

For Low Pressure

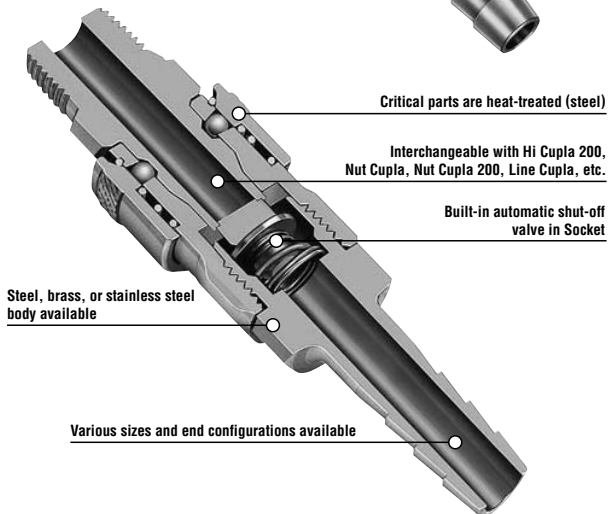
# Hi Cupla

Universal purpose couplings for air lines

Working pressure	Working pressure	Valve structure	Applicable fluids (Steel applies to air only)	
1.5MPa (15kgf/cm <sup>2</sup> )	1.0MPa (10kgf/cm <sup>2</sup> )	One-way shut-off	Air	Water

From factory air line to pneumatic tool connection, available in various body materials, sizes and end configurations. Excellent durability.

- An excellent general purpose coupling for connecting factory air supply to pneumatic tools.
- Steel coupling is suitable for air. Brass or stainless steel are suitable for water. Note that fluid will come out from the plug when disconnected.
- Critical structural parts of steel models are heat-treated for increased strength giving greater durability and resistance to wear.
- Available in various body materials, sizes and end configurations applicable to a wide range of applications.



## Specifications

Body material	Steel (Chrome-plated)	Brass	Stainless steel
Size	1/8" (10 type) • 1/4" (20 type) • 3/8" (30 type) 1/2" (40 type, 400 type) • 3/4" (600 type) • 1" (800 type)		
Working pressure MPa (kgf/cm <sup>2</sup> )	1.5 (15)	1.0 (10)	1.5 (15)
Pressure resistance MPa (kgf/cm <sup>2</sup> )	2.0 (20)		1.5 (15)
Seal material	Seal material	Mark	Working temperature range
	Nitrile rubber	NBR (SG)	-20°C~+80°C
Working temperature range	Fluoro rubber	FKM (X-100)	-20°C~+180°C
			Standard material

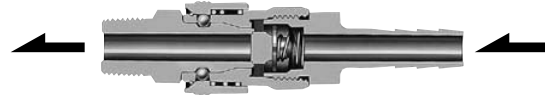
## Max. Tightening Torque

N·m (kgf·cm)

Size		1/8"	1/4"	3/8"	1/2"	3/4"	1"
Torque	Steel	7 (71)	14 (143)	22 (224)	60 (612)	100 (1020)	120 (1224)
	Brass	5 (51)	9 (92)	11 (112)	30 (306)	50 (510)	65 (663)
	Stainless steel	—	14 (143)	22 (224)	60 (612)	100 (1020)	120 (1224)

## Flow Direction

Fluid must run from socket to plug.



## Interchangeability

- ① Sockets and plugs for Models 10 (1/8"), 17 (1/4"), 20 (1/4"), 30 (3/8") and 40 (1/2") can be connected with each other.
- ② Sockets and plugs for Models 400 (1/2"), 600 (3/4") and 800 (1") can be connected with each other. ① and ② can not be connected across each group.
- ③ Interchangeable with all other Hi Cupla Series products.  
Please see the page for "Hi Cupla series Interchangeability".

