

For Low Pressure

# Hi Cupla BL

Universal purpose couplings with sleeve lock mechanism for air lines

Working pressure



Valve structure



Applicable fluids (Steel applies to air only)



## Sleeve-lock mechanism is engaged by rotating the sleeve after connection.

- Sleeve-lock mechanism prevents accidental disconnection.
- An excellent general purpose coupling for connecting factory air supply to pneumatic tools.
- Steel coupling is suitable for air. Stainless steel is suitable for water. Note that fluid will come out from the plug when disconnected.
- Critical structural parts made of steel are heat-treated for increased strength giving greater durability and resistance to wear.
- Various body materials, sizes, and end configurations are available.
- SN-BL type for connection to urethane hose requires no hose clamp.



Specifications							
Body material		Steel (Plated)	Stainless steel				
Size	Thread and hose barb	1/4", 3/8", 1/2"					
	SN Type	For ø6.5 x ø10 mm hose	-				
		For ø8 x ø12 mm hose					
For ø8.5 x ø12.5 mm hose							
Working pressure	MPa	1.5					
	kgf/cm <sup>2</sup>	15					
	bar	15					
	PSI	218					
Seal material	Nitrile rubber	Mark	NBR (SG)	Working temperature range	-20°C to +80°C	Remarks	Standard material

Note: Working temperature range of SN-BL type is -20°C - +60°C.

Max. Tightening Torque			Nm (kgf·cm)	
Size (Thread)	1/4"	3/8"	1/2"	
Torque	Steel	14 {143}	22 {224}	60 {612}
	Stainless steel	14 {143}	22 {224}	60 {612}

Tightening Torque Range		Nm (kgf·cm)	
SN Type			
9 to 11 {92 to 112}			

To mount on urethane hose, slide it over to the hose barb and tighten the nut until it is flush against the hose barb base. It is recommended that grease is applied to the inside of the nut (threaded part and hose contact part) for easy tightening.



- ### Interchangeability
- ① Sockets and plugs for Models 10, 17, 20, 30, and 40 can be connected with each other regardless of end configurations.
  - ② Interchangeable with all other Hi Cupla Series products. Please see the page for "Hi Cupla Series Interchangeability."

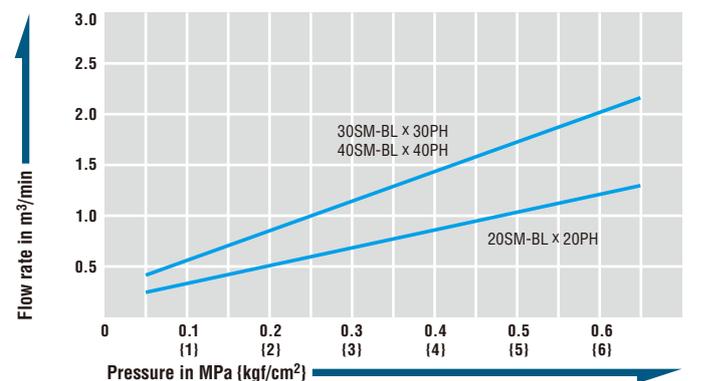
Min. Cross-Sectional Area		(mm <sup>2</sup> )										
Socket	Plug	17PH	20PH	30PH	40PH	10PM	20PM	30PM	40PM	20PF	30PF	40PF
20SH-BL		16	20	20	20	13	20	20	20	20	20	20
20SM-BL		16	20	33	33	13	33	33	33	33	33	33
20SF-BL		16	20	33	33	13	33	33	33	33	33	33
30SH-BL		16	20	33	33	13	33	33	33	33	33	33
30SM-BL		16	20	33	33	13	33	33	33	33	33	33
30SF-BL		16	20	33	33	13	33	33	33	33	33	33
40SH-BL		16	20	33	33	13	33	33	33	33	33	33
40SM-BL		16	20	33	33	13	33	33	33	33	33	33
40SF-BL		16	20	33	33	13	33	33	33	33	33	33
65SN-BL		16	20	22	22	13	22	22	22	22	22	22
80SN-BL		16	20	33	33	13	33	33	33	33	33	33
85SN-BL		16	20	33	33	13	33	33	33	33	33	33

