



Series DR 3-Way Ball Valve for Temperature Control

Sizes 1/2" - 2"

Regular Port Design (1/2" Full Port)

2000/1500 psi WOG (by size)

Available in 316SST or Carbon Steel

Threaded, Socket Weld, or Butt Weld Ends

Superior Live Loaded Packing System

ISO 5211 Actuator Mounting Pad

Blowout Proof Stem w/ Dual Anti-Static Devices

RTFE Seats Standard

VL-Bottom Entry Port Arrangement Standard

Pyramidal Stem Seal Design

Lockable Manual Handle

STANDARDS

Design	ANSI B16.34
Butt Weld Ends	ANSI B16.25
Threaded Ends	ANSI B1.20.1
Fittings	ANSI B16.11
Pipeline Valves	ISO 7-1
Pressure Testing	API 598
Mounting	ISO 5211
Marking System for Valves	MSS SP25, ISO 5209
Safety Integrity	IEC 61508:2010; SIL 3
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2015



While A-T Controls is known for superior service in automated valves and controls, we specialize in offering solutions to the more unique, specific or custom applications.

For tank temperature control in the wine industry, A-T Controls offers custom solutions. On the SUPPLY side (3 position control, off/cooling/heating) and RETURN side (2 position, diverting from cooling and heating), our DR Series ball valves may be automated with Triac WE-500 electric actuators.

These packages are designed to operate 180° to control the SUPPLY side of both heating and cooling or 90° on the RETURN side to divert from cooling or heating the tanks. The valve is 316SST with direct mount automation pad for actuator mounting, eliminating the need for extra hardware and cost. Superior live loaded packing and unique pyramidal stem seal design ensures superior protection against stem leakage experienced over time by using ordinary brass ball valves. The actuator is Type 4/4X, compact and light, suitable for use with valves 1/2" - 2".



WE-500 Electric Actuator
2 & 3 position, mounted to
DR Series 3-way valve

Additional A-T offerings for the WINE INDUSTRY include:

- Butterfly valves for irrigation systems, automated with 12VDC or 24VDC actuators.
- Sanitary valves (77 Series)

MANUAL VALVE SAMPLE PART #

DR-TH-0075-XXX-VL



DR-TH-0075-XXX-VL

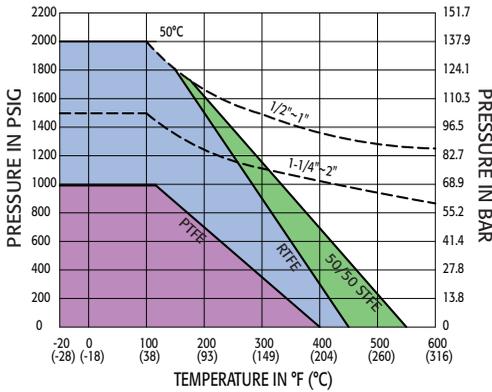
3/4" DR-Series 316SST 3-Way Diverter Ball Valve, 2000psi (WOG), Reduced Port, VL-Bottom Entry, Threaded Ends, Direct Mount, F04/F05 B.C. with RTFE Seats

See valve part number matrix for complete part number and options.

Series DR

3-Way Diverter Ball Valve for Temperature Control ISO 5211 Direct Mount

Pressure vs. Temperature Chart
for Valves 1/2" to 2"



NOTE: Dotted line shows the rating for valve body. Solid line shows the rating for valve seat. Both ratings need to be considered when determining the limitation of the valve for specific application. Consult factory for other seat materials

Break Away Torque for RTFE Seats	
SIZE	IN.-LBS.
1/2"	75
3/4"	100
1"	145
1-1/4"	220
1-1/2"	300
2"	420

