HSP-DC CUPLA

For various applications with pressure fluctuations

Electroless Nickel-Phosphorous Plating

Electroless nickel-phosphorous plating, which is insoluble in fire-resistant water glycol type hydraulic fluid, is entirely adopted.

Wide Range of Thread Sizes

Rc 1/4 | Rc 3/8 | Rc 1/2 | Rc 3/4 | Rc 1

Available in five thread sizes

Enhanced Impact Resistance

Features valve materials with excellent impact resistance. Ideal for applications with large pressure fluctuations, such as die-casting machines.

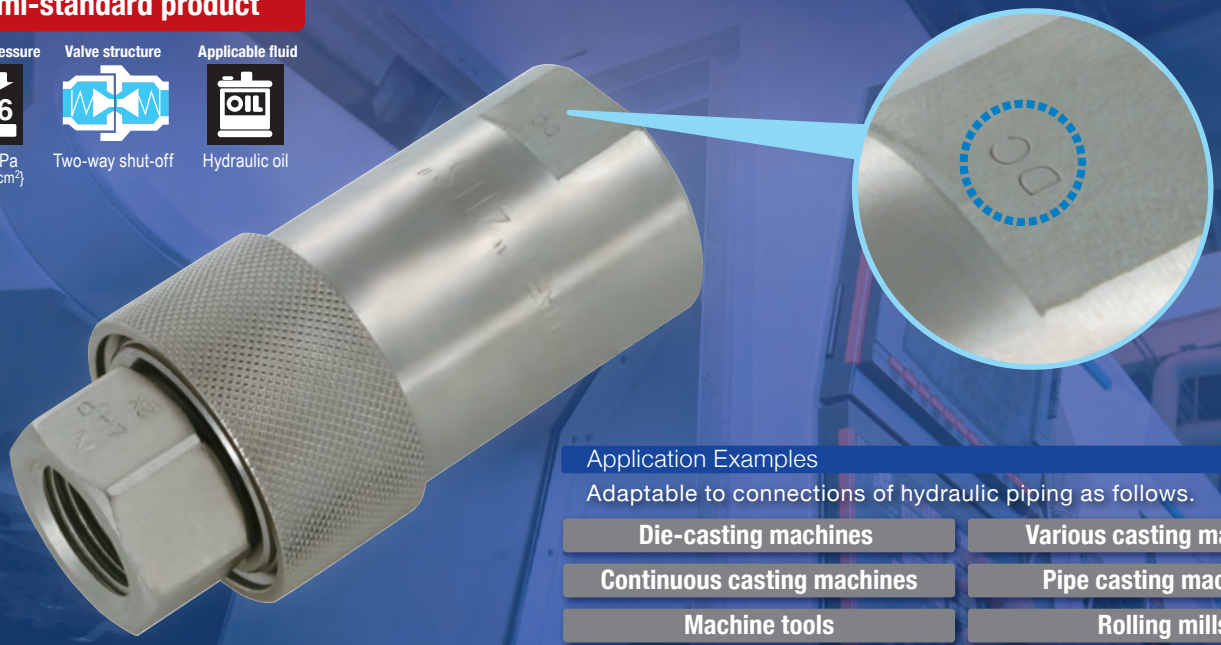
Interchangeability

Interchangeable with standard HSP CUPLA plug or socket in the same size. However, use HSP-DC CUPLA for applications with pressure fluctuations.

The "DC" mark is engraved on the hex part of the plug and the flat part of the socket to distinguish from HSP CUPLA.

Semi-standard product

Working pressure	Valve structure	Applicable fluid
20.6 MPa {210 kgf/cm²}	Two-way shut-off	Hydraulic oil



Application Examples

Adaptable to connections of hydraulic piping as follows.

Die-casting machines	Various casting machines
Continuous casting machines	Pipe casting machines
Machine tools	Rolling mills
Molding presses	Forging presses
Powder alloy presses	Blast furnaces
Electric furnaces	Furnace switchgear
Injection molding machines	Glass forming equipment

YouTube

Green Procurement
Products Comply with RoHS Directive

CUPLA

Specifications

Body material	Special steel (Nickel plated)			
Size (Thread)	1/4", 3/8", 1/2", 3/4", 1			
Pressure unit	**MPa**	**kgf/cm²**	**bar**	**PSI**
Working pressure *1	20.6	210	206	2990
Seal material	**Seal material**	**Mark**		**Working temperature range**
Working temperature range *2	Nitrile rubber	NBR		-20˚C to +80˚C

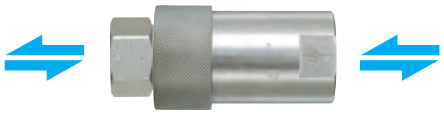
- This product is a semi-standard product.

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

*2: The operable temperature range depends on the operating condition.

