FlowCon T-JUST

Thermostatic Valve for Domestic Water
DN15-25 / 1/2”-1”

SPECIFICATIONS

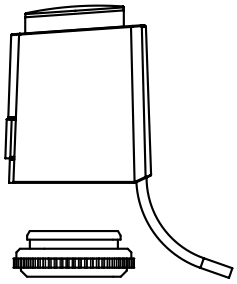
Insert:

Static pressure:	1000 kPa / 145 psi
Ambient temperature:	0°C to +60°C / +32°F to +140°F
Media temperature:	0°C to +85°C / +32°F to +185°F
Material:	
- Insert:	PPS, Polyphenylene sulfide
- Element:	Wax
- Body:	Forged brass ASTM CuZn40Pb2
- Spring:	Stainless steel AISI 302
- Internal components:	PPS, Polyphenylene sulfide
- O-rings:	EPDM
Max. Kv-value:	1.10 m^3/h
Max. differential pressure:	100 kPaD / 14.5 psid
Temperature range:	+35°C to +65°C / +95°F to +149°F

Valve:

Material:	
- Housing:	Forged brass ASTM CuZn40Pb2, DZR brass ASTM CuZn36Pb2AS or SS316
- Ball valve:	ABV: Chemically nickel plated brass ball
End connections:	A: Fixed female ISO AB: Fixed female ISO ABV: Union end conn. in brass alloy ISO FF-unit: Female ISO inlet; male ISO outlet
Housing taps:	AB/ABV: 1/4” ISO

SPECIFICATIONS (continued)



Type EV.0.3.R, EV.0.4.R
Valve adaptor, red

Thermal actuator:

FlowCon EV.0.3.R[1], FlowCon EV.0.4.R[1]

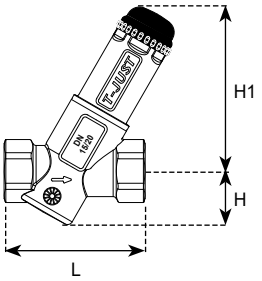
Supply voltage:	EV.0.3.R: 230V AC, ±10% EV.0.4.R: 24V AC/DC, -10/+20%
Control signal:	ON/OFF, normally closed[2]
Power consumption:	1.0 Watt
Operation time:	Approx. 4 min[3]
Ambient temperature:	0°C to +60°C
Protection:	EV.0.3.R: IP54 including upside-down, class II EV.0.4.R: IP54 including upside-down, class III
Cable:	Fixed cable, 1 m / 3 ft
Weight:	0.108 kg / 0.24 lb

Note 1: FlowCon warranty is voided using other actuators than supplied or recommended by FlowCon International ApS.
Note 2: To ensure that the valve is in an open position during commission of the system, the actuator will be delivered in a normal open position and remain in this position until it is electrically operated first time.
Note 3: Closing time is approximately the double dependent on ambient temperature.

DIMENSIONS AND WEIGHT (NOMINAL)

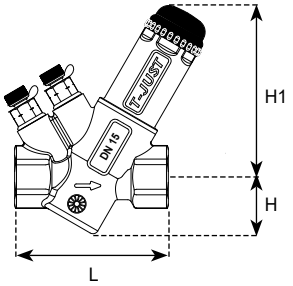
FlowCon T-JUST with FlowCon A-housing

Valve size mm (in)	Valve material	Insert size mm (in)	L mm (in)	H mm (in)	H1 mm (in)	H2 (with actuator - not shown) mm (in)	Weight kg (lb)
15 (1/2)	Forged brass	20 (3/4)	80 (3.15)	31 (1.22)	97 (3.82)	130 (5.12)	0.59 (1.30)
20 (3/4)	Forged brass						0.52 (1.15)
20 (3/4)	Stainless Steel						0.61 (1.34)
25 (1)	Forged brass		91 (3.58)				0.69 (1.52)



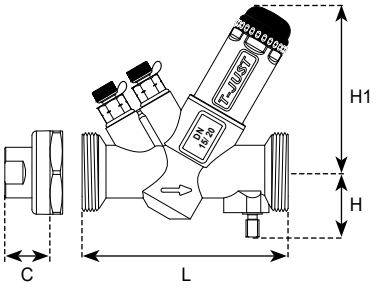
FlowCon T-JUST with FlowCon AB-housing

Valve size mm (in)	Insert size mm (in)	L mm (in)	H mm (in)	H1 mm (in)	H2 (with actuator - not shown) mm (in)	Weight kg (lb)
15 (1/2)	20 (3/4)	81 (3.19)	31 (1.22)	97 (3.82)	130 (5.12)	0.60 (1.32)
20 (3/4)		85 (3.35)				0.63 (1.39)
25 (1)		102 (4.02)				0.78 (1.72)



FlowCon T-JUST with FlowCon ABV.1-housing

Valve size mm (in)	Insert size mm (in)	L mm (in)	H mm (in)	H1 mm (in)	H2 (with actuator - not shown) mm (in)	End connections C[4] Female ISO (NPT)	 Male ISO (NPT)	 Sweat ISO	Weight[5] kg (lb)
15 (1/2)	20 (3/4)	80 (3.15)	33 (1.30)	97 (3.82)	130 (5.12)	22 (0.87)	24 (0.95)	20	0.99 (2.18)
20 (3/4)						22 (0.87)	25 (0.99)	20	
25 (1)		91 (3.58)				-	39 (1.54)	22	

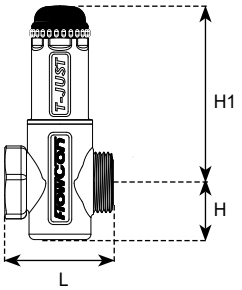


Note 4: Add end connection length to housing length.
Note 5: Weight does not include end connections.

