

One-touch Fittings

Series KQ2

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

How to Order

KQ 2 H 06 - 01 S - []

• **One-touch fittings**

• **Product's color**

Symbol	Body	Release button
2	White	Light gray
Nil	Black	Blue

• **With thread sealant (Male thread only)**

Nil	None
S	With thread sealant

Note) Port size with sealant: Only
R 1/8
R 1/4
R 3/8
R 1/2

• **Applicable tubing O.D.**

23	ø3.2
04	ø4
06	ø6
08	ø8
10	ø10
12	ø12
16	ø16

• **Port size/Applicable tubing O.D.**

Tubing (Rod) connection	Thread connection	Applicable tubing O.D.
M5	M5	M5 x 0.8
M6	M6	M6 x 1.0
01	R 1/8, Rc 1/8	
02	R 1/4, Rc 1/4	
03	R 3/8, Rc 3/8	
04	R 1/2, Rc 1/2	
00	Same dia. tubing	
04	ø4	(Reducer) Different dia. tubing
06	ø6	
08	ø8	
10	ø10	
12	ø12	
16	ø16	
99	Same dia. rod	

• **Made to Order**
Refer to page 58 for details.

• **Model**

H	Male connector	T	Male branch tee
	Straight union		Union tee
	Different diameter straight		Different diameter tee*
S	Hex. socket head male connector	TW	Cross*
F	Female connector	TX	Different diameter cross*
		TY	Different diameter cross*
		Y	Male run tee
L	Male elbow	D	Male delta union
	Union elbow		Delta union
	Plug-in elbow		Branch "Y"
LU	Male branch connector	U	Union "Y"
	Branch union elbow		Different dia. union "Y"
	K		45° male elbow
V	Universal male elbow	UD	Delta branch
VS	Hexagon socket head universal male elbow		Different dia. double union "Y"
VF	Universal female elbow		Double plug-in "Y"
LF	Female elbow	XD	Different diameter plug-in "Y"
VD	Double universal male elbow	X	Plug-in reducer
VT	Triple universal male elbow		
Z	Branch universal male elbow		
ZF	Branch universal female elbow	E	Bulkhead union
ZD	Double branch universal male elbow		
ZT	Triple branch universal male elbow		
W	Extended plug-in elbow	LE	Bulkhead male elbow
	Extended male elbow		

Accessory

Symbol	Name
KQ2N	Nipple
	Reducer nipple
KQ2C	Adaptor
KQ2C	Tube cap
KQ2C	Color cap
KQ2P	Plug (White)
KQP	Plug (Blue)

Use the below part number to order the gasket for M5 and M6 threads.

Gasket for M5 thread: M-5G2
Gasket for M6 thread: M-6G

* Available only for white color body.

Series KQ2: White body
Series KQ : Black body

Guide

Collet

Chuck

Suitable for use with nylon and urethane. Large retaining force.

Has large retaining force while holding force is increased by the collet.

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.

Connection thread

M, R, Rc

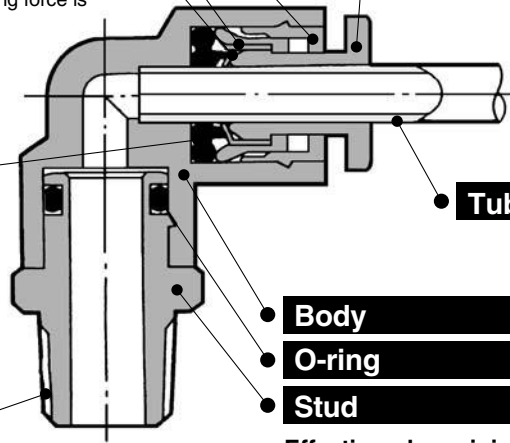
Release button

Series KQ2: Light gray

Series KQ : Blue

Light force for removal

When the fitting is removed from the tube, the chuck and collet are released, thus preventing them from biting into the tube excessively.



Tube

Body

O-ring

Stud

Effective when piping in a confined space.

The body and the threaded portion can rotate. (To the degree for positioning)

PAT.

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

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



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon ⁽¹⁾ , Polyurethane
Tubing O.D.	ø3.2, ø4, ø6, ø8, ø10, ø12, ø16

Note 1) Soft nylon tubing is not compatible with water.

Product's Color

Series	Body	Release button
Series KQ2	White	Light gray
Series KQ	Black	Blue

Specifications

Fluid		Air/Water ⁽²⁾
Operating pressure range ⁽³⁾		-100 kPa to 1 MPa
Proof pressure		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 sealant or none



Note 2) The surge pressure must be under the maximum operating pressure.

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



Made to Order
(Refer to page 58 for details.)

Series KQ2

Model

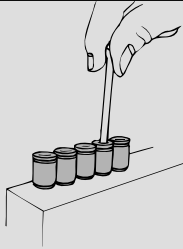
Hex. socket head male connector

KQ2S

P. 42



Internal hex. allows thread connection by using an allen wrench for confined spaces.



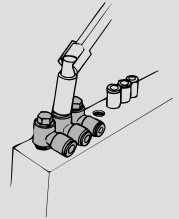
Universal male elbow

KQ2V

P. 45



Universal male elbow allows thread connection by using a socket wrench for confined spaces.



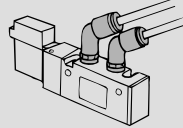
45° male elbow

KQ2K

P. 44



Use to pipe in 45° direction from female thread. Model in-between of male connector and male elbow.



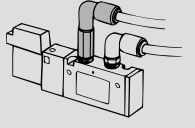
Extended male elbow

KQ2W

P. 50



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



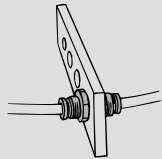
Bulkhead union

KQ2E

P. 56



Use to connect tubes through a panel.



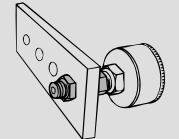
Bulkhead connector

KQ2E

P. 56



Use to connect male thread and tube through a panel.



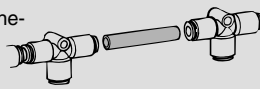
Nipple

KQ2N

P. 57



Use to connect One-touch fittings.



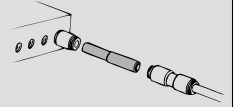
Reducer nipple

KQ2N

P. 57



Use to connect One-touch fittings that are different tubing O.D.s.



Male connector

KQ2H

P. 42



Use to pipe in the same direction from female thread. Most general style.

Male elbow

KQ2L

P. 43



Use to pipe at right angles to female thread. Most general style.

Male branch tee

KQ2T

P. 50



Use to branch line from female thread in both 90° directions.

Female connector

KQ2F

P. 42



Use to pipe from male thread such as pressure gauge.

Union elbow

KQ2L

P. 48



Use to connect tubes at right angles.

Union tee

KQ2T

P. 51



Use to connect tubes in both 90° directions.

Straight union

KQ2H

P. 43



Use to connect tubes in the same direction.

Plug-in elbow

KQ2L

P. 49



Use to change by 90° in a tube fetching direction from One-touch fittings.

Different diameter tee

KQ2T

P. 51



Use to connect tubes with size down in both 90° directions.

Different diameter straight

KQ2H

P. 43



Use to connect different sized tubes.

Reducer elbow

KQ2L

P. 49



Use to change by 90° in a tube fetching direction from One-touch fittings and to size down.

Different diameter tee

KQ2T

P. 51



Use to branch line with size down in both side 90° direction.

Cross

KQ2TW

P. 51



Use to four-branch line.

Different diameter cross

KQ2TX

P. 51



Use to connect tubes with size down in all 90° directions.

Different diameter cross

KQ2TY

P. 52



Use to branch line with size down in three directions.

Hexagon socket head universal male elbow

KQ2VS P. 45



Hex. on the top allows thread connection by using an allen wrench for confined spaces.

Male branch connector

KQ2LU P. 44



Use to branch piping at right angles to female thread.

Universal female elbow

KQ2VF P. 46



Use to branch line in the same direction or at the right angles from male or female thread. Multiplex connection possible.

Female elbow

KQ2LF P. 46



Use to pipe at right angles to male thread.

Double universal male elbow

KQ2VD P. 46



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

Triple universal male elbow

KQ2VT P. 47



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

Branch universal male elbow

KQ2Z P. 47



Hexagonal head allows thread connection by using a box wrench. Use for branch connection.

Branch universal female elbow

KQ2ZF P. 47



Use to branch line in the same direction or at right angles from male or female thread. Multiplex connection possible.

Double branch universal male elbow

KQ2ZD P. 48



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

Male run tee

KQ2Y P. 52



Use to branch line in the same direction from female thread and in 90° direction.

Triple branch universal male elbow

KQ2ZT P. 48



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

Branch union elbow

KQ2LU P. 49



Use to branch line at right angles.

Extended plug-in elbow

KQ2W P. 49



When the elbow extends over a standard elbow for ease of connection/disconnection of tube.

Male delta union

KQ2D P. 53



Use to branch line in 90° direction from female thread.

Delta union

KQ2D P. 53



Use to branch in tripple 90° direction.

Delta branch

KQ2UD P. 54



Use to four-branch line in the same direction from female thread.

Different dia. double union "Y"

KQ2UD P. 54



Use to four-branch line in the same direction with size down.

Different diameter plug-in "Y"

KQ2X P. 55



Use to branch line from One-touch fitting with size down.

Double plug-in "Y"

KQ2XD P. 55



Use to four-branch line from One-touch fitting.

Union "Y"

KQ2U P. 54



Use to branch line in the same direction.

Different dia. union "Y"

KQ2U P. 54



Use to branch line with size down in the same direction.

Plug-in "Y"

KQ2U P. 55



Use to branch line in the same direction from One-touch fittings.

Branch "Y"

KQ2U P. 53



Use to branch line in the same direction from female thread.

Plug-in reducer

KQ2R P. 56



Use to change size of One-touch fittings.

Bulkhead male elbow

KQ2LE P. 56



Use to connect tubes through a panel, changing by 90° in a tube fetching direction.

Adaptor

KQ2N P. 57



Use to connect fitting and R female thread.

Tube cap

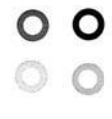
KQ2C P. 57



Use to plug unused tube.

Color cap

KQ2C P. 57



Mounted on the release button corresponding to its applications. Distinguished by color.

Plug

KQ2P, KQP P. 57



Use to plug unused One-touch fittings. KQP (Blue) KQ2P (White)

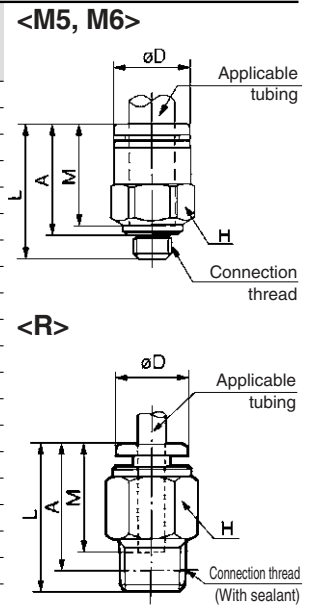
- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

Series KQ2

Male Connector: KQ2H

<M5, M6>

Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	$\phi D^{(1)}$	L	A*	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
								Nylon	Urethane	
3.2	M5 x 0.8	KQ2H23-M5	7	7	16.7	13.6	12.7	3	2.5	2.1
	1/8	KQ2H23-01S	10	-	21.1	18	15.5	3.4	2.9	9
	1/4	KQ2H23-02S	14	-	19	13.5				16
4	M5 x 0.8	KQ2H04-M5	8	-	17	13.9	12.7	4	4	2.4
	M6 x 1.0	KQ2H04-M6	8	8	18	-	16	5.6	4	2.5
	1/8	KQ2H04-01S	10	-	21.1	18				9
	1/4	KQ2H04-02S	14	-	19	13.5	16			
6	M5 x 0.8	KQ2H06-M5	10	10	17.8	14.7	13.5	4	4	3.3
	M6 x 1.0	KQ2H06-M6	10	-	19	14.9	17	13.1	10.4	3.4
	1/8	KQ2H06-01S	12	-	21.6	18.5				16
	1/4	KQ2H06-02S	14	-	22.5	17	14			
8	1/8	KQ2H08-01S	14	-	27.1	24	18.5	26.1	18.0	21
	1/4	KQ2H08-02S	-	26	20.5	19				
	3/8	KQ2H08-03S	17	-	20.9	15.5	26			
10	1/8	KQ2H10-01S	17	-	29.1	26	21	26.1	26.1	19
	1/4	KQ2H10-02S	-	33	27.5	30				
	3/8	KQ2H10-03S	17	-	27.9	22.5	41.5	29.5	30	
	1/2	KQ2H10-04S	22	-	26.1	19	53			
12	1/4	KQ2H12-02S	19	-	34	28.5	22	58.3	46.1	42
	3/8	KQ2H12-03S	-	28.9	23.5	34				
	1/2	KQ2H12-04S	22	-	29.1	22	51			
16	3/8	KQ2H16-03S	24	25.7	38.4	33	25	81	(81)	61
	1/2	KQ2H16-04S	-	34.6	27.5	113		(96)	47	



<R>



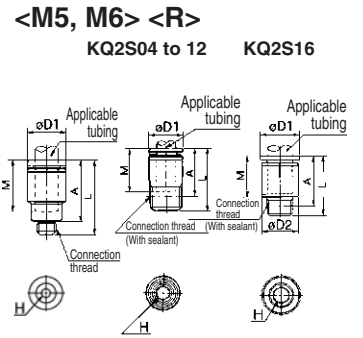
* Reference dimensions after R thread installation.

Note 1) ϕD : Max. diameter
Note 2) (): Values for soft nylon.