### Suitability for Vacuum

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

### Pressure - Flow Characteristics

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



**Steel**

**Socket SH-BL type (Hose barb)**

Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			L	∅D	A	∅T	∅B
20SH-BL	1/4"	103	(72.5)	(26.5)	30	9	5
30SH-BL	3/8"	106	(76.5)	(26.5)	34	11.3	7.5
40SH-BL	1/2"	118	(78.5)	(26.5)	36	15	9

**Socket SM-BL type (Male thread)**

Model	Application	Mass (g)	Dimensions (mm)				
			L	∅D	H(WAF)	T	∅B
20SM-BL	Rc 1/4	101	(55.5)	(26.5)	Hex.19	R 1/4	7
30SM-BL	Rc 3/8	108	(56.5)	(26.5)	Hex.19	R 3/8	8
40SM-BL	Rc 1/2	131	(59.5)	(26.5)	Hex.23	R 1/2	9

**Socket SF-BL type (Female thread)**

Model	Application	Mass (g)	Dimensions (mm)			
			L	∅D	H(WAF)	T
20SF-BL	R 1/4	95	(49.5)	(26.5)	Hex.19	Rc 1/4
30SF-BL	R 3/8	103	(50.5)	(26.5)	Hex.21	Rc 3/8
40SF-BL	R 1/2	139	(52.5)	(26.5)	Hex.29	Rc 1/2

**Socket SN-BL type (For urethane hose connection)**

Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			L	∅D	∅B	H(WAF)	T(WAF)
65SN-BL	∅6.5 x ∅10	115	(59.5)	(26.5)	5.3	Hex.19	Hex.17
80SN-BL	∅8 x ∅12	120	(61.5)	(26.5)	7.5	Hex.19	Hex.19
85SN-BL	∅8.5 x ∅12.5	120	(61.5)	(26.5)	7.5	Hex.19	Hex.19

• Above pictures are sockets of 30 and 80 models.



**Stainless steel**

**Socket SH-BL type (Hose barb)**

Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			L	∅D	A	∅T	∅B
20SH-BL	1/4"	100	(72.5)	25.4	30	9	5
30SH-BL	3/8"	101	(76.5)	25.4	34	11.3	7.5
40SH-BL	1/2"	118	(78.5)	25.4	36	15	9

**Socket SM-BL type (Male thread)**

Model	Application	Mass (g)	Dimensions (mm)				
			L	∅D	H(WAF)	T	∅B
20SM-BL	Rc 1/4	96	(55.5)	25.4	Hex.19	R 1/4	7
30SM-BL	Rc 3/8	105	(56.5)	25.4	Hex.19	R 3/8	9
40SM-BL	Rc 1/2	120	(59.5)	25.4	Hex.22	R 1/2	9

**Socket SF-BL type (Female thread)**

Model	Application	Mass (g)	Dimensions (mm)			
			L	∅D	H(WAF)	T
20SF-BL	R 1/4	98	(49.5)	25.4	Hex.19	Rc 1/4
30SF-BL	R 3/8	99	(50.5)	25.4	Hex.21	Rc 3/8
40SF-BL	R 1/2	138	(52.5)	25.4	Hex.29	Rc 1/2

**Unlocked**

Align the cutout in the sleeve with the ball stopper, and pull the sleeve to connect the plug.

The stopper is marked with blue for visual understanding.

**Locking the sleeve**

Without alignment of the cutout with the ball stopper disconnection cannot be made.

**Accidental disconnection is prevented.**

Align the cutout in the sleeve with the ball stopper, and pull the sleeve for disconnection.