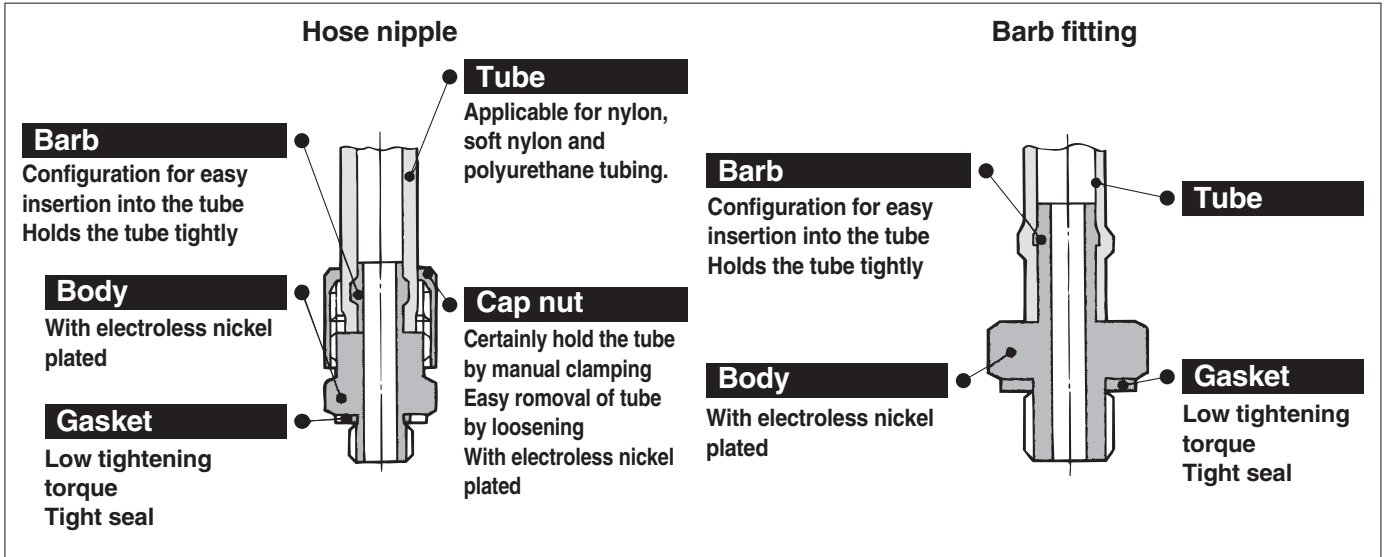


Miniature Fittings

Series M

Applicable Tubing: Ø 3.2, Ø 4, Ø 6 Connection Thread: M3, M5, R 1/8



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.



Made to Order
(Refer to page 7 for details.)

Specifications

Applicable tubing material		Nylon	Soft nylon	Polyurethane	Super PFA ⁽¹⁾	FEP ⁽¹⁾	Modified PTFE ⁽¹⁾
Applicable tubing O.D. / I.D.	M3	—	Ø 3.18/Ø 2.18	Ø 4/Ø 2.5	—	—	—
	M5, R 1/8	Ø 4/Ø 2.5 Ø 6/Ø 4		Ø 4/Ø 2.5 Ø 6/Ø 4	Ø 3.18/Ø 2 Ø 4/Ø 2.5 Ø 6/Ø 4	Ø 6/Ø 4	Ø 4/Ø 2.5 Ø 6/Ø 4
Fluid		Air, Water ⁽²⁾					
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) Compatible only with hose nipple type.

Note 2) Barb fitting, barb elbow, barb elbow (H) are not compatible with water.

