

Hydraulic Oil/Air/Coolant Auto Coupler

Model JVA/JVB

Model JVC/JVD

Model JVE/JVF

Model JNA/JNB

Model JNC/JND

Model JLP/JLS



Coupler to connect the hydraulic circuit

Compact / Applicable to a lot of fluid and flow.

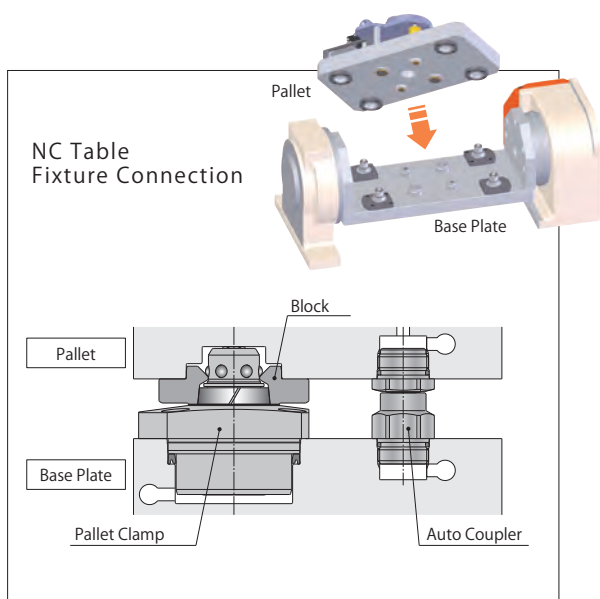
● What is Auto coupler?

Auto coupler is designed to connect a variety of flow circuits, is suitable for automation and fits in small spaces. We can offer based on your requirement.

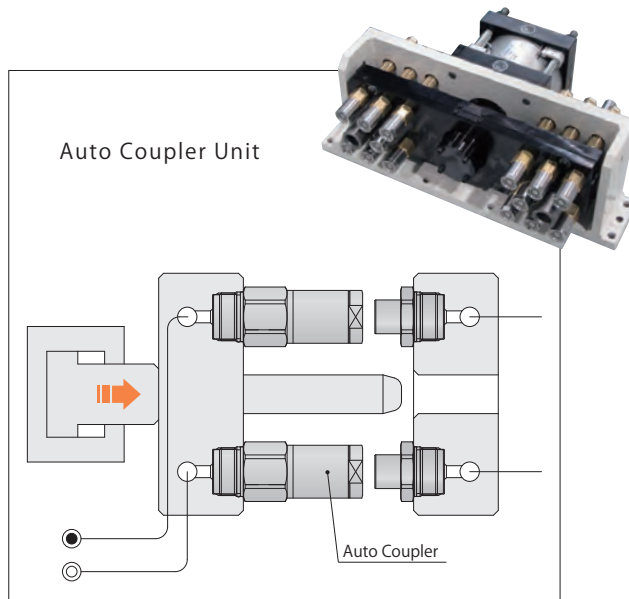
※ Auto coupler doesn't have non-leak mechanism.

In case of you need non-leak function, please refer to P.831.

Application Examples



Connecting from the Pallet Bottom



Connecting from Outside

Model No.	Operating Pressure Range	Usable Fluid	Comparison of Auto Coupler Connected Condition Dimension ※ The drawing below shows that the shortest dimension combination of socket and plug in the connected condition for each model
Model JVA/JVB → P.863	7MPa or less	General Hydraulic Oil	<p>Min. Passage Area : 12.6mm²</p>
Model JVC/JVD → P.867	7MPa or less		<p>Min. Passage Area : 12.6mm²</p>
Model JVE/JVF → P.871	1MPa or less	Coolant	<p>Min. Passage Area : 29.0mm²</p>
Model JNA/JNB → P.875	1MPa or less	Air	<p>Min. Passage Area : 8.8mm² (At Eccentricity : 7.4mm²)</p>
Model JNC/JND → P.879	25MPa or less	General Hydraulic Oil	<p>Min. Passage Area : 10.3mm²</p>
			<p>Min. Passage Area : 10.3mm²</p>
Model JLP/JLS → P.883	3.5MPa or less 25MPa or less ※ it differs depending on the product's material	Coolant	<p>Min. Passage Area *1 : 29.0mm²</p>

※ 1. Minimum passage of JLP/JLS area differs depending on size.
 ※ 2. It shows the connecting dimension on multiple connection.
 1. Please refer to each page in detail if necessary.

- High-Power Series
- Pneumatic Series
- Hydraulic Series
- Valve / Coupler Hydraulic Unit**
- Manual Operation Accessories
- Cautions / Others
- Air Sequence Valve
 - BWD
- Hydraulic Non-Leak Coupler
 - BGA/BGB
 - BGC/BGD
 - BGP/BGS
 - BBP/BBS
 - BNP/BNS
 - BJP/BSJ
 - BFP/BFS
- Auto Coupler**
 - JVA/JVB
 - JVC/JVD
 - JVE/JVF
 - JNA/JNB
 - JNC/JND
 - JLP/JLS
- Rotary Joint
 - JR
- Hydraulic Valve
 - BK
 - BEQ
 - BT
 - BLS/BLG
 - BLB
 - JSS/JS
 - JKA/JKB
 - BM/BMG
 - AU/AU-M
 - BU
 - BP/JPB
 - BX
 - BEP/BSP
 - BH
 - BC
- Air Hydraulic Unit
 - CV
 - CK
 - CP
 - CS
 - CB
 - CC
 - AB/AB-V
 - AC/AC-V

Auto Coupler

Model JVA/JVB

For Oil/Air

(Operating Pressure Range: lower than 7MPa)



What is Auto Coupler?

Auto coupler is designed to connect a variety of flow circuits, is suitable for automation and fits in small spaces. We can offer based on your requirement.

- ※ Auto coupler doesn't have non-leak mechanism.
In case of you need non-leak function. (Please refer to P.831)

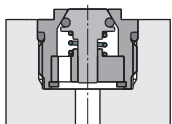
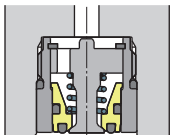
JVA/JVB Feature

It is suitable for connecting and disconnecting the hydraulic circuit on changeover of fixture pallets and tombstones. Threaded auto coupler can be used with "Screw Locator".

Action Description

Disconnected State

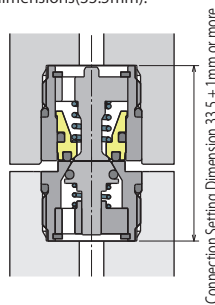
JVA (Fixture Side)



JVB (Pressure Source Side)

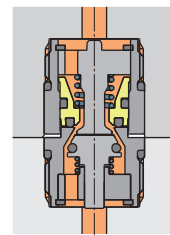
In the Process of Connecting (During Pallet Setting)

- ① Using without "Screw Locator"
Reaction force is not generated at the distance of 1mm or further than the connection setting dimensions(33.5mm).
Reaction force is generated at the distance of 1mm or less than the connection setting dimensions(33.5mm).

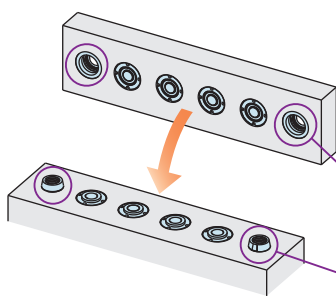
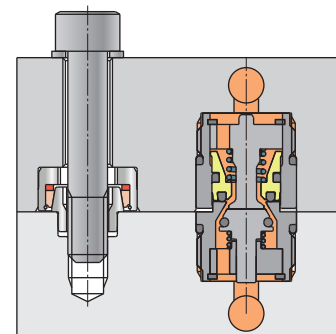
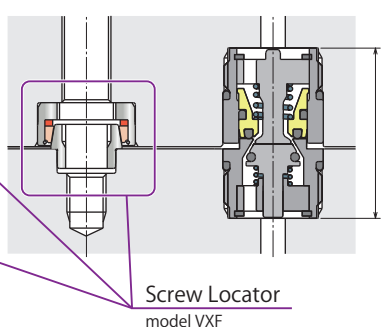


Connected State

The reaction force is created by both spring and the supply pressure.



- ② Using with "Screw Locator"
Reaction force (spring force) is working when setting up the pallet because the stroke of "Screw Locator" is 0.2~0.3mm. Pallet may float if the weight of the pallet is light.



Example with "Screw Locator"

Screw Locator
model VXF

Model No. Indication

JV B 020 0 - W

1 2 3

1 Style

- A** : O-ring side of Connection Surface (Fixture Side)
B : Metal Side of Connection Surface (Pressure Source Side)

2 Design No.

- 0** : Revision Number

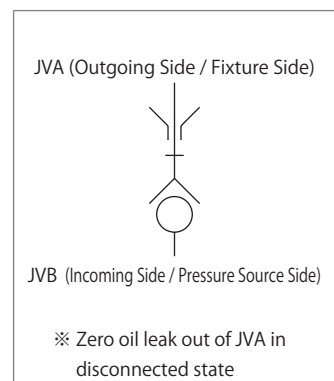
3 Material

- W** : Stainless Steel, Brass, NBR

Specifications

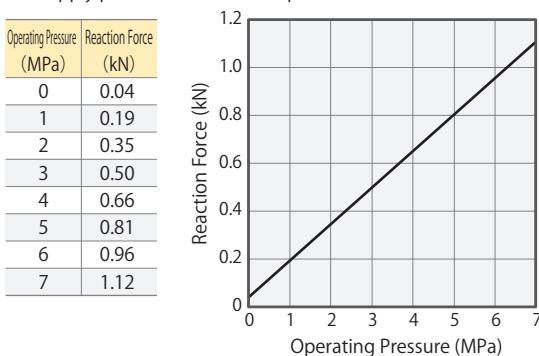
Model No.	Fixture Side	JVA0200-W
	Pressure Source Side	JVB0200-W
Max. Operating Pressure	MPa	7.0
Withstanding Pressure	MPa	10.5
Min. Passage Area	mm ²	12.6
Offset Tolerance	mm	±0.5
Angular Deviation (Tolerance)	DEG.	0.3
Operating Temperature	°C	0 ~ 70
Usable Fluid	General Hydraulic Oil Equivalent to ISO-VG-32•Air	
Reaction Force kN	Operating Pressure	
	at 7 MPa	1.12
	at 1 MPa	0.19
	at P MPa	$0.154 \times P + 0.04$
Mass g	JVA	30
	JVB	24

Circuit Symbol



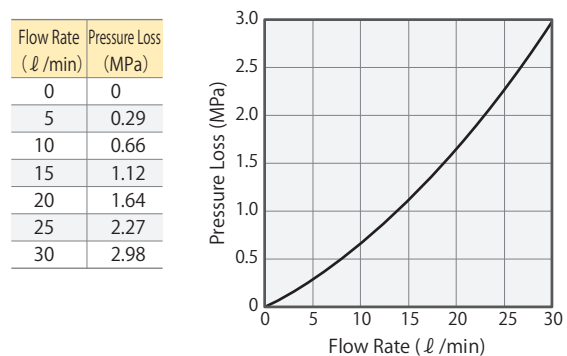
Supply Pressure-Reaction Force Graph

The graph shows the relationship between the reaction force and the supply pressure after the completion of connection of JVA/JVB.



Flow Rate - Pressure Loss Characteristic Graph

The fluid used on this data is normal hydraulic oil corresponding to ISO-VG-32 (30~40°C).

High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic UnitManual Operation
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Cautions / Others

Air
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BWD

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Auto Coupler

JVA/JVB

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BM/BMG

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BP/JPB

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Air
Hydraulic Unit

CV

CK

CP

CS

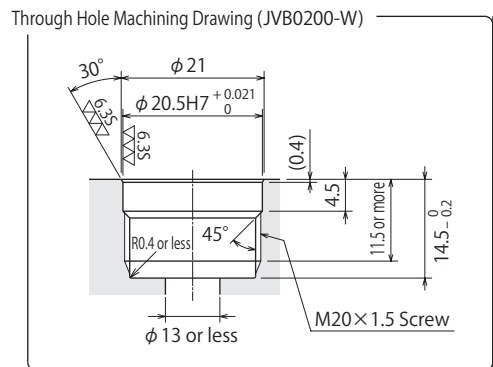
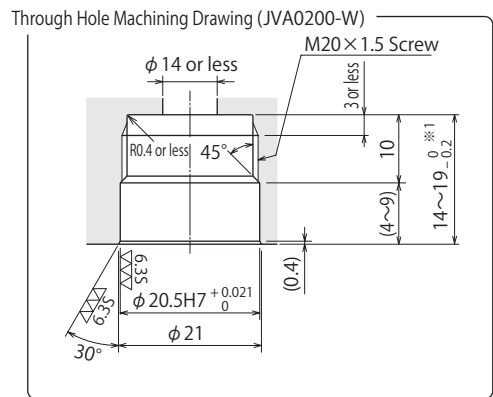
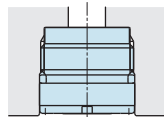
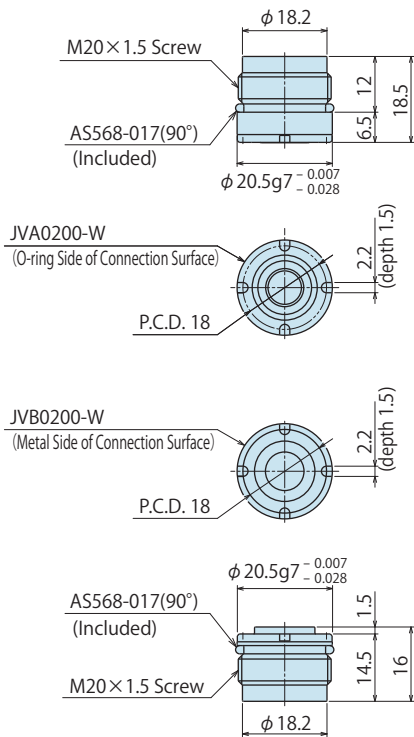
CB

CC

AB/AB-V

AC/AC-V

External Dimensions (JVA/JVB)



Connection Setting Dimension $33.5_{-0.4}^0$
 (Reference Value: Connection Setting Dimension (Single Set Use) 33)

Model No.	Thread Size	Tightening Torque(N·m)
JVA0200-W JVB0200-W	M20×1.5	16

Notes

- When ※1 dimension is 19mm, clearance between base plate and pallet is 0mm.
 When ※1 dimension is 14mm, clearance between base plate and pallet is 5mm.
- Special tool (Model: ZZJ0020) or equivalent is needed when inserting and removing JVA/JVB.
 Special tool (Model: ZZJ0020) is not included with JVA/JVB. Please order separately.

