

Pneumatic Link Clamp

Model WCA

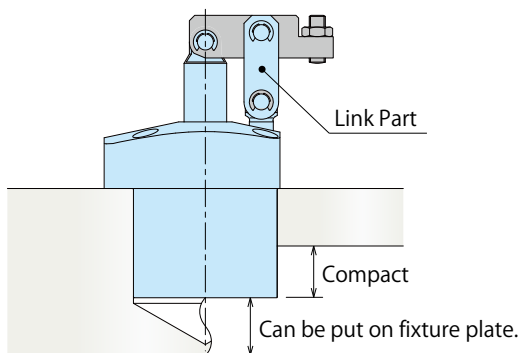


Compact Cylinder with Built-in Link Mechanism

Not required to design the link mechanism.

- **Compact and Easy to Use**

Since the link part is built in clamp body, it is not necessary to design link part separately. It eliminates design and manufacturing precise link mechanism. (Only clamp arm needs to be manufactured.)



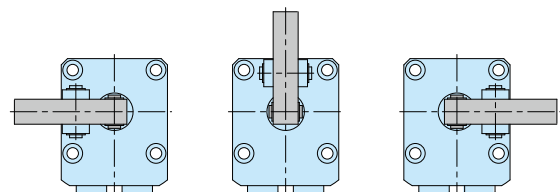
- **There are 3 levers in three different locations.**

Lever Direction (from the view of pipe)

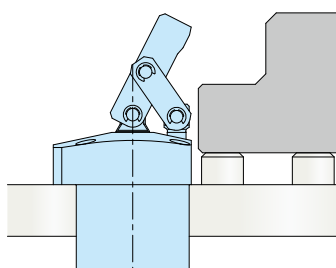
L : Left

C : Center

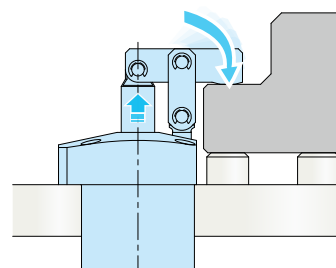
R : Right



Action Description

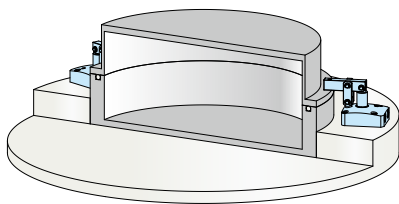


Released State

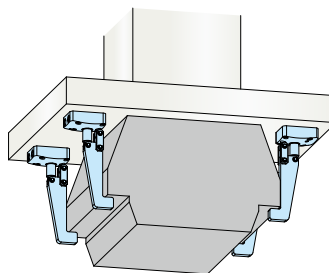


Locked State

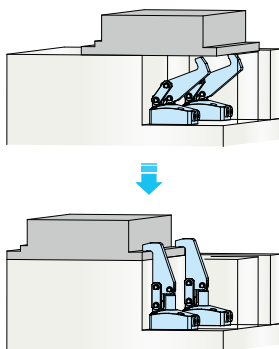
Application Examples



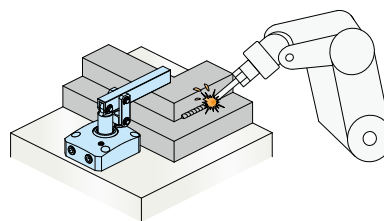
For improvement of leak-tester set up



For transfer and gantry loader



Minor change on the lever to prevent interference during workpiece transfer



For welding process
※ Please contact us.

Options

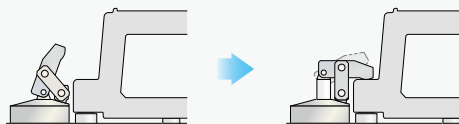
Standard Model

Model **WCA**

External Dimensions
→ P.299



Link Clamp Mechanism



Action Description

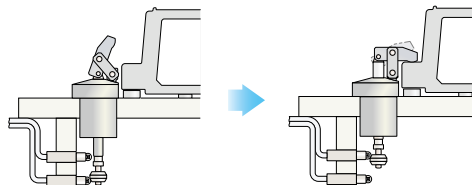
Double End Rod Option for Dog

Model **WCA-D**

External Dimensions
→ P.301



Piston rod condition
can be detected by
a switch etc



Option

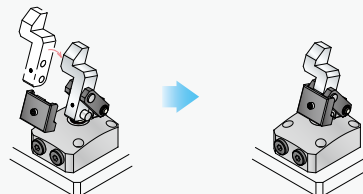
Quick Change Lever Option A

Model **WCA-A**

External Dimensions
→ P.303



Quick and easy to change
levers with Quick Change
Lever Option A



Accessories

Lever

Model **WCZ-L**



→ P.306

Tightening Kit

(For Quick Change Lever Option A)

Model **LZK-W**



→ P.306

Manifold Block

Model **WHZ-MD**



→ P.1335

Speed Control Valve

Model **BZW**



→ P.309

High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic Unit

Manual Operation
Accessories

Cautions / Others

Pneumatic
Hole Clamp

SWA

Pneumatic
Swing Clamp

WHA

Double Piston
Pneumatic Swing Clamp

WHD

Pneumatic
Link Clamp

WCA

Air Flow
Control Valve

BZW

Pneumatic
Expansion Locating Pin

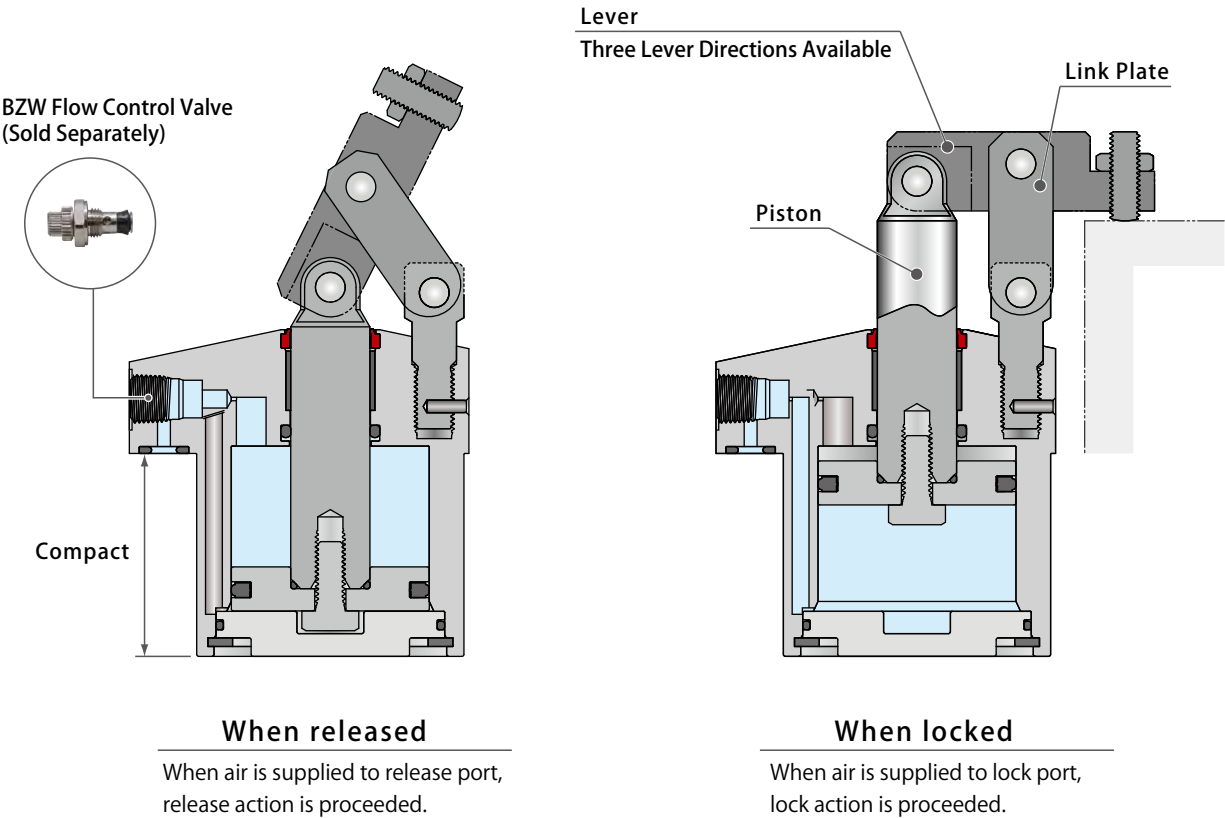
VWM

VWK

Pneumatic
Sensor Pin

WWA

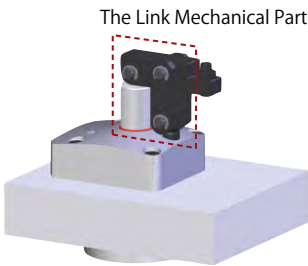
Action Description



The link mechanical section is in body

Since the link mechanism is built in, cost reduction for design and production is possible.

Design Cost	Only required to select the clamp and design the lever. (When using with linear cylinder, it is required to design the link mechanical part, capacity and dimensions.)
Production Cost	Only lever needs to be manufactured. High precision fixture machining is eliminated.
External Dimensions	Building link part in body makes it possible to fit in fixture and plate. (For Linear cylinders, large space is required as the dimensions of Linear cylinder are bigger compared to mechanical link mechanisms)
Maintenance	Only Top plate to be maintained. Or take off the clamps easily.
Other (Piping)	All piping work is done since pipes go through only inside the fixture and under the flange. (The outside piping type is also available.)



Excellent Coolant Resistance

Our exclusive dust seal is designed to protect against high pressure coolant.
It also has high durability against chlorine-based coolant by using a sealing material with excellent chemical resistance.

Able to Attach Speed Control Valve Directly

When using the gasket (piping option -A) as piping method, it is available for directly mounting the speed control valve (BZW-B) with air venting function (speed control valve is sold separately).

Model No. Indication

WCA 040 1 - 2 A R -

1 2 3 4 5 6

1 Cylinder Inner Diameter

032 : Cylinder Inner Diameter=φ 32mm

040 : Cylinder Inner Diameter=φ 40mm

050 : Cylinder Inner Diameter=φ 50mm

063 : Cylinder Inner Diameter=φ 63mm

2 Design No.

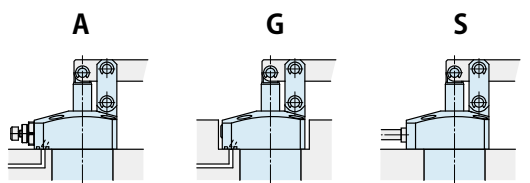
1 : Revision Number

3 Piping Method

A : Gasket Option (With Ports for Speed Controller)

G : Gasket Option (with R Thread Plug)

S : Piping Option (Rc Thread)



Gasket Option

Piping Option

With R Thread Plug (able to attach Speed Control Valve)
(Order the valve separately)
Recommended : BZW-B

With R Thread Plug

Rc Thread
No Gasket Port

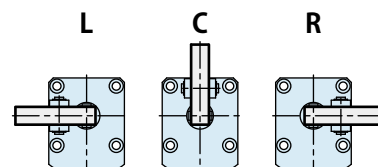
※ Speed control valve (BZW) is sold separately. Please refer to P.309.

4 Lever Direction

L : Left

C : Center

R : Right



5 Action Confirmation Method

Blank : None (Standard)

D : Double End Rod Option for Dog

Blank



D



6 Option

Blank : None (Standard)

A : Quick Change Lever Option A

Blank



A



High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic Unit

Manual Operation
Accessories

Cautions / Others

Pneumatic
Hole Clamp

SWA

Pneumatic
Swing Clamp

WHA

Double Piston
Pneumatic Swing Clamp

WHD

Pneumatic
Link Clamp

WCA

Air Flow
Control Valve

BZW

Pneumatic
Expansion Locating Pin

VWM

VWK

Pneumatic
Sensor Pin

WWA

Specifications

Model No.		WCA0321-2□□□-□	WCA0401-2□□□-□	WCA0501-2□□□-□	WCA0631-2□□□-□
Cylinder Inner Diameter ※1	mm	32	40	50	63
Rod Diameter ※1	mm	14	16	18	22
Action Confirmation 5 Blank	Cylinder Area for Locking	cm ²	8.04	12.57	19.63
	Clamping Force ※2 (Calculation Formula)	kN	$F = \frac{14.11 \times P}{L - 19.5}$	$F = \frac{23.76 \times P}{L - 21}$	$F = \frac{44.17 \times P}{L - 25}$
Action Confirmation 5 D	Cylinder Area for Locking	cm ²	7.26	11.44	18.10
	Clamping Force ※2 (Calculation Formula)	kN	$F = \frac{12.74 \times P}{L - 19.5}$	$F = \frac{21.61 \times P}{L - 21}$	$F = \frac{40.72 \times P}{L - 25}$
Full Stroke	mm	23	24.5	28.5	34
Lock Stroke	mm	20	21.5	25.5	31
Extra Stroke	mm	3	3	3	3
Max. Operating Pressure	MPa	1.0			
Min. Operating Pressure ※3	MPa	0.1			
Withstanding Pressure	MPa	1.5			
Operating Temperature	℃	0 ~ 70			
Usable Fluid		Dry Air			

Notes :

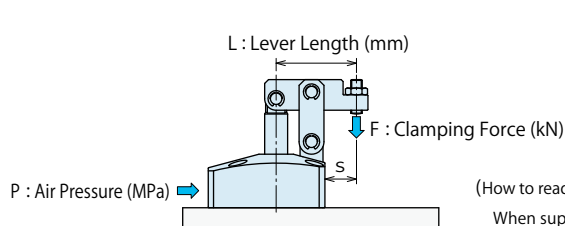
※ 1. Clamping force cannot be calculated from the cylinder inner diameter and rod diameter. Please refer to the clamping force curve.

