

Flowrite™ 599 Series

1/2 to 2-Inch Valve (2-Way & 3-Way) and Actuator Assembly Selection

Description

This Technical Bulletin will aid in the selection of a 1/2-inch to 2-inch Flowrite 599 Series valve and actuator assembly. Begin with the graph of water capacity and the chart of ANSI Class IV close-off pressures to select a valve and actuator according to specifications.

Use Tables 1 through 15 to identify two-way valve and actuator product numbers. Use Tables 16 through 18 to identify three-way valve and actuator product numbers. These tables show all the possible combinations of the 1/2-inch to 2-inch Flowrite 599 Series valves and compatible actuators that can be ordered as complete valve assemblies from the factory.

The dimensions of all 1/2-inch to 2-inch valves and the service envelope required for each actuator are included in Tables 19 and 20.

How to Use the Selection Graphs

Use Figure 1, the Water Capacity graph, to select a valve. Locate the specified flow rate on the vertical axis. Follow across on the horizontal line to the point of intersection with the specified pressure drop. Choose the valve size from the heavy diagonal lines across the graph.

Use Figure 2, the Close-Off Pressure graph, to select an actuator. First locate the graph for the valve action and actuator power source specified. Locate the bar that represents the valve line size. The top of the bar indicates the maximum close-off pressure for tight close-off ANSI Class IV. Use the legend at the bottom of the graph to identify the actuator.

How To Use The Valve Tables

Tables have been organized to help select a valve and actuator combination using additional specifications.

Moving from left to right, identify the valve assembly needed. Continue to the right to match the valve to a desired actuator.

A valve and actuator assembly part number is determined by combining the actuator prefix code with the suffix of the valve product number.

NOTES:

No valve will combine with all actuators.

The symbol "—" indicates a combination is not available.

Selection Example

Specification

Select a two-way normally-open valve and pneumatic actuator assembly that will deliver 20 gpm (5 m³/h) chilled water with linear flow characteristic with no more than 5 psi (35 kPa) pressure drop across the fully-open valve. The valve must have standard packing and a female-to-female (F×F) connection.

The valve shall be operated by a standard 8-inch pneumatic actuator and must close off tightly against a pump head pressure of 50 psi (300 kPa).

Valve Sizing

Use Figure 1, the water capacity graph, to begin valve sizing.

1. Locate 20 gpm (5 m³/h) on the vertical axis to find the required flow.
2. Read across the horizontal axis to find 5 psi (35 kPa), the maximum allowable pressure drop across the open valve.
3. Select a 1-inch (25 mm), 10 Cv (8.6 Kvs) line size valve, because the point of intersection falls between the 3/4 inch and 1-inch line sizes.

Actuator Selection

Use Figure 2, the close-off pressure graph, to choose an actuator.

1. Locate the graph for pneumatic actuators for NO valves in the lower right side of the figure.
2. Locate the bar for 1-inch valves. The gray-shaded bar represents an 8-inch pneumatic actuator.
3. Notice that the 8-inch pneumatic actuator has the sufficient force to provide tight close-off (ANSI C IV) against more than 50 psi (300 kPa) differential. For a 1-inch valve, select an 8-inch, standard pneumatic actuator, with a 20 mm stroke.

Product Number Selection

Use Table 1, "Two-Way, Normally Open (NO), Equal Percentage Valves, Bronze Trim, Standard Packing". Begin at the left and select the specifications necessary.

1. Select a standard packed valve, with an F×F connection according to the above specifications.
2. Select the 1-inch line size determined from the sizing example above. The valve part number is 599-03167.
3. Read across table to the 8-inch Standard Pneumatic actuator.
The actuator part number is 599-01050.
The actuator code number is 277.
4. Read down the column to determine the valve and actuator assembly product number is 277-03167.

NOTE: The valve and actuator can be ordered separately by using the part numbers from Steps 2 and 3.

References

Two-Way Valves, 1/2 to 2-inch Bronze Body, ANSI 250 Technical Instructions (155-184).

Three-Way Valves 1/2 to 2-inch Bronze Body Technical Instructions (155-185).

Table 16. Three-Way, Normally Closed (NC), Equal Percentage Valves, Normally Open, Linear, Standard Packing.

Trim & Connection *	Flow Rate		Line Size		Stroke	Pneumatic					
						Description	4-Inch			8-inch- Standard Temp.	
	3-8 psi (21-55 kPa)	5-10 psi (34-69 kPa)	10-15 psi (69-103 kPa)	Without Positioner			With Positioner				
	Technical Instructions	155-183P25				155-161P25					
	Actuator P/N	599-01081	599-01082	599-01083		599-01050	599-01050 & 599-00426				
Valve P/N	Actuator Code										
	Cv	Kvs	In	mm		268	269	270	277	283	
Bronze Trim - FxF	1	0.9	0.5	15	20	599-03198	268-03198	269-03198	270-03198	277-03198	283-03198
	1.6	1.4	0.5	15	20	599-03199	268-03199	269-03199	270-03199	277-03199	283-03199
	2.5	2.2	0.5	15	20	599-03200	268-03200	269-03200	270-03200	277-03200	283-03200
	4	3.4	0.5	15	20	599-03201	268-03201	269-03201	270-03201	277-03201	283-03201
	6.3	5.4	0.75	20	20	599-03202	268-03202	269-03202	270-03202	277-03202	283-03202
	10	8.6	1	25	20	599-03203	268-03203	269-03203	270-03203	277-03203	283-03203
	16	14	1.25	32	20	599-03204	268-03204	269-03204	270-03204	277-03204	283-03204
	25	22	1.5	40	20	599-03205	268-03205	269-03205	270-03205	277-03205	283-03205
Bronze Trim - UFxUF	1	0.9	0.5	15	20	599-03207	268-03207	—	—	—	—
	1.6	1.4	0.5	15	20	599-03208	268-03208	—	—	—	—
	2.5	2.2	0.5	15	20	599-03209	268-03209	—	—	—	—
	4	3.4	0.5	15	20	599-03210	268-03210	—	—	—	—
	6.3	5.4	0.75	20	20	599-03211	268-03211	—	—	—	—
	10	8.6	1	25	20	599-03212	268-03212	—	—	—	—
	16	14	1.25	32	20	599-03213	268-03213	—	—	—	—
	25	22	1.5	40	20	599-03214	268-03214	—	—	—	—
SS Trim - FxF	1	0.9	0.5	15	20	599-03144	268-03144	269-03144	270-03144	277-03144	283-03144
	1.6	1.4	0.5	15	20	599-03145	268-03145	269-03145	270-03145	277-03145	283-03145
	2.5	2.2	0.5	15	20	599-03146	268-03146	269-03146	270-03146	277-03146	283-03146
	4	3.4	0.5	15	20	599-03147	268-03147	269-03147	270-03147	277-03147	283-03147
	6.3	5.4	0.75	20	20	599-03148	268-03148	269-03148	270-03148	277-03148	283-03148
	10	8.6	1	25	20	599-03149	268-03149	269-03149	270-03149	277-03149	283-03149
	16	14	1.25	32	20	599-03150	268-03150	269-03150	270-03150	277-03150	283-03150
	25	22	1.5	40	20	599-03151	268-03151	269-03151	270-03151	277-03151	283-03151
SS Trim - UFxUF	1	0.9	0.5	15	20	599-03153	268-03153	—	—	—	—
	1.6	1.4	0.5	15	20	599-03154	268-03154	—	—	—	—
	2.5	2.2	0.5	15	20	599-03155	268-03155	—	—	—	—
	4	3.4	0.5	15	20	599-03156	268-03156	—	—	—	—
	6.3	5.4	0.75	20	20	599-03157	268-03157	—	—	—	—
	10	8.6	1	25	20	599-03158	268-03158	—	—	—	—
	16	14	1.25	32	20	599-03159	268-03159	—	—	—	—
	25	22	1.5	40	20	599-03160	268-03160	—	—	—	—
40	34	2	50	20	599-03161	268-03161	—	—	—	—	

* F = Female NPT, UF = Union Female.

