

## SERIES WE05 | 3-PIECE SOCKET WELD STAINLESS STEEL BALL VALVE

### FEATURES/BENEFITS

- Socket weld ends simplifies installation
- Capable of being configured to fit most application
- Limit switches can be mounted to manual valves for remote monitoring

### APPLICATIONS

- Gas or liquid flow control
- Ideal for quick bubble tight shut-off

### DESCRIPTION

The **SERIES WE05** offers 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.





### VALVE SPECIFICATIONS

<b>Service</b>	Compatible liquids and gases.
<b>Body</b>	2-piece.
<b>Line Sizes</b>	1/2 to 3".
<b>End Connections</b>	Socket weld.
<b>Pressure Limits</b>	20" Hg to 1000 psi (-0.7 to 69 bar) up to 250°F.
<b>Wetted Materials</b>	Body and ball: 316 SS (CF8M); Stem: 316SS; Seat: RTFE/PTFE; Seal, washer and packing: PTFE.
<b>Temperature Limits</b>	-20 to 392°F (-29 to 200°C).
<b>Other Materials</b>	O-ring: Fluoroelastomer; Handle: 304 SS; Washer: 301 SS; Stem nut, locking device, gland ring: 304 SS; Handle sleeve: PVC.

### PNEUMATIC ACTUATOR ("DA" & "SR" SERIES) SPECIFICATIONS

<b>Type</b>	DA series is double acting and SR series is spring return (rack and pinion).
<b>Normal Supply Pressure</b>	DA: 40 to 115 psi (2.7 to 7.9 bar); SR: 80 psi (5.5 bar).
<b>Maximum Supply Pressure</b>	120 psi (8.6 bar).
<b>Air Connections</b>	DA01: 1/8" female NPT; DA02 to DA05: 1/4" female NPT; SR02 to SR07: 1/4" female NPT.
<b>Housing Material</b>	Anodized aluminum body and epoxy coated aluminum end caps.
<b>Temperature Limits</b>	-40 to 176°F (-40 to 80°C).
<b>Accessory Mounting</b>	NAMUR standard.

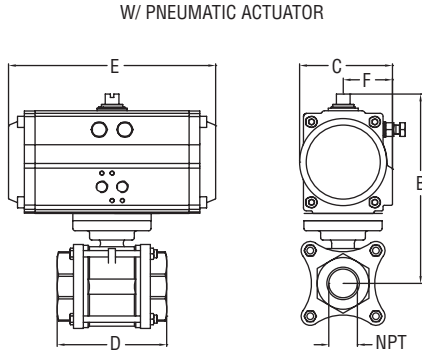
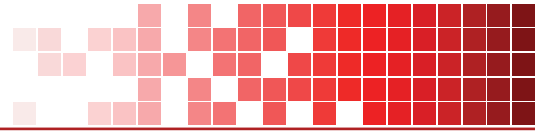
### ELECTRIC ACTUATOR ("TD" & "MD" SERIES) SPECIFICATIONS

<b>Power Requirements</b>	110 VAC, 220 VAC, 24 VAC or 24 VDC (MD models not available in 24 VDC).
<b>Power Consumption</b>	See instruction manual.
<b>Cycle Time (per 90°)</b>	TD01: 4 s; MD01: 10 s; TD02 and MD02: 20 s; TD03 and MD03: 30 s.
<b>Duty Rating</b>	85%.
<b>Enclosure Rating</b>	NEMA 4X (IP67).
<b>Housing Material</b>	Powder coated aluminum.
<b>Temperature Limits</b>	-22 to 140°F (-30 to 60°C).
<b>Electrical Connection</b>	1/2" female NPT.
<b>Modulating Input</b>	4 to 20 mA.
<b>Standard Features</b>	Manual override, position indicator, and TD models come with two limit switches.

