

# 3-PIECE SOCKET WELD STAINLESS STEEL BALL VALVES

Full Port, Vented Ball, Electric or Pneumatic Actuators



WE05-EHD00



WE05-FDA02



WE05-DDA01-AA01



WE05-JTD03-A



WE05-ITI05-B



The Series WE05 3-Piece Socket Weld Stainless Steel Ball Valves offer the best possible design for socket weld ball valves. The swing out body feature and seat arrangement allow for trouble-free welding installation. The Series WE05 incorporates a full port 3-piece SS ball valve for ideal flow rates with minimal pressure drop. The valve features a blowout proof stem for added safety, reinforced PTFE seats and seals for longer life, and a 316 SS (ASTM CF8M) ball for better performance.

Actuators are directly mounted creating a compact assembly for tight spaces. Limit switches can be mounted directly to the valves, allowing for remote position indication. The Series WE05 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 modulating control. Two-position actuators use the supply voltage to drive the valve open or close, while the modulating actuator accepts a 4 to 20 mA input for valve positioning. Actuators feature thermal overload protection and a 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. Also available is the SV3 solenoid valve to electrically switch the air supply pressure between the air supply ports for opening and closing the valve. Actuators are constructed of anodized and epoxy coated aluminum for years of corrosion free service.

## FEATURES/BENEFITS

- Socket weld ends
- Capable of being configured to fit any application
- Limit switches can be mounted to manual valves for remote monitoring
- Available with a variety of electric and pneumatic actuators

## APPLICATIONS

- Gas or liquid flow control

## SPECIFICATIONS

### VALVE

**Service:** Compatible liquids and gases.

**Body:** 3-piece.

**Line Sizes:** 1/2 to 3".

**End Connections:** Socket weld.

**Pressure Limits:** 20" Hg to 1000 psi (-0.7 to 69 bar) up to 250°F.

**Wetted Materials:** Body and ball: 316 SS (CF8M); Stem: 316 SS; Seat: RTFE/PTFE; Seal, Washer, and Packing: PTFE.

**Temperature Limits:** -20 to 392°F (-29 to 200°C).

**Other Materials:** O-ring:

Fluoroelastomer; Handle: 304 SS; Washer: 301 SS; Stem Nut, Locking Device, Gland Ring: 304 SS; Handle Sleeve: PVC.

**Agency Approvals:** Meets the technical requirements of EU Directive 2011/65/ EU (RoHS II).

### 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: 80 psi (5.5 bar).

**Maximum Supply Pressure:** 120 psi (8.6 bar).

**Air Connections:** DA01: 1/8" female NPT; DA02 to DA05: 1/4" female NPT; SR02 to SR07: 1/4" female NPT.

**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, 24 VAC or 24 VDC (MD models not available in 24 VDC).

**Power Consumption:** See instruction manual.

**Cycle Time (per 90°):** TD01: 4 s; MD01: 10 s; TD02 and MD02: 20 s; TD03 and MD03: 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:** 4-20 mA.

