



Balancer unit
Auto pressure adjustment

BBS-A Series

● Bore size : $\phi 50$, $\phi 63$, $\phi 80$, $\phi 100$



Specifications

Model No.	BBS-A-50	BBS-A-63	BBS-A-80	BBS-A-100
Descriptions				
Working fluid	Clean compressed air			
Max. working pressure MPa	0.60 (≈ 87 psi, 6 bar)			
Min. working pressure MPa	0.25 (≈ 36 psi, 2.5 bar)			
Proof pressure MPa	0.90 (≈ 130 psi, 9 bar)			
Ambient temperature $^{\circ}\text{C}$	-5 (23 $^{\circ}\text{F}$) to 50 (122 $^{\circ}\text{F}$) (no freezing)			
Bore size mm	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
Max. stroke length mm	1500			
Working piston speed mm/s	1 to 200			
Cushion	Rubber cushion			
Lubrication	Not available			
Minimum load range kg	10	16	25	40
Maximum load range *1 kg	70	115	180	285
Operating force N	Refer to page 1227 BBS working force documentation			
Holding force N	1539		3940	

*1 : Refer to page 1227 for details about the maximum load range versus BBS working pressure.

Stroke length

Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
100, 200, 300, 400, 500, 600, 700, 800, 900,	1500	100
1000, 1100, 1200, 1300, 1400, 1500		

Note : The custom stroke length is available in 1mm increments.

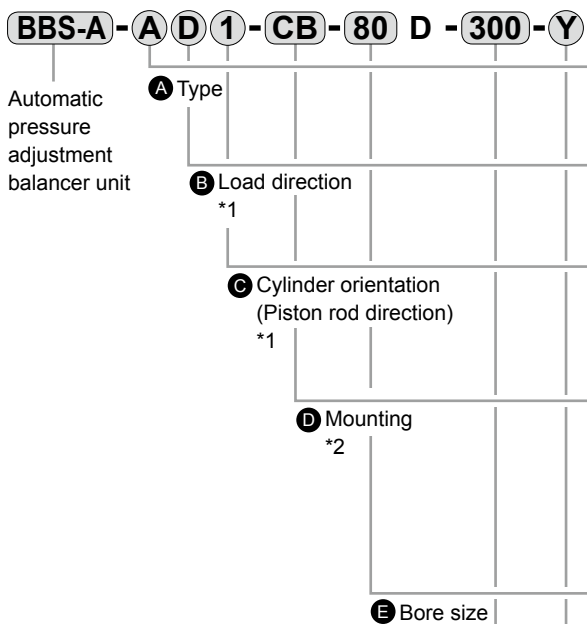
Weight table

(Unit: kg)

Bore size (mm)	Product weight for 0 mm stroke length					Additional weight per 100 mm stroke length
	Basic (00)	Eye bracket (CA)	Clevis bracket (CB)	Flange		
				FA	FB	
$\phi 50$	7.22	7.62	—	8.35	7.56	0.44
$\phi 63$	7.52	8.20	—	8.65	8.02	0.52
$\phi 80$	10.96	—	11.67	12.88	11.67	0.70
$\phi 100$	12.09	—	13.37	14.01	13.44	0.86

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

How to order

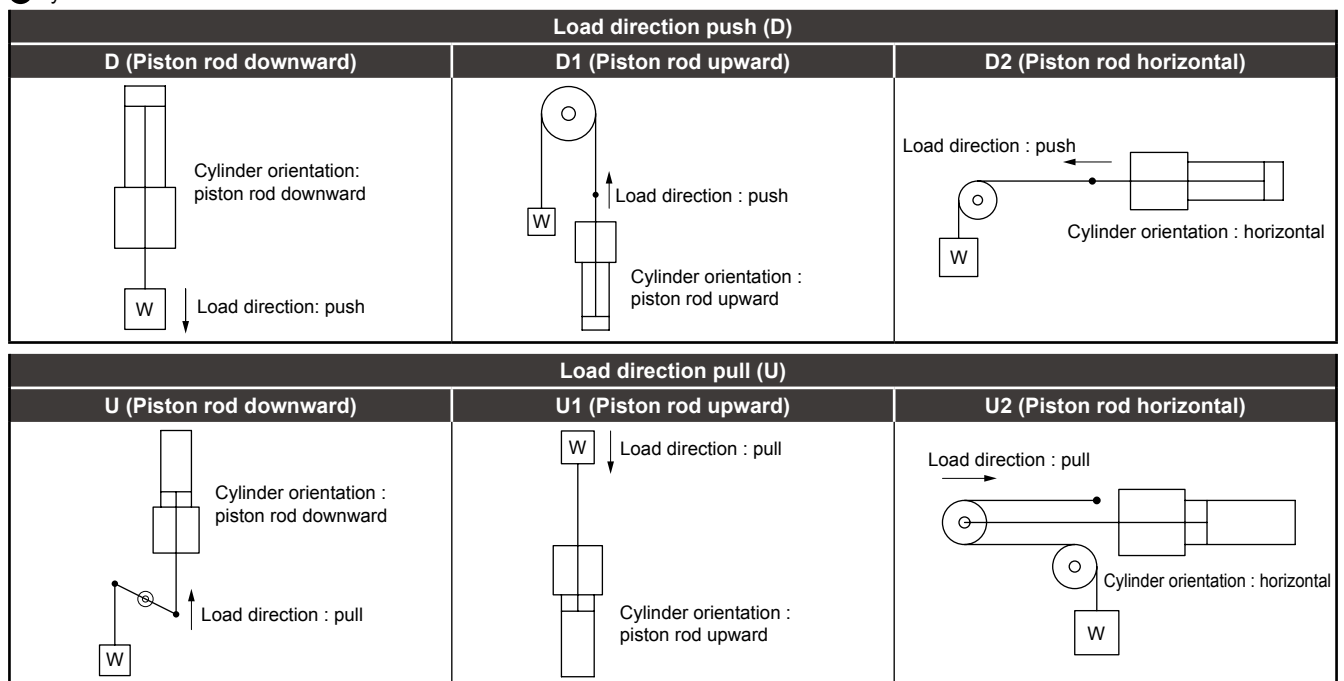


Code	Content
A Type	
Blank	Electric (24 VDC)
A	Pneumatic *4
B Load direction	
D	Push type
U	Pull type
C Cylinder orientation (piston rod direction)	
Blank	Downward
1	Upward
2	Horizontal
D Mounting	
OO	Basic
CA	Eye bracket (φ50, φ63) (pin and snap ring attached)
CB	Clevis bracket (φ80, φ100) (pin and snap ring attached)
FA	Rod side flange
FB	Head side flange
E Bore size (mm)	
50	φ50
63	φ63
80	φ80
100	φ100
F Stroke length (mm)	
	100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500
G Accessory	
I	Rod eye
Y	Rod clevis (pin and snap ring attached)

⚠ Precautions for model No. selection

- *1 : The load direction refers to the input direction of the load to the cylinder.
The cylinder orientation is when installed. Refer to the figure below.
- *2 : Mounting bracket will be shipped with the product.
- *3 : "I" and "Y" cannot be selected together.
- *4 : When the automatic pressure adjustment is selected for the air method, be sure to use the control box (BBS-A-TB Page 1225).

C Cylinder orientation



How to order mounting bracket

Bore size (mm)	φ50	φ63	φ80	φ100
Mounting bracket				
Flange (FA)	BBS-FA-50	BBS-FA-63	BBS-FA-80	BBS-FA-100
Flange (FB)	SCM-FA-50	SCM-FA-63	SCM-FA-80	SCM-FA-100
Eye bracket (CA)	SCM-CA-50	SCM-CA-63	-	-
Clevis bracket (CB)	-	-	SCM-CB-80	SCM-CB-100

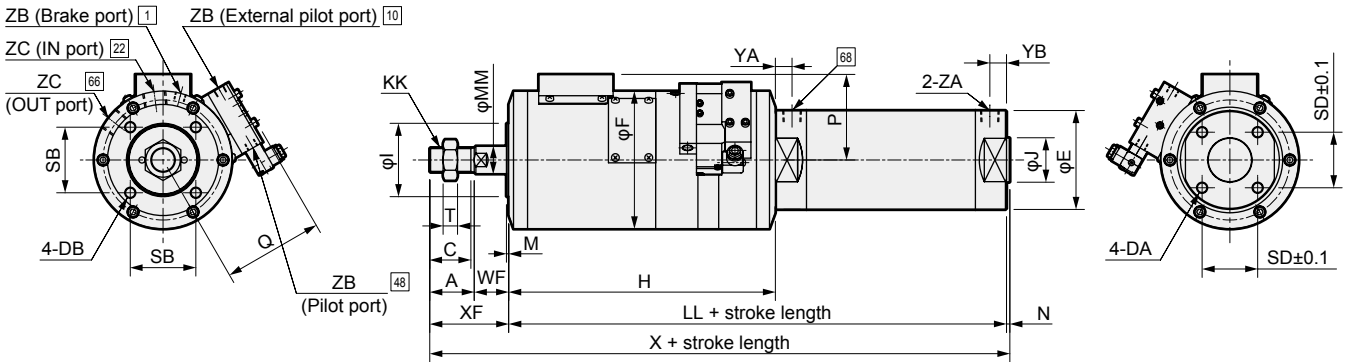
Note : All mounting brackets have mounting bolts attached.

