




For Low Pressure

# HI CUPLA ACE

Lightweight plastic coupling with automatic safety lock for air line applications

<p>Working pressure</p>  <p>1.5 MPa (15 kgf/cm<sup>2</sup>)</p>	<p>Valve structure</p>  <p>One-way shut-off</p>	<p>Applicable fluids</p>  <p>Air Water</p>
--	--	---

The weight is merely a quarter of steel HI CUPLA's and smooth push-in connection is achieved. Sleeve lock mechanism for safety operation.

- Pressure ratings comparable to steel CUPLA.
- A built-in "lock mechanism" locks the sleeve upon connection, thus prevents accidental disconnection.
- Just push plug into socket for simple connection.
- The weight is a quarter of steel HI CUPLA for easy handling.
- Can be used for air and water.
- Air flows in either direction from plug or from socket side when coupled.
- Plug and socket with hose guard nut are also available (see page 68 of NK CUPLA HOSE/NK CUPLA COIL HOSE for details).



Specifications				
Body material	Engineering plastics (PBT, POM)			
Size	Thread and hose barb	1/4", 3/8" / 1/4", 3/8"		
	PN type, SN type (PNG type, SNG type)	For ø5 mm×ø8 mm, ø6 mm×ø9 mm, ø6.5 mm×ø10 mm, ø8 mm×ø12 mm, ø8.5 mm×ø12.5 mm polyurethane hose		
	T type	HA-T type · Inlet : 20P-PLA · Outlet : HA-65S		
Working pressure	MPa	1.5	1.0 for plastic plug and Model HA-T	
	kgf/cm <sup>2</sup>	15	10 for plastic plug and Model HA-T	
	bar	15	10 for plastic plug and Model HA-T	
	PSI	218	145 for plastic plug and Model HA-T	
Seal material	Nitrile rubber	Mark	Working temperature range	Remarks
Working temperature range *1		NBR	-20°C to +60°C	Standard material

\*1: The operable temperature range depends on the operating conditions.

Model	Tightening Torque Range Nm (kgf·cm)			
	20/30SM 20/30PM	50/60/65SN 50/60/65PN 50/65SNG 50/65PNG	80/85SN 80/85PN 85SNG 85PNG	20PFF
Torque	2.5 to 3.0 (26 to 31)	1.6 to 2.0 (16 to 20)	2.2 to 2.8 (22 to 29)	2.0 to 2.5 (20 to 25)

**Flow Direction**

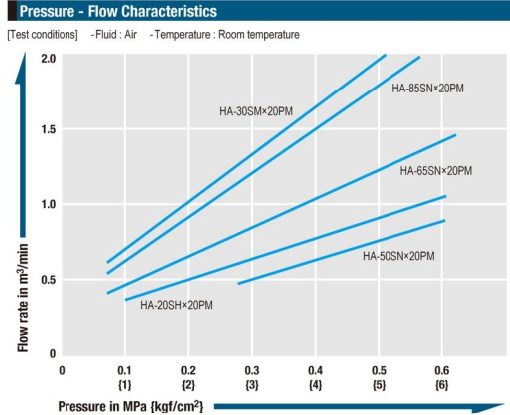
Fluid flow can be bi-directional when socket and plug are connected.

**Interchangeability**

Interchangeable with HI CUPLA models 10, 17, 20, 30 and 40.  
Interchangeable with each models of NUT CUPLA series and HI CUPLA series (except models 400, 600, and 800).  
Please see page 21 for "HI CUPLA Series Interchangeability".

**Suitability for Vacuum**

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

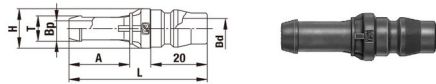


**Sleeve lock function**

When the sleeve (Yellow color) is aligned to the lock position prior to connection, the sleeve will be locked to prevent accidental disconnection.

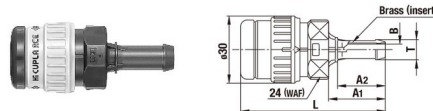
Models and Dimensions

**Plug PH type (Plastic plug / Hose barb)**



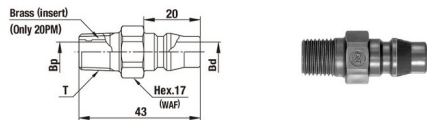
Model	Application (Hose)	Mass (g)	Dimensions (mm)					
			L	øH	A	øT	øBp	øBd
20PH-PLA	1/4"	3	49	14	21.5	9	5.5	7
30PH-PLA	3/8"	4	52	16	23.5	11.5	7.5	7

