

TYLOK TY-FLO HP SERIES

Actuated Ball Valves

INTRODUCTION

Wolseley Industrial Group Valve & Automation, or WIGVA, is a premier valve automation center. We are a member of the Wolseley Industrial Group, the industrial division of Ferguson Enterprises, Inc. Since 1981, our facility has provided professional automation packages and fabrication solutions. We are experts in actuating quarter-turn and linear valves of all types and sizes, as well as fabricating custom components. With combined application and technical experience, we have been serving Pulp & Paper, Mining, Chemical, Food & Beverage, and general industrial businesses for decades. In 2011, our facility became ISO 9001:2008 registered. Quality and the continuing improvement process are evident in our products and service. Dedication to quality is what drives our facility to incorporate the latest technologies such as 3D CAD and CNC milling into our processes.



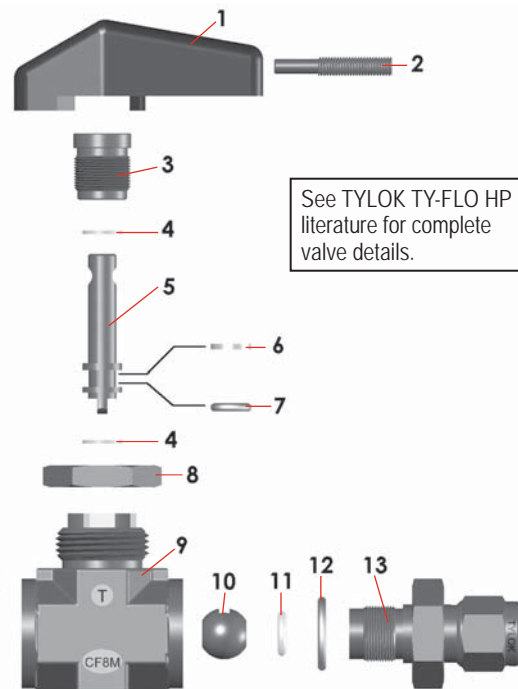
OVERVIEW

WIGVA has developed an actuation program specifically suited to the TYLOKSM TY-FLO[®] HP ball valve. All brackets, couplers and hardware are 300-series stainless steel. The mounting adaption bracket includes an integral mounting pad to conveniently attach the assembly to secondary support, ensuring weight from the actuation does not affect the integrity of the pipe/tube connections. Many configurations, options and accessories exist, and our fabrication abilities are available for any custom application requirements.

ABOUT TYLOK TY-FLO HP BALL VALVES

The TYLOKSM TY-FLO[®] HP ball valves are a reliable, versatile 3-piece design with multiple end connection possibilities. It is suited for on/off operation and is fast acting, has a micro finished ball for positive tight shut off (even with fluctuating pressures), bi-directional flow capability, and a free floating seat design that compensates for seat wear. It is available in 316 stainless steel or brass construction and has multiple end connection configurations including CBC-Lok[®], CS-Lok[®], TYLOK standard tube fittings, and NPT pipe ends.

MATERIALS			
ITEM	COMPONENT	STAINLESS STEEL	BRASS
1	Handle	Polypropylene	
2	Screw	Stainless Steel	
3	Gland Nut	316 SS	Brass
4	Stem Washer	Nylat	
5	Stem	316 Stainless Steel	
6	Stem Back-Up Ring	PTFE	
7	Stem O-Ring	Viton	
8	Panel Lock Nut	316 SS	Brass
9	Body	CF8M/A351 SS	Brass
10	Ball	316 Stainless Steel	
11	Seat	PTFE, PCTFE	
12	End Connector O-Ring	Viton	
13	End Connector	316 SS	Brass



TUBE END CONNECTIONS

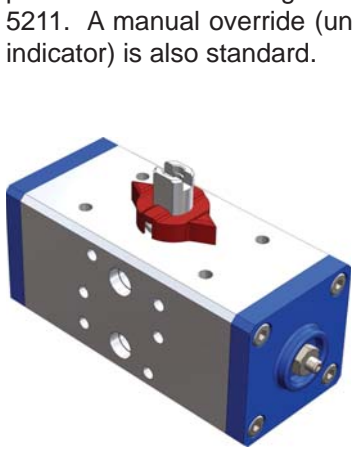
CBC-Lok[®] - Double ferrule tube ends are completely interchangeable with Swagelok[®] and Parker A-Lok[®] tube ends.

