

CUPLA

GENERAL CATALOG



CUPLA enable flexible and fast connections in various fluid lines.

Nitto Kohki's unique technologies and dedicated research have been proven by numerous patents, which led to the development of 25,000 different CUPLA variations.



Nitto Kohki's quick connect couplings, "CUPLA" enable speedy connections/disconnections of various pipings, such as air, water, oil and gas.

They are active in various industrial fields, thanks to the experience in development of 25,000 different variations. Wide varieties of body materials such as steel, brass, aluminum, stainless steel and plastic are available to match every customer's needs.

- Applications diversify from general household to high-tech industries such as in oceanic and space development.
- Numerous sizes are available for various needs.
- Wide varieties of body materials such as steel, brass, plastic, aluminum or stainless steel are available.

A profusion of patented technology crystallized in global users recognition of high quality and high performance.

ISO 9001 and 14001 Certification Award

"CUPLA" quick connect couplings are produced as the crystallization of high-grade know-how nurtured in the fields of fluid engineering and materials engineering, and top level precision machining technology. Having assessed Nitto Kohki consistent quality assurance and control system ranging from design and development through procurement of material, manufacture, assembly, and shipping, the Japan Quality Assurance Foundation, authority for inspection and registration, awarded us "ISO 9001", international standard for quality management systems, and "ISO 14001", international standard for environment management systems intended to perform global environment preservation and pollution control. High reliability built on unparalleled "high quality" and accumulated history of "productivity" for stable supply. CUPLA is receiving overwhelming support from many users spread all over the world as the top brand for fluid energy transmission and control.



CUPLA

CUPLA

Quick Connect Couplings

For easy replacements	Replacements of pneumatic / hydraulic tools, pneumatic / hydraulic cylinders, mold attachments, etc.
For temporary installation in test line	Vacuum tests, pressure durability tests, leakage tests, running tests, etc.
For filling	For filling up various industrial gases, including inert gases, nitrogen, LPG, carbon dioxide, oxygen, fuel gas, etc.
For maintenance services	For computer cooling system, hydraulic cylinders in die-casting machines.
For transfer	For transfer of solid items through pipes such as screws and nuts as well as for electric power cable lines.
As joints	Applications other than fluid transfer covering connections for holding works while anchored or carried around.

Nitto Kohki's Official YouTube channel

Watch our products in action. We have various products from Quick Connect Couplings "CUPLA" to Power and Machine Tools, "delvo" Electric Screwdrivers, Linear-motor-driven Free Piston Pumps and also Door Closers.



www.youtube.com/c/NittoKohkiGLOBAL

⚠ Beware of imitations

Recently on the market, there have appeared similar products that invite misidentification or confusion with Nitto Kohki couplings, or such products that claim to have compatible mating parts. Nitto Kohki cannot accept responsibility for any accident that may result by mixed use with a coupling of another brand that seems connectable to a Nitto Kohki coupling. Nitto Kohki CUPLA are produced with their own unique tolerances and precision under strict quality control, and are not interchangeable with other couplings that are not under such tolerances. Therefore, connection to other brand of coupling may end up with abrupt breakdown or personal injury. Please be sure to check for our marks below, which are always inscribed on Nitto Kohki CUPLA products, when you order and purchase.



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New product

Newly designed in colorful 5 colors.

Quick connect couplings for air / water piping

CUBE CUPLA

- An effective outer appearance.
- Prevent piping mistakes by color indication.

Select from All five colors



It is also possible to check colors after connection



- Small size**
- Light weight**
- Push-to-connect operation**
- Push button easy disconnection**

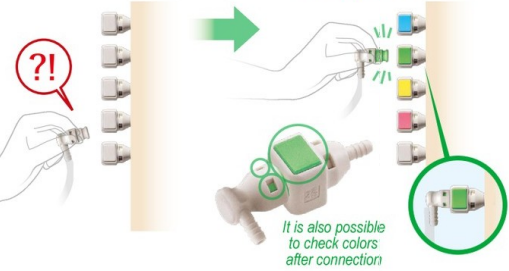


Push button easy disconnection

5 colors

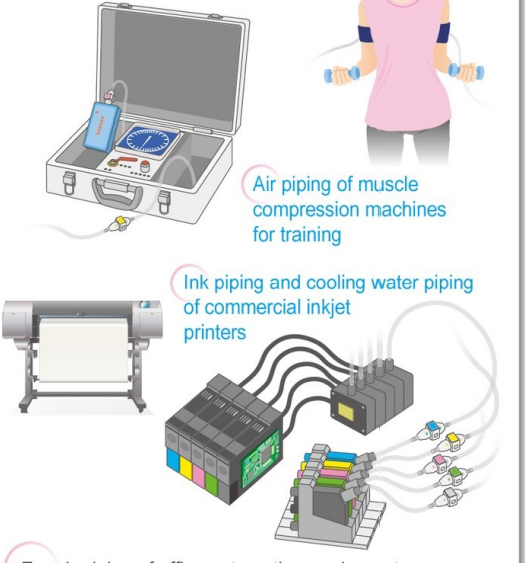
To prevent misconnection of piping

Pipings that are difficult to identify **Connect without hesitation at a glance**



It is also possible to check colors after connection

Application example



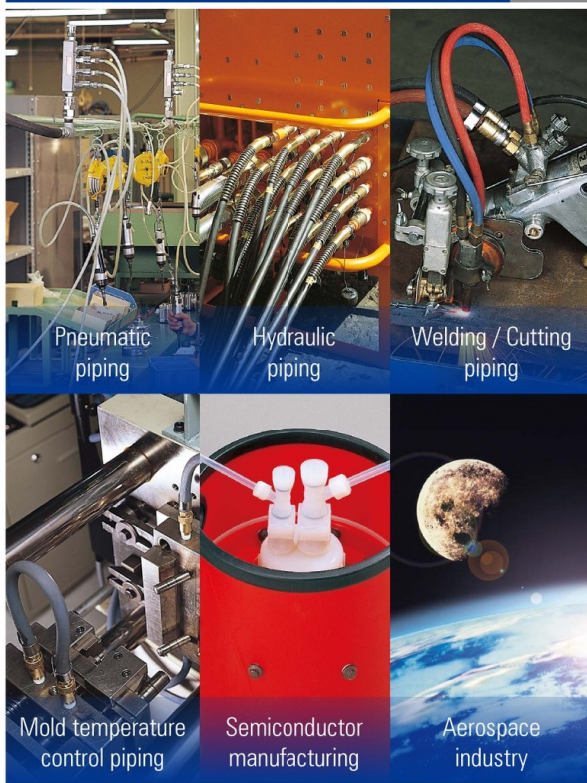
For air piping of office automation equipment, measuring and analyzing fields, etc.

The above application is an example only. When adopting, please consult us separately.

Nitto Kohki's environmentally-friendly Manufacturing

The coexistence of mankind and nature. Each company is now asked for a global level environmental conservation and improvement as important themes. As a part of the environmental improvement activities, we are offering various products such as "couplings", "machines and tools", "screwdrivers", "air compressors and vacuum pumps", and "door closers" as green procurement products.

"CUPLA" active in the widespread field of the manufacturing industry.



Coupling for fuel cell vehicles.

Nitto Kohki's environmentally-friendly Manufacturing

Green Procurement

Nitto Kohki has made every effort in developing "Environmental Improvement Plans" through the implementation of ISO14001, to execute environmentally conscious business activities on a company-wide basis. As a part of our ongoing commitment to the environment, we are also committed to reduce and/or exclude restricted chemical substances from our products as designated by RoHS directives, laws and regulations of chemical substances.

All couplings except for the following products have been switched to green procurement compliant products.

- LEVER LOCK CUPLA
 - All CUPLA products with Tube Fitter
 - CUPLA CONNECTING JIG
 - PRESSURE GAUGE
- } Non compliant

Please visit our website for applicable products.

www.nitto-kohki.co.jp/e/



Products using regulated substances and the countermeasures taken

Products (Standard CUPLA)	Major countermeasures
Products using brass material	Low cadmium contained material used (RoHS directive compliant material)
Zinc chrome plated couplings	Hexavalent chromium-free plated (Such as nickel plated)

Note: Color of plating

The color of the zinc chrome plating is yellow, while nickel plating is silver. Some products may look different in appearance when changed.

Select an Appropriate CUPLA for the Job

Nitto Kohki has the wide range of CUPLA products covering almost every application and feature you need. In order to select an appropriate CUPLA for your job, you need to realize the following specifications.

Specifications to Be Checked When Selecting CUPLA

Fluid and the Temperature	Select a CUPLA with body and seal materials that suit the fluid and its temperature.	There are different body and seal materials to suit different fluids. For example, we recommend steel HI CUPLA for air, and brass or stainless steel for water. Please refer to Body Material Selection Table and Seal Material Selection Table at the end of this catalog for details about the correspondence between fluids and materials.
Fluid Pressure	Select a CUPLA suitable for the actual Maximum fluid pressure.	Fluid pressure is also a key to CUPLA selection. Each series of hydraulic CUPLA have different structures to cope with each pressure resistance ranges up to 68.6 MPa (700 kgf/cm ²).
Automatic Shut-off Valve	Select a CUPLA with a valve structure that suits the piping application.	Valve combinations are two-way shut-off, one-way shut-off, or straight through types. Choose carefully. Unless it is a two-way shut-off type, the internal fluid will flow out from the CUPLA without valve when it is disconnected.
Operating Environment	Select a CUPLA with design and materials that suit each operating environment.	In choosing the type of CUPLA, body material and seal material, consider the temperature range, and/or corrosive atmosphere in the operating environment.
Size and Type of End Configurations	Finally and critically specify the size and type of end configurations.	Having checked the type and materials for the CUPLA, now specify the size and type of end configurations to suit the type of piping. Choose carefully, as the size affects the fluid flow rate.



You can search our "CUPLA" at our web site. (www.nitto-kohki.co.jp/e/) Please take a visit. If you cannot find a suitable "CUPLA", please contact us via our web site or enter the above details in the "CUPLA Inquiry Form" at the end of this catalog and send it to us by fax or post.

Symbols

Quick reference symbols:

(1) Working pressure, (2) Type of valve structure, (3) Applicable fluids, are given on each product page to help you to quickly select a suitable CUPLA. Please use them as the guide to grasp each type selection.

Working pressure

1.0 MPa
{10 kgf/cm²}

Valve structure

Plug Socket Valve

Two-way shut-off Two-way shut-off (Non-Spill) One-way shut-off One-way shut-off Straight through

Applicable fluids

Air	Water	Hydraulic oil	Steam	Oxygen, Fuel Gas	Gas	Inert gas, Vacuum, Helium
Temperature control refrigerant	High purity chemicals	Heated oil	Powder	Solvent based paint	Food, Drinking water	

Glossary

The following terms are used in detailed information pages of each CUPLA. Refer to these terms when checking CUPLA specifications.

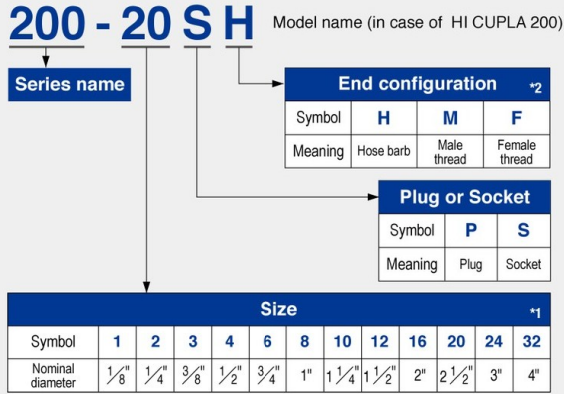
International System of Units (SI Units)

Units stated in this catalog are based on SI Units. The old units, which are non-SI Units, are also written within parentheses side by side with SI Units for reference only.