Hexagon Socket Head Male Connector: KQ2S

<M5, M6>

Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	$\phi D1^{(1)}$	$\phi D2$	L	A*	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
									Nylon	Urethane	
4	M5 x 0.8	KQ2S04-M5	2.5	8	-	18.7	15.6	12.7	4	4	2.7
	M6 x 1.0	KQ2S04-M6	3	8	-	18.2	14.1	16	4.1	3.6	2.8
	1/8	KQ2S04-01S	3	9.8	-	23	19				8
6	M5 x 0.8	KQ2S06-M5	2.5	10	-	19.5	16.4	13.5	4	4	3.3
	M6 x 1.0	KQ2S06-M6	3	10	-	19.1	15	17	10.0	9.9	3.4
	1/8	KQ2S06-01S	4	11.8	-	24	20				9
	1/4	KQ2S06-02S	4	13.8	-	24	18	10.7	10.0	15	
8	1/8	KQ2S08-01S	5	14	-	28	24	18.5	17.2	16.2	12
	1/4	KQ2S08-02S	6	14	-	25.5	19.5				11
	3/8	KQ2S08-03S	6	17	-	27.5	21	23.3	24		
10	1/8	KQ2S10-01S	5	17	-	30	26	21	17.2	16.2	18
	1/4	KQ2S10-02S	8	17	-	27.5	21.5				12
	3/8	KQ2S10-03S	8	17	-	27.5	21	39.0	26.6	19	
	1/2	KQ2S10-04S	22	22	-	28	20	35			
12	1/4	KQ2S12-02S	8	19	-	34	28	22	46.0	44.5	23
	3/8	KQ2S12-03S	10	19	-	29	22.5				18
	1/2	KQ2S12-04S	22	22	-	28	20	30			
16	3/8	KQ2S16-03S	10	25.7	24	39	32.5	25	81	(81)	42
	1/2	KQ2S16-04S	12	25.7	24	35	27		113	(96)	34



<R>

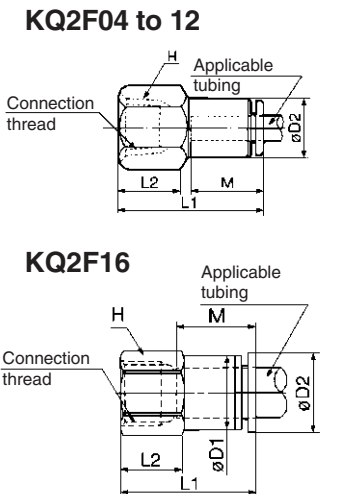


* Reference dimensions after R thread installation.

Note 1) $\phi D1$: Max. diameter
Note 2) (): Values for soft nylon.

Female Connector: KQ2F

Applicable tubing O.D. (mm)	Connection thread Rc	Model	H (width across flats)	$\phi D1^{(1)}$	$\phi D2$	L1	L2	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
									Nylon	Urethane	
4	1/8	KQ2F04-01	14	-	10	27	11	16	5.6	4	15
	1/4	KQ2F04-02	17	-	31	14	23				
6	1/8	KQ2F06-01	14	-	12	27.5	11	17	13.1	10.4	15
	1/4	KQ2F06-02	17	-	31	13	22				
	3/8	KQ2F06-03	19	-	33.5	15	25				
8	1/8	KQ2F08-01	14	-	14	29	11	18.5	26.1	18.0	17
	1/4	KQ2F08-02	17	-	32.5	13	24				
	3/8	KQ2F08-03	19	-	33.5	14	24				
10	1/4	KQ2F10-02	17	-	17	34.5	14	21	41.5	29.5	27
	3/8	KQ2F10-03	19	-	36.5	15	30				
12	1/4	KQ2F12-02	19	-	19	35	14	22	58.3	46.1	36
	3/8	KQ2F12-03	19	-	37	14	31				
	1/2	KQ2F12-04	24	-	41	18	52				
16	3/8	KQ2F16-03	24	24	25.7	38	15	25	81	(81)	59
	1/2	KQ2F16-04	24	24	25.7	43	19		113	(96)	58

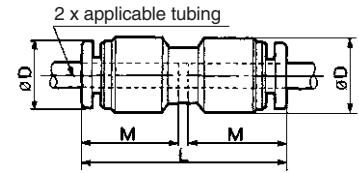


Note 1) $\phi D2$: Max. diameter
Note 2) (): Values for soft nylon

Straight Union: KQ2H



Applicable tubing O.D. (mm)	Model	øD ⁽¹⁾	L	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
					Nylon	Urethane	
3.2	KQ2H23-00	9.6	31.5	15.5	3.4	2.9	3
4	KQ2H04-00	10.4	32.5	16	5.6	4	3
6	KQ2H06-00	12.8	34.5	17	13.1	10.4	4
8	KQ2H08-00	15.2	38.5	18.5	26.1	18.0	6
10	KQ2H10-00	18.5	42.5	21	41.5	29.5	11
12	KQ2H12-00	20.9	44.5	22	58.3	46.1	14
16	KQ2H16-00	26.5	51	25	113	(96)	24

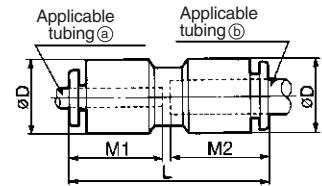


Note 1) øD: Max. diameter
Note 2) (): Values for soft nylon.

Different Diameter Straight: KQ2H



Applicable tubing O.D. (mm)		Model	Note) øD	L	M1	M2	Effective area (mm ²)		Mass (g)
(a)	(b)						Nylon	Urethane	
3.2	4	KQ2H23-04	10.4	32.5	15.5	16	3.4	2.9	3
4	6	KQ2H04-06	12.8	34.5	16	17	5.6	5.6	5
6	8	KQ2H06-08	15.2	38.5	17	18.5	13.1	10.4	6
8	10	KQ2H08-10	18.5	42	18.5	21	26.1	18.0	11
10	12	KQ2H10-12	20.9	44.5	21	22	41.5	29.5	14
12	16	KQ2H12-16	26.5	56.5	22	25	58.3	46.1	47



Note) øD: Max. diameter

Male Elbow: KQ2L

<M5>



<M6>



<R>

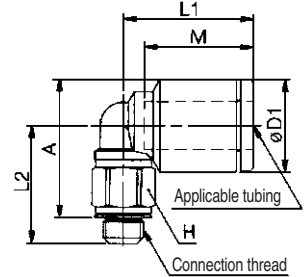


Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	Note 1) øD ⁽¹⁾		L1	L2	A*	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
				øD1	øD2					Nylon	Urethane	
3.2	M5 x 0.8	KQ2L23-M5	7	8.5	—	15.3	13.2	14.3	12.7	2.6	2.2	2.5
	1/8	KQ2L23-01S	10	9.6	10	17.5	20.6	22.5	15.5	3	2.5	8
	1/4	KQ2L23-02S	14	—	—	—	25	24.5	—	—	—	18
4	M5 x 0.8	KQ2L04-M5	7	9.3	—	15.6	13.7	15.3	12.7	3.5	3.5	2.7
	M6 x 1.0	KQ2L04-M6	8	—	—	—	14.7	—	—	—	—	3.6
	1/8	KQ2L04-01S	10	10.4	10	18	21.1	23	16	4.2	4.2	10
6	1/4	KQ2L04-02S	14	—	—	—	25.5	25	—	—	—	19
	M5 x 0.8	KQ2L06-M5	7	11.6	—	16.1	14.7	17.4	13.5	3.5	3.5	3.2
	M6 x 1.0	KQ2L06-M6	8	—	—	—	15.7	—	—	—	—	4.1
8	1/8	KQ2L06-01S	10	12.8	10	20	22.1	25.5	17	11.4	9.0	12
	1/4	KQ2L06-02S	14	—	—	—	26.5	27.5	—	—	—	22
	3/8	KQ2L06-03S	17	—	—	—	27.9	29	—	—	—	33
10	1/8	KQ2L08-01S	12	15.2	12	23	23.6	28	18.5	21.6	14.9	13
	1/4	KQ2L08-02S	14	—	—	—	28	30	—	—	—	21
	3/8	KQ2L08-03S	17	—	—	—	29.4	31.5	—	—	—	35
12	1/8	KQ2L10-01S	17	18.5	17	26.5	26.1	32	21	21.6	14.9	25
	1/4	KQ2L10-02S	—	—	—	—	29.5	33	—	—	—	26
	3/8	KQ2L10-03S	—	—	—	—	30.9	34.5	—	—	—	36
16	1/2	KQ2L10-04S	22	—	—	—	35.1	37	—	—	—	63
	3/8	KQ2L12-02S	17	20.9	17	28.5	30.5	35.5	22	50.2	39.7	28
	1/2	KQ2L12-03S	—	—	—	—	31.9	37	—	—	—	38
16	3/8	KQ2L12-04S	22	—	—	—	36.1	39.5	—	—	—	65
	1/2	KQ2L16-03S	—	—	—	—	36.9	44.5	—	—	—	101
	3/4	KQ2L16-04S	—	—	—	—	40.1	46	—	—	—	105

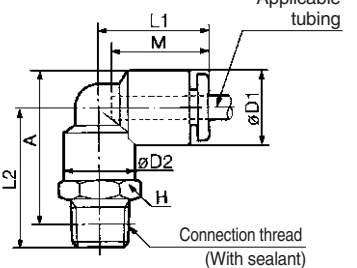


* Reference dimensions after R thread installation.
Note 1) øD1: Max. diameter
Note 2) (): Values for soft nylon.

<M5, M6>



<R>



- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

Series KQ2

Male Branch Connector: KQ2LU

<M5, M6>



<R>



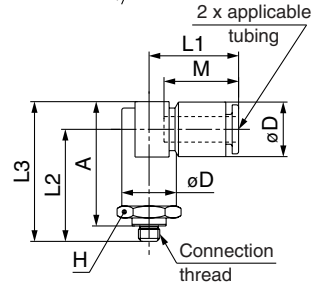
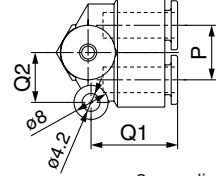
Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	Note) ϕD	L1	L2	L3	A*	M	P	Q1	Q2	Effective area (mm ²)		Mass (g)
													Nylon	Urethane	
4	M5 x 0.8	KQ2LU04-M5	11	10.4	18.5	24	29.5	25.5	16	10.4	18.5	10	4.3	4.1	10
	M6 x 1.0	KQ2LU04-M6				24.5	30						4.3	4.1	
	1/8	KQ2LU04-01S	14			25.6	31.1	27.5					6.0	4.1	12
	1/4	KQ2LU04-02S	14			30	35.5	30					6.0	4.1	21
6	M5 x 0.8	KQ2LU06-M5	13	12.8	21	26.5	33	29.5	17	12.8	20.5	12	4.3	4.3	13
	M6 x 1.0	KQ2LU06-M6				27	33.5						4.3	4.3	
	1/8	KQ2LU06-01S	14			28.6	35.1	32					13.9	11.0	15
	1/4	KQ2LU06-02S	14			32.5	39	33.5					13.9	11.0	22
8	1/8	KQ2LU08-01S	17	15.2	24	33.1	40.6	38	18.5	15.2	24.5	14	26.3	18.2	27
	1/4	KQ2LU08-02S				36.5	44						38.5	26.3	18.2
	3/8	KQ2LU08-03S	17			33.9	40.4	35					26.3	18.2	35
	1/2	KQ2LU08-04S	22			39.5	49	43.5					40.8	29.0	41
10	1/4	KQ2LU10-02S	19	18.5	27	39.9	49.4	44	21	18.5	28	16	40.8	29.0	42
	3/8	KQ2LU10-03S				43.6	53.1						45.5	40.8	29.0
	1/2	KQ2LU10-04S	22			42	52.5	47					40.8	29.0	57
12	1/4	KQ2LU12-02S	22	20.9	29	42.4	52.9	47.5	22	20.9	30	18	57.2	45.2	58
	3/8	KQ2LU12-03S				45.6	56.1						49	57.2	45.2
	1/2	KQ2LU12-04S	22			45.6	56.1	49					57.2	45.2	65

* Reference dimensions after R thread installation.

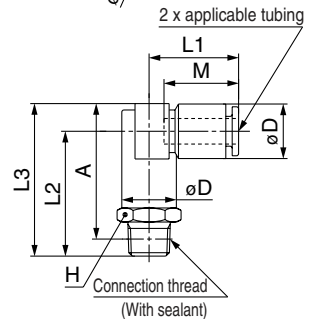
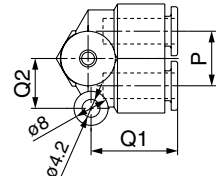
Note) ϕD : Max. diameter



<M5, M6>



<R>



45° Male Elbow: KQ2K

<M5, M6>



<R>



Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	Note 1) $\phi D1$	$\phi D2$	L1	L2	A*	M	Effective area (mm ²)		Mass (g)
										Nylon	Urethane	
4	M5 x 0.8	KQ2K04-M5	8	10.4	8	17	14.5	26	16	3.4	3.4	4
	M6 x 1.0	KQ2K04-M6					15	32				5
	1/8	KQ2K04-01S	10				19.6	34				10
	1/4	KQ2K04-02S	14				24	34				19
6	M5 x 0.8	KQ2K06-M5	8	12.8	8	18	14.5	27.5	17	8.7	6.9	6
	M6 x 1.0	KQ2K06-M6					15	33				5
	1/8	KQ2K06-01S	10				19.6	33				12
	1/4	KQ2K06-02S	14				24	35				10
8	1/8	KQ2K08-01S	12	15.2	12	20.5	21.1	37	18.5	19.7	19.7	13
	1/4	KQ2K08-02S					25.5	39				21
	3/8	KQ2K08-03S	17				26.9	41				35
	1/2	KQ2K08-04S	22				32.1	42				25
10	1/8	KQ2K10-01S	17	18.5	17	24	26.5	43.5	21	30.9	23.2	26
	1/4	KQ2K10-02S					27.9	45				36
	3/8	KQ2K10-03S	17				32.1	47.5				63
	1/2	KQ2K10-04S	22				27	45.5				28
12	1/4	KQ2K12-02S	17	20.9	17	25	28.4	47.5	22	44.5	35.1	38
	3/8	KQ2K12-03S					32.6	49.5				65
	1/2	KQ2K12-04S	22				30.9	55				52
16	3/8	KQ2K16-03S	22	26.5	20.9	30	34.1	56.5	25	65.8	(65.8)	52
	1/2	KQ2K16-04S					91.9	(78.3)		58		

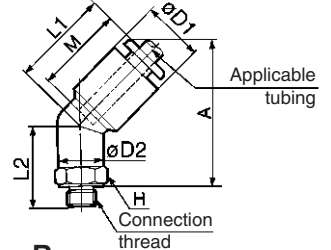
* Reference dimensions after R thread installation.

