

# Hydraulic Single Action Link Clamp

Model LM/LJ

Low Pressure (2.5~7MPa)

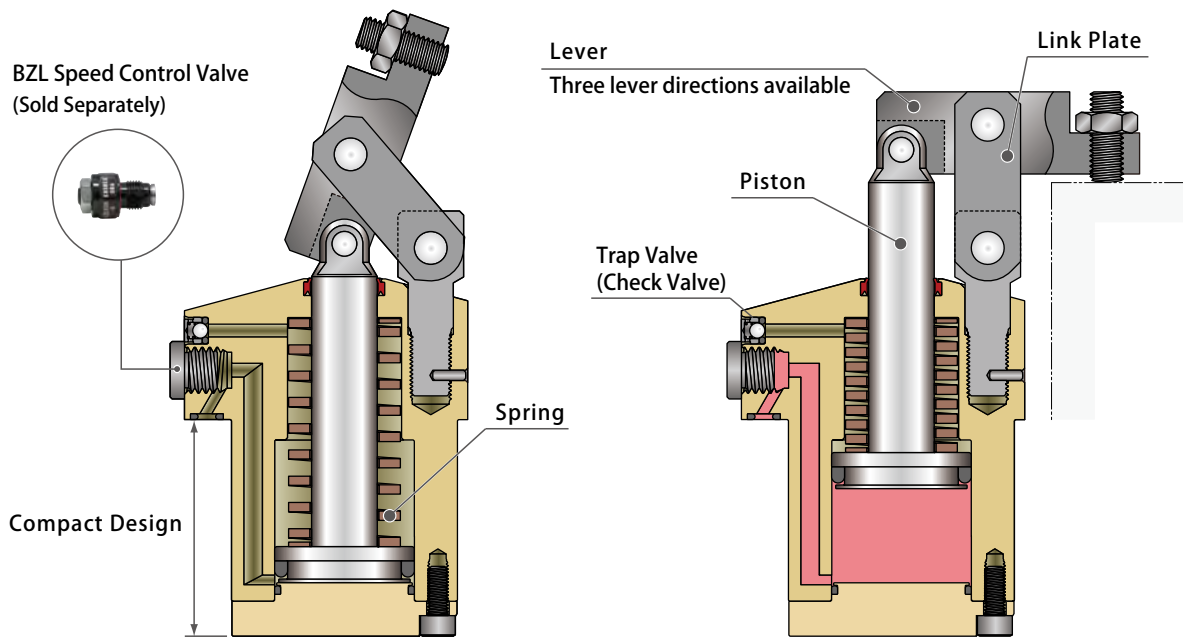
High Power • Compact Clamp



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## Action Description



### When releasing

Cut off hydraulic supply, release action is done by spring.

### When locking

When supplying oil to oil port, do the locking action.

## ● Trap Valve, High Durability and Long Life

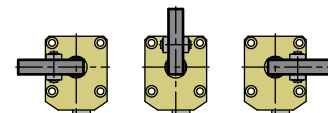
Shutting OFF trap valve, will ensure the complete spring chamber is sealed without contact of external atmosphere. Since the coolant is prevented from entering inside the cylinder, corrosion is eliminated. Also, cumbersome vent port isn't required.

## ● Lighter • Aluminum Alloy Body (Except LJ)

The body of LM0300 ~ LM0750 is made of aluminum alloy that makes the weight of it lighter, which is the most appropriate for high-speed transportation and calculation with no time. Load is reduced by straining the inertial force of the fixture and machine.

## ● Lever in Three Directions Available

Lever positioning is available in three directions; L: Left, C: Center, R: Right. As seen from the port side.



## ● 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 fitting the gasket (-C option), it is able to attach the speed control valve with air venting function. (Speed control valve is sold separately.)

High-Power  
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler  
Hydraulic Unit

Manual Operation  
Accessories

Cautions / Others

Hole Clamp

SFA

SFC

Swing Clamp

LHA

LHC

LHS

LHW

LT/LG

TLA-2

TLB-2

TLA-1

Link Clamp

LKA

LKC

LKW

LM/LJ

TMA-2

TMA-1

Work Support

LD

LC

TNC

TC

Air Sensing  
Lift Cylinder

LLW

Compact Cylinder

LL

LLR

LLU

DP

DR

DS

DT

Block Cylinder

DBA

DBC

Control Valve

BZL

BZT

BZX/JZG

Pallet Clamp

VS

VT

Expansion  
Locating Pin

VL

VM

VJ

VK

Pull Stud Clamp

FP

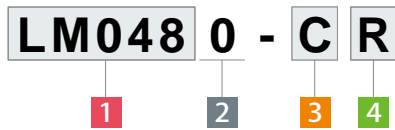
FQ

Customized  
Spring Cylinder

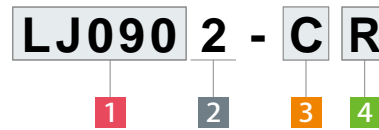
DWA/DWB

## Model No. Indication

Body Material: Aluminum Alloy



Body Material: Steel

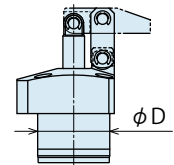


### 1 Body Material • Body Size

- LM030** :  $\phi D=30\text{mm}$  Body Material: Aluminum Alloy
- LM036** :  $\phi D=36\text{mm}$  Body Material: Aluminum Alloy
- LM040** :  $\phi D=40\text{mm}$  Body Material: Aluminum Alloy
- LM048** :  $\phi D=48\text{mm}$  Body Material: Aluminum Alloy
- LM055** :  $\phi D=55\text{mm}$  Body Material: Aluminum Alloy
- LM065** :  $\phi D=65\text{mm}$  Body Material: Aluminum Alloy
- LM075** :  $\phi D=75\text{mm}$  Body Material: Aluminum Alloy

※ LM Body Size : 030~075  
LJ Body Size : 030~105

- LJ030** :  $\phi D=30\text{mm}$  Body Material: Steel
- LJ036** :  $\phi D=36\text{mm}$  Body Material: Steel
- LJ040** :  $\phi D=40\text{mm}$  Body Material: Steel
- LJ048** :  $\phi D=48\text{mm}$  Body Material: Steel
- LJ055** :  $\phi D=55\text{mm}$  Body Material: Steel
- LJ065** :  $\phi D=65\text{mm}$  Body Material: Steel
- LJ075** :  $\phi D=75\text{mm}$  Body Material: Steel
- LJ090** :  $\phi D=90\text{mm}$  Body Material: Steel
- LJ105** :  $\phi D=105\text{mm}$  Body Material: Steel



### 2 Design No. (Revision Number)

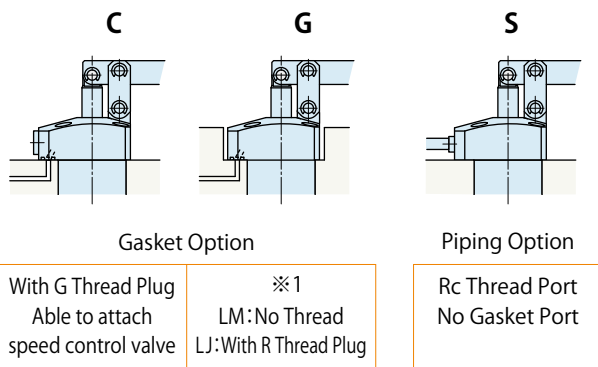
- 0** : **1** LM (Body Material: Aluminum Alloy) selected
- 2** : **1** LJ (Body Material: Steel) selected

### 3 Piping Method

- C** : Gasket Option (With G Thread Plug)
- G** : Gasket Option ※1
- S** : Piping Option (Rc Thread Port)

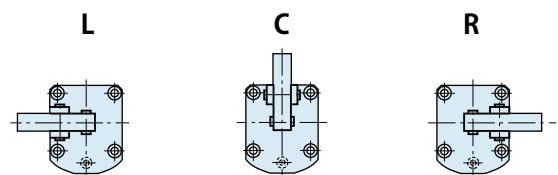
※ Speed control valve (BZL) is sold separately. Refer to P.727.

- ※ 1. Piping Method in G Option
  - LM : It has no Rc thread and no need to mount a plug.
  - LJ : It has Rc thread and is delivered to the customer with R thread plug mounted.



### 4 Lever Direction

- L** : Left
- C** : Center
- R** : Right

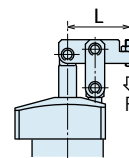


※ This images show the lever direction when the piping port is placed in front of you.

## Specifications

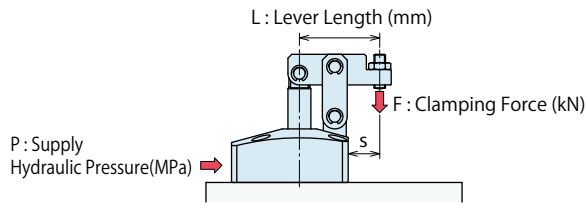
Model No.	LM0300 LJ0302	LM0360 LJ0362	LM0400 LJ0402	LM0480 LJ0482	LM0550 LJ0552	LM0650 LJ0652	LM0750 LJ0752	LJ0902	LJ1052	
Cylinder Area for Locking cm <sup>2</sup>	2.55	3.8	4.5	6.2	9.1	13.9	21.2	33.2	46.6	
Clamping Force (Calculation Formula)**2 kN	$F = \frac{2.86 \times P - 0.97}{L - 12.5}$	$F = \frac{4.96 \times P - 1.87}{L - 14.5}$	$F = \frac{6.51 \times P - 2.80}{L - 16}$	$F = \frac{10.25 \times P - 5.62}{L - 18.5}$	$F = \frac{17.16 \times P - 7.49}{L - 21}$	$F = \frac{30.55 \times P - 12.13}{L - 24.5}$	$F = \frac{57.34 \times P - 24.93}{L - 30}$	$F = \frac{107.52 \times P - 41.12}{L - 36}$	$F = \frac{184.41 \times P - 61.17}{L - 44}$	
Full Stroke mm	16	18.5	20.5	23.5	26	29.5	35	41	49	
Lock Stroke mm	14	16	17.5	20.5	23	26.5	32	38	46	
Extra Stroke mm	2	2.5	3	3	3	3	3	3	3	
Cylinder Capacity cm <sup>3</sup>	4.1	7.0	9.3	14.5	23.6	40.9	74.3	136.1	228.2	
Return Spring Force kN	0.06~0.09	0.09~0.15	0.10~0.21	0.17~0.36	0.24~0.44	0.33~0.58	0.49~0.96	0.68~1.33	0.95~1.58	
Max. Operating Pressure MPa	7.0									
Min. Operating Pressure MPa	2.5									
Withstanding Pressure MPa	10.5									
Operating Temperature °C	0~70									
Mass**3 kg	LM	0.2	0.35	0.4	0.6	0.9	1.4	2.1	-	-
	LJ	0.3	0.6	0.9	1.2	1.8	2.5	4.0	6.5	10.2

Notes: ※2. F : Clamping Force (kN) P : Supply Hydraulic Pressure (MPa) L : Distance between the piston center and the clamping point (mm).  
 ※3. Mass of single clamp without the link lever.



- High-Power Series
- Pneumatic Series
- Hydraulic Series
- Valve / Coupler Hydraulic Unit
- Manual Operation Accessories
- Cautions / Others
- Hole Clamp
  - SFA
  - SFC
- Swing Clamp
  - LHA
  - LHC
  - LHS
  - LHW
  - LT/LG
  - TLA-2
  - TLB-2
  - TLA-1
- Link Clamp
  - LKA
  - LKC
  - LKW
  - LM/LJ**
  - TMA-2
  - TMA-1
- Work Support
  - LD
  - LC
  - TNC
  - TC
- Air Sensing Lift Cylinder
  - LLW
- Compact Cylinder
  - LL
  - LLR
  - LLU
  - DP
  - DR
  - DS
  - DT
- Block Cylinder
  - DBA
  - DBC
- Control Valve
  - BZL
  - BZT
  - BZX/JZG
- Pallet Clamp
  - VS
  - VT
- Expansion Locating Pin
  - VL
  - VM
  - VJ
  - VK
- Pull Stud Clamp
  - FP
  - FQ
- Customized Spring Cylinder
  - DWA/DWB

## Clamping Force Curve



Applicable Model

LM 048 0 -

LJ 090 2 -



1 Body Size

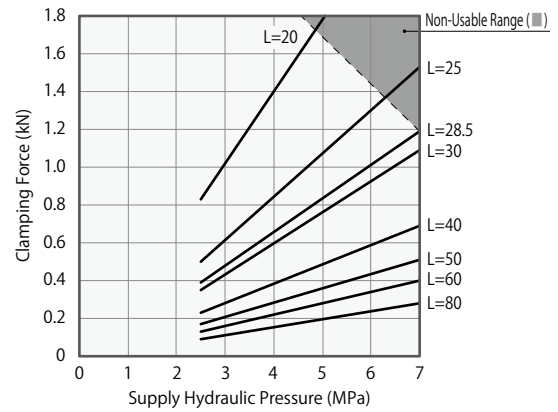
(Ex.) When using LM0480  
 Supply Hydraulic Pressure 5.0 MPa,  
 Lever Length L=42 mm  
 Clamping force is about 1.9 kN.

Notes:

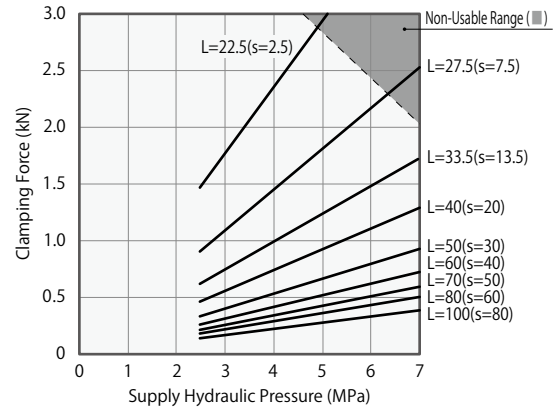
- Tables and graphs shown are the relationships between the clamping force (kN) and supply hydraulic pressure (MPa).
- Cylinder output (when L=0) cannot be calculated from the calculation formula of clamping force.
- Using in the non-usable range may damage the clamp and lead to fluid leakage.

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

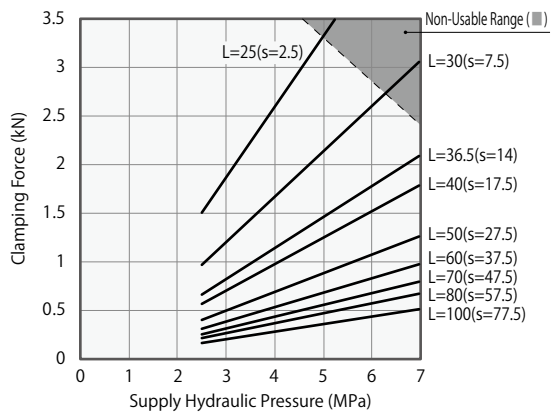
LM0300 / LJ0302		Calculation Formula <sup>※1</sup> (kN) $F = (2.86 \times P - 0.97) / (L - 12.5)$								
Hydraulic Pressure (MPa)	Cylinder Force (kN)	Clamping Force (kN) Non-Usable Range (■)								Min. Lever Length (L) (mm)
		L=20	L=25	L=28.5	L=30	L=40	L=50	L=60	L=80	
7	1.7			1.2	1.1	0.7	0.5	0.4	0.3	28.5
6.5	1.6			1.1	1.0	0.6	0.5	0.4	0.3	26
6	1.4		1.3	1.0	0.9	0.6	0.4	0.3	0.2	24
5.5	1.3		1.2	0.9	0.8	0.5	0.4	0.3	0.2	22
5	1.2		1.1	0.8	0.8	0.5	0.4	0.3	0.2	21
4.5	1.1	1.6	1.0	0.8	0.7	0.4	0.3	0.3	0.2	19
4	0.9	1.4	0.8	0.7	0.6	0.4	0.3	0.2	0.2	18
3.5	0.8	1.2	0.7	0.6	0.5	0.3	0.2	0.2	0.1	17
3	0.7	1.0	0.6	0.5	0.4	0.3	0.2	0.2	0.1	17
2.5	0.5	0.8	0.5	0.4	0.4	0.2	0.2	0.1	0.1	17
Max. Operating Pressure (MPa)		4.8	6.3	7.0	7.0	7.0	7.0	7.0	7.0	



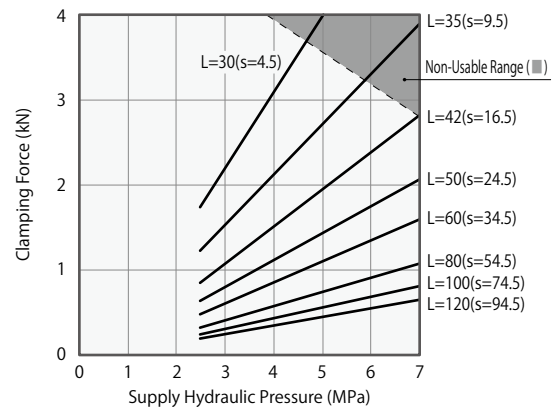
LM0360 / LJ0362		Calculation Formula <sup>※1</sup> (kN) $F = (4.96 \times P - 1.87) / (L - 14.5)$								
Hydraulic Pressure (MPa)	Cylinder Force (kN)	Clamping Force (kN) Non-Usable Range (■)								Min. Lever Length (L) (mm)
		L=22.5	L=27.5	L=33.5	L=40	L=50	L=60	L=80	L=100	
7	2.5			1.7	1.3	0.9	0.7	0.5	0.4	32
6.5	2.3			1.6	1.2	0.9	0.7	0.5	0.4	29
6	2.1		2.1	1.5	1.1	0.8	0.6	0.4	0.3	27
5.5	1.9		2.0	1.3	1.0	0.7	0.6	0.4	0.3	25
5	1.8		1.8	1.2	0.9	0.6	0.5	0.4	0.3	23
4.5	1.6	2.6	1.6	1.1	0.8	0.6	0.4	0.3	0.2	22
4	1.4	2.2	1.4	0.9	0.7	0.5	0.4	0.3	0.2	21
3.5	1.2	1.9	1.2	0.8	0.6	0.4	0.3	0.2	0.2	20
3	1.0	1.6	1.0	0.7	0.5	0.4	0.3	0.2	0.2	20
2.5	0.8	1.3	0.8	0.6	0.4	0.3	0.2	0.2	0.1	20
Max. Operating Pressure (MPa)		4.9	6.3	7.0	7.0	7.0	7.0	7.0	7.0	