Glossary

The Meaning of Each Letter in the Model Name

The model name of a CUPLA indicates its size, whether plug or socket, and the end configuration. Rated pressure is also shown for some hydraulic couplings. Check the following tables to understand the model name implication before making your selection.



*1: The digit numbers of models for some products differs from those of symbols. For example, in case of HI CUPLA 20SH, not "20" but only "2" of the "20" corresponds to "2" of the symbol and indicates the nominal diameter of 1/4".
 *2: For a product with only one type of end configuration, this symbol is omitted. For example, 210 CUPLA have only female threaded end so the model indicates only the size and plug or socket identification.

Body Material

This indicates the material that is used for the plug body or socket body that forms the flow path of fluid through the CUPLA. Some products have internal components of a different material. Please check with us for details.

Body Material		Major applicable fluid
Common name	Mark	
Brass	BRASS	Air, Water, Oil
Iron, Steel	STEEL	Air, Oil
Stainless steel	SUS	Air, Water, Oil

Please refer to Page 158 for body material selection table.

Size

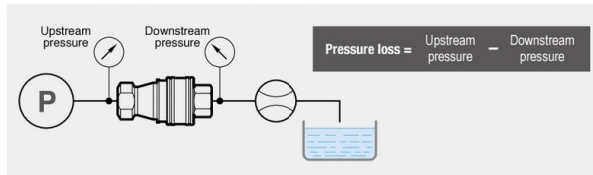
This indicates the nominal size of the pipe thread connection or of the hose to be used.

Working Pressure

The normal allowable fluid pressure under continuous use. Exceeding the working pressure may cause damage and leakage.

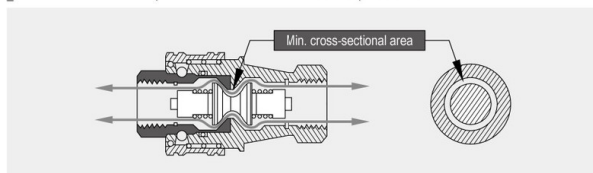
Pressure Loss

This shows the loss of pressure when fluid runs through the CUPLA set. They are measured values at our testing facilities. May differ according to the installation/piping method and operating conditions.



Minimum Cross-Sectional Area

This shows the minimum cross-sectional area of the fluid path when the CUPLA is connected. The position is different in some products.



Seal Material

This shows the material used to seal the CUPLA, usually an O-ring. The standard material is nitrile butadiene rubber. For materials other than those shown below, please specify such as silicone (SI), butyl (IIR), Kalrez (KL) or rubber for food, depending on your application.

Properties of rubbers used for O-rings

Seal material		Working Temperature Range	Features
Common name	Nitto Kohki symbol		
Nitrile rubber	NBR (SG)	-20°C to +80°C	Standard seal with excellent oil resistance.
Hydrogenated nitrile rubber	HNBR	-20°C to +120°C	Compared with the standard nitrile rubber, the seal material is more heat and weather resistant.
	HNBR (H708)	-20°C to +120°C	In addition to the above features, the seal material can also be used for refrigeration oil and refrigerant applications such as HFC-134a. (The seal material is employed only in SP-V CUPLA and PCV PIPE CUPLA.)
Fluoro rubber	FKM (X-100)	-20°C to +180°C	Excellent for heat, weather, and oil resistance. Applicable to wide range of applications.
Chloroprene rubber	CR (X-306)	-20°C to +80°C	Excellent weather resistance.
	CR (C308)	-20°C to +80°C	In addition to the above features, the seal material can also be used for refrigeration oil and refrigerant applications such as HFC-134a.
Ethylene-propylene rubber	EPDM (EPT)	-40°C to +150°C	Excellent resistance to steam and hot water, also excellent resistance to weather and ozone.
Perfluoroelastomer	P	0°C to +50°C	Excellent resistance to chemical and solvents.

Note: Even among rubber materials of the same category, the working temperature range differs depending upon the design of the CUPLA. For details, see the specifications of each CUPLA series. As for the Nitto Kohki symbol for rubber material, fluoro rubber is designated as "FKM" or "X-100" for example. The above are general features, but the seal resistance depends on fluid temperature, fluid concentration, and additives contained in the fluid.

Working Temperature Range

This shows the minimum and maximum working temperature range of the seal material used in the product. Continuous use at the minimum or maximum temperature is not recommended. Please contact us for consultation.

Valve Structure

Two-way shut-off		Automatic shut-off valves are mounted in both plug and socket. The valves prevent spill out of fluid from the lines on disconnection.	
Two-way shut-off (Spill Reduction)		"Two-way shut-off" with spill reduction design allows extremely little admixture of air on connection and minimizes fluid spill out on disconnection.	
One-way shut-off		This design prevents fluid outflow only from the socket side on disconnection. Also available are plugs with an automatic shut-off valve.	
Straight through		Shut-off valve is equipped neither in plug nor in socket. Fluid flows out from either side on disconnection.	

Suitability for Vacuum

Indicates if the CUPLA has necessary performance required for vacuum applications. (Note that the performance in connected state differs from that of disconnected state.)

Interchangeability

Indicates whether the plug or socket of different series, types or models can be connected with each other.

Maximum Tightening Torque, Tightening Torque Range










Considering the balance between possible leakage caused by loose fit and too much structural stress when a CUPLA is mounted on a workpiece, the appropriate screw-in torque value or range is suggested by the maker.

Flow Direction

The design of some couplings may restrict the fluid flow direction to one way only. Check the suggested direction before installing.









Guide for Selecting "NITTO KOHKI" Standard CUPLA

This chart will let you quickly select an appropriate CUPLA for your application. For technical data, please refer to the detailed information pages of each product, Seal Material Selection Table and Body Material Selection Table at the end of this catalog.

Applicable fluid		For Low Pressure (Air)							
Name		MICRO CUPLA	SMALL CUPLA	COMPACT CUPLA	CUBE CUPLA	SUPER CUPLA	HI CUPLA	HI CUPLA BL	HI CUPLA 200
Photo					 Choose from 5 colors  NEW				
Body material • Working pressure (MPa)	Brass	1.0	1.0	1.0			1.0		
	Stainless steel	1.0		1.0			1.5	1.5	
	Steel					1.0	1.5	1.5	1.5
	Plastic				1.0				
	Others					1.0			
Body surface treatment		Plated (Brass only)	Chrome plated	—	—	Chrome plated (Steel only)	Chrome plated (Steel only)	Chrome plated (Steel only)	Chrome plated
Size	1/8"	○	○	○	○	○	○	○	○
	1/4"		○			○	○	○	○
	5/16"								
	3/8"						○	○	○
	1/2"						○	○	○
	3/4"						○		
	1"						○		
	1 1/4"								
	1 1/2"								
	2"								
	2 1/2"								
	3"								
4"									
	Others	○	○	○	○	○		○	○
Working temperature range		-20°C to +80°C (NBR)	-20°C to +80°C (NBR)	-20°C to +180°C (FKM)	-20°C to +60°C (NBR)	-20°C to +80°C (NBR)	-20°C to +80°C (NBR)	-20°C to +80°C (NBR)	-20°C to +60°C (NBR)
Seal material		NBR, FKM	NBR	FKM, EPDM	NBR	NBR	NBR, FKM	NBR	NBR
Connection method	Manual			○			○	○	
	Push-to-connect	○	○		○	○			○
Valve structure	Two-way shut-off			○	○				
	Two-way shut-off (Non-Spill)								
	One-way shut-off	○	○		○	○	○	○	○
	Straight through				○				
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Guide for Selecting "NITTO KOHKI" Standard CUPLA

This chart will let you quickly select an appropriate CUPLA for your application. For technical data, please refer to the detailed information pages of each product, Seal Material Selection Table and Body Material Selection Table at the end of this catalog.

Applicable fluid		For Low Pressure (Air)							
Name		HI CUPLA for Connection to Braided Hoses	NUT CUPLA ROTARY NUT CUPLA	NUT CUPLA 200	LOCK CUPLA 200	HI CUPLA Two Way Type	FULL-BLOW CUPLA	PURGE HI CUPLA PVR	PURGE HI CUPLA
Photo									
Body material • Working pressure (MPa)	Brass	1.0							1.0
	Stainless steel								
	Steel	1.5	1.5	1.5	1.5	1.5			
	Plastic								
	Others						1.5	1.5	
Body surface treatment		Chrome plated (Steel only)	Chrome plated	Chrome plated	Chrome plated	Chrome plated	—	—	Chrome plated
Size	1/8"								
	1/4"				○	○	○		○
	5/16"								
	3/8"				○	○	○		○
	1/2"				○	○	○	○	○
	3/4"							○	○
	1"							○	
	1 1/4"								
	1 1/2"								
	2"								
	2 1/2"								
	3"								
4"									
Others	○	○	○	○		○			
Working temperature range		-20°C to +80°C (NBR)	-20°C to +60°C (NBR)	-20°C to +60°C (NBR)	-20°C to +60°C (NBR)	-20°C to +80°C (NBR)	-20°C to +60°C (NBR)	-20°C to +60°C (NBR)	-20°C to +60°C (NBR)
Seal material		NBR	NBR	NBR	NBR	NBR, FKM	NBR	NBR	NBR
Connection method	Manual	○	○			○			
	Push-to-connect			○	○		○	○	○
Valve structure	Two-way shut-off								
	Two-way shut-off (Non-Spill)								
	One-way shut-off	○	○	○	○	○	○	○	○
	Straight through								
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Guide for Selecting "NITTO KOHKI" Standard CUPLA

This chart will let you quickly select an appropriate CUPLA for your application. For technical data, please refer to the detailed information pages of each product, Seal Material Selection Table and Body Material Selection Table at the end of this catalog.

Applicable fluid		For Low Pressure (Air)							
Name		PURGE LINE CUPLA	ROTARY LINE CUPLA	LINE CUPLA 200T/L/S	ROTARY FULL-BLOW LINE CUPLA	HI CUPLA ACE	ROTARY PLUG	TWIST PLUG	PURGE PLUG
Photo									
Body material • Working pressure (MPa)	Brass	1.0							
	Stainless steel								
	Steel						1.5	1.0	1.0
	Plastic					1.0, 1.5			
	Others		1.5	1.5	1.5				
Body surface treatment		Chrome plated	Chrome plated	Chrome plated	—	—	Nickel plated	Nickel plated	Chrome plated
Size	1/8"							○	
	1/4"		○	○	○	○	○	○	○
	5/16"								
	3/8"					○	○	○	○
	1/2"	○	○	○	○				○
	3/4"								
	1"								
	1 1/4"								
	1 1/2"								
	2"								
	2 1/2"								
	3"								
4"									
	Others		○		○	○			○
Working temperature range		-20°C to +60°C (NBR)	-20°C to +60°C (NBR)	-20°C to +60°C (NBR)	-20°C to +60°C (NBR)	-20°C to +60°C (NBR)	-20°C to +80°C (NBR)	-20°C to +60°C (NBR)	-20°C to +60°C (NBR)
Seal material		NBR	NBR	NBR	NBR	NBR	NBR	NBR	NBR
Connection method	Manual		○						
	Push-to-connect	○		○	○	○			
Valve structure	Two-way shut-off								
	Two-way shut-off (Non-Spill)								
	One-way shut-off	○	○	○	○	○			
	Straight through								
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Guide for Selecting "NITTO KOHKI" Standard CUPLA

This chart will let you quickly select an appropriate CUPLA for your application. For technical data, please refer to the detailed information pages of each product, Seal Material Selection Table and Body Material Selection Table at the end of this catalog.

