

# HOT WATER CUPLA HW Type

*Best suited  
for hot water applications  
such as plastic moldings.*





<b>Working pressure</b>  2.0 2.0 MPa (20 kgf/cm <sup>2</sup> )	<b>Valve structure</b>  Two-way shut-off	<b>Applicable fluids*</b>  Water  Steam	* This product is designed for use with water from -20°C to +180°C. When used with other fluids, check the suitability of the seal and body material.
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# Designed for safety

Safety  
1

## **Safety lock function as a standard specification.**

Prevents accidental disconnection caused by vibration or impact.

Safety lock function (Sleeve lock)



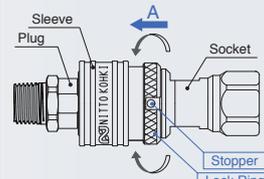
LOCK OFF



LOCK ON

**How to lock**

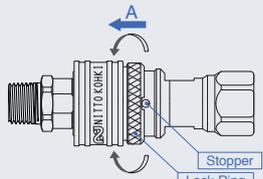
Slide the Lock Ring in the direction of the **arrow A** and rotate it simultaneously. When the Stopper is aligned with the shallower cutout on the Lock Ring, the Coupla will be locked.



Connected state (before lock)

**How to unlock**

Slide the Lock Ring in the direction of the **arrow A** and rotate it simultaneously. When the Stopper is aligned with the deeper cutout on the Lock Ring, the Coupla will be unlocked.



Connected state (locked)

Safety  
2

## **Nickel plated on the liquid contact parts.**

Nickel plated to improve corrosion resistance.





Plug



Socket

Safety  
3

## **Adopting the most suitable rubber for hot water.**

Socket has double O-ring for improved seal.  
Working temperature range is -20°C to +180°C.



Double O-ring

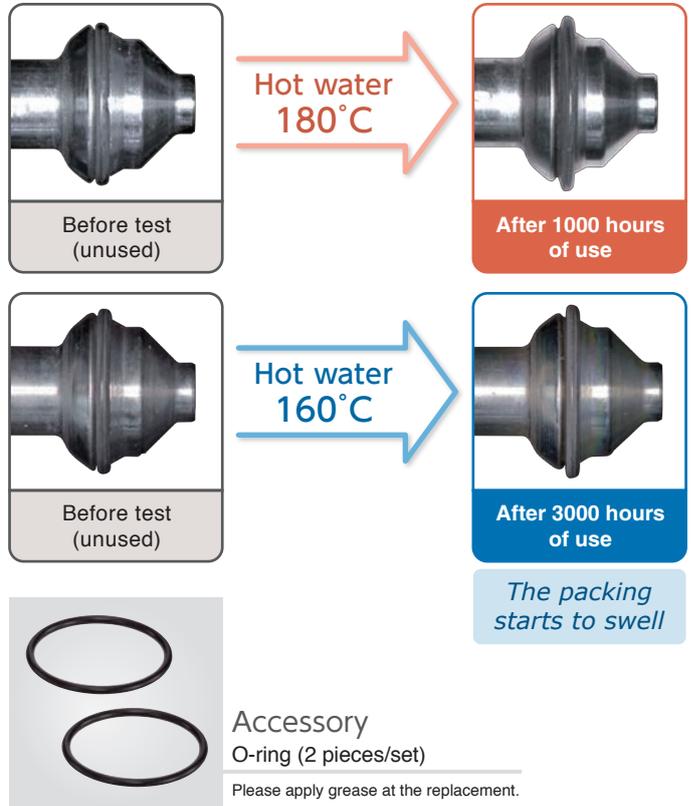
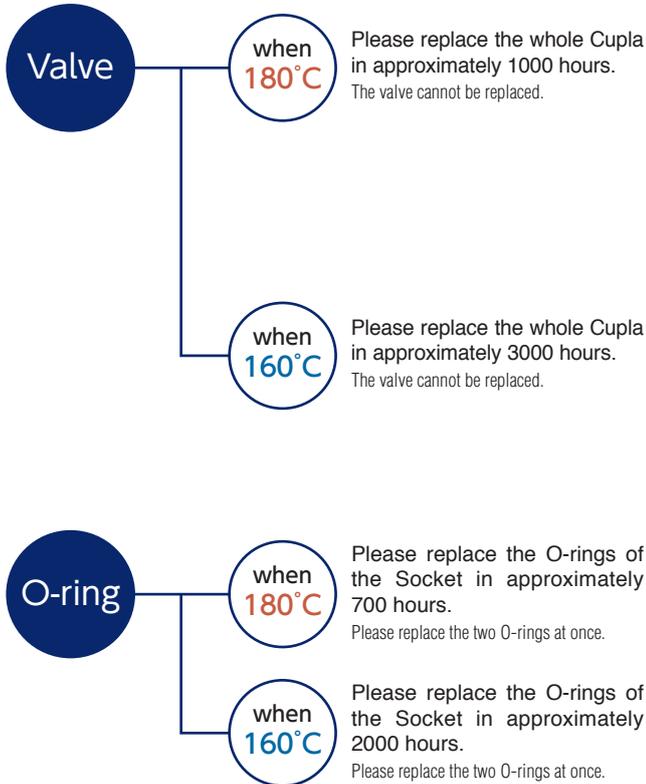
Socket

