INSTALLATION AND OPERATION INSTRUCTION

FlowCon Green 15-40mm

The **FlowCon Green** inserts are for use with three different FlowCon valve housings, either:

FlowCon A (DN15/20/25),
FlowCon AB (DN15/20/25/32) or
FlowCon ABV (DN15/20/25/32/40).

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 A** valve (Model Nos. A15.X, A20.X and A25.I.K) is available with fixed female-by-female threaded connections, i.e. figure 1.

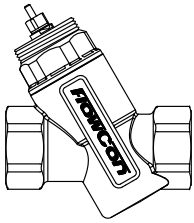

Figure 1

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 (except for DN25 which currently is only ISO).

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.

The **FlowCon AB** valve (Model Nos. AB15.X, AB20.X, AB25.X and AB32.X) is similarly available with female-by-female threaded connections, i.e. figure 2.

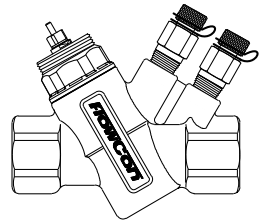

Figure 2

The thread standard for the AB model is equal to what is available for the A model.
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. ABV1 and ABV2) is available with double union end connections, i.e. figure 3.

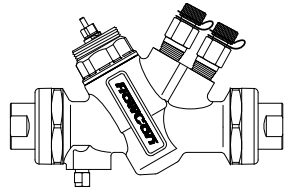

Figure 3

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 insert

Prior to installing the **FlowCon Green** insert (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 Green insert and at the headnut are lubricated with silicone grease, before the insert 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 insert (turned from setting 1.0 and up), with a special adjustment key, i.e. figure 4 (page 3). The key is used to adjust the scale on the top of the insert; the large white numbers are numbered 1 through 5 and the red are numbered 0 through 9. **The insert can be installed in the valve body either before or after setting the required flow rate. Once the correct flow rate has been selected and the insert is fitted in the valve body, then the actuator is applied.**
Please see specific installation instruction for selected actuator.

General

It is recommended flushing the system before installing the insert 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.

For latest updates please see www.flowcon.com

FlowCon Green										
	Insert size: 20mm · 3/4”						Insert size: 40mm · 1 1/2”			
	16-200 kPaD · 2.3-29 psid			30-400 kPaD · 4.4-58 psid			16-400 kPaD* · 2.3-58 psid*			Setting
	Green.0 (grey o-ring)			**Green.1** (black o-ring)			**Green.2** (black o-ring)			
Nominal flow rate	l/sec	l/hr	GPM	l/sec	l/hr	GPM	l/sec	l/hr	GPM	
	-	-	-	0.0178	64	0.282	0.240	865	3.81	1.0
	0.0103	37	0.163	0.0393	142	0.624	0.282	1010	4.46	1.1
	0.0233	84	0.370	0.0580	209	0.920	0.322	1160	5.10	1.2
	0.0322	116	0.510	0.0743	268	1.180	0.361	1300	5.72	1.3
	0.0419	151	0.664	0.0887	319	1.41	0.399	1430	6.32	1.4
	0.0500	180	0.792	0.102	366	1.61	0.435	1570	6.90	1.5
	0.0569	205	0.902	0.113	408	1.80	0.471	1700	7.47	1.6
	0.0650	234	1.03	0.124	446	1.96	0.506	1820	8.02	1.7
	0.0719	259	1.14	0.134	482	2.12	0.540	1940	8.56	1.8
	0.0781	281	1.24	0.143	516	2.27	0.573	2060	9.08	1.9
	0.0839	302	1.33	0.152	549	2.42	0.605	2180	9.59	2.0
	0.0889	320	1.41	0.161	580	2.56	0.636	2290	10.1	2.1
	0.0942	339	1.49	0.170	611	2.69	0.667	2400	10.6	2.2
	0.0981	353	1.55	0.178	641	2.82	0.696	2510	11.0	2.3
	0.103	371	1.63	0.186	671	2.95	0.725	2610	11.5	2.4
	0.106	381	1.68	0.194	700	3.08	0.753	2710	11.9	2.5
	0.109	394	1.73	0.202	728	3.21	0.780	2810	12.4	2.6
	0.113	406	1.79	0.210	756	3.33	0.807	2900	12.8	2.7
	0.115	414	1.82	0.218	783	3.45	0.832	3000	13.2	2.8
	0.119	428	1.88	0.225	810	3.56	0.858	3090	13.6	2.9
	0.122	439	1.93	0.232	835	3.68	0.882	3180	14.0	3.0
	0.125	449	1.98	0.239	860	3.79	0.906	3260	14.4	3.1
	0.127	458	2.02	0.245	883	3.89	0.930	3350	14.7	3.2
	0.130	468	2.06	0.252	906	3.99	0.953	3430	15.1	3.3
	0.133	477	2.10	0.257	927	4.08	0.975	3510	15.5	3.4
	0.135	486	2.14	0.263	946	4.17	0.997	3590	15.8	3.5
	0.137	494	2.17	0.268	965	4.25	1.02	3670	16.1	3.6
	0.140	503	2.21	0.273	982	4.32	1.04	3740	16.5	3.7
	0.142	511	2.25	0.277	998	4.39	1.06	3820	16.8	3.8
	0.144	518	2.28	0.281	1010	4.46	1.08	3890	17.1	3.9
	0.146	526	2.31	0.285	1020	4.51	1.10	3960	17.4	4.0
	0.148	532	2.34	0.288	1040	4.57	1.12	4030	17.7	4.1
	0.149	538	2.37	0.291	1050	4.61	1.14	4100	18.1	4.2
	0.151	544	2.39	0.294	1060	4.66	1.16	4170	18.4	4.3
	0.153	549	2.42	0.296	1070	4.70	1.18	4240	18.7	4.4
	0.154	553	2.43	0.299	1080	4.73	1.20	4300	19.0	4.5
	0.155	559	2.46	0.301	1080	4.77	1.21	4370	19.2	4.6
	0.156	563	2.48	0.303	1090	4.80	1.23	4440	19.5	4.7
	0.158	567	2.50	0.305	1100	4.83	1.25	4500	19.8	4.8
	0.159	571	2.51	0.307	1100	4.86	1.27	4570	20.1	4.9
	0.160	575	2.53	0.308	1110	4.89	1.29	4630	20.4	5.0

