

Hydraulic Oil /Positive air pressure/ Negative air pressure /Coolant Auto Coupler

Model JVA/JVB

Model JVC/JVD

Model JVE/JVF

Model JNA/JNB

Model JNC/JND

Model JLP/JLS

Model JTA/JTB



Coupler to Connect Fluid Circuit

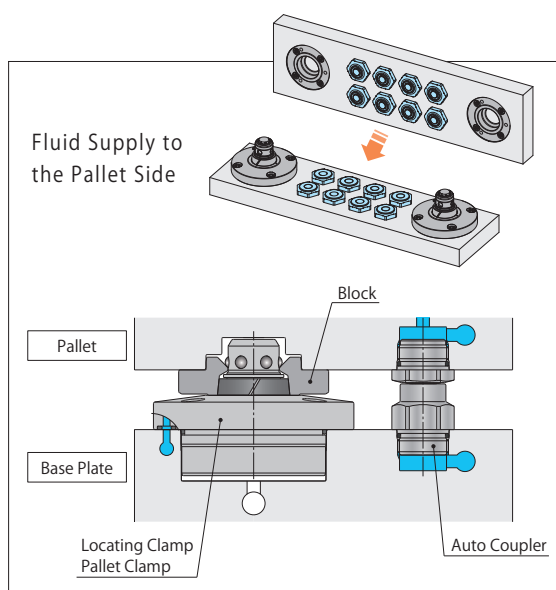
Compact and applicable to various fluids and flow rates.

● What is Auto Coupler?

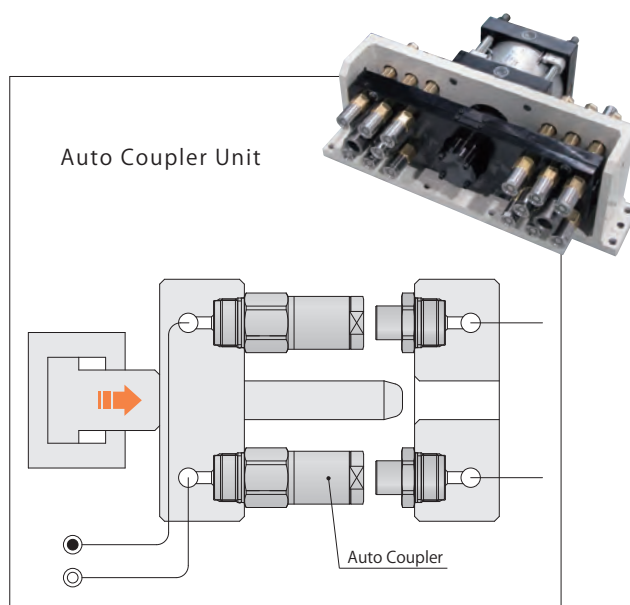
Auto coupler, designed to connect a variety of flow circuits, is suitable for automation and fits in small spaces. We can offer based on your requirement.

※ The auto coupler does not have non-leak mechanism. In case you need the non-leak function, please refer to "Non-Leak Coupler" on KWCS Complete Catalog or visit our website (<http://www.kosmek.com>).

Application Examples

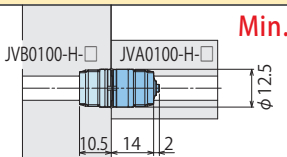
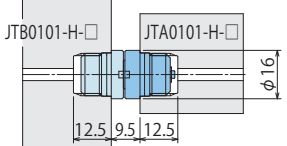
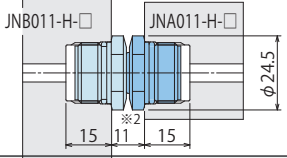
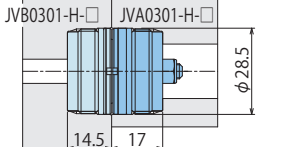
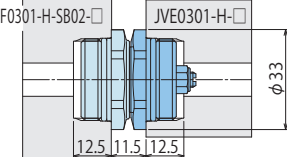
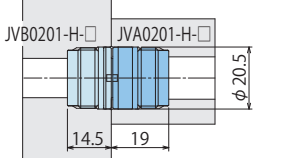
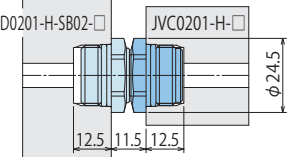
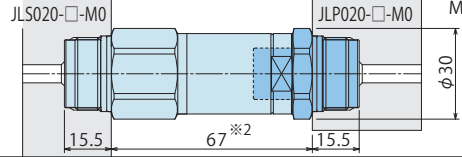
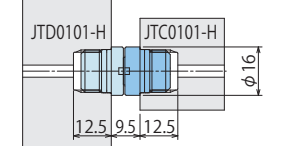
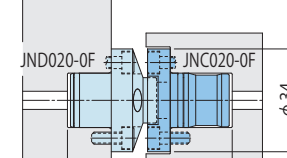
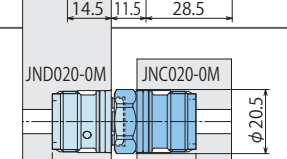