Options: Special tool for mounting JVA/JVB

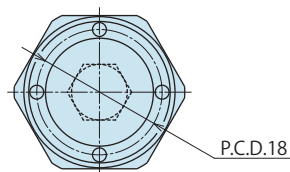
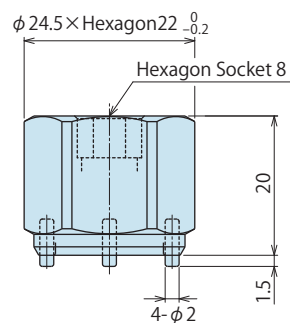
JVA/JVB is mounted with this mounting jig.

Tightening torque: 16N·m

Model No. indication

ZZJ0020

Design No.
 (Revision number of product)



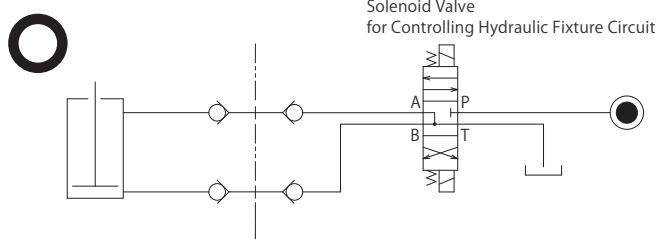
Note

- Special tool (Model: ZZJ0020) or equivalent is needed when inserting and removing JVA/JVB.
 Please determine how many is needed when ordering.

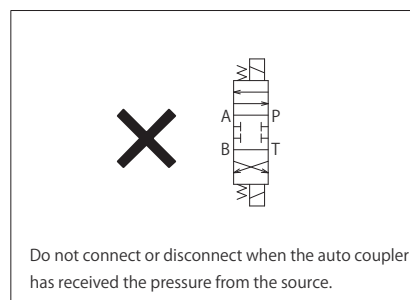
● Cautions (JVA/JVB)

1. Do not connect or disconnect when the auto coupler has received the pressure from the source
(Please refer to Circuit Reference)
2. Drain out air within the circuit before use (The used fluid is oil)
3. Do not connect in the condition that foreign substances such as chips adhere on the connecting surfaces.
Completely remove the adhering chips or coolant by air blow etc.
4. Loading on a fixture side actuator in the separate condition may result in oil flowing out from the end of auto coupler.
5. Damage to internal parts may occur, if the allowable tolerance is exceeded. Guide pin is recommended.
6. When pressing up to the connection limit, use the force higher than the reaction force and lower than 3.0kN
7. Special tool (Model: ZZJ0020) or equivalent is needed when inserting and removing JVA/JVB.

● Circuit Reference



Apply a three-position (center position, ABT connection) solenoid valve for controlling the hydraulic (or air) fixture circuit.

High-Power
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Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic UnitManual Operation
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Air
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Auto Coupler

JVA/JVB

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Auto Coupler

Model JVC/JVD

For Oil/Air

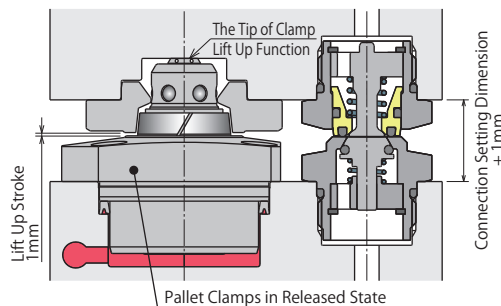
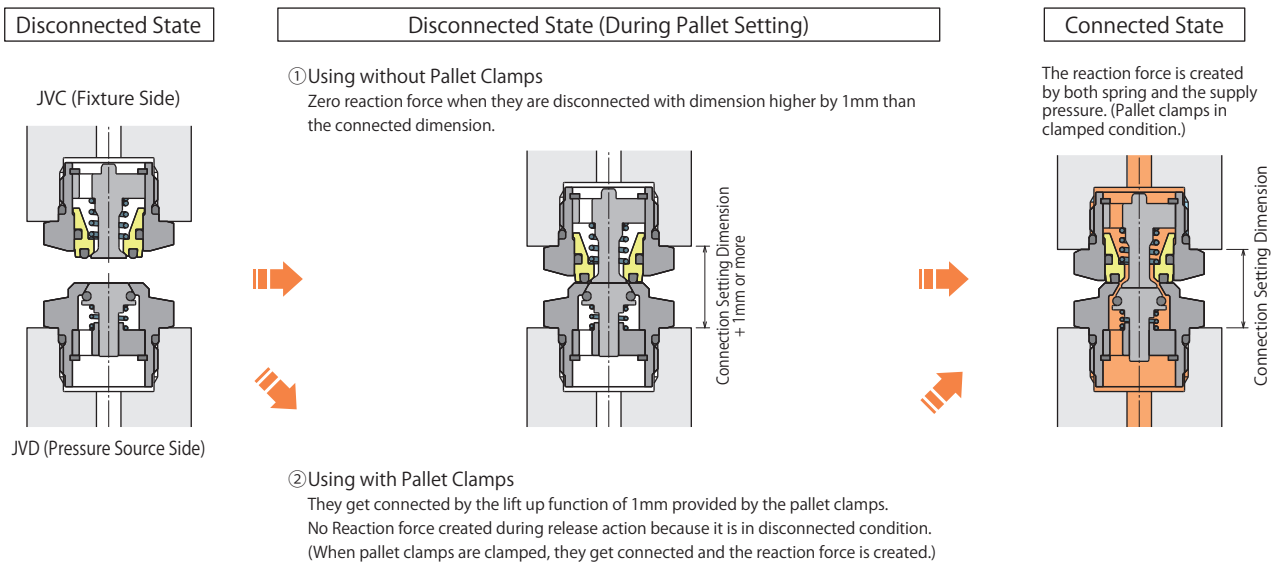
(Operating Pressure Range: lower than 7MPa)



Feature

It is suitable for connecting and disconnecting the hydraulic circuit on changeover of fixture pallets and tombstones. It can be used easily together with pallet clamps (VS/WVS) and no reaction force is found when setting the pallet together with pallet clamp.

Action Description



Model No. Indication

JV **D** **020** **0** - **W** - **S** **B10**

1 2 3 4 5

1 Style

- C** : O-ring side of Connection Surface (Fixture Side)
D : Metal Side of Connection Surface (Pressure Source Side)

2 Design No.

0 : Product Number

3 Material

W : Stainless Steel, Brass, NBR

4 Accommodate Clamp Model

Blank : **1** C selected

S : **1** D selected and used together with VS, WVS or without pallet clamps

T : **1** D selected and used together with VT

※ Please contact us when you select T

5 Pallet Clamp Block Model

Blank : **1** C selected

B02 : VSB020

B06 : VSB060

B10 : VSB100

J01 : —

J02 : VSJ020

J06 : VSJ060

J10 : VSJ100

1 D selected

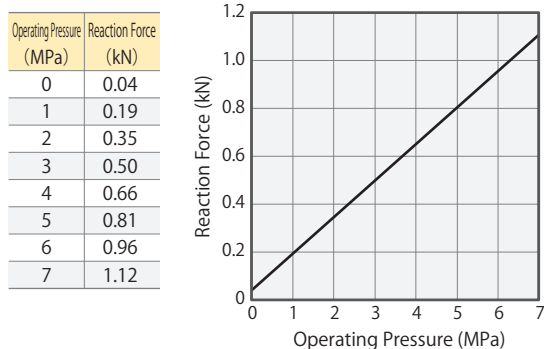
(In the case of not using together with
 palette clamps, please select model
 from connection setting dimension)

Specifications

Model No.	Fixture Side	JVC0200-W						
	Pressure Source Side	JVD0200 -W-SJ01	JVD0200 -W-SB02	JVD0200 -W-SJ02	JVD0200 -W-SB06	JVD0200 -W-SJ06	JVD0200 -W-SB10	JVD0200 -W-SJ10
Max. Operating Pressure	MPa	7.0						
Withstanding Pressure	MPa	10.5						
Min. Passage Area	mm ²	12.6						
Offset Tolerance	mm	±0.5						
Angular Deviation (Offset Tolerance)	DEG.	0.3						
Operating Temperature	°C	0 ~ 70						
Usable Fluid		General Hydraulic Fluid Equivalent to ISO VS 32·Air						
Reaction Force kN	Operating Pressure at 7 MPa	1.12						
	at 1 MPa	0.19						
	at P MPa	0.154 × P + 0.04						
Mass g	JVC	34						
	JVD	50	28	53	33	60	41	65
Accommodate	VS	—	VS0020 / VS0040		VS0060		VS0100	
Clamp Model	WVS	—	WVS0040		WVS0060		WVS0100	
Pallet Clamp Block Model	—	VSB020	VSJ020	VSB060	VSJ060	VSB100	VSJ100	

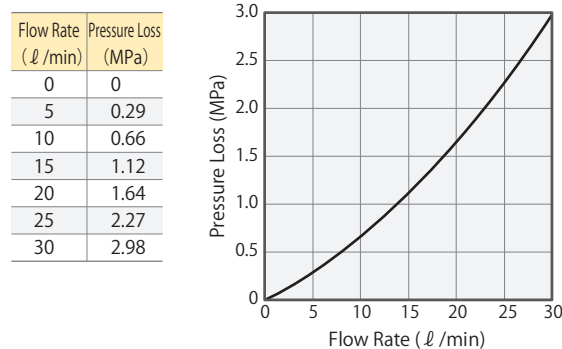
Supply Pressure-Reaction Force Graph

The graph shows the relationship between the reaction force and the supply pressure after the completion of connection of JVC/JVD.

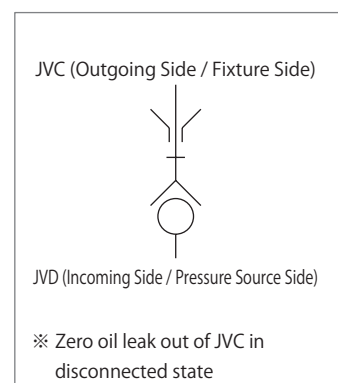


Flow Rate - Pressure Loss Characteristic Graph

The fluid used on this data is normal hydraulic oil corresponding to ISO-VG-32 (30~40°C).



Circuit Symbol

High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic UnitManual Operation
Accessories

Cautions / Others

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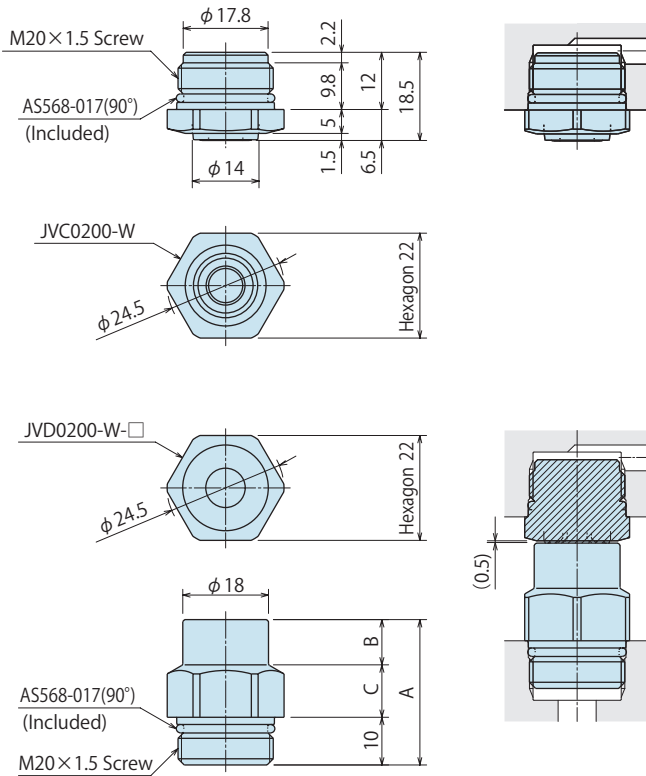
CB

CC

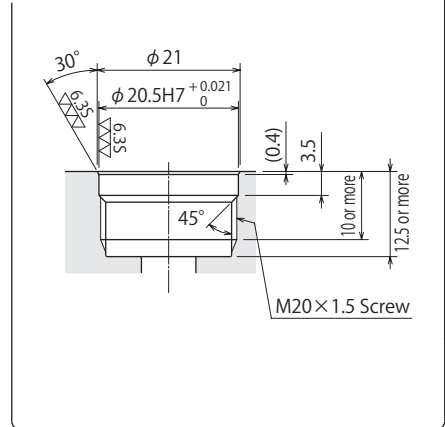
AB/AB-V

AC/AC-V

External Dimensions (JVC/JVD)



Through Hole Machining Drawing (JVC/JVD Common Items)



