

INSTALLATION AND OPERATION INSTRUCTION

FlowCon SH 15-40mm, 1/2"-1 1/2"

Install the **FlowCon SH** valve either in the supply or return pipe work for the unit. It is recommended that a strainer be installed prior to the valve body to prevent damage or blockage due to debris. **INSTALL THE VALVE HOUSING WITH THE FLOW DIRECTIONAL ARROW POINTING IN THE CORRECT DIRECTION.**

The valve body is available with double union end connections, i.e. figure 1.

Two types of end connections are available for use with the union nut:

Threaded (male or female):

The thread standard is ISO 228, which is a straight metric thread (compatible with BS-2779) or NPT threading standard, depending on the end connections ordered. The threads on both the connection and piping should be cleaned carefully. As these models are union end connected, the union nuts and the end connections should be removed for installation.

O-rings are supplied with the valve body and used to seal the connections. It is recommended to grease the o-rings with a silicone grease before installation. **IMPORTANT:** Never use mineral oil or petrol based grease or oil on the o-rings. Please make sure these are in place in the o-ring grooves in the inlet and outlet of the valve body, when installing the housing and **REMEMBER TO TIGHTEN THE UNION NUTS TO ENSURE SEALING.**

For all threaded connections please clear threads on both valve and piping of debris. Sealant such as pipe dope or teflon tape is recommended. **WHEN USING HEMP AS PIPE SEALANT, ENSURE NO STRANDS ARE LEFT IN THE VALVE OR PIPING.**

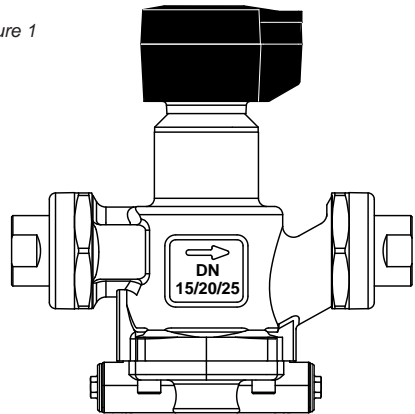
Soldered end (sweat):

REMOVE THE END CONNECTIONS FROM THE HOUSING BEFORE SOLDERING. THIS ENSURES THAT THE O-RINGS AND INTERNAL PARTS ARE NOT DAMAGED BY HEAT.

Valve bodies are as standard supplied with body tappings **plugged**.

Alternatively, the valve body can be ordered with **pressure/temperature fittings** (p/t plugs) for the body tappings. Before finger mounting the p/t plugs in the body tappings, please seal the threads of the p/t plugs. **(DO NOT OVER TIGHTEN).**

Figure 1



General.

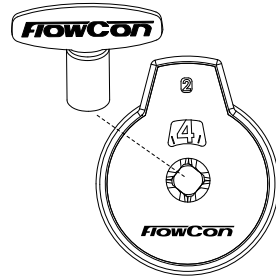
Water must always be suitable treated, clean and free of debris. It is recommended that a strainer be installed prior to the valve body to prevent damage or blockage due to debris. Ensure that the valve is not in the fully closed position when filling the system with water. Further, it is recommended not to exceed maximum differential pressure control range.

Warranty obligation.

Failure to abide by all recommendations as per this installation and operation instruction will void warranty.

Flow rate setting, SH1 and SH2:

Flow rate						Setting
Valve size: DN15-DN25 · 1/2"-1"			Valve size: DN25-DN40 · 1"-1 1/2"			
33-300 kPaD · 4.8-44 psid			33-300 kPaD · 4.8-44 psid			
SH.1.1			SH.2.1			
l/sec	l/hr	GPM	l/sec	l/hr	GPM	
-	-	-	0.11	396	1.7	0.5
-	-	-	0.15	526	2.3	0.6
-	-	-	0.18	655	2.9	0.7
-	-	-	0.22	785	3.5	0.8
-	-	-	0.25	914	4.0	0.9
0.075	270	1.2	0.29	1044	4.6	1.0
0.090	324	1.4	0.34	1224	5.4	1.1
0.105	378	1.7	0.39	1404	6.2	1.2
0.120	432	1.9	0.44	1584	7.0	1.3
0.135	486	2.1	0.49	1764	7.8	1.4
0.15	540	2.4	0.54	1944	8.6	1.5
0.17	598	2.6	0.59	2124	9.4	1.6
0.18	655	2.9	0.64	2304	10.1	1.7
0.20	713	3.1	0.69	2484	10.9	1.8
0.21	770	3.4	0.74	2664	11.7	1.9
0.23	828	3.6	0.79	2844	12.5	2.0
0.25	886	3.9	0.84	3024	13.3	2.1
0.26	943	4.2	0.89	3204	14.1	2.2
0.28	1001	4.4	0.94	3384	14.9	2.3
0.29	1058	4.7	0.99	3564	15.7	2.4
0.31	1116	4.9	1.04	3744	16.5	2.5
0.32	1166	5.1	1.07	3852	17.0	2.6
0.34	1217	5.4	1.10	3960	17.4	2.7
0.35	1267	5.6	1.13	4068	17.9	2.8
0.37	1318	5.8	1.16	4176	18.4	2.9
0.38	1368	6.0	1.19	4284	18.9	3.0
0.39	1418	6.2	1.22	4392	19.3	3.1
0.41	1469	6.5	1.25	4500	19.8	3.2
0.42	1519	6.7	1.28	4608	20.3	3.3
0.44	1570	6.9	1.31	4716	20.8	3.4
0.45	1620	7.1	1.34	4824	21.2	3.5
0.46	1663	7.3	1.37	4932	21.7	3.6
0.47	1706	7.5	1.40	5040	22.2	3.7
0.49	1750	7.7	1.43	5148	22.7	3.8
0.50	1793	7.9	1.46	5256	23.1	3.9
0.51	1836	8.1	1.49	5364	23.6	4.0
0.52	1872	8.2	1.51	5443	24.0	4.1
0.53	1908	8.4	1.53	5522	24.3	4.2
0.54	1944	8.6	1.56	5602	24.7	4.3
0.55	1980	8.7	1.58	5681	25.0	4.4
0.56	2016	8.9	1.60	5760	25.4	4.5
0.57	2059	9.1	1.62	5846	25.7	4.6
0.58	2102	9.3	1.65	5933	26.1	4.7
0.60	2146	9.4	1.67	6019	26.5	4.8
0.61	2189	9.6	1.70	6106	26.9	4.9
0.62	2232	9.8	1.72	6192	27.3	5.0
0.63	2261	10.0	1.74	6271	27.6	5.1
0.64	2290	10.1	1.76	6350	28.0	5.2
0.64	2318	10.2	1.79	6430	28.3	5.3
0.65	2347	10.3	1.81	6509	28.7	5.4
0.66	2376	10.5	1.83	6588	29.0	5.5
0.67	2405	10.6	1.85	6674	29.4	5.6
0.68	2434	10.7	1.88	6761	29.8	5.7
0.68	2462	10.8	1.90	6847	30.1	5.8
0.69	2491	11.0	1.93	6934	30.5	5.9
0.70	2520	11.1	1.95	7020	30.9	6.0



Use the special designed key (FlowCon part no. ACC0001) for micrometer setting.

A micrometer setting at 2.4 as illustrated above corresponds to a flow rate of:

0.29 l/sec
(for valve size DN15/20/25)

0.99 l/sec
(for valve size DN25/32/40).

Accuracy: Greatest of either
±5% of controlled flow rate or
±2% of maximum flow rate.

Assembly drawing FlowCon SH:

- A1: Valve housing
- B: Micrometer setting
- C: Adjustment key
- D1: P/t plug (2 pcs.)
- D2: Plug and gasket (2 of each)
- E1: Union end connections.

Figure 2

