



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

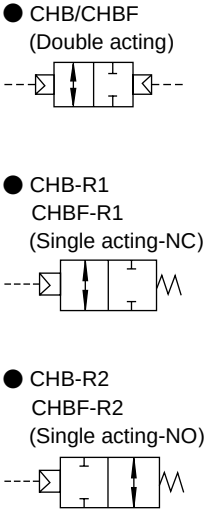
CHB/CHB-R* Series

CHBF/CHBF-R* Series

● Port size: Rc3/8 to Rc2



JIS symbol



Common specifications

Item	Double acting		Single acting	
	CHB (Standard bore) CHBF (Full bore)		CHB-R* (Standard bore) CHBF-R* (Full bore)	
Actuation	Air operated: Double acting		Air operated: Single acting	
Working fluid	Water/air/oil (500 mm ² /s or less)			
Working pressure MPa	0 (≈0 psi, 0 bar) to 1.0 (≈150 psi, 10 bar)			
Proof pressure (water pressure) MPa	2.0 (≈290 psi, 20 bar)			
Fluid temperature °C	0 (32°F) to 80 (176°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, 3.5 bar) to 0.7 (≈100 psi, 7 bar)	0.4 (≈58 psi, 4 bar) to 0.7 (≈100 psi, 7 bar)	
	Fluid temperature °C	5 (41°F) to 60 (140°F)		
	Port size	Rc1/8	Rc1/8	

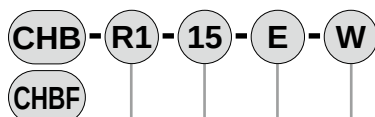
Individual specifications

Item		Port size	Orifice size (mm)	Cv	Weight (kg)	
Model No.					Double acting	Single acting
Standard bore	CHB-(R*-)10	Rc3/8	10	10	1.0	1.0
	CHB-(R*-)15	Rc1/2	10	6	1.0	1.0
	CHB-(R*-)20	Rc3/4	15	16	1.2	1.2
	CHB-(R*-)25	Rc1	20	29	1.3	2.1
	CHB-(R*-)32	Rc1¼	25	50	2.0(2.1)	2.4(2.5)
	CHB-(R*-)40	Rc1½	32	98	2.5(2.6)	4.6(4.7)
	CHB-(R*-)50	Rc2	40	125	3.2(3.3)	5.4(5.5)
Full bore	CHBF-(R*-)15	Rc1/2	15	23	1.1(1.1)	1.2(1.2)
	CHBF-(R*-)20	Rc3/4	20	51	1.3(1.3)	2.1(2.1)
	CHBF-(R*-)25	Rc1	25	66	2.0(2.0)	2.4(2.4)
	CHBF-(R*-)32	Rc1¼	32	114	2.5(2.5)	4.7(4.7)
	CHBF-(R*-)40	Rc1½	40	176	3.2(3.2)	5.4(5.4)

1 : CHB-(R)10 is a full bore type. Weight shown in () is for stainless steel body.
 *2 : Weight increases by 0.2 kg with one limit switch and by 0.3 kg with two limit switches.
 3 : Limit switch of CHB-R-40/50 and CHBF-R*-32/40 is made to order.

CHB/CHB-R* CHBF/CHBF-R* Series

How to order



Model No.

A Actuator

B Port size
*1

C Body material

D Limit switch
*2
*3

		Model No.	
Code	Description	CHB (Standard bore)	CHBF (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 material			
Blank	Bronze	●	●
E	Stainless steel	●	●
N	Stainless steel Oil-prohibited specifications	●	●
D Limit switch			
Blank	Without switch	●	●
H	Detection at valve open	●	●
V	Detection at valve closed	●	●
W	With 2 switches	●	●

*1 : When port size is 10, the valve is full bore but the model is CHB.

2 : Limit switch of CHB-R-40/50 and CHBF-R*-32/40 is made to order.

*3 : OMRON D4E-1G20N

[Example of model No.]

CHB-R1-15-E-W

Model No.: CHB (standard bore)

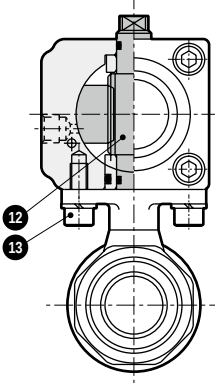
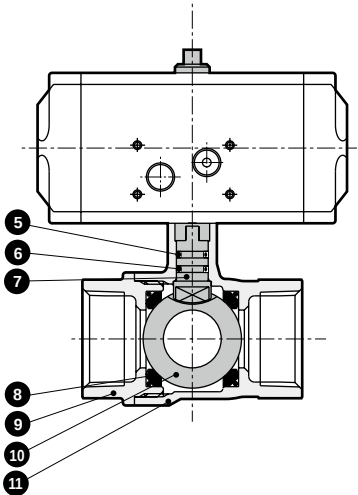
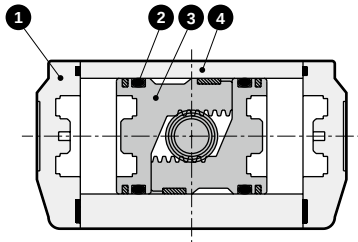
- A** Actuator : Single acting NC
- B** Port size : Rc1/2
- C** Body material : Stainless steel
- D** Limit switch : 2 switches

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

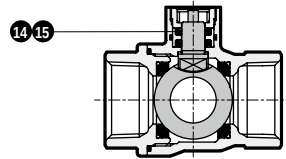
CHB/CHBF Series

Internal structure and parts list: CHB/CHBF Series

● CHB-10/15/20/25
CHBF-15/20



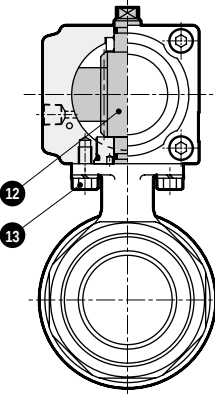
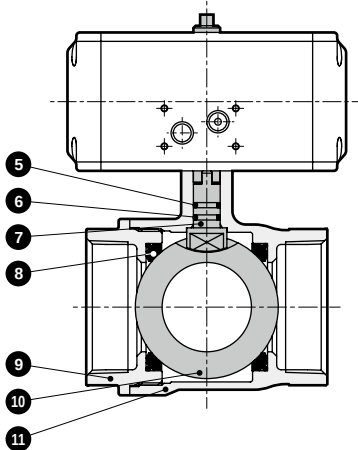
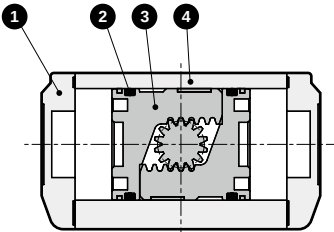
● Oil-prohibited specifications (ball valve)
CHB-10/15/20/25-**N**



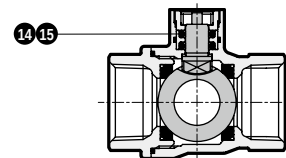
No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	O-ring	NBR Nitrile rubber
3	Piston	ADC12 Aluminum die-casting
4	Cylinder body	A6063 Aluminum
5	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
6	O-ring	FKM Fluoro rubber
7	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
8	Valve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

Materials shown in () are for stainless steel body.

● CHB-32/40/50
CHBF-25/32/40



● Oil-prohibited specifications (ball valve)
CHB-32/40/50-**N**

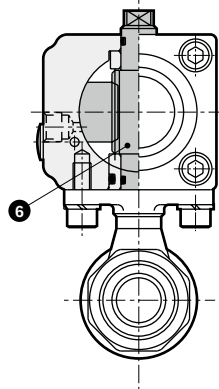
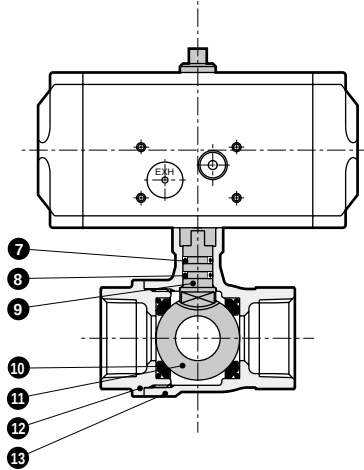
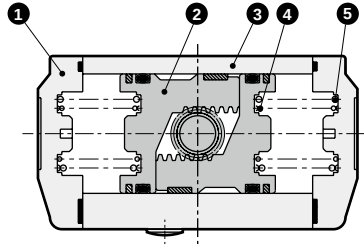


No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	O-ring	NBR Nitrile rubber
3	Piston	ADC12 Aluminum die-casting
4	Cylinder body	A6063 Aluminum
5	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
6	O-ring	FKM Fluoro rubber
7	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
8	Valve seat	PTFE Tetrafluoroethylene resin
9	Valve cap	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
10	Valve ball	C3771, Cr C3771, Cr (SUS304) Copper alloy, chrome plating (stainless steel)
11	Valve body	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
12	Stem	SUS303 Stainless steel
13	Hexagon head bolt	SUSXM7 Stainless steel
14	O-ring	FKM Fluoro rubber
15	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

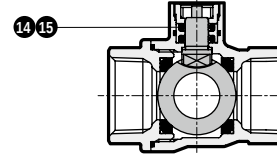
Materials shown in () are for stainless steel body.

Internal structure and parts list: CHB-R*/CHBF-R* Series

- CHB-R*-10/15/20
CHBF-R*-15



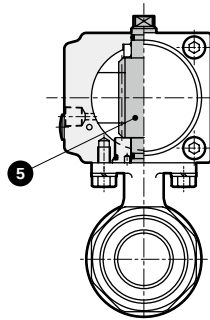
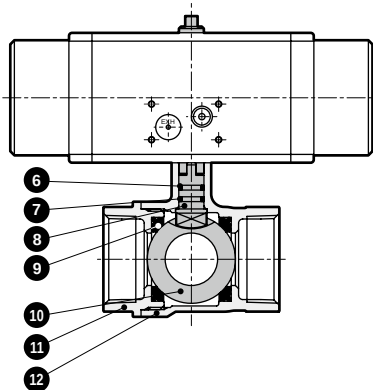
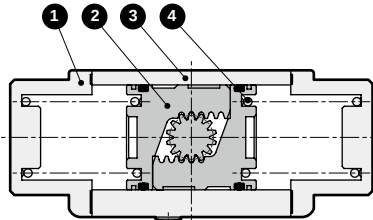
- Oil-prohibited specifications (ball valve)
CHB-R*-10/15/20-[N]



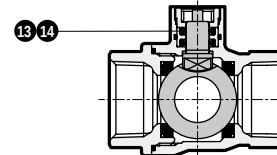
No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	Piston	ADC12 Aluminum die-casting
3	Cylinder body	A6063 Aluminum
4	Spring	SWP Piano wire
5	Spring	SWP Piano wire
6	Stem	SUS303 Stainless steel
7	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
8	O-ring	FKM Fluoro rubber
9	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
10	Valve seat	PTFE Tetrafluoroethylene resin
11	Valve ball	C3771, Cr plating (SUS304) Copper alloy, chrome plating (stainless steel)
12	Valve cap	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
13	Valve body	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
14	O-ring	FKM Fluoro rubber
15	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

Materials shown in () are for stainless steel body.

- CHB-R*-25/32/40/50
CHBF-R*-20/25/32/40



- Oil-prohibited specifications (ball valve)
CHB-R*-25/32/40/50-[N]



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	Stem	SUS303 Stainless steel
6	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
7	O-ring	FKM Fluoro rubber
8	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
9	Valve seat	PTFE Tetrafluoroethylene resin
10	Valve ball	C3771, Cr plating (SUS304) Copper alloy, chrome plating (stainless steel)
11	Valve cap	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
12	Valve body	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
13	O-ring	FKM Fluoro rubber
14	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

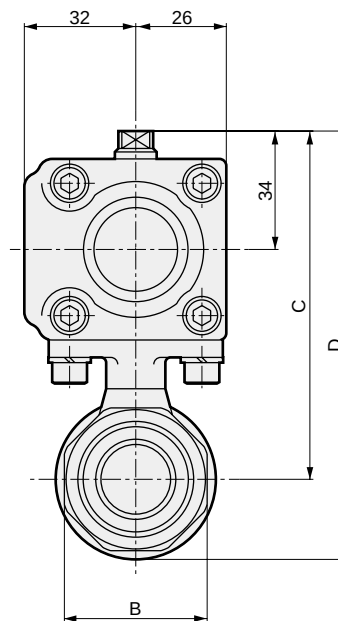
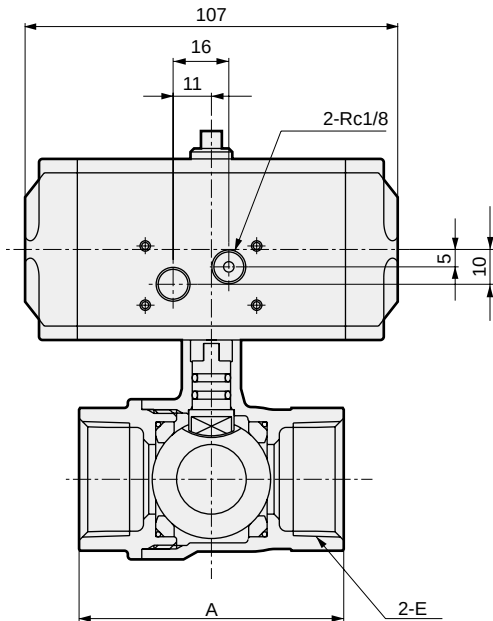
Materials shown in () are for stainless steel body.

