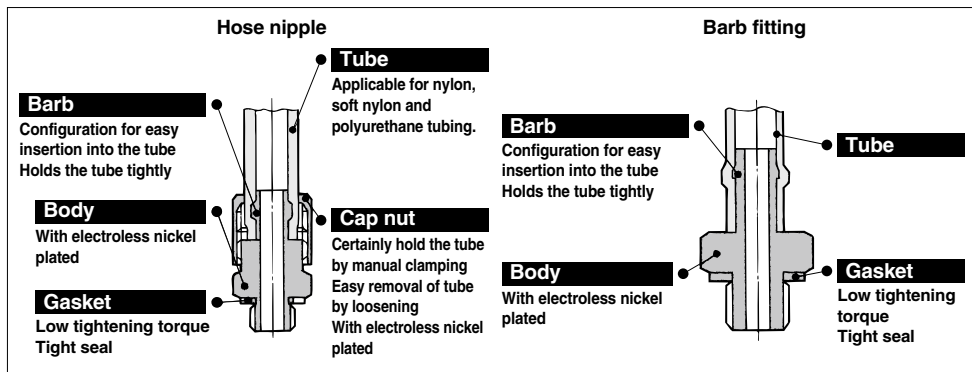


Miniature Fittings

M Series

Applicable Tubing: $\phi 3.2$, $\phi 4$, $\phi 6$ Connection Thread: M3, M5, R $\frac{1}{8}$



Compact piping space

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

Line up various types

For air connection in confined areas.

Accepts many types of plastic tubing

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



Made to Order

(Refer to page 200 for details.)

Specifications

Applicable tubing material		Nylon	Soft nylon		Polyurethane	Super PFA ⁽¹⁾	FEP ⁽²⁾	Modified PTFE ⁽³⁾
Applicable tubing O.D. / I.D.	M3	—	ø3.18/ø2.18	ø4/ø2.5	ø3.18/ø2 ø4/ø2.5	—	—	—
	M5, R 1/8	ø4/ø2.5 ø6/ø4		ø4/ø2.5 ø6/ø4	ø3.18/ø2 ø4/ø2.5 ø6/ø4	ø6/ø4	ø4/ø2.5 ø6/ø4	ø4/ø2.5 ø6/ø4
Fluid			Air, Water ^(4, 5)					
Max. operating pressure (at 20°C)			1.5 MPa	1 MPa	0.8 MPa	1 MPa	1.5 MPa	1.4 MPa
Ambient and fluid temperature			-5 to 60°C, Water: 0 to 40°C (No freezing)					
Connection size			M3, M5, R 1/8			M5, R 1/8		
Thread			JIS B0205, Class 2 (Metric fine thread) JIS B0203 (Taper thread for piping)					

Note 1), Note 2), Note 3) Compatible only with hose nipple type.

Note 4) Barb fitting, barb elbow, barb elbow (H) are not compatible with water.

Note 5) Deionized water is not recommended for use as it may affect the material used in the fittings.

In addition, it is known to degrade the water quality.

Principal Parts Material

Material	Body	C3604 (Electroless nickel plate) (Nipple M-3N, M-5N: Stainless steel 303)
	Gasket	Nylon 66: GF30%, Stainless steel 304: NBR (PVC for M3)

* Body of M-5E, M-5ER, M-5M is not surface-treated.









Electroless nickel plate treated is available as option -X2.







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		
		Barb fittings	Barb elbow	Barb elbow (H)
M3	Soft nylon tubing Polyurethane tubing		—	
R $\frac{1}{8}$, M5	Nylon tubing			
	Soft nylon tubing Polyurethane tubing	Marking 	Marking 	Marking












M3, R 1/8 Series

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 	For soft nylon and polyurethane tubing	ø3.18/2 x M3 ø4/2.5 x M3
	M-3ALU-3	Barb elbow for soft tubing 	For soft nylon tubing	ø3.18/2.18 x M3
	M-3ALU-4	Body rotates at 360° around the stud axis 	For polyurethane tubing For soft nylon and polyurethane tubing	ø3.18/2 x M3 ø4/2.5 x M3
	M-3SUL	Universal elbow 	Body rotates at 360° around the stud axis	M3 female x M3 male
	M-3SUT	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	

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

M5 Series

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 ø6/4 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 ø6/4 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	For soft nylon tubing ø3.18/2.18 x M5 For polyurethane tubing ø3.18/2 x M5
	M-5ALU-4		For soft nylon and polyurethane tubing	ø4/2.5 x M5 ø6/4 x M5
	M-5ALU-6			ø6/4 x M5
M5	M-5ALHN-4	Barb elbow (H) for nylon tubing 	Body rotates at 360° around the stud axis	For nylon tubing 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	For soft nylon tubing ø3.18/2.18 x M5 For polyurethane tubing ø3.18/2 x M5
	M-5ALHU-4		For soft nylon and polyurethane tubing	ø4/2.5 x M5 ø6/4 x M5
	M-5ALHU-6			ø6/4 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 ø6/4 x M5
	M-5HL-6			ø6/4 x M5
	M-5HLH-4	Hose elbow (H) 	Body rotates at 360° around the stud axis	ø4/2.5 x M5
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
	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
M5	M-5P	Plug 	Use to plug unused M5 port.	

