FlowCon international

A Griswold Controls LLC./FlowCon International Company

FlowCon Green.0 / Green.1 / Green.2

Pressure Independent Control Valves
DN15-40 / 1/2”-1 1/2”



SPECIFICATIONS

Insert

Static pressure:	2500 kPa / 360 psi
Ambient temperature:	+1°C to +50°C / +34°F to +122°F
Media temperature[1]:	-20°C to +120°C / -4°F to +248°F
Material, wetted:	
• Composite components:	PPS (glass-reinforced) / POM
• Metal components:	Stainless steel
• O-rings and seat:	EPDM
• Diaphragm:	20 mm / 3/4” insert: EPDM 40 mm / 1 1/2” insert: HNBR
• Head nut:	Brass ASTM CuZn40Pb2
Stroke:	20 mm / 3/4” insert: 3.4 mm / 0.13 in 40 mm / 1 1/2” insert: 5.2 mm / 0.2 in
Maximum close off pressure:	800 kPa / 116 psi
Maximum operational ΔP:	800 kPaD / 116 psid
Control characteristic:	linear (may be converted to equal % on actuator)
Control range:	1:1000 / IEC 60534
Rangeability:	100:1
Turn down ratio:	100:1
Shut-off leakage:	ANSI / FCI 70-2 2006, Class IV / IEC 60534-4, Class IV
Flow rate range:	20 mm / 3/4” insert: 0.0103-0.736 l/sec / 0.163-11.7 GPM 40 mm / 1 1/2” insert: 0.240-1.29 l/sec / 3.81-20.4 GPM

Note 1: Stated temperature rating is defined due to no external insert condensation.

SPECIFICATIONS

Valve

Material, wetted:

• Housing:	A, DN15-25 / 1/2”-1”: DZR brass ASTM CuZn36Pb2As AB, DN15-25small / 1/2”-1”small: DZR brass ASTM CuZn36Pb2As AB, DN25large / 1”large: Brass ASTM CuZn40Pb2 AB, DN32 / 1 1/4”: DZR brass ASTM CuZn36Pb2As
• P/t plugs:	DZR brass ASTM CuZn36Pb2As with PTFE/EPDM seal
End connections[2]:	Fixed female ISO or NPT
Housing taps:	1/4” ISO

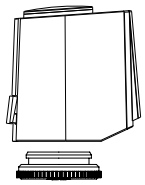
Note 2: NPT only available ex. US-factory.

SPECIFICATIONS

FlowCon FT Actuators (Thermal):

FlowCon Actuator[3/4]	FT.0.2	FT.0.3	FT.0.4
Supply voltage	24V AC -10%... +20%, 50/60 Hz	230V AC ±10%, 50/60 Hz	24V AC/DC -10%...+20%, 50/60 Hz
Type	Thermal	Thermal	Thermal
Power consumption	1.2W	1.2W	1.2W
Control signal	Analog 0-10V	ON/OFF	ON/OFF
Failsafe function[5]	Normally closed	Normally closed	Normally closed
Operation time[6]	App. 4.5 minutes	App. 4.5 minutes	App. 4.5 minutes
Ambient temperature	0°C to +60°C / +32°F to +140°F	0°C to +60°C / +32°F to +140°F	0°C to +60°C / +32°F to +140°F
Protection	IP54 including upside-down, class III	IP54 including upside-down, class II	IP54 including upside-down, class III
Cable	Plug-in, 1 m / 3 ft	Fixed, 1 m / 3 ft	Fixed, 1 m / 3 ft
Weight[7]	0.12 kg / 0.26 lb	0.11 kg / 0.24 lb	0.11 kg / 0.24 lb

Note 3: FlowCon warranty is voided using other actuators than supplied by FlowCon International.
Note 4: Please note if mounted on FlowCon Green.2 specified leakage rate to be exceeded.
Note 5: To ensure that the valve is in an open position during commissioning, the actuator will be delivered in open position and remain in this position until it is electrically operated first time.
Note 6: Closing time is approximately the double dependent on ambient temperature.
Note 7: Weight includes actuator, adaptor ring and 1 meter cable.