Note 1) $\phi D1$: Max. diameter

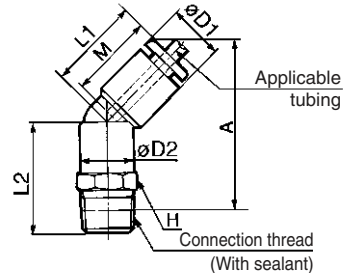
Note 2) (): Values for soft nylon.



<M5, M6>



<R>



Universal Male Elbow: KQ2V

<M5>



<R>

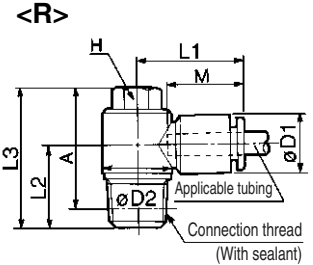
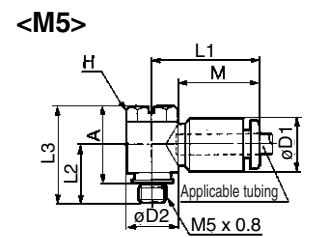


Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	Note 1) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	Effective area (mm ²)		Mass (g)
											Nylon	Urethane	
4	M5 x 0.8	KQ2V04-M5	8	10.4	9.8	20.5	11	18.5	15	16	2.9	2.9	6
	1/8	KQ2V04-01S			13.4	22	13.6	25.6	22.5		14		
6	M5 x 0.8	KQ2V06-M5	8	12.8	9.8	23.5	12	18.5	15	17	3.8	3.8	7
	1/8	KQ2V06-01S			13.4	24	13.6	25.6	22.5		15		
6	1/4	KQ2V06-02S	10	15.4	23.5	18	30.5	25	17	7.5	5.9	26	
	1/8	KQ2V08-01S			12	15.2	17.6	28.5		14.6	27.6	24.5	18.5
8	1/4	KQ2V08-02S	12	15.2	20.6	27.5	18	31	25.5	18.5	20.5	14.3	30
	3/8	KQ2V08-03S			14	20.6	27.5	19.4	35.4		30	47	
10	1/4	KQ2V10-02S	14	18.5	20.6	31	19	35	29.5	21	27	20.3	40
	3/8	KQ2V10-03S			14	18.5	20.6	31	19.4		35.4	30	49
12	3/8	KQ2V12-03S	17	20.9	25.2	34	20.9	37.4	32	22	39	30.8	63
	1/2	KQ2V12-04S			17	20.9	25.2	34	24.1		40.6	33.5	80
16	3/8	KQ2V16-03S	21	26.5	32.3	39	25.4	45.4	40.5	25	55	(55)	103
	1/2	KQ2V16-04S			21	26.5	32.3	39	28.6		48.6	41.5	78

* Reference dimensions after R thread installation.

Note 1) $\phi D1$: Max. diameter

Note 2) (): Values for soft nylon.



K

M

H

KK

D

MS

LQ

MQR

T

Hexagon Socket Head Universal Male Elbow: KQ2VS

<M5>



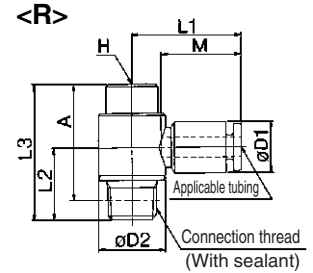
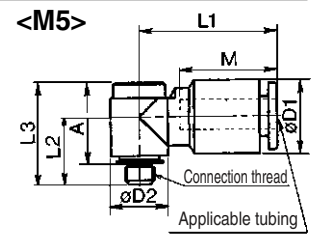
<R>



Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	Effective area (mm ²)		Mass (g)
											Nylon	Urethane	
4	M5 x 0.8	KQ2VS04-M5	4	10.4	9.8	20.5	10.5	18	15	16	2.9	2.9	6
	1/8	KQ2VS04-01S	6		13.4	22	13.6	25.6	22.5		14		
6	M5 x 0.8	KQ2VS06-M5	4	12.8	9.8	23.5	12	18	15	17	3.8	3.8	7
	1/8	KQ2VS06-01S	6		13.4	24	13.6	25.6	22.5		15		
6	1/4	KQ2VS06-02S	6	15.4	23.5	18	26.5	21	17	7.5	5.9	22	
	1/8	KQ2VS08-01S			8	15.2	17.6	28.5		14.6	26.1	23	18.5
8	1/4	KQ2VS08-02S	8	15.2	20.6	27.5	18	29.5	24	18.5	20.5	14.3	30
	3/8	KQ2VS08-03S			8	15.2	20.6	27.5	19.4		31.4	26	47
10	1/4	KQ2VS10-02S	8	18.5	20.6	31	19	31	25	21	27	20.3	32
	3/8	KQ2VS10-03S			8	18.5	20.6	31	19.4		31.4	26	39
12	3/8	KQ2VS12-03S	10	20.9	25.2	34	20.9	34.9	30	22	39	30.8	48
	1/2	KQ2VS12-04S			10	20.9	25.2	34	24.1		38.1	31	67

* Reference dimensions after R thread installation.

Note) $\phi D1$: Max. diameter



Series KQ2

Universal Female Elbow: KQ2VF

<M5>

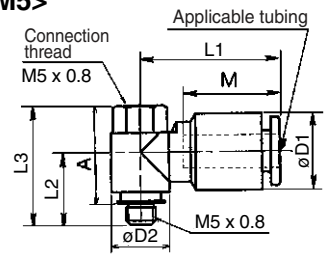


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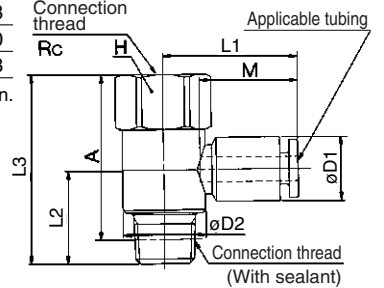


Applicable tubing O.D. (mm)	Connection thread Rc R	Model	H (width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	Mass (g)	
4	M5 x 0.8	KQ2VF04-M5	8	10.4	9.8	20.5	11	20	16	16	6	
	1/8	KQ2VF04-01S	14		13.4	22	14.6	28.6	25.5		19	
6	M5 x 0.8	KQ2VF06-M5	8	12.8	9.8	23.5	12.5	20	16	17	7	
	1/8	KQ2VF06-01S	14		13.4	24.5	14.6	28.6	25.5		19	
	1/4	KQ2VF06-02S	17		17.6	25	19.5	38	32.5		36	
8	1/8	KQ2VF08-01S	17	15.2	17.6	28.5	16.1	30.1	27	18.5	29	
	1/4	KQ2VF08-02S			19.5	38	32.5	37				
	3/8	KQ2VF08-03S			22	25.2	29.5	24.4	44.4		39	66
10	1/4	KQ2VF10-02S	19	18.5	20.6	31.5	21.5	40.5	35	21	48	
	3/8	KQ2VF10-03S			22	25.2	34	23.4	44.4		39	68
	3/8	KQ2VF12-03S			22	25.2	34	23.4	44.4		39	70
12	1/2	KQ2VF12-04S	22	20.9	27	35	24.6	49.1	42	22	93	

<M5>



<R>



* Reference dimensions after R thread installation.
Note) $\phi D1$: Max. diameter

Female Elbow: KQ2LF

<M5, M6>

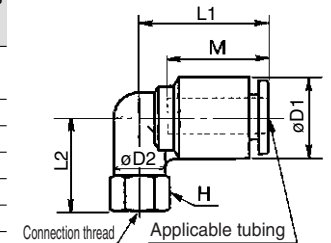


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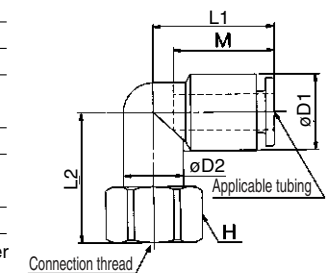


Applicable tubing O.D. (mm)	Connection thread Rc	Model	H (width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	M	Effective area (mm ²)		Mass (g)	
									Nylon	Urethane		
4	M5 x 0.8	KQ2LF04-M5	8	10.4	8	18.5	14.5	16	3.5	3.5	5	
	M6 x 1.0	KQ2LF04-M6	14				15.5					13
	1/8	KQ2LF04-01	14				21					20
	1/4	KQ2LF04-02	17				24.5					20
6	M5 x 0.8	KQ2LF06-M5	8	12.8	8	20.5	15	17	3.5	3.5	5	
	M6 x 1.0	KQ2LF06-M6	14				16				6	
	1/8	KQ2LF06-01	14				22				13	
	1/4	KQ2LF06-02	17				25.5				20	
	3/8	KQ2LF06-03	19				26				20	
8	1/8	KQ2LF08-01	14	15.2	12	23.5	23	18.5	21.6	14.9	16	
	1/4	KQ2LF08-02	17				26.5				22	
	3/8	KQ2LF08-03	19				27				23	
10	1/4	KQ2LF10-02	17	18.5	17	26.5	28	21	21.6	14.9	27	
	3/8	KQ2LF10-03	19				28.5				27	
	1/2	KQ2LF10-04	24				32.5				46	
12	1/4	KQ2LF12-02	17	20.9	17	28.5	29.5	22	50.2	39.7	29	
	3/8	KQ2LF12-03	19				30				29	
	1/2	KQ2LF12-04	24				34				48	

<M5>



<Rc>

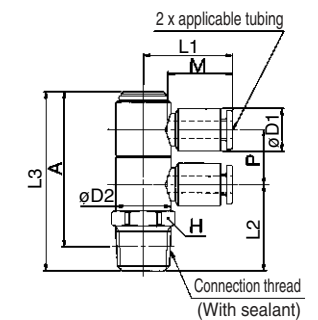


Note) $\phi D1$: Max. diameter

Double Universal Male Elbow: KQ2VD



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	P	Mass (g)	
4	1/8	KQ2VD04-01S	14	10.4	13.4	22	18.5	40.1	37	16	13.4	23	
	1/4	KQ2VD04-02S					21.5	43.5	38			29	
	3/8	KQ2VD04-03S					17	23.5	44.9			40	42
6	1/8	KQ2VD06-01S	14	12.8	13.4	24.5	18.5	40.1	37	17	13.4	24	
	1/4	KQ2VD06-02S					21.5	43.5	38			30	
	3/8	KQ2VD06-03S					17	23.5	44.9			40	42
8	1/8	KQ2VD08-01S	19	15.2	17.6	28.5	21	47.1	44	18.5	15.9	53	
	1/4	KQ2VD08-02S					24	50.5	45			51	
	3/8	KQ2VD08-03S					21	25	50.9			45.5	60
	1/2	KQ2VD08-04S					21	28.5	54.6			47.5	82
10	1/4	KQ2VD10-02S	21	18.5	20.6	31.5	26.5	57.5	52	21	19.2	71	
	3/8	KQ2VD10-03S					27.5	57.9	53			74	
	1/2	KQ2VD10-04S					30.5	61.1	54			91	
12	1/4	KQ2VD12-02S	26	20.9	25.2	34	28.5	64	58.5	22	21.6	118	
	3/8	KQ2VD12-03S					29.5	64.4	59			113	
	1/2	KQ2VD12-04S					32.5	67.6	60			125	

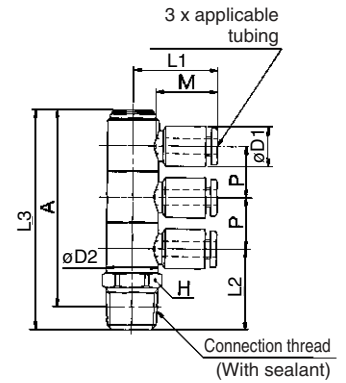


* Reference dimensions after R thread installation.
Note) $\phi D1$: Max. diameter

Triple Universal Male Elbow: KQ2VT



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	P	Mass (g)
4	1/8	KQ2VT04-01S	14	10.4	13.4	22	17.6	53.6	50.5	16	13.4	29
	1/4	KQ2VT04-02S					21	57	51.5			34
	3/8	KQ2VT04-03S					22.4	58.4	53.5			48
6	1/8	KQ2VT06-01S	14	12.8	13.4	24.5	17.5	53.6	50.5	17	13.4	31
	1/4	KQ2VT06-02S					21	57	51.5			37
	3/8	KQ2VT06-03S					21.9	58.4	53.5			50
8	1/8	KQ2VT08-01S	19	15.2	17.6	28.5	20.1	63.1	60	18.5	15.9	71
	1/4	KQ2VT08-02S					23.5	66.5	61			66
	3/8	KQ2VT08-03S					23.9	66.9	61.5			75
	1/2	KQ2VT08-04S					27.6	70.6	63.5			96
10	1/4	KQ2VT10-02S	21	18.5	20.6	31.5	26	77	71.5	21	19.2	94
	3/8	KQ2VT10-03S					26.4	77.4	72			111
	1/2	KQ2VT10-04S					29.6	80.6	73.5			111
12	1/4	KQ2VT12-02S	26	20.9	25.2	34	28.4	85.9	80	22	21.6	153
	3/8	KQ2VT12-03S					31.6	89.1	80.5			142
	1/2	KQ2VT12-04S					31.6	89.1	82			154



