

Butterfly Valve Assemblies

Selection Guide



PRODUCT AT A GLANCE

- 2 to 18" two-way assemblies and 2 to 16" three-way assemblies
- Chilled/hot water/glycol applications
- EPDM resilient seats with tongue and groove design and build in O-ring seal
- Stainless steel double D stem, requires no pins or screws to connect the disc and stem
- Extended neck design for temperature isolation and ease of insulation installation
- Nylon 11 coated ductile iron disc
- Wide choice of pneumatic and electric actuators and control signals
- Cast iron lug bodies mate with ANSI class 125/150 flanges
- Bubble tight shut off
- Bidirectional Flow
- Series S70 NEMA 4 actuators available in 24 or 120 Vac

PRODUCT DESCRIPTION

Schneider Electric's new butterfly valve line offers a wide range of two- and three-way sizes, along with low pressure pneumatic spring return, electric non-spring return, and spring return actuator models that operate with on/off, floating, or proportional control signals. All assemblies include industry leading butterfly valve features, stainless steel double "D" shafts, nylon 11 coated ductile iron disc machined to provide bubble tight shut off, minimum torque, and longer seat life. The tongue and groove resilient seat design with molded in O-ring eliminates the use of flange gaskets and allows for ease of maintenance or replacement of the resilient seat. These features provide years of optimum performance and reliability.

APPLICATIONS

Typical applications include cooling towers, central system shutoff and bypass piping control, thermal storage, and chiller and boiler control.



PART NUMBERING SYSTEM – RUBBER LINED

V X X X - 6 X X X - X X X X - X - X X

Control Signal Type
 A = 2-Position
 B = Body only
 F = Floating (SPDT, center off)
 K = Pneumatic
 S = Proportional (Vdc, mAcd)

Disc
 F = Full 175 psi close to 12"
 U = Undercut 50 psi close

Accessory
 4 = Positive positioner
 S = Auxiliary switch
 Leave the digit blank for no accessories

Type
 6 = Butterfly

Style
 2 = 2-Way
 3 = 3-Way

Power Loss Action
 0 = NSR
 1 = NO
 2 = NC

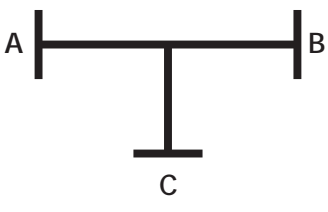
Actuator Code
 See Table 1
 If actuator code is only three digits, leave the fourth digit blank.

Body Style
 L = Nylon disc and lug body
 M = AlumBronze Disc*
 SS = Stainless Steel Disc*
 *Note: (Consult Factory)

Port Code
 11 = 2"
 12 = 2.5"
 13 = 3"
 14 = 4"
 15 = 5"
 16 = 6"
 17 = 8"
 18 = 10"
 19 = 12"
 21 = 16"
 22 = 18"
 *Note:
 Larger Sizes
 (Consult Factory)

Flow Pattern^c

Pattern	Main Valve ^a	Main Valve Position ^d	Linked Valve
0 = 2-Way	-	-	-
1 = 3-Way ^b	A	NC	C
2 = 3-Way ^b	B	NC	C
7 = 3-Way ^b	B	NO	C
8 = 3-Way ^b	A	NO	C
9 = Special	-	-	-



a. The letter indicates the main valve and where the actuator is mounted.
 b. Refer to the flow diagram to the right.
 c. The view represented is looking down on the stem side of the valve.
 d. Spring return models position on loss of power

Table 1: Actuator Codes and Part Numbers^a

Refer to the part numbering system illustration on the previous page.

Actuator Code^b	On/Off or Floating SR	Actuator Code^b	Modulating (2 to 10 Vdc, 4 to 20mA) SR with the addition of a 500 ohm resistor
556	MA41-7153 (VAx) (On/Off)	556	MS41-7153 (VSx)
556D		556D	
556	MF41-7153 (VFx) (Floating)	-	-
556D			
Actuator Code^b	On/Off or Floating SR with Two SPDT Auxiliary Switches	Actuator Code^b	Modulating (2 to 10 Vdc, 4 to 20 mA) SR with Two SPDT Auxiliary Switches with the addition of a 500 ohm resistor
556	MA41-7153-502 (VAxS) (On/Off)	556	MS41-7153-502 (VSxS)
556D		556D	
556	MF41-7153-502 (VFxS) (Floating)	-	-
556D			
Actuator Code^b	On/Off or Floating NSR	Actuator Code^b	Modulating (0 to 10 Vdc, 4 to 20 mA) NSR
E24	NR-2216-521 (VFx)	E24	NR-2216-541 (VSx)
E25	NR-2224-521 (VFx)	E25	NR-2224-541 (VSx)
E25D	NR-2224-521 (VFx)	E25D	NR-2224-541 (VSx)
Actuator Code^b	On/Off or Floating NSR with Two SPDT Auxiliary Switches	Actuator Code^b	Modulating (0 to 10 Vdc, 4 to 20 mA) NSR with Two SPDT Auxiliary Switches
E24	NR-2216-522 (VFxS)	E24	NR-2216-542 (VSxS)
E25	NR-2224-522 (VFxS)	E25	NR-2224-542 (VSxS)
E25D	NR-2224-522 (VFxS)	E25D	NR-2224-542 (VSxS)
Actuator Code	On/Off or Floating with One SPDT Auxiliary Switch	Actuator Code	Modulating (0 to 10 Vdc) NSR with One SPDT Auxiliary Switch
907	MP-9810-129 (VAxS or VFxS)	909	MP-9810-129/CP-8391-456 (VSxS)
Actuator Code^c	On/Off NSR with Two SPDT Auxiliary Switches and Heater	Actuator Code^c	Modulating (0 to 10 Vdc, 4 to 20 mA) NSR with Two SPDT Auxiliary Switches and Heater
E10	S70-0051-H (VAxS) (120 Vac)	E12	S70-0051-SV (VSxS) (120 Vac)
E20	S70-0121-H (VAxS) (120 Vac)	E22	S70-0121-SV (VSxS) (120 Vac)
E30	S70-0201-H (VAxS) (120 Vac)	E32	S70-0201-SV (VSxS) (120 Vac)
E40	S70-0301-H (VAxS) (120 Vac)	E42	S70-0301-SV (VSxS) (120 Vac)
E50	S70-0501-H (VAxS) (120 Vac)	E52	S70-0501-SV (VSxS) (120 Vac)
E60 (120 Vac only)	S70-0651-H (VAxS) (120 Vac)	E62 (120 Vac only)	S70-0651-SV (VSxS) (120 Vac)
Actuator Code^b	Pneumatic Base Model	Actuator Code^b	Pneumatic Modulating (Positive Positioner) SR
221	MK-7121 (VKxx)	221	MK4-7121 (VKx4)
251	M556-51 (VKxx)	251	M556-14 (VKx4)
251D		251D	

- See Table 2 to verify the correct actuator application for the valve selected.
- D = Dual actuators
- For 24 Vac powered change actuator code E to F (F10=S70-24-0051-H example)

BUTTERFLY VALVE ASSEMBLIES AND ACTUATORS

Table 2: Two-Way and Three-Way Valve Assemblies

Size	Close Off	Two-Way Butterfly Valve Assemblies ^a					Three-Way Butterfly Valve Assemblies ^a				
		Schneider Electric DuraDrive™ SR ^b	Direct Coupled NSR ^c	High Torque NSR ^c	NEMA 4 with Hand Wheel NSR ^c	20 PSI Pneu. SR ^b	Schneider Electric DuraDrive SR ^b	Direct Coupled NSR ^c	High Torque NSR ^c	NEMA 4 with Hand Wheel NSR ^c	20 PSI Pneu. SR ^b
2"	175	S	S	-	S	S	S	S	-	S	S
2.5"	175	S	S	-	S	S	S	S	-	S	S
3"	175	D	S	-	S	S	D	S	-	S	S
4"	50	D	S	-	-	S	D	S	-	S	-
	175	-	D	-	S	S	-	D	-	S	S
5"	50	-	S	-	S	S	-	D	-	S	S
	175	-	-	-	S	S	-	-	-	S	S
6"	50	-	D	-	-	S	-	D	-	S	S
	175	-	-	S	S	S	-	-	S	S	D
8"	50	-	-	S	S	S	-	-	S	S	D
	175	-	-	S	S	D	-	-	S	S	-
10"	50	-	-	S	S	D	-	-	S	S	-
	175	-	-	S	S	-	-	-	S	S	-
12"	50	-	-	S	S	-	-	-	S	S	-
	175	-	-	S	S	-	-	-	S	S	-
14"	50	-	-	-	S	-	-	-	-	S	-
	150	-	-	-	S	-	-	-	-	-	-
16"	50	-	-	-	S	-	-	-	-	S	-
18"	50	-	-	-	S	-	-	-	-	-	-

- a. S = Single actuator, D = Dual actuators, - = Assembly combination not available.
- b. SR = Spring return actuator available as configured for normally open and normally closed butterfly valves.
- c. NSR = Non spring return actuator.

