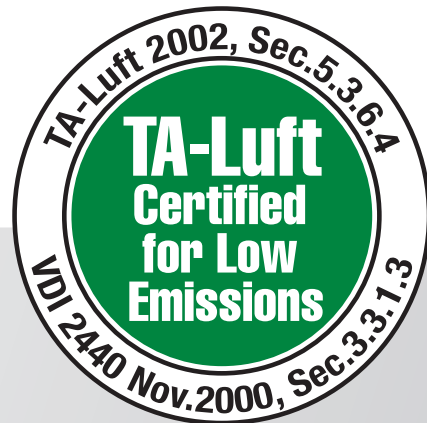
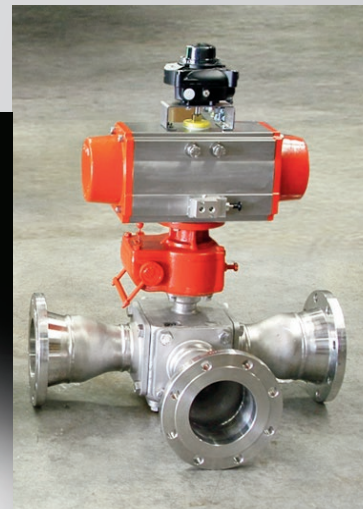


# TRIAQ®



**SERIES 33/43/53 Multiport**



# Series 33/43/53

**3, 4, 5-Way  
Direct Mount  
Multiport Ball Valves  
1/4" - 4"**

 **A-T Controls, Inc.**

9955 International Blvd.  
Cincinnati, Ohio 45246  
www.atcontrols.com

PHONE (513) 247-5465  
FAX (513) 247-5462  
sales@atcontrols.com

# SERIES 33/43/53 Multiport



This versatile, high performance multiport ball valve offers solutions to mixing and diverting with various available flow patterns and end configurations. It can be maintained in-line, leaving the end pieces intact.

The direct mount design makes automation easier and maintains a lower profile. This valve features the pyramidal stem design that is so effective in other Triac valve series. There are a myriad of end piece and flow pattern combinations.

## Easy to Automate!

See automated data sheets for pre-sized assemblies



Pneumatic



Electric

# SERIES 33/43/53

## 3, 4 & 5-Way Direct Mount Multiport Ball Valves

Sizes 1/4" - 4"

Available in 316SST

Full Port with various Port Arrangements

Pressure Rating by size

1000 psi (1/4"-1/2")

800 psi (3/4"-1")

600 psi (1-1/4"-2")

400 psi (2-1/2"-3")

275 psi (4")

NPT, Socket Weld or Butt Weld Ends (1/4"-4")

150/300# Flanged, Sanitary (1/2"-4") 20 RA Max

NACE MR-0175 (optional)

ISO 5211 Actuator Mounting Pad

Blowout Proof Stem w/ Dual  
Anti-Static Devices

5 Seat Design (RTFE Standard)

Pyramidal Stem Seal Packing System

Lockable Manual Handle

## HOW TO ORDER MANUAL VALVES

SAMPLE PART #

**33-TH-0150-XXX-M**

Valve Series

End Connection

Valve Size

Seat Material

Additional Specials

Special Designation

Special Designation

See manual and automated part number matrices for itemized options

**STANDARDS**

**Design**  
**End Connections**  
**Flanged Ends**  
**Pressure Testing**  
**Mounting**  
**Safety Integrity**  
**CE Approval**  
**NACE MR0175**  
**Marking System for Valves**  
**Material Certification**  
**Quality Assurance**

ASME B16.34 (fully conforms)  
 ASME B1.20.1, B16.11, B16.25  
 ASME B16.5  
 API 598  
 ISO 5211  
 SIL 3; IEC 61508:2010  
 PED 2014/68/EU Module H (Series 33 only)  
 (optional)  
 ISO 5209  
 EN 10204-3.1 MTR  
 ISO 9001:2015, CRN Numbers on file

**Valve Model and End Connections Reference**

SERIES	33	43	53
	3-Way	4-Way	5-Way
NPT	33-TH	43-TH	53-TH
Socket Weld	33-SW	43-SW	53-SW
Butt Weld	33-BW	43-BW	53-BW
Flanged (ASME Class 150)	33-F1	43-F1	53-F1
Flanged (ASME Class 300)	33-F3	43-F3	53-F3
Sanitary Clamp	33-SA	43-SA	53-SA
Sanitary Cavity Filled	33-SF	43-SF	53-SF

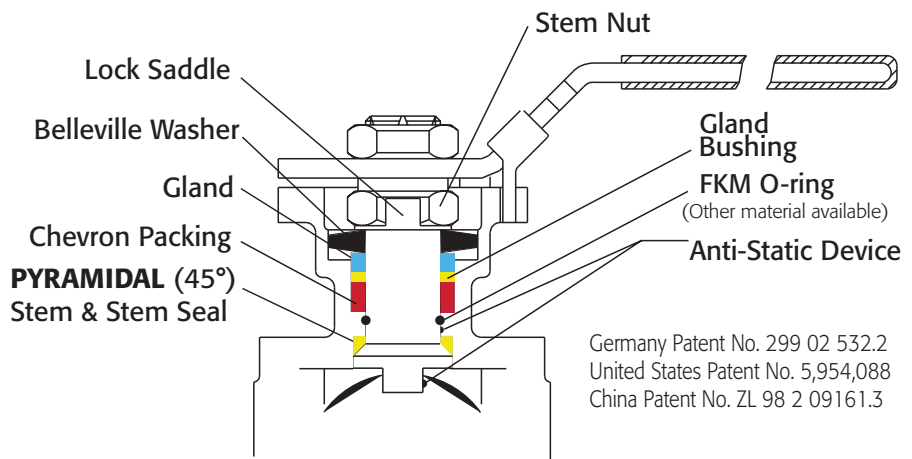
**Port Arrangements**

**L, T, X, & I-Port**  
 Vertical L (**VL**) & Vertical T (**VT**)  
 Double **TT**, Double **LL**

**Seat Material Options**

RTFE (standard)  
 PTFE, CTFE, 50/50 STFE, TFM™ 1600, MG1241, UHMWPE, & others

**Pyramidal Stem Seal Sealing System**



Germany Patent No. 299 02 532.2  
 United States Patent No. 5,954,088  
 China Patent No. ZL 98 2 09161.3

TFM™ is a trademark of Dyneon™, a 3M Company.  
 Viton® is a registered trademark of E. I. DuPont de Nemours.



**Series 33, 43 and 53 Direct Mount Multiport 3, 4 and 5-Way Ball Valves offer superior performance and reliability required to optimize manual and automation process performance.**



**Design Features**

**Dual Pattern ISO 5211 Mounting Pad with Square Shaft**

No bracket and adapter are required for actuator mounting, provides easy and low cost automation with improved cycle life

**5-Seat Construction**

For equal seat loading and positive sealing at any port, and maintain proper ball alignment

**5-Entry Construction**

**O-Ring Stem Seal**

Enhances stem wear and maintains stem alignment

**Anti-Static Device**

Standard applied stem-to-ball; stem-to-body

**Variety of End Connections Available for Options**

**Stem**

- Pyramidal stem packing arrangement provides optimum stem seal and extremely high cycle life

- Super smooth stem surface reduces seal friction and operating torque

- Blowout proof stem prevents stem from blowing out, for maximum safety

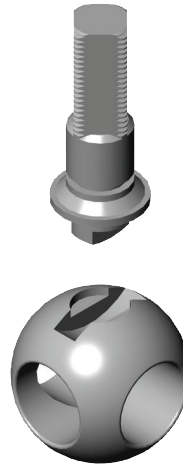
**Ball**

Precisely machined, solid ball for bubble tight shut-off with less operating torque

**Seats**

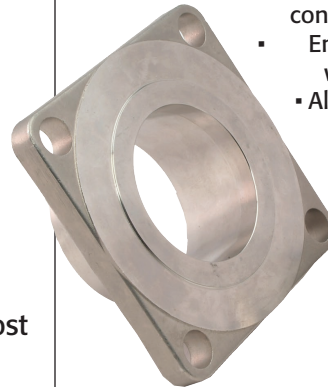
Wide range of seat materials available to suit various applications

**Ball and Stem Connections**



Semi-Trunnion Ball Design produces a locked ball-to-stem connection offering a positive connection that effectively eliminates backlash and hysteresis. The stem connection ensures accurate, precise positioning of the ball and lower operating torque for better actuation.

**End Cap design is separated from seat retainer in two-piece "Easy-to-Maintain" construction**



- Designed to overcome the problem of conventional end cap design.
- End caps remove easily from valve body when valves are mounted in pipeline.
- Allows fast and easy replacement of gasket and seats.
- Lowers costs throughout life cycle.



The conventional end cap and seat retainer was a one piece design that made the end caps extend into the valve body, creating a problem when repair and maintenance is required. It is very difficult to remove end caps from the valve body when valves are mounted in line, especially when welded . . . **not true with the Series 33, 43 and 53!**

**Series 33, 43 and 53 5-Piece Design Cavity Filled Seats**



The cavity filled seats are designed to fill the dead space between the ball and valve body that can contaminate the process. Our cavity filled seats fill 95% of the dead space while competitors' cavity filled seats for multi-port ball valves can only fill a maximum of 80% of the dead space.

