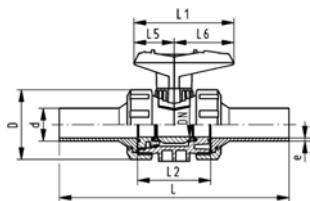
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
40	32	10	1000	161 546 805	161 546 815	0.550	
50	40	10	1600	161 546 806	161 546 816	0.750	
63	50	10	3100	161 546 807	161 546 817	1.360	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]	
40	84	90	44	15	171	128	85	45	54	74	M8	2,3	
50	97	97	51	15	191	128	89	45	54	74	M8	2,9	
63	124	116	64	15	220	152	101	45	66	87	M8	3,6	



DN10/15 - 50



Ball valve type 546 PVC-U With butt fusion spigots long PE 100 SDR11 metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

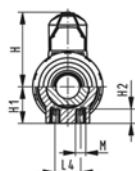
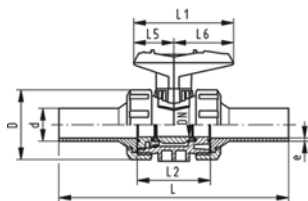
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	16	185	800 000 282	800 000 292	0.170	
25	20	16	350	800 000 283	800 000 293	0.250	
32	25	16	700	800 000 284	800 000 294	0.370	
40	32	16	1000	800 000 285	800 000 295	0.640	
50	40	16	1600	800 000 286	800 000 296	0.910	
63	50	16	3100	800 000 287	800 000 297	1.680	
 75	65	16	5000	800 000 288	800 000 298	5.000	
 90	80	16	7000	800 000 289	800 000 299	7.500	
 110	100	16	11000	800 000 290	800 000 300	11.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]	
20	50	57	27	193	77	56	25	32	45	2,25	
25	58	67	30	216	97	65	25	39	58	2,3	
32	68	73	36	223	97	71	25	39	58	3	
40	84	90	44	249	128	85	45	54	74	3,7	
50	97	97	51	271	128	89	45	54	74	4,6	
63	124	116	64	321	152	101	45	66	87	5,8	
 75	166	149	85	386	270	136	70	64	206	6.8	
 90	200	161	105	421	270	141	70	64	206	8.2	
 110	238	178	123	484	320	164	120	64	256	10	



DN10/15 - 50



Ball valve type 546 PVC-U

With mounting inserts

With butt fusion spigots long PE 100 SDR11 metric

Model:

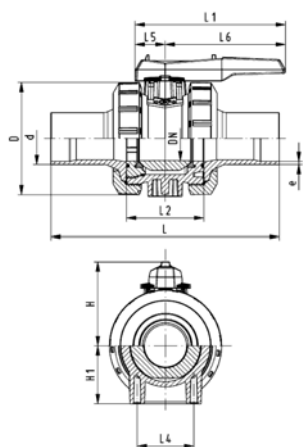
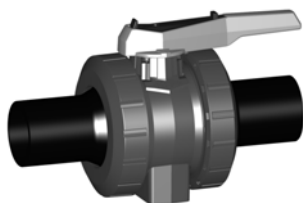
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	16	185	161 546 822	161 546 832	0.150	
25	20	16	350	161 546 823	161 546 833	0.220	
32	25	16	700	161 546 824	161 546 834	0.310	
40	32	16	1000	161 546 825	161 546 835	0.550	
50	40	16	1600	161 546 826	161 546 836	0.750	
63	50	16	3100	161 546 827	161 546 837	1.360	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]	
20	50	57	27	12	193	77	56	25	32	45	M6	2,3	
25	58	67	30	12	216	97	65	25	39	58	M6	2,3	
32	68	73	36	12	223	97	71	25	39	58	M6	3	
40	84	90	44	15	249	128	85	45	54	74	M8	3,7	
50	97	97	51	15	271	128	89	45	54	74	M8	4,6	
63	124	116	64	15	321	152	101	45	66	87	M8	5,8	



Ball valve type 546 PVC-U

With butt fusion spigots long PE 100 SDR17.6 metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

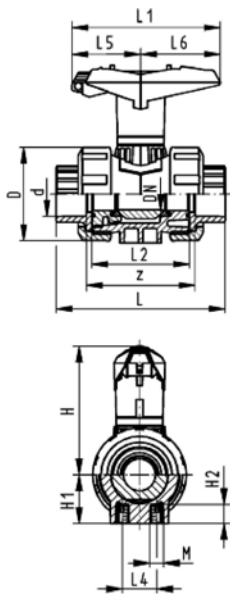
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	16	5000	800 000 218	800 000 228	5.000	
 90	80	16	7000	800 000 219	800 000 229	7.400	
 110	100	16	11000	800 000 220	800 000 230	11.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]	
 75	166	149	85	386	270	136	70	64	206	4.3	
 90	200	161	105	421	270	141	70	64	206	5.1	
 110	238	178	123	484	320	164	120	64	256	6.3	



DN10/15 - 50



Ball valve type 546 PVC-U

With lockable handle

With solvent cement sockets metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Lockable hand lever with ratchet settings

Option:

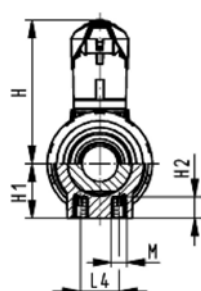
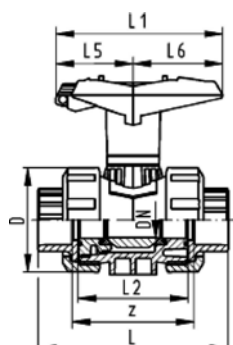
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	16	71	161 546 081	161 546 091	0.165	
20	15	16	185	161 546 082	161 546 092	0.165	
25	20	16	350	161 546 083	161 546 093	0.255	
32	25	16	700	161 546 084	161 546 094	0.355	
40	32	16	1000	161 546 085	161 546 095	0.640	
50	40	16	1600	161 546 086	161 546 096	0.840	
63	50	16	3100	161 546 087	161 546 097	1.500	
75	65	16	5000	161 546 088	161 546 098	5.200	
90	80	16	7000	161 546 089	161 546 099	7.700	
110	100	16	11000	161 546 090	161 546 100	12.000	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	79	27	12	92	87	56	25	42	45	M6	64	
20	50	79	27	12	95	87	56	25	42	45	M6	64	
25	58	88	30	12	110	108	65	25	50	58	M6	72	
32	68	94	36	12	123	108	71	25	50	58	M6	79	
40	84	113	44	15	146	140	85	45	66	75	M8	94	
50	97	119	51	15	157	140	89	45	66	75	M8	95	
63	124	141	64	15	183	165	101	45	78	87	M8	107	
75	166	224	85	15	233	270	136	70	64	206	M8	144	
90	200	235	105	15	254	270	141	70	64	206	M8	151	
110	238	245	123	22	301	320	164	120	64	256	M12	174	



DN10/15 - 50



Ball valve type 546 PVC-U With lockable handle With solvent cement sockets Inch BS

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Lockable hand lever with ratchet settings

Option:

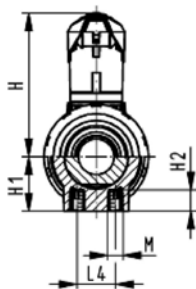
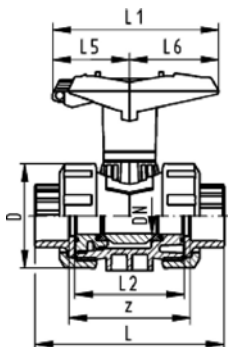
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg							
3/8	10	16	71	161 546 221	161 546 231	0.165							
1/2	15	16	185	161 546 222	161 546 232	0.165							
3/4	20	16	350	161 546 223	161 546 233	0.255							
1	25	16	700	161 546 224	161 546 234	0.355							
1 1/4	32	16	1000	161 546 225	161 546 235	0.625							
1 1/2	40	16	1600	161 546 226	161 546 236	0.855							
2	50	16	3100	161 546 227	161 546 237	1.535							
 65	65	16	5000	161 546 088	161 546 098	5.200							
 3	80	16	7000	161 546 229	161 546 239	7.700							
 4	100	16	11000	161 546 230	161 546 240	12.000							

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]		
3/8	50	79	27	12	92	87	56	25	42	45	M6	60		
1/2	50	79	27	12	95	87	56	25	42	45	M6	60		
3/4	58	88	30	12	110	108	65	25	50	58	M6	69		
1	68	94	36	12	123	108	71	25	50	58	M6	75		
1 1/4	84	113	44	15	146	140	85	45	66	75	M8	89		
1 1/2	97	119	51	15	157	140	89	45	66	75	M8	97		
2	124	141	64	15	183	165	101	45	78	87	M8	110		
 166	166	224	85	15	233	270	136	70	64	206	M8	144		
 3	200	235	105	15	254	270	141	70	64	206	M8	151		
 4	238	245	123	22	301	320	164	120	64	256	M12	174		



DN10/15 - 50



Ball valve type 546 PVC-U

With lockable handle

With solvent cement sockets Inch ASTM

Inclusive 2 threaded valve ends NPT

Model:

- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Lockable hand lever with ratchet settings
- Integrated stainless steel mounting inserts
- Threaded valve ends are only enclosed for DN10/15-50

Option:

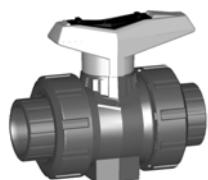
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	16	71	161 546 361	161 546 371	0.195	
1/2	15	16	185	161 546 362	161 546 372	0.205	
3/4	20	16	350	161 546 363	161 546 373	0.315	
1	25	16	700	161 546 364	161 546 374	0.450	
1 1/4	32	16	1000	161 546 365	161 546 375	0.770	
1 1/2	40	16	1600	161 546 366	161 546 376	1.030	
2	50	16	3100	161 546 367	161 546 377	1.820	
 2 1/2	65	16	5000	161 546 368	161 546 378	5.300	
 3	80	16	7000	161 546 369	161 546 379	7.700	
 4	100	16	11000	161 546 370	161 546 380	11.900	

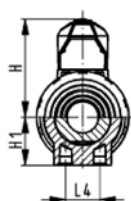
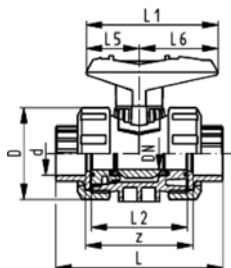
Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
3/8	50	79	27	12	105	87	56	25	42	45	M6	67	
1/2	50	79	27	12	105	87	56	25	42	45	M6	61	
3/4	58	88	30	12	121	108	65	25	50	58	M6	70	
1	68	94	36	12	133	108	71	25	50	58	M6	76	
1 1/4	84	113	44	15	154	140	85	45	66	74	M8	90	
1 1/2	97	119	51	15	164	140	89	45	66	74	M8	94	
2	124	141	64	15	183	165	101	45	78	87	M8	107	
 2 1/2	166	224	85	15	233	270	136	70	64	206	M8	144	
 3	200	235	105	15	254	270	141	70	64	206	M8	151	
 4	238	245	123	22	301	320	164	120	64	256	M12	174	

Ball valves

Ball valve type 546 PVC-U SF With solvent cement sockets metric



DN10/15 - 50



Model:

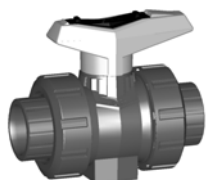
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- With PVDF ball seal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Without mounting inserts

Option:

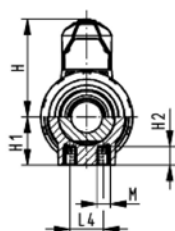
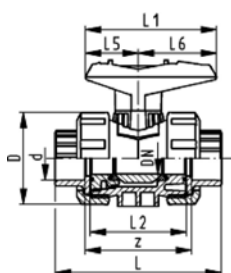
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	16	71	161 546 601	161 546 611	0.150	
20	15	16	185	161 546 602	161 546 612	0.150	
25	20	16	350	161 546 603	161 546 613	0.230	
32	25	16	700	161 546 604	161 546 614	0.330	
40	32	16	1000	161 546 605	161 546 615	0.600	
50	40	16	1600	161 546 606	161 546 616	0.800	
63	50	16	3100	161 546 607	161 546 617	1.460	
75	65	16	5000	161 546 608	161 546 618	4.900	
90	80	16	7000	161 546 609	161 546 619	7.400	
110	100	16	11000	161 546 610	161 546 620	11.600	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
16	50	57	27	92	77	56	25	32	45	64	
20	50	57	27	95	77	56	25	32	45	64	
25	58	67	30	110	97	65	25	39	58	72	
32	68	73	36	123	97	71	25	39	58	79	
40	84	90	44	146	128	85	45	54	74	94	
50	97	97	51	157	128	89	45	54	74	95	
63	124	116	64	183	152	101	45	66	87	107	
75	166	149	85	233	270	136	70	64	206	144	
90	200	161	105	254	270	141	70	64	206	151	
110	238	178	123	301	320	164	120	64	256	174	



DN10/15 - 50



Ball valve type 546 PVC-U SF

With mounting inserts

With solvent cement sockets metric

Model:

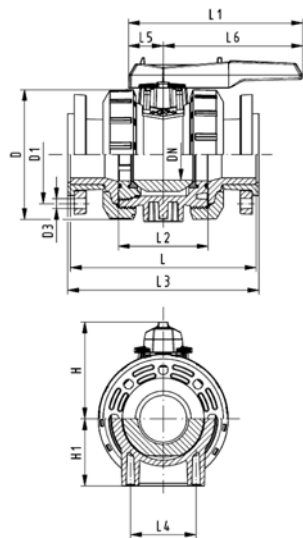
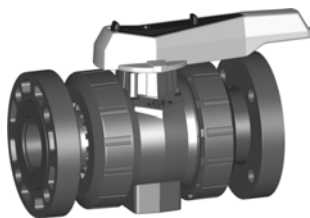
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- With PVDF ball seal
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg							
16	10	16	71	800 000 601	800 000 611	0.150							
20	15	16	185	800 000 602	800 000 612	0.150							
25	20	16	350	800 000 603	800 000 613	0.230							
32	25	16	700	800 000 604	800 000 614	0.330							
40	32	16	1000	800 000 605	800 000 615	0.600							
50	40	16	1600	800 000 606	800 000 616	0.800							
63	50	16	3100	800 000 607	800 000 617	1.460							
 75	65	16	5000	800 000 608	800 000 618	4.900							
 90	80	16	7000	800 000 609	800 000 619	7.400							
 110	100	16	11000	800 000 610	800 000 620	11.600							

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]		
16	50	57	27	12	92	77	56	25	32	45	M6	64		
20	50	57	27	12	95	77	56	25	32	45	M6	64		
25	58	67	30	12	110	97	65	25	39	58	M6	72		
32	68	73	36	12	123	97	71	25	39	58	M6	79		
40	84	90	44	15	146	128	85	45	54	74	M8	94		
50	97	97	51	15	157	128	89	45	54	74	M8	95		
63	124	116	64	15	183	152	101	45	66	87	M8	107		
 75	166	149	85	15	233	270	136	70	64	206	M8	144		
 90	200	161	105	15	254	270	141	70	64	206	M8	151		
 110	238	178	123	22	301	320	164	120	64	256	M12	174		



Ball valve type 546 PVC-U SF

With mounting inserts

With backing flanges PVC-U metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- With PVDF ball seal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

Option:

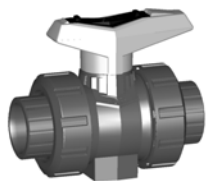
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg								
 75	65	10	5000	161 546 128	161 546 138	7.200								
 90	80	10	7000	161 546 129	161 546 139	10.600								
 110	100	10	11000	161 546 130	161 546 140	16.500								

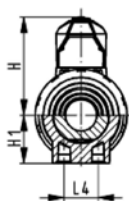
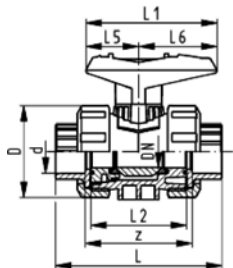
d [mm]	D [mm]	D1 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	H [mm]	H1 [mm]	M	
 75	166	145	18	284	270	136	290	70	64	206	149	85	8	
 90	200	160	18	300	270	141	310	70	64	206	161	105	8	
 110	238	180	18	340	320	164	350	120	64	256	178	123	12	

Ball valves

Ball valve type 546 PVC-U SF With solvent cement sockets Inch ASTM



DN10/15 - 50



Model:

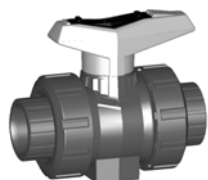
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals: Inch ASTM in PTFE
- Without mounting inserts

Option:

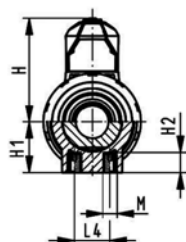
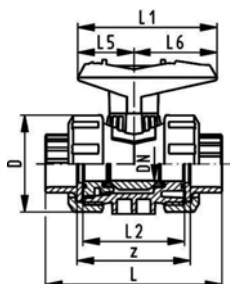
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
$\frac{3}{8}$	10	16	71	161 546 681	161 546 691	0.155	
$\frac{1}{2}$	15	16	185	161 546 682	161 546 692	0.155	
$\frac{3}{4}$	20	16	350	161 546 683	161 546 693	0.240	
1	25	16	700	161 546 684	161 546 694	0.340	
1 $\frac{1}{4}$	32	16	1000	161 546 685	161 546 695	0.605	
1 $\frac{1}{2}$	40	16	1600	161 546 686	161 546 696	0.805	
2	50	16	3100	161 546 687	161 546 697	1.460	
<i>New</i> 2 $\frac{1}{2}$	65	16	5000	161 546 688	161 546 698	4.900	
<i>New</i> 3	80	16	7000	161 546 689	161 546 699	7.400	
<i>New</i> 4	100	16	11000	161 546 690	161 546 700	11.500	

Inch	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
$\frac{3}{8}$	50	57	27	105	77	56	25	32	45	67	
$\frac{1}{2}$	50	57	27	105	77	56	25	32	45	61	
$\frac{3}{4}$	58	67	30	121	97	65	25	39	58	70	
1	68	73	36	133	97	71	25	39	58	76	
1 $\frac{1}{4}$	84	90	44	154	128	85	45	54	74	90	
1 $\frac{1}{2}$	97	97	51	164	128	89	45	54	74	94	
2	124	116	64	183	152	101	45	66	87	107	
<i>New</i> 2 $\frac{1}{2}$	166	149	85	233	270	136	70	64	206	144	
<i>New</i> 3	200	161	105	254	270	141	70	64	206	151	
<i>New</i> 4	238	178	123	301	320	164	120	64	256	174	



DN10/15 - 50



Ball valve type 546 PVC-U SF

With mounting inserts

With solvent cement sockets Inch ASTM

Model:

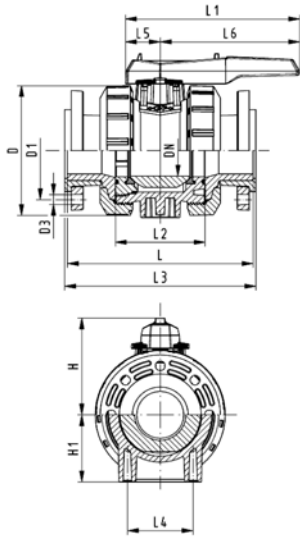
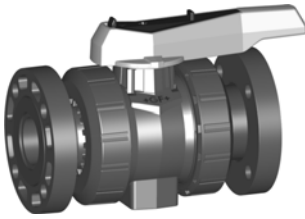
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals: Inch ASTM in PTFE
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	16	71	161 546 841	161 546 851	0.159	
1/2	15	16	185	161 546 842	161 546 852	0.159	
3/4	20	16	350	161 546 843	161 546 853	0.244	
1	25	16	700	161 546 844	161 546 854	0.344	
1 1/4	32	16	1000	161 546 845	161 546 855	0.615	
1 1/2	40	16	1600	161 546 846	161 546 856	0.815	
2	50	16	3100	161 546 847	161 546 857	1.470	
2 1/2	65	16	5000	161 546 848	161 546 858	4.900	
3	80	16	7000	161 546 849	161 546 859	7.400	
4	100	16	11000	161 546 850	161 546 860	11.500	

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
3/8	50	57	27	12	105	77	56	25	32	45	M6	67	
1/2	50	57	27	12	105	77	56	25	32	45	M6	61	
3/4	58	67	30	12	121	97	65	25	39	58	M6	70	
1	68	73	36	12	133	97	71	25	39	58	M6	76	
1 1/4	84	90	44	16	154	128	85	45	54	74	M8	90	
1 1/2	97	97	51	16	164	128	89	45	54	74	M8	94	
2	124	116	64	16	183	152	101	45	66	87	M8	107	
2 1/2	166	149	85	15	233	270	136	70	64	206	M8	144	
3	200	161	105	15	254	270	141	70	64	206	M8	151	
4	238	178	123	22	301	320	164	120	64	256	M12	174	



Ball valve type 546 PVC-U SF

With mounting inserts

With backing flanges PVC-U ASTM/ANSI

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals: Inch ASTM in PTFE
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimension: ANSI/ASME B 16.5 class 150 (ASTM D 4024), BS EN 1759

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg								
 2 1/2	65	10	5000	161 546 188	161 546 198	7.300								
 3	80	10	7000	161 546 189	161 546 199	10.600								
 4	100	10	11000	161 546 190	161 546 200	16.400								

Inch	D [mm]	D1 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	H [mm]	H1 [mm]	M	
 2 1/2	166	140	19	284	270	136	290	70	64	206	149	85	8	
 3	200	152	19	300	270	141	310	70	64	206	161	105	8	
 4	238	191	19	340	320	164	350	120	64	256	178	123	12	

Copiable

Configurator GF Ball Valve Type 546 PVC-U

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for your application, we put together a selection menu for you (the maximum working pressure of the whole valve is determined by the maximum permissible nominal pressure of the connecting part).

Ball valve A01 Ball valve 546										
Material B01 PVC-U										
Dimension C05 d 16 DN 10 3/8" C06 d 20 DN 15 1/2" C07 d 25 DN 20 3/4" C08 d 32 DN 25 1" C09 d 40 DN 32 1 1/4" C10 d 50 DN 40 1 1/2" C11 d 63 DN 50 2" C12 d 75 DN 65 2 1/2" C13 d 90 DN 80 3" C14 d 110 DN 100 4" C15 d 160 DN 150 6"										
Version D01 standard, PTFE ball seal D02 oilfree, PTFE ball seal (only with specific connecting parts) D03 silicon-free, PTFE ball seal for inch ASTM (only with specific connecting parts) D04 silicon-free, PVDF ball seal for metric (only with specific connecting parts)										
Seals E01 EPDM seals E02 FPM seals E03 FFPM (KALREZ®) seals										
Threaded inserts F01 without threaded inserts F02 with threaded inserts										
Connecting parts G01 PVC-U Cement socket metric G03 PVC-U Cement socket inch ASTM G04 PVC-U Cement socket inch BS G05 PVC-U Cement spigot metric G06 PVC-U Threaded socket Rp G07 PVC-U Threaded socket Rp reinforced (DN10-50) G09 PVC-U Threaded socket NPT G30 PP-H Fusion socket metric G32 PP-H Socket fusion spigot metric G33 PP-H Threaded socket Rp G34 PP-H Threaded socket NPT reinforced G35 PP-H Butt fusion spigot SDR 11 metric IR-PLUS G36 PP-H Butt fusion spigot SDR 17.6 metric (limited dimension range) G37 PP-H Butt fusion spigot long SDR11 metric G40 PE-100 Fusion socket metric G41 PE-100 Butt fusion spigot SDR11 metric G42 PE-100 Butt fusion spigot SDR17.6 metric (limited dimension range) G43 PE-100 Butt fusion spigot long SDR11 metric G44 PE-100 Butt fusion spigot long SDR17.6 metric (DN65-100) G60 Fixed flange PVC-U serrated metric G61 Fixed flange PVC-U flat metric G70 Backing flange PVC-U metric G71 Backing flange PVC-U inch ANSI G72 Backing flange PP-steel metric G73 Backing flange PP-steel ANSI G78 Backing flange PVC-U JIS (DN65-100) G80 PVC-U Valve end blank										
Multi-functional module I01 No multi-functional module I02 Empty module I03 Module with 2 limit switches Ag, Ni I04 Module with 2 limit switches Au I05 Module with 2 inductive switches Namur I06 Module with 2 inductive switches PNP I07 Module with 2 inductive switches NPN										
Handle K01 Standard handle red K02 Standard handle black K11 Multi-functional handle red										
Mounting plate L01 without mounting plate L02 with mounting plate										
A01	B01	C	D	E	F	G	G	I	K	L
left						right				

Find the fitting solution with the Configurator

Ball valve

A01 Ball valve 546

Material

B01 PVC-U

Dimension

C05 d 16 DN 10 3/8"

C06 d 20 DN 15 1/2"

C07 d 25 DN 20 3/4"

C08 d 32 DN 25 1"

C09 d 40 DN 32 1 1/4"

C10 d 50 DN 40 1 1/2"

C11 d 63 DN 50 2"

C12 d 75 DN 65 2 1/2"

C13 d 90 DN 80 3"

C14 d 110 DN 100 4"

C15 d 160 DN 150 6"

Version

D01 standard, PTFE ball seal

D02 oilfree, PTFE ball seal (only with specific connecting parts)

D03 silicon-free, PTFE ball seal for inch ASTM (only with specific connecting parts)

D04 silicon-free, PVDF ball seal for metric (only with specific connecting parts)

Seals

E01 EPDM seals

E02 FPM seals

E03 FFPM (KALREZ®) seals

Threaded inserts

F01 without threaded inserts

F02 with threaded inserts

Connecting parts

G01 PVC-U Cement socket metric

G03 PVC-U Cement socket inch ASTM

G04 PVC-U Cement socket inch BS

G05 PVC-U Cement spigot metric

G06 PVC-U Threaded socket Rp

G07 PVC-U Threaded socket Rp reinforced (DN10-50)

G09 PVC-U Threaded socket NPT

G30 PP-H Fusion socket metric

G32 PP-H Socket fusion spigot metric

G33 PP-H Threaded socket Rp

G34 PP-H Threaded socket NPT reinforced

G35 PP-H Butt fusion spigot SDR 11 metric IR-PLUS

G36 PP-H Butt fusion spigot SDR 17.6 metric (limited dimension range)

G37 PP-H Butt fusion spigot long SDR11 metric

G40 PE-100 Fusion socket metric

G41 PE-100 Butt fusion spigot SDR11 metric

G42 PE-100 Butt fusion spigot SDR17.6 metric (limited dimension range)

G43 PE-100 Butt fusion spigot long SDR11 metric

G44 PE-100 Butt fusion spigot long SDR17.6 metric (DN65-100)

G60 Fixed flange PVC-U serrated metric

G61 Fixed flange PVC-U flat metric

G70 Backing flange PVC-U metric

G71 Backing flange PVC-U inch ANSI

G72 Backing flange PP-steel metric

G73 Backing flange PP-steel ANSI

G78 Backing flange PVC-U JIS (DN65-100)

G80 PVC-U Valve end blank

Multi-functional module

I01 No multi-functional module

I02 Empty module

I03 Module with 2 limit switches Ag, Ni

I04 Module with 2 limit switches Au

I05 Module with 2 inductive switches Namur

I06 Module with 2 inductive switches PNP

I07 Module with 2 inductive switches NPN

Handle

K01 Standard handle red

K02 Standard handle black

K11 Multi-functional handle red

Mounting plate

L01 without mounting plate

L02 with mounting plate

A01 B01 C09 D01 E01 F02 G01 G43 I01 K01 L02 =

left right

Example:

Type 546 PVC-U, dimension DN 32, PTFE ball seal, EPDM seals, with threaded inserts and mounting plate, connecting part left: PVC-U cement socket metric, right: PE-100 butt fusion spigot lang SDR11 metric

That's all it takes to configure your ball valve.

Ball valves electric

Ball valve type 107 PVC-U 100-230V With manual emergency override With solvent cement sockets metric



DN10/15 - 50

Model:

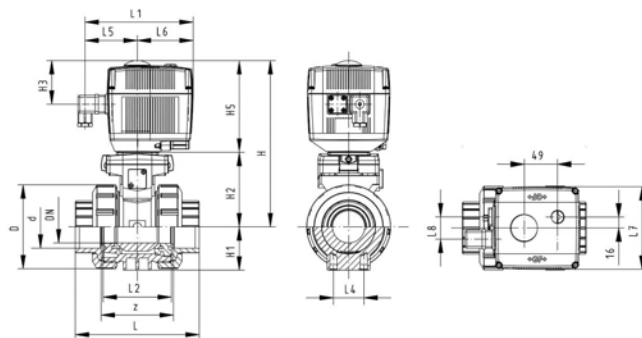
- Built on with electric actuator EA11
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg										
16	10	10	70	199 107 002	199 107 012	2.072										
20	15	10	185	199 107 003	199 107 013	2.072										
25	20	10	350	199 107 004	199 107 014	2.189										
32	25	10	700	199 107 005	199 107 015	2.189										
40	32	10	1000	199 107 006	199 107 016	2.592										
50	40	10	1600	199 107 007	199 107 017	2.914										
63	50	10	3100	199 107 008	199 107 018	2.914										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
16	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
20	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
25	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
32	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
40	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
50	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
63	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





DN10/15 - 50

Ball valve type 107 PVC-U 24V

With manual emergency override

With solvent cement sockets metric

Model:

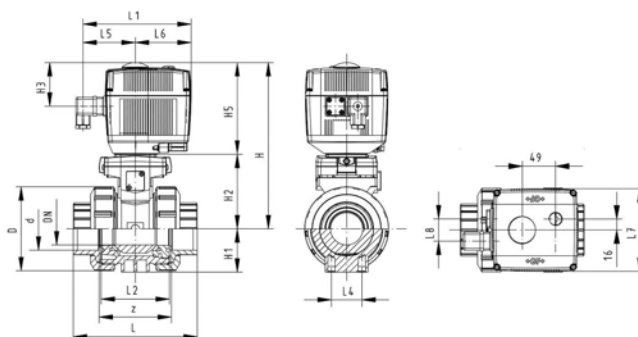
- Built on with electric actuator EA11
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 107 042	199 107 052	2.072	
20	15	10	185	199 107 043	199 107 053	2.072	
25	20	10	350	199 107 044	199 107 054	2.189	
32	25	10	700	199 107 045	199 107 055	2.189	
40	32	10	1000	199 107 046	199 107 056	2.592	
50	40	10	1600	199 107 047	199 107 057	2.914	
63	50	10	3100	199 107 048	199 107 058	3.772	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
16	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
20	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
25	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
32	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
40	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
50	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
63	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





Ball valve type 107 PVC-U 100-230V With manual emergency override With solvent cement spigots metric

Model:

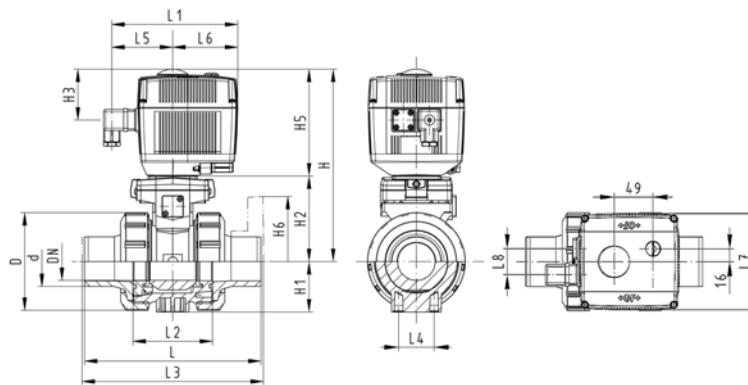
- Built on with electric actuator EA11
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 107 022	199 107 032	2.072	
20	15	10	185	199 107 023	199 107 033	2.072	
25	20	10	350	199 107 024	199 107 034	2.189	
32	25	10	700	199 107 025	199 107 035	2.189	
40	32	10	1000	199 107 026	199 107 036	2.592	
50	40	10	1600	199 107 027	199 107 037	2.914	
63	50	10	3100	199 107 028	199 107 038	3.772	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
16	50	200	27	64	64	137	114	161	56	130	25	77	83	122	33
20	50	200	27	64	64	137	124	161	56	130	25	77	83	122	33
25	58	209	30	73	64	137	144	161	65	150	25	77	83	122	33
32	68	209	36	73	64	137	154	161	71	160	25	77	83	122	33
40	84	220	44	84	64	137	174	161	85	180	45	77	83	122	33
50	97	220	51	84	64	137	194	161	89	200	45	77	83	122	33
63	124	243	64	106	64	137	224	161	101	230	45	77	83	122	33





Ball valve type 107 PVC-U 24V

With manual emergency override

With solvent cement spigots metric

Model:

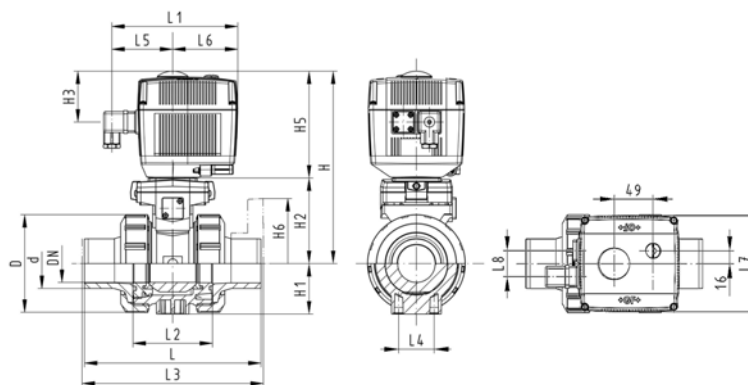
- Built on with electric actuator EA11
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)

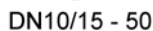
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 107 062	199 107 072	2.072	
20	15	10	185	199 107 063	199 107 073	1.830	
25	20	10	350	199 107 064	199 107 074	2.189	
32	25	10	700	199 107 065	199 107 075	2.189	
40	32	10	1000	199 107 066	199 107 076	2.592	
50	40	10	1600	199 107 067	199 107 077	2.914	
63	50	10	3100	199 107 068	199 107 078	3.772	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
16	50	200	27	64	64	137	114	161	56	130	25	77	83	122	33
20	50	200	27	64	64	137	124	161	56	130	25	77	83	122	33
25	58	209	30	73	64	137	144	161	65	150	25	77	83	122	33
32	68	209	36	73	64	137	154	161	71	160	25	77	83	122	33
40	84	220	44	84	64	137	174	161	85	180	45	77	83	122	33
50	97	220	51	84	64	137	194	161	89	200	45	77	83	122	33
63	124	243	64	106	64	137	224	161	101	230	45	77	83	122	33





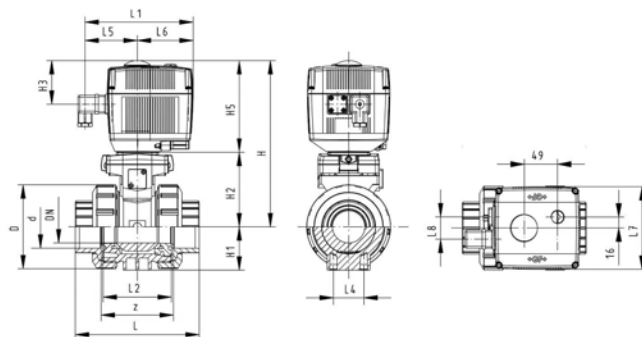
Model:

- Built on with electric actuator EA11
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time 5 s/90°<)

Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value (Δp=1 bar) [l/min]	EPDM Code	FPM Code	kg									
⅜	10	10	70	199 107 622	199 107 632	2.100									
½	15	10	185	199 107 623	199 107 633	2.100									
¾	20	10	350	199 107 624	199 107 634	2.200									
1	25	10	700	199 107 625	199 107 635	2.300									
1 ¼	32	10	1000	199 107 626	199 107 636	2.600									
1 ½	40	10	1600	199 107 627	199 107 637	3.000									
2	50	10	3100	199 107 628	199 107 638	3.800									
Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
⅜	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
½	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
¾	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
1	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
1 ¼	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
1 ½	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
2	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





DN10/15 - 50

Ball valve type 107 PVC-U 24V With manual emergency override With threaded sockets Rp

Model:

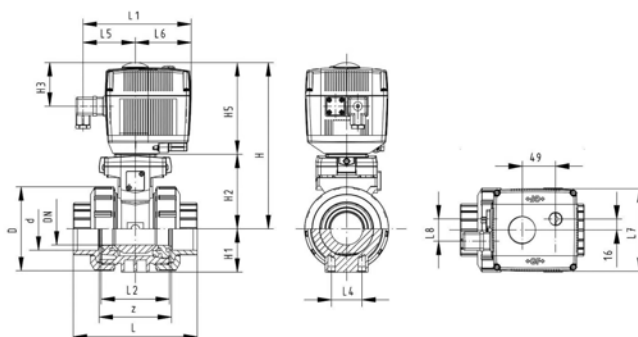
- Built on with electric actuator EA11
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<

Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 107 662	199 107 672	2.100	
1/2	15	10	185	199 107 663	199 107 673	2.100	
3/4	20	10	350	199 107 664	199 107 674	2.200	
1	25	10	700	199 107 665	199 107 675	2.300	
1 1/4	32	10	1000	199 107 666	199 107 676	2.600	
1 1/2	40	10	1600	199 107 667	199 107 677	3.000	
2	50	10	3100	199 107 668	199 107 678	3.800	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
3/8	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
1/2	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
3/4	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
1	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
1 1/4	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
1 1/2	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
2	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





DN10/15 - 50

Ball valve type 107 PVC-U 100-230V With manual emergency override With fixed flanges serrated metric

Model:

- Built on with electric actuator EA11
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

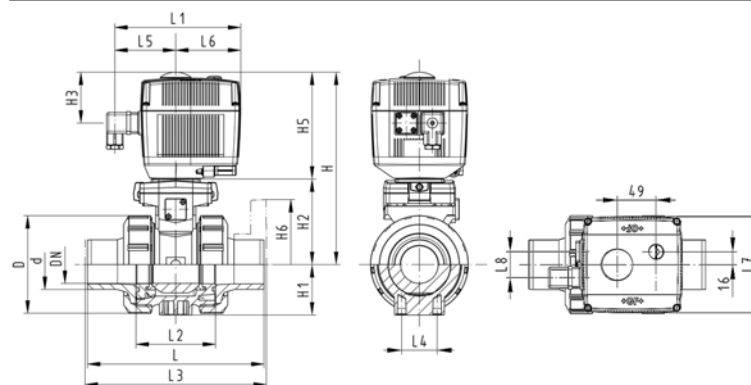
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value (Δp=1 bar) [l/min]	EPDM Code	FPM Code	kg								
20	15	½	10	185	199 107 603	199 107 613	2.300								
25	20	¾	10	350	199 107 604	199 107 614	2.500								
32	25	1	10	700	199 107 605	199 107 615	2.700								
40	32	1 ¼	10	1000	199 107 606	199 107 616	3.200								
50	40	1 ½	10	1600	199 107 607	199 107 617	3.700								
63	50	2	10	3100	199 107 608	199 107 618	4.776								

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	201	27	64	65	138	48	124	160	56	130	25	77	83	122
25	58	210	30	73	65	138	53	144	160	65	150	25	77	83	122
32	68	210	36	73	65	138	58	154	160	71	160	25	77	83	122
40	84	221	44	84	65	138	70	174	160	85	180	45	77	83	122
50	97	221	51	84	65	138	75	194	160	89	200	45	77	83	122
63	124	244	64	106	65	138	83	224	160	101	230	45	77	83	122

d [mm]	L8 [mm]
20	33
25	33
32	33
40	33
50	33
63	33





Ball valve type 107 PVC-U 24V With manual emergency override With fixed flanges serrated metric

Model:

- Built on with electric actuator EA11
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

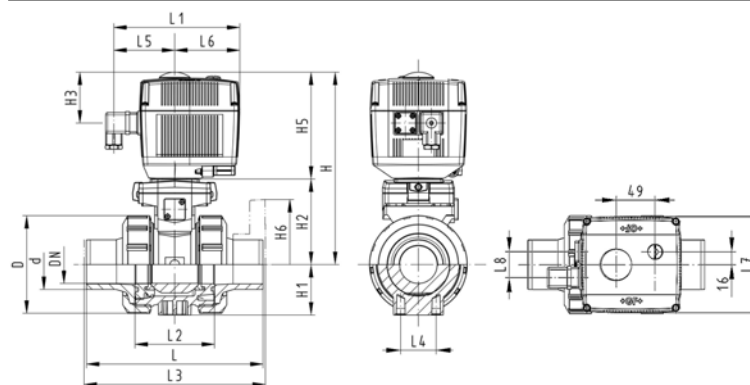
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	½	10	185	199 107 643	199 107 653	2.300	
25	20	¾	10	350	199 107 644	199 107 654	2.500	
32	25	1	10	700	199 107 645	199 107 655	2.700	
40	32	1 ¼	10	1000	199 107 646	199 107 656	3.200	
50	40	1 ½	10	1600	199 107 647	199 107 657	3.700	
63	50	2	10	3100	199 107 648	199 107 658	4.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
20	50	201	27	64	65	138	48	124	160	56	130	25	77	83	122	
25	58	210	30	73	65	138	53	144	160	65	150	25	77	83	122	
32	68	210	36	73	65	138	58	154	160	71	160	25	77	83	122	
40	84	221	44	84	65	138	70	174	160	85	180	45	77	83	122	
50	97	221	51	84	65	138	75	194	160	89	200	45	77	83	122	
63	124	244	64	106	65	138	83	224	160	101	230	45	77	83	122	

d [mm]	L8 [mm]	
20	33	
25	33	
32	33	
40	33	
50	33	
63	33	





DN10/15 - 50

Ball valve type 107 PVC-U 100-230V **With manual emergency override** **With solvent cement sockets Inch BS**

Model:

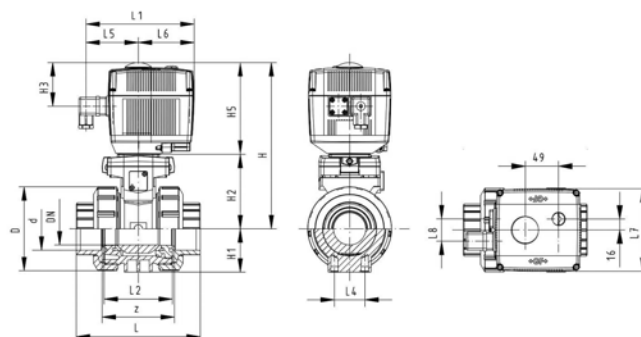
- Built on with electric actuator EA11
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<

Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg										
3/8	10	10	70	199 107 402	199 107 412	2.100										
1/2	15	10	185	199 107 403	199 107 413	2.100										
3/4	20	10	350	199 107 404	199 107 414	2.200										
1	25	10	700	199 107 405	199 107 415	2.300										
1 1/4	32	10	1000	199 107 406	199 107 416	2.600										
1 1/2	40	10	1600	199 107 407	199 107 417	3.000										
2	50	10	3100	199 107 408	199 107 418	3.800										

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
3/8	50	200	27	64	64	137	92	161	56	25	79	1	122	67	60
1/2	50	200	27	64	64	137	95	161	56	25	79	83	122	67	60
3/4	58	209	30	73	64	137	110	161	65	25	79	83	122	67	69
1	68	209	36	73	64	137	123	161	71	25	79	83	122	67	75
1 1/4	84	220	44	84	64	137	146	161	85	45	79	83	122	67	89
1 1/2	97	220	51	84	64	137	157	161	89	45	79	83	122	67	97
2	124	243	64	106	64	137	183	161	101	45	79	83	122	67	110





DN10/15 - 50

Ball valve type 107 PVC-U 24V With manual emergency override With solvent cement sockets Inch BS

Model:

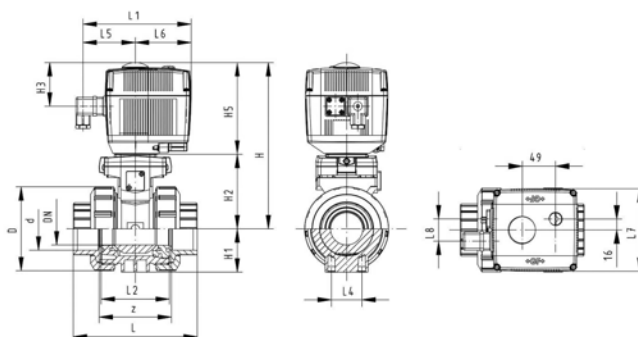
- Built on with electric actuator EA11
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)

Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg										
3/8	10	10	70	199 107 442	199 107 452	2.100										
1/2	15	10	185	199 107 443	199 107 453	2.100										
3/4	20	10	350	199 107 444	199 107 454	2.200										
1	25	10	700	199 107 445	199 107 455	2.300										
1 1/4	32	10	1000	199 107 446	199 107 456	2.600										
1 1/2	40	10	1600	199 107 447	199 107 457	3.000										
2	50	10	3100	199 107 448	199 107 458	3.800										

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
3/8	50	200	27	64	64	137	92	161	56	25	79	83	122	67	60
1/2	50	200	27	64	64	137	95	161	56	25	79	83	122	67	60
3/4	58	209	30	73	64	137	110	161	65	25	79	83	122	67	69
1	68	209	36	73	64	137	123	161	71	25	79	83	122	67	75
1 1/4	84	220	44	84	64	137	146	161	85	45	79	83	122	67	89
1 1/2	97	220	51	84	64	137	157	161	89	45	79	83	122	67	97
2	124	243	64	106	64	137	183	161	101	45	79	83	122	67	110





DN10/15 - 50

Ball valve type 130 PVC-U 100-230V With manual emergency override With solvent cement sockets metric

Model:

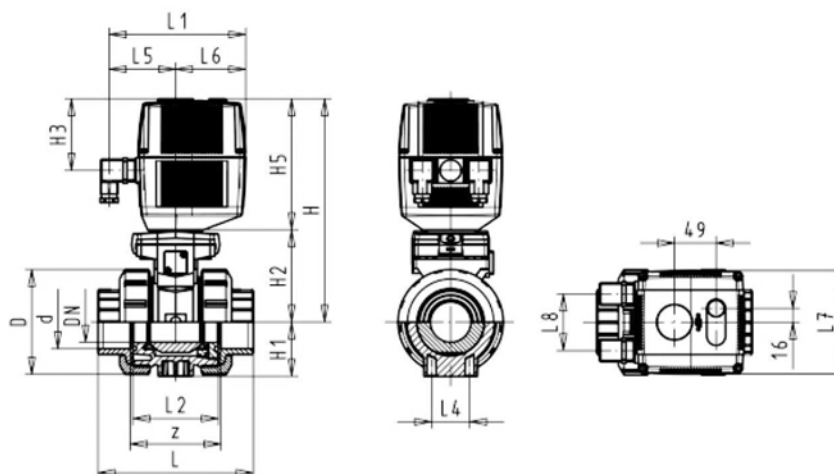
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 130 002	199 130 012	2.100	
20	15	10	185	199 130 003	199 130 013	2.100	
25	20	10	350	199 130 004	199 130 014	2.200	
32	25	10	700	199 130 005	199 130 015	2.300	
40	32	10	1000	199 130 006	199 130 016	2.600	
50	40	10	1600	199 130 007	199 130 017	3.000	
63	50	10	3100	199 130 008	199 130 018	3.800	
 75	65	10	5000	199 130 009	199 130 019	3.900	
 90	80	10	7000	199 130 010	199 130 020	4.800	
 110	100	10	11000	199 130 011	199 130 021	6.300	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	231	27	64	94	167	92	180	56	25	97	83	122	64
20	50	231	27	64	94	167	95	180	56	25	97	83	122	64
25	58	240	30	73	94	167	110	180	65	25	97	83	122	72
32	68	240	36	73	94	167	123	180	71	25	97	83	122	79
40	84	251	44	84	94	167	146	180	85	45	97	83	122	94
50	97	251	51	84	94	167	157	180	89	45	97	83	122	95
63	124	273	64	106	94	167	183	180	101	45	97	83	122	107
 75	166	346	85	156	94	190	233	180	136	70	98	83	122	144
 90	200	358	105	168	94	190	254	180	141	70	98	83	122	151
 110	238	365	123	175	94	190	301	180	164	120	98	83	122	174





DN10/15 - 50

Ball valve type 130 PVC-U 24V

With manual emergency override

With solvent cement sockets metric

Model:

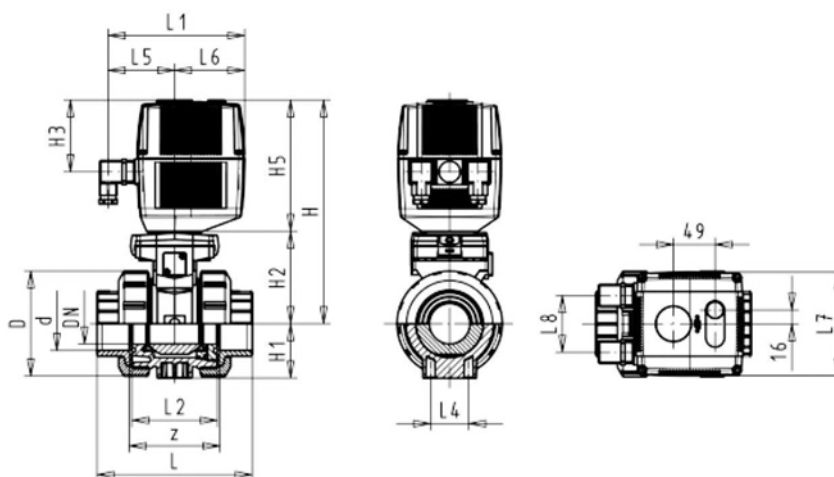
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 130 042	199 130 052	2.100	
20	15	10	185	199 130 043	199 130 053	2.100	
25	20	10	350	199 130 044	199 130 054	2.200	
32	25	10	700	199 130 045	199 130 055	2.300	
40	32	10	1000	199 130 046	199 130 056	2.600	
50	40	10	1600	199 130 047	199 130 057	3.000	
63	50	10	3100	199 130 048	199 130 058	3.800	
 75	65	10	5000	199 130 049	199 130 059	3.900	
 90	80	10	7000	199 130 050	199 130 060	4.800	
 110	100	10	11000	199 130 051	199 130 061	6.300	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	231	27	64	94	167	92	180	56	25	97	83	122	64
20	50	231	27	64	94	167	95	180	56	25	97	83	122	64
25	58	240	30	73	94	167	110	180	65	25	97	83	122	72
32	68	240	36	73	94	167	123	180	71	25	97	83	122	79
40	84	251	44	84	94	167	146	180	85	45	97	83	122	94
50	97	251	51	84	94	167	157	180	89	45	97	83	122	95
63	124	273	64	106	94	167	183	180	101	45	97	83	122	107
 75	166	347	85	156	94	190	233	180	136	70	98	83	122	144
 90	200	358	105	168	94	190	254	180	141	70	98	83	122	151
 110	238	365	123	175	94	190	301	180	164	120	98	83	122	174





DN10/15 - 50

Ball valve type 130 PVC-U 100-230V

With manual emergency override

With solvent cement spigots metric

Model:

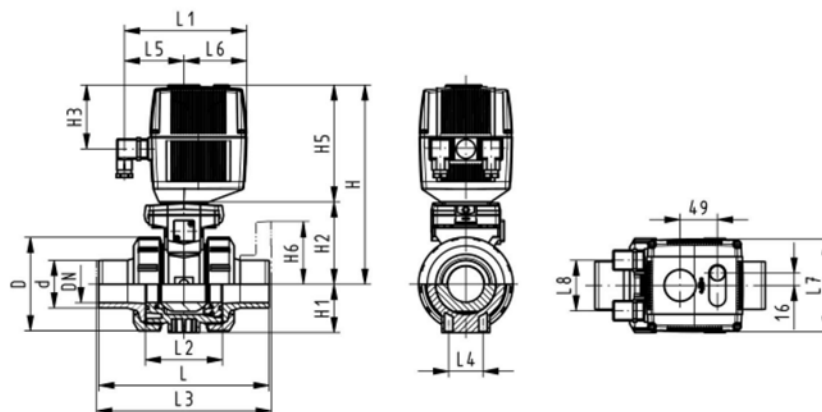
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 130 022	199 130 032	2.100	
20	15	10	185	199 130 023	199 130 033	2.100	
25	20	10	350	199 130 024	199 130 034	2.200	
32	25	10	700	199 130 025	199 130 035	2.300	
40	32	10	1000	199 130 026	199 130 036	2.600	
50	40	10	1600	199 130 027	199 130 037	3.000	
63	50	10	3100	199 130 028	199 130 038	3.800	
 75	65	10	5000	199 130 029	199 130 039	4.000	
 90	80	10	7000	199 130 030	199 130 040	5.000	
 110	100	10	11000	199 130 031	199 130 041	6.500	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	231	27	64	94	167	114	180	56	130	25	97	83	122	
20	50	231	27	64	94	167	124	180	56	130	25	97	83	122	
25	58	240	30	73	94	167	144	180	65	150	25	97	83	122	
32	68	240	36	73	94	167	154	180	71	160	25	97	83	122	
40	84	251	44	84	94	167	174	180	85	180	45	97	83	122	
50	97	251	51	84	94	167	194	180	89	200	45	97	83	122	
63	124	273	64	106	94	167	224	180	101	230	45	97	83	122	
 75	166	346	85	156	94	190	284	180	136	290	70	98	83	122	
 90	200	358	105	168	94	190	300	180	141	310	70	98	83	122	
 110	238	365	123	175	94	190	340	180	164	350	120	98	83	122	





DN10/15 - 50

Ball valve type 130 PVC-U 24V

With manual emergency override

With solvent cement spigots metric

Model:

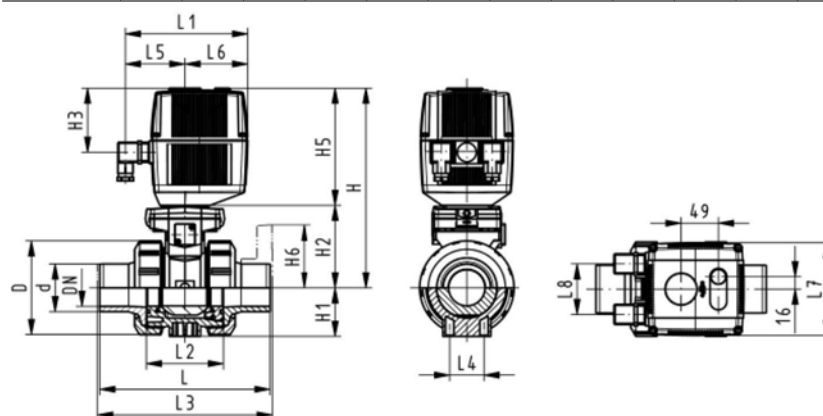
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 130 062	199 130 072	2.100	
20	15	10	185	199 130 063	199 130 073	2.100	
25	20	10	350	199 130 064	199 130 074	2.200	
32	25	10	700	199 130 065	199 130 075	2.300	
40	32	10	1000	199 130 066	199 130 076	2.600	
50	40	10	1600	199 130 067	199 130 077	3.000	
63	50	10	3100	199 130 068	199 130 078	3.800	
 75	65	10	5000	199 130 069	199 130 079	4.000	
 90	80	10	7000	199 130 070	199 130 080	5.000	
 110	100	10	11000	199 130 071	199 130 081	6.500	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	231	27	64	94	167	114	180	56	130	25	97	83	122	
20	50	231	27	64	94	167	124	180	56	130	25	97	83	122	
25	58	240	30	73	94	167	144	180	65	150	25	97	83	122	
32	68	240	36	73	94	167	154	180	71	160	25	97	83	122	
40	84	251	44	84	94	167	174	180	85	180	45	97	83	122	
50	97	251	51	84	94	167	194	180	89	200	45	97	83	122	
63	124	273	64	106	94	167	224	180	101	230	45	97	83	122	
 75	166	346	85	156	94	190	284	180	136	290	70	98	83	122	
 90	200	358	105	168	94	190	300	180	141	310	70	98	83	122	
 110	238	365	123	175	94	190	340	180	164	350	120	98	83	122	





DN10/15 - 50

Ball valve type 130 PVC-U 100-230V

With manual emergency override

With threaded sockets Rp

Model:

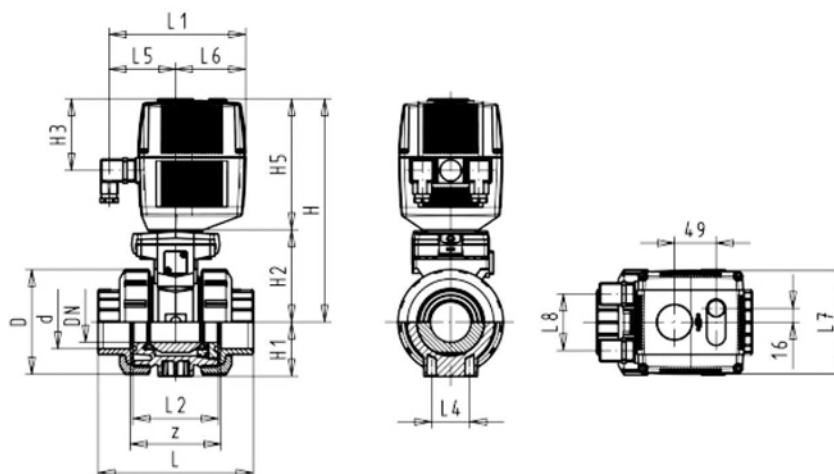
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

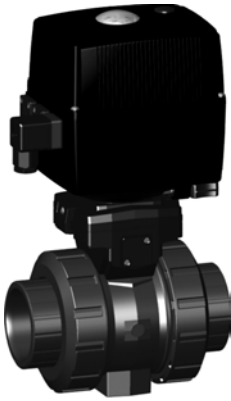
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg									
3/8	10	10	70	199 130 122	199 130 132	2.100									
1/2	15	10	185	199 130 123	199 130 133	2.100									
3/4	20	10	350	199 130 124	199 130 134	2.200									
1	25	10	700	199 130 125	199 130 135	2.300									
1 1/4	32	10	1000	199 130 126	199 130 136	2.600									
1 1/2	40	10	1600	199 130 127	199 130 137	3.000									
2	50	10	3100	199 130 128	199 130 138	3.800									
 2 1/2	65	10	5000	199 130 129	199 130 139	3.900									
 3	80	10	7000	199 130 130	199 130 140	4.900									
 4	100	10	11000	199 130 131	199 130 141	6.300									

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	231	27	64	94	167	92	180	56	25	97	83	122	64
1/2	50	231	27	64	94	167	95	180	56	25	97	83	122	64
3/4	58	240	30	73	94	167	110	180	65	25	97	83	122	72
1	68	240	36	73	94	167	123	180	71	25	97	83	122	79
1 1/4	84	251	44	84	94	167	146	180	85	45	97	83	122	94
1 1/2	97	251	51	84	94	167	157	180	89	45	97	83	122	95
2	124	273	64	106	94	167	183	180	101	45	97	83	122	107
 2 1/2	166	346	85	156	94	190	233	180	136	70	98	83	122	144
 3	200	358	105	168	94	190	254	180	141	70	98	83	122	151
 4	238	365	123	175	94	190	301	180	164	120	98	83	122	174





DN10/15 - 50

Ball valve type 130 PVC-U 24V With manual emergency override With threaded sockets Rp

Model:

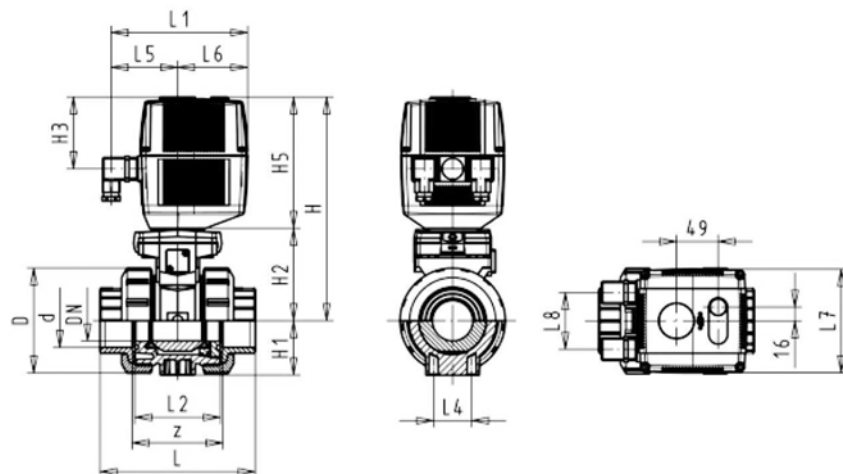
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 130 162	199 130 172	2.100	
1/2	15	10	185	199 130 163	199 130 173	2.100	
3/4	20	10	350	199 130 164	199 130 174	2.200	
1	25	10	700	199 130 165	199 130 175	2.300	
1 1/4	32	10	1000	199 130 166	199 130 176	2.600	
1 1/2	40	10	1600	199 130 167	199 130 177	3.000	
2	50	10	3100	199 130 168	199 130 178	3.800	
2 1/2	65	10	5000	199 130 169	199 130 179	3.900	
3	80	10	7000	199 130 170	199 130 180	4.900	
4	100	10	11000	199 130 171	199 130 181	6.300	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	231	27	64	94	167	92	180	56	25	97	83	122	64
1/2	50	231	27	64	94	167	95	180	56	25	97	83	122	64
3/4	58	240	30	73	94	167	110	180	65	25	97	83	122	72
1	68	240	36	73	94	167	123	180	71	25	97	83	122	79
1 1/4	84	251	44	84	94	167	146	180	85	45	97	83	122	94
1 1/2	97	251	51	84	94	167	157	180	89	45	97	83	122	95
2	124	273	64	106	94	167	183	180	101	45	97	83	122	107
2 1/2	166	346	85	156	94	190	233	180	136	70	98	83	122	144
3	200	358	105	168	94	190	254	180	141	70	98	83	122	151
4	238	365	123	175	94	190	301	180	164	120	98	83	122	174





DN10/15 - 50

Ball valve type 130 PVC-U 100-230V

With manual emergency override

With fixed flanges serrated metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time: EA21: 5s/90°<, EA31: 15s/90°<
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

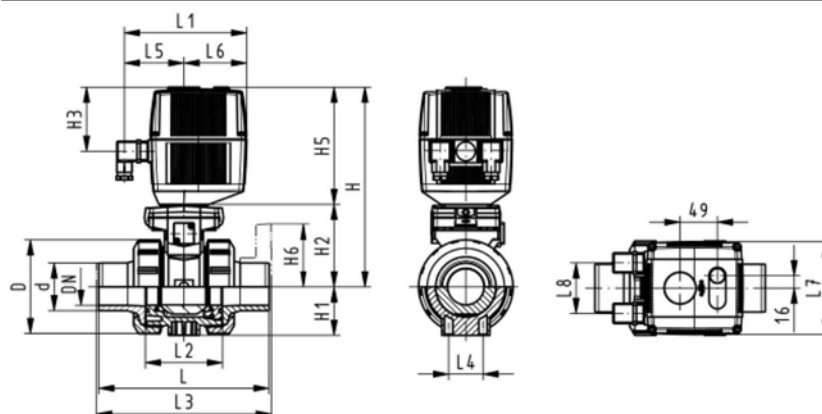
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value (Δp=1 bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	½	10	185	199 130 103	199 130 113	2.300	
25	20	¾	10	350	199 130 104	199 130 114	2.500	
32	25	1	10	700	199 130 105	199 130 115	2.700	
40	32	1 ¼	10	1000	199 130 106	199 130 116	3.200	
50	40	1 ½	10	1600	199 130 107	199 130 117	3.700	
63	50	2	10	3100	199 130 108	199 130 118	4.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	231	27	64	94	167	48	124	180	56	130	25	98	83	122
25	58	240	30	73	94	167	53	144	180	65	150	25	97	83	122
32	68	240	36	73	94	167	58	154	180	71	160	25	97	83	122
40	84	251	44	84	94	167	70	174	180	85	180	45	97	83	122
50	97	251	51	84	94	167	75	194	180	89	200	45	98	83	122
63	124	273	64	106	94	167	83	224	180	101	230	45	97	83	122

d [mm]	L8 [mm]
20	66
25	66
32	66
40	66
50	66
63	66





DN10/15 - 50

Ball valve type 130 PVC-U 24V

With manual emergency override

With fixed flanges serrated metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

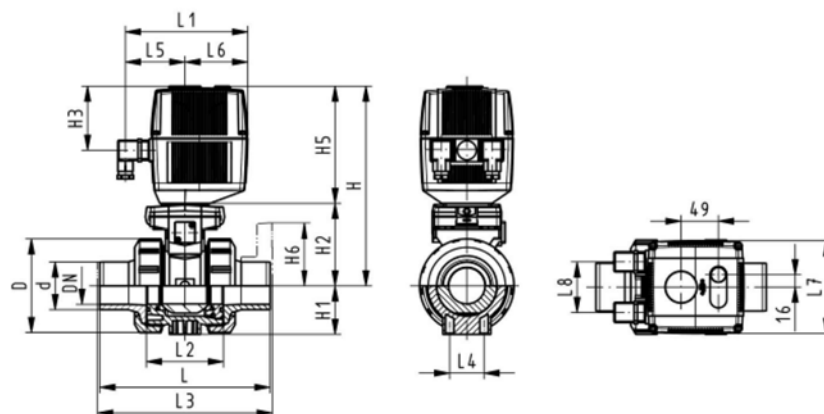
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	½	10	185	199 130 143	199 130 153	2.300	
25	20	¾	10	350	199 130 144	199 130 154	2.500	
32	25	1	10	700	199 130 145	199 130 155	2.700	
40	32	1 ¼	10	1000	199 130 146	199 130 156	3.200	
50	40	1 ½	10	1600	199 130 147	199 130 157	3.700	
63	50	2	10	3100	199 130 148	199 130 158	4.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
20	50	231	27	64	94	167	48	124	180	56	130	25	97	83	122	
25	58	240	30	73	94	167	53	144	180	65	150	25	97	83	122	
32	68	240	36	73	94	167	58	154	180	71	160	25	97	83	122	
40	84	251	44	84	94	167	70	174	180	85	180	45	97	83	122	
50	97	251	51	84	94	167	75	194	180	89	200	45	97	83	122	
63	124	273	64	106	94	167	83	224	180	101	230	45	97	83	122	

d [mm]	L8 [mm]	
20	66	
25	66	
32	66	
40	66	
50	66	
63	66	





Ball valve type 130 PVC-U 100-230V

With manual emergency override

With backing flanges PP ST metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

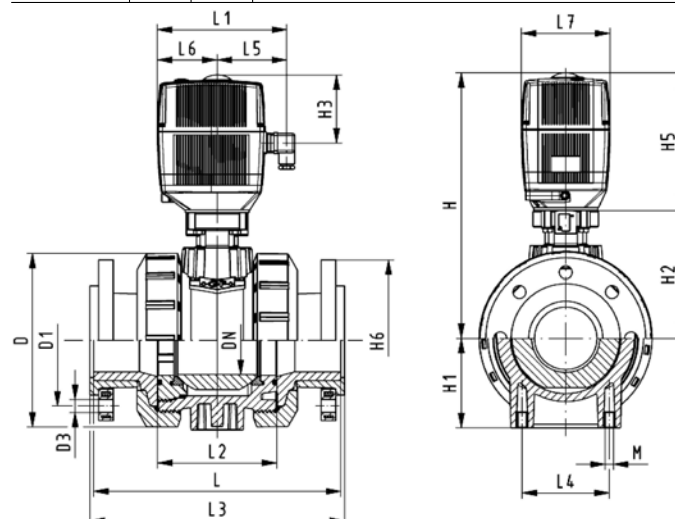
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg										
 75	65	10	5000	199 134 349	199 134 359	8.100										
 90	80	10	7000	199 134 350	199 134 360	9.900										
 110	100	10	11000	199 134 351	199 134 361	13.200										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]		
 75	166	346	85	156	94	190	93	284	180	136	290	70	98	83		
 90	200	358	105	168	94	190	100	300	180	141	310	70	98	83		
 110	238	365	123	175	94	190	110	340	180	164	350	120	98	83		

d [mm]	L7 [mm]	L8 [mm]														
 75	122	66														
 90	122	66														
 110	122	66														





Ball valve type 130 PVC-U 24V

With manual emergency override

With backing flanges PP-st metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

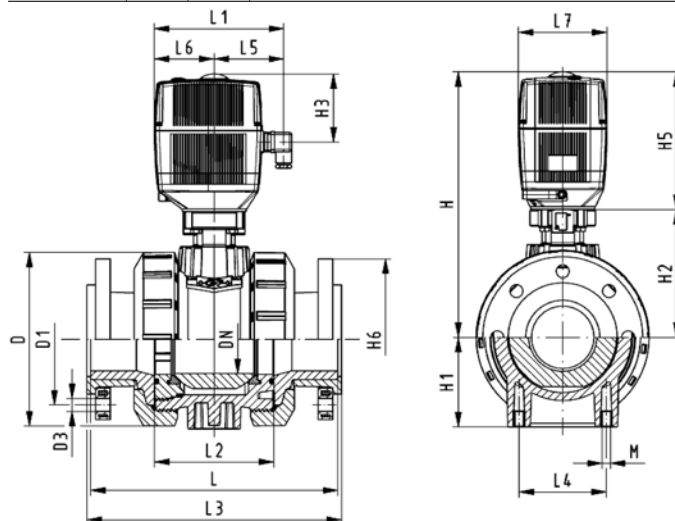
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	199 134 369	199 134 379	8.100	
 90	80	10	7000	199 134 370	199 134 380	9.900	
 110	100	10	11000	199 134 371	199 134 381	13.200	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
 75	166	346	85	156	94	190	93	284	180	136	290	70	98	83	
 90	200	358	105	168	94	190	100	300	180	141	310	70	98	83	
 110	238	365	123	175	94	190	110	340	180	164	350	120	98	83	

d [mm]	L7 [mm]	L8 [mm]	
 75	122	66	
 90	122	66	
 110	122	66	





DN10/15 - 50

Ball valve type 134 PVC-U 100-230V With manual emergency override With solvent cement sockets Inch BS

Model:

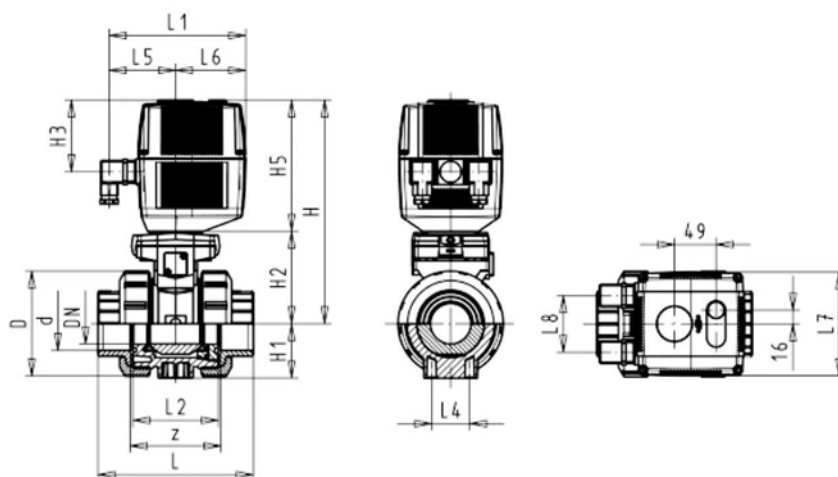
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 134 002	199 134 012	2.100	
1/2	15	10	185	199 134 003	199 134 013	2.100	
3/4	20	10	350	199 134 004	199 134 014	2.200	
1	25	10	700	199 134 005	199 134 015	2.300	
1 1/4	32	10	1000	199 134 006	199 134 016	2.600	
1 1/2	40	10	1600	199 134 007	199 134 017	3.000	
2	50	10	3100	199 134 008	199 134 018	3.800	
 2 1/2	65	10	5000	199 134 009	199 134 019	3.900	
 3	80	10	7000	199 134 010	199 134 020	4.800	
 4	100	10	11000	199 134 011	199 134 021	6.200	

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	231	27	64	94	167	92	180	56	25	97	83	122	60
1/2	50	231	27	64	94	167	95	180	56	25	97	83	122	60
3/4	58	240	30	73	94	167	110	180	65	25	97	83	122	69
1	68	240	36	73	94	167	123	180	71	25	97	83	122	75
1 1/4	84	251	44	84	94	167	146	180	85	45	97	83	122	89
1 1/2	97	251	51	84	94	167	157	180	89	45	97	83	122	97
2	124	273	64	106	94	167	183	180	101	45	97	83	122	110
 2 1/2	166	347	85	156	94	190	233	180	136	70	98	83	122	144
 3	200	358	105	168	94	190	254	180	141	70	98	83	122	151
 4	238	365	123	175	94	190	301	180	164	120	98	83	122	174





Ball valve type 134 PVC-U 24V

With manual emergency override

With solvent cement sockets Inch BS

Model:

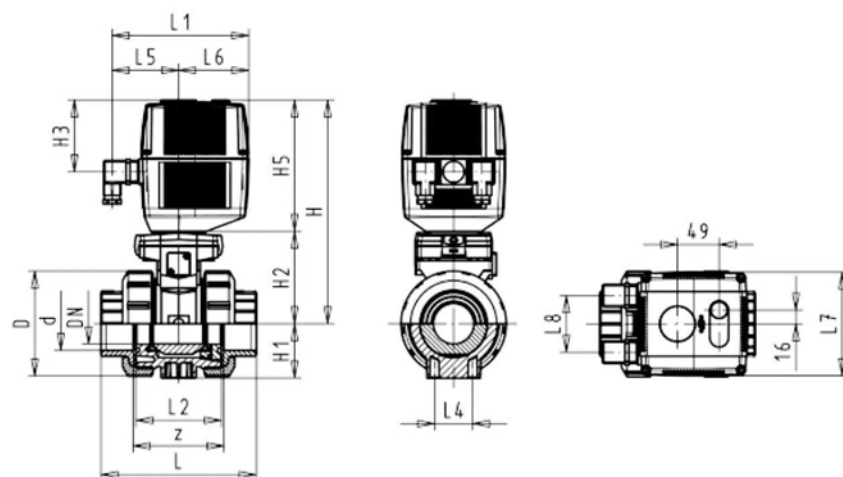
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 134 042	199 134 052	2.100	
1/2	15	10	185	199 134 043	199 134 053	2.100	
3/4	20	10	350	199 134 044	199 134 054	2.200	
1	25	10	700	199 134 045	199 134 055	2.300	
1 1/4	32	10	1000	199 134 046	199 134 056	2.600	
1 1/2	40	10	1600	199 134 047	199 134 057	3.000	
2	50	10	3100	199 134 048	199 134 058	3.800	
2 1/2	65	10	5000	199 134 049	199 134 059	3.900	
3	80	10	7000	199 134 050	199 134 060	4.800	
4	100	10	11000	199 134 051	199 134 061	6.200	

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	231	27	64	94	167	92	180	56	25	97	83	122	60
1/2	50	231	27	64	94	167	95	180	56	25	97	83	122	60
3/4	58	240	30	73	94	167	110	180	65	25	97	83	122	69
1	68	240	36	73	94	167	123	180	71	25	97	83	122	75
1 1/4	84	251	44	84	94	167	146	180	85	45	97	83	122	89
1 1/2	97	251	51	84	94	167	157	180	89	45	97	83	122	97
2	124	273	64	106	94	167	183	180	101	45	97	83	122	110
2 1/2	166	346	85	156	94	190	233	180	136	70	98	83	122	144
3	200	358	105	168	94	190	254	180	141	70	98	83	122	151
4	238	365	123	175	94	190	301	180	164	120	98	83	122	174



Copiable

Configurator GF Ball Valve Type 546 PVC-U

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for your application, we put together a selection menu for you (the maximum working pressure of the whole valve is determined by the maximum permissible nominal pressure of the connecting part).

Ball valve										
A01 Ball valve 546										
Material										
B01 PVC-U										
Dimension										
C05 d 16 DN 10 3/8"										
C06 d 20 DN 15 1/2"										
C07 d 25 DN 20 3/4"										
C08 d 32 DN 25 1"										
C09 d 40 DN 32 1 1/4"										
C10 d 50 DN 40 1 1/2"										
C11 d 63 DN 50 2"										
C12 d 75 DN 65 2 1/2"										
C13 d 90 DN 80 3"										
C14 d 110 DN 100 4"										
C15 d 160 DN 150 6"										
Version										
D01 standard, PTFE ball seal										
D02 oilfree, PTFE ball seal (only with specific connecting parts)										
D03 silicon-free, PTFE ball seal for inch ASTM (only with specific connecting parts)										
D04 silicon-free, PVDF ball seal for metric (only with specific connecting parts)										
Seals										
E01 EPDM seals										
E02 FPM seals										
E03 FFPM (KALREZ®) seals										
Threaded inserts										
F01 without threaded inserts										
F02 with threaded inserts										
Connecting parts										
G01 PVC-U Cement socket metric										
G03 PVC-U Cement socket inch ASTM										
G04 PVC-U Cement socket inch BS										
G05 PVC-U Cement spigot metric										
G06 PVC-U Threaded socket Rp										
G07 PVC-U Threaded socket Rp reinforced (DN10-50)										
G09 PVC-U Threaded socket NPT										
G30 PP-H Fusion socket metric										
G32 PP-H Socket fusion spigot metric										
G33 PP-H Threaded socket Rp										
G34 PP-H Threaded socket NPT reinforced										
G35 PP-H Butt fusion spigot SDR 11 metric IR-PLUS										
G36 PP-H Butt fusion spigot SDR 17.6 metric (limited dimension range)										
G37 PP-H Butt fusion spigot long SDR11 metric										
G40 PE-100 Fusion socket metric										
G41 PE-100 Butt fusion spigot SDR11 metric										
G42 PE-100 Butt fusion spigot SDR17.6 metric (limited dimension range)										
G43 PE-100 Butt fusion spigot long SDR11 metric										
G44 PE-100 Butt fusion spigot long SDR17.6 metric (DN65-100)										
G60 Fixed flange PVC-U serrated metric										
G61 Fixed flange PVC-U flat metric										
G70 Backing flange PVC-U metric										
G71 Backing flange PVC-U inch ANSI										
G72 Backing flange PP-steel metric										
G73 Backing flange PP-steel ANSI										
G78 Backing flange PVC-U JIS (DN65-100)										
G80 PVC-U Valve end blank										
Multi-functional module										
I01 No multi-functional module										
I02 Empty module										
I03 Module with 2 limit switches Ag, Ni										
I04 Module with 2 limit switches Au										
I05 Module with 2 inductive switches Namur										
I06 Module with 2 inductive switches PNP										
I07 Module with 2 inductive switches NPN										
Handle										
K01 Standard handle red										
K02 Standard handle black										
K11 Multi-functional handle red										
Mounting plate										
L01 without mounting plate										
L02 with mounting plate										
A01	B01	C	D	E	F	G	G	I	K	L
						left	right			

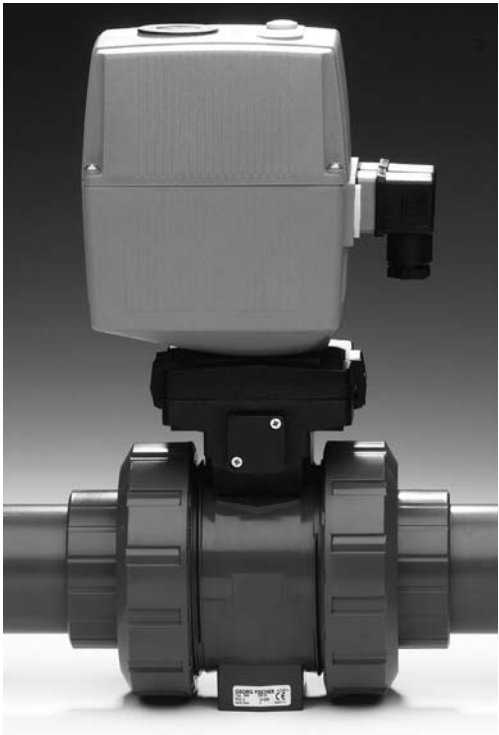
Copiable

GF ball valve type 546 with electric Actuator

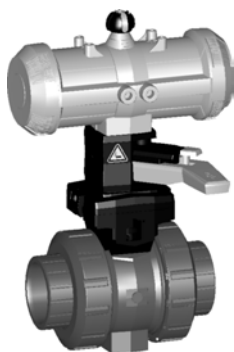
It's easy to actuate the type 546:

With the configurator, you have a choice of new electric actuators, the EA11 for standard applications and the EA21 with modular design and accessories, for practically and type of operation.

We supply what you put together.



Electric Actuator EA11								
T01	EA11 24 V							
T02	EA11 100–230 V							
Accessories EA11								
U01	No accessories							
U02	2 limit switches Ag, Ni							
U03	Heating element							
U04	Fail-safe return							
U05	2 limit switches Ag, Ni normally open							
Electric Actuator EA21/31								
T03	EA21/31 24 V							
T04	EA21/31 100–230 V							
Accessories EA21								
W01	No accessories							
W02	Heating element							
W03	Cycle time module							
W04	Cycle time monitoring							
W05	Cycles monitoring							
W06	Motor current monitoring							
W07	2 limit switches Ag, Ni							
W08	2 limit switches Gold							
W09	2 limit switches NPN							
W10	2 limit switches PNP							
W11	Positioner							
W12	Electric position indicator							
W14	Fail-safe return unit							
W15	Switch intermediate position							
W27	2 limit switches Ag, Ni normally open with connector							
W31	Positioner PE25 with galv. separation							
T	U	T	W	W	W	W	W	W



DN10/15 - 50

Ball valves pneumatic

Ball valve type 230 PVC-U FC (Fail safe to close)

With manual override

With solvent cement sockets metric

Model:

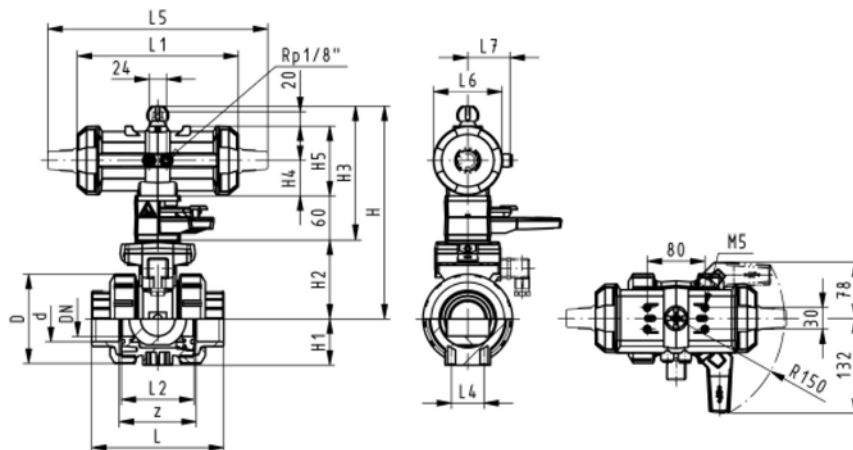
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

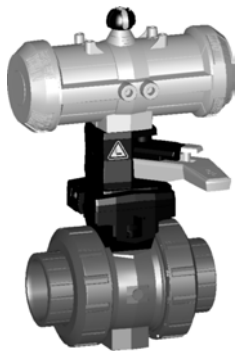
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 002	199 230 012	1.459	
20	15	10	185	199 230 003	199 230 013	1.459	
25	20	10	350	199 230 004	199 230 014	1.576	
32	25	10	700	199 230 005	199 230 015	1.700	
40	32	10	1000	199 230 006	199 230 016	2.751	
50	40	10	1600	199 230 007	199 230 017	3.073	
63	50	10	3100	199 230 008	199 230 018	3.931	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 PVC-U FO (Fail safe to open) With manual override With solvent cement sockets metric

Model:

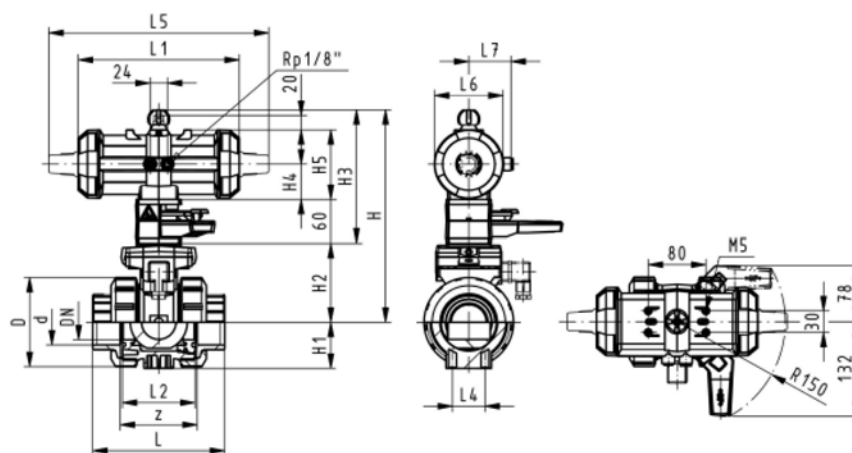
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

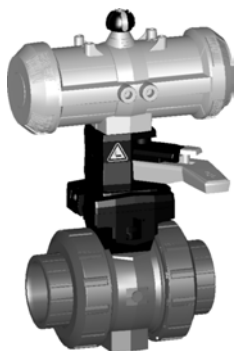
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg									
16	10	10	70	199 230 042	199 230 052	1.459									
20	15	10	185	199 230 043	199 230 053	1.459									
25	20	10	350	199 230 044	199 230 054	1.576									
32	25	10	700	199 230 045	199 230 055	1.700									
40	32	10	1000	199 230 046	199 230 056	2.751									
50	40	10	1600	199 230 047	199 230 057	3.073									
63	50	10	3100	199 230 048	199 230 058	3.931									

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 PVC-U DA (Double acting) With manual override With solvent cement sockets metric

Model:

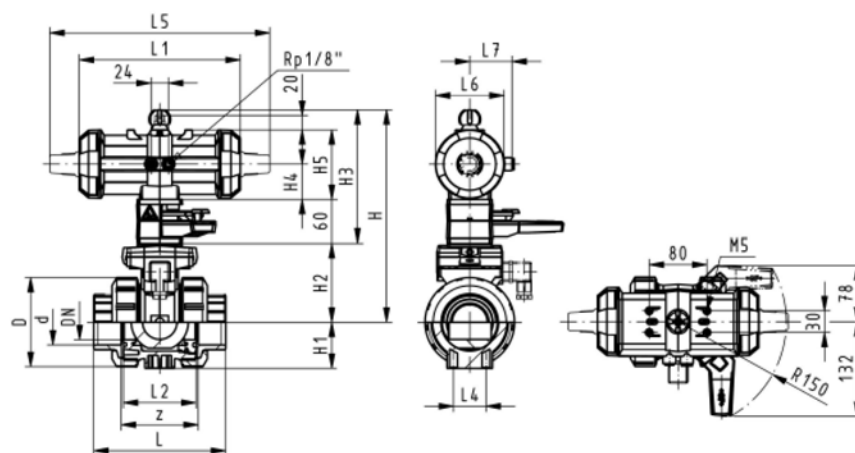
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

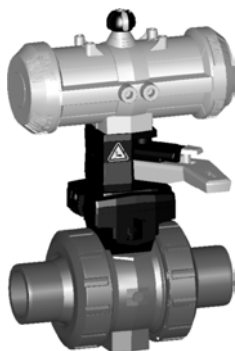
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 082	199 230 092	1.459	
20	15	10	185	199 230 083	199 230 093	1.459	
25	20	10	350	199 230 084	199 230 094	1.576	
32	25	10	700	199 230 085	199 230 095	1.700	
40	32	10	1000	199 230 086	199 230 096	2.751	
50	40	10	1600	199 230 087	199 230 097	3.073	
63	50	10	3100	199 230 088	199 230 098	3.931	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 PVC-U FC (Fail safe to close) With manual override With solvent cement spigots metric

Model:

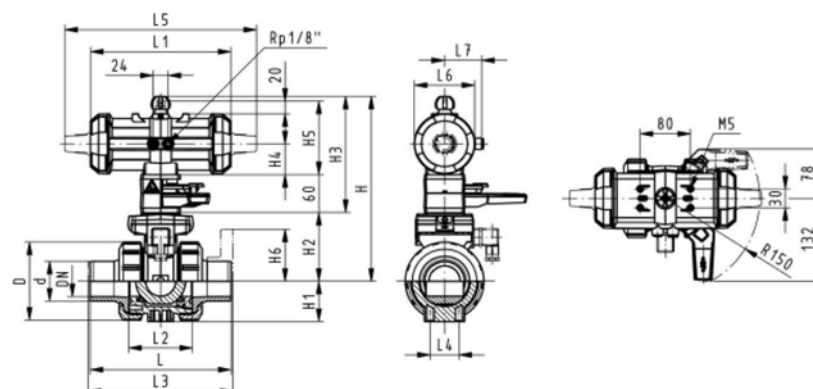
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ \leq$ 1-2 s

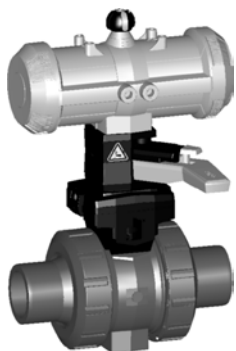
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 230 022	199 230 032	1.459
20	15	10	185	199 230 023	199 230 033	1.459
25	20	10	350	199 230 024	199 230 034	1.576
32	25	10	700	199 230 025	199 230 035	1.700
40	32	10	1000	199 230 026	199 230 036	2.751
50	40	10	1600	199 230 027	199 230 037	3.073
63	50	10	3100	199 230 028	199 230 038	3.931

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	114	194	56	130	25	261	76	48
20	50	230	27	62	168	40	97	124	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	144	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	154	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	174	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	194	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	224	224	101	230	45	305	95	59





DN10/15 - 50

Ball valve type 230 PVC-U FO (Fail safe to open) With manual override With solvent cement spigots metric

Model:

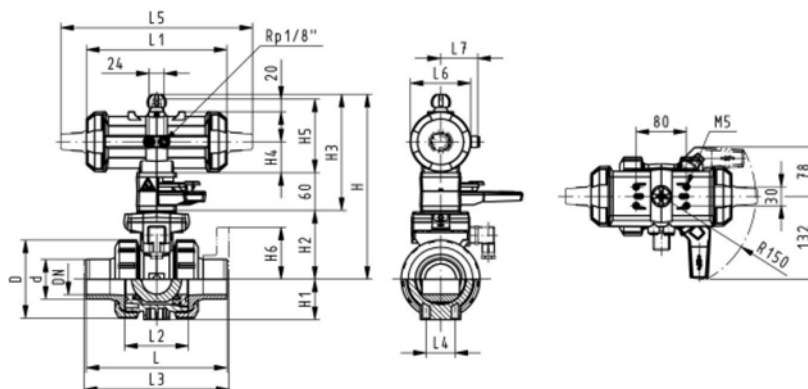
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

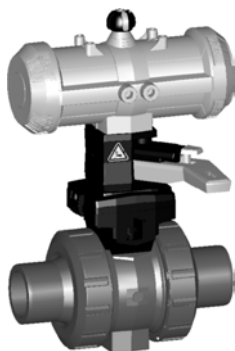
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 062	199 230 072	1.459	
20	15	10	185	199 230 063	199 230 073	1.459	
25	20	10	350	199 230 064	199 230 074	1.576	
32	25	10	700	199 230 065	199 230 075	1.700	
40	32	10	1000	199 230 066	199 230 076	2.751	
50	40	10	1600	199 230 067	199 230 077	3.073	
63	50	10	3100	199 230 068	199 230 078	3.931	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	114	194	56	130	25	261	76	48
20	50	230	27	62	168	40	97	124	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	144	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	154	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	174	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	194	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	224	224	101	230	45	305	95	59





DN10/15 - 50

Ball valve type 230 PVC-U DA (Double acting) With manual override With solvent cement spigots metric

Model:

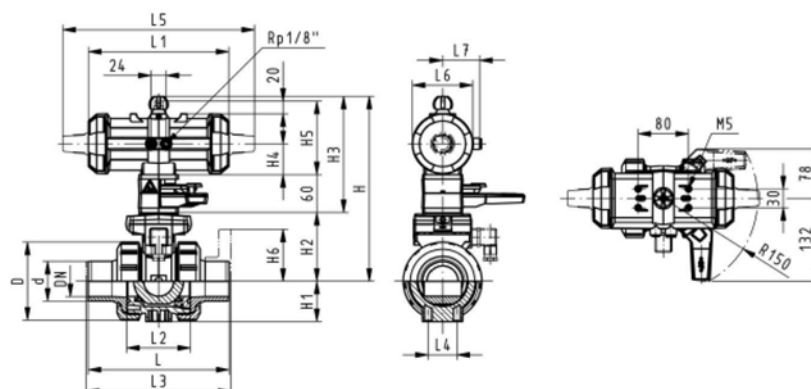
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ \leq$ 1-2 s

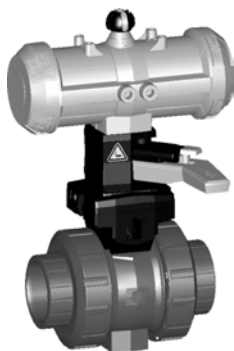
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 230 102	199 230 112	1.459
20	15	10	185	199 230 103	199 230 113	1.459
25	20	10	350	199 230 104	199 230 114	1.576
32	25	10	700	199 230 105	199 230 115	1.700
40	32	10	1000	199 230 106	199 230 116	2.751
50	40	10	1600	199 230 107	199 230 117	3.073
63	50	10	3100	199 230 108	199 230 118	3.931

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	114	194	56	130	25	261	76	48
20	50	230	27	62	168	40	97	124	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	144	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	154	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	174	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	194	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	224	224	101	230	45	305	95	59





DN10/15 - 50

Ball valve type 230 PVC-U FC (Fail safe to close) With manual override With threaded sockets Rp

Model:

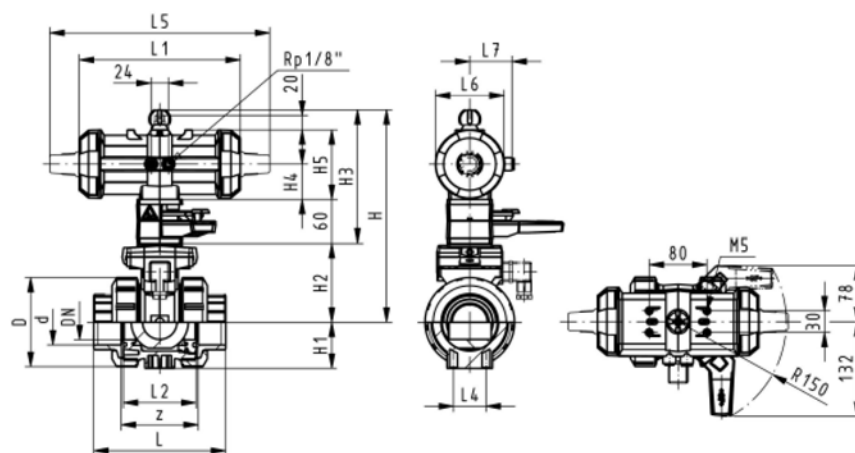
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

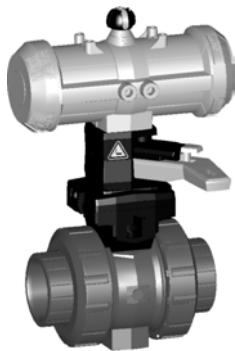
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 230 362	199 230 372	1.500	
1/2	15	10	185	199 230 363	199 230 373	1.500	
3/4	20	10	350	199 230 364	199 230 374	1.600	
1	25	10	700	199 230 365	199 230 375	1.700	
1 1/4	32	10	1000	199 230 366	199 230 376	2.800	
1 1/2	40	10	1600	199 230 367	199 230 377	3.100	
2	50	10	3100	199 230 368	199 230 378	4.000	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 PVC-U FO (Fail safe to open) With manual override With threaded sockets Rp

Model:

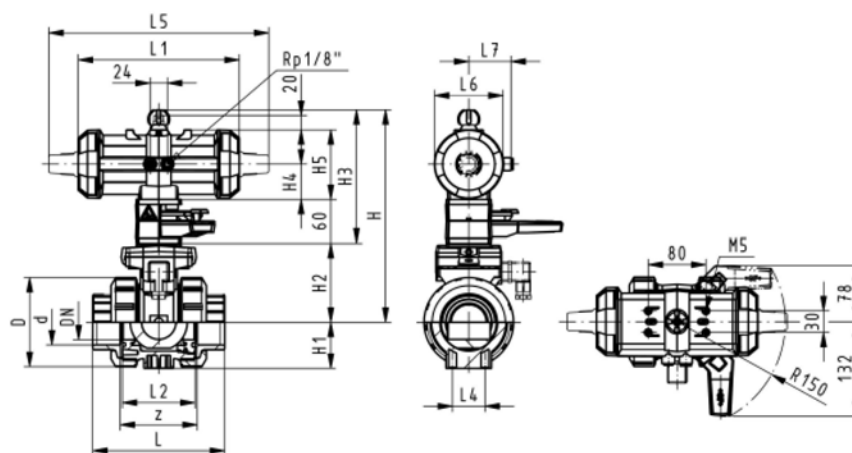
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ \leq$ 1-2 s

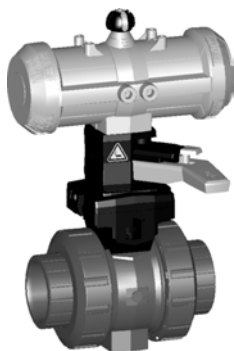
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg										
3/8	10	10	70	199 230 382	199 230 392	1.500										
1/2	15	10	185	199 230 383	199 230 393	1.500										
3/4	20	10	350	199 230 384	199 230 394	1.600										
1	25	10	700	199 230 385	199 230 395	1.700										
1 1/4	32	10	1000	199 230 386	199 230 396	2.800										
1 1/2	40	10	1600	199 230 387	199 230 397	3.100										
2	50	10	3100	199 230 388	199 230 398	4.000										

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 PVC-U DA (Double acting) With manual override With threaded sockets Rp

Model:

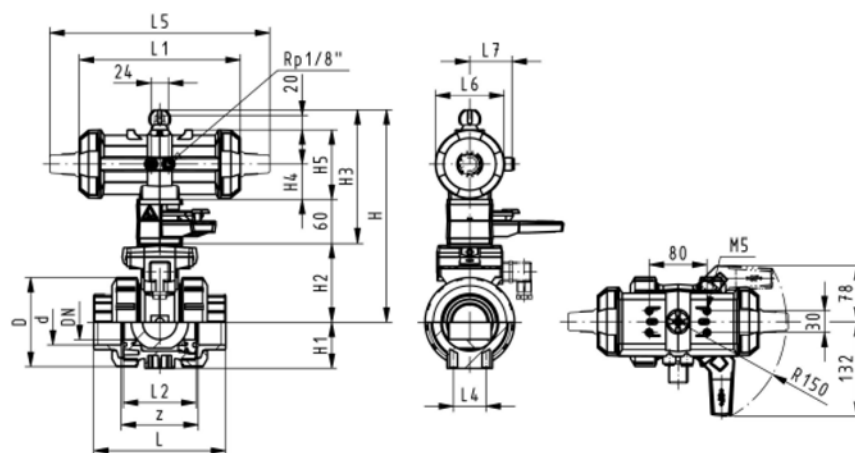
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 230 642	199 230 652	1.500	
1/2	15	10	185	199 230 643	199 230 653	1.500	
3/4	20	10	350	199 230 644	199 230 654	1.600	
1	25	10	700	199 230 645	199 230 655	1.700	
1 1/4	32	10	1000	199 230 646	199 230 656	2.800	
1 1/2	40	10	1600	199 230 647	199 230 657	3.100	
2	50	10	3100	199 230 648	199 230 658	4.000	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 PVC-U FC (Fail safe to close) With manual override With fixed flanges serrated metric

Model:

- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

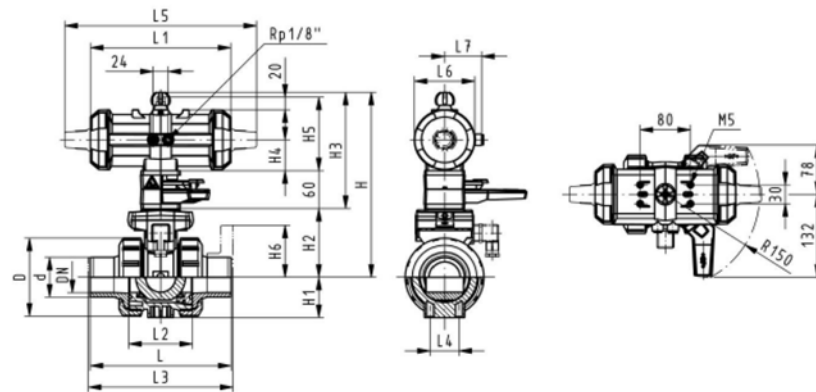
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	199 230 243	199 230 253	1.700
25	20	¾	10	350	199 230 244	199 230 254	1.900
32	25	1	10	700	199 230 245	199 230 255	2.100
40	32	1 ¼	10	1000	199 230 246	199 230 256	3.400
50	40	1 ½	10	1600	199 230 247	199 230 257	3.800
63	50	2	10	3100	199 230 248	199 230 258	4.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	50	230	27	62	168	40	97	48	124	194	56	130	25	261	76
25	58	239	30	71	168	40	97	53	144	194	65	150	25	261	76
32	68	239	36	71	168	40	97	58	154	194	71	160	25	261	76
40	84	271	44	84	187	51	115	70	174	224	85	180	45	305	95
50	97	271	51	84	187	51	115	75	194	224	89	200	45	305	95
63	124	293	64	106	187	51	115	83	224	224	101	230	45	305	95

d [mm]	L7 [mm]
20	48
25	48
32	48
40	59
50	59
63	59





DN10/15 - 50

Ball valve type 230 PVC-U FO (Fail safe to open) With manual override With fixed flanges serrated metric

Model:

- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90° < 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

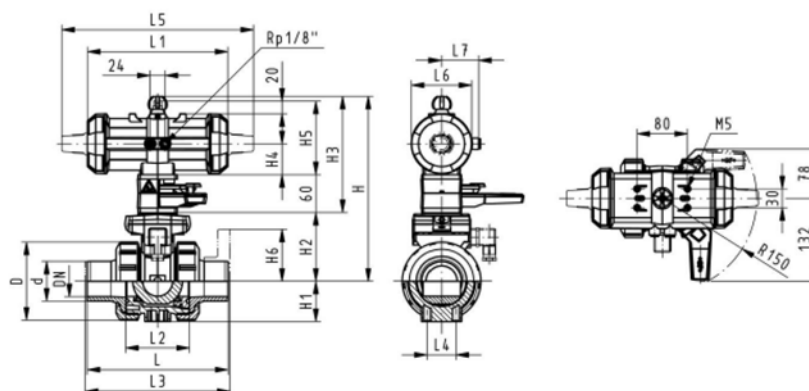
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	½	10	185	199 230 263	199 230 273	1.700	
25	20	¾	10	350	199 230 264	199 230 274	1.900	
32	25	1	10	700	199 230 265	199 230 275	2.100	
40	32	1 ¼	10	1000	199 230 266	199 230 276	3.400	
50	40	1 ½	10	1600	199 230 267	199 230 277	3.800	
63	50	2	10	3100	199 230 268	199 230 278	4.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	50	230	27	62	168	40	97	48	124	194	56	130	25	261	76
25	58	239	30	71	168	40	97	53	144	194	65	150	25	261	76
32	68	239	36	71	168	40	97	58	154	194	71	160	25	261	76
40	84	271	44	84	187	51	115	70	174	224	85	180	45	305	95
50	97	271	51	84	187	51	115	75	194	224	89	200	45	305	95
63	124	293	64	106	187	51	115	83	224	224	101	230	45	305	95

d [mm]	L7 [mm]
20	48
25	48
32	48
40	59
50	59
63	59





DN10/15 - 50

Ball valve type 230 PVC-U DA (Double acting) With manual override With fixed flanges serrated metric

Model:

- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ \leq$ 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

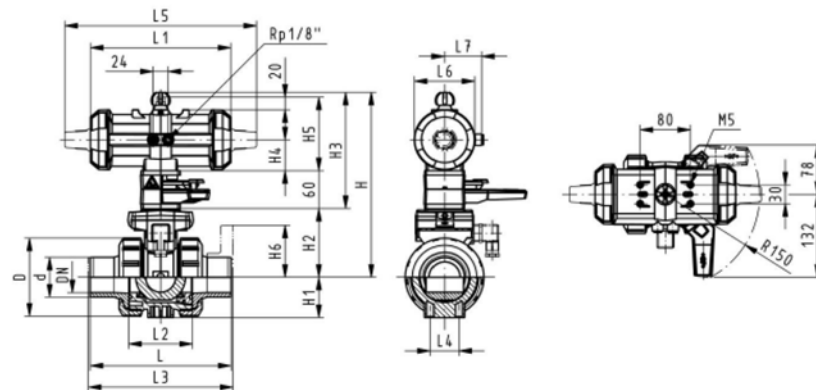
Option:

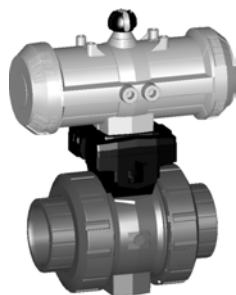
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	199 230 283	199 230 293	1.700
25	20	¾	10	350	199 230 284	199 230 294	1.900
32	25	1	10	700	199 230 285	199 230 295	2.100
40	32	1 ¼	10	1000	199 230 286	199 230 296	3.400
50	40	1 ½	10	1600	199 230 287	199 230 297	3.800
63	50	2	10	3100	199 230 288	199 230 298	4.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	50	230	27	62	168	40	97	48	124	194	56	130	25	261	76
25	58	239	30	71	168	40	97	53	144	194	65	150	25	261	76
32	68	239	36	71	168	40	97	58	154	194	71	160	25	261	76
40	84	271	44	84	187	51	115	70	174	224	85	180	45	305	95
50	97	271	51	84	187	51	115	75	194	224	89	200	45	305	95
63	124	293	64	106	187	51	115	83	224	224	101	230	45	305	95

d [mm]	L7 [mm]
20	48
25	48
32	48
40	59
50	59
63	59





DN10/15 - 50

Ball valve type 230 PVC-U FC (Fail safe to close) Without manual override With solvent cement sockets metric

Model:

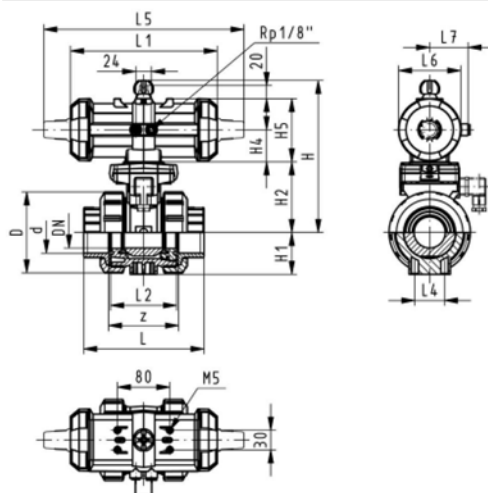
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

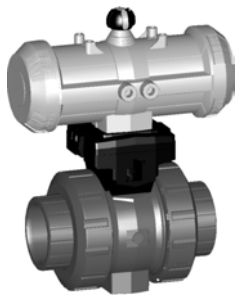
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 122	199 230 132	1.159	
20	15	10	185	199 230 123	199 230 133	1.159	
25	20	10	350	199 230 124	199 230 134	1.276	
32	25	10	700	199 230 125	199 230 135	1.400	
40	32	10	1000	199 230 126	199 230 136	2.451	
50	40	10	1600	199 230 127	199 230 137	2.773	
63	50	10	3100	199 230 128	199 230 138	3.631	
 75	65	10	5000	199 230 129	199 230 139	4.300	
 90	80	10	7000	199 230 130	199 230 140	5.200	
 110	100	10	11000	199 230 131	199 230 141	7.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	167	27	62	40	97	92	194	56	25	261	76	48	64
20	50	167	27	62	40	97	95	194	56	25	261	76	48	64
25	58	176	30	71	40	97	110	194	65	25	261	76	48	72
32	68	176	36	71	40	97	123	194	71	25	261	76	48	79
40	84	210	44	84	51	115	146	224	85	45	305	95	59	94
50	97	210	51	84	51	115	157	224	89	45	305	95	59	95
63	124	232	64	106	51	115	183	224	101	45	305	95	59	107
 75	166	262	85	156		70	233	218	136	70	276	65		144
 90	200	281	105	168		78	254	259	141	70	341	72		151
 110	238	292	123	175		86	301	287	164	120	369	80		174





DN10/15 - 50

Ball valve type 230 PVC-U FO (Fail safe to open) Without manual override With solvent cement sockets metric

Model:

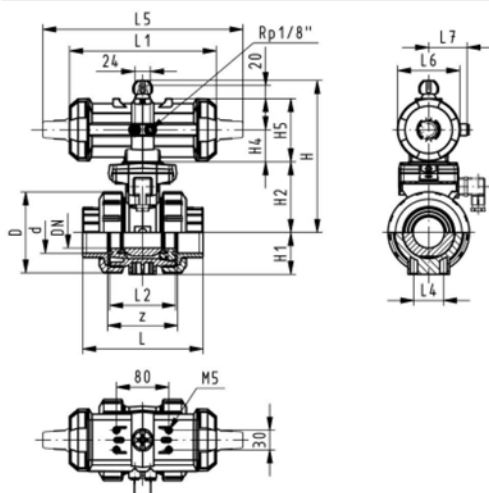
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

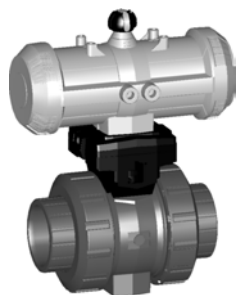
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 162	199 230 172	1.159	
20	15	10	185	199 230 163	199 230 173	1.159	
25	20	10	350	199 230 164	199 230 174	1.276	
32	25	10	700	199 230 165	199 230 175	1.400	
40	32	10	1000	199 230 166	199 230 176	2.451	
50	40	10	1600	199 230 167	199 230 177	2.773	
63	50	10	3100	199 230 168	199 230 178	3.631	
 75	65	10	5000	199 230 169	199 230 179	4.300	
 90	80	10	7000	199 230 170	199 230 180	5.200	
 110	100	10	11000	199 230 171	199 230 181	7.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]	
16	50	167	27	62	40	97	92	194	56	25	261	76	48	64	
20	50	167	27	62	40	97	95	194	56	25	261	76	48	64	
25	58	176	30	71	40	97	110	194	65	25	261	76	48	72	
32	68	176	36	71	40	97	123	194	71	25	261	76	48	79	
40	84	210	44	84	51	115	146	224	85	45	305	95	59	94	
50	97	210	51	84	51	115	157	224	89	45	305	95	59	95	
63	124	232	64	106	51	115	183	224	101	45	305	95	59	107	
 75	166	262	85	156		70	233	218	136	70	276	65		144	
 90	200	281	105	168		78	254	259	141	70	341	72		151	
 110	238	292	123	175		86	301	287	164	120	369	80		174	





DN10/15 - 50

Ball valve type 230 PVC-U DA (Double acting) Without manual override With solvent cement sockets metric

Model:

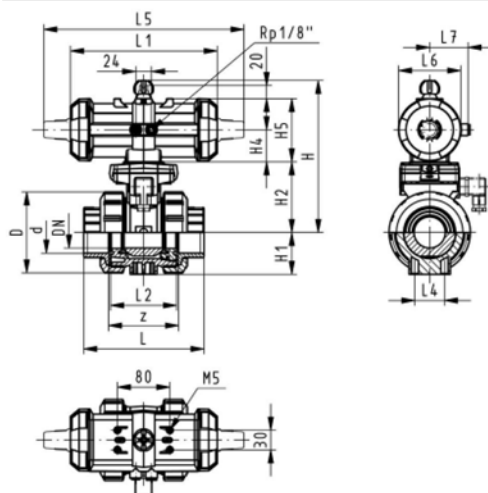
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

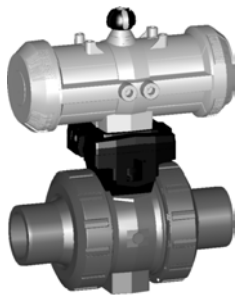
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 202	199 230 212	1.159	
20	15	10	185	199 230 203	199 230 213	1.159	
25	20	10	350	199 230 204	199 230 214	1.276	
32	25	10	700	199 230 205	199 230 215	1.400	
40	32	10	1000	199 230 206	199 230 216	2.451	
50	40	10	1600	199 230 207	199 230 217	2.773	
63	50	10	3100	199 230 208	199 230 218	3.631	
 75	65	10	5000	199 230 209	199 230 219	3.100	
 90	80	10	7000	199 230 210	199 230 220	4.500	
 110	100	10	11000	199 230 211	199 230 221	5.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]	
16	50	167	27	62	40	97	92	194	56	25	261	76	48	64	
20	50	167	27	62	40	97	95	194	56	25	261	76	48	64	
25	58	176	30	71	40	97	110	194	65	25	261	76	48	72	
32	68	176	36	71	40	97	123	194	71	25	261	76	48	79	
40	84	210	44	84	51	115	146	224	85	45	305	95	59	94	
50	97	210	51	84	51	115	157	224	89	45	305	95	59	95	
63	124	232	64	106	51	115	183	224	101	45	305	95	59	107	
 75	166	257	85	156		66	233	144	136	70	190	60		144	
 90	200	274	105	168		70	254	152	141	70	198	65		151	
 110	238	273	123	175		78	301	169	164	120	235	72		174	





DN10/15 - 50

Ball valve type 230 PVC-U FC (Fail safe to close) Without manual override With solvent cement spigots metric

Model:

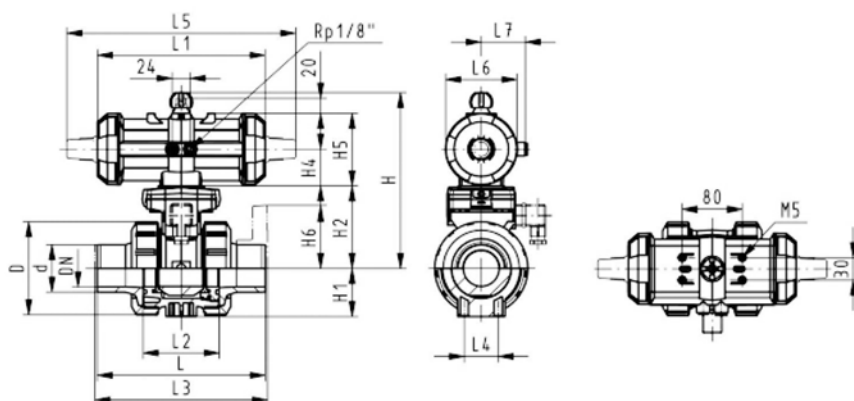
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

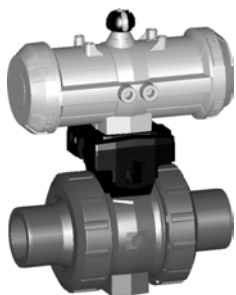
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 142	199 230 152	1.159	
20	15	10	185	199 230 143	199 230 153	1.159	
25	20	10	350	199 230 144	199 230 154	1.276	
32	25	10	700	199 230 145	199 230 155	1.400	
40	32	10	1000	199 230 146	199 230 156	2.451	
50	40	10	1600	199 230 147	199 230 157	2.773	
63	50	10	3100	199 230 148	199 230 158	3.631	
75	65	10	5000	199 230 149	199 230 159	4.400	
90	80	10	7000	199 230 150	199 230 160	5.400	
110	100	10	11000	199 230 151	199 230 161	7.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	167	27	62	40	97	114	194	56	0	25	261	76	48	
20	50	167	27	62	40	97	124	194	56	130	25	261	76	48	
25	58	176	30	71	40	97	144	194	65	150	25	261	76	48	
32	68	176	36	71	40	97	154	194	71	160	25	261	76	48	
40	84	210	44	84	51	115	174	224	85	180	45	305	95	59	
50	97	210	51	84	51	115	194	224	89	200	45	305	95	59	
63	124	232	64	106	51	115	224	224	101	230	45	305	95	59	
75	166	262	85	156		70	284	218	136	290	70	276	65		
90	200	281	105	168		78	300	259	141	310	70	341	72		
110	238	292	123	175		86	340	287	164	350	120	369	80		





DN10/15 - 50

Ball valve type 230 PVC-U FO (Fail safe to open) Without manual override With solvent cement spigots metric

Model:

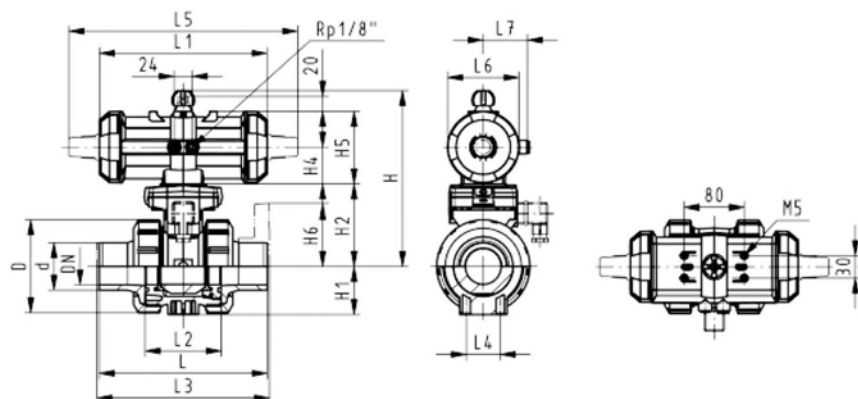
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

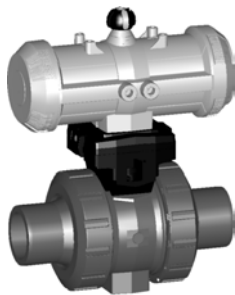
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 182	199 230 192	1.159	
20	15	10	185	199 230 183	199 230 193	1.159	
25	20	10	350	199 230 184	199 230 194	1.276	
32	25	10	700	199 230 185	199 230 195	1.400	
40	32	10	1000	199 230 186	199 230 196	2.451	
50	40	10	1600	199 230 187	199 230 197	2.773	
63	50	10	3100	199 230 188	199 230 198	3.631	
 75	65	10	5000	199 230 189	199 230 199	4.400	
 90	80	10	7000	199 230 190	199 230 200	5.400	
 110	100	10	11000	199 230 191	199 230 201	7.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	167	27	62	40	97	114	194	56	0	25	261	76	48	
20	50	167	27	62	40	97	124	194	56	130	25	261	76	48	
25	58	176	30	71	40	97	144	194	65	150	25	261	76	48	
32	68	176	36	71	40	97	154	194	71	160	25	261	76	48	
40	84	210	44	84	51	115	174	224	85	180	45	305	95	59	
50	97	210	51	84	51	115	194	224	89	200	45	305	95	59	
63	124	232	64	106	51	115	224	224	101	230	45	305	95	59	
 75	166	262	85	156		70	284	218	136	290	70	276	65		
 90	200	281	105	168		78	300	259	141	310	70	341	72		
 110	238	292	123	175		86	340	287	164	350	120	369	80		





DN10/15 - 50

Ball valve type 230 PVC-U DA (Double acting) Without manual override With solvent cement spigots metric

Model:

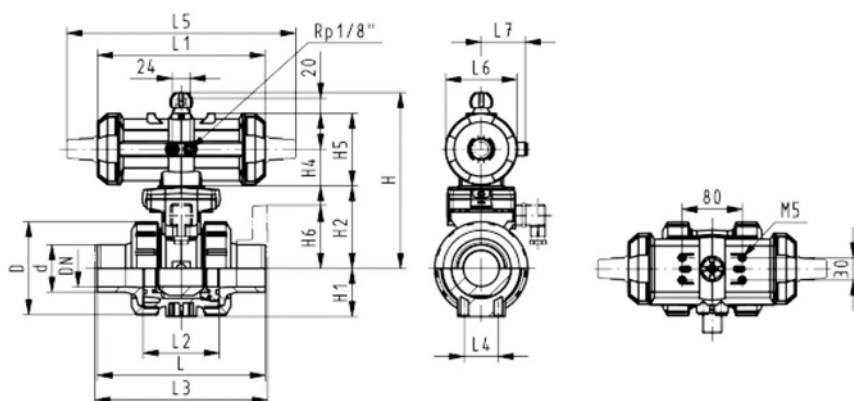
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ \leq$ 1-2 s

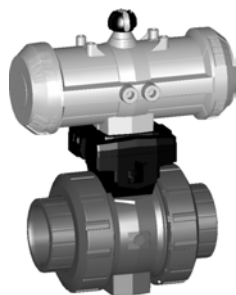
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 222	199 230 232	1.159	
20	15	10	185	199 230 223	199 230 233	1.159	
25	20	10	350	199 230 224	199 230 234	1.276	
32	25	10	700	199 230 225	199 230 235	1.400	
40	32	10	1000	199 230 226	199 230 236	2.451	
50	40	10	1600	199 230 227	199 230 237	2.773	
63	50	10	3100	199 230 228	199 230 238	3.631	
75	65	10	5000	199 230 229	199 230 239	3.300	
90	80	10	7000	199 230 230	199 230 240	4.700	
110	100	10	11000	199 230 231	199 230 241	6.200	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	167	27	62	40	97	114	194	56	0	25	261	76	48	
20	50	167	27	62	40	97	124	194	56	130	25	261	76	48	
25	58	176	30	71	40	97	144	194	65	150	25	261	76	48	
32	68	176	36	71	40	97	154	194	71	160	25	261	76	48	
40	84	210	44	84	51	115	174	224	85	180	45	305	95	59	
50	97	210	51	84	51	115	194	224	89	200	45	305	95	59	
63	124	232	64	106	51	115	224	224	101	230	45	305	95	59	
75	166	257	85	156		66	284	144	136	290	70	190	60		
90	200	274	105	168		70	300	152	141	310	70	198	65		
110	238	273	123	175		78	340	169	164	350	120	235	72		





DN10/15 - 50

Ball valve type 230 PVC-U FC (Fail safe to close) Without manual override With threaded sockets Rp

Model:

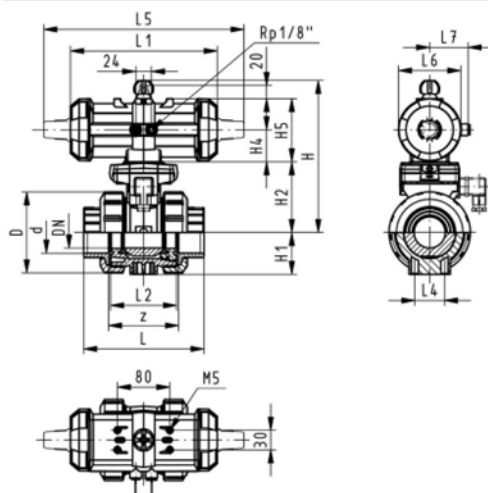
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

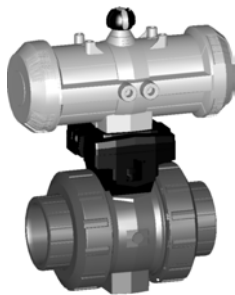
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 230 662	199 230 672	1.200	
1/2	15	10	185	199 230 663	199 230 673	1.200	
3/4	20	10	350	199 230 664	199 230 674	1.300	
1	25	10	700	199 230 665	199 230 675	1.400	
1 1/4	32	10	1000	199 230 666	199 230 676	2.500	
1 1/2	40	10	1600	199 230 667	199 230 677	2.800	
2	50	10	3100	199 230 668	199 230 678	3.700	
2 1/2	65	10	5000	199 230 669	199 230 679	4.300	
3	80	10	7000	199 230 670	199 230 680	5.300	
4	100	10	11000	199 230 671	199 230 681	7.700	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	64
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	64
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	72
1	68	176	36	71	40	97	123	194	71	25	261	76	48	79
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	94
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	95
2	124	232	64	106	51	115	183	224	101	45	305	95	59	107
2 1/2	166	262	85	156		70	233	218	136	70	276	65		144
3	200	281	105	168		78	254	259	141	70	341	72		151
4	238	292	123	175		86	301	287	164	120	369	80		174





DN10/15 - 50

Ball valve type 230 PVC-U FO (Fail safe to open) Without manual override With threaded sockets Rp

Model:

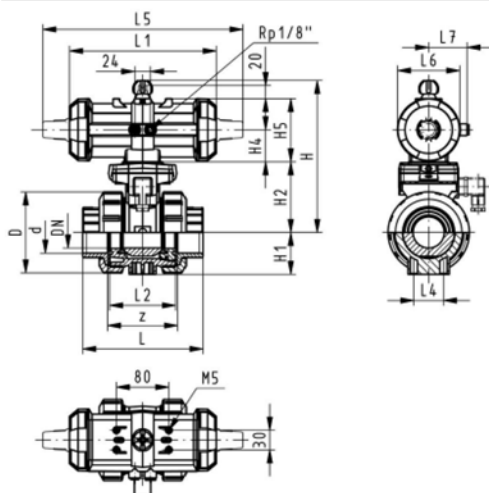
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

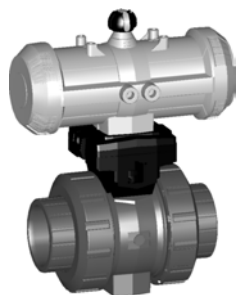
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 230 682	199 230 692	1.200	
1/2	15	10	185	199 230 683	199 230 693	1.200	
3/4	20	10	350	199 230 684	199 230 694	1.300	
1	25	10	700	199 230 685	199 230 695	1.400	
1 1/4	32	10	1000	199 230 686	199 230 696	2.500	
1 1/2	40	10	1600	199 230 687	199 230 697	2.800	
2	50	10	3100	199 230 688	199 230 698	3.700	
 2 1/2	65	10	5000	199 230 689	199 230 699	4.300	
 3	80	10	7000	199 230 690	199 230 700	5.300	
 4	100	10	11000	199 230 691	199 230 701	7.700	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	64
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	64
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	72
1	68	176	36	71	40	97	123	194	71	25	261	76	48	79
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	94
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	95
2	124	232	64	106	51	115	183	224	101	45	305	95	59	107
 2 1/2	166	262	85	156		70	233	218	136	70	276	65		144
 3	200	281	105	168		78	254	259	141	70	341	72		151
 4	238	292	123	175		86	301	287	164	120	369	80		174





DN10/15 - 50

Ball valve type 230 PVC-U DA (Double acting) Without manual override With threaded sockets Rp

Model:

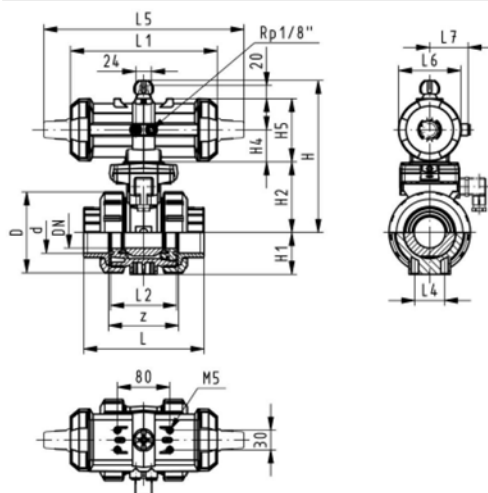
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 230 712	199 230 732	1.200	
1/2	15	10	185	199 230 713	199 230 733	1.200	
3/4	20	10	350	199 230 714	199 230 734	1.300	
1	25	10	700	199 230 715	199 230 735	1.400	
1 1/4	32	10	1000	199 230 716	199 230 736	2.500	
1 1/2	40	10	1600	199 230 717	199 230 737	2.800	
2	50	10	3100	199 230 718	199 230 738	3.700	
2 1/2	65	10	5000	199 230 719	199 230 739	3.200	
3	80	10	7000	199 230 720	199 230 740	4.700	
4	100	10	11000	199 230 721	199 230 741	6.000	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	64
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	64
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	72
1	68	176	36	71	40	97	123	194	71	25	261	76	48	79
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	94
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	95
2	124	232	64	106	51	115	183	224	101	45	305	95	59	107
2 1/2	166	257	85	156		66	233	144	136	70	190	60		144
3	200	274	105	168		70	254	152	141	70	198	65		151
4	238	273	123	175		78	301	169	164	120	235	72		174





DN10/15 - 50

Ball valve type 230 PVC-U FC (Fail safe to close) Without manual override With fixed flanges serrated metric

Model:

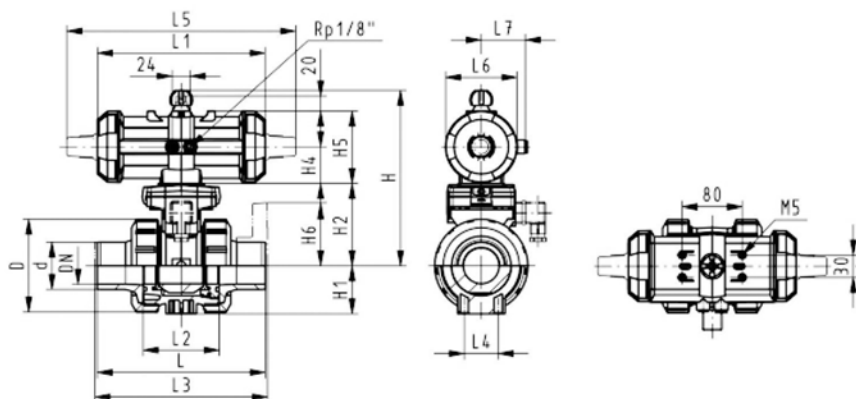
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ <$ 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	½	10	185	199 230 303	199 230 313	1.700	
25	20	¾	10	350	199 230 304	199 230 314	1.900	
32	25	1	10	700	199 230 305	199 230 315	2.100	
40	32	1 ¼	10	1000	199 230 306	199 230 316	3.400	
50	40	1 ½	10	1600	199 230 307	199 230 317	3.800	
63	50	2	10	3100	199 230 308	199 230 318	4.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	167	27	62	40	97	48	124	194	56	130	25	261	76	48
25	58	176	30	71	40	97	53	144	194	65	150	25	261	76	48
32	68	176	36	71	40	97	58	154	194	71	160	25	261	76	48
40	84	210	44	84	51	115	70	174	224	85	180	45	305	95	59
50	97	210	51	84	51	115	75	194	224	89	200	45	305	95	59
63	124	232	64	106	51	115	83	224	224	101	230	45	305	95	59





Ball valve type 230 PVC-U FO (Fail safe to open) Without manual override With fixed flanges serrated metric

Model:

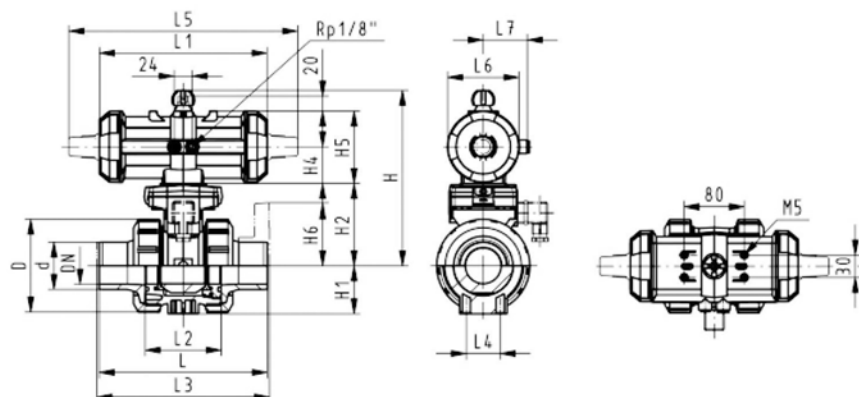
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	½	10	185	199 230 323	199 230 333	1.700	
25	20	¾	10	350	199 230 324	199 230 334	1.900	
32	25	1	10	700	199 230 325	199 230 335	2.100	
40	32	1 ¼	10	1000	199 230 326	199 230 336	3.400	
50	40	1 ½	10	1600	199 230 327	199 230 337	3.800	
63	50	2	10	3100	199 230 328	199 230 338	4.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	167	27	62	40	97	48	124	194	56	130	25	261	76	48
25	58	176	30	71	40	97	53	144	194	65	150	25	261	76	48
32	68	176	36	71	40	97	58	154	194	71	160	25	261	76	48
40	84	210	44	84	51	115	70	174	224	85	180	45	305	95	59
50	97	210	51	84	51	115	75	194	224	89	200	45	305	95	59
63	124	232	64	106	51	115	83	224	224	101	230	45	305	95	59





Ball valve type 230 PVC-U DA (Double acting) Without manual override With fixed flanges metric

Model:

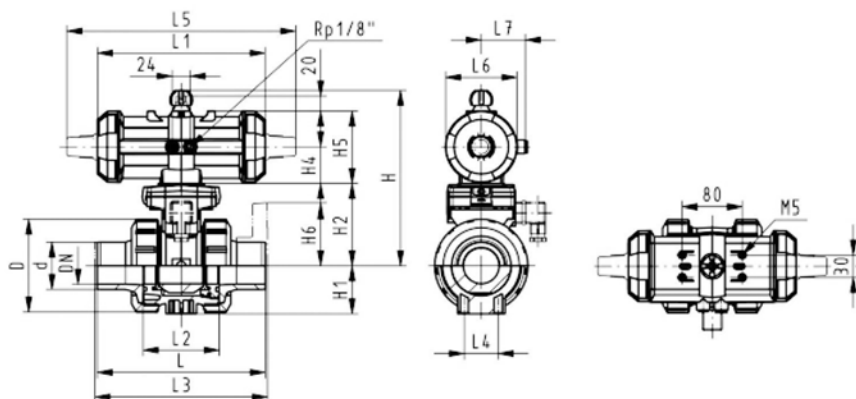
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ <$ 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	½	10	185	199 230 343	199 230 353	1.700	
25	20	¾	10	350	199 230 344	199 230 354	1.900	
32	25	1	10	700	199 230 345	199 230 355	2.100	
40	32	1 ¼	10	1000	199 230 346	199 230 356	3.400	
50	40	1 ½	10	1600	199 230 347	199 230 357	3.800	
63	50	2	10	3100	199 230 348	199 230 358	4.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	167	27	62	40	97	48	124	194	56	130	25	261	76	48
25	58	176	30	71	40	97	53	144	194	65	150	25	261	76	48
32	68	176	36	71	40	97	58	154	194	71	160	25	261	76	48
40	84	210	44	84	51	115	70	174	224	85	180	45	305	95	59
50	97	210	51	84	51	115	75	194	224	89	200	45	305	95	59
63	124	232	64	106	51	115	83	224	224	101	230	45	305	95	59





Ball valve type 230 PVC-U FC (Fail safe to close) Without manual override With backing flanges PP-st metric

Model:

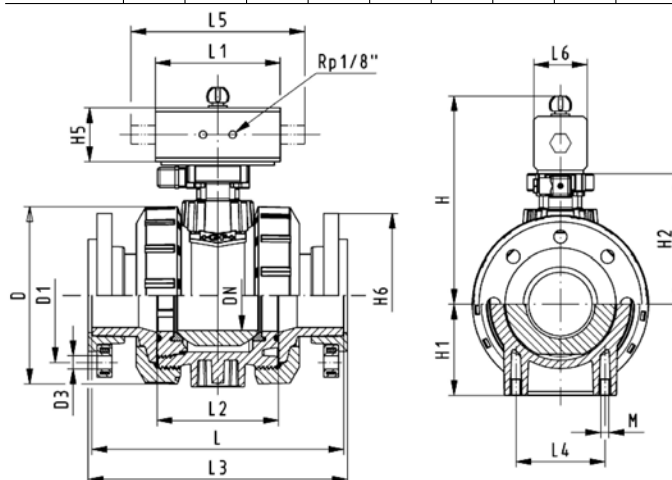
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	199 234 469	199 234 479	8.500	
 90	80	10	7000	199 234 470	199 234 480	10.300	
 110	100	10	11000	199 234 471	199 234 481	14.600	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
 75	166	262	85	156	70	93	284	218	136	290	70	276	65	
 90	200	281	105	168	78	100	300	259	141	310	70	341	72	
 110	238	292	123	175	86	110	340	287	164	350	120	369	80	





Ball valve type 230 PVC-U FO (Fail safe to open) Without manual override With backing flanges PP-st metric

Model:

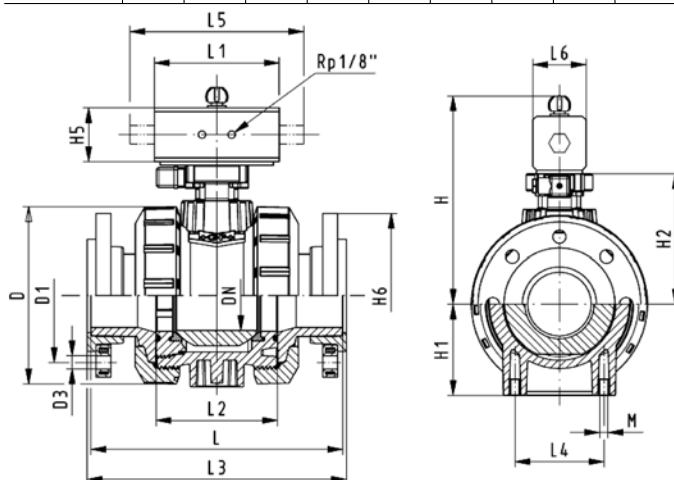
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ \leq$ 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg								
 75	65	10	5000	199 234 489	199 234 499	8.500								
 90	80	10	7000	199 234 490	199 234 500	10.300								
 110	100	10	11000	199 234 491	199 234 501	14.600								

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
 75	166	262	85	156	70	93	284	218	136	290	70	276	65	
 90	200	281	105	168	78	100	300	259	141	310	70	341	72	
 110	238	292	123	175	86	110	340	287	164	350	120	369	80	





Ball valve type 230 PVC-U DA (Double acting) Without manual override With backing flanges PP-st metric

Model:

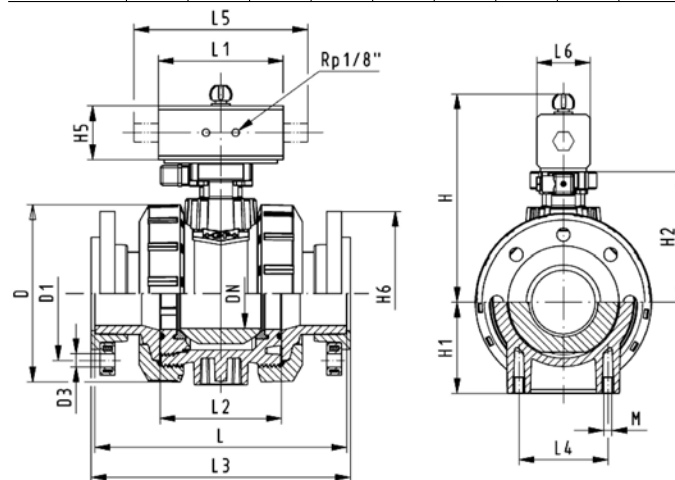
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ <$ 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

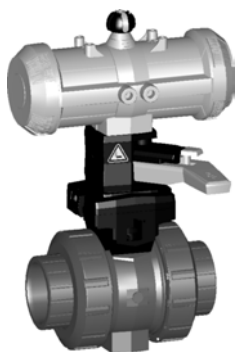
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
75	65	10	5000	199 234 509	199 234 519	7.300	
90	80	10	7000	199 234 510	199 234 520	9.600	
110	100	10	11000	199 234 511	199 234 521	12.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
75	166	257	85	156	66	93	284	144	136	290	70	190	60	
90	200	274	105	168	70	100	300	152	141	310	70	198	65	
110	238	273	123	175	78	110	340	169	164	350	120	235	72	





DN10/15 - 50

Ball valves pneumatic

Ball valve type 234 PVC-U FC (Fail safe to close)

With manual override

With solvent cement sockets Inch BS

Model:

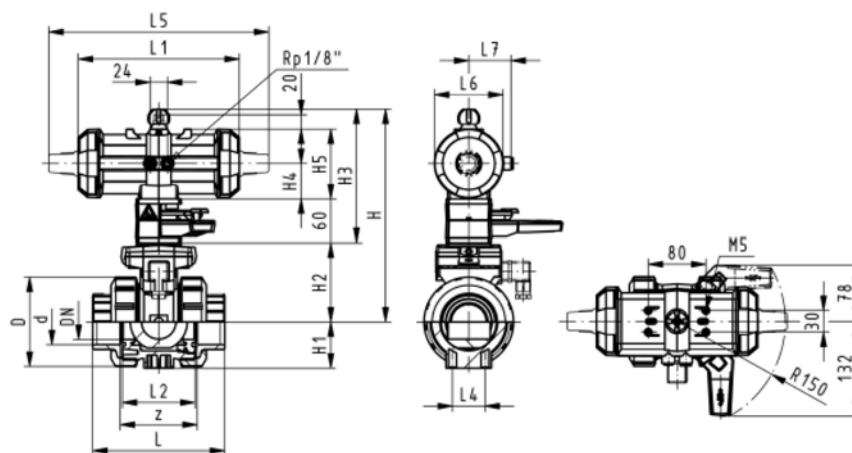
- Built on with pneumatic actuator PA11/21
- Control time $90^\circ \leq$) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

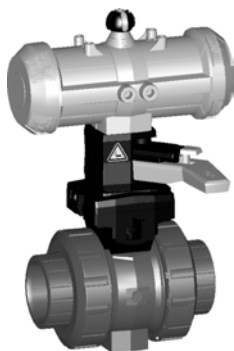
Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg										
$\frac{3}{8}$	10	10	70	199 234 002	199 234 012	1.500										
$\frac{1}{2}$	15	10	185	199 234 003	199 234 013	1.500										
$\frac{3}{4}$	20	10	350	199 234 004	199 234 014	1.600										
1	25	10	700	199 234 005	199 234 015	1.700										
1 $\frac{1}{4}$	32	10	1000	199 234 006	199 234 016	2.800										
1 $\frac{1}{2}$	40	10	1600	199 234 007	199 234 017	3.100										
2	50	10	3100	199 234 008	199 234 018	4.000										

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
$\frac{3}{8}$	50	230	27	62	168	40	97	92	194	56	25	261	76	48	60
$\frac{1}{2}$	50	230	27	62	168	40	97	95	194	56	25	261	76	48	60
$\frac{3}{4}$	58	239	30	71	168	40	97	110	194	65	25	261	76	48	69
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	75
1 $\frac{1}{4}$	84	271	44	84	187	51	115	146	224	85	45	305	95	59	89
1 $\frac{1}{2}$	97	271	51	84	187	51	115	157	224	89	45	305	95	59	97
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	110





DN10/15 - 50

Ball valve type 234 PVC-U FO (Fail safe to open) With manual override With solvent cement sockets Inch BS

Model:

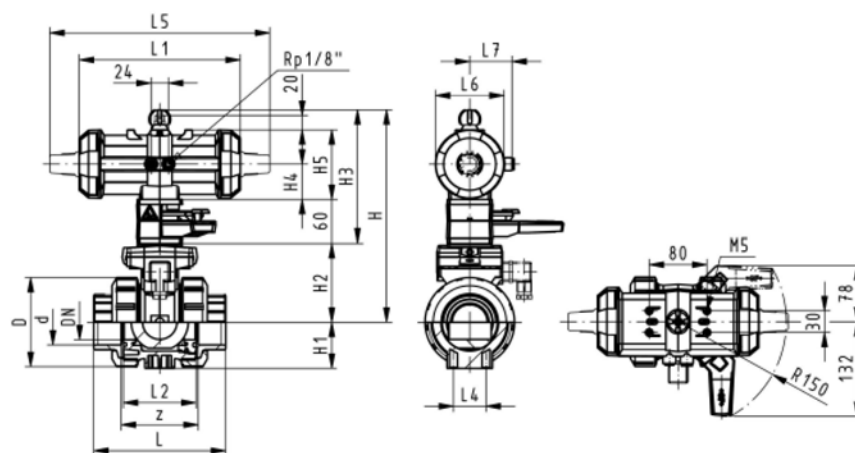
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

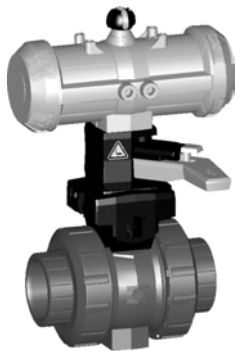
Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg									
3/8	10	10	70	199 234 042	199 234 052	1.500									
1/2	15	10	185	199 234 043	199 234 053	1.500									
3/4	20	10	350	199 234 044	199 234 054	1.600									
1	25	10	700	199 234 045	199 234 055	1.700									
1 1/4	32	10	1000	199 234 046	199 234 056	2.800									
1 1/2	40	10	1600	199 234 047	199 234 057	3.100									
2	50	10	3100	199 234 048	199 234 058	4.000									

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	60
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	60
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	69
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	75
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	89
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	97
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	110





DN10/15 - 50

Ball valve type 234 PVC-U DA (Double acting) With manual override With solvent cement sockets Inch BS

Model:

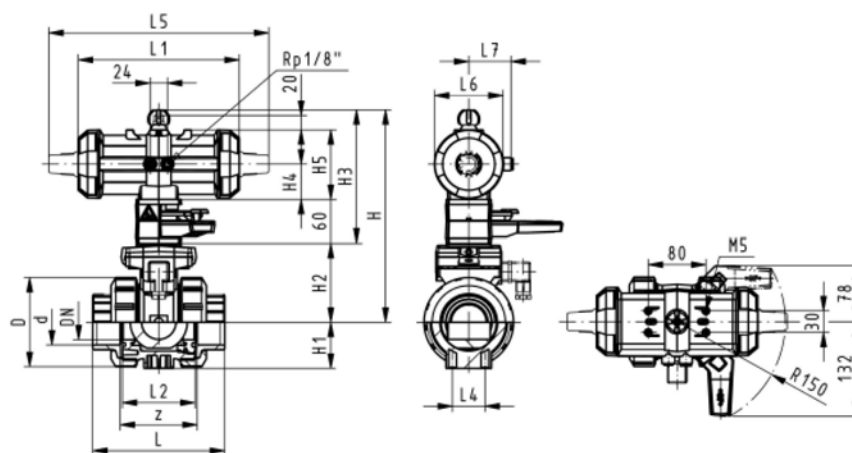
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

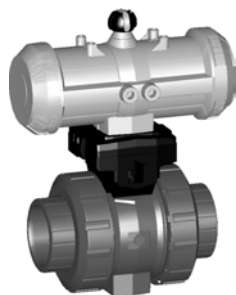
Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg										
3/8	10	10	70	199 234 082	199 234 092	1.500										
1/2	15	10	185	199 234 083	199 234 093	1.500										
3/4	20	10	350	199 234 084	199 234 094	1.600										
1	25	10	700	199 234 085	199 234 095	1.700										
1 1/4	32	10	1000	199 234 086	199 234 096	2.800										
1 1/2	40	10	1600	199 234 087	199 234 097	3.100										
2	50	10	3100	199 234 088	199 234 098	4.000										

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	60
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	60
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	69
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	75
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	89
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	97
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	110





DN10/15 - 50

Ball valve type 234 PVC-U FC (Fail safe to close) Without manual override With solvent cement sockets Inch BS

Model:

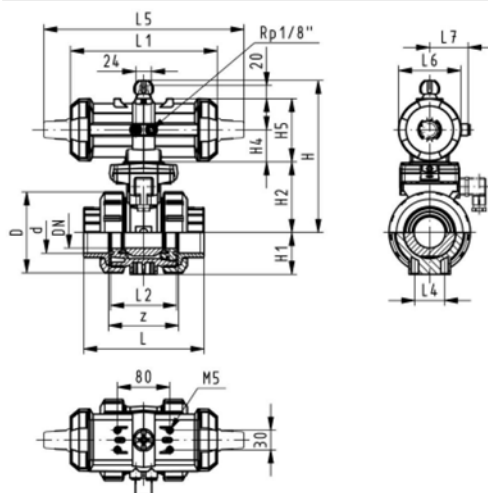
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

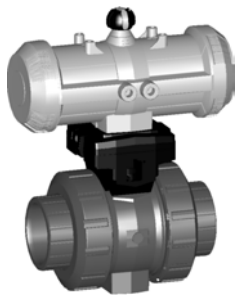
Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 234 122	199 234 132	1.500	
1/2	15	10	185	199 234 123	199 234 133	1.500	
3/4	20	10	350	199 234 124	199 234 134	1.600	
1	25	10	700	199 234 125	199 234 135	1.700	
1 1/4	32	10	1000	199 234 126	199 234 136	2.800	
1 1/2	40	10	1600	199 234 127	199 234 137	3.100	
2	50	10	3100	199 234 128	199 234 138	4.000	
 2 1/2	65	10	5000	199 234 129	199 234 139	4.300	
 3	80	10	7000	199 234 130	199 234 140	5.200	
 4	100	10	11000	199 234 131	199 234 141	7.600	

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	60
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	60
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	69
1	68	176	36	71	40	97	123	194	71	25	261	76	48	75
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	89
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	97
2	124	232	64	106	51	115	183	224	101	45	305	95	59	110
 2 1/2	166	262	85	156		70	233	218	136	70	276	65		144
 3	200	281	105	168		78	254	259	141	70	341	72		151
 4	238	292	123	175		86	301	287	164	120	369	80		174





DN10/15 - 50

Ball valve type 234 PVC-U FO (Fail safe to open) Without manual override With solvent cement sockets Inch BS

Model:

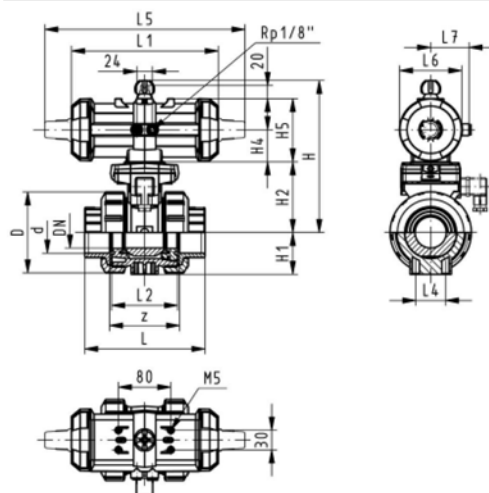
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

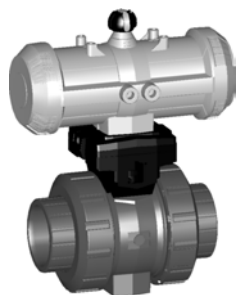
Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 234 162	199 234 172	1.500	
1/2	15	10	185	199 234 163	199 234 173	1.500	
3/4	20	10	350	199 234 164	199 234 174	1.600	
1	25	10	700	199 234 165	199 234 175	1.700	
1 1/4	32	10	1000	199 234 166	199 234 176	2.800	
1 1/2	40	10	1600	199 234 167	199 234 177	3.100	
2	50	10	3100	199 234 168	199 234 178	4.000	
 2 1/2	65	10	5000	199 234 169	199 234 179	4.300	
 3	80	10	7000	199 234 170	199 234 180	5.200	
 4	100	10	11000	199 234 171	199 234 181	7.600	

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	60
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	60
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	69
1	68	176	36	71	40	97	123	194	71	25	261	76	48	75
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	89
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	97
2	124	232	64	106	51	115	183	224	101	45	305	95	59	110
 2 1/2	166	262	85	156		70	233	218	136	70	276	65		144
 3	200	281	105	168		78	254	259	141	70	341	72		151
 4	238	292	123	175		86	301	287	164	120	369	80		174





DN10/15 - 50

Ball valve type 234 PVC-U DA (Double acting) Without manual override With solvent cement sockets Inch BS

Model:

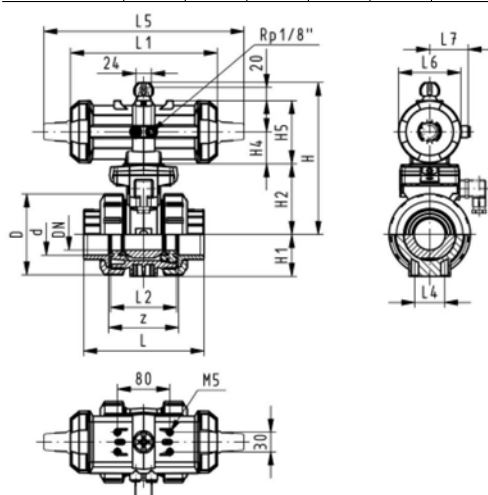
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
3/8	10	10	70	199 234 202	199 234 212	1.500
1/2	15	10	185	199 234 203	199 234 213	1.500
3/4	20	10	350	199 234 204	199 234 214	1.600
1	25	10	700	199 234 205	199 234 215	1.700
1 1/4	32	10	1000	199 234 206	199 234 216	2.800
1 1/2	40	10	1600	199 234 207	199 234 217	3.100
2	50	10	3100	199 234 208	199 234 218	4.000
2 1/2	65	10	5000	199 234 209	199 234 219	3.100
3	80	10	7000	199 234 210	199 234 220	4.600
4	100	10	11000	199 234 211	199 234 221	5.800

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	60
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	60
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	69
1	68	176	36	71	40	97	123	194	71	25	261	76	48	75
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	89
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	97
2	124	232	64	106	51	115	183	224	101	45	305	95	59	110
2 1/2	166	257	85	156		66	233	144	136	70	190	60		144
3	200	274	105	168		70	254	152	141	70	198	65		151
4	238	273	123	175		78	301	169	164	120	235	72		174



Copiable

Configurator GF Ball Valve Type 546 PVC-U

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for your application, we put together a selection menu for you (the maximum working pressure of the whole valve is determined by the maximum permissible nominal pressure of the connecting part).

Ball valve A01 Ball valve 546										
Material B01 PVC-U										
		Dimension								
		C05 d 16 DN 10 3/8"								
		C06 d 20 DN 15 1/2"								
		C07 d 25 DN 20 3/4"								
		C08 d 32 DN 25 1"								
		C09 d 40 DN 32 1 1/4"								
		C10 d 50 DN 40 1 1/2"								
		C11 d 63 DN 50 2"								
		C12 d 75 DN 65 2 1/2"								
		C13 d 90 DN 80 3"								
		C14 d 110 DN 100 4"								
		C15 d 160 DN 150 6"								
		Version								
		D01 standard, PTFE ball seal								
		D02 oilfree, PTFE ball seal (only with specific connecting parts)								
		D03 silicon-free, PTFE ball seal for inch ASTM (only with specific connecting parts)								
		D04 silicon-free, PVDF ball seal for metric (only with specific connecting parts)								
		Seals								
		E01 EPDM seals								
		E02 FPM seals								
		E03 FFPM (KALREZ®) seals								
		Threaded inserts								
		F01 without threaded inserts								
		F02 with threaded inserts								
		Connecting parts								
		G01 PVC-U Cement socket metric								
		G03 PVC-U Cement socket inch ASTM								
		G04 PVC-U Cement socket inch BS								
		G05 PVC-U Cement spigot metric								
		G06 PVC-U Threaded socket Rp								
		G07 PVC-U Threaded socket Rp reinforced (DN10-50)								
		G09 PVC-U Threaded socket NPT								
		G30 PP-H Fusion socket metric								
		G32 PP-H Socket fusion spigot metric								
		G33 PP-H Threaded socket Rp								
		G34 PP-H Threaded socket NPT reinforced								
		G35 PP-H Butt fusion spigot SDR 11 metric IR-PLUS								
		G36 PP-H Butt fusion spigot SDR 17.6 metric (limited dimension range)								
		G37 PP-H Butt fusion spigot long SDR11 metric								
		G40 PE-100 Fusion socket metric								
		G41 PE-100 Butt fusion spigot SDR11 metric								
		G42 PE-100 Butt fusion spigot SDR17.6 metric (limited dimension range)								
		G43 PE-100 Butt fusion spigot long SDR11 metric								
		G44 PE-100 Butt fusion spigot long SDR17.6 metric (DN65-100)								
		G60 Fixed flange PVC-U serrated metric								
		G61 Fixed flange PVC-U flat metric								
		G70 Backing flange PVC-U metric								
		G71 Backing flange PVC-U inch ANSI								
		G72 Backing flange PP-steel metric								
		G73 Backing flange PP-steel ANSI								
		G78 Backing flange PVC-U JIS (DN65-100)								
		G80 PVC-U Valve end blank								
		Multi-functional module								
		I01 No multi-functional module								
		I02 Empty module								
		I03 Module with 2 limit switches Ag, Ni								
		I04 Module with 2 limit switches Au								
		I05 Module with 2 inductive switches Namur								
		I06 Module with 2 inductive switches PNP								
		I07 Module with 2 inductive switches NPN								
		Handle								
		K01 Standard handle red								
		K02 Standard handle black								
		K11 Multi-functional handle red								
		Mounting plate								
		L01 without mounting plate								
		L02 with mounting plate								
A01	B01	C	D	E	F	G	G	I	K	L
left						right				

Copiable

GF ball valve type 546 with pneumatic actuator

It's so easy to configure the type 546:
 With the configurator, you have a choice of new pneumatic actuators PA11 and PA21 in 2 optimized sizes including a large range of accessories.

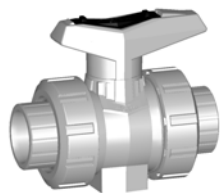
We supply what you put together.



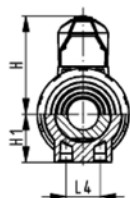
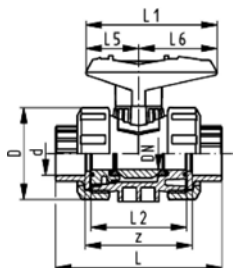
Pneumatic actuators PA11/PA21			
P01	Fail safe to close PA11/PA21		
P02	Fail safe to open PA11/21		
P03	Double acting PA11/21		
P30	Fail safe to close PA30/90		
P31	Fail safe to open PA30/90		
P32	Double acting PA30/90		
Manual override			
Q01	without manual override		
Q02	with manual override		
Stroke limiter			
R01	without stroke limiter		
R02	with stroke limiter		
P	Q	R	

Ball valves

Ball valve type 546 PVC-C With solvent cement sockets metric



DN10/15 - 50



Model:

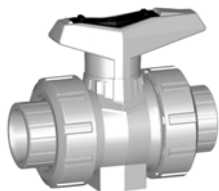
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

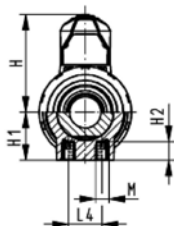
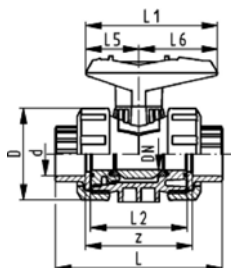
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	16	71	163 546 001	163 546 011	0.160	
20	15	16	185	163 546 002	163 546 012	0.160	
25	20	16	350	163 546 003	163 546 013	0.245	
32	25	16	700	163 546 004	163 546 014	0.365	
40	32	16	1000	163 546 005	163 546 015	0.660	
50	40	16	1600	163 546 006	163 546 016	0.890	
63	50	16	3100	163 546 007	163 546 017	1.650	
 75	65	16	5000	163 546 008	163 546 018	5.300	
 90	80	16	7000	163 546 009	163 546 019	8.000	
 110	100	16	11000	163 546 010	163 546 020	12.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
16	50	57	27	92	77	56	25	32	45	64	
20	50	57	27	95	77	56	25	32	45	64	
25	58	67	30	110	97	65	25	39	58	72	
32	68	73	36	123	97	71	25	39	58	79	
40	84	90	44	146	128	85	45	54	74	94	
50	97	97	51	157	128	89	45	54	74	95	
63	124	116	64	183	152	101	45	66	87	107	
 75	166	149	85	233	270	136	70	64	206	144	
 90	200	161	105	254	270	141	70	64	206	151	
 110	238	178	123	301	320	164	120	64	256	174	



DN10/15 - 50



Ball valve type 546 PVC-C With mounting inserts With solvent cement sockets metric

Model:

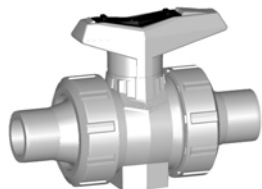
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

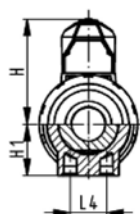
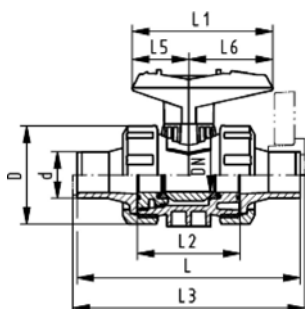
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	16	71	163 546 061	163 546 071	0.160	
20	15	16	185	163 546 062	163 546 072	0.160	
25	20	16	350	163 546 063	163 546 073	0.245	
32	25	16	700	163 546 064	163 546 074	0.365	
40	32	16	1000	163 546 065	163 546 075	0.660	
50	40	16	1600	163 546 066	163 546 076	0.890	
63	50	16	3100	163 546 067	163 546 077	1.650	
 75	65	16	5000	163 546 068	163 546 078	5.300	
 90	80	16	7000	163 546 069	163 546 079	8.000	
 110	100	16	11000	163 546 070	163 546 080	12.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	57	27	12	92	77	56	25	32	45	M6	64	
20	50	57	27	12	95	77	56	25	32	45	M6	64	
25	58	67	30	12	110	97	65	25	39	58	M6	72	
32	68	73	36	12	123	97	71	25	39	58	M6	79	
40	84	90	44	15	146	128	85	45	54	74	M8	94	
50	97	97	51	15	157	128	89	45	54	74	M8	95	
63	124	116	64	15	183	152	101	45	66	87	M8	107	
 75	166	149	85	15	233	270	136	70	64	206	M8	144	
 90	200	161	105	15	254	270	141	70	64	206	M8	151	
 110	238	178	123	22	301	320	164	120	64	256	M12	174	



DN10/15 - 50



Ball valve type 546 PVC-C With solvent cement spigots metric

Model:

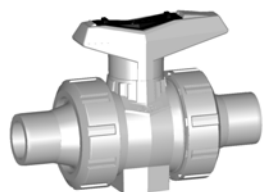
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

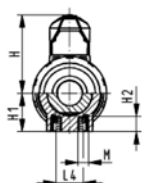
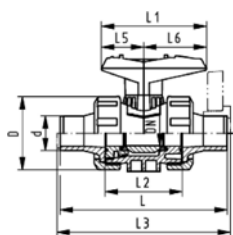
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	16	71	163 546 041	163 546 051	0.160	
20	15	16	185	163 546 042	163 546 052	0.160	
25	20	16	350	163 546 043	163 546 053	0.245	
32	25	16	700	163 546 044	163 546 054	0.365	
40	32	16	1000	163 546 045	163 546 055	0.660	
50	40	16	1600	163 546 046	163 546 056	0.890	
63	50	16	3100	163 546 047	163 546 057	1.650	
 75	65	16	5000	163 546 048	163 546 058	5.500	
 90	80	16	7000	163 546 049	163 546 059	8.200	
 110	100	16	11000	163 546 050	163 546 060	12.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
16	50	57	27	114	77	56		25	32	45	
20	50	57	27	124	77	56	130	25	32	45	
25	58	67	30	144	97	65	150	25	39	58	
32	68	73	36	154	97	71	160	25	39	58	
40	84	90	44	174	128	85	180	45	54	74	
50	97	97	51	194	128	89	200	45	54	74	
63	124	116	64	224	152	101	230	45	66	87	
 75	166	149	85	284	270	136	290	70	64	206	
 90	200	161	105	300	270	141	310	70	64	206	
 110	238	178	123	340	320	164	350	120	64	256	



DN10/15 - 50



Ball valve type 546 PVC-C With mounting inserts With solvent cement spigots metric

Model:

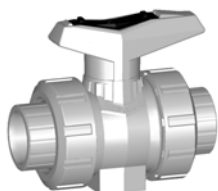
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

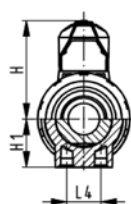
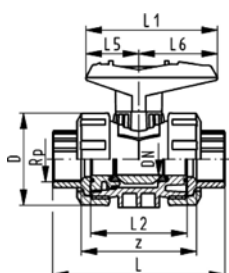
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	16	71	163 546 381	163 546 391	0.162	
20	15	16	185	163 546 382	163 546 392	0.162	
25	20	16	350	163 546 383	163 546 393	0.247	
32	25	16	700	163 546 384	163 546 394	0.367	
40	32	16	1000	163 546 385	163 546 395	0.665	
50	40	16	1600	163 546 386	163 546 396	0.895	
63	50	16	3100	163 546 387	163 546 397	1.655	
 75	65	16	5000	163 546 388	163 546 398	5.500	
 90	80	16	7000	163 546 389	163 546 399	8.200	
 110	100	16	11000	163 546 390	163 546 400	12.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	
16	50	57	27	12	114	77	56		25	32	45	M6	
20	50	57	27	12	124	77	56	130	25	32	45	M6	
25	58	67	30	12	144	97	65	150	25	39	58	M6	
32	68	73	36	12	154	97	71	160	25	39	58	M6	
40	84	90	44	15	174	128	85	180	45	54	74	M8	
50	97	97	51	15	194	128	89	200	45	54	74	M8	
63	124	116	64	15	224	152	101	230	45	66	87	M8	
 75	166	149	85	15	284	270	136	290	70	64	206	M8	
 90	200	161	105	15	300	270	141	310	70	64	206	M8	
 110	238	178	123	22	340	320	164	350	120	64	256	M12	



DN10/15 - 50



Ball valve type 546 PVC-C With threaded sockets Rp

Model:

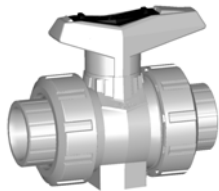
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

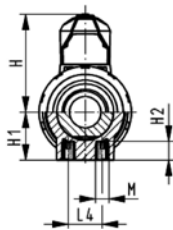
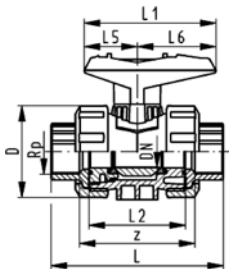
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	71	163 546 021	163 546 031	0.160	
1/2	15	10	185	163 546 022	163 546 032	0.160	
3/4	20	10	350	163 546 023	163 546 033	0.245	
1	25	10	700	163 546 024	163 546 034	0.365	
1 1/4	32	10	1000	163 546 025	163 546 035	0.660	
1 1/2	40	10	1600	163 546 026	163 546 036	0.890	
2	50	10	3100	163 546 027	163 546 037	1.650	
2 1/2	65	10	5000	163 546 028	163 546 038	5.400	
3	80	10	7000	163 546 029	163 546 039	8.100	
4	100	10	11000	163 546 030	163 546 040	12.700	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
3/8	50	57	27	95	77	56	25	32	45	69	
1/2	50	57	27	100	77	56	25	32	45	67	
3/4	58	67	30	114	97	65	25	39	58	78	
1	68	73	36	127	97	71	25	39	58	85	
1 1/4	84	90	44	146	128	85	45	54	74	100	
1 1/2	97	97	51	152	128	89	45	54	74	106	
2	124	116	64	177	152	101	45	66	87	121	
2 1/2	166	149	85	233	270	136	70	64	206	144	
3	200	161	105	254	270	141	70	64	206	151	
4	238	178	123	301	320	164	120	64	256	174	



DN10/15 - 50



Ball valve type 546 PVC-C With mounting inserts With threaded sockets Rp

Model:

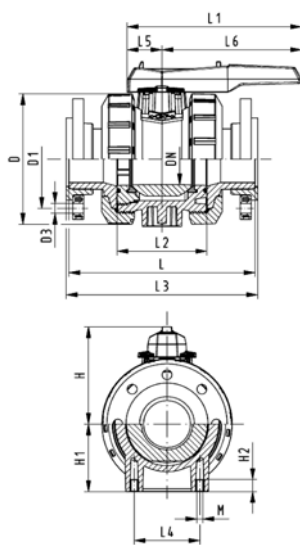
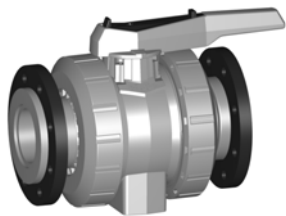
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	71	163 546 401	163 546 411	0.162	
1/2	15	10	185	163 546 402	163 546 412	0.162	
3/4	20	10	350	163 546 403	163 546 413	0.247	
1	25	10	700	163 546 404	163 546 414	0.367	
1 1/4	32	10	1000	163 546 405	163 546 415	0.665	
1 1/2	40	10	1600	163 546 406	163 546 416	0.895	
2	50	10	3100	163 546 407	163 546 417	1.655	
 2 1/2	65	10	5000	163 546 408	163 546 418	5.400	
 3	80	10	7000	163 546 409	163 546 419	8.100	
 4	100	10	11000	163 546 410	163 546 420	12.700	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
3/8	50	57	27	12	95	77	56	25	32	45	M6	69	
1/2	50	57	27	12	100	77	56	25	32	45	M6	67	
3/4	58	67	30	12	114	97	65	25	39	58	M6	78	
1	68	73	36	12	127	97	71	25	39	58	M6	85	
1 1/4	84	90	44	12	146	128	85	45	54	74	M8	100	
1 1/2	97	97	51	15	152	128	89	45	54	74	M8	106	
2	124	116	64	15	177	152	101	45	66	87	M8	121	
 2 1/2	166	149	85	15	233	270	136	70	64	206	M8	144	
 3	200	161	105	15	254	270	141	70	64	206	M8	151	
 4	238	178	123	22	301	320	164	120	64	256	M12	174	



Ball valve type 546 PVC-C

With mounting inserts

With backing flanges PP-st metric

Model:

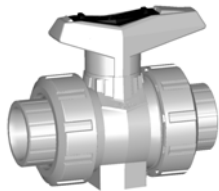
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

Option:

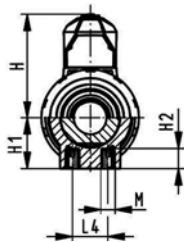
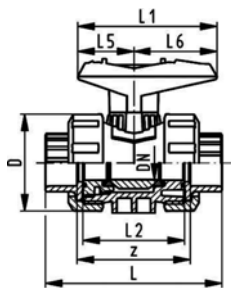
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	16	5000	163 546 108	163 546 118	6.000	
 90	80	16	7000	163 546 109	163 546 119	9.100	
 110	100	16	11000	163 546 110	163 546 120	14.200	

d [mm]	D [mm]	D1 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	H [mm]	H1 [mm]	M	
 75	166	145	18	284	270	136	290	70	64	206	149	85	8	
 90	200	160	18	300	270	141	310	70	64	206	161	105	8	
 110	238	180	18	340	320	164	350	120	64	256	178	123	12	



DN10/15 - 50



Ball valve type 546 PVC-C

With mounting inserts

With solvent cement sockets Inch ASTM

Including 2 threaded union ends NPT

Model:

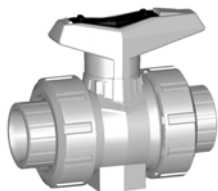
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Ball seals PTFE
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Integrated stainless steel mounting inserts

Option:

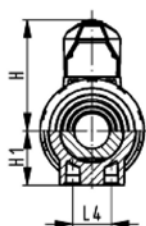
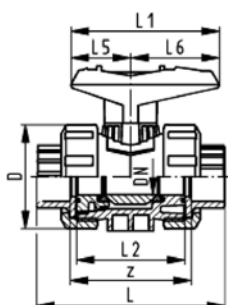
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg						
3/8	10	16	71	163 546 341	163 546 351	0.194						
1/2	15	16	185	163 546 342	163 546 352	0.204						
3/4	20	16	350	163 546 343	163 546 353	0.304						
1	25	16	700	163 546 344	163 546 354	0.464						
1 1/4	32	16	1000	163 546 345	163 546 355	0.810						
1 1/2	40	16	1600	163 546 346	163 546 356	1.105						
2	50	16	3100	163 546 347	163 546 357	2.005						

Inch	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]		
3/8	50	57	27	105	77	56	25	32	45	M6	67		
1/2	50	57	27	105	77	56	25	32	45	M6	61		
3/4	58	67	30	121	97	65	25	39	58	M6	70		
1	68	73	36	133	97	71	25	39	58	M6	76		
1 1/4	84	90	44	154	128	85	45	54	74	M8	90		
1 1/2	97	97	51	164	128	89	45	54	74	M8	94		
2	124	116	64	183	152	101	45	66	87	M8	107		



DN10/15 - 50



Ball valve type 546 PVC-C

With solvent cement sockets Inch ASTM

Including 2 threaded union ends NPT

Model:

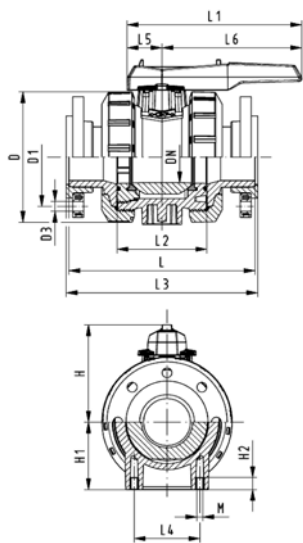
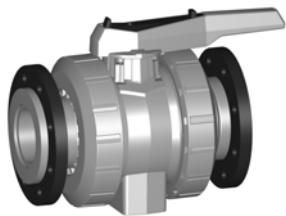
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts
- Threaded valve ends are only enclosed for DN10/15-50

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	16	71	163 546 301	163 546 311	0.190	
1/2	15	16	185	163 546 302	163 546 312	0.200	
3/4	20	16	350	163 546 303	163 546 313	0.300	
1	25	16	700	163 546 304	163 546 314	0.460	
1 1/4	32	16	1000	163 546 305	163 546 315	0.800	
1 1/2	40	16	1600	163 546 306	163 546 316	1.095	
2	50	16	3100	163 546 307	163 546 317	1.995	
 2 1/2	65	16	5000	163 546 308	163 546 318	5.400	
 3	80	16	7000	163 546 309	163 546 319	8.100	
 4	100	16	11000	163 546 310	163 546 320	12.800	

Inch	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
3/8	50	57	27	105	77	56	25	32	45	67	
1/2	50	57	27	105	77	56	25	32	45	61	
3/4	58	67	30	121	97	65	25	39	58	70	
1	68	73	36	133	97	71	25	39	58	76	
1 1/4	84	90	44	154	128	85	45	54	74	90	
1 1/2	97	97	51	164	128	89	45	54	74	94	
2	124	116	64	183	152	101	45	66	87	107	
 2 1/2	166	149	85	233	270	136	70	64	206	144	
 3	200	161	105	254	270	141	70	64	206	151	
 4	238	178	123	301	320	164	120	64	256	174	



Ball valve type 546 PVC-C

With mounting inserts

With backing flanges PP-st Inch/ANSI

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimension ANSI/ASME B 16.5 / ASTM D 4024

Option:

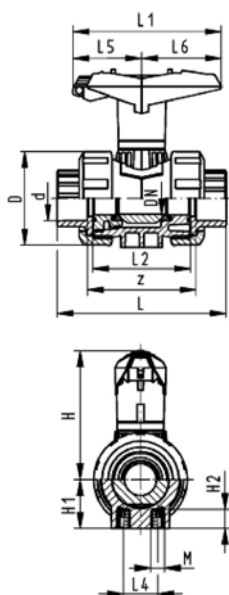
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
2 1/2	65	16	5000	163 546 168	163 546 178	6.000	
3	80	16	7000	163 546 169	163 546 179	9.100	
4	100	16	11000	163 546 170	163 546 180	14.200	

Inch	D [mm]	D1 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	H [mm]	H1 [mm]	M	
2 1/2	166	140	19	284	270	136	290	70	64	206	149	85	8	
3	200	152	19	300	270	141	310	70	64	206	161	105	8	
4	238	191	19	340	320	164	350	120	64	256	178	123	12	



DN10/15 - 50



Ball valve type 546 PVC-C

With lockable handle

With solvent cement sockets metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Lockable hand lever with ratchet settings

Option:

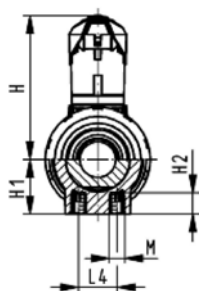
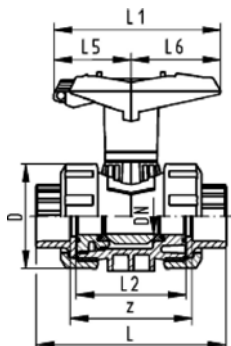
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg							
16	10	16	71	163 546 081	163 546 091	0.175							
20	15	16	185	163 546 082	163 546 092	0.175							
25	20	16	350	163 546 083	163 546 093	0.270							
32	25	16	700	163 546 084	163 546 094	0.390							
40	32	16	1000	163 546 085	163 546 095	0.700							
50	40	16	1600	163 546 086	163 546 096	0.930							
63	50	16	3100	163 546 087	163 546 097	1.695							
75	65	16	5000	163 546 088	163 546 098	-							
90	80	16	7000	163 546 089	163 546 099	-							
110	100	16	11000	163 546 090	163 546 100	-							

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	79	27	12	92	87	56	25	42	45	M6	64	
20	50	79	27	12	95	87	56	25	42	45	M6	64	
25	58	88	30	12	110	108	65	25	50	58	M6	72	
32	68	94	36	12	123	108	71	25	50	58	M6	79	
40	84	113	44	15	146	140	85	45	66	75	M8	94	
50	97	119	51	15	157	140	89	45	66	75	M8	95	
63	124	141	64	15	183	165	101	45	78	87	M8	107	
75	166	224	85	15	233	270	136	70	64	206	M8	144	
90	200	235	105	15	254	270	141	70	64	206	M8	151	
110	238	245	123	22	301	320	164	120	64	256	M12	174	



DN10/15 - 50



Ball valve type 546 PVC-C

With lockable handle

With solvent cement sockets Inch ASTM

Including 2 threaded union ends NPT

Model:

- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Lockable hand lever with ratchet settings
- Threaded valve ends are only enclosed for DN10/15-50

Option:

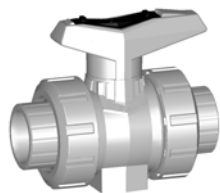
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	16	71	163 546 361	163 546 371	0.205	
1/2	15	16	185	163 546 362	163 546 372	0.215	
3/4	20	16	350	163 546 363	163 546 373	0.325	
1	25	16	700	163 546 364	163 546 374	0.485	
1 1/4	32	16	1000	163 546 365	163 546 375	0.840	
1 1/2	40	16	1600	163 546 366	163 546 376	1.135	
2	50	16	3100	163 546 367	163 546 377	2.035	
 2 1/2	65	16	5000	163 546 368	163 546 378	5.800	
 3	80	16	7000	163 546 369	163 546 379	8.500	
 4	100	16	11000	163 546 370	163 546 380	13.100	

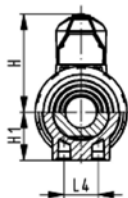
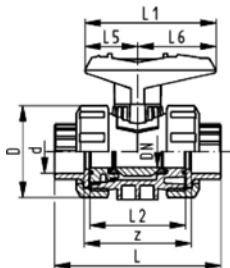
Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
3/8	50	79	27	12	105	87	56	25	42	45	M6	67	
1/2	50	79	27	12	105	87	56	25	42	45	M6	61	
3/4	58	88	30	12	121	108	65	25	50	58	M6	70	
1	68	94	36	12	133	108	71	25	50	58	M6	76	
1 1/4	84	113	44	15	154	140	85	45	66	75	M8	90	
1 1/2	97	119	51	15	164	140	89	45	66	75	M8	94	
2	124	141	64	15	183	165	101	45	78	87	M8	107	
 2 1/2	166	224	85	15	233	270	136	70	64	206	M8	144	
 3	200	235	105	15	254	270	141	70	64	206	M8	151	
 4	238	245	123	22	301	320	164	120	64	256	M12	174	

Ball valves

Ball valve type 546 PVC-C SF With solvent cement sockets metric



DN10/15 - 50



Model:

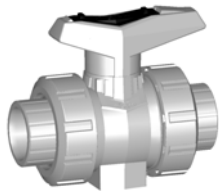
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PVDF
- Without mounting inserts

Option:

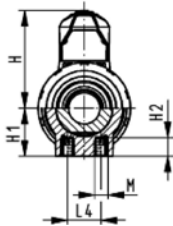
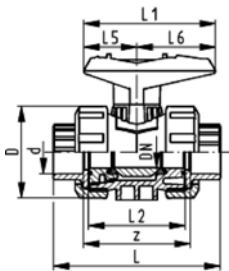
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg					
16	10	16	71	163 546 601	163 546 611	0.160					
20	15	16	185	163 546 602	163 546 612	0.160					
25	20	16	350	163 546 603	163 546 613	0.245					
32	25	16	700	163 546 604	163 546 614	0.365					
40	32	16	1000	163 546 605	163 546 615	0.660					
50	40	16	1600	163 546 606	163 546 616	0.890					
63	50	16	3100	163 546 607	163 546 617	1.650					
75	65	16	5000	163 546 608	163 546 618	5.400					
90	80	16	7000	163 546 609	163 546 619	8.100					
110	100	16	11000	163 546 610	163 546 620	12.800					

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]		
16	50	57	27	92	77	56	25	32	45	64		
20	50	57	27	95	77	56	25	32	45	64		
25	58	67	30	110	97	65	25	39	58	72		
32	68	73	36	123	97	71	25	39	58	79		
40	84	90	44	146	128	85	45	54	74	94		
50	97	97	51	157	128	89	45	54	74	95		
63	124	116	64	183	152	101	45	66	87	107		
75	166	149	85	233	270	136	70	64	206	144		
90	200	161	105	254	270	141	70	64	206	151		
110	238	178	123	301	320	164	120	64	256	174		



DN10/15 - 50



Ball valve type 546 PVC-C SF

With mounting inserts

With solvent cement sockets metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PVDF
- Integrated stainless steel mounting inserts

Option:

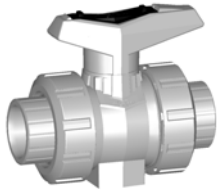
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	16	71	800 000 621	800 000 631	0.160	
20	15	16	185	800 000 622	800 000 632	0.160	
25	20	16	350	800 000 623	800 000 633	0.245	
32	25	16	700	800 000 624	800 000 634	0.365	
40	32	16	1000	800 000 625	800 000 635	0.660	
50	40	16	1600	800 000 626	800 000 636	0.890	
63	50	16	3100	800 000 627	800 000 637	1.650	
 75	65	16	5000	800 000 628	800 000 638	5.400	
 90	80	16	7000	800 000 629	800 000 639	8.100	
 110	100	16	11000	800 000 630	800 000 640	12.800	

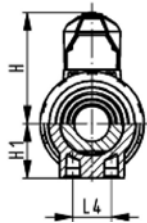
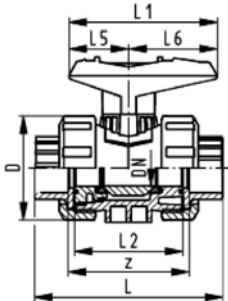
d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	57	27	12	92	77	56	25	32	45	M6	64	
20	50	57	27	12	95	77	56	25	32	45	M6	64	
25	58	67	30	12	110	97	65	25	39	58	M6	72	
32	68	73	36	12	123	97	71	25	39	58	M6	79	
40	84	90	44	15	146	128	85	45	54	74	M8	94	
50	97	97	51	15	157	128	89	45	54	74	M8	95	
63	124	116	64	15	183	152	101	45	66	87	M8	107	
 75	166	149	85	15	233	270	136	70	64	206	M8	144	
 90	200	161	105	15	254	270	141	70	64	206	M8	151	
 110	238	178	123	22	301	320	164	120	64	256	M12	174	

Ball valves

Ball valve type 546 PVC-C SF With solvent cement sockets Inch ASTM



DN10/15 - 50



Model:

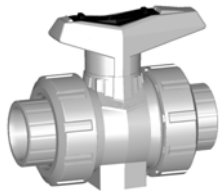
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals: Inch ASTM in PTFE
- Without mounting inserts

Option:

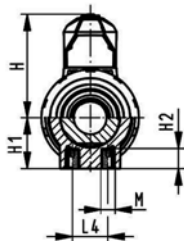
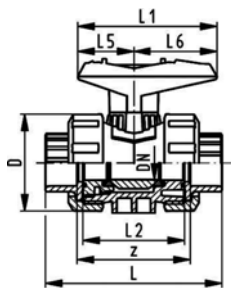
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
1/2	15	16	185	163 546 692	0.160	
3/4	20	16	350	163 546 693	0.245	
1	25	16	700	163 546 694	0.365	
1 1/4	32	16	1000	163 546 695	0.660	
1 1/2	40	16	1600	163 546 696	0.890	
2	50	16	3100	163 546 697	1.650	
2 1/2	65	16	5000	163 546 698	5.300	
3	80	16	7000	163 546 699	7.900	
4	100	16	11000	163 546 700	12.600	

Inch	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
1/2	50	57	27	105	77	56	25	32	45	61	
3/4	58	67	30	121	97	65	25	39	58	70	
1	68	73	36	133	97	71	25	39	58	76	
1 1/4	84	90	44	154	128	85	45	54	74	90	
1 1/2	97	97	51	164	128	89	45	54	74	94	
2	124	116	64	183	152	101	45	66	87	107	
2 1/2	166	149	85	233	270	136	70	64	206	144	
3	200	161	105	254	270	141	70	64	206	151	
4	238	178	123	301	320	164	120	64	256	174	



DN10/15 - 50



Ball valve type 546 PVC-C SF

With mounting inserts

With solvent cement sockets Inch ASTM

Model:

- Integrated stainless steel mounting inserts
- Silicon-free / paint-compatible
- Ball seals:
- - inch ASTM: PTFE
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Without mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
1/2	15	16	185	163 546 842	163 546 852	0.164	
3/4	20	16	350	163 546 843	163 546 853	0.249	
1	25	16	700	163 546 844	163 546 854	0.369	
1 1/4	32	16	1000	163 546 845	163 546 855	0.670	
1 1/2	40	16	1600	163 546 846	163 546 856	0.900	
2	50	16	3100	163 546 847	163 546 857	1.660	

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
1/2	50	57	27	12	105	77	56	25	32	45	6	61	
3/4	58	67	30	12	121	97	65	25	39	58	6	70	
1	68	73	36	12	133	97	71	25	39	58	6	76	
1 1/4	84	90	44	15	154	128	85	45	54	74	8	90	
1 1/2	97	97	51	15	164	128	89	45	54	74	8	94	
2	124	116	64	15	183	152	101	45	66	87	8	107	

Copiable

Configurator GF ball valve type 546 PVC-C

Ball Valve

A01Ball Valve 546

Material

B02PVC-C

Dimension

C05DN 103/8"
C06DN 151/2"
C07DN 203/4"
C08DN 251"
C09DN 321 1/4"
C10DN 401 1/2"
C11DN 502"
C12DN 652 1/2"
C13DN 803"
C14DN 1004"

Version

D01Standard, PTFE ball seal
D02oilfree, PTFE ball seal (only with specific connecting parts)
D03silicon-free, PTFE ball seal (only with specific connecting parts)
D04silicon-free, PVDF ball seal metric (only with specific connecting parts)

Seals

E01EPDM seals
E02FPM seals

Threaded inserts

F01without threaded inserts
F02with threaded inserts

Connecting parts

G11PVC-C Cement socket metric
G12PVC-C Cement socket JIS
G13PVC-C Cement socket inch ASTM
G14PVC-C Cement spigot metric
G15PVC-C Threaded socket Rp
G16PVC-C Threaded socket Rp reinforced (DN10-50)
G17PVC-C Threaded socket NPT
G40PE-100 Butt fusion metric
G41PE-100 Butt fusion spigot SDR11 metric
G42PE-100 Butt fusion spigot SDR17.6 metric (DN65-100)
G43PE-100 Butt fusion spigot long SDR11 metric
G72Backing flange PP-steel metric
G73Backing flange PP-steel inch ANSI
G81PVC-C Valve end blank

Multi-functional module

I01No multi-functional module
I02Empty module
I03Module with 2 end switches Ag, Ni
I04Module with 2 end switches Au
I05Module with 2 inductive switches Namur
I06Module with 2 inductive switches PNP
I07Module with 2 inductive switches NPN

Lever

K01Standard lever red
K02Standard lever black
K11Multi-functional lever red

Mounting plate

L01without mounting plate
L02with mounting plate

A01B02CDEFGGLIKL

leftright

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for your application, we have created a selection menu for you.

We supply what you put together.

Ball valves electric

Ball valve type 107 PVC-C 100-230V With manual emergency override With solvent cement sockets metric



DN10/15 - 50

Model:

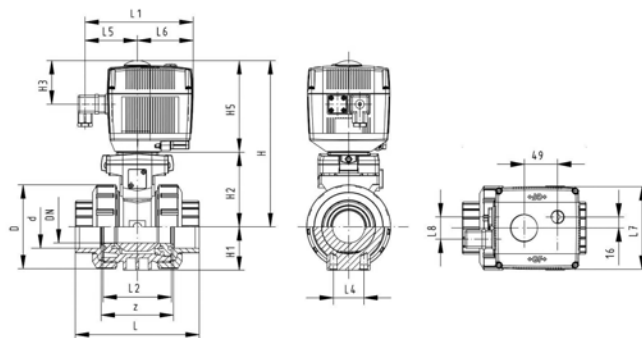
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg										
16	10	10	70	199 107 102	199 107 112	1.770										
20	15	10	185	199 107 103	199 107 113	1.780										
25	20	10	350	199 107 104	199 107 114	1.860										
32	25	10	700	199 107 105	199 107 115	1.950										
40	32	10	1000	199 107 106	199 107 116	2.190										
50	40	10	1600	199 107 107	199 107 117	2.360										
63	50	10	3100	199 107 108	199 107 118	3.140										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
16	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
20	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
25	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
32	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
40	84	220	44	64	64	137	146	161	85	45	77	83	122	33	94
50	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
63	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





Ball valve type 107 PVC-C 24V

With manual emergency override

With solvent cement sockets metric

Model:

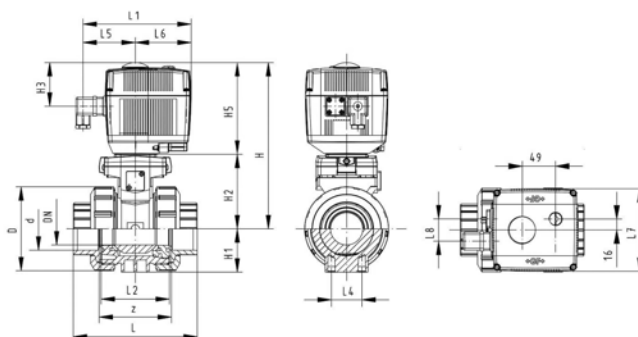
- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

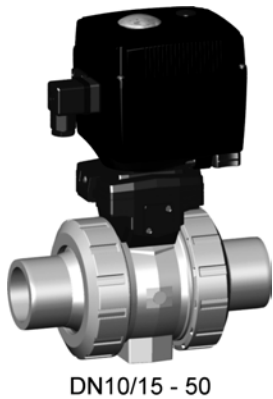
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 107 142	199 107 152	1.770	
20	15	10	185	199 107 143	199 107 153	1.780	
25	20	10	350	199 107 144	199 107 154	1.860	
32	25	10	700	199 107 145	199 107 155	1.950	
40	32	10	1000	199 107 146	199 107 156	2.190	
50	40	10	1600	199 107 147	199 107 157	2.360	
63	50	10	3100	199 107 148	199 107 158	3.140	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
16	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
20	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
25	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
32	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
40	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
50	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
63	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





Ball valve type 107 PVC-C 100-230V

With manual emergency override

With solvent cement spigots metric

Model:

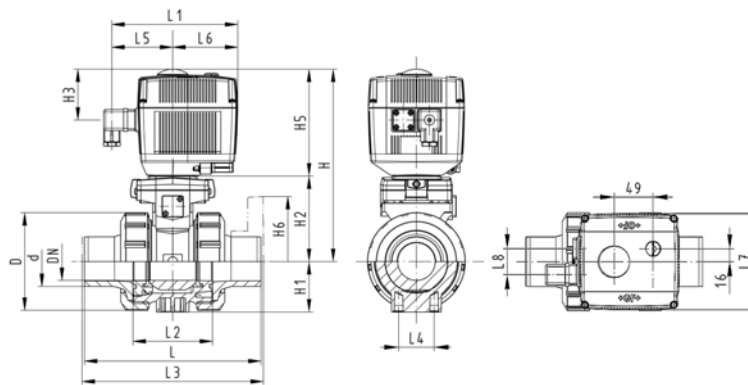
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 107 122	199 107 132	1.770	
20	15	10	185	199 107 123	199 107 133	1.780	
25	20	10	350	199 107 124	199 107 134	1.860	
32	25	10	700	199 107 125	199 107 135	1.950	
40	32	10	1000	199 107 126	199 107 136	2.190	
50	40	10	1600	199 107 127	199 107 137	2.360	
63	50	10	3100	199 107 128	199 107 138	3.140	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
16	50	200	27	64	64	137	114	161	56	130	25	77	83	122	33
20	50	200	27	64	64	137	124	161	56	130	25	77	83	122	33
25	58	209	30	73	64	137	144	161	65	150	25	77	83	122	33
32	68	209	36	73	64	137	154	161	71	160	25	77	83	122	33
40	84	220	44	84	64	137	174	161	85	180	45	77	83	122	33
50	97	220	51	84	64	137	194	161	89	200	45	77	83	122	33
63	124	243	64	106	64	137	224	161	101	230	45	77	83	122	33





Ball valve type 107 PVC-C 24V

With manual emergency override

With solvent cement spigots metric

Model:

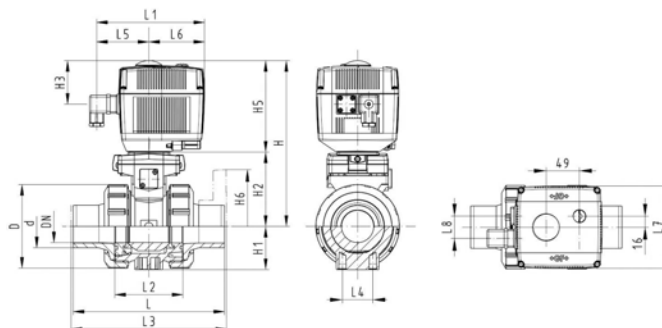
- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 107 162	199 107 172	1.770	
20	15	10	185	199 107 163	199 107 173	1.780	
25	20	10	350	199 107 164	199 107 174	1.860	
32	25	10	700	199 107 165	199 107 175	1.950	
40	32	10	1000	199 107 166	199 107 176	2.190	
50	40	10	1600	199 107 167	199 107 177	2.360	
63	50	10	3100	199 107 168	199 107 178	3.140	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
16	50	200	27	64	64	137	114	161	56	130	25	77	83	122	33
20	50	200	27	64	64	137	124	161	56	130	25	77	83	122	33
25	58	209	30	73	64	137	144	161	65	150	25	77	83	122	33
32	68	209	36	73	64	137	154	161	71	160	25	77	83	122	33
40	84	220	44	84	64	137	174	161	85	180	45	77	83	122	33
50	97	220	51	84	64	137	194	161	89	200	45	77	83	122	33
63	124	243	64	106	64	137	224	161	101	230	45	77	83	122	33





DN10/15 - 50

Ball valve type 107 PVC-C 100-230V With manual emergency override With threaded sockets Rp

Model:

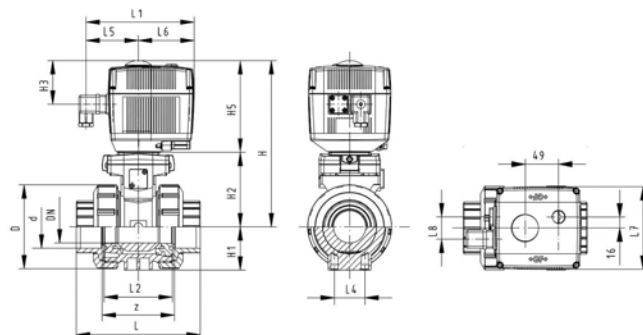
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg										
3/8	10	10	70	199 107 702	199 107 712	2.100										
1/2	15	10	185	199 107 703	199 107 713	2.100										
3/4	20	10	350	199 107 704	199 107 714	2.200										
1	25	10	700	199 107 705	199 107 715	2.300										
1 1/4	32	10	1000	199 107 706	199 107 716	2.600										
1 1/2	40	10	1600	199 107 707	199 107 717	3.000										
2	50	10	3100	199 107 708	199 107 718	3.800										

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
3/8	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
1/2	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
3/4	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
1	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
1 1/4	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
1 1/2	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
2	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





DN10/15 - 50

Ball valve type 107 PVC-C 24V With manual emergency override With threaded sockets Rp

Model:

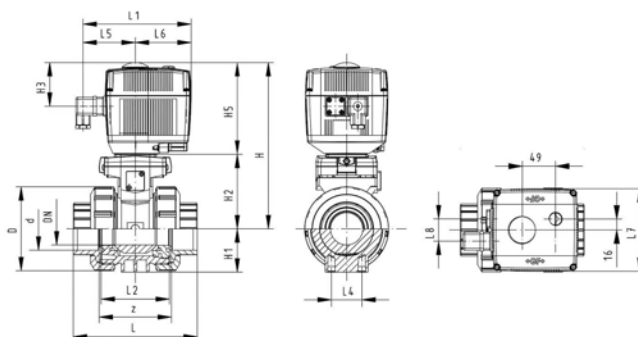
- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 107 742	199 107 752	2.100	
1/2	15	10	185	199 107 743	199 107 753	2.100	
3/4	20	10	350	199 107 744	199 107 754	2.200	
1	25	10	700	199 107 745	199 107 755	2.300	
1 1/4	32	10	1000	199 107 746	199 107 756	2.600	
1 1/2	40	10	1600	199 107 747	199 107 757	3.000	
2	50	10	3100	199 107 748	199 107 758	3.800	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
3/8	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
1/2	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
3/4	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
1	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
1 1/4	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
1 1/2	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
2	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





DN10/15 - 50

Ball valve type 130 PVC-C 100-230V With manual emergency override With solvent cement sockets metric

Model:

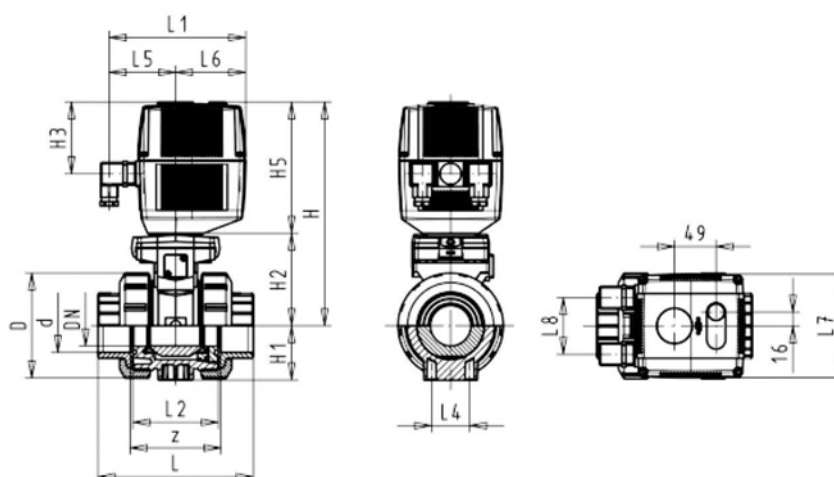
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

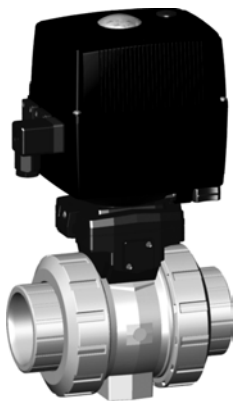
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 130 402	199 130 412	2.100	
20	15	10	185	199 130 403	199 130 413	2.100	
25	20	10	350	199 130 404	199 130 414	2.200	
32	25	10	700	199 130 405	199 130 415	2.300	
40	32	10	1000	199 130 406	199 130 416	2.600	
50	40	10	1600	199 130 407	199 130 417	3.000	
63	50	10	3100	199 130 408	199 130 418	3.800	
 75	65	10	5000	199 130 409	199 130 419	4.000	
 90	80	10	7000	199 130 410	199 130 420	5.100	
 110	100	10	11000	199 130 411	199 130 421	6.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	231	27	64	94	167	92	180	56	25	97	83	122	64
20	50	231	27	64	94	167	95	180	56	25	97	83	122	64
25	58	240	30	73	94	167	110	180	65	25	97	83	122	72
32	68	240	36	73	94	167	123	180	71	25	97	83	122	79
40	84	251	44	84	94	167	146	180	85	45	97	83	122	94
50	97	251	51	84	94	167	157	180	89	45	97	83	122	95
63	124	273	64	106	94	167	183	180	101	45	97	83	122	107
 75	166	346	85	156	94	190	233	180	136	70	98	83	122	144
 90	200	358	105	168	94	190	254	180	141	70	98	83	122	151
 110	238	365	123	175	94	190	301	180	164	120	98	83	122	174





DN10/15 - 50

Ball valve type 130 PVC-C 24V

With manual emergency override

With solvent cement sockets metric

Model:

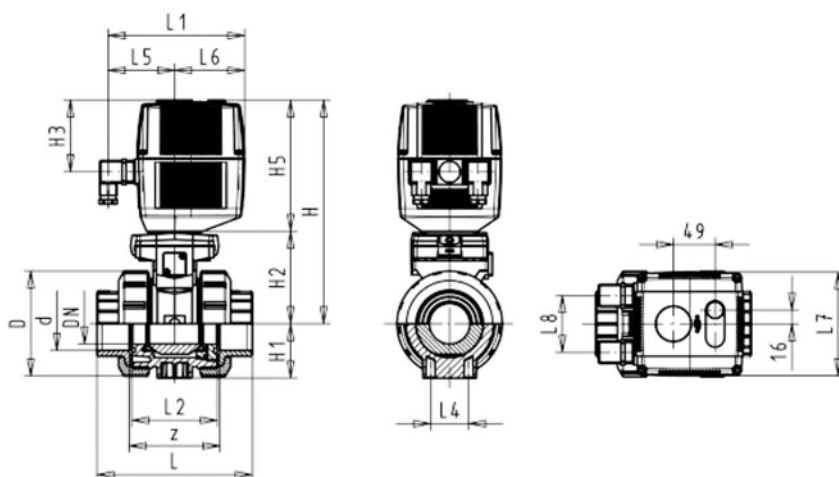
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

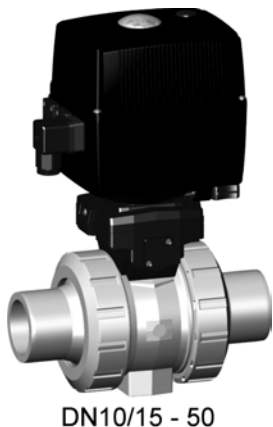
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 130 442	199 130 452	2.100	
20	15	10	185	199 130 443	199 130 453	2.100	
25	20	10	350	199 130 444	199 130 454	2.200	
32	25	10	700	199 130 445	199 130 455	2.300	
40	32	10	1000	199 130 446	199 130 456	2.600	
50	40	10	1600	199 130 447	199 130 457	3.000	
63	50	10	3100	199 130 448	199 130 458	3.800	
 75	65	10	5000	199 130 449	199 130 459	4.000	
 90	80	10	7000	199 130 450	199 130 460	5.100	
 110	100	10	11000	199 130 451	199 130 461	6.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	231	27	64	94	167	92	180	56	25	97	83	122	64
20	50	231	27	64	94	167	95	180	56	25	97	83	122	64
25	58	240	30	73	94	167	110	180	65	25	97	83	122	72
32	68	240	36	73	94	167	123	180	71	25	97	83	122	79
40	84	251	44	84	94	167	146	180	85	45	97	83	122	94
50	97	251	51	84	94	167	157	180	89	45	97	83	122	95
63	124	273	64	106	94	167	183	180	101	45	97	83	122	107
 75	166	346	85	156	94	190	233	180	136	70	98	83	122	144
 90	200	358	105	168	94	190	254	180	141	70	98	83	122	151
 110	238	365	123	175	94	190	301	180	164	120	98	83	122	174





DN10/15 - 50

Ball valve type 130 PVC-C 100-230V With manual emergency override With solvent cement spigots metric

Model:

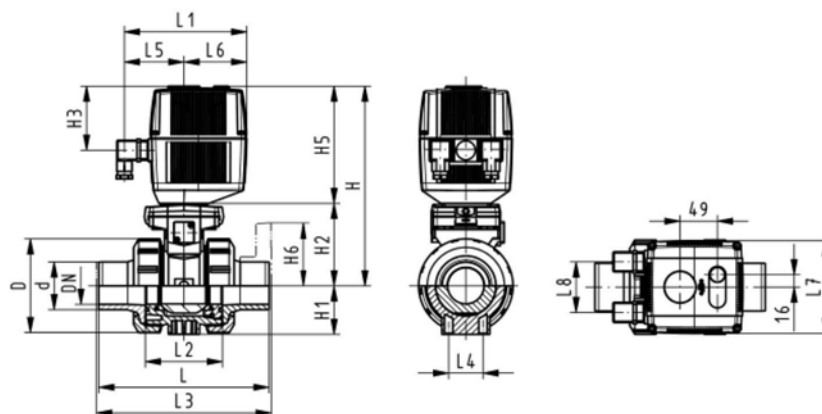
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

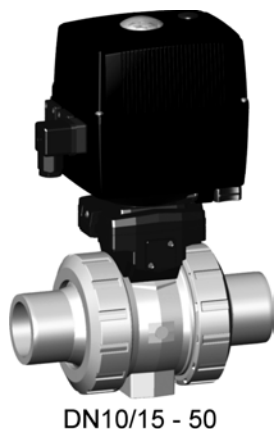
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 130 422	199 130 432	2.100	
20	15	10	185	199 130 423	199 130 433	2.100	
25	20	10	350	199 130 424	199 130 434	2.200	
32	25	10	700	199 130 425	199 130 435	2.300	
40	32	10	1000	199 130 426	199 130 436	2.600	
50	40	10	1600	199 130 427	199 130 437	3.000	
63	50	10	3100	199 130 428	199 130 438	3.800	
 75	65	10	5000	199 130 429	199 130 439	4.200	
 90	80	10	7000	199 130 430	199 130 440	5.300	
 110	100	10	11000	199 130 431	199 130 441	6.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	231	27	64	94	167	114	180	56	130	25	97	83	122	
20	50	231	27	64	94	167	124	180	56	130	25	97	83	122	
25	58	240	30	73	94	167	144	180	65	150	25	97	83	122	
32	68	240	36	73	94	167	154	180	71	160	25	97	83	122	
40	84	251	44	84	94	167	174	180	85	180	45	97	83	122	
50	97	251	51	84	94	167	194	180	89	200	45	97	83	122	
63	124	273	64	106	94	167	224	180	101	230	45	97	83	122	
 75	166	346	85	156	94	190	284	180	136	290	70	98	83	122	
 90	200	358	105	168	94	190	300	180	141	310	70	98	83	122	
 110	238	365	123	175	94	190	340	180	164	350	120	98	83	122	





DN10/15 - 50

Ball valve type 130 PVC-C 24V With manual emergency override With solvent cement spigots metric

Model:

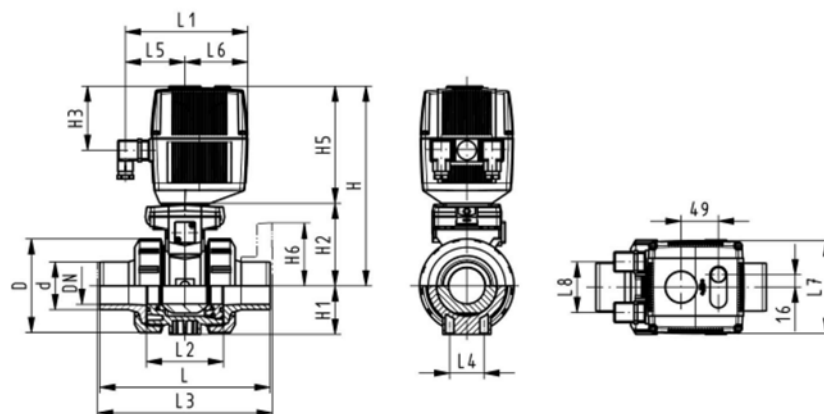
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 130 462	199 130 472	2.100	
20	15	10	185	199 130 463	199 130 473	2.100	
25	20	10	350	199 130 464	199 130 474	2.200	
32	25	10	700	199 130 465	199 130 475	2.300	
40	32	10	1000	199 130 466	199 130 476	2.600	
50	40	10	1600	199 130 467	199 130 477	3.000	
63	50	10	3100	199 130 468	199 130 478	3.800	
75	65	10	5000	199 130 469	199 130 479	4.200	
90	80	10	7000	199 130 470	199 130 480	5.300	
110	100	10	11000	199 130 471	199 130 481	6.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	231	27	64	94	167	114	180	56	0	25	97	83	122	
20	50	231	27	64	94	167	124	180	56	130	25	97	83	122	
25	58	240	30	73	94	167	144	180	65	150	25	97	83	122	
32	68	240	36	73	94	167	154	180	71	160	25	97	83	122	
40	84	251	44	84	94	167	174	180	85	180	45	97	83	122	
50	97	251	51	84	94	167	194	180	89	200	45	97	83	122	
63	124	273	64	106	94	167	224	180	101	230	45	97	83	122	
75	166	346	85	156	94	190	284	180	136	290	70	98	83	122	
90	200	358	105	168	94	190	300	180	141	310	70	98	83	122	
110	238	365	123	175	94	190	340	180	164	350	120	98	83	122	





DN10/15 - 50

Ball valve type 130 PVC-C 100-230V

With manual emergency override

With threaded sockets Rp

Model:

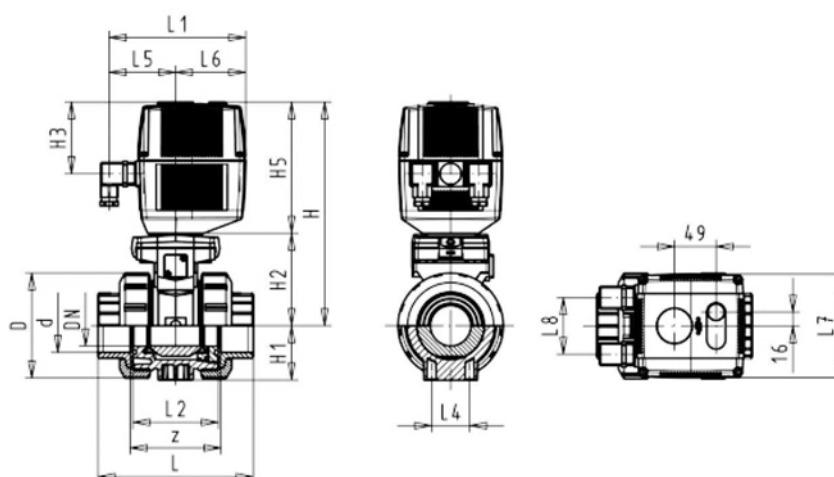
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

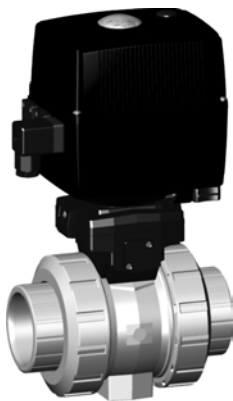
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 130 182	199 130 192	2.100	
1/2	15	10	185	199 130 183	199 130 193	2.100	
3/4	20	10	350	199 130 184	199 130 194	2.200	
1	25	10	700	199 130 185	199 130 195	2.300	
1 1/4	32	10	1000	199 130 186	199 130 196	2.600	
1 1/2	40	10	1600	199 130 187	199 130 197	3.000	
2	50	10	3100	199 130 188	199 130 198	3.800	
 2 1/2	65	10	5000	199 130 189	199 130 199	4.100	
 3	80	10	7000	199 130 190	199 130 200	5.200	
 4	100	10	11000	199 130 191	199 130 201	6.800	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	231	27	64	94	167	92	180	56	25	97	83	122	64
1/2	50	231	27	64	94	167	95	180	56	25	97	83	122	64
3/4	58	240	30	73	94	167	110	180	65	25	97	83	122	72
1	68	240	36	73	94	167	123	180	71	25	97	83	122	79
1 1/4	84	251	44	84	94	167	146	180	85	45	97	83	122	94
1 1/2	97	251	51	84	94	167	157	180	89	45	97	83	122	95
2	124	273	64	106	94	167	183	180	101	45	97	83	122	107
 2 1/2	166	346	85	156	94	190	233	180	136	70	98	83	122	144
 3	200	358	105	168	94	190	254	180	141	70	98	83	122	151
 4	238	365	123	175	94	190	301	180	164	120	98	83	122	174





DN10/15 - 50

Ball valve type 130 PVC-C 24V With manual emergency override With threaded sockets Rp

Model:

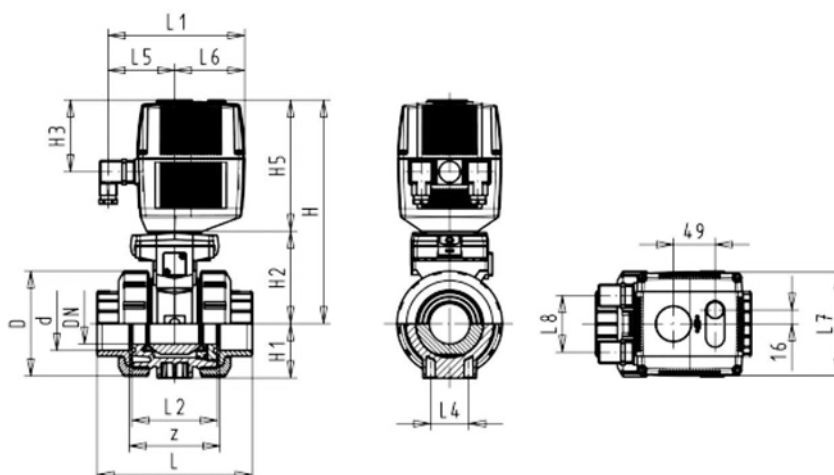
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 130 202	199 130 212	2.100	
1/2	15	10	185	199 130 203	199 130 213	2.100	
3/4	20	10	350	199 130 204	199 130 214	2.200	
1	25	10	700	199 130 205	199 130 215	2.300	
1 1/4	32	10	1000	199 130 206	199 130 216	2.600	
1 1/2	40	10	1600	199 130 207	199 130 217	3.000	
2	50	10	3100	199 130 208	199 130 218	3.800	
 2 1/2	65	10	5000	199 130 209	199 130 219	4.100	
 3	80	10	7000	199 130 210	199 130 220	5.200	
 4	100	10	11000	199 130 211	199 130 221	6.800	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	231	27	64	94	167	92	180	56	25	97	83	122	64
1/2	50	231	27	64	94	167	95	180	56	25	97	83	122	64
3/4	58	240	30	73	94	167	110	180	65	25	97	83	122	72
1	68	240	36	73	94	167	123	180	71	25	97	83	122	79
1 1/4	84	251	44	84	94	167	146	180	85	45	97	83	122	94
1 1/2	97	251	51	84	94	167	157	180	89	45	97	83	122	95
2	124	273	64	106	94	167	183	180	101	45	97	83	122	107
 2 1/2	166	346	85	156	94	190	233	180	136	70	98	83	122	144
 3	200	358	105	168	94	190	254	180	141	70	98	83	122	151
 4	238	365	123	175	94	190	301	180	164	120	98	83	122	174





Ball valve type 130 PVC-C 100-230V

With manual emergency override

With backing flanges PP-st metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

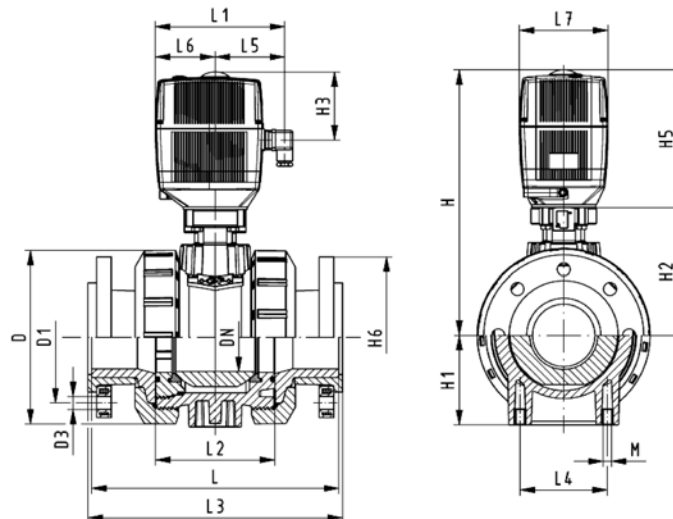
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg										
75	65	10	5000	199 134 489	199 134 499	8.200										
90	80	10	7000	199 134 490	199 134 500	10.100										
110	100	10	11000	199 134 491	199 134 501	13.400										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]		
75	166	346	85	156	94	190	93	284	180	136	290	70	98	83		
90	200	358	105	168	94	190	100	300	180	141	310	70	98	83		
110	238	365	123	175	94	190	110	340	180	164	350	120	98	83		

d [mm]	L7 [mm]	L8 [mm]														
75	122	66														
90	122	66														
110	122	66														





Ball valve type 130 PVC-C 24V

With manual emergency override

With backing flanges PP-st metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

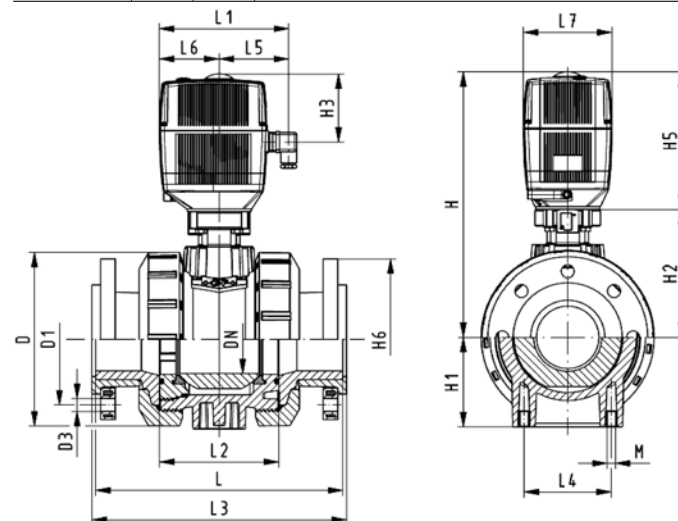
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	199 134 509	199 134 519	8.200	
 90	80	10	7000	199 134 510	199 134 520	10.100	
 110	100	10	11000	199 134 511	199 134 521	13.400	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
 75	166	346	85	156	94	190	93	284	180	136	290	70	98	83	
 90	200	358	105	168	94	190	100	300	180	141	310	70	98	83	
 110	238	365	123	175	94	190	110	340	180	164	350	120	98	83	

d [mm]	L7 [mm]	L8 [mm]	
 75	122	66	
 90	122	66	
 110	122	66	



Copiable

Configurator GF ball valve type 546 PVC-C

Ball Valve

A01Ball Valve 546

Material

B02PVC-C

Dimension

C05DN 103/8"
C06DN 151/2"
C07DN 203/4"
C08DN 251"
C09DN 321 1/4"
C10DN 401 1/2"
C11DN 502"
C12DN 652 1/2"
C13DN 803"
C14DN 1004"

Version

D01Standard, PTFE ball seal
D02oilfree, PTFE ball seal (only with specific connecting parts)
D03silicon-free, PTFE ball seal (only with specific connecting parts)
D04silicon-free, PVDF ball seal metric (only with specific connecting parts)

Seals

E01EPDM seals
E02FPM seals

Threaded inserts

F01without threaded inserts
F02with threaded inserts

Connecting parts

G11PVC-C Cement socket metric
G12PVC-C Cement socket JIS
G13PVC-C Cement socket inch ASTM
G14PVC-C Cement spigot metric
G15PVC-C Threaded socket Rp
G16PVC-C Threaded socket Rp reinforced (DN10-50)
G17PVC-C Threaded socket NPT
G40PE-100 Butt fusion metric
G41PE-100 Butt fusion spigot SDR11 metric
G42PE-100 Butt fusion spigot SDR17.6 metric (DN65-100)
G43PE-100 Butt fusion spigot long SDR11 metric
G72Backing flange PP-steel metric
G73Backing flange PP-steel inch ANSI
G81PVC-C Valve end blank

Multi-functional module

I01No multi-functional module
I02Empty module
I03Module with 2 end switches Ag, Ni
I04Module with 2 end switches Au
I05Module with 2 inductive switches Namur
I06Module with 2 inductive switches PNP
I07Module with 2 inductive switches NPN

Lever

K01Standard lever red
K02Standard lever black
K11Multi-functional lever red

Mounting plate

L01without mounting plate
L02with mounting plate

A01B02CDEFGGLIKL

leftright

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for your application, we have created a selection menu for you.

We supply what you put together.

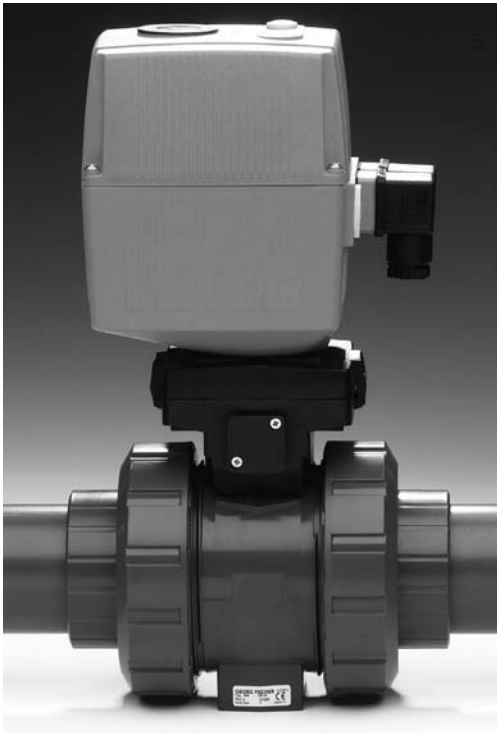
Copiable

GF ball valve type 546 with electric Actuator

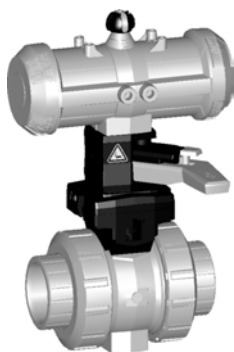
It's easy to actuate the type 546:

With the configurator, you have a choice of new electric actuators, the EA11 for standard applications and the EA21 with modular design and accessories, for practically and type of operation.

We supply what you put together.



