For Low Pressure

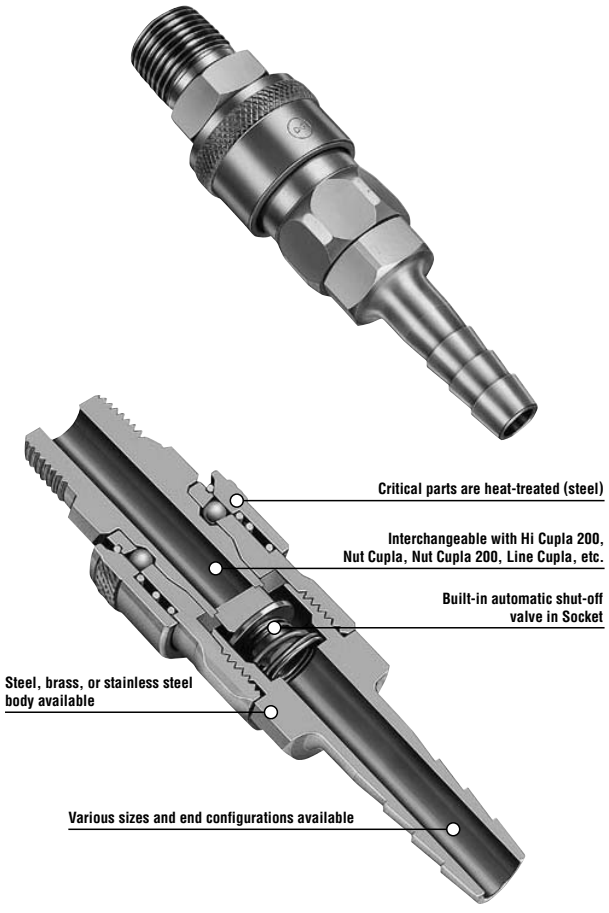
Hi Cupla

Universal purpose couplings for air lines

Working pressure 1.5 — 1.5MPa {15kgf/cm²}
Working pressure 1.0 — 1.0MPa {10kgf/cm²}
Valve structure — One-way shut-off
Applicable fluids (Steel applies to air only) — 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/cm²}	1.5 {15}	1.0 {10}	1.5 {15}
Pressure resistance MPa {kgf/cm²}	2.0 {20}	1.5 {15}	2.0 {20}

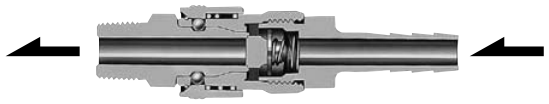
Seal material Working temperature range	Seal material	Mark	Working temperature range	Remarks
	Nitrile rubber	NBR (SG)	−20°C~+80°C	Standard material
	Fluoro rubber	FKM (X-100)	−20°C~+180°C	

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

❶ 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.
❷ Sockets and plugs for Models 400 (1/2"), 600 (3/4") and 800 (1") can be connected with each other. ❶ and ❷ can not be connected across each group.
❸ Interchangeable with all other Hi Cupla Series products.
Please see the page for ''Hi Cupla series Interchangeability''.

Min. Cross-Sectional Area (mm²)

■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

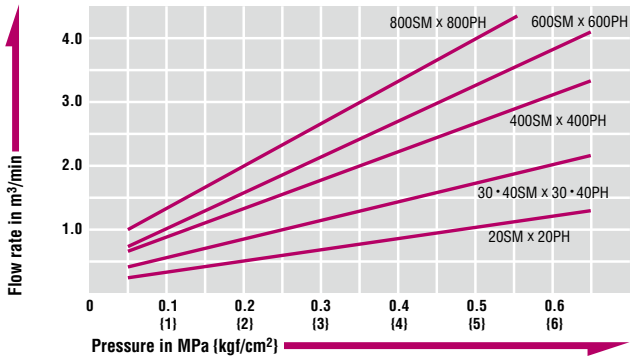
Socket \ Plug	400PH	400PM•PF	600PH	600PM•PF	800PH	800PM•PF
400SH	64	64	64	64	64	64
400SM•SF	64	94	94	94	94	94
600SH	64	94	94	94	94	94
600SM•SF	64	94	94	94	94	94
800SH	64	94	94	94	94	94
800SM•SF	64	94	94	94	94	94

Suitability for Vacuum

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

Pressure - Flow Characteristics

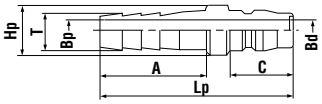
[Test conditions] •Fluid : Air •Temperature : Room temperature



Models and Dimensions

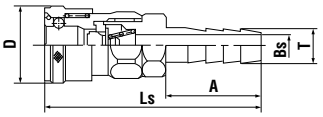
WAF : WAF stands for width across flat.

