

Series 10-KQ2

Metric Size One-touch Fittings

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

RoHS

Guide

Chuck

Large retaining force

The chuck provides secure retention and the collet increases the holding force on the tube.

Seal

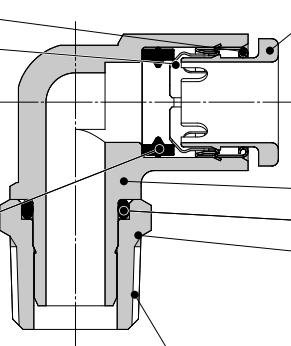
Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa.

The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Guide

Chuck

Body



Release Button (White)

Requires little force for removal.

Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

Body

O-ring

Stud

Effective when piping in a confined space.

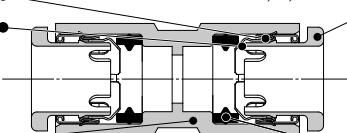
Body part rotates allowing for positioning.

Connection Thread

M, R, Rc

Release Button (White)

Seal



* Fittings without thread portion, and with all resin body material are copper free specification.

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 Note)	PFA, Polyurethane
-----------------------	-------------------

Tubing O.D.	ø2, ø3.2, 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.

Color

Series	Body	Release button
Series 10-KQ2	White	White

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)
Thread	Mounting section JIS B0203 (Taper thread for piping) Nut section JIS B0205 (Metric coarse 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

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.

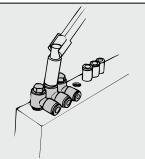


Universal male elbow

10-KQ2V P.1134



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

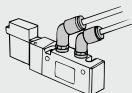


45° male elbow

10-KQ2K P.1133



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

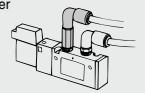


Extended male elbow

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.

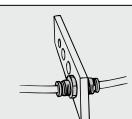


Bulkhead union

10-KQ2E P.1150



Use to connect tubing through a panel, etc.

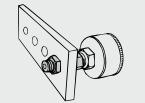


Bulkhead connector

10-KQ2E P.1150



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

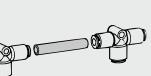


Nipple

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.

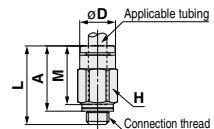
Different diameter tee 10-KQ2T P.1142	Use to connect tubing for branching at both 90° angles with size reduced.	Male run tee 10-KQ2Y P.1144	Use to branch a female thread at a 90° angle.	Union "Y" 10-KQ2U P.1147	Use to branch tubing in the same direction.
Different diameter tee 10-KQ2T P.1142	Use to connect tubing for branching at 90° angle with size reduced from the same piping.	Triple branch universal male elbow 10-KQ2ZT P.1138	Use to six-branch a female thread at right angles. Three individual parts rotate 360°.	Different diameter union "Y" 10-KQ2U P.1147	Use to connect tubing for branching with size reduced.
Different diameter cross 10-KQ2TY P.1143	Use to connect tubing for branching in three directions with size reduced.	Branch union elbow 10-KQ2LU P.1131	Use to branch tubing at right angles.	Plug-in "Y" 10-KQ2U P.1147	Use to branch One-touch fittings.
Hexagon socket head universal male elbow 10-KQ2VS P.1134	Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.	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.	Branch "Y" 10-KQ2U P.1146	Use to branch a female thread.
Male branch connector 10-KQ2LU P.1132	Use to branch a female thread at right angles.	Male delta union 10-KQ2D P.1145	Use to branch a female thread at two right angles.	Plug-in reducer 10-KQ2R P.1150	Use to change size of One-touch fittings.
Female elbow 10-KQ2LF P.1139	Use to pipe a male thread at right angles.	Delta union 10-KQ2D P.1146	Use to branch tubing at three right angles.	Bulkhead male elbow 10-KQ2LE P.1151	Use to connect tubing through a panel, etc. and to change the tube direction by 90°.
Double universal male elbow 10-KQ2VD P.1136	Use to branch a female thread at right angles. Two individual parts rotate 360°.	Double branch "Y" 10-KQ2UD P.1148	Use to four-branch a female thread.	Adapter 10-KQ2N P.1151	Use to connect One-touch fittings and R female thread.
Triple universal male elbow 10-KQ2VT P.1136	Use to three-branch a female thread at right angles. Three individual parts rotate 360°.	Different diameter double union "Y" 10-KQ2UD P.1148	Use to four-branch tubing with size reduced.	Tube cap 10-KQ2C P.1152	Use to plug unused tubing.
Branch universal male elbow 10-KQ2Z P.1137	Hexagon head of the body allows tightening with a box wrench. Use for branch connections.	Different diameter plug-in "Y" 10-KQ2X P.1149	Use to branch One-touch fittings with size reduced.	Color cap 10-KQ2C P.1152	Mount onto the release button and use different colors for piping according to applications.
Double branch universal male elbow 10-KQ2ZD P.1138	Use to four-branch a female thread at right angles. Two individual parts rotate 360°.	Double plug-in "Y" 10-KQ2XD P.1149	Use to four-branch One-touch fittings.	Plug 10-KQP P.1151	Use to plug unused One-touch fittings.

Dimensions

Male Connector: 10-KQ2H (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	ϕD	L	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 2$	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
$\phi 3.2$	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
$\phi 4$	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
$\phi 6$	M6 x 1.0	10-KQ2H04-M6N	8	7.7	18.7	14.7	13.3	5.6	3	3.6
	M6 x 1.0	10-KQ2H06-M6N	10	9.7	17.7	14.7	13.3	4	2.5	4.1
		10-KQ2H06-M5N	10	9.7	18.8	14.8	13.3	5.6	3	4.4

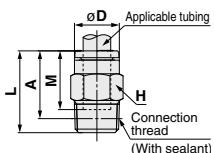


Male Connector: 10-KQ2H (Sealant)



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	ϕD	L	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 3.2$	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
$\phi 4$	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
$\phi 6$	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
$\phi 8$	3/8	10-KQ2H06-03NS	17	9.7	18.1	13	13.3	10.4	4.5	24.5
	1/4	10-KQ2H08-01NS	14	13	22.5	19.4	14.2	18	6	11.9
$\phi 10$	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
$\phi 12$	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
$\phi 16$	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
$\phi 12$	1/4	10-KQ2H12-02NS	19	18.2	26.7	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
$\phi 16$	1/2	10-KQ2H12-04NS	22	18.2	22.3	15.9	17	46.1	9	37.7
	New 1/4	10-KQ2H16-02NS	24	23.6	32.5	27.8	20.6	58.3	9	37.4
$\phi 16$	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

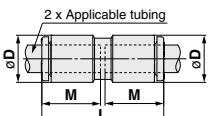
* Reference dimensions after installation of R thread



Straight Union: 10-KQ2H



Applicable tubing O.D. (mm)	Model	ϕD Note	L	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 2$	10-KQ2H02-00A	5.8	24.8	11.9	0.9	1.4	0.8
$\phi 3.2$	10-KQ2H23-00A	7.1	27.6	13.3	2.9	2.5	1.4
$\phi 4$	10-KQ2H04-00A	8.2	27.6	13.3	4	3	1.6
$\phi 6$	10-KQ2H06-00A	10.4	27.6	13.3	10.4	4.5	2.1
$\phi 8$	10-KQ2H08-00A	13.2	29.4	14.2	18	6	3.7
$\phi 10$	10-KQ2H10-00A	15.9	32.2	15.6	29.5	7.5	5.5
$\phi 12$	10-KQ2H12-00A	18.5	35	17	46.1	9	8.2
$\phi 16$	10-KQ2H16-00A	23.8	42.2	20.6	67	13	15.2

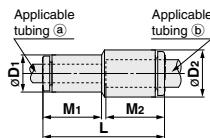


Note) ϕD is maximum diameter.

Dimensions**Different Diameter Straight: 10-KQ2H**

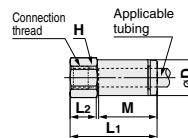
Applicable tubing O.D. (mm)	Model	(Note) øD1	(Note) øD2	L	M1	M2	Effective area (mm²) Urethane	Min. port size	Weight (g)	
ø2	ø3.2	10-KQ2H02-23A	5.8	7.1	26.2	11.9	13.3	0.9	1.4	1.1
ø2	ø4	10-KQ2H02-04A	5.8	8.2	26.2	11.9	13.3	0.9	1.4	1.2
ø3.2	ø4	10-KQ2H23-04A	7.1	8.2	27.6	13.3	13.3	2.9	2.5	1.5
ø3.2	ø6	10-KQ2H23-06A	7.1	10.4	27.6	13.3	13.3	2.9	2.5	1.8
ø4	ø6	10-KQ2H04-06A	8.2	10.4	27.6	13.3	13.3	5.6	3	2
ø6	ø8	10-KQ2H06-08A	10.4	13.2	28.5	13.3	14.2	10.4	4.5	2.9
ø8	ø10	10-KQ2H08-10A	13.2	15.9	30.8	14.2	15.6	18	6	4.9
ø10	ø12	10-KQ2H10-12A	15.9	18.5	33.6	15.6	17	29.5	7.5	7.2
ø12	ø16	10-KQ2H12-16A	18.5	23.8	38.6	17	20.6	46.1	9	12.4

Note) øD1, øD2 are maximum diameters.

**Female Connector: 10-KQ2F**

Applicable tubing O.D. (mm)	Connection thread Rc	Model	H (Width across flats)	(Note) øD	L1	L2	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø3.2	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
ø4	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
ø6	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
ø6	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
ø8	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
ø8	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
ø8	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
ø10	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
ø12	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
ø16	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) øD is maximum diameter.



Directional Control Valves

Air Cylinders

Air Grippers

Air Preparation Equipment

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment
Pressure Sensors/Pressure Sensors

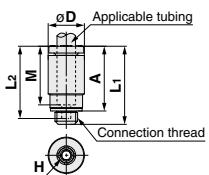
Dimensions

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 (mm²) Urethane	Min. port size	Weight (g)
ø2	M3 x 0.5	10-KQ2S02-M3G	1.5	6	15.7	14.7	13.1	11.9	0.9	1.5	1.7
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
ø6	M3 x 0.5	10-KQ2S04-M6N	3	8	18.5	17.8	14.5	13.3	4	3.1	4.1
	M5 x 0.8	10-KQ2S06-M5N	2.5	10	19.5	17.8	16.5	13.3	4	2.5	3.5
ø6	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.

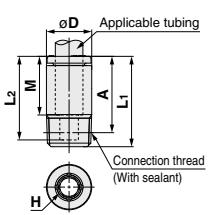


Hexagon Socket Head Male Connector: 10-KQ2S (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	(Note) øD	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQ2S04-01NS	3	9.8	19.7	19.6	17.5	13.3	3.6	3.1	8.1
	1/8	10-KQ2S06-01NS	4	10	20	18.8	17.2	13.3	9.9	4.1	6.5
ø6	1/4	10-KQ2S06-02NS	4	13.8	19.8	18.8	15.1	13.3	10	4.1	13.4
	1/8	10-KQ2S08-01NS	5	13	22.9	19.7	19.8	14.2	16.2	5.1	10.2
ø8	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
	1/2	10-KQ2S12-04NS	10	22	22.8	21.8	16.4	17	44.5	10.1	30.5
ø16	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

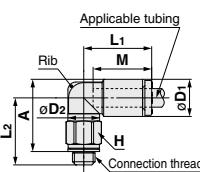
* Reference dimensions after installation of R thread
Note) øD is maximum diameter.



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

Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	Note 1) øD1	øD2	L1	L2	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)	With a rib
ø2	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	●
ø3.2	M3 x 0.5	10-KQ2L23-M3G	7	7.1	7	15.3	14.3	14.9	13.3	2.2	2.5	3.1	●
	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	●
ø4	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	●
ø6	M3 x 1.0	10-KQ2L04-M6N	8	8.2	7	15.4	15.8	15.9	13.3	3.5	2.5	4.2	●
	M6 x 1.0	10-KQ2L06-M6N	7	10.4	7	14.5	16.5	18.7	13.3	3.5	2.5	3.2	●
		10-KQ2L06-M6N	8	10.4	7	14.5	17.5	18.7	13.3	3.5	2.5	4.3	●

Note) øD1 is maximum diameter.

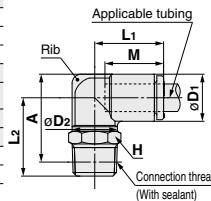
**Male Elbow: 10-KQ2L (Sealant)**

Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	Note 1) øD1	øD2	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)	With a rib
ø3.2	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	—
ø4	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	●
ø6	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	—
ø8	1/8	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	●
ø10	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	●
	3/8	10-KQ2L08-03NS	17	13.2	12	17.2	25.5	27.0	14.2	14.9	6	24.7	●
ø12	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	●
ø16	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	●
	3/8	10-KQ2L12-03NS	17	18.5	17	21.5	30.9	35.0	17	39.7	9	24.1	●
ø16	1/2	10-KQ2L12-04NS	22	18.5	17	21.5	34.9	37.7	17	39.7	9	46.5	●
	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	—
	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) øD1 is maximum diameter.

Note 2) Refer to page 1153 for details.

Directional Control Valves
Air CylindersRotary Actuators
Air GrippersAir Preparation Equipment
Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment
Pressure Sensors/Pressure Sensors

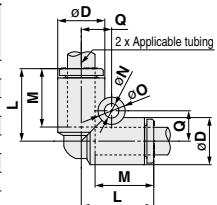
Dimensions

Union Elbow: 10-KQ2L



Applicable tubing O.D. (mm)	Model	(Note) ϕD	L	Q	M	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 3.2$	10-KQ2L23-00A	7.1	14.9	5.4	13.3	6	3.2	2.5	2.5	1.6
$\phi 4$	10-KQ2L04-00A	8.2	15.3	5.7	13.3	6	3.2	4.2	3	1.9
$\phi 6$	10-KQ2L06-00A	10.4	16.3	6.8	13.3	6	3.2	9	4.5	2.7
$\phi 8$	10-KQ2L08-00A	13.2	18.2	8.4	14.2	8	4.2	14.9	6	4.7
$\phi 10$	10-KQ2L10-00A	15.9	20.6	9.6	15.6	8	4.2	25	7.5	7.1
$\phi 12$	10-KQ2L12-00A	18.5	23	10.7	17	8	4.2	39.7	9	10.3
$\phi 16$	10-KQ2L16-00A	23.8	28.6	13.4	20.6	8	4.2	58.9	13	19.7

Note) ϕD is maximum diameter.

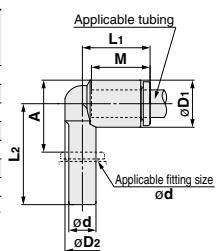


Plug-in Elbow: 10-KQ2L



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	(Note) ϕD_1	ϕD_2	L ₁	L ₂	A	M	Effective area (mm²) 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) ϕD_1 is maximum diameter.

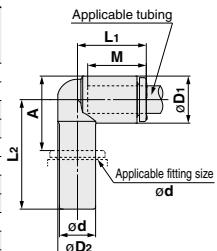


Reducer Elbow: 10-KQ2L



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	(Note) ϕD_1	ϕD_2	L ₁	L ₂	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 4$	$\phi 4$	10-KQ2L23-04A	7.1	6.4	14.5	23.9	14.1	13.3	2.5	2.5	1.1
$\phi 6$	$\phi 6$	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
$\phi 6$	$\phi 8$	10-KQ2L04-08A	8.2	7.2	14.8	29.5	19.4	13.3	4.2	3	1.8
$\phi 8$	$\phi 8$	10-KQ2L06-08A	10.4	9	15.5	24.2	15.2	13.3	9	4.5	2.1
$\phi 10$	$\phi 10$	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
$\phi 10$	$\phi 12$	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) ϕD_1 is maximum diameter.

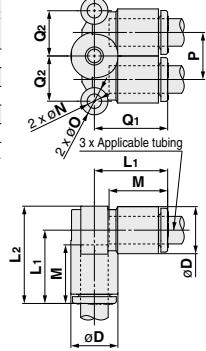


Branch Union Elbow: 10-KQ2LU



Applicable tubing O.D. (mm)	Model	(Note) ϕD	L ₁	L ₂	Q ₁	Q ₂	M	P	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 4$	10-KQ2LU04-00A	8.2	15.8	19.9	15.8	7.9	13.3	8.2	6	3.2	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	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	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	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	45.2	9	18.1

Note) ϕD is maximum diameter.



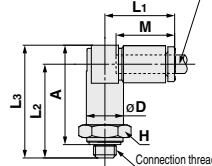
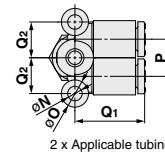
Dimensions

Male Branch Connector: 10-KQ2LU (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width Note across flats)	ϕD	L1	L2	L3	A	M	P	ϕO	ϕN	Q1	Q2	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 4$	M5 x 0.8	10-KQ2LU04-MSN	10	8.2	15.8	20.7	24.8	21.8	13.3	8.2	6	3.2	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	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	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	16.5	10	4.3	3	10.3

Note) ϕD is maximum diameter.

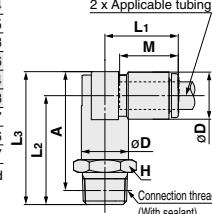
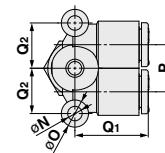


Male Branch Connector: 10-KQ2LU (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width Note across flats)	ϕD	L1	L2	L3	A*	M	P	ϕO	ϕN	Q1	Q2	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2LU04-01NS	10	8.2	15.8	23.3	27.4	24.3	13.3	8.2	6	3.2	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	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	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	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	16.5	10	11	4.5	31.5
	1/8	10-KQ2LU08-01NS	14	13.2	18.2	22.5	32.3	29.2	14.2	13.2	8	4.2	18.2	13.1	18.2	6	16.4
$\phi 10$	1/4	10-KQ2LU10-02NS	14	13.2	18.2	29.0	33.7	32	14.2	13.2	8	4.2	18.2	13.1	18.2	6	21.5
	3/8	10-KQ2LU10-03NS	17	13.2	18.2	31.5	38.1	33	14.2	13.2	8	4.2	18.2	13.1	18.2	6	33.3
$\phi 12$	1/4	10-KQ2LU10-02NS	17	15.9	20.3	32.2	40.2	35.5	15.6	15.9	8	4.2	20.3	15.9	29	7.5	26.6
	3/8	10-KQ2LU10-04NS	22	15.9	20.3	37.8	45.8	39.4	15.6	15.9	8	4.2	20.3	15.9	29	7.5	34.4
$\phi 12$	1/2	10-KQ2LU12-04NS	22	15.9	22.5	34.4	44.3	38.9	17	18.5	8	4.2	22.5	17.9	45.2	9	62.3
	1/4	10-KQ2LU12-02NS	19	18.5	22.5	35.8	45	39.9	17	18.5	8	4.2	22.5	17.9	45.2	9	37.7
$\phi 12$	3/8	10-KQ2LU12-03NS	19	18.5	22.5	35.8	45	39.9	17	18.5	8	4.2	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	22.5	17.9	45.2	9	62.7

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



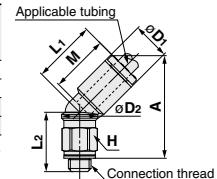
Dimensions

45° Male Elbow: 10-KQ2K (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note 1) ϕD_1	ϕD_2	L1	L2	A	M	Effective area (mm²) 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) ϕD_1 is maximum diameter.



45° Male Elbow: 10-KQ2K (Sealant)

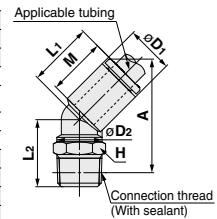


Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note 1) ϕD_1	ϕD_2	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2K04-01NS	10	8.2	10	14.4	12.7	22.3	13.3	3.4	3	4.6
	1/4	10-KQ2K04-02NS	14	8.2	10	14.4	17.2	25.2	13.3	3.4	3	14.1
$\phi 6$	1/8	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
	3/8	10-KQ2K06-03NS	17	10.4	10	14.7	20.6	29.1	13.3	6.9	4.5	26.2
$\phi 8$	1/8	10-KQ2K08-01NS	10	13.2	10	16	15.7	28	14.2	8.7	4.5	6
	Note 2)	10-KQ2K08-01QS	12	13.2	12	16	20.5	32.8	14.2	19.7	6	9.1
		10-KQ2K08-02NS	14	13.2	12	16	22.4	33.1	14.2	19.7	6	17.5
$\phi 10$	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
$\phi 12$	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) ϕD_1 is maximum diameter.

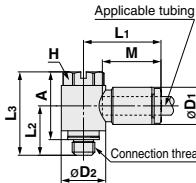
Note 2) Refer to page 1153 for details.



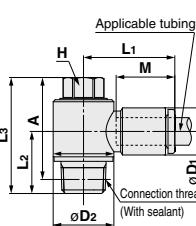
Dimensions**Universal Male Elbow: 10-KQ2V (Gasket seal)**

Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	L3	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	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
ø6	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) øD1 is maximum diameter.