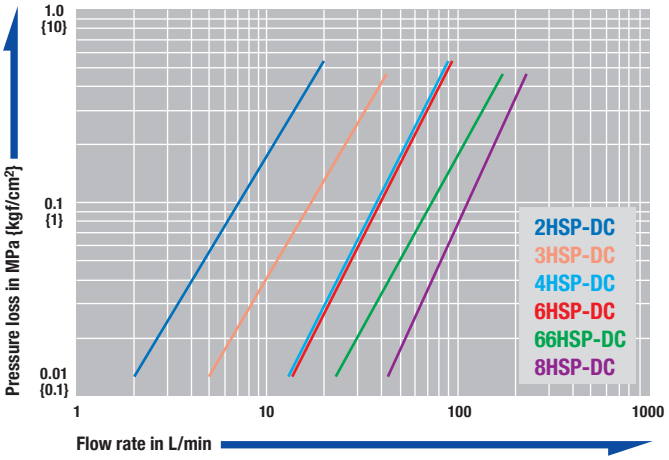
Flow Direction

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



Flow Rate – Pressure Loss Characteristics

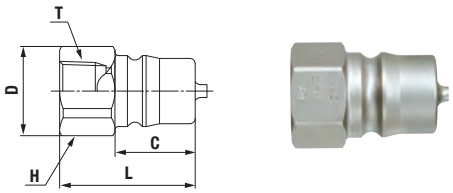
[Test conditions] - Fluid : Hydraulic oil - Temperature : 35˚C±5˚C
- Fluid viscosity : 32×10^{-6} m²/s - Density : 0.87×10^{3} kg/m³



Models and Dimensions (4HSP with 6HSP can be connected with each other whereas 6HSP with 66HSP cannot be connected.)

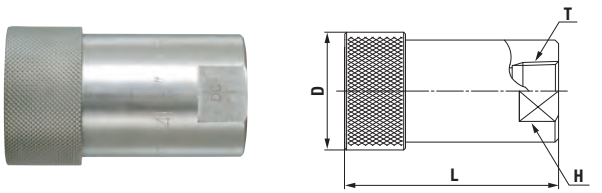
WAF : WAF stands for width across flats.

Plug HP type (Female thread)



Model	Application	Mass (g)	Dimensions (mm)				
			L	ϕD	C	H (WAF)	T
2HP-DC	R 1/4	40	32	20.5	17.5	Hex.19	Rc 1/4
3HP-DC	R 3/8	68	38	25	22.5	Hex.23	Rc 3/8
4HP-DC	R 1/2	124	44	32	27.5	Hex.29	Rc 1/2
6HP-DC	R 3/4	148	50	35	27.5	Hex.32	Rc 3/4
66HP-DC	R 3/4	232	51	40	28	35	Rc 3/4
8HP-DC	R 1	361	61	47	36	41	Rc 1

Socket HS type (Female thread)



Model	Application	Mass (g)	Dimensions (mm)			
			L	ϕD	H (WAF)	T
2HS-DC	R 1/4	134	49	(27.5)	19	Rc 1/4
3HS-DC	R 3/8	226	60	(33)	23	Rc 3/8
4HS-DC	R 1/2	485	72	(43)	35	Rc 1/2
6HS-DC	R 3/4	460	72	(43)	35	Rc 3/4
66HS-DC	R 3/4	569	78.5	(47)	35	Rc 3/4
8HS-DC	R 1	1042	93	(58)	46	Rc 1

Safety Guide

⚠ Danger **Do not apply pressure to CUPLA socket or plug while they are disconnected.**

⚠ Warning **• Do not use CUPLA continuously exceeding the rated working pressure. • Do not connect/disconnect CUPLA with fluid still under dynamic pressure or static residual pressure. • After connection, try to pull the socket and plug apart to confirm secure connection. If the connection is incomplete, the socket and plug may disconnect when pressurized. • Do not disassemble CUPLA. •Do not apply any artificial impact, bend or tension.**

⚠ Caution

- Prior to use, check the compatibility of the seal material and body material against the temperature and the fluid to be used. Selecting the wrong seal material will lead to leakage. As to the use of any special paint or solvent, make thoroughly sure of the material compatibility.
- Only use CUPLA that is within its rated temperature range.
- The durability of CUPLA differs depending on the operating environment and conditions (pressure and temperature etc.). If necessary, conduct performance evaluation test under your actual operating environment and conditions. Also, stress corrosion cracking may occur if used under corrosive environment. Take note of usage conditions.
- When cleaning CUPLA, care must be taken not to use any material that will affect the seal and body materials.
- Make sure that O-rings are lubricated with grease or oil at all times.
- Apply a fluoropolymer resin sealant tape on male tapered pipe threads to ensure no leak.
- Do not exceed the recommended maximum torque when screwing in to the male or female thread of CUPLA for installation.
- Prior to use, always perform a leak test after installing CUPLA.
- Put a designated dust cap on CUPLA after disconnection when there is a possibility of foreign matter such as dirt sticking to the seal surface.
- Always install a shut-off valve between the pressure source and CUPLA.
- Do not strike the tip of an automatic shut-off valve with a hammer or a similar tool. However, if you need to relieve residual pressure, please consult us.
- Do not use with any fluid or medium other than what is specified.
- The use of inline filters is strongly advised and recommended.
- Design and keep the fluid flow speed through CUPLA below 8 m/s.
- Do not use CUPLA in areas or environment where dust such as sand or metal powder can get in to CUPLA.
- Do not let paint stick to CUPLA.
- Be careful not to put scratches or dents on CUPLA.
- Do not drop CUPLA.
- Connecting CUPLA directly to vibrating or impacting equipment will result in reduced lifetime.
- Use only as quick connect couplings for fluid pipelines. (It cannot be used as a swivel joint)
- Only use CUPLA in a combination with NITTO KOHKI coupling "CUPLA".
- Check CUPLA regularly. Stop using immediately if anything unusual is found on CUPLA.

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