

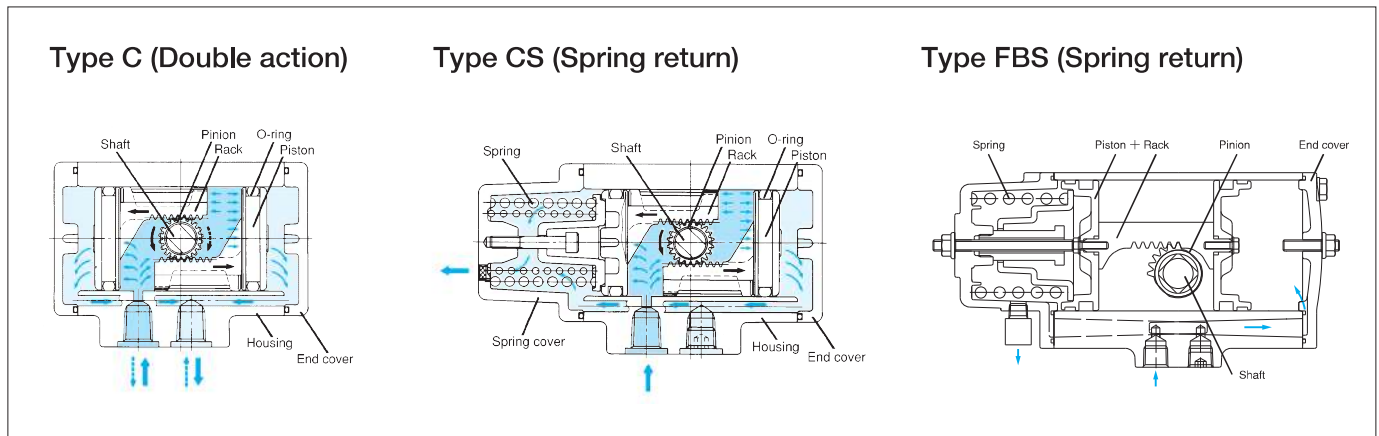


Actuator Driven Compact Ball Valves

- KELMO® Electric Actuators : EA, EC, EAE and ED Series
- Pneumatic Actuators : C, CS, FBS Series
- 1/4"~2" Class 5K / 10K Bronze and Stainless Steel Threaded Ball Valves



KITZ C·CS Series Pneumatic Actuators



Actuator design Specifications

Specification	Type	C-1	C-2	CS-1	CS-2	FBS-1
Operating media		Instrumentation air				
Standard operating pressure		0.39 MPa (60psi)				
Operating pressure range		0.39 ~ 0.69 MPa (60~100psi)				
Output torque*1		3.9 N-m	8.5 N-m	1.3 N-m	3.1 N-m	7.6 N-m
Housing shell test pressure		0.97 MPa (140psi)				
Angle of Revolution		90° (+1° ~ +5°)				90° ± 7°
Cylinder Volume (Litter)		0.073	0.160	0.033	0.071	0.15
Operation Time		Max. 1 sec.*4				
Service Temperature range*2		-20°C ~ +60°C -4°F ~ +140°F				-20°C ~ +80°C -4°F ~ +176°F
Ambient Condition*3		Indoor				

Notes:

- *1 At supply pressure, 0.39MPa
- *2 Free from freezing of supply air
- *3 For outdoor service, consult a KITZ Engineer
- *4 On a condition of KITZ standard air equipments and no load on a valve

KITZ Standard Accessories

C type actuator has a direct mount type special solenoid valve. It makes piping-less and compact mounting. This special solenoid valve is not waterproof type. Prevent water if you use them outdoor.

◆ Special solenoid valve

Electrical connection	Lead wire type
Working pressure range	0.15~0.7MPa
Ambient temperature range	5~50°C
Air inlets	Rc1/8
Effective area of valve	4.0mm ²
Power supply	AC100, 110V/50, 60Hz:±10% AC200, 220V/50, 60Hz:±10% DC24:±10%

◆ Limit Switch

Sensing position	1 position
Power supply	AC: 5A-125VAC 5A-250VAC DC: 0.5A-115VDC 0.25A-230VDC
Ambient temperature range	-10~70°C
Electrical connection	Conduit type
Electric wire diameter	φ5.8-φ7.8

◆ Filter-Regulator

Structure	Relief type
Working pressure range	0.04~0.83MPa
Ambient temperature range	5~65°C
Nominal filtration rating	5μm
Air inlets	Rc1/4

◆ Silencer

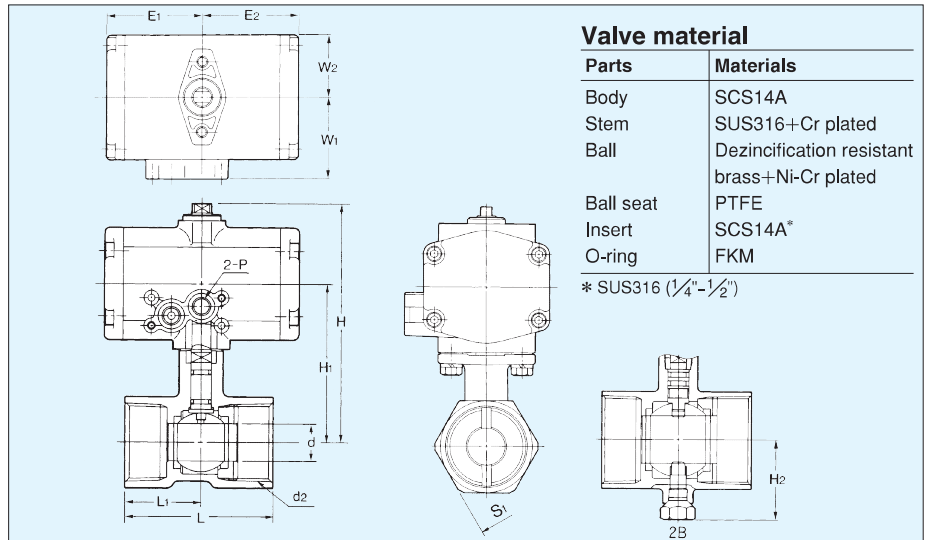
Connection	Rc1/8
Effective area	15mm ²
Noise reduction	18dB
Maximum working pressure	0.9MPa
Ambient temperature range	5~60°C

