

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.

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

Guide
Chuck

Body
Seal

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

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

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 1)}	PFA, Polyurethane
Tubing O.D.	ø2, ø3.2, ø4, ø6, ø8, ø10, ø12, ø16

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

Color

Series	Body	Release button
Series 10-KQ2	White	White

Specifications

Fluid		Air, Water ^{Note 1, 2)}
Operating pressure range ^{Note 3)}		-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) Deionized water is not recommended for use as it may affect the material used in the fittings. In addition, it is known to degrade the water quality.

Note 3) Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

Principal Parts Material

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

Metric Size One-touch Fittings

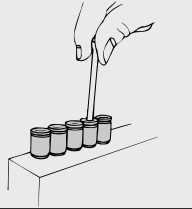
Variations

Hexagon socket head male connector

10-KQ2S P.1129



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

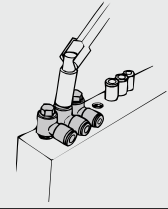


Universal male elbow

10-KQ2V P.1134



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

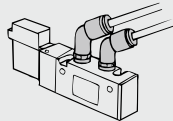


45° male elbow

10-KQ2K P.1133



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

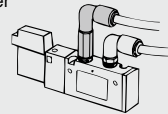


Extended male elbow

10-KQ2W P.1140



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

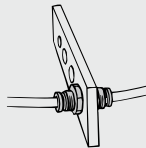


Bulkhead union

10-KQ2E P.1150



Use to connect tubing through a panel, etc.

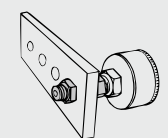


Bulkhead connector

10-KQ2E P.1150



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

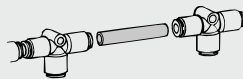


Nipple

10-KQN P.1152



Use to connect One-touch fittings.

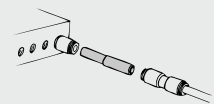


Reducer nipple

10-KQN P.1152



Use to connect One-touch fittings of different sizes.



Universal female elbow

10-KQ2VF P.1135



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

Branch universal female elbow

10-KQ2ZF P.1137



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

Male connector

10-KQ2H P.1127



Use to pipe a female thread. Most general model.

Cross

10-KQ2TW P.1143



Use to four-branch line.

Reducer elbow

10-KQ2L P.1131



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

Female connector

10-KQ2F P.1128



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

Male elbow

10-KQ2L P.1130



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

Different diameter cross

10-KQ2TX P.1143



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

Straight union

10-KQ2H P.1127



Use to connect tubing in the same direction.

Union elbow

10-KQ2L P.1131



Use to connect tubing at right angles.

Male branch tee

10-KQ2T P.1141



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

Different diameter straight

10-KQ2H P.1128



Use to connect tubing of different sizes.

Plug-in elbow

10-KQ2L P.1131



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

Union tee

10-KQ2T P.1142



Use to branch tubing at both 90° angles.

Different diameter tee
10-KQ2T P.1142



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

Different diameter tee
10-KQ2T P.1142



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

Different diameter cross
10-KQ2TY P.1143



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

Hexagon socket head universal male elbow
10-KQ2VS P.1134



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

Male branch connector
10-KQ2LU P.1132



Use to branch a female thread at right angles.

Female elbow
10-KQ2LF P.1139



Use to pipe a male thread at right angles.

Double universal male elbow
10-KQ2VD P.1136



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

Triple universal male elbow
10-KQ2VT P.1136



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

Branch universal male elbow
10-KQ2Z P.1137



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

Double branch universal male elbow
10-KQ2ZD P.1138



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

Male run tee

10-KQ2Y P.1144



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

Triple branch universal male elbow

10-KQ2ZT P.1138



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

Branch union elbow

10-KQ2LU P.1131



Use to branch tubing at right angles.

Extended plug-in elbow

10-KQ2W P.1139



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

Male delta union

10-KQ2D P.1145



Use to branch a female thread at two right angles.

Delta union

10-KQ2D P.1146



Use to branch tubing at three right angles.

Union "Y"

10-KQ2U P.1147



Use to branch tubing in the same direction.

Different diameter union "Y"

10-KQ2U P.1147



Use to connect tubing for branching with size reduced.

Plug-in "Y"

10-KQ2U P.1147



Use to branch One-touch fittings.

Branch "Y"

10-KQ2U P.1146



Use to branch a female thread.

Plug-in reducer

10-KQ2R P.1150



Use to change size of One-touch fittings.

Bulkhead male elbow

10-KQ2LE P.1151



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

Adapter

10-KQ2N P.1151



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

Tube cap

10-KQ2C P.1152



Use to plug unused tubing.

Color cap

10-KQ2C P.1152



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

Plug

10-KQP P.1151



Use to plug unused One-touch fittings.

Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

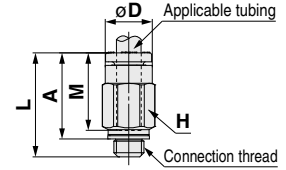
Pressure Switches/ Pressure Sensors

Dimensions

Male Connector: 10-KQ2H (Gasket seal)



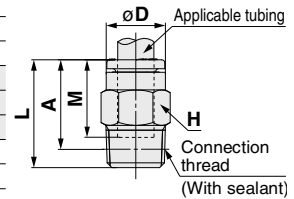
Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	øD	L	A	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)
	M5 x 0.8	10-KQ2H02-M5N	7	5.5	13.8	10.8	11.9	0.9	1.4	2
ø3.2	M3 x 0.5	10-KQ2H23-M3G	7	6.7	17	14.4	13.3	0.9	1.2	2.4
	M5 x 0.8	10-KQ2H23-M5N	7	6.7	17.3	14.3	13.3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



Male Connector: 10-KQ2H (Sealant)



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

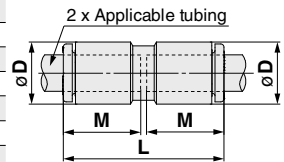


* Reference dimensions after installation of R thread

Straight Union: 10-KQ2H



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

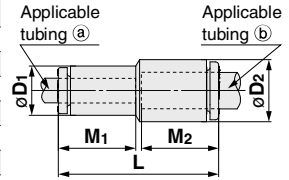


Dimensions

Different Diameter Straight: 10-KQ2H



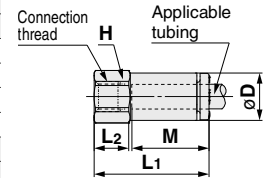
Applicable tubing O.D. (mm)		Model	øD1	øD2	L	M1	M2	Effective area (mm ²) Urethane	Min. port size	Weight (g)
(a)	(b)									
ø2	ø3.2	10-KQ2H02-23A	5.8	7.1	26.2	11.9	13.3	0.9	1.4	1.1
ø2	ø4	10-KQ2H02-04A	5.8	8.2	26.2	11.9	13.3	0.9	1.4	1.2
ø3.2	ø4	10-KQ2H23-04A	7.1	8.2	27.6	13.3	13.3	2.9	2.5	1.5
ø3.2	ø6	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



Female Connector: 10-KQ2F



Applicable tubing O.D. (mm)	Connection thread Rc	Model	H (Width across flats)	øD	L1	L2	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)
	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
	1/8	10-KQ2F04-01N	14	7.9	24.1	8.5	13.3	4	3	12
ø6	1/4	10-KQ2F04-02N	17	7.9	29	12.9	13.3	4	3	21.5
	M5 x 0.8	10-KQ2F06-M5N	10	9.9	17.6	5.7	13.3	10	4.1	5.5
	1/8	10-KQ2F06-01N	14	9.9	23.6	8.5	13.3	10.4	4.5	12.2
	1/4	10-KQ2F06-02N	17	9.9	28.5	12.9	13.3	10.4	4.5	21.6
ø8	3/8	10-KQ2F06-03N	19	9.9	29.9	13.4	13.3	10.4	4.5	22.7
	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
ø10	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
ø12	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
ø16	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



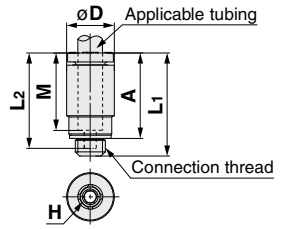
- Directional Control Valves
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Dimensions

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



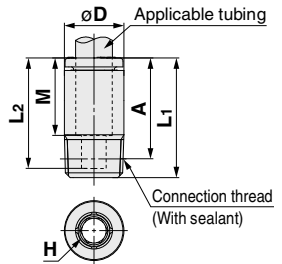
Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	øD	L1	L2	A	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)
ø2	M3 x 0.5	10-KQ2S02-M3G	1.5	6	15.7	14.7	13.1	11.9	0.9	1.5	1.7
ø3.2	M3 x 0.5	10-KQ2S23-M3G	1.5	7	17.1	16.1	14.5	13.3	1.4	1.5	2.2
	M5 x 0.8	10-KQ2S23-M5N	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	M6 x 1.0	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



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



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD	L1	L2	A*	M	Effective area (mm ²) 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
ø6	1/8	10-KQ2S06-01NS	4	10	20	18.8	17.2	13.3	9.9	4.1	6.5
	1/4	10-KQ2S06-02NS	4	13.8	19.8	18.8	15.1	13.3	10	4.1	13.4
ø8	1/8	10-KQ2S08-01NS	5	13	22.9	19.7	19.8	14.2	16.2	5.1	10.2
	1/4	10-KQ2S08-02NS	6	14	23.2	19.5	18.5	14.2	16.2	6.1	14.3
	3/8	10-KQ2S08-03NS	6	17	20.7	19.7	15.6	14.2	16.2	6.1	21.1
ø10	1/8	10-KQ2S10-01NS	5	15.6	24.3	21.1	21.2	15.6	16.2	5.1	12
	1/4	10-KQ2S10-02NS	8	15.6	24.6	20.1	19.9	15.6	26.6	8.1	12.4
	3/8	10-KQ2S10-03NS	8	17	25.1	20.1	20	15.6	26.6	8.1	23.2
	1/2	10-KQ2S10-04NS	8	22	21.1	20.1	14.7	15.6	26.6	8.1	37.4
ø12	1/4	10-KQ2S12-02NS	8	18.2	29	21.5	24.3	17	44.5	8.1	21
	3/8	10-KQ2S12-03NS	10	18.2	26.4	21.8	21.3	17	44.5	10.1	21.2
	1/2	10-KQ2S12-04NS	10	22	22.8	21.8	16.4	17	44.5	10.1	30.5
ø16	^{Now} 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



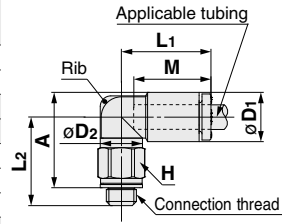
* Reference dimensions after installation of R thread