※ 2. F : Clamping Force (kN), P : Supply Air Pressure (MPa), L : Distance between the piston center and the clamping point (mm).

※ 3. Minimum pressure to operate the clamp without load.

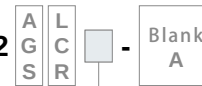
1. Please refer to External Dimensions for cylinder capacity and weight.

Clamping Force Curve (Action Confirmation Method · · · When Blank is chosen)



Model No. Indication

WCA 1 - 2



1 Body Size

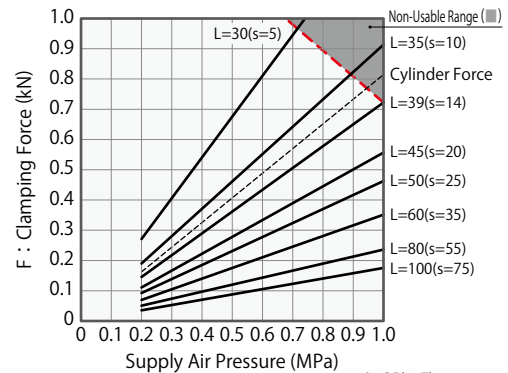
5 Action Confirmation Method
: When "Blank" is chosen

(How to read the clamping force) In case of WCA0501-2□□-□ :

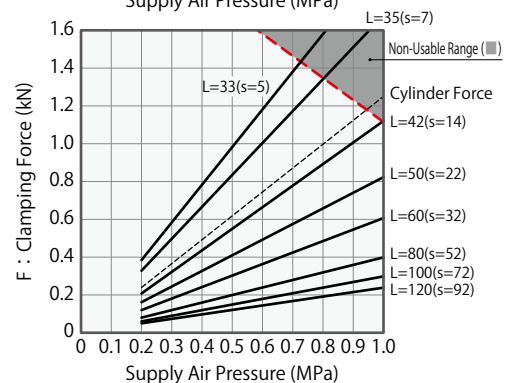
When supply air pressure P is 0.6MPa and lever length L is 50mm, clamping force becomes about 1.06kN.

WCA0321-2□□-□ Clamping Force Calculation Formula ※1 (kN) $F = (14.11 \times P) / (L - 19.5)$

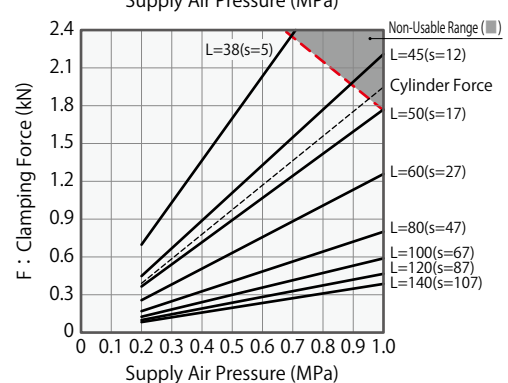
Air Pressure (MPa)	Cylinder Force (kN)	Clamping Force(kN)								Non-Usable Range (Ⅲ)	Min. Lever Length (L) (mm)
		Lever Length L(mm)									
		30	35	39	45	50	60	80	100		
1.0	0.80			0.72	0.55	0.46	0.35	0.23	0.18	39	
0.9	0.72			0.65	0.50	0.42	0.31	0.21	0.16	36	
0.8	0.64		0.73	0.58	0.44	0.37	0.28	0.19	0.14	33	
0.7	0.56	0.94	0.64	0.51	0.39	0.32	0.24	0.16	0.12	30	
0.6	0.48	0.81	0.55	0.43	0.33	0.28	0.21	0.14	0.11	28	
0.5	0.40	0.67	0.46	0.36	0.28	0.23	0.17	0.12	0.09	26	
0.4	0.32	0.54	0.36	0.29	0.22	0.19	0.14	0.09	0.07	25	
0.3	0.24	0.40	0.27	0.22	0.17	0.14	0.11	0.07	0.05	25	
0.2	0.16	0.27	0.18	0.15	0.11	0.09	0.07	0.05	0.04	25	
Max. Operating Pressure (MPa)		0.7	0.8	1.0	1.0	1.0	1.0	1.0	1.0		

WCA0401-2□□-□ Clamping Force Calculation Formula ※1 (kN) $F = (23.76 \times P) / (L - 21)$

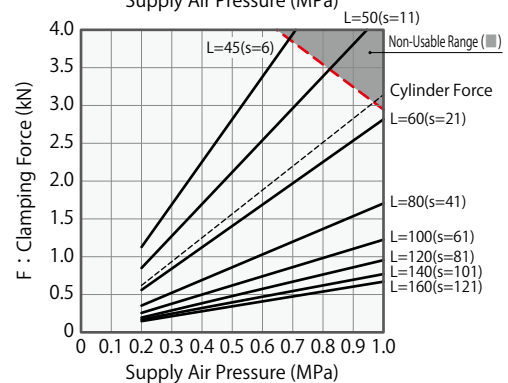
Air Pressure (MPa)	Cylinder Force (kN)	Clamping Force(kN)								Non-Usable Range (Ⅲ)	Min. Lever Length (L) (mm)
		Lever Length L(mm)									
		33	35	42	50	60	80	100	120		
1.0	1.26			1.13	0.82	0.61	0.40	0.30	0.24	42	
0.9	1.13			1.02	0.74	0.55	0.36	0.27	0.22	38	
0.8	1.01		1.36	0.91	0.66	0.49	0.32	0.24	0.19	35	
0.7	0.88	1.39	1.19	0.79	0.57	0.43	0.28	0.21	0.17	32	
0.6	0.75	1.19	1.02	0.68	0.49	0.37	0.24	0.18	0.14	30	
0.5	0.63	0.99	0.85	0.57	0.41	0.31	0.20	0.15	0.12	28	
0.4	0.50	0.79	0.68	0.45	0.33	0.24	0.16	0.12	0.10	28	
0.3	0.38	0.59	0.51	0.34	0.25	0.18	0.12	0.09	0.07	28	
0.2	0.25	0.40	0.34	0.23	0.16	0.12	0.08	0.06	0.05	28	
Max. Operating Pressure (MPa)		0.7	0.8	1.0	1.0	1.0	1.0	1.0	1.0		

WCA0501-2□□-□ Clamping Force Calculation Formula ※1 (kN) $F = (44.17 \times P) / (L - 25)$

Air Pressure (MPa)	Cylinder Force (kN)	Clamping Force(kN)								Non-Usable Range (Ⅲ)	Min. Lever Length (L) (mm)
		Lever Length L(mm)									
		38	45	50	60	80	100	120	140		
1.0	1.96			1.77	1.26	0.80	0.59	0.47	0.38	50	
0.9	1.77			1.59	1.14	0.72	0.53	0.42	0.35	46	
0.8	1.57		1.77	1.41	1.01	0.64	0.47	0.37	0.31	42	
0.7	1.37		1.55	1.24	0.88	0.56	0.41	0.33	0.27	38	
0.6	1.18	2.04	1.33	1.06	0.76	0.48	0.35	0.28	0.23	36	
0.5	0.98	1.70	1.10	0.88	0.63	0.40	0.29	0.23	0.19	33	
0.4	0.79	1.36	0.88	0.71	0.51	0.32	0.24	0.19	0.15	33	
0.3	0.59	1.02	0.66	0.53	0.38	0.24	0.18	0.14	0.12	33	
0.2	0.39	0.68	0.44	0.35	0.25	0.16	0.12	0.09	0.08	33	
Max. Operating Pressure (MPa)		0.6	0.8	1.0	1.0	1.0	1.0	1.0	1.0		

WCA0631-2□□-□ Clamping Force Calculation Formula ※1 (kN) $F = (84.16 \times P) / (L - 30)$

Air Pressure (MPa)	Cylinder Force (kN)	Clamping Force(kN)								Min. Lever Length (L) (mm)
		Lever Length L(mm)								
		45	50	60	80	100	120	140	160	
1.0	3.12			2.81	1.68	1.20	0.94	0.77	0.65	
0.9	2.81			2.53	1.52	1.08	0.84	0.69	0.58	
0.8	2.49		3.37	2.24	1.35	0.96	0.75	0.61	0.52	
0.7	2.18		2.95	1.96	1.18	0.84	0.66	0.54	0.45	
0.6	1.87	3.37	2.53	1.68	1.01	0.72	0.56	0.46	0.39	
0.5	1.56	2.81	2.10	1.40	0.84	0.60	0.47	0.38	0.32	
0.4	1.25	2.24	1.68	1.12	0.67	0.48	0.37	0.31	0.26	
0.3	0.94	1.68	1.26	0.84	0.51	0.36	0.28	0.23	0.19	
0.2	0.62	1.12	0.84	0.56	0.34	0.24	0.19	0.15	0.13	
Max. Operating Pressure (MPa)		0.6	0.8	1.0	1.0	1.0	1.0	1.0	1.0	

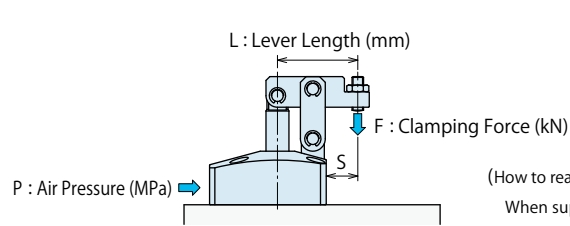


Notes:

※1. F : Clamping Force (kN), P : Supply Air Pressure (MPa), L : Lever Length.

1. Tables and graphs shown are the relationship between the clamping force (kN) and supply air pressure (MPa).
2. Cylinder force (when L=0) cannot be calculated from the calculation formula of clamping force.
3. Clamping force in the non-usable range may cause damage and fluid leakage.

Clamping Force Curve (Action Confirmation Method ··· When D : Double End Rod is chosen)



Model No. Indication

WCA 1 - 2 A G S L C R D - Blank A

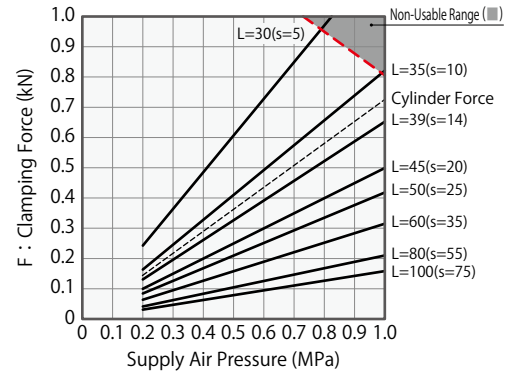
1 Body Size

5 Action Confirmation Method : When D is chosen

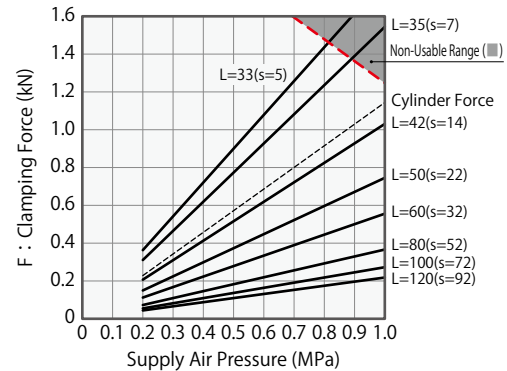
(How to read the clamping force) In case of WCA0501-2□□D-□ :

When supply air pressure P is 0.6MPa and lever length L is 50mm, clamping force becomes about 1.06kN.

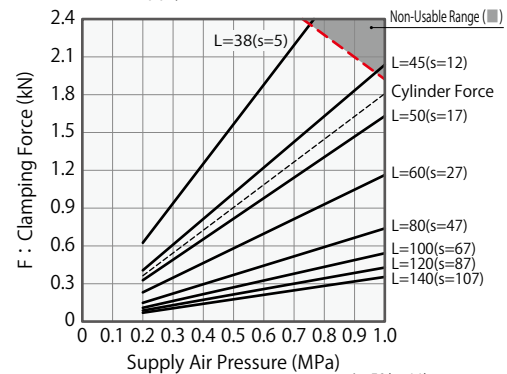
WCA0321-2□□D-□		Clamping Force Calculation Formula ※1 (kN) $F = (12.74 \times P) / (L - 19.5)$									
Air Pressure (MPa)	Cylinder Force (kN)	Clamping Force(kN) Lever Length L(mm)								Non-Usable Range (■)	Min. Lever Length (L) (mm)
		30	35	39	45	50	60	80	100		
1.0	0.73			0.65	0.50	0.42	0.32	0.21	0.16		36
0.9	0.65		0.74	0.59	0.45	0.38	0.28	0.19	0.14		33
0.8	0.58		0.66	0.52	0.40	0.33	0.25	0.17	0.13		31
0.7	0.51	0.85	0.58	0.46	0.35	0.29	0.22	0.15	0.11		29
0.6	0.44	0.73	0.49	0.39	0.30	0.25	0.19	0.13	0.10		27
0.5	0.36	0.61	0.41	0.33	0.25	0.21	0.16	0.11	0.08		25
0.4	0.29	0.49	0.33	0.26	0.20	0.17	0.13	0.08	0.06		25
0.3	0.22	0.36	0.25	0.20	0.15	0.13	0.09	0.06	0.05		25
0.2	0.15	0.24	0.16	0.13	0.10	0.08	0.06	0.04	0.03		25
Max. Operating Pressure (MPa)		0.7	0.9	1.0	1.0	1.0	1.0	1.0	1.0		