Table 3: Actuator Features

Actuator Family	Spring Return	Available Input Signals	Available Options
Schneider Electric DuraDrive SR MX41-7153	Yes	24 Vac. Two Position, Floating, 2 to 10 Vdc, 4 to 20 mA with the addition of a 500 ohm resistor, Proportional	Auxiliary Switch
Direct Coupled NSR NR-22xx	No	24 Vac. Three Wire Two Position, Floating, 0 to 10 Vdc, 4 to 20 mA, Proportional	Auxiliary Switch
High Torque NSR MP-9810-129	No	120 Vac. Three Wire Two Position, Floating, 0 to 10 Vdc, Proportional	Auxiliary Switch (standard)
NEMA 4 with Hand Wheel NSR S70-xxx-	No	120 Vac. or 24 Vac. Three Wire Two Position, Floating, 0 to 10 Vdc, 4 to 20 mA, Proportional	Auxiliary Switch (standard) and Heater (standard)
20 PSI Pneumatic MK-7121/M566	Yes	8 to 13 psi. Nominal Operating Pressure Range	Positive Positioner

SCHNEIDER ELECTRIC DURADRIVE SPRING RETURN ACTUATORS FOR 2 TO 4" TWO- AND THREE-WAY VALVES



DuraDrive Spring Return
Mx41-7153 Actuator

Table 4: Schneider Electric DuraDrive Spring Return Actuators for 2 to 4" Two- and Three-Way Valves

Model Number	Actuator Code	Power	Input Signal	Feedback	Power Loss Mode	Accessories
MA41-7153	556 or 556D	24 Vac	On/off	–	SR	–
MF41-7153			Floating			
MS41-7153			2 to 10 Vdc	2 to 10 Vdc		
MA41-7153-502			On/off	–		
MF41-7153-502			Floating			
MS41-7153-502			2 to 10 Vdc	2 to 10 Vdc		

a. Optional. The first part number field of the valve assembly must call out Vxx**S**-6xxx.

Actuator Code 556, 556D (Mx41-7153 Series) Technical Data

Power Loss Mode

Spring return.

Control Signal

On/off, floating, or proportional
2 to 10 Vdc., 4 to 20 mA with the addition of a 500 ohm resistor

Power Requirements

24 Vac ± 20%, 22 to 30 Vdc, 9.7VA.

Environment

NEMA 2.

Ambient Temperatures

–22 to 140 °F (–12 to 60 °C).

Agency Listings

UL, CUL, CE.

Manual Operator

Provided on single mount units.

Option

Auxiliary switches
7 A @250 Vac.

SCHNEIDER ELECTRIC ELECTRIC NON-SPRING RETURN ACTUATORS FOR 6 TO 12" TWO- AND THREE-WAY VALVES



Non-Spring Return
MP-9810-129 Actuator

Table 5: Schneider Electric Electric Non-Spring Return High Torque Actuators for 6 to 12" Two- and Three-Way Valves

Model Number	Actuator Code	Power	Input Signal	Feedback	Power Loss Mode	Accessories
MP-9810-129	907	120 Vac	On/off, floating	100 W	NSR	SPDT Auxiliary Switch (standard)
MP-9810-129/ CP-8391-456	909		0 to 10 Vdc	–		

Actuator Code 907, 909 (MP-9810-129) Technical Data

Power Loss Mode

Non-spring return.

Control Signal

On/off, floating (907 only).
CP-8391-456 drive, 0 to 10 Vdc adjustable (included with 909 only), optically isolated, 19K Ω input impedance.

Power Requirements

120 Vac 60 Hz, 1.8a.
Add 3.5VA for CP-8391 drive

Environment

NEMA 1.

Ambient Temperatures

–40 to 130 °F (–40 to 50 °C).

Agency Listings

UL.

Standard Auxiliary Switch (Included)

12A resistive at 120 Vac.

NR-22XX NON-SPRING RETURN ACTUATORS FOR 2 TO 6" TWO- AND THREE-WAY VALVES



Non-Spring Return
NR-22xx-5xx Actuator

Table 6: NR-22xx Non-Spring Return Actuators for 2 to 6" Two- and Three-Way Valves

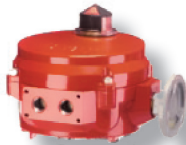
Model Number	Actuator Code	Power	Input Signal	Feedback	Power Loss Mode	Accessories
NR-2216-521	E24	24 Vac	On/off, floating	–	NSR	–
NR-2216-522			0 to 10 Vdc , 4 to 20 mA	0 to 10 Vdc		Two SPDT Auxiliary Switches ^a
NR-2216-541						–
NR-2216-542			Two SPDT Auxiliary Switches ^a			
NR-2224-521	E25 or E25D	24 Vac	On/off, floating	–	NSR	–
NR-2224-522			0 to 10 Vdc , 4 to 20 mA	0 to 10 Vdc		Two SPDT Auxiliary Switches ^a
NR-2224-541						–
NR-2224-542			Two SPDT Auxiliary Switches ^a			

a. Optional. The first part number field of the valve assembly must call out VxxS-6xxx.

Actuator Code E24, E25, E25D (NR-2000 Series) Technical Data

Power Loss Mode Non-spring return.	Power Requirements 20 to 30 Vac, 24 Vdc ± 10%	Ambient Temperatures –4 to 122 °F (–2 to 50 °C).	Optional Auxiliary Switch 2 SPDT 24 Vac 1.5 A inductive, 3 A resistive, 35 VA per switch.
Control Signal On/off, floating, or 2 to 10 Vdc, 4 to 20 mA.	Environment NR-2216 6.5VA, NR-2224 7.5VA NEMA 2.	Agency Listings UL, CSA, CE.	Manual Operator Provided on all models.

S70 NON-SPRING RETURN ACTUATORS FOR 2 TO 18" TWO-WAY AND 2 TO 16" THREE-WAY VALVES



Non-Spring Return
S70-xxxx Actuator

Table 7: S70 Non-Spring Return Actuators for 2 to 18" Two-Way and 2 to 16" Three-Way Valves

Model Number	Actuator Code	Power ^a	Input Signal	Feedback	Power Loss Mode	Accessories
S70-0051-H (120 Vac)	E10	E=120 Vac F=24 Vac	On/off, floating	–	NSR	Two SPDT Auxiliary Switches and heater (standard)
S70-0121-H (120 Vac)	E20					
S70-0201-H (120 Vac)	E30					
S70-0301-H (120 Vac)	E40					
S70-0501-H (120 Vac)	E50					
S70-0651-H (120 Vac)	E60 (120 Vac Only)					
S70-0051-SV (120 Vac)	E12		0 to 10 Vdc, 4 to 20 mA	0 to 10 Vdc, 4 to 20 mA		
S70-0121-SV (120 Vac)	E22					
S70-0201-SV (120 Vac)	E32					
S70-0301-SV (120 Vac)	E42					
S70-0501-SV (120 Vac)	E52					
S70-0651-SV (120 Vac)	E62 (120 Vac Only)					

a. For 24 Vac valve assemblies use F in place of E in the third field (VAFS-6200-F10-L-11). E10 becomes F10 for 24 Vac powered. (F10 actuator code=S70-24-0051-H actuator) For additional voltages contact the factory.

Actuator Code (70 Series) Technical Data

Power Loss Mode Non-spring return.	Actuator Code Ex2 (120 Vac) or Fx2 (24 Vac) Factory configured for 4 to 20 mA with a 250 Ω input impedance, field configurable for 0 to 10 Vdc or 2 to 10 Vdc.	Environment NEMA 4.	(Included) 10 A resistive at 125/250 Vac, 1/2 A at 125 Vdc.
Control Signal Actuator Code Ex0 (120 Vac) or Fx0 (24 Vac) On/off, floating	Power Requirements 120 Vac or 24 Vac, 50/60 Hz. E1x/F1x 1.5a E2x/F2x, E3x/F3x 2.1a E4x/F4x, E5x/F5x, E6x 3.0a	Ambient Temperatures –40 to 150 °F (–40 to 60 °C).	Heater 15 W.
		Agency Listings UL, CSA, CE.	Manual Operator Hand wheel provided on all models.
		Standard Auxiliary Switch	

Note: 24Vac models are Half Wave devices, see F-26363

SCHNEIDER ELECTRIC MK-7121 PNEUMATIC SPRING RETURN ACTUATORS FOR 2 TO 5" TWO-WAY AND 2 AND 2 1/2" THREE-WAY VALVES



Spring Return
MK-7121 Actuator

Table 8: Schneider Electric MK-7121 Pneumatic Spring Return Actuators for 2 to 5" Two-Way and 2 and 2-1/2" Three-Way Valves

Model Number	Actuator Code	Pressure PSI (kPa)	Power Loss Mode	Accessories
MK-7121	221	20 (138)	SR	
MK4-7121				Positive positioner ^a

a. The first part number field must call out VKx4-6xxx.

Actuator Code 221 (MK-7121 Series) Technical Data

Pressure Loss Mode

Spring return.

Spring Range

8 to 13.

Diaphragm

20 square inch neoprene.

Ambient Temperatures

-20 to 160 °F (-10 to 70 °C).

Maximum Pressure

30 PSI (200 kPa).

Material

Die cast aluminum housing.

Option

Positive positioner (part number Vxx4).

SCHNEIDER ELECTRIC M556 PNEUMATIC SPRING RETURN ACTUATORS FOR 5 TO 10" TWO-WAY AND 3 TO 8" THREE-WAY VALVES



Spring Return
M556-14 Actuator

Table 9: M556 Pneumatic Spring Return Actuators for 5 to 10" Two-Way and 3 to 8" Three-Way Valves

Model Number	Actuator Code	Pressure PSI (kPa)	Power Loss Mode	Accessories
M556-14	251 or 251D	20 (138)	SR	Positive positioner ^a
M556-51				-

a. The first part number field must call out VKx4-6xxx.

Actuator Code 251, 251D Technical Data (M556 Series)

Pressure Loss Mode

Spring return.

Spring Range

8 to 13.

Diaphragm

24.8 square inch neoprene.

Ambient Temperatures

-20 to 180 °F (-10 to 80 °C).

Maximum Pressure

30 PSI (200 kPa).

Material

Glass filled nylon housing.

Option

Positive positioner (part number Vxx4).