### ELECTRIC ACTUATOR ("TI" & "MI" SERIES) SPECIFICATIONS

<b>Power Requirements</b>	110 VAC, 220 VAC, 24 VAC or 24 VDC.
<b>Power Consumption</b>	See instruction manual.
<b>Cycle Time (per 90°)</b>	See instruction manual.
<b>Duty Rating</b>	See instruction manual.
<b>Enclosure Rating</b>	NEMA 7, designed to meet hazardous locations: Class I, Group C & D; Class II, Group E, F & G; Division I & II.
<b>Housing Material</b>	Powder coated aluminum.
<b>Temperature Limits</b>	-40 to 140°F (-40 to 60°C).
<b>Electrical Connection</b>	1/2" female NPT.
<b>Modulating Input</b>	4 to 20 mA.
<b>Standard Features</b>	Position indicator and two limit switches.





DOUBLE ACTING PNEUMATIC ACTUATOR								
NPT	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
<b>B</b>	4-5/8"	4-3/4"	5-1/2"	5-3/4"	6-3/4"	7-1/8"	8-3/8"	9"
	116 mm	120 mm	141 mm	146 mm	173 mm	181 mm	212 mm	228 mm
<b>C</b>	2-3/8"	2-3/8"	2-3/4"	2-3/4"	3-1/4"	3-1/4"	3-3/4"	4"
	61 mm	61 mm	71 mm	71 mm	82 mm	82 mm	94 mm	101 mm
<b>D</b>	2-1/2"	3"	3-3/8"	4"	4-3/8"	5-1/8"	6-3/8"	7-3/8"
	65 mm	75 mm	85 mm	101 mm	112 mm	130 mm	162 mm	188 mm
<b>E</b>	4-5/8"	4-5/8"	5-3/4"	5-3/4"	6-5/8"	6-5/8"	7-7/8"	8-1/4"
	116 mm	116 mm	145 mm	145 mm	169 mm	169 mm	201 mm	209 mm
<b>F</b>	1-1/2"	1-1/2"	1-5/8"	1-5/8"	1-3/4"	1-3/4"	2"	2-1/8"
	37 mm	37 mm	41 mm	41 mm	46 mm	46 mm	52 mm	55 mm

SPRING RETURN PNEUMATIC ACTUATOR								
NPT	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
<b>B</b>	5"	5-1/8"	6-1/8"	6-3/8"	7-1/4"	7-7/8"	9-5/8"	10"
	128 mm	132 mm	157 mm	162 mm	185 mm	201 mm	245 mm	253 mm
<b>C</b>	2-3/4"	2-3/4"	3-1/4"	3-1/4"	3-3/4"	4"	4-3/4"	4-3/4"
	71 mm	71 mm	82 mm	82 mm	94 mm	101 mm	122 mm	122 mm
<b>D</b>	2-1/2"	3"	3-3/8"	4"	4-3/8"	5-1/8"	6-3/8"	7-3/8"
	65 mm	75 mm	85 mm	101 mm	112 mm	130 mm	162 mm	188 mm
<b>E</b>	5-3/4"	5-3/4"	6-5/8"	6-5/8"	7-7/8"	8-1/4"	10-7/8"	10-7/8"
	145 mm	145 mm	169 mm	169 mm	201 mm	209 mm	275 mm	275 mm
<b>F</b>	1-5/8"	1-5/8"	1-3/4"	1-3/4"	2"	2-1/8"	2-1/2"	2-1/2"
	41 mm	41 mm	46 mm	46 mm	52 mm	55 mm	64 mm	64 mm

## HOW TO ORDER – HAND OPERATED & PNEUMATIC ACTUATOR

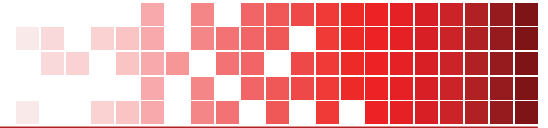
Use the **bold** characters from the chart below to construct a product code.

