

Air operated 2-port ball valve
(compact rotary valve)

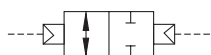
CSB/CSB-R* Series CSBF/CSBF-R* Series

● Port size: Rc3/8 to Rc2

RoHS

JIS symbol

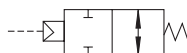
● CSB/CSBF
(Double acting)



● CSB-R1
CSBF-R1
(Single acting-NC)



● CSB-R2
CSBF-R2
(Single acting-NO)



Common specifications

1 MPa = 10 bar

Item	Double acting	Single acting
	CSB (Standard bore) CSBF (Full bore)	CSB-R* (Standard bore) CSBF-R* (Full bore)
Actuation	Air operated: Double acting	
Working fluid	Steam/water	
Working pressure MPa	0 (≈0 psi, 0 bar) to 0.6 (≈87 psi, 6 bar)	
Proof pressure (water pressure) MPa	2.0 (≈290 psi, 20 bar)	
Fluid temperature °C	0 (32°F) to 164 (327.2°F) (no freezing)	
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)	
Working environment	Indoors	
Mounting orientation	Unrestricted	
Frequency Cycle/min.	1 or less	
Rotary actuator	Pilot fluid	Compressed air
	Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)
	Proof pressure (water) MPa	1.5 (≈220 psi, 15 bar)
	Working pressure MPa	0.35 (≈51 psi) to 0.7 (≈100 psi)
	Fluid temperature °C	5 (41°F) to 60 (140°F)
	Port size	Rc1/8

Individual specifications

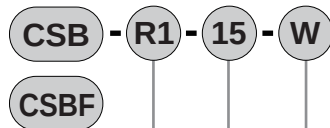
Item		Port size	Orifice size (mm)	Cv	Weight (kg)	
Model No.					Double acting	Single acting
Standard bore	CSB-(R*)-10	Rc3/8	10	10	1.0	1.1
	CSB-(R*)-15	Rc1/2	10	6	1.0	1.1
	CSB-(R*)-20	Rc3/4	15	16	1.2	1.3
	CSB-(R*)-25	Rc 1	20	29	1.3	2.2
	CSB-(R*)-32	Rc1¼	25	50	2.2(2.3)	2.7(2.8)
	CSB-40	Rc1½	32	98	2.6(2.7)	-
	CSB-50	Rc 2	40	125	3.4(3.5)	-
Full bore	CSBF-(R*)-15	Rc1/2	15	23	1.2	1.3
	CSBF-(R*)-20	Rc3/4	20	51	1.3	2.2
	CSBF-(R*)-25	Rc 1	25	66	2.2	2.7
	CSBF-32	Rc1¼	32	114	2.6	-
	CSBF-40	Rc1½	40	176	3.4	-

1 : CSB-(R)-10 is a full bore type.

2 : CSB-R-40/50 and CSBF-R*-32/40 are not provided.

Weight shown in () is for stainless steel body.

How to order



Model No.

A Actuator

B Port size

*1

*2

C Body/seat material

		Model No.	
Code	Description	CSB (Standard bore)	CSBF (Full bore)
A Actuator			
Blank	Double acting	●	●
R1	Single acting NC	●	●
R2	Single acting NO	●	●
B Port size			
10	Rc3/8	●	
15	Rc1/2	●	●
20	Rc3/4	●	●
25	Rc1	●	●
32	Rc1 ¹ / ₄	●	●
40	Rc1 ¹ / ₂	●	●
50	Rc2	●	
C Body/seat material			
H	Copper alloy - reinforced PTFE	●	●
W	Stainless steel - reinforced PTFE	●	

*1 : When port size is 10, the valve is full bore but the model No. is CSB.

2 : CSB-R-40/50 and CSBF-R*-32/40 are not provided.

[Example of model No.]