LM0400 / LJ0402		Calculation Formula <sup>※1</sup> (kN) $F = (6.51 \times P - 2.80) / (L - 16)$								
Hydraulic Pressure (MPa)	Cylinder Force (kN)	Clamping Force (kN) Non-Usable Range (■)								Min. Lever Length (L) (mm)
		L=25	L=30	L=36.5	L=40	L=50	L=60	L=80	L=100	
7	2.9			2.1	1.8	1.3	1.0	0.7	0.5	34
6.5	2.7			1.9	1.6	1.2	0.9	0.6	0.5	31
6	2.5		2.6	1.8	1.5	1.1	0.8	0.6	0.4	29
5.5	2.3		2.4	1.6	1.4	1.0	0.8	0.5	0.4	27
5	2.0	3.3	2.1	1.5	1.2	0.9	0.7	0.5	0.4	25
4.5	1.8	2.9	1.9	1.3	1.1	0.8	0.6	0.4	0.3	24
4	1.6	2.6	1.7	1.1	1.0	0.7	0.5	0.4	0.3	23
3.5	1.4	2.2	1.4	1.0	0.8	0.6	0.5	0.3	0.2	23
3	1.1	1.9	1.2	0.8	0.7	0.5	0.4	0.3	0.2	23
2.5	0.9	1.5	1.0	0.7	0.6	0.4	0.3	0.2	0.2	23
Max. Operating Pressure (MPa)		5.0	6.3	7.0	7.0	7.0	7.0	7.0	7.0	



LM0480 / LJ0482		Calculation Formula <sup>※1</sup> (kN) $F = (10.25 \times P - 5.62) / (L - 18.5)$								
Hydraulic Pressure (MPa)	Cylinder Force (kN)	Clamping Force (kN) Non-Usable Range (■)								Min. Lever Length (L) (mm)
		L=30	L=35	L=42	L=50	L=60	L=80	L=100	L=120	
7	4.0			2.8	2.1	1.6	1.1	0.8	0.7	42
6.5	3.7			2.6	1.9	1.5	1.0	0.7	0.6	39
6	3.4			2.4	1.8	1.3	0.9	0.7	0.6	36
5.5	3.1		3.1	2.2	1.6	1.2	0.8	0.6	0.5	34
5	2.7		2.8	1.9	1.4	1.1	0.7	0.6	0.4	31
4.5	2.4	3.5	2.5	1.7	1.3	1.0	0.7	0.5	0.4	29
4	2.1	3.1	2.1	1.5	1.1	0.9	0.6	0.4	0.3	28
3.5	1.8	2.6	1.8	1.3	1.0	0.7	0.5	0.4	0.3	27
3	1.5	2.2	1.5	1.1	0.8	0.6	0.4	0.3	0.2	26
2.5	1.2	1.7	1.2	0.9	0.6	0.5	0.3	0.2	0.2	26
Max. Operating Pressure (MPa)		4.7	5.9	7.0	7.0	7.0	7.0	7.0	7.0	



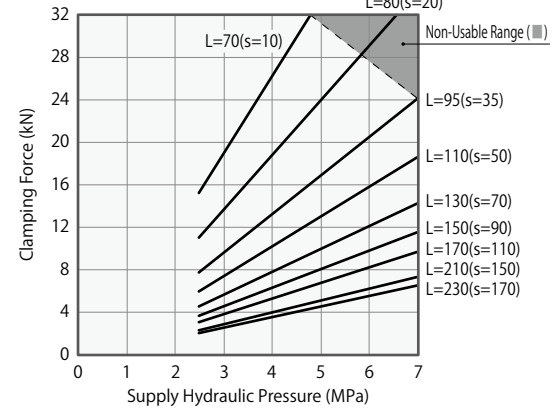
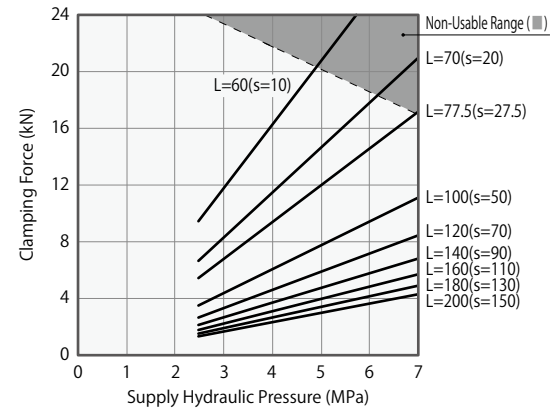
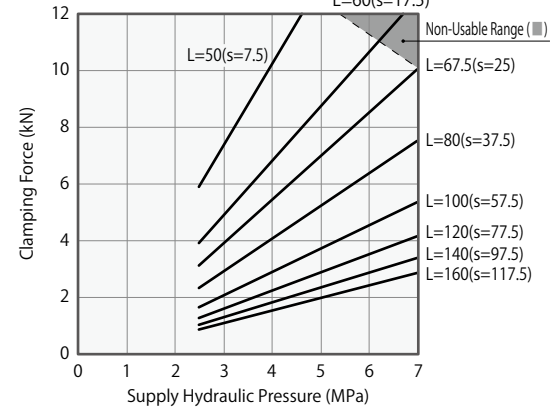
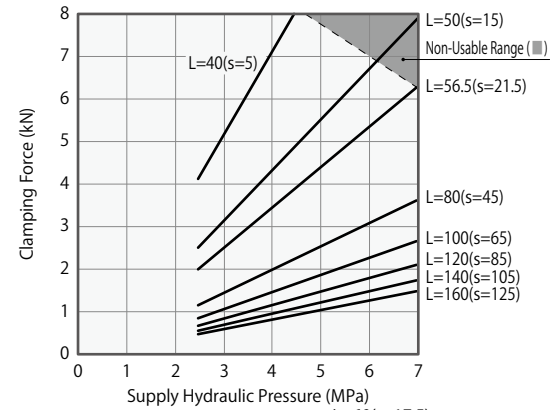
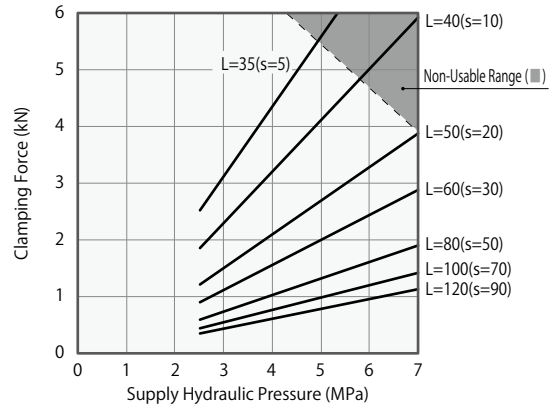
LM0550 / LJ0552		Calculation Formula <sup>*1</sup> (kN) $F = (17.16 \times P - 7.49) / (L - 21)$									
Hydraulic Pressure (MPa)	Cylinder Force (kN)	Clamping Force (kN)								Non-Usable Range (mm)	Min. Lever Length (L) (mm)
		L=35	L=40	L=50	L=60	L=70	L=80	L=100	L=120		
7	5.9			3.9	2.9	2.3	1.9	1.4	1.1		50
6.5	5.5			3.6	2.7	2.1	1.8	1.3	1.1		45
6	5.0			3.3	2.4	1.9	1.6	1.2	1.0		41
5.5	4.6		4.6	3.0	2.2	1.8	1.5	1.1	0.9		38
5	4.1		4.1	2.7	2.0	1.6	1.3	1.0	0.8		36
4.5	3.7	5.0	3.7	2.4	1.8	1.4	1.2	0.9	0.7		33
4	3.2	4.4	3.2	2.1	1.6	1.2	1.0	0.8	0.6		31
3.5	2.7	3.8	2.8	1.8	1.3	1.1	0.9	0.7	0.5		30
3	2.3	3.1	2.3	1.5	1.1	0.9	0.7	0.6	0.4		30
2.5	1.8	2.5	1.9	1.2	0.9	0.7	0.6	0.4	0.4		30
Max. Operating Pressure (MPa)		4.9	5.8	7.0	7.0	7.0	7.0	7.0	7.0		

LM0650 / LJ0652		Calculation Formula <sup>*1</sup> (kN) $F = (30.55 \times P - 12.13) / (L - 24.5)$									
Hydraulic Pressure (MPa)	Cylinder Force (kN)	Clamping Force (kN)								Non-Usable Range (mm)	Min. Lever Length (L) (mm)
		L=40	L=50	L=56.5	L=80	L=100	L=120	L=140	L=160		
7	9.2			6.3	3.6	2.7	2.1	1.7	1.5		56
6.5	8.5			5.8	3.4	2.5	2.0	1.6	1.4		53
6	7.8		6.7	5.3	3.1	2.3	1.8	1.5	1.3		49
5.5	7.1		6.1	4.9	2.8	2.1	1.6	1.3	1.2		46
5	6.4		5.5	4.4	2.5	1.9	1.5	1.2	1.0		43
4.5	5.7	8.1	4.9	3.9	2.3	1.7	1.3	1.1	0.9		40
4	5.0	7.1	4.3	3.4	2.0	1.5	1.2	1.0	0.8		37
3.5	4.3	6.1	3.7	3.0	1.7	1.3	1.0	0.8	0.7		35
3	3.6	5.1	3.1	2.5	1.4	1.1	0.8	0.7	0.6		35
2.5	2.9	4.1	2.5	2.0	1.2	0.9	0.7	0.6	0.5		35
Max. Operating Pressure (MPa)		4.5	6.1	7.0	7.0	7.0	7.0	7.0	7.0		

LM0750 / LJ0752		Calculation Formula <sup>*1</sup> (kN) $F = (57.34 \times P - 24.93) / (L - 30)$									
Hydraulic Pressure (MPa)	Cylinder Force (kN)	Clamping Force (kN)								Non-Usable Range (mm)	Min. Lever Length (L) (mm)
		L=50	L=60	L=67.5	L=80	L=100	L=120	L=140	L=160		
7	13.9			10.0	7.5	5.4	4.2	3.4	2.9		67
6.5	12.8			9.3	7.0	5.0	3.9	3.2	2.7		63
6	11.8		10.6	8.5	6.4	4.6	3.5	2.9	2.5		58
5.5	10.7		9.7	7.7	5.8	4.1	3.2	2.6	2.2		54
5	9.6		8.7	7.0	5.2	3.7	2.9	2.4	2.0		51
4.5	8.6	11.7	7.8	6.2	4.7	3.3	2.6	2.1	1.8		48
4	7.5	10.2	6.8	5.5	4.1	2.9	2.3	1.9	1.6		45
3.5	6.5	8.8	5.9	4.7	3.5	2.5	2.0	1.6	1.4		43
3	5.4	7.4	4.9	3.9	2.9	2.1	1.6	1.3	1.1		43
2.5	4.3	5.9	3.9	3.2	2.4	1.7	1.3	1.1	0.9		43
Max. Operating Pressure (MPa)		4.8	6.2	7.0	7.0	7.0	7.0	7.0	7.0		

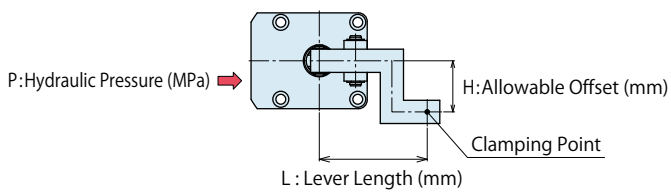
LJ0902		Calculation Formula <sup>*1</sup> (kN) $F = (107.52 \times P - 41.12) / (L - 36)$									
Hydraulic Pressure (MPa)	Cylinder Force (kN)	Clamping Force (kN)								Non-Usable Range (mm)	Min. Lever Length (L) (mm)
		L=60	L=70	L=77.5	L=100	L=120	L=140	L=160	L=200		
7	21.9			17.1	11.1	8.5	6.8	5.7	4.3		77
6.5	20.3			15.8	10.3	7.8	6.3	5.3	4.0		73
6	18.6		17.8	14.6	9.4	7.2	5.8	4.9	3.7		69
5.5	16.9		16.2	13.3	8.6	6.6	5.3	4.4	3.4		64
5	15.3		14.6	12.0	7.8	5.9	4.8	4.0	3.0		61
4.5	13.6	18.4	13.0	10.7	6.9	5.3	4.3	3.6	2.7		57
4	12.0	16.2	11.4	9.4	6.1	4.6	3.7	3.1	2.4		54
3.5	10.3	14.0	9.9	8.1	5.2	4.0	3.2	2.7	2.0		52
3	8.6	11.7	8.3	6.8	4.4	3.4	2.7	2.3	1.7		50
2.5	7.0	9.5	6.7	5.5	3.6	2.7	2.2	1.8	1.4		50
Max. Operating Pressure (MPa)		4.9	6.2	7.0	7.0	7.0	7.0	7.0	7.0		

LJ1052		Calculation Formula <sup>*1</sup> (kN) $F = (184.41 \times P - 61.17) / (L - 44)$									
Hydraulic Pressure (MPa)	Cylinder Force (kN)	Clamping Force (kN)								Non-Usable Range (mm)	Min. Lever Length (L) (mm)
		L=70	L=80	L=95	L=110	L=130	L=150	L=170	L=230		
7	31.0			24.1	18.6	14.3	11.6	9.8	6.6		95
6.5	28.7			22.3	17.2	13.2	10.7	9.0	6.1		88
6	26.4			20.5	15.8	12.2	9.9	8.3	5.6		82
5.5	24.1		26.5	18.7	14.4	11.1	9.0	7.6	5.1		76
5	21.7		23.9	16.9	13.0	10.0	8.1	6.8	4.6		72
4.5	19.4	29.6	21.4	15.1	11.6	8.9	7.3	6.1	4.1		67
4	17.1	26.0	18.8	13.3	10.2	7.9	6.4	5.4	3.6		63
3.5	14.7	22.5	16.2	11.5	8.9	6.8	5.5	4.6	3.1		60
3	12.4	18.9	13.7	9.6	7.5	5.7	4.6	3.9	2.6		60
2.5	10.1	15.4	11.1	7.8	6.1	4.6	3.8	3.2	2.1		60
Max. Operating Pressure (MPa)		4.8	5.8	7.0	7.0	7.0	7.0	7.0	7.0		



- High-Power Series
- Pneumatic Series
- Hydraulic Series**
- Valve / Coupler Hydraulic Unit
- Manual Operation Accessories
- Cautions / Others
  
- Hole Clamp
  - SFA
  - SFC
- Swing Clamp
  - LHA
  - LHC
  - LHS
  - LHW
  - LT/LG
  - TLA-2
  - TLB-2
  - TLA-1
- Link Clamp**
  - LKA
  - LKC
  - LKW
  - L/LJ**
  - TMA-2
  - TMA-1
- Work Support
  - LD
  - LC
  - TNC
  - TC
- Air Sensing Lift Cylinder
  - LLW
- Compact Cylinder
  - LL
  - LLR
  - LLU
  - DP
  - DR
  - DS
  - DT
- Block Cylinder
  - DBA
  - DBC
- Control Valve
  - BZL
  - BZT
  - BZX/JZG
- Pallet Clamp
  - VS
  - VT
- Expansion Locating Pin
  - VL
  - VM
  - VJ
  - VK
- Pull Stud Clamp
  - FP
  - FQ
- Customized Spring Cylinder
  - DWA/DWB

## Allowable Offset Graph



Applicable Model

**LM 048 0** - C G S L C R  
**LJ 090 2** - C G S L C R

(Ex.) When using LM0480  
Supply Hydraulic Pressure 5.0 MPa,  
Lever Length L=80 mm  
Allowable offset is about 18 mm.

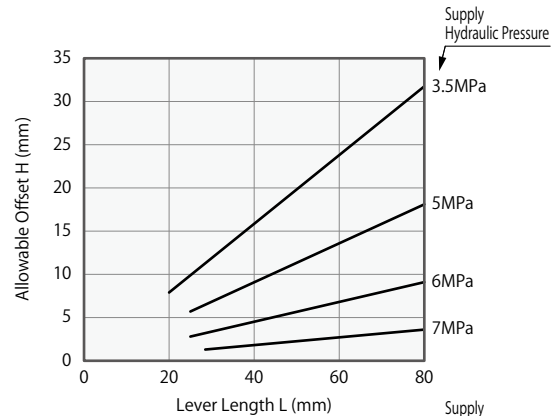
1 Body Size

Notes:

1. Tables and graphs shown are the relationships between the lever length (mm) for supply hydraulic pressure (MPa) and the allowable offset (mm).
2. Using the lever beyond allowable offset may cause deformation, galling 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.