Electric Actuator EA11								
T01 EA11 24 V								
T02 EA11 100–230 V								
Accessories EA11								
U01 No accessories								
U02 2 limit switches Ag, Ni								
U03 Heating element								
U04 Fail-safe return								
U05 2 limit switches Ag, Ni normally open								
Electric Actuator EA21/31								
T03 EA21/31 24 V								
T04 EA21/31 100–230 V								
Accessories EA21								
W01 No accessories								
W02 Heating element								
W03 Cycle time module								
W04 Cycle time monitoring								
W05 Cycles monitoring								
W06 Motor current monitoring								
W07 2 limit switches Ag, Ni								
W08 2 limit switches Gold								
W09 2 limit switches NPN								
W10 2 limit switches PNP								
W11 Positioner								
W12 Electric position indicator								
W14 Fail-safe return unit								
W15 Switch intermediate position								
W27 2 limit switches Ag, Ni normally open with connector								
W31 Positioner PE25 with galv. separation								
T	U	T	W	W	W	W	W	W



DN10/15 - 50

Ball valves pneumatic

Ball valve type 230 PVC-C FC (fail safe to close)

With manual override

With solvent cement sockets metric

Model:

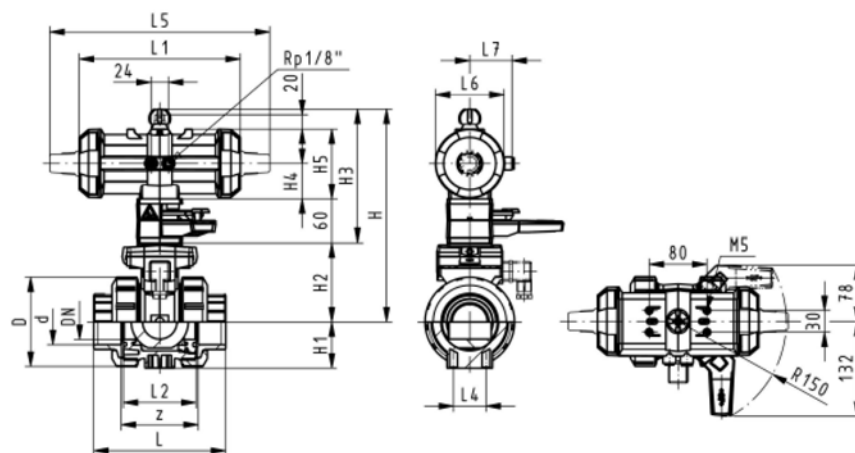
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

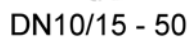
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 402	199 230 412	1.459	
20	15	10	185	199 230 403	199 230 413	1.459	
25	20	10	350	199 230 404	199 230 414	1.576	
32	25	10	700	199 230 405	199 230 415	1.700	
40	32	10	1000	199 230 406	199 230 416	2.751	
50	40	10	1600	199 230 407	199 230 417	3.073	
63	50	10	3100	199 230 408	199 230 418	3.931	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





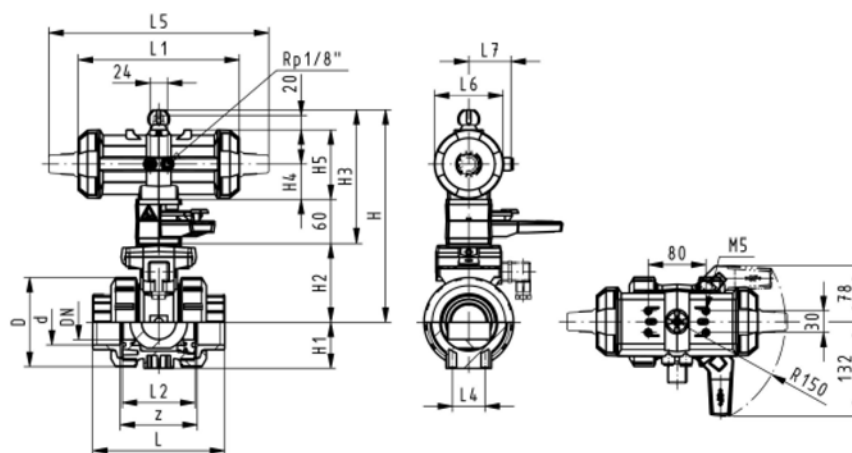
Model:

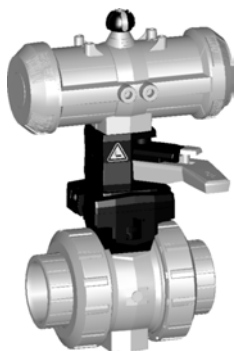
- Built on with pneumatic actuator PA11/21
- Control time $90^\circ <$) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value (Δp=1 bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 442	199 230 452	1.149	
20	15	10	185	199 230 443	199 230 453	1.459	
25	20	10	350	199 230 444	199 230 454	1.576	
32	25	10	700	199 230 445	199 230 455	1.700	
40	32	10	1000	199 230 446	199 230 456	2.751	
50	40	10	1600	199 230 447	199 230 457	3.073	
63	50	10	3100	199 230 448	199 230 458	3.931	

d	D	H	H1	H2	H3	H4	H5	L	L1	L2	L4	L5	L6	L7	z
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
16	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 PVC-C DA (Double acting) With manual override With solvent cement sockets metric

Model:

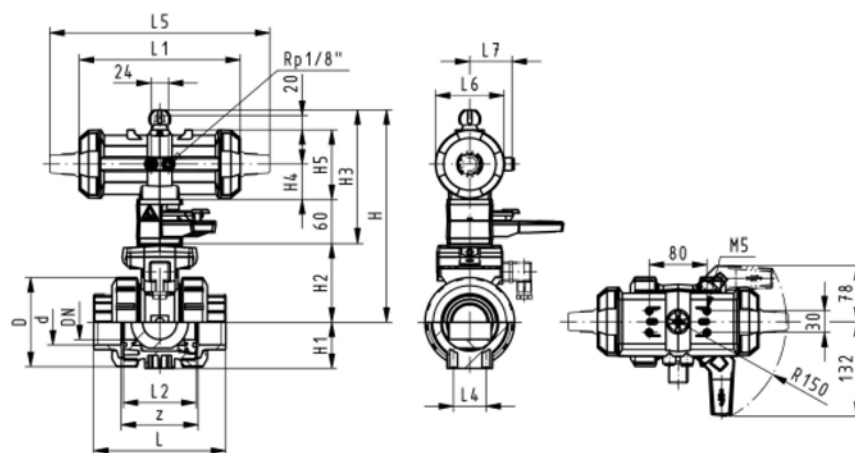
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

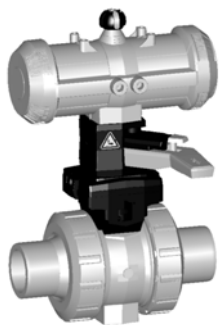
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 482	199 230 492	1.459	
20	15	10	185	199 230 483	199 230 493	1.459	
25	20	10	350	199 230 484	199 230 494	1.576	
32	25	10	700	199 230 485	199 230 495	1.700	
40	32	10	1000	199 230 486	199 230 496	2.751	
50	40	10	1600	199 230 487	199 230 497	3.073	
63	50	10	3100	199 230 488	199 230 498	3.931	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 PVC-C FC (fail safe to close) With manual override With solvent cement spigots metric

Model:

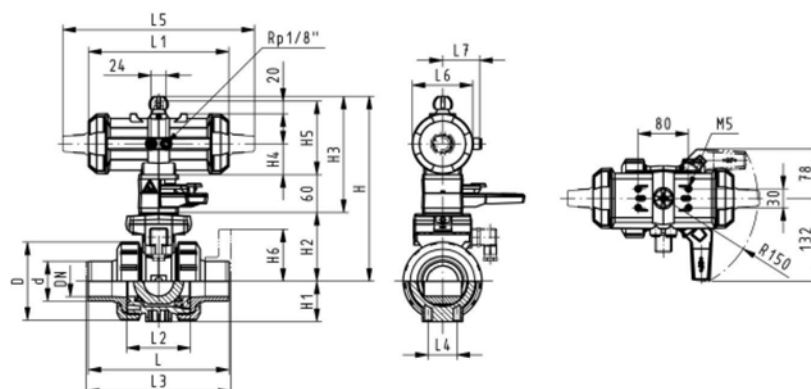
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

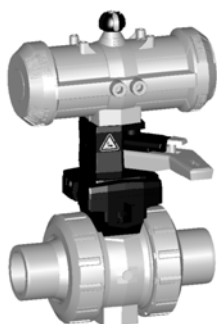
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 230 422	199 230 432	1.459
20	15	10	185	199 230 423	199 230 433	1.459
25	20	10	350	199 230 424	199 230 434	1.576
32	25	10	700	199 230 425	199 230 435	1.700
40	32	10	1000	199 230 426	199 230 436	2.751
50	40	10	1600	199 230 427	199 230 437	3.073
63	50	10	3100	199 230 428	199 230 438	3.931

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	114	194	56	130	25	261	76	48
20	50	230	27	62	168	40	97	124	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	144	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	154	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	174	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	194	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	224	224	101	230	45	305	95	59





DN10/15 - 50

Ball valve type 230 PVC-C FO (Fail safe to open) With manual override With solvent cement spigots metric

Model:

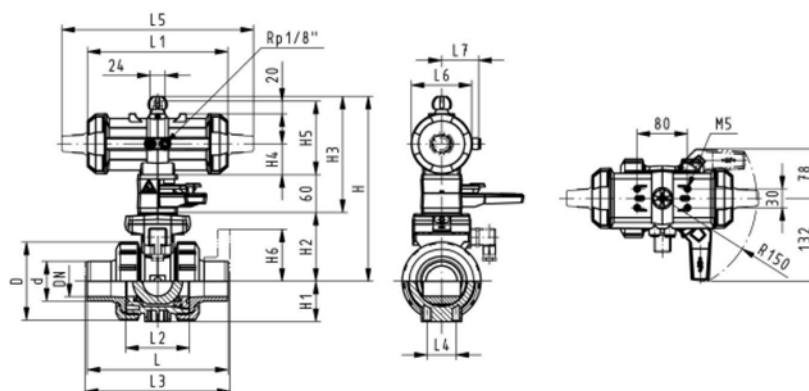
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

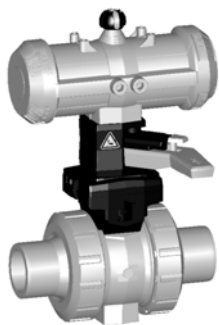
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 462	199 230 472	1.459	
20	15	10	185	199 230 463	199 230 473	1.459	
25	20	10	350	199 230 464	199 230 474	1.576	
32	25	10	700	199 230 465	199 230 475	1.700	
40	32	10	1000	199 230 466	199 230 476	2.751	
50	40	10	1600	199 230 467	199 230 477	3.073	
63	50	10	3100	199 230 468	199 230 478	3.931	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	114	194	56	130	25	261	76	48
20	50	230	27	62	168	40	97	124	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	144	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	154	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	174	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	194	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	224	224	101	230	45	305	95	59





DN10/15 - 50

Ball valve type 230 PVC-C DA (Double acting) With manual override With solvent cement spigots metric

Model:

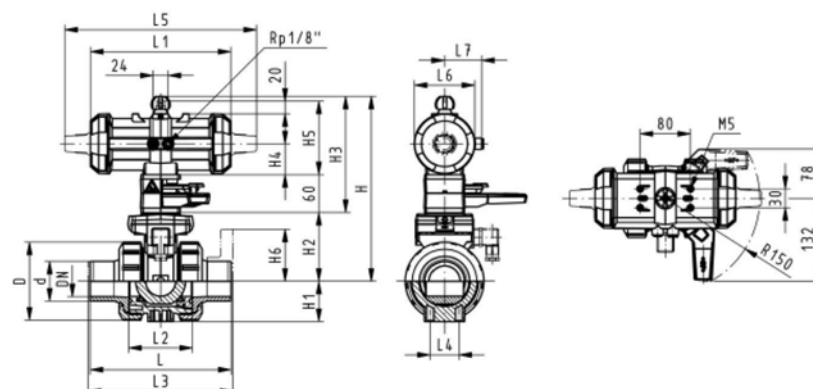
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

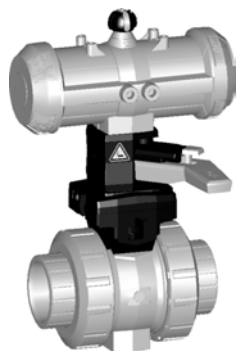
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 230 502	199 230 512	1.459
20	15	10	185	199 230 503	199 230 513	1.459
25	20	10	350	199 230 504	199 230 514	1.576
32	25	10	700	199 230 505	199 230 515	1.700
40	32	10	1000	199 230 506	199 230 516	2.751
50	40	10	1600	199 230 507	199 230 517	3.073
63	50	10	3100	199 230 508	199 230 518	3.931

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	114	194	56	130	25	261	76	48
20	50	230	27	62	168	40	97	124	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	144	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	154	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	174	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	194	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	224	224	101	230	45	305	95	59





DN10/15 - 50

Ball valve type 230 PVC-C FC (fail safe to close) With manual override With threaded sockets Rp

Model:

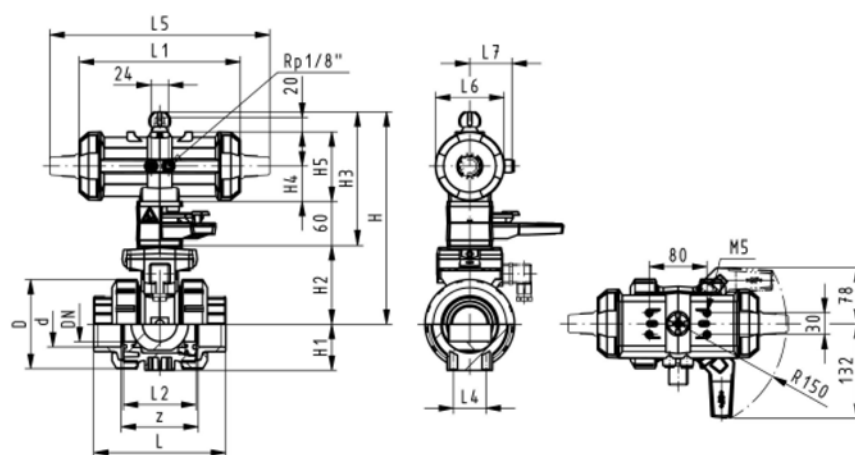
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

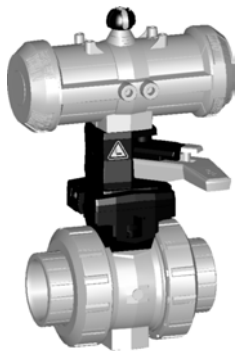
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg									
3/8	10	10	70	199 230 752	199 230 772	1.500									
1/2	15	10	185	199 230 753	199 230 773	1.500									
3/4	20	10	350	199 230 754	199 230 774	1.600									
1	25	10	700	199 230 755	199 230 775	1.700									
1 1/4	32	10	1000	199 230 756	199 230 776	2.800									
1 1/2	40	10	1600	199 230 757	199 230 777	3.100									
2	50	10	3100	199 230 758	199 230 778	4.000									

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 PVC-C FO (Fail safe to open) With manual override With threaded sockets Rp

Model:

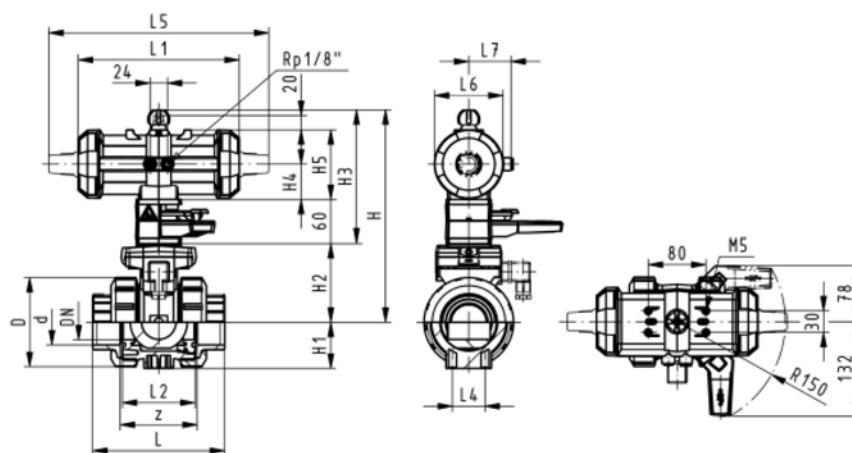
- Built on with pneumatic actuator PA11/21
- Control time $90^\circ <$ 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

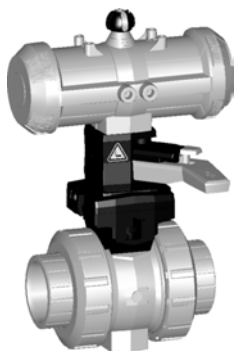
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg										
3/8	10	10	70	199 230 792	199 230 812	1.500										
1/2	15	10	185	199 230 793	199 230 813	1.500										
3/4	20	10	350	199 230 794	199 230 814	1.600										
1	25	10	700	199 230 795	199 230 815	1.700										
1 1/4	32	10	1000	199 230 796	199 230 816	2.800										
1 1/2	40	10	1600	199 230 797	199 230 817	3.100										
2	50	10	3100	199 230 798	199 230 818	4.000										

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 PVC-C DA (Double acting) With manual override With threaded sockets Rp

Model:

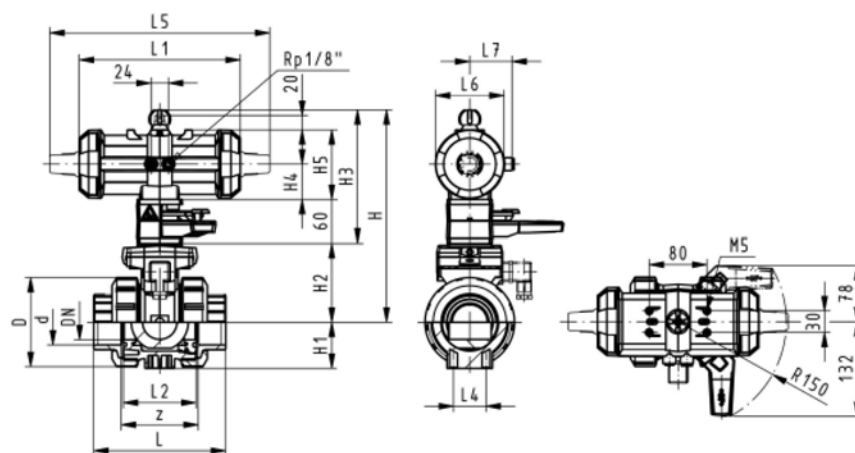
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

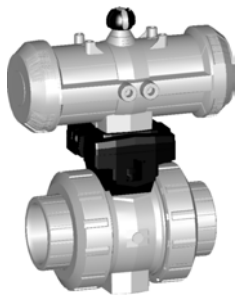
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg									
3/8	10	10	70	199 230 832	199 230 852	1.500									
1/2	15	10	185	199 230 833	199 230 853	1.500									
3/4	20	10	350	199 230 834	199 230 854	1.600									
1	25	10	700	199 230 835	199 230 855	1.700									
1 1/4	32	10	1000	199 230 836	199 230 856	2.800									
1 1/2	40	10	1600	199 230 837	199 230 857	3.100									
2	50	10	3100	199 230 838	199 230 858	4.000									

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 PVC-C FC (Fail safe to close) Without manual override With solvent cement sockets metric

Model:

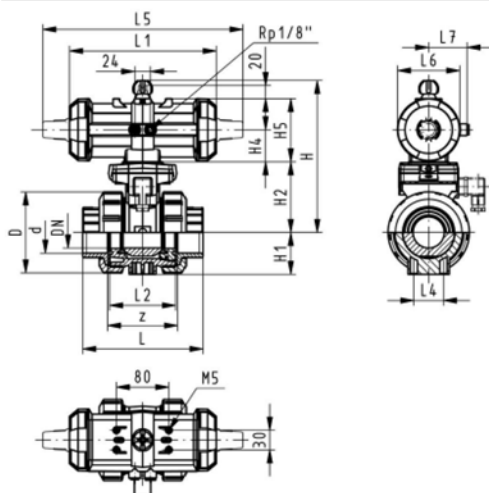
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

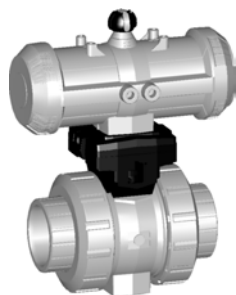
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 522	199 230 532	1.159	
20	15	10	185	199 230 523	199 230 533	1.159	
25	20	10	350	199 230 524	199 230 534	1.276	
32	25	10	700	199 230 525	199 230 535	1.400	
40	32	10	1000	199 230 526	199 230 536	2.451	
50	40	10	1600	199 230 527	199 230 537	2.773	
63	50	10	3100	199 230 528	199 230 538	3.631	
75	65	10	5000	199 230 529	199 230 539	4.400	
90	80	10	7000	199 230 530	199 230 540	5.500	
110	100	10	11000	199 230 531	199 230 541	8.100	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]	
16	50	167	27	62	40	97	92	194	56	25	261	76	48	64	
20	50	167	27	62	40	97	95	194	56	25	261	76	48	64	
25	58	176	30	71	40	97	110	194	65	25	261	76	48	72	
32	68	176	36	71	40	97	123	194	71	25	261	76	48	79	
40	84	210	44	84	51	115	146	224	85	45	305	95	59	94	
50	97	210	51	84	51	115	157	224	89	45	305	95	59	95	
63	124	232	64	106	51	115	183	224	101	45	305	95	59	107	
75	166	262	85	156		70	233	218	136	70	276	65		144	
90	200	281	105	168		78	254	259	141	70	341	72		151	
110	238	292	123	175		86	301	287	164	120	369	80		174	





DN10/15 - 50

Ball valve type 230 PVC-C FO (Fail safe to open) Without manual override With solvent cement sockets metric

Model:

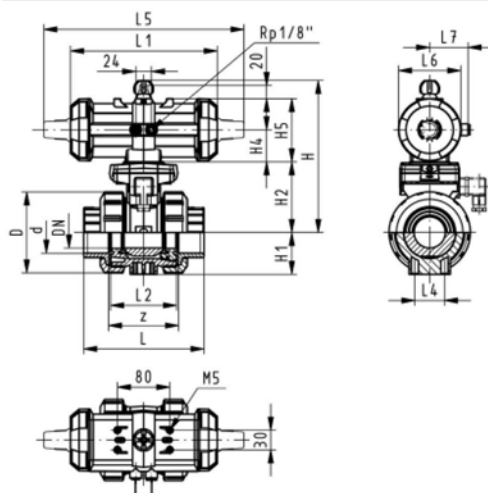
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

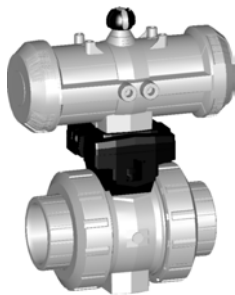
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 562	199 230 572	1.159	
20	15	10	185	199 230 563	199 230 573	1.159	
25	20	10	350	199 230 564	199 230 574	1.276	
32	25	10	700	199 230 565	199 230 575	1.400	
40	32	10	1000	199 230 566	199 230 576	2.451	
50	40	10	1600	199 230 567	199 230 577	2.773	
63	50	10	3100	199 230 568	199 230 578	3.631	
75	65	10	5000	199 230 569	199 230 579	4.400	
90	80	10	7000	199 230 570	199 230 580	5.500	
110	100	10	11000	199 230 571	199 230 581	8.100	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]	
16	50	167	27	62	40	97	92	194	56	25	261	76	48	64	
20	50	167	27	62	40	97	95	194	56	25	261	76	48	64	
25	58	176	30	71	40	97	110	194	65	25	261	76	48	72	
32	68	176	36	71	40	97	123	194	71	25	261	76	48	79	
40	84	210	44	84	51	115	146	224	85	45	305	95	59	94	
50	97	210	51	84	51	115	157	224	89	45	305	95	59	95	
63	124	232	64	106	51	115	183	224	101	45	305	95	59	107	
75	166	262	85	156		70	233	218	136	70	276	65		144	
90	200	281	105	168		78	254	259	141	70	341	72		151	
110	238	292	123	175		86	301	287	164	120	369	80		174	





DN10/15 - 50

Ball valve type 230 PVC-C DA (Double acting) Without manual override With solvent cement sockets metric

Model:

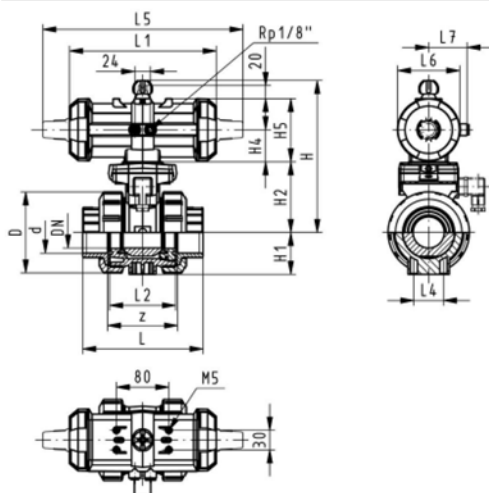
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

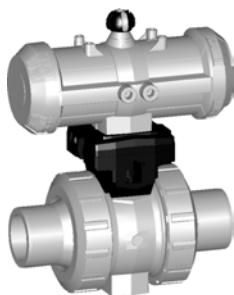
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 602	199 230 612	1.159	
20	15	10	185	199 230 603	199 230 613	1.159	
25	20	10	350	199 230 604	199 230 614	1.276	
32	25	10	700	199 230 605	199 230 615	1.400	
40	32	10	1000	199 230 606	199 230 616	2.451	
50	40	10	1600	199 230 607	199 230 617	2.773	
63	50	10	3100	199 230 608	199 230 618	3.631	
75	65	10	5000	199 230 609	199 230 619	3.300	
90	80	10	7000	199 230 610	199 230 620	4.800	
110	100	10	11000	199 230 611	199 230 621	6.300	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]	
16	50	167	27	62	40	97	92	194	56	25	261	76	48	64	
20	50	167	27	62	40	97	95	194	56	25	261	76	48	64	
25	58	176	30	71	40	97	110	194	65	25	261	76	48	72	
32	68	176	36	71	40	97	123	194	71	25	261	76	48	79	
40	84	210	44	84	51	115	146	224	85	45	305	95	59	94	
50	97	210	51	84	51	115	157	224	89	45	305	95	59	95	
63	124	232	64	106	51	115	183	224	101	45	305	95	59	107	
75	166	257	85	156		66	233	144	136	70	190	60		144	
90	200	274	105	168		70	254	152	141	70	198	65		151	
110	238	273	123	175		78	301	169	164	120	235	72		174	





DN10/15 - 50

Ball valve type 230 PVC-C FC (Fail safe to close) Without manual override With solvent cement spigots metric

Model:

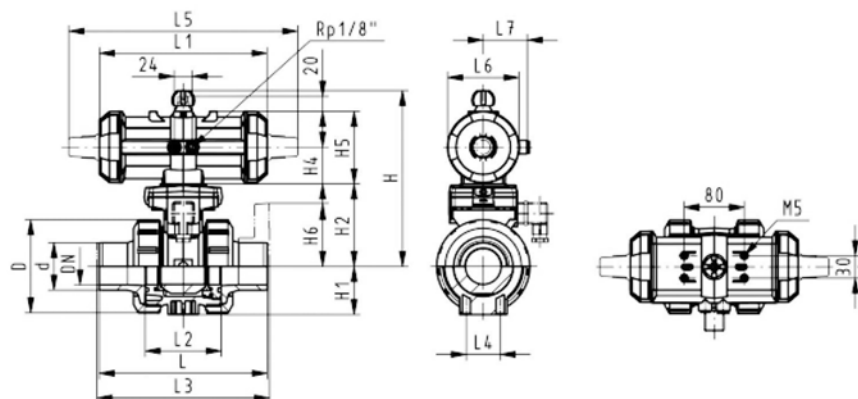
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

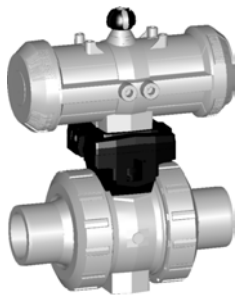
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 542	199 230 552	1.159	
20	15	10	185	199 230 543	199 230 553	1.159	
25	20	10	350	199 230 544	199 230 554	1.276	
32	25	10	700	199 230 545	199 230 555	1.400	
40	32	10	1000	199 230 546	199 230 556	2.451	
50	40	10	1600	199 230 547	199 230 557	2.773	
63	50	10	3100	199 230 548	199 230 558	3.631	
 75	65	10	5000	199 230 549	199 230 559	4.600	
 90	80	10	7000	199 230 550	199 230 560	5.700	
 110	100	10	11000	199 230 551	199 230 561	8.300	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	167	27	62	40	97	114	194	56	0	25	261	76	48	
20	50	167	27	62	40	97	124	194	56	130	25	261	76	48	
25	58	176	30	71	40	97	144	194	65	150	25	261	76	48	
32	68	176	36	71	40	97	154	194	71	160	25	261	76	48	
40	84	210	44	84	51	115	174	224	85	180	45	305	95	59	
50	97	210	51	84	51	115	194	224	89	200	45	305	95	59	
63	124	232	64	106	51	115	224	224	101	230	45	305	95	59	
 75	166	262	85	156		70	284	218	136	290	70	276	65		
 90	200	281	105	168		78	300	259	141	310	70	341	72		
 110	238	292	123	175		86	340	287	164	350	120	369	80		





DN10/15 - 50

Ball valve type 230 PVC-C FO (Fail safe to open) Without manual override With solvent cement spigots metric

Model:

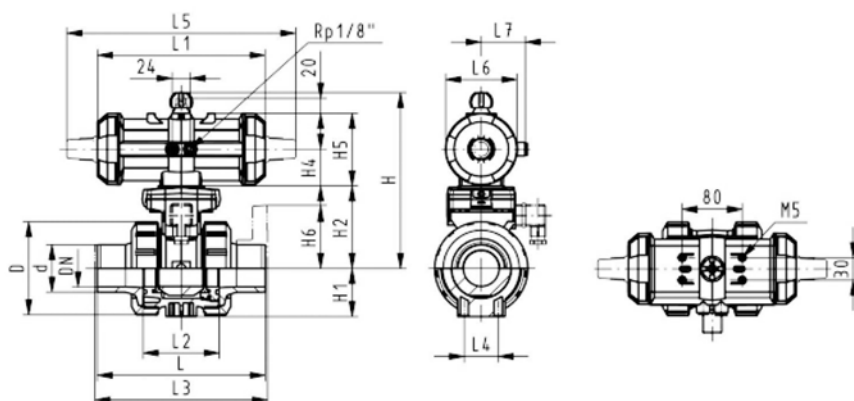
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ \leq$ 1-2 s

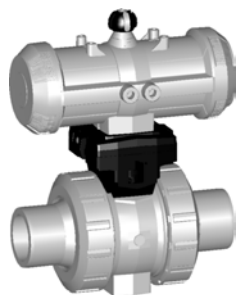
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 582	199 230 592	1.159	
20	15	10	185	199 230 583	199 230 593	1.159	
25	20	10	350	199 230 584	199 230 594	1.276	
32	25	10	700	199 230 585	199 230 595	1.400	
40	32	10	1000	199 230 586	199 230 596	2.451	
50	40	10	1600	199 230 587	199 230 597	2.773	
63	50	10	3100	199 230 588	199 230 598	3.631	
75	65	10	5000	199 230 589	199 230 599	4.600	
90	80	10	7000	199 230 590	199 230 600	5.700	
110	100	10	11000	199 230 591	199 230 601	8.300	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	167	27	62	40	97	114	194	56	130	25	261	76	48	
20	50	167	27	62	40	97	124	194	56	130	25	261	76	48	
25	58	176	30	71	40	97	144	194	65	150	25	261	76	48	
32	68	176	36	71	40	97	154	194	71	160	25	261	76	48	
40	84	210	44	84	51	115	174	224	85	180	45	305	95	59	
50	97	210	51	84	51	115	194	224	89	200	45	305	95	59	
63	124	232	64	106	51	115	224	224	101	230	45	305	95	59	
75	166	262	85	156		70	284	218	136	290	70	276	65		
90	200	281	105	168		78	300	259	141	310	70	341	72		
110	238	292	123	175		86	340	287	164	350	120	369	80		





DN10/15 - 50

Ball valve type 230 PVC-C DA (Double acting) Without manual override With solvent cement spigots metric

Model:

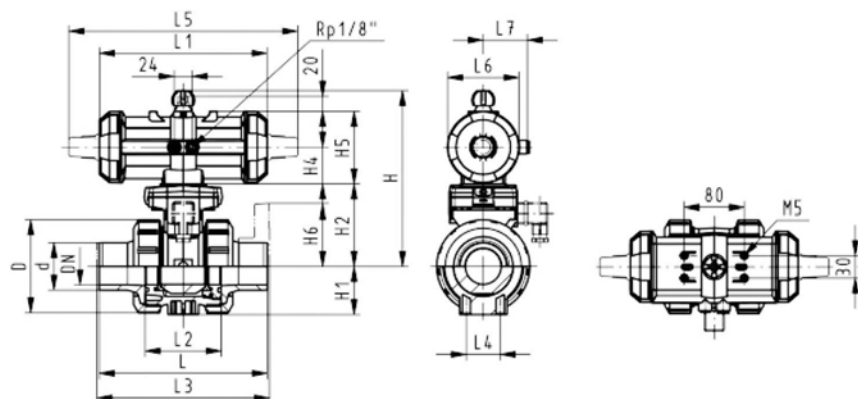
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

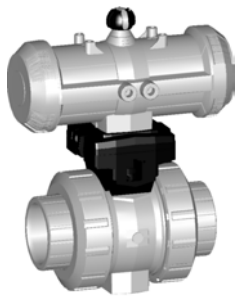
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 230 622	199 230 632	1.159	
20	15	10	185	199 230 623	199 230 633	1.159	
25	20	10	350	199 230 624	199 230 634	1.276	
32	25	10	700	199 230 625	199 230 635	1.400	
40	32	10	1000	199 230 626	199 230 636	2.451	
50	40	10	1600	199 230 627	199 230 637	2.773	
63	50	10	3100	199 230 628	199 230 638	3.631	
 75	65	10	5000	199 230 629	199 230 639	3.500	
 90	80	10	7000	199 230 630	199 230 640	5.000	
 110	100	10	11000	199 230 631	199 230 641	6.600	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	167	27	62	40	97	114	194	56	130	25	261	76	48	
20	50	167	27	62	40	97	124	194	56	130	25	261	76	48	
25	58	176	30	71	40	97	144	194	65	150	25	261	76	48	
32	68	176	36	71	40	97	154	194	71	160	25	261	76	48	
40	84	210	44	84	51	115	174	224	85	180	45	305	95	59	
50	97	210	51	84	51	115	194	224	89	200	45	305	95	59	
63	124	232	64	106	51	115	224	224	101	230	45	305	95	59	
 75	166	257	85	156		66	284	144	136	290	70	190	60		
 90	200	274	105	168		70	300	152	141	310	70	198	65		
 110	238	273	123	175		78	340	169	164	350	120	235	72		





DN10/15 - 50

Ball valve type 230 PVC-C FC (Fail safe to close) Without manual override With threaded sockets Rp

Model:

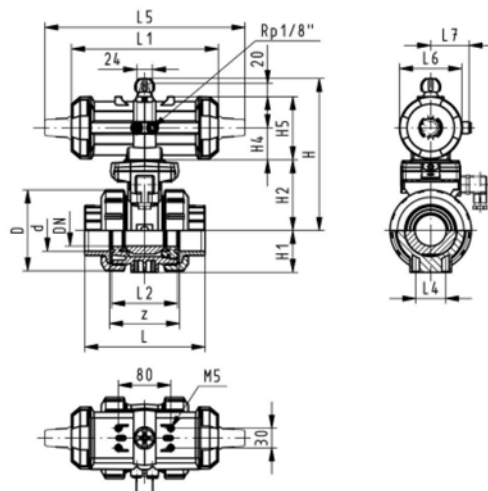
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

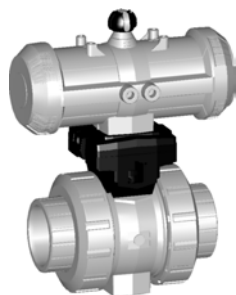
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 230 872	199 230 892	1.200	
1/2	15	10	185	199 230 873	199 230 893	1.200	
3/4	20	10	350	199 230 874	199 230 894	1.300	
1	25	10	700	199 230 875	199 230 895	1.400	
1 1/4	32	10	1000	199 230 876	199 230 896	2.500	
1 1/2	40	10	1600	199 230 877	199 230 897	2.800	
2	50	10	3100	199 230 878	199 230 898	3.700	
 2 1/2	65	10	5000	199 230 879	199 230 899	4.500	
 3	80	10	7000	199 230 880	199 230 900	5.600	
 4	100	10	11000	199 230 881	199 230 901	8.200	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	64
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	64
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	72
1	68	176	36	71	40	97	123	194	71	25	261	76	48	79
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	94
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	95
2	124	232	64	106	51	115	183	224	101	45	305	95	59	107
 2 1/2	166	262	85	156		70	233	218	136	70	276	65		144
 3	200	281	105	168		78	254	259	141	70	341	72		151
 4	238	292	123	175		86	301	287	164	120	369	80		174





DN10/15 - 50

Ball valve type 230 PVC-C FO (Fail safe to open) Without manual override With threaded sockets Rp

Model:

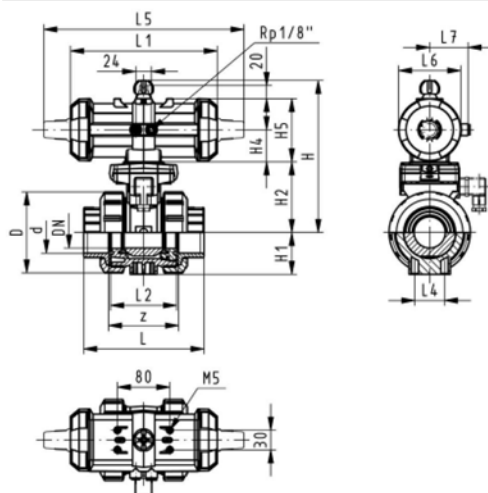
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

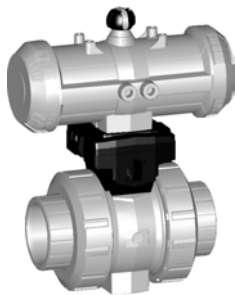
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 230 912	199 230 932	1.200	
1/2	15	10	185	199 230 913	199 230 933	1.200	
3/4	20	10	350	199 230 914	199 230 934	1.300	
1	25	10	700	199 230 915	199 230 935	1.400	
1 1/4	32	10	1000	199 230 916	199 230 936	2.500	
1 1/2	40	10	1600	199 230 917	199 230 937	2.800	
2	50	10	3100	199 230 918	199 230 938	3.700	
2 1/2	65	10	5000	199 230 919	199 230 939	4.500	
3	80	10	7000	199 230 920	199 230 940	5.600	
4	100	10	11000	199 230 921	199 230 941	8.200	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	64
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	64
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	72
1	68	176	36	71	40	97	123	194	71	25	261	76	48	79
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	94
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	95
2	124	232	64	106	51	115	183	224	101	45	305	95	59	107
2 1/2	166	262	85	156		70	233	218	136	70	276	65		144
3	200	281	105	168		78	254	259	141	70	341	72		151
4	238	292	123	175		86	301	287	164	120	369	80		174





DN10/15 - 50

Ball valve type 230 PVC-C DA (Double acting) Without manual override With threaded sockets Rp

Model:

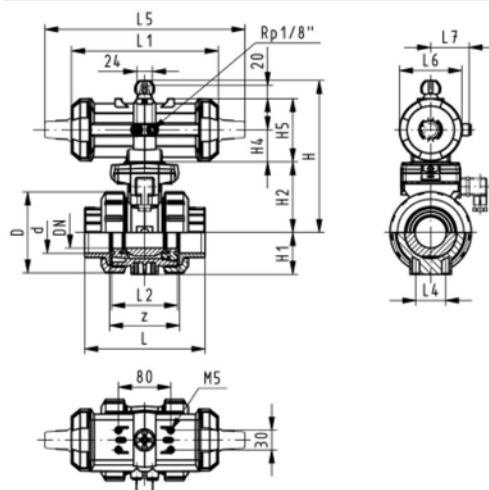
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	70	199 230 942	199 230 952	1.200	
1/2	15	10	185	199 230 943	199 230 953	1.200	
3/4	20	10	350	199 230 944	199 230 954	1.300	
1	25	10	700	199 230 945	199 230 955	1.400	
1 1/4	32	10	1000	199 230 946	199 230 956	2.500	
1 1/2	40	10	1600	199 230 947	199 230 957	2.800	
2	50	10	3100	199 230 948	199 230 958	3.700	
2 1/2	65	10	5000	199 230 949	199 230 959	3.400	
3	80	10	7000	199 230 950	199 230 960	4.900	
4	100	10	11000	199 230 951	199 230 961	6.400	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	64
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	64
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	72
1	68	176	36	71	40	97	123	194	71	25	261	76	48	79
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	94
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	95
2	124	232	64	106	51	115	183	224	101	45	305	95	59	107
2 1/2	166	257	85	156		66	233	144	136	70	190	60		144
3	200	274	105	168		70	254	152	141	70	198	65		151
4	238	273	123	175		78	301	169	164	120	235	72		174





Ball valve type 230 PVC-C FC (Fail safe to close) Without manual override With backing flanges PP-st metric

Model:

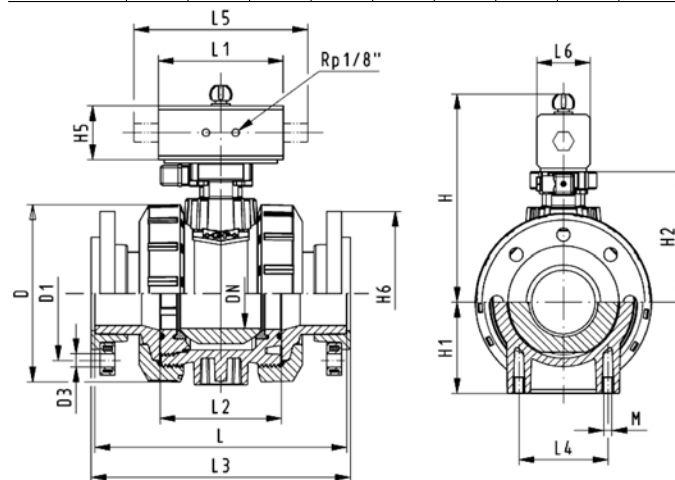
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
75	65	10	5000	199 234 609	199 234 619	8.600	
90	80	10	7000	199 234 610	199 234 620	10.500	
110	100	10	11000	199 234 611	199 234 621	14.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
75	166	262	85	156	70	93	284	218	136	290	70	276	65	
90	200	281	105	168	78	100	300	259	141	310	70	341	72	
110	238	292	123	175	86	110	340	287	164	350	120	369	80	





Ball valve type 230 PVC-C FO (Fail safe to open) Without manual override With backing flanges PP-st metric

Model:

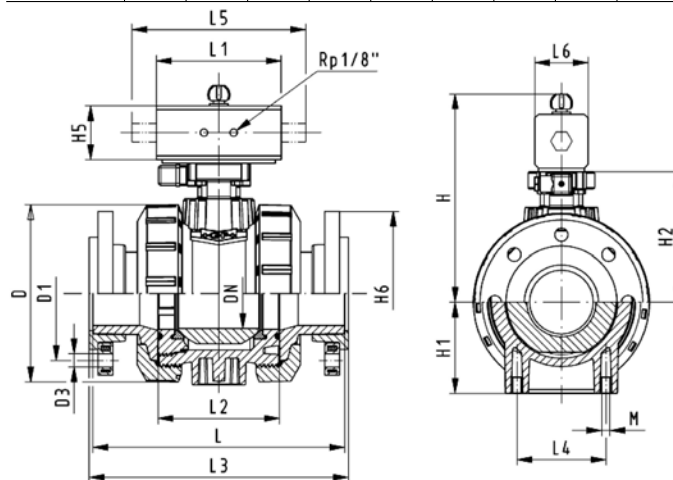
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ \leq$ 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg								
75	65	10	5000	199 234 629	199 234 639	8.600								
90	80	10	7000	199 234 630	199 234 640	10.500								
110	100	10	11000	199 234 631	199 234 641	14.800								

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
75	166	262	85	156	70	93	284	218	136	290	70	276	65	
90	200	281	105	168	78	100	300	259	141	310	70	341	72	
110	238	292	123	175	86	110	340	287	164	350	120	369	80	





Ball valve type 230 PVC-C DA (Double acting) Without manual override With backing flanges PP-st metric

Model:

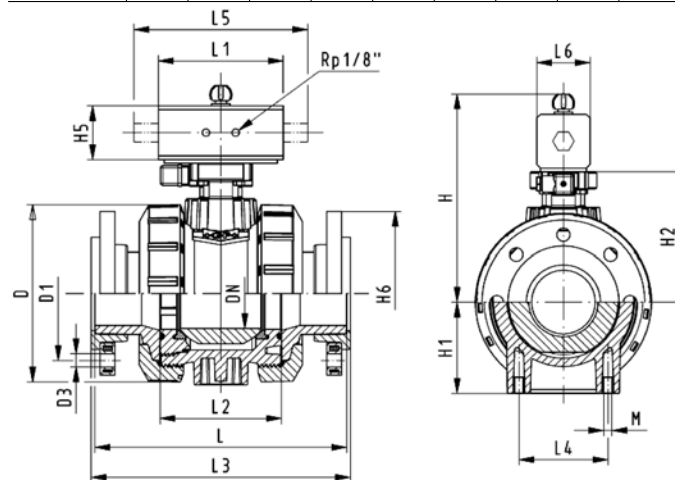
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	199 234 649	199 234 659	7.400	
 90	80	10	7000	199 234 650	199 234 660	9.800	
 110	100	10	11000	199 234 651	199 234 661	13.100	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
 75	166	257	85	156	66	93	284	144	136	290	70	190	60	
 90	200	274	105	168	70	100	300	152	141	310	70	198	65	
 110	238	273	123	175	78	110	340	169	164	350	120	235	72	



Copiable

Configurator GF ball valve type 546 PVC-C

Ball Valve										
A01 Ball Valve 546										
Material										
B02 PVC-C										
Dimension										
C05 DN 10 3/8"										
C06 DN 15 1/2"										
C07 DN 20 3/4"										
C08 DN 25 1"										
C09 DN 32 1 1/4"										
C10 DN 40 1 1/2"										
C11 DN 50 2"										
C12 DN 65 2 1/2"										
C13 DN 80 3"										
C14 DN 100 4"										
Version										
D01 Standard, PTFE ball seal										
D02 oilfree, PTFE ball seal (only with specific connecting parts)										
D03 silicon-free, PTFE ball seal (only with specific connecting parts)										
D04 silicon-free, PVDF ball seal metric (only with specific connecting parts)										
Seals										
E01 EPDM seals										
E02 FPM seals										
Threaded inserts										
F01 without threaded inserts										
F02 with threaded inserts										
Connecting parts										
G11 PVC-C Cement socket metric										
G12 PVC-C Cement socket JIS										
G13 PVC-C Cement socket inch ASTM										
G14 PVC-C Cement spigot metric										
G15 PVC-C Threaded socket Rp										
G16 PVC-C Threaded socket Rp reinforced (DN10-50)										
G17 PVC-C Threaded socket NPT										
G40 PE-100 Butt fusion metric										
G41 PE-100 Butt fusion spigot SDR11 metric										
G42 PE-100 Butt fusion spigot SDR17.6 metric (DN65-100)										
G43 PE-100 Butt fusion spigot long SDR11 metric										
G72 Backing flange PP-steel metric										
G73 Backing flange PP-steel inch ANSI										
G81 PVC-C Valve end blank										
Multi-functional module										
I01 No multi-functional module										
I02 Empty module										
I03 Module with 2 end switches Ag, Ni										
I04 Module with 2 end switches Au										
I05 Module with 2 inductive switches Namur										
I06 Module with 2 inductive switches PNP										
I07 Module with 2 inductive switches NPN										
Lever										
K01 Standard lever red										
K02 Standard lever black										
K11 Multi-functional lever red										
Mounting plate										
L01 without mounting plate										
L02 with mounting plate										
A01	B02	C	D	E	F	G	G	I	K	L
left						right				

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for your application, we have created a selection menu for you.

We supply what you put together.

Copiable

GF ball valve type 546 with pneumatic actuator

It's so easy to configure the type 546:
 With the configurator, you have a choice of new pneumatic actuators PA11 and PA21 in 2 optimized sizes including a large range of accessories.

We supply what you put together.



Pneumatic actuators PA11/PA21			
P01	Fail safe to close PA11/PA21		
P02	Fail safe to open PA11/21		
P03	Double acting PA11/21		
P30	Fail safe to close PA30/90		
P31	Fail safe to open PA30/90		
P32	Double acting PA30/90		
Manual override			
Q01	without manual override		
Q02	with manual override		
Stroke limiter			
R01	without stroke limiter		
R02	with stroke limiter		
P	Q	R	

Ball valves

Ball valve type 546 ABS

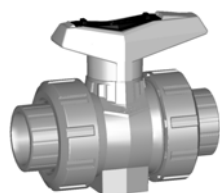
With solvent cement sockets metric

Model:

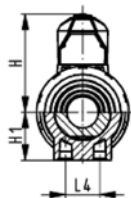
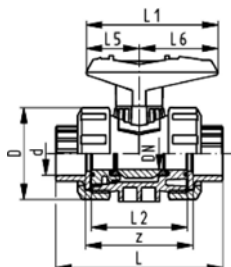
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

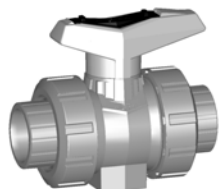


DN10/15 - 50

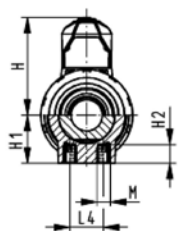
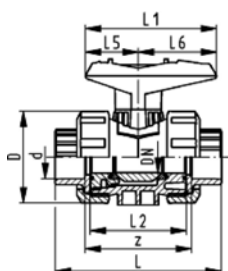


d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg	
16	10	10	71	169 546 001	0.112	
20	15	10	185	169 546 002	0.114	
25	20	10	350	169 546 003	0.178	
32	25	10	700	169 546 004	0.258	
40	32	10	1000	169 546 005	0.457	
50	40	10	1600	169 546 006	0.642	
63	50	10	3100	169 546 007	1.175	
 75	65	10	5000	169 546 008	3.900	
 90	80	10	7000	169 546 009	5.700	
 110	100	10	11000	169 546 010	9.100	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
16	50	57	27	92	77	56	25	32	45	64	
20	50	57	27	95	77	56	25	32	45	64	
25	58	67	30	110	97	65	25	39	58	72	
32	68	73	36	123	97	71	25	39	58	79	
40	84	90	44	146	128	85	45	54	74	94	
50	97	97	51	157	128	89	45	54	74	95	
63	124	116	64	183	152	101	45	66	87	107	
 75	166	149	85	233	270	136	70	64	206	144	
 90	200	161	105	254	270	141	70	64	206	151	
 110	238	178	123	301	320	164	120	64	256	174	



DN10/15 - 50



Ball valve type 546 ABS

With mounting inserts

With solvent cement sockets metric

Model:

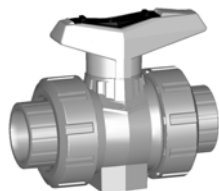
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

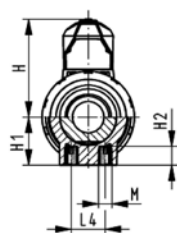
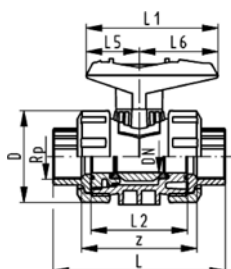
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg								
16	10	10	71	169 546 061	0.112								
20	15	10	185	169 546 062	0.114								
25	20	10	350	169 546 063	0.178								
32	25	10	700	169 546 064	0.258								
40	32	10	1000	169 546 065	0.457								
50	40	10	1600	169 546 066	0.642								
63	50	10	3100	169 546 067	1.175								
 75	65	10	5000	169 546 068	3.900								
 90	80	10	7000	169 546 069	5.700								
 110	100	10	11000	169 546 070	9.100								

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	57	27	12	92	77	56	25	32	45	M6	64	
20	50	57	27	12	95	77	56	25	32	45	M6	64	
25	58	67	30	12	110	97	65	25	39	58	M6	72	
32	68	73	36	12	123	97	71	25	39	58	M6	79	
40	84	90	44	15	146	128	85	45	54	74	M8	94	
50	97	97	51	15	157	128	89	45	54	74	M8	95	
63	124	116	64	15	183	152	101	45	66	87	M8	107	
 75	166	149	85	15	233	270	136	70	64	206	M8	144	
 90	200	161	105	15	254	270	141	70	64	206	M8	151	
 110	238	178	123	22	301	320	164	120	64	256	M12	174	



DN10/15 - 50



Ball valve type 546 ABS

With mounting inserts

With threaded sockets Rp

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

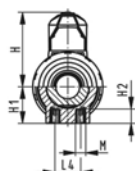
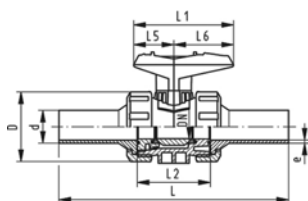
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg								
$\frac{3}{8}$	10	10	71	169 546 021	0.112								
$\frac{1}{2}$	15	10	185	169 546 022	0.114								
$\frac{3}{4}$	20	10	350	169 546 023	0.178								
1	25	10	700	169 546 024	0.258								
1 $\frac{1}{4}$	32	10	1000	169 546 025	0.457								
1 $\frac{1}{2}$	40	10	1600	169 546 026	0.642								
2	50	10	3100	169 546 027	1.175								

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]		
$\frac{3}{8}$	50	57	27	12	95	77	56	25	32	45	M6	69		
$\frac{1}{2}$	50	57	27	12	100	77	56	25	32	45	M6	67		
$\frac{3}{4}$	58	67	30	12	114	97	65	25	39	58	M6	78		
1	68	73	36	12	127	97	71	25	39	58	M6	85		
1 $\frac{1}{4}$	84	90	44	15	146	128	85	45	54	74	M8	100		
1 $\frac{1}{2}$	97	97	51	15	152	128	89	45	54	74	M8	106		
2	124	116	64	15	177	152	101	45	66	87	M8	121		



DN10/15 - 50



Ball valve type 546 ABS

With mounting inserts

With butt fusion spigots long PE 100 SDR11 metric

Model:

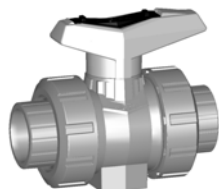
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

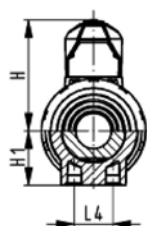
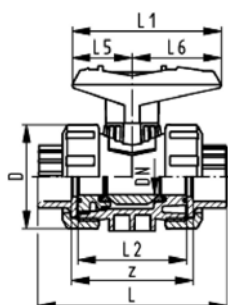
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg							
20	15	16	185	800 024 832	0.150							
25	20	16	350	800 024 834	0.220							
32	25	16	700	800 015 141	0.310							
40	32	16	1000	800 015 142	0.530							
50	40	16	1600	800 015 179	0.740							
63	50	16	3100	800 015 143	1.370							

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]		
20	50	57	27	12	193	77	56	25	32	45	M6	2,3		
25	58	67	30	12	216	97	65	25	39	58	M6	2,3		
32	68	73	36	12	223	97	71	25	39	58	M6	3		
40	84	90	44	15	249	128	85	45	54	74	M8	3,7		
50	97	97	51	15	271	128	89	45	54	74	M8	4,6		
63	124	116	64	15	321	152	101	45	66	87	M8	5,8		



DN10/15 - 50



Ball valve type 546 ABS

With solvent cement sockets Inch BS

Model:

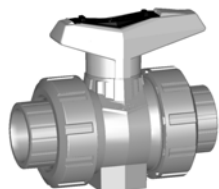
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

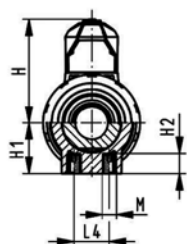
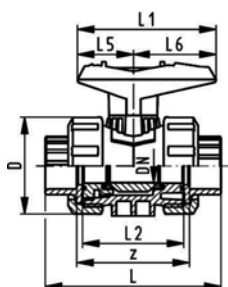
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value (Δp=1 bar) [l/min]	EPDM Code	kg					
3/8	10	10	71	169 546 201	0.112					
1/2	15	10	185	169 546 202	0.114					
3/4	20	10	350	169 546 203	0.178					
1	25	10	700	169 546 204	0.258					
1 1/4	32	10	1000	169 546 205	0.457					
1 1/2	40	10	1600	169 546 206	0.642					
2	50	10	3100	169 546 207	1.175					
 65	65	10	5000	169 546 008	3.900					
 3	80	10	7000	169 546 209	5.700					
 4	100	10	11000	169 546 210	9.100					

Inch	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]		
3/8	50	57	27	92	77	56	25	32	45	60		
1/2	50	57	27	95	77	56	25	32	45	60		
3/4	58	67	30	110	97	65	25	39	58	69		
1	68	73	36	123	97	71	25	39	58	75		
1 1/4	84	90	44	146	128	85	45	54	74	89		
1 1/2	97	97	51	157	128	89	45	54	74	97		
2	124	116	64	183	152	101	45	66	87	110		
 166	166	149	85	233	270	136	70	64	206	144		
 3	200	161	105	254	270	141	70	64	206	151		
 4	238	178	123	301	320	164	120	64	256	174		



DN10/15 - 50



Ball valve type 546 ABS

With mounting inserts

With solvent cement sockets Inch BS

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

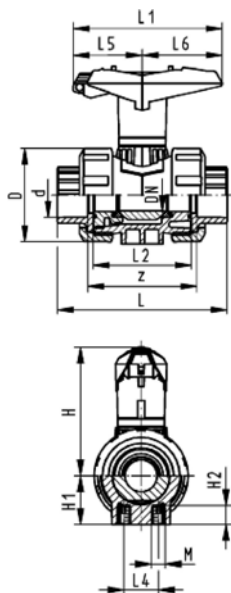
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg	
3/8	10	10	71	169 546 241	0.112	
1/2	15	10	185	169 546 242	0.114	
3/4	20	10	350	169 546 243	0.178	
1	25	10	700	169 546 244	0.258	
1 1/4	32	10	1000	169 546 245	0.457	
1 1/2	40	10	1600	169 546 246	0.642	
2	50	10	3100	169 546 247	1.175	
 65	65	10	5000	169 546 068	3.900	
 80	80	10	7000	169 546 249	5.700	
 100	100	10	11000	169 546 250	9.100	

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
3/8	50	57	27	12	92	77	56	25	32	45	M6	60	
1/2	50	57	27	12	95	77	56	25	32	45	M6	60	
3/4	58	67	30	12	110	97	65	25	39	58	M6	69	
1	68	73	36	12	123	97	71	25	39	58	M6	75	
1 1/4	84	90	44	15	146	128	85	45	54	74	M8	89	
1 1/2	97	97	51	15	157	128	89	45	54	74	M8	97	
2	124	116	64	15	183	152	101	45	66	87	M8	110	
 166	166	149	85	15	233	270	136	70	64	206	M8	144	
 200	200	161	105	15	254	270	141	70	64	206	M8	151	
 238	238	178	123	22	301	320	164	120	64	256	M12	174	



DN10/15 - 50



Ball valve type 546 ABS

With lockable handle

With solvent cement sockets metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Lockable hand lever with ratchet settings

Option:

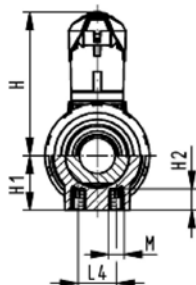
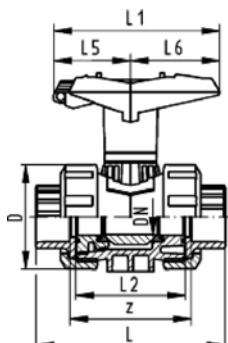
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg									
16	10	10	71	169 546 081	0.121									
20	15	10	185	169 546 082	0.123									
25	20	10	350	169 546 083	0.193									
32	25	10	700	169 546 084	0.273									
40	32	10	1000	169 546 085	0.480									
50	40	10	1600	169 546 086	0.665									
63	50	10	3100	169 546 087	1.205									
 75	65	10	5000	169 546 088	4.200									
 90	80	10	7000	169 546 089	6.100									
 110	100	10	11000	169 546 090	9.400									

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]		
16	50	79	27	12	92	87	56	25	42	45	M6	64		
20	50	79	27	12	95	87	56	25	42	45	M6	64		
25	58	88	30	12	110	108	65	25	50	58	M6	72		
32	68	94	36	12	123	108	71	25	50	58	M6	79		
40	84	113	44	15	146	140	85	45	66	75	M8	94		
50	97	119	51	15	157	140	89	45	66	75	M8	95		
63	124	141	64	15	183	165	101	45	78	87	M8	107		
 75	166	224	85	15	233	270	136	70	64	206	M8	144		
 90	200	235	105	15	254	270	141	70	64	206	M8	151		
 110	238	245	123	22	301	320	164	120	64	256	M12	174		



DN10/15 - 50



Ball valve type 546 ABS

With lockable handle

With solvent cement sockets Inch BS

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Lockable hand lever with ratchet settings

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg								
3/8	10	10	71	169 546 221	0.121								
1/2	15	10	185	169 546 222	0.123								
3/4	20	10	350	169 546 223	0.193								
1	25	10	700	169 546 224	0.273								
1 1/4	32	10	1000	169 546 225	0.480								
1 1/2	40	10	1600	169 546 226	0.665								
2	50	10	3100	169 546 227	1.205								
 65	65	10	5000	169 546 088	4.200								
 3	80	10	7000	169 546 229	6.100								
 4	100		11000	169 546 230	9.400								

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
3/8	50	79	27	12	92	87	56	25	42	45	M6	60	
1/2	50	79	27	12	95	87	56	25	42	45	M6	60	
3/4	58	88	30	12	110	108	65	25	50	58	M6	69	
1	68	94	36	12	123	108	71	25	50	58	M6	75	
1 1/4	84	113	44	15	146	140	85	45	66	75	M8	89	
1 1/2	97	119	51	15	157	140	89	45	66	75	M8	97	
2	124	141	64	15	183	165	101	45	78	87	M8	110	
 166	166	224	85	15	233	270	136	70	64	206	M8	144	
 3	200	235	105	15	254	270	141	70	64	206	M8	151	
 4	238	245	123	22	301	320	164	120	64	256	M12	174	

Ball valves

Ball valve type 546 ABS SF

With mounting inserts

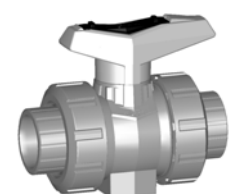
With solvent cement sockets metric

Model:

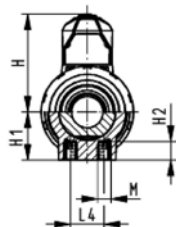
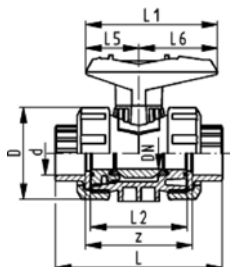
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PVDF
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches



DN10/15 - 50



d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg	
16	10	10	71	169 546 601	0.112	
20	15	10	185	169 546 602	0.114	
25	20	10	350	169 546 603	0.178	
32	25	10	700	169 546 604	0.258	
40	32	10	1000	169 546 605	0.457	
50	40	10	1600	169 546 606	0.642	
63	50	10	3100	169 546 607	1.175	
75	65	10	5000	169 546 608	3.900	
90	80	10	7000	169 546 609	5.700	
110	100	10	11000	169 546 610	9.100	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	57	27	12	92	77	56	25	32	45	M6	64	
20	50	57	27	12	95	77	56	25	32	45	M6	64	
25	58	67	30	12	110	97	65	25	39	58	M6	72	
32	68	73	36	12	123	97	71	25	39	58	M6	79	
40	84	90	44	15	146	128	85	45	54	74	M8	94	
50	97	97	51	15	157	128	89	45	54	74	M8	95	
63	124	116	64	15	183	152	101	45	66	87	M8	107	
75	166	149	85	15	233	270	136	70	64	206	M8	144	
90	200	161	105	15	254	270	141	70	64	206	M8	151	
110	238	178	123	22	301	320	164	120	64	256	M12	174	

Copiable

Configurator GF ball valve type 546 ABS

Ball Valve										
A01 Ball Valve 546										
Material										
B03 ABS										
Nominal width										
C05 DN 10 3/8"										
C06 DN 15 1/2"										
C07 DN 20 3/4"										
C08 DN 25 1"										
C09 DN 32 1 1/4"										
C10 DN 40 1 1/2"										
C11 DN 50 2"										
C12 DN 65 2 1/2"										
C13 DN 80 3"										
C14 DN 100 4"										
Version										
D01 Standard, PTFE ball seal										
D04 silicon-free, PVDF ball seal metric (only with specific connecting parts)										
Seals										
E01 EPDM Seals										
E02 FPM Seals										
Threaded inserts										
F01 without threaded inserts										
F02 with threaded inserts										
Connecting parts										
G20 ABS Cement socket metric										
G21 ABS Cement socket inch BS										
G22 ABS Threaded socket Rp										
G23 ABS Threaded socket Rp reinforced										
G40 PE-100 Fusion socket metric										
G41 PE-100 Butt fusion spigot SDR11 metric										
G42 PE-100 Butt fusion spigot SDR17.6 metric										
G43 PE-100 Butt fusion spigot long SDR11 metric										
G44 PE-100 Butt fusion spigot long SDR17.6 metric (DN65-100)										
G83 ABS Valve end blank										
Multi-functional module										
I01 No multi-functional module										
I02 Empty module										
I03 Module with 2 end switches Ag, Ni										
I04 Module with 2 end switches Au										
I05 Module with 2 inductive switches Namur										
I06 Module with 2 inductive switches PNP										
I07 Module with 2 inductive switches NPN										
Lever										
K01 Standard lever red										
K02 Standard lever black										
K11 Multi-functional lever red										
Mounting plate										
L01 without mounting plate										
L02 with mounting plate										
A01	B03	C	D	E	F	G	G	I	K	L
left						right				

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for you application, we have created a selection menu for you.

We supply what you put together.

Ball valves electric

Ball valve type 107 ABS 100-230V With manual emergency override With solvent cement sockets metric



DN10/15 - 50

Model:

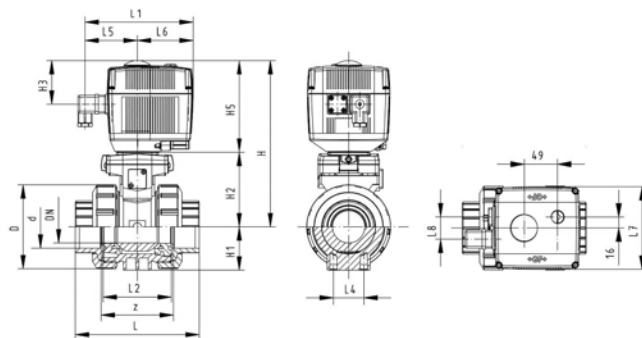
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg										
16	10	10	70	199 107 082	2.072										
20	15	10	185	199 107 083	2.072										
25	20	10	350	199 107 084	2.189										
32	25	10	700	199 107 085	2.189										
40	32	10	1000	199 107 086	2.592										
50	40	10	1600	199 107 087	2.914										
63	50	10	3100	199 107 088	3.772										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
16	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
20	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
25	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
32	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
40	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
50	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
63	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





Ball valve type 107 ABS 24V

With manual emergency override

With solvent cement sockets metric

Model:

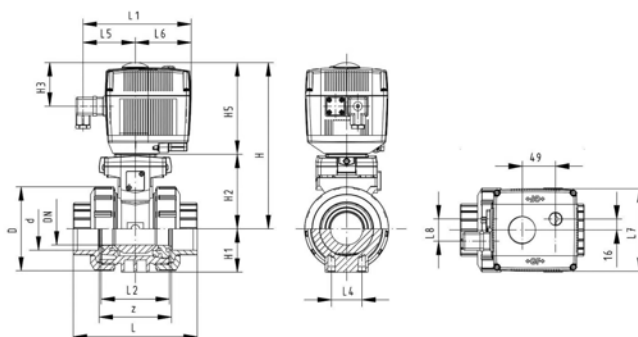
- Built on with electric actuator EA11
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg	
16	10	10	70	199 107 092	2.072	
20	15	10	185	199 107 093	2.072	
25	20	10	350	199 107 094	2.189	
32	25	10	700	199 107 095	2.189	
40	32	10	1000	199 107 096	2.592	
50	40	10	1600	199 107 097	2.914	
63	50	10	3100	199 107 098	3.772	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
16	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
20	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
25	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
32	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
40	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
50	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
63	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





DN10/15 - 50

Ball valve type 107 ABS 100-230V With manual emergency override With threaded sockets Rp

Model:

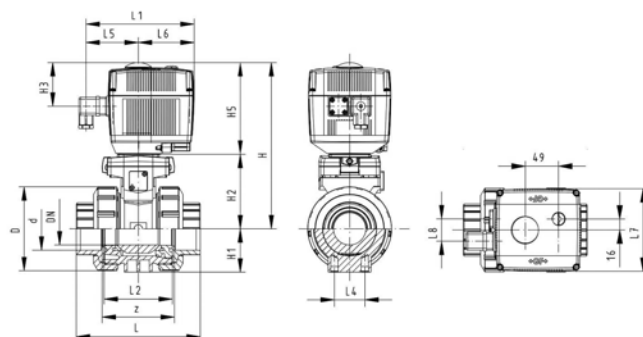
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg											
3/8	10	10	70	199 107 682	2.100											
1/2	15	10	185	199 107 683	2.100											
3/4	20	10	350	199 107 684	2.200											
1	25	10	700	199 107 685	2.300											
1 1/4	32	10	1000	199 107 686	2.600											
1 1/2	40	10	1600	199 107 687	3.000											
2	50	10	3100	199 107 688	3.800											

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
3/8	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
1/2	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
3/4	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
1	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
1 1/4	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
1 1/2	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
2	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





DN10/15 - 50

Ball valve type 107 ABS 24V With manual emergency override With threaded sockets Rp

Model:

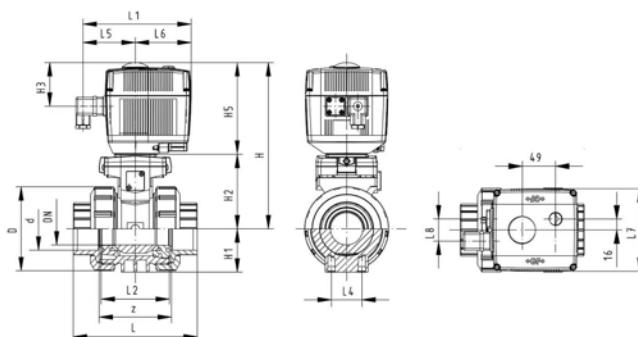
- Built on with electric actuator EA11
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)

Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value (Δp=1 bar) [l/min]	EPDM Code	kg											
3/8	10	10	70	199 107 692	2.100											
1/2	15	10	185	199 107 693	2.100											
3/4	20	10	350	199 107 694	2.200											
1	25	10	700	199 107 695	2.300											
1 1/4	32	10	1000	199 107 696	2.600											
1 1/2	40	10	1600	199 107 697	3.000											
2	50	10	3100	199 107 698	3.800											

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
3/8	50	200	27	64	64	137	92	161	56	25	77	83	122	33	64
1/2	50	200	27	64	64	137	95	161	56	25	77	83	122	33	64
3/4	58	209	30	73	64	137	110	161	65	25	77	83	122	33	72
1	68	209	36	73	64	137	123	161	71	25	77	83	122	33	79
1 1/4	84	220	44	84	64	137	146	161	85	45	77	83	122	33	94
1 1/2	97	220	51	84	64	137	157	161	89	45	77	83	122	33	95
2	124	243	64	106	64	137	183	161	101	45	77	83	122	33	107





Ball valve type 107 ABS 100-230V With manual emergency override With solvent cement sockets Inch BS

Model:

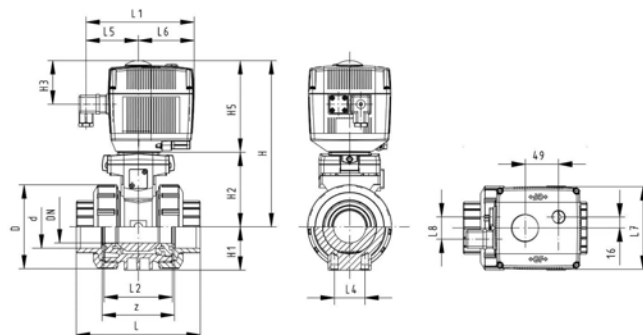
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg											
3/8	10	10	70	199 107 182	2.100											
1/2	15	10	185	199 107 183	2.100											
3/4	20	10	350	199 107 184	2.200											
1	25	10	700	199 107 185	2.300											
1 1/4	32	10	1000	199 107 186	2.600											
1 1/2	40	10	1600	199 107 187	3.000											
2	50	10	3100	199 107 188	3.800											

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
3/8	50	200	27	64	64	137	92	161	56	25	79	83	122	67	60
1/2	50	200	27	64	64	137	95	161	56	25	79	83	122	67	60
3/4	58	209	30	73	64	137	110	161	65	25	79	83	122	67	69
1	68	209	36	73	64	137	123	161	71	25	79	83	122	67	75
1 1/4	84	220	44	84	64	137	146	161	85	45	79	83	122	67	89
1 1/2	97	220	51	84	64	137	157	161	89	45	79	83	122	67	97
2	124	243	64	106	64	137	183	161	101	45	79	83	122	67	110





DN10/15 - 50

Ball valve type 107 ABS 24V

With manual emergency override

With solvent cement sockets Inch BS

Model:

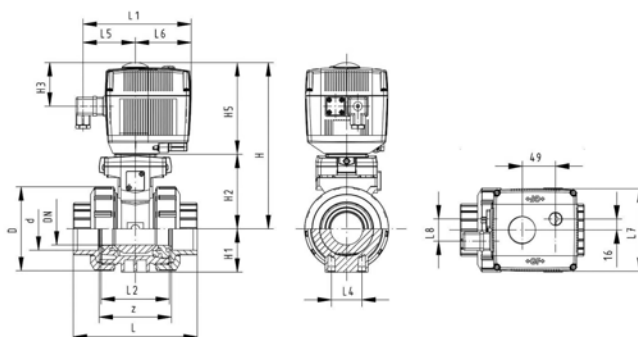
- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

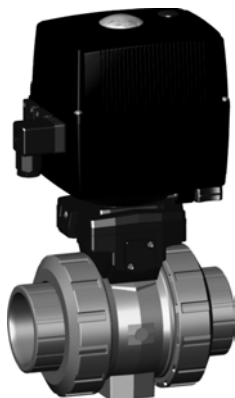
Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
3/8	10	10	70	199 107 192	2.100
1/2	15	10	185	199 107 193	2.100
3/4	20	10	350	199 107 194	2.200
1	25	10	700	199 107 195	2.300
1 1/4	32	10	1000	199 107 196	2.600
1 1/2	40	10	1600	199 107 197	3.000
2	50	10	3100	199 107 198	3.800

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
3/8	50	200	27	64	64	137	92	161	56	25	79	83	122	67	60
1/2	50	200	27	64	64	137	95	161	56	25	79	83	122	67	60
3/4	58	209	30	73	64	137	110	161	65	25	79	83	122	67	69
1	68	209	36	73	64	137	123	161	71	25	79	83	122	67	75
1 1/4	84	220	44	84	64	137	146	161	85	45	79	83	122	67	89
1 1/2	97	220	51	84	64	137	157	161	89	45	79	83	122	67	97
2	124	243	64	106	64	137	183	161	101	45	79	83	122	67	110





DN10/15 - 50

Ball valve type 130 ABS 100-230V With manual emergency override With solvent cement sockets metric

Model:

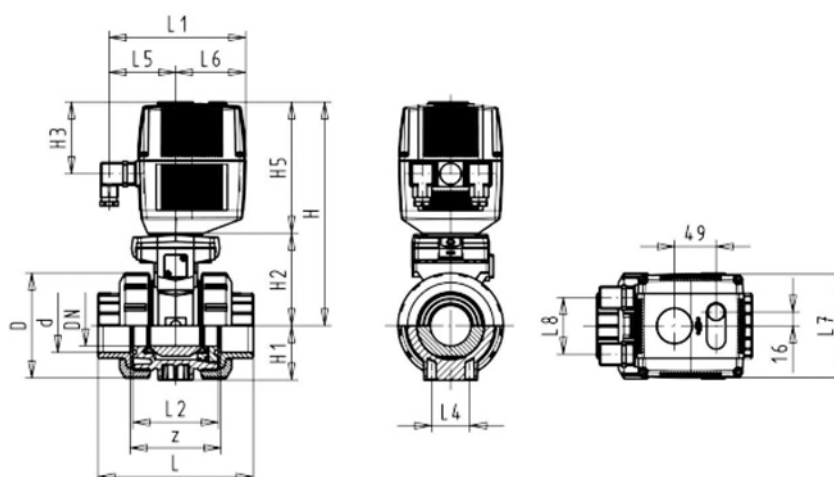
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

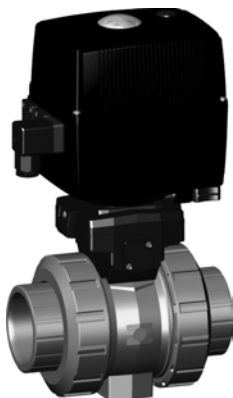
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg	
16	10	10	70	199 130 702	2.100	
20	15	10	185	199 130 703	2.100	
25	20	10	350	199 130 704	2.200	
32	25	10	700	199 130 705	2.300	
40	32	10	1000	199 130 706	2.600	
50	40	10	1600	199 130 707	3.000	
63	50	10	3100	199 130 708	3.800	
 75	65	10	5000	199 130 709	3.500	
 90	80	10	7000	199 130 710	4.300	
 110	100	10	11000	199 130 711	5.400	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	231	27	64	94	167	92	180	56	25	97	83	122	64
20	50	231	27	64	94	167	95	180	56	25	97	83	122	64
25	58	240	30	73	94	167	110	180	65	25	97	83	122	72
32	68	240	36	73	94	167	123	180	71	25	97	83	122	79
40	84	251	44	84	94	167	146	180	85	45	97	83	122	94
50	97	251	51	84	94	167	157	180	89	45	97	83	122	95
63	124	273	64	106	94	167	183	180	101	45	97	83	122	107
 75	166	346	85	156	94	190	233	180	136	70	98	83	122	144
 90	200	358	105	168	94	190	254	180	141	70	98	83	122	151
 110	238	365	123	175	94	190	301	180	164	120	98	83	122	174





DN10/15 - 50

Ball valve type 130 ABS 24V

With manual emergency override

With solvent cement sockets metric

Model:

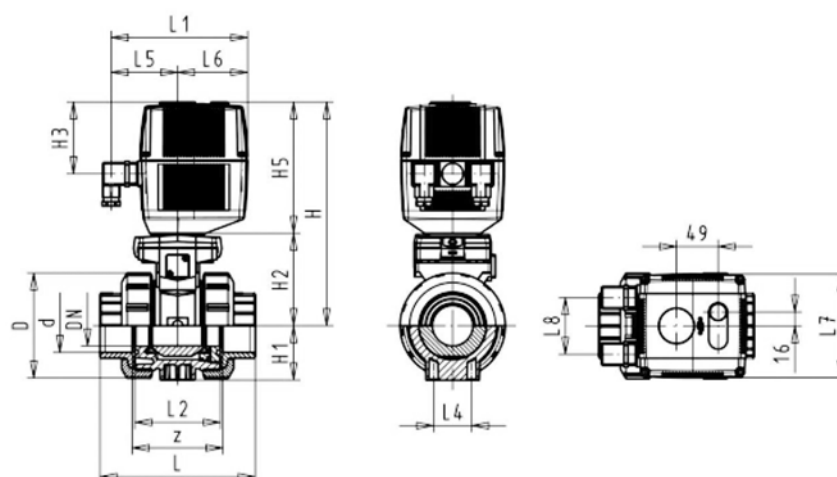
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

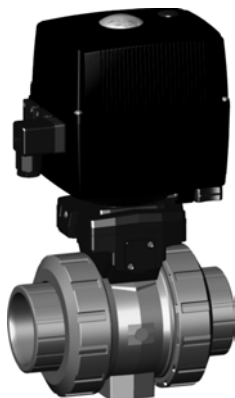
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
16	10	10	70	199 130 742	2.100
20	15	10	185	199 130 743	2.100
25	20	10	350	199 130 744	2.200
32	25	10	700	199 130 745	2.300
40	32	10	1000	199 130 746	2.600
50	40	10	1600	199 130 747	3.000
63	50	10	3100	199 130 748	3.800
 75	65	10	5000	199 130 749	3.500
 90	80	10	7000	199 130 750	4.300
 110	100	10	11000	199 130 751	5.400

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	231	27	64	94	167	92	180	56	25	97	83	122	64
20	50	231	27	64	94	167	95	180	56	25	97	83	122	64
25	58	240	30	73	94	167	110	180	65	25	97	83	122	72
32	68	240	36	73	94	167	123	180	71	25	97	83	122	79
40	84	251	44	84	94	167	146	180	85	45	97	83	122	94
50	97	251	51	84	94	167	157	180	89	45	97	83	122	95
63	124	273	64	106	94	167	183	180	101	45	97	83	122	107
 75	166	346	85	156	94	190	233	180	136	70	98	83	122	144
 90	200	358	105	168	94	190	254	180	141	70	98	83	122	151
 110	238	365	123	175	94	190	301	180	164	120	98	83	122	174





DN10/15 - 50

Ball valve type 130 ABS 100-230V With manual emergency override With threaded sockets Rp

Model:

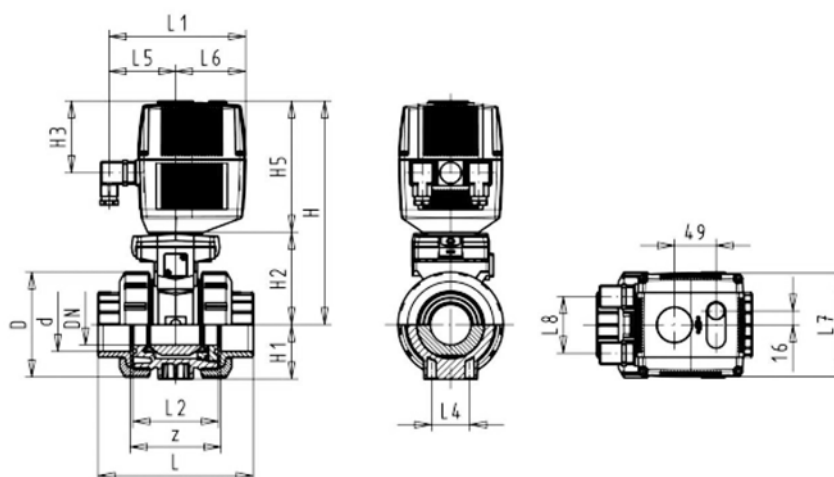
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

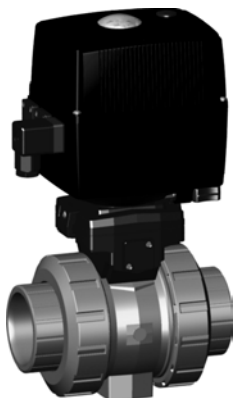
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg										
3/8	10	10	70	199 130 722	2.100										
1/2	15	10	185	199 130 723	2.100										
3/4	20	10	350	199 130 724	2.200										
1	25	10	700	199 130 725	2.300										
1 1/4	32	10	1000	199 130 726	2.600										
1 1/2	40	10	1600	199 130 727	3.000										
2	50	10	3100	199 130 728	3.800										

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
3/8	50	231	27	64	94	167	92	180	56	25	97	83	122	66	64
1/2	50	231	27	64	94	167	95	180	56	25	97	83	122	66	64
3/4	58	240	30	73	94	167	110	180	65	25	97	83	122	66	72
1	68	240	36	73	94	167	123	180	71	25	97	83	122	66	79
1 1/4	84	251	44	84	94	167	146	180	85	45	97	83	122	66	94
1 1/2	97	251	51	84	94	167	157	180	89	45	97	83	122	66	95
2	124	273	64	106	94	167	183	180	101	45	97	83	122	66	107





DN10/15 - 50

Ball valve type 130 ABS 24V With manual emergency override With threaded sockets Rp

Model:

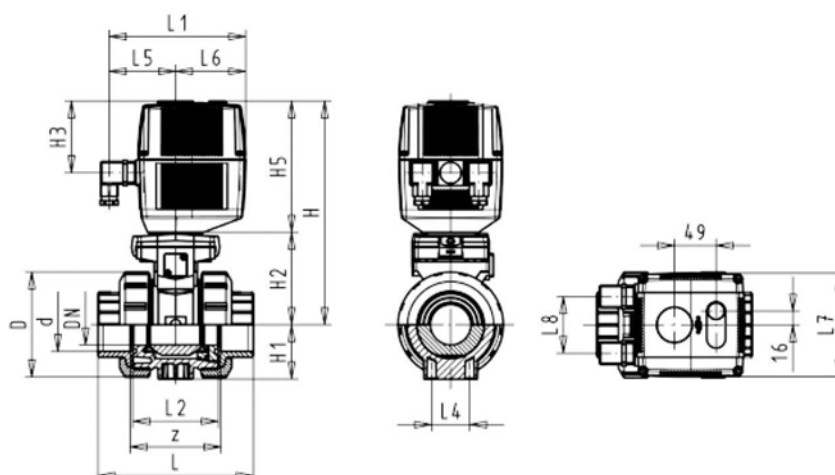
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

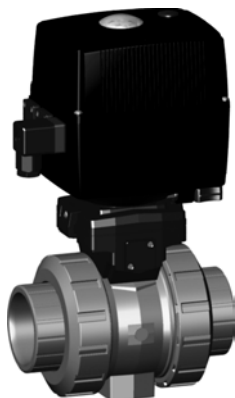
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg											
3/8	10	10	70	199 130 762	2.100											
1/2	15	10	185	199 130 763	2.100											
3/4	20	10	350	199 130 764	2.200											
1	25	10	700	199 130 765	2.300											
1 1/4	32	10	1000	199 130 766	2.600											
1 1/2	40	10	1600	199 130 767	3.000											
2	50	10	3100	199 130 768	3.800											

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
3/8	50	231	27	64	94	167	92	180	56	25	97	83	122	66	64
1/2	50	231	27	64	94	167	95	180	56	25	97	83	122	66	64
3/4	58	240	30	73	94	167	110	180	65	25	97	83	122	66	72
1	68	240	36	73	94	167	123	180	71	25	97	83	122	66	79
1 1/4	84	251	44	84	94	167	146	180	85	45	97	83	122	66	94
1 1/2	97	251	51	84	94	167	157	180	89	45	97	83	122	66	95
2	124	273	64	106	94	167	183	180	101	45	97	83	122	66	107





DN10/15 - 50

Ball valve type 134 ABS 100-230V With manual emergency override With solvent cement sockets Inch BS

Model:

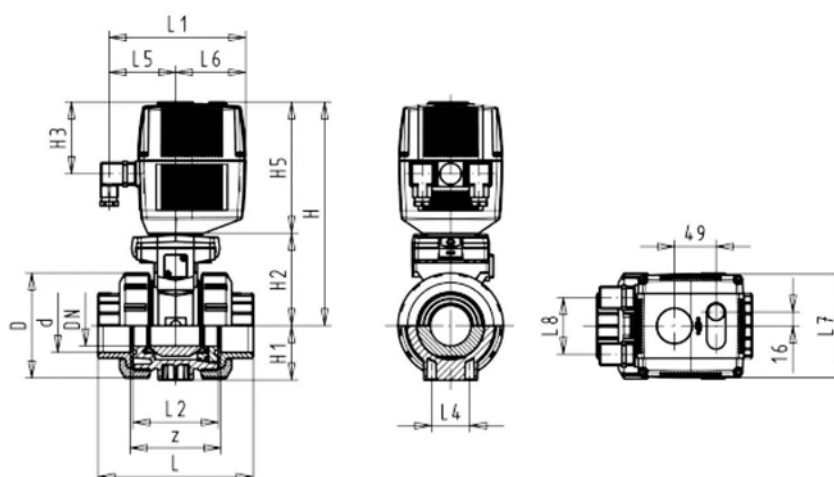
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

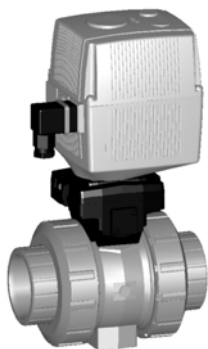
Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
3/8	10	10	70	199 134 782	2.100
1/2	15	10	185	199 134 783	2.100
3/4	20	10	350	199 134 784	2.200
1	25	10	700	199 134 785	2.300
1 1/4	32	10	1000	199 134 786	2.600
1 1/2	40	10	1600	199 134 787	3.000
2	50	10	3100	199 134 788	3.800
 2 1/2	65	10	5000	199 134 789	3.500
 3	80	10	7000	199 134 790	4.300
 4	100	10	11000	199 134 791	5.300

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	231	27	64	94	167	92	180	56	25	97	83	122	60
1/2	50	231	27	64	94	167	95	180	56	25	97	83	122	60
3/4	58	240	30	73	94	167	110	180	65	25	97	83	122	69
1	68	240	36	73	94	167	123	180	71	25	97	83	122	75
1 1/4	84	251	44	84	94	167	146	180	85	45	97	83	122	89
1 1/2	97	251	51	84	94	167	157	180	89	45	97	83	122	97
2	124	273	64	106	94	167	183	180	101	45	97	83	122	110
 2 1/2	166	346	85	156	94	190	233	180	136	70	98	83	122	144
 3	200	358	105	168	94	190	254	180	141	70	98	83	122	151
 4	238	365	123	175	94	190	301	180	164	120	98	83	122	174





DN10/15 - 50

Ball valve type 134 ABS 24V

With manual emergency override

With solvent cement sockets Inch BS

Model:

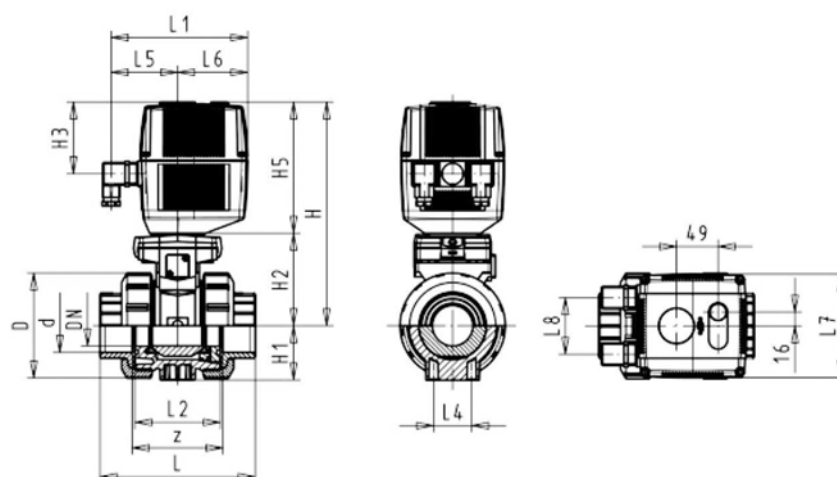
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
3/8	10	10	70	199 134 822	2.100
1/2	15	10	185	199 134 823	2.100
3/4	20	10	350	199 134 824	2.200
1	25	10	700	199 134 825	2.300
1 1/4	32	10	1000	199 134 826	2.600
1 1/2	40	10	1600	199 134 827	3.000
2	50	10	3100	199 134 828	3.800
2 1/2	65	10	5000	199 134 829	3.500
3	80	10	7000	199 134 830	4.300
4	100	10	11000	199 134 831	5.300

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	231	27	64	94	167	92	180	56	25	97	83	122	60
1/2	50	231	27	64	94	167	95	180	56	25	97	83	122	60
3/4	58	240	30	73	94	167	110	180	65	25	97	83	122	69
1	68	240	36	73	94	167	123	180	71	25	97	83	122	75
1 1/4	84	251	44	84	94	167	146	180	85	45	97	83	122	89
1 1/2	97	251	51	84	94	167	157	180	89	45	97	83	122	97
2	124	273	64	106	94	167	183	180	101	45	97	83	122	110
2 1/2	166	346	85	156	94	190	233	180	136	70	98	83	122	144
3	200	358	105	168	94	190	254	180	141	70	98	83	122	151
4	238	365	123	175	94	190	301	180	164	120	98	83	122	174



Copiable

Configurator GF ball valve type 546 ABS

Ball Valve

A01Ball Valve 546

Material

B03ABS

Nominal width

C05DN 103/8"

C06DN 151/2"

C07DN 203/4"

C08DN 251"

C09DN 321 1/4"

C10DN 401 1/2"

C11DN 502"

C12DN 652 1/2"

C13DN 803"

C14DN 1004"

Version

D01Standard, PTFE ball seal

D04silicon-free, PVDF ball seal metric (only with specific connecting parts)

Seals

E01EPDM Seals

E02FPM Seals

Threaded inserts

F01without threaded inserts

F02with threaded inserts

Connecting parts

G20ABS Cement socket metric

G21ABS Cement socket inch BS

G22ABS Threaded socket Rp

G23ABS Threaded socket Rp reinforced

G40PE-100 Fusion socket metric

G41PE-100 Butt fusion spigot SDR11 metric

G42PE-100 Butt fusion spigot SDR17.6 metric

G43PE-100 Butt fusion spigot long SDR11 metric

G44PE-100 Butt fusion spigot long SDR17.6 metric (DN65-100)

G83ABS Valve end blank

Multi-functional module

I01No multi-functional module

I02Empty module

I03Module with 2 end switches Ag, Ni

I04Module with 2 end switches Au

I05Module with 2 inductive switches Namur

I06Module with 2 inductive switches PNP

I07Module with 2 inductive switches NPN

Lever

K01Standard lever red

K02Standard lever black

K11Multi-functional lever red

Mounting plate

L01without mounting plate

L02with mounting plate

A01

B03

C

D

E

F

G

G

I

K

L

left

right

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for you application, we have created a selection menu for you.

We supply what you put together.

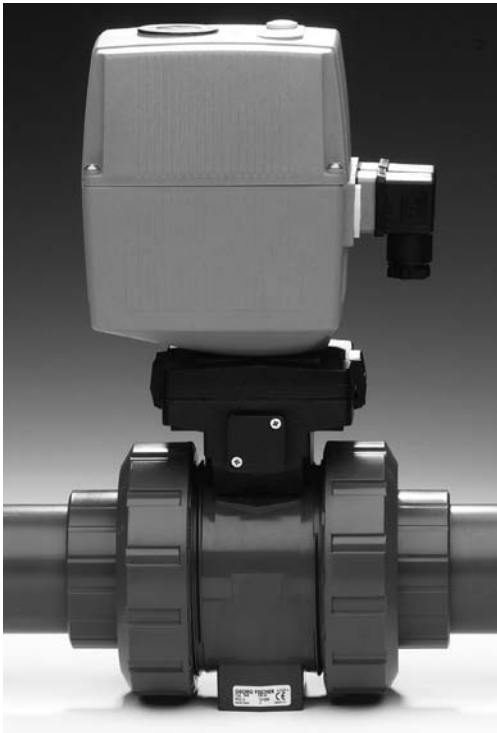
Copiable

GF ball valve type 546 with electric Actuator

It's easy to actuate the type 546:

With the configurator, you have a choice of new electric actuators, the EA11 for standard applications and the EA21 with modular design and accessories, for practically and type of operation.

We supply what you put together.



