INSTALLATION AND OPERATION INSTRUCTION
FlowCon SME.2

The **FlowCon SME.2** cartridges are for use with two different FlowCon valve housings, either:

FlowCon AB (1", 1 1/4") or
FlowCon ABV (1", 1 1/4", 1 1/2").

Install the selected valve housing as called for in the design drawings. Although the performance of the valve is not affected either way, industry standards call for balancing devices to be installed on the downstream side of the terminal unit. Especially for the ABV with its isolation ball valve, it is recommended to ensure the isolation valve is downstream of the balancing device.
INSTALL THE VALVE HOUSING WITH THE FLOW DIRECTIONAL ARROW POINTING IN THE CORRECT DIRECTION.

The **FlowCon AB** valve (Model No. AB25.X and AB32.X) is available with female-by-female threaded connections, i.e. figure1.

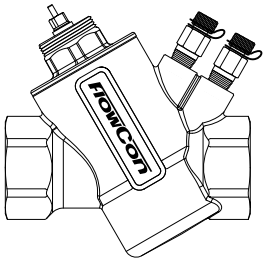

Figure 1

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

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.

Pressure/temperature fittings (p/t plugs) are available upon request for the AB valve. Before finger mounting the p/t plugs in the body tappings, please seal the threads of the p/t plugs (DO NOT OVER TIGHTEN).

Alternatively to p/t plugs, the valve body can be ordered with **plugs** for the body tappings. Each plug is sealed by a gasket.

The **FlowCon ABV** valve (Model No. ABV2) is available with double union end connections, i.e. figure 2.

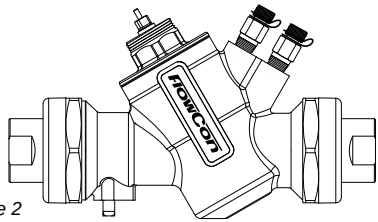

Figure 2

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 silicone grease before installation. **IMPORTANT:** Never use mineral oil or petrol based grease or oil on the o-rings. Please make sure the o-rings 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.

Pressure/temperature fittings (p/t plugs) are available upon request for the ABV valve. Before finger mounting the p/t plugs in the body tappings, please seal the threads of the p/t plugs (DO NOT OVER TIGHTEN).

Alternatively to p/t plugs, the valve body can be ordered with **plugs** for the body tappings. Each plug is sealed by a gasket.

Inserting the cartridge:

Prior to installing the **FlowCon SME** cartridge (supplied from factory in setting 5.0 due to calibration), the system should be properly flushed. A blank valve cover is available to be installed during flushing. It is recommended that the o-rings located around the SME cartridge and at the headnut are lubricated with silicone grease, before the cartridge is installed into the valve body.
IMPORTANT: Never use mineral oil or petrol based grease or oil on the o-rings.

The desired flow rate is chosen by adjusting the flow control cartridge (turned from setting 1.0 and up), with a special adjustment key, i.e. figure 3 (page 3). The key is used to adjusting the scale on the top of the cartridge; the large white numbers reflecting full turns numbered 1 through 5 and the red reflecting tenths of full turns numbered 1 through 9. The cartridge can be installed in the valve body either before or after setting the required flow rate. Once the correct flow rate has been selected the actuator can be applied.
Please see specific installation instruction for selected actuator.

General.

It is recommended flushing the system before installing the cartridge in the valve body. Suitable flushing caps are available. 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.

Warranty obligation.

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

	SME.2 · 40mm · 1 1/2”			Setting
	16-400 kPaD · 2.3-58 psid at setting 2.6			
	l/sec	l/hr	GPM	
Nominal flow rate	*0.240*	*865*	*3.81*	1.0
	0.282	*1010*	*4.46*	1.1
	0.322	1160	5.10	1.2
	0.361	1300	5.72	1.3
	0.399	1430	6.32	1.4
	0.435	1570	6.90	1.5
	0.471	1700	7.47	1.6
	0.506	1820	8.02	1.7
	0.540	1940	8.56	1.8
	0.573	2060	9.08	1.9
	0.605	2180	9.59	2.0
	0.636	2290	10.1	2.1
	0.667	2400	10.6	2.2
	0.696	2510	11.0	2.3
	0.725	2610	11.5	2.4
	0.753	2710	11.9	2.5
	0.780	2810	12.4	2.6
	0.807	2900	12.8	2.7
	0.832	3000	13.2	2.8
	0.858	3090	13.6	2.9
	0.882	3180	14.0	3.0
	0.906	3260	14.4	3.1
	0.930	3350	14.7	3.2
	0.953	3430	15.1	3.3
	0.975	3510	15.5	3.4
	0.997	3590	15.8	3.5
	1.02	3670	16.1	3.6
	1.04	3740	16.5	3.7
	1.06	3820	16.8	3.8
	1.08	3890	17.1	3.9
	1.10	3960	17.4	4.0
	1.12	4030	17.7	4.1
	1.14	4100	18.1	4.2
	1.16	4170	18.4	4.3
	1.18	4240	18.7	4.4
	1.20	4300	19.0	4.5
	1.21	4370	19.2	4.6
	1.23	4440	19.5	4.7
	1.25	4500	19.8	4.8
	1.27	4570	20.1	4.9
	1.29	4630	20.4	5.0