TWO-WAY VALVE AND SR ACTUATOR ASSEMBLIES

Table 10: Direct Coupled Spring Return Schneider Electric DuraDrive Actuator and Valve Assemblies, Normally Closed

Model Number ^a			Power	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 90°
On/Off ^a	Floating ^a	Modulating ^a				
VAF-6220-556-L-11	VFF-6220-556-L-11	VSF-6220-556-L-11	24 Vac	2"	175 (1207)	144 (125)
VAF-6220-556-L-12	VFF-6220-556-L-12	VSF-6220-556-L-12		2.5"		282 (244)
VAF-6220-556D-L-13	VFF-6220-556D-L-13	VSF-6220-556D-L-13		3"		461 (399)
VAU-6220-556D-L-14	VFU-6220-556D-L-14	VSU-6220-556D-L-14		4"	50 (345)	841 (727)

a. For optional two SPDT auxiliary switch models, the letter "S" must be added to the first part number field. Ex.: Vxx**S**.

Table 11: Direct Coupled Spring Return Schneider Electric DuraDrive Actuator and Valve Assemblies, Normally Open

Model Number ^a			Power	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 90°
On/Off ^a	Floating ^a	Modulating ^a				
VAF-6210-556-L-11	VFF-6210-556-L-11	VSF-6210-556-L-11	24 Vac	2"	175 (1207)	144 (125)
VAF-6210-556-L-12	VFF-6210-556-L-12	VSF-6210-556-L-12		2.5"		282 (244)
VAF-6210-556D-L-13	VFF-6210-556D-L-13	VSF-6210-556D-L-13		3"		461 (399)
VAU-6210-556D-L-14	VFU-6210-556D-L-14	VSU-6210-556D-L-14		4"	50 (345)	841 (727)

a. For optional two SPDT auxiliary switch models, the letter "S" must be added to the first part number field. Ex.: Vxx**S**.

TWO-WAY VALVE AND NSR ACTUATOR ASSEMBLIES

Table 12: Direct Coupled Non-Spring Return Actuator and Valve Assemblies

Model Number ^a		Power	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 90°
On/Off or Floating ^a	Modulating ^a				
VFF-6200-E24-L-11	VSF-6200-E24-L-11	24 Vac	2"	175 (1207)	144 (125)
VFF-6200-E24-L-12	VSF-6200-E24-L-12		2.5"		282 (244)
VFF-6200-E25-L-13	VSF-6200-E25-L-13		3"		461 (399)
VFF-6200-E25D-L-14	VSF-6200-E25D-L-14		4"	50 (345)	841 (727)
VFU-6200-E25-L-14	VSU-6200-E25-L-14		4"		841 (727)
VFU-6200-E25-L-15	VSU-6200-E25-L-15		5"		1376 (1190)
VFU-6200-E25D-L-16	VSU-6200-E25D-L-16		6"	1850 (1600)	

a. For optional two SPDT auxiliary switch models, the letter "S" must be added to the first part number field. Ex.: Vxx**S**.

Table 13: High Torque Non-Spring Return Actuator and Valve Assemblies with One SPDT Auxiliary Switch

Model Number		Power	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 90°
On/Off or Floating	Modulating				
VAFS-6200-907-L-16	VSFS-6200-909-L-16	120 Vac	6"	175 (1207)	1850 (1600)
VAFS-6200-907-L-17	VSFS-6200-909-L-17		8"	175 (1207)	3316 (2868)
VAUS-6200-907-L-17	VSUS-6200-909-L-17		8"	50 (345)	3316 (2868)
VAFS-6200-907-L-18	VSFS-6200-909-L-18		10"	175 (1207)	5430 (4697)
VAUS-6200-907-L-18	VSUS-6200-909-L-18		10"	50 (345)	5430 (4697)
VAFS-6200-907-L-19	VSFS-6200-909-L-19		12"	175 (1207)	8077 (6987)
VAUS-6200-907-L-19	VSUS-6200-909-L-19		12"	50 (345)	8077 (6987)

Table 14: Two-Way Butterfly Valve Assemblies With S70 Series Non-Spring Return Actuator and NEMA 4, Hand Wheel with Two SPDT Auxiliary Switches and Heater

Model Number		Power ^a	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 90°
On/Off	Modulating				
VAFS-6200-E10-L-11	VSFS-6200-E12-L-11	E=120 Vac	2"	175 (1207)	144 (125)
VAFS-6200-E10-L-12	VSFS-6200-E12-L-12	F=24 Vac	2.5"	175 (1207)	282 (244)
VAFS-6200-E10-L-13	VSFS-6200-E12-L-13		3"	175 (1207)	461 (399)
VAFS-6200-E10-L-14	VSFS-6200-E12-L-14		4"	175 (1207)	841 (727)
VAUS-6200-E10-L-15	VSUS-6200-E12-L-15		5"	50 (345)	1376 (1190)
VAFS-6200-E20-L-15	VSFS-6200-E22-L-15		5"	175 (1207)	1376 (1190)
VAFS-6200-E20-L-16	VSFS-6200-E22-L-16		6"	175 (1207)	1850 (1600)
VAUS-6200-E20-L-17	VSUS-6200-E22-L-17		8"	50 (345)	3316 (2868)
VAFS-6200-E30-L-17	VSFS-6200-E32-L-17		8"	175 (1207)	3316 (2868)
VAUS-6200-E30-L-18	VSUS-6200-E32-L-18		10"	50 (345)	5430 (4697)
VAFS-6200-E40-L-18	VSFS-6200-E42-L-18		10"	175 (1207)	5430 (4697)
VAUS-6200-E40-L-19	VSUS-6200-E42-L-19		12"	50 (345)	8077 (6987)
VAFS-6200-E50-L-19	VSFS-6200-E52-L-19		12"	175 (1207)	8077 (6987)
VAUS-6200-E50-L-20	VSUS-6200-E52-L-20		14"	50 (345)	10,538 (9115)
VAFS-6200-E60-L-20 ^b	VSFS-6200-E62-L-20 ^b		14"	150 (1034)	10,538 (9115)
VAUS-6200-E60-L-21 ^b	VSUS-6200-E62-L-21 ^b		16"	50 (345)	13,966 (12,081)
VAUS-6200-E60-L-22 ^b	VSUS-6200-E62-L-22 ^b		18"	50 (345)	17,214 (14,890)

- a. 120 Vac powered models shown, for 24 Vac models change the letter E to F. Example VAFS-6200-F10-L-11 would be 24 Vac powered
 b. E60 and E62 only available in 120 Vac

TWO-WAY VALVE AND SR PNEUMATIC ACTUATOR ASSEMBLIES

Table 15: Low Pressure Spring Return Actuator and Assemblies, Normally Closed

Model Number		Pressure PSI (kPa)	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 70°
Base Model	Modulating (Positive Positioner)				
VKF-6220-221-L-11	VKF4-6220-221-L-11	20 (138)	2"	175 (1207)	84 (73)
VKF-6220-221-L-12	VKF4-6220-221-L-12		2.5"	175 (1207)	163 (141)
VKF-6220-221-L-13	VKF4-6220-221-L-13		3"	175 (1207)	267 (231)
VKU-6220-221-L-14	VKU4-6220-221-L-14		4"	50 (345)	496 (429)
VKF-6220-221-L-14	VKF4-6220-221-L-14		4"	175 (1207)	496 (429)
VKU-6220-221-L-15	VKU4-6220-221-L-15		5"	50 (345)	775 (670)
VKF-6220-251-L-15	VKF4-6220-251-L-15		5"	175 (1207)	775 (670)
VKF-6220-251-L-16	VKF4-6220-251-L-16		6"	175 (1207)	1025 (887)
VKU-6220-251-L-17	VKU4-6220-251-L-17		8"	50 (345)	1862 (1611)
VKF-6220-251D-L-17	VKF4-6220-251D-L-17		8"	175 (1207)	1862 (1611)
VKU-6220-251D-L-18	VKU4-6220-251D-L-18		10"	50 (345)	2948 (2550)

Table 16: Low Pressure Spring Return Actuator and Assemblies, Normally Open

Model Number		Pressure PSI (kPa)	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 70°
Base Model	Modulating (Positive Positioner)				
VKF-6210-221-L-11	VKF4-6210-221-L-11	20 (138)	2"	175 (1207)	84 (73)
VKF-6210-221-L-12	VKF4-6210-221-L-12		2.5"	175 (1207)	163 (141)
VKF-6210-221-L-13	VKF4-6210-221-L-13		3"	175 (1207)	267 (231)
VKU-6210-221-L-14	VKU4-6210-221-L-14		4"	50 (345)	496 (429)
VKF-6210-221-L-14	VKF4-6210-221-L-14		4"	175 (1207)	496 (429)
VKU-6210-221-L-15	VKU4-6210-221-L-15		5"	50 (345)	775 (670)
VKF-6210-251-L-15	VKF4-6210-251-L-15		5"	175 (1207)	775 (670)
VKF-6210-251-L-16	VKF4-6210-251-L-16		6"	175 (1207)	1025 (887)
VKU-6210-251-L-17	VKU4-6210-251-L-17		8"	50 (345)	1862 (1611)
VKF-6210-251D-L-17	VKF4-6210-251D-L-17		8"	175 (1207)	1862 (1611)
VKU-6210-251D-L-18	VKU4-6210-251D-L-18	10"	50 (345)	2948 (2550)	

THREE-WAY BUTTERFLY VALVE ASSEMBLIES WITH SPRING RETURN DURADRIE ACTUATORS

Table 17: Direct Coupled Spring Return Schneider Electric DuraDrive Actuator and Valve Assemblies, Normally Closed

Model Number			Power	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 90°
On/Off ^a	Floating ^a	Modulating ^a				
VAF-632x-556-L-11	VFF-632x-556-L-11	VSF-632x-556-L-11	24 Vac	2"	175 (1207)	144 (125)
VAF-632x-556D-L-12	VFF-632x-556D-L-12	VSF-632x-556D-L-12		2.5"		282 (244)
VAF-632x-556D-L-13	VFF-632x-556D-L-13	VSF-632x-556D-L-13		3"		461 (399)
VAU-632x-556D-L-14	VFU-632x-556D-L-14	VSU-632x-556D-L-14		4"	50 (345)	841 (727)

a. For optional two SPDT auxiliary switch models, the letter "S" must be added to the first part number field. Ex.: Vxx**S**.
 X indicates three-way flow patterns 1 or 2. See the flow pattern on page 2.