Model No.	Thread Size	Tightening Torque(N·m)
JV□0200-W-□	M20×1.5	25

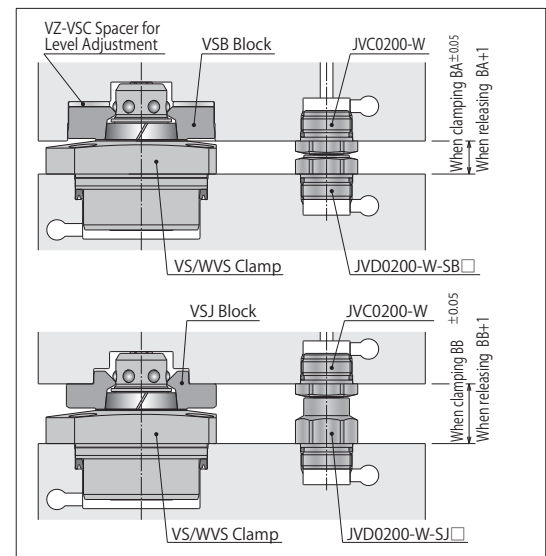
Dimensions (mm)

Model No. Fixture Side	JVC0200-W						
Model No. Pressure Source Side	JVD0200 -W-SJ01	JVD0200 -W-SB02	JVD0200 -W-SJ02	JVD0200 -W-SB06	JVD0200 -W-SJ06	JVD0200 -W-SB10	JVD0200 -W-SJ10
A	21.5	16	24.5	17.5	28	20	30.5
B	1	1	3.5	1	7	1	9.5
C	10.5	5	11	6.5	11	9	11
D	17	11.5	20	13	23.5	15.5	26
E	16.5	11	19.5	12.5	23	15	25.5

The Connected Condition Dimension Using the Pallet Clamps (mm)

A Combination Clamps Model	VS0020/VS0040 WVS0040	VS0060 WVS0060	VS0100 WVS0100
When VSB Block is used BA	11.5	13	15.5
When VSJ Block is used BB	20	23.5	26

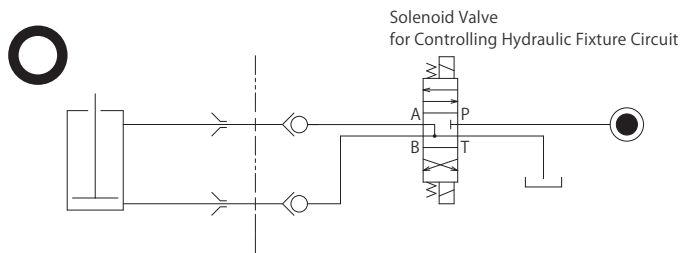
The Connected Condition Dimension when Used in Combination with Pallet Clamps



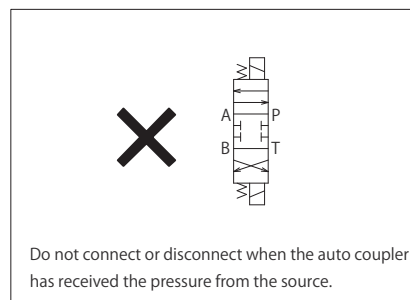
● Cautions (JVC/JVD)

- Do not connect or disconnect when the auto coupler has received the pressure from the source
(Please refer to Circuit Reference)
 - Drain out air within the circuit before use (The used fluid is oil)
 - Do not connect in the condition that foreign substances such as chips adhere on the connecting surfaces.
Completely remove the adhering chips or coolant by air blow etc.
 - Loading on a fixture side actuator in the separate condition may result in oil flowing out from the end of auto coupler.
 - If the allowed tolerance is exceeded, the damage to internal parts may occur.
(It is recommended to use a guide pin when using only a pallet clamp.)
 - It is recommended to use VS/WVS series as pallet clamp to ensure stabilized setting via 1mm lift stroke.
When the pallet clamps other than for corresponding devices are used together,
make the connection dimensions※1 of JVC/JVD at $D \pm 0.05$
or please consider the use of JNA/JNB, JNC/JND
 - The connection dimensions BA and BB vary when the collar for level adjustment (VZ-VS1) is used.
please make the connection dimensions※1 of JVC/JVD at $D \pm 0.05$
 - When pressing up to the connection limit, use the force higher than the reaction force and lower than 4.0kN
- ※1. With regards to tolerance connection dimensions, $D \pm 0.05$ indicates the tolerance when reaction force is zero from the auto joint during pallet setting (When the pallet clamps used together are released)
Otherwise, the connection dimensions can be $D_{-0.4}^0$.

● Circuit Reference



Apply a three-position (center position, ABT connection) solenoid valve for controlling the hydraulic or air fixture circuit.

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CS

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CC

AB/AB-V

AC/AC-V

Auto Coupler

Model JVE/JVF

For Air/Coolant

(Operating Pressure Range: lower than 1MPa)

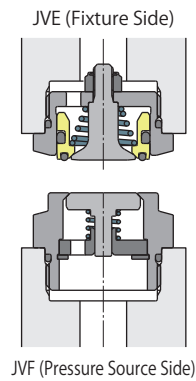


Feature

It is suitable for connecting and disconnecting the flow circuit on changeover of fixture pallets and tombstones. It can be used easily together with pallet clamps (VS/WVS) and no reaction force is found when setting the pallet together with pallet clamp.

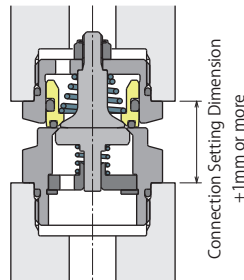
Action Description

Disconnected State



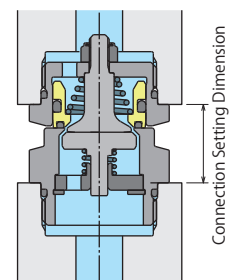
Disconnected State (During Pallet Setting)

- ① Using without Pallet Clamps
Zero reaction force when they are disconnected with dimension higher by 1mm than the connected dimension.

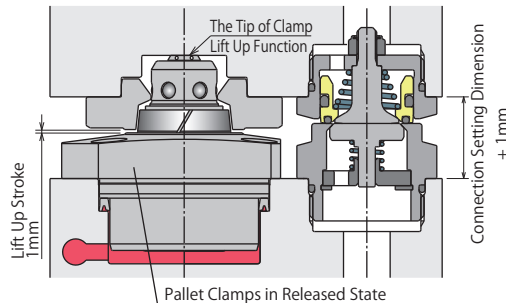


Connected State

The reaction force is created by both spring and the supply pressure. (Pallet clamps in clamped condition.)



- ② Using with Pallet Clamps
They get connected by the lift up function of 1mm provided by the pallet clamps. No Reaction force created during release action because it is in disconnected condition. (When pallet clamps are clamped, they get connected and the reaction force is created.)



Model No. Indication

JV **F** **030** **0** - **H** - **S** **B10**

1 2 3 4 5

1 Style

- E** : O-ring side of Connection Surface (Fixture Side)
F : Metal Side of Connection Surface (Pressure Source Side)

2 Design No.

0 : Product Number

3 Material

H : Stainless Steel, Brass, Fluor Rubber

4 Accommodate Clamp Model

- Blank** : 1 E selected
S : 1 F selected and used together with VS, WVS or without pallet clamps
T : 1 F selected and used together with VT
 ※ Please contact us when you select T

5 Pallet Clamp Block Model

- Blank** : 1 E selected
B02 : VSB020
B06 : VSB060
B10 : VSB100
J01 : —
J02 : VSJ020
J06 : VSJ060
J10 : VSJ100

1 F selected
 (In the case of not using together with
 palette clamps, please select model
 from connection setting dimension)

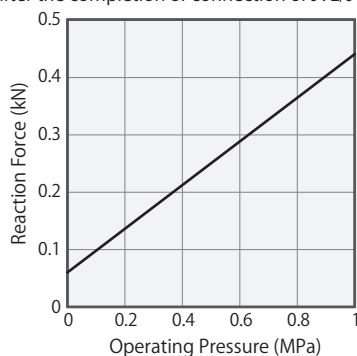
Specifications

Model No.	Fixture side	JVE0300-H						
	Pressure Source Side	JVF0300 -H-SJ01	JVF0300 -H-SB02	JVF0300 -H-SJ02	JVF0300 -H-SB06	JVF0300 -H-SJ06	JVF0300 -H-SB10	JVF0300 -H-SJ10
Max. Operating Pressure	MPa	1.0						
Withstanding Pressure	MPa	1.5						
Min. Passage Area	mm ²	29.0						
Offset Tolerance	mm	±0.5						
Angular Deviation (Offset Tolerance)	DEG.	0.3						
Operating Temperature	°C	0 ~ 70						
Usable Fluid		Coolant or Air						
Reaction Force kN	Operating Pressure							
	at 1.0 MPa	0.44						
	at 0.4 MPa	0.21						
	at P MPa	0.380 × P + 0.06						
Mass g	JVE	61						
	JVF	90	49	96	58	111	73	122
Accommodate	VS	—	VS0020 / VS0040		VS0060		VS0100	
Clamp Model	WVS	—	WVS0040		WVS0060		WVS0100	
Pallet Clamp Block Model	—	VSB020	VSJ020	VSB060	VSJ060	VSB100	VSJ100	

Supply Pressure-Reaction Force Graph

The graph shows the relationship between the reaction force and the supply pressure after the completion of connection of JVE/JVF

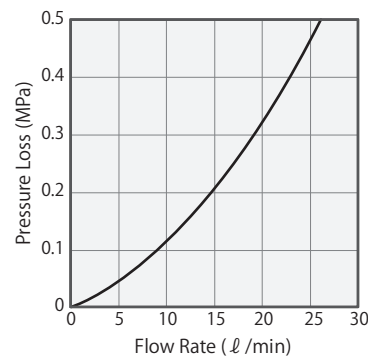
Operating Pressure (MPa)	Reaction Force (kN)
0	0.06
0.1	0.10
0.2	0.14
0.3	0.17
0.4	0.21
0.5	0.25
0.6	0.29
0.7	0.33
0.8	0.36
0.9	0.40
1.0	0.44



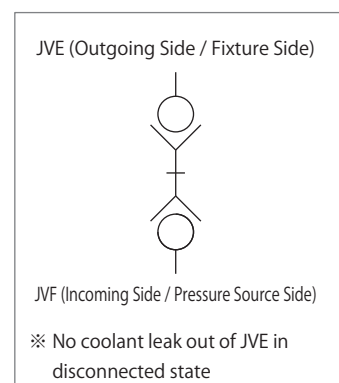
Flow Rate - Pressure Loss Characteristic Graph

Fluid to be used on this data is water

Flow Rate (ℓ/min)	Pressure Loss (MPa)
0	0
5	0.05
10	0.12
15	0.21
20	0.33
25	0.48



Circuit Symbol

High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic UnitManual Operation
Accessories

Cautions / Others

Air
Sequence Valve

BWD

Hydraulic
Non-Leak Coupler

BGA/BGB

BGC/BGD

BGP/BGS

BBP/BBS

BNP/BNS

BJP/BJS

BFP/BFS

Auto Coupler

JVA/JVB

JVC/JVD

JVE/JVF

JNA/JNB

JNC/JND

JLP/JLS

Rotary Joint

JR

Hydraulic Valve

BK

BEQ

BT

BLS/BLG

BLB

JSS/JS

JKA/JKB

BM/BMG

AU/AU-M

BU

BP/JPB

BX

BEP/BSP

BH

BC

Air
Hydraulic Unit

CV

CK

CP

CS

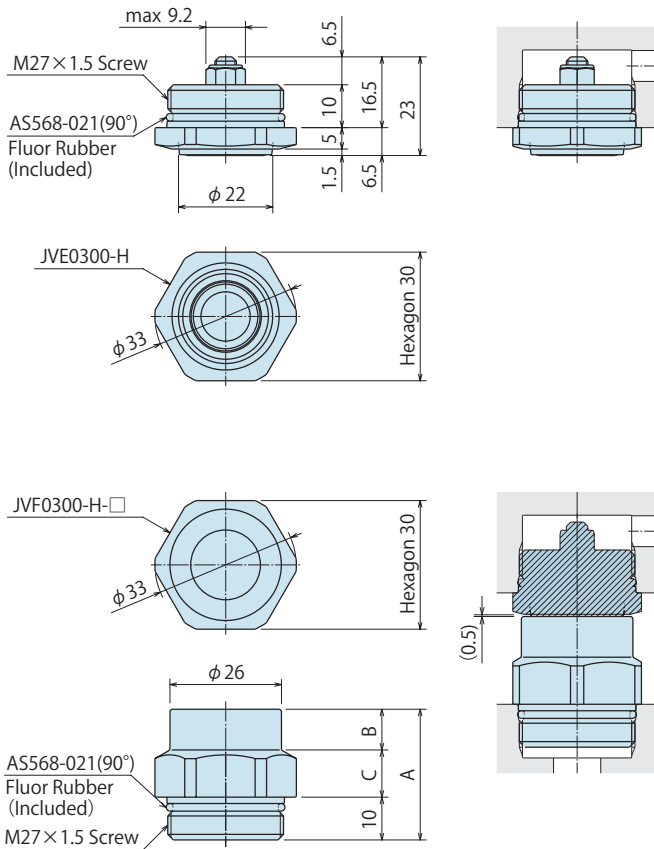
CB

CC

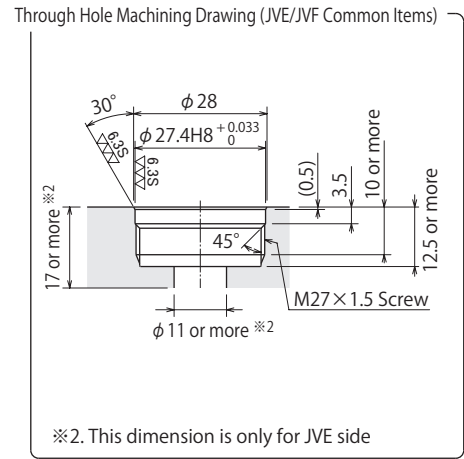
AB/AB-V

AC/AC-V

External Dimensions (JVE/JVF)



Connection Setting Dimension D±0.05
(When the pallet clamps are clamped) ※1
(Reference Value: Connection Setting Dimension (Single Set Use) E)

