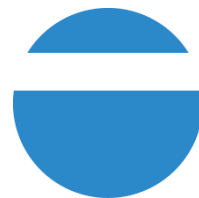


Bravopress®

TECHNOPOLYMER (PPSU) PRESS FITTINGS



Bravopress® is a press fittings system made of a technopolymer (PPSU), a plastic material characterized by exceptional mechanical strength and corrosion resistance, employed for the construction of water supply, heating, cooling and industrial systems.

By using a portable pressing machine equipped with a suitable jaw, the pipe is shaped around the fitting insert.

Even in the presence of temperature fluctuations, the joint is perfectly watertight and cannot be loosened thanks to the stainless-steel sleeve that covers the portion of pipe in contact with the insert.

The sleeve has inspection holes to verify the correct insertion of the pipe on the fitting.

Features

- **Hygiene**

Bravopress® press fittings are certified to transport potable water, and can therefore be used for the construction of domestic hot and cold water distribution systems. The material used to make these fittings provides an exceptional level of hygiene as well as offering an excellent resistance to treatments against Legionella.

- **Chemical resistance**

The material used to make these fittings, polyphenylsulfone (PPSU), is a polymer characterized by an exceptional resistance to oxidation and corrosion, to the main chemical compounds dissolved in water, and to cement and lime. The mechanical properties of this material such as the tensile strength, modulus of elasticity and aging resistance far exceeds those of normal polymers.

- **Multipress**

The Bravopress® fittings are multipress and therefore compatible with a wide range of pressing profiles available on the market (H, TH, U, C, VAL) and this allows the plumber to use the pressing jaws already in his possession without having to buy new ones.

- **Safety**

The Bravopress® fittings are designed so that to indicate any incomplete pressing during system testing, which according to international standards is necessary once the system has been completed (please refer to the chapter "Commissioning").

Thanks to the particular profile of the insert, the fittings indicate incomplete pressing by dripping, thus immediately identifying the point to be repaired (feature available from Ø16 to Ø32 at 0,5÷2 bar).

Furthermore, the fittings are created with a special insert having a profile that prevents the pipe from becoming disconnected and two ring seals to guarantee maximum safety and reliability over time.

The physical and chemical integrity of the coupling is guaranteed by the anti-loosening profile, the double seal ring and a plastic ring that insulates the aluminium layer of the multilayer pipe from the brass alloy of the fitting body.

- **Ease of use**

Bravopress® is extremely easy to use and can be installed using a special portable pressing machine in a very fast way, thus reducing the overall installation costs. In addition, the product is characterised by an extreme lightness.

Table. Bravopress® fittings features.

Body	Polyphenylsulfone (PPSU), characterized by extreme hygiene, chemical resistance and high mechanical characteristics
Sleeve	AISI 304 stainless steel with inspection holes to check the correct insertion of the pipe
Seals	2 made of EPDM
Chemical/physical detachment	Polyphenylensulphone is a plastic material not subject to corrosion and oxidation and eliminates the problem of stray currents
Dimensional range	16-63 mm
Suitable pipes	Pexal®, Mixal®, Thermoline®
Equipment required	Pipe cutter, calibrator, lubricant, pressing machine

Table. Pressing profiles for Bravopress® fittings.

Diameter	Pressing profile
16x2	H, TH, U
20x2	H, TH, U
25x2,5	TH, U
26x3	H, TH, C
32x3	H, TH, U
40x3,5	VAL, TH, U
50x4	VAL, TH, U
63x4,5	VAL, TH, U

Note: during installations, always check the suitable pressing profiles for the fitting in question.















Pressing profile H, U, C, VAL



Pressing profile TH

Range

Table. Bravopress® fittings and accessories.

Description	Design	Description	Design
Intermediate coupling		Reducing coupling	
Threaded coupling (male)		Threaded coupling (female)	
Elbow		Threaded elbow (male)	
Threaded elbow (female)		Union tee	
Reducing union tee		Threaded union tee (female)	
Wingback elbow		45° elbow	

Approvals

The approvals of Valsir® supply systems are available on the website www.valsir.com

Localized pressure losses for Bravopress® fittings

Table Equivalent lengths L_{eq} for heating/conditioning systems.

