Accessories

Model JBA
Pressure Switch

Model JGA/JGB
Pressure Gauge

Model JX
Manifold

Model PS
Coupler Switch

Pressure Switch

Most suitable for checking circuit pressure. Resistant to vibration of 30 G and long life of more than one million cycles.
The switch equipped with light enables to check the action easily.

Model No. Indication

JBA 270 0 -0 G D C - (INC.18.6MPa)(DEC.14.6MPa)

1 2 3 4 5 6

1 Pressure Range

070
270
380

Refer to the specifications for setting pressure range.

2 Design No.

0 : Revision Number

3 Piping Option

Blank : Thread Piping Option (Rc1/4)
G : Gasket Option (O-ring Sealing)

4 Option

Blank : Micro Switch 1 Contact Model, without Action Light
D : Micro Switch 2 Contact Model, without Action Light
L : Micro Switch 1 Contact Model, with LED Light

5 Cable

Blank : Without Cable
C : With Cable, Cable Length 160mm
(1 Contact Model: 2 Core, 2 Contact Model: 4 Core)

6 Set Pressure

Please indicate the set pressure when ordering (Please inform us with proper unit symbols).
Pease let us know set pressure of increased MPa pressure detection and decreased MPa pressure detection.
When selecting 4 D, please indicate this for two contacts.

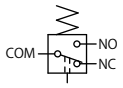
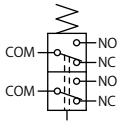
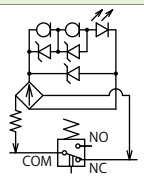
Entry Example
Boosted Pressure Detection : 18.6MPa →**(INC.18.6MPa)**
Decreased Pressure Detection: 4.0MPa →**(DEC.4.0MPa)**
Boosted Pressure Detection : 700PSI →**(INC.700PSI)**

Specifications

Model No.			JBA0700		JBA2700		JBA3800	
			1 Contact Model	2 Contact Model	1 Contact Model	2 Contact Model	1 Contact Model	2 Contact Model
Set Pressure Range 1	INC. (Pressure Increase Detection)	MPa	2.0 ～ 7.0	1.0 ～ 6.0	7.0 ～ 27.0	2.3 ～ 22.4	14.0 ～ 38.0	5.6 ～ 29.6
	DEC. (Pressure Decrease Detection)	MPa	1.4 ～ 6.0	0.5 ～ 5.1	5.8 ～ 23.8	1.6 ～ 19.7	11.7 ～ 32.6	4.4 ～ 25.3
	Open/Close Pressure Difference ※1	MPa	0.6 ～ 1.0	0.5 ～ 0.9	1.2 ～ 3.2	0.7 ～ 2.7	2.3 ～ 5.4	1.2 ～ 4.3
Set Pressure Range 2	INC. (Pressure Increase Detection)	MPa	-	2.0 ～ 7.0	-	7.0 ～ 27.0	-	14.0 ～ 38.0
	DEC. (Pressure Decrease Detection)	MPa	-	1.4 ～ 6.0	-	5.8 ～ 23.8	-	11.7 ～ 32.6
	Open/Close Pressure Difference ※1	MPa	-	0.6 ～ 1.0	-	1.2 ～ 3.2	-	2.3 ～ 5.4
Max. Operating Pressure		MPa	40					
Adjusting Screw Turn Ratio (Reference)		MPa/Rev	0.5		2.2		3.9	
Shock Tolerance ※2			30G					
Repeat Accuracy (of Maximum Set Pressure)			±1%					
Micro Switch	Model No.		SSM33F0 (Azbil)					
	Electrical Rating		5A-250V AC、2A-30V DC					
	Contact Model		Single-Pole Double-Throw (SPDT)					
LED Light	Rated Voltage ※3		12 ～ 125V AC/DC					
	Internal Resistance		33kΩ					
The Shape of the Terminal ※4			#110 Tab Terminal (t=0.5)					
Mounting			Optional					
Operating Temperature			0 ～ 70 ℃					
Usable Fluid			General Hydraulic Oil Equivalent to ISO-VG-32					
Mass		kg	0.6					

※1. It shows the difference of pressure when the switch shifts during pressure increase and decrease. It varies in proportion to the increase of set pressure.
※2. Shock tolerance of the 2 contact model may become less than 30G depending on the set pressure and operating pressure.
※3. Make sure to install the load on the light circuit.
※4. For connection, use the special receptacle for #110 Tab and insert it parallel to the terminal.

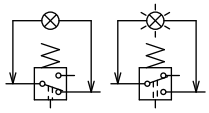
Circuit Symbol

Option	Blank：1 Contact Model	D：2 Contact Model	L：1 Contact Model, Attached LED
Circuit Symbol			

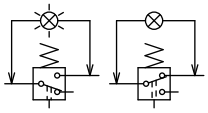
Note

1. About the Light Circuit
- The contact point of the micro switch (NC or NO) can be selected.
- The light turns on at the opened state of the micro switch.