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

#### Electric "TI" and "MI" 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:** -40 to 140°F (-40 to 60°C).

**Electrical Connection:** 1/2" female NPT.

**Modulating Input:** 4-20 mA.

**Standard Features:** Position indicator and two limit switches.

# 3-PIECE SOCKET WELD STAINLESS STEEL BALL VALVES

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MODEL CHART											
Size	Cv (gal/min)	Popular Hand Operated Model	Price	Popular Double Acting Pneumatic Model	Price	Popular Spring Return Pneumatic Model	Price	Popular NEMA 4X Two Position Electric (110 VAC) Model	Price	Popular NEMA 4X Modulating Electric (110 VAC) Model	Price
1/2"	36.64	WE05-CHD00	\$49.00 <sup>(B)</sup>	WE05-CDA01	\$218.00 <sup>(B)</sup>	WE05-CSR02	\$234.00 <sup>(B)</sup>	WE05-CTD01-A	\$433.50 <sup>(B)</sup>	WE05-CMD01-A	\$790.50 <sup>(B)</sup>
3/4"	67.69	WE05-DHD00	59.50 <sup>(B)</sup>	WE05-DDA01	223.00 <sup>(B)</sup>	WE05-DSR02	264.00 <sup>(B)</sup>	WE05-DTD01-A	433.50 <sup>(B)</sup>	WE05-DMD01-A	830.50 <sup>(B)</sup>
1"	110.27	WE05-EHD00	83.50 <sup>(B)</sup>	WE05-EDA02	264.00 <sup>(B)</sup>	WE05-ESR03	293.00 <sup>(B)</sup>	WE05-ETD01-A	452.50 <sup>(B)</sup>	WE05-EMD01-A	890.50 <sup>(B)</sup>
1-1/4"	184.73	WE05-FHD00	123.00 <sup>(B)</sup>	WE05-FDA02	323.00 <sup>(B)</sup>	WE05-FSR03	351.00 <sup>(B)</sup>	WE05-FTD01-A	492.50 <sup>(B)</sup>	WE05-FMD01-A	1008.50 <sup>(B)</sup>
1-1/2"	266.62	WE05-GHD00	187.00 <sup>(B)</sup>	WE05-GDA03	421.00 <sup>(B)</sup>	WE05-GSR04	468.00 <sup>(B)</sup>	WE05-GTD02-A	531.50 <sup>(B)</sup>	WE05-GMD01-A	1108.50 <sup>(B)</sup>
2"	485.3	WE05-HHD00	245.00 <sup>(B)</sup>	WE05-HDA03	468.00 <sup>(B)</sup>	WE05-HSR05	585.00 <sup>(B)</sup>	WE05-HTD02-A	690.50 <sup>(B)</sup>	WE05-HMD02-A	1287.50 <sup>(B)</sup>
2-1/2"	791.57	WE05-IHD00	440.00 <sup>(B)</sup>	WE05-IDA04	760.00 <sup>(B)</sup>	WE05-ISR07	876.00 <sup>(B)</sup>	WE05-ITD03-A	850.50 <sup>(B)</sup>	WE05-IMD03-A	1447.50 <sup>(B)</sup>
3"	1151.95	WE05-JHD00	733.00 <sup>(B)</sup>	WE05-JDA05	993.00 <sup>(B)</sup>	WE05-JSR07	1110.00 <sup>(B)</sup>	WE05-JTD03-A	1089.50 <sup>(B)</sup>	WE05-JMD03-A	1526.50 <sup>(B)</sup>

<sup>(B)</sup> Items are subject to Schedule B discounts.

MODEL CHART - HAND OPERATED & PNEUMATIC ACTUATOR							
Example	WE05	-CSR02	-N	N	09	WE05-CSR02-NN09	Price
Series	WE05					316 SS 3-piece socket weld	-
Size and Actuator		CHD00				1/2" hand operated	\$49.00 <sup>(B)</sup>
		DHD00				3/4" hand operated	59.50 <sup>(B)</sup>
		EHD00				1" hand operated	83.50 <sup>(B)</sup>
		FHD00				1-1/4" hand operated	123.00 <sup>(B)</sup>
		GHD00				1-1/2" hand operated	187.00 <sup>(B)</sup>
		HHD00				2" hand operated	245.00 <sup>(B)</sup>
		IHD00				2-1/2" hand operated	440.00 <sup>(B)</sup>
		JHD00				3" hand operated	733.00 <sup>(B)</sup>
		CDA01				1/2" double acting	218.00 <sup>(B)</sup>
		DDA01				3/4" double acting	223.00 <sup>(B)</sup>
		EDA02				1" double acting	264.00 <sup>(B)</sup>
		FDA02				1-1/4" double acting	323.00 <sup>(B)</sup>
		GDA03				1-1/2" double acting	421.00 <sup>(B)</sup>
		HDA03				2" double acting	468.00 <sup>(B)</sup>
		IDA04				2-1/2" double acting	760.00 <sup>(B)</sup>
		JDA05				3" double acting	993.00 <sup>(B)</sup>
		CSR02				1/2" spring return	234.00 <sup>(B)</sup>
		DSR02				3/4" spring return	264.00 <sup>(B)</sup>
		ESR03				1" spring return	293.00 <sup>(B)</sup>
		FSR03				1-1/4" spring return	351.00 <sup>(B)</sup>
	GSR04				1-1/2" spring return	468.00 <sup>(B)</sup>	
	HSR05				2" spring return	585.00 <sup>(B)</sup>	
	ISR07				2-1/2" spring return	876.00 <sup>(B)</sup>	
	JSR07				3" spring return	1110.00 <sup>(B)</sup>	
Solenoid			N			No solenoid	-
			A			NEMA 4X NAMUR solenoid	+53.50 <sup>(B)</sup>
Solenoid Voltage				N		No solenoid	-
				A		120 VAC	-
				B		220 VAC	-
				C		24 VAC	-
				D		24 VDC	-
				E		12 VDC	-
Positioner and Switches					00	None	-
					01	42AD0 exp limit switch	+245.00 <sup>(B)</sup>
					02	45VD0 exp position transmitter	+558.00 <sup>(B)</sup>
					03	42AD0-B ATEX limit switch	+343.00 <sup>(B)</sup>
					04	42AD0-IE IECEX limit switch	+340.00 <sup>(B)</sup>
					06	QV-210101 poly limit switch	+153.00 <sup>(B)</sup>
					07	VPS and P1 prox switch	+219.00 <sup>(B)</sup>
					08	265ER-D5 positioner	+679.00 <sup>(B)</sup>
					09	285ER-D5 smart positioner	+1592.00 <sup>(B)</sup>
	Options					NO	Fail open spring return actuator

<sup>(B)</sup> Items are subject to Schedule B discounts.

