

## FlowCon Green.3 - 40-50mm

*Pressure Independent Control Valves*



### SPECIFICATIONS

Static pressure:	2500 kPa / 360 psi
Ambient temperature:	+2°C to +50°C / +36°F to +122°F
Media temperature <sup>1</sup> :	-20°C to +120°C / -4°F to +248°F
Material:	
- Flow regulation unit (internal):	Glass-reinforced PSU/PPS/POM
- Metal components (internal):	Stainless steel
- O-rings and seats:	EPDM
- Diaphragm:	Hydrogenated acrylonitrile-butadiene-rubber
- Housing and covers:	Forged brass ASTM CuZn40Pb2
End connections <sup>2</sup> :	ISO or NPT
Maximum close off pressure:	600 kPaD / 87 psid
Maximum operational $\Delta P$ :	400 kPaD / 58 psid
Shut-off leakage:	ANSI / FCI 70-2 2006 / IEC 60534-4 - Class IV
Flow rate range:	0.528-3.79 l/sec / 8.36-60.0 GPM

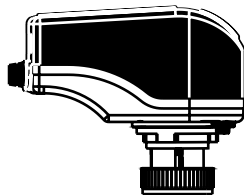
Note 1: Stated temperature rating is defined due to no external condensation.  
Note 2: NPT only available ex. US-factory

## SPECIFICATIONS (... continued)

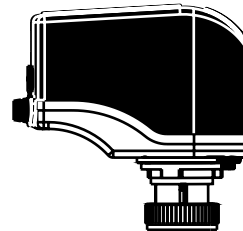
### FlowCon Actuators:

FlowCon Actuator <sup>3</sup>	FH.0.2	FH.0.4	FH.1.2	FH.1.4
Supply voltage	24V AC/DC ±10%, 50/60 Hz			
Type	Electrical, Bi-directional synchronous motor			
Power consumption	7VA		9VA	
Control signal	Analog 0(2)-10V DC	Digital (2-position / 3-point floating)	Analog 0(2)-10V DC	Digital (2-position / 3-point floating)
Feedback	Yes, 0(2)-10V DC	No	Yes, 0(2)-10V DC	No
Failsafe function	No	No	Yes	Yes
Auto stroke	Yes	No	Yes	No
Operation time	50 Hz: 28 sec/mm			
Ambient temperature	+2°C to +50°C			
Humidity rating	<95% no condensation			
Protection	IP54, class II			
Cable	Fixed, 4 wires 22 AWG halogen free cable, 1 meter	Fixed, 3 wires 22 AWG halogen free cable, 1 meter	Fixed, 4 wires 22 AWG halogen free cable, 1 meter	Fixed, 4 wires 22 AWG halogen free cable, 1 meter
Closing point adjustment	During operation the actuator will self-adjust according to the closing point of the valve			
Weight	0.25 kg		0.30 kg	

Note 3: FlowCon warranty is voided using other actuators than supplied by FlowCon International.



FlowCon FH.0.X



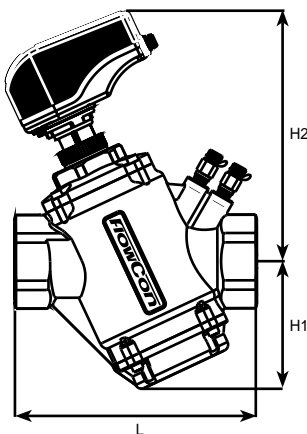
FlowCon FH.1.X

## DIMENSIONS AND WEIGHTS (NOMINAL) (measured in mm unless noted)

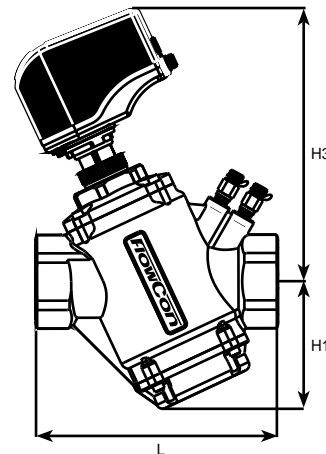
Model no.	Valve model	Valve size	L	H1	H2 FH.0.X actuator	H3 FH.1.X actuator	Weight <sup>4</sup> (kgs.)	Kvs <sup>5</sup> (m <sup>3</sup> /hr)
G.3.XX.40.X.X	Green.3	DN40 F/F	191.0	100.2	192.2	207.2	4.6	34.1
G.3.XX.50.X.X		DN50 F/F					4.2	

Note 4: Weight does not include end connections or actuator.

Note 5: For complete unit based on min. DP.