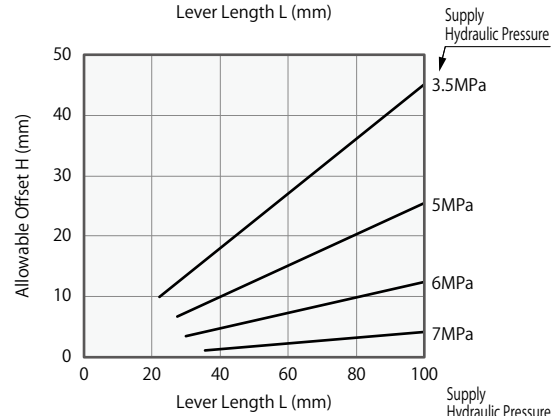
### LM0300 / LJ0302

Hydraulic Pressure (MPa)	Allowable Offset H (mm) Non-Usable Range (■)							
	Lever Length L (mm)							
	L=20	L=25	L=28.5	L=30	L=40	L=50	L=60	L=80
7	■	■	1	1	2	2	3	4
6	■	3	3	3	5	6	7	9
5	■	6	6	7	9	11	14	18
3.5	8	10	11	12	16	20	24	32



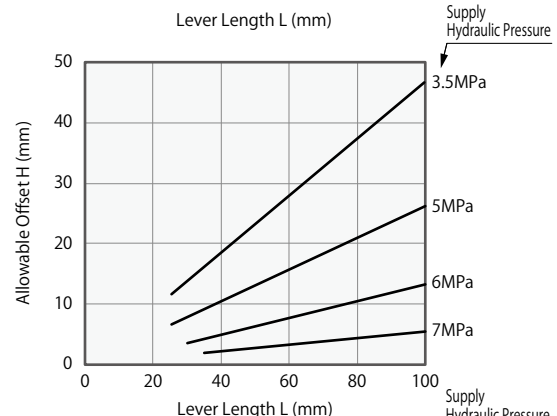
### LM0360 / LJ0362

Hydraulic Pressure (MPa)	Allowable Offset H (mm) Non-Usable Range (■)							
	Lever Length L (mm)							
	L=22.5	L=27.5	L=33.5	L=40	L=50	L=60	L=80	L=100
7	■	■	■	1	2	2	3	4
6	■	■	4	5	6	7	10	12
5	■	7	8	10	13	15	21	25
3.5	10	12	15	18	23	27	36	45



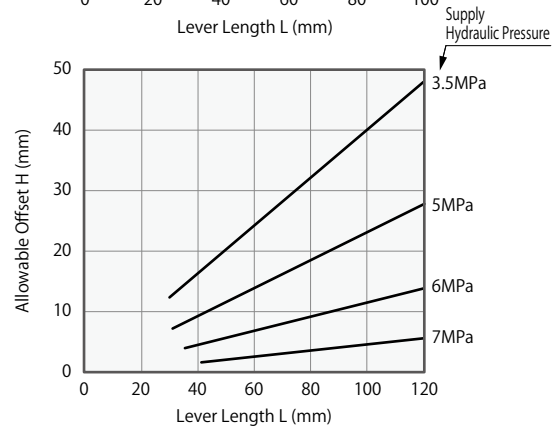
### LM0400 / LJ0402

Hydraulic Pressure (MPa)	Allowable Offset H (mm) Non-Usable Range (■)							
	Lever Length L (mm)							
	L=25	L=30	L=36.5	L=40	L=50	L=60	L=80	L=100
7	■	■	2	2	3	3	4	5
6	■	4	5	5	6	8	11	13
5	7	8	10	11	13	16	21	26
3.5	12	14	17	19	23	28	37	47



### LM0480 / LJ0482

Hydraulic Pressure (MPa)	Allowable Offset H (mm) Non-Usable Range (■)							
	Lever Length L (mm)							
	L=30	L=35	L=42	L=50	L=60	L=80	L=100	L=120
7	■	■	2	2	3	4	5	6
6	■	4	5	6	7	9	12	14
5	7	8	10	12	14	19	23	28
3.5	13	15	17	20	24	32	40	48



**LM0550 / LJ0552**

Hydraulic Pressure (MPa)	Allowable Offset H (mm) Non-Usable Range(III)							
	Lever Length L (mm)							
	L=35	L=40	L=50	L=60	L=70	L=80	L=100	L=120
7			3	3	4	5	6	7
6		6	7	8	10	11	13	16
5	9	11	13	16	19	22	27	32
3.5	17	19	24	28	33	38	47	57

**LM0650 / LJ0652**

Hydraulic Pressure (MPa)	Allowable Offset H (mm) Non-Usable Range(III)							
	Lever Length L (mm)							
	L=40	L=50	L=56.5	L=80	L=100	L=120	L=140	L=160
7			4	5	6	7	8	9
6		8	9	12	15	18	21	24
5		15	17	24	30	36	42	48
3.5	21	27	30	42	52	62	73	83

**LM0750 / LJ0752**

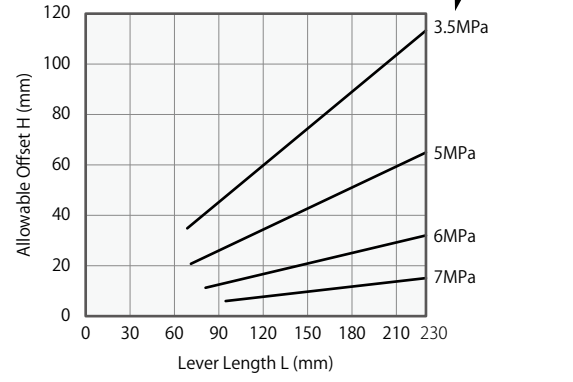
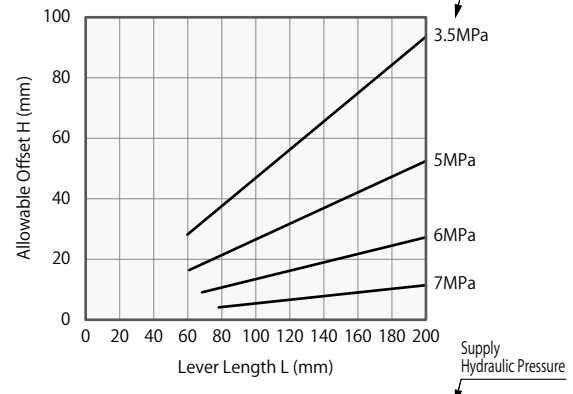
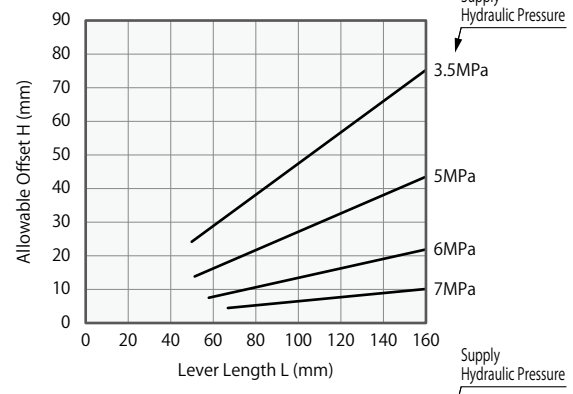
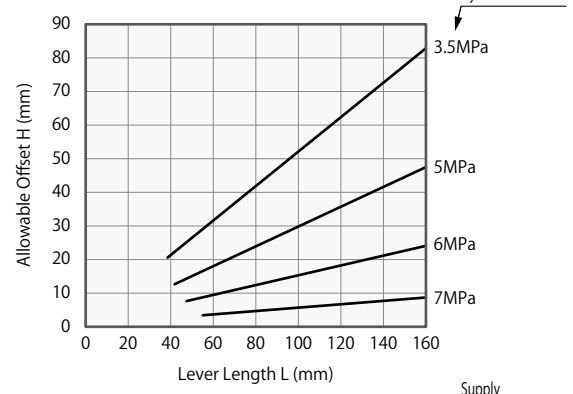
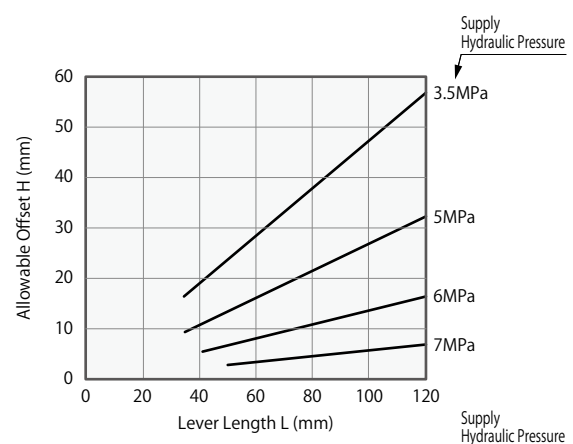
Hydraulic Pressure (MPa)	Allowable Offset H (mm) Non-Usable Range(III)							
	Lever Length L (mm)							
	L=50	L=60	L=67.5	L=80	L=100	L=120	L=140	L=160
7			5	5	7	8	9	10
6		8	9	11	14	16	19	22
5		16	18	22	27	33	38	44
3.5	24	29	33	38	47	57	66	75

**LJ0902**

Hydraulic Pressure (MPa)	Allowable Offset H (mm) Non-Usable Range(III)							
	Lever Length L (mm)							
	L=60	L=70	L=77.5	L=100	L=120	L=140	L=160	L=200
7			4	5	7	8	9	11
6		9	10	13	16	19	22	27
5		19	21	27	32	37	42	53
3.5	28	33	36	47	56	66	75	94

**LJ1052**

Hydraulic Pressure (MPa)	Allowable Offset H (mm) Non-Usable Range(III)							
	Lever Length L (mm)							
	L=70	L=80	L=95	L=110	L=130	L=150	L=170	L=230
7			6	7	8	10	11	15
6			13	15	18	21	24	32
5		23	27	32	37	43	48	65
3.5	36	40	47	55	65	74	84	113

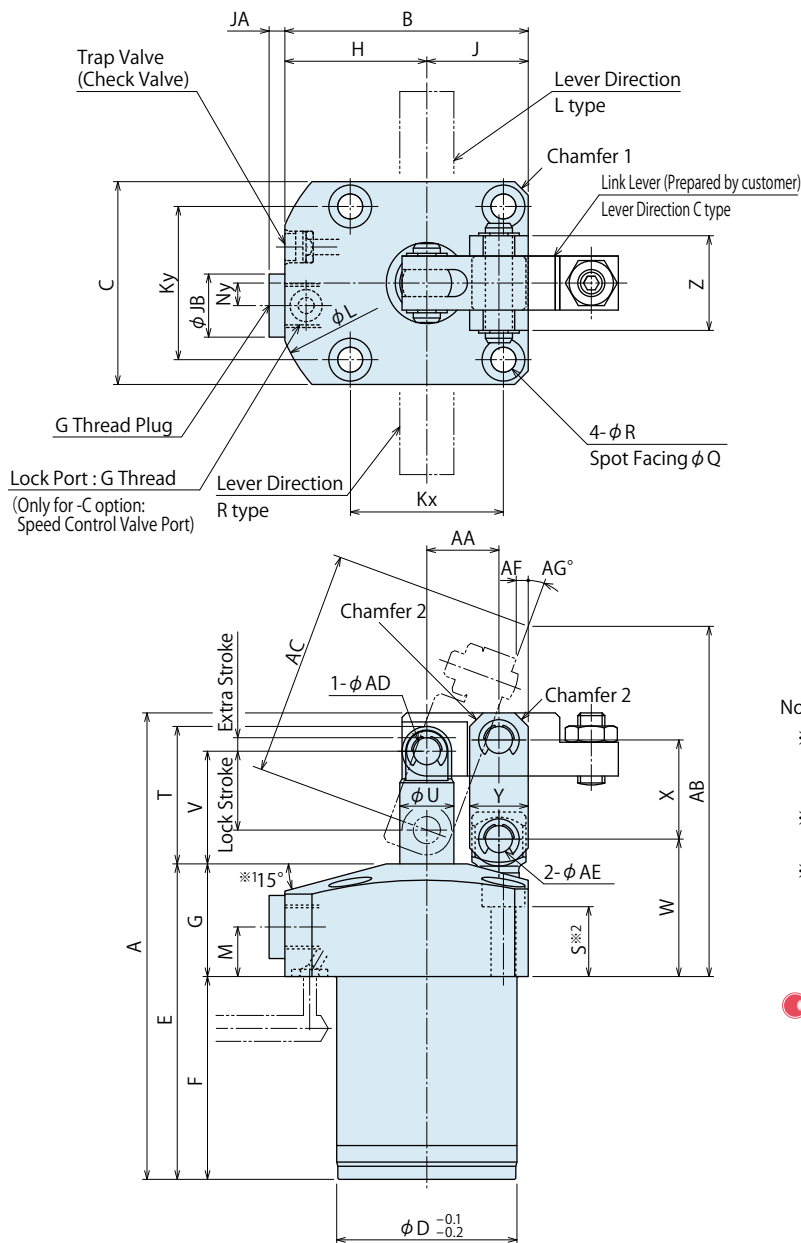




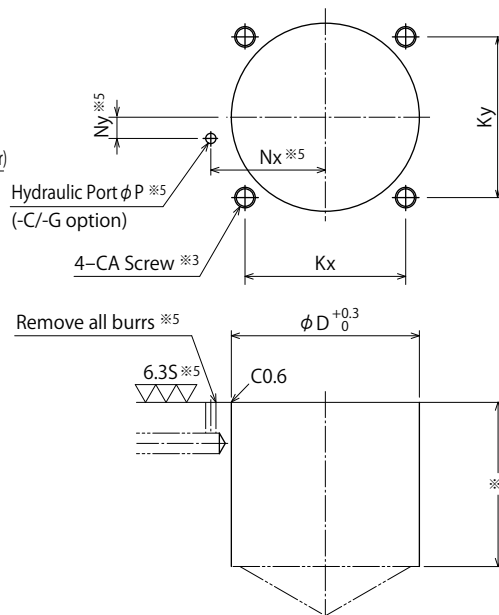
## External Dimensions

C : Gasket Option (With G Thread Plug)

※The drawing shows the locked state of LM/LJ-CC.



## Machining Dimensions of Mounting Area



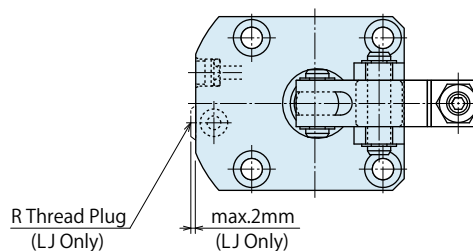
Notes:

- ※3. CA tapping depth should be calculated so that mounting bolts engage fixture by at least 1.5 x bolt diameter.
- ※4. The  $\phi D$  depth of the body mounting hole should be decided from dimension F.
- ※5. This process indicates -C/-G: Gasket option.

## Piping Method

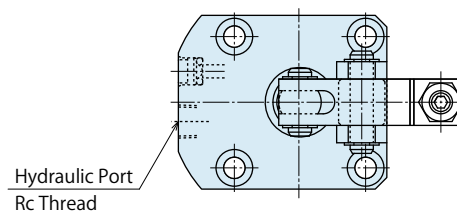
G : Gasket Option (with R Thread Plug)

※The drawing shows the locked state of LM/LJ-GC.

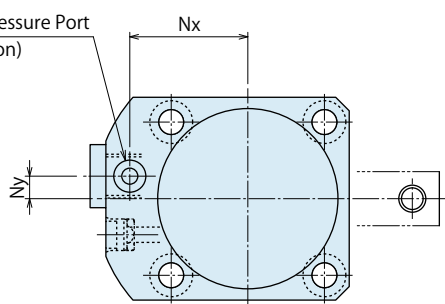


S : Piping Option (Rc Thread)

※The drawing shows the locked state of LM/LJ-SC.



O-ring for Hydraulic Pressure Port  
(Included)(-C/-G option)



Notes:

- ※1. Flange inclination angle is 12° only for LM0650/LJ0652.
- ※2. Mounting bolts are not provided.  
Customer should prepare based on dimension "S".  
1. Please use the provided pin (equivalent to  $\phi ADf6$ ,  $\phi AEf6$ , HRC60) as mounting pin for lever.

## External Dimensions and Machining Dimensions for Mounting

(mm)

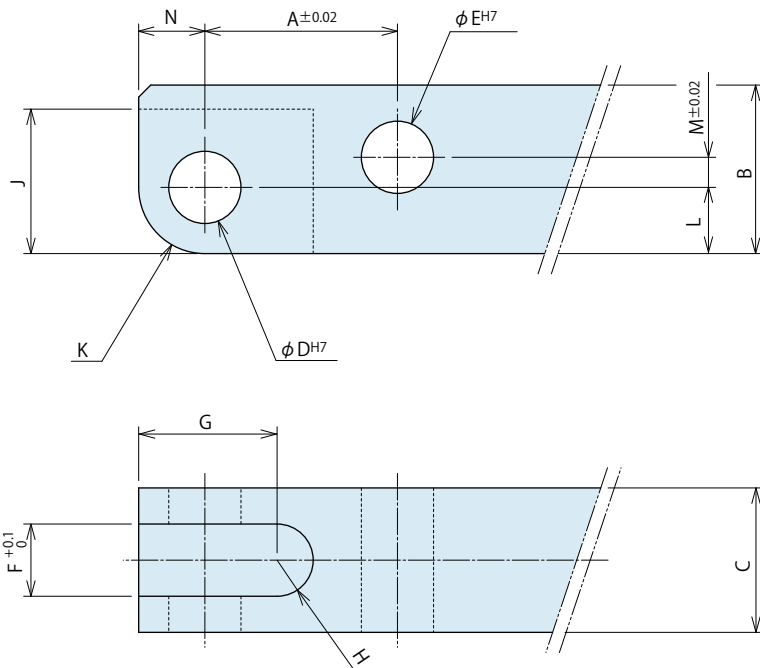
Model No.	LM0300-□□ LJ0302-□□	LM0360-□□ LJ0362-□□	LM0400-□□ LJ0402-□□	LM0480-□□ LJ0482-□□	LM0550-□□ LJ0552-□□	LM0650-□□ LJ0652-□□	LM0750-□□ LJ0752-□□	LJ0902-□□	LJ1052-□□
Full Stroke	16	18.5	20.5	23.5	26	29.5	35	41	49
Lock Stroke	14	16	17.5	20.5	23	26.5	32	38	46
Extra Stroke	2	2.5	3	3	3	3	3	3	3
A	86	94	103.5	114	132.5	147	175	207	243
B	45.5	49	54	61	69	81	94.5	109.5	127
C	34	40	45	51	60	70	85	100	120
D	30	36	40	48	55	65	75	90	105
E	59	63.5	70	75	87	93	108	128	149
F	34	38.5	45	47	59	63	71	88	99
G	25	25	25	28	28	30	37	40	50
H	26	29	31.5	35.5	39	46	52	59.5	67
J	19.5	20	22.5	25.5	30	35	42.5	50	60
Kx	30	31.4	34	40	47	55	63	75	88
Ky	23	31.4	34	40	47	55	63	75	88
L	57	63	68	73	80	94	106	126	147
M	11	11	11	12	12	13	16	16	17
Nx	20.5	23.5	26	30	33.5	39.5	45	52.5	60
Ny	3	5	5	0	0	0	0	0	0
P	3	3	3	3	3	5	5	5	5
Q	7.5	7.5	9.5	9.5	11	11	14	17.5	20
R	4.5	4.5	5.5	5.5	6.8	6.8	9	11	14
S	15.5	18	15.5	17.5	15	15.5	19.5	19	24.5
T	23.5	27	30.5	35	37.5	45	55	64.5	77
U	8	10	12	14	16	18	22	28	35.5
V	20	22.5	25	29	31.5	37	45	52	62
W	29 ±0.3	30 ±0.4	30.5 ±0.4	34.5 ±0.4	35.5 ±0.4	39 ±0.4	48 ±0.4	52.5 ±0.4	64 ±0.4
X	18.5	20	22	26	30	35.5	43.5	52.5	64
Y	9	11	13	13	16	19	25	28	32
Z	14	19	21	21	28	37	40	49	64
Chamfer 1	C3	C2	C3	C3	(φ80)	(φ94)	(φ106)	(φ126)	(φ147)
Chamfer 2	C2	C2.5	C3	C3	C3	C5	C5	C6	C6
AA	12.5	14.5	16	18.5	21	24.5	30	36	44
AB	73.1	74.3	77.7	92.4	101.9	111.4	130.8	146.5	173.6
AC	45.4	47.3	50.2	61.2	71.7	78.7	90.8	104.6	122.5
AD	4	5	6	6	6	8	10	12	15
AE	4	5	6	6	8	10	12	15	18
AF	3.4	2.9	2.7	4.3	4.7	4.3	4.5	5	4.1
AG	16.9	19.6	20.2	18.9	19.9	20.5	21.4	22.4	23.1
CA (Nominal × Pitch)	M4×0.7	M4×0.7	M5×0.8	M5×0.8	M6×1	M6×1	M8×1.25	M10×1.5	M12×1.75
JA	3.5	3.5	3.5	3.5	3.5	4.5	4.5	4.5	4.5
JB	14	14	14	14	14	19	19	22	22
Hydraulic Port G Thread Plug (-C) (Recommended Inner Diameter of Pipe)	G1/8 (φ6)	G1/8 (φ6)	G1/8 (φ6)	G1/8 (φ6)	G1/8 (φ6)	G1/4 (φ8)	G1/4 (φ8)	G3/8 (φ12)	G3/8 (φ12)
Hydraulic Port R Thread Plug (-G) (Recommended Inner Diameter of Pipe)	R1/8 (φ6)	R1/8 (φ6)	R1/8 (φ6)	R1/8 (φ6)	R1/8 (φ6)	R1/4 (φ8)	R1/4 (φ8)	R3/8 (φ12)	R3/8 (φ12)
O-ring	1BP5	1BP5	1BP5	1BP5	1BP5	1BP7	1BP7	1BP7	1BP7
Hydraulic Port Rc Thread Plug (-S)	Rc1/8	Rc1/8	Rc1/8	Rc1/8	Rc1/8	Rc1/4	Rc1/4	Rc3/8	Rc3/8

Note: 1. Recommended pipe inner diameter shown in this table. Make appropriate changes according to the number of clamps used and the distance from the piping.