Principal Parts Material

Material	Body	Gasket
	C3604BD (Nipple M-3N, M-5N: Stainless steel 303)	Nylon 66: GF30 %, Stainless steel 304: NBR (PVC for M3)

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 1/8, M5	Nylon tubing			
	Soft nylon tubing Polyurethane tubing	Marking	Marking	Marking

















* 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 M5

Series	Model	Description	Application	Note
M3	M-3AU-3		For soft nylon tubing	Ø 3.18/2.18 x M3
			For polyurethane tubing	Ø 3.18/2 x M3
	M-3AU-4		For soft nylon and polyurethane tubing	Ø 4/2.5 x M3
	M-3ALU-3		For soft nylon tubing	Ø 3.18/2.18 x M3
			For polyurethane tubing	Ø 3.18/2 x M3
	M-3ALU-4		For soft nylon and polyurethane tubing	Ø 4/2.5 x M3
	M-3UL		Body rotates at 360° around the stud axis	M3 female x M3 male
	M-3UT		Body rotates at 360° around the stud axis	M3 female x M3 female x M3 male
	M-3N		Fitting to workpiece and fitting to fitting connection	M3 male x M3 male
	M-3P		Use to plug unused M3 port	

Series	Model	Description	Application	Note
R 1/8	M-01AN-4		For nylon tubing	Ø 4/2.5 x R 1/8
				Ø 6/4 x R 1/8
	M-01AU-4		For soft nylon and polyurethane tubing	Ø 4/2.5 x R 1/8
				Ø 6/4 x R 1/8
	M-01H-4		For nylon, soft nylon and polyurethane tubing	Ø 4/2.5 x R 1/8
	M-01H-6			Ø 6/4 x R 1/8

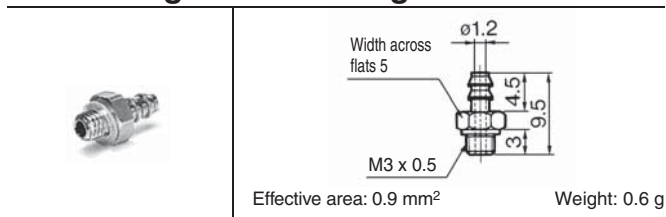
Series	Model	Description	Application	Note
M5	M-5AN-4		For nylon tubing	Ø 4/2.5 x M5
				Ø 6/4 x M5
	M-5AU-3		For soft nylon tubing	Ø 3.18/2.18 x M5
			For polyurethane tubing	Ø 3.18/2 x M5
	M-5AU-4		For soft nylon and polyurethane tubing	Ø 4/2.5 x M5
				Ø 6/4 x M5
	M-5ALN-4		For nylon	Ø 4/2.5 x M5
			Body rotates at 360° around the stud axis	Ø 6/4 x M5
	M-5ALN-6			Ø 4/2.5 x M5
				Ø 6/4 x M5
M-5ALU-3		For soft nylon tubing	Ø 3.18/2.18 x M5	
		For polyurethane tubing	Ø 3.18/2 x M5	
M-5ALU-4		For soft nylon and polyurethane tubing	Ø 4/2.5 x M5	
			Ø 6/4 x M5	
M-5ALHN-4		For nylon tubing	Ø 4/2.5 x M5	
		Body rotates at 360° around the stud axis	Ø 6/4 x M5	
M-5ALHN-6			Ø 4/2.5 x M5	
			Ø 6/4 x M5	
M-5ALHU-3		For soft nylon tubing	Ø 3.18/2.18 x M5	
		For polyurethane tubing	Ø 3.18/2 x M5	
M-5ALHU-4		For soft nylon and polyurethane tubing	Ø 4/2.5 x M5	
			Ø 6/4 x M5	
M-5HL-4		For nylon, soft nylon and polyurethane tubing	Ø 4/2.5 x M5	
			Ø 6/4 x M5	
M-5HL-6			Ø 4/2.5 x M5	
			Ø 6/4 x M5	
M-5HLH-4		For nylon, soft nylon and polyurethane tubing	Ø 4/2.5 x M5	
		Body rotates at 360° around the stud axis	Ø 6/4 x M5	
M-5HLH-6			Ø 4/2.5 x M5	
			Ø 6/4 x M5	
M-5L		One-sided 90° elbow	M5 female x M5 female	