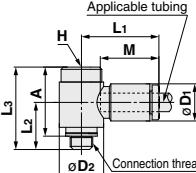
**Universal Male Elbow: 10-KQ2V (Sealant)**

Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	L3	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	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
ø6	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
ø8	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
ø8	1/4	10-KQ2V08-02NS	12	13.2	17.6	23.5	18.5	31	26.3	14.2	11.2	6	29.1
ø8	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
ø10	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
ø10	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
ø12	3/8	10-KQ2V12-03NS	17	18.5	25.2	28.5	21.4	37.6	32.5	17	30.8	9	59.6
ø16	1/2	10-KQ2V16-04NS	17	18.5	25.2	28.5	24.6	40.8	34.4	17	30.8	9	78.2
ø16	3/8	10-KQ2V16-03NS	21	23.8	32.3	34.2	25.1	45.4	40.3	20.6	46	11	99.5
ø16	1/2	10-KQ2V16-04NS	21	23.8	32.3	34.2	28.3	48.6	42.2	20.6	46	13	107.9

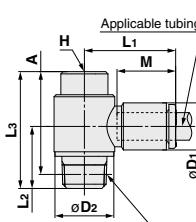
* Reference dimensions after installation of R thread
Note) øD1 is maximum diameter.**Hexagon Socket Head Universal Male Elbow: 10-KQ2VS (Gasket seal)**

Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	L3	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	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
ø6	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) øD1 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) øD1	øD2	L1	L2	L3	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQ2VS04-01NS	6	8.2	13.4	19.3	13.7	25.8	22.7	13.3	2.9	3	13.2
ø6	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
ø8	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
ø8	1/4	10-KQ2VS08-01NS	8	13.2	17.6	23.5	15.1	26	22.9	14.2	11.2	6	19.2
ø8	3/8	10-KQ2VS08-03NS	8	13.2	17.6	23.5	18.5	29.5	24.8	14.2	11.2	6	25.7
ø10	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
ø10	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
ø12	3/8	10-KQ2VS12-03NS	10	18.5	25.2	28.5	21.4	35.1	30	17	30.8	9	51.4
ø12	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) øD1 is maximum diameter.

Directional Control Valves

Air Cylinders
Rotary Actuators
Air GrippersModular F. R.
Pressure Control Equipment
Fittings & TubingFlow Control Equipment
Pressure Sensors/Pressure Sensors

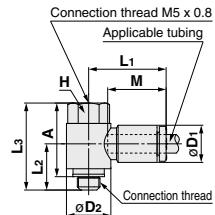
Dimensions

Universal Female Elbow: 10-KQ2VF (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	(Note) øD1	øD2	L1	L2	L3	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	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
ø6	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) øD1 is maximum diameter.

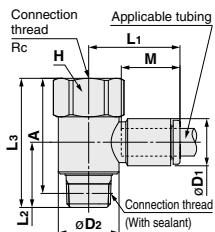


Universal Female Elbow: 10-KQ2VF (Sealant)



Applicable tubing O.D. (mm)	Connection thread R, Rc	Model	H (Width across flats)	(Note) øD1	øD2	L1	L2	L3	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	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
ø6	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
ø8	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
ø10	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
ø12	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) øD1 is maximum diameter.



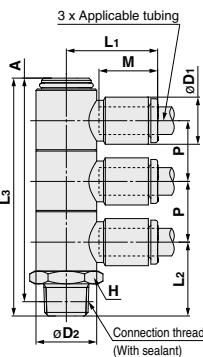
Dimensions

Triple Universal Male Elbow: 10-KQ2VT (Sealant)



	Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note) ϕD_1	ϕD_2	L1	L2	L3	A*	M	P	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 4$	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	
$\phi 6$	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	22.0	75.9	52.2	13.3	13.4	5.9	4.5	33.9	
	3/8	10-KQ2VT06-03NS	17	10.4	13.4	20.5	22.5	75.9	53.2	13.3	13.4	5.9	4.5	45.8	
$\phi 8$	1/8	10-KQ2VT08-01NS	19	13.2	17.6	23.7	19.1	61.8	58.7	14.2	15.9	11.2	6	59.6	
	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	56.8	
	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	
$\phi 10$	1/2	10-KQ2VT08-04NS	22	13.2	17.6	23.7	27.2	70.7	63.6	14.2	15.9	11.2	6	91.5	
	1/4	10-KQ2VT10-02NS	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-KQ2VT10-03NS	21	15.9	20.6	25.7	24.7	75.5	70.8	15.6	19.2	20.3	7.5	81.9	
$\phi 12$	1/2	10-KQ2VT10-04NS	22	15.9	20.6	25.7	28.7	79.9	73.5	15.6	19.2	20.3	7.5	103.9	
	1/4	10-KQ2VT12-02NS	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) ϕD_1 is maximum diameter.

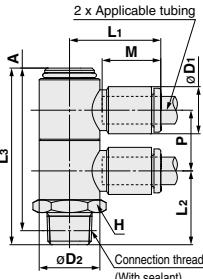


Double Universal Male Elbow: 10-KQ2VD (Sealant)



	Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note) ϕD_1	ϕD_2	L1	L2	L3	A*	M	P	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 4$	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	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	
$\phi 6$	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	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	
$\phi 8$	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	
$\phi 10$	1/2	10-KQ2VD08-04NS	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	
$\phi 12$	1/2	10-KQ2VD10-04NS	22	15.9	20.6	25.7	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) ϕD_1 is maximum diameter.



Directional Control Valves

Air Cylinders

Air Preparation Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Switches/
Pressure Sensors

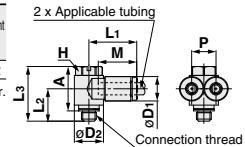
Dimensions

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



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	(Note) øD1	øD2	L1	L2	L3	A	M	P	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	M5 x 0.8	10-KQ2Z04-MSN	8	8.2	9.8	16.5	11.4	18.4	14.9	13.3	8.2	3.4	2.5	6.2

Note) øD1 is maximum diameter.



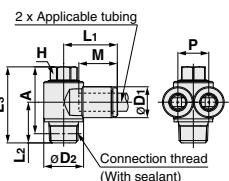
Branch Universal Male Elbow: 10-KQ2Z (Sealant)



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	(Note) øD1	øD2	L1	L2	L3	A*	M	P	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	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
ø6	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
ø8	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
	3/8	10-KQ2Z08-02NS	12	13.2	17.6	21.2	18.5	31	26.3	14.2	13.2	14.2	6	30.8
ø10	1/4	10-KQ2Z10-02NS	14	13.2	20.6	22.3	19.9	35.3	30.2	14.2	13.2	14.2	6	46.3
	3/8	10-KQ2Z10-03NS	14	15.9	21.6	23.6	19.3	34.9	30.2	15.6	15.9	22.6	7.5	49.3
ø12	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) øD1 is maximum diameter.

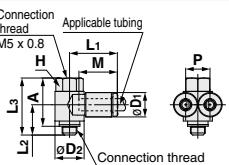


Branch Universal Female Elbow: 10-KQ2ZF (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	(Note) øD1	øD2	L1	L2	L3	A	M	P	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	M5 x 0.8	10-KQ2ZF04-MSN	8	8.2	9.8	16.5	10.2	19.2	16.2	13.3	8.2	3.4	2.5	6.3

Note) øD1 is maximum diameter.



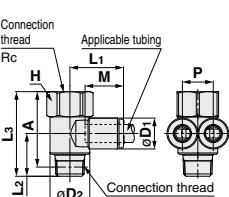
Branch Universal Female Elbow: 10-KQ2ZF (Sealant)



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	(Note) øD1	øD2	L1	L2	L3	A*	M	P	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	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	45.3
ø6	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
	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
ø8	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
	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
ø10	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	68.4
	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
ø12	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

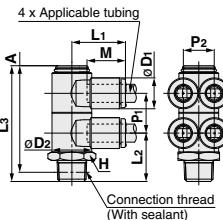
Note) øD1 is maximum diameter.



Dimensions**Double Branch Universal Male Elbow: 10-KQ2ZD (Sealant)**

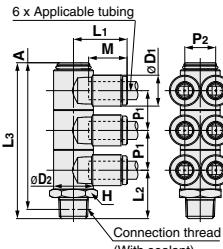
Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width Note across flats) $\odot D_1$	$\odot D_2$	L1	L2	L3	A*	M	P1	P2	Effective area (mm²) Urethane	Min. port size	Weight (g)	
$\odot 4$	1/8	10-KQ2ZD04-01NS	14	8.2	13.4	18.5	16.3	39	35.9	13.3	13.4	8.2	4.7	3	21.3
	1/4	10-KQ2ZD04-02NS	14	8.2	13.4	18.5	20.7	43.4	38.7	13.3	13.4	8.2	4.7	3	29
	3/8	10-KQ2ZD04-03NS	17	8.2	13.4	18.5	22.1	44.8	39.7	13.3	13.4	8.2	4.7	3	40.9
$\odot 6$	1/8	10-KQ2ZD06-01NS	14	10.4	13.4	18.4	16.3	39	35.9	13.3	13.4	10.4	8.6	4.5	22.5
	1/4	10-KQ2ZD06-02NS	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-KQ2ZD06-03NS	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
$\odot 8$	1/8	10-KQ2ZD08-01NS	19	13.2	17.6	21.2	21.9	45.8	42.7	14.2	15.9	13.2	14.2	6	48.7
	1/4	10-KQ2ZD08-02NS	19	13.2	17.6	21.2	22.4	49.2	44.5	14.2	15.9	13.2	14.2	6	48
	3/8	10-KQ2ZD08-03NS	19	13.2	17.6	21.2	23	49.8	44.7	14.2	15.9	13.2	14.2	6	55.9
$\odot 10$	1/2	10-KQ2ZD08-04NS	22	13.2	17.6	21.2	27.2	54	47.6	14.2	15.9	13.2	14.2	6	82.1
	1/4	10-KQ2ZD10-02NS	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-KQ2ZD10-03NS	21	15.9	20.6	23.6	24.7	56.6	51.5	15.6	19.2	15.9	21.6	7.5	71
$\odot 12$	1/2	10-KQ2ZD10-04NS	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-KQ2ZD12-02NS	26	18.5	25.2	26.8	26.5	62.4	57.7	17	21.6	18.5	35.3	9	115.6
	3/8	10-KQ2ZD12-03NS	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-KQ2ZD12-04NS	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) $\odot D_1$ is maximum diameter.

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

Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width Note across flats) $\odot D_1$	$\odot D_2$	L1	L2	L3	A*	M	P1	P2	Effective area (mm²) Urethane	Min. port size	Weight (g)	
$\odot 4$	1/8	10-KQ2ZT04-01NS	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-KQ2ZT04-02NS	14	8.2	13.4	18.5	20.7	56.9	52.2	13.3	13.4	8.2	4.7	3	35.3
	3/8	10-KQ2ZT04-03NS	17	8.2	13.4	18.5	22.1	58.3	52.2	13.3	13.4	8.2	4.7	3	47.2
$\odot 6$	1/8	10-KQ2ZT06-01NS	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
	1/4	10-KQ2ZT06-02NS	14	10.4	13.4	18.4	20.7	56.9	52.2	13.3	13.4	10.4	8.6	4.5	37.1
	3/8	10-KQ2ZT06-03NS	17	10.4	13.4	18.4	22.1	58.3	52.2	13.3	13.4	10.4	8.6	4.5	49.1
$\odot 8$	1/8	10-KQ2ZT08-01NS	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-KQ2ZT08-02NS	19	13.2	17.6	21.2	22.4	65.2	60.5	14.2	15.9	13.2	14.2	6	62.3
	3/8	10-KQ2ZT08-03NS	19	13.2	17.6	21.2	23	65.8	60.7	14.2	15.9	13.2	14.2	6	70.4
$\odot 10$	1/2	10-KQ2ZT08-04NS	22	13.2	17.6	21.2	27.2	70	63.6	14.2	15.9	13.2	14.2	6	97
	1/4	10-KQ2ZT10-02NS	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-KQ2ZT10-03NS	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
$\odot 12$	1/2	10-KQ2ZT10-04NS	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-KQ2ZT12-02NS	26	18.5	25.2	26.8	26.5	84.1	79.4	17	21.6	18.5	35.3	9	152.2
	3/8	10-KQ2ZT12-03NS	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-KQ2ZT12-04NS	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) $\odot D_1$ is maximum diameter.



Directional Control Valves

Air Cylinders

Air Grippers

Modular F. R.

Pressure Control Equipment

Flow Control Equipment

Pressure Switches/ Pressure Sensors

Dimensions

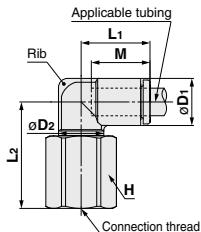
Female Elbow: 10-KQ2LF



Applicable tubing O.D. (mm)	Connection thread M, Rc	Model	H (Width across flats)	Note 1) øD1	øD2	L1	L2	M	Effective area (mm²) 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	●
	1/4	10-KQ2LF04-02N	17	8.2	10	14.8	26.9	13.3	4.2	3	29.6	●
ø6	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	●
	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	—
ø8	3/8	10-KQ2LF08-03N	19	10.4	10	15.5	28.5	13.3	9	4.5	34	—
	1/8	10-KQ2LF08-01N <small>Note 2)</small>	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	●
ø10	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	●
ø12	1/2	10-KQ2LF12-04N	24	18.5	17	21.5	37.8	17	39.7	9	59.5	●

Note 1) øD1 is maximum diameter.

Note 2) Refer to page 1153 for details.

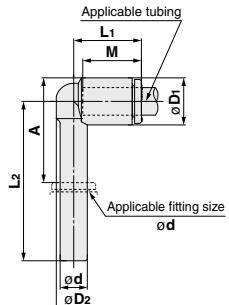


Extended Plug-in Elbow: 10-KQ2W



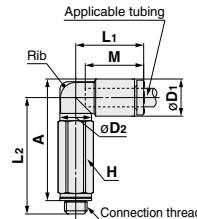
Applicable tubing O.D. (mm)	Applicable fitting size ød	Model	Note 1) øD1	øD2	L1	L2	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø3.2	ø3.2	10-KQ2W23-99A	7.1	6.4	14.4	30.5	20.8	13.3	2.5	2.5	1
ø4	ø4	10-KQ2W04-99A	8.2	7.2	14.5	31.8	22.6	13.3	4.2	3	1.3
ø6	ø6	10-KQ2W06-99A	10.4	8	15.3	35.2	27.1	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) øD1 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) ϕD_1	ϕD_2	L1	L2	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)	With a rib
$\phi 2$ M3 x 0.5 M5 x 0.8	10-KQ2W02-M3G 10-KQ2W02-M5N	5.5 7	5.8 5.8	5.5 5.5	12.6 12.6	18.8 19.3	19.1 19.2	11.9 11.9	0.8 0.8	1.2 1.2	2.6 4.6	● ●	
$\phi 3.2$ M3 x 0.5 M5 x 0.8	10-KQ2W23-M3G 10-KQ2W23-M5N	7 7	7.1 7.1	7 7	15.3 15.3	22.5 25.2	23.4 25.7	13.3 13.3	2.4 0.8	1.2 1.2	4.8 5.8	● ●	
$\phi 4$ M3 x 0.5 M5 x 0.8	10-KQ2W04-M3G 10-KQ2W04-M5N	7 7	8.2 8.2	7 7	15.4 15.4	23 25.7	24.5 26.8	13.3 13.3	0.8 3	1.2 2.5	4.9 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	●	

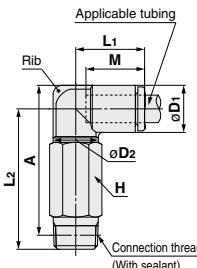
Note) ϕD_1 is maximum diameter.**Extended Male Elbow: 10-KQ2W (Sealant)**

Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	(Note 1) ϕD_1	ϕD_2	L1	L2	A*	M	Effective area (mm²) 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	—	—
	10-KQ2W23-02NS	14	7.1	10	14.5	32.8	31.7	13.3	2.4	2.5	27.3	—	—
$\phi 4$ 1/4	10-KQ2W04-01NS	10	8.2	10	14.8	29.9	30.9	13.3	4	3	11	●	—
	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	—	—
	10-KQ2W06-02NS	14	10.4	10	15.5	35.7	35.8	13.3	8.6	4.5	28	—	—
$\phi 8$ 1/8	10-KQ2W08-01NS	10	13.2	10	16.4	32.4	35.9	14.2	10.9	4.5	12.2	●	—
	10-KQ2W08-01NS Note 2)	12	13.2	12	17.2	42.4	45.9	14.2	14.2	6	23.7	●	—
$\phi 10$ 1/4	10-KQ2W08-02NS	14	13.2	12	17.2	39.1	41	14.2	14.2	6	40	●	—
	10-KQ2W08-03NS	17	13.2	12	17.2	39.2	40.7	14.2	14.2	6	47	●	—
$\phi 12$ 1/4	10-KQ2W10-02NS	17	15.9	17	19.3	48.5	56.2	15.6	23.8	7.5	59	●	—
	10-KQ2W10-03NS	22	15.9	17	19.3	52.5	54.1	15.6	23.8	7.5	51.3	●	—
$\phi 16$ 1/4	10-KQ2W12-02NS	17	18.5	17	21.5	54.2	58.8	17	37.7	9	60.7	●	—
	10-KQ2W12-03NS	22	18.5	17	21.5	49.8	54	17	37.7	9	53.2	●	—
$\phi 16$ 1/2	10-KQ2W16-02NS	17	23.8	17	25.1	53.8	56.7	17	37.7	9	93.9	●	—
	10-KQ2W16-03NS	22	23.8	21	27.1	59.7	66.5	20.6	20.6	58.9	11	105.5	—
$\phi 16$ 1/2	10-KQ2W16-04NS	22	23.8	21	27.1	58.4	63.9	20.6	58.9	13	101.7	—	—

* Reference dimensions after installation of R thread

Note 1) ϕD_1 is maximum diameter.

Note 2) Refer to page 1153 for details.



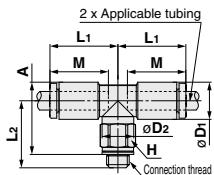
Dimensions

Male Branch Tee: 10-KQ2T (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note ①) øD1	øD2	L1	L2	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø2	M3 x 0.5	10-KQ2T02-M3G	5.5	5.8	5.5	12.6	12.5	12.8	11.9	0.9	1.2	1.9
	M5 x 0.8	10-KQ2T02-M5N	7	5.8	5.5	12.6	13	12.9	11.9	0.9	1.4	3
ø3.2	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
ø4	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
ø6	M3 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) øD1 is maximum diameter.



Male Branch Tee: 10-KQ2T (Sealant)

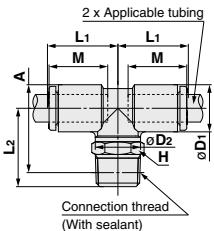


Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note ①) øD1	øD2	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø3.2	1/8	10-KQ2T23-01NS	10	7.1	10	14.5	16.6	17.1	13.3	2.9	2.5	5.2
	1/4	10-KQ2T23-02NS	14	7.1	10	14.5	21.1	20	13.3	2.9	2.5	14.7
ø4	1/8	10-KQ2T04-01NS	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
ø6	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
ø8	3/8	10-KQ2T06-03NS	17	10.4	10	15.5	24.1	24.2	13.3	11	4.5	27.4
	1/8	10-KQ2T08-01NS	10	13.2	10	16.4	18.7	22.2	14.2	14	4.5	7.9
ø10	1/4	10-KQ2T08-01NQS	12	13.2	12	17.2	23.5	27	14.2	18.2	6	11
	3/8	10-KQ2T08-02NS	14	13.2	12	17.2	25.4	27.3	14.2	18.2	6	19.4
ø12	1/8	10-KQ2T08-03NS	17	13.2	12	17.2	25.5	27	14.2	18.2	6	26.5
	1/4	10-KQ2T10-01NS	12	15.9	12	18.6	23.5	28.4	15.6	14.9	6	13.9
ø16	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
ø16	1/2	10-KQ2T10-04NS	22	15.9	17	19.3	33.5	35.1	15.6	25	7.5	47.3
	1/4	10-KQ2T12-02NS	17	18.5	17	21.5	29.9	34.5	17	45.2	9	27.3
ø16	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
ø16	1/4	10-KQ2T16-02NS	17	23.8	17	25.1	32.6	39.8	20.6	57.2	9	35.5
	3/8	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) øD1 is maximum diameter.

Note 2) Refer to page 1153 for details.

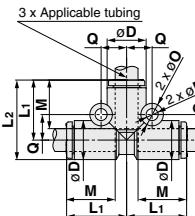


Dimensions

Union Tee: 10-KQ2T



Applicable tubing O.D. (mm)	Model	(Note) ϕD	L1	L2	M	Q	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 2$	10-KQ2T02-00A	5.8	12.9	15.8	11.9	4.5	6	3.2	0.9	1.4	1.4
$\phi 3.2$	10-KQ2T23-00A	7.1	14.9	18.5	13.3	5.4	6	3.2	2.9	2.5	2.3
$\phi 4$	10-KQ2T04-00A	8.2	15.3	19.4	13.3	5.7	6	3.2	4.4	3	2.8
$\phi 6$	10-KQ2T06-00A	10.4	16.3	21.5	13.3	6.8	6	3.2	10.6	4.5	3.8
$\phi 8$	10-KQ2T08-00A	13.2	18.2	24.8	14.2	8.4	8	4.2	17.7	6	7
$\phi 10$	10-KQ2T10-00A	15.9	20.6	28.6	15.6	9.6	8	4.2	28.4	7.5	11
$\phi 12$	10-KQ2T12-00A	18.5	23	32.3	17	10.7	8	4.2	45.4	9	15.7
$\phi 16$	10-KQ2T16-00A	23.8	28.6	40.5	20.6	13.4	8	4.2	58.9	13	29.8

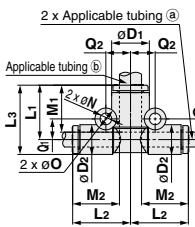
Note) ϕD is maximum diameter.

Directional Control Valves

Different Diameter Tee: 10-KQ2T



Applicable tubing O.D. (mm) (a) (b)	Model	(Note) ϕD_1	ϕD_2	L1	L2	L3	M1	M2	Q1	Q2	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)	
$\phi 3.2$ $\phi 4$	10-KQ2T23-04A	8.2		7.1	14.9	15.3	18.5	13.3	13.3	5.4	5.8	6	3.2	3.5	2.5	2.6
$\phi 4$ $\phi 6$	10-KQ2T04-06A	10.4		8.2	15.3	16.3	19.4	13.3	13.3	5.7	6.8	6	3.2	6.6	3	3.3
$\phi 6$ $\phi 8$	10-KQ2T06-08A	13.2		10.4	17.2	17.3	22.4	14.2	13.3	7.3	8.4	8	4.2	16.4	4.5	5.3
$\phi 8$ $\phi 10$	10-KQ2T08-10A	15.9		13.2	19.6	19.2	26.2	15.6	14.2	8.4	9.6	8	4.2	27.2	6	8.3
$\phi 10$ $\phi 12$	10-KQ2T10-12A	18.5		15.9	22	21.6	30	17	15.6	9.6	10.7	8	4.2	44.5	7.5	12.2
$\phi 12$ $\phi 16$	10-KQ2T12-16A	23.8		18.5	26.6	25	35.9	20.6	17	10.7	13.4	8	4.2	74	9	20.1

Note) ϕD_1 is maximum diameter.

