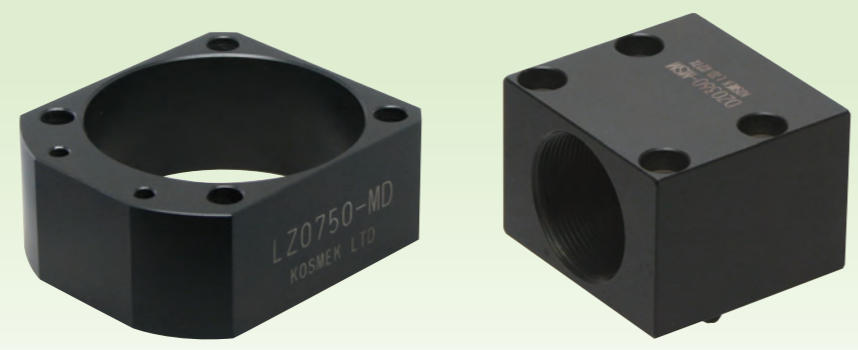


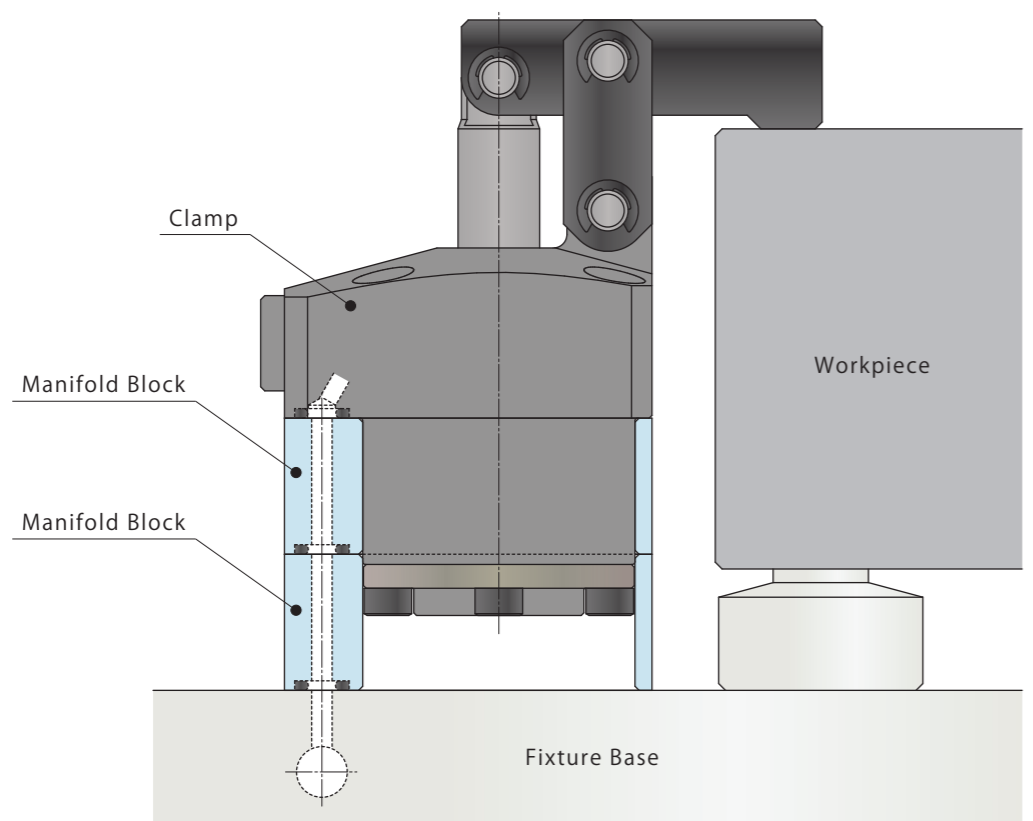
Manifold Block

- 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.