CHB/CHBF Series



Dimensions: CHB/CHBF Series

- CHB-10/15/20/25
CHBF-15/20



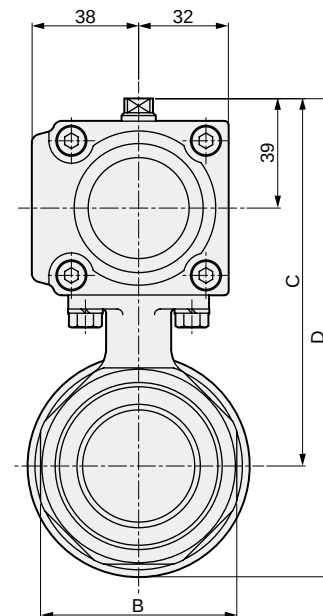
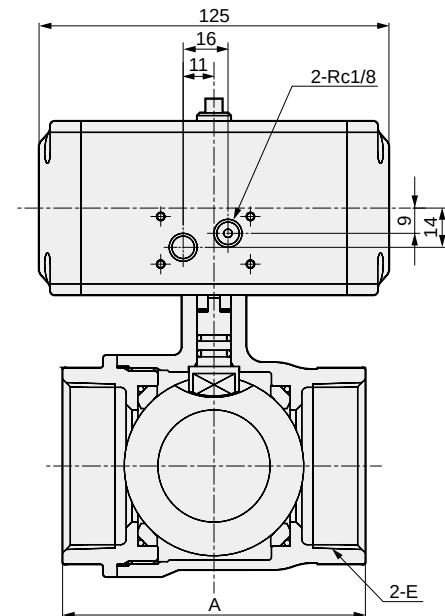
Model No.	A	B	C	D	E
CHB-10	50(56)	24(28)	91	106(107)	Rc3/8
CHB-15	56	28	91	106(107)	Rc1/2
CHB-20	65	34	97	116.5(117.5)	Rc3/4
CHB-25	76	41	100	123(124)	Rc1

Dimensions shown in () are for stainless steel body.

Model No.	A	B	C	D	E
CHBF-15	65	28	97	116.5(117.5)	Rc1/2
CHBF-20	71	34	100	123(124)	Rc3/4

Dimensions shown in () are for stainless steel body.

- CHB-32/40/50
CHBF-25/32/40



Model No.	A	B	C	D	E
CHB-32	84	50	116	143.5(145.5)	Rc1 ¹ / ₄
CHB-40	94	57	122	155.5(157.5)	Rc1 ¹ / ₂
CHB-50	108	70	131	170.5(171.5)	Rc2

Dimensions shown in () are for stainless steel body.

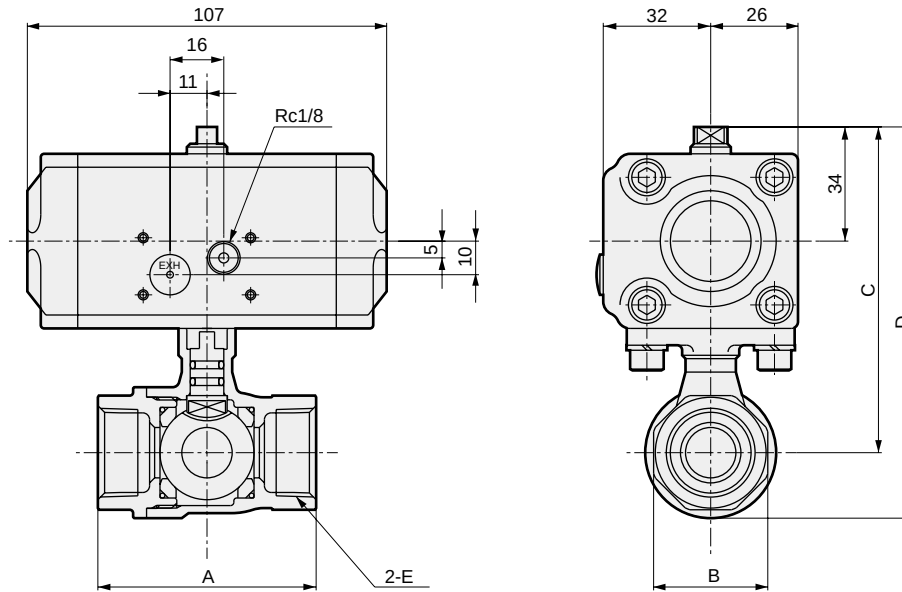
Model No.	A	B	C	D	E
CHBF-25	84	41	116	143.5(144.5)	Rc1
CHBF-32	95	50	122	155.5(156.5)	Rc1 ¹ / ₄
CHBF-40	107	57	131	170.5(171.5)	Rc1 ¹ / ₂

Dimensions shown in () are for stainless steel body.

Dimensions: CHB-R*/CHBF-R* Series



- CHB-R*-10/15/20
CHBF-R*-15



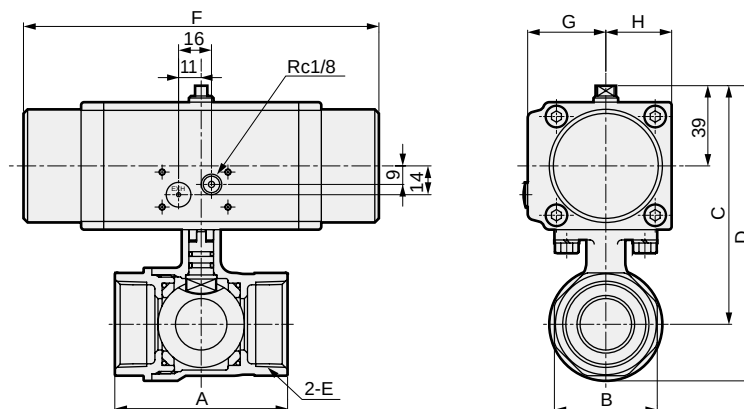
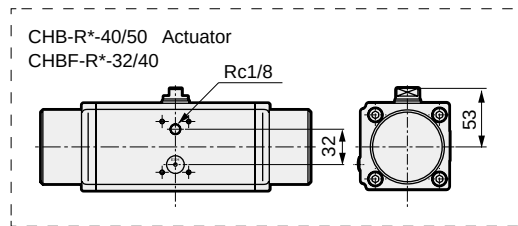
Model No.	A	B	C	D	E
CHB-R*-10	50(56)	24(28)	91	106(107)	Rc3/8
CHB-R*-15	56	28	91	106(107)	Rc1/2
CHB-R*-20	65	34	97	116.5(117.5)	Rc3/4

Dimensions shown in () are for stainless steel body.

Model No.	A	B	C	D	E
CHBF-R*-15	65	28	97	116.5(117.5)	Rc1/2

Dimensions shown in () are for stainless steel body.

- CHB-R*-25/32/40/50
CHBF-R*-20/25/32/40



Model No.	A	B	C	D	E	F	G	H
CHB-R*-25	76	41	110	133(134)	Rc1	173	38	32
CHB-R*-32	84	50	116	143.5(145.5)	Rc1 ¹ / ₄	173	38	32
CHB-R*-40	94	57	156.5	190(192)	Rc1 ¹ / ₂	244	43	38
CHB-R*-50	108	70	165.5	205(206)	Rc2	244	43	38

Dimensions shown in () are for stainless steel body.

Model No.	A	B	C	D	E	F	G	H
CHBF-R*-20	71	34	110	133(134)	Rc3/4	173	38	32
CHBF-R*-25	84	41	116	143.5(144.5)	Rc1	173	38	32
CHBF-R*-32	95	50	156.5	190(191)	Rc1 ¹ / ₄	244	43	38
CHBF-R*-40	107	57	165.5	205(206)	Rc1 ¹ / ₂	244	43	38

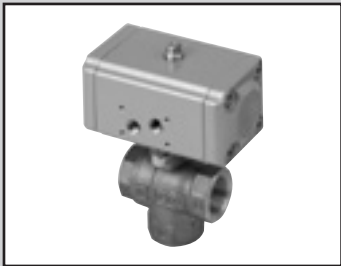
Dimensions shown in () are for stainless steel body.

Optional dimensions



For the external dimensions of types with limit switch, refer to page 730.

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 ¹ 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



Air operated 3-port ball valve
(compact rotary valve)

CHG/CHG-R* Series

● Port size: Rc1/2 to Rc2

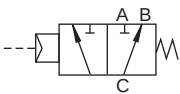


JIS symbol

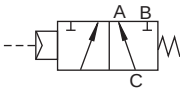
● CHG (double acting)



● CHG-R1 (single acting
- normally B-C path)



● CHG-R2 (single acting
- normally A-C path)



Common specifications

Item	CHG (double acting)	CHG-R* (single acting)
Actuation	Air operated: Double acting	Air operated: Single acting
Working fluid	Water/air/oil (500 mm ² /s or less)	
Working pressure MPa	0 (≈0 psi, 0 bar) to 1.0 (≈150 psi, 10 bar)	
Proof pressure (water pressure) MPa	2.0 (≈290 psi, 20 bar)	
Fluid temperature °C	0 (32°F) to 80 (176°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	
Pressurization direction	Port C pressurization only	
Flow path shape	Multi-fluid (90° rotation switching)	
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, 3.5 bar) to 0.7 (≈100 psi, 7 bar)
	Fluid temperature °C	5 (41°F) to 60 (140°F)
	Port size	Rc1/8

Individual specifications

Item Model No.	Port size	Orifice size (mm)	Cv	Weight (kg)	
				Double acting	Single acting
CHG-(R*)15	Rc1/2	10	3	1.0	1.1
CHG-(R*)20	Rc3/4	14	6	1.2	1.3
CHG-(R*)25	Rc1	19	11	1.4	2.2
CHG-(R*)32	Rc1 ¹ / ₄	23	16	2.2	2.6
CHG-(R*)40	Rc1 ¹ / ₂	30	28	2.7	4.9
CHG-(R*)50	Rc2	38	47	3.5	5.6

*1 : Weight increases by 0.2 kg with one limit switch and by 0.3 kg with two limit switches.

2 : Limit switch of CHG-R-40/50 is made to order.

How to order

CHG - R1 - 20 - E - W

Model No.

A Actuator

B Port size

C Body material

D Limit switch
*1
*2

Code	Description
A Actuator	
Blank	Double acting
R1	Single acting, normally B-C path
R2	Single acting, normally A-C path
B Port size	
15	Rc1/2
20	Rc3/4
25	Rc1
32	Rc1 1/4
40	Rc1 1/2
50	Rc2
C Body material	
Blank	Bronze
E	Stainless steel
N	Stainless steel/oil-prohibited specifications
D Limit switch	
Blank	Without switch
H	A-C path detection
V	B-C path detection
W	With 2 switches

1 : Limit switch of CHG-R-40/50 is made to order.
*2 : OMRON D4E-1G20N

[Example of model No.]