FlowCon Green DN40/50  
with FlowCon FH.0.X actuator



FlowCon Green DN40/50  
with FlowCon FH.1.X actuator

## MODEL NUMBER SELECTION

Insert type of actuator:  
 52= FH.0.2 54= FH.0.4 62= FH.1.2 64= FH.1.4

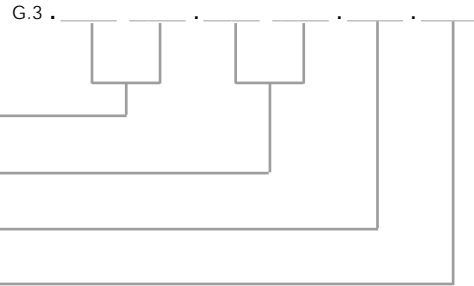
Insert size of body:  
 40= DN40 F/F 50= DN50 F/F

Insert p/t plug requirements:  
 B=pressure/temperature plugs P=taps plugged - leave blank if no p/t plugs required

Insert connections standard:  
 I=ISO N=NPT<sup>6</sup>

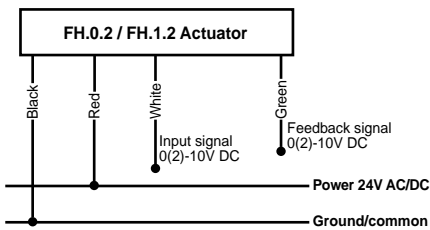
Example: G.3.52.40.B.I=40mm FlowCon Green with a 24V electrically modulating actuator, p/t plugs and ISO female-female threaded.

Note 6: NPT only available ex. US-factory

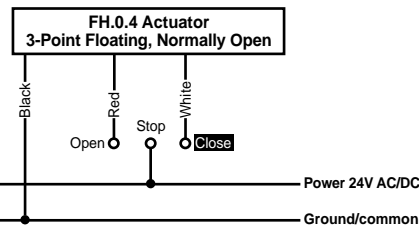
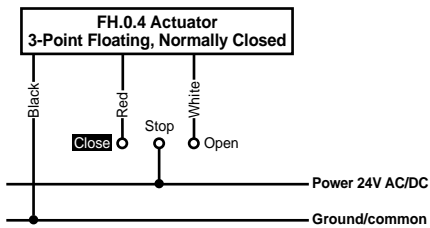
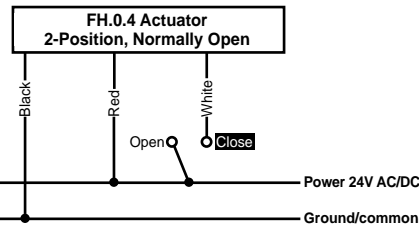
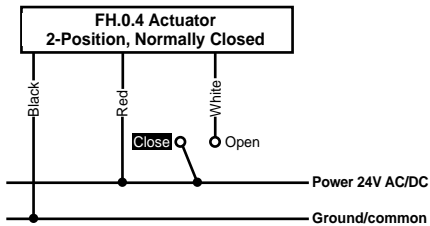


## WIRING INSTRUCTION

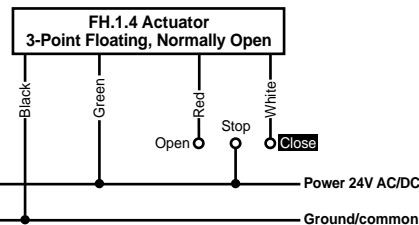
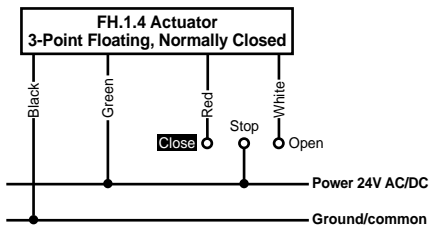
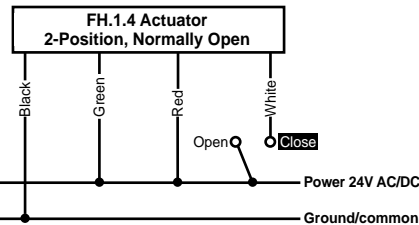
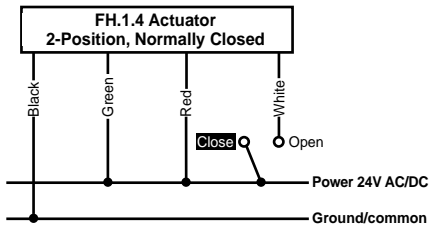
### FlowCon FH.0.2 and FH.1.2



### FlowCon FH.0.4



### FlowCon FH.1.4



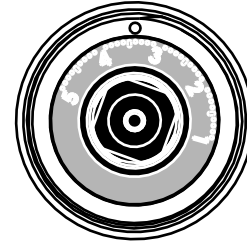
## DESCRIPTION

The FlowCon Green serie is pressure independent control valves 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, VAV applications and cooling ceilings for activation of the heating or cooling.