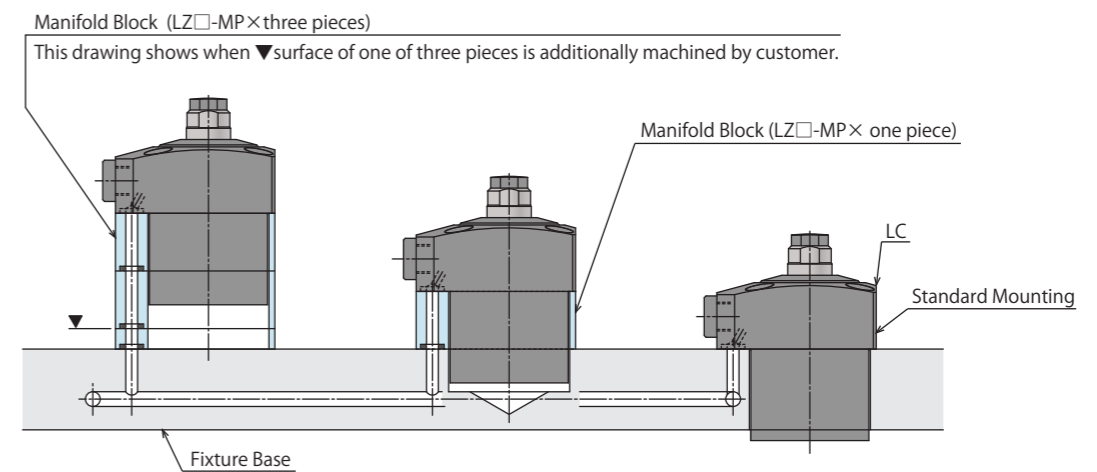


Applicable Model

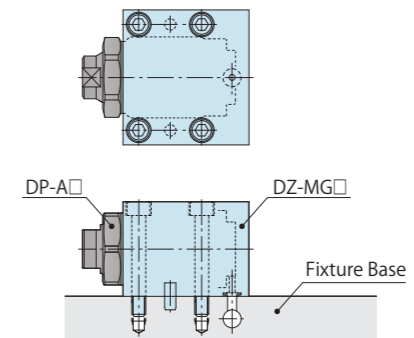
Manifold Block Model No.	Corresponding Item Model No.
Model WHZ-MD	Model WCA Model WHA Model WCE Model WHE
Model LZY-MD	Model LKA Model LKE Model LHC Model LHS Model LKC Model LHA Model LHE Model LL
Model LZ-MS	Model LJ Model LG Model LM Model LT
Model LZ-MP	Model LC Model TC
Model TMZ-1MB	Model TMA-1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

Application Examples

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



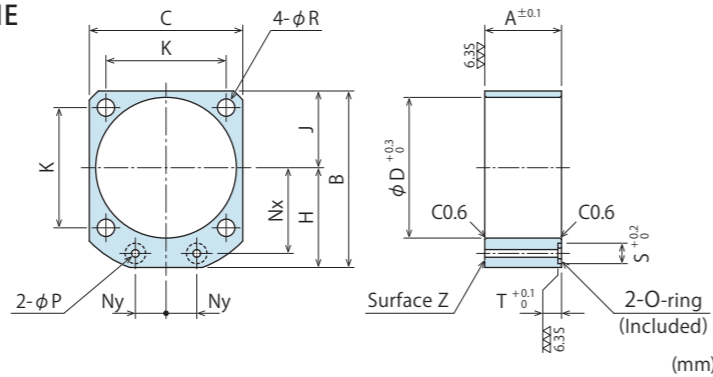
● **Push Cylinder (DP) Application Example**



- 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)

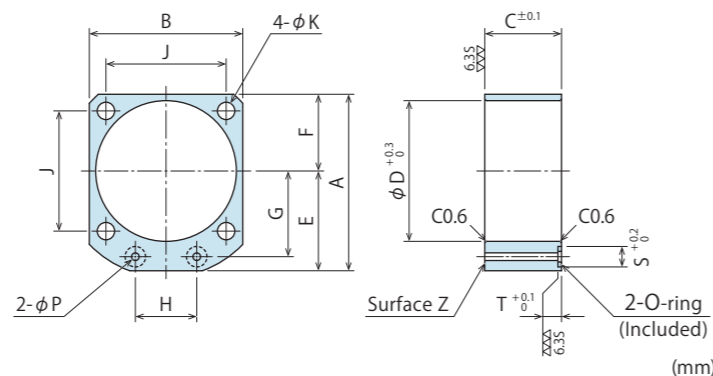


Model No.	WHZ0600-MD	WHZ0320-MD	WHZ0400-MD	WHZ0500-MD	WHZ0630-MD
Corresponding Model No.	WCE0602 WHE0600	WCA0321 WHA0320 WCE1002 WHE1000	WCA0401 WHA0400 WCE1602 WHE1600	WCA0501 WHA0500 WCE2502 WHE2500	WCA0631 WHA0630 WCE4002 WHE4000
A	23	25	27	31	35
B	54	60	67	77	88.5
C	45	50	58	68	81
D	40	46	54	64	77
H	31.5	35	38	43	48
J	22.5	25	29	34	40.5
K	34	39	45	53	65
Nx	26	28	31	36	41
Ny	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:
1. Material: A2017BE-T4 Surface Finishing: Zircon Finishing (Zirconium Chemical Conversion Treatment)
 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.