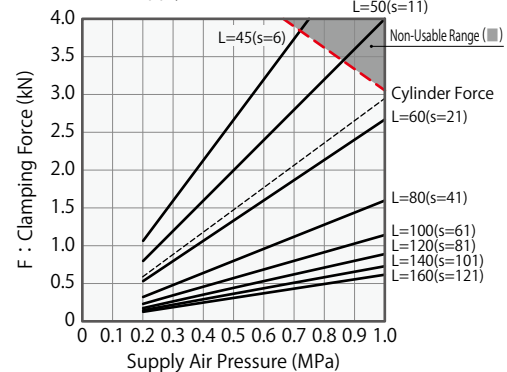
WCA0401-2□□D-□		Clamping Force Calculation Formula ※1 (kN) $F = (21.61 \times P) / (L - 21)$									
Air Pressure (MPa)	Cylinder Force (kN)	Clamping Force(kN) Lever Length L(mm)								Non-Usable Range (■)	Min. Lever Length (L) (mm)
		33	35	42	50	60	80	100	120		
1.0	1.14			1.03	0.75	0.55	0.37	0.27	0.22		39
0.9	1.03			0.93	0.67	0.50	0.33	0.25	0.20		36
0.8	0.91	1.44	1.24	0.82	0.60	0.44	0.29	0.22	0.18		33
0.7	0.80	1.26	1.08	0.72	0.52	0.39	0.26	0.19	0.15		31
0.6	0.69	1.08	0.93	0.62	0.45	0.33	0.22	0.16	0.13		29
0.5	0.57	0.90	0.77	0.52	0.37	0.28	0.18	0.14	0.11		28
0.4	0.46	0.72	0.62	0.41	0.30	0.22	0.15	0.11	0.09		28
0.3	0.34	0.54	0.46	0.31	0.22	0.17	0.11	0.08	0.07		28
0.2	0.23	0.36	0.31	0.21	0.15	0.11	0.07	0.06	0.04		28
Max. Operating Pressure (MPa)		0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0		



WCA0501-2□□D-□		Clamping Force Calculation Formula ※1 (kN) $F = (40.72 \times P) / (L - 25)$									
Air Pressure (MPa)	Cylinder Force (kN)	Clamping Force(kN) Lever Length L(mm)								Non-Usable Range (■)	Min. Lever Length (L) (mm)
		38	45	50	60	80	100	120	140		
1.0	1.81			1.63	1.16	0.74	0.54	0.43	0.35		47
0.9	1.63		1.83	1.47	1.05	0.67	0.49	0.39	0.32		43
0.8	1.45		1.63	1.30	0.93	0.59	0.43	0.34	0.28		40
0.7	1.27	2.19	1.43	1.14	0.81	0.52	0.38	0.30	0.25		37
0.6	1.09	1.88	1.22	0.98	0.70	0.44	0.33	0.26	0.21		35
0.5	0.90	1.57	1.02	0.81	0.58	0.37	0.27	0.21	0.18		33
0.4	0.72	1.25	0.81	0.65	0.47	0.30	0.22	0.17	0.14		33
0.3	0.54	0.94	0.61	0.49	0.35	0.22	0.16	0.13	0.11		33
0.2	0.36	0.63	0.41	0.33	0.23	0.15	0.11	0.09	0.07		33
Max. Operating Pressure (MPa)		0.7	0.9	1.0	1.0	1.0	1.0	1.0	1.0		



WCA0631-2□□D-□		Clamping Force Calculation Formula ※1 (kN) $F = (80.01 \times P) / (L - 30)$									
Air Pressure (MPa)	Cylinder Force (kN)	Clamping Force(kN) Lever Length L(mm)								Non-Usable Range (■)	Min. Lever Length (L) (mm)
		45	50	60	80	100	120	140	160		
1.0	2.96			2.67	1.60	1.14	0.89	0.73	0.62		57
0.9	2.67			2.40	1.44	1.03	0.80	0.66	0.55		52
0.8	2.37		3.20	2.13	1.28	0.91	0.71	0.58	0.49		48
0.7	2.07	3.73	2.80	1.87	1.12	0.80	0.62	0.51	0.43		45
0.6	1.78	3.20	2.40	1.60	0.96	0.69	0.53	0.44	0.37		42
0.5	1.48	2.67	2.00	1.33	0.80	0.57	0.45	0.36	0.31		39
0.4	1.19	2.13	1.60	1.07	0.64	0.46	0.36	0.29	0.25		39
0.3	0.89	1.60	1.20	0.80	0.48	0.34	0.27	0.22	0.19		39
0.2	0.59	1.07	0.80	0.53	0.32	0.23	0.18	0.15	0.12		39
Max. Operating Pressure (MPa)		0.7	0.8	1.0	1.0	1.0	1.0	1.0	1.0		



Notes:

※1. F : Clamping Force (kN), P : Supply Air Pressure (MPa), L : Lever Length.

- Tables and graphs shown are the relationship between the clamping force (kN) and supply air pressure (MPa).
- Cylinder force (when L=0) cannot be calculated from the calculation formula of clamping force.
- Clamping force in the non-usable range may cause damage and fluid leakage.

High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic Unit

Manual Operation
Accessories

Cautions / Others

Pneumatic
Hole Clamp

SWA

Pneumatic
Swing Clamp

WHA

Double Piston
Pneumatic Swing Clamp

WHD

Pneumatic
Link Clamp

WCA

Air Flow
Control Valve

BZW

Pneumatic
Expansion Locating Pin

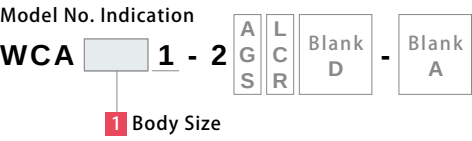
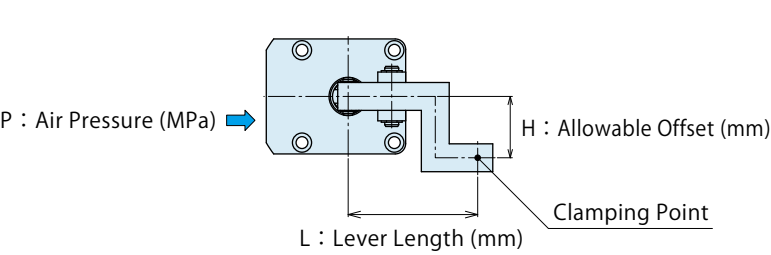
VWM

VWK

Pneumatic
Sensor Pin

WWA

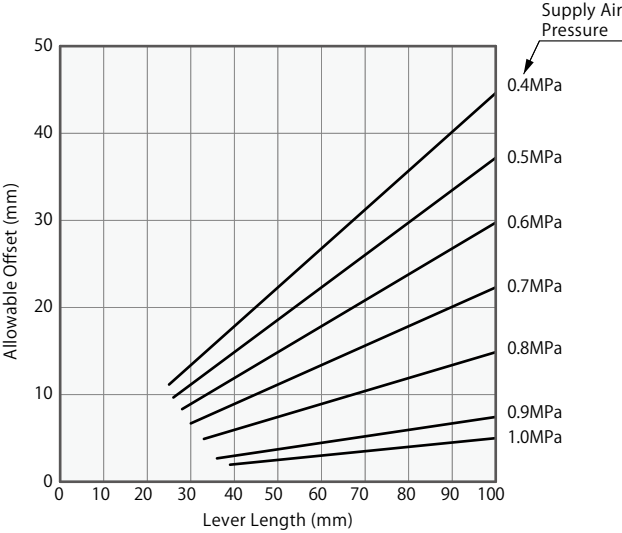
● Allowable Offset Graph



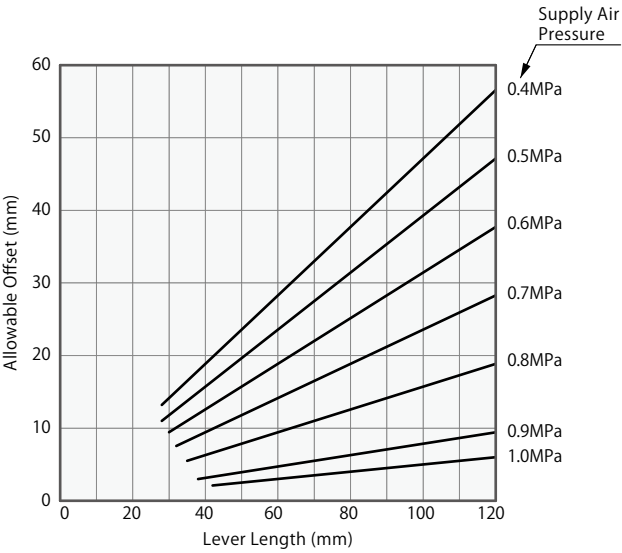
(How to read the allowable offset graph)
In case of WCA0501-2□□□-□
When supply air pressure P is 0.5MPa and lever length L is 50mm, allowable offset becomes about 22mm.

- Notes :
- 1. Tables and graphs show the relationship between the lever length and the allowable offset according to the supply air pressure.
 - 2. Using the lever beyond allowable offset may cause deformation, seizure and fluid leakage etc.
 - 3. The tables and graphs are only for reference. The design should be carried out with allowance fully taken into consideration.

WCA0321-2□□□-□								
Air Pressure (MPa)	Allowable Offset H (mm)							Non-Usable Range ()
	L=30	L=35	L=39	L=45	L=50	L=60	L=80	
1.0			1	2	2	3	4	5
0.9			2	3	3	4	5	7
0.8		5	5	6	7	8	11	14
0.7	6	7	8	10	11	13	17	22
0.6	8	10	11	13	14	17	23	29
0.5	11	13	14	16	18	22	29	37
0.4	13	15	17	20	22	26	35	44



WCA0401-2□□□-□								
Air Pressure (MPa)	Allowable Offset H (mm)							Non-Usable Range ()
	L=33	L=35	L=42	L=50	L=60	L=80	L=100	
1.0			2	2	3	4	5	6
0.9			3	3	4	6	7	9
0.8		5	6	7	9	12	15	18
0.7	7	8	9	11	14	18	23	28
0.6	10	11	13	15	18	25	31	37
0.5	12	13	16	19	23	31	39	47
0.4	15	16	19	23	28	37	47	56



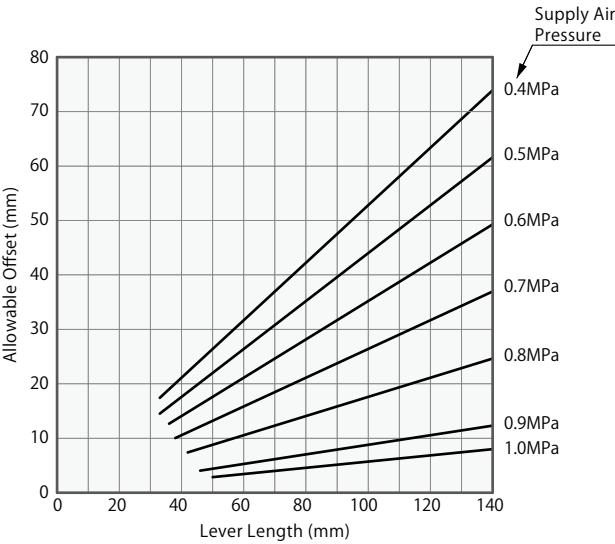
High-Power Series
Pneumatic Series
Hydraulic Series
Valve / Coupler Hydraulic Unit
Manual Operation Accessories
Cautions / Others

Pneumatic Hole Clamp
SWA
Pneumatic Swing Clamp
WHA
Double Piston Pneumatic Swing Clamp
WHD

Pneumatic Link Clamp
WCA
Air Flow Control Valve
BZW
Pneumatic Expansion Locating Pin
VWM
VWK
Pneumatic Sensor Pin
WWA

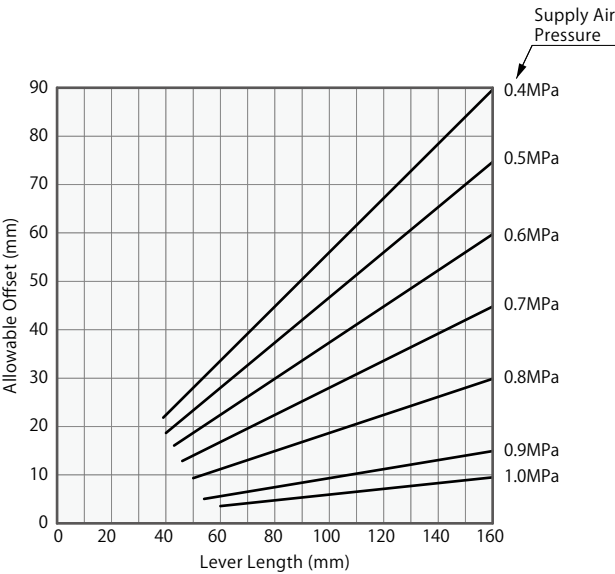
WCA0501-2□□□-□

Air Pressure (MPa)	Allowable Offset H (mm)							Non-Usable Range ()
	L=38	L=45	L=50	L=60	L=80	L=100	L=120	
1.0			2	3	4	5	6	8
0.9			4	5	7	8	10	12
0.8		7	8	10	14	17	21	24
0.7		11	13	15	21	26	31	36
0.6	13	15	17	21	28	35	42	49
0.5	16	19	22	26	35	44	52	61
0.4	20	23	26	31	42	52	63	73