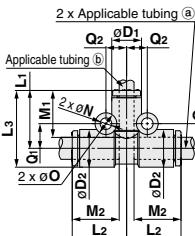
Air Cylinders

Rotary Actuators

Different Diameter Tee: 10-KQ2T



Applicable tubing O.D. (mm) (a) (b)	Model	(Note) ϕD_1	ϕD_2	L1	L2	L3	M1	M2	Q1	Q2	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)	
$\phi 6$ $\phi 4$	10-KQ2T06-04A	8.2		10.4	16.3	15.3	21.5	13.3	13.3	6.8	5.7	6	3.2	4.4	3	3.5
$\phi 8$ $\phi 6$	10-KQ2T08-06A	10.4		13.2	17.3	17.2	23.9	13.3	14.2	8.4	7.3	8	4.2	10.6	4.5	6
$\phi 10$ $\phi 8$	10-KQ2T10-08A	13.2		15.9	19.2	19.6	27.2	14.2	15.6	9.6	8.4	8	4.2	17.7	6	9.5
$\phi 12$ $\phi 10$	10-KQ2T12-10A	15.9		18.5	21.6	22	30.9	15.6	17	10.7	9.6	8	4.2	28.4	7.5	13.4

Note) ϕD_1 is maximum diameter.

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Switches/
Pressure Sensors

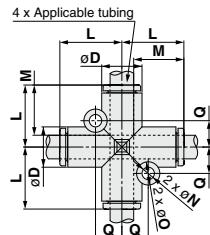
Dimensions

Cross: 10-KQ2TW



Applicable tubing O.D. (mm)	Model	(Note) ϕD	L	Q	M	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 4$	10-KQ2TW04-00A	8.2	15.3	5.7	13.3	6	3.2	4.4	3	3.5
$\phi 6$	10-KQ2TW06-00A	10.4	16.3	6.8	13.3	6	3.2	10.6	4.5	4.9
$\phi 8$	10-KQ2TW08-00A	13.2	18.2	8.4	14.2	8	4.2	17.7	6	8.5
$\phi 10$	10-KQ2TW10-00A	15.9	20.6	9.6	15.6	8	4.2	28.4	7.5	12.7
$\phi 12$	10-KQ2TW12-00A	18.5	23	10.7	17	8	4.2	45.4	9	18.4

Note) ϕD is maximum diameter.

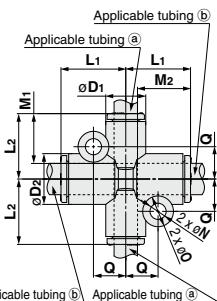


Different Diameter Cross: 10-KQ2TX



Applicable tubing O.D. (mm)	Model	(Note) ϕD_1	(Note) ϕD_2	L ₁	L ₂	Q	M ₁	M ₂	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 6$ $\phi 8$	10-KQ2TX06-08A	10.4	13.2	17.2	17.3	8.4	13.3	14.2	8	4.2	10.6	4.5	7.1
$\phi 8$ $\phi 10$	10-KQ2TX08-10A	13.2	15.9	19.6	19.2	9.6	14.2	15.6	8	4.2	17.7	6	10.9
$\phi 10$ $\phi 12$	10-KQ2TX10-12A	15.9	18.5	22	21.6	10.7	15.6	17	8	4.2	28.4	7.5	15.9

Note) ϕD_1 , ϕD_2 are maximum diameters.

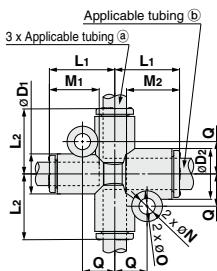


Different Diameter Cross: 10-KQ2TY



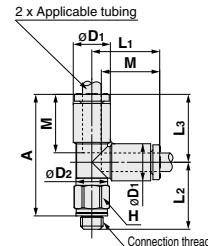
Applicable tubing O.D. (mm)	Model	(Note) ϕD_1	(Note) ϕD_2	L ₁	L ₂	Q	M ₁	M ₂	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 6$ $\phi 8$	10-KQ2TY06-08A	10.4	13.2	17.3	17.2	8.4	13.3	14.2	8	4.2	10.6	4.5	6.5
$\phi 8$ $\phi 10$	10-KQ2TY08-10A	13.2	15.9	19.2	19.6	9.6	14.2	15.6	8	4.2	17.7	6	10.2
$\phi 10$ $\phi 12$	10-KQ2TY10-12A	15.9	18.5	21.6	22	10.7	15.6	17	8	4.2	28.4	7.5	14.9

Note) ϕD_1 , ϕD_2 are maximum diameters.



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

Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	ϕD_1	ϕD_2	L1	L2	L3	A	M	Effective area (mm²) 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
$\phi 6$	M3 x 1.0	10-KQ2Y04-M6N	8	8.2	7	15.4	15.6	15.4	27.2	13.3	4.5	2.5	4.9
	M6 x 1.0	10-KQ2Y06-M6N	7	10.4	7	16.3	16.5	16.3	29.8	13.3	4.5	2.5	4.6
$\phi 8$	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

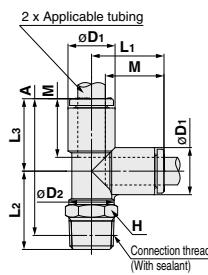
Note) ϕD_1 is maximum diameter.**Male Run Tee: 10-KQ2Y (Sealant)**

Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note 1)	ϕD_1	ϕD_2	L1	L2	L3	A*	M	Effective area (mm²) 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	
$\phi 8$	1/8	10-KQ2Y06-03NS	17	10.4	10	16.3	24.1	16.3	35.3	13.3	10.6	4.5	27.5	
	1/4	10-KQ2Y08-01NS <small>Note 2)</small>	10	13.2	10	18.2	18.7	18.2	33.8	14.2	13.4	4.5	8	
$\phi 10$	1/8	10-KQ2Y08-02NS	12	13.2	12	18.2	23.5	18.2	38.7	14.2	17.7	6	11.1	
	1/4	10-KQ2Y08-03NS	17	13.2	12	18.2	25.4	18.2	38.9	14.2	17.7	6	19.5	
$\phi 12$	1/8	10-KQ2Y08-04NS	17	13.2	12	18.2	25.5	18.2	38.6	14.2	17.7	6	26.5	
	1/4	10-KQ2Y10-01NS	12	15.9	12	20.6	23.5	20.6	41.1	15.6	28.4	6	14	
$\phi 14$	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	
	3/8	10-KQ2Y10-03NS	17	15.9	17	20.6	29.5	20.6	45.1	15.6	28.4	7.5	25	
$\phi 16$	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	
	1/4	10-KQ2Y12-02NS	17	18.5	17	23	29.9	23	48.3	17	45.4	9	27.6	
$\phi 18$	3/8	10-KQ2Y12-03NS	17	18.5	17	23	30.8	23	48.8	17	45.4	9	28.2	
	1/2	10-KQ2Y12-04NS	22	18.5	17	23	34.8	23	51.5	17	45.4	9	50.7	
$\phi 20$	1/4	10-KQ2Y16-02NS	17	23.8	17	28.6	32.6	28.6	56.5	20.6	45.4	9	36	
	3/8	10-KQ2Y16-03NS	22	23.8	21	28.6	35.4	28.6	58.9	20.6	60	11	48.3	
$\phi 24$	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) ϕD_1 is maximum diameter.

Note 2) Refer to page 1153 for details.



Directional Control Valves

Air Cylinders
Rotary ActuatorsAir Grippers
Air Preparation EquipmentPressure Control Equipment
Fittings & TubingFlow Control Equipment
Pressure Sensors/Pressure Sensors

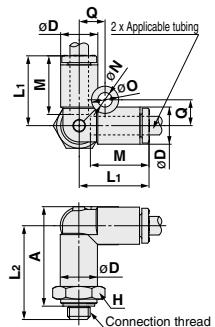
Dimensions

Male Delta Union: 10-KQ2D (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note) øD	L1	L2	A	M	Q	øO	øN	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	M5 x 0.8	10-KQ2D04-M5N	10	8.2	15.8	20.7	21.8	13.3	5.7	6	3.2	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	4.3	3	6.4
ø6	M5 x 0.8	10-KQ2D06-M5N	12	10.4	16.8	21.7	23.9	13.3	6.7	6	3.2	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	4.3	3	9.7

Note) øD is maximum diameter.

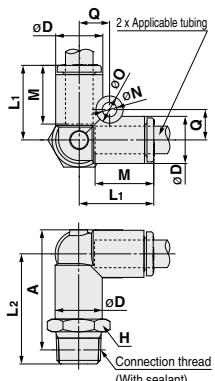


Male Delta Union: 10-KQ2D (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note) øD	L1	L2	A*	M	Q	øO	øN	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQ2D04-01NS	10	8.2	15.8	23.3	24.3	13.3	5.7	6	3.2	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	6	3.6	19
ø6	1/8	10-KQ2D06-01NS	12	10.4	16.8	24.3	26.4	13.3	6.7	6	3.2	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	11	5.4	19.1
ø8	3/8	10-KQ2D06-03NS	17	10.4	16.8	30.1	30.2	13.3	6.7	6	3.2	11	5.4	31
	1/8	10-KQ2D08-01NS	14	13.2	18.8	26.3	29.8	14.2	8.4	8	4.2	18.2	6	15.3
ø10	1/4	10-KQ2D08-02NS	14	13.2	18.8	30.7	32.6	14.2	8.4	8	4.2	18.2	7.3	20.4
	1/4	10-KQ2D10-02NS	17	15.9	21.2	33.1	33.6	15.6	9.6	8	4.2	29	9	24.9
ø12	3/8	10-KQ2D10-03NS	17	15.9	21.2	34.5	37.3	15.6	9.6	8	4.2	29	9.4	32.7
	1/2	10-KQ2D10-04NS	22	15.9	21.2	38.7	40.2	15.6	9.6	8	4.2	29	9.4	60.6
ø12	1/4	10-KQ2D12-02NS	19	18.5	23.6	35.5	34.0	17	10.7	8	4.2	45.2	9	35
	3/8	10-KQ2D12-03NS	19	18.5	23.6	36.9	41.1	17	10.7	8	4.2	45.2	11	38
	1/2	10-KQ2D12-04NS	22	18.5	23.6	41.1	43.9	17	10.7	8	4.2	45.2	11.6	60

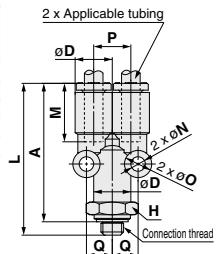
* Reference dimensions after installation of R thread
Note) øD is maximum diameter.



Dimensions**Branch "Y": 10-KQ2U (Gasket seal)**

Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	(Note) øD	L	A	M	P	Q	øO	øN	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø3.2	M5 x 0.8	10-KQ2U23-M5N	10	7.1	33.8	30.8	13.3	7.1	5.2	6	3.2	2.2	1.8	5.8
ø4	M5 x 0.8	10-KQ2U04-M5N	10	8.2	33.9	30.9	13.3	8.2	5.7	6	3.2	2.2	1.8	6.7
ø6	M6 x 1.0	10-KQ2U06-M6N	10	8.2	34.9	30.9	13.3	8.2	5.7	6	3.2	2.2	3	6.6
ø6	M6 x 1.0	10-KQ2U06-M6N	12	10.4	35	32	13.3	10.4	6.8	6	3.2	2.2	1.8	10
ø6	M6 x 1.0	10-KQ2U06-M6N	12	10.4	36	32	13.3	10.4	6.8	6	3.2	2.2	3	9.8

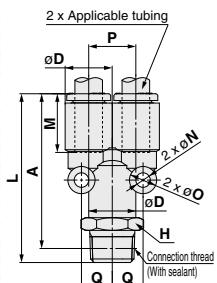
Note) øD is maximum diameter.

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

Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	(Note) øD	L	A*	M	P	Q	øO	øN	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø3.2	1/8	10-KQ2U23-01NS	10	7.1	36.4	33.3	13.3	7.1	5.2	6	3.2	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	2.9	2.7	19
ø4	1/8	10-KQ2U04-01NS	10	8.2	36.5	33.4	13.3	8.2	5.7	6	3.2	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	4.2	3.6	19.1
ø6	1/8	10-KQ2U06-01NS	12	10.4	37.6	34.5	13.3	10.4	6.8	6	3.2	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	10.6	5.4	19.2
ø6	3/8	10-KQ2U06-03NS	17	10.4	43.4	38.3	13.3	10.4	6.8	6	3.2	10.6	5.4	31.2
	1/8	10-KQ2U08-01NS	14	13.2	40.7	37.6	14.2	13.2	8.7	8	4.2	17.7	6	15.8
ø8	1/4	10-KQ2U08-02NS	14	13.2	45.1	40.4	14.2	13.2	8.7	8	4.2	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	17.7	7.3	32.7
ø10	1/4	10-KQ2U10-02NS	17	15.9	49	44.3	15.6	15.9	10.1	8	4.2	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	28.4	9.4	33.4
ø12	1/2	10-KQ2U10-04NS	22	15.9	54.6	48.2	15.6	15.9	10.1	8	4.2	28.4	9.4	61.3
	1/4	10-KQ2U12-02NS	19	18.5	53	48.3	17	18.5	11.4	8	4.2	45.4	9	36
ø12	3/8	10-KQ2U12-03NS	19	18.5	54.4	49.3	17	18.5	11.4	8	4.2	45.4	11	36.9
	1/2	10-KQ2U12-04NS	22	18.5	58.6	52.2	17	18.5	11.4	8	4.2	45.4	11.6	61
ø16	1/4	10-KQ2U16-02NS	24	23.8	62.4	57.7	20.6	23.8	14	8	4.2	45.4	9	67.6
	3/8	10-KQ2U16-03NS	24	23.8	63.8	58.7	20.6	23.8	14	8	4.2	60	11	71.5
	1/2	10-KQ2U16-04NS	24	23.8	68	61.6	20.6	23.8	14	8	4.2	60	13	82.6

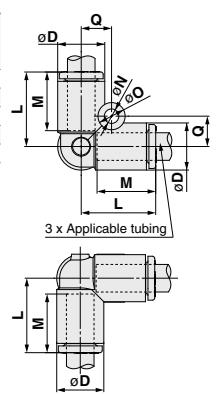
* Reference dimensions after installation of R thread

Note) øD is maximum diameter.

**Delta Union: 10-KQ2D**

Applicable tubing O.D. (mm)	Model	(Note) øD	L	M	Q	øO	øN	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	10-KQ2D04-00A	8.2	15.8	13.3	5.7	6	3.2	4.1	3	2.7
ø6	10-KQ2D06-00A	10.4	16.8	13.3	6.7	6	3.2	11	4.5	3.8
ø8	10-KQ2D08-00A	13.2	18.8	14.2	8.4	8	4.2	18.2	6	6.8
ø10	10-KQ2D10-00A	15.9	21.2	15.6	9.6	8	4.2	29	7.5	10.3
ø12	10-KQ2D12-00A	18.5	23.6	17	10.7	8	4.2	45.2	9	15.2

Note) øD is maximum diameter.



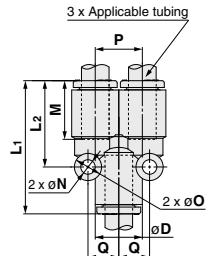
Dimensions

Union "Y": 10-KQ2U



Applicable tubing O.D. (mm)	Model	(Note) ϕD	L1	L2	P	M	Q	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 2$	10-KQ2U02-00A	5.8	25.8	16.1	5.8	11.9	4.5	6	3.2	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	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	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	10.6	4.5	4.1
$\phi 8$	10-KQ2U08-00A	13.2	33.2	22.3	13.2	14.2	8.7	8	4.2	17.7	6	7.4
$\phi 10$	10-KQ2U10-00A	15.9	37.1	25	15.9	15.6	10.1	8	4.2	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	45.4	9	16.4
$\phi 16$	10-KQ2U16-00A	23.8	51.5	35	23.8	20.6	14	8	4.2	60	13	30.6

Note) ϕD is maximum diameter.

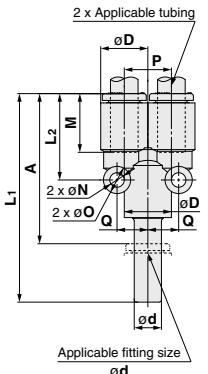


Plug-in "Y": 10-KQ2U



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	(Note) ϕD	L1	L2	P	A	M	Q	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 3.2$	$\phi 3.2$	10-KQ2U23-99A	7.1	45.1	18	7.1	31.8	13.3	5.2	6	3.2	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	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	10.6	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	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	28.4	7.5	12.3
$\phi 12$	$\phi 12$	10-KQ2U12-99A	18.5	63	27.8	18.5	54.6	17	11.4	8	4.2	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	60	13	33.5

Note) ϕD is maximum diameter.



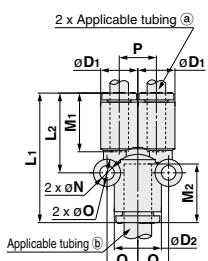
Applicable fitting size
 ϕd

Different Diameter Union "Y": 10-KQ2U



Applicable tubing O.D. (mm)	Model	(Note) ϕD_1	(Note) ϕD_2	L1	L2	P	M1	M2	Q	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)	
$\phi 2$	$\phi 3.2$	10-KQ2U02-23A	5.8	7.1	28.2	16.6	5.8	11.9	13.3	5.2	6	3.2	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	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	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	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	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	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	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	45.4	9	21.2

Note) ϕD_1 , ϕD_2 are maximum diameters.



Applicable tubing (a)
 ϕD_1

Applicable tubing (b)
 ϕD_2

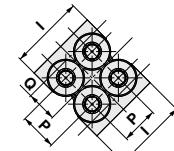
Dimensions

Double Branch "Y": 10-KQ2UD (Sealant)

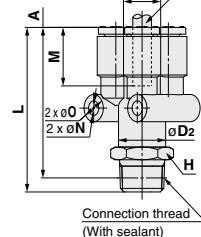


Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	ϕD_1	ϕD_2	L	I	A*	M	P	Q	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2UD04-01NS	12	8.2	10.4	36.7	16.6	33.6	13.3	8.2	6.8	6	3.2	4.2	5.4	11.7
	1/4	10-KQ2UD04-02NS	14	8.2	10.4	41.1	16.6	36.4	13.3	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) ϕD_1 is maximum diameter.



4 x Applicable tubing



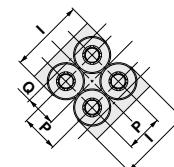
Connection thread (With sealant)

Different Diameter Double Union "Y": 10-KQ2UD

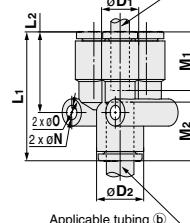


Applicable tubing O.D. (mm)	Model	Note (a)	Note (b)	ϕD_1	ϕD_2	L1	L2	P	I	M1	M2	Q	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 4$	$\phi 6$	10-KQ2UD04-06A	8.2	10.4	29.2	18.2	8.2	16.6	13.3	13.3	6.8	6	3.2	4.2	3	5.4	
$\phi 6$	$\phi 8$	10-KQ2UD06-08A	10.4	13.2	32	20.5	10.4	21	13.3	14.2	8.2	6	3.2	10.6	4.5	8.1	

Note) ϕD_1 , ϕD_2 are maximum diameters.



4 x Applicable tubing (a)



Applicable tubing (b)

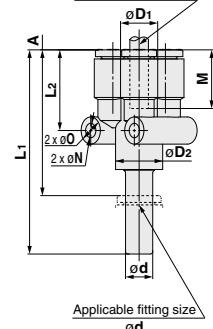
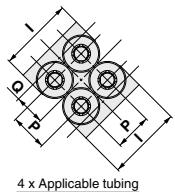
Dimensions

Double Plug-in "Y": 10-KQ2XD



Applicable tubing O.D. (mm)	Applicable fitting size ød	Model	Note	øD_1	øD_2	L_1	L_2	A	I	P	M	Q	øO	øN	Effective area (mm ²) Urethane	Min. port size	Weight (g)
$\text{o}4$	$\text{o}6$	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
$\text{o}6$	$\text{o}8$	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) øD_1 is maximum diameter.

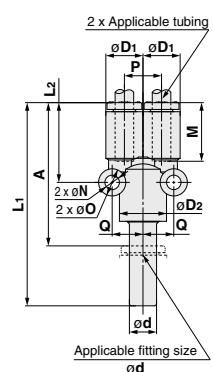


Different Diameter Plug-in "Y": 10-KQ2X



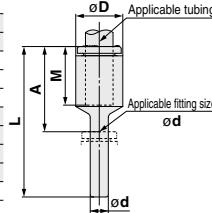
Applicable tubing O.D. (mm)	Applicable fitting size ød	Model	Note	øD_1	øD_2	L_1	L_2	A	P	M	Q	øO	øN	Effective area (mm ²) Urethane	Min. port size	Weight (g)
$\text{o}3.2$	$\text{o}4$	10-KQ2X23-04A		7.1	8.2	44.7	18	31.4	7.1	13.3	5.7	6	3.2	2.7	2.5	2.8
$\text{o}4$	$\text{o}6$	10-KQ2X04-06A		8.2	10.4	45.2	18	31.9	8.2	13.3	6.8	6	3.2	4.2	3	3.8
$\text{o}6$	$\text{o}8$	10-KQ2X06-08A		10.4	13.2	49.9	19.3	35.7	10.4	13.3	8.2	6	3.2	10.6	4.5	5.5
$\text{o}8$	$\text{o}10$	10-KQ2X08-10A		13.2	15.9	54.8	22.3	39.2	13.2	14.2	10.1	8	4.2	17.7	6	9.8
$\text{o}10$	$\text{o}12$	10-KQ2X10-12A		15.9	18.5	60.4	25	43.4	15.9	15.6	11.4	8	4.2	28.4	7.5	14.6

Note) øD_1 , øD_2 are maximum diameters.