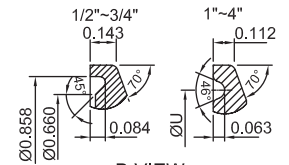
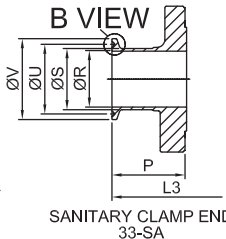
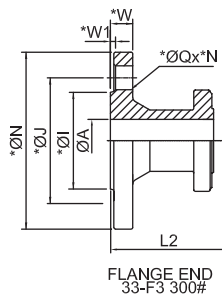
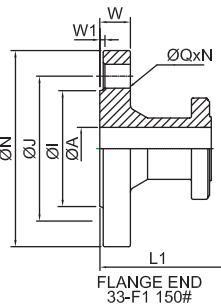
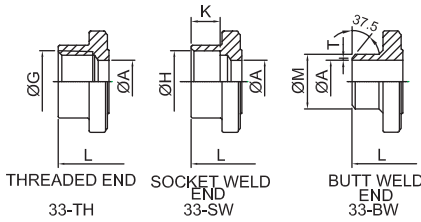
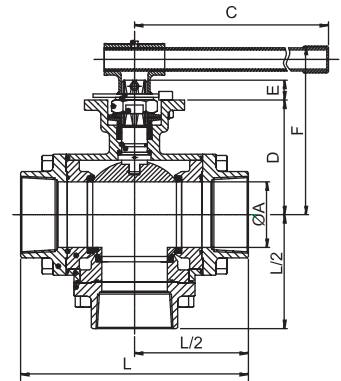
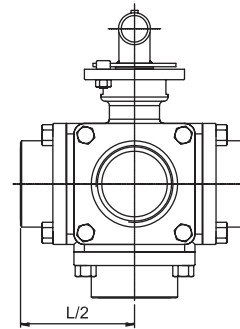
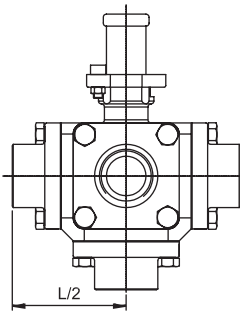
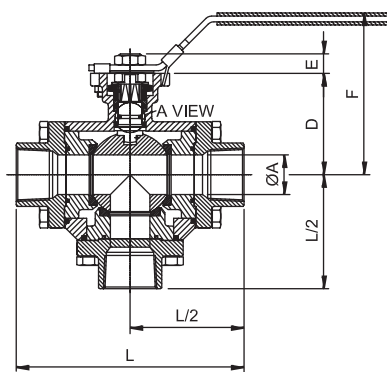
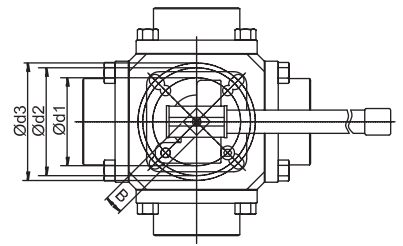
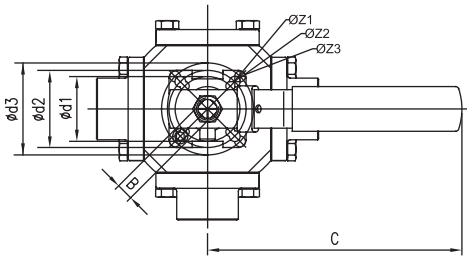
# SERIES 33/43/53 Multiport Ball Valves

## 33, 43, 53 Series 3, 4, 5-Way

1/4" - 2-1/2"

## Dimensional Drawings

3" - 4"



### DIMENSIONS (IN)

SIZE												NPT, SOCKET WELD, & BUTT WELD ENDS								
	ØA	B	C	D	E	F	Ød1	Ød2	Ød3	ØZ1	ØZ2	ØZ3	ISO 5211	ØG	ØH	K	ØM	T	L	LBS.
1/4"	0.46	0.354	5.91	1.73	0.35	3.35	1.417	1.654	1.969	0.27	0.27	0.27	F03/F04/F05	1/4" NPT	0.56	0.39	0.64	0.06	3.62	3
3/8"	0.50	0.354	5.91	1.73	0.35	3.35	1.417	1.654	1.969	0.27	0.27	0.27	F03/F04/F05	3/8" NPT	0.69	0.39	0.69	0.06	3.62	3
1/2"	0.59	0.354	5.91	1.73	0.35	3.35	1.417	1.654	1.969	0.27	0.27	0.27	F03/F04/F05	1/2" NPT	0.86	0.39	0.89	0.06	3.62	3
3/4"	0.79	0.433	6.50	2.13	0.41	3.66	1.654	1.969	-	0.27	0.27	-	F04/F05	3/4" NPT	1.07	0.51	1.08	0.06	4.33	6
1"	0.98	0.433	10.35	2.52	0.41	4.25	1.654	1.969	2.756	0.27	0.27	0.35	F04/F05/F07	1" NPT	1.33	0.51	1.34	0.06	5.67	11
1-1/4"	1.26	0.551	10.35	3.09	0.51	5.00	1.969	2.756	-	0.27	0.35	-	F05/F07	1-1/4" NPT	1.68	0.51	1.68	0.06	5.75	13
1-1/2"	1.50	0.748	10.35	3.74	0.71	5.98	2.756	4.016	-	0.39	0.47	-	F07/F10	1-1/2" NPT	1.93	0.51	1.91	0.06	6.46	23
2"	1.97	0.748	12.32	4.00	0.71	6.26	2.756	4.016	-	0.39	0.47	-	F07/F10	2" NPT	2.41	0.63	2.38	0.06	7.24	30
2-1/2"	2.56	0.748	13.54	4.72	0.71	6.97	2.756	4.016	-	0.39	0.47	-	F07/F10	2-1/2" NPT	3.03	0.63	3.00	0.08	9.29	47
3"	2.99	0.866	12.48	5.23	0.91	7.68	4.016	4.921	-	0.47	0.55	-	F10/F12	3" NPT	3.54	0.63	3.54	0.08	10.43	64
4"	3.94	0.866	20.08	6.46	0.91	8.90	4.016	4.921	-	0.47	0.55	-	F10/F12	4" NPT	4.55	0.79	4.57	0.14	12.60	127

SIZE	ASME CLASS 150 FLANGED ENDS							ASME CLASS 300 FLANGED ENDS							SANITARY CLAMP ENDS										
	ØI	ØJ	ØN	ØQ	N	W1	W	L1	LBS.	*ØI	*ØN	*ØJ	*ØQ	*N	*W1	*W	L2	LBS.	ØR	ØS	ØU	ØV	P	L3	LBS.
1/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/8"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/2"	1.38	2.38	3.50	0.63	4	0.06	0.44	5.91	5.55	1.38	3.75	2.62	0.63	4	0.06	0.56	6.30	CF	0.37	0.50	-	0.99	1.17	4.33	3
3/4"	1.69	2.75	3.88	0.63	4	0.06	0.44	6.89	10.65	1.69	4.62	3.25	0.75	4	0.06	0.62	7.48	CF	0.62	0.75	-	1.00	1.44	5.51	6
1"	2.00	3.12	4.25	0.63	4	0.06	0.44	8.07	14	2.00	4.88	3.50	0.75	4	0.06	0.69	8.46	20	0.87	1.00	1.71	1.98	1.52	6.30	11
1-1/4"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-1/2"	2.88	3.88	5.00	0.63	4	0.06	0.56	10.04	32	2.88	6.12	4.50	0.87	4	0.06	0.81	10.63	41	1.37	1.50	1.71	1.99	1.79	7.87	23
2"	3.62	4.75	6.00	0.75	4	0.06	0.63	11.02	45	3.62	6.50	5.00	0.75	8	0.06	0.88	11.42	60	1.87	2.00	2.20	2.52	1.95	8.66	30
2-1/2"	4.12	5.50	7.00	0.75	4	0.06	0.69	12.80	68	4.12	7.50	5.88	0.87	8	0.06	1.00	13.39	CF	2.37	2.50	2.78	3.05	1.85	9.45	47
3"	5.00	6.00	7.50	0.75	4	0.06	0.75	13.58	88	5.00	8.25	6.62	0.87	8	0.06	1.12	CF	CF	2.87	3.00	3.28	3.58	2.10	10.43	61
4"	6.19	7.50	9.00	0.75	8	0.06	0.94	15.98	166	6.19	10.0	7.88	0.87	8	0.06	1.25	CF	CF	3.83	4.00	4.34	4.68	2.11	12.60	124

# Bill of Materials 33/43/53 Series

## MATERIALS LIST

NO.	PART NAME	QTY	MATERIAL	MATERIAL
1	BODY	1	ASTM A351 GRADE CF8M <sup>^</sup>	ASTM A216 GRADE WCB
2	END CAP	*	ASTM A351 GRADE CF8M <sup>^</sup>	ASTM A216 GRADE WCB
3	BLIND	*	ASTM A351 GRADE CF8M <sup>^</sup>	ASTM A216 GRADE WCB
4	SEAT RETAINER	5	ASTM A351 GRADE CF8M <sup>^</sup>	ASTM A351 GRADE CF8M
5	BALL	1	1/4" THRU 3/8" ASTM A276 SS316	1/4" THRU 3/8" ASTM A276 SS316
5	BALL	1	1/2" THRU 4" ASTM A351 GRADE CF8M <sup>^</sup>	1/2" THRU 4" ASTM A351 GRADE CF8M
6	SEAT	5	RTFE	RTFE
7	JOINT GASKET	5	PTFE	PTFE
8	STEM SEAL	1	RTFE	RTFE
9	STEM	1	ASTM A276 SS316 <sup>^^</sup>	ASTM A276 SS316
10	GLAND PACKING	1 SET	PTFE	PTFE
11	GLAND BUSHING	1	AISI 304	AISI 304
12	BELLEVILLE WASHER	2	AISI 301	AISI 301
13	LOCK SADDLE	1	AISI 304	AISI 304
14	STEM NUT	**	AISI 304	AISI 304
15	STEM WASHER	1	AISI 304	AISI 304
16	RETAINER SEAL	5	PTFE	PTFE
17	HANDLE SLEEVE	1	VINYL	VINYL
18	LOCKING DEVICE	1	AISI 304	AISI 304
19	BOLT	20	ASTM A193 GRADE B8	ASTM A193 GRADE B8
20	PIN NUT	1	AISI 304	AISI 304
21	STOP PIN	1	AISI 304	AISI 304
22	O-RING	1***	FKM	FKM
23	LOCKING PLATE	1	AISI 304	AISI 304
24	HANDLE	1	AISI 304	AISI 304
25	HANDLE HUB	1	AISI 304	AISI 304
26	HANDLE NUT	2	AISI 304	AISI 304
27	ANTI-STATIC DEVICE	1	AISI 316	AISI 316
28	WASHER	1	AISI 304	AISI 304
29	TRUNNION BEARING	1	50/50 STFE	50/50 STFE
30	TRUNNION RETAINER	1	AISI 316	AISI 316