Dimensions

Male Elbow: 10-KQ2L (Gasket seal)



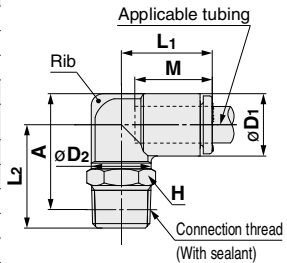
Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	øD1	øD2	L1	L2	A	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)	With a rib
ø2	M3 x 0.5	10-KQ2L02-M3G	5.5	5.8	5.5	12.6	12.5	12.8	11.9	0.8	1.2	1.6	●
	M5 x 0.8	10-KQ2L02-M5N	7	5.8	5.5	12.6	13	12.9	11.9	0.8	1.4	2.7	●
ø3.2	M3 x 0.5	10-KQ2L23-M3G	7	7.1	7	15.3	13.8	14.8	13.3	0.8	1.2	2.7	●
	M5 x 0.8	10-KQ2L23-M5N	7	7.1	7	15.3	14.3	14.9	13.3	2.2	2.5	3.1	●
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	●
	M6 x 1.0	10-KQ2L04-M6N	8	8.2	7	15.4	15.8	15.9	13.3	3.5	2.5	4.2	●
ø6	M5 x 0.8	10-KQ2L06-M5N	7	10.4	7	14.5	16.5	18.7	13.3	3.5	2.5	3.2	●
	M6 x 1.0	10-KQ2L06-M6N	8	10.4	7	14.5	17.5	18.7	13.3	3.5	2.5	4.3	●



Male Elbow: 10-KQ2L (Sealant)



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	øD1	øD2	L1	L2	A*	M	Effective area (mm ²) 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	—
	3/8	10-KQ2L06-03NS	17	10.4	10	15.5	24.1	24.2	13.3	9	4.5	26.5	—
ø8	1/8	10-KQ2L08-01NS	10	13.2	10	16.4	18.7	22.2	14.2	11.4	4.5	6.1	●
		Note) 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	●
ø10	3/8	10-KQ2L08-03NS	17	13.2	12	17.2	25.5	27.0	14.2	14.9	6	24.7	●
	1/8	10-KQ2L10-01NS	12	15.9	12	18.6	23.6	28.4	15.6	14.9	6	11.1	●
	1/4	10-KQ2L10-02NS	17	15.9	17	19.3	28.7	31.9	15.6	25	7.5	21.7	●
	3/8	10-KQ2L10-03NS	17	15.9	17	19.3	29.6	32.4	15.6	25	7.5	22.2	●
ø12	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	●
	New 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) Refer to page 1153 for details.

Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

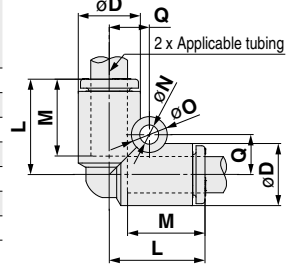
Pressure Switches/ Pressure Sensors

Dimensions

Union Elbow: 10-KQ2L



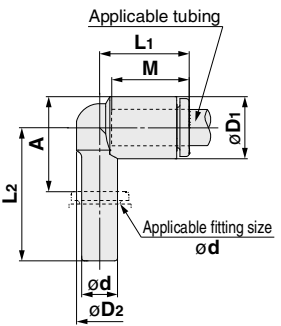
Applicable tubing O.D. (mm)	Model	øD	L	Q	M	Mounting hole			Effective area (mm ²) Urethane	Min. port size	Weight (g)
						øO	øN	Thickness			
ø3.2	10-KQ2L23-00A	7.1	14.9	5.4	13.3	6	3.2	7.1	2.5	2.5	1.6
ø4	10-KQ2L04-00A	8.2	15.3	5.7	13.3	6	3.2	8.2	4.2	3	1.9
ø6	10-KQ2L06-00A	10.4	16.3	6.8	13.3	6	3.2	10.4	9	4.5	2.7
ø8	10-KQ2L08-00A	13.2	18.2	8.4	14.2	8	4.2	13.2	14.9	6	4.7
ø10	10-KQ2L10-00A	15.9	20.6	9.6	15.6	8	4.2	15.9	25	7.5	7.1
ø12	10-KQ2L12-00A	18.5	23	10.7	17	8	4.2	18.5	39.7	9	10.3
ø16	10-KQ2L16-00A	23.8	28.6	13.4	20.6	8	4.2	23.8	58.9	13	19.7



Plug-in Elbow: 10-KQ2L



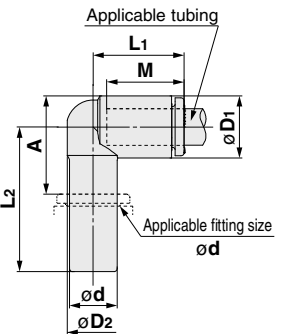
Applicable tubing O.D. (mm)	Applicable fitting size ød	Model	øD1	øD2	L1	L2	A	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)
ø3.2	ø3.2	10-KQ2L23-99A	7.1	6.4	14.4	20.9	11.1	13.3	2.5	2.2	0.9
ø4	ø4	10-KQ2L04-99A	8.2	7.2	14.5	21.1	11.9	13.3	4.2	2.5	1.2
ø6	ø6	10-KQ2L06-99A	10.4	8	15.3	22.3	14.2	13.3	9	4	1.8
ø8	ø8	10-KQ2L08-99A	13.2	10	17.2	26.2	18.6	14.2	14.9	6	3
ø10	ø10	10-KQ2L10-99A	15.9	12	19.3	28.2	20.5	15.6	25	7.5	4.7
ø12	ø12	10-KQ2L12-99A	18.5	14	21.5	31	23.2	17	39.7	9	7
ø16	ø16	10-KQ2L16-99A	23.8	20	27.1	36.8	28.1	20.6	58.9	13	13.7



Reducer Elbow: 10-KQ2L



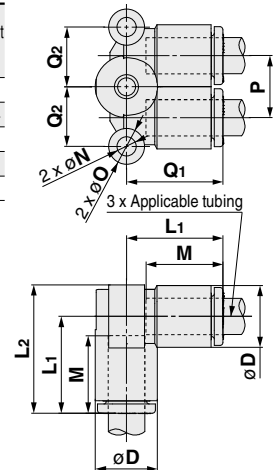
Applicable tubing O.D. (mm)	Applicable fitting size ød	Model	øD1	øD2	L1	L2	A	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)
ø3.2	ø4	10-KQ2L23-04A	7.1	6.4	14.5	23.9	14.1	13.3	2.5	2.5	1.1
	ø6	10-KQ2L23-06A	7.1	6.4	14.5	24.1	14.3	13.3	2.5	2.5	1.3
ø4	ø6	10-KQ2L04-06A	8.2	7.2	14.8	24.6	15.4	13.3	4.2	3	1.5
	ø8	10-KQ2L04-08A	8.2	7.2	14.8	29.5	19.4	13.3	4.2	3	1.8
ø6	ø8	10-KQ2L06-08A	10.4	9	15.5	24.2	15.2	13.3	9	4.5	2.1
	ø10	10-KQ2L06-10A	10.4	9	15.5	31.6	21.2	13.3	9	4.5	2.7
ø8	ø10	10-KQ2L08-10A	13.2	10	18.8	27.1	18.1	14.2	14.9	6	3.5
	ø12	10-KQ2L08-12A	13.2	10	18.8	34	23.6	14.2	14.9	6	4.9
ø10	ø12	10-KQ2L10-12A	15.9	12	19.3	35.6	26.5	15.6	25	7.5	5.6
ø12	ø16	10-KQ2L12-16A	18.5	14	21.5	42.6	31.2	17	39.7	9	8.7



Branch Union Elbow: 10-KQ2LU



Applicable tubing O.D. (mm)	Model	øD	L1	L2	Q1	Q2	M	P	Mounting hole			Effective area (mm ²) Urethane	Min. port size	Weight (g)
									øO	øN	Thickness			
ø4	10-KQ2LU04-00A	8.2	15.8	19.9	15.8	7.9	13.3	8.2	6	3.2	8.2	4.1	3	3.1
ø6	10-KQ2LU06-00A	10.4	16.5	21.7	16.5	10	13.3	10.4	6	3.2	10.4	11	4.5	4.4
ø8	10-KQ2LU08-00A	13.2	18.2	24.8	18.2	13.1	14.2	13.2	8	4.2	13.2	18.2	6	8
ø10	10-KQ2LU10-00A	15.9	20.3	28.3	20.3	15.9	15.6	15.9	8	4.2	15.9	29	7.5	12.2
ø12	10-KQ2LU12-00A	18.5	22.5	31.7	22.5	17.9	17	18.5	8	4.2	18.5	45.2	9	18.1

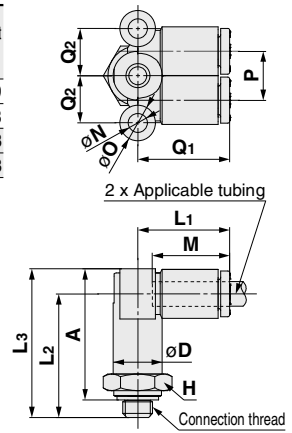


Dimensions

Male Branch Connector: 10-KQ2LU (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	øD	L1	L2	L3	A	M	P	Mounting hole			Q1	Q2	Effective area (mm ²) Urethane	Min. port size	Weight (g)
											øO	øN	Thickness					
ø4	M5 x 0.8	10-KQ2LU04-M5N	10	8.2	15.8	20.7	24.8	21.8	13.3	8.2	6	3.2	8.2	15.8	7.9	4.1	1.8	6.9
	M6 x 1.0	10-KQ2LU04-M6N	10	8.2	15.8	21.7	25.8	21.8	13.3	8.2	6	3.2	8.2	15.8	7.9	4.1	3	6.8
ø6	M5 x 0.8	10-KQ2LU06-M5N	12	10.4	16.5	21.4	26.6	23.6	13.3	10.4	6	3.2	10.4	16.5	10	4.3	1.8	10.3
	M6 x 1.0	10-KQ2LU06-M6N	12	10.4	16.5	22.4	27.6	23.6	13.3	10.4	6	3.2	10.4	16.5	10	4.3	3	10.3



