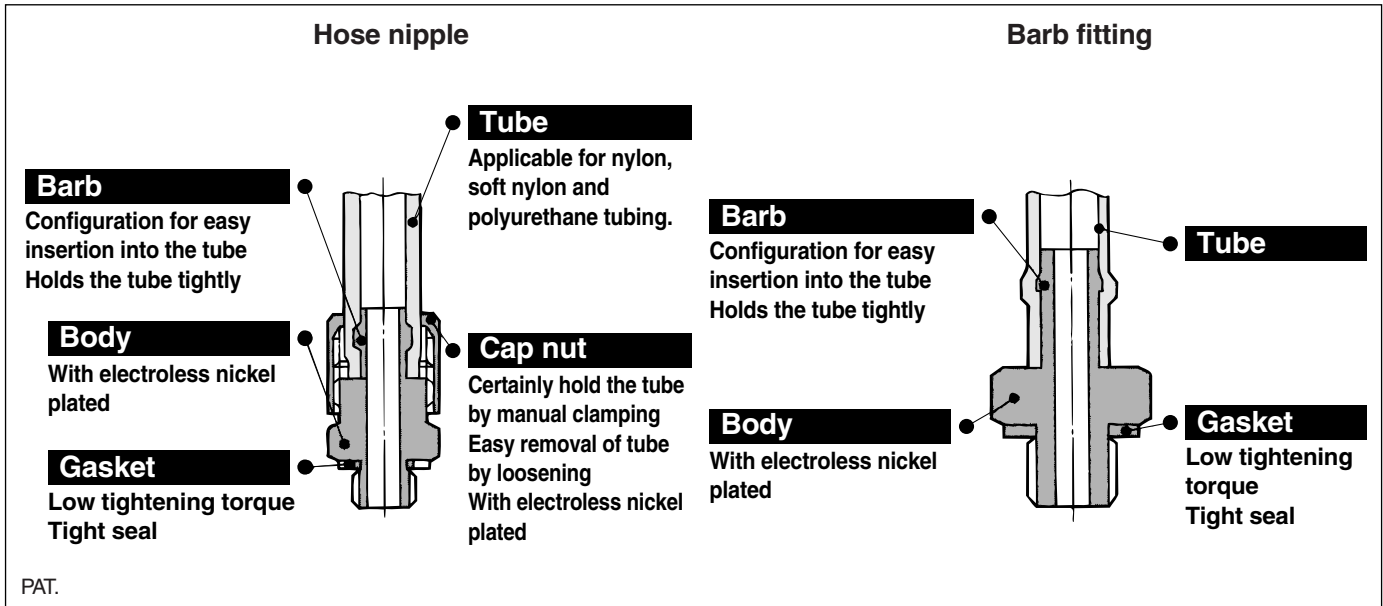


Miniature Fittings

M3, M5, R 1/8

Series M



Compact piping space

Hose nipple tubing connection/disconnection is simple while keeping a large retaining force.

Line up various styles

For air connection in confined areas.

Accepts many styles of plastic tubing

Hose nipple and hose elbow accepts nylon, soft nylon, and polyurethane tubing.



Specifications

| Applicable tubing material | | Nylon | Soft nylon | Polyurethane |
|-----------------------------------|----------|---|-------------|------------------|
| Applicable tubing | M3 | — | — | — |
| | M5-R 1/8 | ø4/ø2.5 ø6/ø4 | ø3.18/ø2.18 | ø4/ø2.5 ø6/ø4 |
| Max. operating pressure (at 20°C) | | 1.5 MPa | 1.0 MPa | 0.8 MPa |
| Connection size | | M3, M5, R 1/8 | | |
| Thread | | JIS B 0209 Class 2 (Metric coarse thread), JIS B 0203 (Taper pipe thread) | | |

Principal Parts Material

| Material | Body | |
|----------|--------|--|
| | Gasket | C3604BD (Nipple M-3N, M-5N: Stainless steel 303) |










Fitting Markings for Applicable Tubing Material (Barb fitting, Barb elbow, Barb elbow (H))







Tubing material determines the compatible fittings. (Refer to the table below.)

| Connection | Tubing | Fitting marking for applicable tubing material | | | Surface treatment (Color) |
|------------|--|--|------------|----------------|---|
| | | Barb fittings | Barb elbow | Barb elbow (H) | |
| M3 | Soft nylon tubing Polyurethane tubing | | — | | Electroless nickel plated (Silver color) |
| | Nylon tubing | | | | Electroless nickel plated (Silver color) |
| R 1/8, M5 | Soft nylon tubing Polyurethane tubing | Marking | Marking | Marking | Electroless nickel plated (Black color) [Except stud] |























* Body of M-5E, M-5ER, M-5M is not surface-treated.
Electroless nickel plate treated is available as option -X2.