CS-Lok[®] - Single ferrule tube ends are completely interchangeable with Parker CPI[®] tube ends.

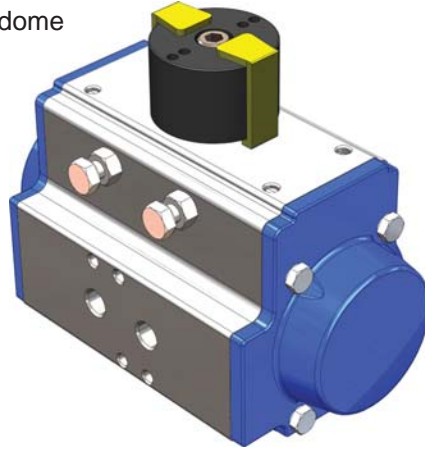
SPECIFICATION	PRESSURE / TEMPERATURE RATINGS			
	STAINLESS STEEL		BRASS	
	PTFE	PCTFE	PTFE	PCTFE
Pressure (PSIG)	1500	5000	1500	3000
Temperature (°F)	-15 to 400	-15 to 300	-15 to 400	-15 to 300

ACTUATORS

Assemblies are available with either pneumatic or electric quarter-turn actuators. Pneumatic actuators are sizes at 80 PSI minimum air supply and are available with anodized aluminum bodies and epoxy coated end caps or optional nickel plating. ISO 5211 and NAMUR mounting are standard. Electric actuators are available in various voltages. Standard finish is a thermally bonded polyester powder coat. Mounting and drive are ISO 5211. A manual override (under dome indicator) is also standard.



Double-Acting



Spring-Return

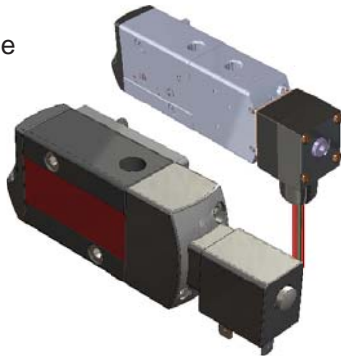


Electric

OPTIONS & ACCESSORIES

Below are standard pneumatic and electric options and accessories available for these packages. Contact WIGVA for additional accessories or custom options to meet your control needs.

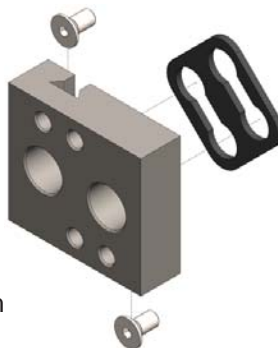
SOLENOIDS - Solenoid pilots valves are available in IP65, NEMA 4 and NEMA 7 enclosure ratings. Standard units are NAMUR direct mount and 120VAC. Other voltages and configurations are available.



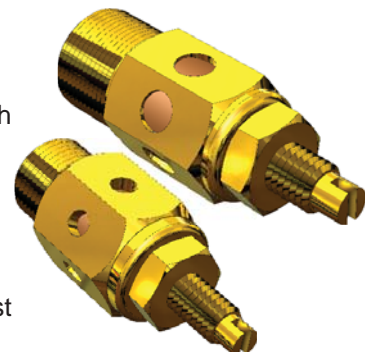
SWITCHES - Position indication switches are available in either NEMA 4 or NEMA 7 enclosures. Standard switches include visual indication and two SPDT mechanical switches.



PORT ORIENTATION ADAPTERS - The double-acting pneumatic actuators have a vertical NAMUR mount. An optional adapter kit is available to reorient a mounted solenoid horizontally. These adapters are included on double-acting assemblies with solenoid AND switch.