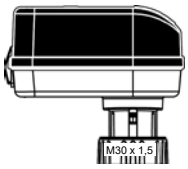
FlowCon FT.0.2
Valve adaptor, black



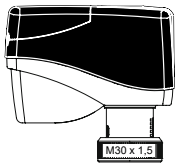
FlowCon FT.0.3/0.4
Valve adaptor, black

FlowCon FNF / FN / FNR Actuators (Gear):

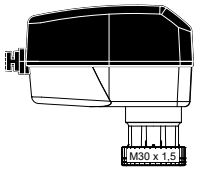
FlowCon Actuator[8]	FNF.0.2	FNR.0.2	FNR.0.2-EQ
Supply voltage	24V AC/DC ±10%, 50/60 Hz	24V AC/DC ±15%, 50/60 Hz	24V AC/DC ±15%, 50/60 Hz
Type	Electrical, bi-directional synchronous motor	Electrical, bi-directional step motor	
Power consumption	24V AC: 0.88VA standby / 3.5VA operating / 4.4VA max. 24V DC: 0.35W standby / 1.5W operating / 2.0W max.	24V AC: 1VA standby / 6VA operating / 6VA max. 24V DC: 0.5W standby / 4W operating / 4W max.	24V AC: 1VA standby / 6VA operating / 6VA max. 24V DC: 0.5W standby / 4W operating / 4W max.
Control signal	Analog 0(2)-10V DC, <0.5mA	Analog 0-10V DC, linear	Analog 0-10V DC, equal%
Feedback	Yes, control signal	No	No
Failsafe function	Fail in place	Fail in place	Fail in place
Auto stroke	Yes	No	No
Operation time	Max 22 sec/mm	Max 5.5 sec/mm	Max 5.5 sec/mm
Ambient temperature	0°C to +50°C / +32°F to +122°F	0°C to +50°C / +32°F to +122°F	0°C to +50°C / +32°F to +122°F
Media temperature	0°C to +120°C / +32°F to +248°F	0°C to +120°C / +32°F to +248°F	0°C to +120°C / +32°F to +248°F
Humidity rating	0..85% rH, no condensation	0..80% rH, no condensation	0..80% rH, no condensation
Protection	IP54, class III, indoor use only	IP54 including upside-down, class III, indoor use only	IP54 including upside-down, class III, indoor use only
Cable	Fixed 4 x 0.35 mm², 1.0 m / 4 x AWG22, 3.3 ft	Fixed 3 x 0.20 mm², 1.5 m / 3 x AWG24, 4.9 ft	Fixed 3 x 0.20 mm², 1.5 m / 3 x AWG24, 4.9 ft
Closing point adjustment	During operation the actuator will self-adjust according to the closing point of the valve		
Weight	0.170 kg / 0.375 lb	0.23 kg / 0.51 lb	0.23 kg / 0.51 lb



FlowCon FNF



FlowCon FN



FlowCon FNR

FlowCon Actuator[8]	FNR.0.3	FN.0.4
Supply voltage	110/230V AC ±10%, 50/60 Hz	24V AC/DC ±10%, 50/60 Hz
Type	Electrical, bi-directional step motor	Electrical, bi-directional synchronous motor
Power consumption	1VA standby / 6VA operating / 8VA max.	24V AC: 0.9 VA standby / 2.5VA operating / 4.7VA max. 24V DC: 0.75W standby / 1.2W operating / 2.2W max.
Control signal	Digital 2-position / 3-point floating	Digital 2-position / 3-point floating
Feedback	No	No
Failsafe function	Fail in place	Fail in place
Auto stroke	No	Yes
Operation time	Max 27.2 sec/mm	Max 22 sec/mm Reaction time: 0.8 sec
Ambient temperature	0°C to +50°C / +32°F to +122°F	0°C to +50°C / +32°F to +122°F
Media temperature	0°C to +120°C / +32°F to +248°F	0°C to +120°C / +32°F to +248°F
Humidity rating	0..80% rH, no condensation	0..85% rH, no condensation
Protection	IP54 including upside-down, class II, indoor use only	IP54 including upside-down, class III, indoor use only
Cable	Fixed 3 x 0.5 mm², 1.5 m / 3 x AWG20, 4.9 ft	Fixed 3 x 0.5 mm², 1.5 m / 3 x AWG20, 4.9 ft
Closing point adjustment	During operation the actuator will self-adjust according to the closing point of the valve	
Weight	0.23 kg / 0.51 lb	0.25 kg / 0.55 lb

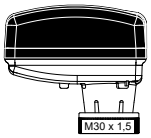
Note 8: FlowCon warranty is voided using other actuators than supplied by FlowCon International.

SPECIFICATIONS

FlowCon FN / FNJ Actuators (Gear, failsafe):