ACCESSORIES		
Model	Description	Price
AFR4	Air filter regulator 0 to 120 psi	\$72.00 <sup>(B)</sup>
VB-01	Volume booster	182.00 <sup>(B)</sup>

<sup>(B)</sup> Items are subject to Schedule B discounts.

MODEL CHART - ELECTRIC ACTUATOR					
Example	WE05	-ETD01	-B	WE05-ETD01-B	Price
Series	WE05			316 SS 3-piece socket weld	-
Size and Actuator		CTD01		1/2" NEMA 4X two-position	\$380.00 <sup>(B)</sup>
		DTD01		3/4" NEMA 4X two-position	380.00 <sup>(B)</sup>
		ETD01		1" NEMA 4X two-position	399.00 <sup>(B)</sup>
		FTD01		1-1/4" NEMA 4X two-position	439.00 <sup>(B)</sup>
		GTD02		1-1/2" NEMA 4X two-position	478.00 <sup>(B)</sup>
		HTD02		2" NEMA 4X two-position	637.00 <sup>(B)</sup>
		ITD03		2-1/2" NEMA 4X two-position	797.00 <sup>(B)</sup>
		JTD03		3" NEMA 4X two-position	1036.00 <sup>(B)</sup>
		CMD01		1/2" NEMA 4X modulating	737.00 <sup>(B)</sup>
		DMD01		3/4" NEMA 4X modulating	777.00 <sup>(B)</sup>
		EMD01		1" NEMA 4X modulating	837.00 <sup>(B)</sup>
		FMD01		1-1/4" NEMA 4X modulating	955.00 <sup>(B)</sup>
		GMD01		1-1/2" NEMA 4X modulating	1055.00 <sup>(B)</sup>
		HMD02		2" NEMA 4X modulating	1234.00 <sup>(B)</sup>
		IMD03		2-1/2" NEMA 4X modulating	1394.00 <sup>(B)</sup>
		JMD03		3" NEMA 4X modulating	1473.00 <sup>(B)</sup>
		CTI01		1/2" exp two-position	797.00 <sup>(B)</sup>
		DTI01		3/4" exp two-position	837.00 <sup>(B)</sup>
		ETI02		1" exp two-position	955.00 <sup>(B)</sup>
		FTI02		1-1/4" exp two-position	1036.00 <sup>(B)</sup>
	GTI03		1-1/2" exp two-position	1194.00 <sup>(B)</sup>	
	HTI04		2" exp two-position	1433.00 <sup>(B)</sup>	
	ITI05		2-1/2" exp two-position	1831.00 <sup>(B)</sup>	
	JTI05		3" exp two-position	1990.00 <sup>(B)</sup>	
	CMI01		1/2" exp electric modulating	1751.00 <sup>(B)</sup>	
	DMI01		3/4" exp electric modulating	1751.00 <sup>(B)</sup>	
	EMI02		1" exp electric modulating	1751.00 <sup>(B)</sup>	
	FMI02		1-1/4" exp electric modulating	1751.00 <sup>(B)</sup>	
	GMI03		1-1/2" exp electric modulating	1751.00 <sup>(B)</sup>	
	HMI04		2" exp electric modulating	1990.00 <sup>(B)</sup>	
	IMI05		2-1/2" exp electric modulating	2388.00 <sup>(B)</sup>	
	JMI05		3" exp electric modulating	2786.00 <sup>(B)</sup>	
Actuator Voltage			A	110 VAC	-
			B	220 VAC	-
			C	24 VAC	75.00 <sup>(B)</sup>
			D	24 VDC	75.00 <sup>(B)</sup>

<sup>(B)</sup> Items are subject to Schedule B discounts.

REPAIR KIT		
Model	Valve Series and Size	Price
VRK-10	WE05-1/2"	\$7.70
VRK-11	WE05-3/4"	11.50
VRK-12	WE05-1"	15.75
VRK-14	WE05-1-1/2"	36.00
VRK-15	WE05-2"	50.50
VRK-16	WE05-2-1/2"	86.00
VRK-17	WE05-3"	142.00
Parts List - Included in Kit		
1 PTFE thrust washer		
1 FKM O-ring		
2 PTFE stem packing		
2 PTFE seals		
2 RTFE seats		