【NC Contact】
Turns ON when exceeding the set pressure.

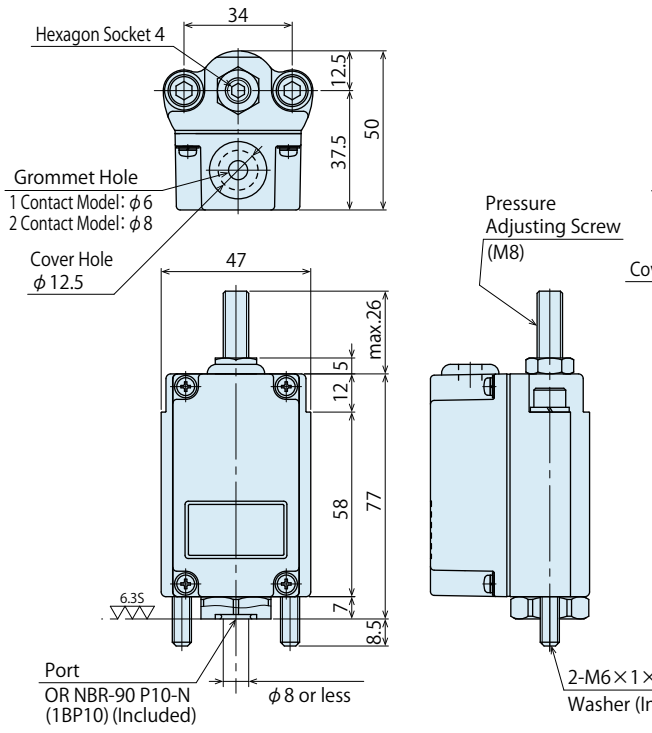


【NO Contact】
Turns OFF when exceeding the set pressure.

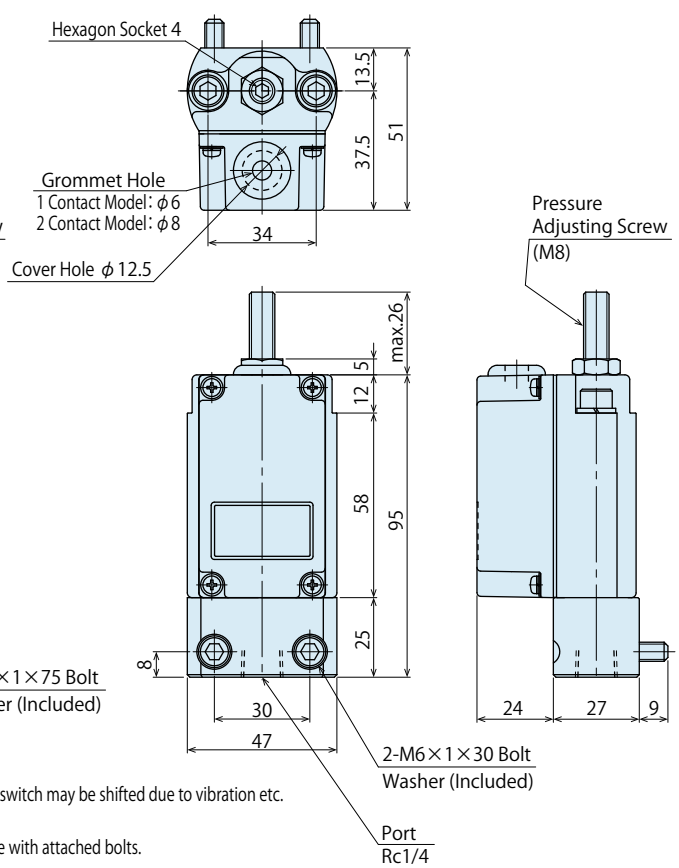


External Dimensions

JBA□0–0G：Gasket Option



JBA□0–0：Piping Option



Notes for Use

1. If there is only a slight difference between set pressure and operating pressure, the switch may be shifted due to vibration etc. Recommended difference of set pressure and operating pressure is 2MPa or more.
2. When mounting the piping option, securely fix the cylinder to the mounting surface with attached bolts. Fixing only the pipe leads to piping damage due to vibration etc.

Pressure Gauge

Indicates pressure of hydraulic circuit.
Filled with glycerin for anti-vibration.

