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KOGANEI

ACCESSORIES GENERAL CATALOG

AIR TREATMENT, AUXILIARY, VACUUM,
AND FLUORORESIN PRODUCTS

QUICK FITTINGS MINI TYPE CONTENTS

QUICK FITTINGS MINI TYPE

For ϕ 1.8 Tubes

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For ϕ 3 ~ ϕ 6 Tubes

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Caution

Before use, be sure to read the "Safety Precautions" on p. 49.

For $\phi 1.8$ [0.071 in.] Tubes

QUICK FITTING MINI TYPE

Koganei has developed $\phi 1.8$ mm [0.071 in.] sized quick fittings, an industry first for the market.

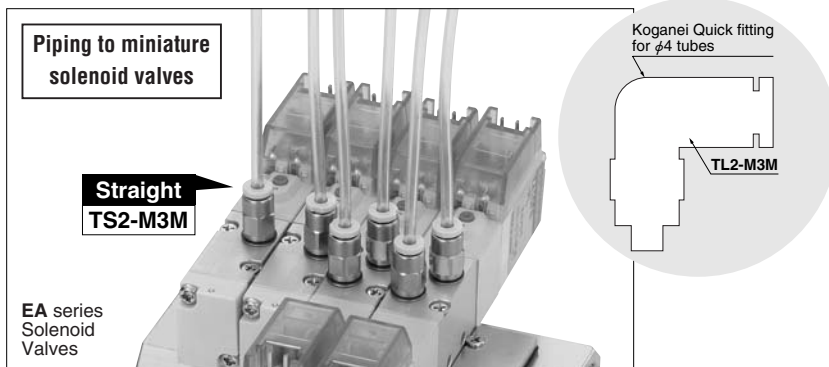
- Using $\phi 1.8$ [0.071 in.] tube achieves energy-saving, space-saving, and high tact time.
- Quick connection and disconnection of tubes offer superb performance.

Miniaturized!



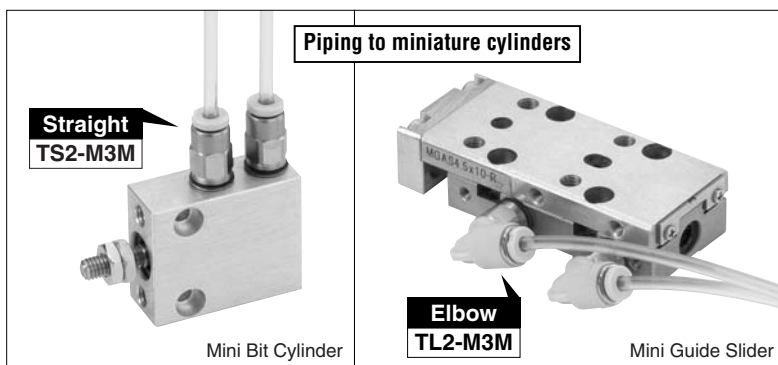
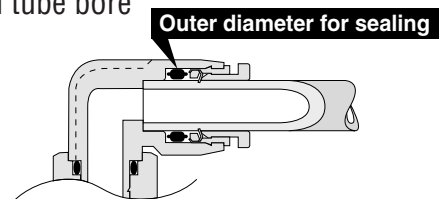
Compact connection

- 20% reduction in terms of volume compared to our current quick fitting for $\phi 4$ [0.157 in.] tubes.
- Suitable for piping to miniature cylinders and solenoid valves.



Minimum flow loss using tube's full bore

Compared to barb fittings, quick fittings use the tube outer diameter for sealing, thereby achieving maximum flow using the full tube bore



Tubes suitable for the fittings are available

The $\phi 1.8$ [0.071 in.] urethane tubes compatible with the fittings are also available.



- Model : U2-CB (Tube color : Blue-transparent)
- U2-C (Tube color : Transparent)
- U2-B (Tube color : Black)

Note: Use Koganei-made tubes for these fittings. Other manufacturers' tubes must not be used as they may be connected improperly. Care should be taken that Koganei conductive urethane tube U2A-B cannot be used.

Respond to Every Piping Requirement

Wide Product Range with 11 Types, 16 Models

Sales unit: One pack (10 pcs.)

mm [in.]

●TS Straight

316



Model	Tube outer diameter φD	R
TS2-M3M	1.8 [0.071]	M3×0.5
TS2-M5M	1.8 [0.071]	M5×0.8

●TSH Straight with hexagon socket

316



Model	Tube outer diameter φD	R
TSH2-M3M	1.8 [0.071]	M3×0.5

●US Union straight

316



Model	Tube outer diameter φD
US2M	1.8 [0.071]

●USD Different diameter union

317



Model	Tube outer diameter φD1	Tube outer diameter φD2
USD3-2M	1.8 [0.071]	3 [0.118]
USD4-2M	1.8 [0.071]	4 [0.157]

●UR Reducer

317



Model	Tube outer diameter φD1	Applicable fitting diameter φD2
UR4-2M	1.8 [0.071]	4 [0.157]

●TL Elbow

317



Model	Tube outer diameter φD	R
TL2-M3M	1.8 [0.071]	M3×0.5
TL2-M5M	1.8 [0.071]	M5×0.8

●UL Union elbow

318



Model	Tube outer diameter φD
UL2M	1.8 [0.071]

●TT Tee

318



Model	Tube outer diameter φD	R
TT2-M3M	1.8 [0.071]	M3×0.5
TT2-M5M	1.8 [0.071]	M5×0.8

●TB Branch tee

318



Model	Tube outer diameter φD	R
TB2-M3M	1.8 [0.071]	M3×0.5
TB2-M5M	1.8 [0.071]	M5×0.8

●UT Union tee

319



Model	Tube outer diameter φD
UT2M	1.8 [0.071]

●UP Plug

319



Model	Applicable fitting diameter φD
UP2M	1.8 [0.071]

QUICK FITTINGS MINI TYPE

For $\phi 1.8$ Tubes

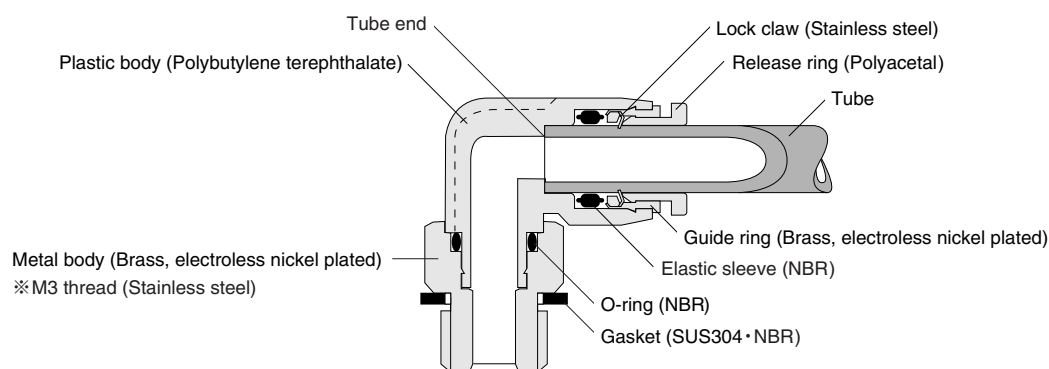
Specifications

Item	Applicable tube size	$\phi 1.8$ [0.071 in.]	$\phi 3$ [0.118 in.]	$\phi 4$ [0.157 in.]
Media		Air		
Maximum operating pressure		1.0 MPa [145 psi.]		
Operating vacuum pressure		-100 kPa [-29.54 in.Hg]		
Operating temperature range		0~60°C [32~140°F]		
Recommended tube ^{Note}		Urethane Tube	Urethane Tube, Nylon Tube	
Seles unit		1 pack (10 pcs.)		

Remark: Supplied with a gasket.

Note: Use Koganei tubes. Care should be taken that Koganei conductive urethane tube **U2A-B** cannot be used.

Inner Construction and Major Parts Materials



Order Code

Place an order with the code after confirming the types, tubes to be used, tube outer diameters, and connection thread, shown in types and models on p.314.

Sales unit: One pack (10 pcs.)

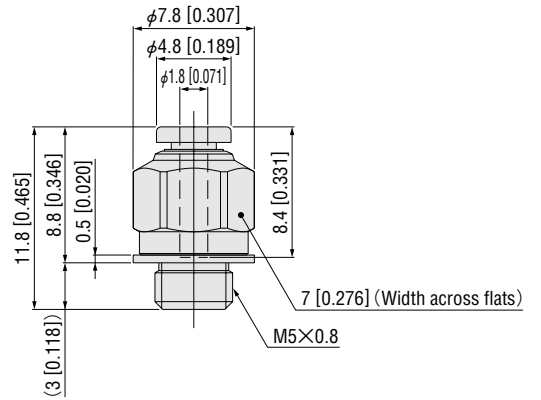
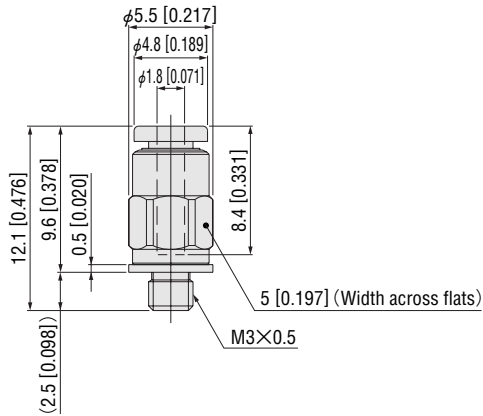
Effective Area and Mass

Name	Model	Effective area mm ² [Cv]	Mass g [oz.]
Straight	TS2-M3M	0.7 [0.039]	1 [0.035]
	TS2-M5M	0.8 [0.044]	2.3 [0.081]
Straight with hexagon socket	TSH2-M3M	0.7 [0.039]	0.9 [0.032]
Union straight	US2M	0.6 [0.033]	1.1 [0.039]
Different diameter union	USD3-2M	0.6 [0.033]	1.1 [0.039]
	USD4-2M	0.6 [0.033]	1.8 [0.063]
Reducer	UR4-2M	0.6 [0.033]	0.7 [0.025]
Elbow	TL2-M3M	0.5 [0.028]	1.4 [0.049]
	TL2-M5M	0.7 [0.039]	2.8 [0.099]
Union elbow	UL2M	0.6 [0.033]	1.2 [0.042]
Tee	TT2-M3M	0.6 [0.033]	1.9 [0.067]
	TT2-M5M	0.7 [0.039]	3.2 [0.113]
Branch tee	TB2-M3M	0.6 [0.033]	1.9 [0.067]
	TB2-M5M	0.8 [0.044]	3.2 [0.113]
Union tee	UT2M	0.6 [0.033]	1.7 [0.060]
Plug	UP2M	—	0.1 [0.004]

Dimensions mm [in.]