CSB-R1-15-W

Model: CSB (standard bore)

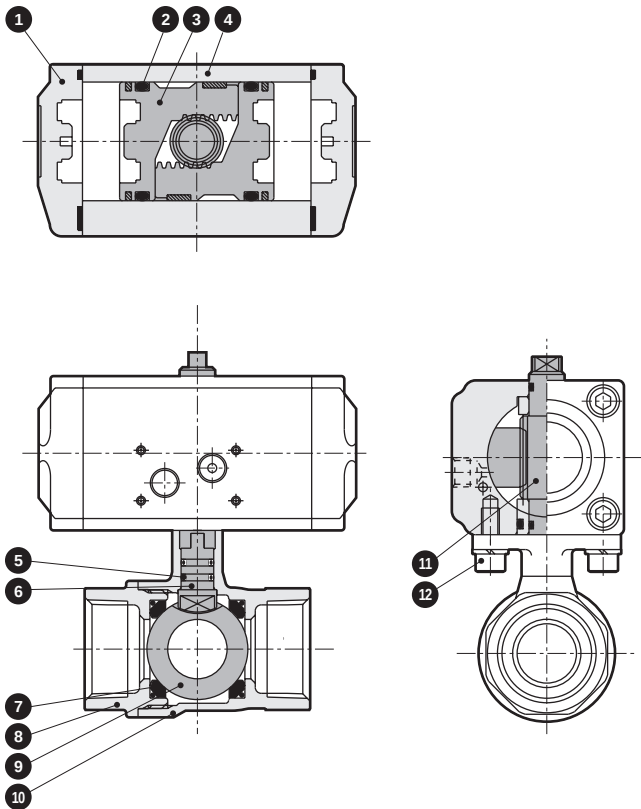
- A** Actuator : Single acting NC
- B** Port size : Rc1/2
- C** Body/seat material : Stainless steel - reinforced PTFE

EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/ AD
APK/ ADK
DryAir
EX- XPLNprf
XPLNprf
HVB/ HVL
S◇B/ NAB
LAD/ NAD
Water- Rela
NP/NAP/ NVP
SNP
CHB/G
MXB/G
Other valves
SWD/ MWD
DustColl
CVE/ CVSE
CCH/ CPE/D
LifeSci
Gas- Combus
Auto- Water
Outdoor
SpecFld
Custom
Ending

EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/ AD
APK/ ADK
DryAir
EX- XPLNprf
XPLNprf
HVB/ HVL
S◇B/ NAB
LAD/ NAD
Water- Rela
NP/NAP/ NVP
SNP
CHB/G
MXB/G
Other valves
SWD/ MWD
DustColl
CVE/ CVSE
CCH/ CPE/D
LifeSci
Gas- Combust
Auto- Water
Outdoor
SpecFld
Custom
Ending

Internal structure and parts list: CSB/CSBF Series

- CSB-10/15/20/25/32/40/50
CSBF-15/20/25/32/40

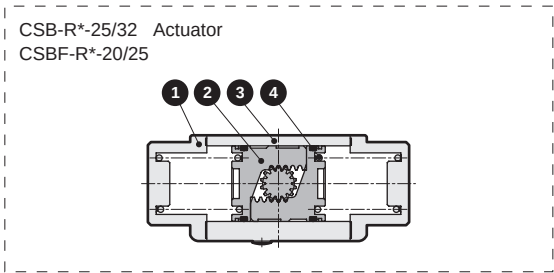
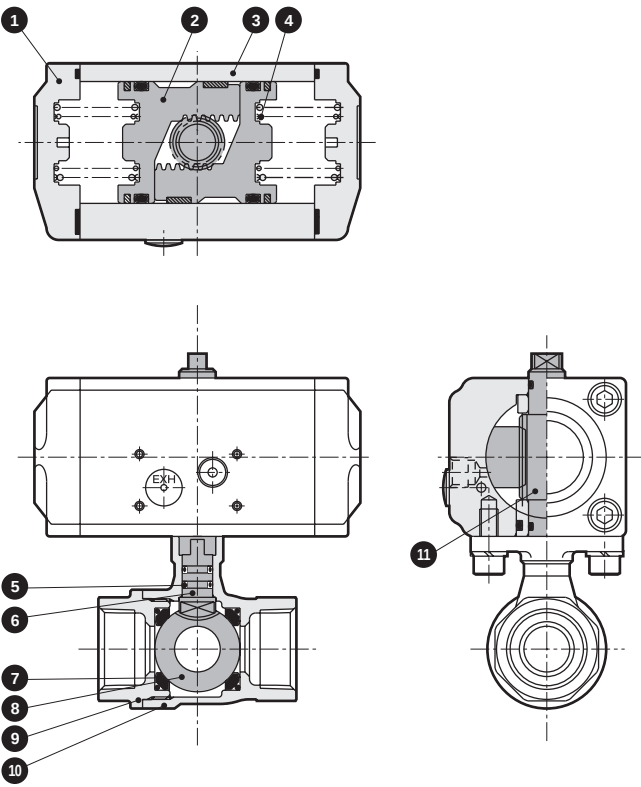