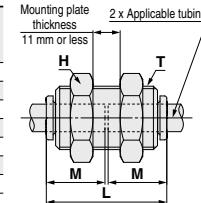


Dimensions**Plug-in Reducer: 10-KQ2R**

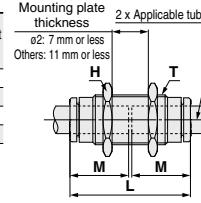
Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	(Note) ϕD	L	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 2$	$\phi 4$	10-KQ2R02-04A	5.8	27.8	14.5	11.9	0.9	1.4	0.6
	$\phi 4$	10-KQ2R23-04A	7.1	28.6	15.3	13.3	2.9	2.5	0.8
$\phi 3.2$	$\phi 6$	10-KQ2R04-06A	7.1	29.1	15.8	13.3	2.9	2.5	1
	$\phi 6$	10-KQ2R23-06A	10.4	31.7	16.1	13.3	4	3	1.3
	$\phi 10$	10-KQ2R04-10A	10.4	33.6	20.3	13.3	4	3	2.2
$\phi 4$	$\phi 4$	10-KQ2R06-04A	10.4	31.6	17.4	13.3	10.4	4.5	1.7
	$\phi 8$	10-KQ2R06-08A	10.4	33.9	18.3	13.3	10.4	4.5	2.1
	$\phi 10$	10-KQ2R06-10A	12	35.7	18.7	13.3	10.4	4.5	3.2
$\phi 6$	$\phi 12$	10-KQ2R06-12A	12	37.7	19.3	13.3	10.4	4.5	4.5
	$\phi 10$	10-KQ2R08-10A	13.2	35.1	19.5	14.2	18	6	2.9
	$\phi 12$	10-KQ2R08-12A	13.2	36.5	19.5	14.2	18	6	3.4
$\phi 8$	$\phi 12$	10-KQ2R10-12A	15.9	39.2	22.2	15.6	32.8	7.5	4.5
	$\phi 10$	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) ϕD is maximum diameter.**Bulkhead Union: 10-KQ2E (Interchangeable with KQ)**

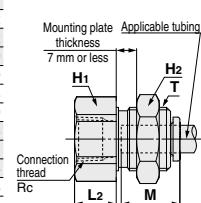
Applicable tubing O.D. (mm)	Model	T (M)	H (Width across flats)	L	Mounting hole	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 3.2$	10-KQ2E23-00N	M12 x 1	14	27.3	13	13.3	2.9	2.5	24.1
$\phi 4$	10-KQ2E04-00N	M12 x 1	14	27.3	13	13.3	4	3	22.9
$\phi 6$	10-KQ2E06-00N	M14 x 1	17	27.3	15	13.3	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 (mm²) 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)	H ₁ (Width across flats)	H ₂ (Width across flats)	L ₁	L ₂	Mounting hole	M	Effective area (mm²) 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
	1/8	10-KQ2E04-01N	M12 x 1	14	14	24.4	10	13	13.3	4	3	21.2
$\phi 4$	1/4	10-KQ2E04-02N	M12 x 1	17	14	29	14.6	13	13.3	4	3	30.9
	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
$\phi 6$	3/8	10-KQ2E06-03N	M14 x 1	19	17	30.7	16.3	15	13.3	10.4	4.5	35.9
	1/8	10-KQ2E08-01N	M16 x 1	17	19	24.1	6.7	17	14.2	18	6	30.5
	1/4	10-KQ2E08-02N	M16 x 1	17	19	28.4	11	17	14.2	18	6	33.1
$\phi 8$	3/8	10-KQ2E08-03N	M16 x 1	19	19	31.7	14.3	23	17	14.2	18	6
	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
$\phi 10$	1/2	10-KQ2E12-04N	M22 x 1	24	27	32.3	11.9	23	17	46.1	9	69.3
	3/8	10-KQ2E12-03N	M22 x 1	24	27	37.7	17.3	23	17	46.1	9	72.7
	1/2	10-KQ2E16-04N	M28 x 1.5	30	32	34.4	11.5	29	20.6	67	13	122.2
$\phi 12$	3/8	10-KQ2E16-03N	M28 x 1.5	30	32	38.8	15.9	29	20.6	67	13	132.1
	1/2	10-KQ2E16-04N	M28 x 1.5	30	32	38.8	15.9	29	20.6	67	13	132.1



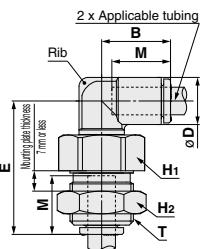
Dimensions

Bulkhead Male Elbow: 10-KQ2LE



Applicable tubing O.D. (mm)	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	B	E	Note oD	Mounting hole	M	Effective area (mm²) 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	●

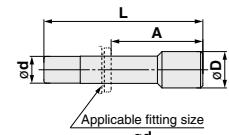
Note) øD is maximum diameter.



Plug: 10-KQP



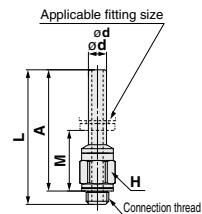
Applicable fitting size ød	Model	øD	L	A	Weight (g)
ø2	10-KQP-02	3	17	5.1	0.1
ø3.2	10-KQP-23	5	31.5	18.2	1
ø4	10-KQP-04	6	32	18.7	1
ø6	10-KQP-06	8	35	21.7	1
ø8	10-KQP-08	10	39	24.8	2
ø10	10-KQP-10	12	43	27.4	3.5
ø12	10-KQP-12	14	45.5	28.5	5
ø16	10-KQP-16	20.9	47	26.4	8



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

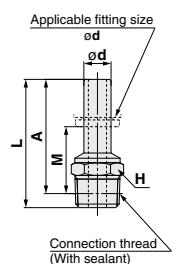


Adapter: 10-KQ2N (Sealant)



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	1/4	10-KQ2N06-01NS	10	28.3	25.2	11.9	4	4.1
ø6	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
ø8	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

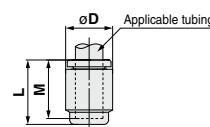
* Reference dimensions after installation of R thread



Dimensions**Tube Cap: 10-KQ2C**

Applicable tubing O.D. (mm)	Model	ϕD 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

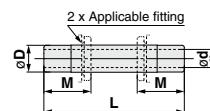
Note) øD is maximum diameter.



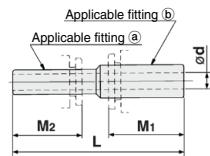
Directional Control Valves

Nipple: 10-KQN

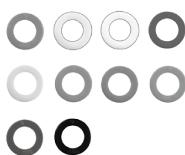
Applicable fitting øD	Model	L	M	ϕd	Min. port size	Weight (g)
ø4	10-KQN04-99	37	13.3	2.5	2.5	1
ø6	10-KQN06-99	39	13.3	4	4	2
ø8	10-KQN08-99	43	14.2	6	6	2
ø10	10-KQN10-99	49	15.6	7.5	7.5	4
ø12	10-KQN12-99	52	17	9	9	3.3
ø16	10-KQN16-99	57	20.6	13	13	4.8

Air Cylinders
Rotary Actuators**Reducer Nipple: 10-KQN**

Applicable fitting (a) (b)	Model	L	M1	M2	ϕd	Min. port size	Weight (g)
ø4 ø6	10-KQN04-06	38	13.3	13.3	2.5	2.5	2
ø6 ø8	10-KQN06-08	42	14.2	13.3	4	4	2
ø8 ø10	10-KQN08-10	47	15.6	14.2	6	6	2
ø10 ø12	10-KQN10-12	51	17	15.6	7.5	7.5	3.1
ø12 ø16	10-KQN12-16	55	20.6	17	9	9	4.9

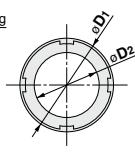
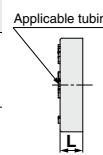


Air Preparation Equipment

Color Cap: 10-KQ2C

Applicable tubing O.D. (mm)	Model	ϕD_1	ϕD_2	L	Weight (g)	Note
ø2	10-KQ2C-02□A	6.1	3.2	2.6	0.1	
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	

Applicable for products with enlarged outside diameter of release button.



Pressure Control Equipment

□: 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

Flow Control Equipment
Pressure Switches/
Pressure Sensors

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□QI□	<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) 10-KQ2L08-01AQS</p>

Series 10-KQ2

Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

RoHS

Guide

Chuck

Large retaining force

The chuck provides secure retention and the collet increases the holding force on the tube.

Seal

Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa.

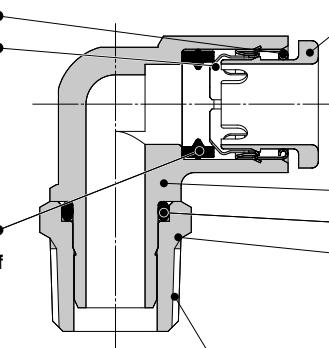
The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Guide

Chuck

Body

* Fittings without thread portion, and with all resin body material are copper free specification.



Release Button (White)

Requires little force for removal.

Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

Body

O-ring

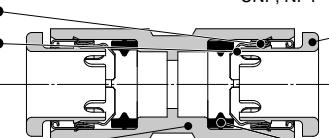
Stud

Effective when piping in a confined space.

Body part rotates allowing for positioning.

Connection Thread

UNF, NPT



Release Button (White)

Seal

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 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.

Color

Series	Body	Release button
Series 10-KQ2	White	White

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)
Thread	Mounting section Nut section
	ANSI/ASME1.20.1 (NPT thread) 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

Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Sensors/Pressure Sensors

Inch Size One-touch Fittings

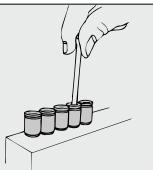
Variations

Hexagon socket head male connector

10-KQ2S P.1159



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

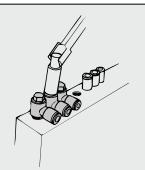


Universal male elbow

10-KQ2V P.1162



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

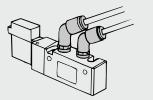


45° male elbow

10-KQ2K P.1162



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

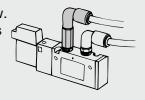


Extended male elbow

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.

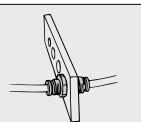


Bulkhead union

10-KQ2E P.1173



Use to connect tubing through a panel, etc.

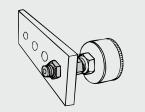


Bulkhead connector

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.

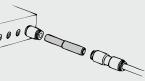


Reducer nipple

10-KQN P.1175



Use to connect One-touch fittings of different sizes.



Male connector

10-KQ2H P.1157



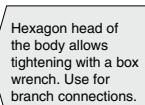
Use to pipe a female thread. Most general model.

Hexagon socket head universal male elbow

10-KQ2VS P.1163



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



Female connector

10-KQ2F P.1158



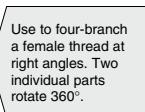
Use to pipe a male thread of a pressure gauge, etc.

Universal female elbow

10-KQ2VF P.1163



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



Straight union

10-KQ2H P.1158



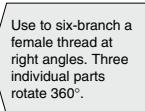
Use to connect tubing in the same direction.

Female elbow

10-KQ2LF P.1161



Use to pipe a male thread at right angles.



Different diameter straight

10-KQ2H P.1158



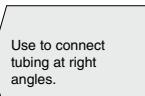
Use to connect tubing of different sizes.

Double universal male elbow

10-KQ2VD P.1164



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



Male elbow

10-KQ2L P.1160



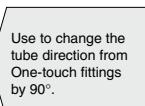
Use to pipe a female thread at right angles. Most general model.

Triple universal male elbow

10-KQ2VT P.1165



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



Union elbow

10-KQ2L P.1161



Use to connect tubing at right angles.

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.	Branch "Y" 10-KQ2U P.1171	Use to branch a female thread.	Bulkhead male elbow 10-KQ2LE P.1174	Use to connect tubing through a panel, etc. and to change the tube direction by 90°.
Male branch tee 10-KQ2T P.1168	Use to branch a female thread at both 90° angles.	Union "Y" 10-KQ2U P.1172	Use to branch tubing in the same direction.	Tube cap 10-KQ2C P.1175	Use to plug unused tubing.
Union tee 10-KQ2T P.1169	Use to branch tubing at both 90° angles.	Different diameter union "Y" 10-KQ2U P.1172	Use to connect tubing for branching with size reduced.	Plug 10-KQP P.1174	Use to plug unused One-touch fittings.
Different diameter tee 10-KQ2T P.1169	Use to connect tubing for branching at 90° angle with size reduced from the same piping.	Plug-in "Y" 10-KQ2U P.1172	Use to branch One-touch fittings.	Color cap 10-KQ2C P.1175	Mount onto the release button and use different colors for piping according to applications.
Cross 10-KQ2TW P.1169	Use to four-branch line.	Different diameter plug-in "V" 10-KQ2X P.1173	Use to branch One-touch fittings with size reduced.		
Male run tee 10-KQ2Y P.1170	Use to branch a female thread at a 90° angle.	Plug-in reducer 10-KQ2R P.1173	Use to change size of One-touch fittings.		

Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Fittings & Tubing

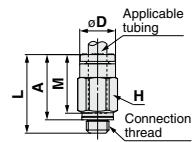
Pressure Control Equipment

Flow Control Equipment

Pressure Sensors

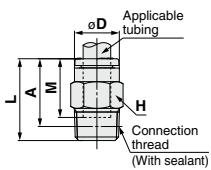
Dimensions**Male Connector: 10-KQ2H (Gasket seal)**

Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	ϕD	L	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-32UNF	10-KQ2H01-32N	7	6.7	17.4	14.4	13.3	2.5	2.3	2.7
$\phi 5/32$	10-32UNF	10-KQ2H03-32N	8	7.7	17.6	14.6	13.3	3.3	2.3	3.3
$\phi 3/16$	10-32UNF	10-KQ2H05-32N	8	8.3	17.7	14.7	13.3	3.4	2.3	3.4
$\phi 1/4$	10-32UNF	10-KQ2H07-32N	11.11	10.9	18	15	13.3	3.4	2.3	5.2

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

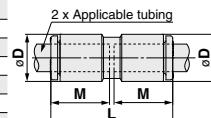
Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	ϕD	L	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/16	10-KQ2H01-33NS	9.5	6.7	19.3	15.2	13.3	2.5	2.5	6
	1/8	10-KQ2H01-34NS	11.11	6.7	14	10.8	13.3	2.5	2.5	7.1
	1/4	10-KQ2H01-35NS	14.29	6.7	16.7	12.3	13.3	2.9	2.5	16.2
$\phi 5/32$	1/16	10-KQ2H03-33NS	9.5	7.7	20	15.9	13.3	3.4	3	6.1
	1/8	10-KQ2H03-34NS	11.11	7.7	14	10.8	13.3	3.4	3	6.5
	1/4	10-KQ2H03-35NS	14.29	7.7	16.7	12.3	13.3	3.4	3	15.6
$\phi 3/16$	1/8	10-KQ2H05-34NS	11.11	8.3	17.4	14.2	13.3	6.5	3.5	7.4
	1/4	10-KQ2H05-35NS	14.29	8.3	16.7	12.3	13.3	6.5	3.5	14.9
	1/16	10-KQ2H07-33NS	11.11	10.9	22.5	18.4	13.3	11.5	4.6	7.6
$\phi 1/4$	1/8	10-KQ2H07-34NS	11.11	10.9	18	14.8	13.3	11.5	4.6	6.5
	1/4	10-KQ2H07-35NS	14.29	10.9	16.7	12.3	13.3	11.5	4.6	13.1
	3/8	10-KQ2H07-36NS	17.46	10.9	18.1	13.4	13.3	11.5	4.6	25.7
$\phi 5/16$	1/8	10-KQ2H09-34NS	14.29	13	22.2	19	14.2	18	6	12.6
	1/4	10-KQ2H09-35NS	14.29	13	22.1	17.7	14.2	18	6	15.2
	3/8	10-KQ2H09-36NS	17.46	13	18.1	13.4	14.2	18	6	22.5
$\phi 3/8$	1/8	10-KQ2H11-34NS	17.46	15.1	24.1	20.9	15.6	26	6	19.5
	1/4	10-KQ2H11-35NS	17.46	15.1	25.1	20.7	15.6	29.1	7	21
	3/8	10-KQ2H11-36NS	17.46	15.1	22.7	18	15.6	29.1	7	23.5
$\phi 1/2$	1/2	10-KQ2H11-37NS	22.23	15.1	22.3	15.9	15.6	29.1	7	49.1
	1/4	10-KQ2H13-35NS	22.23	19	28.8	24.4	17	51.7	9	34.4
	3/8	10-KQ2H13-36NS	22.23	19	27.5	22.8	17	51.7	9.6	36.2
$\phi 1/2$	1/2	10-KQ2H13-37NS	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**

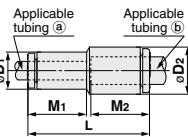
Applicable tubing O.D. (inch)	Model	øD Note)	L	M	Effective area (mm²)		Min. port size	Weight (g)
					Urethane	M		
ø1/8	10-KQ2H01-00A	7.1	27.6	13.3	2.9	2.5	1.4	
ø5/32	10-KQ2H03-00A	8.2	27.6	13.3	4	3	1.6	
ø3/16	10-KQ2H05-00A	9.1	27.6	13.3	6.5	3.5	1.9	
ø1/4	10-KQ2H07-00A	11.1	27.6	13.3	11.5	4.6	2.4	
ø5/16	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) ① ②	Model	øD1 Note)	øD2 Note)	L	M1	M2	Effective area (mm²)		Min. port size	Weight (g)
							Urethane	M		
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 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 ø1/4	10-KQ2H03-07A	8.2	11.1	27.6	13.3	13.3	5.6	3	2.1	
ø3/16 ø1/4	10-KQ2H05-07A	9.1	11.1	27.6	13.3	13.3	6.5	3.5	2.2	
ø5/16 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	
ø5/16 ø3/8	10-KQ2H09-11A	13.2	15.4	30.8	14.2	15.6	18	6	4.7	
ø1/2 ø3/8	10-KQ2H09-13A	13.2	19.3	32.2	14.2	17	18	6	6.6	
ø1/2 ø1/2	10-KQ2H11-13A	15.4	19.3	33.6	15.6	17	29.1	7	7.3	

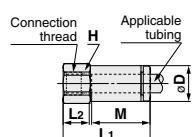


(Note) øD1, øD2 are maximum diameters.

Female Connector: 10-KQ2F

Applicable tubing O.D. (inch)	Connection thread UNF, NPT	Model	H (Width across flats)	øD Note)	L1		L2	M	Effective area (mm²)		Min. port size	Weight (g)
					L1	L2			Urethane	M		
ø1/8	10-32UNF	10-KQ2F01-32N	7	6.9	19.7	5.7	13.3	2.5	2.5	3.4		
ø1/8	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			
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			
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			
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 ActuatorsModular F. R.
Pressure Control Equipment

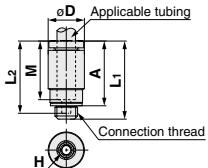
Fittings & Tubing

Flow Control Equipment
Pressure Sensors/Pressure Sensors

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

Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	(Note) øD	L1	L2	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø1/8	10-32UNF	10-KQ2S01-32N	2	7	17.5	16.3	14.5	13.3	2.5	2	2.6
ø5/32	10-32UNF	10-KQ2S03-32N	2.5	8	18.6	17.8	15.6	13.3	4	2.5	3
ø1/4	10-32UNF	10-KQ2S07-32N	2.5	10.3	19	17.8	16	13.3	4	2.5	3.7

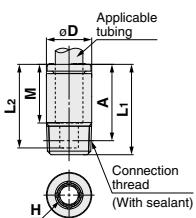
Note) øD is maximum diameter.

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

Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	(Note) øD	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø5/32	1/16	10-KQ2S03-33NS	2.78	8	19.8	18.8	15.7	13.3	3.6	2.8	4.5
	1/8	10-KQ2S03-34NS	2.78	10.3	17.3	16.3	14.1	13.3	3.6	2.8	6
ø3/16	1/8	10-KQ2S05-34NS	3.57	11	19.8	18.8	16.6	13.3	6.5	3.6	7.5
	1/16	10-KQ2S07-33NS	3.57	10.3	20.9	18.8	16.8	13.3	8.4	3.6	6.3
ø1/4	1/8	10-KQ2S07-34NS	4.76	10.3	19.8	18.8	16.6	13.3	11.5	4.8	7.4
	1/4	10-KQ2S07-35NS	4.76	13.8	19.8	18.8	15.4	13.3	11.5	4.8	13.2
ø5/16	3/8	10-KQ2S07-36NS	4.76	17	20.8	19.8	16.1	13.3	11.5	4.8	24
	1/8	10-KQ2S09-34NS	5.56	13	22.3	19.7	19.1	14.2	16.2	5.6	9.7
ø3/8	1/4	10-KQ2S09-35NS	6.35	14	21.2	20.1	16.8	14.2	16.2	6.4	12.6
	3/8	10-KQ2S09-36NS	6.35	17.5	20.7	19.7	16	14.2	16.2	6.4	21
ø1/2	1/8	10-KQ2S11-34NS	5.56	15.1	23.7	21.1	20.5	15.6	22.7	5.6	12.1
	1/4	10-KQ2S11-35NS	6.35	15.1	24.4	21.1	20	15.6	29.1	6.4	15.2
ø3/4	3/8	10-KQ2S11-36NS	6.35	18	22.1	21.1	17.4	15.6	29.1	6.4	22.7
	1/2	10-KQ2S11-37NS	6.35	21.3	22.1	21.1	15.7	15.6	29.1	6.4	40.6
ø1	1/4	10-KQ2S13-35NS	8	19	28.5	22.5	24.1	17	48	8.1	18.9
	3/8	10-KQ2S13-36NS	9.53	19	26.3	22.5	21.6	17	51.7	9.6	20.7
ø1/2	1/2	10-KQ2S13-37NS	9.53	22	23.5	22.5	17.1	17	51.7	9.6	33.3

* Reference dimensions after installation of NPT thread

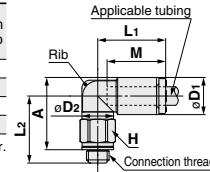
Note) øD is maximum diameter.