\*FOR 33 SERIES: QTY 3 END CAP-A, QTY 2 BLIND

\*FOR 43 SERIES: QTY 4 END CAP-A, QTY 1 BLIND

\*FOR 53 SERIES: QTY 5 END CAP-A, QTY 0 BLIND

<sup>^</sup>ASTM A351 GRADE CF3M for 33-SA/43-SA/53-SA VALVES

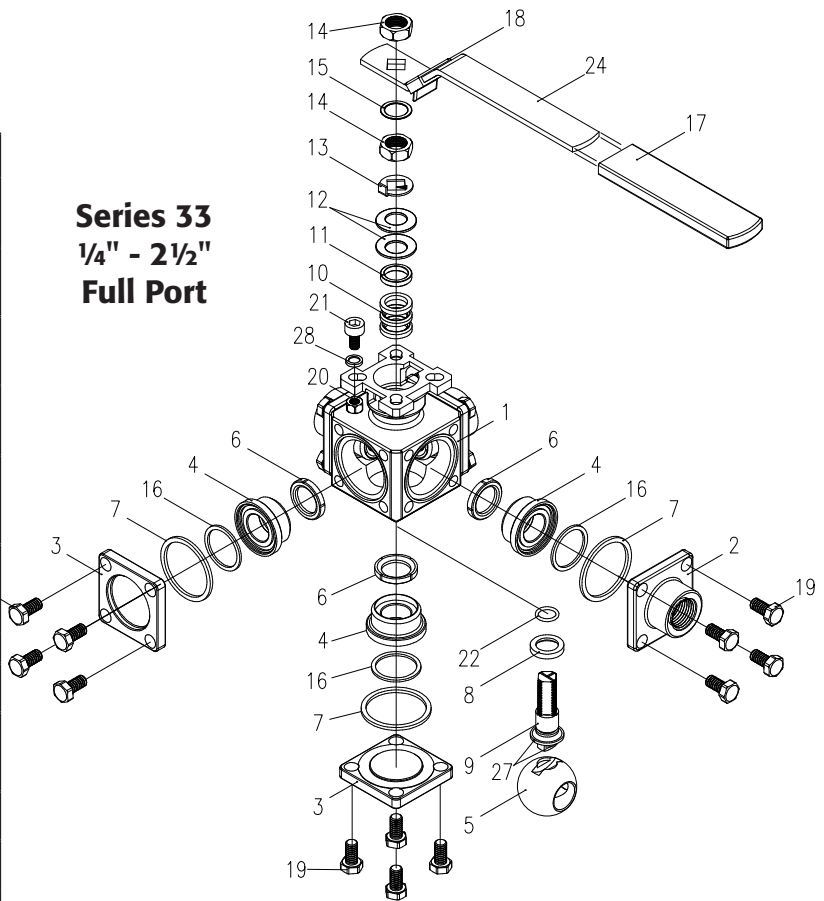
\*\*FOR 1/4"-2-1/2": QTY 2

\*\*FOR 3"-4": QTY 1

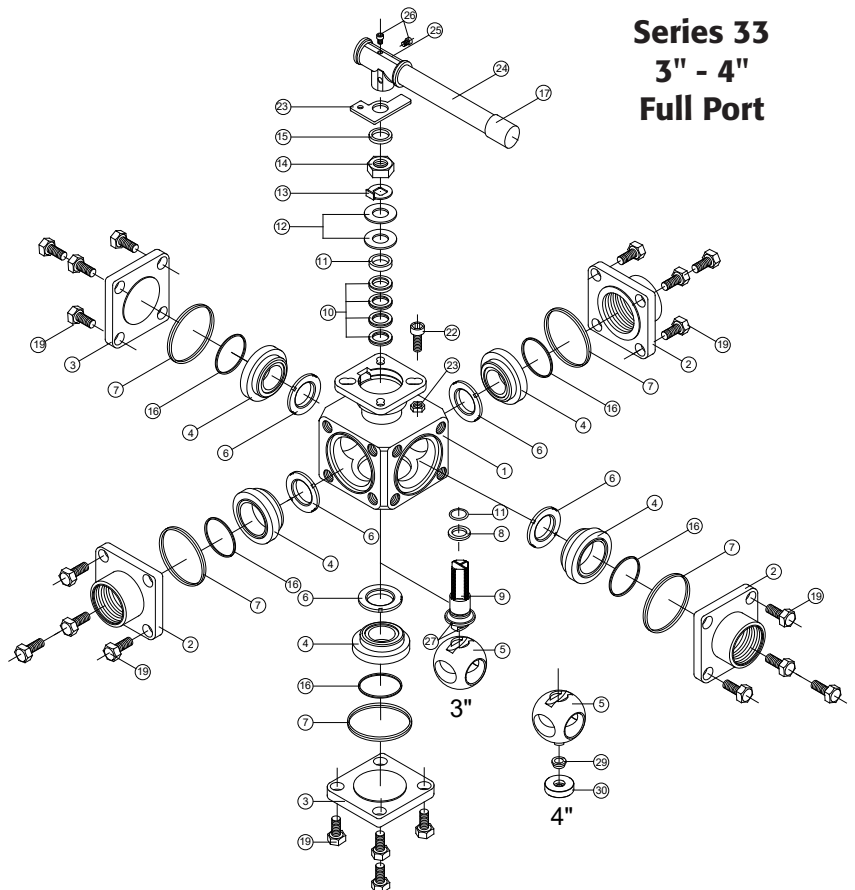
<sup>^^</sup>ASTM A276 SS316L for 33-SA/43-SA/53-SA valves

\*\*\*SERIES 33-SA/43-SA/53 QTY: 0

**Series 33  
1/4" - 2 1/2"  
Full Port**

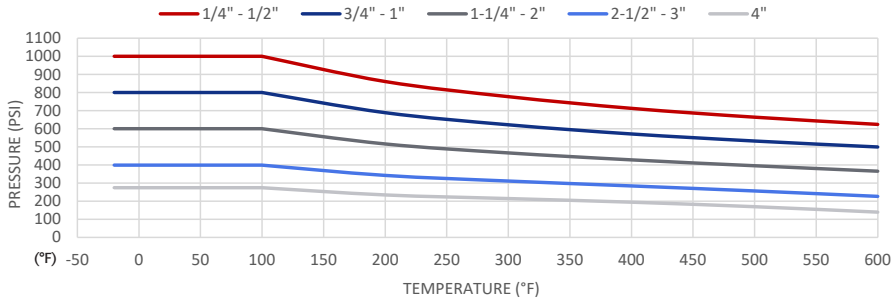


**Series 33  
3" - 4"  
Full Port**



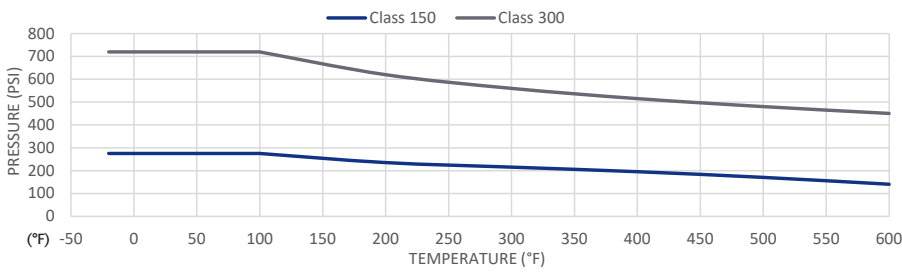
# SERIES 33/43/53 Multiport Ball Valves

## SERIES 33 TH/SW/BW | BODY PRESSURE VS. TEMPERATURE ASME B16.34



Body Pressure Rating (psig) ASME B16.34 33-TH/SW/BW					
Temp	1/4" - 1/2"	3/4" - 1"	1-1/4" - 2"	2-1/2" - 3"	4"
-20°F	1000	800	600	400	275
100°F	1000	800	600	400	275
200°F	861	689	516	343	235
300°F	778	622	467	312	215
400°F	713	572	429	285	195
500°F	665	533	396	257	170
600°F	625	500	366	227	140

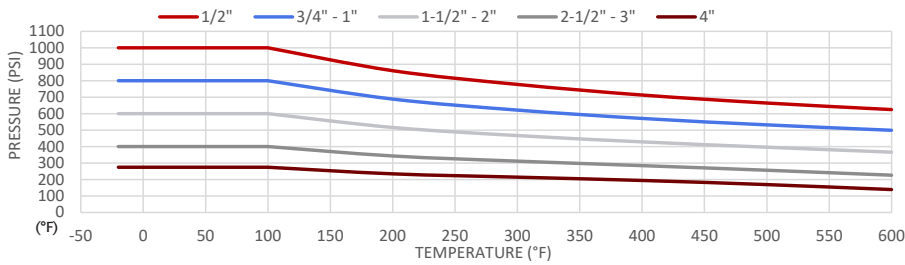
## SERIES 33 F1/F3 | BODY PRESSURE VS. TEMPERATURE ASME B16.34



Body Pressure Rating (psig) ASME B16.34 33-F1 and 33-F3		
Temp	Class 150	*Class 300 1/4" - 1"
-20°F	275	720
100°F	275	720
200°F	235	620
300°F	215	560
400°F	195	515
500°F	170	480
600°F	140	450

\*Class 300 valves larger than 1" are limited by their body pressure rating (see TH/SW/BW ratings)

## SERIES 33 SA | BODY PRESSURE VS. TEMPERATURE ASME B16.34

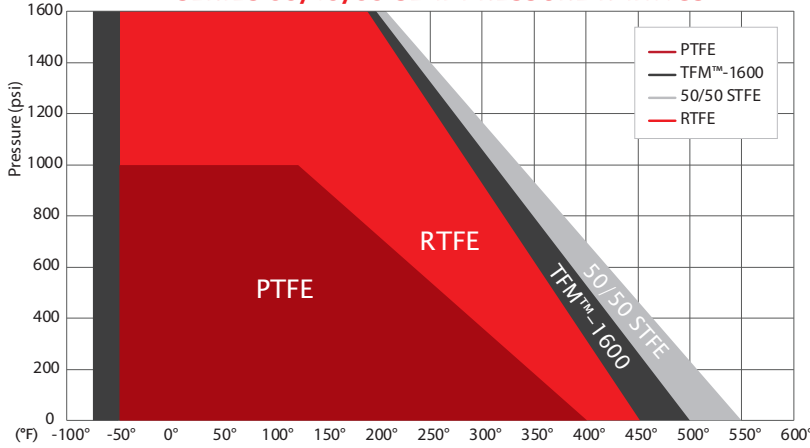


Body Pressure Rating (psig) ASME B16.34 33-SA/SF					
Temp	1/4" - 1/2"	3/4" - 1"	1-1/4" - 2"	2-1/2" - 3"	4"
-20°F	1000	800	600	400	275
100°F	1000	800	600	400	275
200°F	861	689	516	343	235
300°F	778	622	467	312	215
400°F	713	572	429	285	195
500°F	665	533	396	257	170
600°F	625	500	366	227	140

NOTE: At temperature, valves are limited by either the valve body/end cap pressure ratings, seat pressure ratings, or packing/stem seal/gaskets; whichever is lower. See next page for temperature ratings of valve components.

