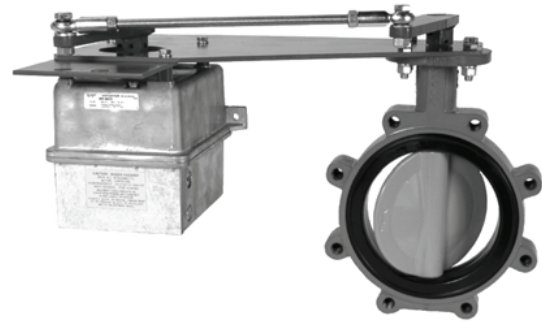


TAC Rubber Lined Butterfly Valve Assemblies



TAC's butterfly valve line offers a wide range of two- and three-way sizes, using 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.

Features

- 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 built in O-ring seal
- Peroxide cured EPDM seats offer elastomeric stability
- 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 electric actuators and control signals
- Cast iron lug bodies mate with ANSI class 125/150 flanges
- Bubble tight shut-off
- Bidirectional flow
- Three-way models can be piped in either mixing or diverting configurations.

Table of Contents

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Rubber Lined Butterfly

V X X X - 6 X X X -

Control Signal Type
 A = Two Position
 B = Body Only
 F = Floating (SPDT, center off)
 K = Pneumatic
 S = Proportional (Vdc, mAdc)

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.

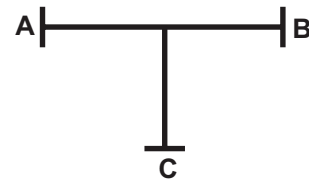
Type
 6 = Butterfly

Style
 2 = 2-Way
 3 = 3-Way

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

Flow Pattern^{cd}

Pattern	Main Valve ^a	Main Valve Position	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. 3-Way models can be piped in either mixing or diverting configurations.

Valve Assemblies

X X X X - X - X X

Actuator Code

SR = Spring Return
NSR = Non-Spring Return

Body Style
L = Nylon disc
and lug body

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"

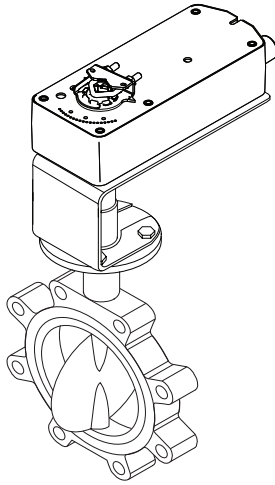
Actuator Code ^a	On/Off or Floating SR with	Actuator Code	Modulating SR (0 to 10 Vdc)
556	MA41-7153 (VAx)	556	MS41-7153 (VSx)
556D		556D	
556	MF41-7153 (VFx)	-	-
556D			
Actuator Code ^a	On/Off or Floating SR with 2 SPDT Auxiliary Switches	Actuator Code	Modulating SR (0 to 10 Vdc, 4 to 20 mA) with 2 SPDT Auxiliary Switches
556	MA41-7153 -502 (VAxS)	556	MS41-7153-502 (VSxS)
556D		556D	
556	MF41-7153-502 (VFxS)	-	-
556D			
Actuator Code ^a	On/Off or Floating NSR	Actuator Code	Modulating NSR (0 to 10 Vdc, 4 to 20 mA)
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 ^a	On/Off or Floating NSR with 2 SPDT Auxiliary Switches	Actuator Code	Modulating NSR (0 to 10 Vdc, 4 to 20 mA) with 2 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 NSR with 1 SPDT Auxiliary Switches	Actuator Code	Modulating NSR (0 to 10 Vdc, 4 to 20 mA) with 2 SPDT Auxiliary Switches
907	MP-9810-129 (VAxS or VFxS)	909	MP-9810-129/CP-8391-456 (VSxS)
Actuator Code	On/Off NSR with 2 SPDT Auxiliary Switches	Actuator Code	Modulating NSR (0 to 10 Vdc, 4 to 20 mA) with 2 SPDT Auxiliary Switches
E10	700051-113A0536/A (VAxS)	E12	700051-113A0536/B (VSxS)
E20	700121-113A0536/A (VAxS)	E22	700121-113A0536/B (VSxS)
E30	700201-113A0536/A (VAxS)	E32	700201-113A0536/B (VSxS)
E40	700301-113A0536/A (VAxS)	E42	700301-113A0536/B (VSxS)
E50	700501-113A0536/A (VAxS)	E52	700501-113A0536/B (VSxS)
E60	700651-113A0536/A (VAxS)	E62	700651-113A0536/B (VSxS)

^a D = Dual actuators

Understanding a Configured Catalog Number

Butterfly Valves

Two-Way Spring Return Rubber Lined



2 to 4 in. Lug Bodies

Two-Way Spring Return Normally Open

Flow Type	Equal % bidirectional.
Material	<p>Body Polyester coated cast iron, ASTM A126 Class B lug. Mates with ANSI 125/150 flanges.</p> <p>Seat EPDM tongue and groove seat and molded O-ring flange seal. Peroxide cured.</p> <p>Stem Stainless steel double D stem.</p> <p>Stem Seals Self adjusting double U cup.</p> <p>Disc Ductile iron nylon 11 coated disc.</p>
Fluid Temperatures	-40 to 250°F (-40 to 121°C).
Close-Off Rating	ANSI VI Bubble tight.
Application	Chilled or hot water up to 60% glycol.