Directional Control Valves

Air Cylinders

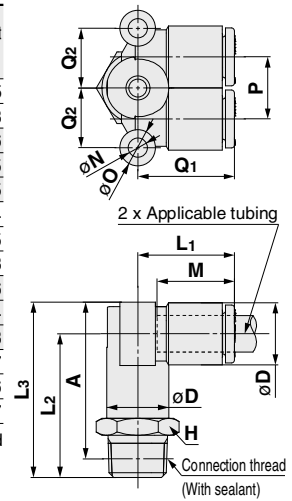
Rotary Actuators

Male Branch Connector: 10-KQ2LU (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD	L1	L2	L3	A*	M	P	Mounting hole			Q1	Q2	Effective area (mm ²) Urethane	Min. port size	Weight (g)
											øO	øN	Thickness					
ø4	1/8	10-KQ2LU04-01NS	10	8.2	15.8	23.3	27.4	24.3	13.3	8.2	6	3.2	8.2	15.8	7.9	4.1	3	9.5
	1/4	10-KQ2LU04-02NS	14	8.2	15.8	27.7	31.8	27.1	13.3	8.2	6	3.2	8.2	15.8	7.9	4.1	3	19.3
ø6	1/8	10-KQ2LU06-01NS	12	10.4	16.5	24	29.2	26.1	13.3	10.4	6	3.2	10.4	16.5	10	11	4.5	10.6
	1/4	10-KQ2LU06-02NS	14	10.4	16.5	28.4	33.6	28.9	13.3	10.4	6	3.2	10.4	16.5	10	11	4.5	19.5
ø8	3/8	10-KQ2LU06-03NS	17	10.4	16.5	29.8	35	29.9	13.3	10.4	6	3.2	10.4	16.5	10	11	4.5	31.5
	1/8	10-KQ2LU08-01NS	14	13.2	18.2	25.7	32.3	29.2	14.2	13.2	8	4.2	13.2	18.2	13.1	18.2	6	16.4
ø10	1/4	10-KQ2LU08-02NS	14	13.2	18.2	30.1	36.7	32	14.2	13.2	8	4.2	13.2	18.2	13.1	18.2	6	21.5
	3/8	10-KQ2LU08-03NS	17	13.2	18.2	31.5	38.1	33	14.2	13.2	8	4.2	13.2	18.2	13.1	18.2	6	33.3
ø12	1/4	10-KQ2LU10-02NS	17	15.9	20.3	32.2	40.2	35.5	15.6	15.9	8	4.2	15.9	20.3	15.9	29	7.5	26.6
	3/8	10-KQ2LU10-03NS	17	15.9	20.3	33.6	41.6	36.5	15.6	15.9	8	4.2	15.9	20.3	15.9	29	7.5	34.4
ø12	1/4	10-KQ2LU10-04NS	22	15.9	20.3	37.8	45.8	39.4	15.6	15.9	8	4.2	15.9	20.3	15.9	29	7.5	62.3
	3/8	10-KQ2LU12-02NS	19	18.5	22.5	34.4	43.6	38.9	17	18.5	8	4.2	18.5	22.5	17.9	45.2	9	37.7
ø12	3/8	10-KQ2LU12-03NS	19	18.5	22.5	35.8	45	39.9	17	18.5	8	4.2	18.5	22.5	17.9	45.2	9	40.6
	1/2	10-KQ2LU12-04NS	22	18.5	22.5	40	49.2	42.8	17	18.5	8	4.2	18.5	22.5	17.9	45.2	9	62.7

* Reference dimensions after installation of R thread



Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

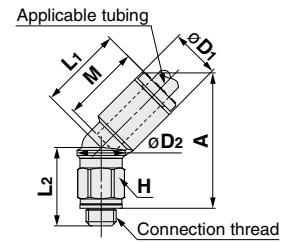
Pressure Switches/ Pressure Sensors

Dimensions

45° Male Elbow: 10-KQ2K (Gasket seal)



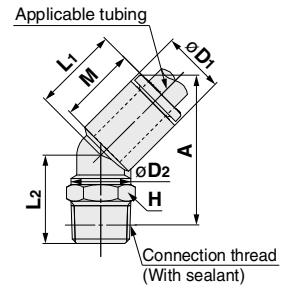
Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	øD1	øD2	L1	L2	A	M	Effective area (mm ²)	Min. port size	Weight (g)
										Urethane		
ø4	M5 x 0.8	10-KQ2K04-M5N	7	8.2	7	14.4	13.1	22.8	13.3	3.4	2.5	3
	M6 x 1.0	10-KQ2K04-M6N	8	8.2	7	14.4	14.1	22.8	13.3	3.4	2.5	4.1
ø6	M5 x 0.8	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



45° Male Elbow: 10-KQ2K (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD1	øD2	L1	L2	A*	M	Effective area (mm ²)	Min. port size	Weight (g)
										Urethane		
ø4	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
ø6	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
ø8	3/8	10-KQ2K06-03NS	17	10.4	10	14.7	20.6	29.1	13.3	6.9	4.5	26.2
		10-KQ2K08-01NS	10	13.2	10	16	15.7	28	14.2	8.7	4.5	6
	1/8	10-KQ2K08-01NQS	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
ø10	3/8	10-KQ2K08-03NS	17	13.2	12	16	22.5	32.8	14.2	19.7	6	24.5
		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
		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	
	10-KQ2K12-02NS	17	18.5	17	19.4	29	43.8	17	35.1	9	23.3	
ø12	3/8	10-KQ2K12-03NS	17	18.5	17	19.4	24.2	38.6	17	35.1	9	23.2
		10-KQ2K12-04NS	22	18.5	17	19.4	28.2	41.3	17	35.1	9	45.7
ø16	^{New} 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
		10-KQ2K16-04NS	22	23.8	21	23.8	30.1	47.6	20.6	58	13	42.9



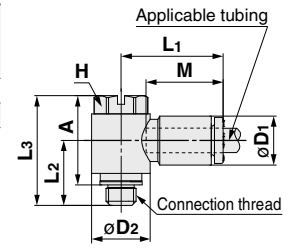
* Reference dimensions after installation of R thread
 Note) Refer to page 1153 for details.

Dimensions

Universal Male Elbow: 10-KQ2V (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A	M	Effective area (mm ²) 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



Directional Control Valves

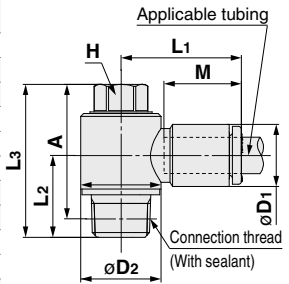
Air Cylinders

Universal Male Elbow: 10-KQ2V (Sealant)



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A*	M	Effective area (mm ²) 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
	1/4	10-KQ2V06-02NS	10	10.4	15.3	19.9	17.9	30.5	25.8	13.3	5.9	4.5	24.9
ø6	1/8	10-KQ2V08-01NS	12	13.2	17.6	23.5	15.1	27.6	24.5	14.2	11.2	6	22.6
	1/4	10-KQ2V08-02NS	12	13.2	17.6	23.5	18.5	31	26.3	14.2	11.2	6	29.1
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
	1/2	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
	1/2	10-KQ2V12-03NS	17	18.5	25.2	28.5	21.4	37.6	32.5	17	30.8	9	59.6
ø12	1/2	10-KQ2V12-04NS	17	18.5	25.2	28.5	24.6	40.8	34.4	17	30.8	9	78.2
	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



Rotary Actuators

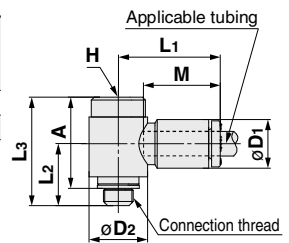
Air Grippers

Air Preparation Equipment

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



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A	M	Effective area (mm ²) 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



Modular F. R.

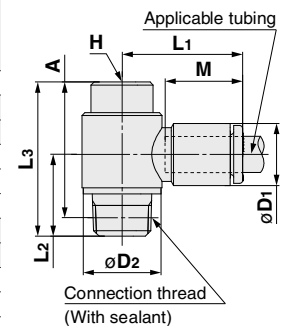
Pressure Control Equipment

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



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A*	M	Effective area (mm ²) 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
	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
ø6	1/8	10-KQ2VS08-01NS	8	13.2	17.6	23.5	15.1	26	22.9	14.2	11.2	6	19.2
	1/4	10-KQ2VS08-02NS	8	13.2	17.6	23.5	18.5	29.5	24.8	14.2	11.2	6	25.7
ø8	3/8	10-KQ2VS08-03NS	8	13.2	20.6	23.1	19.5	31.4	26.3	14.2	11.2	6	37
	1/2	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
	1/2	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



Fittings & Tubing

Flow Control Equipment

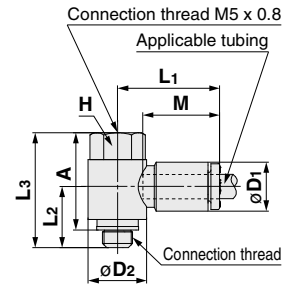
Pressure Switches/ Pressure Sensors

Dimensions

Universal Female Elbow: 10-KQ2VF (Gasket seal)



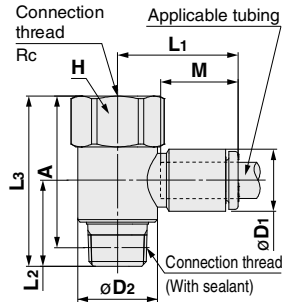
Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)
ø4	M5 x 0.8	10-KQ2VF04-M5N	8	8.2	9.8	17.5	10.2	19.2	16.2	13.3	2.9	2.5	5.5
ø6	M5 x 0.8	10-KQ2VF06-M5N	8	10.4	9.8	18.3	10.2	19.2	16.2	13.3	3.8	2.5	5.8



Universal Female Elbow: 10-KQ2VF (Sealant)



Applicable tubing O.D. (mm)	Connection thread R, Rc	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A*	M	Effective area (mm ²) 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
ø6	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
	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
ø8	1/8	10-KQ2VF08-01NS	17	13.2	17.6	23.5	15.5	30	26.9	14.2	11.2	6	27.5
	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
ø10	3/8	10-KQ2VF08-03NS	22	13.2	25.2	24.9	24	44	38.9	14.2	11.2	6	64.5
	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
ø12	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
	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



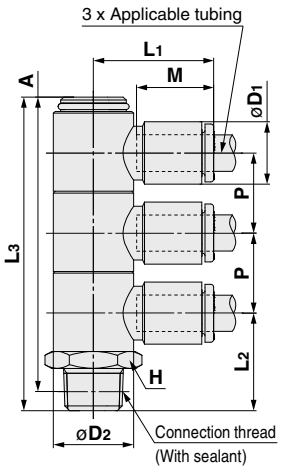
* Reference dimensions after installation of R thread

