

For Low Pressure (Air)

HI CUPLA for Connection to Braided Hoses

NUT CUPLA

NUT CUPLA 200

ROTARY NUT CUPLA

For connection to urethane hose, braided hose

Working pressure

1.5 MPa (15 kgf/cm²) 1.0 MPa (10 kgf/cm²)

Valve structure

One-way shut-off

Applicable fluids (Steel applies to air only)

Air Water

No hose clamp required!
Fitted with hose guard nut to prevent possible kinking.
HI CUPLA for connection to braided hoses is now available.

- Nut types are available in HI CUPLA Series and HI CUPLA 200 Series. Hose guard nut type available to prevent hose kinking.
- To mount on hose, simply slide it over the nipple and tighten the nut.
- The design to tighten outside of hose reduces hose slip away or fluid leaks.
- Also available are ROTARY NUT CUPLA equipped with ball bearing swivel mechanism to prevent and relieve tension on operator's hands.



Specifications (NUT CUPLA / NUT CUPLA 200 / ROTARY NUT CUPLA)

| | | | | |
|-----------------------------|--|---------------------|---------------------------|-------------------|
| Body material | Steel (Chrome plated), Stainless Steel (SUS304) | | | |
| Urethane hose size | For ø5 mm×ø8 mm, ø6 mm×ø9 mm hose For ø6.5 mm×ø10 mm, ø8 mm×ø12 mm hose For ø8.5 mm×ø12.5 mm, ø11 mm×ø16 mm hose | | | |
| Pressure unit | MPa | kgf/cm ² | bar | PSI |
| Working pressure | 1.5 | 15 | 15 | 218 |
| Seal material | Seal material | Mark | Working temperature range | Remarks |
| Working temperature range*1 | Nitrile rubber | NBR | -20°C to +60°C | Standard material |

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

Specifications (HI CUPLA for Connection to Braided Hoses)

| | | | | |
|-----------------------------|-----------------------|-------|---------------------------|-------------------|
| Body material | Steel (Chrome plated) | Brass | | |
| Braided hose size | For ø9 mm×ø15 mm hose | | | |
| Working pressure | MPa | 1.5 | 1.0 | |
| | kgf/cm ² | 15 | 10 | |
| | bar | 15 | 10 | |
| | PSI | 218 | 145 | |
| Seal material | Seal material | Mark | Working temperature range | Remarks |
| Working temperature range*1 | Nitrile rubber | NBR | -20°C to +60°C | Standard material |

- Maximum working pressure and temperature range of PN/SN type for braided hoses depends upon the specification of the braided hose to be used.

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

Tightening Torque Range

Nm [kgf·cm]

| | | | |
|--------|---------------------|-----------------------|-----------------------|
| Model | SN, PN, SNR Type | 65SNG, PNG, SNRG Type | 85SNG, PNG, SNRG Type |
| Torque | 9 to 11 [92 to 112] | 5 to 6 [51 to 61] | 7 to 8 [71 to 82] |

To mount on braided hose or 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.

Flow Direction

Fluid must run from socket to plug.



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".

Minimum Cross-Sectional Area

(mm²)

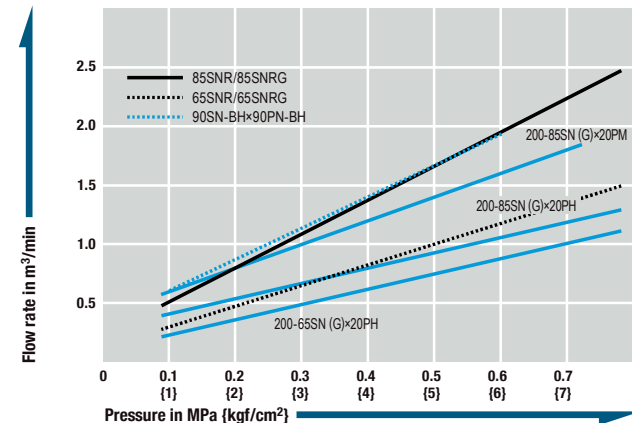
| Socket | Plug | 17PH | 20PH | 30PH | 40PH | 10PM | 20PM | 30PM | 40PM | 20PF | 30PF | 40PF | 90PN-BH |
|-----------|------|----------|------|------|------|------|------|------|------|------|------|------|---------|
| | | 200-50SN | 16 | 16 | 16 | 16 | 13 | 16 | 16 | 16 | 16 | 16 | 16 |
| 200-60SN | 16 | 20 | 22 | 22 | 13 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 200-65SN | 16 | 20 | 22 | 22 | 13 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 200-80SN | 16 | 20 | 41 | 41 | 13 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| 200-85SN | 16 | 20 | 41 | 41 | 13 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| 200-110SN | 16 | 20 | 41 | 41 | 13 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| 200-50SNG | 16 | 16 | 16 | 16 | 13 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| 200-65SNG | 16 | 20 | 22 | 22 | 13 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| 200-85SNG | 16 | 20 | 40 | 41 | 13 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| 90SN-BH | 16 | 20 | 33 | 33 | 13 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 |

Suitability for Vacuum

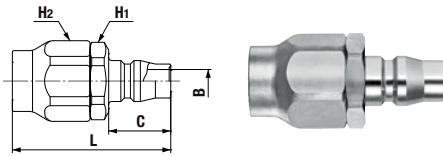
Not suitable for vacuum application in either connected or disconnected condition.

