



- 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
- 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

# TAC™ Butterfly Valve Assemblies

TAC'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.

## APPLICABLE DOCUMENTATION

For more technical information, refer to *TAC Butterfly Valve Assemblies—Technical Data*, F-27440.



# VALVE BODY SPECIFICATIONS

## 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

Bi-directional.

## 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 larger: 316 stainless steel double D stem.

### Disc

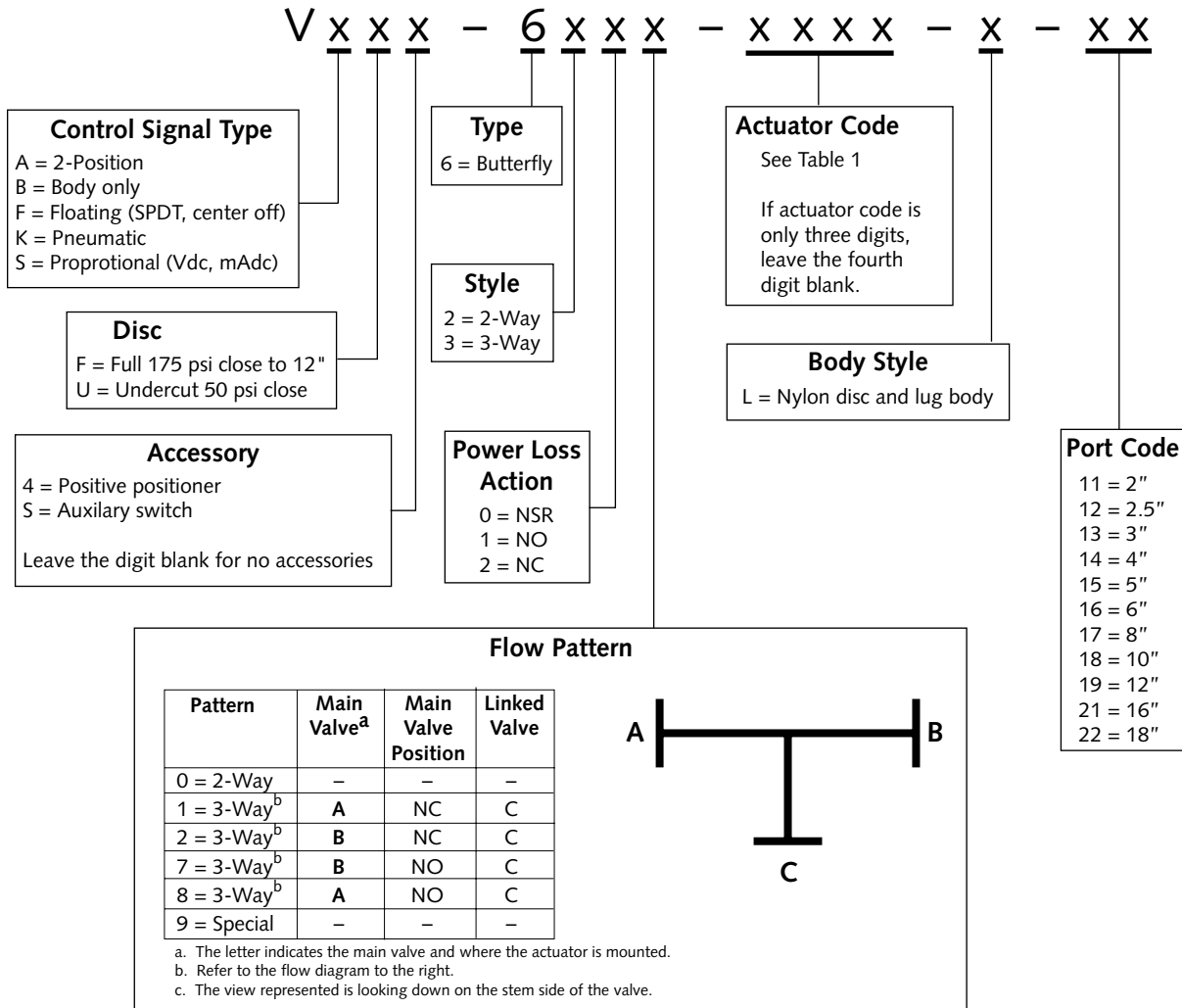
Ductile iron nylon 11 coated disc

### Seat

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

# PART NUMBERING SYSTEM

## Butterfly Valve Numbering System Rubber Lined



# ACTUATOR CODES

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

**TABLE 1: ACTUATOR CODES AND PART NUMBERS<sup>A</sup>**

Actuator Code <sup>b</sup>	On/Off or Floating SR	Actuator Code	Modulating (2 to 10 Vdc) SR
556	MA41-7153 (VAX)	556	MS41-7153 (VSX)
556D		556D <sup>a</sup>	
556	MF41-7153 (VFX)	–	–
556D			
Actuator Code <sup>b</sup>	On/Off or Floating SR with Two SPDT Auxiliary Switches	Actuator Code	Modulating (0 to 10 Vdc, 4 to 20 mA) NSR with Two SPDT Auxiliary Switches
556	MA41-7153-502 (VAXS)	556	MS41-7153-502 (VSXS)
556D		556D <sup>a</sup>	
556	MF41-7153-502 (VFXS)	–	–
556D			
Actuator Code <sup>b</sup>	On/Off or Floating NSR	Actuator Code	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 <sup>a</sup>	NR-2224-541(VSX)
Actuator Code <sup>b</sup>	On/Off or Floating NSR with Two SPDT Auxiliary Switches	Actuator Code	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 <sup>a</sup>	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	On/Off NSR with Two SPDT Auxiliary Switches	Actuator Code	Modulating (0 to 10 Vdc, 4 to 20 mA) NSR with Two 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)
Actuator Code <sup>b</sup>	Pneumatic Base Model	Actuator Code	Pneumatic Modulating (Positive Positioner) SR
221	MK-7121 (VKxx)	221	MK4-7121 (VKx4)
221D		221D <sup>a</sup>	