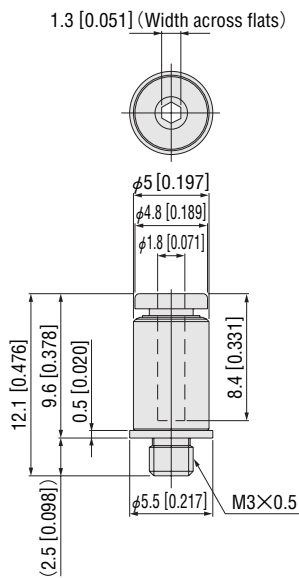
Straight
TS2-M3M

TS2-M5M

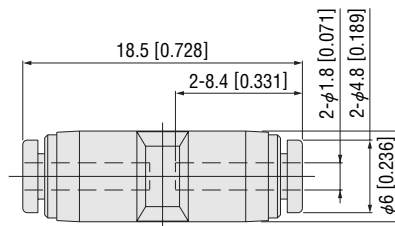


QUICK FITTINGS MINI TYPE

Straight with hexagon socket
TSH2-M3M

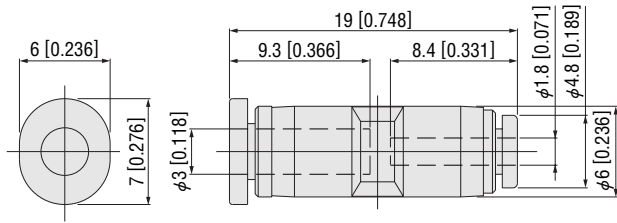


Union straight
US2M

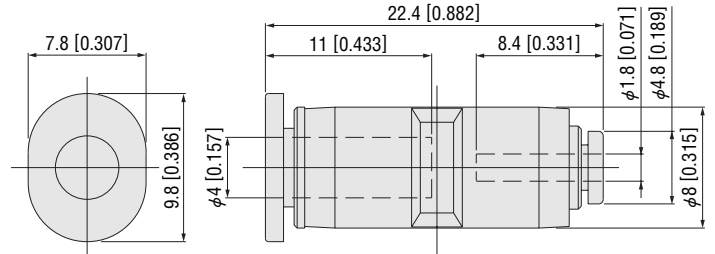


Dimensions mm [in.]

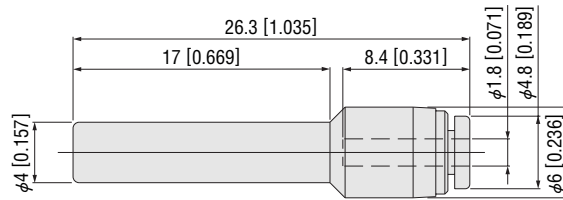
Different diameter union
USD3-2M



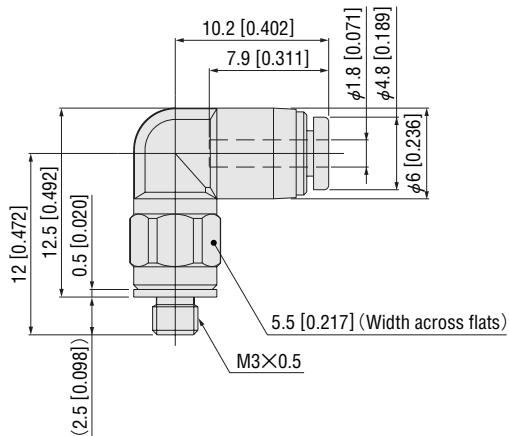
USD4-2M



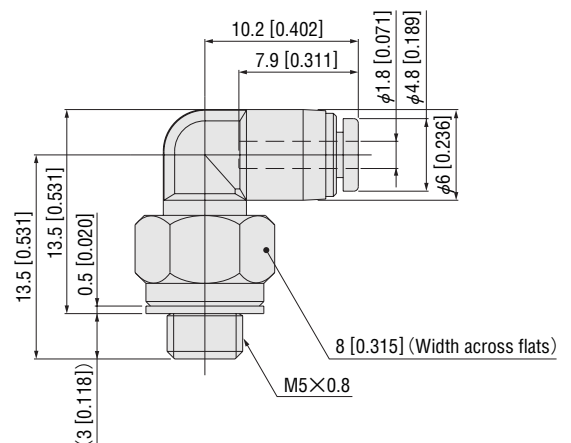
Reducer
UR4-2M



Elbow
TL2-M3M

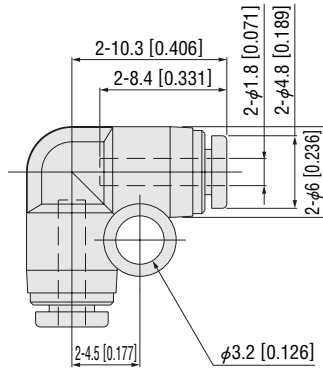


TL2-M5M

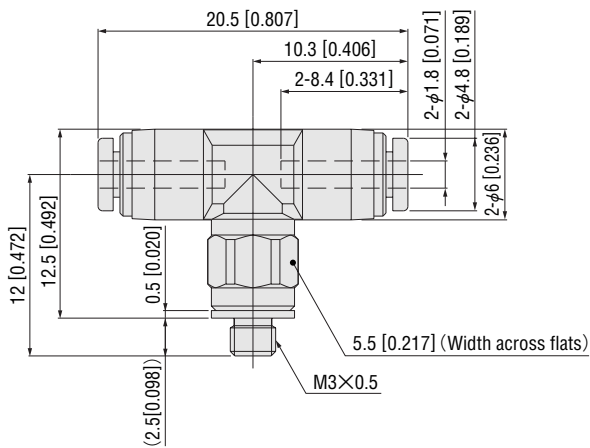


Dimensions mm [in.]

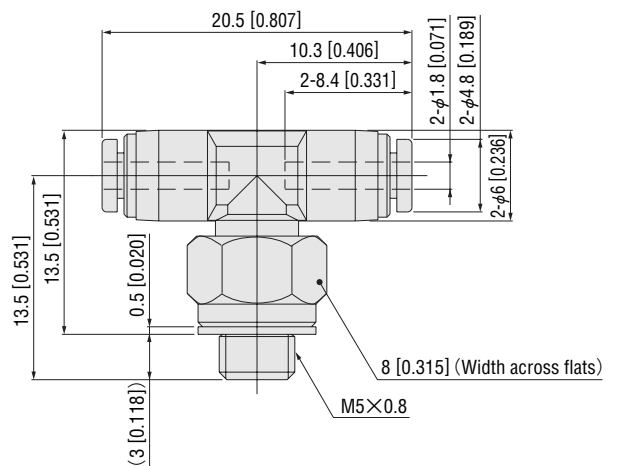
Union elbow
UL2M



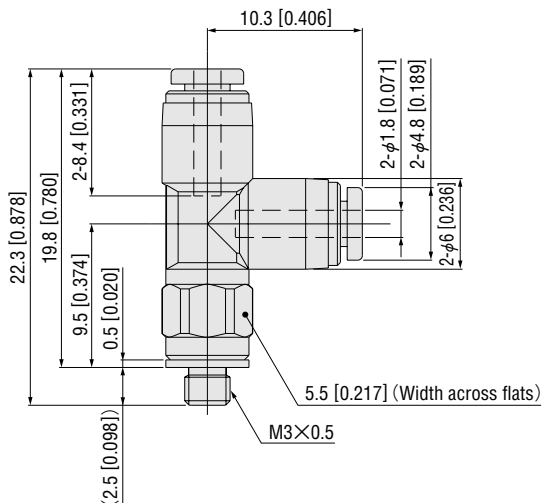
Tee
TT2-M3M



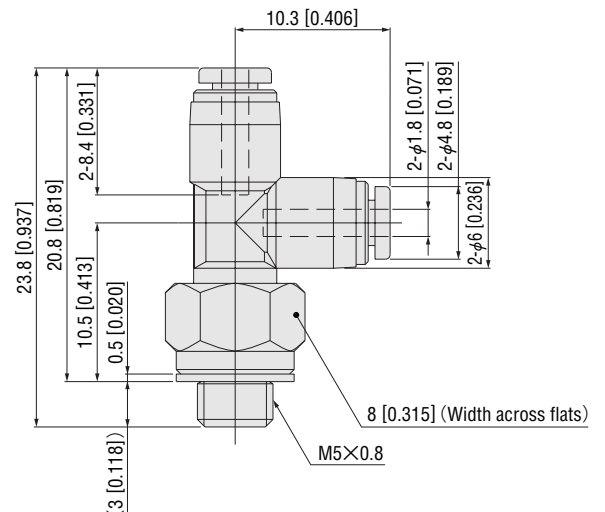
TT2-M5M



Branch tee
TB2-M3M

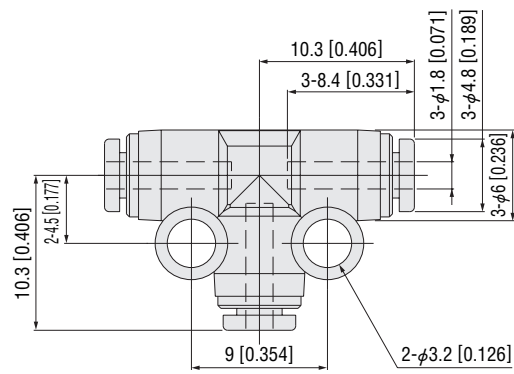


TB2-M5M

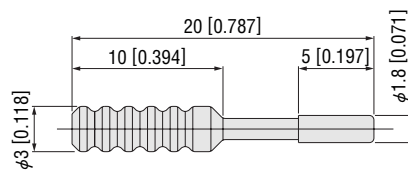


Dimensions mm [in.]

