



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

# CSB/CSB-R\* Series CSBF/CSBF-R\* Series

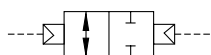
● Port size: Rc3/8 to Rc2



- 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 $\nabla$ 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
- SpecFld
- Custom
- Ending

## JIS symbol

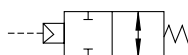
● CSB/CSBF  
(Double acting)



● CSB-R1  
CSBF-R1  
(Single acting-NC)



● CSB-R2  
CSBF-R2  
(Single acting-NO)



## Common specifications

1 MPa = 10 bar

Descriptions	Double acting	Single acting	
	CSB (Standard bore) CSBF (Full bore)	CSB-R* (Standard bore) CSBF-R* (Full bore)	
Actuation	Air operated: Double acting	Air operated: Single acting	
Working fluid	Steam/water		
Working pressure MPa	0 ( $\approx$ 0 psi, 0 bar) to 0.6 ( $\approx$ 87 psi, 6 bar)		
Proof pressure (water pressure) MPa	2.0 ( $\approx$ 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 ( $\approx$ 220 psi, 15 bar)	
	Working pressure MPa	0.35 ( $\approx$ 51 psi) to 0.7 ( $\approx$ 100 psi)	0.4 ( $\approx$ 58 psi) to 0.7 ( $\approx$ 100 psi)
	Fluid temperature °C	5 (41°F) to 60 (140°F)	
	Port size	Rc1/8	

## Individual specifications

Descriptions Model No.	Port size	Orifice size (mm)	Cv	Weight (kg)		
				Double acting	Single acting	
Standard bore	CSB-(R*-)10	Rc3/8	10	1.0	1.1	
	CSB-(R*-)15	Rc1/2	10	1.0	1.1	
	CSB-(R*-)20	Rc3/4	15	1.2	1.3	
	CSB-(R*-)25	Rc 1	20	1.3	2.2	
	CSB-(R*-)32	Rc1 $\frac{1}{4}$	25	50	2.2(2.3)	2.7(2.8)
	CSB-40	Rc1 $\frac{1}{2}$	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	Rc1 $\frac{1}{4}$	32	114	2.6	-
	CSBF-40	Rc1 $\frac{1}{2}$	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

CSB - R1 - 15 - W

CSBF

Model No.

**A** Actuator

**B** Port size

\*1

\*2

**C** Body/seat material

		Model No.	
Code	Content	CSB (Standard bore)	CSBF (Full bore)
<b>A Actuator</b>			
Blank	Double acting	●	●
R1	Single acting NC	●	●
R2	Single acting NO	●	●
<b>B Port size</b>			
10	Rc3/8	●	
15	Rc1/2	●	●
20	Rc3/4	●	●
25	Rc1	●	●
32	Rc1 <sup>1</sup> / <sub>4</sub>	●	●
40	Rc1 <sup>1</sup> / <sub>2</sub>	●	●
50	Rc2	●	
<b>C Body/seat material</b>			
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)

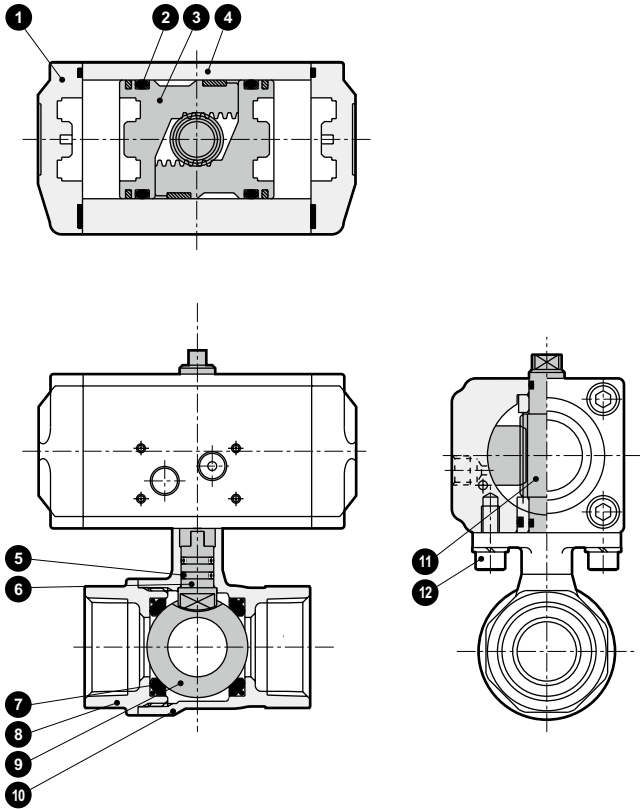
- A** Actuator : Single acting NC
- B** Port size : Rc1/2
- C** Body/seat material : Stainless steel - reinforced PTFE

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 <sup>◇</sup> B/ NAB
LAD/ NAD
Water- Rela
NP/NAP/ NVP
SNP
<b>CHB/G</b>
MXB/G
Other valves
SWD/ MWD
DustColl
CVE/ CVSE
CCH / CPE/D
LifeSci
Gas- Combus
Auto- Water
SpecFld
Custom
Ending

