



Series FitSys 18



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 flexible push-fit system has a modular design and allows the combination of different connector types (male thread, tube clamp, nozzle, push-fit in straight, L-, T- or Y-Connector).

The oval shape of the release ring on the retaining element of the push-fit connections Ø 4 and 6 mm (G and F) provides sufficient contact surface to simplify handling when releasing the pipes.

The functional components such as control and overpressure valves additionally increase the benefit of the system. These components can be found in the Fitting Plug-In System Functional Elements data sheet.

Approvals

Approved variants available on request:



- KTW-BWGL
- EG 1935/2004
- NSF 169
- other approvals on request

Applications

- Variable media management
- Connecting valves of the series 18.00x
- Distribution systems in vending machines as well as coffee and espresso machines
- Pharmaceutical technology
- Laboratory and analytical equipment
- Medical technology
- Diagnostics
- Industrial appliances
- Environmental engineering

Materials

| | |
|--------------------------------|------------------------|
| Fitting body / connection type | PPSU |
| O-ring | EPDM FKM 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.

Characteristics

- Easy to install plug-in system
- Compact design, for space optimisation
- Easy and safe release without tools, reduced assembly times
- Hose guide prevents misalignment of tubing
- Tactile feedback when inserting the hose
- Minimal axial clearance on dynamic pressure loads
- No damage to the hose
- Connection types for most fittings in a wide variety of combinations
- Base body of some fittings can be shaped with orifice reduction
- High temperature resistance (Saturated steam 143° C at 3 bar (290° F at 43.5 psi))
- UL and NSF/ANSI 169 approved versions available

Technical Data

| Type | Fitting System | |
|-----------------|--|---|
| Construction | Pluggable without tools | |
| Media | Neutral gases, cold and heated potable water and physically and chemically similar media | |
| T-Medium | 5 - 98 | °C |
| Saturated steam | 5 - 143 (3 bar) | °C |
| T-Ambient | 5 - 60 | °C |
| 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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Straight Through Connector

All connection types can be manufactured in any combination on request. An internal orifice in the range Ø 0.5 - 4 mm is also possible as an option.

Available standard components

| Type | Dimensions | Image | ID |
|----------|-------------------------|-------|--------|
| G4-G.C | | | 009440 |
| G4-F.C | | | 009435 |
| G4-F.F | | | 009431 |
| G4-B.A | | | 009422 |
| G0,8-B.A | with orifice 0.8 mm | | 009423 |
| G4-C.A | | | 009740 |
| G4-C.E | | | 009570 |

Further combinations see from page 8 on request



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L-Connector

All connection types can be manufactured in any combination on request. An internal orifice in the range \varnothing 1.5 - 4 mm is also possible as an option.

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| Type | Dimensions | Image | ID |
|--------|------------|-------|--------|
| L4-F.C | | | 009434 |
| L4-F.F | | | 009429 |
| L4-G.F | | | 009760 |
| L4-G.G | | | 009475 |
| L4-C.C | | | 009392 |
| L4-E.E | | | 009430 |
| L4-G.C | | | 009506 |

Further combinations see from page 8 on request



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T-Connector

All connection types can be manufactured in any combination on request.

Available standard components

| Type | Dimensions | Image | ID |
|---------|------------|-------|--------|
| T-G.G.G | | | 009439 |
| T-F.F.F | | | 009432 |
| T-E.E.E | | | 009433 |
| T-C.C.C | | | 009396 |
| T-G.C.G | | | 009507 |
| T-C.F.C | | | 009514 |
| T-F.L.L | | | 011619 |

Further combinations see from page 8 on request

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T-Connector

All connection types can be manufactured in any combination on request.

Available standard components

| Type | Dimensions | Image | ID |
|---------|------------|-------|--------|
| T-F.C.F | | | 009523 |
| T-F.F.C | | | 009571 |
| T-F.C.C | | | 009741 |

Further combinations see from page 8 on request

S-Plug

For connection types C, F and G

Available standard components

| Type | Dimensions | Image | ID | |
|------|------------|-------|--------|-------------------------|
| S-B | | | 009463 | Closure of connection G |
| S-C | | | 009462 | Closure of connection F |
| S-F | | | 010141 | Closure of connection C |



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Y-Connector

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

(Counterparts: Connection types B and C)