◆ Speed Controller

Structure	Restrictor	Exhaust restrictor	Exhaust restrictor with silencer
Working pressure range	0.05~1MPa	0.1~1MPa	0~1MPa
Ambient temperature range	5~60°C	-5~60°C	0~60°C
Air inlets	Rc1/8	R1/8•Rc1/8	Rc1/8

Type C Pneumatic Actuators / Class 10K Stainless Steel Ball Valves

Fig. **C-UTE**
(Reduced bore)



Valve material	
Parts	Materials
Body	SCS14A
Stem	SUS316+Cr plated
Ball	Dezincification resistant brass+Ni-Cr plated
Ball seat	PTFE
Insert	SCS14A*
O-ring	FKM

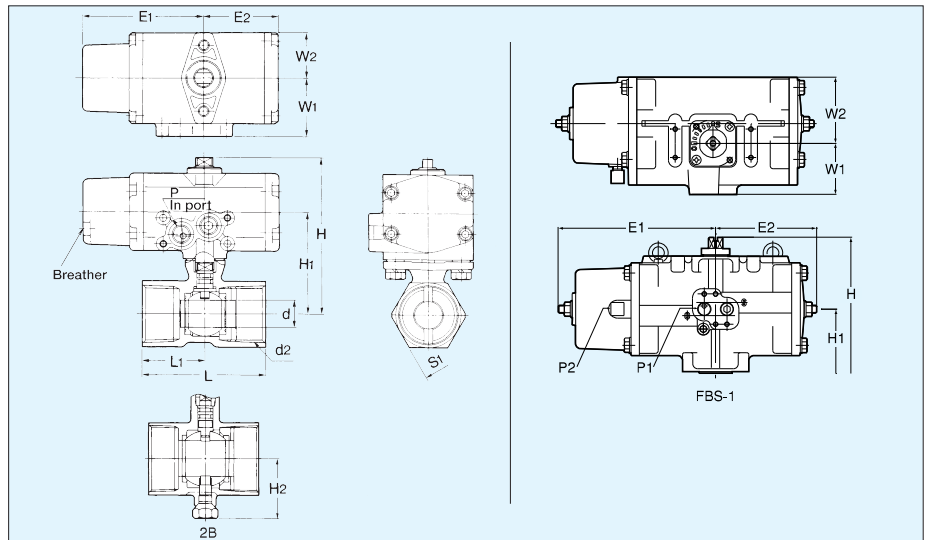
* SUS316 (1/4"-1/2")

Dimensions

(mm)

Valve Size (inch)	d	d ₂	H	H ₁	H ₂	L	L ₁	S ₁	Actuators					
									E ₁	E ₂	W ₁	W ₂	P	Type
1/4	4.5	Rc1/4	85.5	54	—	44	21	21	43	43	34.5	26	Rc1/8	C-1
3/8	6.8	Rc3/8	85.5	54	—	44	21	21						
1/2	9.2	Rc1/2	85.5	54	—	56.5	27.5	25						
3/4	12.5	Rc3/4	88.5	57	—	59	30	32						
1	16	Rc1	91.5	60	—	71	36	38	51.4	51.4	44	33.5	Rc1/8	C-2
1 1/4	20	Rc1 1/4	128.5	86	—	78	40	49						
1 1/2	24.5	Rc1 1/2	131.5	89	—	83	42.5	53						
2	32	Rc2	137.5	95	53.5	100	51	65						

Fig. **CS-UTE**
Valve size: 1/4" to 1"
FBS-UTE
Valve size: 1 1/4" to 2"
(Reduced bore)



Dimensions

(mm)

Valve Size (inch)	d	d ₂	H	H ₁	H ₂	L	L ₁	S ₁	Actuators						
									E ₁	E ₂	W ₁	W ₂	P ₁	P ₂	Type
1/4	4.5	Rc1/4	85.5	54	—	44	21	21	69.5	43	34.5	26	—	Rc1/8	CS-1
3/8	6.8	Rc3/8	85.5	54	—	44	21	21							
1/2	9.2	Rc1/2	104.5	62	—	56.5	27.5	25							
3/4	12.5	Rc3/4	107.5	65	—	59	30	32	92	51.4	44	33.5	—	Rc1/8	CS-2
1	16	Rc1	110.5	68	—	71	36	38							
1 1/4	20	Rc1 1/4	186	116	—	78	40	49							
1 1/2	24.5	Rc1 1/2	189	119	—	83	42.5	53	132	87	50	54	Rc1/4	Rc1/8	FBS-1
2	32	Rc2	195	125	53.5	100	51	65							

Type C • CS/FBS