Union tee UT2M



Plug UP2M



Safety Precautions (Quick Fittings Mini Type for $\phi 1.8$ Tubes)

The following is a safety precaution to Quick Fittings Mini Type. For other safety precautions, be sure to read the precautions on p.49.

Warning

- With the exception of the quick fittings rotary type, do not use any quick fittings in locations where thread portions or tubes are subject to swing or rotation. The swing or rotation could result in damage to the fitting body.

Handling Instructions and Precautions

● Mounting

Precautions for mounting the body

1. To mount the body, use a suitable tool to tighten it to the outer or inner hexagonal section of the fitting.
2. When tightening threads, tighten to the recommended tightening torque shown in the table below. Tightening to more than the recommended torque could result in broken threads or air leaks due to deformed gaskets. Tightening to less than the recommended torque could lead to loose threads or air leaks.
3. For fittings with fixed piping direction, tighten to the desired piping direction, then adjust so that it falls within the range of the body tightening torque.

Recommended tightening torques and gasket material

Thread type	Thread	Tightening torque	Gasket material
Metric thread	M3×0.5 ^{Note}	0.7N·m [6.2 in·lbf]	SUS304 NBR
	M5×0.8	1.0~1.5N·m [8.9~13.3 in·lbf]	

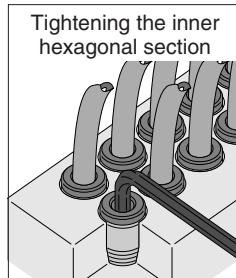
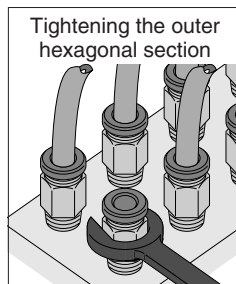
Note: Straight with hexagon socket (TSH2-M3M) has a tightening torque of 0.3 N·m [2.7 in·lbf].

Precautions for disconnecting the body

To disconnect the body, use a suitable tool to loosen it from the outer or inner hexagonal section of the body.

Method for tightening screws

For tightening screws, use either a wrench on outer hexagonal sections, and for inner hexagonal sections, use an Allen wrench (enables to reduce the space between fittings).

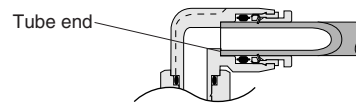


- Cautions:**
1. Because the Quick Fitting Mini Type is compact and lightweight, avoid uses that subject it to external forces. Excessive bending or pulling force could damage the fittings.
 2. Use the tightening torque shown in the table above, and avoid applying excessive tightening torque.

● Tube connection and disconnection

Precautions for connecting the tube

1. Check that the cut section of the tube has been cut at straight angle, that the outer surface of the tube is not scratched, and that the tube has not become oval shaped.
2. When connecting a tube, failure to insert the tube all the way to the end could result in air leaks.



3. After connection, pull the tube to check that it will not disconnect.

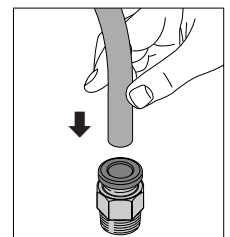
Precautions for disconnecting the tube

1. Before disconnecting a tube, check that the pressure inside the tube is down to zero.
2. Push the release ring evenly all the way to the end, and then pull the tube out. An insufficient push could make it impossible to pull the tube out, or could scratch the tube, leaving scratched tube material inside the fitting.

Tube connection and disconnection method

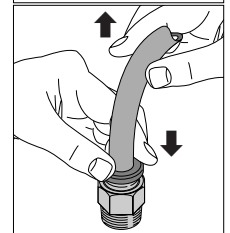
1. Tube connection

The Quick Fitting Mini Type is equipped with a lock claw that holds the tube in place when it has been pushed all the way to the end, and with an elastic sleeve for sealing the tube periphery.



2. Tube disconnection

To disconnect the tube, first push on the release ring, releasing the lock claw, and then pull the tube out. Always stop the air supply before removing the tube.



● Usable tubes

Use Koganei tubes. Other manufacturers' tubes must not be connected due to improper connection. Koganei conductive urethane tube **U2A-B** cannot be used.

- Cautions:**
1. Use tubes with no visible scratches on the outer surface. If a scratch is made during repeated use, cut off the scratched section.
 2. Do not bend or twist the tube too much near the connection to the fitting. It could result in air leaks.

QUICK FITTINGS MINI TYPE

For $\phi 3$ to $\phi 6$ Tubes

● Compact quick fitting offers smaller pitch and takes up less space.
(40% smaller volume and 20% less outer diameter than previous products)

● A wide range of product series that includes 45° elbow and cross types assist mounting work in confined space.

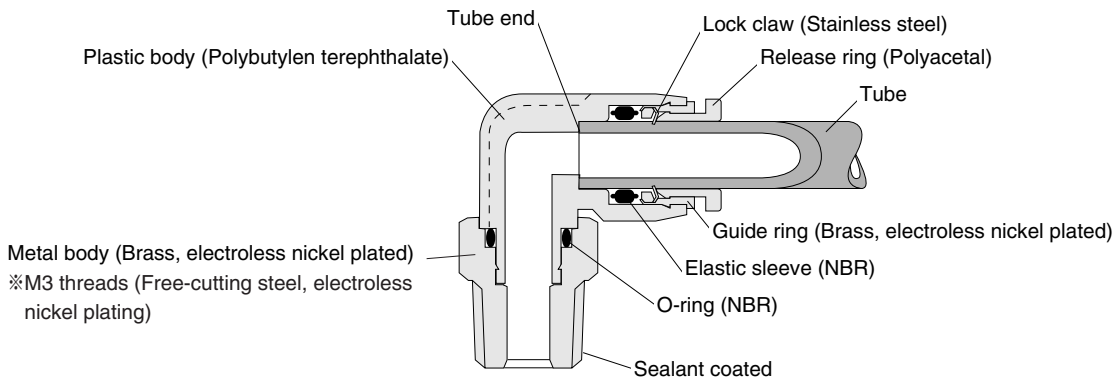
Specifications

Item	Applicable tube size	$\phi 3$	$\phi 4$	$\phi 6$
Media		Air		
Maximum operating pressure		0.9 MPa [131 psi.]		
Operating vacuum pressure		-100 kPa [-29.54 in.Hg]		
Operating temperature range		0~60°C [32~140°F]		
Recommended tube ^{Note}		Urethane tube	Nylon tube, urethane tube	
Sales unit		1 pack (10 pcs.)		

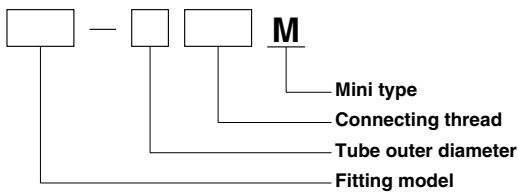
Remark: Supplied with a gasket or sealant coated.

Note: Use tubes with outer dimensions within $\pm 0.1\text{mm}$ [$\pm 0.004\text{in.}$] of the nominal dimensions.

Inner Construction, Major Parts and Materials



Order Codes



※For the fitting models, the tube size, and thread combinations, see p.322~324.

Remark: For NCU specification, see p.334~335.
For non-lubricant specification, see p.336~337.

●TS Straight 325



Tube — Thread size			
M3×0.5	M5×0.8	M6×1	R1/8
3—M3	3—M5	3—M6	—
4—M3	4—M5	4—M6	4—01
—	6—M5	6—M6	6—01

●TSH Straight with hexagon socket 325



Tube — Thread size			
M3×0.5	M5×0.8	M6×1	R1/8
3—M3	3—M5	—	—
4—M3	4—M5	4—M6	4—01
—	6—M5	6—M6	6—01

●TSK Cartridge 325



Tube — Thread size	
M6×0.75	M8×0.75
3—M6	—
4—M6	4—M8
—	6—M8

●TSM Female straight 325



Tube — Thread size	
M3×0.5	M5×0.8
3—M3	3—M5
4—M3	4—M5

●US Union straight 326



Tube size
3
4
6

●USD Different diameter union 326



Tube size
4—3
6—4

●UK Union for bulkhead 326



Tube size
3
4
6

●UR Reducer 326



Socket — Tube size
4—3
6—3
6—4

●TL Elbow 327



Tube — Thread size			
M3×0.5	M5×0.8	M6×1	R1/8
3—M3	3—M5	3—M6	—
4—M3	4—M5	4—M6	4—01
—	6—M5	6—M6	6—01

●TLL Long elbow 327



Tube — Thread size			
M3×0.5	M5×0.8	M6×1	R1/8
3—M3	—	—	—
4—M3	4—M5	4—M6	4—01
—	6—M5	6—M6	6—01

●UL Union elbow 327



Tube size
3
4
6

●ULA Socket elbow 328



Tube, socket size
3
4
6

●ULAD Different diameter socket elbow 328



Socket — Tube size
4—3
6—3
6—4

●TLV 45° elbow 328



Tube — Thread size		
M5×0.8	M6×1	R1/8
4—M5	4—M6	4—01
6—M5	6—M6	6—01

●ULAV 45° socket elbow 328



Tube, socket size
4
6

●TT Tee 329



Tube — Thread size			
M3×0.5	M5×0.8	M6×1	R1/8
3—M3	3—M5	3—M6	—
4—M3	4—M5	4—M6	4—01
—	6—M5	6—M6	6—01

●TB Branch tee 329



Tube — Thread size			
M3×0.5	M5×0.8	M6×1	R1/8
3—M3	3—M5	3—M6	—
4—M3	4—M5	4—M6	4—01
—	6—M5	6—M6	6—01

●UT Union tee 329



Tube size
3
4
6

●UTD Different diameter union tee 330



Tube size
4—3
6—4

●UY Union Y 330



Tube size
3
4
6

● **UYD** Different diameter union Y 330



Tube size
4-3
6-3
6-4

● **UB** Branch union Y 331



Tube size
3
4
6

● **UBD** Different diameter branch union Y 331



Socket — Tube size
4-3
6-3
6-4

● **UXA** Cross A 332



Tube size
3
4
6

● **UXB** Cross B (different diameter) 332



Tube size
4-3
6-4

● **UXC** Cross C (different diameter) 332



Tube size
4-3
6-4

● **UP3M** Plug 333



For the 4 mm and 6 mm sizes, plugs for the standard type quick fittings can be used.

