

DATA SHEET

**Pressure rating of
INSTAFLEX polybutene
drinking water piping
systems**



+GF+

JRG

1.0 Introduction

The choice of material and the pressure rating are crucial for the operating reliability and lifetime (useful life) of piping components. Equally important for consideration are the working temperature, the medium conveyed and the load duration.

As indicated in the norm EN ISO – 15876 Part 1, the pressure rating PN (Pressure Nominal) refers to the allowable working pressure in bar at 20°C. The expected useful life for drinking water applications is 50 years. A safety factor of SF = 1.5 has been taken into consideration.

1.1 Please note

Prior to using INSTAFLEX PB systems with drinking water additives of a chemical nature or in special applications with high pressures or temperatures, the responsible system manager should be consulted!

2.0 INSTAFLEX d16-d110 (Electro socket and compression fittings for drinking water)

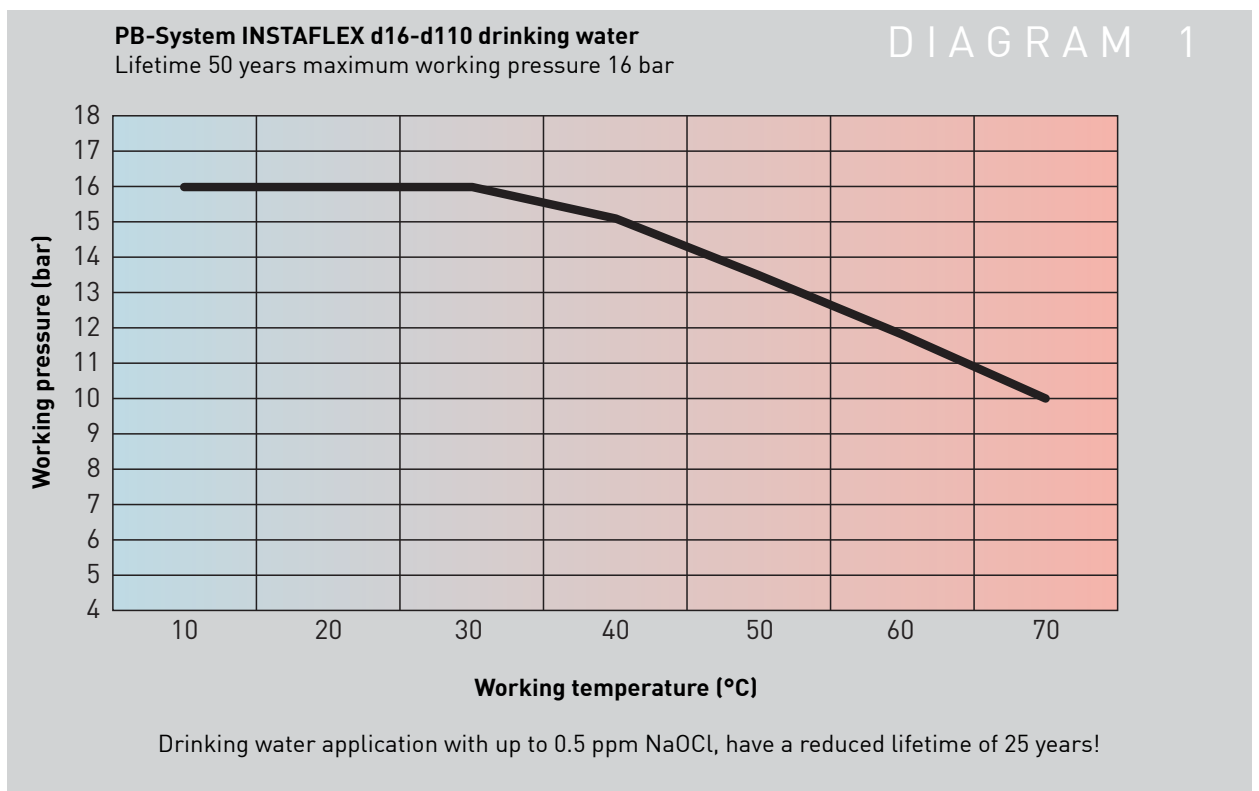
INSTAFLEX products d16 to d110 conform to a maximum allowable working pressure of 16 bar. What this means is that this piping system can have a pressure load of 16 bar at 20°C. In plumbing installations, pipes and fittings must accord with the building and testing regulations of the specific country, thus ensuring a safe and reliable distribution of hot and cold drinking water.

The most important criteria of a piping system are the working pressure, the temperature and the service life.

2.1 Example for INSTAFLEX d16 to d110

Working temperature: 70°C
 Working pressure: 10 bar
 Useful lifetime: 50 years
 A safety factor of 1.5 has already been included.