Table 17. Three-Way Normally Closed (NC), Linear Valves, Stainless Steel, Standard Packing.

Connection *	Flow Rate		Valve Size		Stroke	Electro-Mechanical Actuators 24 Vac					
						Description	Non-Spring Return		Spring Return		
	Floating		0-10 Vdc, 4-20mA	2-Position			0-10 Vdc				
	30 sec	120 sec									
	Technical Instructions	155-186P25		155-182P25		155-541P25					
Actuator P/N	SQX82.03U	SQX82.00U	SQX62U	599-03611	599-03609						
Valve P/N	Actuator Code										
	273	272	271	299	298						
Bronze Trim Fx F	1	0.9	0.5	15	20	599-03198	273-03198	272-03198	271-03198	299-03198	298-03198
	1.6	1.4	0.5	15	20	599-03199	273-03199	272-03199	271-03199	299-03199	298-03199
	2.5	2.2	0.5	15	20	599-03200	273-03200	272-03200	271-03200	299-03200	298-03200
	4	3.4	0.5	15	20	599-03201	273-03201	272-03201	271-03201	299-03201	298-03201
	6.3	5.4	0.75	20	20	599-03202	273-03202	272-03202	271-03202	299-03202	298-03202
	10	8.6	1	25	20	599-03203	273-03203	272-03203	271-03203	299-03203	298-03203
	16	14	1.25	32	20	599-03204	273-03204	272-03204	271-03204	299-03204	298-03204
	25	22	1.5	40	20	599-03205	273-03205	272-03205	271-03205	299-03205	298-03205
	40	34	2	50	20	599-03206	273-03206	272-03206	271-03206	299-03206	298-03206
	Bronze Trim UF x UF	1	0.9	0.5	15	20	599-03207	—	—	—	—
1.6		1.4	0.5	15	20	599-03208	—	—	—	—	—
2.5		2.2	0.5	15	20	599-03209	—	—	—	—	—
4		3.4	0.5	15	20	599-03210	—	—	—	—	—
6.3		5.4	0.75	20	20	599-03211	—	—	—	—	—
10		8.6	1	25	20	599-03212	—	—	—	—	—
16		14	1.25	32	20	599-03213	—	—	—	—	—
25		22	1.5	40	20	599-03214	—	—	—	—	—
40		34	2	50	20	599-03215	—	—	—	—	—
SS Trim - Fx F		1	0.9	0.5	15	20	599-03144	273-03144	272-03144	271-03144	299-03144
	1.6	1.4	0.5	15	20	599-03145	273-03145	272-03145	271-03145	299-03145	298-03145
	2.5	2.2	0.5	15	20	599-03146	273-03146	272-03146	271-03146	299-03146	298-03146
	4	3.4	0.5	15	20	599-03147	273-03147	272-03147	271-03147	299-03147	298-03147
	6.3	5.4	0.75	20	20	599-03148	273-03148	272-03148	271-03148	299-03148	298-03148
	10	8.6	1	25	20	599-03149	273-03149	272-03149	271-03149	299-03149	298-03149
	16	14	1.25	32	20	599-03150	273-03150	272-03150	271-03150	299-03150	298-03150
	25	22	1.5	40	20	599-03151	273-03151	272-03151	271-03151	299-03151	298-03151
	40	34	2	50	20	599-03152	273-03152	272-03152	271-03152	299-03152	298-03152
	SS Trim UF x UF	1	0.9	0.5	15	20	599-03153				—
1.6		1.4	0.5	15	20	599-03154				—	—
2.5		2.2	0.5	15	20	599-03155				—	—
4		3.4	0.5	15	20	599-03156				—	—
6.3		5.4	0.75	20	20	599-03157				—	—
10		8.6	1	25	20	599-03158				—	—
16		14	1.25	32	20	599-03159				—	—
25		22	1.5	40	20	599-03160				—	—
40	34	2	50	20	599-03161				—	—	

* F = Female NPT, UF = Union Female.

Table 18. Three-Way, Normally Closed (NC), Equal Percentage Valves, Normally Open (NO), Linear, Standard Packing.

Trim	Connection *	Flow Rate		Valve Size		Stroke	Electro-Hydraulic Actuators				
							Description	NSR		Spring Return	
		Technical Instructions	Floating	Floating	4 to 20 mA						
			155-181P25		155-180P25		155-163P25				
		Actuator P/N	SKD82.50U	SKD82.51U	SKD62U		SKB62U				
Valve P/N	Actuator Code										
	275	276	274	291							
Bronze	F x F	1	0.9	0.5	15	20	599-03198	275-03198	276-03198	274-03198	—
		1.6	1.4	0.5	15	20	599-03199	275-03199	276-03199	274-03199	—
		2.5	2.2	0.5	15	20	599-03200	275-03200	276-03200	274-03200	—
		4	3.4	0.5	15	20	599-03201	275-03201	276-03201	274-03201	—
		6.3	5.4	0.75	20	20	599-03202	275-03202	276-03202	274-03202	—
		10	8.6	1.0	25	20	599-03203	275-03203	276-03203	274-03203	291-03203
		16	14	1.25	32	20	599-03204	275-03204	276-03204	274-03204	291-03204
		25	22	1.5	40	20	599-03205	275-03205	276-03205	274-03205	291-03205
	40	34	2.0	50	20	599-03206	275-03206	276-03206	274-03206	291-03206	
	UF x UF	1	0.9	0.5	15	20	599-03207	—	—	274-03207	—
		1.6	1.4	0.5	15	20	599-03208	—	—	274-03208	—
		2.5	2.2	0.5	15	20	599-03209	—	—	274-03209	—
		4	3.4	0.5	15	20	599-03210	—	—	274-03210	—
		6.3	5.4	0.75	20	20	599-03211	—	—	274-03211	—
		10	8.6	1.0	25	20	599-03212	—	—	274-03212	—
		16	14	1.25	32	20	599-03213	—	—	274-03213	—
25		22	1.5	40	20	599-03214	—	—	274-03214	—	
40	34	2.0	50	20	599-03215	—	—	274-03215	—		
Stainless Steel	F x F	1	0.9	0.5	15	20	599-03144	275-03144	276-03144	274-03144	—
		1.6	1.4	0.5	15	20	599-03145	275-03145	276-03145	274-03145	—
		2.5	2.2	0.5	15	20	599-03146	275-03146	276-03146	274-03146	—
		4	3.4	0.5	15	20	599-03147	275-03147	276-03147	274-03147	—
		6.3	5.4	0.75	20	20	599-03148	275-03148	276-03148	274-03148	—
		10	8.6	1.0	25	20	599-03149	275-03149	276-03149	274-03149	291-03149
		16	14	1.25	32	20	599-03150	275-03150	276-03150	274-03150	291-03150
		25	22	1.5	40	20	599-03151	275-03151	276-03151	274-03151	291-03151
	40	34	2.0	50	20	599-03152	275-03152	276-03152	274-03152	291-03152	
	UF x UF	1	0.9	0.5	15	20	599-03153	—	—	274-03153	—
		1.6	1.4	0.5	15	20	599-03154	—	—	274-03154	—
		2.5	2.2	0.5	15	20	599-03155	—	—	274-03155	—
		4	3.4	0.5	15	20	599-03156	—	—	274-03156	—
		6.3	5.4	0.75	20	20	599-03157	—	—	274-03157	—
		10	8.6	1.0	25	20	599-03158	—	—	274-03158	—
		16	14	1.25	32	20	599-03159	—	—	274-03159	—
25		22	1.5	40	20	599-03160	—	—	274-03160	—	
40	34	2.0	50	20	599-03161	—	—	274-03161	—		

* F = Female NPT, UF = Union Female.