- LCW
- LCR
- LCG
- LCX
- LCM
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCC2
- RCS
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS**
- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending

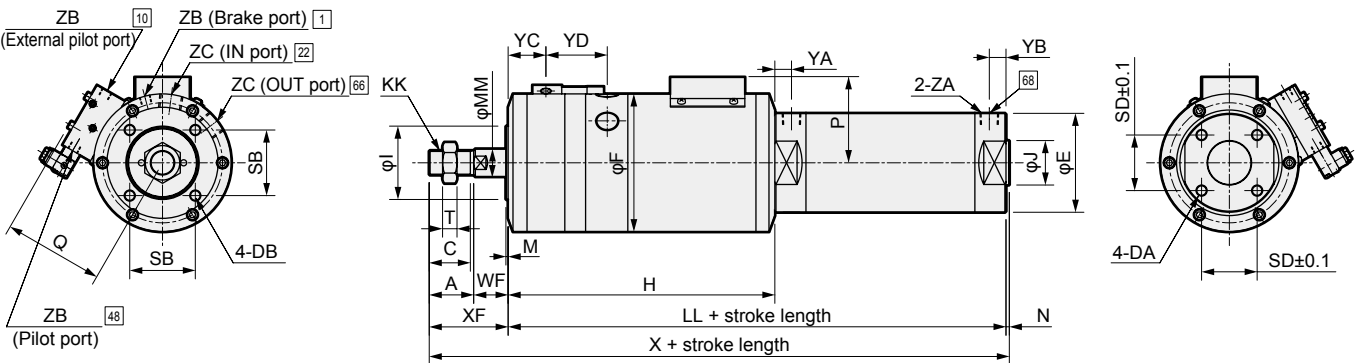
BBS-A Series

Dimensions

● Basic (00) Load direction push (D)



● Basic (00) Load direction pull (U)



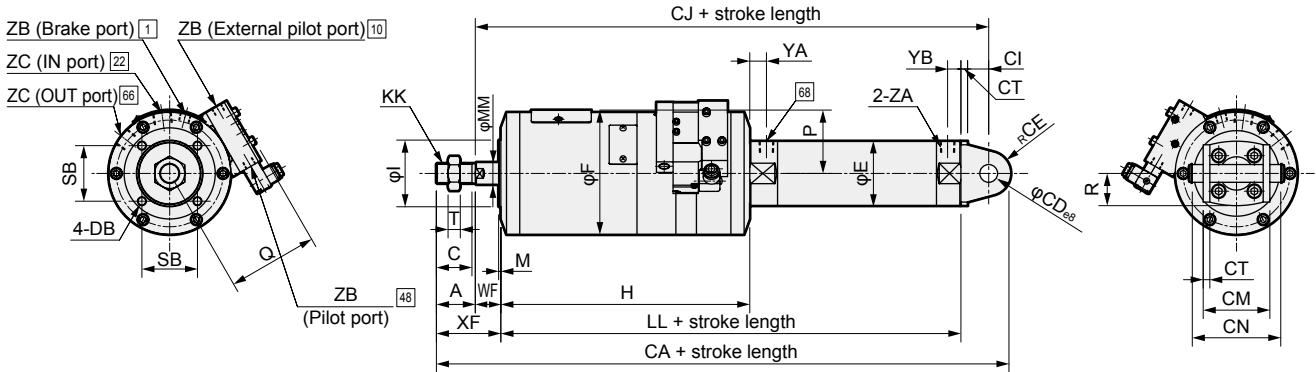
Note: □ contains the piping connection number of the air circuit diagram.

Code	A	C	DA		DB	E	F	H	I	J	KK	LL	MM				
Bore size (mm)																	
φ50	35	32	M8 × 1.25 depth 16		M8 × 1.25 depth 15	58	110	224	60	30	M18×1.5	314	20				
φ63	35	32	M10 × 1.5 depth 16		M8 × 1.25 depth 15	72	110	224	60	32	M18×1.5	314	20				
φ80	40	37	M10 × 1.5 depth 22		M10 × 1.5 depth 15	89	124	240	66	40	M22×1.5	348	25				
φ100	40	37	M12 × 1.5 depth 22		M10 × 1.5 depth 15	110	124	240	66	50	M22×1.5	348	25				
Code	M	N	P	Q	SB	SD	T	WF	X	XF	YA	YB	YC	YD	ZA	ZB	ZC
Bore size (mm)																	
φ50	2	2	57	81	50	32	11	23	374	58	15	12	32	52	Rc1/4	Rc1/8	Rc3/8
φ63	2	2	57	81	50	38	11	23	374	58	15	12	32	52	Rc1/4	Rc1/8	Rc3/8
φ80	2	3	77	90	59	50	13	31	422	71	15	15	34	55.7	Rc3/8	Rc1/8	Rc1/2
φ100	2	3	77	90	59	60	13	31	422	71	15	15	34	55.7	Rc1/2	Rc1/8	Rc1/2

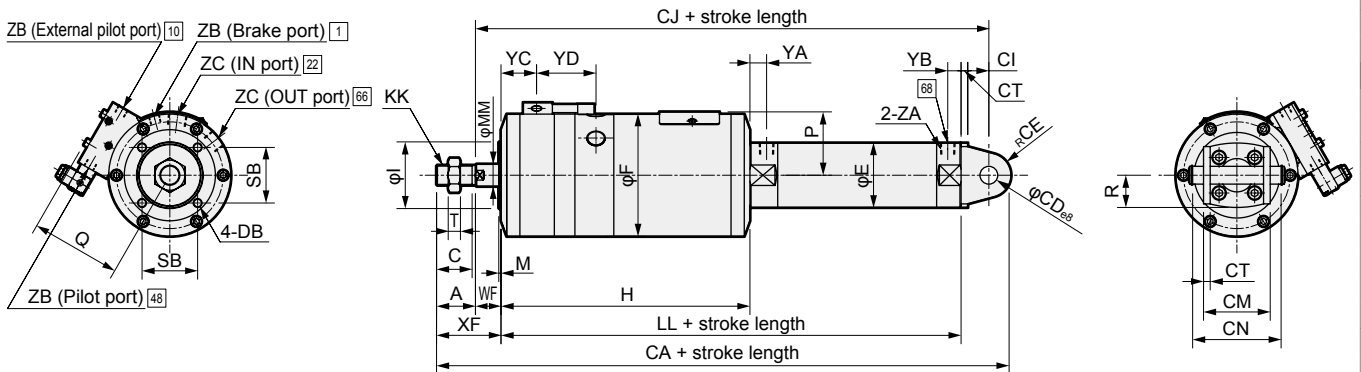
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Dimensions

- Eye bracket (CA) Load direction push (D)



- Eye bracket (CA) Load direction pull (U)



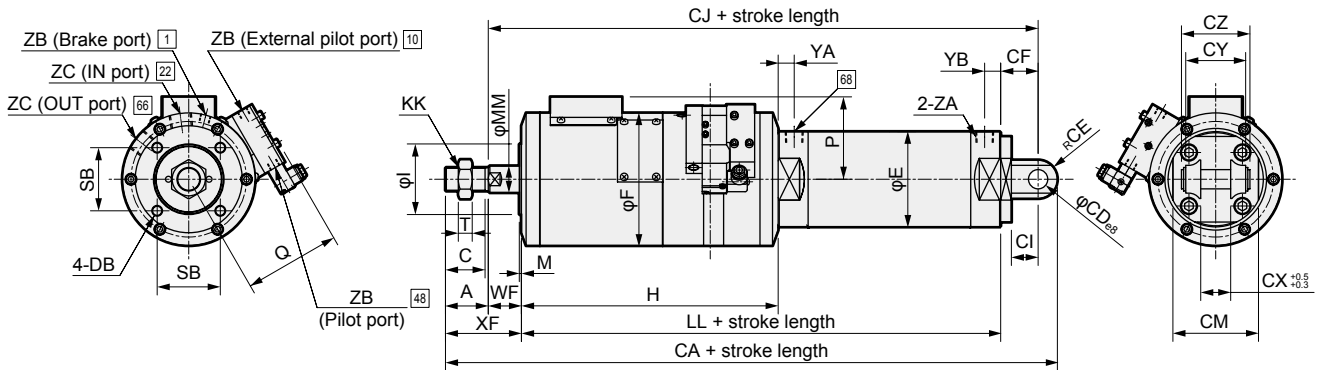
Note : □ contains the piping connection number of the air circuit diagram.

Code	A	C	DB	E	F	H	I	KK	LL	MM	M	P	Q	R	SB	T	
Code																	
Bore size (mm)																	
φ50	35	32	M8 × 1.25 depth 15	58	110	224	60	M18×1.5	314	20	2	57	81	29	50	11	
φ63	35	32	M8 × 1.25 depth 15	72	110	224	60	M18×1.5	314	20	2	57	81	36	50	11	
Code																	
Bore size (mm)																	
φ50	WF	XF	CA	CD	CE	CI	CT	CJ	CM	CN	YA	YB	YC	YD	ZA	ZB	ZC
φ50	23	58	417	16	20	19	6	362	60	79.6	15	12	32	52	Rc1/4	Rc1/8	Rc3/8
φ63	23	58	424	18	22	22	8	367	74	97.8	15	12	32	52	Rc1/4	Rc1/8	Rc3/8

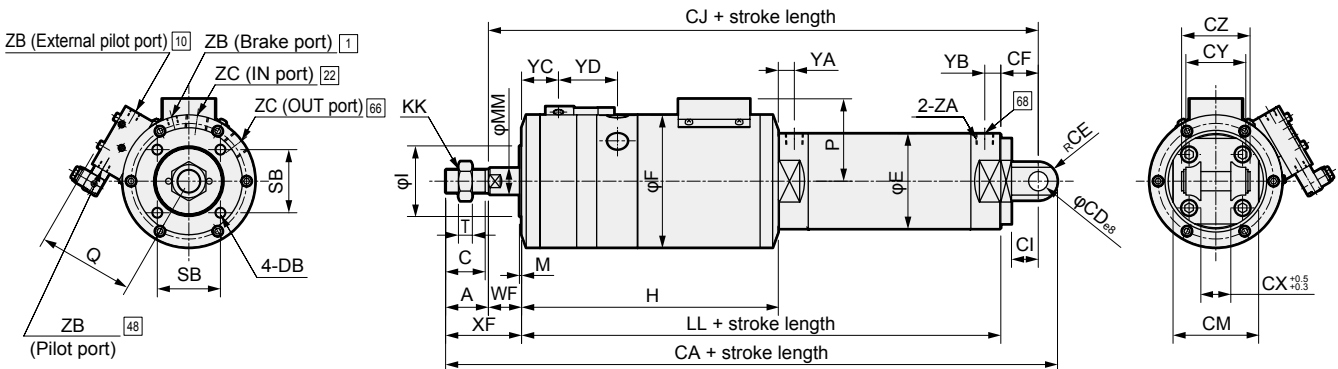
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- LCG
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- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCC2
- RCS
- PCC
- SHC
- MCP
- GLC
- MFC
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- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
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- FK
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- Ending

Dimensions

● Clevis bracket (CB) Load direction push (D)



● Clevis bracket (CB) Load direction pull : (U)



Note : □ contains the piping connection number of the air circuit diagram.