Electric Actuator EA11								
T01	EA11 24 V							
T02	EA11 100–230 V							
Accessories EA11								
U01	No accessories							
U02	2 limit switches Ag, Ni							
U03	Heating element							
U04	Fail-safe return							
U05	2 limit switches Ag, Ni normally open							
Electric Actuator EA21/31								
T03	EA21/31 24 V							
T04	EA21/31 100–230 V							
Accessories EA21								
W01	No accessories							
W02	Heating element							
W03	Cycle time module							
W04	Cycle time monitoring							
W05	Cycles monitoring							
W06	Motor current monitoring							
W07	2 limit switches Ag, Ni							
W08	2 limit switches Gold							
W09	2 limit switches NPN							
W10	2 limit switches PNP							
W11	Positioner							
W12	Electric position indicator							
W14	Fail-safe return unit							
W15	Switch intermediate position							
W27	2 limit switches Ag, Ni normally open with connector							
W31	Positioner PE25 with galv. separation							
T	U	T	W	W	W	W	W	W

Ball valves pneumatic

Ball valve type 230 ABS FC (Fail safe to close)

With manual override

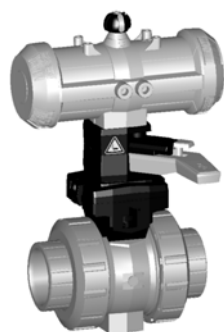
With solvent cement sockets metric

Model:

- Built on with pneumatic actuator PA11/21
- Control time $90^\circ \leq$) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

Option:

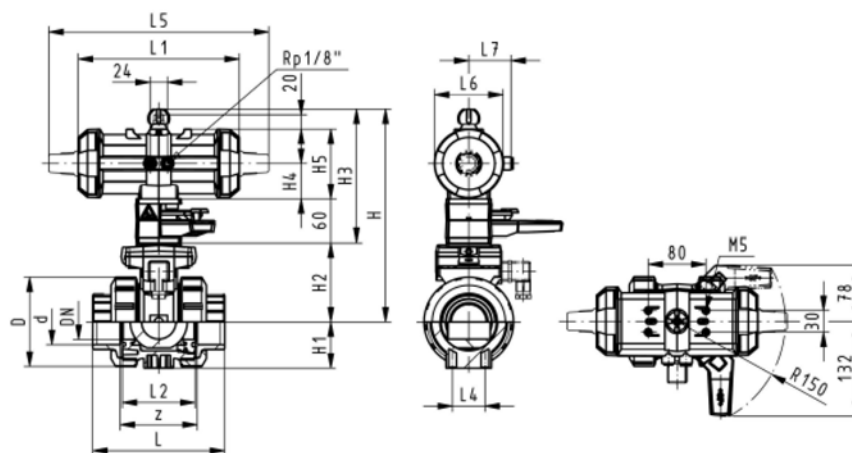
- Individual configuration of the valve (see form)

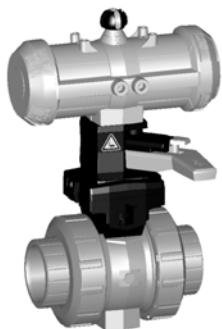


DN10/15 - 50

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
16	10	10	70	199 230 702	1.459
20	15	10	185	199 230 703	1.459
25	20	10	350	199 230 704	1.576
32	25	10	700	199 230 705	1.700
40	32	10	1000	199 230 706	2.751
50	40	10	1600	199 230 707	3.073
63	50	10	3100	199 230 708	3.931

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 ABS FO (Fail safe to open) With manual override With solvent cement sockets metric

Model:

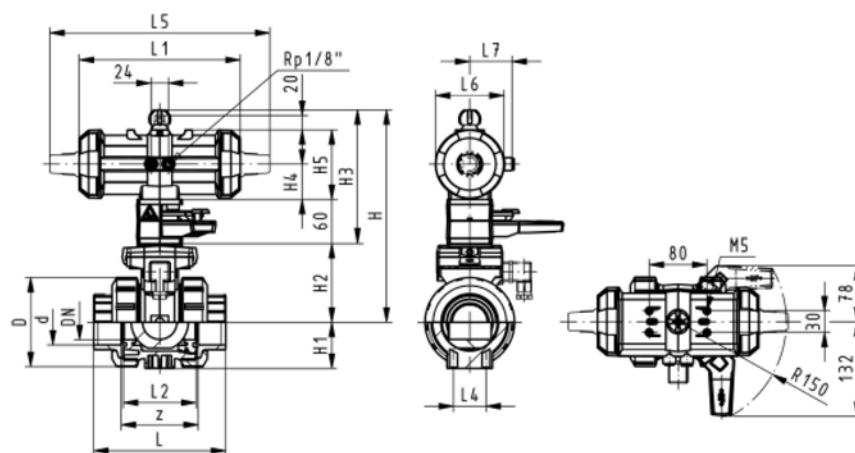
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

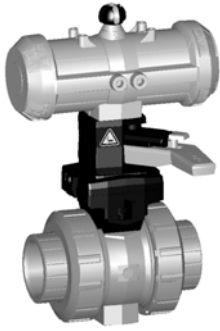
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg										
16	10	10	70	199 230 742	1.459										
20	15	10	185	199 230 743	1.459										
25	20	10	350	199 230 744	1.576										
32	25	10	700	199 230 745	1.700										
40	32	10	1000	199 230 746	2.751										
50	40	10	1600	199 230 747	3.073										
63	50	10	3100	199 230 748	3.931										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 ABS DA (Double acting) With manual override With solvent cement sockets metric

Model:

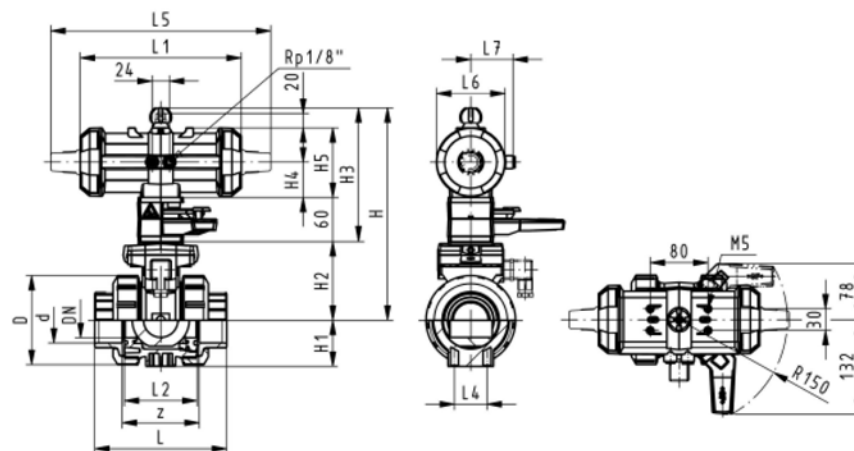
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

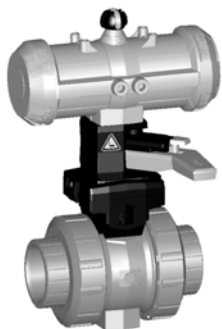
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
16	10	10	70	199 230 782	1.459
20	15	10	185	199 230 783	1.459
25	20	10	350	199 230 784	1.576
32	25	10	700	199 230 785	1.700
40	32	10	1000	199 230 786	2.751
50	40	10	1600	199 230 787	3.073
63	50	10	3100	199 230 788	3.931

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 ABS FC (Fail safe to close) With manual override With threaded sockets Rp

Model:

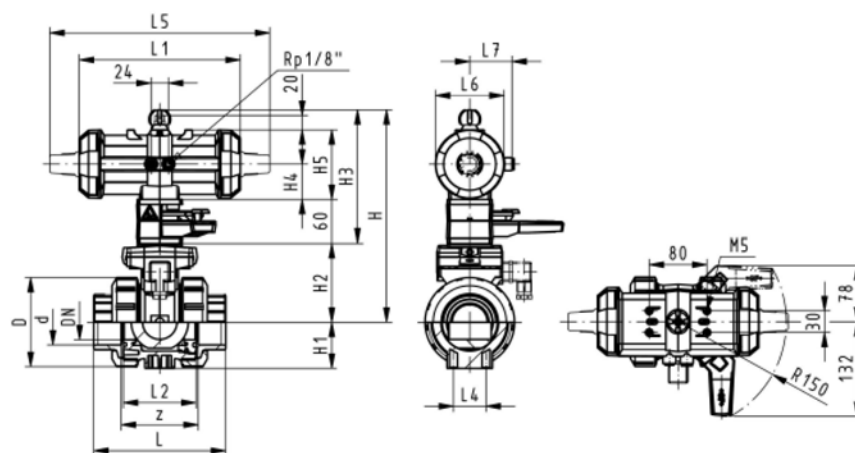
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

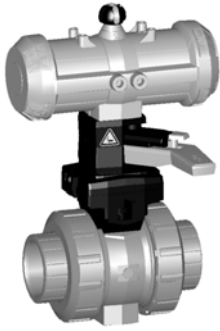
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg										
3/8	10	10	70	199 230 722	1.459										
1/2	15	10	185	199 230 723	1.459										
3/4	20	10	350	199 230 724	1.576										
1	25	10	700	199 230 725	1.700										
1 1/4	32	10	1000	199 230 726	2.751										
1 1/2	40	10	1600	199 230 727	3.073										
2	50	10	3100	199 230 728	3.931										

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 ABS FO (Fail safe to open) With manual override With threaded sockets Rp

Model:

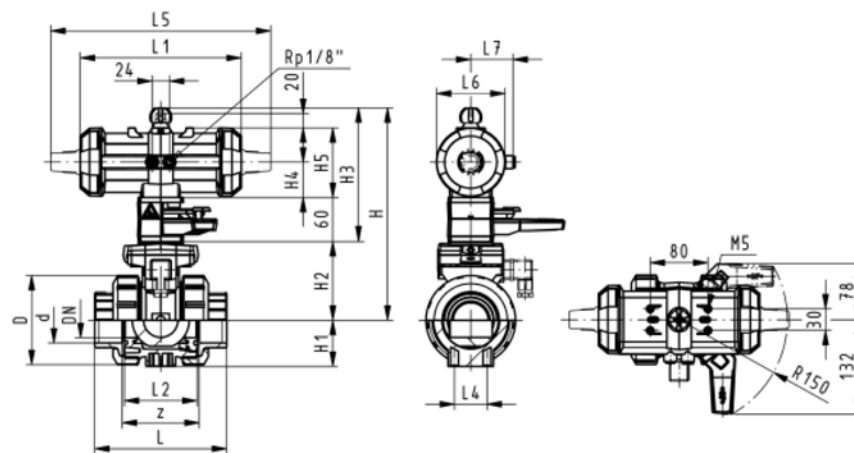
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

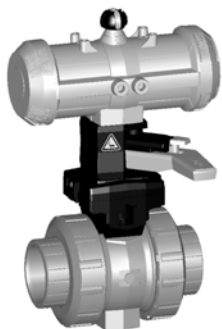
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
3/8	10	10	70	199 230 762	1.459
1/2	15	10	185	199 230 763	1.459
3/4	20	10	350	199 230 764	1.576
1	25	10	700	199 230 765	1.700
1 1/4	32	10	1000	199 230 766	2.751
1 1/2	40	10	1600	199 230 767	3.073
2	50	10	3100	199 230 768	3.931

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 ABS DA (Double acting) With manual override With threaded sockets Rp

Model:

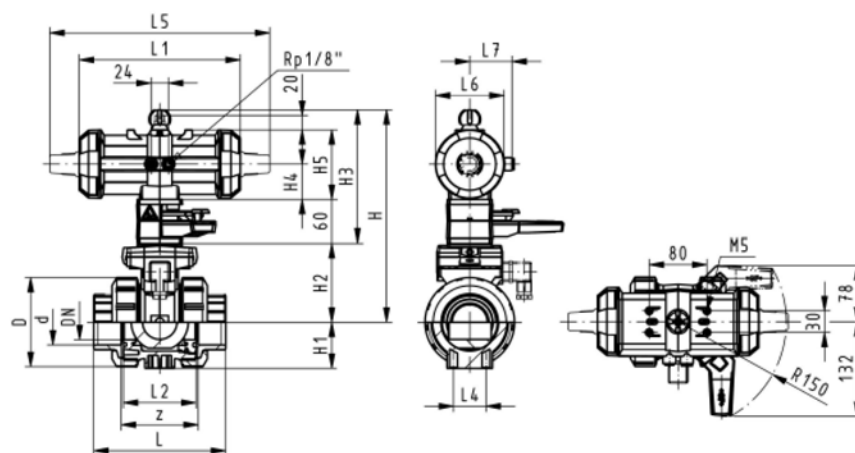
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

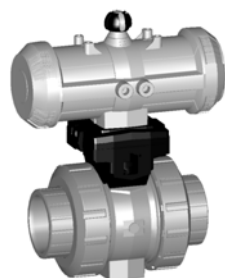
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg										
3/8	10	10	70	199 230 802	1.459										
1/2	15	10	185	199 230 803	1.459										
3/4	20	10	350	199 230 804	1.576										
1	25	10	700	199 230 805	1.700										
1 1/4	32	10	1000	199 230 806	2.751										
1 1/2	40	10	1600	199 230 807	3.073										
2	50	10	3100	199 230 808	3.931										

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 ABS FC (Fail safe to close) Without manual override With solvent cement sockets metric

Model:

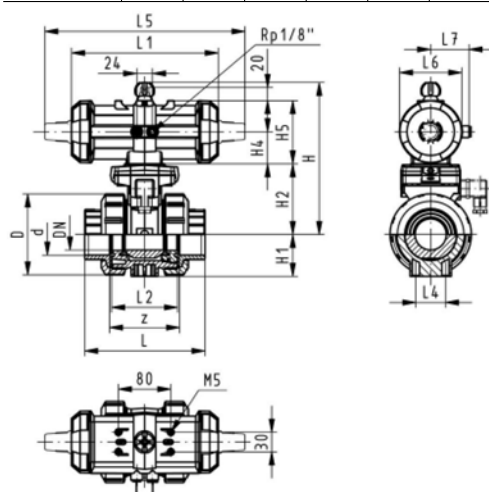
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

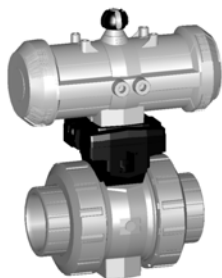
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
16	10	10	70	199 230 822	1.459
20	15	10	185	199 230 823	1.459
25	20	10	350	199 230 824	1.576
32	25	10	700	199 230 825	1.700
40	32	10	1000	199 230 826	2.751
50	40	10	1600	199 230 827	3.073
63	50	10	3100	199 230 828	3.931
75	65	10	5000	199 230 829	3.900
90	80	10	7000	199 230 830	4.700
110	100	10	11000	199 230 831	6.800

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	167	27	62	40	97	92	194	56	25	261	76	48	64
20	50	167	27	62	40	97	95	194	56	25	261	76	48	64
25	58	176	30	71	40	97	110	194	65	25	261	76	48	72
32	68	176	36	71	40	97	123	194	71	25	261	76	48	79
40	84	210	44	84	51	115	146	224	85	45	305	95	59	94
50	97	210	51	84	51	115	157	224	89	45	305	95	59	95
63	124	232	64	106	51	115	183	224	101	45	305	95	59	107
75	166	262	85	156		70	233	218	136	70	276	65		144
90	200	281	105	168		78	254	259	141	70	341	72		151
110	238	292	123	175		86	301	287	164	120	369	80		174





DN10/15 - 50

Ball valve type 230 ABS FO (Fail safe to open) Without manual override With solvent cement sockets metric

Model:

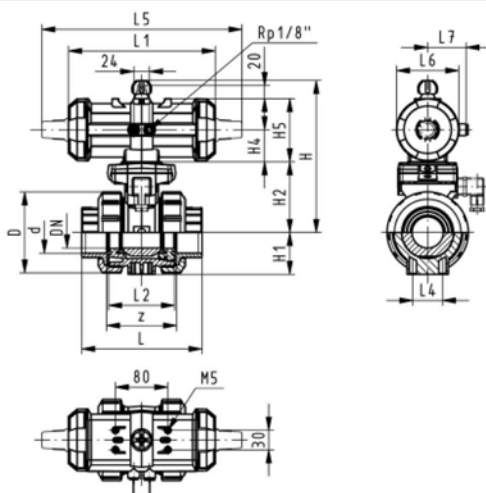
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

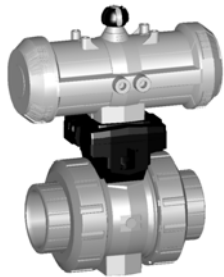
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
16	10	10	70	199 230 862	1.459
20	15	10	185	199 230 863	1.459
25	20	10	350	199 230 864	1.576
32	25	10	700	199 230 865	1.700
40	32	10	1000	199 230 866	2.751
50	40	10	1600	199 230 867	3.073
63	50	10	3100	199 230 868	3.931
75	65	10	5000	199 230 869	3.900
90	80	10	7000	199 230 870	4.700
110	100	10	11000	199 230 871	6.800

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	167	27	62	40	97	92	194	56	25	261	76	48	64
20	50	167	27	62	40	97	95	194	56	25	261	76	48	64
25	58	176	30	71	40	97	110	194	65	25	261	76	48	72
32	68	176	36	71	40	97	123	194	71	25	261	76	48	79
40	84	210	44	84	51	115	146	224	85	45	305	95	59	94
50	97	210	51	84	51	115	157	224	89	45	305	95	59	95
63	124	232	64	106	51	115	183	224	101	45	305	95	59	107
75	166	262	85	156		70	233	218	136	70	276	65		144
90	200	281	105	168		78	254	259	141	70	341	72		151
110	238	292	123	175		86	301	287	164	120	369	80		174





DN10/15 - 50

Ball valve type 230 ABS DA (Double acting) Without manual override With solvent cement sockets metric

Model:

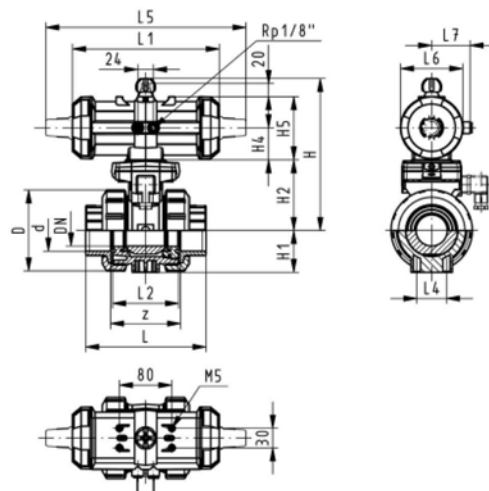
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

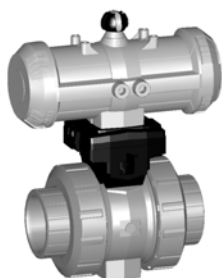
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
16	10	10	70	199 230 902	1.459
20	15	10	185	199 230 903	1.459
25	20	10	350	199 230 904	1.576
32	25	10	700	199 230 905	1.700
40	32	10	1000	199 230 906	2.751
50	40	10	1600	199 230 907	3.073
63	50	10	3100	199 230 908	3.931
75	65	10	5000	199 230 909	2.800
90	80	10	7000	199 230 910	4.000
110	100	10	11000	199 230 911	5.000

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	167	27	62	40	97	92	194	56	25	261	76	48	64
20	50	167	27	62	40	97	95	194	56	25	261	76	48	64
25	58	176	30	71	40	97	110	194	65	25	261	76	48	72
32	68	176	36	71	40	97	123	194	71	25	261	76	48	79
40	84	210	44	84	51	115	146	224	85	45	305	95	59	94
50	97	210	51	84	51	115	157	224	89	45	305	95	59	95
63	124	232	64	106	51	115	183	224	101	45	305	95	59	107
75	166	257	85	156		66	233	144	136	70	190	60		144
90	200	274	105	168		70	254	152	141	70	198	65		151
110	238	273	123	175		78	301	169	164	120	235	72		174





DN10/15 - 50

Ball valve type 230 ABS FC (Fail safe to close) Without manual override With threaded sockets Rp

Model:

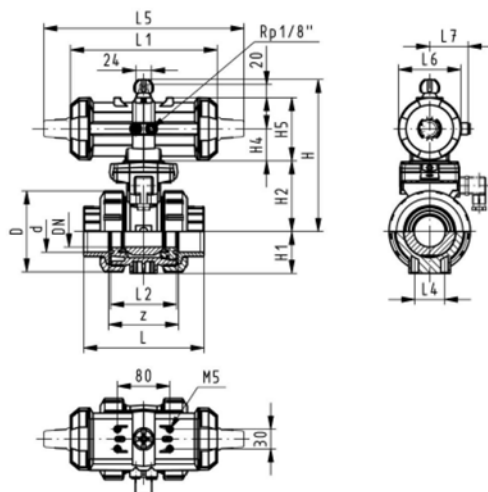
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

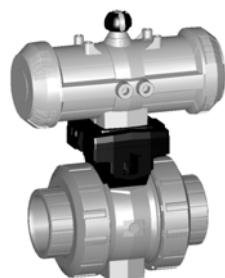
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
3/8	10	10	70	199 230 842	1.200
1/2	15	10	185	199 230 843	1.200
3/4	20	10	350	199 230 844	1.300
1	25	10	700	199 230 845	1.400
1 1/4	32	10	1000	199 230 846	2.500
1 1/2	40	10	1600	199 230 847	2.800
2	50	10	3100	199 230 848	3.700

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	64
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	64
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	72
1	68	176	36	71	40	97	123	194	71	25	261	76	48	79
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	94
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	95
2	124	232	64	106	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 230 ABS FO (Fail safe to open) Without manual override With threaded sockets Rp

Model:

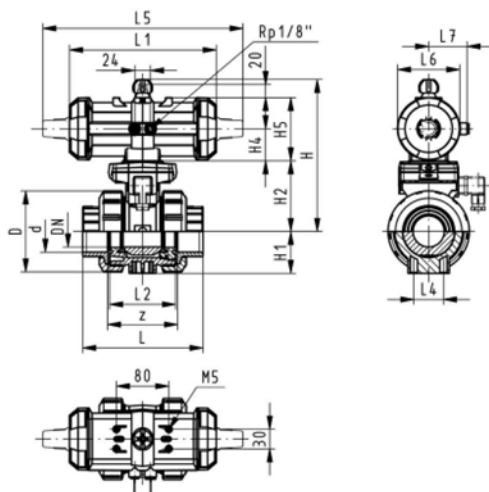
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ <$ 1-2 s

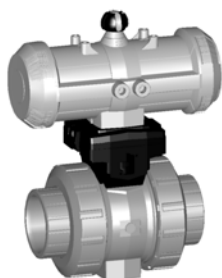
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg										
$\frac{3}{8}$	10	10	70	199 230 882	1.200										
$\frac{1}{2}$	15	10	185	199 230 883	1.200										
$\frac{3}{4}$	20	10	350	199 230 884	1.300										
1	25	10	700	199 230 885	1.400										
1 $\frac{1}{4}$	32	10	1000	199 230 886	2.500										
1 $\frac{1}{2}$	40	10	1600	199 230 887	2.800										
2	50	10	3100	199 230 888	3.700										

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]	
$\frac{3}{8}$	50	167	27	62	40	97	92	194	56	25	261	76	48	64	
$\frac{1}{2}$	50	167	27	62	40	97	95	194	56	25	261	76	48	64	
$\frac{3}{4}$	58	176	30	71	40	97	110	194	65	25	261	76	48	72	
1	68	176	36	71	40	97	123	194	71	25	261	76	48	79	
1 $\frac{1}{4}$	84	210	44	84	51	115	146	224	85	45	305	95	59	94	
1 $\frac{1}{2}$	97	210	51	84	51	115	157	224	89	45	305	95	59	95	
2	124	232	64	106	51	115	183	224	101	45	305	95	59	107	





DN10/15 - 50

Ball valve type 230 ABS DA (Double acting) Without manual override With threaded sockets Rp

Model:

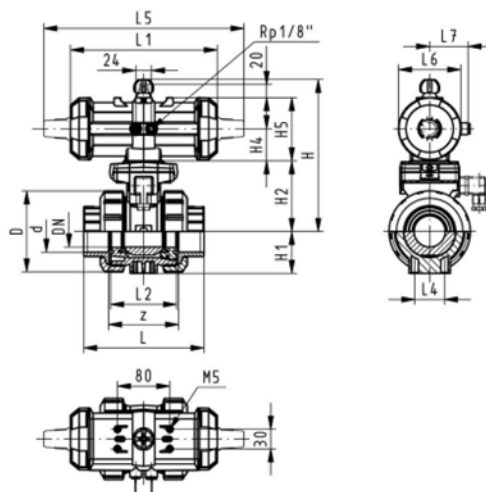
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90° < 1-2 s

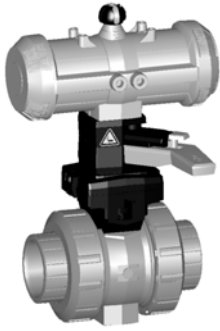
Option:

- Individual configuration of the valve (see form)

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
3/8	10	10	70	199 230 922	1.200
1/2	15	10	185	199 230 923	1.200
3/4	20	10	350	199 230 924	1.300
1	25	10	700	199 230 925	1.400
1 1/4	32	10	1000	199 230 926	2.500
1 1/2	40	10	1600	199 230 927	2.800
2	50	10	3100	199 230 928	3.700

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	64
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	64
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	72
1	68	176	36	71	40	97	123	194	71	25	261	76	48	79
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	94
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	95
2	124	232	64	106	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

Ball valve type 234 ABS FC (Fail safe to close) With manual override With solvent cement sockets Inch BS

Model:

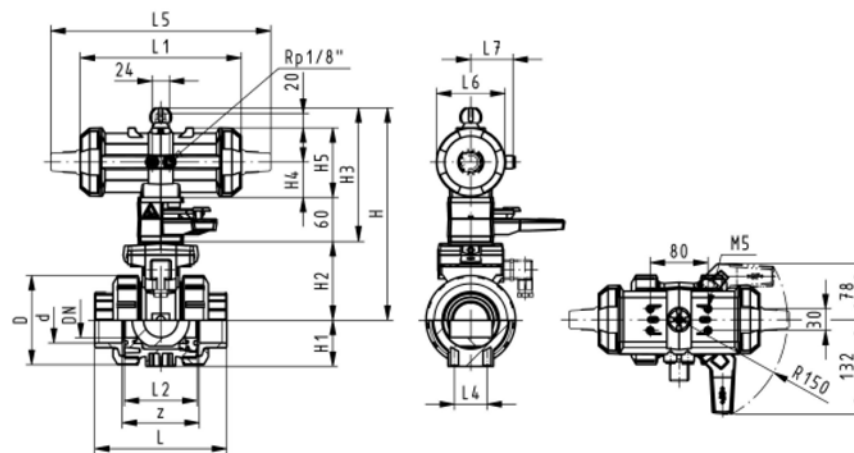
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

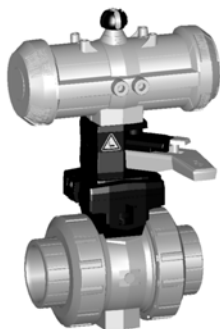
Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
3/8	10	10	70	199 234 702	1.500
1/2	15	10	185	199 234 703	1.500
3/4	20	10	350	199 234 704	1.600
1	25	10	700	199 234 705	1.700
1 1/4	32	10	1000	199 234 706	2.800
1 1/2	40	10	1600	199 234 707	3.100
2	50	10	3100	199 234 708	4.000

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	60
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	60
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	69
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	75
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	89
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	97
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	110





DN10/15 - 50

Ball valve type 234 ABS FO (Fail safe to open) With manual override With solvent cement sockets Inch BS

Model:

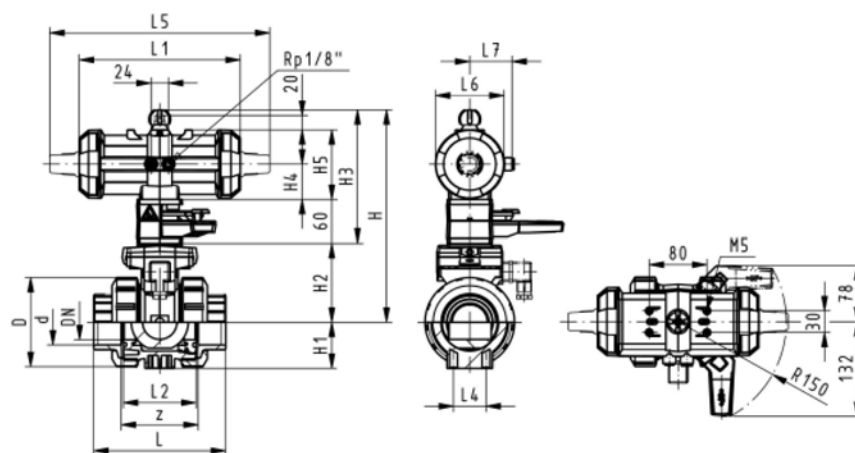
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

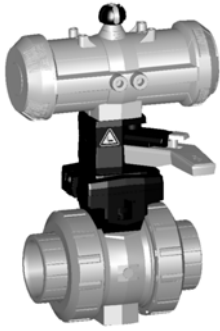
Option:

- Individual configuration of the valve (see form)

Inch	Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
3/8	3/8	10	10	70	199 234 742	1.500
1/2	1/2	15	10	185	199 234 743	1.500
3/4	3/4	20	10	350	199 234 744	1.600
1	1	25	10	700	199 234 745	1.700
1 1/4	1 1/4	32	10	1000	199 234 746	2.800
1 1/2	1 1/2	40	10	1600	199 234 747	3.100
2	2	50	10	3100	199 234 748	4.000

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	60
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	60
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	69
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	75
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	89
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	97
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	110





DN10/15 - 50

Ball valve type 234 ABS DA (Double acting) With manual override With solvent cement sockets Inch BS

Model:

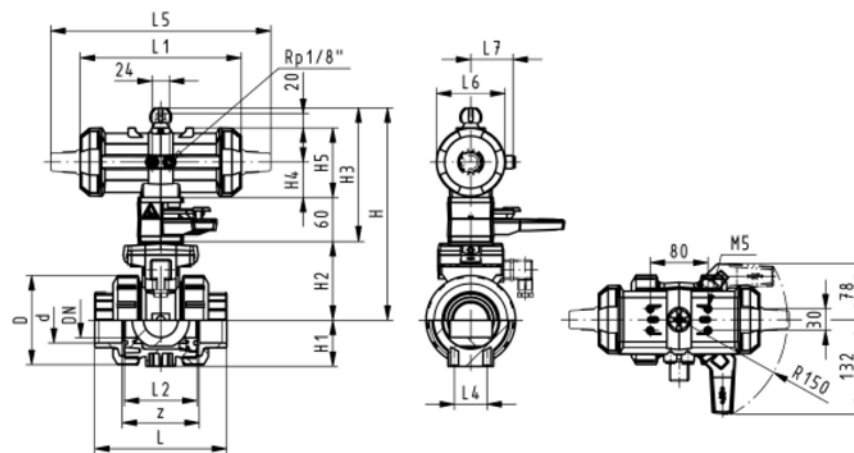
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

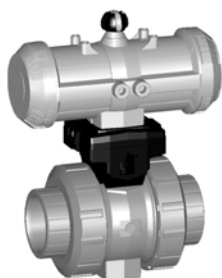
Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg											
3/8	10	10	70	199 234 782	1.500											
1/2	15	10	185	199 234 783	1.500											
3/4	20	10	350	199 234 784	1.600											
1	25	10	700	199 234 785	1.700											
1 1/4	32	10	1000	199 234 786	2.800											
1 1/2	40	10	1600	199 234 787	3.100											
2	50	10	3100	199 234 788	4.000											

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	230	27	62	168	40	97	92	194	56	25	261	76	48	60
1/2	50	230	27	62	168	40	97	95	194	56	25	261	76	48	60
3/4	58	239	30	71	168	40	97	110	194	65	25	261	76	48	69
1	68	239	36	71	168	40	97	123	194	71	25	261	76	48	75
1 1/4	84	271	44	84	187	51	115	146	224	85	45	305	95	59	89
1 1/2	97	271	51	84	187	51	115	157	224	89	45	305	95	59	97
2	124	293	64	106	187	51	115	183	224	101	45	305	95	59	110





DN10/15 - 50

Ball valve type 234 ABS FC (Fail safe to close) Without manual override With solvent cement sockets Inch BS

Model:

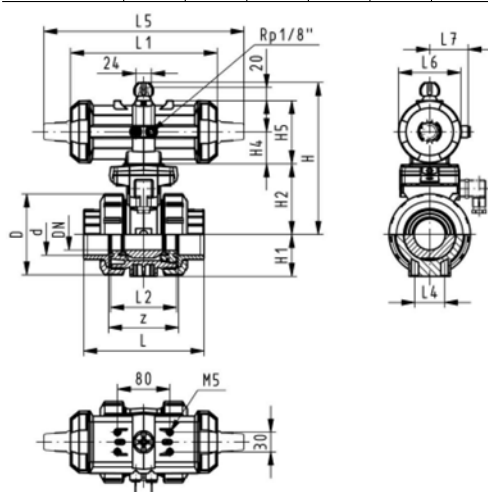
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

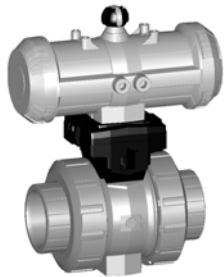
Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
3/8	10	10	70	199 234 822	1.200
1/2	15	10	185	199 234 823	1.200
3/4	20	10	350	199 234 824	1.300
1	25	10	700	199 234 825	1.400
1 1/4	32	10	1000	199 234 826	2.500
1 1/2	40	10	1600	199 234 827	2.800
2	50	10	3100	199 234 828	3.700
2 1/2	65	10	5000	199 234 829	3.900
3	80	10	7000	199 234 830	4.700
4	100	10	11000	199 234 831	6.700

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	60
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	60
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	69
1	68	176	36	71	40	97	123	194	71	25	261	76	48	75
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	89
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	97
2	124	232	64	106	51	115	183	224	101	45	305	95	59	110
2 1/2	166	262	85	156		70	233	218	136	70	276	65		144
3	200	281	105	168		78	254	259	141	70	341	72		151
4	238	292	123	175		86	301	287	164	120	369	80		174





DN10/15 - 50

Ball valve type 234 ABS FO (Fail safe to open) Without manual override With solvent cement sockets Inch BS

Model:

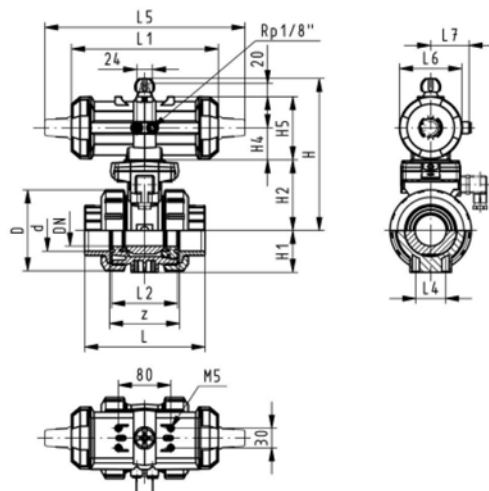
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

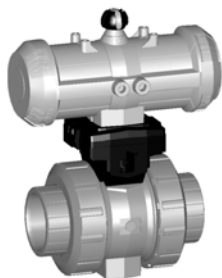
Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
3/8	10	10	70	199 234 862	1.200
1/2	15	10	185	199 234 863	1.200
3/4	20	10	350	199 234 864	1.300
1	25	10	700	199 234 865	1.400
1 1/4	32	10	1000	199 234 866	2.500
1 1/2	40	10	1600	199 234 867	2.800
2	50	10	3100	199 234 868	3.700
 2 1/2	65	10	5000	199 234 869	3.900
 3	80	10	7000	199 234 870	4.700
 4	100	10	11000	199 234 871	6.700

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	60
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	60
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	69
1	68	176	36	71	40	97	123	194	71	25	261	76	48	75
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	89
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	97
2	124	232	64	106	51	115	183	224	101	45	305	95	59	110
 2 1/2	166	262	85	156		70	233	218	136	70	276	65		144
 3	200	281	105	168		78	254	259	141	70	341	72		151
 4	238	292	123	175		86	301	287	164	120	369	80		174





DN10/15 - 50

Ball valve type 234 ABS DA (Double acting) Without manual override With solvent cement sockets Inch BS

Model:

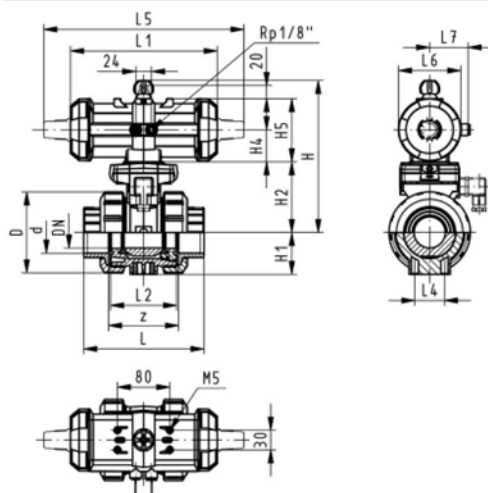
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

- Individual configuration of the valve (see form)

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	kg
3/8	10	10	70	199 234 902	1.200
1/2	15	10	185	199 234 903	1.200
3/4	20	10	350	199 234 904	1.300
1	25	10	700	199 234 905	1.400
1 1/4	32	10	1000	199 234 906	2.500
1 1/2	40	10	1600	199 234 907	2.800
2	50	10	3100	199 234 908	3.700
 2 1/2	65	10	5000	199 234 909	2.800
 3	80	10	7000	199 234 910	4.000
 4	100	10	11000	199 234 911	4.900

Inch	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
3/8	50	167	27	62	40	97	92	194	56	25	261	76	48	60
1/2	50	167	27	62	40	97	95	194	56	25	261	76	48	60
3/4	58	176	30	71	40	97	110	194	65	25	261	76	48	69
1	68	176	36	71	40	97	123	194	71	25	261	76	48	75
1 1/4	84	210	44	84	51	115	146	224	85	45	305	95	59	89
1 1/2	97	210	51	84	51	115	157	224	89	45	305	95	59	97
2	124	232	64	106	51	115	183	224	101	45	305	95	59	110
 2 1/2	166	257	85	156		66	233	144	136	70	190	60		144
 3	200	274	105	168		70	254	152	141	70	198	65		151
 4	238	273	123	175		78	301	169	164	120	235	72		174



Copiable
Configurator GF ball valve type 546 ABS

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for your application, we have created a selection menu for you.

We supply what you put together.

Ball Valve																		
A01 Ball Valve 546																		
Material																		
B03 ABS																		
Nominal width																		
C05	DN 10	3/8"																
C06	DN 15	1/2"																
C07	DN 20	3/4"																
C08	DN 25	1"																
C09	DN 32	1 1/4"																
C10	DN 40	1 1/2"																
C11	DN 50	2"																
C12	DN 65	2 1/2"																
C13	DN 80	3"																
C14	DN 100	4"																
Version																		
D01	Standard, PTFE ball seal																	
D04	silicon-free, PVDF ball seal metric (only with specific connecting parts)																	
Seals																		
E01	EPDM Seals																	
E02	FPM Seals																	
Threaded inserts																		
F01	without threaded inserts																	
F02	with threaded inserts																	
Connecting parts																		
G20	ABS Cement socket metric																	
G21	ABS Cement socket inch BS																	
G22	ABS Threaded socket Rp																	
G23	ABS Threaded socket Rp reinforced																	
G40	PE-100 Fusion socket metric																	
G41	PE-100 Butt fusion spigot SDR11 metric																	
G42	PE-100 Butt fusion spigot SDR17.6 metric																	
G43	PE-100 Butt fusion spigot long SDR11 metric																	
G44	PE-100 Butt fusion spigot long SDR17.6 metric [DN65-100]																	
G83	ABS Valve end blank																	
Multi-functional module																		
I01	No multi-functional module																	
I02	Empty module																	
I03	Module with 2 end switches Ag, Ni																	

Copiable

GF ball valve type 546 with pneumatic actuator

It's so easy to configure the type 546:
 With the configurator, you have a choice of new pneumatic actuators PA11 and PA21 in 2 optimized sizes including a large range of accessories.

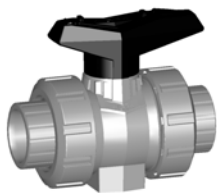
We supply what you put together.



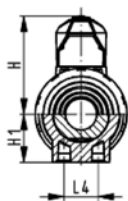
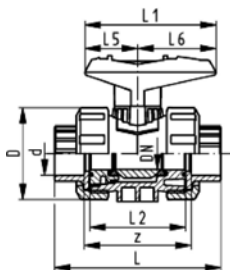
Pneumatic actuators PA11/PA21			
P01	Fail safe to close PA11/PA21		
P02	Fail safe to open PA11/21		
P03	Double acting PA11/21		
P30	Fail safe to close PA30/90		
P31	Fail safe to open PA30/90		
P32	Double acting PA30/90		
Manual override			
Q01	without manual override		
Q02	with manual override		
Stroke limiter			
R01	without stroke limiter		
R02	with stroke limiter		
P	Q	R	

Ball valves

Ball valve type 546 PP-H With fusion sockets metric



DN10/15 - 50



Model:

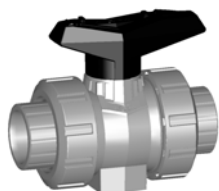
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

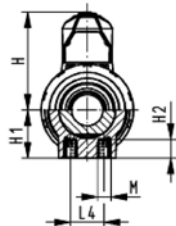
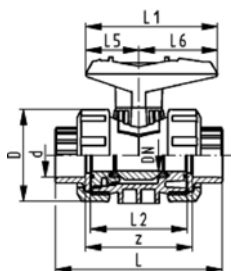
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	71	167 546 001	167 546 011	0.115	
20	15	10	185	167 546 002	167 546 012	0.115	
25	20	10	350	167 546 003	167 546 013	0.180	
32	25	10	700	167 546 004	167 546 014	0.255	
40	32	10	1000	167 546 005	167 546 015	0.440	
50	40	10	1600	167 546 006	167 546 016	0.610	
63	50	10	3100	167 546 007	167 546 017	1.145	
75	65	10	5000	167 546 008	167 546 018	3.700	
90	80	10	7000	167 546 009	167 546 019	5.500	
110	100	10	11000	167 546 010	167 546 020	8.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
16	50	57	27	93	77	56	25	32	45	67	
20	50	57	27	95	77	56	25	32	45	66	
25	58	67	30	109	97	65	25	39	58	77	
32	68	73	36	119	97	71	25	39	58	83	
40	84	90	44	135	128	85	45	54	74	99	
50	97	97	51	147	128	89	45	54	74	105	
63	124	116	64	168	152	101	45	66	87	117	
75	166	149	85	233	270	136	70	64	206	167	
90	200	161	105	254	270	141	70	64	206	180	
110	238	178	123	301	320	164	120	64	256	215	



DN10/15 - 50



Ball valve type 546 PP-H With mounting inserts With fusion sockets metric

Model:

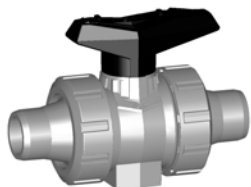
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

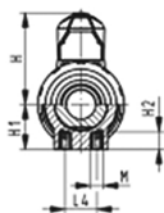
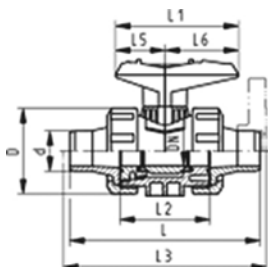
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	71	167 546 401	167 546 411	0.115	
20	15	10	185	167 546 402	167 546 412	0.115	
25	20	10	350	167 546 403	167 546 413	0.180	
32	25	10	700	167 546 404	167 546 414	0.255	
40	32	10	1000	167 546 405	167 546 415	0.440	
50	40	10	1600	167 546 406	167 546 416	0.610	
63	50	10	3100	167 546 407	167 546 417	1.145	
 75	65	10	5000	167 546 408	167 546 418	3.700	
 90	80	10	7000	167 546 409	167 546 419	5.500	
 110	100	10	11000	167 546 410	167 546 420	8.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	57	27	12	93	77	56	25	32	45	M6	67	
20	50	57	27	12	95	77	56	25	32	45	M6	66	
25	58	67	30	12	109	97	65	25	39	58	M6	77	
32	68	73	36	12	119	97	71	25	39	58	M6	83	
40	84	90	44	15	135	128	85	45	54	74	M8	99	
50	97	97	51	15	147	128	89	45	54	74	M8	105	
63	124	116	64	15	168	152	101	45	66	87	M8	117	
 75	166	149	85	15	233	270	136	70	64	206	M8	167	
 90	200	161	105	15	254	270	141	70	64	206	M8	180	
 110	238	178	123	22	301	320	164	120	64	256	M12	215	



DN10/15 - 50



Ball valve type 546 PP-H With mounting inserts With socket fusion spigots metric

Model:

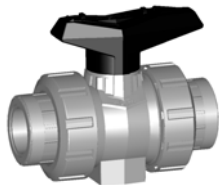
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

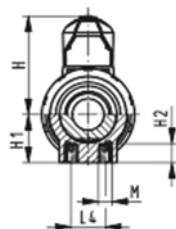
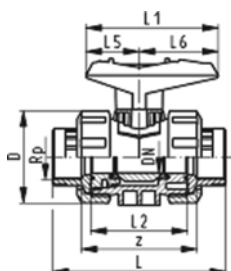
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	71	167 546 041	167 546 051	0.120	
20	15	10	185	167 546 042	167 546 052	0.120	
25	20	10	350	167 546 043	167 546 053	0.180	
32	25	10	700	167 546 044	167 546 054	0.260	
40	32	10	1000	167 546 045	167 546 055	0.450	
50	40	10	1600	167 546 046	167 546 056	0.640	
63	50	10	3100	167 546 047	167 546 057	1.210	
 75	65	10	5000	167 546 048	167 546 058	3.800	
 90	80	10	7000	167 546 049	167 546 059	5.600	
 110	100	10	11000	167 546 050	167 546 060	8.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	
16	50	57	27	12	110	77	56		25	32	45	M6	
20	50	57	27	12	120	77	56	130	25	32	45	M6	
25	58	67	30	12	139	97	65	150	25	39	58	M6	
32	68	73	36	12	150	97	71	160	25	39	58	M6	
40	84	90	44	15	170	128	85	180	45	54	74	M8	
50	97	97	51	15	190	128	89	200	45	54	74	M8	
63	124	116	64	15	220	152	101	230	45	66	87	M8	
 75	166	149	85	15	280	270	136	290	70	64	206	M8	
 90	200	161	105	15	296	270	141	310	70	64	206	M8	
 110	238	178	123	22	336	320	164	350	120	64	256	M12	



DN10/15 - 50



Ball valve type 546 PP-H With mounting inserts With threaded sockets Rp

Model:

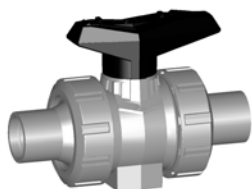
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

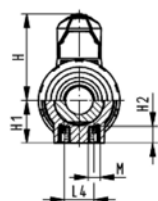
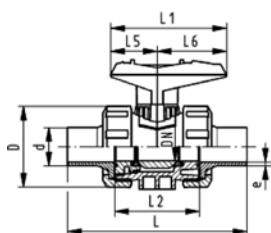
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Rp [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
3/8	10	10	71	167 546 021	167 546 031	0.120	
1/2	15	10	185	167 546 022	167 546 032	0.120	
3/4	20	10	350	167 546 023	167 546 033	0.180	
1	25	10	700	167 546 024	167 546 034	0.270	
1 1/4	32	10	1000	167 546 025	167 546 035	0.460	
1 1/2	40	10	1600	167 546 026	167 546 036	0.635	
2	50	10	3100	167 546 027	167 546 037	1.190	

Rp [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
3/8	50	57	27	12	96	77	56	25	32	45	M6	69	
1/2	50	57	27	12	99	77	56	25	32	45	M6	67	
3/4	58	67	30	12	111	97	65	25	39	58	M6	78	
1	68	73	36	12	127	97	71	25	39	58	M6	85	
1 1/4	84	90	44	15	146	128	85	45	54	74	M8	100	
1 1/2	97	97	51	15	157	128	89	45	54	74	M8	106	
2	124	116	64	15	183	152	101	45	66	87	M8	121	



DN10/15 - 50



Ball valve type 546 PP-H With mounting inserts With butt fusion spigots IR-Plus SDR11 metric

Model:

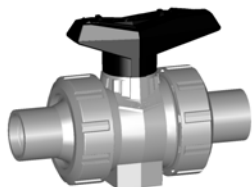
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

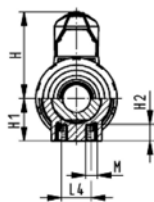
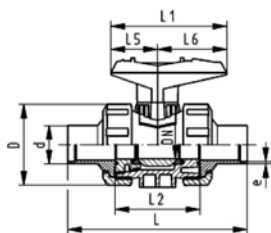
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg							
20	15	10	185	167 546 442	167 546 452	0.120							
25	20	10	350	167 546 443	167 546 453	0.180							
32	25	10	700	167 546 444	167 546 454	0.255							
40	32	10	1000	167 546 445	167 546 455	0.440							
50	40	10	1600	167 546 446	167 546 456	0.620							
63	50	10	3100	167 546 447	167 546 457	1.200							
 75	65	10	5000	167 546 448	167 546 458	3.800							
 90	80	10	7000	167 546 449	167 546 459	5.500							
 110	100	10	11000	167 546 450	167 546 460	8.700							

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]	
20	50	57	27	12	130	77	56	25	32	45	M6	1,9	
25	58	67	30	12	143	97	65	25	39	58	M6	2,3	
32	68	73	36	12	150	97	71	25	39	58	M6	3	
40	84	90	44	15	171	128	85	45	54	74	M8	3,7	
50	97	97	51	15	191	128	89	45	54	74	M8	4,6	
63	124	116	64	15	220	152	101	45	66	87	M8	5,8	
 75	166	149	85	15	266	270	136	70	64	206	M8	8.2	
 90	200	161	105	15	264	270	141	70	64	206	M8	9.9	
 110	238	178	123	22	301	320	164	120	64	256	M12	12	



DN10/15 - 50



Ball valve type 546 PP-H

With mounting inserts

With butt fusion spigots SDR17.6 metric

Model:

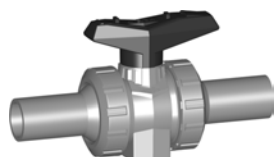
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

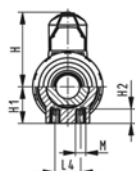
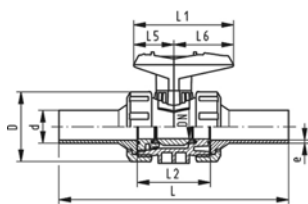
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
50	40	6	1600	167 546 066	167 546 076	0.635	
63	50	6	3100	167 546 067	167 546 077	1.200	
 75	65	6	5000	167 546 068	167 546 078	3.800	
 90	80	6	7000	167 546 069	167 546 079	5.500	
 110	100	6	11000	167 546 070	167 546 080	8.600	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]	
50	97	97	51	15	191	128	89	45	54	74	M8	2,9	
63	124	116	64	15	220	152	101	45	66	87	M8	3,6	
 75	166	149	85	15	266	270	136	70	64	206	M8	4.7	
 90	200	161	105	15	264	270	141	70	64	206	M8	5.5	
 110	238	178	123	22	301	320	164	120	64	256	M12	6.8	



DN10/15 - 50



Ball valve type 546 PP-H With mounting inserts With butt fusion spigots long SDR11 metric

Model:

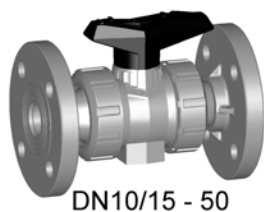
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

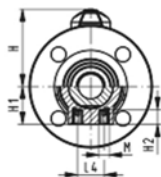
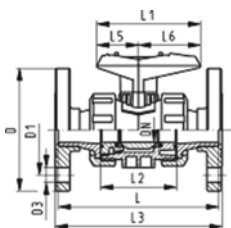
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	10	185	167 546 262	167 546 272	0.130	
25	20	10	350	167 546 263	167 546 273	0.195	
32	25	10	700	167 546 264	167 546 274	0.280	
40	32	10	1000	167 546 265	167 546 275	0.480	
50	40	10	1600	167 546 266	167 546 276	0.700	
63	50	10	3100	167 546 267	167 546 277	1.320	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]	
20	50	57	27	12	193	77	56	25	32	45	M6	2,3	
25	58	67	30	12	216	97	65	25	39	58	M6	2,3	
32	68	73	36	12	223	97	71	25	39	58	M6	3	
40	84	90	44	15	249	128	85	45	54	74	M8	3,7	
50	97	97	51	15	271	128	89	45	54	74	M8	4,6	
63	124	116	64	15	321	152	101	45	66	87	M8	5,8	



DN10/15 - 50



Ball valve type 546 PP-H

With mounting inserts

With fixed flanges PP-H serrated metric

Model:

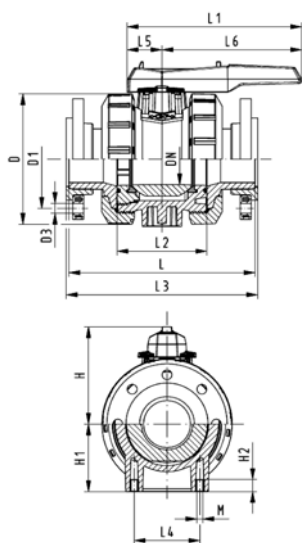
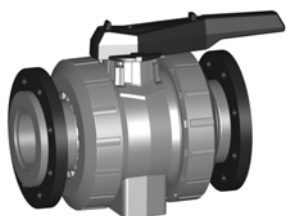
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Overall length EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	1/2	10	185	167 546 182	167 546 192	0.245	
25	20	3/4	10	350	167 546 183	167 546 193	0.345	
32	25	1	10	700	167 546 184	167 546 194	0.495	
40	32	1 1/4	10	1000	167 546 185	167 546 195	0.830	
50	40	1 1/2	10	1600	167 546 186	167 546 196	1.100	
63	50	2	10	3100	167 546 187	167 546 197	1.830	

d [mm]	D [mm]	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	
20	95	65	14	57	27	12	120	77	56	130	25	32	45	M6	
25	105	75	14	67	30	12	140	97	65	150	25	39	58	M6	
32	115	85	14	73	36	12	150	97	71	160	25	39	58	M6	
40	140	100	18	90	44	15	170	128	85	180	45	54	74	M8	
50	150	110	18	97	51	15	190	128	89	200	45	54	74	M8	
63	165	125	18	116	64	15	220	152	101	230	45	66	87	M8	



Ball valve type 546 PP-H With mounting inserts With backing flanges PP-st metric

Model:

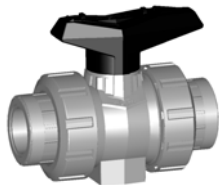
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

Option:

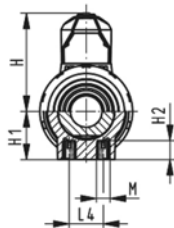
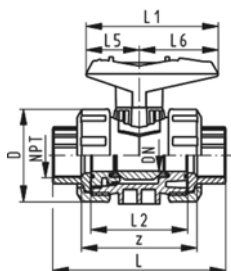
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	167 546 808	167 546 818	4.300	
 90	80	10	7000	167 546 809	167 546 819	6.400	
 110	100	10	11000	167 546 810	167 546 820	10.000	

d [mm]	D [mm]	D1 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	H [mm]	H1 [mm]	M	
 75	166	145	18	280	270	136	290	70	64	206	149	85	8	
 90	200	160	18	296	270	141	310	70	64	206	161	105	8	
 110	238	180	18	336	320	164	350	120	64	256	178	123	12	



DN10/15 - 50



Ball valve type 546 PP-H With mounting inserts With threaded sockets NPT

Model:

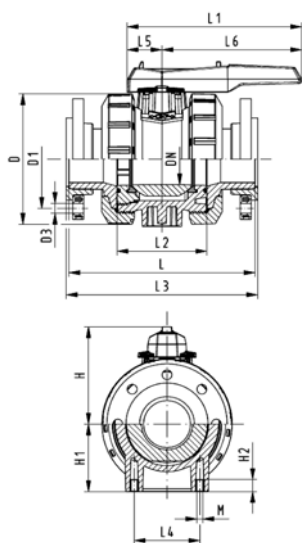
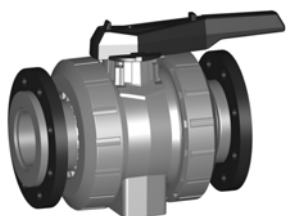
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

NPT [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
$\frac{3}{8}$	10	10	71	167 546 321	167 546 331	0.120	
$\frac{1}{2}$	15	10	185	167 546 322	167 546 332	0.120	
$\frac{3}{4}$	20	10	350	167 546 323	167 546 333	0.180	
1	25	10	700	167 546 324	167 546 334	0.270	
1 $\frac{1}{4}$	32	10	1000	167 546 325	167 546 335	0.460	
1 $\frac{1}{2}$	40	10	1600	167 546 326	167 546 336	0.635	
2	50	10	3100	167 546 327	167 546 337	1.190	

NPT [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
$\frac{3}{8}$	50	57	27	12	96	77	56	25	32	45	M6	71	
$\frac{1}{2}$	50	57	27	12	99	77	56	25	32	45	M6	64	
$\frac{3}{4}$	58	67	30	12	111	97	65	25	39	58	M6	76	
1	68	73	36	12	127	97	71	25	39	58	M6	83	
1 $\frac{1}{4}$	84	90	44	15	146	128	85	45	54	74	M8	100	
1 $\frac{1}{2}$	97	97	51	15	157	128	89	45	54	74	M8	111	
2	124	116	64	15	183	152	101	45	66	87	M8	134	



Ball valve type 546 PP-H With mounting inserts With backing flanges PP-st ANSI

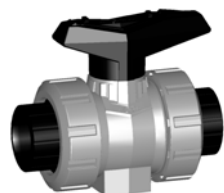
Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimension ANSI/ASME B 16.5 / ASTM D 4024

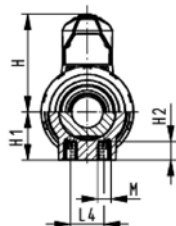
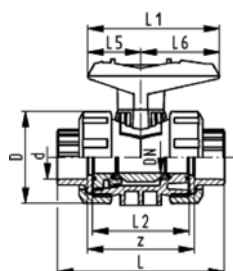
Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg								
2 1/2	65	10	5000	167 546 868	167 546 878	4.300								
3	80	10	7000	167 546 869	167 546 879	6.400								
4	100	10	11000	167 546 870	167 546 880	10.000								
Inch	D [mm]	D1 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	H [mm]	H1 [mm]	M	
2 1/2	166	140	19	280	270	136	290	70	64	206	149	85	8	
3	200	152	19	296	270	141	310	70	64	206	161	105	8	
4	238	191	19	336	320	164	350	120	64	256	178	123	12	



DN10/15 - 50



Ball valve type 546 PP-H With mounting inserts With fusion sockets PE 100 metric

Model:

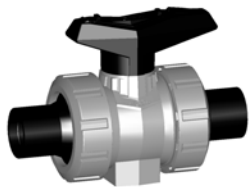
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

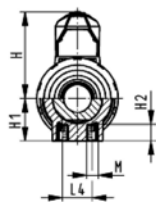
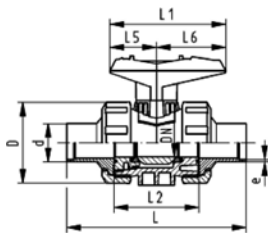
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	71	167 546 161	167 546 171	0.120	
20	15	10	185	167 546 162	167 546 172	0.120	
25	20	10	350	167 546 163	167 546 173	0.180	
32	25	10	700	167 546 164	167 546 174	0.260	
40	32	10	1000	167 546 165	167 546 175	0.450	
50	40	10	1600	167 546 166	167 546 176	0.630	
63	50	10	3100	167 546 167	167 546 177	1.195	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	57	27	12	93	77	56	25	32	45	M6	67	
20	50	57	27	12	95	77	56	25	32	45	M6	67	
25	58	67	30	12	109	97	65	25	39	58	M6	77	
32	68	73	36	12	119	97	71	25	39	58	M6	83	
40	84	90	44	15	135	128	85	45	54	74	M8	99	
50	97	97	51	15	147	128	89	45	54	74	M8	105	
63	124	116	64	15	168	152	101	45	66	87	M8	113	



DN10/15 - 50



Ball valve type 546 PP-H

With mounting inserts

With butt fusion spigots PE 100 SDR11 metric

Model:

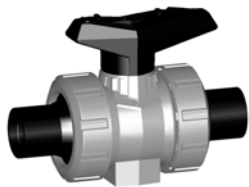
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

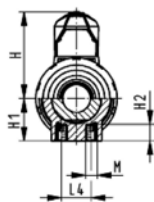
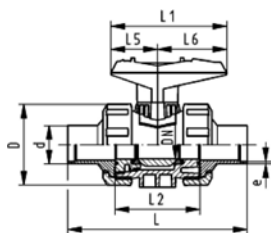
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg								
20	15	10	185	167 546 142	167 546 152	0.120								
25	20	10	350	167 546 143	167 546 153	0.180								
32	25	10	700	167 546 144	167 546 154	0.255								
40	32	10	1000	167 546 145	167 546 155	0.440								
50	40	10	1600	167 546 146	167 546 156	0.620								
63	50	10	3100	167 546 147	167 546 157	1.200								

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]		
20	50	57	27	12	130	77	56	130	25	32	45	M6	1,9		
25	58	67	30	12	143	97	65	150	25	39	58	M6	2,3		
32	68	73	36	12	150	97	71	160	25	39	58	M6	3		
40	84	90	44	15	171	128	85	180	45	54	74	M8	3,7		
50	97	97	51	15	191	128	89	200	45	54	74	M8	4,6		
63	124	116	64	15	220	152	101	230	45	66	87	M8	5,8		



DN10/15 - 50



Ball valve type 546 PP-H

With mounting inserts

With butt fusion spigots PE 100 SDR17.6 metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

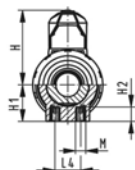
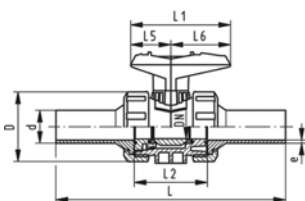
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg							
50	40	6	1600	167 546 126	167 546 136	0.620							
63	50	6	3100	167 546 127	167 546 137	1.200							

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]		
50	97	97	51	15	191	128	89	45	54	74	M8	2,9		
63	124	116	64	15	220	152	101	45	66	87	M8	3,6		



DN10/15 - 50



Ball valve type 546 PP-H

With mounting inserts

With butt fusion spigots long PE 100 SDR11 metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

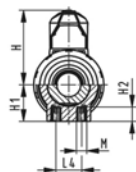
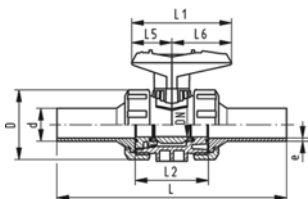
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	10	185	167 546 282	167 546 292	0.130	
25	20	10	350	167 546 283	167 546 293	0.195	
32	25	10	700	167 546 284	167 546 294	0.280	
40	32	10	1000	167 546 285	167 546 295	0.485	
50	40	10	1600	167 546 286	167 546 296	0.695	
63	50	10	3100	167 546 287	167 546 297	1.320	
75	65	10	5000	167 546 288	167 546 298	3.900	
90	80	10	7000	167 546 289	167 546 299	5.900	
110	100	10	11000	167 546 290	167 546 300	9.300	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]	
20	50	57	27	12	193	77	56	25	32	45	M6	2,3	
25	58	67	30	12	216	97	65	25	39	58	M6	2,3	
32	68	73	36	12	223	97	71	25	39	58	M6	3	
40	84	90	44	15	249	128	85	45	54	74	M8	3,7	
50	97	97	51	15	271	128	89	45	54	74	M8	4,6	
63	124	116	64	15	321	152	101	45	66	87	M8	5,8	
75	166	149	85	15	386	270	136	70	64	206	M8	6.8	
90	200	161	105	15	421	270	141	70	64	206	M8	8.2	
110	238	178	123	22	484	320	164	120	64	256	M12	10	



DN10/15 - 50



Ball valve type 546 PP-H With mounting inserts With butt fusion spigots long PE 100 SDR17,6 metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

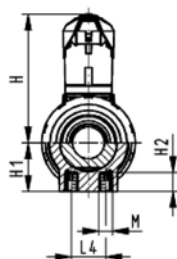
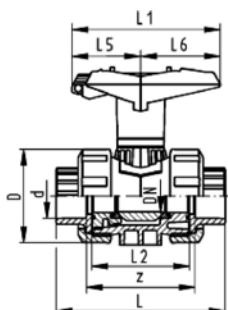
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg							
 75	65	10	5000	167 546 308	167 546 318	3.900							
 90	80	10	7000	167 546 309	167 546 319	5.800							
 110	100	10	11000	167 546 310	167 546 320	9.200							

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]		
 75	166	149	85	15	386	270	136	70	64	206	8	4.3		
 90	200	161	105	15	421	270	141	70	64	206	8	5.1		
 110	238	178	123	22	484	320	164	120	64	256	12	6.3		



DN10/15 - 50



Ball valve type 546 PP-H With lockable handle With fusion sockets metric

Model:

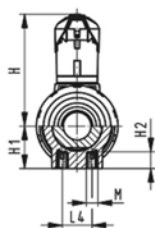
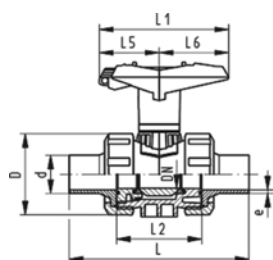
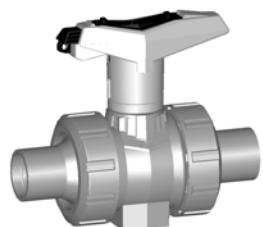
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Lockable hand lever with ratchet settings

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg							
16	10	10	71	167 546 421	167 546 431	0.125							
20	15	10	185	167 546 422	167 546 432	0.125							
25	20	10	350	167 546 423	167 546 433	0.195							
32	25	10	700	167 546 424	167 546 434	0.270							
40	32	10	1000	167 546 425	167 546 435	0.465							
50	40	10	1600	167 546 426	167 546 436	0.635							
63	50	10	3100	167 546 427	167 546 437	1.175							
75	65	10	5000	167 546 428	167 546 438	4.000							
90	80	10	7000	167 546 429	167 546 439	5.900							
110	100	10	11000	167 546 430	167 546 440	9.100							

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	79	27	12	93	77	56	25	32	45	M6	67	
20	50	79	27	12	95	77	56	25	32	45	M6	66	
25	58	88	30	12	109	97	65	25	39	58	M6	77	
32	68	94	36	12	119	97	71	25	39	58	M6	83	
40	84	113	44	15	135	128	85	45	54	74	M8	99	
50	97	119	51	15	147	128	89	45	54	74	M8	105	
63	124	141	64	15	168	152	101	45	66	87	M8	117	
75	166	224	85	15	233	270	136	70	64	206	M8	167	
90	200	235	105	15	254	270	141	70	64	206	M8	180	
110	238	245	123	22	301	320	164	120	64	256	M12	215	



Ball valve type 546 PP-H

With lockable handle

With butt fusion spigots IR-Plus SDR11 metric

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Lockable hand lever with ratchet settings

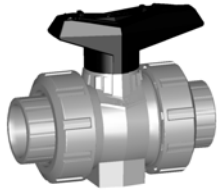
Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

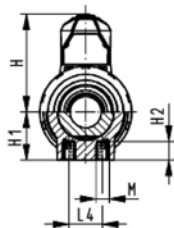
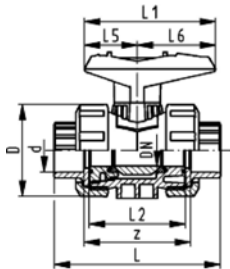
d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	10	185	167 546 462	167 546 472	0.130	
25	20	10	350	167 546 463	167 546 473	0.195	
32	25	10	700	167 546 464	167 546 474	0.270	
40	32	10	1000	167 546 465	167 546 475	0.465	
50	40	10	1600	167 546 466	167 546 476	0.645	
63	50	10	3100	167 546 467	167 546 477	1.230	
 75	65	10	5000	167 546 468	167 546 478	4.100	
 90	80	10	7000	167 546 469	167 546 479	5.900	
 110	100	10	11000	167 546 470	167 546 480	9.000	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]	
20	50	79	27	12	130	87	56	25	42	45	M6	1,9	
25	58	88	30	12	143	108	65	25	50	58	M6	2,3	
32	68	94	36	12	150	108	71	25	50	58	M6	3	
40	84	113	44	15	171	140	85	45	66	75	M8	3,7	
50	97	119	51	15	191	140	89	45	66	75	M8	4,6	
63	124	141	64	15	220	165	101	45	78	87	M8	5,8	
 75	166	149	85	15	266	270	136	70	64	206	M8	8.2	
 90	200	161	105	15	264	270	141	70	64	206	M8	9.9	
 110	238	178	123	22	301	320	164	120	64	256	M12	12	

Ball valves



DN10/15 - 50



PROGEF® PLUS silicone free Ball valve type 546 PP-H SF With mounting inserts With fusion sockets metric

Model:

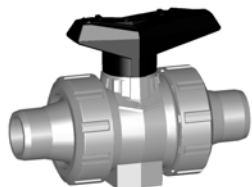
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Integrated stainless steel mounting inserts
- Double bagged
- Ball seals PVDF

Option:

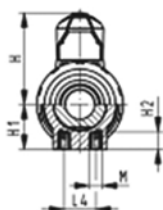
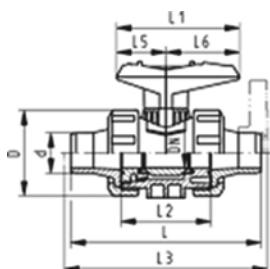
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	71	167 546 601	167 546 611	0.115	
20	15	10	185	167 546 602	167 546 612	0.115	
25	20	10	350	167 546 603	167 546 613	0.180	
32	25	10	700	167 546 604	167 546 614	0.255	
40	32	10	1000	167 546 605	167 546 615	0.440	
50	40	10	1600	167 546 606	167 546 616	0.610	
63	50	10	3100	167 546 607	167 546 617	1.145	
 75	65	10	5000	167 546 608	167 546 618	3.700	
 90	80	10	7000	167 546 609	167 546 619	5.500	
 110	100	10	11000	167 546 610	167 546 620	8.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	57	27	12	93	77	56	25	32	45	M6	67	
20	50	57	27	12	95	77	56	25	32	45	M6	66	
25	58	67	30	12	108	97	65	25	39	58	M6	77	
32	68	73	36	12	118	97	71	25	39	58	M6	83	
40	84	90	44	15	137	128	85	45	54	74	M8	99	
50	97	97	51	15	147	128	89	45	54	74	M8	105	
63	124	116	64	15	168	152	101	45	66	87	M8	117	
 75	166	149	85	15	233	270	136	70	64	206	M8	167	
 90	200	161	105	15	254	270	141	70	64	206	M8	180	
 110	238	178	123	22	301	320	164	120	64	256	M12	215	



DN10/15 - 50



PROGEF® PLUS silicone free **Ball valve type 546 PP-H SF** **With mounting inserts** **With socket fusion spigots metric**

Model:

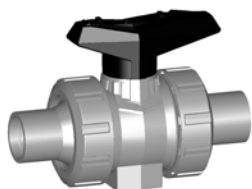
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Integrated stainless steel mounting inserts
- Double bagged
- Ball seals PVDF

Option:

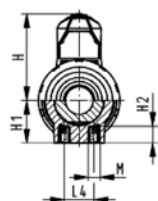
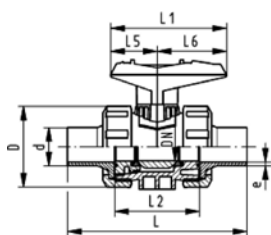
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	71	167 546 621	167 546 631	0.120	
20	15	10	185	167 546 622	167 546 632	0.120	
25	20	10	350	167 546 623	167 546 633	0.180	
32	25	10	700	167 546 624	167 546 634	0.260	
40	32	10	1000	167 546 625	167 546 635	0.450	
50	40	10	1600	167 546 626	167 546 636	0.640	
63	50	10	3100	167 546 627	167 546 637	1.210	
 75	65	10	5000	167 546 628	167 546 638	3.800	
 90	80	10	7000	167 546 629	167 546 639	5.600	
 110	100	10	11000	167 546 630	167 546 640	8.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	
16	50	57	27	12	110	77	56		25	32	45	M6	
20	50	57	27	12	120	77	56	130	25	32	45	M6	
25	58	67	30	12	139	97	65	150	25	39	58	M6	
32	68	73	36	12	150	97	71	160	25	39	58	M6	
40	84	90	44	15	170	128	85	180	45	54	74	M8	
50	97	97	51	15	190	128	89	200	45	54	74	M8	
63	124	116	64	15	220	152	101	230	45	66	87	M8	
 75	166	149	85	15	280	270	136	290	70	64	206	M8	
 90	200	161	105	15	296	270	141	310	70	64	206	M8	
 110	238	178	123	22	336	320	164	350	120	64	256	M12	



DN10/15 - 50



PROGEF® PLUS silicone free **Ball valve type 546 PP-H SF** **With mounting inserts** **With butt fusion spigots IR-Plus SDR11 metric**

Model:

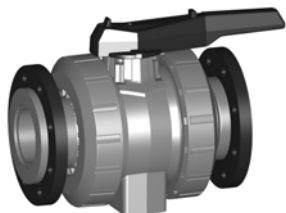
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Integrated stainless steel mounting inserts
- Double bagged
- Ball seals PVDF

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	10	185	167 546 662	167 546 672	0.120	
25	20	10	350	167 546 663	167 546 673	0.180	
32	25	10	700	167 546 664	167 546 674	0.255	
40	32	10	1000	167 546 665	167 546 675	0.440	
50	40	10	1600	167 546 666	167 546 676	0.620	
63	50	10	3100	167 546 667	167 546 677	1.200	
75	65	10	5000	167 546 668	167 546 678	3.800	
90	80	10	7000	167 546 669	167 546 679	5.500	
110	100	10	11000	167 546 670	167 546 680	8.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]	
20	50	57	27	12	130	77	56	25	32	45	M6	1,9	
25	58	67	30	12	143	97	65	25	39	58	M6	2,3	
32	68	73	36	12	150	97	71	25	39	58	M6	3	
40	84	90	44	15	171	128	85	45	54	74	M8	3,7	
50	97	97	51	15	191	128	89	45	54	74	M8	4,6	
63	124	116	64	15	220	152	101	45	66	87	M8	5,8	
75	166	149	85	15	266	270	136	70	64	206	M8	8.2	
90	200	161	105	15	264	270	141	70	64	206	M8	9.9	
110	238	178	123	22	301	320	164	120	64	256	M12	12	



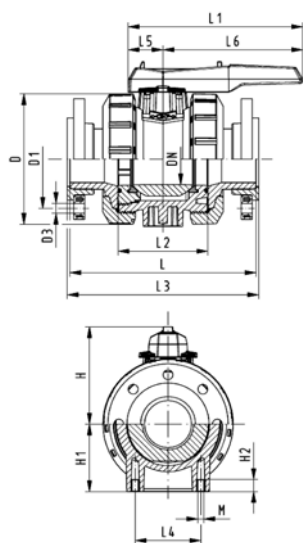
PROGEF® PLUS silicone free **Ball valve type 546 PP-H SF** **With mounting inserts** **With backing flanges PP-st metric**

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Integrated stainless steel mounting inserts
- Double bagged
- Ball seals PVDF
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

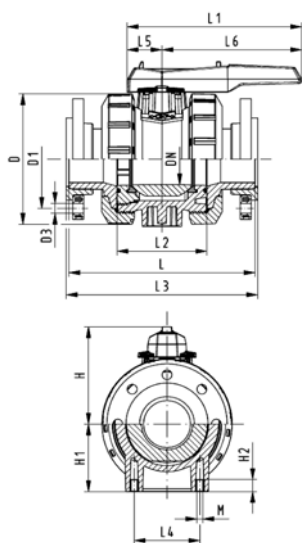
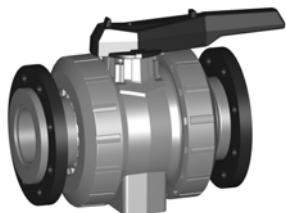
Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches



d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg								
 75	65	10	5000	167 546 828	167 546 838	4.300								
 90	80	10	7000	167 546 829	167 546 839	6.400								
 110	100	10	11000	167 546 830	167 546 840	10.000								

d [mm]	D [mm]	D1 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	H [mm]	H1 [mm]	M	
 75	166	145	18	280	270	136	290	70	64	206	149	85	8	
 90	200	160	18	296	270	141	310	70	64	206	161	105	8	
 110	238	180	18	336	320	164	350	120	64	256	178	123	12	



PROGEF® PLUS silicone free **Ball valve type 546 PP-H SF** **With mounting inserts** **With backing flanges PP-st ANSI**

Model:

- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- Silicon-free / paint-compatible
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Integrated stainless steel mounting inserts
- Double bagged
- Ball seals PTFE
- Overall length according to EN 558-1
- Connecting dimension ANSI/ASME B 16.5 / ASTM D 4024

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	167 546 888	167 546 898	4.300	
 90	80	10	7000	167 546 889	167 546 899	6.400	
 110	100	10	11000	167 546 890	167 546 900	10.000	

d [mm]	D [mm]	D1 [mm]	D3 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	H [mm]	H1 [mm]	M	
 75	166	140	19	280	270	136	290	70	64	206	149	85	8	
 90	200	152	19	296	270	141	310	70	64	206	161	105	8	
 110	238	191	19	336	320	164	350	120	64	256	178	123	12	

Copiable

Configurator GF ball valve type 546 PP-H

Ball Valve

A01 Ball Valve 546
A02 Linear Ball Valve

Material
B05 PP-H

Dimension

C05 d 16 DN 10 3/8"
C06 d 20 DN 15 1/2"
C07 d 25 DN 20 3/4"
C08 d 32 DN 25 1"
C09 d 40 DN 32 1 1/4"
C10 d 50 DN 40 1 1/2"
C11 d 63 DN 50 2"
C12 d 75 DN 65 2 1/2"
C13 d 90 DN 80 3"
C14 d 110 DN 100 4"
C15 d 160 DN 150 6"

Version

D01 Standard, PTFE ball seal
D02 oilfree, PTFE ball seal (only with specific connecting parts)
D03 silicon-free, PTFE ball seal (only with specific connecting parts)
D04 silicon-free, PVDF ball seal for metric (only with specific connecting parts)

Seals

E01 EPDM seals
E02 FPM seals
E03 FFPM (KALREZ®) seals

Threaded inserts

F01 without threaded inserts
F02 with threaded inserts

Connecting parts

G30 PP-H Fusion socket metric
G32 PP-H Socket fusion spigot metric
G33 PP-H Threaded socket Rp reinforced
G34 PP-H Threaded socket NPT reinforced
G35 PP-H Butt fusion spigot SDR 11 metric IR-PLUS®
G36 PP-H Butt fusion spigot SDR 17.6 metric with this valve end the maximum nominal pressure is reduced to PN 6
G37 PP-H Butt fusion spigot long SDR11 metric
G83 PP-H Valve end blank
G44 PE-100 Butt fusion spigot long SDR17.6 metric (DN65-100)
G63 Fixed flange PP-H serrated metric (DN10-50)
G72 Backing flange PP-steel metric
G73 Backing flange PP-steel inch ANSI
G77 Backing flange PP JIS with connecting parts
G78 Backing flange PP-GF JIS
G40 PE-100 Fusion socket metric
G41 PE-100 Butt fusion spigot SDR11 metric
G42 PE-100 Butt fusion spigot SDR17.6 metric
G43 PE-100 Butt fusion spigot long SDR11 metric

Multi-functional module

I01 No multi-functional module
I02 Empty module
I03 Module with 2 end switches Ag, Ni
I04 Module with 2 end switches Au
I05 Module with 2 inductive switches Namur
I06 Module with 2 inductive switches PNP
I07 Module with 2 inductive switches NPN

Lever

K01 Standard lever red
K02 Standard lever black
K11 Multi-functional lever red

Mounting plate

L01 without mounting plate
L02 with mounting plate

A01

B05

C

D

E

F

G

G

I

K

L

left

right

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for your application, we have created a selection menu for you. (The maximum nominal pressure for the ball valve is PN10).

We supply what you put together.

Find the fitting solution with the Configurator

Ball Valve

A01 Ball Valve 546
A02 Linear Ball Valve 546

Material

B05 PP-H

Dimension

C05 d 16 DN 10 3/8"
C06 d 20 DN 15 1/2"
C07 d 25 DN 20 3/4"
C08 d 32 DN 25 1"
C09 d 40 DN 32 1 1/4"
C10 d 50 DN 40 1 1/2"
C11 d 63 DN 50 2"
C12 d 75 DN 65 2 1/2"
C13 d 90 DN 80 3"
C14 d 110 DN 100 4"
C15 d 160 DN 150 6"

Version

D01 Standard, PTFE ball seal
D02 oilfree, PTFE ball seal (only with specific connecting parts)
D03 silicon-free, PTFE ball seal (only with specific connecting parts)
D04 silicon-free, PVDF ball seal for metric (only with specific connecting parts)

Seals

E01 EPDM Seals
E02 FPM Seals
E03 FFPM (KALREZ®) seals

Threaded inserts

F01 without threaded inserts
F02 with threaded inserts

Connecting parts

G30 PP-H Fusion socket metric
G32 PP-H Socket fusion spigot metric
G33 PP-H Threaded socket Rp reinforced
G34 PP-H Threaded socket NPT reinforced
G35 PP-H Butt fusion spigot SDR 11 metric IR Plus®
G36 PP-H Butt fusion spigot SDR 17.6 metric (limited dimension range) with this valve end the maximum nominal pressure is reduced to PN 6
G37 PP-H Butt fusion spigot long SDR11 metric
G83 PP-H Valve end blank
G63 Fixed flange PP-H serrated metric
G72 Backing flange PP-steel metric
G73 Backing flange PP-steel inch ANSI
G77 Backing flange PP-GF JIS
G40 PE-100 Fusion socket metric
G41 PE-100 Butt fusion spigot SDR11 metric
G42 PE-100 Butt fusion spigot SDR17.6 metric (limited dimension range)
G43 PE-100 Butt fusion spigot long SDR11 metric
G44 PE-100 Butt fusion spigot long SDR17.6 metric (DN65-100)
G11 PVC-C Cement socket metric
G12 PVC-C Cement socket JIS
G13 PVC-C Cement socket inch ASTM
G14 PVC-C Cement spigot metric
G15 PVC-C Threaded socket Rp
G16 PVC-C Threaded socket Rp reinforced
G17 PVC-C Threaded socket NPT

Multi-functional module

I01 No multi-functional module
I02 Empty module
I03 Module with 2 limit switches Ag, Ni
I04 Module with 2 limit switches Au
I05 Module with 2 inductive switches Namur
I06 Module with 2 inductive switches PNP
I07 Module with 2 inductive switches NPN

Lever

K01 Standard lever red
K02 Standard lever black
K11 Multi-functional lever red

Mounting plate

L01 without mounting plate
L02 with mounting plate

A01 B05 C09 D01 E01 F02 G30 G41 I01 K02 L02 =

left right



Ball valves electric

Ball valve type 107 PP-H 100-230V

With manual emergency override

With fusion sockets metric



DN10/15 - 50

Model:

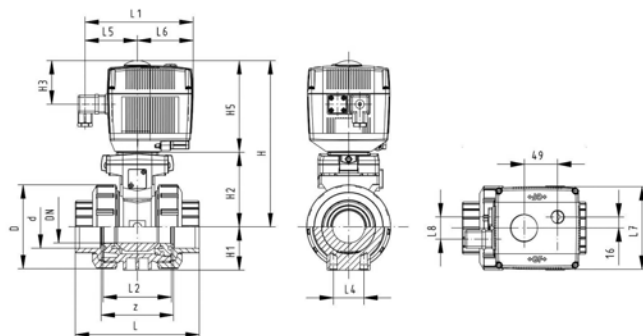
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

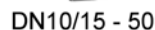
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg										
16	10	10	70	199 107 502	199 107 512	2.100										
20	15	10	185	199 107 503	199 107 513	2.100										
25	20	10	350	199 107 504	199 107 514	2.200										
32	25	10	700	199 107 505	199 107 515	2.300										
40	32	10	1000	199 107 506	199 107 516	2.600										
50	40	10	1600	199 107 507	199 107 517	3.000										
63	50	10	3100	199 107 508	199 107 518	3.800										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
16	50	200	27	64	64	137	93	161	56	25	77	83	122	33	67
20	50	200	27	64	64	137	95	161	56	25	77	83	122	33	66
25	58	209	30	73	64	137	108	161	65	25	77	83	122	33	77
32	68	209	36	73	64	137	118	161	71	25	77	83	122	33	83
40	84	220	44	84	64	137	137	161	85	45	77	83	122	33	99
50	97	220	51	84	64	137	147	161	89	45	77	83	122	33	105
63	124	243	64	106	64	137	168	161	101	45	77	83	122	33	117



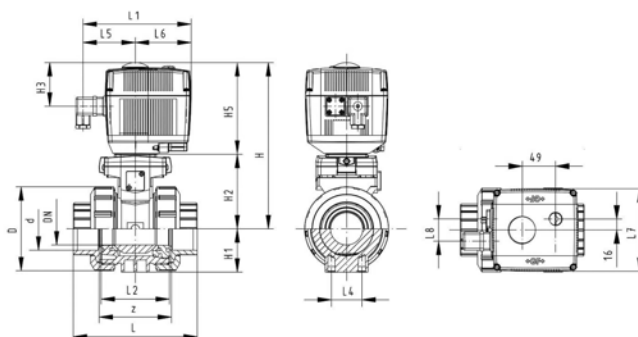


Model:

- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

- Individual configuration of the valve (see form)

d	D	H	H1	H2	H3	H5	L	L1	L2	L4	L5	L6	L7	L8	z
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
16	50	200	27	64	64	137	93	161	56	25	77	83	122	33	67
20	50	200	27	64	64	137	95	161	56	25	77	83	122	33	66
25	58	209	30	73	64	137	108	161	65	25	77	83	122	33	77
32	68	209	36	73	64	137	118	161	71	25	77	83	122	33	83
40	84	220	44	84	64	137	137	161	85	45	77	83	122	33	99
50	97	220	51	84	64	137	147	161	89	45	77	83	122	33	105
63	124	243	64	106	64	137	168	161	101	45	77	83	122	33	117





Ball valve type 107 PP-H 100-230V

With manual emergency override

With fusion spigots metric

Model:

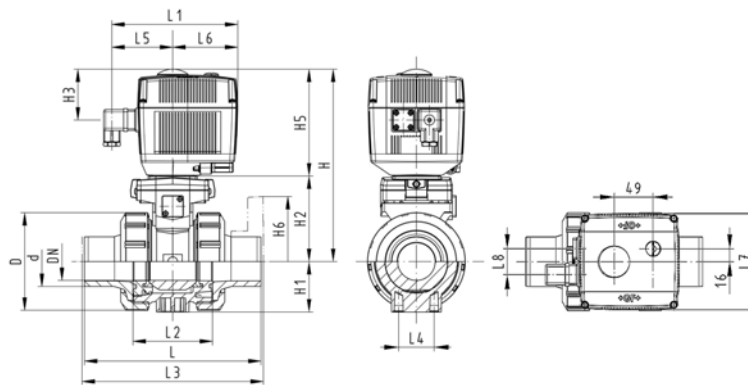
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 107 522	199 107 532	2.100	
20	15	10	185	199 107 523	199 107 533	2.100	
25	20	10	350	199 107 524	199 107 534	2.200	
32	25	10	700	199 107 525	199 107 535	2.300	
40	32	10	1000	199 107 526	199 107 536	2.600	
50	40	10	1600	199 107 527	199 107 537	3.000	
63	50	10	3100	199 107 528	199 107 538	3.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
16	50	200	27	64	64	137	110	161	56	130	25	77	83	122	33
20	50	200	27	64	64	137	120	161	56	130	25	77	83	122	33
25	58	209	30	73	64	137	139	161	65	150	25	77	83	122	33
32	68	209	36	73	64	137	150	161	71	160	25	77	83	122	33
40	84	220	44	84	64	137	170	161	85	180	45	77	83	122	33
50	97	220	51	84	64	137	190	161	89	200	45	77	83	122	33
63	124	243	64	106	64	137	220	161	101	230	45	77	83	122	33





Ball valve type 107 PP-H 24V

With manual emergency override

With fusion spigots metric

Model:

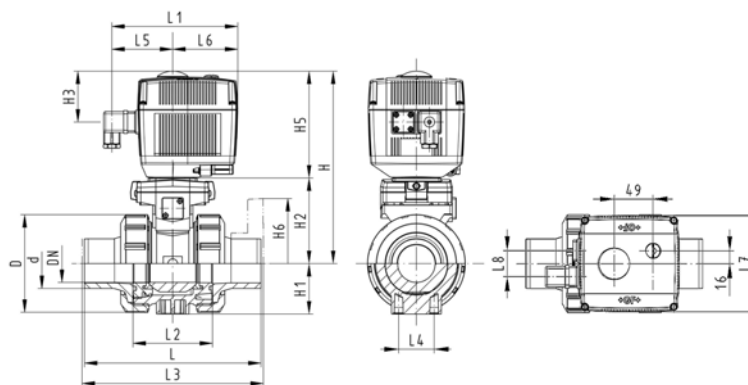
- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

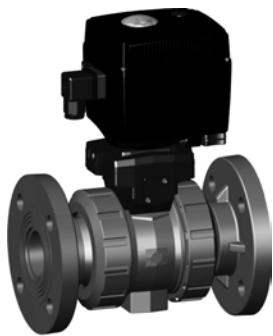
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 107 562	199 107 572	2.100	
20	15	10	185	199 107 563	199 107 573	2.100	
25	20	10	350	199 107 564	199 107 574	2.200	
32	25	10	700	199 107 565	199 107 575	2.300	
40	32	10	1000	199 107 566	199 107 576	2.600	
50	40	10	1600	199 107 567	199 107 577	3.000	
63	50	10	3100	199 107 568	199 107 578	3.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
16	50	200	27	64	64	137	110	161	56	130	25	77	83	122	33
20	50	200	27	64	64	137	120	161	56	130	25	77	83	122	33
25	58	209	30	73	64	137	139	161	65	150	25	77	83	122	33
32	68	209	36	73	64	137	156	161	71	160	25	77	83	122	33
40	84	220	44	84	64	137	170	161	85	180	45	77	83	122	33
50	97	220	51	84	64	137	190	161	89	200	45	77	83	122	33
63	124	243	64	106	64	137	220	161	101	230	45	77	83	122	33





DN10/15 - 50

Ball valve type 107 PP-H 100-230V With manual emergency override With fixed flanges PP-H serrated metric

Model:

- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

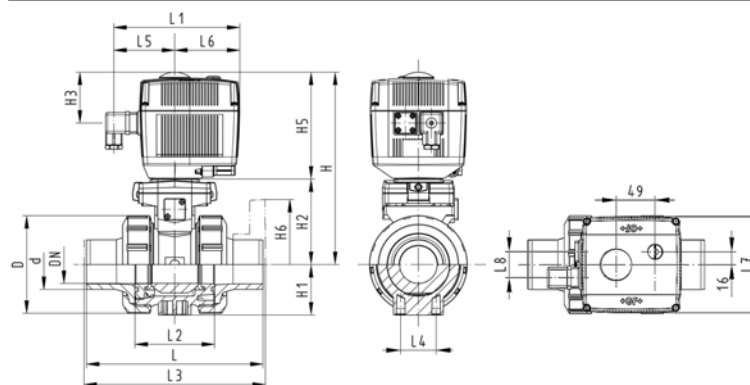
Option:

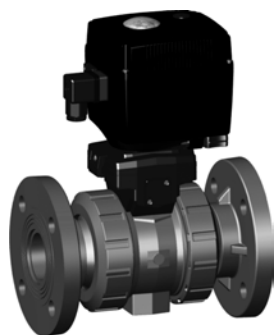
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	½	10	185	199 107 583	199 107 593	2.300	
25	20	¾	10	350	199 107 584	199 107 594	2.500	
32	25	1	10	700	199 107 585	199 107 595	2.700	
40	32	1 ¼	10	1000	199 107 586	199 107 596	3.200	
50	40	1 ½	10	1600	199 107 587	199 107 597	3.700	
63	50	2	10	3100	199 107 588	199 107 598	4.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	200	27	64	64	137	48	120	161	56	130	25	77	83	122
25	58	209	30	73	64	137	53	140	161	65	150	25	77	83	122
32	68	209	36	73	64	137	58	150	161	71	160	25	77	83	122
40	84	220	44	84	64	137	70	170	161	85	180	45	77	83	122
50	97	220	51	84	64	137	75	190	161	89	200	45	77	83	122
63	124	243	64	106	64	137	165	220	161	101	230	45	77	83	122

d [mm]	L8 [mm]
20	33
25	33
32	33
40	33
50	33
63	33





DN10/15 - 50

Ball valve type 107 PP-H 24V

With manual emergency override

With fixed flanges PP-H serrated metric

Model:

- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

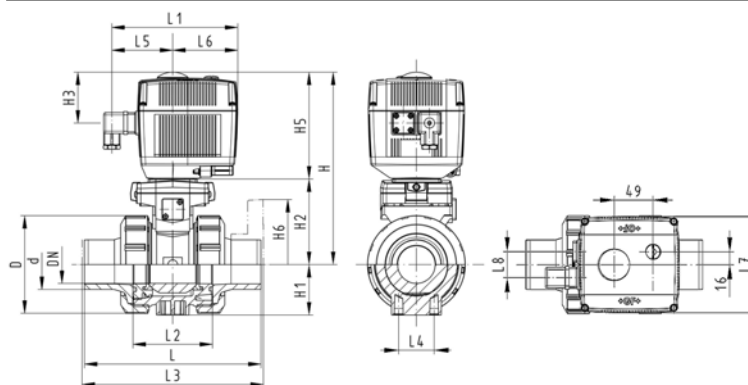
Option:

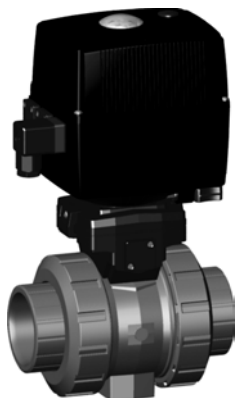
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value (Δp=1 bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	½	10	185	199 107 783	199 107 793	2.300	
25	20	¾	10	350	199 107 784	199 107 794	2.500	
32	25	1	10	700	199 107 785	199 107 795	2.700	
40	32	1 ¼	10	1000	199 107 786	199 107 796	3.200	
50	40	1 ½	10	1600	199 107 787	199 107 797	3.700	
63	50	2	10	3100	199 107 788	199 107 798	4.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	200	27	64	64	137	48	120	161	56	130	25	77	83	122
25	58	209	30	73	64	137	53	140	161	65	150	25	77	83	122
32	68	209	36	73	64	137	58	150	161	71	160	25	77	83	122
40	84	220	44	84	64	137	70	170	161	85	180	45	77	83	122
50	97	220	51	84	64	137	75	190	161	89	200	45	77	83	122
63	124	243	64	106	64	137	165	220	161	101	230	45	77	83	122

d [mm]	L8 [mm]
20	33
25	33
32	33
40	33
50	33
63	33





DN10/15 - 50

Ball valve type 131 PP-H 100-230V With manual emergency override With fusion sockets metric

Model:

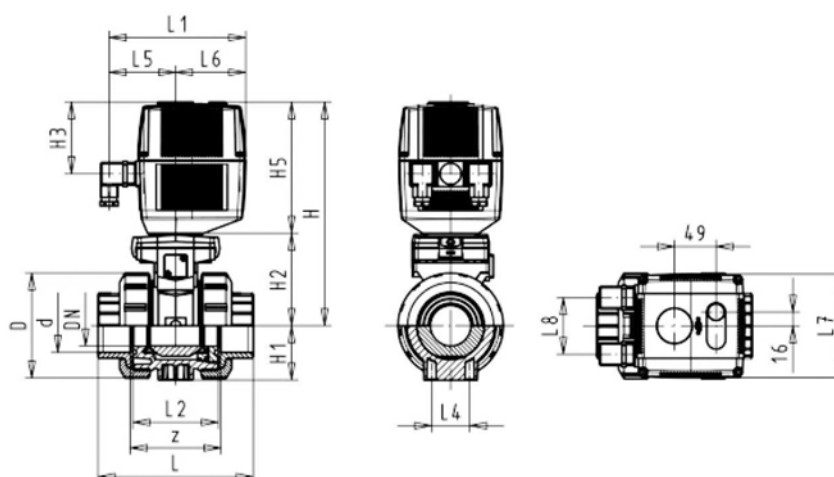
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

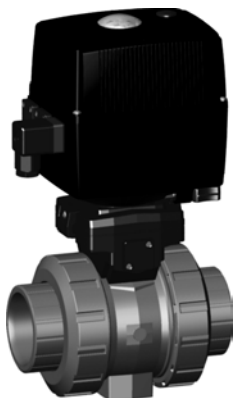
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 131 002	199 131 012	2.100	
20	15	10	185	199 131 003	199 131 013	2.100	
25	20	10	350	199 131 004	199 131 014	2.200	
32	25	10	700	199 131 005	199 131 015	2.300	
40	32	10	1000	199 131 006	199 131 016	2.600	
50	40	10	1600	199 131 007	199 131 017	3.000	
63	50	10	3100	199 131 008	199 131 018	3.800	
 75	65	10	5000	199 131 009	199 131 019	3.600	
 90	80	10	7000	199 131 010	199 131 020	4.300	
 110	100	10	11000	199 131 011	199 131 021	5.500	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	231	27	64	94	167	93	180	56	25	97	83	122	67
20	50	231	27	64	94	167	95	180	56	25	97	83	122	66
25	58	240	30	73	94	167	108	180	65	25	97	83	122	77
32	68	240	36	73	94	167	118	180	71	25	97	83	122	83
40	84	251	44	84	94	167	137	180	85	45	97	83	122	99
50	97	251	51	84	94	167	147	180	89	45	97	83	122	105
63	124	273	64	106	94	167	168	180	101	45	97	83	122	117
 75	166	346	85	156	94	190	233	180	136	70	98	83	122	167
 90	200	358	105	168	94	190	254	180	141	70	98	83	122	180
 110	238	365	123	175	94	190	301	180	164	120	98	83	122	215





DN10/15 - 50

Ball valve type 131 PP-H 24V With manual emergency override With fusion sockets metric

Model:

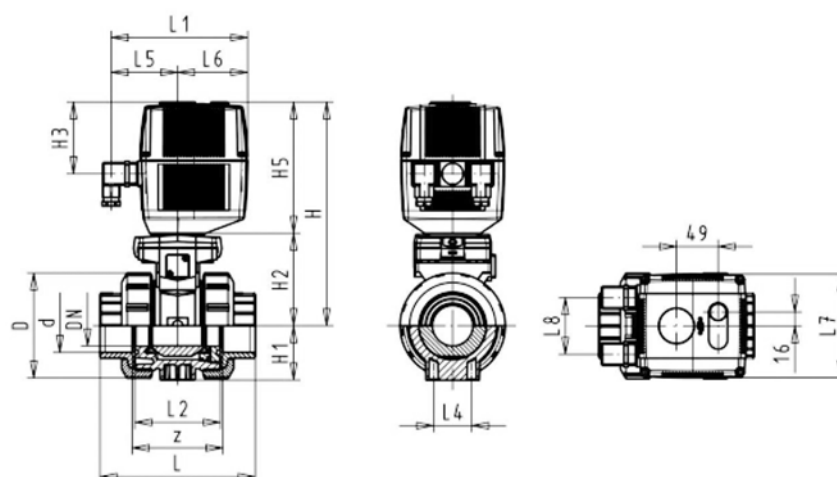
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

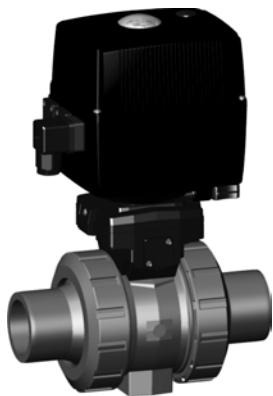
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 131 042	199 131 052	2.100	
20	15	10	185	199 131 043	199 131 053	2.100	
25	20	10	350	199 131 044	199 131 054	2.200	
32	25	10	700	199 131 045	199 131 055	2.300	
40	32	10	1000	199 131 046	199 131 056	2.600	
50	40	10	1600	199 131 047	199 131 057	3.000	
63	50	10	3100	199 131 048	199 131 058	3.800	
 75	65	10	5000	199 131 049	199 131 059	3.600	
 90	80	10	7000	199 131 050	199 131 060	4.300	
 110	100	10	11000	199 131 051	199 131 061	5.500	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]	
16	50	231	27	64	94	167	93	180	56	25	97	83	122	67	
20	50	231	27	64	94	167	95	180	56	25	97	83	122	66	
25	58	240	30	73	94	167	108	180	65	25	97	83	122	77	
32	68	240	36	73	94	167	118	180	71	25	97	83	122	83	
40	84	251	44	84	94	167	137	180	85	45	97	83	122	99	
50	97	251	51	84	94	167	147	180	89	45	97	83	122	105	
63	124	273	64	106	94	167	168	180	101	45	97	83	122	117	
 75	166	346	85	156	94	190	233	180	136	70	98	83	122	167	
 90	200	358	105	168	94	190	254	180	141	70	98	83	122	180	
 110	238	365	123	175	94	190	301	180	164	120	98	83	122	215	





DN10/15 - 50

Ball valve type 131 PP-H 100-230V With manual emergency override With socket fusion spigots metric

Model:

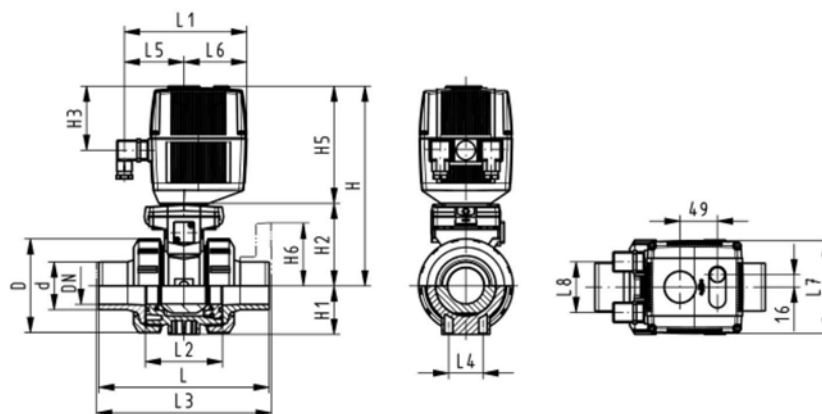
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 131 022	199 131 032	2.100	
20	15	10	185	199 131 023	199 131 033	2.100	
25	20	10	350	199 131 024	199 131 034	2.200	
32	25	10	700	199 131 025	199 131 035	2.300	
40	32	10	1000	199 131 026	199 131 036	2.600	
50	40	10	1600	199 131 027	199 131 037	3.000	
63	50	10	3100	199 131 028	199 131 038	3.800	
 75	65	10	5000	199 131 029	199 131 039	3.600	
 90	80	10	7000	199 131 030	199 131 040	4.400	
 110	100	10	11000	199 131 031	199 131 041	5.500	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	231	27	64	94	167	110	180	56	130	25	97	83	122	
20	50	231	27	64	94	167	120	180	56	130	25	97	83	122	
25	58	240	30	73	94	167	139	180	65	150	25	97	83	122	
32	68	240	36	73	94	167	150	180	71	160	25	97	83	122	
40	84	251	44	84	94	167	170	180	85	180	45	97	83	122	
50	97	251	51	84	94	167	190	180	89	200	45	97	83	122	
63	124	273	64	106	94	167	220	180	101	230	45	97	83	122	
 75	166	346	85	156	94	190	280	180	136	290	70	98	83	122	
 90	200	358	105	168	94	190	296	180	141	310	70	98	83	122	
 110	238	365	123	175	94	190	336	180	164	350	120	98	83	122	





DN10/15 - 50

Ball valve type 131 PP-H 24V With manual emergency override With socket fusion spigots metric

Model:

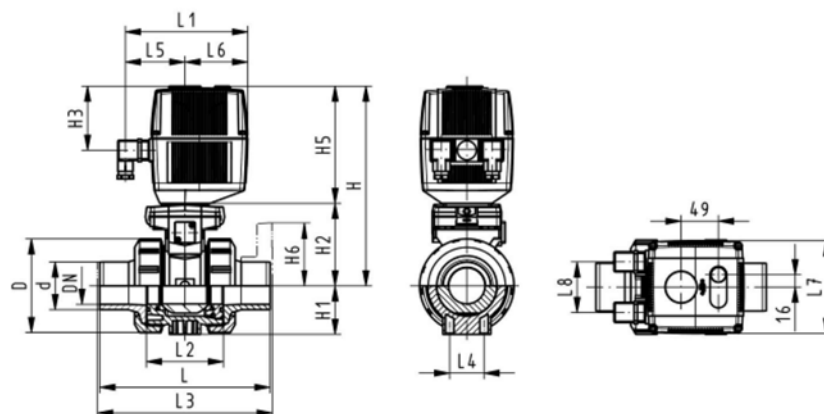
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 131 062	199 131 072	2.100	
20	15	10	185	199 131 063	199 131 073	2.100	
25	20	10	350	199 131 064	199 131 074	2.200	
32	25	10	700	199 131 065	199 131 075	2.300	
40	32	10	1000	199 131 066	199 131 076	2.600	
50	40	10	1600	199 131 067	199 131 077	3.000	
63	50	10	3100	199 131 068	199 131 078	3.800	
 75	65	10	5000	199 131 069	199 131 079	3.600	
 90	80	10	7000	199 131 070	199 131 080	4.400	
 110	100	10	11000	199 131 071	199 131 081	5.500	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	231	27	64	94	167	110	180	56	130	25	97	83	122	
20	50	231	27	64	94	167	120	180	56	130	25	97	83	122	
25	58	240	30	73	94	167	139	180	65	150	25	97	83	122	
32	68	240	36	73	94	167	150	180	71	160	25	97	83	122	
40	84	251	44	84	94	167	170	180	85	180	45	97	83	122	
50	97	251	51	84	94	167	190	180	89	200	45	97	83	122	
63	124	273	64	106	94	167	220	180	101	230	45	97	83	122	
 75	166	346	85	156	94	190	280	180	136	290	70	98	83	122	
 90	200	358	105	168	94	190	296	180	141	310	70	98	83	122	
 110	238	365	123	175	94	190	336	180	164	350	120	98	83	122	





Ball valve type 131 PP-H 100-230V

With manual emergency override

With fixed flanges PP-H serrated metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time: EA21: 5s/90°<, EA31: 15s/90°<
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

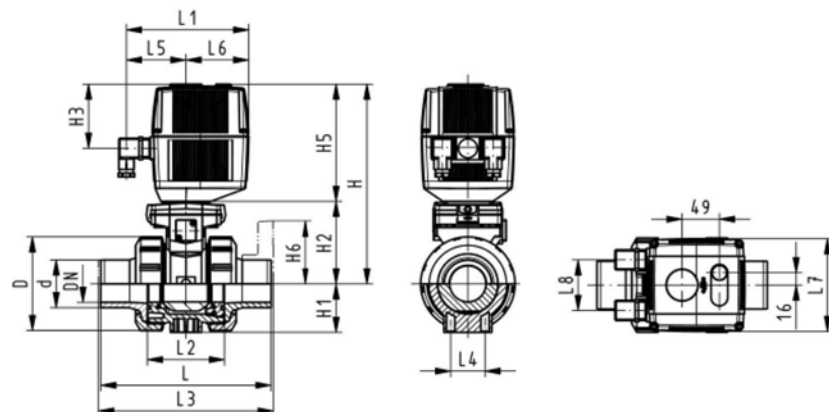
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg								
20	15	½	10	185	199 131 083	199 131 093	2.300								
25	20	¾	10	350	199 131 084	199 131 094	2.500								
32	25	1	10	700	199 131 085	199 131 095	2.700								
40	32	1 ¼	10	1000	199 131 086	199 131 096	3.200								
50	40	1 ½	10	1600	199 131 087	199 131 097	3.700								
63	50	2	10	3100	199 131 088	199 131 098	4.800								

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	231	27	64	94	167	48	120	180	56	130	25	97	83	122
25	58	240	30	73	94	167	53	140	180	65	150	25	97	83	122
32	68	240	36	73	94	167	58	150	180	71	160	25	97	83	122
40	84	251	44	84	94	167	70	170	180	85	180	45	97	83	122
50	97	251	51	84	94	167	75	190	180	89	200	45	97	83	122
63	124	273	64	106	94	167	165	220	180	101	230	45	97	83	122

d [mm]	L8 [mm]
20	66
25	66
32	66
40	66
50	66
63	66





DN10/15 - 50

Ball valve type 131 PP-H 24V With manual emergency override With fixed flanges PP-H serrated metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

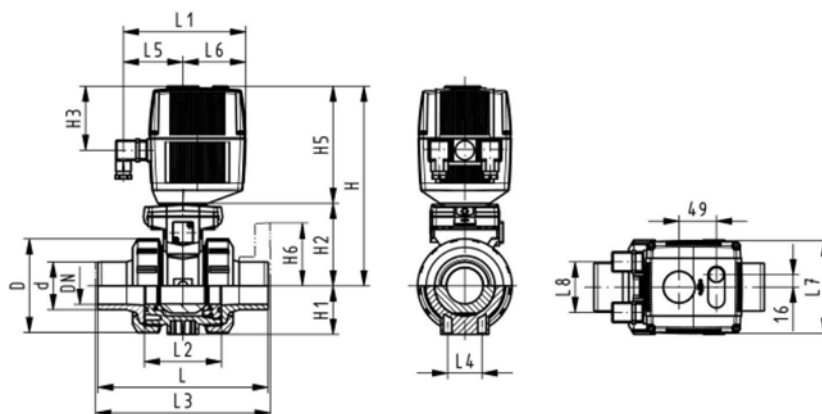
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	½	10	185	199 131 103	199 131 113	2.300	
25	20	¾	10	350	199 131 104	199 131 114	2.500	
32	25	1	10	700	199 131 105	199 131 115	2.700	
40	32	1 ¼	10	1000	199 131 106	199 131 116	3.200	
50	40	1 ½	10	1600	199 131 107	199 131 117	3.700	
63	50	2	10	3100	199 131 108	199 131 118	4.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
20	50	231	27	64	94	167	48	120	180	56	130	25	97	83	122	
25	58	240	30	73	94	167	53	140	180	65	150	25	97	83	122	
32	68	240	36	73	94	167	58	150	180	71	160	25	97	83	122	
40	84	251	44	84	94	167	70	170	180	85	180	45	97	83	122	
50	97	251	51	84	94	167	75	190	180	89	200	45	97	83	122	
63	124	273	64	106	94	167	165	220	180	101	230	45	97	83	122	

d [mm]	L8 [mm]	
20	66	
25	66	
32	66	
40	66	
50	66	
63	66	





Ball valve type 131 PP-H 100-230V

With manual emergency override

With butt fusion spigots SDR11 metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

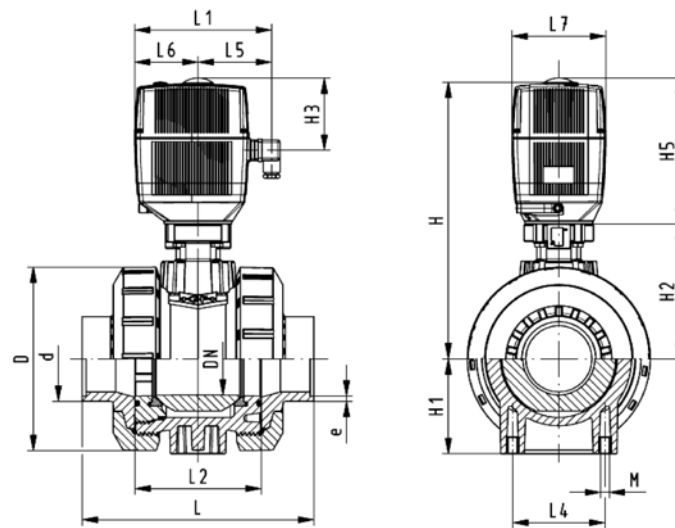
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	199 131 329	199 131 339	3.600	
 90	80	10	7000	199 131 330	199 131 340	4.400	
 110	100	10	11000	199 131 331	199 131 341	5.500	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
 75	166	346	85	156	94	190	266	180	136	290	70	98	83	122	
 90	200	358	105	168	94	190	264	180	141	310	70	98	83	122	
 110	238	365	123	175	94	190	301	180	164	350	120	98	83	122	

d [mm]	e [mm]	
 75	8.2	
 90	9.9	
 110	12.0	





Ball valve type 131 PP-H 24V

With manual emergency override

With butt fusion spigots SDR11 metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

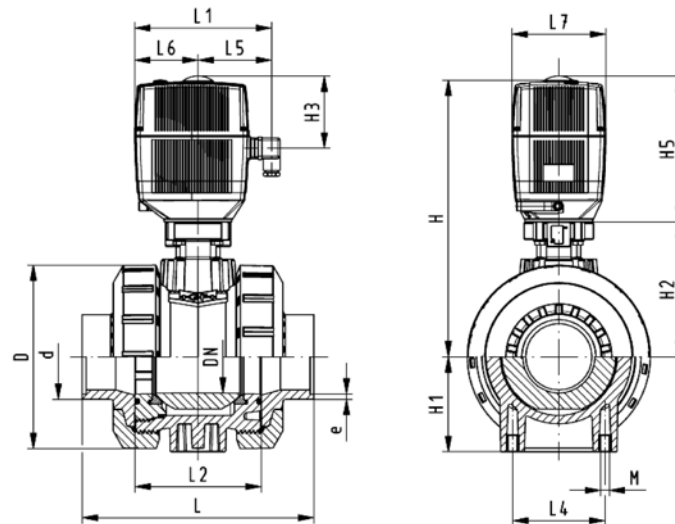
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	199 131 369	199 131 379	3.600	
 90	80	10	7000	199 131 370	199 131 380	4.400	
 110	100	10	11000	199 131 371	199 131 381	5.500	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
 75	166	346	85	156	94	190	266	180	136	290	70	98	83	122	
 90	200	358	105	168	94	190	264	180	141	310	70	98	83	122	
 110	238	365	123	175	94	190	301	180	164	350	120	98	83	122	

d [mm]	e [mm]	
 75	8.2	
 90	9.9	
 110	12.0	





Ball valve type 131 PP-H 100-230V

With manual emergency override

With butt fusion spigots SDR17.6 metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

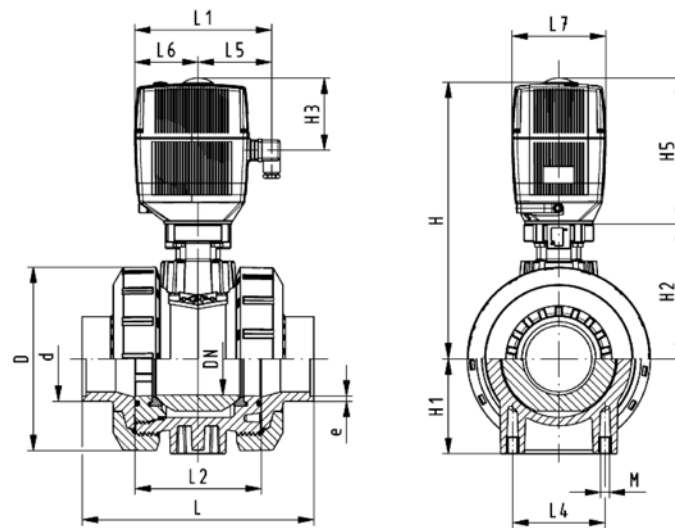
Option:

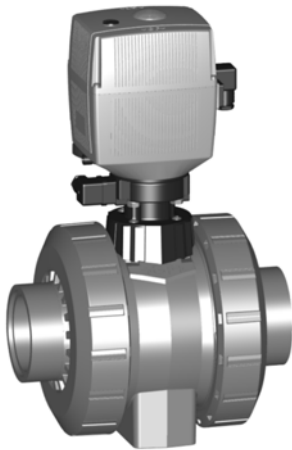
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	199 131 729	199 131 739	3.600	
 90	80	10	7000	199 131 730	199 131 740	4.400	
 110	100	10	11000	199 131 731	199 131 741	5.500	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
 75	166	346	85	156	94	190	266	180	136	290	70	98	83	122	
 90	200	358	105	168	94	190	264	180	141	310	70	98	83	122	
 110	238	365	123	175	94	190	301	180	164	350	120	98	83	122	

d [mm]	e [mm]	
 75	4.6	
 90	5.5	
 110	6.7	





Ball valve type 131 PP-H 24V

With manual emergency override

With butt fusion spigots SDR17.6 metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<
- Control time: EA21: 5s/90°<, EA31: 15s/90°<

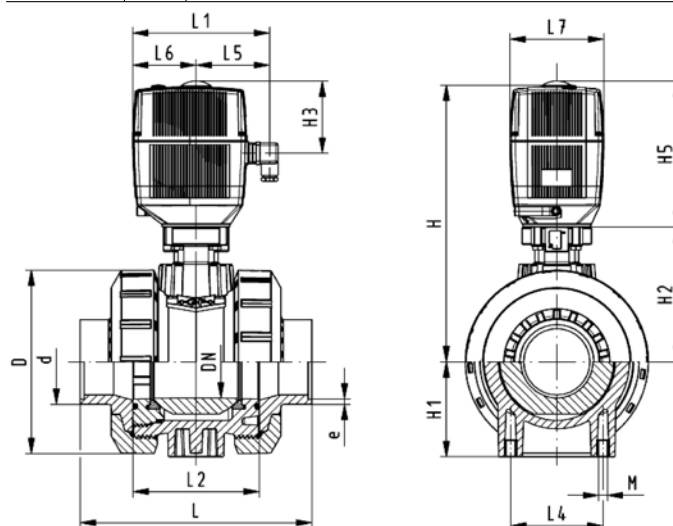
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	199 131 769	199 131 779	3.600	
 90	80	10	7000	199 131 770	199 131 780	4.400	
 110	100	10	11000	199 131 771	199 131 781	5.500	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
 75	166	346	85	156	94	190	266	180	136	290	70	98	83	122	
 90	200	358	105	168	94	190	264	180	141	310	70	98	83	122	
 110	238	365	123	175	94	190	301	180	164	350	120	98	83	122	

d [mm]	e [mm]	
 75	4.6	
 90	5.5	
 110	6.7	





Ball valve type 131 PP-H 100-230V

With manual emergency override

With backing flanges PP-st metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time: EA21: 5s/90°<, EA31: 15s/90°<
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

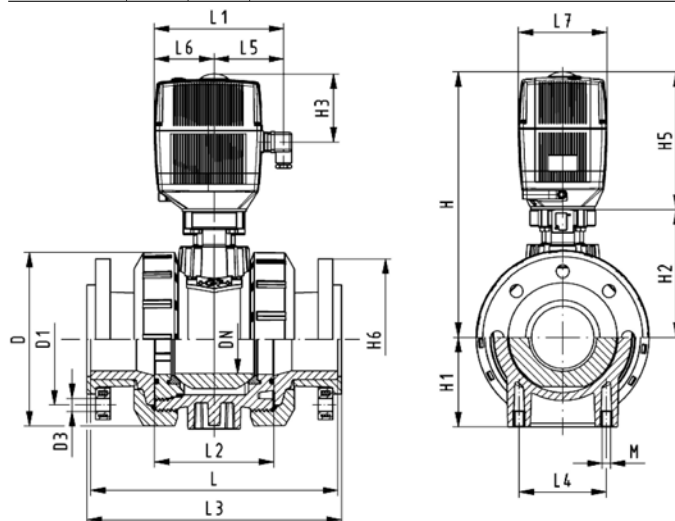
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg								
75	65	2 1/2	10	5000	199 131 129	199 131 139	7.900								
90	80	3	10	7000	199 131 130	199 131 140	9.600								
110	100	4	10	11000	199 131 131	199 131 141	12.700								

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
75	166	346	85	156	94	190	93	280	180	136	290	70	98	83	
90	200	358	105	168	94	190	100	296	180	141	310	70	98	83	
110	238	365	123	175	94	190	110	336	180	164	350	120	98	83	

d [mm]	L7 [mm]	L8 [mm]	
75	122	66	
90	122	66	
110	122	66	





Ball valve type 131 PP-H 24V

With manual emergency override

With backing flanges PP-st metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

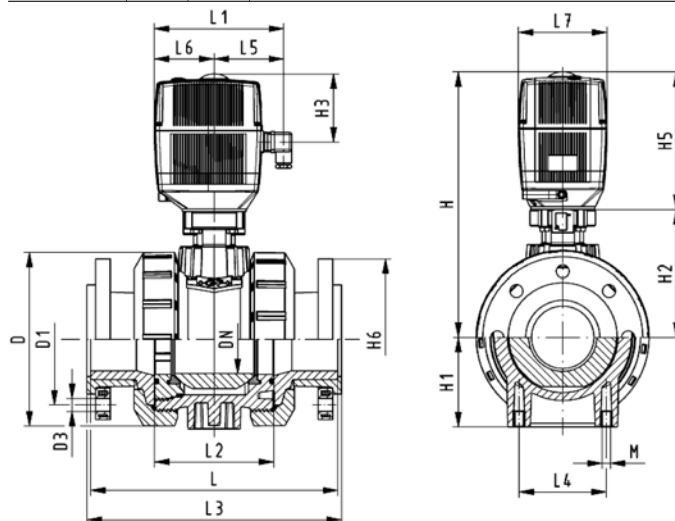
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
 75	65	2 ½	10	5000	199 131 149	199 131 159	7.900
 90	80	3	10	7000	199 131 150	199 131 160	9.600
 110	100	4	10	11000	199 131 151	199 131 161	12.700

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
 75	166	346	85	156	94	190	93	280	180	136	290	70	98	83
 90	200	358	105	168	94	190	100	296	180	141	310	70	98	83
 110	238	365	123	175	94	190	110	336	180	164	350	120	98	83

d [mm]	L7 [mm]	L8 [mm]
 75	122	66
 90	122	66
 110	122	66





Ball valve type 131 PP-H 100-230V With manual emergency override With backing flanges PP-st ASTM

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Control time 5 s/90°<)
- Integrated stainless steel mounting inserts
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time: EA21: 5s/90°<), EA31: 15s/90°<)
- Overall length according to EN 558-1
- Connecting dimension ANSI/ASME B 16.5 / ASTM D 4024

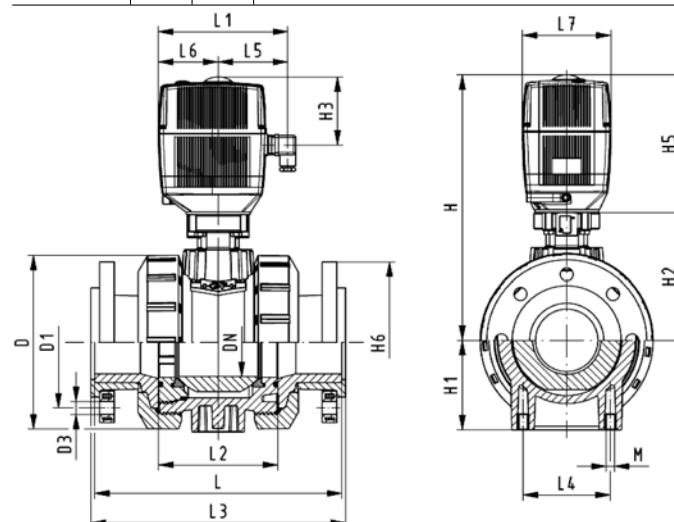
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
75	65	2 1/2	10	5000	199 131 529	199 131 539	7.900	
90	80	3	10	7000	199 131 530	199 131 540	9.600	
110	100	4	10	11000	199 131 531	199 131 541	12.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
75	166	346	85	156	94	190	93	280	180	136	290	70	98	83	
90	200	358	105	168	94	190	100	296	180	141	310	70	98	83	
110	238	365	123	175	94	190	110	336	180	164	350	120	98	83	

d [mm]	L7 [mm]	L8 [mm]	
75	122	66	
90	122	66	
110	122	66	





Ball valve type 131 PP-H 24V With manual emergency override With backing flanges PP-st ASTM

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Voltage 24 V AC/DC
- Control range 90°<
- Control time: EA21: 5s/90°<, EA31: 15s/90°<
- Overall length according to EN 558-1
- Connecting dimension ANSI/ASME B 16.5 / ASTM D 4024

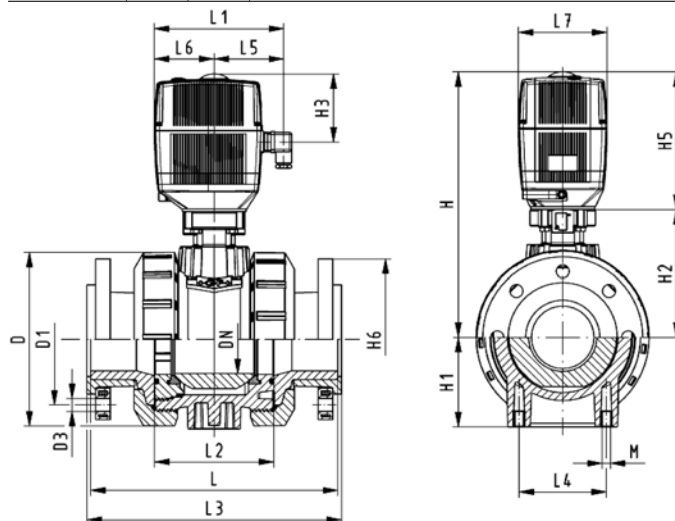
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value (Δp=1 bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	2 ½	10	5000	199 131 549	199 131 559	7.900	
 90	80	3	10	7000	199 131 550	199 131 560	9.600	
 110	100	4	10	11000	199 131 551	199 131 561	12.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
 75	166	346	85	156	94	190	93	280	180	136	290	70	98	83	
 90	200	358	105	168	94	190	100	296	180	141	310	70	98	83	
 110	238	365	123	175	94	190	110	336	180	164	350	120	98	83	

d [mm]	L7 [mm]	L8 [mm]	
 75	122	66	
 90	122	66	
 110	122	66	



Copiable

Configurator GF ball valve type 546 PP-H

Ball Valve

A01 Ball Valve 546
A02 Linear Ball Valve

Material
B05 PP-H

Dimension

C05 d 16 DN 10 3/8"
C06 d 20 DN 15 1/2"
C07 d 25 DN 20 3/4"
C08 d 32 DN 25 1"
C09 d 40 DN 32 1 1/4"
C10 d 50 DN 40 1 1/2"
C11 d 63 DN 50 2"
C12 d 75 DN 65 2 1/2"
C13 d 90 DN 80 3"
C14 d 110 DN 100 4"
C15 d 160 DN 150 6"

Version

D01 Standard, PTFE ball seal
D02 oilfree, PTFE ball seal (only with specific connecting parts)
D03 silicon-free, PTFE ball seal (only with specific connecting parts)
D04 silicon-free, PVDF ball seal for metric (only with specific connecting parts)

Seals

E01 EPDM seals
E02 FPM seals
E03 FFPM (KALREZ®) seals

Threaded inserts

F01 without threaded inserts
F02 with threaded inserts

Connecting parts

G30 PP-H Fusion socket metric
G32 PP-H Socket fusion spigot metric
G33 PP-H Threaded socket Rp reinforced
G34 PP-H Threaded socket NPT reinforced
G35 PP-H Butt fusion spigot SDR 11 metric IR-PLUS®
G36 PP-H Butt fusion spigot SDR 17.6 metric with this valve end the maximum nominal pressure is reduced to PN 6
G37 PP-H Butt fusion spigot long SDR11 metric
G83 PP-H Valve end blank
G44 PE-100 Butt fusion spigot long SDR17.6 metric (DN65-100)
G63 Fixed flange PP-H serrated metric (DN10-50)
G72 Backing flange PP-steel metric
G73 Backing flange PP-steel inch ANSI
G77 Backing flange PP JIS with connecting parts
G78 Backing flange PP-GF JIS
G40 PE-100 Fusion socket metric
G41 PE-100 Butt fusion spigot SDR11 metric
G42 PE-100 Butt fusion spigot SDR17.6 metric
G43 PE-100 Butt fusion spigot long SDR11 metric

Multi-functional module

I01 No multi-functional module
I02 Empty module
I03 Module with 2 end switches Ag, Ni
I04 Module with 2 end switches Au
I05 Module with 2 inductive switches Namur
I06 Module with 2 inductive switches PNP
I07 Module with 2 inductive switches NPN

Lever

K01 Standard lever red
K02 Standard lever black
K11 Multi-functional lever red

Mounting plate

L01 without mounting plate
L02 with mounting plate

A01

B05

C

D

E

F

G

G

I

K

L

left

right

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for your application, we have created a selection menu for you. (The maximum nominal pressure for the ball valve is PN10).