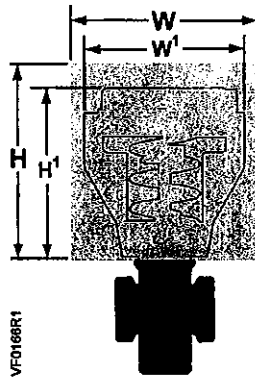


Figure 3. Actuator Dimensions. See Table 19.

Table 19. Dimensions of the Actuator and Recommended Service Envelope.
 Dimensions in Inches (Millimeters).

Actuator	Actuator Prefix Code	Actual Height of Actuator H1	Service Height H	Actual Width or Diameter of Actuator W1	Service Width W
4-inch Pneumatic	268, 269 270	5-3/4 (146)	14 (350)	5-1/2 (137) diameter	18 (450)
8-inch Pneumatic	277, 278, 283, 284	14-1/8 (359)	26 (660)	8-3/4 (222) diameter	21 (533)
SKB with handle closed	289, 290, 291	14-3/4 (375)	22-3/4 (578)	7 (178) width × 8-15/16 (226) depth	25 (635)
SKD	274, 275, 276	11-13/16 (300)	19-3/4 (500)	5 (127) width × 6-5/8 (169) depth	14-1/2 (360)
SQX	271, 272, 273	8-7/8 (226)	17 (430)	5-17/32 (140) width × 4-3/8 (111) depth	13-1/2 (340)
El/Mech with linkage	298, 299	14-1/2 (368)	10 (254)	5 (127) width × 5-1/8 (121) depth	8 (203)

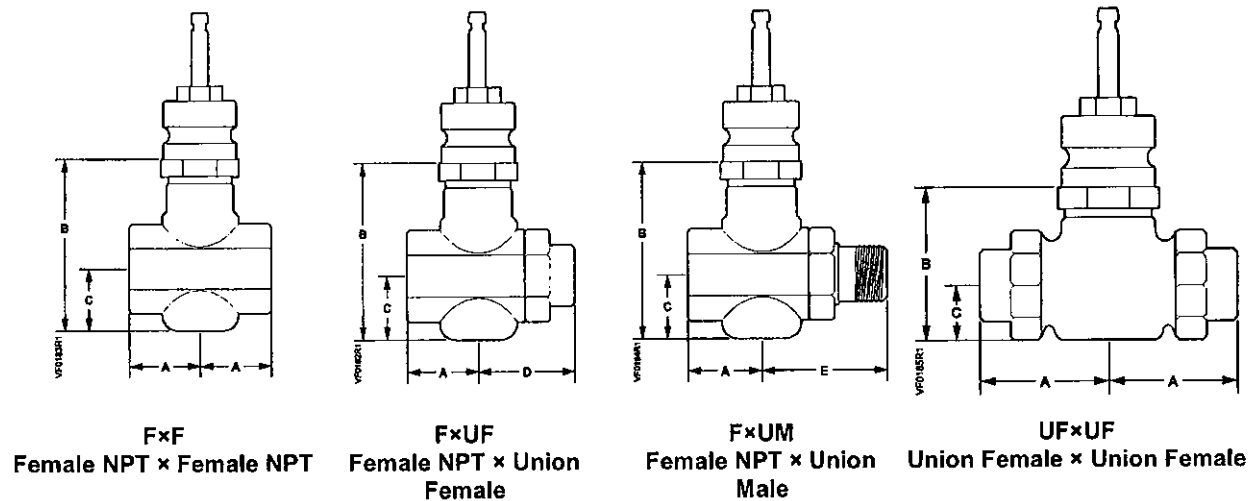


Figure 4. Two-Way Valves.

Table 20. Two-Way Valve Dimensions.

Valve Action	Valve Size inch (mm)	A		B	C	D F×UF	E F×UM	Weight lb (kg)			
		F×F, F×UF, and F×UM	UF×UF					F×F	F×UF	F×UM	UF×UF
Normally Open	1/2 (15)	1-1/16 (36)	—	2-15/16 (74)	1-1/4 (31)	2-5/16 (59)	2-7/8 (73)	3 (1.4)	3 (1.4)	3 (1.4)	—
	3/4 (20)	1-11/16 (43)	—	3-15/16 (99)	1-7/16 (36)	2-5/8 (67)	3-3/16 (81)	4 (1.8)	4 (1.8)	5 (2.3)	—
	1 (25)	2 (50)	—	3-3/4 (96)	1-1/4 (32)	3 (76)	3-1/2 (89)	5 (2.3)	6 (2.7)	6 (2.7)	—
	1-1/4 (32)	2-1/2 (62)	3-3/4 (95)	4-1/8 * (104)	1-5/8* (40)	—	4-3/8 (111)	7 (3.2)	—	8 (3.6)	9 (4.1)
	1-1/2 (40)	2-9/16 (65)	3-15/16 (99)	4-1/4* (109)*	1-3/4* (44)*	—	—	9 (4.1)	—	—	11 (5)
	2 (50)	3-1/8 (79)	4-9/16 (115)	4-9/16* (116)*	2* (51)*	—	—	13 (5.9)	—	—	16 (7.3)
Normally Closed	1/2 (15)	1-7/16 (36)	—	3-13/16 (97)	2-3/16 (55)	2-5/16 (59)	2-7/8 (73)	3 (1.4)	4 (1.8)	4 (1.8)	—
	3/4 (20)	1-11/16 (43)	—	3-13/16 (97)	2-3/16 (55)	2-5/8 (67)	3-3/16 (81)	4 (1.8)	4 (1.8)	5 (2.3)	—
	1 (25)	2 (50)	—	3-13/16 (97)	2-3/16 (55)	3 (76)	3-1/2 (89)	5 (2.3)	5 (2.3)	5 (2.3)	—
	1-1/4 (32)	2-1/2 (62)	3-3/4 (95)	3-13/16 (97)	2-3/16 (55)	—	—	7 (3.2)	—	—	9 (4.1)
	1-1/2 (40)	2-9/16 (65)	3-15/16 (99)	3-7/8 (99)	2-1/4 (58)	—	—	8 (3.6)	—	—	11 (5)
	2 (50)	3-1/8 (79)	4-9/16 (115)	4-3/16 (106)	—	—	—	16 (7.3)	—	—	16 (7.3)

* This dimension is determined by the union nut.

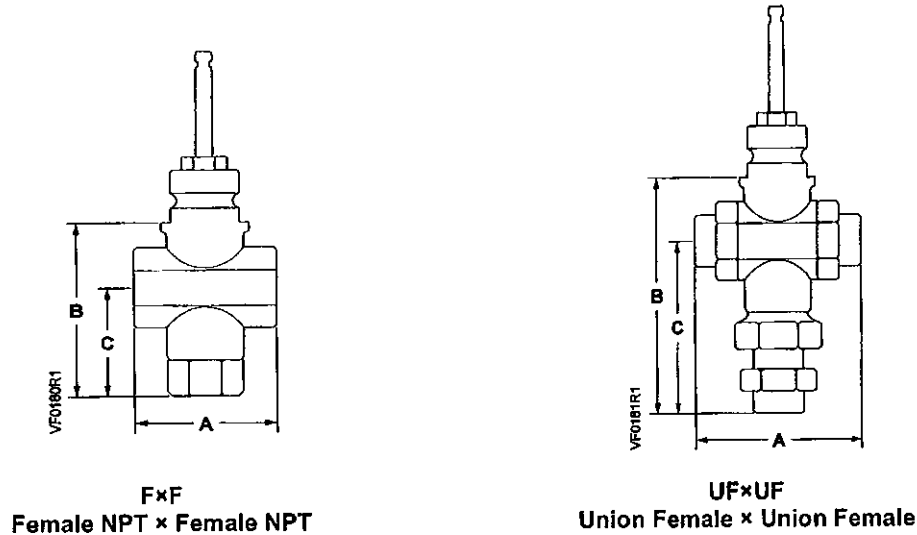


Figure 5. Three-Way Valves.