Series	Model	Description	Application	Note
M5	M-5T		Both sides allow 90° connection	M5 female x M5 female x M5 female
	M-5UL		Body rotates at 360° around the stud axis	M5 female x M5 male
	M-5UT		Body rotates at 360° around the stud axis	M5 female x M5 female x M5 male
	M-5J		Solid piece moves fitting up from workpiece	M5 male x M5 female
	M-5N		Fitting to workpiece and fitting to fitting connection	M5 male x M5 male
M-5UN		Body rotates at 360° around the stud axis	M5 male x M5 male PAT.	
M-5E		Panel-mount connection	M5 female x M5 female	
M-5ER		Reduction from Rc 1/8 to M5 including panel or bracket mounting	Rc 1/8 x M5 female	
M-5M		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		For reducing R 1/8 female to M5.	R 1/8 x M5 female	
M-5P		Use to plug unused M5 port.		

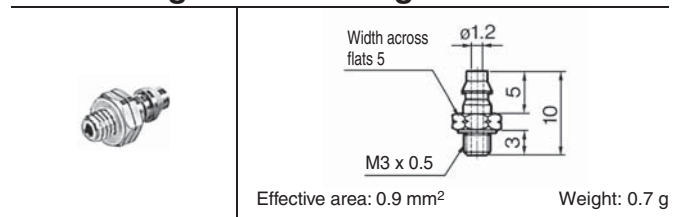
Series M

Series M3

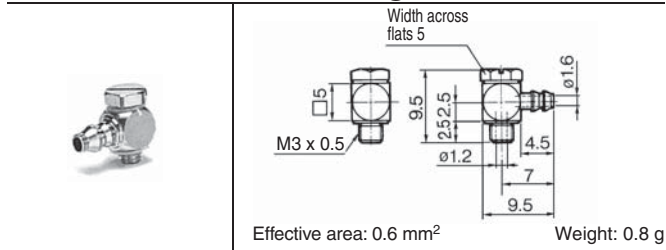
Barb Fitting for Soft Tubing: M-3AU-3



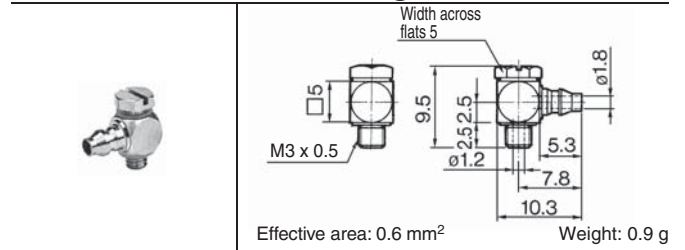
Barb Fitting for Soft Tubing: M-3AU-4



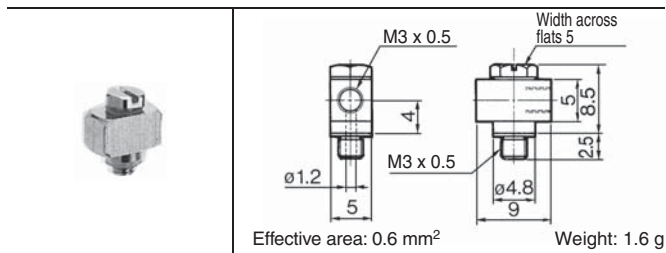
Barb Elbow for Soft Tubing: M-3ALU-3



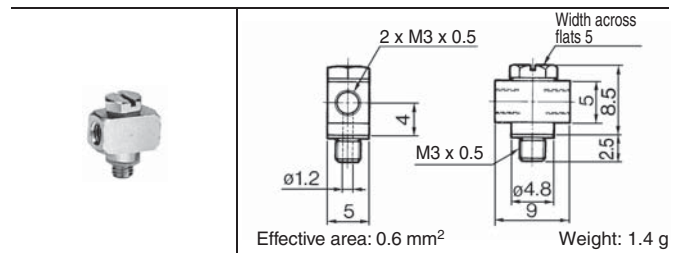
Barb Elbow for Soft Tubing: M-3ALU-4



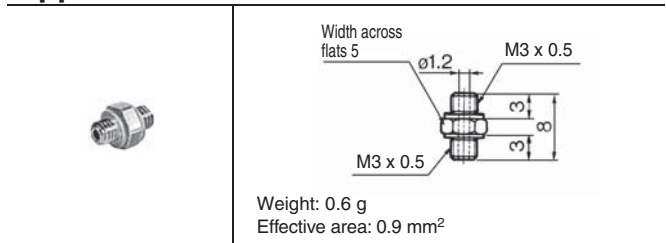