## Min. Cross-Sectional Area

(mm<sup>2</sup>)

### 10, 17, 20, 30, 40 type

Socket \ Plug	10PM	17PH	20PH	20PM-PF	30PH	30PM-PF	40PH	40PM-PF
10SM	13	13	13	13	13	13	13	13
17SH	13	16	16	16	16	16	16	16
20SH	13	16	20	20	20	20	20	20
20SM-SF	13	16	20	33	33	33	33	33
30SH	13	16	20	33	33	33	33	33
30SM-SF	13	16	20	33	33	33	33	33
40SH	13	16	20	33	33	33	33	33
40SM-SF	13	16	20	33	33	33	33	33

### 400, 600, 800 type

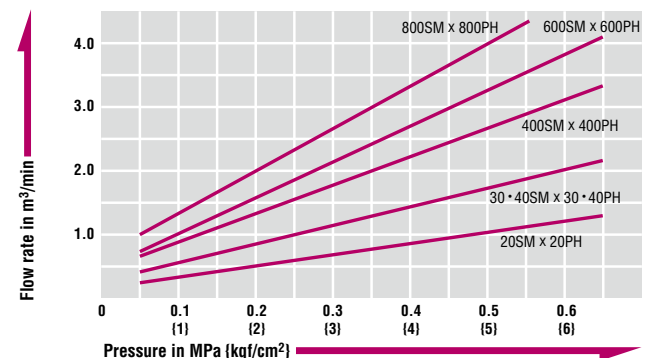
Socket \ Plug	400PH	400PM-PF	600PH	600PM-PF	800PH	800PM-PF
400SH	64	64	64	64	64	64
400SM-SF	64	94	94	94	94	94
600SH	64	94	94	94	94	94
600SM-SF	64	94	94	94	94	94
800SH	64	94	94	94	94	94
800SM-SF	64	94	94	94	94	94

## Suitability for Vacuum

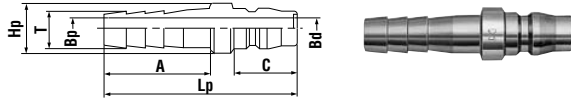
Not suitable for vacuum application in either connected or disconnected condition.

## Pressure - Flow Characteristics

[Test conditions] • Fluid : Air • Temperature : Room temperature

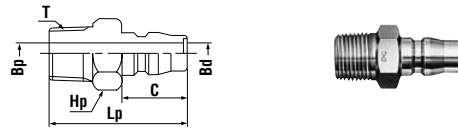


**Plug PH type (Hose barb)**



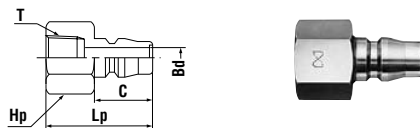
Model	Application (Hose)	Body material • Mass (g)			Dimensions (mm)						
		Steel	Brass	Stainless steel	Lp	øHp	A	C	øT	øBp	øBd
17PH	1/4"	24	-	-	54	16	27	20	7.2	4.5	7.5
20PH	1/4"	28	30	26	57	16	30	20	9	5	7.5
30PH	3/8"	31	34	27	61	16	34	20	11.3	7.5	7.5
40PH	1/2"	53	58	47	63	20	36	20	15	7.5	7.5
400PH	1/2"	66	72	67	66	22	36	23	15	9	13
600PH	3/4"	121	132	129	77	30	45	23	21	13	13
800PH	1"	152	167	150	85	34	54	23	27	20	13

**Plug PM type (Male thread)**



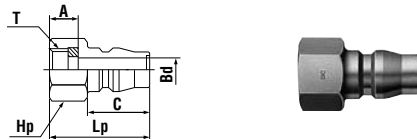
Model	Application	Body material • Mass (g)			Dimensions (mm)					
		Steel	Brass	Stainless steel	Lp	Hp(WAF)	C	T	øBp	øBd
10PM	Rc 1/8	22	24	-	37	Hex.14	20	R 1/8	4	7.5
20PM	Rc 1/4	25	28	27	41	Hex.14	20	R 1/4	7.5	7.5
30PM	Rc 3/8	43	48	40	42	Hex.19 <sup>*3</sup>	20	R 3/8	7.5	7.5
40PM	Rc 1/2	59	66	62	46	Hex.22	20	R 1/2	12	7.5
400PM	Rc 1/2	69	77	70	50	Hex.22	23	R 1/2	13	13
600PM	Rc 3/4	116	126	115	55	Hex.32	23	R 3/4	19	13
800PM	Rc 1	180	196	180	63	Hex.35	23	R 1	22	13