Model No. Indication

JG A 25 1

- 1 — Design No. (Revision Number)
- 25 — Max. Indicating Pressure (Refer to specification)
- A — Mounting Orientation (Refer to external dimensions)

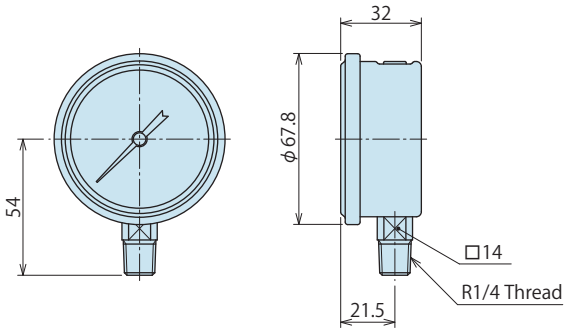
Specifications

Model No.	JGA161 JGB161	JGA251 JGB251	JGA401 JGB401	JGA601 JGB601
Max. Indicating Pressure※1 MPa	16.0	25.0	40.0	60.0
Accuracy	JIS 1.6 class			
Mass kg	0.2			

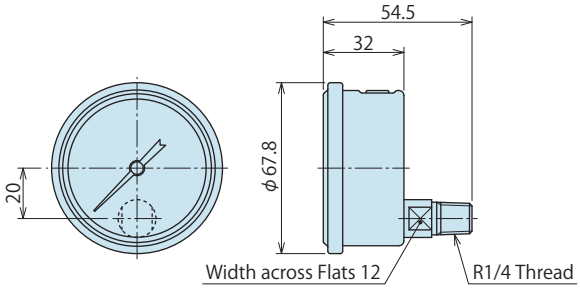
Note ※1. Products with PSI unit is not available.
We recommend purchasing locally.

External Dimensions

JGA□1



JGB□1



Manifold

Relaying and manifold pipe is available.

Model No. Indication

JX 4 0 21

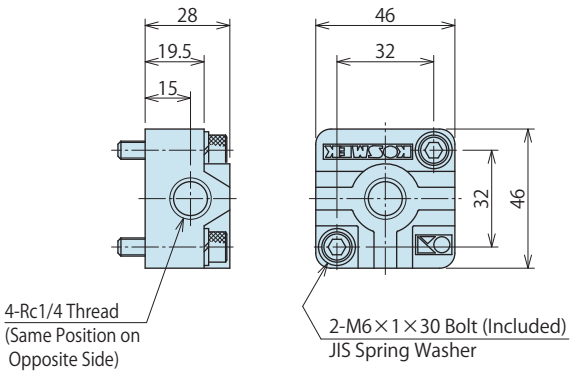
- 21 — Design No. (Revision Number)
- 4 — The Number of the Ports (Refer to external dimensions)

Specifications

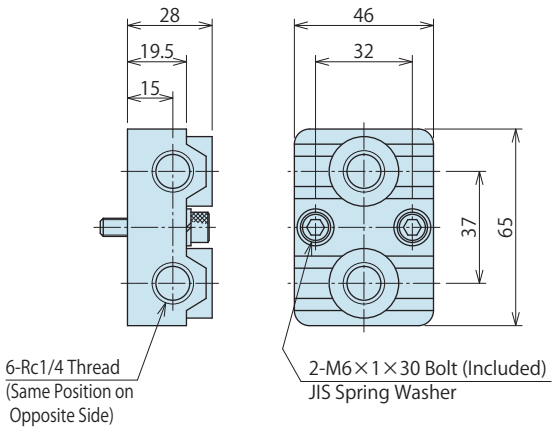
Model No.	JX4021	JX6021
Mass kg	0.2	0.3

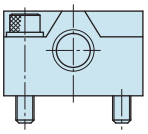
Model No. Indication

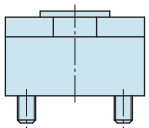
JX4021



JX6021







Coupler Switch

Interlocking is possible between fixtures and fixture transfer machine by using a disconnecting detector of hydraulic quick coupler on hoses. Most appropriate when used with BK non-leak valve.

Model No. Indication

PS 010 1 – H

1 2 3

1 Adapted Coupler

010 : Coupler made by Nitto Kohki Corp. 2HS (Rc1/4 thread)

071 : Coupler made by Nitto Kohki Corp. 3HS (Rc3/8 thread)

2 Design No.

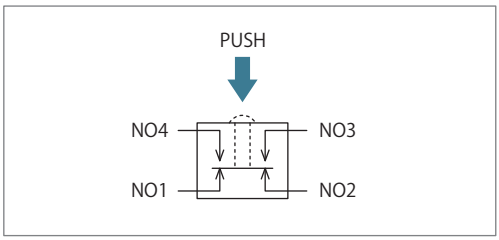
1 : Revision Number

3 Maker of the Switch

H : Made by Azbil Corp. (Standard)

T : Made by Omron Corp. (Option)

Circuit Symbol (Limit Switch)