Applicable fluid		For Low Pressure (Air)				For Oxygen and Fuel Gas		For Low Pressure (Water)	
Name		ANTI-VIBRATION PLUG HOSE	DUSTER CUPLA	NK CUPLA HOSE	NK CUPLA COIL HOSE	MINI CUPLA	MINI CUPLA SUPER	MICRO CUPLA	SMALL CUPLA
Photo									
Body material • Working pressure (MPa)	Brass					0.7	0.7	1.0	1.0
	Stainless steel							1.0	
	Steel						0.7		
	Plastic								
	Others	1.5	1.0	1.0	0.7				
Body surface treatment		—	Chrome plated	Chrome plated (Plug only)	Chrome plated (Plug only)	—	Chrome plated	Plated (Brass only)	Chrome plated
Size	1/8"					○		○	○
	1/4"	○	○			○	○		○
	5/16"					○	○		
	3/8"	○	○			○	○		
	1/2"		○						
	3/4"								
	1"								
	1 1/4"								
	1 1/2"								
	2"								
	2 1/2"								
	3"								
4"									
	Others		○	○	○	○	○	○	○
Working temperature range		—	-20°C to +60°C (NBR)	-5°C to +60°C (NBR)	-5°C to +60°C (NBR)	-20°C to +80°C (NBR)	-20°C to +80°C (NBR)	-20°C to +80°C (NBR)	-20°C to +80°C (NBR)
Seal material		—	NBR	NBR	NBR	NBR	NBR	NBR, FKM	NBR
Connection method	Manual		○						
	Push-to-connect			○	○	○	○	○	○
Valve structure	Two-way shut-off								
	Two-way shut-off (Non-Spill)								
	One-way shut-off		○	○	○	○	○	○	○
	Straight through								
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Guide for Selecting "NITTO KOHKI" Standard CUPLA

This chart will let you quickly select an appropriate CUPLA for your application. For technical data, please refer to the detailed information pages of each product, Seal Material Selection Table and Body Material Selection Table at the end of this catalog.

Applicable fluid		For Low Pressure (Water)							
Name		COMPACT CUPLA	CUBE CUPLA	HI CUPLA	HI CUPLA ACE	MOLD CUPLA	MOLD CUPLA High Flow Type	FLOW METER	LEVER LOCK CUPLA
Photo			 Choose from 5 colors  NEW						
Body material • Working pressure (MPa)	Brass	1.0		1.0		1.0	1.0		
	Stainless steel	1.0		1.5					1.8, 1.6, 1.1
	Steel								
	Plastic		1.0		1.0, 1.5				0.5, 0.2
	Others						0.5		1.8, 1.1, 0.9, 0.7
Body surface treatment		—	—	—	—	—	—	—	—
Size	1/8"	○	○	○		○			
	1/4"			○	○	○	○		
	5/16"								
	3/8"			○	○	○	○	○	
	1/2"			○			○		
	3/4"			○					○
	1"			○					○
	1 1/4"								○
	1 1/2"								○
	2"								○
	2 1/2"								○
	3"								○
4"								○	
	Others	○	○		○	○			
Working temperature range		-20°C to +180°C (FKM)	-20°C to +60°C (NBR)	-20°C to +80°C (NBR)	-20°C to +60°C (NBR)	-20°C to +80°C (NBR)	-20°C to +80°C (NBR)	+20°C to +60°C (NBR)	-20°C to +80°C (NBR) +5°C to +50°C (PP body)
Seal material		FKM, EPDM	NBR	NBR, FKM	NBR	NBR, FKM	NBR, FKM	NBR	NBR, FKM, SI, EPDM
Connection method	Manual	○		○					○
	Push-to-connect		○		○	○	○		
Valve structure	Two-way shut-off	○	○						
	Two-way shut-off (Non-Spill)								
	One-way shut-off		○	○	○	○	○		
	Straight through		○			○	○		○
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Guide for Selecting "NITTO KOHKI" Standard CUPLA

This chart will let you quickly select an appropriate CUPLA for your application. For technical data, please refer to the detailed information pages of each product, Seal Material Selection Table and Body Material Selection Table at the end of this catalog.

Applicable fluid		For Medium Pressure / For Low Pressure				For Medium Pressure	For High Pressure		
Name		TSP CUPLA	TSP CUPLA with Ball Valve	SP CUPLA TYPE A	HOT WATER CUPLA HW Type	ZEROSPILL CUPLA	HSP CUPLA	HYPER HSP CUPLA	210 CUPLA
Photo									
Body material • Working pressure (MPa)	Brass	5.0, 3.0, 2.0, 1.5	1.0	5.0, 3.0, 2.0, 1.5	2.0	3.5			
	Stainless steel	7.5, 4.5, 3.0, 2.0		7.5, 4.5, 3.0, 2.0		3.5			
	Steel	7.5, 4.5, 3.0, 2.0		7.5, 4.5, 3.0, 2.0			20.6, 18.0, 14.0	20.6	20.6
	Plastic								
Others									
Body surface treatment		Nickel plated (Steel only)	—	Nickel plated (Steel only)	Nickel plated	—	Nickel plated	Nickel plated	Nickel plated
Size	1/8"	○		○					
	1/4"	○	○	○	○	○	○	○	○
	5/16"								
	3/8"	○	○	○	○	○	○	○	○
	1/2"	○	○	○	○	○	○	○	○
	3/4"	○	○	○		○	○	○	○
	1"	○	○	○		○	○	○	○
	1 1/4"	○		○			○		
	1 1/2"	○		○			○		
	2"	○		○			○		
	2 1/2"								
	Others	○							
Working temperature range		-20°C to +80°C (NBR)	-5°C to +120°C (FKM)	-20°C to +80°C (NBR)	-20°C to +180°C (FKM)	-20°C to +80°C (NBR)	-20°C to +80°C (NBR)	-20°C to +80°C (NBR)	-20°C to +80°C (NBR)
Seal material		NBR, FKM, EPDM	FKM	NBR, FKM, EPDM	FKM	NBR, FKM, EPDM	NBR, FKM	NBR	NBR, FKM
Connection method	Manual	○	○	○	○		○	○	○
	Push-to-connect					○			
Valve structure	Two-way shut-off			○	○		○	○	○
	Two-way shut-off (Non-Spill)					○			
	One-way shut-off		○						
	Straight through	○							
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Guide for Selecting "NITTO KOHKI" Standard CUPLA

This chart will let you quickly select an appropriate CUPLA for your application. For technical data, please refer to the detailed information pages of each product, Seal Material Selection Table and Body Material Selection Table at the end of this catalog.

Applicable fluid		For High Pressure							
Name		HSU CUPLA	S210 CUPLA	280 CUPLA	350 CUPLA	FLAT FACE CUPLA F35	FLAT FACE CUPLA FF	450B CUPLA	700R CUPLA
Photo									
Body material • Working pressure (MPa)	Brass								
	Stainless steel	21.0	20.6						
	Steel			31.5, 27.5	34.5	35	35	44.1	68.6
	Plastic								
	Others								
Body surface treatment		—	—	Bright chromate conversion coating	Nickel plated	Nickel plated	Nickel plated	Nickel plated	Nickel plated
Size	1/8"								
	1/4"	○	○	○	○	○			
	5/16"								
	3/8"	○	○	○	○	○	○	○	○
	1/2"	○	○	○	○	○	○	○	○
	3/4"	○	○	○	○	○	○		
	1"	○	○	○	○	○	○		
	1 1/4"				○				
	1 1/2"				○				
	2"								
	2 1/2"								
	3"								
	4"								
Others									
Working temperature range		-20°C to +120°C (HNBR)	-20°C to +180°C (FKM)	-20°C to +80°C (NBR)	-20°C to +180°C (FKM)	-20°C to +180°C (FKM)	-20°C to +80°C (NBR)	-20°C to +80°C (NBR)	-20°C to +80°C (NBR)
Seal material		HNBR	FKM, NBR	NBR	FKM, NBR	FKM, NBR	NBR	NBR, FKM	NBR, FKM
Connection method	Manual	○	○	○				○	○
	Push-to-connect				○	○	○		
Valve structure	Two-way shut-off	○	○	○				○	○
	Two-way shut-off (Non-Spill)				○	○	○		
	One-way shut-off								
	Straight through								
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Guide for Selecting "NITTO KOHKI" Standard CUPLA

This chart will let you quickly select an appropriate CUPLA for your application. For technical data, please refer to the detailed information pages of each product, Seal Material Selection Table and Body Material Selection Table at the end of this catalog.

Applicable fluid		For Multi-Port Connection (Manual)			For Multi-Port Connection (Automatic)				
Name		MULTI CUPLA MAM Type	MULTI CUPLA MAM-B Type	MULTI CUPLA MAM-A Type	MULTI CUPLA MAS Type	MULTI CUPLA MAT Type	MULTI CUPLA MALC-01 Type	MULTI CUPLA MALC-SP Type	MULTI CUPLA MALC-HSP Type
Photo									
Body material • Working pressure (MPa)	Brass	0.7	1.0	1.0			1.0		
	Stainless steel				7.0	7.0		7.5, 5.0, 1.5	
	Steel								25.0, 21.0
	Plastic								
Others									
Body surface treatment		Chrome plated	Nickel plated	Nickel plated	Nickel plated	Nickel plated	Nickel plated	Nickel plated	Nickel plated
Size	1/8"	○	○				○	○	○
	1/4"		○	○	○	○		○	○
	5/16"								
	3/8"			○	○	○		○	○
	1/2"			○	○	○		○	○
	3/4"				○	○		○	○
	1"				○	○		○	○
	1 1/4"								
	1 1/2"							○	
	2"								
	2 1/2"								
	3"								
4"									
Others							○	○	○
Working temperature range		-20°C to +60°C (NBR)	-20°C to +180°C (FKM)	-20°C to +180°C (FKM)	-20°C to +180°C (FKM)	-20°C to +180°C (FKM)	-20°C to +80°C (NBR)	-20°C to +180°C (FKM)	-20°C to +180°C (FKM)
Seal material		NBR	FKM	FKM	FKM	FKM	NBR	FKM	FKM
Connection method	Manual								
	Push-to-connect								
Valve structure	Two-way shut-off		○	○	○	○			
	Two-way shut-off (Non-Spill)						○	○	
	One-way shut-off	○					○		
	Straight through								
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Guide for Selecting "NITTO KOHKI" Standard CUPLA

This chart will let you quickly select an appropriate CUPLA for your application. For technical data, please refer to the detailed information pages of each product, Seal Material Selection Table and Body Material Selection Table at the end of this catalog.

Applicable fluid		For High Purity Chemicals						For Inert Gas and Vacuum	
Name		SEMICON CUPLA SP Type	SEMICON CUPLA SCS Type	SEMICON CUPLA SCY Type	SEMICON CUPLA SCT Type	SEMICON CUPLA SCAL Type	SEMICON CUPLA SCF Type	SP-V CUPLA	PCV PIPE CUPLA
Photo									
Body material • Working pressure (MPa)	Brass							5.0, 3.0	4.5
	Stainless steel	0.2	0.2	0.2				7.5, 4.5	
	Steel				0.2	0.2	0.2		
	Plastic								
Others									
Body surface treatment		Electropolished	Electropolished	Electropolished	—	—	—	—	—
Size	1/8"	○	○	○					
	1/4"	○	○	○	○	○		○	○
	5/16"								
	3/8"	○	○	○	○	○	○	○	○
	1/2"	○	○	○	○	○	○	○	
	3/4"	○	○	○	○	○		○	
	1"	○	○	○	○	○			
	1 1/4"								
	1 1/2"					○			
	2"								
	2 1/2"								
	3"								
4"									
Others							○		○
Working temperature range		0°C to +50°C (FKM)	0°C to +50°C (P)	0°C to +50°C (P)	+5°C to +50°C (FKM)	+5°C to +50°C (FKM)	+5°C to +50°C (FKM)	-20°C to +80°C (CR)	-20°C to +80°C (CR)
Seal material		FKM, EPDM, P, KL	P (O-ring for socket)	P, PTFE (Packing seal for socket)	FEP-coated FKM	P (O-ring for socket)	FEP-coated FKM	CR, FKM, HNBR	CR, FKM, HNBR
Connection method	Manual	○	○	○	○			○	○
	Push-to-connect					○	○		
Valve structure	Two-way shut-off	○	○	○	○		○	○	
	Two-way shut-off (Non-Spill)					○			
	One-way shut-off								
	Straight through								○
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Guide for Selecting "NITTO KOHKI" Standard CUPLA











This chart will let you quickly select an appropriate CUPLA for your application. For technical data, please refer to the detailed information pages of each product, Seal Material Selection Table and Body Material Selection Table at the end of this catalog.

