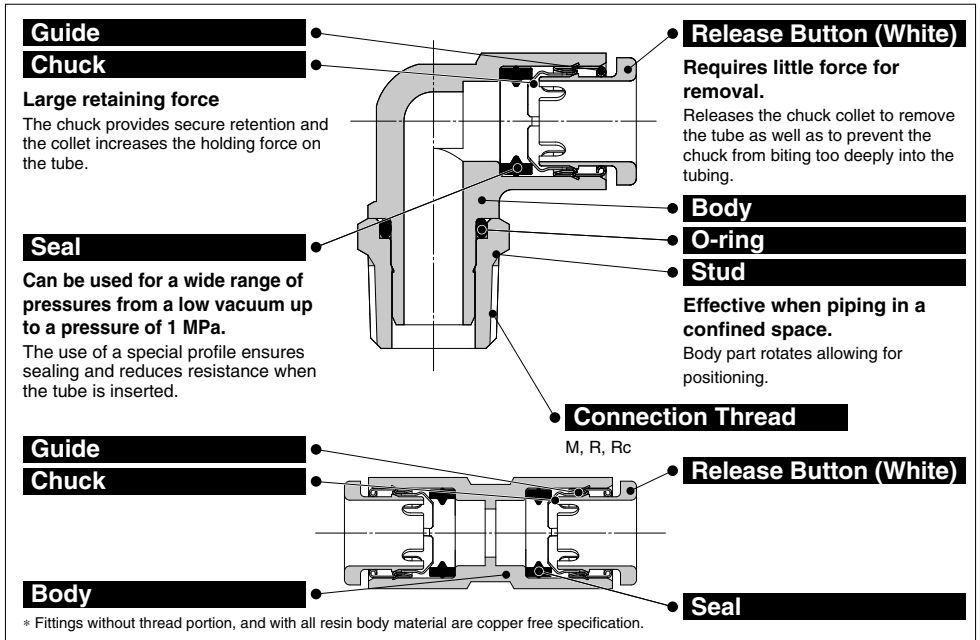


# Series 10-KQ2

Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

RoHS



**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa**

- Applicable tubing—Metric size
- Applicable tubing material PFA, Polyurethane



## Applicable Tubing

Tubing material <sup>Note 1)</sup>	PFA, Polyurethane
Tubing O.D.	ø2, ø3.2, ø4, ø6, ø8, ø10, ø12, ø16

Note 1) FEP, nylon and soft nylon tubing can also be used. However, the degree of clean performance will be reduced.

## Color

Series	Body	Release button
Series 10-KQ2	White	White

## Specifications

<b>Fluid</b>		Air, Water <sup>Note 1)</sup>
<b>Operating pressure range</b> <sup>Note 2)</sup>		-100 kPa to 1 MPa
<b>Proof pressure (at 23°C)</b>		3 MPa
<b>Ambient and fluid temperature</b>		-5 to 60°C, Water: 0 to 40°C (No freezing)
<b>Thread</b>	<b>Mounting section</b>	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	<b>Nut section</b>	JIS B0205 (Metric fine thread)
<b>Seal on the threads</b>		With seal or none
<b>Grease</b>		Fluorine based grease
<b>Cleanliness class (ISO class)</b>		Class 5

Note 1) The surge pressure must be under the maximum operating pressure.

Note 2) Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

## Principal Parts Material

Body	C3604 Electroless nickel plated, PBT, PP, Stainless steel 303
Stud	C3604 (Thread portion) Electroless nickel plated, Stainless steel 303 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR

# Metric Size One-touch Fittings

## Variations

### Hexagon socket head male connector

10-KQ2S P.1129



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.

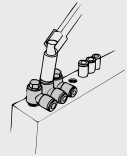


### Universal male elbow

10-KQ2V P.1134



Hexagon head of the body allows tightening with a box wrench in confined spaces.

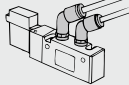


### 45° male elbow

10-KQ2K P.1133



Use to pipe a female thread at a 45° angle. The model between the male connector and male elbow.

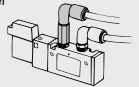


### Extended male elbow

10-KQ2W P.1140



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.

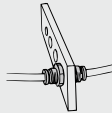


### Bulkhead union

10-KQ2E P.1150



Use to connect tubing through a panel, etc.

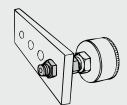


### Bulkhead connector

10-KQ2E P.1150



Use to connect male thread and tubing through a panel, etc.

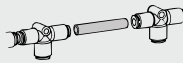


### Nipple

10-KQN P.1152



Use to connect One-touch fittings.

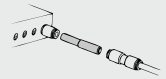


### Reducer nipple

10-KQN P.1152



Use to connect One-touch fittings of different sizes.



### Universal female elbow

10-KQ2VF P.1135



Use to branch a male or female thread at a 90° angle. Multiple connections possible.

### Branch universal female elbow

10-KQ2ZF P.1137



Use to two-branch a male or female thread at a 90° angle. Multiple connections possible.

### Male connector

10-KQ2H P.1127



Use to pipe a female thread. Most general model.

### Cross

10-KQ2TW P.1143



Use to four-branch line.

### Reducer elbow

10-KQ2L P.1131



Use to change the tube direction from One-touch fittings by 90° and to reduce size.

### Female connector

10-KQ2F P.1128



Use to pipe a male thread of a pressure gauge, etc.

### Male elbow

10-KQ2L P.1130



Use to pipe a female thread at right angles. Most general model.

### Different diameter cross

10-KQ2TX P.1143



Use to branch tubing with size reduced at both 90° angles.

### Straight union

10-KQ2H P.1127



Use to connect tubing in the same direction.

### Union elbow

10-KQ2L P.1131



Use to connect tubing at right angles.

### Male branch tee

10-KQ2T P.1141



Use to branch a female thread at both 90° angles.

### Different diameter straight

10-KQ2H P.1128



Use to connect tubing of different sizes.

### Plug-in elbow

10-KQ2L P.1131



Use to change the tube direction from One-touch fittings by 90°.

### Union tee

10-KQ2T P.1142



Use to branch tubing at both 90° angles.

**Different diameter tee**

10-KQ2T P.1142



Use to connect tubing for branching at both 90° angles with size reduced.

**Different diameter tee**

10-KQ2T P.1142



Use to connect tubing for branching at 90° angle with size reduced from the same piping.

**Different diameter cross**

10-KQ2TY P.1143



Use to connect tubing for branching in three directions with size reduced.

**Hexagon socket head universal male elbow**

10-KQ2VS P.1134



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

**Male branch connector**

10-KQ2LU P.1132



Use to branch a female thread at right angles.

**Female elbow**

10-KQ2LF P.1139



Use to pipe a male thread at right angles.

**Double universal male elbow**

10-KQ2VD P.1136



Use to branch a female thread at right angles. Two individual parts rotate 360°.

**Triple universal male elbow**

10-KQ2VT P.1136



Use to three-branch a female thread at right angles. Three individual parts rotate 360°.

**Branch universal male elbow**

10-KQ2ZZ P.1137



Hexagon head of the body allows tightening with a box wrench. Use for branch connections.

**Double branch universal male elbow**

10-KQ2ZD P.1138



Use to four-branch a female thread at right angles. Two individual parts rotate 360°.

**Male run tee**

10-KQ2Y P.1144



Use to branch a female thread at a 90° angle.

**Triple branch universal male elbow**

10-KQ2ZT P.1138



Use to six-branch a female thread at right angles. Three individual parts rotate 360°.

**Branch union elbow**

10-KQ2LU P.1131



Use to branch tubing at right angles.

**Extended plug-in elbow**

10-KQ2W P.1139



Use to change the tube direction of One-touch fittings by 90°. Multi-level piping is also possible with the plug-in elbow.

**Male delta union**

10-KQ2D P.1145



Use to branch a female thread at two right angles.

**Delta union**

10-KQ2D P.1146



Use to branch tubing at three right angles.

**Union "Y"**

10-KQ2U P.1147



Use to branch tubing in the same direction.

**Different diameter union "Y"**

10-KQ2U P.1147



Use to connect tubing for branching with size reduced.

**Plug-in "Y"**

10-KQ2U P.1147



Use to branch One-touch fittings.

**Branch "Y"**

10-KQ2U P.1146



Use to branch a female thread.

**Plug-in reducer**

10-KQ2R P.1150



Use to change size of One-touch fittings.

**Bulkhead male elbow**

10-KQ2LE P.1151



Use to connect tubing through a panel, etc. and to change the tube direction by 90°.

**Adapter**

10-KQ2N P.1151



Use to connect One-touch fittings and R female thread.

**Tube cap**

10-KQ2C P.1152



Use to plug unused tubing.

**Color cap**

10-KQ2C P.1152



Mount onto the release button and use different colors for piping according to applications.

**Plug**

10-KQP P.1151



Use to plug unused One-touch fittings.

Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

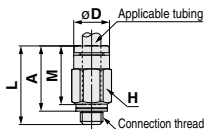
Pressure Switches/ Pressure Sensors

## Dimensions

### Male Connector: 10-KQ2H (Gasket seal)



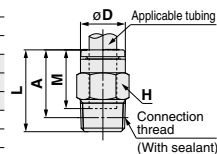
Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	øD	L	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø2	M3 x 0.5	10-KQ2H02-M3G	7	5.5	15.6	13	11.9	0.9	1.2	1.5
	M5 x 0.8	10-KQ2H02-M5N	7	5.5	13.8	10.8	11.9	0.9	1.4	2
ø3.2	M3 x 0.5	10-KQ2H23-M3G	7	6.7	17	14.4	13.3	0.9	1.2	2.4
	M5 x 0.8	10-KQ2H23-M5N	7	6.7	17.3	14.3	13.3	2.5	2.5	2.7
ø4	M3 x 0.5	10-KQ2H04-M3G	8	7.7	17.1	14.5	13.3	0.9	1.2	2.9
	M5 x 0.8	10-KQ2H04-M5N	8	7.7	17.7	14.7	13.3	4	2.5	3.3
ø6	M6 x 1.0	10-KQ2H04-M6N	8	7.7	18.7	14.7	13.3	5.6	3	3.6
	M5 x 0.8	10-KQ2H06-M5N	10	9.7	17.7	14.7	13.3	4	2.5	4.1
ø6	M6 x 1.0	10-KQ2H06-M6N	10	9.7	18.8	14.8	13.3	5.6	3	4.4



### Male Connector: 10-KQ2H (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD	L	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø3.2	1/8	10-KQ2H23-01NS	10	6.7	14	10.9	13.3	2.9	2.5	6
	1/4	10-KQ2H23-02NS	14	6.7	16.7	12	13.3	2.9	2.5	15.3
ø4	1/8	10-KQ2H04-01NS	10	7.7	14.3	11.2	13.3	4	3	5.6
	1/4	10-KQ2H04-02NS	14	7.7	16.7	12	13.3	4	3	14.6
ø6	1/8	10-KQ2H06-01NS	10	9.7	18.4	15.3	13.3	10.4	4.5	5.8
	1/4	10-KQ2H06-02NS	14	9.7	16.7	12	13.3	10.4	4.5	12.5
ø8	3/8	10-KQ2H06-03NS	17	9.7	18.1	13	13.3	10.4	4.5	24.5
	1/8	10-KQ2H08-01NS	14	13	22.5	19.4	14.2	18	6	11.9
ø8	1/4	10-KQ2H08-02NS	14	13	22	17.3	14.2	18	6	13.9
	3/8	10-KQ2H08-03NS	17	13	18.1	13	14.2	18	6	21
ø10	1/8	10-KQ2H10-01NS	17	15.6	23.8	20.7	15.6	26.1	6	16.9
	1/4	10-KQ2H10-02NS	17	15.6	27.3	22.6	15.6	29.5	7.5	22.1
ø10	3/8	10-KQ2H10-03NS	17	15.6	23.5	18.4	15.6	29.5	7.5	22.5
	1/2	10-KQ2H10-04NS	22	15.6	22.3	15.9	15.6	29.5	7.5	44.7
ø12	1/4	10-KQ2H12-02NS	19	18.2	28.7	24	17	46.1	9	24.3
	3/8	10-KQ2H12-03NS	19	18.2	25.9	20.8	17	46.1	9	25.2
ø12	1/2	10-KQ2H12-04NS	22	18.2	22.3	15.9	17	46.1	9	37.7
	3/8	10-KQ2H16-02NS	24	23.6	32.5	27.8	20.6	58.3	9	37.4
ø16	3/8	10-KQ2H16-03NS	24	23.6	33.1	28	20.6	67	11	42.4
	1/2	10-KQ2H16-04NS	24	23.6	32.1	25.7	20.6	67	13	44.6

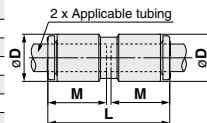


\* Reference dimensions after installation of R thread

### Straight Union: 10-KQ2H



Applicable tubing O.D. (mm)	Model	øD (Note)	L	M	Effective area (mm <sup>2</sup> )	Min. port size	Weight (g)
					Urethane		
ø2	10-KQ2H02-00A	5.8	24.8	11.9	0.9	1.4	0.8
ø3.2	10-KQ2H23-00A	7.1	27.6	13.3	2.9	2.5	1.4
ø4	10-KQ2H04-00A	8.2	27.6	13.3	4	3	1.6
ø6	10-KQ2H06-00A	10.4	27.6	13.3	10.4	4.5	2.1
ø8	10-KQ2H08-00A	13.2	29.4	14.2	18	6	3.7
ø10	10-KQ2H10-00A	15.9	32.2	15.6	29.5	7.5	5.5
ø12	10-KQ2H12-00A	18.5	35	17	46.1	9	8.2
ø16	10-KQ2H16-00A	23.8	42.2	20.6	67	13	15.2



Note) øD is maximum diameter.

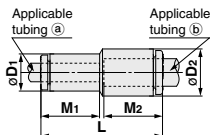
## Dimensions

### Different Diameter Straight: 10-KQ2H



Applicable tubing O.D. (mm)		Model	Note) $\phi D_1$	Note) $\phi D_2$	L	M1	M2	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
(a)	(b)									
$\phi 2$	$\phi 3.2$	10-KQ2H02-23A	5.8	7.1	26.2	11.9	13.3	0.9	1.4	1.1
	$\phi 4$	10-KQ2H02-04A	5.8	8.2	26.2	11.9	13.3	0.9	1.4	1.2
$\phi 3.2$	$\phi 4$	10-KQ2H23-04A	7.1	8.2	27.6	13.3	13.3	2.9	2.5	1.5
		10-KQ2H23-06A	7.1	10.4	27.6	13.3	13.3	2.9	2.5	1.8
$\phi 4$	$\phi 6$	10-KQ2H04-06A	8.2	10.4	27.6	13.3	13.3	5.6	3	2
		10-KQ2H06-08A	10.4	13.2	28.5	13.3	14.2	10.4	4.5	2.9
$\phi 6$	$\phi 10$	10-KQ2H08-10A	13.2	15.9	30.8	14.2	15.6	18	6	4.9
		10-KQ2H10-12A	15.9	18.5	33.6	15.6	17	20.6	7.5	7.2
$\phi 12$	$\phi 16$	10-KQ2H12-16A	18.5	23.8	38.6	17	20.6	46.1	9	12.4

Note)  $\phi D_1$ ,  $\phi D_2$  are maximum diameters.

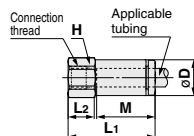


### Female Connector: 10-KQ2F



Applicable tubing O.D. (mm)	Connection thread Rc	Model	H (Width across flats)	Note) $\phi D$	L1	L2	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 3.2$	M3 x 0.5	10-KQ2F23-M3N	7	6.9	17.3	5.7	13.3	2.5	2.5	3.1
	M5 x 0.8	10-KQ2F23-M5N	7	6.9	19.7	5.7	13.3	2.5	2.5	3.3
$\phi 4$	M3 x 0.5	10-KQ2F04-M3N	8	7.9	16.5	5.7	13.3	4	2.5	4.1
	M5 x 0.8	10-KQ2F04-M5N	8	7.9	19.6	5.7	13.3	4	3	4.5
	1/8	10-KQ2F04-01N	14	7.9	24.1	8.5	13.3	4	3	12
	1/4	10-KQ2F04-02N	17	7.9	29	12.9	13.3	4	3	21.5
$\phi 6$	M5 x 0.8	10-KQ2F06-M5N	10	9.9	17.6	5.7	13.3	10	4.1	5.5
	1/8	10-KQ2F06-01N	14	9.9	23.6	8.5	13.3	10.4	4.5	12.2
	1/4	10-KQ2F06-02N	17	9.9	28.5	12.9	13.3	10.4	4.5	21.6
	3/8	10-KQ2F06-03N	19	9.9	29.9	13.4	13.3	10.4	4.5	22.7
$\phi 8$	1/8	10-KQ2F08-01N	14	13	24.1	8.5	14.2	18	6	12.9
	1/4	10-KQ2F08-02N	17	13	29	12.2	14.2	18	6	22.1
$\phi 10$	3/8	10-KQ2F08-03N	19	13	30.4	13.4	14.2	18	6	30.7
	1/4	10-KQ2F10-02N	17	15.6	30	12.9	15.6	29.5	7.5	24.2
$\phi 12$	3/8	10-KQ2F10-03N	19	15.6	31.3	13.3	15.6	29.5	7.5	25.5
	1/4	10-KQ2F12-02N	19	18.2	30.9	12.1	17	46.1	9	32.6
$\phi 16$	3/8	10-KQ2F12-03N	19	18.2	32.3	13.3	17	46.1	9	27.6
	1/2	10-KQ2F12-04N	24	18.2	36.3	15.9	17	46.1	9	46.3
$\phi 16$	3/8	10-KQ2F16-03N	24	23.6	34.7	12.6	20.6	67	13	53.8
	1/2	10-KQ2F16-04N	24	23.6	38.7	15.9	20.6	67	13	51.6

Note)  $\phi D$  is maximum diameter.



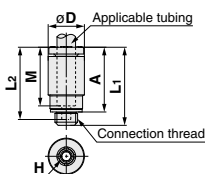
## Dimensions

### Hexagon Socket Head Male Connector: 10-KQ2S (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note) øD	L1	L2	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø3.2	M3 x 0.5	10-KQ2S23-M3G	1.5	7	17.1	16.1	14.5	13.3	1.4	1.5	2.2
	M5 x 0.8	10-KQ2S23-M5N	2	7	17.5	16.3	14.5	13.3	2.5	2	2.6
ø4	M3 x 0.5	10-KQ2S04-M3G	1.5	8	17.1	16.1	14.5	13.3	1.4	1.5	2.3
	M5 x 0.8	10-KQ2S04-M5N	2.5	8	18.6	17.8	15.6	13.3	4	2.5	3
	M6 x 1.0	10-KQ2S04-M6N	3	8	18.5	17.8	14.5	13.3	4	3.1	4.1
ø6	M5 x 0.8	10-KQ2S06-M5N	2.5	10	19.5	17.8	16.5	13.3	4	2.5	3.5
	M6 x 1.0	10-KQ2S06-M6N	3	10	19.1	18.1	15.1	13.3	4	3.1	5.1

Note) øD is maximum diameter.

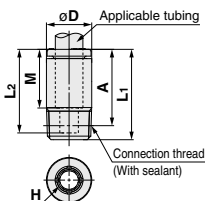


### Hexagon Socket Head Male Connector: 10-KQ2S (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note) øD	L1	L2	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø6	1/8	10-KQ2S06-01NS	4	10	20	18.8	17.2	13.3	9.9	4.1	6.5
	1/4	10-KQ2S06-02NS	4	13.8	19.8	18.8	15.1	13.3	10	4.1	13.4
ø8	1/8	10-KQ2S08-01NS	5	13	22.9	19.7	19.8	14.2	16.2	5.1	10.2
	1/4	10-KQ2S08-02NS	6	14	23.2	19.5	18.5	14.2	16.2	6.1	14.3
	3/8	10-KQ2S08-03NS	6	17	20.7	19.7	15.6	14.2	16.2	6.1	21.1
ø10	1/8	10-KQ2S10-01NS	5	15.6	24.3	21.1	21.2	15.6	16.2	5.1	12
	1/4	10-KQ2S10-02NS	8	15.6	24.6	20.1	19.9	15.6	26.6	8.1	12.4
	3/8	10-KQ2S10-03NS	8	17	25.1	20.1	20	15.6	26.6	8.1	23.2
	1/2	10-KQ2S10-04NS	8	22	21.1	20.1	14.7	15.6	26.6	8.1	37.4
ø12	1/4	10-KQ2S12-02NS	8	18.2	29	21.5	24.3	17	44.5	8.1	21
	3/8	10-KQ2S12-03NS	10	18.2	26.4	21.8	21.3	17	44.5	10.1	21.2
ø16	1/2	10-KQ2S12-04NS	10	22	22.8	21.8	16.4	17	44.5	10.1	30.5
	<sup>New</sup> 1/4	10-KQ2S16-02NS	8	23.6	32.5	25.1	27.8	20.6	46	8.1	25.7
	3/8	10-KQ2S16-03NS	10	23.6	33.5	25.4	28.4	20.6	67	10.1	38.3
	1/2	10-KQ2S16-04NS	12	23.6	33.4	26.1	27	20.6	67	12.1	43.5

\* Reference dimensions after installation of R thread  
Note) øD is maximum diameter.



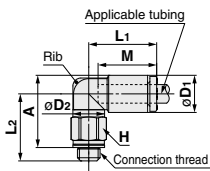
## Dimensions

### Male Elbow: 10-KQ2L (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
$\phi 2$	M3 x 0.5	10-KQ2L02-M3G	5.5	5.8	5.5	12.6	12.5	12.8	11.9	0.8	1.2	1.6	●
	M5 x 0.8	10-KQ2L02-M5N	7	5.8	5.5	12.6	13	12.9	11.9	0.8	1.4	2.7	●
$\phi 3.2$	M3 x 0.5	10-KQ2L23-M3G	7	7.1	7	15.3	13.8	14.8	13.3	0.8	1.2	2.7	●
	M5 x 0.8	10-KQ2L23-M5N	7	7.1	7	15.3	14.3	14.9	13.3	2.2	2.5	3.1	●
$\phi 4$	M3 x 0.5	10-KQ2L04-M3G	7	8.2	7	15.4	14.3	15.8	13.3	0.8	1.2	2.7	●
	M5 x 0.8	10-KQ2L04-M5N	7	8.2	7	15.4	14.8	15.9	13.3	3.5	2.5	3.1	●
	M6 x 1.0	10-KQ2L04-M6N	8	8.2	7	15.4	15.8	15.9	13.3	3.5	2.5	4.2	●
	M5 x 0.8	10-KQ2L06-M5N	7	10.4	7	14.5	16.5	18.7	13.3	3.5	2.5	3.2	●
$\phi 6$	M6 x 1.0	10-KQ2L06-M6N	8	10.4	7	14.5	17.5	18.7	13.3	3.5	2.5	4.3	●

Note)  $\phi D_1$  is maximum diameter.

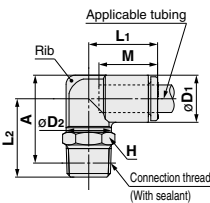


### Male Elbow: 10-KQ2L (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
$\phi 3.2$	1/8	10-KQ2L23-01NS	10	7.1	10	14.5	16.7	17.2	13.3	2.5	2.5	4.6	—
	1/4	10-KQ2L23-02NS	14	7.1	10	14.5	21.2	20.1	13.3	2.5	2.5	14.1	—
$\phi 4$	1/8	10-KQ2L04-01NS	10	8.2	10	14.8	16.2	17.2	13.3	3.3	3	4.8	●
	1/4	10-KQ2L04-02NS	14	8.2	10	14.8	21.7	21.1	13.3	3.3	3	14.3	●
$\phi 6$	1/8	10-KQ2L06-01NS	10	10.4	10	15.5	17.3	19.4	13.3	9	4.5	5.2	—
	1/4	10-KQ2L06-02NS	14	10.4	10	15.5	22.8	23.3	13.3	9	4.5	14.7	—
$\phi 8$	3/8	10-KQ2L06-03NS	17	10.4	10	15.5	24.1	24.2	13.3	9	4.5	26.5	—
	1/8	10-KQ2L08-01NS	10	13.2	10	16.4	18.7	22.2	14.2	11.4	4.5	6.1	●
	Note 2) 1/8	10-KQ2L08-01NQS	12	13.2	12	17.2	23.5	27.0	14.2	14.9	6	9.3	●
	1/4	10-KQ2L08-02NS	14	13.2	12	17.2	25.4	27.3	14.2	14.9	6	17.7	●
$\phi 10$	3/8	10-KQ2L08-03NS	17	13.2	12	17.2	25.5	27.0	14.2	14.9	6	24.7	●
	1/8	10-KQ2L10-01NS	12	15.9	12	18.6	23.6	28.4	15.6	14.9	6	11.1	●
	1/4	10-KQ2L10-02NS	17	15.9	17	19.3	28.7	31.9	15.6	25	7.5	21.7	●
	3/8	10-KQ2L10-03NS	17	15.9	17	19.3	29.6	32.4	15.6	25	7.5	22.2	●
$\phi 12$	1/2	10-KQ2L10-04NS	22	15.9	17	19.3	33.6	35.1	15.6	25	7.5	44.6	●
	1/4	10-KQ2L12-02NS	17	18.5	17	21.5	30.0	34.5	17	39.7	9	23.5	●
$\phi 16$	3/8	10-KQ2L12-03NS	17	18.5	17	21.5	30.9	35.0	17	39.7	9	24.1	●
	1/2	10-KQ2L12-04NS	22	18.5	17	21.5	34.9	37.7	17	39.7	9	46.5	●
	Note 2) 1/4	10-KQ2L16-02NS	17	23.8	17	25.1	32.6	39.8	20.6	50.2	9	27.8	●
	3/8	10-KQ2L16-03NS	22	23.8	21	27.1	35.4	42.2	20.6	58.9	11	40.8	—
$\phi 16$	1/2	10-KQ2L16-04NS	22	23.8	21	27.1	34.1	39.6	20.6	58.9	13	44.5	—

\* Reference dimensions after installation of R thread  
 Note 1)  $\phi D_1$  is maximum diameter.  
 Note 2) Refer to page 1153 for details.



Directional Control Valves  
 Air Cylinders  
 Rotary Actuators  
 Air Grippers  
 Air Preparation Equipment  
 Modular F. R.  
 Pressure Control Equipment  
 Fittings & Tubing  
 Flow Control Equipment  
 Pressure Switches/ Pressure Sensors

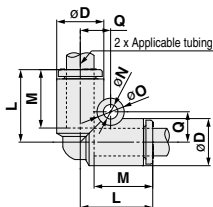
## Dimensions

### Union Elbow: 10-KQ2L



Applicable tubing O.D. (mm)	Model	Note) $\phi D$	L	Q	M	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
						$\phi O$	$\phi N$	Thickness			
$\phi 3.2$	10-KQ2L23-00A	7.1	14.9	5.4	13.3	6	3.2	7.1	2.5	2.5	1.6
$\phi 4$	10-KQ2L04-00A	8.2	15.3	5.7	13.3	6	3.2	8.2	4.2	3	1.9
$\phi 6$	10-KQ2L06-00A	10.4	16.3	6.8	13.3	6	3.2	10.4	9	4.5	2.7
$\phi 8$	10-KQ2L08-00A	13.2	18.2	8.4	14.2	8	4.2	13.2	14.9	6	4.7
$\phi 10$	10-KQ2L10-00A	15.9	20.6	9.6	15.6	8	4.2	15.9	25	7.5	7.1
$\phi 12$	10-KQ2L12-00A	18.5	23	10.7	17	8	4.2	18.5	39.7	9	10.3
$\phi 16$	10-KQ2L16-00A	23.8	28.6	13.4	20.6	8	4.2	23.8	58.9	13	19.7

Note)  $\phi D$  is maximum diameter.

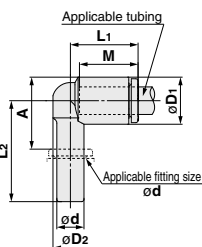


### Plug-in Elbow: 10-KQ2L



Applicable tubing O.D. (mm)	Applicable fitting size $\phi d$	Model	Note) $\phi D1$	$\phi D2$	L1	L2	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 3.2$	$\phi 3.2$	10-KQ2L23-99A	7.1	6.4	14.4	20.9	11.1	13.3	2.5	2.2	0.9
$\phi 4$	$\phi 4$	10-KQ2L04-99A	8.2	7.2	14.5	21.1	11.9	13.3	4.2	2.5	1.2
$\phi 6$	$\phi 6$	10-KQ2L06-99A	10.4	8	15.3	22.3	14.2	13.3	9	4	1.8
$\phi 8$	$\phi 8$	10-KQ2L08-99A	13.2	10	17.2	26.2	18.6	14.2	14.9	6	3
$\phi 10$	$\phi 10$	10-KQ2L10-99A	15.9	12	19.3	28.2	20.5	15.6	25	7.5	4.7
$\phi 12$	$\phi 12$	10-KQ2L12-99A	18.5	14	21.5	31	23.2	17	39.7	9	7
$\phi 16$	$\phi 16$	10-KQ2L16-99A	23.8	20	27.1	36.8	28.1	20.6	58.9	13	13.7

Note)  $\phi D1$  is maximum diameter.

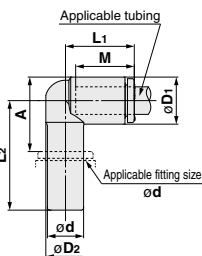


### Reducer Elbow: 10-KQ2L



Applicable tubing O.D. (mm)	Applicable fitting size $\phi d$	Model	Note) $\phi D1$	$\phi D2$	L1	L2	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 3.2$	$\phi 4$	10-KQ2L23-04A	7.1	6.4	14.5	23.9	14.1	13.3	2.5	2.5	1.1
	$\phi 6$	10-KQ2L23-06A	7.1	6.4	14.5	24.1	14.3	13.3	2.5	2.5	1.3
$\phi 4$	$\phi 6$	10-KQ2L04-06A	8.2	7.2	14.8	24.6	15.4	13.3	4.2	3	1.5
	$\phi 8$	10-KQ2L04-08A	8.2	7.2	14.8	29.5	19.4	13.3	4.2	3	1.8
$\phi 6$	$\phi 8$	10-KQ2L06-08A	10.4	9	15.5	24.2	15.2	13.3	9	4.5	2.1
	$\phi 10$	10-KQ2L06-10A	10.4	9	15.5	31.6	21.2	13.3	9	4.5	2.7
$\phi 8$	$\phi 10$	10-KQ2L08-10A	13.2	10	18.8	27.1	18.1	14.2	14.9	6	3.5
	$\phi 12$	10-KQ2L08-12A	13.2	10	18.8	34	23.6	14.2	14.9	6	4.9
$\phi 10$	$\phi 12$	10-KQ2L10-12A	15.9	12	19.3	35.6	26.5	15.6	25	7.5	5.6
$\phi 12$	$\phi 16$	10-KQ2L12-16A	18.5	14	21.5	42.6	31.2	17	39.7	9	8.7

Note)  $\phi D1$  is maximum diameter.

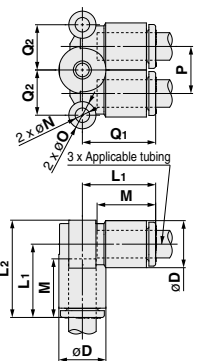


### Branch Union Elbow: 10-KQ2LU



Applicable tubing O.D. (mm)	Model	Note) $\phi D$	L1	L2	Q1	Q2	M	P	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
									$\phi O$	$\phi N$	Thickness			
$\phi 4$	10-KQ2LU04-00A	8.2	15.8	19.9	15.8	7.9	13.3	8.2	6	3.2	8.2	4.1	3	3.1
$\phi 6$	10-KQ2LU06-00A	10.4	16.5	21.7	16.5	10	13.3	10.4	6	3.2	10.4	11	4.5	4.4
$\phi 8$	10-KQ2LU08-00A	13.2	18.2	24.8	18.2	13.1	14.2	13.2	8	4.2	13.2	18.2	6	8
$\phi 10$	10-KQ2LU10-00A	15.9	20.3	28.3	20.3	15.9	15.6	15.9	8	4.2	15.9	29	7.5	12.2
$\phi 12$	10-KQ2LU12-00A	18.5	22.5	31.7	22.5	17.9	17	18.5	8	4.2	18.5	45.2	9	18.1

Note)  $\phi D$  is maximum diameter.





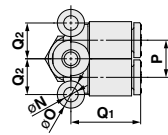
## Dimensions

### Male Branch Connector: 10-KQ2LU (Gasket seal)

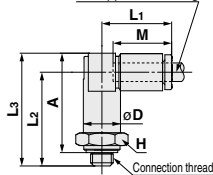


Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats) (mm)	(Note) $\phi D$	L1	L2	L3	A	M	P	Mounting hole		Q1	Q2	Effective area (mm <sup>2</sup> ) (Urethane)	Min. port size	Weight (g)	
											$\phi O$	$\phi N$						Thickness
$\phi 4$	M5 x 0.8	10-KQ2LU04-M5N	10	8.2	15.8	20.7	24.8	21.8	13.3	8.2	6	3.2	8.2	15.8	7.9	4.1	1.8	6.9
	M6 x 1.0	10-KQ2LU04-M6N	10	8.2	15.8	21.7	25.8	21.8	13.3	8.2	6	3.2	8.2	15.8	7.9	4.1	3	6.8
$\phi 6$	M5 x 0.8	10-KQ2LU06-M5N	12	10.4	16.5	21.4	26.6	23.6	13.3	10.4	6	3.2	10.4	16.5	10	4.3	1.8	10.3
	M6 x 1.0	10-KQ2LU06-M6N	12	10.4	16.5	22.4	27.6	23.6	13.3	10.4	6	3.2	10.4	16.5	10	4.3	3	10.3

(Note)  $\phi D$  is maximum diameter.



2 x Applicable tubing

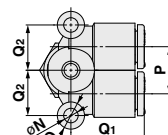


### Male Branch Connector: 10-KQ2LU (Sealant)

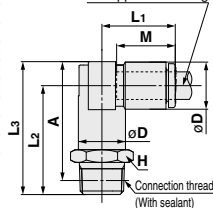


Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats) (mm)	(Note) $\phi D$	L1	L2	L3	A*	M	P	Mounting hole		Q1	Q2	Effective area (mm <sup>2</sup> ) (Urethane)	Min. port size	Weight (g)	
											$\phi O$	$\phi N$						Thickness
$\phi 4$	1/8	10-KQ2LU04-01NS	10	8.2	15.8	23.3	27.4	24.3	13.3	8.2	6	3.2	8.2	15.8	7.9	4.1	3	9.5
	1/4	10-KQ2LU04-02NS	14	8.2	15.8	27.7	31.8	27.1	13.3	8.2	6	3.2	8.2	15.8	7.9	4.1	3	19.3
$\phi 6$	1/8	10-KQ2LU06-01NS	12	10.4	16.5	24	29.2	26.1	13.3	10.4	6	3.2	10.4	16.5	10	11	4.5	10.6
	1/4	10-KQ2LU06-02NS	14	10.4	16.5	28.4	33.6	28.9	13.3	10.4	6	3.2	10.4	16.5	10	11	4.5	19.5
$\phi 8$	3/8	10-KQ2LU06-03NS	17	10.4	16.5	29.8	35	29.9	13.3	10.4	6	3.2	10.4	16.5	10	11	4.5	31.5
	1/2	10-KQ2LU08-01NS	14	13.2	18.2	25.7	32.3	29.2	14.2	13.2	8	4.2	13.2	18.2	13.1	18.2	6	16.4
$\phi 10$	3/8	10-KQ2LU08-02NS	14	13.2	18.2	30.1	36.7	32	14.2	13.2	8	4.2	13.2	18.2	13.1	18.2	6	21.5
	1/2	10-KQ2LU08-03NS	17	13.2	18.2	31.5	38	33	14.2	13.2	8	4.2	13.2	18.2	13.1	18.2	6	33.3
$\phi 12$	1/4	10-KQ2LU10-02NS	17	15.9	20.3	32	40.2	35.5	15.6	15.9	8	4.2	15.9	20.3	15.9	29	7.5	26.6
	3/8	10-KQ2LU10-03NS	17	15.9	20.3	33.6	41.6	36.5	15.6	15.9	8	4.2	15.9	20.3	15.9	29	7.5	34.4
$\phi 16$	1/2	10-KQ2LU10-04NS	22	15.9	20.3	37.6	45.8	39.4	15.6	15.9	8	4.2	15.9	20.3	15.9	29	7.5	62.3
	3/4	10-KQ2LU12-02NS	19	18.5	22.5	34.4	43.6	38.9	17	18.5	8	4.2	18.5	22.5	17.9	45.2	9	37.7
$\phi 20$	3/8	10-KQ2LU12-03NS	19	18.5	22.5	35.8	45	39.9	17	18.5	8	4.2	18.5	22.5	17.9	45.2	9	40.6
	1/2	10-KQ2LU12-04NS	22	18.5	22.5	40	49.2	42.8	17	18.5	8	4.2	18.5	22.5	17.9	45.2	9	62.7

\* Reference dimensions after installation of R thread  
(Note)  $\phi D$  is maximum diameter.



2 x Applicable tubing



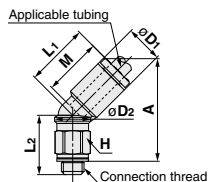
## Dimensions

### 45° Male Elbow: 10-KQ2K (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	M5 x 0.8	10-KQ2K04-M5N	7	8.2	7	14.4	13.1	22.8	13.3	3.4	2.5	3
	M6 x 1.0	10-KQ2K04-M6N	8	8.2	7	14.4	14.1	22.8	13.3	3.4	2.5	4.1
$\phi 6$	M5 x 0.8	10-KQ2K06-M5N	7	10.4	7	14.4	17	27.4	13.3	3.4	2.5	3.5
	M6 x 1.0	10-KQ2K06-M6N	8	10.4	7	14.4	18	27.4	13.3	3.4	2.5	4.5

Note)  $\phi D_1$  is maximum diameter.