Connecting from the Pallet Bottom



Connecting from Outside

Variation

Usable Fluid	Pressure Range	Comparison of Auto Coupler Connected Dimension ※ The shortest dimension combination of each coupler model.	Model No.
Positive air pressure / Negative air pressure			
	1MPa or less	 <p>Min. Passage Area : 8mm² Minimum Size</p>	Model JVA0100/JVB0100 NEW → P.827
	1MPa or less	 <p>Min. Passage Area : 5mm²</p>	Model JTA/JTB → P.861
	1MPa or less	 <p>Min. Passage Area : 8.8mm² (At Eccentricity : 7.4mm²)</p>	Model JNA/JNB → P.847
	1MPa or less	 <p>Min. Passage Area : 29.0mm²</p>	Model JVA0301/JVB0301 → P.835
	1MPa or less	 <p>Min. Passage Area : 29.0mm²</p>	Model JVE/JVF → P.843
	7MPa or less	 <p>Min. Passage Area : 12.6mm²</p>	Model JVA0201/JVB0201 → P.831
	7MPa or less	 <p>Min. Passage Area : 12.6mm²</p>	Model JVC/JVD → P.839
	3.5MPa or less 25MPa or less ※ Depends on the material of the product.	 <p>Min. Passage Area※1 29.0mm²</p>	Model JLP/JLS → P.857
	7MPa or less	 <p>Min. Passage Area : 5mm²</p>	Model JTC/JTD → Please refer to our website for details.
	25MPa or less	 <p>Min. Passage Area : 10.3mm²</p>	Model JNC/JND → P.853
		 <p>Min. Passage Area : 10.3mm²</p>	

※1. The minimum passage area of JLP/JLS differs depending on size.

※2. It shows the connecting dimension on multiple connection.

1. Please refer to each page for detail.

Locating
+
Clamp

Locating

Hand • Clamp

Support

Valve • Coupler

Electric Drive •
Conveyor

Cautions • Others

Air Safety Valve

BWS

Air Sequence Valve

BWD

Auto Coupler

JVA/JVB0100

JVA/JVB0201

JVA/JVB0301

JVC/JVD

JVE/JVF

JNA/JNB

JNC/JND

JLP/JLS

JTA/JTB

Leakless Coupler

JWC/JWD

Rotary Joint

JR

Auto Coupler

Model JTC/JTD

Oil/ Positive air pressure/
Negative air pressure

(Operating Pressure Range: lower than 7MPa)

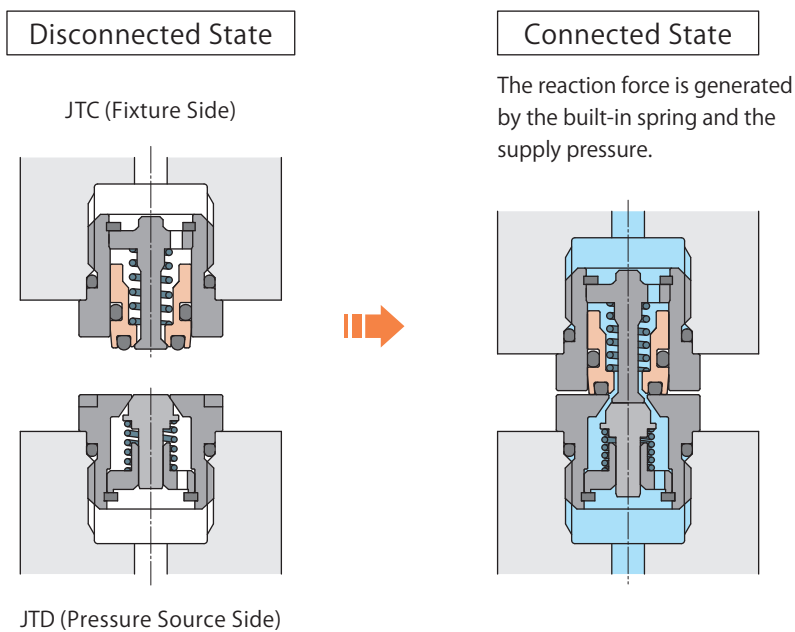


● JTC/JTD Feature

Ultra-Compact Auto Coupler.