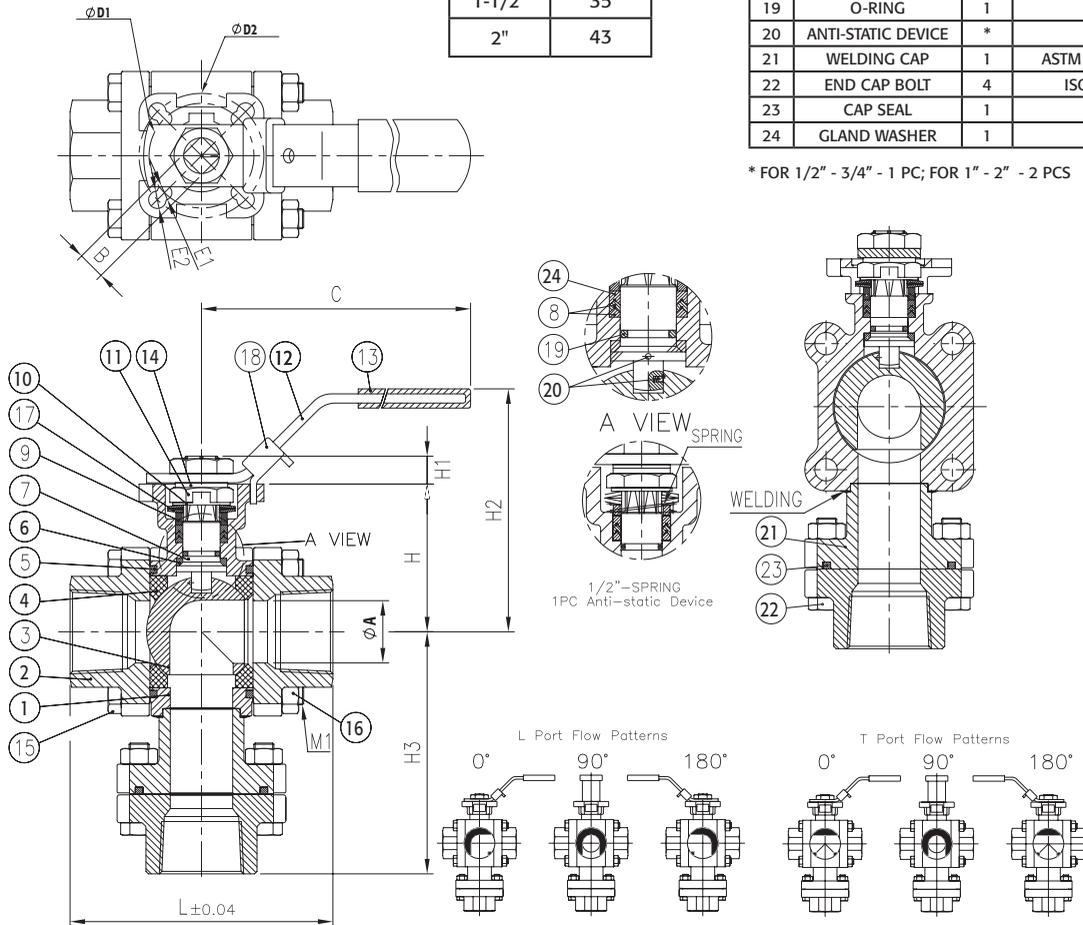
NOTE: For other seat material, consult factory

Cv DR Series L Port	
SIZE	VALVE Cv
1/2"	4
3/4"	6
1"	12
1-1/4"	17
1-1/2"	35
2"	43

MATERIALS LIST

NO.	PART NAME	QTY.	MATERIAL
1	BODY	1	ASTM A351 Grade CF8M
2	END CAP	3	ASTM A351 Grade CF8M
3	BALL	1	1/2"-3/4": ASTM A276 SS316 1"-2": ASTM A351 Grade CF8M
4	SEAT	2	RTFE
5	JOINT GASKET	2	PTFE
6	STEM SEAL	1	RTFE
7	STEM	1	ASTM A276 SS316
8	GLAND PACKING	2	PTFE
9	GLAND BUSHING	1	AISI 304
10	LOCK SADDLE	1	AISI 304
11	STEM NUT	2	AISI 304
12	HANDLE	1	AISI 304
13	HANDLE SLEEVE	1	VINYL
14	STEM WASHER	1	AISI 304
15	BODY BOLT	4	ISO 3506-1 A2-70
16	BODY NUT	8	ISO 3506-2 A2-70
17	BELLEVILLE WASHER	2	AISI 301
18	HANDLE LOCK	1	AISI 304
19	O-RING	1	Viton®
20	ANTI-STATIC DEVICE	*	AISI 316
21	WELDING CAP	1	ASTM A351 Grade CF3M
22	END CAP BOLT	4	ISO 3506-1 A2-70
23	CAP SEAL	1	PTFE
24	GLAND WASHER	1	RTFE

* FOR 1/2" - 3/4" - 1 PC; FOR 1" - 2" - 2 PCS



DIMENSIONS (IN)