* Reference dimensions after R thread installation.
Note) $\phi D1$: Max. diameter



Branch Universal Male Elbow: KQ2Z

<M5>



<R>

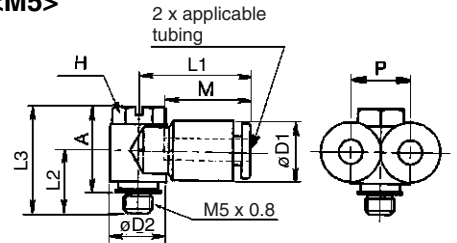


Applicable tubing O.D. (mm)	Connection thread R/M	Model	H (width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	P	Effective area (mm ²)		Mass (g)			
												Nylon	Urethane				
4	M5 x 0.8	KQ2Z04-M5	8	10.4	9.8	19.5	11	18.5	15	16	10.4	3.4	3.4	8			
	1/8	KQ2Z04-01S										4.7	4.7	16			
6	1/8	KQ2Z06-01S	8	12.8	13.4	22	13.6	25.6	22.5	17	12.8	10.8	8.6	17			
	1/4	KQ2Z06-02S												19	35	29.5	39
	3/8	KQ2Z06-03S												19.4	35.4	30	47
8	1/8	KQ2Z08-01S	12	15.2	17.6	26	14.6	27.6	24.5	18.5	15.2	20.5	14.2	27			
	1/4	KQ2Z08-02S												18	31	25.5	33
	3/8	KQ2Z08-03S												20.6	27	19.4	35.4
10	1/4	KQ2Z10-02S	14	18.5	20.6	29	19	35	29.5	21	18.5	31.8	22.6	46			
	3/8	KQ2Z10-03S												19.4	35.4	30	54
	1/2	KQ2Z10-04S												20.9	37.9	32.5	71
12	3/8	KQ2Z12-03S	17	20.9	25.2	32.5	24.1	41.1	34	22	20.9	44.6	35.3	71			
	1/2	KQ2Z12-04S												24.1	41.1	34	88

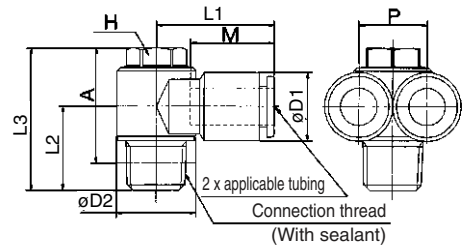
* Reference dimensions after R thread installation.
Note) $\phi D1$: Max. diameter



<M5>



<R>



Branch Universal Female Elbow: KQ2ZF

<M5>



<R>

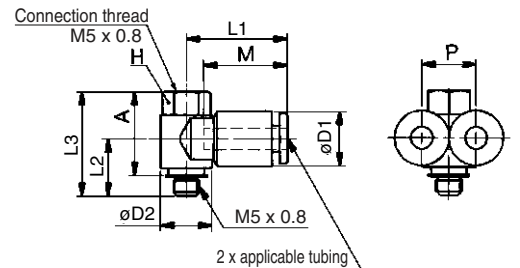


Applicable tubing O.D. (mm)	Connection thread R/M/Rc	Model	H (width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	P	Mass (g)
4	M5 x 0.8	KQ2ZF04-M5	8	10.4	9.8	19.5	11	20	16.5	16	10.4	8
	1/8	KQ2ZF04-01S										13.4
6	1/8	KQ2ZF06-01S	14	12.8	13.4	22	14.6	28.6	25.5	17	12.8	21
	1/4	KQ2ZF06-02S										20.6
8	1/8	KQ2ZF08-01S	17	15.2	17.6	25.5	16.1	30.1	27	18.5	15.2	32
	1/4	KQ2ZF08-02S										20.6
10	1/4	KQ2ZF10-02S	19	18.5	20.6	29	21.5	40.5	35	21	18.5	54
	3/8	KQ2ZF10-03S										22
12	3/8	KQ2ZF12-03S	22	20.9	25.2	32.5	23.4	44.4	39	22	20.9	77
	1/2	KQ2ZF12-04S										24

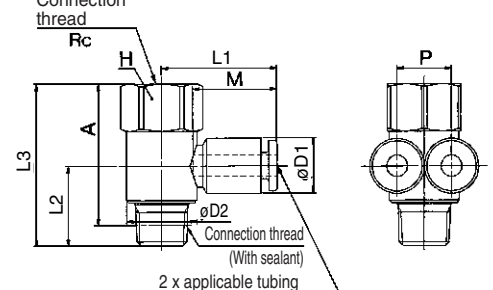
* Reference dimensions after R thread installation.
Note) $\phi D1$: Max. diameter



<M5>



<R>

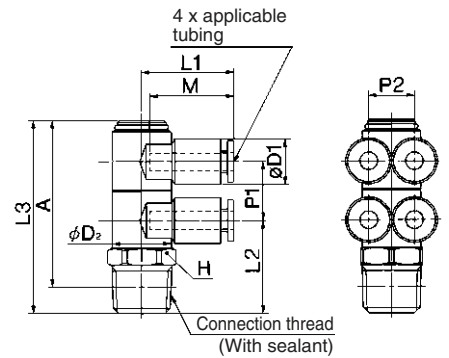


Series KQ2

Double Branch Universal Male Elbow: KQ2ZD



Applicable tubing O.D. (mm)	Connection threads R	Model	H (width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	P1	P2	Mass (g)
4	1/8	KQ2ZD04-01S	14	10.4	13.4	21	17.6	40.1	37	16	13.4	10.4	25
	1/4	KQ2ZD04-02S	14				21	43.5	38				31
	3/8	KQ2ZD04-03S	17				22.4	44.9	40				44
6	1/8	KQ2ZD06-01S	14	12.8	13.4	22	17.6	40.1	37	17	13.4	12.8	27
	1/4	KQ2ZD06-02S	14				21	43.5	38				33
	3/8	KQ2ZD06-03S	17				22.4	44.9	40				46
8	1/8	KQ2ZD08-01S	14	15.2	17.6	26	20.1	47.1	44	18.5	15.9	15.2	56
	1/4	KQ2ZD08-02S	19				23.5	50.5	45				54
	3/8	KQ2ZD08-03S	19				23.5	50.9	45.5				62
	1/2	KQ2ZD08-04S	21				27.6	54.6	47.5				85
10	1/4	KQ2ZD10-02S	21	18.5	20.6	29	26	57.5	52	21	19.2	18.5	83
	3/8	KQ2ZD10-03S	21				26.4	57.9	53				85
	1/2	KQ2ZD10-04S	21				29.6	61.1	54				102
12	1/4	KQ2ZD12-02S	26	20.9	25.2	32	28	64	58.5	22	21.6	20.9	134
	3/8	KQ2ZD12-03S	26				28.5	64.4	59				130
	1/2	KQ2ZD12-04S	26				31.6	67.6	60				141



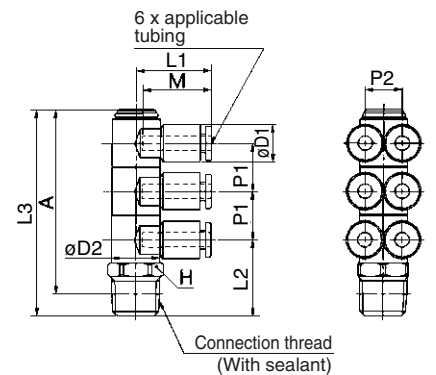
* Reference dimensions after R thread installation.
Note) $\phi D1$: Max. diameter



Triple Branch Universal Male Elbow: KQ2ZT



Applicable tubing O.D. (mm)	Connection threads R	Model	H (width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	P1	P2	Mass (g)
4	1/8	KQ2ZT04-01S	14	10.4	13.4	21	16.7	53.6	50.5	16	13.4	10.4	34
	1/4	KQ2ZT04-02S	14				20.5	57	51.5				40
	3/8	KQ2ZT04-03S	17				22.4	58.4	53.5				53
6	1/8	KQ2ZT06-01S	14	12.8	13.4	22	17.6	53.6	50.5	17	13.4	12.8	38
	1/4	KQ2ZT06-02S	14				21	57	51.5				43
	3/8	KQ2ZT06-03S	17				22.4	58.4	53.5				57
8	1/8	KQ2ZT08-01S	14	15.2	17.6	26	20.1	63.1	60	18.5	15.9	15.2	76
	1/4	KQ2ZT08-02S	19				23.5	66.5	61				72
	3/8	KQ2ZT08-03S	19				23.5	66.9	61.5				81
	1/2	KQ2ZT08-04S	21				27.6	70.6	63.5				102
10	1/4	KQ2ZT10-02S	21	18.5	20.6	29	26	77	71.5	21	19.2	18.5	111
	3/8	KQ2ZT10-03S	21				26.4	77.4	72				128
	1/2	KQ2ZT10-04S	21				29.6	80.6	73.5				128
12	1/4	KQ2ZT12-02S	26	20.9	25.2	32	28	85.5	80	22	21.6	20.9	178
	3/8	KQ2ZT12-03S	26				28.5	85.9	80.5				167
	1/2	KQ2ZT12-04S	26				31.6	89.1	82				179



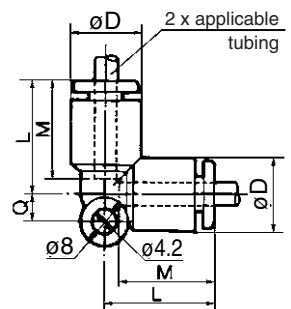
* Reference dimensions after R thread installation.
Note) $\phi D1$: Max. diameter



Union Elbow: KQ2L



Applicable tubing O.D. (mm)	Model	$\phi D^{(1)}$	L	Q	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
						Nylon	Urethane	
3.2	KQ2L23-00	9.6	17.5	4.3	15.5	3	2.5	3
4	KQ2L04-00	10.4	18	4.5	16	4.2	4.2	6
6	KQ2L06-00	12.8	20	5.3	17	11.4	9.0	6
8	KQ2L08-00	15.2	23	6	18.5	21.6	14.9	10
10	KQ2L10-00	18.5	26.5	6.8	21	35.2	25.0	17
12	KQ2L12-00	20.9	28.5	7.5	22	50.2	39.7	21
16	KQ2L16-00	26.5	34	10	25	100	(84)	29



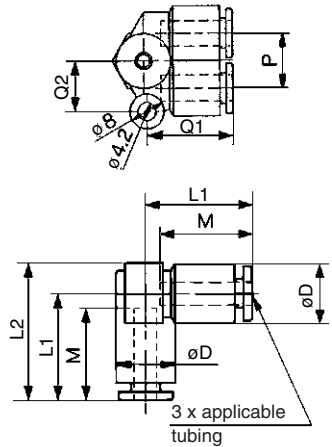
Note 1) ϕD : Max. diameter
Note 2) (): Valves for soft nylon.

Branch Union Elbow: KQ2LU



Applicable tubing O.D. (mm)	Model	Note) ϕD	L1	L2	Q1	Q2	M	P	Effective area (mm ²)		Mass (g)
									Nylon	Urethane	
4	KQ2LU04-00	10.4	18.5	24	18.5	10	16	10.4	6.0	4.1	6
6	KQ2LU06-00	12.8	21	27.5	20.5	12	17	12.8	13.9	11.0	8
8	KQ2LU08-00	15.2	24	32	24.5	14	18.5	15.2	26.3	18.2	15
10	KQ2LU10-00	18.5	27	36.5	28	16	21	18.5	40.8	29.0	25
12	KQ2LU12-00	20.9	29	40	30	18	22	20.9	57.2	45.2	32

Note) ϕD : Max. diameter

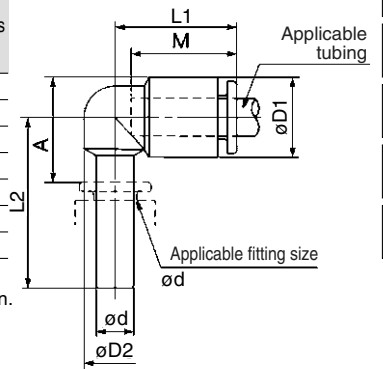


Plug-in Elbow: KQ2L



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	Note 1) $\phi D1$		L1	L2	A	M	Effective area (mm ²)		Mass (g)
			$\phi D1$	$\phi D2$					Nylon	Urethane	
3.2	3.2	KQ2L23-99	9.6	7	17	24.5	14	15.5	3	2.5	2
4	4	KQ2L04-99	10.4	8	18	25	14.5	16	4.2	4.2	3
6	6	KQ2L06-99	12.8	10	20	27.5	17	17	11.4	9.0	3
8	8	KQ2L08-99	15.2	12	22.5	31.5	21	18.5	21.6	14.9	5
10	10	KQ2L10-99	18.5	14	25.5	35.5	23.5	21	35.2	25.0	9
12	12	KQ2L12-99	20.9	16	27	37.5	26	22	50.2	39.7	10
16	16	KQ2L16-99	26.5	20.9	34	53	41	25	100	(84)	42

Note 1) $\phi D1$: Max. diameter
Note 2) (): Values for soft nylon.