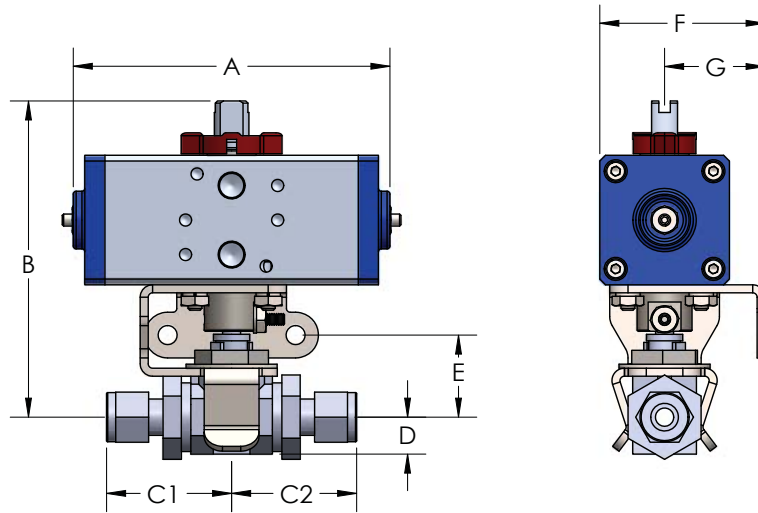


ADJUSTABLE SPEED CONTROLS - Speed controls are available for pneumatic assemblies with solenoids to reduce valve stroke speed. Constructed from brass, they also include a sintered bronze muffler to reduce solenoid exhaust noise.



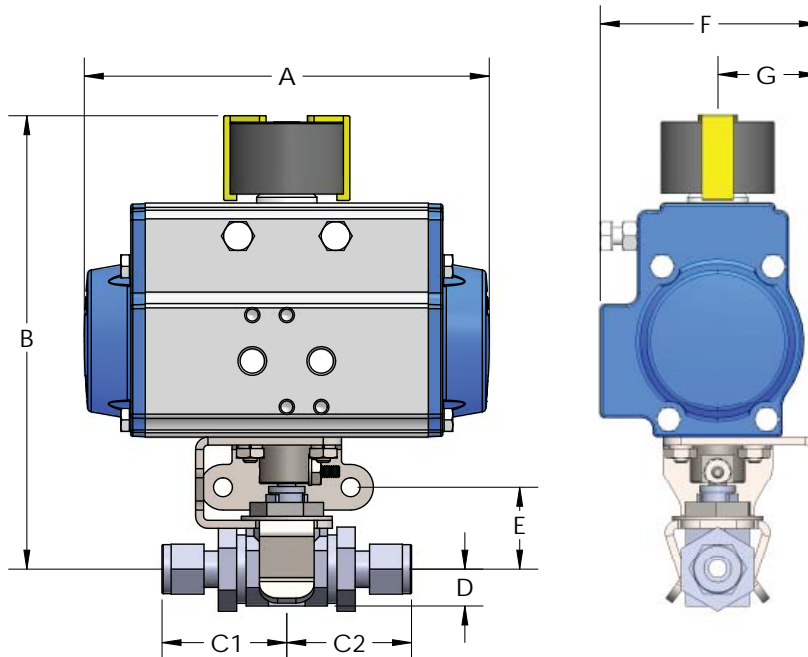
ELECTRIC ACTUATOR OPTIONS - There are many options available for the electric actuator. Additional limit switches, heater and thermostat, position feedback, or an additional conduit entry port are just a few to choose from. Discuss your actuator needs with a WIGVA sales associate.

PNEUMATIC DOUBLE-ACTING DIMENSIONS (inch)