Pressure - Flow Characteristics

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



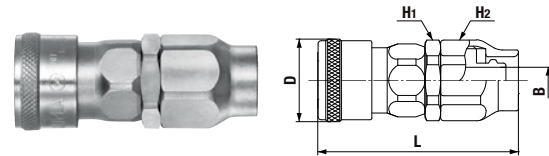
Plug PN type (HI CUPLA for connection to braided hoses)



Grease is applied to the threaded part of steel nut to prevent galling.

| Model | Application (Hose) ^{*1} | | Body material*Mass (g) | | Dimensions (mm) | | | | |
|---------|----------------------------------|--------------------------|------------------------|-------|-----------------|---------|---------|----|-----|
| | Size (mm) | Hose wall thickness (mm) | Steel | Brass | L | H1(WAF) | H2(WAF) | C | øB |
| 90PN-BH | ø9×ø15 | 3±0.3 | 86 | 88 | (51) | Hex.23 | Hex.24 | 20 | 7.5 |

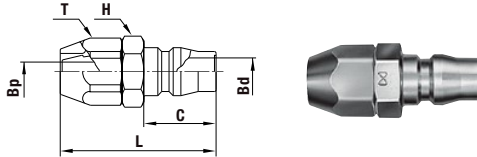
Socket SN type (HI CUPLA for connection to braided hoses)



Grease is applied to the threaded part of steel nut to prevent galling.

| Model | Application (Hose) ^{*1} | | Body material*Mass (g) | | Dimensions (mm) | | | | |
|---------|----------------------------------|--------------------------|------------------------|-------|-----------------|----------------------|---------|---------|-----|
| | Size (mm) | Hose wall thickness (mm) | Steel | Brass | L | øD | H1(WAF) | H2(WAF) | øB |
| 90SN-BH | ø9×ø15 | 3±0.3 | 147 | 154 | (64.5) | (26.5) ^{*2} | Hex.24 | Hex.24 | 8.5 |

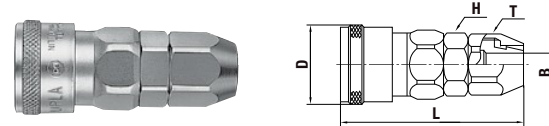
Plug PN type (NUT CUPLA for urethane hose connection)



Grease is applied to the threaded part of stainless steel nut to prevent galling.

| Model | Application (Hose) | Body material*Mass (g) | | Dimensions (mm) | | | | | |
|-------|--------------------|------------------------|-----------------|-----------------|----|-----|-----|--------|--------|
| | | Steel | Stainless steel | L | C | øBp | øBd | H(WAF) | T(WAF) |
| 50PN | ø5×ø8 | 30 | - | (43) | 20 | 4.5 | 7.5 | Hex.17 | Hex.17 |
| 60PN | ø6×ø9 | 40 | - | (43) | 20 | 5.3 | 7.5 | Hex.17 | Hex.17 |
| 65PN | ø6.5×ø10 | 42 | 43 | (43) | 20 | 5.3 | 7.5 | Hex.17 | Hex.17 |
| 80PN | ø8×ø12 | 50 | 52 | (45) | 20 | 7.5 | 7.5 | Hex.19 | Hex.19 |
| 85PN | ø8.5×ø12.5 | 52 | 53 | (45) | 20 | 7.5 | 7.5 | Hex.19 | Hex.19 |
| 110PN | ø11×ø16 | 75 | - | (52) | 20 | 7.5 | 7.5 | Hex.23 | Hex.24 |

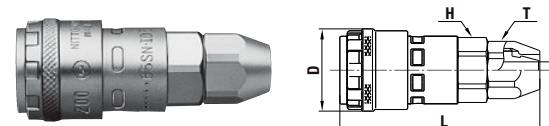
Socket SN type (NUT CUPLA for urethane hose connection)



Grease is applied to the threaded part of stainless steel nut to prevent galling.

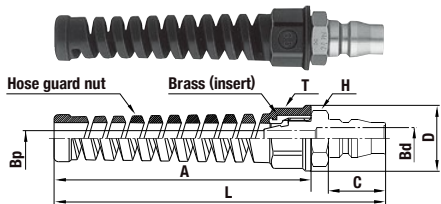
| Model | Application (Hose) | Body material*Mass (g) | | Dimensions (mm) | | | | |
|-------|--------------------|------------------------|-----------------|-----------------|----------------------|-----|--------|--------|
| | | Steel | Stainless steel | L | øD | øB | H(WAF) | T(WAF) |
| 50SN | ø5×ø8 | 117 | - | (60) | (26.5) | 4.5 | Hex.19 | Hex.17 |
| 60SN | ø6×ø9 | 115 | - | (59.5) | (26.5) | 5.3 | Hex.19 | Hex.17 |
| 65SN | ø6.5×ø10 | 115 | 110 | (59.5) | (26.5) ^{*3} | 5.3 | Hex.19 | Hex.17 |
| 80SN | ø8×ø12 | 120 | 114 | (61.5) | (26.5) ^{*3} | 7.5 | Hex.19 | Hex.19 |
| 85SN | ø8.5×ø12.5 | 120 | 115 | (61.5) | (26.5) ^{*3} | 7.5 | Hex.19 | Hex.19 |
| 110SN | ø11×ø16 | 153 | - | (64.5) | (26.5) | 10 | Hex.23 | Hex.24 |