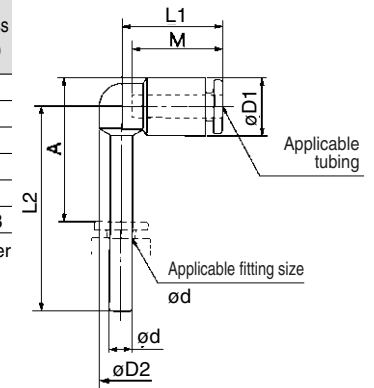


Extended Plug-in Elbow: KQ2W



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	Note) $\phi D1$		L1	L2	A	M	Effective area (mm ²)		Mass (g)
			$\phi D1$	$\phi D2$					Nylon	Urethane	
3.2	3.2	KQ2W23-99	9.6	7	17.5	35	24.5	15.5	3	2.5	2
4	4	KQ2W04-99	10.4	8	18	37	26	16	4.2	4.2	3
6	6	KQ2W06-99	12.8	10	20	41.5	31	17	11.4	9.0	4
8	8	KQ2W08-99	15.2	10	22.5	48	37	18.5	21.6	14.9	6
10	10	KQ2W10-99	18.5	14	25.5	55	43.5	21	35.2	25.0	9
12	12	KQ2W12-99	20.9	16	27	59.5	48	22	50.2	39.7	13

Note) $\phi D1$: Max. diameter

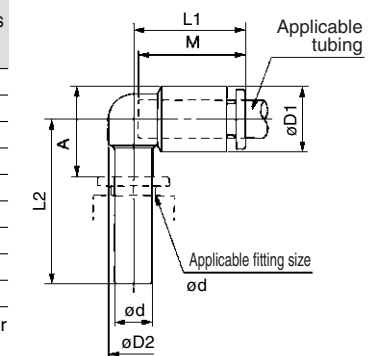


Reducer Elbow: KQ2L



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	Note) $\phi D1$		L1	L2	A	M	Effective area (mm ²)		Mass (g)
			$\phi D1$	$\phi D2$					Nylon	Urethane	
3.2	4	KQ2L23-04	9.6	7	17	25	13.5	15.5	3	2.5	2
	6	KQ2L04-06	10.4	8	18	26	14.5	16	4.2	4.2	3
8	KQ2L04-08	10		35	22						
6	8	KQ2L06-08	12.8	10	19.5	30.5	18	17	11.4	9.0	12
	10	KQ2L06-10			20	38.5	24				
8	10	KQ2L08-10	15.2	12	22.5	33.5	20.5	18.5	21.6	14.9	20
	12	KQ2L08-12			23	40.5	26				
10	12	KQ2L10-12	18.5	17	26.5	42	29.5	21	35.2	25.0	29
12	16	KQ2L12-16	20.9	17	28.5	49.5	34.5	22	50.2	39.7	53

Note) $\phi D1$: Max. diameter



- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

Series KQ2

Extended Male Elbow: KQ2W

<M5>



<R>



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	⁽¹⁾		L1	L2	A*	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
				øD1	øD2					Nylon	Urethane	
3.2	M5 x 0.8	KQ2W23-M5	8	9.6	10	17.5	30	31	15.5	2.8	2.4	10
	1/8	KQ2W23-01S	10				37	38				19
	1/4	KQ2W23-02S	14				43	42				41
4	M5 x 0.8	KQ2W04-M5	8	10.4	10	18	30	32	16	3.0	3.0	11
	1/8	KQ2W04-01S	10				36.6	38.5				23
	1/4	KQ2W04-02S	14				43	42.5				38
6	M5 x 0.8	KQ2W06-M5	8	12.8	10	20	30.5	33.5	17	3	3	11
	1/8	KQ2W06-01S	10				39.1	42.5				26
	1/4	KQ2W06-02S	14				45.5	46.5				41
8	1/8	KQ2W08-01S	12	15.2	12	23	42.6	47	18.5	20.5	14.2	30
	1/4	KQ2W08-02S	14				49	51				47
	3/8	KQ2W08-03S	17				50.4	52.5				74
10	1/4	KQ2W10-02S	17	18.5	17	26.5	56	59.5	21	33.5	23.8	66
	3/8	KQ2W10-03S	17				57.4	61				76
	1/2	KQ2W10-04S	22				64.1	66				145
12	1/4	KQ2W12-02S	17	20.9	17	28.5	57	62	22	47.7	37.7	68
	3/8	KQ2W12-03S	17				58.4	63.5				78
	1/2	KQ2W12-04S	22				65.1	68.5				147
16	3/8	KQ2W16-03S	22	26.5	20.9	34	68.4	76	25	71	(71)	101
	1/2	KQ2W16-04S	22				72.1	78				105

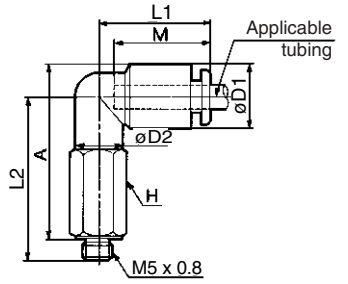
* Reference dimensions after R thread installation.

Note 1) øD1: Max. diameter

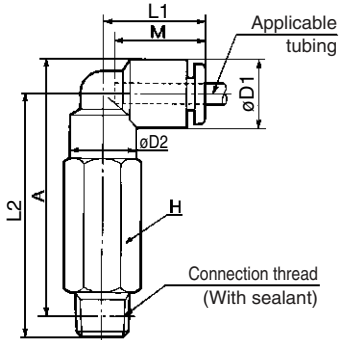
Note 2) (): Values for soft nylon



<M5>



<R>



Male Branch Tee: KQ2T

<M5>



<M6>



<R>



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	⁽¹⁾		L1	L2	A*	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
				øD1	øD2					Nylon	Urethane	
3.2	M5 x 0.8	KQ2T23-M5	7	8.4	10	15.3	13.2	14.3	12.7	3.2	2.7	3.2
	1/8	KQ2T23-01S	10				20.6	22.5				10
	1/4	KQ2T23-02S	14				25	24.5				20
4	M5 x 0.8	KQ2T04-M5	7	9.3	10	15.6	13.7	15.3	12.7	4.5	4.5	3.5
	M6 x 1.0	KQ2T04-M6	8				14.7					4.4
	1/8	KQ2T04-01S	10				21.1	23				13
6	1/4	KQ2T04-02S	14	10.4	10	18	25.5	25	16	6.0	4.1	19
	M5 x 0.8	KQ2T06-M5	7				14.7	17.4				4.4
	M6 x 1.0	KQ2T06-M6	8				15.7					5.3
8	1/8	KQ2T06-01S	10	11.6	10	21	22.1	25.5	17	13.9	11.0	12
	1/4	KQ2T06-02S	14				26.5	27.5				20
	3/8	KQ2T06-03S	17				27.9	29				34
10	1/8	KQ2T08-01S	12	12.8	12	24	23.6	28	18.5	26.3	18.2	14
	1/4	KQ2T08-02S	14				28	30				22
	3/8	KQ2T08-03S	17				29.4	31.5				36
12	1/8	KQ2T10-01S	12	15.2	12	24	26.1	32	21	21.6	14.9	31
	1/4	KQ2T10-02S	17				29.5	33				29
	3/8	KQ2T10-03S	17				30.9	34.5				39
16	1/2	KQ2T10-04S	22	18.5	17	26.5	35.1	37	25	35.2	25	66
	1/4	KQ2T12-02S	17				30.5	35.5				31
	3/8	KQ2T12-03S	17				31.9	37				41
16	1/2	KQ2T12-04S	22	20.9	17	28.5	36.1	39.5	22	57.2	45.2	68
	3/8	KQ2T16-03S	22				36.9	44.5				112
	1/2	KQ2T16-04S	22				39.6	46				116

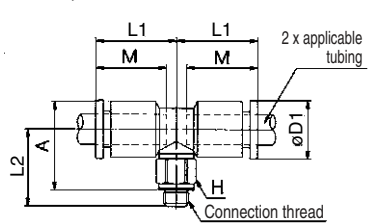
* Reference dimensions after R thread installation.

Note 1) øD1: Max. diameter

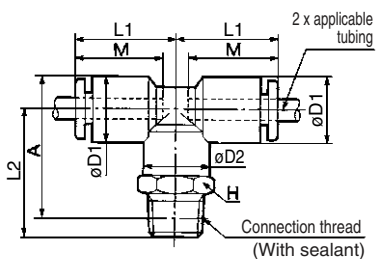
Note 2) (): Values for soft nylon



<M5, M6>



<R>

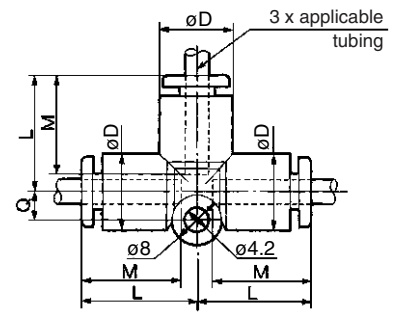


Union Tee: KQ2T



Applicable tubing O.D. (mm)	Model	⁽¹⁾ ϕD		L	Q	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
		ϕD	L				Nylon	Urethane	
3.2	KQ2T23-00	9.6	17.5	4.3	15.5	3.4	2.9	5	
4	KQ2T04-00	10.4	18	4.5	16	6.4	4.4	7	
6	KQ2T06-00	12.8	21	5.3	17	13.4	10.6	10	
8	KQ2T08-00	15.2	24	6	18.5	25.6	17.7	15	
10	KQ2T10-00	18.5	26.5	6.8	21	40	28.4	25	
12	KQ2T12-00	20.9	28.5	7.5	22	57.4	45.4	29	
16	KQ2T16-00	26.5	34	10	25	100	(84)	40	

Note 1) ϕD : Max. diameter
 Note 2) (): Valves for soft nylon.

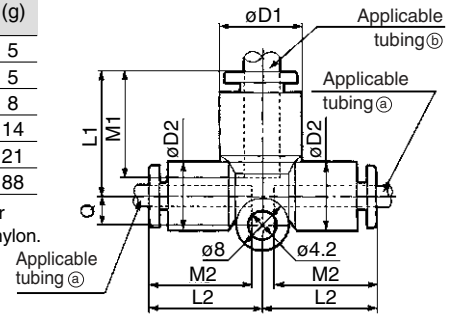


Different Diameter Tee: KQ2T



Applicable tubing O.D. (mm)		Model	⁽¹⁾ $\phi D1$ $\phi D2$		L1	L2	Q	M1	M2	Effective area ⁽²⁾ (mm ²)		Mass (g)
(a)	(b)		$\phi D1$	$\phi D2$						Nylon	Urethane	
3.2	4	KQ2T23-04	10.4	9.6	18	17.5	4.3	16	15.5	3.8	3.5	5
4	6	KQ2T04-06	12.8	10.4	19.5	18	4.5	17	16	7.1	6.5	5
6	8	KQ2T06-08	15.2	12.8	22.5	21	5.3	18.5	17	16.4	16.4	8
8	10	KQ2T08-10	18.5	15.2	26.5	24	6	21	18.5	36	27.2	14
10	12	KQ2T10-12	20.9	18.5	28.5	26.5	6.8	22	21	56	44.5	21
12	16	KQ2T12-16	26.5	26.5	34	39	10	25	22	108.5	(92.2)	88

Note 1) $\phi D1$: Max. diameter
 Note 2) (): Values for soft nylon.

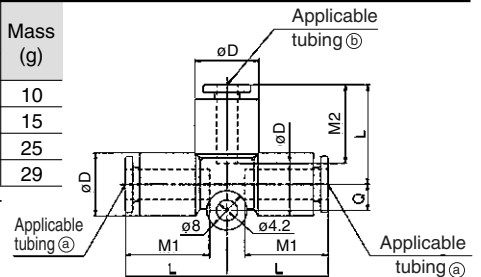


Different Diameter Tee: KQ2T



Applicable tubing O.D. (mm)		Model	Note) ϕD	L	Q	M1	M2	Effective area (mm ²)		Mass (g)
(a)	(b)							Nylon	Urethane	
6	4	KQ2T06-04	12.8	21	5.3	17	16	6.4	4.4	10
8	6	KQ2T08-06	15.2	24	6	18.5	17	13.4	10.6	15
10	8	KQ2T10-08	18.5	26.5	6.8	21	18.5	25.6	17.7	25
12	10	KQ2T12-10	20.9	28.5	7.5	22	21	40	28.4	29

Note) ϕD : Max. diameter

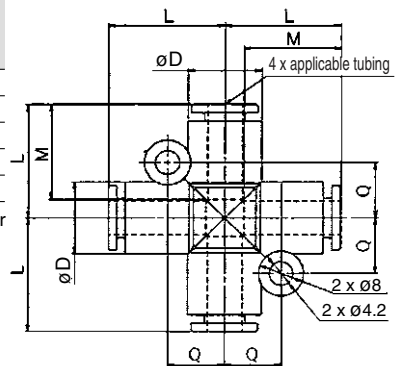


Cross: KQ2TW



Applicable tubing O.D. (mm)		Model	Note) ϕD	L	Q	M	Effective area (mm ²)		Mass (g)
(a)	(b)						Nylon	Urethane	
4		KQ2TW04-00	10.4	18	8.7	16	6.4	4.4	9
6		KQ2TW06-00	12.8	21	9.9	17	13.4	10.6	13
8		KQ2TW08-00	15.2	24	11.1	18.5	25.6	17.7	20
10		KQ2TW10-00	18.5	26.5	12.8	21	40	28.4	33
12		KQ2TW12-00	20.9	28.5	13.9	22	57.4	45.4	39