Universal Elbow: M-3UL



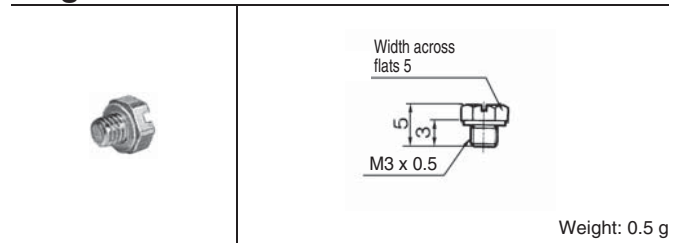
Universal Tee: M-3UT



Nipple: M-3N



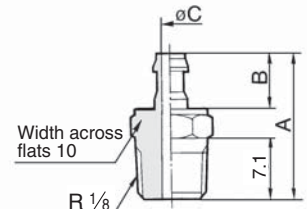
Plug: M-3P



Series R 1/8

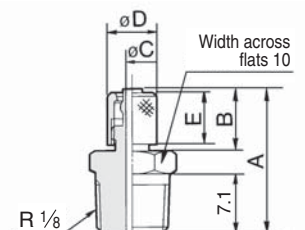
Barb Fitting for Nylon Tubing, Soft Tubing: M-01A□-4/-6

Applicable tubing	Model	A	B	Ø C	Effective area (mm²)	Weight (g)
Nylon tubing	M-01AN-4	15.1	5	1.8	2.1	6.4
	M-01AN-6	17.1	7	2.5	4.0	6.6
Soft tubing	M-01AU-4	15.1	5	1.8	2.1	6.5
	M-01AU-6	17.1	7	2.5	4.0	6.7



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

Model	A	B	Ø C	Ø D	E	Effective area (mm²)	Weight (g)
M-01H-4	18.6	8.5	1.8	6.5	7	2.1	7.1
M-01H-6	19.6	9.5	3	8.5	8	5.5	7.7

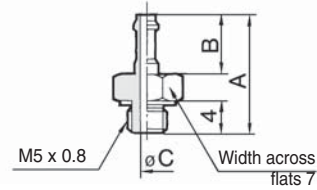


Series M5

Barb Fitting for Nylon Tubing: M-5AN-4/-6



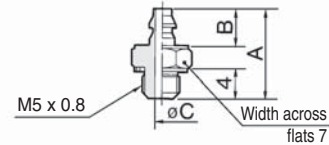
Model	A	B	Ø C	Effective area (mm ²)	Weight (g)
M-5AN-4	12	5	1.8	2.1	1.6
M-5AN-6	14	8	2.5	4.0	1.7



Barb Fitting for Soft Tubing: M-5AU-3/-4/-6



Model	A	B	Ø C	Effective area (mm ²)	Weight (g)
M-5AU-3	11.5	4.5	1.6	1.7	1.5
M-5AU-4	12	5	1.8	2.1	1.6
M-5AU-6	14	7	2.5	4.0	1.8

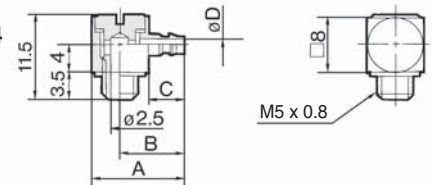


Barb Elbow for Nylon Tubing: M-5ALN-4/-6
Barb Elbow for Soft Tubing: M-5ALU-3/-4/-6