- ※ The auto coupler does not have the non-leak function. In case you need the non-leak function, please refer to "Non-Leak Coupler" on KWCS Complete Catalog or visit our website (<http://www.kosmek.com>).
- ※ No copper (Cu) or zinc (Zn) based materials are used.
Stainless steel and aluminum materials may contain copper (Cu) and zinc (Zn) as additive elements.

● Action Description



Model No. Indication

JT D 010 1 - H - CR

1 2 3 4

1 Style

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

2 Design No.

- 1** : Revision Number

3 Material

- H** : Stainless Steel, Steel, Fluor Rubber

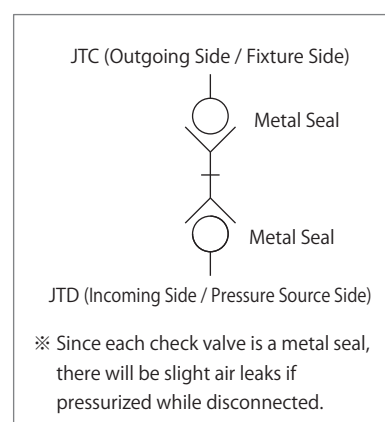
4 Grease

- Blank** : NBU8EP made by NOK KLUEBER (Standard)
CR : AFF made by THK (For clean environment)
FD : NH1 64-422 made by NOK KLUEBER
 (For food machinery)

Specifications

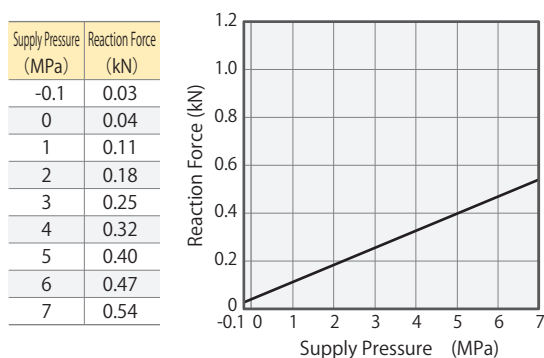
Model No.	Fixture Side	JTC0101-H-□
	Pressure Source Side	JTD0101-H-□
Max. Operating Pressure	MPa	7.0
Withstanding Pressure	MPa	10.5
Min. Passage Area	mm ²	5
Offset Distance (Tolerance)	mm	±0.5
Angular Deviation (Tolerance)	DEG.	0.3
Operating Temperature	°C	0 ~ 120
Usable Fluid		General Hydraulic Oil Equivalent to ISO-VG-32, Positive air pressure, Negative air pressure
Reaction Force kN	at 7 MPa	0.537
	at 1 MPa	0.111
	at P MPa	$0.071 \times P + 0.04$
Weight g	JTC	15
	JTD	13

Circuit Symbol



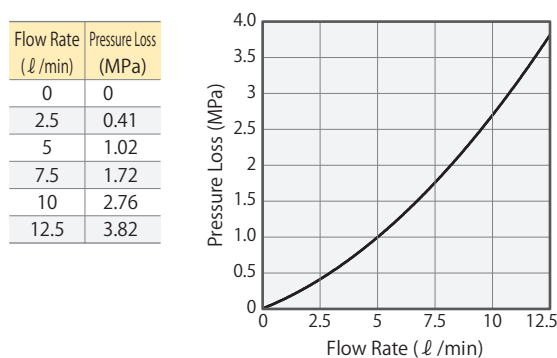
Supply Pressure—Reaction Force Graph

The graph shows the reaction force when supplying pressure after the connection of JTC/JTD is completed.