- High-Power Series
- Pneumatic Series
- Hydraulic Series
- Valve / Coupler Hydraulic Unit
- Manual Operation Accessories
- Cautions / Others
- Hole Clamp
  - SFA
  - SFC
- Swing Clamp
  - LHA
  - LHC
  - LHS
  - LHW
  - LT/LG
  - TLA-2
  - TLB-2
  - TLA-1
- Link Clamp
  - LKA
  - LKC
  - LKW
  - LM/LJ
  - TMA-2
  - TMA-1
- Work Support
  - LD
  - LC
  - TNC
  - TC
- Air Sensing Lift Cylinder
  - LLW
- Compact Cylinder
  - LL
  - LLR
  - LLU
  - DP
  - DR
  - DS
  - DT
- Block Cylinder
  - DBA
  - DBC
- Control Valve
  - BZL
  - BZT
  - BZX/JZG
- Pallet Clamp
  - VS
  - VT
- Expansion Locating Pin
  - VL
  - VM
  - VJ
  - VK
- Pull Stud Clamp
  - FP
  - FQ
- Customized Spring Cylinder
  - DWA/DWB

**Link Lever Design Dimension**

※ Reference for designing link lever.



**Calculation List of Link Lever Design Dimension**

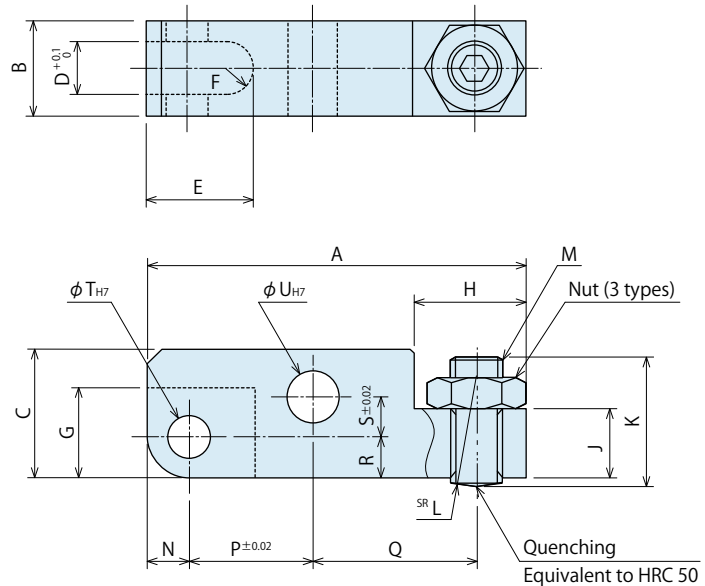
	(mm)								
Corresponding Model No.	LM0300 LJ0302	LM0360 LJ0362	LM0400 LJ0402	LM0480 LJ0482	LM0550 LJ0552	LM0650 LJ0652	LM0750 LJ0752	LJ0902	LJ1052
A	12.5	14.5	16	18.5	21	24.5	30	36	44
B	11	12.5	14	16	20	25	32	38	45
C	8 <sup>0</sup> <sub>-0.1</sub>	10 <sup>0</sup> <sub>-0.2</sub>	12 <sup>0</sup> <sub>-0.3</sub>	12 <sup>0</sup> <sub>-0.3</sub>	16 <sup>0</sup> <sub>-0.3</sub>	19 <sup>0</sup> <sub>-0.3</sub>	22 <sup>0</sup> <sub>-0.3</sub>	25 <sup>0</sup> <sub>-0.3</sub>	32 <sup>0</sup> <sub>-0.4</sub>
D	4 <sup>+0.012</sup> <sub>0</sub>	5 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	8 <sup>+0.015</sup> <sub>0</sub>	10 <sup>+0.015</sup> <sub>0</sub>	12 <sup>+0.018</sup> <sub>0</sub>	15 <sup>+0.018</sup> <sub>0</sub>
E	4 <sup>+0.012</sup> <sub>0</sub>	5 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	8 <sup>+0.015</sup> <sub>0</sub>	10 <sup>+0.015</sup> <sub>0</sub>	12 <sup>+0.018</sup> <sub>0</sub>	15 <sup>+0.018</sup> <sub>0</sub>	18 <sup>+0.018</sup> <sub>0</sub>
F	4.5	5	6	6	8	10	11	13	16
G	8.5	10	11.5	13	12.5	16	20	24	28
H	R2.25	R2.5	R3	R3	R4	R5	R5.5	R6.5	R8
J	8.5	10	12	13	13	17.5	22	26	30.5
K	R4	R4.5	R5.5	R6	R6	R8	R10	R11	R13
L	4	4.5	5.5	6	6	8	10	11	13
M	2.5	2.5	2.5	3.5	6	7.5	9.5	13	16
N	4	4.5	5.5	6	6	8	10	11	13

Notes:

1. Design the link lever length according to the performance graph.
2. If the link lever is not in accordance with the dimension shown above, performance may be degraded and damage can occur.
3. Please use the attached pin (equivalent to φADf6, φAEf6, HRC60) as the mounting pin for lever.  
(Please refer to each external dimension of LM/LJ for the dimensions φAD and φAE.)

 Accessories : Link Lever (LZ-LJ1)

## Model No. Indication

**LZ 048 0 – LJ1**Size (Refer to the  
graph on the right.)Design No.  
(Revision Number)

(mm)

Model No.	LZ0300-LJ1	LZ0360-LJ1	LZ0400-LJ1	LZ0480-LJ1	LZ0550-LJ1	LZ0650-LJ1	LZ0750-LJ1	LZ0900-LJ1	LZ1050-LJ1
Corresponding Model No.	LM0300 LJ0302	LM0360 LJ0362	LM0400 LJ0402	LM0480 LJ0482	LM0550 LJ0552	LM0650 LJ0652	LM0750 LJ0752	LJ0902	LJ1052
A	37.5	43	48	54	64	74.5	88.5	102.5	125
B	8 <sup>-0.1</sup>	10 <sup>-0.2</sup>	12 <sup>-0.3</sup>	12 <sup>-0.3</sup>	16 <sup>-0.3</sup>	19 <sup>-0.3</sup>	22 <sup>-0.3</sup>	25 <sup>-0.3</sup>	32 <sup>-0.4</sup>
C	11	12.5	14	16	20	25	32	38	45
D	4.5	5	6	6	8	10	11	13	16
E	10.75	12.5	14.5	16	16.5	21	25.5	30.5	36
F	R2.25	R2.5	R3	R3	R4	R5	R5.5	R6.5	R8
G	8.5	10	12	13	13	17.5	22	26	30.5
H	10.5	10.5	13	13	17	22	25	31	38
J	6	7	7.5	8	10	13	16	22	27
K	13	14.5	16	18	22	27	31	40	47
L	8	9	10	10	15	20	30	45	60
M	M4×0.7	M5×0.8	M6×1	M6×1	M8×1.25	M10×1.5	M12×1.75	M16×2	M20×2.5
N	4	4.5	5.5	6	6	8	10	11	13
P	12.5	14.5	16	18.5	21	24.5	30	36	44
Q	16	19	20.5	23.5	29	32	37.5	41.5	51
R	4	4.5	5.5	6	6	8	10	11	13
S	2.5	2.5	2.5	3.5	6	7.5	9.5	13	16
T	4 <sup>+0.012</sup> <sub>0</sub>	5 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	8 <sup>+0.015</sup> <sub>0</sub>	10 <sup>+0.015</sup> <sub>0</sub>	12 <sup>+0.018</sup> <sub>0</sub>	15 <sup>+0.018</sup> <sub>0</sub>
U	4 <sup>+0.012</sup> <sub>0</sub>	5 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	8 <sup>+0.015</sup> <sub>0</sub>	10 <sup>+0.015</sup> <sub>0</sub>	12 <sup>+0.018</sup> <sub>0</sub>	15 <sup>+0.018</sup> <sub>0</sub>	18 <sup>+0.018</sup> <sub>0</sub>

Notes: 1. Material S45C

2. Please use the attached pin (equivalent to φ ADf6、φ AEf6、HRC60) as mounting pin for lever.

High-Power  
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler  
Hydraulic UnitManual Operation  
Accessories

Cautions / Others

Hole Clamp

SFA  
SFC

Swing Clamp

LHA  
LHC  
LHS  
LHW  
LT/LG  
TLA-2  
TLB-2  
TLA-1

Link Clamp

LKA  
LKC  
LKW  
LM/LJ  
TMA-2  
TMA-1

Work Support

LD  
LC  
TNC  
TCAir Sensing  
Lift Cylinder

LLW

Compact Cylinder

LL  
LLR  
LLU  
DP  
DR  
DS  
DT

Block Cylinder

DBA  
DBC

Control Valve

BZL  
BZT  
BZX/JZG

Pallet Clamp

VS  
VTExpansion  
Locating PinVL  
VM  
VJ  
VK

Pull Stud Clamp

FP  
FQCustomized  
Spring Cylinder

DWA/DWB

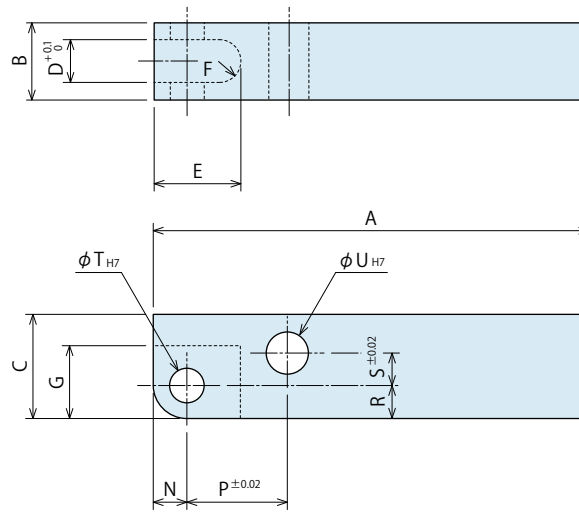
Accessories : Material Link Lever (LZ-LJ2)

Model No. Indication

**LZ 048 0 – LJ2**

Size (Refer to the graph on the right)

Design No. (Revision Number)



Model No.	LZ0300-LJ2	LZ0360-LJ2	LZ0400-LJ2	LZ0480-LJ2	LZ0550-LJ2	LZ0650-LJ2	LZ0750-LJ2	LZ0900-LJ2	LZ1050-LJ2
Corresponding Model No.	LM0300 LJ0302	LM0360 LJ0362	LM0400 LJ0402	LM0480 LJ0482	LM0550 LJ0552	LM0650 LJ0652	LM0750 LJ0752	LJ0902	LJ1052
A	50	65	75	85	90	105	110	160	220
B	8 <sup>0</sup> <sub>-0.1</sub>	10 <sup>0</sup> <sub>-0.2</sub>	12 <sup>0</sup> <sub>-0.3</sub>	12 <sup>0</sup> <sub>-0.3</sub>	16 <sup>0</sup> <sub>-0.3</sub>	19 <sup>0</sup> <sub>-0.3</sub>	22 <sup>0</sup> <sub>-0.3</sub>	25 <sup>0</sup> <sub>-0.3</sub>	32 <sup>0</sup> <sub>-0.4</sub>
C	11	12.5	14	16	20	25	32	38	45
D	4.5	5	6	6	8	10	11	13	16
E	10.75	12.5	14.5	16	16.5	21	25.5	30.5	36
F	R2.25	R2.5	R3	R3	R4	R5	R5.5	R6.5	R8
G	8.5	10	12	13	13	17.5	22	26	30.5
N	4	4.5	5.5	6	6	8	10	11	13
P	12.5	14.5	16	18.5	21	24.5	30	36	44
R	4	4.5	5.5	6	6	8	10	11	13
S	2.5	2.5	2.5	3.5	6	7.5	9.5	13	16
T	4 <sup>+0.012</sup> <sub>0</sub>	5 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	8 <sup>+0.015</sup> <sub>0</sub>	10 <sup>+0.015</sup> <sub>0</sub>	12 <sup>+0.018</sup> <sub>0</sub>	15 <sup>+0.018</sup> <sub>0</sub>
U	4 <sup>+0.012</sup> <sub>0</sub>	5 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	6 <sup>+0.012</sup> <sub>0</sub>	8 <sup>+0.015</sup> <sub>0</sub>	10 <sup>+0.015</sup> <sub>0</sub>	12 <sup>+0.018</sup> <sub>0</sub>	15 <sup>+0.018</sup> <sub>0</sub>	18 <sup>+0.018</sup> <sub>0</sub>

- Notes: 1. Material S45C  
 2. If necessary, the front end should be additionally machined.  
 3. Please use the attached pin (equivalent to φADf6, φAEf6, HRC60) as mounting pin for lever.

(mm)

 **MEMO**High-Power  
Series

Pneumatic Series

**Hydraulic Series**Valve / Coupler  
Hydraulic UnitManual Operation  
Accessories

Cautions / Others

Hole Clamp

SFA  
SFC

Swing Clamp

LHA  
LHC  
LHS  
LHW  
LT/LG  
TLA-2  
TLB-2  
TLA-1**Link Clamp**LKA  
LKC  
LKW  
**LM/LJ**  
TMA-2  
TMA-1

Work Support

LD  
LC  
TNC  
TCAir Sensing  
Lift Cylinder

LLW

Compact Cylinder

LL  
LLR  
LLU  
DP  
DR  
DS  
DT

Block Cylinder

DBA  
DBC

Control Valve

BZL  
BZT  
BZX/JZG

Pallet Clamp

VS  
VTExpansion  
Locating PinVL  
VM  
VJ  
VK

Pull Stud Clamp

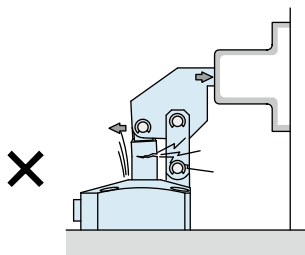
FP  
FQCustomized  
Spring Cylinder

DWA/DWB

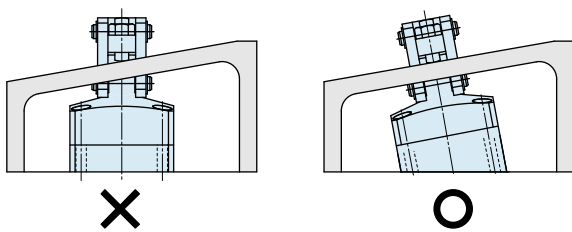
**Cautions**

● Notes for Design

- 1) Check Specifications
  - Please use each product according to the specifications.
- 2) Notes for Circuit Design
  - Please read "Notes on Hydraulic Cylinder Speed Control Circuit" on P.1044 to assist with proper hydraulic circuit designing.
  - Ensure there is no possibility of supplying hydraulic pressure to the lock and release ports simultaneously.
- 3) Notes for Link Lever Design
  - Make sure no force is applied to the piston rod except 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.



- If offset load is applied on the link part, use it within the allowable range of "Allowable Offset Graph".
- 4) When using on a welding fixture, the exposed area of piston rod and link plate should be protected.
    - If spatter gets onto the sliding surface it may lead to malfunction and fluid leakage.
  - 5) When clamping on a sloped surface on the workpiece.
    - Make sure the clamp surface and the mounting surface on the workpiece are parallel.



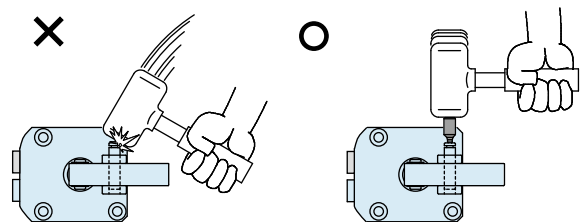
- 6) When using in a dry environment.
  - The link pin can dry out. Grease it periodically or use a special pin. Contact us for the specifications for special pins.
- 7) Notes for LKA-M/N, LKW
  - When using air sensing link clamp (LKA-M/N, LKW), make sure to check the Notes for Design • Installation • Use (Pages shown below).
    - Link clamp with air sensing option LKA-M/N: Refer to P.471.
    - Link clamp with air sensing valve LKW: Refer to P.491.

● Installation Notes

- 1) Check the Usable Fluid
  - Please use the appropriate fluid by referring to the Hydraulic Fluid List (P.1043).
- 2) Mounting / Removing clamp.
  - When mounting the clamp, use hexagon socket bolts as multiple bolt holes for mounting (with tensile strength of 12.9) and tighten them with the torque shown in the chart below. Tightening with greater torque than recommended can depress the seating surface or break the bolt.

