

BUTTERFLY VALVE

Lug or Wafer, EPDM or PTFE, Electric or Pneumatic Actuators



WE20-CHD00-LE



WE20-EDA06-LE



WE20-ETD04-LE-A



WE20-CDA04-WP-AA07



WE20-CDA04-WP-NN08



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The **SERIES WE20** is offered in lug or wafer body styles and is equipped with a PTFE or EPDM liner. The most critical aspect of the Series WE20 Butterfly Valves is the cartridge seat design, which alleviates installation problems associated with common "dove tail design" seats. Valve torques are lower and more consistent as the seat dynamics are not dependent on being coupled between two flanges. Precision machining of the disc and body allow the cartridge design to maintain a tighter disc to seat tolerance, providing a perfect low torque seal each and every time the valve is cycled. The seat to disc seal is independent of flange support and capable of full rated dead end service.

Actuators are directly mounted creating a compact assembly for tight spaces. Limit switches are able to be mounted directly to the valves allowing for remote position indication.

The Series WE20 can be configured with either an electric or pneumatic actuator. Electric actuators are available in weatherproof or explosion-proof, a variety of supply voltages and two-position or modulating control. Two-position actuators use the supply voltage to drive the valve open or closed, while the modulating actuator accepts a 4-20 mA input for valve positioning. Actuators feature thermal overload protection and permanently lubricated gear train. The pneumatic double acting actuator uses an air supply to drive the valve open and closed. The actuator has two supply ports, with one driving the valve open and the other driving the valve closed. Spring return pneumatic actuators use the air supply to open the valve, and internally loaded springs return the valve to the closed position.

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FEATURES/BENEFITS

- Machined flats attach disc/stem - no pins
- Phenolic backed cartridge seat design for extended service and ease of replacement
- Extended neck for insulation - no fabricated extensions required
- Capable of being configured to fit any application
- Limit switches can be mounted to manual valves for remote monitoring

SPECIFICATIONS

VALVE

Service: Compatible liquids, gases, and steam.

Body: 2-way, wafer or lug butterfly.

Line Sizes: 2 to 12".

End Connections: Lug and wafer pattern designed for flanges that are ANSI Class 125 (B16.1) and ANSI Class 150 (B16.5) dimension.

Pressure Limits: 225 psi (15.5 bar).

Wetted Materials: Body Material: Ductile iron; Disc: 316 SS; Seat and O-ring: EPDM or PTFE; Stem: 410 SS.

Temperature Limits: Disc: EPDM: -50 to 250°F (-46 to 121°C); PTFE: 0 to 300°F (-18 to 149°C).

Bearings: Nylatron.

Operator: 2 to 6" 10-position locking hand lever; 8 to 12": manual gear.

ACTUATORS

Pneumatic "DA" and "SR" Series

Type: DA series is double acting and SR series is spring return (rack and pinion).

Normal Supply Pressure: DA: 40 to 115 psi (2.7 to 7.9 bar); SR: 70 to 115 psi (4.8 to 7.9 bar).

Maximum Supply Pressure: 120 psi (8.6 bar).

Air Connections: DA03 thru DA11: 1/4" FNPT; SR03 thru SR11: 1/4" FNPT.

Housing Material: Anodized aluminum body and epoxy coated aluminum end caps.

Temperature Limits: -40 to 176°F (-40 to 80°C).

Accessory Mounting: NAMUR standard.

Electric "TD" and "MD" Series

Power Requirements: 110 VAC, 220 VAC or 24 VAC.

Power Consumption: See instruction manual.

Cycle Time (per 90°): TD01 and MD01: 4 s; TD02 and MD02: 20 s; TD03 and MD03: 30 s; TD04 and MD04: 30 s; TD05 and MD05: 30 s; TD06 and MD06: 45 s; TD07 and MD07: 30 s.

Duty Rating: 85%.

Enclosure Rating: NEMA 4X (IP67).

Housing Material: Powder coated aluminum.

Temperature Limits: -22 to 140°F (-30 to 60°C).

Electrical Connection: 1/2" female NPT.

Modulating Input: 4 to 20 mA.

Standard Features: Manual override, position indicator, and TD models come with two limit switches.

Electric "TH and MH Series

Power Requirements: 110 VAC, 220 VAC, 24 VAC or 24 VDC.

Power Consumption: See instruction manual.

Cycle Time (per 90°): See instruction manual.

Duty Rating: See instruction manual.

Enclosure Rating: NEMA 7, designed to meet hazardous locations: Class I, Group C & D; Class II, Group E, F & G; Division I & II.

Housing Material: Powder Coated Aluminum

Temperature Limits: -22 to 140°F (-30 to 60°C).

Electrical Connection: 1/2" female NPT.

Modulating Input: 4 to 20 mA.

Standard Features: Position indicator and two limit switches.