WCA0631-2□□□-□

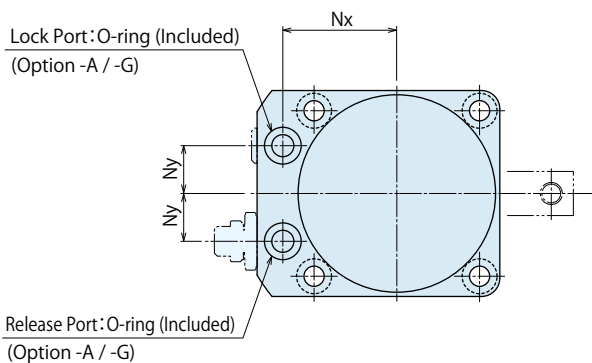
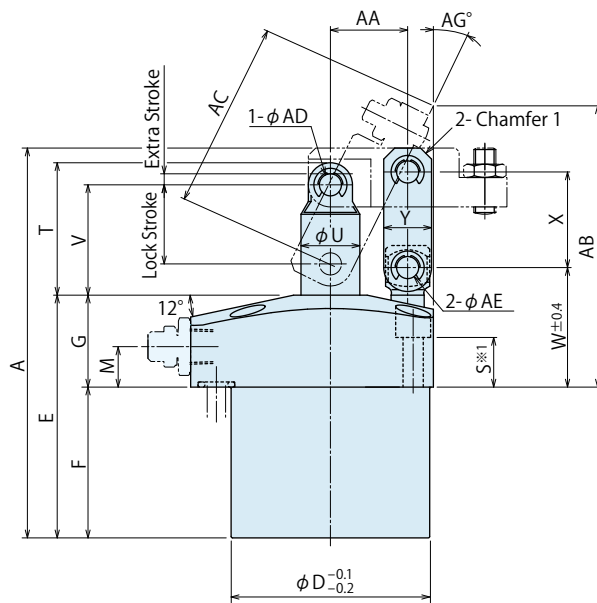
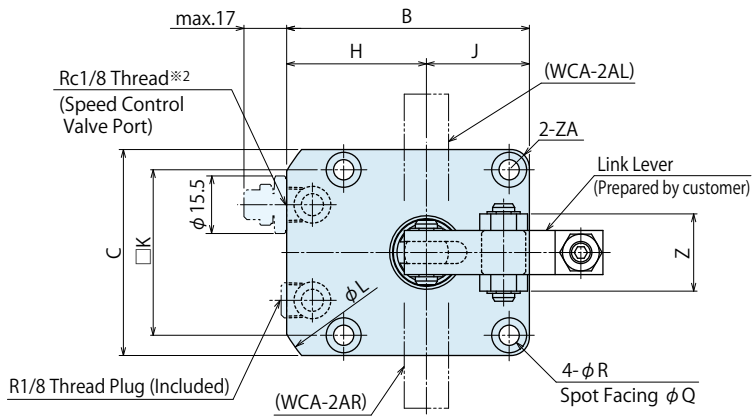
Air Pressure (MPa)	Allowable Offset H (mm)							Non-Usable Range ()
	L=45	L=50	L=60	L=80	L=100	L=120	L=140	
1.0			3	4	5	7	8	9
0.9			5	7	9	11	13	14
0.8		9	11	14	18	22	26	29
0.7		14	16	22	28	33	39	44
0.6	16	18	22	29	37	44	52	59
0.5	21	23	28	37	46	56	65	74
0.4	25	28	33	44	56	67	78	89



External Dimensions

A : Gasket Option (With Ports for Speed Controller : R-Thread Plug Included)

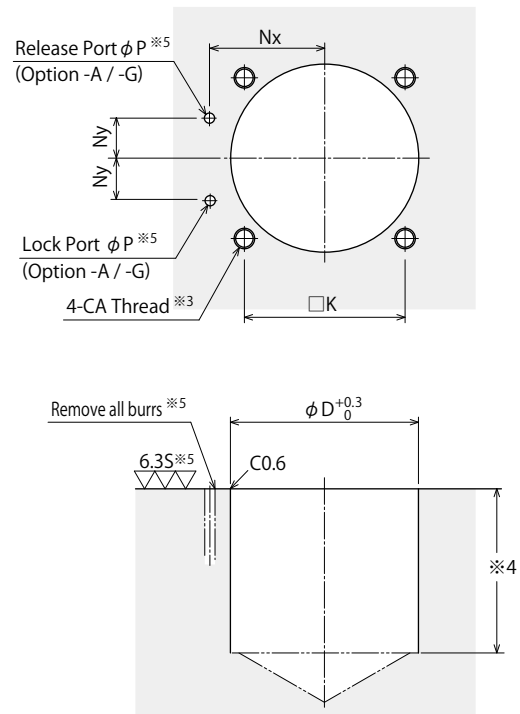
※ The drawing shows the locked state of WCA-2AC.



Notes :

- ※ 1. Mounting bolts are not provided. Please prepare them according to the mounting height referring to dimension 'S'.
- ※ 2. Speed control valve is sold separately. Please refer to P.309.
 1. Please use the provided pin (equivalent to ϕ ADf6, ϕ AEf6, HRC60) as mounting pin for lever.

Machining Dimensions of Mounting Area



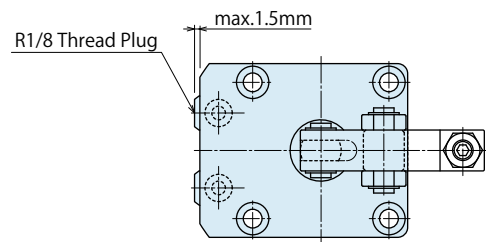
Notes :

- ※ 3. CA tapping depth of the mounting bolt should be decided according to the mounting height referring to dimension 'S'.
- ※ 4. The depth of the body mounting hole ϕ D should be decided according to the mounting height referring to dimension 'F'.
- ※ 5. The machining dimension is for -A/-G : Gasket Option.

Piping Method

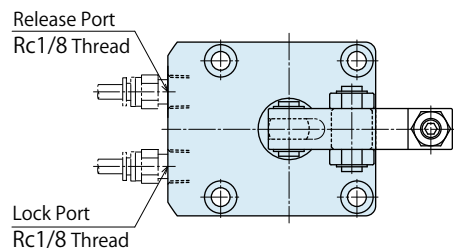
G : Gasket Option (R Thread Plug)

※ The drawing shows the locked state of WCA-2GC.

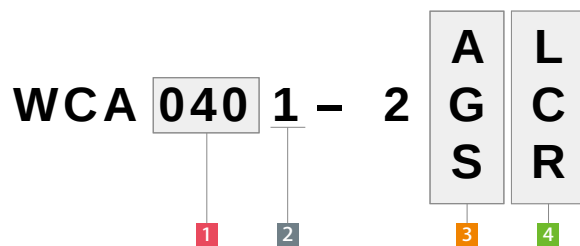


S : Piping Option (Rc Thread)

※ The drawing shows the locked state of WCA-2SC.



Model No. Indication



(Format Example : WCA0500-2AC)

- 1 Cylinder Inner Diameter
- 2 Design No.
- 3 Piping Method
- 4 Lever Direction
- 5 Action Confirmation (When Blank is chosen)
- 6 Option (When Blank is chosen)

External Dimensions and Machining Dimensions for Mounting

(mm)

Model No.	WCA0321-2□□	WCA0401-2□□	WCA0501-2□□	WCA0631-2□□
Full Stroke	23	24.5	28.5	34
Lock Stroke	20	21.5	25.5	31
Extra Stroke	3	3	3	3
A	99	106	129	148.5
B	60	66	76	87
C	50	56	66	78
D	46	54	64	77
E	64	66	81	89
F	39	41	51	59
G	25	25	30	30
H	35	38	43	48
J	25	28	33	39
K	39	45	53	65
L	79	88	98	113
M	11	11	11	11
Nx	28	31	36	41
Ny	10	13	15	20
P	5	5	5	5
Q	9.5	9.5	11	11
R	5.5	5.5	6.8	6.8
S	14	13.5	16	15
T	31.5	36	40	50.5
U	14	16	18	22
V	27	30	34	42.5
W	31	32.5	37.5	40.5
X	23.5	26	32.5	39.5
Y	11	13	16	18
Z	19	21	28	37
Chamfer 1	C2.5	C3	C3	C5
AA	19.5	21	25	30
AB	72	76.5	92.2	105.7
AC	46.9	50.9	62.7	74.7
AD	5	6	6	8
AE	5	6	8	10
AG	26.5	26.4	26.1	25.2
CA (Nominal×Pitch)	M5×0.8	M5×0.8	M6×1	M6×1
ZA	R5	R5	R6	R6
O-ring (Piping Option A/G)	1BP7	1BP7	1BP7	1BP7
Cylinder Capacity	Lock			
cm ³	Release			
Weight ※6	kg			
	0.4	0.5	0.8	1.2

Note :

※ 6. It shows the weight of single clamp without the link lever.

High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic Unit

Manual Operation
Accessories

Cautions / Others

Pneumatic
Hole Clamp

SWA

Pneumatic
Swing Clamp

WHA

Double Piston
Pneumatic Swing Clamp

WHD

Pneumatic
Link Clamp

WCA

Air Flow
Control Valve

BZW

Pneumatic
Expansion Locating Pin

VWM

VWK

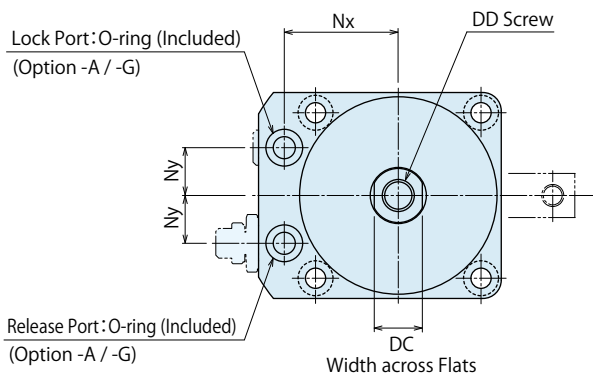
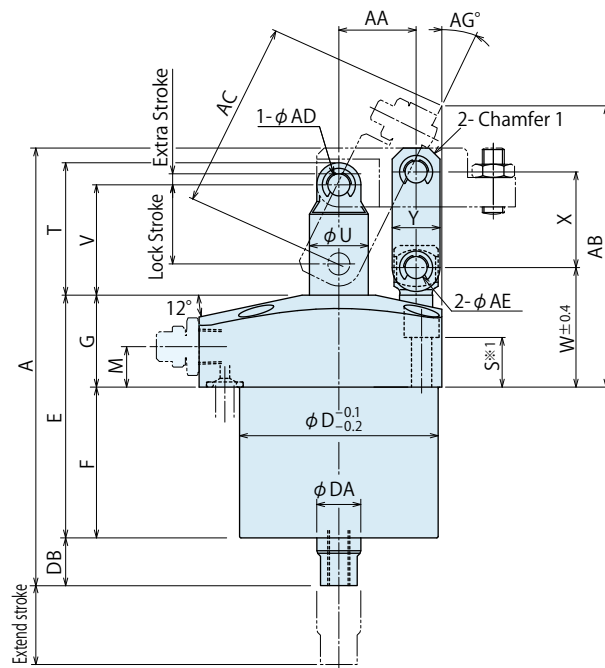
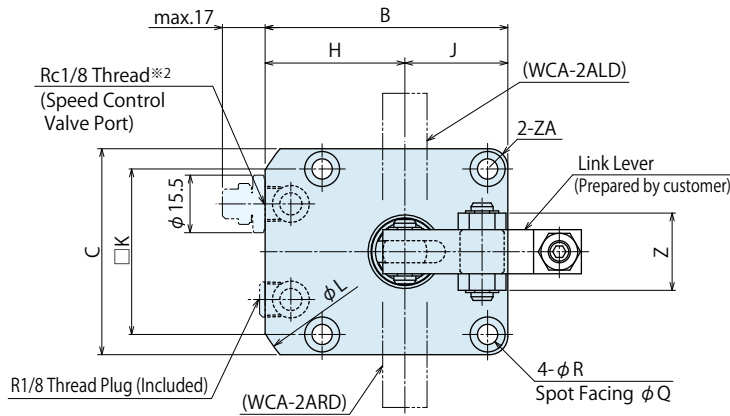
Pneumatic
Sensor Pin

WWA

External Dimensions

A : Gasket Option (With Ports for Speed Controller : R-Thread Plug Included)

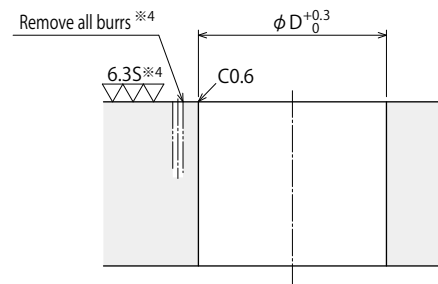
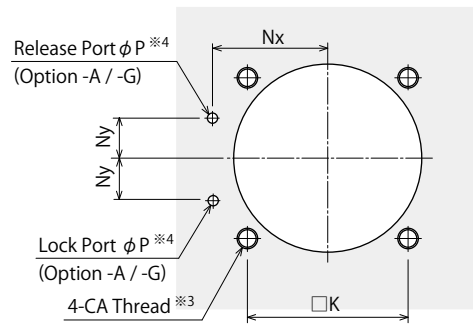
※ The drawing shows the locked state of WCA-2ACD.



Notes :

- ※ 1. Mounting bolts are not provided. Please prepare them according to the mounting height referring to dimension 'S'.
- ※ 2. Speed control valve is sold separately. Please refer to P.309.
 1. Please use the provided pin (equivalent to ϕ ADf6, ϕ AEf6, HRC60) as mounting pin for lever.

Machining Dimensions of Mounting Area



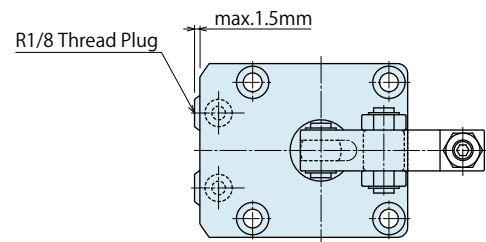
Notes :

- ※ 3. CA tapping depth of the mounting bolt should be decided according to the mounting height referring to dimension 'S'.
- ※ 4. The machining dimension is for -A/-G : Gasket Option.

Piping Method

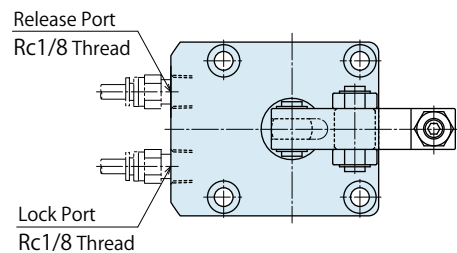
G : Gasket Option (R Thread Plug)

※ The drawing shows the locked state of WCA-2GCD.