# CSB/CSBF Series

## Internal structure and parts list: CSB/CSBF Series

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



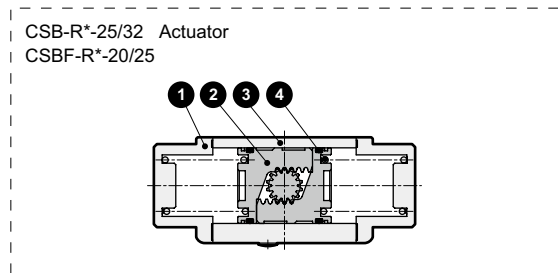
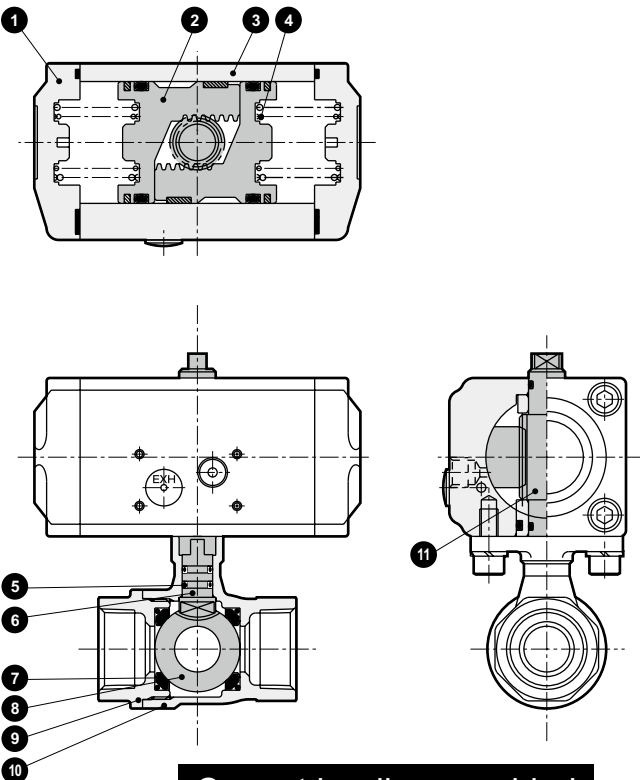
No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	O-ring	FKM Fluoro rubber
3	Piston	ADC12 Aluminum die-casting
4	Cylinder body	A6063 Aluminum
5	O-ring	FKM Fluoro rubber
6	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
7	Valve seat	Reinforced PTFE Tetrafluoroethylene resin
8	Valve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

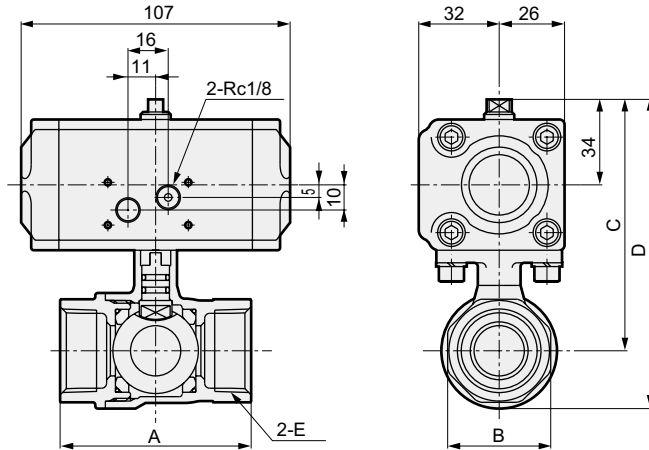


No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	Piston	ADC12 Aluminum die-casting
3	Cylinder body	A6063 Aluminum
4	Spring	SWP Piano wire
5	O-ring	FKM Fluoro rubber
6	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
7	Valve seat	Reinforced PTFE Tetrafluoroethylene resin
8	Valve ball	C3771, Cr (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.

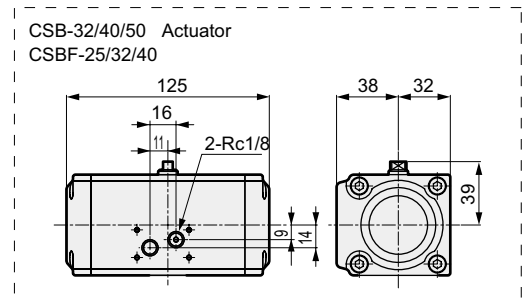
## Dimensions: CSB/CSBF Series

- 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

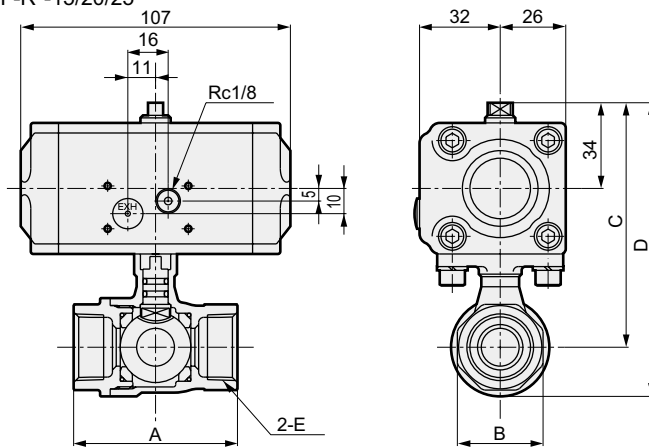
Materials shown in ( ) are for stainless steel body.



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 $\frac{1}{2}$

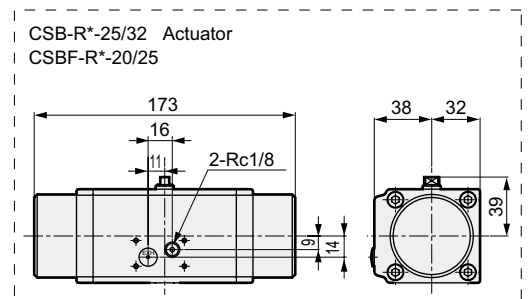
## Dimensions: CSB-R\*/CSBF-R\* Series

- 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

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