Table 21. Three-Way Valve Dimensions.

Valve	Valve Size Inches (mm)	Dimensions in Inches (mm)						Weight lb (kg)	
		F x F NPT x NPT			UF x UF Female Union x Female Union			F x F	UF x UF
		A	B	C	A	B	C		
3-Way	1/2 (15)	2-7/8 (72)	4-5/16 (110)	2-11/16 (68)	4-11/16 (119)	6-1/4 (159)	4-5/8 (117)	3 (1.4)	4 (1.8)
	3/4 (20)	3-3/8 (85)	4-5/16 (110)	2-3/4 (69)	6-3/8 (163)	6-15/16 (176)	5-1/4 (134)	4 (1.8)	6 (2.7)
	1 (25)	3-15/16 (100)	4-1/2 (114)	2-7/8 (72)	7-1/16 (180)	7 (178)	5-3/8 (136)	5 (2.3)	7 (3.2)
	1-1/4 (32)	4-15/16 (125)	4-5/8 (116)	2-15/16 (74)	7-1/2 (190)	6-3/4 (170)	5-1/16 (129)	7 (3.2)	11 (5)
	1-1/2 (40)	5-1/8 (130)	4-5/8 (117)	3 (76)	7-13/16 (199)	6-15/16 (176)	5-5/16 (135)	9 (4.1)	13 (5.9)
	2 (50)	6-1/4 (158)	4-3/4 (121)	3-3/16 (81)	9-1/16 (231)	7-3/16 (182)	5-9/16 (141)	13 (5.9)	19 (8.6)

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SIEMENS

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Flowrite™ 599 Series

2-1/2 to 6-Inch Valve, Two-Way & Three-Way, and Actuator Assembly Selection

Description

This Technical Bulletin will aid in the selection of a Flowrite 599 Series 2-1/2 Inch to 6-Inch valve and actuator assembly. Begin with the graph of water capacity and the chart of close-off pressures to select a valve and actuator according to specifications. Use Tables 1 through 4 to identify product numbers.

These tables show all the possible combinations of the Flowrite 599 Series valves and compatible actuators that can be ordered as complete valve assemblies from the factory.

The dimensions of all valves and the service envelope required for each actuator are included in Tables 5 through 7.

How to Use the Selection Graphs

Use Figure 1, the water capacity graph, to select a valve. Locate the specified flow rate on the vertical axis. Follow across on the horizontal line to the point of intersection with the specified pressure drop. Choose the valve size from the heavy diagonal lines across the graph.

Use Figure 2, the close-off pressure graph, to select an actuator. First locate the valve action and actuator power source specified. Locate the bar that represents the valve line size. The top of the bar indicates the maximum close-off pressure for tight close-off.

Use the legend at the bottom of the graph to identify the actuator.

How To Use The Valve Tables

Tables have been organized to help select a valve and actuator combination using additional specifications.

Moving from left to right, identify the valve by selecting the combination of parameters needed. Continue to the right to match the selected valve to a desired actuator.

A valve and actuator assembly part number is determined by combining the actuator prefix code with the suffix of the valve product number.

NOTES:

1. No valve will combine with all actuators.
 2. The symbol "—" indicates a combination is not available.
-

Selection Example

Specification

Select a two-way normally closed valve and actuator assembly for an ANSI 125 piping system that will deliver 500 gpm (113 m³/h) chilled water with an equal percentage flow characteristic with no more than 5 psi (35 kPa) pressure drop across the fully open valve.

The valve shall be operated by a 24 Vac powered, 0 to 10 Vdc control signal, spring return electronic actuator, and must close off tightly against a pump head pressure of 15 psi (1 bar).

Valve Sizing

Use Figure 1, the water capacity graph, to begin valve sizing.

1. Locate 500 gpm (113 m³/h) on the vertical axis to find the required flow.
2. Read across the horizontal axis to find 5 psi (35 kPa), the maximum allowable pressure drop across the open valve.
3. Select a 5-inch (125 mm) 250 Cv (214 Kvs) line size valve because the point of intersection falls close to the 5-inch line.

Actuator selection

Use Figures 2, the close-off pressure graph, to choose an actuator.

1. Locate the graph for electronic actuators for NC valves in the upper left side of the figure.
 2. Locate the bar for 5-inch valves. The black bar represents an SKB/C actuator.
 3. Notice that the SKB/C has the sufficient force to provide tight close-off against more than 20 psi (1.4 bar) differential. For a 5-inch valve, select a SKC actuator with a 40 mm stroke.
-

Product Number Selection

Use Table 1 for ANSI Class 125 valves. Begin at the left and select the specifications necessary.

1. Select a two-way, normally closed, equal percentage flow characteristic according to the specifications.
2. Select bronze trim for the low pressure water application and standard packing for chilled water.
3. Select the 5-inch line size determined from the sizing example above. Note the 40 mm stroke of the valve. The valve part number is 599-05993.
4. Read across the top of the table to Electronic-hydraulic, 40 mm, and 24 Vac, 0-10 Vdc control signal.
The actuator part number is SKC62U.
The actuator code number is 294.
5. Read down the column to determine the valve and actuator assembly product number is 294-05993.

NOTE: A valve and actuator can be ordered separately by using the part numbers from Steps 3 and 4.

References

Two-Way Valves 2-1/2 to 6-inch Flanged Iron Body Technical Instructions (155-159)

Three-Way Valves 2-1/2 to 6-inch Flanged Iron Body Technical Instructions (155-160)

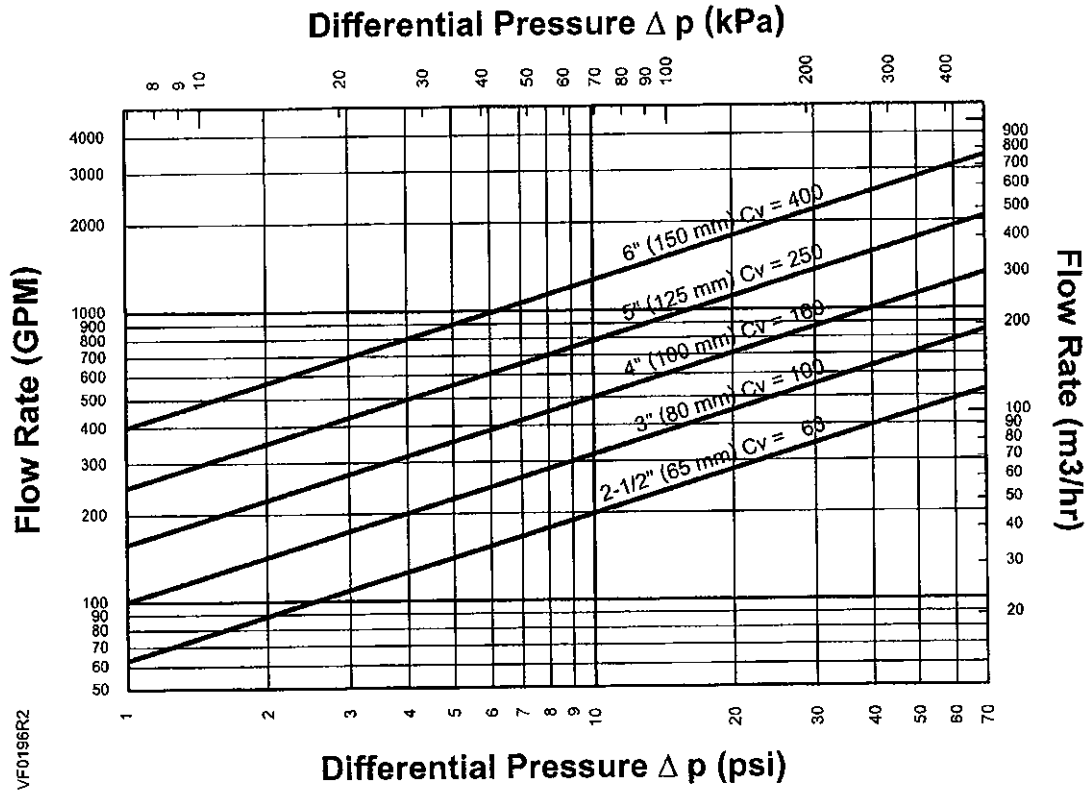


Figure 1. Water Capacity Graph.