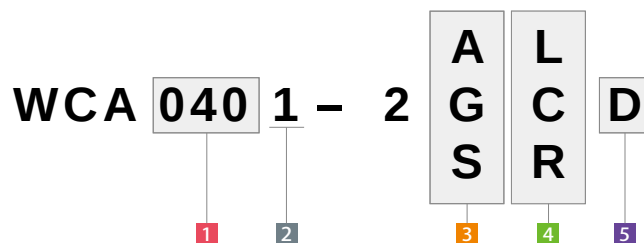


S : Piping Option (Rc Thread)

※ The drawing shows the locked state of WCA-2SCD.



Model No. Indication



(Format Example : WCA0500-2ACD)

- 1 Cylinder Inner Diameter
- 2 Design No.
- 3 Piping Method
- 4 Lever Direction
- 5 Action Confirmation
(When D is chosen : Double End Rod Option for Dog)
- 6 Option (When Blank is chosen)

External Dimensions and Machining Dimensions for Mounting

(mm)

Model No.	WCA0321-2□□D	WCA0401-2□□D	WCA0501-2□□D	WCA0631-2□□D
Full Stroke	23	24.5	28.5	34
Lock Stroke	20	21.5	25.5	31
Extra Stroke	3	3	3	3
A	112	119	142	161.5
B	60	66	76	87
C	50	56	66	78
D	46	54	64	77
E	64	66	81	89
F	39	41	51	59
G	25	25	30	30
H	35	38	43	48
J	25	28	33	39
K	39	45	53	65
L	79	88	98	113
M	11	11	11	11
Nx	28	31	36	41
Ny	10	13	15	20
P	5	5	5	5
Q	9.5	9.5	11	11
R	5.5	5.5	6.8	6.8
S	14	13.5	16	15
T	31.5	36	40	50.5
U	14	16	18	22
V	27	30	34	42.5
W	31	32.5	37.5	40.5
X	23.5	26	32.5	39.5
Y	11	13	16	18
Z	19	21	28	37
Chamfer 1	C2.5	C3	C3	C5
AA	19.5	21	25	30
AB	72	76.5	92.2	105.7
AC	46.9	50.9	62.7	74.7
AD	5	6	6	8
AE	5	6	8	10
AG	26.5	26.4	26.1	25.2
CA (Nominal×Pitch)	M5×0.8	M5×0.8	M6×1	M6×1
DA	10	12	14	14
DB	13	13	13	13
DC	8	10	12	12
DD (Nominal×Pitch×Depth)	M5×0.8×12	M6×1×15	M8×1.25×18	M8×1.25×18
ZA	R5	R5	R6	R6
O-ring (Piping Option A/G)	1BP7	1BP7	1BP7	1BP7
Cylinder Capacity cm ³	Lock	16.7	28.0	51.6
	Release	15.0	25.9	48.7
Weight ※5	kg	0.4	0.5	0.8
				1.3

Note :

※ 5. It shows the weight of single clamp without the link lever.

High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic Unit

Manual Operation
Accessories

Cautions / Others

Pneumatic
Hole Clamp

SWA

Pneumatic
Swing Clamp

WHA

Double Piston
Pneumatic Swing Clamp

WHD

Pneumatic
Link Clamp

WCA

Air Flow
Control Valve

BZW

Pneumatic
Expansion Locating Pin

VWM

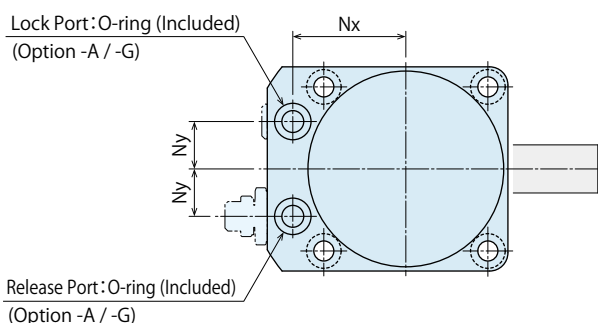
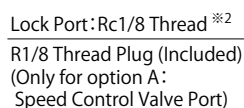
VWK

Pneumatic
Sensor Pin

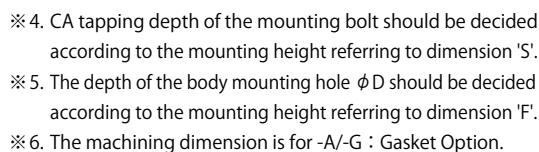
WWA

● Machining Dimensions of Mounting Area

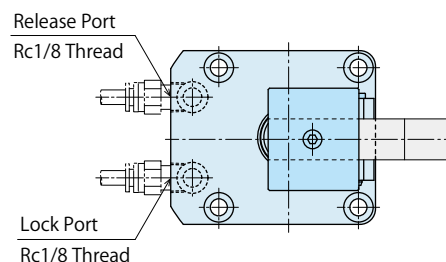
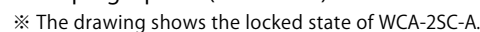
※ The drawing shows the locked state of WCA-2AC-A.



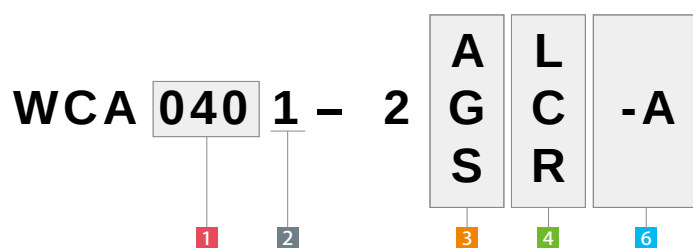
- ※ 1. Mounting bolts are not provided. Please prepare them according to the mounting height referring to dimension 'S'.
- ※ 2. Speed control valve is sold separately. Please refer to P.309.
- ※ 3. Tightening Kit (LZK□-W) including the cover (with bolt), the rod pin and the lever pin is sold separately



※ The drawing shows the locked state of WCA-2GC-A.



Model No. Indication



(Format Example : WCA0500-2AC-A)

- 1 Cylinder Inner Diameter
- 2 Design No.
- 3 Piping Method
- 4 Lever Direction
- 5 Action Confirmation (When Blank is chosen)
- 6 Option (When A is chosen)

Note :

1. When selecting 6 option A, unlike Blank, the lever mounting pin is not included. The dimensions of clamp body are the same as Blank.

External Dimensions and Machining Dimensions for Mounting

(mm)

Model No.	WCA0321-2□□-A	WCA0401-2□□-A	WCA0501-2□□-A	WCA0631-2□□-A
Full Stroke	23	24.5	28.5	34
Lock Stroke	20	21.5	25.5	31
Extra Stroke	3	3	3	3
A	102	109	132	152.5
B	60	66	76	87
C	50	56	66	78
D	46	54	64	77
E	64	66	81	89
F	39	41	51	59
G	25	25	30	30
H	35	38	43	48
J	25	28	33	39
K	39	45	53	65
L	79	88	98	113
M	11	11	11	11
Nx	28	31	36	41
Ny	10	13	15	20
P	5	5	5	5
Q	9.5	9.5	11	11
R	5.5	5.5	6.8	6.8
S	14	13.5	16	15
T	31.5	36	40	50.5
U	14	16	18	22
V	27	30	34	42.5
W	31	32.5	37.5	40.5
X	23.5	26	32.5	39.5
Y	11	13	16	18
Z	19	21	28	37
Chamfer 1	C2.5	C3	C3	C5
AA	19.5	21	25	30
AB	72	76.5	92.2	105.7
AC	46.9	50.9	62.7	74.7
AD	5	6	6	8
AE	5	6	8	10
AG	26.5	26.4	26.1	25.2
CA (Nominal×Pitch)	M5×0.8	M5×0.8	M6×1	M6×1
SA	3	3	3	4
SB	24	26	35	45
SC	21	24	29	34.5
SD	10.5	11.5	17	20
SE	11	12.5	16.5	18.5
SF	M3×0.5×6	M3×0.5×6	M3×0.5×8	M4×0.7×8
SG	4	7	7.5	9
ZA	R5	R5	R6	R6
O-ring (Piping Option A/G)	1BP7	1BP7	1BP7	1BP7
Cylinder Capacity cm ³	Lock	18.5	30.8	56.0
	Release	15.0	25.9	48.7
Weight ※7	kg	0.4	0.5	0.8
				1.2

Note :

- ※ 7. It shows the weight of single clamp without the link lever.

High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic Unit

Manual Operation
Accessories

Cautions / Others

Pneumatic
Hole Clamp

SWA

Pneumatic
Swing Clamp

WHA

Double Piston
Pneumatic Swing Clamp

WHD

Pneumatic
Link Clamp

WCA

Air Flow
Control Valve

BZW

Pneumatic
Expansion Locating Pin

VWM

VWK

Pneumatic
Sensor Pin

WWA

Link Lever Design Dimensions

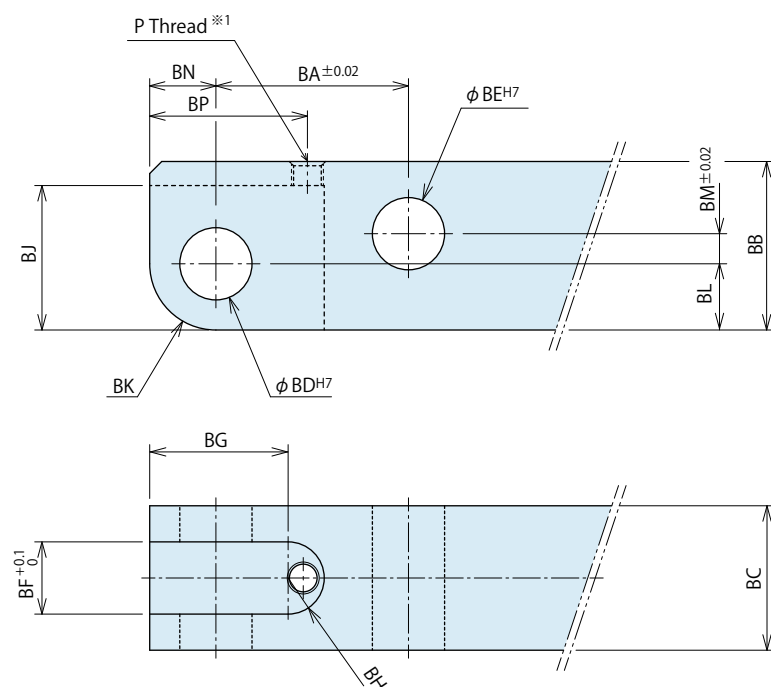
※ Reference for designing link lever.

Corresponding Model No.

WCA 1 - A G S L C R Blank D - Blank A

1 Body Size

6 Option



Calculation List of Link Lever Design Dimension

(mm)

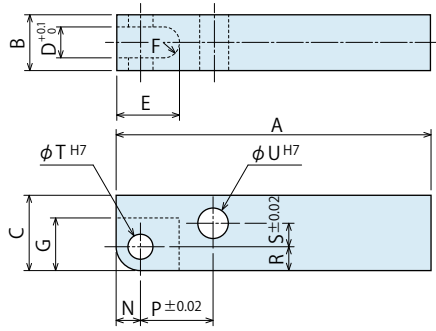
Corresponding Model No.	WCA0321	WCA0401	WCA0501	WCA0631
BA	19.5	21	25	30
BB	12.5	16	20	25
BC	10 ⁰ _{-0.2}	12 ⁰ _{-0.3}	16 ⁰ _{-0.3}	19 ⁰ _{-0.3}
BD	5 ^{+0.012} ₀	6 ^{+0.012} ₀	6 ^{+0.012} ₀	8 ^{+0.015} ₀
BE	5 ^{+0.012} ₀	6 ^{+0.012} ₀	8 ^{+0.015} ₀	10 ^{+0.015} ₀
BF	5	6	8	10
BG	10	13	13	17
BH	R2.5	R3	R4	R5
BJ	10	13	13	17.5
BK	R4.5	R6	R6	R8
BL	4.5	6	6	8
BM	2.5	3.5	6	7.5
BN	4.5	6	6	8
BP	14.5	14.5	15	19.5
P (Nominal×Depth) ※1	M3×0.5×4	M3×0.5 Through	M3×0.5×6	M4×0.7 Through

Notes :

- Link lever should be designed with its length according to the performance curve.
- If the link lever is not in accordance with the dimension shown above, its performance may be degraded, and damage can occur.
- For 6 Option **Blank**, use the attached pin (equivalent to φADf6, φAEf6, HRC60) as the lever mounting pin.
(Refer to external dimensions of the clamp body for the dimensions of φAD, φAE.)
- For 6 Option **A**, the lever mounting pin is not included in the clamp.
Please order Tightening Kit for Quick Change Lever Option A (LZK□-W).

※1. Machining of P Thread is required only when using Tightening Kit for Quick Change Lever Option A (LZK□-W).

Accessories : Material Link Lever



Model No. Indication

WCZ 040 0 - L2

Size (Refer to the table.) Design No. (Revision Number)

Model No.	WCZ0320-L2	WCZ0400-L2	WCZ0500-L2	WCZ0630-L2
Corresponding Model No.	WCA0321	WCA0401	WCA0501	WCA0631
A	90	100	115	140
B	10 ⁰ _{-0.2}	12 ⁰ _{-0.3}	16 ⁰ _{-0.3}	19 ⁰ _{-0.3}
C	12.5	16	20	25
D	5	6	8	10
E	12.5	16	17	22
F	R2.5	R3	R4	R5
G	10	13	13	17.5
N	4.5	6	6	8
P	19.5	21	25	30
R	4.5	6	6	8
S	2.5	3.5	6	7.5
T	5 ^{+0.012} ₀	6 ^{+0.012} ₀	6 ^{+0.012} ₀	8 ^{+0.015} ₀
U	5 ^{+0.012} ₀	6 ^{+0.012} ₀	8 ^{+0.015} ₀	10 ^{+0.015} ₀

Notes :

- Material S45C Surface Finishing : Alkaline Blackening
- If necessary, the front end should be additionally machined.
- For **6** Option **Blank**, use the attached pin (equivalent to ϕ ADf6, ϕ AEf6, HRC60) as the lever mounting pin.
- For **6** Option **A**, the lever mounting pin is not included in the clamp.
Please order Tightening Kit for Quick Change Lever Option A (LZK□-W).
- When using Tightening Kit for Quick Change Lever Option A (LZK□-W), a tapped hole should be additionally machined.
Refer to the link lever design dimensions (P Thread part) for additional machining.