Plug PH type (Hose barb)



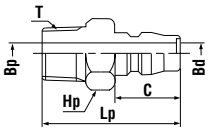
Model	Application (Hose)	Body material•Mass (g)			Dimensions (mm)						
		Steel	Brass	Stainless steel	Lp	øHp	A	C	øT	øBp	øBd
17PH	1/4"	24	–	–	54	16	27	20	7.2	4.5	7.5
20PH	1/4"	28	30	26	57	16	30	20	9	5	7.5
30PH	3/8"	31	34	27	61	16	34	20	11.3	7.5	7.5
40PH	1/2"	53	58	47	63	20	36	20	15	7.5	7.5
400PH	1/2"	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

Socket SH type (Hose barb)



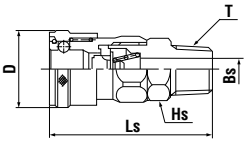
Model	Application (Hose)	Body material•Mass (g)			Dimensions (mm)				
		Steel	Brass	Stainless steel	Ls	øD	A	T	øBs
17SH	1/4"	99	–	–	(69.5)	26.5	27	7.2	4.5
20SH	1/4"	103	107	100	(72.5)	26.5 *1	30	9	5
30SH	3/8"	106	111	101	(76.5)	26.5 *1	34	11.3	7.5
40SH	1/2"	118	124	118	(78.5)	26.5 *1	36	15	9
400SH	1/2"	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

Plug PM type (Male thread)



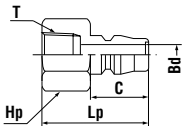
Model	Application	Body material•Mass (g)			Dimensions (mm)					
		Steel	Brass	Stainless steel	Lp	Hp(WAF)	C	T	øBp	øBd
10PM	Rc 1/8	22	24	–	37	Hex.14	20	R 1/8	4	7.5
20PM	Rc 1/4	25	28	27	41	Hex.14	20	R 1/4	7.5	7.5
30PM	Rc 3/8	43	48	40	42	Hex.19 +3	20	R 3/8	7.5	7.5
40PM	Rc 1/2	59	66	62	46	Hex.22	20	R 1/2	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

Socket SM type (Male thread)



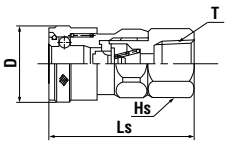
Model	Application	Body material•Mass (g)			Dimensions (mm)				
		Steel	Brass	Stainless steel	Ls	øD	Hs(WAF)	T	øBs
10SM	Rc 1/8	98	–	–	(52.5)	26.5	Hex.19	R 1/8	5
20SM	Rc 1/4	101	104	96	(55.5)	26.5 *1	Hex.19	R 1/4	7
30SM	Rc 3/8	108	119	105	(56.5)	26.5 *1	Hex.19	R 3/8	8
40SM	Rc 1/2	131	136	120	(59.5)	26.5 *1	Hex.23 *2	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

Plug PF type (Female thread)



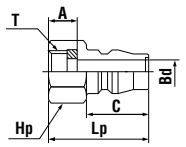
Model	Application	Body material•Mass (g)			Dimensions (mm)				
		Steel	Brass	Stainless steel	Lp	Hp(WAF)	C	T	øBd
20PF	R 1/4	28	30	30	36	Hex.17	20	Rc 1/4	7.5
30PF	R 3/8	39	41	41	37	Hex.21	20	Rc 3/8	7.5
40PF	R 1/2	70	77	69	38	Hex.29	20	Rc 1/2	7.5
400PF	R 1/2	82	89	81	41	Hex.29	23	Rc 1/2	13
600PF	R 3/4	116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

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 *1	Hex.19	Rc 1/4
30SF	R 3/8	103	105	99	(50.5)	26.5 *1	Hex.21	Rc 3/8
40SF	R 1/2	139	149	138	(52.5)	26.5 *1	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

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

• 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


Pneumatic tools


Automatic woodworking assembler