Two-Way Normally Open Assemblies

Size in.	Cv (K _{vs}) @ 90°	Close-Off Pressure psi (kPa)	Two Position	Floating	Proportional	Voltage Vac
2	144 (125)	175 (1207)	VAF-6210-556-L-11	VFF-6210-556-L-11	VSF-6210-556-L-11	24
2.5	282 (244)	175 (1207)	VAF-6210-556-L-12	VFF-6210-556-L-12	VSF-6210-556-L-12	24
3	461 (399)	175 (1207)	VAF-6210-556D-L-13	VFF-6210-556D-L-13	VSF-6210-556D-L-13	24
4	841 (727)	50 (345)	VAU-6210-556D-L-14	VFU-6210-556D-L-14	VSU-6210-556D-L-14	24

Actuator Code Table.

Vxxx-6210-556x-L-xx

Actuator Codes	Model Prefix ^a	Actuator Model	Description	Wiring		Dimension Information	
				Page	Figure	Page	Figure
556 ^b	VAxx	MA41-7153	24vac, on/off, SR	176	12	227	106
556 ^{bc}	VAxS	MA41-7153-502	24vac, on/off, SR, 2-SPDT aux switches	176 180	12 22	227	106
556 ^b	VFxx	MF41-7153	24vac, Floating, SR	179 to 181	21 to 24	227	106
556 ^{bc}	VFxS	MF41-7153-502	24vac, Floating, SR, 2-SPDT aux switches	179 to 181	21 to 24	227	106
556 ^b	VSxx	MS41-7153	24vac, modulating, SR	194 to 195	55 to 57	227	106
556 ^{bc}	VSxS	MS41-7153-502	24vac, on/off, SR, 2-SPDT aux switches	180 194 to 195	22 55 to 57	227	106

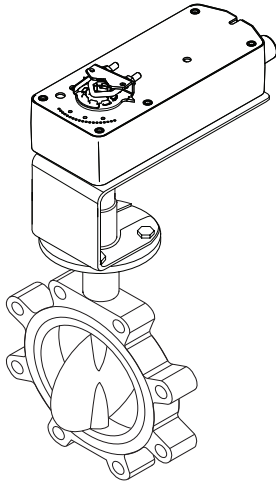
^a For optional two SPDT auxiliary switch models the letter "S" must be added to the model prefix field. EX: VxxS

^b D = Dual mounting.

^c Dual mounted application. One Mx41-7153 and one Mx41-7153-502 are supplied.

Butterfly Valves

Two-Way Spring Return Rubber Lined



2 to 4 in. Lug Bodies

Two-Way Spring Return Normally Closed

Flow Type	Equal % bidirectional.
Body	Polyester coated cast iron, ASTM A126 Class B lug. Mates with ANSI 125/150 flanges.
Seat	EPDM tongue and groove seat and molded O-ring flange seal. Peroxide cured.
Material	
Stem	Stainless steel double D stem.
Stem Seals	Self adjusting double U cup.
Disc	Ductile iron nylon 11 coated disc.
Fluid Temperatures	-40 to 250°F (-40 to 121°C).
Close-Off Rating	ANSI VI Bubble tight.
Application	Chilled or hot water up to 60% glycol.

Two-Way

Size in.	Cv (K _{vs}) @ 90°	Close-Off Pressure psi (kPa)	Two Position	Floating	Proportional	Voltage Vac
2	144 (125)	175 (1207)	VAF-6220-556-L-11	VFF-6220-556-L-11	VSF-6220-556-L-11	24
2.5	282 (244)	175 (1207)	VAF-6220-556-L-12	VFF-6220-556-L-12	VSF-6220-556-L-12	24
3	461 (399)	175 (1207)	VAF-6220-556D-L-13	VFF-6220-556D-L-13	VSF-6220-556D-L-13	24
4	841 (727)	50 (345)	VAU-6220-556D-L-14	VFF-6220-556D-L-14	VSF-6220-556D-L-14	24

Actuator Code Table.

Vxxx-6220-556x-L-xx



Actuator Codes	Model Prefix ^a	Actuator Model	Description	Wiring		Dimensions	
				Page	Figure	Page	Figure
556 ^b	VAXx	MA41-7153	24 Vac, on/off, SR	176	12	227	106
556 ^{bc}	VAXS	MA41-7153-502	24 Vac, on/off, SR, 2 SPDT aux switches	176 180	12 22	227	106
556 ^b	VFxx	MF41-7153	24 Vac, Floating, SR	179 to 181	21 to 24	227	106
556 ^{bc}	VFxS	MF41-7153-502	24 Vac, Floating, SR, 2 SPDT aux switches	179 to 181	21 to 24	227	106
556 ^b	VSxx	MS41-7153	24 Vac, Modulating, SR	194 to 195	55 to 57	227	106
556 ^{bc}	VSxS	MS41-7153-502	24 Vac, on/off, SR, 2 SPDT aux switches	180 194 to 195	22 55 to 57	227	106

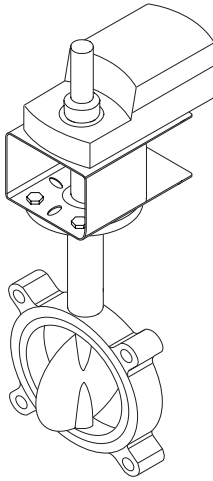
^a For optional two SPDT auxiliary switch models the letter "S" must be added to the model prefix field. EX: VxxS

^b D = Dual mounting.