Applicable fluid		For Paint	For Food
Name		PAINT CUPLA	HYGIENIC CUPLA Easy Wash Type
Photo			
Body material • Working pressure (MPa)	Brass		
	Stainless steel	1.0 (Plug)	1.0
	Steel		
	Plastic		
	Others	1.0 (Socket)	
Body surface treatment		—	Buff finish #400 (liquid contact part)
Size	1/8"		
	1/4"		
	5/16"		
	3/8"	○	
	1/2"		
	3/4"		
	1"		
	1 1/4"		
	1 1/2"		
	2"		
	2 1/2"		
	3"		
	4"		
Others		○	
Working temperature range		0°C to +50°C (PFA)	0°C to +110°C (SI)
Seal material		PFA	SI, FKM, EPDM
Connection method	Manual	○	
	Push-to-connect		○
Valve structure	Two-way shut-off		
	Two-way shut-off (Non-Spill)		
	One-way shut-off	○	
	Straight through		○
Detailed information page		139	141

Semi-standard CUPLA Series

Accessories

“Semi-standard CUPLA Series” are products with an already established record but are not standard stock items.

CUPLA Safety Mechanism		For Water		
<p>CUPLA with Single Lock 143 Page</p> <p>Accidental disconnection prevention mechanism</p> 	<p>TSP-HP CUPLA (for High Pressure) 144 Page</p> <p>High pressure and general purpose type</p>  <p>Valve structure: Straight through</p> <p>Working pressure : 9.0 MPa (92 kgf/cm²) Body material : Stainless steel Application : 1/4" to 1/2" Seal material : NBR, etc.</p>			
<p>CUPLA with Safety Lock 143 Page</p> <p>Accidental disconnection prevention mechanism</p> 				
		For Medium Pressure		
		<p>SP CUPLA Type A pv Type 147 Page</p> <p>Connectable with residual pressure With Purge Valve</p>  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 2.0 to 4.5 MPa (20 to 46 kgf/cm²) Body material : brass, Stainless steel Application : Rc 3/4 to Rc 1 1/2 Seal material : NBR</p>		
For Temperature Controllers				
<p>MYU CUPLA 144 Page</p> <p>For small bore piping (10 mm OD) for temperature control Applicable fluid : Water, gas, air</p>  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 1.0 MPa (10 kgf/cm²) Body material : Stainless steel, brass (Plated) Application : Please let us know the required sizes and end configurations. Seal material : NBR, EPDM, FKM</p>				
		For Low Pressure (air)		
<p>LITTLE CUPLA 144 Page</p> <p>For small bore piping (14 mm OD) for temperature control Applicable fluid : Water, gas, air</p>  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 1.5 MPa (15 kgf/cm²) Body material : Stainless steel Application : Please let us know the required sizes and end configurations. Seal material : NBR, EPDM, FKM</p>	<p>PLASTIC CUPLA BC Type 148 Page</p> <p>Valveless type for low pressure air piping</p>  <p>Valve structure: Straight through</p> <p>Working pressure : 0.07 MPa (0.7 kgf/cm²) Body material : Plastic Application : 1/4", 3/8" Seal material : NBR</p>			
<p>HIGH FLOW CUPLA 145 Page</p> <p>For piping to control temperatures Applicable fluid: Water, Heat transfer fluids</p>  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 1.0 MPa (10 kgf/cm²) Body material : Stainless steel, brass Application : 1/4" to 1/2" Seal material : EPDM, FKM</p>	<p>PLASTIC CUPLA BCC Type 148 Page</p> <p>Equipped with flow controller for low pressure air piping</p>  <p>Valve structure: One-way shut-off</p> <p>Working pressure : 0.07 MPa (0.7 kgf/cm²) Body material : Plastic Application : 3/8" Seal material : NBR</p>			
<p>HIGH FLOW CUPLA Bi Type 146 Page</p> <p>HIGH FLOW CUPLA with ferrule flange mount Applicable fluid: Water, Heat transfer fluids</p>  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 1.0 MPa (10 kgf/cm²) Body material : Stainless steel Application : 1/8" to 1/2" Seal material : EPDM, FKM</p>	<p>When placing your order</p> <p>Please select your appropriate combination from the column in each product page (on the right beside the product name) then decide the seal and body materials from the selection tables listed at the end of the catalog.</p>			











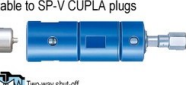













Accessories		
<p>DIP MOLD DUST CAP 149 Page</p> <p>DUST CAPS for HI CUPLA, SP CUPLA Type A, TSP CUPLA, ZEROSPILL CUPLA and HYDRAULIC CUPLA</p> 	<p>SLEEVE STOPPER 151 Page</p> <p>Sleeve Stopper for SP CUPLA Type A</p> 	
<p>SAFETY CAP 149 Page</p> <p>Metal caps for HI CUPLA Series, SP CUPLA Type A, TSP CUPLA and HYDRAULIC CUPLA • Semi-standard</p> 	<p>ACCESSORIES FOR O-RING MAINTENANCE 151 Page</p> <p>Jigs & grease for replacement of O-rings for couplings For SP CUPLA Type A, TSP CUPLA, HOT WATER CUPLA, ZEROSPILL CUPLA, HSP CUPLA, HSU CUPLA and HYGIENIC CUPLA</p> 	
<p>DUST CAP 150 Page</p> <p>Plastic cap for HI CUPLA Series</p> 	<p>RESIDUAL PRESSURE RELEASE JIG 152 Page</p> <p>Residual Pressure Release Jig for SP CUPLA and HYDRAULIC CUPLA</p> 	
<p>DUST CAP 150 Page</p> <p>Dedicated polyethylene cap for HYGIENIC CUPLA</p> 	<p>CUPLA ADAPTER for Braided Hose Connection 152 Page</p> <p>Mounts on CUPLA plug / socket with female thread</p> 	
<p>SLEEVE COVER 150 Page</p> <p>Plastic cover for HI CUPLA Series</p>  <p>White, Black, Blue, Red, Yellow</p>	<p>PURGE ADAPTER 153 Page</p> <p>Residual Pressure Purge Adapter for Hydraulic Lines</p> 	
<p>PROTECTION COVER 150 Page</p> <p>Plastic Cover for NUT CUPLA and FULL-BLOW CUPLA Nut Type</p> 	<p>CUPLA CONNECTING JIG 154 Page</p> <p>Connecting Jig for large CUPLA</p> 	
<p>DRAIN COCK / PRESSURE GAUGE 151 Page</p> <p>Accessories for Air Lines of HI CUPLA Series</p> 		

Special Made-to-Order CUPLA

Nitto Kohki is developing couplings with various functions and specifications to suit respective user's applications. The CUPLA products on this page are examples of such.

Important notice

Special made-to-order couplings are supplied based upon the specific instructions / specifications detailed by the customer. Once written acceptance of our final drawing / specifications of the CUPLA is received from the customer we formally accept this as a final order. It is essential, as the customer, to carry out a performance test of the special made-to-order CUPLA, in its specific usage conditions, for assurance of safety and adaptability to the hoses, pipes or devices used in the application. Use of the made-to-order CUPLA in any application or condition other than those specified in the design drawing, will exclude Nitto Kohki from any liabilities for any special, indirect or consequential loss or damages.

For Inert Gases	For Gases and Liquids (PIPE CUPLA Series)	For Inert Gas and Vacuum	For High Purity Chemicals	Automatic MULTI CUPLA
CHARGE CUPLA CS Type For industrial gases Connectable to SP-V CUPLA plugs  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 3.0 MPa (31 kgf/cm²) Body material : Stainless steel (part Aluminum alloy and Brass) Application : 1/4" Seal material : CR, HNBR</p>	PCB CUPLA For expanded pipes  <p>Valve structure: Straight through</p> <p>Working pressure : To be defined after consultation. Body material : Brass (part Stainless steel) Pipe sizes : To be complied with your requirements. Seal material : CR, FKM, NBR</p>	PCA CUPLA Pipes for high pressure line  <p>Valve structure: Straight through</p> <p>Working pressure : To be defined after consultation. Body material : Brass (part Stainless steel and Steel) Pipe sizes : To be complied with your requirements. Seal material : CR, FKM, NBR</p>	SEMICON CUPLA SML Type For semiconductor manufacturing equipment  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 0.2 MPa (2 kgf/cm²) Body material : Stainless steel Application : 1/8", 1/4" Seal material : FKM, EPDM, others</p>	MULTI CUPLA AMCS-FA Type Full automatic operation type  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : To be decided after consultation. Body material : To be decided after consultation. Application : To be decided after consultation. Seal material : To be decided after consultation.</p>
CHARGE CUPLA CNR Type For industrial gases Connectable to SP-V CUPLA plugs  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 4.5 MPa (46 kgf/cm²) Body material : Stainless steel (part Aluminum alloy and Brass) Application : 1/4", 3/8", 1/2" Seal material : CR, HNBR</p>	PCBW CUPLA For bulged pipes and spool pipes  <p>Valve structure: Straight through</p> <p>Working pressure : To be defined after consultation. Body material : Brass (part Stainless steel) Pipe sizes : To be complied with your requirements. Seal material : CR, FKM, NBR</p>	PCIO CUPLA For pipes that have inner locking system  <p>Valve structure: Straight through</p> <p>Working pressure : To be defined after consultation. Body material : Stainless steel (part Brass) Pipe sizes : To be complied with your requirements. Seal material : CR, FKM, NBR</p>	SEMICON CUPLA SCF Straight Type For semiconductor manufacturing equipment *see page 134  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 0.2 MPa (2 kgf/cm²) Body material : Fluorine contained resin Application : 3/8", 1/2" Seal material : FEP-coated FKM, Fluoro-resin</p>	MULTI CUPLA AMCS-SA Type Semi-automatic type  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : To be decided after consultation. Body material : To be decided after consultation. Application : To be decided after consultation. Seal material : To be decided after consultation.</p>
AUTO CUPLA AC Type For industrial gases Connectable to SP-V CUPLA plugs  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 3.0 MPa (31 kgf/cm²) Body material : Stainless steel (part Aluminum alloy and Brass) Application : 1/4", 3/8" Seal material : CR, HNBR, NBR</p>	PCP CUPLA For bulged pipes and spool pipes  <p>Valve structure: Straight through</p> <p>Working pressure : To be defined after consultation. Body material : POM (Polyacetal), part Stainless steel Pipe sizes : To be complied with your requirements. Seal material : CR, FKM, NBR</p>	PCD CUPLA For pipes of special shapes  <p>Valve structure: Straight through</p> <p>Working pressure : To be defined after consultation. Body material : Stainless steel (part Aluminum alloy) Pipe sizes : To be complied with your requirements. Seal material : CR, FKM, NBR</p>	For Water	
AUTO CUPLA ACV Type For industrial gases Connectable to SP-V CUPLA plugs  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 3.0 MPa (31 kgf/cm²) Body material : Stainless steel (part Aluminum alloy and Brass) Application : 1/4", 3/8" Seal material : CR, HNBR, NBR</p>	PCBL CUPLA For straight pipes  <p>Valve structure: Straight through</p> <p>Working pressure : To be defined after consultation. Body material : Stainless steel (part Brass) Pipe sizes : To be complied with your requirements. Seal material : CR, FKM, NBR</p>	AUTO CUPLA For copper pipes  <p>Valve structure: Straight through</p> <p>Working pressure : To be defined after consultation. Body material : Stainless steel (part Brass) Pipe sizes : To be complied with your requirements. Seal material : CR, FKM, NBR</p>	AIRLESS CUPLA For physical and chemical devices  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 3.0 MPa (31 kgf/cm²) Body material : Stainless steel Application : 1/4" to 1" Seal material : FKM, EPDM</p>	
AIRLESS CUPLA CNA Type For industrial gases  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 3.0 MPa (31 kgf/cm²) Body material : Stainless steel Application : 3/8" Seal material : CR, HNBR</p>	PCL CUPLA For straight pipes  <p>Valve structure: Straight through</p> <p>Working pressure : To be defined after consultation. Body material : Brass (part Steel) Pipe sizes : To be complied with your requirements. Seal material : CR, FKM, NBR</p>	SCREW CUPLA PCS Type For vacuum and pressure testing Please consult with us for larger sizes.  <p>Valve structure: Straight through</p> <p>Working pressure : 3.0 MPa (31 kgf/cm²) Body material : Steel (part Stainless steel) Application : 7/16" to 7/8" Seal material : CR, NBR, FKM</p>	For Manipulators Safety Equipment	
PCW CUPLA For straight pipes  <p>Valve structure: Straight through</p> <p>Working pressure : To be defined after consultation. Body material : Brass (part Stainless steel and Steel) Pipe sizes : To be complied with your requirements. Seal material : CR, FKM, NBR</p>	For Pneumatics and Hydraulics		MP CUPLA For manipulators  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : 5.0 MPa (51 kgf/cm²) Body material : Stainless steel Application : 1/4" to 1" Seal material : FKM, others</p>	AUTOMATIC DISCONNECTION CUPLA For fail safe system and automatic connection/disconnection applications  <p>Valve structure: Two-way shut-off</p> <p>Working pressure : To be decided after consultation. Body material : To be decided after consultation. Application : To be decided after consultation. Seal material : To be decided after consultation.</p>
SCREW CUPLA NCM Type For connecting pneumatic/hydraulic lines  <p>Valve structure: Straight through</p> <p>Working pressure : 14.0 MPa (142 kgf/cm²) Body material : Steel (Plated) Application : 1/8" to 1" Seal material : NBR</p>	When placing your order Please ask about the details, since the CUPLA products in this group are special made-to-order items.			

