

For Low Pressure

Hi Cupla Ace

Lightweight plastic coupling with automatic safety lock for air line applications

Working pressure
1.5
1.5 MPa
(15 kgf/cm²)

Valve structure
One-way shut-off

Applicable fluids
Air Water

The weight is merely a quarter of steel Hi Cupla's and smooth push-in connection is achieved. Automatic sleeve lock for safety operation.

- Pressure ratings comparable to steel Cuplas.
- A built-in "automatic 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 the pages 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 x ø8 mm, ø6 mm x ø9 mm, ø6.5 mm x ø10 mm, ø8 mm x ø12 mm, ø8.5 mm x ø12.5 mm polyurethane hose | | | | | |
| | T type | HA-T type • Inlet : 20P-PLA • Outlet : HA-65S x 2 | | | | | |
| Working pressure | MPa | 1.5 | 1.0 for plastic plug and Model HA-T | | | | |
| | kgf/cm ² | 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 | NBR (SG) | Working temperature range | -20°C to +60°C | Remarks | Standard material |

Tightening Torque Range

Nm (kgf·cm)

| Model | 20/30SM 20/30PM | 50/60/65SN 50/60/65PN | 80/85SN 80/85PN | 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

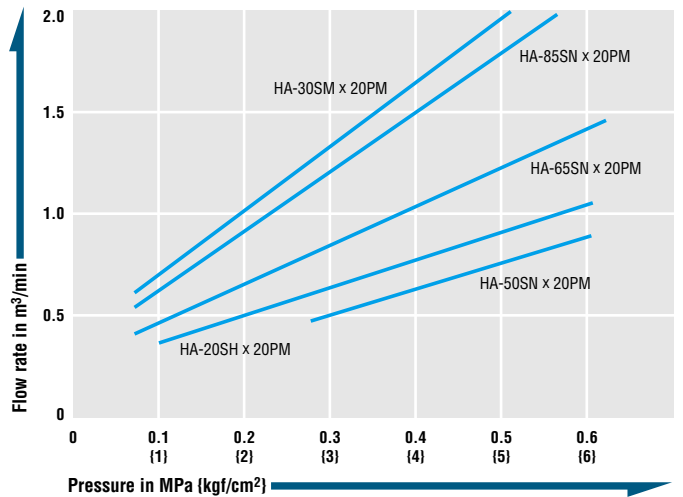
Can be connected with Hi Cupla Models 10, 17, 20, 30 and 40. Interchangeable with models of Nut Cupla Series and Hi Cupla Series except models 400, 600, and 800.

Suitability for Vacuum

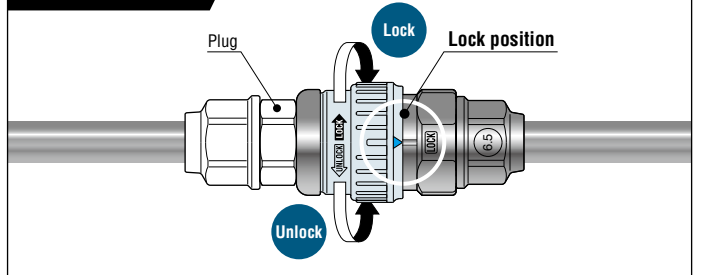
Not suitable for vacuum application in either connected or disconnected condition.

Pressure - Flow Characteristics

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

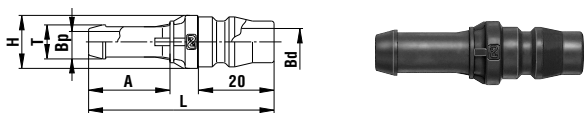


Sleeve lock function



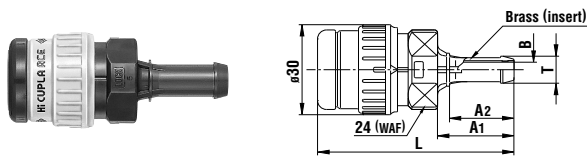
Models and Dimensions

Plug PH type (Plastic plug / Hose barb)



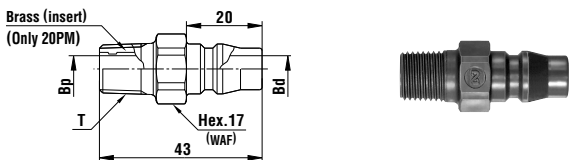
| Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | | | |
|----------|--------------------|----------|-----------------|----|------|------|-----|-----|
| | | | L | øH | A | øT | øBp | øBd |
| 20PH-PLA | 1/4" | 3 | 49 | 14 | 21.5 | 9 | 5.5 | 7 |
| 30PH-PLA | 3/8" | 4 | 52 | 16 | 23.5 | 11.5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

Socket SH type (Hose barb)



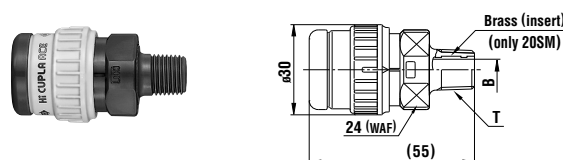
| Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | | |
|---------|--------------------|----------|-----------------|------|------|------|----|
| | | | L | A1 | A2 | øT | øB |
| HA-20SH | 1/4" | 26 | (65.5) | 25.5 | 21.5 | 9 | 5 |
| HA-30SH | 3/8" | 28 | (68) | 28 | 23.5 | 11.5 | 7 |