Table 18: Direct Coupled Spring Return Schneider Electric DuraDrive Actuator and Valve Assemblies, Normally Open

Model Number ^a			Power	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 90°
On/Off ^a	Floating ^a	Modulating ^a				
VAF-631x-556-L-11	VFF-631x-556-L-11	VSF-631x-556-L-11	24 Vac	2"	175 (1207)	144 (125)
VAF-631x-556D-L-12	VFF-631x-556D-L-12	VSF-631x-556D-L-12		2.5"		282 (244)
VAF-631x-556D-L-13	VFF-631x-556D-L-13	VSF-631x-556D-L-13		3"		461 (399)
VAU-631x-556D-L-14	VFU-631x-556D-L-14	VSU-631x-556D-L-14		4"	50 (345)	841 (727)

a. For optional two SPDT auxiliary switch models, the letter "S" must be added to the first part number field. Ex.: Vxx**S**.
 b. X indicates three-way flow patterns 7 or 8. See the flow pattern on page 2.

THREE-WAY BUTTERFLY VALVE ASSEMBLIES WITH NSR ACTUATORS

Table 19: Direct Coupled Non-Spring Return Actuator and Valve Assemblies

Model Number ^a		Power	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 90°
On/Off or Floating ^a	Modulating ^a				
VFF-630x-E24-L-11	VSF-630x-E24-L-11	24 Vac	2"	175 (1207)	144 (125)
VFF-630x-E25-L-12	VSF-630x-E25-L-12		2.5"		282 (244)
VFF-630x-E25-L-13	VSF-630x-E25-L-13		3"		461 (399)
VFF-630x-E25D-L-14	VSF-630x-E25D-L-14		4"		841 (727)
VFU-630x-E25-L-14	VSU-630x-E25-L-14		4"	50 (345)	841 (727)
VFU-630x-E25D-L-15	VSU-630x-E25D-L-15		5"		1376 (1190)
VFU-630x-E25D-L-16	VSU-630x-E25D-L-16		6"		1850 (1600)

a. For optional two SPDT auxiliary switch models, the letter "S" must be added to the first part number field. Ex.: Vxx**S**.
X indicates three-way flow patterns 1, 2, 7, or 8. See the flow pattern on page 2.

Table 20: Three-Way Butterfly Valve Assemblies with High Torque Non-Spring Return Actuator with One SPDT Auxiliary Switch

Model Number		Power	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 90°
On/Off or Floating	Modulating				
VAFS-630x-907-L-16	VSFS-630x-909-L-16	120 Vac	6"	175 (1207)	1850 (1600)
VAFS-630x-907-L-17	VSFS-630x-909-L-17		8"	175 (1207)	3316 (2868)
VAUS-630x-907-L-17	VSUS-630x-909-L-17		8"	50 (345)	3316 (2868)
VAFS-630x-907-L-18	VSFS-630x-909-L-18		10"	175 (1207)	5430 (4697)
VAUS-630x-907-L-18	VSUS-630x-909-L-18		10"	50 (345)	5430 (4697)
VAFS-630x-907-L-19	VSFS-630x-909-L-19		12"	175 (1207)	8077 (6987)
VAUS-630x-907-L-19	VSUS-630x-909-L-19		12"	50 (345)	8077 (6987)

X indicates three-way flow patterns 1, 2, 7, or 8. See the flow pattern on page 2.

Table 21: Three-Way Butterfly Valve Assemblies With S70 Series Non-Spring Return Actuator and NEMA 4, Hand Wheel with Two SPDT Auxiliary Switches and Heater

Model Number		Power ^a	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 90°
On/Off	Modulating				
VAFS-630x-E10-L-11	VSFS-630x-E12-L-11	E=120 Vac	2"	175 (1207)	144 (125)
VAFS-630x-E10-L-12	VSFS-630x-E12-L-12	F=24 Vac	2.5"	175 (1207)	282 (244)
VAFS-630x-E10-L-13	VSFS-630x-E12-L-13		3"	175 (1207)	461 (399)
VAUS-630x-E10-L-14	VSUS-630x-E12-L-14		4"	50 (345)	841 (727)
VAFS-630x-E20-L-14	VSFS-630x-E22-L-14		4"	175 (1207)	841 (727)
VAUS-630x-E10-L-15	VSUS-630x-E12-L-15		5"	50 (345)	1376 (1190)
VAFS-630x-E20-L-15	VSFS-630x-E22-L-15		5"	175 (1207)	1376 (1190)
VAUS-630x-E20-L-16	VSUS-630x-E22-L-16		6"	50 (345)	1850 (1600)
VAFS-630x-E20-L-16	VSFS-630x-E22-L-16		6"	175 (1207)	1850 (1600)
VAUS-630x-E20-L-17	VSUS-630x-E22-L-17		8"	50 (345)	3316 (2868)
VAFS-630x-E30-L-17	VSFS-630x-E32-L-17		8"	175 (1207)	3316 (2868)
VAUS-630x-E30-L-18	VSUS-630x-E32-L-18		10"	50 (345)	5430 (4697)
VAFS-630x-E50-L-18	VSFS-630x-E52-L-18		10"	175 (1207)	5430 (4697)
VAUS-630x-E50-L-19	VSUS-630x-E52-L-19		12"	50 (345)	8077 (6987)
VAFS-630x-E60-L-19 ^b	VSFS-630x-E62-L-19 ^b		12"	175 (1207)	8077 (6987)
VAUS-630x-E50-L-20	VSUS-630x-E52-L-20		14"	50 (345)	10,538 (9115)
VAUS-630x-E60-L-21 ^b	VSUS-630x-E62-L-21 ^b		16"	50 (345)	13,966 (12,081)

X = 1, 2, 7, or 8. See the flow pattern on page 2.

- a. 120 Vac powered models shown, for 24 Vac models change the letter E to F. Example VAFS-630x-F10-L-11 would be 24 Vac powered.
- b. E60 and E62 only available in 120 Vac.

THREE-WAY VALVE AND SR PNEUMATIC ACTUATOR ASSEMBLIES

Table 22: Low Pressure Spring Return Actuator and Valve Assemblies, Normally Closed

Model Number		Pressure PSI (kPa)	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 70°
Base Model	Modulating (Positive Positioner)				
VKF-632x-221-L-11	VKF4-632x-221-L-11	20 (138)	2"	175 (1207)	84 (73)
VKF-632x-221-L-12	VKF4-632x-221-L-12		2.5"	175 (1207)	163 (141)
VKF-632x-251-L-13	VKF4-632x-251-L-13		3"	175 (1207)	267 (231)
VKF-632x-251-L-14	VKF4-632x-251-L-14		4"	175 (1207)	496 (429)
VKU-632x-251-L-15	VKU4-632x-251-L-15		5"	50 (345)	775 (670)
VKF-632x-251-L-15	VKF4-632x-251-L-15		5"	175 (1207)	775 (670)
VKU-632x-251-L-16	VKU4-632x-251-L-16		6"	50 (345)	1025 (887)
VKF-632x-251D-L-16	VKF4-632x-251D-L-16		6"	175 (1207)	1025 (887)
VKU-632x-251D-L-17	VKU4-632x-251D-L-17		8"	50 (345)	1862 (1611)

X = 1 or 2. See the flow pattern on page 2.

Table 23: Low Pressure Spring Return Actuator and Valve Assemblies, Normally Open

Model Number		Pressure PSI (kPa)	Valve Size	Close Off PSI (kPa)	C _v (K _{vs}) at 70°
Base Model	Modulating (Positive Positioner)				
VKF-631x-221-L-11	VKF4-631x-221-L-11	20 (138)	2"	175 (1207)	84 (73)
VKF-631x-221-L-12	VKF4-631x-221-L-12		2.5"	175 (1207)	163 (141)
VKF-631x-251-L-13	VKF4-631x-251-L-13		3"	175 (1207)	267 (231)
VKF-631x-251-L-14	VKF4-631x-251-L-14		4"	175 (1207)	496 (429)
VKU-631x-251-L-15	VKU4-631x-251-L-15		5"	50 (345)	775 (670)
VKF-631x-251-L-15	VKF4-631x-251-L-15		5"	175 (1207)	775 (670)
VKU-631x-251-L-16	VKU4-631x-251-L-16		6"	50 (345)	1025 (887)
VKF-631x-251D-L-16	VKF4-631x-251D-L-16		6"	175 (1207)	1025 (887)
VKU-631x-251D-L-17	VKU4-631x-251D-L-17		8"	50 (345)	1862 (1611)

X = 7 or 8. See the flow pattern on page 2.

VALVE BODY TECHNICAL DATA

Service

Hot and chilled water, up to 60% glycol.
See EN-205 Water System Guidelines, F-26080.

Fluid Temperature limits

-40 to 250 °F (-40 to 120 °C).

Sizes

2 to 18" two-way models.
2 to 16" three-way models.

Neck

2" extended neck.

Flow

Bidirectional.

Leakage

ANSI Class VI seat leakage (bubble tight).

Materials

Body

Polyester coated cast Iron ASTM A126 Class B lug.
Mates with ANSI Class 125/150 flanges.

Stem

2 to 8": 416 stainless steel double D stem.
10" and 12": 316 stainless steel double D stem.
14" and up: 316 Stainless Steel round shaft woodruff key slot

Disc

Ductile iron nylon 11 coated disc

Seat

EPDM tongue and groove seat and molded O-ring flange seal.