For other values, please see Diagram 1.



3.0 INSTAFLEX d16-d110 (Electro socket and compression fittings for drinking water applications with 0.5–2 ppm NaOCl)

INSTAFLEX products d16 to d110 conform to a maximum allowable working pressure of 13 bar for this quality of water. What this means is that this piping system can have a pressure load of 13 bar at 20°C; however, the useful life has been limited to maximum 25 years in this application. In plumbing installations, pipes and fittings must accord with the building and testing regulations of the specific country, thus ensuring a safe and reliable distribution of hot and cold drinking water.

The most important criteria of a piping system are the working pressure, the temperature and the service life.

3.1 Example for INSTAFLEX d16 to d110 (with 0.5–2 ppm NaOCl)

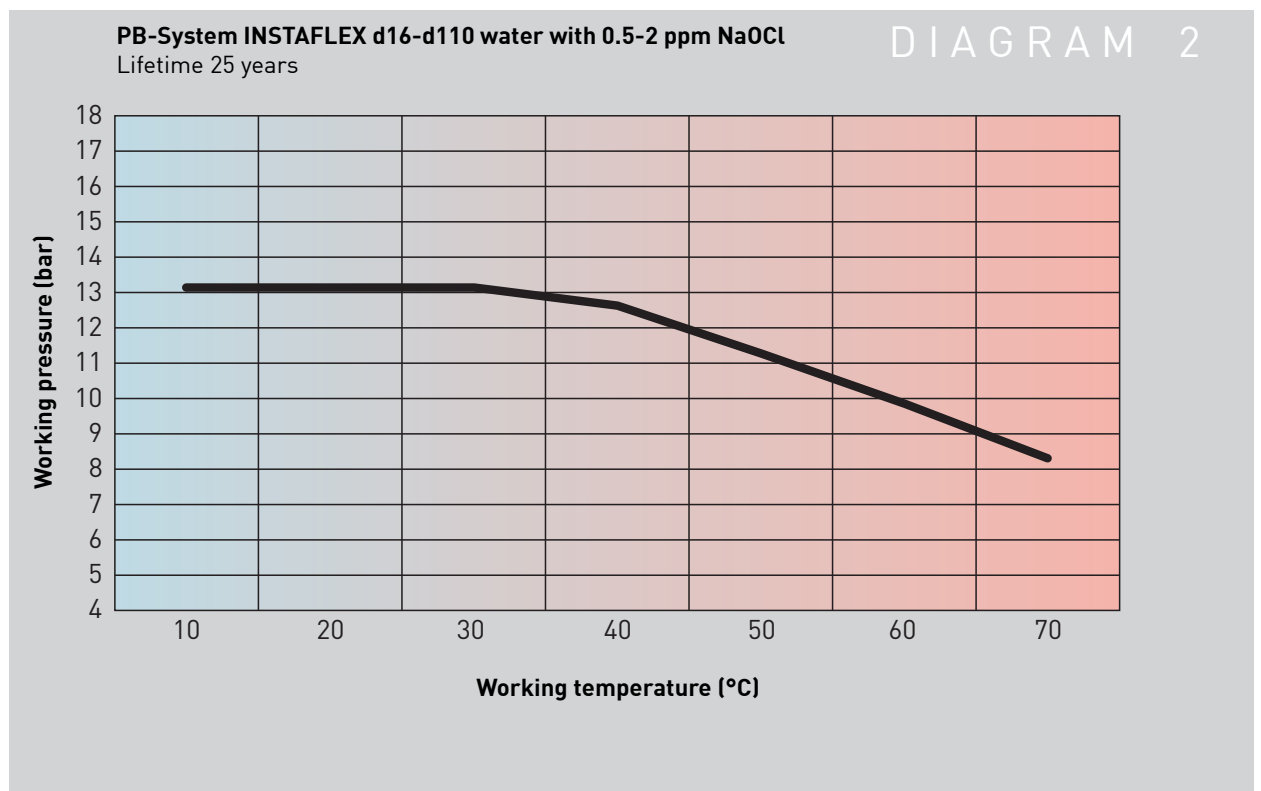
Working temperature: 70°C

Working pressure: 8.3 bar

Useful lifetime: 25 years

The PB and NaOCl safety factors of 1.5 for possible diminution have already been included.

For other values, please see Diagram 2.