FlowCon Actuator[9]	FNJ.1.2	FNJ.1.2-EQ
Supply voltage	24V AC/DC ±15%, 50/60 Hz	24V AC/DC ±15%, 50/60 Hz
Type	Electrical, bi-directional synchronous motor	
Power consumption	24V AC: 2.5VA standby / 2.5VA operating / 5VA max. 24V DC: 1.5W standby / 1.5W operating / 3W max.	24V AC: 2.5VA standby / 2.5VA operating / 5VA max. 24V DC: 1.5W standby / 1.5W operating / 3W max.
Control signal	Analog 0-10V DC, linear	Analog 0-10V DC, equal%
Feedback	Yes, 0-10V DC	Yes, 0-10V DC
Failsafe function	Close, optional open	Close, optional open
Auto stroke	No	No
Operation time	Max 8 sec/mm	Max 8 sec/mm
Ambient temperature	0°C to +50°C / +32°F to +122°F	0°C to +50°C / +32°F to +122°F
Media temperature	0°C to +95°C / +32°F to +203°F	0°C to +95°C / +32°F to +203°F
Humidity rating	10..90% rH, no condensation	10..90% rH, no condensation
Protection	IP54 no upside-down mounting, class III, indoor use only	IP54 no upside-down mounting, class III, indoor use only
Cable	Plug-in, 4 wires x 0.35 mm² halogen free, 1.5 m 4 wires x AWG22 halogen free, 4.9 ft	Plug-in, 4 wires x 0.35 mm² halogen free, 1.5 m 4 wires x AWG22 halogen free, 4.9 ft
Closing point adjustment	During operation the actuator will self-adjust according to the closing point of the valve	
Weight	0.30 kg / 0.66 lb	0.30 kg / 0.66 lb

Note 9: FlowCon warranty is voided using other actuators than supplied by FlowCon International.

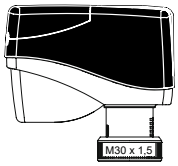


FlowCon FNJ

FlowCon FN Actuators (BUS):

FlowCon Actuator[10]	FN.0.2-BUS
Supply voltage	24V AC/DC ±10%, 50/60 Hz
Type	Electrical, bi-directional synchronous motor
Power consumption	24V AC: 2.1VA standby / 3.6VA operating / 5.4VA max. 24V DC: 1.0W standby / 1.8W operating / 2.7W max.
Control signal	0-100% (BACnet or Modbus)
Feedback	Yes, 0-100% (BACnet or Modbus)
Failsafe function	Fail in place
Auto stroke	Yes
Operation time	Max 22 sec/mm (alternatively 16 sec/mm or 28 sec/mm)
Ambient temperature	0°C to +50°C / +32°F to +122°F
Media temperature	-10°C to +120°C / +14°F to +248°F
Humidity rating	0..85% rH, no condensation
Protection	IP54 including upside-down, class III, indoor use only
Cable	Group 1: Fixed, 2 x 2 wires x 0.35 mm², 1.5 m / 2 x 2 wires x AWG22, 4.9 ft Fixed, 2 wires x 0.50 mm², 1.5 m / 2 wires x AWG20, 4.9 ft Group 2: Fixed, 4 wires x 0.50 mm², 1.5 m / 4 wires x AWG20, 4.9 ft
Closing point adjustment	During operation the actuator will self-adjust according to the closing point of the valve
Weight	0.35 kg / 0.77 lb

Note 10: FlowCon warranty is voided using other actuators than supplied by FlowCon International.

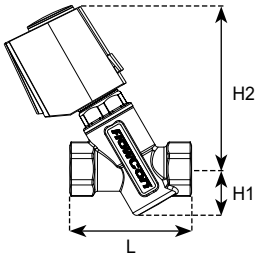


FlowCon FN.0.2-BUS

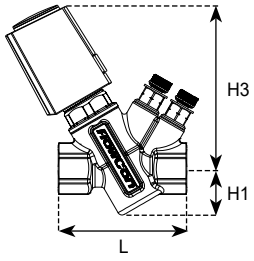
DIMENSIONS AND WEIGHT (NOMINAL)

Model no.	Valve model	Valve size	Insert size	L	H1	H2	H3	H4	H5	H6	H7	Weight[11]
						Actuator FT.0.2	Actuator FT.0.3 FT.0.4	Actuator FNF	Actuator FN.0.2-BUS FN.0.4	Actuator FNJ	Actuator FNR	
		mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	kg (lb)
G.X.XX.04	A	15 (1/2)	20 (3/4)	80 (3.15)	30.3 (1.19)	107 (4.22)	108 (4.26)	117 (4.60)	123 (4.86)	113 (4.46)	124 (4.90)	0.50 (1.10)
G.X.XX.05		20 (3/4)										0.44 (0.97)
G.X.XX.06		25 (1)		92 (3.62)								0.57 (1.26)
G.X.XX.01	AB	15 (1/2)	20 (3/4)	81 (3.19)	30.7 (1.21)	107 (4.22)	108 (4.26)	117 (4.60)	123 (4.86)	113 (4.46)	124 (4.90)	0.50 (1.10)
G.X.XX.02		20 (3/4)		85 (3.35)								0.52 (1.14)
G.X.XX.07		25 (1)		102 (4.02)	30.3 (1.19)							0.69 (1.52)
G.2.XX.14		25 (1)	40 (1 1/2)	128 (5.04)	45.8 (1.80)	128 (5.05)	129 (5.08)	138 (5.43)	144 (5.68)	134 (5.28)	145 (5.71)	1.86 (4.10)
G.2.XX.15		32 (1 1/4)										1.49 (3.28)

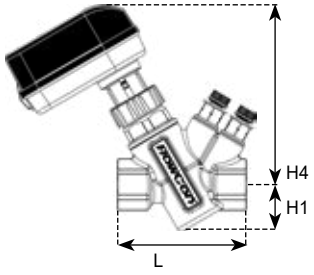
Note 11: Weight does not include actuator.