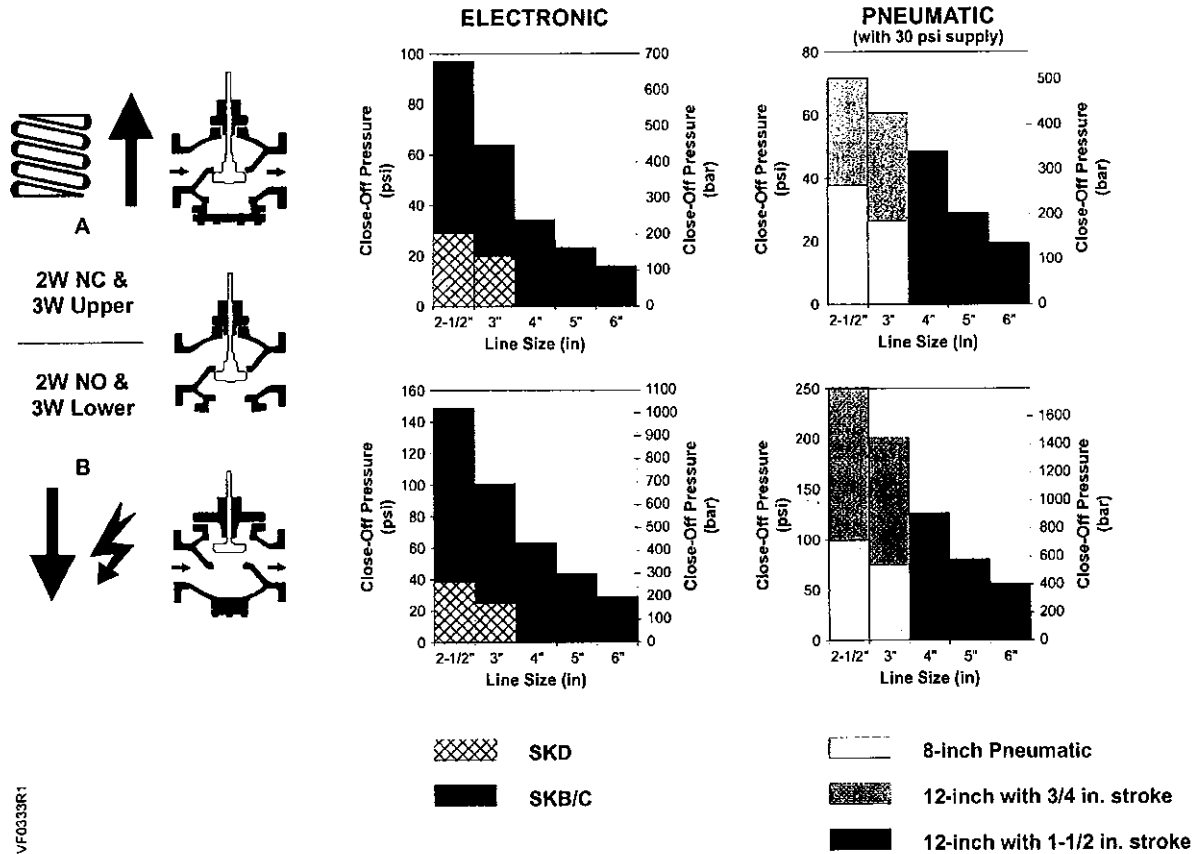


Figure 2. Close-off Pressures for 2-1/2 through 6-Inch Valves.

Table 2. Two-Way and Three-Way, Flanged Valves, ANSI Class 125.

Characteristic	Trim	Packing	Flow Rate		Valve Size		Stroke	Pneumatic				Pneumatic with Factory Mounted Positioner								
								Stroke	20 mm		40 mm		20 mm		40 mm					
									Description	8-inch		12-inch		8-inch		12-inch				
								Technical Instructions		Standard	Hi Temp	155-161P25		155-162P25		Standard	Hi-Temp	155-161P25		155-162P25
									Actuator P/N	599-01050	599-01051	599-01010	599-01000	599-01050 & 599-00426	599-01051 & 599-00426	599-01010 & 599-00423	599-01000 & 599-00423	Actuator Code		
Valve P/N	277	278	279	281	283	284	285	287												
2-Way Equal Percentage, NO	Bronze	Standard	63	54	2.5	65	20	599-05980	277-05980	---	279-05980	---	283-05980	---	285-05980	---				
			100	86	3	80	20	599-05981	277-05981	---	279-05981	---	283-05981	---	285-05981	---				
			160	140	4	100	40	599-05982	---	---	281-05982	---	---	---	---	287-05982				
			250	215	5	125	40	599-05983	---	---	---	281-05983	---	---	---	287-05983				
			400	340	6	150	40	599-05984	---	---	---	281-05984	---	---	---	287-05984				
			63	54	2.5	65	20	599-05980	277-05980	---	279-05980	---	283-05980	---	285-05980	---				
	100	86	3	80	20	599-05961	277-05961	---	279-05961	---	283-05961	---	285-05961	---						
	160	140	4	100	40	599-05962	---	---	---	281-05962	---	---	---	287-05962						
	250	215	5	125	40	599-05963	---	---	---	281-05963	---	---	---	287-05963						
	400	340	6	150	40	599-05964	---	---	---	281-05964	---	---	---	287-05964						
	63	54	2.5	65	20	599-06060	277-06060	---	279-06060	---	283-06060	---	285-06060	---						
	100	86	3	80	20	599-06061	277-06061	---	279-06061	---	283-06061	---	285-06061	---						
160	140	4	100	40	599-06062	---	---	---	281-06062	---	---	---	287-06062							
250	215	5	125	40	599-06063	---	---	---	281-06063	---	---	---	287-06063							
400	340	6	150	40	599-06064	---	---	---	281-06064	---	---	---	287-06064							
2-Way Linear, NO	Stainless Steel	Standard	63	54	2.5	65	20	599-06040	277-06040	278-06040	279-06040	---	283-06040	284-06040	285-06040	---				
			100	86	3	80	20	599-06041	277-06041	278-06041	279-06041	---	283-06041	284-06041	285-06041	---				
			160	140	4	100	40	599-06042	---	---	---	281-06042	---	---	---	287-06042				
			250	215	5	125	40	599-06043	---	---	---	281-06043	---	---	---	287-06043				
			400	340	6	150	40	599-06044	---	---	---	281-06044	---	---	---	287-06044				
			63	54	2.5	65	20	599-06040	277-06040	278-06040	279-06040	---	283-06040	284-06040	285-06040	---				
	100	86	3	80	20	599-06041	277-06041	278-06041	279-06041	---	283-06041	284-06041	285-06041	---						
	160	140	4	100	40	599-06042	---	---	---	281-06042	---	---	---	287-06042						
	250	215	5	125	40	599-06043	---	---	---	281-06043	---	---	---	287-06043						
	400	340	6	150	40	599-06044	---	---	---	281-06044	---	---	---	287-06044						
	2-Way Equal Percentage, NC	Bronze	Standard	63	54	2.5	65	20	599-05990	277-05990	---	279-05990	---	283-05990	---	285-05990	---			
				100	86	3	80	20	599-05991	277-05991	---	279-05991	---	283-05991	---	285-05991	---			
160				140	4	100	40	599-05992	---	---	---	281-05992	---	---	---	287-05992				
250				215	5	125	40	599-05993	---	---	---	281-05993	---	---	---	287-05993				
400				340	6	150	40	599-05994	---	---	---	281-05994	---	---	---	287-05994				
63				54	2.5	65	20	599-05970	277-05970	---	279-05970	---	283-05970	---	285-05970	---				
100		86	3	80	20	599-05971	277-05971	---	279-05971	---	283-05971	---	285-05971	---						
160		140	4	100	40	599-05972	---	---	---	281-05972	---	---	---	287-05972						
250		215	5	125	40	599-05973	---	---	---	281-05973	---	---	---	287-05973						
400		340	6	150	40	599-05974	---	---	---	281-05974	---	---	---	287-05974						
63		54	2.5	65	20	599-06070	277-06070	---	279-06070	---	283-06070	---	285-06070	---						
100		86	3	80	20	599-06071	277-06071	---	279-06071	---	283-06070	---	285-06070	---						
160	140	4	100	40	599-06072	---	---	---	281-06072	---	---	---	287-06072							
250	215	5	125	40	599-06073	---	---	---	281-06073	---	---	---	287-06073							
400	340	6	150	40	599-06074	---	---	---	281-06074	---	---	---	287-06074							
2-Way Linear, NC	Stainless Steel	Standard	63	54	2.5	65	20	599-06050	277-06050	278-06050	279-06050	---	283-06050	284-06050	285-06050	---				
			100	86	3	80	20	599-06051	277-06051	278-06051	279-06051	---	283-06050	284-06051	285-06051	---				
			160	140	4	100	40	599-06052	---	---	---	281-06052	---	---	---	287-06052				
			250	215	5	125	40	599-06053	---	---	---	281-06053	---	---	---	287-06053				
			400	340	6	150	40	599-06054	---	---	---	281-06954	---	---	---	287-06054				
			63	54	2.5	65	20	599-06050	277-06050	278-06050	279-06050	---	283-06050	284-06050	285-06050	---				
	100	86	3	80	20	599-06051	277-06051	278-06051	279-06051	---	283-06050	284-06051	285-06051	---						
	160	140	4	100	40	599-06052	---	---	---	281-06052	---	---	---	287-06052						
	250	215	5	125	40	599-06053	---	---	---	281-06053	---	---	---	287-06053						
	400	340	6	150	40	599-06054	---	---	---	281-06954	---	---	---	287-06054						
	3-Way Mixing Linear	Bronze	Standard	63	54	2.5	65	20	599-06160	277-06160	---	279-06160	---	283-06160	---	285-06160	---			
				100	86	3	80	20	599-06161	277-06161	---	279-06161	---	283-06161	---	285-06161	---			
160				140	4	100	40	599-06162	---	---	---	281-06162	---	---	---	287-06162				
250				215	5	125	40	599-06163	---	---	---	281-06163	---	---	---	287-06163				
400				340	6	150	40	599-06164	---	---	---	281-06174	---	---	---	287-06174				
63				54	2.5	65	20	599-06165	277-06165	---	279-06165	---	283-06165	---	285-06165	---				
100		86	3	80	20	599-06166	277-06166	---	279-06166	---	283-06166	---	285-06166	---						
160		140	4	100	40	599-06167	---	---	---	281-06167	---	---	---	287-06167						
250		215	5	125	40	599-06168	---	---	---	281-06168	---	---	---	287-06168						
400		340	6	150	40	599-06169	---	---	---	281-06169	---	---	---	287-06169						