KQ2

KQB2

KS
KX

KM

KF

M

H/DL
L/LL

KC

KK

KK130

DM

KDM

KB

KR

KA

KQ62

KG

KFG2

MS

KKA

KP

LQ

MQR

T

IDK

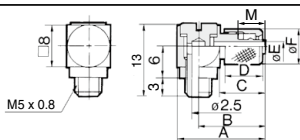
M Series

M5 Series

Hose Elbow: M-5HL-4/-6



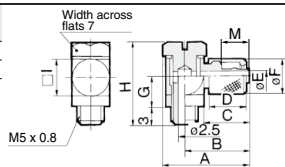
Model	A	B	C	D	øE	øF	M	Effective area (mm ²)	Weight (g)
M-5HL-4	16.5	12.5	8.5	7	1.8	6.5	5	1.4	4.4
M-5HL-6	17.5	13.5	9.5	8	2.5	8.5	6	2.4	5.2



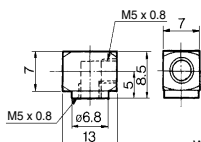
Hose Elbow: M-5HLH-4/-6



Model	A	B	C	D	øE	øF	G	H	I	M	Effective area (mm ²)	Weight (g)
M-5HLH-4	15.5	12	8.5	7	1.8	6.5	5.5	15	7	5	1.4	4.5
M-5HLH-6	17.5	13.5	9.5	8	2.5	8.5	6	16	8	6	2.4	6.6

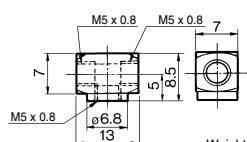


Elbow: M-5L



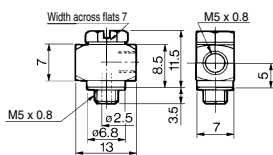
Weight: 4.2 g

Tee: M-5T



Weight: 3.5 g

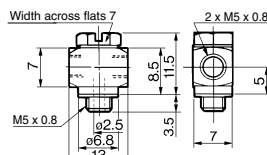
Universal Elbow: M-5UL



Effective area: 2.4 mm²

Weight: 5.3 g

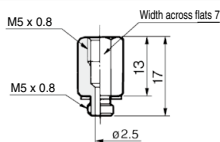
Universal Tee: M-5UT



Effective area: 2.4 mm²

Weight: 4.8 g

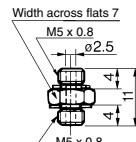
Extension Fitting: M-5J



Effective area: 4.0 mm²

Weight: 3.6 g

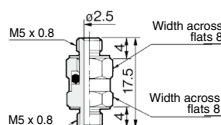
Nipple: M-5N



Effective area: 4.0 mm²

Weight: 1.5 g

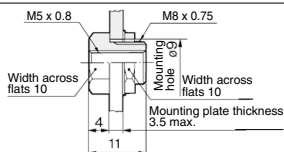
Universal Nipple: M-5UN



Effective area: 4.0 mm²

Weight: 3.9 g

Bulkhead Union: M-5E

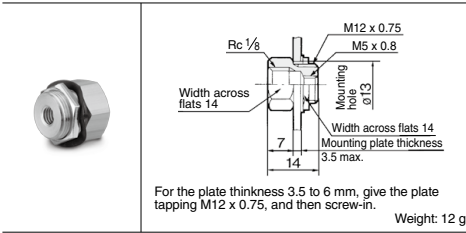


For the plate thickness 3.5 to 6 mm, give the plate tapping M8 x 0.75, and then screw-in.

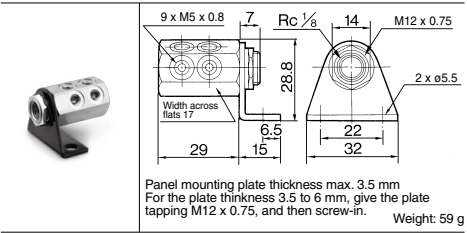
Weight: 4.6 g

M5 Series

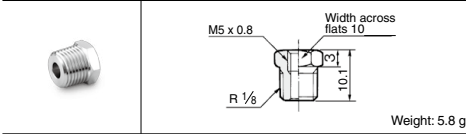
Bulkhead Reducer: M-5ER



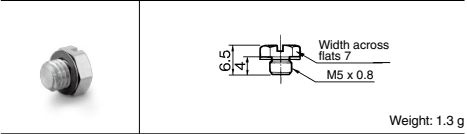
Manifold: M-5M



Bushing: M-5B



Plug: M-5P



⚠ Precautions

- Be sure to read this before handling the products.
- Refer to back page 50 for Safety Instructions and pages 13 to 17 for Fittings and Tubing Precautions.

Tightening of M3/M5 Threads

⚠ Caution

- Tighten by hand, and give it an additional turn with a wrench.
Please check the number of tightening revolutions using the table below.
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.

Thread	Model	Number of tightening rotations
M3	M-3AU-□	Approx. 1/4 rotations
	M-3N	
	M-3P	
	M-3ALU-□	Approx. 1/2 rotations
	M-3UL	
	M-3UT	
M5	M-5AN-□	Approx. 1/6 to 1/4 rotations (Note)
	M-5AU-□	
	M-5H-□	
	M-5J	
	M-5N	
	M-5UN	
	M-5P	
	M-5ALN-6	Approx. 1/2 rotations (Note)
	M-5ALU-6	
	M-5ALHN-6	
	M-5ALHU-6	
	M-5HL-□	
	M-5HLH-□	
	M-5ALN-4	
	M-5ALU-3,4	
	M-5ALHN-4	
	M-5ALHU-3,4	
	M-5UL	
	M-5UT	

(Note) As a guideline, the tightening torque should be 1 to 1.5 N·m.

Use of Tube with Hose Nipple

⚠ Caution

- 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".)
- Pass the tube through the cap nut.
- Push the tube until it comes to the end of the barb portion, or it may cause air leakage or hose releasing.
- Tighten the cap nut firmly by hand on the fitting.

Use of Tube with Barb Fitting

⚠ Caution

- 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".)
- Push the tube until it comes to the end of the barb portion, or it may cause air leakage or release hose.