Accessory : Tightening Kit for Quick Change Lever Option A

Model No. Indication

LZK 040 0 - W

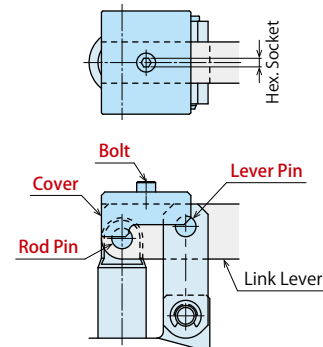
Size (Refer to the table.) Design No. (Revision Number)

Tightening Kit for mounting Quick Change Lever Option A.

Sold separately from the clamp body.

【Contents of Tightening Kit】

- Cover (with Bolt)
- Rod Pin
- Lever Pin



Model No.	LZK0360-W	LZK0400-W	LZK0550-W	LZK0650-W
Corresponding Model No.	WCA0321-□-A	WCA0401-□-A	WCA0501-□-A	WCA0631-□-A
Nominal×Pitch of Bolt	M3×0.5	M3×0.5	M3×0.5	M4×0.7
Hex. Socket mm	2.5	2.5	2.5	3
Tightening Torque N·m	1.3	1.3	1.3	3.2

High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic Unit

Manual Operation
Accessories

Cautions / Others

Pneumatic
Hole Clamp

SWA

Pneumatic
Swing Clamp

WHA

Double Piston
Pneumatic Swing Clamp

WHD

Pneumatic
Link Clamp

WCA

Air Flow
Control Valve

BZW

Pneumatic
Expansion Locating Pin

VWM

VWK

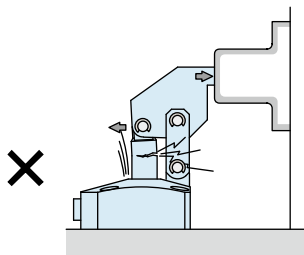
Pneumatic
Sensor Pin

WWA

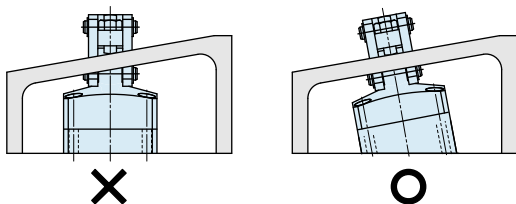
Cautions

Notes for Design

- 1) Check Specifications
 - Please use each product according to the specifications.
- 2) Notes for Circuit Design
 - Ensure there is no possibility of supplying air pressure to both the lock port and the release port simultaneously. Improper circuit design may lead to malfunctions and damages.
- 3) Notes for Link Lever Design
 - Make sure no force is applied to the piston rod except from the axial direction. (Make sure the clamp surface and the mounting surface on the workpiece are parallel.) The usage like the one shown in the drawing below will apply a large bending stress to the piston rod and must be avoided.



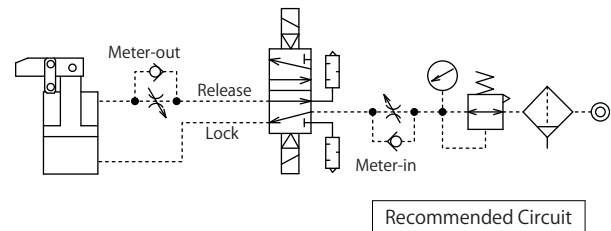
- 4) When using on a welding fixture, the exposed area of the piston rod and the link plate should be protected.
 - If spatter attaches to sliding surfaces, it could lead to malfunctions and fluid leakage.
- 5) When clamping on a sloped surface of the workpiece
 - Make sure the clamping surface and the mounting surface of the clamp are parallel.



- 6) When using in a dry environment.
 - The link pin can be dried out. Grease it periodically or use a special pin. Contact us for the specifications for special pins.

Speed Adjustment

- If the clamp operates too fast the parts will be worn out and become damaged more quickly leading to equipment failure. Generally air supply should be adjusted to obtain 1 second clamping action. Install a speed control valve (meter-out) and gradually control the flow rate from the low-speed side (small flow) to the designated speed. Controlling from the high-speed side (large flow) causes excessive surge pressure or overload to the clamp leading to damage of a machine or device.



When operating multiple clamps simultaneously, please install the speed controller (meter-out) to each clamp.

● Installation Notes

- Check the fluid to use.
 - Please supply filtered clean dry air.
 - Oil supply with a lubricator etc. is unnecessary.
- Procedure before Piping
 - The pipeline, piping connector and fixture circuits should be cleaned and flushed thoroughly.
The dust and cutting chips in the circuit may lead to fluid leakage and malfunction.
 - There is no filter provided with this product for prevention of contaminants in the air circuit.
- Applying Sealing Tape
 - Wrap with tape 1 to 2 times following the screwing direction.
Wrapping in the wrong direction will cause leaks and malfunction.
 - Pieces of the sealing tape can lead to air leaks and malfunction.
 - When piping, be careful that contaminant such as sealing tape does not enter in products.

4) Installation of the Product

- When mounting the product use four hexagonal socket bolts (with tensile strength of 12.9) and tighten them with the torque shown in the following table. Tightening with greater torque than recommended can dent the seating surface or break the bolt.

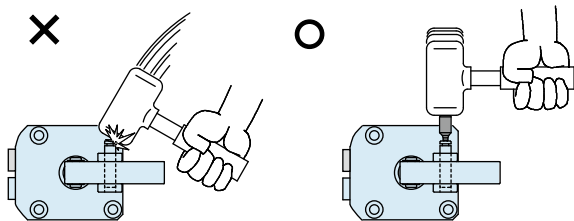
Model No.	Mounting Bolt Size	Tightening Torque (N·m)
WCA0321	M5×0.8	6.3
WCA0401	M5×0.8	6.3
WCA0501	M6×1	10
WCA0631	M6×1	10

5) Installation of the Speed Control Valve

- Tightening torque for installing flow control valve is 5 to 7 N · m.

6) Installation and removal of the link lever.

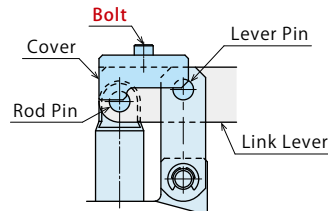
- When inserting the link pin, do not hit the pin directly with a hammer. When using a hammer to insert the pin, always use a cover plate with a smaller diameter than the snap ring groove on the pin.



- Tighten the bolt for Quick Change Lever Option A with the torque shown below.

Quick Change Lever Option A

Model No.	Bolt Size	Tightening Torque (N·m)
WCA0321-2□□-A	M3×0.5	1.3
WCA0401-2□□-A	M3×0.5	1.3
WCA0501-2□□-A	M3×0.5	1.3
WCA0631-2□□-A	M4×0.7	3.2



7) Speed Adjustment

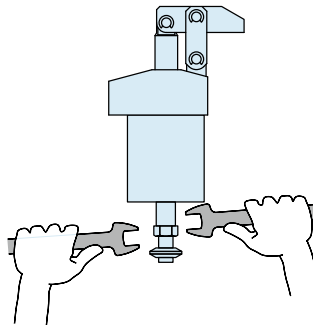
- Adjust the speed by the standard of lock operation within 1 second.
If the clamp operates too fast the parts will be worn out leading to premature damage and ultimately complete equipment failure.
- Turn the speed control valve gradually from the low-speed side (small flow) to the high-speed side (large flow) to adjust the speed.

8) Checking Looseness and Retightening

- At the beginning of the product installation, the bolts may be tightened lightly. Check the looseness and re-tighten as required.

9) Notes on Dual Rod Option (-D) for Dog Application

- When attaching the dog, stop the piston rod with a spanner, etc.
Tightening torque for the screw parts are shown in the table below.

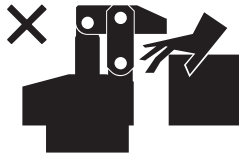


Model No.	Thread Size	Tightening Torque (N·m)
WCA0321-2□□D	M5×0.8	6.3
WCA0401-2□□D	M6×1	10
WCA0501-2□□D	M8×1.25	25
WCA0631-2□□D	M8×1.25	25

● Cautions

● Notes on Handling

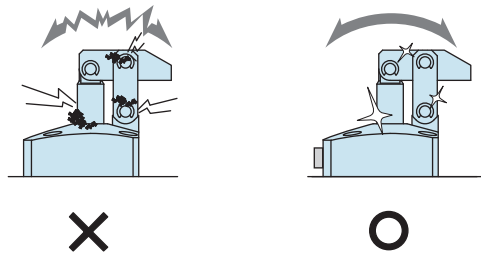
- 1) It should be operated by qualified personnel.
- The hydraulic machine and air compressor should be operated and maintained by qualified personnel.
- 2) Do not operate or remove the product unless the safety protocols are ensured.
 - ① The machine and equipment can only be inspected or prepared when it is confirmed that the safety devices are in place.
 - ② Before the product is removed, make sure that the above-mentioned safety devices are in place. Shut off the pressure and power source, and make sure no pressure exists in the air and hydraulic circuits.
 - ③ After stopping the product, do not remove until the temperature drops.
 - ④ Make sure there is no abnormality in the bolts and respective parts before restarting the machine or equipment.
- 3) Do not touch a clamp (cylinder) while it is working. Otherwise, your hands may be injured due to clinching.



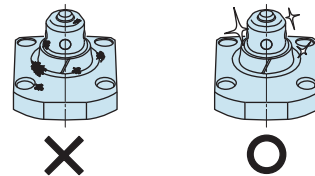
- 4) Do not disassemble or modify.
- If the equipment is taken apart or modified, the warranty will be voided even within the warranty period.

● Maintenance and Inspection

- 1) Removal of the Machine and Shut-off of Pressure Source
 - Before the machine is removed, make sure that safety devices and preventive devices are in place. Shut off the pressure and power source, and make sure no pressure exists in the air and hydraulic circuits.
 - Make sure there is no abnormality in the bolts and respective parts before restarting.
- 2) Regularly clean the area around the piston rod and plunger.
 - If it is used when the surface is contaminated with dirt, it may lead to packing seal damage, malfunctioning and fluid leakage.



- 3) Please clean out the reference surfaces on a regular basis (taper reference surface and seating surface) of the locating products. (VS/VT/VFL/VFM/VFJ/VFK/WVS/VWM/VWK/VX/VXE/VXF)
 - The locating products, except VX/VXE/VXF model, can remove contaminants with cleaning functions. However, hardened cutting chips, adhesive coolant and others may not be removed. Make sure there are no contaminants before installing a workpiece/pallet.
 - Continuous use with contaminant on components will lead to locating accuracy failure, malfunction and fluid leakage.



- 4) If disconnecting by couplers, air bleeding should be carried out on a regular basis to avoid air mixed in the circuit.
- 5) Regularly tighten nut, bolt, pin, cylinder, pipe line and others to ensure proper use.
- 6) Make sure the hydraulic fluid has not deteriorated.
- 7) Make sure there is a smooth action without an irregular noise.
 - Especially when it is restarted after left unused for a long period, make sure it can be operated correctly.
- 8) The products should be stored in the cool and dark place without direct sunshine or moisture.
- 9) Please contact us for overhaul and repair.

Cautions[Installation Notes
\(For Hydraulic Series\)](#)[Hydraulic Fluid List](#)[Notes on Hydraulic Cylinder
Speed Control Circuit](#)[Notes on Handling](#)[Maintenance/
Inspection](#)[Warranty](#)**Company Profile**[Company Profile](#)[Our Products](#)[History](#)**Index**[Search by](#)[Alphabetical Order](#)**Sales Offices**

● Warranty

1) Warranty Period

- The product warranty period is 18 months from shipment from our factory or 12 months from initial use, whichever is earlier.

2) Warranty Scope

- If the product is damaged or malfunctions during the warranty period due to faulty design, materials or workmanship, we will replace or repair the defective part at our expense.

Defects or failures caused by the following are not covered.

- ① If the stipulated maintenance and inspection are not carried out.
- ② If the product is used while it is not suitable for use based on the operator's judgment, resulting in defect.
- ③ If it is used or operated in an inappropriate way by the operator. (Including damage caused by the misconduct of the third party.)
- ④ If the defect is caused by reasons other than our responsibility.
- ⑤ If repair or modifications are carried out by anyone other than Kosmek, or without our approval and confirmation, it will void warranty.
- ⑥ Other caused by natural disasters or calamities not attributable to our company.
- ⑦ Parts or replacement expenses due to parts consumption and deterioration. (Such as rubber, plastic, seal material and some electric components.)

Damages excluding from direct result of a product defect shall be excluded from the warranty.