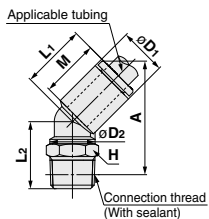


### 45° Male Elbow: 10-KQ2K (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2K04-01NS	10	8.2	10	14.4	12.7	22.3	13.3	3.4	3	4.6
	1/4	10-KQ2K04-02NS	14	8.2	10	14.4	17.2	25.2	13.3	3.4	3	14.1
$\phi 6$	1/8	10-KQ2K06-01NS	10	10.4	10	14.7	14.8	25.3	13.3	6.9	4.5	5
	1/4	10-KQ2K06-02NS	14	10.4	10	14.7	19.3	28.2	13.3	6.9	4.5	14.5
$\phi 8$	3/8	10-KQ2K06-03NS	17	10.4	10	14.7	20.6	29.1	13.3	6.9	4.5	26.2
	1/2	10-KQ2K08-01NS	10	13.2	10	16	15.7	28	14.2	8.7	4.5	6
$\phi 10$	1/8	10-KQ2K08-02NS	12	13.2	12	16	20.5	32.8	14.2	19.7	6	9.1
	1/4	10-KQ2K08-02NS	14	13.2	12	16	22.4	33.1	14.2	19.7	6	17.5
	3/8	10-KQ2K08-03NS	17	13.2	12	16	22.5	32.8	14.2	19.7	6	24.5
$\phi 12$	1/8	10-KQ2K10-01NS	12	15.9	12	18.2	21.5	36.2	15.6	23.2	6	11.1
	1/4	10-KQ2K10-02NS	17	15.9	17	17.6	29.1	41.8	15.6	23.2	7.5	21.8
	3/8	10-KQ2K10-03NS	17	15.9	17	17.6	24.3	36.6	15.6	23.2	7.5	21.7
	1/2	10-KQ2K10-04NS	22	15.9	17	17.6	28.3	39.3	15.6	23.2	7.5	44.1
$\phi 16$	1/4	10-KQ2K12-02NS	17	18.5	17	19.4	29	43.8	17	35.1	9	23.3
	3/8	10-KQ2K12-03NS	17	18.5	17	19.4	24.2	38.6	17	35.1	9	23.2
	1/2	10-KQ2K12-04NS	22	18.5	17	19.4	28.2	41.3	17	35.1	9	45.7
$\phi 16$	1/4	10-KQ2K16-02NS	17	23.8	17	24.3	29.6	49.2	20.6	44.5	9	27.7
	3/8	10-KQ2K16-03NS	22	23.8	21	23.8	31.4	50.2	20.6	58	11	39.2
	1/2	10-KQ2K16-04NS	22	23.8	21	23.8	30.1	47.6	20.6	58	13	42.9

\* Reference dimensions after installation of R thread  
 Note 1)  $\phi D_1$  is maximum diameter.  
 Note 2) Refer to page 1153 for details.



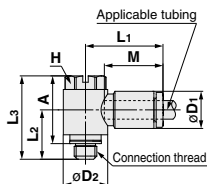
## Dimensions

### Universal Male Elbow: 10-KQ2V (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	M5 x 0.8	10-KQ2V04-M5N	8	8.2	9.8	17.5	10.9	18.4	14.9	13.3	2.9	2.5	5.4
$\phi 6$	M5 x 0.8	10-KQ2V06-M5N	8	10.4	9.8	18.3	10.9	18.4	15.4	13.3	3.8	2.5	5.7

(Note)  $\phi D_1$  is maximum diameter.

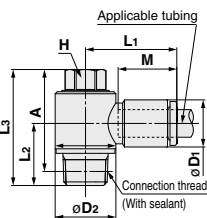


### Universal Male Elbow: 10-KQ2V (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2V04-01NS	8	8.2	13.4	19.3	13.7	25.6	22.5	13.3	2.9	3	13.2
$\phi 6$	1/8	10-KQ2V06-01NS	8	10.4	13.4	20.5	13.7	25.6	22.5	13.3	5.9	4.5	13.5
	1/4	10-KQ2V06-02NS	10	10.4	15.3	19.9	17.9	30.5	25.8	13.3	5.9	4.5	24.9
$\phi 8$	1/8	10-KQ2V08-01NS	12	13.2	17.6	23.5	15.1	27.6	24.5	14.2	11.2	6	22.6
	1/4	10-KQ2V08-02NS	12	13.2	17.6	23.5	18.5	31	26.3	14.2	11.2	6	29.1
	3/8	10-KQ2V08-03NS	14	13.2	20.6	23.1	19.5	35.3	30.2	14.2	11.2	6	44.4
$\phi 10$	1/4	10-KQ2V10-02NS	14	15.9	20.6	25.9	19.9	34.9	30.2	15.6	20.3	7.5	38.1
	3/8	10-KQ2V10-03NS	14	15.9	20.6	25.9	20.3	35.3	30.2	15.6	20.3	7.5	45.7
$\phi 12$	3/8	10-KQ2V12-03NS	17	18.5	25.2	28.5	21.4	37.6	32.5	17	30.8	9	59.6
	1/2	10-KQ2V12-04NS	17	18.5	25.2	28.5	24.6	40.8	34.4	17	30.8	9	78.2
$\phi 16$	3/8	10-KQ2V16-03NS	21	23.8	32.3	34.2	25.1	45.4	40.3	20.6	46	11	99.5
	1/2	10-KQ2V16-04NS	21	23.8	32.3	34.2	28.3	48.6	42.2	20.6	46	13	107.9

\* Reference dimensions after installation of R thread  
(Note)  $\phi D_1$  is maximum diameter.

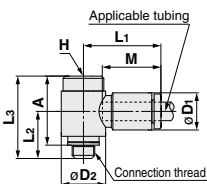


### Hexagon Socket Head Universal Male Elbow: 10-KQ2VS (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	M5 x 0.8	10-KQ2VS04-M5N	4	8.2	9.8	17.5	10.4	18.2	15.2	13.3	2.9	2.5	5.3
$\phi 6$	M5 x 0.8	10-KQ2VS06-M5N	4	10.4	9.8	18.3	10.4	18.2	15.2	13.3	3.8	2.5	5.6

(Note)  $\phi D_1$  is maximum diameter.

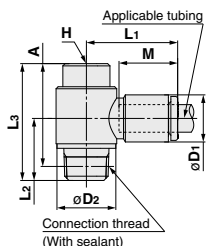


### Hexagon Socket Head Universal Male Elbow: 10-KQ2VS (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2VS04-01NS	6	8.2	13.4	19.3	13.7	25.6	22.7	13.3	2.9	3	13.2
$\phi 6$	1/8	10-KQ2VS06-01NS	6	10.4	13.4	20.5	13.7	25.8	22.7	13.3	5.9	4.5	13.5
	1/4	10-KQ2VS06-02NS	6	10.4	15.3	19.9	17.9	26.5	21.8	13.3	5.9	4.5	20.8
	1/8	10-KQ2VS08-01NS	8	13.2	17.6	23.5	15.1	26	22.9	14.2	11.2	6	19.2
$\phi 8$	1/4	10-KQ2VS08-02NS	8	13.2	17.6	23.5	18.5	29.5	24.8	14.2	11.2	6	25.7
	3/8	10-KQ2VS08-03NS	8	13.2	20.6	23.1	19.5	31.4	26.3	14.2	11.2	6	37
$\phi 10$	1/4	10-KQ2VS10-02NS	8	15.9	20.6	25.9	19.7	30.8	26.1	15.6	20.3	7.5	30.4
	3/8	10-KQ2VS10-03NS	8	15.9	20.6	25.9	20.3	31.4	26.3	15.6	20.3	7.5	38.3
$\phi 12$	3/8	10-KQ2VS12-03NS	10	18.5	25.2	28.5	21.4	35.1	30	17	30.8	9	51.4
	1/2	10-KQ2VS12-04NS	10	18.5	25.2	28.5	24.6	38.3	31.9	17	30.8	9	70

\* Reference dimensions after installation of R thread  
(Note)  $\phi D_1$  is maximum diameter.



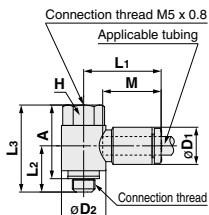
## Dimensions

### Universal Female Elbow: 10-KQ2VF (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	M5 x 0.8	10-KQ2VF04-M5N	8	8.2	9.8	17.5	10.2	19.2	16.2	13.3	2.9	2.5	5.5
$\phi 6$	M5 x 0.8	10-KQ2VF06-M5N	8	10.4	9.8	18.3	10.2	19.2	16.2	13.3	3.8	2.5	5.8

Note)  $\phi D_1$  is maximum diameter.

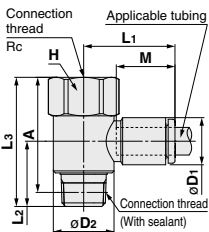


### Universal Female Elbow: 10-KQ2VF (Sealant)



Applicable tubing O.D. (mm)	Connection thread R, Rc	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2VF04-01NS	14	8.2	13.4	19.3	14.4	28.5	25.4	13.3	2.9	3	17.3
	1/8	10-KQ2VF06-01NS	14	10.4	13.4	20.5	14.4	28.5	25.4	13.3	5.9	4.5	17.6
$\phi 6$	1/4	10-KQ2VF06-02NS	17	10.4	17.6	21.2	19.4	37.9	33.2	13.3	5.9	4.5	37
	1/8	10-KQ2VF08-01NS	17	13.2	17.6	23.5	15.5	30	26.9	14.2	11.2	6	27.5
$\phi 8$	1/4	10-KQ2VF08-02NS	17	13.2	17.6	23.5	18.9	37.9	33.2	14.2	11.2	6	38.1
	3/8	10-KQ2VF08-03NS	22	13.2	25.2	24.9	24	44	38.9	14.2	11.2	6	64.5
$\phi 10$	1/4	10-KQ2VF10-02NS	19	15.9	20.6	25.9	20.4	40.3	35.6	15.6	20.3	7.5	46.4
	3/8	10-KQ2VF10-03NS	22	15.9	25.2	26.3	23.2	44	38.9	15.6	20.3	7.5	65.3
$\phi 12$	3/8	10-KQ2VF12-03NS	22	18.5	25.2	28.5	22.5	44	38.9	17	30.8	9	67.2
	1/2	10-KQ2VF12-04NS	24	18.5	27	29.9	24.4	48.9	42.5	17	30.8	9	95.6

\* Reference dimensions after installation of R thread  
Note)  $\phi D_1$  is maximum diameter.



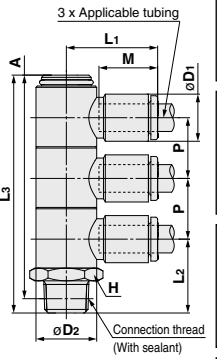
**Dimensions**

**Triple Universal Male Elbow: 10-KQ2VT (Sealant)**



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note	øD1	øD2	L1	L2	L3	A*	M	P	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQ2VT04-01NS	14	8.2	13.4	19.3	16.3	52.5	49.4	13.3	13.4	2.9	3	25.3	
	1/4	10-KQ2VT04-02NS	14	8.2	13.4	19.3	20.7	56.9	52.2	13.3	13.4	2.9	3	32.9	
	3/8	10-KQ2VT04-03NS	17	8.2	13.4	19.3	22.1	58.3	53.2	13.3	13.4	2.9	3	44.8	
ø6	1/8	10-KQ2VT06-01NS	14	10.4	13.4	20.5	16.3	52.5	49.4	13.3	13.4	5.9	4.5	26.2	
	1/4	10-KQ2VT06-02NS	14	10.4	13.4	20.5	20.7	56.9	52.2	13.3	13.4	5.9	4.5	33.9	
	3/8	10-KQ2VT06-03NS	17	10.4	13.4	20.5	22.1	58.3	53.2	13.3	13.4	5.9	4.5	45.8	
ø8	1/8	10-KQ2VT08-01NS	19	13.2	17.6	23.7	19	61.8	58.7	14.2	15.9	11.2	6	58.6	
	1/4	10-KQ2VT08-02NS	19	13.2	17.6	23.7	22.4	65.2	60.5	14.2	15.9	11.2	6	58.8	
	3/8	10-KQ2VT08-03NS	19	13.2	17.6	23.7	23	65.8	60.7	14.2	15.9	11.2	6	64.9	
ø10	1/2	10-KQ2VT10-02NS	22	13.2	17.6	23.7	27.2	70	63.6	14.2	15.9	11.2	6	91.5	
	1/4	10-KQ2VT10-03NS	21	15.9	20.6	25.7	24.3	75.5	70.8	15.6	19.2	20.3	7.5	82	
	3/8	10-KQ2VT10-04NS	21	15.9	20.6	25.7	24.7	75.9	70.8	15.6	19.2	20.3	7.5	81.9	
ø12	1/2	10-KQ2VT12-04NS	26	18.5	25.2	28.9	26.5	84.1	79.4	17	21.6	30.8	9	139.3	
	3/8	10-KQ2VT12-03NS	26	18.5	25.2	28.9	26.9	84.5	79.4	17	21.6	30.8	9	129.7	
	1/2	10-KQ2VT12-04NS	26	18.5	25.2	28.9	30.1	87.7	81.3	17	21.6	30.8	9	142.2	

\* Reference dimensions after installation of R thread Note) øD1 is maximum diameter.



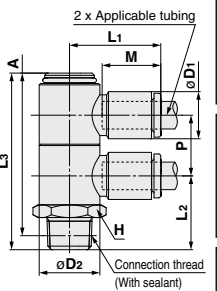
Directional Control Valves  
Air Cylinders  
Rotary Actuators

**Double Universal Male Elbow: 10-KQ2VD (Sealant)**



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note	øD1	øD2	L1	L2	L3	A*	M	P	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQ2VD04-01NS	14	8.2	13.4	19.3	16.3	39	35.9	13.3	13.4	2.9	3	19.7	
	1/4	10-KQ2VD04-02NS	14	8.2	13.4	19.3	20.7	43.4	38.7	13.3	13.4	2.9	3	27.4	
	3/8	10-KQ2VD04-03NS	17	8.2	13.4	19.3	22.1	44.8	39.7	13.3	13.4	2.9	3	39.3	
ø6	1/8	10-KQ2VD06-01NS	14	10.4	13.4	20.5	16.3	39	35.9	13.3	13.4	5.9	4.5	20.3	
	1/4	10-KQ2VD06-02NS	14	10.4	13.4	20.5	20.7	43.4	38.7	13.3	13.4	5.9	4.5	28	
	3/8	10-KQ2VD06-03NS	17	10.4	13.4	20.5	22.1	44.8	39.7	13.3	13.4	5.9	4.5	39.9	
ø8	1/8	10-KQ2VD08-01NS	19	13.2	17.6	23.7	19	45.8	42.7	14.2	15.9	11.2	6	45.1	
	1/4	10-KQ2VD08-02NS	19	13.2	17.6	23.7	22.4	49.2	44.5	14.2	15.9	11.2	6	44.3	
	3/8	10-KQ2VD08-03NS	19	13.2	17.6	23.7	23	49.8	44.7	14.2	15.9	11.2	6	52.3	
ø10	1/2	10-KQ2VD10-04NS	22	13.2	17.6	23.7	27.2	54	47.6	14.2	15.9	11.2	6	78.4	
	1/4	10-KQ2VD10-02NS	21	15.9	20.6	25.7	24.3	56.2	51.5	15.6	19.2	20.3	7.5	63.1	
	3/8	10-KQ2VD10-03NS	21	15.9	20.6	25.7	24.7	56.6	51.5	15.6	19.2	20.3	7.5	65.1	
ø12	1/2	10-KQ2VD12-04NS	26	18.5	25.2	28.9	28.7	60	53.6	15.6	19.2	20.3	7.5	87	
	1/4	10-KQ2VD12-02NS	26	18.5	25.2	28.9	26.5	62.4	57.7	17	21.6	30.8	9	107	
	3/8	10-KQ2VD12-03NS	26	18.5	25.2	28.9	26.9	62.8	57.7	17	21.6	30.8	9	102.1	
1/2	10-KQ2VD12-04NS	26	18.5	25.2	28.9	30.1	66	59.6	17	21.6	30.8	9	116.1		

\* Reference dimensions after installation of R thread Note) øD1 is maximum diameter.



Air Grippers  
Air Preparation Equipment  
Modular F. R.  
Pressure Control Equipment

Fittings & Tubing  
Flow Control Equipment  
Pressure Switches/ Pressure Sensors

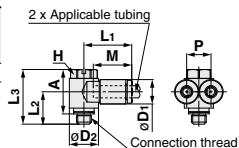
## Dimensions

### Branch Universal Male Elbow: 10-KQ2Z (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L1	L2	L3	A	M	P	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	M5 x 0.8	10-KQ2Z04-M5N	8	8.2	9.8	16.5	11.4	18.4	14.9	13.3	8.2	3.4	2.5	6.2

Note)  $\phi D_1$  is maximum diameter.

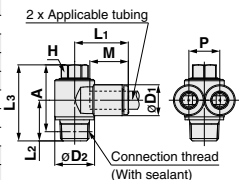


### Branch Universal Male Elbow: 10-KQ2Z (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L1	L2	L3	A*	M	P	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2Z04-01NS	8	8.2	13.4	18.5	13.7	25.6	22.5	13.3	8.2	4.7	3	14
	1/8	10-KQ2Z06-01NS	8	10.4	13.4	18.4	13.7	25.6	22.5	13.3	10.4	8.6	4.5	14.6
$\phi 6$	1/4	10-KQ2Z06-02NS	14	10.4	20.6	21.5	19.1	34.9	30.2	13.3	10.4	8.6	4.5	37
	3/8	10-KQ2Z06-03NS	14	10.4	20.6	21.5	19.5	35.3	30.2	13.3	10.4	8.6	4.5	44.6
$\phi 8$	1/8	10-KQ2Z08-01NS	12	13.2	17.6	21.2	15.1	27.6	24.5	14.2	13.2	14.2	6	24.3
	1/4	10-KQ2Z08-02NS	12	13.2	17.6	21.2	18.5	31	26.3	14.2	13.2	14.2	6	30.8
$\phi 8$	3/8	10-KQ2Z08-03NS	14	13.2	20.6	22.3	19.5	35.3	30.2	14.2	13.2	14.2	6	46.3
	1/4	10-KQ2Z10-02NS	14	15.9	21.6	23.6	19.9	34.9	30.2	15.6	15.9	22.6	7.5	41.7
$\phi 10$	3/8	10-KQ2Z10-03NS	14	15.9	21.6	23.6	20.3	35.3	30.2	15.6	15.9	22.6	7.5	49.3
	1/2	10-KQ2Z12-04NS	17	18.5	24.1	26.9	21.2	37.6	32.5	17	18.5	35.3	9	63.4
$\phi 12$	3/8	10-KQ2Z12-03NS	17	18.5	24.1	26.9	21.2	37.6	32.5	17	18.5	35.3	9	63.4
	1/2	10-KQ2Z12-04NS	17	18.5	24.1	26.9	24.4	40.8	34.4	17	18.5	35.3	9	82

\* Reference dimensions after installation of R thread  
Note)  $\phi D_1$  is maximum diameter.

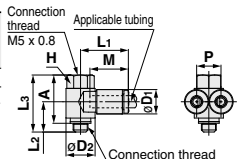


### Branch Universal Female Elbow: 10-KQ2ZF (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L1	L2	L3	A	M	P	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	M5 x 0.8	10-KQ2ZF04-M5N	8	8.2	9.8	16.5	10.2	19.2	16.2	13.3	8.2	3.4	2.5	6.3

Note)  $\phi D_1$  is maximum diameter.

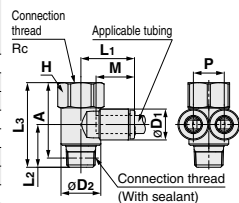


### Branch Universal Female Elbow: 10-KQ2ZF (Sealant)



Applicable tubing O.D. (mm)	Connection thread R, Rc	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L1	L2	L3	A*	M	P	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2ZF04-01NS	14	8.2	13.4	18.5	14.4	28.5	25.4	13.3	8.2	4.7	3	18.1
	1/8	10-KQ2ZF06-01NS	14	10.4	13.4	18.4	14.4	28.5	25.4	13.3	10.4	8.6	4.5	18.7
$\phi 6$	1/4	10-KQ2ZF06-02NS	19	10.4	20.6	21.5	21.2	40.3	35.6	13.3	10.4	8.6	4.5	45.3
	3/8	10-KQ2ZF06-03NS	19	10.4	20.6	21.5	21.2	40.3	35.6	13.3	10.4	8.6	4.5	45.3
$\phi 8$	1/8	10-KQ2ZF08-01NS	17	13.2	17.6	21.2	15.5	30	26.9	14.2	13.2	14.2	6	29.3
	1/4	10-KQ2ZF08-02NS	19	13.2	20.6	22.3	21.2	40.3	35.6	14.2	13.2	14.2	6	47
$\phi 10$	1/4	10-KQ2ZF10-02NS	19	15.9	21.6	23.6	20.4	40.3	35.6	15.6	15.9	22.6	7.5	49.9
	3/8	10-KQ2ZF10-03NS	22	15.9	25.2	25.5	23.2	44	38.9	15.6	15.9	22.6	7.5	68.4
$\phi 12$	3/8	10-KQ2ZF12-03NS	22	18.5	24.1	26.9	22.7	44	38.9	17	18.5	35.3	9	71
	1/2	10-KQ2ZF12-04NS	24	18.5	27	29.9	24.4	48.9	42.5	17	18.5	35.3	9	100.5

\* Reference dimensions after installation of R thread  
Note)  $\phi D_1$  is maximum diameter.



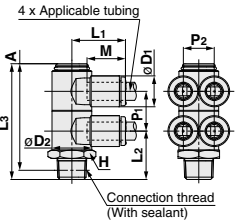
**Dimensions**

**Double Branch Universal Male Elbow: 10-KQZ2D (Sealant)**



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A*	M	P <sub>1</sub>	P <sub>2</sub>	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQZ2D04-01NS	14	8.2	13.4	18.5	16.3	39	35.9	13.3	13.4	8.2	4.7	3	21.3
	1/4	10-KQZ2D04-02NS	14	8.2	13.4	18.5	20.7	43.4	38.7	13.3	13.4	8.2	4.7	3	29
ø6	3/8	10-KQZ2D06-03NS	17	8.2	13.4	18.5	22.1	44.8	39.7	13.3	13.4	8.2	4.7	3	40.9
	1/8	10-KQZ2D06-01NS	14	10.4	13.4	18.4	16.3	39	35.9	13.3	13.4	10.4	8.6	4.5	22.5
ø8	1/4	10-KQZ2D08-02NS	14	10.4	13.4	18.4	20.7	43.4	38.7	13.3	13.4	10.4	8.6	4.5	30.2
	3/8	10-KQZ2D08-03NS	17	10.4	13.4	18.4	22.1	44.8	39.7	13.3	13.4	10.4	8.6	4.5	42.1
ø10	1/8	10-KQZ2D10-01NS	19	13.2	17.6	21.2	19	45.8	42.7	14.2	15.9	13.2	14.2	6	48.7
	1/4	10-KQZ2D10-02NS	19	13.2	17.6	21.2	22.4	49.2	44.5	14.2	15.9	13.2	14.2	6	48
ø12	3/8	10-KQZ2D12-03NS	19	13.2	17.6	21.2	23	49.8	44.7	14.2	15.9	13.2	14.2	6	55.9
	1/2	10-KQZ2D12-04NS	22	13.2	17.6	21.2	27.2	54	47.6	14.2	15.9	13.2	14.2	6	82.1
ø10	1/4	10-KQZ2D10-02NS	21	15.9	20.6	23.6	24.3	56.2	51.5	15.6	19.2	15.9	21.6	7.5	69
	3/8	10-KQZ2D10-03NS	21	15.9	20.6	23.6	24.7	56.6	51.5	15.6	19.2	15.9	21.6	7.5	71
ø12	1/2	10-KQZ2D10-04NS	22	15.9	20.6	23.6	28.7	60	53.6	15.6	19.2	15.9	21.6	7.5	92.9
	1/4	10-KQZ2D12-02NS	26	18.5	25.2	26.8	26.5	62.4	57.7	17	21.6	18.5	35.3	9	115.6
ø12	3/8	10-KQZ2D12-03NS	26	18.5	25.2	26.8	26.9	62.8	57.7	17	21.6	18.5	35.3	9	110.7
	1/2	10-KQZ2D12-04NS	26	18.5	25.2	26.8	30.1	66	59.6	17	21.6	18.5	35.3	9	124.7

\* Reference dimensions after installation of R thread  
Note)  $\phi D_1$  is maximum diameter.

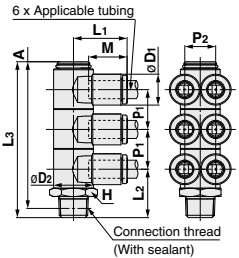


**Triple Branch Universal Male Elbow: 10-KQZ2T (Sealant)**



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A*	M	P <sub>1</sub>	P <sub>2</sub>	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQZ2T04-01NS	14	8.2	13.4	18.5	16.3	52.5	49.4	13.3	13.4	8.2	4.7	3	27.7
	1/4	10-KQZ2T04-02NS	14	8.2	13.4	18.5	20.7	56.9	52.2	13.3	13.4	8.2	4.7	3	35.3
ø6	3/8	10-KQZ2T06-03NS	17	8.2	13.4	18.5	22.1	58.3	53.2	13.3	13.4	8.2	4.7	3	47.2
	1/8	10-KQZ2T06-01NS	14	10.4	13.4	18.4	16.3	52.5	49.4	13.3	13.4	10.4	8.6	4.5	29.5
ø8	1/4	10-KQZ2T08-02NS	14	10.4	13.4	18.4	20.7	56.9	52.2	13.3	13.4	10.4	8.6	4.5	37.2
	3/8	10-KQZ2T08-03NS	17	10.4	13.4	18.4	22.1	58.3	53.2	13.3	13.4	10.4	8.6	4.5	49.1
ø10	1/8	10-KQZ2T10-01NS	19	13.2	17.6	21.2	19	61.8	58.7	14.2	15.9	13.2	14.2	6	65.1
	1/4	10-KQZ2T10-02NS	19	13.2	17.6	21.2	22.4	65.2	60.5	14.2	15.9	13.2	14.2	6	62.3
ø12	3/8	10-KQZ2T12-03NS	19	13.2	17.6	21.2	23	65.8	60.7	14.2	15.9	13.2	14.2	6	70.4
	1/2	10-KQZ2T12-04NS	22	13.2	17.6	21.2	27.2	70	63.6	14.2	15.9	13.2	14.2	6	97
ø10	1/4	10-KQZ2T10-02NS	21	15.9	20.6	23.6	24.3	75.5	70.8	15.6	19.2	15.9	21.6	7.5	90.9
	3/8	10-KQZ2T10-03NS	21	15.9	20.6	23.6	24.7	75.9	70.8	15.6	19.2	15.9	21.6	7.5	90.7
ø12	1/2	10-KQZ2T10-04NS	22	15.9	20.6	23.6	28.7	79.9	73.5	15.6	19.2	15.9	21.6	7.5	112.7
	1/4	10-KQZ2T12-02NS	26	18.5	25.2	26.8	26.5	84.1	79.4	17	21.6	18.5	35.3	9	152.2
ø12	3/8	10-KQZ2T12-03NS	26	18.5	25.2	26.8	26.9	84.5	79.4	17	21.6	18.5	35.3	9	142.6
	1/2	10-KQZ2T12-04NS	26	18.5	25.2	26.8	30.1	87.7	81.3	17	21.6	18.5	35.3	9	155.1

\* Reference dimensions after installation of R thread  
Note)  $\phi D_1$  is maximum diameter.



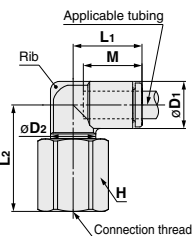
Directional Control Valves  
Air Cylinders  
Rotary Actuators  
Air Grippers  
Air Preparation Equipment  
Modular F. R.  
Pressure Control Equipment  
Pressure Switches/ Pressure Sensors  
Flow Control Equipment  
Fittings & Tubing

## Dimensions

### Female Elbow: 10-KQ2LF



Applicable tubing O.D. (mm)	Connection thread M, Rc	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
ø4	M5 x 0.8	10-KQ2LF04-M5N	8	8.2	7	15.4	15.3	13.3	3.5	2.5	4.7	●
	M6 x 1.0	10-KQ2LF04-M6N	8	8.2	7	15.4	16.1	13.3	3.5	2.5	4.6	●
	1/8	10-KQ2LF04-01N	14	8.2	10	14.8	22.4	13.3	4.2	3	17.6	●
ø6	1/4	10-KQ2LF04-02N	17	8.2	10	14.8	26.9	13.3	4.2	3	29.6	●
	M5 x 0.8	10-KQ2LF06-M5N	8	10.4	7	14.5	17	13.3	3.5	2.5	4.8	●
	M6 x 1.0	10-KQ2LF06-M6N	8	10.4	7	14.5	17.8	13.3	3.5	2.5	4.7	●
ø8	1/8	10-KQ2LF06-01N	14	10.4	10	15.5	23.5	13.3	9	4.5	18	—
	1/4	10-KQ2LF06-02N	17	10.4	10	15.5	28	13.3	9	4.5	30.1	—
	3/8	10-KQ2LF06-03N	19	10.4	10	15.5	28.5	13.3	9	4.5	34	—
ø10	1/8	10-KQ2LF08-01N	14	13.2	10	16.4	24.9	14.2	11.4	4.5	18.8	●
	1/4	10-KQ2LF08-02N	17	13.2	12	17.2	23	14.2	14.9	6	14.6	●
	3/8	10-KQ2LF08-03N	19	13.2	12	17.2	28.8	14.2	14.9	6	28.7	●
ø12	1/4	10-KQ2LF10-02N	17	15.9	17	19.3	27.4	15.6	14.9	7.5	26.4	●
	3/8	10-KQ2LF10-03N	19	15.9	17	19.3	33.5	15.6	25	7.5	31	●
	1/2	10-KQ2LF10-04N	24	15.9	17	19.3	36.5	15.6	25	7.5	57.6	●
ø12	1/4	10-KQ2LF12-02N	17	18.5	17	21.5	28.7	17	39.7	9	28.2	●
	3/8	10-KQ2LF12-03N	19	18.5	17	21.5	34.8	17	39.7	9	32.9	●
	1/2	10-KQ2LF12-04N	24	18.5	17	21.5	37.8	17	39.7	9	59.5	●



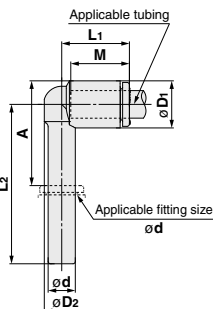
Note 1)  $\phi D_1$  is maximum diameter.  
Note 2) Refer to page 1153 for details.

### Extended Plug-in Elbow: 10-KQ2W



Applicable tubing O.D. (mm)	Applicable fitting size $\phi d$	Model	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø3.2	ø3.2	10-KQ2W23-99A	7.1	6.4	14.4	30.5	20.8	13.3	2.5	2.5	1
ø4	ø4	10-KQ2W04-99A	8.2	7.2	14.5	31.8	22.6	13.3	4.2	3	1.3
ø6	ø6	10-KQ2W06-99A	10.4	8	15.3	35.2	27.1	13.3	9	4	2
ø8	ø8	10-KQ2W08-99A	13.2	10	17.2	41.9	34.3	14.2	14.9	6	3.5
ø10	ø10	10-KQ2W10-99A	15.9	12	19.3	46.6	38.9	15.6	25	7.5	5.5
ø12	ø12	10-KQ2W12-99A	18.5	14	21.5	52	44.2	17	39.7	9	8.4

Note)  $\phi D_1$  is maximum diameter.





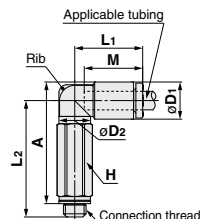
## Dimensions

### Extended Male Elbow: 10-KQ2W (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
$\phi 2$	M3 x 0.5	10-KQ2W02-M3G	5.5	5.8	5.5	12.6	18.8	19.1	11.9	0.8	1.2	2.6	●
	M5 x 0.8	10-KQ2W02-M5N	7	5.8	5.5	12.6	19.3	19.2	11.9	0.8	1.2	4.6	●
$\phi 3.2$	M3 x 0.5	10-KQ2W23-M3G	7	7.1	7	15.3	22.5	23.4	13.3	0.8	1.2	4.8	●
	M5 x 0.8	10-KQ2W23-M5N	7	7.1	7	15.3	25.2	25.7	13.3	2.4	2.5	5.8	●
$\phi 4$	M3 x 0.5	10-KQ2W04-M3G	7	8.2	7	15.4	23	24.5	13.3	0.8	1.2	4.9	●
	M5 x 0.8	10-KQ2W04-M5N	7	8.2	7	15.4	25.7	26.8	13.3	3	2.5	5.8	●
$\phi 6$	M5 x 0.8	10-KQ2W06-M5N	7	10.4	7	14.5	27.4	29.6	13.3	3	2.5	5.9	●

(Note)  $\phi D_1$  is maximum diameter.



### Extended Male Elbow: 10-KQ2W (Sealant)

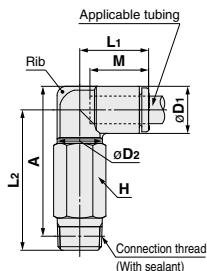


Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A <sup>Note 2)</sup>	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
$\phi 3.2$	1/8	10-KQ2W23-01NS	10	7.1	10	14.5	30.3	30.8	13.3	2.4	2.5	10.8	—
	1/4	10-KQ2W23-02NS	14	7.1	10	14.5	32.8	31.7	13.3	2.4	2.5	27.3	—
$\phi 4$	1/8	10-KQ2W04-01NS	10	8.2	10	14.8	29.9	30.9	13.3	4	3	11	●
	1/4	10-KQ2W04-02NS	14	8.2	10	14.8	33.3	32.7	13.3	4	3	27.5	●
$\phi 6$	1/8	10-KQ2W06-01NS	10	10.4	10	15.5	31	33.1	13.3	8.6	4.5	11.4	—
	1/4	10-KQ2W06-02NS	14	10.4	10	15.5	34.4	34.9	13.3	8.6	4.5	28	—
$\phi 8$	3/8	10-KQ2W06-03NS	17	10.4	10	15.5	35.7	35.8	13.3	8.6	4.5	47.4	—
	1/2	10-KQ2W08-01NS	10	13.2	10	16.4	32.4	35.9	14.2	10.9	4.5	12.2	●
$\phi 8$	1/8	10-KQ2W08-01NS <sup>Note 2)</sup>	12	13.2	12	17.2	42.4	45.9	14.2	14.2	6	23.7	●
	1/4	10-KQ2W08-02NS	14	13.2	12	17.2	39.1	41	14.2	14.2	6	40	●
	3/8	10-KQ2W08-03NS	17	13.2	12	17.2	39.2	40.7	14.2	14.2	6	47	●
$\phi 10$	1/4	10-KQ2W10-02NS	17	15.9	17	19.3	52.9	56.2	15.6	23.8	7.5	59	●
	3/8	10-KQ2W10-03NS	17	15.9	17	19.3	48.5	51.4	15.6	23.8	7.5	51.3	●
$\phi 12$	1/2	10-KQ2W10-04NS	22	15.9	17	19.3	52.5	54.1	15.6	23.8	7.5	92	●
	3/8	10-KQ2W12-02NS	17	18.5	17	21.5	54.2	58.8	17	37.7	9	60.7	●
$\phi 16$	3/8	10-KQ2W12-03NS	17	18.5	17	21.5	49.8	54	17	37.7	9	53.2	●
	1/2	10-KQ2W12-04NS	22	18.5	17	21.5	53.8	56.7	17	37.7	9	93.9	●
	3/8	10-KQ2W16-02NS	17	23.8	17	25.1	56.9	64.1	20.6	47.7	9	67.4	●
$\phi 16$	3/8	10-KQ2W16-03NS	22	23.8	21	27.1	59.7	66.5	20.6	58.9	11	105.5	—
	1/2	10-KQ2W16-04NS	22	23.8	21	27.1	58.4	63.9	20.6	58.9	13	101.7	—

<sup>a</sup> Reference dimensions after installation of R thread

Note 1)  $\phi D_1$  is maximum diameter.

Note 2) Refer to page 1153 for details.



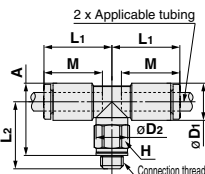
## Dimensions

### Male Branch Tee: 10-KQ2T (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
	M5 x 0.8	10-KQ2T02-M5N	7	5.8	5.5	12.6	13	12.9	11.9	0.9	1.4	3
$\phi 3.2$	M3 x 0.5	10-KQ2T23-M3G	7	7.1	7	15.3	13.8	14.7	13.3	0.9	1.2	3.1
	M5 x 0.8	10-KQ2T23-M5N	7	7.1	7	15.3	14.3	14.8	13.3	2.7	2.5	3.5
$\phi 4$	M3 x 0.5	10-KQ2T04-M3G	7	8.2	7	15.4	14.3	15.8	13.3	0.9	1.2	3.4
	M5 x 0.8	10-KQ2T04-M5N	7	8.2	7	15.4	14.8	15.9	13.3	4.5	2.5	3.9
$\phi 6$	M6 x 1.0	10-KQ2T04-M6N	8	8.2	7	15.4	15.8	15.9	13.3	4.5	2.5	4.9
	M5 x 0.8	10-KQ2T06-M5N	7	10.4	7	14.5	16.5	18.7	13.3	4.5	2.5	4.4
	M6 x 1.0	10-KQ2T06-M6N	8	10.4	7	14.5	17.5	18.7	13.3	4.5	2.5	5.4

Note)  $\phi D_1$  is maximum diameter.