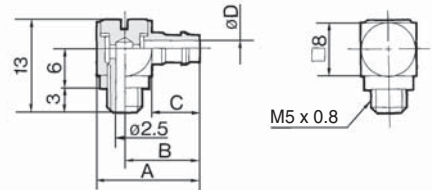


Model	A	B	C	Ø D	Effective area (mm ²)	Weight (g)
M-5ALN-4	13	9	5	1.8	1.4	4.0
M-5ALN-6	15	11	7	2.5	2.4	4.4
M-5ALU-3	13	9	4.5	1.6	1.1	4.0
M-5ALU-4	13.5	9.5	5	1.8	1.4	4.1
M-5ALU-6	15.5	11.5	7	2.5	2.4	4.5

M-5ALN-4
M-5ALU-3/-4



M-5ALN-6
M-5ALU-6

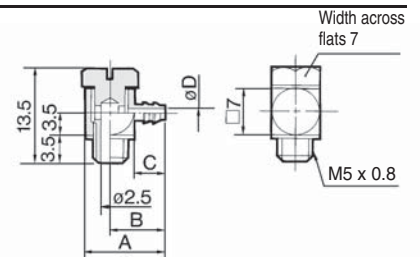


Barb Elbow for Nylon Tubing: M-5ALHN-4/-6
Barb Elbow for Soft Tubing: M-5ALHU-3/-4/-6

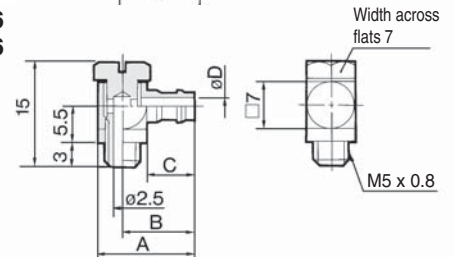


Model	A	B	C	Ø D	Effective area (mm ²)	Weight (g)
M-5ALHN-4	12	8.5	5	1.8	1.4	3.2
M-5ALHN-6	14	10.5	7	2.5	2.4	3.7
M-5ALHU-3	12	8.5	4.5	1.6	1.1	3.2
M-5ALHU-4	12.5	9	5	1.8	1.4	3.3
M-5ALHU-6	14.5	11	7	2.5	2.4	3.9

M-5ALHN-4
M-5ALHU-3/-4



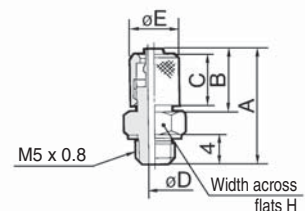
M-5ALHN-6
M-5ALHU-6



Hose Nipple: M-5H-4/-6



Model	A	B	C	Ø D	Ø E	H	Effective area (mm ²)	Weight (g)
M-5H-4	15.5	8.5	7	1.8	6.5	7	2.1	2.7
M-5H-6	16.5	9.5	8	2.5	8.5	8	4.0	3.9



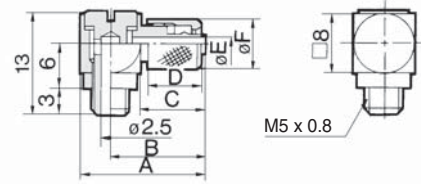
Series M

Series M5

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



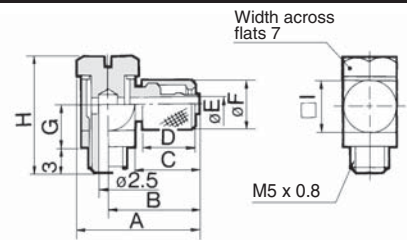
Model	A	B	C	D	Ø E	Ø F	Effective area (mm ²)	Weight (g)
M-5HL-4	16.5	12.5	8.5	7	1.8	6.5	1.4	4.4
M-5HL-6	17.5	13.5	9.5	8	2.5	8.5	2.4	5.2