^c Dual mounted application. One Mx41-7153 and one Mx41-7153-502 are supplied.

Butterfly Valves

Two-Way Spring Return Rubber Lined



2 to 6 in. Lug Bodies

Two-Way Non-Spring Return Rubberlined

Flow Type	Equal % bidirectional.
Body	Polyester coated cast iron, ASTM A126 Class B lug. Mates with ANSI 125/150 flanges.
Seat	EPDM tongue and groove seat and molded O-ring flange seal. Peroxide cured.
Material	
Stem	Stainless steel double D stem.
Stem Seals	Self adjusting double U cup.
Disc	Ductile iron nylon 11 coated disc.
Fluid Temperatures	-40 to 250°F (-40 to 121°C).
Close-Off Rating	ANSI VI Bubble tight.
Application	Chilled or hot water up to 60% glycol.

Size in.	Cv (Kvs) @ 90°	Close-Off Pressure psi (kPa)	Two Position or Floating	Proportional	Voltage Vac
2	144 (125)	175 (1207)	VFF-6200-E24-L-11	VSF-6200-E24-L-11	24
2.5	282 (244)	175 (1207)	VFF-6200-E24-L-12	VSF-6200-E24-L-12	24
3	461 (399)	175 (1207)	VFF-6200-E25-L-13	VSF-6200-E25-L-13	24
4	841 (727)	175 (1207)	VFF-6200-E25D-L-14	VSF-6200-E25D-L-14	24
			VFU-6200-E25-L-14	VSU-6200-E25-L-14	24
5	1376 (1190)	50 (345)	VFU-6200-E25-L-15	VSU-6200-E25-L-15	24
6	1850 (1600)		VFU-6200-E25D-L-16	VSU-6200-E25D-L-16	24

Actuator Code Table.

Vxxx-6200-E2xx-L-xx



Actuator Codes	Model Prefix ^a	Actuator Model	Description	Wiring		Dimension Information	
				Page	Figure	Page	Figure
E24	VFxx	NR-2216-521	24 Vac, Floating, on/off, NSR	202	72 to 73	229	108
E24	VFxS	NR-2216-522	24 Vac, Floating, on/off, NSR, 2 SPDT aux Switch	202 to 203	72, 73, 75	229	108
E24	VSxx	NR-2216-541	24 Vac, Modulated, NSR	202	74	229	108
E24	VSxS	NR-2216-542	24 Vac, Modulated, NSR, 2 SPDT aux Switch	202 to 203	74 to 75	229	108
E25 ^b	VFxx	NR-2224-521	24 Vac, Floating, on/off, NSR	202	72, 73	229	108
E25 ^{bc}	VFxS	NR-2224-522	24 Vac, Floating, on/off, NSR, 2 SPDT aux Switch	202 to 203	72, 73, 75	229	108
E25 ^b	VSxx	NR-2224-541	24 Vac, Modulated, NSR	202	74	229	108
E25 ^{bc}	VSxS	NR-2224-542	24 Vac, Modulated, NSR, 2 SPDT aux Switch	202 to 203	74 to 75	229	108

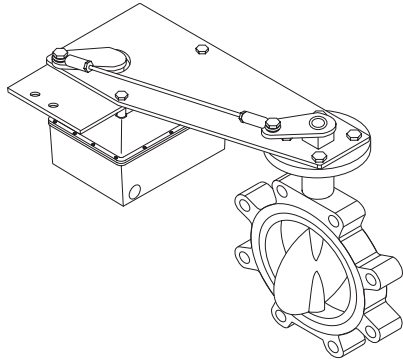
^a For optional two SPDT auxiliary switch models the letter "S" must be added to the model prefix field. EX: VxxS

^b D = Dual mounting.

^c Dual mounted application. One NR-22xx-5x2 and one NR-22xx-5xx are supplied.

Butterfly Valves

Two-Way Non-Spring Return, Rubber Lined, High Torque



6 to 12 in. Lug Bodies

Two-Way Non-Spring Return

Flow Type	Equal % bidirectional.
Body	Polyester coated cast iron, ASTM A126 Class B lug. Mates with ANSI 125/150 flanges.
Seat	EPDM tongue and groove seat and molded O-ring flange seal. Peroxide cured.
Material	
Stem	Stainless steel double D stem.
Stem Seals	Self adjusting double U cup.
Disc	Ductile iron nylon 11 coated disc.
Fluid Temperatures	-40 to 250°F (-40 to 121°C).
Close-Off Rating	ANSI VI Bubble tight.
Application	Chilled or hot water up to 60% glycol.