Socket size
3

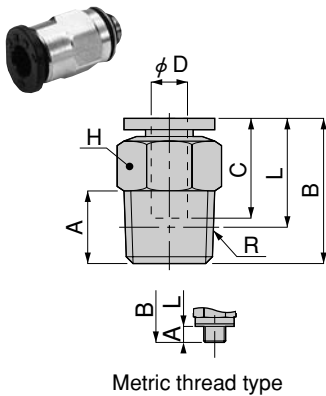
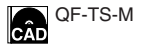
● **UC3M** Cap 333



For the 4 mm and 6 mm sizes, plugs for the standard type quick fittings can be used.

Tube size
3

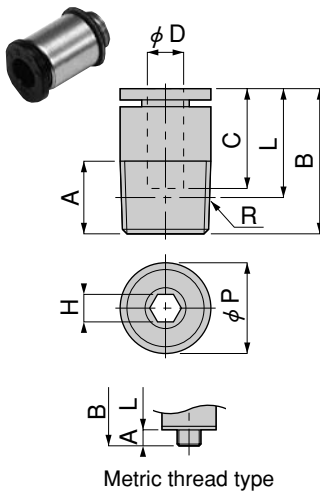
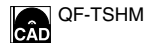
**Straight
TS**



Model	Tube outer diameter ϕD	R	A	B	L ^{Note}	C	Width across flats H	Effective area (mm ²)	Mass (g) [oz.]
TS3-M3M	3	M3×0.5	2.5	13	10.5	9.3	5.5	0.7	1.1 [0.039]
TS3-M5M		M5×0.8	3	15.6	12.6	10.9	8	3	3.4 [0.120]
TS3-M6M		M6×1	3.9	16.6	12.7				3.7 [0.131]
TS4-M3M	4	M3×0.5	2.5	15.1	12.6	10.9	8	0.9	2.4 [0.085]
TS4-M5M		M5×0.8	3	15.6					3.8
TS4-M6M		M6×1	3.9	16.6	12.7			6.3	3.6 [0.127]
TS4-01M		R1/8	8	15.6	11.6			10	6.4
TS6-M5M	6	M5×0.8	3	17	14	11.7	10	3.6	4.5 [0.159]
TS6-M6M		M6×1	3.9	18	14.1				6.3
TS6-01M		R1/8	8	17.6	13.6			6	6 [0.212]

Note: The L dimensions for the tapered thread type are the reference dimensions after the fittings are assembled.

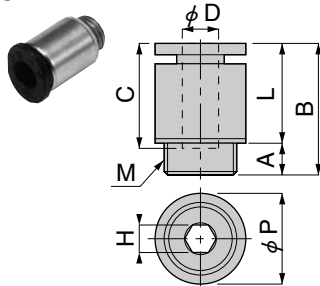
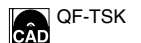
**Straight with hexagon socket
TSH**



Model	Tube outer diameter ϕD	R	A	B	L ^{Note}	C	Width across flats H	ϕP	Effective area (mm ²)	Mass (g) [oz.]
TSH3-M3M	3	M3×0.5	2.5	15.1	12.6	10.9	1.5	8	1.9	2.3 [0.081]
TSH3-M5M		M5×0.8	3	15.6			2		2.8	3.2 [0.113]
TSH4-M3M	4	M3×0.5	2.5	15.1	12.6	10.9	1.5	8	1.8	2.2 [0.078]
TSH4-M5M		M5×0.8	3	15.6			2.5		5.1	3 [0.106]
TSH4-M6M		M6×1	3.9	16.6	12.7		3	7	3.3 [0.116]	
TSH4-01M		R1/8	8	15.8	11.8			10	7.4	6.2 [0.219]
TSH6-M5M	6	M5×0.8	3	17.5	14.5	11.7	2.5	10	5.2	4.4 [0.155]
TSH6-M6M		M6×1	4	18	14		3		7.1	4.7 [0.166]
TSH6-01M		R1/8	8	17.9	13.9		4		13	5.6 [0.198]

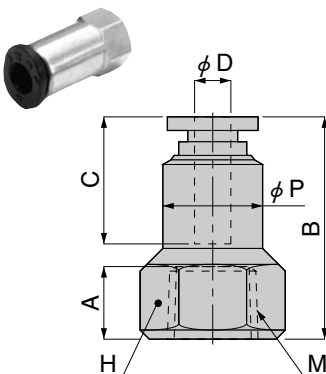
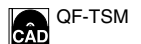
Note: The L dimensions for the tapered thread type are the reference dimensions after the fittings are assembled.

**Cartridge
TSK**



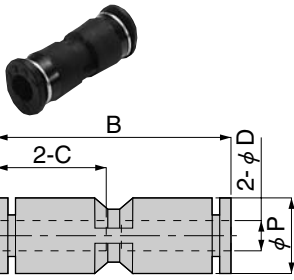
Model	Tube outer diameter ϕD	M	A	B	L	C	Width across flats H	ϕP	Effective area (mm ²)	Mass (g) [oz.]
TSK3-M6M	3	M6×0.75	3	14	11	10.9	2	8	2.9	2.7 [0.095]
TSK4-M6M	4	M6×0.75	3	14	11	10.4	2.5	8	5.1	2.6 [0.092]
TSK4-M8M		M8×0.75	3.4		10.6		3		10	7.3
TSK6-M8M	6	M8×0.75	3.4	14.8	11.4	11.7	4	10	12.8	3.6 [0.127]

**Female straight
TSM**



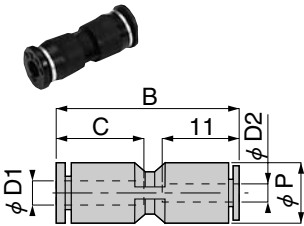
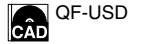
Model	Tube outer diameter ϕD	M	A	B	ϕP	C	Width across flats H	Effective area (mm ²)	Mass (g) [oz.]
TSM3-M3M	3	M3×0.5	3.7	13.7	5.5	9.3	5.5	1.4	1.5 [0.053]
TSM3-M5M		M5×0.8	5	15.3	8		8	2.8	4.2 [0.148]
TSM4-M3M	4	M3×0.5	3.3	15.4	8	10.9	8	3.5	3.6 [0.127]
TSM4-M5M		M5×0.8	5	17.6				2.6	4.3 [0.152]

Union straight
US



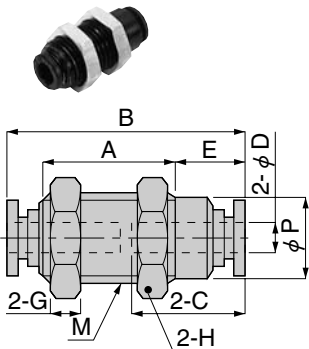
Model	Tube outer diameter ϕD	B	ϕP	C	Effective area (mm ²)	Mass (g) [oz.]
US3M	3	19.6	6	9.3	2.7	1.1 [0.039]
US4M	4	22.7	8	11	5.4	2 [0.071]
US6M	6	24.4	10.4	11.6	11	3.1 [0.109]

Different diameter union
USD



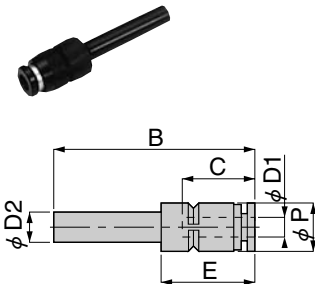
Model	Tube outer diameter $\phi D1$	Tube outer diameter $\phi D2$	B	ϕP	C	Effective area (mm ²)	Mass (g) [oz.]
USD4-3M	4	3	22.7	8	11	2.4	2.1 [0.074]
USD6-4M	6	4	24	10.4	11.6	5.6	3 [0.106]

Union for bulkhead
UK



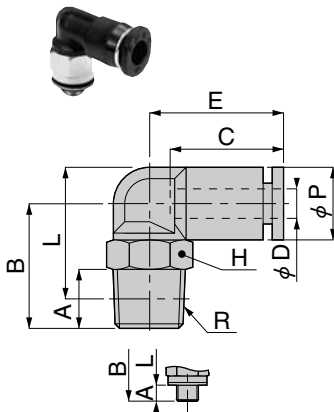
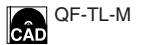
Model	Tube outer diameter ϕD	M	B	E	A	ϕP	C	Width across flats H	G	Effective area (mm ²)	Mass (g) [oz.]
UK3M	3	M8X0.75	19.3	4.7	12.4	7	9.3	10	2	2.4	3.1 [0.109]
UK4M	4	M10X1	23.2	5.8	14.1	8.9	10.9	12	3	3.7	6 [0.212]
UK6M	6	M12X1	25	6.6	14.8	10.8	11.7	14	4	10.5	9 [0.317]

Reducer
UR



Model	Tube outer diameter $\phi D1$	Applicable fitting diameter $\phi D2$	B	E	ϕP	C	Effective area (mm ²)	Mass (g) [oz.]
UR4-3M	3	4	33.3	13.3	8	9.3	3.7	1.4 [0.049]
UR6-3M	3	6	38	15.7	9.6	11	3.1	2.4 [0.085]
UR6-4M	4						5.4	

**Elbow
TL**

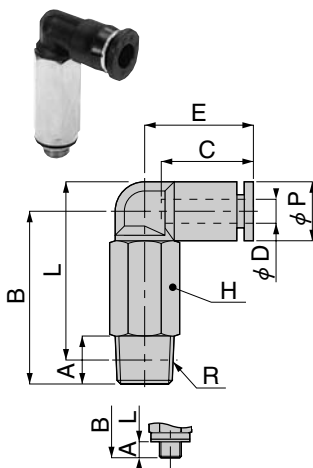
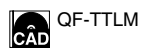


Metric thread type

Model	Tube outer diameter ϕD	R	A	B	L ^{Note}	ϕP	C	E	Width across flats H	Effective area (mm ²)	Mass (g) [oz.]
TL3-M3M	3	M3X0.5	2.5	12	12.5	6	9.3	10.8	5.5	0.5	1.4 [0.049]
TL3-M5M		M5X0.8	3	13.5	13.5				8	1.8	2.8 [0.099]
TL3-M6M		M6X1	3.9	14.5	13.6				3.1 [0.109]		
TL4-M3M	4	M3X0.5	2.5	14	15.5	8	11	15.1	8	1.3	3 [0.106]
TL4-M5M		M5X0.8	3	13.5	14.5					2.2	3.4 [0.120]
TL4-M6M		M6X1	3.9	14.5	14.6					3.9	3.7 [0.131]
TL4-01M		R1/8	8	16	16					10	4.8
TL6-M5M	6	M5X0.8	3	14.5	16.8	10.5	11.6	16	8	3.5	4.1 [0.145]
TL6-M6M		M6X1	3.9	15.5	16.9					3.6	4.4 [0.155]
TL6-01M		R1/8	8	17	18.3					10	8.5

Note: The L dimensions for the tapered thread type are the reference dimensions after the fittings are assembled.