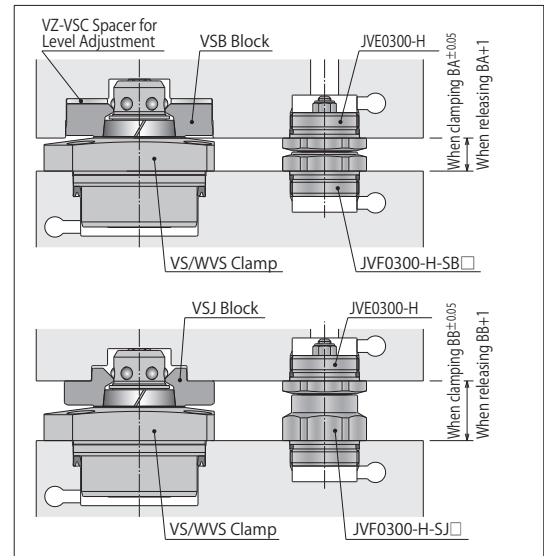


Model No.	Thread Size	Tightening Torque(N·m)
JV□0300-H-□	M27×1.5	40

Dimensions		JVE0300-H						(mm)
Model No. Fixture Side	Pressure Source Side	JVF0300 -H-SJ01	JVF0300 -H-SB02	JVF0300 -H-SJ02	JVF0300 -H-SB06	JVF0300 -H-SJ06	JVF0300 -H-SB10	JVF0300 -H-SJ10
A		21.5	16	24.5	17.5	28	20	30.5
B		1	1	3.5	1	7	1	9.5
C		10.5	5	11	6.5	11	9	11
D		17	11.5	20	13	23.5	15.5	26
E		16.5	11	19.5	12.5	23	15	25.5

The Connected Condition Dimension Using the Pallet Clamps		(mm)		
A combination clamps model	VS0020/VS0040 WVS0040	VS0060 WVS0060	VS0100 WVS0100	
When VSB Block is used	BA	11.5	13	15.5
When VSJ Block is used	BB	20	23.5	26

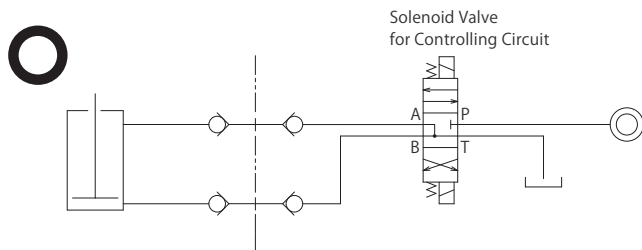
The Connected Condition Dimension when Used in Combination with Pallet Clamps



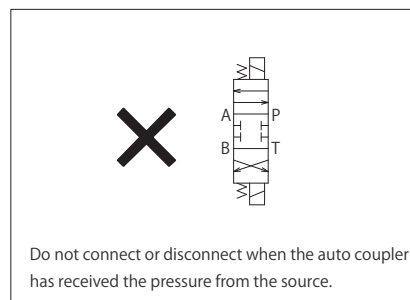
● Cautions (JVE/JVF)

1. The coolant should be supplied after the connection completion (Please refer to the Circuit Reference).
 2. JVF has a check valve made of a metal seal however, there is a chance of little leakage if it is pressurized during separation
 3. Do not connect in the condition that foreign substances such as chips adhere on the connecting surfaces.
Completely remove the adhering chips or coolant by air blow etc.
 4. Loading on a fixture side actuator in the separate condition may result in oil flowing out from the end of auto coupler.
 5. If the allowed tolerance is exceeded, the damage to internal parts may occur.
(It is recommended to use a guide pin when using only a pallet clamp.)
 6. It is recommended to use VS/WVS series as pallet clamp to ensure stabilized setting via 1mm lift stroke.
When the pallet clamps other than for corresponding devices are used together,
make the connection dimensions ※1 of JVE/JVF at $D \pm 0.05$ or please consider the use of JNA/JNB, JNC/JND
 7. The connection dimensions BA and BB vary when the collar for level adjustment (VZ-VS1) is used.
please make the connection dimensions ※1 of JVE/JVF at $D \pm 0.05$
 8. When pressing up to the connection limit, use the force higher than the reaction force and lower than 4.0kN
- ※1. With regards to tolerance connection dimensions, $D \pm 0.05$ indicates the tolerance when reaction force is zero from the auto joint during pallet setting (When the pallet clamps used together are released)
Otherwise, the connection dimensions can be $D_{-0.4}^0$.

● Circuit Reference



Apply a three-position (center position, ABT connection) solenoid valve for controlling the air or coolant fixture circuit.

High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic UnitManual Operation
Accessories

Cautions / Others

Air
Sequence Valve

BWD

Hydraulic
Non-Leak Coupler

BGA/BGB

BGC/BGD

BGP/BGS

BBP/BBS

BNP/BNS

BJP/BJS

BFP/BFS

Auto Coupler

JVA/JVB

JVC/JVD

JVE/JVF

JNA/JNB

JNC/JND

JLP/JLS

Rotary Joint

JR

Hydraulic Valve

BK

BEQ

BT

BLS/BLG

BLB

JSS/JS

JKA/JKB

BM/BMG

AU/AU-M

BU

BP/JPB

BX

BEP/BSP

BH

BC

Air
Hydraulic Unit

CV

CK

CP

CS

CB

CC

AB/AB-V

AC/AC-V

Auto Coupler

Model JNA/JNB

For Air

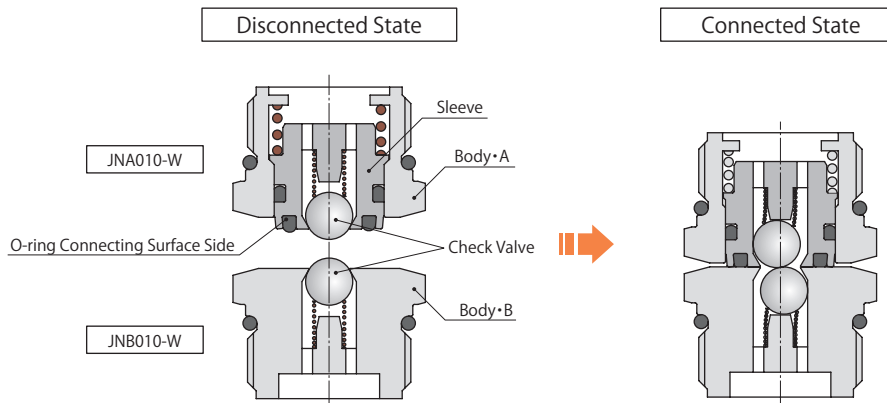
(Operating Pressure Range: lower than 1MPa)



Feature

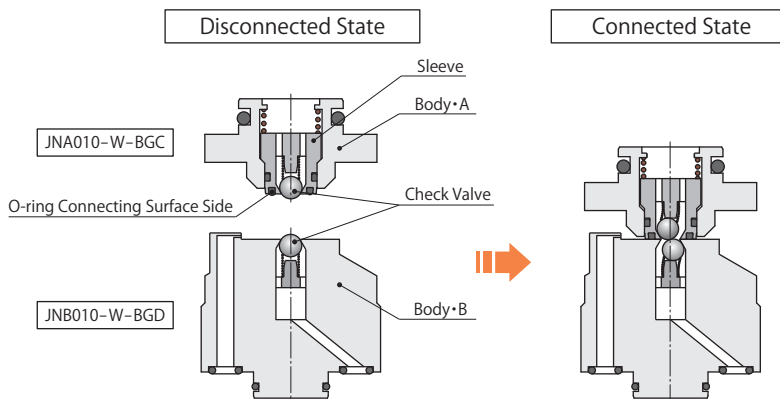
It is designed to prevent cutting chips and coolant from entering check valve during separation. Compactly designed manifold model and BGC/BGD combination model are available.

Action Description (Manifold Model)

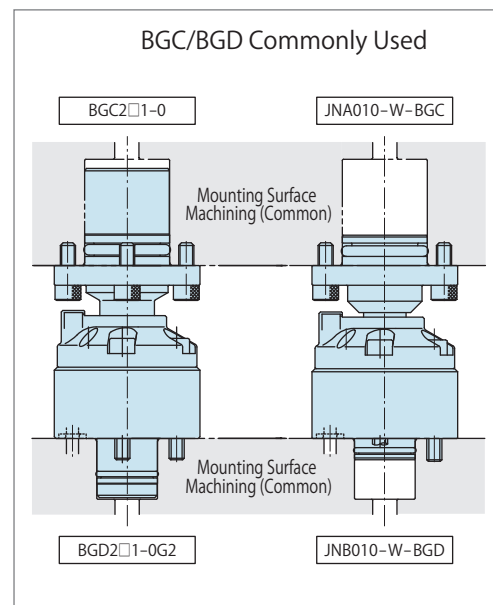


- ① When JNA closely contacts with JNB, one check valve presses the other to make the valves open.
- ② At this time, the O-ring on the end surface of the sleeve prevents external air leakage.

Action Description (BGC/BGD Combination Model)



- ① When JNA closely contacts with JNB, one check valve presses the other to make the valves open.
- ② At this time, the O-ring on the end surface of the sleeve prevents external air leakage.



Model No. Indication



1 Style

- A** : O-ring side of Connection Surface (Fixture Side)
B : Metal Side of Connection Surface (Pressure Source Side)

2 Design No.

- 0** : Product Number

3 Material

- W** : Stainless Steel, Brass, NBR

4 Combination Coupler Model No.

Blank : Manifold Model (Standard)

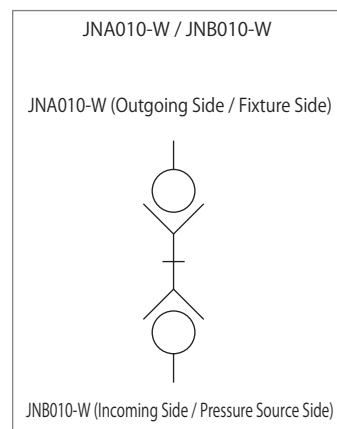
BGC : 1 In the case that when A is selected and BGC is used together

BGD : 1 In the case that when B is selected and BGD is used together

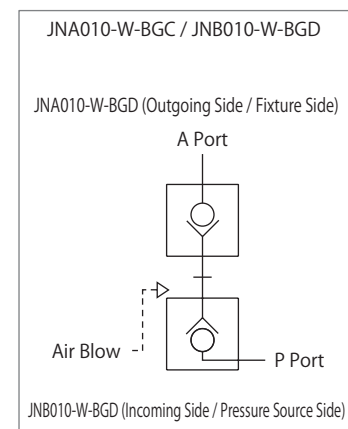
Specifications

Model No.	Fixture Side	JNA010-W□
	Pressure Source Side	JNB010-W□
Max. Operating Pressure	MPa	1.0
Withstanding Pressure	MPa	1.5
Min. Passage Area	mm ²	8.8 (At eccentricity: 7.4)
Offset Tolerance	mm	±1
Angular Deviation (Offset Tolerance)	DEG.	0.3
Operating Temperature	°C	0 ~ 70
Usable Fluid		Air
Reaction Force kN	Operating Pressure at 0.5 MPa	0.12
	at 0.2 MPa	0.07
	at P MPa	$0.154 \times P + 0.04$
Mass g	JNA010-W	35
	JNB010-W	40
	JNA010-W-BGC	150
	JNB010-W-BGD	450

Circuit Symbol (Manifold Model)



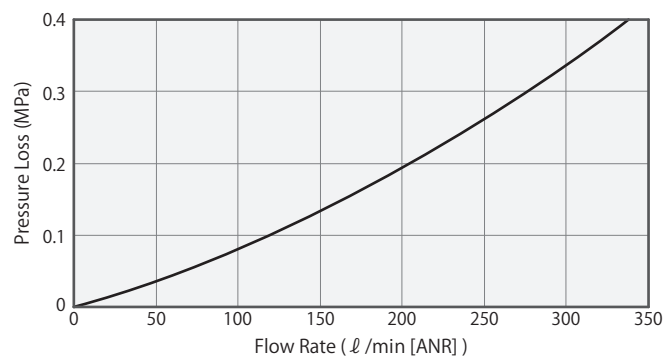
Circuit Symbol (BGC/BGD Combination Model)



Flow Rate - Pressure Loss Characteristic Graph

Fluid to be used on this data is air (temperature is 25°C), min. passage area is 8.8mm².