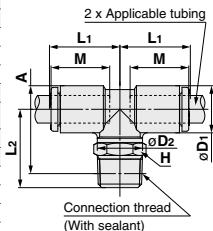
### Male Branch Tee: 10-KQ2T (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
	1/4	10-KQ2T23-02NS	14	7.1	10	14.5	21.1	20	13.3	2.9	2.5	14.7
$\phi 4$	1/8	10-KQ2T04-01NS	10	8.2	10	14.8	16.2	17.2	13.3	4.1	3	5.5
	1/4	10-KQ2T04-02NS	14	8.2	10	14.8	21.7	21.1	13.3	4.1	3	15
$\phi 6$	1/8	10-KQ2T06-01NS	10	10.4	10	15.5	17.3	19.4	13.3	11	4.5	6.1
	1/4	10-KQ2T06-02NS	14	10.4	10	15.5	22.8	23.3	13.3	11	4.5	15.6
$\phi 8$	3/8	10-KQ2T06-03NS	17	10.4	10	15.5	24.1	24.2	13.3	11	4.5	27.4
	1/2	10-KQ2T08-01NS	10	13.2	10	16.4	18.7	22.2	14.2	14	4.5	7.9
$\phi 10$	1/8	10-KQ2T08-01NQS	12	13.2	12	17.2	23.5	27	14.2	18.2	6	11
	1/4	10-KQ2T08-02NS	14	13.2	12	17.2	25.4	27.3	14.2	18.2	6	19.4
$\phi 12$	3/8	10-KQ2T08-03NS	17	13.2	12	17.2	25.5	27	14.2	18.2	6	26.5
	1/2	10-KQ2T10-01NS	12	15.9	12	18.6	23.5	28.4	15.6	14.9	6	13.9
$\phi 16$	1/4	10-KQ2T10-02NS	17	15.9	17	19.3	28.6	31.9	15.6	25	7.5	24.3
	3/8	10-KQ2T10-03NS	17	15.9	17	19.3	29.5	32.4	15.6	25	7.5	24.8
$\phi 20$	1/2	10-KQ2T10-04NS	22	15.9	17	19.3	33.5	35.1	15.6	25	7.5	47.3
	3/4	10-KQ2T12-02NS	17	18.5	17	21.5	29.9	34.5	17	45.2	9	27.3
$\phi 25$	3/8	10-KQ2T12-03NS	17	18.5	17	21.5	30.8	35	17	45.2	9	28
	1/2	10-KQ2T12-04NS	22	18.5	17	21.5	34.8	37.7	17	45.2	9	50.4
$\phi 32$	1/2	10-KQ2T16-02NS	17	23.8	17	25.1	32.6	39.8	20.6	57.2	9	35.5
	3/4	10-KQ2T16-03NS	22	23.8	21	27.1	35.4	42.2	20.6	58.9	11	47.7
	1/2	10-KQ2T16-04NS	22	23.8	21	27.1	34.1	39.6	20.6	58.9	13	51.4

\* Reference dimensions after installation of R thread  
 Note 1)  $\phi D_1$  is maximum diameter.

Note 2) Refer to page 1153 for details.



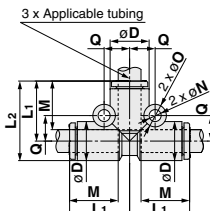
## Dimensions

### Union Tee: 10-KQ2T



Applicable tubing O.D. (mm)	Model	Note) øD	L1	L2	M	Q	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
							øO	øN	Thickness			
ø2	10-KQ2T02-00A	5.8	12.9	15.8	11.9	4.5	6	3.2	5.8	0.9	1.4	1.4
ø3.2	10-KQ2T23-00A	7.1	14.9	18.5	13.3	5.4	6	3.2	7.1	2.9	2.5	2.3
ø4	10-KQ2T04-00A	8.2	15.3	19.4	13.3	5.7	6	3.2	8.2	4.4	3	2.8
ø6	10-KQ2T06-00A	10.4	16.3	21.5	13.3	6.8	6	3.2	10.4	10.6	4.5	3.8
ø8	10-KQ2T08-00A	13.2	18.2	24.8	14.2	8.4	8	4.2	13.2	17.7	6	7
ø10	10-KQ2T10-00A	15.9	20.6	28.6	15.6	9.6	8	4.2	15.9	28.4	7.5	11
ø12	10-KQ2T12-00A	18.5	23	32.3	17	10.7	8	4.2	18.5	45.4	9	15.7
ø16	10-KQ2T16-00A	23.8	28.6	40.5	20.6	13.4	8	4.2	23.8	58.9	13	29.8

Note) øD is maximum diameter.

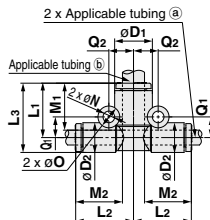


### Different Diameter Tee: 10-KQ2T



Applicable tubing O.D. (mm)		Model	Note) øD1	øD2	L1	L2	L3	M1	M2	Q1	Q2	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
øa	øb											øO	øN	Thickness			
ø3.2	ø4	10-KQ2T23-04A	8.2	7.1	14.9	15.3	18.5	13.3	13.3	5.4	5.8	6	3.2	8.2	3.5	2.5	2.6
ø4	ø6	10-KQ2T04-06A	10.4	8.2	15.3	16.3	19.4	13.3	13.3	5.7	6.8	6	3.2	10.4	6.6	3	3.3
ø6	ø8	10-KQ2T06-08A	13.2	10.4	17.2	17.3	22.4	14.2	13.3	7.3	8.4	8	4.2	13.2	16.4	4.5	5.3
ø8	ø10	10-KQ2T08-10A	15.9	13.2	19.6	19.2	26.2	15.6	14.2	8.4	9.6	8	4.2	15.9	27.2	6	8.3
ø10	ø12	10-KQ2T10-12A	18.5	15.9	22	21.6	30	17	15.6	9.6	10.7	8	4.2	18.5	44.5	7.5	12.2
ø12	ø16	10-KQ2T12-16A	23.8	18.5	26.6	25	35.9	20.6	17	10.7	13.4	8	4.2	23.8	74	9	20.1

Note) øD1 is maximum diameter.

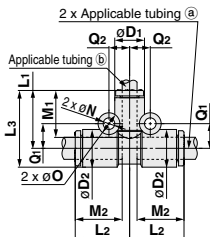


### Different Diameter Tee: 10-KQ2T



Applicable tubing O.D. (mm)		Model	Note) øD1	øD2	L1	L2	L3	M1	M2	Q1	Q2	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
øa	øb											øO	øN	Thickness			
ø6	ø4	10-KQ2T06-04A	8.2	10.4	16.3	15.3	21.5	13.3	13.3	6.8	5.7	6	3.2	10.4	4.4	3	3.5
ø8	ø6	10-KQ2T08-06A	10.4	13.2	17.3	17.2	23.9	13.3	14.2	8.4	7.3	8	4.2	13.2	10.6	4.5	6
ø10	ø8	10-KQ2T10-08A	13.2	15.9	19.2	19.6	27.2	14.2	15.6	9.6	8.4	8	4.2	15.9	17.7	6	9.5
ø12	ø10	10-KQ2T12-10A	15.9	18.5	21.6	22	30.9	15.6	17	10.7	9.6	8	4.2	18.5	28.4	7.5	13.4

Note) øD1 is maximum diameter.



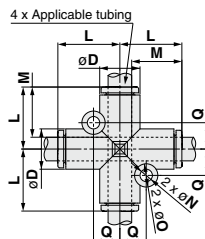
## Dimensions

### Cross: 10-KQ2TW



Applicable tubing O.D. (mm)	Model	Note) $\phi D$	L	Q	M	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
						$\phi O$	$\phi N$	Thickness			
$\phi 4$	10-KQ2TW04-00A	8.2	15.3	5.7	13.3	6	3.2	8.2	4.4	3	3.5
$\phi 6$	10-KQ2TW06-00A	10.4	16.3	6.8	13.3	6	3.2	10.4	10.6	4.5	4.9
$\phi 8$	10-KQ2TW08-00A	13.2	18.2	8.4	14.2	8	4.2	13.2	17.7	6	8.5
$\phi 10$	10-KQ2TW10-00A	15.9	20.6	9.6	15.6	8	4.2	15.9	28.4	7.5	12.7
$\phi 12$	10-KQ2TW12-00A	18.5	23	10.7	17	8	4.2	18.5	45.4	9	18.4

Note)  $\phi D$  is maximum diameter.

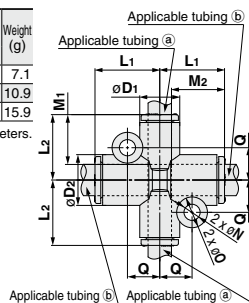


### Different Diameter Cross: 10-KQ2TX



Applicable tubing O.D. (mm)		Note) $\phi D1$	Note) $\phi D2$	L1	L2	Q	M1	M2	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
a	b								$\phi O$	$\phi N$	Thickness			
$\phi 6$	$\phi 8$	10.4	13.2	17.2	17.3	8.4	13.3	14.2	8	4.2	13.2	10.6	4.5	7.1
$\phi 8$	$\phi 10$	13.2	15.9	19.6	19.2	9.6	14.2	15.6	8	4.2	15.9	17.7	6	10.9
$\phi 10$	$\phi 12$	15.9	18.5	22	21.6	10.7	15.6	17	8	4.2	18.5	28.4	7.5	15.9

Note)  $\phi D1$ ,  $\phi D2$  are maximum diameters.

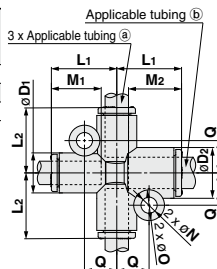


### Different Diameter Cross: 10-KQ2TY



Applicable tubing O.D. (mm)		Note) $\phi D1$	Note) $\phi D2$	L1	L2	Q	M1	M2	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
a	b								$\phi O$	$\phi N$	Thickness			
$\phi 6$	$\phi 8$	10.4	13.2	17.3	17.2	8.4	13.3	14.2	8	4.2	13.2	10.6	4.5	6.5
$\phi 8$	$\phi 10$	13.2	15.9	19.2	19.6	9.6	14.2	15.6	8	4.2	15.9	17.7	6	10.2
$\phi 10$	$\phi 12$	15.9	18.5	21.6	22	10.7	15.6	17	8	4.2	18.5	28.4	7.5	14.9

Note)  $\phi D1$ ,  $\phi D2$  are maximum diameters.



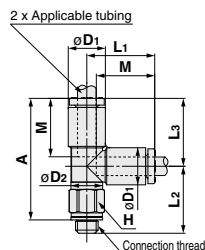
## Dimensions

### Male Run Tee: 10-KQ2Y (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 2$	M3 x 0.5	10-KQ2Y02-M3G	5.5	5.8	5.5	12.9	12.5	12.9	22.8	11.9	0.9	1.2	2
	M5 x 0.8	10-KQ2Y02-M5N	7	5.8	5.5	12.9	13	12.9	22.9	11.9	0.9	1.4	3.1
$\phi 3.2$	M3 x 0.5	10-KQ2Y23-M3G	7	7.1	7	15.3	13.8	15.3	26.5	13.3	0.9	1.2	3.1
	M5 x 0.8	10-KQ2Y23-M5N	7	7.1	7	15.3	14.3	15.3	26.6	13.3	2.7	2.5	3.5
$\phi 4$	M3 x 0.5	10-KQ2Y04-M3G	7	8.2	7	15.4	14.3	15.4	27.1	13.3	0.9	1.2	3.4
	M5 x 0.8	10-KQ2Y04-M5N	7	8.2	7	15.4	14.8	15.4	27.2	13.3	4.5	2.5	3.9
$\phi 6$	M6 x 1.0	10-KQ2Y04-M6N	8	8.2	7	15.4	15.8	15.4	27.2	13.3	4.5	2.5	4.6
	M5 x 0.8	10-KQ2Y06-M5N	7	10.4	7	16.3	16.5	16.3	29.8	13.3	4.5	2.5	4.9
	M6 x 1.0	10-KQ2Y06-M6N	8	10.4	7	16.3	17.5	16.3	29.8	13.3	4.5	2.5	5.7

(Note)  $\phi D_1$  is maximum diameter.

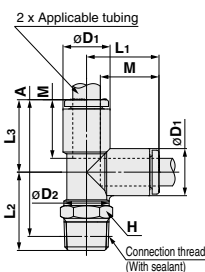


### Male Run Tee: 10-KQ2Y (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 3.2$	1/8	10-KQ2Y23-01NS	10	7.1	10	14.9	16.6	14.9	28.5	13.3	2.9	2.5	5.3
	1/4	10-KQ2Y23-02NS	14	7.1	10	14.9	21.1	14.9	31.4	13.3	2.9	2.5	14.7
$\phi 4$	1/8	10-KQ2Y04-01NS	10	8.2	10	15.3	16.2	15.3	28.4	13.3	4.4	3	5.6
	1/4	10-KQ2Y04-02NS	14	8.2	10	15.3	21.7	15.3	32.3	13.3	4.4	3	15
$\phi 6$	1/8	10-KQ2Y06-01NS	10	10.4	10	16.3	17.3	16.3	30.5	13.3	10.6	4.5	6.2
	1/4	10-KQ2Y06-02NS	14	10.4	10	16.3	22.8	16.3	34.4	13.3	10.6	4.5	15.8
$\phi 8$	3/8	10-KQ2Y06-03NS	17	10.4	10	16.3	24.1	16.3	35.3	13.3	10.6	4.5	27.5
	1/8	10-KQ2Y08-01NS	10	13.2	10	18.2	18.7	18.2	33.8	14.2	13.4	4.5	8
$\phi 10$	1/4	10-KQ2Y08-02NS	14	13.2	12	18.2	23.5	18.2	38.7	14.2	17.7	6	11.1
	3/8	10-KQ2Y08-03NS	17	13.2	12	18.2	25.5	18.2	38.6	14.2	17.7	6	26.5
$\phi 12$	1/8	10-KQ2Y10-01NS	12	15.9	12	20.6	23.5	20.6	41.1	15.6	28.4	6	14
	1/4	10-KQ2Y10-02NS	17	15.9	17	20.6	28.6	20.6	44.6	15.6	28.4	7.5	24.5
$\phi 16$	3/8	10-KQ2Y10-03NS	17	15.9	17	20.6	29.5	20.6	45.1	15.6	28.4	7.5	25
	1/2	10-KQ2Y10-04NS	22	15.9	17	20.6	33.5	20.6	47.8	15.6	28.4	7.5	47.4
$\phi 12$	1/4	10-KQ2Y12-02NS	17	18.5	17	23	29.9	23	48.3	17	45.4	9	27.6
	3/8	10-KQ2Y12-03NS	17	18.5	17	23	30.8	23	48.8	17	45.4	9	28.2
$\phi 16$	1/2	10-KQ2Y12-04NS	22	18.5	17	23	34.8	23	51.5	17	45.4	9	50.7
	Note 2) 1/4	10-KQ2Y16-02NS	17	23.8	17	28.6	32.6	28.6	56.5	20.6	57.4	9	36
$\phi 16$	3/8	10-KQ2Y16-03NS	22	23.8	21	28.6	35.4	28.6	58.9	20.6	60	11	48.3
	1/2	10-KQ2Y16-04NS	22	23.8	21	28.6	34.1	28.6	56.3	20.6	60	13	52

\* Reference dimensions after installation of R thread  
 Note 1)  $\phi D_1$  is maximum diameter.  
 Note 2) Refer to page 1153 for details.



Directional Control Valves  
 Air Cylinders  
 Rotary Actuators  
 Air Grippers  
 Air Preparation Equipment  
 Modular F. R.  
 Pressure Control Equipment  
 Fittings & Tubing  
 Flow Control Equipment  
 Pressure Switches/ Pressure Sensors

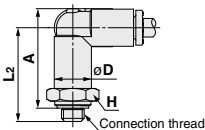
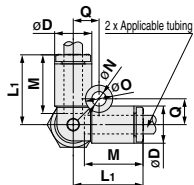
## Dimensions

### Male Delta Union: 10-KQ2D (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	Note) $\phi D$	L1	L2	A	M	Q	Mounting hole				Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
										$\phi O$	$\phi N$	Thickness				
$\phi 4$	M5 x 0.8	10-KQ2D04-M5N	10	8.2	15.8	20.7	21.8	13.3	5.7	6	3.2	8.2	2.2	1.8	6.6	
	M6 x 1.0	10-KQ2D04-M6N	10	8.2	15.8	21.7	21.8	13.3	5.7	6	3.2	8.2	4.3	3	6.4	
$\phi 6$	M5 x 0.8	10-KQ2D06-M5N	12	10.4	16.8	21.7	23.9	13.3	6.7	6	3.2	10.4	4.3	1.8	9.8	
	M6 x 1.0	10-KQ2D06-M6N	12	10.4	16.8	22.7	23.9	13.3	6.7	6	3.2	10.4	4.3	3	9.7	

Note)  $\phi D$  is maximum diameter.

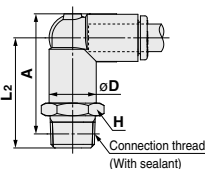
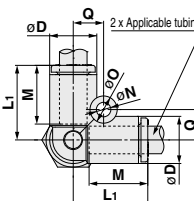


### Male Delta Union: 10-KQ2D (Sealant)



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	Note) $\phi D$	L1	L2	A*	M	Q	Mounting hole				Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
										$\phi O$	$\phi N$	Thickness				
$\phi 4$	1/8	10-KQ2D04-01NS	10	8.2	15.8	23.3	24.3	13.3	5.7	6	3.2	8.2	6	3.6	9.2	
	1/4	10-KQ2D04-02NS	14	8.2	15.8	27.7	27.1	13.3	5.7	6	3.2	8.2	6	3.6	19	
$\phi 6$	1/8	10-KQ2D06-01NS	12	10.4	16.8	24.3	26.4	13.3	6.7	6	3.2	10.4	11	5.4	10.2	
	1/4	10-KQ2D06-02NS	14	10.4	16.8	28.7	29.2	13.3	6.7	6	3.2	10.4	11	5.4	19.1	
$\phi 8$	3/8	10-KQ2D08-03NS	17	10.4	16.8	30.1	30.2	13.3	6.7	6	3.2	10.4	11	5.4	31	
	1/2	10-KQ2D08-04NS	14	13.2	18.8	26.3	29.8	14.2	8.4	8	4.2	13.2	18.2	6	15.3	
$\phi 10$	1/4	10-KQ2D10-01NS	14	13.2	18.8	30.7	32.6	14.2	8.4	8	4.2	13.2	18.2	7.3	20.4	
	3/8	10-KQ2D10-02NS	17	13.2	18.8	32.1	33.6	14.2	8.4	8	4.2	13.2	18.2	7.3	32.1	
$\phi 12$	1/4	10-KQ2D12-02NS	17	15.9	21.2	33.1	36.3	15.6	9.6	8	4.2	15.9	29	9	24.9	
	3/8	10-KQ2D12-03NS	17	15.9	21.2	34.5	37.3	15.6	9.6	8	4.2	15.9	29	9.4	32.7	
$\phi 10$	1/2	10-KQ2D10-04NS	22	15.9	21.2	38.7	40.2	15.6	9.6	8	4.2	15.9	29	9.4	60.6	
	1/4	10-KQ2D12-02NS	19	18.5	23.6	35.5	40	17	10.7	8	4.2	18.5	45.2	9	35	
$\phi 12$	3/8	10-KQ2D12-03NS	19	18.5	23.6	36.9	41	17	10.7	8	4.2	18.5	45.2	11	38	
	1/2	10-KQ2D12-04NS	22	18.5	23.6	41.1	43.9	17	10.7	8	4.2	18.5	45.2	11.6	60	

\* Reference dimensions after installation of R thread  
Note)  $\phi D$  is maximum diameter.



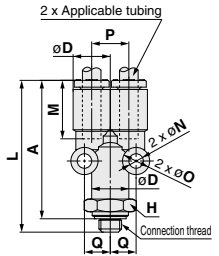
**Dimensions**

**Branch “Y”: 10-KQ2U (Gasket seal)**



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note) $\phi D$	L	A	M	P	Q	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
										$\phi O$	$\phi N$	Thickness			
$\phi 3.2$	M5 x 0.8	10-KQ2U23-M5N	10	7.1	33.8	30.8	13.3	7.1	5.2	6	3.2	7.1	2.2	1.8	5.8
	M4	10-KQ2U04-M5N	10	8.2	33.9	30.9	13.3	8.2	5.7	6	3.2	8.2	2.2	1.8	6.7
$\phi 4$	M6 x 1.0	10-KQ2U04-M6N	10	8.2	34.9	30.9	13.3	8.2	5.7	6	3.2	8.2	2.2	3	6.6
	M5 x 0.8	10-KQ2U06-M5N	12	10.4	35	32	13.3	10.4	6.8	6	3.2	10.4	2.2	1.8	10
$\phi 6$	M6 x 1.0	10-KQ2U06-M6N	12	10.4	36	32	13.3	10.4	6.8	6	3.2	10.4	2.2	3	9.8

Note)  $\phi D$  is maximum diameter.

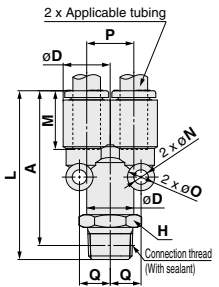


**Branch “Y”: 10-KQ2U (Sealant)**



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note) $\phi D$	L	A*	M	P	Q	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
										$\phi O$	$\phi N$	Thickness			
$\phi 3.2$	1/8	10-KQ2U23-01NS	10	7.1	36.4	33.3	13.3	7.1	5.2	6	3.2	7.1	2.9	2.7	8.6
	1/4	10-KQ2U23-02NS	14	7.1	40.8	36.1	13.3	7.1	5.2	6	3.2	7.1	2.9	2.7	19
$\phi 4$	1/8	10-KQ2U04-01NS	10	8.2	36.5	33.4	13.3	8.2	5.7	6	3.2	8.2	4.2	3.6	9.3
	1/4	10-KQ2U04-02NS	14	8.2	40.9	36.2	13.3	8.2	5.7	6	3.2	8.2	4.2	3.6	19.1
$\phi 6$	1/8	10-KQ2U06-01NS	12	10.4	37.6	34.5	13.3	10.4	6.8	6	3.2	10.4	10.6	5.4	10.3
	1/4	10-KQ2U06-02NS	14	10.4	42	37.3	13.3	10.4	6.8	6	3.2	10.4	10.6	5.4	19.2
$\phi 8$	3/8	10-KQ2U06-03NS	17	10.4	43.4	38.3	13.3	10.4	6.8	6	3.2	10.4	10.6	5.4	31.2
	1/2	10-KQ2U08-01NS	14	13.2	40.7	37.6	14.2	13.2	8.7	8	4.2	13.2	17.7	6	15.8
$\phi 10$	1/4	10-KQ2U08-02NS	14	13.2	45.1	40.4	14.2	13.2	8.7	8	4.2	13.2	17.7	7.3	20.9
	3/8	10-KQ2U08-03NS	17	13.2	46.5	41.4	14.2	13.2	8.7	8	4.2	13.2	17.7	7.3	32.7
$\phi 12$	1/4	10-KQ2U10-02NS	17	15.9	49	44.3	15.6	15.9	10.1	8	4.2	15.9	28.4	9	25.6
	3/8	10-KQ2U10-03NS	17	15.9	50.4	45.3	15.6	15.9	10.1	8	4.2	15.9	28.4	9.4	33.4
$\phi 16$	1/2	10-KQ2U10-04NS	22	15.9	54.6	48.2	15.6	15.9	10.1	8	4.2	15.9	28.4	9.4	61.3
	3/4	10-KQ2U12-02NS	19	18.5	53	48.3	17	18.5	11.4	8	4.2	18.5	45.4	9	36
$\phi 16$	1/2	10-KQ2U12-03NS	19	18.5	54.4	49.3	17	18.5	11.4	8	4.2	18.5	45.4	11	38.9
	3/8	10-KQ2U16-03NS	24	23.8	63.8	58.7	20.6	23.8	14	8	4.2	23.8	60	11	71.5
$\phi 16$	1/2	10-KQ2U16-04NS	24	23.8	68	61.6	20.6	23.8	14	8	4.2	23.8	60	13	82.6

\* Reference dimensions after installation of R thread  
Note)  $\phi D$  is maximum diameter.

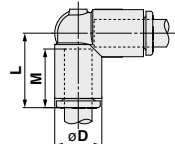
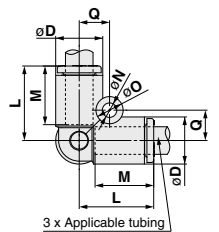


**Delta Union: 10-KQ2D**



Applicable tubing O.D. (mm)	Model	Note) $\phi D$	L	M	Q	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
						$\phi O$	$\phi N$	Thickness			
$\phi 4$	10-KQ2D04-00A	8.2	15.8	13.3	5.7	6	3.2	8.2	4.1	3	2.7
$\phi 6$	10-KQ2D06-00A	10.4	16.8	13.3	6.7	6	3.2	10.4	11	4.5	3.8
$\phi 8$	10-KQ2D08-00A	13.2	18.8	14.2	8.4	8	4.2	13.2	18.2	6	6.8
$\phi 10$	10-KQ2D10-00A	15.9	21.2	15.6	9.6	8	4.2	15.9	29	7.5	10.3
$\phi 12$	10-KQ2D12-00A	18.5	23.6	17	10.7	8	4.2	18.5	45.2	9	15.2

Note)  $\phi D$  is maximum diameter.



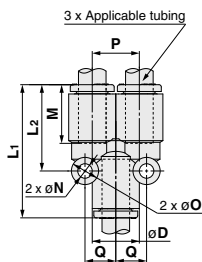
## Dimensions

### Union "Y": 10-KQ2U



Applicable tubing O.D. (mm)	Model	Note) $\phi D$	$L_1$	$L_2$	$P$	$M$	$Q$	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
								$\phi O$	$\phi N$	Thickness			
$\phi 2$	10-KQ2U02-00A	5.8	25.8	16.1	5.8	11.9	4.5	6	3.2	5.8	0.9	1.2	1.6
$\phi 3.2$	10-KQ2U23-00A	7.1	28.9	18	7.1	13.3	5.2	6	3.2	7.1	2.9	2.5	2.4
$\phi 4$	10-KQ2U04-00A	8.2	29	18.2	8.2	13.3	5.7	6	3.2	8.2	4.2	3	2.9
$\phi 6$	10-KQ2U06-00A	10.4	30.1	19.4	10.4	13.3	6.8	6	3.2	10.4	10.6	4.5	4.1
$\phi 8$	10-KQ2U08-00A	13.2	33.2	22.3	13.2	14.2	8.7	8	4.2	13.2	17.7	6	7.4
$\phi 10$	10-KQ2U10-00A	15.9	37.1	25	15.9	15.6	10.1	8	4.2	15.9	28.4	7.5	11.2
$\phi 12$	10-KQ2U12-00A	18.5	41.1	27.8	18.5	17	11.4	8	4.2	18.5	45.4	9	16.4
$\phi 16$	10-KQ2U16-00A	23.8	51.5	35	23.8	20.6	14	8	4.2	23.8	60	13	30.6

Note)  $\phi D$  is maximum diameter.

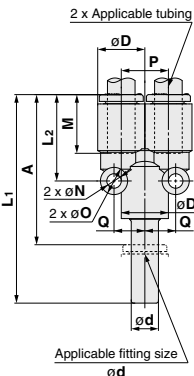


### Plug-in "Y": 10-KQ2U



Applicable tubing O.D. (mm)	Applicable fitting size $\phi d$	Model	Note) $\phi D$	$L_1$	$L_2$	$P$	$A$	$M$	$Q$	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
										$\phi O$	$\phi N$	Thickness			
$\phi 3.2$	$\phi 3.2$	10-KQ2U23-99A	7.1	45.1	18	7.1	31.8	13.3	5.2	6	3.2	7.1	2.9	2	2.5
$\phi 4$	$\phi 4$	10-KQ2U04-99A	8.2	44.8	18.2	8.2	31.5	13.3	5.7	6	3.2	8.2	4.2	2.5	3.1
$\phi 6$	$\phi 6$	10-KQ2U06-99A	10.4	46.3	19.4	10.4	33	13.3	6.8	6	3.2	10.4	10.6	4	4.5
$\phi 8$	$\phi 8$	10-KQ2U08-99A	13.2	52.1	22.3	13.2	37.9	14.2	8.7	8	4.2	13.2	17.7	6	8
$\phi 10$	$\phi 10$	10-KQ2U10-99A	15.9	57.3	25	15.9	41.7	15.6	10.1	8	4.2	15.9	28.4	7.5	12.3
$\phi 12$	$\phi 12$	10-KQ2U12-99A	18.5	63	27.8	18.5	46	17	11.4	8	4.2	18.5	45.4	9	18.3
$\phi 16$	$\phi 16$	10-KQ2U16-99A	23.8	75.9	35	23.8	55.3	20.6	14	8	4.2	23.8	60	13	33.5

Note)  $\phi D$  is maximum diameter.

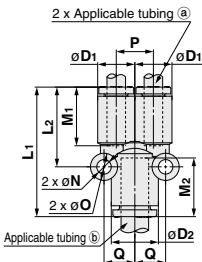


### Different Diameter Union "Y": 10-KQ2U



Applicable tubing O.D. (mm)	Model	Note) $\phi D_1$	Note) $\phi D_2$	$L_1$	$L_2$	$P$	$M_1$	$M_2$	$Q$	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	
										$\phi O$	$\phi N$	Thickness				
$\phi 2$	$\phi 3.2$	10-KQ2U02-23A	5.8	7.1	28.2	16.6	5.8	11.9	13.3	5.2	6	3.2	7.1	0.9	1.2	1.9
$\phi 2$	$\phi 4$	10-KQ2U02-04A	5.8	8.2	27.6	15.7	5.8	11.9	13.3	5.7	6	3.2	8.2	0.9	1.2	2.1
$\phi 3.2$	$\phi 4$	10-KQ2U23-04A	7.1	8.2	28.9	18	7.1	13.3	13.3	5.7	6	3.2	8.2	2.7	2.5	2.7
$\phi 4$	$\phi 6$	10-KQ2U04-06A	8.2	10.4	29	18	8.2	13.3	13.3	6.8	6	3.2	10.4	4.2	3	3.3
$\phi 6$	$\phi 8$	10-KQ2U06-08A	10.4	13.2	31	19.3	10.4	13.3	14.2	8.2	6	3.2	13.2	10.6	4.5	5
$\phi 8$	$\phi 10$	10-KQ2U08-10A	13.2	15.9	34.6	22.3	13.2	14.2	15.6	10.1	8	4.2	15.9	17.7	6	8.6
$\phi 10$	$\phi 12$	10-KQ2U10-12A	15.9	18.5	38.5	25	15.9	15.6	17	11.4	8	4.2	18.5	28.4	7.5	12.7
$\phi 12$	$\phi 16$	10-KQ2U12-16A	18.5	23.8	47.9	31	18.5	17	20.6	14	8	4.2	23.8	45.4	9	21.2

Note)  $\phi D_1$ ,  $\phi D_2$  are maximum diameters.





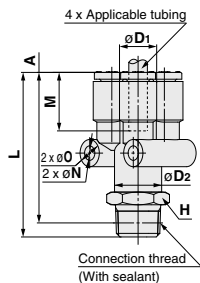
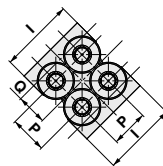
## Dimensions

### Double Branch “Y”: 10-KQ2UD (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L	I	A*	M	P	Q	$\phi O$	$\phi N$	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2UD04-01NS	12	8.2	10.4	36.7	16.6	33.6	13.3	8.2	6.8	6	3.2	4.2	5.4	11.7
	1/4	10-KQ2UD04-02NS	14	8.2	10.4	41.1	16.6	36.4	13.3	8.2	6.8	6	3.2	4.2	5.4	20.6
$\phi 6$	1/8	10-KQ2UD06-01NS	14	10.4	13.2	39.5	21	36.4	13.3	10.4	8.2	6	3.2	10.6	6	16.4
	1/4	10-KQ2UD06-02NS	14	10.4	13.2	43.9	21	39.2	13.3	10.4	8.2	6	3.2	10.6	7.3	21.6

\* Reference dimensions after installation of R thread  
Note)  $\phi D_1$  is maximum diameter.

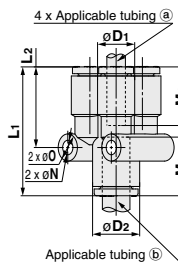
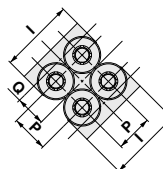


### Different Diameter Double Union “Y”: 10-KQ2UD



Applicable tubing O.D. (mm)		Model	Note) $\phi D_1$	Note) $\phi D_2$	$L_1$	$L_2$	P	I	$M_1$	$M_2$	Q	$\phi O$	$\phi N$	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
(a)	(b)															
$\phi 4$	$\phi 6$	10-KQ2UD04-06A	8.2	10.4	29.2	18.2	8.2	16.6	13.3	13.3	6.8	6	3.2	4.2	3	5.4
$\phi 6$	$\phi 8$	10-KQ2UD06-08A	10.4	13.2	32	20.5	10.4	21	13.3	14.2	8.2	6	3.2	10.6	4.5	8.1

Note)  $\phi D_1$ ,  $\phi D_2$  are maximum diameters.



- Directional Control Valves
- Air Cylinders
- Rotary Actuators
- Air Grippers
- Air Preparation Equipment
- Modular F. R.
- Pressure Control Equipment
- Fittings & Tubing
- Flow Control Equipment
- Pressure Switches/ Pressure Sensors

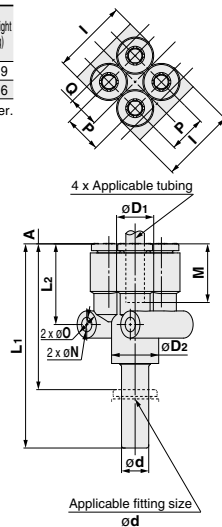
## Dimensions

### Double Plug-in “Y”: 10-KQ2XD



Applicable tubing O.D. (mm)	Applicable fitting size $\phi d$	Model	Note) $\phi D1$	$\phi D2$	L1	L2	A	I	P	M	Q	$\phi O$	$\phi N$	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	$\phi 6$	10-KQ2XD04-06A	8.2	10.4	45.4	18.2	32.1	16.6	8.2	13.3	6.8	6	3.2	4.2	3	5.9
$\phi 6$	$\phi 8$	10-KQ2XD06-08A	10.4	13.2	50.9	20.5	36.7	21	10.4	13.3	8.2	6	3.2	10.6	4.5	8.6

Note)  $\phi D1$  is maximum diameter.

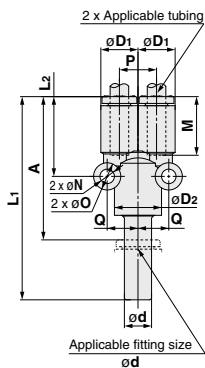


### Different Diameter Plug-in “Y”: 10-KQ2X



Applicable tubing O.D. (mm)	Applicable fitting size $\phi d$	Model	Note) $\phi D1$	Note) $\phi D2$	L1	L2	A	P	M	Q	Mounting hole $\phi O$	$\phi N$	Thickness	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 3.2$	$\phi 4$	10-KQ2X23-04A	7.1	8.2	44.7	18	31.4	7.1	13.3	5.7	6	3.2	8.2	2.7	2.5	2.8
$\phi 4$	$\phi 6$	10-KQ2X04-06A	8.2	10.4	45.2	18	31.9	8.2	13.3	6.8	6	3.2	10.4	4.2	3	3.8
$\phi 6$	$\phi 8$	10-KQ2X06-08A	10.4	13.2	49.9	19.3	35.7	10.4	13.3	8.2	6	3.2	13.2	10.6	4.5	5.5
$\phi 8$	$\phi 10$	10-KQ2X08-10A	13.2	15.9	54.8	22.3	39.2	13.2	14.2	10.1	8	4.2	15.9	17.7	6	9.8
$\phi 10$	$\phi 12$	10-KQ2X10-12A	15.9	18.5	60.4	25	43.4	15.9	15.6	11.4	8	4.2	18.5	28.4	7.5	14.6

Note)  $\phi D1$ ,  $\phi D2$  are maximum diameters.



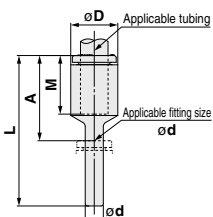
## Dimensions

### Plug-in Reducer: 10-KQ2R

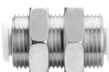


Applicable tubing O.D. (mm)	Applicable fitting size $\phi$ D	Model	Note) $\phi$ D	L	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi$ 3.2	$\phi$ 4	10-KQ2R23-04A	7.1	28.6	15.3	13.3	2.9	2.5	0.8
	$\phi$ 6	10-KQ2R23-06A	7.1	29.1	15.8	13.3	2.9	2.5	1
$\phi$ 4	$\phi$ 6	10-KQ2R04-06A	8.2	28.6	15.3	13.3	4	3	1.1
	$\phi$ 8	10-KQ2R04-08A	8.2	29.6	15.4	13.3	4	3	1.3
$\phi$ 10	$\phi$ 10	10-KQ2R04-10A	10.4	31.7	16.1	13.3	4	3	2.2
	$\phi$ 4	10-KQ2R06-04A	10.4	33.6	20.3	13.3	4	2.5	1.4
$\phi$ 6	$\phi$ 8	10-KQ2R06-08A	10.4	33.6	17.4	13.3	10.4	4.5	1.7
	$\phi$ 10	10-KQ2R06-10A	10.4	33.9	18.3	13.3	10.4	4.5	2.1
$\phi$ 12	$\phi$ 12	10-KQ2R06-12A	12	35.7	18.7	13.3	10.4	4.5	3.2
	$\phi$ 10	10-KQ2R08-10A	13.2	35.1	19.5	14.2	18	6	2.9
$\phi$ 8	$\phi$ 12	10-KQ2R08-12A	13.2	36.5	19.5	14.2	18	6	3.4
	$\phi$ 12	10-KQ2R10-12A	15.9	39.2	22.2	15.6	32.8	7.5	4.5
$\phi$ 10	$\phi$ 16	10-KQ2R10-16A	16	44.7	24.1	15.6	32.8	7.5	6
	$\phi$ 12	10-KQ2R12-16A	18.5	45.7	25.1	17	46.1	9	7

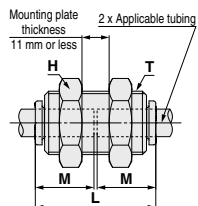
Note)  $\phi$ D is maximum diameter.