**Long elbow
TLL**

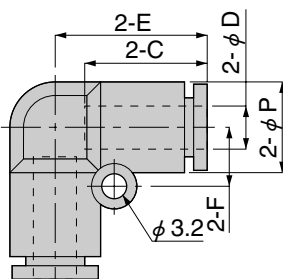


Metric thread type

Model	Tube outer diameter ϕD	R	A	B	L ^{Note}	ϕP	C	E	Width across flats H	Effective area (mm ²)	Mass (g) [oz.]
TLL3-M3M	3	M3X0.5	2.5	19	19.5	6	9.3	10.8	5.5	0.6	2.8 [0.099]
TLL4-M3M	4	M3X0.5	2.5	23	24.5	8	11	15.1	8	0.9	6.8 [0.240]
TLL4-M5M		M5X0.8	3	25	26					3	8.3 [0.293]
TLL4-M6M		M6X1	3.9	26	26.1					3.7	8.4 [0.296]
TLL4-01M		R1/8	8	28.5	28.5					10	4.2
TLL6-M5M	6	M5X0.8	3	26	28.5	10.5	11.6	16	8	3.3	9 [0.317]
TLL6-M6M		M6X1	3.9	27	28.4					3.7	
TLL6-01M		R1/8	8	29.5	30.8					10	7.6

Note: The L dimensions for the tapered thread type are the reference dimensions after the fittings are assembled.

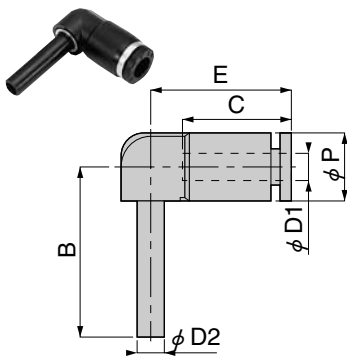
**Union elbow
UL**



Model	Tube outer diameter ϕD	ϕP	C	E	F	Effective area (mm ²)	Mass (g) [oz.]
UL3M	3	6	9.3	10.8	4.5	2.3	1.2 [0.042]
UL4M	4	8	11	13.1	5.6	4.8	2.3 [0.081]
UL6M	6	10.5	11.6	15	6.6	9	3.6 [0.127]

Socket elbow

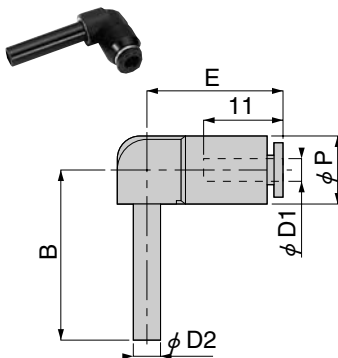
ULA



Model	Tube outer diameter ϕ D1	Applicable fitting diameter ϕ D2	B	ϕ P	C	E	Effective area (mm ²)	Mass (g) [oz.]
ULA3M	3	3	21.1	7	9.3	12.8	1.2	1.1 [0.039]
ULA4M	4	4	25	8	11	15	3.2	1.8 [0.063]
ULA6M	6	6	29.5	10.5	11.6	16.4	5.1	3.1 [0.109]

Different diameter socket elbow

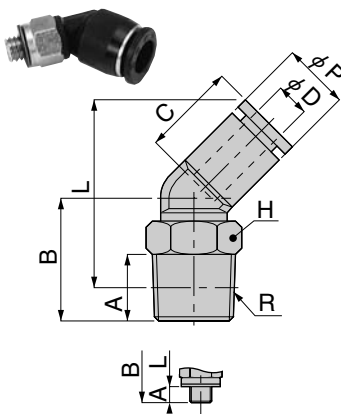
ULAD



Model	Tube outer diameter ϕ D1	Applicable fitting diameter ϕ D2	B	ϕ P	E	Effective area (mm ²)	Mass (g) [oz.]
ULAD4-3M	3	4	25	8	15	2.3	1.8 [0.063]
ULAD6-3M	3	6	29.5	10.5	16	2.4	2.9 [0.102]
ULAD6-4M	4					4.2	

45° elbow

TLV



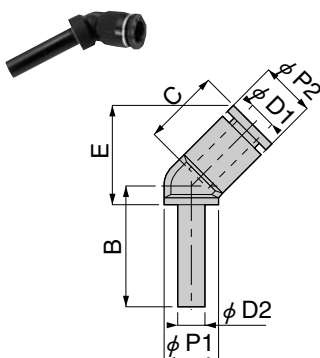
Metric thread type

Model	Tube outer diameter ϕ D1	R	A	B	L ^{Note}	ϕ P	C	Width across flats H	Effective area (mm ²)	Mass (g) [oz.]	
TLV4-M5M	4	M5X0.8	3	12.3	21.3	8	11	8	2.9	3.3 [0.116]	
TLV4-M6M		M6X1	3.9	13.3	21.4				4		3.6 [0.127]
TLV4-01M		R1/8	8	14.8	22.8				10		5
TLV6-M5M	6	M5X0.8	3	13.9	23.8	10.5	11.6	8	3.6	3.9 [0.138]	
TLV6-M6M		M6X1	3.9	14.9	23.9				3.8		4.2 [0.148]
TLV6-01M		R1/8	8	16.4	25.3				10		8.7

Note: The L dimensions for the tapered thread type are the reference dimensions after the fittings are assembled.

45° socket elbow

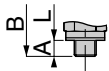
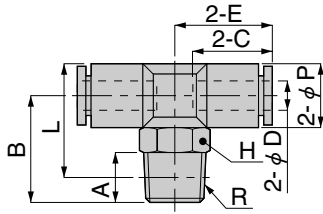
ULAV



Model	Tube outer diameter ϕ D1	Applicable fitting diameter ϕ D2	B	ϕ P1	ϕ P2	C	E	Effective area (mm ²)	Mass (g) [oz.]
ULAV4M	4	4	25.3	9.3	8	11	17.3	3.2	1.9 [0.067]
ULAV6M	6	6	28.5	10.4	10.5	11.6	20.8	5.1	3 [0.106]

Tee

TT



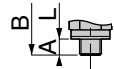
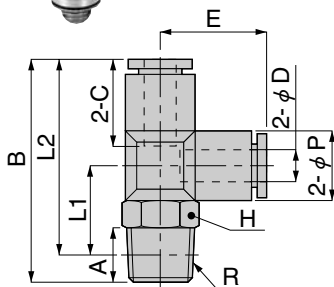
Metric thread type

Model	Tube outer diameter ϕD	R	A	B	L ^{Note}	ϕP	C	E	Width across flats H	Effective area (mm ²)	Mass (g) [oz.]		
TT3-M3M	3	M3X0.5	2.5	12	12.5	6	9.3	10.8	5.5	0.7	1.9 [0.067]		
TT3-M5M		M5X0.8	3	13.5	13.5							2	3.3 [0.116]
TT3-M6M		M6X1	3.9	14.5	13.6								
TT4-M3M	4	M3X0.5	2.5	15	16.5	8	11	12.5	8	1.4	3.9 [0.138]		
TT4-M5M		M5X0.8	3	14.5	15.5							3.7	4.3 [0.152]
TT4-M6M		M6X1	3.9	15.5	15.6								
TT4-01M		R1/8	8	17	17							4.6	7.2 [0.254]
TT6-M5M	6	M5X0.8	3	15.5	17.8	10.5	11.6	13.9	8	3.5	5.6 [0.198]		
TT6-M6M		M6X1	3.9	16.5	17.9							3.6	5.9 [0.208]
TT6-01M		R1/8	8	18	19.3								

Note: The L dimensions for the tapered thread type are the reference dimensions after the fittings are assembled.

Branch tee

TB



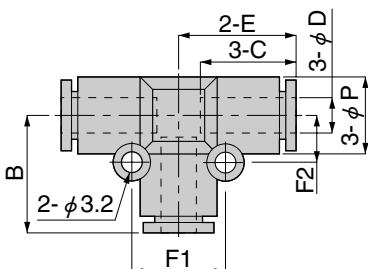
Metric thread type

Model	Tube outer diameter ϕD	R	A	B	L1 ^{Note}	L2 ^{Note}	ϕP	C	E	Width across flats H	Effective area (mm ²)	Mass (g) [oz.]		
TB3-M3M	3	M3X0.5	2.5	22.8	9.5	20.3	6	9.3	10.8	5.5	0.7	1.9 [0.067]		
TB3-M5M		M5X0.8	3	24.3	10.5	21.3							2.2	3.2 [0.113]
TB3-M6M		M6X1	3.9	25.3	10.6	21.4								
TB4-M3M	4	M3X0.5	2.5	28.1	12.5	25.6	8	11	13.1	8	0.9	4 [0.141]		
TB4-M5M		M5X0.8	3	27.6	11.5	24.6							2.1	4.4 [0.155]
TB4-M6M		M6X1	3.9	28.6	11.6	24.7								
TB4-01M		R1/8	8	30.1	13	26.1							4.6	7.3 [0.257]
TB6-M5M	6	M5X0.8	3	30.5	12.5	27.5	10.5	11.6	15	8	2.2	5.6 [0.198]		
TB6-M6M		M6X1	3.9	31.5	12.6	27.6							3.3	5.9 [0.208]
TB6-01M		R1/8	8	33	14	29								

Note: The L1 and L2 dimensions for the tapered thread type are the reference dimensions after the fittings are assembled.