Table 3. Two-Way and Three-Way, Flanged Valves, ANSI Class 250, Continued.

Action	Port & Characteristic	Trim	Packing	Flow Rate		Valve Size		Stroke	Electronic-Hydraulic - 24 Vac										
									Stroke	20 mm					40 mm				
										Description	Non-Spring Return		Spring Return			NSR		Spring Return	
									Technical Instructions		Floating			0 to 10 Vdc, 4 to 20 mA		0 to 10 Vdc, 4 to 20 10		Floating	
										Actuator P/N	SKD82.50U	SKB82.50U	SKD82.51U	SKB82.51U	SKD62U	SKB62U	SKC82.60U	SKC82.61U	SKC62U
Normally Open	2-Way Equal Percentage	Bronze	Standard	63	54	2.5	65	20	599-05940	275-05940	290-05940	276-05940	289-05940	274-05940	291-05940	—	—	—	
				100	86	3	80	20	599-05941	275-05941	290-05941	276-05941	289-05941	274-05941	291-05941	—	—	—	
				160	140	4	100	40	599-05942	—	—	—	—	—	—	293-05942	292-05942	294-05942	
				250	215	5	125	40	599-05943	—	—	—	—	—	—	—	293-05943	292-05943	294-05943
				400	340	6	150	40	599-05944	—	—	—	—	—	—	—	293-05944	292-05944	294-05944
				400	340	6	150	40	599-05944	—	—	—	—	—	—	—	—	—	—
		Stainless St	63	54	2.5	65	20	599-05920	275-05920	290-05920	276-05920	289-05920	274-05920	291-05920	—	—	—		
			100	86	3	80	20	599-05921	275-05921	290-05921	276-05921	289-05921	274-05921	291-05921	—	—	—		
			160	140	4	100	40	599-05922	—	—	—	—	—	—	293-05922	292-05922	294-05922		
			250	215	5	125	40	599-05923	—	—	—	—	—	—	—	293-05923	292-05923	294-05923	
			400	340	6	150	40	599-05924	—	—	—	—	—	—	—	293-05924	292-05924	294-05924	
			400	340	6	150	40	599-05924	—	—	—	—	—	—	—	—	—	—	
	2-Way Linear	Stainless St	Standard	63	54	2.5	65	20	599-06140	275-06140	290-06140	276-06140	289-06140	274-06140	291-06140	—	—	—	
				100	86	3	80	20	599-06141	275-06141	290-06141	276-06141	289-06141	274-06141	291-06141	—	—	—	
				160	140	4	100	40	599-06142	—	—	—	—	—	—	293-06142	292-06142	294-06142	
				250	215	5	125	40	599-06143	—	—	—	—	—	—	—	293-06143	292-06143	294-06143
				400	340	6	150	40	599-06144	—	—	—	—	—	—	—	293-06144	292-06144	294-06144
				400	340	6	150	40	599-06144	—	—	—	—	—	—	—	—	—	—
		Hi-Temp	63	54	2.5	65	20	599-06120	275-06120	290-06120	276-06120	289-06120	274-06120	291-06120	—	—	—		
			100	86	3	80	20	599-06121	275-06121	290-06121	276-06121	289-06121	274-06121	291-06121	—	—	—		
			160	140	4	100	40	599-06122	—	—	—	—	—	—	293-06122	292-06122	294-06122		
			250	215	5	125	40	599-06123	—	—	—	—	—	—	—	293-06123	292-06123	294-06123	
			400	340	6	150	40	599-06124	—	—	—	—	—	—	—	293-06124	292-06124	294-06124	
			400	340	6	150	40	599-06124	—	—	—	—	—	—	—	—	—	—	
Normally Closed	2-Way Equal Percentage	Bronze	Standard	63	54	2.5	65	20	599-05950	275-05950	290-05950	276-05950	289-05950	274-05950	291-05950	—	—	—	
				100	86	3	80	20	599-05951	275-05951	290-05951	276-05951	289-05951	274-05951	291-05951	—	—	—	
				160	140	4	100	40	599-05952	—	—	—	—	—	—	293-05952	292-05952	294-05952	
				250	215	5	125	40	599-05953	—	—	—	—	—	—	—	293-05953	292-05953	294-05953
				400	340	6	150	40	599-05954	—	—	—	—	—	—	—	293-05954	292-05954	294-05954
				400	340	6	150	40	599-05954	—	—	—	—	—	—	—	—	—	—
		Stainless St	63	54	2.5	65	20	599-05930	275-05930	290-05930	276-05930	289-05930	274-05930	291-05930	—	—	—		
			100	86	3	80	20	599-05931	275-05931	290-05931	276-05931	289-05931	274-05931	291-05931	—	—	—		
			160	140	4	100	40	599-05932	—	—	—	—	—	—	293-05932	292-05932	294-05932		
			250	215	5	125	40	599-05933	—	—	—	—	—	—	—	293-05933	292-05933	294-05933	
			400	340	6	150	40	599-05934	—	—	—	—	—	—	—	293-05934	292-05934	294-05934	
			400	340	6	150	40	599-05934	—	—	—	—	—	—	—	—	—	—	
	2-Way Linear	Stainless St	Standard	63	54	2.5	65	20	599-06150	275-06150	290-06150	276-06150	289-06150	274-06150	291-06150	—	—	—	
				100	86	3	80	20	599-06151	275-06151	290-06151	276-06151	289-06151	274-06151	291-06151	—	—	—	
				160	140	4	100	40	599-06152	—	—	—	—	—	—	293-06152	292-06152	294-06152	
				250	215	5	125	40	599-06153	—	—	—	—	—	—	—	293-06153	292-06153	294-06153
				400	340	6	150	40	599-06154	—	—	—	—	—	—	—	293-06154	292-06154	294-06154
				400	340	6	150	40	599-06154	—	—	—	—	—	—	—	—	—	—
		Hi-Temp	63	54	2.5	65	20	599-06130	275-06130	290-06130	276-06130	289-06130	274-06130	291-06130	—	—	—		
			100	86	3	80	20	599-06131	275-06131	290-06131	276-06131	289-06131	274-06131	291-06131	—	—	—		
			160	140	4	100	40	599-06132	—	—	—	—	—	—	293-06132	292-06132	294-06132		
			250	215	5	125	40	599-06133	—	—	—	—	—	—	—	293-06133	292-06133	294-06133	
			400	340	6	150	40	599-06134	—	—	—	—	—	—	—	293-06134	292-06134	294-06134	
			400	340	6	150	40	599-06134	—	—	—	—	—	—	—	—	—	—	
Linear	3-Way Mixing	Bronze	Standard	63	54	2.5	65	20	599-06170	275-06170	290-06170	276-06170	289-06170	274-06170	291-06170	—	—	—	
				100	86	3	80	20	599-06171	275-06171	290-06171	276-06171	289-06171	274-06171	291-06171	—	—	—	
				160	140	4	100	40	599-06172	—	—	—	—	—	—	293-06172	292-06172	294-06172	
				250	215	5	125	40	599-06173	—	—	—	—	—	—	—	293-06173	292-06173	294-06173
				400	340	6	150	40	599-06174	—	—	—	—	—	—	—	293-06174	292-06174	294-06174
				400	340	6	150	40	599-06174	—	—	—	—	—	—	—	—	—	—
	Stainless St	63	54	2.5	65	20	599-06175	275-06175	290-06175	276-06175	289-06175	274-06175	291-06175	—	—	—			
		100	86	3	80	20	599-06176	275-06176	290-06176	276-06176	289-06176	274-06176	291-06176	—	—	—			
		160	140	4	100	40	599-06177	—	—	—	—	—	—	293-06177	292-06177	294-06177			
		250	215	5	125	40	599-06178	—	—	—	—	—	—	—	293-06178	292-06178	294-06178		
		400	340	6	150	40	599-06179	—	—	—	—	—	—	—	293-06179	294-06179	294-06179		
		400	340	6	150	40	599-06179	—	—	—	—	—	—	—	—	—	—		

