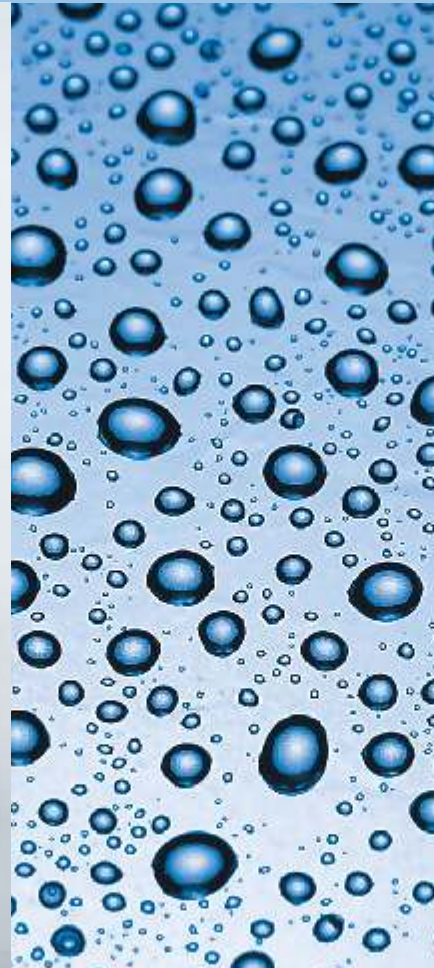


QUICK CONNECTIVE PIPE CLAMP



NEW-MACHINE CO., LTD. TOKYO-JAPAN



Catalog No. EC3-1

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Coupling / Pipe Clamp Selection Method

Check the following five items to select the right coupling for your application requirement.

(1) Fluid Type

Check the application fluid Air, Water, Oil etc.

Example :

Air Application - UNIC Series

Water Application - YSP, NSP Series

Select the coupling with body, packing, and O-ring material to suit the fluid type.

We provide different body materials and packing materials to suit various types of fluids.

(2) Fluid Pressure

Couplings, Pipe Clamps have different pressure resistance to suit fluid application requirements. Select a coupling with pressure resistance to suit fluid pressure.

Example : Pressure 20.6 MPa (210 kgf/cm²) SPH-050 Series

(3) Fluid Temperature

Fluid working temperature is important to select O-ring and packing material. There are different packing materials to suit different fluid working temperature.

Example : Nitrogen Butadiene Rubber is used for fluid working temperature from -20°C to + 80°C

(4) Size, Connection Type, Valve Structure and Body Material

- a. **Size:** Select suitable size 1/8"~2", (Diameter 3.18 mm to 31.75 mm)
- b. **Connection Type:** Male / Female thread, Hose nipple, Nut, Plug
- c. **Valve structure:** Select from different valve structures Two-way shut-off, One-way shut-off or Straight through types
- d. **Body Material:** Select body material brass, stainless steel to suit requirements

(5) Working Environment

Check the working environment such as temperature, dust, and vibrations etc. while choosing coupling for safe operation

Example : Avoid unnecessary vibrations, impacts and operating under dirty, dust environment.

Precaution

Wrong selection of the coupling could cause trouble to the operation system. Select the coupling by checking operating conditions, suitability to the system, operating conditions, temperatures, fluids etc.

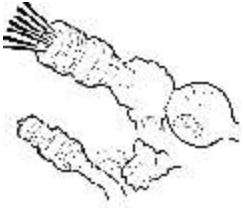
Manufacturer is not responsible for wrong selection of products.

Precaution Notes on Using Couplings

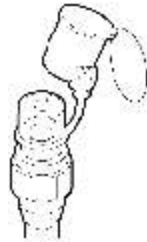
Read the precaution notes before operating the coupling

Precautions for Couplings usage :

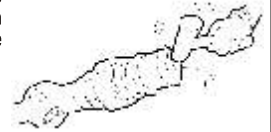
- Don't connect/disconnect any external tools when pressure is applied. It may cause damage
- Don't leave the socket and plug disconnected when pressure is applied.



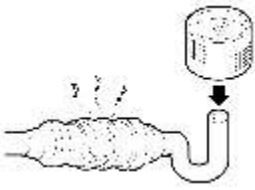
- Don't use couplings where metal dust, debris may enter causing damage to the sealing. This may cause damage or leakage.
- Couplings shipped with dust protection caps should never keep open. Install the dust cap when couplings are disconnected.



- Don't use tools like hammer, impact device causing extraordinary vibrations. This will reduce endurance. External pressure and impact can cause dangerous situation.
- Don't hit tip of the valve to exhaust the residual pressure. Valve structure may malfunction for Open / Close operation.



- Remove the foreign particles from the fluid flowing through the coupling using filter. Accumulation of foreign particles may cause malfunction of valve open/close operation.



- Never use the coupling instead of rotating devices like rotary joints and swivel joints.



- Don't tighten the nut fittings, screw type fittings in excess of the maximum torque. Excess torque application may cause damage. Therefore, apply proper torque for tightening.