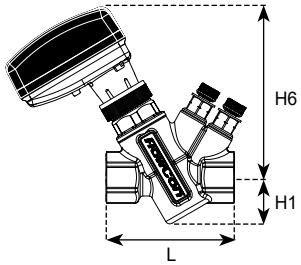
FlowCon Green.0/1 in FlowCon A valve DN15/20/25 (1/2", 3/4", 1") with FlowCon FT.0.2 actuator



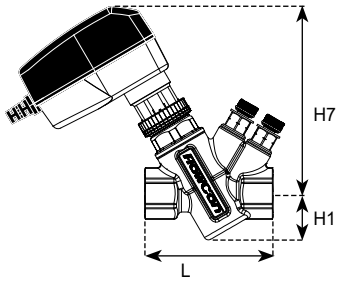
FlowCon Green.0/1 in FlowCon AB valve DN15/20/25 (1/2", 3/4", 1") with FlowCon FT.0.3/0.4 actuator



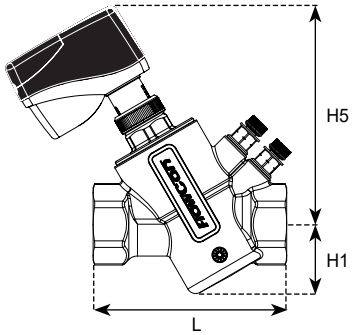
FlowCon Green.0/1 in FlowCon AB valve DN15/20/25 (1/2", 3/4", 1") with FlowCon FNF actuator



FlowCon Green.0/1 in FlowCon AB valve DN15/20/25 (1/2", 3/4", 1") with FlowCon FNJ actuator



FlowCon Green.0/1 in FlowCon AB valve DN15/20/25 (1/2", 3/4", 1") with FlowCon FNR actuator



FlowCon Green.2 in FlowCon AB valve DN25/32/40 (1", 1 1/4", 1 1/2") with FlowCon FN actuator

MODEL NUMBER SELECTION

G . . . . . 0 0 .

Flow range:
0 = 20 mm / 3/4” insert (low flow)
1 = 20 mm / 3/4” insert (medium flow)
1HF = 20 mm / 3/4” insert (high flow)
2 = 40 mm / 1 1/2” insert

Type of actuator:
00 = No actuator

	Thermal	Gear	Gear failsafe
24V modulating	**22** = FT.0.2	**36** = FNR.0.2 **37** = FNR.0.2-EQ **39** = FN.0.2-BUS **112** = FNF.0.2	**40** = FNJ.1.2 **41** = FNJ.1.2-EQ
230V digital	**23** = FT.0.3	**38** = FNR.0.3	
24V digital	**24** = FT.0.4	**34** = FN.0.4	

Type of housing:
20 mm / 3/4” insert:
01 = AB DN15 / 1/2”
02 = AB DN20 / 3/4”
04 = A DN15 / 1/2”
05 = A DN20 / 3/4”
06 = A DN25 / 1”
07 = AB DN25 / 1”
40 mm / 1 1/2 insert:
14 = AB DN25 / 1”
15 = AB DN32 / 1 1/4”

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

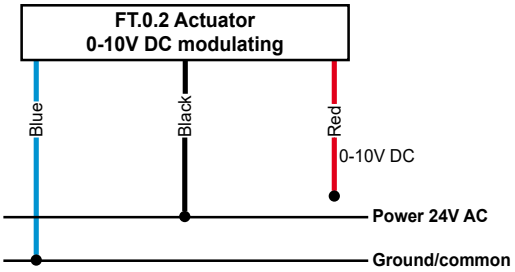
Connection standard:
I = ISO
N = NPT

Example:
G.1.22.02.B.0.0.I = 20 mm (3/4”) FlowCon Green, medium flow, with an AB DN20 ISO threaded housing with p/t plugs and a 24V thermal modulating actuator.