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

Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) øD1	øD2	L1	L2	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)	With a rib
ø1/8	10-32UNF	10-KQ2L01-32N	7	7.1	7	15.3	14.2	14.8	13.3	2.2	2.5	3	●
ø5/32	10-32UNF	10-KQ2L03-32N	7	8.2	7	15.4	14.7	15.8	13.3	3.5	2.5	3.1	●
ø3/16	10-32UNF	10-KQ2L05-32N	7	9.1	7	14.5	15.8	17.4	13.3	3.5	2.5	3.2	●
ø1/4	10-32UNF	10-KQ2L07-32N	7	11.1	7	15.4	16	18.6	13.3	3.5	2.5	3.5	●

Note) øD1 is maximum diameter.

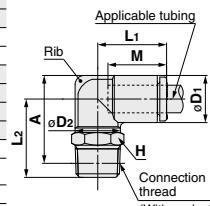
**Male Elbow: 10-KQ2L (Sealant)**

Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) øD1	øD2	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)	With a rib	
1/16	NPT	10-KQ2L01-33NS	11.11	7.1	10	14.5	24.3	23.8	13.3	2.5	2.5	9.1	—	
ø1/8	NPT	10-KQ2L01-34NS	11.11	7.1	10	14.5	16.7	17.1	13.3	2.5	2.5	5.5	—	
1/4	NPT	10-KQ2L01-35NS	14.29	7.1	10	14.5	21.1	20.3	13.3	2.5	2.5	15	—	
1/16	NPT	10-KQ2L03-33NS	11.11	8.2	10	14.8	23.8	23.8	13.3	3.3	3	9.3	●	
ø5/32	NPT	10-KQ2L03-34NS	11.11	8.2	10	14.8	16.2	17.1	13.3	3.3	3	5.6	●	
1/4	NPT	10-KQ2L03-35NS	14.29	8.2	10	14.8	21.6	21.3	13.3	3.3	3	15.2	●	
1/8	NPT	10-KQ2L05-34NS	11.11	9.1	10	15	16.7	18.1	13.3	5.6	3.5	5.8	—	
1/4	NPT	10-KQ2L05-35NS	14.29	9.1	10	15	22.1	22.3	13.3	5.6	3.5	15.4	—	
1/16	NPT	10-KQ2L07-33NS	11.11	11.1	10	15.6	25.3	26.8	13.3	6.8	3.5	9.8	●	
1/8	NPT	10-KQ2L07-34NS	11.11	11.1	10	15.6	17.7	20.1	13.3	10	4.5	6.1	●	
1/4	NPT	10-KQ2L07-35NS	14.29	11.1	10	15.6	23.1	24.3	13.3	10	4.5	15.7	●	
3/8	NPT	10-KQ2L07-36NS	17.46	11.1	10	15.6	24.5	25.4	13.3	10	4.5	28	—	
1/8	NPT	10-KQ2L09-34NS	11.11	13.2	10	16.4	18.7	22.1	14.2	11.4	4.5	6.9	●	
ø5/16	NPT	10-KQ2L09-34NQS	14.29	12.7	13.2	12	17.2	23.5	26.9	14.2	14.9	6	9.9	●
1/4	NPT	10-KQ2L09-35NS	14.29	13.2	12	17.2	24.1	26.3	14.2	14.9	6	14.1	●	—
3/8	NPT	10-KQ2L09-36NS	17.46	13.2	12	17.2	25.5	27.4	14.2	14.9	6	26.2	●	—
1/8	NPT	10-KQ2L11-34NS	12.7	15.4	12	18.6	23.2	27.7	15.6	21.2	6	11.8	●	—
1/4	NPT	10-KQ2L11-35NS	17.46	15.4	17	19.3	28.6	31.9	15.6	23.8	7.5	21.7	●	—
3/8	NPT	10-KQ2L11-36NS	17.46	15.4	17	19.3	33.4	34.7	15.6	23.8	7.5	19.8	●	—
1/2	NPT	10-KQ2L11-37NS	22.23	15.4	17	19.3	33.4	34.7	15.6	23.8	7.5	46.2	●	—
1/4	NPT	10-KQ2L13-35NS	17.46	19.3	17	21.5	30.5	35.7	17	44.4	9	24	—	—
3/8	NPT	10-KQ2L13-36NS	17.46	19.3	17	21.8	26.3	31.2	17	44.4	9.5	20.3	—	—
1/2	NPT	10-KQ2L13-37NS	22.23	19.3	17	21.8	30.5	35.7	17	44.4	9.5	46.3	—	—

* Reference dimensions after installation of NPT thread

Note 1) øD1 is maximum diameter.

Note 2) Refer to page 1175-1 for details.



Directional Control Valves

Air Cylinders

Air Grippers

Air Preparation Equipment

Fittings & Tubing

Flow Control Equipment

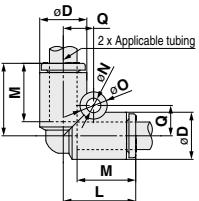
Pressure Switches/ Pressure Sensors

Dimensions

Union Elbow: 10-KQ2L



Applicable tubing O.D. (inch)	Model	(Note) ϕD	L	Q	M	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-KQ2L01-00A	7.1	14.9	5.4	13.3	6	3.2	2.5	2.5	1.6
$\phi 5/32$	10-KQ2L03-00A	8.2	15.3	5.7	13.3	6	3.2	4.2	3	1.9
$\phi 3/16$	10-KQ2L05-00A	9.1	15.7	6.2	13.3	6	3.2	5.6	3.5	2.2
$\phi 1/4$	10-KQ2L07-00A	11.1	16.5	7.2	13.3	6	3.2	10	4.6	2.9
$\phi 5/16$	10-KQ2L09-00A	13.2	18.2	8.4	14.2	8	4.2	14.9	6	4.7
$\phi 3/8$	10-KQ2L11-00A	15.4	20.4	9.9	15.6	8	4.2	23.8	7	6.7
$\phi 1/2$	10-KQ2L13-00A	19.3	23.4	11.8	17	8	4.2	44.4	9.6	10.8



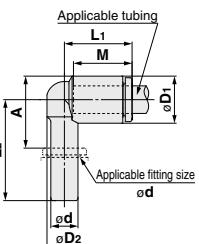
Note) ϕD is maximum diameter.

Plug-in Elbow: 10-KQ2L



Applicable tubing O.D. (inch)	Applicable fitting size ϕd (inch)	Model	(Note) ϕD_1	ϕD_2	L ₁	L ₂	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	$\phi 1/8$	10-KQ2L01-99A	7.1	6.4	14.5	20.9	11.1	13.3	2.5	2.2	0.9
$\phi 5/32$	$\phi 5/32$	10-KQ2L03-99A	8.2	7.2	14.5	21.1	11.9	13.3	4.2	2.5	1.2
$\phi 3/16$	$\phi 3/16$	10-KQ2L05-99A	9.1	8	15	22.2	13.4	13.3	5.6	3.5	1.4
$\phi 1/4$	$\phi 1/4$	10-KQ2L07-99A	11.1	8	15.6	22.8	15	13.3	10	4.6	1.9
$\phi 5/16$	$\phi 5/16$	10-KQ2L09-99A	13.2	10	17.2	26.2	18.6	14.2	14.9	6	3
$\phi 3/8$	$\phi 3/8$	10-KQ2L11-99A	15.4	12	19.1	28	20.1	15.6	23.8	7	4.5
$\phi 1/2$	$\phi 1/2$	10-KQ2L13-99A	19.3	14	21.8	38.7	31.3	17	44.4	9.6	7.8

Note) ϕD_1 is maximum diameter.

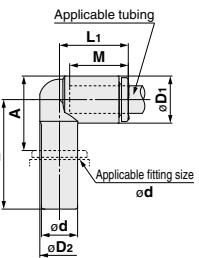


Reducer Elbow: 10-KQ2L



Applicable tubing O.D. (inch)	Applicable fitting size ϕd (inch)	Model	(Note) ϕD_1	ϕD_2	L ₁	L ₂	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 5/32$	$\phi 5/32$	10-KQ2L01-03A	7.1	6.4	14.5	23.9	14.1	13.3	2.5	2.5	1.1
$\phi 1/8$	$\phi 3/16$	10-KQ2L01-05A	7.1	6.4	14.5	28.4	18.6	13.3	2.5	2.5	1.1
$\phi 1/4$	$\phi 1/4$	10-KQ2L01-07A	7.1	6.4	14.5	24.5	14.7	13.3	2.5	2.5	1.3
$\phi 5/32$	$\phi 3/16$	10-KQ2L03-05A	8.2	7.2	14.8	29.1	19.9	13.3	4.2	3	1.3
$\phi 1/4$	$\phi 1/4$	10-KQ2L03-07A	8.2	7.2	14.8	21.1	11.9	13.3	4.2	3	1.4
$\phi 3/16$	$\phi 1/4$	10-KQ2L05-07A	9.1	8	15	21.6	12.8	13.3	5.6	3.5	1.5
$\phi 5/16$	$\phi 5/16$	10-KQ2L05-09A	9.1	8	15	30	20.3	13.3	5.6	3.5	1.9
$\phi 1/4$	$\phi 1/4$	10-KQ2L07-09A	11.1	8	15.6	30.7	22	13.3	10	4.6	2.3
$\phi 3/8$	$\phi 3/8$	10-KQ2L07-11A	11.1	8	15.6	31.1	21	13.3	10	4.6	3
$\phi 5/16$	$\phi 3/8$	10-KQ2L09-11A	13.2	10	18.8	34.1	25.1	14.2	14.9	6	3.7
$\phi 1/2$	$\phi 1/2$	10-KQ2L09-13A	13.2	10	18.8	35.6	25.2	14.2	14.9	6	4.6
$\phi 3/8$	$\phi 1/2$	10-KQ2L11-13A	15.4	12	19.1	36.5	27.2	15.6	23.8	7	5.6

Note) ϕD_1 is maximum diameter.

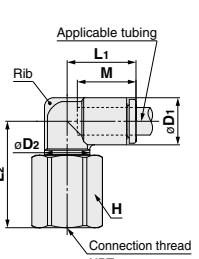


Female Elbow: 10-KQ2LF



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	(Note) ϕD_1	ϕD_2	L ₁	L ₂	M	Effective area (mm²) Urethane	Min. port size	Weight (g)	With a rib
$\phi 1/8$	1/8	10-KQ2LF01-34N	14.29	7.1	10	14.5	22.8	13.3	2.5	2.5	18.2	—
	1/4	10-KQ2LF01-35N	17.46	7.1	10	14.5	26.3	13.3	2.5	2.5	31.7	—
$\phi 5/32$	1/8	10-KQ2LF03-34N	14.29	8.2	10	14.8	22.4	13.3	4.2	3	18.3	●
	1/4	10-KQ2LF03-35N	17.46	8.2	10	14.8	26.9	13.3	4.2	3	31.9	●
$\phi 1/4$	1/8	10-KQ2LF07-34N	14.29	11.1	10	15.6	23.9	13.3	10	4.5	18.9	●
	1/4	10-KQ2LF07-36N	17.46	11.1	10	15.6	28.4	13.3	10	4.5	32.4	●
$\phi 3/8$	1/8	10-KQ2LF07-36N	22.23	11.1	10	15.6	28.9	13.3	10	4.5	53.1	●
	1/4	10-KQ2LF11-35N	17.46	15.4	17	19.3	27.1	15.6	23.8	7	28	●
$\phi 3/8$	1/8	10-KQ2LF11-36N	22.23	15.4	17	19.3	33.3	15.6	23.8	7	49.6	●
	1/2	10-KQ2LF11-37N	23.81	15.4	17	19.3	36.3	15.6	23.8	7	56.9	●
$\phi 1/2$	3/8	10-KQ2LF13-36N	22.23	19.3	17	21.8	30.4	17	44.4	9.5	51.4	—
	1/2	10-KQ2LF13-37N	23.81	19.3	17	21.8	33.4	17	44.4	9.5	58	—

Note) ϕD_1 is maximum diameter.



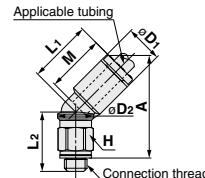
Dimensions

45° Male Elbow: 10-KQ2K (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) ϕD_1	ϕD_2	L1	L2	A	M	Effective area (mm²) 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) ϕD_1 is maximum diameter.



45° Male Elbow: 10-KQ2K (Sealant)

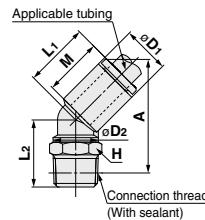


Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) ϕD_1	ϕD_2	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/8	10-KQ2K01-34NS	11.11	7.1	10	14.3	12.7	21.8	13.3	2.5	2.5	5.3
$\phi 5/32$	1/8	10-KQ2K03-34NS	11.11	8.2	10	14.4	12.7	22.2	13.3	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
$\phi 1/4$	1/4	10-KQ2K07-35NS	14.29	11.1	10	14.8	16.9	26	13.3	10	4.5	15.6
$\phi 3/8$	1/8	10-KQ2K07-36NS	17.46	11.1	10	14.8	21	30.1	13.3	10	4.5	27.8
$\phi 1/4$	1/8	10-KQ2K09-34NS	17.46	13.2	10	16	15.7	27.9	14.2	11.3	4.5	6.8
$\phi 5/16$	1/8	10-KQ2K09-34NQS	17.7	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
$\phi 3/8$	1/4	10-KQ2K11-35NS	17.46	15.4	17	17.7	28.6	41.5	15.6	23.8	7	21.8
$\phi 3/8$	1/2	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
$\phi 1/2$	1/4	10-KQ2K13-35NS	17.46	19.3	17	19.4	28.7	44.1	17	44.4	9	23.8
$\phi 1/2$	3/8	10-KQ2K13-36NS	17.46	19.3	17	19.4	23.6	38.7	17	44.4	9.5	19.9
$\phi 1/2$	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) ϕD_1 is maximum diameter.

Note 2) Refer to page 1175-1 for details.

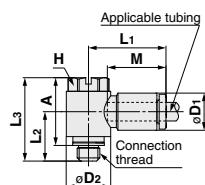


Universal Male Elbow: 10-KQ2V (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) ϕD_1	ϕD_2	L1	L2	L3	A	M	Effective area (mm²) 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) ϕD_1 is maximum diameter.



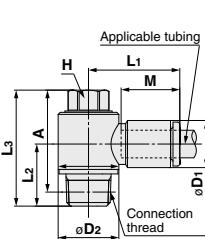
Universal Male Elbow: 10-KQ2V (Sealant)



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) ϕD_1	ϕD_2	L1	L2	L3	A*	M	Effective area (mm²) 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
$\phi 1/4$	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
$\phi 3/8$	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
$\phi 3/8$	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
$\phi 3/8$	1/2	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
$\phi 3/8$	1/2	10-KQ2V11-36NS	12.7	15.4	20.6	25.8	20.9	35.3	30.6	15.6	19.3	7	45.2
$\phi 1/2$	1/2	10-KQ2V13-36NS	17.46	19.3	27	30.5	20.2	35.1	30.4	17	34.3	9	64
$\phi 1/2$	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) ϕD_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 Sensors/Pressure Sensors

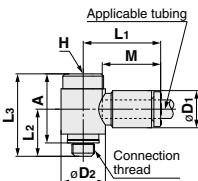
Dimensions

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



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note) øD ₁	øD ₂	L ₁	L ₂	L ₃	A	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)
ø1/8	10-32UNF	10-KQ2VS01-32N	8	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	8	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.



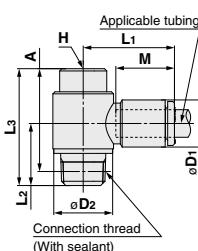
Hexagon Socket Head Universal Male Elbow: 10-KQ2VS (Sealant)



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note) øD ₁	øD ₂	L ₁	L ₂	L ₃	A*	M	Effective area (mm ²) 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
ø1/4	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
	1/8	10-KQ2VS09-34NS	8	13.2	17.6	23.5	15.1	26	22.8	14.2	11.2	6	19.3
ø5/16	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	20.6	31.4	26.7	15.6	19.3	7	38.6	
3/8	10-KQ2VS13-36NS	9.53	19.3	27	30.5	20.2	33.6	28.9	17	34.3	9	59.2	
ø1/2	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.

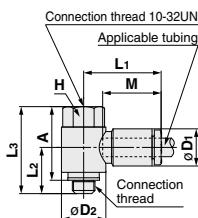


Universal Female Elbow: 10-KQ2VF (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note) øD ₁	øD ₂	L ₁	L ₂	L ₃	A	M	Effective area (mm ²) 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.



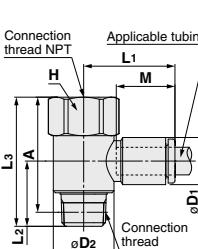
Universal Female Elbow: 10-KQ2VF (Sealant)



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note) øD ₁	øD ₂	L ₁	L ₂	L ₃	A*	M	Effective area (mm ²) 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
ø1/4	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
	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
ø5/16	1/4	10-KQ2VF09-35NS	17.46	13.2	17.6	23.5	15.5	30	26.8	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	
ø3/8	10-KQ2VF13-36NS	25.4	19.3	27	30.5	21.2	40.7	36	17	34.3	9	69.8	
ø1/2	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

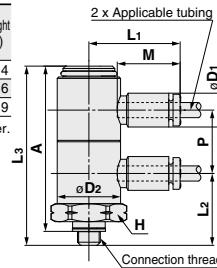
Note) øD₁ is maximum diameter.



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

Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	L3	A	M	P	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø1/8	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
ø5/32	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
ø1/4	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

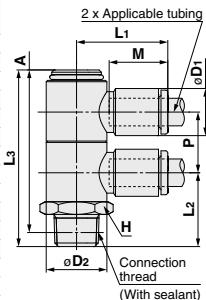
Note) øD1 is maximum diameter.

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

Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	L3	A*	M	P	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø1/8	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
ø5/32	1/8	10-KQ2VD03-34NS	14.29	8.2	13.4	19.3	16.3	39	35.8	13.3	13.4	2.3	3	20.2
ø3/16	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	20.5
ø1/4	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
ø1/4	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
ø3/8	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
ø5/16	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
ø5/16	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
ø3/8	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
ø3/8	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
ø3/8	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
ø1/2	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
ø1/2	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
ø1/2	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) øD1 is maximum diameter.



Directional Control Valves

Air Cylinders

Air Grippers

Air Preparation Equipment

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Switches/
Pressure Sensors

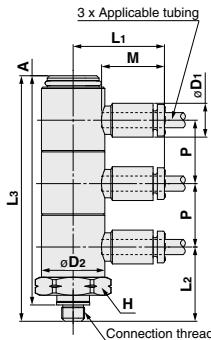
Dimensions

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



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats) ^{Note)}	ϕD_1	ϕD_2	L ₁	L ₂	L ₃	A	M	P	Effective area (mm ²) 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) ϕD_1 is maximum diameter.



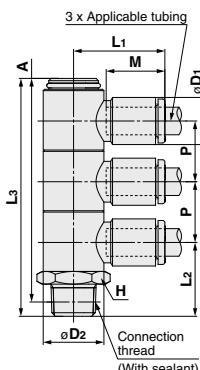
Triple Universal Male Elbow: 10-KQ2VT (Sealant)



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats) ^{Note)}	ϕD_1	ϕD_2	L ₁	L ₂	L ₃	A*	M	P	Effective area (mm ²) 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
$\phi 1/4$	1/4	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
$\phi 3/8$	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	
$\phi 1/4$	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
$\phi 5/16$	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
$\phi 3/8$	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
$\phi 3/8$	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
$\phi 3/8$	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) ϕD_1 is maximum diameter.



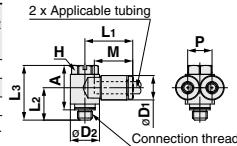
Dimensions

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



Applicable tubing O.D. (inch) UNF	Connection thread UNF	Model	H (Width across flats)	(Note) øD1	øD2	L1	L2	L3	A	M	P	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø1/8	10-32UNF	10-KQ2Z01-32N	8	7.1	9.8	16.5	10.4	17.9	14.9	13.3	7.1	1.9	2.5	5.9
ø5/32	10-32UNF	10-KQ2Z03-32N	8	8.2	9.8	16.5	10.4	17.9	14.9	13.3	8.2	2.9	2.5	6.2
ø1/4	10-32UNF	10-KQ2Z07-32N	8	11.1	13.4	18.4	12.1	24	20.5	13.3	11.1	2.9	2.5	13.4

Note) øD1 is maximum diameter.