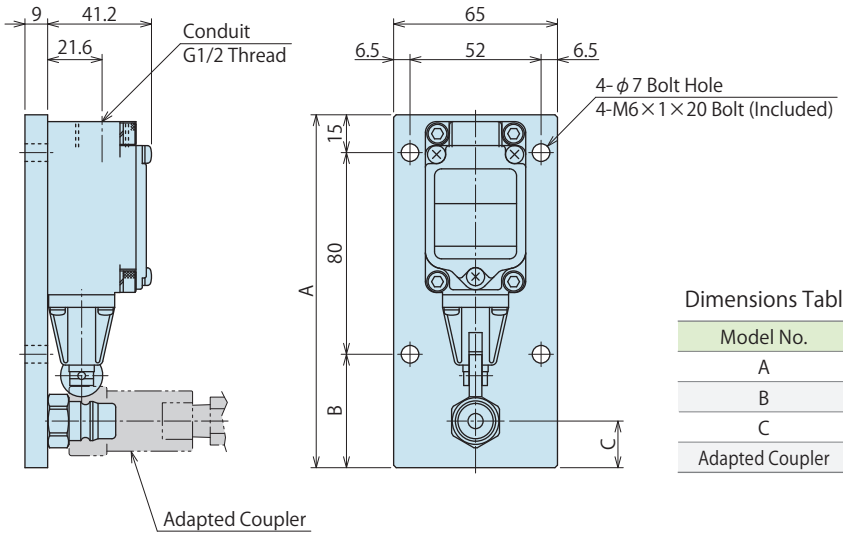
Specifications

Model No.	PS0101-H	PS0711-H
Limit Switch	5LS1-J (Made by Azbil Corp.)	
Electric Rating	10A-125,250,480VAC	
	0.8A-115VDC	
	0.4A-230VDC	
	0.1A-550VDC	
Circuit Composition	2-Circuit Double Off Model (1a1b)	
Compatible Coupler Part Number※1	2HS	3HS
Mass kg	0.9	

Note

※1. Please select the same specification as BK valve for the compatible coupler when BK valve is used together.

External Dimensions



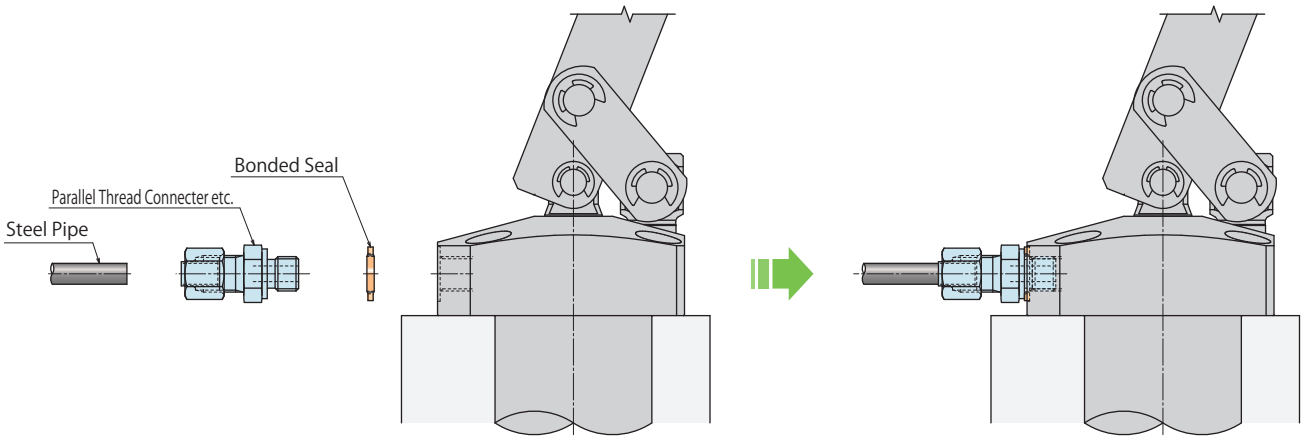
Dimensions Table

Model No.	PS0101-H	PS0711-H
A	140	145
B	45	50
C	18.5	21
Adapted Coupler	2HS	3HS

G-Thread Fitting

The fitting as shown is made by Ihara Science Corp.

Mounting

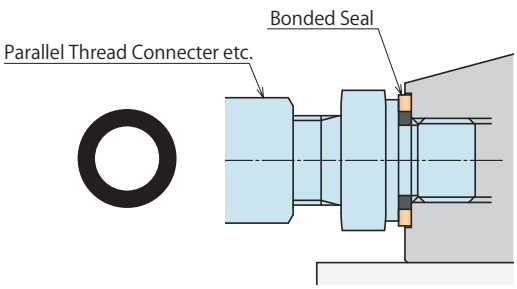


Before mounting

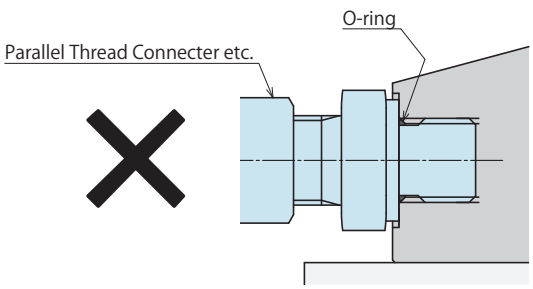
After mounting

Notes

※ Please put bonded seal between clamp and parallel connector etc (fitting) for sealing G-thread with our clamp. It cannot be used in models with O-rings seal type.



Please put bonded seal between clamp and parallel connector etc (fitting).