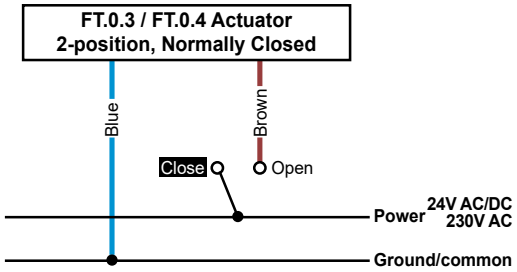
WIRING INSTRUCTION

THERMAL MODULATING

FlowCon FT

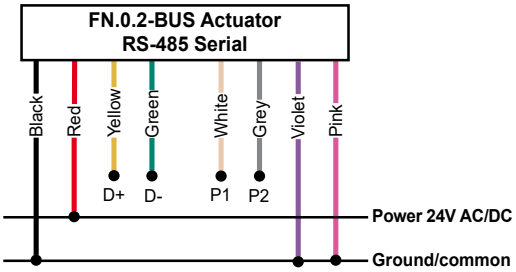


THERMAL ON/OFF

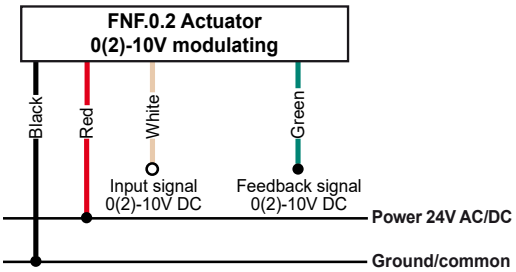


ELECTRICAL MODULATING

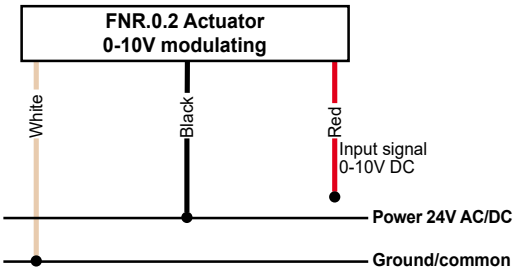
FlowCon FN

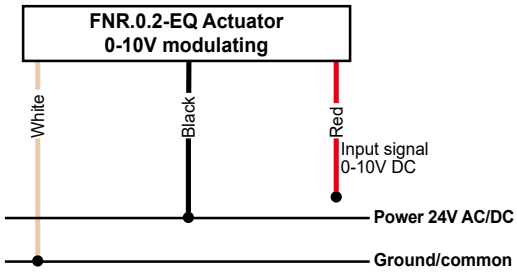


FlowCon FNF

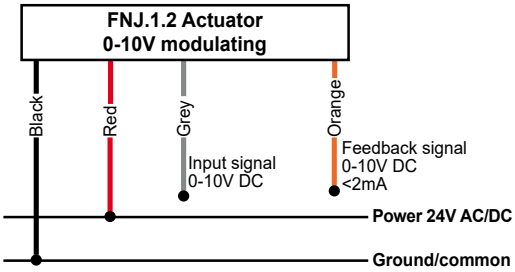


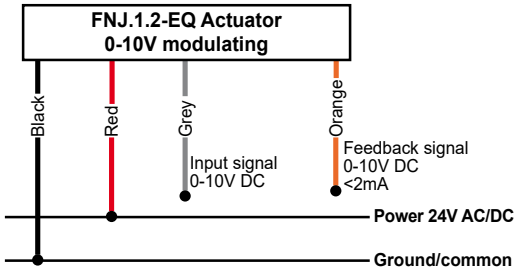
FlowCon FNR





FlowCon FNJ

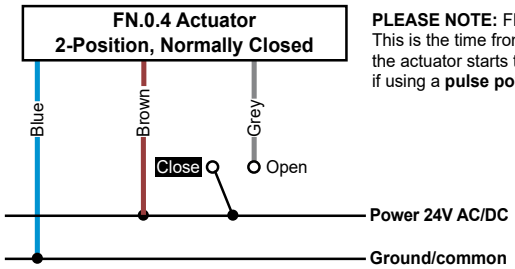




WIRING INSTRUCTION (...CONTINUED)

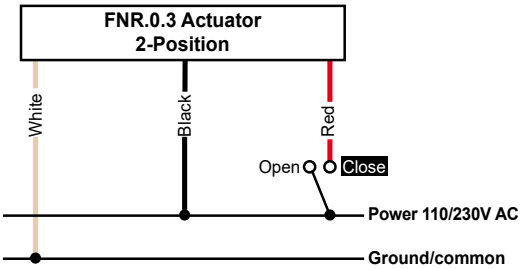
ELECTRICAL 2-POSITION

FlowCon FN



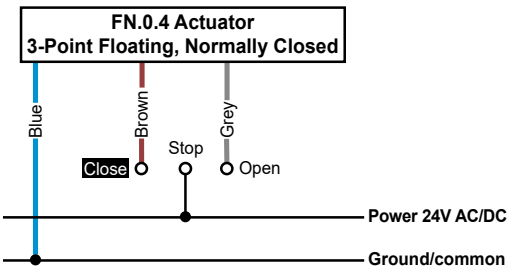
PLEASE NOTE: FN.0.4 has a reaction time of 0.8 sec. This is the time from giving a 24V power signal until the actuator starts to move. This is particular important if using a **pulse power signal.**