Table 4. Two-Way and Three-Way, Flanged Valves, ANSI Class 250.

Characteristic	Trim	Packing	Flow Rate		Valve Size		Stroke	Pneumatic				Pneumatic with Factory Mounted Positioner						
								20 mm		40 mm		20 mm		40 mm				
								8-inch		12-inch		8-inch		12-inch				
								Standard	Hi-Temp	Standard	Hi-Temp	Standard	Hi-Temp	Standard	Hi-Temp			
								155-161P25		155-162P25		155-161P25		155-162P25				
Actuator P/N		599-01050	599-01051	599-01010	599-01000	599-01050 & 599-00426	599-01051 & 599-00426	599-01010 & 599-00423	599-01000 & 599-00423									
Valve P/N		Actuator Codes																
Cv	Kvs	In	mm	277	278	279	281	283	284	285	287							
Normally Open	2-Way Equal Percentage	Bronze	Standard	63	54	2.5	65	20	599-05940	277-05940	—	279-05940	—	283-05940	—	285-05940	—	
				100	86	3	80	20	599-05941	277-05941	—	279-05941	—	283-05941	—	285-05941	—	
				160	140	4	100	40	599-05942	—	—	—	281-05942	—	—	—	287-05942	
				250	215	5	125	40	599-05943	—	—	—	281-05943	—	—	—	287-05943	
				400	340	6	150	40	599-05944	—	—	—	281-05944	—	—	—	287-05944	
		63	54	2.5	65	20	599-05920	277-05920	—	279-05920	—	283-05920	—	285-05920	—			
		100	86	3	80	20	599-05921	277-05921	—	279-05921	—	283-05921	—	285-05921	—			
		160	140	4	100	40	599-05922	—	—	—	281-05922	—	—	—	287-05922			
		250	215	5	125	40	599-05923	—	—	—	281-05923	—	—	—	287-05923			
		400	340	6	150	40	599-05924	—	—	—	281-05924	—	—	—	287-05924			
	63	54	2.5	65	20	599-06120	277-06120	—	279-06120	—	283-06120	—	285-06120	—				
	100	86	3	80	20	599-06121	277-06121	—	279-06121	—	283-06121	—	285-06121	—				
	160	140	4	100	40	599-06122	—	—	—	281-06122	—	—	—	287-06122				
	250	215	5	125	40	599-06123	—	—	—	281-06123	—	—	—	287-06123				
	400	340	6	150	40	599-06124	—	—	—	281-06124	—	—	—	287-06124				
	63	54	2.5	65	20	599-05950	277-05950	—	279-05950	—	283-05950	—	285-05950	—				
	100	86	3	80	20	599-05951	277-05951	—	279-05951	—	283-05951	—	285-05951	—				
	160	140	4	100	40	599-05952	—	—	—	281-05952	—	—	—	287-05952				
	250	215	5	125	40	599-05953	—	—	—	281-05953	—	—	—	287-05953				
	400	340	6	150	40	599-05954	—	—	—	281-05954	—	—	—	287-05954				
Normally Closed	2-Way Equal Percentage	Bronze	Standard	63	54	2.5	65	20	599-06120	277-06120	278-06120	279-06120	—	283-06120	284-06120	285-06120	—	
				100	86	3	80	20	599-06121	277-06121	278-06121	279-06121	—	283-06121	284-06121	285-06121	—	
				160	140	4	100	40	599-06122	—	—	—	281-06122	—	—	—	287-06122	
				250	215	5	125	40	599-06123	—	—	—	281-06123	—	—	—	287-06123	
				400	340	6	150	40	599-06124	—	—	—	281-06124	—	—	—	287-06124	
		63	54	2.5	65	20	599-06150	277-06150	—	279-06150	—	283-06150	—	285-06150	—			
		100	86	3	80	20	599-06151	277-06151	—	279-06151	—	283-06151	—	285-06151	—			
		160	140	4	100	40	599-06152	—	—	—	281-06152	—	—	—	287-06152			
		250	215	5	125	40	599-06153	—	—	—	281-06153	—	—	—	287-06153			
		400	340	6	150	40	599-06154	—	—	—	281-06154	—	—	—	287-06154			
	63	54	2.5	65	20	599-06130	277-06130	278-06130	279-06130	—	283-06130	284-06130	285-06130	—				
	100	86	3	80	20	599-06131	277-06131	278-06131	279-06131	—	283-06131	284-06131	285-06131	—				
	160	140	4	100	40	599-06132	—	—	—	281-06132	—	—	—	287-06132				
	250	215	5	125	40	599-06133	—	—	—	281-06133	—	—	—	287-06133				
	400	340	6	150	40	599-06134	—	—	—	281-06134	—	—	—	287-06134				
	Linear	3-Way Mixing	Bronze	Standard	63	54	2.5	65	20	599-06170	277-06170	—	279-06170	—	283-06170	—	285-06170	—
					100	86	3	80	20	599-06171	277-06171	—	279-06171	—	283-06171	—	285-06171	—
					160	140	4	100	40	599-06172	—	—	—	281-06172	—	—	—	287-06172
					250	215	5	125	40	599-06173	—	—	—	281-06173	—	—	—	287-06173
					400	340	6	150	40	599-06174	—	—	—	281-06174	—	—	—	287-06174
63		54	2.5	65	20	599-06175	277-06175	—	279-06175	—	283-06175	—	285-06175	—				
100		86	3	80	20	599-06176	277-06176	—	279-06176	—	283-06176	—	285-06176	—				
160		140	4	100	40	599-06177	—	—	—	281-06177	—	—	—	287-06177				
250		215	5	125	40	599-06178	—	—	—	281-06178	—	—	—	287-06178				
400		340	6	150	40	599-06179	—	—	—	281-06179	—	—	—	287-06179				