**Socket SH type (Hose barb)**



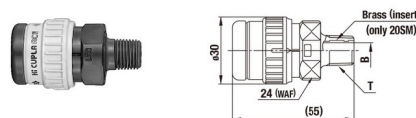
Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			L	A1	A2	øT	øB
HA-20SH	1/4"	26	(65.5)	25.5	21.5	9	5
HA-30SH	3/8"	28	(68)	28	23.5	11.5	7

**Plug PM type (Plastic plug / Male thread)**



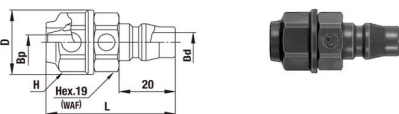
Model	Application (Thread)	Mass (g)	Dimensions (mm)		
			T	øBp	øBd
20PM-PLA	Rc 1/4	8	R 1/4	7.1	7.4
30PM-PLA	Rc 3/8	6	R 3/8	10	7.4

**Socket SM type (Male thread)**



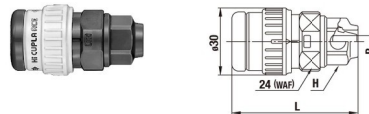
Model	Application (Thread)	Mass (g)	Dimensions (mm)	
			T	øB
HA-20SM	Rc 1/4	27	R 1/4	7.1
HA-30SM	Rc 3/8	26	R 3/8	8

**Plug PN type (Plastic plug / For urethane hose connection)**



Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			L	øH	Hp(WAF)	øBp	øBd
50PN-PLA	ø5 mm×ø8 mm	9	(46)	23	Hex.19	4	7
60PN-PLA	ø6 mm×ø9 mm	9	(46)	23	Hex.19	4.7	7
65PN-PLA	ø6.5 mm×ø10 mm	9	(46)	23	Hex.19	5.3	7
80PN-PLA	ø8 mm×ø12 mm	12	(48.5)	26	Hex.22	6.5	7
85PN-PLA	ø8.5 mm×ø12.5 mm	12	(48.5)	26	Hex.22	7	7

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



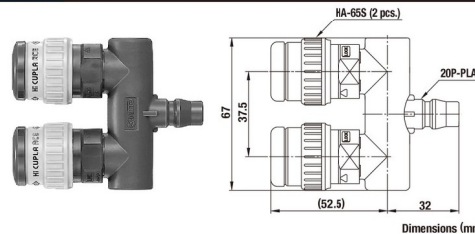
Model	Application (Hose)	Mass (g)	Dimensions (mm)		
			L	H(WAF)	øB
HA-50SN	ø5 mm×ø8 mm	27	(57)	Hex.19	4
HA-60SN	ø6 mm×ø9 mm	27	(57)	Hex.19	4.7
HA-65SN	ø6.5 mm×ø10 mm	27	(57)	Hex.19	5.3
HA-80SN	ø8 mm×ø12 mm	29	(59.5)	Hex.22	6.5
HA-85SN	ø8.5 mm×ø12.5 mm	29	(59.5)	Hex.22	7

**Plug PFF type (Plastic plug / Parallel female thread)**



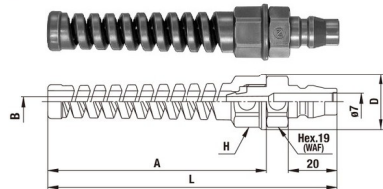
Model	Application (Thread)	Mass (g)
20PFF-PLA	G 1/4	6

**Socket T type (For two branch lines)**



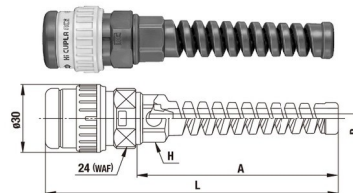
Model	Inlet / Outlet	Mass (g)
HA-T	20P-PLA / HA-65S (2 pcs.)	73

**Plug PNG type (Plastic plug / For hose with hose guard nut connection)**



Model	Application (Hose)	Mass (g)	Dimensions (mm)				
			L	øD	H(WAF)	A	øB
50PNG-PLA	ø5 mm×ø8 mm	14	(119)	23	Hex.19	(90)	4
65PNG-PLA	ø6.5 mm×ø10 mm	15	(119)	23	Hex.19	(90)	5.3
85PNG-PLA	ø8.5 mm×ø12.5 mm	17	(119)	26	Hex.22	(90)	7

**Socket SNG type (For hose with hose guard nut connection)**



Model	Application (Hose)	Mass (g)	Dimensions (mm)			
			L	H(WAF)	A	øB
HA-50SNG	ø5 mm×ø8 mm	31	(130)	Hex.19	(90)	4
HA-65SNG	ø6.5 mm×ø10 mm	33	(130)	Hex.19	(90)	5.3
HA-85SNG	ø8.5 mm×ø12.5 mm	35	(130)	Hex.22	(90)	7

Before use, please be sure to read "Safety Guide" described at the end of this book and "Instruction Sheet" that comes with the products.