

For Low Pressure

Mini Cupla

Standard type for use on equipment for welding and gas cutting, etc.

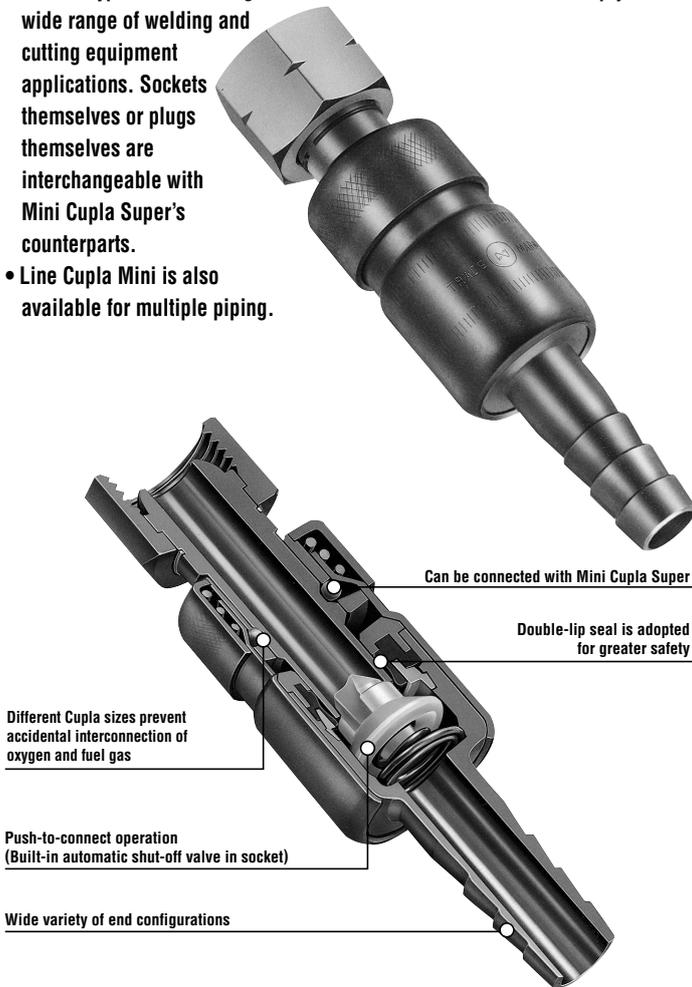
Working pressure **0.7** MPa (7 kgf/cm²)

Valve structure: One-way shut-off

Applicable fluids: Oxygen, Fuel Gas

Exclusively for oxyacetylene equipment. Many variations with higher flow rates!

- From cylinders to torches, all piping connections associated with welding and cutting equipment are push-to-connect operations.
- Double-lip seal prevents minor leak during connection. Oxygen and fuel gas Cuplas have different sizes to prevent accidental interconnection.
- Pressure loss is minimized to achieve higher flow rate.
- Various types of end configurations have been standardized to comply with a wide range of welding and cutting equipment applications. Sockets themselves or plugs themselves are interchangeable with Mini Cupla Super's counterparts.
- Line Cupla Mini is also available for multiple piping.

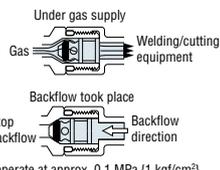
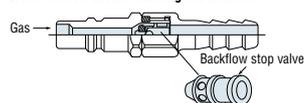


Structure and Principle of Backflow Prevention

Plug with backflow stop valve

Plugs with backflow stop valve in Mini Cupla are designed exclusively for gas welding/cutting to prevent occurrence of gas mixing. Possible backflow of gas during operation can be stopped by cutting the back flow into the cylinder or line. Such valve is adopted in both fuel gas and oxygen plug.

Cross-section sketch showing the structure



Specifications

| | | | | |
|------------------|----------------|----------------------------------|----------------|-------------------|
| Body material | Brass | | | |
| Size | Thread | 1/8", 1/4", 3/8" / M16, W12.5-20 | | |
| | Hose barb | 1/4", 5/16", 3/8" | | |
| Pressure unit | MPa | kgf/cm ² | bar | PSI |
| Working pressure | 0.7 | 7 | 7 | 102 |
| Seal material | Nitrile rubber | NBR (SG) | -20°C to +80°C | Standard material |

Max. Tightening Torque

| | | | |
|--------|--|--------|----------|
| Model | 22PF, 22PFB, 22SF, 25PF, 33PF, 33PFB, 33SF | 22SM | 33SM |
| Torque | 12 (122) | 9 (92) | 11 (112) |

Flow Direction

Fluid must run from socket to plug.