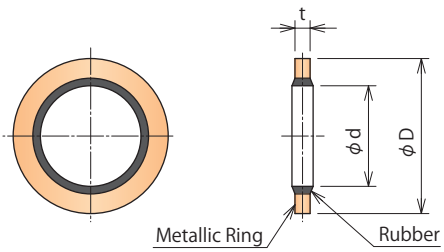
It cannot be used in models with O-rings seal type.

Bonded Seal

Model No. Indication

9UKP0C0001

BSPP Thread (G-Thread) Size
(Refer to following table.)



(mm)

Model No.	9UKP0C0001	9UKP0C0002	9UKP0C0003
Applicable Thread	G1/8	G1/4	G3/8
d	9.9	13.3	16.8
D	17	20.5	24
t	2	2	2

Note 1. Rubber material is NBR, metallic ring is SPCC of JWG3141 (Cold pressure deferred steel sheet) used as standard specification.(Operating temperature −20°～120°C)

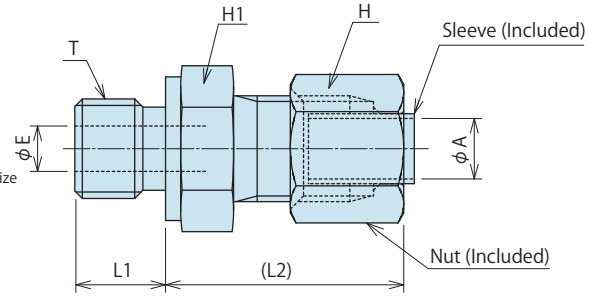
Parallel Thread Connector

Model No. Indication

9UKC0 06 0 1 E

BSPP Thread (G-Thread) Size
(Refer to following table)

Applicable Pipe External Diameter
(Refer to following table)



(mm)

Model No.	9UKC00601E	9UKC00801E	9UKC00602E	9UKC00802E	9UKC01203E
Applicable Pipe External DiameterϕA	6	8	6	8	12
Applicable Thread T	G1/8	G1/8	G1/4	G1/4	G3/8
E	4	4	4	6	8
Hexagon Opposite Side H1	14	17	19	19	22
Hexagon Opposite Side H	14	17	14	17	22
L1	8	8	12	12	12
Tighten by Hand (L2)	(30.5)	(30.5)	(31.5)	(31.5)	(33.5)
Mass (kg)	0.030	0.042	0.048	0.053	0.087

Note 1. Bonded seal is not included to this product. Please prepare separately.

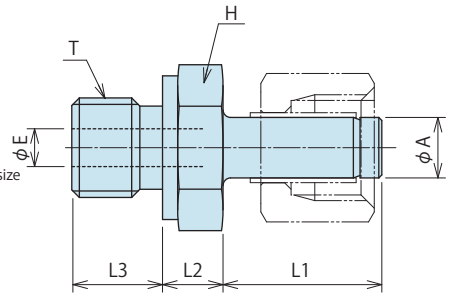
Parallel Thread Adapter

Model No. Indication

9UKHB 06 0 1 E

BSPP Thread (G-Thread) size
(Refer to following table)

Applicable Pipe External Diameter
(Refer to following table)



(mm)

Model No.	9UKHB0601E	9UKHB0802E	9UKHB1203E
Applicable Pipe External DiameterϕA	6	8	12
Applicable Thread T	G1/8	G1/4	G3/8
E	3	5	8
Hexagon Opposite Side H	14	19	22
L1	21	21	22.5
L2	7	8	9.5
L3	8	12	12
Mass (kg)	0.016	0.033	0.051

Note 1. Bonded seal is not included to this product. Please prepare separately.

Stud Elbow Fitting

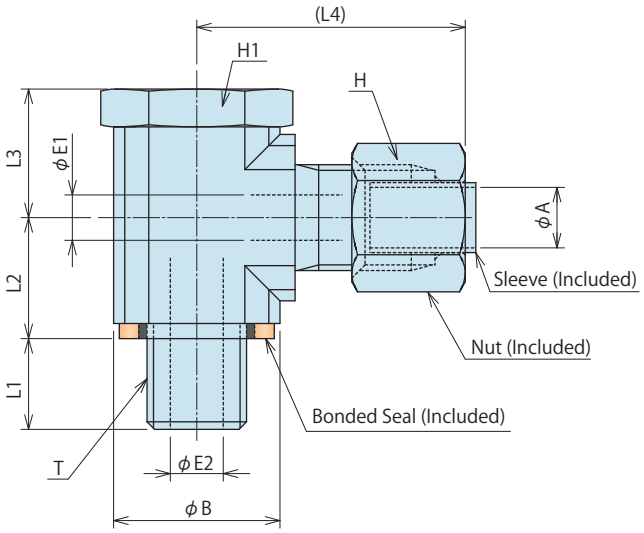
Model No. Indication

9UKMB 06 0 1 E

- 06: Applicable Pipe External Diameter (Refer to following table)
- 1: BSPP Thread (G-Thread) Size (Refer to following table)

(mm)

Model No.	9UKMB0601E	9UKMB0802E	9UKMB1203E
Applicable Pipe External Diameter ϕA	6	8	12
Applicable Thread T	G1/8	G1/4	G3/8
E1	4	6	10
E2	4	7	9
Hexagon Opposite Side H1	17	22	27
Hexagon Opposite Side H	14	17	22
L1	8	12	12
L2	13	16	19
L3	14	17	22
Tighten by Hand (L4)	(33.5)	(35.5)	(40.5)
Mass (kg)	0.078	0.127	0.232



Note 1. Do not use it as an alternative one of swivel fitting to make a turn.