## Approximate time for Valve / O-ring replacement

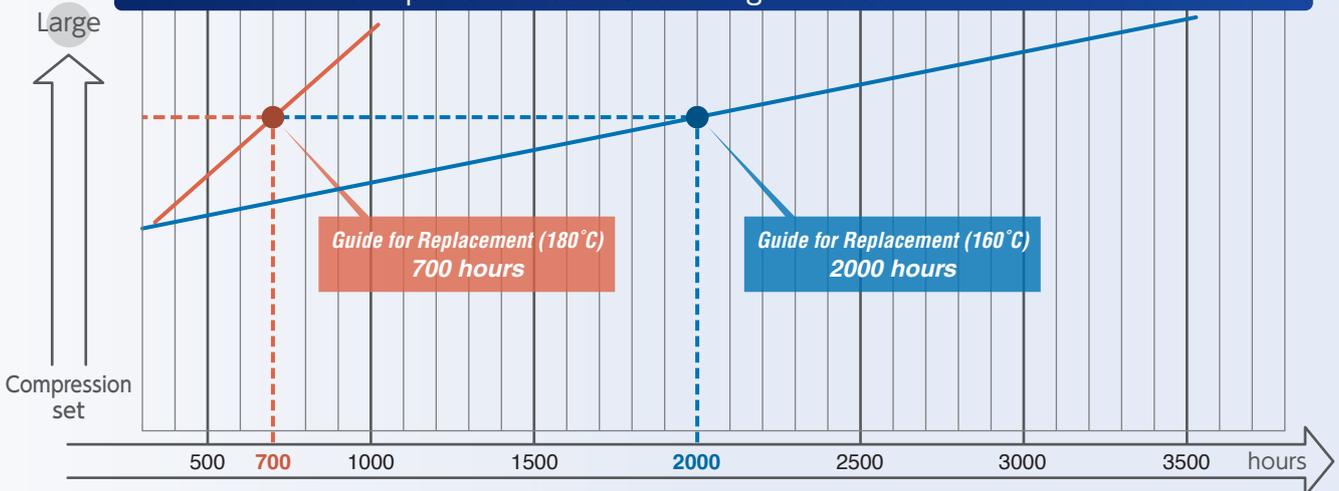
\*Test results by us

### Test conditions

- Testing device: Mold temperature controlling machine
- Fluid: Clean water
- Test temperature: 160°C, 180°C
- Test condition: Continuous test with the Cupla connected



The compression set of the O-ring when used with hot water.



### ⚠ Caution

#### \*Hot water continuous flow test by a mold temperation controller

**Valve:** For continuous use of 3000 hours at 160°C / 1000 hours at 180°C

**O-ring:** For continuous use of 2000 hours at 160°C / 700 hours at 180°C

Although we have confirmed that there is no leakage, it is our experimental value and not a guaranteed value.

Please consider above hours just as a guide. The durability of the seal differs depending on the customers usage conditions. (Number of connection / disconnection, fluid additives, etc.)

- Air will be admixed at the time of connection. Please purge the air by the equipment side when using with hot water.
- If additives are mixed in water or the piping is filled with steam, the lifetime of the seal will be decreased. When using in such an environment, conduct performance evaluation test by actual product.

Specifications				
Body material	Brass (Nickel plated)			
Size (Thread)	Plug : R 1/4, R 3/8, R 1/2 / Socket : Rc 1/4, Rc 3/8, Rc 1/2			
Pressure unit	MPa	kg/cm <sup>2</sup>	bar	PSI
Working pressure <sup>*1</sup>	2.0	20	20	290
Proof pressure <sup>*2</sup>	3.0	31	30	435
Seal material	Seal material	Mark	Working temperature range	Remarks
Working temperature range <sup>*3</sup>	Fluoro rubber	FKM (X-100)	-20°C to +180°C	Standard material

\*1: The normal allowable fluid pressure under continuous use. Continuously exceeding the working pressure may cause leakage or damage.  
 \*2: The maximum pressure, up to which the performance of the cupla will not be affected - even if the max working pressure is temporarily exceeded.  
 \*3: The available temperature range differs depending on usage conditions.