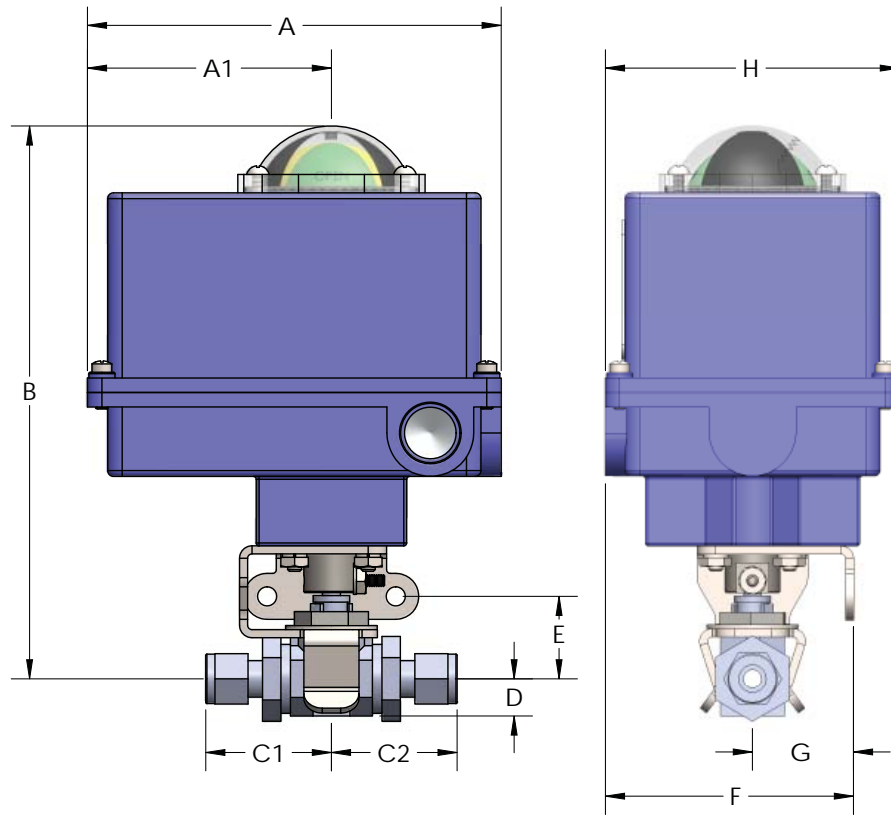
TY-FLO SERIES	ORIFICE SIZE	A	B	C1	C2	D	E	F	G	Wt. (Lbs)
4	0.188	4.33	4.44	See page 5 for C1 and C2 connection dimensions.		0.47	1.15	2.26	1.375	1.83
6	0.250	4.33	4.41			0.58	1.12	2.26	1.375	1.93
8	0.375	4.33	4.66			0.65	1.37	2.26	1.375	2.32

PNEUMATIC SPRING-RETURN DIMENSIONS (inch)



TY-FLO SERIES	ORIFICE SIZE	A	B	C1	C2	D	E	F	G	Wt. (Lbs)
4	0.188	5.55	6.30	See page 5 for C1 and C2 connection dimensions.		0.47	1.15	2.56	1.375	3.62
6	0.250	5.55	6.27			0.58	1.12	2.56	1.375	3.72
8	0.375	5.55	6.52			0.65	1.37	2.56	1.375	4.11

ELECTRIC DIMENSIONS (inch)



TY-FLO SERIES	ORIFICE SIZE	A	A1	B	C1	C2	D	E	F	G	H	Wt. (Lbs)
4	0.188	5.75	3.36	7.51	See below for C1 and C2 connection dimensions.		0.47	1.15	3.44	1.375	4.13	6.75
6	0.250	5.75	3.36	7.48			0.58	1.12	3.44	1.375	4.13	6.85
8	0.375	5.75	3.36	7.73			0.65	1.37	3.44	1.375	4.13	7.24

C1 & C2 CONNECTION TYPE DIMENSIONS (inch)

SERIES 4		
BASIC P/N	CONNECTION TYPE	C1/C2
4-DTT-2-2	1/8" CBC-Lok	1.54
4-STT-2-2	1/8" CS-Lok	1.54
4-DTT-4-4	1/4" CBC-Lok	1.63
4-STT-4-4	1/4" CS-Lok	1.63
4-1FF-2-2	1/8" Female NPT	1.21
4-1FF-4-4	1/4" Female NPT	1.46
4-1MM-2-2	1/8" Male NPT	1.3
4-1MM-4-4	1/4" Male NPT	1.49