Series M3, R 1/8

| Series | Model | Description | Application | Note |
|-----------|-----------------|---|--|---------------------------------|
| M3 | M-3AU-3 | Barb fitting for soft tube  | For soft nylon tubing | ø3.18/2.18 x M3 |
| | M-3AU-4 |  | For polyurethane tubing | ø3.18/2 x M3 |
| | M-3ALU-3 | Barb elbow for soft tubing  | For soft nylon tubing | ø3.18/2.18 x M3 |
| | M-3ALU-4 |  | For polyurethane tubing | ø3.18/2 x M3 |
| | M-3UL | Universal elbow  | Body rotates at 360° around the stud axis | M3 female x M3 male |
| | M-3UT | Universal tee  | Body rotates at 360° around the stud axis | M3 female x M3 female x M3 male |
| | M-3N | Nipple  | Fitting to workpiece and fitting to fitting connection | M3 male x M3 male |
| | M-3P | Plug  | Use to plug unused M3 port | |
| | M-3G | Gasket  | To seal M3 thread | |

| Series | Model | Description | Application | Note |
|--------------|-----------------|--|---|----------------|
| R 1/8 | M-01AN-4 | Barb fitting for nylon tubing  | For nylon tubing | ø4/2.5 x R 1/8 |
| | M-01AN-6 |  | | ø6/4 x R 1/8 |
| | M-01AU-4 | Barb fitting for soft tubing  | For soft nylon and polyurethane tubing | ø4/2.5 x R 1/8 |
| | M-01AU-6 |  | | ø6/4 x R 1/8 |
| | M-01H-4 | Hose nipple  | For nylon, soft nylon and polyurethane tubing | ø4/2.5 x R 1/8 |
| | M-01H-6 |  | | ø6/4 x R 1/8 |

Series M5

| Series | Model | Description | Application | Note |
|------------------|--|--|--|-----------------|
| M5 | M-5AN-4 | Barb fitting for nylon tubing  | For nylon tubing | ø4/2.5 x M5 |
| | M-5AN-6 |  | | ø6/4 x M5 |
| | M-5AU-3 | Barb fitting for soft tubing  | For soft nylon tubing | ø3.18/2.18 x M5 |
| | M-5AU-4 |  | For polyurethane tubing | ø3.18/2 x M5 |
| | M-5AU-6 |  | For soft nylon and polyurethane tubing | ø4/2.5 x M5 |
| | M-5ALN-4 | Barb elbow for nylon tubing  | • For nylon • Body rotates at 360° around the stud axis | ø4/2.5 x M5 |
| | M-5ALN-6 |  | | ø6/4 x M5 |
| | M-5ALU-3 | Barb elbow for soft tubing  | Body rotates at 360° around the stud axis | ø3.18/2.18 x M5 |
| | M-5ALU-4 |  | For polyurethane tubing | ø3.18/2 x M5 |
| | M-5ALU-6 |  | For soft nylon and polyurethane tubing | ø4/2.5 x M5 |
| M-5ALHN-4 | Barb elbow (H) for nylon tubing  | Body rotates at 360° around the stud axis | ø4/2.5 x M5 | |
| M-5ALHN-6 |  | | ø6/4 x M5 | |
| M-5ALHU-3 | Barb elbow (H) for soft tubing  | Body rotates at 360° around the stud axis | ø3.18/2.18 x M5 | |
| M-5ALHU-4 |  | For polyurethane tubing | ø3.18/2 x M5 | |
| M-5ALHU-6 |  | For soft nylon and polyurethane tubing | ø4/2.5 x M5 | |
| M-5H-4 | Hose nipple  | For nylon, soft nylon and polyurethane tubing | ø4/2.5 x M5 | |
| M-5H-6 |  | | ø6/4 x M5 | |
| M-5HL-4 | Hose elbow  | • For nylon, soft nylon and polyurethane tubing • Body rotates at 360° around the stud axis | ø4/2.5 x M5 | |
| M-5HL-6 |  | | ø6/4 x M5 | |
| M-5HLH-4 | Hose elbow (H)  | | ø4/2.5 x M5 | |
| M-5HLH-6 |  | | ø6/4 x M5 | |
| M-5L | Elbow  | One-sided 90° elbow | M5 female x M5 female | |