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)

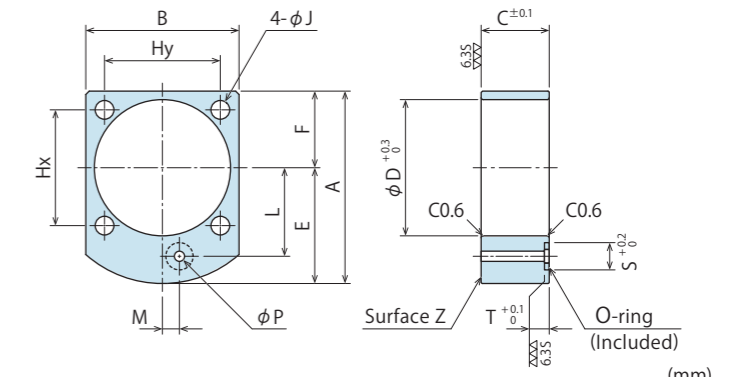


Model No.	LZY0360-MD	LZY0400-MD	LZY0480-MD	LZY0550-MD	LZY0650-MD	LZY0750-MD	LZY0900-MD	LZY1050-MD
Corresponding Model No.	LKA0360 / LKE0360 LHA0360 / LHC0360 LHE0360 / LHS0360 LL0360	LKA0400 / LKC0400 LKE0400 / LHA0400 LHC0400 / LHE0400 LHS0400 / LL0400	LKA0480 / LKC0480 LKE0480 / LHA0480 LHC0480 / LHE0480 LHS0480 / LL0480	LKA0550 / LKC0550 LKE0550 / LHA0550 LHC0550 / LHE0550 LHS0550 / LL0550	LKA0650 / LKC0650 LKE0650 / LHA0650 LHC0650 / LHE0650 LHS0650 / LL0650	LKA0750 / LHA0750 LHC0750 / LHE0750 LHS0750 / LL0750	LKA0900 / LHA0900 LHC0900 / LHE0900 LHS0900 / LL0900	LKA1050 / LHA1050 LHC1050 / LHE1050 LHS1050 / LL1050
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:
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 LJ/LM/LG/LT

Model No. Indication
LZ 048 0 - MS
Size (Refer to following table)
Design No. (Revision Number)

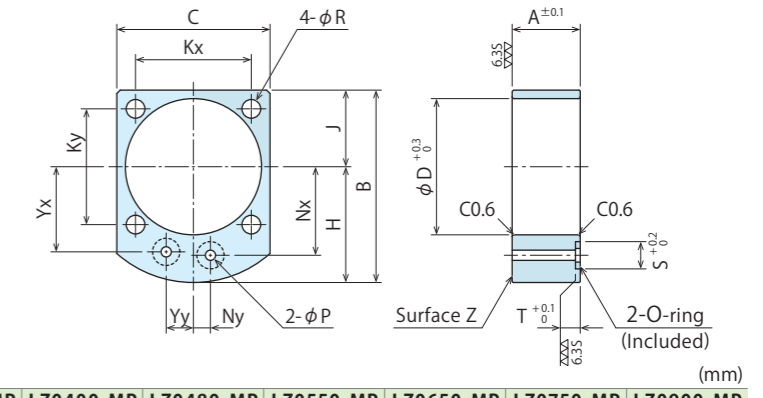


Model No.	LZ0300-MS	LZ0360-MS	LZ0400-MS	LZ0480-MS	LZ0550-MS	LZ0650-MS	LZ0750-MS	LZ0900-MS	LZ1050-MS
Corresponding Model No.	LG0301 / LT0301 LJ0302 / LM0300	LG0361 / LT0361 LJ0362 / LM0360	LG0401 / LT0401 LJ0402 / LM0400	LG0481 / LT0481 LJ0482 / LM0480	LG0551 / LT0551 LJ0552 / LM0550	LG0651 / LT0651 LJ0652 / 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)