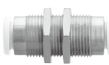
### Bulkhead Union: 10-KQ2E (Interchangeable with KQ)



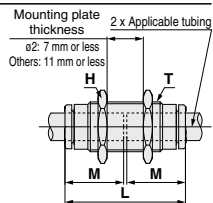
Applicable tubing O.D. (mm)	Model	T (M)	H (Width across flats)	L	Mounting hole	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi$ 3.2	10-KQ2E23-00N	M12 x 1	14	27.3	13	13.3	2.9	2.5	24.1
$\phi$ 4	10-KQ2E04-00N	M12 x 1	14	27.3	13	13.3	4	3	22.9
$\phi$ 6	10-KQ2E06-00N	M14 x 1	17	27.3	15	13.3	10.4	4.5	28
$\phi$ 8	10-KQ2E08-00N	M16 x 1	19	29.1	17	14.2	18	6	34
$\phi$ 10	10-KQ2E10-00N	M20 x 1	24	31.9	21	15.6	29.5	7.5	64.4
$\phi$ 12	10-KQ2E12-00N	M22 x 1	27	34.7	23	17	46.1	9	63.8
$\phi$ 16	10-KQ2E16-00N	M28 x 1.5	32	41.9	29	20.6	67	13	120.1



### Bulkhead Union: 10-KQ2E (Interchangeable with KJ)



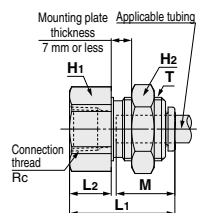
Applicable tubing O.D. (mm)	Model	T (M)	H (Width across flats)	L	Mounting hole	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi$ 2	10-KQ2E02-00NJ	M7 x 0.75	9	24.5	8	11.9	0.9	1.4	5.2
$\phi$ 3.2	10-KQ2E23-00NJ	M8 x 0.75	10	27.3	9	13.3	2.5	2.5	6.9
$\phi$ 4	10-KQ2E04-00NJ	M9 x 0.75	11	27.3	10	13.3	4	3	8.3
$\phi$ 6	10-KQ2E06-00NJ	M11 x 0.75	14	27.3	12	13.3	10	4.5	11.2



### Bulkhead Connector: 10-KQ2E



Applicable tubing O.D. (mm)	Connection thread Rc	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Mounting hole	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi$ 3.2	1/4	10-KQ2E23-02N	M12 x 1	17	14	28.7	14.3	13	13.3	2.9	2.5	31.2
$\phi$ 4	1/4	10-KQ2E04-01N	M12 x 1	14	14	24.4	10	13	13.3	4	3	21.2
	1/8	10-KQ2E04-02N	M12 x 1	17	14	29	14.6	13	13.3	4	3	30.9
$\phi$ 6	1/8	10-KQ2E06-01N	M14 x 1	17	17	23.6	9.2	15	13.3	10.4	4.5	28.9
	1/4	10-KQ2E06-02N	M14 x 1	17	17	28.4	14	15	13.3	10.4	4.5	32.4
$\phi$ 8	3/8	10-KQ2E06-03N	M14 x 1	19	17	30.7	16.3	15	13.3	10.4	4.5	35.9
	1/4	10-KQ2E08-01N	M16 x 1	17	19	24.1	6.7	17	14.2	18	6	30.5
$\phi$ 10	1/4	10-KQ2E08-02N	M16 x 1	17	19	28.4	11	17	14.2	18	6	33.1
	3/8	10-KQ2E08-03N	M16 x 1	19	19	31.7	14.3	17	14.2	18	6	37.4
$\phi$ 12	1/4	10-KQ2E10-02N	M20 x 1	22	24	29.3	9.9	21	15.6	29.5	7.5	63.8
	3/8	10-KQ2E10-03N	M20 x 1	22	24	31.4	12	21	15.6	29.5	7.5	71.6
$\phi$ 16	3/8	10-KQ2E12-03N	M22 x 1	24	27	32.3	11.9	23	17	46.1	9	69.3
	1/2	10-KQ2E12-04N	M22 x 1	24	27	37.7	17.3	23	17	46.1	9	72.7
$\phi$ 16	3/8	10-KQ2E16-03N	M28 x 1.5	30	32	34.4	11.5	29	20.6	67	13	122.2
	1/2	10-KQ2E16-04N	M28 x 1.5	30	32	38.8	15.9	29	20.6	67	13	132.1



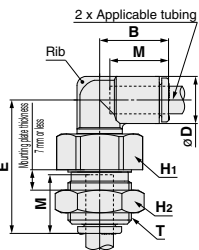
## Dimensions

### Bulkhead Male Elbow: 10-KQ2LE



Applicable tubing O.D. (mm)	Model	T (M)	H <sub>1</sub> (Width across flats)	H <sub>2</sub> (Width across flats)	B	E	Note) øD	Mounting hole	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
ø4	10-KQ2LE04-00N	M12 x 1	14	14	14.8	28.5	8.2	13	13.3	4.2	3	21.2	●
ø6	10-KQ2LE06-00N	M14 x 1	17	17	15.5	29.6	10.4	15	13.3	9	4.5	29.4	—
ø8	10-KQ2LE08-00N	M16 x 1	17	19	17.2	32.3	13.2	17	14.2	14.9	6	30.4	●
ø10	10-KQ2LE10-00N	M20 x 1	22	24	19.3	37.9	15.9	21	15.6	25	7.5	53.5	●
ø12	10-KQ2LE12-00N	M22 x 1	24	27	21.5	40.8	18.5	23	17	39.7	9	61	●

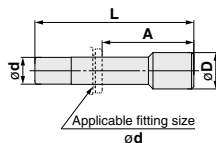
Note) øD is maximum diameter.



### Plug: 10-KQP



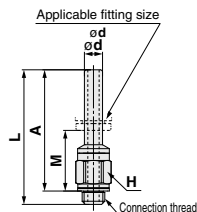
Applicable fitting size ød	Model	øD	L	A	Weight (g)
ø2	10-KJP-02	3	17	5.1	0.1
ø3.2	10-KQP-23	5	31.5	18.2	1
ø4	10-KQP-04	6	32	18.7	1
ø6	10-KQP-06	8	35	21.7	1
ø8	10-KQP-08	10	39	24.8	2
ø10	10-KQP-10	12	43	27.4	3.5
ø12	10-KQP-12	14	45.5	28.5	5
ø16	10-KQP-16	20.9	47	26.4	8



### Adapter: 10-KQ2N (Gasket seal)



Applicable fitting size ød	Connection thread M	Model	H (Width across flats)	L	A	M	Min. port size	Weight (g)
ø4	M5 x 0.8	10-KQ2N04-M5N	7	29.7	26.7	13.4	2.5	2.4
ø6	M5 x 0.8	10-KQ2N06-M5N	7	29.7	26.7	13.4	2.5	2.6

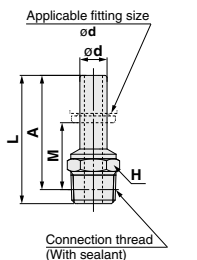


### Adapter: 10-KQ2N (Sealant)



Applicable fitting size ød	Connection thread R	Model	H (Width across flats)	L	A*	M	Min. port size	Weight (g)
ø4	1/8	10-KQ2N04-01NS	10	28.3	25.2	11.9	2.5	4
ø6	1/8	10-KQ2N06-01NS	10	28.3	25.2	11.9	4	4.1
	1/4	10-KQ2N06-02NS	14	32.8	28.1	14.8	4	13.6
ø8	1/4	10-KQ2N08-02NS	14	35.9	31.2	17	6	15.7
	3/8	10-KQ2N08-03NS	17	36	30.9	16.7	6	22.7
ø10	3/8	10-KQ2N10-03NS	17	40.6	35.5	19.9	7.5	19.1

\* Reference dimensions after installation of R thread



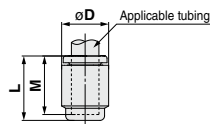
## Dimensions

### Tube Cap: 10-KQ2C



Applicable tubing O.D. (mm)	Model	øD (Note)	L	M	Weight (g)
ø4	10-KQ2C04-00A	8.2	14.5	13.3	0.8
ø6	10-KQ2C06-00A	10.4	14.6	13.3	1.1
ø8	10-KQ2C08-00A	13.2	15.7	14.2	2
ø10	10-KQ2C10-00A	15.9	17.3	15.6	2.9
ø12	10-KQ2C12-00A	18.5	18.9	17	4.5
ø16	10-KQ2C16-00A	23.8	23	20.6	8.4

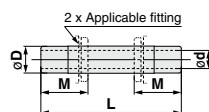
Note) øD is maximum diameter.



### Nipple: 10-KQN



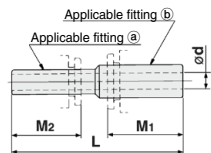
Applicable fitting øD	Model	L	M	ød	Min. port size	Weight (g)
ø4	10-KQN04-99	37	13.3	2.5	2.5	1
ø6	10-KQN06-99	39	13.3	4	4	2
ø8	10-KQN08-99	43	14.2	6	6	2
ø10	10-KQN10-99	49	15.6	7.5	7.5	4
ø12	10-KQN12-99	52	17	9	9	3.3
ø16	10-KQN16-99	57	20.6	13	13	4.8



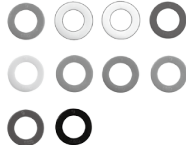
### Reducer Nipple: 10-KQN



Applicable fitting		Model	L	M <sub>1</sub>	M <sub>2</sub>	ød Min. port size	Weight (g)
(a)	(b)						
ø4	ø6	10-KQN04-06	38	13.3	13.3	2.5	2
ø6	ø8	10-KQN06-08	42	14.2	13.3	4	2
ø8	ø10	10-KQN08-10	47	15.6	14.2	6	2
ø10	ø12	10-KQN10-12	51	17	15.6	7.5	3.1
ø12	ø16	10-KQN12-16	55	20.6	17	9	4.9

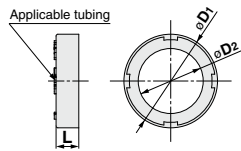


### Color Cap: 10-KQ2C



Applicable tubing O.D. (mm)	Model	øD <sub>1</sub>	øD <sub>2</sub>	L	Weight (g)	Note
ø2	10-KQ2C-02□A	6.1	3.2	2.6	0.1	Applicable for products with enlarged outside diameter of release button
ø3.2	10-KQ2C-23□A	7.3	4.3	2.6	0.1	
ø4	10-KQ2C-04□A	8.3	5.2	2.6	0.1	
ø6	10-KQ2C-06□A	10.3	7.2	2.6	0.1	
ø8	10-KQ2C-08□B	13.6	9.2	2.6	0.1	
ø10	10-KQ2C-10□B	16.2	11.2	2.7	0.1	
ø12	10-KQ2C-12□B	18.8	13.2	2.7	0.2	
ø16	10-KQ2C-16□B	24.2	17.2	3.2	0.3	

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Gray), W (White), BU (Blue)



In order to improve the operability, the outside diameter of the release button has been enlarged for the New KQ2 series. Along with this change, the usable color caps differ before and after the change. For details, refer to "Notes when Ordering Color Caps" in the standard products KQ2 series (**WEB catalog**). Additionally, when ordering the color cap, add "10-" at the beginning of the part number. Example) 10-KQ2C-06BA



# Series 10-KQ2

## Made to Order

Please contact SMC for detailed dimensions, specifications, and lead times.

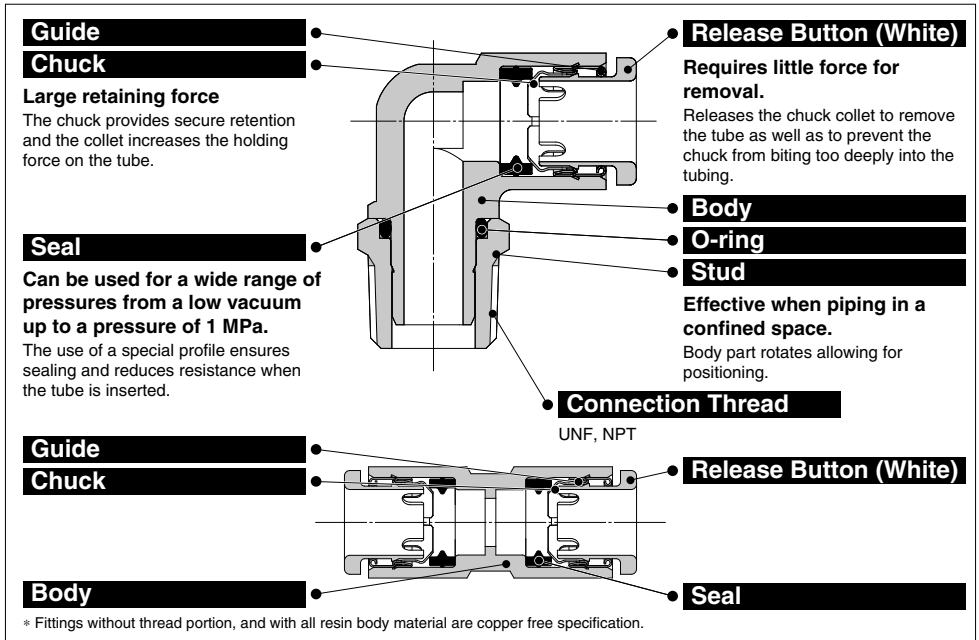
### 1 Made to Order

Symbol	Specifications
10-KQ2□08-01□Q□	<p>Effective area is interchangeable with the current product (KQ series).</p> <p>Applicable model: Male elbow, 45° male elbow, Female elbow, Extended male elbow, Male branch tee, Male run tee</p> <p>Applicable tubing O.D./Port size: ø8/R1/8</p> <p>Thread material/Surface treatment: Brass + Electroless nickel plating</p> <p>Example) <b>10-KQ2L08-01AQS</b></p>

# Series 10-KQ2

Inch Size One-touch Fittings  
Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

RoHS



**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa**

- Applicable tubing—Inch size
- Applicable tubing material  
PFA, Polyurethane



## Applicable Tubing

Tubing material <sup>Note)</sup>	PFA, Polyurethane
Tubing O.D.	ø1/8", ø5/32", ø3/16", ø1/4", ø5/16", ø3/8", ø1/2"

Note) FEP, nylon and soft nylon tubing can also be used. However, the degree of clean performance will be reduced.

## Color

Series	Body	Release button
Series 10-KQ2	White	White

## Specifications

Fluid		Air, Water <sup>Note 1)</sup>
Operating pressure range <sup>Note 2)</sup>		-100 kPa to 1 MPa
Proof pressure (at 23°C)		3 MPa
Ambient and fluid temperature		-5 to 60°C, Water: 0 to 40°C (No freezing)
Thread	Mounting section	ANSI/ASME1.20.1 (NPT thread) JIS B0208 (UNF thread)
	Nut section	JIS B0208 (UNF thread)
Seal on the threads		With seal or none
Grease		Fluorine based grease
Cleanliness class (ISO class)		Class 5

Note 1) The surge pressure must be under the maximum operating pressure.

Note 2) Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

## Principal Parts Material

Body	C3604 Electroless nickel plated, PBT, PP
Stud	C3604 (Thread portion) Electroless nickel plated
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR

# Inch Size One-touch Fittings

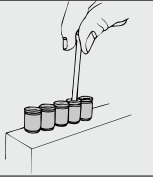
## Variations

### Hexagon socket head male connector

10-KQ2S P.1159



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.

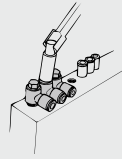


### Universal male elbow

10-KQ2V P.1162



Hexagon head of the body allows tightening with a box wrench in confined spaces.

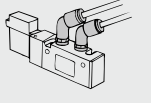


### 45° male elbow

10-KQ2K P.1162



Use to pipe a female thread at a 45° angle. The model between the male connector and male elbow.

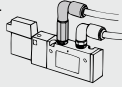


### Extended male elbow

10-KQ2W P.1167



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.

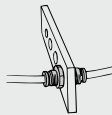


### Bulkhead union

10-KQ2E P.1173



Use to connect tubing through a panel, etc.

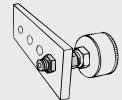


### Bulkhead connector

10-KQ2E P.1174



Use to connect male thread and tubing through a panel, etc.



### Nipple

10-KQN P.1175



Use to connect One-touch fittings.

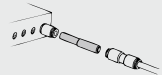


### Reducer nipple

10-KQN P.1175



Use to connect One-touch fittings of different sizes.



### Male connector

10-KQ2H P.1157



Use to pipe a female thread. Most general model.

### Hexagon socket head universal male elbow

10-KQ2VS P.1163



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

### Branch universal male elbow

10-KQ2Z P.1166



Hexagon head of the body allows tightening with a box wrench. Use for branch connections.

### Female connector

10-KQ2F P.1158



Use to pipe a male thread of a pressure gauge, etc.

### Universal female elbow

10-KQ2VF P.1163



Use to branch a male or female thread at a 90° angle. Multiple connections possible.

### Double branch universal male elbow

10-KQ2ZD P.1166



Use to four-branch a female thread at right angles. Two individual parts rotate 360°.

### Straight union

10-KQ2H P.1158



Use to connect tubing in the same direction.

### Female elbow

10-KQ2LF P.1161



Use to pipe a male thread at right angles.

### Triple branch universal male elbow

10-KQ2ZT P.1167



Use to six-branch a female thread at right angles. Three individual parts rotate 360°.

### Different diameter straight

10-KQ2H P.1158



Use to connect tubing of different sizes.

### Double universal male elbow

10-KQ2VD P.1164



Use to branch a female thread at right angles. Two individual parts rotate 360°.

### Union elbow

10-KQ2L P.1161



Use to connect tubing at right angles.

### Male elbow

10-KQ2L P.1160



Use to pipe a female thread at right angles. Most general model.

### Triple universal male elbow

10-KQ2VT P.1165



Use to three-branch a female thread at right angles. Three individual parts rotate 360°.

### Plug-in elbow

10-KQ2L P.1161



Use to change the tube direction from One-touch fittings by 90°.



### Reducer elbow

10-KQ2L P.1161



Use to change the tube direction from One-touch fittings by 90° and to reduce size.

### Male branch tee

10-KQ2T P.1168



Use to branch a female thread at both 90° angles.

### Union tee

10-KQ2T P.1169



Use to branch tubing at both 90° angles.

### Different diameter tee

10-KQ2T P.1169



Use to connect tubing for branching at 90° angle with size reduced from the same piping.

### Cross

10-KQ2TW P.1169



Use to four-branch line.

### Male run tee

10-KQ2Y P.1170



Use to branch a female thread at a 90° angle.

### Branch "Y"

10-KQ2U P.1171



Use to branch a female thread.

### Union "Y"

10-KQ2U P.1172



Use to branch tubing in the same direction.

### Different diameter union "Y"

10-KQ2U P.1172



Use to connect tubing for branching with size reduced.

### Plug-in "Y"

10-KQ2U P.1172



Use to branch One-touch fittings.

### Different diameter plug-in "Y"

10-KQ2X P.1173



Use to branch One-touch fittings with size reduced.

### Plug-in reducer

10-KQ2R P.1173



Use to change size of One-touch fittings.

### Bulkhead male elbow

10-KQ2LE P.1174



Use to connect tubing through a panel, etc. and to change the tube direction by 90°.

### Tube cap

10-KQ2C P.1175



Use to plug unused tubing.

### Plug

10-KQP P.1174



Use to plug unused One-touch fittings.

### Color cap

10-KQ2C P.1175



Mount onto the release button and use different colors for piping according to applications.

Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

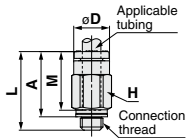
Pressure Switches/ Pressure Sensors

## Dimensions

### Male Connector: 10-KQ2H (Gasket seal)



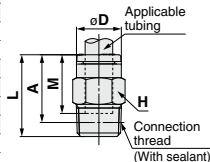
Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	øD	L	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø1/8	10-32UNF	<b>10-KQ2H01-32N</b>	7	6.7	17.4	14.4	13.3	2.5	2.3	2.7
ø5/32	10-32UNF	<b>10-KQ2H03-32N</b>	8	7.7	17.6	14.6	13.3	3.3	2.3	3.3
ø3/16	10-32UNF	<b>10-KQ2H05-32N</b>	8	8.3	17.7	14.7	13.3	3.4	2.3	3.4
ø1/4	10-32UNF	<b>10-KQ2H07-32N</b>	11.11	10.9	18	15	13.3	3.4	2.3	5.2



### Male Connector: 10-KQ2H (Sealant)



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	øD	L	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø1/8	1/16	<b>10-KQ2H01-33NS</b>	9.5	6.7	19.3	15.2	13.3	2.5	2.5	6
	1/8	<b>10-KQ2H01-34NS</b>	11.11	6.7	14	10.8	13.3	2.5	2.5	7.1
	1/4	<b>10-KQ2H01-35NS</b>	14.29	6.7	16.7	12.3	13.3	2.9	2.5	16.2
ø5/32	1/16	<b>10-KQ2H03-33NS</b>	9.5	7.7	20	15.9	13.3	3.4	3	6.1
	1/8	<b>10-KQ2H03-34NS</b>	11.11	7.7	14	10.8	13.3	3.4	3	6.5
	1/4	<b>10-KQ2H03-35NS</b>	14.29	7.7	16.7	12.3	13.3	3.4	3	15.6
ø3/16	1/8	<b>10-KQ2H05-34NS</b>	11.11	8.3	17.4	14.2	13.3	6.5	3.5	7.4
	1/4	<b>10-KQ2H05-35NS</b>	14.29	8.3	16.7	12.3	13.3	6.5	3.5	14.9
	1/16	<b>10-KQ2H07-33NS</b>	11.11	10.9	22.5	18.4	13.3	11.5	4.6	7.6
ø1/4	1/8	<b>10-KQ2H07-34NS</b>	11.11	10.9	18	14.8	13.3	11.5	4.6	6.5
	1/4	<b>10-KQ2H07-35NS</b>	14.29	10.9	16.7	12.3	13.3	11.5	4.6	13.1
	3/8	<b>10-KQ2H07-36NS</b>	17.46	10.9	18.1	13.4	13.3	11.5	4.6	25.7
ø5/16	1/8	<b>10-KQ2H09-34NS</b>	14.29	13	22.2	19	14.2	18	6	12.6
	1/4	<b>10-KQ2H09-35NS</b>	14.29	13	22.1	17.7	14.2	18	6	15.2
	3/8	<b>10-KQ2H09-36NS</b>	17.46	13	18.1	13.4	14.2	18	6	22.5
ø3/8	1/8	<b>10-KQ2H11-34NS</b>	17.46	15.1	24.1	20.9	15.6	26	6	19.5
	1/4	<b>10-KQ2H11-35NS</b>	17.46	15.1	25.1	20.7	15.6	29.1	7	21
	3/8	<b>10-KQ2H11-36NS</b>	17.46	15.1	22.7	18	15.6	29.1	7	23.5
ø1/2	1/2	<b>10-KQ2H11-37NS</b>	22.23	15.1	22.3	15.9	15.6	29.1	7	49.1
	1/4	<b>10-KQ2H13-35NS</b>	22.23	19	28.8	24.4	17	51.7	9	34.4
	3/8	<b>10-KQ2H13-36NS</b>	22.23	19	27.5	22.8	17	51.7	9.6	36.2
	1/2	<b>10-KQ2H13-37NS</b>	22.23	19	28	21.6	17	51.7	9.6	47.1



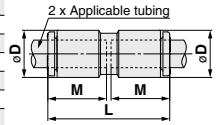
\* Reference dimensions after installation of NPT thread

**Dimensions**

**Straight Union: 10-KQ2H**



Applicable tubing O.D. (inch)	Model	øD (Note)	L	M	Effective area (mm <sup>2</sup> )	Min. port size	Weight (g)
					Urethane		
ø1/8	10-KQ2H01-00A	7.1	27.6	13.3	2.9	2.5	1.4
ø5/32	10-KQ2H03-00A	8.2	27.6	13.3	4	3	1.6
ø3/16	10-KQ2H05-00A	9.1	27.6	13.3	6.5	3.5	1.9
ø1/4	10-KQ2H07-00A	11.1	27.6	13.3	11.5	4.6	2.4
ø5/16	10-KQ2H09-00A	13.2	29.4	14.2	18	6	3.7
ø3/8	10-KQ2H11-00A	15.4	32.2	15.6	29.1	7	5.2
ø1/2	10-KQ2H13-00A	19.3	35	17	51.7	9.6	8.7

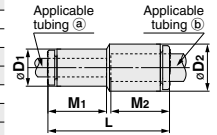


(Note) øD is maximum diameter.

**Different Diameter Straight: 10-KQ2H**



Applicable tubing O.D. (inch)		Model	Note) øD1	Note) øD2	L	M1	M2	Effective area (mm <sup>2</sup> )	Min. port size	Weight (g)
(a)	(b)							Urethane		
ø1/8	ø5/32	10-KQ2H01-03A	7.1	8.2	27.6	13.3	13.3	2.9	2.5	1.5
	ø1/4	10-KQ2H01-07A	7.1	11.1	27.6	13.3	13.3	2.9	2.5	2
ø5/32	ø3/16	10-KQ2H03-05A	8.2	9.1	27.6	13.3	13.3	5.6	3	1.8
	ø1/4	10-KQ2H03-07A	8.2	11.1	27.6	13.3	13.3	5.6	3	2.1
ø3/16	ø5/16	10-KQ2H05-07A	9.1	11.1	27.6	13.3	13.3	6.5	3.5	2.2
	ø1/4	10-KQ2H07-09A	11.1	13.2	28.5	13.3	14.2	11.5	4.6	3.2
ø1/4	ø3/8	10-KQ2H07-11A	11.1	15.4	29.9	13.3	15.6	11.5	4.6	4.1
	ø3/8	10-KQ2H09-11A	13.2	15.4	30.8	14.2	15.6	18	6	4.7
ø5/16	ø1/2	10-KQ2H09-13A	13.2	19.3	32.2	14.2	17	18	6	6.6
	ø3/8	10-KQ2H11-13A	15.4	19.3	33.6	15.6	17	29.1	7	7.3

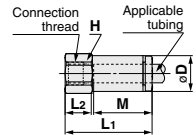


(Note) øD1, øD2 are maximum diameters.

**Female Connector: 10-KQ2F**



Applicable tubing O.D. (inch)	Connection thread UNF, NPT	Model	H (Width across flats)	Note) øD	L1	L2	M	Effective area (mm <sup>2</sup> )	Min. port size	Weight (g)
								Urethane		
ø1/8	10-32UNF	10-KQ2F01-32N	7	6.9	19.7	5.7	13.3	2.5	2.5	3.4
	1/8	10-KQ2F01-34N	14.29	6.9	25	9.5	13.3	2.5	2.5	13.4
	1/4	10-KQ2F01-35N	17.46	6.9	29.8	13.3	13.3	2.5	2.5	24.4
ø5/32	10-32UNF	10-KQ2F03-32N	8	7.9	19.5	5.7	13.3	4	3	4.5
	1/8	10-KQ2F03-34N	14.29	7.9	24.8	9.5	13.3	4	3	13.7
	1/4	10-KQ2F03-35N	17.46	7.9	29.7	13.3	13.3	4	3	24.7
ø1/4	10-32UNF	10-KQ2F07-32N	11.11	10.9	17.7	5.5	13.3	10.1	3.9	6.7
	1/8	10-KQ2F07-34N	14.29	10.9	24.4	9.5	13.3	11.5	4.6	14.2
	1/4	10-KQ2F07-35N	17.46	10.9	29.2	13.3	13.3	11.5	4.6	25.1
	3/8	10-KQ2F07-36N	22.23	10.9	30.5	13.2	13.3	11.5	4.6	38.7
ø5/16	1/8	10-KQ2F09-34N	14.29	13	24.8	9.2	14.2	18	6	15.2
	1/4	10-KQ2F09-35N	17.46	13	29.7	11.8	14.2	18	6	26.2
	3/8	10-KQ2F09-36N	22.23	13	31	12.4	14.2	18	6	39.8
ø3/8	1/4	10-KQ2F11-35N	17.46	15.1	30.5	11.8	15.6	29.1	8	27.2
	3/8	10-KQ2F11-36N	22.23	15.1	31.8	12.4	15.6	29.1	8	40.7
	1/2	10-KQ2F11-37N	23.81	15.1	34.9	15.8	15.6	29.1	8	45.6
ø1/2	3/8	10-KQ2F13-36N	22.23	19	32.6	12.4	17	51.7	10	43.8
	1/2	10-KQ2F13-37N	23.81	19	35.7	15.8	17	51.7	10	48.6



(Note) øD is maximum diameter.

Directional Control Valves  
Air Cylinders  
Rotary Actuators  
Air Grippers  
Air Preparation Equipment  
Modular F. R.  
Pressure Control Equipment  
Fittings & Tubing  
Flow Control Equipment  
Pressure Switches/ Pressure Sensors

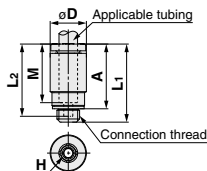
## Dimensions

### Hexagon Socket Head Male Connector: 10-KQ2S (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	Note) øD	L1	L2	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø1/8	10-32UNF	<b>10-KQ2S01-32N</b>	2	7	17.5	16.3	14.5	13.3	2.5	2	2.6
ø5/32	10-32UNF	<b>10-KQ2S03-32N</b>	2.5	8	18.6	17.8	15.6	13.3	4	2.5	3
ø1/4	10-32UNF	<b>10-KQ2S07-32N</b>	2.5	10.3	19	17.8	16	13.3	4	2.5	3.7

Note) øD is maximum diameter.

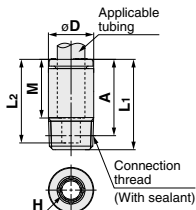


### Hexagon Socket Head Male Connector: 10-KQ2S (Sealant)



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note) øD	L1	L2	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø5/32	1/16	<b>10-KQ2S03-33NS</b>	2.78	8	19.8	18.8	15.7	13.3	3.6	2.8	4.5
	1/8	<b>10-KQ2S03-34NS</b>	2.78	10.3	17.3	16.3	14.1	13.3	3.6	2.8	6
ø3/16	1/8	<b>10-KQ2S05-34NS</b>	3.57	11	19.8	18.8	16.6	13.3	6.5	3.6	7.5
	1/16	<b>10-KQ2S07-33NS</b>	3.57	10.3	20.9	18.8	16.8	13.3	8.4	3.6	6.3
ø1/4	1/8	<b>10-KQ2S07-34NS</b>	4.76	10.3	19.8	18.8	16.6	13.3	11.5	4.8	7.4
	1/4	<b>10-KQ2S07-35NS</b>	4.76	13.8	19.8	18.8	15.4	13.3	11.5	4.8	13.2
	3/8	<b>10-KQ2S07-36NS</b>	4.76	17	20.8	19.8	16.1	13.3	11.5	4.8	24
ø5/16	1/8	<b>10-KQ2S09-34NS</b>	5.56	13	22.3	19.7	19.1	14.2	16.2	5.6	9.7
	1/4	<b>10-KQ2S09-35NS</b>	6.35	14	21.2	20.1	16.8	14.2	16.2	6.4	12.6
	3/8	<b>10-KQ2S09-36NS</b>	6.35	17.5	20.7	19.7	16	14.2	16.2	6.4	21
ø3/8	1/8	<b>10-KQ2S11-34NS</b>	5.56	15.1	23.7	21.1	20.5	15.6	22.7	5.6	12.1
	1/4	<b>10-KQ2S11-35NS</b>	6.35	15.1	24.4	21.1	20	15.6	29.1	6.4	15.2
	3/8	<b>10-KQ2S11-36NS</b>	6.35	18	22.1	21.1	17.4	15.6	29.1	6.4	22.7
ø1/2	1/2	<b>10-KQ2S11-37NS</b>	6.35	21.3	22.1	21.1	15.7	15.6	29.1	6.4	40.6
	1/4	<b>10-KQ2S13-35NS</b>	8	19	28.5	22.5	24.1	17	48	8.1	18.9
	3/8	<b>10-KQ2S13-36NS</b>	9.53	19	26.3	22.5	21.6	17	51.7	9.6	20.7
	1/2	<b>10-KQ2S13-37NS</b>	9.53	22	23.5	22.5	17.1	17	51.7	9.6	33.3

\* Reference dimensions after installation of NPT thread  
Note) øD is maximum diameter.



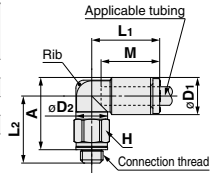
**Dimensions**

**Male Elbow: 10-KQ2L (Gasket seal)**



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
$\phi 1/8$	10-32UNF	10-KQ2L01-32N	7	7.1	7	15.3	14.2	14.8	13.3	2.2	2.5	3	●
$\phi 5/32$	10-32UNF	10-KQ2L03-32N	7	8.2	7	15.4	14.7	15.8	13.3	3.5	2.5	3.1	●
$\phi 3/16$	10-32UNF	10-KQ2L05-32N	7	9.1	7	14.5	15.8	17.4	13.3	3.5	2.5	3.2	●
$\phi 1/4$	10-32UNF	10-KQ2L07-32N	7	11.1	7	15.4	16	18.6	13.3	3.5	2.5	3.5	●

Note)  $\phi D_1$  is maximum diameter.

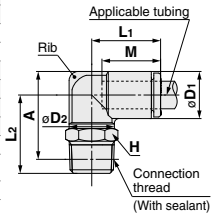


**Male Elbow: 10-KQ2L (Sealant)**



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A <sup>2)</sup>	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
$\phi 1/8$	1/16	10-KQ2L01-33NS	11.11	7.1	10	14.5	24.3	23.8	13.3	2.5	2.5	9.1	—
	1/8	10-KQ2L01-34NS	11.11	7.1	10	14.5	16.7	17.1	13.3	2.5	2.5	5.5	—
	1/4	10-KQ2L01-35NS	14.29	7.1	10	14.5	21.1	20.3	13.3	2.5	2.5	15	—
$\phi 5/32$	1/16	10-KQ2L03-33NS	11.11	8.2	10	14.8	23.8	23.8	13.3	3.3	3	9.3	●
	1/8	10-KQ2L03-34NS	11.11	8.2	10	14.8	16.2	17.1	13.3	3.3	3	5.6	●
$\phi 3/16$	1/4	10-KQ2L03-35NS	14.29	8.2	10	14.8	21.6	21.3	13.3	3.3	3	15.2	●
	1/8	10-KQ2L05-34NS	11.11	9.1	10	15	16.7	18.1	13.3	5.6	3.5	5.8	—
	1/4	10-KQ2L05-35NS	14.29	9.1	10	15	22.1	22.3	13.3	5.6	3.5	15.4	—
$\phi 1/4$	1/16	10-KQ2L07-33NS	11.11	11.1	10	15.6	25.3	26.8	13.3	6.8	3.5	9.8	●
	1/8	10-KQ2L07-34NS	11.11	11.1	10	15.6	17.7	20.1	13.3	10	4.5	6.1	●
	1/4	10-KQ2L07-35NS	14.29	11.1	10	15.6	23.1	24.3	13.3	10	4.5	15.7	●
$\phi 5/16$	3/8	10-KQ2L07-36NS	17.46	11.1	10	15.6	24.5	25.4	13.3	10	4.5	28	●
	1/8	10-KQ2L09-34NS	11.11	13.2	10	16.4	18.7	22.1	14.2	11.4	4.5	6.9	●
	1/4	10-KQ2L09-34NS <sup>Note 2)</sup>	12.7	13.2	12	17.2	23.5	26.9	14.2	14.9	6	9.9	●
	3/8	10-KQ2L09-35NS	14.29	13.2	12	17.2	24.1	26.3	14.2	14.9	6	14.1	●
$\phi 3/8$	1/8	10-KQ2L09-36NS	17.46	13.2	12	17.2	25.5	27.4	14.2	14.9	6	26.2	●
	1/4	10-KQ2L11-34NS	12.7	15.4	12	18.6	23.2	27.7	15.6	21.2	6	11.8	●
	1/4	10-KQ2L11-35NS	17.46	15.4	17	19.3	28.6	31.9	15.6	23.8	7.5	21.7	●
	3/8	10-KQ2L11-36NS	17.46	15.4	17	19.3	29.2	32.2	15.6	23.8	7.5	19.8	●
$\phi 1/2$	1/2	10-KQ2L11-37NS	22.23	15.4	17	19.3	33.4	34.7	15.6	23.8	7.5	46.2	●
	1/4	10-KQ2L13-35NS	17.46	19.3	17	21.5	30.5	35.7	17	44.4	9	24	—
	3/8	10-KQ2L13-36NS	17.46	19.3	17	21.8	26.3	31.2	17	44.4	9.5	20.3	—
	1/2	10-KQ2L13-37NS	22.23	19.3	17	21.8	30.5	33.7	17	44.4	9.5	46.3	—

\* Reference dimensions after installation of NPT thread  
 Note 1)  $\phi D_1$  is maximum diameter.  
 Note 2) Refer to page 1175-1 for details.



Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

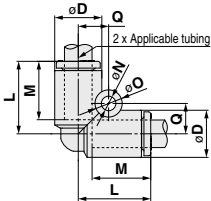
Pressure Switches/ Pressure Sensors

**Dimensions**

**Union Elbow: 10-KQ2L**



Applicable tubing O.D. (inch)	Model	Note) $\phi D$	L	Q	M	Mounting hole		Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
						$\phi O$	$\phi N$			
$\phi 1/8$	<b>10-KQ2L01-00A</b>	7.1	14.9	5.4	13.3	6	3.2	7.1	2.5	1.6
$\phi 5/32$	<b>10-KQ2L03-00A</b>	8.2	15.3	5.7	13.3	6	3.2	8.2	4.2	1.9
$\phi 3/16$	<b>10-KQ2L05-00A</b>	9.1	15.7	6.2	13.3	6	3.2	9.1	5.6	2.2
$\phi 1/4$	<b>10-KQ2L07-00A</b>	11.1	16.5	7.2	13.3	6	3.2	11.1	10	2.9
$\phi 5/16$	<b>10-KQ2L09-00A</b>	13.2	18.2	8.4	14.2	8	4.2	13.2	14.9	4.7
$\phi 3/8$	<b>10-KQ2L11-00A</b>	15.4	20.4	9.9	15.6	8	4.2	15.4	23.8	6.7
$\phi 1/2$	<b>10-KQ2L13-00A</b>	19.3	23.4	11.8	17	8	4.2	19.3	44.4	10.8

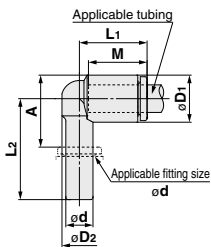


Note)  $\phi D$  is maximum diameter.