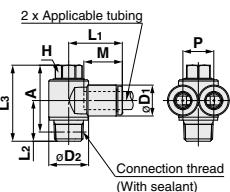
Branch Universal Male Elbow: 10-KQ2Z (Sealant)



Applicable tubing O.D. (inch) NPT	Connection thread NPT	Model	H (Width across flats)	(Note) øD1	øD2	L1	L2	L3	A*	M	P	Effective area (mm²) Urethane	Min. port size	Weight (g)	
ø1/8	1/8	10-KQ2Z01-34NS	8	7.1	13.4	18.5	13.7	25.6	22.4	13.3	7.1	1.9	2.5	14.1	
ø5/32	1/8	10-KQ2Z03-34NS	8	8.2	13.4	18.5	13.7	25.6	22.4	13.3	8.2	2.9	3	14.4	
ø3/16	1/8	10-KQ2Z05-34NS	8	9.1	13.4	18.4	13.7	25.6	22.4	13.3	9.1	3.7	3.5	14.7	
ø1/4	1/8	10-KQ2Z07-34NS	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	1/4	10-KQ2Z07-35NS	8	11.1	11.1	17.6	20.4	18	31	26.6	13.3	11.1	6.6	4.5	29.5
1/8	1/8	10-KQ2Z09-34NS	11.11	13.2	17.6	21.2	15.1	27.6	24.4	14.2	13.2	14.2	6	24.1	
ø5/16	1/4	10-KQ2Z09-35NS	11.11	13.2	17.6	21.2	18.5	31	26.6	14.2	13.2	14.2	6	31	
3/8	1/4	10-KQ2Z09-36NS	12.7	13.2	20.6	22.3	19.5	35.3	30.6	14.2	13.2	14.2	6	46	
1/4	1/4	10-KQ2Z11-35NS	12.7	15.4	20.6	25.9	19.1	34.9	30.5	15.6	15.4	19.3	7	40.7	
ø3/8	3/8	10-KQ2Z11-36NS	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	3/8	10-KQ2Z13-36NS	17.46	19.3	27	30.1	20.2	35.1	30.4	17	19.3	34.3	9	69.5	
ø1/2	1/2	10-KQ2Z13-37NS	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) øD1 is maximum diameter.



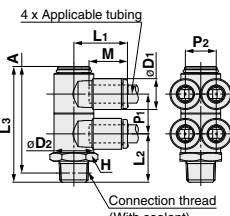
Double Branch Universal Male Elbow: 10-KQ2ZD (Sealant)



Applicable tubing O.D. (inch) NPT	Connection thread NPT	Model	H (Width across flats)	(Note) øD1	øD2	L1	L2	L3	A*	M	P1	P2	Effective area (mm²) Urethane	Min. port size	Weight (g)	
ø1/8	1/8	10-KQ2ZD01-34NS	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	
ø5/32	1/8	10-KQ2ZD03-34NS	14.29	8.2	13.4	18.5	16.3	39	35.8	13.3	13.4	8.2	2.9	3	21.8	
ø3/16	1/8	10-KQ2ZD05-34NS	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	
ø1/4	1/4	10-KQ2ZD07-35NS	14.29	11.1	13.4	18.3	21.1	44.2	39.8	13.3	13.8	11.1	6.6	4.6	25.5	
3/8	10-KQ2ZD07-36NS	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		
ø5/16	3/8	10-KQ2ZD09-36NS	19	13.2	17.6	21.9	23	49.8	45.1	14.2	15.9	13.2	14.2	6	56.8	
1/2	1/2	10-KQ2ZD09-37NS	22.23	13.2	17.6	21.9	27.2	54	47.6	14.2	15.9	13.2	14.2	6	83.3	
1/4	1/4	10-KQ2ZD11-35NS	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	
3/8	10-KQ2ZD11-36NS	22.23	15.4	20.6	23.6	24.8	56.7	52	15.6	19.2	15.4	19.3	7	73.2		
1/2	10-KQ2ZD11-37NS	22.23	15.4	20.6	23.6	28.7	60.6	54.2	15.6	19.2	15.4	19.3	7	93.3		
3/8	10-KQ2ZD13-36NS	25.4	19.3	27	27.9	29.6	64.4	59.7	17	22.3	19.3	34.3	9.6	137.2		
ø1/2	1/2	10-KQ2ZD13-37NS	25.4	19.3	27	27.9	32.8	67.6	61.2	17	22.3	19.3	34.3	9.6	155	

* Reference dimensions after installation of NPT thread

Note) øD1 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

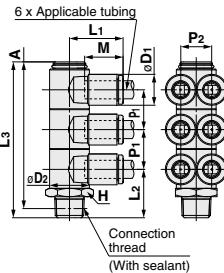
Triple Universal Male Elbow: 10-KQ2ZT (Sealant)



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats) Note 1)	ϕD_1	ϕD_2	L1	L2	L3	A*	M	P1	P2	Effective area (mm²) 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
$\phi 1/4$	1/4	10-KQ2ZT07-34NS	14.29	11.1	13.4	18.3	21.1	58	53.6	13.3	13.8	11.1	6.6	4.6	33.1
$3/8$	1/4	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	40
$1/4$	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
$\phi 5/16$	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
$1/2$	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
$1/4$	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
$\phi 3/8$	3/8	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
$1/2$	1/2	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
$3/8$	3/8	10-KQ2ZT13-36NS	25.4	19.3	27	27.9	29.6	86.8	81.1	17	22.3	19.3	34.3	9.6	182.3
$1/2$	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) ϕD_1 is maximum diameter.

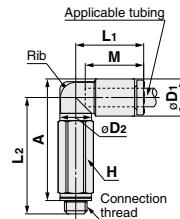


Extended Male Elbow: 10-KQ2W (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	Note 1)	ϕD_1	ϕD_2	L1	L2	A	M	Effective area (mm²) 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) ϕD_1 is maximum diameter.



Extended Male Elbow: 10-KQ2W (Sealant)



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note 1)	ϕD_1	ϕD_2	L1	L2	A*	M	Effective area (mm²) 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	—	
$1/16$		10-KQ2W07-33NS	11.11	11.1	10	15	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	●	
$3/8$		10-KQ2W07-36NS	14.29	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	●	
$1/4$		10-KQ2W09-34NS	12.7	13.2	12	17.2	42.4	45.8	14.2	14.2	6	26.4	●	
$1/8$		10-KQ2W09-35NS	14.29	13.2	12	17.2	37.8	40	14.2	14.2	6	26.5	●	
$3/8$		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	●	
$1/2$		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	—	
$3/8$		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) ϕD_1 is maximum diameter.

Note 2) Refer to page 1175-1 for details.

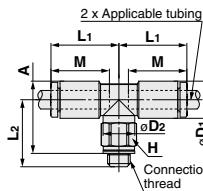
Dimensions

Male Branch Tee: 10-KQ2T (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) øD1	øD2	L1	L2	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø1/8	10-32UNF	10-KQ2T01-32N	7	7.1	7	15.3	14.2	14.8	13.3	2.7	2.5	3.5
ø5/32	10-32UNF	10-KQ2T03-32N	7	8.2	7	15.4	14.7	15.8	13.3	4.5	2.5	3.8
ø1/4	10-32UNF	10-KQ2T07-32N	7	11.1	7	15.4	16	18.6	13.3	4.5	2.5	4.7

Note) øD1 is maximum diameter.



Male Branch Tee: 10-KQ2T (Sealant)

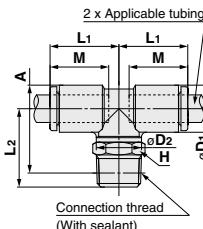


Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) øD1	øD2	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø1/8	1/16	10-KQ2T01-33NS	11.11	7.1	10	14.5	24.2	23.7	13.3	2.9	2.5	9.7
	1/8	10-KQ2T01-34NS	11.11	7.1	10	14.5	16.6	17	13.3	2.9	2.5	6
	1/4	10-KQ2T01-35NS	14.29	7.1	10	14.5	21	20.2	13.3	2.9	2.5	15.6
ø5/32	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
	1/4	10-KQ2T03-35NS	14.29	8.2	10	14.8	21.6	21.3	13.3	4.1	3	15.9
ø3/16	1/8	10-KQ2T05-34NS	11.11	9.1	10	15	16.7	18	13.3	7	3.5	6.6
	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
ø1/4	1/8	10-KQ2T07-34NS	11.11	11.1	10	15.6	17.7	20	13.3	12.4	4.5	7.3
	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
ø5/16	1/8	10-KQ2T09-34NS	11.11	13.2	10	16.4	18.7	22.1	14.2	14	4.5	8.7
	1/4	10-KQ2T09-34NQS	12.7	13.2	12	17.2	23.5	26.9	14.2	18.2	6	11.7
	3/8	10-KQ2T09-35NS	14.29	13.2	12	17.2	24.1	26.3	14.2	18.2	6	15.9
ø3/8	1/4	10-KQ2T09-36NS	17.46	13.2	12	17.2	25.5	27.4	14.2	18.2	6	27.9
	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
ø1/2	3/8	10-KQ2T11-36NS	17.46	15.4	17	19.3	29.1	32.1	15.6	23.8	7.5	22.2
	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
ø1/2	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) øD1 is maximum diameter.

Note 2) Refer to page 1175-1 for details.



Directional Control Valves

Air Cylinders
Rotary ActuatorsAir Grippers
Air Preparation EquipmentModular F. R.
Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment
Pressure Sensors/Pressure Sensors

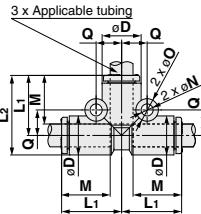
Dimensions

Union Tee: 10-KQ2T



Applicable tubing O.D. (inch)	Model	(Note) ϕD	L1	L2	M	Q	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-KQ2T01-00A	7.1	14.9	18.5	13.3	5.4	6	3.2	2.9	2.3	2.3
$\phi 5/32$	10-KQ2T03-00A	8.2	15.3	19.4	13.3	5.7	6	3.2	4.4	3	2.8
$\phi 3/16$	10-KQ2T05-00A	9.1	15.7	20.3	13.3	6.2	6	3.2	7	3.5	3.2
$\phi 1/4$	10-KQ2T07-00A	11.1	16.5	22.1	13.3	7.2	6	3.2	12.4	4.6	4.3
$\phi 5/16$	10-KQ2T09-00A	13.2	18.2	24.8	14.2	8.4	8	4.2	17.7	6	7
$\phi 3/8$	10-KQ2T11-00A	15.4	20.4	28.1	15.6	9.9	8	4.2	23.8	7	10.2
$\phi 1/2$	10-KQ2T13-00A	19.3	23.4	33	17	11.8	8	4.2	50.6	9.6	16.9

Note) ϕD is maximum diameter.

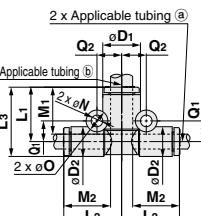


Different Diameter Tee: 10-KQ2T



Applicable tubing O.D. (inch) (a) (b)	Model	(Note) ϕD_1	ϕD_2	L1	L2	L3	M1	M2	Q1	Q2	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-KQ2T01-03A	8.2	7.1	14.9	15.3	18.5	13.3	13.3	5.4	5.8	6	3.2	3.5	3	2.6
$\phi 1/4$	10-KQ2T01-07A	11.1	7.1	14.9	16.5	18.5	13.3	13.3	5.3	7.2	6	3.2	3.5	3	2.8
$\phi 5/32$	10-KQ2T03-05A	9.1	8.2	15.3	15.7	19.4	13.3	13.3	5.7	6.2	6	3.2	6.6	3.5	2.6
$\phi 1/4$	10-KQ2T03-07A	11.1	8.2	15.3	16.5	19.4	13.3	13.3	5.7	7.2	6	3.2	6.6	4.1	3
$\phi 3/16$	10-KQ2T05-07A	11.1	9.1	15.7	16.5	20.3	13.3	13.3	6.2	7.2	6	3.2	7	4.6	3.7
$\phi 1/4$	10-KQ2T07-09A	13.2	11.1	17.4	17.3	23	14.2	13.3	7.4	8.4	8	4.2	12.4	6	5.6
$\phi 3/8$	10-KQ2T07-11A	15.4	11.1	18.8	18.1	24.4	15.6	13.3	7.7	9.9	8	4.2	12.4	6.4	6.8
$\phi 5/16$	10-KQ2T09-11A	15.4	13.2	19.6	19	26.2	15.6	14.2	8.7	9.9	8	4.2	18.3	7	8.2
$\phi 3/8$	10-KQ2T09-13A	19.3	13.2	21	20.6	27.6	17	14.2	8.7	11.8	8	4.2	18.3	8.1	10.6
$\phi 1/2$	10-KQ2T11-13A	19.3	15.4	21.8	22	29.5	17	15.6	9.9	11.8	8	4.2	23.8	9.6	12.4

Note) ϕD_1 is maximum diameter.

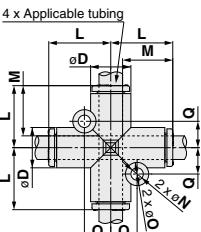


Cross: 10-KQ2TW



Applicable tubing O.D. (inch)	Model	(Note) ϕD	L	Q	M	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 5/32$	10-KQ2TW03-00A	8.2	15.3	5.7	13.3	6	3.2	4.4	3	3.5
$\phi 1/4$	10-KQ2TW07-00A	11.1	16.5	7.2	13.3	6	3.2	12.4	4.6	5.4
$\phi 5/16$	10-KQ2TW09-00A	13.2	18.2	8.4	14.2	8	4.2	17.7	6	8.5
$\phi 3/8$	10-KQ2TW11-00A	15.4	20.4	9.9	15.6	8	4.2	23.8	7	12
$\phi 1/2$	10-KQ2TW13-00A	19.3	23.4	11.8	17	8	4.2	50.6	9.6	19.7

Note) ϕD is maximum diameter.

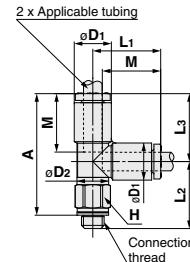


Dimensions

Male Run Tee: 10-KQ2Y (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) øD ₁	øD ₂	L ₁	L ₂	L ₃	A	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)
ø1/8	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
ø5/32	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
ø1/4	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) øD₁ is maximum diameter.

Male Run Tee: 10-KQ2Y (Sealant)

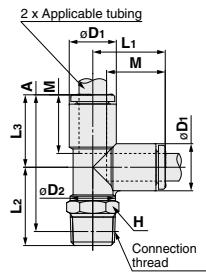


Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) øD ₁	øD ₂	L ₁	L ₂	L ₃	A*	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)
ø1/8	1/16	10-KQ2Y01-33NS	11.11	7.1	10	14.9	24.2	14.9	35.1	13.3	2.9	2.5	9.8
	1/8	10-KQ2Y01-34NS	11.11	7.1	10	14.9	16.6	14.9	28.4	13.3	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
ø5/32	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
	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
ø3/16	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
	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
ø1/4	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
ø5/16	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
	1/8	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
ø3/8	3/8	10-KQ2Y09-36NS	17.46	13.2	12	18.2	25.5	18.2	39	14.2	17.7	6	28
	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
ø1/2	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
	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) øD₁ is maximum diameter.

Note 2) Refer to page 1175-1 for details.



Directional Control Valves

Air Cylinders
Rotary ActuatorsAir Grippers
Air Preparation EquipmentModular F. R.
Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment
Pressure Switches/
Pressure Sensors

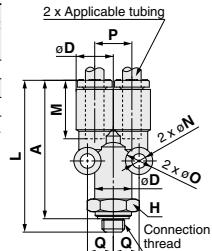
Dimensions

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



Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	Note øD	L	P	A	M	Q	øO	øN	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø1/8	10-32UNF	10-KQ2U01-32N	8	7.1	33.8	7.1	30.3	13.3	5.2	6	3.2	2.2	1.8	5
ø5/32	10-32UNF	10-KQ2U03-32N	10	8.2	33.9	8.2	30.4	13.3	5.7	6	3.2	2.2	1.8	6.6
ø1/4	10-32UNF	10-KQ2U07-32N	12	11.1	35.2	11.1	31.7	13.3	7.6	8	4	2.2	1.8	11.2

Note) øD is maximum diameter.



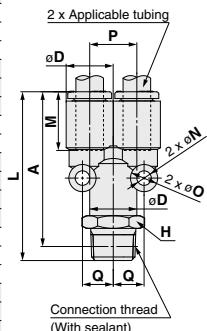
Branch "Y": 10-KQ2U (Sealant)



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note øD	L	P	A*	M	Q	øO	øN	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø1/8	1/16	10-KQ2U01-33NS	9	7.1	37.3	7.1	33.2	13.3	5.2	6	3.2	2.9	2.5	7.1
	1/8	10-KQ2U01-34NS	[11.1]	7.1	36.4	7.1	33.2	13.3	5.2	6	3.2	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	2.9	2.7	20
ø5/32	1/16	10-KQ2U03-33NS	9	8.2	37.4	8.2	33.3	13.3	5.7	6	3.2	4.2	3.6	7.3
	1/8	10-KQ2U03-34NS	[11.1]	8.2	36.5	8.2	33.3	13.3	5.7	6	3.2	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	4.2	3.6	20.1
ø3/16	1/8	10-KQ2U05-34NS	[11.1]	9.1	37.1	9.1	33.9	13.3	6.2	6	3.2	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	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	12.4	4.6	11.6
ø1/4	1/8	10-KQ2U07-34NS	12.7	11.1	37.8	11.1	34.6	13.3	7.6	8	4	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	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	12.4	5.6	33.5
ø5/16	1/8	10-KQ2U09-34NS	[14.29]	13.2	40.7	13.2	37.5	14.2	8.7	8	4.2	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	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	17.7	7.3	34.1
ø3/8	1/4	10-KQ2U11-35NS	17.46	15.4	48.6	15.4	44.2	15.6	9.9	8	4.2	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	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	23.8	8.9	62.8
ø1/2	1/4	10-KQ2U13-35NS	22	19.3	53.4	19.3	49	17	11.8	8	4.2	50.6	9	42
	3/8	10-KQ2U13-36NS	22	19.3	54.8	19.3	50.1	17	11.8	8	4.2	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	50.6	12.1	62.1

* Reference dimensions after installation of NPT thread

Note) øD is maximum diameter.



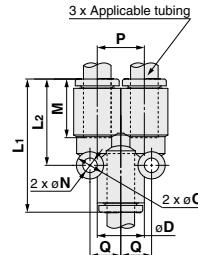
Dimensions

Union "Y": 10-KQ2U



Applicable tubing O.D. (inch)	Model	(Note) ϕD	L1	L2	P	M	Q	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-KQ2U01-00A	7.1	28.9	18	7.1	13.3	5.2	6	3.2	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	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	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	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	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	23.8	9.6	10.4

Note) ϕD is maximum diameter.

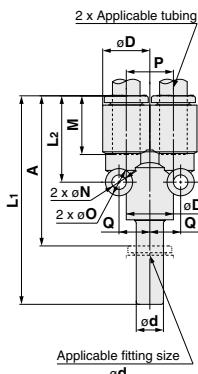


Plug-in "Y": 10-KQ2U



Applicable tubing O.D. (inch)	Applicable fitting size ϕd (inch)	Model	(Note) ϕD	L1	L2	P	A	M	Q	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	$\phi 1/8$	10-KQ2U01-99A	7.1	45.1	18	7.1	31.8	13.3	5.2	6	3.2	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	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	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	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	17.7	6	8

Note) ϕD is maximum diameter.

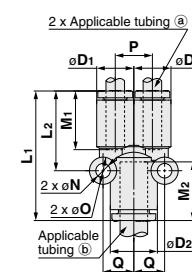


Different Diameter Union "Y": 10-KQ2U



Applicable tubing O.D. (inch)	Model	(Note) ϕD_1	(Note) ϕD_2	L1	L2	P	M1	M2	Q	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-KQ2U01-03A	7.1	8.2	28.9	18	7.1	13.3	13.3	5.7	6	3.2	2.7	3.3	2.7
	10-KQ2U01-07A	7.1	11.1	30.3	18.5	7.1	13.3	13.3	7.2	6	3.2	2.7	3.3	3.3
$\phi 5/32$	10-KQ2U03-05A	8.2	9.1	29.6	18.8	8.2	13.3	13.3	6.2	6	3.2	4.2	4.1	3.2
	10-KQ2U03-07A	8.2	11.1	30.3	19	8.2	13.3	13.3	7.2	6	3.2	4.2	4.1	3.6
$\phi 3/16$	10-KQ2U05-07A	9.1	11.1	30.6	19.8	9.1	13.3	13.3	7.2	6	3.2	7	4.8	3.9
	10-KQ2U07-09A	11.1	13.2	32.3	21.3	11.1	13.3	14.2	8.6	8	4	12.4	6.4	6
$\phi 1/4$	10-KQ2U07-11A	11.1	15.4	34.4	21.7	11.1	13.3	15.6	9.8	8	4	12.4	6.4	7.2
	10-KQ2U09-11A	13.2	15.4	35.3	23	13.2	14.2	15.6	9.9	8	4.2	18.3	8.1	8.5
$\phi 5/16$	10-KQ2U09-13A	13.2	19.3	38.7	24.2	13.2	14.2	17	11.8	8	4.2	18.3	8.1	11.2
	10-KQ2U11-13A	15.4	19.3	40.1	26.6	15.4	15.6	17	11.8	8	4.2	23.8	9.6	13

Note) ϕD_1 , ϕD_2 are maximum diameters.



Directional Control Valves
Air Cylinders
Air Actuators

Rotary Grippes
Air Preparation Equipment

Modular F. R.
Pressure Control Equipment

Fittings & Tubing
Flow Control Equipment

Pressure Switches/
Pressure Sensors

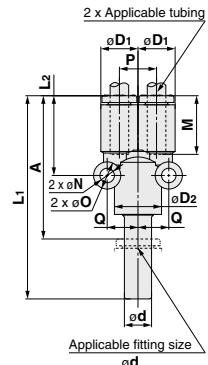
Dimensions

Different Diameter Plug-in "Y": 10-KQ2X



Applicable tubing O.D. (inch)	Applicable fitting size d (inch)	Model	Note)	ϕD_1	ϕD_2	L_1	L_2	A	P	M	Q	ϕO	ϕN	Effective area (mm^2) Urethane	Min. port size	Weight (g)
$\phi 1/8$	$\phi 5/32$	10-KQ2X01-03A	7.1	8.2	44.7	18	42.2	7.1	13.3	5.7	6	3.2	2.7	2.5	2.8	
$\phi 5/32$	$\phi 3/16$	10-KQ2X03-05A	8.2	9.1	46.1	18.8	42.6	8.2	13.3	6.2	6	3.2	2.9	3.5	3.3	
$\phi 1/4$	$\phi 1/4$	10-KQ2X03-07A	8.2	11.1	46.8	19	42.2	8.2	13.3	7.2	6	3.2	2.9	4.1	4	
$\phi 3/16$	$\phi 1/4$	10-KQ2X05-07A	9.1	11.1	47.1	19.8	42.5	9.1	13.3	7.2	6	3.2	7	4.6	4.4	
$\phi 1/4$	$\phi 5/16$	10-KQ2X07-09A	11.1	13.2	51.2	21.3	45.2	11.1	13.3	8.6	8	4	12.4	6	6.5	

Note) ϕD_1 , ϕD_2 are maximum diameters.