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

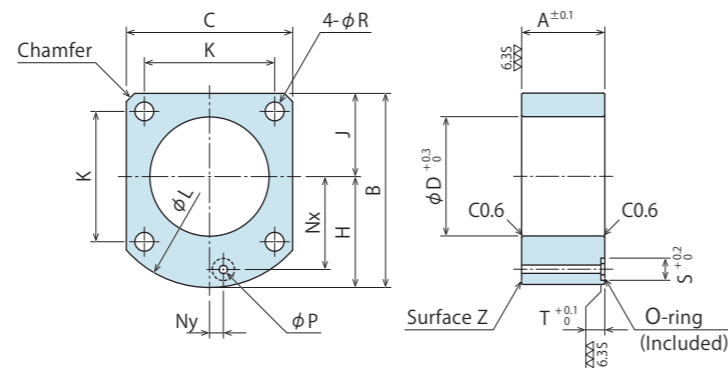
Manifold Block for TMA-1

Model No. Indication

TMZ 040 0 - 1MB

Size (Refer to following table)

Design No. (Revision Number)



Model No.	TMZ0250-1MB	TMZ0400-1MB	TMZ0600-1MB	TMZ1000-1MB	TMZ1600-1MB	TMZ2500-1MB	TMZ3200-1MB
Corresponding Model No.	TMA0250-1	TMA0400-1	TMA0600-1	TMA1000-1	TMA1600-1	TMA2500-1	TMA3200-1
A	18	21	24	28	35	42	46
B	56.5	62	69	83	95	110	122
C	45	51	60	73	85	100	110
D	33	36	43	48	60	70	85
H	34	36.5	39	46.5	52.5	60	67
J	22.5	25.5	30	36.5	42.5	50	55
K	34	40	47	57	65	75	88
L	68	73	80	97	112	129	147
Nx	26	30	33.5	40	45	52.5	60
Ny	5	0	0	0	0	0	0
R	5.5	5.5	6.8	9	11	14	14
P	3	3	3	3	5	5	5
S	8	8	8	8	10	10	10
T	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Chamfer	3	3	(φ80)	(φ97)	(φ112)	(φ129)	(φ147)
O-ring	1BP5	1BP5	1BP5	1BP5	1BP7	1BP7	1BP7
Weight kg	0.2	0.3	0.5	0.9	1.4	2.2	2.6

- 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.

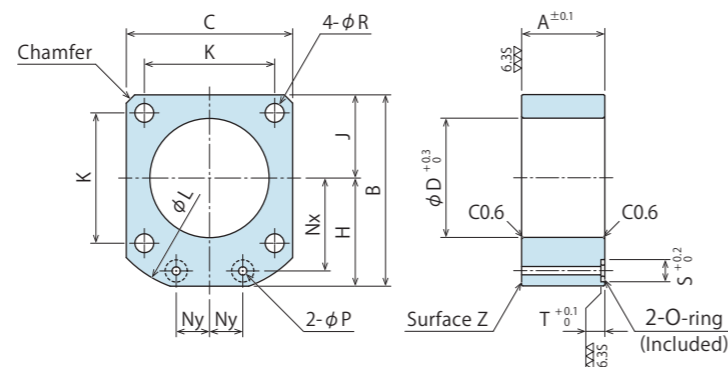
Manifold Block for TMA-2

Model No. Indication

TMZ 040 0 - 2MB

Size (Refer to following table)

Design No. (Revision Number)



Model No.	TMZ0250-2MB	TMZ0400-2MB	TMZ0600-2MB	TMZ1000-2MB	TMZ1600-2MB	TMZ2500-2MB	TMZ3200-2MB
Corresponding Model No.	TMA0250-2	TMA0400-2	TMA0600-2	TMA1000-2	TMA1600-2	TMA2500-2	TMA3200-2
A	15	16	18	20	24	28	32
B	54	61	69	82.5	94.5	109.5	122
C	45	51	60	73	85	100	110
D	33	36	43	48	60	70	85
H	31.5	35.5	39	46	52	59.5	67
J	22.5	25.5	30	36.5	42.5	50	55
K	34	40	47	57	65	75	88
L	68	75	83	100	113	133	147
Nx	26	30	33.5	40	45	52.5	60
Ny	9	10	12	15	16	18.5	20
R	5.5	5.5	6.8	9	11	14	14
P	3	3	3	3	5	5	5
S	8	8	8	8	10	10	10
T	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Chamfer	3	3	3	4	5	8	(φ147)
O-ring	1BP5	1BP5	1BP5	1BP5	1BP7	1BP7	1BP7
Weight kg	0.2	0.3	0.4	0.6	0.9	1.5	1.8

- 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.