Note) ϕD : Max. diameter

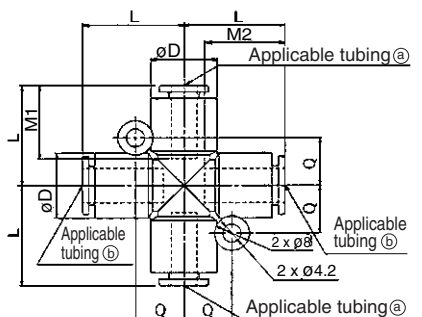


Different Diameter Cross: KQ2TX



Applicable tubing O.D. (mm)		Model	Note) ϕD	L	Q	M1	M2	Effective area (mm ²)		Mass (g)
(a)	(b)							Nylon	Urethane	
6	8	KQ2TX06-08	15.2	23	11.1	18.5	17	13.4	10.6	13
8	10	KQ2TX08-10	18.5	26.5	12.8	21	18.5	25.6	17.7	27
10	12	KQ2TX10-12	20.9	28.5	13.9	22	21	40	28.4	36

Note) ϕD : Max. diameter



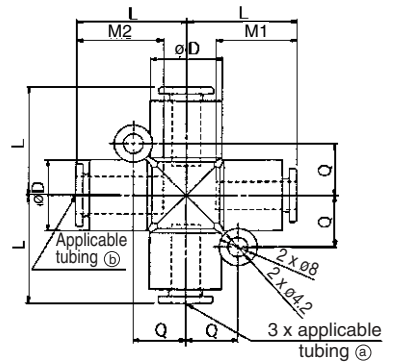
Series KQ2

Different Diameter Cross: KQ2TY



Applicable tubing O.D. (mm)		Model	Note) øD	L	Q	M1	M2	Effective area (mm ²)		Mass (g)
Ⓐ	Ⓑ							Nylon	Urethane	
6	8	KQ2TY06-08	15.2	23	11.1	17	18.5	13.4	10.6	15
8	10	KQ2TY08-10	18.5	26.5	12.8	18.5	21	25.6	17.7	23
10	12	KQ2TY10-12	20.9	28.5	13.9	21	22	40	28.4	35

Note) øD: max. diameter



Male Run Tee: KQ2Y

<M5>



<M6>



<R>



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	Note 1)		L1	L2	L3	A*	M	Effective area 2)		Mass (g)
				øD1	øD2						Nylon	Urethane	
3.2	M5 x 0.8	KQ2Y23-M5	7	8.4	—	15.4	13.2	14.8	24.9	12.7	3.2	2.7	3.2
	1/8	KQ2Y23-01S	10	9.6	10	17.5	20.6	—	35	15.5	3.4	2.9	10
	1/4	KQ2Y23-02S	14				25	37	20				
4	M5 x 0.8	KQ2Y04-M5	7	9.3	—	15.6	13.7	14.8	25.4	12.7	4.5	4.5	3.5
	M6 x 1.0	KQ2Y04-M6	8				14.7						—
	1/8	KQ2Y04-01S	10	10.4	10	18	21.1	—	36	16	6.4	4.4	13
1/4	KQ2Y04-02S	14	25.5				38						19
6	M5 x 0.8	KQ2Y06-M5	7	11.6	—	17.1	14.7	17.1	28.7	13.5	4.5	4.5	4.5
	M6 x 1.0	KQ2Y06-M6	8				15.7						—
	1/8	KQ2Y06-01S	10	12.8	10	20	22.1	—	39	17	13.4	10.6	12
1/4	KQ2Y06-02S	14	26.5				41						20
8	3/8	KQ2Y06-03S	17	15.2	12	23	27.9	—	42.5	18.5	25.6	17.7	34
	1/8	KQ2Y08-01S	12				23.6						43.5
	1/4	KQ2Y08-02S	14	28	45.5	22							
10	3/8	KQ2Y08-03S	17	18.5	17	26.5	29.4	—	47	21	40.0	28.4	36
	1/8	KQ2Y10-01S	7				26.1						49.5
	1/4	KQ2Y10-02S	10	29.5	50.5	29							
12	3/8	KQ2Y10-03S	17	20.9	17	28.5	30.9	—	52	22	57.4	45.4	39
	1/2	KQ2Y10-04S	22				35.1						54.5
	1/4	KQ2Y12-02S	10	30.5	53.5	31							
16	3/8	KQ2Y12-03S	17	26.5	20.9	34	31.9	—	55	25	81	(81)	41
	1/2	KQ2Y12-04S	22				36.1						57.5
	3/8	KQ2Y16-03S	17	36.9	65.5	112							
1/2	KQ2Y16-04S	22	40.1	67	113								

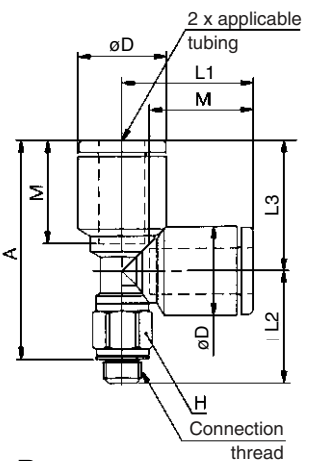
* Reference dimensions after R thread installation.

Note 1) øD1: Max. diameter

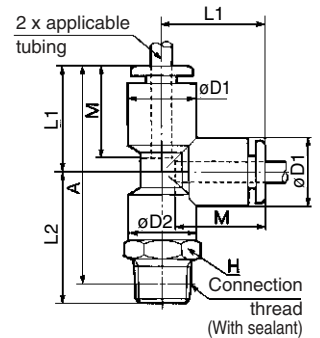
Note 2) (): Values for soft nylon



<M5, M6>



<R>



Male Delta Union: KQ2D

<M5, M6>



<R>



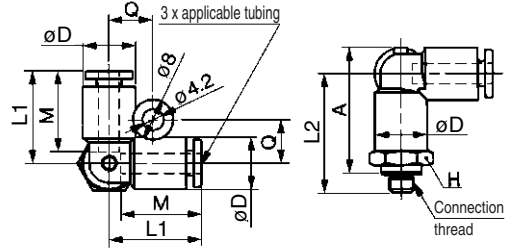
Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	Note) øD	L1	L2	A*	M	Q	Effective area (mm ²)		Mass (g)	
										Nylon	Urethane		
4	M5 x 0.8	KQ2D04-M5	11	10.4	18.5	24	25.5	16	8.7	2.2	2.2	10	
	M6 x 1.0	KQ2D04-M6				24.5				4.3	4.3		
	1/8	KQ2D04-01S				25.6	27.5			6.0	6.0		12
	1/4	KQ2D04-02S				30	29.5			6.0	6.0		21
6	M5 x 0.8	KQ2D06-M5	13	12.8	20.5	26	28.5	17	9.9	4.3	4.3	12	
	M6 x 1.0	KQ2D06-M6				26.5				13.9	11.0		14
	1/8	KQ2D06-01S				28.1	31.5			14			21
	1/4	KQ2D06-02S				32	33			17			34
	3/8	KQ2D06-03S				33.4	34.5						
	1/8	KQ2D08-01S				32.6	37						
8	1/4	KQ2D08-02S	17	15.2	23.5	36	38	18.5	11.1	26.3	18.2	26	
	3/8	KQ2D08-03S	36.4	38.5			35						
	1/4	KQ2D10-02S	39	43			39						
10	3/8	KQ2D10-03S	19	18.5	26.5	39.4	43.5	21	12.8	40.8	29.0	40	
	1/2	KQ2D10-04S	22			43.1	45			62			
	1/4	KQ2D12-02S	22	20.9	28.5	41.5	46.5			55			
12	3/8	KQ2D12-03S	22	20.9	28.5	41.9	47	22	13.9	57.2	45.2	56	
	1/2	KQ2D12-04S	22			45.1	48.5			63			

* Reference dimensions after R thread installation.

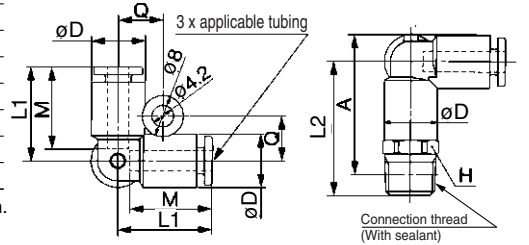
Note) øD: Max. diameter



<M5, M6>



<R>

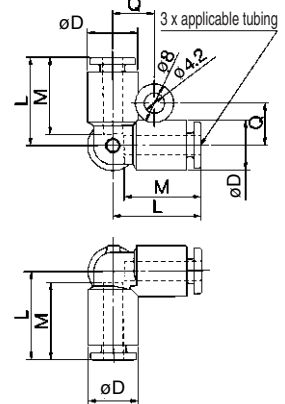


Delta Union: KQ2D



Applicable tubing O.D. (mm)	Model	Note) øD	L	Q	M	Effective area (mm ²)		Mass (g)
						Nylon	Urethane	
4	KQ2D04-00	10.4	18.5	8.7	16	6.0	4.1	5
6	KQ2D06-00	12.8	20.5	9.9	17	13.9	11.0	7
8	KQ2D08-00	15.2	23.5	11.1	18.5	26.3	18.2	11
10	KQ2D10-00	18.5	26.5	12.8	21	40.8	29.0	19
12	KQ2D12-00	20.9	28.5	13.9	22	57.2	45.2	24

Note) øD: Max. diameter



Branch "Y": KQ2U

<M5, M6>



<R>



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	Note 1) øD	L	P	A*	M	Effective area (2) (mm ²)		Mass (g)	
									Nylon	Urethane		
3.2	M5 x 0.8	KQ2U23-M5	10	9.6	38	9.6	34.5	15.5	2.2	2.2	9	
	1/8	KQ2U23-01S	11		40.1		37		3.4	2.9		14
	1/4	KQ2U23-02S	14		43.5		38					
4	M5 x 0.8	KQ2U04-M5	11	10.4	39.5	10.4	36	16	2.2	2.2	4	
	M6 x 1.0	KQ2U04-M6			40				4.2	4.2		10
	1/8	KQ2U04-01S			41.1		38		11			
	1/4	KQ2U04-02S			45.5		40		20			
6	M5 x 0.8	KQ2U06-M5	13	12.8	42.5	12.8	39	17	2.2	2.2	12	
	M6 x 1.0	KQ2U06-M6			43				13.4	10.6		11
	1/8	KQ2U06-01S			44.6		41.5		11			
	1/4	KQ2U06-02S			48.5		43		21			
	3/8	KQ2U06-03S			49.9		44.5		34			
8	1/8	KQ2U08-01S	17	15.2	51.6	15.2	48.5	18.5	25.6	17.7	15	
	1/4	KQ2U08-02S	17	55	50		23					
	3/8	KQ2U08-03S	55.4	50	35							
10	1/4	KQ2U10-02S	19	18.5	60.5	18.5	55	21	40	28.4	30	
	3/8	KQ2U10-03S	60.9	55.5	40							
	1/2	KQ2U10-04S	64.1	57	65							
12	1/4	KQ2U12-02S	22	20.9	64	20.9	58.5	22	57.4	45.4	32	
	3/8	KQ2U12-03S	64.4	59	40							
	1/2	KQ2U12-04S	67.6	60.5	65							
16	3/8	KQ2U16-03S	27	26.5	74.9	26.5	69.5	25	81	(81)	106	
	1/2	KQ2U16-04S	78.1	71	113		(96)		111			

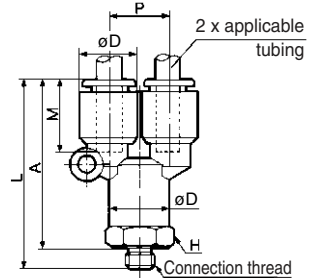
* Reference dimensions after R thread installation.

Note 1) øD: Max. diameter

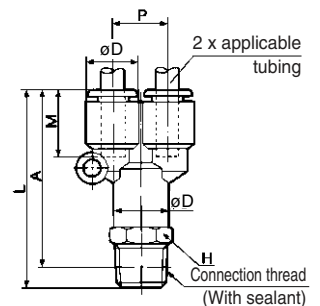
Note 2) (): Values for soft nylon



<M5, M6>



<R>



Series KQ2

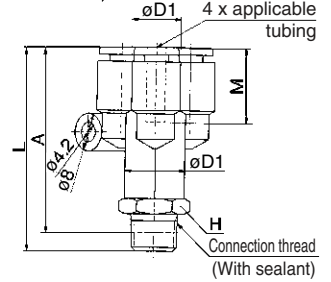
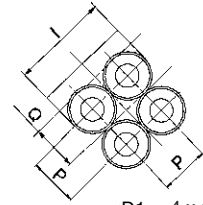
Delta Branch: KQ2UD



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	Note) $\phi D1$	$\phi D2$	L	I	A*	Q	M	P	Effective area (mm ²)		Mass (g)
												Nylon	Urethane	
4	1/8	KQ2UD04-01S	13	10.4	12.8	42.6	21	39.5	9.7	16	10.4	4.2	4.2	17
	1/4	KQ2UD04-02S	14			46.5		41				25		
6	1/8	KQ2UD06-01S	17	12.8	15.2	49.6	26	46.5	11.7	17	12.8	13.4	10.6	29
	1/4	KQ2UD06-02S				53		47.5				29		

* Reference dimensions after R thread installation.