SIZE	ØA	B	C	ØD1	ØD2	ØE1	ØE2	H	H1	H2	H3	L	M1	ISO 5211
1/2"	0.50	0.354	5.47	1.417	1.654	0.24	0.24	1.68	0.30	3.03	2.88	2.95	M6	F03/F04
3/4"	0.59	0.354	5.47	1.417	1.654	0.24	0.24	1.68	0.30	3.03	2.83	2.85	M6	F03/F04
1"	0.79	0.354	5.47	1.417	1.654	0.24	0.24	1.84	0.34	3.23	3.31	3.36	M8	F03/F04
1-1/4"	0.98	0.433	6.50	1.654	1.969	0.24	0.28	2.33	0.41	3.88	3.82	4.15	M8	F04/F05
1-1/2"	1.26	0.433	6.50	1.654	1.969	0.24	0.28	2.46	0.41	4.02	3.94	4.37	M10	F04/F05
2"	1.50	0.551	8.46	1.969	2.756	0.30	0.35	3.11	0.53	5.04	4.42	5.01	M10	F05/F07



Electric Automated Ball Valve Package

Series DR

3-Way Diverter Ball Valve for Temperature Control

Size 1/2" Full Port
 Sizes 3/4" - 2" Regular Port
 2000/1500 psi WOG
 (by size)

Available in 316SST or Carbon
 TH, SW, or BW Ends
 Superior Live Loaded Packing
 System

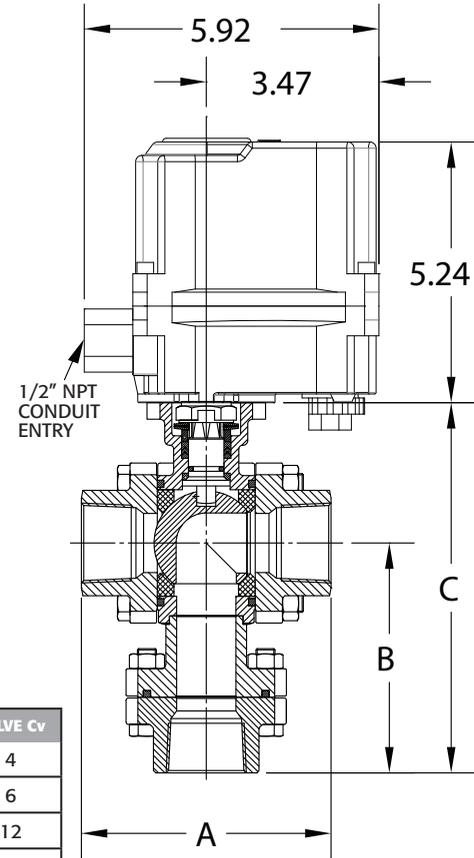
Blowout Proof Stem w/ Dual
 Anti-Static Devices
 RTFE Seats Standard
 VL-Bottom Entry Port Arrangement
 Pyramidal Stem Seal Design

STANDARDS

Design	ANSI B16.34
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Threaded Ends	ANSI B1.20.1
Fittings	ANSI B16.11
Pipeline Valves	ISO 7-1
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Quality Assurance	ISO 9001:2015



WE Series Electric Actuator
 Weatherproof, Type 4, 4X



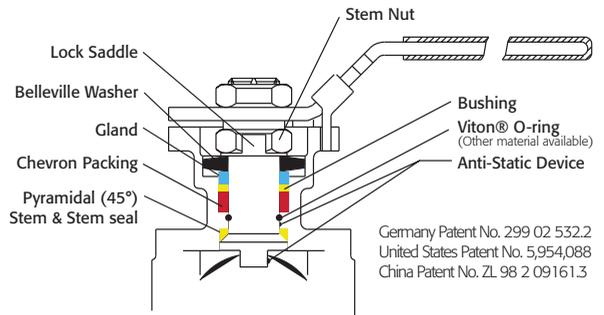
DIMENSIONS (IN)

VALVE SIZE	A	B	C	VALVE Cv
1/2"	2.85	2.83	4.51	4
3/4"	2.85	2.83	4.51	6
1"	3.36	3.31	5.15	12
1-1/4"	4.15	3.83	6.16	17
1-1/2"	4.37	3.94	6.40	35
2"	5.01	4.42	7.53	43