Size in.	Cv (Kvs) @ 90°	Close-Off Pressure psi (kPa)	On/Off or Floating	Proportional	Voltage Vac
6	1850 (1600)	175 (1207)	VAFS-6200-907-L-16	VSFS-6200-909-L-16	120
8	3316 (2868)	175 (1207)	VAFS-6200-907-L-17	VSFS-6200-909-L-17	120
		50 (345)	VAUS-6200-907-L-17	VSUS-6200-909-L-17	120
10	5430 (4697)	175 (1207)	VAFS-6200-907-L-18	VSFS-6200-909-L-18	120
		50 (345)	VAUS-6200-907-L-18	VSUS-6200-909-L-18	120
12	8077 (6987)	175 (1207)	VAFS-6200-907-L-19	VSFS-6200-909-L-19	120
		50 (345)	VAUS-6200-907-L-19	VSUS-6200-909-L-19	120

Actuator Code Table.

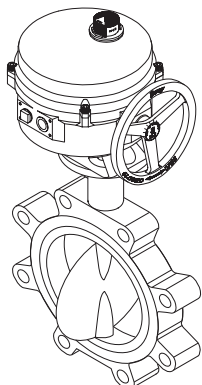
VxxS-6200-90x-L-xx



Actuator Codes	Model Prefix	Actuator Model	Description	Wiring		Dimension Information	
				Page	Figure	Page	Figure
907	VAXS	MP-9810-129	120 Vac, on/off, Floating, NSR	186	37	Consult Factory	
909	VSXS	MP-9810-129	With CP-8391-456 Modulated	175	9		

Butterfly Valves

Two-Way Non-Spring Return, Rubber Lined, NEMA 4 w/Hand Wheel



2 to 18 in. Lug Bodies

Two-Way Non-Spring Return NEMA 4 with Hand Wheel


Flow Type	Equal % bidirectional.
Body	Polyester coated cast iron, ASTM A126 Class B lug. Mates with ANSI 125/150 flanges.
Seat	EPDM tongue and groove seat and molded O-ring flange seal. Peroxide cured.
Material	
Stem	Stainless steel double D stem.
Stem Seals	Self adjusting double U cup.
Disc	Ductile iron nylon 11 coated disc.
Fluid Temperatures	-40 to 250°F (-40 to 121°C).
Close-Off Rating	ANSI VI Bubble tight.
Application	Chilled or hot water up to 60% glycol.

Size in.	Cv (K _{vs}) @ 90°	Close-Off Pressure psi (kPa)	Two Position	Proportional	Voltage Vac
2	144 (125)	175 (1207)	VAFS-6200-E10-L-11	VSFS-6200-E12-L-11	120
2.5	282 (244)	175 (1207)	VAFS-6200-E10-L-12	VSFS-6200-E12-L-12	120
3	461 (399)	175 (1207)	VAFS-6200-E10-L-13	VSFS-6200-E12-L-13	120
4	841 (727)	50 (345)	VAUS-6200-E10-L-14	VSUS-6200-E12-L-14	120
		175 (1207)	VAFS-6200-E10-L-14	VSFS-6200-E12-L-14	120
5	1376 (1190)	50 (345)	VAUS-6200-E10-L-15	VSUS-6200-E12-L-15	120
		175 (1207)	VAFS-6200-E20-L-15	VSFS-6200-E22-L-15	120
6	1850 (1600)	50 (345)	VAUS-6200-E20-L-16	VSUS-6200-E22-L-16	120
		175 (1207)	VAFS-6200-E20-L-16	VSFS-6200-E22-L-16	120
8	3316 (2868)	50 (345)	VAUS-6200-E20-L-17	VSUS-6200-E22-L-17	120
		175 (1207)	VAFS-6200-E30-L-17	VSFS-6200-E32-L-17	120
10	5430 (4697)	50 (345)	VAUS-6200-E30-L-18	VSUS-6200-E32-L-18	120
		175 (1207)	VAFS-6200-E40-L-18	VSFS-6200-E42-L-18	120
12	8077 (6987)	50 (345)	VAUS-6200-E40-L-19	VSUS-6200-E42-L-19	120
		175 (1207)	VAFS-6200-E50-L-19	VSFS-6200-E52-L-19	120
14	10538 (9115)	50 (345)	VAUS-6200-E50-L-20	VSUS-6200-E52-L-20	120
		1750 (1207)	VAFS-6200-E60-L-20	VSFS-6200-E62-L-20	120
16	13966 (12081)	50 (345)	VAUS-6200-E60-L-21	VSUS-6200-E62-L-21	120
18	17214 (14890)	50 (345)	VAUS-6200-E60-L-22	VSUS-6200-E62-L-22	120

Butterfly Valves

Two-Way Non-Spring Return, Rubber Lined, NEMA 4 w/Hand Wheel

Actuator Code Table.