Interchangeability

To prevent accidental interconnection, no Cuplas for oxygen can be connected with those for fuel gas Cuplas. However, oxygen plugs and sockets are interchangeable regardless of end configurations and fuel gas plugs and sockets are interchangeable regardless of end configurations. Also Mini Cupla models for oxygen are interchangeable with Mini Cupla Super models for oxygen, while fuel gas models are interchangeable.

Min. Cross-Sectional Area

(mm²)

For Oxygen

| Socket \ Plug | 22PH | 25PH | 22PF | 22PFF | 25PF | 22PHB | 25PHB | 22PFB | 21PMT | 22PMT |
|---------------|------|------|------|-------|------|-------|-------|-------|-------|-------|
| 22SH | 19.6 | 19.6 | 19.6 | 19.6 | 19.6 | 15.9 | 15.9 | 15.9 | 19.6 | 19.6 |
| 25SH | 19.6 | 19.6 | 19.6 | 19.6 | 19.6 | 15.9 | 15.9 | 15.9 | 19.6 | 19.6 |
| 22SF | 19.6 | 19.6 | 19.6 | 19.6 | 19.6 | 15.9 | 15.9 | 15.9 | 19.6 | 19.6 |
| 22SM | 19.6 | 19.6 | 19.6 | 19.6 | 19.6 | 15.9 | 15.9 | 15.9 | 19.6 | 19.6 |

For Fuel Gas

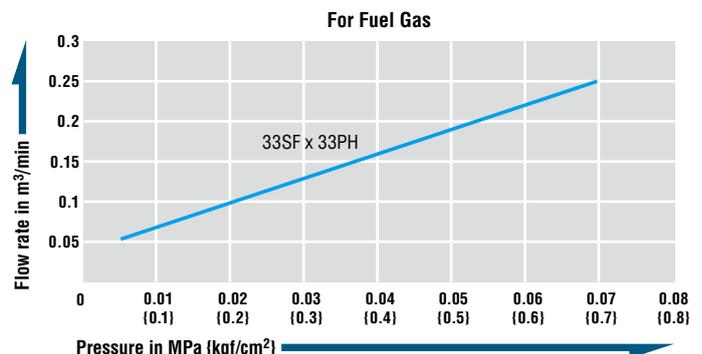
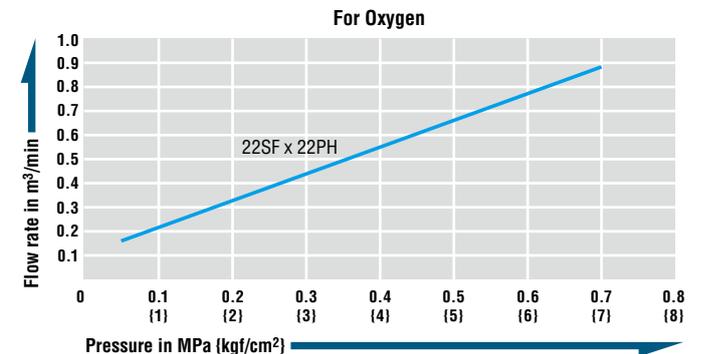
| Socket \ Plug | 33PH | 35PH | 33PF | 33PHB | 35PHB | 33PFB |
|---------------|------|------|------|-------|-------|-------|
| 33SH | 44.1 | 28.2 | 44.1 | 15.9 | 15.9 | 15.9 |
| 35SH | 28.2 | 28.2 | 28.2 | 15.9 | 15.9 | 15.9 |
| 33SF | 19.6 | 19.6 | 19.6 | 15.9 | 15.9 | 15.9 |
| 33SM | 44.1 | 28.2 | 44.1 | 15.9 | 15.9 | 15.9 |

Suitability for Vacuum

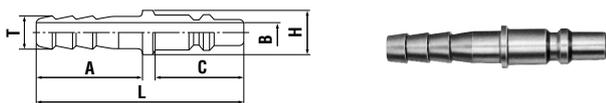
Not suitable for vacuum application in either connected or disconnected condition.