**Plug-in Elbow: 10-KQ2L**



Applicable tubing O.D. (inch)	Applicable fitting size $\phi d$ (inch)	Model	Note) $\phi D1$	$\phi D2$	L1	L2	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 5/32$	$\phi 5/32$	<b>10-KQ2L03-99A</b>	8.2	7.2	14.5	21.1	11.9	13.3	4.2	2.5	1.2
$\phi 3/16$	$\phi 3/16$	<b>10-KQ2L05-99A</b>	9.1	8	15	22.2	13.4	13.3	5.6	3.5	1.4
$\phi 1/4$	$\phi 1/4$	<b>10-KQ2L07-99A</b>	11.1	8	15.6	22.8	15	13.3	10	4.6	1.9
$\phi 5/16$	$\phi 5/16$	<b>10-KQ2L09-99A</b>	13.2	10	17.2	26.2	18.6	14.2	14.9	6	3
$\phi 3/8$	$\phi 3/8$	<b>10-KQ2L11-99A</b>	15.4	12	19.1	28	20.1	15.6	23.8	7	4.5
$\phi 1/2$	$\phi 1/2$	<b>10-KQ2L13-99A</b>	19.3	14	21.8	38.7	31.3	17	44.4	9.6	7.8

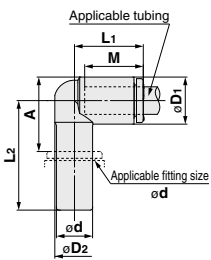


Note)  $\phi D1$  is maximum diameter.

**Reducer Elbow: 10-KQ2L**



Applicable tubing O.D. (inch)	Applicable fitting size $\phi d$ (inch)	Model	Note) $\phi D1$	$\phi D2$	L1	L2	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	$\phi 3/16$	<b>10-KQ2L01-05A</b>	7.1	6.4	14.5	28.4	18.6	13.3	2.5	2.5	1.1
	$\phi 1/4$	<b>10-KQ2L01-07A</b>	7.1	6.4	14.5	24.5	14.7	13.3	2.5	2.5	1.3
$\phi 5/32$	$\phi 3/16$	<b>10-KQ2L03-05A</b>	8.2	7.2	14.8	29.1	19.9	13.3	4.2	3	1.3
	$\phi 1/4$	<b>10-KQ2L03-07A</b>	8.2	7.2	14.8	21.1	11.9	13.3	4.2	3	1.4
$\phi 3/16$	$\phi 1/4$	<b>10-KQ2L05-07A</b>	9.1	8	15	21.6	12.8	13.3	5.6	3.5	1.5
	$\phi 5/16$	<b>10-KQ2L05-09A</b>	9.1	8	15	30	20.3	13.3	5.6	3.5	1.9
$\phi 1/4$	$\phi 5/16$	<b>10-KQ2L07-09A</b>	11.1	8	15.6	30.7	22	13.3	10	4.6	2.3
	$\phi 3/8$	<b>10-KQ2L07-11A</b>	11.1	8	15.6	31.1	21	13.3	10	4.6	3
$\phi 5/16$	$\phi 3/8$	<b>10-KQ2L09-11A</b>	13.2	10	18.8	34.1	25.1	14.2	14.9	6	3.7
	$\phi 1/2$	<b>10-KQ2L09-13A</b>	13.2	10	18.8	35.6	25.2	14.2	14.9	6	4.6
$\phi 3/8$	$\phi 1/2$	<b>10-KQ2L11-13A</b>	15.4	12	19.1	36.5	27.2	15.6	23.8	7	5.6

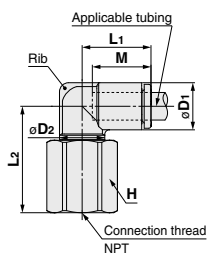


Note)  $\phi D1$  is maximum diameter.

**Female Elbow: 10-KQ2LF**



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
1/4	<b>10-KQ2LF01-35N</b>	17.46	7.1	10	14.5	26.3	13.3	2.5	2.5	31.7	—	
$\phi 5/32$	1/8	<b>10-KQ2LF03-34N</b>	14.29	8.2	10	14.8	22.4	13.3	4.2	3	18.3	●
	1/4	<b>10-KQ2LF03-35N</b>	17.46	8.2	10	14.8	26.9	13.3	4.2	3	31.9	●
$\phi 1/4$	1/8	<b>10-KQ2LF07-34N</b>	14.29	11.1	10	15.6	23.9	13.3	10	4.5	18.9	●
	1/4	<b>10-KQ2LF07-35N</b>	17.46	11.1	10	15.6	28.4	13.3	10	4.5	32.4	●
$\phi 3/8$	3/8	<b>10-KQ2LF07-36N</b>	22.23	11.1	10	15.6	28.9	13.3	10	4.5	53.1	●
	1/4	<b>10-KQ2LF11-35N</b>	17.46	15.4	17	19.3	27.1	15.6	23.8	7	28	●
$\phi 3/8$	3/8	<b>10-KQ2LF11-36N</b>	22.23	15.4	17	19.3	33.3	15.6	23.8	7	49.6	●
	1/2	<b>10-KQ2LF11-37N</b>	23.81	15.4	17	19.3	36.3	15.6	23.8	7	56.9	●
$\phi 1/2$	3/8	<b>10-KQ2LF13-36N</b>	22.23	19.3	17	21.8	30.4	17	44.4	9.5	51.4	—
	1/2	<b>10-KQ2LF13-37N</b>	23.81	19.3	17	21.8	33.4	17	44.4	9.5	58	—



Note)  $\phi D1$  is maximum diameter.

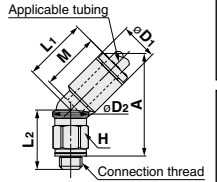
**Dimensions**

**45° Male Elbow: 10-KQ2K (Gasket seal)**



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-32UNF	10-KQ2K01-32N	7	7.1	7	14.4	13	21.9	13.3	2.5	2.5	2.8
$\phi 5/32$	10-32UNF	10-KQ2K03-32N	7	8.2	7	14.4	13	22.2	13.3	3.4	2.5	3
$\phi 1/4$	10-32UNF	10-KQ2K07-32N	7	11.1	7	14.9	16.5	26.8	13.3	3.5	2.5	3.6

Note)  $\phi D_1$  is maximum diameter.

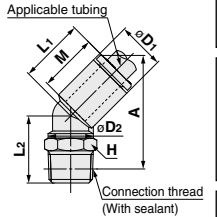


**45° Male Elbow: 10-KQ2K (Sealant)**



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/8	10-KQ2K01-34NS	11.11	7.1	10	14.3	12.7	21.8	13.3	2.5	2.5	5.3
$\phi 5/32$	1/8	10-KQ2K03-34NS	11.11	8.2	10	14.4	12.7	22.2	13.3	4.2	3	5.5
$\phi 3/16$	1/8	10-KQ2K05-34NS	11.11	9.1	10	14.5	13.2	23.1	13.3	5.6	3.5	5.6
$\phi 1/4$	1/8	10-KQ2K07-34NS	11.11	11.1	10	14.8	15.2	25.8	13.3	10	4.5	6
	1/4	10-KQ2K07-35NS	14.29	11.1	10	14.8	19.6	29	13.3	10	4.5	15.6
$\phi 5/16$	3/8	10-KQ2K07-36NS	17.46	11.1	10	14.8	21	30.1	13.3	10	4.5	27.8
	1/8	10-KQ2K09-34NS	11.11	13.2	10	16	15.7	27.9	14.2	11.3	4.5	6.8
$\phi 1/2$	1/8	10-KQ2K09-34NSQ <sup>Note 2)</sup>	12.7	13.2	12	16	20.5	32.7	14.2	19.7	6	9.7
	1/4	10-KQ2K09-35NS	14.29	13.2	12	16	21.1	32.1	14.2	19.7	6	13.9
	3/8	10-KQ2K09-36NS	17.46	13.2	12	16	22.5	33.2	14.2	19.7	6	26
$\phi 3/8$	1/8	10-KQ2K11-34NS	12.7	15.4	12	18.1	21.1	35.5	15.6	21.2	6	11.7
	1/4	10-KQ2K11-35NS	17.46	15.4	17	17.7	28.6	41.5	15.6	23.8	7	21.8
	3/8	10-KQ2K11-36NS	17.46	15.4	17	17.7	23.5	36.1	15.6	23.8	7	19.2
$\phi 1/2$	1/2	10-KQ2K11-37NS	22.23	15.4	17	17.7	27.7	38.6	15.6	23.8	7	45.7
	1/4	10-KQ2K13-35NS	17.46	19.3	17	19.4	28.7	44.1	17	44.4	9	23.8
	3/8	10-KQ2K13-36NS	17.46	19.3	17	19.4	23.6	38.7	17	44.4	9.5	19.9
1/2	10-KQ2K13-37NS	22.23	19.3	17	19.4	27.8	41.2	17	44.4	9.5	46	

\* Reference dimensions after installation of NPT thread  
 Note 1)  $\phi D_1$  is maximum diameter.  
 Note 2) Refer to page 1175-1 for details.

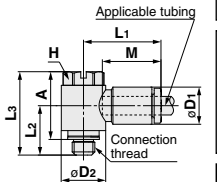


**Universal Male Elbow: 10-KQ2V (Gasket seal)**



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-32UNF	10-KQ2V01-32N	8	7.1	9.8	17.5	10.4	17.9	14.9	13.3	1.9	2.5	5.2
$\phi 5/32$	10-32UNF	10-KQ2V03-32N	8	8.2	9.8	17.5	10.4	17.9	14.9	13.3	2.9	2.5	5.3
$\phi 1/4$	10-32UNF	10-KQ2V07-32N	8	11.1	13.4	20.6	12.1	24	20.5	13.3	2.9	2.5	12.2

Note)  $\phi D_1$  is maximum diameter.

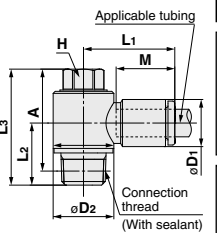


**Universal Male Elbow: 10-KQ2V (Sealant)**



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/8	10-KQ2V01-34NS	8	7.1	13.4	19.3	13.7	25.6	22.4	13.3	1.9	2.5	13.5
$\phi 5/32$	1/8	10-KQ2V03-34NS	8	8.2	13.4	19.3	13.7	25.6	22.4	13.3	2.9	3	13.6
$\phi 3/16$	1/8	10-KQ2V05-34NS	8	9.1	13.4	19.6	13.7	25.6	22.4	13.3	3.7	3.5	13.7
$\phi 1/4$	1/8	10-KQ2V07-34NS	8	11.1	13.4	20.6	13.7	25.6	22.4	13.3	6.6	4.5	14.1
	1/4	10-KQ2V07-35NS	8	11.1	15.3	19.9	18.7	32.1	27.7	13.3	6.6	4.5	25.6
$\phi 5/16$	1/8	10-KQ2V09-34NS	11.11	13.2	17.6	23.5	15.1	27.6	24.4	14.2	11.2	6	22.3
	1/4	10-KQ2V09-35NS	11.11	13.2	17.6	23.5	18.5	31	26.6	14.2	11.2	6	29.2
	3/8	10-KQ2V09-36NS	12.7	13.2	20.6	23.1	19.5	35.3	30.6	14.2	11.2	6	44.1
$\phi 3/8$	1/4	10-KQ2V11-35NS	12.7	15.4	20.6	25.8	19.6	34.9	30.5	15.6	19.3	7	37.5
	3/8	10-KQ2V11-36NS	12.7	15.4	20.6	25.8	20	35.3	30.6	15.6	19.3	7	45.2
	1/2	10-KQ2V13-36NS	17.46	19.3	27	30.5	20.2	35.1	30.4	17	34.3	9	64
1/2	10-KQ2V13-37NS	17.46	19.3	27	30.5	23.4	38.3	31.9	17	34.3	9	82.6	

\* Reference dimensions after installation of NPT thread  
 Note)  $\phi D_1$  is maximum diameter.



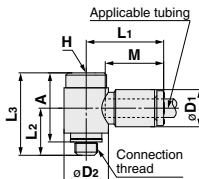
## Dimensions

### Hexagon Socket Head Universal Male Elbow: 10-KQ2VS (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	Note	øD1	øD2	L1	L2	L3	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø1/8	10-32UNF	10-KQ2VS01-32N	4		7.1	9.8	17.5	10.4	18.2	15.2	13.3	1.9	2.3	5.3
ø5/32	10-32UNF	10-KQ2VS03-32N	4		8.2	9.8	17.5	10.4	18.2	15.2	13.3	2.9	2.3	5.4
ø1/4	10-32UNF	10-KQ2VS07-32N	6.35		11.1	13.4	20.6	11.1	23.2	20.2	13.3	2.9	2.5	11.3

Note) øD1 is maximum diameter.

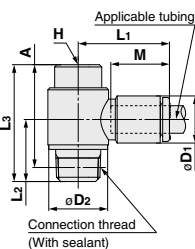


### Hexagon Socket Head Universal Male Elbow: 10-KQ2VS (Sealant)



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note	øD1	L1	L2	L3	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	
ø1/8	1/8	10-KQ2VS01-34NS	6.35		7.1	13.4	19.3	13.7	25.8	22.6	13.3	1.9	2.5	13.1
ø5/32	1/8	10-KQ2VS03-34NS	6.35		8.2	13.4	19.3	13.7	25.8	22.6	13.3	2.9	3	13.2
ø3/16	1/8	10-KQ2VS05-34NS	6.35		9.1	13.4	19.6	13.7	25.8	22.6	13.3	3.7	3.5	13.3
ø1/4	1/8	10-KQ2VS07-34NS	6.35		11.1	13.4	20.6	13.7	25.8	22.6	13.3	6.6	4.6	13.7
	1/4	10-KQ2VS07-35NS	6.35		11.1	15.3	19.9	18.7	28.1	23.7	13.3	6.6	4.6	20.8
ø5/16	1/8	10-KQ2VS09-34NS	8		13.2	17.6	23.5	15.1	26	22.8	14.2	11.2	6	19.3
	1/4	10-KQ2VS09-35NS	8		13.2	17.6	23.5	18.5	29.5	25.1	14.2	11.2	6	24.6
	3/8	10-KQ2VS09-36NS	8		13.2	20.6	23.1	19.5	31.4	26.7	14.2	11.2	6	37.6
ø3/8	1/4	10-KQ2VS11-35NS	8		15.4	20.6	25.8	19.6	30.8	26.4	15.6	19.3	7	29
	3/8	10-KQ2VS11-36NS	8		15.4	20.6	25.8	20	31.4	26.7	15.6	19.3	7	38.6
ø1/2	3/8	10-KQ2VS13-36NS	9.53		19.3	27	30.5	20.2	33.6	28.9	17	34.3	9	59.2
	1/2	10-KQ2VS13-37NS	9.53		19.3	27	30.5	23.4	36.8	30.4	17	34.3	9	78.3

\* Reference dimensions after installation of NPT thread  
Note) øD1 is maximum diameter.

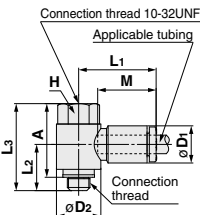


### Universal Female Elbow: 10-KQ2VF (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	Note	øD1	øD2	L1	L2	L3	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø1/8	10-32UNF	10-KQ2VF01-32N	8		7.1	9.8	17.5	10.4	19.4	16.4	13.3	1.9	2.5	5.4
ø5/32	10-32UNF	10-KQ2VF03-32N	8		8.2	9.8	17.5	10.4	19.4	16.4	13.3	2.9	2.5	5.5
ø1/4	10-32UNF	10-KQ2VF07-32N	14.29		11.1	13.4	20.6	12.8	22.4	19.4	13.3	2.9	2.5	14.2

Note) øD1 is maximum diameter.

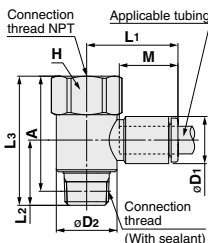


### Universal Female Elbow: 10-KQ2VF (Sealant)



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note	øD1	øD2	L1	L2	L3	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø1/8	1/8	10-KQ2VF01-34NS	14.29		7.1	13.4	19.3	14.4	28.5	25.3	13.3	1.9	2.5	18
ø5/32	1/8	10-KQ2VF03-34NS	14.29		8.2	13.4	19.3	14.4	28.5	25.3	13.3	2.9	3	18.1
ø3/16	1/8	10-KQ2VF05-34NS	14.29		9.1	13.4	19.6	14.4	28.5	25.3	13.3	3.7	3.5	18.2
ø1/4	1/8	10-KQ2VF07-34NS	14.29		11.1	13.4	20.6	14.4	28.5	25.3	13.3	6.6	4.6	18.5
	1/4	10-KQ2VF07-35NS	17.46		11.1	17.6	21.3	19.4	37.9	33.5	13.3	6.6	4.6	38.4
ø5/16	1/8	10-KQ2VF09-34NS	17.46		13.2	17.6	23.5	15.5	30	26.8	14.2	11.2	6	28.7
	1/4	10-KQ2VF09-35NS	17.46		13.2	17.6	23.5	18.9	37.9	33.5	14.2	11.2	6	39.3
	3/8	10-KQ2VF09-36NS	22.23		13.2	25.2	24.9	24	44	39.3	14.2	11.2	6	67.2
ø3/8	1/4	10-KQ2VF11-35NS	22.23		15.4	20.6	25.8	20.7	40.3	35.9	15.6	19.3	7	58.7
	3/8	10-KQ2VF11-36NS	22.23		15.4	25.2	26.3	23.2	44	39.3	15.6	19.3	7	67.9
ø1/2	3/8	10-KQ2VF13-36NS	25.4		19.3	27	30.5	21.2	40.7	36	17	34.3	9	69.8
	1/2	10-KQ2VF13-37NS	25.4		19.3	27	30.5	24.4	48.9	42.5	17	34.3	9	105.7

\* Reference dimensions after installation of NPT thread  
Note) øD1 is maximum diameter.





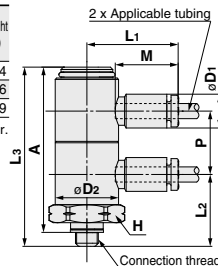
**Dimensions**

**Double Universal Male Elbow: 10-KQ2VD (Gasket seal)**



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L1	L2	L3	A	M	P	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-32UNF	10-KQ2VD01-32N	14.29	7.1	13.4	19.3	15.2	37.9	34.9	13.3	13.4	1.9	2.3	24.4
$\phi 5/32$	10-32UNF	10-KQ2VD03-32N	14.29	8.2	13.4	19.3	15.2	37.9	34.9	13.3	13.4	2.5	2.3	24.6
$\phi 1/4$	10-32UNF	10-KQ2VD07-32N	14.29	11.1	13.4	20.6	15.6	38.7	35.7	13.3	13.8	2.5	2.3	26.9

Note)  $\phi D_1$  is maximum diameter.

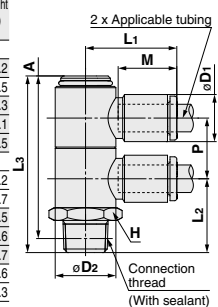


**Double Universal Male Elbow: 10-KQ2VD (Sealant)**



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L1	L2	L3	A*	M	P	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/8	10-KQ2VD01-34NS	14.29	7.1	13.4	19.3	16.3	39	35.8	13.3	13.4	1.9	2.5	20
$\phi 5/32$	1/8	10-KQ2VD03-34NS	14.29	8.2	13.4	19.3	16.3	39	35.8	13.3	13.4	2.9	3	20.2
$\phi 3/16$	1/8	10-KQ2VD05-34NS	14.29	9.1	13.4	19.6	16.3	39	35.8	13.3	13.4	3.7	3.5	23.3
	1/8	10-KQ2VD07-34NS	14.29	11.1	13.4	20.6	17.7	40.8	37.6	13.3	13.8	6.6	4.6	23.3
$\phi 1/4$	1/4	10-KQ2VD07-35NS	14.29	11.1	13.4	20.6	21.1	44.2	39.8	13.3	13.8	6.6	4.6	30.1
	3/8	10-KQ2VD07-36NS	17.46	11.1	13.4	20.6	22.5	45.6	40.9	13.3	13.8	6.6	4.6	42.5
	1/4	10-KQ2VD09-35NS	19	13.2	17.6	23.7	22.4	49.2	44.8	14.2	15.9	11.2	6	45
$\phi 5/16$	3/8	10-KQ2VD09-36NS	19	13.2	17.6	23.7	23	49.8	45.1	14.2	15.9	11.2	6	53.2
	1/2	10-KQ2VD09-37NS	22.23	13.2	17.6	23.7	27.2	54	47.6	14.2	15.9	11.2	6	79.7
	1/4	10-KQ2VD11-35NS	22.23	15.4	20.6	25.3	24.4	56.3	51.9	15.6	19.2	19.3	7	65.5
$\phi 3/8$	3/8	10-KQ2VD11-36NS	22.23	15.4	20.6	25.3	24.8	56.7	52	15.6	19.2	19.3	7	67.6
	1/2	10-KQ2VD11-37NS	22.23	15.4	20.6	25.3	28.7	60.6	54.2	15.6	19.2	19.3	7	87.7
	3/8	10-KQ2VD13-36NS	25.4	19.3	27	30.5	29.6	64.4	59.7	17	22.3	34.3	9.6	128.6
$\phi 1/2$	1/2	10-KQ2VD13-37NS	25.4	19.3	27	30.5	32.8	67.6	61.2	17	22.3	34.3	9.6	146.3

\* Reference dimensions after installation of NPT thread  
Note)  $\phi D_1$  is maximum diameter.



- Directional Control Valves
- Air Cylinders
- Rotary Actuators
- Air Grippers
- Air Preparation Equipment
- Modular F. R.
- Pressure Control Equipment
- Fittings & Tubing
- Flow Control Equipment
- Pressure Switches/ Pressure Sensors

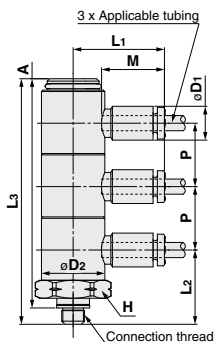
## Dimensions

### Triple Universal Male Elbow: 10-KQ2VT (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	(Note) $\phi D_1$	$\phi D_2$	L1	L2	L3	A	M	P	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-32UNF	10-KQ2VT01-32N	14.29	7.1	13.4	19.3	15.7	51.9	48.4	13.3	13.4	1.9	2.5	32.4
$\phi 5/32$	10-32UNF	10-KQ2VT03-32N	14.29	8.2	13.4	19.3	15.7	51.9	48.4	13.3	13.4	2.9	2.5	32.7
$\phi 1/4$	10-32UNF	10-KQ2VT07-32N	14.29	11.1	13.4	20.6	16.1	53	49.5	13.3	13.8	2.3	2.5	35.4

(Note)  $\phi D_1$  is maximum diameter.

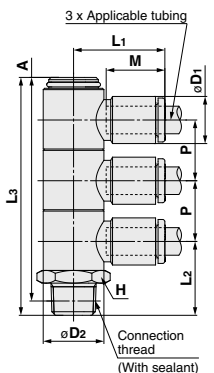


### Triple Universal Male Elbow: 10-KQ2VT (Sealant)



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	(Note) $\phi D_1$	$\phi D_2$	L1	L2	L3	A*	M	P	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/8	10-KQ2VT01-34NS	14.29	7.1	13.4	19.3	16.3	52.5	49.3	13.3	13.4	1.9	2.5	25.5
$\phi 5/32$	1/8	10-KQ2VT03-34NS	14.29	8.2	13.4	19.3	16.3	52.5	49.3	13.3	13.4	2.9	3	25.8
$\phi 3/16$	1/8	10-KQ2VT05-34NS	14.29	9.1	13.4	19.6	16.3	52.5	49.3	13.3	13.4	3.7	3.5	26.2
$\phi 1/4$	1/8	10-KQ2VT07-34NS	14.29	11.1	13.4	20.6	17.7	54.6	51.4	13.3	13.8	6.6	4.6	29.7
	3/8	10-KQ2VT07-35NS	14.29	11.1	13.4	20.6	21.1	58	53.6	13.3	13.8	6.6	4.6	36.6
$\phi 5/16$	3/8	10-KQ2VT07-36NS	17.46	11.1	13.4	20.6	22.5	59.4	54.7	13.3	13.8	6.6	4.6	49
	1/4	10-KQ2VT09-35NS	17.46	13.2	17.6	23.7	22.4	65.2	60.8	14.2	15.9	11.2	6	55.4
$\phi 3/8$	3/8	10-KQ2VT09-36NS	19	13.2	17.6	23.7	23	65.8	61.1	14.2	15.9	11.2	6	65.3
	1/2	10-KQ2VT09-37NS	22.23	13.2	17.6	23.7	27.2	70	63.6	14.2	15.9	11.2	6	91.8
$\phi 1/2$	1/4	10-KQ2VT11-35NS	22.23	15.4	20.6	25.3	24.4	75.6	71.2	15.6	19.2	19.3	7	84.2
	3/8	10-KQ2VT11-36NS	22.23	15.4	20.6	25.3	24.8	76	71.3	15.6	19.2	19.3	7	91.8
$\phi 1/2$	1/2	10-KQ2VT11-37NS	22.23	15.4	20.6	25.3	28.7	79.9	73.5	15.6	19.2	19.3	7	104.4
	3/8	10-KQ2VT13-36NS	25.4	19.3	27	30.5	29.6	86.8	82.1	17	22.3	34.3	9.6	169.3
$\phi 1/2$	1/2	10-KQ2VT13-37NS	25.4	19.3	27	30.5	32.8	90	83.6	17	22.3	34.3	9.6	187

\* Reference dimensions after installation of NPT thread  
(Note)  $\phi D_1$  is maximum diameter.



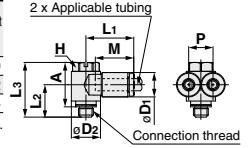
**Dimensions**

**Branch Universal Male Elbow: 10-KQZ2 (Gasket seal)**



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L1	L2	L3	A	M	P	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-32UNF	10-KQZ201-32N	8	7.1	9.8	16.5	10.4	17.9	14.9	13.3	7.1	1.9	2.5	5.9
$\phi 5/32$	10-32UNF	10-KQZ203-32N	8	8.2	9.8	16.5	10.4	17.9	14.9	13.3	8.2	2.9	2.5	6.2
$\phi 1/4$	10-32UNF	10-KQZ207-32N	8	11.1	13.4	18.4	12.1	24	20.5	13.3	11.1	2.9	2.5	13.4

Note)  $\phi D_1$  is maximum diameter.

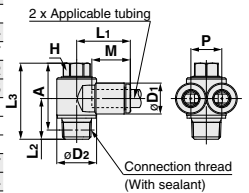


**Branch Universal Male Elbow: 10-KQZ2 (Sealant)**



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L1	L2	L3	A*	M	P	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/8	10-KQZ201-34NS	8	7.1	13.4	18.5	13.7	25.6	22.4	13.3	7.1	1.9	2.5	14.1
$\phi 5/32$	1/8	10-KQZ203-34NS	8	8.2	13.4	18.5	13.7	25.6	22.4	13.3	8.2	2.9	3	14.4
$\phi 3/16$	1/8	10-KQZ207-34NS	8	9.1	13.4	18.4	13.7	25.6	22.4	13.3	9.1	3.7	3.5	14.7
$\phi 1/4$	1/8	10-KQZ207-34NS	8	11.1	13.4	18.4	13.7	25.6	22.4	13.3	11.1	6.6	4.5	15.2
	1/4	10-KQZ207-35NS	11.11	11.1	17.6	20.4	18	31	26.6	13.3	11.1	6.6	4.5	29.5
$\phi 5/16$	1/8	10-KQZ209-34NS	11.11	13.2	17.6	21.2	15.1	27.6	24.4	14.2	13.2	14.2	6	24.1
	1/4	10-KQZ209-35NS	11.11	13.2	17.6	21.2	18.5	31	26.6	14.2	13.2	14.2	6	31
$\phi 3/8$	3/8	10-KQZ209-36NS	12.7	13.2	20.6	22.3	19.5	35.3	30.6	14.2	13.2	14.2	6	46
	1/4	10-KQZ211-35NS	12.7	15.4	20.6	25.9	19.1	34.9	30.5	15.6	15.4	19.3	7	40.7
$\phi 3/8$	3/8	10-KQZ211-36NS	12.7	15.4	20.6	25.9	19.5	35.3	30.6	15.6	15.4	19.3	7	48.4
	3/8	10-KQZ213-36NS	17.46	19.3	27	30.1	20.2	35.1	30.4	17	19.3	34.3	9	69.5
$\phi 1/2$	1/2	10-KQZ213-37NS	17.46	19.3	27	30.1	23.4	38.3	31.9	17	19.3	34.3	9	88.1

\* Reference dimensions after installation of NPT thread  
Note)  $\phi D_1$  is maximum diameter.

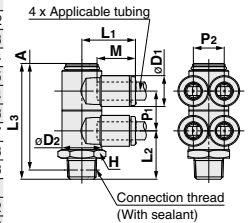


**Double Branch Universal Male Elbow: 10-KQZ2D (Sealant)**



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L1	L2	L3	A*	M	P1	P2	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/8	10-KQZ2D01-34NS	14.29	7.1	13.4	18.5	16.3	39	35.8	13.3	13.4	7.1	1.9	2.5	21.2
$\phi 5/32$	1/8	10-KQZ2D03-34NS	14.29	8.2	13.4	18.5	16.3	39	35.8	13.3	13.4	8.2	2.9	3	21.8
$\phi 3/16$	1/8	10-KQZ2D05-34NS	14.29	9.1	13.4	18.4	16.3	39	35.8	13.3	13.4	9.1	3.7	3.5	22.4
$\phi 1/4$	1/8	10-KQZ2D07-34NS	14.29	11.1	13.4	18.3	17.7	40.8	37.6	13.3	13.8	11.1	6.6	4.6	25.5
	1/4	10-KQZ2D07-35NS	14.29	11.1	13.4	18.3	21.1	44.2	39.8	13.3	13.8	11.1	6.6	4.6	32.4
$\phi 5/16$	3/8	10-KQZ2D07-36NS	17.46	11.1	13.4	18.3	22.5	45.6	40.9	13.3	13.8	11.1	6.6	4.6	44.8
	1/4	10-KQZ2D09-35NS	19	13.2	17.6	21.95	22.4	49.2	44.8	14.2	15.9	13.2	14.2	6	48.7
$\phi 3/8$	3/8	10-KQZ2D09-36NS	19	13.2	17.6	21.95	23	49.8	45.1	14.2	15.9	13.2	14.2	6	56.8
	1/2	10-KQZ2D09-37NS	22.23	13.2	17.6	21.95	27.2	54	47.6	14.2	15.9	13.2	14.2	6	83.3
$\phi 1/2$	3/8	10-KQZ2D11-35NS	22.23	15.4	20.6	23.6	24.4	56.3	51.9	15.6	19.2	15.4	19.3	7	71.1
	1/2	10-KQZ2D11-36NS	22.23	15.4	20.6	23.6	24.8	56.7	52	15.6	19.2	15.4	19.3	7	73.2
$\phi 1/2$	1/2	10-KQZ2D11-37NS	22.23	15.4	20.6	23.6	28.7	60.6	54.2	15.6	19.2	15.4	19.3	7	93.2
	3/8	10-KQZ2D13-36NS	25.4	19.3	27	27.9	29.6	64.4	59.7	17	22.3	19.3	34.3	9.6	137.3
$\phi 1/2$	1/2	10-KQZ2D13-37NS	25.4	19.3	27	27.9	32.6	67.6	61.2	17	22.3	19.3	34.3	9.6	155

\* Reference dimensions after installation of NPT thread  
Note)  $\phi D_1$  is maximum diameter.

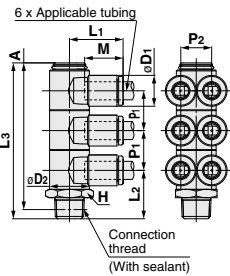


**Dimensions**

**Triple Universal Male Elbow: 10-KQ2ZT (Sealant)**



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A*	M	P <sub>1</sub>	P <sub>2</sub>	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/8	10-KQ2ZT01-34NS	14.29	7.1	13.4	18.5	16.3	52.5	49.3	13.3	13.4	7.1	1.9	2.5	27.3
$\phi 5/32$	1/8	10-KQ2ZT03-34NS	14.29	8.2	13.4	18.5	16.3	52.5	49.3	13.3	13.4	8.2	2.9	3	28.2
$\phi 3/16$	1/8	10-KQ2ZT05-34NS	14.29	9.1	13.4	18.4	16.3	52.5	49.3	13.3	13.4	9.1	3.7	3.5	29
$\phi 1/4$	1/8	10-KQ2ZT07-34NS	14.29	11.1	13.4	18.3	17.7	54.6	51.4	13.3	13.8	11.1	6.6	4.6	33.1
	1/4	10-KQ2ZT07-35NS	14.29	11.1	13.4	18.3	21.1	58	53.6	13.3	13.8	11.1	6.6	4.6	40
	3/8	10-KQ2ZT07-36NS	17.46	11.1	13.4	18.3	22.5	59.4	54.7	13.3	13.8	11.1	6.6	4.6	52.4
$\phi 5/16$	1/4	10-KQ2ZT09-35NS	17.46	13.2	17.6	21.2	22.4	65.2	60.8	14.2	15.9	13.2	14.2	6	60.9
	3/8	10-KQ2ZT09-36NS	19	13.2	17.6	21.2	23	65.8	61.1	14.2	15.9	13.2	14.2	6	70.8
$\phi 1/2$	1/2	10-KQ2ZT09-37NS	22.23	13.2	17.6	21.2	27.2	70	63.6	14.2	15.9	13.2	14.2	6	97.3
	1/4	10-KQ2ZT11-35NS	22.23	15.4	20.6	23.6	24.4	75.6	71.2	15.6	19.2	15.4	19.3	7	100.2
$\phi 3/8$	1/2	10-KQ2ZT11-36NS	22.23	15.4	20.6	23.6	24.8	76	71.3	15.6	19.2	15.4	19.3	7	100.2
	3/8	10-KQ2ZT11-37NS	22.23	15.4	20.6	23.6	28.7	79.9	73.5	15.6	19.2	15.4	19.3	7	100.2
$\phi 1/2$	3/8	10-KQ2ZT13-36NS	25.4	19.3	27	27.9	29.6	86.8	82.1	17	22.3	19.3	34.3	9.6	182.3
	1/2	10-KQ2ZT13-37NS	25.4	19.3	27	27.9	32.8	90	83.6	17	22.3	19.3	34.3	9.6	200

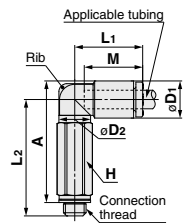


\* Reference dimensions after installation of NPT thread  
Note)  $\phi D_1$  is maximum diameter.

**Extended Male Elbow: 10-KQ2W (Gasket seal)**



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
$\phi 1/8$	10-32UNF	10-KQ2W01-32N	7	7.1	7	15.3	25.8	26.4	13.3	2.4	2.5	5.9	●
$\phi 5/32$	10-32UNF	10-KQ2W03-32N	7	8.2	7	15.4	26.3	27.5	13.3	3	2.5	6	●
$\phi 1/4$	10-32UNF	10-KQ2W07-32N	7	11.1	7	15.4	27.6	30.2	13.3	3.5	2.5	6.4	●

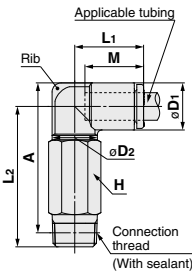


Note)  $\phi D_1$  is maximum diameter.

**Extended Male Elbow: 10-KQ2W (Sealant)**



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
1/16	10-KQ2W01-33NS	11.11	7.1	10	14.5	35.9	35.4	13.3	2.4	2.5	16.6	—	
$\phi 1/8$	1/8	10-KQ2W01-34NS	11.11	7.1	10	14.5	30.3	30.7	13.3	2.4	2.5	13.9	—
	1/4	10-KQ2W01-35NS	14.29	7.1	10	14.5	32.7	31.9	13.3	2.4	2.5	27.3	—
	1/16	10-KQ2W03-33NS	11.11	8.2	10	14.8	35.4	35.4	13.3	4	3	16.7	●
$\phi 5/32$	1/8	10-KQ2W03-34NS	11.11	8.2	10	14.8	29.9	30.8	13.3	4	3	14.1	●
	1/4	10-KQ2W03-35NS	14.29	8.2	10	14.8	33.2	32.9	13.3	4	3	27.5	●
$\phi 3/16$	1/8	10-KQ2W05-34NS	11.11	9.1	10	15	30.4	31.7	13.3	5.6	3.5	14.3	—
	1/4	10-KQ2W05-35NS	14.29	9.1	10	15	33.7	33.9	13.3	5.6	3.5	27.7	—
$\phi 1/4$	1/16	10-KQ2W07-33NS	11.11	11.1	10	15.6	36.9	38.4	13.3	6.8	3.5	17.3	●
	1/8	10-KQ2W07-34NS	11.11	11.1	10	15.6	31.4	33.7	13.3	10	4.5	14.6	●
	1/4	10-KQ2W07-35NS	14.29	11.1	10	15.6	34.7	35.9	13.3	10	4.5	28	●
$\phi 5/16$	3/8	10-KQ2W07-36NS	17.46	11.1	10	15.6	36.1	37	13.3	10	4.5	50.2	●
	1/8	10-KQ2W09-34NS	11.11	13.2	10	16.4	32.4	35.8	14.2	11.3	4.5	15.4	●
	Note 2) $\phi 5/32$	10-KQ2W09-34NQ3	12.7	13.2	12	17.2	42.4	45.8	14.2	14.2	6	26.4	●
	1/4	10-KQ2W09-35NS	14.29	13.2	12	17.2	37.8	40	14.2	14.2	6	26.5	●
$\phi 3/8$	3/8	10-KQ2W09-36NS	17.46	13.2	12	17.2	39.2	41.1	14.2	14.2	6	50	●
	1/4	10-KQ2W11-35NS	17.46	15.4	17	19.3	48.3	51.6	15.6	23.8	7.5	54.3	●
	3/8	10-KQ2W11-36NS	17.46	15.4	17	19.3	45.1	48.1	15.6	23.8	7.5	37.8	●
$\phi 1/2$	1/2	10-KQ2W11-37NS	22.23	15.4	17	19.3	49.3	50.6	15.6	23.8	7.5	86.5	●
	1/4	10-KQ2W13-35NS	17.46	19.3	17	21.5	50.2	55.5	17	44.4	9	56.6	—
$\phi 3/8$	3/8	10-KQ2W13-36NS	17.46	19.3	17	21.8	46	51	17	44.4	9.5	42.8	—
	1/2	10-KQ2W13-37NS	22.23	19.3	17	21.8	50.2	53.5	17	44.4	9.5	95.5	—



\* Reference dimensions after installation of NPT thread  
Note 1)  $\phi D_1$  is maximum diameter.  
Note 2) Refer to page 1175-1 for details.



