

FlowCon General Instruction

GENERAL:

Medium:

Water or water mixture (to 50% Ethylene Glycol or Propylene Glycol).

Flushing:

Water must always be suitable treated, clean and free of debris (according to VDI 2035 recommendation).

In case of an insert-based valve, system is recommended to be flushed before the insert is installed in the valve body. A suitable flushing cap is available. In case of a one-unit-valve, system is recommended to be flushed before the valve is installed. If not possible, flush the system at maximum flow setting equal to fully open valve. Ensure that the valve is not in the fully closed position when filling the system with water. It is recommended that a strainer be installed prior to the valve body to prevent damage or blockage due to debris.

Installation:

INSTALL THE VALVE HOUSING WITH THE FLOW DIRECTIONAL ARROW POINTING IN THE CORRECT DIRECTION. Valves must be installed avoiding unnecessary pull or twist in the valve housing.

Thread Sealing:

For threaded connections please clear threads on both valve and piping of debris. FlowCon recommends thread sealant (Permabond A1044 or equivalent). When using Teflon tape, FlowCon

recommends 4-6 rounds of tape applied tightly in clockwise rotation. WHEN USING HEMP AS PIPE SEALANT, ENSURE NO STRANDS ARE LEFT IN THE VALVE OR PIPING.

For threaded connections including sealing O-ring or sealing gasket additional sealing is not required. Please make sure the O-ring / gasket is properly placed. After finger tightening O-ring sealing requires 2-5 Nm torque.

EuroCone fittings will seal with FlowCon UniQ[®] and FlowCon By-Pass Mini without additional sealing.

O-rings:

Any O-ring (on valve, insert or accessory) is recommended to be greased with silicone oil before installation. **IMPORTANT:** Never use mineral oil or petrol-based grease or oil on the O-rings.

Pressure:

It is recommended to make some type of overpressure limitation to avoid the inlet pressure never exceeds the maximum operating pressure. The valves shall be inspected for damage after any overpressure condition.

Recycling

At end of product life FlowCon recommends to sort valve parts into brass, ductile iron, stainless steel, plastics and electronics for proper recycling, energy recovery and minimized waste.

WARRANTY:

Following recommendations will prolong valve life and give better functionality.

Failure to abide by all recommendations as per this General Instruction will void warranty.

Warranty is voided using other actuators than supplied or recommended by FlowCon International.

For any supplementary warranty obligations, please see the relevant product specific installation and operation instruction.

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FLOWCON VALVE HOUSINGS:

Install the selected valve housing as called for in the design drawings.

FlowCon A

The housing is available with fixed female-by-female threaded connections for all model sizes. The A model is only available for 20 mm (3/4") insert and model numbers are A15.X, A20.X and A25.I.

FlowCon AB

The housing is similarly available with fixed female-by-female threaded connections for all model sizes. The AB model is available for 20 mm (3/4") insert (model numbers are AB15.X, AB20.X and AB25.I.K), 40 mm (1 1/2") insert (model numbers are AB25.X and AB32.X) and 50 mm (2") insert (model numbers are AB40.X and AB50.X). P/t plugs with collar.

FlowCon ABV

The housing is available with double union end connections for all model sizes. The ABV model is available for 20 mm (3/4") insert (model number ABV1) and 40 mm (1 1/2") insert (model number ABV2). P/t plugs with collar.

FlowCon By-Pass 2-Union

The unit is for all sizes available one-sided with fixed female threaded connections and one-sided double union end connections.

FlowCon By-Pass Mini

The unit is for all sizes available with fixed 20 mm male ISO threaded connections suitable for DN15/18/20 EuroCone according to EN215.

FlowCon FIT

The valve is available with double union end connections or double flange connections depending on size. P/t plugs without collar. FIT-G is insert based for AB housing and p/t plugs with collar.

FlowCon Green.3

The valve is available with fixed female-by-female threaded connections for all model sizes. P/t plugs with collar.

FlowCon Intelligent Meter

The valve is available for double flanged connections for all model sizes. P/t plugs without collar.

FlowCon K

The valve is available with fixed female-by-female threaded connections for all model sizes. P/t plugs with collar.

FlowCon Partner Ball

The valve is available with fixed female-by-female threaded connections for all model sizes. P/t plugs without collar.