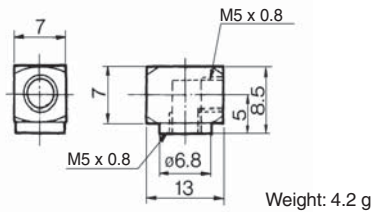
Hose Elbow: M-5HLH-4/-6



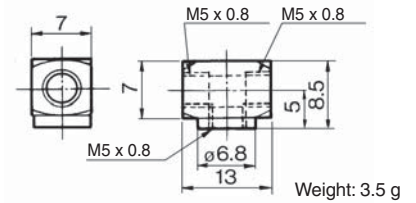
Model	A	B	C	D	Ø E	Ø F	G	H	□ I	Effective area (mm ²)	Weight (g)
M-5HLH-4	15.5	12	8.5	7	1.8	6.5	5.5	15	7	1.4	4.5
M-5HLH-6	17.5	13.5	9.5	8	2.5	8.5	6	16	8	2.4	6.6



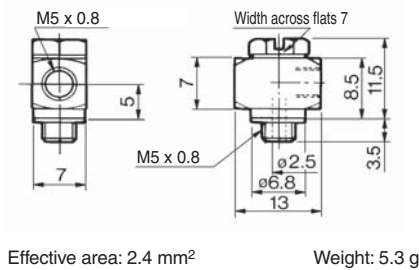
Elbow: M-5L



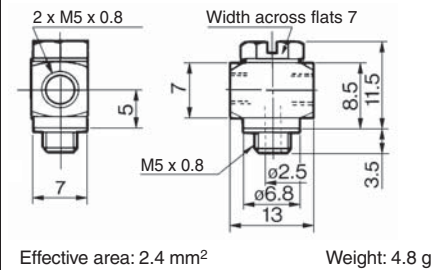
Tee: M-5T



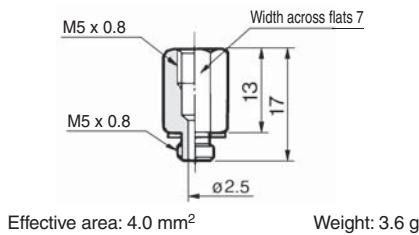
Universal Elbow: M-5UL



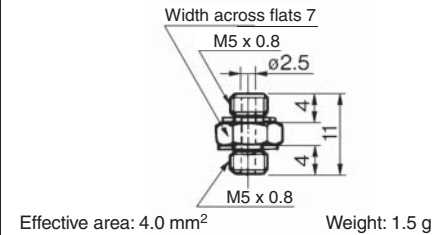
Universal Tee: M-5UT



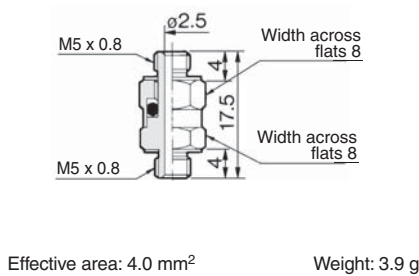
Extension Fitting: M-5J



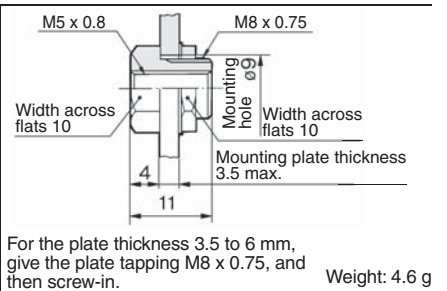
Nipple: M-5N



Universal Nipple: M-5UN

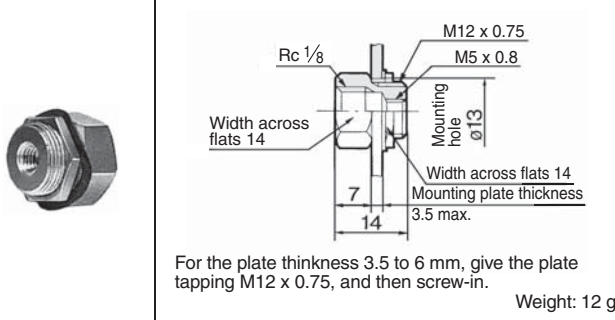


Bulkhead Union: M-5E

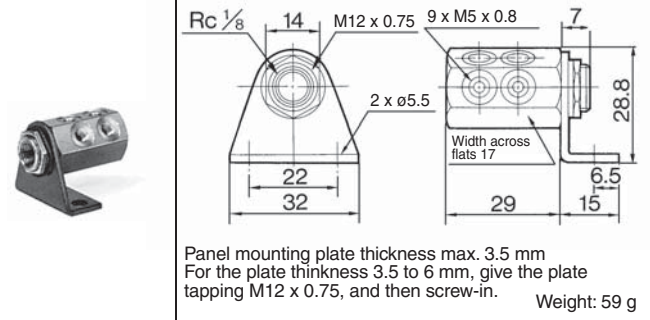


Series M5

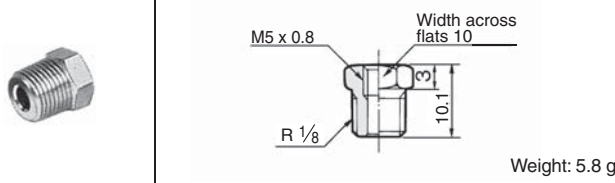
Bulkhead Reducer: M-5ER



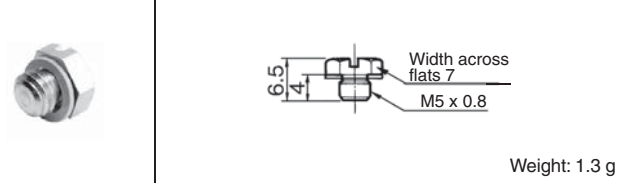
Manifold: M-5M



Bushing: M-5B



Plug: M-5P



⚠ Precautions

Tightening of M3/M5 Threads

⚠ Caution

1. 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 <small>Note)</small>	
	M-5AU-□		
	M-5H-□		
	M-5J		
	M-5N		
	M-5UN		
	M-5P		
	M-5ALN-6		Approx. 1/2 rotations <small>Note)</small>