Flow Rate (ℓ/min [ANR])	Pressure Loss (MPa)
0	0
85	0.05
125	0.10
165	0.15
200	0.20
235	0.25
270	0.30
305	0.35
345	0.40



High-Power Series

Pneumatic Series

Hydraulic Series

Valve / Coupler Hydraulic Unit

Manual Operation Accessories

Cautions / Others

Air Sequence Valve

BWD

Hydraulic Non-Leak Coupler

BGA/BGB

BGC/BGD

BGP/BGS

BBP/BBS

BNP/BNS

BJP/BJS

BFP/BFS

Auto Coupler

JVA/JVB

JVC/JVD

JVE/JVF

JNA/JNB

JNC/JND

JLP/JLS

Rotary Joint

JR

Hydraulic Valve

BK

BEQ

BT

BLS/BLG

BLB

JSS/JS

JKA/JKB

BM/BMG

AU/AU-M

BU

BP/JPB

BX

BEP/BSP

BH

BC

Air

Hydraulic Unit

CV

CK

CP

CS

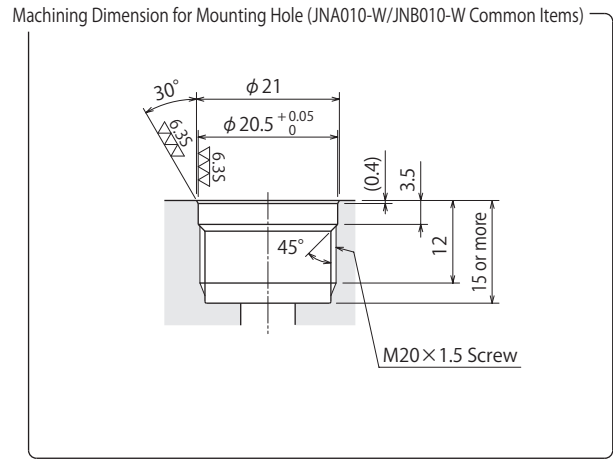
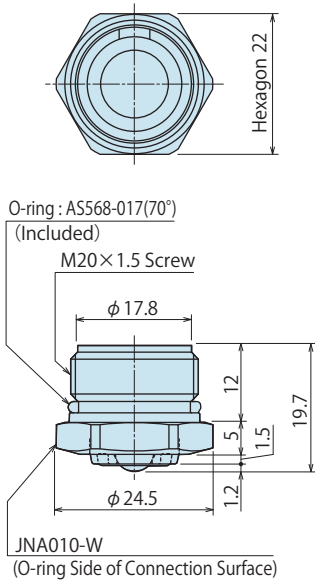
CB

CC

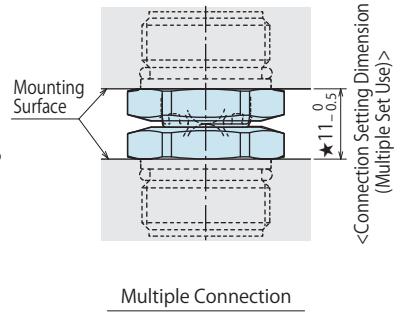
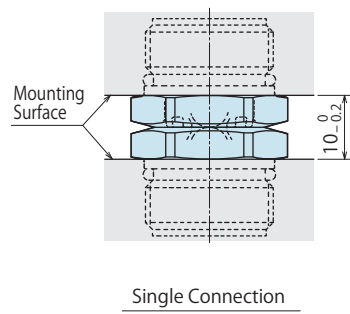
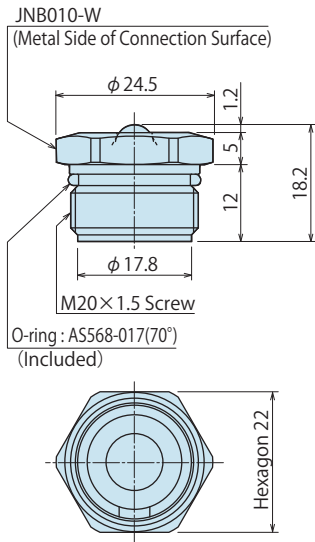
AB/AB-V

AC/AC-V

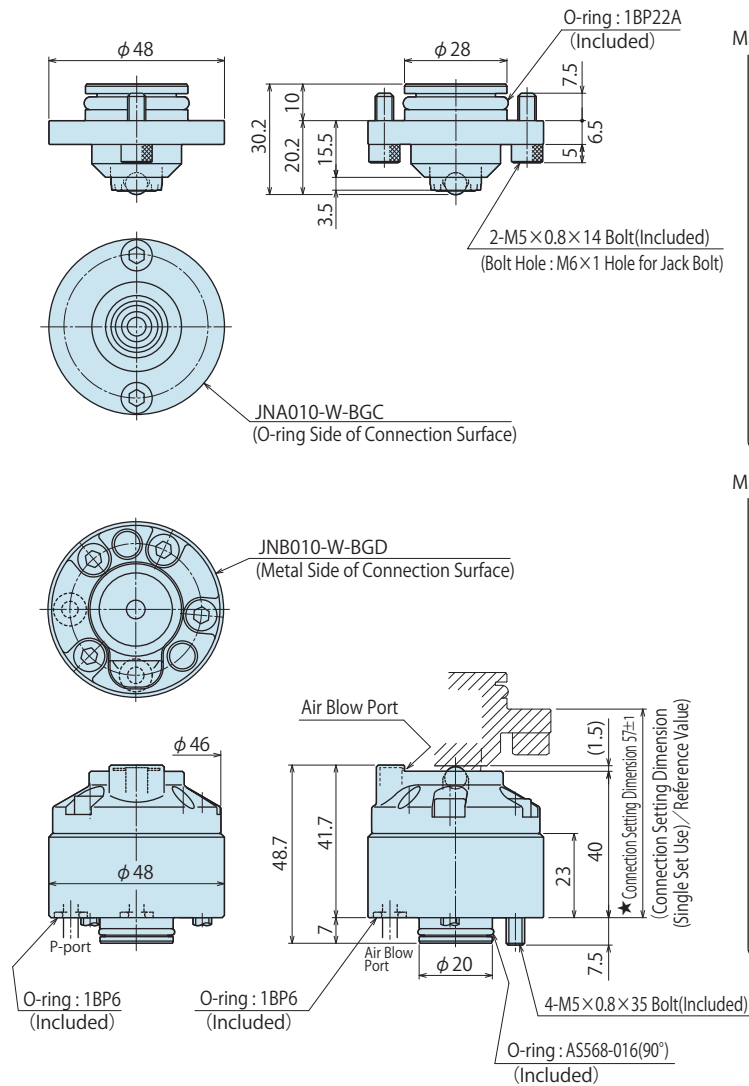
External Dimensions (JNA010-W/JNB010-W)



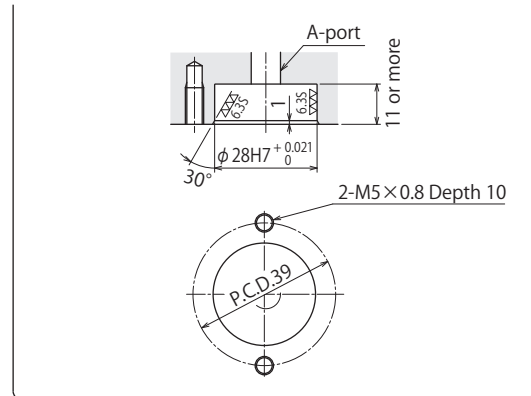
Model No.	Thread Size	Tightening Torque(N·m)
JN□010-W	M20×1.5	25



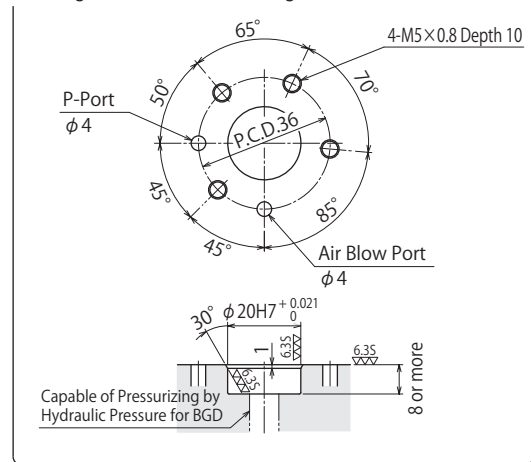
External Dimensions (JNA010-W-BGC/JNB010-W-BGD)



Machining Dimension for Mounting Hole (JNA010-W-BGC)



Machining Dimension for Mounting Hole (JNB010-W-BGD)



Model No.	Mounting Bolt	Tightening Torque(N·m)
JN□010-W-BG□	M5×0.8	6.3

Cautions (JNA/JNB)

<Cautions (common)>

- Pressurization in the separate condition may result in a small amount of leakage due to metal seal construction of check valves.
- When one side is pressurized in the separate condition and if connection work is attempted, air is discharged outside before the O-ring seal surface opening the check valve.
- Do not connect in the condition that foreign substances such as chips adhere on the connecting surfaces.
- When an additional connection limit stopper is present or multiple sets of the coupler are used, apply connection setting dimensions ★ shown in the drawing.
- When pressing the coupler to the connection limit, the pressing force should be between the reaction force and 1.0 kN (JNA010-W/JNB010-W), between the reaction force and 2.0 kN (JNA010-W-BGC/JNA010-W-BGD)

<Caution only for JNA010-W/JNB010-W>

- When chips or coolant adhere on the connecting surface, perform connection after providing a cover or completely removing them by air blow etc.

<Caution only for JNA010-W-BGC/JNB010-W-BGD>

- Do not attempt to connect in the condition that chips or coolant adhere on the connecting end surface.

High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic UnitManual Operation
Accessories

Cautions / Others

Air
Sequence Valve

BWD

Hydraulic
Non-Leak Coupler

BGA/BGB

BGC/BGD

BGP/BGS

BBP/BBS

BNP/BNS

BJP/BJS

BFP/BFS

Auto Coupler

JVA/JVB

JVC/JVD

JVE/JVF

JNA/JNB

JNC/JND

JLP/JLS

Rotary Joint

JR

Hydraulic Valve

BK

BEQ

BT

BLS/BLG

BLB

JSS/JS

JKA/JKB

BM/BMG

AU/AU-M

BU

BP/JPB

BX

BEP/BSP

BH

BC

Air
Hydraulic Unit

CV

CK

CP

CS

CB

CC

AB/AB-V

AC/AC-V

Auto Coupler

Model JNC/JND

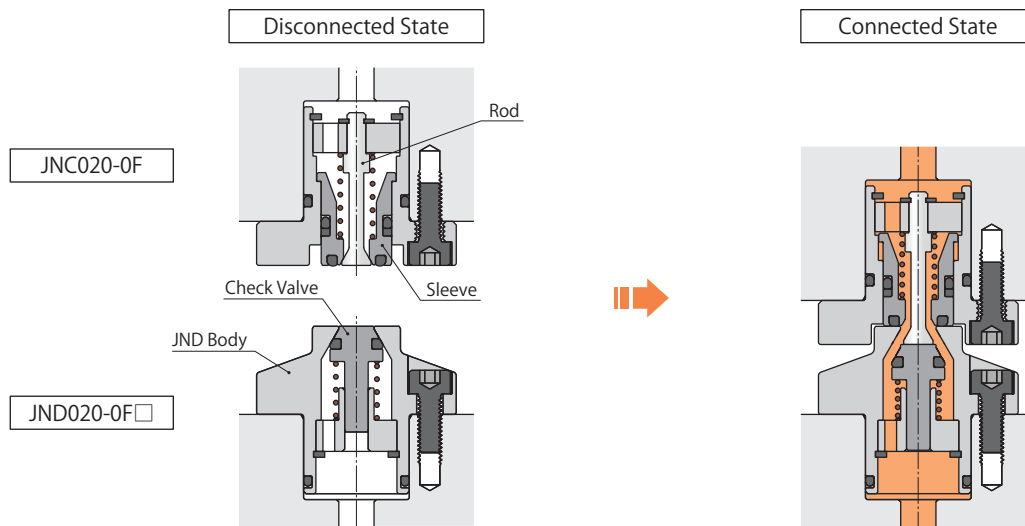
For Oil/Air
(Operating Pressure Range:
lower than 25MPa)



Feature

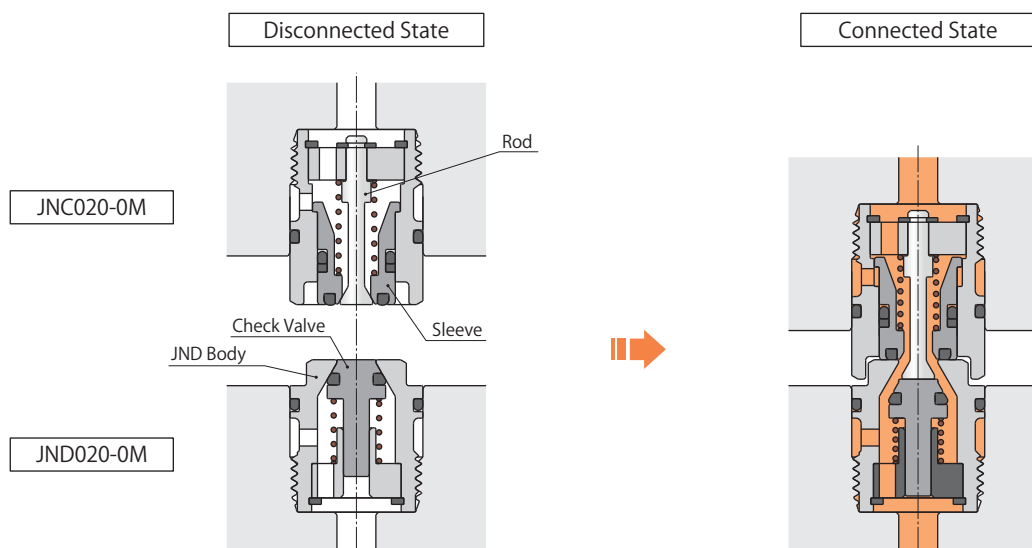
Hydraulic and air auto coupler suitable for attaching/detaching to fluid circuit when replacing fixture pallets or tombstones. Compactly designed manifold option and flange option commonly used with pallet clamp are available.

Action Description (Flange Option)



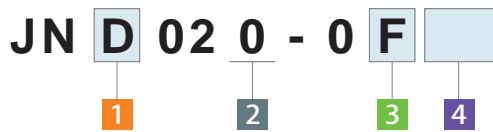
When JNC is closely in contact with JND, the body presses against the sleeve and the rod presses against check valve then the valve will open.

Action Description (Manifold Option)



When JNC is closely in contact with JND, the body presses against the sleeve and the rod presses against check valve then the valve will open.