## Technical Data

**PRESSURE VS. TEMPERATURE  
SERIES 33/43/53 SEAT PRESSURE RATINGS**



Temp	Pressure - Seat Material			
	RTFE	STFE	PTFE	TFM™-1600
-75°				2000
-50°	2000	2000	1000	2000
100°	2000	2000	1000	2000
122°	2000	2000	1000	2000
150°	1829	1869	899	1852
200°	1524	1636	719	1587
250°	1220	1402	540	1323
300°	915	1168	360	1058
350°	610	935	180	794
400°	305	701	0	529
450°	0	467		265
500°		234		0
550°		0		

**Component Temperature Ratings**

Component	Material	Temperature
Stem Packing	PTFE	-50°F to 400°F
Stem Seal	PTFE (standard -SA/-SF valves)	-50°F to 400°F
	RTFE (standard -TH/-SW/-BW/-F1/-F3 valves)	-50°F to 450°F
Gaskets	PTFE	-50°F to 400°F
Seats (Other Materials Available)	PTFE (standard -SA/-SF valves)	-50°F to 400°F
	RTFE (standard -TH/-SW/-BW/-F1/-F3 valves)	-50°F to 450°F
	TFM™-1600	-75°F to 500°F
	50/50 STFE	-50°F to 550°F
O-Rings (N/A -SA/-SF valves)	FKM (standard)	-20°F to 450°F
	Markez® Z1028	5°F to 608°F
	Kalrez® 4079	30°F to 600°F
	Chemraz® 505	-22°F to 446°F
	Kalrez® 6375	-4°F to 527°F
	Perlast® G75M	5°F to 500°F
	Chemraz® 564	-40°F to 445°F
	Low Temp Buna	-65°F to 275°F
	EPDM	-70°F to 250°F
Silicone	-60°F to 400°F	

NOTE: At temperature, valves are limited by either the valve body/end cap pressure ratings, seat pressure ratings, or packing/stem seal/gaskets; whichever is lower.

VALVE SIZE	Cv Flow Coefficients					
	L-Port	T-Port Through	T-Port Branch	LL-Port Horizontal	LL-Port Vertical	VL-Port
1/4"	4	7	4	3	3	4
3/8"	5	9	4	4	4	5
1/2"	6	10	5	6	5	6
3/4"	16	21	13	15	13	16
1"	31	36	22	27	30	31
1-1/4"	32	58	25	28	33	32
1-1/2"	75	90	55	65	75	75
2"	140	175	100	120	145	140
2-1/2"	210	235	149	175	220	210
3"	375	450	270	300	375	375
4"	670	800	475	353	675	670

Break Away Torque for RTFE Seats	
SIZE	IN-LBS
1/4"	117
3/8"	146
1/2"	184
3/4"	286
1"	554
1-1/4"	611
1-1/2"	1010
2"	1269
2-1/2"	1465
3"	1770
4"	2624

Published torques are based on full differential pressure with clean water. Consult the Application Sizing Guide for assistance with sizing actuators.

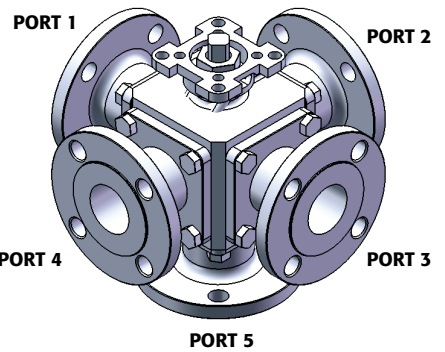
NOTE: For other seat material, consult factory



# SERIES 33/43/53 Multi-Port

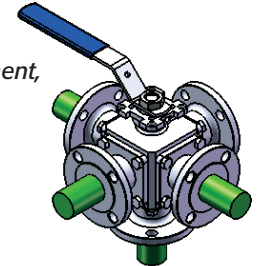
## Flow Patterns

3-WAY (33 SERIES)		POSITION			
PORT	Arrangement	1	2	3	4
L	L				
LL	M				
LL	N				
VL	O				
VL	P				
T	T				
TT	U				
TT	S				
VT	V				
VT	W				



**EXAMPLE:** A Series 53 (5-way) valve specified with a **TT** port and **U** arrangement in ball **Position 1** will have flow paths open at **Ports 1, 3, 4, and 5**.

53 Series  
TT Port, U Arrangement,  
Shown in Position 1

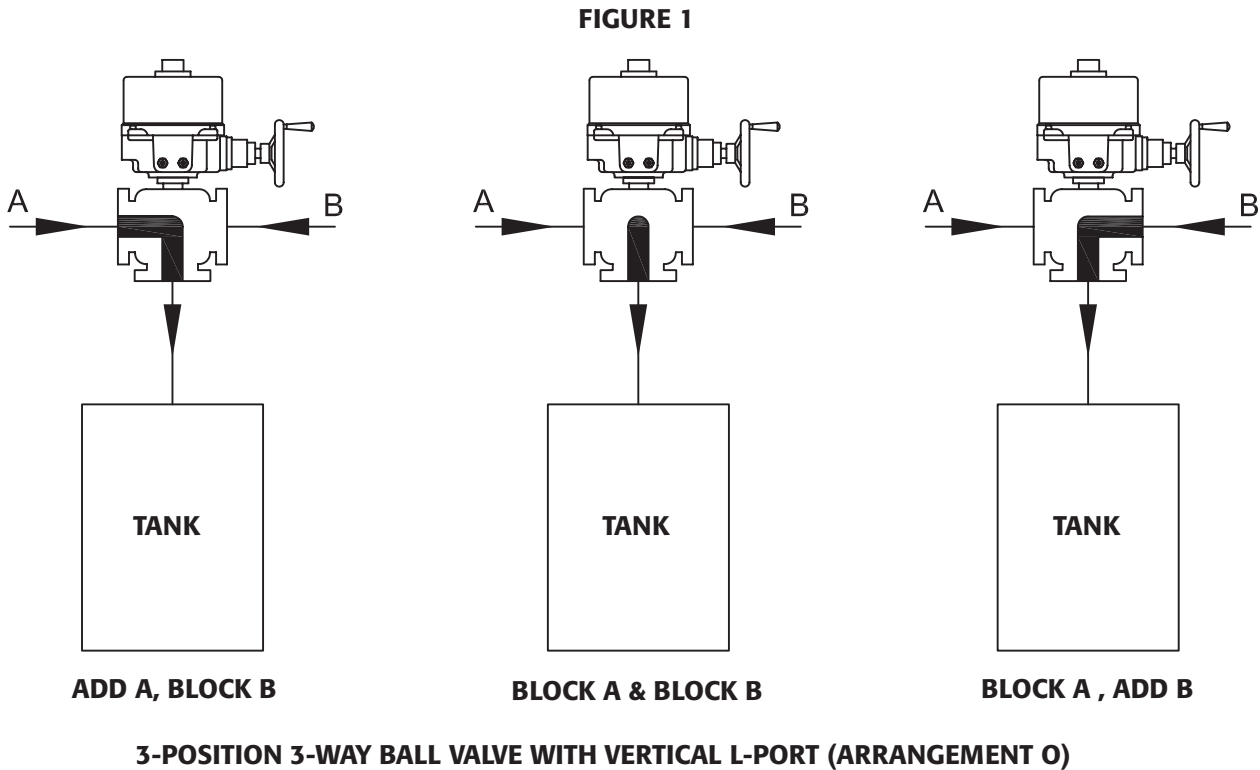


4-WAY (43 SERIES)		POSITION			
PORT	Arrangement	1	2	3	4
I	I				
L	L				
LL	M				
VL	O				
T	T				
TT	U				
VT	V				
X	X				

## Flow Patterns

5-WAY (53 SERIES)		POSITION			
PORT	ARRANGEMENT	1	2	3	4
LL	M				
VL	O				
TT	U				
VT	V				

Actuators on the following pages are sized based on full differential pressure with clean water. Consult the Application Sizing Guide for assistance with sizing actuators.



# Series 33

## Threaded, Socket Weld and Butt Weld

### Automated Model numbers

**3-Way  
Double Acting**

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	33-TX-025/TR1D-XX-(* )	1/4"	33-TX-025/2R2D-XX-(* )
3/8"	33-TX-038/TR1D-XX-(* )	3/8"	33-TX-038/2R2D-XX-(* )
1/2"	33-TX-050/2R2D-XX-(* )	1/2"	33-TX-050/2R2D-XX-(* )
3/4"	33-TX-075/2R2D-XX-(* )	3/4"	33-TX-075/2R3D-XX-(* )
1"	33-TX-100/2R2D-XX-(* )	1"	33-TX-100/2R3D-XX-(* )
1-1/4"	33-TX-125/2R3D-XX-(* )	1-1/4"	33-TX-125/2R4D-XX-(* )
1-1/2"	33-TX-150/2R4D-XX-(* )	1-1/2"	33-TX-150/2R4D-XX-(* )
2"	33-TX-200/2R5D-XX-(* )	2"	33-TX-200/2R5D-XX-(* )
2-1/2"	33-TX-250/2R5D-XX-(* )	2-1/2"	33-TX-250/2R6D-XX-(* )
3"	33-TX-300/2R6D-XX-(* )	3"	33-TX-300/2R7D-XX-(* )
4"	33-TX-400/2R7D-XX-(* )	4"	33-TX-400/2R8D-XX-(* )