When placing your order
 Please ask about the details, since the CUPLA products in this group are special made-to-order items.

HI CUPLA Series Interchangeability

Following plugs and sockets can be connected with each other

Plug	
Type	Model
HI CUPLA	17PH, 20PH, 30PH, 40PH
	10PM, 20PM, 30PM, 40PM
	20PF, 30PF, 40PF
	20PFF
	60PC, 80PC, 100PC
90PN-BH	
NUT CUPLA	50PN (10PAH), 60PN (20PAH), 65PN
	80PN (30PAH), 85PN, 110PN (40PAH)
	50PNG, 65PNG, 85PNG
HI CUPLA ACE	20PH-PLA, 30PH-PLA
	20PM-PLA, 30PM-PLA
	50PN-PLA, 60PN-PLA, 65PN-PLA, 80PN-PLA, 85PN-PLA
	20PFF-PLA
	50PNG-PLA, 65PNG-PLA, 85PNG-PLA
ROTARY PLUG	RL-20PM, RL-30PM RL-20PFF
TWIST PLUG	TS-10PM, TS-20PM, TS-30PM TS-20PFF
PURGE PLUG	PV-20PH, PV-30PH, PV-40PH PV-65PN, PV-85PN
ANTI-VIBRATION PLUG HOSE	SHA-3-2R, SHA-3-3R
NK CUPLA HOSE	NKU-605B, NKU-610B, NKU-620B (65PNG)
	NKU-810B, NKU-820B (85PNG)
NK CUPLA COIL HOSE	NKC-503B, NKC-505B (50PNG)
	NKC-603B, NKC-605B (65PNG)
ROTARY LINE CUPLA	RT Type (Inlet Port)
LINE CUPLA 200	200T Type (Inlet Port)
ROTARY FULL-BLOW LINE CUPLA	FBH-RT Type (Inlet Port)
HI CUPLA ACE T TYPE	HA-T Type (Inlet Port)
ACCESSORIES FOR AIR LINES	DC-30PF, PG-10P
SUPER CUPLA	02S20P (End Configuration)

Can be connected with each other



Socket	
Model	Type
17SH, 20SH, 30SH, 40SH	HI CUPLA
10SM, 20SM, 30SM, 40SM	
20SF, 30SF, 40SF	
90SN-BH	HI CUPLA BL
20SH-BL, 30SH-BL, 40SH-BL	
20SM-BL, 30SM-BL, 40SM-BL	
20SF-BL, 30SF-BL, 40SF-BL	
65SN-BL, 80SN-BL, 85SN-BL	
TW20SH, TW30SH, TW40SH	HI CUPLA TW Type
TW20SM, TW30SM, TW40SM	
TW20SF, TW30SF, TW40SF	HI CUPLA 200
200-17SH, 200-20SH, 200-30SH, 200-40SH	
200-20SM, 200-30SM, 200-40SM	
200-20SF, 200-30SF, 200-40SF	
200-60SC, 200-80SC, 200-100SC	
FBH-20SH, FBH-30SH, FBH-40SH	FULL-BLOW CUPLA
FBH-20SM, FBH-30SM, FBH-40SM	
FBH-20SF, FBH-30SF, FBH-40SF	
FBH-65SN, FBH-80SN, FBH-85SN, FBH-110SN	NUT CUPLA
50SN (10SAH), 60SN (20SAH), 65SN	
80SN (30SAH), 85SN, 110SN (40SAH)	
200-50SN, 200-60SN, 200-65SN, 200-80SN	NUT CUPLA 200
200-85SN, 200-110SN	
200-50SNG, 200-65SNG, 200-85SNG	ROTARY NUT CUPLA
65SNR, 85SNR	
65SNRG, 85SNRG	DUSTER CUPLA
DCS-20PH, DCS-30PH, DCS-40PH	
DCS-65PNG, DCS-85PNG	LOCK CUPLA 200
L200-20SH, L200-30SH, L200-40SH	
L200-20SM, L200-30SM, L200-40SM	
L200-20SF, L200-30SF, L200-40SF	
L200-65SNRG, L200-85SNRG	
PV-20SM, PV-30SM, PV-40SM	PURGE HI CUPLA
RE-PV-30 (Outlet Port)	PURGE LINE CUPLA
RT Type (Outlet Port), RE Type (Outlet Port)	ROTARY LINE CUPLA
200T Type (Outlet Port), 200L Type (Outlet Port), 200S Type (Outlet Port)	LINE CUPLA 200
FBH-RE Type (Outlet Port), FBH-RT Type (Outlet Port)	ROTARY FULL-BLOW LINE CUPLA
HA-20SH, HA-30SH	HI CUPLA ACE
HA-20SM, HA-30SM, HA-50SN, HA-60SN	
HA-65SN, HA-80SN, HA-85SN	
HA-T Type (Outlet Port)	
HA-50SNG, HA-65SNG, HA-85SNG	
NKU-605B, NKU-610B, NKU-620B (HA-65SNG)	NK CUPLA HOSE
NKU-810B, NKU-820B (HA-85SNG)	
NKC-503B, NKC-505B (HA-50SNG)	NK CUPLA COIL HOSE
NKC-603B, NKC-605B (HA-65SNG)	

Not interchangeable

Plug	
Type	Model
HI CUPLA	400PH, 600PH, 800PH
	400PM, 600PM, 800PM
	400PF, 600PF, 800PF
LINE CUPLA 200	200L Type (Inlet Port)
	200S Type (Inlet Port)

Can be connected with each other



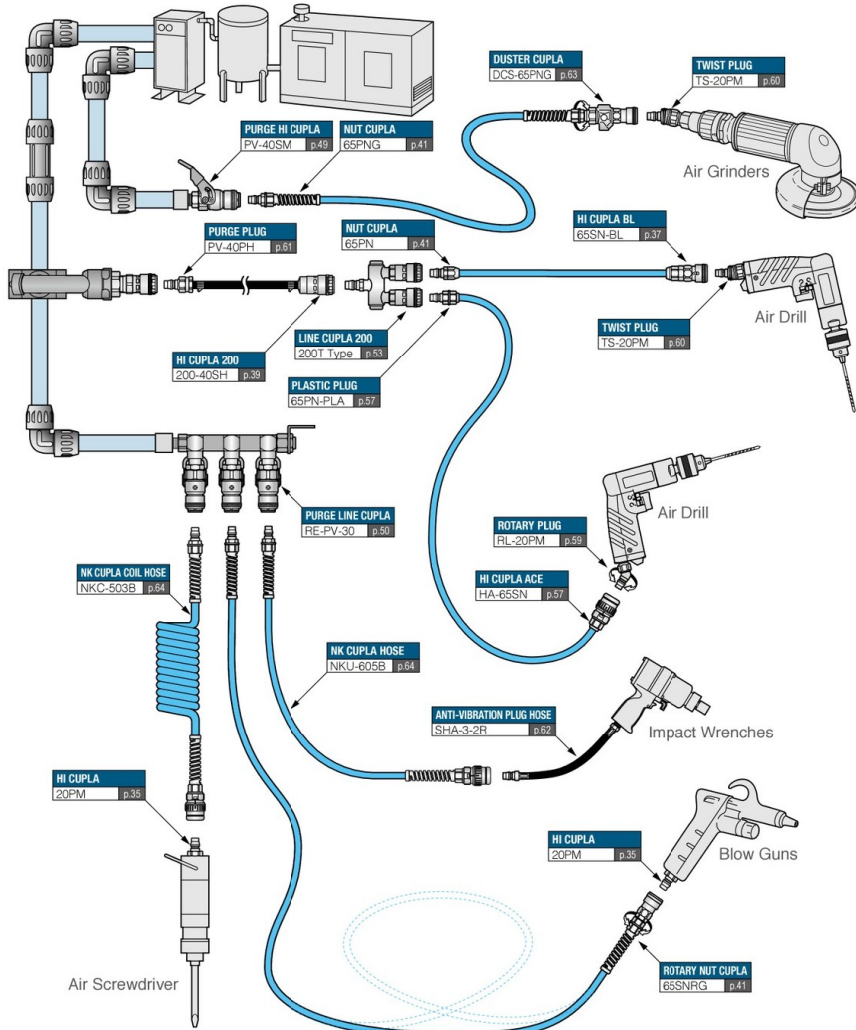
Socket	
Model	Type
400SH, 600SH, 800SH	HI CUPLA
400SM, 600SM, 800SM	
400SF, 600SF, 800SF	
PV-400SM, PV-600SM	PURGE HI CUPLA
PVR-400SH, PVR-600SH, PVR-800SH	PURGE HI CUPLA PVR Type
PVR-400SM, PVR-600SM, PVR-800SM	
PVR-400SF, PVR-600SF, PVR-800SF	

Standard CUPLA Series

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Examples of air line connections using HI CUPLA group models

Air distribution is one of the typical piping systems. Various HI CUPLA Series models meet all needs of air piping from main supply, relays in factories, pipe end connections to pneumatic tools, and those of air piping within equipment. The following sketch gives you some examples of air piping using HI CUPLA Series and may serve as a good reference in selecting appropriate CUPLA products.




