Product Information

Push-Fit Fitting System Functional Elements

Series FitSys 18

A. u. K. Müller

Solenoid valves
Control valves
Special valves and systems

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Characteristics

- Easy to assemble
- Compact design, for space optimisation
- Can easily be disassembled without tools, reduced assembly time
- Hose guide prevents misalignment of tubing
- Tactile feedback when inserting the hose
- Minimal axial clearance on dynamic pressure loads
- No damage to the hose
- High temperature resistance
  (Saturated steam 143° C at 3 bar)
  (290° F at 43.5 psi)
- UL and NSF/ANSI 169 approved versions available

Description

The FitSys 18 Push-Fit fitting system is used with a variety of liquid and gaseous media. It can also be used for food, hot water, steam and many aggressive media.

The functional elements of the FitSys 18 system are an excellent supplement to the standard Push-Fit fitting system.

Functional components such as control and pressure relief valves increase the benefit of the system.

Applications

- Distribution systems in vending machines as well as coffee and espresso machines
- Pharmaceutical industry
- Laboratory and analytical equipment
- Medical equipment
- Diagnostics
- Industrial appliances
- Environmental technology

Materials

Fitting body / connection type	PPSU
O-ring	FKM EPDM on request
Spring	stainless steel

⚠ PPSU valve bodies must not come in contact with:

acetone, ethers, ketones, aromatic hydrocarbons, chlorinated hydrocarbons, acids and oxidizing anaerobic adhesives.

Technical Data

Type	Fitting system	
Construction	Push-Fit without tools	
Media	Neutral gases, cold and heated potable water and physically and chemically similar media	
T-Medium **Saturated steam**	98 143 (3bar)	°C max. °C max.
T-Ambient	60	°C max.
p-Operating	0 - 16 (0 - 232 0 - 3 (0 - 44	bar (98 °C) psi (208 °F)) bar (143 °C) psi (289 °F))

⚠ Please be aware of the maximum allowable pressure of the used tube / hose.

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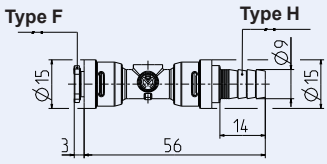
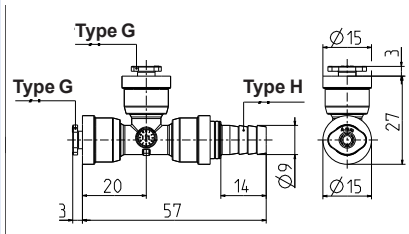
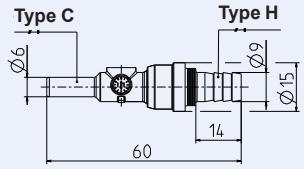
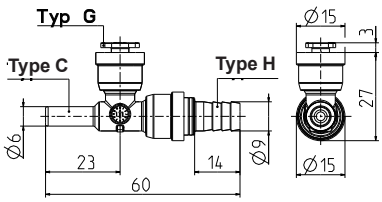
PRV - Pressure Relief Valve

The connection types F and G can be manufactured in any combination on request.

Available standard components

Type	Dimensions	Image	Response Pressure (bar)	ID
PRV3-F.x			4	009788
			5	010761
			12	009604
			14	010762
			16	010259
PRV3-G.G.x			11	010180
PRV3-C.x			4	010396
PRV3-G.C.x			14	on request

The response pressures in the range of up to 16 bar and needed release flow rates are customizable according to application specific requirements. The response pressure indicates the point at which the valve becomes permeable. Full opening of the valve is only achieved at higher pressures.

⚠ The valve should be tested for suitability in the intended application.

Other combinations of connection types on request

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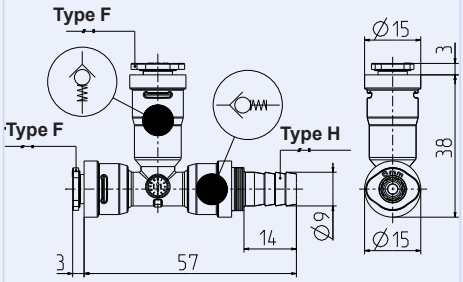
PRV - Pressure Relief Valve with BP-Backflow Preventer

The connection types F and G can be manufactured in any combination on request.