Dimensions

Triple Universal Male Elbow: 10-KQ2VT (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A*	M	P	Effective area (mm ²) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQ2VT04-01NS	14	8.2	13.4	19.3	16.3	52.5	49.4	13.3	13.4	2.9	3	25.3
	1/4	10-KQ2VT04-02NS	14	8.2	13.4	19.3	20.7	56.9	52.2	13.3	13.4	2.9	3	32.9
	3/8	10-KQ2VT04-03NS	17	8.2	13.4	19.3	22.1	58.3	53.2	13.3	13.4	2.9	3	44.8
ø6	1/8	10-KQ2VT06-01NS	14	10.4	13.4	20.5	16.3	52.5	49.4	13.3	13.4	5.9	4.5	26.2
	1/4	10-KQ2VT06-02NS	14	10.4	13.4	20.5	20.7	56.9	52.2	13.3	13.4	5.9	4.5	33.9
	3/8	10-KQ2VT06-03NS	17	10.4	13.4	20.5	22.1	58.3	53.2	13.3	13.4	5.9	4.5	45.8
ø8	1/8	10-KQ2VT08-01NS	19	13.2	17.6	23.7	19	61.8	58.7	14.2	15.9	11.2	6	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
ø10	1/2	10-KQ2VT08-04NS	22	13.2	17.6	23.7	27.2	70	63.6	14.2	15.9	11.2	6	91.5
	1/4	10-KQ2VT10-02NS	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	75.9	70.8	15.6	19.2	20.3	7.5	81.9
ø12	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

Directional Control Valves

Air Cylinders

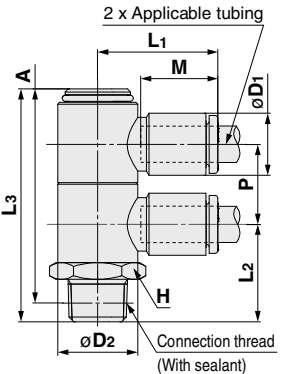
Rotary Actuators

Air Grippers

Double Universal Male Elbow: 10-KQ2VD (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A*	M	P	Effective area (mm ²) Urethane	Min. port size	Weight (g)
ø4	1/8	10-KQ2VD04-01NS	14	8.2	13.4	19.3	16.3	39	35.9	13.3	13.4	2.9	3	19.7
	1/4	10-KQ2VD04-02NS	14	8.2	13.4	19.3	20.7	43.4	38.7	13.3	13.4	2.9	3	27.4
	3/8	10-KQ2VD04-03NS	17	8.2	13.4	19.3	22.1	44.8	39.7	13.3	13.4	2.9	3	39.3
ø6	1/8	10-KQ2VD06-01NS	14	10.4	13.4	20.5	16.3	39	35.9	13.3	13.4	5.9	4.5	20.3
	1/4	10-KQ2VD06-02NS	14	10.4	13.4	20.5	20.7	43.4	38.7	13.3	13.4	5.9	4.5	28
	3/8	10-KQ2VD06-03NS	17	10.4	13.4	20.5	22.1	44.8	39.7	13.3	13.4	5.9	4.5	39.9
ø8	1/8	10-KQ2VD08-01NS	19	13.2	17.6	23.7	19	45.8	42.7	14.2	15.9	11.2	6	45.1
	1/4	10-KQ2VD08-02NS	19	13.2	17.6	23.7	22.4	49.2	44.5	14.2	15.9	11.2	6	44.3
	3/8	10-KQ2VD08-03NS	19	13.2	17.6	23.7	23	49.8	44.7	14.2	15.9	11.2	6	52.3
ø10	1/2	10-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
ø12	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

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

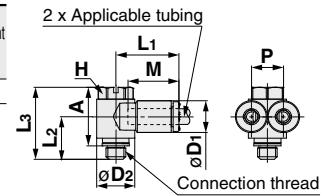
Pressure Switches/ Pressure Sensors

Dimensions

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



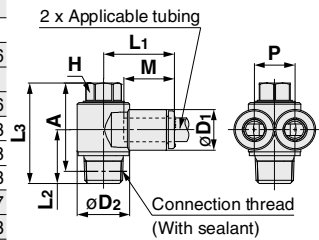
Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A	M	P	Effective area (mm ²) Urethane	Min. port size	Weight (g)



Branch Universal Male Elbow: 10-KQ2Z (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A*	M	P	Effective area (mm ²) Urethane	Min. port size	Weight (g)
ø6	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
	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
ø8	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
	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
ø10	1/4	10-KQ2Z08-02NS	12	13.2	17.6	21.2	18.5	31	26.3	14.2	13.2	14.2	6	30.8
	3/8	10-KQ2Z08-03NS	14	13.2	20.6	22.3	19.5	35.3	30.2	14.2	13.2	14.2	6	46.3
ø12	1/4	10-KQ2Z10-02NS	14	15.9	21.6	23.6	19.9	34.9	30.2	15.6	15.9	22.6	7.5	41.7
	3/8	10-KQ2Z10-03NS	14	15.9	21.6	23.6	20.3	35.3	30.2	15.6	15.9	22.6	7.5	49.3
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

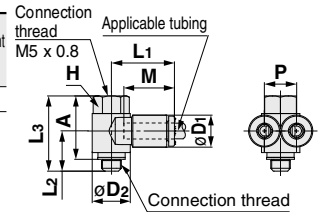


* Reference dimensions after installation of R thread

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



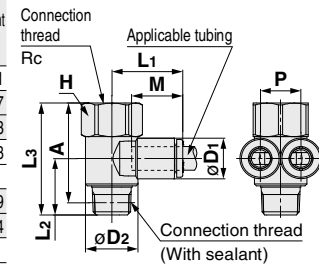
Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A	M	P	Effective area (mm ²) Urethane	Min. port size	Weight (g)



Branch Universal Female Elbow: 10-KQ2ZF (Sealant)



Applicable tubing O.D. (mm)	Connection thread R, Rc	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A*	M	P	Effective area (mm ²) Urethane	Min. port size	Weight (g)
ø6	1/8	10-KQ2ZF06-01NS	14	10.4	13.4	18.4	14.4	28.5	25.4	13.3	10.4	8.6	4.5	18.7
	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
ø8	1/8	10-KQ2ZF08-01NS	17	13.2	17.6	21.2	15.5	30	26.9	14.2	13.2	14.2	6	29.3
	1/4	10-KQ2ZF08-02NS	19	13.2	20.6	22.3	21.2	40.3	35.6	14.2	13.2	14.2	6	47
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	49.9
	3/8	10-KQ2ZF10-03NS	22	15.9	25.2	25.5	23.2	44	38.9	15.6	15.9	22.6	7.5	68.4
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

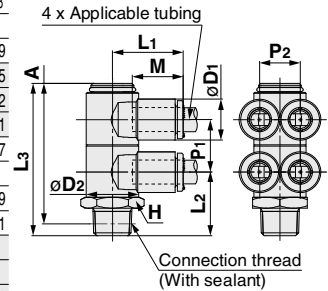
Dimensions

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



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A*	M	P1	P2	Effective area (mm ²)		Min. port size	Weight (g)
													Urethane			
ø4	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	
ø6	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	
ø8	1/8	10-KQ2ZD08-01NS	19	13.2	17.6	21.2	19	45.8	42.7	14.2	15.9	13.2	14.2	6	48.7	
	1/4	10-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	
ø10	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	
ø12	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



Directional Control Valves

Air Cylinders

Rotary Actuators

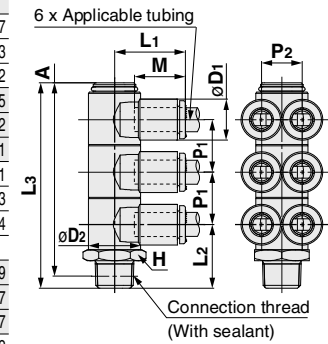
Air Grippers

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



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A*	M	P1	P2	Effective area (mm ²)		Min. port size	Weight (g)
													Urethane			
ø4	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	53.2	13.3	13.4	8.2	4.7	3	47.2	
ø6	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	37.2	
	3/8	10-KQ2ZT06-03NS	17	10.4	13.4	18.4	22.1	58.3	53.2	13.3	13.4	10.4	8.6	4.5	49.1	
ø8	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	
ø10	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	
ø12	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



Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

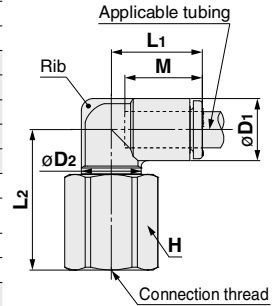
Pressure Switches/ Pressure Sensors

Dimensions

Female Elbow: 10-KQ2LF



Applicable tubing O.D. (mm)	Connection thread M, Rc	Model	H (Width across flats)	øD1	øD2	L1	L2	M	Effective area (mm ²) 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-KQ2LF06-03N	19	10.4	10	15.5	28.5	13.3	9	4.5	34	—
	1/8	10-KQ2LF08-01N	14	13.2	10	16.4	24.9	14.2	11.4	4.5	18.8	●
		^{Note)} 10-KQ2LF08-01NQ	14	13.2	12	17.2	23	14.2	14.9	6	14.6	●
	1/4	10-KQ2LF08-02N	17	13.2	12	17.2	28.8	14.2	14.9	6	28.7	●
ø10	3/8	10-KQ2LF08-03N	19	13.2	12	17.2	29.3	14.2	14.9	6	32.3	●
	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	●
ø12	1/2	10-KQ2LF10-04N	24	15.9	17	19.3	36.5	15.6	25	7.5	57.6	●
	1/4	10-KQ2LF12-02N	17	18.5	17	21.5	28.7	17	39.7	9	28.2	●
	3/8	10-KQ2LF12-03N	19	18.5	17	21.5	34.8	17	39.7	9	32.9	●
1/2	10-KQ2LF12-04N	24	18.5	17	21.5	37.8	17	39.7	9	59.5	●	

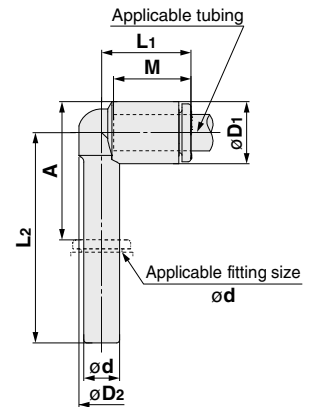


Note) Refer to page 1153 for details.