	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

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.



Please contact SMC for detailed dimensions, specifications, and delivery.

1 Gasket Material Modification

Symbol	Specifications	
X83	Gasket material: Stainless steel 304, NBR	
	Applicable thread	Gasket part no.
	M3	IN-233-706
	M5 ^{Note)}	M-5G2
X226	Gasket material: Stainless steel 304, FKM	
	Applicable thread	Gasket part no.
	M3	M3G-DPH00489
X112	Gasket material: Stainless steel 316, Special FKM	
	Applicable thread	Gasket part no.
	M5	M-5G3

Note) Compatible with only models using M-5GH.

Spare Parts

Description	Part no.	Applicable thread	Material	Applicable model
Gasket	M-3G	M3	PVC	—
	M-3G2		Stainless steel 304, NBR	—
	M-5G1	M5	PVC	—
	M-5G2		Stainless steel 304, NBR	—
	M-5G3		Stainless steel 316, Special FKM	—
	M-5GH		Nylon 66, GF30 %	M-5AL□-6, M-5ALH□-6 M-5HL-4, 6, M-5HLH4, 6
	M-6G	M6	Stainless steel 304, NBR	For KQ2 M6 thread
	M-10/32G	10-32 UNF		Series KQ2, 10-32 UNF
Cap nut	M-5-4-P01	—	C3604 (With electroless nickel plated)	M-01H-4, M-5H-4 M-5HL-4, M-5HLH-4
	M-5-6-P01	—	C3604 (With electroless nickel plated)	M-01H-6, M-5H-6 M-5HL-6, M-5HLH-6