CV FLOWS BASED ON DISC POSITION

Table 24: Cv Values^a

							Factory Set Pneumatic		Factory Set Electric
Disc Position in Degrees									
Valve Size	10°	20°	30°	40°	50°	60°	70°	80°	90°
2"	1	7	16	27	43	61	84	114	144
2-1/2"	1.5	11	24	43	67	107	163	223	282
3"	2	15	35	61	96	154	267	364	461
4"	3	27	62	109	171	274	496	701	841
5"	5	43	98	170	268	428	775	1146	1376
6"	6	56	129	225	354	567	1025	1542	1850
8"	12	102	241	421	690	1081	1862	2842	3316
10"	19	162	382	667	1076	1710	2948	4525	5430
12"	27	235	555	1005	1594	2563	4393	6731	8077
14"	34	299	756	1320	2149	3384	5939	8874	10,538
16"	45	397	1001	1749	2847	4483	7867	11,761	13,966
18"	58	507	1281	2237	3643	5736	10,065	14,496	17,214

a. $Cv \times .865 = Kvs$

Cv is defined as the volume of water in US gallon per minute (GPM) that flows through a given restriction or valve opening with a pressure drop of one PSI at room temperature.

The best equal percentage flow characteristic is between 20 to 70 degrees of disc opening. Above 70 degrees the flow characteristic is primarily quick opening. Application engineers requiring good equal percentage floating or proportional control should size the valve for the required Cv according to Table 24, and limit the disc rotation to a maximum of 70 degrees in the field. Various methods can be used to limit the disc rotation including in the controller, electrically at the actuator (for proportional actuators only), or mechanically at the actuator. Two position actuators should not be selected for applications requiring equal percentage flow characteristics.

2 TO 4" TWO-WAY BUTTERFLY VALVE ASSEMBLIES WITH DURADRIVE SPRING RETURN ACTUATOR DIMENSIONS

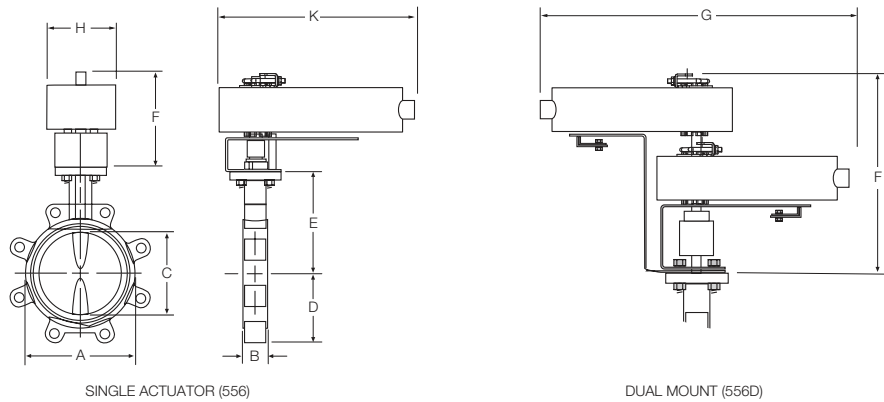


Table 25: Two-Way SR

Valve Assembly Part Number	Valve Size In	Dimensions in inches (millimetres)								
		A	B	C	D	E	F	G	H	K
VxFx-62x0-556-L-11	2"	3.69 (94)	1.62 (41)	2.00 (51)	2.30 (59)	5.50 (140)	6.00 (152)	—	4.00 (102)	12.5 (318)
VxFx-62x0-556-L-12	2-1/2"	4.19 (106)	1.75 (45)	2.50 (64)	2.57 (65)	6.00 (152)	6.00 (152)	—	4.00 (102)	12.5 (318)
VxFx-62x0-556D-L-13	3"	4.88 (124)	1.75 (45)	3.00 (76)	2.81 (71)	6.25 (159)	11.75 (298)	19.00 (483)	4.00 (102)	—
VxUx-62x0-556D-L-14	4"	6.06 (154)	2.00 (51)	4.00 (102)	4.09 (104)	7.00 (179)	11.75 (298)	19.00 (483)	4.00 (102)	—

2 TO 4" THREE-WAY BUTTERFLY VALVE ASSEMBLIES WITH DURADRIVE SPRING RETURN ACTUATOR DIMENSIONS

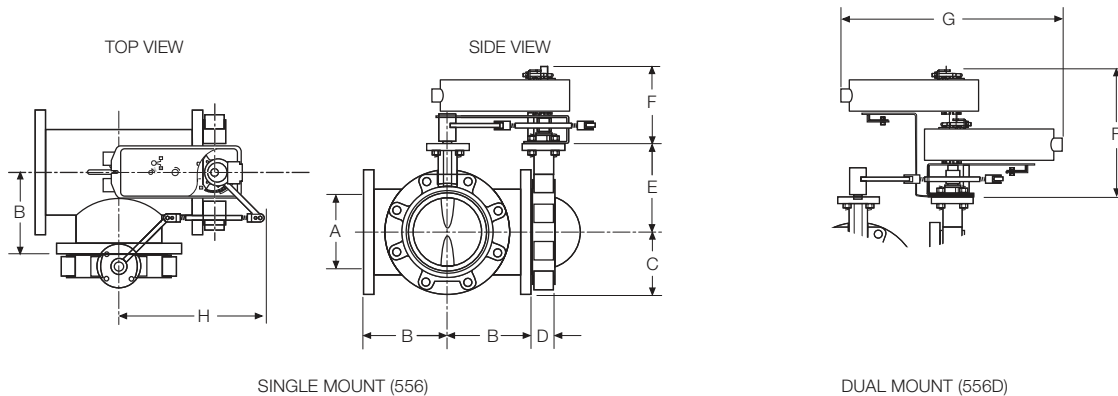


Table 26: Three-Way SR

Valve Assembly Part Number	Valve Size In	Dimensions in inches (millimetres)							
		A	B	C	D	E	F	G	H
VxFx-63xx-556-L-11	2"	2.00 (51)	4.50 (114)	3.00 (76)	1.62 (41)	5.50 (140)	7.50 (190.5)	—	12.00 (305)
VxFx-63xx-556D-L-12	2-1/2"	2.50 (64)	5.00 (127)	3.50 (89)	1.80 (46)	6.00 (152)	13.25 (336)	19.00 (483)	13.00 (330)
VxFx-63xx-556D-L-13	3"	3.00 (76)	5.50 (140)	3.80 (97)	1.80 (46)	6.20 (157)	13.25 (336)	19.00 (483)	13.50 (343)
VxUx-63xx-556D-L-14	4"	4.00 (102)	6.50 (1.65)	4.50 (114)	2.00 (51)	7.00 (179)	13.25 (336)	19.00 (483)	14.50 (368)

2 TO 6" TWO-WAY BUTTERFLY VALVE ASSEMBLIES WITH NON-SPRING RETURN ACTUATOR DIMENSIONS

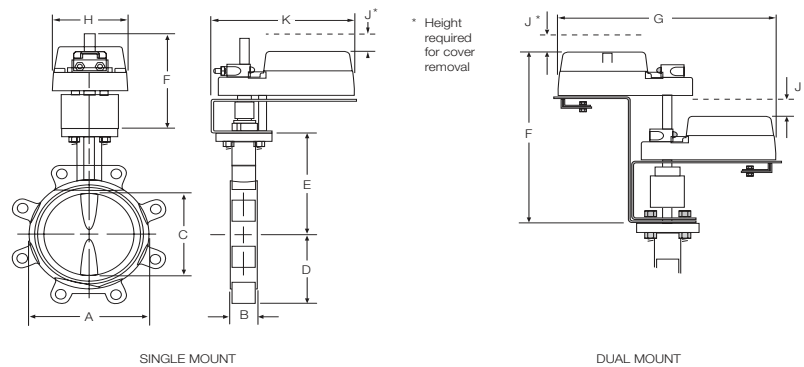


Table 27: Two-Way NSR

Valve Assembly Part Number	Valve Size In	Dimensions in inches (millimetres)									
		A	B	C	D	E	F	G	H	J	K
VxFx-6200-E24-L-11	2"	3.69 (94)	1.62 (41)	2.00 (51)	2.30 (59)	5.50 (140)	6.00 (152)	—	4.00 (102)	2.00 (51)	7.50 (191)
VxFx-6200-E24-L-12	2-1/2"	4.19 (106)	1.75 (45)	2.50 (64)	2.57 (65)	6.00 (152)	6.00 (152)	—	4.00 (102)	2.00 (51)	7.50 (191)
VxFx-6200-E25-L-13	3"	4.88 (124)	1.75 (45)	3.00 (76)	2.81 (71)	6.25 (159)	6.00 (152)	—	4.00 (102)	2.00 (51)	7.50 (191)
VxUx-6200-E25-L-14	4"	6.06 (154)	2.00 (51)	4.00 (102)	4.09 (104)	7.00 (179)	6.00 (152)	—	4.00 (102)	2.00 (51)	7.50 (191)
VxFx-6200-E25D-L-14	4"	6.06 (154)	2.00 (51)	4.00 (102)	4.09 (104)	7.00 (179)	11.75 (298)	16.00 (404)	5.00 (127)	2.00 (51)	—
VxUx-6200-E25-L-15	5"	7.06 (179)	2.12 (54)	5.00 (127)	4.61 (117)	7.50 (190)	6.00 (152)	—	4.00 (102)	2.00 (51)	7.50 (191)
VxUx-6200-E25D-L-16	6"	8.12 (206)	2.12 (54)	5.75 (146)	5.06 (129)	8.00 (203)	11.75 (298)	16.00 (404)	5.00 (127)	2.00 (51)	—