FlowCon FNR

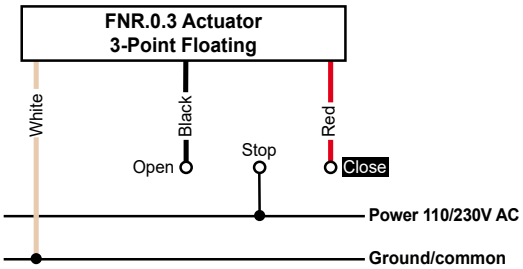


ELECTRICAL 3-POINT FLOATING

FlowCon FN



FlowCon FNR



DESCRIPTION

The FlowCon Green series is a range of pressure independent control valves, PICVs, that are two-way, modulating to accept digital or analog input signals. The valves accept 0(2)-10V, 3-point floating or ON/OFF input signals. Each valve has an adjustable maximum flow rate setting maintaining a full stroke to enable flow limitation and balancing to the coil or zone that the valve is controlling.

For use in fan-coil units, cooling ceilings, air curtains and much more for activation of heating or cooling.
They are available in two different valve housings, i.e. FlowCon A or AB.

MAXIMUM FLOW RATE LIMITATION SETTINGS

FlowCon Green

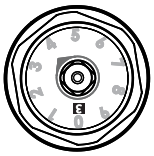
Nominal flow rate													
Insert size: 20 mm · 3/4”										**Insert size: 40 mm · 1 1/2”**			
16-600 kPaD · 2.3-87 psid[12]			30-800 kPaD · 4.4-116 psid[13]			35-800 kPaD · 5.1-116 psid[13]			16-800 kPaD · 2.3-116 psid			Setting
Green.0 (grey O-ring)			**Green.1** (black O-ring)			Green.1HF (black O-ring)			**Green.2** (black O-ring)			
l/sec	l/hr	GPM	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	0.172	620	2.73	0.435	1570	6.90	1.5
0.0569	205	0.902	0.113	408	1.80	0.200	720	3.17	0.471	1700	7.47	1.6
0.0650	234	1.03	0.124	446	1.96	0.228	820	3.61	0.506	1820	8.02	1.7
0.0719	259	1.14	0.134	482	2.12	0.258	930	4.10	0.540	1940	8.56	1.8
0.0781	281	1.24	0.143	516	2.27	0.294	1060	4.67	0.573	2060	9.08	1.9
0.0839	302	1.33	0.152	549	2.42	0.325	1170	5.15	0.605	2180	9.59	2.0
0.0889	320	1.41	0.161	580	2.56	0.350	1260	5.55	0.636	2290	10.1	2.1
0.0942	339	1.49	0.170	611	2.69	0.375	1350	5.95	0.667	2400	10.6	2.2
0.0981	353	1.55	0.178	641	2.82	0.396	1430	6.28	0.696	2510	11.0	2.3
0.103	371	1.63	0.186	671	2.95	0.417	1500	6.61	0.725	2610	11.5	2.4
0.106	381	1.68	0.194	700	3.08	0.439	1580	6.96	0.753	2710	11.9	2.5
0.109	394	1.73	0.202	728	3.21	0.458	1650	7.27	0.780	2810	12.4	2.6
0.113	406	1.79	0.210	756	3.33	0.481	1730	7.62	0.807	2900	12.8	2.7
0.115	414	1.82	0.218	783	3.45	0.500	1800	7.93	0.832	3000	13.2	2.8
0.119	428	1.88	0.225	810	3.56	0.522	1880	8.28	0.858	3090	13.6	2.9
0.122	439	1.93	0.232	835	3.68	0.542	1950	8.59	0.882	3180	14.0	3.0
0.125	449	1.98	0.239	860	3.79	0.550	1980	8.72	0.906	3260	14.4	3.1
0.127	458	2.02	0.245	883	3.89	0.558	2010	8.85	0.930	3350	14.7	3.2
0.130	468	2.06	0.252	906	3.99	0.567	2040	8.99	0.953	3430	15.1	3.3
0.133	477	2.10	0.257	927	4.08	0.575	2070	9.12	0.975	3510	15.5	3.4
0.135	486	2.14	0.263	946	4.17	0.583	2100	9.25	0.997	3590	15.8	3.5
0.137	494	2.17	0.268	965	4.25	0.597	2150	9.47	1.02	3670	16.1	3.6
0.140	503	2.21	0.273	982	4.32	0.611	2200	9.69	1.04	3740	16.5	3.7
0.142	511	2.25	0.277	998	4.39	0.625	2250	9.91	1.06	3820	16.8	3.8
0.144	518	2.28	0.281	1010	4.46	0.639	2300	10.1	1.08	3890	17.1	3.9
0.146	526	2.31	0.285	1020	4.51	0.653	2350	10.4	1.10	3960	17.4	4.0
0.148	532	2.34	0.288	1040	4.57	0.661	2380	10.5	1.12	4030	17.7	4.1
0.149	538	2.37	0.291	1050	4.61	0.669	2410	10.6	1.14	4100	18.1	4.2
0.151	544	2.39	0.294	1060	4.66	0.678	2440	10.7	1.16	4170	18.4	4.3
0.153	549	2.42	0.296	1070	4.70	0.686	2470	10.9	1.18	4240	18.7	4.4
0.154	553	2.43	0.299	1080	4.73	0.694	2500	11.0	1.20	4300	19.0	4.5
0.155	559	2.46	0.301	1080	4.77	0.703	2530	11.1	1.21	4370	19.2	4.6
0.156	563	2.48	0.303	1090	4.80	0.711	2560	11.3	1.23	4440	19.5	4.7
0.158	567	2.50	0.305	1100	4.83	0.719	2590	11.4	1.25	4500	19.8	4.8
0.159	571	2.51	0.307	1100	4.86	0.728	2620	11.5	1.27	4570	20.1	4.9
0.160	575	2.53	0.308	1110	4.89	0.736	2650	11.7	1.29	4630	20.4	5.0