FlowCon T-JUST with FF-unit[6]

Valve size mm (in)	Insert size mm (in)	L mm (in)	H mm (in)	H1 mm (in)	H2 (with actuator - not shown) mm (in)	Weight kg (lb)
20 (3/4)	20 (3/4)	56 (2.20)	32 (1.26)	97 (3.82)	130 (5.12)	0.58 (1.28)

Note 6: To be fitted as upgrading element.



MODEL NUMBER SELECTION

T . . . . . . I .

Type of actuator:
0 = no actuator
3 = EV.0.3.R
4 = EV.0.4.R

Type of housing:
1 = A DN15 / 1/2”
2 = A DN20 / 3/4”
3 = A DN25 / 1”
4 = AB DN15 / 1/2”
5 = AB DN20 / 3/4”
6 = AB DN25 / 1”
7 = ABV.1 DN15/20/25 / 1/2”-3/4”-1”
9 = FF-unit 20 mm

P/t plug requirements:
0 = no (p/t) plugs
B = pressure/temperature plugs
P = taps plugged

Union end connections (inlet x outlet):
0.0 = no union ends

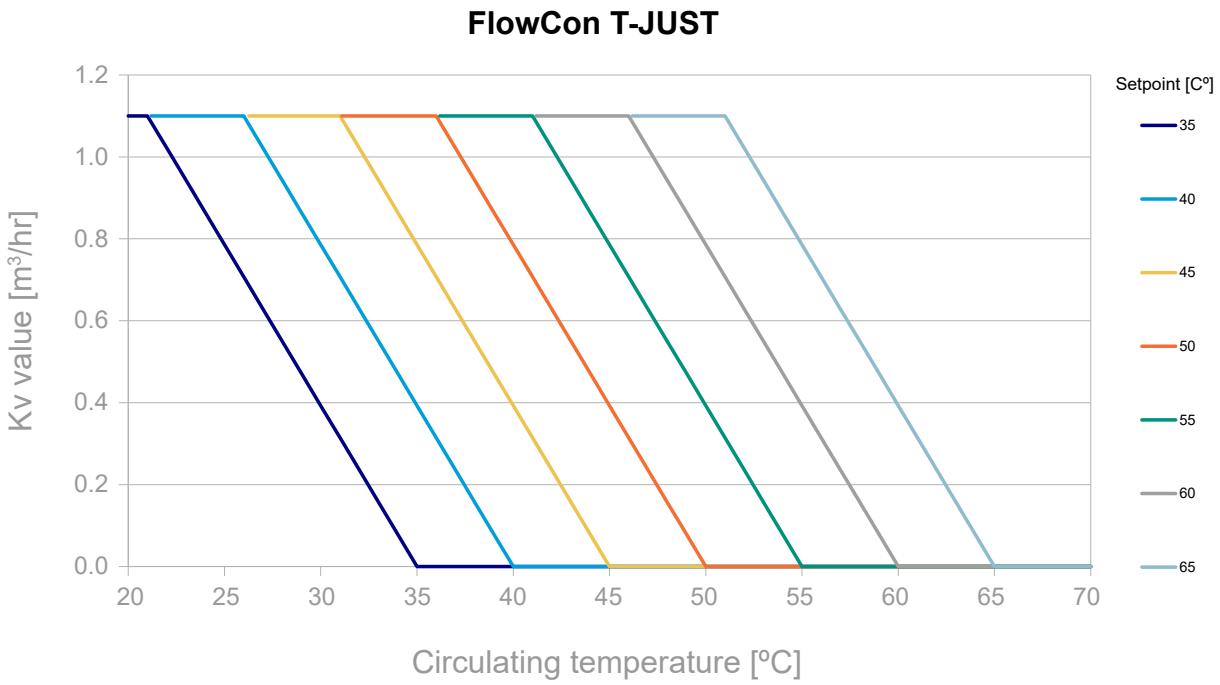
Model and size	Female threaded	Male threaded	Sweat
ABV.1 with GreEQ insert, 20 mm	**E** = 15 mm / 1/2” **F** = 20 mm / 3/4”	**H** = 15 mm / 1/2” **I** = 20 mm / 3/4” **J** = 25 mm / 1”	**K** = 15 mm **L** = 18 mm **M** = 22 mm

Connection standard:
I = ISO

Valve housing material:
B = DZR brass
R = Stainless steel (only A DN20 ISO)

Example:
T.0.1.0.0.0.I.B = A DN15 (1/2”) ISO female threaded housing and T-JUST insert.