Available standard components on request

Type	Dimensions	Image	Response Pressure (bar)	ID
T-F.BP.PRV3.x			4	010125
			11	010233

The response pressures in the range of up to 16 bar and needed release flow rates are customizable according to application specific requirements. The response pressure indicates the point at which the valve becomes permeable. Full opening of the valve is only achieved at higher pressures.

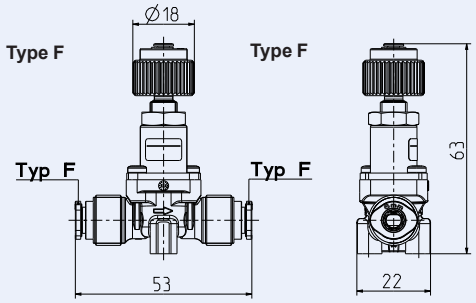
⚠ The valve should be tested for suitability in the intended application.

Other combinations of connection types on request

CV-Control Valve

The CV control valve is used to regulate volume flows and can be used in the cold water, hot water and steam area. After adjusting the volume flow via the knurled nut, the position of the valve can be secured via a lock nut. The CV control valve is not suitable for completely closing off the pipe run.

Available standard components

Type	Dimensions	Image	ID
T-F.CV.F			087740

Other combinations (see valve bodys series 18.005) on request

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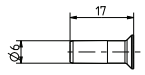
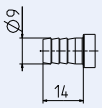
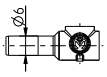
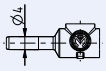
Possible connection types of the fitting system

Type			Hose / Tube material	Recommended Hose / Tube Dimensions Outer-Ø x Inner-Ø
C*		Nozzle connection Hose inner-Ø 6 mm (0.236 inch)	Flexible plastic tubes Silicone	> 8 x 6 mm** (0.315 x 0.236 inch)
F*		Push-Fit Ø 6 mm (Counterpart of type C)	Flexible plastic tubes PFA, PTFE	6 x 4 mm (0.236 x 0.158 inch) 6 x 4,5 mm (0.236 x 0,177 inch) 6 x 5 mm (0.236 x 0.197 inch)
G*		Push-Fit Ø 4 mm (Counterpart of type B)	Metal tubes	4 x 2 mm (0.158 x 0.79 inch) 4 x 3 mm (0.158 x 0.118 inch)
H*		Nozzle connection Hose inner-Ø 6 mm (0.236 inch)	Flexible plastic hoses Silicone	> 11 x 9 mm** (0.433 x 0.315 inch)

*	UL and NSF/ANSI 169 approved versions available
**	The suitability of the recommended diameters depends on the selected material properties of the hoses used. The operator must ensure that the hose is held securely on the nozzle.

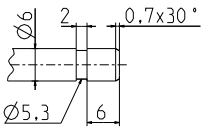
Accessory

For closing the connections, for example for maintenance or test purposes.

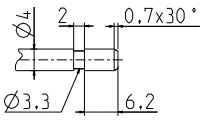
Type		Application
S*		Plug for connection type F
S*		Plug for connection type G

Installation notes reworking when using metal pipes (Type F and G)

Type F Push-Fit
when using a metal
tube Ø 6 x 4 mm
(0.236 x 0.158 inch)



Type G Push-Fit
when using a metal
tube Ø 4 x 2 mm
(0.158 x 0.79 inch)



When using hoses, it is **necessary** to deburr the cutting site.

Installation note pipe in connection with Push-Fit connections (Type F and G)

- Cut pipe to length at right angles and deburr well.
- When using metal pipes, additionally groove according to pipe diameter (see above)
- Push the pipe into the holding element to the limit stop.
- To check the correct connection, pull the pipe in the opposite direction.
- To release the pipe, press in the holding element and pull the pipe in the opposite direction.