**Plug PF type (Female thread)**



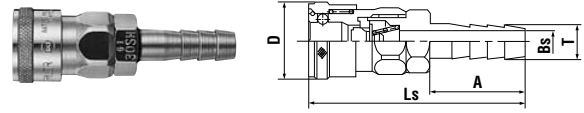
Model	Application	Body material • Mass (g)			Dimensions (mm)				
		Steel	Brass	Stainless steel	Lp	Hp(WAF)	C	T	øBd
20PF	R 1/4	28	30	30	36	Hex.17	20	Rc 1/4	7.5
30PF	R 3/8	39	41	41	37	Hex.21	20	Rc 3/8	7.5
40PF	R 1/2	70	77	69	38	Hex.29	20	Rc 1/2	7.5
400PF	R 1/2	82	89	81	41	Hex.29	23	Rc 1/2	13
600PF	R 3/4	116	126	118	45	Hex.35	23	Rc 3/4	13
800PF	R 1	190	202	192	54	Hex.41	23	Rc 1	13

**Plug PFF type (Parallel female thread)**



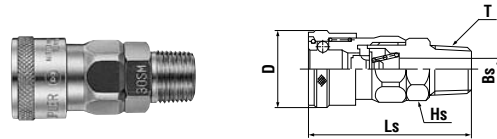
Model	Application	Body material • Mass (g)			Dimensions (mm)					
		Steel	Brass	Stainless steel	Lp	Hp(WAF)	A	C	T	øBd
20PFF	G 1/4	23	-	-	32	Hex.17	9	20	G 1/4	7.5

**Socket SH type (Hose barb)**



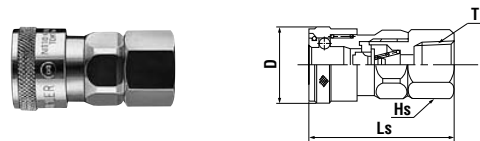
Model	Application (Hose)	Body material • Mass (g)			Dimensions (mm)				
		Steel	Brass	Stainless steel	Ls	øD	A	T	øBs
17SH	1/4"	99	-	-	(69.5)	26.5	27	7.2	4.5
20SH	1/4"	103	107	100	(72.5)	26.5 <sup>+1</sup>	30	9	5
30SH	3/8"	106	111	101	(76.5)	26.5 <sup>+1</sup>	34	11.3	7.5
40SH	1/2"	118	124	118	(78.5)	26.5 <sup>+1</sup>	36	15	9
400SH	1/2"	220	240	218	(83)	35	36	15	9
600SH	3/4"	251	273	242	(92)	35	45	21	14
800SH	1"	273	299	272	(102)	35	55	27	16

**Socket SM type (Male thread)**



Model	Application	Body material • Mass (g)			Dimensions (mm)					
		Steel	Brass	Stainless steel	Ls	øD	Hs(WAF)	T	øBs	
10SM	Rc 1/8	98	-	-	(52.5)	26.5	Hex.19	R 1/8	5	
20SM	Rc 1/4	101	104	96	(55.5)	26.5 <sup>+1</sup>	Hex.19	R 1/4	7	
30SM	Rc 3/8	108	119	105	(56.5)	26.5 <sup>+1</sup>	Hex.19	R 3/8	8	
40SM	Rc 1/2	131	136	120	(59.5)	26.5 <sup>+1</sup>	Hex.23 <sup>*2</sup>	R 1/2	9	
400SM	Rc 1/2	213	232	207	(63)	35	Hex.29	R 1/2	13	
600SM	Rc 3/4	260	283	241	(67)	35	Hex.32	R 3/4	16	
800SM	Rc 1	288	317	303	(72)	35	Hex.36	R 1	16	

**Socket SF type (Female thread)**



Model	Application	Body material • Mass (g)			Dimensions (mm)			
		Steel	Brass	Stainless steel	Ls	øD	Hs(WAF)	T
20SF	R 1/4	95	103	98	(49.5)	26.5 <sup>+1</sup>	Hex.19	Rc 1/4
30SF	R 3/8	103	105	99	(50.5)	26.5 <sup>+1</sup>	Hex.21	Rc 3/8
40SF	R 1/2	139	149	138	(52.5)	26.5 <sup>+1</sup>	Hex.29	Rc 1/2
400SF	R 1/2	216	235	216	(57)	35	Hex.29	Rc 1/2
600SF	R 3/4	260	283	258	(61)	35	Hex.35	Rc 3/4
800SF	R 1	324	353	317	(68)	35	Hex.41	Rc 1

\* Above pictures are plugs and sockets of steel 20, 30 and 40 models.

\*1 : D = 25.4 for brass and stainless steel models.

\*2 : Hs = Hex. 22 for brass and stainless steel models.

\*3 : Hp = Hex. 17 for brass and stainless steel models.

**Application Example**