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For Low Pressure

MICRO CUPLA


For piping in pneumatic control devices

Working pressure




1.0 MPa
(10 kgf/cm²)

Valve structure



One-way shut-off

Applicable fluids

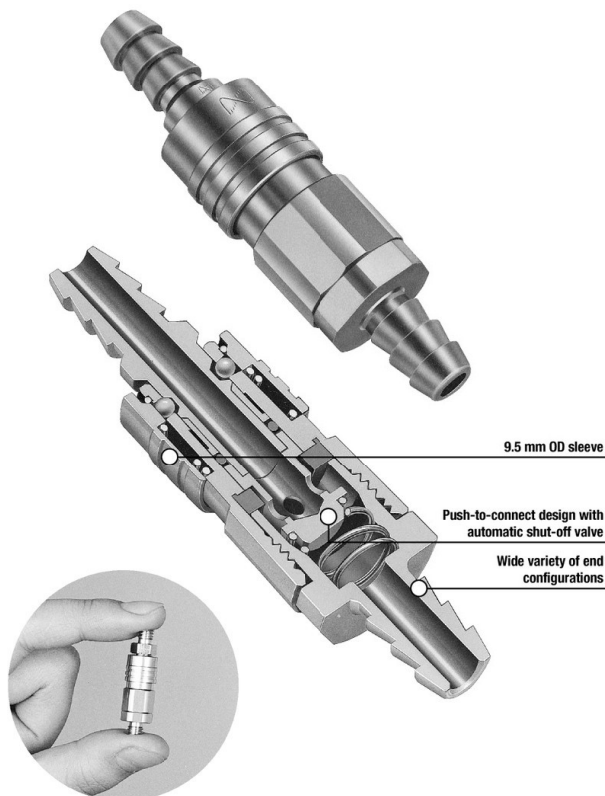


Air
Water (Tube Fitter type is unsuitable for water.)

Compact, lightweight CUPLA with only 9.5 mm outer diameter. Push-to-connect operation. Tube Fitter type for even easier tube insertion.

- Even though the valve is built in the socket, the sleeve outer diameter is confined to 9.5 mm.
- Push-to-connect design.
- Compact design for piping in narrow spaces.
- Plated brass and stainless steel bodies are available for excellent corrosion resistance.
- Available in various end configurations to satisfy a wide range of pneumatic applications.

Note: Fluid will flow out from the plug side when disconnected. Take necessary precaution if the fluid is water.



Specifications				
Body material	CUPLA : Brass (Plated), Stainless steel (SUS 304) Tube Fitter Part : Brass (Plated) , Plastic			
	Thread	1/8" , M5 x 0.8		
Size	Tube barb (Tube fitter)	Tube ID ø3, ø4		
		Polyurethane tube: Outside Dia. ø4 ± 0.1, ø6 ± 0.1		
		Polyamide tube: Outside Dia. ø4 ^{+0.05} _{-0.08} , ø6 ^{+0.05} _{-0.08}		
		Fluorine contained resin tube: Outside Dia. ø4 ± 0.05, ø6 ± 0.07		
Pressure unit	MPa	kgf/cm ²	bar	PSI
Working pressure	1.0	10	10	145
Seal material Working temperature range	Seal material	Mark	Working temperature range	Remarks
	Nitrile rubber	NBR (SG)	-20°C to +80°C	Standard material
	Fluoro rubber	FKM (X-100)	-20°C to +180°C	Made-to-order item(s)

* Above specifications apply only to CUPLA. Maximum working pressure and working temperature range may vary depending on tube materials you use with and the working temperature. CUPLA with Tube Fitter has NBR packing material only.

Maximum Tightening Torque			Nm {kgf·cm}
Size (Thread)	M5x0.8	R 1/8	
Torque	Brass	1.3 {13}	5 {51}
	Stainless steel		7 {71}

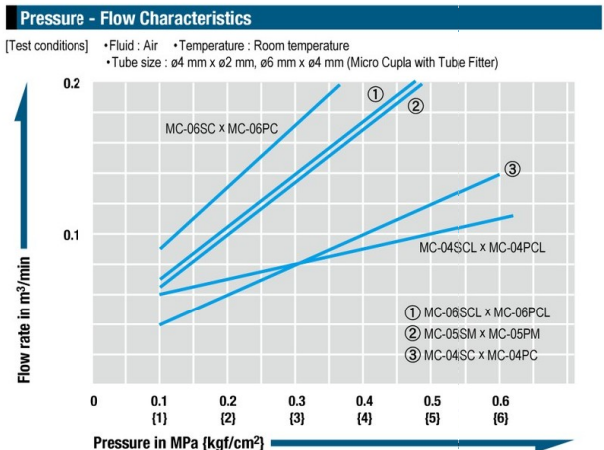
Flow Direction

Fluid flow can be bi-directional when socket and plug are connected.

Interchangeability
Sockets and plugs can be connected regardless of end configurations.

Minimum Cross-Sectional Area (mm ²)						
Model	MC-03SP	MC-04SP	MC-05SP	MC-10SP	Tube Fitter Type for 4 mm OD tube	Tube Fitter Type for 6 mm OD tube
Min. cross-sectional area	1.1	4.9	4.9	4.9	4.9	4.9

Suitability for Vacuum			53.0 kPa {400 mmHg}
Socket only	Plug only	When connected	
—	—	Operational	



Models and Dimensions

Plug PH type (Tube barb)

Model	Application (Tube)	Body material·Mass (g) Brass	Dimensions (mm)					
			L	C	A	øH	øT	øB
MC-03PH	3 mm ID	1.2	19	9.2	8	5.5	3.5	1.2
MC-04PH	4 mm ID	1.4	19	9.2	8	5.5	4.8	2.5

Socket SH type (Tube barb)

Model	Application (Tube)	Body material·Mass (g) Brass	Dimensions (mm)				
			L	øD	A	øT	øB
MC-03SH	3 mm ID	7	(27.5)	9.5	8	3.5	1.2
MC-04SH	4 mm ID	7.3	(27.5)	9.5	8	4.8	2.5

Plug PM type (Male thread)

Model	Application (Thread)	Body material·Mass (g) Brass	Dimensions (mm)					
			L	C	A	H(WAF)	T	øB
MC-05PM	M5 x 0.8	1.9	17	9.2	4.5	Hex.7	M5x0.8	2.5

Socket SM type (Male thread)

Model	Application (Thread)	Body material·Mass (g) Brass	Dimensions (mm)					
			L	øD	A	T	H(WAF)	øB
MC-05SM	M5 x 0.8	7.4	(24.5)	9.5	4.5	M5x0.8	Hex.9	2.5

Plug PM type (Male thread)

Model	Application (Thread)	Body material·Mass (g) Brass	Dimensions (mm)				
			L	C	A	H(WAF)	T
MC-10PM	Rc 1/8	9	26	9.2	Hex.11	R 1/8	2.5

Socket SM type (Male thread)

Model	Application (Thread)	Body material·Mass (g) Brass	Dimensions (mm)				
			L	øD	T	H(WAF)	øB
MC-10SM	Rc 1/8	13.1	(30)	9.5	R 1/8	Hex.11	3

Plug PHL type (Tube barb)

Model	Application (Tube)	Body material·Mass (g) Brass	Dimensions (mm)						
			L	C	A	B	E	øT	øBp
MC-04PHL	4 mm ID	9.4	(23.3)	9.2	8	(18.3)	18	4.8	2.5

Socket SHL type (Tube barb)

Model	Application (Tube)	Body material·Mass (g) Brass	Dimensions (mm)						
			L	C	E	A	øD	øT	øB
MC-04SHL	4 mm ID	14.8	(30.8)	(25.8)	18	8	9.5	4.8	2.5

Application Example

Air cylinders
Always fix tubes with hose clamps when using hose barb types.

Solenoid valves
Always fix tubes with hose clamps when using hose barb types.

Socket SHB type (For panel mounting)

* F and øJ are dimensions of panel.

Model	Application (Tube)	Body material·Mass (g) Brass	Dimensions (mm)								
			L	A	øD	øT	øB	HS(WAF)	øJ	H(WAF)	F
MC-04SHB	4 mm ID	11.5	(36)	8	9.5	4.8	2.5	Hex.11	7.1 ^{+0.3} ₀	Hex.9	1.2 to 3.5

Before use, please be sure to read "Safety Guide" described at the end of this book and "Instruction Sheet" that comes with the products.

MICRO CUPLA (Brass)

Models and Dimensions (MICRO CUPLA with Tube Fitter) WAF: WAF stands for width across flats.

Plug PC type (With Tube Fitter)

Model	Application (Tube)	Mass (g)	Dimensions (mm)			
			L	C	øT	øB
MC-04PC	4 mm OD	3	(21.7)	9.2	8	2.5
MC-06PC	6 mm OD	5	(25)	9.2	9.8	2.5

Socket SC type (With Tube Fitter)

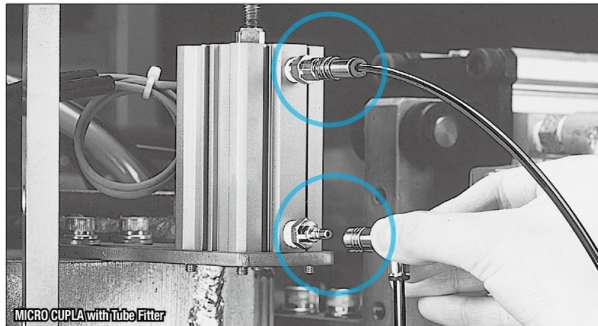
Model	Application (Tube)	Mass (g)	Dimensions (mm)			
			L	øD	C	øT
MC-04SC	4 mm OD	9	(31.5)	9.5	(11.8)	8
MC-06SC	6 mm OD	11.5	(33.5)	9.5	(12.5)	9.8

Plug PCL type (With L-shaped Tube Fitter)

Model	Application (Tube)	Mass (g)	Dimensions (mm)				
			L	C	E	øT	øB
MC-04PCL	4 mm OD	10	(23.3)	9.2	(18.3)	8	2.5
MC-06PCL	6 mm OD	13.5	(24.3)	9.2	(18.8)	9.8	2.5

Socket SCL type (With L-shaped Tube Fitter)

Model	Application (Tube)	Mass (g)	Dimensions (mm)				
			L	E	øD	C	øT
MC-04SCL	4 mm OD	16	(30.8)	(25.8)	9.5	(10)	8
MC-06SCL	6 mm OD	19	(31.8)	(26.3)	9.5	(12.5)	9.8



Socket SCB type (With Tube Fitter for panel mounting)

* T and øJ are dimensions of panel.

Model	Application (Tube)	Mass (g)	Dimensions (mm)							
			L	øD	øE	HS(WAF)	H(WAF)	T	øJ	
MC-04SCB	4 mm OD	15	(34)	9.5	16	Hex.13	Hex.13	3.5 or less	10.5 ^{+0.3} ₀	
MC-06SCB	6 mm OD	18.5	(36)	9.5	18	Hex.15	Hex.15	3.5 or less	12.5 ^{+0.3} ₀	

Models and Dimensions (MICRO LINE CUPLA) WAF: WAF stands for width across flats.

Socket MC-03 type (MICRO LINE CUPLA with three branch ports)

Mass: 65 g
• The branch body is made of aluminum alloy.

MC-05SM (3 pcs.)

3.2 mm dia. through hole x 4 pcs.

Dimensions (mm)

Socket MC-05 type (MICRO LINE CUPLA with 5 branch ports)

Mass: 101 g
• The branch body is made of aluminum alloy.