Air Flow Control Valve

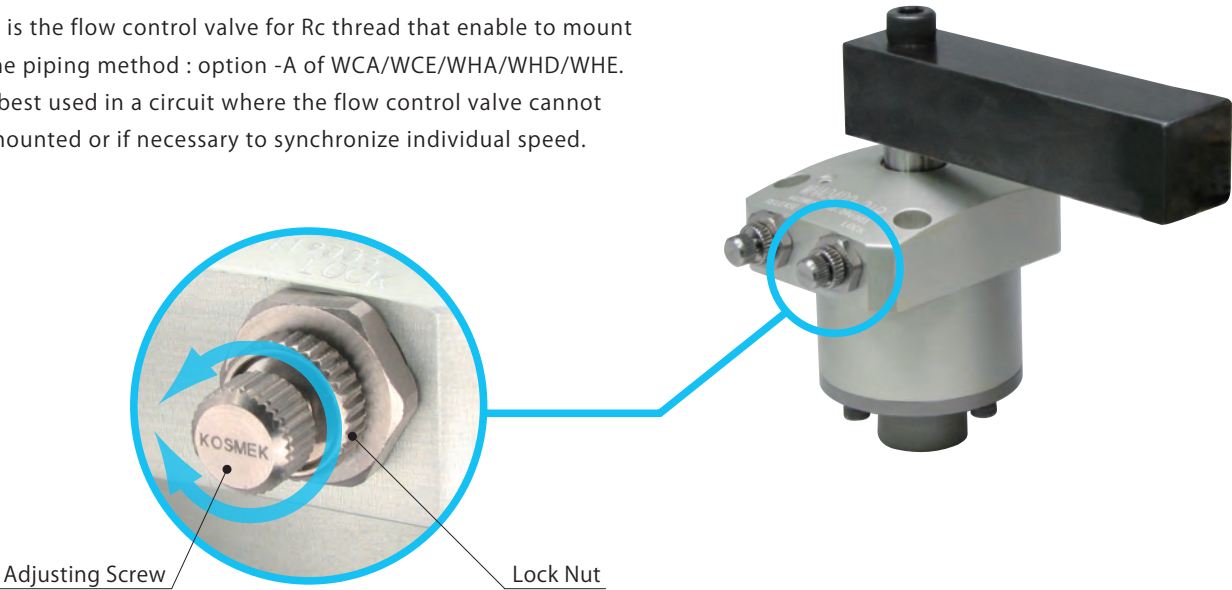
Model **BZW**



Directly mounted to clamps, easy adjusting

- Directly Mounted to Clamps

BZW is the flow control valve for Rc thread that enable to mount to the piping method : option -A of WCA/WCE/WHA/WHD/WHE. It is best used in a circuit where the flow control valve cannot be mounted or if necessary to synchronize individual speed.



Corresponding Product Model

Clamps	BZW Model No.	Clamp Model No.
High-Power Pneumatic Link Clamp	BZW0100- A	WCE □ 2-2 A □
High-Power Pneumatic Swing Clamp	BZW0100- B	WHE□ 0-2 A □
Pneumatic Swing Clamp		WHA□ 0-2 A □
Double Piston Pneumatic Swing Clamp		WHD□ 0-2 A □
Pneumatic Link Clamp		WCA□ 1-2 A □

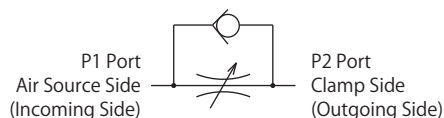
Corresponding to piping method -A option.
 ※ When mounting BZW to the piping method G, take off R thread plug and remove the sealing tape not to get inside the cylinder.

BZW 010 0 - B

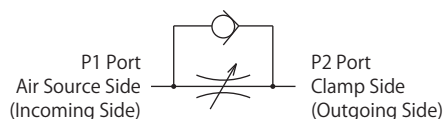
010: Rc1/8

Circuit Symbol

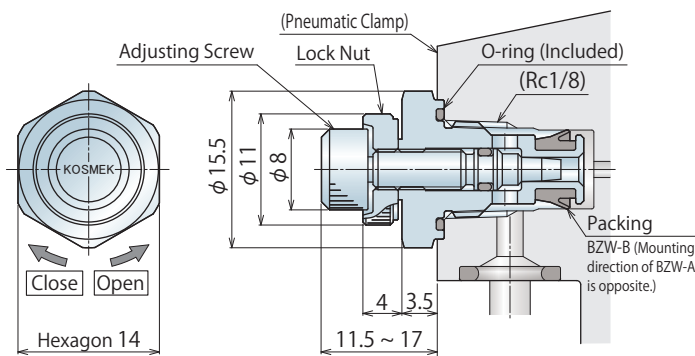
BZW0100-B : Meter-out



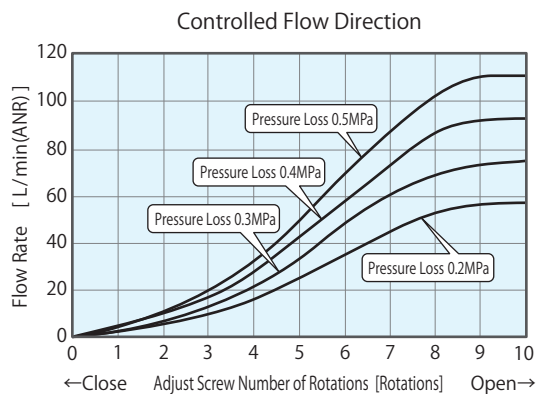
BZW0100-A : Meter-in



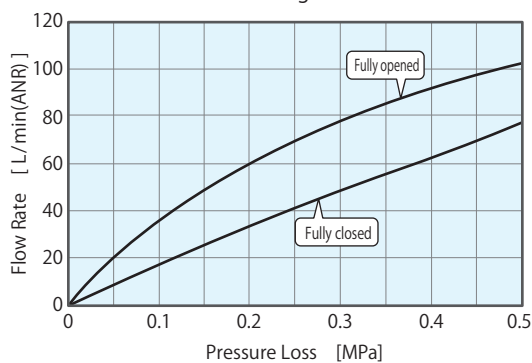
Flow Rate Graph



BZW0100-B/BZW0100-A common



Free Flowing Direction



1. Since the $\nabla\nabla\nabla$ area is sealing part, be careful not to damage it.
2. No cutting chips or burr should be at the tolerance part of machining hole.
3. As shown in the drawing, P1 port is used as the air supply side and P2 port as the clamp side.

Cautions / Others

SWA

WHA

WHD

WCA

BZW

BZW

VWM

WWA

Manifold Block

Model WHZ-MD

Model LZY-MD

Model LZ-MS

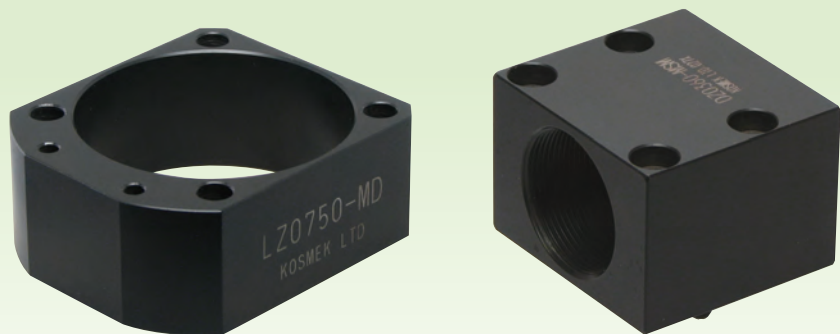
Model LZ-MP

Model TMZ-1MB

Model TMZ-2MB

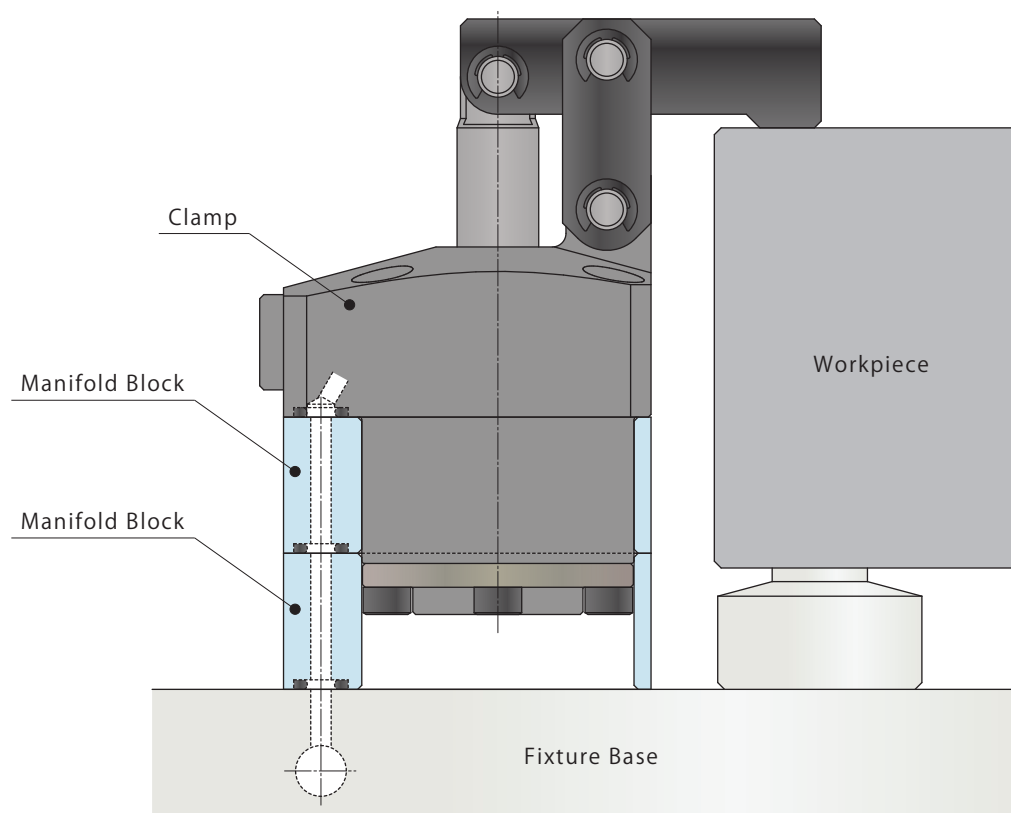
Model DZ-MG ☐

Model DZ-MS ☐



● Manifold Block

The mounting height of clamp is adjustable with the manifold block.

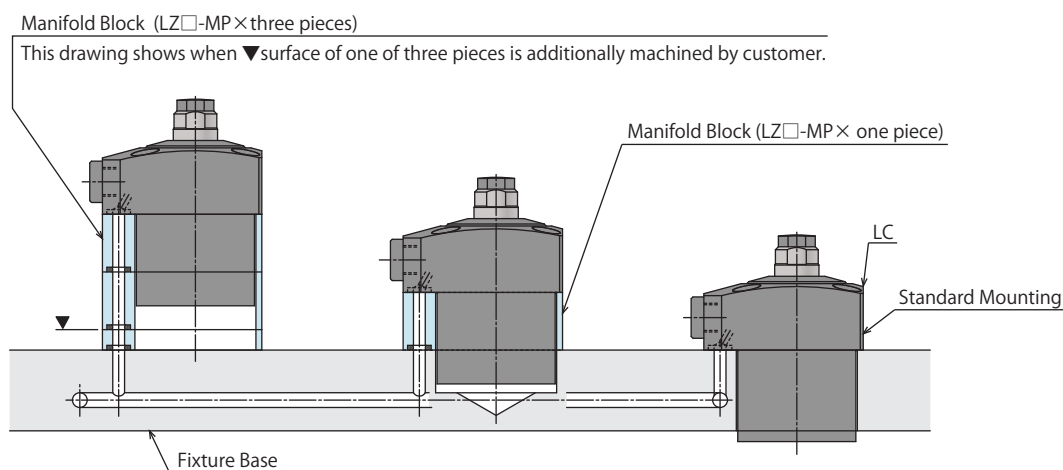


Applicable Model

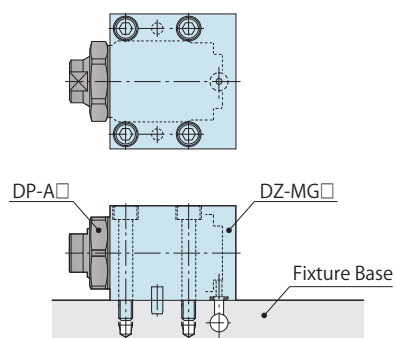
Manifold Block Model No.	Corresponding Item Model No.
Model WHZ-MD	Model WCA Model WHA Model WCE Model WHE
Model LZY-MD	Model LKA Model LKE Model LHC Model LHS Model LKC Model LHA Model LHE Model LL
Model LZ-MS	Model LJ Model LG Model LM Model LT
Model LZ-MP	Model LC Model TC
Model TMZ-1MB	Model TMA-1
Model TMZ-2MB	Model TMA-2
Model DZ-MG□/MS□	Model DP

Application Examples

● Work Support (LC) Application Example



● Push Cylinder (DP) Application Example



High-Power Series

Pneumatic Series

Hydraulic Series

Valve / Coupler Hydraulic Unit

Manual Operation Accessories

Cautions / Others

Screw Locator

VXF/VXE

Manual Expansion Locating Pin

VX

Manifold Block

WHZ-MD

LZY-MD

LZ-MS

LZ-MP

TMZ-1MB

TMZ-2MB

DZ-M

Manifold Block / Nut

DZ-R

DZ-C

DZ-P

DZ-B

LZ-S

LZ-SQ

WNZ-SQ

TNZ-S

TNZ-SQ

Pressure Switch

JBA

Pressure Gauge

JGA/JGB

Manifold

JX

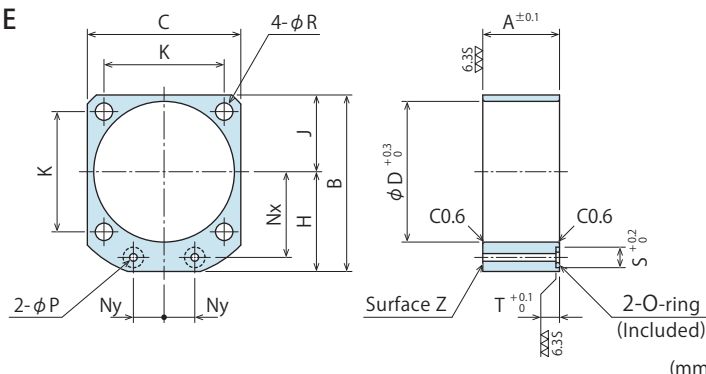
Coupler Switch

PS

G-Thread Fitting

Manifold Block for WCA/WCE/WHA/WHE

Model No. Indication

WHZ 048 0 - MD
Size
(Refer to
following table)Design No.
(Revision Number)