We supply what you put together.

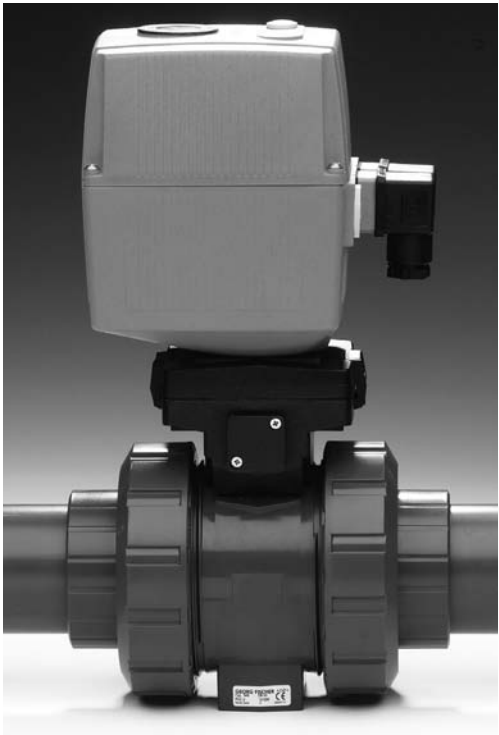
Copiable

GF ball valve type 546 with electric Actuator

It's easy to actuate the type 546:

With the configurator, you have a choice of new electric actuators, the EA11 for standard applications and the EA21 with modular design and accessories, for practically and type of operation.

We supply what you put together.



Electric Actuator EA11								
T01	EA11 24 V							
T02	EA11 100–230 V							
Accessories EA11								
U01	No accessories							
U02	2 limit switches Ag, Ni							
U03	Heating element							
U04	Fail-safe return							
U05	2 limit switches Ag, Ni normally open							
Electric Actuator EA21/31								
T03	EA21/31 24 V							
T04	EA21/31 100–230 V							
Accessories EA21								
W01	No accessories							
W02	Heating element							
W03	Cycle time module							
W04	Cycle time monitoring							
W05	Cycles monitoring							
W06	Motor current monitoring							
W07	2 limit switches Ag, Ni							
W08	2 limit switches Gold							
W09	2 limit switches NPN							
W10	2 limit switches PNP							
W11	Positioner							
W12	Electric position indicator							
W14	Fail-safe return unit							
W15	Switch intermediate position							
W27	2 limit switches Ag, Ni normally open with connector							
W31	Positioner PE25 with galv. separation							
T	U	T	W	W	W	W	W	W

Ball valves pneumatic

Ball valve type 231 PP-H FC (Fail safe to close)

With manual override

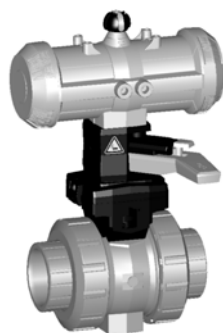
With fusion sockets metric

Model:

- Built on with pneumatic actuator PA11/21
- Control time $90^\circ \leq$) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

Option:

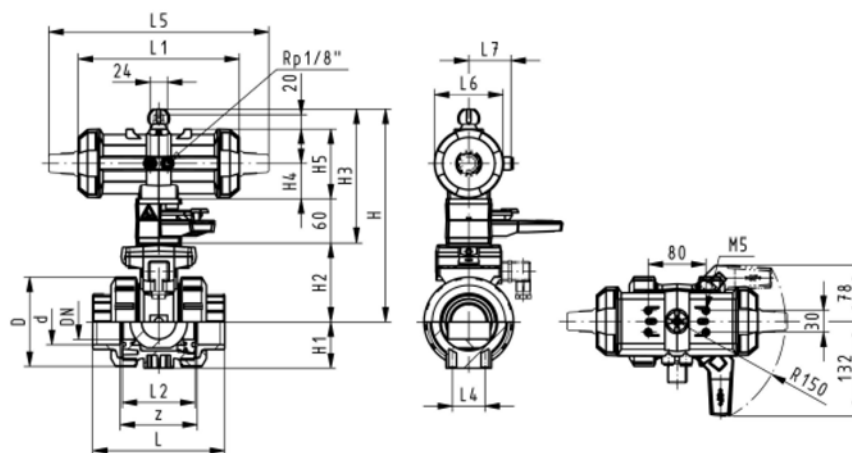
- Individual configuration of the valve (see form)

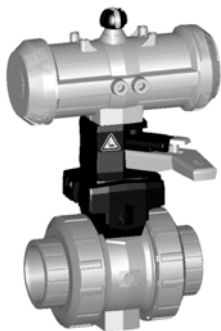


DN10/15 - 50

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 231 002	199 231 012	1.500	
20	15	10	185	199 231 003	199 231 013	1.500	
25	20	10	350	199 231 004	199 231 014	1.600	
32	25	10	700	199 231 005	199 231 015	1.700	
40	32	10	1000	199 231 006	199 231 016	2.800	
50	40	10	1600	199 231 007	199 231 017	3.100	
63	50	10	3100	199 231 008	199 231 018	4.000	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	93	194	56	25	261	76	48	67
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	66
25	58	239	30	71	168	40	97	108	194	65	25	261	76	48	77
32	68	239	36	71	168	40	97	118	194	71	25	261	76	48	83
40	84	271	44	84	187	51	115	137	224	85	45	305	95	59	99
50	97	271	51	84	187	51	115	147	224	89	45	305	95	59	105
63	124	293	64	106	187	51	115	168	224	101	45	305	95	59	117





DN10/15 - 50

Ball valve type 231 PP-H FO (Fail safe to open) With manual override With fusion sockets metric

Model:

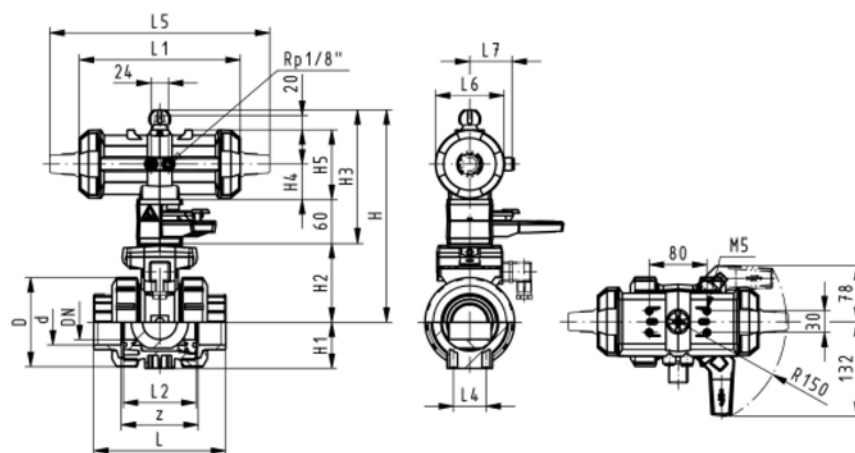
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

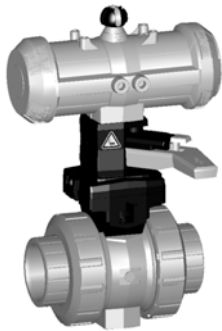
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 231 042	199 231 052	1.500	
20	15	10	185	199 231 043	199 231 053	1.500	
25	20	10	350	199 231 044	199 231 054	1.600	
32	25	10	700	199 231 045	199 231 055	1.700	
40	32	10	1000	199 231 046	199 231 056	2.800	
50	40	10	1600	199 231 047	199 231 057	3.100	
63	50	10	3100	199 231 048	199 231 058	4.000	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	93	194	56	25	261	76	48	67
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	66
25	58	239	30	71	168	40	97	108	194	65	25	261	76	48	77
32	68	239	36	71	168	40	97	118	194	71	25	261	76	48	83
40	84	271	44	84	187	51	115	137	224	85	45	305	95	59	99
50	97	271	51	84	187	51	115	147	224	89	45	305	95	59	105
63	124	293	64	106	187	51	115	168	224	101	45	305	95	59	117





DN10/15 - 50

Ball valve type 231 PP-H DA (Double acting) With manual override With fusion sockets metric

Model:

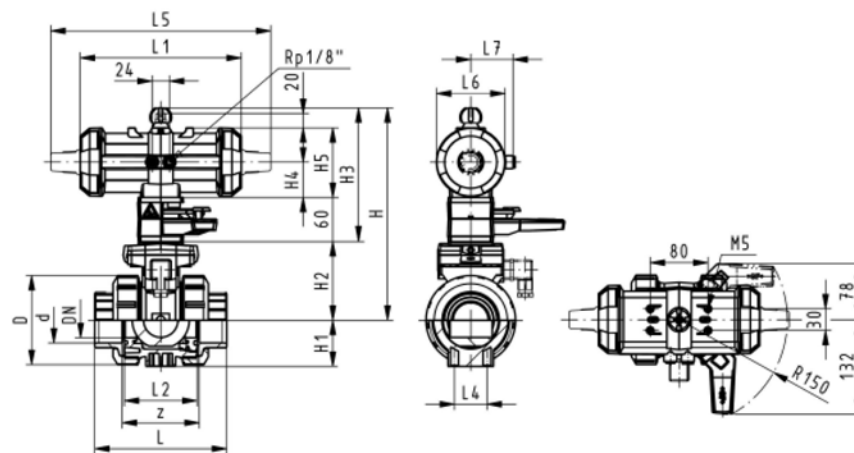
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

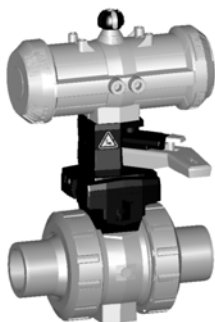
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 231 082	199 231 092	1.500	
20	15	10	185	199 231 083	199 231 093	1.500	
25	20	10	350	199 231 084	199 231 094	1.600	
32	25	10	700	199 231 085	199 231 095	1.700	
40	32	10	1000	199 231 086	199 231 096	2.800	
50	40	10	1600	199 231 087	199 231 097	3.100	
63	50	10	3100	199 231 088	199 231 098	4.000	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	93	194	56	25	261	76	48	67
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	66
25	58	239	30	71	168	40	97	108	194	65	25	261	76	48	77
32	68	239	36	71	168	40	97	118	194	71	25	261	76	48	83
40	84	271	44	84	187	51	115	137	224	85	45	305	95	59	99
50	97	271	51	84	187	51	115	147	224	89	45	305	95	59	105
63	124	293	64	106	187	51	115	168	224	101	45	305	95	59	117





DN10/15 - 50

Ball valve type 231 PP-H FC (Fail safe to close) With manual override With fusion spigots metric

Model:

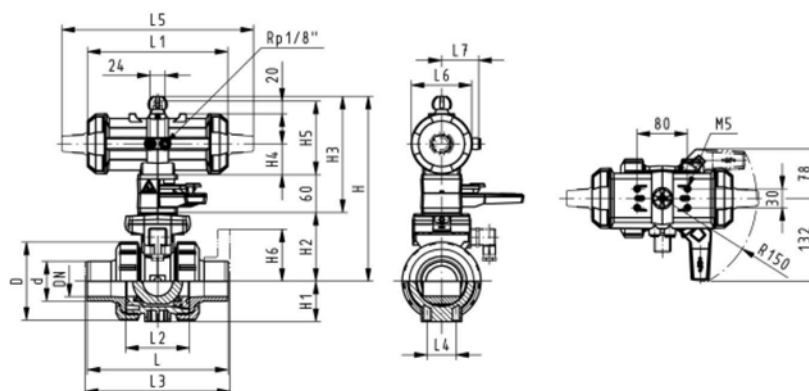
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

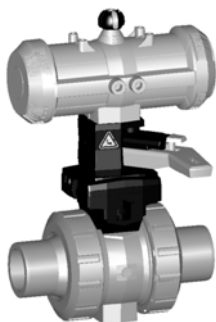
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 231 022	199 231 032	1.500
20	15	10	185	199 231 023	199 231 033	1.500
25	20	10	350	199 231 024	199 231 034	1.600
32	25	10	700	199 231 025	199 231 035	1.700
40	32	10	1000	199 231 026	199 231 036	2.800
50	40	10	1600	199 231 027	199 231 037	3.100
63	50	10	3100	199 231 028	199 231 038	4.000

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	110	194	56		25	261	76	48
20	50	230	27	62	168	40	97	120	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	139	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	150	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	170	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	190	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	220	224	101	230	45	305	95	59





DN10/15 - 50

Ball valve type 231 PP-H FO (Fail safe to open) With manual override With fusion spigots metric

Model:

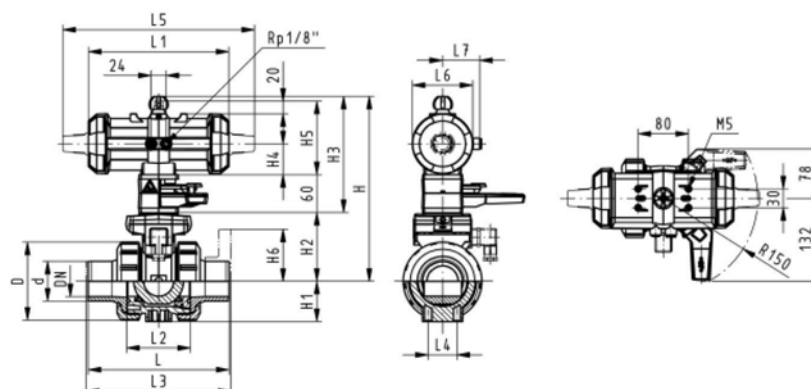
- Built on with pneumatic actuator PA11/21
- Control time $90^\circ <$ 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

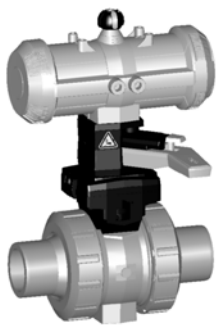
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 231 062	199 231 072	1.500
20	15	10	185	199 231 063	199 231 073	1.500
25	20	10	350	199 231 064	199 231 074	1.600
32	25	10	700	199 231 065	199 231 075	1.700
40	32	10	1000	199 231 066	199 231 076	2.800
50	40	10	1600	199 231 067	199 231 077	3.100
63	50	10	3100	199 231 068	199 231 078	4.000

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	110	194	56	130	25	261	76	48
20	50	230	27	62	168	40	97	120	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	139	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	150	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	170	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	190	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	220	224	101	230	45	305	95	59





DN10/15 - 50

Ball valve type 231 PP-H DA (Double acting) With manual override With fusion spigots metric

Model:

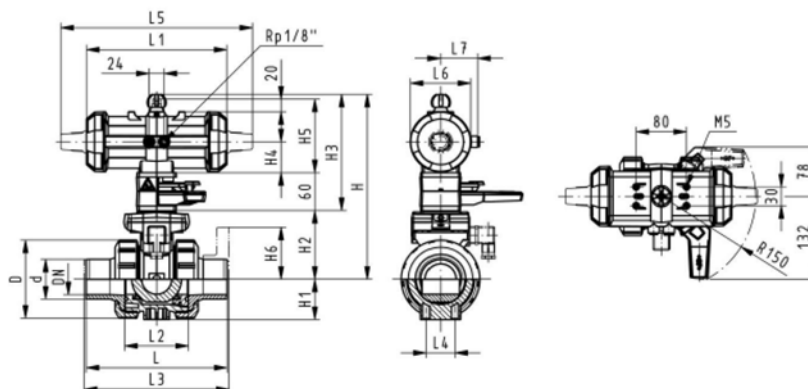
- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts

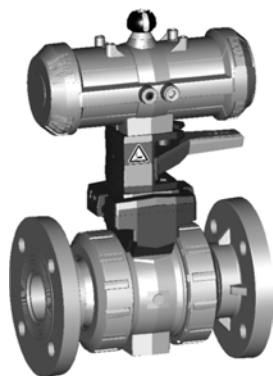
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
16	10	10	70	199 231 102	199 231 112	1.500
20	15	10	185	199 231 103	199 231 113	1.500
25	20	10	350	199 231 104	199 231 114	1.600
32	25	10	700	199 231 105	199 231 115	1.700
40	32	10	1000	199 231 106	199 231 116	2.800
50	40	10	1600	199 231 107	199 231 117	3.100
63	50	10	3100	199 231 108	199 231 118	4.000

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	110	194	56		25	261	76	48
20	50	230	27	62	168	40	97	120	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	139	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	150	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	170	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	190	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	220	224	101	230	45	305	95	59





DN10/15 - 50

Ball valve type 231 PP-H FC (Fail safe to close) With manual override With fixed flanges PP-H serrated metric

Model:

- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

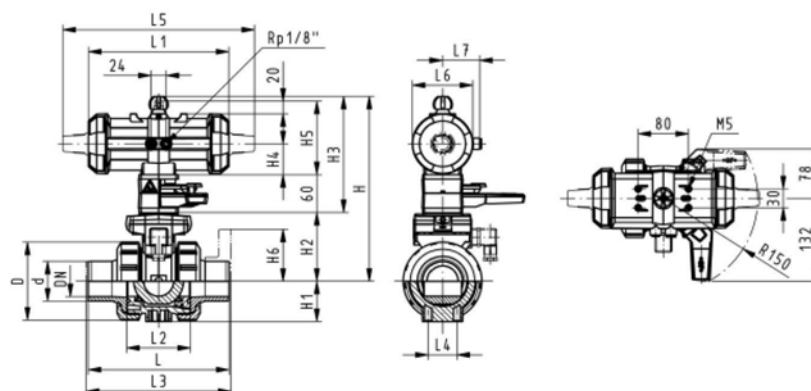
Option:

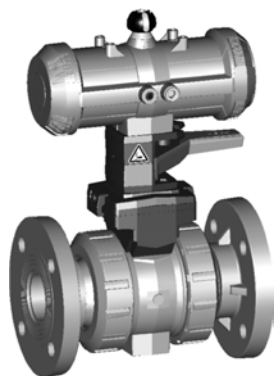
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	199 231 243	199 231 253	1.700
25	20	¾	10	350	199 231 244	199 231 254	1.900
32	25	1	10	700	199 231 245	199 231 255	2.100
40	32	1 ¼	10	1000	199 231 246	199 231 256	3.400
50	40	1 ½	10	1600	199 231 247	199 231 257	3.900
63	50	2	10	3100	199 231 248	199 231 258	4.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	50	230	27	62	168	40	97	48	120	194	56	130	25	261	76
25	58	239	30	71	168	40	97	53	139	194	65	150	25	261	76
32	68	239	36	71	168	40	97	58	150	194	71	160	25	261	76
40	84	271	44	84	187	51	115	70	170	224	85	180	45	305	95
50	97	271	51	84	187	51	115	75	190	224	89	200	45	305	95
63	124	293	64	106	187	51	115	83	220	224	101	230	45	305	95

d [mm]	L7 [mm]
20	48
25	48
32	48
40	59
50	59
63	59





DN10/15 - 50

Ball valve type 231 PP-H FO (Fail safe to open) With manual override With fixed flanges PP-H serrated metric

Model:

- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

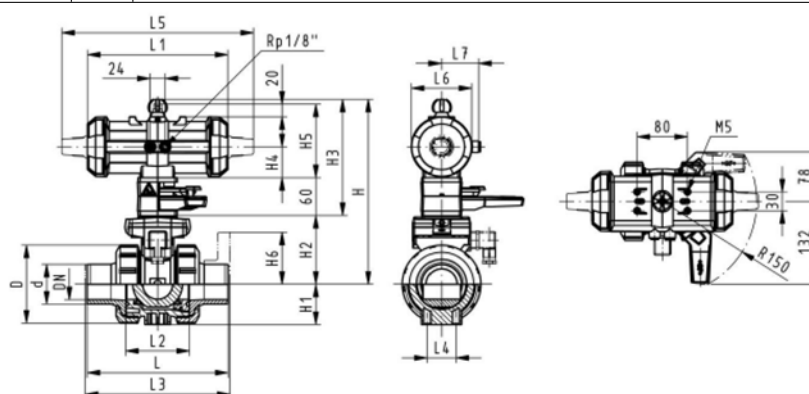
Option:

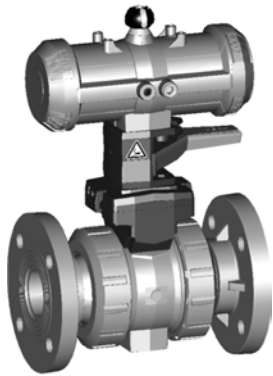
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	1/2	10	185	199 231 263	199 231 273	1.700	
25	20	3/4	10	350	199 231 264	199 231 274	1.900	
32	25	1	10	700	199 231 265	199 231 275	2.100	
40	32	1 1/4	10	1000	199 231 266	199 231 276	3.400	
50	40	1 1/2	10	1600	199 231 267	199 231 277	3.900	
63	50	2	10	3100	199 231 268	199 231 278	4.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	58	230	27	62	168	40	97	48	120	194	56	130	25	261	76
25	58	239	30	71	168	40	97	53	139	194	65	150	25	261	76
32	68	239	36	71	168	40	97	58	150	194	71	160	25	261	76
40	84	271	44	84	187	51	115	70	170	224	85	180	45	305	95
50	97	271	51	84	187	51	115	75	190	224	89	200	45	305	95
63	124	293	64	106	187	51	115	83	220	224	101	230	45	305	95

d [mm]	L7 [mm]
20	48
25	48
32	48
40	59
50	59
63	59





DN10/15 - 50

Ball valve type 231 PP-H DA (Double acting) With manual override With fixed flanges PP-H serrated metric

Model:

- Built on with pneumatic actuator PA11/21
- Control time 90°<) 1-2 s
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

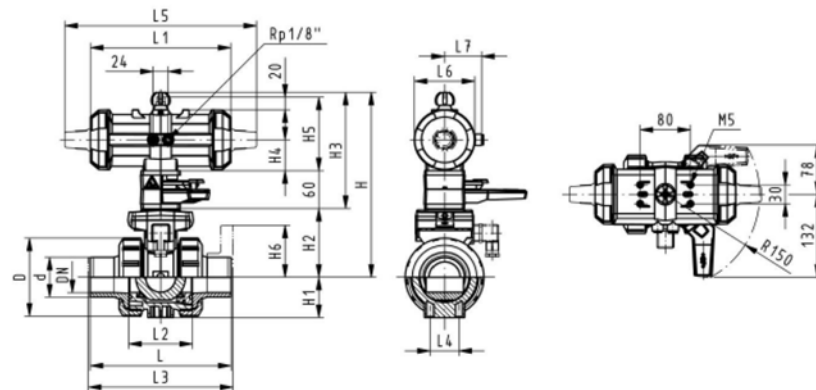
Option:

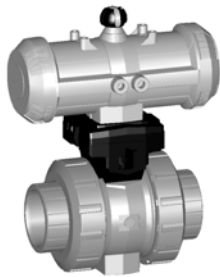
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg
20	15	½	10	185	199 231 283	199 231 293	1.700
25	20	¾	10	350	199 231 284	199 231 294	1.900
32	25	1	10	700	199 231 285	199 231 295	2.100
40	32	1 ¼	10	1000	199 231 286	199 231 296	3.400
50	40	1 ½	10	1600	199 231 287	199 231 297	3.900
63	50	2	10	3100	199 231 288	199 231 298	4.900

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	50	230	27	62	168	40	97	48	120	194	56	130	25	261	76
25	58	239	30	71	168	40	97	53	139	194	65	150	25	261	76
32	68	239	36	71	168	40	97	58	150	194	71	160	25	261	76
40	84	271	44	84	187	51	115	70	170	224	85	180	45	305	95
50	97	271	51	84	187	51	115	75	190	224	89	200	45	305	95
63	124	293	64	106	187	51	115	83	220	224	101	230	45	305	95

d [mm]	L7 [mm]
20	48
25	48
32	48
40	59
50	59
63	59





DN10/15 - 50

Ball valve type 231 PP-H FC (Fail safe to close) Without manual override With fusion sockets metric

Model:

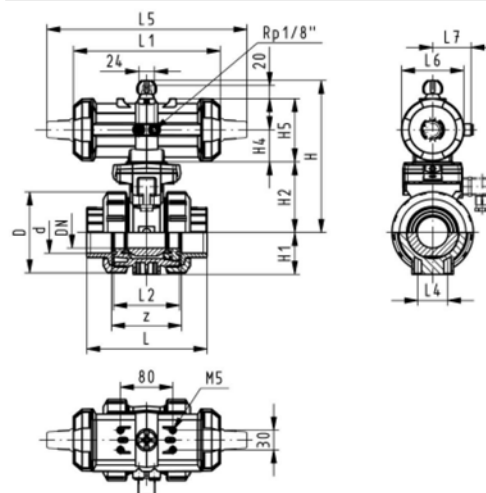
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

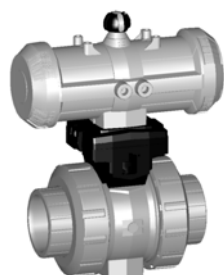
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 231 122	199 231 132	1.200	
20	15	10	185	199 231 123	199 231 133	1.200	
25	20	10	350	199 231 124	199 231 134	1.300	
32	25	10	700	199 231 125	199 231 135	1.400	
40	32	10	1000	199 231 126	199 231 136	2.500	
50	40	10	1600	199 231 127	199 231 137	2.800	
63	50	10	3100	199 231 128	199 231 138	3.700	
75	65	10	5000	199 231 129	199 231 139	4.000	
90	80	10	7000	199 231 130	199 231 140	4.700	
110	100	10	11000	199 231 131	199 231 141	6.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]	
16	50	167	27	62	40	97	93	194	56	25	261	76	48	67	
20	50	167	27	62	40	97	95	194	56	25	261	76	48	66	
25	58	176	30	71	40	97	108	194	65	25	261	76	48	77	
32	68	176	36	71	40	97	118	194	71	25	261	76	48	83	
40	84	210	44	84	51	115	137	224	85	45	305	95	59	99	
50	97	210	51	84	51	115	147	224	89	45	305	95	59	105	
63	124	232	64	106	51	115	168	224	101	45	305	95	59	117	
75	166	262	85	156		70	233	218	136	70	276	65		167	
90	200	281	105	168		78	254	259	141	70	341	72		180	
110	238	292	123	175		86	301	287	164	120	369	80		215	





DN10/15 - 50

Ball valve type 231 PP-H FO (Fail safe to open) Without manual override With fusion sockets metric

Model:

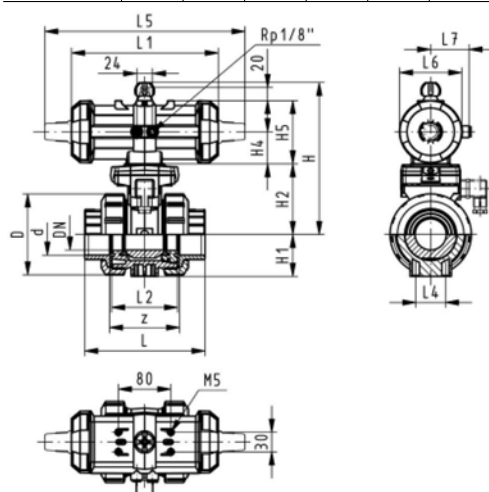
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

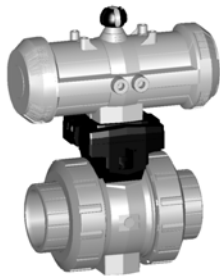
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 231 162	199 231 172	1.200	
20	15	10	185	199 231 163	199 231 173	1.200	
25	20	10	350	199 231 164	199 231 174	1.300	
32	25	10	700	199 231 165	199 231 175	1.400	
40	32	10	1000	199 231 166	199 231 176	2.500	
50	40	10	1600	199 231 167	199 231 177	2.800	
63	50	10	3100	199 231 168	199 231 178	3.700	
 75	65	10	5000	199 231 169	199 231 179	4.000	
 90	80	10	7000	199 231 170	199 231 180	4.700	
 110	100	10	11000	199 231 171	199 231 181	6.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]	
16	50	167	27	62	40	97	93	194	56	25	261	76	48	66	
20	50	167	27	62	40	97	95	194	56	25	261	76	48	67	
25	58	176	30	71	40	97	108	194	65	25	261	76	48	77	
32	68	176	36	71	40	97	118	194	71	25	261	76	48	83	
40	84	210	44	84	51	115	137	224	85	45	305	95	59	99	
50	97	210	51	84	51	115	147	224	89	45	305	95	59	105	
63	124	232	64	106	51	115	168	224	101	45	305	95	59	117	
 75	166	262	85	156		70	233	218	136	70	276	65		167	
 90	200	281	105	168		78	254	259	141	70	341	72		180	
 110	238	292	123	175		86	301	287	164	120	369	80		215	





DN10/15 - 50

Ball valve type 231 PP-H DA (Double acting) Without manual override With fusion sockets metric

Model:

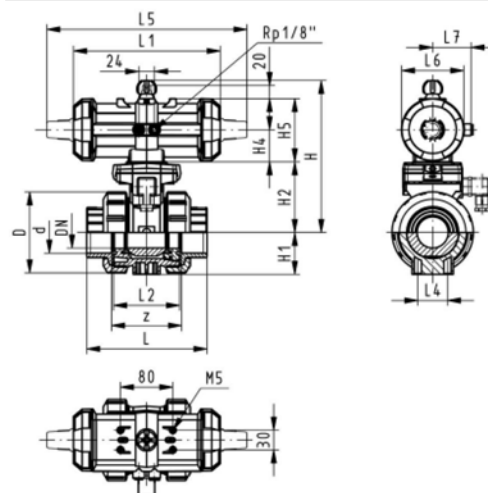
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

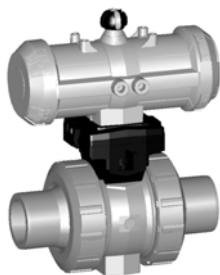
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 231 202	199 231 212	1.200	
20	15	10	185	199 231 203	199 231 213	1.200	
25	20	10	350	199 231 204	199 231 214	1.300	
32	25	10	700	199 231 205	199 231 215	1.400	
40	32	10	1000	199 231 206	199 231 216	2.500	
50	40	10	1600	199 231 207	199 231 217	2.800	
63	50	10	3100	199 231 208	199 231 218	3.700	
75	65	10	5000	199 231 209	199 231 219	2.800	
90	80	10	7000	199 231 210	199 231 220	4.000	
110	100	10	11000	199 231 211	199 231 221	5.100	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]	
16	50	167	27	62	40	97	93	194	56	25	261	76	48	66	
20	50	167	27	62	40	97	95	194	56	25	261	76	48	67	
25	58	176	30	71	40	97	108	194	65	25	261	76	48	77	
32	68	176	36	71	40	97	118	194	71	25	261	76	48	83	
40	84	210	44	84	51	115	137	224	85	45	305	95	59	99	
50	97	210	51	84	51	115	147	224	89	45	305	95	59	105	
63	124	232	64	106	51	115	168	224	101	45	305	95	59	117	
75	166	257	85	156		66	233	144	136	70	190	60		167	
90	200	274	105	168		70	254	152	141	70	198	65		180	
110	238	273	123	175		78	301	169	164	120	235	72		215	





DN10/15 - 50

Ball valve type 231 PP-H FC (Fail safe to close) Without manual override With socket fusion spigots metric

Model:

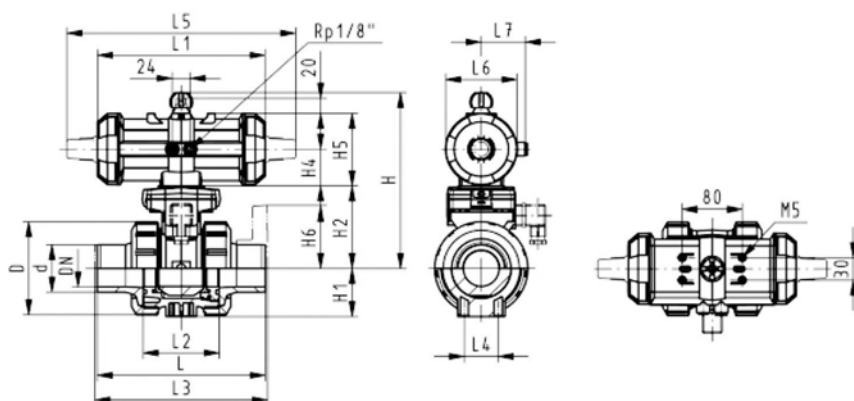
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ \leq$ 1-2 s

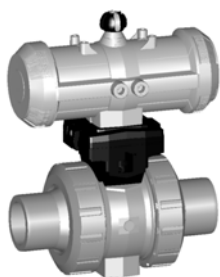
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 231 142	199 231 152	1.200	
20	15	10	185	199 231 143	199 231 153	1.200	
25	20	10	350	199 231 144	199 231 154	1.300	
32	25	10	700	199 231 145	199 231 155	1.400	
40	32	10	1000	199 231 146	199 231 156	2.500	
50	40	10	1600	199 231 147	199 231 157	2.800	
63	50	10	3100	199 231 148	199 231 158	3.700	
75	65	10	5000	199 231 149	199 231 159	4.000	
90	80	10	7000	199 231 150	199 231 160	4.800	
110	100	10	11000	199 231 151	199 231 161	6.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	167	27	62	40	97	110	194	56	130	25	261	76	48	
20	50	167	27	62	40	97	120	194	56	130	25	261	76	48	
25	58	176	30	71	40	97	139	194	65	150	25	261	76	48	
32	68	176	36	71	40	97	150	194	71	160	25	261	76	48	
40	84	210	44	84	51	115	170	224	85	180	45	305	95	59	
50	97	210	51	84	51	115	190	224	89	200	45	305	95	59	
63	124	232	64	106	51	115	220	224	101	230	45	305	95	59	
75	166	262	85	156		70	280	218	136	290	70	276	65		
90	200	281	105	168		78	296	259	141	310	70	341	72		
110	238	292	123	175		86	336	287	164	350	120	369	80		





DN10/15 - 50

Ball valve type 231 PP-H FO (Fail safe to open) Without manual override With socket fusion spigots metric

Model:

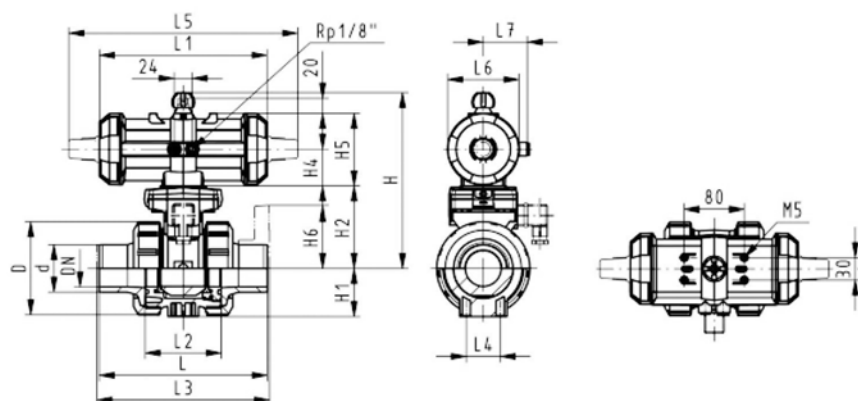
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

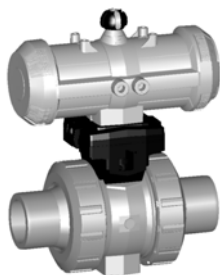
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 231 182	199 231 192	1.200	
20	15	10	185	199 231 183	199 231 193	1.200	
25	20	10	350	199 231 184	199 231 194	1.300	
32	25	10	700	199 231 185	199 231 195	1.400	
40	32	10	1000	199 231 186	199 231 196	2.500	
50	40	10	1600	199 231 187	199 231 197	2.800	
63	50	10	3100	199 231 188	199 231 198	3.700	
 75	65	10	5000	199 231 189	199 231 199	4.000	
 90	80	10	7000	199 231 190	199 231 200	4.800	
 110	100	10	11000	199 231 191	199 231 201	6.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	167	27	62	40	97	110	194	56	130	25	261	76	48	
20	50	167	27	62	40	97	120	194	56	130	25	261	76	48	
25	58	176	30	71	40	97	139	194	65	150	25	261	76	48	
32	68	176	36	71	40	97	150	194	71	160	25	261	76	48	
40	84	210	44	84	51	115	170	224	85	180	45	305	95	59	
50	97	210	51	84	51	115	190	224	89	200	45	305	95	59	
63	124	232	64	106	51	115	220	224	101	230	45	305	95	59	
 75	166	262	85	156		70	280	218	136	290	70	276	65		
 90	200	281	105	168		78	296	259	141	310	70	341	72		
 110	238	292	123	175		86	336	287	164	350	120	369	80		





DN10/15 - 50

Ball valve type 231 PP-H DA (Double acting) Without manual override With socket fusion spigots metric

Model:

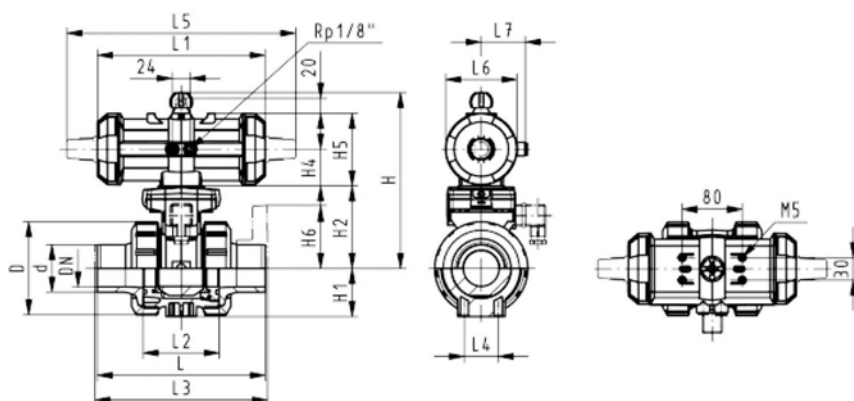
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ <$ 1-2 s

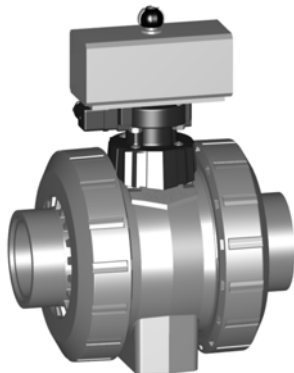
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
16	10	10	70	199 231 222	199 231 232	1.200	
20	15	10	185	199 231 223	199 231 233	1.200	
25	20	10	350	199 231 224	199 231 234	1.300	
32	25	10	700	199 231 225	199 231 235	1.400	
40	32	10	1000	199 231 226	199 231 236	2.500	
50	40	10	1600	199 231 227	199 231 237	2.800	
63	50	10	3100	199 231 228	199 231 238	3.700	
75	65	10	5000	199 231 229	199 231 239	2.900	
90	80	10	7000	199 231 230	199 231 240	4.100	
110	100	10	11000	199 231 231	199 231 241	5.200	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	167	27	62	40	97	110	194	56	130	25	261	76	48	
20	50	167	27	62	40	97	120	194	56	130	25	261	76	48	
25	58	176	30	71	40	97	139	194	65	150	25	261	76	48	
32	68	176	36	71	40	97	150	194	71	160	25	261	76	48	
40	84	210	44	84	51	115	170	224	85	180	45	305	95	59	
50	97	210	51	84	51	115	190	224	89	200	45	305	95	59	
63	124	232	64	106	51	115	220	224	101	230	45	305	95	59	
75	166	257	85	156		66	280	144	136	290	70	190	60		
90	200	274	105	168		70	296	152	141	310	70	198	65		
110	238	273	123	175		78	336	169	164	350	120	235	72		





Ball valve type 231 PP-H FC (Fail safe to close)

Without manual override

With butt fusion spigots SDR11 metric

Model:

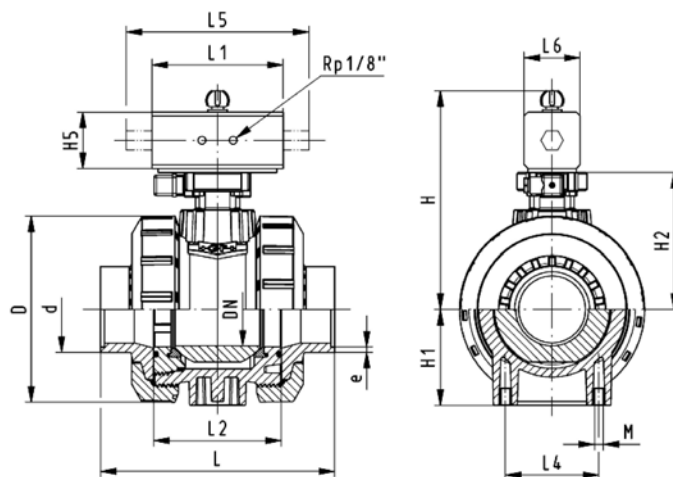
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

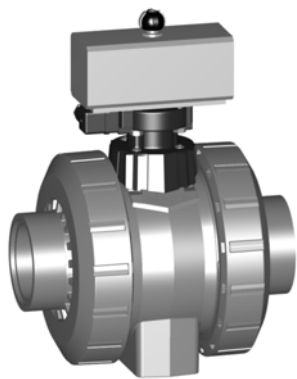
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
75	65	10	5000	199 231 839	199 231 849	4.000	
90	80	10	7000	199 231 840	199 231 850	4.800	
110	100	10	11000	199 231 841	199 231 851	6.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]	
75	166	262	85	156	70	266	218	136	290	70	276	65	8.2	
90	200	281	105	168	78	264	259	141	310	70	341	72	9.9	
110	238	292	123	175	86	301	287	164	350	120	369	80	12.0	





Ball valve type 231 PP-H FO (Fail safe to open) Without manual override With butt fusion spigots SDR11 metric

Model:

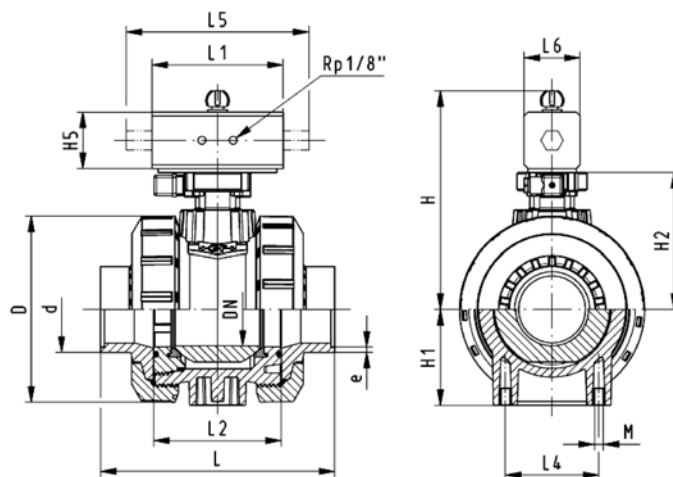
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ <$ 1-2 s

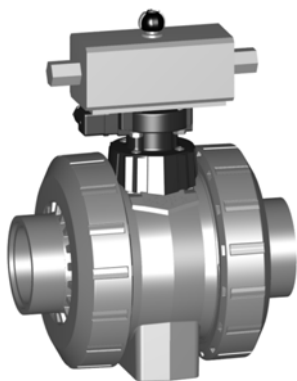
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	199 231 859	199 231 869	4.000	
 90	80	10	7000	199 231 860	199 231 870	4.800	
 110	100	10	11000	199 231 861	199 231 871	6.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]	
 75	166	262	85	156	70	266	218	136	290	70	276	65	8.2	
 90	200	281	105	168	78	264	259	141	310	70	341	72	9.9	
 110	238	292	123	175	86	301	287	164	350	120	369	80	12.0	





Ball valve type 231 PP-H DA (Double acting)

Without manual override

With butt fusion spigots SDR11 metric

Model:

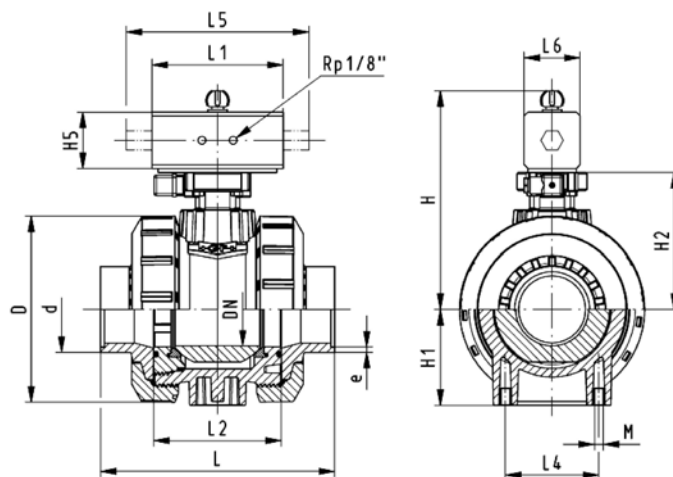
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

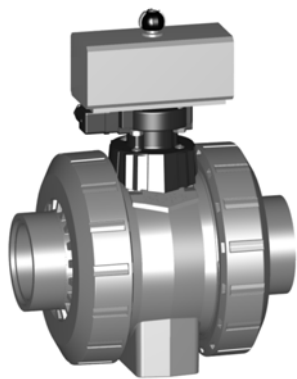
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	199 231 879	199 231 889	2.900	
 90	80	10	7000	199 231 880	199 231 890	4.100	
 110	100	10	11000	199 231 881	199 231 891	5.200	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]	
 75	166	257	85	156	66	266	144	136	290	70	190	60	8.2	
 90	200	274	105	168	70	264	152	141	310	70	198	65	9.9	
 110	238	273	123	175	78	301	169	164	350	120	235	72	12.0	





Ball valve type 231 PP-H FC (Fail safe to close)

Without manual override

With butt fusion spigots SDR17.6 metric

Model:

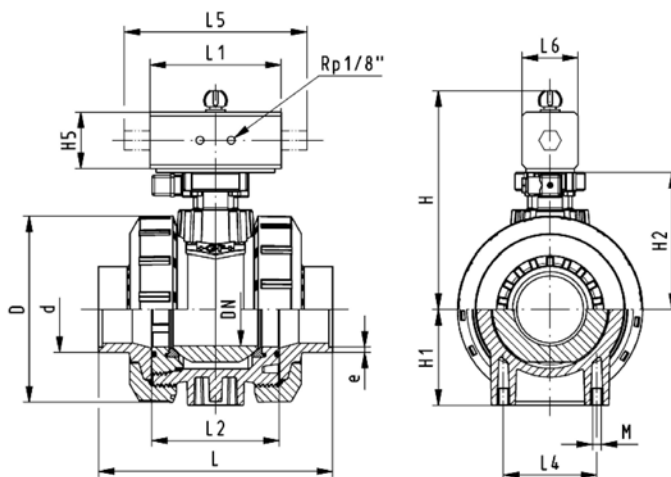
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ \leq$ 1-2 s

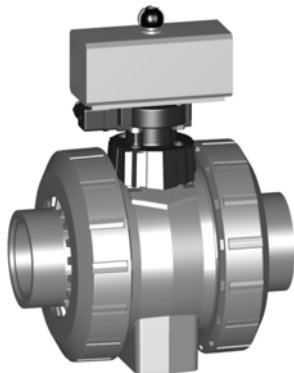
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
75	65	10	5000	199 231 939	199 231 949	4.000	
90	80	10	7000	199 231 940	199 231 950	4.800	
110	100	10	11000	199 231 941	199 231 951	6.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]	
75	166	262	85	156	70	266	218	136	290	70	276	65	4.6	
90	200	281	105	168	78	264	259	141	310	70	341	72	5.5	
110	238	292	123	175	86	301	287	164	350	120	369	80	6.7	





Ball valve type 231 PP-H FO (Fail safe to open) Without manual override With butt fusion spigots SDR17.6 metric

Model:

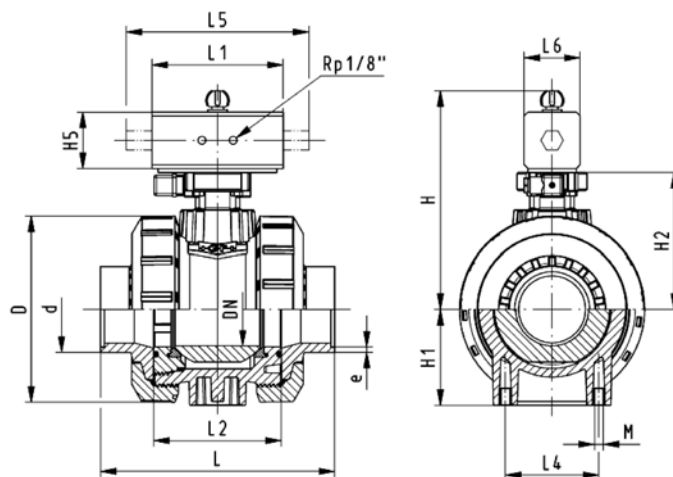
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

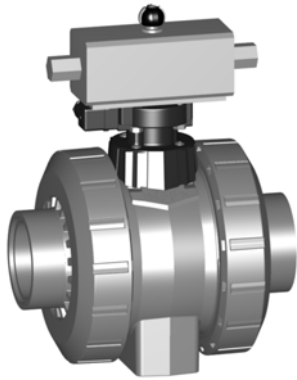
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	199 231 959	199 231 969	4.000	
 90	80	10	7000	199 231 960	199 231 970	4.800	
 110	100	10	11000	199 231 961	199 231 971	6.900	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]	
 75	166	262	85	156	70	266	218	136	290	70	276	65	4.6	
 90	200	281	105	168	78	264	259	141	310	70	341	72	5.5	
 110	238	292	123	175	86	301	287	164	350	120	369	80	6.7	





Ball valve type 231 PP-H DA (Double acting) Without manual override With butt fusion spigots SDR17.6 metric

Model:

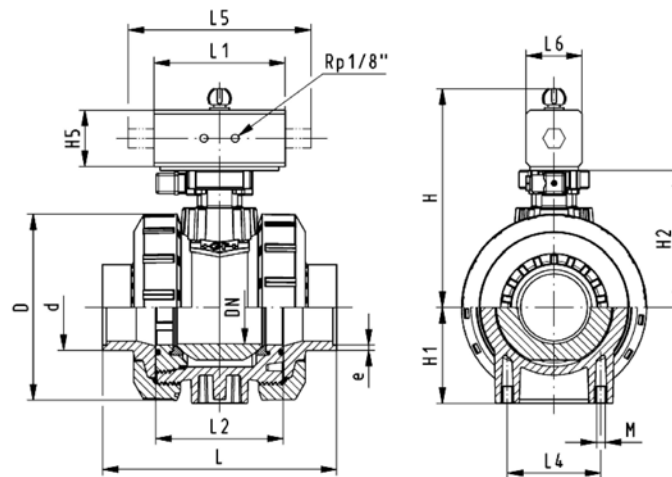
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ <$ 1-2 s

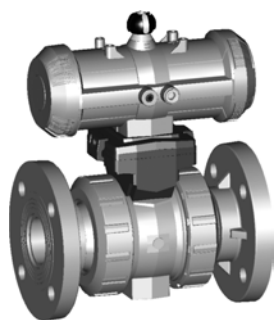
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	10	5000	199 231 979	199 231 989	2.900	
 90	80	10	7000	199 231 980	199 231 990	4.100	
 110	100	10	11000	199 231 981	199 231 991	5.200	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]	
 75	166	257	85	156	66	266	144	136	290	70	190	60	4.6	
 90	200	274	105	168	70	264	152	141	310	70	198	65	5.5	
 110	238	273	123	175	78	301	169	164	350	120	235	72	6.7	





DN10/15 - 50

Ball valve type 231 PP-H FC (Fail safe to close) Without manual override With fixed flanges PP-H serrated metric

Model:

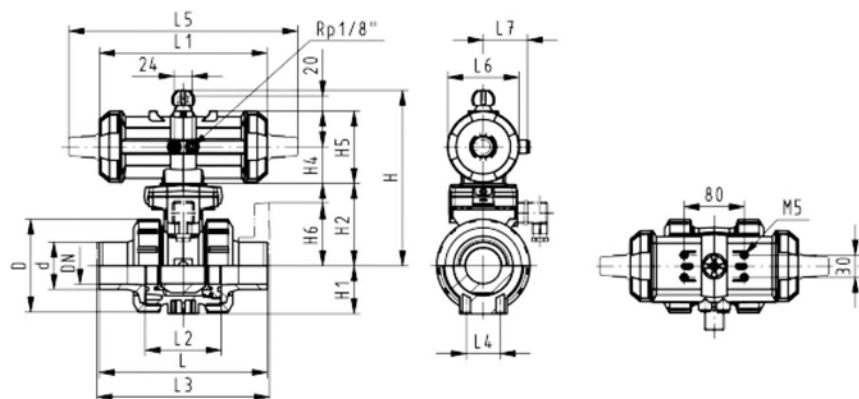
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

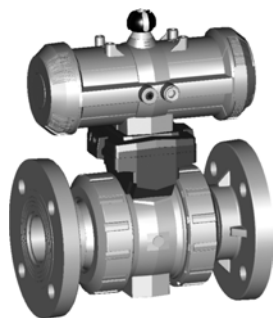
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	½	10	185	199 231 423	199 231 433	1.400	
25	20	¾	10	350	199 231 424	199 231 434	1.600	
32	25	1	10	700	199 231 425	199 231 435	1.800	
40	32	1 ¼	10	1000	199 231 426	199 231 436	3.100	
50	40	1 ½	10	1600	199 231 427	199 231 437	3.600	
63	50	2	10	3100	199 231 428	199 231 438	4.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	167	27	62	40	97	48	120	194	56	130	25	261	76	48
25	58	176	30	71	40	97	53	140	194	65	150	25	261	76	48
32	68	176	36	71	40	97	58	150	194	71	160	25	261	76	48
40	84	210	44	84	51	115	70	170	224	85	180	45	305	95	59
50	97	210	51	84	51	115	75	190	224	89	200	45	305	95	59
63	124	232	64	106	51	115	83	220	224	101	230	45	305	95	59





DN10/15 - 50

Ball valve type 231 PP-H FO (Fail safe to open) Without manual override With fixed flanges PP-H serrated metric

Model:

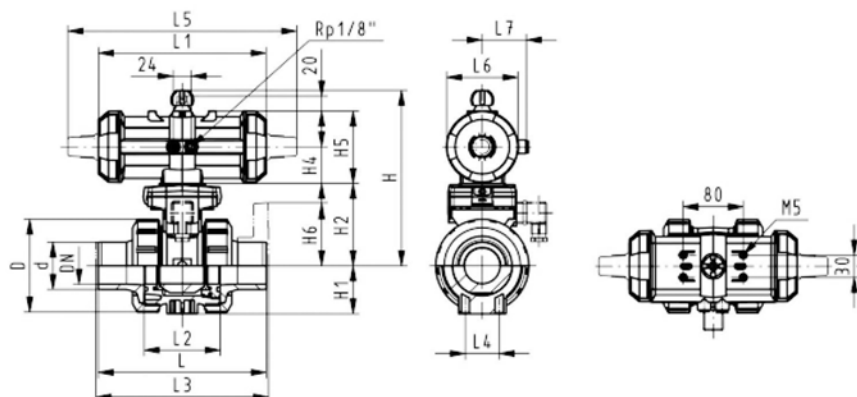
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ <$ 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

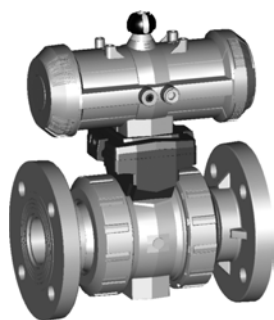
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	½	10	185	199 231 443	199 231 453	1.400	
25	20	¾	10	350	199 231 444	199 231 454	1.600	
32	25	1	10	700	199 231 445	199 231 455	1.800	
40	32	1 ¼	10	1000	199 231 446	199 231 456	3.100	
50	40	1 ½	10	1600	199 231 447	199 231 457	3.600	
63	50	2	10	3100	199 231 448	199 231 458	4.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	167	27	62	40	97	48	120	194	56	130	25	261	76	48
25	58	176	30	71	40	97	53	140	194	65	150	25	261	76	48
32	68	176	36	71	40	97	58	150	194	71	160	25	261	76	48
40	84	210	44	84	51	115	70	170	224	85	180	45	305	95	59
50	97	210	51	84	51	115	75	190	224	89	200	45	305	95	59
63	124	232	64	106	51	115	83	220	224	101	230	45	305	95	59





DN10/15 - 50

Ball valve type 231 PP-H DA (Double acting) Without manual override With fixed flanges PP-H serrated metric

Model:

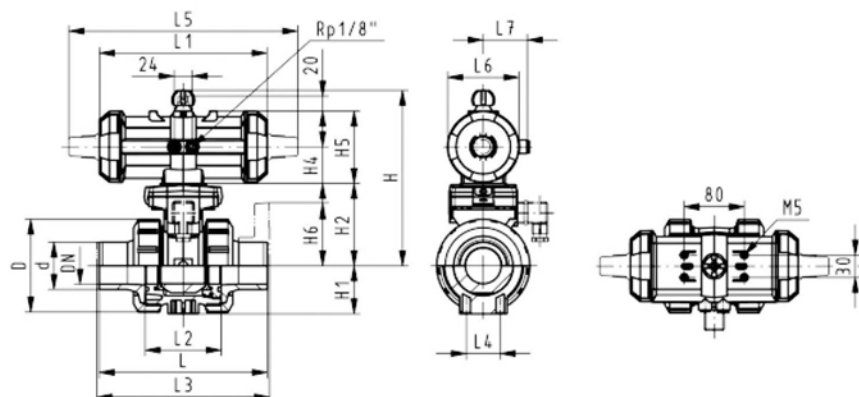
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
20	15	½	10	185	199 231 463	199 231 473	1.400	
25	20	¾	10	350	199 231 464	199 231 474	1.600	
32	25	1	10	700	199 231 465	199 231 475	1.800	
40	32	1 ¼	10	1000	199 231 466	199 231 476	3.100	
50	40	1 ½	10	1600	199 231 467	199 231 477	3.600	
63	50	2	10	3100	199 231 468	199 231 478	4.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	167	27	62	40	97	48	120	194	56	130	25	261	76	48
25	58	176	30	71	40	97	53	140	194	65	150	25	261	76	48
32	68	176	36	71	40	97	58	150	194	71	160	25	261	76	48
40	84	210	44	84	51	115	70	170	224	85	180	45	305	95	59
50	97	210	51	84	51	115	75	190	224	89	200	45	305	95	59
63	124	232	64	106	51	115	83	220	224	101	230	45	305	95	59





Ball valve type 231 PP-H FC (Fail safe to close) Without manual override With backing flanges PP-st metric

Model:

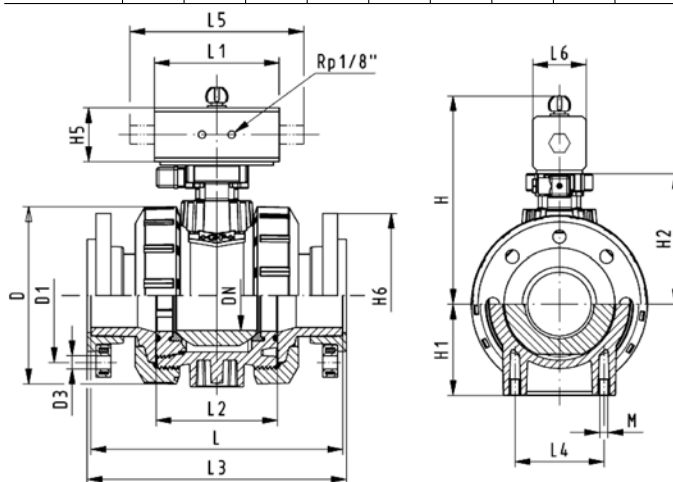
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ \leq$ 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
75	65	2 1/2	10	5000	199 231 329	199 231 339	8.300	
90	80	3	10	7000	199 231 330	199 231 340	10.000	
110	100	4	10	11000	199 231 331	199 231 341	14.100	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
75	166	262	85	156	70	93	280	218	136	290	70	276	65	
90	200	281	105	168	78	100	296	259	141	310	70	341	72	
110	238	292	123	175	86	110	336	287	164	350	120	369	80	





Ball valve type 231 PP-H FO (Fail safe to open) Without manual override With backing flanges PP-st metric

Model:

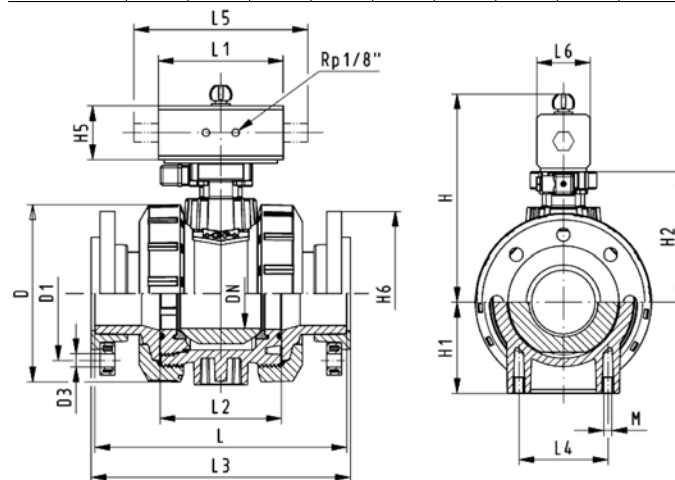
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	2 1/2	10	5000	199 231 349	199 231 359	8.300	
 90	80	3	10	7000	199 231 350	199 231 360	10.000	
 110	100	4	10	11000	199 231 351	199 231 361	14.100	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
 75	166	262	85	156	70	93	280	218	136	290	70	276	65	
 90	200	281	105	168	78	100	296	259	141	310	70	341	72	
 110	238	292	123	175	86	110	336	287	164	350	120	369	80	





Ball valve type 231 PP-H DA (Double acting)

Without manual override

With backing flanges PP-st metric

Model:

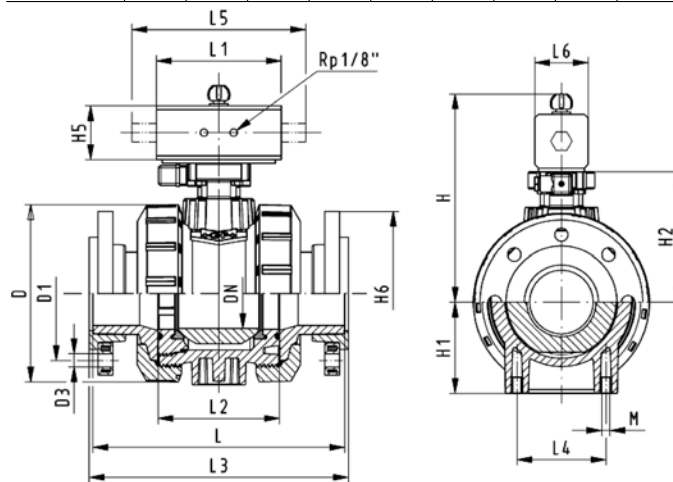
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ \leq$ 1-2 s
- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
75	65	2 1/2	10	5000	199 231 369	199 231 379	7.100	
90	80	3	10	7000	199 231 370	199 231 380	9.300	
110	100	4	10	11000	199 231 371	199 231 381	12.300	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
75	166	257	85	156	66	93	280	144	136	290	70	190	60	
90	200	274	105	168	70	100	296	152	141	310	70	198	65	
110	238	273	123	175	78	110	336	169	164	350	120	235	72	





Ball valve type 231 PP-H FC (Fail safe to close) Without manual override With backing flanges PP-st ASTM

Model:

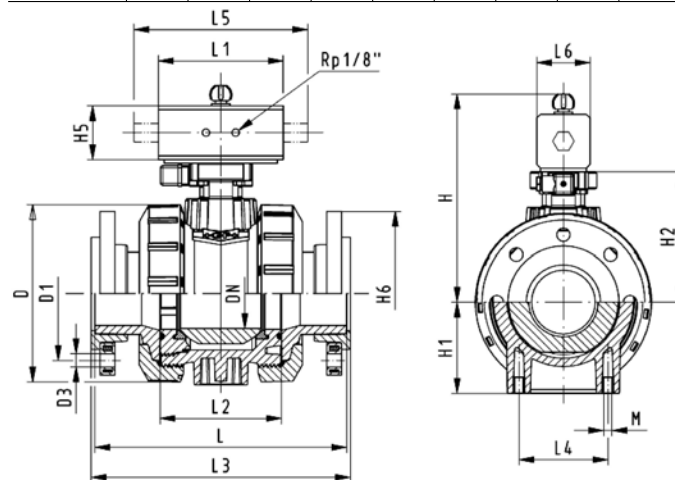
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Overall length according to EN 558-1
- Connecting dimension ANSI/ASME B 16.5 / ASTM D 4024

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	2 1/2	10	5000	199 231 729	199 231 739	8.300	
 90	80	3	10	7000	199 231 730	199 231 740	10.000	
 110	100	4	10	11000	199 231 731	199 231 741	14.100	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
 75	166	262	85	156	70	93	280	218	136	290	70	276	65	
 90	200	281	105	168	78	100	296	259	141	310	70	341	72	
 110	238	292	123	175	86	115	336	287	164	350	120	369	80	





Ball valve type 231 PP-H FO (Fail safe to open) Without manual override With backing flanges PP-st ASTM

Model:

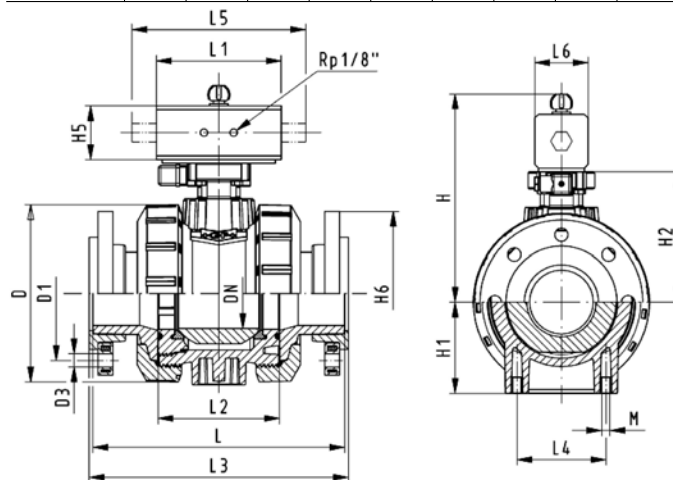
- Assignment of actuators PA11 (DN10/15-25), PA21 (DN32-50), PA30 (DN65), PA35 (DN80), PA40 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time $90^\circ \leq 1-2$ s
- Overall length according to EN 558-1
- Connecting dimension ANSI/ASME B 16.5 / ASTM D 4024

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
75	65	2 1/2	10	5000	199 231 749	199 231 759	8.300	
90	80	3	10	7000	199 231 750	199 231 760	10.000	
110	100	4	10	11000	199 231 751	199 231 761	14.100	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
75	166	262	85	156	70	93	280	218	136	290	70	276	65	
90	200	281	105	168	78	100	296	259	141	310	70	341	72	
110	238	292	123	175	86	115	336	287	164	350	120	369	80	





Ball valve type 231 PP-H DA (Double acting) Without manual override With backing flanges PP-st ASTM

Model:

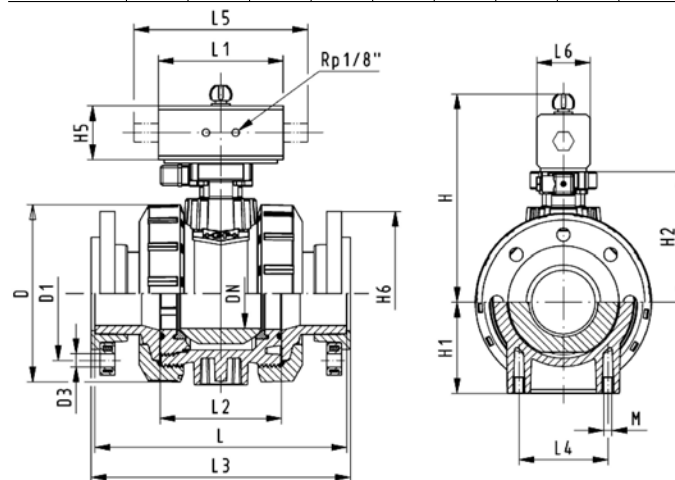
- Assignment of actuators: PA11 (DN10/15-25), PA21 (DN32-50), PA35 (DN65), PA40 (DN80), PA45 (DN100)
- Image and drawing DN65-100 please see **New product ball valve DN65-100**
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90° < 1-2 s
- Overall length according to EN 558-1
- Connecting dimension ANSI/ASME B 16.5 / ASTM D 4024

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	EPDM Code	FPM Code	kg	
 75	65	2 1/2	10	5000	199 231 769	199 231 779	7.100	
 90	80	3	10	7000	199 231 770	199 231 780	9.300	
 110	100	4	10	11000	199 231 771	199 231 781	12.300	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
 75	166	257	85	156	66	93	280	144	136	290	70	190	60	
 90	200	274	105	168	70	100	296	152	141	310	70	198	65	
 110	238	273	123	175	78	115	336	169	164	350	120	235	72	



Copiable

Configurator GF ball valve type 546 PP-H

Ball Valve

A01 Ball Valve 546
A02 Linear Ball Valve

Material
B05 PP-H

Dimension

C05 d 16 DN 10 3/8"
C06 d 20 DN 15 1/2"
C07 d 25 DN 20 3/4"
C08 d 32 DN 25 1"
C09 d 40 DN 32 1 1/4"
C10 d 50 DN 40 1 1/2"
C11 d 63 DN 50 2"
C12 d 75 DN 65 2 1/2"
C13 d 90 DN 80 3"
C14 d 110 DN 100 4"
C15 d 160 DN 150 6"

Version

D01 Standard, PTFE ball seal
D02 oilfree, PTFE ball seal (only with specific connecting parts)
D03 silicon-free, PTFE ball seal (only with specific connecting parts)
D04 silicon-free, PVDF ball seal for metric (only with specific connecting parts)

Seals

E01 EPDM seals
E02 FPM seals
E03 FFPM (KALREZ®) seals

Threaded inserts

F01 without threaded inserts
F02 with threaded inserts

Connecting parts

G30 PP-H Fusion socket metric
G32 PP-H Socket fusion spigot metric
G33 PP-H Threaded socket Rp reinforced
G34 PP-H Threaded socket NPT reinforced
G35 PP-H Butt fusion spigot SDR 11 metric IR-PLUS®
G36 PP-H Butt fusion spigot SDR 17.6 metric with this valve end the maximum nominal pressure is reduced to PN 6
G37 PP-H Butt fusion spigot long SDR11 metric
G83 PP-H Valve end blank
G44 PE-100 Butt fusion spigot long SDR17.6 metric (DN65-100)
G63 Fixed flange PP-H serrated metric (DN10-50)
G72 Backing flange PP-steel metric
G73 Backing flange PP-steel inch ANSI
G77 Backing flange PP JIS with connecting parts
G78 Backing flange PP-GF JIS
G40 PE-100 Fusion socket metric
G41 PE-100 Butt fusion spigot SDR11 metric
G42 PE-100 Butt fusion spigot SDR17.6 metric
G43 PE-100 Butt fusion spigot long SDR11 metric

Multi-functional module

I01 No multi-functional module
I02 Empty module
I03 Module with 2 end switches Ag, Ni
I04 Module with 2 end switches Au
I05 Module with 2 inductive switches Namur
I06 Module with 2 inductive switches PNP
I07 Module with 2 inductive switches NPN

Lever

K01 Standard lever red
K02 Standard lever black
K11 Multi-functional lever red

Mounting plate

L01 without mounting plate
L02 with mounting plate

A01

B05

C

D

E

F

G

G

I

K

L

left

right

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for your application, we have created a selection menu for you. (The maximum nominal pressure for the ball valve is PN10).

We supply what you put together.

Copiable

GF ball valve type 546 with pneumatic actuator

It's so easy to configure the type 546:
 With the configurator, you have a choice of new pneumatic actuators PA11 and PA21 in 2 optimized sizes including a large range of accessories.

We supply what you put together.



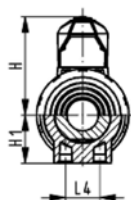
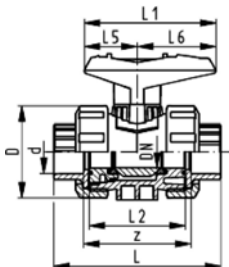
Pneumatic actuators PA11/PA21			
P01	Fail safe to close PA11/PA21		
P02	Fail safe to open PA11/21		
P03	Double acting PA11/21		
P30	Fail safe to close PA30/90		
P31	Fail safe to open PA30/90		
P32	Double acting PA30/90		
Manual override			
Q01	without manual override		
Q02	with manual override		
Stroke limiter			
R01	without stroke limiter		
R02	with stroke limiter		
P	Q	R	

Ball valves

SYGEF® standard Ball valve type 546 PVDF With fusion sockets metric



DN10/15 - 50



Model:

- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

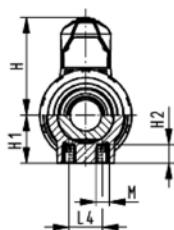
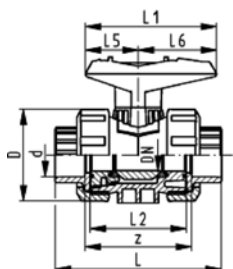
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
16	10	16	71	175 546 011	0.195	
20	15	16	185	175 546 012	0.200	
25	20	16	350	175 546 013	0.300	
32	25	16	700	175 546 014	0.440	
40	32	16	1000	175 546 015	0.760	
50	40	16	1600	175 546 016	1.060	
63	50	16	3100	175 546 017	2.055	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	z [mm]	
16	50	57	27	93	77	56	25	32	45	67	
20	50	57	27	95	77	56	25	32	45	66	
25	58	67	30	109	97	65	25	39	58	77	
32	68	73	36	119	97	71	25	39	58	83	
40	84	90	44	135	128	85	45	54	74	99	
50	97	97	51	147	128	89	45	54	74	105	
63	124	116	64	168	152	101	45	66	87	117	



DN10/15 - 50



SYGEF® standard Ball valve type 546 PVDF With mounting inserts With fusion sockets metric

Model:

- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

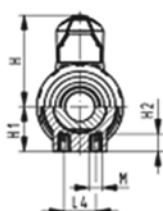
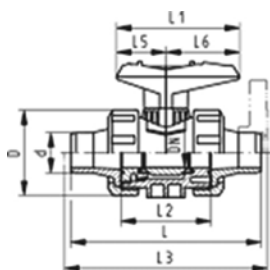
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
16	10	16	71	175 546 411	0.195	
20	15	16	185	175 546 412	0.200	
25	20	16	350	175 546 413	0.300	
32	25	16	700	175 546 414	0.440	
40	32	16	1000	175 546 415	0.760	
50	40	16	1600	175 546 416	1.060	
63	50	16	3100	175 546 417	2.055	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	79	27	12	93	77	56	25	32	45	M6	67	
20	50	57	27	12	95	77	56	25	32	45	M6	66	
25	58	67	30	12	109	97	65	25	39	58	M6	77	
32	68	73	36	12	119	97	71	25	39	58	M6	83	
40	84	90	44	15	135	128	85	45	54	74	M8	99	
50	97	97	51	15	147	128	89	45	54	74	M8	105	
63	124	116	64	15	168	152	101	45	66	87	M8	117	



DN10/15 - 50



SYGEF® standard Ball valve type 546 PVDF With mounting inserts With socket fusion spigots metric

Model:

- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

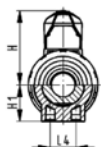
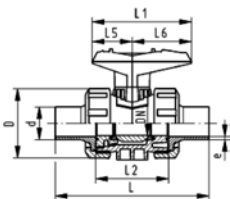
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
16	10	16	71	175 546 051	0.200	
20	15	16	185	175 546 052	0.205	
25	20	16	350	175 546 053	0.310	
32	25	16	700	175 546 054	0.460	
40	32	16	1000	175 546 055	0.780	
50	40	16	1600	175 546 056	1.110	
63	50	16	3100	175 546 057	2.150	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	
16	50	57	27	12	110	77	56		25	32	45	M6	
20	50	57	27	12	120	77	56	130	25	32	45	M6	
25	58	67	30	12	139	97	65	150	25	39	58	M6	
32	68	73	36	12	150	97	71	160	25	39	58	M6	
40	84	90	44	15	170	128	85	180	45	54	74	M8	
50	97	97	51	15	190	128	89	200	45	54	74	M8	
63	124	116	64	15	220	152	101	230	45	66	87	M8	



DN10/15 - 50



SYGEF® standard Ball valve type 546 PVDF With butt fusion spigots metric

Model:

- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Without mounting inserts

Option:

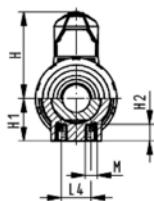
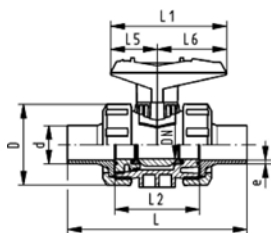
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
20	15	16	185	175 546 092	0.205	
25	20	16	350	175 546 093	0.310	
32	25	16	700	175 546 094	0.460	
40	32	16	1000	175 546 095	0.780	
50	40	16	1600	175 546 096	1.110	
63	50	16	3100	175 546 097	2.150	

d [mm]	D [mm]	H [mm]	H1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	e [mm]	
20	50	57	27	130	77	56	25	32	45	1,9	
25	58	67	30	143	97	65	25	39	58	1,9	
32	68	73	36	150	97	71	25	39	58	2,4	
40	84	90	44	171	128	85	45	54	74	2,4	
50	97	97	51	191	128	89	45	54	74	3	
63	124	116	64	220	152	101	45	66	87	3	



DN10/15 - 50



SYGEF® standard Ball valve type 546 PVDF With mounting inserts With butt fusion spigots metric

Model:

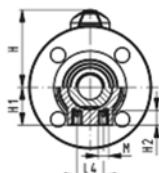
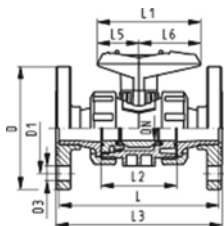
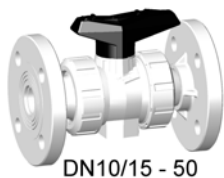
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg								
20	15	16	185	175 546 272	0.205								
25	20	16	350	175 546 273	0.310								
32	25	16	700	175 546 274	0.460								
40	32	16	1000	175 546 275	0.780								
50	40	16	1600	175 546 276	1.110								
63	50	16	3100	175 546 277	2.150								

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]		
20	50	57	27	12	130	77	56	25	32	45	M6	1,9		
25	58	67	30	12	143	97	65	25	39	58	M6	1,9		
32	68	73	36	12	150	97	71	25	39	58	M6	2,4		
40	84	90	44	15	171	128	85	45	54	74	M8	2,4		
50	97	97	51	15	191	128	89	45	54	74	M8	3		
63	124	116	64	15	220	152	101	45	66	87	M8	3		



SYGEF® standard Ball valve type 546 PVDF With mounting inserts With fixed flanges PVDF serrated metric

Model:

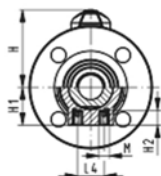
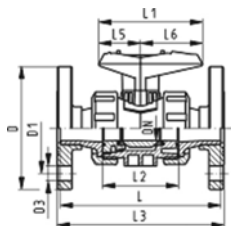
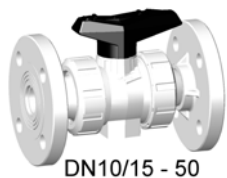
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Overall length EN 558-1

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
20	15	16	185	175 546 192	0.470	
25	20	16	350	175 546 193	0.650	
32	25	16	700	175 546 194	0.940	
40	32	16	1000	175 546 195	1.570	
50	40	16	1600	175 546 196	2.070	
63	50	16	3100	175 546 197	3.490	

d [mm]	D [mm]	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	
20	93	65	14	57	27	12	120	77	56	130	25	32	45	M6	
25	103	75	14	67	30	12	140	97	65	150	25	39	58	M6	
32	115	85	14	73	36	12	150	97	71	160	25	39	58	M6	
40	137	100	18	90	44	15	170	128	85	180	45	54	74	M8	
50	147	110	18	97	51	15	190	128	89	200	45	54	74	M8	
63	162	125	18	116	64	15	220	152	101	230	45	66	87	M8	



SYGEF® standard Ball valve type 546 PVDF With mounting inserts With fixed flanges PVDF serrated ANSI

Model:

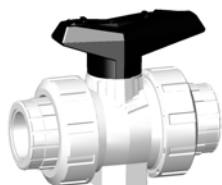
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Overall length EN 558-1

Option:

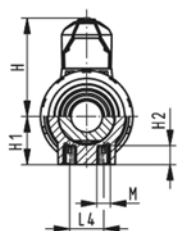
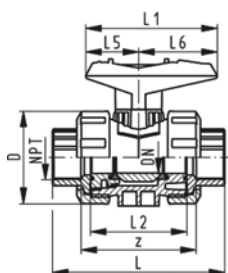
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

Inch	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code											
½	15	16	185	175 546 592											
¾	20	16	350	175 546 593											
1	25	16	700	175 546 594											
1 ¼	32	16	1000	175 546 595											
1 ½	40	16	1600	175 546 596											
2	50	16	3100	175 546 597											

Inch	D [mm]	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	
½	93	65	14	57	27	12	120	77	56	130	25	32	45	M6	
¾	103	75	14	67	30	12	140	97	65	150	25	39	58	M6	
1	115	85	14	73	36	12	150	97	71	160	25	39	58	M6	
1 ¼	137	100	18	90	44	15	170	128	85	180	45	54	74	M8	
1 ½	147	110	18	97	51	15	190	128	89	200	45	54	74	M8	
2	162	125	18	116	64	15	220	152	101	230	45	66	87	M8	



DN10/15 - 50



SYGEF® standard Ball valve type 546 PVDF With mounting inserts With threaded sockets NPT

Model:

- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts

Option:

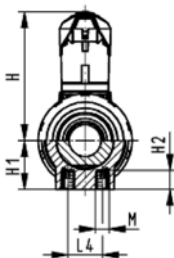
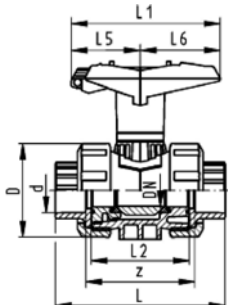
- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

NPT [inch]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg
3/8	10	10	71	175 546 331	0.205
1/2	15	10	185	175 546 332	0.220
3/4	20	10	350	175 546 333	0.325
1	25	10	700	175 546 334	0.490
1 1/4	32	10	1000	175 546 335	0.820
1 1/2	40	10	1600	175 546 336	1.135
2	50	10	3100	175 546 337	2.150

NPT [inch]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]
3/8	50	57	27	12	96	77	56	25	32	45	M6	69
1/2	50	57	27	12	99	77	56	25	32	45	M6	64
3/4	58	67	30	12	111	97	65	25	39	58	M6	76
1	68	73	36	12	127	97	71	25	39	58	M6	83
1 1/4	84	90	44	15	146	128	85	45	54	74	M8	101
1 1/2	97	97	51	15	157	128	89	45	54	74	M8	111
2	124	116	64	15	183	152	101	45	66	87	M8	135



DN10/15 - 50



SYGEF® standard Ball valve type 546 PVDF With lockable handle With fusion sockets metric

Model:

- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Ball seals PTFE
- Integrated stainless steel mounting inserts
- Lockable hand lever with ratchet settings

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
16	10	16	71	175 546 431	0.205	
20	15	16	185	175 546 432	0.210	
25	20	16	350	175 546 433	0.315	
32	25	16	700	175 546 434	0.455	
40	32	16	1000	175 546 435	0.785	
50	40	16	1600	175 546 436	1.085	
63	50	16	3100	175 546 437	2.085	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]	
16	50	79	27	12	93	77	56	25	32	45	M6	67	
20	50	79	27	12	95	77	56	25	32	45	M6	66	
25	58	88	30	12	109	97	65	25	39	58	M6	77	
32	68	94	36	12	119	97	71	25	39	58	M6	83	
40	84	113	44	15	135	128	85	45	54	74	M8	99	
50	97	119	51	15	147	128	89	45	54	74	M8	105	
63	124	141	64	15	168	152	101	45	66	87	M8	117	

Ball valves silicon free/paint compatible

SYGEF® standard silicone free

Ball valve type 546 SF

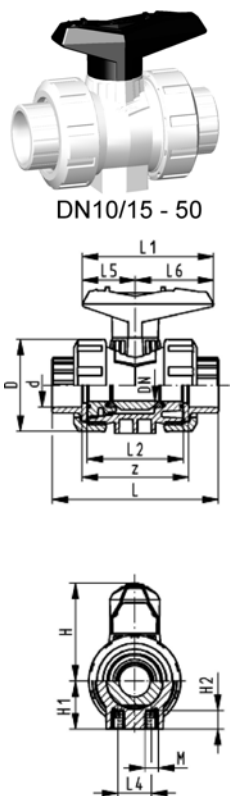
With fusion sockets metric

Model:

- Silicon-free / paint-compatible
- Ball seals PVDF
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

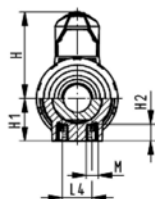
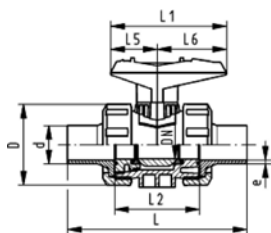


d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg								
16	10	16	71	175 546 691	0.195								
20	15	16	185	175 546 692	0.200								
25	20	16	350	175 546 693	0.300								
32	25	16	700	175 546 694	0.440								
40	32	16	1000	175 546 695	0.760								
50	40	16	1600	175 546 696	1.060								
63	50	16	3100	175 546 697	2.055								

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	z [mm]		
16	50	79	27	12	93	77	56	25	32	45	M6	67		
20	50	57	27	12	95	77	56	25	32	45	M6	66		
25	58	67	30	12	109	97	65	25	39	58	M6	77		
32	68	73	36	12	119	97	71	25	39	58	M6	83		
40	84	90	44	15	135	128	85	45	54	74	M8	99		
50	97	97	51	15	147	128	89	45	54	74	M8	105		
63	124	116	64	15	168	152	101	45	66	87	M8	117		



DN10/15 - 50



SYGEF® standard silicone free Ball valve type 546 SF With butt fusion spigots IR-Plus metric

Model:

- Silicon-free / paint-compatible
- Ball seals PVDF
- For easy installation and removal
- z-dimension, valve end and valve nut are **not compatible** with type 346 (DN10/15-50) resp. type 370 (DN65-100)
- Integrated stainless steel mounting inserts

Option:

- Individual configuration of the valve (see form)
- Multifunctional module with integrated limit switches
- Pneumatic or electric actuators from +GF+

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
20	15	16	185	175 546 752	0.205	
25	20	16	350	175 546 753	0.310	
32	25	16	700	175 546 754	0.460	
40	32	16	1000	175 546 755	0.780	
50	40	16	1600	175 546 756	1.110	
63	50	16	3100	175 546 757	2.150	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	M	e [mm]	
20	50	57	27	12	130	77	56	25	32	45	M6	1,9	
25	58	67	30	12	143	97	65	25	39	58	M6	1,9	
32	68	73	36	12	150	97	71	25	39	58	M6	2,4	
40	84	90	44	15	171	128	85	45	54	74	M8	2,4	
50	97	97	51	15	191	128	89	45	54	74	M8	3	
63	124	116	64	15	220	152	101	45	66	87	M8	3	

Copiable

Configurator +GF+ Ball Valve Type 546 PVDF

Ball valve
A01 Ball valve 546

Material
B15 PVDF

Dimension
C05 d 16 DN 10 3/8"
C06 d 20 DN 15 1/2"
C07 d 25 DN 20 3/4"
C08 d 32 DN 25 1"
C09 d 40 DN 32 1 1/4"
C10 d 50 DN 40 1 1/2"
C11 d 63 DN 50 2"

Version
D01 standard, PTFE ball seal
D02 oil-free, PTFE ball seal (only with specific connecting parts)
D04 silicon-free, PVDF ball seal (only with specific connecting parts)

Seals
E01 EPDM seals
E02 FPM seals

Threaded inserts
F01 without threaded inserts
F02 with threaded inserts

Connecting parts
G50 PVDF Fusion socket metric
G51 PVDF Socket fusion spigot metric
G52 PVDF Butt fusion spigot IR Plus® metric
G53 PVDF Threaded socket NPT
G64 Fixed flange PVDF serrated metric

Multi-functional module
I01 No multi-functional module
I02 Empty module
I03 Module with 2 limit switches Ag, Ni
I04 Module with 2 limit switches Au
I05 Module with 2 inductive switches Namur
I06 Module with 2 inductive switches PNP
I07 Module with 2 inductive switches NPN

Handle
K01 Standard handle red
K02 Standard handle black
K11 Multi-functional handle red

Mounting plate
L01 without mounting plate
L02 with mounting plate

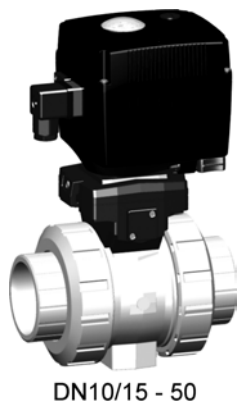
A01	B15	C	D	E	F	G	G	I	K	L
						left	right			

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for your application, we put together a selection menu for you (the maximum working pressure of the whole valve is determined by the maximum permissible nominal pressure of the connecting part).

We supply what you put together.

Ball valves electric

SYGEF® standard Ball valve type 107 100-230V With manual emergency override With fusion sockets metric



DN10/15 - 50

Model:

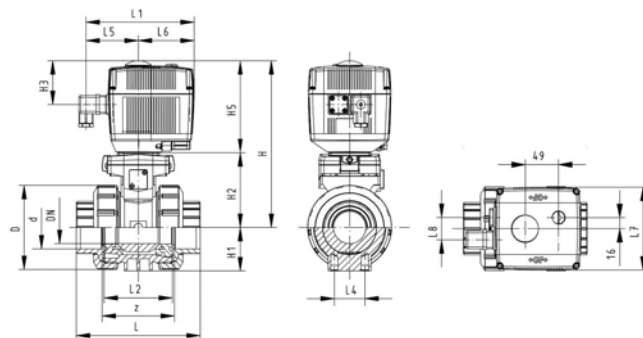
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

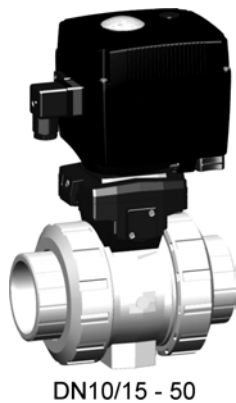
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
16	10	10	70	199 107 802	2.100	
20	15	10	185	199 107 803	2.100	
25	20	10	350	199 107 804	2.200	
32	25	10	700	199 107 805	2.300	
40	32	10	1000	199 107 806	2.600	
50	40	10	1600	199 107 807	3.000	
63	50	10	3100	199 107 808	3.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
16	50	200	27	64	64	137	92	161	56	25	79	83	122	67	64
20	50	200	27	64	64	137	95	161	56	25	79	83	122	67	64
25	58	209	30	73	64	137	110	161	65	25	79	83	122	67	72
32	68	209	36	73	64	137	123	161	71	25	79	83	122	67	79
40	84	220	44	84	64	137	146	161	85	45	79	83	122	67	94
50	97	220	51	84	64	137	157	161	89	45	79	83	122	67	95
63	124	243	64	106	64	137	183	161	101	45	79	83	122	67	107





DN10/15 - 50

SYGEF® standard Ball valve type 107 24V With manual emergency override With fusion sockets metric

Model:

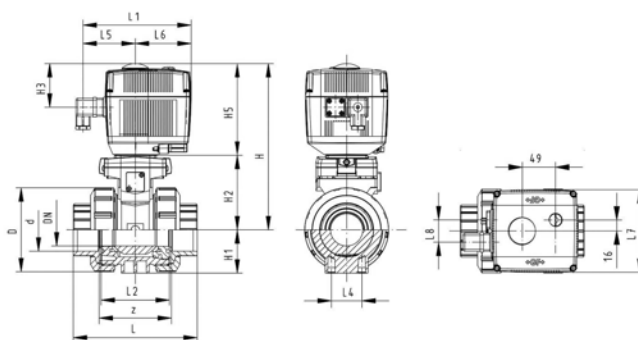
- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

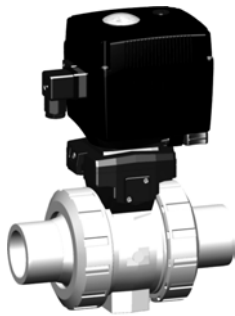
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
16	10	10	70	199 107 822	2.100	
20	15	10	185	199 107 823	2.100	
25	20	10	350	199 107 824	2.200	
32	25	10	700	199 107 825	2.300	
40	32	10	1000	199 107 826	2.600	
50	40	10	1600	199 107 827	3.000	
63	50	10	3100	199 107 828	3.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
16	50	200	27	64	64	137	92	161	56	25	79	83	122	67	64
20	50	200	27	64	64	137	95	161	56	25	79	83	122	67	64
25	58	209	30	73	64	137	110	161	65	25	79	83	122	67	72
32	68	209	36	73	64	137	123	161	71	25	79	83	122	67	79
40	84	220	44	84	64	137	146	161	85	45	79	83	122	67	94
50	97	220	51	84	64	137	157	161	89	45	79	83	122	67	95
63	124	243	64	106	64	137	183	161	101	45	79	83	122	67	107





DN10/15 - 50

SYGEF® standard Ball valve type 107 100-230V With manual emergency override With fusion spigots metric

Model:

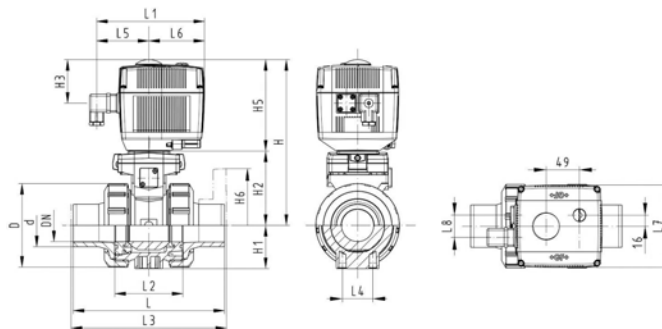
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

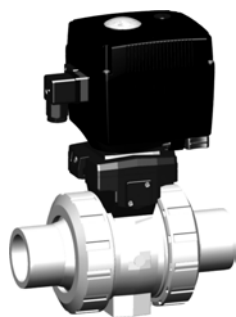
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
16	10	10	70	199 107 812	2.100	
20	15	10	185	199 107 813	2.100	
25	20	10	350	199 107 814	2.200	
32	25	10	700	199 107 815	2.300	
40	32	10	1000	199 107 816	2.600	
50	40	10	1600	199 107 817	3.000	
63	50	10	3100	199 107 818	3.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
16	50	200	27	64	64	137	114	161	56	0	25	79	83	122	67
20	50	200	27	64	64	137	124	161	56	130	25	79	83	122	67
25	58	209	30	73	64	137	144	161	65	150	25	79	83	122	67
32	68	209	36	73	64	137	154	161	71	160	25	79	83	122	67
40	84	220	44	84	64	137	174	161	85	180	45	79	83	122	67
50	97	220	51	84	64	137	194	161	89	200	45	79	83	122	67
63	124	243	64	106	64	137	224	161	101	230	45	79	83	122	67





DN10/15 - 50

SYGEF® standard Ball valve type 107 24V With manual emergency override With fusion spigots metric

Model:

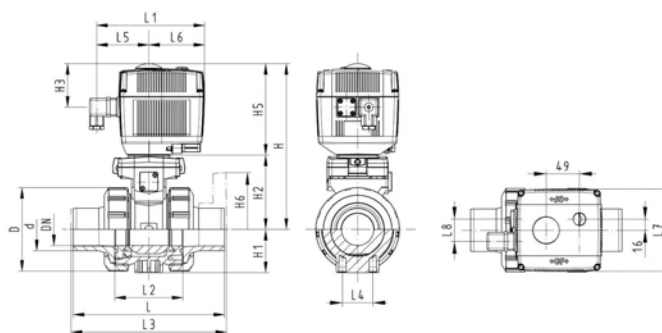
- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

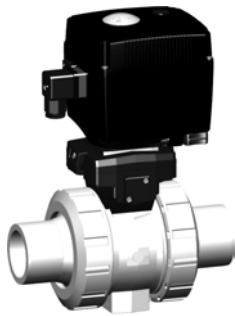
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
16	10	10	70	199 107 832	2.100	
20	15	10	185	199 107 833	2.100	
25	20	10	350	199 107 834	2.200	
32	25	10	700	199 107 835	2.300	
40	32	10	1000	199 107 836	2.600	
50	40	10	1600	199 107 837	3.000	
63	50	10	3100	199 107 838	3.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	
16	50	200	27	64	64	137	114	161	56	0	25	79	83	122	67	
20	50	200	27	64	64	137	124	161	56	130	25	79	83	122	67	
25	58	209	30	73	64	137	144	161	65	150	25	79	83	122	67	
32	68	209	36	73	64	137	154	161	71	160	25	79	83	122	67	
40	84	220	44	84	64	137	174	161	85	180	45	79	83	122	67	
50	97	220	51	84	64	137	194	161	89	200	45	79	83	122	67	
63	124	243	64	106	64	137	224	161	101	230	45	79	83	122	67	





DN10/15 - 50

SYGEF® standard Ball valve type 107 100-230V With manual emergency override With butt fusion spigots metric

Model:

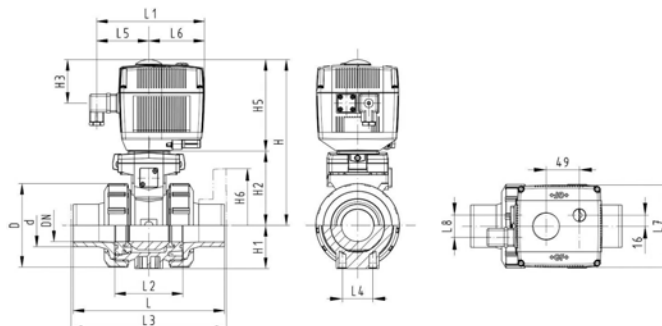
- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

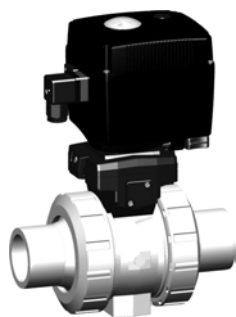
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	
20	15	10	185	199 107 423	
25	20	10	350	199 107 424	
32	25	10	700	199 107 425	
40	32	10	1000	199 107 426	
50	40	10	1600	199 107 427	
63	50	10	3100	199 107 428	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	
20	50	200	27	64	64	137	130	161	56	25	79	83	122	67	
25	58	209	30	73	64	137	143	161	65	25	79	83	122	67	
32	68	209	36	73	64	137	150	161	71	25	79	83	122	67	
40	84	220	44	84	64	137	171	161	85	45	79	83	122	67	
50	97	220	51	84	64	137	191	161	89	45	79	83	122	67	
63	124	243	64	106	64	137	220	161	101	45	79	83	122	67	





DN10/15 - 50

SYGEF® standard Ball valve type 107 24V With manual emergency override With butt fusion spigots metric

Model:

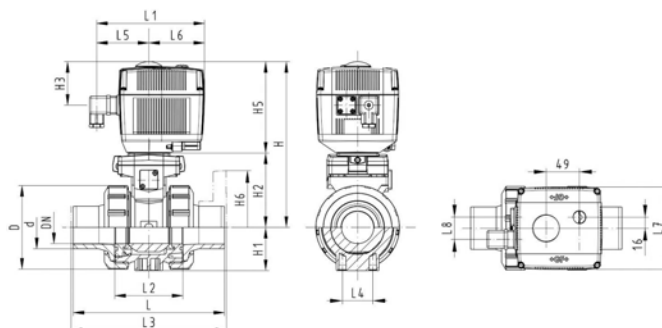
- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

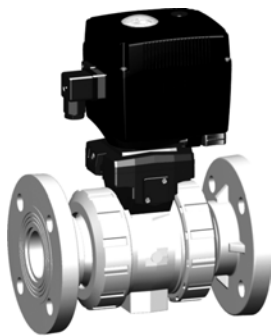
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	
20	15	10	185	199 107 433	
25	20	10	350	199 107 434	
32	25	10	700	199 107 435	
40	32	10	1000	199 107 436	
50	40	10	1600	199 107 437	
63	50	10	3100	199 107 438	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	
20	50	200	27	64	64	137	130	161	56	25	79	83	122	67	
25	58	209	30	73	64	137	143	161	65	25	79	83	122	67	
32	68	209	36	73	64	137	150	161	71	25	79	83	122	67	
40	84	220	44	84	64	137	171	161	85	45	79	83	122	67	
50	97	220	51	84	64	137	191	161	89	45	79	83	122	67	
63	124	243	64	106	64	137	220	161	101	45	79	83	122	67	





DN10/15 - 50

SYGEF® standard Ball valve type 107 100-230V With manual emergency override With fixed flanges PVDF serrated metric

Model:

- Built on with electric actuator EA11
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

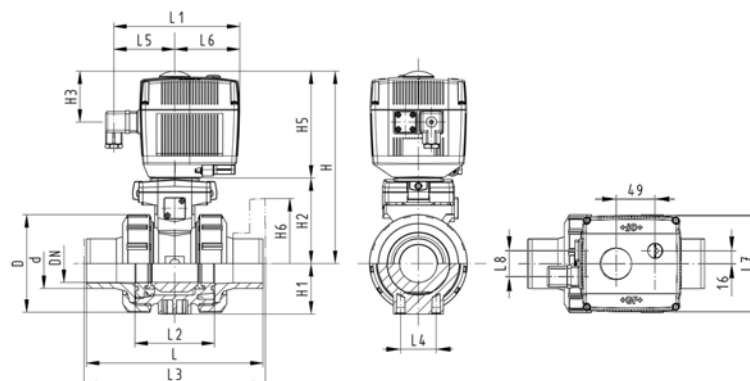
Option:

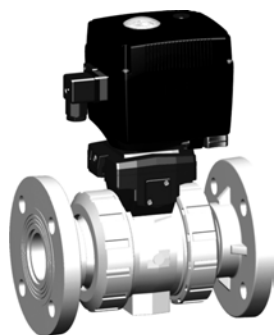
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value (Δp=1 bar) [l/min]	FPM Code	kg	
20	15	½	10	185	199 107 843	2.300	
25	20	¾	10	350	199 107 844	2.500	
32	25	1	10	700	199 107 845	2.700	
40	32	1 ¼	10	1000	199 107 846	3.200	
50	40	1 ½	10	1600	199 107 847	3.700	
63	50	2	10	3100	199 107 848	4.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	201	27	64	65	138	48	124	160	56	130	25	77	83	122
25	58	210	30	73	65	138	53	144	160	65	150	25	77	83	122
32	68	210	36	73	65	138	58	154	160	71	160	25	77	83	122
40	84	221	44	84	65	138	70	174	160	85	180	45	77	83	122
50	97	221	51	84	65	138	75	194	160	89	200	45	77	83	122
63	124	244	64	106	65	138	83	224	160	101	230	45	77	83	122

d [mm]	L8 [mm]
20	33
25	33
32	33
40	33
50	33
63	33





DN10/15 - 50

SYGEF® standard Ball valve type 107 24V With manual emergency override With fixed flanges PVDF serrated metric

Model:

- Built on with electric actuator EA11
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

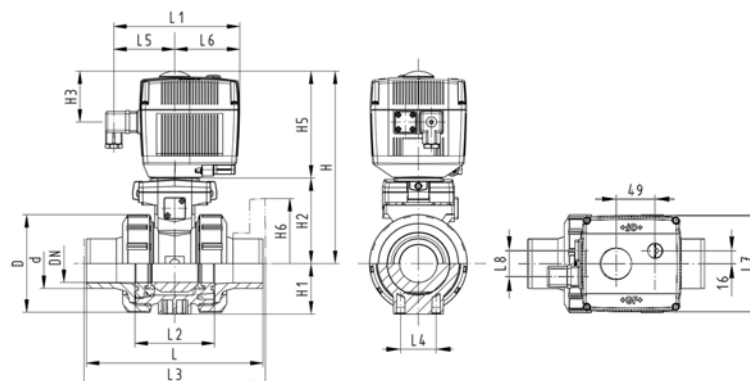
Option:

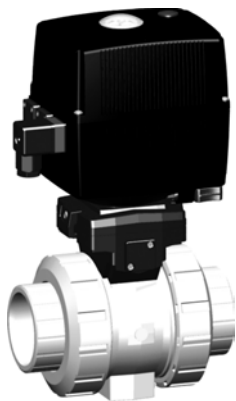
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value (Δp=1 bar) [l/min]	FPM Code	kg	
20	15	½	10	185	199 107 853	2.300	
25	20	¾	10	350	199 107 854	2.500	
32	25	1	10	700	199 107 855	2.700	
40	32	1 ¼	10	1000	199 107 856	3.200	
50	40	1 ½	10	1600	199 107 857	3.700	
63	50	2	10	3100	199 107 858	4.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
20	50	201	27	64	65	138	48	124	160	56	130	25	77	83	122	
25	58	210	30	73	65	138	53	144	160	65	150	25	77	83	122	
32	68	210	36	73	65	138	58	154	160	71	160	25	77	83	122	
40	84	221	44	84	65	138	70	174	160	85	180	45	77	83	122	
50	97	221	51	84	65	138	75	194	160	89	200	45	77	83	122	
63	124	244	64	106	65	138	83	224	160	101	230	45	77	83	122	

d [mm]	L8 [mm]	
20	33	
25	33	
32	33	
40	33	
50	33	
63	33	





DN10/15 - 50

SYGEF® standard Ball valve type 132 100-230V With manual emergency override With fusion sockets metric

Model:

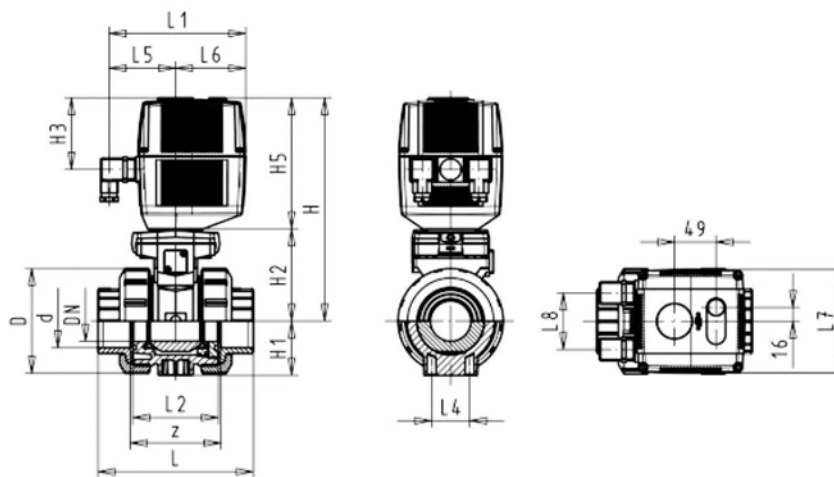
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

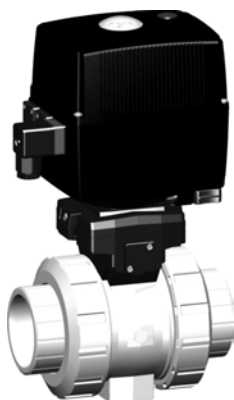
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg										
16	10	10	70	199 132 012	2.100										
20	15	10	185	199 132 013	2.100										
25	20	10	350	199 132 014	2.200										
32	25	10	700	199 132 015	2.300										
40	32	10	1000	199 132 016	2.600										
50	40	10	1600	199 132 017	3.000										
63	50	10	3100	199 132 018	3.800										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
16	50	231	27	64	94	167	92	180	56	25	97	83	122	66	64
20	50	231	27	64	94	167	95	180	56	25	97	83	122	66	64
25	58	240	30	73	94	167	110	180	65	25	97	83	122	66	72
32	68	240	36	73	94	167	123	180	71	25	97	83	122	66	79
40	84	251	44	84	94	167	146	180	85	45	97	83	122	66	94
50	97	251	51	84	94	167	157	180	89	45	97	83	122	66	95
63	124	273	64	106	94	167	183	180	101	45	97	83	122	66	107





DN10/15 - 50

SYGEF® standard Ball valve type 132 24V With manual emergency override With fusion sockets metric

Model:

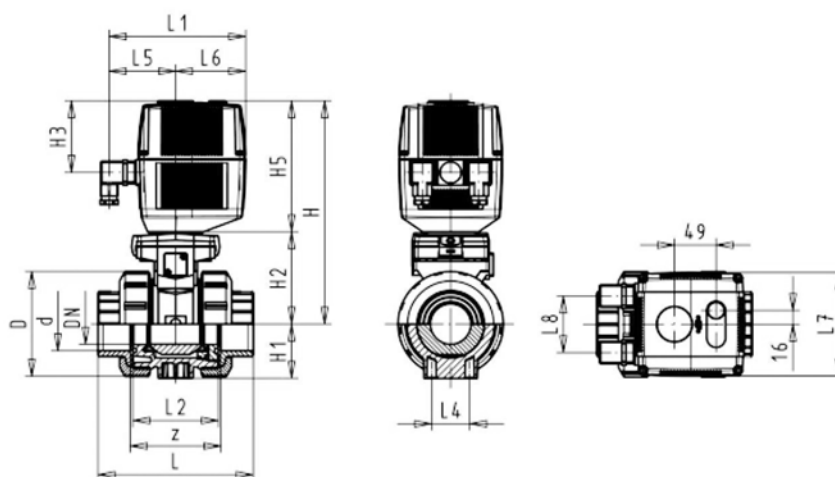
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

