

For Air

# Hi Cupla 200

Push-to-connect type for air lines

Working pressure



Valve structure



Applicable fluid



▼ with Tube Fitter

**Simple and secure push-to-connect type! Big flow rate! Tube edge seal design. Gives excellent handling touch.**

- Just push the plug into the socket for simple and secure connection. This reduces connection time and improves efficiency.
- New valve design for low pressure loss to achieve flow rate increase (15% up over the previous model).
- Tube edge seal is achieved when connected.
- Low connection resistance allows easier connection/disconnection.
- No seal damage caused by exhausted lubricant is observed and the handling is superior to external O-ring design.
- Available only with steel body. Not suitable for water or oil.
- Tube Fitter type is available for push-to-connect operation.

## Specifications

|  |  |          |                           |                   |
|--|--|----------|---------------------------|-------------------|
| Body material                                  | Steel (Chrome-plated)  |          |                           |                   |
| Size   | 1/4" (20 type) • 3/8" (30 type) • 1/2" (40 type)   |          |                           |                   |
| Tube size (for Tube Fitter end configurations) | Polyurethane : $\phi 6 \pm 0.1$ • $\phi 8 \pm 0.15$ • $\phi 10 \pm 0.15$<br>Nylon : $\phi 6^{+0.05}_{-0.08}$ • $\phi 8^{+0.05}_{-0.1}$ • $\phi 10^{+0.05}_{-0.1}$<br>Teflon : $\phi 6 \pm 0.07$ • $\phi 8 \pm 0.07$ • $\phi 10 \pm 0.07$ |          |                           |                   |
| Working pressure MPa (kgf/cm <sup>2</sup> )    | 1.5 {15}   |          |                           |                   |
| Pressure resistance MPa (kgf/cm <sup>2</sup> ) | 2.0 {20}   |          |                           |                   |
| Seal material                                  | Seal material  | Mark     | Working temperature range | Remarks           |
| Working temperature range                      | Nitrile rubber   | NBR (SG) | -5°C~+60°C                | Standard material |

• Above are specifications only for Cuplas. Working pressures, maximum pressures and working temperature ranges may vary depending on materials of the tube and temperature conditions in use. The seal material of Micro Cupla with Tube Fitter is NBR only.

## Max. Tightening Torque

N·m (kgf·cm)

|        |          |          |          |
|--------|----------|----------|----------|
| Size   | 1/4"     | 3/8"     | 1/2"     |
| Torque | 14 {143} | 22 {224} | 60 {612} |

## Flow Direction

Fluid must run from socket to plug.



## Interchangeability

Interchangeable with Hi Cupla Models 20, 30 and 40.  
Interchangeable with each corresponding Hi Cupla Series models.

## Min. Cross-Sectional Area

(mm<sup>2</sup>)

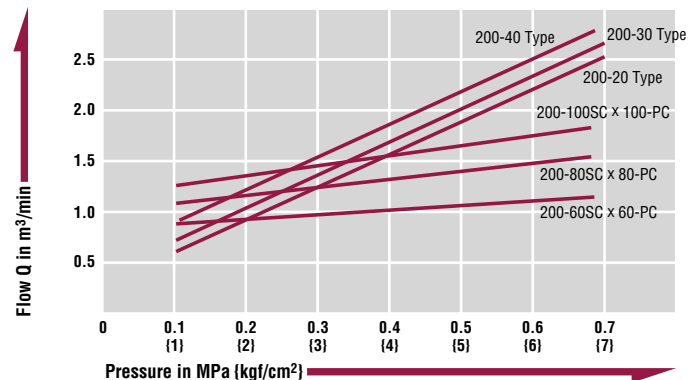
| Socket   | Plug | 17PH | 20PH | 30PH | 40PH | 20PM | 30PM | 40PM | 20PF | 30PF | 40PF |
|----------|------|------|------|------|------|------|------|------|------|------|------|
| 200-17SH |      | 16   | 16   | 16   | 16   | 16   | 16   | 16   | 16   | 16   | 16   |
| 200-20SH |      | 16   | 20   | 20   | 20   | 20   | 20   | 20   | 20   | 20   | 20   |
| 200-30SH |      | 16   | 20   | 41   | 41   | 41   | 41   | 41   | 41   | 41   | 41   |
| 200-40SH |      | 16   | 20   | 41   | 41   | 41   | 41   | 41   | 41   | 41   | 41   |
| 200-20SM |      | 16   | 20   | 41   | 41   | 41   | 41   | 41   | 41   | 41   | 41   |
| 200-30SM |      | 16   | 20   | 41   | 41   | 41   | 41   | 41   | 41   | 41   | 41   |
| 200-40SM |      | 16   | 20   | 41   | 41   | 41   | 41   | 41   | 41   | 41   | 41   |
| 200-20SF |      | 16   | 20   | 41   | 41   | 41   | 41   | 41   | 41   | 41   | 41   |
| 200-30SF |      | 16   | 20   | 41   | 41   | 41   | 41   | 41   | 41   | 41   | 41   |
| 200-40SF |      | 16   | 20   | 41   | 41   | 41   | 41   | 41   | 41   | 41   | 41   |

