FlowCon S-JUST

Manual Flow Control
DN15-25 / 1/2”-1”

SPECIFICATIONS

Insert:

Static pressure:	2500 kPa / 360 psi
Media temperature:	-20°C to +120°C / -4°F to +248°F
Materials:	
- Insert top:	PSU
- Insert bottom:	Brass
- O-rings:	EPDM
ΔP-range:	1-100 kPaD / 0.145-14.5 psid
Flow rate range:	0.0039-1.59 l/sec / 0.0616-25.1 GPM

Valve:

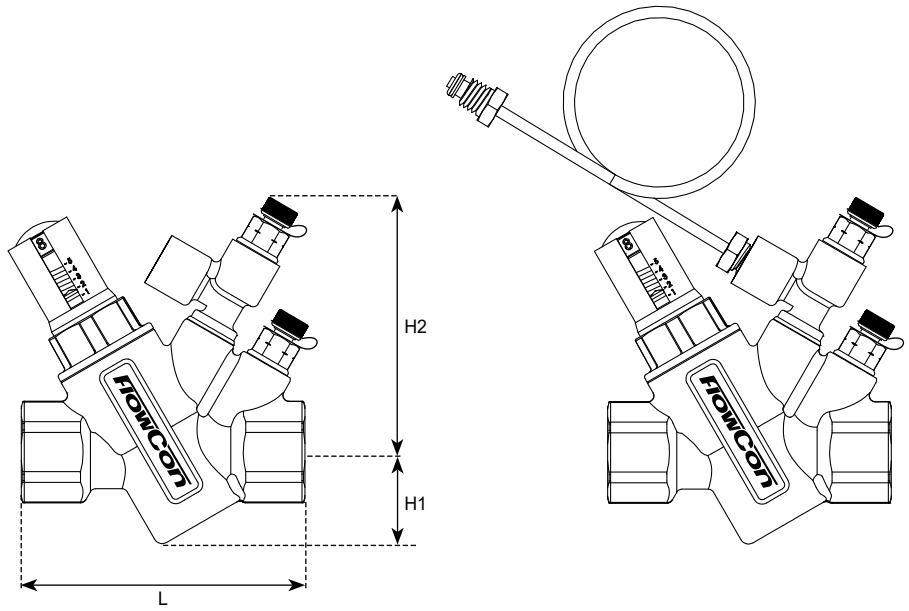
Material:	
- Housing:	Forged DZR brass ASTM CuZn36Pb2As
End connections[1]:	Fixed female ISO or NPT
Housing taps:	1/4” ISO

Note1: NPT only available ex. US-factory.

DIMENSIONS AND WEIGHT (NOMINAL)

Model no.	Valve size mm (in)	Insert size mm (in)	L mm (in)	H1 mm (in)	H2 mm (in)	Weight[2] kg (lb)	Kvs/Cvs[3] m^3/hr (GPM)
AB	15 (1/2)	20 (3/4)	80 (3.15)	31 (1.22)	90 (3.54)	0.61 (1.35)	5.7 (6.6)
	20 (3/4)		80 (3.15)			0.63 (1.39)	
	25 (1)		92 (3.62)			0.80 (1.76)	

Note 2: Weight includes insert, 2 p/t plugs and 1 T-piece. Connect the DPCV capillary tube to the T-piece.
Note 3: For insert and valve housing combined.



MODEL NUMBER SELECTION

S-JUST . 0 . . . . .

Type of insert:
0 = 20 mm (3/4”) insert (standard)

Type of housing:
01 = AB DN15 / 1/2”
02 = AB DN20 / 3/4”
07 = AB DN25 / 1”

P/t plug requirements:
A = pressure/temperature plug set (2 p/t and 1 T-piece) (standard)
B = pressure/temperature plugs (2 pcs.)
P = plugs (2 pcs.)

Connection standard:
I = ISO (standard)
N = NPT

Example:
S-JUST.0.02.A.I=DN20 (3/4”) ISO AB housing with 2 p/t plugs, 1 T-piece and FlowCon S-JUST insert.

DESCRIPTION

The FlowCon S-JUST is a static balancing insert. The insert has a stepless adjustable Kv setting from 0.0 to 5.7 m^3/hr and a metal to metal sealing allowing shut-off. The setting is operated by means of a special FlowCon key and made tamper-proof as it is sealed by means of a top cap.