Manifold Block for DP

Model No. Indication

DZ 036 0 - M G S

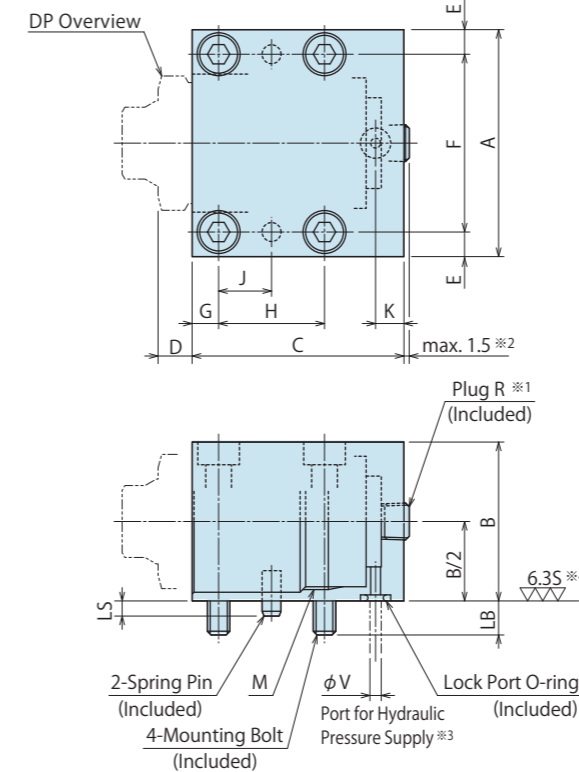
Size (Refer to following table)

Design No. (Revision Number)

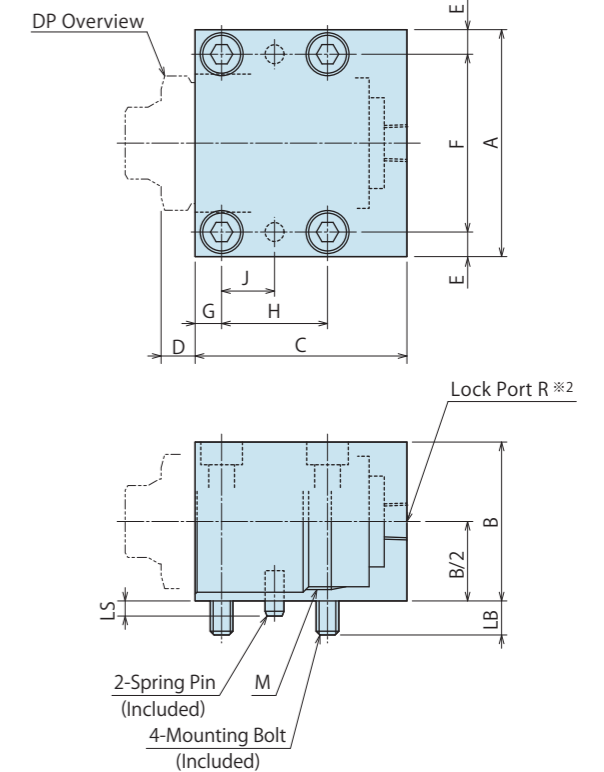
Stroke Code
 S : For DP□-□S
 M : For DP□-□M
 L : For DP□-□L

Piping Method
 G : Gasket Option
 S : Piping Option

※The drawing below shows DZ□0-MG□ (Gasket option).



※The drawing below shows DZ□0-MS□ (Piping option).



- Notes: 1. Material: S45C Surface Finishing: Alkaline Blackening
 ※1. G option: the R-thread plug is screwed in at shipment. There is variance in protrusion amount of the plug.
 ※2. Plug is not included in the S option.
 ※3. Recommended hole size for a hydraulic pressure supply port drilled by Customer. Make sure there are no burrs around the connection and no cutting chips or other foreign substances inside.
 ※4. The surface touching the O-ring should have a roughness of $\sqrt{0.35}$.