Extended Plug-in Elbow: 10-KQ2W



Applicable tubing O.D. (mm)	Applicable fitting size ød	Model	øD1	øD2	L1	L2	A	M	Effective area (mm ²) 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

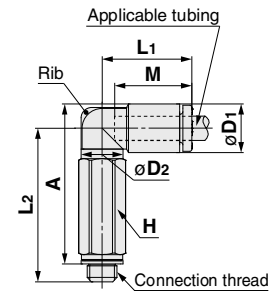


Dimensions

Extended Male Elbow: 10-KQ2W (Gasket seal)



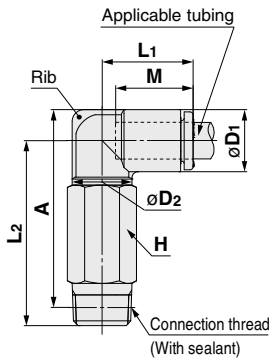
Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	øD1	øD2	L1	L2	A	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)	With a rib
ø2	M3 x 0.5	10-KQ2W02-M3G	5.5	5.8	5.5	12.6	18.8	19.1	11.9	0.8	1.2	2.6	●
	M5 x 0.8	10-KQ2W02-M5N	7	5.8	5.5	12.6	19.3	19.2	11.9	0.8	1.2	4.6	●
ø3.2	M3 x 0.5	10-KQ2W23-M3G	7	7.1	7	15.3	22.5	23.4	13.3	0.8	1.2	4.8	●
	M5 x 0.8	10-KQ2W23-M5N	7	7.1	7	15.3	25.2	25.7	13.3	2.4	2.5	5.8	●
ø4	M3 x 0.5	10-KQ2W04-M3G	7	8.2	7	15.4	23	24.5	13.3	0.8	1.2	4.9	●
	M5 x 0.8	10-KQ2W04-M5N	7	8.2	7	15.4	25.7	26.8	13.3	3	2.5	5.8	●
ø6	M5 x 0.8	10-KQ2W06-M5N	7	10.4	7	14.5	27.4	29.6	13.3	3	2.5	5.9	●



Extended Male Elbow: 10-KQ2W (Sealant)



Applicable tubing O.D. (mm)	Connection thread	Model	H (Width across flats)	øD1	øD2	L1	L2	A*	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)	With a rib
ø3.2	1/8	10-KQ2W23-01NS	10	7.1	10	14.5	30.3	30.8	13.3	2.4	2.5	10.8	—
	1/4	10-KQ2W23-02NS	14	7.1	10	14.5	32.8	31.7	13.3	2.4	2.5	27.3	—
ø4	1/8	10-KQ2W04-01NS	10	8.2	10	14.8	29.9	30.9	13.3	4	3	11	●
	1/4	10-KQ2W04-02NS	14	8.2	10	14.8	33.3	32.7	13.3	4	3	27.5	●
ø6	1/8	10-KQ2W06-01NS	10	10.4	10	15.5	31	33.1	13.3	8.6	4.5	11.4	—
	1/4	10-KQ2W06-02NS	14	10.4	10	15.5	34.4	34.9	13.3	8.6	4.5	28	—
	3/8	10-KQ2W06-03NS	17	10.4	10	15.5	35.7	35.8	13.3	8.6	4.5	47.4	—
ø8	1/8	10-KQ2W08-01NS	10	13.2	10	16.4	32.4	35.9	14.2	10.9	4.5	12.2	●
		^{Note)} 10-KQ2W08-01NQS	12	13.2	12	17.2	42.4	45.9	14.2	14.2	6	23.7	●
	1/4	10-KQ2W08-02NS	14	13.2	12	17.2	39.1	41	14.2	14.2	6	40	●
ø10	3/8	10-KQ2W08-03NS	17	13.2	12	17.2	39.2	40.7	14.2	14.2	6	47	●
	1/4	10-KQ2W10-02NS	17	15.9	17	19.3	52.9	56.2	15.6	23.8	7.5	59	●
	3/8	10-KQ2W10-03NS	17	15.9	17	19.3	48.5	51.4	15.6	23.8	7.5	51.3	●
ø12	1/2	10-KQ2W10-04NS	22	15.9	17	19.3	52.5	54.1	15.6	23.8	7.5	92	●
	1/4	10-KQ2W12-02NS	17	18.5	17	21.5	54.2	58.8	17	37.7	9	60.7	●
	3/8	10-KQ2W12-03NS	17	18.5	17	21.5	49.8	54	17	37.7	9	53.2	●
ø16	1/2	10-KQ2W12-04NS	22	18.5	17	21.5	53.8	56.7	17	37.7	9	93.9	●
	^{New} 1/4	10-KQ2W16-02NS	17	23.8	17	25.1	56.9	64.1	20.6	47.7	9	67.4	●
	3/8	10-KQ2W16-03NS	22	23.8	21	27.1	59.7	66.5	20.6	58.9	11	105.5	—
	1/2	10-KQ2W16-04NS	22	23.8	21	27.1	58.4	63.9	20.6	58.9	13	101.7	—



* Reference dimensions after installation of R thread
 Note) Refer to page 1153 for details.

Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

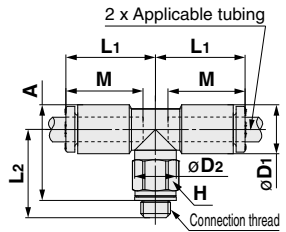
Pressure Switches/ Pressure Sensors

Dimensions

Male Branch Tee: 10-KQ2T (Gasket seal)



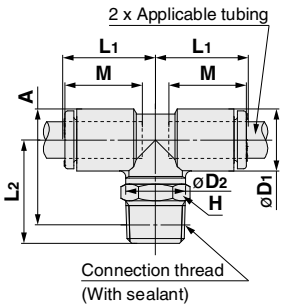
Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	øD1	øD2	L1	L2	A	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)
	M5 x 0.8	10-KQ2T02-M5N	7	5.8	5.5	12.6	13	12.9	11.9	0.9	1.4	3
ø3.2	M3 x 0.5	10-KQ2T23-M3G	7	7.1	7	15.3	13.8	14.7	13.3	0.9	1.2	3.1
	M5 x 0.8	10-KQ2T23-M5N	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
	M6 x 1.0	10-KQ2T04-M6N	8	8.2	7	15.4	15.8	15.9	13.3	4.5	2.5	4.9
ø6	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



Male Branch Tee: 10-KQ2T (Sealant)



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



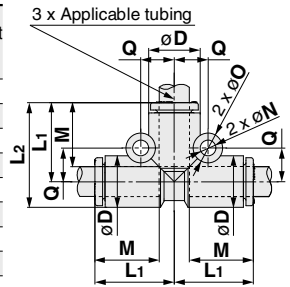
* Reference dimensions after installation of R thread
 Note) Refer to page 1153 for details.

Dimensions

Union Tee: 10-KQ2T



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



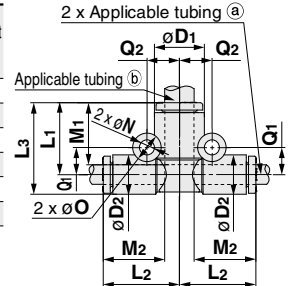
Directional Control Valves

Air Cylinders

Different Diameter Tee: 10-KQ2T



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



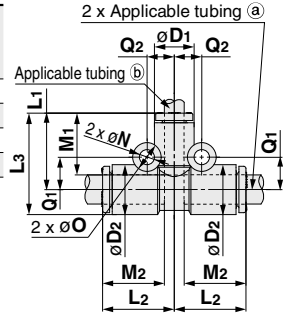
Rotary Actuators

Air Grippers

Different Diameter Tee: 10-KQ2T



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



Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

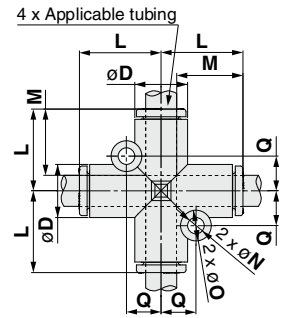
Pressure Switches/
Pressure Sensors

Dimensions

Cross: 10-KQ2TW



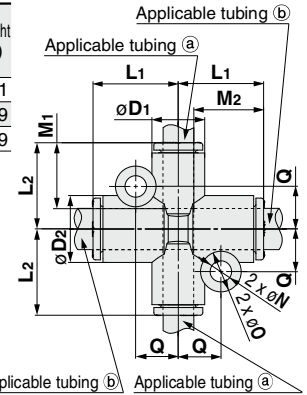
Applicable tubing O.D. (mm)	Model	øD	L	Q	M	Mounting hole			Effective area (mm ²) Urethane	Min. port size	Weight (g)
						øO	øN	Thickness			
ø4	10-KQ2TW04-00A	8.2	15.3	5.7	13.3	6	3.2	8.2	4.4	3	3.5
ø6	10-KQ2TW06-00A	10.4	16.3	6.8	13.3	6	3.2	10.4	10.6	4.5	4.9
ø8	10-KQ2TW08-00A	13.2	18.2	8.4	14.2	8	4.2	13.2	17.7	6	8.5
ø10	10-KQ2TW10-00A	15.9	20.6	9.6	15.6	8	4.2	15.9	28.4	7.5	12.7
ø12	10-KQ2TW12-00A	18.5	23	10.7	17	8	4.2	18.5	45.4	9	18.4



Different Diameter Cross: 10-KQ2TX



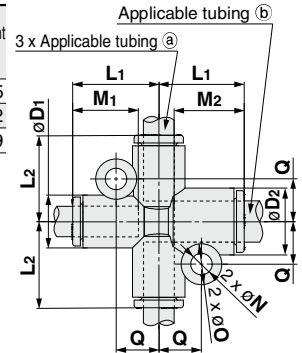
Applicable tubing O.D. (mm)		Model	øD1	øD2	L1	L2	Q	M1	M2	Mounting hole			Effective area (mm ²) Urethane	Min. port size	Weight (g)
a	b									øO	øN	Thickness			
ø6	ø8	10-KQ2TX06-08A	10.4	13.2	17.2	17.3	8.4	13.3	14.2	8	4.2	13.2	10.6	4.5	7.1
ø8	ø10	10-KQ2TX08-10A	13.2	15.9	19.6	19.2	9.6	14.2	15.6	8	4.2	15.9	17.7	6	10.9
ø10	ø12	10-KQ2TX10-12A	15.9	18.5	22	21.6	10.7	15.6	17	8	4.2	18.5	28.4	7.5	15.9



Different Diameter Cross: 10-KQ2TY



Applicable tubing O.D. (mm)		Model	øD1	øD2	L1	L2	Q	M1	M2	Mounting hole			Effective area (mm ²) Urethane	Min. port size	Weight (g)
a	b									øO	øN	Thickness			
ø6	ø8	10-KQ2TY06-08A	10.4	13.2	17.3	17.2	8.4	13.3	14.2	8	4.2	13.2	10.6	4.5	6.5
ø8	ø10	10-KQ2TY08-10A	13.2	15.9	19.2	19.6	9.6	14.2	15.6	8	4.2	15.9	17.7	6	10.2
ø10	ø12	10-KQ2TY10-12A	15.9	18.5	21.6	22	10.7	15.6	17	8	4.2	18.5	28.4	7.5	14.9



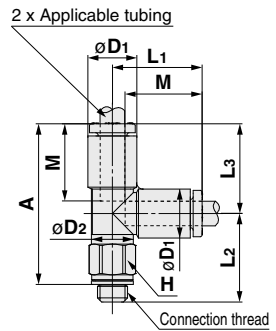
Dimensions

Male Run Tee: 10-KQ2Y (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A	M	Effective area (mm ²) 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	0.9	2.7	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
	M6 x 1.0	10-KQ2Y04-M6N	8	8.2	7	15.4	15.8	15.4	27.2	13.3	4.5	2.5	4.9
$\phi 6$	M5 x 0.8	10-KQ2Y06-M5N	7	10.4	7	16.3	16.5	16.3	29.8	13.3	4.5	2.5	4.6
	M6 x 1.0	10-KQ2Y06-M6N	8	10.4	7	16.3	17.5	16.3	29.8	13.3	4.5	2.5	5.7

Note) $\phi D1$ is maximum diameter.