VxxS-6200-Exx-L-xx


Actuator Codes	Model Prefix	Actuator Model	Description	Wiring		Dimension Information	
				Page	Figure	Page	Figure
E10	VxS	S70-0051-A	120 Vac, on/off, NEMA4, 2 SPDT aux switch, manual override	173	2	231	110
E20	VxS	S70-0121-A	120 Vac, on/off, NEMA4, 2 SPDT aux switch, manual override	173	2	231	110
E30	VxS	S70-0201-A	120 Vac, on/off, NEMA4, 2 SPDT aux switch, manual override	173	2	231	110
E40	VxS	S70-0301-A	120 Vac, on/off, NEMA4, 2 SPDT aux switch, manual override	173	2	231	110
E50	VxS	S70-0501-A	120 Vac, on/off, NEMA4, 2 SPDT aux switch, manual override	173	2	231	110
E60	VxS	S70-0651-A	120 Vac, on/off, NEMA4, 2 SPDT aux switch, manual override	173	2	231	110
E12	VsS	S70-0051-B	120 Vac, modulated, NEMA4, 2 SPDT aux switch, manual override	172	1	231	110
E22	VsS	S70-0121-B	120 Vac, modulated, NEMA4, 2 SPDT aux switch, manual override	172	1	231	110
E32	VsS	S70-0201-B	120 Vac, modulated, NEMA4, 2-SPDT aux switch, manual override	172	1	231	110
E42	VsS	S70-0301-B	120 Vac, modulated, NEMA4, 2 SPDT aux switch, manual override	172	1	231	110
E52	VsS	S70-0501-B	120 Vac, modulated, NEMA4, 2 SPDT aux switch, manual override	172	1	231	110
E62	VsS	S70-0651-B	120 Vac, modulated, NEMA4, 2 SPDT aux switch, manual override	172	1	231	110

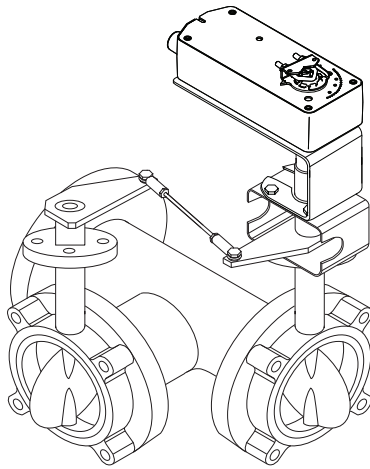
Butterfly Valves

Butterfly Valves

Three-Way Spring Return Rubber Lined

2 to 4 in. Lug Bodies

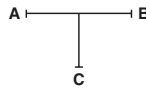
Three-Way Spring Return Normally Open



Flow Type	Equal % linear bidirectional. Mixing or diverting configurations.
Body	Polyester coated cast iron, ASTM A126 Class B lug. Mates with ANSI 125/150 flanges.
Seat	EPDM tongue and groove seat and molded O-ring flange seal. Peroxide cured.
Material	
Stem	Stainless steel double D stem.
Stem Seals	Self adjusting double U cup.
Disc	Ductile iron nylon 11 coated disc.
Fluid Temperatures	-40 to 250°F (-40 to 121°C).
Close-Off Rating	ANSI VI Bubble tight.
Application	Chilled or hot water up to 60% glycol.

Size in.	Cv (Kvs) @ 90°	Close-Off Pressure psi (kPa)	Two Position ^a	Floating ^a	Proportional ^a	Voltage Vac
2	144 (125)	175 (1207)	VAF-631x-556-L-11	VFF-631x-556-L-11	VSF-631x-556-L-11	24
2.5	282 (244)	175 (1207)	VAF-631x-556D-L-12	VFF-631x-556D-L-12	VSF-631x-556D-L-12	24
3	461 (399)	175 (1207)	VAF-631x-556D-L-13	VFF-631x-556D-L-13	VSF-631x-556D-L-13	24
4	841 (727)	50 (345)	VAU-631x-556D-L-14	VFU-631x-556D-L-14	VSU-631x-556D-L-14	24

^a Select 7 or 8 for the "x".
 8 = Actuator is mounted on the main valve at "A" and is NO.
 7 = Actuator is mounted on the main valve at "B" and is NO.
 The linked valve for 7 and 8 is "C".



Actuator Code Table.

Vxxx-631x-556x-L-xx

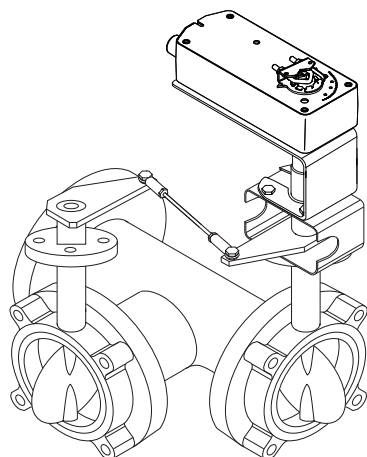
Actuator Codes	Model Prefix ^a	Actuator Model	Description	Wiring		Dimension Information	
				Page	Figure	Page	Figure
556 ^b	VAx	MA41-7153	24 Vac, on/off, SR	176	12	228	107
556 ^{bc}	VAxS	MA41-7153-502	24 Vac, on/off, SR, 2 SPDT aux switches	176 180	12 22	228	107
556 ^b	VFx	MF41-7153	24 Vac, Floating, SR	179 to 181	21 to 24	228	107
556 ^{bc}	VFxS	MF41-7153-502	24 Vac, Floating, SR, 2 SPDT aux switches	179 to 181	21 to 24	228	107
556 ^b	VSx	MS41-7153	24 vac, Modulating, SR	194 to 195	55 to 57	228	107
556 ^{bc}	VSxS	MS41-7153-502	24 Vac, on/off, SR, 2 SPDT aux switches	180 194 to 195	22 55 to 57	228	107

^a For optional two SPDT auxiliary switch models the letter "S" must be added to the model prefix field. EX: VxxS
^b D = Dual mounting.
^c Dual mounted application. One Mx41-7153 and one Mx41-7153-502 are supplied.