Union Fitting

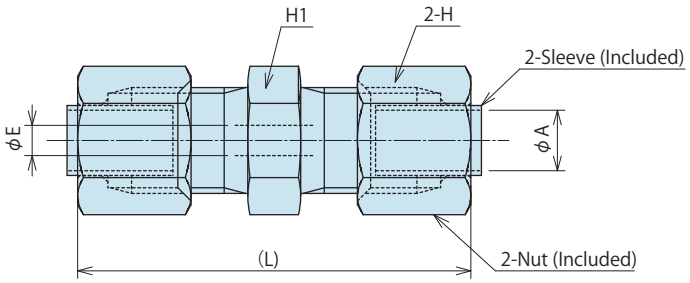
Model No. Indication

9UKUA 06 00E

- 06: Applicable Pipe External Diameter (Refer to following table)

(mm)

Model No.	9UKUA0600E	9UKUA0800E	9UKUA1200E
Pipe External Diameter ϕA	6	8	12
E	4	6	10
Hex. Opposite Side H1	14	17	19
Hex. Opposite Side H	14	17	22
Tighten by Hand (L)	(51)	(52)	(54)
Mass (kg)	0.042	0.059	0.093



Union Fitting (Elbow)

Model No. Indication

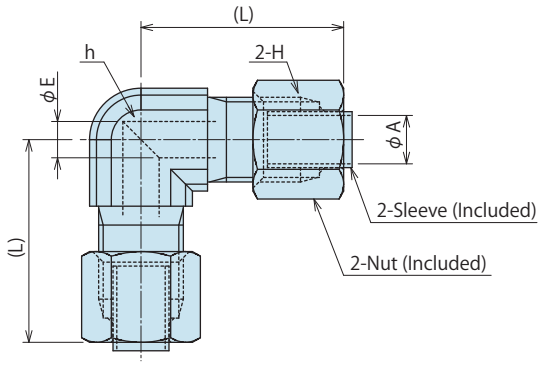
9UKLA 06 00E

- 06: Applicable Pipe External Diameter (Refer to following table)

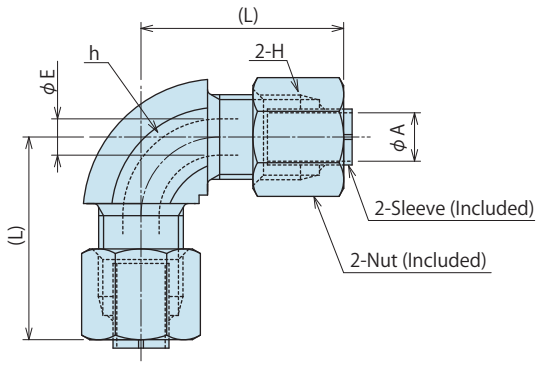
(mm)

Model No.	9UKLA0600E	9UKLA0800E	9UKLA1200E
Pipe External Diameter ϕA	6	8	12
E	4	6	10
Width across Flats h	14	17	19
Hex. Opposite Side H	14	17	22
Tighten by Hand (L)	(30.5)	(33.5)	(35.5)
Mass (kg)	0.048	0.081	0.116

9UKLA0600E



9UKLA0800E
9UKLA1200E

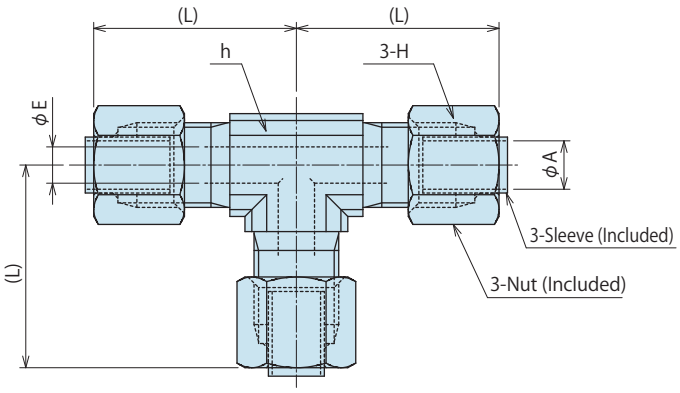


Union Fitting (Tee-Union Fitting)

Model No. Indication

9UKTA 06 00E

Applicable Pipe External Diameter.
(Refer to following table)



(mm)