2 TO 6" THREE-WAY BUTTERFLY VALVE ASSEMBLIES WITH NON-SPRING RETURN ACTUATOR DIMENSIONS

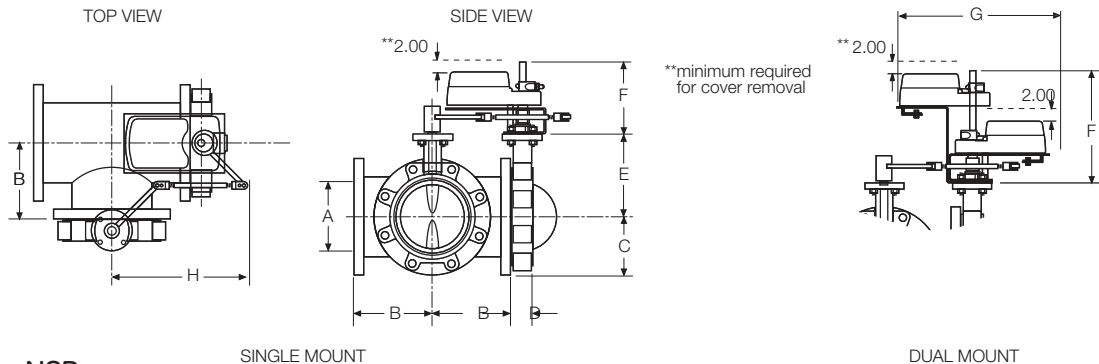


Table 28: Three-Way NSR

Valve Assembly Part Number	Valve Size In	Dimensions in inches (millimetres)							
		A	B	C	D	E	F	G	H
VxFx-630x-E24-L-11	2"	2.00 (51)	4.50 (114)	3.00 (76)	1.62 (41)	5.50 (140)	7.50 (191)	—	12.00 (305)
VxFx-630x-E24-L-12	2-1/2"	2.50 (64)	5.00 (127)	3.50 (89)	1.80 (46)	6.00 (152)	7.50 (191)	—	13.00 (330)
VxFx-630x-E25-L-13	3"	3.00 (76)	5.50 (140)	3.80 (97)	1.80 (46)	6.20 (157)	7.50 (191)	—	13.50 (343)
VxUx-630x-E25-L-14	4"	4.00 (102)	6.50 (165)	4.50 (114)	2.00 (51)	7.00 (179)	7.50 (191)	—	14.50 (368)
VxFx-630x-E25D-L-14	4"	4.00 (102)	6.50 (165)	4.50 (114)	2.00 (51)	7.00 (179)	13.25 (337)	16.00 (406)	14.50 (368)
VxUx-630x-E25D-L-15	5"	5.00 (127)	7.50 (190)	5.00 (127)	2.12 (54)	7.50 (190)	13.25 (337)	16.00 (406)	15.50 (394)
VxUx-630x-E25D-L-16	6"	5.80 (147)	8.00 (203)	5.50 (140)	2.12 (54)	8.00 (203)	13.25 (337)	16.00 (406)	16.25 (413)

6 TO 12" TWO-WAY BUTTERFLY VALVES ASSEMBLIES WITH HIGH TORQUE NON-SPRING RETURN ACTUATOR DIMENSIONS

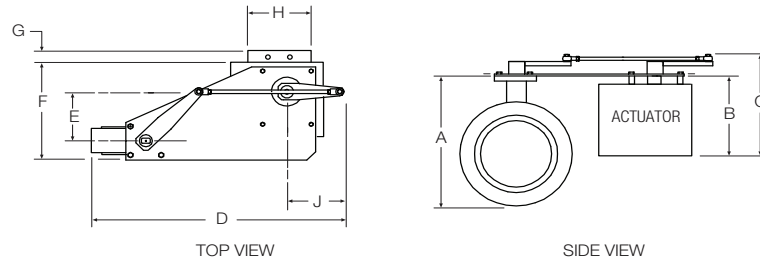


Table 29: Two-Way HT NSR

Valve Assembly Part Number	Valve Size In	Dimensions in inches (millimetres)								
		A	B	C	D	E	F	G	H	J
On Off or Floating Control										
VAFS-6200-907-L-16	6"	13.06 (332)	9.50 (241)	12.50 (318)	26.80 (681)	6.50 (165)	12.75 (324)	—	—	5.74 (146)
VAFS-6200-907-L-17 VAUS-6200-907-L-17	8"	15.55 (395)	9.50 (241)	12.50 (318)	27.79 (706)	6.50 (165)	12.75 (324)	—	—	5.74 (146)
VAFS-6200-907-L-18 VAUS-6200-907-L-18	10"	18.44 (468)	9.50 (241)	12.50 (318)	29.43 (748)	6.50 (165)	12.75 (324)	—	—	5.74 (146)
VAFS-6200-907-L-19 VAUS-6200-907-L-19	12"	21.27 (540)	9.50 (241)	12.50 (318)	30.76 (781)	6.50 (165)	12.75 (324)	—	—	5.74 (146)
Modulated Control										
VSFS-6200-909-L-16	6"	13.06 (332)	9.50 (241)	12.50 (318)	26.80 (681)	6.50 (165)	12.75 (324)	4.00 (102)	6.50 (165)	5.74 (146)
VSFS-6200-909-L-17 VAUS-6200-909-L-17	8"	15.55 (395)	9.50 (241)	12.50 (318)	27.79 (706)	6.50 (165)	12.75 (324)	4.00 (102)	6.50 (165)	5.74 (146)
VSFS-6200-909-L-18 VAUS-6200-909-L-18	10"	18.44 (468)	9.50 (241)	12.50 (318)	29.43 (748)	6.50 (165)	12.75 (324)	4.00 (102)	6.50 (165)	5.74 (146)
VSFS-6200-909-L-19 VAUS-6200-909-L-19	12"	21.27 (540)	9.50 (241)	12.50 (318)	30.76 (781)	6.50 (165)	12.75 (324)	4.00 (102)	6.50 (165)	5.74 (146)

6 TO 12" THREE-WAY BUTTERFLY VALVE ASSEMBLIES WITH HIGH TORQUE NON-SPRING RETURN ACTUATOR DIMENSIONS

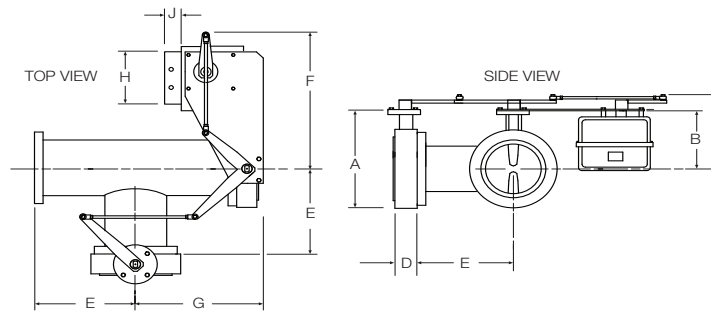


Table 30: Three-Way HT NSR

Valve Assembly Part Number	Valve Size In	Dimensions in inches (millimetres)								
		A	B	C	D	E	F	G	H	J
Two Position/Floating Control										
VAFS-630x-907-L-16	6"	13.06 (332)	9.50 (241)	12.50 (318)	2.12 (54)	8.00 (203)	12.75 (324)	11.77 (299)	—	—
VAFS-630x-907-L-17 VAUS-630x-907-L-17	8"	15.55 (395)	9.50 (241)	12.50 (318)	2.50 (63)	9.00 (229)	12.75 (324)	13.21 (336)	—	—
VAFS-630x-907-L-18 VAUS-630x-907-L-18	10"	18.44 (468)	9.50 (241)	12.50 (318)	2.50 (63)	11.00 (279)	12.75 (324)	15.21 (386)	—	—
VAFS-630x-907-L-19 VAUS-630x-907-L-19	12"	21.27 (540)	9.50 (241)	12.50 (318)	3.00 (76)	12.00 (305)	12.75 (324)	16.66 (423)	—	—
Modulated										
VSFS-630x-909-L-16	6"	13.06 (332)	9.50 (241)	12.50 (318)	2.12 (54)	8.00 (203)	12.75 (324)	11.77 (299)	6.50 (165)	4.00 (102)
VSFS-630x-909-L-17 VSUS-630x-909-L-17	8"	15.55 (395)	9.50 (241)	12.50 (318)	2.50 (63)	9.00 (229)	12.75 (324)	13.21 (336)	6.50 (165)	4.00 (102)
VSFS-630x-909-L-18 VSUS-630x-909-L-18	10"	18.44 (468)	9.50 (241)	12.50 (318)	2.50 (63)	11.00 (279)	12.75 (324)	15.21 (386)	6.50 (165)	4.00 (102)
VSFS-630x-909-L-19 VSUS-630x-909-L-19	12"	21.27 (540)	9.50 (241)	12.50 (318)	3.00 (76)	12.00 (305)	12.75 (324)	16.66 (423)	6.50 (165)	4.00 (102)