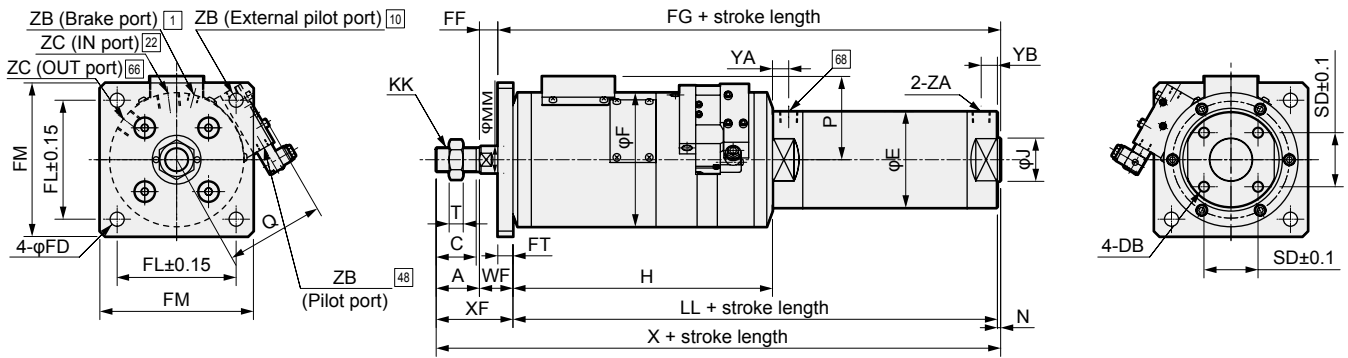
Code	A	C	DB		E	F	H	I	KK	LL	MM	M	P	Q	SB	T
Bores size (mm)																
φ80	40	37	M10 × 1.5	15	89	124	240	66	M22 × 1.5	348	25	2	77	90	59	13
φ100	40	37	M10 × 1.5	15	110	124	240	66	M22 × 1.5	348	25	2	77	90	59	13

Code	WF	XF	CA	CD	CE	CF	CI	CJ	CM	CX	CY	CZ	YA	YB	YC	YD	ZA	ZB	ZC
Bores size (mm)																			
φ80	31	71	472	18	18	35	25	414	80	28	56	64	15	15	34	55.7	Rc3/8	Rc1/8	Rc1/2
φ100	31	71	484	22	22	43	31	422	100	32	64	72	15	15	34	55.7	Rc1/2	Rc1/8	Rc1/2

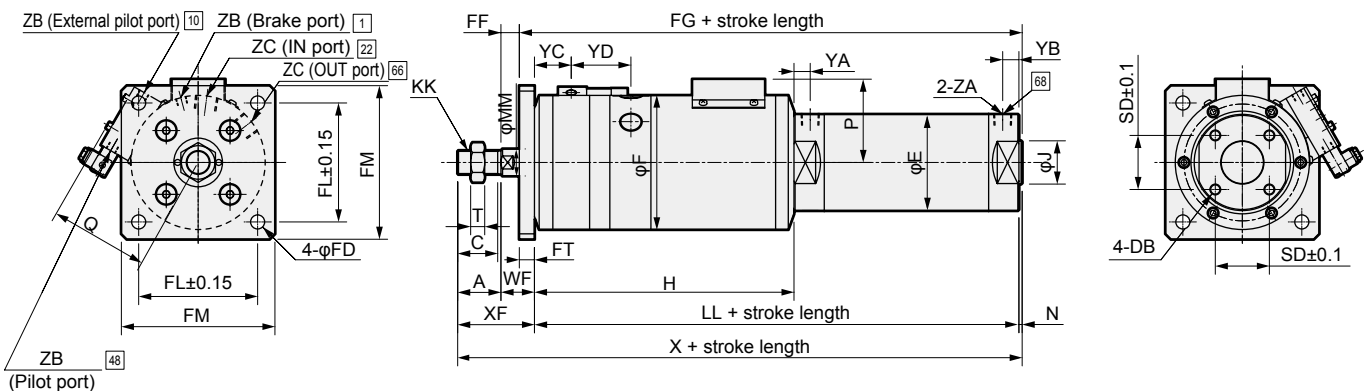
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- LCR
- LCG
- LCX
- LCM
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCC2
- RCS
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS**
- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending

Dimensions

- Rod side flange (FA) Load direction push (D)



- Rod side flange (FA) Load direction pull : (U)



Note : □ contains the piping connection number of the air circuit diagram.

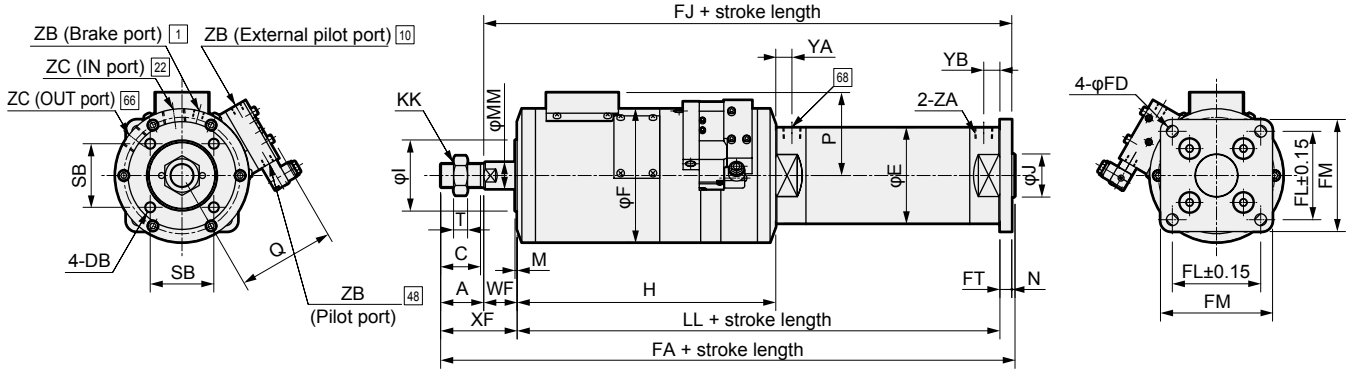
Code	A	C	DB	E	F	H	J	KK	LL	MM	N	P	Q	SD
Bores size (mm)														
φ50	35	32	M8 × 1.25 depth 16	58	110	224	30	M18×1.5	314	20	2	57	81	32
φ63	35	32	M10 × 1.5 depth 16	72	110	224	32	M18×1.5	314	20	2	57	81	38
φ80	40	37	M10 × 1.5 depth 22	89	124	240	40	M22×1.5	348	25	3	77	90	50
φ100	40	37	M12×1.75 depth 22	110	124	240	50	M22×1.5	348	25	3	77	90	60

Code	T	WF	X	XF	FD	FF	FG	FL	FM	FT	YA	YB	YC	YD	ZA	ZB	ZC
Bores size (mm)																	
φ50	11	23	374	58	11	11	328	95	120	12	15	12	32	52	Rc1/4	Rc1/8	Rc3/8
φ63	11	23	374	58	11	11	328	95	120	12	15	12	32	52	Rc1/4	Rc1/8	Rc3/8
φ80	13	31	422	71	13	17	365	110	142	14	15	15	34	55.7	Rc3/8	Rc1/8	Rc1/2
φ100	13	31	422	71	13	17	365	110	142	14	15	15	34	55.7	Rc1/2	Rc1/8	Rc1/2

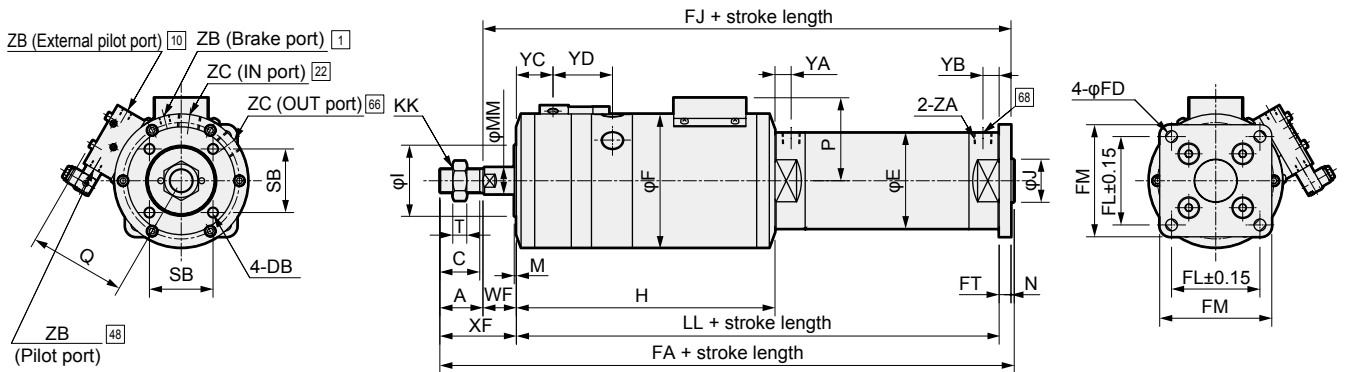
- LCW
- LCR
- LCG
- LCX
- LCM
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCC2
- RCS
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS**
- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending

Dimensions

● Head side flange (FB) Load direction push (D)



● Head side flange (FB) Load direction pull : (U)



Note : □ contains the piping connection number of the air circuit diagram.