| Series | Model | Description | Application | Note |
|--------------|---|--|---|-----------------------------------|
| M5 | M-5T | tee  | Both sides allow 90° connection | M5 female x M5 female x M5 female |
| | M-5UL | Universal elbow  | Body rotates at 360° around the stud axis | M5 female x M5 male |
| | M-5UT | Universal tee  | Body rotates at 360° around the stud axis | M5 female x M5 female x M5 male |
| | M-5J | Extension fitting  | Solid piece moves fitting up from workpiece | M5 male x M5 female |
| | M-5N | Nipple  | Fitting to workpiece and fitting to fitting connection | M5 male x M5 male |
| | M-5UN | Universal nipple  | Body rotates at 360° around the stud axis | M5 male x M5 male PAT. |
| | M-5E | Bulkhead union  | Panel-mount connection | M5 female x M5 female |
| | M-5ER | Bulkhead reducer  | Reduction from Rc 1/8 to M5 including panel or bracket mounting | Rc 1/8 x M5 female |
| | M-5M | Manifold  | For reducing Rc 1/8 female be diverted to up to 9, M5 stations, including panel or bracket mounting | Rc 1/8 x M5 female (9 stations) |
| | M-5B | Bushing  | For reducing R 1/8 female to M5. | R 1/8 x M5 female |
| M-5P | Plug  | Use to plug unused M5 port. | | |
| M-5G1 | Gasket  | To seal M5 thread | Material: PVC | |
| M-5GH | Gasket (H)  | M-5AL□-6 M-5ALH□-6 M-5HL-4, 6 M-5HLH-4, 6 | Material: Nylon66 GF30% | |

* Gaskets are prepared for other items than the above, too.

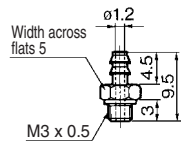
| Part no. | Application | Material |
|-----------------|------------------------------------|----------------------|
| M-5G2 | For M5 thread for Series KQ2, KJ | Stainless steel 304, |
| M-6G | For M6 thread for Series KQ2 | NBR |
| M-10/32G | For 10-32UNF thread for Series KQ2 | |