SERIES 6		
BASIC P/N	CONNECTION TYPE	C1/C2
6-DTT-4-4	1/4" CBC-Lok	1.65
6-STT-4-4	1/4" CS-Lok	1.65
6-DTT-6-6	3/8" CBC-Lok	1.71
6-STT-6-6	3/8" CS-Lok	1.71
6-DTT-8-8	1/2" CBC-Lok	1.83
6-STT-8-8	1/2" CS-Lok	1.83
6-1FF-4-4	1/4" Female NPT	1.51
6-1FF-6-6	3/8" Female NPT	1.51
6-1FF-8-8	1/2" Female NPT	1.7
6-1MM-4-4	1/4" Male NPT	1.51
6-1MM-6-6	3/8" Male NPT	1.51
6-1MM-8-8	1/2" Male NPT	1.7

SERIES 8		
BASIC P/N	CONNECTION TYPE	C1/C2
8-DTT-6-6	3/8" CBC-Lok	1.85
8-STT-6-6	3/8" CS-Lok	1.85
8-DTT-8-8	1/2" CBC-Lok	1.96
8-STT-8-8	1/2" CS-Lok	1.96
8-DTT-12-12	3/4" CBC-Lok	1.97
8-STT-12-12	3/4" CS-Lok	1.97
8-1FF-6-6	3/8" Female NPT	1.61
8-1FF-8-8	1/2" Female NPT	1.78
8-1FF-12-12	3/4" Female NPT	1.9
8-1MM-6-6	3/8" Male NPT	1.65
8-1MM-8-8	1/2" Male NPT	1.84

Dimensions shown in these tables with CBC-Lok® and CS-Lok® nuts finger tight. All dimensions shown are for reference only, and subject to change.

See TYLOK TY-FLO HP literature for details.

BRACKETS & MOUNTING ACCESSORIES

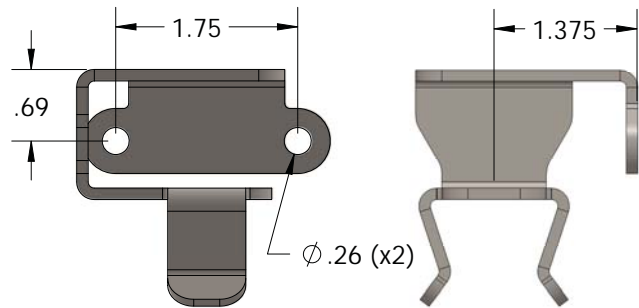
STANDARD BRACKETS - Each TY-FLO HP package comes standard with a 304 stainless steel mounting bracket with secondary support mounting holes. When properly secured, the secondary support removes any stress due to the weight of the actuation package on valves with compression end connections. Failure to properly support the assembly, piping, or align the valve with piping may result in end connection leakage or premature valve failure.

SPACER BLOCKS - For valve packages mounted close to walls and other surfaces, additional spacing is necessary for electric actuators and position switches. Spacer blocks are fabricated in various depths from carbon steel and coated in stainless steel impregnated paint. Minimum spacer depths for wall clearance are:

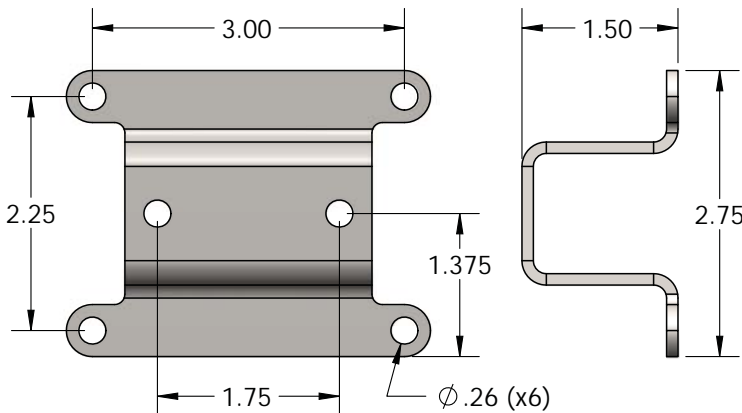
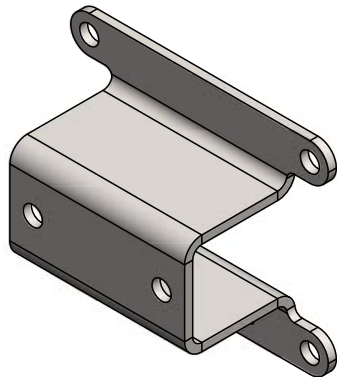
- 3/4" for Electric Actuator
- 1-1/4" for NEMA 4 Position Switch
- 1" for NEMA 7 Position Switch

WALL MOUNT BRACKETS - For added stability and ease of mounting, wall mount brackets are available. These brackets have a larger footprint with easy access mounting holes.

