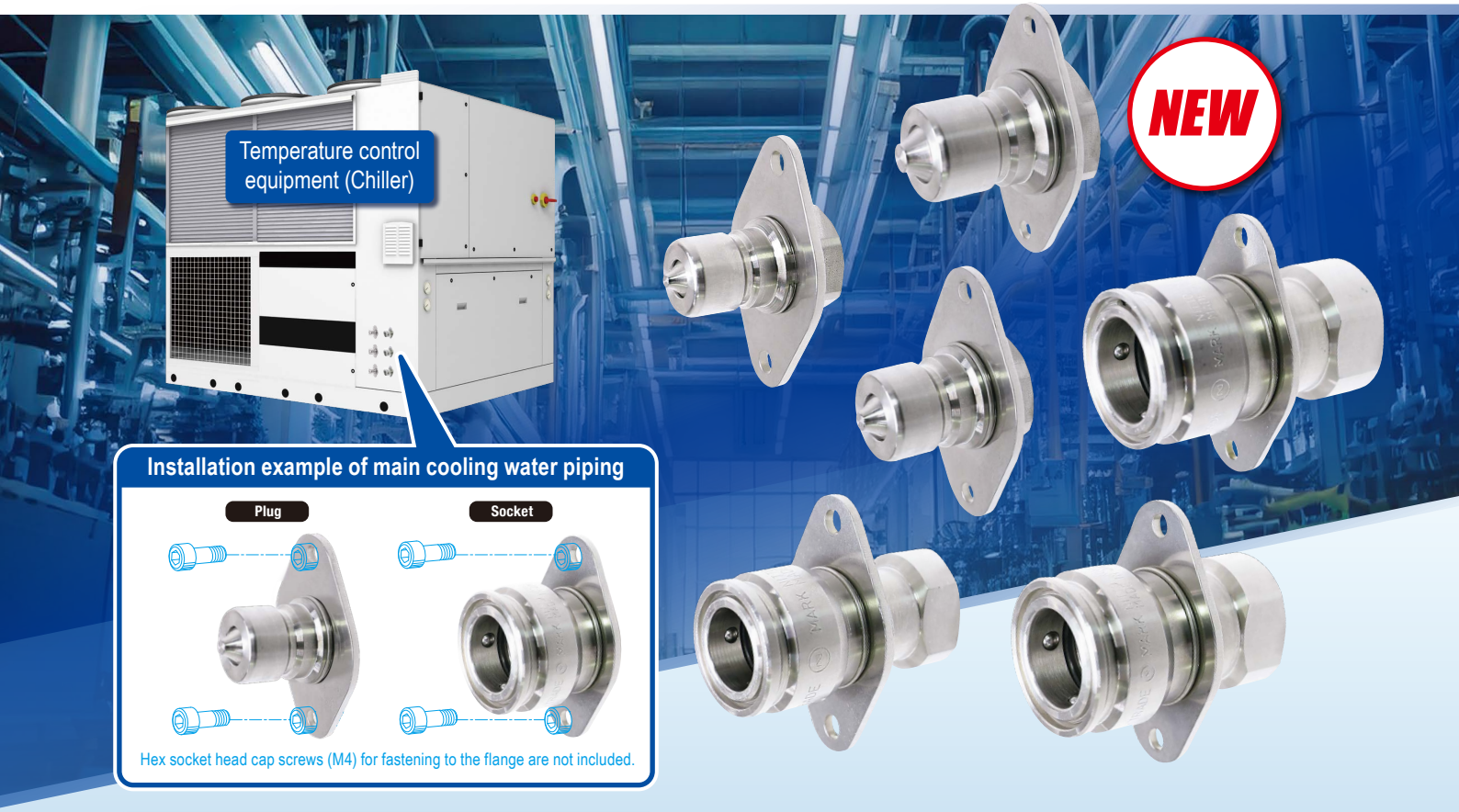
HI FLOW CUPLA Flange mount type

CUPLA Series for Temperature Control Equipment Piping

Semi-standard product | Built-in valve

No welding, flanges, or hose barbs required!