FlowCon S-JUST can be used either in heating or cooling applications and is recommended with FlowCon AB housings. It is intended to be used as partner valve for the FlowCon DPCV range. With the FlowCon S-JUST installed as partner valve in the supply pipe, you will get manual flow adjustment, pressure and flow verification as well as isolation and a connection point for the DPCV's capillary tube.

ACCESSORIES

- ACC0001: Adjustment key
- ACC00113: Pressure/temperature plug and gasket
- ACC00103: T-piece for partner valve
- ACC0080: Flushing cap small (replaces 20 mm / 3/4" insert during flushing)

KV SETTINGS

Measure the differential pressure on the p/t plugs and convert setting to actual Kv value and calculate flow:
Q (m^3/hr) = Kv * √ΔP (kPaD) * 100

FlowCon S-JUST					
Setting	**Kv (m^3/hr)**	**Cv (GPM)**	**Setting**	**Kv (m^3/hr)**	**Cv (GPM)**
1.0	0.00	0.00	3.0	2.9	3.4
1.1	0.14	0.16	3.1	3.0	3.5
1.2	0.29	0.34	3.2	3.2	3.7
1.3	0.43	0.50	3.3	3.3	3.8
1.4	0.57	0.66	3.4	3.4	3.9
1.5	0.72	0.84	3.5	3.6	4.2
1.6	0.86	1.0	3.6	3.7	4.3
1.7	1.0	1.2	3.7	3.9	4.5
1.8	1.1	1.3	3.8	4.0	4.6
1.9	1.3	1.5	3.9	4.2	4.9
2.0	1.4	1.6	4.0	4.3	5.0
2.1	1.6	1.9	4.1	4.5	5.2
2.2	1.7	2.0	4.2	4.6	5.3
2.3	1.9	2.2	4.3	4.7	5.5
2.4	2.0	2.3	4.4	4.9	5.7
2.5	2.2	2.6	4.5	5.0	5.8
2.6	2.3	2.7	4.6	5.2	6.0
2.7	2.4	2.8	4.7	5.3	6.1
2.8	2.6	3.0	4.8	5.5	6.4
2.9	2.7	3.1	4.9	5.6	6.5
			5.0	5.7	6.6

HOW TO SELECT

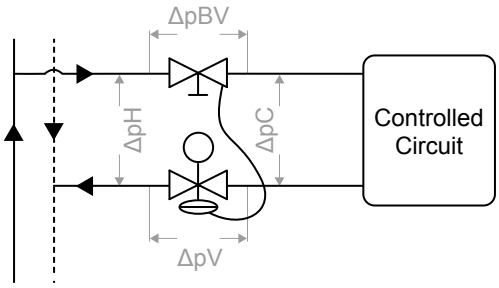
The FlowCon S-JUST is to be selected based on the required design flow and pipe size. The FlowCon S-JUST's pressure loss ΔpBV is found in the flow/pressure/setting diagrams.

EXAMPLE:
Design flow = 100 l/hr = 0.1 m^3/hr (0.44 GPM)
Pipe size = DN20 (3/4")

❶ **Select valve** based on line size and system requirements to eliminate pipe modifications. In this example FlowCon S-JUST DN20 (3/4") is selected. With its maximum flow of 100 l/hr (0.44 GPM) this valve size matches both size and flow requirements.