CHG-R1-20-E-W

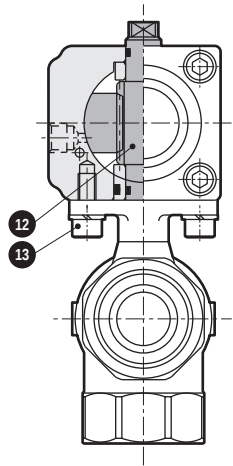
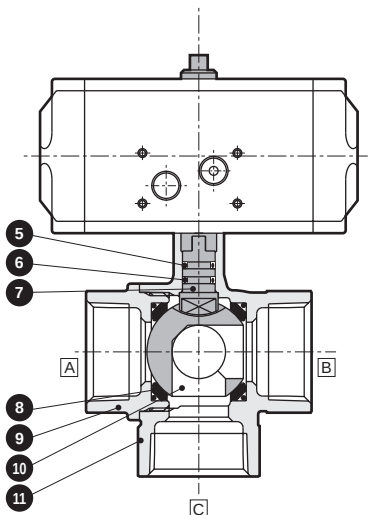
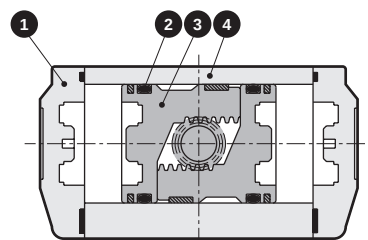
Model: CHG

- A Actuator : Single acting, normally B-C path
- B Port size : Rc3/4
- C Body material : Stainless steel
- D Limit switch : 2 switches

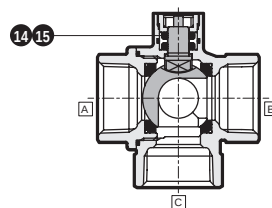
EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/ AD
APK/ ADK
DryAir
EX- XPLNprf
XPLNprf
HVB/ HVL
S ◇ B/ NAB
LAD/ NAD
Water- Rela
NP/NAP/ NVP
SNP
CHB/G
MXB/G
Other valves
SWD/ MWD
DustColl
CVE/ CVSE
CCH/ CPE/D
LifeSci
Gas- Combus
Auto- Water
Outdoor
SpecFld
Custom
Ending

Internal structure and parts list: CHG Series

● CHG-15/20/25



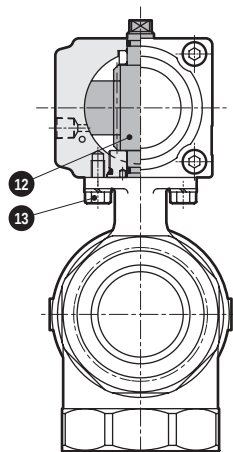
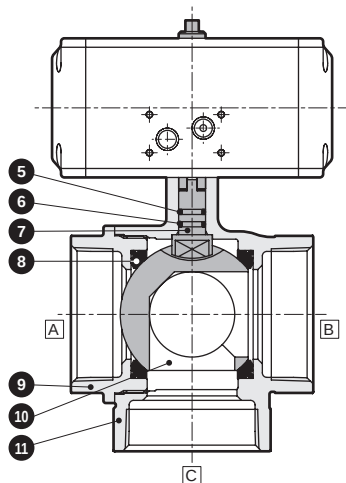
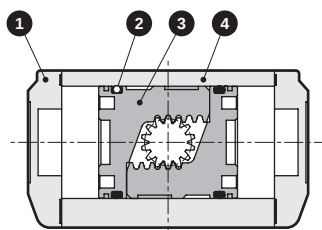
● Oil-prohibited specifications (ball valve) CHG-15/20/25-N



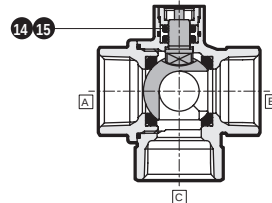
No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	O-ring	NBR Nitrile rubber
3	Piston	ADC12 Aluminum die-casting
4	Cylinder body	A6063 Aluminum
5	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
6	O-ring	FKM Fluoro rubber
7	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
8	Valve seat	PTFE Tetrafluoroethylene resin
9	Valve cap	CAC408(SCS13) Bronze casting (stainless steel casting)
10	Valve ball	C3771, Cr plating (SUS304) Copper alloy, chrome plating (stainless steel)
11	Valve body	CAC408(SCS13) Bronze casting (stainless steel casting)
12	Stem	SUS303 Stainless steel
13	Hexagon socket head cap screw	SUSXM7 Stainless steel
14	O-ring	FKM Fluoro rubber
15	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

Materials shown in () are for stainless steel body.

● CHG-32/40/50



● Oil-prohibited specifications (ball valve) CHG-32/40/50-N

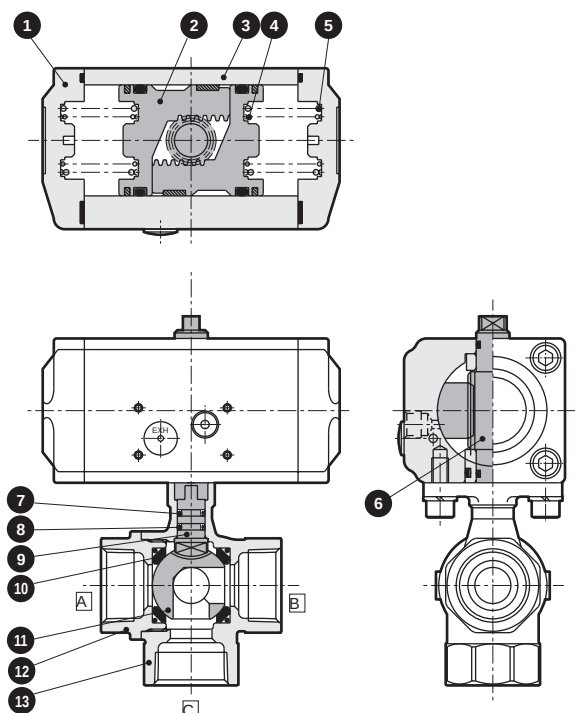


No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	O-ring	NBR Nitrile rubber
3	Piston	ADC12 Aluminum die-casting
4	Cylinder body	A6063 Aluminum
5	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
6	O-ring	FKM Fluoro rubber
7	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
8	Valve seat	PTFE Tetrafluoroethylene resin
9	Valve cap	CAC408(SCS13) Bronze casting (stainless steel casting)
10	Valve ball	C3771, Cr plating (SUS304) Copper alloy, chrome plating (stainless steel)
11	Valve body	CAC408(SCS13) Bronze casting (stainless steel casting)
12	Stem	SUS303 Stainless steel
13	Hexagon head bolt	SUSXM7 Stainless steel
14	O-ring	FKM Fluoro rubber
15	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

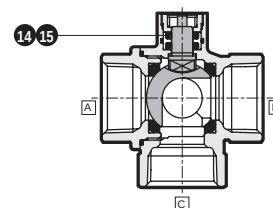
Materials shown in () are for stainless steel body.

Internal structure and parts list: CHG-R* Series

● CHG-R*-15/20



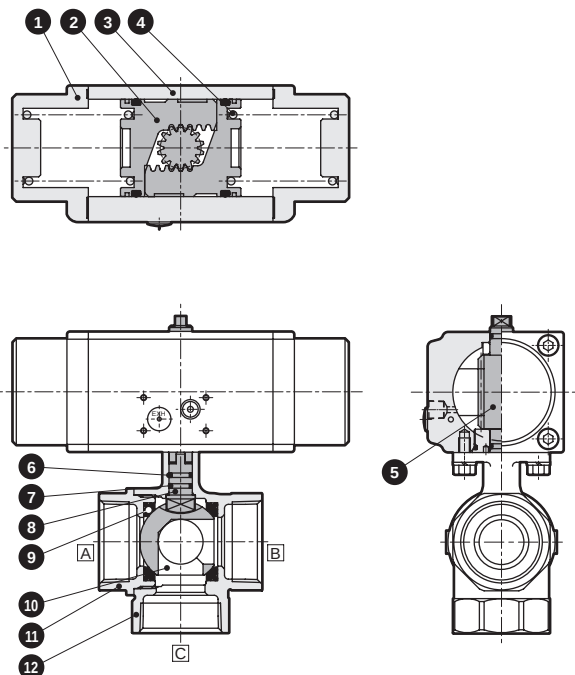
● Oil-prohibited specifications (ball valve) CHG-R*-15/20-N



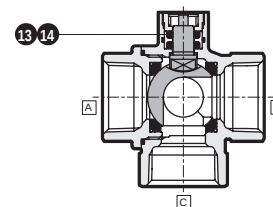
No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	Piston	ADC12 Aluminum die-casting
3	Cylinder body	A6063 Aluminum
4	Spring	SWP Piano wire
5	Spring	SWP Piano wire
6	Stem	SUS303 Stainless steel
7	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
8	O-ring	FKM Fluoro rubber
9	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
10	Valve seat	PTFE Tetrafluoroethylene resin
11	Valve ball	C3771, Cr Copper alloy, chrome plating (SUS304) (stainless steel)
12	Valve cap	CAC408(SCS13) Bronze casting (stainless steel casting)
13	Valve body	CAC408(SCS13) Bronze casting (stainless steel casting)
14	O-ring	FKM Fluoro rubber
15	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

Materials shown in () are for stainless steel body.

● CHG-R*-25/32/40/50



● Oil-prohibited specifications (ball valve) CHG-R*-25/32/40/50-N



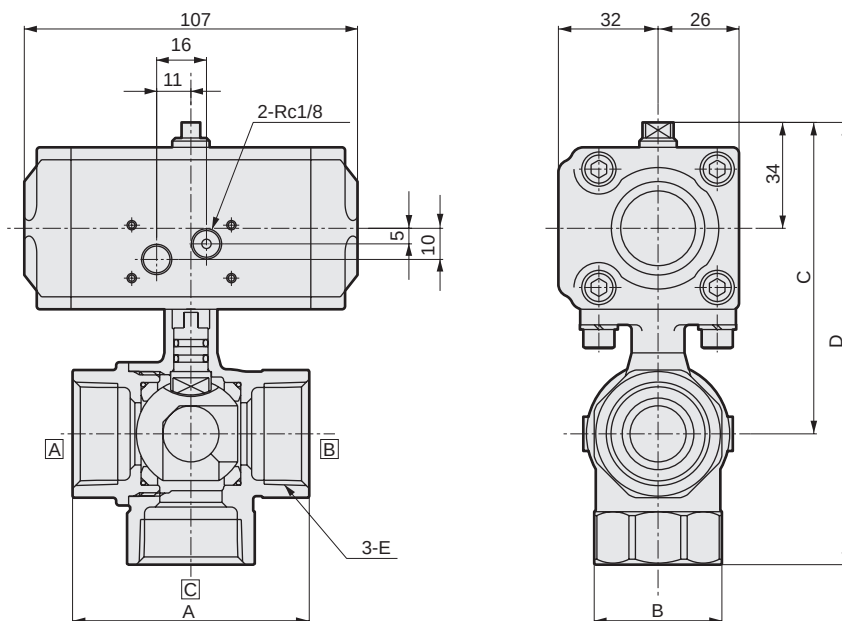
No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	Piston	ADC12 Aluminum die-casting
3	Cylinder body	A6063 Aluminum
4	Spring	SWP Piano wire
5	Stem	SUS303 Stainless steel
6	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
7	O-ring	FKM Fluoro rubber
8	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
9	Valve seat	PTFE Tetrafluoroethylene resin
10	Valve ball	C3771, Cr Copper alloy, chrome plating (SUS304) (stainless steel)
11	Valve cap	CAC408(SCS13) Bronze casting (stainless steel casting)
12	Valve body	CAC408(SCS13) Bronze casting (stainless steel casting)
13	O-ring	FKM Fluoro rubber
14	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

Materials shown in () are for stainless steel body.