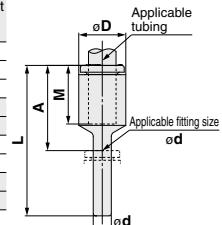


Plug-in Reducer: 10-KQ2R



Applicable tubing O.D. (inch)	Applicable fitting size d (inch)	Model	Note)	ϕD	L	A	M	Effective area (mm^2) Urethane	Min. port size	Weight (g)
$\phi 1/8$	$\phi 5/32$	10-KQ2R01-03A	7.1	28.6	15.3	13.3		2.9	2.5	0.8
	$\phi 3/16$	10-KQ2R01-05A	7.1	28.7	15.4	13.3		2.9	2.5	0.8
	$\phi 1/4$	10-KQ2R01-07A	7.1	28.4	15.1	13.3		2.9	2.5	1
$\phi 5/32$	$\phi 3/16$	10-KQ2R03-05A	8.2	28.7	15.4	13.3	4	3	1	
	$\phi 1/4$	10-KQ2R03-07A	8.2	31.8	18.5	13.3	4	3	1.2	
$\phi 3/16$	$\phi 1/4$	10-KQ2R05-07A	9.1	31.4	18.1	13.3	6.5	3.5	1.3	
	$\phi 5/16$	10-KQ2R05-09A	9.1	33.4	19.2	13.3	6.5	3.5	1.5	
$\phi 1/4$	$\phi 5/16$	10-KQ2R07-09A	11.1	33.3	19.1	13.3	11.5	4.6	1.7	
	$\phi 3/8$	10-KQ2R07-11A	11.1	35.9	20.3	13.3	11.5	4.6	2.2	
$\phi 5/16$	$\phi 3/8$	10-KQ2R09-11A	13.2	36.2	20.6	14.2	18.1	6	2.8	
	$\phi 1/2$	10-KQ2R09-13A	13.2	37.2	20.2	14.2	18.1	6	3.5	
$\phi 3/8$	$\phi 1/2$	10-KQ2R11-13A	15.4	39.5	22.5	15.6	29.1	7	4.2	

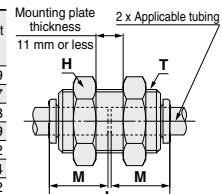
Note) ϕD is maximum diameter.



Bulkhead Union: 10-KQ2E (Interchangeable with KQ)



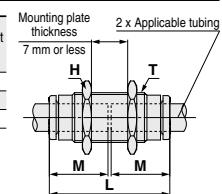
Applicable tubing O.D. (inch)	Model	T (UNF)	H (Width across flats)	L	Mounting hole	M	Effective area (mm^2) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-KQ2E01-00N	1/2-20UNF	17.46	27.8	13.5	13.3	2.9	2.5	26.9
$\phi 5/32$	10-KQ2E03-00N	1/2-20UNF	17.46	27.8	13.5	13.3	4	3	25.7
$\phi 3/16$	10-KQ2E05-00N	9/16-18UNF	17.46	29.8	15	13.3	6.5	3.5	40.3
$\phi 1/4$	10-KQ2E07-00N	9/16-18UNF	17.46	29.8	15	13.3	11.5	4.6	36.9
$\phi 5/16$	10-KQ2E09-00N	3/4-16UNF	22.23	31.8	20	14.2	18	6	61.2
$\phi 3/8$	10-KQ2E11-00N	7/8-14UNF	25.4	33.8	23	15.6	29.1	7	83.4
$\phi 1/2$	10-KQ2E13-00N	1-12UNF	28.57	37.8	26	17	51.7	9.6	109.2



Bulkhead Union: 10-KQ2E (Interchangeable with KJ)

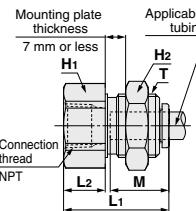


Applicable tubing O.D. (inch)	Model	T (UNF)	H (Width across flats)	L	Mounting hole	M	Effective area (mm^2) Urethane	Min. port size	Weight (g)
$\phi 1/8$	10-KQ2E01-00NJ	3/8-24UNF	12.7	27.3	10.5	13.3	2.5	2.5	12.6
$\phi 5/32$	10-KQ2E03-00NJ	3/8-24UNF	12.7	27.3	10.5	13.3	4	3	11.9
$\phi 1/4$	10-KQ2E07-00NJ	1/2-20UNF	15.88	27.3	14	13.3	11.5	4.6	19.2



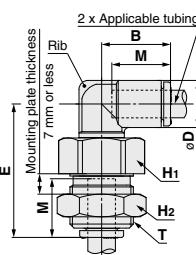
Dimensions**Bulkhead Connector: 10-KQ2E**

Applicable tubing O.D. (inch)	Connection thread NPT	Model	T (UNF)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Mounting hole	M	Effective area (mm²)	Min. port size Urethane	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	3/8	10-KQ2E13-36N	1-12UNF	28.57	28.57	32	11.6	26	17	51.7	9.6	106.6
		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**

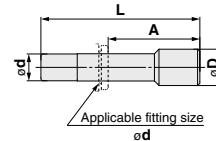
Applicable tubing O.D. (inch)	Model	T (UNF)	H1 (Width across flats)	H2 (Width across flats)	B	E	(Note) øD	Mounting hole	M	Effective area (mm²)	Min. port size Urethane	Weight (g)	With a rib
ø1/8	10-KQ2LE01-00N	1/2-20UNF	17.46	17.46	14.5	28.9	7.1	13.5	13.3	2.5	2.5	27.5	—
ø5/32	10-KQ2LE03-00N	1/2-20UNF	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

Air Cylinders

Air Grippers

Modular F. R.

Fittings & Tubing

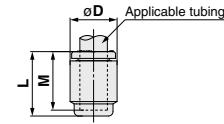
Flow Control Equipment

Pressure Sensors/ Pressure Sensors

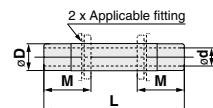
Dimensions**Tube Cap: 10-KQ2C**

Applicable tubing O.D. (inch)	Model	Note) øD	L	M	Weight (g)
ø5/32	10-KQ2C03-00A	8.2	14.5	13.3	0.8
ø1/4	10-KQ2C07-00A	11.1	14.8	13.3	1.3
ø5/16	10-KQ2C09-00A	13.2	15.7	14.2	2
ø3/8	10-KQ2C11-00A	15.4	17.3	15.6	2.8

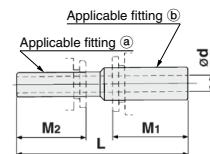
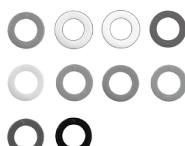
Note) øD is maximum diameter.

**Nipple: 10-KQN**

Applicable fitting øD	Model	L	M	ød Min. port size	Weight (g)
ø1/8	10-KQN01-99	36	13.3	2.1	0.2
ø3/16	10-KQN05-99	38	13.3	3.4	0.4
ø1/4	10-KQN07-99	39	13.3	4.6	1
ø3/8	10-KQN11-99	49	15.6	7	2
ø1/2	10-KQN13-99	51	17	9.5	3.5

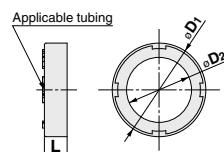
**Reducer Nipple: 10-KQN**

Applicable fitting ① ②	Model	L	M ₁	M ₂	ød Min. port size	Weight (g)
ø1/8	10-KQN01-03	36.5	13.3	13.3	2.1	0.2
	10-KQN01-05	37	13.3	13.3	2.1	0.4
ø5/32	10-KQN03-05	37.5	13.3	13.3	2.5	0.4
	10-KQN03-07	38	13.3	13.3	2.5	0.6
ø3/16	10-KQN05-07	38.5	13.3	13.3	3.4	0.6
	10-KQN05-09	41	13.3	13.3	3.4	1
ø1/4	10-KQN07-09	41.5	13.3	13.3	4.6	1
	10-KQN07-11	45	15.6	13.3	4.6	1
ø5/16	10-KQN09-11	46.5	15.6	14.2	6	1.8
	10-KQN09-13	47.5	17	14.2	6	2.6
ø3/8	10-KQN11-13	50	17	15.6	7	3.2

**Color Cap: 10-KQ2C**

Applicable tubing O.D. (inch)	Model	øD ₁	øD ₂	L	Weight (g)	Note
ø1/8	10-KQ2C-01A	7.3	4.3	2.6	0.1	—
ø3/16	10-KQ2C-05A	9	5.9	2.6	0.1	Applicable for products with enlarged outside diameter of release button
ø1/4	10-KQ2C-07B	11.5	7.5	2.6	0.1	
ø3/8	10-KQ2C-11B	15.7	10.7	2.7	0.1	
ø1/2	10-KQ2C-13B	19.6	13.9	2.7	0.2	

□: 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-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) 10-KQ2L09-34AQS</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 One-touch Fittings

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

RoHS

Guide

Chuck

Large retaining force

The chuck provides secure retention and the collet increases the holding force on the tube.

Seal

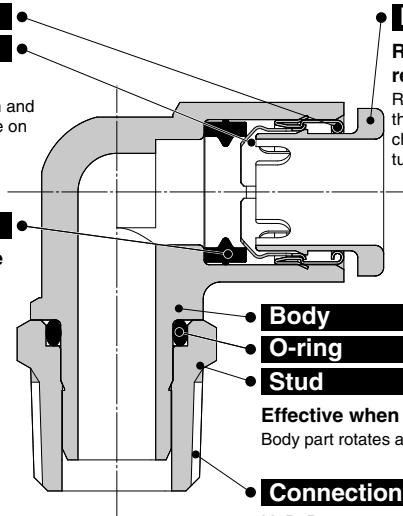
Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa.

The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Release Button (White)

Requires little force for removal.

Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.



Body

O-ring

Stud

Effective when piping in a confined space.

Body part rotates allowing for positioning.

Connection Thread

M, R, Rc

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 Note)	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 ^{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)
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

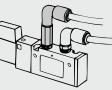
Variations

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.

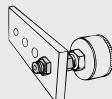


Bulkhead connector

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

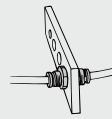


Bulkhead union

10-KQ2E P.1180



Use to connect tubing through a panel, etc.



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 both 90° angles.

Branch "Y"

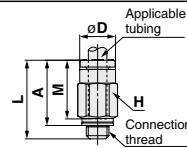
10-KQ2U P.1180



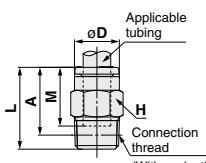
Use to branch a female thread.

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

Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	ϕD	L	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	M 5 x 0.8	10-KQ2H01-M5N	7	6.7	17.3	14.3	13.3	2.5	2.5	2.7
$\phi 3/16$	M 5 x 0.8	10-KQ2H05-M5N	10	8.3	17.6	14.6	13.3	4.0	2.5	4.6
$\phi 1/4$	M 5 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)**

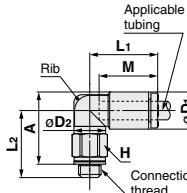
Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	ϕD	L	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/8	10-KQ2H01-01NS	10	6.7	14	10.9	13.3	2.9	2.5	6
	1/4	10-KQ2H01-02NS	14	6.7	16.7	12	13.3	2.9	2.5	15.3
$\phi 3/16$	1/8	10-KQ2H05-01NS	10	8.3	17.9	14.8	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
$\phi 1/4$	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
$\phi 5/16$	1/8	10-KQ2H09-01NS	14	13	22.5	19.4	14.2	18	6	11.9
	1/4	10-KQ2H09-02NS	14	13	22	17.3	14.2	18	6	13.9
$\phi 3/8$	1/8	10-KQ2H09-03NS	17	13	18.1	13	14.2	18	6	21
	1/4	10-KQ2H11-01NS	17	15.1	26.9	22.2	15.6	29.1	7	22.5
$\phi 1/2$	3/8	10-KQ2H11-03NS	17	15.1	23.2	18.1	15.6	29.1	7	22.9
	1/2	10-KQ2H11-04NS	22	15.1	22.3	15.9	15.6	29.1	7	45.9
$\phi 1/2$	1/4	10-KQ2H13-02NS	19	19	28.7	24	17	51.7	9	23.3
	3/8	10-KQ2H13-03NS	19	19	27.2	22.1	17	51.7	9.6	26.2
$\phi 1/2$	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)

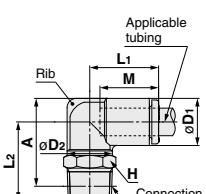
Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) ϕD_1	ϕD_2	L1	L2	A	M	Effective area (mm²) Urethane	Min. port size	Weight (g)	With a rib
$\phi 1/8$	M 5 x 0.8	10-KQ2L01-M5N	7	7.1	7	15.3	14.3	14.9	13.3	2.2	2.5	3.1	●
$\phi 1/4$	M 5 x 0.8	10-KQ2L07-M5N	7	11.1	7	15.4	16.1	18.7	13.3	3.5	2.5	3.6	●

Note 1) ϕD_1 is maximum diameter.

Note 2) Refer to page 1180-1 for details.

Male Elbow: 10-KQ2L (Sealant)

Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats)	Note 1) ϕD_1	ϕD_2	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)	With a rib
$\phi 3/16$	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	—
$\phi 1/4$	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	●
$\phi 5/16$	1/8	10-KQ2L07-03NS	17	11.1	10	15.6	24.5	25.0	13.3	10	4.5	26.5	—
	1/4	10-KQ2L09-01NS	10	13.2	10	16.4	18.7	22.2	14.2	11.4	4.5	6.1	●
$\phi 3/8$	1/8	10-KQ2L09-01NS	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	●
$\phi 1/2$	3/8	10-KQ2L09-03NS	17	13.2	12	17.2	25.5	27.0	14.2	14.9	6	24.7	●
	1/2	10-KQ2L11-04NS	22	15.4	17	19.3	33.4	34.7	15.6	23.8	7.5	21.5	●
$\phi 1/2$	1/4	10-KQ2L11-02NS	17	15.4	17	19.3	28.5	31.5	15.6	23.8	7.5	23.8	—
	3/8	10-KQ2L11-03NS	17	15.4	17	19.3	30.4	33.7	17	44.4	9.5	44.4	●
$\phi 1/2$	1/4	10-KQ2L13-02NS	17	19.3	17	21.5	30.4	35.3	17	44.4	9.5	23.2	—
	3/8	10-KQ2L13-03NS	17	19.3	17	21.8	28.5	33.0	17	44.4	9.5	44.6	—
$\phi 1/2$	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) ϕD_1 is maximum diameter.

Note 2) Refer to page 1180-1 for details.

Dimensions

Extended Male Elbow: 10-KQ2W (Sealant)

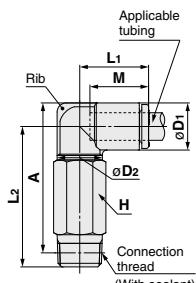


Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Note 1) øD ₁	øD ₂	L ₁	L ₂	A*	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)	With a rib
ø3/16	1/8	10-KQ2W05-01NS	10	9.1	10	15	30.4	31.8	13.3	5.6	3.5	11.2	—
	1/4	10-KQ2W05-02NS	14	9.1	10	15	33.8	33.7	13.3	5.6	3.5	27.7	●
	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	●
ø1/4	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	●
	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	17	13.2	12	17.2	39.2	40.7	14.2	14.9	6	40	●
ø5/16	1/8	10-KQ2W11-01NS	17	15.4	17	19.3	52.7	55.7	15.6	23.8	7	58.8	●
	1/4	10-KQ2W11-02NS	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	●
	1/4	10-KQ2W13-02NS	17	19.3	17	21.5	54.6	59.6	17	44.4	9	61	—
ø3/8	3/8	10-KQ2W11-03NS	17	19.3	17	21.8	48.2	52.8	17	44.4	9.5	48.4	—
	1/2	10-KQ2W13-03NS	17	19.3	17	21.8	48.2	52.8	17	44.4	9.5	48.4	—
	1/4	10-KQ2W13-04NS	22	19.3	17	21.8	50.2	53.5	17	44.4	9.5	92.3	—
	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) øD₁ is maximum diameter.

Note 2) Refer to page 1180-1 for details.



Male Branch Tee: 10-KQ2T (Sealant)

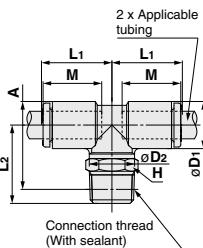


Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Note 1) øD ₁	øD ₂	L ₁	L ₂	A*	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)	
ø3/16	1/8	10-KQ2T05-01NS	10	9.1	10	15	16.7	18.1	13.3	7.0	3.5	5.8	—
	1/4	10-KQ2T05-02NS	14	9.1	10	15	22.2	22	13.3	7.0	3.5	15.3	—
	1/8	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	—
ø1/4	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	—
	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	—
ø5/16	1/8	10-KQ2T11-02NS	17	15.4	17	19.3	28.4	31.4	15.6	23.8	7.5	23.9	—
	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	—
	1/4	10-KQ2T13-02NS	17	19.3	17	21.5	30.3	35.3	17	50.6	9	27.9	—
ø3/8	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) øD₁ is maximum diameter.

Note 2) Refer to page 1180-1 for details.



Male Run Tee: 10-KQ2Y (Sealant)

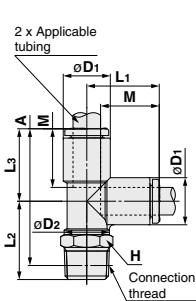


Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Note 1) øD ₁	øD ₂	L ₁	L ₂	L ₃	A*	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)
ø3/16	1/8	10-KQ2Y05-01NS	10	9.1	10	15.7	16.7	29.3	13.3	7.0	3.5	5.9	—
	1/4	10-KQ2Y05-02NS	14	9.1	10	15.7	22.2	15.7	33.2	13.3	7.0	3.5	15.4
	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
ø1/4	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
	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
ø5/16	1/8	10-KQ2Y11-02NS	17	15.4	17	20.4	28.4	20.4	44.1	15.6	23.8	7.5	24.1
	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
	1/4	10-KQ2Y13-02NS	17	19.3	17	23.4	30.3	23.4	49	17	50.6	9	28.3
ø3/8	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) øD₁ is maximum diameter.

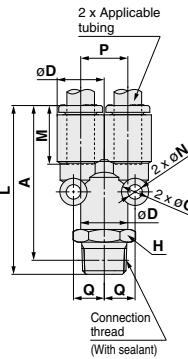
Note 2) Refer to page 1180-1 for details.



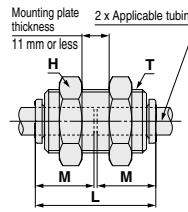
Dimensions**Branch "Y": 10-KQ2U (Sealant)**

Applicable tubing O.D. (inch)	Connection thread	Model	H (Width across flats) Note) øD	L	P	A*	M	Q	øO	øN	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø3/16	1/8	10-KQ2U05-01NS	12	9.1	37.1	9.1	34	13.3	6.2	6	3.2	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	7.0	3.5 19.5
	1/8	10-KQ2U07-01NS	12	11.1	37.8	11.1	34.7	13.3	7.6	8	4	12.4	4.6 11.3
ø1/4	1/4	10-KQ2U07-02NS	14	11.1	42.2	11.1	37.5	13.3	7.6	8	4	12.4	4.6 20.1
	3/8	10-KQ2U07-03NS	17	11.1	43.6	11.1	38.5	13.3	7.6	8	4	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	18.3	6 15.8
ø5/16	1/4	10-KQ2U09-02NS	14	13.2	45.1	13.2	40.4	14.2	8.7	8	4.2	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	18.3	6 32.7
	1/4	10-KQ2U11-02NS	17	15.4	48.6	15.4	44.9	15.6	9.9	8	4.2	23.8	7 24.5
ø3/8	3/8	10-KQ2U11-03NS	17	15.4	50	15.4	44.9	15.6	9.9	8	4.2	23.8	7 33.5
	1/2	10-KQ2U11-04NS	22	15.4	54.2	15.4	44.7	15.6	9.9	8	4.2	23.8	7 61.6
ø1/2	1/4	10-KQ2U13-02NS	21	19.3	53.4	19.3	48.7	17	11.8	8	4.2	50.6	9 40.4
	3/8	10-KQ2U13-03NS	21	19.3	54.8	19.3	49.7	17	11.8	8	4.2	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	50.6	9.6 61

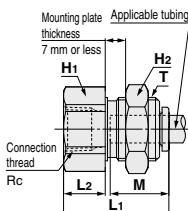
* Reference dimensions after installation of R thread
Note) øD is maximum diameter.

**Bulkhead Union: 10-KQ2E**

Applicable tubing O.D. (inch)	Model	T (M)	H (Width across flats)	L	Mounting hole	M	Effective area (mm²) 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	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Mounting hole	M	Effective area (mm²) 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: ø5/16"/R1/8</p> <p>Thread material/Surface treatment: Brass + Electroless nickel plating</p> <p>Example) 10-KQ2L09-01AQS</p>

Series 10-KQ2

Metric Size Uni One-touch Fittings

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



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

Guide

Chuck

Large retaining force

The chuck provides secure retention and the collet increases the holding force on the tube.

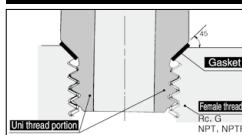
Seal

Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa.

The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Gasket

Uni Thread



Uni thread ridge shape

A gasket made of a stainless sheet covered with laminated NBR on both sides is seated on the chamfer of a female thread for a perfect sealing construction irrespective of the difference in thread diameters due to the difference in the types of female threads, variation in tolerance, or difference in the size of chamfer. (It is applicable to any female thread with an ordinary chamfer.)