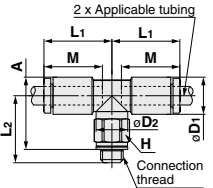
**Dimensions**

**Male Branch Tee: 10-KQ2T (Gasket seal)**



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-32UNF	10-KQ2T01-32N	7	7.1	7	15.3	14.2	14.8	13.3	2.7	2.5	3.5
$\phi 5/32$	10-32UNF	10-KQ2T03-32N	7	8.2	7	15.4	14.7	15.8	13.3	4.5	2.5	3.8
$\phi 1/4$	10-32UNF	10-KQ2T07-32N	7	11.1	7	15.4	16	18.6	13.3	4.5	2.5	4.7

Note)  $\phi D1$  is maximum diameter.

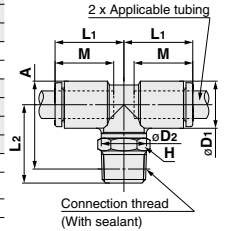


**Male Branch Tee: 10-KQ2T (Sealant)**



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note 1) $\phi D1$	$\phi D2$	L1	L2	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/16	10-KQ2T01-33NS	11.11	7.1	10	14.5	24.2	23.7	13.3	2.9	2.5	9.7
	1/8	10-KQ2T01-34NS	11.11	7.1	10	14.5	16.6	17	13.3	2.9	2.5	6
	1/4	10-KQ2T01-35NS	14.29	7.1	10	14.5	21	20.2	13.3	2.9	2.5	15.6
$\phi 5/32$	1/16	10-KQ2T03-33NS	11.11	8.2	10	14.8	23.8	23.8	13.3	4.1	3	10
	1/8	10-KQ2T03-34NS	11.11	8.2	10	14.8	16.2	17.1	13.3	4.1	3	6.3
$\phi 3/16$	1/4	10-KQ2T03-35NS	14.29	8.2	10	14.8	21.6	21.3	13.3	4.1	3	15.9
	1/8	10-KQ2T05-34NS	11.11	9.1	10	15	16.7	18	13.3	7	3.5	6.6
$\phi 1/4$	1/4	10-KQ2T05-35NS	14.29	9.1	10	15	22.1	22.2	13.3	7	3.5	16.2
	1/16	10-KQ2T07-33NS	11.11	11.1	10	15.6	25.3	26.8	13.3	8.5	3.5	11
	1/8	10-KQ2T07-34NS	11.11	11.1	10	15.6	17.7	20	13.3	12.4	4.5	7.3
$\phi 5/16$	1/4	10-KQ2T07-35NS	14.29	11.1	10	15.6	23.1	24.2	13.3	12.4	4.5	16.9
	3/8	10-KQ2T07-36NS	17.46	11.1	10	15.6	24.5	25.3	13.3	12.4	4.5	29.2
	1/8	10-KQ2T09-34NS	11.11	13.2	10	16.4	18.7	22.1	14.2	14	4.5	8.7
$\phi 3/8$	1/8	10-KQ2T09-34NQS	12.7	13.2	12	17.2	23.5	26.9	14.2	18.2	6	11.7
	1/4	10-KQ2T09-35NS	14.29	13.2	12	17.2	24.1	26.3	14.2	18.2	6	15.9
	3/8	10-KQ2T09-36NS	17.46	13.2	12	17.2	25.5	27.4	14.2	18.2	6	27.9
$\phi 1/2$	1/8	10-KQ2T11-34NS	12.7	15.4	12	18.6	23.1	27.6	15.6	21.2	6	14.4
	1/4	10-KQ2T11-35NS	17.46	15.4	17	19.3	28.5	31.8	15.6	23.8	7.5	24.1
	3/8	10-KQ2T11-36NS	17.46	15.4	17	19.3	29.1	32.1	15.6	23.8	7.5	22.2
$\phi 1/2$	1/2	10-KQ2T11-37NS	22.23	15.4	17	19.3	33.3	34.6	15.6	23.8	7.5	48.7
	1/4	10-KQ2T13-35NS	17.46	19.3	17	21.5	30.4	35.7	17	50.6	9	28.1
	3/8	10-KQ2T13-36NS	17.46	19.3	17	21.8	26.2	31.2	17	50.6	9.5	24.4
	1/2	10-KQ2T13-37NS	22.23	19.3	17	21.8	30.4	33.7	17	50.6	9.5	50.5

\* Reference dimensions after installation of NPT thread  
 Note 1)  $\phi D1$  is maximum diameter.  
 Note 2) Refer to page 1175-1 for details.



Directional Control Valves  
 Air Cylinders  
 Rotary Actuators  
 Air Grippers  
 Air Preparation Equipment  
 Modular F. R.  
 Pressure Control Equipment  
 Fittings & Tubing  
 Flow Control Equipment  
 Pressure Switches/ Pressure Sensors

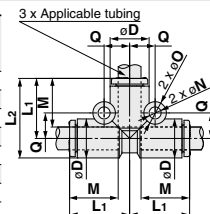
## Dimensions

### Union Tee: 10-KQ2T



Applicable tubing O.D. (inch)	Model	Note) $\phi D$	L1	L2	M	Q	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
							$\phi O$	$\phi N$	Thickness			
$\phi 1/8$	<b>10-KQ2T01-00A</b>	7.1	14.9	18.5	13.3	5.4	6	3.2	7.1	2.9	2.5	2.3
$\phi 5/32$	<b>10-KQ2T03-00A</b>	8.2	15.3	19.4	13.3	5.7	6	3.2	8.2	4.4	3	2.8
$\phi 3/16$	<b>10-KQ2T05-00A</b>	9.1	15.7	20.3	13.3	6.2	6	3.2	9.1	7	3.5	3.2
$\phi 1/4$	<b>10-KQ2T07-00A</b>	11.1	16.5	22.1	13.3	7.2	6	3.2	11.1	12.4	4.6	4.3
$\phi 5/16$	<b>10-KQ2T09-00A</b>	13.2	18.2	24.8	14.2	8.4	8	4.2	13.2	17.7	6	7
$\phi 3/8$	<b>10-KQ2T11-00A</b>	15.4	20.4	28.1	15.6	9.9	8	4.2	15.4	23.8	7	10.2
$\phi 1/2$	<b>10-KQ2T13-00A</b>	19.3	23.4	33	17	11.8	8	4.2	19.3	50.6	9.6	16.9

Note)  $\phi D$  is maximum diameter.

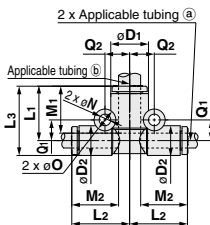


### Different Diameter Tee: 10-KQ2T



Applicable tubing O.D. (inch)	Model	Note) $\phi D_1$	$\phi D_2$	L1	L2	L3	M1	M2	Q1	Q2	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
											$\phi O$	$\phi N$	Thickness			
$\phi 1/8$	$\phi 5/32$ <b>10-KQ2T01-03A</b>	8.2	7.1	14.9	15.3	18.5	13.3	13.3	5.4	5.8	6	3.2	8.2	3.5	3	2.6
	$\phi 1/4$ <b>10-KQ2T01-07A</b>	11.1	7.1	14.9	16.5	18.5	13.3	13.3	5.3	7.2	6	3.2	11.1	3.5	3.2	2.8
$\phi 5/32$	$\phi 3/16$ <b>10-KQ2T03-05A</b>	9.1	8.2	15.3	15.7	19.4	13.3	13.3	5.7	6.2	6	3.2	9.1	6.6	3.5	2.6
	$\phi 1/4$ <b>10-KQ2T03-07A</b>	11.1	8.2	15.3	16.5	19.4	13.3	13.3	5.7	7.2	6	3.2	11.1	6.6	4.1	3
$\phi 3/16$	$\phi 1/4$ <b>10-KQ2T05-07A</b>	11.1	9.1	15.7	16.5	20.3	13.3	13.3	6.2	7.2	6	3.2	11.1	7	4.6	3.7
	$\phi 5/16$ <b>10-KQ2T05-09A</b>	13.2	11.1	17.4	17.3	23	14.2	13.3	7.4	8.4	8	4.2	13.2	12.4	6	5.6
$\phi 1/4$	$\phi 3/8$ <b>10-KQ2T07-11A</b>	15.4	11.1	18.8	18.1	24.4	15.6	13.3	7.7	9.9	8	4.2	15.4	12.4	6.4	6.8
	$\phi 5/16$ <b>10-KQ2T07-13A</b>	15.4	13.2	19.6	19	26.2	15.6	14.2	8.7	9.9	8	4.2	15.4	18.3	7	8.2
$\phi 5/16$	$\phi 1/2$ <b>10-KQ2T09-13A</b>	19.3	13.2	21	20.6	27.6	17	14.2	8.7	11.8	8	4.2	19.3	18.3	8.1	10.6
	$\phi 3/8$ $\phi 1/2$ <b>10-KQ2T11-13A</b>	19.3	15.4	21.8	22	29.5	17	15.6	9.9	11.8	8	4.2	19.3	23.8	9.6	12.4

Note)  $\phi D_1$  is maximum diameter.

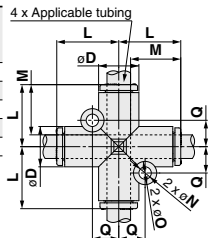


### Cross: 10-KQ2TW



Applicable tubing O.D. (inch)	Model	Note) $\phi D$	L	Q	M	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
						$\phi O$	$\phi N$	Thickness			
$\phi 5/32$	<b>10-KQ2TW03-00A</b>	8.2	15.3	5.7	13.3	6	3.2	8.2	4.4	3	3.5
$\phi 1/4$	<b>10-KQ2TW07-00A</b>	11.1	16.5	7.2	13.3	6	3.2	11.1	12.4	4.6	5.4
$\phi 5/16$	<b>10-KQ2TW09-00A</b>	13.2	18.2	8.4	14.2	8	4.2	13.2	17.7	6	8.5
$\phi 3/8$	<b>10-KQ2TW11-00A</b>	15.4	20.4	9.9	15.6	8	4.2	15.4	23.8	7	12
$\phi 1/2$	<b>10-KQ2TW13-00A</b>	19.3	23.4	11.8	17	8	4.2	19.3	50.6	9.6	19.7

Note)  $\phi D$  is maximum diameter.



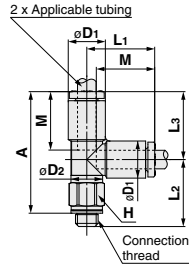
**Dimensions**

**Male Run Tee: 10-KQ2Y (Gasket seal)**



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-32UNF	10-KQ2Y01-32N	7	7.1	7	15.3	14.2	15.3	26.5	13.3	2.7	2.5	3.5
$\phi 5/32$	10-32UNF	10-KQ2Y03-32N	7	8.2	7	15.4	14.7	15.4	27.1	13.3	4.5	2.5	3.8
$\phi 1/4$	10-32UNF	10-KQ2Y07-32N	7	11.1	7	16.5	16	16.5	29.5	13.3	4.5	2.5	4.7

Note)  $\phi D_1$  is maximum diameter.

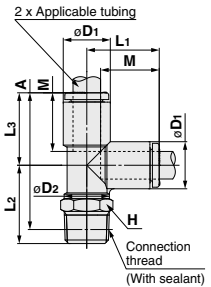


**Male Run Tee: 10-KQ2Y (Sealant)**



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/16	10-KQ2Y01-33NS	11.11	7.1	10	14.9	24.2	14.9	35.1	13.3	2.9	2.5	9.8
	1/8	10-KQ2Y01-34NS	11.11	7.1	10	14.9	16.6	14.9	28.4	13.3	2.9	2.5	6.1
	1/4	10-KQ2Y01-35NS	14.29	7.1	10	14.9	21	14.9	31.6	13.3	2.9	2.5	15.6
$\phi 5/32$	1/16	10-KQ2Y03-33NS	11.11	8.2	10	15.3	23.8	15.3	35	13.3	4.4	3	10.1
	1/8	10-KQ2Y03-34NS	11.11	8.2	10	15.3	16.2	15.3	28.3	13.3	4.4	3	6.4
$\phi 1/4$	1/4	10-KQ2Y03-35NS	14.29	8.2	10	15.3	21.6	15.3	32.5	13.3	4.4	3	15.9
	1/8	10-KQ2Y05-34NS	11.11	9.1	10	15.7	16.7	15.7	29.2	13.3	7	3.5	6.7
$\phi 3/16$	1/4	10-KQ2Y05-35NS	14.29	9.1	10	15.7	22.1	15.7	33.4	13.3	7	3.5	16.3
	1/16	10-KQ2Y07-33NS	11.11	11.1	10	16.5	25.3	16.5	37.7	13.3	8.5	3.5	11
$\phi 1/4$	1/8	10-KQ2Y07-34NS	11.11	11.1	10	16.5	17.7	16.5	31	13.3	12.4	4.5	7.3
	1/4	10-KQ2Y07-35NS	14.29	11.1	10	16.5	23.1	16.5	35.2	13.3	12.4	4.5	16.9
	3/8	10-KQ2Y07-36NS	17.46	11.1	10	16.5	24.5	16.5	36.3	13.3	12.4	4.5	29.2
$\phi 5/16$	1/8	10-KQ2Y09-34NS	11.11	13.2	10	18.2	18.7	18.2	33.7	14.2	14	4.5	8.8
		Note 2) 10-KQ2Y09-34NQS	12.7	13.2	12	18.2	23.5	18.2	38.6	14.2	17.7	6	11.7
	1/4	10-KQ2Y09-35NS	14.29	13.2	12	18.2	24.1	18.2	37.9	14.2	17.7	6	16
	3/8	10-KQ2Y09-36NS	17.46	13.2	12	18.2	25.5	18.2	39	14.2	17.7	6	28
$\phi 1/4$	1/4	10-KQ2Y11-35NS	17.46	15.4	17	20.4	28.5	20.4	44.5	15.6	23.8	7.5	24.3
	3/8	10-KQ2Y11-36NS	17.46	15.4	17	20.4	29.1	20.4	44.8	15.6	23.8	7.5	22.3
$\phi 3/8$	1/2	10-KQ2Y11-37NS	22.23	15.4	17	20.4	33.3	20.4	47.3	15.6	23.8	7.5	48.8
	1/4	10-KQ2Y13-35NS	17.46	19.3	17	23.4	30.4	23.4	49.4	17	50.6	9	28.5
$\phi 1/2$	3/8	10-KQ2Y13-36NS	17.46	19.3	17	23.4	26.2	23.4	44.9	17	50.6	9.5	24.7
	1/2	10-KQ2Y13-37NS	22.23	19.3	17	23.4	30.4	23.4	47.4	17	50.6	9.5	50.7

\* Reference dimensions after installation of NPT thread  
 Note 1)  $\phi D_1$  is maximum diameter.  
 Note 2) Refer to page 1175-1 for details.



Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Switches/ Pressure Sensors

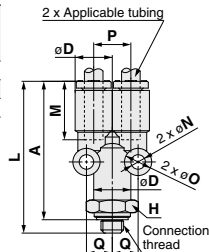
## Dimensions

### Branch "Y": 10-KQ2U (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	Note) $\phi$ D	L	P	A	M	Q	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
										$\phi$ O	$\phi$ N	Thickness			
$\phi$ 1/8	10-32UNF	10-KQ2U01-32N	8	7.1	33.8	7.1	30.3	13.3	5.2	6	3.2	7.1	2.2	1.8	5
$\phi$ 5/32	10-32UNF	10-KQ2U03-32N	10	8.2	33.9	8.2	30.4	13.3	5.7	6	3.2	8.2	2.2	1.8	6.6
$\phi$ 1/4	10-32UNF	10-KQ2U07-32N	12	11.1	35.2	11.1	31.7	13.3	7.6	8	4	11.1	2.2	1.8	11.2

Note)  $\phi$ D is maximum diameter.

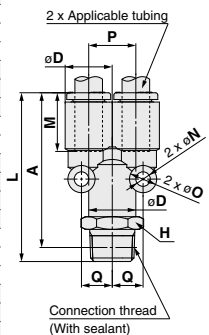


### Branch "Y": 10-KQ2U (Sealant)



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note) $\phi$ D	L	P	A*	M	Q	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
										$\phi$ O	$\phi$ N	Thickness			
$\phi$ 1/8	1/16	10-KQ2U01-33NS	9	7.1	37.3	7.1	33.2	13.3	5.2	6	3.2	7.1	2.9	2.5	7.1
	1/8	10-KQ2U01-34NS	11.11	7.1	36.4	7.1	33.2	13.3	5.2	6	3.2	7.1	2.9	2.7	9.5
	1/4	10-KQ2U01-35NS	14.29	7.1	40.8	7.1	36.4	13.3	5.2	6	3.2	7.1	2.9	2.7	20
$\phi$ 5/32	1/16	10-KQ2U03-33NS	9	8.2	37.4	8.2	33.3	13.3	5.7	6	3.2	8.2	4.2	3.6	7.3
	1/8	10-KQ2U03-34NS	11.11	8.2	36.5	8.2	33.3	13.3	5.7	6	3.2	8.2	4.2	3.6	9.8
	1/4	10-KQ2U03-35NS	14.29	8.2	40.9	8.2	36.5	13.3	5.7	6	3.2	8.2	4.2	3.6	20.1
$\phi$ 3/16	1/8	10-KQ2U05-34NS	11.11	9.1	37.1	9.1	33.9	13.3	6.2	6	3.2	9.1	7	4.1	10.2
	1/4	10-KQ2U05-35NS	14.29	9.1	41.5	9.1	37.1	13.3	6.2	6	3.2	9.1	7	4.1	20.5
	1/16	10-KQ2U07-33NS	12.7	11.1	38.7	11.1	34.6	13.3	7.6	8	4	11.1	12.4	4.6	11.6
$\phi$ 1/4	1/8	10-KQ2U07-34NS	12.7	11.1	37.8	11.1	34.6	13.3	7.6	8	4	11.1	12.4	5.6	12
	1/4	10-KQ2U07-35NS	14.29	11.1	42.2	11.1	37.8	13.3	7.6	8	4	11.1	12.4	5.6	21.1
	3/8	10-KQ2U07-36NS	17.46	11.1	43.6	11.1	38.9	13.3	7.6	8	4	11.1	12.4	5.6	33.5
$\phi$ 5/16	1/4	10-KQ2U09-34NS	14.29	13.2	40.7	13.2	37.5	14.2	8.7	8	4.2	13.2	17.7	6	16.4
	1/4	10-KQ2U09-35NS	14.29	13.2	45.1	13.2	40.7	14.2	8.7	8	4.2	13.2	17.7	7.3	21.9
	3/8	10-KQ2U09-36NS	17.46	13.2	46.5	13.2	41.8	14.2	8.7	8	4.2	13.2	17.7	7.3	34.1
$\phi$ 3/8	1/4	10-KQ2U11-35NS	17.46	15.4	48.6	15.4	44.2	15.6	9.9	8	4.2	15.4	23.8	8.9	25.7
	3/8	10-KQ2U11-36NS	17.46	15.4	50	15.4	45.3	15.6	9.9	8	4.2	15.4	23.8	8.9	35
	1/2	10-KQ2U11-37NS	22.23	15.4	54.2	15.4	47.8	15.6	9.9	8	4.2	15.4	23.8	8.9	62.8
$\phi$ 1/2	1/4	10-KQ2U13-35NS	22	19.3	53.4	19.3	49	17	11.8	8	4.2	19.3	50.6	9	42
	3/8	10-KQ2U13-36NS	22	19.3	54.8	19.3	50.1	17	11.8	8	4.2	19.3	50.6	11	45.8
	1/2	10-KQ2U13-37NS	22.23	19.3	59	19.3	52.6	17	11.8	8	4.2	19.3	50.6	12.1	62.1

\* Reference dimensions after installation of NPT thread  
Note)  $\phi$ D is maximum diameter.





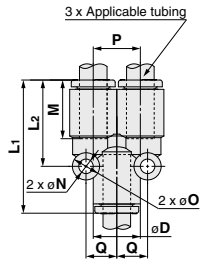
## Dimensions

### Union "Y": 10-KQ2U



Applicable tubing O.D. (inch)	Model	Note) $\phi D$	L1	L2	P	M	Q	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
								$\phi O$	$\phi N$	Thickness			
$\phi 1/8$	10-KQ2U01-00A	7.1	28.9	18	7.1	13.3	5.2	6	3.2	7.1	2.9	3.2	2.4
$\phi 5/32$	10-KQ2U03-00A	8.2	29	18.2	8.2	13.3	5.7	6	3.2	8.2	4.2	4.1	2.9
$\phi 3/16$	10-KQ2U05-00A	9.1	29.6	18.9	9.1	13.3	6.2	6	3.2	9.1	7	4.8	3.5
$\phi 1/4$	10-KQ2U07-00A	11.1	30.3	20.2	11.1	13.3	7.6	8	4	11.1	12.4	6.4	5
$\phi 5/16$	10-KQ2U09-00A	13.2	33.2	22.3	13.2	14.2	8.7	8	4.2	13.2	17.7	8.1	7.4
$\phi 3/8$	10-KQ2U11-00A	15.4	36.7	24.6	15.4	15.6	9.9	8	4.2	15.4	23.8	9.6	10.4

Note)  $\phi D$  is maximum diameter.

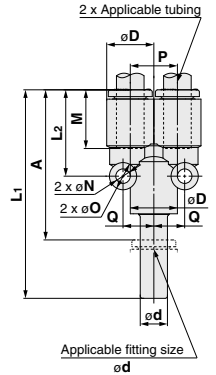


### Plug-in "Y": 10-KQ2U



Applicable tubing O.D. (inch)	Applicable fitting size $\phi d$ (inch)	Model	Note) $\phi D$	L1	L2	P	A	M	Q	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
										$\phi O$	$\phi N$	Thickness			
$\phi 1/8$	$\phi 1/8$	10-KQ2U01-99A	7.1	45.1	18	7.1	31.8	13.3	5.2	6	3.2	7.1	2.9	2	2.5
$\phi 5/32$	$\phi 5/32$	10-KQ2U03-99A	8.2	44.8	18.2	8.2	31.5	13.3	5.7	6	3.2	8.2	4.2	2.5	3.1
$\phi 3/16$	$\phi 3/16$	10-KQ2U05-99A	9.1	46.1	18.9	9.1	32.8	13.3	6.2	6	3.2	9.1	7	3.5	3.6
$\phi 1/4$	$\phi 1/4$	10-KQ2U07-99A	11.1	46.8	20.2	11.1	33.5	13.3	7.6	8	4	11.1	12.4	4.6	5.5
$\phi 5/16$	$\phi 5/16$	10-KQ2U09-99A	13.2	52.1	22.3	13.2	37.9	14.2	8.7	8	4.2	13.2	17.7	6	8

Note)  $\phi D$  is maximum diameter.

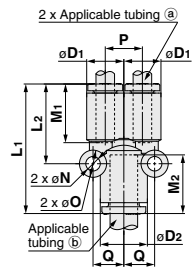


### Different Diameter Union "Y": 10-KQ2U



Applicable tubing O.D. (inch)	Model	Note) $\phi D1$	Note) $\phi D2$	L1	L2	P	M1	M2	Q	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	
										$\phi O$	$\phi N$	Thickness				
$\phi 1/8$	$\phi 5/32$	10-KQ2U01-03A	7.1	8.2	28.9	18	7.1	13.3	13.3	5.7	6	3.2	8.2	2.7	3.3	2.7
	$\phi 1/4$	10-KQ2U01-07A	7.1	11.1	30.3	18.5	7.1	13.3	13.3	7.2	6	3.2	11.1	2.7	3.3	3.3
$\phi 5/32$	$\phi 3/16$	10-KQ2U03-05A	8.2	9.1	29.6	18.8	8.2	13.3	13.3	6.2	6	3.2	9.1	4.2	4.1	3.2
	$\phi 1/4$	10-KQ2U03-07A	8.2	11.1	30.3	19	8.2	13.3	13.3	7.2	6	3.2	11.1	4.2	4.1	3.6
$\phi 3/16$	$\phi 1/4$	10-KQ2U05-07A	9.1	11.1	30.6	19.8	9.1	13.3	13.3	7.2	6	3.2	11.1	7	4.8	3.9
	$\phi 5/16$	10-KQ2U07-09A	11.1	13.2	32.3	21.3	11.1	13.3	14.2	8.6	8	4	13.2	12.4	6.4	6
$\phi 1/4$	$\phi 3/8$	10-KQ2U07-11A	11.1	15.4	34.4	21.7	11.1	13.3	15.6	9.8	8	4	15.4	12.4	6.4	7.2
	$\phi 5/16$	10-KQ2U09-11A	13.2	15.4	35.3	23	13.2	14.2	15.6	9.9	8	4.2	15.4	18.3	8.1	8.5
$\phi 5/16$	$\phi 1/2$	10-KQ2U09-13A	13.2	19.3	38.7	24.2	13.2	14.2	17	11.8	8	4.2	19.3	18.3	8.1	11.2
	$\phi 3/8$	10-KQ2U11-13A	15.4	19.3	40.1	26.6	15.4	15.6	17	11.8	8	4.2	19.3	23.8	9.6	13

Note)  $\phi D1$ ,  $\phi D2$  are maximum diameters.



Directional Control Valves  
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Air Preparation Equipment  
Modular F. R.  
Pressure Control Equipment  
Fittings & Tubing  
Flow Control Equipment  
Pressure Switches/ Pressure Sensors

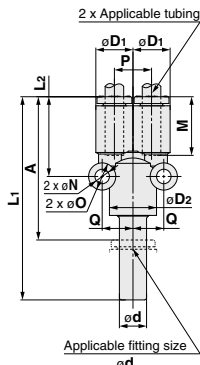
## Dimensions

### Different Diameter Plug-in “Y”: 10-KQ2X



Applicable tubing O.D. (inch)	Applicable fitting size ød (inch)	Model	Note) øD1	Note) øD2	L1	L2	A	P	M	Q	Mounting hole			Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
											øO	øN	Thickness			
ø1/8	ø5/32	10-KQ2X01-03A	7.1	8.2	44.7	18	42.2	7.1	13.3	5.7	6	3.2	8.2	2.7	2.5	2.8
	ø3/16	10-KQ2X03-05A	8.2	9.1	46.1	18.8	42.6	8.2	13.3	6.2	6	3.2	9.1	2.9	3.5	3.3
ø5/32	ø1/4	10-KQ2X03-07A	8.2	11.1	46.8	19	42.2	8.2	13.3	7.2	6	3.2	11.1	2.9	4.1	4.4
	ø3/16	10-KQ2X05-07A	9.1	11.1	47.1	19.8	42.5	9.1	13.3	7.2	6	3.2	11.1	7	4.6	4.4
ø1/4	ø5/16	10-KQ2X07-09A	11.1	13.2	51.2	21.3	45.2	11.1	13.3	8.6	8	4	13.2	12.4	6	6.5

Note) øD1, øD2 are maximum diameters.

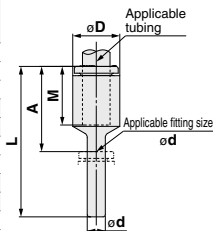


### Plug-in Reducer: 10-KQ2R



Applicable tubing O.D. (inch)	Applicable fitting size ød (inch)	Model	Note) øD	L	A	M	Effective area (mm <sup>2</sup> )		Min. port size	Weight (g)
							Urethane			
ø1/8	ø5/32	10-KQ2R01-03A	7.1	28.6	15.3	13.3	2.9	2.5	0.8	
	ø3/16	10-KQ2R01-05A	7.1	28.7	15.4	13.3	2.9	2.5	0.8	
	ø1/4	10-KQ2R01-07A	7.1	28.4	15.1	13.3	2.9	2.5	1	
ø5/32	ø3/16	10-KQ2R03-05A	8.2	28.7	15.4	13.3	4	3	1	
	ø1/4	10-KQ2R03-07A	8.2	31.8	18.5	13.3	4	3	1.2	
ø3/16	ø1/4	10-KQ2R05-07A	9.1	31.4	18.1	13.3	6.5	3.5	1.3	
	ø5/16	10-KQ2R05-09A	9.1	33.4	19.2	13.3	6.5	3.5	1.5	
ø1/4	ø5/16	10-KQ2R07-09A	11.1	33.3	19.1	13.3	11.5	4.6	1.7	
	ø3/8	10-KQ2R07-11A	11.1	35.9	20.3	13.3	11.5	4.6	2.2	
ø5/16	ø3/8	10-KQ2R09-11A	13.2	36.2	20.6	14.2	18.1	6	2.8	
	ø1/2	10-KQ2R09-13A	13.2	37.2	20.2	14.2	18.1	6	3.5	
ø3/8	ø1/2	10-KQ2R11-13A	15.4	39.5	22.5	15.6	29.1	7	4.2	

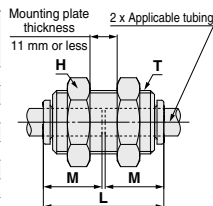
Note) øD is maximum diameter.



### Bulkhead Union: 10-KQ2E (Interchangeable with KQ)



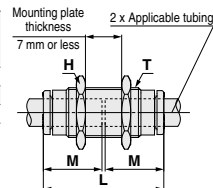
Applicable tubing O.D. (inch)	Model	T (UNF)	H (Width across flats)	L	Mounting hole	M	Effective area (mm <sup>2</sup> )		Min. port size	Weight (g)
							Urethane			
ø1/8	10-KQ2E01-00N	1/2-20UNF	17.46	27.8	13.5	13.3	2.9	2.5	26.9	
ø5/32	10-KQ2E03-00N	1/2-20UNF	17.46	27.8	13.5	13.3	4	3	25.7	
ø3/16	10-KQ2E05-00N	9/16-18UNF	17.46	29.8	15	13.3	6.5	3.5	40.3	
ø1/4	10-KQ2E07-00N	9/16-18UNF	17.46	29.8	15	13.3	11.5	4.6	36.9	
ø5/16	10-KQ2E09-00N	3/4-16UNF	22.23	31.8	20	14.2	18	6	61.2	
ø3/8	10-KQ2E11-00N	7/8-14UNF	25.4	33.8	23	15.6	29.1	7	83.4	
ø1/2	10-KQ2E13-00N	1-12UNF	28.57	37.8	26	17	51.7	9.6	109.2	



### Bulkhead Union: 10-KQ2E (Interchangeable with KJ)



Applicable tubing O.D. (inch)	Model	T (UNF)	H (Width across flats)	L	Mounting hole	M	Effective area (mm <sup>2</sup> )		Min. port size	Weight (g)
							Urethane			
ø1/8	10-KQ2E01-00NJ	3/8-24UNF	12.7	27.3	10.5	13.3	2.5	2.5	12.6	
ø5/32	10-KQ2E03-00NJ	3/8-24UNF	12.7	27.3	10.5	13.3	4	3	11.9	
ø1/4	10-KQ2E07-00NJ	1/2-20UNF	15.88	27.3	14	13.3	11.5	4.6	19.2	

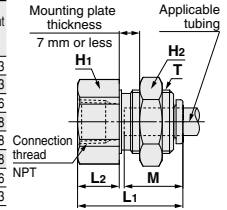


**Dimensions**

**Bulkhead Connector: 10-KQ2E**



Applicable tubing O.D. (inch)	Connection thread NPT	Model	T (UNF)	H <sub>1</sub> (Width across flats)	H <sub>2</sub> (Width across flats)	L <sub>1</sub>	L <sub>2</sub>	Mounting hole	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø1/8	1/4	10-KQ2E01-35N	1/2-20UNF	17.46	17.46	28.7	13.3	13.5	13.3	2.9	2.5	33.3
ø5/32	1/4	10-KQ2E03-35N	1/2-20UNF	17.46	17.46	29	13.6	13.5	13.3	4	3	33.3
ø3/16	1/8	10-KQ2E05-34N	9/16-18UNF	17.46	17.46	25.6	9.2	15	13.3	6.5	3.5	36.6
ø1/4	1/4	10-KQ2E07-35N	9/16-18UNF	17.46	17.46	29.9	13.5	15	13.3	11.5	4.6	38.8
ø5/16	3/8	10-KQ2E09-36N	3/4-16UNF	22.23	22.23	31	13.6	20	14.2	18	6	61.8
ø3/8	3/8	10-KQ2E11-36N	7/8-14UNF	25.4	25.4	31.4	12	23	15.6	29.1	7	83.8
ø1/2	1/2	10-KQ2E13-36N	1-12UNF	28.57	28.57	32	11.6	26	17	51.7	9.6	108.6
		10-KQ2E13-37N	1-12UNF	28.57	28.57	36.1	15.7	26	17	51.7	9.6	114.3

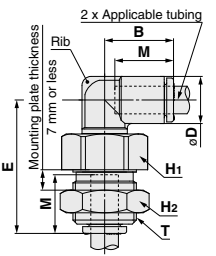


**Bulkhead Male Elbow: 10-KQ2LE**



Applicable tubing O.D. (inch)	Model	T (UNF)	H <sub>1</sub> (Width across flats)	H <sub>2</sub> (Width across flats)	B	E	Note) øD	Mounting hole	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
ø1/8	10-KQ2LE01-00N	1/2-20UNF	17.46	17.46	14.5	28.9	7.1	13.5	13.3	2.5	2.5	27.5	—
ø5/32	10-KQ2LE03-00N	1/2-20UNF	17.46	17.46	14.8	28.5	8.2	13.5	13.3	4.2	3	27.1	●
ø3/16	10-KQ2LE05-00N	9/16-18UNF	17.46	17.46	15	29.7	9.1	15	13.3	5.6	3.5	34.1	—
ø1/4	10-KQ2LE07-00N	9/16-18UNF	17.46	17.46	15.6	30.7	11.1	15	13.3	10	4.5	32.8	●
ø5/16	10-KQ2LE09-00N	3/4-16UNF	22.23	22.23	17.2	34.2	13.2	20	14.2	14.9	6	55.6	●
ø3/8	10-KQ2LE11-00N	7/8-14UNF	25.4	25.4	19.3	32.6	15.4	23	15.6	23.8	7	67.7	●
ø1/2	10-KQ2LE13-00N	1-12UNF	28.57	28.57	21.8	43.2	19.3	26	17	44.4	9.5	121.5	—

Note) øD is maximum diameter.

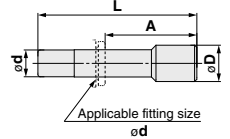


**Plug: 10-KQP**



Applicable fitting size ød (inch)	Model	Note) øD	L	A	Weight (g)
ø1/8	10-KQP-01	5	31.5	18.2	1
ø5/32	10-KQP-03	6	32	18.7	1
ø3/16	10-KQP-05	6.8	34	20.7	1
ø1/4	10-KQP-07	8.5	35	21.7	1
ø5/16	10-KQP-09	10	39	24.8	2
ø3/8	10-KQP-11	11.5	43	27.4	3.5
ø1/2	10-KQP-13	15	45.5	28.5	5

Note) øD is maximum diameter.



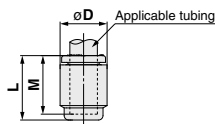
Directional Control Valves  
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Rotary Actuators  
Air Grippers  
Air Preparation Equipment  
Modular F. R.  
Pressure Control Equipment  
Fittings & Tubing  
Flow Control Equipment  
Pressure Switches/Pressure Sensors

## Dimensions

### Tube Cap: 10-KQ2C



Applicable tubing O.D. (inch)	Model	Note) $\phi D$	L	M	Weight (g)
$\phi 5/32$	<b>10-KQ2C03-00A</b>	8.2	14.5	13.3	0.8
$\phi 1/4$	<b>10-KQ2C07-00A</b>	11.1	14.8	13.3	1.3
$\phi 5/16$	<b>10-KQ2C09-00A</b>	13.2	15.7	14.2	2
$\phi 3/8$	<b>10-KQ2C11-00A</b>	15.4	17.3	15.6	2.8

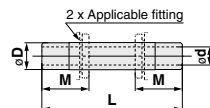


Note)  $\phi D$  is maximum diameter.