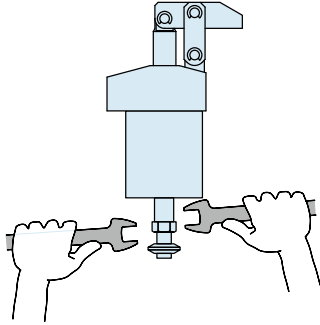
	Model No.	Thread Size	Tightening Torque (N·m)
LKA LKC LKW	LKA0360	M4×0.7	4.0
	LKA0400	M5×0.8	8.0
	LKC0400/LKW040□		
	LKA0480	M5×0.8	8.0
	LKC0480/LKW048□		
	LKA0550	M6×1	14
	LKC0550/LKW055□		
	LKA0650	M6×1	14
	LKC0650/LKW065□		
	LKA0750/LKW0751	M8×1.25	33
LKA0900	M10×1.5	65	
LKA1050	M12×1.75	114	
LM/LJ	LM0300/LJ0302	M4×0.7	3.2
	LM0360/LJ0362	M4×0.7	3.2
	LM0400/LJ0402	M5×0.8	6.3
	LM0480/LJ0482	M5×0.8	6.3
	LM0550/LJ0552	M6×1	10
	LM0650/LJ0652	M6×1	10
	LM0750/LJ0752	M8×1.25	25
	LJ0902	M10×1.5	58.8
	LJ1052	M12×1.75	98
	TMA	TMA0250	M5×0.8
TMA0400		M5×0.8	6.9
TMA0600		M6×1	11.8
TMA1000		M8×1.25	25
TMA1600		M10×1.5	58.8
TMA2500		M12×1.75	98
TMA3200		M12×1.75	98

- 3) Installation / 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.



- 4) Speed Adjustment
  - Adjust the speed so that the total operating time is one second or more. If the clamp operates too fast the parts will wear out leading to premature damage and ultimately complete equipment failure.
  - Please make sure to release air from the circuit before adjusting speed. It will be difficult to adjust the speed accurately with air mixed in the circuit.
  - Turn the speed control valve gradually from the low-speed side (small flow) to the high-speed side (large flow) to adjust the speed.

- 5) Notes on double end rod option (-D) for dog application.
- When installing dog or cam onto rod end, secure the dog or cam and prevent any rotation or torque on the piston rod. Fix the width part at the front of the dog and then mount it. Torque values for the mounting screw are shown in the table below.



	Model No.	Thread Size	Tightening Torque (N·m)
LKA-D	LKA0360-□□D	M4×0.7	3.2
	LKA0400-□□D	M6×1	10
	LKA0480-□□D	M8×1.25	25
	LKA0550-□□D	M8×1.25	25
	LKA0650-□□D	M8×1.25	25
	LKA0750-□□D	M10×1.5	50
	LKA0900-□□D	M10×1.5	50
	LKA1050-□□D	M10×1.5	50

※ Please refer to P.1043 for common cautions.

- Installation Notes
- Hydraulic Fluid List
- Notes on Hydraulic Cylinder Speed Control Circuit
- Notes on Handling
- Maintenance/Inspection
- Warranty

High-Power Series

Pneumatic Series

Hydraulic Series

Valve / Coupler Hydraulic Unit

Manual Operation Accessories

Cautions / Others

Hole Clamp

- SFA
- SFC

Swing Clamp

- LHA
- LHC
- LHS
- LHW
- LT/LG
- TLA-2
- TLB-2
- TLA-1

Link Clamp

- LKA
- LKC
- LKW
- LM/LJ
- TMA-2
- TMA-1

Work Support

- LD
- LC
- TNC
- TC

Air Sensing Lift Cylinder

- LLW

Compact Cylinder

- LL
- LLR
- LLU
- DP
- DR
- DS
- DT

Block Cylinder

- DBA
- DBC

Control Valve

- BZL
- BZT
- BZX/JZG

Pallet Clamp

- VS
- VT

Expansion Locating Pin

- VL
- VM
- VJ
- VK

Pull Stud Clamp

- FP
- FQ

Customized Spring Cylinder

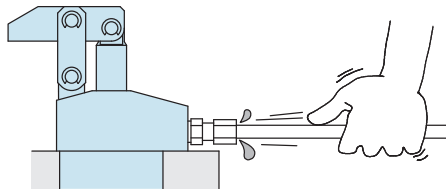
- DWA/DWB



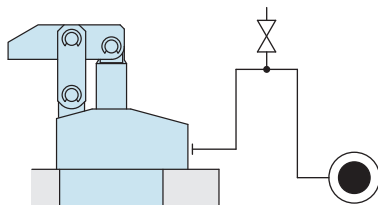
## ● Cautions

### ● Installation Notes (For Hydraulic Series)

- 1) Check the Usable Fluid
  - Please use the appropriate fluid by referring to the Hydraulic Fluid List.
- 2) Procedure before Piping
  - The pipeline, piping connector and fixture circuits should be cleaned by thorough flushing.
  - The dust and cutting chips in the circuit may lead to fluid leakage and malfunction.
  - There is no filter provided with Kosmek' s product except for a part of valves which prevents foreign materials and contaminants from getting into the circuit.
- 3) Applying Sealing Tape
  - Wrap with tape 1 to 2 times following the screw direction.
  - Pieces of the sealing tape can lead to oil leakage and malfunction.
  - In order to prevent a foreign substance from going into the product during the piping work, it should be carefully cleaned before working.
- 4) Air Bleeding of the Hydraulic Circuit
  - If the hydraulic circuit has excessive air, the action time may become very long. If air enters the circuit after connecting the hydraulic port or under the condition of no air in the oil tank, please perform the following steps.
    - ① Reduce hydraulic pressure to less than 2MPa.
    - ② Loosen the cap nut of pipe fitting closest to the clamp by one full turn.
    - ③ Wiggle the pipeline to loosen the outlet of pipe fitting.  
Hydraulic fluid mixed with air comes out.



- ④ Tighten the cap nut after bleeding.
- ⑤ It is more effective to bleed air at the highest point inside the circuit or at the end of the circuit.  
(Set an air bleeding valve at the highest point inside the circuit.)



### 5) Checking Looseness and Retightening

- At the beginning of the machine installation, the bolt and nut may be tightened lightly. Check the looseness and re-tighten as required.

### ● Hydraulic Fluid List

Maker	ISO Viscosity Grade ISO-VG-32	
	Anti-Wear Hydraulic Oil	Multi-Purpose Hydraulic Oil
Showa Shell Sekiyu	Tellus S2 M 32	Morlina S2 B 32
Idemitsu Kosan	Daphne Hydraulic Fluid 32	Daphne Super Multi Oil 32
JX Nippon Oil & Energy	Super Hyrando 32	Super Mulpus DX 32
Cosmo Oil	Cosmo Hydro AW32	Cosmo New Mighty Super 32
ExxonMobil	Mobil DTE 24	Mobil DTE 24 Light
Matsumura Oil	Hydol AW-32	
Castrol	Hyspin AWS 32	

Note As it may be difficult to purchase the products as shown in the table from overseas, please contact the respective manufacturer.

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

**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

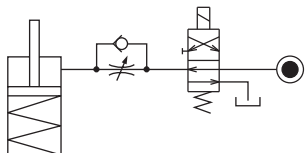
● Notes on Hydraulic Cylinder Speed Control Unit



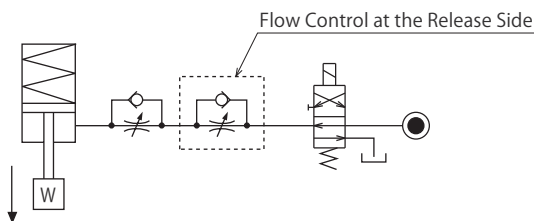
Please pay attention to the cautions below. Design the hydraulic circuit for controlling the action speed of hydraulic cylinder. Improper circuit design may lead to malfunctions and damages. Please review the circuit design in advance.

● Flow Control Circuit for Single Acting Cylinder

For spring return single acting cylinders, restricting flow during release can extremely slow down or disrupt release action. The preferred method is to control the flow during the lock action using a valve that has free-flow in the release direction. It is also preferred to provide a flow control valve at each actuator.



Accelerated clamping speed by excessive hydraulic flow to the cylinder may sustain damage. In this case add flow control to regulate flow. (Please add flow control to release flow if the lever weight is put on at the time of release action when using swing clamps.)



● Flow Control Circuit for Double Acting Cylinder

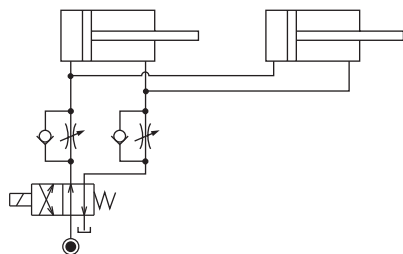
Flow control circuit for double acting cylinder should have meter-out circuits for both the lock and release sides. Meter-in control can have adverse effect by presence of air in the system.

However, in the case of controlling LKE, TMA, TLA, both lock side and release side should be meter-in circuit.

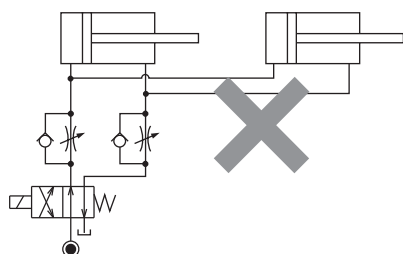
Refer to P.47 for speed adjustment of LKE.

For TMA and TLA, if meter-out circuit is used, abnormal high pressure is created, which causes oil leakage and damage.

【Meter-out Circuit】 (Except LKE/TMA/TLA)

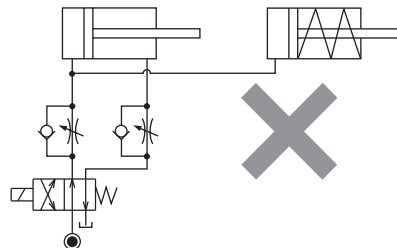


【Meter-in Circuit】 (LKE/TMA/TLA must be controlled with meter-in.)



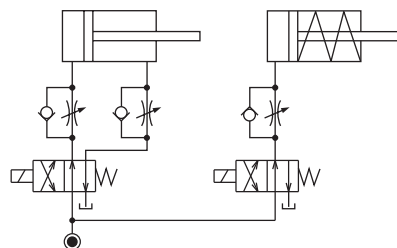
In the case of meter-out circuit, the hydraulic circuit should be designed with the following points.

- ① Single acting components should not be used in the same flow control circuit as the double acting components. The release action of the single acting cylinders may become erratic or very slow.

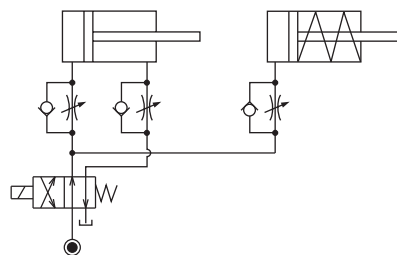


Refer to the following circuit when both the single acting cylinder and double acting cylinder are used together.

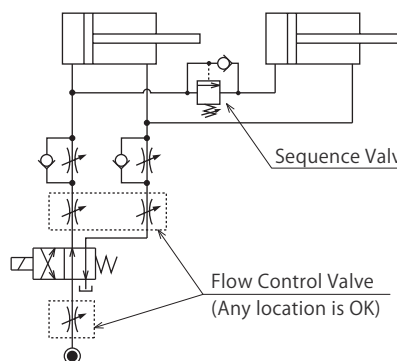
- Separate the control circuit.



- Reduce the influence of double acting cylinder control unit. However, due to the back pressure in tank line, single action cylinder is activated after double action cylinder works.



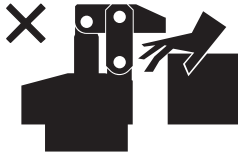
- ② In the case of meter-out circuit, the inner circuit pressure may increase during the cylinder action because of the fluid supply. The increase of the inner circuit pressure can be prevented by reducing the supplied fluid beforehand via the flow control valve. Especially when using sequence valve or pressure switches for clamping detection. If the back pressure is more than the set pressure then the system will not work as it is designed to.



## ● Cautions

### ● Notes on Handling

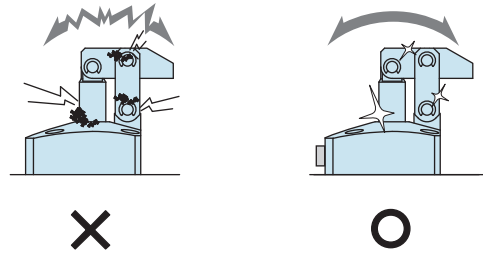
- 1) It should be handled by qualified personnel.
  - The hydraulic machine and air compressor should be handled and maintained by qualified personnel.
- 2) Do not handle or remove the machine unless the safety protocols are ensured.
  - ① The machine and equipment can only be inspected or prepared when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



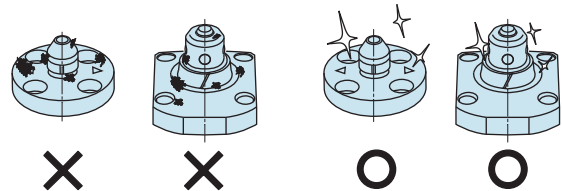
- 4) Do not disassemble or modify.
  - If the equipment is taken apart or modified, the warranty will be voided even within the warranty period.

### ● Maintenance and Inspection

- 1) Removal of the Machine and Shut-off of Pressure Source
  - Before the machine is removed, make sure that the above-mentioned safety measures are in place. Shut off the air of hydraulic source and make sure no pressure exists in the hydraulic and air circuit.
  - 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, fluid leakage and air leaks.



- 3) Please clean out the reference surface regularly (taper reference surface and seating surface) of locating machine. (VS/VT/VL/VM/VJ/VK/WVS/WM/WK/VX/VXF)
  - Location products, except VX/VXF model, can remove contaminants with cleaning functions. When installing pallets make sure there is no thick sludge like substances on pallets.
  - Continuous use with dirt on components will lead to locating functions not work properly, leaking and malfunction.



- 4) If disconnecting by couplers on a regular basis, air bleeding should be carried out daily to avoid air mixed in the circuit.
- 5) Regularly tighten nuts, bolts, pins, cylinders and pipe line to ensure proper use.
- 6) Make sure the hydraulic fluid has not deteriorated.
- 7) Make sure there is smooth action and no abnormal 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

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## 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 handled in 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.

# Control Valve

Model BZL

Model BZT

Model BZX

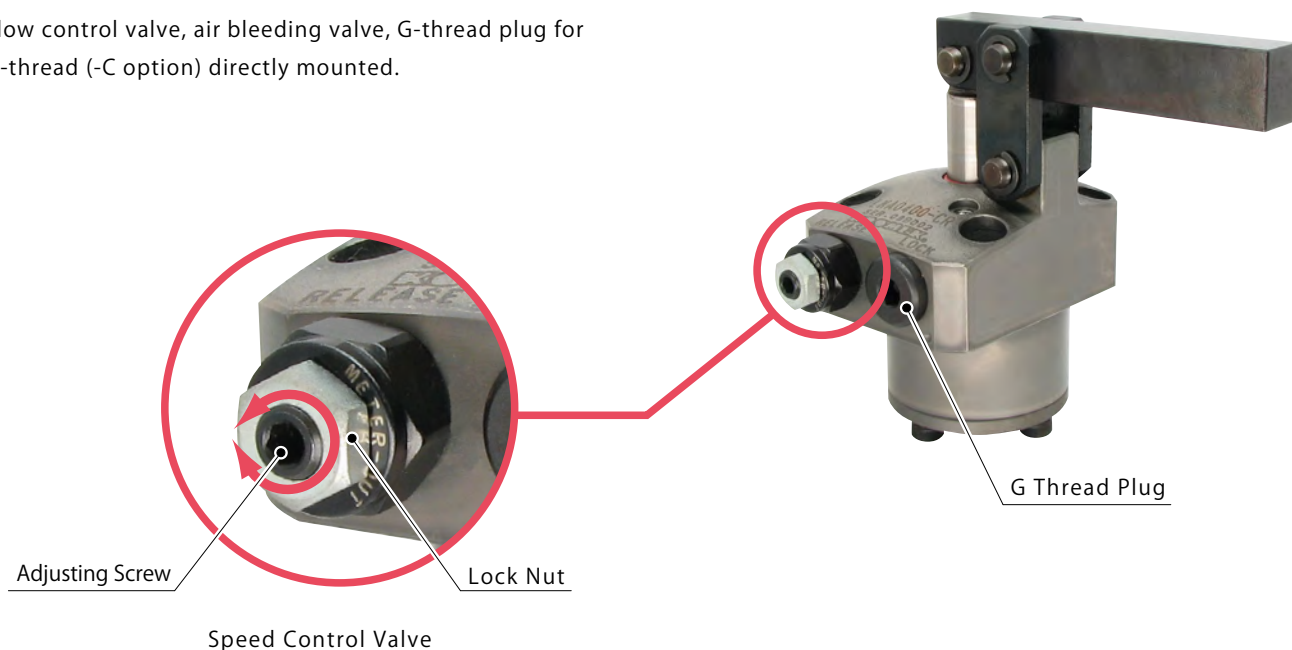
Model JZG



Directly mounted to clamps, flow control valve • Air bleeding • plug

- Directly mounted to clamps

Flow control valve, air bleeding valve, G-thread plug for G-thread (-C option) directly mounted.