MC-05SM (5 pcs.)

3.2 mm dia. through hole x 4 pcs.

Dimensions (mm)

Socket MC-10 type (MICRO LINE CUPLA with 10 branch ports)

Mass: 187 g
• The branch body is made of aluminum alloy.

MC-05SM (10 pcs.)

3.2 mm dia. through hole x 4 pcs.

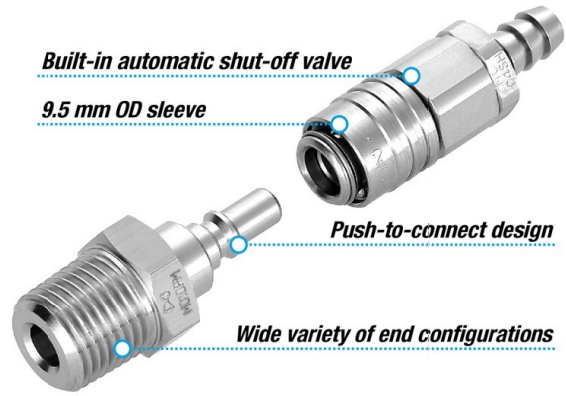
Dimensions (mm)

Before use, please be sure to read "Safety Guide" described at the end of this book and "Instruction Sheet" that comes with the products.

MICRO CUPLA

Stainless Steel Models

Highly Corrosion-resistant
Stainless Steel MICRO CUPLA



Models and Dimensions (Stainless Steel) WAF: WAF stands for width across flats.

Plug PH type (Hose barb)

Model	Application (Tube)	Body material*Mass (g)	Dimensions (mm)					
			L	C	A	øH	øT	øB
MC-04PH	4 mm ID	1.3	19	9.2	8	5.5	4.8	2.5

Socket SH type (Hose barb)

Model	Application (Tube)	Body material*Mass (g)	Dimensions (mm)				
			L	øD	A	øT	øB
MC-04SH	4 mm ID	6.7	(27.5)	9.5	8	4.8	2.5

Plug PM type (Male thread)

Model	Application (Thread)	Body material*Mass (g)	Dimensions (mm)					
			L	C	A	H(WAF)	T	øB
MC-05PM	M5 x 0.8	2.2	17	9.2	4.5	Hex.8	M5x0.8	2.5

Socket SM type (Male thread)

Model	Application (Thread)	Body material*Mass (g)	Dimensions (mm)					
			L	øD	A	T	H(WAF)	øB
MC-05SM	M5 x 0.8	6.8	(24.5)	9.5	4.5	M5x0.8	Hex.9	2.5

Plug PM type (Male thread)

Model	Application (Thread)	Body material*Mass (g)	Dimensions (mm)					
			L	C	H(WAF)	T	øB	
MC-10PM	Rc 1/8	8.1	26	9.2	Hex.11	R 1/8	2.5	

Socket SM type (Male thread)

Model	Application (Thread)	Body material*Mass (g)	Dimensions (mm)					
			L	øD	T	H(WAF)	øB	
MC-10SM	Rc 1/8	12.1	(30)	9.5	R 1/8	Hex.11	3	

Plug PHL type (Hose barb)

Model	Application (Tube)	Body material*Mass (g)	Dimensions (mm)						
			L	C	A	B	E	øT	øBp
MC-04PHL	4 mm ID	9	(23.3)	9.2	8	(18.3)	18	4.8	2.5

Socket SHL type (Hose barb)

Model	Application (Tube)	Body material*Mass (g)	Dimensions (mm)						
			L	C	E	A	øD	øT	øB
MC-04SHL	4 mm ID	13.6	(30.8)	(25.8)	18	8	9.5	4.8	2.5

Socket SHB type (For panel mounting)

* F and øJ are dimensions of panel.

Model	Application (Tube)	Body material*Mass (g)	Dimensions (mm)								
			L	A	øD	øT	øB	Hs(WAF)	øJ	H(WAF)	F
MC-04SHB	4 mm ID	10.6	(36)	8	9.5	4.8	2.5	Hex.11	7.1 ^{+0.3} ₀	Hex.9	1.2 to 3.5


Before use, please be sure to read "Safety Guide" described at the end of this book and "Installation Sheet" that comes with the products.

For Low Pressure

SMALL CUPLA


Lightweight and compact for use on air lines and scientific equipment

Working pressure




1.0 MPa
(10 kgf/cm²)

Valve structure



One-way shut-off

Applicable fluids

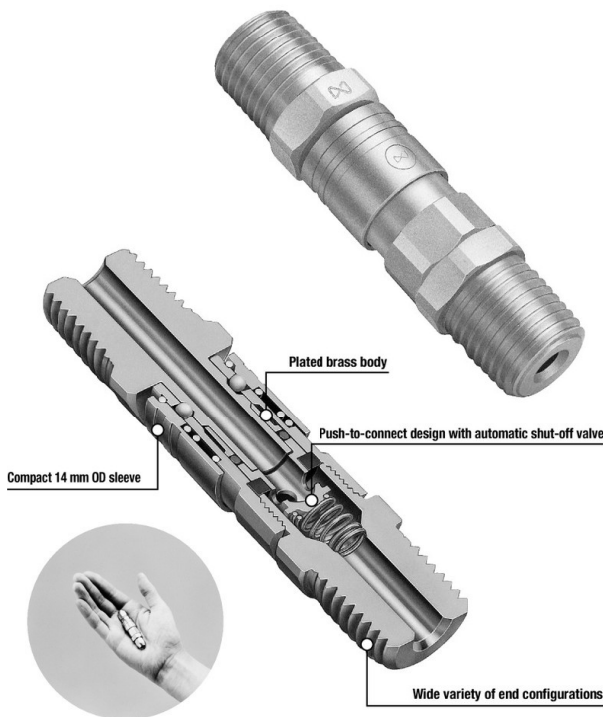


Air
Water (Tube Fitter type is unsuitable for water.)

Lightweight and compact push-to-connect operation.
Responding to requirements of modular combinations.

- Compact socket with built-in valve and 14 mm OD sleeve. Suits applications calling for compact and modular components.
- Just push in the plug to the socket for connection by easy one hand operation.
- Plated brass for corrosion resistance adopted for the body. Stable performance for long life.
- A wide line-up of end configurations (female and male threads, hose barbs, manifolds) enables suitability with a wide range of piping applications such as pneumatic, scientific and medical equipment.
- Also available with quick connect/disconnect Tube Fitter type.

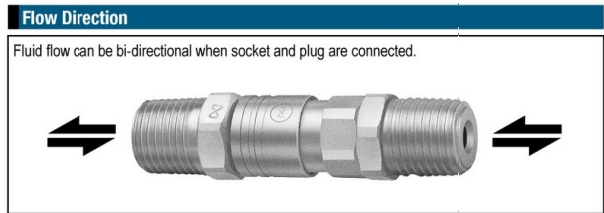
Note: Fluid will flow out from the plug side when disconnected. Take necessary precaution if the fluid is water.



Specifications					
Body material	CUPLA : Brass (Chrome plated) Tube Fitter Part : Brass (Nickel plated) , Plastic				
Size	Thread	1/8", 1/4"			
	Hose barb	Polyamide hose: $\phi 4 \times \phi 6, \phi 4.5 \times \phi 6$ Urethane hose: $\phi 4 \times \phi 6$			
	Tube barb (Tube fitter)	Polyurethane tube: Outside Dia. $\phi 6 \pm 0.1, \phi 8 \pm 0.15$ Polyamide tube: Outside Dia. $\phi 6^{+0.05}_{-0.08}, \phi 8^{+0.05}_{-0.1}$ Fluorine contained resin tube: Outside Dia. $\phi 6 \pm 0.07, \phi 8 \pm 0.07$			
Pressure unit	MPa	kgf/cm ²	bar	PSI	
Working pressure	1.0	10	10	145	
Seal material	Nitrile rubber	Mark	NBR (SG)	Working temperature range	-20°C to +80°C
Working temperature range	Standard material				

* Above specifications apply only to CUPLA. Maximum working pressure and working temperature range may vary depending on tube materials you use with and the working temperature.

Maximum Tightening Torque		Nm {kgf-cm}	
Size (Thread)	1/8"	1/4"	PN • SN Type
Torque	5 {51}	9 {92}	5 {51}



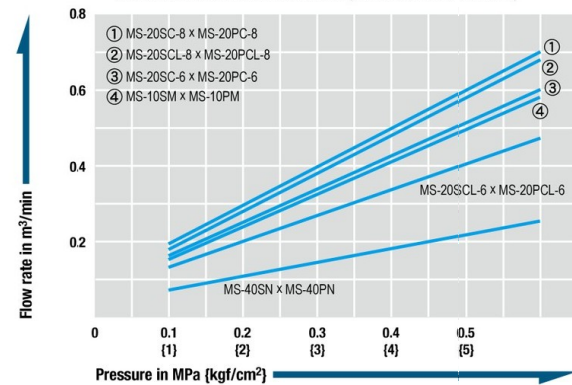
Interchangeability
 Sockets and plugs can be connected regardless of end configurations.

Minimum Cross-Sectional Area (mm ²)						
Model	MS-10SM x MS-10PM	MS-20SM x MS-20PM	MS-40SN x MS-40PN	MS-45SN x MS-45PN	Tube Fitter Type for 6 mm OD tube	Tube Fitter Type for 8 mm OD tube
Minimum cross-sectional area	12.5	12.5	4.9	7	12.5	12.5

Suitability for Vacuum 53.0 kPa {400 mmHg}		
Socket only	Plug only	When connected
—	—	Operational

Pressure - Flow Characteristics

[Test conditions] • Fluid : Air • Temperature : Room temperature
 • Tube size : $\phi 6 \text{ mm} \times \phi 4 \text{ mm}, \phi 8 \text{ mm} \times \phi 6 \text{ mm}$ (SMALL CUPLA with Tube Fitter)



Models and Dimensions

Plug PN type (For connection to hose)

Model	Application (Hose)	Mass (g)	Dimensions (mm)					
			L	C	øD	H1(WAF)	H2(WAF)	øB
MS-40PN	ø4 mm x ø6 mm Polyamide	10.5	(31)	15.2	11	Hex.10	Hex.10	2.5
MS-45PN	ø4.5 mm x ø6 mm Polyamide ø4 mm x ø6 mm Polyurethane	11	(31)	15.2	11	Hex.10	Hex.10	3

Socket SN type (For connection to hose)

Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			L	H1(WAF)	H2(WAF)	øD	øB
MS-40SN	ø4 mm x ø6 mm Polyamide	26.5	(40.8)	Hex.10	Hex.12	14	2.5
MS-45SN	ø4.5 mm x ø6 mm Polyamide ø4 mm x ø6 mm Polyurethane	27.0	(40.8)	Hex.10	Hex.12	14	3

Plug PM type (Male thread)

Model	Application (Thread)	Mass (g)	Dimensions (mm)					
			L	øD	C	H(WAF)	T	øB
MS-10PM	Rc 1/8	9	28.5	12	15.2	Hex.11	R 1/8	4
MS-20PM	Rc 1/4	19.5	32.5	15.2	15.2	Hex.14	R 1/4	4

Socket SM type (Male thread)

Model	Application (Thread)	Mass (g)	Dimensions (mm)					
			L	H(WAF)	T	øD	øE	øB
MS-10SM	Rc 1/8	24	(36.8)	Hex.12	R 1/8	14	13.2	4
MS-20SM	Rc 1/4	34	(40.8)	Hex.14	R 1/4	14	15.2	4

Plug PF type (Female thread)

Model	Application (Thread)	Mass (g)	Dimensions (mm)					
			L	øD	C	H(WAF)	T	øB
MS-10PF	R 1/8	11	27	14	15.2	Hex.13	Rc 1/8	4