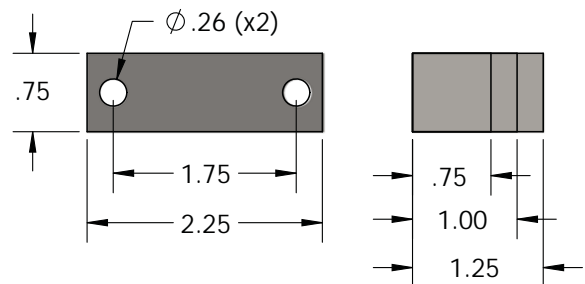
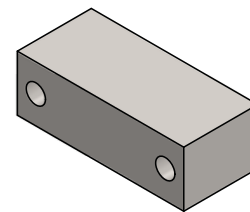
CUSTOM FABRICATED SPACERS & BRACKETS - For specific installation needs, custom components can be fabricated in carbon and stainless steel.



STANDARD BRACKET	
VALVE SERIES	PART NUMBER
4	WVAMBTYFLOHPBC
6	WVAMBTYFLOHPBC
8	WVAMBTYFLOHPD



WALL MOUNT BRACKET	
DEPTH	PART NUMBER
1-1/2"	WVAWBTYFLOHPBDJ

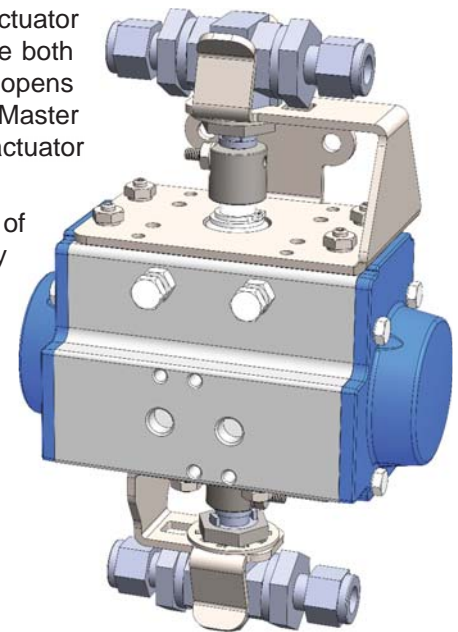


SPACER BLOCKS	
DEPTH	PART NUMBER
3/4"	WVASPTYFLOHPBDF
1"	WVASPTYFLOHPBDG
1-1/4"	WVASPTYFLOHPBDH

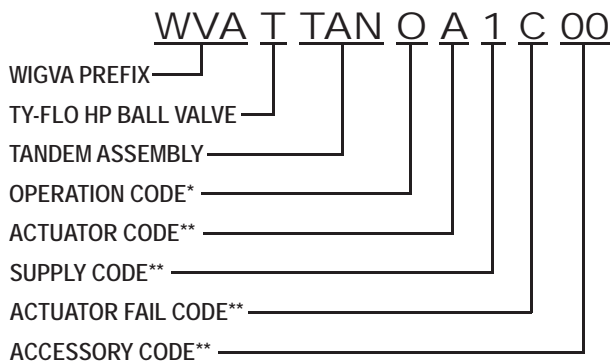
TANDEM ASSEMBLIES

Tandem assemblies are a convenient method of operating two valves with one actuator while reducing actuation and control costs. Assemblies can be provided where both valves operate the same (both open or close at the same time) or opposing (one opens when the other closes). The valve mounted to the actuator output drive is the Master valve. The valve mounted to the top of the actuator is the Slave valve. The actuator fail on loss of supply code is determined by the Master valve.