Speed Control Valve

Model BZL

Model BZT




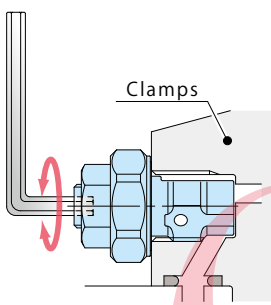
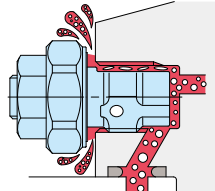

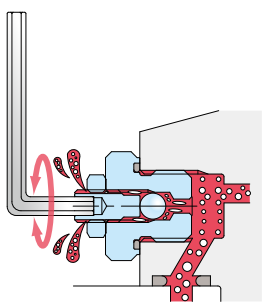

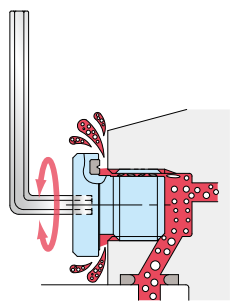
Air Bleed Valve

Model BZX



G Thread Plug

Model JZG

	Operating Pressure Range	Action Description
<p>Speed Control Valve (For Low Pressure)</p> <p>Model <b>BZL</b> → P.729</p> 	7MPa or less	<p>Adjust the flow by wrench. It can adjust the clamping action speed individually.</p> 
<p>Speed Control Valve (For High Pressure)</p> <p>Model <b>BZT</b> → P.733</p>	35MPa or less	<p>Air bleeding in the circuit is possible by loosening flow control valve.</p> 
<p>Air Bleed Valve</p> <p>Model <b>BZX</b> → P.735</p> 	25MPa or less	<p>Air bleeding in the circuit is possible by wrench.</p> 
<p>G Thread Plug</p> <p>Model <b>JZG</b> → P.737</p> 	35MPa or less	<p>Air bleeding in the circuit is possible by loosening G thread plug.</p> 

High-Power Series

Pneumatic Series

**Hydraulic Series**

Valve / Coupler Hydraulic Unit

Manual Operation Accessories

Cautions / Others

Hole Clamp

- SFA
- SFC

Swing Clamp

- LHA
- LHC
- LHS
- LHW
- LT/LG
- TLA-2
- TLB-2
- TLA-1

Link Clamp

- LKA
- LKC
- LKW
- LM/LJ
- TMA-2
- TMA-1

Work Support

- LD
- LC
- TNC
- TC

Air Sensing Lift Cylinder

- LLW

Compact Cylinder

- LL
- LLR
- LLU
- DP
- DR
- DS
- DT

Block Cylinder

- DBA
- DBC

**Control Valve**

- BZL**
- BZT**
- BZX/JZG**

Pallet Clamp

- VS
- VT

Expansion Locating Pin

- VL
- VM
- VJ
- VK

Pull Stud Clamp

- FP
- FQ

Customized Spring Cylinder

- DWA/DWB

Model No. Indication (Speed Control Valve for Low Pressure)

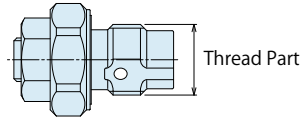
**BZL 0** **10** **0** - **B**

1
2
3



**1** G Thread Size

- 10** : Thread Part G1/8A Thread
- 20** : Thread Part G1/4A Thread
- 30** : Thread Part G3/8A Thread

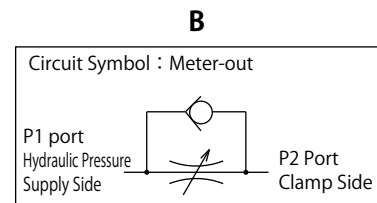
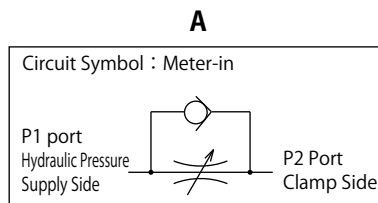


**2** Design No.

- 0** : Revision Number

**3** Control Method

- A** : Meter-in
- B** : Meter-out



Specifications

Model No.	BZL0100-A	BZL0200-A	BZL0300-A	BZL0100-B	BZL0200-B	BZL0300-B
Max. Operating Pressure MPa	7					
Withstanding Pressure MPa	10.5					
Control Method	Meter-in			Meter-out		
G Thread Size	G1/8A	G1/4A	G3/8A	G1/8A	G1/4A	G3/8A
Cracking Pressure MPa	0.04			0.12		
Max. Passage Area mm <sup>2</sup>	2.6	5.0	11.6	2.6	5.0	10.2
Usable Fluid	General Hydraulic Oil Equivalent to ISO-VG-32					
Operating Temperature °C	0 ~ 70					
Tightening Torque for Main Body N·m	10	25	35	10	25	35

- Notes
1. Minimum passage area when fully opened is the same as the maximum passage area in the table above.
  2. It must be mounted with recommended torque. Because of the structure of the metal seal, if mounting torque is insufficient, the flow control valve may not be able to adjust the flow rate.
  3. Don't use used BZL to other clamps.  
Flow control will not be made because the bottom depth difference of G thread makes metal seal insufficient.

## Applicable Products

Model No.	DBA (Single Action) Block Cylinder	DBC (Single Action) Block Cylinder	LC (Single Action) Work Support	LHA (Double Action) Swing Clamp	LHC (Double Action) Swing Clamp	LHE (Double Action) High-Power Swing Clamp	LHS (Double Action) Swing Clamp	LHW (Double Action) Swing Clamp
BZL0100-A	(DBA0250-C□) (DBA0320-C□)	(DBC0250-C□) (DBC0320-C□)	LC0402-C□□□ LC0482-C□□□ LC0552-C□□□ LC0652-C□□□	(LHA0360-C□□□) (LHA0400-C□□□) (LHA0480-C□□□) (LHA0550-C□□□)	(LHC0360-C□□□) (LHC0400-C□□□) (LHC0480-C□□□) (LHC0550-C□□□)		(LHS0360-C□□□) (LHS0400-C□□□) (LHS0480-C□□□) (LHS0550-C□□□)	(LHW040□-C□□□) (LHW048□-C□□□) (LHW055□-C□□□)
BZL0100-B	DBA0250-C□ DBA0320-C□	DBC0250-C□ DBC0320-C□		LHA0360-C□□□ LHA0400-C□□□ LHA0480-C□□□ LHA0550-C□□□	LHC0360-C□□□ LHC0400-C□□□ LHC0480-C□□□ LHC0550-C□□□	LHE0300-C□ LHE0360-C□ LHE0400-C□ LHE0480-C□ LHE0550-C□	LHS0360-C□□□ LHS0400-C□□□ LHS0480-C□□□ LHS0550-C□□□	LHW040□-C□□□ LHW048□-C□□□ LHW055□-C□□□
BZL0200-A	(DBA0400-C□) (DBA0500-C□)	(DBC0400-C□) (DBC0500-C□)	LC0752-C□□□ LC0902-C□□□	(LHA0650-C□□□) (LHA0750-C□□□)	(LHC0650-C□□□)		(LHS0650-C□□□) (LHS0750-C□□□)	(LHW065□-C□□□) (LHW0751-C□□□)
BZL0200-B	DBA0400-C□ DBA0500-C□	DBC0400-C□ DBC0500-C□		LHA0650-C□□□ LHA0750-C□□□	LHC0650-C□□□		LHS0650-C□□□ LHS0750-C□□□	LHW065□-C□□□ LHW0751-C□□□
BZL0300-A				(LHA0900-C□□□) (LHA1050-C□□□)			(LHS0900-C□□□) (LHS1050-C□□□)	
BZL0300-B				LHA0900-C□□□ LHA1050-C□□□			LHS0900-C□□□ LHS1050-C□□□	

Model No.	LT (Single Action) Swing Clamp	LG (Single Action) Swing Clamp	LKA (Double Action) Link Clamp	LKC (Double Action) Link Clamp	LKE (Double Action) High-Power Link Clamp	LKW (Double Action) Link Clamp	LM (Single Action) Link Clamp	LJ (Single Action) Link Clamp
BZL0100-A	LT0301-C□□□ LT036□-C□□□ LT040□-C□□□ LT048□-C□□□ LT055□-C□□□	LG0301-C□□□ LG036□-C□□□ LG040□-C□□□ LG048□-C□□□ LG055□-C□□□	(LKA0360-C□□□) (LKA0400-C□□□) (LKA0480-C□□□) (LKA0550-C□□□)	(LKC0400-C□□□) (LKC0480-C□□□) (LKC0550-C□□□)	LKE0300-C□ LKE0360-C□ LKE0400-C□ LKE0480-C□ LKE0550-C□	(LKW040□-C□□□) (LKW048□-C□□□) (LKW055□-C□□□)	LM0300-C□ LM0360-C□ LM0400-C□ LM0480-C□ LM0550-C□	LJ0302-C□ LJ0362-C□ LJ0402-C□ LJ0482-C□ LJ0552-C□
BZL0100-B			LKA0360-C□□□ LKA0400-C□□□ LKA0480-C□□□ LKA0550-C□□□	LKC0400-C□□□ LKC0480-C□□□ LKC0550-C□□□		LKW040□-C□□□ LKW048□-C□□□ LKW055□-C□□□		
BZL0200-A	LT065□-C□□□ LT075□-C□□□	LG065□-C□□□ LG075□-C□□□	(LKA0650-C□□□) (LKA0750-C□□□)	(LKC0650-C□□□)		(LKW065□-C□□□) (LKW0751-C□□□)	LM0650-C□ LM0750-C□	LJ0652-C□ LJ0752-C□
BZL0200-B			LKA0650-C□□□ LKA0750-C□□□	LKC0650-C□□□		LKW065□-C□□□ LKW0751-C□□□		
BZL0300-A		LG090□-C□□□ LG105□-C□□□	(LKA0900-C□□□) (LKA1050-C□□□)					LJ0902-C□ LJ1052-C□
BZL0300-B			LKA0900-C□□□ LKA1050-C□□□					

Model No.	LL (Double Action) Linear Cylinder	LLR (Double Action) Linear Cylinder	LLW (Double Action) Lift Cylinder
BZL0100-A	(LL0360-C□□□) (LL0400-C□□□) (LL0480-C□□□) (LL0550-C□□□)	(LLR0360-C□□□) (LLR0400-C□□□) (LLR0480-C□□□) (LLR0550-C□□□)	(LLW036□-C□□□) (LLW040□-C□□□) (LLW048□-C□□□)
BZL0100-B	LL0360-C□□□ LL0400-C□□□ LL0480-C□□□ LL0550-C□□□	LLR0360-C□□□ LLR0400-C□□□ LLR0480-C□□□ LLR0550-C□□□	LLW036□-C□□□ LLW040□-C□□□ LLW048□-C□□□
BZL0200-A	(LL0650-C□□□) (LL0750-C□□□)	(LLR0650-C□□□) (LLR0750-C□□□)	
BZL0200-B	LL0650-C□□□ LL0750-C□□□	LLR0650-C□□□ LLR0750-C□□□	
BZL0300-A	(LL0900-C□□□) (LL1050-C□□□)	(LLR0900-C□□□) (LLR1050-C□□□)	
BZL0300-B	LL0900-C□□□ LL1050-C□□□	LLR0900-C□□□ LLR1050-C□□□	

Note: 1. Flow control circuit for double acting cylinder both should have meter-out circuits for the lock side and release side except model LKE/TLA/TMA.  
Meter-in controls can be adversely affected by any air in the system.

High-Power Series

Pneumatic Series

Hydraulic Series

Valve / Coupler Hydraulic Unit

Manual Operation Accessories

Cautions / Others

Hole Clamp

SFA  
SFC

Swing Clamp

LHA  
LHC  
LHS  
LHW  
LT/LG  
TLA-2  
TLB-2  
TLA-1

Link Clamp

LKA  
LKC  
LKW  
LM/LJ  
TMA-2  
TMA-1

Work Support

LD  
LC  
TNC  
TC

Air Sensing Lift Cylinder

LLW

Compact Cylinder

LL  
LLR  
LLU  
DP  
DR  
DS  
DT

Block Cylinder

DBA  
DBC

Control Valve

BZL  
BZT  
BZX/JZG

Pallet Clamp

VS  
VT

Expansion Locating Pin

VL  
VM  
VJ  
VK

Pull Stud Clamp

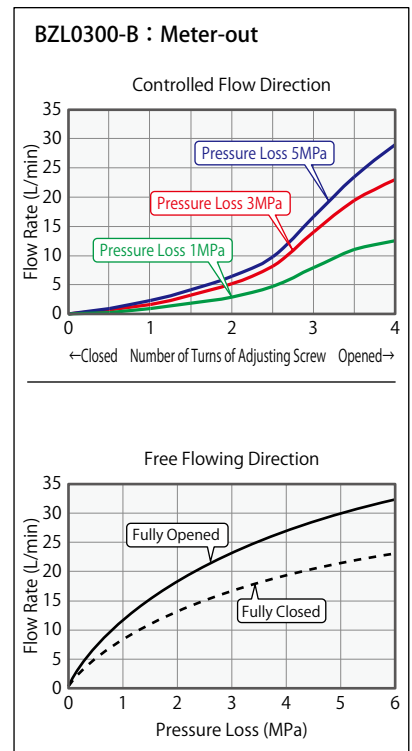
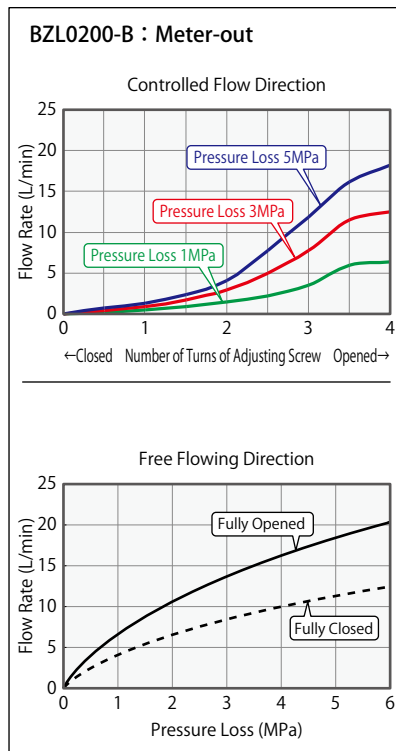
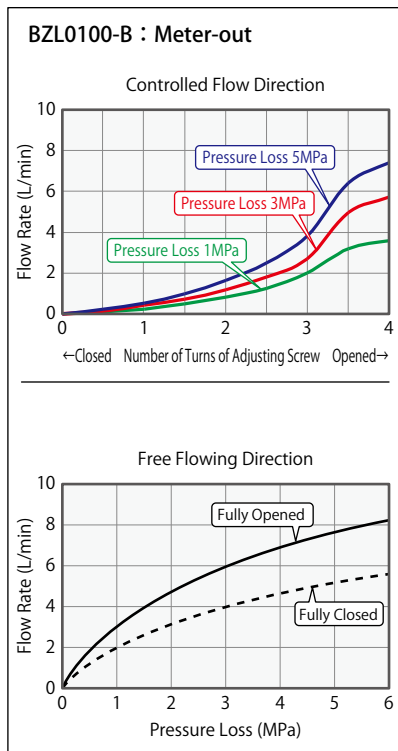
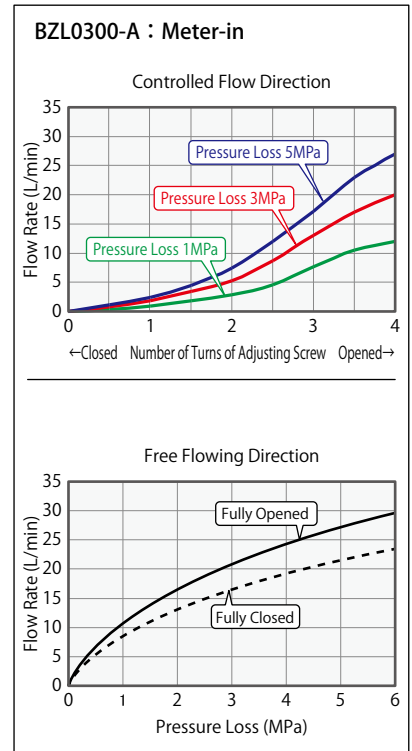
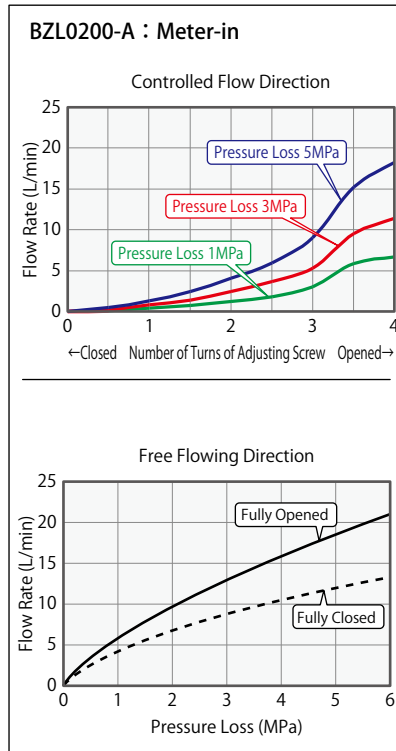
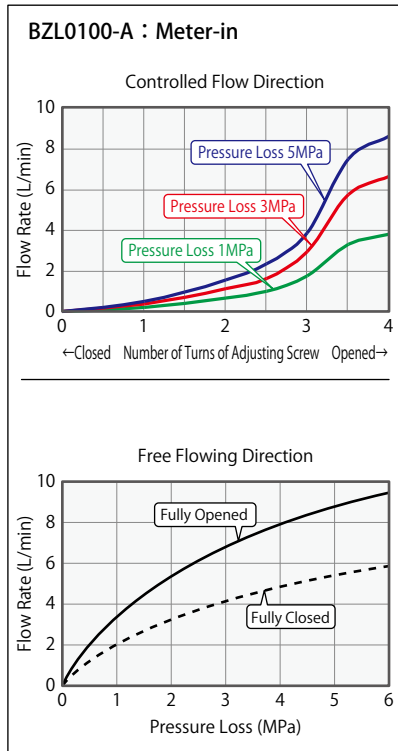
FP  
FQ

Customized Spring Cylinder

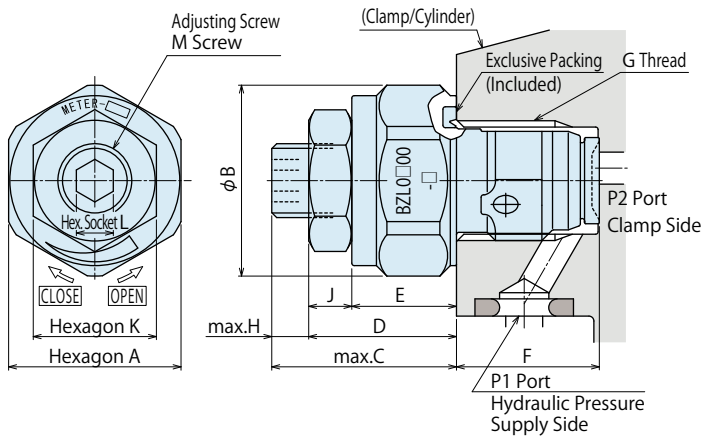
DWA/DWB



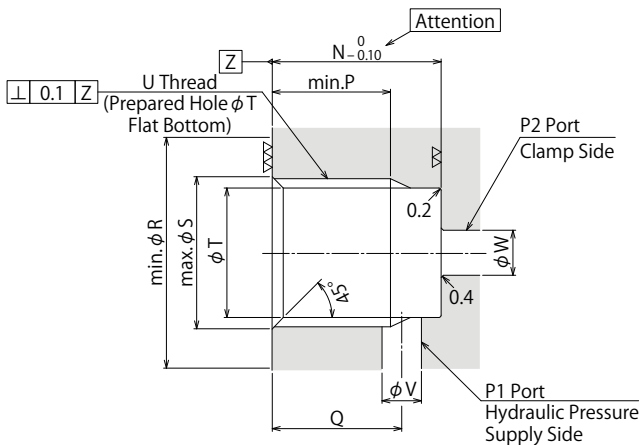
● Flow Rate Graph < Hydraulic Fluids ISO-VG32 (25~35°C) >



## External Dimensions



## Machining Dimensions of Mounting Area



### Notes

1. Since the  $\nabla\nabla$  area is sealing part, be careful not to damage it.
2. Since the  $\nabla\nabla$  area is the metal sealing part of BZL, be careful not to damage it. (Especially when deburring)
3. No cutting chips or burr should be at the tolerance part of machining hole.
4. As shown in the drawing, P1 port is used as the hydraulic supply and P2 port as the clamp side.
5. If mounting plugs or fittings with G thread specification available in the market, the dimension '※1' should be 12.5.