## Suitability for Vacuum

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

## Pressure - Flow Characteristics

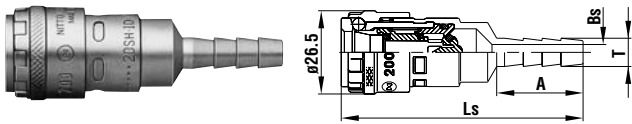
[Test conditions] • Fluid : Air • Temperature : Room temperature



**Models and Dimensions**

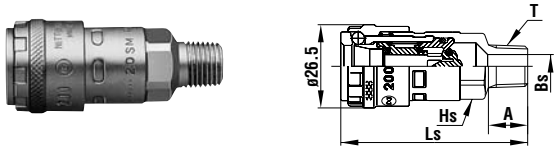
WAF : WAF stands for width across flats.

**Socket SH type (Hose barb)**



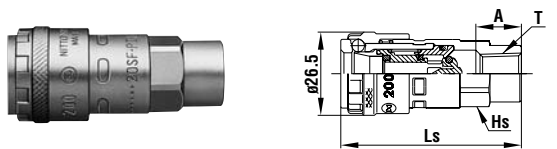
| Model    | Application (Hose) | Mass (g) | Dimensions (mm) |      |      |     |
|----------|--------------------|----------|-----------------|------|------|-----|
|          |                    |          | Ls              | A    | σT   | σBs |
| 200-17SH | 1/4"               | 86       | 77              | 27   | 7.2  | 4.5 |
| 200-20SH | 1/4"               | 90       | 77              | 27.5 | 9    | 5   |
| 200-30SH | 3/8"               | 92       | 79              | 32   | 11.3 | 7.5 |
| 200-40SH | 1/2"               | 104      | 79.5            | 32   | 15   | 10  |

**Socket SM type (Male thread)**



| Model    | Application | Mass (g) | Dimensions (mm) |         |      |       |     |
|----------|-------------|----------|-----------------|---------|------|-------|-----|
|          |             |          | Ls              | Hs(WAF) | A    | T     | σBs |
| 200-20SM | Rc 1/4      | 89       | 60              | Hex.19  | 13   | R 1/4 | 7.5 |
| 200-30SM | Rc 3/8      | 91       | 60.5            | Hex.19  | 13.5 | R 3/8 | 10  |
| 200-40SM | Rc 1/2      | 102      | 56              | Hex.24  | 16   | R 1/2 | 13  |