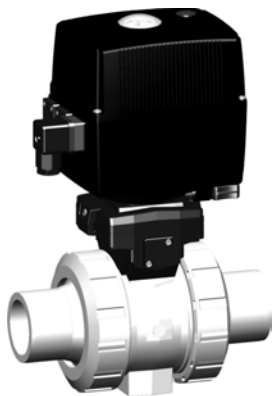
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg											
16	10	10	70	199 132 052	2.100											
20	15	10	185	199 132 053	2.100											
25	20	10	350	199 132 054	2.200											
32	25	10	700	199 132 055	2.300											
40	32	10	1000	199 132 056	2.600											
50	40	10	1600	199 132 057	3.000											
63	50	10	3100	199 132 058	3.800											

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	z [mm]
16	50	231	27	64	94	167	92	180	56	25	97	83	122	66	64
20	50	231	27	64	94	167	95	180	56	25	97	83	122	66	64
25	58	240	30	73	94	167	110	180	65	25	97	83	122	66	72
32	68	240	36	73	94	167	123	180	71	25	97	83	122	66	79
40	84	251	44	84	94	167	146	180	85	45	97	83	122	66	94
50	97	251	51	84	94	167	157	180	89	45	97	83	122	66	95
63	124	273	64	106	94	167	183	180	101	45	97	83	122	66	107





DN10/15 - 50

SYGEF® standard Ball valve type 132 100-230V With manual emergency override With fusion spigots metric

Model:

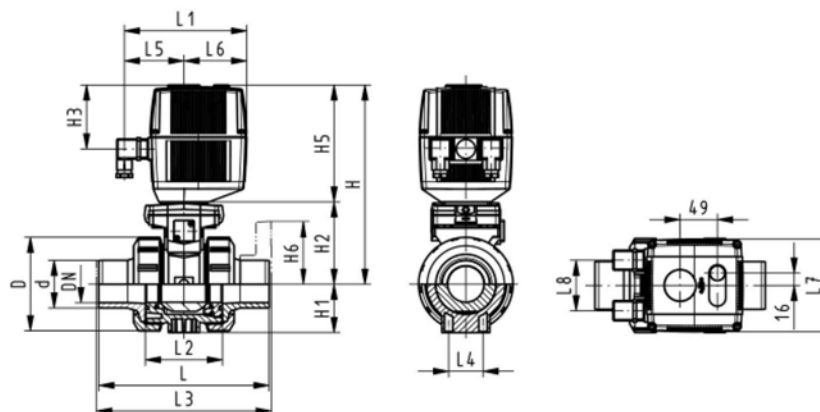
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

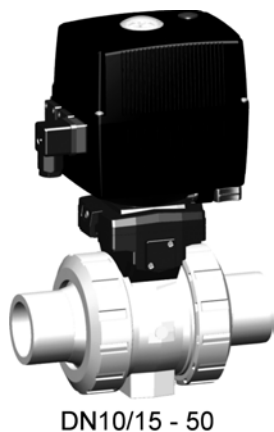
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg										
16	10	10	70	199 132 032	2.100										
20	15	10	185	199 132 033	2.100										
25	20	10	350	199 132 034	2.200										
32	25	10	700	199 132 035	2.300										
40	32	10	1000	199 132 036	2.600										
50	40	10	1600	199 132 037	3.000										
63	50	10	3100	199 132 038	3.800										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]
16	50	231	27	64	94	167	114	180	56	130	25	97	83	122	66
20	50	231	27	64	94	167	124	180	56	130	25	97	83	122	66
25	58	240	30	73	94	167	144	180	65	150	25	97	83	122	66
32	68	240	36	73	94	167	154	180	71	160	25	97	83	122	66
40	84	251	44	84	94	167	174	180	85	180	45	97	83	122	66
50	97	251	51	84	94	167	194	180	89	200	45	97	83	122	66
63	124	273	64	106	94	167	224	180	101	230	45	97	83	122	66





DN10/15 - 50

SYGEF® standard Ball valve type 132 24V With manual emergency override With fusion spigots metric

Model:

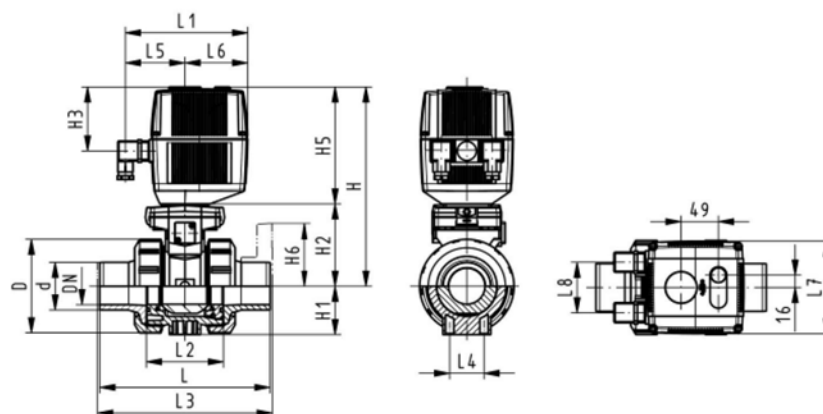
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 24 V AC/DC
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

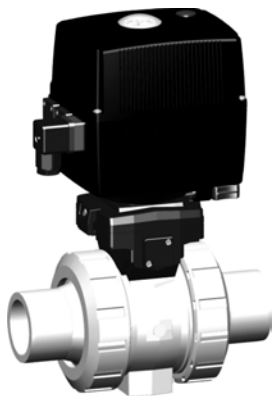
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
16	10	10	70	199 132 072	2.100	
20	15	10	185	199 132 073	2.100	
25	20	10	350	199 132 074	2.200	
32	25	10	700	199 132 075	2.300	
40	32	10	1000	199 132 076	2.600	
50	40	10	1600	199 132 077	3.000	
63	50	10	3100	199 132 078	3.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	
16	50	231	27	64	94	167	114	180	56	130	25	97	83	122	66	
20	50	231	27	64	94	167	124	180	56	130	25	97	83	122	66	
25	58	240	30	73	94	167	144	180	65	150	25	97	83	122	66	
32	68	240	36	73	94	167	154	180	71	160	25	97	83	122	66	
40	84	251	44	84	94	167	174	180	85	180	45	97	83	122	66	
50	97	251	51	84	94	167	194	180	89	200	45	97	83	122	66	
63	124	273	64	106	94	167	224	180	101	230	45	97	83	122	66	





DN10/15 - 50

SYGEF® standard Ball valve type 132 100-230V With manual emergency override With butt fusion spigots metric

Model:

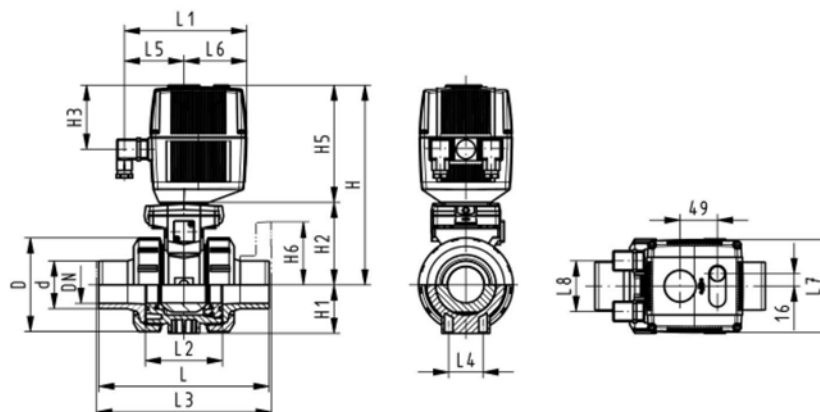
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts

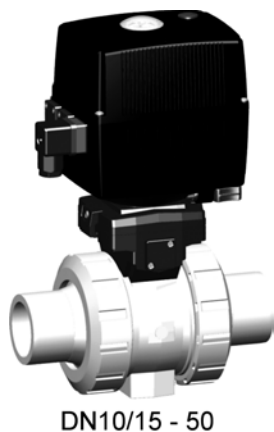
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	
20	15	10	185	199 132 113	
25	20	10	350	199 132 114	
32	25	10	700	199 132 115	
40	32	10	1000	199 132 116	
50	40	10	1600	199 132 117	
63	50	10	3100	199 132 118	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	
20	50	231	27	64	94	167	130	180	56	25	97	83	122	66	
25	58	240	30	73	94	167	143	180	65	25	97	83	122	66	
32	68	240	36	73	94	167	150	180	71	25	97	83	122	66	
40	84	251	44	84	94	167	171	180	85	45	97	83	122	66	
50	97	251	51	84	94	167	191	180	89	45	97	83	122	66	
63	124	273	64	106	94	167	220	180	101	45	97	83	122	66	





DN10/15 - 50

SYGEF® standard Ball valve type 132 24V With manual emergency override With butt fusion spigots metric

Model:

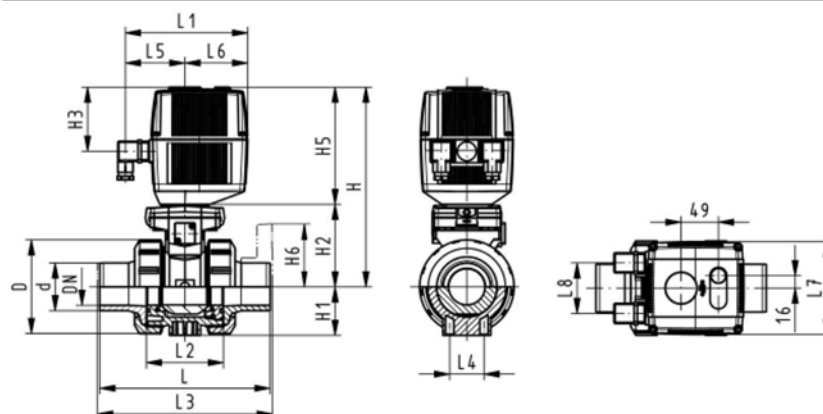
- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts

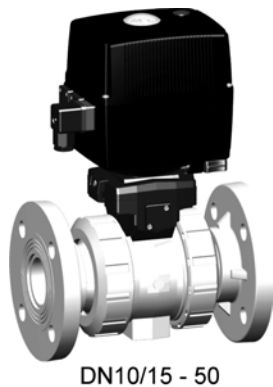
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	
20	15	10	185	199 132 153	
25	20	10	350	199 132 154	
32	25	10	700	199 132 155	
40	32	10	1000	199 132 156	
50	40	10	1600	199 132 157	
63	50	10	3100	199 132 158	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	L8 [mm]	
20	50	231	27	64	94	167	130	180	56	25	97	83	122	66	
25	58	240	30	73	94	167	143	180	65	25	97	83	122	66	
32	68	240	36	73	94	167	150	180	71	25	97	83	122	66	
40	84	251	44	84	94	167	171	180	85	45	97	83	122	66	
50	97	251	51	84	94	167	191	180	89	45	97	83	122	66	
63	124	273	64	106	94	167	220	180	101	45	97	83	122	66	





DN10/15 - 50

SYGEF® standard Ball valve type 132 100-230V With manual emergency override With fixed flanges PVDF serrated metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 100-230 V, 50-60 Hz
- Control range 90°<
- Control time 5 s/90°<
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

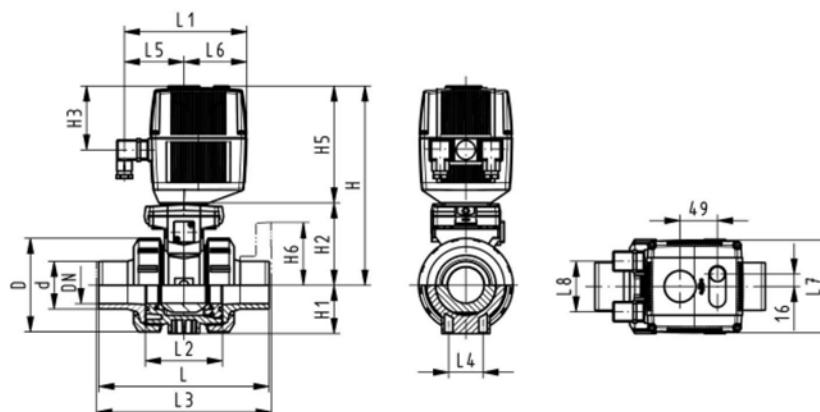
Option:

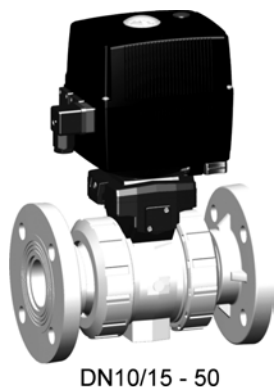
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value (Δp=1 bar) [l/min]	FPM Code	kg	
20	15	½	10	185	199 132 083	2.300	
25	20	¾	10	350	199 132 084	2.500	
32	25	1	10	700	199 132 085	2.700	
40	32	1 ¼	10	1000	199 132 086	3.200	
50	40	1 ½	10	1600	199 132 087	3.700	
63	50	2	10	3100	199 132 088	4.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	231	27	64	94	167	48	124	180	56	130	25	98	83	122
25	58	240	30	73	94	167	53	144	180	65	150	25	97	83	122
32	68	240	36	73	94	167	58	154	180	71	160	25	97	83	122
40	84	251	44	84	94	167	70	174	180	85	180	45	97	83	122
50	97	251	51	84	94	167	75	194	180	89	200	45	98	83	122
63	124	273	64	106	94	167	83	224	180	101	230	45	97	83	122

d [mm]	L8 [mm]
20	66
25	66
32	66
40	66
50	66
63	66





DN10/15 - 50

SYGEF® standard Ball valve type 132 24V With manual emergency override With fixed flanges PVDF serrated metric

Model:

- Assignment of actuators EA21 (DN10/15-50), EA31 (DN65-100 if available)
- Voltage 24 V AC/DC
- Control range 90°<)
- Control time 5 s/90°<)
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Overall length EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

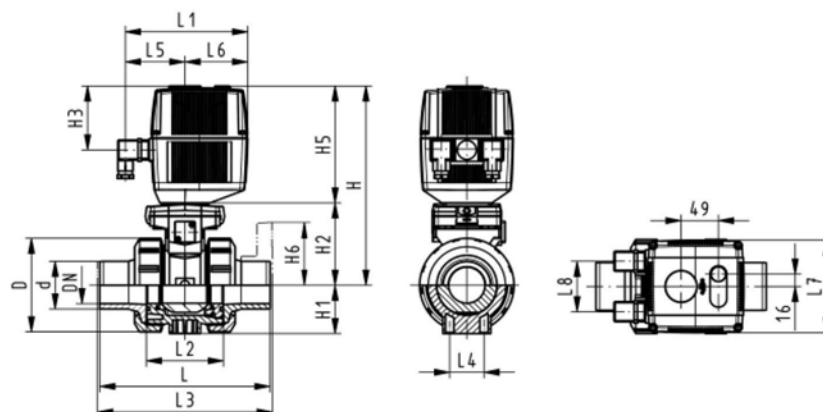
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value (Δp=1 bar) [l/min]	FPM Code	kg	
20	15	½	10	185	199 132 093	2.300	
25	20	¾	10	350	199 132 094	2.500	
32	25	1	10	700	199 132 095	2.700	
40	32	1 ¼	10	1000	199 132 096	3.200	
50	40	1 ½	10	1600	199 132 097	3.700	
63	50	2	10	3100	199 132 098	4.800	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
20	50	231	27	64	94	167	48	124	180	56	130	25	98	83	122	
25	58	240	30	73	94	167	53	144	180	65	150	25	97	83	122	
32	68	240	36	73	94	167	58	154	180	71	160	25	97	83	122	
40	84	251	44	84	94	167	70	174	180	85	180	45	97	83	122	
50	97	251	51	84	94	167	75	194	180	89	200	45	98	83	122	
63	124	273	64	106	94	167	83	224	180	101	230	45	97	83	122	

d [mm]	L8 [mm]	
20	66	
25	66	
32	66	
40	66	
50	66	
63	66	



Copiable

Configurator +GF+ Ball Valve Type 546 PVDF

Ball valve

A01 Ball valve 546

Material

B15 PVDF

Dimension

C05 d 16 DN 10 3/8"
C06 d 20 DN 15 1/2"
C07 d 25 DN 20 3/4"
C08 d 32 DN 25 1"
C09 d 40 DN 32 1 1/4"
C10 d 50 DN 40 1 1/2"
C11 d 63 DN 50 2"

Version

D01 standard, PTFE ball seal
D02 oil-free, PTFE ball seal (only with specific connecting parts)
D04 silicon-free, PVDF ball seal (only with specific connecting parts)

Seals

E01 EPDM seals
E02 FPM seals

Threaded inserts

F01 without threaded inserts
F02 with threaded inserts

Connecting parts

G50 PVDF Fusion socket metric
G51 PVDF Socket fusion spigot metric
G52 PVDF Butt fusion spigot IR Plus® metric
G53 PVDF Threaded socket NPT
G64 Fixed flange PVDF serrated metric

Multi-functional module

I01 No multi-functional module
I02 Empty module
I03 Module with 2 limit switches Ag, Ni
I04 Module with 2 limit switches Au
I05 Module with 2 inductive switches Namur
I06 Module with 2 inductive switches PNP
I07 Module with 2 inductive switches NPN

Handle

K01 Standard handle red
K02 Standard handle black
K11 Multi-functional handle red

Mounting plate

L01 without mounting plate
L02 with mounting plate

A01	B15	C	D	E	F	G	G	I	K	L
-----	-----	---	---	---	---	---	---	---	---	---

left

right

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for your application, we put together a selection menu for you (the maximum working pressure of the whole valve is determined by the maximum permissible nominal pressure of the connecting part).

We supply what you put together.

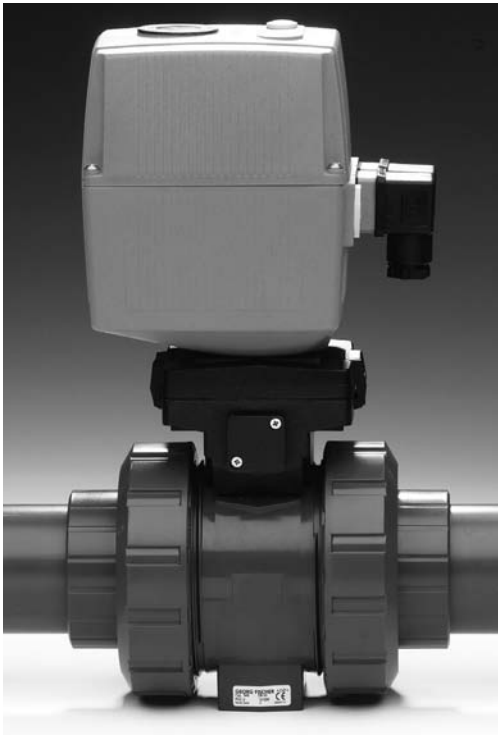
Copiable

GF ball valve type 546 with electric Actuator

It's easy to actuate the type 546:

With the configurator, you have a choice of new electric actuators, the EA11 for standard applications and the EA21 with modular design and accessories, for practically and type of operation.

We supply what you put together.



Electric Actuator EA11								
T01	EA11 24 V							
T02	EA11 100–230 V							
Accessories EA11								
U01	No accessories							
U02	2 limit switches Ag, Ni							
U03	Heating element							
U04	Fail-safe return							
U05	2 limit switches Ag, Ni normally open							
Electric Actuator EA21/31								
T03	EA21/31 24 V							
T04	EA21/31 100–230 V							
Accessories EA21								
W01	No accessories							
W02	Heating element							
W03	Cycle time module							
W04	Cycle time monitoring							
W05	Cycles monitoring							
W06	Motor current monitoring							
W07	2 limit switches Ag, Ni							
W08	2 limit switches Gold							
W09	2 limit switches NPN							
W10	2 limit switches PNP							
W11	Positioner							
W12	Electric position indicator							
W14	Fail-safe return unit							
W15	Switch intermediate position							
W27	2 limit switches Ag, Ni normally open with connector							
W31	Positioner PE25 with galv. separation							
T	U	T	W	W	W	W	W	W

Ball valves pneumatic

SYGEF® standard

Ball valve type 232

Function FC (Fail safe to close)

With manual override

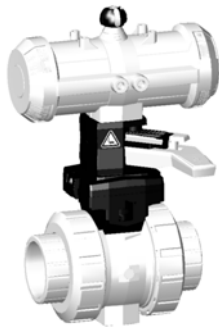
With fusion Sockets metric

Model:

- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

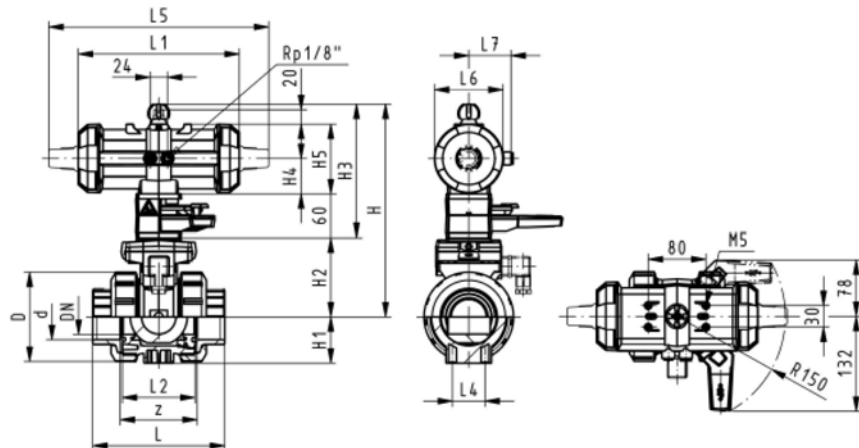
- Individual configuration of the valve (see form)

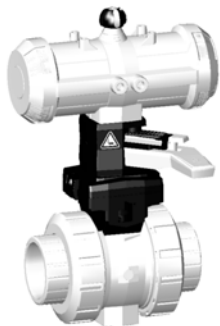


DN10/15 - 50

d [mm]	DN [mm]	PN	kv-value (Δp=1 bar) [l/min]	FPM Code	kg
16	10	10	70	199 232 012	1.500
20	15	10	185	199 232 013	1.500
25	20	10	350	199 232 014	1.600
32	25	10	700	199 232 015	1.700
40	32	10	1000	199 232 016	2.800
50	40	10	1600	199 232 017	3.100
63	50	10	3100	199 232 018	4.000

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function FO (Fail safe to open)
With manual override
With fusion sockets metric

Model:

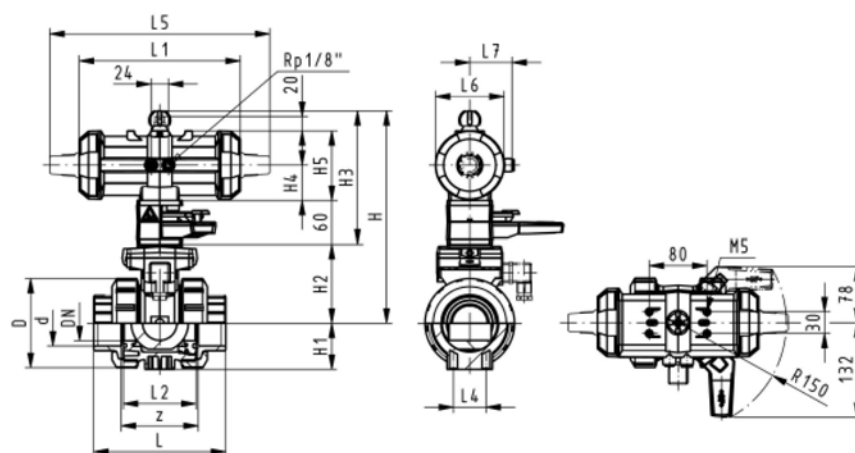
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
16	10	10	70	199 232 052	1.500	
20	15	10	185	199 232 053	1.500	
25	20	10	350	199 232 054	1.600	
32	25	10	700	199 232 055	1.700	
40	32	10	1000	199 232 056	2.800	
50	40	10	1600	199 232 057	3.100	
63	50	10	3100	199 232 058	4.000	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

SYGEF® standard Ball valve type 232 Function DA (Double acting) With manual override With fusion sockets metric

Model:

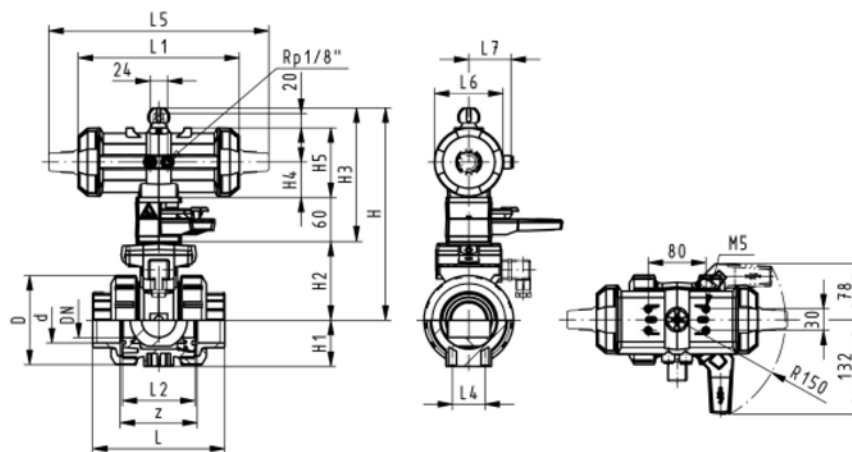
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg										
16	10	10	70	199 232 092	1.500										
20	15	10	185	199 232 093	1.500										
25	20	10	350	199 232 094	1.600										
32	25	10	700	199 232 095	1.700										
40	32	10	1000	199 232 096	2.800										
50	40	10	1600	199 232 097	3.100										
63	50	10	3100	199 232 098	4.000										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]
16	50	230	27	62	168	40	97	92	194	56	25	261	76	48	64
20	50	230	27	62	168	40	97	95	194	56	25	261	76	48	64
25	58	239	30	71	168	40	97	110	194	65	25	261	76	48	72
32	68	239	36	71	168	40	97	123	194	71	25	261	76	48	79
40	84	271	44	84	187	51	115	146	224	85	45	305	95	59	94
50	97	271	51	84	187	51	115	157	224	89	45	305	95	59	95
63	124	293	64	106	187	51	115	183	224	101	45	305	95	59	107





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function FC (Fail safe to close)
With manual override
With fusion spigots metric

Model:

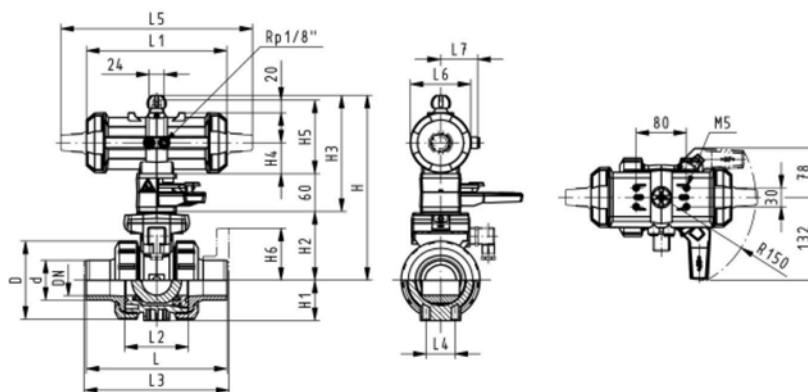
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg										
16	10	10	70	199 232 032	1.500										
20	15	10	185	199 232 033	1.500										
25	20	10	350	199 232 034	1.600										
32	25	10	700	199 232 035	1.700										
40	32	10	1000	199 232 036	2.800										
50	40	10	1600	199 232 037	3.100										
63	50	10	3100	199 232 038	4.000										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	92	194	56	130	25	261	76	48
20	50	230	27	62	168	40	97	95	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	110	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	123	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	146	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	157	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	183	224	101	230	45	305	95	59





DN10/15 - 50

SYGEF® standard Ball valve type 232 Function FO (Fail safe to open) With manual override With fusion spigots metric

Model:

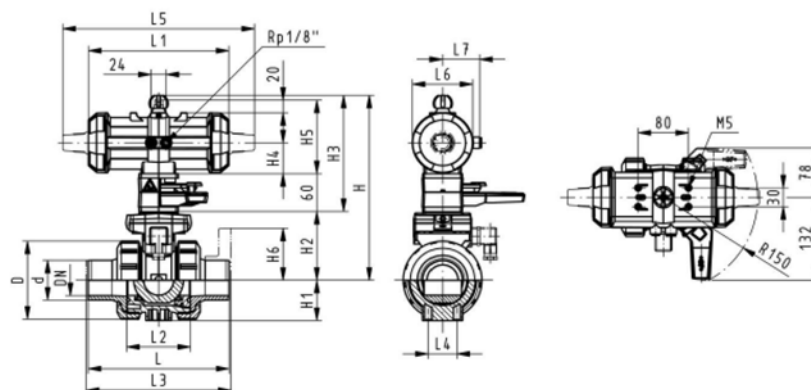
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg											
16	10	10	70	199 232 072	1.500											
20	15	10	185	199 232 073	1.500											
25	20	10	350	199 232 074	1.600											
32	25	10	700	199 232 075	1.700											
40	32	10	1000	199 232 076	2.800											
50	40	10	1600	199 232 077	3.100											
63	50	10	3100	199 232 078	4.000											

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	92	194	56	130	25	261	76	48
20	50	230	27	62	168	40	97	95	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	110	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	123	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	146	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	157	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	183	224	101	230	45	305	95	59





DN10/15 - 50

SYGEF® standard Ball valve type 232 Function DA (Double acting) With manual override With fusion spigots metric

Model:

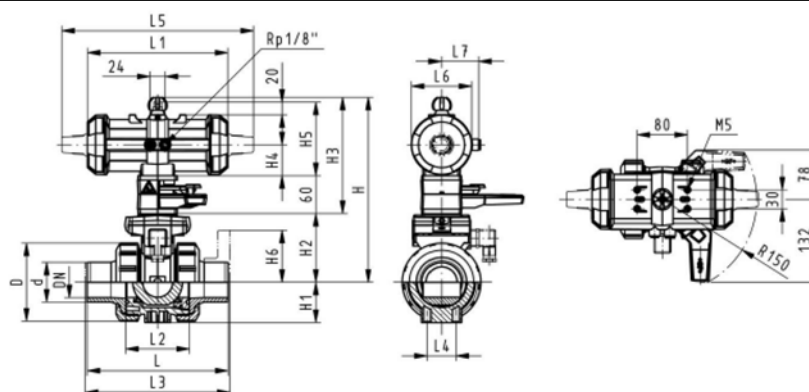
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg										
16	10	10	70	199 232 112	1.500										
20	15	10	185	199 232 113	1.500										
25	20	10	350	199 232 114	1.600										
32	25	10	700	199 232 115	1.700										
40	32	10	1000	199 232 116	2.800										
50	40	10	1600	199 232 117	3.100										
63	50	10	3100	199 232 118	4.000										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
16	50	230	27	62	168	40	97	92	194	56	130	25	261	76	48
20	50	230	27	62	168	40	97	95	194	56	130	25	261	76	48
25	58	239	30	71	168	40	97	110	194	65	150	25	261	76	48
32	68	239	36	71	168	40	97	123	194	71	160	25	261	76	48
40	84	271	44	84	187	51	115	146	224	85	180	45	305	95	59
50	97	271	51	84	187	51	115	157	224	89	200	45	305	95	59
63	124	293	64	106	187	51	115	183	224	101	230	45	305	95	59





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function FC (Fail safe to close)
With manual override
With butt fusion pigots metric

Model:

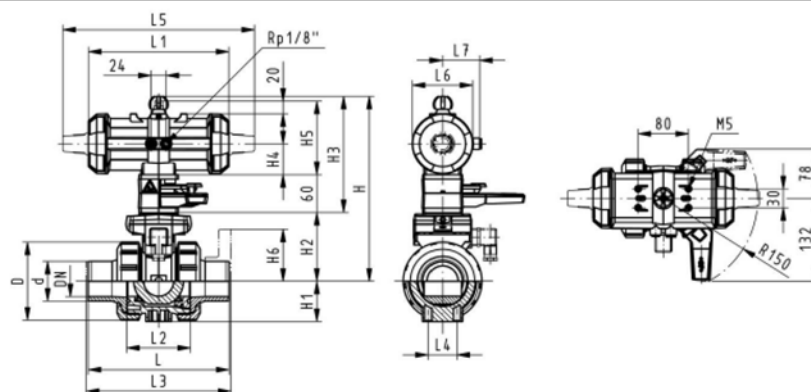
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value (Δp=1 bar) [l/min]	FPM Code	
20	15	10	185	199 232 713	
25	20	10	350	199 232 714	
32	25	10	700	199 232 715	
40	32	10	1000	199 232 716	
50	40	10	1600	199 232 717	
63	50	10	3100	199 232 718	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
20	50	230	27	62	168	40	97	130	194	56	25	261	76	48	
25	58	239	30	71	168	40	97	130	194	65	25	261	76	48	
32	68	239	36	71	168	40	97	130	194	71	25	261	76	48	
40	84	271	44	84	187	51	115	130	224	85	45	305	95	59	
50	97	271	51	84	187	51	115	130	224	89	45	305	95	59	
63	124	293	64	106	187	51	115	130	224	101	45	305	95	59	





DN10/15 - 50

SYGEF® standard Ball valve type 232 Function FO (Fail safe to open) With manual override With butt fusion spigots metric

Model:

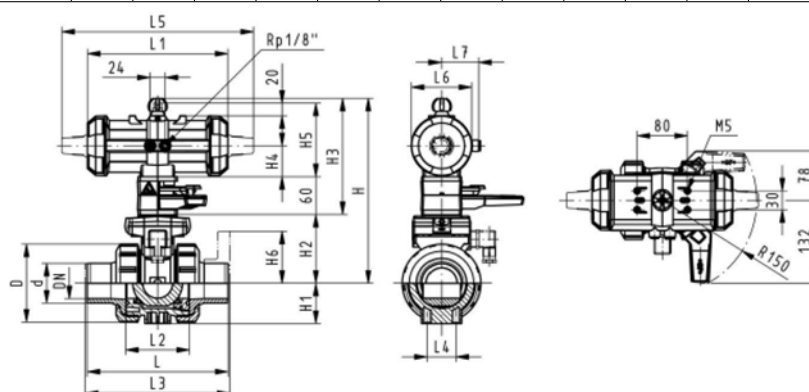
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	
20	15	10	185	199 232 753	
25	20	10	350	199 232 754	
32	25	10	700	199 232 755	
40	32	10	1000	199 232 756	
50	40	10	1600	199 232 757	
63	50	10	3100	199 232 758	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
20	50	230	27	62	168	40	97	130	194	56	25	261	76	48	
25	58	239	30	71	168	40	97	130	194	65	25	261	76	48	
32	68	239	36	71	168	40	97	130	194	71	25	261	76	48	
40	84	271	44	84	187	51	115	130	224	85	45	305	95	59	
50	97	271	51	84	187	51	115	130	224	89	45	305	95	59	
63	124	293	64	106	187	51	115	130	224	101	45	305	95	59	





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function DA (Double acting)
With manual override
With butt fusion spigots metric

Model:

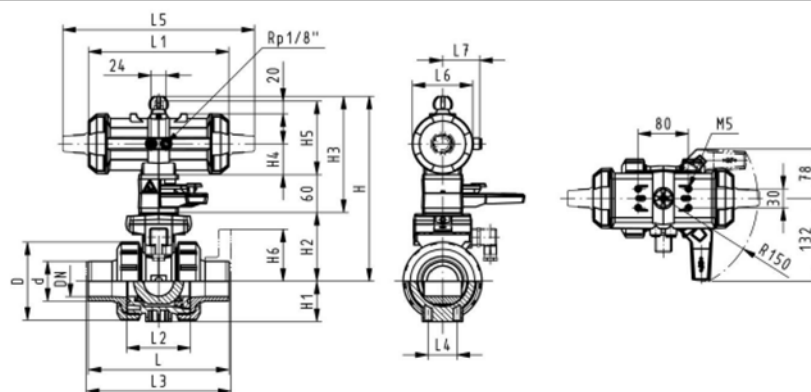
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

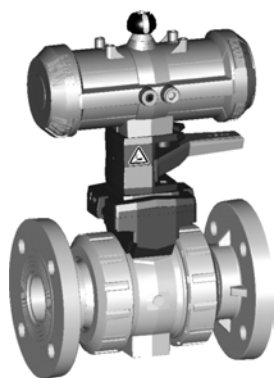
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	
20	15	10	185	199 232 793	
25	20	10	350	199 232 794	
32	25	10	700	199 232 795	
40	32	10	1000	199 232 796	
50	40	10	1600	199 232 797	
63	50	10	3100	199 232 798	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
20	50	230	27	62	168	40	97	130	194	56	25	261	76	48	
25	58	239	30	71	168	40	97	130	194	65	25	261	76	48	
32	68	239	36	71	168	40	97	130	194	71	25	261	76	48	
40	84	271	44	84	187	51	115	130	224	85	45	305	95	59	
50	97	271	51	84	187	51	115	130	224	89	45	305	95	59	
63	124	293	64	106	187	51	115	130	224	101	45	305	95	59	





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function FC (Fail safe to close)
With manual override
With fixed flanges PVDF serrated metric

Model:

- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

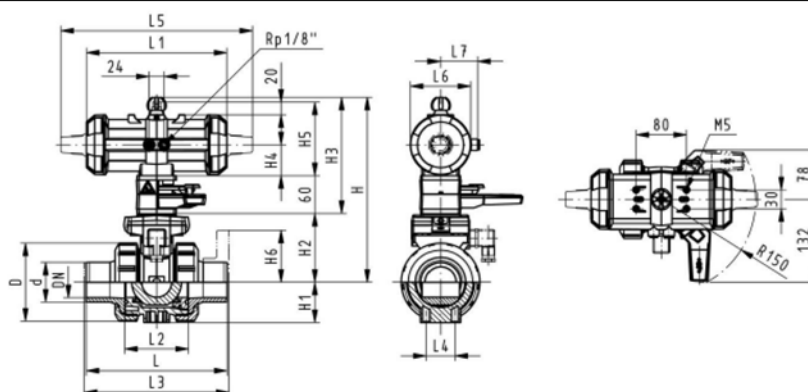
Option:

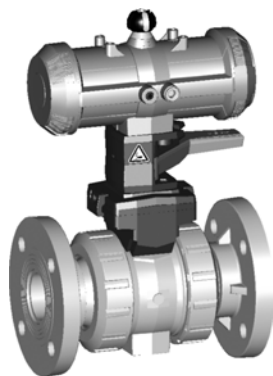
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value (Δp=1 bar) [l/min]	FPM Code	kg										
20	15	½	10	185	199 232 003	1.700										
25	20	¾	10	350	199 232 004	1.900										
32	25	1	10	700	199 232 005	2.100										
40	32	1 ¼	10	1000	199 232 006	3.400										
50	40	1 ½	10	1600	199 232 007	3.900										
63	50	2	10	3100	199 232 008	5.000										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	
20	50	230	27	62	168	40	97	48	124	194	56	130	25	261	76	
25	58	239	30	71	168	40	97	53	144	194	65	150	25	261	76	
32	68	239	36	71	168	40	97	58	154	194	71	160	25	261	76	
40	84	271	44	84	187	51	115	70	174	224	85	180	45	305	95	
50	97	271	51	84	187	51	115	75	194	224	89	200	45	305	95	
63	124	293	64	106	187	51	115	83	224	224	101	230	45	305	95	

d [mm]	L7 [mm]	
20	48	
25	48	
32	48	
40	59	
50	59	
63	59	





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function FO (Fail safe to open)
With manual override
With fixed flanges PVDF serrated metric

Model:

- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Overall length EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

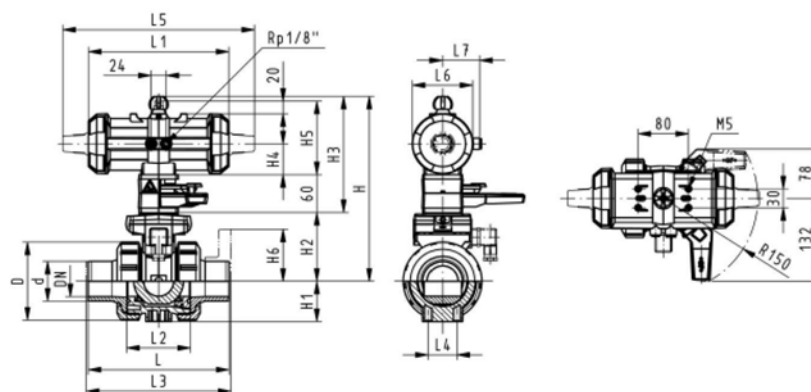
Option:

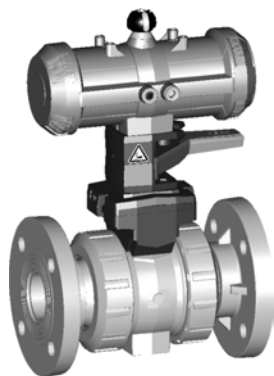
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value (Δp=1 bar) [l/min]	FPM Code	kg										
20	15	½	10	185	199 232 023	1.700										
25	20	¾	10	350	199 232 024	1.900										
32	25	1	10	700	199 232 025	2.100										
40	32	1 ¼	10	1000	199 232 026	3.400										
50	40	1 ½	10	1600	199 232 027	3.900										
63	50	2	10	3100	199 232 028	5.000										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	50	230	27	62	168	40	97	48	124	194	56	130	25	261	76
25	58	239	30	71	168	40	97	53	144	194	65	150	25	261	76
32	68	239	36	71	168	40	97	58	154	194	71	160	25	261	76
40	84	271	44	84	187	51	115	70	174	224	85	180	45	305	95
50	97	271	51	84	187	51	115	75	194	224	89	200	45	305	95
63	124	293	64	106	187	51	115	83	224	224	101	230	45	305	95

d [mm]	L7 [mm]
20	48
25	48
32	48
40	59
50	59
63	59





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function DA (Double acting)
With manual override
With fixed flanges PVDF serrated metric

Model:

- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Overall length EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

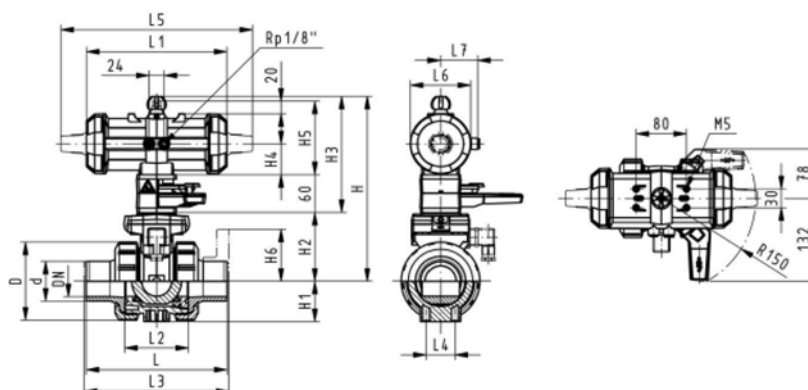
Option:

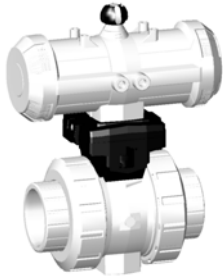
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg									
20	15	½	10	185	199 232 043	1.700									
25	20	¾	10	350	199 232 044	1.900									
32	25	1	10	700	199 232 045	2.100									
40	32	1 ¼	10	1000	199 232 046	3.400									
50	40	1 ½	10	1600	199 232 047	3.900									
63	50	2	10	3100	199 232 048	5.000									

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]
20	50	230	27	62	168	40	97	48	124	194	56	130	25	261	76
25	58	239	30	71	168	40	97	53	144	194	65	150	25	261	76
32	68	239	36	71	168	40	97	58	154	194	71	160	25	261	76
40	84	271	44	84	187	51	115	70	174	224	85	180	45	305	95
50	97	271	51	84	187	51	115	75	194	224	89	200	45	305	95
63	124	293	64	106	187	51	115	83	224	224	101	230	45	305	95

d [mm]	L7 [mm]
20	48
25	48
32	48
40	59
50	59
63	59





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function FC (Fail safe to close)
Without manual override
With fusion sockets metric

Model:

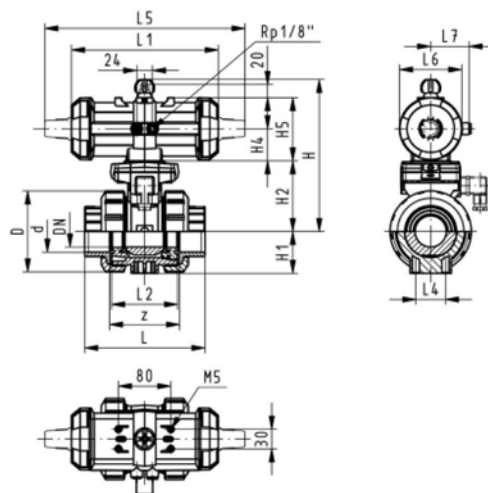
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg										
16	10	10	70	199 232 132	1.200										
20	15	10	185	199 232 133	1.200										
25	20	10	350	199 232 134	1.300										
32	25	10	700	199 232 135	1.400										
40	32	10	1000	199 232 136	2.500										
50	40	10	1600	199 232 137	2.800										
63	50	10	3100	199 232 138	3.700										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]	
16	50	167	27	62	40	97	92	194	56	25	261	76	48	64	
20	50	167	27	62	40	97	95	194	56	25	261	76	48	64	
25	58	176	30	71	40	97	110	194	65	25	261	76	48	72	
32	68	176	36	71	40	97	123	194	71	25	261	76	48	79	
40	84	210	44	84	51	115	146	224	85	45	305	95	59	94	
50	97	210	51	84	51	115	157	224	89	45	305	95	59	95	
63	124	232	64	106	51	115	183	224	101	45	305	95	59	107	





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function FO (Fail safe to open)
Without manual override
With fusion sockets metric

Model:

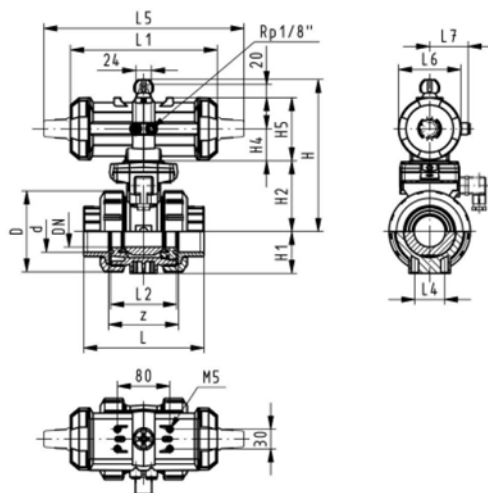
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

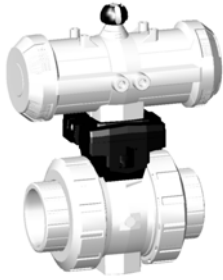
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
16	10	10	70	199 232 172	1.200	
20	15	10	185	199 232 173	1.200	
25	20	10	350	199 232 174	1.300	
32	25	10	700	199 232 175	1.400	
40	32	10	1000	199 232 176	2.500	
50	40	10	1600	199 232 177	2.800	
63	50	10	3100	199 232 178	3.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]	
16	50	167	27	62	40	97	92	194	56	25	261	76	48	64	
20	50	167	27	62	40	97	95	194	56	25	261	76	48	64	
25	58	176	30	71	40	97	110	194	65	25	261	76	48	72	
32	68	176	36	71	40	97	123	194	71	25	261	76	48	79	
40	84	210	44	84	51	115	146	224	85	45	305	95	59	94	
50	97	210	51	84	51	115	157	224	89	45	305	95	59	95	
63	124	232	64	106	51	115	183	224	101	45	305	95	59	107	





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function DA (Double acting)
Without manual override
With fusion sockets metric

Model:

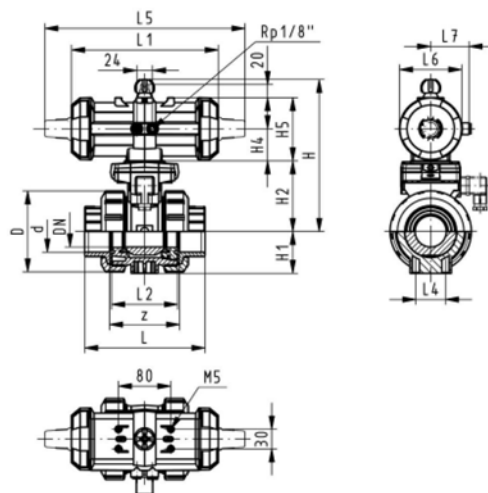
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

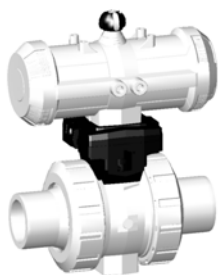
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg										
16	10	10	70	199 232 212	1.200										
20	15	10	185	199 232 213	1.200										
25	20	10	350	199 232 214	1.300										
32	25	10	700	199 232 215	1.400										
40	32	10	1000	199 232 216	2.500										
50	40	10	1600	199 232 217	2.800										
63	50	10	3100	199 232 218	3.700										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	z [mm]	
16	50	167	27	62	40	97	92	194	56	25	261	76	48	64	
20	50	167	27	62	40	97	95	194	56	25	261	76	48	64	
25	58	176	30	71	40	97	110	194	65	25	261	76	48	72	
32	68	176	36	71	40	97	123	194	71	25	261	76	48	79	
40	84	210	44	84	51	115	146	224	85	45	305	95	59	94	
50	97	210	51	84	51	115	157	224	89	45	305	95	59	95	
63	124	232	64	106	51	115	183	224	101	45	305	95	59	107	





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function FC (Fail safe to close)
Without manual override
With fusion spigots metric

Model:

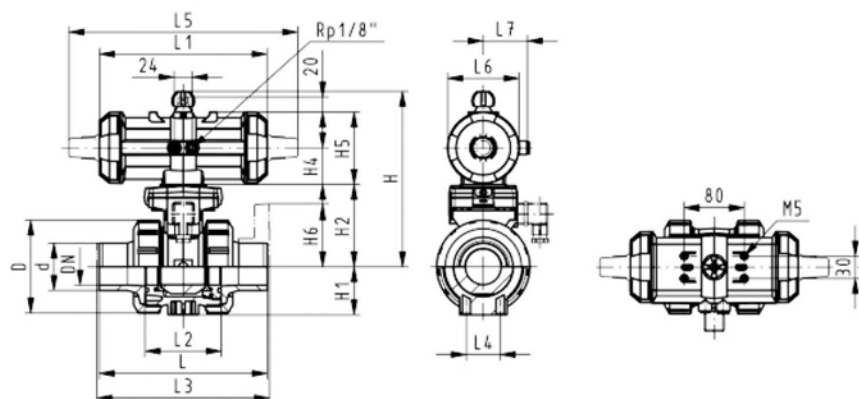
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

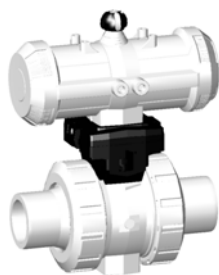
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg										
16	10	10	70	199 232 152	1.200										
20	15	10	185	199 232 153	1.200										
25	20	10	350	199 232 154	1.300										
32	25	10	700	199 232 155	1.400										
40	32	10	1000	199 232 156	2.500										
50	40	10	1600	199 232 157	2.800										
63	50	10	3100	199 232 158	3.700										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	167	27	62	40	97	114	194	56	130	25	261	76	48	
20	50	167	27	62	40	97	124	194	56	130	25	261	76	48	
25	58	176	30	71	40	97	144	194	65	150	25	261	76	48	
32	68	176	36	71	40	97	154	194	71	160	25	261	76	48	
40	84	210	44	84	51	115	174	224	85	180	45	305	95	59	
50	97	210	51	84	51	115	194	224	89	200	45	305	95	59	
63	124	232	64	106	51	115	224	224	101	230	45	305	95	59	





DN10/15 - 50

SYGEF® standard Ball valve type 232 Function FO (Fail safe to open) Without manual override With fusion spigots metric

Model:

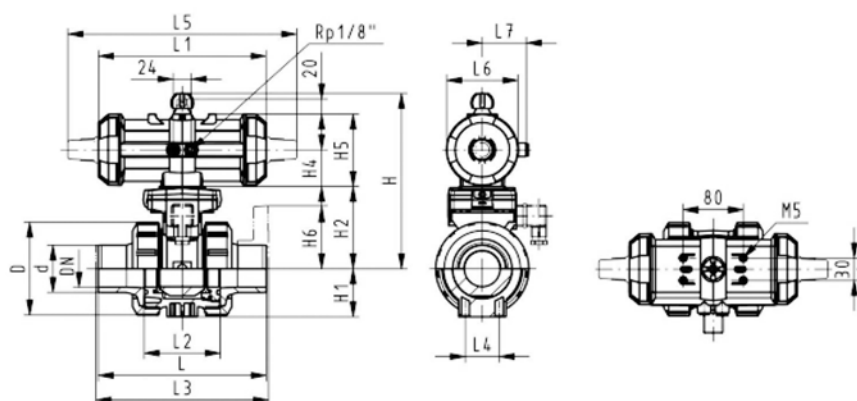
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

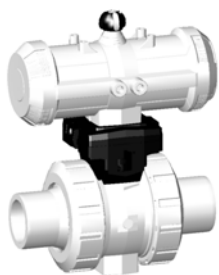
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg	
16	10	10	70	199 232 192	1.200	
20	15	10	185	199 232 193	1.200	
25	20	10	350	199 232 194	1.300	
32	25	10	700	199 232 195	1.400	
40	32	10	1000	199 232 196	2.500	
50	40	10	1600	199 232 197	2.800	
63	50	10	3100	199 232 198	3.700	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	167	27	62	40	97	114	194	56	130	25	261	76	48	
20	50	167	27	62	40	97	124	194	56	130	25	261	76	48	
25	58	176	30	71	40	97	144	194	65	150	25	261	76	48	
32	68	176	36	71	40	97	154	194	71	160	25	261	76	48	
40	84	210	44	84	51	115	174	224	85	180	45	305	95	59	
50	97	210	51	84	51	115	194	224	89	200	45	305	95	59	
63	124	232	64	106	51	115	224	224	101	230	45	305	95	59	





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function DA (Double acting)
Without manual override
With fusion spigots metric

Model:

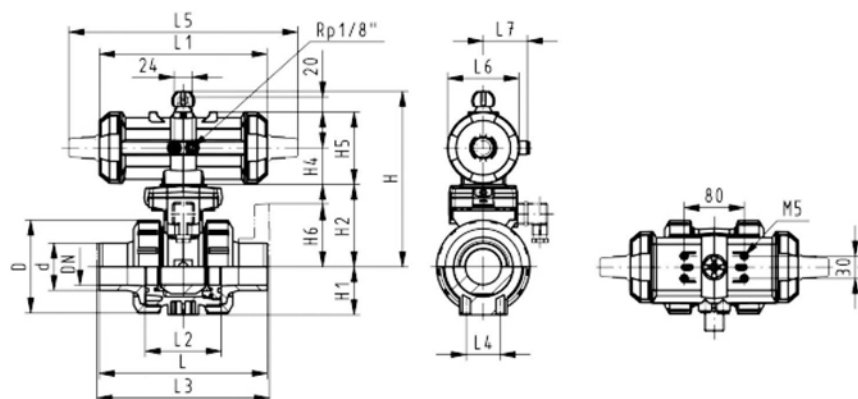
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

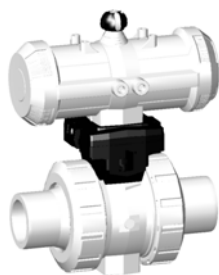
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	kg										
16	10	10	70	199 232 232	1.200										
20	15	10	185	199 232 233	1.200										
25	20	10	350	199 232 234	1.300										
32	25	10	700	199 232 235	1.400										
40	32	10	1000	199 232 236	2.500										
50	40	10	1600	199 232 237	2.800										
63	50	10	3100	199 232 238	3.700										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
16	50	167	27	62	40	97	114	194	56	130	25	261	76	48	
20	50	167	27	62	40	97	124	194	56	130	25	261	76	48	
25	58	176	30	71	40	97	144	194	65	150	25	261	76	48	
32	68	176	36	71	40	97	154	194	71	160	25	261	76	48	
40	84	210	44	84	51	115	174	224	85	180	45	305	95	59	
50	97	210	51	84	51	115	194	224	89	200	45	305	95	59	
63	124	232	64	106	51	115	224	224	101	230	45	305	95	59	





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function FC (Fail safe to close)
Without manual override
With butt fusion spigots metric

Model:

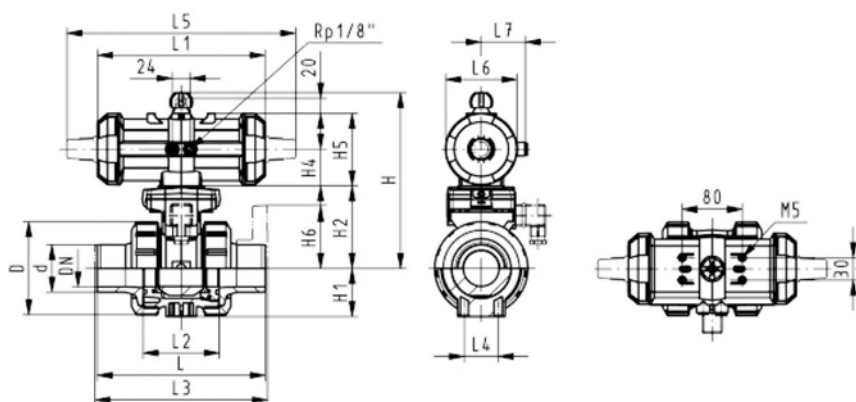
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

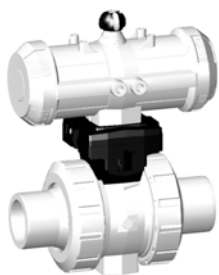
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	
20	15	10	185	199 232 833	
25	20	10	350	199 232 834	
32	25	10	700	199 232 835	
40	32	10	1000	199 232 836	
50	40	10	1600	199 232 837	
63	50	10	3100	199 232 838	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
20	50	167	27	62	40	97	130	194	56	25	261	76	48	
25	58	176	30	71	40	97	130	194	65	25	261	76	48	
32	68	176	36	71	40	97	130	194	71	25	261	76	48	
40	84	210	44	84	51	115	130	224	85	45	305	95	59	
50	97	210	51	84	51	115	130	224	89	45	305	95	59	
63	124	232	64	106	51	115	130	224	101	45	305	95	59	





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function FO (Fail safe to open)
Without manual override
With butt fusion spigots metric

Model:

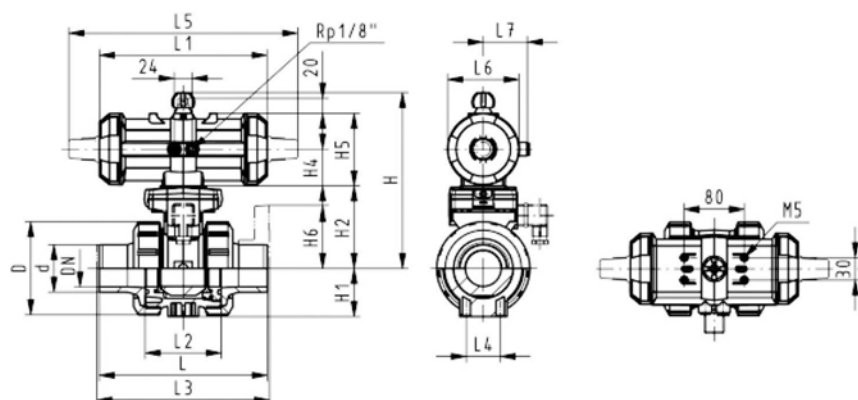
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

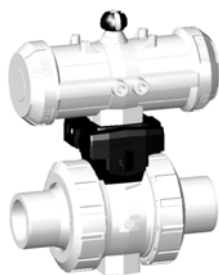
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	
20	15	10	185	199 232 873	
25	20	10	350	199 232 874	
32	25	10	700	199 232 875	
40	32	10	1000	199 232 876	
50	40	10	1600	199 232 877	
63	50	10	3100	199 232 878	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
20	50	167	27	62	40	97	130	194	56	25	261	76	48	
25	58	176	30	71	40	97	130	194	65	25	261	76	48	
32	68	176	36	71	40	97	130	194	71	25	261	76	48	
40	84	210	44	84	51	115	130	224	85	45	305	95	59	
50	97	210	51	84	51	115	130	224	89	45	305	95	59	
63	124	232	64	106	51	115	130	224	101	45	305	95	59	





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function DA (Double acting)
Without manual override
With butt fusion spigots metric

Model:

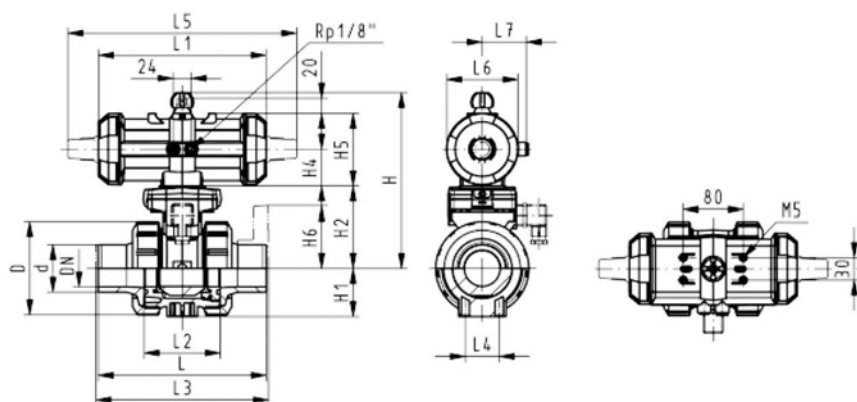
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s

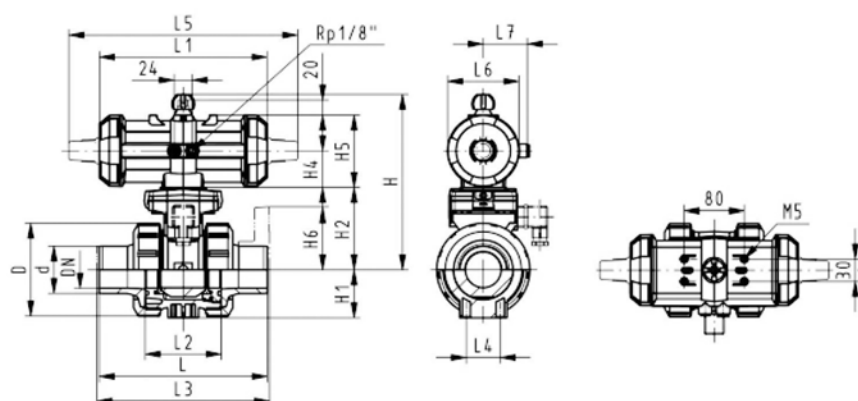
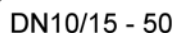
Option:

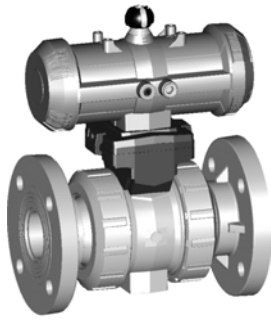
- Individual configuration of the valve (see form)

d [mm]	DN [mm]	PN	kv-value ($\Delta p=1$ bar) [l/min]	FPM Code	
20	15	10	185	199 232 913	
25	20	10	350	199 232 914	
32	25	10	700	199 232 915	
40	32	10	1000	199 232 916	
50	40	10	1600	199 232 917	
63	50	10	3100	199 232 918	

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	L [mm]	L1 [mm]	L2 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]	
20	50	167	27	62	40	97	130	194	56	25	261	76	48	
25	58	176	30	71	40	97	130	194	65	25	261	76	48	
32	68	176	36	71	40	97	130	194	71	25	261	76	48	
40	84	210	44	84	51	115	130	224	85	45	305	95	59	
50	97	210	51	84	51	115	130	224	89	45	305	95	59	
63	124	232	64	106	51	115	130	224	101	45	305	95	59	







DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function FO (Fail safe to open)
Without manual override
With fixed flanges PVDF serrated metric

Model:

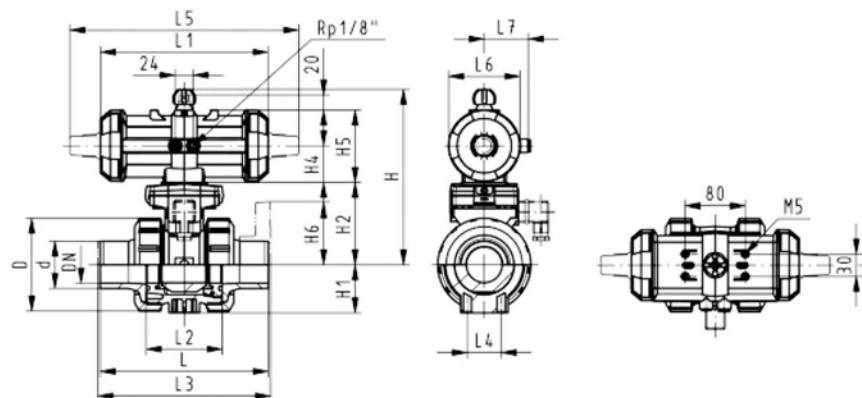
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Overall length EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

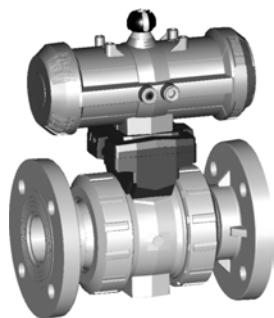
Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value (Δp=1 bar) [l/min]	FPM Code	kg										
20	15	½	10	185	199 232 083	1.400										
25	20	¾	10	350	199 232 084	1.600										
32	25	1	10	700	199 232 085	1.800										
40	32	1 ¼	10	1000	199 232 086	3.100										
50	40	1 ½	10	1600	199 232 087	3.600										
63	50	2	10	3100	199 232 088	4.700										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	167	27	62	40	97	48	124	194	56	130	25	261	76	48
25	58	176	30	71	40	97	53	144	194	65	150	25	261	76	48
32	68	176	36	71	40	97	58	154	194	71	160	25	261	76	48
40	84	210	44	84	51	115	70	174	224	85	180	45	305	95	59
50	97	210	51	84	51	115	75	194	224	89	200	45	305	95	59
63	124	232	64	106	51	115	83	224	224	101	230	45	305	95	59





DN10/15 - 50

SYGEF® standard
Ball valve type 232
Function DA (Double acting)
Without manual override
With fixed flanges PVDF serrated metric

Model:

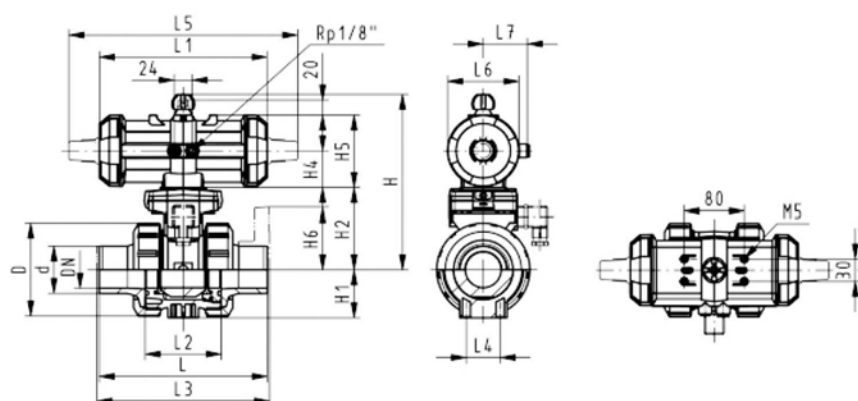
- Built on with pneumatic actuator PA11/21
- For easy installation and removal
- Integrated stainless steel mounting inserts
- Control time 90°<) 1-2 s
- Overall length EN 558-1
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

Option:

- Individual configuration of the valve (see form)

d [mm]	DN [mm]	Inch	PN	kv-value (Δp=1 bar) [l/min]	FPM Code	kg										
20	15	½	10	185	199 232 103	1.400										
25	20	¾	10	350	199 232 104	1.600										
32	25	1	10	700	199 232 105	1.800										
40	32	1 ¼	10	1000	199 232 106	3.100										
50	40	1 ½	10	1600	199 232 107	3.600										
63	50	2	10	3100	199 232 108	4.700										

d [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	L6 [mm]	L7 [mm]
20	50	167	27	62	40	97	48	124	194	56	130	25	261	76	48
25	58	176	30	71	40	97	53	144	194	65	150	25	261	76	48
32	68	176	36	71	40	97	58	154	194	71	160	25	261	76	48
40	84	210	44	84	51	115	70	174	224	85	180	45	305	95	59
50	97	210	51	84	51	115	75	194	224	89	200	45	305	95	59
63	124	232	64	106	51	115	83	224	224	101	230	45	305	95	59



Copiable

Configurator +GF+ Ball Valve Type 546 PVDF

Ball valve

A01 Ball valve 546

Material

B15 PVDF

Dimension

C05 d 16 DN 10 3/8"
C06 d 20 DN 15 1/2"
C07 d 25 DN 20 3/4"
C08 d 32 DN 25 1"
C09 d 40 DN 32 1 1/4"
C10 d 50 DN 40 1 1/2"
C11 d 63 DN 50 2"

Version

D01 standard, PTFE ball seal
D02 oil-free, PTFE ball seal (only with specific connecting parts)
D04 silicon-free, PVDF ball seal (only with specific connecting parts)

Seals

E01 EPDM seals
E02 FPM seals

Threaded inserts

F01 without threaded inserts
F02 with threaded inserts

Connecting parts

G50 PVDF Fusion socket metric
G51 PVDF Socket fusion spigot metric
G52 PVDF Butt fusion spigot IR Plus® metric
G53 PVDF Threaded socket NPT
G64 Fixed flange PVDF serrated metric

Multi-functional module

I01 No multi-functional module
I02 Empty module
I03 Module with 2 limit switches Ag, Ni
I04 Module with 2 limit switches Au
I05 Module with 2 inductive switches Namur
I06 Module with 2 inductive switches PNP
I07 Module with 2 inductive switches NPN

Handle

K01 Standard handle red
K02 Standard handle black
K11 Multi-functional handle red

Mounting plate

L01 without mounting plate
L02 with mounting plate

A01	B15	C	D	E	F	G	G	I	K	L
-----	-----	---	---	---	---	---	---	---	---	---

left

right

You will find a large selection of different versions in our range of products. New system elements also provide you with new opportunities for use. In order for us to supply exactly the ball valve you need for your application, we put together a selection menu for you (the maximum working pressure of the whole valve is determined by the maximum permissible nominal pressure of the connecting part).

We supply what you put together.

Copiable

GF ball valve type 546 with pneumatic actuator

It's so easy to configure the type 546:
 With the configurator, you have a choice of new pneumatic actuators PA11 and PA21 in 2 optimized sizes including a large range of accessories.

We supply what you put together.

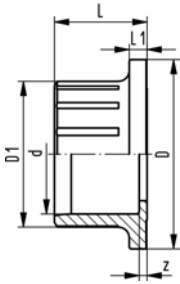


Pneumatic actuators PA11/PA21			
P01	Fail safe to close PA11/PA21		
P02	Fail safe to open PA11/21		
P03	Double acting PA11/21		
P30	Fail safe to close PA30/90		
P31	Fail safe to open PA30/90		
P32	Double acting PA30/90		
Manual override			
Q01	without manual override		
Q02	with manual override		
Stroke limiter			
R01	without stroke limiter		
R02	with stroke limiter		
P	Q	R	

Valve ends ball valve type 546

Valve end 546 PVC-U (G01)

With solvent cement socket metric



d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
16	16	161 490 666	0.009	38	23	18	4	4	
20	16	161 490 667	0.011	38	27	20	4	4	
25	16	161 490 668	0.016	44	33	23	5	4	
32	16	161 490 669	0.025	53	41	26	5	4	
40	16	161 490 670	0.043	65	51	31	5	5	
50	16	161 490 671	0.064	77	62	34	6	3	
63	16	161 490 672	0.119	99	77	41	7	3	
75	16	161 490 673	0.227	125	92	49	9	4	
90	16	161 490 674	0.376	150	110	57	10	5	
110	16	161 490 675	0.639	180	134	69	11	5	

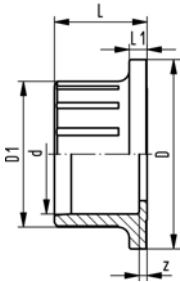


Valve end 546 PVC-U

With solvent cement socket metric

Model:

- Valve end 546 PVC-U to retrofit the ball valve 546 according the same z-dimension as for type 370 with nuts

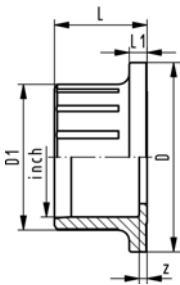


d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
90	16	161 491 084	0.399	150	110	64	10	12	
110	16	161 491 085	0.695	180	134	80	11	16	

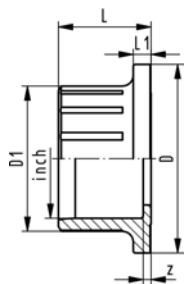


Valve end 546 PVC-U (G03)

With solvent cement socket Inch ASTM

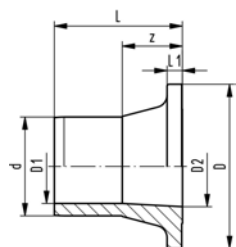


Inch	d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
3/8	16	16	161 490 712	0.012	38	24	25	4	6	
1/2	20	16	161 490 713	0.014	38	30	25	4	2	
3/4	25	16	161 490 714	0.020	44	35	28	5	3	
1	32	16	161 490 715	0.031	53	43	31	5	3	
1 1/4	40	16	161 490 716	0.046	65	53	34	5	3	
1 1/2	50	16	161 490 717	0.067	77	60	38	6	3	
2	63	16	161 490 718	0.118	99	73	41	7	3	
2 1/2	75	16	161 490 719	0.241	125	92	49	9	4	
3	90	16	161 490 720	0.394	150	110	57	10	9	
4	110	16	161 490 721	0.582	180	134	69	11	11	



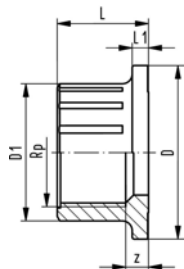
Valve end 546 PVC-U (G04) With solvent cement socket Inch BS

Inch	d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
3/8	16	16	161 490 734	0.009	38	23	18	4	2	
1/2	20	16	161 490 735	0.009	38	27	20	4	2	
3/4	25	16	161 490 736	0.013	44	33	23	5	2	
1	32	16	161 490 737	0.022	53	41	26	5	2	
1 1/4	40	16	161 490 738	0.036	65	51	31	5	2	
1 1/2	50	16	161 490 739	0.071	77	62	34	6	4	
2	63	16	161 490 740	0.135	99	77	41	7	5	
	75	16	161 490 673	0.227	125	92	49	9	4	
3	90	16	161 490 742	0.390	150	110	57	10	6	
4	110	16	161 490 743	0.577	180	134	69	11	5	



Valve end 546 PVC-U (G05) With solvent cement spigot metric

d [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	z [mm]	
16	16	161 490 701	0.011	38	10	16	29	4	15	
20	16	161 490 702	0.014	38	14	16	34	4	18	
25	16	161 490 703	0.021	44	19	20	39	5	20	
32	16	161 490 704	0.033	53	24	26	42	5	20	
40	16	161 490 705	0.050	65	31	33	45	5	19	
50	16	161 490 706	0.085	77	39	41	53	6	22	
63	16	161 490 707	0.161	99	49	51	62	7	24	
75	16	161 490 708	0.302	125	58	65	74	9	30	
90	16	161 490 709	0.467	150	70	90	80	10	28	
110	16	161 490 710	0.747	180	86	100	88	11	27	

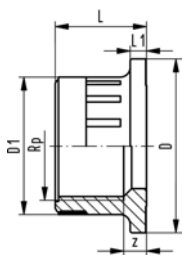


Valve end 546 PVC-U (G06) With threaded socket Rp

Model:

- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVC-U

Rp [inch]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
3/8	10	161 490 690	0.011	38	24	20	4	7	
1/2	10	161 490 691	0.013	38	28	22	4	6	
3/4	10	161 490 692	0.019	44	34	25	5	7	
1	10	161 490 693	0.031	53	42	28	5	7	
1 1/4	10	161 490 694	0.047	65	52	30	5	7	
1 1/2	10	161 490 695	0.081	77	63	32	6	9	
2	10	161 490 696	0.150	99	78	38	7	10	
2 1/2	10	161 490 697	0.255	125	58	49	9	18	
3	10	161 490 698	0.436	150	110	57	10	23	
4	10	161 490 699	0.645	180	134	69	11	29	

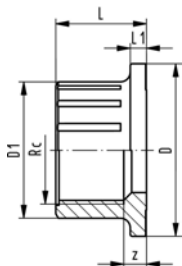


Valve end 546 PVC-U (G07) With threaded socket Rp reinforced

Model:

- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PVC-U

Rp [inch]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
3/8	16	161 490 825	0.013	38	24	20	4	7	
1/2	16	161 490 826	0.016	38	28	22	4	6	
3/4	16	161 490 827	0.023	44	34	25	5	7	
1	16	161 490 828	0.040	53	42	28	5	7	
1 1/4	16	161 490 829	0.058	65	52	30	5	7	
1 1/2	16	161 490 830	0.097	77	63	32	6	9	
2	16	161 490 831	0.166	99	78	38	7	10	

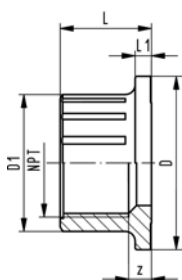


Valve end 546 PVC-U (G08) With threaded socket Rc

Model:

- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVC-U

Rc [inch]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
1/2	10	161 490 755	0.013	38	28	22	4	5	
3/4	10	161 490 756	0.019	44	34	25	5	7	
1	10	161 490 757	0.033	53	42	28	5	7	
1 1/4	10	161 490 758	0.047	65	52	30	5	6	
1 1/2	10	161 490 759	0.081	77	63	32	6	8	
2	10	161 490 760	0.150	99	78	38	7	9	
2 1/2	10	161 490 761	0.261	125	58	49	9	18	
3	10	161 490 762	0.444	150	110	57	10	23	
4	10	161 490 763	0.682	180	134	69	11	29	

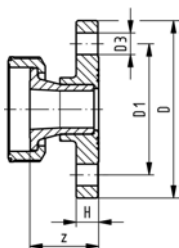
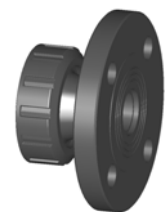


Valve end 546 PVC-U (G09) With threaded socket NPT

Model:

- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVC-U

NPT [inch]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
3/8	10	161 490 723	0.014	38	26	21	4	7	
1/2	10	161 490 724	0.019	38	33	21	4	4	
3/4	10	161 490 725	0.026	44	39	23	5	5	
1	10	161 490 726	0.043	53	47	28	5	6	
1 1/4	10	161 490 727	0.064	65	57	31	5	7	
1 1/2	10	161 490 728	0.093	77	65	34	6	11	
2	10	161 490 729	0.157	99	77	41	7	17	
2 1/2	10	161 490 730	0.287	125	58	49	9	15	
3	10	161 490 731	0.451	150	110	57	10	21	
4	10	161 490 732	0.692	180	134	69	11	31	

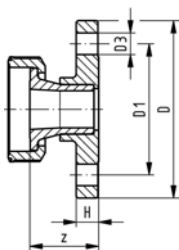


Valve end 546 PVC-U (G60) Assembly with fixed flange serrated PVC-U metric

Model:

- Joint made with special adhesive Tangit for PVC-U
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

d [mm]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D3 [mm]	H [mm]	z [mm]	
20	15	16	161 486 360	0.131	95	65	14	12	37	
25	20	16	161 486 361	0.175	105	75	14	13	42	
32	25	16	161 486 362	0.256	115	85	14	15	45	
40	32	16	161 486 363	0.417	140	100	18	17	48	
50	40	16	161 486 364	0.544	150	110	18	18	56	
63	50	16	161 486 365	0.861	165	125	18	20	65	

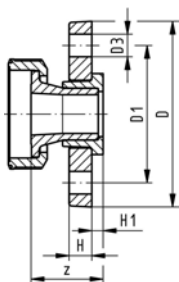


Valve end 546 PVC-U (G61) Assembly with fixed flange flat PVC-U metric

Model:

- Joint made with special adhesive Tangit for PVC-U
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

d [mm]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D3 [mm]	H [mm]	z [mm]	
20	15	16	161 486 295	0.136	95	65	14	12	37	
25	20	16	161 486 296	0.175	105	75	14	13	42	
32	25	16	161 486 297	0.254	115	85	14	15	45	
40	32	16	161 486 298	0.417	140	100	18	17	48	
50	40	16	161 486 299	0.541	150	110	18	18	56	
63	50	16	161 486 300	0.861	165	125	18	20	65	

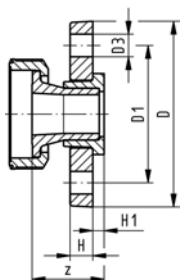
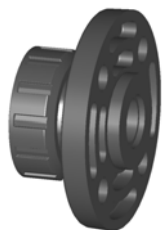


Valve end 546 PVC-U (G70) Assembly with backing flange PVC-U metric

Model:

- Joint made with special adhesive Tangit for PVC-U
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

d [mm]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	z [mm]	
20	15	16	161 486 265	0.110	95	65	14	11	6	37	
25	20	16	161 486 266	0.155	105	75	14	12	7	42	
32	25	16	161 486 267	0.230	115	85	14	14	7	45	
40	32	16	161 486 268	0.360	140	100	18	15	8	48	
50	40	16	161 486 269	0.500	150	110	18	16	8	56	
63	50	16	161 486 270	0.770	165	125	18	18	9	65	
 75	65	10	161 486 271	1.429	185	145	18	19	10	77	
 90	80	10	161 486 272	2.109	200	160	18	20	11	85	
 110	100	10	161 486 273	3.067	220	180	18	22	12	93	

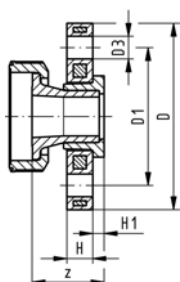


Valve end 546 PVC-U (G71) Assembly with backing flange PVC-U Inch ANSI

Model:

- Joint made with special adhesive Tangit for PVC-U
- Connecting dimensions: ANSI/ASME B 16.5, ASTM D 4024, BS 1560 (bolt circle 150 lbs)

Inch	d [mm]	PN	Code	kg	D [mm]	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	z [mm]	
½	20	16	161 486 275	0.110	95	60	14	11	6	37	
¾	25	16	161 486 276	0.150	105	70	14	12	7	42	
1	32	16	161 486 277	0.225	115	79	14	14	7	45	
1 ¼	40	16	161 486 278	0.375	140	89	18	15	8	48	
1 ½	50	16	161 486 279	0.495	150	98	18	16	8	56	
2	63	16	161 486 280	0.760	165	121	18	18	9	65	
2 ½	75	10	161 486 281	1.429	185	140	19	19	10	77	
3	90	10	161 486 282	2.109	200	152	19	20	11	85	
4	110	10	161 486 283	3.067	220	190	19	22	12	93	

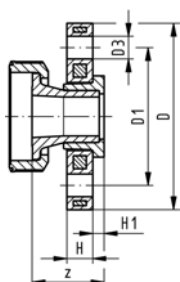


Valve end 546 PVC-U (G72) Assembly with backing flange PP-St metric

Model:

- Joint made with special adhesive Tangit for PVC-U
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

d [mm]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	z [mm]	
20	15	16	161 486 285	0.265	95	65	14	12	6	37	
25	20	16	161 486 286	0.325	105	75	14	12	7	42	
32	25	16	161 486 287	0.530	115	85	14	16	7	45	
40	32	16	161 486 288	0.815	140	100	18	16	8	48	
50	40	16	161 486 289	1.070	150	110	18	18	8	56	
63	50	16	161 486 290	1.395	165	125	18	18	9	65	
75	65	16	161 486 291	2.319	185	145	18	18	10	77	
90	80	16	161 486 292	2.905	200	160	18	20	11	85	
110	100	16	161 486 293	4.079	220	180	18	20	12	93	

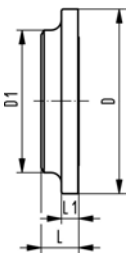


Valve end 546 PVC-U (G73) Assembly with backing flange PP-St inch

Model:

- Joint made with special adhesive Tangit for PVC-U
- Connecting dimensions: ANSI/ASME B 16.5, ASTM D 4024, BS 1560 (bolt circle 150 lbs)

Inch	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	z [mm]	
½	15	16	161 486 425	0.250	95	60	16	12	6	37	
¾	20	16	161 486 426	0.310	105	70	16	12	7	42	
1	25	16	161 486 427	0.520	115	79	16	16	7	45	
1 ¼	32	16	161 486 428	0.835	140	89	16	16	8	48	
1 ½	40	16	161 486 429	1.110	150	98	16	18	8	56	
2	50	16	161 486 430	1.385	165	121	19	18	9	65	
2 ½	65	16	161 486 431	2.319	185	140	19	18	10	77	
3	80	16	161 486 432	2.905	200	152	19	20	11	85	
4	100	16	161 486 433	4.079	229	190	19	20	12	93	

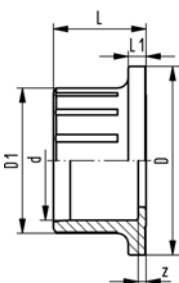


Valve end blank 546 PVC-U (G80)

Model:

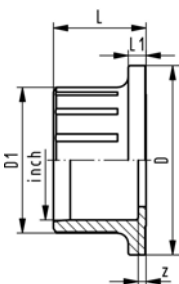
- Jointing face flat

d [mm]	DN [mm]	Inch	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	
20	15	½	16	161 490 837	0.009	38	23	8	4	
25	20	¾	16	161 490 838	0.013	44	33	10	5	
32	25	1	16	161 490 839	0.021	53	41	11	5	
40	32	1 ¼	16	161 490 840	0.034	65	51	11	5	
50	40	1 ½	16	161 490 841	0.057	77	62	14	6	
63	50	2	16	161 490 842	0.113	99	77	17	7	



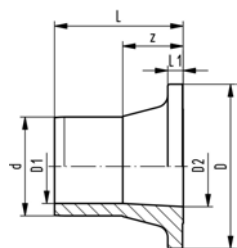
Valve end 546 PVC-C (G11) With solvent cement socket metric

d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
16	16	163 481 275	0.009	38	23	18	4	4	
20	16	163 481 276	0.011	38	27	20	4	4	
25	16	163 481 277	0.016	44	33	23	5	4	
32	16	163 481 278	0.025	53	41	26	5	4	
40	16	163 481 279	0.043	65	51	31	5	5	
50	16	163 481 280	0.064	77	62	34	6	3	
63	16	163 481 281	0.119	99	77	41	7	3	
75	16	163 481 282	0.249	125	92	49	9	4	
90	16	163 481 283	0.416	150	110	57	10	5	
110	16	163 481 284	0.705	180	134	69	11	5	



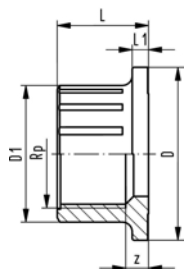
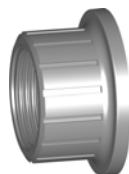
Valve end 546 PVC-C (G13) With solvent cement socket Inch ASTM

Inch	d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
¾	16	16	163 481 311	0.012	38	24	25	4	6	
½	20	16	163 481 312	0.014	38	30	25	4	2	
¾	25	16	163 481 313	0.020	44	35	28	5	3	
1	32	16	163 481 314	0.031	53	43	31	5	3	
1 ¼	40	16	163 481 315	0.046	65	53	34	5	3	
1 ½	50	16	163 481 316	0.067	77	60	38	6	3	
2	63	16	163 481 317	0.118	99	73	41	7	3	
2 ½	75	16	163 481 318	0.266	125	92	49	9	4	
3	90	16	163 481 319	0.394	150	110	57	10	8	
4	110	16	163 481 320	0.651	180	134	69	11	11	



Valve end 546 PVC-C (G14) With solvent cement spigot metric

d [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	z [mm]
16	16	163 481 300	0.012	38	10	16	29	4	15
20	16	163 481 301	0.015	38	14	16	34	4	18
25	16	163 481 302	0.023	44	19	20	39	5	20
32	16	163 481 303	0.040	53	24	26	42	5	20
40	16	163 481 304	0.054	65	31	33	45	5	19
50	16	163 481 305	0.093	77	39	41	53	6	22
63	16	163 481 306	0.177	99	49	51	62	7	24
75	16	163 481 307	0.333	125	58	65	74	9	30
90	16	163 481 308	0.515	150	70	90	80	10	28
110	16	163 481 309	0.822	180	86	100	88	11	27

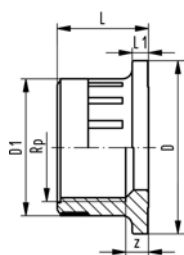


Valve end 546 PVC-C (G15) With threaded socket Rp

Model:

- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVC-C

Rp [inch]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]
3/8	10	163 481 286	0.011	38	24	20	4	7
1/2	10	163 481 287	0.013	38	28	22	4	6
3/4	10	163 481 288	0.019	44	34	25	5	7
1	10	163 481 289	0.031	53	42	28	5	7
1 1/4	10	163 481 290	0.047	65	52	30	5	7
1 1/2	10	163 481 291	0.081	77	63	32	6	9
2	10	163 481 292	0.150	99	78	38	7	10
2 1/2	10	163 481 293	0.282	125	58	49	9	19
3	10	163 481 294	0.481	150	110	57	10	23
4	10	163 481 295	0.735	180	134	69	11	29

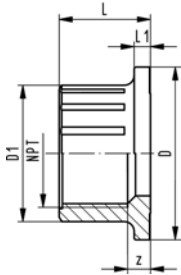


Valve end 546 PVC-C (G16) With threaded socket Rp reinforced

Model:

- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PVC-C

Rp [inch]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]
3/8	16	163 481 400	0.014	38	24	20	4	7
1/2	16	163 481 401	0.018	38	28	22	4	6
3/4	16	163 481 402	0.025	44	34	25	5	7
1	16	163 481 403	0.044	53	42	28	5	7
1 1/4	16	163 481 404	0.064	65	52	30	5	7
1 1/2	16	163 481 405	0.106	77	63	32	6	9
2	16	163 481 406	0.182	99	78	38	7	10

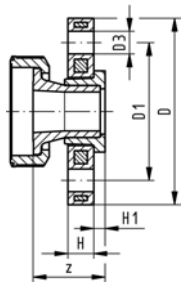


Valve end 546 PVC-C (G17) With threaded socket NPT

Model:

- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVC-C

NPT [inch]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
3/8	10	163 481 322	0.014	38	26	21	4	7	
1/2	10	163 481 323	0.019	38	33	21	4	4	
3/4	10	163 481 324	0.026	44	39	23	5	5	
1	10	163 481 325	0.043	53	47	28	5	6	
1 1/4	10	163 481 326	0.064	65	57	31	5	7	
1 1/2	10	163 481 327	0.093	77	65	34	6	11	
2	10	163 481 328	0.157	99	77	41	7	17	
2 1/2	10	163 481 329	0.317	125	58	49	9	15	
3	10	163 481 330	0.497	150	110	57	10	21	
4	10	163 481 331	0.763	180	134	69	11	31	

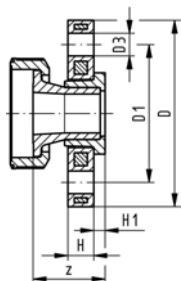


Valve end 546 PVC-C (G72) Assembly with backing flange PP-St metric

Model:

- Joint made with special adhesive Tangit for PVC-C
- Connecting dimensions: ISO 7005 / EN 1092 / DIN 2501 PN10 / BS4504

d [mm]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	z [mm]	
20	15	16	163 481 412	0.265	95	65	14	12	6	37	
25	20	16	163 481 413	0.330	105	75	14	12	7	42	
32	25	16	163 481 414	0.540	115	85	14	16	7	45	
40	32	16	163 481 415	0.820	140	100	18	16	8	48	
50	40	16	163 481 416	1.075	150	110	18	18	8	56	
63	50	16	163 481 417	1.435	165	125	18	18	9	65	
75	65	16	163 481 418	2.459	185	145	18	18	10	77	
90	80	16	163 481 419	3.309	200	160	18	20	11	85	
110	100	16	163 481 420	4.557	220	180	18	20	12	93	

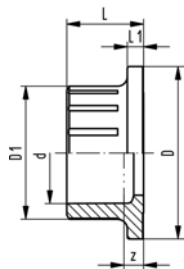
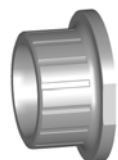


Valve end 546 PVC-C (G73) Assembly with backing flange PP-St Inch ANSI

Model:

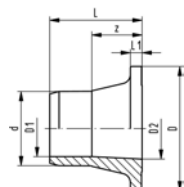
- Joint made with special adhesive Tangit for PVC-C
- Connecting dimensions: ANSI/ASME B 16.5, ASTM D 4024, BS 1560 (bolt circle 150 lbs)

Inch	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	z [mm]	
1/2	15	16	163 481 425	0.255	95	60	16	12	6	37	
3/4	20	16	163 481 426	0.316	105	70	16	12	7	42	
1	25	16	163 481 427	0.530	115	79	16	16	7	45	
1 1/4	32	16	163 481 428	0.835	140	89	16	16	8	47	
1 1/2	40	16	163 481 429	1.135	150	98	16	18	8	56	
2	50	16	163 481 430	1.435	165	121	19	18	9	65	
2 1/2	65	16	163 481 431	2.459	185	140	19	18	10	77	
3	80	16	163 481 432	3.309	200	152	19	20	11	85	
4	100	16	163 481 433	4.557	229	190	19	20	12	93	



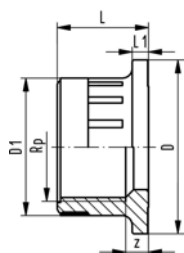
Valve end 546 PP-H (G30) With fusion socket metric

d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
16	10	167 482 900	0.006	38	23	19	4	5	
20	10	167 482 901	0.007	38	27	20	4	5	
25	10	167 482 902	0.011	44	33	22	5	6	
32	10	167 482 903	0.017	53	41	24	5	6	
40	10	167 482 904	0.027	65	51	26	5	7	
50	10	167 482 905	0.040	77	62	29	6	8	
63	10	167 482 906	0.070	99	77	34	7	6	
75	10	167 482 907	0.168	125	92	49	9	20	
90	10	167 482 908	0.272	150	110	57	10	24	
110	10	167 482 909	0.467	180	134	69	11	30	



Valve end 546 PP-H (G32) With socket fusion spigot metric

d [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	z [mm]	
16	10	167 482 922	0.007	38	10	16	27	4	13	14	
20	10	167 482 923	0.009	38	14	16	32	4	14	18	
25	10	167 482 924	0.013	44	19	20	37	5	16	21	
32	10	167 482 925	0.021	53	24	26	40	5	18	22	
40	10	167 482 926	0.032	65	31	33	43	5	20	23	
50	10	167 482 927	0.055	77	39	41	51	6	23	28	
63	10	167 482 928	0.103	99	49	51	60	7	27	33	
75	10	167 482 929	0.195	125	58	65	72	9	48	24	
90	10	167 482 930	0.307	150	70	90	78	10	48	29	
110	10	167 482 931	0.495	180	86	100	86	11	54	32	

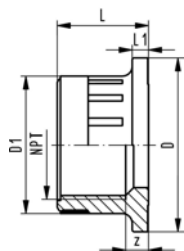


Valve end 546 PP-H (G33) With threaded socket Rp reinforced

Model:

- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PP

Rp [inch]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
3/8	16	167 482 911	0.008	38	24	20	4	7	
1/2	16	167 482 912	0.009	38	28	21	4	6	
3/4	16	167 482 913	0.012	44	34	23	5	7	
1	16	167 482 914	0.024	53	42	28	5	7	
1 1/4	16	167 482 915	0.037	65	52	31	5	7	
1 1/2	16	167 482 916	0.052	77	63	34	6	9	
2	16	167 482 917	0.091	99	78	41	7	10	

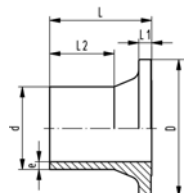


Valve end 546 PP-H (G34) With threaded socket NPT reinforced

Model:

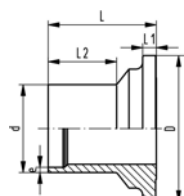
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to PP

NPT [inch]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
3/8	16	167 482 966	0.008	38	26	20	4	7	
1/2	16	167 482 967	0.009	38	33	21	4	4	
3/4	16	167 482 968	0.012	44	39	23	5	5	
1	16	167 482 969	0.024	53	47	28	5	6	
1 1/4	16	167 482 970	0.037	65	57	31	5	7	
1 1/2	16	167 482 971	0.052	77	65	34	6	11	
2	16	167 482 972	0.091	99	77	41	7	17	



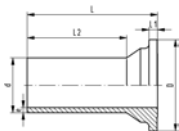
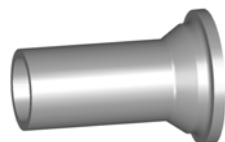
Valve end 546 PP-H (G35) With butt fusion spigot IR-Plus® SDR11 metric

d [mm]	FM	PN	Code	kg	D [mm]	e [mm]	L [mm]	L1 [mm]	L2 [mm]	
20	IR	10	167 482 945	0.007	38	1,9	37	4	25	
25	IR	10	167 482 946	0.011	44	2,3	39	5	25	
32	IR	10	167 482 947	0.017	53	3	40	5	25	
40	IR	10	167 482 948	0.028	65	3,7	43	5	25	
50	IR	10	167 482 949	0.045	77	4,6	51	6	25	
63	IR	10	167 482 950	0.096	99	5,8	60	7	28	
75	IR	10	167 482 951	0.193	125	8.2	65	9	41	
90	IR	10	167 482 952	0.270	150	9.9	62	10	33	
110	IR	10	167 482 953	0.421	180	12	69	11	37	



Valve end 546 PP-H (G36) With butt fusion spigot SDR17,6 metric

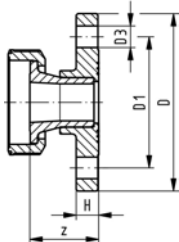
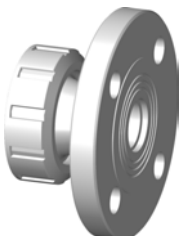
d [mm]	PN	Code	kg	D [mm]	e [mm]	L [mm]	L1 [mm]	L2 [mm]	
40	6	167 482 937	0.032	65	2,3	43	5	25	
50	6	167 482 938	0.053	77	2,9	51	6	25	
63	6	167 482 939	0.099	99	3,6	60	7	28	
75	6	167 482 940	0.189	125	4.65	65	9	41	
90	6	167 482 941	0.265	150	5.5	62	10	33	
110	6	167 482 942	0.414	180	6.75	69	11	37	



Valve end 546 PP-H (G37)

With butt fusion spigot long SDR11 metric

d [mm]	PN	Code	kg	D [mm]	e [mm]	L [mm]	L1 [mm]	L2 [mm]	
20	10	167 482 956	0.012	38	2,3	69	4	53	
25	10	167 482 957	0.019	44	2,3	76	5	58	
32	10	167 482 958	0.029	53	3	76	5	58	
40	10	167 482 959	0.048	65	3,7	82	5	61	
50	10	167 482 960	0.082	77	4,6	91	6	63	
63	10	167 482 961	0.157	99	5,8	110	7	77	



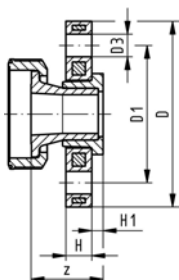
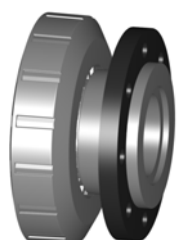
Valve end 546 PP-H (G63)

With fixed flange serrated PP-H metric

Model:

- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

d [mm]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D3 [mm]	H [mm]	z [mm]	
20	15	10	167 484 160	0.090	94	65	14	12	37	
25	20	10	167 484 161	0.115	103	75	14	13	42	
32	25	10	167 484 162	0.170	115	85	14	14	45	
40	32	10	167 484 163	0.275	138	100	18	15	48	
50	40	10	167 484 164	0.355	148	110	18	16	56	
63	50	10	167 484 165	0.565	163	125	18	18	65	



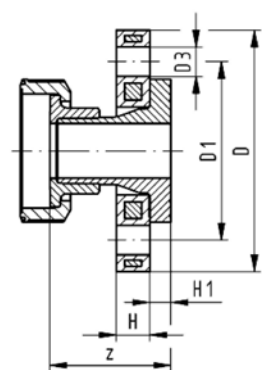
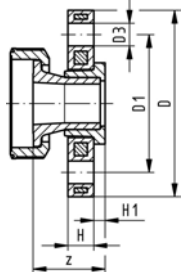
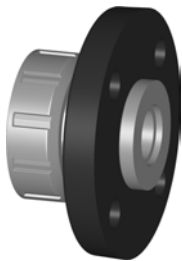
Valve end 546 PP-H (G72)

Assembly with backing flange PP-St metric

Model:

- Overall length according to EN 558-1
- Connecting dimensions: ISO 7005, EN 1092, BS 4504, DIN 2501; bolt circle PN 10

d [mm]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	z [mm]	
75	65	10	167 484 418	1.834	185	145	18	18	16	77	
 90	80	10	167 484 419	2.592	200	160	18	20	17	85	
 110	100	10	167 484 420	3.272	220	180	18	20	18	93	

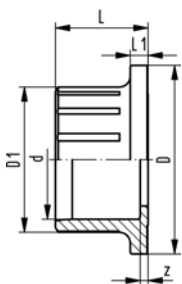
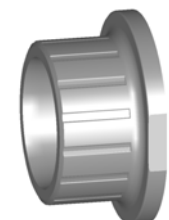


Valve end 546 PP-H (G73) With backing flange PP-St inch ANSI

Model:

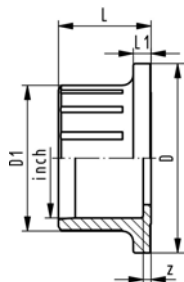
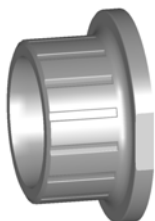
- DN15-50 overall length **NOT** according to EN 558-1
- DN 65-100 overall length according to EN 558-1
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

Inch	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D3 [mm]	H [mm]	H1 [mm]	z [mm]	
1/2	15	10	167 484 065	0.224	95	60	16	12	7	54	
3/4	20	10	167 484 066	0.305	105	70	16	12	9	55	
1	25	10	167 484 067	0.505	115	79	16	16	10	58	
1 1/4	32	10	167 484 068	0.810	140	89	16	16	11	60	
1 1/2	40	10	167 484 069	1.050	150	98	19	18	12	66	
2	50	10	167 484 070	1.290	165	121	19	18	14	68	
2 1/2	65	10	167 484 071	2.161	185	140	19	18	16	77	
3	80	10	167 484 072	2.818	200	152	19	20	17	85	
4	100	10	167 484 073	3.741	229	190	19	20	18	93	



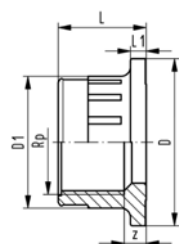
Valve end 546 ABS (G20) With solvent cement socket metric

d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
16	10	169 480 775	0.006	38	23	18	4	4	
20	10	169 480 776	0.008	38	27	20	4	4	
25	10	169 480 777	0.012	44	33	22	5	4	
32	10	169 480 778	0.019	53	41	26	5	4	
40	10	169 480 779	0.031	65	51	31	5	5	
50	10	169 480 780	0.047	77	62	34	6	3	
63	10	169 480 781	0.086	99	77	41	7	3	
75	10	169 480 782	0.175	125	92	49	9	4	
90	10	169 480 783	0.292	150	110	57	10	5	
110	10	169 480 784	0.495	180	134	69	11	5	



Valve end 546 ABS (G21) With solvent cement socket Inch BS

Inch	d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
3/8	16	10	169 480 800	0.007	38	23	18	4	2	
1/2	20	10	169 480 801	0.007	38	27	20	4	2	
3/4	25	10	169 480 802	0.009	44	33	23	5	2	
1	32	10	169 480 803	0.016	53	41	26	5	2	
1 1/4	40	10	169 480 804	0.026	65	51	31	5	2	
1 1/2	50	10	169 480 805	0.052	77	62	34	6	4	
2	63	10	169 480 806	0.098	99	77	41	7	5	
	75	10	169 480 782	0.175	125	92	49	9	4	
3	90	10	169 480 808	0.300	150	110	57	10	6	
4	110	10	169 480 809	0.446	180	134	69	11	5	

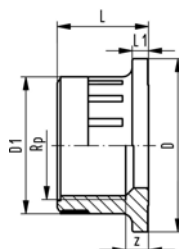


Valve end 546 ABS (G22) With threaded socket Rp

Model:

- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to ABS

Rp [inch]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
3/8	10	169 480 786	0.008	38	24	20	4	7	
1/2	10	169 480 787	0.009	38	28	22	4	6	
3/4	10	169 480 788	0.014	44	34	25	5	7	
1	10	169 480 789	0.023	53	42	28	5	7	
1 1/4	10	169 480 790	0.034	65	52	30	5	7	
1 1/2	10	169 480 791	0.059	77	63	32	6	9	
2	10	169 480 792	0.109	99	78	38	7	10	

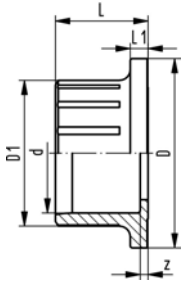


Valve end 546 ABS (G23) With threaded socket Rp reinforced

Model:

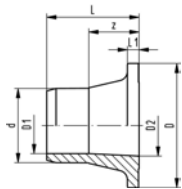
- Connection to plastic or metal
- Reinforcing ring stainless (A2)
- Do not use thread sealing pastes that are harmful to ABS

Rp [inch]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
3/8	16	169 480 925	0.008	38	24	20	4	7	
1/2	16	169 480 926	0.010	38	28	22	4	6	
3/4	16	169 480 927	0.014	44	34	25	5	7	
1	16	169 480 928	0.023	53	42	28	5	7	
1 1/4	16	169 480 929	0.035	65	52	30	5	7	
1 1/2	16	169 480 930	0.060	77	63	32	6	9	
2	16	169 480 931	0.110	99	78	38	7	10	



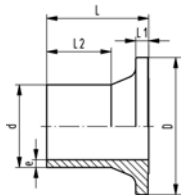
Valve end 546 PVDF (G50) With fusion socket metric

d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]	
16	16	175 483 025	0.013	38	23	19	4	5	
20	16	175 483 026	0.014	38	27	20	4	5	
25	16	175 483 027	0.014	44	33	22	5	6	
32	16	175 483 028	0.023	53	41	24	5	6	
40	16	175 483 029	0.065	65	51	26	5	7	
50	16	175 483 030	0.094	77	62	29	6	8	
63	16	175 483 031	0.180	99	77	34	7	8	



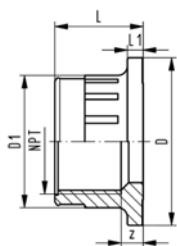
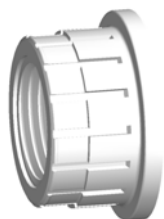
Valve end 546 PVDF (G51) With socket fusion spigot metric

d [mm]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	z [mm]	
16	16	175 483 036	0.014	38	10	16	27	4	13	14	
20	16	175 483 037	0.018	38	14	16	32	4	14	18	
25	16	175 483 038	0.028	44	19	20	37	5	16	21	
32	16	175 483 039	0.047	53	24	26	40	5	18	22	
40	16	175 483 040	0.065	65	31	33	43	5	20	23	
50	16	175 483 041	0.112	77	39	41	51	6	23	28	
63	16	175 483 042	0.210	99	49	51	60	7	27	33	



Valve end 546 PVDF (G52) With butt fusion spigot IR-Plus® metric

d [mm]	FM	PN	Code	kg	D [mm]	e [mm]	L [mm]	L1 [mm]	L2 [mm]	
20	IR	16	175 483 048	0.015	38	1,9	37	4	25	
25	IR	16	175 483 049	0.022	44	1,9	39	5	25	
32	IR	16	175 483 050	0.035	53	2,4	40	5	25	
40	IR	16	175 483 051	0.056	65	2,4	43	5	25	
50	IR	16	175 483 052	0.101	77	3	51	6	25	
63	IR	16	175 483 053	0.188	99	3	60	7	28	

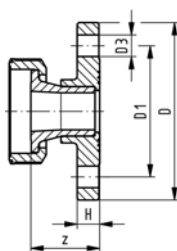
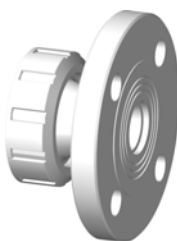


Valve end 546 PVDF (G53) With threaded socket NPT

Model:

- Connection to plastic thread only
- Do not use thread sealing pastes that are harmful to PVDF

NPT [inch]	PN	Code	kg	D [mm]	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	z [mm]
3/8	10	175 483 058	0.010	38	26	14	20	4	6
1/2	10	175 483 059	0.014	38	33	16	21	4	4
3/4	10	175 483 060	0.022	44	39	20	23	5	5
1	10	175 483 061	0.040	53	47	26	28	5	6
1 1/4	10	175 483 062	0.070	65	55	33	31	5	8
1 1/2	10	175 483 063	0.100	77	65	41	34	6	11
2	10	175 483 064	0.180	99	77	51	41	7	17

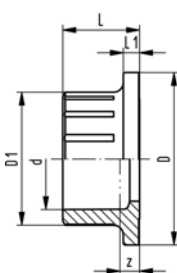


Valve end 546 PVDF (G64) With fixed flange serrated PVDF metric

Model:

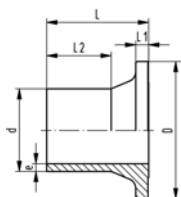
- Connecting dimension: ISO 7005 PN10, EN 1092 PN10, DIN 2501 PN10

d [mm]	DN [mm]	PN	Code	kg	D [mm]	D1 [mm]	D3 [mm]	H [mm]	z [mm]
20	15	16	175 483 285	0.170	93	65	14	12	37
25	20	16	175 483 286	0.230	103	75	14	13	42
32	25	16	175 483 287	0.330	115	85	14	14	45
40	32	16	175 483 288	0.540	137	100	18	15	48
50	40	16	175 483 289	0.710	147	110	18	16	56
63	50	16	175 483 290	1.120	162	125	18	18	65



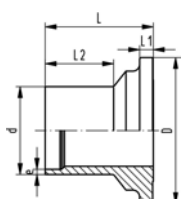
Valve end 546 PE 100 (G40) With fusion socket metric

d [mm]	PN	Code	kg	D [mm]	D1 [mm]	L [mm]	L1 [mm]	z [mm]
16	16	193 480 175	0.007	38	23	19	4	5
20	16	193 480 176	0.008	38	27	20	4	5
25	16	193 480 177	0.012	44	33	22	5	6
32	16	193 480 178	0.019	53	41	24	5	6
40	16	193 480 179	0.033	65	51	26	5	7
50	16	193 480 180	0.050	77	62	29	6	8
63	16	193 480 181	0.095	99	77	34	7	8