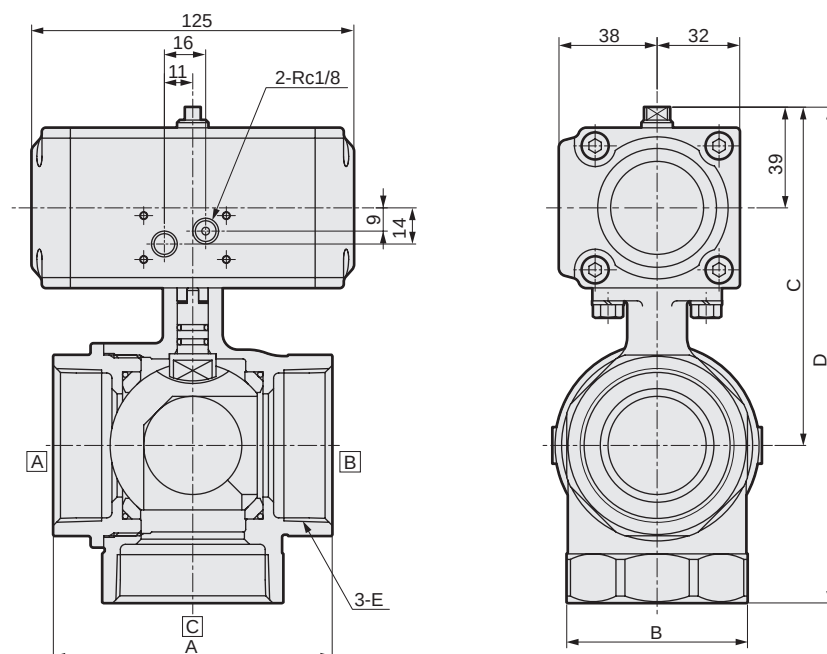
Dimensions: CHG Series

● CHG-15/20/25



Model No.	A	B	C	D	E
CHG-15	56	28	91	121	Rc1/2
CHG-20	65	34	97	133	Rc3/4
CHG-25	76	41	100	142	Rc1

● CHG-32/40/50

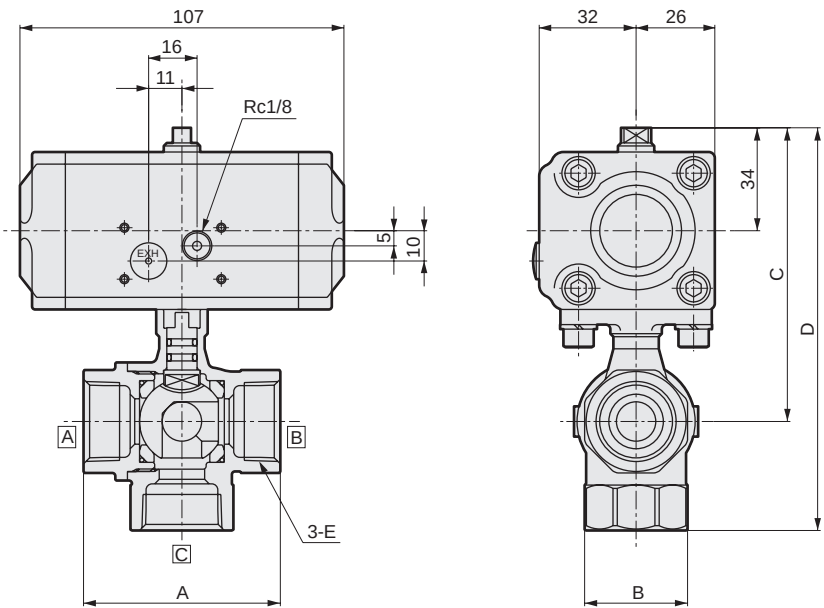


Model No.	A	B	C	D	E
CHG-32	84	50	116	163	Rc1 ¹ / ₄
CHG-40	94	57	122	175	Rc1 ¹ / ₂
CHG-50	108	70	131	192	Rc2

Dimensions: CHG-R* Series

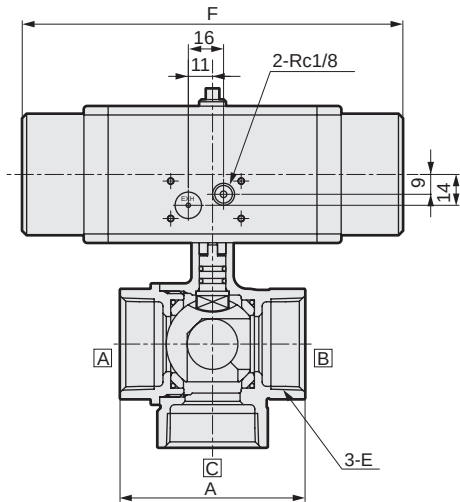


● CHG-R*-15/20



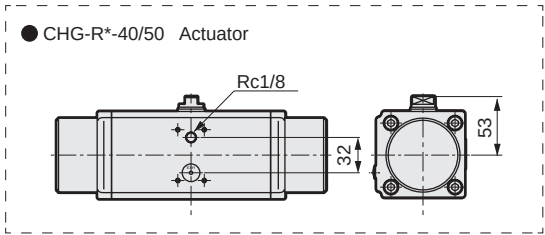
Model No.	A	B	C	D	E
CHG-R*-15	56	28	91	121	Rc1/2
CHG-R*-20	65	34	97	133	Rc3/4

● CHG-R*-25/32/40/50



Model No.	A	B	C	D	E	F	G	H
CHG-R*-25	76	41	110	152	Rc1	173	38	32
CHG-R*-32	84	50	116	163	Rc1 1/4	173	38	32
CHG-R*-40	94	57	156.5	209.5	Rc1 1/2	244	43	38
CHG-R*-50	108	70	165.5	226.5	Rc2	244	43	38

● CHG-R*-40/50 Actuator



Optional dimensions



For the external dimensions of types with limit switch, refer to page 730.

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



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

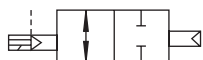
CHB-V*/CHB-X* CHBF-V*/CHBF-X* Series

● Port size: Rc3/8 to Rc2

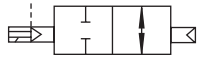


JIS symbol

● CHB-V1
CHBF-V1
(Double acting-NC)



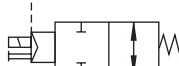
● CHB-V2
CHBF-V2
(Double acting-NO)



● CHB-X1
CHBF-X1
(Single acting-NC)



● CHB-X2
CHBF-X2
(Single acting-NO)



Common specifications

1 MPa = 10 bar

Item		Double acting		Single acting	
		CHB-V* (Standard bore) CHBF-V* (Full bore)		CHB-X* (Standard bore) CHBF-X* (Full bore)	
Actuation		With solenoid valve: Double acting		With solenoid valve: Single acting	
Working fluid		Water/air/oil (500 mm ² /s or less)			
Working pressure MPa		0 (≈0 psi, 0 bar) to 1.0 (≈150 psi, 10 bar)			
Proof pressure (water pressure) MPa		2.0 (≈290 psi, 20 bar)			
Fluid temperature °C		0 (32°F) to 80 (176°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		1.05 (≈150 psi, 10.5 bar)		
	Working pressure MPa		0.35 (≈51 psi) to 0.7 (≈100 psi)		0.4 (≈58 psi) to 0.7 (≈100 psi)
	Fluid temperature °C		5 (41°F) to 60 (140°F)		
	Port size	P-port	Rc1/8		
		R port	Rc1/8		

Electrical specifications

Rated voltage		100 VAC(50/60 Hz),200 VAC(50/60 Hz),24 VDC
Starting current (A) (With indicator lamp)	100 VAC	0.056/0.044(50/60 Hz)
	200 VAC	0.028/0.022(50/60 Hz)
	24 VDC	0.075(0.083)
Holding current (A)	100 VAC	0.028/0.022(50/60 Hz)
	200 VAC	0.014/0.011(50/60 Hz)
	24 VDC	0.075
Power consumption (W) (With indicator lamp)	100 VAC	1.8/1.4(1.9/1.5)(50/60 Hz)
	200 VAC	1.8/1.4(1.9/1.5)(50/60 Hz)
	24 VDC	1.8(2.0)
Thermal class		Class 130 (B)
Degree of protection		Dust-proof
Voltage fluctuation range		±10%

Individual specifications

Item		Port size	Orifice size (mm)	Cv	Weight (kg)	
Model No.					Double acting	Single acting
Standard bore	CHB-V*/X*-10-*	Rc3/8	10	10	1.2	1.2
	CHB-V*/X*-15-*	Rc1/2	10	6	1.2	1.2
	CHB-V*/X*-20-*	Rc3/4	15	16	1.4	1.2
	CHB-V*/X*-25-*	Rc1	20	29	1.5	2.1
	CHB-V*/X*-32-*	Rc1¼	25	50	2.2 (2.3)	2.6 (2.7)
	CHB-V*/X*-40-*	Rc1½	32	98	2.7 (2.8)	4.8 (4.9)
	CHB-V*/X*-50-*	Rc2	40	125	3.4 (3.5)	5.6 (5.7)
Full bore	CHBF-V*/X*-15-*	Rc1/2	15	23	1.3 (1.3)	1.4 (1.4)
	CHBF-V*/X*-20-*	Rc3/4	20	51	1.5 (1.5)	2.3 (2.3)
	CHBF-V*/X*-25-*	Rc1	25	66	2.2 (2.2)	2.6 (2.6)
	CHBF-V*/X*-32-*	Rc1¼	32	114	2.7 (2.7)	4.9 (4.9)
	CHBF-V*/X*-40-*	Rc1½	40	176	3.4 (3.4)	5.6 (5.6)

Materials shown in () are for stainless steel body.

1 : CHB-V/X*-10-* is a full bore.

*2 : Weight increases by 0.2 kg with one limit switch and by 0.3 kg with two limit switches.

3 : Limit switch of CHB-X-40/50-* and CHBF-X*-32/40-* is made to order.

CHB-V*/CHB-X* CHBF-V*/CHBF-X* Series

How to order

CHB - V1 - 25 - O B - W S - AC100V

CHBF

Model No.

A Actuator

B Port size
*1

C Body material

D Coil option

E Limit switch
*2
*3

F Other options
*4

G Voltage

		Model No.	
Code	Description	CHB (Standard bore)	CHBF (Full bore)
A Actuator			
V1	Double acting NC (open when energized)	●	●
V2	Double acting NO (closed when energized)	●	●
X1	Single acting NC (open when energized)	●	●
X2	Single acting NO (closed when energized)	●	●
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 material			
0	Bronze	●	●
E	Stainless steel	●	●
N	Stainless steel/oil-prohibited specifications	●	●
D Coil option			
Blank	Grommet lead wire	●	●
B	With compact terminal box	●	●
L	Compact term box, lamp (anti-surge in DC)	●	●
C	C-connector with lead wire	●	●
C2	C-connector with lead wire with surge suppressor and indicator lamp	●	●
D	D-connector with lead wire	●	●
D2	D-connector with lead wire with surge suppressor and indicator lamp	●	●
E Limit switch			
Blank	Without switch	●	●
H	Detection at valve open	●	●
V	Detection at valve closed	●	●
W	With 2 switches	●	●
F Other options			
Blank	None	●	●
S	Metering valve with silencer *4	●	●
G Voltage			
AC100V	100 VAC 50/60 Hz, 110 VAC 60 Hz	●	●
AC200V	200 VAC 50/60 Hz, 220 VAC 60 Hz	●	●
DC24V	24 VDC	●	●

[Example of model No.]

CHB-V1-25-OB-WS-AC100V

Model No.: CHB (standard bore)

- A Actuator : Double acting NC (open when energized)
- B Port size : Rc1
- C Body material : Bronze
- D Coil option : Compact terminal box
- E Limit switch : 2 switches
- F Other options : Metering valve with silencer
- G Voltage : 100 VAC 50/60 Hz. 110 VAC 60 Hz

*1: When port size is 10, the valve is full bore but the model is CHB.

2: Limit switch of CHB-X-40/50-* and CHBF-X*-32/40-* is made to order.

*3: OMRON D4E-1G20N

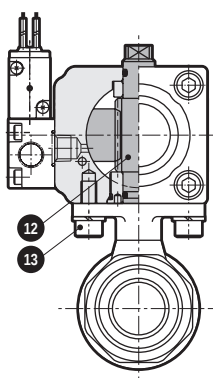
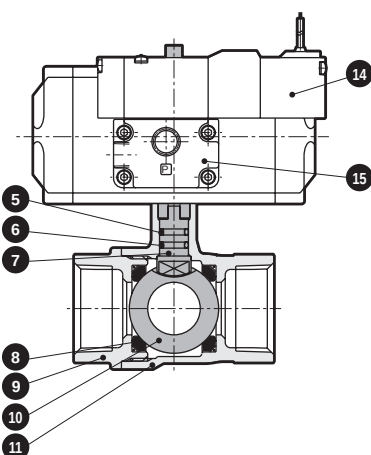
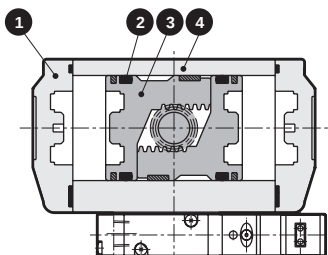
*4: CKD SMW2-6A is attached with the product.