Note: Spring start point NO = 3 to 8 psi (21 to 55 kPa), NC = 10 to 15 psi (69 to 103 kPa), 3-Way = 8 to 13 psi (55 to 90 kPa),

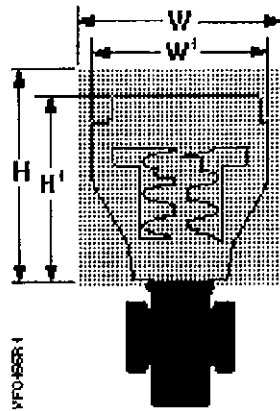
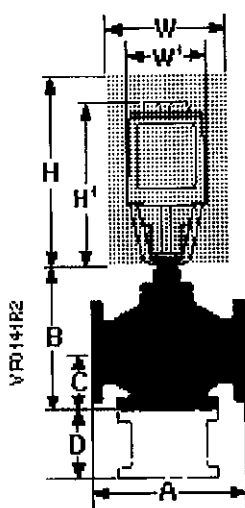


Figure 3. Actuator Dimensions.

Table 5. Dimensions of the Actuator and Recommended Service Envelope.
 Dimensions in Inches (Millimeters).

Actuator	Actuator Prefix Code	Actual Height of Actuator H1	Service Height H	Actual Width or Diameter of Actuator W1	Service Width W
8-inch Pneumatic	277, 278, 283, 284	14-1/8 (359)	26 (660)	8-3/4 (222) diameter	21 (533)
12-inch Pneumatic	279, 281, 285, 287	17-7/8 (454)	30 (762)	15-1/8 (384) diameter	27 (686)
SKB/C with handle closed	289, 290, 291, 292, 292, 294	14-3/4 (375)	22-3/4 (578)	7 (178) width × 8-15/16 (226) depth	25 (635)
SKD	274, 275, 276	11-13/16 (300)	19-3/4 (500)	5 (127) width × 6-5/8 (169) depth	14-1/2 (360)

Table 6. Three-Way Valve Dimensions.



Nominal Valve Size Inches (mm)	Dimensions in Inches (Millimeters)					Weight lb (kg)	
	A		B	C	D	ANSI Class 125	ANSI Class 250
	ANSI Class 125	ANSI Class 250					
2-1/2 (65)	10-7/8 (276.4)	11-1/2 (292)	9-3/8 (239.2)	3-3/4 (95)	6-1/2 (165)	104 (47)	117 (53)
3 (80)	11-3/4 (298.5)	12-1/2 (318)	10-3/4 (272)	4-3/8 (111)	7 (178)	114 (52)	132 (60)
4 (100)	13-7/8 (352.4)	14-1/2 (368)	12-1/2 (317.6)	5-1/8 (131.6)	7-1/2 (191)	146 (66)	174 (79)
5 (125)	15-3/4 (400)	16-5/8 (422)	13-3/4 (349.2)	5-3/4 (146.2)	8-1/2 (216)	170 (77)	215 (99)
6 (150)	17-3/4 (451)	18-5/8 (473)	15-1/2 (393)	6-5/8 (167)	9-1/2 (241)	199 (90)	261 (119)

Figure 4. Dimensions.

Table 7. Two-Way Valve Dimensions.

Valve Action	Nominal Valve Size Inches (mm)	ANSI Class 125				ANSI Class 250			
		Dimensions in Inches (mm)			Weight lb (kg)	Dimensions in Inches (mm)			Weight lb (kg)
		A	B	C		A	B	C	
Normally Open	2-1/2 (65)	10-7/8 (276)	11 (281)	4-7/8 (123)	107 (49)	11-1/2 (292)	11 (281)	4-7/8 (123)	121 (55)
	3 (80)	11-3/4 (299)	12-1/4 (312)	5-5/16 (135)	118 (53)	12-1/2 (318)	12-1/4 (312)	5-5/16 (135)	139 (63)
	4 (100)	13-7/8 (352)	13-9/16 (345)	6-5/16 (160)	153 (70)	14-1/2 (368)	13-5/8 (344.7)	6-5/16 (160)	183 (83)
	5 (125)	15-3/4 (400)	15-3/16 (385)	7 (177)	176 (80)	16-5/8 (422)	15-3/16 (385)	7 (177)	222 (101)
	6 (150)	17-3/4 (451)	16-3/4 (426)	7-7/8 (200)	211 (96)	18-5/8 (473)	16-3/4 (426)	7-7/8 (200)	277 (126)
Normally Closed	2-1/2 (65)	10-7/8 (276)	10-5/8 (269)	4-7/8 (125)	107 (48)	11-1/2 (292)	11 (279)	5-3/8 (135)	120 (55)
	3 (80)	11-3/4 (299)	11-15/16 (303)	5-5/8 (142)	117 (53)	12-1/2 (318)	12-7/16 (315)	6 (154)	136 (62)
	4 (100)	13-7/8 (352)	13-15/16 (354)	6-5/8 (168)	154 (70)	14-1/2 (368)	14-3/8 (364)	7 (178)	184 (84)
	5 (125)	15-3/4 (400)	15-1/4 (388)	7-1/2 (185)	175 (79)	16-5/8 (422)	15-3/4 (399)	7-3/4 (196)	221 (101)
	6 (150)	17-3/4 (451)	17-1/16 (433)	8-3/16 (207)	210 (95)	18-5/8 (473)	17-1/2 (444)	8-5/8 (218)	275 (125)

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 Flow Control Division
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Wed. Jan 27. 2010

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 Page: 1 of 1

Order: 245714
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 CA: AFORD

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PO: 0041630503
 Rep: 247 - PROCESS SUPPLIES & ACCESSOR

SHIP TO: EASTMAN CHEMICAL COMPANY
 TN MAINTENANCE & STORES
 EASTMAN ROAD
 KINGSPORT, TN 37662
 United States
 Attn:

BILL TO: EASTMAN CHEMICAL COMPANY
 P.O. BOX 511
 ACCOUNTS PAYABLE
 KINGSPORT, TN 37662
 United States
 Attn:

PayTerm: NET 45 DAYS
 FrtTerm: Freight Allowed
 FOB: Factory
 Carrier: AIR NEXT DAY

Line	Item/Description	Date Requested	Date Promised	Qty	Unit	Selling Price	Extended Price
1	245714-001 MaxFlo 3, 8.00, CL 300, A351-CF8M (SS), Other. ACTUATOR: POSITIONER: CONTROLLER: 237-PC-1161 BODY SUB	23-FEB-10	23-FEB-10	1	FACH	8,542.00	8,542.00
							8,542.00

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