- K□
- M□
- H□
- D□
- MS
- T□
- VMG

Series M

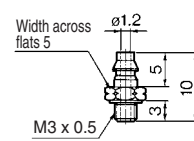
Series M3

Barb Fitting for Soft Tubing: M-3AU-3



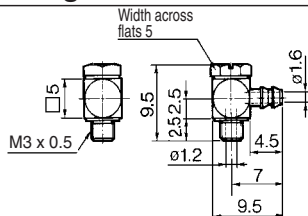
Effective area: 0.9 mm² Weight: 0.6 g

Barb Fitting for Soft Tubing: M-3AU-4



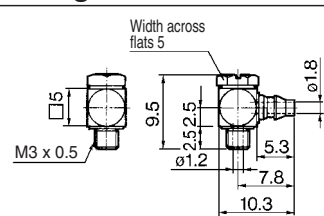
Effective area: 0.9 mm² Weight: 0.7 g

Barb Elbow for Soft Tubing: M-3ALU-3



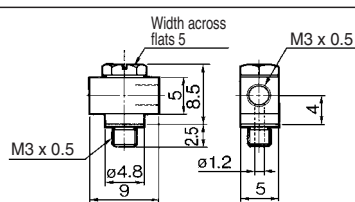
Effective area: 0.6 mm² Weight: 0.8 g

Barb Elbow for Soft Tubing: M-3ALU-4



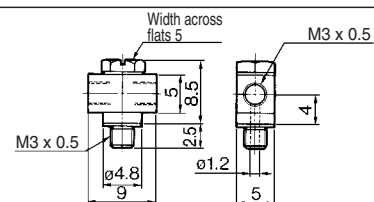
Effective area: 0.6 mm² Weight: 0.9 g

Universal Elbow: M-3UL



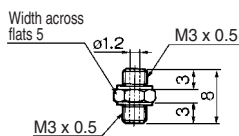
Effective area: 0.6 mm² Weight: 1.6 g

Universal Tee: M-3UT



Effective area: 0.6 mm² Weight: 1.4 g

Nipple: M-3N



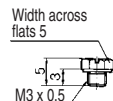
Weight: 0.6 g
Effective area: 0.9 mm²

Gasket: M-3G



Weight: 0.005 g

Plug: M-3P



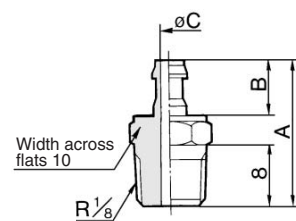
Weight: 0.5 g

Series R 1/8

Barb Fitting for Nylon Tubing, Soft Tubing: M-01A□-4/-6



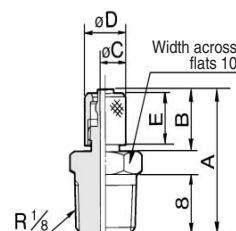
| Applicable tubing | Model | A | B | øC | Effective area (mm ²) | Weight (g) |
|-------------------|----------|----|---|-----|-----------------------------------|------------|
| Nylon tubing | M-01AN-4 | 16 | 5 | 1.8 | 2.1 | 6.4 |
| | M-01AN-6 | 18 | 7 | 2.5 | 4.0 | 6.6 |
| Soft tubing | M-01AU-4 | 16 | 5 | 1.8 | 2.1 | 6.5 |
| | M-01AU-6 | 18 | 7 | 2.5 | 4.0 | 6.7 |



Hose Nipple: M-01H-4/-6

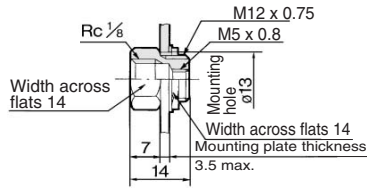


| Model | A | B | øC | øD | E | Effective area (mm ²) | Weight (g) |
|---------|------|-----|-----|-----|---|-----------------------------------|------------|
| M-01H-4 | 19.5 | 8.5 | 1.8 | 6.5 | 7 | 2.1 | 7.1 |
| M-01H-6 | 20.5 | 9.5 | 3 | 8.5 | 8 | 5.5 | 7.7 |



Series M5

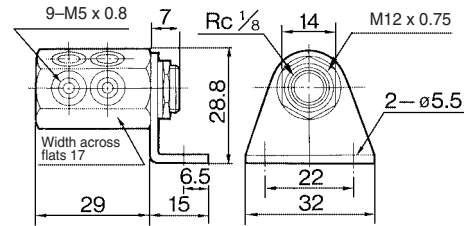
Bulkhead Reducer: M-5ER



For the plate thickness 3.5 to 6 mm, give the plate tapping M12 x 0.75, and then screw-in.

Weight: 12 g

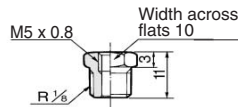
Manifold: M-5M



Panel mounting plate thickness max. 3.5 mm
For the plate thickness 3.5 to 6 mm, give the plate tapping M12 x 0.75, and then screw-in.

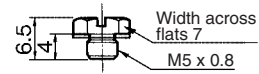
Weight: 59 g

Bushing: M-5B



Weight: 5.8 g

Plug: M-5P



Weight: 1.3 g

Gasket: M-5G1



Weight: 0.01 g

Gasket: M-5GH



Weight: 0.04 g

- K
- M
- H
- D
- MS
- T
- VMG

⚠ Precautions

Refer to pages 15-18-3 to 15-18-4 in the front matter for Safety Instructions and Common Precautions on the products mentioned in this catalog, and refer to pages 15-1-10 to 15-1-11 for Precautions on every series.