Note) $\phi D1$: Max. diameter



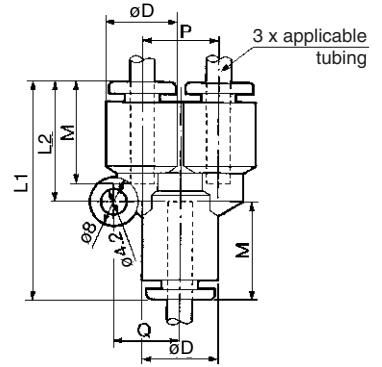
Union "Y": KQ2U



Applicable tubing O.D. (mm)	Model	(1) ϕD	L1	L2	P	Q	M	Effective area (mm ²) (2)		Mass (g)
								Nylon	Urethane	
3.2	KQ2U23-00	9.6	33	17.5	9.6	9	15.5	3.4	2.9	5
4	KQ2U04-00	10.4	34	18	10.4	9.7	16	4.2	4.2	7
6	KQ2U06-00	12.8	37	20	12.8	11.7	17	13.4	10.6	9
8	KQ2U08-00	15.2	42.5	24.5	15.2	13.7	18.5	25.6	17.7	11
10	KQ2U10-00	18.5	48	27.5	18.5	16.1	21	40	28.4	16
12	KQ2U12-00	20.9	51	30	20.9	18.1	22	57.4	45.4	23
16	KQ2U16-00	26.5	61.5	36.5	26.5	23	25	113	(96)	54

Note 1) ϕD : Max. diameter

Note 2) (): Values for soft nylon.

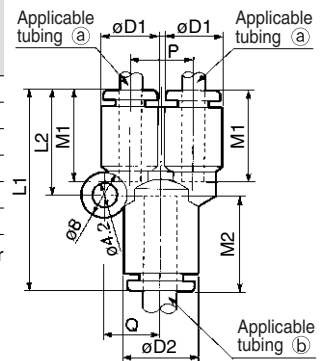


Different Diameter Union "Y": KQ2U



Applicable tubing O.D. (mm)		Model	Note) $\phi D1$	Note) $\phi D2$	L1	L2	P	Q	M1	M2	Effective area (mm ²)		Mass (g)
(a)	(b)										Nylon	Urethane	
3.2	4	KQ2U23-04	9.6	10.4	33.5	17.5	9.6	9	15.5	16	3.2	2.7	5
4	6	KQ2U04-06	10.4	12.8	35	18	10.4	9.7	16	17	4.2	4.2	6
6	8	KQ2U06-08	12.8	15.2	39.5	20	12.8	11.7	17	18.5	13.4	10.6	11
8	10	KQ2U08-10	15.2	18.5	45	24.5	15.2	13.7	18.5	21	25.6	17.7	18
10	12	KQ2U10-12	18.5	20.9	49	27.5	18.5	16.1	21	22	40	28.4	27
12	16	KQ2U12-16	26.5	26.5	66.5	41.5	26.5	23	22	25	57.4	45.4	100

Note) $\phi D1, \phi D2$: Max. diameter

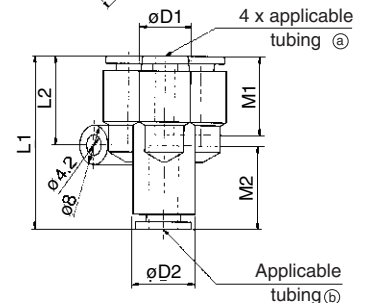
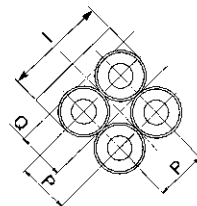


Different Diameter Double Union "Y": KQ2UD



Applicable tubing O.D. (mm)		Model	Note) $\phi D1$	Note) $\phi D2$	L1	L2	P	I	Q	M1	M2	Effective area (mm ²)		Mass (g)
(a)	(b)											Nylon	Urethane	
4	6	KQ2UD04-06	10.4	12.8	35.5	18.2	10.4	21	9.7	16	17	4.2	4.2	10
6	8	KQ2UD06-08	12.8	15.2	40.5	20.3	12.8	26	11.7	17	18.5	13.4	10.6	17

Note) $\phi D1, \phi D2$: Max. diameter

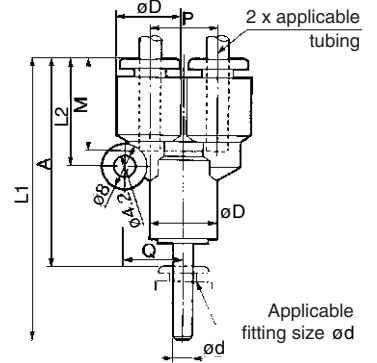


Plug-in “Y”: KQ2U



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	(1)		P	Q	A	M	Effective area (2) (mm ²)		Mass (g)	
			ϕD	L1					Nylon	Urethane		
3.2	3.2	KQ2U23-99	9.6	50	17.5	9.6	9	35	15.5	3.4	2.9	6
4	4	KQ2U04-99	10.4	51.5	18	10.4	9.7	35.5	16	4.2	4.2	12
6	6	KQ2U06-99	12.8	55.5	20	12.8	11.7	38.5	17	13.4	10.6	18
8	8	KQ2U08-99	15.2	64.5	24.5	15.2	13.7	46	18.5	25.6	17.7	21
10	10	KQ2U10-99	18.5	71.5	27.5	18.5	16.1	50.5	21	40	28.4	26
12	12	KQ2U12-99	20.9	75.5	30	20.9	18.1	53.5	22	57.4	45.4	32
16	16	KQ2U16-99	26.5	90	36.5	26.5	23	65	25	113	(96)	78

Note 1) ϕD : Max. diameter
 Note 2) (): Values for soft nylon.

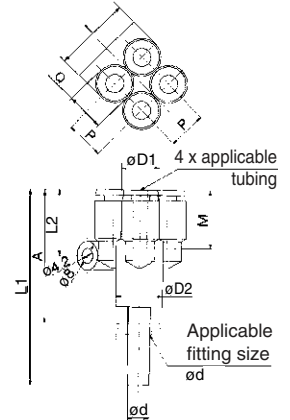


Double Plug-in “Y”: KQ2XD



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	Note)		L1	L2	I	Q	A	P	M	Effective area (mm ²)		Mass (g)
			$\phi D1$	$\phi D2$								Nylon	Urethane	
4	6	KQ2XD04-06	10.4	12.8	54	18.2	21	9.7	37	10.4	16	4.2	4.2	10
6	8	KQ2XD06-08	12.8	15.2	62.5	20.3	26	11.7	44	12.8	17	13.4	10.6	23

Note) $\phi D1$: Max. diameter

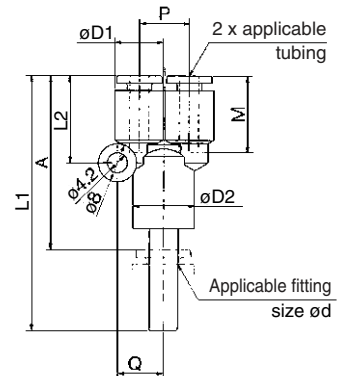


Different Diameter Plug-in “Y”: KQ2X



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	Note)		L1	L2	A	P	Q	M	Effective area (mm ²)		Mass (g)
			$\phi D1$	$\phi D2$							Nylon	Urethane	
4	6	KQ2X04-06	10.4	12.8	53.5	18.5	36.5	10.4	9.7	16	4.2	4.2	7
6	8	KQ2X06-08	12.8	15.2	61.5	20.5	43	12.8	11.7	17	13.4	10.6	18
8	10	KQ2X08-10	15.2	18.5	68.5	24.5	47.5	15.2	13.7	18.5	25.6	17.7	28
10	12	KQ2X10-12	18.5	20.9	73.5	27.5	51.5	18.5	16.1	21	40	28.4	42

Note) $\phi D1$: Max. diameter



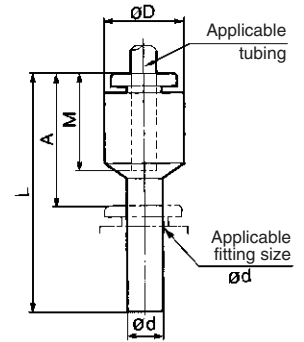
- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

Series KQ2

Plug-in Reducer: KQ2R



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	⁽¹⁾		M	Effective area ⁽²⁾ (mm ²)		Mass (g)	
			ϕD	L		A	Nylon		Urethane
3.2	4	KQ2R23-04	9.6	33.5	18.5	15.5	3.4	2.9	2
	6	KQ2R04-06	10.4	34.5	17.5	16	5.6	4	1.8
4	8	KQ2R04-08		36.5	18				2.0
	10	KQ2R04-10	12.8	39.5	18.5	17	4	4	3.3
6	4	KQ2R06-04	12.8	37	21				4
	8	KQ2R06-08	12.8	37	18.5	13.1	10.4	3	
	10	KQ2R06-10		39.5	18.5			4.7	
8	12	KQ2R06-12	15.2	42	20	18.5	26.1	18.0	4.0
	10	KQ2R08-10	15.2	41	20				4.6
10	12	KQ2R10-12	18.5	44.5	23	21	41.5	32.8	33
	16	KQ2R10-16	20.9	50.5	25.5				(29.5)
12	16	KQ2R12-16	20.9	50.5	25.5	22	58.3	(46.1)	37

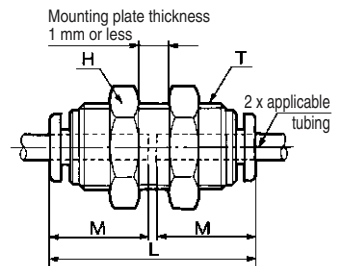


Note 1) ϕD : Max. diameter
 Note 2) (): Values for soft nylon.

Bulkhead Union: KQ2E



Applicable tubing O.D. (mm)	Model	T (M)	H (width across flats)	L	Mounting hole	M	Effective area ^{Note)} (mm ²)		Mass (g)
							Nylon	Urethane	
3.2	KQ2E23-00	M12 x 1	14	31.5	13	15.5	3.4	2.9	26
4	KQ2E04-00	M12 x 1	14	32.5	13	16	5.6	4	26
6	KQ2E06-00	M14 x 1	17	34.5	15	17	13.1	10.4	33
8	KQ2E08-00	M16 x 1	19	38	17	18.5	26.1	18.0	52
10	KQ2E10-00	M20 x 1	24	42.5	21	21	41.5	29.5	70
12	KQ2E12-00	M22 x 1	27	44	23	22	58.3	46.1	90
16	KQ2E16-00	M28 x 1.5	32	51	29	25	113	(96)	115

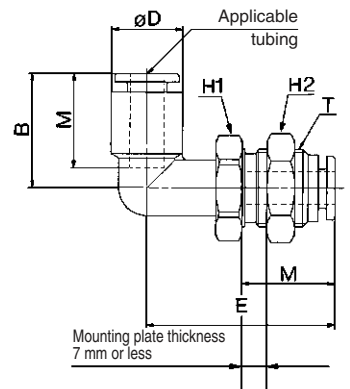


Note) (): Values for soft nylon.

Bulkhead Male Elbow: KQ2LE



Applicable tubing O.D. (mm)	Model	T (M)	H1 (width across flats)	H2 (width across flats)	B	E	^{Note)} ϕD	Mounting hole	M	Effective area ^{Note)} (mm ²)		Mass (g)
										Nylon	Urethane	
4	KQ2LE04-00	M12 x 1	14	14	18.5	31	10.4	13	16	4.2	4.2	18
6	KQ2LE06-00	M14 x 1	17	17	20.5	34	12.8	15	17	11.4	9.0	25
8	KQ2LE08-00	M16 x 1	17	19	23.5	38.5	15.2	17	18.5	21.6	14.9	33
10	KQ2LE10-00	M20 x 1	22	24	26.5	43.5	18.5	21	21	35.2	25.0	63
12	KQ2LE12-00	M22 x 1	24	27	28.5	45.5	20.9	23	22	50.2	39.7	77

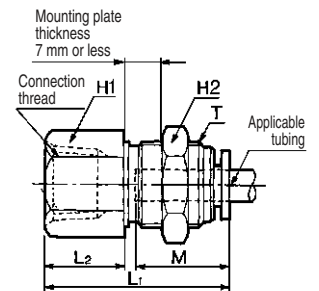


Note) ϕD : Max. diameter

Bulkhead Connector: 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 ^{Note)} (mm ²)		Mass (g)
										Nylon	Urethane	
3.2	1/4	KQ2E23-02	M12 x 1	17	14	31.5	15	13	15.5	3.4	2.9	13
	1/8	KQ2E04-01	M12 x 1	14	14	27.5	11	13	16	5.6	4	16
4	1/4	KQ2E04-02		17	14	31	15	15	17	13.1	10.4	35
	1/8	KQ2E06-01	M14 x 1	17	17	28	11					30
6	1/4	KQ2E06-02		17	17	31.5	15	15	17	13.1	10.4	30
	3/8	KQ2E06-03	19	17	33.5	17	34					
8	1/8	KQ2E08-01	M16 x 1	17	19	27.5	7.5	17	18.5	26.1	18.0	28
	1/4	KQ2E08-02		19	19	33	13					33
10	3/8	KQ2E08-03	M20 x 1	19	19	35	15	21	21	41.5	29.5	34
	1/4	KQ2E10-02		22	24	34.5	12.5					53
12	3/8	KQ2E10-03	M22 x 1	22	24	36.5	14	23	22	58.3	46.1	67
	1/2	KQ2E12-04		24	27	37	14					92
16	3/8	KQ2E12-03	M28 x 1.5	24	27	41	18	29	25	96	(96)	59
	1/2	KQ2E12-04		40	14	113	127					
		KQ2E16-03			44	18						132



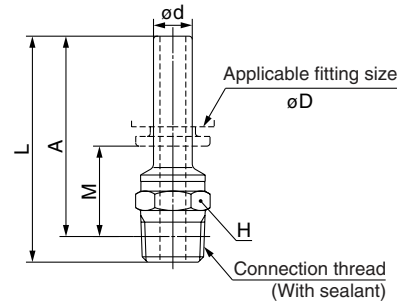
Note) (): Values for soft nylon.