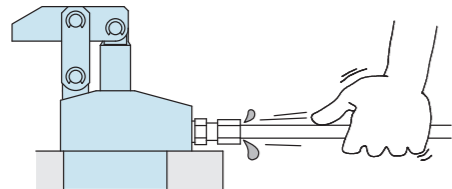
Model No.	DZ0160-MG□	DZ0220-MG□	DZ0240-MG□	DZ0300-MG□	DZ0360-MG□	DZ0450-MG□	DZ0550-MG□	DZ0650-MG□	DZ0800-MG□
Stroke Code	S M L	S M L	S M L	S M L	S M L	S M L	S M L	S M L	S M L
Corresponding Model No.	DP0160-□	DP0221-□	DP0241-□	DP0301-□	DP0361-□	DP0451-□	DP0551-□	DP0651-□	DP0801-□
Model No.	DP0160-□	DP0221-□	DP0241-□	DP0301-□	DP0361-□	DP0451-□	DP0551-□	DP0651-□	DP0801-□
A	32	38	45	50	60	75	90	105	120
B	22	28	32	38	42	52	62	72	88
C	34 40 49	32.5 38.5 51.5	35 42.5 59	38.5 45.5 65	43 56 77	50 63 85.5	56 69.5 92	65 79 108.5	70 88 119
D	6	8	8	9	9	13	13	15	15
E	4.5	4.5	6	6	6.5	8.5	10	11	11
F	23	29	33	38	47	58	70	83	98
G	5	5	6	6	7	8	9	11	11
H	12 18	12 18	12 18	16 22	18 28	20 30	24 36	30 42	34 52
J	6 9	6 9	6 9	8 11	9 14	10 15	12 18	15 21	17 26
K	7.5	7.5	7.5	7.5	7.5	11.5	11.5	11.5	11.5
LB	7	6	8	7	9	11	13	15	15
LS	3	3	3	4	4	4	4	6	7
M (Nominal × Pitch)	M16×1.5	M22×1.5	M24×1.5	M30×1.5	M36×1.5	M45×1.5	M55×2	M65×2	M80×2
R	Rc1/8	Rc1/8	Rc1/8	Rc1/8	Rc1/8	Rc1/4	Rc1/4	Rc1/4	Rc1/4
Mounting Bolt	M4×0.7×25	M4×0.7×30	M5×0.8×35	M5×0.8×40	M6×45	M8×55	M10×65	M12×75	M12×90
O-ring	1BP5	1BP5	1BP5	1BP5	1BP5	1BP7	1BP7	1BP7	1BP7
Spring Pin	φ3×8	φ3×8	φ3×8	φ5×12	φ5×12	φ6×12	φ6×12	φ8×16	φ10×20
V	3	3	3	5	5	5	5	5	5
Weight kg	0.15 0.15 0.2	0.2 0.2 0.3	0.3 0.3 0.4	0.4 0.5 0.6	0.6 0.7 1	1 1.2 1.7	1.5 1.8 2.5	2.2 2.8 3.8	3.2 4 5.5

- 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

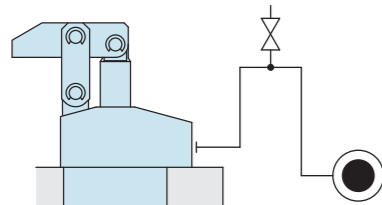
● Cautions

● 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.
 - Please implement piping construction in a clear environment to prevent anything getting in products.
- 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 Shake 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 release 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	

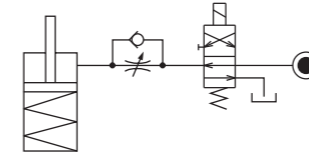
Note : Please contact manufacturers when customers require products in the list above.

● Notes on Hydraulic Cylinder Speed Control Unit

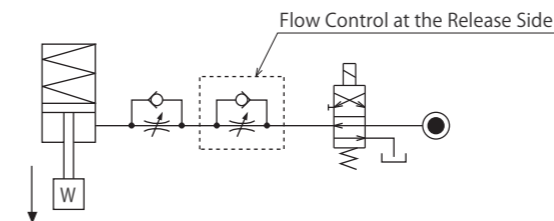
⚠ Please pay attention to the cautions below. Design the hydraulic circuit for controlling the action speed of hydraulic cylinder. Improper circuit design may lead to malfunctions and damages. Please review the circuit design in advance.

- 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.