Tightening of M3/M5 Threads

⚠ Caution

1. Tighten by hand, and give it an additional 1/4 rotation with wrench. (The additional rotation should be doubled to 1/2 when using the universal elbow, universal tee, etc. which have two gaskets.) If tightened excessively, thread portion may be damaged and gasket may be deformed. This will cause air leakage. On the contrary, if tightened insufficiently, thread may loosen causing air leakage.

Use of Tube with Hose Nipple

⚠ Caution

1. Cut the tube perpendicularly to the tube axis to a little longer than required length. (Use tube cutter "TK-1", "TK-2" or "TK-3".)
2. Pass the tube through the cap nut.
3. Push the tube until it comes to the end of the barb portion, or it may cause air leakage or hose releasing.
4. Tighten the cap nut firmly by hand on the fitting.

Use of Tube with Barb Fitting

⚠ Caution

1. Cut the tube perpendicularly to the tube axis to a little longer than required length. (Use tube cutter "TK-1", "TK-2" or "TK-3".)
2. Push the tube until it comes to the end of the barb portion, or it may cause air leakage or release hose.

Miniature Fittings Stainless Steel 316 Series MS

For use in corrosive environments
Stainless steel

Compact piping space

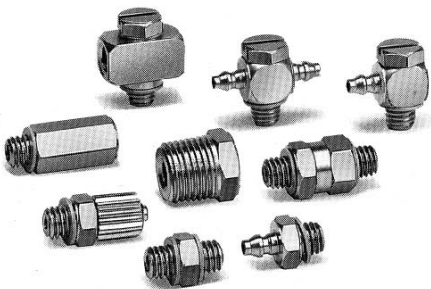
Tube has a large retaining force. Hose nipple assures easy installation and removal.

Line up various types

Possible for special tubing in the same direction. Accepts many styles of plastic tubing

Hose nipple and hose elbow

Accepts nylon, soft nylon, and polyurethane tubing.



Hose nipple

Barb

Configuration for easy insertion into the tube
Holds the tube tightly.

Body

Stainless steel 316

Gasket

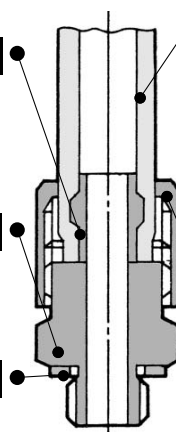
Low tightening torque
Tight seal

Tube

Possible for combination use of nylon tubing and polyurethane tubing.

Cap nut

Certainly hold the tube by manual clamping
Easy removal of tube by loosening
Stainless steel 316



Barb fitting

Barb

Configuration for easy insertion into the tube
Holds the tube tightly.

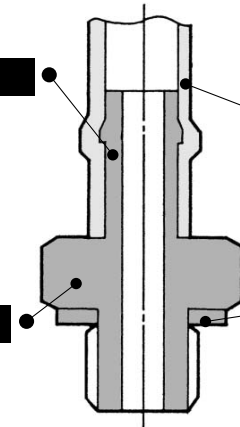
Body

Stainless steel 316

Tube

Gasket

Low tightening torque
Tight seal



Specifications

| Applicable tubing material | Nylon | Soft nylon | | Polyurethane |
|----------------------------|--|----------------------|--------------------|-------------------------------|
| Applicable tubing diameter | ø4, ø2.5 ø6, ø4 | ø3.18, ø2.18 | ø4, ø2.5 ø6, ø4 | ø3.18, ø2, ø4 ø2.5, ø6, ø4 |
| Maximum operating pressure | 1.5 MPa | 1.0 MPa | | 0.8 MPa |
| Connection size | M5 (JIS B 0209 Class 2 metric coarse thread) | | | |
| Material | Body | Stainless steel 316 | | |
| | Gasket | PVC, Nylon 66, GF30% | | |