Male Run Tee: 10-KQ2Y (Sealant)

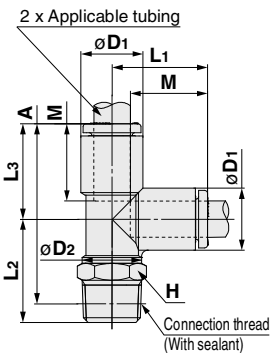


Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	Note 1) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)
$\phi 3.2$	1/8	10-KQ2Y23-01NS	10	7.1	10	14.9	16.6	14.9	28.5	13.3	2.9	2.5	5.3
	1/4	10-KQ2Y23-02NS	14	7.1	10	14.9	21.1	14.9	31.4	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
	3/8	10-KQ2Y06-03NS	17	10.4	10	16.3	24.1	16.3	35.3	13.3	10.6	4.5	27.5
$\phi 8$	1/8	10-KQ2Y08-01NS	10	13.2	10	18.2	18.7	18.2	33.8	14.2	13.4	4.5	8
		Note 2) 10-KQ2Y08-01NQS	12	13.2	12	18.2	23.5	18.2	38.7	14.2	17.7	6	11.1
	1/4	10-KQ2Y08-02NS	14	13.2	12	18.2	25.4	18.2	38.9	14.2	17.7	6	19.5
$\phi 10$	3/8	10-KQ2Y08-03NS	17	13.2	12	18.2	25.5	18.2	38.6	14.2	17.7	6	26.5
	1/8	10-KQ2Y10-01NS	12	15.9	12	20.6	23.5	20.6	41.1	15.6	28.4	6	14
	1/4	10-KQ2Y10-02NS	17	15.9	17	20.6	28.6	20.6	44.6	15.6	28.4	7.5	24.5
$\phi 12$	3/8	10-KQ2Y10-03NS	17	15.9	17	20.6	29.5	20.6	45.1	15.6	28.4	7.5	25
	1/2	10-KQ2Y10-04NS	22	15.9	17	20.6	33.5	20.6	47.8	15.6	28.4	7.5	47.4
	1/4	10-KQ2Y12-02NS	17	18.5	17	23	29.9	23	48.3	17	45.4	9	27.6
$\phi 16$	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
	New 1/4	10-KQ2Y16-02NS	17	23.8	17	28.6	32.6	28.6	56.5	20.6	57.4	9	36
$\phi 16$	3/8	10-KQ2Y16-03NS	22	23.8	21	28.6	35.4	28.6	58.9	20.6	60	11	48.3
	1/2	10-KQ2Y16-04NS	22	23.8	21	28.6	34.1	28.6	56.3	20.6	60	13	52

* Reference dimensions after installation of R thread

Note 1) $\phi D1$ is maximum diameter.

Note 2) Refer to page 1153 for details.



Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

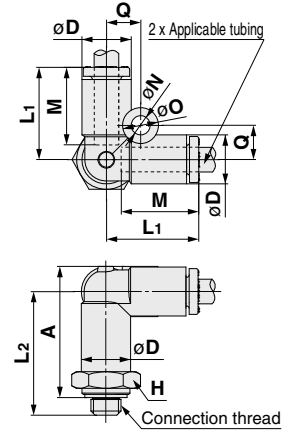
Pressure Switches/ Pressure Sensors

Dimensions

Male Delta Union: 10-KQ2D (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	øD	L1	L2	A	M	Q	Mounting hole			Effective area (mm ²) Urethane	Min. port size	Weight (g)
										øO	øN	Thickness			
ø4	M5 x 0.8	10-KQ2D04-M5N	10	8.2	15.8	20.7	21.8	13.3	5.7	6	3.2	8.2	2.2	1.8	6.6
	M6 x 1.0	10-KQ2D04-M6N	10	8.2	15.8	21.7	21.8	13.3	5.7	6	3.2	8.2	4.3	3	6.4
ø6	M5 x 0.8	10-KQ2D06-M5N	12	10.4	16.8	21.7	23.9	13.3	6.7	6	3.2	10.4	4.3	1.8	9.8
	M6 x 1.0	10-KQ2D06-M6N	12	10.4	16.8	22.7	23.9	13.3	6.7	6	3.2	10.4	4.3	3	9.7

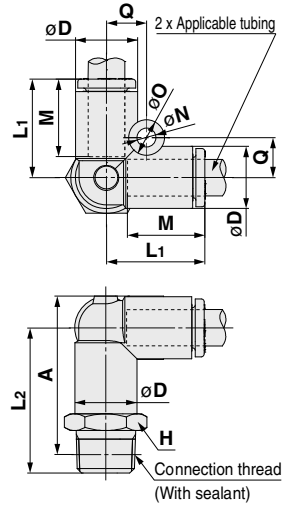


Male Delta Union: 10-KQ2D (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD	L1	L2	A*	M	Q	Mounting hole			Effective area (mm ²) Urethane	Min. port size	Weight (g)
										øO	øN	Thickness			
ø4	1/8	10-KQ2D04-01NS	10	8.2	15.8	23.3	24.3	13.3	5.7	6	3.2	8.2	6	3.6	9.2
	1/4	10-KQ2D04-02NS	14	8.2	15.8	27.7	27.1	13.3	5.7	6	3.2	8.2	6	3.6	19
ø6	1/8	10-KQ2D06-01NS	12	10.4	16.8	24.3	26.4	13.3	6.7	6	3.2	10.4	11	5.4	10.2
	1/4	10-KQ2D06-02NS	14	10.4	16.8	28.7	29.2	13.3	6.7	6	3.2	10.4	11	5.4	19.1
ø8	3/8	10-KQ2D06-03NS	17	10.4	16.8	30.1	30.2	13.3	6.7	6	3.2	10.4	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	13.2	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	13.2	18.2	7.3	20.4
	3/8	10-KQ2D08-03NS	17	13.2	18.8	32.1	33.6	14.2	8.4	8	4.2	13.2	18.2	7.3	32.1
ø12	1/4	10-KQ2D10-02NS	17	15.9	21.2	33.1	36.3	15.6	9.6	8	4.2	15.9	29	9	24.9
	3/8	10-KQ2D10-03NS	17	15.9	21.2	34.5	37.3	15.6	9.6	8	4.2	15.9	29	9.4	32.7
ø12	1/2	10-KQ2D10-04NS	22	15.9	21.2	38.7	40.2	15.6	9.6	8	4.2	15.9	29	9.4	60.6
	1/4	10-KQ2D12-02NS	19	18.5	23.6	35.5	40	17	10.7	8	4.2	18.5	45.2	9	35
ø12	3/8	10-KQ2D12-03NS	19	18.5	23.6	36.9	41	17	10.7	8	4.2	18.5	45.2	11	38
	1/2	10-KQ2D12-04NS	22	18.5	23.6	41.1	43.9	17	10.7	8	4.2	18.5	45.2	11.6	60

* Reference dimensions after installation of R thread

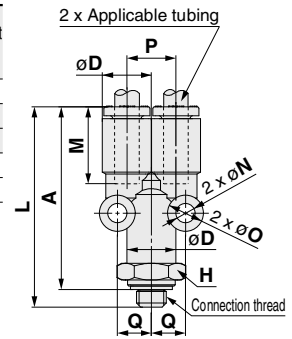


Dimensions

Branch “Y”: 10-KQ2U (Gasket seal)



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



Directional Control Valves

Air Cylinders

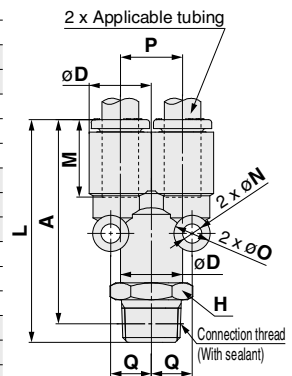
Rotary Actuators

Branch “Y”: 10-KQ2U (Sealant)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD	L	A*	M	P	Q	Mounting hole			Effective area (mm ²) Urethane	Min. port size	Weight (g)
										øO	øN	Thickness			
ø3.2	1/8	10-KQ2U23-01NS	10	7.1	36.4	33.3	13.3	7.1	5.2	6	3.2	7.1	2.9	2.7	8.6
	1/4	10-KQ2U23-02NS	14	7.1	40.8	36.1	13.3	7.1	5.2	6	3.2	7.1	2.9	2.7	19
ø4	1/8	10-KQ2U04-01NS	10	8.2	36.5	33.4	13.3	8.2	5.7	6	3.2	8.2	4.2	3.6	9.3
	1/4	10-KQ2U04-02NS	14	8.2	40.9	36.2	13.3	8.2	5.7	6	3.2	8.2	4.2	3.6	19.1
ø6	1/8	10-KQ2U06-01NS	12	10.4	37.6	34.5	13.3	10.4	6.8	6	3.2	10.4	10.6	5.4	10.3
	1/4	10-KQ2U06-02NS	14	10.4	42	37.3	13.3	10.4	6.8	6	3.2	10.4	10.6	5.4	19.2
ø8	3/8	10-KQ2U06-03NS	17	10.4	43.4	38.3	13.3	10.4	6.8	6	3.2	10.4	10.6	5.4	31.2
	1/8	10-KQ2U08-01NS	14	13.2	40.7	37.6	14.2	13.2	8.7	8	4.2	13.2	17.7	6	15.8
ø8	1/4	10-KQ2U08-02NS	14	13.2	45.1	40.4	14.2	13.2	8.7	8	4.2	13.2	17.7	7.3	20.9
	3/8	10-KQ2U08-03NS	17	13.2	46.5	41.4	14.2	13.2	8.7	8	4.2	13.2	17.7	7.3	32.7
ø10	1/4	10-KQ2U10-02NS	17	15.9	49	44.3	15.6	15.9	10.1	8	4.2	15.9	28.4	9	25.6
	3/8	10-KQ2U10-03NS	17	15.9	50.4	45.3	15.6	15.9	10.1	8	4.2	15.9	28.4	9.4	33.4
ø10	1/2	10-KQ2U10-04NS	22	15.9	54.6	48.2	15.6	15.9	10.1	8	4.2	15.9	28.4	9.4	61.3
	1/4	10-KQ2U12-02NS	19	18.5	53	48.3	17	18.5	11.4	8	4.2	18.5	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	18.5	45.4	11	38.9
	1/2	10-KQ2U12-04NS	22	18.5	58.6	52.2	17	18.5	11.4	8	4.2	18.5	45.4	11.6	61
ø16	New 1/4	10-KQ2U16-02NS	24	23.8	62.4	57.7	20.6	23.8	14	8	4.2	23.8	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	23.8	60	11	71.5
ø16	1/2	10-KQ2U16-04NS	24	23.8	68	61.6	20.6	23.8	14	8	4.2	23.8	60	13	82.6

* Reference dimensions after installation of R thread



Air Grippers

Air Preparation Equipment

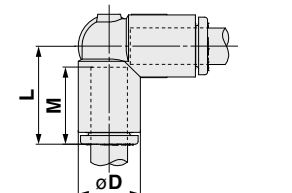
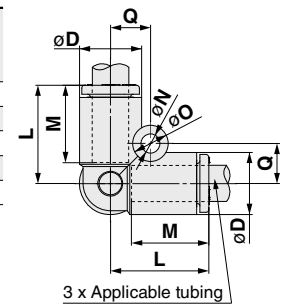
Modular F. R.