Accuracy: Greatest of either ±10% of controlled flow rate or ±5% of maximum flow rate.

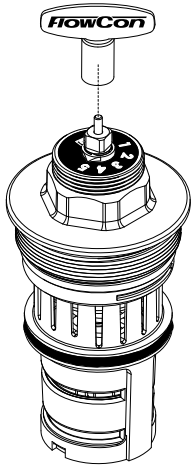

Figure 3

Assembly drawing FlowCon SME.2 Cartridge in ABV housing:

A: Valve housing (here FlowCon ABV2, incl. o-rings for end connections)
B: SME cartridge
C: Adjustment keys
D1: P/t plug (2 pcs.)
D2: Plug and gasket (2 of each)
E: Union end connections
F: Valve adaptor
G: Actuator (here FN.0.2-type).

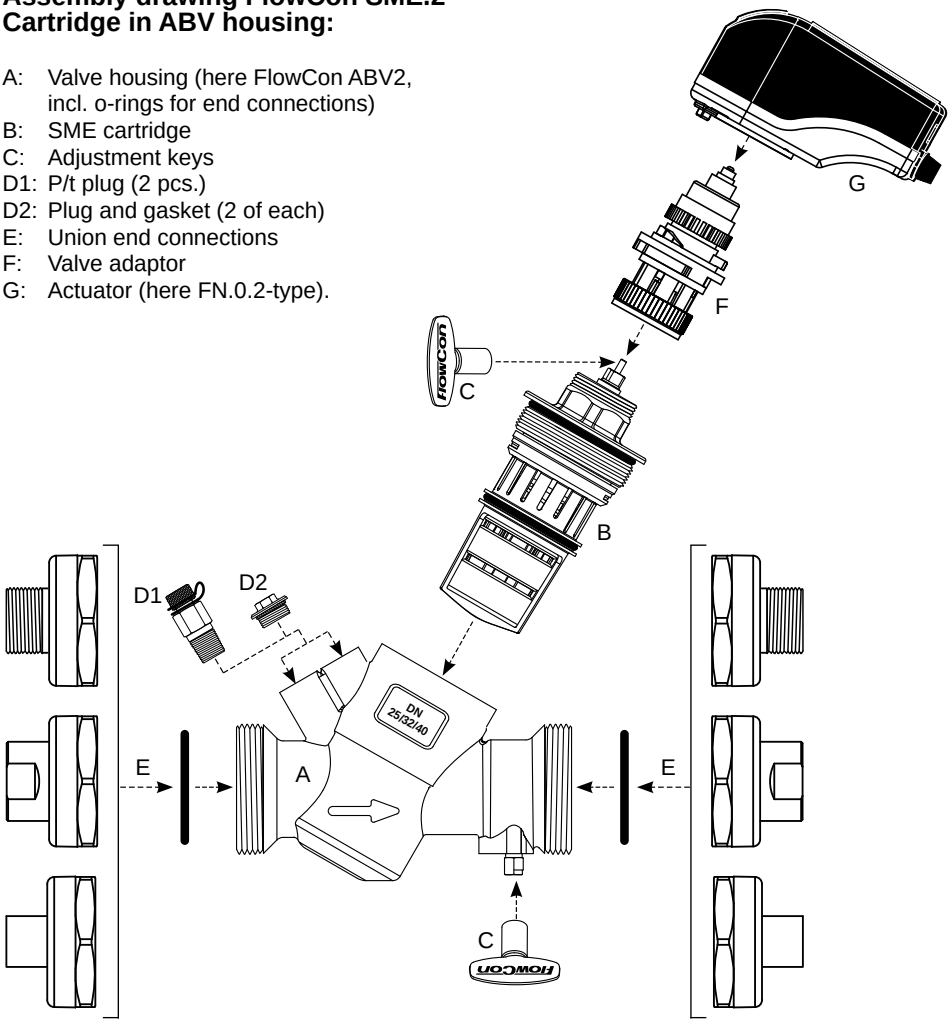

Figure 4