<p><b>SERIES</b></p> <p><b>WE05</b> - 316 SS 3-piece socket weld</p> <p><b>SIZE</b></p> <p>-C - 1/2"            -G - 1-1/2"</p> <p>-D - 3/4"            -H - 2"</p> <p>-E - 1"                -I - 2-1/2"</p> <p>-F - 1-1/4"          -J - 3"</p> <p><b>ACTUATOR</b></p> <p><b>HD00</b> - Hand operated</p> <p><b>DA01</b> - Double acting (1/2" to 3/4")</p> <p><b>DA02</b> - Double acting (1" to 1-1/4")</p> <p><b>DA03</b> - Double acting (1-1/2" to 2")</p> <p><b>DA04</b> - Double acting (2-1/2")</p> <p><b>DA05</b> - Double acting (3")</p> <p><b>SR02</b> - Spring return (1/2" to 3/4")</p> <p><b>SR03</b> - Spring return (1" to 1-1/4")</p> <p><b>SR04</b> - Spring return (1-1/2")</p> <p><b>SR05</b> - Spring return (2")</p> <p><b>SR07</b> - Spring return (2-1/2" to 3")</p>	<p><b>WE05</b>    <b>-X</b>    <b>X</b>    <b>-X</b>    <b>X</b>    <b>X</b>    <b>-X</b></p>	<p><b>OPTIONS</b></p> <p><b>-NO</b> - Fail open spring return actuator</p> <p><b>POSITIONER AND SWITCHES</b></p> <p><b>00</b> - 42AD0 exp limit switch</p> <p><b>01</b> - 45VD0 exp position transmitter</p> <p><b>02</b> - 42AD0-B ATEX limit switch</p> <p><b>03</b> - 42AD0-IE IECEx limit switch</p> <p><b>04</b> - QV-210101 poly limit switch</p> <p><b>06</b> - VPS and P1 prox switch</p> <p><b>07</b> - 265ER-D5 positioner</p> <p><b>08</b> - 265ER-D5 positioner</p> <p><b>09</b> - 285ER-D5 smart positioner</p> <p><b>SOLENOID VOLTAGE</b></p> <p><b>N</b> - No Solenoid            <b>C</b> - 24 VAC</p> <p><b>A</b> - 110 VAC                 <b>D</b> - 24 VDC</p> <p><b>B</b> - 220 VAC                 <b>E</b> - 12 VDC</p> <p><b>SOLENOID</b></p> <p><b>-N</b> - No Solenoid</p> <p><b>-A</b> - NEMA 4X NAMUR solenoid</p>
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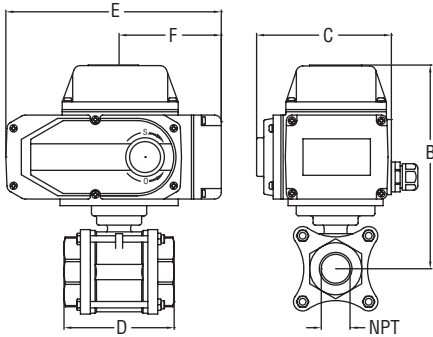
## ACCESSORIES

Model	Description
<b>R2-2120</b>	Air regulator
<b>AFR4</b>	Air filter regulator 0 to 120 psi
<b>VB-01</b>	Volume booster





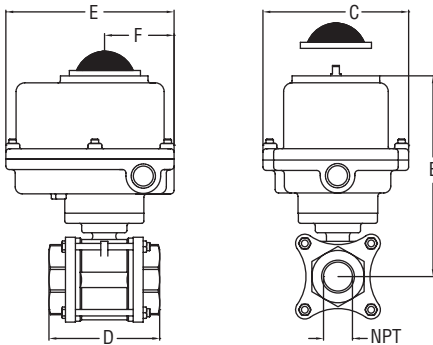
W/ ELECTRIC ACTUATOR



**ELECTRIC ACTUATOR**

NPT	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
<b>B</b>	6-3/8"	6-1/2"	8-3/8"	8-1/2"	8-7/8"	10"	10-3/4"	11"
	162 mm	165 mm	211 mm	217 mm	227 mm	253 mm	272 mm	280 mm
<b>C</b>	5-1/4"	5-1/4"	9-3/8"	9-3/8"	9-3/8"	8-1/2"	8-1/2"	8-1/2"
	133 mm	133 mm	239 mm	239 mm	239 mm	216 mm	216 mm	216 mm
<b>D</b>	2-1/2"	3"	3-3/8"	4"	4-3/8"	5-1/8"	6-3/8"	7-3/8"
	65 mm	75 mm	85 mm	101 mm	112 mm	130 mm	162 mm	188 mm
<b>E</b>	6-1/8"	6-1/8"	8-1/2"	8-1/2"	8-1/2"	8-1/2"	8-1/2"	8-1/2"
	154 mm	154 mm	217 mm	217 mm	217 mm	216 mm	216 mm	216 mm
<b>F</b>	2-3/4"	2-5/8"	5"	5"	5"	5-3/8"	5-3/8"	5-3/8"
	68 mm	68 mm	126 mm	126 mm	126 mm	136 mm	136 mm	136 mm