Pressure Control Equipment

Delta Union: 10-KQ2D



Applicable tubing O.D. (mm)	Model	øD	L	M	Q	Mounting hole			Effective area (mm ²) Urethane	Min. port size	Weight (g)
						øO	øN	Thickness			
ø4	10-KQ2D04-00A	8.2	15.8	13.3	5.7	6	3.2	8.2	4.1	3	2.7
ø6	10-KQ2D06-00A	10.4	16.8	13.3	6.7	6	3.2	10.4	11	4.5	3.8
ø8	10-KQ2D08-00A	13.2	18.8	14.2	8.4	8	4.2	13.2	18.2	6	6.8
ø10	10-KQ2D10-00A	15.9	21.2	15.6	9.6	8	4.2	15.9	29	7.5	10.3
ø12	10-KQ2D12-00A	18.5	23.6	17	10.7	8	4.2	18.5	45.2	9	15.2



Fittings & Tubing

Flow Control Equipment

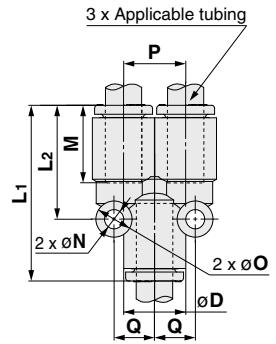
Pressure Switches/ Pressure Sensors

Dimensions

Union "Y": 10-KQ2U



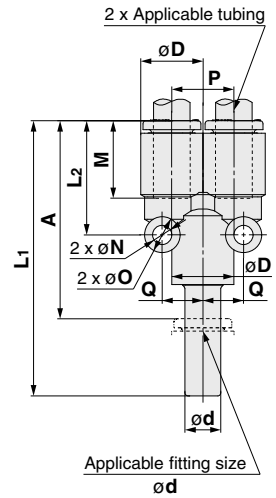
Applicable tubing O.D. (mm)	Model	øD	L1	L2	P	M	Q	Mounting hole			Effective area (mm ²) Urethane	Min. port size	Weight (g)
								øO	øN	Thickness			
ø2	10-KQ2U02-00A	5.8	25.8	16.1	5.8	11.9	4.5	6	3.2	5.8	0.9	1.2	1.6
ø3.2	10-KQ2U23-00A	7.1	28.9	18	7.1	13.3	5.2	6	3.2	7.1	2.9	2.5	2.4
ø4	10-KQ2U04-00A	8.2	29	18.2	8.2	13.3	5.7	6	3.2	8.2	4.2	3	2.9
ø6	10-KQ2U06-00A	10.4	30.1	19.4	10.4	13.3	6.8	6	3.2	10.4	10.6	4.5	4.1
ø8	10-KQ2U08-00A	13.2	33.2	22.3	13.2	14.2	8.7	8	4.2	13.2	17.7	6	7.4
ø10	10-KQ2U10-00A	15.9	37.1	25	15.9	15.6	10.1	8	4.2	15.9	28.4	7.5	11.2
ø12	10-KQ2U12-00A	18.5	41.1	27.8	18.5	17	11.4	8	4.2	18.5	45.4	9	16.4
ø16	10-KQ2U16-00A	23.8	51.5	35	23.8	20.6	14	8	4.2	23.8	60	13	30.6



Plug-in "Y": 10-KQ2U



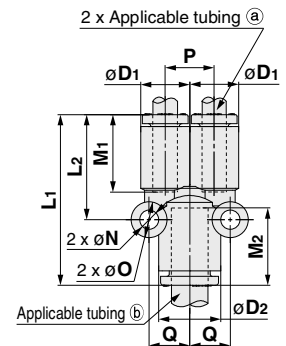
Applicable tubing O.D. (mm)	Applicable fitting size ød	Model	øD	L1	L2	P	A	M	Q	Mounting hole			Effective area (mm ²) Urethane	Min. port size	Weight (g)
										øO	øN	Thickness			
ø3.2	ø3.2	10-KQ2U23-99A	7.1	45.1	18	7.1	31.8	13.3	5.2	6	3.2	7.1	2.9	2	2.5
ø4	ø4	10-KQ2U04-99A	8.2	44.8	18.2	8.2	31.5	13.3	5.7	6	3.2	8.2	4.2	2.5	3.1
ø6	ø6	10-KQ2U06-99A	10.4	46.3	19.4	10.4	33	13.3	6.8	6	3.2	10.4	10.6	4	4.5
ø8	ø8	10-KQ2U08-99A	13.2	52.1	22.3	13.2	37.9	14.2	8.7	8	4.2	13.2	17.7	6	8
ø10	ø10	10-KQ2U10-99A	15.9	57.3	25	15.9	41.7	15.6	10.1	8	4.2	15.9	28.4	7.5	12.3
ø12	ø12	10-KQ2U12-99A	18.5	63	27.8	18.5	46	17	11.4	8	4.2	18.5	45.4	9	18.3
ø16	ø16	10-KQ2U16-99A	23.8	75.9	35	23.8	55.3	20.6	14	8	4.2	23.8	60	13	33.5



Different Diameter Union "Y": 10-KQ2U



Applicable tubing O.D. (mm)	Model	øD1	øD2	L1	L2	P	M1	M2	Q	Mounting hole			Effective area (mm ²) Urethane	Min. port size	Weight (g)	
										øO	øN	Thickness				
ø2	ø3.2	10-KQ2U02-23A	5.8	7.1	28.2	16.6	5.8	11.9	13.3	5.2	6	3.2	7.1	0.9	1.2	1.9
ø2	ø4	10-KQ2U02-04A	5.8	8.2	27.6	15.7	5.8	11.9	13.3	5.7	6	3.2	8.2	0.9	1.2	2.1
ø3.2	ø4	10-KQ2U23-04A	7.1	8.2	28.9	18	7.1	13.3	13.3	5.7	6	3.2	8.2	2.7	2.5	2.7
ø4	ø6	10-KQ2U04-06A	8.2	10.4	29	18	8.2	13.3	13.3	6.8	6	3.2	10.4	4.2	3	3.3
ø6	ø8	10-KQ2U06-08A	10.4	13.2	31	19.3	10.4	13.3	14.2	8.2	6	3.2	13.2	10.6	4.5	5
ø8	ø10	10-KQ2U08-10A	13.2	15.9	34.6	22.3	13.2	14.2	15.6	10.1	8	4.2	15.9	17.7	6	8.6
ø10	ø12	10-KQ2U10-12A	15.9	18.5	38.5	25	15.9	15.6	17	11.4	8	4.2	18.5	28.4	7.5	12.7
ø12	ø16	10-KQ2U12-16A	18.5	23.8	47.9	31	18.5	17	20.6	14	8	4.2	23.8	45.4	9	21.2



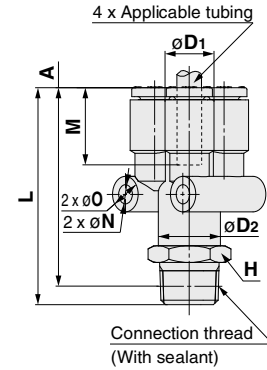
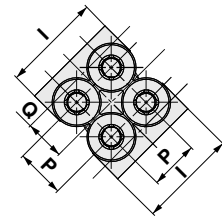
Dimensions

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



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD1	øD2	L	I	A*	M	P	Q	øO	øN	Effective area (mm ²) Urethane	Min. port size	Weight (g)
ø4	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
ø6	1/8	10-KQ2UD06-01NS	14	10.4	13.2	43.9	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



Directional Control Valves

Air Cylinders

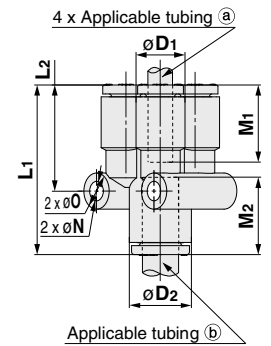
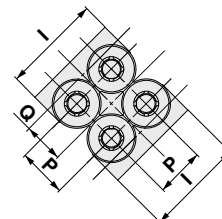
Rotary Actuators

Air Grippers

Different Diameter Double Union "Y": 10-KQ2UD



Applicable tubing O.D. (mm)		Model	øD1	øD2	L1	L2	P	I	M1	M2	Q	øO	øN	Effective area (mm ²) Urethane	Min. port size	Weight (g)
a	b															
ø4	ø6	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
ø6	ø8	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



Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

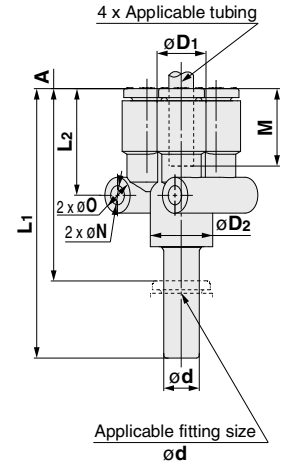
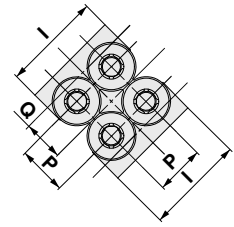
Pressure Switches/ Pressure Sensors