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
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Auto-
Water
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SpecFld
Custom
Ending

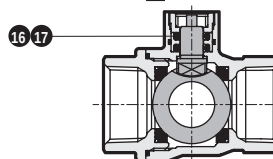
CHB-V*/CHBF-V* Series

Internal structure and parts list: CHB-V*/CHBF-V* Series

- CHB-V*-10/15/20/25-*
CHBF-V*-15/20-*



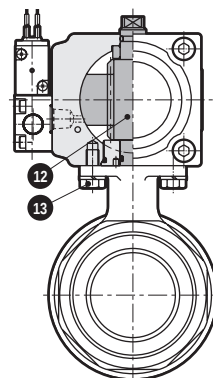
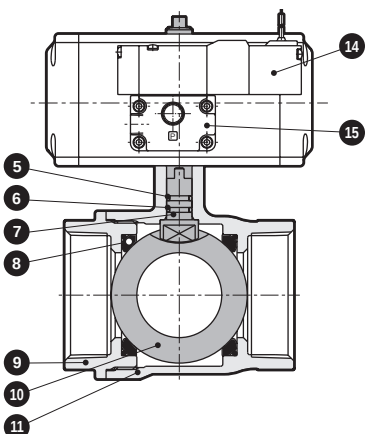
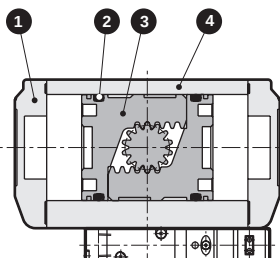
- Oil-prohibited specifications (ball valve)
CHB-V*-10/15/20/25-[N]



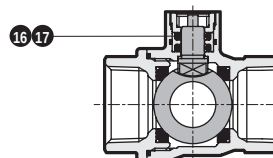
No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	O-ring	NBR Nitrile rubber
3	Piston	ADC12 Aluminum die-casting
4	Cylinder body	A6063 Aluminum
5	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
6	O-ring	FKM Fluoro rubber
7	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
8	Valve seat	PTFE Tetrafluoroethylene resin
9	Valve cap	CAC408/CAC407 Bronze casting (SCS13) (stainless steel casting)
10	Valve ball	C3771, Cr Copper alloy, chrome plating (SUS304) (stainless steel)
11	Valve body	CAC408/CAC407 Bronze casting (SCS13) (stainless steel casting)
12	Stem	SUS303 Stainless steel
13	Hexagon socket head cap screw	SUSXM7 Stainless steel
14	Solenoid valves [4KB119-00]	
15	Block	ADC12 Aluminum die-casting
16	O-ring	FKM Fluoro rubber
17	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

Materials shown in () are for stainless steel body.

- CHB-V*-32/40/50-*
CHBF-V*-25/32/40-*



- Oil-prohibited specifications (ball valve)
CHB-V*-32/40/50-[N]

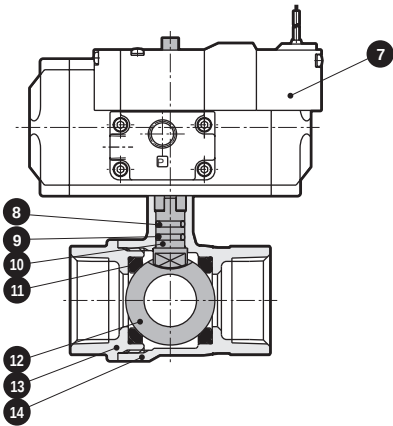
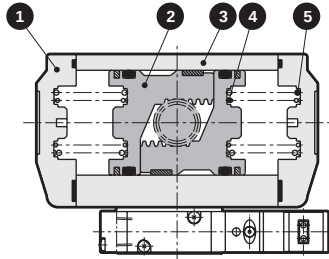


No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	O-ring	NBR Nitrile rubber
3	Piston	ADC12 Aluminum die-casting
4	Cylinder body	A6063 Aluminum
5	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
6	O-ring	FKM Fluoro rubber
7	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
8	Valve seat	PTFE Tetrafluoroethylene resin
9	Valve cap	CAC408/CAC407 Bronze casting (SCS13) (stainless steel casting)
10	Valve ball	C3771, Cr Copper alloy, chrome plating (SUS304) (stainless steel)
11	Valve body	CAC408/CAC407 Bronze casting (SCS13) (stainless steel casting)
12	Stem	SUS303 Stainless steel
13	Hexagon head bolt	SUSXM7 Stainless steel
14	Solenoid valves [4KB119-00]	
15	Block	ADC12 Aluminum die-casting
16	O-ring	FKM Fluoro rubber
17	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

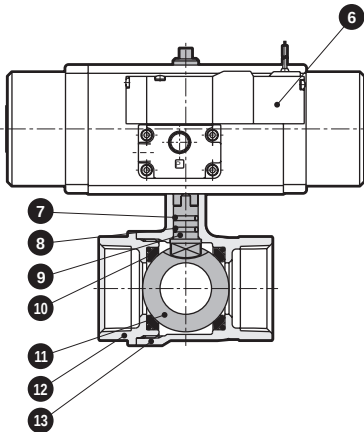
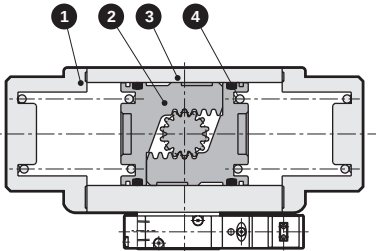
Materials shown in () are for stainless steel body.

Internal structure and parts list: CHB-X*/CHBF-X* Series

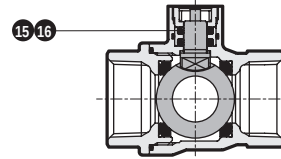
- CHB-X*-10/15/20-*
CHBF-X*-15-*



- CHB-X*-25/32/40/50-*
CHBF-X*-20/25/32/40-*



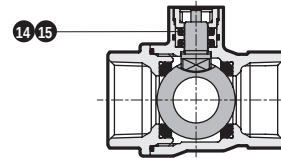
- Oil-prohibited specifications (ball valve)
CHB-X*-10/15/20-**N**



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	Spring	SWP Piano wire
6	Stem	SUS303 Stainless steel
7	Solenoid valves [4KB119-00]	
8	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
9	O-ring	FKM Fluoro rubber
10	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
11	Valve seat	PTFE Tetrafluoroethylene resin
12	Valve ball	C3771, Cr Copper alloy, chrome plating (SUS304) (stainless steel)
13	Valve cap	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
14	Valve body	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
15	O-ring	FKM Fluoro rubber
16	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

Materials shown in () are for stainless steel body.

- Oil-prohibited specifications (ball valve)
CHB-X*-25/32/40/50-**N**



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	Stem	SUS303 Stainless steel
6	Solenoid valves [4KB119-00]	
7	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
8	O-ring	FKM Fluoro rubber
9	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
10	Valve seat	PTFE Tetrafluoroethylene resin
11	Valve ball	C3771, Cr Copper alloy, chrome plating (SUS304) (stainless steel)
12	Valve cap	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
13	Valve body	CAC408/CAC407 (SCS13) Bronze casting (stainless steel casting)
14	O-ring	FKM Fluoro rubber
15	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

Materials shown in () are for stainless steel body.

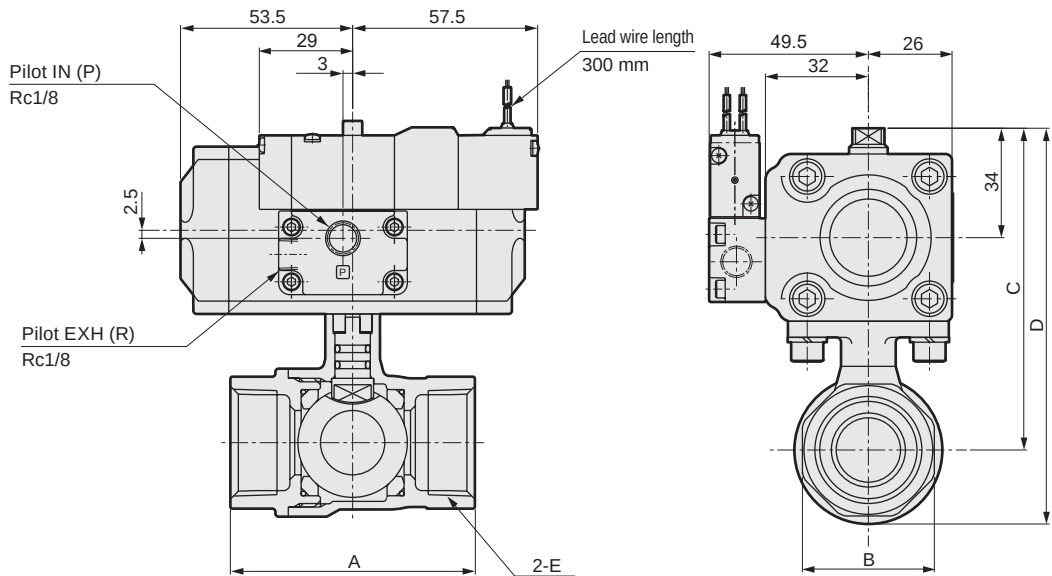
EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/ AD
APK/ ADK
DryAir
EX- XPLNprf
XPLNprf
HVB/ HVL
S ◇ B/ NAB
LAD/ NAD
Water- Rela
NP/NAP/ NVP
SNP
CHB/G
MXB/G
Other valves
SWD/ MWD
DustColl
CVE/ CVCSE
CCH/ CPE/D
LifeSci
Gas- Combus
Auto- Water
Outdoor
SpecFld
Custom
Ending

CHB-V*/CHBF-V* Series



Dimensions: CHB-V*/CHBF-V* Series

- CHB-V*-10/15/20/25-*
CHBF-V*-15/20-*



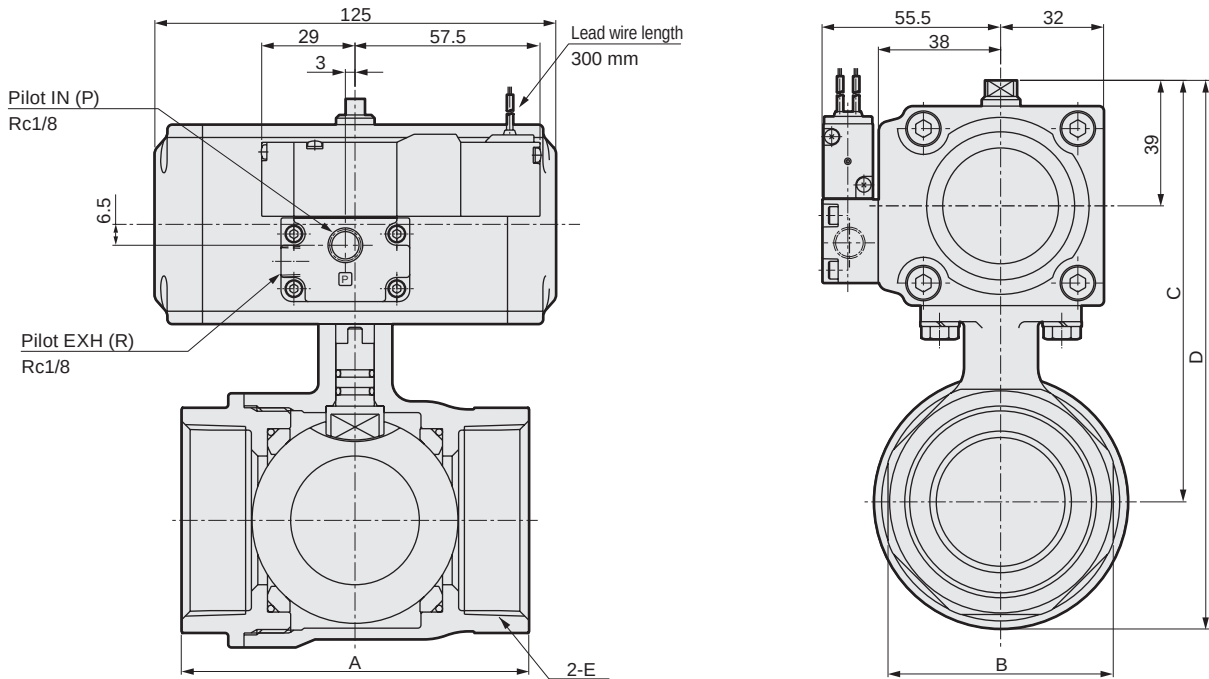
Model No.	A	B	C	D	E
CHB-V*-10-*	50(56)	24(28)	91	106(107)	Rc3/8
CHB-V*-15-*	56	28	91	106(107)	Rc1/2
CHB-V*-20-*	65	34	97	116.5(117.5)	Rc3/4
CHB-V*-25-*	76	41	100	123(124)	Rc1

Dimensions shown in () are for stainless steel body.

Model No.	A	B	C	D	E
CHBF-V*-15-*	65	28	97	116.5(117.5)	Rc1/2
CHBF-V*-20-*	71	34	100	123(124)	Rc3/4

Dimensions shown in () are for stainless steel body.