Model No. Indication



1 Style

- C** : O-ring side of Connection Surface (Fixture Side)
D : Metal Side of Connection Surface (Pressure Source Side)

2 Design No.

- 0** : Product Number

3 Mounting Method

- F** : Flange Option (Easy to use together with pallet clamps)
M : Manifold Option

4 Spacer Thickness ※ Only JND flange option is assigned.

Blank : No Spacer (Standard)

05 : T = 0.5mm

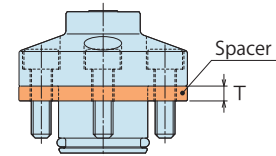
15 : T = 1.5mm

40 : T = 4.0mm

65 : T = 6.5mm

80 : T = 8.0mm

0D : Spacer Block (Refer to the external dimension.) ※1



Notes

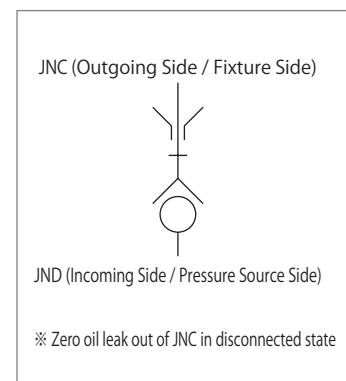
※1. 0D : please refer to external dimension about spacer thickness.

1. Spacer thickness varies depending on the pallet clamps used with this joint.

Specifications

Model No.	Fixture Side	JNC020-0F	JNC020-0M	
	Pressure Source Side	JND020-0F□	JND020-0M	
Max. Operating Pressure	MPa	25.0		
Withstanding Pressure	MPa	37.5		
Min. Passage Area	mm ²	10.3		
Offset Tolerance	mm	±0.5	±0.4	
Angular Deviation (Offset Tolerance)	DEG.	0.3		
Operating Temperature	°C	0 ~ 70		
Usable Fluid		General Hydraulic Oil Equivalent to ISO VS 32•Air		
Reaction Force	kN	Operating Pressure	at 25 MPa	2.86
			at 7 MPa	0.82
			at P MPa	$0.113 \times P + 0.03$
Mass	kg	JNC	0.07	0.05
		JND	Refer to External Dimensions	0.05

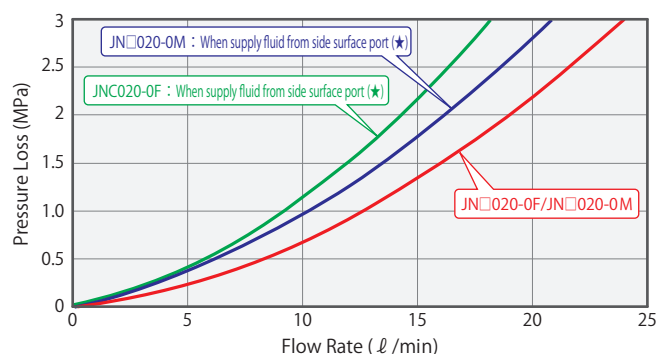
Circuit Symbol



Flow Rate - Pressure Loss Characteristic Graph

The fluid used on this data is normal hydraulic oil corresponding to ISO-VG-32 (30~40°C).

Pressure Loss (MPa)	Flow Rate (ℓ/min)			
	JN□020-0F	When supply fluid from side surface port (★)		
		JN□020-0M	JN□020-0F	JNC020-0M
0	0	0	0	
0.5	8.5	5.6	6.5	
1.0	12.6	9.2	10.2	
1.5	15.8	12.0	13.5	
2.0	19.2	14.3	16.0	
2.5	21.5	16.5	18.5	
3.0	24.0	18.2	21.0	



Note 1. Please see the external dimension if you need the information of side surface port (★).

High-Power Series

Pneumatic Series

Hydraulic Series

Valve / Coupler Hydraulic Unit

Manual Operation Accessories

Cautions / Others

Air Sequence Valve

BWD

Hydraulic Non-Leak Coupler

BGA/BGB

BGC/BGD

BGP/BGS

BBP/BBS

BNP/BNS

BJP/BJS

BFP/BFS

Auto Coupler

JVA/JVB

JVC/JVD

JVE/JVF

JNA/JNB

JNC/JND

JLP/JLS

Rotary Joint

JR

Hydraulic Valve

BK

BEQ

BT

BLS/BLG

BLB

JSS/JS

JKA/JKB

BM/BMG

AU/AU-M

BU

BP/JPB

BX

BEP/BSP

BH

BC

Air Hydraulic Unit

CV

CK

CP

CS

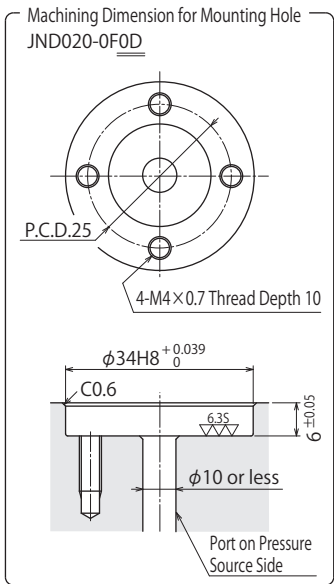
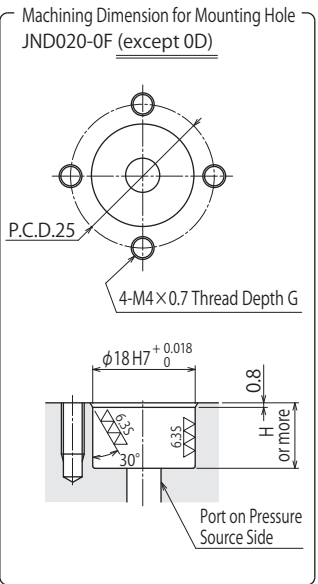
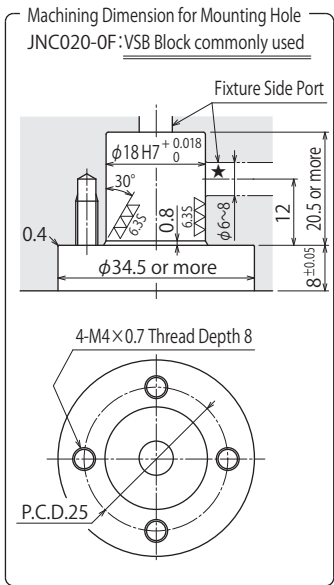
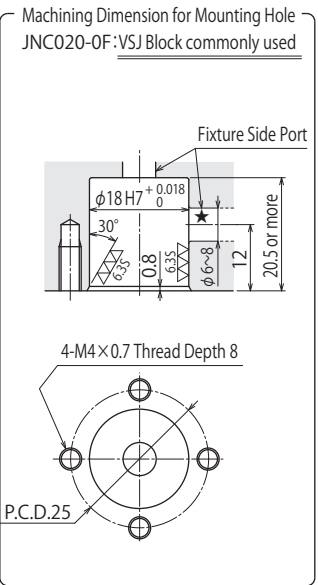
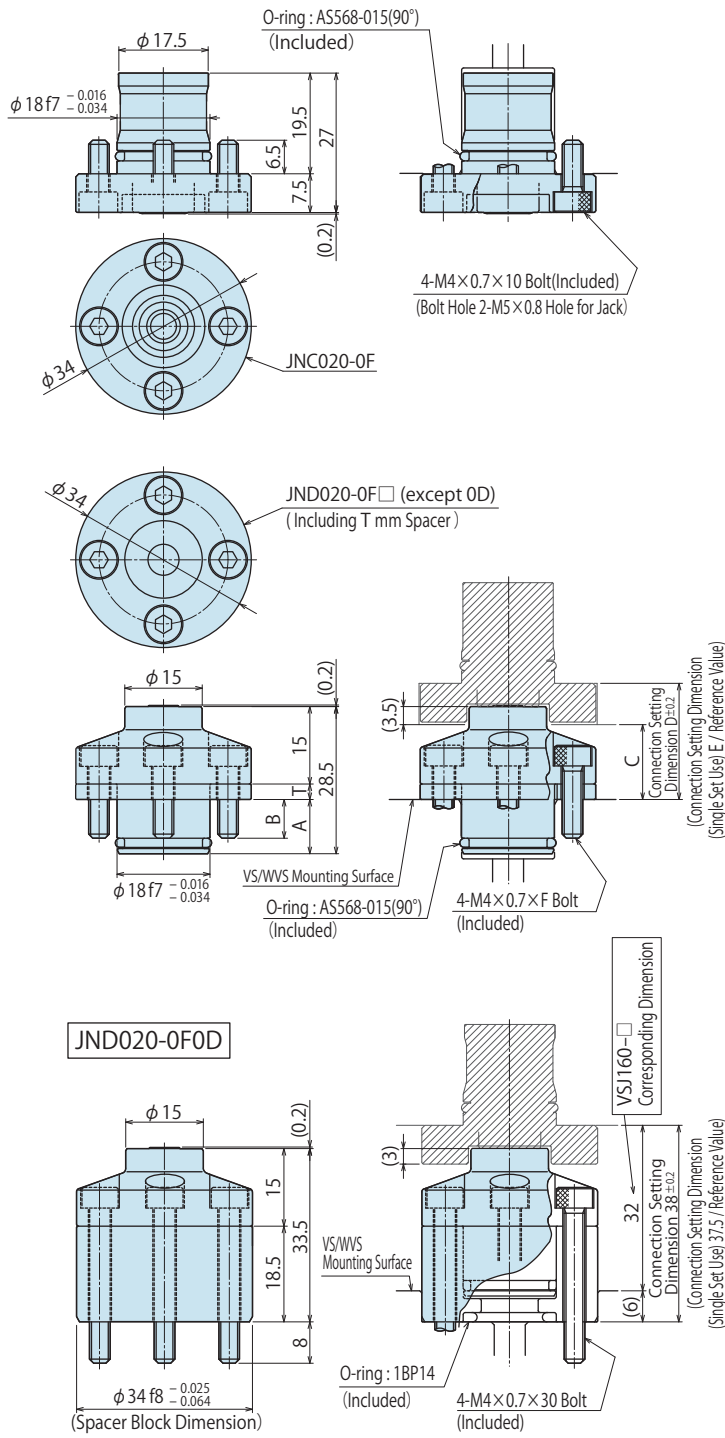
CB

CC

AB/AB-V

AC/AC-V

External Dimensions (JNC020-0F/JND020-0F□)

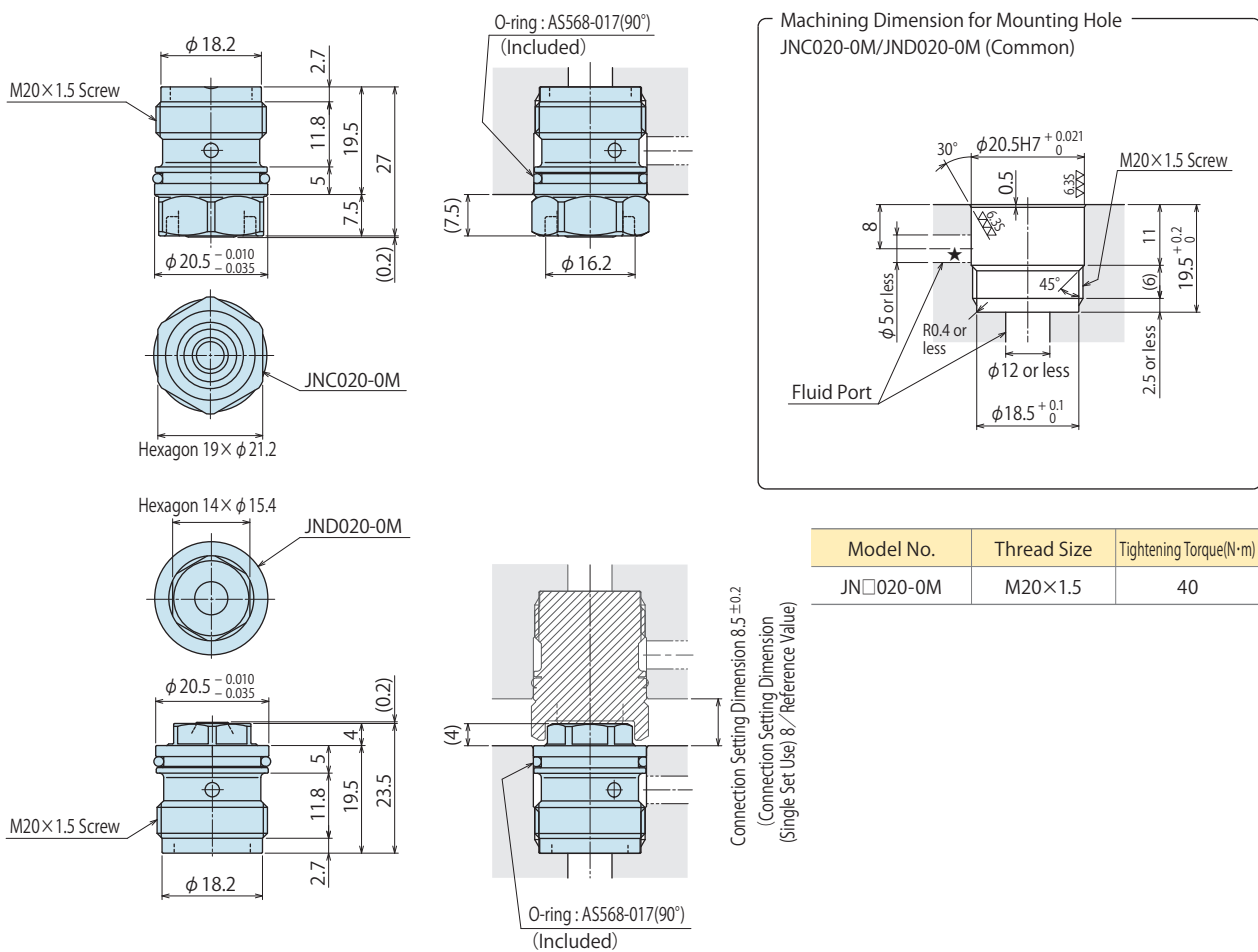


Model No.	Mounting Bolt	Tightening Torque(N·m)
JN□020-0F□	M4×0.7	3

Dimensions (Spacer Thickness Selection Chart)

JND Model		JND020-0F	JND020-0F05	JND020-0F15	JND020-0F40	JND020-0F65	JND020-0F80	JND020-0F0D
Pallet Clamp Model	VS	VS0020/VS0040		VS0060	VS0100		VS0160	
	WVS	WVS0040		WVS0060	WVS0100		WVS0160	
Pallet Clamp Block Model	VSB	VSB020	-	VSB060	-	VSB100	-	VSB160
	VSJ	-	VSJ020	-	VSJ060	-	VSJ100	-
T		0 (No spacer)	0.5	1.5	4	6.5	8	Refer to the Drawing Above
A		13.5	13	12	9.5	7	5.5	
B		6.5	6	7	6.5	6	8.5	
C		11.5	-	13	-	15.5	19.5	
D		19.5	20	21	23.5	26	27.5	
E		19	19.5	20.5	23	25.5	27	
F		10	10	12	14	16	20	
G		8	8	9	8	8	10	
H		14.5	14	13	10.5	8	6.5	
Mass	kg	0.08	0.08	0.09	0.11	0.12	0.13	0.17

External Dimensions (JNC020-0M/JND020-0M)



Cautions (JNC/JND)

<Cautions (Common)>

- Do not connect or disconnect in the pressurized (pressure remaining) condition.
- Perform air bleeding of the circuit sufficiently prior to operation. (when using hydraulic pressure)
- Do not connect in the condition that foreign substances such as chips adhere on the connecting surfaces.
(Completely remove the adhering chips or coolant by air blow etc.)
- During the connection process, note that maximum 0.03 kN of spring force acts even if circuit pressure is zero.
- Loading on a jig side actuator in the separate condition may result in oil flowing out from the end of JNC. (when using hydraulic pressure)
- When pressing up to the connection limit,
use the force higher than reaction force and lower than 5.0kN for JN□020-0F and higher than reaction force and lower than 4.0kN for JN□020-0M
- When the fixture side port is with ★mark, flow characteristics are deteriorated. (Please refer to the [Flow rate - pressure loss characteristic graph].)