Glossary

The following terms are used for coupling specifications mentioned this catalogue.

Body Material

The material used for the socket and plug body that form the fluid path. Internal valve mechanism components may have different materials.

Pressure

Working Pressure : Standard continuous allowable pressure when coupling is in use.

Pressure Resistance : Maximum allowable pressure for momentary time, that will not affect the performance of the coupling.

Packing Material

This shows the material used for O-ring and packing seals used in the coupling.

Maximum Tightening Torque

This indicates the maximum torque value that can be applied when coupling fittings are being tightened.

Working Temperature Range

This indicates the minimum and maximum working temperatures for which coupling and packing materials can be used.

Size

This indicates pipe or hose diameter to be connected.

Pressure Loss

This shows loss of pressure (drop in pressure) when the fluid flows through the coupling.

Performance Characteristics & Control Limits

The figures described in performance characteristics and sketch dimensions are mean values for reference information.

Interchangeability

New Machine couplings are designed considering global coupling standards and interchangeability with other manufacturers products.

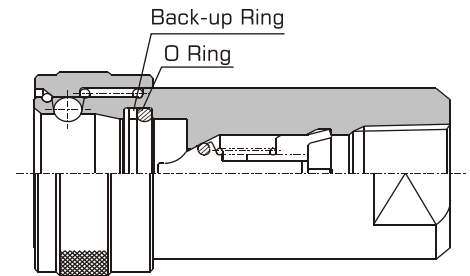
Inspection & Replacement of O-Ring

Inspect the couplings periodically for leakage. O-ring or Back-up ring installed in the socket should be replaced with new one when fluid (Air, gas and Oil etc.) leakage is noticed due to worn or deterioration or being cut.

1. Remove the O-ring (or Back-up ring) from the socket using bent end tool (L-shaped hook, pin or needle) by stretching it and pulling towards your side. Wipe the groove with a clean cloth after removing the O-ring.
2. Insert the new O-ring (or Back-up ring) in to the socket. To install it, press one part of O-ring in the groove and press remaining part using bent end tool (R-shaped hook, pine etc.) High pressure application sockets have back-up ring along with an O-ring. Back-up ring should be installed in front of the O-ring, seeing from your side. Refer the sketch.

3. After replacing the O-ring, apply silicon grease for gas fluid, or oil being used as fluid. Proper lubricant should be used to suit the fluid.

Note : We recommend to use our original spare parts (O-ring, Back-up ring and other replaceable parts) for better coupling performance.



(High Pressure Application Socket)

Connecting and disconnecting of the coupling

◆ YSP-TYPE, NSP-TYPE, UNIC TYPE etc

Connecting : Insert the plug into the socket with sleeve kept pulled toward your side and sleeve will return to original position automatically. The sleeve is attached on the socket

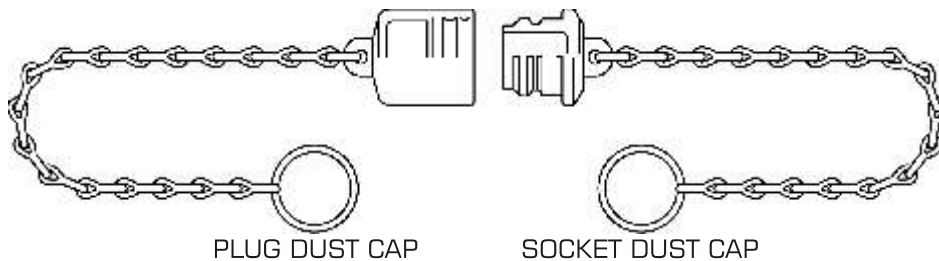
Disconnecting : Slide the sleeve and the plug and the socket will be disconnected automatically.

◆ MSP-TYPE, CA-OO TYPE, AP TYPE etc. (One-touch operation type)

Connecting : Only inserting makes the coupling connect

Disconnecting : Slide the sleeve and the plug and the socket will be disconnected automatically.

Safekeeping of the coupling



Fastning Torque


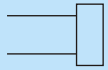

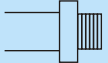





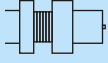

1. Body Material : Steel, Stainless Steel

SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Torque Range N.m(kgf.cm)	9 (92)	14 (143)	22 (224)	60 (612)	90 (918)	120 (1224)	240 (2448)	280 (2856)	500 (5100)








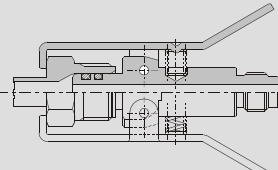




2. Body Material : Brass (BSBM)

SIZE	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Torque Range N.m(kgf.cm)	5 (51)	9 (92)	12 (122)	30 (306)	50 (510)	65 (663)	150 (1530)	180 (1836)	260 (2652)

New Machine Coupling Solutions for Maximum Productivity and Profitability
Pipe-Clamp is our Original Product !