Accuracy: ±10% of controlled flow rate with a threshold of ±5% of highest settable max flow rate.
Note 12: If used in design pressure conditions above 200 kPaD (29 psid), it is advised to adjust to a 10% higher max flow.
Note 13: If used in design pressure conditions above 400 kPaD (58 psid), it is advised to adjust to a 10% higher max flow.



A micrometer **setting of 3.4** as illustrated above corresponds to a maximum flow rate of

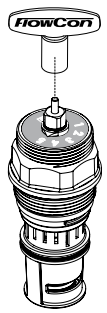
Green.0: 0.133 l/sec (2.10 GPM)
Green.1: 0.257 l/sec (4.08 GPM)
Green.2: 0.975 l/sec (15.5 GPM)



Scale setting for **Green.1HF** is reversed.

A micrometer **setting of 3.4** as illustrated above corresponds to a maximum flow rate of

Green.1HF: 0.575 l/sec (9.12 GPM)



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

GENERAL SPECIFICATIONS

1. Pressure independent dynamic control valves - FlowCon Green

1.1. Contractor shall install the pressure independent dynamic control valves where indicated in drawings.
1.2. Valve shall be an electronic, dynamic, modulating, 2-way, pressure independent control device.
1.3. Pressure independent dynamic control valve shall accurately control flow, independent of system pressure fluctuation.
1.4. Maximum flow setting shall be adjustable to 41 different settings within the range of the valve size.
1.5. Valve housing shall be permanently marked to show direction of flow.

2. Valve actuator

2.a. **FlowCon FT actuator**
- 2.a.1. Actuator housing shall be rated to IP54, including upside-down mounting.
- 2.a.2. Actuator shall be driven by 24V or 230V AC, and shall depending on actuator choice accept 0-10V DC or ON/OFF control signal.
- 2.a.3. Actuator shall use full stroke and provide full authority.
- 2.a.4. Actuator shall have visible indication of stroke position.
- 2.a.5. Failsafe function shall be available on all versions.

OR....

2.b. **FlowCon FNF actuator**
- 2.b.1. Actuator shall be rated to IP54. 180° mounting shall be acceptable.
- 2.b.2. Actuator shall be driven by 24V AC/DC and shall accept 0(2)-10V DC control signal.
- 2.b.3. Actuator shall use full stroke and provide full authority.
- 2.b.4. Actuator shall have visible indication of stroke position. Optional electrical indication of stroke position shall be available.
- 2.b.5. Feedback signal equal to control signal shall be standard.
- 2.b.6. Optional auto stroke function shall be available.
- 2.b.7. Override shall be possible.
- 2.b.8. LED indicator for actuator status shall be standard.
- 2.b.9. Programmable control mode (linear flow or equal percentage) shall be standard.

OR....

2.c. **FlowCon FN actuator**
- 2.c.1. Actuator housing shall be rated to IP54. 360° mounting shall be acceptable.
- 2.c.2. Optional BUS version, with choice of BACnet or Modbus, shall be available. BUS version shall provide remote setting and control of actuator.
- 2.c.3. Actuator shall be driven by 24V AC/DC and shall depending on actuator choice accept 3-point floating, 2-position or 0-100% control signal.
- 2.c.4. Actuator shall use full stroke and provide full authority.
- 2.c.5. Actuator shall have visible indication of stroke position.
- 2.c.6. Feedback signal equal to control signal shall be standard on BUS version.
- 2.c.7. Optional auto stroke function shall be available on BUS version.
- 2.c.8. Override shall be possible.
- 2.c.9. LED indicator for actuator status shall be standard.