Code	A	C	DB	E	F	H	I	J	KK	LL	MM	M	N	P	Q		
Bore size (mm)																	
φ50	35	32	M8 × 1.25 depth 15	58	110	224	60	30	M18×1.5	314	20	2	2	57	81		
φ63	35	32	M8 × 1.25 depth 15	72	110	224	60	32	M18×1.5	314	20	2	2	57	81		
φ80	40	37	M10 × 1.5 depth 15	89	124	240	66	40	M22×1.5	348	25	2	3	77	90		
φ100	40	37	M10 × 1.5 depth 15	110	124	240	66	50	M22×1.5	348	25	2	3	77	90		
Code	SB	T	WF	XF	FA	FD	FJ	FL	FM	FT	YA	YB	YC	YD	ZA	ZB	ZC
Bore size (mm)																	
φ50	50	11	23	58	383	9	346	58	76	9	15	12	32	52	Rc1/4	Rc1/8	Rc3/8
φ63	50	11	23	58	383	11	346	70	92	9	15	12	32	52	Rc1/4	Rc1/8	Rc3/8
φ80	59	13	31	71	433	11	390	82	104	11	15	15	34	55.7	Rc3/8	Rc1/8	Rc1/2
φ100	59	13	31	71	436	13	393	100	128	14	15	15	34	55.7	Rc1/2	Rc1/8	Rc1/2

Control box (for electric)

How to order

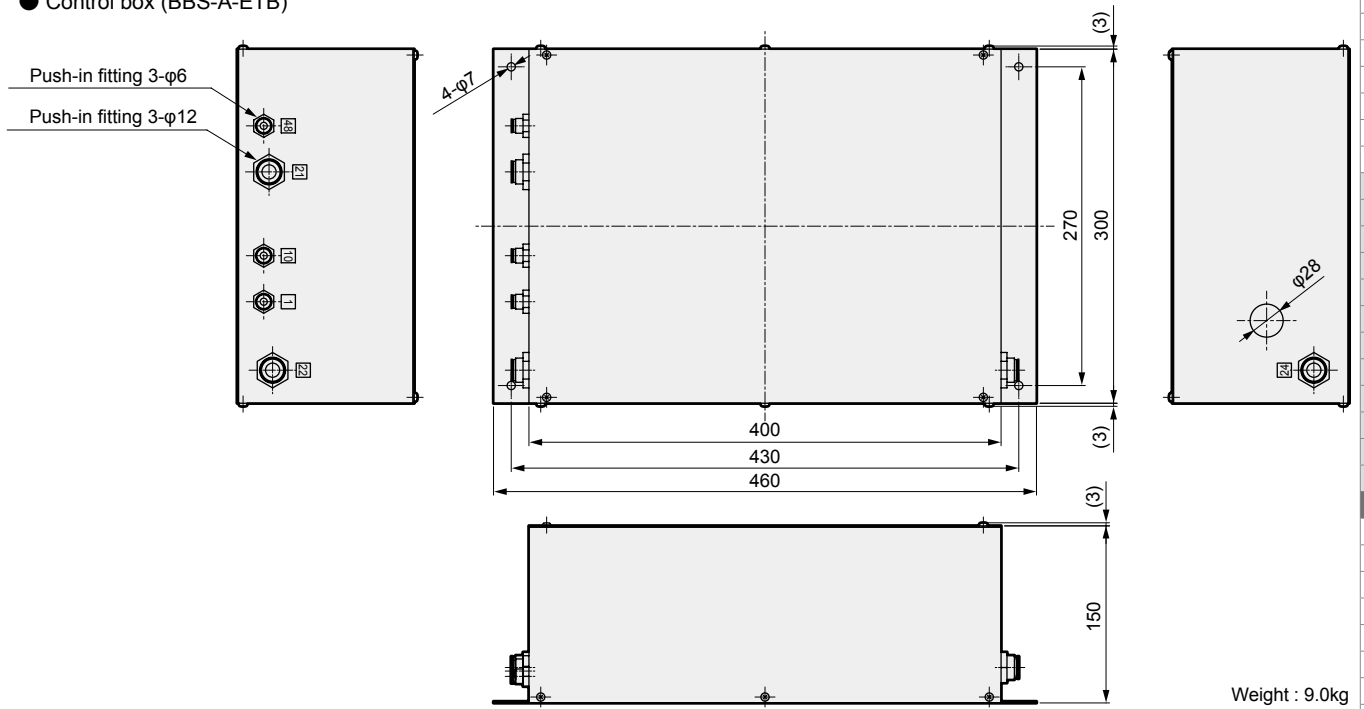
BBS-A - ETB

Auto pressure
adjustment
balancer unit Control box

Custom order circuits are available to suit customer usage criteria. Contact CKD for details.

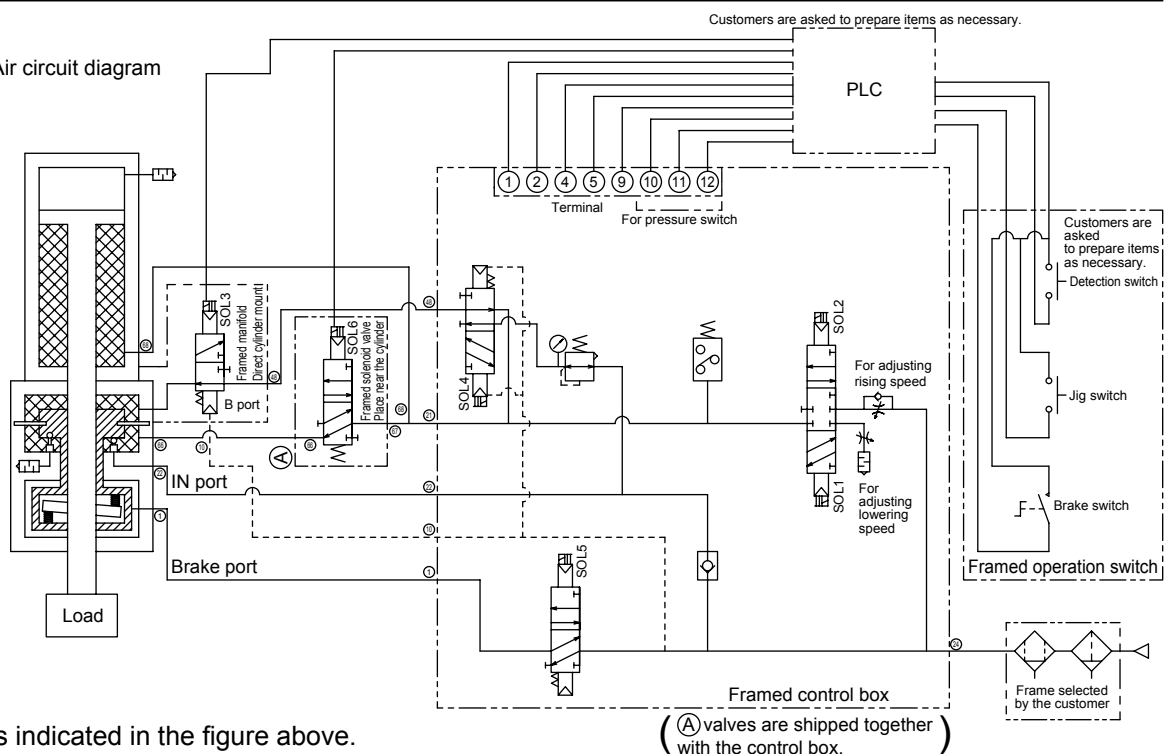
Dimensions

● Control box (BBS-A-ETB)



Air circuit diagram

● Control box (BBS-A-ETB) Air circuit diagram



D (push load) is indicated in the figure above.
For U (pull load), the piping to the cylinder is on the head side.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Control box (for electric, 2-stage speed switchable)

How to order

BBS-A - ETB2

Auto pressure
adjustment
balancer unit

Control box

Custom order circuits are available to suit customer usage criteria. Contact CKD for details.