Butterfly Valves

Butterfly Valves

Three-Way Spring Return Rubber Lined



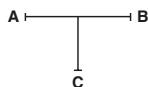
2 to 4 in. Lug Bodies

Three-Way Spring Return Normally Closed

Flow Type	Equal % linear bidirectional. Mixing or diverting configurations.
Body	Polyester coated cast iron, ASTM A126 Class B lug. Mates with ANSI 125/150 flanges.
Seat	EPDM tongue and groove seat and molded O-ring flange seal. Peroxide cured.
Material	
Stem	Stainless steel double D stem.
Stem Seals	Self adjusting double U cup.
Disc	Ductile iron nylon 11 coated disc.
Fluid Temperatures	-40 to 250°F (-40 to 121°C).
Close-Off Rating	ANSI VI Bubble tight.
Application	Chilled or hot water up to 60% glycol.

Size in.	Cv (K _{vs}) @ 90°	Close-Off Pressure psi (kPa)	Two Position ^a	Floating ^a	Proportional ^a	Voltage Vac
2	144 (125)	175 (1207)	VAF-632x-556-L-11	VFF-632x-556-L-11	VSF-632x-556-L-11	24
2.5	282 (244)	175 (1207)	VAF-632x-556D-L-12	VFF-632x-556D-L-12	VSF-632x-556D-L-12	24
3	461 (399)	175 (1207)	VAF-632x-556D-L-13	VFF-632x-556D-L-13	VSF-632x-556D-L-13	24
4	841 (727)	50 (345)	VAU-632x-556D-L-14	VFU-632x-556D-L-14	VSU-632x-556D-L-14	24

^a Select 1 or 2 for the "x".
 1 = Actuator is mounted on the main valve at "A" and is NC.
 2 = Actuator is mounted on the main valve at "B" and is NC.
 The linked valve for 1 and 2 is "C".



Actuator Code Table.

Vxxx-632x-556x-L-xx

Actuator Codes	Model Prefix ^a	Actuator Model	Description	Wiring		Dimension Information	
				Page	Figure	Page	Figure
556 ^b	VAx	MA41-7153	24 Vac, on/off, SR	176	12	228	107
556 ^{bc}	VAxS	MA41-7153-502	24 Vac, on/off, SR, 2 SPDT aux switches	176 180	12 22	228	107
556 ^b	VFx	MF41-7153	24 Vac, Floating, SR	179 to 181	21 to 24	228	107
556 ^{bc}	VFxS	MF41-7153-502	24 Vac, Floating, SR, 2 SPDT aux switches	179 to 181	21 to 24	228	107
556 ^b	VSx	MS41-7153	24 Vac, Modulating, SR	194 to 195	55 to 57	228	107
556 ^{bc}	VSxS	MS41-7153-502	24 Vac, on/off, SR, 2 SPDT aux switches	180 194 to 195	22 55 to 57	228	107

^a For optional two SPDT auxiliary switch models the letter "S" must be added to the model prefix field. EX: VxxS

^b D = Dual mounting.

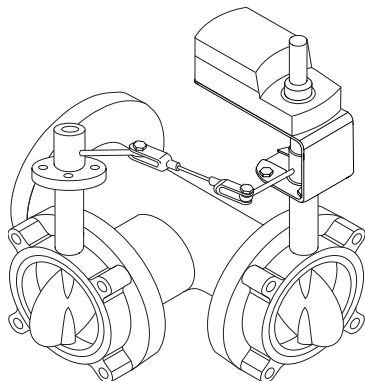
^c Dual mounted application. One Mx41-7153 and one Mx41-7153-502 are supplied.

Butterfly Valves

Three-Way Non-Spring Return Rubber Lined

2 to 6 in. Lug Bodies

Three-Way Non-Spring Return



Flow Type

Equal % linear bidirectional.
Mixing or diverging configuration.

Body

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

Seat

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

Material

Stem

Stainless steel double D stem.

Stem Seals

Self adjusting double U cup.

Disc

Ductile iron nylon 11 coated disc.

Fluid Temperatures

-40 to 250°F (-40 to 121°C).

Close-Off Rating

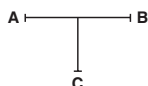
ANSI VI Bubble tight.

Application

Chilled or hot water up to 60% glycol.

Size in.	Cv (K _{vs}) @ 90°	Close-Off Pressure psi (kPa)	On/Off or Floating ^a	Proportional ^a	Voltage Vac
2	144 (125)	175 (1207)	VFF-630x-E24-L-11	VSF-630x-E24-L-11	24
2.5	282 (244)	175 (1207)	VFF-630x-E25-L-12	VSF-630x-E25-L-12	24
3	461 (399)	175 (1207)	VFF-630x-E25-L-13	VSF-630x-E25-L-13	24
4	841 (727)	175 (1207)	VFF-630x-E25D-L-14	VSF-630x-E25D-L-14	24
			VFU-630x-E25-L-14	VSU-630x-E25-L-14	24
5	1376 (1190)	50 (345)	VFU-630x-E25D-L-15	VSU-630x-E25D-L-15	24
6	1850 (1600)		VFU-630x-E25D-L-16	VSU-630x-E25D-L-16	24

^a Select 1 or 2 for the "x".
1 = Actuator is mounted on the main valve at "A" and is NC.
2 = Actuator is mounted on the main valve at "B" and is NC.
The linked valve for 1 and 2 is "C".



