

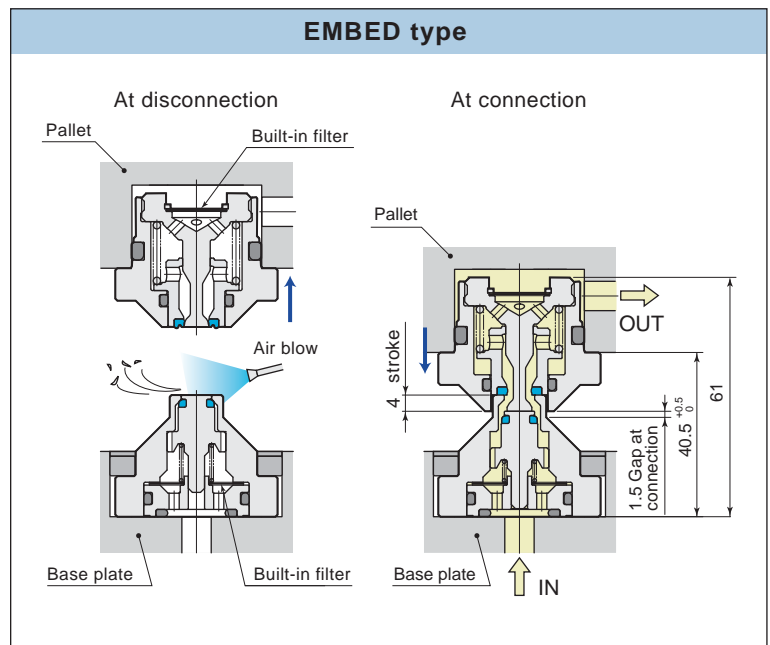
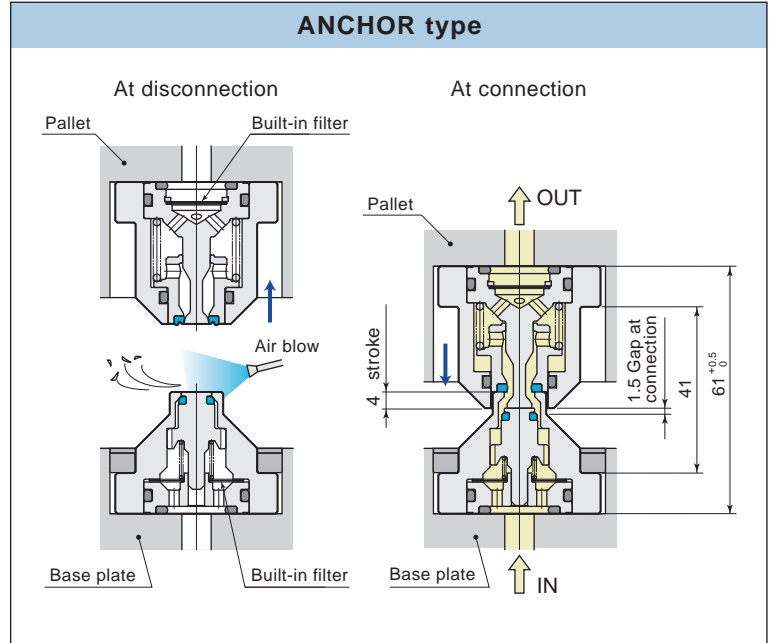
# 7MPa COMPACT COUPLER

**7MPa COMPACT COUPLER**  
SOCKET MODEL (FEMALE) model WVP-2CSL



**7MPa COMPACT COUPLER**  
PLUG MODEL (MALE) model WVP-2CPL

- The compact coupler of low profile having a simple open/close inner structure.
- The choice of anchor or embed type available for the mounting of socket model coupler.
- The built-in filter shuts off the intrusion of foreign substances into the circuit.
- Specially designed seal at the edge prevents the spill of residual oil out of the circuit as well as the intrusion of coolant at the time of disconnection.
- Oil and air can be both used due to the anti-corrosion treatment arranged.
- Pressurization to WVP-2CPL can be done while at disconnection.

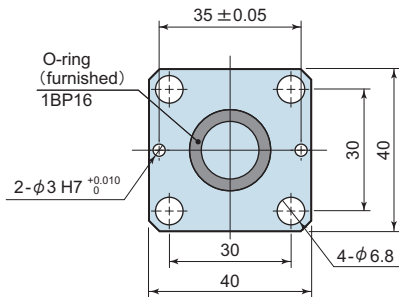
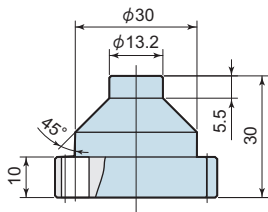
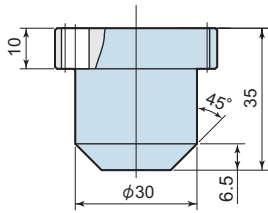
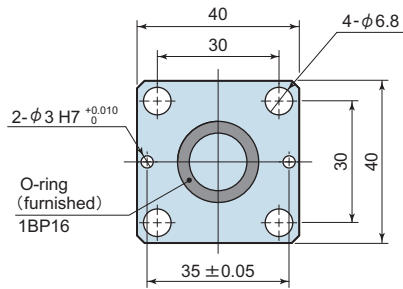