OR....

2.c. **FlowCon FNR actuator**
- 2.d.1. Actuator housing shall be rated to IP54. 360° mounting shall be acceptable.
- 2.d.2. Actuator shall be driven by 24V AC/DC or 110V/230V AC, and shall depending on actuator choice and accept 0-10V DC, 3-point floating or 2-position control signal.
- 2.d.3. Actuator shall use full stroke and provide full authority.
- 2.d.4. Actuator shall have visible indication of stroke position.
- 2.d.5. Manual override shall be possible.

OR....

2.d. **FlowCon FNJ actuator**
- 2.d.1. Actuator housing shall be rated to IP54. 180° mounting shall be acceptable.
- 2.d.2. Actuator shall be driven by 24V AC/DC, and shall accept 0-10V DC control signal.
- 2.d.3. Actuator shall use full stroke and provide full authority.
- 2.d.4. Actuator shall have visible indication of stroke position.
- 2.d.5. Feedback signal of 0-10V DC shall be standard.
- 2.d.6. Failsafe version shall be standard.

GENERAL SPECIFICATIONS

3. Valve housing

3.a. **FlowCon A**

3.a.1. Valve housing shall consist of DZR brass ASTM CuZn36Pb2As, 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 brass ASTM CuZn40Pb2 or 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 flow performance shall be available for all valve sizes.

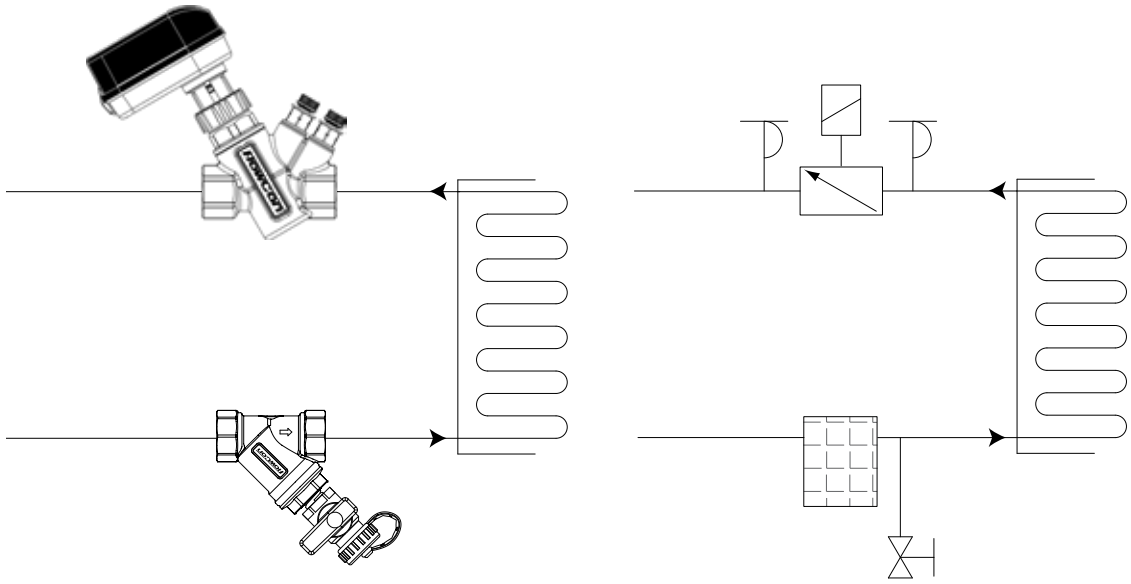
4. Flow regulation unit

4.1. Flow regulation unit shall consist of PPS (glass-reinforced) / POM and EPDM sealings with an EPDM diaphragm (20 mm / 3/4” insert) or a HNBR diaphragm (40 mm / 1 1/2” insert).

4.2. 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.

4.3. Flow regulation unit shall be externally adjustable to 1 of 41 different flow rates without limiting the stroke length; shall be available in 3 different operational pressure ranges for DN15/20/25 (1/2”, 3/4”, 1”) and 1 operational pressure range for DN25/32 (1”, 1 1/4”); minimum range shall be capable of being activated by 16 kPaD (2.3 psid). Further, the flow regulation unit shall be capable of controlling the flow within ±10% of controlled flow, with a threshold of ±5% of highest settable max flow.

APPLICATION AND SCHEMATIC EXAMPLE



UPDATES

For latest updates please see www.flowcon.com

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