Actuator Code Table.

Vxxx-E2xx-L-xx

Actuator Codes	Model Prefix ^a	Actuator Model	Description	Wiring		Dimension Information	
				Page	Figure	Page	Figure
E24	VFxx	NR-2216-521	24 Vac, Floating, on/off, NSR	202	72, 73	230	109
E24	VFxS	NR-2216-522	24 Vac, Floating, on/off, NSR, 2 SPDT aux switch	202 to 203	72, 73, 75	230	109
E24	VSxx	NR-2216-541	24 Vac, Modulated, NSR	202	74	230	109
E24	VSxS	NR-2216-542	24 Vac, Modulated, NSR, 2 SPDT aux switch	202 to 203	74 to 75	230	109
E25 ^b	VFxx	NR-2224-521	24 Vac, Floating, on/off, NSR	202	72 to 73	230	109
E25 ^{bc}	VFxS	NR-2224-522	24 Vac, Floating, on/off, NSR, 2 SPDT aux switch	202 to 203	72, 73, 75	230	109
E25 ^b	VSxx	NR-2224-541	24 Vac, Modulated, NSR	202	74	230	109
E25 ^{bc}	VSxS	NR-2224-542	24 Vac, Modulated, NSR, 2 SPDT aux switch	202 to 203	74 to 75	230	109

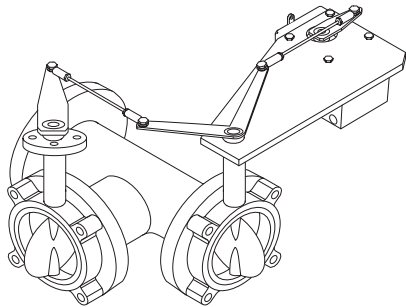
^a For optional two SPDT auxiliary switch models the letter "S" must be added to the model prefix field. EX: VxxS

^b D = Dual mounting (E25D).

^c Dual mounted application. One NR-22xx-5x1 and one NR-22xx-5x2 are supplied.

Butterfly Valves

Three-Way Non-Spring Return, Rubber Lined, High Torque



6 to 12 in. Lug Bodies

Three-Way Non-Spring Return

Flow Type	Equal % linear bidirectional. Mixing or diverting configurations.
Body	Polyester coated cast iron, ASTM A126 Class B lug. Mates with ANSI 125/150 flanges.
Seat	EPDM tongue and groove seat and molded O-ring flange seal. Peroxide cured.
Material	
Stem	Stainless steel double D stem.
Stem Seals	Self adjusting double U cup.
Disc	Ductile iron nylon 11 coated disc.
Fluid Temperatures	-40 to 250°F (-40 to 121°C).
Close-Off Rating	ANSI VI Bubble tight.
Application	Chilled or hot water up to 60% glycol.

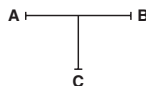
Size in.	Cv (K _{vs}) @ 90°	Close-Off Pressure psi (kPa)	On/Off or Floating ^a	Proportional ^a	Voltage Vac
6	1850 (1600)	175 (1207)	VAFS-630x-907-L-16	VSFS-630x-909-L-16	120
8	3316 (2868)	175 (1207)	VAFS-630x-907-L-17	VSFS-630x-909-L-17	120
		50 (345)	VAUS-630x-907-L-17	VSUS-630x-909-L-17	120
10	5430 (4697)	175 (1207)	VAFS-630x-907-L-18	VSFS-630x-909-L-18	120
		50 (345)	VAUS-630x-907-L-18	VSUS-630x-909-L-18	120
12	8077 (6987)	175 (1207)	VAFS-630x-907-L-19	VSFS-630x-909-L-19	120
		50 (345)	VAUS-630x-907-L-19	VSUS-630x-909-L-19	120

^a Select 1 or 2 for the "x".

1 = Actuator is mounted on the main valve at "A" and is NC.

2 = Actuator is mounted on the main valve at "B" and is NC.

The linked valve for 1 and 2 is "C".



Actuator Code Table.

VxxS-630x-90x-L-xx



Actuator Codes	Model Prefix ^a	Actuator Model	Description	Wiring		Dimension Information	
				Page	Figure	Page	Figure
907	VAXS	MP-9810-129	120 Vac, on/off, floating, NSR	186	37	Consult Factory	
909	VSXS	MP-9810-129	With CP-8391-456	175	9		

^a Includes SPDT Auxiliary Switch.