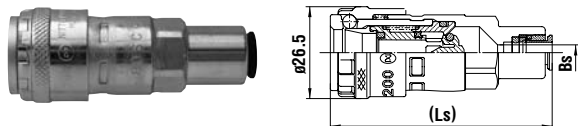
**Socket SF type (Female thread)**



| Models   | Application | Mass (g) | Dimensions (mm) |         |      |        |
|----------|-------------|----------|-----------------|---------|------|--------|
|          |             |          | Ls              | Hs(WAF) | A    | T      |
| 200-20SF | R 1/4       | 94       | 57.5            | Hex.19  | 14.5 | Rc 1/4 |
| 200-30SF | R 3/8       | 103      | 55.5            | Hex.22  | 13   | Rc 3/8 |
| 200-40SF | R 1/2       | 138      | 57.5            | Hex.29  | 16   | Rc 1/2 |

**Models and Dimensions (with Tube Fitter)**

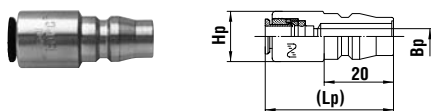
**Socket SC type (with Tube Fitter)**



| Model     | Application      | Mass (g) | Dimensions (mm) |     |
|-----------|------------------|----------|-----------------|-----|
|           |                  |          | Ls              | σBs |
| 200-60SC  | For 6mm OD tube  | 100      | 64              | 5   |
| 200-80SC  | For 8mm OD tube  | 105      | 67.5            | 6.5 |
| 200-100SC | For 10mm OD tube | 123      | 70.5            | 8.5 |

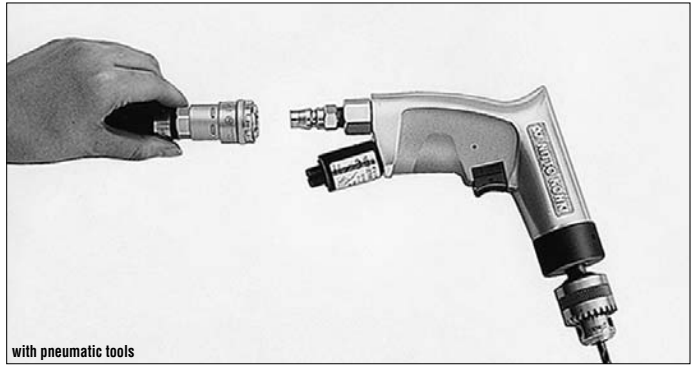
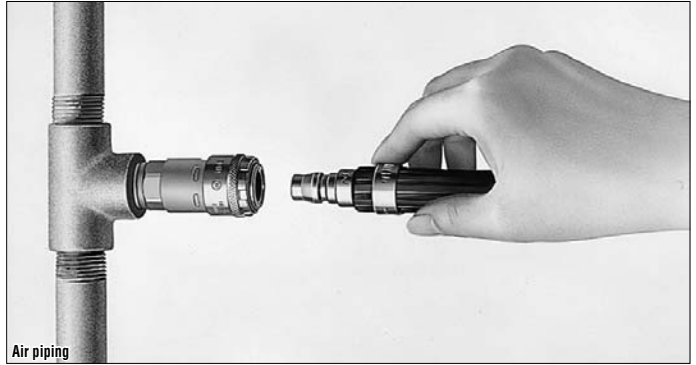
• The outer dimensions of Model 200-100SC are a little bit different from those of other models.

**Plug PC type (with Tube Fitter)**



| Model | Application      | Mass (g) | Dimensions (mm) |      |     |
|-------|------------------|----------|-----------------|------|-----|
|       |                  |          | Lp              | σHp  | σBp |
| 60PC  | For 6mm OD tube  | 25       | 37              | 14.5 | 4.5 |
| 80PC  | For 8mm OD tube  | 30       | 41              | 16.5 | 6.5 |
| 100PC | For 10mm OD tube | 43       | 45              | 19.5 | 7.5 |

**Application example**



*All of socket, plug and tube can be connected in one push-to-connect operation.*

Socket

Plug

No need of pulling the sleeve before the connection. Just push-to-connect.

Just push the tube into Cupla and then it is locked.

Polyurethane, Nylon and Teflon tubes.

**Hi Cupla 200 and Tube Fitter are now integrated.**

*Major applications: miniature pneumatic equipment, automatic control equipment, physicochemical equipment and medical devices.*

**Just push in for quick connection.**

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