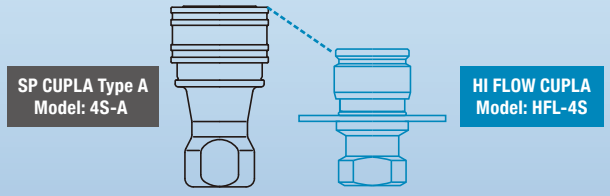
Can be directly installed in a variety of manufacturing equipment.



Installation example of main cooling water piping

Hex socket head cap screws (M4) for fastening to the flange are not included.

Size comparison with SP CUPLA Type A
(Comparing sockets with the same connection size)



- Diamond-shaped flange allows for installation at close intervals.
- Both the plug and socket have built-in automatic shut-off valves.
- High flow characteristics for enhanced cooling effect.
- Enables quick connection and disconnection of cooling pipes.
- Compact, space-saving design with up to 22% shorter connection length compared to previous models.
- Allows for easy and quick installation and maintenance.

Specifications

Body material	Stainless steel (SUS304)			
Size (Thread)	1/4", 3/8", 1/2"			
Pressure unit	**MPa**	**kgf/cm²**	**bar**	**PSI**
Working pressure *1	1.0	10	10	145
Seal material / **Working temperature range** *2	**Seal material**		**Mark**	**Working temperature range**
	Ethylene-propylene rubber		EPDM	-40˚C to +150˚C

*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 conditions.

⚠ Safety Guide

- Do not apply pressure to CUPLA socket or plug while they are disconnected.
- Do not use CUPLA continuously exceeding the rated working pressure.
- Only use CUPLA that are within their rated temperature range.
- Do not exceed the recommended maximum torque when installing CUPLA.
- The flange type does not include hex socket head cap screws (M4) or other components for fixing to the flange.
  Please select hex socket head cap screws of appropriate length for installation.
- Care must be taken when installing CUPLA not to overtighten or cross thread.
- Do not connect/disconnect with fluid still under dynamic pressure or static residual pressure.
- 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.

Green Procurement
Products Comply with RoHS Directive

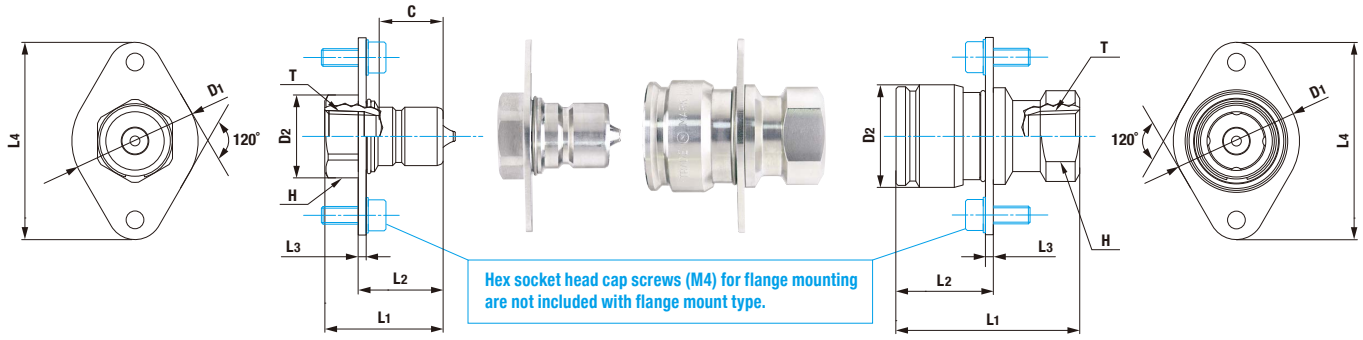
CUPLA

Models and Dimensions

WAF : WAF stands for width across flats.