Plug PM type (Plastic plug / Male thread)



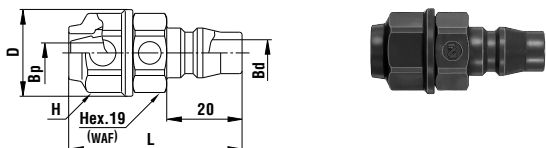
| Model | Application | Mass (g) | Dimensions (mm) | | |
|----------|-------------|----------|-----------------|-----|-----|
| | | | T | øBp | øBd |
| 20PM-PLA | Rc 1/4 | 8 | R 1/4 | 7.1 | 7.4 |
| 30PM-PLA | Rc 3/8 | 6 | R 3/8 | 10 | 7.4 |

Socket SM type (Male thread)



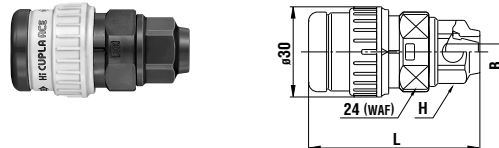
| Model | Application | Mass (g) | Dimensions (mm) | |
|---------|-------------|----------|-----------------|-----|
| | | | T | øB |
| HA-20SM | Rc 1/4 | 27 | R 1/4 | 7.1 |
| HA-30SM | Rc 3/8 | 26 | R 3/8 | 8 |

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



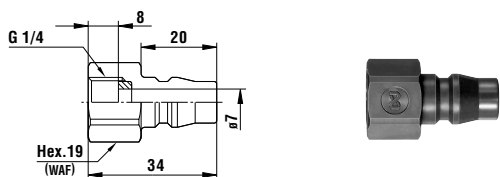
| Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | | |
|----------|--------------------|----------|-----------------|----|---------|-----|-----|
| | | | L | øH | Hp(WAF) | øBp | øBd |
| 50PN-PLA | ø5 mm x ø8 mm | 9 | (46) | 23 | Hex.19 | 4 | 7 |
| 60PN-PLA | ø6 mm x ø9 mm | 9 | (46) | 23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

Socket SN type (For urethane hose connection)



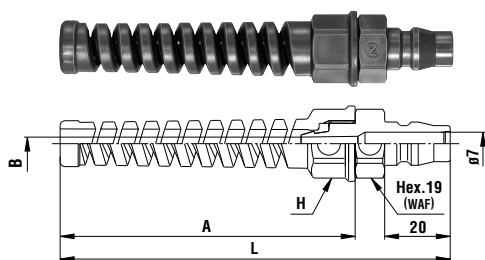
| Model | Application (Hose) | Mass (g) | Dimensions (mm) | | |
|---------|--------------------|----------|-----------------|--------|-----|
| | | | L | H(WAF) | øB |
| HA-50SN | ø5 mm x ø8 mm | 27 | (57) | Hex.19 | 4 |
| HA-60SN | ø6 mm x ø9 mm | 27 | (57) | Hex.19 | 4.7 |
| HA-65SN | ø6.5 mm x ø10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

Plug PFF type (Plastic plug / Parallel female thread)



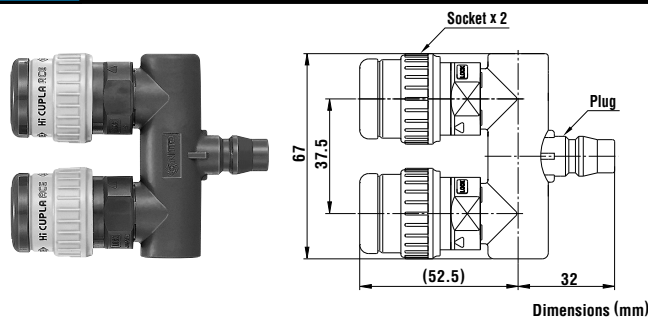
| Model | Application | Mass (g) |
|-----------|-------------|----------|
| 20PFF-PLA | G 1/4 | 6 |

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



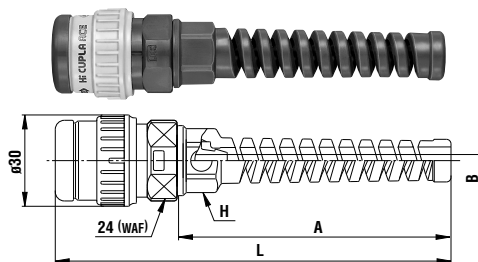
| Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | |
|-----------|--------------------|----------|-----------------|--------|------|-----|
| | | | L | H(WAF) | A | øB |
| 50PNG-PLA | ø5 mm x ø8 mm | 14 | (119) | Hex.19 | (90) | 4 |
| 65PNG-PLA | ø6.5 mm x ø10 mm | 15 | (119) | Hex.19 | (90)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

Socket T type (For two branch lines)



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

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 x ø8 mm | 31 | (130) | Hex.19 | (90) | 4 |
| HA-65SNG | ø6.5 mm x ø10 mm | 33 | (130) | Hex.19 | (90) | 5.3 |
| HA-85SNG | ø8.5 mm x ø12.5 mm | 35 | (130) | Hex.22 | (90) | 7 |