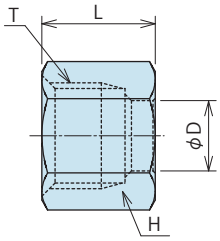
Model No.	9UKTA0600E	9UKTA0800E	9UKTA1200E
Applicable Pipe External Diameter ϕA	6	8	12
E	4	6	10
Width across Flats h	14	17	19
Hexagon Opposite Side H	14	17	22
Tighten by Hand (L)	(30.5)	(33.5)	(35.5)
Mass kg	0.069	0.122	0.172

Nut

Model No. Indication

9UKKN 06 00E

Applicable Pipe External Diameter
(Refer to following table)



(mm)

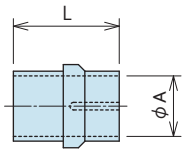
Model No.	9UKKN0600E	9UKKN0800E	9UKKN1200E
Applicable Pipe External Diameter ϕA	6	8	12
D	7.3	9.3	13.3
T	M12×1.5	M14×1.5	M18×1.5
Hexagon Opposite Side H	14	17	22
L	15	15	16
Mass kg	0.010	0.015	0.026

Sleeve

Model No. Indication

9UKK0 06 00E

Applicable Pipe External Diameter
(Refer to following table)



(mm)

Model No.	9UKK00600E	9UKK00800E	9UKK01200E
Applicable Pipe External Diameter ϕA	6	8	12
L	14	14	15
Mass kg	0.002	0.003	0.004

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.

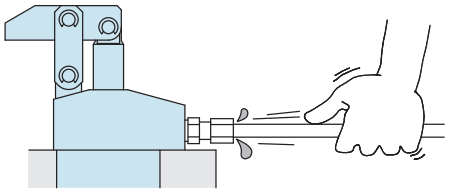
3) Applying Sealing Tape

- 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.

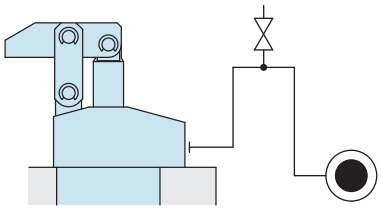
4) Air Bleeding of the Hydraulic Circuit

- 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

ISO Viscosity Grade ISO-VG-32

Maker	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	

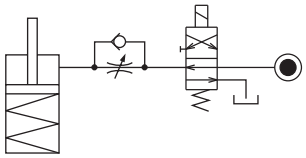
Note As it may be difficult to purchase the products as shown in the table from overseas, please contact the respective manufacturer.

Notes on Hydraulic Cylinder Speed Control Unit

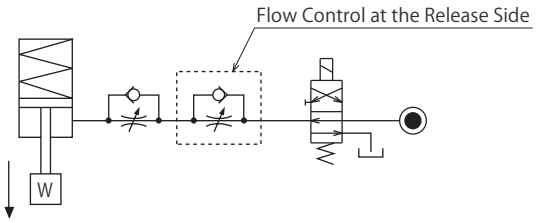
Please pay attention to the cautions below. Design the hydraulic circuit for controlling the action speed of hydraulic cylinder. Improper circuit design may lead to malfunctions and damages. Please review the circuit design in advance.

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.



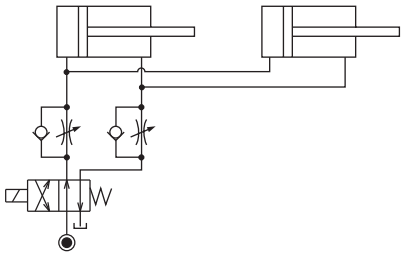
Accelerated clamping speed by excessive hydraulic flow to the cylinder may sustain damage. In this case add flow control to regulate flow. (Please add flow control to release flow if the lever weight is put on at the time of release action when using swing clamps.)



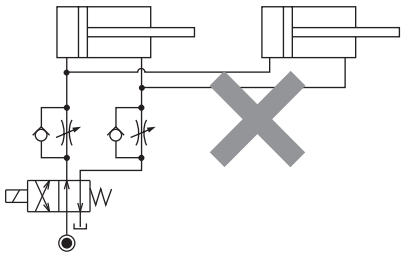
Flow Control Circuit for Double Acting Cylinder

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)

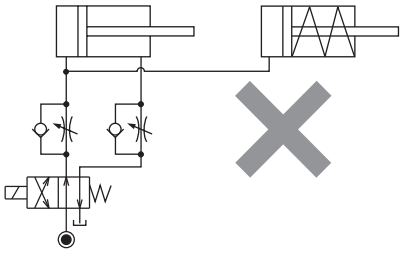


【Meter-in Circuit】(LKE/TMA/TLA must be controlled with meter-in.)



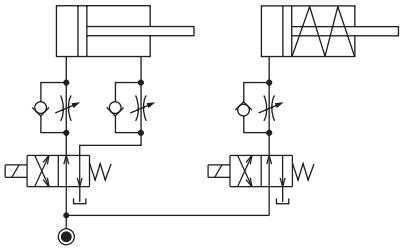
In the case of meter-out circuit, the hydraulic circuit should be designed with the following points.