Pressure - Flow Characteristics

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

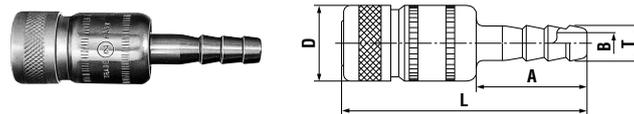


Plug PH type (Hose barb)



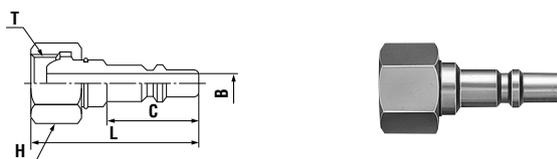
| Usage | Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | | | |
|--------------|-------|--------------------|----------|-----------------|------|----|----|------|-----|
| | | | | L | C | A | øH | øT | øB |
| For Oxygen | 22PH | 1/4" | 16 | 55 | 23.5 | 28 | 11 | 7.8 | 5 |
| | 25PH | 5/16" | 19 | | | | | 9 | |
| For Fuel Gas | 33PH | 3/8" | 22 | 57 | 25.5 | 28 | 14 | 10.5 | 7.5 |
| | 35PH | 5/16" | 20 | | | | | 9 | |

Socket SH type (Hose barb)



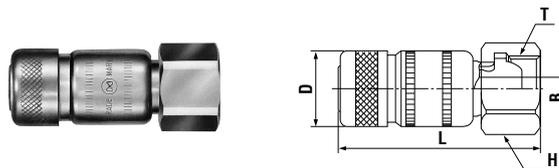
| Usage | Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | | | |
|--------------|-------|--------------------|----------|-----------------|--------|----|------|-----|---|
| | | | | L | øD | A | øT | øB | |
| For Oxygen | 22SH | 1/4" | 52 | (64) | (19.8) | 29 | 7.8 | 5 | |
| | 25SH | 5/16" | 55 | | | | | | 9 |
| For Fuel Gas | 33SH | 3/8" | 69 | (65) | (22.6) | 29 | 10.5 | 7.5 | |
| | 35SH | 5/16" | 67 | | | | 9 | | 6 |

Plug PF type (Female thread for torch connection)



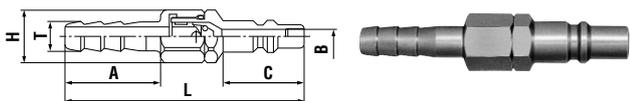
| Usage | Model | Application | Mass (g) | Dimensions (mm) | | | | | |
|--------------|-------|-------------------------|----------|-----------------|------|--------|--------------------------|-----|----------|
| | | | | L | C | H(WAF) | T | øB | |
| For Oxygen | 22PF | For oxygen torch side | 31 | (43) | 23.5 | Hex.19 | M16x1.5 | 5 | |
| | 22PFF | | 29 | (43.5) | | | | | G 1/4 |
| | 25PF | | 26 | | | | | | W12.5-20 |
| For Fuel Gas | 33PF | For fuel gas torch side | 36 | (44.5) | 25.5 | Hex.19 | M16x1.5 left-hand thread | 7.5 | |

Socket SF type (Female thread for cylinder connection)



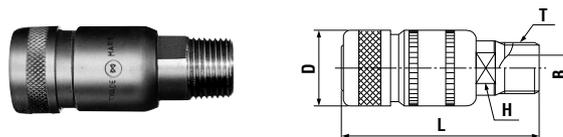
| Usage | Model | Application | Mass (g) | Dimensions (mm) | | | | | |
|--------------|-------|-------------------------|----------|-----------------|--------|--------------------------|----|--------|--|
| | | | | L | øD | T | øB | H(WAF) | |
| For Oxygen | 22SF | For oxygen gauge side | 80 | (52) | (19.8) | M16x1.5 | 5 | Hex.19 | |
| For Fuel Gas | 33SF | For fuel gas gauge side | 96 | (54) | (22.6) | M16x1.5 left-hand thread | 5 | Hex.19 | |

Plug PHB type (Hose barb with backflow stop valve)