- CHB-V*-32/40/50-*
CHBF-V*-25/32/40-*



Model No.	A	B	C	D	E
CHB-V*-32-*	84	50	116	143.5(145.5)	Rc1 ¹ / ₄
CHB-V*-40-*	94	57	122	155.5(157.5)	Rc1 ¹ / ₂
CHB-V*-50-*	108	70	131	170.5(171.5)	Rc2

Dimensions shown in () are for stainless steel body.

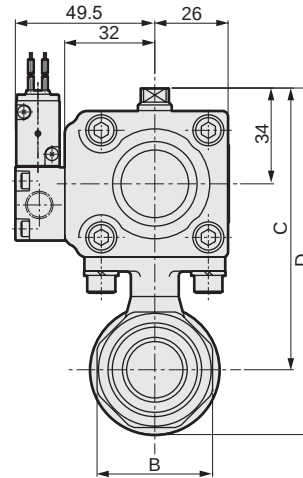
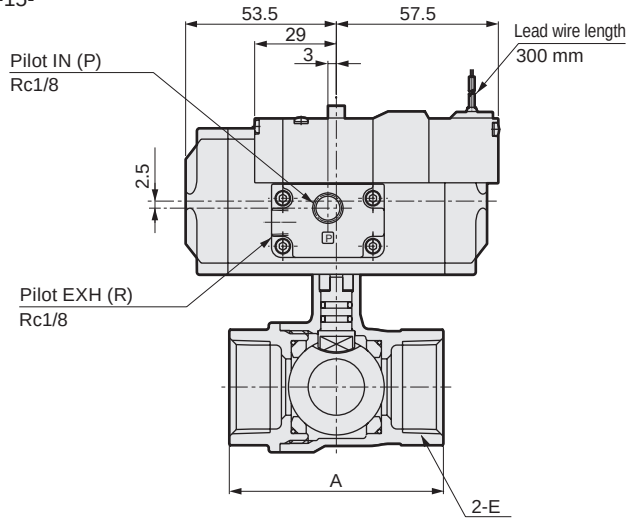
Model No.	A	B	C	D	E
CHBF-V*-25-*	84	41	116	143.5(144.5)	Rc1
CHBF-V*-32-*	95	50	122	155.5(156.5)	Rc1 ¹ / ₄
CHBF-V*-40-*	107	57	131	170.5(171.5)	Rc1 ¹ / ₂

Dimensions shown in () are for stainless steel body.

Dimensions: CHB-X*/CHBF-X* Series



- CHB-X*-10/15/20-*
CHBF-X*-15-*



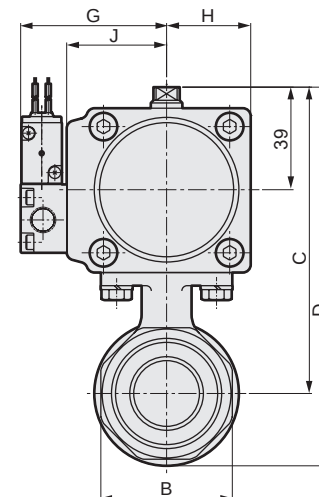
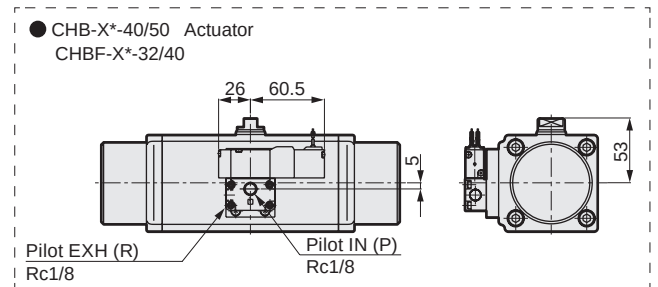
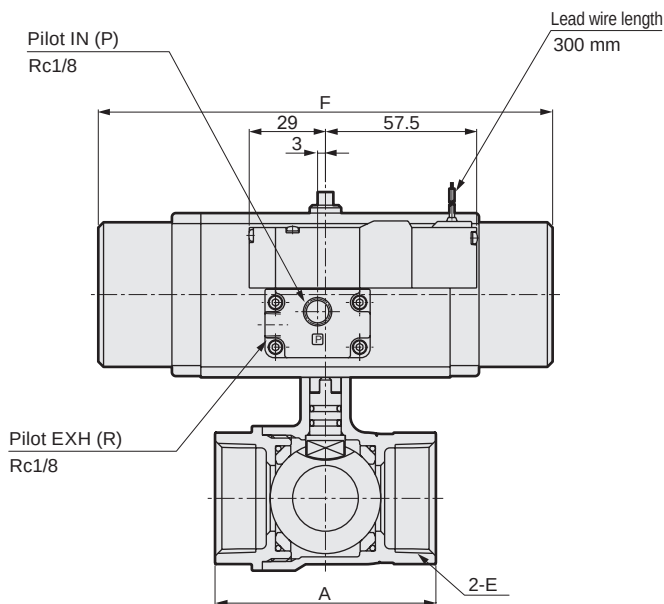
Model No.	A	B	C	D	E
CHB-X*-10*	50(56)	24(28)	91	106(107)	Rc3/8
CHB-X*-15*	56	28	91	106(107)	Rc1/2
CHB-X*-20*	65	34	97	116.5(117.5)	Rc3/4

Model No.	A	B	C	D	E
CHBF-X*-15*	65	28	97	116.5(117.5)	Rc1/2

Dimensions shown in () are for stainless steel body.

Dimensions shown in () are for stainless steel body.

- CHB-X*-25/32/40/50-*
CHBF-X*-20/25/32/40-*



Model No.	A	B	C	D	E	F	G	H	J
CHB-X*-25*	76	41	110	133(134)	Rc1	173	55.5	32	38
CHB-X*-32*	84	50	116	143.5(145.5)	Rc1 ¹ / ₄	173	55.5	32	38
CHB-X*-40*	94	57	156.5	190(192)	Rc1 ¹ / ₂	244	70.5	38	43
CHB-X*-50*	108	70	165.5	205(206)	Rc2	244	70.5	38	43

Model No.	A	B	C	D	E	F	G	H	J
CHBF-X*-20*	71	34	110	133(134)	Rc3/4	173	55.5	32	38
CHBF-X*-25*	84	41	116	143.5(144.5)	Rc1	173	55.5	32	38
CHBF-X*-32*	95	50	156.5	190(191)	Rc1 ¹ / ₄	244	70.5	38	43
CHBF-X*-40*	107	57	165.5	205(206)	Rc1 ¹ / ₂	244	70.5	38	43

Dimensions shown in () are for stainless steel body.

Dimensions shown in () are for stainless steel body.

Optional dimensions



For the external dimensions of the type with a limit switch and coil options, refer to page 730.

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 ¹ 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



Air operated 3-port ball valve with solenoid valve
(compact rotary valve)

CHG-V*/CHG-X* Series

● Port size: Rc1/2 to Rc2

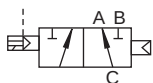


JIS symbol

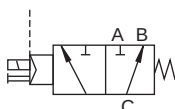
● CHG-V1 (double acting - normally B-C path)



● CHG-V2 (double acting - normally A-C path)



● CHG-X1 (single acting - normally B-C path)



● CHG-X2 (single acting - normally A-C path)



Common specifications

1 MPa = 10 bar

Item		CHG-V* (Double acting)	CHG-X* (Single acting)
Actuation		With solenoid valve: Double acting	With solenoid valve: Single acting
Working fluid		Water/air/oil (500 mm ² /s or less)	
Working pressure MPa		0 (≈0 psi, 0 bar) to 1.0 (≈150 psi, 10 bar)	
Proof pressure (water pressure) MPa		2.0 (≈290 psi, 20 bar)	
Fluid temperature °C		0 (32°F) to 80 (176°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	
Pressurization direction		Port C pressurization only	
Flow path shape		Multi-fluid (90° rotation switching)	
Rotary actuator	Pilot fluid	Compressed air	
	Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)	
	Proof pressure (water) MPa	1.05 (≈150 psi, 10.5 bar)	
	Working pressure MPa	0.35 (≈51 psi) to 0.7 (≈100 psi)	0.4 (≈58 psi) to 0.7 (≈100 psi)
	Fluid temperature °C	5 (41°F) to 60 (140°F)	
	Port size	P-port R port	Rc1/8 Rc1/8

Electrical specifications

Rated voltage		100 VAC(50/60 Hz), 200 VAC(50/60 Hz), 24 VDC	
Starting current (A)	100 VAC	0.056/0.044(50/60 Hz)	
	200 VAC	0.028/0.022(50/60 Hz)	
	24 VDC	0.075(0.083)	
Holding current (A)	100 VAC	0.028/0.022(50/60 Hz)	
	200 VAC	0.014/0.011(50/60 Hz)	
	24 VDC	0.075	
Power consumption (W)	100 VAC	1.8/1.4(1.9/1.5)(50/60 Hz)	
	200 VAC	1.8/1.4(1.9/1.5)(50/60 Hz)	
	24 VDC	1.8(2.0)	
Thermal class		Class 130 (B)	
Degree of protection		Dust-proof	
Voltage fluctuation range		±10%	

Individual specifications

Item Model No.	Port size	Orifice size (mm)	Cv	Weight (kg)	
				Double acting	Single acting
CHG-V*/X*-15-*	Rc1/2	10	3	1.2	1.3
CHG-V*/X*-20-*	Rc3/4	14	6	1.4	1.5
CHG-V*/X*-25-*	Rc1	19	11	1.6	2.4
CHG-V*/X*-32-*	Rc1 ¹ / ₄	23	16	2.4	2.8
CHG-V*/X*-40-*	Rc1 ¹ / ₂	30	28	2.9	5.1
CHG-V*/X*-50-*	Rc2	38	47	3.7	5.8

*1 : Weight increases by 0.2 kg with one limit switch and by 0.3 kg with two limit switches.

2 : Limit switch of CHG-X-40/50-* is made to order.

How to order

CHG - X1 - 15 - E B - W S - AC200V

Model No.

A Actuator

B Port size

C Body material

D Coil option

E Limit switch

*1

*2

F Other options

*3

G Voltage

Code	Description
A Actuator	
V1	Double acting, normally B-C path
V2	Double acting, normally A-C path
X1	Single acting, normally B-C path
X2	Single acting, normally A-C path
B Port size	
15	Rc1/2
20	Rc3/4
25	Rc1
32	Rc1 ¹ / ₄
40	Rc1 ¹ / ₂
50	Rc2
C Body material	
0	Bronze
E	Stainless steel
N	Stainless steel/oil-prohibited specifications
D Coil option	
Blank	Grommet lead wire
B	With compact terminal box
L	Compact term box, lamp (anti-surge in DC)
C	C-connector with lead wire
C2	C-connector with lead wire with surge suppressor and indicator lamp
D	D-connector with lead wire
D2	D-connector with lead wire with surge suppressor and indicator lamp
E Limit switch	
Blank	Without switch
H	A-C path detection
[1 to 5 V]	B-C path detection
W	With 2 switches
F Other options	
Blank	None
S	Metering valve with silencer *3
G Voltage	
AC100V	100 VAC 50/60 Hz, 110 VAC 60 Hz
AC200V	200 VAC 50/60 Hz, 220 VAC 60 Hz
DC24V	24 VDC

1 : Limit switch of CHG-X-40/50-* is made to order.

*2 : OMRON D4E-1G20N

*3 : CKD SMW2-6A is attached with the product.

[Example of model No.]