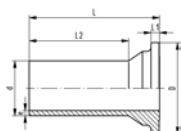
Valve end 546 PE 100 (G41) With butt fusion spigot SDR11 metric

d [mm]	FM	PN	Code	kg	D [mm]	e [mm]	L [mm]	L1 [mm]	L2 [mm]	
20	IR	16	193 480 102	0.007	38	1,9	37	4	25	
25	IR	16	193 480 103	0.011	44	2,3	39	5	25	
32	IR	16	193 480 104	0.017	53	3	40	5	25	
40	IR	16	193 480 105	0.028	65	3,7	43	5	25	
50	IR	16	193 480 106	0.045	77	4,6	51	6	25	
63	IR	16	193 480 107	0.096	99	5,8	60	7	28	



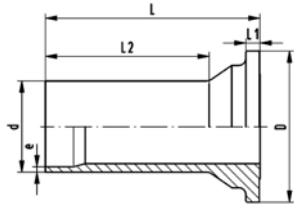
Valve end 546 PE 100 (G42) With butt fusion spigot SDR17,6 metric

d [mm]	FM	PN	Code	kg	D [mm]	e [mm]	L [mm]	L1 [mm]	L2 [mm]	
40	IR	10	193 480 086	0.028	65	2,3	43	5	25	
50	IR	10	193 480 087	0.045	77	2,9	51	6	25	
63	IR	10	193 480 088	0.096	99	3,6	60	7	28	



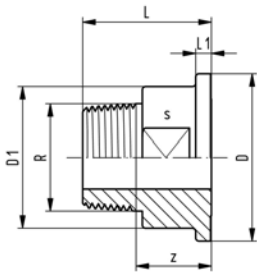
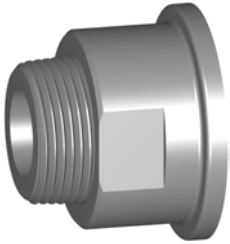
Valve end 546 PE 100 (G43) With butt fusion spigot long SDR11 metric

d [mm]	PN	Code	kg	D [mm]	e [mm]	L [mm]	L1 [mm]	L2 [mm]	
20	16	193 480 152	0.012	38	2,25	69	4	53	
25	16	193 480 153	0.019	44	2,3	76	5	58	
32	16	193 480 154	0.029	53	3	76	5	58	
40	16	193 480 155	0.048	65	3,7	82	5	61	
50	16	193 480 156	0.082	77	4,6	91	6	63	
63	16	193 480 157	0.157	99	5,8	110	7	77	
75	16	193 480 158	0.277	125	6,8	125	9	89	
90	16	193 480 159	0.439	150	8,2	140	10	103	
110	16	193 480 160	0.731	180	10	160	11	117	



Valve end 546 PE 100 (G44) With butt fusion spigot long SDR17,6 metric

d [mm]	PN	Code	kg	D [mm]	e [mm]	L [mm]	L1 [mm]	L2 [mm]	
75	16	193 480 168	0.263	125	4.3	125	9	89	
90	16	193 480 169	0.415	150	5.1	140	10	103	
110	16	193 480 170	0.683	180	6.3	160	11	117	

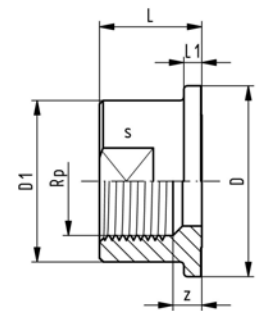
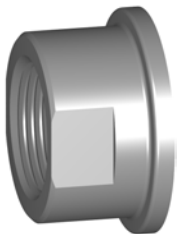


Valve end 546 brass With threaded spigot R

Model:

- Connection to metal threads

Inch	Code	kg	D [mm]	D1 [mm]	D2 [mm]	z [mm]	L [mm]	L1 [mm]	s [mm]	
1/2	161 486 640	0.160	38	32	13	23	36	4	30	
3/4	161 486 641	0.220	44	38	16	22	36	5	36	
1	161 486 642	0.350	53	45	20	24	41	5	41	



Valve end 546 brass With threaded socket Rp

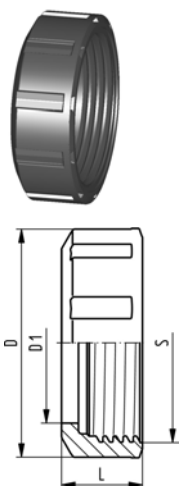
Model:

- Connection to metal threads

Inch	Code	kg	D [mm]	D1 [mm]	D2 [mm]	z [mm]	L [mm]	L1 [mm]	s [mm]	
1/2	161 486 651	0.100	38	32	15	5	20	4	30	
3/4	161 486 652	0.160	44	38	20	8	25	5	36	
1	161 486 653	0.250	53	45	25	10	29	5	41	

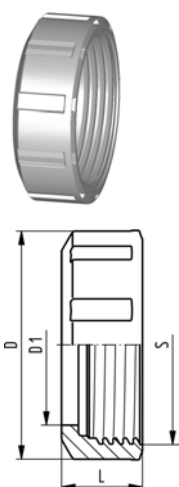
Union nuts

Union nut 546 PVC-U



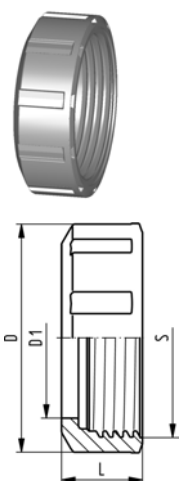
d [mm]	DN [mm]	Code	kg	D [mm]	D1 [mm]	L [mm]	S [mm]	
16-20	10-15	161 490 538	0.019	50	34	19	42	
25	20	161 490 539	0.026	58	39	20	48	
32	25	161 490 540	0.041	68	47	24	58	
40	32	161 490 541	0.077	84	57	27	71	
50	40	161 490 542	0.111	97	65	30	84	
63	50	161 490 543	0.191	124	79	36	106	
75	65	161 490 544	0.562	166	94	48	135	
90	80	161 490 545	0.882	200	113	54	135	
110	100	161 490 546	1.355	238	137	60	198	

Union nut 546 PVC-C

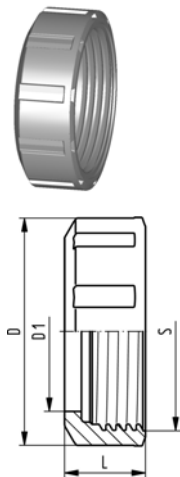


d [mm]	DN [mm]	Code	kg	D [mm]	D1 [mm]	L [mm]	S [mm]	
16-20	10-15	163 481 226	0.013	50	34	19	42	
25	20	163 481 227	0.019	58	39	20	48	
32	25	163 481 228	0.028	68	47	24	58	
40	32	163 481 229	0.054	84	57	27	71	
50	40	163 481 230	0.072	97	65	30	84	
63	50	163 481 231	0.225	124	79	36	106	
75	65	163 481 232	0.619	166	94	48	135	
90	80	163 481 233	0.973	200	113	54	135	
110	100	163 481 234	1.493	238	137	60	198	

Union nut 546 ABS

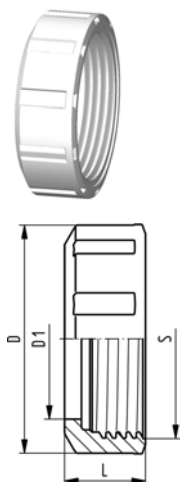


d [mm]	DN [mm]	Code	kg	D [mm]	D1 [mm]	L [mm]	S [mm]	
16-20	10-15	169 480 713	0.014	50	34	19	42	
25	20	169 480 714	0.019	58	39	20	48	
32	25	169 480 715	0.030	68	47	24	58	
40	32	169 480 716	0.056	84	57	27	71	
50	40	169 480 717	0.081	97	65	30	84	
63	50	169 480 718	0.139	124	79	36	106	
75	65	169 480 719	0.435	166	94	48	135	
90	80	169 480 720	0.683	200	113	54	135	
110	100	169 480 721	1.048	238	137	60	198	



Union nut 546 PP-H

d [mm]	DN [mm]	Code	kg	D [mm]	D1 [mm]	L [mm]	S [mm]	
16-20	10-15	167 482 712	0.012	50	34	19	42	
25	20	167 482 713	0.018	58	39	20	48	
32	25	167 482 714	0.027	68	47	24	58	
40	32	167 482 715	0.052	84	57	27	71	
50	40	167 482 716	0.069	97	65	30	84	
63	50	167 482 717	0.135	124	79	36	106	
75	65	167 482 718	0.463	166	94	48	135	
90	80	167 482 719	0.728	200	113	54	135	
110	100	167 482 720	1.117	238	137	60	198	



Union nut 546 PVDF

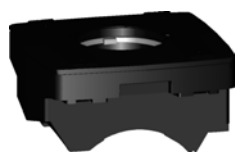
d [mm]	DN [mm]	Code	kg	D [mm]	D1 [mm]	L [mm]	S [mm]	
16-20	10-15	175 482 937	0.024	50	34	19	42	
25	20	175 482 938	0.033	58	39	20	48	
32	25	175 482 939	0.053	68	47	24	58	
40	32	175 482 940	0.099	84	57	27	71	
50	40	175 482 941	0.142	94	65	30	84	
63	50	175 482 942	0.245	120	79	36	106	

Multifunctional modules, handle and handle extensions

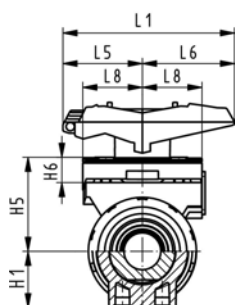
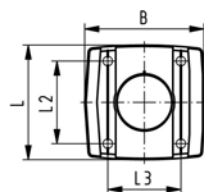
Multifunctional module (I02) PP-GF Module empty

Model:

- Accessory to Ball Valve Type 546
- Multifunctional module acts as an intermediate element for actuators
- Including screws to mount the module and stainless steel coupling piece (V2A) for dimension DN65-100

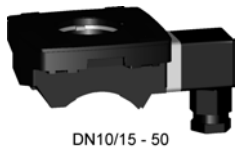


DN10/15 - 50

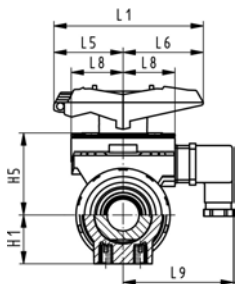


d-d [mm]	DN-DN [mm]	Code	kg	
16 - 20	10 - 15	167 482 680	0.055	
25 - 32	20 - 25	167 482 681	0.070	
40 - 50	32 - 40	167 482 682	0.080	
- 63	- 50	167 482 683	0.120	
75 - 90	65 - 50	167 482 684	0.397	
- 110	- 100	167 482 685	0.425	

d-d [mm]	B [mm]	H1 [mm]	H5 [mm]	H6 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L5 [mm]	L6 [mm]	L8 [mm]	
16 - 20	67	27	50	17	72	87	54	40	42	45	34	
25 - 32	75	30	53	16	72	108	52	46	50	58	38	
40 - 50	81	44	72	16	80	140	60	50	66	75	41	
- 63	91	64	94	19	93	165	68	65	78	87	46	
75 - 90												
- 110												



DN10/15 - 50



Multifunctional module (I03) PP-GF With mechanical limit switches Ag Ni

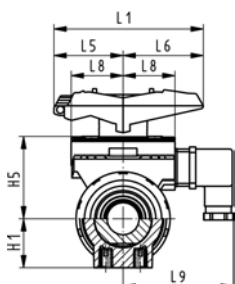
Model:

- Accessory to Ball Valve Type 546
- Multifunctional module acts as an intermediate element for actuators
- Including Plug 3P+E / Protection: IP65
- Including screws to mount the module and stainless steel coupling piece (V2A) for dimension DN65-100

d-d [mm]	DN-DN [mm]	Code	kg	H1 [mm]	H5 [mm]	L1 [mm]	L5 [mm]	L6 [mm]	L8 [mm]	L9 [mm]	
16 - 20	10 - 15	167 482 626	0.110	27	50	87	42	45	34	73	
25 - 32	20 - 25	167 482 627	0.120	30	53	108	50	58	38	77	
40 - 50	32 - 40	167 482 628	0.135	44	72	140	66	75	41	80	
- 63	- 50	167 482 629	0.175	64	94	165	78	87	46	85	
75 - 90	65 - 80	167 482 630	0.460								
- 110	- 100	167 482 631	0.480								



DN10/15 - 50



Multifunctional module (I04) PP-GF With mechanical limit switches Au

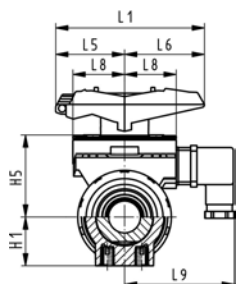
Model:

- Accessory to Ball Valve Type 546
- Multifunctional module acts as an intermediate element for actuators
- Including Plug 3P+E / Protection: IP65
- Including screws to mount the module and stainless steel coupling piece (V2A) for dimension DN65-100

d-d [mm]	DN-DN [mm]	Code	kg	H1 [mm]	H5 [mm]	L1 [mm]	L5 [mm]	L6 [mm]	L8 [mm]	L9 [mm]	
16 - 20	10 - 15	167 482 635	0.110	27	50	87	42	45	34	73	
25 - 32	20 - 25	167 482 636	0.120	30	53	108	50	58	38	77	
40 - 50	32 - 40	167 482 637	0.135	44	72	140	66	75	41	80	
- 63	- 50	167 482 638	0.175	64	94	165	78	87	46	85	
75 - 90	65 - 80	167 482 639	0.460								
- 110	- 100	167 482 640	0.480								



DN10/15 - 50



Multifunctional module (I05) PP-GF With inductive limit switches Namur

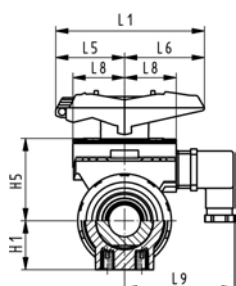
Model:

- Accessory to Ball Valve Type 546
- Multifunctional module acts as an intermediate element for actuators
- Including Plug 3P+E / Protection: IP65
- Including screws to mount the module and stainless steel coupling piece (V2A) for dimension DN65-100

d-d [mm]	DN-DN [mm]	Code	kg	H1 [mm]	H5 [mm]	L1 [mm]	L5 [mm]	L6 [mm]	L8 [mm]	L9 [mm]	
16 - 20	10 - 15	167 482 671	0.110	27	50	87	42	45	34	73	
25 - 32	20 - 25	167 482 672	0.120	30	53	108	50	58	38	77	
40 - 50	32 - 40	167 482 673	0.135	44	72	140	66	75	41	80	
- 63	- 50	167 482 674	0.175	64	94	165	78	87	46	85	
75 - 90	65 - 80	167 482 675	0.460								
- 110	- 100	167 482 676	0.480								



DN10/15 - 50

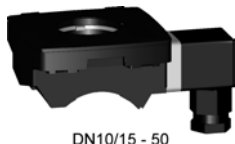


Multifunctional module (I06) PP-GF With inductive limit switches PNP

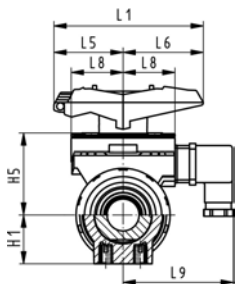
Model:

- Accessory to Ball Valve Type 546
- Multifunctional module acts as an intermediate element for actuators
- Including Plug 3P+E / Protection: IP65
- Including screws to mount the module and stainless steel coupling piece (V2A) for dimension DN65-100

d-d [mm]	DN-DN [mm]	Code	kg	H1 [mm]	H5 [mm]	L1 [mm]	L5 [mm]	L6 [mm]	L8 [mm]	L9 [mm]	
16 - 20	10 - 15	167 482 662	0.110	27	50	87	42	45	34	73	
25 - 32	20 - 25	167 482 663	0.120	30	53	108	50	58	38	77	
40 - 50	32 - 40	167 482 664	0.135	44	72	140	66	75	41	80	
- 63	- 50	167 482 665	0.175	64	94	165	78	87	46	85	
75 - 90	65 - 80	167 482 666	0.460								
- 110	- 100	167 482 667	0.480								



DN10/15 - 50



Multifunctional module (I07) PP-GF With inductive limit switches NPN

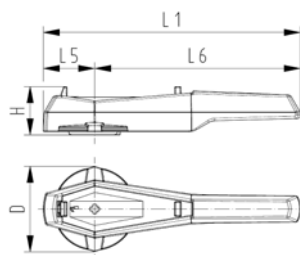
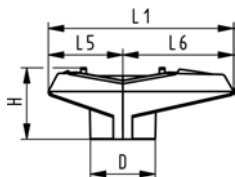
Model:

- Accessory to Ball Valve Type 546
- Multifunctional module acts as an intermediate element for actuators
- Including Plug 3P+E / Protection: IP65
- Including screws to mount the module and stainless steel coupling piece (V2A) for dimension DN65-100

d-d [mm]	DN-DN [mm]	Code	kg	H1 [mm]	H5 [mm]	L1 [mm]	L5 [mm]	L6 [mm]	L8 [mm]	L9 [mm]	
16 - 20	10 - 15	167 482 653	0.110	27	50	87	42	45	34	73	
25 - 32	20 - 25	167 482 654	0.120	30	53	108	50	58	38	77	
40 - 50	32 - 40	167 482 655	0.135	44	72	140	66	75	41	80	
- 63	- 50	167 482 656	0.175	64	94	165	78	87	46	85	
75 - 90	65 - 80	167 482 657	0.460								
- 110	- 100	167 482 658	0.480								

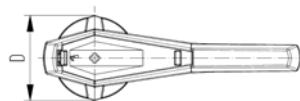
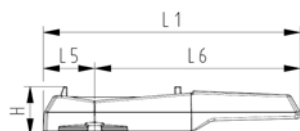
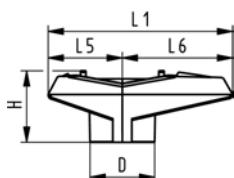
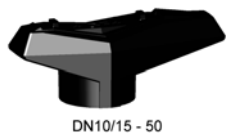


DN10/15 - 50



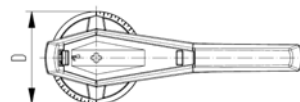
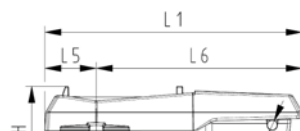
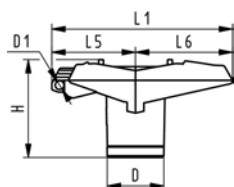
Standard handle 546 red (K01)

d [mm]	DN [mm]	Code	kg	L1 [mm]	L5 [mm]	L6 [mm]	H [mm]	D [mm]	
16-20	10-15	167 484 088	0.012	77	32	45	31	26	
25	20	167 484 089	0.022	97	39	58	37	34	
32	25	167 484 090	0.022	97	39	58	37	34	
40	32	167 484 091	0.042	128	54	74	46	40	
50	40	167 484 092	0.042	128	54	74	46	40	
63	50	167 484 093	0.059	152	66	87	54	44	
75	65	167 484 094	0.250	270	64	206	58	106	
90	80	167 484 095	0.250	270	64	206	58	106	
100	100	167 484 096	0.298	320	64	256	60	106	



Standard handle 546 black (K02)

d [mm]	DN [mm]	Code	kg	L1 [mm]	L5 [mm]	L6 [mm]	H [mm]	D [mm]	
16-20	10-15	167 484 076	0.012	77	32	45	31	26	
25	20	167 484 077	0.022	97	39	58	37	34	
32	25	167 484 078	0.022	97	39	58	37	34	
40	32	167 484 079	0.042	128	54	74	46	40	
50	40	167 484 080	0.042	128	54	74	46	40	
63	50	167 484 081	0.059	152	66	87	54	44	
75	65	167 484 082	0.250	270	64	206	58	106	
90	80	167 484 083	0.250	270	64	206	58	106	
110	100	167 484 084	0.298	320	64	256	60	106	

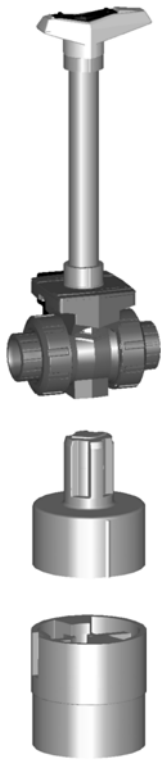


Multifunctional handle 546 red (K11) With ratchet settings lockable

Note:

- To retrofit the ball valve 546 with the multifunctional handle a multifunction module is necessary in the dimensions DN65-100

d-d [mm]	DN-DN [mm]	Code	kg	D [mm]	D1 [mm]	H [mm]	L1 [mm]	L5 [mm]	L6 [mm]	
16 - 20	10 - 15	167 484 100	0.026	26	5	53	87	42	45	
- 25	- 20	167 484 101	0.045	34	5	59	108	50	58	
- 32	- 25	167 484 102	0.045	34	5	59	108	50	58	
- 40	- 32	167 484 103	0.082	40	5	69	140	66	75	
- 50	- 40	167 484 104	0.082	40	5	69	140	66	75	
- 63	- 50	167 484 105	0.104	44	5	80	165	78	87	
- 75	- 65	161 486 689	0.480	115	12	105	270	64	206	
- 90	- 80	161 486 690	0.480	115	12	105	270	64	206	
110 - 140	100 - 125	161 486 691	0.480	115	12	107	320	64	256	

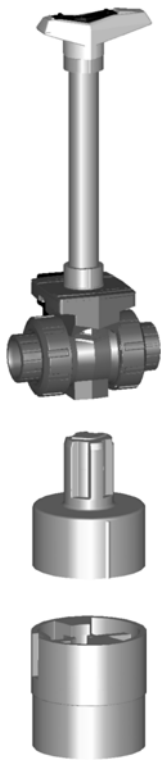
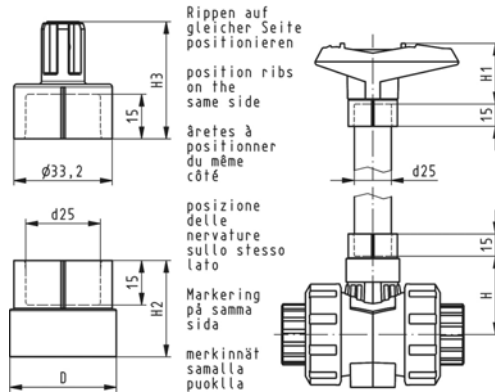


Handle extension 546 PVC-U metric

Model:

- For Ball Valve Type 546
- Composed of adapter sockets for handle connection and stem connection
- PVC-U pipe in suitable length has to be obtained on site

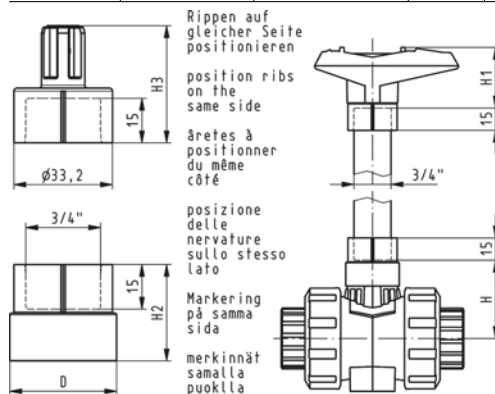
d-d [mm]	DN-DN [mm]	Code	kg	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	D [mm]	
16 - 20	10 - 15	161 486 435	0.032	41	52	29	36	26	
25 - 32	20 - 25	161 486 436	0.037	50	62	32	39	36	
40 - 50	32 - 40	161 486 437	0.047	65	76	34	44	40	
- 63	- 50	161 486 438	0.058	84	87	37	48	44	



Handle extension 546 PVC-U inch BS/ASTM

- For Ball Valve Type 546

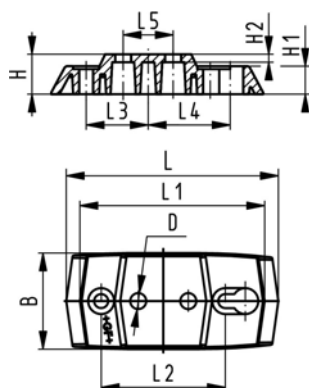
DN-DN [mm]	Inch	Code	kg	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	D [mm]	
10 - 15	3/8-1/2	161 486 443	0.032	41	52	29	36	26	
20 - 25	3/4-1	161 486 444	0.037	50	62	32	39	36	
32 - 40	1 1/4-1 1/2	161 486 445	0.047	65	76	34	44	40	
50 -	2	161 486 446	0.058	84	87	37	48	44	



Mounting plates

Mounting plate 546 PP-GF (L02)

- 2 mounting screws inclusive



d-d [mm]	DN-DN [mm]	Code	kg									
16 - 32 40 - 63	10 - 25 32 - 50	167 484 110 167 484 111	0.055 0.086									
d-d [mm]	B [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	
16 - 32 40 - 63	48 54	8 9	20 20	14 14	4 4	106 149	92 134	62 104	31 52	41 62	25 45	

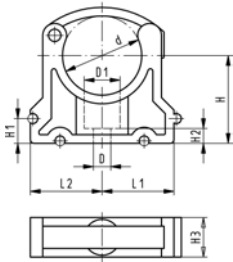
Pipe Clips metric

KLIP-IT Pipe Clips Type 061H, PP metric

Model:

- For mm-pipes d16-d63
- Material: PP black, UV resistant
- **Minimum order quantity: standard packagings SP**

- Height designed for Ball Valve Type 546
- * d16 to d32 without bracket



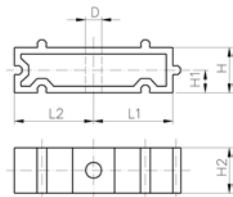
d [mm]	Code	kg	D [mm]	D1 [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	SC	
*16	167 061 035	0.006	6	11	14	17	27	10	6	16	M5	
*20	167 061 036	0.008	6	11	17	19	27	10	6	16	M5	
*25	167 061 037	0.009	6	11	19	22	30	10	6	16	M5	
*32	167 061 038	0.012	6	11	24	27	36	10	6	16	M5	
40	167 061 039	0.027	7	14	34	34	44	10	7	22	M6	
50	167 061 040	0.031	7	14	37	37	51	10	7	22	M6	
63	167 061 041	0.054	9	17	45	45	64	10	10	25	M8	



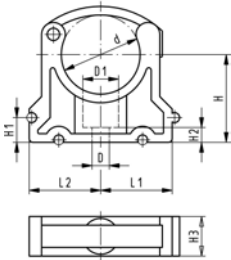
KLIP-IT Spacer Type 061, PP

Model:

- For pipe clips Type 061/061H, PP black, UV resistant
- **Minimum order quantity: standard packaging SP**



d [mm]	Inch	Code	kg	D [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	SC	
16	3/8	167 061 155	0.006	6	14	17	20	10	16	M5	
20	1/2	167 061 156	0.006	6	17	19	20	10	16	M5	
25	3/4	167 061 157	0.007	6	19	22	20	10	16	M5	
32	1	167 061 158	0.008	6	24	27	20	10	16	M5	
40	1 1/4	167 061 159	0.016	7	34	34	20	10	22	M6	
50	1 1/2	167 061 160	0.017	7	37	37	20	10	22	M6	
63	2	167 061 161	0.024	9	45	45	20	10	25	M8	

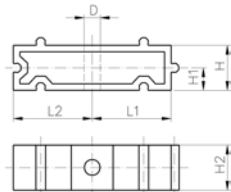


KLIP-IT Pipe Clips Type 061H, PP BS/ASTM

Model:

- Material: PP black, UV resistant
- **Minimum order quantity: standard packaging SP**
- Height designed for Ball Valve Type 546
- For Inch-pipes 3/8-2

Inch	Code	kg	D [mm]	D1 [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	SC	
1/4	167 061 054	0.003	5	8	11	14	21	10	6	12	M5	
3/8	167 061 085	0.006	6	10	14	17	27	10	6	16	M5	
1/2	167 061 086	0.008	6	10	17	19	27	10	6	16	M5	
3/4	167 061 087	0.009	6	10	19	22	30	10	6	16	M5	
1	167 061 088	0.012	6	10	24	27	36	10	6	16	M5	
1 1/4	167 061 089	0.027	7	14	34	34	44	10	7	22	M6	
1 1/2	167 061 090	0.031	7	14	37	37	51	10	7	22	M6	
2	167 061 091	0.054	9	17	45	45	64	10	10	25	M8	
2 1/2	167 061 112	0.062	9	17	52	52	58	10	10	25	M8	
	167 061 013	0.090	9		65	65	65	10	10	28	M8	
4	167 061 114	0.114	9	17	79	79	81	10	10	28	M8	
	167 061 016	0.217	9		98	98	110	10	10	32	M8	



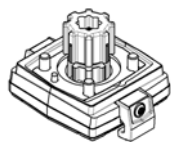
KLIP-IT Spacer Type 061, PP

Model:

- For pipe clips Type 061/061H, PP black, UV resistant
- **Minimum order quantity: standard packaging SP**

d [mm]	Inch	Code	kg	D [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	SC	
16	3/8	167 061 155	0.006	6	14	17	20	10	16	M5	
20	1/2	167 061 156	0.006	6	17	19	20	10	16	M5	
25	3/4	167 061 157	0.007	6	19	22	20	10	16	M5	
32	1	167 061 158	0.008	6	24	27	20	10	16	M5	
40	1 1/4	167 061 159	0.016	7	34	34	20	10	22	M6	
50	1 1/2	167 061 160	0.017	7	37	37	20	10	22	M6	
63	2	167 061 161	0.024	9	45	45	20	10	25	M8	

Assembly parts for ball valves



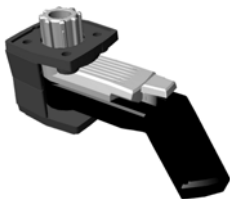
Adapter plate incl. coupling

For actuator units electric type EA 11/ EA 21

Pneumatic type PA 11 / PA 21

To type 546

d-d [mm]	DN-DN [mm]	Code	kg
16 - 20	10 - 15	198 150 556	0.098
25 - 32	20 - 25	198 150 557	0.114
40 - 50	32 - 40	198 150 558	0.154
- 63	- 50	198 150 559	0.184



Intermediate element to type 107 - 130 / 230 with manual override

DN-DN [mm]	Code	kg
10 - 25	198 000 500	0.240
32 - 50	198 000 501	0.260

Intermediate element (coupling/screws/distance pieces/reducing bush) For actuator units pneumatic PA30-45 To type 546

d	DN	Type	Code
75	65	PA30 FC/FO	198 000 595
75	65	PA35 DA	198 000 595
90	80	PA35 FC/FO	198 000 596
90	80	PA40 DA	198 000 595
110	100	PA40 FC/FO	198 000 599
110	100	PA45 DA	198 000 599

Code	kg
198 000 595	0.300
198 000 596	0.300
198 000 599	0.100

Adapter set (screws/distance pieces/reducing bush) For actuator unit EA31 To type 546

d-d	DN-DN	Code
75-90	65-80	198 000 601
110	100	198 000 602

Code	kg
198 000 601	0.150
198 000 602	0.150

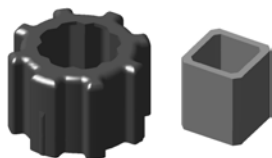
Assembly parts for actuators



**Adapter set for PA11
F04 (WS11) per EN ISO 5211**



Code	kg	
198 000 586	0.006	



**Adapter set for PA21 EA11 EA21
F05 (WS11/14) per EN ISO 5211**



Code	kg	
198 000 587	0.018	

Electric actuators

Electric actuator type EA 11

Note:

- F05 (WS11/14) per EN ISO 5211 with adapter 198.000.587

Voltage	Code	kg	
100-230 V~	198 150 180	1.500	
24 V= / ~	198 150 181	1.500	



Electric actuator type EA 21

Note:

- F05 (WS11/14) per EN ISO 5211 with adapter 198.000.587

Voltage	Code	kg	
100-230 V~	198 150 182	1.750	
24 V= / ~	198 150 183	1.750	



Electric actuator type EA 31

Note:

- F07 (WS 17) per EN ISO 5211

Voltage	Code	kg	
100-230 V~	198 150 184	2.150	
24 V= / ~	198 150 185	2.150	



Accessories for electric actuators



For electric actuators Type EA 11/ EA 21/ EA 31/ EA 42 Heating element

Voltage	Code	kg	
24 V=	199 190 086	0.200	



For electric actuators Type EA 11/ EA 21/ EA 31/ EA 42 Fail safe return incl. battery kit

Voltage	Code	kg	
24 V=	199 190 085	0.885	



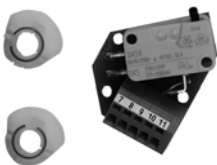
For electric actuators Type EA 11/ EA 21/ EA 31/ EA 42 Heating element + fail safe return incl. battery kit

Voltage	Code	kg	
24 V=	199 190 087	0.200	



For electric actuators Type EA 11/ EA 21/ EA 31/ EA 42 Battery kit (spare)

Voltage	Code	kg	
24 V=	198 151 317	0.250	



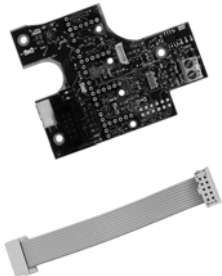
For electric actuators Type EA 11/ EA 21/ EA 31/ EA 42 Limit switch kit with mechanical limit switches AgNi

Voltage	Code	kg	
250 V ~6 A	199 190 092	0.200	



**For electric actuators
Type EA 21/ EA 31/ EA 42
Testing adapter kit**

Code	kg	
198 151 426	0.100	



**For electric actuators
Type EA 21/ EA 31/ EA 42
Monitoring print**

Code	kg	
199 190 099	0.020	



**For electric actuators
Type EA 21/ EA 31/ EA 42
Cycle time extension**

Model:

- Monitoring print required

Code	kg	
199 190 080	0.020	



**For electric actuators
Type EA 21/ EA 31/ EA 42
Cycle time monitoring**

Model:

- Monitoring print required

Code	kg	
199 190 082	0.020	



**For electric actuators
Type EA 21/ EA 31/ EA 42
Cycle counter**

Model:

- Monitoring print required

Code	kg	
199 190 083	0.020	



For electric actuators Type EA 21/ EA 31/ EA 42 Motor current monitoring

Model:

- Monitoring print required

Code	kg	
199 190 081	0.020	



For electric actuators Type EA 21/ EA 31/ EA 42 Position signalization

Model:

- Must be used with either the PE25 positioner or the monitoring print

Code	kg	
199 190 084	0.020	



For electric actuators Type EA 21/ EA 31/ EA 42 Positioner PE25

Model:

- Positioner must use position signalization

** galvanic isolated set value inputs

* not galvanic isolated set value inputs

Voltage	Code	kg	
*24 V=	199 190 100	0.200	
**24 V=	199 190 101	0.200	



For electric actuators Type EA 21/ EA 31/ EA 42 Limit switch kit with gold contacts Au

Voltage	Code	kg	
30 V=, 100mA	199 190 093	0.200	



For electric actuators Type EA 21/ EA 31/ EA 42 Limit switch kit with inductive switches PNP

Voltage	Code	kg	
5-30 V= 0,1 A	199 190 095	0.200	



**For electric actuators
Type EA 21/ EA 31/ EA 42
Limit switch kit with inductive switches NPN**

Voltage	Code	kg	
5-30 V= 0,1 A	199 190 096	0.200	



**For electric actuators
Type EA 21/ EA 31/ EA 42
Assembly kit for 4 limit switches**

Voltage	Code	kg	
5-30 V= 0,1 A	199 190 097	0.200	

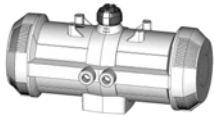


**For electric actuators
Type EA 21/ EA 31/ EA 42
Limit switch kit with mechanical limit switches
Middle position**

Voltage	Code	kg	
4-30 V= 1-100 mA	199 190 094	0.200	

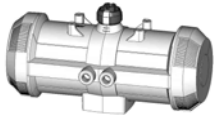
Pneumatic rotary actuators PA

Pneumatic actuator type PA 11 / PA 21 Fail safe to close (FC)



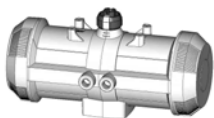
Type	DN-DN [mm]	Code	kg	
PA 11 FC PA 21 FC	10 - 25 32 - 50	198 150 127 198 150 130	0.743 1.419	

Pneumatic actuator type PA 11 / PA 21 Fail safe to open (FO)



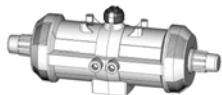
Type	DN-DN [mm]	Code	kg	
PA 11 FO PA 21 FO	10 - 25 32 - 50	198 150 128 198 150 131	0.743 1.419	

Pneumatic actuator type PA 11 / PA 21 Double action (DA)



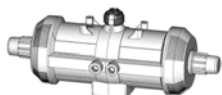
Type	DN-DN [mm]	Code	kg	
PA 11 DA PA 21 DA	10 - 25 32 - 50	198 150 129 198 150 132	0.553 0.995	

Pneumatic actuator type PA 11 / PA 21 Fail safe to close (FC) with stroke limiter



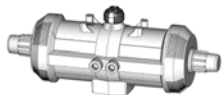
Type	DN-DN [mm]	Code	kg	
PA 11 FC PA 21 FC	10 - 25 32 - 50	198 150 144 198 150 147	0.837 1.609	

Pneumatic actuator type PA 11 / PA 21 Fail safe to open (FO) with stroke limiter



Type	DN-DN [mm]	Code	kg	
PA 11 FO PA 21 FO	10 - 25 32 - 50	198 150 145 198 150 148	0.837 1.609	

Pneumatic actuator type PA 11 / PA 21 Double action (DA) with stroke limiter



Type	DN-DN [mm]	Code	kg	
PA 11 DA PA 21 DA	10 - 25 32 - 50	198 150 146 198 150 149	0.647 1.185	



Pneumatic actuator type PA 30 PA 90

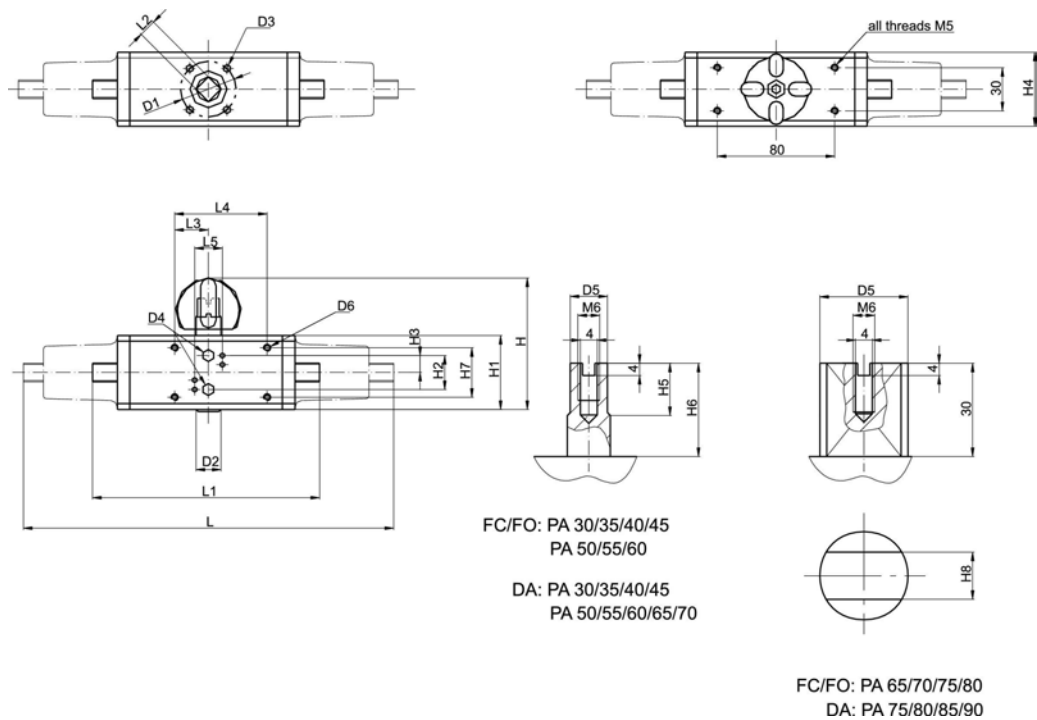
Fail safe to close / Fail safe to open (FC/FO)

* Only for butterfly valve type 240, 241, 242

Type	hard anodized Code	nickel plated Code	hard anodized with stroke limiter Code	
PA 30 FC/FO	198 800 757	198 800 034	-	
*PA 30 FO	198 811 025	-	-	
PA 35 FC/FO	198 800 037	198 800 052	-	
*PA 35 FO	198 811 026	-	-	
PA 40 FC/FO	198 800 728	198 800 004	198 800 017	
*PA 40 FO	198 811 027	-	-	
PA 45 FC/FO	198 800 039	198 800 054	-	
*PA45 FO	198 811 028	-	-	
PA 50 FC/FO	198 800 729	198 800 005	198 800 018	
*PA50 FO	198 811 029	-	-	
PA 55 FC/FO	198 800 041	198 800 056	-	
*PA 55 FO	198 811 030	-	-	
PA 60 FC/FO	198 800 730	198 800 006	198 800 019	
PA 65 FC/FO	198 800 043	198 800 058	-	
PA 70 FC/FO	198 800 731	198 800 007	198 800 020	
PA 75 FC/FO	198 800 045	198 800 060	-	
PA 80 FC/FO	198 800 047	198 800 062	-	

Type		D1 [mm]	D2 [mm]	D3[M] [mm]	D4 [inch]	D5 [mm]	L [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	H [mm]
PA 30 FC/FO	F04	42	30	M5x9	1/8	10	276	11	35	70	32	102
*PA 30 FO	F04	42	30	M5x9	1/8	10	276	11	35	70	32	102
PA 35 FC/FO	F05	50	35	M6x11	1/8	12	326	14	35	70	32	111
*PA 35 FO	F05	50	35	M6x11	1/8	12	326	14	35	70	32	111
PA 40 FC/FO	F05	50	35	M6x11	1/8	12	370	14	35	70	32	129
*PA 40 FO	F05	50	35	M6x11	1/8	12	370	14	35	70	32	129
PA 45 FC/FO	F07	70	55	M8x15	1/8	15	411	17	35	70	32	139
*PA45 FO	F07	70	55	M8x15	1/8	15	411	17	35	70	32	139
PA 50 FC/FO	F07	70	55	M8x15	1/8	15	423	17	35	70	32	149
*PA50 FO	F07	70	55	M8x15	1/8	15	423	17	35	70	32	149
PA 55 FC/FO	F10	102	70	M10x17	1/8	19	452	22	35	70	32	161
*PA 55 FO	F10	102	70	M10x17	1/8	19	452	22	35	70	32	161
PA 60 FC/FO	F10	102	70	M10x17	1/8	19	503	22	35	70	32	173
PA 65 FC/FO	F12	125	85	M12x21	1/4		648	27			32	191
PA 70 FC/FO	F12	125	85	M12x21	1/4		663	27			32	196
PA 75 FC/FO	F14	140	100	M16x25	1/4		824	36			32	229
PA 80 FC/FO	F14	140	100	M16x25	1/4		918	36			32	241

Type	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]	H8 [mm]	
PA 30 FC/FO	70	21	18	65	13	20	36		
*PA 30 FO	70	21	18	65	13	20	36		
PA 35 FC/FO	78	21	18	72	13	20	36		
*PA 35 FO	78	21	18	72	13	20	36		
PA 40 FC/FO	86	25	21	80	13	30	36		
*PA 40 FO	86	25	21	80	13	30	36		
PA 45 FC/FO	96	25	21	90	16	30	36		
*PA45 FO	96	25	21	90	16	30	36		
PA 50 FC/FO	106	25	26	100	17	30	36		
*PA50 FO	106	25	26	100	17	30	36		
PA 55 FC/FO	118	25	25	112	19	30	36		
*PA 55 FO	118	25	25	112	19	30	36		
PA 60 FC/FO	130	25	32	124	19	30	36		
PA 65 FC/FO	148	24	34	137				22	
PA 70 FC/FO	153	24	38	145				24	
PA 75 FC/FO	186	24	43	166				27	
PA 80 FC/FO	198	24	44	180				32	





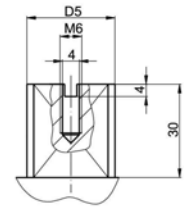
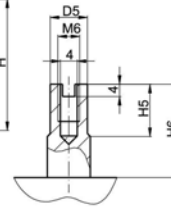
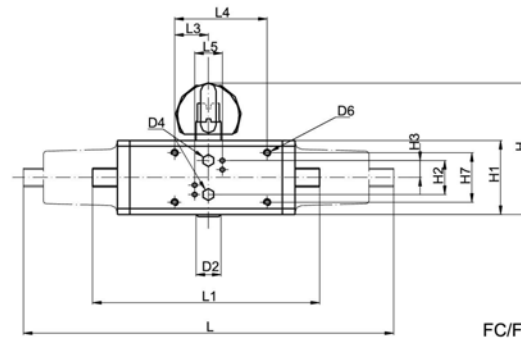
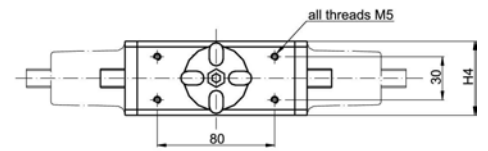
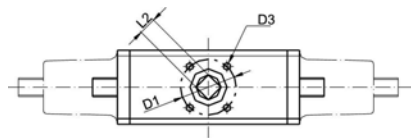
Pneumatic actuator type PA 30 PA 90 Double acting (DA)

Other versions on request

Type	hard anodized Code	kg	
PA 30 DA	198 800 737	2.400	
PA 35 DA	198 800 758	1.250	
PA 40 DA	198 800 732	1.731	
PA 45 DA	198 800 040	1.850	
PA 50 DA	198 800 733	2.984	
PA 55 DA	198 800 042	3.400	
PA 60 DA	198 800 734	6.040	
PA 65 DA	198 800 044	7.200	
PA 70 DA	198 800 735	10.300	
PA 75 DA	198 800 046	12.000	
PA 80 DA	198 800 048	14.000	
PA 85 DA	198 800 050	19.700	
PA 90 DA	198 800 051	25.400	

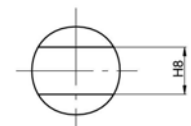
Type		D1 [mm]	D2 [mm]	D3[M] [mm]	D4 [inch]	D5 [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	H [mm]	H1 [mm]
PA 30 DA	F03	36	25	M5x9	⅛	9	177	9	35	70		92	60
PA 35 DA	F04	42	30	M5x9	⅛	10	190	11	35	70		98	66
PA 40 DA	F04	42	30	M5x9	⅛	10	198	11	35	70		102	70
PA 45 DA	F05	50	35	M6x11	⅛	12	235	14	35	70		111	78
PA 50 DA	F05	50	35	M6x11	⅛	12	250	14	35	70		129	86
PA 55 DA	F07	70	55	M8x15	⅛	15	279	17	35	70		139	96
PA 60 DA	F07	70	55	M8x15	⅛	15	341	17	35	70		149	106
PA 65 DA	F10	102	70	M10x17	⅛	19	350	22	35	70		161	118
PA 70 DA	F10	102	70	M10x17	⅛	19	381	22	35	70		173	130
PA 75 DA	F12	125	85	M12x21	¼		416	27			32	191	148
PA 80 DA	F12	125	85	M12x21	¼		466	27			32	197	153
PA 85 DA	F14	140	100	M16x25	¼		555	36			32	229	186
PA 90 DA	F14	140	100	M16x25	¼		581	36			32	241	198

Type	H2 [mm]	H3 [mm]	H4 [mm]	H5 [mm]	H6 [mm]	H7 [mm]	H8 [mm]	
PA 30 DA	25	12	55	10	20	36		
PA 35 DA	25	13	60	13	20	36		
PA 40 DA	21	18	65	13	20	36		
PA 45 DA	21	18	72	13	20	36		
PA 50 DA	25	21	80	13	30	36		
PA 55 DA	25	21	90	16	30	36		
PA 60 DA	25	26	100	17	30	36		
PA 65 DA	25	25	112	19	30	36		
PA 70 DA	25	32	124	19	30	36		
PA 75 DA	24	34	137				22	
PA 80 DA	24	38	145				24	
PA 85 DA	24	43	166				27	
PA 90 DA	24	44	180				32	



FC/FO: PA 30/35/40/45
PA 50/55/60

DA: PA 30/35/40/45
PA 50/55/60/65/70



FC/FO: PA 65/70/75/80
DA: PA 75/80/85/90

Accessories for pneumatic rotary actuators

For pneumatic actuators type PA 11 - PA 90 Namur connecting plate



- PA30 - PA55

Code	kg	
199 190 275	0.100	



For pneumatic actuators type PA 11 - PA 90 Namur mounting flange

No	Code	kg	
3	199 190 281	0.312	

Position indicator



For actuator units pneumatic type PA 11 - PA 90
Namur mounting flange

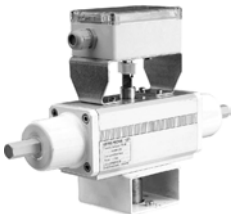
No	Code	kg	
3	199 190 281	0.312	



For actuator units pneumatic type PA 11 - PA 90
Limit switch box with 2 auxiliary switches

- Including namur mounting flange

Voltage	Code	kg	
250 V ~/10 A	199 190 282	0.530	



For actuator units pneumatic type PA 11 - PA 90
Limit switch box with 2 inductive auxiliary switches
NPN with luminous diode

- Including namur mounting flange

Voltage	Code	kg	
10...30 V/ 0.1 A	199 190 283	0.530	



For actuator units pneumatic type PA 11 - PA 90
Limit switch box with 2 inductive auxiliary switches PNP
With luminous diode

- Including namur mounting flange

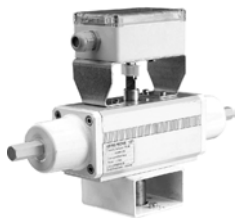
Voltage	Code	kg	
10...30 V/ 0.1 A	199 190 284	0.530	



For actuator units pneumatic type PA 11 - PA 90
Limit switch box with 2 inductive auxiliary switches
Namur Eexi (intrinsically safe)

- Including namur mounting flange

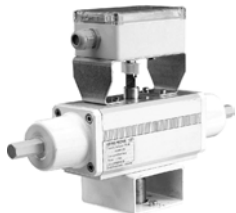
Voltage	Code	kg	
5-15 V	199 190 285	0.530	



For actuator units pneumatic type PA 11 - PA 90 Limit switch box with 2 auxiliary switches Eexd

- Including namur mounting flange

Voltage	Code	kg	
250 V ~/5 A	199 190 286	0.600	



For actuator units pneumatic type PA 11 - PA 90 Limit switch box with 2 auxiliary switches With gold contact

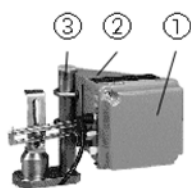
- Including namur mounting flange

Voltage	Code	kg	
30 V =/ 1-100 mA	199 190 287	0.530	

Controllers

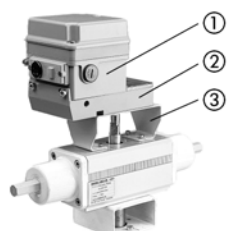
Electro-pneumatic positioner Positioner type Eckardt SRI 986

- Other versions and accessories on request



No	single acting (FC/FO) Code	double acting (DA) Code	kg	
1	199 190 348	199 190 349	1.900	

Accessories for electro-pneumatic positioner Attachment kit for type Eckardt SRI 986

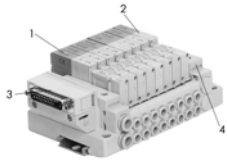


No	Typ DIASTAR DN 15-150 Code	Type PA 30 - PA 90 Code	kg	
2	199 190 350	199 190 351	0.200	



Pilot valves

Solenoid pilot valve type PV 2000 2 x 3/2-way valve

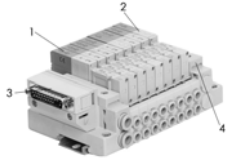


Model:

- lockable manual override
- Version for 3/2-way and 5/2-way valves
- Electrical control over multiple and field bus connector

No	Voltage	Code	kg	
1	24V/DC 100%	199 190 435	0.110	

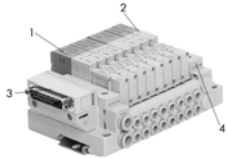
Solenoid pilot valve type PV 2000 1 x 5/2-way valve



- Version for 3/2-way and 5/2-way valves
- Electrical control over multiple and field bus connector

No	Voltage	Code	kg	
2	24 V/DC 100%	199 190 423	0.105	

Solenoid pilot valve type PV 2000 Connection module with D-sub connector



- Version for 3/2-way and 5/2-way valves
- Electrical control over multiple and field bus connector

No	Code	kg	
3	199 190 424	0.156	

Solenoid pilot valve type PV 2000 End module



- Version for 3/2-way and 5/2-way valves
- Electrical control over multiple and field bus connector

No	Code	kg	
4	199 190 426	0.102	



Solenoid pilot valve type PV 2000 Connection module AS-interface

- Version for 3/2-way and 5/2-way valves
- Electrical control over multiple and field bus connector

No	Code	kg	
1	199 190 430	0.200	



Solenoid pilot valve type PV 2000 Connection module profibus

- Version for 3/2-way and 5/2-way valves
- Electrical control over multiple and field bus connector

No	Code	kg	
1	199 190 431	0.200	



Solenoid pilot valve type PV 2000 Connection module with bus interface

- Version for 3/2-way and 5/2-way valves
- Electrical control over multiple and field bus connector

No	Code	kg	
2	199 190 425	0.156	



Accessories to type PV 2000

Silencer 8mm

Code	kg	
199 190 427	0.020	

Accessories to type PV 2000

Plug (white)

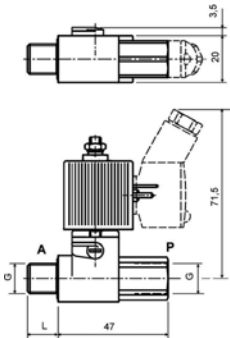
d [mm]	Code	kg	
8	199 190 428	0.010	
6	199 190 429	0.010	

Accessories to type PV 2000

D-Sub connector 25 poles

With connection cable

Cable length [m]	Code	kg	
1.50	199 190 432	0.500	
3.00	199 190 433	0.500	
5.00	199 190 434	0.500	



Solenoid pilot valve type PV 94 Pilot valve 3/2 ways

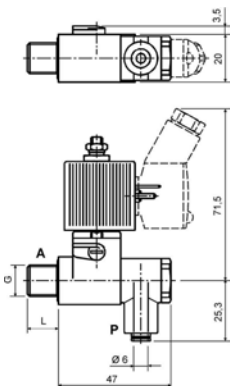


Model:

- For direct installation (including valve body and hollow screw)
- Port P compressed air connection G 1/8
- Port A actuator connection G 1/8
- With connector plug
- With adapter G1/8 to G1/4

- To pneumatic actuators FC/FO (single acting)
- Circuit function C: de-energized closed
- Valve material polyamid / brass

Voltage	DN [mm]	Com- pressed air con- nection P	Actuator connec- tion	PN	kv-value ($\Delta p=1$ bar) [l/min]	NBR Code	kg	
24 V=	1.2	G 1/8	G 1/8	10	48	199 190 498	0.135	
24 V, 50-60 Hz	1.2	G 1/8	G 1/8	10	48	199 190 499	0.135	
110 V, 50-60 Hz	1.2	G 1/8	G 1/8	10	48	199 190 500	0.135	
230 V, 50-60 Hz	1.2	G 1/8	G 1/8	10	48	199 190 501	0.135	



Solenoid pilot valve type PV 94 Pilot valve 3/2 ways



Model:

- For direct installation (including valve body and hollow screw)
- Port P compressed air connection tube push-in 6mm
- Port A actuator connection G 1/8
- With connector plug
- With adapter G1/8 to G1/4

- To pneumatic actuators FC/FO (single acting)
- Circuit function C: de-energized closed
- Valve material polyamid / brass

Voltage	DN [mm]	Com- pressed air con- nection P	Actuator connec- tion	PN	kv-value ($\Delta p=1$ bar) [l/min]	NBR Code	kg	
24 V=	1.2	push-in	G 1/8	10	48	199 190 510	0.135	
24 V, 50-60 Hz	1.2	push-in	G 1/8	10	48	199 190 511	0.135	
110 V, 50-60 Hz	1.2	push-in	G 1/8	10	48	199 190 512	0.135	
230 V, 50-60 Hz	1.2	push-in	G 1/8	10	48	199 190 513	0.135	

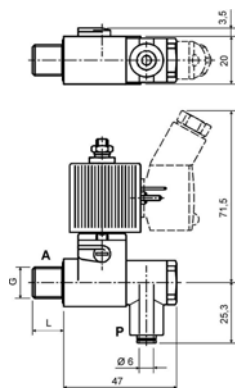


Solenoid pilot valve type PV 94 Pilot valve 3/2 ways



Model:

- For direct installation (including valve body and hollow screw)
- Port P compressed air connection NPT 1/8
- Port A actuator connection G 1/8
- With connector plug
- With adapter G1/8 to G1/4



- To pneumatic actuators FC/FO (single acting)
- Circuit function C: de-energized closed
- Valve material polyamid / brass

Voltage	DN [mm]	Com- pressed air con- nection P	Actuator connec- tion	PN	kv-value ($\Delta p=1$ bar) [l/min]	NBR Code	kg	
24 V=	1.2	NPT 1/8	G 1/8	10	48	199 190 546	0.135	
24 V AC	1.2	NPT 1/8	G 1/8	10	48	199 190 561	0.135	
110 V, 50-60 Hz	1.2	NPT 1/8	G 1/8	10	48	199 190 547	0.135	

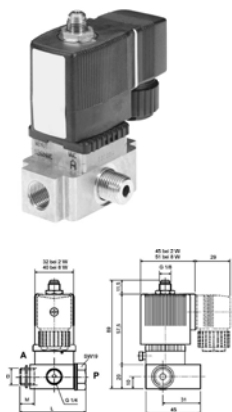
Solenoid pilot valve type PV 94 Accessory



Model:

- Cable plug to DIN EN 175301-803 (DIN 43 650) form C

Voltage	Version	NBR Code	kg	
0-250 V	no circuitry	199 190 518	0.020	
0-24 V	with LED	199 190 519	0.020	
0-24 V	with LED and varistor	199 190 520	0.020	
0-24 V	with rectifier LED and varistor	199 190 521	0.020	
200-240 V	with LED	199 190 522	0.020	
200-240 V	with LED and varistor	199 190 523	0.020	



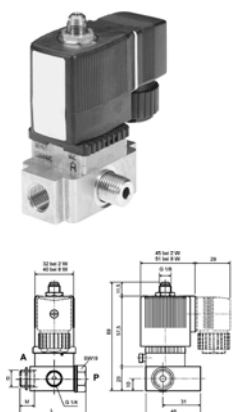
Solenoid pilot valve type PV 95 Pilot valve 3/2 ways



Model:

- For direct installation (including valve body and hollow screw)
- Port P compressed air connection G 1/4
- Port A actuator connection G 1/8
- With connector plug
- With adapter G1/8 to G1/4
- To pneumatic actuators FC/FO (single acting)
- Circuit function C: de-energized closed
- Valve material: brass
- Power consumption: 24VA at AC inrush; 17VA/8W at AC hold; 8W at DC

Voltage	DN [mm]	Com- pressed air con- nection P	Actuator connec- tion	PN	kv-value ($\Delta p=1$ bar) [l/min]	NBR Code	kg
24 V=	2.0	G 1/4	G 1/8	10	120	199 190 532	0.420
24 V, 50-60 Hz	2.0	G 1/4	G 1/8	10	120	199 190 533	0.420
110 V, 50-60 Hz	2.0	G 1/4	G 1/8	10	120	199 190 534	0.420
230 V, 50-60 Hz	2.0	G 1/4	G 1/8	10	120	199 190 535	0.420



Solenoid pilot valve type PV 95 Pilot valve 3/2 ways



Model:

- For direct installation (including valve body and hollow screw)
- Port P compressed air connection NPT 1/8
- Port A actuator connection G 1/4
- With connector plug
- With adapter G1/8 to G1/4
- To pneumatic actuators FC/FO (single acting)
- Circuit function C: de-energized closed
- Valve material: brass
- Power consumption: 24VA at AC inrush; 17VA/8W at AC hold; 8W at DC

Voltage	DN [mm]	Com- pressed air con- nection P	Actuator connec- tion	PN	kv-value ($\Delta p=1$ bar) [l/min]	NBR Code	kg
24 V=	1.5	NPT 1/8	G 1/4	10	120	199 190 554	0.420
110 V, 50-60 Hz	1.5	NPT 1/8	G 1/4	10	120	199 190 555	0.420

Solenoid pilot valve type PV 95 Accessory



Model:

- Cable plug to DIN EN 175301-803 (DIN 43 650) form A

Voltage	Version	NBR Code	kg
0-250 V	no circuitry	199 190 540	0.020
0-24 V	with LED	199 190 541	0.020
0-24 V	with LED and varistor	199 190 542	0.020
0-24 V	with rectifier LED and varistor	199 190 543	0.020
200-240 V	with LED	199 190 544	0.020
200-240 V	with LED and varistor	199 190 545	0.020



Pilot valve type 5470

Pilot valve 4/2 ways

- to pneumatic actuators DA (Double acting)
- Version with NAMUR connection
- Circuit function: 4/2-way valve, in rest position pressure inlet 1 connected to outlet 2, outlet 4 exhausted
- Valve material: polyamid
- Electrical connection: cable plug
- For AC 50-60 Hz and DC

Voltage	DN [mm]	NBR Code	kg
230 V, AC/DC	4	199 190 302	0.270
115 V, AC/DC	4	199 190 303	0.270
24 V, AC/DC	4	199 190 304	0.140



Pilot valve type MNL532

Pilot valve 3/2-5/2-ways

Model:

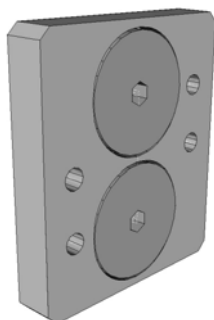
- With NAMUR connection and two silencers/throttle screws

Mode of action:

- 3/2-way valve, in rest position pressure inlet 1 closed, outlet 3 exhausted
- 5/2-way valve, in rest position pressure inlet 1 connected to outlet 4, outlet 3 exhausted
- Material of body: Aluminum

- to pneumatic actuators
- Electrical connection: cable plug

Voltage	DN [mm]	NBR Code	kg
230 V, AC	5	199 190 360	0.270
110 V, AC	5	199 190 359	0.270
48 V, AC	5	199 190 361	0.270
24 V, AC	5	199 190 358	0.270
24 V, DC	5	199 190 357	0.270



Accessories to type 5470 and type MNL532

NAMUR connector plate for type DIASTAR DN 15-50 and PA11/21

Pos	DN	Series PA11/21	Series 028-FC	Series 025-FC	Series 025-FO/DA
2	15	199 190 378	199 190 378	199 190 378	199 190 378
2	20	199 190 378	199 190 378	199 190 378	199 190 378
2	25	199 190 378	199 190 378	199 190 378	199 190 378
2	32	199 190 378	199 190 378	199 190 379	199 190 378
2	40	199 190 378	199 190 379	199 190 379	199 190 379
2	50	199 190 378	199 190 379	199 190 379	199 190 379

Series 025 / 028 Code	kg
199 190 378	0.111
199 190 379	0.354

ASI bus



AS-Interface type ASEV 2400-11.M For electric rotary actuators



Code	
199 190 562	



AS-Interface set type ASVC 2300-11 For pneumatic rotary drive



Code	kg	
199 190 560	0.300	



AS-Interface set type FL31 for PA 11 - PA 21 / PA 30 - PA 90

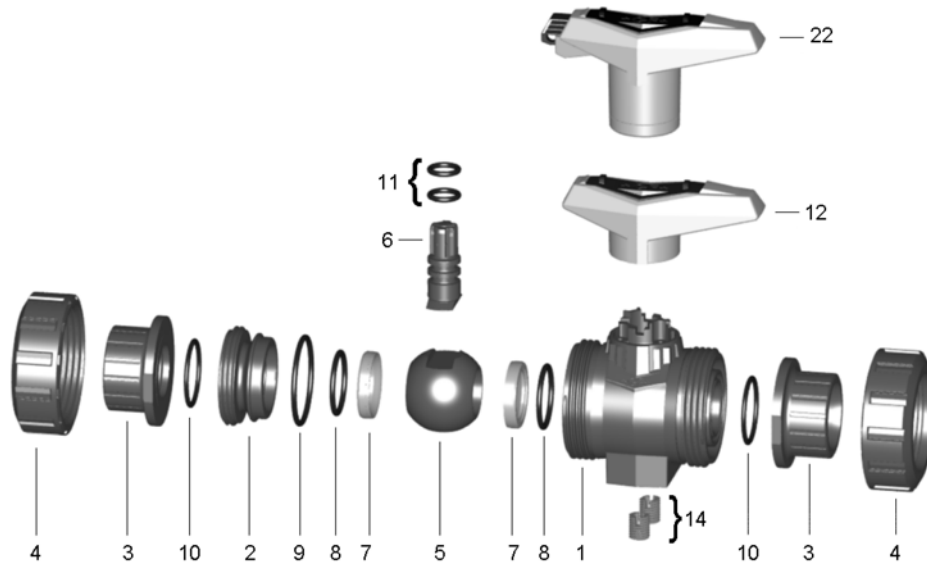
With cable, without pilot valve Code	kg	
199 190 451	0.530	



AS-Interface connection by means of slave for EA 11 - EA 21 / EA 20 - EA 41

Code	kg	
199 190 463	0.530	

Spare parts for ball valve type 546 PVC-U (DN10/15-50)



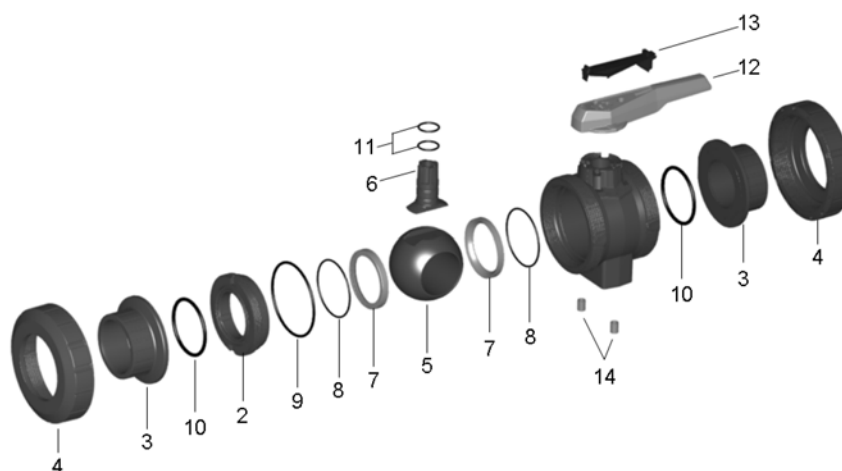
No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	Central part
	161 486 151	161 486 151	161 486 153	161 486 154	161 486 155	161 486 156			
1	Body PVC-U	1							
2	Union bush PVC-U	1							
5	Ball PVC-U	1							
6	Stem PVC-U	1							
7	Ball seal PTFE	2							
8	Backing seal EPDM	2							
9	Body seal EPDM	1							
10	Face seal EPDM	2							
11	Stem seal EPDM	2							
12	Lever PP red	1							
14	Threaded bush Stainless steel	2							
	Central part		161 486 163	161 486 163	161 486 164	161 486 165	161 486 166	161 486 167	161 486 168
1	Body PVC-U	1							
2	Union bush PVC-U	1							
5	Ball PVC-U	1							
6	Stem PVC-U	1							
7	Ball seal PTFE	2							
8	Backing seal FPM	2							
9	Body seal FPM	1							
10	Face seal FPM	2							
11	Stem seal FPM	2							
12	Lever PP red	1							
14	Threaded bush Stainless steel	2							

No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	
	Ball set		161 486 375	161 486 375	161 486 376	161 486 377	161 486 378	161 486 379	161 486 380
5	Ball PVC-U	1							
6	Stem EPDM	1							
7	Ball seal PTFE	2							
8	Backing seal EPDM	2							
9	Body seal EPDM	1							
11	Stem seal EPDM	2							
	Ball set		161 486 385	161 486 385	161 486 386	161 486 387	161 486 388	161 486 389	161 486 390
5	Ball PVC-U	1							
6	Stem FPM	1							
7	Ball seal PTFE	2							
8	Backing seal FPM	2							
9	Body seal FPM	1							
11	Stem seal FPM	2							
	Seal set		161 486 400	161 486 400	161 486 401	161 486 402	161 486 403	161 486 404	161 486 405
8	Backing seal EPDM	2							
9	Body seal EPDM	1							
10	Face seal EPDM	2							
11	Stem seal EPDM	2							
	Seal set		161 486 410	161 486 410	161 486 411	161 486 412	161 486 413	161 486 414	161 486 415
8	Backing seal FPM	2							
9	Body seal FPM	1							
10	Face seal FPM	2							
11	Stem seal FPM	2							
3	Connecting piece 546 PVC-U (G01) with solvent cement socket metric	1	161 490 666	161 490 667	161 490 668	161 490 669	161 490 670	161 490 671	161 490 672
3	Connecting piece 546 PVC-U (G03) with solvent cement socket Inch ASTM	1	161 490 712	161 490 713	161 490 714	161 490 715	161 490 716	161 490 717	161 490 718
3	Connecting piece 546 PVC-U (G04) with solvent cement socket Inch BS	1	161 490 734	161 490 735	161 490 736	161 490 737	161 490 738	161 490 739	161 490 740
3	Connecting piece 546 PVC-U (G05) with solvent cement spigot metric	1	161 490 701	161 490 702	161 490 703	161 490 704	161 490 705	161 490 706	161 490 707
3	Connecting piece 546 PVC-U (G06) with threaded socket Rp	1	161 490 690	161 490 691	161 490 692	161 490 693	161 490 694	161 490 695	161 490 696
3	Connecting piece 546 PVC-U (G07) with threaded socket Rp fortified	1	161 490 825	161 490 826	161 490 827	161 490 828	161 490 829	161 490 830	161 490 831

No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	
3	Connecting piece 546 PVC-U (G08) with threaded socket NPT	1	161 490 723	161 490 724	161 490 725	161 490 726	161 490 727	161 490 728	161 490 729
3	Connecting piece 546 PP-H (G30) with fusion socket metric	1	167 482 900	167 482 901	167 482 902	167 482 903	167 482 904	167 482 905	167 482 906
3	Connecting piece 546 PP-H (G32) with socket fusion spigot metric	1	167 482 922	167 482 923	167 482 924	167 482 925	167 482 926	167 482 927	167 482 928
3	Connecting piece 546 PP-H (G33) with threaded socket Rp fortified	1	167 482 911	167 482 912	167 482 913	167 482 914	167 482 915	167 482 916	167 482 917
3	Connecting piece 546 PP-H (G34) with threaded socket NPT fortified	1	167 480 966	167 482 967	167 482 968	167 482 969	167 482 970	167 482 971	167 482 972
3	Connecting piece 546 PP-H (G35) with butt fusion spigot IR Plus® SDR11 metric	1	-	167 482 945	167 482 946	167 482 947	167 482 948	167 482 749	167 482 950
3	Connecting piece 546 PP-H (G36) with butt fusion spigot SDR17,6 metric	1	-	-	-	-	167 482 937	167 482 938	167 482 939
3	Connecting piece 546 PP-H (G37) with butt fusion spigot long SDR11 metric	1	-	167 482 956	167 482 957	167 482 958	167 482 959	167 482 960	167 482 961
3	Connecting piece 546 PE 100 (G40) with fusion socket metric	1	193 480 175	193 480 176	193 480 177	193 480 178	193 480 179	193 480 180	193 480 181
3	Connecting piece 546 PE 100 (G41) with butt fusion spigot SDR11 metric	1	-	193 480 102	193 480 103	193 480 104	193 480 105	193 480 106	193 480 107
3	Connecting piece 546 PE 100 (G42) with butt fusion spigot SDR17,6 metric	1	-	-	-	-	193 480 086	193 480 087	193 480 088
3	Connecting piece 546 PE 100 (G43) with butt fusion spigot long SDR11 metric	1	-	193 480 152	193 480 153	193 480 154	193 480 155	193 480 156	193 480 157
3	Connecting piece 546 PVC-U (G60) subassembly with fixed flange serrated PVC-U metric	1	-	161 486 360	161 486 361	161 483 362	161 486 363	161 486 364	161 486 365

No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	
3	Connecting piece 546 PVC-U (G61) subassembly with fixed flange flat PVC-U metric	1	-	161 486 295	161 486 296	161 486 297	161 486 298	161 486 299	161 486 300
3	Connecting piece 546 PVC-U (G70) subassembly with backing flange PVC-U Inch ANSI	1	-	161 486 265	161 486 266	161 486 267	161 486 268	161 486 269	161 486 270
3	Connecting piece 546 PVC-U (G71) subassembly with backing flange PVC-U Inch ANSI	1	-	161 486 275	161 486 276	161 486 277	161 486 278	161 486 279	161 486 280
3	Connecting piece 546 PVC-U (G72) subassembly with backing flange PP-ST metric	1	-	161 486 285	161 486 286	161 486 287	161 486 288	161 486 289	161 486 290
3	Connecting piece 546 PVC-U (G73) subassembly with backing flange PP-ST ANSI	1	-	161 486 425	161 486 426	161 486 427	161 486 428	161 486 429	161 486 430
3	Connecting piece blank 546 PVC-U (G80)	1	161 490 837	161 490 837	161 490 838	161 490 839	161 490 839	161 490 840	161 490 841
4	Union nut PVC-U	1	161 490 538	161 490 538	161 490 539	161 490 540	161 490 541	161 490 542	161 490 543
12	Standard handle 546 red (K01)	1	167 484 088	167 484 088	167 484 089	167 484 090	167 484 091	167 484 092	167 484 093
12	Standard handle 546 black (K02)	1	167 484 076	167 484 076	167 484 077	167 484 078	167 484 079	161 484 080	167 484 081
22	Multifunction handle 546 red (K11) with ratchet settings lockable	1	167 484 100	167 484 100	167 484 101	167 484 102	167 484 103	167 484 104	167 484 105
10	Face seal EPDM	1	748 410 059	748 410 059	748 410 106	748 410 151	748 410 062	748 410 003	748 410 231
10	Face seal FPM	1	749 410 059	749 410 059	749 410 106	749 410 151	749 410 062	749 410 003	749 410 231

Spare parts for ball valve type 546 PVC-U (DN65-100)

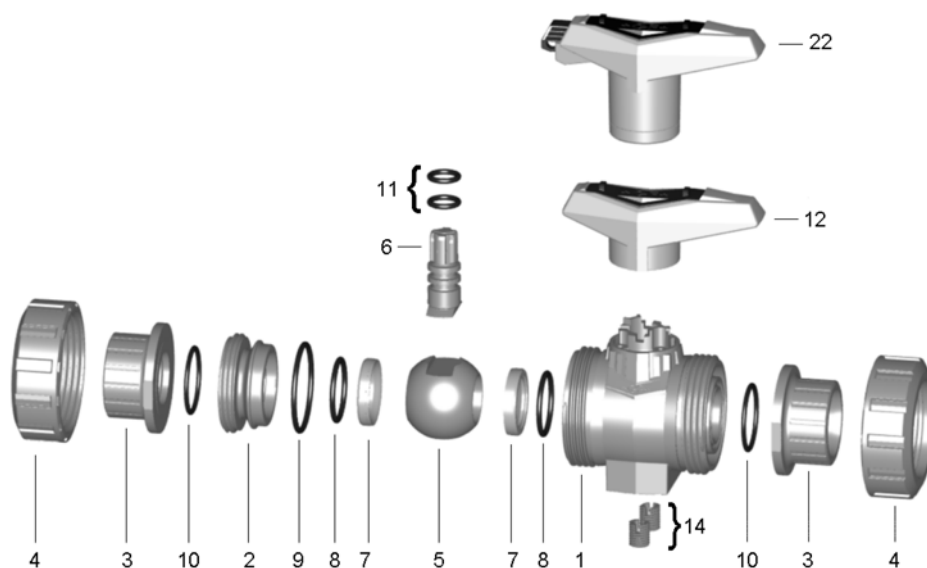


No.	Article / Material	Pieces	d75 DN65	d90 DN80	Central part
	161 486 157	161 486 158	161 486 159		
1	Body PVC-U	1			
2	Union bush PVC-U	1			
5	Ball PVC-U	1			
6	Stem PVC-U	1			
7	Ball seal PTFE	2			
8	Backing seal EPDM	2			
9	Body seal EPDM	1			
10	Face seal EPDM	2			
11	Stem seal EPDM	2			
12	Lever PP red	1			
13	handle clip	1			
14	Threaded bush Stainless steel	2			
	Central part		161 486 169	161 486 170	161 486 171
1	Body PVC-U	1			
2	Union bush PVC-U	1			
5	Ball PVC-U	1			
6	Stem PVC-U	1			
7	Ball seal PTFE	2			
8	Backing seal FPM	2			
9	Body seal FPM	1			
10	Face seal FPM	2			
11	Stem seal FPM	2			
12	Lever PP red	1			
13	handle clip	1			
14	Threaded bush Stainless steel	2			

No.	Article / Material	Pieces	d75 DN65	d90 DN80	
	Ball set		161 486 381	161 486 382	161 486 383
5	Ball PVC-U	1			
6	Stem EPDM	1			
7	Ball seal PTFE	2			
8	Backing seal EPDM	2			
9	Body seal EPDM	1			
11	Stem seal EPDM	2			
	Ball set		161 486 391	161 486 392	161 486 393
5	Ball PVC-U	1			
6	Stem FPM	1			
7	Ball seal PTFE	2			
8	Backing seal FPM	2			
9	Body seal FPM	1			
11	Stem seal FPM	2			
	Seal set		161 486 406	161 486 407	161 486 408
8	Backing seal EPDM	2			
9	Body seal EPDM	1			
10	Face seal EPDM	2			
11	Stem seal EPDM	2			
	Seal set		161 486 416	161 486 417	161 486 418
8	Backing seal FPM	2			
9	Body seal FPM	1			
10	Face seal FPM	2			
11	Stem seal FPM	2			
3	Connecting piece 546 PVC-U (G01) with solvent cement socket metric	1	161 490 673	161 490 674	161 490 675
3	Connecting piece 546 PVC-U (G02) with solvent cement socket JIS	1	161 490 751	161 490 752	161 490 753
3	Connecting piece 546 PVC-U (G03) with solvent cement socket Inch ASTM	1	161 490 719	161 490 720	161 490 721
3	Connecting piece 546 PVC-U (G04) with solvent cement socket Inch BS	1	161 490 673	161 490 742	161 490 743
3	Connecting piece 546 PVC-U (G05) with solvent cement spigot metric	1	161 490 708	161 490 709	161 490 710
3	Connecting piece 546 PVC-U (G06) with threaded socket Rp	1	161 490 697	161 490 698	161 490 699

No.	Article / Material	Pieces	d75 DN65	d90 DN80	
3	Connecting piece 546 PVC-U (G08) with threaded socket NPT	1	161 490 761	161 490 762	161 490 763
3	Connecting piece 546 PVC-U (G09) with threaded socket NPT	1	161 490 730	161 490 731	161 490 732
3	Connecting piece 546 PE 100 (G43) with butt fusion spigot long SDR11 metric	1	193 480 158	193 480 159	193 480 160
3	Connecting piece 546 PE 100 (G44) with butt fusion spigot long SDR17,6 metric	1	163 480 168	163 480 169	163 480 170
3	Connecting piece 546 PVC-U (G70) subassembly with backing flange PVC-U ISO BS	1	161 486 271	161 486 272	161 486 273
3	Connecting piece 546 PVC-U (G71) subassembly with backing flange PVC-U Inch ANSI	1	161 486 281	161 486 282	161 486 283
3	Connecting piece 546 PP (G72) subassembly with backing flange PP-ST ISO BS	1	161 486 291	161 486 292	161 486 293
3	Connecting piece 546 PP (G73) subassembly with backing flange PP-ST ANSI	1	161 486 431	161 486 432	161 486 433
3	Connecting piece 546 PVC-U (G78) subassembly with backing flange JIS	1	161 486 201	161 486 202	161 486 203
4	Union nut PVC-U	1	161 490 544	161 490 545	161 490 546
10	Face seal EPDM	1	748 410 119	748 410 023	748 410 254
10	Face seal FPM	1	749 410 119	749 410 023	749 410 254
12	Standard handle 546 red (K01)	1	167 484 094	167 484 095	167 484 096
12	Standard handle 546 black (K02)	1	167 484 082	167 484 083	167 484 084

Spare parts for ball valve type 546 PVC-C (DN10/15-50)

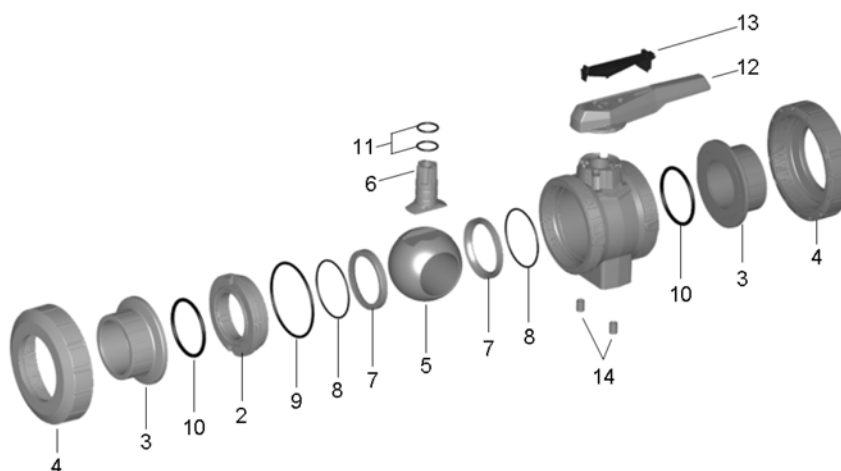


No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	Central part
	163 481 251	163 481 251	163 481 253	163 481 254	163 480 255	163 481 256			
1	Body PVC-C	1							
2	Union bush PVC-C	1							
5	Ball PVC-C	1							
6	Stem PVC-C	1							
7	Ball seal PTFE	2							
8	Backing seal EPDM	2							
9	Body seal EPDM	1							
10	Face seal EPDM	2							
11	Stem seal EPDM	2							
12	Lever PP red	1							
14	Threaded bush Stainless steel	2							
	Central part		163 481 263	163 481 263	163 481 264	163 481 265	163 481 266	163 481 267	163 481 268
1	Body PVC-C	1							
2	Union bush PVC-C	1							
5	Ball PVC-C	1							
6	Stem PVC-C	1							
7	Ball seal PTFE	2							
8	Backing seal FPM	2							
9	Body seal FPM	1							
10	Face seal FPM	2							
11	Stem seal FPM	2							
12	Lever PP red	1							
14	Threaded bush Stainless steel	2							

No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	
	Ball set		163 481 375	163 481 375	163 481 376	163 481 377	163 481 378	163 481 379	163 481 380
5	Ball PVC-C	1							
6	Stem PVC-C	1							
7	Ball seal PTFE	2							
8	Backing seal EPDM	2							
9	Body seal EPDM	1							
11	Stem seal EPDM	2							
	Ball set		163 481 385	163 481 385	163 481 386	163 481 387	163 481 388	163 481 389	163 481 390
5	Ball PVC-C	1							
6	Stem PVC-C	1							
7	Ball seal PTFE	2							
8	Backing seal FPM	2							
9	Body seal FPM	1							
11	Stem seal FPM	2							
	Seal set		161 486 400	161 486 400	161 486 401	161 486 402	161 486 403	161 486 404	161 486 405
8	Backing seal EPDM	2							
9	Body seal EPDM	1							
10	Face seal EPDM	2							
11	Stem seal EPDM	2							
	Seal set		161 486 410	161 486 410	161 486 411	161 486 412	161 486 413	161 486 414	161 486 415
8	Backing seal FPM	2							
9	Body seal FPM	1							
10	Face seal FPM	2							
11	Stem seal FPM	2							
3	Connecting piece 546 PVC-C (G11) with solvent cement socket metric	1	163 481 275	163 481 276	163 481 277	163 481 278	163 481 279	163 481 280	163 481 281
3	Connecting piece 546 PVC-C (G13) with solvent cement socket Inch ASTM	1	163 481 311	163 481 312	163 481 313	163 481 314	163 481 315	163 481 316	163 481 317
3	Connecting piece 546 PVC-C (G14) with solvent cement spigot metric	1	163 481 300	163 481 301	163 481 302	163 481 303	163 481 304	163 481 305	163 481 306
3	Connecting piece 546 PVC-C (G15) with threaded socket Rp	1	163 481 286	163 481 287	163 481 288	163 481 289	163 481 290	163 481 291	163 481 292
3	Connecting piece 546 PVC-C (G16) with threaded socket Rp fortified	1	163 481 400	163 481 401	163 481 402	163 481 403	163 481 404	163 481 405	163 481 406
3	Connecting piece 546 PVC-C (G17) with threaded socket NPT	1	163 481 322	163 481 323	163 481 324	163 481 325	163 481 326	163 481 327	163 481 328

No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	
3	Connecting piece 546 PE 100 (G40) with fusion socket metric	1	193 480 175	193 480 176	193 480 177	193 480 178	193 480 179	193 480 180	193 480 181
3	Connecting piece 546 PE 100 (G41) with butt fusion spigot SDR11 metric	1	-	193 480 102	193 480 103	193 480 104	193 480 105	193 480 106	193 480 107
3	Connecting piece 546 PE 100	1	-	-	-	-	193 480 086	193 480 087	193 480 088
3	Connecting piece 546 PE 100 (G43) with butt fusion spigot long SDR11 metric	1	-	193 480 152	193 480 153	193 480 154	193 480 155	193 480 156	193 480 157
3	Connecting piece 546 PE 100 (G72) subassembly with backing flange PP-ST metric	1	-	163 481 412	163 481 413	163 481 414	163 481 415	163 481 416	163 481 417
3	Connecting piece blank 546 PVC-U (G80)	1	161 490 837	161 490 837	161 490 838	161 490 839	161 490 840	161 490 841	161 490 842
4	Union nut PVC-C	1	163 481 226	163 481 226	163 481 227	163 481 228	163 481 229	163 481 230	1634812231
12	Standard handle 546 red (K01)	1	167 484 088	167 484 088	167 484 089	167 484 090	167 484 091	167 484 092	167 484 093
12	Standard handle 546 black (K02)	1	167 484 076	167 484 076	167 484 077	167 484 078	167 484 079	167 484 080	167 484 081
22	Multifunction handle 546 red (K11) with ratchet settings lockable	1	167 484 100	167 484 100	167 484 101	167 484 102	167 484 103	167 484 104	167 484 105
10	Face seal EPDM	1	748 410 059	748 410 059	748 410 106	748 410 159	748 410 062	748 410 003	748 410 231
10	Face seal FPM	1	749 410 059	749 410 059	749 410 106	749 410 159	749 410 062	749 410 003	749 410 231

Spare parts for ball valve type 546 PVC-C (DN65-100)

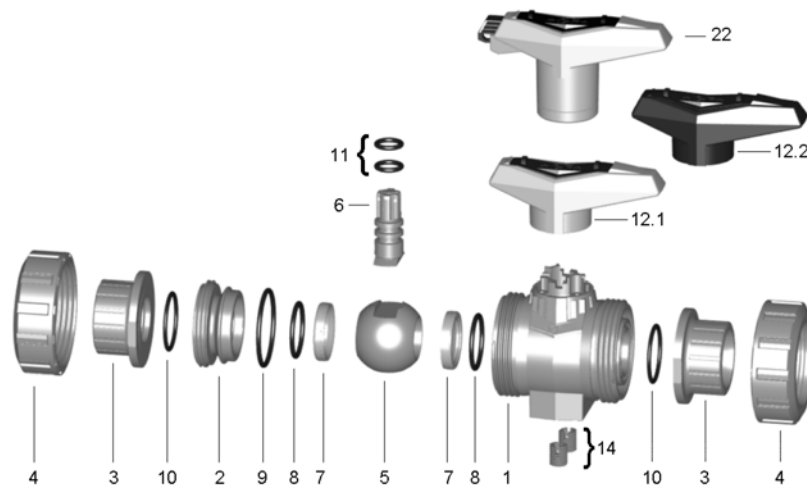


No.	Article / Material	Pieces	d75 DN65	d90 DN80	Central part
	163 481 257	163 480 258	163 481 259		
1	Body PVC-C	1			
2	Union bush PVC-C	1			
5	Ball PVC-C	1			
6	Stem PVC-C	1			
7	Ball seal PTFE	2			
8	Backing seal EPDM	2			
9	Body seal EPDM	1			
10	Face seal EPDM	2			
11	Stem seal EPDM	2			
12	Lever PP red	1			
13	handle clip	1			
14	Threaded bush Stainless steel	2			
	Central part		163 481 269	163 481 270	163 481 271
1	Body PVC-C	1			
2	Union bush PVC-C	1			
5	Ball PVC-C	1			
6	Stem PVC-C	1			
7	Ball seal PTFE	2			
8	Backing seal FPM	2			
9	Body seal FPM	1			
10	Face seal FPM	2			
11	Stem seal FPM	2			
12	Lever PP red	1			
13	handle clip	1			
14	Threaded bush Stainless steel	2			

No.	Article / Material	Pieces	d75 DN65	d90 DN80	
	Ball set		163 481 381	163 481 382	163 481 383
5	Ball PVC-C	1			
6	Stem PVC-C	1			
7	Ball seal PTFE	2			
8	Backing seal EPDM	2			
9	Body seal EPDM	1			
11	Stem seal EPDM	2			
	Ball set		163 481 391	163 481 392	163 481 393
5	Ball PVC-C	1			
6	Stem PVC-C	1			
7	Ball seal PTFE	2			
8	Backing seal FPM	2			
9	Body seal FPM	1			
11	Stem seal FPM	2			
	Seal set		161 486 406	161 486 407	161 486 408
8	Backing seal EPDM	2			
9	Body seal EPDM	1			
10	Face seal EPDM	2			
11	Stem seal EPDM	2			
	Seal set		161 486 416	161 486 417	161 486 418
8	Backing seal FPM	2			
9	Body seal FPM	1			
10	Face seal FPM	2			
11	Stem seal FPM	2			
3	Connecting piece 546 PVC-C (G11) with solvent cement socket metric	1	163 481 282	163 481 283	163 481 284
3	Connecting piece 546 PVC-C (G12) with solvent cement socket JIS	1	163 481 339	163 481 340	163 481 341
3	Connecting piece 546 PVC-C (G13) with solvent cement socket Inch ASTM	1	163 481 318	163 481 319	163 481 320
3	Connecting piece 546 PVC-C (G14) with solvent cement spigot metric	1	163 481 307	163 481 308	163 481 309
3	Connecting piece 546 PVC-C (G15) with threaded socket Rp	1	163 481 293	163 481 294	163 481 295
3	Connecting piece 546 PVC-C (G17) with threaded socket NPT	1	163 481 329	163 481 330	163 481 331

No.	Article / Material	Pieces	d75 DN65	d90 DN80	
3	Connecting piece 546 (G72) subassembly with backing flange PP-ST ISO BS	1	163 481 418	163 481 419	163 481 420
3	Connecting piece 546 (G73) subassembly with backing flange PP-ST ASTM	1	163 481 431	163 481 432	163 481 433
4	Union nut PVC-C	1	163 481 232	163 481 233	1634812234
10	Face seal EPDM	1	748 410 119	748 410 023	748 410 254
10	Face seal FPM	1	749 410 119	749 410 023	749 410 254
12	Standard handle 546 red (K01)	1	167 484 094	167 484 095	167 484 096
12	Standard handle 546 black (K02)	1	167 484 082	167 484 083	167 484 084

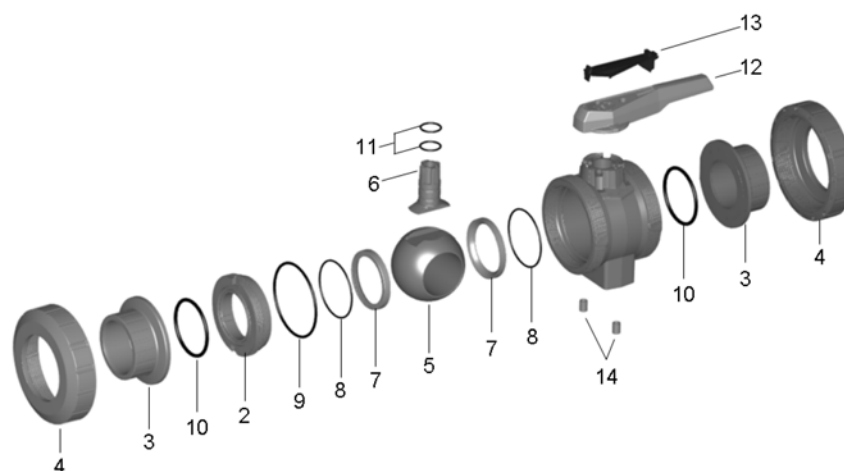
Spare parts for ball valve type 546 ABS (DN10/15-50)



No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	Central part
	169 480 751	169 480 751	169 480 753	169 480 754	169 480 755	169 480 756			
1	Body ABS	1							
2	Union bush ABS	1							
5	Ball ABS	1							
6	Stem ABS	1							
7	Ball seal PTFE	2							
8	Backing seal EPDM	2							
9	Body seal EPDM	1							
10	Face seal EPDM	2							
11	Stem seal EPDM	2							
12	Lever PP red	1							
14	Threaded bush Stainless steel	2							
	Ball set		169 480 900	169 480 900	169 480 901	169 480 902	169 480 903	169 480 904	169 480 905
5	Ball ABS	1							
6	Stem ABS	1							
7	Ball seal PTFE	2							
8	Backing seal EPDM	2							
9	Body seal EPDM	1							
11	Stem seal EPDM	2							
	Seal set		161 486 400	161 486 400	161 486 401	161 486 402	161 486 403	161 486 404	161 486 405
8	Backing seal EPDM	2							
9	Body seal EPDM	1							
10	Face seal EPDM	2							
11	Stem seal EPDM	2							

No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	
	Seal set		161 486 410	161 486 410	161 486 411	161 486 412	161 486 413	161 486 414	161 486 415
8	Backing seal FPM	2							
9	Body seal FPM	1							
10	Face seal FPM	2							
11	Stem seal FPM	2							
3	Connecting piece 546 ABS (G20) with solvent cement socket metric	1	169 480 775	169 480 776	169 480 777	169 480 778	169 480 779	169 480 780	169 480 781
3	Connecting piece 546 ABS (G21) with solvent cement socket Inch BS	1	169 480 800	169 480 801	169 480 802	169 480 803	169 480 804	169 480 805	169 480 806
3	Connecting piece 546 ABS (G22) with threaded socket Rp	1	169 480 786	169 480 787	169 480 788	169 480 789	169 480 790	169 480 791	169 480 792
3	Connecting piece 546 ABS (G23) with threaded socket Rp fortified	1	169 480 925	169 480 926	169 480 927	169 480 928	169 480 929	169 480 930	169 480 931
3	Connecting piece 546 PE 100 (G40) with fusion socket metric	1	193 480 175	193 480 176	193 480 177	193 480 178	193 480 179	193 480 180	193 480 181
3	Connecting piece 546 PE 100	1	-	193 480 102	193 480 103	193 480 104	193 480 105	193 480 106	193 480 107
3	Connecting piece 546 PE 100 (G42) with butt fusion spigot SDR17,6 metric	1	-	-	-	-	193 480 086	193 480 087	193 480 088
3	Connecting piece 546 PE 100 (G43) with butt fusion spigot long SDR11 metric	1	-	193 480 152	193 480 153	193 480 154	193 480 155	193 480 156	193 480 157
3	Connecting piece blank 546 PVC-U (G80)	1	161 490 837	161 490 837	161 490 838	161 490 839	161 490 840	161 490 841	161 490 842
4	Union nut 546 ABS		169 480 713	169 480 713	169 480 714	169 480 715	169 480 716	169 480 717	169 480 718
12	Standard handle 546 red (K01)	1	167 484 088	167 484 088	167 484 089	167 484 090	167 484 091	167 484 092	167 484 093
12	Standard handle 546 black (K02)	1	167 484 076	167 484 076	167 484 077	167 484 078	167 484 079	167 484 080	167 484 081
22	Multifunction handle 546 red (K11) with ratchet settings lockable	1	167 484 100	167 484 100	167 484 101	167 484 102	167 484 103	167 484 104	167 484 105
10	Face seal EPDM		748 410 059	748 410 059	748 410 106	748 410 151	748 410 062	748 410 003	748 410 231

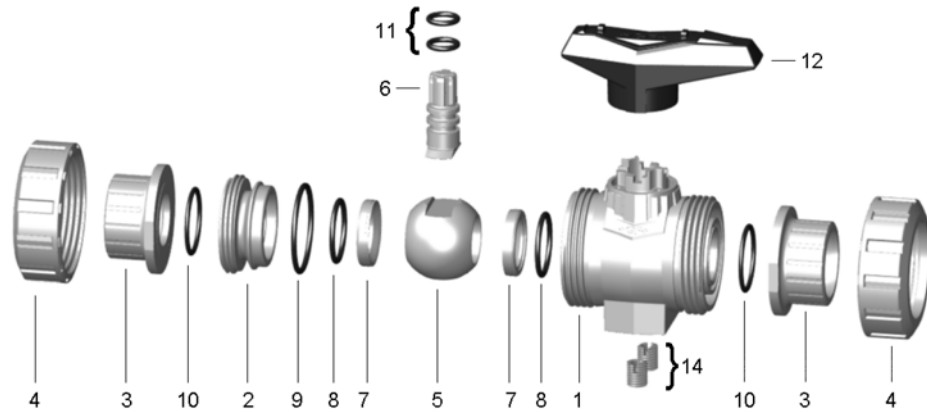
Spare parts for ball valve type 546 ABS (DN65-100)



No.	Article / Material	Pieces	d75 DN65	d90 DN80	Central part
	169 480 757	169 480 758	169 480 759		
1	Body ABS	1			
2	Union bush ABS	1			
5	Ball ABS	1			
6	Stem ABS	1			
7	Ball seal PTFE	2			
8	Backing seal EPDM	2			
9	Body seal EPDM	1			
10	Face seal EPDM	2			
11	Stem seal EPDM	2			
12	Lever PP red	1			
13	handle clip	1			
14	Threaded bush Stainless steel	2			
	Ball set		169 480 906	169 480 907	169 480 908
5	Ball ABS	1			
6	Stem ABS	1			
7	Ball seal PTFE	2			
8	Backing seal EPDM	2			
9	Body seal EPDM	1			
11	Stem seal EPDM	2			
	Seal set		161 486 406	161 486 407	161 486 408
8	Backing seal EPDM	2			
9	Body seal EPDM	1			
10	Face seal EPDM	2			
11	Stem seal EPDM	2			

No.	Article / Material	Pieces	d75 DN65	d90 DN80	
3	Connecting piece 546 ABS (G20) with solvent cement socket metric	1	169 480 782	169 480 783	169 480 784
3	Connecting piece 546 ABS (G21) with solvent cement socket Inch BS	1	169 480 782	169 480 808	169 480 809
4	Union nut 546 ABS	1	169 480 719	169 480 720	169 480 721
12	Standard handle 546 red (K01)	1	167 484 094	167 484 095	167 484 096
12	Standard handle 546 black (K02)	1	167 484 082	167 484 083	167 484 084
10	Face seal EPDM	1	748 410 119	748 410 023	748 410 254

Spare parts for ball valve type 546 PP-H (DN10/15-50)



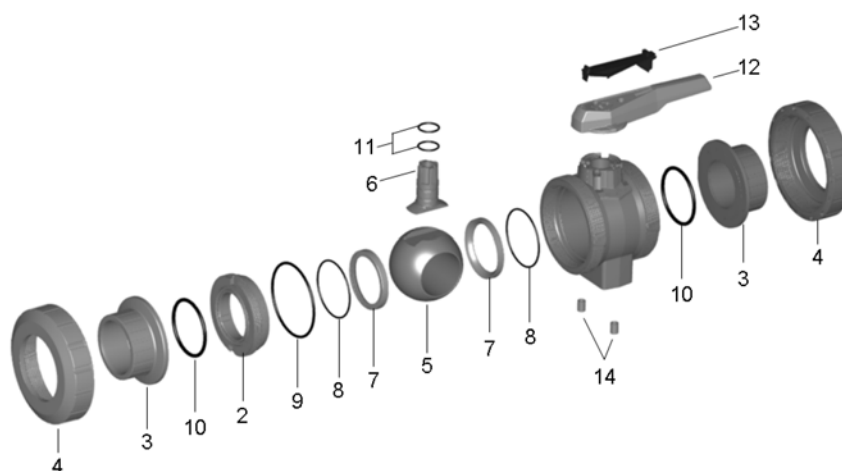
No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	Central part
	167 482 876	167 482 876	167 482 878	167 482 879	167 482 880	167 482 881			
1	Body PP	1							
2	Union bush PP	1							
5	Ball PP	1							
6	Stem PP	1							
7	Ball seal PTFE	2							
8	Backing seal EPDM	1							
9	Body seal EPDM	1							
10	Face seal EPDM	2							
11	Stem seal EPDM	2							
12	Lever PP black	1							
14	Threaded bush Stainless steel	3							
	Central part		167 482 888	167 482 888	167 482 889	167 482 890	167 482 891	167 482 892	167 482 893
1	Body PP	1							
2	Union bush PP	1							
5	Ball PP	1							
6	Stem PP	1							
7	Ball seal PTFE	2							
8	Backing seal FPM	1							
9	Body seal FPM	1							
10	Face seal FPM	2							
11	Stem seal FPM	2							
12	Lever PP black	1							
14	Threaded bush Stainless steel	3							
	Ball set		167 484 125	167 484 125	167 484 126	167 484 127	167 484 128	167 484 129	167 484 130
5	Ball PP	1							
6	Stem PP	1							
7	Ball seal PTFE	2							
8	Backing seal EPDM	2							
9	Body seal EPDM	1							
11	Stem seal EPDM	2							

No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	
	Ball set		167 484 135	167 484 135	167 484 136	167 484 137	167 484 138	167 484 139	167 484 140
5	Ball PP	1							
6	Stem PP	1							
7	Ball seal PTFE	2							
8	Backing seal FPM	2							
9	Body seal FPM	1							
11	Stem seal FPM	2							
	Seal set		161 486 400	161 486 400	161 486 401	161 486 402	161 486 403	161 486 404	161 486 405
8	Backing seal EPDM	2							
9	Body seal EPDM	1							
10	Face seal EPDM	2							
11	Stem seal EPDM	2							
	Seal set		161 486 410	161 486 410	161 486 411	161 486 412	161 486 413	161 486 414	161 486 415
8	Backing seal FPM	2							
9	Body seal FPM	1							
10	Face seal FPM	2							
11	Stem seal FPM	2							
3	Connecting piece 546 PP-H (G30) with fusion socket metric	1	167 482 900	167 482 901	167 482 902	167 482 903	167 482 904	167 482 905	167 482 906
3	Connecting piece 546 PP-H (G32) with socket fusion spigot metric	1	167 482 922	167 482 923	167 482 924	167 482 925	167 482 926	167 482 927	167 482 928
3	Connecting piece 546 PP-H (G33) with threaded socket Rp fortified	1	167 482 911	167 482 912	167 482 913	167 482 914	167 482 915	167 482 916	167 482 917
3	Connecting piece 546 PP-H (G34) with threaded socket NPT fortified	1	167 482 966	167 482 967	167 482 968	167 482 969	167 482 970	167 482 971	167 482 972
3	Connecting piece 546 PP-H (G35) with butt fusion spigot IR Plus® SDR11 metric	1	-	167 482 945	167 482 946	167 482 947	167 482 948	167 482 949	167 482 950
3	Connecting piece 546 PP-H (G36) with butt fusion spigot SDR17,6 metric	1	-	-	-	-	167 482 937	167 482 938	167 482 939
3	Connecting piece 546 PP-H (G37) with butt fusion spigot long SDR11 metric	1	-	167 482 956	167 482 957	167 482 958	167 482 959	167 482 960	167 482 961
3	Connecting piece 546 PP-H (G63) subassembly with fixed flange serrated PP-H metric	1	-	167 484 160	167 484 161	167 484 162	167 484 163	167 484 164	167 484 165

No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	
3	Connecting piece 546 PP-H (G73) subassembly with backing flange PP-ST ANSI	1	-	167 482 956	167 482 957	167 482 958	167 482 959	-	-
3	Connecting piece 546 PE 100 (G40) with fusion socket metric	1	193 480 175	193 480 176	193 480 177	193 480 178	193 480 179	193 480 180	193 480 181
3	Connecting piece 546 PE 100 (G41) with butt fusion spigot SDR11 metric	1	-	193 480 102	193 480 103	193 480 104	193 480 105	193 480 106	193 480 107
3	Connecting piece 546 PE 100 (G42) with butt fusion spigot SDR17,6 metric	1	-	-	-	-	193 480 086	193 480 087	193 480 088
3	Connecting piece 546 PE 100 (G43) with butt fusion spigot long SDR11 metric	1	-	193 480 152	193 480 153	193 480 154	193 480 155	193 480 156	193 480 157
3	Connecting piece 546 PVC-C (G11) with solvent cement socket metric	1	163 481 275	163 481 276	163 481 277	163 481 278	163 481 279	163 481 280	163 481 281
3	Connecting piece 546 PVC-C (G13) with solvent cement socket Inch ASTM	1	163 481 311	163 481 312	163 481 313	163 481 314	163 481 315	163 481 316	163 481 317
3	Connecting piece 546 PVC-C (G14) with solvent cement spigot metric	1	163 481 300	163 481 301	163 481 302	163 481 303	163 481 304	163 481 305	163 481 306
3	Connecting piece 546 PVC-C (G15) with threaded socket Rp	1	163 481 286	163 481 287	163 481 288	163 481 289	163 481 290	163 481 291	163 481 292
3	Connecting piece 546 PVC-C (G16) with threaded socket Rp fortified	1	163 481 400	163 481 401	163 481 402	163 481 403	163 481 404	163 481 405	163 481 406
3	Connecting piece 546 PVC-C (G17) with threaded socket NPT	1	163 481 322	163 481 323	163 481 324	163 481 325	163 481 326	163 481 327	163 481 328
4	Union nut 546 PP-H	1	167 482 712	167 482 712	167 482 713	167 482 714	167 482 715	167 482 716	167 482 717
12	Standard handle 546 red (K01)	1	167 484 088	167 484 088	167 484 089	167 484 090	167 484 091	167 484 092	167 484 093

No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	
12	Standard handle 546 black (K02)	1	167 484 076	167 484 076	167 484 077	167 484 078	167 484 079	167 484 080	167 484 081
22	Multifunction handle 546 red (K11) with ratchet settings lockable	1	167 484 100	167 484 100	167 484 101	167 484 102	167 484 103	167 484 104	167 484 105
10	Face seal EPDM	1	748 410 059	748 410 059	748 410 106	748 410 151	748 410 062	748 410 003	748 410 231
10	Face seal FPM	1	749 410 059	749 410 059	749 410 106	749 410 151	749 410 062	749 410 003	749 410 231

Spare parts for ball valve type 546 PP-H (DN65-100)

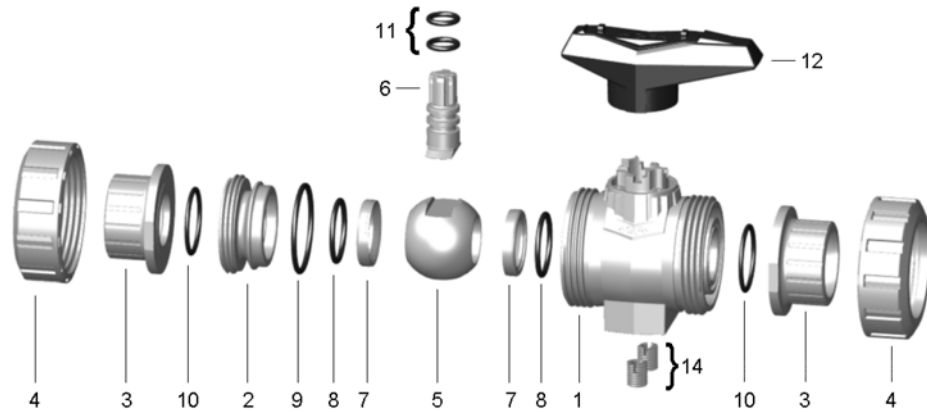


No.	Article / Material	Pieces	d75 DN65	d90 DN80	Central part
	167 482 882	167 482 883	167 482 884		
1	Body PP	1			
2	Union bush PP	1			
5	Ball PP	1			
6	Stem PP	1			
7	Ball seal PTFE	2			
8	Backing seal EPDM	1			
9	Body seal EPDM	1			
10	Face seal EPDM	2			
11	Stem seal EPDM	2			
12	Lever PP black	1			
13	handle clip	1			
14	Threaded bush Stainless steel	3			
	Central part		167 482 894	167 482 895	167 482 896
1	Body PP	1			
2	Union bush PP	1			
5	Ball PP	1			
6	Stem PP	1			
7	Ball seal PTFE	2			
8	Backing seal FPM	1			
9	Body seal FPM	1			
10	Face seal FPM	2			
11	Stem seal FPM	2			
12	Lever PP black	1			
13	handle clip	1			
14	Threaded bush Stainless steel	3			

No.	Article / Material	Pieces	d75 DN65	d90 DN80	
	Ball set		167 484 131	167 484 132	167 484 133
5	Ball PP	1			
6	Stem PP	1			
7	Ball seal PTFE	2			
8	Backing seal EPDM	2			
9	Body seal EPDM	1			
11	Stem seal EPDM	2			
	Ball set		167 484 141	167 484 142	167 484 143
5	Ball PP	1			
6	Stem PP	1			
7	Ball seal PTFE	2			
8	Backing seal FPM	2			
9	Body seal FPM	1			
11	Stem seal FPM	2			
	Seal set		161 486 406	161 486 407	161 486 408
8	Backing seal EPDM	2			
9	Body seal EPDM	1			
10	Face seal EPDM	2			
11	Stem seal EPDM	2			
	Seal set		161 486 416	161 486 417	161 486 418
8	Backing seal FPM	2			
9	Body seal FPM	1			
10	Face seal FPM	2			
11	Stem seal FPM	2			
3	Connecting piece 546 PP-H (G30) with fusion socket metric	1	167 482 907	167 482 908	167 482 909
3	Connecting piece 546 PP-H (G32) with socket fusion spigot metric	1	167 482 929	167 482 930	167 482 931
3	Connecting piece 546 PP-H (G35) with butt fusion spigot IR Plus® SDR11 metric	1	167 482 951	167 482 952	167 482 953
3	Connecting piece 546 PP-H (G36) with butt fusion spigot SDR17,6 metric	1	167 482 940	167 482 941	167 482 942
3	Connecting piece 546 (G73) subassembly with backing flange PP-ST ANSI	1	167 484 071	167 484 072	167 484 073
3	Connecting piece 546 (G77) subassembly with backing flange PP-GF JIS	1	167 484 481	167 484 482	167 484 483

No.	Article / Material	Pieces	d75 DN65	d90 DN80	
3	Connecting piece 546 (G72) subassembly with backing flange PP-ST ISO BS	1	167 484 418	167 484 419	167 484 420
3	Connecting piece 546 PE 100 (G43) with butt fusion spigot long SDR11 metric	1	193 480 158	193 480 159	193 480 160
3	Connecting piece 546 PE 100 (G44) with butt fusion spigot long SDR17,6 metric	1	193 480 168	193 480 169	193 480 170
4	Union nut 546 PP-H	1	167 482 718	167 482 719	167 482 720
12	Standard handle 546 red (K01)	1	167 484 094	167 484 095	167 484 096
12	Standard handle 546 black (K02)	1	167 484 082	167 484 083	167 484 084
10	Face seal EPDM	1	748 410 119	748 410 023	748 410 254
10	Face seal FPM	1	749 410 119	749 410 023	749 410 254