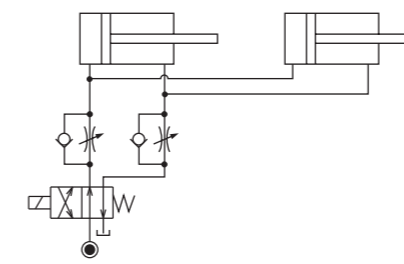
Accelerated clamping speed by excessive hydraulic flow to the cylinder may sustain damage. In this case add flow control to regulate flow. (Please add flow control to release flow if the lever weight is put on at the time of release action when using swing clamps.)



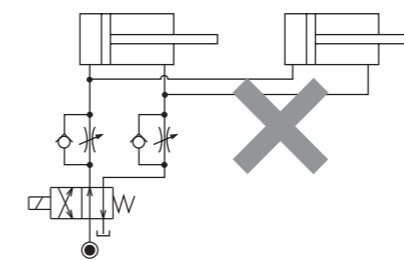
- Flow Control Circuit for Double Acting Cylinder

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.75 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.

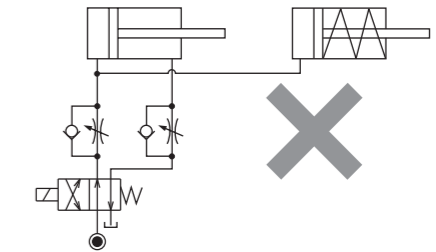
【Meter-out Circuit】 (Except LKE/TMA/TLA)



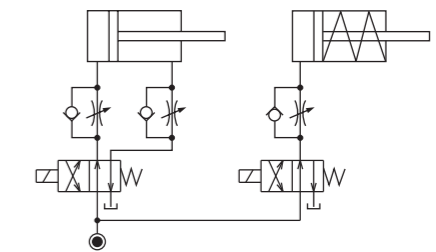
【Meter-in Circuit】 (LKE/TMA/TLA must be controlled with meter-in.)



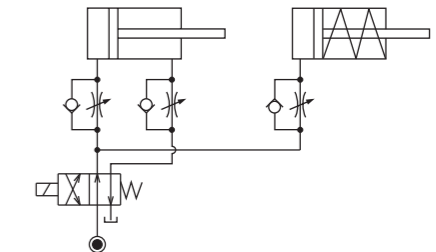
- ① Single acting components should not be used in the same flow control circuit as the double acting components. The release action of the single acting cylinders may become erratic or very slow.



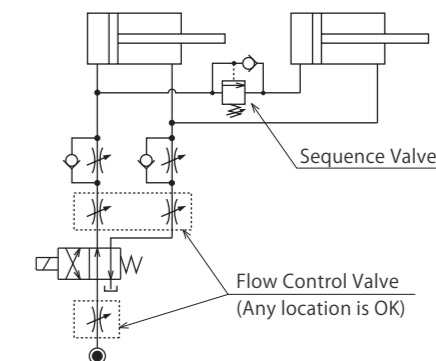
Refer to the following circuit when both the single acting cylinder and double acting cylinder are used together. ○ Separate the control circuit.



- 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.



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

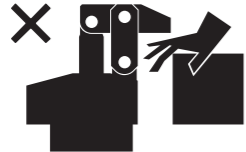
Index
Search by Alphabetical Order

Sales Offices

Cautions

● Notes on Handling

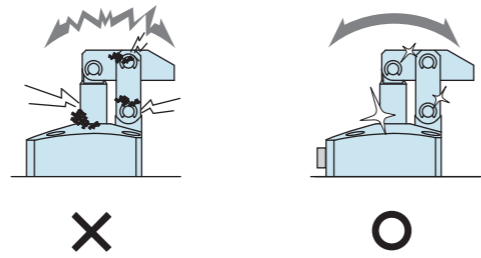
- 1) It should be operated by qualified personnel.
 - The hydraulic machine and air compressor should be operated and maintained by qualified personnel.
- 2) Do not operate or remove the product unless the safety protocols are ensured.
 - ① The machine and equipment can only be inspected or prepared 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.



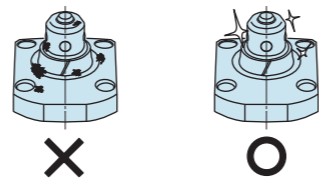
- 4) Do not disassemble or modify.
 - If the equipment is taken apart or modified, the warranty will be voided even within the warranty period.

● 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.

● 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.

- High-Power Series
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- Manual Operation Accessories
- Cautions / Others

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- 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



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