**3-Way  
Spring Return**

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	33-TX-025/2R2S-XX-(* )	1/4"	33-TX-025/2R3S-XX-(* )
3/8"	33-TX-038/2R2S-XX-(* )	3/8"	33-TX-038/2R3S-XX-(* )
1/2"	33-TX-050/2R2S-XX-(* )	1/2"	33-TX-050/2R3S-XX-(* )
3/4"	33-TX-075/2R3S-XX-(* )	3/4"	33-TX-075/2R4S-XX-(* )
1"	33-TX-100/2R4S-XX-(* )	1"	33-TX-100/2R4S-XX-(* )
1-1/4"	33-TX-125/2R4S-XX-(* )	1-1/4"	33-TX-125/2R5S-XX-(* )
1-1/2"	33-TX-150/2R6S-XX-(* )	1-1/2"	33-TX-150/2R6S-XX-(* )
2"	33-TX-200/2R6S-XX-(* )	2"	33-TX-200/2R7S-XX-(* )
2-1/2"	33-TX-250/2R6S-XX-(* )	2-1/2"	33-TX-250/2R7S-XX-(* )
3"	33-TX-300/2R8S-XX-(* )	3"	33-TX-300/2R8S-XX-(* )
4"	33-TX-400/2R9S-XX-(* )	4"	33-TX-400/2R0S-XX-(* )

**3-Way  
Electric**

On-Off		Modulating	
SIZE	MODEL	SIZE	MODEL
1/4"	33-TX-025/WEA1-XX-(* )	1/4"	33-TX-025/WEA2-XX-(* )
3/8"	33-TX-038/WEA1-XX-(* )	3/8"	33-TX-038/WEA2-XX-(* )
1/2"	33-TX-050/WEA1-XX-(* )	1/2"	33-TX-050/WEA2-XX-(* )
3/4"	33-TX-075/WEA1-XX-(* )	3/4"	33-TX-075/WEA2-XX-(* )
1"	33-TX-100/WEA1-XX-(* )	1"	33-TX-100/WEA2-XX-(* )
1-1/4"	33-TX-125/WEB1-XX-(* )	1-1/4"	33-TX-125/WEB2-XX-(* )
1-1/2"	33-TX-150/WEC1-XX-(* )	1-1/2"	33-TX-150/WEC2-XX-(* )
2"	33-TX-200/WED1-XX-(* )	2"	33-TX-200/WED2-XX-(* )
2-1/2"	33-TX-250/WEE1-XX-(* )	2-1/2"	33-TX-250/WEE2-XX-(* )
3"	33-TX-300/WEE1-XX-(* )	3"	33-TX-300/WEE2-XX-(* )
4"	33-TX-400/WEF1-XX-(* )	4"	33-TX-400/WEF2-XX-(* )

\* Port Arrangement designation: See page 8 for options

# Series 33

## Flanged - ANSI Class 150

### Automated Model numbers

#### 3-Way Double Acting

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	33-F1-050/2R2D-XX-(* )	1/2"	33-F1-050/2R2D-XX-(* )
3/4"	33-F1-075/2R2D-XX-(* )	3/4"	33-F1-075/2R3D-XX-(* )
1"	33-F1-100/2R2D-XX-(* )	1"	33-F1-100/2R3D-XX-(* )
1-1/2"	33-F1-150/2R4D-XX-(* )	1-1/2"	33-F1-150/2R4D-XX-(* )
2"	33-F1-200/2R5D-XX-(* )	2"	33-F1-200/2R5D-XX-(* )
2-1/2"	33-F1-250/2R5D-XX-(* )	2-1/2"	33-F1-250/2R6D-XX-(* )
3"	33-F1-300/2R6D-XX-(* )	3"	33-F1-300/2R7D-XX-(* )
4"	33-F1-400/2R7D-XX-(* )	4"	33-F1-400/2R8D-XX-(* )

#### 3-Way Spring Return

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	33-F1-050/2R2S-XX-(* )	1/2"	33-F1-050/2R3S-XX-(* )
3/4"	33-F1-075/2R3S-XX-(* )	3/4"	33-F1-075/2R4S-XX-(* )
1"	33-F1-100/2R4S-XX-(* )	1"	33-F1-100/2R4S-XX-(* )
1-1/2"	33-F1-150/2R6S-XX-(* )	1-1/2"	33-F1-150/2R6S-XX-(* )
2"	33-F1-200/2R6S-XX-(* )	2"	33-F1-200/2R7S-XX-(* )
2-1/2"	33-F1-250/2R6S-XX-(* )	2-1/2"	33-F1-250/2R7S-XX-(* )
3"	33-F1-300/2R8S-XX-(* )	3"	33-F1-300/2R8S-XX-(* )
4"	33-F1-400/2R9S-XX-(* )	4"	33-F1-400/2R0S-XX-(* )

#### 3-Way Electric

On-Off		Modulating	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	33-F1-050/WEA1-XX-(* )	1/2"	33-F1-050/WEA2-XX-(* )
3/4"	33-F1-075/WEA1-XX-(* )	3/4"	33-F1-075/WEA2-XX-(* )
1"	33-F1-100/WEA1-XX-(* )	1"	33-F1-100/WEA2-XX-(* )
1-1/2"	33-F1-150/WEC1-XX-(* )	1-1/2"	33-F1-150/WEC2-XX-(* )
2"	33-F1-200/WED1-XX-(* )	2"	33-F1-200/WED2-XX-(* )
2-1/2"	33-F1-250/WEE1-XX-(* )	2-1/2"	33-F1-250/WEE2-XX-(* )
3"	33-F1-300/WEE1-XX-(* )	3"	33-F1-300/WEE2-XX-(* )
4"	33-F1-400/WEF1-XX-(* )	4"	33-F1-400/WEF2-XX-(* )

\* Port Arrangement designation: See page 8 for options



# Series 33

## Non-Cavity Filled Sanitary

### Automated Model numbers

**3-Way  
Double Acting**

Sized for 80 PSI			Sized for 60 PSI	
SIZE	MODEL		SIZE	MODEL
1/4"	N/A		1/4"	N/A
3/8"	N/A		3/8"	N/A
1/2"	33-C1-050/2R2D-XX-(* )		1/2"	33-C1-050/2R2D-XX-(* )
3/4"	33-C1-075/2R2D-XX-(* )		3/4"	33-C1-075/2R3D-XX-(* )
1"	33-C1-100/2R2D-XX-(* )		1"	33-C1-100/2R3D-XX-(* )
1-1/2"	33-C1-150/2R4D-XX-(* )		1-1/2"	33-C1-150/2R4D-XX-(* )
2"	33-C1-200/2R5D-XX-(* )		2"	33-C1-200/2R5D-XX-(* )
2-1/2"	33-C1-250/2R5D-XX-(* )		2-1/2"	33-C1-250/2R6D-XX-(* )
3"	33-C1-300/2R6D-XX-(* )		3"	33-C1-300/2R7D-XX-(* )
4"	33-C1-400/2R7D-XX-(* )		4"	33-C1-400/2R8D-XX-(* )

**3-Way  
Spring Return**

Sized for 80 PSI			Sized for 60 PSI	
SIZE	MODEL		SIZE	MODEL
1/4"	N/A		1/4"	N/A
3/8"	N/A		3/8"	N/A
1/2"	33-C1-050/2R2S-XX-(* )		1/2"	33-C1-050/2R3S-XX-(* )
3/4"	33-C1-075/2R3S-XX-(* )		3/4"	33-C1-075/2R4S-XX-(* )
1"	33-C1-100/2R4S-XX-(* )		1"	33-C1-100/2R4S-XX-(* )
1-1/2"	33-C1-150/2R6S-XX-(* )		1-1/2"	33-C1-150/2R6S-XX-(* )
2"	33-C1-200/2R6S-XX-(* )		2"	33-C1-200/2R7S-XX-(* )
2-1/2"	33-C1-250/2R6S-XX-(* )		2-1/2"	33-C1-250/2R7S-XX-(* )
3"	33-C1-300/2R8S-XX-(* )		3"	33-C1-300/2R8S-XX-(* )
4"	33-C1-400/2R9S-XX-(* )		4"	33-C1-400/2R0S-XX-(* )

**3-Way  
Electric**

On-Off			Modulating	
SIZE	MODEL		SIZE	MODEL
1/4"	N/A		1/4"	N/A
3/8"	N/A		3/8"	N/A
1/2"	33-C1-050/WEA1-XX-(* )		1/2"	33-C1-050/WEA2-XX-(* )
3/4"	33-C1-075/WEA1-XX-(* )		3/4"	33-C1-075/WEA2-XX-(* )
1"	33-C1-100/WEA1-XX-(* )		1"	33-C1-100/WEA2-XX-(* )
1-1/2"	33-C1-150/WEC1-XX-(* )		1-1/2"	33-C1-150/WEC2-XX-(* )
2"	33-C1-200/WED1-XX-(* )		2"	33-C1-200/WED2-XX-(* )
2-1/2"	33-C1-250/WEE1-XX-(* )		2-1/2"	33-C1-250/WEE2-XX-(* )
3"	33-C1-300/WEE1-XX-(* )		3"	33-C1-300/WEE2-XX-(* )
4"	33-C1-400/WEF1-XX-(* )		4"	33-C1-400/WEF2-XX-(* )

\* Port Arrangement designation: See page 8 for options

# Series 33

## Cavity Filled - Threaded, Socket Weld, & Butt Weld

### Automated Model numbers

#### 3-Way Double Acting

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	33-TF-025/2R2D-XX-(* )	1/4"	CF
3/8"	33-TF-038/2R2D-XX-(* )	3/8"	CF
1/2"	33-TF-050/2R2D-XX-(* )	1/2"	CF
3/4"	33-TF-075/2R3D-XX-(* )	3/4"	CF
1"	33-TF-100/2R3D-XX-(* )	1"	CF
1-1/2"	33-TF-150/2R5D-XX-(* )	1-1/2"	CF
2"	33-TF-200/2R6D-XX-(* )	2"	CF
2-1/2"	33-TF-250/2R6D-XX-(* )	2-1/2"	CF
3"	33-TF-300/2R7D-XX-(* )	3"	CF
4"	33-TF-400/2R8D-XX-(* )	4"	CF

#### 3-Way Spring Return

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	33-TF-025/2R3S-XX-(* )	1/4"	CF
3/8"	33-TF-038/2R3S-XX-(* )	3/8"	CF
1/2"	33-TF-050/2R3S-XX-(* )	1/2"	CF
3/4"	33-TF-075/2R4S-XX-(* )	3/4"	CF
1"	33-TF-100/2R5S-XX-(* )	1"	CF
1-1/2"	33-TF-150/2R7S-XX-(* )	1-1/2"	CF
2"	33-TF-200/2R8S-XX-(* )	2"	CF
2-1/2"	33-TF-250/2R8S-XX-(* )	2-1/2"	CF
3"	33-TF-300/2R9S-XX-(* )	3"	CF
4"	33-TF-400/2R0S-XX-(* )	4"	CF