CHG-X1-15-EB-WS-AC200V

Model: CHG

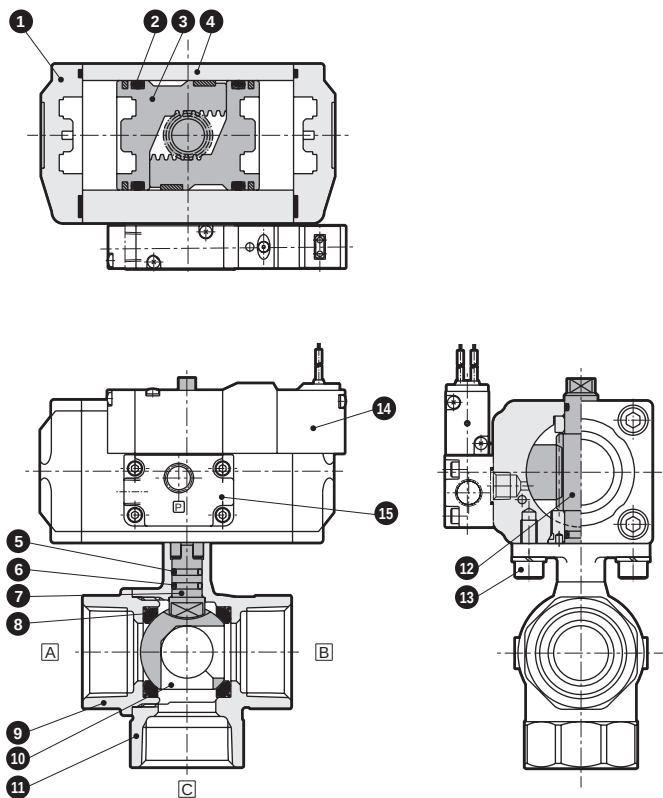
- A** Actuator : Single acting, normally B-C path
- B** Port size : Rc1/2
- C** Body material : Stainless steel
- D** Coil option : Compact terminal box
- E** Limit switch : 2 switches
- F** Other options : Metering valve with silencer
- G** Voltage : 200 VAC 50/60 Hz, 220 VAC 60 Hz

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

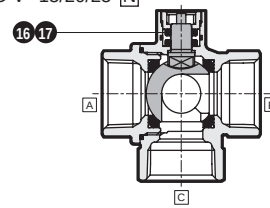
EXA
FWD
HNB/G
USB/G
FAB/G
FGB/G
FVB
FWB/G
FHB
FLB
AB
AG
AP/
AD
APK/
ADK
DryAir
EX-
XPLNprf
XPLNprf
HVB/
HVL
S◇B/
NAB
LAD/
NAD
Water-
Rela
NP/NAP/
NVP
SNP
CHB/G
MXB/G
Other
valves
SWD/
MWD
DustColl
CVE/
CVSE
CCH/
CPE/D
LifeSci
Gas-
Combust
Auto-
Water
Outdoor
SpecFld
Custom
Ending

Internal structure and parts list: CHG-V* Series

● CHG-V*-15/20/25-*



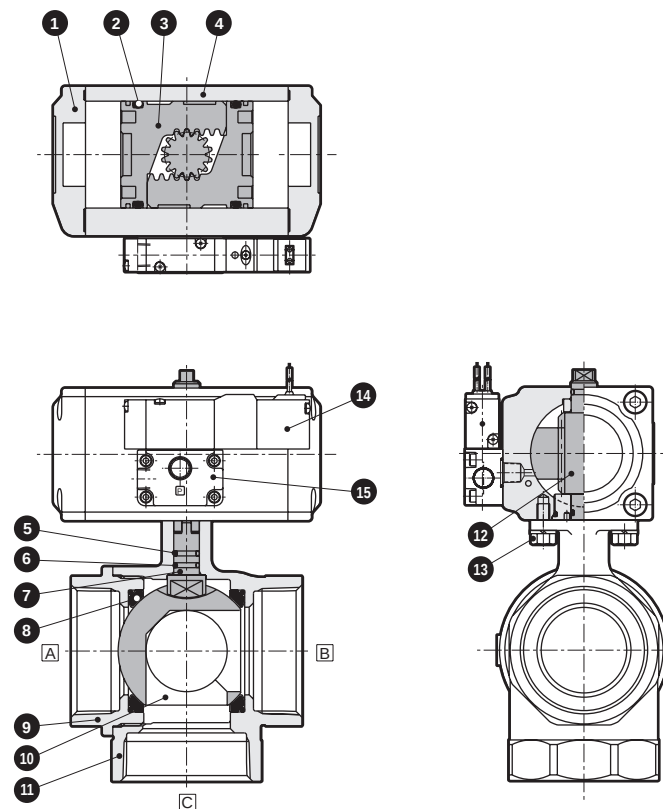
● Oil-prohibited specifications (ball valve)
CHG-V*-15/20/25-[N]



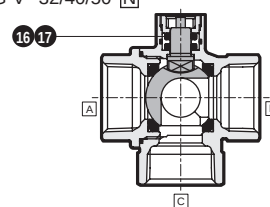
No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	O-ring	NBR Nitrile rubber
3	Piston	ADC12 Aluminum die-casting
4	Cylinder body	A6063 Aluminum
5	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
6	O-ring	FKM Fluoro rubber
7	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
8	Valve seat	PTFE Tetrafluoroethylene resin
9	Valve cap	CAC408(SCS13) Bronze casting (stainless steel casting)
10	Valve ball	C3771, Cr plating (SUS304) Copper alloy, chrome plating (stainless steel)
11	Valve body	CAC408(SCS13) Bronze casting (stainless steel casting)
12	Stem	SUS303 Stainless steel
13	Hexagon socket head cap screw	SUSXM7 Stainless steel
14	Solenoid valves [4KB119-00]	
15	Block	ADC12 Aluminum die-casting
16	O-ring	FKM Fluoro rubber
17	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

Materials shown in () are for stainless steel body.

● CHG-V*-32/40/50-*



● Oil-prohibited specifications (ball valve)
CHG-V*-32/40/50-[N]

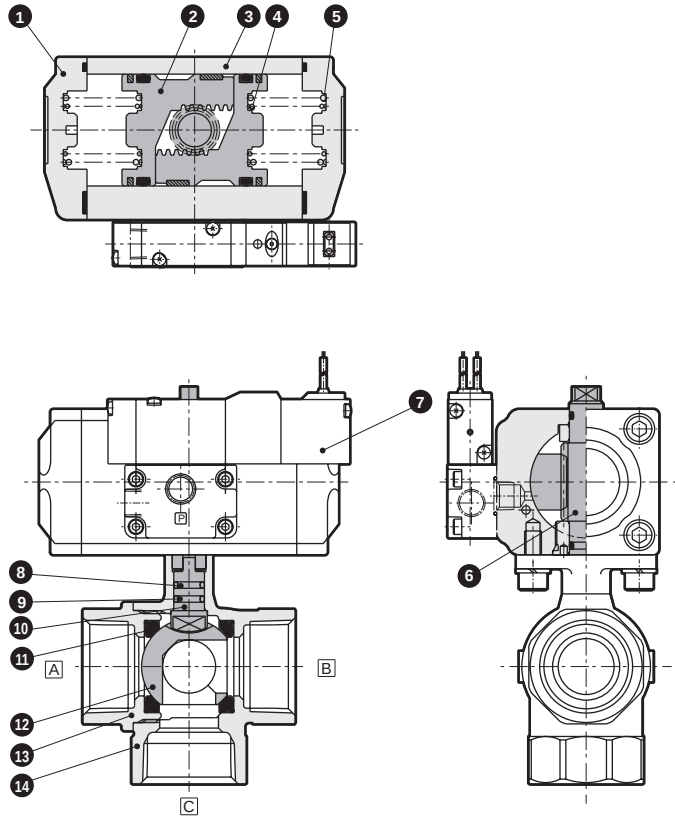


No.	Part name	Material
1	Cylinder cap	ADC12 Aluminum die-casting
2	O-ring	NBR Nitrile rubber
3	Piston	ADC12 Aluminum die-casting
4	Cylinder body	A6063 Aluminum
5	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
6	O-ring	FKM Fluoro rubber
7	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
8	Valve seat	PTFE Tetrafluoroethylene resin
9	Valve cap	CAC408(SCS13) Bronze casting (stainless steel casting)
10	Valve ball	C3771, Cr plating (SUS304) Copper alloy, chrome plating (stainless steel)
11	Valve body	CAC408(SCS13) Bronze casting (stainless steel casting)
12	Stem	SUS303 Stainless steel
13	Hexagon head bolt	SUSXM7 Stainless steel
14	Solenoid valves [4KB119-00]	
15	Block	ADC12 Aluminum die-casting
16	O-ring	FKM Fluoro rubber
17	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

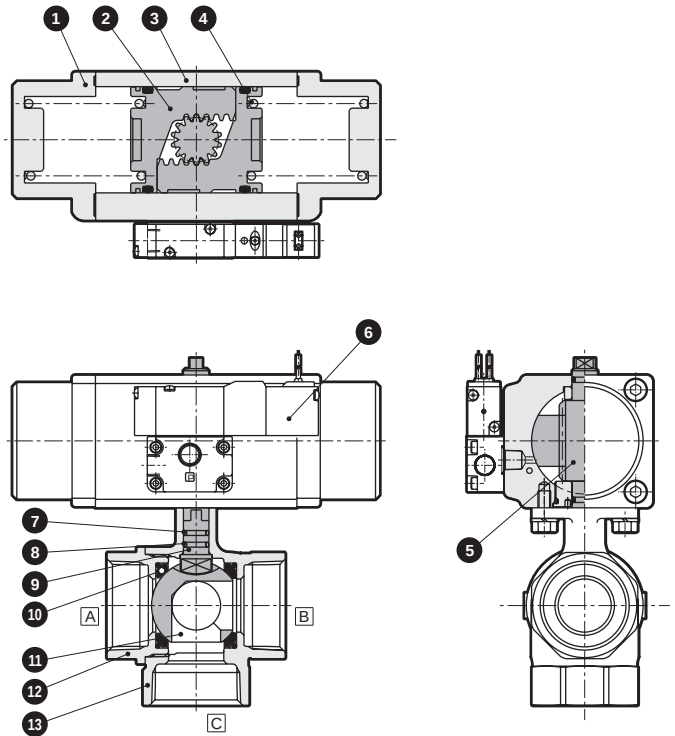
Materials shown in () are for stainless steel body.

Internal structure and parts list: CHG-X* Series

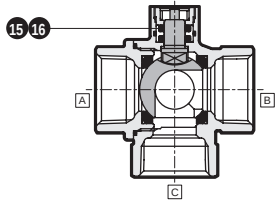
● CHG-X*-15/20-*



● CHG-X*-25/32/40/50-*



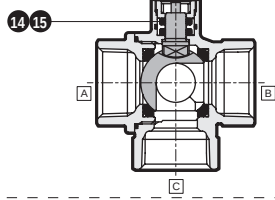
● Oil-prohibited specifications (ball valve)
CHG-X*-15/20-N



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	Spring	SWP Piano wire
6	Stem	SUS303 Stainless steel
7	Solenoid valves [4KB119-00]	
8	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
9	O-ring	FKM Fluoro rubber
10	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
11	Valve seat	PTFE Tetrafluoroethylene resin
12	Valve ball	C3771, Cr Copper alloy, chrome plating (SUS304) (stainless steel)
13	Valve cap	CAC408(SCS13) Bronze casting (stainless steel casting)
14	Valve body	CAC408(SCS13) Bronze casting (stainless steel casting)
15	O-ring	FKM Fluoro rubber
16	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

Materials shown in () are for stainless steel body.

● Oil-prohibited specifications (ball valve)
CHG-X*-25/32/40/50-N



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	Stem	SUS303 Stainless steel
6	Solenoid valves [4KB119-00]	
7	O-ring	NBR(FKM) Nitrile rubber (fluoro rubber)
8	O-ring	FKM Fluoro rubber
9	Shaft	SUS303(SUS304) Stainless steel (stainless steel)
10	Valve seat	PTFE Tetrafluoroethylene resin
11	Valve ball	C3771, Cr Copper alloy, chrome plating (SUS304) (stainless steel)
12	Valve cap	CAC408(SCS13) Bronze casting (stainless steel casting)
13	Valve body	CAC408(SCS13) Bronze casting (stainless steel casting)
14	O-ring	FKM Fluoro rubber
15	Seal ring	UHMW-PE Ultra-high molecular weight polyethylene

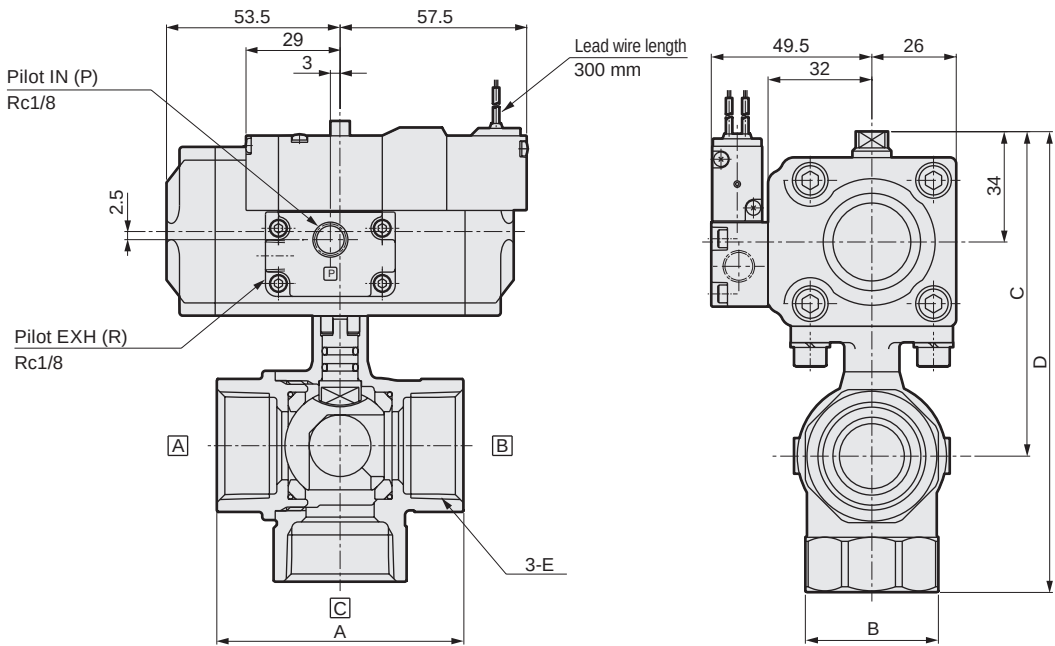
Materials shown in () are for stainless steel body.