Valves in tandem assemblies do not need to be matched; any combination of series 4, 6, and 8 TY-FLO HP valves can be used. Because of the assembly variables, tandem assembly part numbers are specified in three part numbers, the actuation portion, and the two individual valves. For example:



Typical Tandem Assembly



OPERATION CODE	
CODE	TYPE
S	Same
O	Opposing

* Select the code for the type of overall action of the tandem assembly from the Operations Code table.

** For actuation and accessory codes, see the Part Number Matrix on page 8.

In addition to the actuation part number above, the two valves to be assembled in tandem must be specified from the Part Number Matrix on page 8, the section outlined as TYLOK TY-FLO HP Series Ball Valve Part Number. For example:

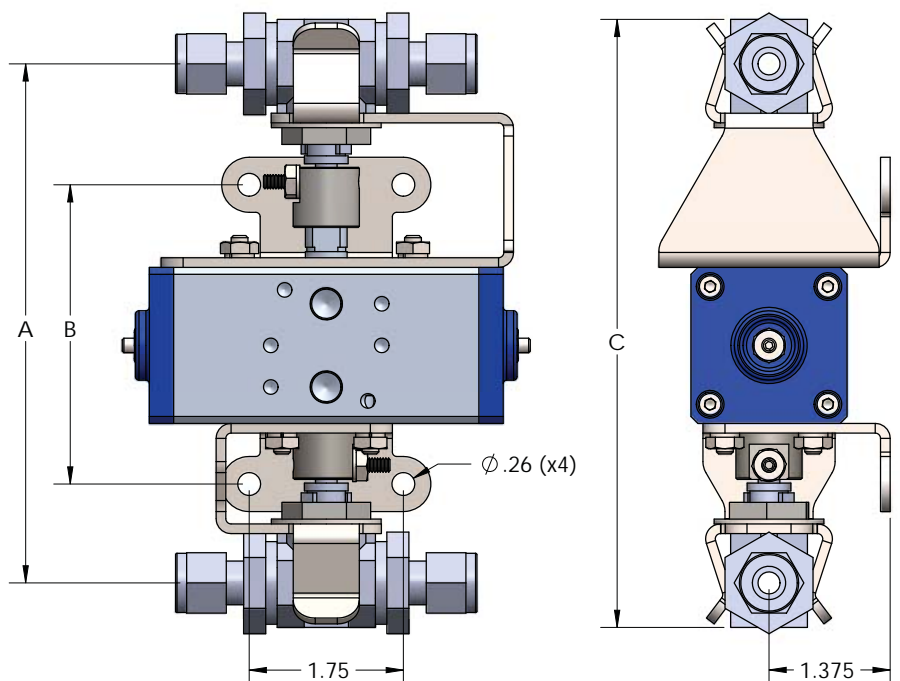
Master Valve: SS6DTT66K in tandem with Slave Valve: SS4DTT44K

DIMENSIONS (inch)