K□

M□

H□


















D□

MS

T□

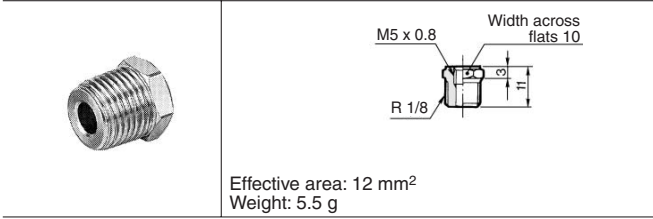
VMG

Series MS

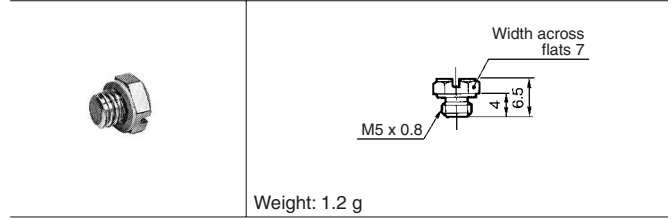
| Model | | | |
|------------|---|---|---------------------------------|
| Model | Description | Application | Note |
| MS-5AU-3 | Barb fitting for soft tube  | For soft nylon tube | ø3.18, ø2.18 x M5 |
| | | For polyurethane tube | ø3.18, ø2 x M5 |
| MS-5AU-4 |  | For soft nylon and polyurethane tube | ø4, ø2.5 x M5 |
| MS-5AU-6 | | | ø6, ø4 x M5 |
| | P. 27 | | |
| MS-5ALHU-3 | Barb elbow for soft tube  | For soft nylon tube | ø3.18, ø2.18 x M5 |
| | | For polyurethane tube | ø3.18, ø2 x M5 |
| MS-5ALHU-4 |  | For soft nylon and polyurethane tube | ø4, ø2.5 x M5 |
| MS-5ALHU-6 | | | ø6, ø4 x M5 |
| | P. 27 | | |
| | | Body rotates at 360° around the stud axis | |
| MS-5H-4 | Hose nipple  | For nylon, soft nylon, and polyurethane tube | ø4, ø2.5 x M5 |
| MS-5H-6 | | | ø6, ø4 x M5 |
| | P. 27 | | |
| MS-5HLH-4 | Hose elbow  | <ul style="list-style-type: none"> For nylon, soft nylon, and polyurethane tube Body rotates at 360° around the stud axis | ø4, ø2.5 x M5 |
| MS-5HLH-6 | | | |
| | P. 27 | | |
| MS-5G1 | Gasket  | To seal M5 thread | Material: PVC |
| | P. 28 | | |
| MS-5UL | Universal elbow  P. 27 | Body rotates at 360° around the stud axis | M5 female x M5 male |
| MS-5UT | Universal tee  P. 27 | Body rotates at 360° around the stud axis | M5 female x M5 female x M5 male |
| MS-5B | Push  P. 28 | For reducing Rc 1/8 female to M5 female | R 1/8 x M5 female |
| MS-5P | Plug  P. 28 | Use to plug unused M5 port. | |
| MS-5J | Extension fitting  P. 28 | Solid piece moves fitting up from work piece | M5 male x M5 female |
| MS-5N | Nipple  P. 28 | Fitting to workpiece and fitting to fitting connection | M5 male x M5 male |
| MS-5UN | Universal nipple  P. 28 | Body rotates at 360° around the stud axis | M5 male x M5 male PAT |
| MS-5ATHU-3 | Barb tee for soft tube  | For soft nylon tube | ø3.18, ø2.18 x M5 |
| | | For polyurethane tube | ø3.18, ø2 x M5 |
| MS-5ATHU-4 |  | For soft nylon and polyurethane tube | ø4, ø2.5 x M5 |
| MS-5ATHU-6 | | | ø6, ø4 x M5 |
| | P. 28 | | |
| | | Body rotates at 360° around the stud axis | |
| M-5GH | Gasket (H)  P. 28 | MS-5ALHU-6 MS-5HLH-4 MS-5HLH-6 MS-5ATHU-6 only | Material: Nylon 66 GF 30% |