	Model	Coupling View	Pipe Size Dia. mm	Applicable Pressure MPa (Kg/cm ²)		Features	Mounting Part Shape	Page
				Working	Resistance			
Standard Type	Pipe Clamp With Lever PCL Series		3.18 ~ 31.75	2.9 (30)	3.9 (40)	<ul style="list-style-type: none"> • Straight pipe applications • Pipe edge sealing • Air conditioner, Refrigerators charging and leakage testing applications 	A Type  Stop	7
	Pipe Clamp SGU Series		4.76 ~ 15.88	2.9 (30)	4.9 (50)	<ul style="list-style-type: none"> • Straight pipe applications • Double seal clamp construction for high pressure applications (Snug fit on end and pipe outside surface) • Air conditioner Charging, Vacuuming and Leak Testing 	B Type 	9
	Snap Sealing Lever Operated SGPL Series		4.76 ~ 9.52	2.9 (30)	4.9 (50)	<ul style="list-style-type: none"> • Straight pipe applications • Designed for high pressure applications (Snug fit on pipe outer surface) • Air conditioner Charging, Vacuuming and Leak Testing • Easy and fast operation by lock lever 	YPC Type 	11
	Snap Sealing Ring Type SG Series		4.76 ~ 9.52	0.29 (3)	0.49 (5)	<ul style="list-style-type: none"> • Straight pipe applications • Air conditioner Charging, Vacuuming and Leak Testing • Excellent in vacuuming applications 		
Semi Standard Type	Internal Plug Connector IB-IS Series		6.35 ~ 9.52	2.7 (28)	3.5 (36)	<ul style="list-style-type: none"> • Straight pipe applications • Double sealing construction between pipe inner surface and face • Excellent for pipe clamp applications in confined space • Ideal applications in Heat exchanger, Fin Coils etc 	IS Type  Stop IB Type 	16
	Screw Clamp USJ Series High Pressure Application		Unified Threads 7/16" ~ 1 1/16"	4.9 (50)	7.4 (75)	<ul style="list-style-type: none"> • Applicable for UNF, R & G threads. 	Consult - us	13

Customer Satisfaction through Superior Quality,
Economical Prices, Long-life Reliability, Ergonomic Design,
Numerous Applications, Custom Designed Pipe Clamps Solutions

	Model	Coupling View	Pipe Size Dia. mm	Applicable Pressure MPa (kg/cm ²)		Features	Mounting Part Shape	Page
				Working	Resistance			
Customer Specification Based Designed Couplings	Ball Lock Construction STO Series (Single Ball Type)		Customized Specifications	2.9 (30)	4.4 (45)	<ul style="list-style-type: none"> Double leakage prevention through simultaneous sealing of inner diameter of the pipe and pipe edge Widely used in air-conditioning, refrigeration testing etc. Designed for various shaped pipes (Except straight pipes) 	A Type  Stop	15
	Ball Lock Construction STOW Series (Double Ball Type)		Customized Specifications	2.9 (30)	4.4 (45)	<ul style="list-style-type: none"> Double ball lock construction (Locking and sealing the pipe completely) Widely used in automobile engine testing, car and building air-conditioning, refrigeration testing etc. Designed for various shaped pipes (Except straight pipes) 		
	Collet Lock Clamp STH Series		Designed and manufactured with Customer required specifications			<ul style="list-style-type: none"> One touch direct clamping to Pipe O.D., Hose nipple and other required connections High pressure specifications for STO, STOW series couplings Extensively used in Automobile, Car air-conditioner, refrigeration testing and production requirements 	B Type 	16
	Clamping for Special Shape Pipe STA Series		Designed and manufactured with Customer required specifications			<ul style="list-style-type: none"> Simultaneous pipe flange clamping and sealing (Grip type) Extensively used in car air-conditioner etc. leakage testing and test running applications 	YPC Type 	17
	Clamping for Special Shape Pipe PCB Series		Designed and manufactured with Customer required specifications			<ul style="list-style-type: none"> Simultaneous pipe flange clamping and sealing (Hand operated grip type) Extensively used in car air-conditioner etc. leakage testing applications 		
Coupling for Charging/ Vacuuming	Auto Machine MRS Series		Plug 1/4" 3/8"	2.9 (30)	4.4 (45)	<ul style="list-style-type: none"> Refrigerant gas charging or Vacuuming Instant automatic disconnection of socket and plug by connecting air pressure 	Valve Construction  TWO-WAY SHUT-OFF	18
	Line Charging Gun LCG Series			Plug 1/4" 3/8"	4.9 (50)	7.4 (75)	<ul style="list-style-type: none"> Refrigerant gas charging or Vacuuming Connects/ disconnects easily and quickly Used in air-conditioner test line and on-field applications 	 TWO-WAY SHUT-OFF

Note : Please mention working pressure, working temperature, body material, fluid type etc. in purchase order.



* The Specifications mentions in this Catalog are subject to change for Improvements.

For the rationalized Coupling of fluids.



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