#### 3-Way Electric

On-Off		Modulating	
SIZE	MODEL	SIZE	MODEL
1/4"	33-TF-025/WEA1-XX-(* )	1/4"	33-TF-025/WEA2-XX-(* )
3/8"	33-TF-038/WEA1-XX-(* )	3/8"	33-TF-038/WEA2-XX-(* )
1/2"	33-TF-050/WEA1-XX-(* )	1/2"	33-TF-050/WEA2-XX-(* )
3/4"	33-TF-075/WEA1-XX-(* )	3/4"	33-TF-075/WEA2-XX-(* )
1"	33-TF-100/WEB1-XX-(* )	1"	33-TF-100/WEB2-XX-(* )
1-1/2"	33-TF-150/WED1-XX-(* )	1-1/2"	33-TF-150/WED2-XX-(* )
2"	33-TF-200/WEE1-XX-(* )	2"	33-TF-200/WEE2-XX-(* )
2-1/2"	33-TF-250/WEE1-XX-(* )	2-1/2"	33-TF-250/WEE2-XX-(* )
3"	33-TF-300/WEF1-XX-(* )	3"	33-TF-300/WEF2-XX-(* )
4"	33-TF-400/WEF1-XX-(* )	4"	33-TF-400/WEF2-XX-(* )

\* Port Arrangement designation: See page 8 for options

# Series 33

## Cavity Filled Flanged - ANSI Class 150

### Automated Model numbers

**3-Way  
Double Acting**

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	33-FF-050/2R2D-XX-(* )	1/2"	CF
3/4"	33-FF-075/2R3D-XX-(* )	3/4"	CF
1"	33-FF-100/2R3D-XX-(* )	1"	CF
1-1/2"	33-FF-150/2R5D-XX-(* )	1-1/2"	CF
2"	33-FF-200/2R6D-XX-(* )	2"	CF
2-1/2"	33-FF-250/2R6D-XX-(* )	2-1/2"	CF
3"	33-FF-300/2R7D-XX-(* )	3"	CF
4"	33-FF-400/2R8D-XX-(* )	4"	CF

**3-Way  
Spring Return**

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	33-FF-050/2R3S-XX-(* )	1/2"	CF
3/4"	33-FF-075/2R4S-XX-(* )	3/4"	CF
1"	33-FF-100/2R5S-XX-(* )	1"	CF
1-1/2"	33-FF-150/2R7S-XX-(* )	1-1/2"	CF
2"	33-FF-200/2R8S-XX-(* )	2"	CF
2-1/2"	33-FF-250/2R8S-XX-(* )	2-1/2"	CF
3"	33-FF-300/2R9S-XX-(* )	3"	CF
4"	33-FF-400/2R0S-XX-(* )	4"	CF

**3-Way  
Electric**

On-Off		Modulating	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	33-FF-050/WEA1-XX-(* )	1/2"	33-FF-050/WEA2-XX-(* )
3/4"	33-FF-075/WEA1-XX-(* )	3/4"	33-FF-075/WEA2-XX-(* )
1"	33-FF-100/WEB1-XX-(* )	1"	33-FF-100/WEB2-XX-(* )
1-1/2"	33-FF-150/WED1-XX-(* )	1-1/2"	33-FF-150/WED2-XX-(* )
2"	33-FF-200/WEE1-XX-(* )	2"	33-FF-200/WEE2-XX-(* )
2-1/2"	33-FF-250/WEE1-XX-(* )	2-1/2"	33-FF-250/WEE2-XX-(* )
3"	33-FF-300/WEF1-XX-(* )	3"	33-FF-300/WEF2-XX-(* )
4"	33-FF-400/WEF1-XX-(* )	4"	33-FF-400/WEF2-XX-(* )

\* Port Arrangement designation: See page 8 for options

# Series 33

## Cavity Filled Sanitary

### Automated Model numbers

#### 3-Way Double Acting

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	33-CF-050/2R2D-XX-(* )	1/2"	CF
3/4"	33-CF-075/2R3D-XX-(* )	3/4"	CF
1"	33-CF-100/2R3D-XX-(* )	1"	CF
1-1/2"	33-CF-150/2R5D-XX-(* )	1-1/2"	CF
2"	33-CF-200/2R6D-XX-(* )	2"	CF
2-1/2"	33-CF-250/2R6D-XX-(* )	2-1/2"	CF
3"	33-CF-300/2R7D-XX-(* )	3"	CF
4"	33-CF-400/2R8D-XX-(* )	4"	CF

#### 3-Way Spring Return

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	33-CF-050/2R3S-XX-(* )	1/2"	CF
3/4"	33-CF-075/2R4S-XX-(* )	3/4"	CF
1"	33-CF-100/2R5S-XX-(* )	1"	CF
1-1/2"	33-CF-150/2R7S-XX-(* )	1-1/2"	CF
2"	33-CF-200/2R8S-XX-(* )	2"	CF
2-1/2"	33-CF-250/2R8S-XX-(* )	2-1/2"	CF
3"	33-CF-300/2R9S-XX-(* )	3"	CF
4"	33-CF-400/2R0S-XX-(* )	4"	CF

#### 3-Way Electric

On-Off		Modulating	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	33-CF-050/WEA1-XX-(* )	1/2"	33-CF-050/WEA2-XX-(* )
3/4"	33-CF-075/WEA1-XX-(* )	3/4"	33-CF-075/WEA2-XX-(* )
1"	33-CF-100/WEB1-XX-(* )	1"	33-CF-100/WEB2-XX-(* )
1-1/2"	33-CF-150/WED1-XX-(* )	1-1/2"	33-CF-150/WED2-XX-(* )
2"	33-CF-200/WEE1-XX-(* )	2"	33-CF-200/WEE2-XX-(* )
2-1/2"	33-CF-250/WEE1-XX-(* )	2-1/2"	33-CF-250/WEE2-XX-(* )
3"	33-CF-300/WEF1-XX-(* )	3"	33-CF-300/WEF2-XX-(* )
4"	33-CF-400/WEF1-XX-(* )	4"	33-CF-400/WEF2-XX-(* )

\* Port Arrangement designation: See page 8 for options



# Series 43

## Threaded, Socket Weld and Butt Weld

### Automated Model numbers

**4-Way  
Double Acting**

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	43-TX-025/TR1D-XX-(* )	1/4"	43-TX-025/2R2D-XX-(* )
3/8"	43-TX-038/TR1D-XX-(* )	3/8"	43-TX-038/2R2D-XX-(* )
1/2"	43-TX-050/2R2D-XX-(* )	1/2"	43-TX-050/2R2D-XX-(* )
3/4"	43-TX-075/2R2D-XX-(* )	3/4"	43-TX-075/2R3D-XX-(* )
1"	43-TX-100/2R2D-XX-(* )	1"	43-TX-100/2R3D-XX-(* )
1-1/4"	43-TX-125/2R3D-XX-(* )	1-1/4"	43-TX-125/2R4D-XX-(* )
1-1/2"	43-TX-150/2R4D-XX-(* )	1-1/2"	43-TX-150/2R4D-XX-(* )
2"	43-TX-200/2R5D-XX-(* )	2"	43-TX-200/2R5D-XX-(* )
2-1/2"	43-TX-250/2R5D-XX-(* )	2-1/2"	43-TX-250/2R6D-XX-(* )
3"	43-TX-300/2R6D-XX-(* )	3"	43-TX-300/2R7D-XX-(* )
4"	43-TX-400/2R7D-XX-(* )	4"	43-TX-400/2R8D-XX-(* )

**4-Way  
Spring Return**

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	43-TX-025/2R2S-XX-(* )	1/4"	43-TX-025/2R3S-XX-(* )
3/8"	43-TX-038/2R2S-XX-(* )	3/8"	43-TX-038/2R3S-XX-(* )
1/2"	43-TX-050/2R2S-XX-(* )	1/2"	43-TX-050/2R3S-XX-(* )
3/4"	43-TX-075/2R3S-XX-(* )	3/4"	43-TX-075/2R4S-XX-(* )
1"	43-TX-100/2R4S-XX-(* )	1"	43-TX-100/2R4S-XX-(* )
1-1/4"	43-TX-125/2R4S-XX-(* )	1-1/4"	43-TX-125/2R5S-XX-(* )
1-1/2"	43-TX-150/2R6S-XX-(* )	1-1/2"	43-TX-150/2R6S-XX-(* )
2"	43-TX-200/2R6S-XX-(* )	2"	43-TX-200/2R7S-XX-(* )
2-1/2"	43-TX-250/2R6S-XX-(* )	2-1/2"	43-TX-250/2R7S-XX-(* )
3"	43-TX-300/2R8S-XX-(* )	3"	43-TX-300/2R8S-XX-(* )
4"	43-TX-400/2R9S-XX-(* )	4"	43-TX-400/2R0S-XX-(* )

**4-Way  
Electric**

On-Off		Modulating	
SIZE	MODEL	SIZE	MODEL
1/4"	43-TX-025/WEA1-XX-(* )	1/4"	43-TX-025/WEA2-XX-(* )
3/8"	43-TX-038/WEA1-XX-(* )	3/8"	43-TX-038/WEA2-XX-(* )
1/2"	43-TX-050/WEA1-XX-(* )	1/2"	43-TX-050/WEA2-XX-(* )
3/4"	43-TX-075/WEA1-XX-(* )	3/4"	43-TX-075/WEA2-XX-(* )
1"	43-TX-100/WEA1-XX-(* )	1"	43-TX-100/WEA2-XX-(* )
1-1/4"	43-TX-125/WEB1-XX-(* )	1-1/4"	43-TX-125/WEB2-XX-(* )
1-1/2"	43-TX-150/WEC1-XX-(* )	1-1/2"	43-TX-150/WEC2-XX-(* )
2"	43-TX-200/WED1-XX-(* )	2"	43-TX-200/WED2-XX-(* )
2-1/2"	43-TX-250/WEE1-XX-(* )	2-1/2"	43-TX-250/WEE2-XX-(* )
3"	43-TX-300/WEF1-XX-(* )	3"	43-TX-300/WEF2-XX-(* )
4"	43-TX-400/WEF1-XX-(* )	4"	43-TX-400/WEF2-XX-(* )