### Nipple: 10-KQN



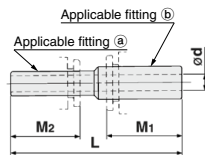
Applicable fitting $\phi D$	Model	L	M	$\phi d$ Min. port size	Weight (g)
$\phi 1/8$	<b>10-KQN01-99</b>	36	13.3	2.1	0.2
$\phi 3/16$	<b>10-KQN05-99</b>	38	13.3	3.4	0.4
$\phi 1/4$	<b>10-KQN07-99</b>	39	13.3	4.6	1
$\phi 3/8$	<b>10-KQN11-99</b>	49	15.6	7	2
$\phi 1/2$	<b>10-KQN13-99</b>	51	17	9.5	3.5



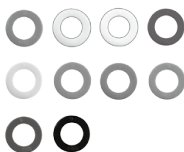
### Reducer Nipple: 10-KQN



Applicable fitting	Model		L	M <sub>1</sub>	M <sub>2</sub>	$\phi d$ Min. port size	Weight (g)
	(a)	(b)					
$\phi 1/8$	$\phi 5/32$	<b>10-KQN01-03</b>	36.5	13.3	13.3	2.1	0.2
	$\phi 3/16$	<b>10-KQN01-05</b>	37	13.3	13.3	2.1	0.4
$\phi 5/32$	$\phi 3/16$	<b>10-KQN03-05</b>	37.5	13.3	13.3	2.5	0.4
	$\phi 1/4$	<b>10-KQN03-07</b>	38	13.3	13.3	2.5	0.6
$\phi 3/16$	$\phi 1/4$	<b>10-KQN05-07</b>	38.5	13.3	13.3	3.4	0.6
	$\phi 5/16$	<b>10-KQN05-09</b>	41	13.3	13.3	3.4	1
$\phi 1/4$	$\phi 5/16$	<b>10-KQN07-09</b>	41.5	13.3	13.3	4.6	1
	$\phi 3/8$	<b>10-KQN07-11</b>	45	15.6	13.3	4.6	1
$\phi 5/16$	$\phi 3/8$	<b>10-KQN09-11</b>	46.5	15.6	14.2	6	1.8
	$\phi 1/2$	<b>10-KQN09-13</b>	47.5	17	14.2	6	2.6
$\phi 3/8$	$\phi 1/2$	<b>10-KQN11-13</b>	50	17	15.6	7	3.2

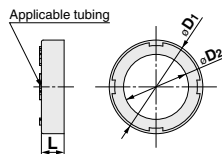


### Color Cap: 10-KQ2C



Applicable tubing O.D. (inch)	Model	$\phi D_1$	$\phi D_2$	L	Weight (g)	Note
$\phi 1/8$	<b>10-KQ2C-01□A</b>	7.3	4.3	2.6	0.1	Applicable for products with enlarged outside diameter of release button
$\phi 3/16$	<b>10-KQ2C-05□A</b>	9	5.9	2.6	0.1	
$\phi 1/4$	<b>10-KQ2C-07□B</b>	11.5	7.5	2.6	0.1	
$\phi 3/8$	<b>10-KQ2C-11□B</b>	15.7	10.7	2.7	0.1	
$\phi 1/2$	<b>10-KQ2C-13□B</b>	19.6	13.9	2.7	0.2	

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Grey), W (White), BU (Blue)



In order to improve the operability, the outside diameter of the release button has been enlarged for the New KQ2 series. Along with this change, the usable color caps differ before and after the change. For details, refer to "Notes when Ordering Color Caps" in the standard products KQ2 series (**WEB catalog**). Additionally, when ordering the color cap, add "10-" at the beginning of the part number. Example) 10-KQ2C-05BA



# Series 10-KQ2

## Made to Order

Please contact SMC for detailed dimensions, specifications, and lead times.

### 1 Made to Order

Symbol	Specifications
10-KQ2□09-34□Q□	<p>Effective area is interchangeable with the current product (KQ series).</p> <p>Applicable model: Male elbow, 45° male elbow, Extended male elbow, Male branch tee, Male run tee</p> <p>Applicable tubing O.D./Port size: ø5/16"/NPT1/8</p> <p>Thread material/Surface treatment: Brass + Electroless nickel plating</p> <p>Example) <b>10-KQ2L09-34AQS</b></p>

Directional  
Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation  
Equipment

Modular F. R.

Pressure Control  
Equipment

Flow Control  
Equipment

Pressure Switches/  
Pressure Sensors

Flow Control  
Equipment

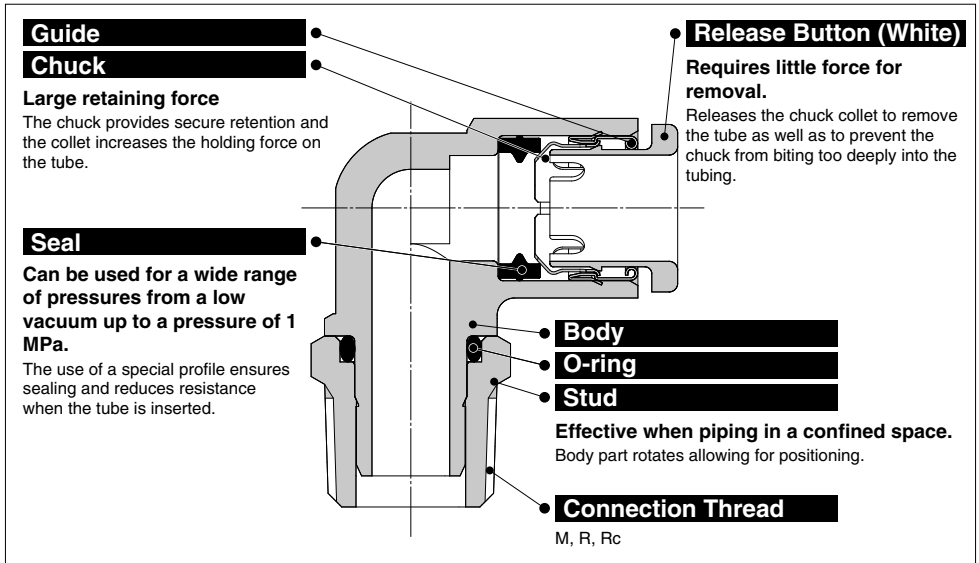
Pressure Switches/  
Pressure Sensors



# Series 10-KQ2

Inch Size One-touch Fittings  
Applicable Tubing: Inch Size, Connection Thread: M, R, Rc

RoHS



**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa**

- Applicable tubing—Inch size
- Applicable tubing material PFA, Polyurethane



## Applicable Tubing

Tubing material <sup>Note)</sup>	PFA, Polyurethane
Tubing O.D.	ø1/8", ø3/16", ø1/4", ø5/16", ø3/8", ø1/2"

Note) FEP, nylon and soft nylon tubing can also be used. However, the degree of clean performance will be reduced.

## Color

Series	Body	Release button
Series 10-KQ2	White	White

## Specifications

Fluid		Air, Water <sup>Note 1)</sup>
Operating pressure range <sup>Note 2)</sup>		-100 kPa to 1 MPa
Proof pressure (at 23°C)		3 MPa
Ambient and fluid temperature		-5 to 60°C, Water: 0 to 40°C (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Seal on the threads		With seal or none
Grease		Fluorine based grease
Cleanliness class (ISO class)		Class 5

Note 1) The surge pressure must be under the maximum operating pressure.

Note 2) Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

## Principal Parts Material

Body	C3604 Electroless nickel plated, PBT, PP, Stainless steel 303
Stud	C3604 (Thread portion) Electroless nickel plated, Stainless steel 303 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR

# Inch Size One-touch Fittings

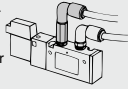
## Variations

### Extended male elbow

10-KQ2W P.1179



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.

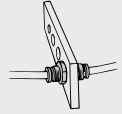


### Bulkhead union

10-KQ2E P.1180



Use to connect tubing through a panel, etc.

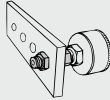


### Bulkhead connector

10-KQ2E P.1180



Use to connect male thread and tubing through a panel, etc.



### Male connector

10-KQ2H P.1178



Use to pipe a female thread. Most general model.

### Male branch tee

10-KQ2T P.1179



Use to branch a female thread at both 90° angles.

### Branch "Y"

10-KQ2U P.1180



Use to branch a female thread.

### Male elbow

10-KQ2L P.1178



Use to pipe a female thread at right angles. Most general model.

### Male run tee

10-KQ2Y P.1179



Use to branch a female thread at a 90° angle.

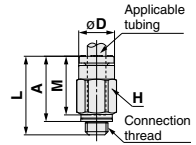


**Dimensions**

**Male Connector: 10-KQ2H (Gasket seal)**



Applicable tubing O.D. (inch)	Connection thread M	Model	H (Width across flats)	øD	L	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø1/8	M5 x 0.8	10-KQ2H01-M5N	7	6.7	17.3	14.3	13.3	2.5	2.5	2.7
ø3/16	M5 x 0.8	10-KQ2H05-M5N	10	8.3	17.6	14.6	13.3	4.0	2.5	4.6
ø1/4	M5 x 0.8	10-KQ2H07-M5N	11	10.9	18.4	15.4	13.3	4.0	2.5	6.5

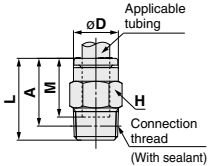


**Male Connector: 10-KQ2H (Sealant)**



Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	øD	L	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø1/8	1/8	10-KQ2H01-01NS	10	6.7	14	10.9	13.3	2.9	2.5	6
	1/4	10-KQ2H01-02NS	14	6.7	16.7	12	13.3	2.9	2.5	15.3
ø3/16	1/8	10-KQ2H05-01NS	10	8.3	17.9	14.8	13.3	6.5	3.5	6.4
	1/4	10-KQ2H05-02NS	14	8.3	16.7	12	13.3	6.5	3.5	13.9
ø1/4	1/8	10-KQ2H07-01NS	12	10.9	18.2	15.1	13.3	11.5	4.6	7.1
	1/4	10-KQ2H07-02NS	14	10.9	16.7	12	13.3	11.5	4.6	12.1
ø3/8	1/8	10-KQ2H07-03NS	17	10.9	18.1	13	13.3	11.5	4.6	2.4
	1/4	10-KQ2H09-01NS	14	13	22.5	19.4	14.2	18	6	11.9
ø5/16	1/4	10-KQ2H09-02NS	14	13	22	17.3	14.2	18	6	13.9
	3/8	10-KQ2H09-03NS	17	13	18.1	13	14.2	18	6	21
ø1/2	1/4	10-KQ2H11-02NS	17	15.1	26.9	22.2	15.6	29.1	7	22.5
	3/8	10-KQ2H11-03NS	17	15.1	23.2	18.1	15.6	29.1	7	22.9
ø1/2	1/2	10-KQ2H11-04NS	22	15.1	22.3	15.9	15.6	29.1	7	45.9
	1/4	10-KQ2H13-02NS	19	19	28.7	24	17	51.7	9	23.3
ø1/2	3/8	10-KQ2H13-03NS	19	19	27.2	22.1	17	51.7	9.6	26.2
	1/2	10-KQ2H13-04NS	22	19	22.3	15.9	17	51.7	9.6	35.4

\* Reference dimensions after installation of R thread

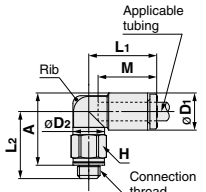


**Male Elbow: 10-KQ2L (Gasket seal)**



Applicable tubing O.D. (inch)	Connection thread M	Model	H (Width across flats)	Note 1) øD1	øD2	L1	L2	A	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
ø1/8	M5 x 0.8	10-KQ2L01-M5N	7	7.1	7	15.3	14.3	14.9	13.3	2.2	2.5	3.1	●
ø1/4	M5 x 0.8	10-KQ2L07-M5N	7	11.1	7	15.4	16.1	18.7	13.3	3.5	2.5	3.6	●

Note 1) øD1 is maximum diameter.  
Note 2) Refer to page 1180-1 for details.

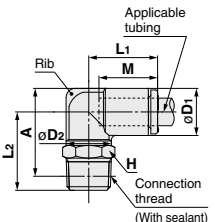


**Male Elbow: 10-KQ2L (Sealant)**



Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Note 1) øD1	øD2	L1	L2	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
ø3/16	1/8	10-KQ2L05-01NS	10	9.1	10	15	16.7	18.2	13.3	5.6	3.5	5	—
	1/4	10-KQ2L05-02NS	14	9.1	10	15	22.2	22.1	13.3	5.6	3.5	14.5	—
ø1/4	1/8	10-KQ2L07-01NS	10	11.1	10	15.6	17.7	20.2	13.3	10	4.5	5.3	●
	1/4	10-KQ2L07-02NS	14	11.1	10	15.6	23.2	24.1	13.3	10	4.5	14.8	●
ø1/4	3/8	10-KQ2L07-03NS	17	11.1	10	15.6	24.5	25.0	13.3	10	4.5	26.5	●
	1/8	10-KQ2L09-01NS	10	13.2	10	16.4	18.7	22.2	14.2	11.4	4.5	6.1	●
ø5/16	1/8	Note 2) 10-KQ2L09-01NQS	12	13.2	12	17.2	23.5	27.0	14.2	14.9	6	9.3	●
	1/4	10-KQ2L09-02NS	14	13.2	12	17.2	25.4	27.3	14.2	14.9	6	17.7	●
ø5/16	3/8	10-KQ2L09-03NS	17	13.2	12	17.2	25.5	27.0	14.2	14.9	6	24.7	●
	1/4	10-KQ2L11-02NS	17	15.4	17	19.3	28.5	31.5	15.6	23.8	7.5	21.5	●
ø3/8	3/8	10-KQ2L11-03NS	17	15.4	17	19.3	29.4	32.0	15.6	23.8	7.5	22	●
	1/2	10-KQ2L11-04NS	22	15.4	17	19.3	33.4	34.7	15.6	23.8	7.5	44.4	●
ø1/2	1/4	10-KQ2L13-02NS	17	19.3	17	21.5	30.4	35.3	17	44.4	9	23.8	—
	3/8	10-KQ2L13-03NS	17	19.3	17	21.8	28.5	33.0	17	44.4	9.5	23.2	—
ø1/2	1/2	10-KQ2L13-04NS	22	19.3	17	21.8	30.5	33.7	17	44.4	9.5	44.6	—

\* Reference dimensions after installation of R thread  
Note 1) øD1 is maximum diameter.  
Note 2) Refer to page 1180-1 for details.



Directional Control Valves

Air Cylinders

Air Actuators

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Flow Control Equipment

Fittings & Tubing

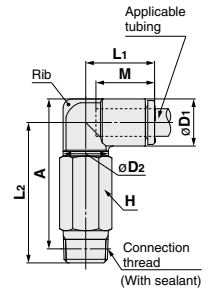
Pressure Switches/ Pressure Sensors

**Dimensions**

**Extended Male Elbow: 10-KQ2W (Sealant)**



Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
ø3/16	1/8	10-KQ2W05-01NS	10	9.1	10	15	30.4	31.8	13.3	5.6	3.5	11.2	—
	1/4	10-KQ2W05-02NS	14	9.1	10	15	33.8	33.7	13.3	5.6	3.5	27.7	—
ø1/4	1/8	10-KQ2W07-01NS	10	11.1	10	15.6	31.4	33.8	13.3	10.0	4.5	11.5	●
	1/4	10-KQ2W07-02NS	14	11.1	10	15.6	34.8	35.7	13.3	10.0	4.5	28	●
ø5/16	3/8	10-KQ2W07-03NS	17	11.1	10	15.6	36.1	36.6	13.3	10.0	4.5	47.4	●
	1/8	10-KQ2W09-01NS	10	13.2	10	16.4	32.4	35.9	14.2	11.6	4.5	12.2	●
ø5/16	1/4	10-KQ2W09-01NQS	12	13.2	12	17.2	42.4	45.9	14.2	14.9	6	23.7	●
	3/8	10-KQ2W09-02NS	14	13.2	12	17.2	39.1	41	14.2	14.9	6	40	●
ø3/8	3/8	10-KQ2W09-03NS	17	13.2	12	17.2	39.2	40.7	14.2	14.9	6	47	●
	1/4	10-KQ2W11-02NS	17	15.4	17	19.3	52.7	55.7	15.6	23.8	7	58.8	●
ø3/8	3/8	10-KQ2W11-03NS	17	15.4	17	19.3	48.3	50.9	15.6	23.8	7	51.1	●
	1/2	10-KQ2W11-04NS	22	15.4	17	19.3	52.3	53.6	15.6	23.8	7	91.8	●
ø1/2	1/4	10-KQ2W13-02NS	17	19.3	17	21.5	54.6	59.6	17	44.4	9	61	—
	3/8	10-KQ2W13-03NS	17	19.3	17	21.8	48.2	52.8	17	44.4	9.5	48.4	—
1/2	10-KQ2W13-04NS	22	19.3	17	21.8	50.2	53.5	17	44.4	9.5	92.3	—	

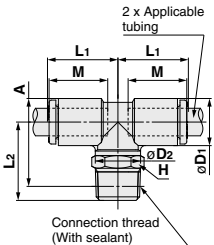


\* Reference dimensions after installation of R thread  
 Note 1)  $\phi D_1$  is maximum diameter.  
 Note 2) Refer to page 1180-1 for details.

**Male Branch Tee: 10-KQ2T (Sealant)**



Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø3/16	1/8	10-KQ2T05-01NS	10	9.1	10	15	16.7	18.1	13.3	7.0	3.5	5.8
	1/4	10-KQ2T05-02NS	14	9.1	10	15	22.2	22	13.3	7.0	3.5	15.3
ø1/4	1/8	10-KQ2T07-01NS	10	11.1	10	15.6	17.7	20.1	13.3	12.4	4.5	6.5
	1/4	10-KQ2T07-02NS	14	11.1	10	15.6	23.2	24	13.3	12.4	4.5	16
ø5/16	3/8	10-KQ2T07-03NS	17	11.1	10	15.6	24.5	24.9	13.3	12.4	4.5	27.7
	1/8	10-KQ2T09-01NS	10	13.2	10	16.4	18.7	22.2	14.2	14.4	4.5	7.9
ø5/16	1/4	10-KQ2T09-01NQS	12	13.2	12	17.2	23.5	27	14.2	18.2	6	11
	3/8	10-KQ2T09-02NS	14	13.2	12	17.2	25.4	27.3	14.2	18.2	6	19.4
ø3/8	3/8	10-KQ2T09-03NS	17	13.2	12	17.2	25.5	27	14.2	18.2	6	26.5
	1/4	10-KQ2T11-02NS	17	15.4	17	19.3	28.4	31.4	15.6	23.8	7.5	23.9
ø3/8	3/8	10-KQ2T11-03NS	17	15.4	17	19.3	29.3	31.9	15.6	23.8	7.5	24.4
	1/2	10-KQ2T11-04NS	22	15.4	17	19.3	33.3	34.6	15.6	23.8	7.5	46.9
ø1/2	1/4	10-KQ2T13-02NS	17	19.3	17	21.5	30.3	35.3	17	50.6	9	27.9
	3/8	10-KQ2T13-03NS	17	19.3	17	21.8	28.4	33	17	50.6	9.5	27.4
1/2	10-KQ2T13-04NS	22	19.3	17	21.8	30.4	33.7	17	50.6	9.5	48.8	

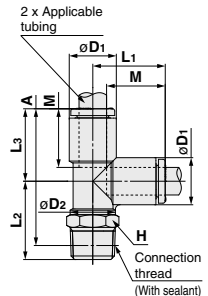


\* Reference dimensions after installation of R thread  
 Note 1)  $\phi D_1$  is maximum diameter.  
 Note 2) Refer to page 1180-1 for details.

**Male Run Tee: 10-KQ2Y (Sealant)**



Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø3/16	1/8	10-KQ2Y05-01NS	10	9.1	10	15.7	16.7	15.7	29.3	13.3	7.0	3.5	5.9
	1/4	10-KQ2Y05-02NS	14	9.1	10	15.7	22.2	15.7	33.2	13.3	7.0	3.5	15.4
ø1/4	1/8	10-KQ2Y07-01NS	10	11.1	10	16.5	17.7	16.5	31.1	13.3	12.4	4.5	6.5
	1/4	10-KQ2Y07-02NS	14	11.1	10	16.5	23.2	16.5	35	13.3	12.4	4.5	16
ø5/16	3/8	10-KQ2Y07-03NS	17	11.1	10	16.5	24.5	16.5	35.9	13.3	12.4	4.5	27.7
	1/8	10-KQ2Y09-01NS	10	13.2	10	18.2	18.7	18.2	33.8	14.2	14.0	4.5	8
ø5/16	1/4	10-KQ2Y09-01NQS	12	13.2	12	18.2	23.5	18.2	38.7	14.2	18.3	6	11.1
	3/8	10-KQ2Y09-02NS	14	13.2	12	18.2	25.4	18.2	38.9	14.2	18.3	6	19.5
ø3/8	3/8	10-KQ2Y09-03NS	17	13.2	12	18.2	25.5	18.2	38.6	14.2	18.3	6	26.5
	1/4	10-KQ2Y11-02NS	17	15.4	17	20.4	28.4	20.4	44.1	15.6	23.8	7.5	24.1
ø3/8	3/8	10-KQ2Y11-03NS	17	15.4	17	20.4	29.3	20.4	44.6	15.6	23.8	7.5	24.5
	1/2	10-KQ2Y11-04NS	22	15.4	17	20.4	33.3	20.4	47.3	15.6	23.8	7.5	47
ø1/2	1/4	10-KQ2Y13-02NS	17	19.3	17	23.4	30.3	23.4	49	17	50.6	9	28.3
	3/8	10-KQ2Y13-03NS	17	19.3	17	23.4	28.4	23.4	46.7	17	50.6	9.5	27.6
1/2	10-KQ2Y13-04NS	22	19.3	17	23.4	30.4	23.4	47.4	17	50.6	9.5	49	



\* Reference dimensions after installation of R thread  
 Note 1)  $\phi D_1$  is maximum diameter.  
 Note 2) Refer to page 1180-1 for details.

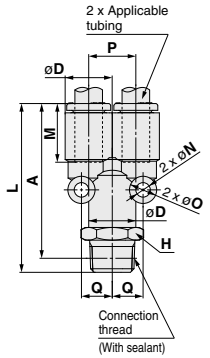
**Dimensions**

**Branch "Y": 10-KQ2U (Sealant)**



Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Notes	øD	L	P	A*	M	Q	Mounting hole		Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
											øO	øN			
ø3/16	1/8	10-KQ2U05-01NS	12	9.1	37.1	9.1	34	13.3	6.2	6	3.2	9.1	7.0	3.5	10.3
	1/4	10-KQ2U05-02NS	14	9.1	41.5	9.1	36.8	13.3	6.2	6	3.2	9.1	7.0	3.5	19.5
ø1/4	1/8	10-KQ2U07-01NS	12	11.1	37.8	11.1	34.7	13.3	7.6	8	4	11.1	12.4	4.6	11.3
	1/4	10-KQ2U07-02NS	14	11.1	42.2	11.1	37.5	13.3	7.6	8	4	11.1	12.4	4.6	20.1
ø5/16	3/8	10-KQ2U07-03NS	17	11.1	43.6	11.1	38.5	13.3	7.6	8	4	11.1	12.4	4.6	32
	1/8	10-KQ2U09-01NS	14	13.2	40.7	13.2	37.6	14.2	8.7	8	4.2	13.2	18.3	6	15.8
ø3/8	1/4	10-KQ2U09-02NS	14	13.2	45.1	13.2	40.4	14.2	8.7	8	4.2	13.2	18.3	6	20.9
	3/8	10-KQ2U09-03NS	17	13.2	46.5	13.2	41.4	14.2	8.7	8	4.2	13.2	18.3	6	32.7
ø1/2	1/4	10-KQ2U11-02NS	17	15.4	48.6	15.4	43.9	15.6	9.9	8	4.2	15.4	23.8	7	24.5
	3/8	10-KQ2U11-03NS	17	15.4	50	15.4	44.9	15.6	9.9	8	4.2	15.4	23.8	7	33.5
ø1/2	1/2	10-KQ2U11-04NS	22	15.4	54.2	15.4	47.8	15.6	9.9	8	4.2	15.4	23.8	7	61.6
	1/4	10-KQ2U13-02NS	21	19.3	53.4	19.3	48.7	17	11.8	8	4.2	19.3	50.6	9	40.4
ø1/2	3/8	10-KQ2U13-03NS	21	19.3	54.8	19.3	49.7	17	11.8	8	4.2	19.3	50.6	9.6	43.9
	1/2	10-KQ2U13-04NS	22	19.3	59	19.3	52.6	17	11.8	8	4.2	19.3	50.6	9.6	61

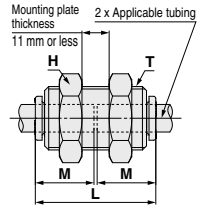
\* Reference dimensions after installation of R thread  
 Note) øD is maximum diameter.



**Bulkhead Union: 10-KQ2E**



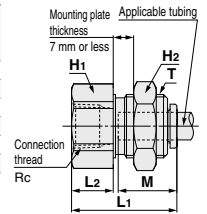
Applicable tubing O.D. (inch)	Model	T (M)	H (Width across flats)	L	Mounting hole	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø3/16	10-KQ2E05-00MN	M14 x 1	17	27.3	15	13.3	6.5	3.5	30.5
ø1/4	10-KQ2E07-00MN	M14 x 1	17	27.3	15	13.3	11.5	4.6	27.2
ø5/16	10-KQ2E09-00MN	M16 x 1	19	29.1	17	14.2	18	6	34
ø3/8	10-KQ2E11-00MN	M20 x 1	24	31.9	21	15.6	29.1	7	66.1
ø1/2	10-KQ2E13-00MN	M22 x 1	27	34.7	23	17	51.7	9.6	59.9



**Bulkhead Connector: 10-KQ2E**



Applicable tubing O.D. (inch)	Connection thread Rc	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Mounting hole	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø3/16	1/8	10-KQ2E05-01N	M14 x 1	17	17	23.9	9.5	15	13.3	6.5	3.5	30.8
ø1/4	1/4	10-KQ2E07-02N	M14 x 1	17	17	28.4	14	15	13.3	11.5	4.6	32
ø5/16	3/8	10-KQ2E09-03N	M16 x 1	19	19	31.7	14.3	17	14.2	18	6	59.2
ø3/8	3/8	10-KQ2E11-03N	M20 x 1	22	24	31.5	12.1	21	15.6	29.1	7	62.7
ø1/2	3/8	10-KQ2E13-03N	M22 x 1	24	27	32.1	11.7	23	17	51.7	9.6	66.7
	1/2	10-KQ2E13-04N	M22 x 1	24	27	37.7	17.3	23	17	51.7	9.6	70.6



# Series 10-KQ2

## Made to Order

Please contact SMC for detailed dimensions, specifications, and lead times.

### 1 Made to Order

Symbol	Specifications
10-KQ2□09-01□Q□	<p>Effective area is interchangeable with the current product (KQ series).</p> <p>Applicable model: Male elbow,  Extended male elbow,  Male branch tee,  Male run tee</p> <p>Applicable tubing O.D./Port size: <math>\phi 5/16"/R1/8</math>  Thread material/Surface treatment: Brass +  Electroless nickel plating</p> <p>Example) <b>10-KQ2L09-01AQS</b></p>



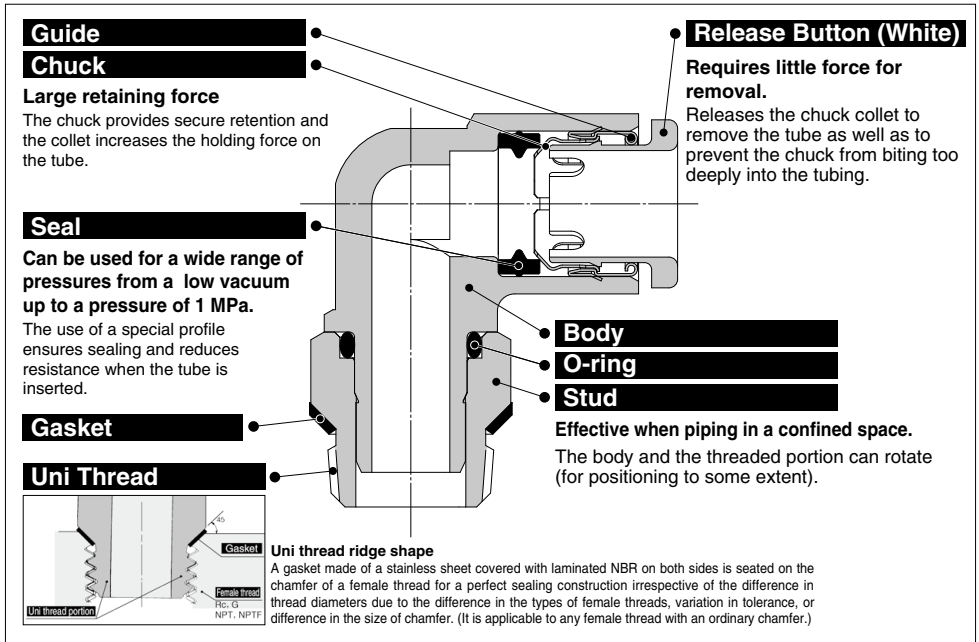
# Series 10-KQ2

Metric Size Uni One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread\*: Rc, G, NPT, NPTF

RoHS

\* A ridge shape has been created as a Uni thread for common applications for Rc, G, NPT and NPTF.



**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa**

- Applicable tubing—Metric size
- Applicable tubing material  
PFA, Polyurethane
- The male thread for piping  
drastically cuts piping work-hours.



## Applicable Tubing

Tubing material <small>Note</small>	PFA, Polyurethane
Tubing O.D.	ø4, ø6, ø8, ø10, ø12, ø16

Note) FEP, nylon and soft nylon tubing can also be used. However, the degree of clean performance will be reduced.

## Specifications

<b>Fluid</b>	Air, Water <small>Note 1</small>
<b>Operating pressure range</b> <small>Note 2</small>	-100 kPa to 1 MPa
<b>Proof pressure (at 23°C)</b>	3 MPa
<b>Ambient and fluid temperature</b>	-5 to 60°C, Water: 0 to 40°C (No freezing)
<b>Grease</b>	Fluorine based grease
<b>Cleanliness class (ISO class)</b>	Class 5

Note 1) The surge pressure must be under the maximum operating pressure.

Note 2) Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

## Principal Parts Material

Body	C3604 Electroless nickel plated, PBT
Stud	C3604 (Thread portion) Electroless nickel plated
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR

# Metric Size Uni One-touch Fittings

## Variations

### Hexagon socket head male connector

10-KQ2S P.1183



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.

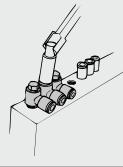


### Universal male elbow

10-KQ2V P.1184



Hexagon head of the body allows tightening with a box wrench in confined spaces.

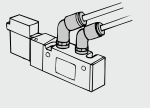


### 45° male elbow

10-KQ2K P.1184



Use to pipe a female thread at a 45° angle. The model between the male connector and male elbow.

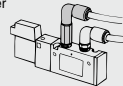


### Extended male elbow

10-KQ2W P.1184



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.



### Male connector

10-KQ2H P.1183



Use to pipe a female thread. Most general model.

### Male elbow

10-KQ2L P.1183



Use to pipe a female thread at right angles. Most general model.

### Male branch tee

10-KQ2T P.1185



Use to branch a female thread at both 90° angles.

### Branch "Y"

10-KQ2U P.1185



Use to branch a female thread.

### Male run tee

10-KQ2Y P.1185



Use to branch a female thread at a 90° angle.

Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Switches/ Pressure Sensors

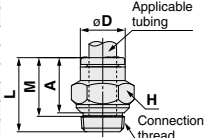
**Dimensions**

**Male Connector: 10-KQ2H (Gasket seal)**



Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	øD	L	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQ2H04-U01N	10	7.7	15.9	11.1	13.3	3.4	3	6.6
	1/4	10-KQ2H04-U02N	14	7.7	15.3	8.9	13.3	3.4	3	12.7
ø6	1/8	10-KQ2H06-U01N	12	9.7	16.7	11.9	13.3	10.4	4.5	6.2
	1/4	10-KQ2H06-U02N	14	9.7	17	10.6	13.3	10.4	4.5	12.8
	3/8	10-KQ2H06-U03N	17	9.7	14.9	8.5	13.3	10.4	4.5	18.1
ø8	1/8	10-KQ2H08-U01N	14	13	20.6	15.8	14.2	18	6	7
	1/4	10-KQ2H08-U02N	14	13	18.5	12.1	14.2	18	6	10.1
	3/8	10-KQ2H08-U03N	17	13	14.9	8.5	14.2	18	6	15
ø10	1/8	10-KQ2H10-U01N	17	15.6	22.4	17.6	15.6	18	6	13.9
	1/4	10-KQ2H10-U02N	17	15.6	23.7	17.3	15.6	29.5	7.5	17.6
	3/8	10-KQ2H10-U03N	17	15.6	19.5	13.1	15.6	29.5	7.5	15.6
	1/2	10-KQ2H10-U04N	22	15.6	17	8.4	15.6	29.5	7.5	29.5
ø12	1/4	10-KQ2H12-U02N	19	18.2	24.8	18.4	17	46.1	9	13.8
	3/8	10-KQ2H12-U03N	19	18.2	21.8	15.4	17	46.1	9	17.9
	1/2	10-KQ2H12-U04N	22	18.2	17.7	9.1	17	46.1	9	25.4
ø16	3/8	10-KQ2H16-U03N	24	23.6	29.2	22.8	20.6	67	11	33.9
	1/2	10-KQ2H16-U04N	24	23.6	26.8	18.2	20.6	67	13	31.5

\* Reference dimensions after installation of Uni thread

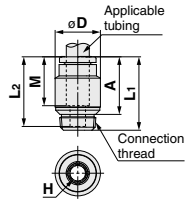


**Hexagon Socket Head Male Connector: 10-KQ2S (Gasket seal)**



Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	Note) øD	L <sub>1</sub>	L <sub>2</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQ2S04-U01N	3	10	20.6	19.6	15.8	13.3	3.6	3.1	8
	1/4	10-KQ2S06-U01N	4	12	19.8	18.8	15	13.3	9.9	4.1	8.2
ø6	1/4	10-KQ2S06-U02N	4	14	19.8	18.8	13.4	13.3	10	4.1	12.3
	1/8	10-KQ2S08-U01N	5	14	20.7	19.7	15.9	14.2	16.2	5.1	9.4
	1/4	10-KQ2S08-U02N	6	14	20.5	19.5	14.1	14.2	16.2	6.1	10.9
ø8	3/8	10-KQ2S08-U03N	6	17	20.7	19.7	14.3	14.2	16.2	6.1	19.8
	1/8	10-KQ2S10-U01N	5	15.6	22.4	21.9	16.8	15.6	16.2	5.1	10.5
	1/4	10-KQ2S10-U02N	8	17	23.7	20.1	17.3	15.6	26.6	8.1	15.4
ø10	3/8	10-KQ2S10-U03N	8	17	21.1	20.1	14.7	15.6	26.6	8.1	16.4
	1/2	10-KQ2S10-U04N	8	21	21.1	20.1	12.5	15.6	26.6	8.1	29.7
	1/4	10-KQ2S12-U02N	8	18.2	27.8	21.5	21.4	17	44.5	8.1	20.7
ø12	3/8	10-KQ2S12-U03N	10	18.2	22.8	21.8	16.4	17	44.5	10.1	16.1
	1/2	10-KQ2S12-U04N	10	21	22.8	21.8	14.2	17	44.5	10.1	28.1

\* Reference dimensions after installation of Uni thread  
Note) øD is maximum diameter.

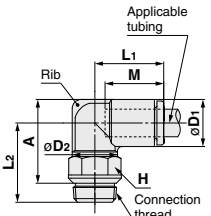


**Male Elbow: 10-KQ2L (Gasket seal)**



Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	Note) øD1	Note 1) øD2	L <sub>1</sub>	L <sub>2</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
ø4	1/8	10-KQ2L04-U01N	10	8.2	10	14.8	16.4	15.7	13.3	4.2	3	4.8	●
	1/4	10-KQ2L04-U02N	14	8.2	10	14.8	19.2	16.9	13.3	4.2	3	11.5	●
ø6	1/8	10-KQ2L06-U01N	10	10.4	10	15.5	17.5	17.9	13.3	9	4.5	5.3	—
	1/4	10-KQ2L06-U02N	14	10.4	10	15.5	20.3	19.1	13.3	9	4.5	12	—
ø8	3/8	10-KQ2L06-U03N	17	10.4	10	15.5	21.4	20.2	13.3	9	4.5	21.4	—
	1/8	10-KQ2L08-U01N	10	13.2	10	16.4	18.9	20.7	14.2	11.4	4.5	6.1	●
	1/4	Note 2) 10-KQ2L08-U01NQ	12	13.2	12	17.2	22.7	25.0	14.2	14.9	6	8.6	●
10-KQ2L08-U02N		14	13.2	12	17.2	21.7	21.9	14.2	14.9	6	10.9	●	
10-KQ2L08-U03N		17	13.2	12	17.2	22.8	23.0	14.2	14.9	6	20.2	●	
ø10	1/8	10-KQ2L10-U01N	14	15.9	12	18.6	21.5	24.6	15.6	14.9	6	12.3	●
	1/4	10-KQ2L10-U02N	17	15.9	17	19.3	24.3	25.8	15.6	25	7.5	16.9	●
	3/8	10-KQ2L10-U03N	17	15.9	17	19.3	26.9	28.4	15.6	25	7.5	17.9	●
	1/2	10-KQ2L10-U04N	22	15.9	17	19.3	34.5	33.8	15.6	25	7.5	48.2	●
ø12	1/4	10-KQ2L12-U02N	17	18.5	17	21.5	25.6	28.4	17	39.7	9	18.7	●
	3/8	10-KQ2L12-U03N	17	18.5	17	21.5	28.2	31.0	17	39.7	9	18.8	●
	1/2	10-KQ2L12-U04N	22	18.5	17	21.5	35.8	36.4	17	39.7	9	50	●
ø16	3/8	10-KQ2L16-U03N	22	23.8	21	27.1	32.4	37.9	20.6	58.9	11	37.4	—
	1/2	10-KQ2L16-U04N	22	23.8	21	27.1	35.0	38.3	20.6	58.9	13	47.9	—

\* Reference dimensions after installation of Uni thread  
Note 1) øD1 is maximum diameters.  
Note 2) Refer to page 1185-1 for details.