## Notes

1. Please read "Notes on Hydraulic Cylinder Speed Control Circuit" to assist with proper hydraulic circuit design.  
If there is something wrong with the circuit design, it leads to the applications malfunction and damage. (Refer to P.1044)
2. It is dangerous to air bleed during operation under high pressure. It must be done under lower pressure.  
(For reference: the minimum operating range of the product within the circuit.)

Model No.	BZL0100-□	BZL0200-□	BZL0300-□
A	14	18	22
B	15.5	20	24
C	15	16	19
D	12	13	16
E	8.5	9.5	11
F	(11.6)	(15.1)	(17.6)
G	G1/8	G1/4	G3/8
H	3	3	3
J	3.5	3.5	5
K	10	10	13
L	3	3	4
M	M6×0.75	M6×0.75	M8×0.75
N	11.5	15	17.5
P	8.5	11※1	13
Q	9	11.5	13
R (Flat Surface Area)	16	20.5	24.5
S	10	13.5	17
T	8.7	11.5	15
U	G1/8	G1/4	G3/8
V	2 ~ 3	3 ~ 4	4 ~ 5
W	2.5 ~ 5	3.5 ~ 7	4.5 ~ 9

High-Power Series

Pneumatic Series

Hydraulic Series

Valve / Coupler Hydraulic Unit

Manual Operation Accessories

Cautions / Others

Hole Clamp

SFA  
SFC

Swing Clamp

LHA  
LHC  
LHS  
LHW  
LT/LG  
TLA-2  
TLB-2  
TLA-1

Link Clamp

LKA  
LKC  
LKW  
LM/LJ  
TMA-2  
TMA-1

Work Support

LD  
LC  
TNC  
TC

Air Sensing Lift Cylinder

LLW

Compact Cylinder

LL  
LLR  
LLU  
DP  
DR  
DS  
DT

Block Cylinder

DBA  
DBC

Control Valve

BZL  
BZT  
BZX/JZG

Pallet Clamp

VS  
VT

Expansion Locating Pin

VL  
VM  
VJ  
VK

Pull Stud Clamp

FP  
FQ

Customized Spring Cylinder

DWA/DWB

## Model No. Indication (Air Bleed Valve)

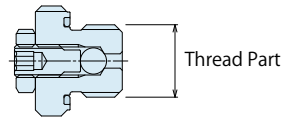
**BZX0** **1** **0**

**1** **2**



### 1 G Thread Size

- 1** : Thread Part G1/8A Thread
- 2** : Thread Part G1/4A Thread
- 3** : Thread Part G3/8A Thread



### 2 Design No.

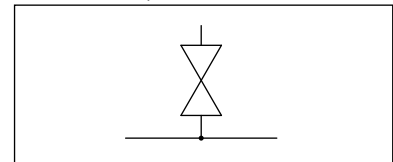
- 0** : Revision Number

## Specifications

Model No.	BZX010	BZX020	BZX030
Max. Operating Pressure MPa	25		
Withstanding Pressure MPa	37.5		
G Thread Size	G1/8A	G1/4A	G3/8A
Usable Fluid	General Hydraulic Oil Equivalent to ISO-VG-32		
Operating Temperature °C	0 ~ 70		
Tightening Torque for Main Body N·m	10	25	35

- Notes
1. Do not over loosen the plug during air venting.  
(Do not loosen for more than 2 turns from the fully closed position.)
  2. It is dangerous to have air venting operation under high pressure. It must be done under lower pressure.  
(For reference: the minimum operation pressure range of the product within the circuit)
  3. Refer to the processing dimensions for BZL mounting area.

## Circuit Symbol



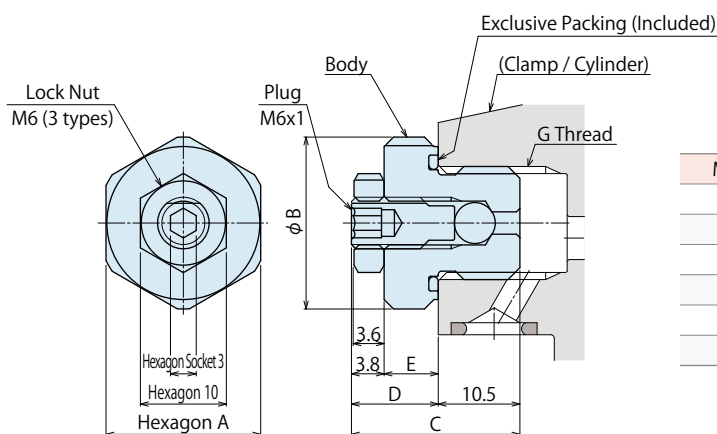
## Applicable Products

Model No.	DBA (Single Action) Block Cylinder	DBC (Single Action) Block Cylinder	LC (Single Action) Work Support	LHA (Double Action) Swing Clamp	LHC (Double Action) Swing Clamp	LHE (Double Action) High-Power Swing Clamp	LHW (Double Action) Swing Clamp	LHS (Double Action) Swing Clamp
BZX010	DBA0250-C□□	DBC0250-C□□	LC0402-C□□□	LHA0360-C□□□	LHC0360-C□□□	LHE0300-C□□	LHW040□-C□□□	LHS0360-C□□□
	DBA0320-C□□	DBC0320-C□□	LC0482-C□□□	LHA0400-C□□□	LHC0400-C□□□	LHE0360-C□□	LHW048□-C□□□	LHS0400-C□□□
			LC0552-C□□□	LHA0480-C□□□	LHC0480-C□□□	LHE0400-C□□	LHW055□-C□□□	LHS0480-C□□□
			LC0652-C□□□	LHA0550-C□□□	LHC0550-C□□□	LHE0480-C□□		LHS0550-C□□□
BZX020	DBA0400-C□□	DBC0400-C□□	LC0752-C□□□	LHA0650-C□□□	LHC0650-C□□□		LHW065□-C□□□	LHS0650-C□□□
	DBA0500-C□□	DBC0500-C□□	LC0902-C□□□	LHA0750-C□□□			LHW0751-C□□□	LHS0750-C□□□
BZX030				LHA0900-C□□□				LHS0900-C□□□
				LHA1050-C□□□				LHS1050-C□□□

Model No.	LT (Single Action) Swing Clamp	LG (Single Action) Swing Clamp	LKA (Double Action) Link Clamp	LKC (Double Action) Link Clamp	LKE (Double Action) High-Power Link Clamp	LKW (Double Action) Link Clamp	LM (Single Action) Link Clamp	LJ (Single Action) Link Clamp
BZX010	LT0301-C□□□	LG0301-C□□□	LKA0360-C□□□	LKC0400-C□□□	LKE0300-C□□	LKW040□-C□□□	LM0300-C□□	LJ0302-C□□
	LT036□-C□□□	LG036□-C□□□	LKA0400-C□□□	LKC0480-C□□□	LKE0360-C□□	LKW048□-C□□□	LM0360-C□□	LJ0362-C□□
	LT040□-C□□□	LG040□-C□□□	LKA0480-C□□□	LKC0550-C□□□	LKE0400-C□□	LKW055□-C□□□	LM0400-C□□	LJ0402-C□□
	LT048□-C□□□	LG048□-C□□□	LKA0550-C□□□		LKE0480-C□□		LM0480-C□□	LJ0482-C□□
	LT055□-C□□□	LG055□-C□□□			LKE0550-C□□		LM0550-C□□	LJ0552-C□□
BZX020	LT065□-C□□□	LG065□-C□□□	LKA0650-C□□□	LKC0650-C□□□		LKW065□-C□□□	LM0650-C□□	LJ0652-C□□
	LT075□-C□□□	LG075□-C□□□	LKA0750-C□□□			LKW0751-C□□□	LM0750-C□□	LJ0752-C□□
BZX030		LG090□-C□□□	LKA0900-C□□□					LJ0902-C□□
		LG105□-C□□□	LKA1050-C□□□					LJ1052-C□□

Model No.	LL (Double Action) Linear Cylinder	LLR (Double Action) Linear Cylinder	LLW (Double Action) Lift Cylinder
BZX010	LL0360-C□□□	LLR0360-C□□□	LLW036□-C□□□
	LL0400-C□□□	LLR0400-C□□□	LLW040□-C□□□
	LL0480-C□□□	LLR0480-C□□□	LLW048□-C□□□
	LL0550-C□□□	LLR0550-C□□□	
BZX020	LL0650-C□□□	LLR0650-C□□□	
	LL0750-C□□□	LLR0750-C□□□	
BZX030	LL0900-C□□□	LLR0900-C□□□	
	LL1050-C□□□	LLR1050-C□□□	

## External Dimensions



Model No.	BZX010	BZX020	BZX030
A	14	18	22
B	15.5	20	24
C	19.8	20.6	20.6
D	9.3	10.1	10.1
E	5.5	6.3	6.3
G	G1/8	G1/4	G3/8

### High-Power Series

### Pneumatic Series

### Hydraulic Series

### Valve / Coupler Hydraulic Unit

### Manual Operation Accessories

### Cautions / Others

### Hole Clamp

SFA  
SFC

### Swing Clamp

LHA  
LHC  
LHS  
LHW  
LT/LG  
TLA-2  
TLB-2  
TLA-1

### Link Clamp

LKA  
LKC  
LKW  
LM/LJ  
TMA-2  
TMA-1

### Work Support

LD  
LC  
TNC  
TC

### Air Sensing Lift Cylinder

LLW

### Compact Cylinder

LL  
LLR  
LLU  
DP  
DR  
DS  
DT

### Block Cylinder

DBA  
DBC

### Control Valve

BZL  
BZT  
**BZX/JZG**

### Pallet Clamp

VS  
VT

### Expansion Locating Pin

VL  
VM  
VJ  
VK

### Pull Stud Clamp

FP  
FQ

### Customized Spring Cylinder

DWA/DWB

● Model No. Indication (G Thread Plug with Air Bleeding Function)

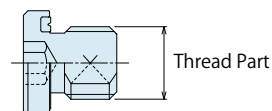
**JZG0** **1** **0**

1    2



**1** G Thread Size

- 1 : Thread Part G1/8A Thread
- 2 : Thread Part G1/4A Thread
- 3 : Thread Part G3/8A Thread



**2** Design No.

- 0 : Revision Number

● Specifications

Model No.	JZG010	JZG020	JZG030
Max. Operating Pressure MPa	35		
Withstanding Pressure MPa	42		
G Thread Size	G1/8A	G1/4A	G3/8A
Usable Fluid	General Hydraulic Oil Equivalent to ISO-VG-32		
Operating Temperature °C	0 ~ 70		
Tightening Torque for Main Body N·m	10	25	35

- Notes
1. It is dangerous to have air venting operation under high pressure. It must be done under lower pressure.  
(For reference: the minimum operation pressure range of the product within the circuit)
  2. Refer to the processing dimensions for BZL mounting area.

## External Dimensions

Model No.	DBA (Single Action) Block Cylinder	DBC (Single Action) Block Cylinder	LC (Single Action) Work Support	LHA (Double Action) Swing Clamp	LHC (Double Action) Swing Clamp	LHE (Double Action) High-Power Swing Clamp	LHW (Double Action) Swing Clamp	LHS (Double Action) Swing Clamp
JZG010	DBA0250-C□□	DBC0250-C□□	LC0402-C□□□	LHA0360-C□□□	LHC0360-C□□□	LHE0300-C□□	LHW040□-C□□□	LHS0360-C□□□
	DBA0320-C□□	DBC0320-C□□	LC0482-C□□□	LHA0400-C□□□	LHC0400-C□□□	LHE0360-C□□	LHW048□-C□□□	LHS0400-C□□□
			LC0552-C□□□	LHA0480-C□□□	LHC0480-C□□□	LHE0400-C□□	LHW055□-C□□□	LHS0480-C□□□
			LC0652-C□□□	LHA0550-C□□□	LHC0550-C□□□	LHE0480-C□□	LHE0550-C□□	LHS0550-C□□□
JZG020	DBA0400-C□□	DBC0400-C□□	LC0752-C□□□	LHA0650-C□□□	LHC0650-C□□□		LHW065□-C□□□	LHS0650-C□□□
	DBA0500-C□□	DBC0500-C□□	LC0902-C□□□	LHA0750-C□□□			LHW0751-C□□□	LHS0750-C□□□
JZG030				LHA0900-C□□□				LHS0900-C□□□
				LHA1050-C□□□				LHS1050-C□□□
Model No.	LT (Single Action) Swing Clamp	LG (Single Action) Swing Clamp	LKA (Double Action) Link Clamp	LKC (Double Action) Link Clamp	LKE (Double Action) High-Power Link Clamp	LKW (Double Action) Link Clamp	LM (Single Action) Link Clamp	LJ (Single Action) Link Clamp
JZG010	LT0301-C□□□	LG0301-C□□□	LKA0360-C□□□	LKC0400-C□□□	LKE0300-C□□	LKW040□-C□□□	LM0300-C□□	LJ0302-C□□
	LT036□-C□□□	LG036□-C□□□	LKA0400-C□□□	LKC0480-C□□□	LKE0360-C□□	LKW048□-C□□□	LM0360-C□□	LJ0362-C□□
	LT040□-C□□□	LG040□-C□□□	LKA0480-C□□□	LKC0550-C□□□	LKE0400-C□□	LKW055□-C□□□	LM0400-C□□	LJ0402-C□□
	LT048□-C□□□	LG048□-C□□□	LKA0550-C□□□		LKE0480-C□□		LM0480-C□□	LJ0482-C□□
	LT055□-C□□□	LG055□-C□□□			LKE0550-C□□		LM0550-C□□	LJ0552-C□□
JZG020	LT065□-C□□□	LG065□-C□□□	LKA0650-C□□□	LKC0650-C□□□		LKW065□-C□□□	LM0650-C□□	LJ0652-C□□
	LT075□-C□□□	LG075□-C□□□	LKA0750-C□□□			LKW0751-C□□□	LM0750-C□□	LJ0752-C□□
JZG030		LG090□-C□□□	LKA0900-C□□□					LJ0902-C□□
		LG105□-C□□□	LKA1050-C□□□					LJ1052-C□□
Model No.	LL (Double Action) Linear Cylinder	LLR (Double Action) Linear Cylinder	LLW (Double Action) Lift Cylinder	TLA-2 (Double Action) Swing Clamp	TLB-2 (Double Action) Swing Clamp	TLA-1 (Single Action) Swing Clamp	TMA-2 (Double Action) Link Clamp	TMA-1 (Single Action) Link Clamp
JZG010	LL0360-C□□□	LLR0360-C□□□	LLW036□-C□□□	TLA0401-2C□□	TLB0401-2C□□	TLA0402-1C□	TMA0250-2C□	TMA0250-1C□
	LL0400-C□□□	LLR0400-C□□□	LLW040□-C□□□	TLA0601-2C□□	TLB0601-2C□□	TLA0602-1C□	TMA0400-2C□	TMA0400-1C□
	LL0480-C□□□	LLR0480-C□□□	LLW048□-C□□□	TLA0801-2C□□	TLB0801-2C□□	TLA0802-1C□	TMA0600-2C□	TMA0600-1C□
	LL0550-C□□□	LLR0550-C□□□		TLA1001-2C□□	TLB1001-2C□□	TLA1002-1C□	TMA1000-2C□	TMA1000-1C□
				TLA1601-2C□□	TLB1601-2C□□	TLA1602-1C□		
JZG020	LL0650-C□□□	LLR0650-C□□□		TLA2001-2C□□	TLB2001-2C□□	TLA2002-1C□	TMA1600-2C□	TMA1600-1C□
	LL0750-C□□□	LLR0750-C□□□		TLA2501-2C□□	TLB2501-2C□□	TLA2502-1C□	TMA2500-2C□	TMA2500-1C□
JZG030				TLA4001-2C□□	TLB4001-2C□□	TLA4002-1C□	TMA3200-2C□	TMA3200-1C□
	LL0900-C□□□	LLR0900-C□□□						
	LL1050-C□□□	LLR1050-C□□□						

High-Power  
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler  
Hydraulic UnitManual Operation  
Accessories

Cautions / Others

Hole Clamp

SFA

SFC

Swing Clamp

LHA

LHC

LHS

LHW

LT/LG

TLA-2

TLB-2

TLA-1

Link Clamp

LKA

LKC

LKW

LM/LJ

TMA-2

TMA-1

Work Support

LD

LC

TNC

TC

Air Sensing  
Lift Cylinder

LLW

Compact Cylinder

LL

LLR

LLU

DP

DR

DS

DT

Block Cylinder

DBA

DBC

Control Valve

BZL

BZT

BZX/JZG

Pallet Clamp

VS

VT

Expansion  
Locating Pin

VL

VM

VJ

VK

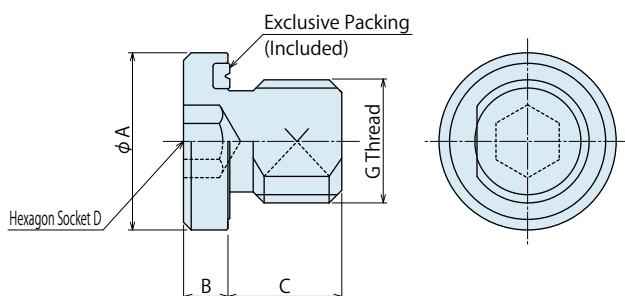
Pull Stud Clamp

FP

FQ

Customized  
Spring Cylinder

DWA/DWB



Model No.	JZG010	JZG020	JZG030
A	14	18	22
B	3.5	4.5	4.5
C	8	9	10
D	5	6	8
G	G1/8A	G1/4A	G3/8A

(mm)