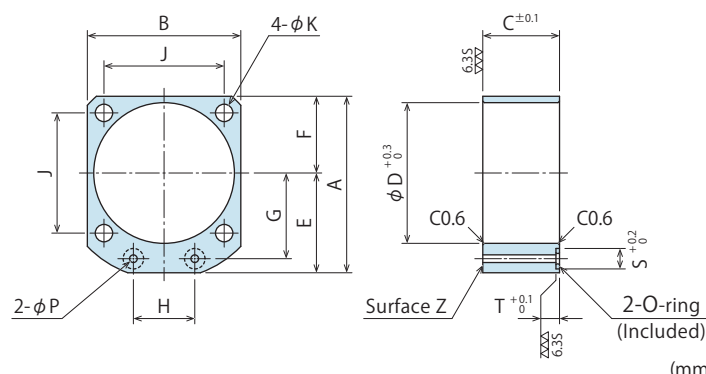
(mm)

Model No.	WHZ0600-MD	WHZ0320-MD	WHZ0400-MD	WHZ0500-MD	WHZ0630-MD
Corresponding Model No.	WCE0602 WHE0600	WCA0321 WHA0320 WCE1002 WHE1000	WCA0401 WHA0400 WCE1602 WHE1600	WCA0501 WHA0500 WCE2502 WHE2500	WCA0631 WHA0630 WCE4002 WHE4000
A	23	25	27	31	35
B	54	60	67	77	88.5
C	45	50	58	68	81
D	40	46	54	64	77
H	31.5	35	38	43	48
J	22.5	25	29	34	40.5
K	34	39	45	53	65
N _x	26	28	31	36	41
N _y	9	10	13	15	20
P	3	5	5	5	5
R	5.5	5.5	5.5	6.5	6.5
S	8	10	10	10	10
T	1.4	1.4	1.4	1.4	1.4
O-ring	1BP5	1BP7	1BP7	1BP7	1BP7
Weight kg	0.1	0.1	0.1	0.2	0.2

- Notes:
- Material: A2017BE-T4 Surface Finishing: Zircon Finishing (Zirconium Chemical Conversion Treatment)
 - Mounting bolts are not provided. Prepare mounting bolts according to the mounting height using the dimension A as a reference.
 - For other block thickness (dim. A), machine the surface Z or design a block referring to the drawing and apply surface treatment if necessary.

Manifold Block for LKA/LKC/LKE/LHA/LHC/LHE/LHS/LL

Model No. Indication

LZY 048 0 - MD
Size
(Refer to
following table)Design No.
(Revision Number)

(mm)

Model No.	LZY0360-MD	LZY0400-MD	LZY0480-MD	LZY0550-MD	LZY0650-MD	LZY0750-MD	LZY0900-MD	LZY1050-MD
Corresponding Model No.	LKA0360 / LKE0360 LHA0360 / LHC0360 LHE0360 / LHS0360 LLO360	LKA0400 / LKC0400 LKE0400 / LHA0400 LHC0400 / LHE0400 LHS0400 / LLO400	LKA0480 / LKC0480 LKE0480 / LHA0480 LHC0480 / LHE0480 LHS0480 / LLO480	LKA0550 / LKC0550 LKE0550 / LHA0550 LHC0550 / LHE0550 LHS0550 / LLO550	LKA0650 / LKC0650 LHA0650 / LHC0650 LHS0650 LLO650	LKA0750 LHA0750 LHS0750 LLO750	LKA0900 LHA0900 LHS0900 LLO900	LKA1050 LHA1050 LHS1050 LLO1050
A	49	54	61	69	81	92	107	122
B	40	45	51	60	70	80	95	110
C	20	20	27	30	32	37	45	50
D	36	40	48	55	65	75	90	105
E	29	31.5	35.5	39	46	52	59.5	67
F	20	22.5	25.5	30	35	40	47.5	55
G	23.5	26	30	33.5	39.5	45	52.5	60
H	16	18	22	24	30	32	37	45
J	31.4	34	40	47	55	63	75	88
K	4.5	5.5	5.5	6.8	6.8	9	11	14
P	3	3	3	3	5	5	5	5
S	8	8	8	8	10	10	10	10
T	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
O-ring	1BP5	1BP5	1BP5	1BP5	1BP7	1BP7	1BP7	1BP7
Weight kg	0.2	0.2	0.3	0.4	0.5	0.8	1.2	1.7

- Notes:
- Material: S45C Surface Finishing: Alkaline Blackening
 - Mounting bolts are not provided. Prepare mounting bolts according to the mounting height using the dimension C as a reference.
 - For other block thickness (dim. C), machine the surface Z or design a block referring to the drawing and apply surface treatment if necessary.

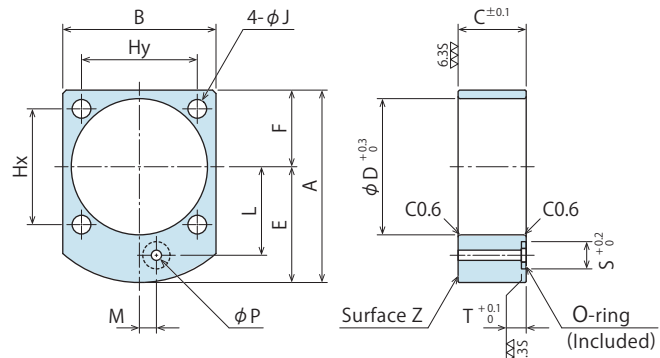
Manifold Block for LJ/LM/LG/LT

Model No. Indication

LZ 048 0 - MS

Size
(Refer to
following table)

Design No.
(Revision Number)



(mm)

Model No.	LZ0300-MS	LZ0360-MS	LZ0400-MS	LZ0480-MS	LZ0550-MS	LZ0650-MS	LZ0750-MS	LZ0900-MS	LZ1050-MS
Corresponding Model No.	LG0301 / LT0301 LJ0302 / LM0300	LG0361 / LT0361 LJ0362 / LM0360	LG0401 / LT0401 LJ0402 / LM0400	LG0481 / LT0481 LJ0482 / LM0480	LG0551 / LT0551 LJ0552 / LM0550	LG0651 / LT0651 LJ0652 / LM0650	LG0751 / LT0751 LJ0752 / LM0750	LG0901 / LT0901 LJ0902	LG1051 / LT1051 LJ1052
A	48	51.5	56.5	62	70	82	93	107	122
B	34	40	45	51	60	70	80	95	110
C	18	20	20	27	30	32	37	45	50
D	30	36	40	48	55	65	75	90	105
E	28.5	31.5	34	36.5	40	47	53	59.5	67
F	19.5	20	22.5	25.5	30	35	40	47.5	55
Hx	30	31.4	34	40	47	55	63	75	88
Hy	23	31.4	34	40	47	55	63	75	88
J	4.5	4.5	5.5	5.5	6.8	6.8	9	11	14
L	20.5	23.5	26	30	33.5	39.5	45	52.5	60
M	3	5	5	0	0	0	0	0	0
P	3	3	3	3	3	5	5	5	5
S	8	8	8	8	8	10	10	10	10
T	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
O-ring	1BP5	1BP5	1BP5	1BP5	1BP5	1BP7	1BP7	1BP7	1BP7
Weight kg	0.1	0.2	0.2	0.3	0.4	0.5	0.8	1.2	1.7

- Notes: 1. Material: S45C Surface Finishing: Alkaline Blackening
2. Mounting bolts are not provided. Prepare mounting bolts according to the mounting height using the dimension C as a reference.
3. For other block thickness (dim. C), machine the surface Z or design a block referring to the drawing and apply surface treatment if necessary.

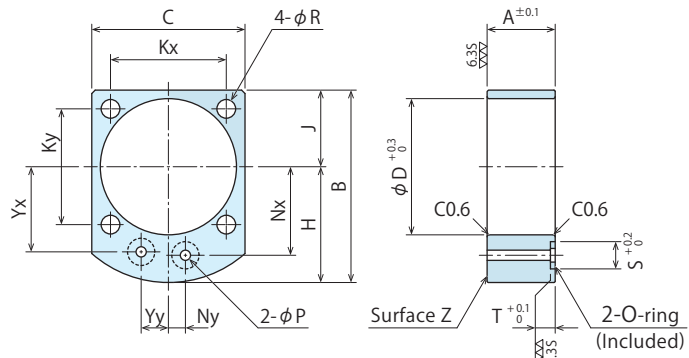
Manifold Block for LC/TC

Model No. Indication

LZ 048 0 - MP

Size
(Refer to
following table)

Design No.
(Revision Number)



(mm)

Model No.	LZ0260-MP	LZ0300-MP	LZ0360-MP	LZ0400-MP	LZ0480-MP	LZ0550-MP	LZ0650-MP	LZ0750-MP	LZ0900-MP
Corresponding Model No.	LC0262	LC0302	LC0362	LC0402 / TC0402	LC0482 / TC0482	LC0552 / TC0552	LC0652 / TC0652	LC0752 / TC0752	LC0902
A	18	18	20	20	27	30	32	37	45
B	43	48	51.5	56.5	62	70	82	93	107
C	29	34	40	45	51	60	70	80	95
D	26	30	36	40	48	55	65	75	90
H	26.5	28.5	31.5	34	36.5	40	47	53	59.5
J	16.5	19.5	20	22.5	25.5	30	35	40	47.5
Kx	25	30	31.4	34	40	47	55	63	75
Ky	21	23	31.4	34	40	47	55	63	75
Nx	18.5	20.5	23.5	26	30	33.5	39.5	45	52.5
Ny	3	3	5	5	0	0	0	0	0
R	3.4	4.5	4.5	5.5	5.5	6.8	6.8	9	11
Yx	18.5	20.5	23.5	25	28	31	37	42.5	50
Yy	7	7	8	8	11	13	14	15	15
P	3	3	3	3	3	3	5	5	5
S	8	8	8	8	8	8	10	10	10
T	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
O-ring	1BP5	1BP5	1BP5	1BP5	1BP5	1BP5	1BP7	1BP7	1BP7
Weight kg	0.1	0.1	0.2	0.2	0.3	0.4	0.5	0.8	1.2

- Notes: 1. Material: S45C Surface Finishing: Alkaline Blackening
2. Mounting bolts are not provided. Prepare mounting bolts according to the mounting height using the dimension A as a reference.
3. For other block thickness (dim. A), machine the surface Z or design a block referring to the drawing and apply surface treatment if necessary.

High-Power Series
Pneumatic Series
Hydraulic Series
Valve / Coupler Hydraulic Unit
Manual Operation Accessories
Cautions / Others

Screw Locator
VXF/VXE
Manual Expansion Locating Pin
VX
Manifold Block
WHZ-MD
LZY-MD
LZ-MS
LZ-MP
TMZ-1MB
TMZ-2MB
DZ-M

Manifold Block / Nut
DZ-R
DZ-C
DZ-P
DZ-B
LZ-S
LZ-SQ
WNZ-SQ
TNZ-S
TNZ-SQ

Pressure Switch
JBA

Pressure Gauge
JGA/JGB

Manifold
JX

Coupler Switch
PS

G-Thread Fitting

Sales Offices

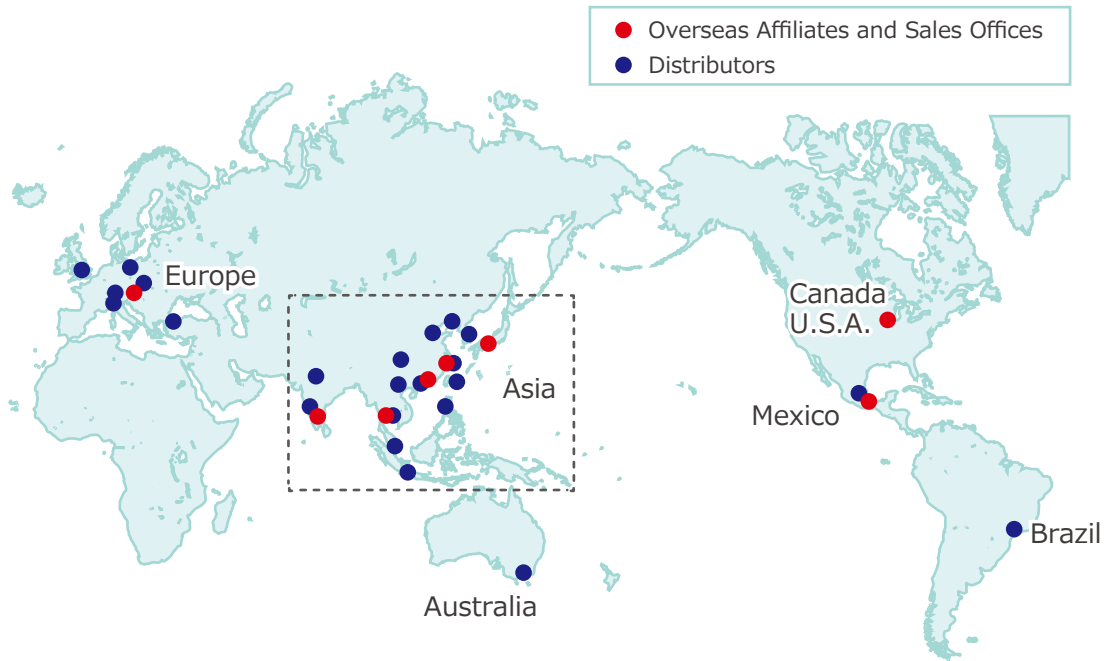
Sales Offices across the World

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Asia Detailed Map