Max. Tightening Torque			
Size (Thread)	1/4"	3/8"	1/2"
Torque	9 (92)	12 (122)	30 (306)

On installation or removal always use correct size spanner/wrench on the hexagon section of socket/plug body.

**Flow Direction**

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



**Interchangeability**

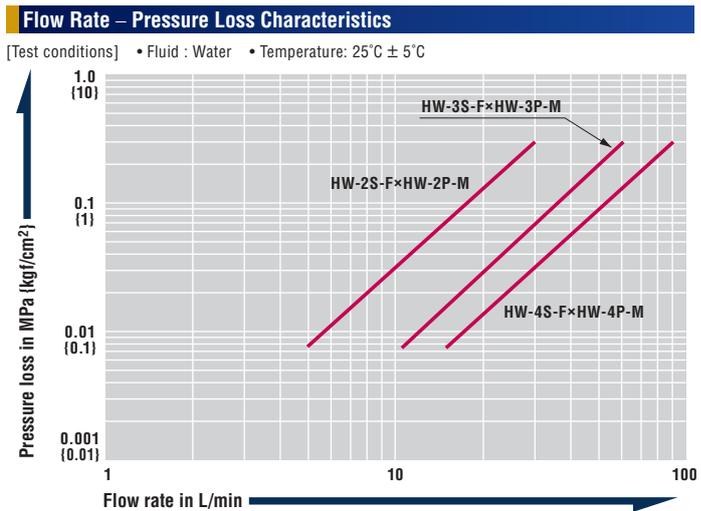
Different sizes of sockets and plugs cannot be connected to each other. SP Cupla Type A and HW Type Cuplas of the same size can be connected to each other regardless of end configurations. However, SP Cupla Type A has different seal material characteristics, so the product specification and durability will differ. Conduct performance evaluation test under your actual operating environment and conditions within range of the working conditions of the product.

Min. Cross-Sectional Area			
Model	HW-2S-F × HW-2P-M	HW-3S-F × HW-3P-M	HW-4S-F × HW-4P-M
Min. Cross-sectional area	26	51	73

Suitability for Vacuum		
1.3 × 10 <sup>-1</sup> Pa {1 × 10 <sup>-3</sup> mmHg}		
Socket only	Plug only	When connected
—	—	Operational

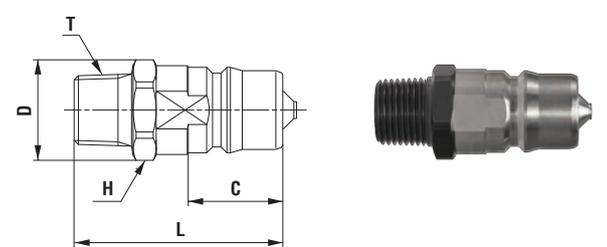
Admixture of Air on Connection			
Model	HW-2S-F × HW-2P-M	HW-3S-F × HW-3P-M	HW-4S-F × HW-4P-M
Volume of air	1.2	2.7	3.9

Volume of Spillage per Disconnection			
Model	HW-2S-F × HW-2P-M	HW-3S-F × HW-3P-M	HW-4S-F × HW-4P-M
Volume of spillage	0.8	2.1	3.2



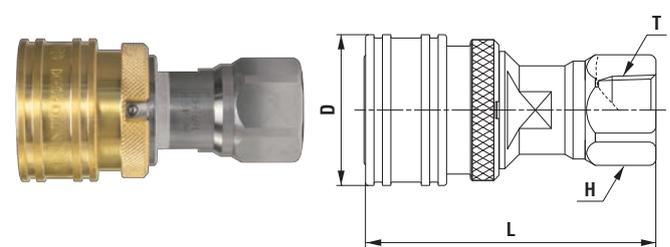
**Models and Dimensions** WAF : WAF stands for width across flats.

**Plug Male thread**



Model	Application	Mass (g)	Dimensions (mm)				
			L	C	øD	H (WAF)	T
HW-2P-M	Rc 1/4	41	(44)	22	18.5	Hex.17	R 1/4
HW-3P-M	Rc 3/8	71	(51)	25	23	Hex.21	R 3/8
HW-4P-M	Rc 1/2	149	(62)	28	30	Hex.27	R 1/2

**Socket Female thread**



Model	Application	Mass (g)	Dimensions (mm)			
			L	øD	H (WAF)	T
HW-2S-F	R 1/4	150	(66)	28	Hex.19	Rc 1/4
HW-3S-F	R 3/8	247	(74)	35	Hex.24	Rc 3/8
HW-4S-F	R 1/2	480	(87)	45	Hex.30	Rc 1/2

**⚠ Precautions for use** Prior to use, be sure to read the "Precautions Relating to the Use of All Cuplas" on the Cupla general catalog and the "Instruction Sheet" that comes with the product and use them correctly and safely.

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