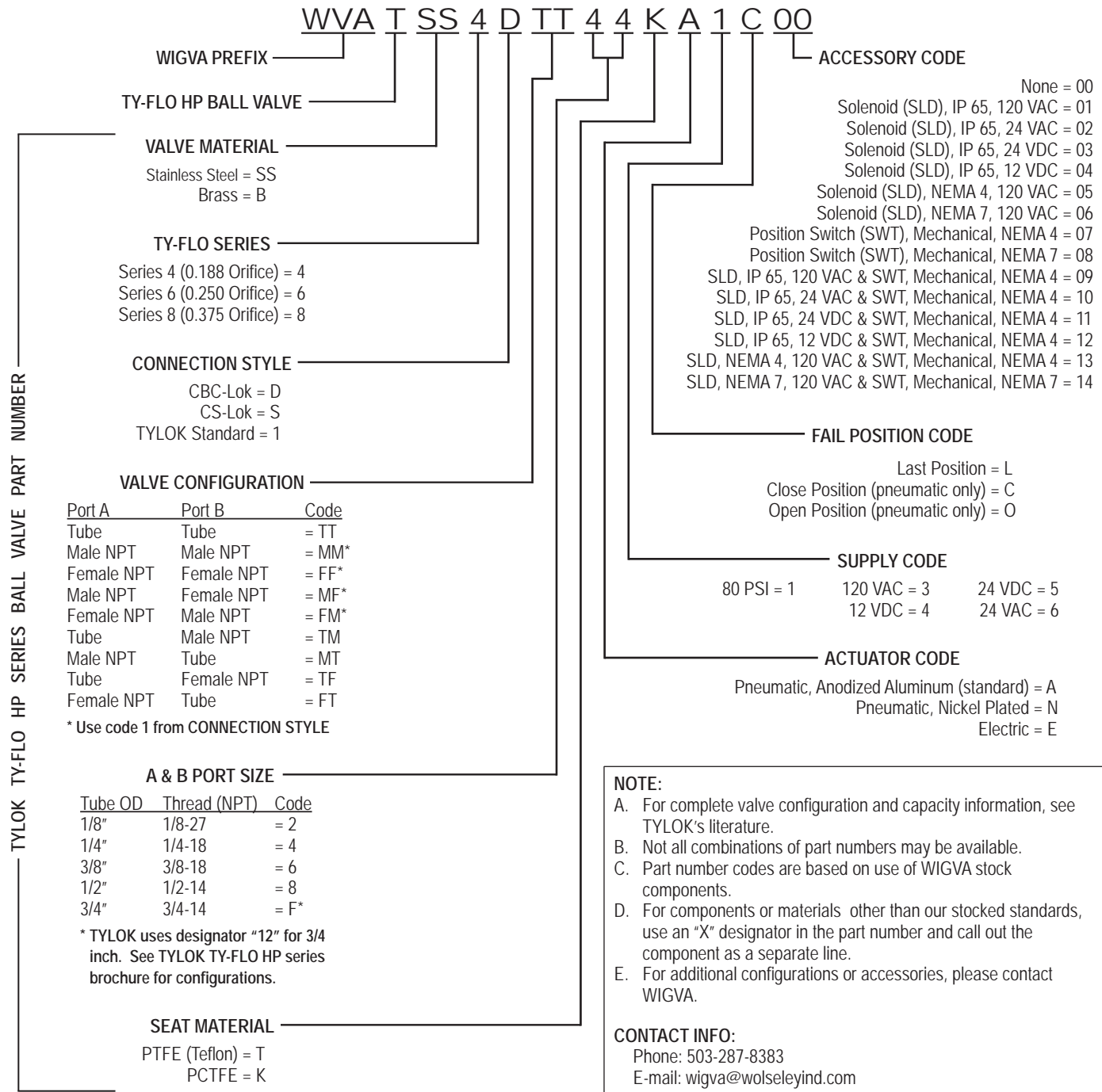
DOUBLE-ACTING ACTUATOR				
TY-FLO SERIES	A	B	C	Wt. (Lbs)
4 x 4	5.95	3.40	6.89	2.85
6 x 6	5.89	3.40	7.05	4.64
8 x 8	6.39	3.40	7.69	7.77

SPRING-RETURN ACTUATOR				
TY-FLO SERIES	A	B	C	Wt. (Lbs)
4 x 4	7.38	4.83	8.32	3.05
6 x 6	7.32	4.83	8.48	4.84
8 x 8	7.82	4.83	9.12	7.97

ELECTRIC ACTUATOR				
TY-FLO SERIES	A	B	C	Wt. (Lbs)
4 x 4	8.90	6.35	9.84	3.83
6 x 6	8.84	6.35	10.00	5.62
8 x 8	9.34	6.35	10.64	8.75



PART NUMBER MATRIX



PART NUMBERS OF TYPICALLY STOCKED ASSEMBLIES			
TY-FLO SERIES	DOUBLE-ACTING	SPRING-RETURN	ELECTRIC
4	WVATSS4DTT44KA1L00	WVATSS4DTT44KA1C00	WVATSS4DTT44KE3L00
6	WVATSS6DTT66KA1L00	WVATSS6DTT66KA1C00	WVATSS6DTT66KE3L00
8	WVATSS8DTT88KA1L00	WVATSS8DTT88KA1C00	WVATSS8DTT88KE3L00

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