# Manifold Block

Model WHZ-MD

Model LZY-MD

Model LZ-MS

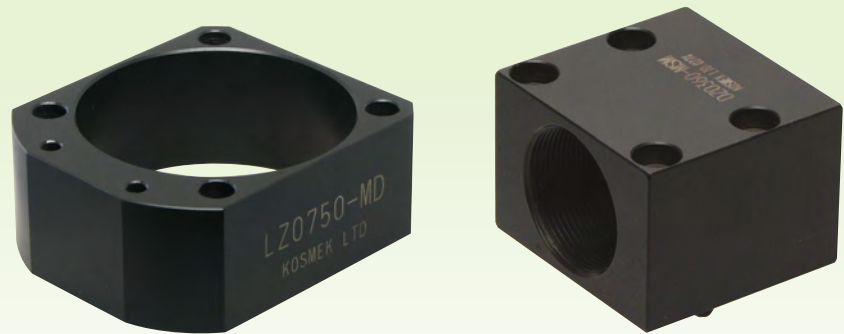
Model LZ-MP

Model TMZ-1MB

Model TMZ-2MB

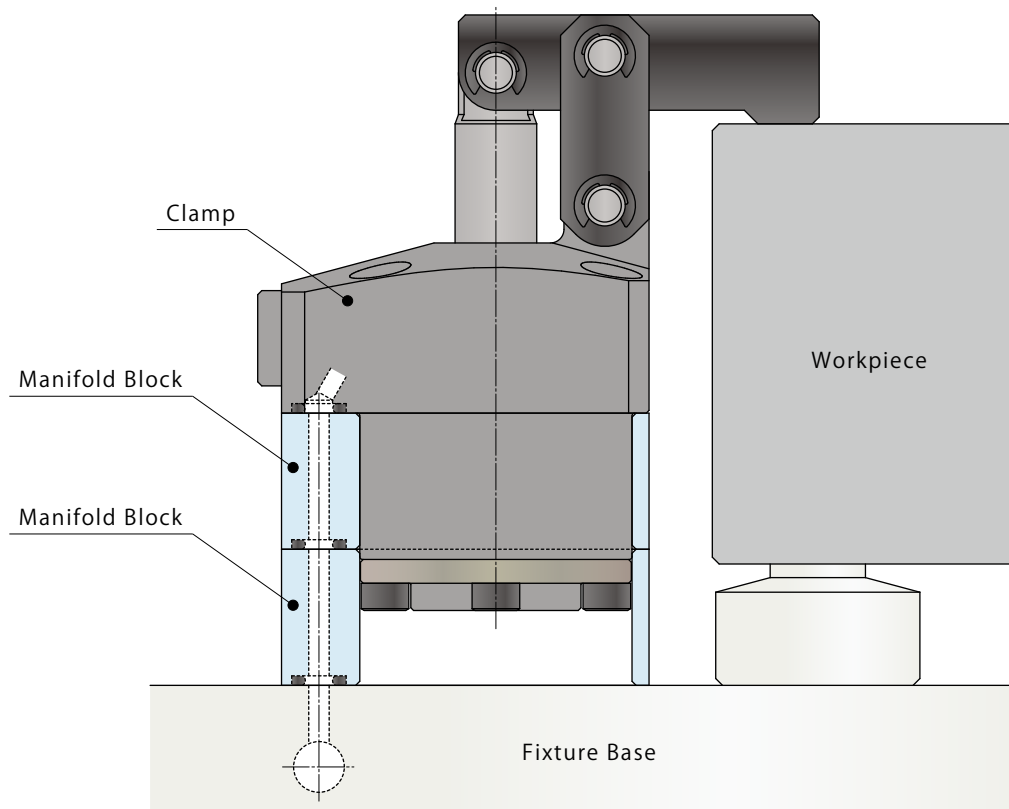
Model DZ-MG

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 <b>WHZ-MD</b>	Model <b>WCA</b> Model <b>WHA</b> Model <b>WCE</b> Model <b>WHE</b>
Model <b>LZY-MD</b>	Model <b>LKA</b> Model <b>LKE</b> Model <b>LHC</b> Model <b>LHS</b> Model <b>LKC</b> Model <b>LHA</b> Model <b>LHE</b> Model <b>LL</b>
Model <b>LZ-MS</b>	Model <b>LM</b> Model <b>LT</b> Model <b>LJ</b> Model <b>LG</b>
Model <b>LZ-MP</b>	Model <b>LC</b> Model <b>TC</b>
Model <b>TMZ-1MB</b>	Model <b>TMA-1</b>
Model <b>TMZ-2MB</b>	Model <b>TMA-2</b>
Model <b>DZ-MG□/MS□</b>	Model <b>DP</b>

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

- Screw Locator
- VXF

- 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
- TNZ-S
- TNZ-SQ

- Pressure Switch
- JB

- Pressure Gauge
- JGA/JGB

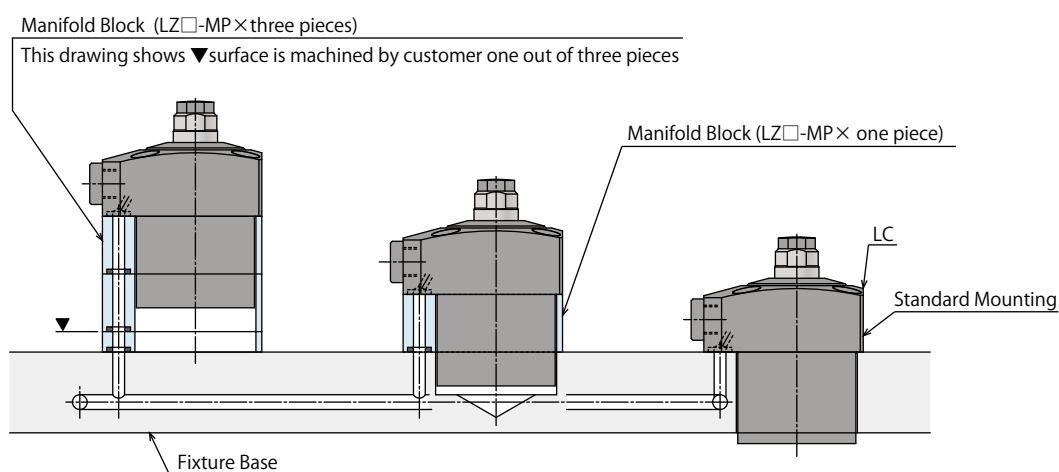
- Manifold
- JX

- Coupler Switch
- PS

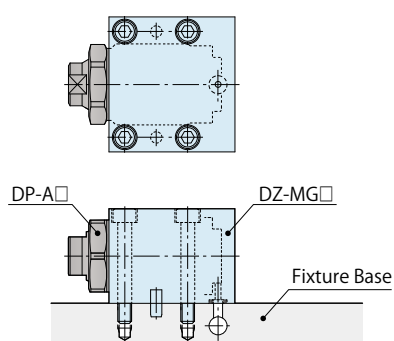
- G-Thread Fitting

### Application Examples

#### ● Work Support (LC) Application Example



#### ● Push Cylinder (DP) Application Example





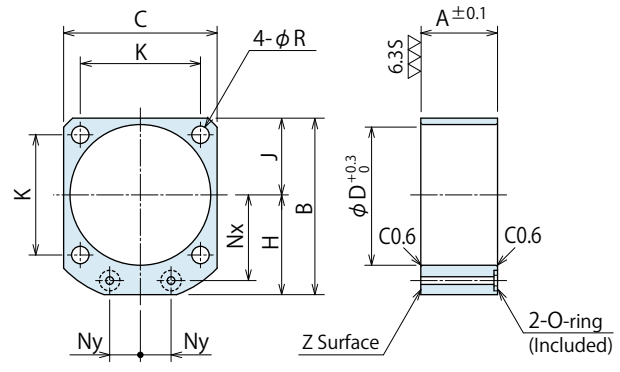
Manifold Block for WCA/WCE/WHA/WHE

Model No. Indication

**WHZ 048 0 - MD**

Size  
(Refer to following table)

Design No.  
(Revision Number)



Model No.	WHZ0600-MD	WHZ0320-MD	WHZ0400-MD	WHZ0500-MD	WHZ0630-MD
Corresponding Item Model Number	WCE0601 WHE0600	WCA0321 WHA0320	WCE1001 WHE1000	WCA0401 WHA0400	WCE1601 WHE1600
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
Nx	26	28	31	36	41
Ny	9	10	13	15	20
R	5.5	5.5	5.5	6.5	6.5
O-ring	1BP5	1BP7	1BP7	1BP7	1BP7
Mass kg	0.1	0.1	0.1	0.2	0.2

- Notes:
1. Material: A2017BE-T4
  2. Mounting bolts are not provided. Prepare mounting bolts according to the mounting height using the A dimensions as a reference.
  3. If thickness other than A is required, perform additional machining on surface Z. Please refer to the drawing.

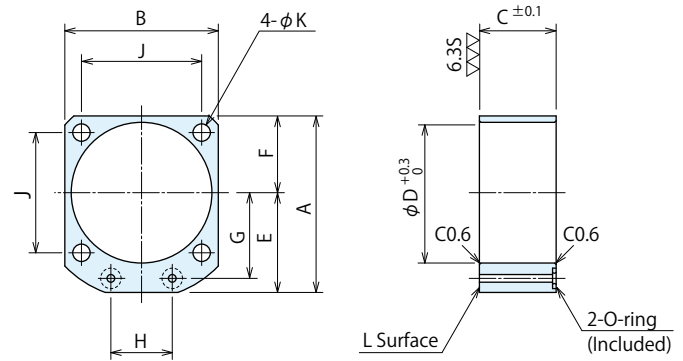
Manifold Block for LKA/LKC/LKE/LHA/LHC/LHE/LHS/LL

Model No. Indication

**LZY 048 0 - MD**

Size  
(Refer to following table)

Design No.  
(Revision Number)



Model No.	LZY0360-MD	LZY0400-MD	LZY0480-MD	LZY0550-MD	LZY0650-MD	LZY0750-MD	LZY0900-MD	LZY1050-MD
Corresponding Item Model Number	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
O-ring	1BP5	1BP5	1BP5	1BP5	1BP7	1BP7	1BP7	1BP7
Mass kg	0.2	0.2	0.3	0.4	0.5	0.8	1.2	1.7

- Notes:
1. Material: S45C
  2. Mounting bolts are not provided. Prepare mounting bolts according to the mounting height using the C dimensions as a reference.
  3. If thickness other than C is required, perform additional machining on surface L. Please refer to the drawing.

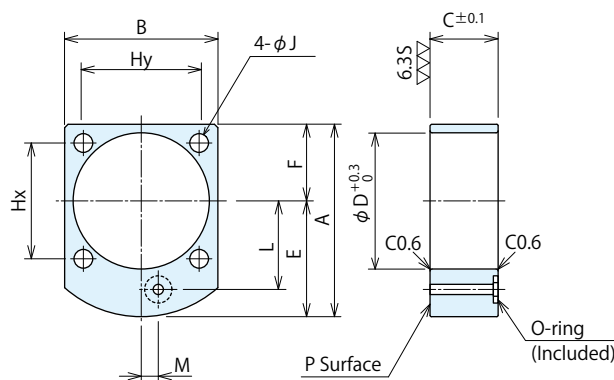
● **Manifold Block for LM/LJ/LT/LG**

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 Item	LT0301 / LG0301	LT036□ / LG036□	LT040□ / LG040□	LT048□ / LG048□	LT055□ / LG055□	LT065□ / LG065□	LT075□ / LG075□	LG090□	LG105□
Model Number	LM0300 / LJ0302	LM0360 / LJ0362	LM0400 / LJ0402	LM0480 / LJ0482	LM0550 / LJ0552	LM0650 / LJ0652	LM0750 / LJ0752	LJ0902	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
O-ring	1BP5	1BP5	1BP5	1BP5	1BP5	1BP7	1BP7	1BP7	1BP7
Mass kg	0.1	0.2	0.2	0.3	0.4	0.5	0.8	1.2	1.7

- Notes:
1. Material: S45C
  2. Mounting bolts are not provided. Prepare mounting bolts according to the mounting height using the C dimensions as a reference.
  3. If thickness other than C is required, perform additional machining on surface L. Please refer to the drawing.

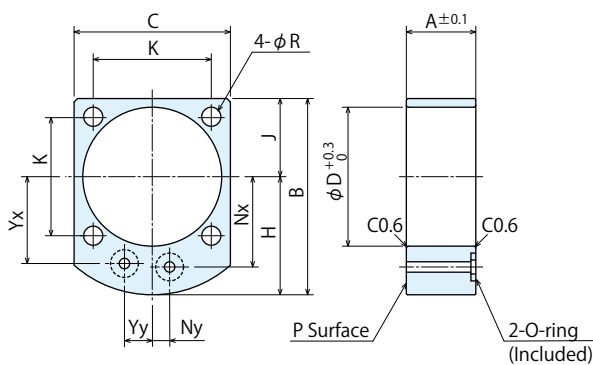
● **Manifold Block for LC/TC**

Model No. Indication

**LZ 048 0 - MP**

Size  
(Refer to following table)

Design No.  
(Revision Number)



(mm)

Model No.	LZ0400-MP	LZ0480-MP	LZ0550-MP	LZ0650-MP	LZ0750-MP	LZ0900-MP
Corresponding Item	LC0402	LC0482	LC0552	LC0652	LC0752	LC0902
Model Number	TC0402	TC0482	TC0552	TC0652	TC0752	
A	20	27	30	32	37	45
B	56.5	62	70	82	93	107
C	45	51	60	70	80	95
D	40	48	55	65	75	90
H	34	36.5	40	47	53	59.5
J	22.5	25.5	30	35	40	47.5
K	34	40	47	55	63	75
Nx	26	30	33.5	39.5	45	52.5
Ny	5	0	0	0	0	0
R	5.5	5.5	6.8	6.8	9	11
Yx	25	28	31	37	42.5	50
Yy	8	11	13	14	15	15
O-ring	1BP5	1BP5	1BP5	1BP7	1BP7	1BP7
Mass kg	0.2	0.3	0.4	0.5	0.8	1.2

- Notes:
1. Material: S45C
  2. Mounting bolts are not provided. Prepare mounting bolts according to the mounting height using the A dimensions as a reference.
  3. If thickness other than A is required, perform additional machining on surface P. Please refer to the drawing.

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

- Screw Locator
  - VXF
- 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
  - TNZ-S
  - TNZ-SQ

- Pressure Switch
  - JB

- Pressure Gauge
  - JGA/JGB

- Manifold
  - JX

- Coupler Switch
  - PS

- G-Thread Fitting

# Sales Offices

## Sales Offices across the World

Japan	<b>TEL. +81-78-991-5162</b>	<b>FAX. +81-78-991-8787</b>
Overseas Sales	KOSMEK LTD. 1-5, 2-chome, Murotani, Nishi-ku, Kobe-city, Hyogo, Japan 651-2241 〒651-2241 兵庫県神戸市西区室谷2丁目1番5号	
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KOSMEK (USA) LTD.	1441 Branding Avenue, Suite 110, Downers Grove, IL 60515 USA	
China	<b>TEL.+86-21-54253000</b>	<b>FAX.+86-21-54253709</b>
KOSMEK (CHINA) LTD. 考世美(上海)貿易有限公司	21/F, Orient International Technology Building, No.58, Xiangchen Rd, Pudong Shanghai 200122., P.R.China 中国上海市浦东新区向城路58号东方国际科技大厦21F室 200122	
India	<b>TEL.+91-9880561695</b>	
KOSMEK LTD - INDIA	F 203, Level-2, First Floor, Prestige Center Point, Cunningham Road, Bangalore -560052 India	
Thailand	<b>TEL. +66-2-715-3450</b>	<b>FAX. +66-2-715-3453</b>
Thailand Representative Office	67 Soi 58, RAMA 9 Rd., Suanluang, Suanluang, Bangkok 10250, Thailand	
Taiwan (Taiwan Exclusive Distributor)	<b>TEL. +886-2-82261860</b>	<b>FAX. +886-2-82261890</b>
Full Life Trading Co., Ltd. 盈生貿易有限公司	16F-4, No.2, Jian Ba Rd., Zhonghe District, New Taipei City Taiwan 23511 台湾新北市中和區建八路2號 16F-4 (遠東世紀廣場)	
Philippines (Philippines Exclusive Distributor)	<b>TEL.+63-2-310-7286</b>	<b>FAX. +63-2-310-7286</b>
G.E.T. Inc, Phil.	Victoria Wave Special Economic Zone Mt. Apo Building, Brgy. 186, North Caloocan City, Metro Manila, Philippines 1427	
Europe (Europe Exclusive Distributor)	<b>TEL. +43-463-287587-10</b>	<b>FAX. +43-463-287587-20</b>
KOS-MECH GmbH	Schleppeplatz 2 9020 Klagenfurt Austria	
Indonesia (Indonesia Exclusive Distributor)	<b>TEL. +62-21-5818632</b>	<b>FAX. +62-21-5814857</b>
P.T PANDU HYDRO PNEUMATICS	Ruko Green Garden Blok Z- II No.51 Rt.005 Rw.008 Kedoya Utara-Kebon Jeruk Jakarta Barat 11520 Indonesia	

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Head Office	<b>TEL.078-991-5115</b>	<b>FAX.078-991-8787</b>
Osaka Sales Office	〒651-2241 兵庫県神戸市西区室谷2丁目1番5号	
Overseas Sales		
Tokyo Sales Office	<b>TEL.048-652-8839</b>	<b>FAX.048-652-8828</b>
	〒331-0815 埼玉県さいたま市北区大成町4丁目81番地	
Nagoya Sales Office	<b>TEL.0566-74-8778</b>	<b>FAX.0566-74-8808</b>
	〒446-0076 愛知県安城市美園町2丁目10番地1	
Fukuoka Sales Office	<b>TEL.092-433-0424</b>	<b>FAX.092-433-0426</b>
	〒812-0006 福岡県福岡市博多区上牟田1丁目8-10-101	

# Global Network



Asia Detailed Map



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