Union Tee

UT



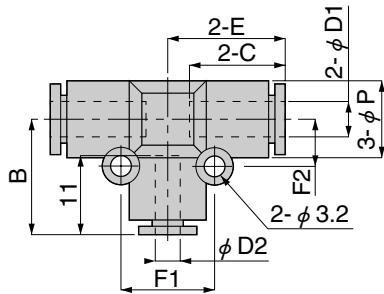
Model	Tube outer diameter ϕD	B	ϕP	C	E	F1	F2	Effective area (mm ²)	Mass (g) [oz.]
UT3M	3	10.8	6	9.3	10.8	9	4.5	1.9	1.7 [0.060]
UT4M	4	13.1	8	11	13.1	11.2	5.6	4.6	3.3 [0.116]
UT6M	6	15	10.5	11.6	14.95	13.2	6.6	8.9	5.3 [0.187]

Different diameter union tee

UTD



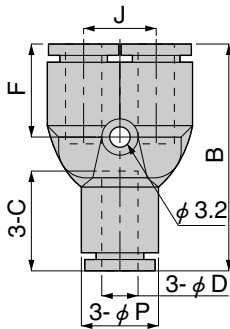
Model	Tube outer diameter ϕ D1	Tube outer diameter ϕ D2	B	ϕ P	C	E	F1	F2	Effective area (mm ²)	Mass (g) [oz.]
UTD4-3M	4	3	13.1	8	11	13.05	11.2	5.6	2.4	3.3 [0.116]
UTD6-4M	6	4	14.6	10.5	11.6	14.95	13.2	6.6	5.3	5.1 [0.180]



Union Y
UY



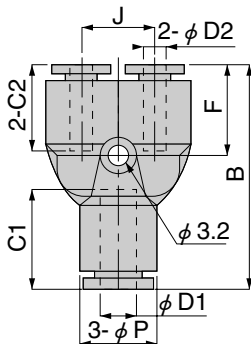
Model	Tube outer diameter ϕ D	B	ϕ P	C	J	F	Effective area (mm ²)	Mass (g) [oz.]
UY3M	3	28	8	9.3	8	12.8	2	2.7 [0.095]
UY4M	4	27.6	8	11	8	12.6	2.3	3.4 [0.120]
UY6M	6	31	10.5	11.6	10.5	14	6.8	5.5 [0.194]



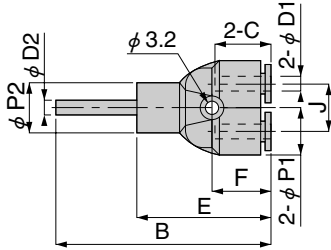
Different diameter union Y
UYD



Model	Tube outer diameter ϕ D1	Tube outer diameter ϕ D2	B	ϕ P	C1	C2	J	F	Effective area (mm ²)	Mass (g) [oz.]
UYD4-3M	4	3	27.8	8	11	9.3	8	12.8	2.1	3 [0.106]
UYD6-3M	6	3	30.6	10.5	11.6	11	10.5	13.6	2.5	5.3 [0.187]
UYD6-4M		4							4.2	

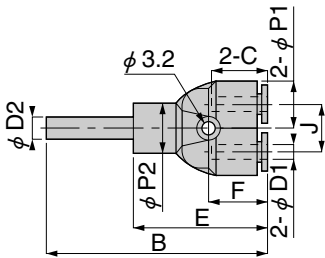


**Branch union Y
UB**



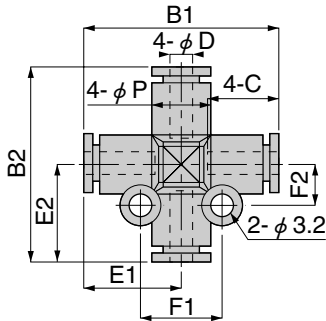
Model	Tube outer diameter ϕ D1	Applicable fitting diameter ϕ D2	B	ϕ P1	ϕ P2	C	E	F	J	Effective area (mm ²)	Mass (g) [oz.]
UB3M	3	3	42.8	8	8	9.3	25.2	12.8	8	0.8	2.6 [0.092]
UB4M	4	4	45	8	8	11	25	12.6	8	2.2	3.2 [0.113]
UB6M	6	6	50.3	10.5	10.5	11.6	28	14	10.5	5.6	5.4 [0.190]

**Different diameter
branch union Y
UBD**



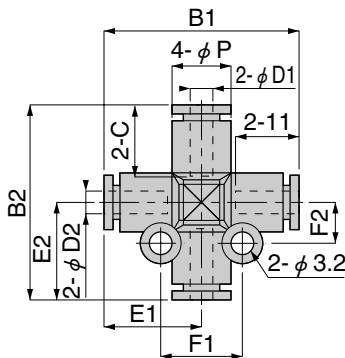
Model	Tube outer diameter ϕ D1	Applicable fitting diameter ϕ D2	B	ϕ P1	ϕ P2	C	E	F	J	Effective area (mm ²)	Mass (g) [oz.]
UBD4-3M	3	4	44.8	8	8	9.3	25.2	12.8	8	2.6	2.8 [0.099]
UBD6-3M	3	6	49.9	10.5	10.5	11	27.6	13.6	10.5	4.5	5.2 [0.183]
UBD6-4M	4									5.3	5.1 [0.180]

**Cross A
UXA**



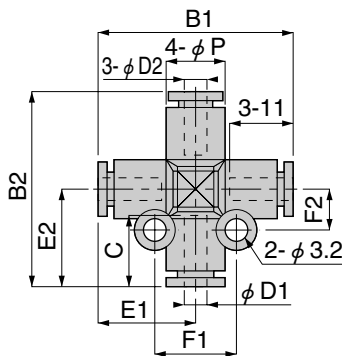
Model	Tube outer diameter ϕ D1	B1	B2	E1	E2	ϕ P	C	F1	F2	Effective area (mm ²)	Mass (g) [oz.]
UXA3M	3	26.1	26.1	13.05	13.05	8	11	11.2	5.6	2.2	4.6 [0.162]
UXA4M	4	26.1	26.1	13.05	13.05	8	11	11.2	5.6	4.8	4.3 [0.152]
UXA6M	6	29.9	29.9	14.95	14.95	10.5	11.6	13.2	6.6	8.8	6.7 [0.236]

**Cross B
UXB**



Model	Tube outer diameter ϕ D1	Tube outer diameter ϕ D2	B1	B2	E1	E2	ϕ P	C	F1	F2	Effective area (mm ²)	Mass (g) [oz.]
UXB4-3M	4	3	26.1	26.1	13.05	13.05	8	11	11.2	5.6	2.2	4.4 [0.155]
UXB6-4M	6	4	29.1	29.9	14.55	14.95	10.5	11.6	13.2	6.6	5.3	6.5 [0.229]

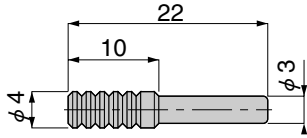
**Cross C
UXC**



Model	Tube outer diameter ϕ D1	Tube outer diameter ϕ D2	B1	B2	E1	E2	ϕ P	C	F1	F2	Effective area (mm ²)	Mass (g) [oz.]
UXC4-3M	4	3	26.1	26.1	13.05	13.05	8	11	11.2	5.6	2.2	4.4 [0.155]
UXC6-4M	6	4	29.1	29.5	14.55	14.95	10.5	11.6	13.2	6.6	4.9	6.3 [0.222]

Dimensions (mm)

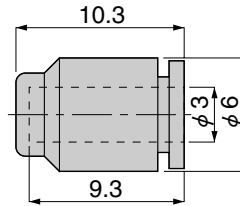
Plug UP3M



Mass:0.2g [0.007oz.]

● For the 4 mm and 6 mm sizes, plugs for the standard type quick fittings can be used.

Cap UC3M

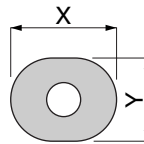


Mass:0.6 g [0.021 oz.]

● For the 4 mm and 6 mm sizes, caps for the standard type quick fittings can be used.

Release ring dimensions

The release ring for the quick fittings mini type is oval-shaped, as shown in the figure to the right (for smooth removal of tubes). As the dimensions of the release ring are not listed in dimension tables elsewhere in this catalog, see the release ring dimension table to the right.



		(mm)		
		Tube size		
Code	Tube size	$\phi 3$	$\phi 4$	$\phi 6$
X		7	9.8	11.8
Y		6	7.8	9.8

Note: Be aware that some tubes with 3mm outer diameters have release rings of X = 9.8mm and Y = 7.8mm.

QUICK FITTINGS MINI TYPE

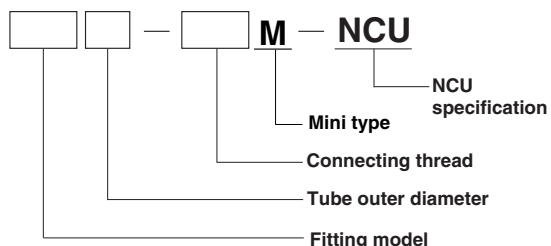
NCU Specification

- For the specifications, see p.321.
- The dimensions for the **NCU** specification shown below are the same as for the standard type. See the dimensions on p.325~333.

Caution : For delivery, consult us.

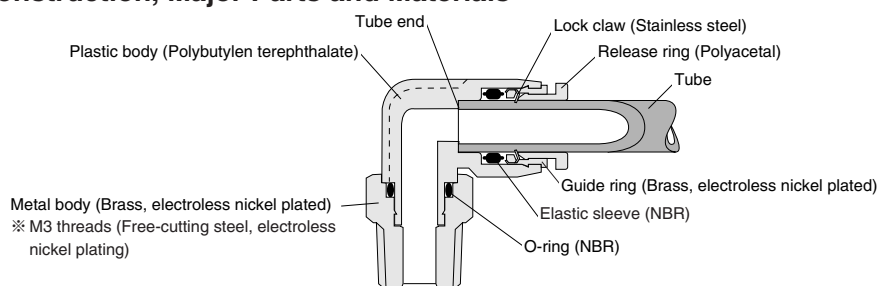
NCU Specification

● Order Codes



※ For the fitting models, the tube size and thread combinations, see the table below. Columns showing the “←” symbol indicate that standard products can be used as the NCU specification. In these cases, place orders for the standard products.

● Inner Construction, Major Parts and Materials



Note: The sealant is not applied to the R tapered thread portion of the NCU specification fittings.