FlowCon Partner Globe

The valve is available for double flanged connections for all model sizes. P/t plugs without collar.

FlowCon PIM™-DP

The valve is available for double flanged connections for all model sizes. P/t plugs without collar.

FlowCon QuickDisc®

The valve is available with fixed female-by-female threaded connections for all model sizes. P/t plugs without collar.

FlowCon SM

The valve is available with double union end connections or double flange connections depending on size. P/t plugs without collar.

FlowCon Unimizer®

The valve is available with double union end connections or double flange connections depending on size. P/t plugs without collar.

FlowCon UniQ®

The valve is available with fixed female-by-female threaded connections. Further, it is available with fixed 20 mm male ISO threaded connections.

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tions suitable for DN15/18/20 EuroCone according to EN215. The Uni^Q model numbers are U.0.XX.1.I, U.0.XX.2.I and U.0.XX.3.I.

FlowCon Wafer

The wafer is available for double flanged connections for all model sizes. P/t plugs without collar.

FLOWCON VALVE CONNECTION TYPES:

Valve Threaded Ends:

Thread standard is either ISO 228, which is a straight metric thread (compatible with BS-2779) or NPT threading standard, depending on the product number ordered.

Valve Flanged Ends:

Flange ends are compatible with DIN steel flanges PN10, PN16, PN25 and/or PN40 according to EN1092-1 or ANSI steel flanges class 150 and/or 300 according to ASME B16.5. depending on product ordered.

Flanges are not supplied by FlowCon.

FLOWCON VALVE ACCESSORIES:

Two different types of pressure/temperature fittings (p/t plugs) are available upon request for valves with body tappings, i.e. **p/t plugs with - out collar** and **p/t plugs with collar**. Suitable p/t plug choice will depend on the valve. Alternative to p/t plugs, the valve body can be ordered with **plugs** for the body tappings. **Extended p/t plugs** (without collar) are standard included with FlowCon Wafer.

For all p/t plugs (with or without collar incl. extended p/t) proper rope size is max. $\varnothing 2.8$ mm.

Before finger mounting p/t plugs without collar in the body tappings (DO NOT OVER TIGHTEN), please seal the threads of the p/t plugs. Thread sealing is described elsewhere in this General Instruction. P/t plugs with collar as well as plugs

are sealed by a gasket. After finger mounting, gasket sealing requires 1-3 Nm torque.

Threaded union end connections (male or female) for union end connected valves must have the union nuts and the end connections should be removed for installation.

Soldered union end connections (sweat) for union end connected valves must have the END CONNECTIONS REMOVED FROM THE HOUSING BEFORE SOLDERING. THIS ENSURES THAT THE O-RINGS AND INTERNAL PARTS ARE NOT DAMAGED BY HEAT.

Capillary tubes are not to be damaged.

Therefore, do not force the tube to compress or bend with a bending radius below 20 mm (3/4").

Capillary tube for inserts (ACC00110)

Capillary tube is supplied with fixed M8 fitting and O-ring at each end. Ensure that the O-ring is greased and correctly placed before finger mounting the capillary tube in the FlowCon QuickDisc[®] (DO NOT OVERTIGHTEN AS THIS WILL DAMAGE THE O-RING). If the capillary tube is to be mounted in a FlowCon Partner Ball or other valve with 1/4" (ISO 7/1) tapping, a 1/4" to M8 adaptor is available (ACC00121). Thread sealing and O-ring lubrication are described elsewhere in this General Instruction.

Capillary tube for PIM™-DP (F212)

Capillary tube is supplied with fixed angled 1/4" NPT fitting (F4039-14) at one end going to the FlowCon Partner Globe with an adaptor (ACC6584). The other tube end is to be assembled in the 1/4" NPT fitting already mounted on the FlowCon PIM™-DP. Thread sealing is described elsewhere in this General Instruction.

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FLOWCON INSERTS:

Please see specific installation instruction for selected insert (Green, GreEQ, FIT-G, EVS, E-JUST, Composite, Stainless Steel, SDP, EDP, ADP, S-JUST or T-JUST) regarding valve housing match, installation and setting.

FLOWCON ACTUATORS:

Please see specific installation instruction for selected actuator (EV, FT, FN, FNP, FNQ, FNR, FH, SM, B or T) regarding product fitting, mounting position and wiring. For product match please read FlowCon Actuator Matrix.