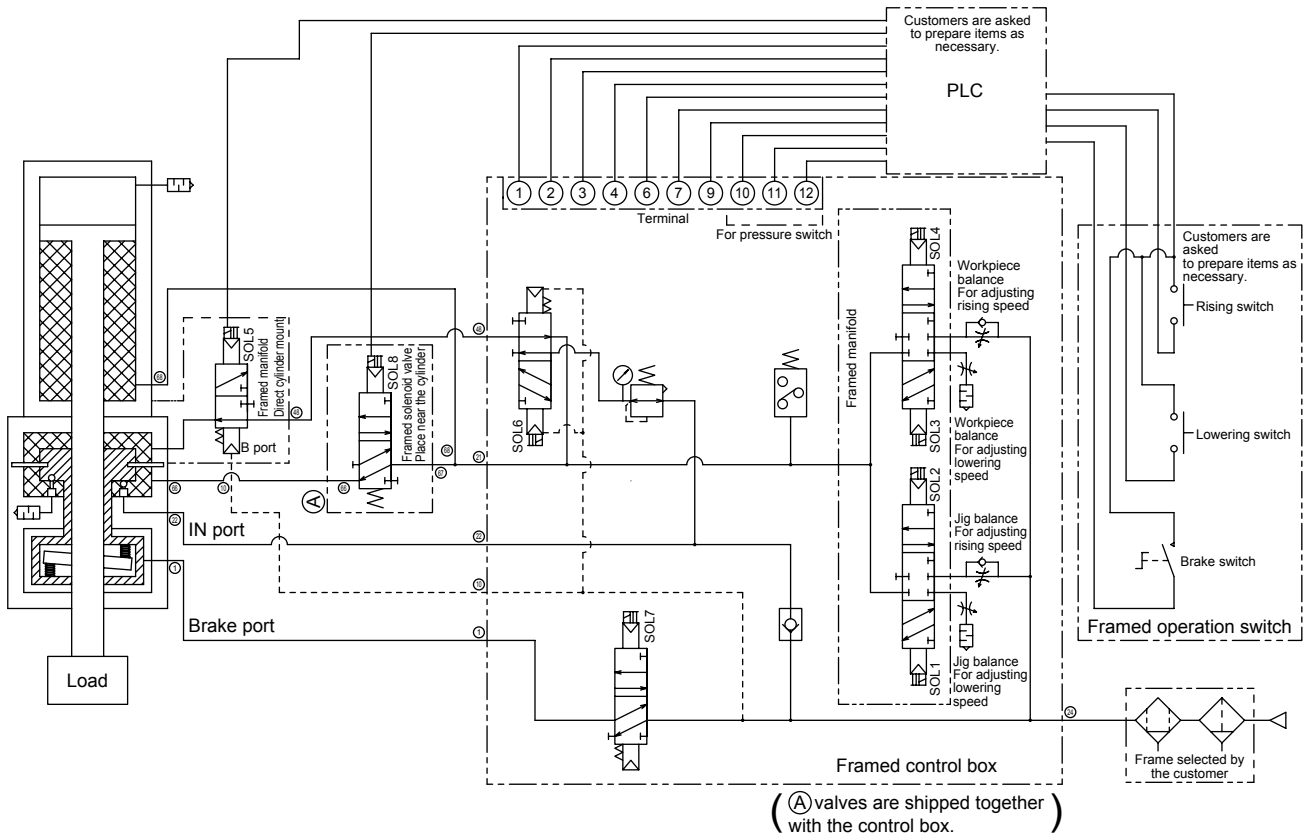
Dimensions

- Same as control box (BBS-A-ETB). Refer to page 1223.

Weight: 9.5kg

Air circuit diagram

- Control box (BBS-A-ETB2) air circuit diagram



D (push load) is indicated in the figure above.

For U (pull load), the piping to the cylinder is on the head side.

Control box (for pneumatic)

How to order

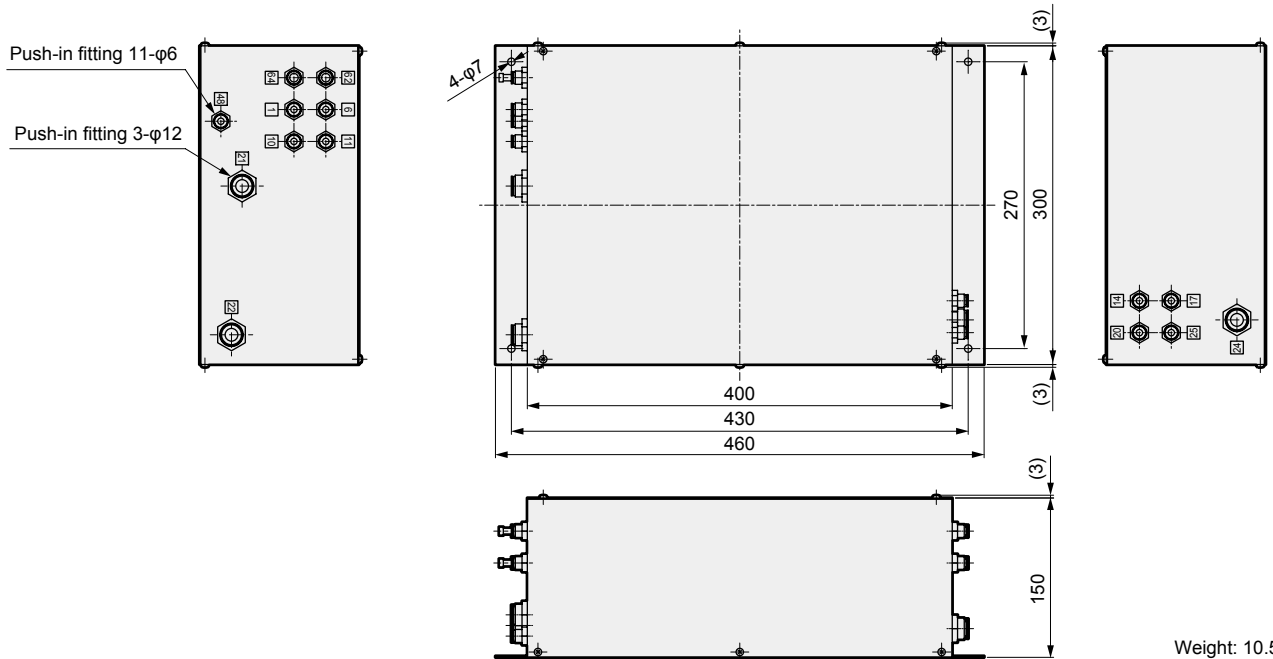
BBS-A - TB

Automatic pressure
adjustment
balancer unit Control box

Custom order circuits are available to suit customer usage criteria. Contact CKD for details.

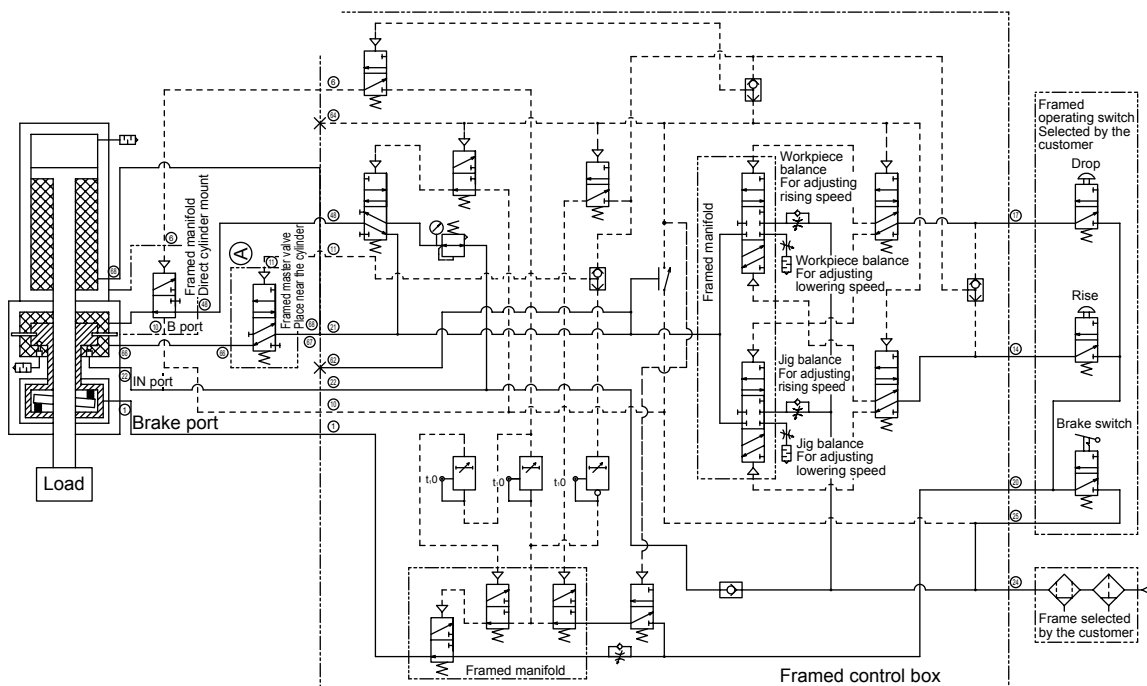
Dimensions

● Control box (BBS-A-TB)



Air circuit diagram

● Control box (BBS-A-TB) air circuit diagram



D (push load) is indicated in the figure above.
For U (pull load), the piping to the cylinder is on the head side.

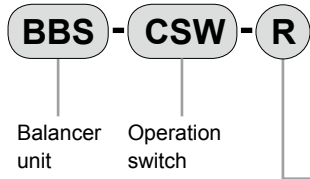
(A) valves are shipped together with the control box.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

BBS-A Series

Operation switch (for pneumatic)

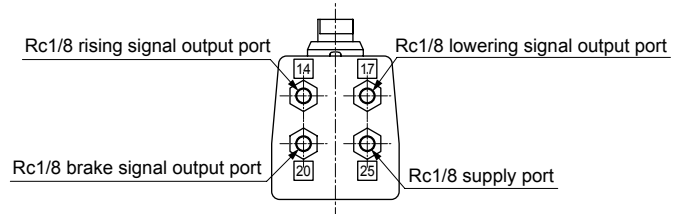
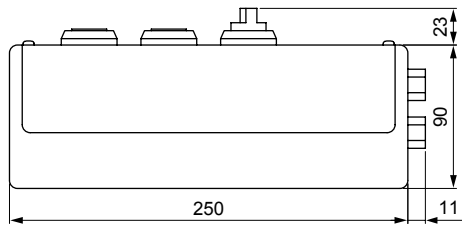
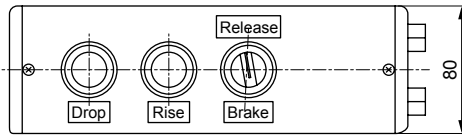
How to order