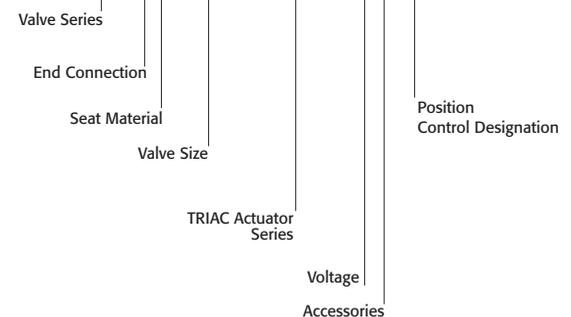
SERIES DR 3-Way Diverter Ball Valve

180° 2-POSITION	
SIZE	MODEL
1/2"	DR-TX-050/WEA1-XX-Y
3/4"	DR-TX-075/WEA1-XX-Y
1"	DR-TX-100/WEA1-XX-Y
1-1/4"	DR-TX-125/WEA1-XX-Y
1-1/2"	DR-TX-150/WEA1-XX-Y
2"	DR-TX-200/WEA1-XX-Y

180° 3-POSITION	
SIZE	MODEL
1/2"	DR-TX-050/WEA1-XX-P
3/4"	DR-TX-075/WEA1-XX-P
1"	DR-TX-100/WEA1-XX-P
1-1/4"	DR-TX-125/WEA1-XX-P
1-1/2"	DR-TX-150/WEA1-XX-P
2"	DR-TX-200/WEA1-XX-P



ELECTRIC ASSEMBLY SAMPLE PART # **DR-TX-075/WEA1-XX-P**



OPTIONS

DESCRIPTION
24 VAC/24 VDC/220VAC
Feedback potentiometer

NOTE: Heater and thermostat standard
 (2) auxiliary switches standard

Other options available - call for details
 Actuators are sized based on clean/clear fluid.

See valve part number matrix for complete part number and options.



9955 International Blvd. PHONE (513) 247-5465
 Cincinnati, Ohio 45246 FAX (513) 247-5462
 www.atcontrols.com sales@atcontrols.com

HOW TO ORDER: Manual Valves

2	Valve Series
DR	3 Way Ball Valve for Temperature Control

3	Body/Ball/Stem
Blank	Valve Series Standard (316SST)
C	Carbon Steel Body

4	End Connection
TH	NPT Ends
SW	Socket Weld Ends
BW	Butt Weld Ends
TS	NPT x Socket Weld
TB	NPT x Butt Weld

5	Valve Size
0050*	1/2" 0150 1-1/2"
0075	3/4" 0200 2"
0100	1"
0125	1-1/4"

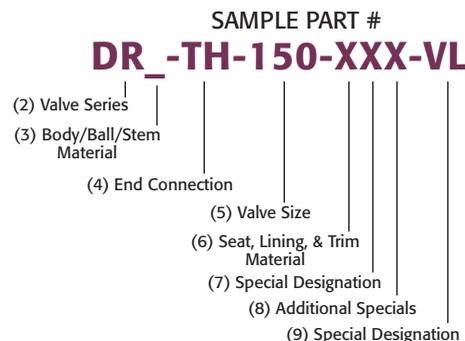
* Full Port

6	Seat, Lining & Trim Material
X	Reinforced TFE Seats (RTFE)

7	Special Designation
X	No Specials/Series Standard Handle
G	Gear Operator
H	Gear Operator with Lockout Plate

8	Additional Specials
X	No Specials/Series Standard

9	Special Designation
VL	Port Arrangement
LL	Port Arrangement



HOW TO ORDER: Automated Valves

2	Valve Series
DR	3 Way Ball Valve for Temperature Control

3	Body/Ball/Stem
Blank	Valve Series Standard (316SST)
C	Carbon Steel Body

4	End Connection
T	NPT Ends
S	Socket Weld Ends
B	Butt Weld Ends
M	NPT x Socket Weld
P	NPT x Butt Weld

5	Seat, Lining & Trim
1	Valve Series Standard Seats Reinforced TFE Seats (RTFE)
S	50/50 STFE Seats
T	TFM™-1600 Seats

6	Valve Size
0050*	1/2" 0150 1-1/2"
0075	3/4" 0200 2"
0100	1"
0125	1-1/4"

* Full Port

7 (B)	Pneumatic Action
D	Double Acting (DA)
S	Spring CW (5 springs)*
O	Spring CCW (5 springs)*
4	Spring CW (4 springs)**
F	Spring CCW (4 springs)**