Pipe	Fitting																	
	Water velocity [m/s]																	
	0.3	0.5	0.8	0.3	0.5	0.8	0.3	0.5	0.8	0.3	0.5	0.8	0.3	0.5	0.8	0.3	0.5	0.8
Equivalent length L_{eq}																		
16x2	0.2	0.3	0.3	1.0	1.2	1.3	0.3	0.4	0.5	1.1	1.3	1.4	1.2	1.3	1.5	0.3	0.3	0.4
20x2	0.2	0.2	0.3	1.2	1.4	1.6	0.4	0.4	0.5	1.3	1.5	1.7	1.4	1.6	1.8	0.3	0.3	0.4
26x3	0.2	0.2	0.3	1.5	1.7	1.9	0.4	0.5	0.5	1.6	1.9	2.1	1.6	1.9	2.1	0.3	0.4	0.4
32x3	0.1	0.2	0.2	1.8	2.1	2.3	0.5	0.5	0.6	2.0	2.3	2.6	2.0	2.3	2.6	0.4	0.4	0.5
40x3,5	0,2	0,2	0,3	2,0	2,3	2,6	0,5	0,6	0,6	2,3	2,6	2,9	2,3	2,6	2,9	0,4	0,4	0,5
50x4	0,1	0,2	0,2	2,5	2,9	3,2	0,6	0,6	0,7	2,9	3,3	3,6	2,8	3,2	3,5	0,4	0,5	0,6
63x4,5	0,0	0,1	0,1	2,9	3,3	3,7	0,6	0,7	0,8	3,4	3,8	4,2	3,2	3,7	4,1	0,5	0,5	0,6

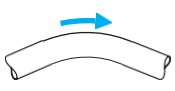
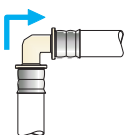
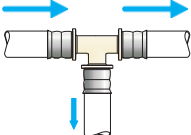
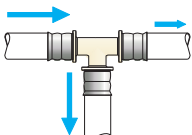
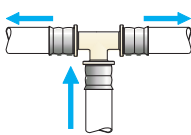
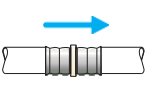
Note. In heating and conditioning systems, the maximum velocity recommended is 0.3 m/s for the connections to the terminal units, 0.5 m/s for horizontal manifolds and 0.8 m/s for common pipes.

Table Equivalent lengths L_{eq} for water supply systems.

Pipe	Fitting																
	Water velocity [m/s]																
	2	4	2	4	2	4	2	4	2	4	2	4	2	4			
Equivalent length L_{eq}																	
16x2	0.4	0.5	1.7	1.9	0.6	0.6	1.8	2.0	1.9	2.2	0.4	0.5					
20x2	0.4	0.5	2.0	2.3	0.6	0.7	2.1	2.5	2.2	2.6	0.5	0.5					
26x3	0.4	0.4	2.3	2.7	0.7	0.7	2.6	2.9	2.6	3.0	0.5	0.6					
32x3	0.3	0.4	2.9	3.2	0.7	0.8	3.2	3.6	3.2	3.6	0.6	0.6					
40x3,5	0,4	0,4	3,2	3,6	0,8	0,9	3,6	4,1	3,5	4,0	0,6	0,7					
50x4	0,3	0,4	3,9	4,4	0,9	1,0	4,4	5,0	4,3	4,9	0,7	0,8					
63x4,5	0,3	0,3	4,5	5,0	0,9	1,0	5,1	5,8	4,9	5,5	0,7	0,8					

Note. In water supply systems the maximum velocity recommended is 2 m/s for the supply manifolds, the risers and the branch lines to the floors and 4 m/s for the end sections that connect to the individual points of use.

Table k loss factors.

Pipe	Fitting					
						
k loss factor						
16x2	1.0	3.8	1.3	4.1	4.3	1.0
20x2	0.7	3.2	1.0	3.4	3.6	0.8
26x3	0.5	2.8	0.8	3.1	3.2	0.6
32x3	0.3	2.5	0.6	2.8	2.8	0.5
40x3,5	0,3	2,1	0,5	2,3	2,3	0,4
50x4	0,2	1,9	0,4	2,1	2,1	0,3
63x4,5	0,1	1,6	0,3	1,8	1,8	0,3