No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	O-ring	FKM Fluoro rubber
3	Piston	ADC12 Aluminum die-casting
4	Cylinder body	A6063 Aluminum
5	O-ring	FKM Fluoro rubber
6	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
7	Valve seat	Reinforced PTFE Tetrafluoroethylene resin
8	Valve cap	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
9	Valve ball	C3771, Cr plating (SUS304) Copper alloy, chrome plating (stainless steel)
10	Valve body	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
11	Stem	SUS303 Stainless steel
12	Hexagon socket head cap screw	SUSXM7 Stainless steel

Materials shown in () are for stainless steel body.
*1: Hexagon head bolt for CSB-32 to 50 and CSBF-25 to 40

Internal structure and parts list: CSB-R*/CSBF-R* Series

- CSB-R*-10/15/20/25/32
CSBF-R*-15/20/25

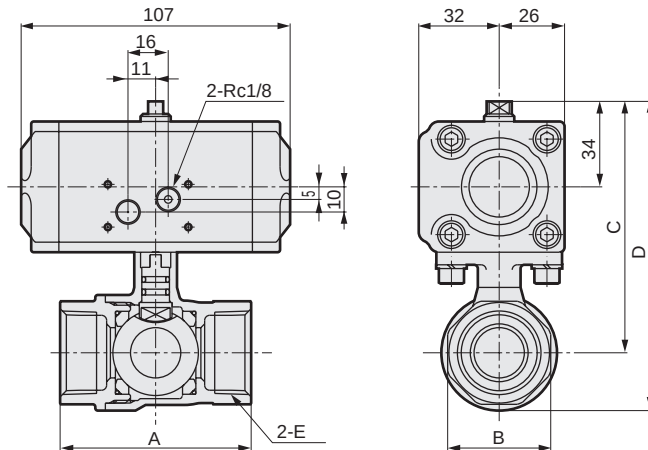


No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	Piston	ADC12 Aluminum die-casting
3	Cylinder body	A6063 Aluminum
4	Spring	SWP Piano wire
5	O-ring	FKM Fluoro rubber
6	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
7	Valve seat	Reinforced PTFE Tetrafluoroethylene resin
8	Valve ball	C3771, Cr plating (SUS304) Copper alloy, chrome plating (stainless steel)
9	Valve cap	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
10	Valve body	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
11	Stem	SUS303 Stainless steel

Materials shown in () are for stainless steel body.