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MODEL CHART						
Size	Cv (gal/min)	Popular Hand Operated Model	Popular Double Acting Pneumatic Model	Popular Spring Return Pneumatic Model	NEMA 4X Two-Position Electric (110 VAC) Model	NEMA 4X Modulating Electric (110 VAC) Model
2"	135	WE20-AHD00-WE	WE20-ADA03-WE	WE20-ASR04-WE	WE20-ATD02-WE-A	WE20-AMD02-WE-A
2-1/2"	220	WE20-BHD00-WE	WE20-BDA03-WE	WE20-BSR04-WE	WE20-BTD02-WE-A	WE20-BMD02-WE-A
3"	302	WE20-CHD00-WE	WE20-CDA04-WE	WE20-CSR06-WE	WE20-CTD02-WE-A	WE20-CMD02-WE-A
4"	600	WE20-DHD00-WE	WE20-DDA05-WE	WE20-DSR07-WE	WE20-DTD03-WE-A	WE20-DMD03-WE-A
5"	1022	WE20-EHD00-WE	WE20-EDA06-WE	WE20-ESR08-WE	WE20-ETD04-WE-A	WE20-EMD04-WE-A
6"	1579	WE20-FHD00-WE	WE20-FDA07-WE	WE20-FSR09-WE	WE20-FTD04-WE-A	WE20-FMD04-WE-A
8"	3136	WE20-GHD00-WE	WE20-GDA08-WE	WE20-GSR10-WE	WE20-GTD05-WE-A	WE20-GMD05-WE-A
10"	5340	WE20-HHD00-WE	WE20-HDA09-WE	WE20-HSR11-WE	WE20-HTD06-WE-A	WE20-HMD06-WE-A
12"	8250	WE20-IHD00-WE	WE20-IDA11-WE	WE20-ISR11-WE	WE20-ITD07-WE-A	WE20-IMD07-WE-A

MODEL CHART - HAND OPERATED & PNEUMATIC ACTUATOR							
Example	WE20	-BSR04	-WE	-A	A	00	WE20-BSR04-WE-AA00
Series	WE20						Butterfly valve
Size and Actuator		AHD00 BHD00 CHD00 DHD00 EHD00 FHD00 GHD00 HHD00 IHD00 ADA03 BDA03 CDA04 DDA05 EDA06 FDA07 GDA08 HDA09 IDA11 ASR04 BSR04 CSR06 DSR07 ESR08 FSR09 GSR10 HSR11 ISR11					2" hand operated 2-1/2" hand operated 3" hand operated 4" hand operated 5" hand operated 6" hand operated 8" hand operated 10" hand operated 12" hand operated 2" double acting 2-1/2" double acting 3" double acting 4" double acting 5" double acting 6" double acting 8" double acting 10" double acting 12" double acting 2" spring return 2-1/2" spring return 3" spring return 4" spring return 5" spring return 6" spring return 8" spring return 10" spring return 12" spring return
Body Type /Liner			WE WP LE LP				Wafer-EPDM Wafer-PTFE Lug-EPDM Lug-PTFE
Solenoid				N A			No solenoid NEMA 4X NAMUR solenoid
Solenoid Voltage					N A B C D E		No solenoid 120 VAC 220 VAC 24 VAC 24 VDC 12 VDC
Positioner and Switches						00 01 02 03 04 05 06 07 08 09	None 42AD0 exp limit switch 45VD0 exp position transmitter 42AD0-B ATEX limit switch 42AD0-IE IECEx limit switch VPI-M01 NEMA 4X limit switch QV-210101 poly limit switch VPS and P1 prox switch 265ER-D5 positioner 285ER-D5 smart positioner
Options						NO	Fail open spring return actuator

MODEL CHART - ELECTRIC ACTUATOR						
Example	WE20	-DMH05	-WE	-A	WE20-DMH05-WE-A	
Series	WE20				Butterfly valve	
Size and Actuator		ATD02 BTD02 CTD02 DTD03 ETD04 FTD04 GTD05 HTD06 ITD07 AMD02 BMD02 CMD02 DMD03 EMD04 FMD04 GMD05 HMD06 IMD07 ATH03 BTH03 CTH05 DTH05 ETH06 FTH08 GTH09 HTH10 ITH11 AMH03 BMH03 CMH05 DMH05 EMH06 FMH08 GMH09 HMH10 IMH11			2" NEMA 4X two-position 2-1/2" NEMA 4X two-position 3" NEMA 4X two-position 4" NEMA 4X two-position 5" NEMA 4X two-position 6" NEMA 4X two-position 8" NEMA 4X two-position 10" NEMA 4X two-position 12" NEMA 4X two-position 2" NEMA 4X modulating 2-1/2" NEMA 4X modulating 3" NEMA 4X modulating 4" NEMA 4X modulating 5" NEMA 4X modulating 6" NEMA 4X modulating 8" NEMA 4X modulating 10" NEMA 4X modulating 12" NEMA 4X modulating 2" exp two-position 2-1/2" exp two-position 3" exp two-position 4" exp two-position 5" exp two-position 6" exp two-position 8" exp two-position 10" exp two-position 12" exp two-position 2" exp electric modulating 2-1/2" exp electric modulating 3" exp electric modulating 4" exp electric modulating 5" exp electric modulating 6" exp electric modulating 8" exp electric modulating 10" exp electric modulating 12" exp electric modulating	
Material/Liner			WE WP LE LP		Wafer-EPDM Wafer-PTFE Lug-EPDM Lug-PTFE	
Actuator Voltage				A B C D	110 VAC 220 VAC 24 VAC 24 VDC	

ACCESSORIES	
Model	Description
R2-2120	Air regulator
AFR2-2	Instrument air filter regulator
VB-01	Volume booster