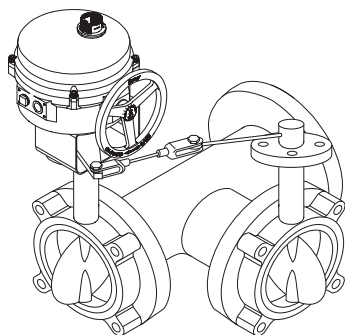
Butterfly Valves

Butterfly Valves

Three-Way Non-Spring Return, Rubber Lined, NEMA 4 w/Hand Wheel

2 to 16 in. Lug Bodies

Three-Way Non-Spring Return NEMA 4 with Hand Wheel



Flow Type

- Body**
- Seat**
- Material**
- Stem**
- Stem Seals**
- Disc**

Fluid Temperatures

Close-Off Rating

Application

Equal % linear bidirectional.
Mixing or diverting configurations.

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

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

Stainless steel double D stem.

Self adjusting double U cup.

Ductile iron nylon 11 coated disc.

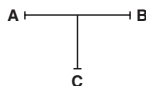
-40 to 250°F (-40 to 121°C).

ANSI VI Bubble tight.

Chilled or hot water up to 60% glycol.

Size in.	Cv (K _{vs}) @ 90°	Close-Off Pressure psi (kPa)	Two Position ^a	Proportional ^a	Voltage Vac
2	144 (125)	175 (1207)	VAFS-630x-E10-L-11	VSFS-630x-E12-L-11	120
2.5	282 (244)	175 (1207)	VAFS-630x-E10-L-12	VSFS-630x-E12-L-12	120
3	461 (399)	175 (1207)	VAFS-630x-E10-L-13	VSFS-630x-E12-L-13	120
4	841 (727)	50 (345)	VAUS-630x-E10-L-14	VSUS-630x-E12-L-14	120
		175 (1207)	VAFS-630x-E10-L-14	VSFS-630x-E12-L-14	120
5	1376 (1190)	50 (345)	VAUS-630x-E10-L-15	VSUS-630x-E12-L-15	120
		175 (1207)	VAFS-630x-E20-L-15	VSFS-630x-E22-L-15	120
6	1850 (1600)	50 (345)	VAUS-630x-E20-L-16	VSUS-630x-E22-L-16	120
		175 (1207)	VAFS-630x-E20-L-16	VSFS-630x-E22-L-16	120
8	3316 (2868)	50 (345)	VAUS-630x-E20-L-17	VSUS-630x-E22-L-17	120
		175 (1207)	VAFS-630x-E30-L-17	VSFS-630x-E32-L-17	120
10	5430 (4697)	50 (345)	VAUS-630x-E30-L-18	VSUS-630x-E32-L-18	120
		175 (1207)	VAFS-630x-E40-L-18	VSFS-630x-E42-L-18	120
12	8077 (6987)	50 (345)	VAUS-630x-E40-L-19	VSUS-630x-E42-L-19	120
		175 (1207)	VAFS-630x-E50-L-19	VSFS-630x-E52-L-19	120
14	10538 (9115)	50 (345)	VAUS-630x-E50-L-20	VSUS-630x-E52-L-20	120
		1750 (1207)	VAFS-630x-E60-L-20	VSFS-630x-E62-L-20	120
16	13966 (12081)	50 (345)	VAUS-630x-E60-L-21	VSUS-630x-E62-L-21	120


^a Select 1 or 2 for the "x".
 1 = Actuator is mounted on the main valve at "A" and is NC.
 2 = Actuator is mounted on the main valve at "B" and is NC.
 The linked valve for 1 and 2 is "C".



Butterfly Valves

Three-Way Non-Spring Return, Rubber Lined, NEMA 4 w/Hand Wheel

Actuator Code Table.

VxxS-630x-Exx-L-xx


Actuator Codes	Model Prefix	Actuator Model	Description	Wiring		Dimension Information	
				Page	Figure	Page	Figure
E10	VAxS	S70-0051-A	120 Vac, on/off, NEMA4, 2 SPDT aux switch, manual override	173	2	232	111
E20	VAxS	S70-0121-A	120 Vac, on/off, NEMA4, 2 SPDT aux switch, manual override	173	2	232	111
E30	VAxS	S70-0201-A	120 Vac, on/off, NEMA4, 2 SPDT aux switch, manual override	173	2	232	111
E40	VAxS	S70-0301-A	120 Vac, on/off, NEMA4, 2 SPDT aux switch, manual override	173	2	232	111
E50	VAxS	S70-0501-A	120 Vac, on/off, NEMA4, 2 SPDT aux switch, manual override	173	2	232	111
E60	VAxS	S70-0651-A	120 Vac, on/off, NEMA4, 2 SPDT aux switch, manual override	173	2	232	111
E12	VSxS	S70-0051-B	120 Vac, modulated, NEMA4, 2 SPDT aux switch, manual override	172	1	232	111
E22	VSxS	S70-0121-B	120 Vac, modulated, NEMA4, 2 SPDT aux switch, manual override	172	1	232	111
E32	VSxS	S70-0201-B	120 Vac, modulated, NEMA4, 2 SPDT aux switch, manual override	172	1	232	111
E42	VSxS	S70-0301-B	120 Vac, modulated, NEMA4, 2 SPDT aux switch, manual override	172	1	232	111
E52	VSxS	S70-0501-B	120 Vac, modulated, NEMA4, 2 SPDT aux switch, manual override	172	1	232	111
E62	VSxS	S70-0651-B	120 Vac, modulated, NEMA4, 2 SPDT aux switch, manual override	172	1	232	111

Butterfly Valves