Series MS

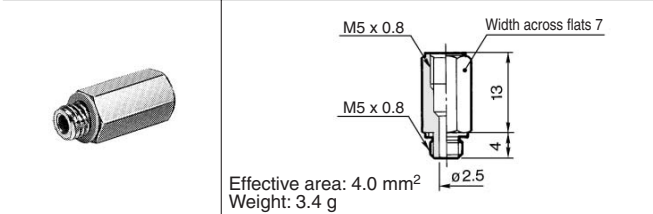
Bushing: MS-5B



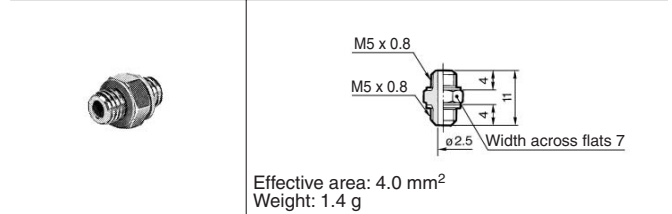
Plug: MS-5P



Extension Fitting: MS-5J



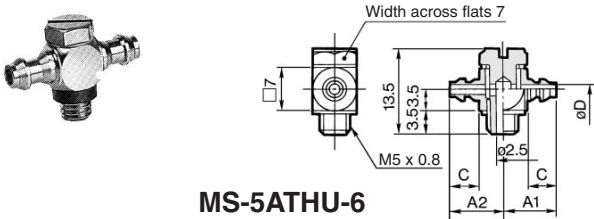
Nipple: MS-5N



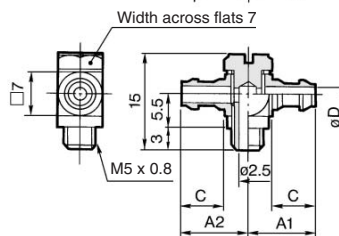
Barb Tee for Soft Tube: MS-5ATHU-3/4/6

| Model | A1 | A2 | C | øD | Effective area (mm ²) | Weight (g) |
|------------|------|------|-----|-----|-----------------------------------|------------|
| MS-5ATHU-3 | 8 | 8.3 | 4.5 | 1.6 | 1.1 | 3.4 |
| MS-5ATHU-4 | 8.8 | 8.8 | 5.0 | 1.8 | 1.4 | 3.6 |
| MS-5ATHU-6 | 10.8 | 10.8 | 7.0 | 2.5 | 2.4 | 4.2 |

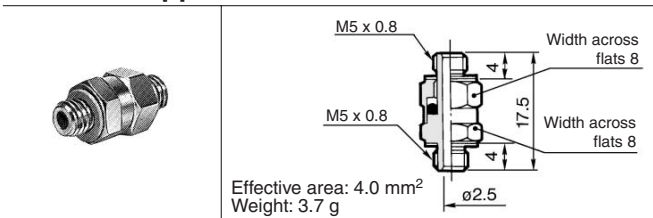
MS-5ATHU-3/4



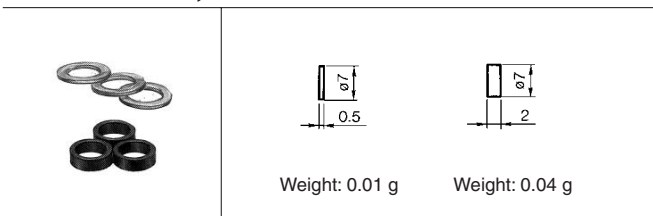
MS-5ATHU-6



Universal Nipple: MS-5UN



Gasket: M-5G1, M-5GH



⚠ Precautions

Be sure to read before handling. Refer to pages 15-8-3 to 15-8-4 for Safety Instructions and Common Precautions on the products mentioned in this catalog, and refer to pages 15-1-10 to 15-1-11 for Precautions on every series.

Tightening of M5 Thread

⚠ Caution

1. Tighten by hand, and give it an additional 1/4 rotation with a wrench. (The additional rotation should be doubled to 1/2 when using the universal elbow, universal tee, etc. which have two gaskets.) If tightened excessively, thread portion may be damaged and gasket may be deformed. This will cause air leakage. On the contrary, if tightened insufficiently, thread may loosen causing air leakage.

Use of Tube with Hose Nipple

⚠ Caution

1. Cut the tube perpendicularly to the tube axis to a little longer length than required (use tube cutter "TK-1", "TK-2" or "TK-3").
2. Pass the tube through the cap nut.
3. Push the tube until it comes to the end of the barb portion, or it may cause air leakage or hose releasing.
4. Tighten the cap nut firmly by hand on the fitting.

Use of Tube with Barb Fitting

⚠ Caution

1. Cut the tube perpendicularly to the tube axis to a little longer length than required (use tube cutter "TK-1", "TK-2" or "TK-3").
2. Push the tube until it comes to the end of the barb portion, or it may cause air leakage or release hose.