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.

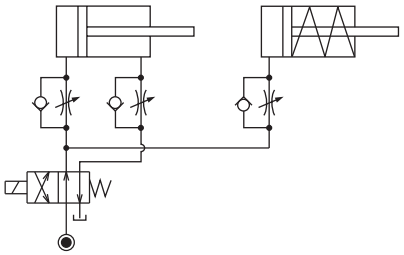


Refer to the following circuit when both the single acting cylinder and double acting cylinder are used together.

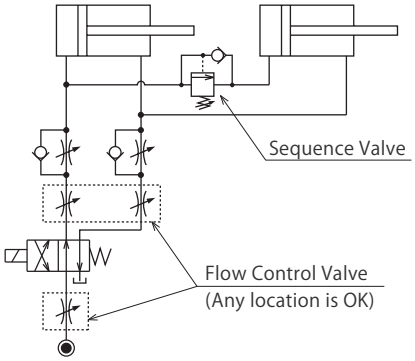
○ Separate the control circuit.



○ 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.



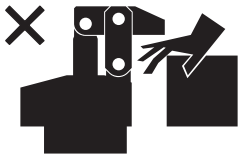
Cautions

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.

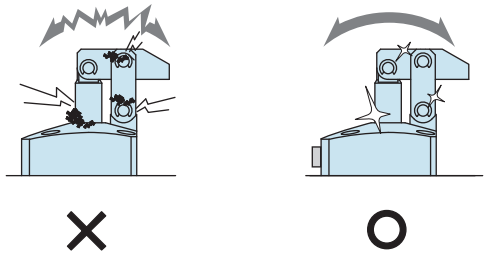


4) Do not disassemble or modify.
- If the equipment is taken apart or modified, the warranty will be voided even within the warranty period.

Maintenance and Inspection

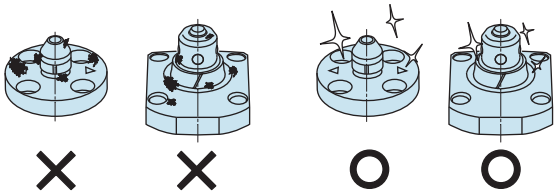
1) Removal of the Machine and Shut-off of Pressure Source
- Before the machine is removed, make sure that the above-mentioned safety measures are in place. Shut off the air of hydraulic source and make sure no pressure exists in the hydraulic and air circuit.
- Make sure there is no abnormality in the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

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.

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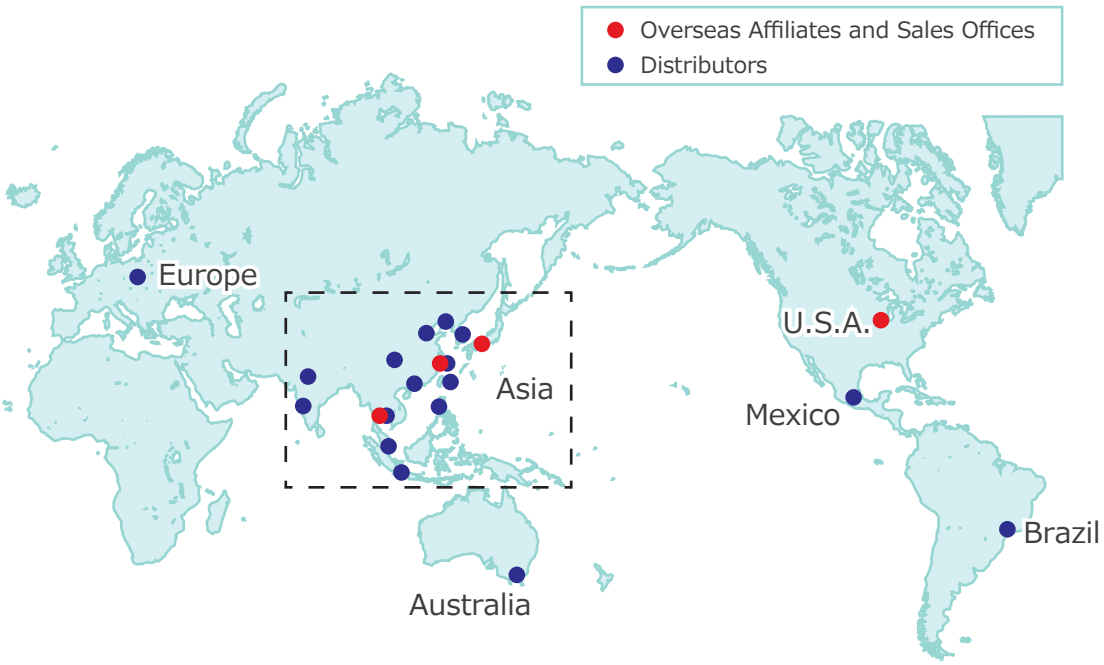
Global Network



Asia Detailed Map

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