W/ EXPLOSION-PROOF ELECTRIC ACTUATOR



**EXPLOSION-PROOF ELECTRIC ACTUATOR**

NPT	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"
<b>B</b>	6-5/8"	6-3/4"	7-1/8"	7-3/8"	7-3/4"	8-1/8"	9-7/8"	10-1/8"
	169 mm	172 mm	182 mm	187 mm	197 mm	205 mm	250 mm	258 mm
<b>C</b>	4-1/2"	4-1/2"	4-1/2"	4-1/2"	4-1/2"	4-1/2"	4-3/4"	4-3/4"
	113 mm	113 mm	113 mm	113 mm	113 mm	113 mm	121 mm	121 mm
<b>D</b>	2-1/2"	3"	3-3/8"	4"	4-3/8"	5-1/8"	6-3/8"	7-3/8"
	65 mm	75 mm	85 mm	101 mm	112 mm	130 mm	162 mm	188 mm
<b>E</b>	6-1/4"	6-1/4"	6-1/4"	6-1/4"	6-1/4"	6-1/4"	7-3/4"	7-3/4"
	160 mm	160 mm	160 mm	160 mm	160 mm	160 mm	196 mm	196 mm
<b>F</b>	3"	3"	3"	3"	3"	3"	3-7/8"	3-7/8"
	77 mm	77 mm	77 mm	77 mm	77 mm	77 mm	98 mm	98 mm

## HOW TO ORDER – HAND OPERATED & PNEUMATIC ACTUATOR

Use the **bold** characters from the chart below to construct a product code.

<p><b>SERIES</b></p> <p><b>WE05</b> - 316 SS 3-piece socket weld</p> <p><b>Size</b></p> <p><b>-C</b> - 1/2"      <b>-G</b> - 1-1/2"</p> <p><b>-D</b> - 3/4"      <b>-H</b> - 2"</p> <p><b>-E</b> - 1"        <b>-J</b> - 2-1/2"</p> <p><b>-F</b> - 1-1/4"    <b>-J</b> - 3"</p> <p><b>Actuator</b></p> <p><b>TD01</b> - NEMA 4X two-position (1/2" to 1-1/4")</p> <p><b>TD02</b> - NEMA 4X two-position (1-1/2" to 2")</p> <p><b>TD03</b> - NEMA 4X two-position (2-1/2" to 3")</p> <p><b>MD01</b> - NEMA 4X modulating (1/2" to 1-1/2")</p> <p><b>MD02</b> - NEMA 4X modulating (2")</p> <p><b>MD03</b> - NEMA 4X modulating (2-1/2" to 3")</p> <p><b>TI01</b> - Exp two-position (1/2" to 3/4")</p> <p><b>TI02</b> - Exp two-position (1" to 1-1/4")</p> <p><b>TI03</b> - Exp two-position (1-1/2")</p> <p><b>TI04</b> - Exp two-position (2")</p> <p><b>TI05</b> - Exp two-position (2-1/2" to 3")</p> <p><b>MI01</b> - Exp electric modulating (1/2" to 3/4")</p> <p><b>MI02</b> - Exp electric modulating (1" to 1-1/4")</p> <p><b>MI03</b> - Exp electric modulating (1-1/2")</p> <p><b>MI04</b> - Exp electric modulating (2")</p> <p><b>MI05</b> - Exp electric modulating (2-1/2" to 3")</p>	<p><b>WE05</b>    <b>-X</b>        <b>X</b>        <b>-X</b></p>	<p><b>ACTUATOR VOLTAGE</b></p> <p><b>-A</b> - 110 VAC</p> <p><b>-B</b> - 220 VAC</p> <p><b>-C</b> - 24 VAC</p> <p><b>-D</b> - 24 VDC</p>
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