\* Port Arrangement designation: See page 8 for options

# Series 43

## Flanged - ANSI Class 150

### Automated Model numbers

#### 4-Way Double Acting

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	43-F1-050/2R2D-XX-(* )	1/2"	43-F1-050/2R2D-XX-(* )
3/4"	43-F1-075/2R2D-XX-(* )	3/4"	43-F1-075/2R3D-XX-(* )
1"	43-F1-100/2R2D-XX-(* )	1"	43-F1-100/2R3D-XX-(* )
1-1/2"	43-F1-150/2R4D-XX-(* )	1-1/2"	43-F1-150/2R4D-XX-(* )
2"	43-F1-200/2R5D-XX-(* )	2"	43-F1-200/2R5D-XX-(* )
2-1/2"	43-F1-250/2R5D-XX-(* )	2-1/2"	43-F1-250/2R6D-XX-(* )
3"	43-F1-300/2R6D-XX-(* )	3"	43-F1-300/2R7D-XX-(* )
4"	43-F1-400/2R7D-XX-(* )	4"	43-F1-400/2R8D-XX-(* )

#### 4-Way Spring Return

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	43-F1-050/2R2S-XX-(* )	1/2"	43-F1-050/2R3S-XX-(* )
3/4"	43-F1-075/2R3S-XX-(* )	3/4"	43-F1-075/2R4S-XX-(* )
1"	43-F1-100/2R4S-XX-(* )	1"	43-F1-100/2R4S-XX-(* )
1-1/2"	43-F1-150/2R6S-XX-(* )	1-1/2"	43-F1-150/2R6S-XX-(* )
2"	43-F1-200/2R6S-XX-(* )	2"	43-F1-200/2R7S-XX-(* )
2-1/2"	43-F1-250/2R6S-XX-(* )	2-1/2"	43-F1-250/2R7S-XX-(* )
3"	43-F1-300/2R8S-XX-(* )	3"	43-F1-300/2R8S-XX-(* )
4"	43-F1-400/2R9S-XX-(* )	4"	43-F1-400/2R0S-XX-(* )

#### 4-Way Electric

On-Off		Modulating	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	43-F1-050/WEA1-XX-(* )	1/2"	43-F1-050/WEA2-XX-(* )
3/4"	43-F1-075/WEA1-XX-(* )	3/4"	43-F1-075/WEA2-XX-(* )
1"	43-F1-100/WEA1-XX-(* )	1"	43-F1-100/WEA2-XX-(* )
1-1/2"	43-F1-150/WEC1-XX-(* )	1-1/2"	43-F1-150/WEC2-XX-(* )
2"	43-F1-200/WED1-XX-(* )	2"	43-F1-200/WED2-XX-(* )
2-1/2"	43-F1-250/WEE1-XX-(* )	2-1/2"	43-F1-250/WEE2-XX-(* )
3"	43-F1-300/WEE1-XX-(* )	3"	43-F1-300/WEE2-XX-(* )
4"	43-F1-400/WEF1-XX-(* )	4"	43-F1-400/WEF2-XX-(* )

\* Port Arrangement designation: See page 8 for options

# Series 43

## Non-Cavity Filled Sanitary

### Automated Model numbers

**4-Way  
Double Acting**

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	43-C1-050/2R2D-XX-(* )	1/2"	43-C1-050/2R2D-XX-(* )
3/4"	43-C1-075/2R2D-XX-(* )	3/4"	43-C1-075/2R3D-XX-(* )
1"	43-C1-100/2R2D-XX-(* )	1"	43-C1-100/2R3D-XX-(* )
1-1/2"	43-C1-150/2R4D-XX-(* )	1-1/2"	43-C1-150/2R4D-XX-(* )
2"	43-C1-200/2R5D-XX-(* )	2"	43-C1-200/2R5D-XX-(* )
2-1/2"	43-C1-250/2R5D-XX-(* )	2-1/2"	43-C1-250/2R6D-XX-(* )
3"	43-C1-300/2R6D-XX-(* )	3"	43-C1-300/2R7D-XX-(* )
4"	43-C1-400/2R7D-XX-(* )	4"	43-C1-400/2R8D-XX-(* )

**4-Way  
Spring Return**

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	43-C1-050/2R2S-XX-(* )	1/2"	43-C1-050/2R3S-XX-(* )
3/4"	43-C1-075/2R3S-XX-(* )	3/4"	43-C1-075/2R4S-XX-(* )
1"	43-C1-100/2R4S-XX-(* )	1"	43-C1-100/2R4S-XX-(* )
1-1/2"	43-C1-150/2R6S-XX-(* )	1-1/2"	43-C1-150/2R6S-XX-(* )
2"	43-C1-200/2R6S-XX-(* )	2"	43-C1-200/2R7S-XX-(* )
2-1/2"	43-C1-250/2R6S-XX-(* )	2-1/2"	43-C1-250/2R7S-XX-(* )
3"	43-C1-300/2R8S-XX-(* )	3"	43-C1-300/2R8S-XX-(* )
4"	43-C1-400/2R9S-XX-(* )	4"	43-C1-400/2R0S-XX-(* )

**4-Way  
Electric**

On-Off		Modulating	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	43-C1-050/WEA1-XX-(* )	1/2"	43-C1-050/WEA2-XX-(* )
3/4"	43-C1-075/WEA1-XX-(* )	3/4"	43-C1-075/WEA2-XX-(* )
1"	43-C1-100/WEA1-XX-(* )	1"	43-C1-100/WEA2-XX-(* )
1-1/2"	43-C1-150/WEC1-XX-(* )	1-1/2"	43-C1-150/WEC2-XX-(* )
2"	43-C1-200/WED1-XX-(* )	2"	43-C1-200/WED2-XX-(* )
2-1/2"	43-C1-250/WEE1-XX-(* )	2-1/2"	43-C1-250/WEE2-XX-(* )
3"	43-C1-300/WEE1-XX-(* )	3"	43-C1-300/WEE2-XX-(* )
4"	43-C1-400/WEF1-XX-(* )	4"	43-C1-400/WEF2-XX-(* )

\* Port Arrangement designation: See page 8 for options

# Series 43

## Cavity Filled - Threaded, Socket Weld & Butt Weld

### Automated Model numbers

#### 4-Way Double Acting

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	43-TF-025/2R2D-XX-(* )	1/4"	CF
3/8"	43-TF-038/2R2D-XX-(* )	3/8"	CF
1/2"	43-TF-050/2R2D-XX-(* )	1/2"	CF
3/4"	43-TF-075/2R3D-XX-(* )	3/4"	CF
1"	43-TF-100/2R3D-XX-(* )	1"	CF
1-1/2"	43-TF-150/2R5D-XX-(* )	1-1/2"	CF
2"	43-TF-200/2R6D-XX-(* )	2"	CF
2-1/2"	43-TF-250/2R6D-XX-(* )	2-1/2"	CF
3"	43-TF-300/2R7D-XX-(* )	3"	CF
4"	43-TF-400/2R8D-XX-(* )	4"	CF

#### 4-Way Spring Return

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	43-TF-025/2R3S-XX-(* )	1/4"	CF
3/8"	43-TF-038/2R3S-XX-(* )	3/8"	CF
1/2"	43-TF-050/2R3S-XX-(* )	1/2"	CF
3/4"	43-TF-075/2R4S-XX-(* )	3/4"	CF
1"	43-TF-100/2R5S-XX-(* )	1"	CF
1-1/2"	43-TF-150/2R7S-XX-(* )	1-1/2"	CF
2"	43-TF-200/2R8S-XX-(* )	2"	CF
2-1/2"	43-TF-250/2R8S-XX-(* )	2-1/2"	CF
3"	43-TF-300/2R9S-XX-(* )	3"	CF
4"	43-TF-400/2R0S-XX-(* )	4"	CF

#### 4-Way Electric

On-Off		Modulating	
SIZE	MODEL	SIZE	MODEL
1/4"	43-TF-025/WEA1-XX-(* )	1/4"	43-TF-025/WEA2-XX-(* )
3/8"	43-TF-038/WEA1-XX-(* )	3/8"	43-TF-038/WEA2-XX-(* )
1/2"	43-TF-050/WEA1-XX-(* )	1/2"	43-TF-050/WEA2-XX-(* )
3/4"	43-TF-075/WEA1-XX-(* )	3/4"	43-TF-075/WEA2-XX-(* )
1"	43-TF-100/WEB1-XX-(* )	1"	43-TF-100/WEB2-XX-(* )
1-1/2"	43-TF-150/WED1-XX-(* )	1-1/2"	43-TF-150/WED2-XX-(* )
2"	43-TF-200/WEE1-XX-(* )	2"	43-TF-200/WEE2-XX-(* )
2-1/2"	43-TF-250/WEE1-XX-(* )	2-1/2"	43-TF-250/WEE2-XX-(* )
3"	43-TF-300/WEF1-XX-(* )	3"	43-TF-300/WEF2-XX-(* )
4"	43-TF-400/WEF1-XX-(* )	4"	43-TF-400/WEF2-XX-(* )

\* Port Arrangement designation: See page 8 for options



# Series 43

## Cavity Filled Flanged - ANSI Class 150

### Automated Model numbers

**4-Way  
Double Acting**

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	43-FF-050/2R2D-XX-(* )	1/2"	CF
3/4"	43-FF-075/2R3D-XX-(* )	3/4"	CF
1"	43-FF-100/2R3D-XX-(* )	1"	CF
1-1/2"	43-FF-150/2R5D-XX-(* )	1-1/2"	CF
2"	43-FF-200/2R6D-XX-(* )	2"	CF
2-1/2"	43-FF-250/2R6D-XX-(* )	2-1/2"	CF
3"	43-FF-300/2R7D-XX-(* )	3"	CF
4"	43-FF-400/2R8D-XX-(* )	4"	CF

**4-Way  
Spring Return**

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	43-FF-050/2R3S-XX-(* )	1/2"	CF
3/4"	43-FF-075/2R4S-XX-(* )	3/4"	CF
1"	43-FF-100/2R5S-XX-(* )	1"	CF
1-1/2"	43-FF-150/2R7S-XX-(* )	1-1/2"	CF
2"	43-FF-200/2R8S-XX-(* )	2"	CF
2-1/2"	43-FF-250/2R8S-XX-(* )	2-1/2"	CF
3"	43-FF-300/2R9S-XX-(* )	3"	CF
4"	43-FF-400/2R0S-XX-(* )	4"	CF