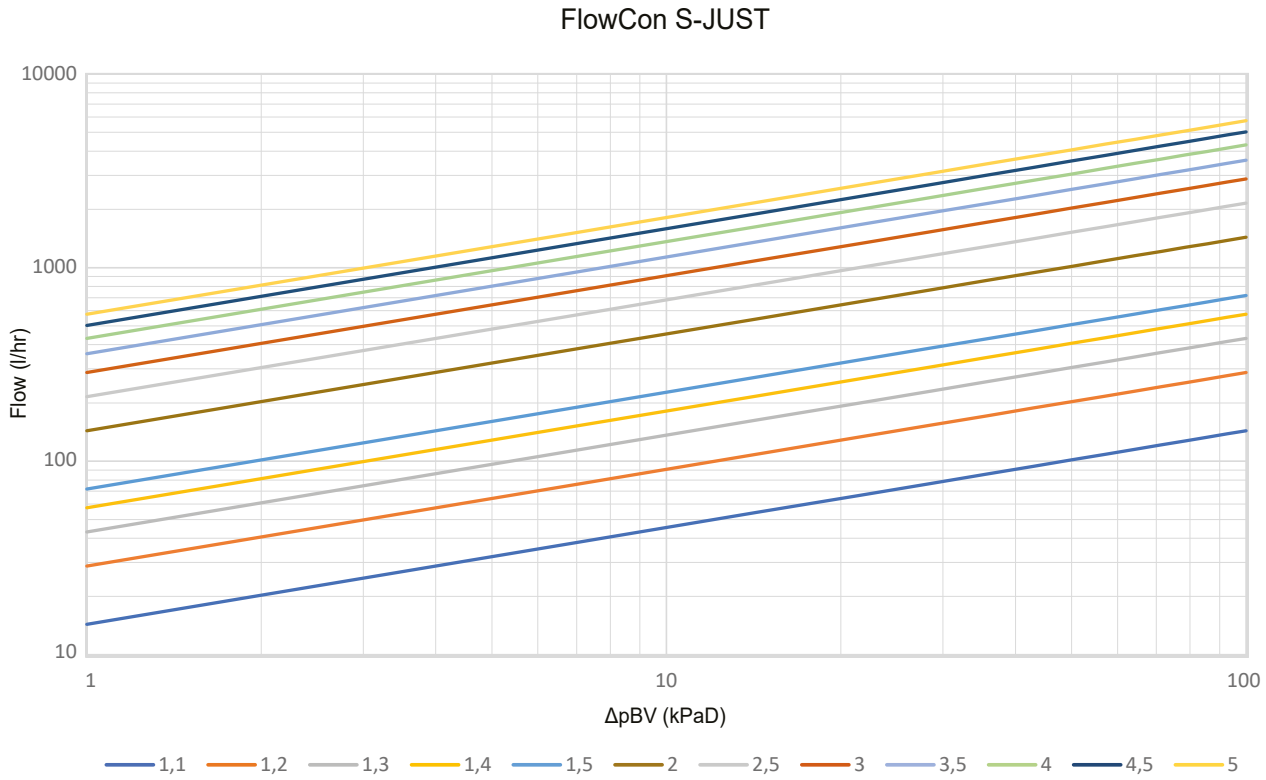
❷ **Set valve** to required design flow by checking 'flow curves and settingsvv'-diagram. Find flow in the left column and follow a horizontal line to the first reached pre-setting graph.
In this example proper setting will be 1.5.

❸ **Determine ΔpBV** following a vertical line down from the intersection between design flow and setting. From the specific valve diagram, ΔpBV is at a flow rate of 100 l/hr (0.44 GPM) in setting 1.5 read to be 2 kPaD (0.29 psid).



ΔpC = Controlled Δp Circuit
ΔpV = Δp across FlowCon EDP
ΔpBV = Δp across FlowCon S-JUST
ΔpH = Δp Pump Head

FLOW CURVES AND SETTINGS



GENERAL SPECIFICATIONS

1. STATIC BALANCING VALVES WITH EXTERNAL ADJUSTABLE SETTING – FLOWCON S-JUST

1.1. Contractor shall install the static balancing valves where indicated in drawings.
1.2. Valve shall consist of a static, accessible, adjustable flow regulation unit.
1.3. Valve shall be available orifice type with precise flow regulation according to system pressure.

2. VALVE HOUSING

2.1. 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).
2.2. Housing shall be permanently marked to show direction of flow.
2.3. Pressure/temperature test plugs for verifying performance shall be available for all valve sizes.
2.4. Valve housing shall be for threaded installation without any pipe length restrictions before and after the valve.

3. FLOW REGULATION UNIT

3.1. Flow regulation unit shall consist of brass and PSU.
3.2. Flow regulation unit shall be readily accessible for change-out or maintenance. Flow regulation unit shall be adjustable with the valve in-line and the system in operation.
3.3. Flow regulation unit shall be externally adjustable to 1 of 41 different Kv values.
3.4. Flow regulation unit shall include a metal to metal shut-off function.

UPDATES

For latest updates please see www.flowcon.com