Accuracy: Greatest of either ±10% of controlled flow rate or ±5% of maximum flow rate.
**at setting 2.6.*

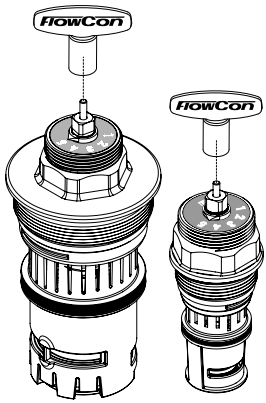

Figure 4

Assembly drawing FlowCon Green (20mm) in ABV1 housing

A: Valve housing (here FlowCon ABV1, incl. o-rings for end connections)
B: Green insert (20mm)
C: Adjustment keys
D1: P/t plug (2 pcs.)
D2: Plug and gasket (2 of each)
E: Union end connections
F: FlowCon FT actuator
Fa: Adaptor ring.

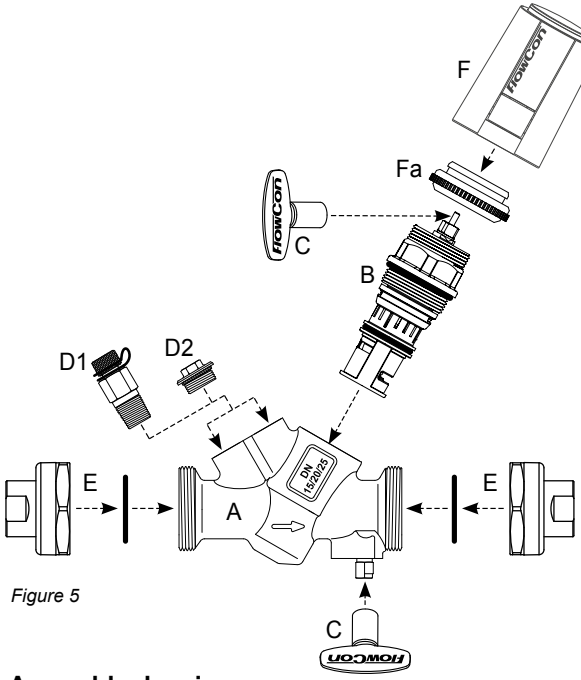

Figure 5

Assembly drawing FlowCon Green (40mm) in ABV2 housing

A: Valve housing (here FlowCon ABV2, incl. o-rings for end connections)
B: Green insert (40mm)
C: Adjustment keys
D1: P/t plug (2 pcs.)
D2: Plug and gasket (2 of each)
E: Union end connections
F: Actuator (here FN.0.X-type)
Fa: Valve adaptor.

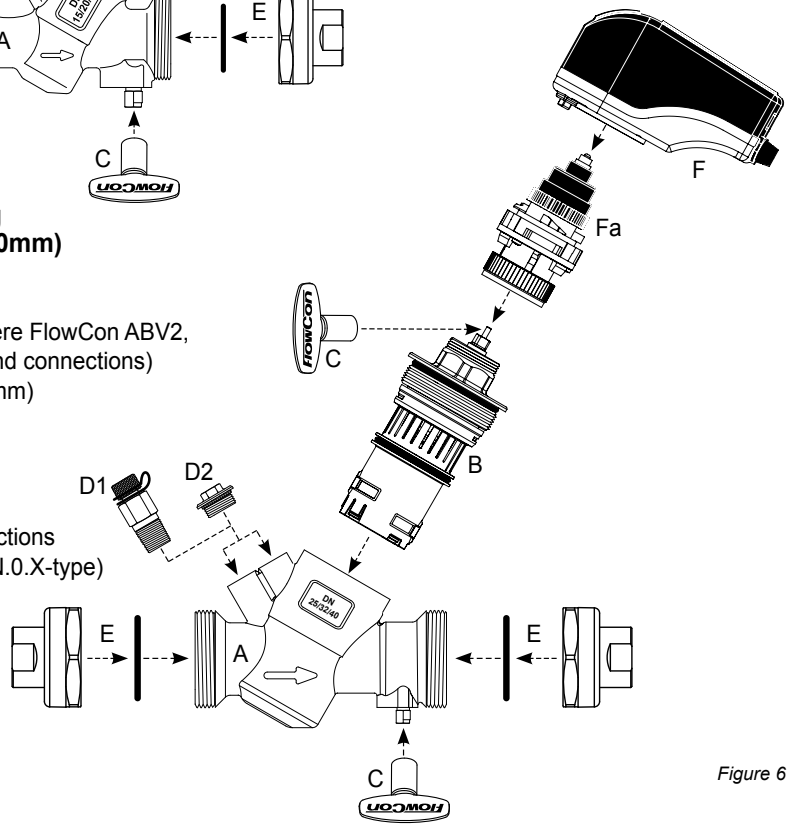

Figure 6