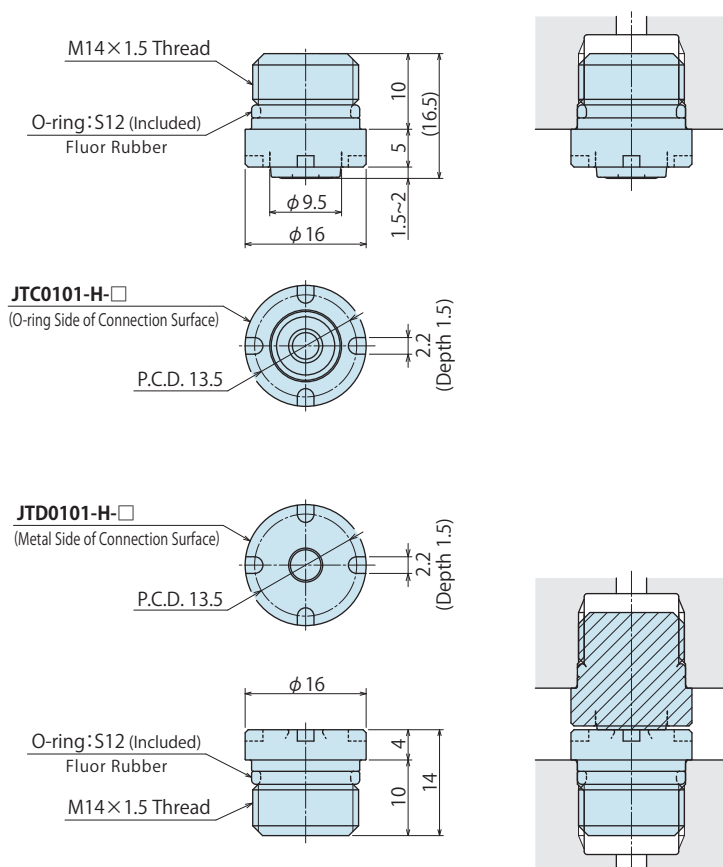


Flow Rate—Pressure Loss Characteristic Graph

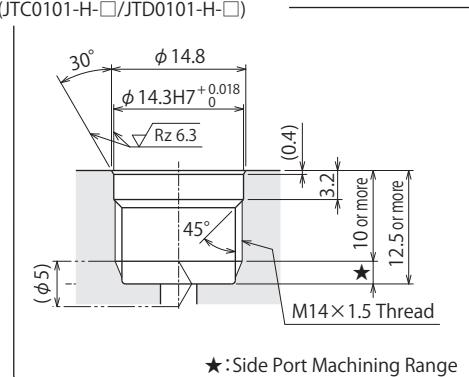
The fluid used on this data is general hydraulic oil equivalent to ISO-VG-32 (30 ~ 40°C).



External Dimensions (JTC/JTD)



Mounting Hole Machining Dimensions
(JTC0101-H-□/JTD0101-H-□)



Model No.	Thread Size	Tightening Torque (N·m)
JTC0101-H-□ JTD0101-H-□	M14×1.5	10

Connection Setting Dimension $9.5_{-0.4}^{0}$
(Limit Dimension for Single Unit Connection $9_{-0.2}^{0}$)

Note :

1. Mounting Jig (Model ZZJ0040) or equivalent is required to install and remove JTC/JTD.
Mounting Jig (Model ZZJ0040) is not included with JTC/JTD. Please order separately.

Accessory : Mounting Jig

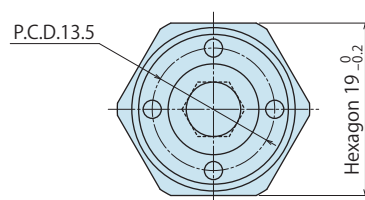
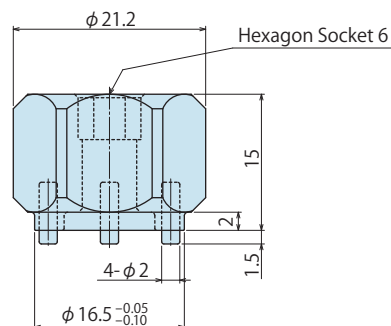
This jig is used to mount and remove the JTC/JTD.