TEMPERATURE CURVES AND SETTINGS



APPLICATIONS

The FlowCon T-JUST, to be used in either FlowCon A, AB, ABV.1 bodies or the FF-unit, is designed for domestic hot water installations with circulation. The FlowCon T-JUST automatically controls the temperature of the water that circulates through the valve and therefore the thermal balance is ensured throughout the domestic hot water system.

The T-JUST will from factory be pre-set to +60°C (+140°F). Temperature setting is easy - simply remove the black top cover and set the temperature by means of a FlowCon adjustment key. If for instance a water temperature of +55°C (+130°F) is needed, the T-JUST is set to the temperature of +55°C (+130°F). If the temperature of the circulating water is below +55°C (+130°F), T-JUST opens and more water will pass through. If the temperature is higher than +55°C (+130°F), T-JUST closes. The black top cap must be screwed tightly on the T-JUST to activate the thermostatic control (and to avoid tampering).

The by-pass function can be carried out either manually by installing the red by-pass ring (used as indicator) or by means of an on/off actuator. The by-pass will force the T-JUST to fully open and set the temperature control out of action. This function is used to avoid bacterial problems such as Legionella and therefore it is recommended to flush the system regularly, flushing one branch at a time for a recommended period of time. For manual by-pass, adapt the red by-pass ring on the T-JUST and screw the black cap tight for the flushing period. When using automatic by-pass, the actuator can be either timer controlled or controlled by the BMS-system.

For the valve to work efficiently, a certain heat loss must be present, and since the pipes are normally insulated, insulation of the valve is not necessary. Without insulation of the valve, the valve will operate under optimal working conditions and temperature regulation will be more accurate. If insulation is required the valve will still function, but regulation will be less precise.

ACCESSORIES

- Flushing cap: ACC0080 (cap without an insert for flushing out the system)
- Adjustment key: ACC0001
- Manuel by-pass ring: ACC0002 (indicator ring for manual by-pass; 10 pcs. per package)
- Replacement cap, black: ACC0003.

GENERAL SPECIFICATIONS

1. THERMOSTATIC VALVES FOR DOMESTIC WATER – FLOWCON T-JUST

1.1. Contractor shall install the thermostatic valves where indicated in drawings.
1.2. Temperature regulation unit shall be available as plug-in device for an in-line valve housing and the adjustable element shall be out of contact with the circulating water.
1.3. Valve housing shall be configured for thermostatic regulation unit accessibility.
1.4. Valve housing shall be permanently marked to show direction of flow.

2. VALVE ACTUATOR

2.1. Valve actuator housing shall be rated to IP54, including upside-down mounting.
2.2. Actuator shall be driven by 24V AC/DC or 230V AC and shall accept ON/OFF control signal.
2.3. Actuator shall have visible indication of stroke position.
2.4. Failsafe function shall be available on all versions, closing the valve when not powered.

3. VAVLE HOUSING

3.a. **FlowCon A**
3.a.1. Valve housing shall consist of forged brass ASTM CuZn40Pb2, DZR brass ASTM CuZn36Pb2As or SS316, rated at no less than 2500 kPa (360 psi) static pressure at +120°C (+248°F).

OR….

3.b. **FlowCon AB**
3.b.1. Valve housing shall consist of forged DZR brass ASTM CuZn36Pb2As, rated at no less than 2500 kPa (360 psi) static pressure at +120°C (+248°F).
3.b.2. Pressure/temperature test plugs for verifying accuracy of performance shall be available for all valve sizes.

OR….

3.c. **FlowCon ABV**
3.c.1. Valve housing shall consist of forged brass ASTM CuZn40Pb2, rated at no less than 2500 kPa (360 psi) static pressure at +120°C (+248°F).
3.c.2. Valve ball shall consist of chemically nickel-plated brass (ASTM CuZn40Pb2)
3.c.3. Pressure/temperature test plugs for verifying accuracy of performance shall be available for all valve sizes.

OR….

3.d. **FlowCon FF-unit**
3.d.1. Valve housing shall consist of forged DZR brass ASTM CuZn36Pb2As, rated at no less than 2500 kPa (360 psi) static pressure at +120°C (+248°F).

4. TEMPERATURE REGULATING UNIT

4.1. Temperature regulation unit shall consist of a body manufactured of forged brass ASTM CuZn40Pb2, rated at no less than 1000 kPa (14.5 psi) static pressure and +85°C (185°F) and the insert shall be manufactured of polyphenylene sulfide with a stainless steel 18-8 spring and a wax element.
4.2. Temperature regulation unit shall be readily accessible, for change-out or maintenance. Temperature regulation unit shall be adjustable with the valve in-line and the system in operation.
4.3. Temperature regulation unit shall be externally and stepless adjustable from +35°C to +65°C; and shall be capable of controlling the temperature within ±2°C of the rate temperature.
4.4. Temperature regulation unit shall be ready for either manual by-pass or actuated by-pass without exchanging the unit.

UPDATES

For latest updates please see www.flowcon.com