Release Button (White)

Requires little force for removal.

Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

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 Note)	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

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

Metric Size Uni One-touch Fittings

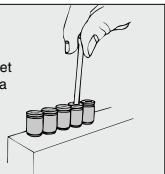
Variations

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.

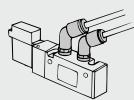


45° male elbow

10-KQ2K P.1184



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

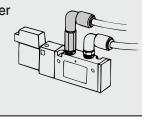


Extended male elbow

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.

Fittings & Tubing

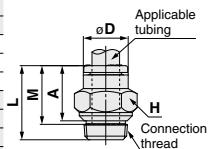
Flow Control Equipment

Pressure Switches/ Pressure Sensors

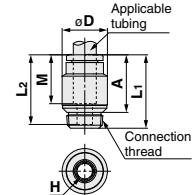
Dimensions**Male Connector: 10-KQ2H (Gasket seal)**

Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	ϕD	L	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 4$	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
$\phi 6$	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
$\phi 8$	3/8	10-KQ2H08-U03N	17	9.7	14.9	8.5	13.3	10.4	4.5	18.1
	1/8	10-KQ2H08-U01N	14	13	20.6	15.8	14.2	18	6	7
$\phi 10$	1/4	10-KQ2H10-U02N	14	13	18.5	12.1	14.2	18	6	10.1
	3/8	10-KQ2H10-U03N	17	13	14.9	8.5	14.2	18	6	15
$\phi 12$	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
$\phi 16$	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
$\phi 12$	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
$\phi 16$	1/2	10-KQ2H12-U04N	22	18.2	17.7	9.1	17	46.1	9	25.4
	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) ϕD	L ₁	L ₂	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 4$	1/8	10-KQ2S04-U01N	3	10	20.6	19.6	15.8	13.3	3.6	3.1	8
	1/8	10-KQ2S06-U01N	4	12	19.8	18.8	15	13.3	9.9	4.1	8.2
$\phi 6$	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
$\phi 8$	1/4	10-KQ2S08-U02N	6	14	20.5	19.5	14.1	14.2	16.2	6.1	10.9
	3/8	10-KQ2S08-U03N	6	17	20.7	19.7	14.3	14.2	16.2	6.1	19.8
$\phi 10$	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
$\phi 12$	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
$\phi 12$	1/4	10-KQ2S12-U02N	8	18.2	27.8	21.5	21.4	17	44.5	8.1	20.7
	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

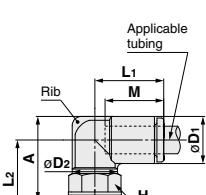
* Reference dimensions after installation of Uni thread
Note) ϕD is maximum diameter.**Male Elbow: 10-KQ2L (Gasket seal)**

Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	Note 1) ϕD_1	Note 1) ϕD_2	L ₁	L ₂	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)	With a rib
$\phi 4$	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	●
$\phi 6$	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	—
$\phi 8$	1/8	10-KQ2L08-U01N	17	10.4	10	15.5	21.4	20.2	13.3	9	4.5	21.4	—
	1/4	10-KQ2L08-U01NQ	12	13.2	12	17.2	22.7	25.0	14.2	14.9	6	8.6	●
$\phi 10$	1/4	10-KQ2L08-U02N	14	13.2	12	17.2	21.7	21.9	14.2	14.9	6	10.9	●
	3/8	10-KQ2L08-U03N	17	13.2	12	17.2	22.8	23.0	14.2	14.9	6	20.2	—
$\phi 12$	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	26.9	28.4	15.6	25	7.5	16.9	●
$\phi 12$	1/2	10-KQ2L10-U04N	22	15.9	17	19.3	34.5	33.8	15.6	25	7.5	48.2	●
	1/4	10-KQ2L12-U02N	17	18.5	17	21.5	25.6	28.4	17	39.7	9	18.7	●
$\phi 12$	3/8	10-KQ2L12-U03N	17	18.5	17	21.5	28.2	31.0	17	39.7	9	19.8	●
	1/2	10-KQ2L12-U04N	22	18.5	17	21.5	35.8	36.4	17	39.7	9	50	●
$\phi 16$	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) ϕD_1 is maximum diameters.

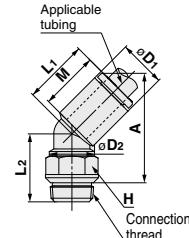
Note 2) Refer to page 1185-1 for details.



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

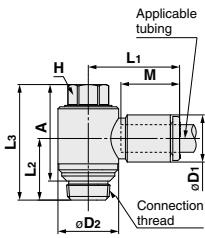
Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	Note 1) $\varnothing D_1$	$\varnothing D_2$	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\varnothing 4$	1/8	10-KQ2K04-U01N	10	8.2	10	14.4	12.9	20.8	13.3	3.4	4.5	4.7
	1/4	10-KQ2K04-U02N	14	8.2	10	14.4	14.7	21	13.3	3.4	4.5	11.3
$\varnothing 6$	1/8	10-KQ2K06-U01N	10	10.4	10	14.7	15	23.8	13.3	6.9	4.5	5.1
	3/8	10-KQ2K06-U03N	17	10.4	10	14.7	17.9	25.1	13.3	6.9	4.5	21.2
$\varnothing 8$	1/8	10-KQ2K08-U01N	10	13.2	10	16	18.7	27.7	14.2	19.7	6	10.7
	1/4	10-KQ2K08-U02N	14	13.2	12	16	18.8	28.8	14.2	19.7	6	20
$\varnothing 10$	3/8	10-KQ2K10-U03N	17	13.2	12	16	19.8	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
$\varnothing 12$	3/8	10-KQ2K10-U04N	22	15.9	17	17.6	29.2	38	15.6	23.2	7.5	47.7
	1/4	10-KQ2K12-U02N	17	18.5	17	19.4	24.6	37.7	17	35.1	9	18.5
$\varnothing 12$	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 1) $\varnothing D_1$ is maximum diameter.

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

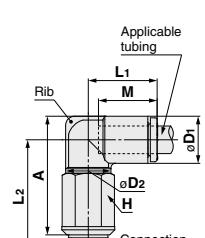
Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	Note 1) $\varnothing D_1$	$\varnothing D_2$	L1	L2	L3	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\varnothing 4$	1/8	10-KQ2V04-U01N	8	8.2	13.4	19.3	13.6	25.5	20.7	13.3	2.9	4.5	13.5
	1/4	10-KQ2V06-U01N	8	10.4	13.4	20.5	13.6	25.5	20.7	13.3	5.9	4.5	13.9
$\varnothing 6$	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
$\varnothing 8$	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
$\varnothing 10$	1/4	10-KQ2V10-U02N	14	15.9	20.6	25.9	19	34	27.6	15.6	20.3	7.5	36.9
	3/8	10-KQ2V10-U03N	14	15.9	20.6	25.9	19	34	27.6	15.6	20.3	7.5	44.4
$\varnothing 12$	3/8	10-KQ2V12-U03N	17	18.5	25.2	28.5	20.2	36.4	36	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 1) $\varnothing D_1$ 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) $\varnothing D_1$	$\varnothing D_2$	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)	With a rib
$\varnothing 4$	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	●
$\varnothing 6$	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	—
$\varnothing 8$	1/8	10-KQ2W08-U01N	10	13.2	10	16.4	32.6	34.4	14.2	10.9	4.5	12.3	●
	1/4	10-KQ2W08-U01NQ	12	13.2	12	17.2	43.6	45.4	14.2	14.2	6	24.7	●
$\varnothing 10$	1/4	10-KQ2W08-U02N	14	13.2	12	17.2	35.4	35.6	14.2	14.2	6	24.1	●
	3/8	10-KQ2W08-U03N	17	13.2	12	17.2	36.5	36.7	14.2	14.2	6	42.5	●
$\varnothing 12$	1/4	10-KQ2W10-U02N	17	15.9	17	19.3	48.5	50.1	15.6	23.8	7.5	54.2	●
	3/8	10-KQ2W10-U03N	17	15.9	17	19.3	45.8	47.4	15.6	23.8	7.5	47	●
$\varnothing 12$	1/2	10-KQ2W10-U04N	22	15.9	17	19.3	53.4	52.8	15.6	23.8	7.5	95.5	●
	1/4	10-KQ2W12-U02N	17	18.5	17	21.5	49.8	52.7	17	37.7	9	55.9	●
$\varnothing 12$	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) $\varnothing D_1$ is maximum diameter.
Note 2) Refer to page 1185-1 for details.



Directional Control Valves

Air Cylinders

Air Grippers

Air Preparation Equipment

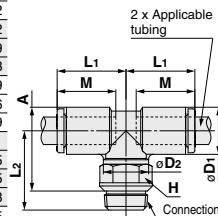
Fittings & Tubing

Flow Control Equipment

Pressure Switches/
Pressure Sensors

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

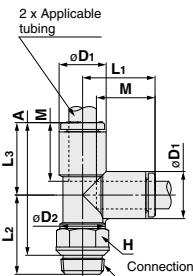
Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	(Note) øD1	øD2	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQ2T04-U01N	8.2	10	14.8	16.4	15.7	13.3	4.1	3	5.5	
	1/4	10-KQ2T04-U02N	14	8.2	10	14.8	19.2	16.9	13.3	4.1	3	12.2
ø6	1/8	10-KQ2T06-U01N	10	10.4	10	15.5	17.5	17.9	13.3	11	4.5	6.2
	3/8	10-KQ2T06-U03N	17	10.4	10	15.5	21.4	20.2	13.3	11	4.5	22.3
ø8	1/8	10-KQ2T08-U01N	10	13.2	10	16.4	18.9	20.7	14.2	13.9	4.5	7.9
	1/4	10-KQ2T08-U02N	14	13.2	12	17.2	22.8	23	14.2	18.2	6	12.6
ø10	3/8	10-KQ2T08-U03N	17	13.2	12	17.2	22.8	23	14.2	18.2	6	21.9
	1/8	10-KQ2T10-U01N	14	15.9	12	18.6	21.4	24.6	15.6	14.9	6	15.1
ø12	1/4	10-KQ2T10-U02N	17	15.9	17	19.3	24.2	25.8	15.6	25	7.5	19.5
	3/8	10-KQ2T10-U03N	17	15.9	17	19.3	26.8	28.4	15.6	25	7.5	20.5
ø14	1/2	10-KQ2T10-U04N	22	15.9	17	19.3	34.4	33.8	15.6	25	7.5	50.8
	1/4	10-KQ2T12-U02N	17	18.5	17	21.5	25.5	28.4	17	45.2	9	22.5
ø16	3/8	10-KQ2T12-U03N	17	18.5	17	21.5	28.1	31	17	45.2	9	23.6
	1/2	10-KQ2T12-U04N	22	18.5	17	21.5	35.7	36.4	17	45.2	9	53.9
ø18	3/8	10-KQ2T16-U03N	22	23.8	21	27.1	32.4	37.9	20.6	58.9	11	44.3
	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) øD1 is maximum diameter.

Male Run Tee: 10-KQ2Y (Gasket seal)

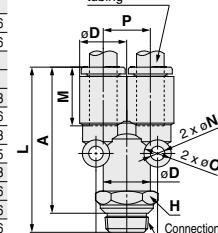
Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	(Note) øD1	øD2	L1	L2	L3	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQ2Y04-U01N	10	8.2	10	15.3	16.4	15.3	26.9	13.3	4	3	5.6
	1/4	10-KQ2Y04-U02N	14	8.2	10	15.3	19.2	15.3	28.1	13.3	4	3	12.2
ø6	1/8	10-KQ2Y06-U01N	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
ø8	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
ø10	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
ø12	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
ø14	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
ø16	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
ø18	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
ø20	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) øD1 is maximum diameter.

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

Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	(Note) øD1	L	P	A*	M	Q	øO	øN	Effective area (mm²) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQ2U04-U01N	11	8.2	35.4	8.2	30.6	13.3	5.7	6	3.2	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	4.2	3.6	14.6
ø6	1/8	10-KQ2U06-U01N	12	10.4	36.8	10.4	32	13.3	6.8	6	3.2	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	10.6	5.4	15
ø8	3/8	10-KQ2U06-U03N	17	10.4	39.3	10.4	32.9	13.3	6.8	6	3.2	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	17.7	6	17.6
ø10	1/4	10-KQ2U08-U02N	14	13.2	42.6	13.2	36.2	14.2	8.7	8	4.2	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	17.7	7.3	25.5
ø12	1/4	10-KQ2U10-U02N	17	15.9	47.6	15.9	41.2	15.6	10.1	8	4.2	28.4	9.4	31.6
	3/8	10-KQ2U10-U03N	19	15.9	47.5	15.9	41.1	15.6	10.1	8	4.2	28.4	9.4	31.6
ø14	1/2	10-KQ2U10-U04N	22	15.9	49.4	15.9	40.8	15.6	10.1	8	4.2	28.4	9.4	47.6
	1/4	10-KQ2U12-U02N	22	18.5	51.2	18.5	45.7	17	11.4	8	4.2	45.4	9	42.6
ø16	3/8	10-KQ2U12-U03N	22	18.5	52	18.5	45.6	17	11.4	8	4.2	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	45.4	11.6	48.8



* Reference dimensions after installation of Uni thread
Note) øD 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) 10-KQ2L09-U01AQ</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



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

Guide

Chuck

Large retaining force

The chuck provides secure retention and the collet increases the holding force on the tube.

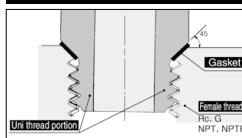
Seal

Can be used for a wide range of pressures from a low vacuum up to a pressure of 1 MPa.

The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Gasket

Uni Thread



Uni thread ridge shape

A gasket made of a stainless sheet covered with laminated NBR on both sides is seated on the chamfer of a female thread for a perfect sealing construction irrespective of the difference in thread diameters due to the difference in the types of female threads, variation in tolerance, or difference in the size of chamfer. (It is applicable to any female thread with an ordinary chamfer.)

Release Button (White)

Requires little force for removal.

Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

Body

O-ring

Stud

Effective when piping in a confined space.

The body and the threaded portion can rotate (for positioning to some extent).

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 Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Switches/
Pressure Sensors

Inch Size Uni One-touch Fittings

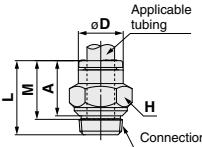
Variations

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)	ϕD	L	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	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
$\phi 5/32$	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
$\phi 3/16$	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
$\phi 1/4$	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
$\phi 3/8$	1/8	10-KQ2H07-U03N	17.46	10.9	14.9	8.5	13.3	10	4.6	18.4
	1/4	10-KQ2H09-U01N	14.29	13	20.6	15.8	14.2	18	6	10.5
$\phi 5/16$	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
$\phi 3/8$	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
$\phi 1/2$	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
$\phi 3/8$	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

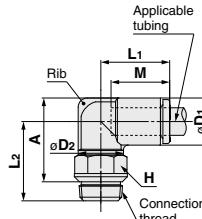
**Male Elbow: 10-KQ2L (Gasket seal)**

Applicable tubing O.D. (inch)	Connection thread Uni	Model	H (Width across flats)	Note 1) ϕD_1	ϕD_2	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)	With a rib
$\phi 1/8$	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	—
$\phi 5/32$	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	●
$\phi 3/16$	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	—
$\phi 1/4$	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	●
$\phi 3/8$	3/8	10-KQ2L07-U03N	17.46	11.1	10	15.6	22.3	21.5	13.3	10	4.5	23.1	●
	1/2	10-KQ2L09-U01N	11.11	13.2	10	16.4	19.9	21.7	14.2	11.4	4.5	7.4	●
$\phi 5/16$	1/2	10-KQ2L09-U01N	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	●
$\phi 3/8$	3/8	10-KQ2L09-U03N	17.46	13.2	12	17.2	23	23.5	14.2	14.9	6	21.7	●
	1/2	10-KQ2L11-U04N	22.23	15.4	17	19.3	24.7	25.7	15.6	23.8	7.5	18.7	●
$\phi 1/2$	1/4	10-KQ2L11-U02N	17.46	19.3	17	21.5	26.3	29.5	17	44.4	9	20.3	—
	3/8	10-KQ2L11-U03N	17.46	19.3	17	21.8	28.9	32	11.7	44.4	9.5	25.1	—
$\phi 1/2$	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) ϕD_1 is maximum diameter.

Note 2) Refer to page 1189-1 for details.

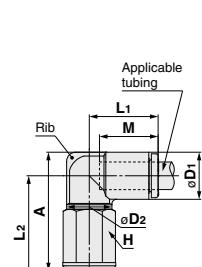
**Extended Male Elbow: 10-KQ2W (Gasket seal)**

Applicable tubing O.D. (inch)	Connection thread Uni	Model	H (Width across flats)	Note 1) ϕD_1	ϕD_2	L1	L2	A*	M	Effective area (mm²) Urethane	Min. port size	Weight (g)	With a rib
$\phi 1/8$	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	—
$\phi 5/32$	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	●
$\phi 3/16$	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	—
$\phi 1/4$	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	●
$\phi 3/8$	3/8	10-KQ2W07-U03N	17.46	11.1	10	15.6	33.9	33.1	13.3	10	4.5	45.3	●
	1/2	10-KQ2W09-U01N	11.11	13.2	10	16.4	33.6	35.4	14.2	11.3	4.5	15.9	●
$\phi 5/16$	1/2	10-KQ2W09-U01N	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	●
$\phi 3/8$	3/8	10-KQ2W09-U03N	17.46	13.2	12	17.2	37	37.2	14.2	14.2	6	45.5	●
	1/2	10-KQ2W11-U02N	17.46	15.4	17	19.3	44.1	45.4	15.6	23.8	7.5	50.6	●
$\phi 1/2$	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	21.5	46	49.3	17	44.4	9	52.9	—
$\phi 1/2$	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) ϕD_1 is maximum diameter.

Note 2) Refer to page 1189-1 for details.



Dimensions

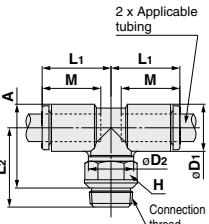
Male Branch Tee: 10-KQ2T (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread Uni	Model	H (Width across flats)	(Note) ϕD_1	ϕD_2	L1	L2	A*	M	Effective area (mm²) 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
$\phi 5/16$	3/8	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
$\phi 3/8$	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
	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) ϕD_1 is maximum diameter.



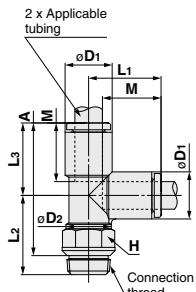
Male Run Tee: 10-KQ2Y (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread Uni	Model	H (Width across flats)	(Note) ϕD_1	ϕD_2	L1	L2	L3	A*	M	Effective area (mm²) 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
$\phi 3/16$	1/4	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	21.4	16.5	31.3	13.3	10	4.5	14.1
$\phi 3/8$	1/4	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	19.8	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) ϕD_1 is maximum diameter.



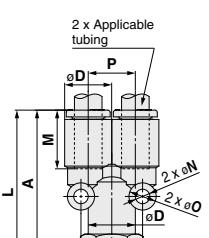
Branch "Y": 10-KQ2U (Gasket seal)



Applicable tubing O.D. (inch)	Connection thread Uni	Model	H (Width across flats)	(Note) ϕD	L	P	A*	M	Q	ϕO	ϕN	Effective area (mm²) Urethane	Min. port size	Weight (g)
$\phi 1/8$	1/8	10-KQ2U01-U01N	11.11	7.1	35.1	7.1	30.3	13.3	5.2	6	3.2	2.9	2.7	8.2
	1/4	10-KQ2U01-U02N	14.29	7.1	37.4	7.1	31	13.3	5.2	6	3.2	2.9	2.7	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	4.2	3.6	8.7
	1/4	10-KQ2U03-U02N	14.29	8.2	37.4	8.2	31	13.3	5.7	6	3.2	4.2	3.6	14.8
$\phi 3/16$	1/8	10-KQ2U05-U01N	11.11	9.1	35.8	9.1	31	13.3	6.2	6	3.2	5.6	4.1	9
	1/4	10-KQ2U05-U02N	14.29	9.1	36.1	9.1	31.7	13.3	6.2	6	3.2	5.6	4.1	15.3
$\phi 1/4$	1/8	10-KQ2U07-U01N	12.7	11.1	37.7	11.1	32.9	13.3	7.6	8	4	10	5.6	12
	1/4	10-KQ2U07-U02N	14.29	11.1	38.8	11.1	32.4	13.3	7.6	8	4	10	5.6	16.3
$\phi 3/8$	1/8	10-KQ2U07-U03N	17.46	11.1	39.7	11.1	33.3	13.3	7.6	8	4	10	5.6	25.1
	1/4	10-KQ2U09-U01N	14.29	13.2	41.6	13.2	36.8	14.2	8.7	8	4.2	17.7	6	17.9
$\phi 5/16$	1/4	10-KQ2U09-U02N	14.29	13.2	42.6	13.2	36.2	14.2	8.7	8	4.2	17.7	7.3	18.6
	3/8	10-KQ2U09-U03N	17.46	13.2	42.4	13.2	36	14.2	8.7	8	4.2	17.7	7.3	26.1
$\phi 3/8$	1/4	10-KQ2U11-U03N	19	15.4	47.1	15.4	40.8	15.6	9.9	8	4.2	23.8	8.9	24.8
	1/2	10-KQ2U11-U04N	22.23	15.4	49.3	15.4	40.7	15.6	9.9	8	4.2	23.8	8.9	31.5
$\phi 1/2$	1/4	10-KQ2U13-U02N	22.23	19.3	52.5	19.3	46.1	17	11.8	8	4.2	23.8	8.9	44.3
	3/8	10-KQ2U13-U03N	22.23	19.3	52.4	19.3	46	17	11.8	8	4.2	20.6	11	43
$\phi 1/2$	1/2	10-KQ2U13-U04N	22.23	19.3	54	19.3	45.4	17	11.8	8	4.2	20.6	12.1	50

* Reference dimensions after installation of Uni thread

Note) ϕD 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) 10-KQ2L08-U01AQ</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