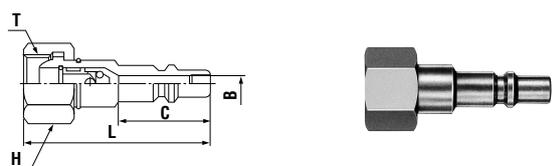
| Usage | Model | Application (Hose) | Mass (g) | Dimensions (mm) | | | | | |
|--------------|-------|--------------------|----------|-----------------|------|----|------|------|-----|
| | | | | L | C | A | øH | øT | øB |
| For Oxygen | 22PHB | 1/4" | 31 | (69.6) | 23.5 | 28 | 15.5 | 7.8 | 4.5 |
| | 25PHB | 5/16" | 34 | | | | | 9 | |
| For Fuel Gas | 33PHB | 3/8" | 41 | (70.6) | 25.5 | 28 | 15.5 | 10.5 | 4.5 |
| | 35PHB | 5/16" | 39 | | | | | 9 | |

Socket SM type (Male thread)



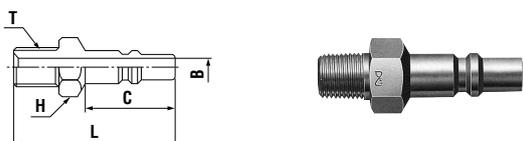
| Usage | Model | Application | Mass (g) | Dimensions (mm) | | | | | |
|--------------|-------|-------------|----------|-----------------|--------|--------|-------|-----|--|
| | | | | L | øD | H(WAF) | T | øB | |
| For Oxygen | 22SM | Rc 1/4 | 51 | (52) | (19.8) | 12 | R 1/4 | 7.5 | |
| For Fuel Gas | 33SM | Rc 3/8 | 77 | (55) | (22.6) | 14 | R 3/8 | 10 | |

Plug PFB type (Female thread with backflow stop valve for torch connection)



| Usage | Model | Application | Mass (g) | Dimensions (mm) | | | | | |
|--------------|-------|-------------------------|----------|-----------------|------|--------|--------------------------|-----|--|
| | | | | L | C | H(WAF) | T | øB | |
| For Oxygen | 22PFB | For oxygen torch side | 36 | (48.5) | 23.5 | Hex.19 | M16x1.5 | 4.5 | |
| For Fuel Gas | 33PFB | For fuel gas torch side | 41 | (49) | 25.5 | Hex.19 | M16x1.5 left-hand thread | 4.5 | |

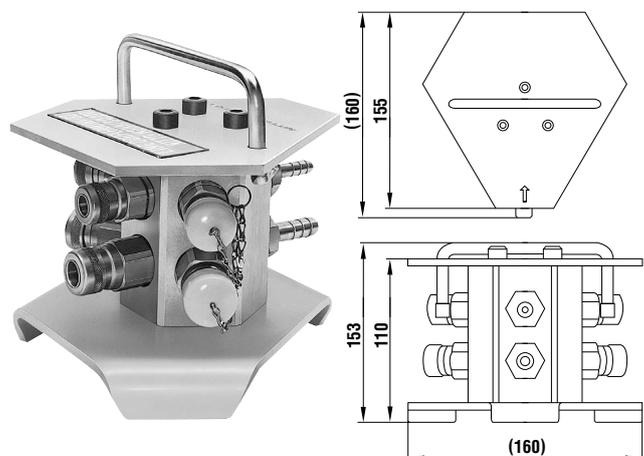
Plug PMT type (Male thread)



| Usage | Model | Application | Mass (g) | Dimensions (mm) | | | | | |
|------------|-------|-------------|----------|-----------------|----|--------|-------|----|--|
| | | | | L | C | H(WAF) | T | øB | |
| For Oxygen | 21PMT | Rc 1/8 | 22 | 43.5 | 24 | Hex.14 | R 1/8 | 5 | |
| | 22PMT | Rc 1/4 | 27 | 45 | 24 | Hex.14 | R 1/4 | 5 | |

Socket Line Cupla Mini LM-32 (For three port branch piping)

Mass : 4,300 g
 • Dust caps come with the product as standard.



| Line Cupla Mini contains: | | | | Dimensions (mm) | | |
|---|------------|--------------|------------|-----------------|--|--|
| Supply port | For Oxygen | For Fuel Gas | Qty | | | |
| Gas outlets | 22SM | 33SM | Each 3 pc. | | | |
| Accessories (Plug with backflow stop valve) | 22PHB | 33PHB | Each 3 pc. | | | |