Tightening Torque: 10N·m

Model No. Indication

ZZJ0040

Design No.
(Revision Number)

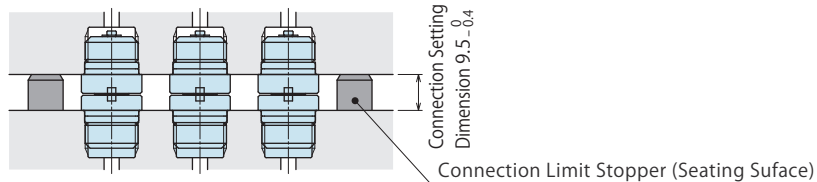


Note :

1. Mounting Jig (Model ZZJ0040) or equivalent is required to install and remove JTC/JTD.
Please determine the required number of jigs when ordering.

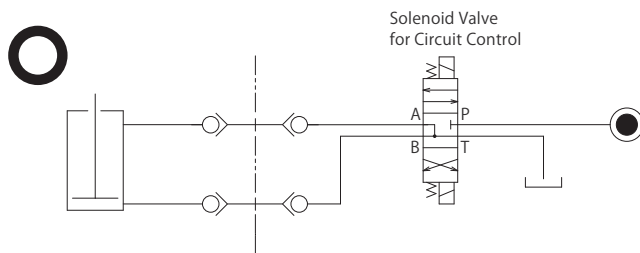
● Cautions (JTC/JTD)

1. Do not connect or disconnect the auto coupler under pressure. (Refer to the following Circuit Reference.)
2. Release the air from the circuit before use.
3. Do not connect the coupler when contaminants are adhered on each connecting surface.
When there are cutting chips or coolant, install a cover, or remove all contaminants with air blow.
4. If load is applied to the actuator on the fixture side while disconnected, it will be pressurized and fluid may leak from the coupler end.
5. Exceeding allowable offset leads to damage on internal parts. It is recommended to install a guide pin.
6. When using connection limit stopper(s) or multiple couplers (more than three of them), make sure it becomes the connection setting dimension when connected.

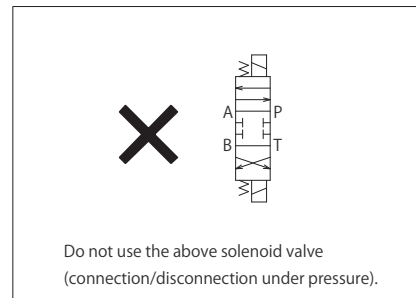


7. When pressing up to the connection limit, the force should be higher than the reaction force and lower than 1.0kN.
8. For mounting and removing the coupler, use the mounting jig (ZZJ0040) or equivalent.
9. When using with the pallet clamp (VS/WVS), it is recommended to use the auto coupler model JVC/JVD.
(When using JTC/JTD with the pallet clamp: If a pallet might be lifted up by the spring reaction force when setting, the connection setting dimension needs to be reconsidered. Please contact us.)

● Circuit Reference



Use a three position (center position, ABT connection) solenoid valve for circuit control, and stop supplying hydraulic (or air) pressure with the center position when connecting/disconnecting JTC/JTD.



● Cautions

● Notes on Handling

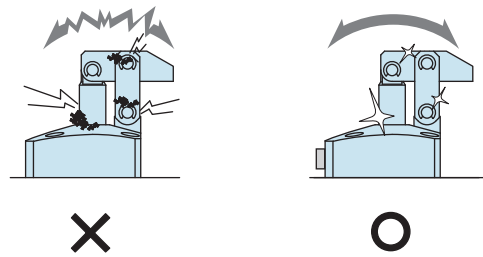
- 1) It should be operated by qualified personnel.
- The hydraulic machine and air compressor should be operated and maintained by qualified personnel.
- 2) Do not operate or remove the product unless the safety protocols are ensured.
 - ① The machine and equipment can only be inspected or prepared when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



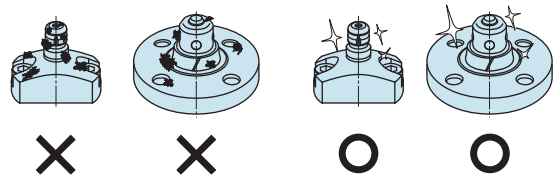
- 4) Do not disassemble or modify.
- If the equipment is taken apart or modified, the warranty will be voided even within the warranty period.

● Maintenance and Inspection

- 1) Removal of the Machine and Shut-off of Pressure Source
 - Before removing the product, make sure that the safety devices are in place. Shut off the pressure and power source and make sure no pressure exists in the air and hydraulic circuits.
 - Make sure there is no trouble/issue 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.