2 TO 18" TWO-WAY BUTTERFLY VALVE ASSEMBLIES WITH S70 NON-SPRING RETURN NEMA 4 ACTUATOR DIMENSIONS

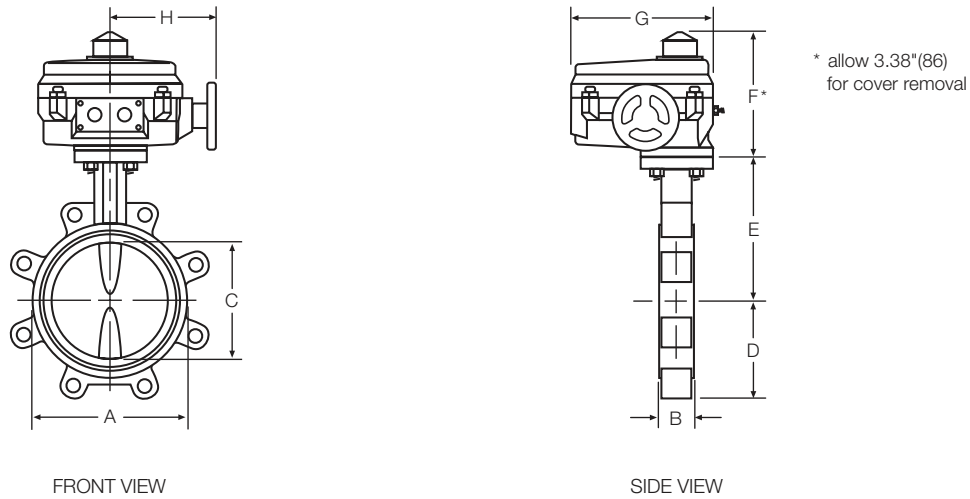


Table 31: Two-Way N4 NSR

Valve Assembly Part Number ^a	Valve Size In	Dimensions in inches (millimetres)							
		A	B	C	D	E	F	G	H
VxFS-6200-E1x-L-11	2"	3.69 (94)	1.62 (41)	2.00 (51)	2.30 (58)	5.50 (140)	6.70 (170)	7.50 (191)	5.80 (147)
VxFS-6200-E1x-L-12	2-1/2"	4.19 (106)	1.75 (44)	2.50 (63)	2.57 (65)	6.00 (152)	6.70 (170)	7.50 (191)	5.80 (147)
VxFS-6200-E1x-L-13	3"	4.88 (124)	1.75 (44)	3.00 (76)	2.81 (71)	6.25 (159)	6.70 (170)	7.50 (191)	5.80 (147)
VxFS-6200-E1x-L-14	4"	6.06 (154)	2.00 (51)	4.00 (102)	4.09 (104)	7.00 (178)	6.70 (170)	7.50 (191)	5.80 (147)
VxUS-6200-E1x-L-15	5"	7.06 (179)	2.12 (54)	5.00 (127)	4.61 (117)	7.50 (190)	6.70 (170)	7.50 (191)	5.80 (147)
VxFS-6200-E2x-L-15	5"	7.06 (179)	2.12 (54)	5.00 (127)	4.61 (117)	7.50 (190)	8.10 (206)	10.10 (257)	7.80 (198)
VxFS-6200-E2x-L-16	6"	8.12 (206)	2.12 (54)	5.75 (146)	5.06 (129)	8.00 (203)	8.10 (206)	10.10 (257)	7.80 (198)
VxUS-6200-E2x-L-17 VxFS-6200-E3x-L-17	8"	10.50 (267)	2.50 (63)	7.75 (199)	6.05 (154)	9.50 (241)	8.10 (206)	10.10 (257)	7.80 (198)
VxUS-6200-E3x-L-18	10"	12.75 (324)	2.50 (63)	9.75 (248)	7.69 (195)	10.75 (273)	8.10 (206)	10.10 (257)	7.80 (198)
VxFS-6200-E4x-L-18	10"	12.75 (324)	2.50 (63)	9.75 (248)	7.69 (195)	10.75 (273)	8.80 (224)	12.10 (307)	9.50 (241)
VxUS-6200-E4x-L-19 VxFS-6200-E5x-L-19	12"	14.88 (378)	3.00 (76)	11.75 (298)	9.02 (229)	12.25 (311)	8.80 (224)	12.10 (307)	9.50 (241)
VxUS-6200-E5x-L-20 VxFS-6200-E6x-L-20	14"	17.05 (433)	3.00 (76)	13.25 (337)	9.93 (252)	13.62 (346)	8.80 (224)	12.10 (307)	9.50 (241)
VxUS-6200-E6x-L-21	16"	19.21 (488)	4.00 (102)	15.25 (388)	11.30 (287)	14.75 (375)	8.80 (224)	12.10 (307)	9.50 (241)
VxUS-6200-E6x-L-22	18"	21.12 (536)	4.25 (108)	17.25 (438)	12.16 (309)	16.00 (406)	8.80 (224)	12.10 (307)	9.50 (241)

a. Actuator code Exx or Fxx Dimensions are the same

2 TO 16" THREE-WAY BUTTERFLY VALVE ASSEMBLIES WITH S70 NON-SPRING RETURN NEMA 4 ACTUATOR DIMENSIONS

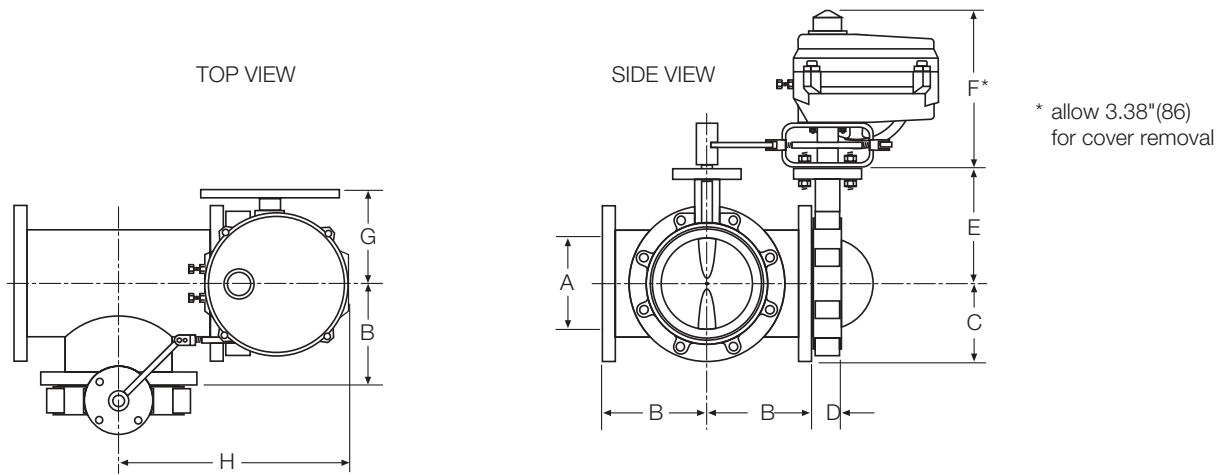


Table 32: Three-Way N4 NSR

Valve Assembly Part Number ^a	Valve Size In	Dimensions in inches (millimetres)							
		A	B	C	D	E	F	G	H
VxFS-630x-E1x-L-11	2"	2.00 (51)	4.50 (114)	3.00 (76)	1.62 (41)	5.50 (140)	9.70 (246)	5.80 (147)	11.00 (279)
VxFS-630x-E1x-L-12	2-1/2"	2.50 (63)	5.00 (127)	3.50 (89)	1.80 (46)	6.00 (152)	9.70 (246)	5.80 (147)	11.60 (295)
VxFS-630x-E1x-L-13	3"	3.00 (76)	5.50 (140)	3.80 (97)	1.80 (46)	6.20 (157)	9.70 (246)	5.80 (147)	12.00 (305)
VxUS-630x-E1x-L-14	4"	4.00 (102)	6.50 (165)	4.50 (114)	2.00 (51)	7.00 (179)	9.70 (246)	5.80 (147)	13.90 (353)
VxFS-630x-E2x-L-14	4"	4.00 (102)	6.50 (165)	4.50 (114)	2.00 (51)	7.00 (179)	11.10 (282)	7.80 (198)	15.20 (386)
VxUS-630x-E1x-L-15	5"	5.00 (127)	7.50 (190)	5.00 (127)	2.12 (54)	7.50 (190)	9.70 (246)	5.80 (147)	14.29 (363)
VxFS-630x-E2x-L-15	5"	5.00 (127)	7.50 (190)	5.00 (127)	2.12 (54)	7.50 (190)	11.10 (282)	7.80 (198)	16.30 (414)
VxUS-630x-E2x-L-16	6"	5.80 (147)	8.00 (203)	5.50 (140)	2.12 (54)	8.00 (203)	11.10 (282)	7.80 (198)	16.80 (427)
VxFS-630x-E2x-L-16									
VxUS-630x-E2x-L-17	8"	7.80 (198)	9.00 (229)	6.80 (173)	2.50 (63)	9.50 (241)	11.10 (282)	7.80 (198)	18.00 (457)
VxFS-630x-E3x-L-17									
VxUS-630x-E3x-L-18	10"	9.80 (249)	11.00 (279)	8.00 (203)	2.50 (63)	10.80 (274)	11.10 (282)	7.80 (198)	20.00 (508)
VxFS-630x-E5x-L-18									
VxUS-630x-E5x-L-19	12"	11.80 (300)	12.00 (305)	9.50 (241)	3.00 (76)	12.20 (310)	12.80 (325)	9.50 (241)	22.74 (578)
VxFS-630x-E6x-L-19									
VxUS-630x-E5x-L-20	14"	13.20 (335)	14.00 (356)	10.50 (267)	3.00 (76)	13.60 (345)	12.80 (325)	9.50 (241)	24.74 (628)
VxFS-630x-E6x-L-21									
VxFS-630x-E6x-L-21	16"	15.20 (386)	15.00 (381)	11.80 (300)	4.00 (102)	14.80 (376)	12.80 (325)	9.50 (241)	26.25 (667)

a. Actuator code Exx or Fxx Dimensions are the same.