*2500 & 3500 80 psig spring

**2500 & 3500 60 psig spring

7	Actuator - Electric (On-Off)
WEX1	WE-350 WEG1 WE-5200
WEA1	WE-500 WEH1 WE-6900
WEB1	WE-690 WEJ1 WE-10500
WEC1	WE-1350 WEK1 WE-17500
WED1	WE-1700 WEL1 WE-25900
WEE1	WE-2640 WEM1 WE-53000
WEF1	WE-4400 WEN1 WE-80000

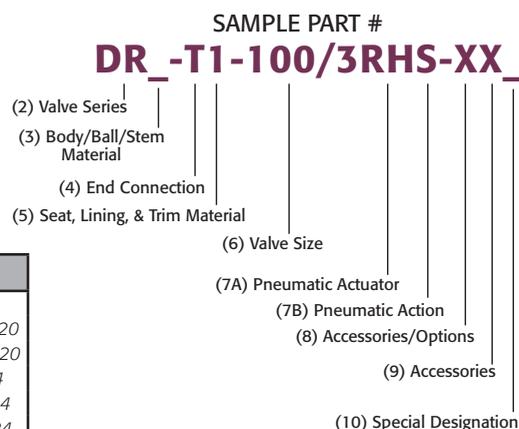
7	Actuator - Electric (Modulating)
WEA2	WEM-500 WEH2 WEM-6900
WEB2	WEM-690 WEJ2 WEM-10500
WEC2	WEM-1350 WEK2 WEM-17500
WED2	WEM-1700 WEL2 WEM-25900
WEE2	WEM-2640 WEM2 WEM-53000
WEF2	WEM-4400 WEN2 WEM-80000
WEG2	WEM-5200

8	Accessories/Options	Model no.
X	No Specials	
A	TYPE 4 Solenoid 120VAC	TVCS-X411-4N-A120
B	TYPE 7 Solenoid 120VAC	TVC6-X411-7N-A120
C	Intrinsically Safe Solenoid	TVIS-X411-4N-D24
D	TYPE 4 Solenoid 24VDC	TVCS-X411-4N-D24
F	TYPE 7 Solenoid 24VDC	TVC6-X411-7N-D24
Q	TYPE 4 SST Solenoid 120VAC	TVSS-X411-4N-A120
M	TYPE 7 SST Solenoid 120VAC	TVSS-X411-7N-A120
L	TYPE 4 SST Solenoid 24VDC	TVSS-X411-4N-D24
N	TYPE 7 SST Solenoid 24VDC	TVSS-X411-7N-D24
P	Pneumatic Positioner	PPR-1200
E	Electro-Pneumatic Positioner	EPR-1000
R	24VDC Electric Actuator	
S	220VAC Electric Actuator	
T	Other Voltage Electric Actuator	
W	12VDC Electric Actuator	
Y	24VAC Electric Actuator	

* No voltage specified on electric assemblies denotes 120VAC

9	Accessories	Model no.
X	No Specials	
A	TYPE 4 Limit Switch	APL-210N
B	TYPE 7 Limit Switch	APL-510N
C	Intrinsically Safe Limit Switch	APL-218N
Q	TYPE 4 SST Limit Switch	APL-910N
M	TYPE 7 SST Limit Switch	APL-510S
H	NEMA 4 Std. Enc.	APL-310N
1	HS1 High Speed Electric	
2	HS2 High Speed Electric	

10	Special Designation
Blank	No Designation, SST Stem
Y	2-Position, 180° Control for Wine Industry
P	3-Position, 180° Control for Wine Industry
F	Viton® Seal for Pneumatic Actuators (0°F to 300°F)



7 (A)	Pneumatic Actuator - 3R, 3N, 3P Series
3RC	3R10 3RM 3R850
3RD	3R20 3RN 3R1000
3RE	3R40 3RP 3R1200
3RF	3R80 3RR 3R1750
3RG	3R130 3RS 3R2400
3RH	3R200 3RT 3R2500
3RJ	3R300 3RU 3R2700
3RK	3R500 3RV 3R3300
3RL	3R700 3RW 3R3500

3R=Standard, 3N=Electroless Nickel Plating, 3P=Teflon™ (PTFE) Coating

7 (A)	Pneumatic Actuator - S2 Series
S2C	S2-052 S2G S2-125
S2D	S2-063 S2H S2-140
S2E	S2-083 S2J S2-160
S2F	S2-105 S2K S2-210