Code	Content
A Type	
P	Push
H	Hand
R	Lever
G	Grip

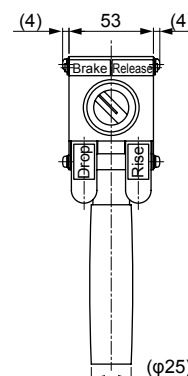
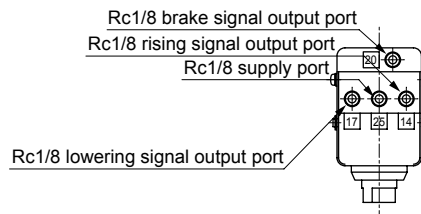
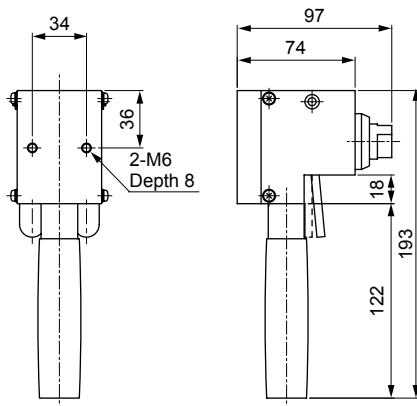
Operation switch outline drawing

● Push (BBS-CSW-P)



Weight : 1.4kg

● Hand (BBS-CSW-H)

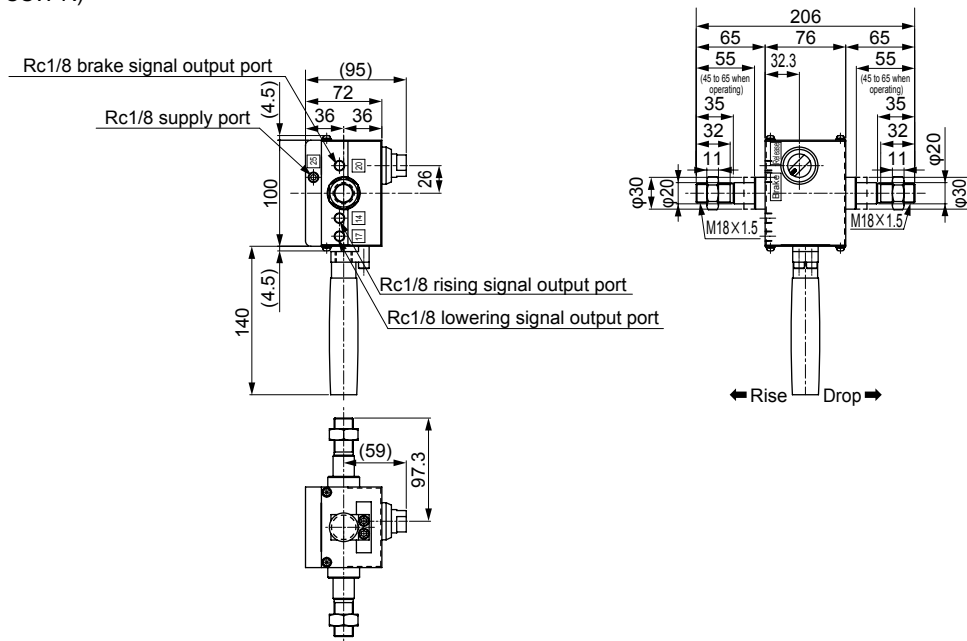


Weight : 1.0kg

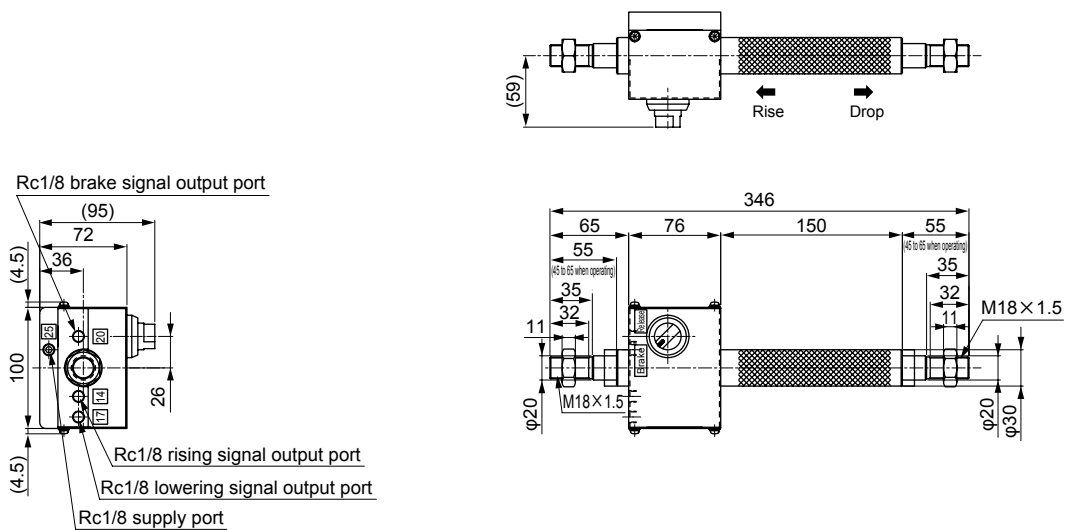
- LCW
- LCR
- LCG
- LCX
- LCM
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCC2
- RCS
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS**
- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending

Operation switch outline drawing

● Lever (BBS-CSW-R)



● Grip (BBS-CSW-G)

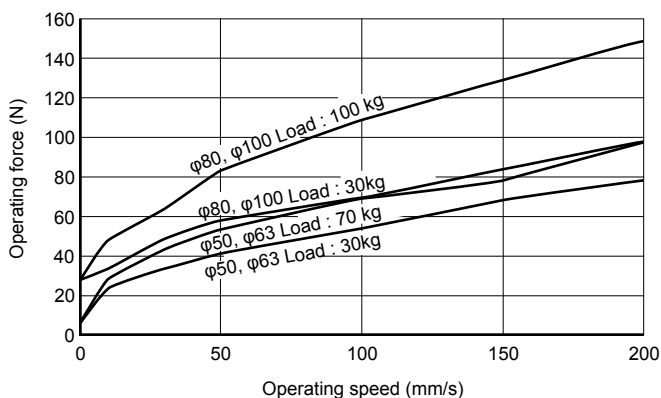


Weight : 2.0kg

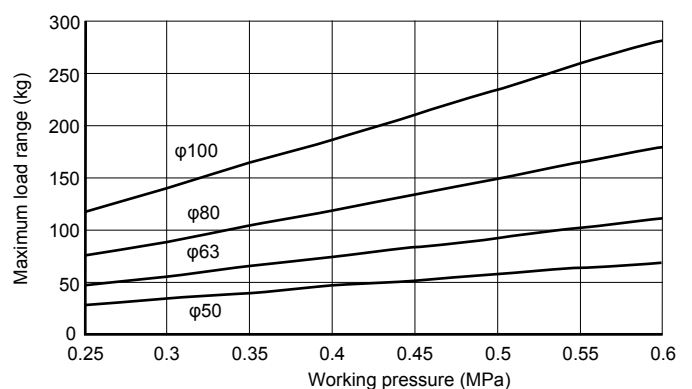
Weight : 2.5kg

Assemble the lever and grip operation switch to the piston rod before use.
Adapters for assembly are also available. Contact CKD.

Operating force



Maximum load range versus working pressure



LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
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FJ
FK
SpdContr
Ending



Balancer unit
Fixed pressure adjustment
Control box separate

Control box integrated

BBS-O Series BBS-OB Series

● Bore size : $\phi 50$, $\phi 63$, $\phi 80$, $\phi 100$



Specifications

Model No.	BBS-O-50	BBS-O-63	BBS-O-80	BBS-O-100
Descriptions				
Working fluid	Clean compressed air			
Max. working pressure MPa	0.60 (≈ 87 psi, 6 bar)			
Min. working pressure MPa	0.25 (≈ 36 psi, 2.5 bar)			
Proof pressure MPa	0.90 (≈ 130 psi, 9 bar)			
Ambient temperature $^{\circ}\text{C}$	-5 (23 $^{\circ}\text{F}$) to 50 (122 $^{\circ}\text{F}$) (no freezing)			
Bore size mm	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
Max. stroke length mm	1500			
Working piston speed mm/s	1 to 200			
Cushion	Rubber cushion			
Lubrication	Not available			
Minimum load range kg	10	16	25	40
Maximum load range *1 kg	70	115	180	285
Operating force N	Refer to page 1227 BBS working force documentation			
Holding force N	1539		3940	

*1 : Refer to page 1227 for details about the maximum load range versus BBS working pressure.

Stroke length

Model	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
BBS-O	100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500	1500	100
BBS-OB	300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500	1500	300

Note : The custom stroke length is available in 1mm increments.

Weight table

● Control box separate BBS-O (Unit : kg)

Bore size (mm)	Product weight for 0 mm stroke length					Additional weight per 100 mm stroke length
	Basic (00)	Eye bracket (CA)	Clevis bracket (CB)	Flange		
				FA	FB	
$\phi 50$	7.22	7.62	—	8.35	7.56	0.44
$\phi 63$	7.52	8.20	—	8.65	8.02	0.52
$\phi 80$	10.96	—	11.67	12.88	11.67	0.70
$\phi 100$	12.09	—	13.37	14.01	13.44	0.86

● Control box integrated BBS-OB (Unit : kg)

Bore size (mm)	Product weight for 0 mm stroke length					Additional weight per 100 mm stroke length
	Basic (00)	Eye bracket (CA)	Clevis bracket (CB)	Flange		
				FA	FB	
$\phi 50$	11.14	11.54	—	12.27	11.48	0.58
$\phi 63$	11.44	12.12	—	12.57	11.94	0.66
$\phi 80$	14.78	—	15.49	16.70	15.49	0.84
$\phi 100$	15.91	—	17.19	17.83	17.26	1.00

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

How to order

BBS-O - D - CB - 80 D - 300 - Y

A Model No.