Socket SN type (NUT CUPLA 200 for urethane hose connection)



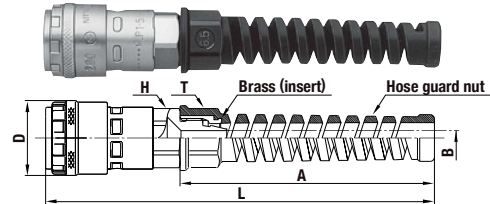
| Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | |
|-----------|--------------------|----------|-----------------|--------|-----|--------|
| | | | L | øD | øB | T(WAF) |
| 200-50SN | ø5×ø8 | 105 | (64.5) | (26.5) | 4.5 | Hex.19 |
| 200-60SN | ø6×ø9 | 105 | (64.5) | (26.5) | 5.3 | Hex.19 |
| 200-65SN | ø6.5×ø10 | 106 | (64.5) | (26.5) | 5.3 | Hex.19 |
| 200-80SN | ø8×ø12 | 112 | (66.5) | (26.5) | 7.5 | Hex.19 |
| 200-85SN | ø8.5×ø12.5 | 113 | (66.5) | (26.5) | 7.5 | Hex.19 |
| 200-110SN | ø11×ø16 | 127 | (62) | (26.5) | 10 | Hex.23 |

Plug PNG type (For urethane hose with hose guard nut connection)



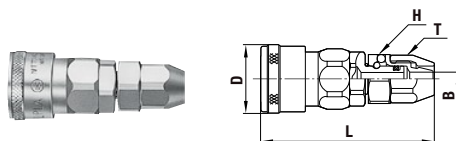
| Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | | | | |
|---------------------|--------------------|----------|-----------------|----|----|-----|-----|--------|--------|
| | | | L | C | A | øBp | øBd | T(WAF) | |
| 50PNG ^{*4} | ø5×ø8 | 41 | (116) | 20 | 90 | 23 | 4.5 | 7.5 | Hex.17 |
| 65PNG | ø6.5×ø10 | 43 | (116) | 20 | 90 | 23 | 5.3 | 7.5 | Hex.17 |
| 85PNG | ø8.5×ø12.5 | 55 | (116) | 20 | 90 | 26 | 7.5 | 7.5 | Hex.19 |

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



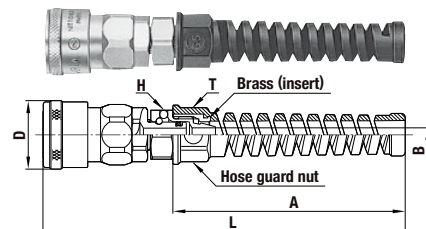
| Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | | |
|-------------------------|--------------------|----------|-----------------|----|--------|--------|--------|
| | | | L | A | øB | T(WAF) | |
| 200-50SNG ^{*4} | ø5×ø8 | 105 | (137.5) | 90 | (26.5) | 4.5 | Hex.19 |
| 200-65SNG | ø6.5×ø10 | 107 | (137.5) | 90 | (26.5) | 5.3 | Hex.19 |
| 200-85SNG | ø8.5×ø12.5 | 116 | (137.5) | 90 | (26.5) | 7.5 | Hex.19 |

Socket SNR type (ROTARY NUT CUPLA with swivel mechanism)



| Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | |
|-------|--------------------|----------|-----------------|--------|-----|--------|
| | | | L | øD | øB | T(WAF) |
| 65SNR | ø6.5×ø10 | 120 | (67.3) | (26.5) | 5.3 | Hex.19 |
| 85SNR | ø8.5×ø12.5 | 136 | (69.3) | (26.5) | 7.5 | Hex.21 |

Socket SNRG type (ROTARY NUT CUPLA with swivel mechanism)



| Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | | |
|--------|--------------------|----------|-----------------|----|--------|--------|--------|
| | | | L | A | øB | T(WAF) | |
| 65SNRG | ø6.5×ø10 | 121 | (140.3) | 90 | (26.5) | 5.3 | Hex.19 |
| 85SNRG | ø8.5×ø12.5 | 139 | (140.3) | 90 | (26.5) | 7.5 | Hex.21 |

The pictures of HI CUPLA for connection to braided hoses and PN type and SN type of NUT CUPLA show steel bodies.

*1 Braided hoses for HI CUPLA for Connection to Braided Hoses should be made of soft PVC and woven by reinforcement thread. *2: Brass: øD=25.4 *3: Stainless steel: øD=25.4 *4: Made-to-order item