<JNC020-0F/JND020-0F□ : Cautions for Flange Option >

- If using without pallet clamps, select the standard JNC020-0F/JND020-0F.
- When supplying hydraulic pressure in the connected condition, keep the pallet clamps in the locked condition (when VS/WVS is used together).
- If you will commonly be using VSB and VSJ, contact us.

<JNC020-0M/JND020-0M : Caution for Manifold Option >

- The area of hexagonal head for tightening is small because of compact design. Surely apply a tool to the hexagonal head.

High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic UnitManual Operation
Accessories

Cautions / Others

Air
Sequence Valve

BWD

Hydraulic
Non-Leak Coupler

BGA/BGB

BGC/BGD

BGP/BGS

BBP/BBS

BNP/BNS

BJP/BSJ

BFP/BFS

Auto Coupler

JVA/JVB

JVC/JVD

JVE/JVF

JNA/JNB

JNC/JND

JLP/JLS

Rotary Joint

JR

Hydraulic Valve

BK

BEQ

BT

BLS/BLG

BLB

JSS/JS

JKA/JKB

BM/BMG

AU/AU-M

BU

BP/JPB

BX

BEP/BSP

BH

BC

Air
Hydraulic Unit

CV

CK

CP

CS

CB

CC

AB/AB-V

AC/AC-V

Auto Coupler

Model JLP/JLS

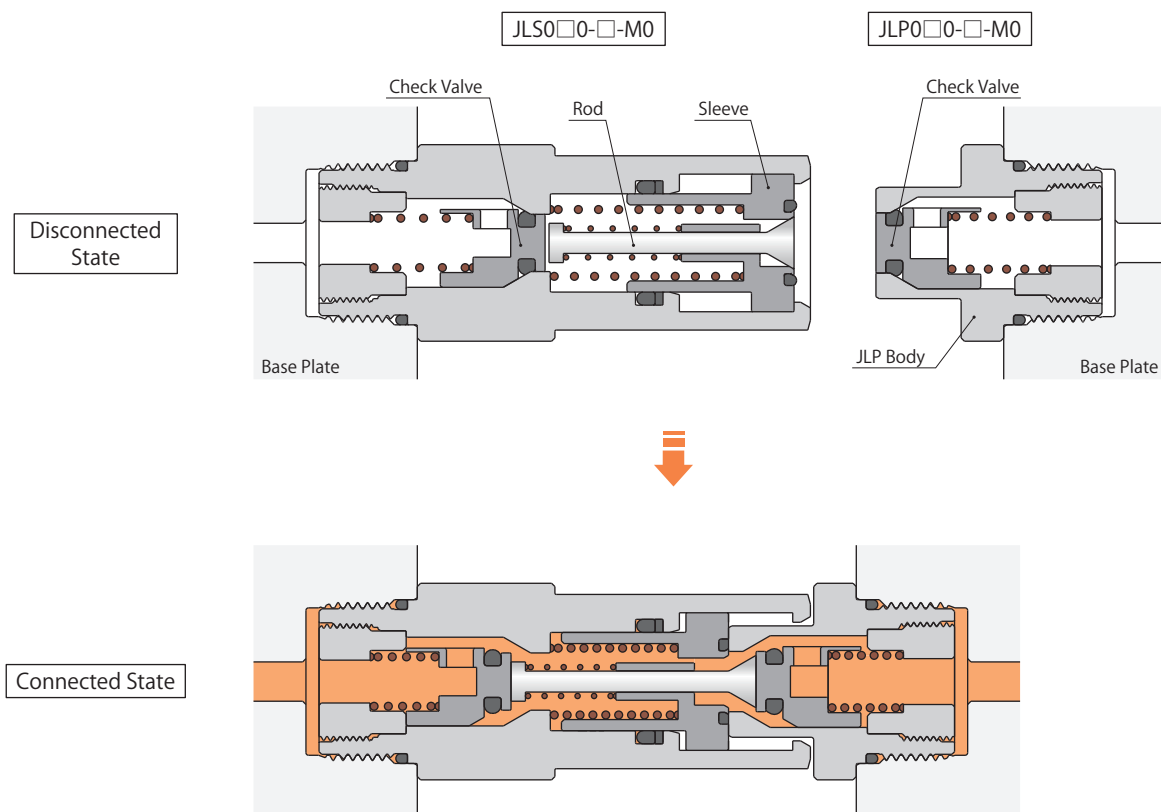
For Oil/Air/Coolant
(Operating Pressure Range:
lower than 3.5MPa/lower than 25MPa)



Feature

Auto joint with check valve is to be used in an air circuit or for coolant and is suitable for automation.

Action Description



When JLS is closely in contact with JLP, the body presses against the sleeve and the rod presses against check valve then the valve will open.

Model No. Indication

J L P 0 2 0 - W - M 0

1 2 3 4 5

1 Style

- P** : Plug Side
S : Socket Side

2 Body Size^{※1}

- 2** : Min. Passage Area 29mm²
3 : Min. Passage Area 50mm²
4 : Min. Passage Area 102mm²

3 Design No.

- 0** : Revision Number

Notes

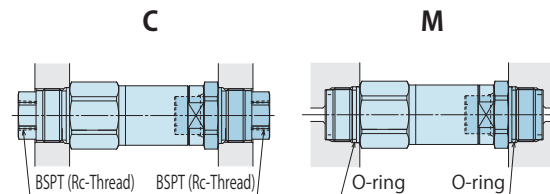
- ※1. Please contact us in the case that it is combined with different body size.
However, it is recommended to use the same dimension from the point of view the maintenance and management of the spare item.
※2. Different piping method, C and M can be combined for use.

4 Material

- W** : Stainless Steel, Brass, NBR (Recommended Fluid : Air)
H : Stainless Steel, Brass, Fluor Rubber (Recommended Fluid : coolant)
O : Steel, NBR (Recommended Fluid: General Hydraulic Oil)

5 Piping Method^{※2}

- C** : Connector Option
M : Manifold Option (O-ring Seal)

High-Power
Series

Pneumatic Series

Hydraulic Series

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Hydraulic UnitManual Operation
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Air
Sequence Valve

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JVA/JVB

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BLB

JSS/JS

JKA/JKB

BM/BMG

AU/AU-M

BU

BP/JPB

BX

BEP/BSP

BH

BC

Air
Hydraulic Unit

CV

CK

CP

CS

CB

CC

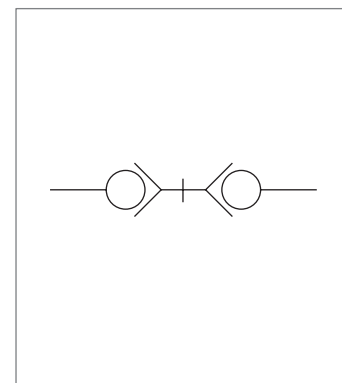
AB/AB-V

AC/AC-V

Specifications

Model No.	Plug Side	JLP020-□-□0	JLP030-□-□0	JLP040-□-□0		
	Socket Side	JLS020-□-□0	JLS030-□-□0	JLS040-□-□0		
Min. Passage Area	mm ²	29	50	102		
Offset Tolerance	mm	±0.5	±0.5	±0.8		
Angular Deviation (Offset Tolerance)	DEG.		0.5			
Max. Operating Pressure	MPa	4 when choosing material W	3.5			
		4 when choosing material H	3.5			
		4 when choosing material O	25			
Operating Temperature	°C	4 when choosing material W/O	0~80			
		4 when choosing material H	0~120			
Reaction Force	kN	Operating pressure	at 3.5 MPa	0.64	0.84	1.47
			at 25.0MPa	3.95	5.16	9.64
			at P MPa	0.154 × P + 0.10	0.201 × P + 0.13	0.380 × P + 0.14
Mass		Refer to External Dimensions				

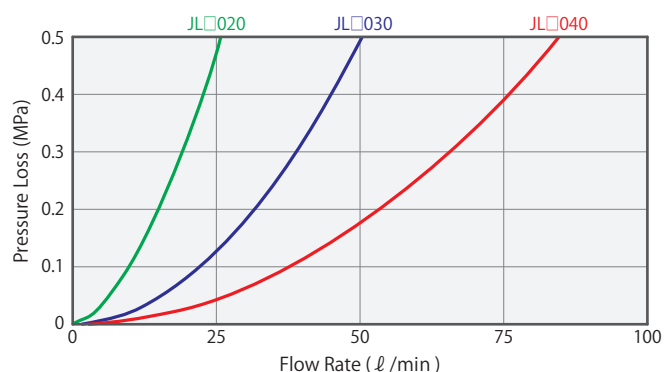
Circuit Symbol



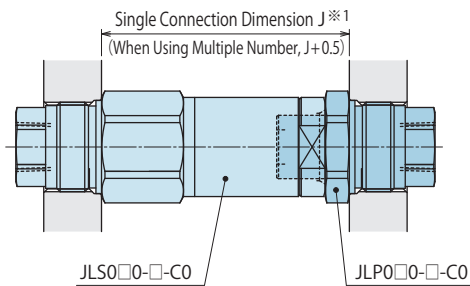
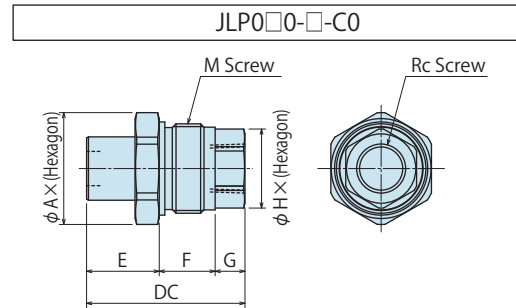
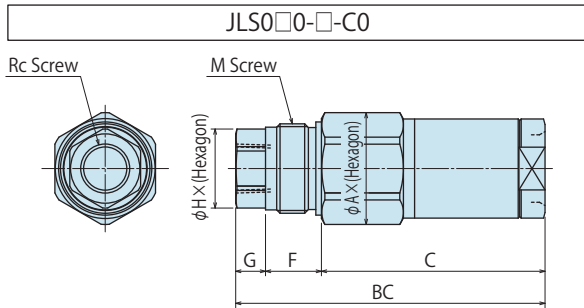
Flow Rate—Pressure Loss Characteristic Graph

Fluid to be used on this data is water (temperature is 20°C).

