

Actuator Sizing (For Ball valves)

The operating torque of a valve varies according to fluid conditions such as pressure, temperature, velocity, viscosity and density. The following actuator sizes are recommended for typical light or heavy load service with the fluid conditions specified below. Selection of Type B listed here can be also applied to selection of Type BS and Type BSW.

IMPORTANT

Selection of actuators is very critical when:

- Fluid pressure is higher than that listed below.
- Fluid velocity is extremely high.
- Operational interval exceeds three months.
- Operating pressure is lower than 0.4 MPa (60 psi)

For TDZ Series (Full Bore Design)

Size	in	1/2 ^B	3/4 ^B	1 ^B	1 1/2 ^B	2 ^B	2 1/2 ^B	3 ^B	4 ^B	5 ^B	6 ^B	8 ^B	10 ^B
	mm	15 ^A	20 ^A	25 ^A	40 ^A	50 ^A	65 ^A	80 ^A	100 ^A	125 ^A	150 ^A	200 ^A	250 ^A
Service Condition		A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
Service Pressure	MPa												
	0.5												
	1.0	B-0	B-0 B-1	B-1		B-2		B-3		B-4		B-5	B-6
	1.5												
	2.0						B-3				B-5		
2.5													

*Consult KITZ distributors for availability of appropriate actuators.

For TB Series

Size	Full Bore Type in(mm)	1/2 ^B (15 ^A)	3/4 (20)	1 (25)	1 1/4 (32)	1 1/2 (40)	2 (50)	2 1/2 (65)	3 (80)	4 (100)	5 (125)	6 (150)	8 (200)	10 (250)
	Reduced Bore Type in(mm)	3/4 ^B (20 ^A)	1 (25)	1 1/4 (32)	1 1/2 (40)	2 (50)	—	3 (80)	4 (100)	5 (125)	6 (150)	8 (200)	10 (250)	12 (300)
Service Condition		A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C	A B C
Service Pressure	MPa													
	0.5			B-0								B-4		
	1.0	B-0	B-0		B-1			B-2	B-2	B-3		B-4		B-6
	1.5												B-5	
	2.0					B-2		B-2		B-4	B-4		B-5	B-6
2.5							B-3		B-4		B-5			

*Consult KITZ distributors for availability of appropriate actuators.

Fluid Condition

Fluids	Service Condition	Light Load Service	Heavy Load Service
Water		up to 1.0 MPa: A	1.0~2.5 MPa: B
Air, steam and gases		up to 0.7 MPa: A	0.7~1.8 MPa: B
Highly viscous fluid			up to 1.0 MPa: B
Kerosene, naphtha, alcohol, and other solvents			up to 1.0 MPa: B
Oil-free service			up to 1.0 MPa: B
Slurry and other liquids containing foreign objects			up to 1.0 MPa: C*
Service temperature: Fluids temperature		See valve seat rating of "Ball Valves Catalog" (E-201)	

Contact us for fluids other than the above.

*Contact us for extremely heavy load service (powder, slurry, dehydrated cake, etc.) or fluids easy to solidify or polymerize.