Available standard components

| Type | Dimensions | Image | ID |
|---------|------------|-------|--------|
| Y-G.G.G | | | 009437 |
| Y-F.F.F | | | 009436 |
| Y-F.G.G | | | 009474 |
| Y-F.F.G | | | 009569 |



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M-Connector Patented distributor components for plug-in connections Ø 6 mm

| Typ | Images | | ID |
|--------------|---------------------------|--|--------|
| | * Area of the O-ring seal | Flow direction (→) can also be reversed | |
| MC-F.C.C | | | 008948 |
| MC-F.C.C.C | | | 008949 |
| MO-F.C.C.C | | | 008946 |
| MO-F.C.C.C.C | | | 008947 |

MC = Outlet passage closed

MO = Outlet passage open



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Possible Combinations of the Push-Fit Fitting System

The Push-Fit fitting system offers many possibilities to provide the basic housing with different connection types. The corresponding basic housing is prefixed to the designation. The following tables show which of the connection types can be used on the basic housings.

With Possible Basic Housing

| Type | Basic housing | | Designation of the combination housing and connection |
|------|---------------|---|---|
| G x* | | <p>Straight through Ø 4 mm (0.158 inch)</p> | <p>G a-X.Y</p> <p>Connection type right (A - G) Connection type left (A - G) Inner diameter of orifice in [mm] (0,5 - 4)</p> |
| | | <p>Straight through with integrated orifice Ø 0,5 - 4 mm possible (Ø 0.02 - 0.158 inch)</p> | |
| L x* | | <p>L-Fitting body Ø 4 mm (0.158 inch)</p> | <p>L a-X.Y</p> <p>Connection type above (A - G) Connection type left (A - G) Inner diameter of orifice in [mm] (1,5 - 4)</p> |
| | | <p>L-Fitting body with integrated orifice Ø 1,5 - 4 mm possible</p> | |
| T* | | <p>T-Fitting body Ø 4 mm (0.158 inch)</p> | <p>T-X.Y.Z</p> <p>Connection type right (A - G) Connection type above (A - G) Connection type left (A - G)</p> |
| S* | | <p>S-Plug</p> | <p>S-X</p> <p>Connection type (A - D, F, G)</p> |
| Y* | | <p>Y-Fitting for connection types F, G</p> | <p>Y-X.Y.Z</p> <p>Connection type above right (ØDx: F oder G) Connection type above left (ØDx: F oder G) Connection type below (ØDx: F oder G)</p> |

* UL and NSF/ANSI 169 certified versions available



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Possible connection types of the fitting system

| Type | | | Hose / Tube Material | Recommended Hose / Tube Dimensions Outer-Ø x Inner-Ø |
|------|--|---|---|---|
| A* | | Nozzle connection Hose inner Ø 6 mm (0.236 inch) | Flexible plastic tubes Silicone | > 8 x 6 mm** (0.315 x 0.236 inch) |
| B* | | Push-Fit stem Ø 4 mm (0.158 inch) (Counterpart of type G) | - | - |
| C* | | Push-Fit stem Ø 6 mm (0.236 inch) (Counterpart of type F) | - | - |
| E* | | Clamp connection Ø 6 mm (0.236 inch) | Flexible plastic tubes PFA, PTFE | 6 x 4 mm (0.236 x 0.158 inch) |
| | | | Metal tube | 6 x 4 mm (0.236 x 0.158 inch) |
| F* | | Push-Fit Ø 6 mm (0.236 inch) (Counterpart of type C) | Flexible plastic hoses PFA, PTFE Metal tube | 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 (0.158 inch) (Counterpart of type B) | | 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 tubes Silicone | > 11 x 9 mm** (0.433 x 0.315 inch) |
| L* | | Nozzle connection Hose inner Ø 5 mm (0.197 inch) | Flexible plastic tubes Silicone | > 8 x 5 mm** |

* UL and NSF/ANSI 169 approved versions available

** The suitability of the recommended diameters depends on the selected material properties of the hoses used.

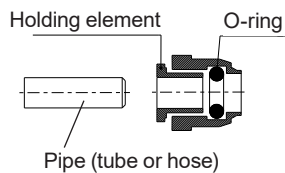
The operator must ensure that the hose is held securely on the nozzle.



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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, an additional groove corresponding to the pipe diameter must be pipe diameter. To determine the position of the groove, please contact A. u. K. Müller.
- 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.



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