Spare parts for ball valve type 546 PVDF



No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	Central part
	175 482 963	175 482 963	175 482 963	175 482 966	175 482 967	175 482 968			
1	Body PVDF	1							
2	Union bush PVDF	1							
5	Ball PVDF	1							
6	Stem PVDF	1							
7	Ball seal PTFE	2							
8	Backing seal FPM	2							
9	Body seal FPM	1							
10	Face seal FPM	2							
11	Stem seal FPM	2							
12	Lever PP black	1							
14	Threaded bush Stainless steel	2							
	Ball set		175 483 275	175 483 275	175 483 276	175 483 277	175 483 278	175 483 279	175 483 280
5	Ball PVDF	1							
6	Stem PVDF	1							
7	Ball seal PTFE	2							
8	Backing seal FPM	2							
9	Body seal FPM	1							
11	Stem seal FPM	2							
	Seal set		161 486 410	161 486 410	161 486 411	161 486 412	161 486 413	161 486 414	161 486 415
8	Backing seal FPM	2							
9	Body seal FPM	1							
10	Face seal FPM	2							
11	Stem seal FPM	2							
3	Connecting piece 546 PVDF (G50) with fusion socket metric	1	175 483 025	175 483 026	175 483 027	175 483 028	175 483 029	175 483 030	175 483 031
3	Connecting piece 546 PVDF (G51) with socket fusion spigot metric	1	175 483 036	175 483 037	175 483 038	175 483 039	175 483 040	175 483 041	175 483 042
3	Connecting piece 546 PVDF (G52) with butt fusion spigot IR-Plus® metric	1	-	175 483 048	175 483 049	175 483 050	175 483 051	175 483 052	175 483 053

No.	Article / Material	Pieces	d16 DN10	d20 DN15	d25 DN20	d32 DN25	d40 DN32	d50 DN40	
3	Connecting piece 546 PVDF (G53) with threaded socket NPT	1	175 483 058	175 483 059	175 483 060	175 483 061	175 483 062	175 483 063	175 483 064
3	Connecting piece 546 PVDF (G64) subassembly with fixed flange serrated PVDF metric	1	-	175 483 285	175 483 286	175 483 287	175 483 288	175 483 289	175 483 290
4	Union nut 546 PVDF	1	175 482 937	175 482 937	175 482 938	175 482 939	175 482 940	175 482 941	175 482 942
12	Standard handle 546 red (K01)	1	167 484 088	167 484 088	167 484 089	167 484 090	167 484 091	167 484 092	167 484 093
12	Standard handle 546 black (K02)	1	167 484 076	167 484 076	167 484 077	167 484 078	167 484 079	167 484 080	167 484 081
22	Multifunction handle 546 red (K11) with ratchet settings lockable	1	167 484 100	167 484 100	167 484 101	167 484 102	167 484 103	167 484 104	167 484 105
10	Face seal FPM	1	749 470 059	749 470 059	749 470 106	749 470 151	749 470 062	749 470 003	749 470 231

Index

Code	Page
161 483 362	393
161 484 080	393
161 486 151	393
161 486 152	393
161 486 153	393
161 486 154	393
161 486 155	393
161 486 156	393
161 486 157	396
161 486 158	396
161 486 159	396
161 486 163	393
161 486 164	393
161 486 165	393
161 486 166	393
161 486 167	393
161 486 168	393
161 486 169	396
161 486 170	396
161 486 171	396
161 486 201	396
161 486 202	396
161 486 203	396
161 486 265	341
161 486 266	341
161 486 267	341
161 486 268	341
161 486 269	341
161 486 270	341
161 486 271	341
161 486 272	341
161 486 273	341
161 486 275	342
161 486 276	342
161 486 277	342
161 486 278	342
161 486 279	342
161 486 280	342
161 486 281	342
161 486 282	342
161 486 283	342
161 486 285	342
161 486 286	342
161 486 287	342
161 486 288	342
161 486 289	342
161 486 290	342
161 486 291	342
161 486 292	342
161 486 293	342
161 486 295	341
161 486 296	341
161 486 297	341
161 486 298	341
161 486 299	341
161 486 300	341
161 486 360	341
161 486 361	341
161 486 362	341
161 486 363	341
161 486 364	341
161 486 365	341
161 486 375	393
161 486 376	393
161 486 377	393
161 486 378	393
161 486 379	393

Code	Page
161 486 380	393
161 486 381	396
161 486 382	396
161 486 383	396
161 486 385	393
161 486 386	393
161 486 387	393
161 486 388	393
161 486 389	393
161 486 390	393
161 486 391	396
161 486 392	396
161 486 393	396
161 486 400	393
161 486 401	393
161 486 402	393
161 486 403	393
161 486 404	393
161 486 405	393
161 486 406	396
161 486 407	396
161 486 408	396
161 486 410	393
161 486 411	393
161 486 412	393
161 486 413	393
161 486 414	393
161 486 415	393
161 486 416	396
161 486 417	396
161 486 418	396
161 486 425	342
161 486 426	342
161 486 427	342
161 486 428	342
161 486 429	342
161 486 430	342
161 486 431	342
161 486 432	342
161 486 433	342
161 486 435	362
161 486 436	362
161 486 437	362
161 486 438	362
161 486 443	362
161 486 444	362
161 486 445	362
161 486 446	362
161 486 640	354
161 486 641	354
161 486 642	354
161 486 651	354
161 486 652	354
161 486 653	354
161 486 689	361
161 486 690	361
161 486 691	361
161 490 538	355
161 490 539	355
161 490 540	355
161 490 541	355
161 490 542	355
161 490 543	355
161 490 544	355
161 490 545	355
161 490 546	355
161 490 666	338

Code	Page
161 490 667	338
161 490 668	338
161 490 669	338
161 490 670	338
161 490 671	338
161 490 672	338
161 490 673	338
161 490 674	338
161 490 675	338
161 490 690	339
161 490 691	339
161 490 692	339
161 490 693	339
161 490 694	339
161 490 695	339
161 490 696	339
161 490 697	339
161 490 698	339
161 490 699	339
161 490 701	339
161 490 702	339
161 490 703	339
161 490 704	339
161 490 705	339
161 490 706	339
161 490 707	339
161 490 708	339
161 490 709	339
161 490 710	339
161 490 712	338
161 490 713	338
161 490 714	338
161 490 715	338
161 490 716	338
161 490 717	338
161 490 718	338
161 490 719	338
161 490 720	338
161 490 721	338
161 490 723	340
161 490 724	340
161 490 725	340
161 490 726	340
161 490 727	340
161 490 728	340
161 490 729	340
161 490 730	340
161 490 731	340
161 490 732	340
161 490 734	339
161 490 735	339
161 490 736	339
161 490 737	339
161 490 738	339
161 490 739	339
161 490 740	339
161 490 742	339
161 490 743	339
161 490 751	396
161 490 752	396
161 490 753	396
161 490 755	340
161 490 756	340
161 490 757	340
161 490 758	340
161 490 759	340
161 490 760	340

Index

Code	Page
161 490 761	340
161 490 762	340
161 490 763	340
161 490 825	340
161 490 826	340
161 490 827	340
161 490 828	340
161 490 829	340
161 490 830	340
161 490 831	340
161 490 837	343
161 490 838	343
161 490 839	343
161 490 840	343
161 490 841	343
161 490 842	343
161 491 084	338
161 491 085	338
161 546 001	7
161 546 002	7
161 546 003	7
161 546 004	7
161 546 005	7
161 546 006	7
161 546 007	7
161 546 008	7
161 546 009	7
161 546 010	7
161 546 011	7
161 546 012	7
161 546 013	7
161 546 014	7
161 546 015	7
161 546 016	7
161 546 017	7
161 546 018	7
161 546 019	7
161 546 020	7
161 546 021	11
161 546 022	11
161 546 023	11
161 546 024	11
161 546 025	11
161 546 026	11
161 546 027	11
161 546 028	11
161 546 029	11
161 546 030	11
161 546 031	11
161 546 032	11
161 546 033	11
161 546 034	11
161 546 035	11
161 546 036	11
161 546 037	11
161 546 038	11
161 546 039	11
161 546 040	11
161 546 041	9
161 546 042	9
161 546 043	9
161 546 044	9
161 546 045	9
161 546 046	9
161 546 047	9
161 546 048	9
161 546 049	9

Code	Page
161 546 050	9
161 546 051	9
161 546 052	9
161 546 053	9
161 546 054	9
161 546 055	9
161 546 056	9
161 546 057	9
161 546 058	9
161 546 059	9
161 546 060	9
161 546 061	8
161 546 062	8
161 546 063	8
161 546 064	8
161 546 065	8
161 546 066	8
161 546 067	8
161 546 068	8
161 546 069	8
161 546 070	8
161 546 071	8
161 546 072	8
161 546 073	8
161 546 074	8
161 546 075	8
161 546 076	8
161 546 077	8
161 546 078	8
161 546 079	8
161 546 080	8
161 546 081	29
161 546 082	29
161 546 083	29
161 546 084	29
161 546 085	29
161 546 086	29
161 546 087	29
161 546 088	29
161 546 089	29
161 546 090	29
161 546 091	29
161 546 092	29
161 546 093	29
161 546 094	29
161 546 095	29
161 546 096	29
161 546 097	29
161 546 098	29
161 546 099	29
161 546 100	29
161 546 108	14
161 546 109	14
161 546 110	14
161 546 118	14
161 546 119	14
161 546 120	14
161 546 128	34
161 546 129	34
161 546 130	34
161 546 138	34
161 546 139	34
161 546 140	34
161 546 168	18
161 546 169	18
161 546 170	18
161 546 178	18

Code	Page
161 546 179	18
161 546 180	18
161 546 188	37
161 546 189	37
161 546 190	37
161 546 198	37
161 546 199	37
161 546 200	37
161 546 201	16
161 546 202	16
161 546 203	16
161 546 204	16
161 546 205	16
161 546 206	16
161 546 207	16
161 546 209	16
161 546 210	16
161 546 211	16
161 546 212	16
161 546 213	16
161 546 214	16
161 546 215	16
161 546 216	16
161 546 217	16
161 546 219	16
161 546 220	16
161 546 221	30
161 546 222	30
161 546 223	30
161 546 224	30
161 546 225	30
161 546 226	30
161 546 227	30
161 546 229	30
161 546 230	30
161 546 231	30
161 546 232	30
161 546 233	30
161 546 234	30
161 546 235	30
161 546 236	30
161 546 237	30
161 546 239	30
161 546 240	30
161 546 241	17
161 546 242	17
161 546 243	17
161 546 244	17
161 546 245	17
161 546 246	17
161 546 247	17
161 546 249	17
161 546 250	17
161 546 251	17
161 546 252	17
161 546 253	17
161 546 254	17
161 546 255	17
161 546 256	17
161 546 257	17
161 546 259	17
161 546 260	17
161 546 301	19
161 546 302	19
161 546 303	19
161 546 304	19
161 546 305	19

Index

Code	Page	Code	Page	Code	Page
161 546 306	19	161 546 613	32	161 546 760	12
161 546 307	19	161 546 614	32	161 546 761	22
161 546 308	19	161 546 615	32	161 546 762	22
161 546 309	19	161 546 616	32	161 546 763	22
161 546 310	19	161 546 617	32	161 546 764	22
161 546 311	19	161 546 618	32	161 546 765	22
161 546 312	19	161 546 619	32	161 546 766	22
161 546 313	19	161 546 620	32	161 546 767	22
161 546 314	19	161 546 681	35	161 546 771	22
161 546 315	19	161 546 682	35	161 546 772	22
161 546 316	19	161 546 683	35	161 546 773	22
161 546 317	19	161 546 684	35	161 546 774	22
161 546 318	19	161 546 685	35	161 546 775	22
161 546 319	19	161 546 686	35	161 546 776	22
161 546 320	19	161 546 687	35	161 546 777	22
161 546 341	20	161 546 688	35	161 546 782	24
161 546 342	20	161 546 689	35	161 546 783	24
161 546 343	20	161 546 690	35	161 546 784	24
161 546 344	20	161 546 691	35	161 546 785	24
161 546 345	20	161 546 692	35	161 546 786	24
161 546 346	20	161 546 693	35	161 546 787	24
161 546 347	20	161 546 694	35	161 546 792	24
161 546 348	20	161 546 695	35	161 546 793	24
161 546 349	20	161 546 696	35	161 546 794	24
161 546 350	20	161 546 697	35	161 546 795	24
161 546 351	20	161 546 698	35	161 546 796	24
161 546 352	20	161 546 699	35	161 546 797	24
161 546 353	20	161 546 700	35	161 546 805	24
161 546 354	20	161 546 721	10	161 546 806	24
161 546 355	20	161 546 722	10	161 546 807	24
161 546 356	20	161 546 723	10	161 546 815	24
161 546 357	20	161 546 724	10	161 546 816	24
161 546 358	20	161 546 725	10	161 546 817	24
161 546 359	20	161 546 726	10	161 546 822	27
161 546 360	20	161 546 727	10	161 546 823	27
161 546 361	31	161 546 728	10	161 546 824	27
161 546 362	31	161 546 729	10	161 546 825	27
161 546 363	31	161 546 730	10	161 546 826	27
161 546 364	31	161 546 731	10	161 546 827	27
161 546 365	31	161 546 732	10	161 546 832	27
161 546 366	31	161 546 733	10	161 546 833	27
161 546 367	31	161 546 734	10	161 546 834	27
161 546 368	31	161 546 735	10	161 546 835	27
161 546 369	31	161 546 736	10	161 546 836	27
161 546 370	31	161 546 737	10	161 546 837	27
161 546 371	31	161 546 738	10	161 546 841	36
161 546 372	31	161 546 739	10	161 546 842	36
161 546 373	31	161 546 740	10	161 546 843	36
161 546 374	31	161 546 741	12	161 546 844	36
161 546 375	31	161 546 742	12	161 546 845	36
161 546 376	31	161 546 743	12	161 546 846	36
161 546 377	31	161 546 744	12	161 546 847	36
161 546 378	31	161 546 745	12	161 546 848	36
161 546 379	31	161 546 746	12	161 546 849	36
161 546 380	31	161 546 747	12	161 546 850	36
161 546 601	32	161 546 748	12	161 546 851	36
161 546 602	32	161 546 749	12	161 546 852	36
161 546 603	32	161 546 750	12	161 546 853	36
161 546 604	32	161 546 751	12	161 546 854	36
161 546 605	32	161 546 752	12	161 546 855	36
161 546 606	32	161 546 753	12	161 546 856	36
161 546 607	32	161 546 754	12	161 546 857	36
161 546 608	32	161 546 755	12	161 546 858	36
161 546 609	32	161 546 756	12	161 546 859	36
161 546 610	32	161 546 757	12	161 546 860	36
161 546 611	32	161 546 758	12	161 546 948	15
161 546 612	32	161 546 759	12	161 546 949	15

Index

Code	Page
161 546 950	15
161 546 958	15
161 546 959	15
161 546 960	15
163 480 168	396
163 480 169	396
163 480 170	396
163 480 255	400
163 480 258	403
163 481 226	355
163 481 227	355
163 481 228	355
163 481 229	355
163 481 230	355
163 481 231	355
163 481 232	355
163 481 233	355
163 481 234	355
163 481 251	400
163 481 252	400
163 481 253	400
163 481 254	400
163 481 256	400
163 481 257	403
163 481 259	403
163 481 263	400
163 481 264	400
163 481 265	400
163 481 266	400
163 481 267	400
163 481 268	400
163 481 269	403
163 481 270	403
163 481 271	403
163 481 275	343
163 481 276	343
163 481 277	343
163 481 278	343
163 481 279	343
163 481 280	343
163 481 281	343
163 481 282	343
163 481 283	343
163 481 284	343
163 481 286	344
163 481 287	344
163 481 288	344
163 481 289	344
163 481 290	344
163 481 291	344
163 481 292	344
163 481 293	344
163 481 294	344
163 481 295	344
163 481 300	344
163 481 301	344
163 481 302	344
163 481 303	344
163 481 304	344
163 481 305	344
163 481 306	344
163 481 307	344
163 481 308	344
163 481 309	344
163 481 311	343
163 481 312	343
163 481 313	343

Code	Page
163 481 314	343
163 481 315	343
163 481 316	343
163 481 317	343
163 481 318	343
163 481 319	343
163 481 320	343
163 481 322	345
163 481 323	345
163 481 324	345
163 481 325	345
163 481 326	345
163 481 327	345
163 481 328	345
163 481 329	345
163 481 330	345
163 481 331	345
163 481 339	403
163 481 340	403
163 481 341	403
163 481 375	400
163 481 376	400
163 481 377	400
163 481 378	400
163 481 379	400
163 481 380	400
163 481 381	403
163 481 382	403
163 481 383	403
163 481 385	400
163 481 386	400
163 481 387	400
163 481 388	400
163 481 389	400
163 481 390	400
163 481 391	403
163 481 392	403
163 481 393	403
163 481 400	344
163 481 401	344
163 481 402	344
163 481 403	344
163 481 404	344
163 481 405	344
163 481 406	344
163 481 412	345
163 481 413	345
163 481 414	345
163 481 415	345
163 481 416	345
163 481 417	345
163 481 418	345
163 481 419	345
163 481 420	345
163 481 425	345
163 481 426	345
163 481 427	345
163 481 428	345
163 481 429	345
163 481 430	345
163 481 431	345
163 481 432	345
163 481 433	345
163 546 001	101
163 546 002	101
163 546 003	101
163 546 004	101

Code	Page
163 546 005	101
163 546 006	101
163 546 007	101
163 546 008	101
163 546 009	101
163 546 010	101
163 546 011	101
163 546 012	101
163 546 013	101
163 546 014	101
163 546 015	101
163 546 016	101
163 546 017	101
163 546 018	101
163 546 019	101
163 546 020	101
163 546 021	105
163 546 022	105
163 546 023	105
163 546 024	105
163 546 025	105
163 546 026	105
163 546 027	105
163 546 028	105
163 546 029	105
163 546 030	105
163 546 031	105
163 546 032	105
163 546 033	105
163 546 034	105
163 546 035	105
163 546 036	105
163 546 037	105
163 546 038	105
163 546 039	105
163 546 040	105
163 546 041	103
163 546 042	103
163 546 043	103
163 546 044	103
163 546 045	103
163 546 046	103
163 546 047	103
163 546 048	103
163 546 049	103
163 546 050	103
163 546 051	103
163 546 052	103
163 546 053	103
163 546 054	103
163 546 055	103
163 546 056	103
163 546 057	103
163 546 058	103
163 546 059	103
163 546 060	103
163 546 061	102
163 546 062	102
163 546 063	102
163 546 064	102
163 546 065	102
163 546 066	102
163 546 067	102
163 546 068	102
163 546 069	102
163 546 070	102
163 546 071	102

Index

Code	Page	Code	Page	Code	Page
163 546 072	102	163 546 347	108	163 546 420	106
163 546 073	102	163 546 351	108	163 546 601	113
163 546 074	102	163 546 352	108	163 546 602	113
163 546 075	102	163 546 353	108	163 546 603	113
163 546 076	102	163 546 354	108	163 546 604	113
163 546 077	102	163 546 355	108	163 546 605	113
163 546 078	102	163 546 356	108	163 546 606	113
163 546 079	102	163 546 357	108	163 546 607	113
163 546 080	102	163 546 361	112	163 546 608	113
163 546 081	111	163 546 362	112	163 546 609	113
163 546 082	111	163 546 363	112	163 546 610	113
163 546 083	111	163 546 364	112	163 546 611	113
163 546 084	111	163 546 365	112	163 546 612	113
163 546 085	111	163 546 366	112	163 546 613	113
163 546 086	111	163 546 367	112	163 546 614	113
163 546 087	111	163 546 368	112	163 546 615	113
163 546 088	111	163 546 369	112	163 546 616	113
163 546 089	111	163 546 370	112	163 546 617	113
163 546 090	111	163 546 371	112	163 546 618	113
163 546 091	111	163 546 372	112	163 546 619	113
163 546 092	111	163 546 373	112	163 546 620	113
163 546 093	111	163 546 374	112	163 546 692	115
163 546 094	111	163 546 375	112	163 546 693	115
163 546 095	111	163 546 376	112	163 546 694	115
163 546 096	111	163 546 377	112	163 546 695	115
163 546 097	111	163 546 378	112	163 546 696	115
163 546 098	111	163 546 379	112	163 546 697	115
163 546 099	111	163 546 380	112	163 546 698	115
163 546 100	111	163 546 381	104	163 546 699	115
163 546 108	107	163 546 382	104	163 546 700	115
163 546 109	107	163 546 383	104	163 546 842	116
163 546 110	107	163 546 384	104	163 546 843	116
163 546 118	107	163 546 385	104	163 546 844	116
163 546 119	107	163 546 386	104	163 546 845	116
163 546 120	107	163 546 387	104	163 546 846	116
163 546 168	110	163 546 388	104	163 546 847	116
163 546 169	110	163 546 389	104	163 546 852	116
163 546 170	110	163 546 390	104	163 546 853	116
163 546 178	110	163 546 391	104	163 546 854	116
163 546 179	110	163 546 392	104	163 546 855	116
163 546 180	110	163 546 393	104	163 546 856	116
163 546 301	109	163 546 394	104	163 546 857	116
163 546 302	109	163 546 395	104	1634812231	400
163 546 303	109	163 546 396	104	1634812234	403
163 546 304	109	163 546 397	104	167 061 013	365
163 546 305	109	163 546 398	104	167 061 016	365
163 546 306	109	163 546 399	104	167 061 035	364
163 546 307	109	163 546 400	104	167 061 036	364
163 546 308	109	163 546 401	106	167 061 037	364
163 546 309	109	163 546 402	106	167 061 038	364
163 546 310	109	163 546 403	106	167 061 039	364
163 546 311	109	163 546 404	106	167 061 040	364
163 546 312	109	163 546 405	106	167 061 041	364
163 546 313	109	163 546 406	106	167 061 054	365
163 546 314	109	163 546 407	106	167 061 085	365
163 546 315	109	163 546 408	106	167 061 086	365
163 546 316	109	163 546 409	106	167 061 087	365
163 546 317	109	163 546 410	106	167 061 088	365
163 546 318	109	163 546 411	106	167 061 089	365
163 546 319	109	163 546 412	106	167 061 090	365
163 546 320	109	163 546 413	106	167 061 091	365
163 546 341	108	163 546 414	106	167 061 112	365
163 546 342	108	163 546 415	106	167 061 114	365
163 546 343	108	163 546 416	106	167 061 155	364
163 546 344	108	163 546 417	106	167 061 156	364
163 546 345	108	163 546 418	106	167 061 157	364
163 546 346	108	163 546 419	106	167 061 158	364

Index

Code	Page
167 061 159	364
167 061 160	364
167 061 161	364
167 480 966	393
167 482 626	358
167 482 627	358
167 482 628	358
167 482 629	358
167 482 630	358
167 482 631	358
167 482 635	358
167 482 636	358
167 482 637	358
167 482 638	358
167 482 639	358
167 482 640	358
167 482 653	360
167 482 654	360
167 482 655	360
167 482 656	360
167 482 657	360
167 482 658	360
167 482 662	359
167 482 663	359
167 482 664	359
167 482 665	359
167 482 666	359
167 482 667	359
167 482 671	359
167 482 672	359
167 482 673	359
167 482 674	359
167 482 675	359
167 482 676	359
167 482 680	357
167 482 681	357
167 482 682	357
167 482 683	357
167 482 684	357
167 482 685	357
167 482 712	356
167 482 713	356
167 482 714	356
167 482 715	356
167 482 716	356
167 482 717	356
167 482 718	356
167 482 719	356
167 482 720	356
167 482 749	393
167 482 876	411
167 482 877	411
167 482 878	411
167 482 879	411
167 482 880	411
167 482 881	411
167 482 882	414
167 482 883	414
167 482 884	414
167 482 888	411
167 482 889	411
167 482 890	411
167 482 891	411
167 482 892	411
167 482 893	411
167 482 894	414
167 482 895	414

Code	Page
167 482 896	414
167 482 900	346
167 482 901	346
167 482 902	346
167 482 903	346
167 482 904	346
167 482 905	346
167 482 906	346
167 482 907	346
167 482 908	346
167 482 909	346
167 482 911	346
167 482 912	346
167 482 913	346
167 482 914	346
167 482 915	346
167 482 916	346
167 482 917	346
167 482 922	346
167 482 923	346
167 482 924	346
167 482 925	346
167 482 926	346
167 482 927	346
167 482 928	346
167 482 929	346
167 482 930	346
167 482 931	346
167 482 937	347
167 482 938	347
167 482 939	347
167 482 940	347
167 482 941	347
167 482 942	347
167 482 945	347
167 482 946	347
167 482 947	347
167 482 948	347
167 482 949	347
167 482 950	347
167 482 951	347
167 482 952	347
167 482 953	347
167 482 956	348
167 482 957	348
167 482 958	348
167 482 959	348
167 482 960	348
167 482 961	348
167 482 966	347
167 482 967	347
167 482 968	347
167 482 969	347
167 482 970	347
167 482 971	347
167 482 972	347
167 484 065	349
167 484 066	349
167 484 067	349
167 484 068	349
167 484 069	349
167 484 070	349
167 484 071	349
167 484 072	349
167 484 073	349
167 484 076	361
167 484 077	361

Code	Page
167 484 078	361
167 484 079	361
167 484 080	361
167 484 081	361
167 484 082	361
167 484 083	361
167 484 084	361
167 484 088	360
167 484 089	360
167 484 090	360
167 484 091	360
167 484 092	360
167 484 093	360
167 484 094	360
167 484 095	360
167 484 096	360
167 484 100	361
167 484 101	361
167 484 102	361
167 484 103	361
167 484 104	361
167 484 105	361
167 484 110	363
167 484 111	363
167 484 125	411
167 484 126	411
167 484 127	411
167 484 128	411
167 484 129	411
167 484 130	411
167 484 131	414
167 484 132	414
167 484 133	414
167 484 135	411
167 484 136	411
167 484 137	411
167 484 138	411
167 484 139	411
167 484 140	411
167 484 141	414
167 484 142	414
167 484 143	414
167 484 160	348
167 484 161	348
167 484 162	348
167 484 163	348
167 484 164	348
167 484 165	348
167 484 418	348
167 484 419	348
167 484 420	348
167 484 481	414
167 484 482	414
167 484 483	414
167 546 001	203
167 546 002	203
167 546 003	203
167 546 004	203
167 546 005	203
167 546 006	203
167 546 007	203
167 546 008	203
167 546 009	203
167 546 010	203
167 546 011	203
167 546 012	203
167 546 013	203

Index

Code	Page	Code	Page	Code	Page
167 546 014	203	167 546 161	214	167 546 326	212
167 546 015	203	167 546 162	214	167 546 327	212
167 546 016	203	167 546 163	214	167 546 331	212
167 546 017	203	167 546 164	214	167 546 332	212
167 546 018	203	167 546 165	214	167 546 333	212
167 546 019	203	167 546 166	214	167 546 334	212
167 546 020	203	167 546 167	214	167 546 335	212
167 546 021	206	167 546 171	214	167 546 336	212
167 546 022	206	167 546 172	214	167 546 337	212
167 546 023	206	167 546 173	214	167 546 401	204
167 546 024	206	167 546 174	214	167 546 402	204
167 546 025	206	167 546 175	214	167 546 403	204
167 546 026	206	167 546 176	214	167 546 404	204
167 546 027	206	167 546 177	214	167 546 405	204
167 546 031	206	167 546 182	210	167 546 406	204
167 546 032	206	167 546 183	210	167 546 407	204
167 546 033	206	167 546 184	210	167 546 408	204
167 546 034	206	167 546 185	210	167 546 409	204
167 546 035	206	167 546 186	210	167 546 410	204
167 546 036	206	167 546 187	210	167 546 411	204
167 546 037	206	167 546 192	210	167 546 412	204
167 546 041	205	167 546 193	210	167 546 413	204
167 546 042	205	167 546 194	210	167 546 414	204
167 546 043	205	167 546 195	210	167 546 415	204
167 546 044	205	167 546 196	210	167 546 416	204
167 546 045	205	167 546 197	210	167 546 417	204
167 546 046	205	167 546 262	209	167 546 418	204
167 546 047	205	167 546 263	209	167 546 419	204
167 546 048	205	167 546 264	209	167 546 420	204
167 546 049	205	167 546 265	209	167 546 421	219
167 546 050	205	167 546 266	209	167 546 422	219
167 546 051	205	167 546 267	209	167 546 423	219
167 546 052	205	167 546 272	209	167 546 424	219
167 546 053	205	167 546 273	209	167 546 425	219
167 546 054	205	167 546 274	209	167 546 426	219
167 546 055	205	167 546 275	209	167 546 427	219
167 546 056	205	167 546 276	209	167 546 428	219
167 546 057	205	167 546 277	209	167 546 429	219
167 546 058	205	167 546 282	217	167 546 430	219
167 546 059	205	167 546 283	217	167 546 431	219
167 546 060	205	167 546 284	217	167 546 432	219
167 546 066	208	167 546 285	217	167 546 433	219
167 546 067	208	167 546 286	217	167 546 434	219
167 546 068	208	167 546 287	217	167 546 435	219
167 546 069	208	167 546 288	217	167 546 436	219
167 546 070	208	167 546 289	217	167 546 437	219
167 546 076	208	167 546 290	217	167 546 438	219
167 546 077	208	167 546 292	217	167 546 439	219
167 546 078	208	167 546 293	217	167 546 440	219
167 546 079	208	167 546 294	217	167 546 442	207
167 546 080	208	167 546 295	217	167 546 443	207
167 546 126	216	167 546 296	217	167 546 444	207
167 546 127	216	167 546 297	217	167 546 445	207
167 546 136	216	167 546 298	217	167 546 446	207
167 546 137	216	167 546 299	217	167 546 447	207
167 546 142	215	167 546 300	217	167 546 448	207
167 546 143	215	167 546 308	218	167 546 449	207
167 546 144	215	167 546 309	218	167 546 450	207
167 546 145	215	167 546 310	218	167 546 452	207
167 546 146	215	167 546 318	218	167 546 453	207
167 546 147	215	167 546 319	218	167 546 454	207
167 546 152	215	167 546 320	218	167 546 455	207
167 546 153	215	167 546 321	212	167 546 456	207
167 546 154	215	167 546 322	212	167 546 457	207
167 546 155	215	167 546 323	212	167 546 458	207
167 546 156	215	167 546 324	212	167 546 459	207
167 546 157	215	167 546 325	212	167 546 460	207

Index

Code	Page
167 546 462	220
167 546 463	220
167 546 464	220
167 546 465	220
167 546 466	220
167 546 467	220
167 546 468	220
167 546 469	220
167 546 470	220
167 546 472	220
167 546 473	220
167 546 474	220
167 546 475	220
167 546 476	220
167 546 477	220
167 546 478	220
167 546 479	220
167 546 480	220
167 546 601	221
167 546 602	221
167 546 603	221
167 546 604	221
167 546 605	221
167 546 606	221
167 546 607	221
167 546 608	221
167 546 609	221
167 546 610	221
167 546 611	221
167 546 612	221
167 546 613	221
167 546 614	221
167 546 615	221
167 546 616	221
167 546 617	221
167 546 618	221
167 546 619	221
167 546 620	221
167 546 621	222
167 546 622	222
167 546 623	222
167 546 624	222
167 546 625	222
167 546 626	222
167 546 627	222
167 546 628	222
167 546 629	222
167 546 630	222
167 546 631	222
167 546 632	222
167 546 633	222
167 546 634	222
167 546 635	222
167 546 636	222
167 546 637	222
167 546 638	222
167 546 639	222
167 546 640	222
167 546 662	223
167 546 663	223
167 546 664	223
167 546 665	223
167 546 666	223
167 546 667	223
167 546 668	223
167 546 669	223
167 546 670	223

Code	Page
167 546 672	223
167 546 673	223
167 546 674	223
167 546 675	223
167 546 676	223
167 546 677	223
167 546 678	223
167 546 679	223
167 546 680	223
167 546 808	211
167 546 809	211
167 546 810	211
167 546 818	211
167 546 819	211
167 546 820	211
167 546 828	224
167 546 829	224
167 546 830	224
167 546 838	224
167 546 839	224
167 546 840	224
167 546 868	213
167 546 869	213
167 546 870	213
167 546 878	213
167 546 879	213
167 546 880	213
167 546 888	225
167 546 889	225
167 546 890	225
167 546 898	225
167 546 899	225
167 546 900	225
169 480 713	355
169 480 714	355
169 480 715	355
169 480 716	355
169 480 717	355
169 480 718	355
169 480 719	355
169 480 720	355
169 480 721	355
169 480 751	405
169 480 752	405
169 480 753	405
169 480 754	405
169 480 755	405
169 480 756	405
169 480 757	407
169 480 758	407
169 480 759	407
169 480 775	349
169 480 776	349
169 480 777	349
169 480 778	349
169 480 779	349
169 480 780	349
169 480 781	349
169 480 782	349
169 480 783	349
169 480 784	349
169 480 786	350
169 480 787	350
169 480 788	350
169 480 789	350
169 480 790	350
169 480 791	350

Code	Page
169 480 792	350
169 480 800	350
169 480 801	350
169 480 802	350
169 480 803	350
169 480 804	350
169 480 805	350
169 480 806	350
169 480 808	350
169 480 809	350
169 480 900	405
169 480 901	405
169 480 902	405
169 480 903	405
169 480 904	405
169 480 905	405
169 480 906	407
169 480 907	407
169 480 908	407
169 480 925	350
169 480 926	350
169 480 927	350
169 480 928	350
169 480 929	350
169 480 930	350
169 480 931	350
169 546 001	158
169 546 002	158
169 546 003	158
169 546 004	158
169 546 005	158
169 546 006	158
169 546 007	158
169 546 008	158
169 546 009	158
169 546 010	158
169 546 021	160
169 546 022	160
169 546 023	160
169 546 024	160
169 546 025	160
169 546 026	160
169 546 027	160
169 546 061	159
169 546 062	159
169 546 063	159
169 546 064	159
169 546 065	159
169 546 066	159
169 546 067	159
169 546 068	159
169 546 069	159
169 546 070	159
169 546 081	164
169 546 082	164
169 546 083	164
169 546 084	164
169 546 085	164
169 546 086	164
169 546 087	164
169 546 088	164
169 546 089	164
169 546 090	164
169 546 201	162
169 546 202	162
169 546 203	162
169 546 204	162

Index

Code	Page	Code	Page	Code	Page
169 546 205	162	175 483 060	352	175 546 435	290
169 546 206	162	175 483 061	352	175 546 436	290
169 546 207	162	175 483 062	352	175 546 437	290
169 546 209	162	175 483 063	352	175 546 592	288
169 546 210	162	175 483 064	352	175 546 593	288
169 546 221	165	175 483 275	417	175 546 594	288
169 546 222	165	175 483 276	417	175 546 595	288
169 546 223	165	175 483 277	417	175 546 596	288
169 546 224	165	175 483 278	417	175 546 597	288
169 546 225	165	175 483 279	417	175 546 691	291
169 546 226	165	175 483 280	417	175 546 692	291
169 546 227	165	175 483 285	352	175 546 693	291
169 546 229	165	175 483 286	352	175 546 694	291
169 546 230	165	175 483 287	352	175 546 695	291
169 546 241	163	175 483 288	352	175 546 696	291
169 546 242	163	175 483 289	352	175 546 697	291
169 546 243	163	175 483 290	352	175 546 752	292
169 546 244	163	175 546 011	282	175 546 753	292
169 546 245	163	175 546 012	282	175 546 754	292
169 546 246	163	175 546 013	282	175 546 755	292
169 546 247	163	175 546 014	282	175 546 756	292
169 546 249	163	175 546 015	282	175 546 757	292
169 546 250	163	175 546 016	282	193 480 086	353
169 546 601	166	175 546 017	282	193 480 087	353
169 546 602	166	175 546 051	284	193 480 088	353
169 546 603	166	175 546 052	284	193 480 102	353
169 546 604	166	175 546 053	284	193 480 103	353
169 546 605	166	175 546 054	284	193 480 104	353
169 546 606	166	175 546 055	284	193 480 105	353
169 546 607	166	175 546 056	284	193 480 106	353
169 546 608	166	175 546 057	284	193 480 107	353
169 546 609	166	175 546 092	285	193 480 152	353
169 546 610	166	175 546 093	285	193 480 153	353
175 482 937	356	175 546 094	285	193 480 154	353
175 482 938	356	175 546 095	285	193 480 155	353
175 482 939	356	175 546 096	285	193 480 156	353
175 482 940	356	175 546 097	285	193 480 157	353
175 482 941	356	175 546 192	287	193 480 158	353
175 482 942	356	175 546 193	287	193 480 159	353
175 482 963	417	175 546 194	287	193 480 160	353
175 482 964	417	175 546 195	287	193 480 168	354
175 482 965	417	175 546 196	287	193 480 169	354
175 482 966	417	175 546 197	287	193 480 170	354
175 482 967	417	175 546 272	286	193 480 175	352
175 482 968	417	175 546 273	286	193 480 176	352
175 483 025	351	175 546 274	286	193 480 177	352
175 483 026	351	175 546 275	286	193 480 178	352
175 483 027	351	175 546 276	286	193 480 179	352
175 483 028	351	175 546 277	286	193 480 180	352
175 483 029	351	175 546 331	289	193 480 181	352
175 483 030	351	175 546 332	289	198 000 500	366
175 483 031	351	175 546 333	289	198 000 501	366
175 483 036	351	175 546 334	289	198 000 586	367
175 483 037	351	175 546 335	289	198 000 587	367
175 483 038	351	175 546 336	289	198 000 595	366
175 483 039	351	175 546 337	289	198 000 596	366
175 483 040	351	175 546 411	283	198 000 599	366
175 483 041	351	175 546 412	283	198 000 601	366
175 483 042	351	175 546 413	283	198 000 602	366
175 483 048	351	175 546 414	283	198 150 127	373
175 483 049	351	175 546 415	283	198 150 128	373
175 483 050	351	175 546 416	283	198 150 129	373
175 483 051	351	175 546 417	283	198 150 130	373
175 483 052	351	175 546 431	290	198 150 131	373
175 483 053	351	175 546 432	290	198 150 132	373
175 483 058	352	175 546 433	290	198 150 144	373
175 483 059	352	175 546 434	290	198 150 145	373

Index

Code	Page
198 150 146	373
198 150 147	373
198 150 148	373
198 150 149	373
198 150 180	368
198 150 181	368
198 150 182	368
198 150 183	368
198 150 184	368
198 150 185	368
198 150 556	366
198 150 557	366
198 150 558	366
198 150 559	366
198 151 317	369
198 151 426	370
198 800 004	374
198 800 005	374
198 800 006	374
198 800 007	374
198 800 017	374
198 800 018	374
198 800 019	374
198 800 020	374
198 800 034	374
198 800 037	374
198 800 039	374
198 800 040	376
198 800 041	374
198 800 042	376
198 800 043	374
198 800 044	376
198 800 045	374
198 800 046	376
198 800 047	374
198 800 048	376
198 800 050	376
198 800 051	376
198 800 052	374
198 800 054	374
198 800 056	374
198 800 058	374
198 800 060	374
198 800 062	374
198 800 728	374
198 800 729	374
198 800 730	374
198 800 731	374
198 800 732	376
198 800 733	376
198 800 734	376
198 800 735	376
198 800 737	376
198 800 757	374
198 800 758	376
198 811 025	374
198 811 026	374
198 811 027	374
198 811 028	374
198 811 029	374
198 811 030	374
199 107 002	40
199 107 003	40
199 107 004	40
199 107 005	40
199 107 006	40
199 107 007	40

Code	Page
199 107 008	40
199 107 012	40
199 107 013	40
199 107 014	40
199 107 015	40
199 107 016	40
199 107 017	40
199 107 018	40
199 107 022	42
199 107 023	42
199 107 024	42
199 107 025	42
199 107 026	42
199 107 027	42
199 107 028	42
199 107 032	42
199 107 033	42
199 107 034	42
199 107 035	42
199 107 036	42
199 107 037	42
199 107 038	42
199 107 042	41
199 107 043	41
199 107 044	41
199 107 045	41
199 107 046	41
199 107 047	41
199 107 048	41
199 107 052	41
199 107 053	41
199 107 054	41
199 107 055	41
199 107 056	41
199 107 057	41
199 107 058	41
199 107 062	43
199 107 063	43
199 107 064	43
199 107 065	43
199 107 066	43
199 107 067	43
199 107 068	43
199 107 072	43
199 107 073	43
199 107 074	43
199 107 075	43
199 107 076	43
199 107 077	43
199 107 078	43
199 107 082	168
199 107 083	168
199 107 084	168
199 107 085	168
199 107 086	168
199 107 087	168
199 107 088	168
199 107 092	169
199 107 093	169
199 107 094	169
199 107 095	169
199 107 096	169
199 107 097	169
199 107 098	169
199 107 102	118
199 107 103	118
199 107 104	118

Code	Page
199 107 105	118
199 107 106	118
199 107 107	118
199 107 108	118
199 107 112	118
199 107 113	118
199 107 114	118
199 107 115	118
199 107 116	118
199 107 117	118
199 107 118	118
199 107 122	120
199 107 123	120
199 107 124	120
199 107 125	120
199 107 126	120
199 107 127	120
199 107 128	120
199 107 132	120
199 107 133	120
199 107 134	120
199 107 135	120
199 107 136	120
199 107 137	120
199 107 138	120
199 107 142	119
199 107 143	119
199 107 144	119
199 107 145	119
199 107 146	119
199 107 147	119
199 107 148	119
199 107 152	119
199 107 153	119
199 107 154	119
199 107 155	119
199 107 156	119
199 107 157	119
199 107 158	119
199 107 162	121
199 107 163	121
199 107 164	121
199 107 165	121
199 107 166	121
199 107 167	121
199 107 168	121
199 107 172	121
199 107 173	121
199 107 174	121
199 107 175	121
199 107 176	121
199 107 177	121
199 107 178	121
199 107 182	172
199 107 183	172
199 107 184	172
199 107 185	172
199 107 186	172
199 107 187	172
199 107 188	172
199 107 192	173
199 107 193	173
199 107 194	173
199 107 195	173
199 107 196	173
199 107 197	173
199 107 198	173

Index

Code	Page
199 107 402	48
199 107 403	48
199 107 404	48
199 107 405	48
199 107 406	48
199 107 407	48
199 107 408	48
199 107 412	48
199 107 413	48
199 107 414	48
199 107 415	48
199 107 416	48
199 107 417	48
199 107 418	48
199 107 423	298
199 107 424	298
199 107 425	298
199 107 426	298
199 107 427	298
199 107 428	298
199 107 433	299
199 107 434	299
199 107 435	299
199 107 436	299
199 107 437	299
199 107 438	299
199 107 442	49
199 107 443	49
199 107 444	49
199 107 445	49
199 107 446	49
199 107 447	49
199 107 448	49
199 107 452	49
199 107 453	49
199 107 454	49
199 107 455	49
199 107 456	49
199 107 457	49
199 107 458	49
199 107 502	228
199 107 503	228
199 107 504	228
199 107 505	228
199 107 506	228
199 107 507	228
199 107 508	228
199 107 512	228
199 107 513	228
199 107 514	228
199 107 515	228
199 107 516	228
199 107 517	228
199 107 518	228
199 107 522	230
199 107 523	230
199 107 524	230
199 107 525	230
199 107 526	230
199 107 527	230
199 107 528	230
199 107 532	230
199 107 533	230
199 107 534	230
199 107 535	230
199 107 536	230
199 107 537	230

Code	Page
199 107 538	230
199 107 542	229
199 107 543	229
199 107 544	229
199 107 545	229
199 107 546	229
199 107 547	229
199 107 548	229
199 107 552	229
199 107 553	229
199 107 554	229
199 107 555	229
199 107 556	229
199 107 557	229
199 107 558	229
199 107 562	231
199 107 563	231
199 107 564	231
199 107 565	231
199 107 566	231
199 107 567	231
199 107 568	231
199 107 572	231
199 107 573	231
199 107 574	231
199 107 575	231
199 107 576	231
199 107 577	231
199 107 578	231
199 107 583	232
199 107 584	232
199 107 585	232
199 107 586	232
199 107 587	232
199 107 588	232
199 107 593	232
199 107 594	232
199 107 595	232
199 107 596	232
199 107 597	232
199 107 598	232
199 107 603	46
199 107 604	46
199 107 605	46
199 107 606	46
199 107 607	46
199 107 608	46
199 107 613	46
199 107 614	46
199 107 615	46
199 107 616	46
199 107 617	46
199 107 618	46
199 107 622	44
199 107 623	44
199 107 624	44
199 107 625	44
199 107 626	44
199 107 627	44
199 107 628	44
199 107 632	44
199 107 633	44
199 107 634	44
199 107 635	44
199 107 636	44
199 107 637	44
199 107 638	44

Code	Page
199 107 643	47
199 107 644	47
199 107 645	47
199 107 646	47
199 107 647	47
199 107 648	47
199 107 653	47
199 107 654	47
199 107 655	47
199 107 656	47
199 107 657	47
199 107 658	47
199 107 662	45
199 107 663	45
199 107 664	45
199 107 665	45
199 107 666	45
199 107 667	45
199 107 668	45
199 107 672	45
199 107 673	45
199 107 674	45
199 107 675	45
199 107 676	45
199 107 677	45
199 107 678	45
199 107 682	170
199 107 683	170
199 107 684	170
199 107 685	170
199 107 686	170
199 107 687	170
199 107 688	170
199 107 692	171
199 107 693	171
199 107 694	171
199 107 695	171
199 107 696	171
199 107 697	171
199 107 698	171
199 107 702	122
199 107 703	122
199 107 704	122
199 107 705	122
199 107 706	122
199 107 707	122
199 107 708	122
199 107 712	122
199 107 713	122
199 107 714	122
199 107 715	122
199 107 716	122
199 107 717	122
199 107 718	122
199 107 742	123
199 107 743	123
199 107 744	123
199 107 745	123
199 107 746	123
199 107 747	123
199 107 748	123
199 107 752	123
199 107 753	123
199 107 754	123
199 107 755	123
199 107 756	123
199 107 757	123

Index

Code	Page
199 107 758	123
199 107 783	233
199 107 784	233
199 107 785	233
199 107 786	233
199 107 787	233
199 107 788	233
199 107 793	233
199 107 794	233
199 107 795	233
199 107 796	233
199 107 797	233
199 107 798	233
199 107 802	294
199 107 803	294
199 107 804	294
199 107 805	294
199 107 806	294
199 107 807	294
199 107 808	294
199 107 812	296
199 107 813	296
199 107 814	296
199 107 815	296
199 107 816	296
199 107 817	296
199 107 818	296
199 107 822	295
199 107 823	295
199 107 824	295
199 107 825	295
199 107 826	295
199 107 827	295
199 107 828	295
199 107 832	297
199 107 833	297
199 107 834	297
199 107 835	297
199 107 836	297
199 107 837	297
199 107 838	297
199 107 843	300
199 107 844	300
199 107 845	300
199 107 846	300
199 107 847	300
199 107 848	300
199 107 853	301
199 107 854	301
199 107 855	301
199 107 856	301
199 107 857	301
199 107 858	301
199 130 002	50
199 130 003	50
199 130 004	50
199 130 005	50
199 130 006	50
199 130 007	50
199 130 008	50
199 130 009	50
199 130 010	50
199 130 011	50
199 130 012	50
199 130 013	50
199 130 014	50
199 130 015	50

Code	Page
199 130 016	50
199 130 017	50
199 130 018	50
199 130 019	50
199 130 020	50
199 130 021	50
199 130 022	52
199 130 023	52
199 130 024	52
199 130 025	52
199 130 026	52
199 130 027	52
199 130 028	52
199 130 029	52
199 130 030	52
199 130 031	52
199 130 032	52
199 130 033	52
199 130 034	52
199 130 035	52
199 130 036	52
199 130 037	52
199 130 038	52
199 130 039	52
199 130 040	52
199 130 041	52
199 130 042	51
199 130 043	51
199 130 044	51
199 130 045	51
199 130 046	51
199 130 047	51
199 130 048	51
199 130 049	51
199 130 050	51
199 130 051	51
199 130 052	51
199 130 053	51
199 130 054	51
199 130 055	51
199 130 056	51
199 130 057	51
199 130 058	51
199 130 059	51
199 130 060	51
199 130 061	51
199 130 062	53
199 130 063	53
199 130 064	53
199 130 065	53
199 130 066	53
199 130 067	53
199 130 068	53
199 130 069	53
199 130 070	53
199 130 071	53
199 130 072	53
199 130 073	53
199 130 074	53
199 130 075	53
199 130 076	53
199 130 077	53
199 130 078	53
199 130 079	53
199 130 080	53
199 130 081	53
199 130 103	56

Code	Page
199 130 104	56
199 130 105	56
199 130 106	56
199 130 107	56
199 130 108	56
199 130 113	56
199 130 114	56
199 130 115	56
199 130 116	56
199 130 117	56
199 130 118	56
199 130 122	54
199 130 123	54
199 130 124	54
199 130 125	54
199 130 126	54
199 130 127	54
199 130 128	54
199 130 129	54
199 130 130	54
199 130 131	54
199 130 132	54
199 130 133	54
199 130 134	54
199 130 135	54
199 130 136	54
199 130 137	54
199 130 138	54
199 130 139	54
199 130 140	54
199 130 141	54
199 130 143	57
199 130 144	57
199 130 145	57
199 130 146	57
199 130 147	57
199 130 148	57
199 130 153	57
199 130 154	57
199 130 155	57
199 130 156	57
199 130 157	57
199 130 158	57
199 130 162	55
199 130 163	55
199 130 164	55
199 130 165	55
199 130 166	55
199 130 167	55
199 130 168	55
199 130 169	55
199 130 170	55
199 130 171	55
199 130 172	55
199 130 173	55
199 130 174	55
199 130 175	55
199 130 176	55
199 130 177	55
199 130 178	55
199 130 179	55
199 130 180	55
199 130 181	55
199 130 182	128
199 130 183	128
199 130 184	128
199 130 185	128

Index

Code	Page	Code	Page	Code	Page
199 130 186	128	199 130 433	126	199 130 743	175
199 130 187	128	199 130 434	126	199 130 744	175
199 130 188	128	199 130 435	126	199 130 745	175
199 130 189	128	199 130 436	126	199 130 746	175
199 130 190	128	199 130 437	126	199 130 747	175
199 130 191	128	199 130 438	126	199 130 748	175
199 130 192	128	199 130 439	126	199 130 749	175
199 130 193	128	199 130 440	126	199 130 750	175
199 130 194	128	199 130 441	126	199 130 751	175
199 130 195	128	199 130 442	125	199 130 762	177
199 130 196	128	199 130 443	125	199 130 763	177
199 130 197	128	199 130 444	125	199 130 764	177
199 130 198	128	199 130 445	125	199 130 765	177
199 130 199	128	199 130 446	125	199 130 766	177
199 130 200	128	199 130 447	125	199 130 767	177
199 130 201	128	199 130 448	125	199 130 768	177
199 130 202	129	199 130 449	125	199 131 002	234
199 130 203	129	199 130 450	125	199 131 003	234
199 130 204	129	199 130 451	125	199 131 004	234
199 130 205	129	199 130 452	125	199 131 005	234
199 130 206	129	199 130 453	125	199 131 006	234
199 130 207	129	199 130 454	125	199 131 007	234
199 130 208	129	199 130 455	125	199 131 008	234
199 130 209	129	199 130 456	125	199 131 009	234
199 130 210	129	199 130 457	125	199 131 010	234
199 130 211	129	199 130 458	125	199 131 011	234
199 130 212	129	199 130 459	125	199 131 012	234
199 130 213	129	199 130 460	125	199 131 013	234
199 130 214	129	199 130 461	125	199 131 014	234
199 130 215	129	199 130 462	127	199 131 015	234
199 130 216	129	199 130 463	127	199 131 016	234
199 130 217	129	199 130 464	127	199 131 017	234
199 130 218	129	199 130 465	127	199 131 018	234
199 130 219	129	199 130 466	127	199 131 019	234
199 130 220	129	199 130 467	127	199 131 020	234
199 130 221	129	199 130 468	127	199 131 021	234
199 130 402	124	199 130 469	127	199 131 022	236
199 130 403	124	199 130 470	127	199 131 023	236
199 130 404	124	199 130 471	127	199 131 024	236
199 130 405	124	199 130 472	127	199 131 025	236
199 130 406	124	199 130 473	127	199 131 026	236
199 130 407	124	199 130 474	127	199 131 027	236
199 130 408	124	199 130 475	127	199 131 028	236
199 130 409	124	199 130 476	127	199 131 029	236
199 130 410	124	199 130 477	127	199 131 030	236
199 130 411	124	199 130 478	127	199 131 031	236
199 130 412	124	199 130 479	127	199 131 032	236
199 130 413	124	199 130 480	127	199 131 033	236
199 130 414	124	199 130 481	127	199 131 034	236
199 130 415	124	199 130 702	174	199 131 035	236
199 130 416	124	199 130 703	174	199 131 036	236
199 130 417	124	199 130 704	174	199 131 037	236
199 130 418	124	199 130 705	174	199 131 038	236
199 130 419	124	199 130 706	174	199 131 039	236
199 130 420	124	199 130 707	174	199 131 040	236
199 130 421	124	199 130 708	174	199 131 041	236
199 130 422	126	199 130 709	174	199 131 042	235
199 130 423	126	199 130 710	174	199 131 043	235
199 130 424	126	199 130 711	174	199 131 044	235
199 130 425	126	199 130 722	176	199 131 045	235
199 130 426	126	199 130 723	176	199 131 046	235
199 130 427	126	199 130 724	176	199 131 047	235
199 130 428	126	199 130 725	176	199 131 048	235
199 130 429	126	199 130 726	176	199 131 049	235
199 130 430	126	199 130 727	176	199 131 050	235
199 130 431	126	199 130 728	176	199 131 051	235
199 130 432	126	199 130 742	175	199 131 052	235

Index

Code	Page
199 131 053	235
199 131 054	235
199 131 055	235
199 131 056	235
199 131 057	235
199 131 058	235
199 131 059	235
199 131 060	235
199 131 061	235
199 131 062	237
199 131 063	237
199 131 064	237
199 131 065	237
199 131 066	237
199 131 067	237
199 131 068	237
199 131 069	237
199 131 070	237
199 131 071	237
199 131 072	237
199 131 073	237
199 131 074	237
199 131 075	237
199 131 076	237
199 131 077	237
199 131 078	237
199 131 079	237
199 131 080	237
199 131 081	237
199 131 083	238
199 131 084	238
199 131 085	238
199 131 086	238
199 131 087	238
199 131 088	238
199 131 093	238
199 131 094	238
199 131 095	238
199 131 096	238
199 131 097	238
199 131 098	238
199 131 103	239
199 131 104	239
199 131 105	239
199 131 106	239
199 131 107	239
199 131 108	239
199 131 113	239
199 131 114	239
199 131 115	239
199 131 116	239
199 131 117	239
199 131 118	239
199 131 129	244
199 131 130	244
199 131 131	244
199 131 139	244
199 131 140	244
199 131 141	244
199 131 149	245
199 131 150	245
199 131 151	245
199 131 159	245
199 131 160	245
199 131 161	245
199 131 329	240
199 131 330	240

Code	Page
199 131 331	240
199 131 339	240
199 131 340	240
199 131 341	240
199 131 369	241
199 131 370	241
199 131 371	241
199 131 379	241
199 131 380	241
199 131 381	241
199 131 529	246
199 131 530	246
199 131 531	246
199 131 539	246
199 131 540	246
199 131 541	246
199 131 549	247
199 131 550	247
199 131 551	247
199 131 559	247
199 131 560	247
199 131 561	247
199 131 729	242
199 131 730	242
199 131 731	242
199 131 739	242
199 131 740	242
199 131 741	242
199 131 769	243
199 131 770	243
199 131 771	243
199 131 779	243
199 131 780	243
199 131 781	243
199 132 012	302
199 132 013	302
199 132 014	302
199 132 015	302
199 132 016	302
199 132 017	302
199 132 018	302
199 132 032	304
199 132 033	304
199 132 034	304
199 132 035	304
199 132 036	304
199 132 037	304
199 132 038	304
199 132 052	303
199 132 053	303
199 132 054	303
199 132 055	303
199 132 056	303
199 132 057	303
199 132 058	303
199 132 072	305
199 132 073	305
199 132 074	305
199 132 075	305
199 132 076	305
199 132 077	305
199 132 078	305
199 132 083	308
199 132 084	308
199 132 085	308
199 132 086	308
199 132 087	308

Code	Page
199 132 088	308
199 132 093	309
199 132 094	309
199 132 095	309
199 132 096	309
199 132 097	309
199 132 098	309
199 132 113	306
199 132 114	306
199 132 115	306
199 132 116	306
199 132 117	306
199 132 118	306
199 132 153	307
199 132 154	307
199 132 155	307
199 132 156	307
199 132 157	307
199 132 158	307
199 134 002	60
199 134 003	60
199 134 004	60
199 134 005	60
199 134 006	60
199 134 007	60
199 134 008	60
199 134 009	60
199 134 010	60
199 134 011	60
199 134 012	60
199 134 013	60
199 134 014	60
199 134 015	60
199 134 016	60
199 134 017	60
199 134 018	60
199 134 019	60
199 134 020	60
199 134 021	60
199 134 042	61
199 134 043	61
199 134 044	61
199 134 045	61
199 134 046	61
199 134 047	61
199 134 048	61
199 134 049	61
199 134 050	61
199 134 051	61
199 134 052	61
199 134 053	61
199 134 054	61
199 134 055	61
199 134 056	61
199 134 057	61
199 134 058	61
199 134 059	61
199 134 060	61
199 134 061	61
199 134 349	58
199 134 350	58
199 134 351	58
199 134 359	58
199 134 360	58
199 134 361	58
199 134 369	59
199 134 370	59

Index

Code	Page	Code	Page	Code	Page
199 134 371	59	199 190 351	381	199 230 018	65
199 134 379	59	199 190 357	388	199 230 022	68
199 134 380	59	199 190 358	388	199 230 023	68
199 134 381	59	199 190 359	388	199 230 024	68
199 134 489	130	199 190 360	388	199 230 025	68
199 134 490	130	199 190 361	388	199 230 026	68
199 134 491	130	199 190 378	388	199 230 027	68
199 134 499	130	199 190 379	388	199 230 028	68
199 134 500	130	199 190 423	382	199 230 032	68
199 134 501	130	199 190 424	382	199 230 033	68
199 134 509	131	199 190 425	383	199 230 034	68
199 134 510	131	199 190 426	382	199 230 035	68
199 134 511	131	199 190 427	384	199 230 036	68
199 134 519	131	199 190 428	384	199 230 037	68
199 134 520	131	199 190 429	384	199 230 038	68
199 134 521	131	199 190 430	383	199 230 042	66
199 134 782	178	199 190 431	383	199 230 043	66
199 134 783	178	199 190 432	384	199 230 044	66
199 134 784	178	199 190 433	384	199 230 045	66
199 134 785	178	199 190 434	384	199 230 046	66
199 134 786	178	199 190 435	382	199 230 047	66
199 134 787	178	199 190 451	389	199 230 048	66
199 134 788	178	199 190 463	389	199 230 052	66
199 134 789	178	199 190 498	385	199 230 053	66
199 134 790	178	199 190 499	385	199 230 054	66
199 134 791	178	199 190 500	385	199 230 055	66
199 134 822	179	199 190 501	385	199 230 056	66
199 134 823	179	199 190 510	385	199 230 057	66
199 134 824	179	199 190 511	385	199 230 058	66
199 134 825	179	199 190 512	385	199 230 062	69
199 134 826	179	199 190 513	385	199 230 063	69
199 134 827	179	199 190 518	386	199 230 064	69
199 134 828	179	199 190 519	386	199 230 065	69
199 134 829	179	199 190 520	386	199 230 066	69
199 134 830	179	199 190 521	386	199 230 067	69
199 134 831	179	199 190 522	386	199 230 068	69
199 190 080	370	199 190 523	386	199 230 072	69
199 190 081	371	199 190 532	387	199 230 073	69
199 190 082	370	199 190 533	387	199 230 074	69
199 190 083	370	199 190 534	387	199 230 075	69
199 190 084	371	199 190 535	387	199 230 076	69
199 190 085	369	199 190 540	387	199 230 077	69
199 190 086	369	199 190 541	387	199 230 078	69
199 190 087	369	199 190 542	387	199 230 082	67
199 190 092	369	199 190 543	387	199 230 083	67
199 190 093	371	199 190 544	387	199 230 084	67
199 190 094	372	199 190 545	387	199 230 085	67
199 190 095	371	199 190 546	386	199 230 086	67
199 190 096	372	199 190 547	386	199 230 087	67
199 190 097	372	199 190 554	387	199 230 088	67
199 190 099	370	199 190 555	387	199 230 092	67
199 190 100	371	199 190 560	389	199 230 093	67
199 190 101	371	199 190 561	386	199 230 094	67
199 190 275	378	199 190 562	389	199 230 095	67
199 190 281	378	199 230 002	65	199 230 096	67
199 190 282	379	199 230 003	65	199 230 097	67
199 190 283	379	199 230 004	65	199 230 098	67
199 190 284	379	199 230 005	65	199 230 102	70
199 190 285	379	199 230 006	65	199 230 103	70
199 190 286	380	199 230 007	65	199 230 104	70
199 190 287	380	199 230 008	65	199 230 105	70
199 190 302	388	199 230 012	65	199 230 106	70
199 190 303	388	199 230 013	65	199 230 107	70
199 190 304	388	199 230 014	65	199 230 108	70
199 190 348	381	199 230 015	65	199 230 112	70
199 190 349	381	199 230 016	65	199 230 113	70
199 190 350	381	199 230 017	65	199 230 114	70

Index

Code	Page
199 230 115	70
199 230 116	70
199 230 117	70
199 230 118	70
199 230 122	77
199 230 123	77
199 230 124	77
199 230 125	77
199 230 126	77
199 230 127	77
199 230 128	77
199 230 129	77
199 230 130	77
199 230 131	77
199 230 132	77
199 230 133	77
199 230 134	77
199 230 135	77
199 230 136	77
199 230 137	77
199 230 138	77
199 230 139	77
199 230 140	77
199 230 141	77
199 230 142	80
199 230 143	80
199 230 144	80
199 230 145	80
199 230 146	80
199 230 147	80
199 230 148	80
199 230 149	80
199 230 150	80
199 230 151	80
199 230 152	80
199 230 153	80
199 230 154	80
199 230 155	80
199 230 156	80
199 230 157	80
199 230 158	80
199 230 159	80
199 230 160	80
199 230 161	80
199 230 162	78
199 230 163	78
199 230 164	78
199 230 165	78
199 230 166	78
199 230 167	78
199 230 168	78
199 230 169	78
199 230 170	78
199 230 171	78
199 230 172	78
199 230 173	78
199 230 174	78
199 230 175	78
199 230 176	78
199 230 177	78
199 230 178	78
199 230 179	78
199 230 180	78
199 230 181	78
199 230 182	81
199 230 183	81
199 230 184	81

Code	Page
199 230 185	81
199 230 186	81
199 230 187	81
199 230 188	81
199 230 189	81
199 230 190	81
199 230 191	81
199 230 192	81
199 230 193	81
199 230 194	81
199 230 195	81
199 230 196	81
199 230 197	81
199 230 198	81
199 230 199	81
199 230 200	81
199 230 201	81
199 230 202	79
199 230 203	79
199 230 204	79
199 230 205	79
199 230 206	79
199 230 207	79
199 230 208	79
199 230 209	79
199 230 210	79
199 230 211	79
199 230 212	79
199 230 213	79
199 230 214	79
199 230 215	79
199 230 216	79
199 230 217	79
199 230 218	79
199 230 219	79
199 230 220	79
199 230 221	79
199 230 222	82
199 230 223	82
199 230 224	82
199 230 225	82
199 230 226	82
199 230 227	82
199 230 228	82
199 230 229	82
199 230 230	82
199 230 231	82
199 230 232	82
199 230 233	82
199 230 234	82
199 230 235	82
199 230 236	82
199 230 237	82
199 230 238	82
199 230 239	82
199 230 240	82
199 230 241	82
199 230 243	74
199 230 244	74
199 230 245	74
199 230 246	74
199 230 247	74
199 230 248	74
199 230 253	74
199 230 254	74
199 230 255	74
199 230 256	74

Code	Page
199 230 257	74
199 230 258	74
199 230 263	75
199 230 264	75
199 230 265	75
199 230 266	75
199 230 267	75
199 230 268	75
199 230 273	75
199 230 274	75
199 230 275	75
199 230 276	75
199 230 277	75
199 230 278	75
199 230 283	76
199 230 284	76
199 230 285	76
199 230 286	76
199 230 287	76
199 230 288	76
199 230 293	76
199 230 294	76
199 230 295	76
199 230 296	76
199 230 297	76
199 230 298	76
199 230 303	86
199 230 304	86
199 230 305	86
199 230 306	86
199 230 307	86
199 230 308	86
199 230 313	86
199 230 314	86
199 230 315	86
199 230 316	86
199 230 317	86
199 230 318	86
199 230 323	87
199 230 324	87
199 230 325	87
199 230 326	87
199 230 327	87
199 230 328	87
199 230 333	87
199 230 334	87
199 230 335	87
199 230 336	87
199 230 337	87
199 230 338	87
199 230 343	88
199 230 344	88
199 230 345	88
199 230 346	88
199 230 347	88
199 230 348	88
199 230 353	88
199 230 354	88
199 230 355	88
199 230 356	88
199 230 357	88
199 230 358	88
199 230 362	71
199 230 363	71
199 230 364	71
199 230 365	71
199 230 366	71

Index

Code	Page	Code	Page	Code	Page
199 230 367	71	199 230 464	139	199 230 549	147
199 230 368	71	199 230 465	139	199 230 550	147
199 230 372	71	199 230 466	139	199 230 551	147
199 230 373	71	199 230 467	139	199 230 552	147
199 230 374	71	199 230 468	139	199 230 553	147
199 230 375	71	199 230 472	139	199 230 554	147
199 230 376	71	199 230 473	139	199 230 555	147
199 230 377	71	199 230 474	139	199 230 556	147
199 230 378	71	199 230 475	139	199 230 557	147
199 230 382	72	199 230 476	139	199 230 558	147
199 230 383	72	199 230 477	139	199 230 559	147
199 230 384	72	199 230 478	139	199 230 560	147
199 230 385	72	199 230 482	137	199 230 561	147
199 230 386	72	199 230 483	137	199 230 562	145
199 230 387	72	199 230 484	137	199 230 563	145
199 230 388	72	199 230 485	137	199 230 564	145
199 230 392	72	199 230 486	137	199 230 565	145
199 230 393	72	199 230 487	137	199 230 566	145
199 230 394	72	199 230 488	137	199 230 567	145
199 230 395	72	199 230 492	137	199 230 568	145
199 230 396	72	199 230 493	137	199 230 569	145
199 230 397	72	199 230 494	137	199 230 570	145
199 230 398	72	199 230 495	137	199 230 571	145
199 230 402	135	199 230 496	137	199 230 572	145
199 230 403	135	199 230 497	137	199 230 573	145
199 230 404	135	199 230 498	137	199 230 574	145
199 230 405	135	199 230 502	140	199 230 575	145
199 230 406	135	199 230 503	140	199 230 576	145
199 230 407	135	199 230 504	140	199 230 577	145
199 230 408	135	199 230 505	140	199 230 578	145
199 230 412	135	199 230 506	140	199 230 579	145
199 230 413	135	199 230 507	140	199 230 580	145
199 230 414	135	199 230 508	140	199 230 581	145
199 230 415	135	199 230 512	140	199 230 582	148
199 230 416	135	199 230 513	140	199 230 583	148
199 230 417	135	199 230 514	140	199 230 584	148
199 230 418	135	199 230 515	140	199 230 585	148
199 230 422	138	199 230 516	140	199 230 586	148
199 230 423	138	199 230 517	140	199 230 587	148
199 230 424	138	199 230 518	140	199 230 588	148
199 230 425	138	199 230 522	144	199 230 589	148
199 230 426	138	199 230 523	144	199 230 590	148
199 230 427	138	199 230 524	144	199 230 591	148
199 230 428	138	199 230 525	144	199 230 592	148
199 230 432	138	199 230 526	144	199 230 593	148
199 230 433	138	199 230 527	144	199 230 594	148
199 230 434	138	199 230 528	144	199 230 595	148
199 230 435	138	199 230 529	144	199 230 596	148
199 230 436	138	199 230 530	144	199 230 597	148
199 230 437	138	199 230 531	144	199 230 598	148
199 230 438	138	199 230 532	144	199 230 599	148
199 230 442	136	199 230 533	144	199 230 600	148
199 230 443	136	199 230 534	144	199 230 601	148
199 230 444	136	199 230 535	144	199 230 602	146
199 230 445	136	199 230 536	144	199 230 603	146
199 230 446	136	199 230 537	144	199 230 604	146
199 230 447	136	199 230 538	144	199 230 605	146
199 230 448	136	199 230 539	144	199 230 606	146
199 230 452	136	199 230 540	144	199 230 607	146
199 230 453	136	199 230 541	144	199 230 608	146
199 230 454	136	199 230 542	147	199 230 609	146
199 230 455	136	199 230 543	147	199 230 610	146
199 230 456	136	199 230 544	147	199 230 611	146
199 230 457	136	199 230 545	147	199 230 612	146
199 230 458	136	199 230 546	147	199 230 613	146
199 230 462	139	199 230 547	147	199 230 614	146
199 230 463	139	199 230 548	147	199 230 615	146

Index

Code	Page
199 230 616	146
199 230 617	146
199 230 618	146
199 230 619	146
199 230 620	146
199 230 621	146
199 230 622	149
199 230 623	149
199 230 624	149
199 230 625	149
199 230 626	149
199 230 627	149
199 230 628	149
199 230 629	149
199 230 630	149
199 230 631	149
199 230 632	149
199 230 633	149
199 230 634	149
199 230 635	149
199 230 636	149
199 230 637	149
199 230 638	149
199 230 639	149
199 230 640	149
199 230 641	149
199 230 642	73
199 230 643	73
199 230 644	73
199 230 645	73
199 230 646	73
199 230 647	73
199 230 648	73
199 230 652	73
199 230 653	73
199 230 654	73
199 230 655	73
199 230 656	73
199 230 657	73
199 230 658	73
199 230 662	83
199 230 663	83
199 230 664	83
199 230 665	83
199 230 666	83
199 230 667	83
199 230 668	83
199 230 669	83
199 230 670	83
199 230 671	83
199 230 672	83
199 230 673	83
199 230 674	83
199 230 675	83
199 230 676	83
199 230 677	83
199 230 678	83
199 230 679	83
199 230 680	83
199 230 681	83
199 230 682	84
199 230 683	84
199 230 684	84
199 230 685	84
199 230 686	84
199 230 687	84
199 230 688	84

Code	Page
199 230 689	84
199 230 690	84
199 230 691	84
199 230 692	84
199 230 693	84
199 230 694	84
199 230 695	84
199 230 696	84
199 230 697	84
199 230 698	84
199 230 699	84
199 230 700	84
199 230 701	84
199 230 702	182
199 230 703	182
199 230 704	182
199 230 705	182
199 230 706	182
199 230 707	182
199 230 708	182
199 230 712	85
199 230 713	85
199 230 714	85
199 230 715	85
199 230 716	85
199 230 717	85
199 230 718	85
199 230 719	85
199 230 720	85
199 230 721	85
199 230 722	185
199 230 723	185
199 230 724	185
199 230 725	185
199 230 726	185
199 230 727	185
199 230 728	185
199 230 732	85
199 230 733	85
199 230 734	85
199 230 735	85
199 230 736	85
199 230 737	85
199 230 738	85
199 230 739	85
199 230 740	85
199 230 741	85
199 230 742	183
199 230 743	183
199 230 744	183
199 230 745	183
199 230 746	183
199 230 747	183
199 230 748	183
199 230 752	141
199 230 753	141
199 230 754	141
199 230 755	141
199 230 756	141
199 230 757	141
199 230 758	141
199 230 762	186
199 230 763	186
199 230 764	186
199 230 765	186
199 230 766	186
199 230 767	186

Code	Page
199 230 768	186
199 230 772	141
199 230 773	141
199 230 774	141
199 230 775	141
199 230 776	141
199 230 777	141
199 230 778	141
199 230 782	184
199 230 783	184
199 230 784	184
199 230 785	184
199 230 786	184
199 230 787	184
199 230 788	184
199 230 792	142
199 230 793	142
199 230 794	142
199 230 795	142
199 230 796	142
199 230 797	142
199 230 798	142
199 230 802	187
199 230 803	187
199 230 804	187
199 230 805	187
199 230 806	187
199 230 807	187
199 230 808	187
199 230 812	142
199 230 813	142
199 230 814	142
199 230 815	142
199 230 816	142
199 230 817	142
199 230 818	142
199 230 822	188
199 230 823	188
199 230 824	188
199 230 825	188
199 230 826	188
199 230 827	188
199 230 828	188
199 230 829	188
199 230 830	188
199 230 831	188
199 230 832	143
199 230 833	143
199 230 834	143
199 230 835	143
199 230 836	143
199 230 837	143
199 230 838	143
199 230 842	191
199 230 843	191
199 230 844	191
199 230 845	191
199 230 846	191
199 230 847	191
199 230 848	191
199 230 852	143
199 230 853	143
199 230 854	143
199 230 855	143
199 230 856	143
199 230 857	143
199 230 858	143

Index

Code	Page	Code	Page	Code	Page
199 230 862	189	199 230 935	151	199 231 057	251
199 230 863	189	199 230 936	151	199 231 058	251
199 230 864	189	199 230 937	151	199 231 062	254
199 230 865	189	199 230 938	151	199 231 063	254
199 230 866	189	199 230 939	151	199 231 064	254
199 230 867	189	199 230 940	151	199 231 065	254
199 230 868	189	199 230 941	151	199 231 066	254
199 230 869	189	199 230 942	152	199 231 067	254
199 230 870	189	199 230 943	152	199 231 068	254
199 230 871	189	199 230 944	152	199 231 072	254
199 230 872	150	199 230 945	152	199 231 073	254
199 230 873	150	199 230 946	152	199 231 074	254
199 230 874	150	199 230 947	152	199 231 075	254
199 230 875	150	199 230 948	152	199 231 076	254
199 230 876	150	199 230 949	152	199 231 077	254
199 230 877	150	199 230 950	152	199 231 078	254
199 230 878	150	199 230 951	152	199 231 082	252
199 230 879	150	199 230 952	152	199 231 083	252
199 230 880	150	199 230 953	152	199 231 084	252
199 230 881	150	199 230 954	152	199 231 085	252
199 230 882	192	199 230 955	152	199 231 086	252
199 230 883	192	199 230 956	152	199 231 087	252
199 230 884	192	199 230 957	152	199 231 088	252
199 230 885	192	199 230 958	152	199 231 092	252
199 230 886	192	199 230 959	152	199 231 093	252
199 230 887	192	199 230 960	152	199 231 094	252
199 230 888	192	199 230 961	152	199 231 095	252
199 230 892	150	199 231 002	250	199 231 096	252
199 230 893	150	199 231 003	250	199 231 097	252
199 230 894	150	199 231 004	250	199 231 098	252
199 230 895	150	199 231 005	250	199 231 102	255
199 230 896	150	199 231 006	250	199 231 103	255
199 230 897	150	199 231 007	250	199 231 104	255
199 230 898	150	199 231 008	250	199 231 105	255
199 230 899	150	199 231 012	250	199 231 106	255
199 230 900	150	199 231 013	250	199 231 107	255
199 230 901	150	199 231 014	250	199 231 108	255
199 230 902	190	199 231 015	250	199 231 112	255
199 230 903	190	199 231 016	250	199 231 113	255
199 230 904	190	199 231 017	250	199 231 114	255
199 230 905	190	199 231 018	250	199 231 115	255
199 230 906	190	199 231 022	253	199 231 116	255
199 230 907	190	199 231 023	253	199 231 117	255
199 230 908	190	199 231 024	253	199 231 118	255
199 230 909	190	199 231 025	253	199 231 122	259
199 230 910	190	199 231 026	253	199 231 123	259
199 230 911	190	199 231 027	253	199 231 124	259
199 230 912	151	199 231 028	253	199 231 125	259
199 230 913	151	199 231 032	253	199 231 126	259
199 230 914	151	199 231 033	253	199 231 127	259
199 230 915	151	199 231 034	253	199 231 128	259
199 230 916	151	199 231 035	253	199 231 129	259
199 230 917	151	199 231 036	253	199 231 130	259
199 230 918	151	199 231 037	253	199 231 131	259
199 230 919	151	199 231 038	253	199 231 132	259
199 230 920	151	199 231 042	251	199 231 133	259
199 230 921	151	199 231 043	251	199 231 134	259
199 230 922	193	199 231 044	251	199 231 135	259
199 230 923	193	199 231 045	251	199 231 136	259
199 230 924	193	199 231 046	251	199 231 137	259
199 230 925	193	199 231 047	251	199 231 138	259
199 230 926	193	199 231 048	251	199 231 139	259
199 230 927	193	199 231 052	251	199 231 140	259
199 230 928	193	199 231 053	251	199 231 141	259
199 230 932	151	199 231 054	251	199 231 142	262
199 230 933	151	199 231 055	251	199 231 143	262
199 230 934	151	199 231 056	251	199 231 144	262

Index

Code	Page
199 231 145	262
199 231 146	262
199 231 147	262
199 231 148	262
199 231 149	262
199 231 150	262
199 231 151	262
199 231 152	262
199 231 153	262
199 231 154	262
199 231 155	262
199 231 156	262
199 231 157	262
199 231 158	262
199 231 159	262
199 231 160	262
199 231 161	262
199 231 162	260
199 231 163	260
199 231 164	260
199 231 165	260
199 231 166	260
199 231 167	260
199 231 168	260
199 231 169	260
199 231 170	260
199 231 171	260
199 231 172	260
199 231 173	260
199 231 174	260
199 231 175	260
199 231 176	260
199 231 177	260
199 231 178	260
199 231 179	260
199 231 180	260
199 231 181	260
199 231 182	263
199 231 183	263
199 231 184	263
199 231 185	263
199 231 186	263
199 231 187	263
199 231 188	263
199 231 189	263
199 231 190	263
199 231 191	263
199 231 192	263
199 231 193	263
199 231 194	263
199 231 195	263
199 231 196	263
199 231 197	263
199 231 198	263
199 231 199	263
199 231 200	263
199 231 201	263
199 231 202	261
199 231 203	261
199 231 204	261
199 231 205	261
199 231 206	261
199 231 207	261
199 231 208	261
199 231 209	261
199 231 210	261
199 231 211	261

Code	Page
199 231 212	261
199 231 213	261
199 231 214	261
199 231 215	261
199 231 216	261
199 231 217	261
199 231 218	261
199 231 219	261
199 231 220	261
199 231 221	261
199 231 222	264
199 231 223	264
199 231 224	264
199 231 225	264
199 231 226	264
199 231 227	264
199 231 228	264
199 231 229	264
199 231 230	264
199 231 231	264
199 231 232	264
199 231 233	264
199 231 234	264
199 231 235	264
199 231 236	264
199 231 237	264
199 231 238	264
199 231 239	264
199 231 240	264
199 231 241	264
199 231 243	256
199 231 244	256
199 231 245	256
199 231 246	256
199 231 247	256
199 231 248	256
199 231 253	256
199 231 254	256
199 231 255	256
199 231 256	256
199 231 257	256
199 231 258	256
199 231 263	257
199 231 264	257
199 231 265	257
199 231 266	257
199 231 267	257
199 231 268	257
199 231 273	257
199 231 274	257
199 231 275	257
199 231 276	257
199 231 277	257
199 231 278	257
199 231 283	258
199 231 284	258
199 231 285	258
199 231 286	258
199 231 287	258
199 231 288	258
199 231 293	258
199 231 294	258
199 231 295	258
199 231 296	258
199 231 297	258
199 231 298	258
199 231 329	274

Code	Page
199 231 330	274
199 231 331	274
199 231 339	274
199 231 340	274
199 231 341	274
199 231 349	275
199 231 350	275
199 231 351	275
199 231 359	275
199 231 360	275
199 231 361	275
199 231 369	276
199 231 370	276
199 231 371	276
199 231 379	276
199 231 380	276
199 231 381	276
199 231 423	271
199 231 424	271
199 231 425	271
199 231 426	271
199 231 427	271
199 231 428	271
199 231 433	271
199 231 434	271
199 231 435	271
199 231 436	271
199 231 437	271
199 231 438	271
199 231 443	272
199 231 444	272
199 231 445	272
199 231 446	272
199 231 447	272
199 231 448	272
199 231 453	272
199 231 454	272
199 231 455	272
199 231 456	272
199 231 457	272
199 231 458	272
199 231 463	273
199 231 464	273
199 231 465	273
199 231 466	273
199 231 467	273
199 231 468	273
199 231 473	273
199 231 474	273
199 231 475	273
199 231 476	273
199 231 477	273
199 231 478	273
199 231 729	277
199 231 730	277
199 231 731	277
199 231 739	277
199 231 740	277
199 231 741	277
199 231 749	278
199 231 750	278
199 231 751	278
199 231 759	278
199 231 760	278
199 231 761	278
199 231 769	279
199 231 770	279

Index

Code	Page
199 231 771	279
199 231 779	279
199 231 780	279
199 231 781	279
199 231 839	265
199 231 840	265
199 231 841	265
199 231 849	265
199 231 850	265
199 231 851	265
199 231 859	266
199 231 860	266
199 231 861	266
199 231 869	266
199 231 870	266
199 231 871	266
199 231 879	267
199 231 880	267
199 231 881	267
199 231 889	267
199 231 890	267
199 231 891	267
199 231 939	268
199 231 940	268
199 231 941	268
199 231 949	268
199 231 950	268
199 231 951	268
199 231 959	269
199 231 960	269
199 231 961	269
199 231 969	269
199 231 970	269
199 231 971	269
199 231 979	270
199 231 980	270
199 231 981	270
199 231 989	270
199 231 990	270
199 231 991	270
199 232 003	321
199 232 004	321
199 232 005	321
199 232 006	321
199 232 007	321
199 232 008	321
199 232 012	312
199 232 013	312
199 232 014	312
199 232 015	312
199 232 016	312
199 232 017	312
199 232 018	312
199 232 023	322
199 232 024	322
199 232 025	322
199 232 026	322
199 232 027	322
199 232 028	322
199 232 032	315
199 232 033	315
199 232 034	315
199 232 035	315
199 232 036	315
199 232 037	315
199 232 038	315
199 232 043	323

Code	Page
199 232 044	323
199 232 045	323
199 232 046	323
199 232 047	323
199 232 048	323
199 232 052	313
199 232 053	313
199 232 054	313
199 232 055	313
199 232 056	313
199 232 057	313
199 232 058	313
199 232 063	333
199 232 064	333
199 232 065	333
199 232 066	333
199 232 067	333
199 232 068	333
199 232 072	316
199 232 073	316
199 232 074	316
199 232 075	316
199 232 076	316
199 232 077	316
199 232 078	316
199 232 083	334
199 232 084	334
199 232 085	334
199 232 086	334
199 232 087	334
199 232 088	334
199 232 092	314
199 232 093	314
199 232 094	314
199 232 095	314
199 232 096	314
199 232 097	314
199 232 098	314
199 232 103	335
199 232 104	335
199 232 105	335
199 232 106	335
199 232 107	335
199 232 108	335
199 232 112	317
199 232 113	317
199 232 114	317
199 232 115	317
199 232 116	317
199 232 117	317
199 232 118	317
199 232 132	324
199 232 133	324
199 232 134	324
199 232 135	324
199 232 136	324
199 232 137	324
199 232 138	324
199 232 152	327
199 232 153	327
199 232 154	327
199 232 155	327
199 232 156	327
199 232 157	327
199 232 158	327
199 232 172	325
199 232 173	325

Code	Page
199 232 174	325
199 232 175	325
199 232 176	325
199 232 177	325
199 232 178	325
199 232 192	328
199 232 193	328
199 232 194	328
199 232 195	328
199 232 196	328
199 232 197	328
199 232 198	328
199 232 212	326
199 232 213	326
199 232 214	326
199 232 215	326
199 232 216	326
199 232 217	326
199 232 218	326
199 232 232	329
199 232 233	329
199 232 234	329
199 232 235	329
199 232 236	329
199 232 237	329
199 232 238	329
199 232 713	318
199 232 714	318
199 232 715	318
199 232 716	318
199 232 717	318
199 232 718	318
199 232 753	319
199 232 754	319
199 232 755	319
199 232 756	319
199 232 757	319
199 232 758	319
199 232 793	320
199 232 794	320
199 232 795	320
199 232 796	320
199 232 797	320
199 232 798	320
199 232 833	330
199 232 834	330
199 232 835	330
199 232 836	330
199 232 837	330
199 232 838	330
199 232 873	331
199 232 874	331
199 232 875	331
199 232 876	331
199 232 877	331
199 232 878	331
199 232 913	332
199 232 914	332
199 232 915	332
199 232 916	332
199 232 917	332
199 232 918	332
199 234 002	92
199 234 003	92
199 234 004	92
199 234 005	92
199 234 006	92

Index

Code	Page
199 234 007	92
199 234 008	92
199 234 012	92
199 234 013	92
199 234 014	92
199 234 015	92
199 234 016	92
199 234 017	92
199 234 018	92
199 234 042	93
199 234 043	93
199 234 044	93
199 234 045	93
199 234 046	93
199 234 047	93
199 234 048	93
199 234 052	93
199 234 053	93
199 234 054	93
199 234 055	93
199 234 056	93
199 234 057	93
199 234 058	93
199 234 082	94
199 234 083	94
199 234 084	94
199 234 085	94
199 234 086	94
199 234 087	94
199 234 088	94
199 234 092	94
199 234 093	94
199 234 094	94
199 234 095	94
199 234 096	94
199 234 097	94
199 234 098	94
199 234 122	95
199 234 123	95
199 234 124	95
199 234 125	95
199 234 126	95
199 234 127	95
199 234 128	95
199 234 129	95
199 234 130	95
199 234 131	95
199 234 132	95
199 234 133	95
199 234 134	95
199 234 135	95
199 234 136	95
199 234 137	95
199 234 138	95
199 234 139	95
199 234 140	95
199 234 141	95
199 234 162	96
199 234 163	96
199 234 164	96
199 234 165	96
199 234 166	96
199 234 167	96
199 234 168	96
199 234 169	96
199 234 170	96
199 234 171	96

Code	Page
199 234 172	96
199 234 173	96
199 234 174	96
199 234 175	96
199 234 176	96
199 234 177	96
199 234 178	96
199 234 179	96
199 234 180	96
199 234 181	96
199 234 202	97
199 234 203	97
199 234 204	97
199 234 205	97
199 234 206	97
199 234 207	97
199 234 208	97
199 234 209	97
199 234 210	97
199 234 211	97
199 234 212	97
199 234 213	97
199 234 214	97
199 234 215	97
199 234 216	97
199 234 217	97
199 234 218	97
199 234 219	97
199 234 220	97
199 234 221	97
199 234 469	89
199 234 470	89
199 234 471	89
199 234 479	89
199 234 480	89
199 234 481	89
199 234 489	90
199 234 490	90
199 234 491	90
199 234 499	90
199 234 500	90
199 234 501	90
199 234 509	91
199 234 510	91
199 234 511	91
199 234 519	91
199 234 520	91
199 234 521	91
199 234 609	153
199 234 610	153
199 234 611	153
199 234 619	153
199 234 620	153
199 234 621	153
199 234 629	154
199 234 630	154
199 234 631	154
199 234 639	154
199 234 640	154
199 234 641	154
199 234 649	155
199 234 650	155
199 234 651	155
199 234 659	155
199 234 660	155
199 234 661	155
199 234 702	194

Code	Page
199 234 703	194
199 234 704	194
199 234 705	194
199 234 706	194
199 234 707	194
199 234 708	194
199 234 742	195
199 234 743	195
199 234 744	195
199 234 745	195
199 234 746	195
199 234 747	195
199 234 748	195
199 234 782	196
199 234 783	196
199 234 784	196
199 234 785	196
199 234 786	196
199 234 787	196
199 234 788	196
199 234 822	197
199 234 823	197
199 234 824	197
199 234 825	197
199 234 826	197
199 234 827	197
199 234 828	197
199 234 829	197
199 234 830	197
199 234 831	197
199 234 862	198
199 234 863	198
199 234 864	198
199 234 865	198
199 234 866	198
199 234 867	198
199 234 868	198
199 234 869	198
199 234 870	198
199 234 871	198
199 234 902	199
199 234 903	199
199 234 904	199
199 234 905	199
199 234 906	199
199 234 907	199
199 234 908	199
199 234 909	199
199 234 910	199
199 234 911	199
748 410 003	393
748 410 023	396
748 410 059	393
748 410 062	393
748 410 106	393
748 410 119	396
748 410 151	393
748 410 159	400
748 410 231	393
748 410 254	396
749 410 003	393
749 410 023	396
749 410 059	393
749 410 062	393
749 410 106	393
749 410 119	396
749 410 151	393

Index

Code	Page	Code	Page
749 410 159	400	800 000 290	26
749 410 231	393	800 000 292	26
749 410 254	396	800 000 293	26
749 470 003	417	800 000 294	26
749 470 059	417	800 000 295	26
749 470 062	417	800 000 296	26
749 470 106	417	800 000 297	26
749 470 151	417	800 000 298	26
749 470 231	417	800 000 299	26
800 000 101	21	800 000 300	26
800 000 102	21	800 000 601	33
800 000 103	21	800 000 602	33
800 000 104	21	800 000 603	33
800 000 105	21	800 000 604	33
800 000 106	21	800 000 605	33
800 000 107	21	800 000 606	33
800 000 111	21	800 000 607	33
800 000 112	21	800 000 608	33
800 000 113	21	800 000 609	33
800 000 114	21	800 000 610	33
800 000 115	21	800 000 611	33
800 000 116	21	800 000 612	33
800 000 117	21	800 000 613	33
800 000 125	24	800 000 614	33
800 000 126	24	800 000 615	33
800 000 127	24	800 000 616	33
800 000 135	24	800 000 617	33
800 000 136	24	800 000 618	33
800 000 137	24	800 000 619	33
800 000 142	23	800 000 620	33
800 000 143	23	800 000 621	114
800 000 144	23	800 000 622	114
800 000 145	23	800 000 623	114
800 000 146	23	800 000 624	114
800 000 147	23	800 000 625	114
800 000 152	23	800 000 626	114
800 000 153	23	800 000 627	114
800 000 154	23	800 000 628	114
800 000 155	23	800 000 629	114
800 000 156	23	800 000 630	114
800 000 157	23	800 000 631	114
800 000 182	13	800 000 632	114
800 000 183	13	800 000 633	114
800 000 184	13	800 000 634	114
800 000 185	13	800 000 635	114
800 000 186	13	800 000 636	114
800 000 187	13	800 000 637	114
800 000 192	13	800 000 638	114
800 000 193	13	800 000 639	114
800 000 194	13	800 000 640	114
800 000 195	13	800 015 141	161
800 000 196	13	800 015 142	161
800 000 197	13	800 015 143	161
800 000 218	28	800 015 179	161
800 000 219	28	800 024 832	161
800 000 220	28	800 024 834	161
800 000 228	28		
800 000 229	28		
800 000 230	28		
800 000 282	26		
800 000 283	26		
800 000 284	26		
800 000 285	26		
800 000 286	26		
800 000 287	26		
800 000 288	26		
800 000 289	26		

General Condition of Supply of Georg Fischer Piping Systems Limited, Schaffhausen

1 General

- 1.1 These General Conditions shall apply to all Products supplied by Georg Fischer to the Purchaser. They shall also apply to all future business even when no express reference is made to them.
- 1.2 Any deviating or supplementary conditions especially Purchaser's general conditions of purchase and verbal agreements shall only be applicable if accepted in writing by Georg Fischer.
- 1.3 The written form shall be deemed to be fulfilled by all forms of transmission, evidenced in the form of text, such as telefax, e-mail, etc.

2 Tenders

- Tenders shall only be binding if they contain a specifically stated period for acceptance.

3 Scope of Delivery

- 3.1 Georg Fischer's product range is subject to change.
- 3.2 The confirmation of order shall govern the scope and execution of the contract.

4 Data and Documents

- 4.1 Technical documents such as drawings, descriptions, illustrations and data on dimensions, performance and weight as well as the reference to standards are for information purposes only. They are not warranted characteristics and are subject to change.
- 4.2 All technical documents shall remain the exclusive property of Georg Fischer and may only be used for the agreed purposes or as Georg Fischer may consent.

5 Confidentiality, Protection of Personal Data

- 5.1 Each party shall keep in strict confidence all commercial or technical information relating to the business of the other party, of which it has gained knowledge in the course of its dealing with the other party. Such information shall neither be disclosed to third parties nor used for other purposes than those for which the information has been supplied.
- 5.2 In the context of the contractual relation with the Purchaser personal data may be processed. The Purchaser agrees to the disclosure of said data to third parties such as foreign subcontractors and suppliers etc.

6 Local Laws and Regulations, Export Controls

- 6.1 The Purchaser shall bring to the attention of Georg Fischer all local laws and regulations at the place of destination which bear connection with the execution of the contract and the adherence to relevant safety regulations and approval procedures.
- 6.2 In case of re-exports, Purchaser shall be responsible for compliance with pertinent export control regulations.

7 Price

- 7.1 Unless agreed otherwise, the prices shall be deemed quoted net ex works (according to Incoterms of the ICC, latest version) including standard packing. All supplementary costs such as the cost of carriage, insurance, export-, transit- and import duties etc. shall be borne by the Purchaser. The Purchaser shall also bear the costs of all taxes, fees, duties etc. connected with the contract.
- 7.2 If the costs of packing, carriage, insurance, fees and other supplementary costs are included in the tender price or contract price or are referred to specifically in the tender or confirmation of order, Georg Fischer reserve the right to revise their prices accordingly should any change occur in the relevant tariffs.

8 Terms of Payment

- 8.1 The Purchaser shall make payment in the manner agreed by the parties without any deductions such as discounts, costs, taxes or dues.
- 8.2 The Purchaser may only withhold or off-set payments due against counter claims which are either expressly acknowledged by Georg Fischer or finally awarded to the Purchaser. In particular, payment shall still be made when unessential items are still out-standing provided that the Products already delivered are not rendered unusable as a result.

9 Retention of Title

- 9.1 The Products shall remain the property of Georg Fischer until the Purchaser shall have settled all claims, present and future, which Georg Fischer may have against him.
- 9.2 Should the Purchaser resell Products to which title is reserved, in the ordinary course of business, he shall hereby be deemed to have tacitly assigned to Georg Fischer the proceeds deriving from their sale together with all collateral rights, securities and reservations of title until all claims held by Georg Fischer shall have been settled. Until revoked by Georg Fischer, this assignment shall not preclude Purchaser's right to collect the assigned receivables.
- 9.3 To the extent the value of the Products to which title is reserved together with collateral securities exceeds Georg Fischer's claims against the Purchaser by more than 20%, Georg Fischer shall re-assign the above proceeds to Purchaser at his request.

10 Delivery

- 10.1 The term of delivery shall commence as soon as the contract has been entered into, all official formalities such as import and payment permits have been obtained and all essential technical issues have been settled. The term of delivery shall be deemed duly observed when, upon its expiry, the Products are ready for despatch.
- 10.2 Delivery is subject to the following conditions, i.e. the term of delivery shall be reasonably extended:
 - a) if Georg Fischer are not supplied in time with the information necessary for the execution of the contract or if subsequent changes causing delays are made by the Purchaser.
 - b) if Georg Fischer are prevented from performing the contract by force majeure. Force majeure shall equally be deemed to be any unforeseeable event beyond Georg Fischer's control which renders Georg Fischer's performance commercially unpractical or impossible, such as delayed or defective supplies from sub contractors labour disputes, governmental orders or regulations, shortages in materials or energy, serious disturbances in Georg Fischer's works, such as the total or partial destruction of plant and equipment or the breakdown of essential facilities, serious disruptions in transport facilities, e.g. impassable roads.
Should the effect of force majeure exceed a period of six months, either party may cancel the contract forthwith.
Georg Fischer shall not be liable for any damage or loss of any kind whatsoever resulting therefrom, any suspension or cancellation being without prejudice to Georg Fischer's right to recover all sums due in respect of consignments delivered and costs incurred to date.
 - c) if the Purchaser is in delay with the fulfilment of his obligations under the contract, in particular, if he does not adhere to the agreed conditions of payment or if he has failed to timely provide the agreed securities.
- 10.3 If for reasons attributable to Georg Fischer the agreed term of delivery or a reasonable extension thereof is exceeded, Georg Fischer shall not be deemed in default until the Purchaser has granted to Georg Fischer in writing a reasonable extension thereof of not less than one month which equally is not met.
The Purchaser shall then be entitled to the remedies provided at law, it being however understood that, subject to limitations of Art. 16, damage claims shall be limited to max. 10% of the price of the delayed delivery.
- 10.4 Part shipments shall be allowed and Georg Fischer shall be entitled to invoice for such partial deliveries.
- 10.5 If the Purchaser fails to take delivery within a reasonable time of Products notified as ready for despatch, Georg Fischer shall be entitled to store the Products at the Purchaser's expense and risk and to invoice them as delivered. If Purchaser fails to effect payment, Georg Fischer shall be entitled to dispose of the Products.
- 10.6 Should Purchaser cancel an order without justification and should Georg Fischer not insist on the performance of the contract, Georg Fischer shall be entitled to liquidated damages in the amount of 10% of the contract price, Georg Fischer's right to prove and claim higher damages remaining reserved. Purchaser shall be entitled to prove, that Georg Fischer has suffered no or a considerably lower damage.

11 Packing

- If the Products are provided with additional packing over and above the standard packing, such packing shall be charged additionally.

12 Passing of Risk

- 12.1 The risk in the Products shall pass to the Purchaser as soon as they have left Georg Fischer's works (EXWORKS, Incoterms ICC, latest version), even if delivery is made carriage-paid, under similar clauses or including installation or when carriage is organized and managed by Georg Fischer.
- 12.2 If delivery is delayed for reasons beyond Georg Fischer's control, the risk shall pass to the Purchaser when he is notified that the Products are ready for despatch.

13 Carriage and Insurance

- 13.1 Unless agreed otherwise, the Purchaser shall bear the cost of carriage.
- 13.2 The Purchaser shall be responsible for transport insurance against damage of whatever kind. Even when such insurance is arranged by Georg Fischer it shall be deemed taken out by the order of and for the account of the Purchaser and at his risk.
- 13.3 Special requests regarding carriage and insurance shall be communicated to Georg Fischer in due time. Otherwise carriage shall be arranged by Georg Fischer at their discretion, but without responsibility, by the quickest and cheapest method possible.
In case of carriage-paid delivery transport arrangements shall be made by Georg Fischer. If the Purchaser specifies particular requirements, any extra costs involved shall be borne by him.
- 13.4 In the event of damage or loss of the Products during carriage the Purchaser shall mark the delivery documents accordingly and immediately have the damage ascertained by the carrier. Not readily ascertainable damages sustained during carriage shall be notified to the carrier within six days after receipt of the Products.

14 Inspection, Notification of Defects and Damages

- 14.1 The Products will be subject to normal inspection by Georg Fischer during manufacture. Additional tests required by the Purchaser shall be agreed upon in writing and shall be charged to the Purchaser.
- 14.2 It shall be a condition of Georg Fischer's obligation under the warranties stated hereinafter that Georg Fischer be notified in writing by the Purchaser of any purported defect immediately upon discovery. Notice concerning weight, numbers or apparent defects is to be given latest within 30 days from receipt of the Products, notice of other defects immediately latest within 7 working days after discovery, in any event within the agreed warranty period.
- 14.3 Purchaser shall not dispose of allegedly defective Products until all warranty and/or damage claims are finally settled. At its request, defective Products are to be placed at Georg Fischer's disposal.
- 14.4 At its request, Georg Fischer shall be given the opportunity to inspect the defect and/or damage, prior to commencement of remedial work, either itself or by third party experts.

15 Warranty

- 15.1 At the written request of the Purchaser, Georg Fischer undertake to repair or replace at their discretion, as quickly as possible and free of charge all Products supplied which demonstrably suffer from faulty design, materials or workman-ship or from faulty operating or installation instructions.
In order to protect employees from toxic or radioactive substances which may have been transported through defective parts returned to Georg Fischer's sales organisation, said parts must be accompanied by a Material Safety Disclosure Form. The form may be obtained from Georg Fischer's local sales company or via www.piping.georgfischer.com.
Replaced parts shall become property of Georg Fischer.
- 15.2 For Products which are manufactured to specifications, drawings or patterns supplied by the Purchaser, Georg Fischer's warranty shall be restricted to proper materials and workmanship.
- 15.3 The Purchaser shall be entitled to cancel the contract or to demand a reduction in the contract price if also a second attempt to repair or replace the Products has failed.
- 15.4 For Products or essential components manufactured by a third party and supplied by Georg Fischer under this contract, Georg Fischer's warranty is limited to the warranty provided by said third party.
- 15.5 This warranty shall not apply to damage resulting from normal wear and tear, improper storage and maintenance, failure to observe the operating instructions, overstressing or overloading, unsuitable operating media, unsuitable construction work or unsuitable building ground, improper repairs or alterations by the Purchaser or third parties, the use of other than original spare parts and other reasons beyond Georg Fischer's control.
- 15.6 No action or claim may be brought by the Purchaser on account of any alleged breach of warranty or any other obligation of Georg Fischer after the expiration of twelve (12) months from receipt of the Products by the end user or at the latest within eighteen (18) months of the Products being despatched by Georg Fischer.
- 15.7 In case of Products for use in domestic installations or in utilities
 - Georg Fischer will assume the costs of dismantling the defective Product and restoring the damaged object as well as, in case of negligence, all other direct damages caused by the defective Product (damage to property and injury to or death of persons) up to CHF 1 000 000 per occurrence.
 - the statute of limitations for warranty or damage claims - contrary to Section 15.6 - will be 5 years from the date of installation.

16 Limitation of Liability

- All cases of breach of contract and the relevant consequences as well as all rights and claims on the part of the customer, irrespective on what ground they are based, are exhaustively covered by these general conditions of supply. In particular, any claims not expressly mentioned for damages, reduction of price, termination of or withdrawal from the contract are excluded. In no case whatsoever shall the customer be entitled to claim damages other than compensation for costs of remedying defects in the supplies. This in particular refers, but shall not be limited, to loss of production, loss of use, loss of orders, loss of profit and other direct or indirect or consequential damage. This exclusion of liability, however, does not apply to unlawful intent or gross negligence on the part of Georg Fischer and in case of strict liability under applicable product liability statutes, but does apply to unlawful intent or gross negligence of persons employed or appointed by Georg Fischer to perform any of its obligations.

17 Severability

- Should any term or clause of these General Conditions in whole or in part be found to be unenforceable or void, all other provisions shall remain in full force and effect and the unenforceable or void provision shall be replaced by a valid provision, which comes closest to the original intention of the unenforceable or invalid provision.

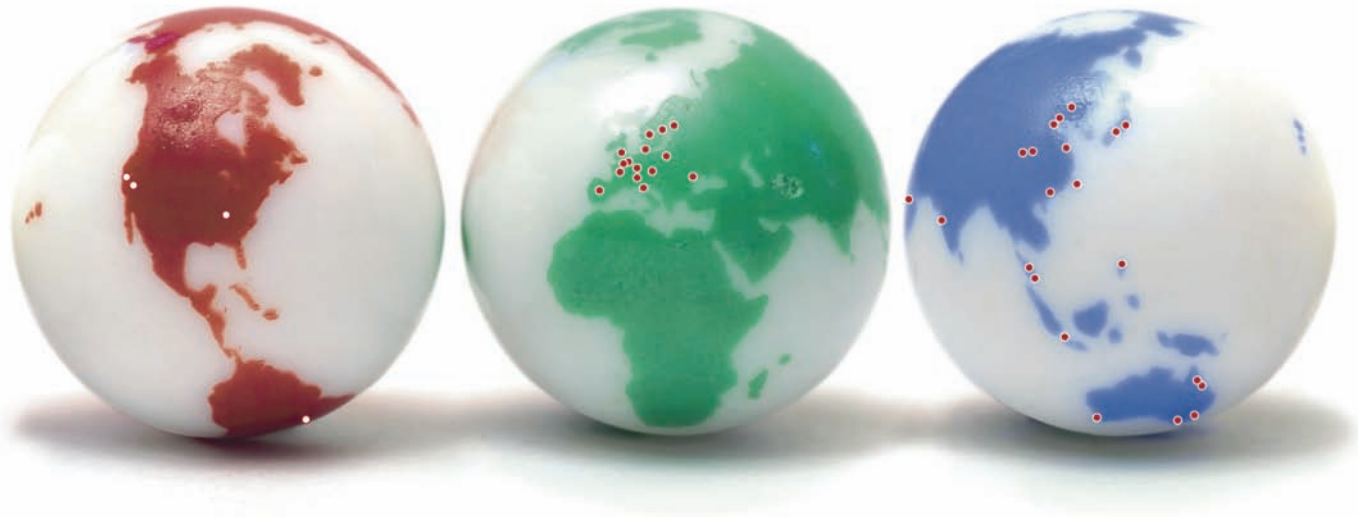
18 Place of Performance and Jurisdiction

- 18.1 Place of performance for the Products shall be the Georg Fischer works from which the Products are despatched.
- 18.2 Any civil action based upon any alleged breach of this contract shall be filed and prosecuted exclusively in the courts of Schaffhausen, Switzerland.
Georg Fischer however reserves the right to file actions in any court having jurisdiction over controversies arising out of or in connection with the present contract.
- 18.3 The contract shall be governed by Swiss law without regard to conflict of law provisions that would require the application of another law.

GF Piping Systems → worldwide at home

Our sales companies and representatives ensure local customer support in over 100 countries.

www.piping.georgfischer.com



The technical data are not binding and not expressly warranted characteristics of the goods. They are subject to change. Our General Conditions of Sale apply.

Adding Quality to People's Lives

Australia

Georg Fischer Pty Ltd
Unit 1, 100 Belmore Road
Riverwood NSW 2210 Australia
Phone +61(0)2/9502 8000
australia.ps@georgfischer.com
www.georgfischer.com.au

Austria

Georg Fischer
Rohrleitungssysteme GmbH
3130 Herzogenburg
Phone +43(0)2782/856 43-0
austria.ps@georgfischer.com
www.georgfischer.at

Belgium/Luxembourg

Georg Fischer NV/SA
1070 Bruxelles/Brüssel
Phone +32(0)2/556 40 20
be.ps@georgfischer.com
www.georgfischer.be

Brazil

Georg Fischer Ltda
04795-100 São Paulo
Phone +55(0)11/5687 1311
br.ps@georgfischer.com

China

Georg Fischer
Piping Systems Ltd Shanghai
Pudong, Shanghai 201319
Phone +86(0)21/58 13 33 33
china.ps@georgfischer.com
www.cn.piping.georgfischer.com

Denmark/Iceland

Georg Fischer A/S
2630 Taastrup
Phone +45 (0)70 22 19 75
info.dk.ps@georgfischer.com
www.georgfischer.dk

France

Georg Fischer SAS
Bâtiment Le Rabelais Paris Nord 2
22 Avenue des Nations
BP 88026 Villepinte
95932 Roissy Charles de Gaulle Cedex
Phone +33(0)1 41 84 68 84
fr.ps@georgfischer.com
www.georgfischer.fr

Germany

Georg Fischer GmbH
73095 Albershausen
Phone +49(0)7161/302-0
info.de.ps@georgfischer.com
www.vgd.georgfischer.de

India

Georg Fischer Piping Systems Ltd
400 076 Mumbai
Phone +91 224007 2001
in.ps@georgfischer.com
www.georgfischer.in

Italy

Georg Fischer S.p.A.
20063 Cernusco S/N (MI)
Phone +3902/921 861
it.ps@georgfischer.com
www.georgfischer.it

Japan

Georg Fischer Ltd
556-0011 Osaka,
Phone +81(0)6/6635 2691
jp.ps@georgfischer.com
www.georgfischer.jp

Korea

Georg Fischer Piping Systems
#902 Ace Techno-Tower III
197-48, Guro-dong, Guro-gu
Seoul 152-050 Korea
Phone +82 2 851 3861/3862
Fax +82 2 851 3844
kor.ps@georgfischer.com

Malaysia

Georg Fischer (M) Sdn. Bhd.
47500 Subang Jaya
Phone +60 (0)3-8024 7879
conne.kong@georgfischer.com.my

Middle East

Georg Fischer Piping Systems
Dubai, United Arab Emirates
Phone +971 4 289 41 20
gfdubai@emirates.net.ae
www.piping.georgfischer.com

Netherlands

Georg Fischer N.V.
8161 PA Epe
Phone +31(0)578/678 222
nL.ps@georgfischer.com
www.georgfischer.nl

Norway

Georg Fischer AS
1351 Rud
Phone +47(0)67 18 29 00
no.ps@georgfischer.com
www.georgfischer.no

Poland

Georg Fischer Sp. z o.o.
02-226 Warszawa
Phone +48(0)22/313 10 50
poland.ps@georgfischer.com
www.georgfischer.pl

Romania

Georg Fischer
Piping Systems Ltd
020257 Bucharest - Sector 2
Phone +40(0)21/230 53 80
ro.ps@georgfischer.com

Russia

Georg Fischer Piping Systems
Office 14a, 3 Entrance, 9 Floor
Business Center Parus
1st Tverskaya-Yamskaya Street, 23
Moscow 125047
Tel. +7 495 258 60 80
ru.ps@georgfischer.com

Singapore

Georg Fischer Pte Ltd
528 872 Singapore
Phone +65(0)67 47 06 11
sgp.ps@georgfischer.com
www.georgfischer.com.sg

Spain/Portugal

Georg Fischer S.A.
28046 Madrid
Phone +34(0)91/781 98 90
es.ps@georgfischer.com
www.georgfischer.es

Sweden/Finland

Georg Fischer AB
12523 Älvsjö-Stockholm
Phone +46(0)8/506 775 00
info.se.ps@georgfischer.com
www.georgfischer.se

Switzerland

Georg Fischer
Rohrleitungssysteme (Schweiz) AG
8201 Schaffhausen
Phone +41(0)52 631 30 26
ch.ps@georgfischer.com
www.piping.georgfischer.ch

Taiwan

Georg Fischer Piping Systems
2F, No. 88, Hsing Te Road
San Chung City
Taipei Hsien, Taiwan (R.O.C.)
Phone +886 2 8512 2822
Fax +886 2 8512 2823

United Kingdom/Ireland

Georg Fischer Sales Limited
Coventry, CV2 2ST
Phone +44(0)2476 535 535
uk.ps@georgfischer.com
www.georgfischer.co.uk

USA/Canada/Latin America/Caribbean

Georg Fischer Inc.
Tustin, CA 92780-7258
Phone +1(714) 731 88 00
Toll Free 800/854 40 90
us.ps@georgfischer.com
www.us.piping.georgfischer.com

Export

Georg Fischer
Piping Systems (Switzerland) Ltd.
8201 Schaffhausen
Phone +41 (0)52-631 30 26
Fax +41 (0)52-631 28 93
export.ps@georgfischer.com
www.piping.georgfischer.ch

GMST 8259/4 (1.07)

© Georg Fischer Piping Systems Ltd
CH-8201 Schaffhausen/Switzerland, 2006
Printed in Germany

+GF+

GEORG FISCHER PIPING SYSTEMS