B Load direction
*1

C Mounting
*2

D Bore size

E Stroke length
*3

F Accessory
*4

Code	Content
A Model No.	
BBS-O	Control box separate (*5)
BBS-OB	Control box integrated
B Load direction	
D	Push type
U	Pull type
C Mounting	
OO	Basic
CA	Eye bracket (φ50, φ63) (pin and snap ring attached)
CB	Clevis bracket (φ80, φ100) (pin and snap ring attached)
FA	Rod side flange
FB	Head side flange
D Bore size (mm)	
50	φ50
63	φ63
80	φ80
100	φ100
E Stroke length (mm)	
100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500	
F Accessory	
I	Rod eye
Y	Rod clevis (pin and snap ring attached)

⚠ Precautions for model No. selection

- *1 : The load direction refers to the input direction of the load to the cylinder.
- *2 : Mounting bracket will be shipped with the product.
- *3 : The min. stroke length of BBS-OB is 300 mm.
- *4 : "I" and "Y" cannot be selected together.
- *5 : BBS-O control boxes are attached separately. Connect them to the cylinder yourself.

How to order mounting bracket

Bore size (mm)	φ50	φ63	φ80	φ100
Mounting bracket				
Flange (FA)	BBS-FA-50	BBS-FA-50	BBS-FA-80	BBS-FA-80
Flange (FB)	SCM-FA-50	SCM-FA-63	SCM-FA-80	SCM-FA-100
Eye bracket (CA)	SCM-CA-50	SCM-CA-63	—	—
Clevis bracket (CB)	—	—	SCM-CB-80	SCM-CB-100

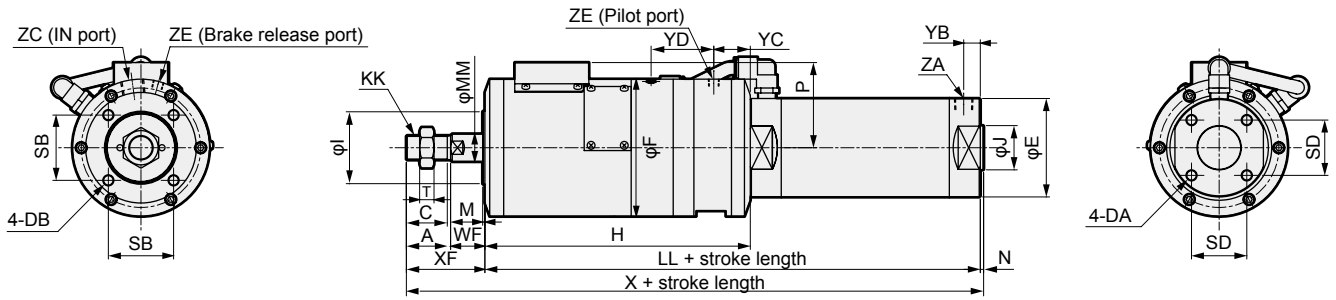
*1 : All mounting brackets have mounting bolts attached.

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

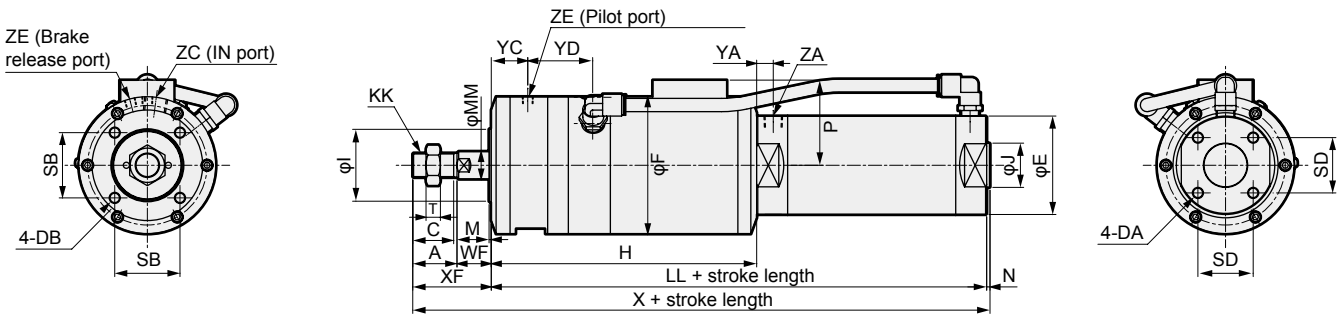
BBS-O Series

Dimensions

● Control box separated, basic (00), load direction push : (D)



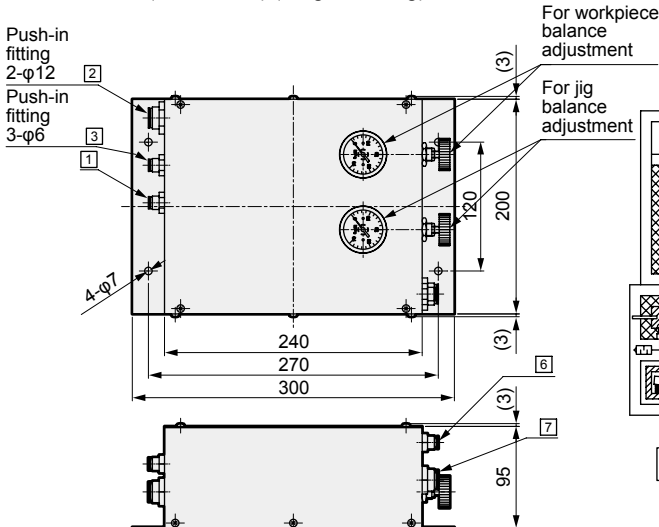
● Control box separated, basic (00), load direction pull : (U)



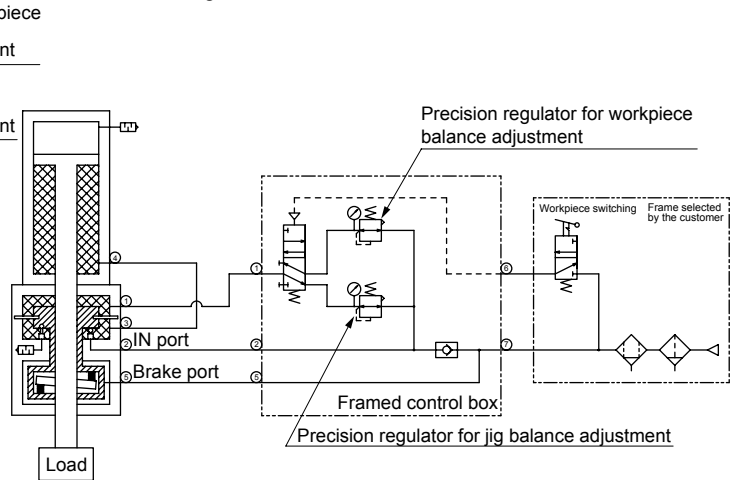
Code	A	C	DA	DB	E	F	H	I	J	KK	LL	MM	M	N
Bore size (mm)														
φ50	35	32	M8 × 1.25 depth 16	M8 × 1.25 depth 15	58	110	224	60	30	M18×1.5	314	20	2	2
φ63	35	32	M10 × 1.5 depth 16	M8 × 1.25 depth 15	72	110	224	60	32	M18×1.5	314	20	2	2
φ80	40	37	M10 × 1.5 depth 22	M10 × 1.5 depth 15	89	124	240	66	40	M22×1.5	348	25	2	3
φ100	40	37	M12 × 1.5 depth 22	M10 × 1.5 depth 15	110	124	240	66	50	M22×1.5	348	25	2	3

Code	P	SB	SD	T	WF	X	XF	YA	YB	YC	YD	ZA	ZE	ZC
Bore size (mm)														
φ50	57	50	32	11	23	374	58	15	12	37	48.5	Rc1/4	Rc1/8	Rc3/8
φ63	57	50	38	11	23	374	58	15	12	37	48.5	Rc1/4	Rc1/8	Rc3/8
φ80	77	59	50	13	31	422	71	15	15	33	56.7	Rc3/8	Rc1/8	Rc1/2
φ100	77	59	60	13	31	422	71	15	15	33	56.7	Rc1/2	Rc1/8	Rc1/2

● Control box (attachment) (weight : 3.7 kg)