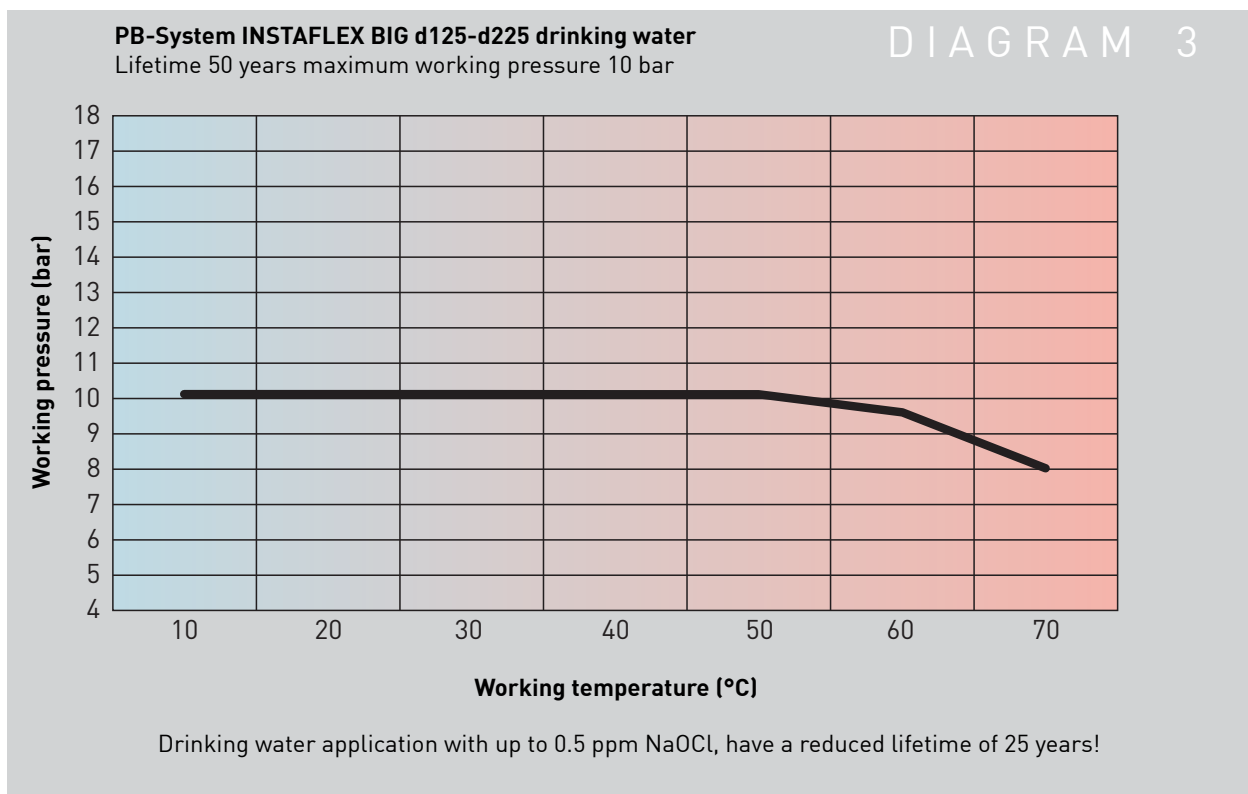
4.0 INSTAFLEX BIG d125-d225 (drinking water application without chemical additives)

INSTAFLEX BIG products d125 to d225 conform to a maximum allowable working pressure of 10 bar. What this means is that this piping system can have a pressure load of 10 bar at 20°C. In plumbing installations, pipes and fittings must accord with the building and testing regulations of the specific country, thus ensuring a safe and reliable distribution of hot and cold drinking water. The most important criteria of a piping system are the working pressure, the temperature and the service life.

4.1 Example for INSTAFLEX BIG d125 to d225 (without chemical additives)

Working temperature: 70°C
 Working pressure: 8 bar
 Useful lifetime: 50 years
 A safety factor of 1.5 has already been included.

For other values, please see Diagram 3.



5.0 INSTAFLEX BIG d125 to d225 (water applications with 0.5–2 ppm NaOCl)

INSTAFLEX BIG products d125 to d225 conform to a maximum allowable working pressure of 9 bar for this quality of water. What this means is that this piping system can have a pressure load of 9 bar at 20°C; however, the useful life has been limited to maximum 25 years in this application. In plumbing installations, pipes and fittings must accord with the building and testing regulations of the specific country, thus ensuring a safe and reliable distribution of hot and cold drinking water.

The most important criteria of a piping system are the working pressure, the temperature and the service life.

5.1 Example for INSTAFLEX BIG d125 to d225 (with 0.5–2 ppm NaOCl)

Working temperature: 70°C
 Working pressure: 7 bar
 Useful life: 25 years

The PB and NaOCl safety factors of 1.5 for possible diminution have already been included.

For other values, please see Diagram 4.

