

# FFCUP Series

## ISO 16028 Connect Under Pressure Flat Face Plug/Male



Eaton's FFCUP Series plug/male coupling is an ISO 16028 standard interchange. The flush face design prevents fluid loss on disconnection and air inclusion on connection guaranteeing excellent flow capability. An integrated patented system allows the FFCUP Series plug to be connected to a socket/female half coupling under 350 bar (5075 psi) residual pressure.

### Product Features

- Designed and manufactured in accordance with Article 4.3 of the European Pressure Equipment Directive PED 2014/68/EU
- Meets dimensional requirements of ISO 16028
- Push to connect
- Connect under residual pressure
- Shock resistant color coding ring option available to prevent accidental crossing of lines
- Standard Material: High-resistant carbon steel with Guardian Seal™ plating, a whole new level of corrosion resistance with minimum 720 hours RR protection
- Guardian Seal™ plating:
  - Nickel-free
  - Solvent-free
  - Meets Global RoHS, ELV and REACH requirements
- Alternative end connections available upon request
- Standard seal material: NBR (Nitrile) + AU (Polyurethane)
- Utilize FF Series dust caps

### Physical Characteristics

Body Size (in)	ISO Size*	Nominal Flow Diameter (mm)	Max. Operating Pressure (bar) (psi)	Min. Burst Pressure (bar) (psi)	Rated Flow** (lpm) (gpm)	Air Inclusion ml-cc.	Fluid Loss ml-cc.	Force to Connect N lbf
3/8	10	8.6	350 5,075	1,400 20,300	29.4 7.76	0.010	0.006	350 79
1/2	12.5	11	350 5,075	1,400 20,300	46.8 12.36	0.013	0.012	270 60.7

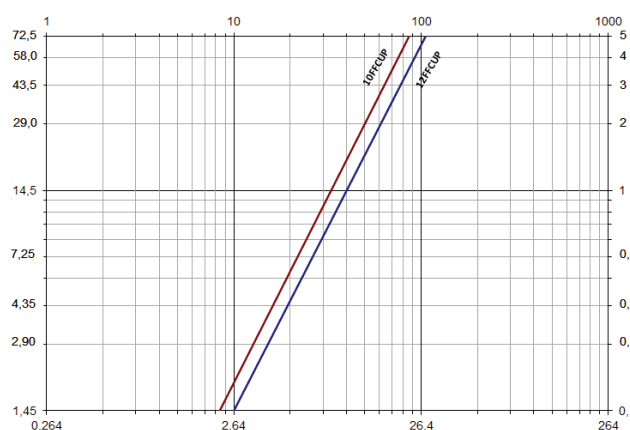
\* The ISO size corresponds to the internal diameter of the hose or the external diameter of the rigid tube (as defined in ISO 4397 Standard)

\*\* Indicated values refer to a 1 bar/14.5 psi pressure drop

### Connect Under Pressure Operating Guidelines

- The plug can be connected against 350 bar/5075 psi residual pressure to sockets/females meeting ISO 16028 standard requirements.
- Plug only is under pressure while connected
- During the connection phase, the socket must not be under pressure
- Disconnection under pressure is strictly forbidden
- Connection under pressure may require a few seconds: the force to connect must be maintained during this lapse of time

### Flow Data



### Seal Elastomer Data\*

Seal Elastomer	Max. Operation Temperature Range
NBR (Nitrile) + AU (Polyurethane)	-25°C +100°C/-13°F +212°F

\* For reference only, based on Eaton recommended temperatures.  
Contact Eaton technical support for further information on fluid compatibility

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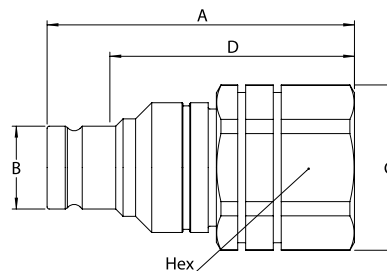


Figure 1

### Plugs (Male)

Part Number	Body Size	ISO Size	Nominal Flow Diameter	Thread Size* (Female)			Dimensions										Weight			
				NPT	BSPP	SAE J 1926-1	Fig.	A (in)	B (in)	C (in)	D (in)	Hex (in)	A (mm)	B (mm)	C (mm)	D (mm)	Hex (mm)	lbs	grams	
NBR+AU	(in)	(mm)	(mm)																	
10FFPCUP37	3/8	10	8.6	¾-18	-		1	2.89	0.74	1.55	2.28	1.41	73.5	18.7	39.5	58.0	36	0.69	314	
10FFPCUP37BS					-	¾-19		1	2.89	0.74	1.55	2.28	1.41	73.5	18.7	39.5	58.0	36	0.69	314
10FFPCUP50					½-14	-		1	2.89	0.74	1.55	2.28	1.41	73.5	18.7	39.5	58.0	36	0.66	300
10FFPCUP50BS					-	½-14		1	2.89	0.74	1.55	2.28	1.41	73.5	18.7	39.5	58.0	36	0.66	300
12FFPCUP50	1/2	12,5	11	½-14			1	3,03	0,96	1,55	2,36	1,41	77	24,52	39,5	60	36	0,77	350	
12FFPCUP50BS					½-14		1	3,03	0,96	1,55	2,36	1,41	77	24,52	39,5	60	36	0,76	346	
12FFPCUP56UN						9/16 18f UNF	1	2,87	0,96	1,55	2,2	1,41	73	24,52	39,5	56	36	0,74	336	
12FFPCUP75UN						¾ 16f UNF	1	3,03	0,96	1,55	2,36	1,41	77	24,52	39,5	60	36	0,77	351	

\* Alternative end connections available upon request.

### Color Coding Ring Option\*

Body Size (in)	ISO Size (mm)	Nominal Flow Diameter (mm)	Plug/Male Ring Part Number**				Tool Part Number
			Blue	Red	Yellow	Green	
3/8	10	8.6	CR12FFPLB	CR12FFPRD	CR12FFPYL	CR12FFPDG	CR12FFSP93
1/2	12.5	11	CR16FFPLB	CR16FFPRD	CR16FFPYL	CR16FFPDG	CR16FFSP93

For color coded rings TPE material is used that offers excellent flexibility which allows a very good shock resistance in demanding applications. Good thermal, chemical and weather resistance provides a great fit on the coupling and a extended life time in toughest conditions. The color coded rings are easy to install by using the referenced tools. Please refer to the user guide on "eaton.com"

\* For requests on alternative colors or installation instructions, please contact your Eaton sales representative.

\*\* Orders must be in multiples of 10 pcs.

\*\*\* The kit consists of a tool plus 10 socket rings and 10 plug rings of each color.