● Model Table

Fitting type	Tube outer diameter	Thread	Standard type model (reference)	NCU specification model
Straight TS	3	M3×0.5	TS3-M3M	←
		M5×0.8	TS3-M5M	←
		M6×1	TS3-M6M	←
	4	M3×0.5	TS4-M3M	←
		M5×0.8	TS4-M5M	←
		M6×1	TS4-M6M	←
		R1/8	TS4-01M	TS4-01M-NCU
	6	M5×0.8	TS6-M5M	←
		M6×1	TS6-M6M	←
R1/8		TS6-01M	TS6-01M-NCU	
Straight with hexagon socket TSH	3	M3×0.5	TSH3-M3M	←
		M5×0.8	TSH3-M5M	←
	4	M3×0.5	TSH4-M3M	←
		M5×0.8	TSH4-M5M	←
		M6×1	TSH4-M6M	←
	6	R1/8	TSH4-01M	TSH4-01M-NCU
		M5×0.8	TSH6-M5M	←
		M6×1	TSH6-M6M	←
	R1/8	TSH6-01M	TSH6-01M-NCU	
Cartridge TSK	3	M6×0.75	TSK3-M6M	←
	4	M6×0.75	TSK4-M6M	←
	6	M8×0.75	TSK6-M8M	←
Female straight TSM	3	M3×0.5	TSM3-M3M	←
		M5×0.8	TSM3-M5M	←
	4	M3×0.5	TSM4-M3M	←
		M5×0.8	TSM4-M5M	←
Union straight US	3	—	US3M	←
	4	—	US4M	←
	6	—	US6M	←
Different diameter union USD	4-3	—	USD4-3M	←
	6-4	—	USD6-4M	←

Fitting type	Tube outer diameter	Thread	Standard type model (reference)	NCU specification model
Union for bulkhead UK	3	—	UK3M	←
	4	—	UK4M	←
	6	—	UK6M	←
Reducer UR	3-4	—	UR4-3M	←
	3-6	—	UR6-3M	←
	4-6	—	UR6-4M	←
Elbow TL	3	M3×0.5	TL3-M3M	←
		M5×0.8	TL3-M5M	←
		M6×1	TL3-M6M	←
	4	M3×0.5	TL4-M3M	←
		M5×0.8	TL4-M5M	←
		M6×1	TL4-M6M	←
	6	R1/8	TL4-01M	TL4-01M-NCU
		M5×0.8	TL6-M5M	←
		M6×1	TL6-M6M	←
R1/8	TL6-01M	TL6-01M-NCU		
Long elbow TLL	3	M3×0.5	TLL3-M3M	←
		M3×0.5	TLL4-M3M	←
		M5×0.8	TLL4-M5M	←
	4	M6×1	TLL4-M6M	←
		R1/8	TLL4-01M	TLL4-01M-NCU
		M5×0.8	TLL6-M5M	←
	6	M6×1	TLL6-M6M	←
		R1/8	TLL6-01M	TLL6-01M-NCU
		Union elbow UL	3	—
4	—		UL4M	←
6	—		UL6M	←
Socket elbow ULA	3	—	ULA3M	←
	4	—	ULA4M	←
	6	—	ULA6M	←

NCU Specification

Model Table

Fitting type	Tube outer diameter	Thread	Standard type model (reference)	NCU specification model	
Different diameter socket elbow ULAD	3-4	----	ULAD4-3M	←	
	3-6	----	ULAD6-3M	←	
	4-6	----	ULAD6-4M	←	
45° elbow TLV	4	M5×0.8	TLV4-M5M	←	
		M6×1	TLV4-M6M	←	
		R1/8	TLV4-01M	TLV4-01M-NCU	
	6	M5×0.8	TLV6-M5M	←	
		M6×1	TLV6-M6M	←	
		R1/8	TLV6-01M	TLV6-01M-NCU	
45° socket elbow ULAV	4	----	ULAV4M	←	
	6	----	ULAV6M	←	
Tee TT	3	M3×0.5	TT3-M3M	←	
		M5×0.8	TT3-M5M	←	
		M6×1	TT3-M6M	←	
	4	M3×0.5	TT4-M3M	←	
		M5×0.8	TT4-M5M	←	
		M6×1	TT4-M6M	←	
		R1/8	TT4-01M	TT4-01M-NCU	
	6	M5×0.8	TT6-M5M	←	
		M6×1	TT6-M6M	←	
		R1/8	TT6-01M	TT6-01M-NCU	
	Branch tee TB	3	M3×0.5	TB3-M3M	←
			M5×0.8	TB3-M5M	←
M6×1			TB3-M6M	←	
4		M3×0.5	TB4-M3M	←	
		M5×0.8	TB4-M5M	←	
		M6×1	TB4-M6M	←	
		R1/8	TB4-01M	TB4-01M-NCU	
6		M5×0.8	TB6-M5M	←	
		M6×1	TB6-M6M	←	
		R1/8	TB6-01M	TB6-01M-NCU	

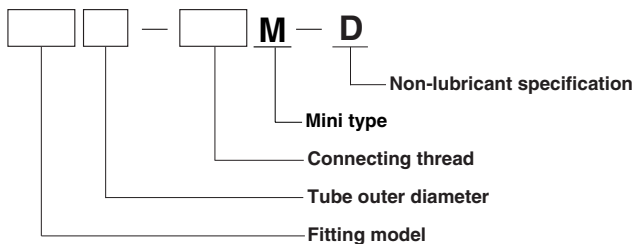
Fitting type	Tube outer diameter	Thread	Standard type model (reference)	NCU specification model
Union tee UT	3	----	UT3M	←
	4	----	UT4M	←
	6	----	UT6M	←
Different diameter union tee UTD	4-3	----	UTD4-3M	←
	6-4	----	UTD6-4M	←
Union Y UY	3	----	UY3M	←
	4	----	UY4M	←
	6	----	UY6M	←
Different diameter union Y UYD	4-3	----	UYD4-3M	←
	6-3	----	UYD6-3M	←
	6-4	----	UYD6-4M	←
Branch union Y UB	3	----	UB3M	←
	4	----	UB4M	←
	6	----	UB6M	←
Different diameter branch union Y UBD	3-4	----	UBD4-3M	←
	3-6	----	UBD6-3M	←
	4-6	----	UBD6-4M	←
Cross A UXA	3	----	UXA3M	←
	4	----	UXA4M	←
	6	----	UXA6M	←
Cross B UXB	4-3	----	UXB4-3M	←
	6-4	----	UXB6-4M	←
Cross C UXC	4-3	----	UXC4-3M	←
	6-4	----	UXC6-4M	←
Plug UP	3	----	UP3M	←
Cap UC	3	----	UC3M	←

QUICK FITTINGS MINI TYPE

Non-lubricant Specification

Non-lubricant Specification

● Order Codes



※ For the fitting models, tube size and thread combinations, see the table below.
Columns showing the “←” symbol indicate that standard products can be used as the non-lubricant specification. In these cases, place orders for the standard products.

● Model Table

Fitting type	Tube outer diameter	Thread	Standard type model (reference)	Non-lubricant specification model
Straight TS	3	M3×0.5	TS3-M3M	TS3-M3M-D
		M5×0.8	TS3-M5M	TS3-M5M-D
		M6×1	TS3-M6M	TS3-M6M-D
	4	M3×0.5	TS4-M3M	TS4-M3M-D
		M5×0.8	TS4-M5M	TS4-M5M-D
		M6×1	TS4-M6M	TS4-M6M-D
		R1/8	TS4-01M	TS4-01M-D
	6	M5×0.8	TS6-M5M	TS6-M5M-D
		M6×1	TS6-M6M	TS6-M6M-D
R1/8		TS6-01M	TS6-01M-D	
Straight with hexagon socket TSH	3	M3×0.5	TSH3-M3M	TSH3-M3M-D
		M5×0.8	TSH3-M5M	TSH3-M5M-D
	4	M3×0.5	TSH4-M3M	TSH4-M3M-D
		M5×0.8	TSH4-M5M	TSH4-M5M-D
		M6×1	TSH4-M6M	TSH4-M6M-D
		R1/8	TSH4-01M	TSH4-01M-D
	6	M5×0.8	TSH6-M5M	TSH6-M5M-D
		M6×1	TSH6-M6M	TSH6-M6M-D
		R1/8	TSH6-01M	TSH6-01M-D
Cartridge TSK	3	M6×0.75	TSK3-M6M	TSK3-M6M-D
	4	M6×0.75	TSK4-M6M	TSK4-M6M-D
		M8×0.75	TSK4-M8M	TSK4-M8M-D
6	M8×0.75	TSK6-M8M	TSK6-M8M-D	
Female straight TSM	3	M3×0.5	TSM3-M3M	TSM3-M3M-D
		M5×0.8	TSM3-M5M	TSM3-M5M-D
	4	M3×0.5	TSM4-M3M	TSM4-M3M-D
M5×0.8		TSM4-M5M	TSM4-M5M-D	
Union straight US	3	—	US3M	US3M-D
	4	—	US4M	US4M-D
	6	—	US6M	US6M-D
Different diameter union USD	4-3	—	USD4-3M	USD4-3M-D
	6-4	—	USD6-4M	USD6-4M-D
Union for bulkhead UK	3	—	UK3M	UK3M-D
	4	—	UK4M	UK4M-D
	6	—	UK6M	UK6M-D
Reducer UR	3-4	—	UR4-3M	UR4-3M-D
	3-6	—	UR6-3M	UR6-3M-D
	4-6	—	UR6-4M	UR6-4M-D

● For the specifications, see p.321.

● The dimensions, inner construction, major parts and materials for the non-lubricant specification shown below are the same as the standard type. See the inner construction, major parts and materials on p.321, and see the dimensions on p.325~333.

Caution: For delivery, consult us.