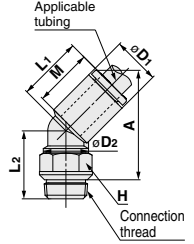
**Dimensions**

**45° Male Elbow: 10-KQ2K (Gasket seal)**



Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2K04-U01N	10	8.2	10	14.4	12.9	20.8	13.3	3.4	4.5	4.7
	1/4	10-KQ2K04-U02N	14	8.2	10	14.4	14.7	21	13.3	3.4	4.5	11.3
$\phi 6$	1/8	10-KQ2K06-U01N	10	10.4	10	14.7	15	23.8	13.3	6.9	4.5	5.1
	1/4	10-KQ2K06-U02N	14	10.4	10	14.7	16.8	24	13.3	6.9	4.5	11.7
$\phi 8$	3/8	10-KQ2K08-U03N	17	15.9	17	17.6	17.9	25.1	13.3	6.9	4.5	21.2
	1/8	10-KQ2K08-U01N	10	13.2	10	16	15.9	26.5	14.2	8.7	4.5	6
$\phi 10$	1/4	10-KQ2K08-U02N	14	13.2	12	16	18.7	27.7	14.2	19.7	6	10.7
	3/8	10-KQ2K08-U03N	17	13.2	12	16	19.8	28.8	14.2	19.7	6	20
$\phi 12$	1/8	10-KQ2K10-U01N	14	15.9	12	18.2	19.4	32.4	15.6	23.2	6	12.2
	1/4	10-KQ2K10-U02N	17	15.9	17	17.6	24.7	35.7	15.6	23.2	7.5	17
$\phi 12$	3/8	10-KQ2K10-U03N	17	15.9	17	17.6	21.6	32.6	15.6	23.2	7.5	17.4
	1/2	10-KQ2K10-U04N	22	15.9	17	17.6	29.2	38	15.6	23.2	7.5	47.7
$\phi 12$	1/4	10-KQ2K12-U02N	17	18.5	17	19.4	24.6	37.7	17	35.1	9	18.5
	3/8	10-KQ2K12-U03N	17	18.5	17	19.4	21.5	34.6	17	35.1	9	18.9
1/2	10-KQ2K12-U04N	22	18.5	17	19.4	29.1	40	17	35.1	9	49.2	

\* Reference dimensions after installation of Uni thread  
Note)  $\phi D_1$  is maximum diameter.

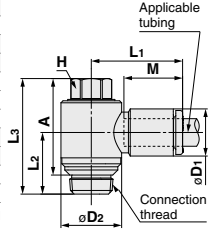


**Universal Male Elbow: 10-KQ2V (Gasket seal)**



Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2V04-U01N	8	8.2	13.4	19.3	13.6	25.5	20.7	13.3	2.9	4.5	13.5
	1/8	10-KQ2V06-U01N	8	10.4	13.4	20.5	13.6	25.5	20.7	13.3	5.9	4.5	13.9
$\phi 6$	1/4	10-KQ2V06-U02N	10	10.4	15.3	19.9	15.4	28	21.6	13.3	5.9	4.5	21.8
	1/8	10-KQ2V08-U01N	12	13.2	17.6	23.5	15	27.5	22.7	14.2	11.2	6	23.7
$\phi 8$	1/4	10-KQ2V08-U02N	12	13.2	17.6	23.5	17	29.5	23.1	14.2	11.2	6	28
	3/8	10-KQ2V08-U03N	14	13.2	20.6	23.1	18.2	34	27.6	14.2	14.3	7.5	43.1
$\phi 10$	1/4	10-KQ2V10-U02N	14	15.9	20.6	25.9	19	34	27.6	15.6	20.3	7.5	38.9
	3/8	10-KQ2V10-U03N	14	15.9	20.6	25.9	19	34	27.6	15.6	20.3	7.5	44.4
$\phi 12$	3/8	10-KQ2V12-U03N	17	18.5	25.2	28.5	20.2	36.4	30	17	30.8	9	60.5
	1/2	10-KQ2V12-U04N	17	18.5	25.2	28.5	22.9	39.1	30.5	17	30.8	9	74.5

\* Reference dimensions after installation of Uni thread  
Note)  $\phi D_1$  is maximum diameter.

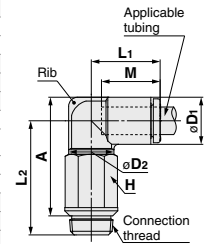


**Extended Male Elbow: 10-KQ2W (Gasket seal)**



Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	Note 1) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
$\phi 4$	1/8	10-KQ2W04-U01N	10	8.2	10	14.8	24.1	23.4	13.3	4	3	8.3	●
	1/4	10-KQ2W04-U02N	14	8.2	10	14.8	30.1	27.8	13.3	4	3	23.9	—
$\phi 6$	1/8	10-KQ2W06-U01N	10	10.4	10	15.5	31.2	31.6	13.3	8.6	4.5	11.5	—
	1/4	10-KQ2W06-U02N	14	10.4	10	15.5	31.2	30	13.3	8.6	4.5	24.3	—
$\phi 8$	3/8	10-KQ2W06-U03N	17	10.4	10	15.5	32.3	31.1	13.3	8.6	4.5	41	—
	1/8	10-KQ2W08-U01N	10	13.2	10	16.4	32.6	34.4	14.2	10.9	4.5	12.3	●
$\phi 8$	1/4	10-KQ2W08-U01NQ	12	13.2	12	17.2	43.6	45.4	14.2	14.2	6	24.7	●
	1/4	10-KQ2W08-U02N	14	13.2	12	17.2	35.4	35.6	14.2	14.2	6	24.1	●
$\phi 8$	3/8	10-KQ2W08-U03N	17	13.2	12	17.2	36.5	36.7	14.2	14.2	6	42.5	●
	1/4	10-KQ2W10-U02N	17	15.9	17	19.3	48.5	50.1	15.6	23.8	7.5	54.2	●
$\phi 10$	3/8	10-KQ2W10-U03N	17	15.9	17	19.3	45.8	47.4	15.6	23.8	7.5	47	●
	1/2	10-KQ2W10-U04N	22	15.9	17	19.3	53.4	52.8	15.6	23.8	7.5	95.5	●
$\phi 12$	1/4	10-KQ2W12-U02N	17	18.5	17	21.5	49.8	52.7	17	37.7	9	55.9	●
	3/8	10-KQ2W12-U03N	17	18.5	17	21.5	47.1	50	17	37.7	9	48.9	●
1/2	10-KQ2W12-U04N	22	18.5	17	21.5	54.7	55.4	17	37.7	9	97.4	●	

\* Reference dimensions after installation of Uni thread  
Note 1)  $\phi D_1$  is maximum diameter.  
Note 2) Refer to page 1185-1 for details.



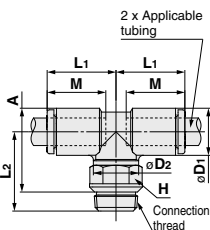
## Dimensions

### Male Branch Tee: 10-KQ2T (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2T04-U01N	10	8.2	10	14.8	16.4	15.7	13.3	4.1	3	5.5
	1/4	10-KQ2T04-U02N	14	8.2	10	14.8	19.2	16.9	13.3	4.1	3	12.2
$\phi 6$	1/8	10-KQ2T06-U01N	10	10.4	10	15.5	17.5	17.9	13.3	11	4.5	6.2
	1/4	10-KQ2T06-U02N	14	10.4	10	15.5	20.3	19.1	13.3	11	4.5	12.9
$\phi 8$	3/8	10-KQ2T08-U03N	17	10.4	10	15.5	21.4	20.2	13.3	11	4.5	22.3
	1/8	10-KQ2T08-U01N	10	13.2	10	16.4	18.9	20.7	14.2	13.9	4.5	7.9
$\phi 10$	1/4	10-KQ2T08-U02N	14	13.2	12	17.2	21.7	21.9	14.2	18.2	6	12.6
	3/8	10-KQ2T08-U03N	17	13.2	12	17.2	22.8	23	14.2	18.2	6	21.9
$\phi 12$	1/8	10-KQ2T10-U01N	14	15.9	12	18.6	21.4	24.6	15.6	14.9	6	15.1
	1/4	10-KQ2T10-U02N	17	15.9	17	19.3	24.2	25.8	15.6	25	7.5	19.5
$\phi 16$	3/8	10-KQ2T10-U03N	17	15.9	17	19.3	26.8	28.4	15.6	25	7.5	20.5
	1/2	10-KQ2T10-U04N	22	15.9	17	19.3	34.4	33.8	15.6	25	7.5	50.8
$\phi 12$	1/4	10-KQ2T12-U02N	17	18.5	17	21.5	25.5	28.4	17	45.2	9	22.5
	3/8	10-KQ2T12-U03N	17	18.5	17	21.5	28.1	31	17	45.2	9	23.6
$\phi 16$	1/2	10-KQ2T12-U04N	22	18.5	17	21.5	35.7	36.4	17	45.2	9	53.9
	3/8	10-KQ2T16-U03N	22	23.8	21	27.1	32.4	37.9	20.6	58.9	11	44.3
$\phi 16$	1/2	10-KQ2T16-U04N	22	23.8	21	27.1	35	38.3	20.6	58.9	13	54.8

\* Reference dimensions after installation of Uni thread  
Note)  $\phi D_1$  is maximum diameter.

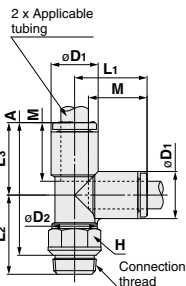


### Male Run Tee: 10-KQ2Y (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2Y04-U01N	10	8.2	10	15.3	16.4	15.3	26.9	13.3	4	3	5.6
	1/4	10-KQ2Y04-U02N	14	8.2	10	15.3	19.2	15.3	28.1	13.3	4	3	12.2
$\phi 6$	1/8	10-KQ2Y06-U01N	10	10.4	10	16.3	17.5	16.3	29	13.3	10.6	4.5	6.3
	1/4	10-KQ2Y06-U02N	14	10.4	10	16.3	20.3	16.3	30.2	13.3	10.6	4.5	13
$\phi 8$	3/8	10-KQ2Y06-U03N	17	10.4	10	16.3	21.4	16.3	31.3	13.3	10.6	4.5	22.5
	1/8	10-KQ2Y08-U01N	10	13.2	10	18.2	18.9	18.2	32.3	14.2	13.4	4.5	8
$\phi 10$	1/4	10-KQ2Y08-U02N	14	13.2	12	18.2	21.7	18.2	33.5	14.2	17.7	6	12.7
	3/8	10-KQ2Y08-U03N	17	13.2	12	18.2	22.8	18.2	34.6	14.2	17.7	6	22
$\phi 12$	1/8	10-KQ2Y10-U01N	14	15.9	12	20.6	21.4	20.6	37.3	15.6	28.4	6	15.2
	1/4	10-KQ2Y10-U02N	17	15.9	17	20.6	24.2	20.6	38.5	15.6	28.4	7.5	19.7
$\phi 16$	3/8	10-KQ2Y10-U03N	17	15.9	17	20.6	26.8	20.6	41.1	15.6	28.4	7.5	20.7
	1/2	10-KQ2Y10-U04N	22	15.9	17	20.6	34.4	20.6	46.5	15.6	28.4	7.5	50.9
$\phi 12$	1/4	10-KQ2Y12-U02N	17	18.5	17	23	25.5	23	42.2	17	45.4	9	22.8
	3/8	10-KQ2Y12-U03N	17	18.5	17	23	28.1	23	44.8	17	45.4	9	23.9
$\phi 16$	1/2	10-KQ2Y12-U04N	22	18.5	17	23	35.7	23	50.2	17	45.4	9	54.2
	3/8	10-KQ2Y16-U03N	22	23.8	21	28.6	32.4	28.6	54.6	20.6	60	11	44.9
$\phi 16$	1/2	10-KQ2Y16-U04N	22	23.8	21	28.6	35	28.6	55	20.6	60	13	55.4

\* Reference dimensions after installation of Uni thread  
Note)  $\phi D_1$  is maximum diameter.

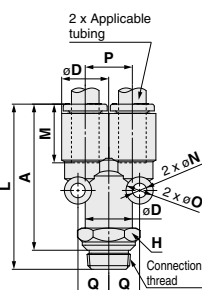


### Branch "Y": 10-KQ2U (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	Note) $\phi D_1$	L	P	A*	M	Q	Mounting hole $\phi O \times \phi N$	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2U04-U01N	11	8.2	35.4	8.2	30.6	13.3	5.7	6 3.2 8.2	4.2	3.6	8.6
	1/4	10-KQ2U04-U02N	14	8.2	37.4	8.2	31	13.3	5.7	6 3.2 8.2	4.2	3.6	14.6
$\phi 6$	1/8	10-KQ2U06-U01N	12	10.4	36.8	10.4	32	13.3	6.8	6 3.2 10.4	10.6	5.4	10
	1/4	10-KQ2U06-U02N	14	10.4	38.5	10.4	32.1	13.3	6.8	6 3.2 10.4	10.6	5.4	15
$\phi 8$	3/8	10-KQ2U06-U03N	17	10.4	39.3	10.4	32.9	13.3	6.8	6 3.2 10.4	10.6	5.4	23.3
	1/8	10-KQ2U08-U01N	14	13.2	41.6	13.2	36.8	14.2	8.7	8 4.2 13.2	17.7	6	17.6
$\phi 10$	1/4	10-KQ2U08-U02N	14	13.2	42.6	13.2	36.2	14.2	8.7	8 4.2 13.2	17.7	7.3	18.3
	3/8	10-KQ2U08-U03N	17	13.2	42.4	13.2	36	14.2	8.7	8 4.2 13.2	17.7	7.3	25.5
$\phi 12$	1/4	10-KQ2U10-U02N	17	15.9	47.6	15.9	41.2	15.6	10.1	8 4.2 15.9	28.4	9	25.3
	3/8	10-KQ2U10-U03N	19	15.9	47.5	15.9	41.1	15.6	10.1	8 4.2 15.9	28.4	9.4	31.6
$\phi 16$	1/2	10-KQ2U10-U04N	22	15.9	49.4	15.9	40.8	15.6	10.1	8 4.2 15.9	28.4	9.4	47.6
	1/4	10-KQ2U12-U02N	22	18.5	52.1	18.5	45.7	17	11.4	8 4.2 18.5	45.4	9	42.6
$\phi 12$	3/8	10-KQ2U12-U03N	22	18.5	52	18.5	45.6	17	11.4	8 4.2 18.5	45.4	11	41.2
	1/2	10-KQ2U12-U04N	22	18.5	53.4	18.5	44.8	17	11.4	8 4.2 18.5	45.4	11.6	48.8

\* Reference dimensions after installation of Uni thread  
Note)  $\phi D$  is maximum diameter.



# Series 10-KQ2

# Made to Order

Please contact SMC for detailed dimensions, specifications, and lead times.

## 1 Made to Order

Symbol	Specifications
10-KQ2□09-U01□Q	<p>Effective area is interchangeable with the current product (KQ series).</p> <p>Applicable model: Male elbow, 45° male elbow, Extended male elbow, Male branch tee, Male run tee</p> <p>Applicable tubing O.D./Port size: ø5/16"/Uni1/8</p> <p>Thread material/Surface treatment: Brass + Electroless nickel plating</p> <p>Example) <b>10-KQ2L09-U01AQ</b></p>

Directional  
Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation  
Equipment

Modular F. R.

Pressure Control  
Equipment

Fittings & Tubing

Flow Control  
Equipment

Pressure Switches/  
Pressure Sensors



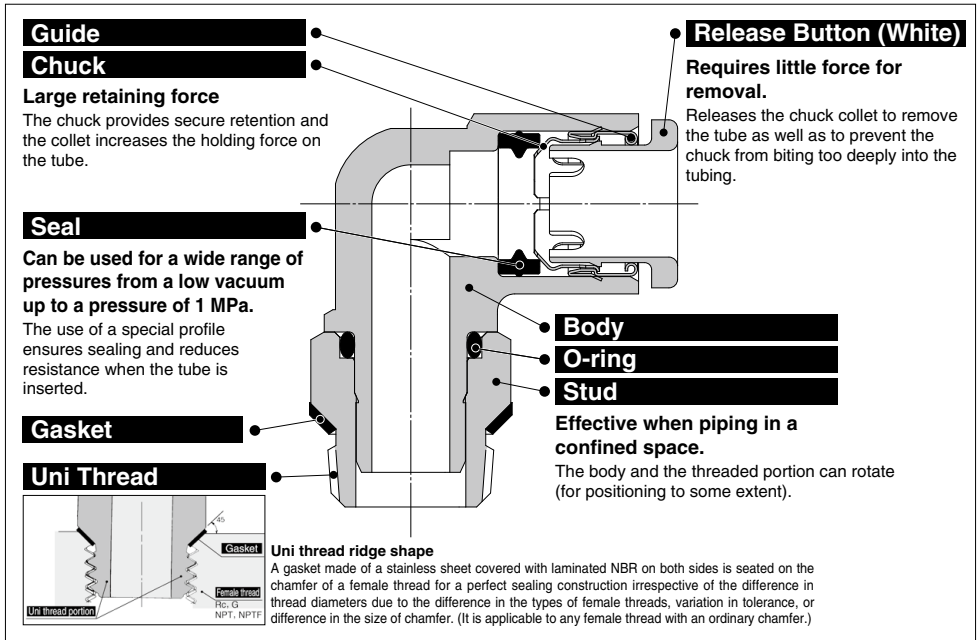
# Series 10-KQ2

Inch Size Uni One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread\*: Rc, G, NPT, NPTF

**RoHS**

\* A ridge shape has been created as a Uni thread for common applications for Rc, G, NPT and NPTF.



**One-touch IN/OUT connection.**  
**Possible to use in vacuum to -100 kPa**

- Applicable tubing—Inch size
- Applicable tubing material  
PFA, Polyurethane
- The male thread for piping  
drastically cuts piping work-hours.



## Applicable Tubing

Tubing material (Note)	PFA, Polyurethane
Tubing O.D.	ø1/8", ø5/32", ø3/16", ø1/4", ø5/16", ø3/8", ø1/2"

Note) FEP, nylon and soft nylon tubing can also be used. However, the degree of clean performance will be reduced.

## Specifications

Fluid	Air, Water (Note 1)
Operating pressure range (Note 2)	-100 kPa to 1 MPa
Proof pressure (at 23°C)	3 MPa
Ambient and fluid temperature	-5 to 60°C, Water: 0 to 40°C (No freezing)
Grease	Fluorine based grease
Cleanliness class (ISO class)	Class 5

Note 1) The surge pressure must be under the maximum operating pressure.

Note 2) Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

## Principal Parts Material

Body	C3604 Electroless nickel plated, PBT
Stud	C3604 (Thread portion) Electroless nickel plated
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR

Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Switches/ Pressure Sensors

# Inch Size Uni One-touch Fittings

## Variations

### Male connector

10-KQ2H P.1188



Use to pipe a female thread. Most general model.

### Male elbow

10-KQ2L P.1188



Use to pipe a female thread at right angles. Most general model.

### Male branch tee

10-KQ2T P.1189



Use to branch a female thread at both 90° angles.

### Male run tee

10-KQ2Y P.1189



Use to branch a female thread at a 90° angle.

### Branch "Y"

10-KQ2U P.1189



Use to branch a female thread.

### Extended male elbow

10-KQ2W P.1188



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.

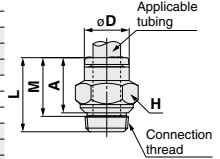
**Dimensions**

**Male Connector: 10-KQ2H (Gasket seal)**



Applicable tubing O.D. (inch)	Connection thread Uni	Model	H (Width across flats)	øD	L	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
ø1/8	1/8	10-KQ2H01-U01N	11.11	6.7	15.2	10.4	13.3	2.9	2.5	7.9
	1/4	10-KQ2H01-U02N	14.29	6.7	15.3	8.9	13.3	2.9	2.5	13.7
ø5/32	1/8	10-KQ2H03-U01N	11.11	7.7	15.7	10.9	13.3	3.4	3	7.7
	1/4	10-KQ2H03-U02N	14.29	7.7	15.3	8.9	13.3	3.4	3	13
ø3/16	1/8	10-KQ2H05-U01N	12.7	8.3	16	11.2	13.3	5.6	3.5	7.7
	1/4	10-KQ2H05-U02N	14.29	8.3	15.3	8.9	13.3	5.6	3.5	12.4
ø1/4	1/8	10-KQ2H07-U01N	12.7	10.9	18.9	14.1	13.3	10	4.6	8.7
	1/4	10-KQ2H07-U02N	14.29	10.9	15.3	8.9	13.3	10	4.6	10.7
ø5/16	3/8	10-KQ2H07-U03N	17.46	10.9	14.9	8.5	13.3	10	4.6	18.4
	1/8	10-KQ2H09-U01N	14.29	13	20.6	15.8	14.2	18	6	10.5
ø1/2	1/4	10-KQ2H09-U02N	14.29	13	18.5	12.1	14.2	18	6	10.7
	3/8	10-KQ2H09-U03N	17.46	13	14.9	8.5	14.2	18	6	15.5
ø3/8	1/4	10-KQ2H11-U02N	17.46	15.1	22.2	15.8	15.6	23.8	7	16.6
	3/8	10-KQ2H11-U03N	17.46	15.1	18.9	12.5	15.6	23.8	7	16.2
ø1/2	1/2	10-KQ2H11-U04N	22.23	15.1	17	8.4	15.6	23.8	7	30.9
	1/4	10-KQ2H13-U02N	22.23	19	25.2	18.8	17	44.4	9	24.9
ø1/2	3/8	10-KQ2H13-U03N	22.23	19	23.5	17.1	17	44.4	9.6	27
	1/2	10-KQ2H13-U04N	22.23	19	21.7	13.1	17	44.4	9.6	29.8

\* Reference dimensions after installation of Uni thread

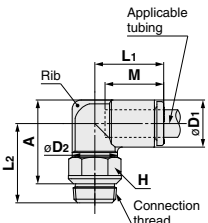


**Male Elbow: 10-KQ2L (Gasket seal)**



Applicable tubing O.D. (inch)	Connection thread Uni	Model	H (Width across flats)	Note 1) øD1	øD2	L1	L2	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
ø1/8	1/8	10-KQ2L01-U01N	11.11	7.1	10	14.5	17.9	16.7	13.3	2.5	2.5	6	—
	1/4	10-KQ2L01-U02N	14.29	7.1	10	14.5	19.2	16.4	13.3	2.5	2.5	12.1	—
ø5/32	1/8	10-KQ2L03-U01N	11.11	8.2	10	14.8	17.4	16.7	13.3	4.2	3	6.2	●
	1/4	10-KQ2L03-U02N	14.29	8.2	10	14.8	19.7	17.4	13.3	4.2	3	12.3	●
ø3/16	1/8	10-KQ2L05-U01N	11.11	9.1	10	15	17.9	17.7	13.3	5.6	3.5	6.4	—
	1/4	10-KQ2L05-U02N	14.29	9.1	10	15	20.2	18.4	13.3	5.6	3.5	12.5	—
ø1/4	1/8	10-KQ2L07-U01N	11.11	11.1	10	15.6	18.9	19.7	13.3	10	4.5	6.7	●
	1/4	10-KQ2L07-U02N	14.29	11.1	10	15.6	21.2	20.4	13.3	10	4.5	12.9	●
ø5/16	3/8	10-KQ2L07-U03N	17.46	11.1	10	15.6	22.3	21.5	13.3	10	4.5	23.1	●
	1/4	10-KQ2L09-U01N	11.11	13.2	10	16.4	19.9	21.7	14.2	11.4	4.5	7.4	●
ø1/2	1/8	Note 2) 10-KQ2L09-U01NQ	12.7	13.2	12	17.2	22.7	25.0	14.2	14.9	6	9.2	●
	1/4	10-KQ2L09-U02N	14.29	13.2	12	17.2	22.2	22.4	14.2	14.9	6	11.6	●
ø3/8	3/8	10-KQ2L09-U03N	17.46	13.2	12	17.2	23.3	23.5	14.2	14.9	6	21.7	●
	1/4	10-KQ2L11-U02N	17.46	15.4	17	19.3	24.4	25.7	15.6	23.8	7.5	18	●
ø1/2	3/8	10-KQ2L11-U03N	17.46	15.4	17	19.3	27.0	28.3	15.6	23.8	7.5	18.7	●
	1/2	10-KQ2L11-U04N	22.23	15.4	17	19.3	34.8	33.9	15.6	23.8	7.5	50	—
ø1/2	1/4	10-KQ2L13-U02N	17.46	19.3	17	21.5	26.3	29.5	17	44.4	9	20.3	—
	3/8	10-KQ2L13-U03N	17.46	19.3	17	21.8	28.9	32.1	17	44.4	9.5	25.1	—
1/2	10-KQ2L13-U04N	22.23	19.3	17	21.8	31.9	32.9	17	44.4	9.5	56	—	

\* Reference dimensions after installation of Uni thread  
 Note 1) øD1 is maximum diameter.  
 Note 2) Refer to page 1189-1 for details.

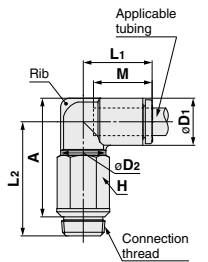


**Extended Male Elbow: 10-KQ2W (Gasket seal)**



Applicable tubing O.D. (inch)	Connection thread Uni	Model	H (Width across flats)	Note 1) øD1	øD2	L1	L2	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)	With a rib
ø1/8	1/8	10-KQ2W01-U01N	11.11	7.1	10	14.5	31.5	30.3	13.3	2.4	2.5	14.5	—
	1/4	10-KQ2W01-U02N	14.29	7.1	10	14.5	30.8	28	13.3	2.4	2.5	26	—
ø5/32	1/8	10-KQ2W03-U01N	11.11	8.2	10	14.8	31.1	30.4	13.3	4	3	14.6	●
	1/4	10-KQ2W03-U02N	14.29	8.2	10	14.8	31.3	29	13.3	4	3	26.2	●
ø3/16	1/8	10-KQ2W05-U01N	11.11	9.1	10	15	31.6	31.3	13.3	5.6	3.5	14.8	—
	1/4	10-KQ2W05-U02N	14.29	9.1	10	15	31.8	30	13.3	5.6	3.5	26.4	—
ø1/4	1/8	10-KQ2W07-U01N	11.11	11.1	10	15.6	32.6	33.3	13.3	10	4.5	15.1	●
	1/4	10-KQ2W07-U02N	14.29	11.1	10	15.6	32.8	32	13.3	10	4.5	26.8	●
ø5/16	3/8	10-KQ2W07-U03N	17.46	11.1	10	15.6	33.9	33.1	13.3	10	4.5	45.3	●
	1/4	10-KQ2W09-U01N	11.11	13.2	10	16.4	33.6	35.4	14.2	11.3	4.5	15.9	●
ø1/2	1/8	Note 2) 10-KQ2W09-U01NQ	12.7	13.2	12	17.2	39.5	41.3	14.2	14.2	6	24.0	●
	1/4	10-KQ2W09-U02N	14.29	13.2	12	17.2	35.9	36.1	14.2	14.2	6	25.7	●
ø3/8	3/8	10-KQ2W09-U03N	17.46	13.2	12	17.2	37	37.2	14.2	14.2	6	45.5	●
	1/4	10-KQ2W11-U02N	17.46	15.4	17	19.3	44.1	45.4	15.6	23.8	7.5	50.6	●
ø1/2	3/8	10-KQ2W11-U03N	17.46	15.4	17	19.3	42.9	44.2	15.6	23.8	7.5	45	●
	1/2	10-KQ2W11-U04N	22.23	15.4	17	19.3	50.7	49.8	15.6	23.8	7.5	90.9	●
ø1/2	1/4	10-KQ2W13-U02N	17.46	19.3	17	21.5	46	49.3	17	44.4	9	52.9	—
	3/8	10-KQ2W13-U03N	17.46	19.3	17	21.8	48.6	51.9	17	44.4	9.5	52.6	—
1/2	10-KQ2W13-U04N	22.23	19.3	17	21.8	51.6	52.7	17	44.4	9.5	114.1	—	

\* Reference dimensions after installation of Uni thread  
 Note 1) øD1 is maximum diameter.  
 Note 2) Refer to page 1189-1 for details.



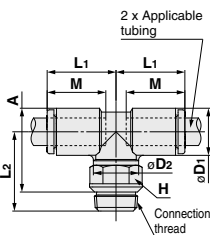
## Dimensions

### Male Branch Tee: 10-KQ2T (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread Uni	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/8	10-KQ2T01-U01N	11.11	7.1	10	14.5	17.8	16.6	13.3	2.9	2.5	6.6
	1/4	10-KQ2T01-U02N	14.29	7.1	10	14.5	19.1	16.3	13.3	2.9	2.5	12.7
$\phi 5/32$	1/8	10-KQ2T03-U01N	11.11	8.2	10	14.8	17.4	16.7	13.3	4.1	3	6.9
	1/4	10-KQ2T03-U02N	14.29	8.2	10	14.8	19.7	17.4	13.3	4.1	3	13
$\phi 3/16$	1/8	10-KQ2T05-U01N	11.11	9.1	10	15	17.9	17.6	13.3	5.6	3.5	7.1
	1/4	10-KQ2T05-U02N	14.29	9.1	10	15	20.2	18.3	13.3	5.6	3.5	13.3
$\phi 1/4$	1/8	10-KQ2T07-U01N	11.11	11.1	10	15.6	18.9	19.6	13.3	10	4.5	7.8
	1/4	10-KQ2T07-U02N	14.29	11.1	10	15.6	21.2	20.3	13.3	10	4.5	14.1
$\phi 3/8$	1/8	10-KQ2T07-U03N	17.46	11.1	10	15.6	22.3	21.4	13.3	10	4.5	24.3
	1/8	10-KQ2T09-U01N	11.11	13.2	10	16.4	19.9	21.7	14.2	13.9	4.5	9.3
$\phi 5/16$	1/4	10-KQ2T09-U02N	14.29	13.2	12	17.2	22.2	22.4	14.2	18.2	6	13.4
	3/8	10-KQ2T09-U03N	17.46	13.2	12	17.2	23.3	23.5	14.2	18.2	6	23.4
$\phi 3/8$	1/4	10-KQ2T11-U02N	17.46	15.4	17	19.3	24.3	25.6	15.6	23.8	7.5	20.4
	3/8	10-KQ2T11-U03N	17.46	15.4	17	19.3	26.9	28.2	15.6	23.8	7.5	21.2
$\phi 1/2$	1/2	10-KQ2T11-U04N	22.23	15.4	17	19.3	34.7	33.8	15.6	23.8	7.5	52.5
	1/4	10-KQ2T13-U02N	17.46	19.3	17	21.5	26.2	29.5	17	44.4	9	24.4
$\phi 1/2$	3/8	10-KQ2T13-U03N	17.46	19.3	17	21.8	28.8	32.1	17	44.4	9.5	29.3
	1/2	10-KQ2T13-U04N	22.23	19.3	17	21.8	31.8	32.9	17	44.4	9.5	60.2

\* Reference dimensions after installation of Uni thread  
Note)  $\phi D_1$  is maximum diameter.

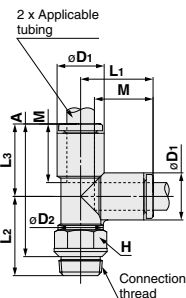


### Male Run Tee: 10-KQ2Y (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread Uni	Model	H (Width across flats)	Note) $\phi D_1$	$\phi D_2$	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	A*	M	Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/8	10-KQ2Y01-U01N	11.11	7.1	10	14.9	17.8	14.9	28	13.3	2.9	2.5	6.6
	1/4	10-KQ2Y01-U02N	14.29	7.1	10	14.9	19.1	14.9	27.7	13.3	2.9	2.5	12.8
$\phi 5/32$	1/8	10-KQ2Y03-U01N	11.11	8.2	10	15.3	17.4	15.3	27.9	13.3	4.4	3	6.9
	1/4	10-KQ2Y03-U02N	14.29	8.2	10	15.3	19.7	15.3	28.6	13.3	4.4	3	13.1
$\phi 3/16$	1/8	10-KQ2Y05-U01N	11.11	9.1	10	15.7	17.9	15.7	28.8	13.3	5.6	3.5	7.2
	1/4	10-KQ2Y05-U02N	14.29	9.1	10	15.7	20.2	15.7	29.5	13.3	5.6	3.5	13.4
$\phi 1/4$	1/8	10-KQ2Y07-U01N	11.11	11.1	10	16.5	18.9	16.5	30.6	13.3	10	4.5	7.9
	1/4	10-KQ2Y07-U02N	14.29	11.1	10	16.5	21.2	16.5	31.3	13.3	10	4.5	14.1
$\phi 3/8$	1/8	10-KQ2Y07-U03N	17.46	11.1	10	16.5	22.3	16.5	32.4	13.3	10	4.5	24.3
	1/8	10-KQ2Y09-U01N	11.11	13.2	10	18.2	19.9	18.2	33.3	14.2	13.4	4.5	9.3
$\phi 5/16$	1/4	10-KQ2Y09-U02N	14.29	13.2	12	18.2	22.2	18.2	34	14.2	17.7	6	13.4
	3/8	10-KQ2Y09-U03N	17.46	13.2	12	18.2	23.3	18.2	35.1	14.2	17.7	6	23.5
$\phi 3/8$	1/4	10-KQ2Y11-U02N	17.46	15.4	17	20.4	24.3	20.4	38.3	15.6	23.8	7.5	20.5
	3/8	10-KQ2Y11-U03N	17.46	15.4	17	20.4	26.9	20.4	40.9	15.6	23.8	7.5	21.3
$\phi 1/2$	1/2	10-KQ2Y11-U04N	22.23	15.4	17	20.4	34.7	20.4	46.5	15.6	23.8	7.5	52.6
	1/4	10-KQ2Y13-U02N	17.46	19.3	17	23.4	26.2	23.4	43.2	17	44.4	9	24.7
$\phi 1/2$	3/8	10-KQ2Y13-U03N	17.46	19.3	17	23.4	28.8	23.4	45.8	17	44.4	9.5	29.5
	1/2	10-KQ2Y13-U04N	22.23	19.3	17	23.4	31.8	23.4	46.6	17	44.4	9.5	60.4

\* Reference dimensions after installation of Uni thread  
Note)  $\phi D_1$  is maximum diameter.

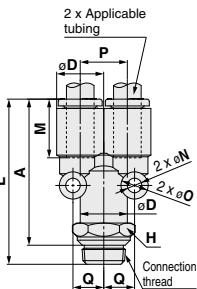


### Branch "Y": 10-KQ2U (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread Uni	Model	H (Width across flats)	Note) $\phi D$	L	P	A*	M	Q	Mounting hole		Effective area (mm <sup>2</sup> ) Urethane	Min. port size	Weight (g)
										$\phi O$	$\phi N$			
$\phi 1/8$	1/8	10-KQ2U01-U01N	11.11	7.1	35.1	7.1	30.3	13.3	5.2	6	3.2	7.1	2.9	8.2
	1/4	10-KQ2U01-U02N	14.29	7.1	37.4	7.1	31	13.3	5.2	6	3.2	7.1	2.9	14.6
$\phi 5/32$	1/8	10-KQ2U03-U01N	11.11	8.2	35.4	8.2	30.6	13.3	5.7	6	3.2	8.2	4.2	3.6
	1/4	10-KQ2U03-U02N	14.29	8.2	37.4	8.2	31	13.3	5.7	6	3.2	8.2	4.2	3.6
$\phi 3/16$	1/8	10-KQ2U05-U01N	11.11	9.1	35.8	9.1	31	13.3	6.2	6	3.2	9.1	5.6	4.1
	1/4	10-KQ2U05-U02N	14.29	9.1	38.1	9.1	31.7	13.3	6.2	6	3.2	9.1	5.6	4.1
$\phi 1/4$	1/8	10-KQ2U07-U01N	12.7	11.1	37.7	11.1	32.9	13.3	7.6	8	4	11.1	10	5.6
	1/4	10-KQ2U07-U02N	14.29	11.1	38.8	11.1	32.4	13.3	7.6	8	4	11.1	10	5.6
$\phi 3/8$	1/8	10-KQ2U07-U03N	17.46	11.1	39.7	11.1	33.3	13.3	7.6	8	4	11.1	10	5.6
	1/8	10-KQ2U09-U01N	14.29	13.2	41.6	13.2	36.8	14.2	8.7	8	4.2	13.2	17.7	6
$\phi 5/16$	1/4	10-KQ2U09-U02N	14.29	13.2	42.6	13.2	36.2	14.2	8.7	8	4.2	13.2	17.7	7.3
	3/8	10-KQ2U09-U03N	17.46	13.2	42.4	13.2	36	14.2	8.7	8	4.2	13.2	17.7	7.3
$\phi 3/8$	1/4	10-KQ2U11-U02N	17.46	15.4	47.2	15.4	40.8	15.6	9.9	8	4.2	15.4	23.8	8.9
	3/8	10-KQ2U11-U03N	19	15.4	47.1	15.4	40.7	15.6	9.9	8	4.2	15.4	23.8	8.9
$\phi 1/2$	1/2	10-KQ2U11-U04N	22.23	15.4	49.3	15.4	40.7	15.6	9.9	8	4.2	15.4	23.8	8.9
	1/4	10-KQ2U13-U02N	22.23	19.3	52.5	19.3	46.1	17	11.8	8	4.2	19.3	50.6	9
$\phi 1/2$	3/8	10-KQ2U13-U03N	22.23	19.3	52.4	19.3	46	17	11.8	8	4.2	19.3	50.6	11
	1/2	10-KQ2U13-U04N	22.23	19.3	54	19.3	45.4	17	11.8	8	4.2	19.3	50.6	12.1

\* Reference dimensions after installation of Uni thread  
Note)  $\phi D$  is maximum diameter.





# Series 10-KQ2

## Made to Order

Please contact SMC for detailed dimensions, specifications, and lead times.

### 1 Made to Order

Symbol	Specifications
10-KQ2□08-U01□Q	<p>Effective area is interchangeable with the current product (KQ series).</p> <p>Applicable model: Male elbow, 45° male elbow, Extended male elbow, Male branch tee, Male run tee</p> <p>Applicable tubing O.D./Port size: ø8/Uni1/8</p> <p>Thread material/Surface treatment: Brass + Electroless nickel plating</p> <p>Example) <b>10-KQ2L08-U01AQ</b></p>

Directional  
Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation  
Equipment

Modular F. R.

Pressure Control  
Equipment

Fittings & Tubing

Flow Control  
Equipment

Pressure Switches/  
Pressure Sensors