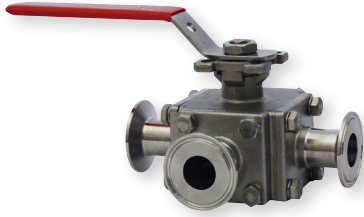
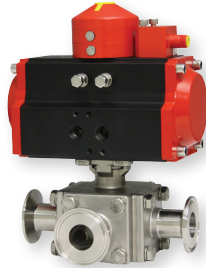


# 3-WAY TRI-CLAMP STAINLESS STEEL BALL VALVES

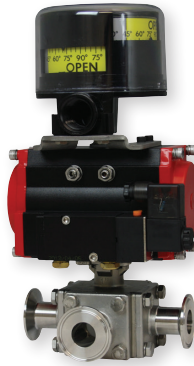
## Cavity Filled, Electric and Pneumatic Actuators



WE33-DHD00-T2



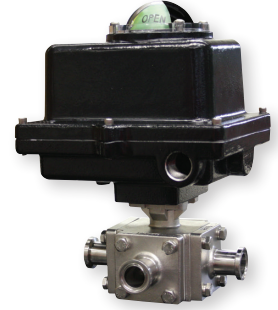
WE33-ESR03-T1-NN07



WE33-DDA01-L1-AA06



WE33-DTD01-T3-A



WE33-DT101-T2-A



The **Series WE33 3-Way Tri-Clamp Stainless Steel Ball Valves** incorporate a full port 3-way tri-clamp SS ball valve for great 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 direct 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 WE33 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 close, while the modulating actuator accepts a 4 to 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. Also available is the SN 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

- Capable of being configured to fit any application
- Limit switches can be mounted to manual valves for remote monitoring
- Cavity filled valve for sanitary applications
- Weatherproof or explosion-proof electric actuators
- Double acting or spring return anodized aluminum pneumatic actuators
- Full port design reduces the pressure drop across the valve

### APPLICATIONS

- Gas or liquid flow control
- Ideal for quick bubble tight shut-off
- Mixing or diverting liquids and gases

### SPECIFICATIONS

#### VALVE

**Service:** Compatible liquids and gases.

**Body:** 3-way.

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

**End Connections:** Tri-clamp ends.

**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 DA03: 1/4" female NPT; SR02 to SR04: 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.

**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-WAY TRI-CLAMP STAINLESS STEEL BALL VALVES

Cavity Filled, Electric and Pneumatic Actuators

MODEL CHART						
Size	Cv (gal/min)	Popular Hand Operated Model	Popular Double Acting Pneumatic Model	Popular Spring Return Pneumatic Model	Popular NEMA 4X Two Position Electric (110 VAC) Model	Popular NEMA 4X Modulating Electric (110 VAC) Model
1/2"	14.39	WE33-CHD00-T2	WE33-CDA01-T2	WE33-CSR02-T2	WE33-CTD01-T2-A	WE33-CMD01-T2-A
3/4"	42.25	WE33-DHD00-T2	WE33-DDA01-T2	WE33-DSR02-T2	WE33-DTD01-T2-A	WE33-DMD01-T2-A
1"	86.17	WE33-EHD00-T2	WE33-EDA02-T2	WE33-ESR03-T2	WE33-ETD01-T2-A	WE33-EMD01-T2-A
1-1/2"	223.61	WE33-GHD00-T2	WE33-GDA02-T2	WE33-GSR04-T2	WE33-GTD02-T2-A	WE33-GMD02-T2-A
2"	437.98	WE33-HHD00-T2	WE33-HDA03-T2	WE33-HSR04-T2	WE33-HTD02-T2-A	WE33-HMD02-T2-A

MODEL CHART - HAND OPERATED & PNEUMATIC ACTUATOR						
Example	WE33	-CSR02	-T4	-N	N	07
Series	WE33					316 SS 3-way tri-clamp
Size and Actuator		CHD00 DHD00 EHD00 GHD00 HHD00 CDA01 DDA01 EDA02 GDA02 HDA03 CSR02 DSR02 ESR03 GSR04 HSR04				1/2" hand operated 3/4" hand operated 1" hand operated 1-1/2" hand operated 2" hand operated 1/2" double acting 3/4" double acting 1" double acting 1-1/2" double acting 2" double acting 1/2" spring return 3/4" spring return 1" spring return 1-1/2" spring return 2" spring return
Valve Position			T1 T2 T3 T4 L1			Flow path A Flow path B Flow path C Flow path D Flow path E
Solenoid					N A	No solenoid NEMA 4X NAMUR solenoid
Solenoid Voltage					N A B C D E	No solenoid 110 VAC 220 VAC 24 VAC 24 VDC 12 VDC
Positioner and Switches						00 None 01 42AD0 exp limit switch 02 45VD0 exp position transmitter 03 42AD0-B ATEX limit switch 04 42AD0-IE IECEX limit switch 06 QV-210101 poly limit switch 07 VPS and P1 prox switch 08 265ER-D5 positioner 09 285ER-D5 smart positioner

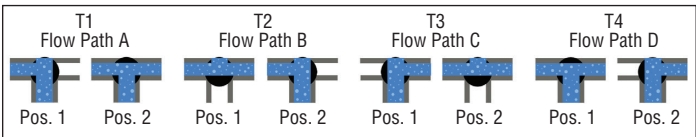
ACCESSORIES	
Model	Description
AFR4	Air filter regulator 0 to 120 psi
VB-01	Volume booster

MODEL CHART - ELECTRIC ACTUATOR				
Example	WE33	-DMD01	-T2	-B
Series	WE33			
Size and Actuator		CTD01 DTD01 ETD01 GTD02 HTD02 CMD01 DMD01 EMD01 GMD02 HMD02 CTI01 DTI01 ETI02 GTI02 HTI03 CMI01 DMI01 EMI02 GMI02 HMI03		
Valve Position			T1 T2 T3 T4 L1	
Actuator Voltage				A B C D

REPAIR KIT	
Model	Valve Series and Size
VRK-42	WE33-1/2"
VRK-43	WE33-3/4"
VRK-44	WE33-1"
VRK-45	WE33-1-1/2"
VRK-46	WE33-2"

Parts List - Included in Kit	
1	PTFE thrust washer
1	FKM O-ring
2	PTFE stem packing
2	PTFE seals
2	RTFE seats

"T" Port Ball



"L" Port Ball

