**Technical data sheet** 

F680HD

200 psi (2: to 12") and 150 psi (14"-30") bubble tight shut-off, Long stem design allows for 2" insulation, Valve face-to-face dimensions comply with API 609 & MSS-SP-67, Completely assembled and tested, ready for installation

Resilient Seat, 304 Stainless Steel Disc









### **Technical data**

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 Inct	ınna	11 C	ІЗТЗ

Valve Size	3" [80]
Fluid	chilled or hot water, up to 60% glycol
Fluid Temp Range (water)	-22250°F [-30120°C]
Body Pressure Rating	ANSI Class Consistent with 125, 232 psi CWP
Close-off pressure ∆ps	200 psi
Flow characteristic	modified equal percentage
Servicing	maintenance-free
Rangeability Sv	10:1 (for 3070° range)
Flow Pattern	2-way
Leakage rate	0%
Controllable flow range	90° rotation
Cv	302
ANSI Class	Consistent with 125
Body pressure rating note	232 psi CWP
Maximum Velocity	12 FPS
Lug threads	5/8-11 UNC

#### Materials

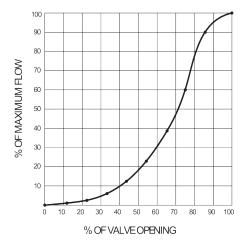
Valve body	Ductile cast iron ASTM A536
Body finish	epoxy powder coating (blue RAL 5002)
Stem seal	EPDM (lubricated)
Seat	EPDM
Pipe connection	for use with ANSI class 125/150 flanges
Bearing	RPTFE
Disc	304 stainless steel
Gear operator materials	Gears - hardened steel
Non-Spring	GRB(X)
Electronic fail-safe	GKRB(X)

# Suitable actuators

### **Product features**

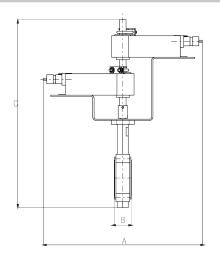


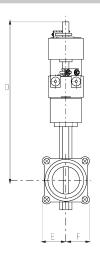
### Flow/Mounting details



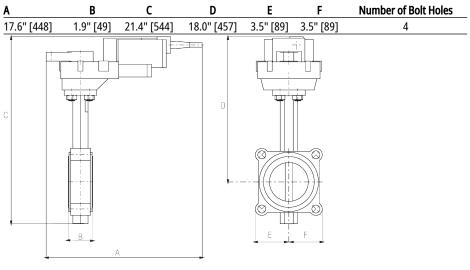
### **Dimensions**

### **Dimensional drawings**





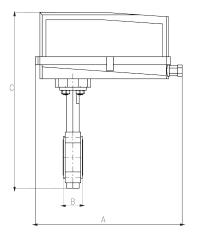
2\*AF

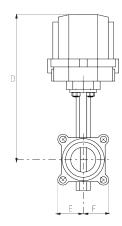


GK

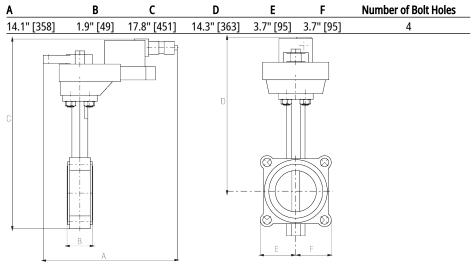
A	В	С	D	E	F	Number of Bolt Holes
10.9" [277]	1.9" [49]	16.5" [419]	13.1" [334]	3.5" [89]	3.5" [89]	4