Plug HFL-■P-FL type (Flange mount type for low pressure)

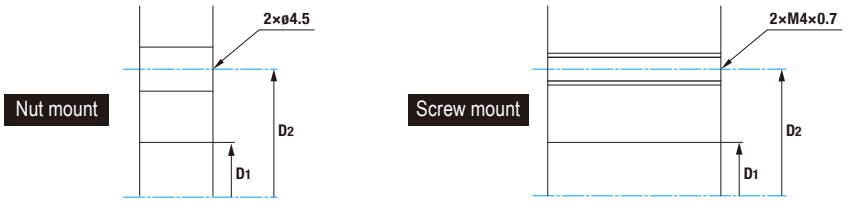
Socket HFL-■S-FL type (Flange mount type for low pressure)



Model	Application (Thread)	Mass (g) Stainless steel	Dimensions (mm) L1	L2	L3	L4	C	øD1	øD2	H (WAF)	T
HFL-2P-FL	See drawings below	45	30	(21.5)	2	50	16.5	(32)	21	Hex.19	Rc 1/4
HFL-3P-FL		63	31	(23.5)		55	18	(37)	25	Hex.23	Rc 3/8
HFL-4P-FL		95	37.5	(29)		60	22.5	(41)	32	Hex.29	Rc 1/2

Model	Application (Thread)	Mass (g) Stainless steel	Dimensions (mm) L1	L2	L3	L4	øD1	øD2	H (WAF)	T
HFL-2S-FL	See drawings below	108	(46.5)	(24.7)	2	50	(32)	26	19	Rc 1/4
HFL-3S-FL		166	(49)	(26.8)		55	(37)	32	24	Rc 3/8
HFL-4S-FL		232	(60)	(30.7)		60	(41)	35	29	Rc 1/2

Dimensions for Mounting



Model	Dimensions (mm) øD1	D2
HFL-2P-FL	21.5 $^{+0.2}_{0}$	PCD40±0.2
HFL-3P-FL	25.5 $^{+0.2}_{0}$	PCD45±0.2
HFL-4P-FL	32.5 $^{+0.2}_{0}$	PCD50±0.2

Model	Dimensions (mm) øD1	D2
HFL-2S-FL	25 $^{+0.2}_{0}$	PCD40±0.2
HFL-3S-FL	30 $^{+0.2}_{0}$	PCD45±0.2
HFL-4S-FL	35 $^{+0.2}_{0}$	PCD50±0.2

Maximum Tightening Torque

Nm {kgf·cm}

Model	HFL-2P-FL / HFL-2S-FL	HFL-3P-FL / HFL-3S-FL	HFL-4P-FL / HFL-4S-FL
Torque	14 {143}	22 {224}	60 {612}

Interchangeability

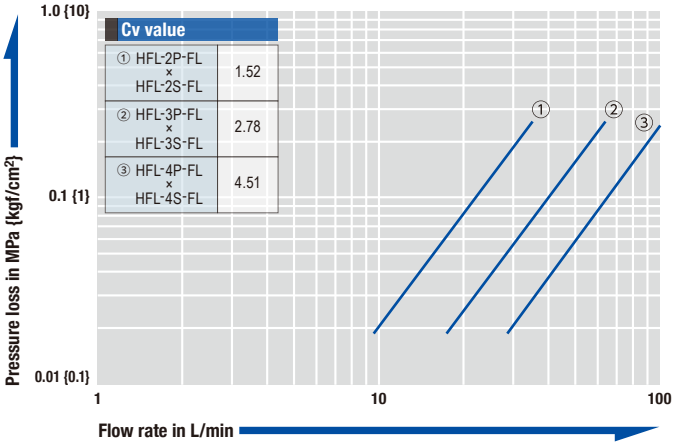
Socket and plug of different sizes cannot be connected.

Flow Direction

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

Flow Rate – Pressure Loss Characteristics

[Test conditions] - Fluid : Water - Temperature : 23˚C±5˚C



Minimum Cross-Sectional Area

(mm²)

Model	HFL-2P-FL HFL-2S-FL	HFL-3P-FL HFL-3S-FL	HFL-4P-FL HFL-4S-FL
Minimum cross-sectional area	32	53	91

Suitability for Vacuum

1.3×10^{-1} Pa {1×10^{-3} mmHg}

Socket only	Plug only	When connected
–	–	Operational

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