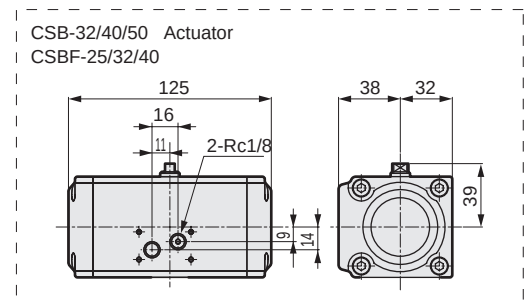
Dimensions: CSB/CSBF Series

- CSB-10/15/20/25/32/40/50
- CSBF-15/20/25/32/40



Model No.	A	B	C	D	E
CSB-10	50(56)	24(28)	91	106(107)	Rc3/8
CSB-15	56	28	91	106(107)	Rc1/2
CSB-20	65	34	97	116.5(117.5)	Rc3/4
CSB-25	76	41	100	123(124)	Rc1
CSB-32	84	50	116	143.5(145.5)	Rc1 $\frac{1}{4}$
CSB-40	94	57	122	155.5(157.5)	Rc1 $\frac{1}{2}$
CSB-50	108	70	131	170.5(171.5)	Rc2

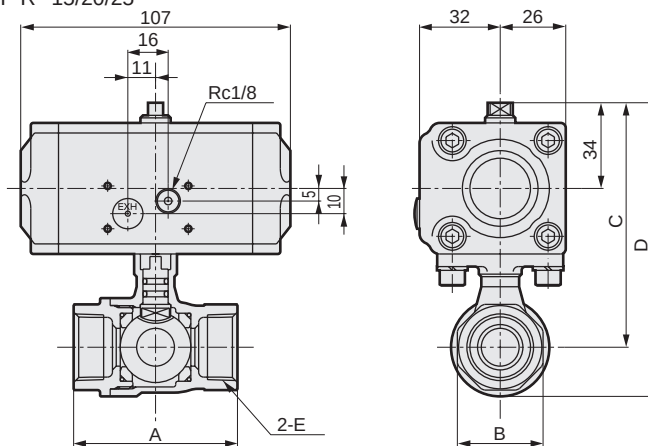
Materials shown in () are for stainless steel body.



Model No.	A	B	C	D	E
CSBF-15	65	28	97	116.5	Rc1/2
CSBF-20	71	34	100	123	Rc3/4
CSBF-25	84	41	116	143.5	Rc1
CSBF-32	95	50	122	155.5	Rc1 $\frac{1}{4}$
CSBF-40	107	57	131	170.5	Rc1 $\frac{1}{2}$

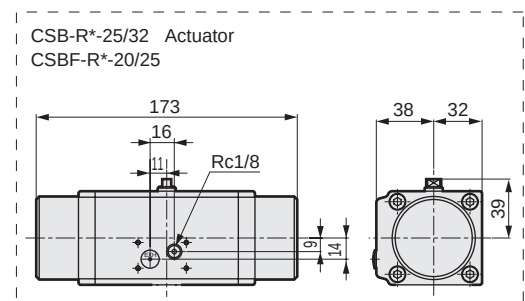
Dimensions: CSB-R*/CSBF-R* Series

- CSB-R*-10/15/20/25/32
- CSBF-R*-15/20/25



Model No.	A	B	C	D	E
CSB-R*-10	50(56)	24(28)	91	106(107)	Rc3/8
CSB-R*-15	56	28	91	106(107)	Rc1/2
CSB-R*-20	65	34	97	116.5(117.5)	Rc3/4
CSB-R*-25	76	41	110	133(134)	Rc1
CSB-R*-32	84	50	116	143.5(145.5)	Rc1 $\frac{1}{4}$

Materials shown in () are for stainless steel body.



Model No.	A	B	C	D	E
CSBF-R*-15	65	28	97	116.5	Rc1/2
CSBF-R*-20	71	34	110	133	Rc3/4
CSBF-R*-25	84	41	116	143.5	Rc1

EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/AD
APK/ADK
DryAir
EX-XPLNprf
XPLNprf
HVB/HVL
S $\diamond$ B/NAB
LAD/NAD
Water-Rela
NP/NAP/NVP
SNP
CHB/G
MXB/G
Other valves
SWD/MWD
DustColl
CVE/CVSE
CCH/CPE/D
LifeSci
Gas-Combus
Auto-Water
Outdoor
SpecFld
Custom
Ending