251	M556-51 (VKxx)	251	M556-14 (VKx4)
251D		251D <sup>a</sup>	

a. See Table 2 to verify the correct actuator application for the valve selected.  
b. D = Dual actuators

# APPLICATIONS

**TABLE 2: TWO-WAY AND THREE-WAY VALVE ASSEMBLIES**

Size	Close Off	Two-Way Butterfly Valve Assemblies <sup>a</sup>					Three-Way Butterfly Valve Assemblies <sup>a</sup>				
		TAC DuraDrive SR <sup>b</sup>	Direct Coupled NSR <sup>c</sup>	High Torque NSR <sup>c</sup>	NEMA 4 with Hand Wheel NSR <sup>c</sup>	20 PSI Pneu. SR <sup>b</sup>	TAC DuraDrive SR <sup>b</sup>	Direct Coupled NSR <sup>c</sup>	High Torque NSR <sup>c</sup>	NEMA 4 with Hand Wheel NSR <sup>c</sup>	20 PSI Pneu. SR <sup>b</sup>
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	D
4"	50	D	S	–	S	S	D	S	–	S	D
	175	–	D	–	S	S	–	D	–	S	D
5"	50	–	S	–	S	S	–	D	–	S	S
	175	–	–	–	S	D	–	–	–	S	S
6"	50	–	D	–	S	D	–	D	–	S	S
	175	–	–	S	S	D	–	–	S	S	D
8"	50	–	–	S	S	D	–	–	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 two-way butterfly valves.  
 c. NSR = Non spring return actuator.

**TABLE 3: ACTUATORS**

Actuator Family	MX41-7153 TAC DuraDrive SR	NR-22xx Direct Coupled NSR	MP-9810-129 High Torque NSR	700xxx NEMA 4 with Hand Wheel NSR	MK-7121/M566 20 PSI Pneumatic
Spring Return	Yes	No	No	No	Yes
Available Input Signals	24 Vac. Two Position, Floating, 2 to 10 Vdc. Proportional	24 Vac. Three Wire Two Position, Floating, 0 to 10 Vdc Proportional	120 Vac. Three Wire Two Position, Floating, 0 to 10 Vdc Proportional	120 Vac. Three Wire Two Position, Floating, 0 to 10 Vdc, 4 to 20 mA. Proportional	8 to 13 psi Nominal Operating Pressure Range
Available Options	Auxiliary Switch	Auxiliary Switch	Auxiliary Switch (standard)	Auxiliary Switch (standard) and Heater (standard)	Positive Positioner

© Copyright 2007 TAC  
 All brand names, trademarks and registered trademarks are the property of their respective owners. Information contained within this document is subject to change without notice. All rights reserved.

F-27435

**TAC**  
 1354 Clifford Avenue  
 P.O. Box 2940  
 Loves Park, IL 61132-2940  
[www.tac.com](http://www.tac.com)