Technical data sheet F680HD

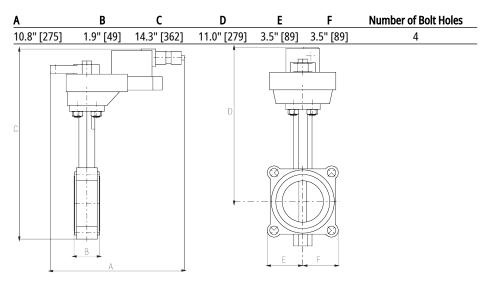




GR/GK..N4



GR

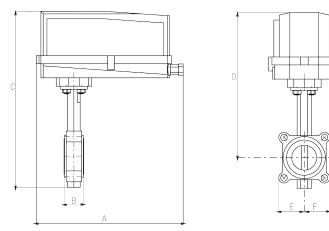


GM

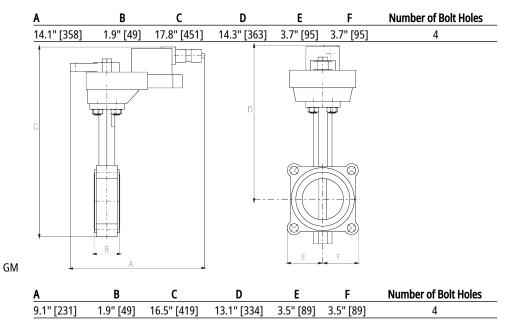
A	В	С	D	E	F	Number of Bolt Holes
9.1" [231]	1.9" [49]	16.5" [419]	13.1" [334]	3.5" [89]	3.5" [89]	4
Α	В	С	D	E	F	Number of Bolt Holes
10.8" [275]	1.9" [49]	14.3" [362]	11.0" [279]	3.5" [89]	3.5" [89]	4



# Technical data sheet F680HD



GR/GK..N4



**Technical data sheet** 

DRX24-MFT-T

Modulating, Non-Spring Return, 24 V, for DC 2...10 V or 4...20 mA





5-year warranty



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Toc	hni	cal /	lata

Electrical data	Nominal voltage	AC/DC 24 V		
	Nominal voltage frequency	50/60 Hz		
	Power consumption in operation	12 W		
	Power consumption in rest position	3 W		
	Transformer sizing	21 VA (class 2 power source)		
	Electrical Connection	Screw terminal (for 22 to 12 AWG wire)		
	Overload Protection	electronic thoughout 090° rotation		
Functional data	Operating range Y	210 V		
	Operating range Y note	420 mA w/ ZG-R01 (500 $\Omega$ , 1/4 W resistor)		
	Input Impedance	100 $k\Omega$ for 210 V (0.1 mA), 500 $\Omega$ for 420 mA, 1500 $\Omega$ for On/Off		
	Operating range Y variable	Start point 0.530 V End point 2.532 V		
	Options positioning signal	variable (VDC, on/off, floating point)		
	Position feedback U	210 V		
	Position feedback U note	Max. 0.5 mA		
	Position feedback U variable	VDC variable		
	Direction of motion motor	selectable with switch 0/1		
	Manual override	external push button		
	Running Time (Motor)	default 150 s, variable 75150 s		
	Running time motor variable	75150 s		
	Noise level, motor	45 dB(A)		
	Position indication	integrated into handle		
Safety data	Degree of protection IEC/EN	IP54		
	Degree of protection NEMA/UL	NEMA 2 UL Enclosure Type 2		
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35, EU; Listed to UL 2043 - suitable for use in air plenums per Section 300.22(c) of the NEC and Section 602.2 of the IMC		
	Quality Standard	ISO 9001		
	Ambient temperature	-22122°F [-3050°C]		
	Storage temperature	-40176°F [-4080°C]		
	Ambient humidity	max. 95% r.H., non-condensing		
	Servicing	maintenance-free		
Weight	Weight	2.7 lb [1.2 kg]		



#### **Accessories**

Gateways	Description	Туре
	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to LonWorks	UK24LON
	Gateway MP to Modbus RTU	UK24MOD
Service tools	Description	Туре
	Connection cable 10 ft [3 m], A: RJ11 6/4 ZTH EU, B: 3-pin Weidmüller and supply connection	ZK4-GEN
	Service Tool, with ZIP-USB function, for parametrisable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US

#### **Electrical installation**

## **X** INSTALLATION NOTES

1 Provide overload protection and disconnect as required.

Actuators may also be powered by 24 VDC.

5 Only connect common to negative (-) leg of control circuits.

 $\triangle$  A 500  $\Omega$  resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.

For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller; the actuator internal common reference is not compatible.

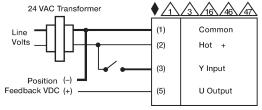
 $\cancel{h}$  IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).

 $\frac{1}{16}$  Actuators are provided with a numbered screw terminal strip instead of a cable.

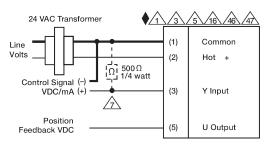
Meets cULus requirements without the need of an electrical ground connection.

#### Warning! Live Electrical Components!

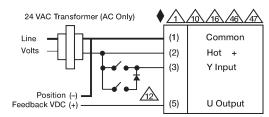
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



On/Off



VDC/mA Control



Floating Point