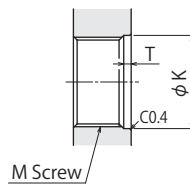
Pressure Loss (MPa)	Flow Rate (ℓ/min)		
	JL□020	JL□030	JL□040
0	0	0	0
0.1	10.0	21.8	37.7
0.2	14.0	31.1	52.2
0.3	19.0	38.1	65.2
0.4	22.0	44.0	74.1
0.5	26.0	50.0	85.0



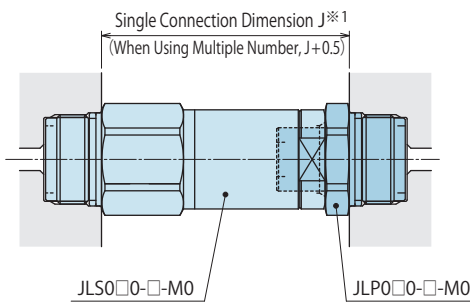
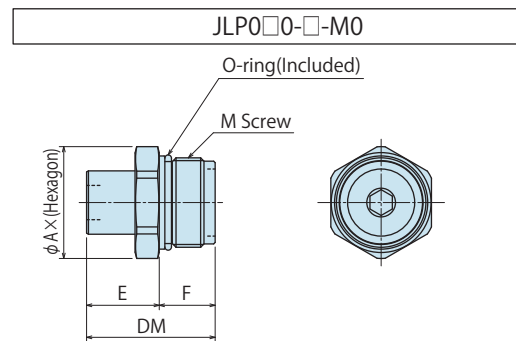
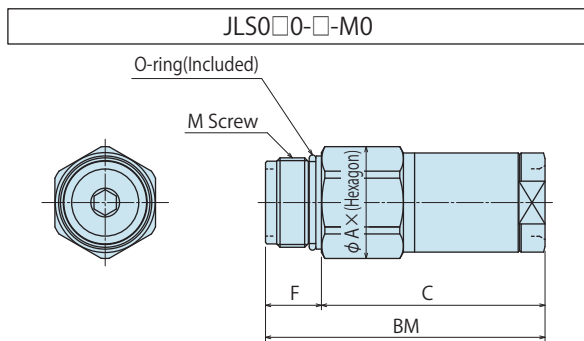
External Dimensions (JLP/JLS)



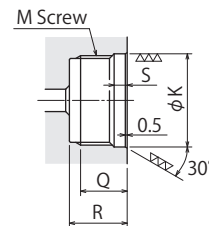
Machining Dimension for Mounting Hole
JLS0□0-□-C0/JLP0□0-□-C0 Common Items



Model No.	Thread Size (M Screw)	Tightening Torque(N·m)	
		when choosing Material W/H	when choosing Material O
JL□020-□-C0	M24×1.5	25	100
JL□030-□-C0	M27×1.5	40	100
JL□040-□-C0	M33×1.5	63	180



Machining Dimension for Mounting Hole
JLS0□0-□-M0/JLP0□0-□-M0 Common Items



Model No.	Thread Size (M Screw)	Tightening Torque(N·m)	
		when choosing Material W/H	when choosing Material O
JL□020-□-M0	M24×1.5	25	100
JL□030-□-M0	M27×1.5	40	100
JL□040-□-M0	M33×1.5	63	180

Dimensions

Model No.	(mm)			
	JLP JLS	JLP020 JLS020	JLP030 JLS030	JLP040 JLS040
A×(Hexagon)	φ30×(27)	φ33×(30)	φ40×(36)	
BC	83	92.5	107	
BM	75	81.5	94	
C	60	65.5	76	
DC	42.5	48.5	57.5	
DM	34.5	37.5	44.5	
E	19.5	21.5	26.5	
F	15	16	18	
G	8	11	13	
H×(Hexagon)	φ21.2×(19)	φ24.5×(22)	φ30×(27)	
J	66.5	72	84.5	
K	φ25H8 ^{+0.033} _g	φ28H8 ^{+0.033} _g	φ34H8 ^{+0.039} _g	
M	M24×1.5	M27×1.5	M33×1.5	
Q	12.5 or more	13.5 or more	15.5 or more	
R	15.5 or more	16.5 or more	18.5 or more	
S	3.5	3.5	3.5	
T	2	2	2	
Rc Screw	Rc1/4	Rc3/8	Rc1/2	

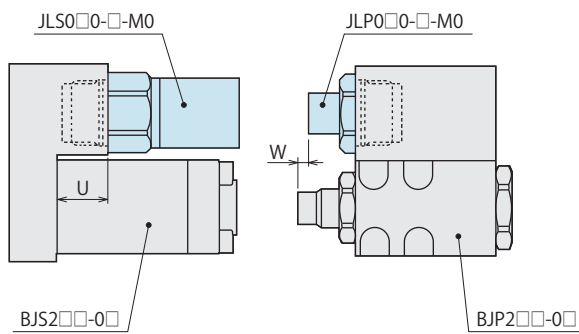
Note

※1. When using multiple number, provide a stopper for connection dimension to be within +0.5mm of single connection dimension.

Mass

Model No.	(kg)		
	When W/H is chosen	When O is chosen	
Piping Option C selected	JLS020-□-C0	0.26	0.25
	JLP020-□-C0	0.09	0.09
	JLS030-□-C0	0.36	0.35
	JLP030-□-C0	0.13	0.13
Piping Option M selected	JLS040-□-C0	0.60	0.57
	JLP040-□-C0	0.26	0.26
	JLS020-□-M0	0.25	0.24
	JLP020-□-M0	0.08	0.08
	JLS030-□-M0	0.34	0.33
	JLP030-□-M0	0.11	0.11
	JLS040-□-M0	0.56	0.53
	JLP040-□-M0	0.22	0.22

Combination Sample



Model No.	(mm)		
	JLP	JLP020-□-M0	JLP030-□-M0
U	JLS	JLS020-□-M0	JLS030-□-M0
U		27.5	22
W		5.5	3.5

Note

1. Additionally equip the air blow for JL□ (measure for cutting powder).

Cautions (JLP/JLS)

<Cautions (common)>

1. Do not connect or disconnect in the pressurized (pressure remaining) condition.
2. Perform air bleeding of the circuit sufficiently prior to operation. (when using hydraulic pressure)
3. Do not connect in the condition that foreign substances such as chips adhere on the connecting surfaces.
(Completely remove the adhering chips or coolant by air blow etc.)
4. Prevent foreign substances (chips or seal tape) from entering the circuit.
5. When using water or air as fluid, consider rust prevention of manifold blocks and pipe fittings.
6. When reaching the connection limit, the holding pressure is
should be higher than reaction pressure and lower than 4.0kN for JL□020-W/H-□0, higher than reaction force and lower than 6.0kN for JL□020-O-□0.
should be higher than reaction pressure and lower than 5.0kN for JL□030-W/H-□0, higher than reaction force and lower than 9.0kN for JL□030-O-□0.
should be higher than reaction pressure and lower than 7.0kN for JL□040-W/H-□0, higher than reaction force and lower than 12.0kN for JL□040-O-□0.
7. Please contact us if a larger passage area is needed than the one demonstrated.

High-Power
Series

Pneumatic Series

Hydraulic Series

Valve / Coupler
Hydraulic UnitManual Operation
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Cautions / Others

Air
Sequence Valve

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Auto Coupler

JVA/JVB

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Rotary Joint

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BU

BP/JPB

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BH

BC

Air
Hydraulic Unit

CV

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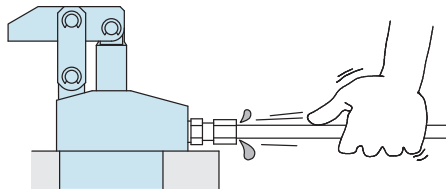
AB/AB-V

AC/AC-V

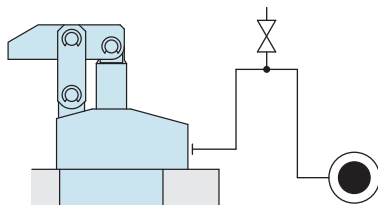
● Cautions

● 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

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- Search by Alphabetical Order

Sales Offices

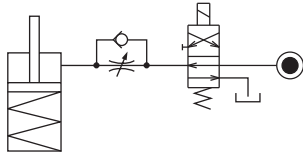
● Notes on Hydraulic Cylinder Speed Control Unit



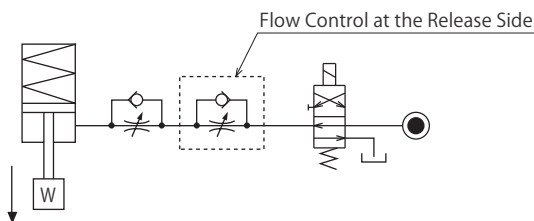
Please pay attention to the cautions below. Design the hydraulic circuit for controlling the action speed of hydraulic cylinder. Improper circuit design may lead to malfunctions and damages. Please review the circuit design in advance.

● 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

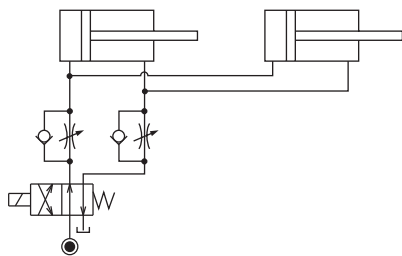
Flow control circuit for double acting cylinder should have meter-out circuits for both the lock and release sides. Meter-in control can have adverse effect by presence of air in the system.

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

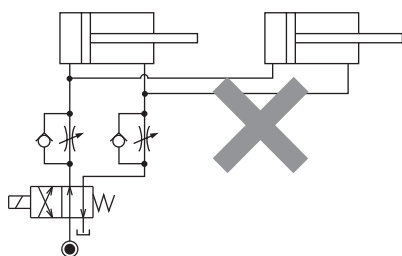
Refer to P.47 for speed adjustment of LKE.

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)

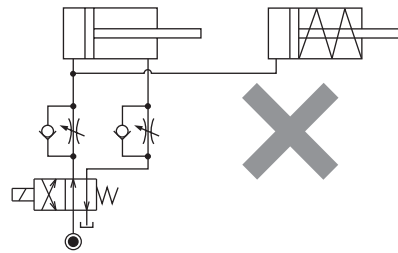


【Meter-in Circuit】 (LKE/TMA/TLA must be controlled with meter-in.)



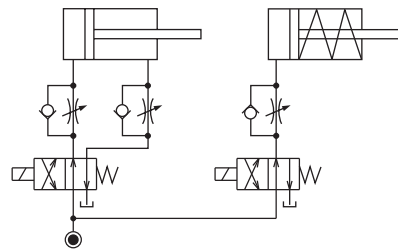
In the case of meter-out circuit, the hydraulic circuit should be designed with the following points.

- 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.

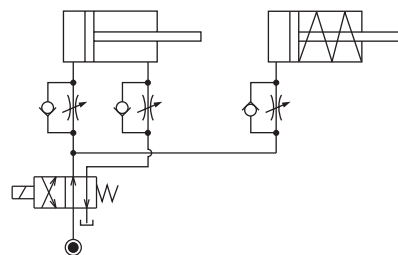


Refer to the following circuit when both the single acting cylinder and double acting cylinder are used together.

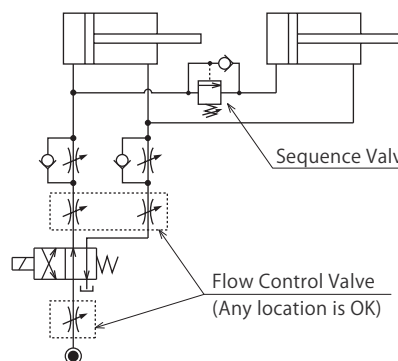
- Separate the control circuit.



- 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.



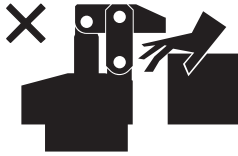
- ② In the case of meter-out circuit, the inner circuit pressure may increase during the cylinder action because of the fluid supply. The increase of the inner circuit pressure can be prevented by reducing the supplied fluid beforehand via the flow control valve. Especially when using sequence valve 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

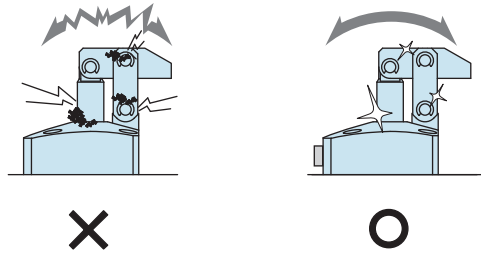
- 1) It should be handled by qualified personnel.
 - The hydraulic machine and air compressor should be handled and maintained by qualified personnel.
- 2) Do not handle or remove the machine unless the safety protocols are ensured.
 - ① The machine and equipment can only be inspected or prepared when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



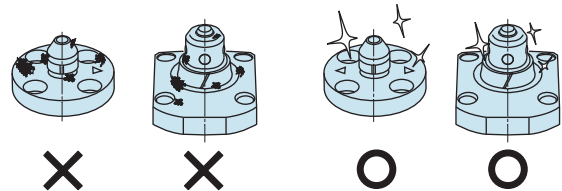
- 4) Do not disassemble or modify.
 - If the equipment is taken apart or modified, the warranty will be voided even within the warranty period.

● 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

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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.

Sales Offices

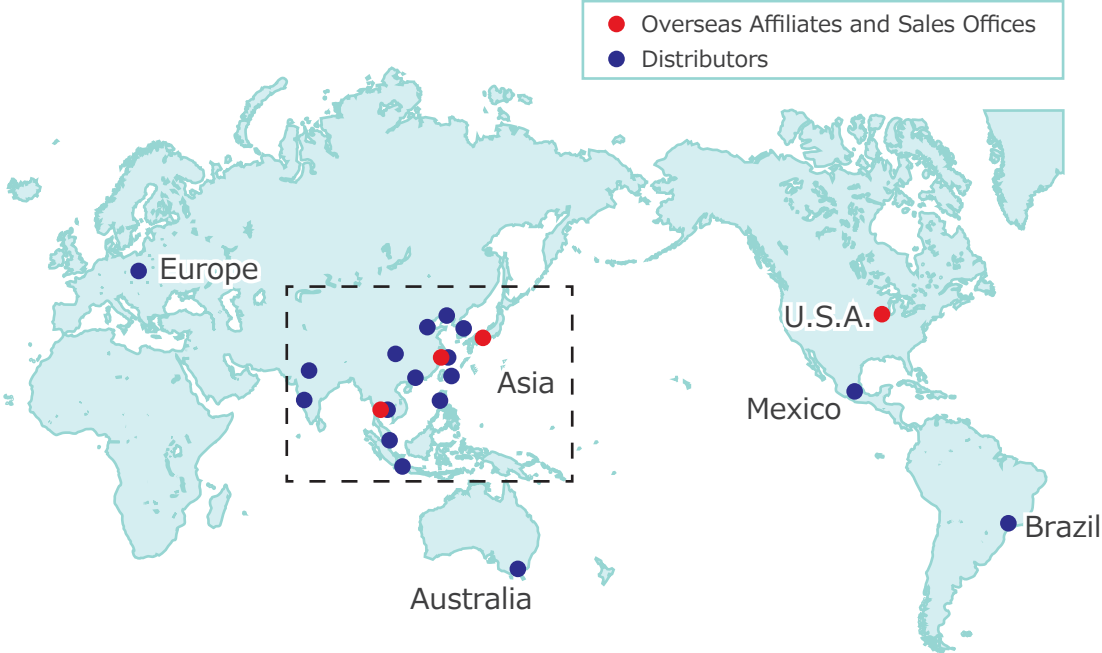
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Global Network



Asia Detailed Map



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