**4-Way  
Electric**

On-Off		Modulating	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	43-FF-050/WEA1-XX-(* )	1/2"	43-FF-050/WEA2-XX-(* )
3/4"	43-FF-075/WEA1-XX-(* )	3/4"	43-FF-075/WEA2-XX-(* )
1"	43-FF-100/WEB1-XX-(* )	1"	43-FF-100/WEB2-XX-(* )
1-1/2"	43-FF-150/WED1-XX-(* )	1-1/2"	43-FF-150/WED-XX-(* )
2"	43-FF-200/WEE1-XX-(* )	2"	43-FF-200/WEE2-XX-(* )
2-1/2"	43-FF-250/WEE1-XX-(* )	2-1/2"	43-FF-250/WEE2-XX-(* )
3"	43-FF-300/WEF1-XX-(* )	3"	43-FF-300/WEF2-XX-(* )
4"	43-FF-400/WEF1-XX-(* )	4"	43-FF-400/WEF2-XX-(* )

\* Port Arrangement designation: See page 8 for options

# Series 43

## Cavity Filled Sanitary

### Automated Model numbers

#### 4-Way Double Acting

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	43-CF-050/2R2D-XX-(* )	1/2"	CF
3/4"	43-CF-075/2R3D-XX-(* )	3/4"	CF
1"	43-CF-100/2R3D-XX-(* )	1"	CF
1-1/2"	43-CF-150/2R5D-XX-(* )	1-1/2"	CF
2"	43-CF-200/2R6D-XX-(* )	2"	CF
2-1/2"	43-CF-250/2R6D-XX-(* )	2-1/2"	CF
3"	43-CF-300/2R7D-XX-(* )	3"	CF
4"	43-CF-400/2R8D-XX-(* )	4"	CF

#### 4-Way Spring Return

Sized for 80 PSI		Sized for 60 PSI	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	43-CF-050/2R3S-XX-(* )	1/2"	CF
3/4"	43-CF-075/2R4S-XX-(* )	3/4"	CF
1"	43-CF-100/2R5S-XX-(* )	1"	CF
1-1/2"	43-CF-150/2R7S-XX-(* )	1-1/2"	CF
2"	43-CF-200/2R8S-XX-(* )	2"	CF
2-1/2"	43-CF-250/2R8S-XX-(* )	2-1/2"	CF
3"	43-CF-300/2R9S-XX-(* )	3"	CF
4"	43-CF-400/2R0S-XX-(* )	4"	CF

#### 4-Way Electric

On-Off		Modulating	
SIZE	MODEL	SIZE	MODEL
1/4"	N/A	1/4"	N/A
3/8"	N/A	3/8"	N/A
1/2"	43-CF-050/WEA1-XX-(* )	1/2"	43-CF-050/WEA2-XX-(* )
3/4"	43-CF-075/WEA1-XX-(* )	3/4"	43-CF-075/WEA2-XX-(* )
1"	43-CF-100/WEB1-XX-(* )	1"	43-CF-100/WEB2-XX-(* )
1-1/2"	43-CF-150/WED1-XX-(* )	1-1/2"	43-CF-150/WED2-XX-(* )
2"	43-CF-200/WEE1-XX-(* )	2"	43-CF-200/WEE2-XX-(* )
2-1/2"	43-CF-250/WEE1-XX-(* )	2-1/2"	43-CF-250/WEE2-XX-(* )
3"	43-CF-300/WEF1-XX-(* )	3"	43-CF-300/WEF2-XX-(* )
4"	43-CF-400/WEF1-XX-(* )	4"	43-CF-400/WEF2-XX-(* )

\* Port Arrangement designation: See page 8 for options

# HOW TO ORDER: Manual Valves

# Series 33/43/53

2	Valve Series
33	3-Way Full Port, Multiport
43	4-Way Full Port, Multiport
53	5-Way Full Port, Multiport

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

4	End Connection
TH	NPT Ends
SW	Socket Weld Ends
BW	Butt Weld Ends
F1	150# Flanged Ends
F3	300# Flanged Ends
SA	Sanitary Clamp Ends
SF	Sanitary Clamp Ends w/ Cavity Filler
XX	Configurable End Connection

5	Valve Size	
0025	1/4"	0150 1-1/2"
0038	3/8"	0200 2"
0050	1/2"	0250 2-1/2"
0075	3/4"	0300 3"
0100	1"	0400 4"
0125	1-1/4"	

6	Seat, Lining & Trim Material
X	Reinforced TFE Seats (RTFE)
P	Virgin TFE Seats (PTFE)
U	UHMWPE Seats
S	50/50 STFE Seats
C	25% CS Powder/75% TFE Seats (CTFE)
T	TFM™-1600 Seats
E	All TFM™-1600 Seats, Seals, and Packing
A	50% SS Powder/50% TFM™-1600 Seats (STFM)
F	PTFE Cavity Filler Seats
M	MG1241 Seats

TFM™ is a trademark of Dyneon™, a 3M Company.

7	Special Designation
X	No Specials, Series Standard
G	Gear Operator
H	Gear Operator with Lockout Plate
O	Oval Handle (available on some)
S	Spring Return Handle (Direct Mount only)
4	4" Lockable Stem Extension

8	Additional Specials
X	No Specials, Series Standard
O	Oxygen Cleaned
E	Bonnet Extension Lockable Handle
D	Degreased & Bagged

9	Special Designation
A	17-4 PH® Stem
B	XM-19 (Nitronic 50) Stem
C	Duplex 2205 Stem
D	Inconel® 718 Stem
L	L-Port 3-Way arrangement
T	T-Port 3-Way arrangement
*	Other Port Arrangement (see Pages 9 & 10 for more options)

10	O-Ring
X	Multiple Option Designation
2	Markez® Z1028
4	Kalrez® 4079
5	Chemraz® 505
6	Kalrez® 6375
7	Perlast® G75M
9	Chemraz® 564
B	Low Temp Buna
E	EPDM
S	Silicone

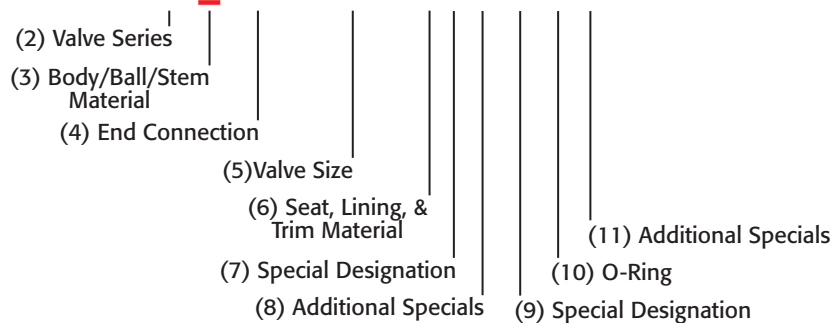
11	Additional Specials
Blank	Standard
X	Multiple Option Designation
B	B7M Bolting
E	CE/PED Certified
M	Marine Epoxy Coating

17-4 PH® is a registered trademark of AK Steel Corporation.  
Chemraz® is a registered trademark of Greene, Tweed & Co.  
Markez® is a registered trademark of Marco Rubber & Plastic Products Inc.  
Perlast® is a registered trademark of Precision Polymer Engineering Limited.  
TFM™ is a trademark of Dyneon™, a 3M Company.

## MANUAL VALVE

SAMPLE PART #

**33 -TH-0150-XXX-X-XM**



## HOW TO ORDER: Automated Valves w/ Options

2	Valve Series
33	3-Way Full Port, Multiport
43	4-Way Full Port, Multiport
53	5-Way Full Port, Multiport

3	Body Material
Blank	Valve Series Standard (316SST or 316LSST)
C	Carbon Steel

4	End Connection
T	NPT Ends
S	Socket Weld Ends
B	Butt Weld Ends
F	150# Flanged Ends
3	300# Flanged Ends
C	Sanitary Clamp Ends

5	Seat, Lining & Trim Materials
I	Valve Series Standard
X	Reinforced TFE Seats (RTFE)
P	Virgin TFE Seats (PTFE)
U	UHMWPE Seats
S	50/50 STFE Seats
C	25% CS Powder/75% TFE Seats (CTFE)
T	TFM™-1600 Seats
E	All TFM™-1600 Seats, Seals, and Packing
A	50% SS Powder/50% TFM™-1600 Seats (STFM)
F	PTFE Cavity Filler Seats
M	MG1241 Seats

TFM™ is a trademark of Dyneon™, a 3M Company.

6	Valve Size
025	1/4"
038	3/8"
050	1/2"
075	3/4"
100	1"
125	1-1/4"

7	Actuator - Pneumatic (DA)
TRYD	TR10DA 2R7D 2R500DA
TR1D	TR20DA 2R8D 2R850DA
2R2D	2R40DA 2R9D 2R1200DA
2R3D	2R80DA 2R0D 2R1750DA
2R4D	2R130DA 2RAD 2R2500DA
2R5D	2R200DA 2RBD 2R3500DA
2R6D	2R300DA

7	Actuator - Pneumatic (SR)
TR1S	TR20SR 2R7S 2R500SR
2R2S	2R40SR 2R8S 2R850SR
2R3S	2R80SR 2R9S 2R1200SR
2R4S	2R130SR 2R0S 2R1750SR
2R5S	2R200SR 2RAS 2R2500SR
2R6S	2R300SR 2RBS 2R3500SR

7	Actuator - Pneumatic Stainless (DA)
S21D	S2-052DA S25D S2-125DA
S22D	S2-063DA S26D S2-140DA
S23D	S2-083DA S27D S2-160DA
S24D	S2-105DA S28D S2-210DA

7	Actuator - Pneumatic Stainless (SR)
S21S	S2-052SR S25S S2-125SR
S22S	S2-063SR S26S S2-140SR
S23S	S2-083SR S27S S2-160SR
S24S	S2-105SR S28S S2-210SR

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

### OPTIONS:

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/APL-310N
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
1	HS1 High Speed Electric	
2	HS2 High Speed Electric	

10	Special Designation
Blank	No Designation, SST Stem
A	17-4 PH® Stem
B	XM-19 (Nitronic 50) Stem
C	Duplex 2205 Stem
D	Inconel® 718 Stem
E	CE/PED Certified
F	Viton® Seal for Pneumatic Actuators (0° to 300°F)
L	L-Port 3-Way arrangement
T	T-Port 3-Way arrangement
*	Other Port Arrangement (see Pages 9 & 10 for more options)

### AUTOMATED VALVE

SAMPLE PART #

**33\_-TX-100/2R3D-XX-\_-**