2 TO 8" TWO-WAY BUTTERFLY VALVE ASSEMBLIES WITH SINGLE PNEUMATIC ACTUATOR VALVE DIMENSIONS

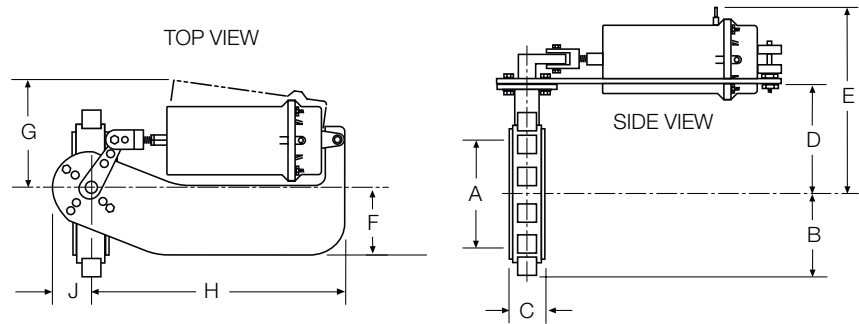


Table 33: Two-Way Single Pneumatic

Valve Assembly Part Number ^a	Valve Size In	Dimensions in inches (millimetres)								
		A	B	C	D	E	F	G	H	J
VkFx-62xx-221-L-11	2"	2.00 (51)	2.30 (58)	1.62 (41)	5.50 (140)	8.62 (219)	4.88 (124)	9.31 (237)	19.94 (507)	2.00 (51)
VkFx-62xx-221-L-12	2-1/2"	2.50 (64)	2.57 (65)	1.75 (45)	6.00 (152)	9.12 (232)	4.88 (124)	9.31 (237)	19.94 (507)	2.00 (51)
VkFx-62xx-221-L-13	3"	3.00 (76)	2.81 (71)	1.75 (45)	6.25 (159)	9.38 (238)	5.45 (138)	9.31 (237)	19.94 (507)	2.00 (51)
VkUx-62xx-221-L-14	4"	4.00 (102)	4.09 (104)	2.00 (51)	7.00 (178)	13.75 (349)	5.45 (138)	9.31 (237)	19.94 (507)	2.00 (51)
VkFx-62xx-221-L-14										
VkUx-62xx-221-L-15	5"	5.00 (127)	4.61 (117)	2.12 (54)	7.50 (191)	14.38 (365)	5.45 (138)	9.31 (237)	19.94 (507)	2.00 (51)
VkFx-62xx-251-L-15	5"	5.00 (127)	4.61 (117)	2.12 (54)	7.50 (191)	14.38 (365)	5.45 (138)	10.94 (278)	25.81 (656)	3.00 (76)
VkFx-62xx-251-L-16	6"	5.75 (146)	5.06 (129)	2.12 (54)	8.00 (203)	14.88 (378)	5.45 (138)	10.94 (278)	25.81 (656)	3.00 (76)
VkUx-62xx-251-L-17	8"	7.75 (197)	6.05 (154)	2.50 (64)	9.50 (241)	16.38 (416)	5.45 (138)	10.94 (278)	25.81 (656)	3.00 (76)

a. For Positive Positioner substitute 4 for x in the first field of the part number. (VKF4-62xx-221-L-11)

8 TO 10" TWO-WAY BUTTERFLY VALVE ASSEMBLIES WITH DUAL PNEUMATIC ACTUATOR VALVE DIMENSIONS

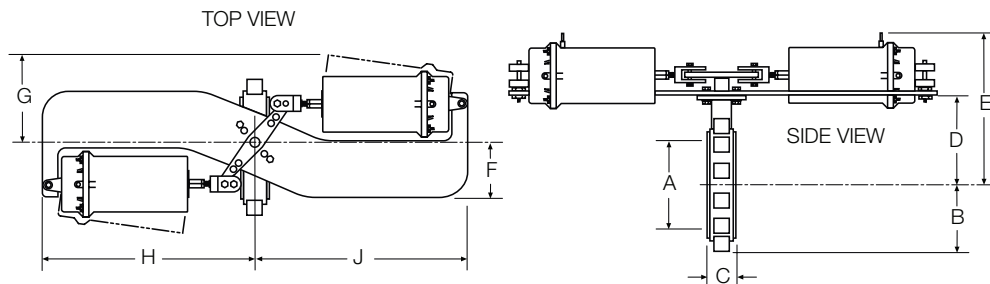


Table 34: Two-Way Dual Pneumatic

Valve Assembly Part Number ^a	Valve Size In	Dimensions in inches (millimetres)								
		A	B	C	D	E	F	G	H	J
VkFx-62xx-251D-L-17	8"	7.75 (197)	6.05 (154)	2.50 (64)	9.50 (241)	16.38 (416)	6.00 (152)	10.94 (278)	22.75 (578)	22.75 (578)
VkUx-62xx-251D-L-18	10"	9.75 (248)	7.69 (195)	2.50 (64)	10.75 (273)	17.62 (448)	6.00 (152)	10.94 (278)	22.75 (578)	22.75 (578)

a. For Positive Positioner substitute 4 for x in the first field of the part number. (VKF4-62xx-251D-L-18)

2 TO 6" THREE-WAY BUTTERFLY VALVE ASSEMBLIES WITH SINGLE PNEUMATIC ACTUATOR VALVE DIMENSIONS

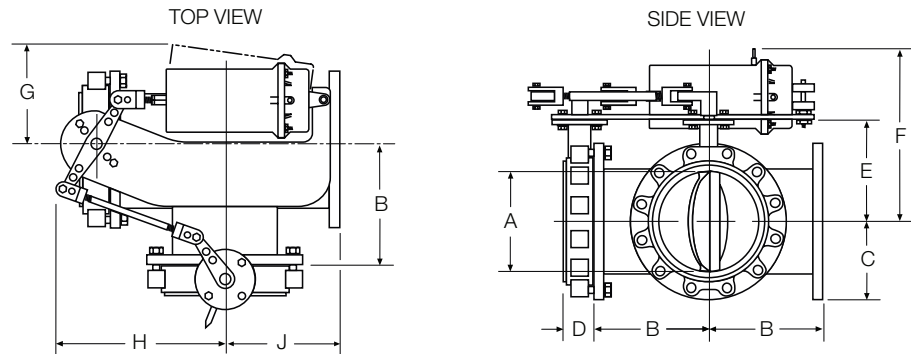


Table 35: Three-Way Single Pneumatic

Valve Assembly Part Number ^a	Valve Size In	Dimensions in inches (millimetres)								
		A	B	C	D	E	F	G	H	J
VKFx-63xx-221-L-11	2"	2.00 (51)	4.50 (114)	3.00 (76)	1.62 (41)	5.50 (140)	8.62 (219)	9.31 (237)	9.83 (250)	4.50 (114)
VKFx-63xx-221-L-12	2-1/2"	2.50 (64)	5.00 (127)	3.50 (89)	1.80 (46)	6.00 (152)	9.12 (232)	9.31 (237)	10.40 (264)	5.00 (127)
VKFx-63xx-251-L-13	3"	3.00 (76)	5.50 (140)	3.80 (97)	1.80 (46)	6.25 (159)	9.38 (238)	10.94 (278)	10.90 (277)	5.50 (140)
VKFx-63xx-251-L-14	4"	4.00 (102)	6.50 (165)	4.50 (114)	2.00 (51)	7.00 (178)	13.75 (349)	10.94 (278)	12.02 (305)	6.50 (165)
VKUx-63xx-251-L-15	5"	5.00 (127)	7.50 (191)	5.00 (127)	2.12 (54)	7.50 (191)	14.38 (365)	10.94 (278)	13.76 (350)	7.50 (191)
VKFx-63xx-251-L-15										
VKUx-63xx-251-L-16	6"	5.80 (147)	8.00 (203)	5.50 (140)	2.12 (54)	8.00 (203)	14.88 (378)	10.94 (278)	14.26 (362)	16.00 (406)

a. For Positive Positioner substitute 4 for x in the first field of the part number. (VKF4-63xx-221-L-11)

6 TO 8" THREE-WAY BUTTERFLY VALVE ASSEMBLIES WITH DUAL PNEUMATIC ACTUATOR VALVE DIMENSIONS

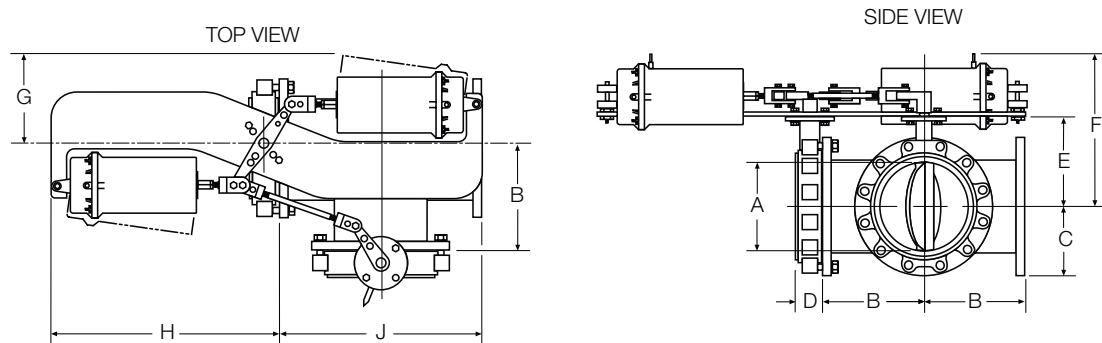


Table 36: Three-Way Dual Pneumatic

Valve Assembly Part Number ^a	Valve Size In	Dimensions in inches (millimetres)								
		A	B	C	D	E	F	G	H	J
VKFx-63xx-251D-L-16	6"	5.80 (147)	8.00 (203)	5.50 (140)	2.12 (54)	8.00 (203)	14.88 (378)	10.94 (278)	23.81 (605)	16.00 (406)
VKUx-63xx-251D-L-17	8"	7.80 (198)	9.00 (229)	6.75 (172)	2.50 (64)	9.50 (241)	16.38 (416)	10.94 (278)	24.00 (610)	18.00 (457)

a. For Positive Positioner substitute 4 for x in the first field of the part number. (VKF4-63xx-251D-L-16)