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



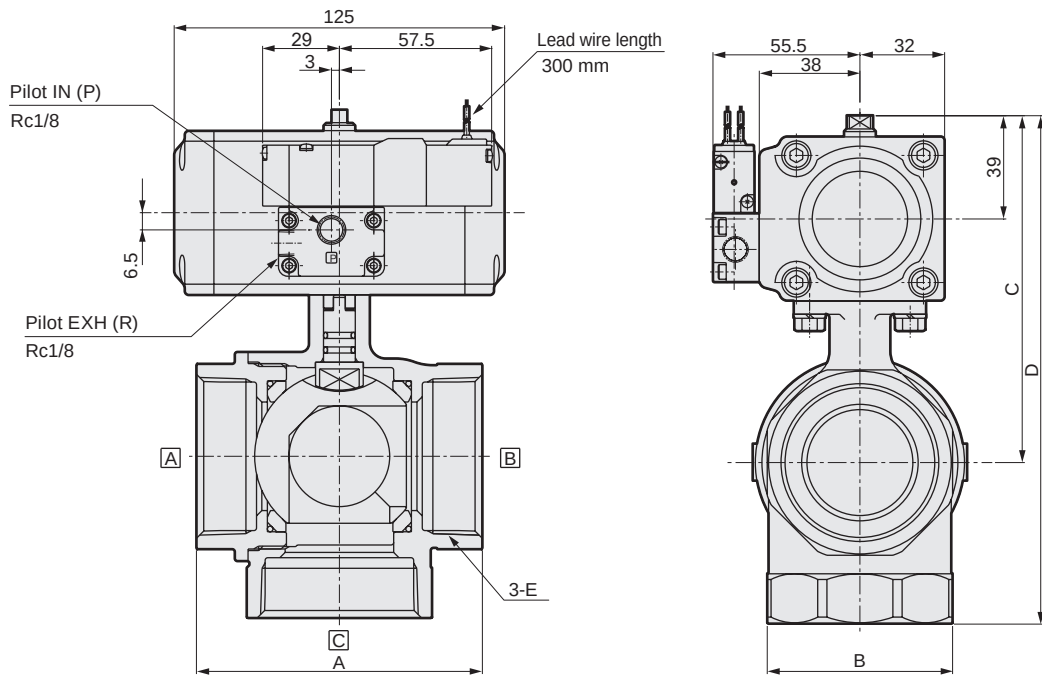
Dimensions: CHG-V* Series

● CHG-V*-15/20/25-*



Model No.	A	B	C	D	E
CHG-V*-15-*	56	28	91	121	Rc1/2
CHG-V*-20-*	65	34	97	133	Rc3/4
CHG-V*-25-*	76	41	100	142	Rc1

● CHG-V*-32/40/50-*

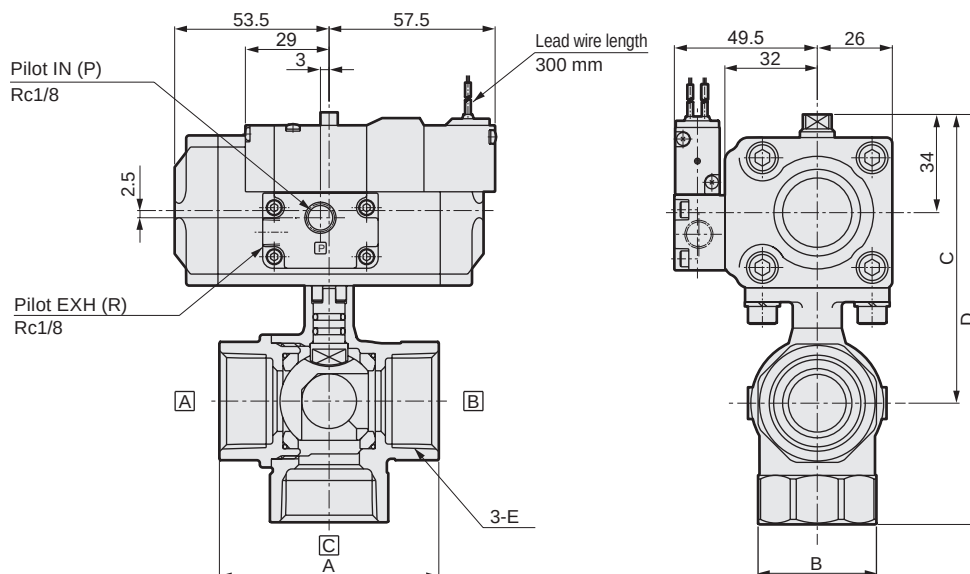


Model No.	A	B	C	D	E
CHG-V*-32-*	84	50	116	163	Rc1 $\frac{1}{4}$
CHG-V*-40-*	94	57	122	175	Rc1 $\frac{1}{2}$
CHG-V*-50-*	108	70	131	192	Rc2

Dimensions: CHG-X* Series

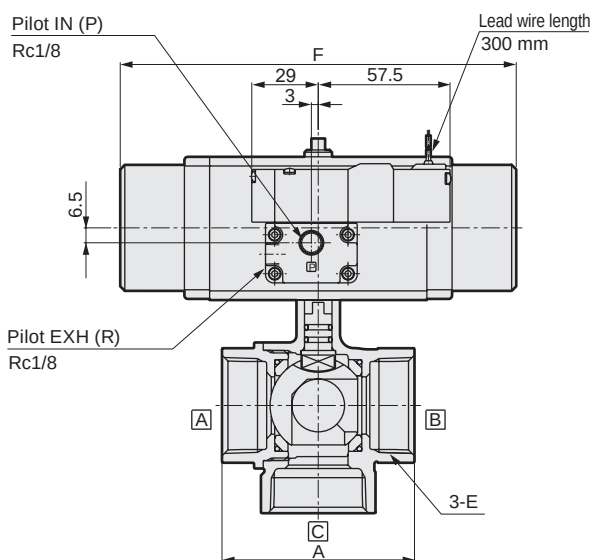


● CHG-X*-15/20-*

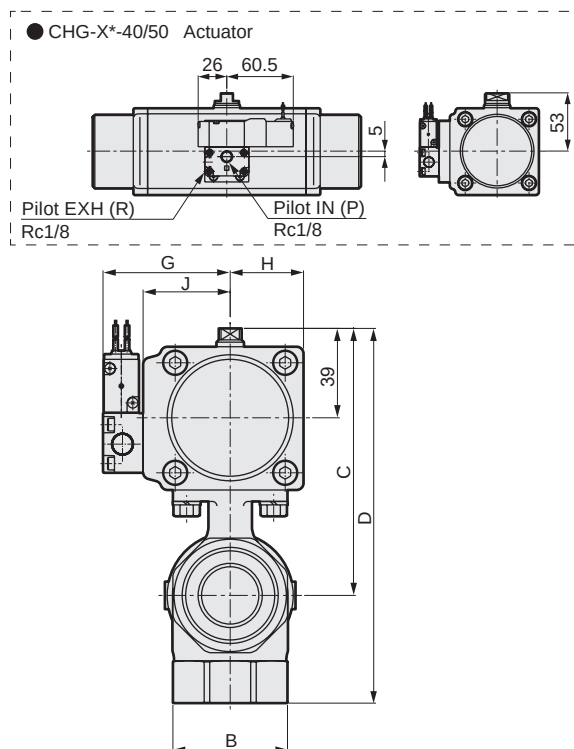


Model No.	A	B	C	D	E
CHG-X*-15-*	56	28	91	121	Rc1/2
CHG-X*-20-*	65	34	97	133	Rc3/4

● CHG-X*-25/32/40/50-*



Model No.	A	B	C	D	E	F	G	H	J
CHG-X*-25-*	76	41	110	152	Rc1	173	55.5	32	38
CHG-X*-32-*	84	50	116	163	Rc1 1/4	173	55.5	32	38
CHG-X*-40-*	94	57	156.5	209.5	Rc1 1/2	244	70.5	38	43
CHG-X*-50-*	108	70	165.5	226.5	Rc2	244	70.5	38	43



Optional dimensions



For the external dimensions with a limit switch and coil options, refer to page 730.

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

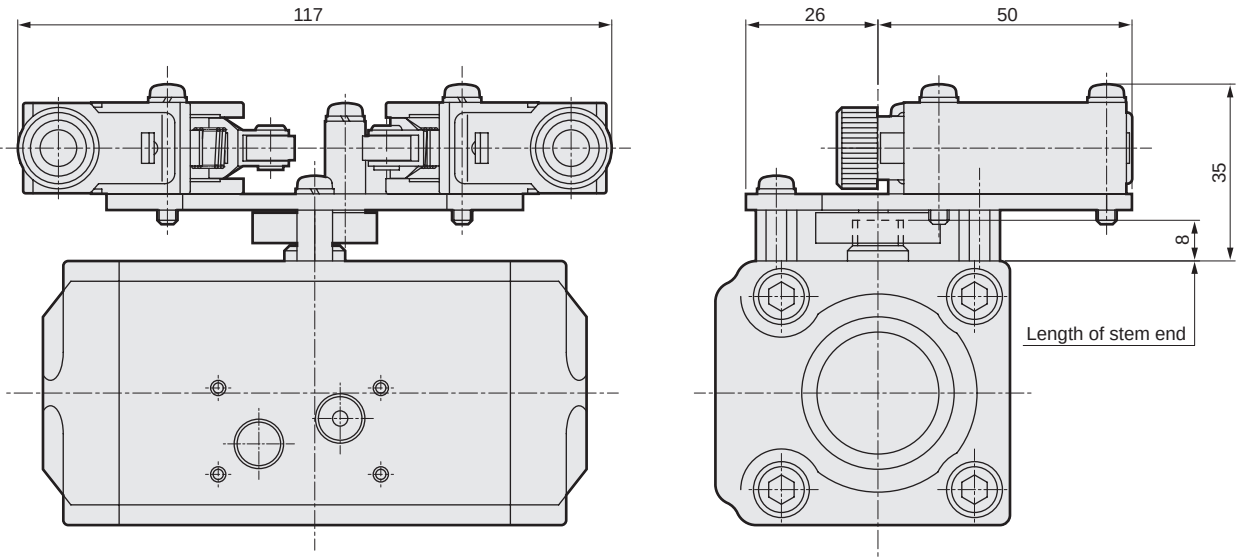
CHB/CHG Series

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- Combustion
Auto- Water
Outdoor
SpecFld
Custom
Ending

Optional dimensions



● Limit switch

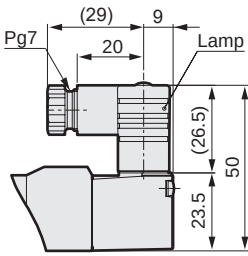
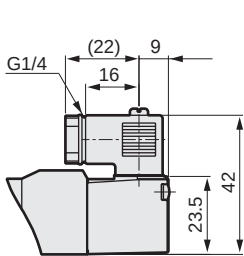


* Product with limit switch is 27 mm higher.

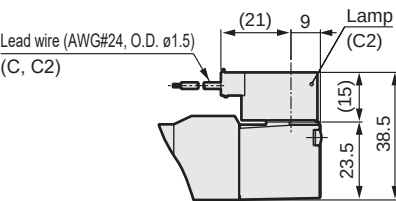
● Compact terminal box: (B [without indicator lamp]/L [with indicator lamp])

Without indicator lamp

With indicator lamp



● C-connector: (C/C2)



● D-connector: (D/D2)