Socket SF type (Female thread)

Model	Application (Thread)	Mass (g)	Dimensions (mm)				
			L	H(WAF)	T	øD	øB
MS-10SF	R 1/8	29.5	(38.8)	Hex.13	Rc 1/8	14	4

Plug PC type (Tube Fitter)

Model	Application (Tube)	Mass (g)	Dimensions (mm)					
			L	C	øE	H(WAF)	øT	øB
MS-20PC-6	6 mm OD	26.5	(40.5)	15.2	17.5	Hex.16	10.3	4
MS-20PC-8	8 mm OD	31	(47.5)	15.2	17.5	Hex.16	13.5	4

Socket SC type (Tube Fitter)

Model	Application (Tube)	Mass (g)	Dimensions (mm)				
			L	øD	øE	H(WAF)	øT
MS-20SC-6	6 mm OD	46	(56.3)	14	17.5	Hex.16	10.3
MS-20SC-8	8 mm OD	50.5	(60.8)	14	17.5	Hex.16	13.5

Plug PCL type (L-shaped Tube Fitter)

Model	Application (Tube)	Mass (g)	Dimensions (mm)					
			L	C	E	H(WAF)	øT	øB
MS-20PCL-6	6 mm OD	27.5	(43)	15.2	(24.8)	Hex.16	10.5	4
MS-20PCL-8	8 mm OD	32	(46.5)	15.2	(31.8)	Hex.16	13.5	4

Socket SCL type (L-shaped Tube Fitter)

Model	Application (Tube)	Mass (g)	Dimensions (mm)				
			L	øD	C	H(WAF)	øT
MS-20SCL-6	6 mm OD	47.5	(56.8)	14	(24.8)	Hex.16	10.5
MS-20SCL-8	8 mm OD	49.5	(59.8)	14	(31.8)	Hex.16	13.5

Socket MS-5 type (SMALL LINE CUPLA with 5 branch ports)

• The branch body is made of aluminum alloy.

Mass : 238 g
Dimensions (mm)

Socket SCB type (Tube Fitter for panel mounting)

• T and øJ are dimensions of panel.

Model	Application (Tube)	Mass (g)	Dimensions (mm)						
			L	øD	øC	Hs(WAF)	H(WAF)	T	øJ
MS-20SCB-6	6 mm OD	57.5	(61.3)	14	18	Hex.17	Hex.15	7 or less	12.5 ^{+0.3}
MS-20SCB-8	8 mm OD	58.5	(62.8)	14	21	Hex.17	Hex.18	8 or less	15.5 ^{+0.3}


Before use, please be sure to read "Safety Guide" described at the end of this book and "Instruction Sheet" that comes with the products.

For Low Pressure

COMPACT CUPLA


Small multipurpose type for low pressure lines

Working pressure




1.0 MPa
{10 kgf/cm²}

Valve structure



Two-way shut-off

Applicable fluids



Air Water

Compact 17.5 mm outer diameter, yet socket and plug have built-in automatic shut-off valves.

- Both socket and plug have built-in automatic shut-off valves.
- Compact size with maximum outer diameter 17.5 mm.
- For small bore piping from temperature control piping to scientific equipment.
- Body materials in stainless steel (SUS304) or brass, excellent in corrosion resistance.
- Four types of end configuration enable suitability with a wide range of piping applications.




Specifications				
Body material	Brass, Stainless steel (SUS 304)			
Size	Thread	1/8"		
	Tube barb	Polyamide tube : $\phi 4 \times \phi 6, \phi 6 \times \phi 8$ Polyolefin tube : $\phi 4 \times \phi 6, \phi 6 \times \phi 8$ Fluorine contained resin tube : $\phi 4 \times \phi 6, \phi 6 \times \phi 8$		
Pressure unit	MPa	kgf/cm ²	bar	PSI
Working pressure	1.0	10	10	145
Seal material	Seal material	Mark	Working temperature range	Remarks
	Fluoro rubber	FKM	-20°C to +180°C	Standard material
Working temperature range	Ethylene-propylene rubber	EPDM	-40°C to +150°C	Available on request

Note: Maximum working pressure and working temperature range of nut type depend on the tube material and its dimensional tolerance.

Maximum Tightening Torque		Nm (kgf·cm)	
Size (Thread)	1/8"	Tube barb	
Torque	Brass	5 {51}	5 {51}
	Stainless steel	9 {92}	7 {71}

Flow Direction

Fluid flow can be bi-directional when socket and plug are connected.



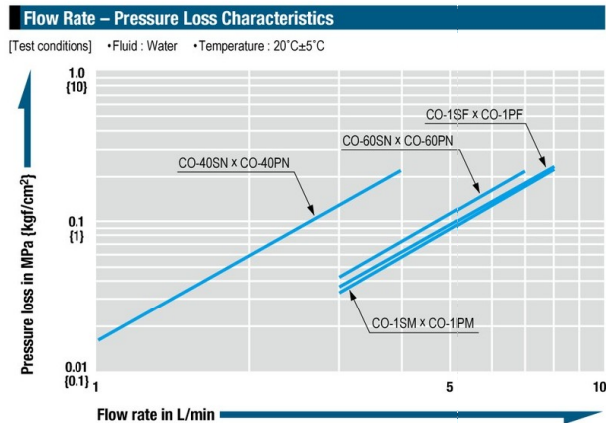
Interchangeability
Sockets and plugs can be connected regardless of end configurations.

Minimum Cross-Sectional Area (mm ²)				
Model	CO-1SM x CO-1PM	CO-1SF x CO-1PF	CO-40SN x CO-40PN	CO-60SN x CO-60PN
Minimum cross-sectional area	8.8	8.8	4.9	8.8

Suitability for Vacuum 1.3 x 10 ⁻¹ Pa {1 x 10 ⁻³ mmHg}		
Socket only	Plug only	When connected
—	—	Operational

Admixture of Air on Connection <small>May vary depending upon the usage conditions.</small> (mL)	
Volume of air admixture	0.34

Volume of Spillage per Disconnection <small>May vary depending upon the usage conditions.</small> (mL)	
Volume of spillage	0.23



Models and Dimensions

Plug PM type (Male thread)

Model	Application (Thread)	Body material, Mass (g)		Dimensions (mm)				
		Brass	Stainless steel	L	øD	H (WAF)	T	øB
CO-1PM	Rc 1/8	20	19	(36)	15.5	Hex.14	R 1/8	5.5

Socket SM type (Male thread)

Model	Application (Thread)	Body material, Mass (g)		Dimensions (mm)				
		Brass	Stainless steel	L	øD	H (WAF)	T	øB
CO-1SM	Rc 1/8	34	32	(38)	17.5	Hex.14	R 1/8	5.5

Plug PF type (Female thread)

Model	Application (Thread)	Body material, Mass (g)		Dimensions (mm)			
		Brass	Stainless steel	L	øD	H (WAF)	T
CO-1PF	R 1/8	25	23	(36)	15.5	Hex.14	Rc 1/8

Socket SF type (Female thread)

Model	Application (Thread)	Body material, Mass (g)		Dimensions (mm)			
		Brass	Stainless steel	L	øD	H (WAF)	T
CO-1SF	R 1/8	39	36	(38)	17.5	Hex.14	Rc 1/8

Plug PN type (For connection to tube)

Model	Application (Tube)	Body material, Mass (g)		Dimensions (mm)				
		Brass	Stainless steel	L	øD	H1 (WAF)	H2 (WAF)	øB
CO-40PN	ø4 x ø6	23	22	(38.5)	15.5	Hex.14	Hex.10	2.5
CO-60PN	ø6 x ø8	25	24	(37.5)	15.5	Hex.14	Hex.13	4.2

Socket SN type (For connection to tube)

Model	Application (Tube)	Body material, Mass (g)		Dimensions (mm)				
		Brass	Stainless steel	L	øD	H1 (WAF)	H2 (WAF)	øB
CO-40SN	ø4 x ø6	38	35	(40.5)	17.5	Hex.14	Hex.10	2.5
CO-60SN	ø6 x ø8	40	37	(39.5)	17.5	Hex.14	Hex.13	4.2

No difference in dimensions of brass and stainless steel CUPLA

Application Example

For branch piping

For branch piping

Built-in automatic shut-off valve

17.5 mm OD sleeve

Built-in automatic shut-off valve

Before use, please be sure to read "Safety Guide" described at the end of this book and "Instruction Sheet" that comes with the products.

For Low Pressure

CUBE CUPLA

Small and lightweight coupling for air supply lines.

Working pressure

1.0 MPa
(10 kgf/cm²)

Valve structure

Two-way shut-off

One-way shut-off

Straight through

Applicable fluids

Air

Water

Both socket and plug have built-in valve types and valveless types. Simple one action for connection or disconnection. Lightweight plastic coupling.

- In all five color variations to prevent piping mistakes.
- Ultra-lightweight, made of polyacetal resin. Compact design for space saving.
- Just push plug into socket for connection. Simply press the button on the socket for disconnection.
- Two-way shut-off type with valve on both sides and straight through type with low pressure loss are available.
- L type plug ideal for piping in narrow spaces are available.
- Socket and plug cannot be disconnected unless two buttons on the socket are pressed simultaneously.

NEW

L type plug *Newly added*

Choose from 5 colors

Blue
Yellow
Pink
Green
Ivory

See page 3 for the colors

Push the buttons for quick disconnection

Push button for disconnection

Simple operation to push the buttons on the socket.

Specifications

Body material	Polyacetal resin (POM)			
Size	4 mm and 6 mm ID tube, 1/8"			
Pressure unit	MPa	kgf/cm ²	bar	PSI
Working pressure	1.0	10	10	145
Seal material	Nitrile rubber	NBR (SG)	Working temperature range	Remarks
Working temperature range			-20°C to +60°C	Standard material

Tightening Torque Range Nm (kgf·cm)

Size (Thread)	R 1/8
Torque	0.9 to 1.1 {9.2 to 11}

Flow Direction

Fluid flow can be bi-directional when socket and plug are connected.

Interchangeability

Sockets and plugs can be connected regardless of end configurations. *Do not use in the combination of valved sockets and valveless plugs. The valve in the socket will not open and the fluid will not flow.

Connection capability Select the combination of models suitable to your applications

Connection capability	Plug	
	With	Without
Socket	With	Not connectable
	Without	Not connectable

Two-way shut-off

One-way shut-off

Straight through

Note: When disconnected, the fluid from the valveless side will flow out. Take care if the fluid is water.

Minimum Cross-Sectional Area (-VL means Valve less type) (mm²)

Model Plug / Socket	SPC-04SH	SPC-06SH	SPC-10SM	SPC-04SH-VL	SPC-06SH-VL	SPC-10SM-VL
SPC-04PH/PHB/PHL	5	5	5	5	5	5
SPC-06PH/PHB/PHL	5	8.6	8.6	5	8.6	8.6
SPC-10PM	5	8.6	8.6	5	8.6	8.6
SPC-04PH-VL/PHB-VL/PHL-VL	-	-	-	5	5	5
SPC-06PH-VL/PHB-VL	-	-	-	5	10.2	10.2
SPC-06PHL-VL	-	-	-	5	10.2	12.6
SPC-10PM-VL	-	-	-	5	10.2	16.6

Suitability for Vacuum 53.0 kPa {400 mmHg}

Socket only	Plug only	When connected
-	-	Operational

Admixture of Air on Connection (mL)

Volume of air admixture	0.60 (Built-in valve type only)
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Volume of Spillage per Disconnection (mL)

Volume of spillage	0.51 (Built-in valve type only)
--------------------	---------------------------------

Pressure - Flow Characteristics (The fluid flow will not differ by body color)

[Test conditions] *Fluid : Air *Temperature : Room temperature