Fitting type	Tube outer diameter	Thread	Standard type model (reference)	Non-lubricant specification model
Elbow TL	3	M3×0.5	TL3-M3M	TL3-M3M-D
		M5×0.8	TL3-M5M	TL3-M5M-D
		M6×1	TL3-M6M	TL3-M6M-D
	4	M3×0.5	TL4-M3M	TL4-M3M-D
		M5×0.8	TL4-M5M	TL4-M5M-D
		M6×1	TL4-M6M	TL4-M6M-D
		R1/8	TL4-01M	TL4-01M-D
	6	M5×0.8	TL6-M5M	TL6-M5M-D
		M6×1	TL6-M6M	TL6-M6M-D
R1/8		TL6-01M	TL6-01M-D	
Long elbow TLL	3	M3×0.5	TLL3-M3M	TLL3-M3M-D
		M5×0.8	TLL4-M3M	TLL4-M3M-D
	4	M5×0.8	TLL4-M5M	TLL4-M5M-D
		M6×1	TLL4-M6M	TLL4-M6M-D
		R1/8	TLL4-01M	TLL4-01M-D
	6	M5×0.8	TLL6-M5M	TLL6-M5M-D
		M6×1	TLL6-M6M	TLL6-M6M-D
		R1/8	TLL6-01M	TLL6-01M-D
	Union elbow UL	3	—	UL3M
4		—	UL4M	UL4M-D
6		—	UL6M	UL6M-D
Socket elbow ULA	3	—	ULA3M	ULA3M-D
	4	—	ULA4M	ULA4M-D
	6	—	ULA6M	ULA6M-D
Different diameter socket elbow ULAD	3-4	—	ULAD4-3M	ULAD4-3M-D
	3-6	—	ULAD6-3M	ULAD6-3M-D
	4-6	—	ULAD6-4M	ULAD6-4M-D
45° elbow TLV	4	M5×0.8	TLV4-M5M	TLV4-M5M-D
		M6×1	TLV4-M6M	TLV4-M6M-D
		R1/8	TLV4-01M	TLV4-01M-D
	6	M5×0.8	TLV6-M5M	TLV6-M5M-D
		M6×1	TLV6-M6M	TLV6-M6M-D
45° socket elbow ULAV	4	—	ULAV4M	ULAV4M-D
	6	—	ULAV6M	ULAV6M-D

Non-lubricant Specification

● Model Table

Fitting type	Tube outer diameter	Thread	Standard type model (reference)	Non-lubricant specification model
Tee TT	3	M3×0.5	TT3-M3M	TT3-M3M-D
		M5×0.8	TT3-M5M	TT3-M5M-D
		M6×1	TT3-M6M	TT3-M6M-D
	4	M3×0.5	TT4-M3M	TT4-M3M-D
		M5×0.8	TT4-M5M	TT4-M5M-D
		M6×1	TT4-M6M	TT4-M6M-D
		R1/8	TT4-01M	TT4-01M-D
	6	M5×0.8	TT6-M5M	TT6-M5M-D
		M6×1	TT6-M6M	TT6-M6M-D
R1/8		TT6-01M	TT6-01M-D	
Branch tee TB	3	M3×0.5	TB3-M3M	TB3-M3M-D
		M5×0.8	TB3-M5M	TB3-M5M-D
		M6×1	TB3-M6M	TB3-M6M-D
	4	M3×0.5	TB4-M3M	TB4-M3M-D
		M5×0.8	TB4-M5M	TB4-M5M-D
		M6×1	TB4-M6M	TB4-M6M-D
		R1/8	TB4-01M	TB4-01M-D
	6	M5×0.8	TB6-M5M	TB6-M5M-D
		M6×1	TB6-M6M	TB6-M6M-D
R1/8		TB6-01M	TB6-01M-D	
Union Tee UT	3	----	UT3M	UT3M-D
	4	----	UT4M	UT4M-D
	6	----	UT6M	UT6M-D
Different diameter union tee UTD	4-3	----	UTD4-3M	UTD4-3M-D
	6-4	----	UTD6-4M	UTD6-4M-D
Union Y UY	3	----	UY3M	UY3M-D
	4	----	UY4M	UY4M-D
	6	----	UY6M	UY6M-D
Different diameter union Y UYD	4-3	----	UYD4-3M	UYD4-3M-D
	6-3	----	UYD6-3M	UYD6-3M-D
	6-4	----	UYD6-4M	UYD6-4M-D
Branch union Y UB	3	----	UB3M	UB3M-D
	4	----	UB4M	UB4M-D
	6	----	UB6M	UB6M-D
Different diameter branch union Y UBD	3-4	----	UBD4-3M	UBD4-3M-D
	3-6	----	UBD6-3M	UBD6-3M-D
	4-6	----	UBD6-4M	UBD6-4M-D
Cross A UXA	3	----	UXA3M	UXA3M-D
	4	----	UXA4M	UXA4M-D
	6	----	UXA6M	UXA6M-D
Cross B UXB	4-3	----	UXB4-3M	UXB4-3M-D
	6-4	----	UXB6-4M	UXB6-4M-D
Cross C UXC	4-3	----	UXC4-3M	UXC4-3M-D
	6-4	----	UXC6-4M	UXC6-4M-D
Plug UP		----	UP3M	←
Cap UC	3	----	UC3M	UC3M-D

Safety Precautions (Quick Fittings Mini Type for φ3 to φ6 Tubes)

The following is a safety precaution to Quick Fittings Mini Type. For other safety precautions, be sure to read the precautions on p.49.

Warning

- With the exception of the quick fittings rotary type, do not use any quick fittings in locations where thread portions or tubes are subject to swing or rotation. The swing or rotation could result in damage to the fitting body.

Handling Instructions and Precautions

● Mounting

Precautions for mounting the body

1. To mount the body, use a suitable tool to tighten it to the outer or inner hexagonal section of the fitting.
2. When tightening threads, tighten to the recommended tightening torque shown in the table below. Tightening to more than the recommended torque could result in broken threads or air leaks due to deformed gaskets. Tightening to less than the recommended torque could lead to loose threads or air leaks.
3. For fittings with fixed piping direction, tighten to the desired piping direction, and then adjust so that it falls within the range of the body tightening torque.

Recommended tightening torque, sealant color, and gasket material

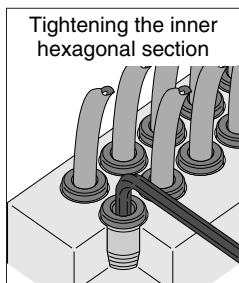
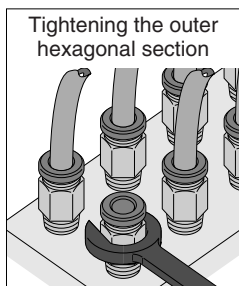
Thread type	Thread	Tightening torque	Sealant color	Gasket material
Metric thread	M3×0.5	0.7 N·m [6.2 in·lbf]	—	SUS304 NBR
	M5×0.8	1.0~1.5 N·m [8.9~13.3 in·lbf]		
	M6×1	1.8~2.3 N·m [15.9~20.4 in·lbf]		
	M6×0.75	0.8~1 N·m [7.1~8.9 in·lbf]		
	M8×0.75	1~2 N·m [8.9~17.7 in·lbf]		
Taper pipe thread	R1/8	7~9 N·m [62.0~79.7 in·lbf]	White	—

Precautions for disconnecting the body

1. To disconnect the body, use a suitable tool to loosen it from the outer or inner hexagonal section of the body.
2. Clean off the sealant coating on the thread of the removed mating part. The coated sealant could enter other relating parts, and cause breakdowns.

Method for tightening screws

For tightening screws, use either a wrench or an impact wrench on outer hexagonal sections, and for inner hexagonal sections, use an Allen wrench (enables to reduce the space between fittings).

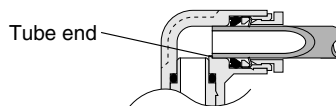


- Cautions:**
1. Because the Quick Fitting Mini Type is compact and lightweight, avoid uses that subject it to external forces. Excessive bending or pulling force could damage the fittings.
 2. Use the tightening torque shown in the table above, and avoid applying excessive tightening torque.
 3. While the R1/8 size sealant can be reused a number of times, the thread on the mating part may also be adhered with sealant. Always clean out the inside of the device's female thread.

● Tube connection and disconnection

Precautions for connecting the tube

1. Check that the cut section of the tube has been cut at straight angle, that the outer surface of the tube is not scratched, and that the tube has not become oval shaped.
2. When connecting a tube, failure to insert the tube all the way to the end could result in air leaks.



3. After connection, pull the tube to check that it will not disconnect.

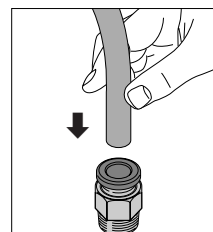
Precautions for disconnecting the tube

1. Before disconnecting a tube, check that the pressure inside the tube is down to zero.
2. Push the release ring evenly all the way to the end, and then pull the tube out. An insufficient push could make it impossible to pull the tube out, or could scratch the tube, leaving scratched tube material inside the fitting.

Tube connection and disconnection method

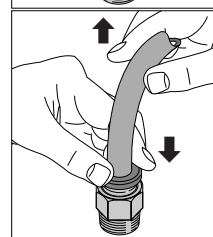
1. Tube connection

The Quick Fitting Mini Type is equipped with a lock claw that holds the tube in place when it has been pushed all the way to the end, and with an elastic sleeve for sealing the tube periphery.



2. Tube disconnection

To disconnect the tube, first push on the release ring, releasing the lock claw, and then pull the tube out. Always stop the air supply before removing the tube.



For cases where tight or cramped piping spaces hinder tube removal operations, a special tool is available. Consult us for details.

Special tool for tube removal

For ϕ 3 [0.118 in.], ϕ 4 [0.157 in.] and ϕ 6 [0.236 in.] tubes
Order code : **UJ-1**



For ϕ 6 [0.236 in.], ϕ 8 [0.315 in.],
 ϕ 10 [0.394 in.] and ϕ 12 [0.472 in.] tubes
Order code : **UJ-2**



Handling Instructions and Precautions

● Usable tubes

Either nylon or urethane tubes can be used. The tube outer diameter accuracy should be, for nylon tubes, within ± 0.1 mm [± 0.004 in.] of the nominal dimensions, and for urethane tubes, within ± 0.15 mm [± 0.006 in.] of the nominal dimensions, while the ovalness (difference between long diameter and short diameter) should be within 0.2 mm [0.008 in.].

- Cautions:**
1. Use tubes with no visible scratches on the outer surface. If a scratch is made during repeated use, cut off the scratched portion.
 2. Do not bend or twist the tube too much near the connection to the fitting. It could result in air leaks. The minimum bending radius for nylon tubes is as shown in the table below.

mm [in.]	
Tube size	Minimum bending radius
ϕ 3 [0.118]	18 [0.7]
ϕ 4 [0.157]	20 [0.8]
ϕ 6 [0.236]	30 [1.2]