Dimensions

Double Plug-in “Y”: 10-KQ2XD



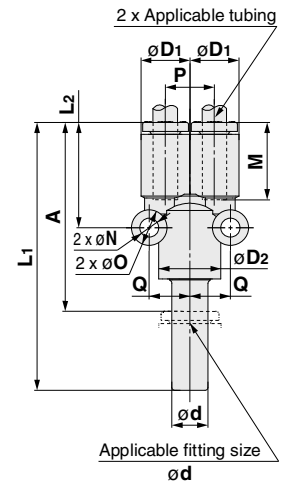
Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	$\phi D1$	$\phi D2$	L1	L2	A	I	P	M	Q	ϕO	ϕN	Effective area (mm ²) Urethane	Min. port size	Weight (g)
$\phi 4$	$\phi 6$	10-KQ2XD04-06A	8.2	10.4	45.4	18.2	32.1	16.6	8.2	13.3	6.8	6	3.2	4.2	3	5.9
$\phi 6$	$\phi 8$	10-KQ2XD06-08A	10.4	13.2	50.9	20.5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



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



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

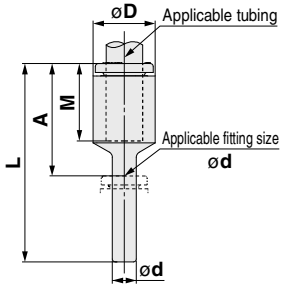


Dimensions

Plug-in Reducer: 10-KQ2R



Applicable tubing O.D. (mm)	Applicable fitting size ϕ D	Model	ϕ D	L	A	M	Effective area (mm ²)	Min. port size	Weight (g)
							Urethane		
ϕ 2	ϕ 4	10-KQ2R02-04A	5.8	27.8	14.5	11.9	0.9	1.4	0.6
ϕ 3.2	ϕ 4	10-KQ2R23-04A	7.1	28.6	15.3	13.3	2.9	2.5	0.8
	ϕ 6	10-KQ2R23-06A	7.1	29.1	15.8	13.3	2.9	2.5	1
ϕ 4	ϕ 6	10-KQ2R04-06A	8.2	28.6	15.3	13.3	4	3	1.1
	ϕ 8	10-KQ2R04-08A	8.2	29.6	15.4	13.3	4	3	1.3
	ϕ 10	10-KQ2R04-10A	10.4	31.7	16.1	13.3	4	3	2.2
ϕ 6	ϕ 4	10-KQ2R06-04A	10.4	33.6	20.3	13.3	4	2.5	1.4
	ϕ 8	10-KQ2R06-08A	10.4	31.6	17.4	13.3	10.4	4.5	1.7
	ϕ 10	10-KQ2R06-10A	10.4	33.9	18.3	13.3	10.4	4.5	2.1
ϕ 8	ϕ 12	10-KQ2R06-12A	12	35.7	18.7	13.3	10.4	4.5	3.2
	ϕ 10	10-KQ2R08-10A	13.2	35.1	19.5	14.2	18	6	2.9
	ϕ 12	10-KQ2R08-12A	13.2	36.5	19.5	14.2	18	6	3.4
ϕ 10	ϕ 12	10-KQ2R10-12A	15.9	39.2	22.2	15.6	32.8	7.5	4.5
	ϕ 16	10-KQ2R10-16A	16	44.7	24.1	15.6	32.8	7.5	6
ϕ 12	ϕ 16	10-KQ2R12-16A	18.5	45.7	25.1	17	46.1	9	7



Directional Control Valves

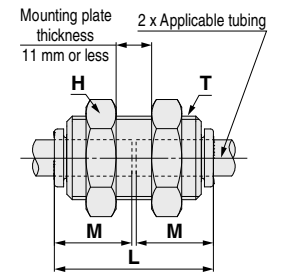
Air Cylinders

Rotary Actuators

Bulkhead Union: 10-KQ2E (Interchangeable with KQ)



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



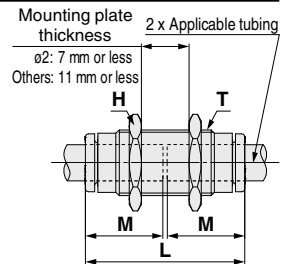
Air Grippers

Air Preparation Equipment

Bulkhead Union: 10-KQ2E (Interchangeable with KJ)



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



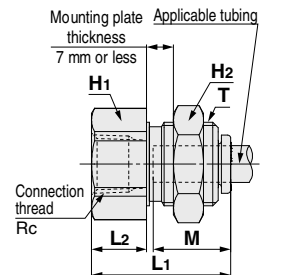
Modular F. R.

Pressure Control Equipment

Bulkhead Connector: 10-KQ2E



Applicable tubing O.D. (mm)	Connection thread Rc	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Mounting hole	M	Effective area (mm ²)	Min. port size	Weight (g)
										Urethane		
ϕ 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
ϕ 4	1/8	10-KQ2E04-01N	M12 x 1	14	14	24.4	10	13	13.3	4	3	21.2
	1/4	10-KQ2E04-02N	M12 x 1	17	14	29	14.6	13	13.3	4	3	30.9
ϕ 6	1/8	10-KQ2E06-01N	M14 x 1	17	17	23.6	9.2	15	13.3	10.4	4.5	28.9
	1/4	10-KQ2E06-02N	M14 x 1	17	17	28.4	14	15	13.3	10.4	4.5	32.4
	3/8	10-KQ2E06-03N	M14 x 1	19	17	30.7	16.3	15	13.3	10.4	4.5	35.9
ϕ 8	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
	3/8	10-KQ2E08-03N	M16 x 1	19	19	31.7	14.3	17	14.2	18	6	37.4
ϕ 10	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
ϕ 12	3/8	10-KQ2E12-03N	M22 x 1	24	27	32.3	11.9	23	17	46.1	9	69.3
	1/2	10-KQ2E12-04N	M22 x 1	24	27	37.7	17.3	23	17	46.1	9	72.7
ϕ 16	3/8	10-KQ2E16-03N	M28 x 1.5	30	32	34.4	11.5	29	20.6	67	13	122.2
	1/2	10-KQ2E16-04N	M28 x 1.5	30	32	38.8	15.9	29	20.6	67	13	132.1



Fittings & Tubing

Flow Control Equipment

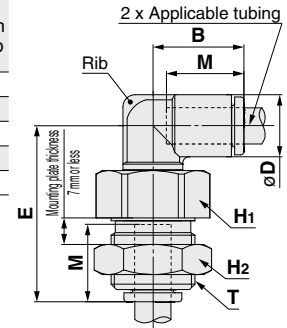
Pressure Switches/ Pressure Sensors

Dimensions

Bulkhead Male Elbow: 10-KQ2LE



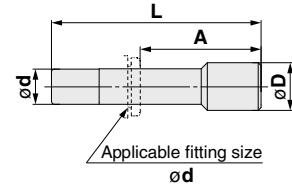
Applicable tubing O.D. (mm)	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	B	E	øD	Mounting hole	M	Effective area (mm ²) Urethane	Min. port size	Weight (g)	With a rib
ø4	10-KQ2LE04-00N	M12 x 1	14	14	14.8	28.5	8.2	13	13.3	4.2	3	21.2	●
ø6	10-KQ2LE06-00N	M14 x 1	17	17	15.5	29.6	10.4	15	13.3	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	●



Plug: 10-KQP



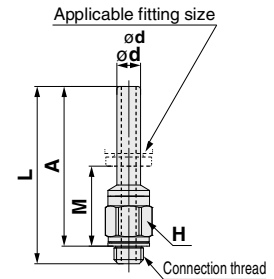
Applicable fitting size ød	Model	øD	L	A	Weight (g)
ø2	10-KJP-02	3	17	5.1	0.1
ø3.2	10-KQP-23	5	31.5	18.2	1
ø4	10-KQP-04	6	32	18.7	1
ø6	10-KQP-06	8	35	21.7	1
ø8	10-KQP-08	10	39	24.8	2
ø10	10-KQP-10	12	43	27.4	3.5
ø12	10-KQP-12	14	45.5	28.5	5
ø16	10-KQP-16	20.9	47	26.4	8



Adapter: 10-KQ2N (Gasket seal)



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

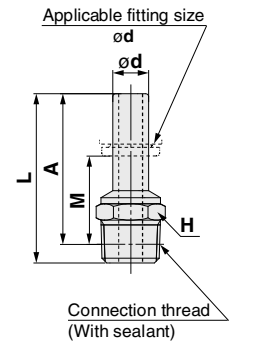


Adapter: 10-KQ2N (Sealant)



Applicable fitting size ød	Connection thread R	Model	H (Width across flats)	L	A*	M	Min. port size	Weight (g)
ø4	1/8	10-KQ2N04-01NS	10	28.3	25.2	11.9	2.5	4
	1/4	10-KQ2N06-02NS	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
	3/8	10-KQ2N08-03NS	14	35.9	31.2	17	6	15.7
ø8	3/8	10-KQ2N08-03NS	17	36	30.9	16.7	6	22.7
	1/2	10-KQ2N10-03NS	17	40.6	35.5	19.9	7.5	19.1

* Reference dimensions after installation of R thread

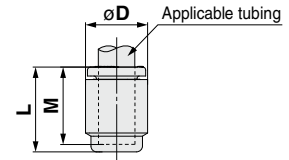


Dimensions

Tube Cap: 10-KQ2C



Applicable tubing O.D. (mm)	Model	øD	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



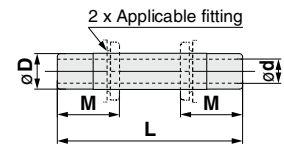
Directional Control Valves

Air Cylinders

Nipple: 10-KQN



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



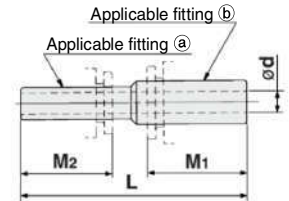
Rotary Actuators

Air Grippers

Reducer Nipple: 10-KQN



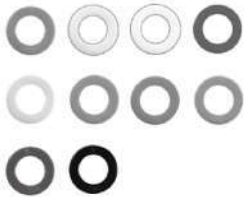
Applicable fitting		Model	L	M ₁	M ₂	ød Min. port size	Weight (g)
①	②						
ø4	ø6	10-KQN04-06	38	13.3	13.3	2.5	2
ø6	ø8	10-KQN06-08	42	14.2	13.3	4	2
ø8	ø10	10-KQN08-10	47	15.6	14.2	6	2
ø10	ø12	10-KQN10-12	51	17	15.6	7.5	3.1
ø12	ø16	10-KQN12-16	55	20.6	17	9	4.9



Air Preparation Equipment

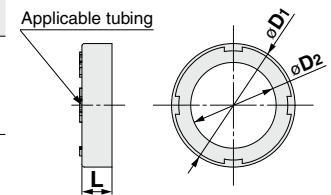
Modular F. R.

Color Cap: 10-KQ2C



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

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



Pressure Control Equipment

Fittings & Tubing



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