- 3) Regularly clean the reference surfaces (taper reference surface and seating surface) of locating products (SWT/SWQ/SWP/VRA/VRC/VX/VXE/VXF/WVS/WVG/VWH/VWM/VWK).
 - Locating products (except VRA/VRC/VX/VXE/VXF and SWR without air blow port) can remove contaminants with the cleaning function. When installing a workpiece or a pallet, make sure there are no contaminants such as thick sludge.
 - Continuous use with dirt on components will lead to locating failure, fluid leakage and malfunction.



- 4) Regularly tighten pipe, mounting bolt, nut, snap ring, cylinder and others to ensure proper use.
- 5) Make sure the hydraulic fluid has not deteriorated.
- 6) Make sure there is a smooth action without an irregular noise.
 - Especially when it is restarted after left unused for a long period, make sure it can be operated correctly.
- 7) The products should be stored in the cool and dark place without direct sunshine or moisture.
- 8) 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 Failure caused by the use of the non-confirming state at the user's discretion.
- ③ If it is used or operated in an inappropriate way by the operator.
(Including damage caused by the misconduct of the third party.)
- ④ If the defect is caused by reasons other than our responsibility.
- ⑤ If repair or modifications are carried out by anyone other than Kosmek, or without our approval and confirmation, it will void warranty.
- ⑥ Other caused by natural disasters or calamities not attributable to our company.
- ⑦ Parts or replacement expenses due to parts consumption and deterioration.
(Such as rubber, plastic, seal material and some electric components.)

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

[Locating
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[Hand • Clamp](#)
[Support](#)
[Valve • Coupler](#)
[Electric Drive •
Conveyor](#)
[Cautions • Others](#)

Cautions

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Inspection](#)
[Warranty](#)
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[Our Products](#)
[History](#)
[Index](#)
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Alphabetical Order](#)
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Sales Offices

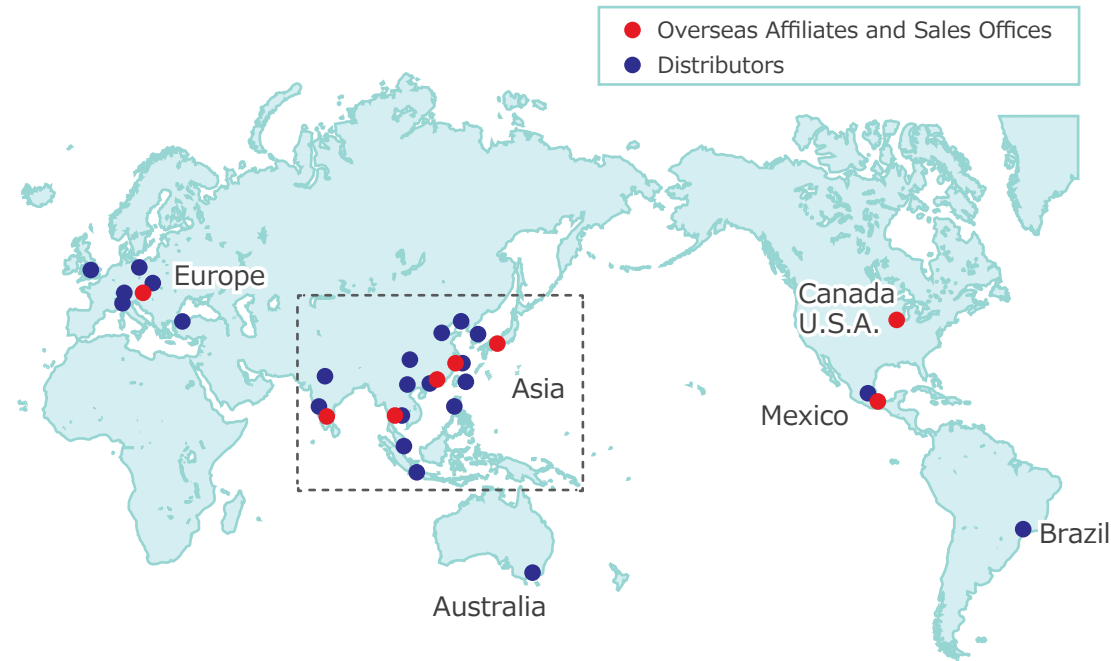
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Global Network



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