Max. Working Pressure	7.0 MPa	<p style="text-align: center;">Circuit symbol</p>
Proof Pressure	10.5 MPa	
Orifice area	12.5 mm <sup>2</sup>	
Fluid used	Normal Operating oil, air	
Allowable misalignment	± 0.4 mm	
Allowable gradient	less than 0.2°	
Reaction force	154 N per 1 MPa hydraulic pressure Max. spring force 101 N at 0 MPa hydraulic pressure	
Ambient temperature	0 ~ 70°C	
Mass	WVP-2CPL : 150g / -2CSL : 190g / -2CFL : 170g	

NOTE : As the special check valve is not built-in, connection and disconnection under pressure are not possible.

**ANCHOR type**

**WVP-2CSL SOCKET MODEL (ANCHOR)**

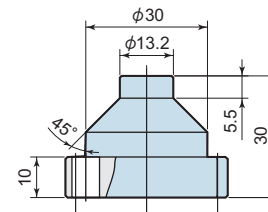
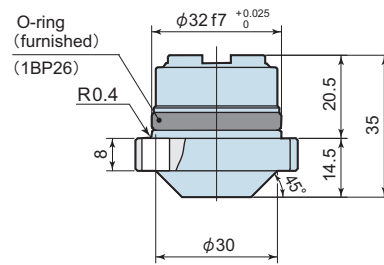
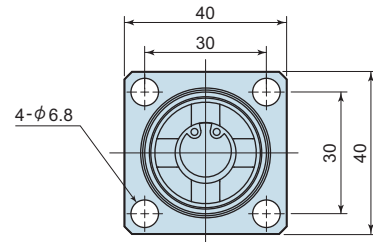


**WVP-2CPL PLUG MODEL (ANCHOR)**

Mounting bolts are not furnished.

**EMBED type**

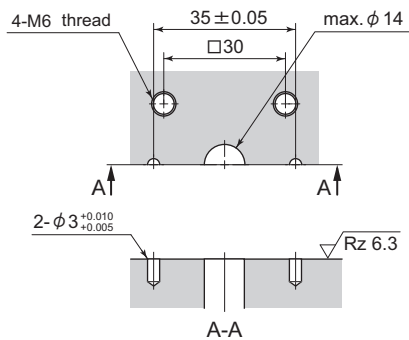
**WVP-2CFL SOCKET MODEL (EMBED)**



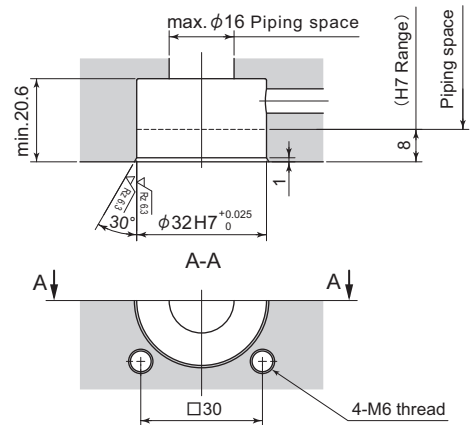
**WVP-2CPL PLUG MODEL (ANCHOR)**

Mounting bolts are not furnished.

**Mounting details**  
**WVP-2CSL, WVP-2CPL**



**Mounting details**  
**WVP-2CFL**



## Caution In Use

1. When using a model that can connect/disconnect under pressure, be sure to carry out a sufficient air bleeding out of the circuit at the time of installation. If insufficient, the spill amount at disconnection may become larger.
2. Avoid connecting when the cutting chips or coolant liquid are attached at the tip of coupler. In such cases, be sure to carry out an air-blow before connection.
3. Before connecting the couplers, be sure to remove the burrs from the threaded portions of manifold or piping holes and clean inside the piping by flushing to completely put the chips away. As the filter is not built-in at the piping port side of each coupler, the intruded chips may scratch the seal portion to cause a possible oil leakage.
4. Forwarding force of coupler should be larger than the reaction force. The reaction force remains while coupled.
5. Guide or stopper are not prepared at the coupler body. They need to be provided at your end.

### Reaction force calculation example

#### ● Conditions

Hydraulic	2 circuits with double acting clamp (both 5 MPa) Coupler model : WVP-2HPL × 2, WVP-2HSL × 2
Air	1 circuit for landing detection (0.3 MPa) Coupler model : WVP-2WPN, WVP-2WSN

#### ● Reaction force at clamping

Clamp circuit

$$\text{Spring force } 157(\text{N}) + \text{Hydraulic pressure } 5(\text{MPa}) \times 154 = 927(\text{N})$$

Unclamp circuit

$$\text{Spring force} = 157(\text{N})$$

Air circuit

$$\text{Spring force } 86(\text{N}) + \text{Air pressure } 0.3(\text{MPa}) \times 201 = 146(\text{N})$$

#### ● Total reaction force

$$\text{Hydraulic coupler } 927(\text{N}) + 157(\text{N}) + \text{Air coupler } 146(\text{N}) = 1230(\text{N})$$