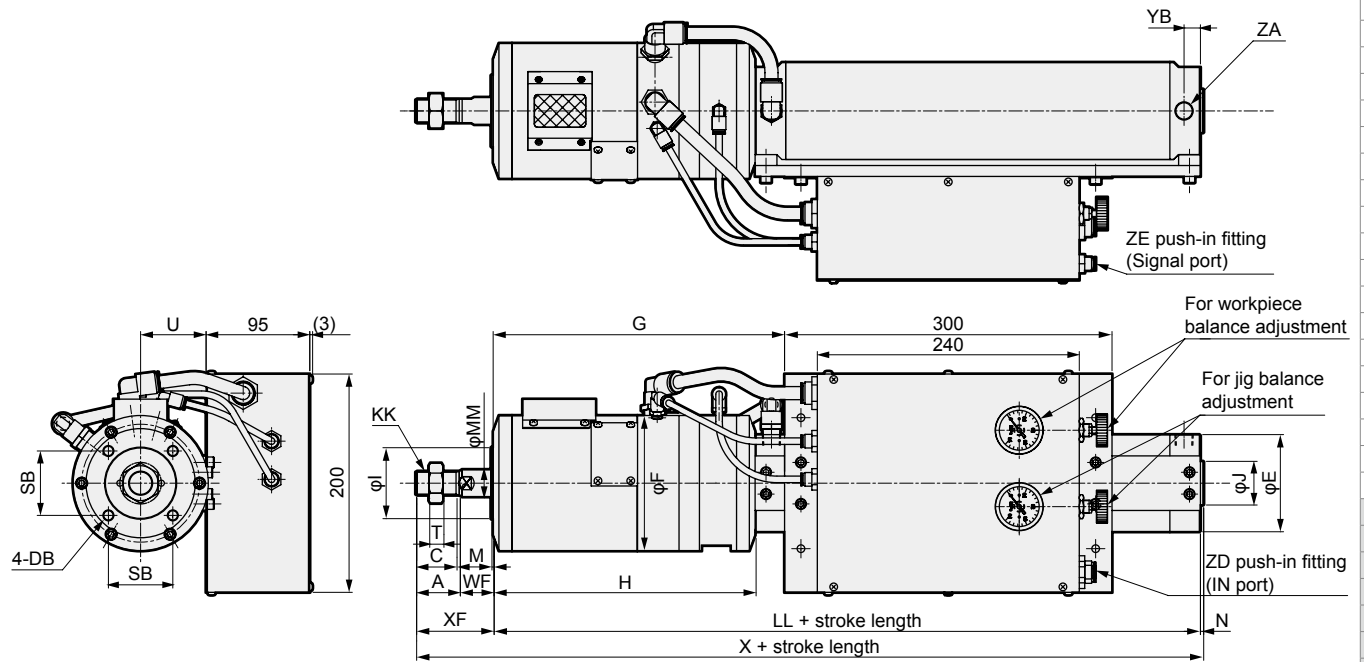
● Air circuit diagram



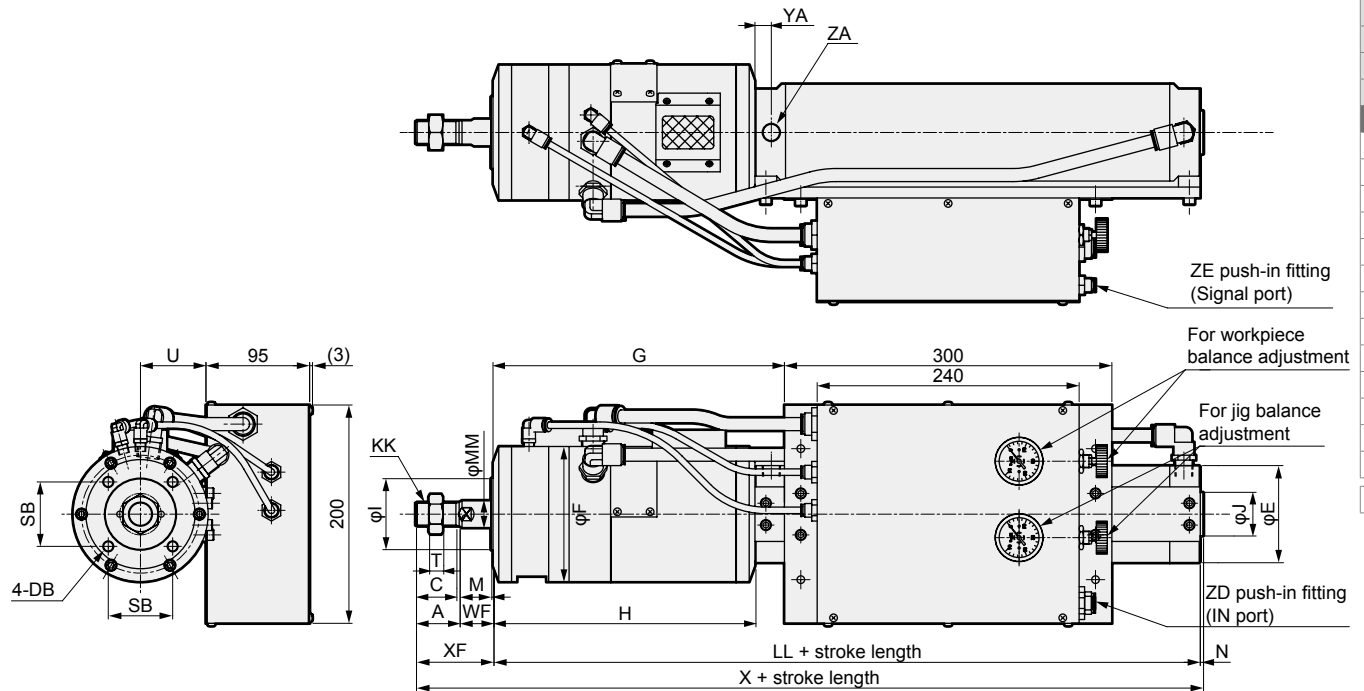
Mounting dimensions of each mounting are the same as BBS-A. Refer to pages 1219 to 1222.

Dimensions

- Control box integrated, basic (00), load direction push : (D)



- Control box integrated, basic (00), load direction pull : (U)



Code	A	C	(DA)	DB	E	F	G	H	I	J	KK	LL
φ50	35	32	M8 × 1.25 depth 16	M8 × 1.25 depth 15	58	110	248	224	60	30	M18 × 1.5	314
φ63	35	32	M10 × 1.5 depth 16	M8 × 1.25 depth 15	72	110	248	224	60	32	M18 × 1.5	314
φ80	40	37	M10 × 1.5 depth 22	M10 × 1.5 depth 15	89	124	267	240	66	40	M22 × 1.5	348
φ100	40	37	M12 × 1.5 depth 22	M10 × 1.5 depth 15	110	124	267	240	66	50	M22 × 1.5	348

Code	MM	M	N	SB	(SD)	T	U	WF	X	XF	YA	YB	ZA	ZD	ZE
φ50	20	2	2	50	32	11	47.5	23	374	58	15	12	Rc1/4	φ12	φ6
φ63	20	2	2	50	38	11	54.5	23	374	58	15	12	Rc1/4	φ12	φ6
φ80	25	2	3	59	50	13	60	31	422	71	15	15	Rc3/8	φ12	φ6
φ100	25	2	3	59	60	13	70	31	422	71	15	15	Rc1/2	φ12	φ6

Mounting dimensions of each mounting are the same as BBS-A. Refer to pages 1219 to 1222.

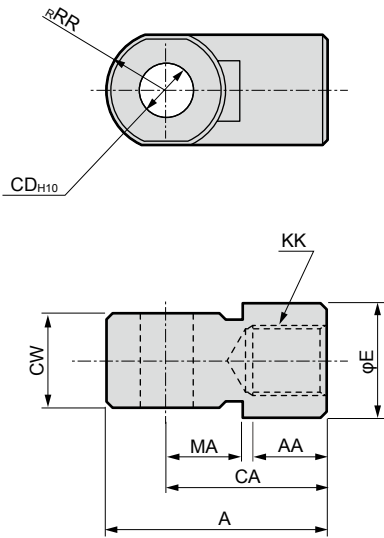
- LCW
- LCR
- LCG
- LCX
- LCM
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LM
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCC2
- RCS
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS**
- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending

Accessory dimensions

- LCW
- LCR
- LCG
- LCX
- LCM
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCC2
- RCS
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS**
- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending

● Rod eye

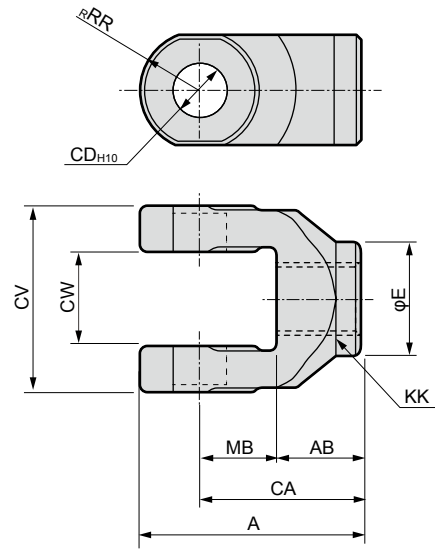
Material : Cast iron
Painting



No.	Bore size (mm)	A	AA	CA	CD	CW	E	KK	MA	RR	Weight (g)
SCM-I-50	50, 63	56	18	40	14	22 ^{-0.3}	28	M18×1.5	20	16	158
SCM-I-80	80, 100	71	21	50	18	28 ^{-0.3}	38	M22×1.5	27	21	395

● Rod clevis

Material : Cast iron
Painting

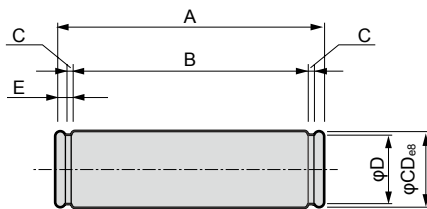


No.	Bore size (mm)	A	AB	CA	CD	CV	CW	E	KK	MB	RR	Pin No.	Weight (g)
SCM-Y-50	50, 63	56	20	40	14	44	22 ^{+0.5}	28	M18×1.5	20	16	SCM-P-50	258
SCM-Y-80	80, 100	71	23	50	18	56	28 ^{+0.5}	38	M22×1.5	27	21	SCM-P-80	590

Note : A pin and a snap ring are attached.

● Pin for clevis

Material : Steel
Zinc chromate plating treatment

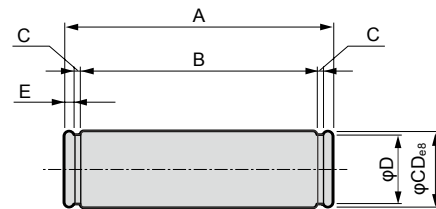


No.	Bore size (mm)	A	B	C	CD	D	E	Applicable snap ring	Weight (g)
SCM-P1-50	50	86	79.6	1.15	16	15.2	2.1	C type for shaft 16	133
SCM-P1-63	63	105.4	97.8	1.35	18	17	2.5	C type for shaft 18	207

*1 : For bore sizes φ80 and φ100, the dimension is the same as the pin for rod eye.

● Rod eye pin

Material : Steel
Zinc chromate plating treatment



No.	Bore size (mm)	A	B	C	CD	D	E	Applicable snap ring	Weight (g)
SCM-P-50	50, 63	50.6	44.2	1.15	14	13.4	2.1	C type for shaft 14	60
SCM-P-80	80, 100	64	56.2	1.35	18	17	2.6	C type for shaft 18	126