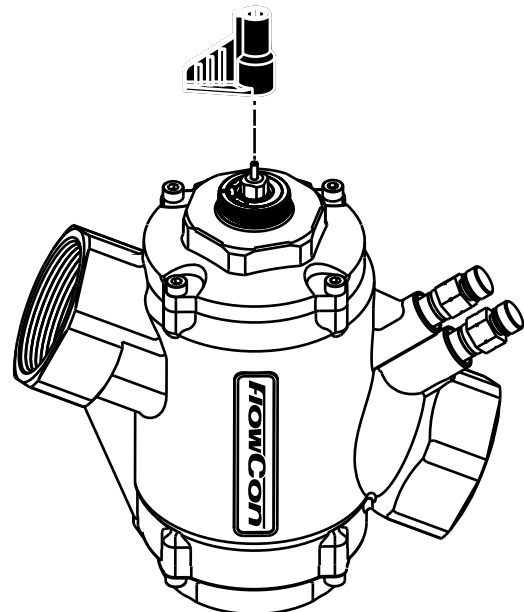
## MAXIMUM FLOW RATE LIMITATION SETTINGS

FlowCon Green.3				Setting
16-400 kPad - 2.3-58 psid				
Nominal flow rate	l/sec	l/hr	GPM	
	0.528	1900	8.36	1.0
	0.633	2278	10.0	1.1
	0.738	2655	11.7	1.2
	0.843	3033	13.3	1.3
	0.947	3410	15.0	1.4
	1.05	3787	16.7	1.5
	1.16	4163	18.3	1.6
	1.26	4537	20.0	1.7
	1.36	4909	21.6	1.8
	1.47	5279	23.2	1.9
	1.57	5646	24.8	2.0
	1.67	6011	26.4	2.1
	1.77	6372	28.0	2.2
	1.87	6730	29.6	2.3
	1.97	7083	31.2	2.4
	2.06	7432	32.7	2.5
	2.16	7776	34.2	2.6
	2.25	8115	35.7	2.7
	2.35	8449	37.2	2.8
2.44	8777	38.6	2.9	
2.53	9098	40.0	3.0	
2.61	9413	41.4	3.1	
2.70	9721	42.8	3.2	
2.78	10021	44.1	3.3	
2.86	10314	45.4	3.4	
2.94	10599	46.6	3.5	
3.02	10875	47.8	3.6	
3.10	11142	49.0	3.7	
3.17	11400	50.2	3.8	
3.24	11649	51.3	3.9	
3.30	11888	52.3	4.0	
3.37	12116	53.3	4.1	
3.43	12334	54.3	4.2	
3.48	12540	55.2	4.3	
3.54	12735	56.0	4.4	
3.59	12919	56.8	4.5	
3.64	13090	57.6	4.6	
3.68	13249	58.3	4.7	
3.72	13395	58.9	4.8	
3.76	13527	59.5	4.9	
3.79	13647	60.0	5.0	



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

2.86 l/sec



Use the special designed key (FlowCon part no. ACC0007) for micrometer setting.

Accuracy: Greatest of either  $\pm 10\%$  of controlled flow rate or  $\pm 5\%$  of maximum flow rate.

## GENERAL SPECIFICATIONS

### 1. PRESSURE INDEPENDENT DYNAMIC CONTROL VALVE - FLOWCON GREEN.3

- 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.

### 2. VALVE ACTUATOR - FLOWCON FH

- 2.1. Valve actuator housing shall be rated to IP54.
- 2.2. Actuator shall be driven by 24V AC/DC and shall depending on actuator choice accept 0(2)-10V DC, 3-point floating or 2-position control signal.
- 2.3. Actuator shall use full stroke and provide full authority.
- 2.4. Actuator shall have visible indication of stroke position.
- 2.5. Feedback signal 0(2)-10V DC to the control system shall be standard on modulating version.
- 2.6. Optional failsafe function shall be available on 24V AC/DC versions.
- 2.7. Auto stroke function shall be available on modulating version.
- 2.8. Manual override shall be possible without use of tools.

### 3. VALVE HOUSING - FLOWCON GREEN.3

Valve housing DN40-DN50 female-female shall consist of forged brass ASTM CuZn40Pb2, rated at no less than 2500 kPa static pressure at +120°C.

### 4. FLOW REGULATION UNIT

- 4.1. Flow regulation unit shall consist of glass-reinforced PPS, PSU and POM with HNBR diaphragm and EPDM sealings.
- 4.2. Flow regulation unit shall be externally adjustable to 1 of 41 different flow rates; minimum range shall be capable of being activated by minimum 16 kPaD operation ranges; and shall be capable of controlling the flow within  $\pm 10\%$  of rated flow or  $\pm 5\%$  of maximum flow.

## APPLICATION AND SCHEMATIC EXAMPLE