Adaptor: KQ2N



Applicable fitting size ϕD	Connection thread R	Model	H (width across flats)	L	A*	M	ϕd	Mass (g)
4	M5 x 0.8	KQ2N04-M5	7	32	29	13	2.5	2
	1/8	KQ2N04-01S	10	33.1	30	14		6
6	M5 x 0.8	KQ2N06-M5	7	33	30	13	2.5	2
	1/8	KQ2N06-01S	10	34.1	31	14		5
	1/4	KQ2N06-02S	14	37	31.5	14.5		14
8	1/4	KQ2N08-02S	14	38.5	33	14.5	6	17
	3/8	KQ2N08-03S	17	39.9	34.5	16		30
10	3/8	KQ2N10-03S	17	44.9	39.5	18.5	7.5	31

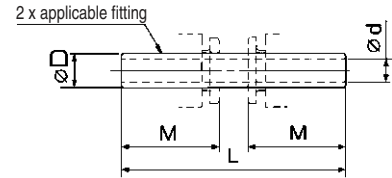
* Reference dimensions after R thread is screwed in.



Nipple: KQ2N



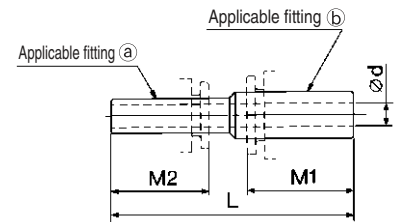
Applicable fitting ϕD	Model	L	M	ϕd	Mass (g)
4	KQ2N04-99	37	16	2.5	1
6	KQ2N06-99	39	17	4	2
8	KQ2N08-99	43	18.5	6	2
10	KQ2N10-99	49	21	7.5	4
12	KQ2N12-99	52	22	9	20.6
16	KQ2N16-99	57	25	13	31



Reducer Nipple: KQ2N



Applicable fitting		Model	L	M1	M2	ϕd	Mass (g)
(a)	(b)						
4	6	KQ2N04-06	38	17	16	2.5	2
6	8	KQ2N06-08	42	18.5	17	4	2
8	10	KQ2N08-10	47	21	18.5	6	2
10	12	KQ2N10-12	51	22	21	8	18.2
12	16	KQ2N12-16	55	25	22	9	29

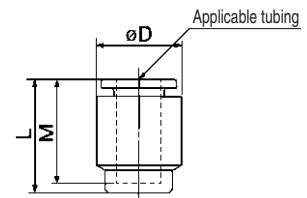


Tube Cap: KQ2C

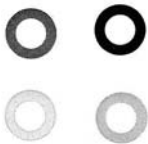


Applicable tubing O.D. (mm)	Model	Note) ϕD	L	M	Mass (g)
4	KQ2C04-00	10.4	17	16	3
6	KQ2C06-00	12.8	18.5	17	3
8	KQ2C08-00	15.2	20.5	18.5	4
10	KQ2C10-00	18.5	23	21	6
12	KQ2C12-00	20.9	24	22	8
16	KQ2C16-00	26.5	28	25	13

Note) ϕD : Max. diameter

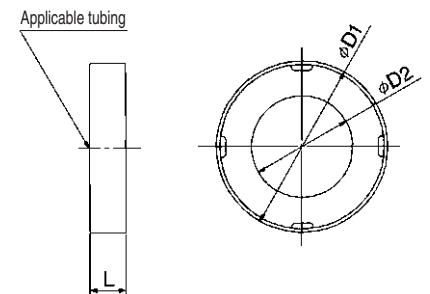


Color Cap: KQ2C



Applicable tubing O.D. (mm)	Model	$\phi D1$	$\phi D2$	L	Mass (g)	Application
4	KQ2C-04□	10.1	5.2	2.9	0.1	
	KQ2C-04A-□	8.5	5	2.2	0.1	KQH, KQ2H04-M5, M6 KQS, KQ2S04-M5, M6
4	KQ2C-04B-□	9.7	5	2.2	0.1	KQL, KQ2L04-M5, M6 KQT, KQ2T04-M5, M6 KQY, KQ2Y04-M5, M6
6	KQ2C-06□	12.1	7.2	2.9	0.1	
6	KQ2C-06A-□	10.5	7	2.2	0.1	KQH, KQ2H06-M5, M6 KQS, KQ2S06-M5, M6
6	KQ2C-06B-□	12.0	7	2.2	0.1	KQL, KQ2L06-M5, M6 KQT, KQ2T06-M5, M6 KQY, KQ2Y06-M5, M6
8	KQ2C-08□	14.1	9.2	2.9	0.1	
10	KQ2C-10□	17.1	11.2		0.2	
12	KQ2C-12□	19.1	13.2		0.2	
16	KQ2C-16□	26.3	17.2	3.9	0.3	

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

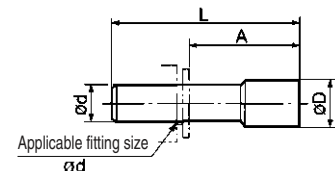


Plug: KQ2P, KQP



Applicable fitting size ϕd	Model (Note)		ϕD	L	A	Mass (g)
3.2	KQ2P-23	KQP-23	5	31.5	16	1
4	KQ2P-04	KQP-04	6	32	16	1
6	KQ2P-06	KQP-06	8	35	18	1
8	KQ2P-08	KQP-08	10	39	20.5	2
10	KQ2P-10	KQP-10	12	43	22	3.5
12	KQ2P-12	KQP-12	14	45.5	24	5
16	KQ2P-16	KQP-16	20.9	47	22	8

Note) KQ2P (White), KQP (Blue)





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

1 Grease-free Specifications

Symbol	Specifications
X17	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue
X29	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Copper-free (Electroless nickel plated)
X39	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double package, resin body: white)
X94	Grease-free Rubber material: FKM (With fluorine coating) Release button color: Light blue

2 Other Specifications

Symbol	Specifications
X2	Copper-free (With electroless nickel plated)
X12	Lubricant: White Vaseline Release button color: White
X34	Rubber material: FKM
X41	With fixed throttle ^{Note)}

Note) Compatible with male connector and male elbow only
Consult SMC separately for the available fixed throttle diameters.

Spare Parts

Description	Part no.	Applicable thread	Material	Applicable model
Gasket	M-5G2	M5	Stainless steel 304, NBR	—
	M-6G	M6		—
Pipe nut	KQ04-P01	—	—	KQ2E23-00, KQ2E04-00, KQ2E23-02 KQ2E04-01, KQ2E04-02, KQ2LE04-00
	KQ06-P01	—	—	KQ2E06-00, KQ2E06-01 KQ2E06-02, KQ2E06-03, KQ2LE06-00
	KQ08-P01	—	—	KQ2E08-00, KQ2E08-01 KQ2E08-02, KQ2E08-03, KQ2LE08-00
	KQ10-P01	—	—	KQ2E10-00, KQ2E10-02 KQ2E10-03, KQ2LE10-00
	KQ12-P01	—	—	KQ2E12-00, KQ2E12-03 KQ2E12-04, KQ2LE12-00
	KQ16-P01	—	—	KQ2E16-00 KQ2E16-03, KQ2E16-04

Inch-size One-touch Fittings

Series KQ2

Applicable Tubing: Inch Size
Connection Thread: UNF, NPT

How to Order

KQ 2 H 05 - 34 S -

One-touch fittings

Product's color

Symbol	Body	Release button
2	White	Orange
Nil	Black	Red

Applicable tubing O.D.

01	ø 1/8"
03	ø 5/32"
05	ø 3/16"
07	ø 1/4"
09	ø 5/16"
11	ø 3/8"
13	ø 1/2"

Made to Order
(Refer to page 75 for details.)

Port size/Applicable tubing O.D.

Thread connection	Tubing (Rod) connection
32	10-32 UNF
33	NPT 1/16
34	NPT 1/8
35	NPT 1/4
36	NPT 3/8
37	NPT 1/2
00	Same dia. tubing
99	Same dia. rod
01	ø 1/8"
03	ø 5/32"
05	ø 3/16"
07	ø 1/4"
09	ø 5/16"
11	ø 3/8"
13	ø 1/2"

With thread sealant (Male thread)

Nil	None
S	With thread sealant



Note) Port size with sealant: Only
NPT 1/16
NPT 1/8
NPT 1/4
NPT 3/8
NPT 1/2

Model

H	Male connector
	Straight
	Different dia. straight *
S	Hexagon socket head male connector *
F	Female union *
L	Male elbow
	Elbow
	Plug-in elbow
	Reducer elbow
K	45° male elbow *
V	Universal male elbow *
VS	Hexagon socket head universal male elbow *
VF	Universal female elbow *
LF	Female elbow *
VD	Double universal male elbow *
VT	Triple universal male elbow *
Z	Branch universal male elbow *
ZD	Double branch universal male elbow *
ZT	Triple branch universal male elbow *
W	Extended male elbow
	Male branch tee
T	Union tee
	Different dia. tee *
TW	Cross union *
Y	Male run tee
	Branch "Y"
	Union "Y"
U	Plug-in "Y"
	Different dia. union "Y" *
X	Different dia. plug-in "Y" *
R	Plug-in reducer
E	Bulkhead union
	Bulkhead connector
LE	Bulkhead union elbow *



* Available only for KQ2 (White color body).

Accessory

Symbol	Name
KQ2N	Nipple
	Reducer nipple
KQ2C	Tube cap
KQ2P (KQP)	Plug (Orange)

Use the below part number to order the gasket for sealing 10-32 UNF thread.

Gasket for 10-32 UNF: M-10/32G

Series KQ2: White body
Series KQ: Black body

Guide

Collet

Chuck

Suitable for use with nylon and urethane.
Large retaining force.
Has large retaining force while holding force is increased by the collet.

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.

Connection thread
UNF, NPT

Release button

KQ2: Orange
KQ : Red

Light force for removal
When the fitting is removed from the tube, the chuck and collet are released, thus preventing them from biting into the tube excessively.

Tube

Inch size
Ø1/8", Ø5/32", Ø3/16", Ø1/4", Ø5/16", Ø3/8", Ø1/2"

Body

O-ring

Stud

Effective when piping in a confined space.
The body and the threaded portion can rotate (for positioning to some extent).

PAT.

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T



Product's Color

Series	Body	Release button
Series KQ2	White	Orange
Series KQ	Black	Red

Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon ⁽¹⁾ , Polyurethane
Tubing O.D.	Ø 1/8", Ø 5/32", Ø 3/16", Ø 1/4", Ø 5/16", Ø 3/8", Ø 1/2"

Note 1) Soft nylon tubing is not compatible with water.

Specifications

Fluid		Air/Water ⁽²⁾
Operating pressure range ⁽³⁾		-100 kPa to 1 MPa
Proof pressure		3 MPa
Ambient and fluid temperature		-5 to 60°C, Water: 0 to 40°C (No freezing)
Thread	Mounting section	ANSI/ASME B1.20.1 (NPT thread) JIS B0208 (UNF thread)
	Nut section	JIS B0208 (UNF thread)
Seal on the threads		With sealant or none



Note 2) The surge pressure must be under the maximum operating pressure.

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



Made to Order
Refer to page 75 for details.

Principal Parts Material

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

Series KQ2

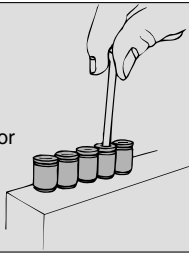
Model

Hex. socket head male connector

KQ2S P. 64



Internal hex. allows thread connection by using an allen wrench for confined spaces.

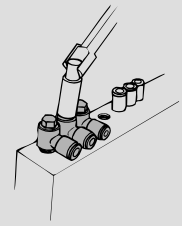


Universal male elbow

KQ2V P. 66



Universal male elbow allows thread connection by using a socket wrench for confined spaces.

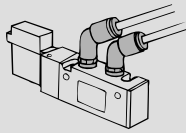


45° male elbow

KQ2K P. 66



Use to pipe in 45° angle direction from female thread. Model in-between of male connector and male elbow.

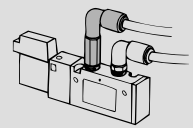


Extended male elbow

KQ2W P. 70



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

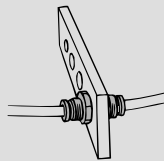


Bulkhead union

KQ2E P. 73



Use to connect tubes through a panel.

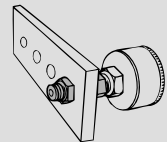


Bulkhead connector

KQ2E P. 74



Use to connect male thread and tube through a panel.

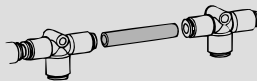


Nipple

KQ2N P. 74



Use to connect One-touch fittings.

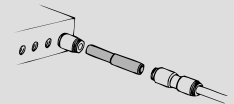


Reducer nipple

KQ2N P. 74



Use to connect One-touch fittings that are different tubing O.Ds.



Male connector

KQ2H P. 64



Use to pipe in the same direction from female thread. Most general style.

Hexagon socket head universal male elbow

KQ2VS P. 66



Hex. on the top allows thread connection by using an allen wrench for confined spaces.

Branch universal male elbow

KQ2Z P. 68



Hexagonal head allows thread connection by using a box wrench. Use for branch connection.

Female connector

KQ2F P. 64



Use to pipe from male thread such as pressure gauge.

Universal female elbow

KQ2VF P. 67



Use to branch line in the same direction or at right angles from male or female thread. Multiplex connection possible.

Double branch universal male elbow

KQ2ZD P. 68



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

Straight union

KQ2H P. 65



Use to connect tubes in the same direction.

Female elbow

KQ2LF P. 67



Use to pipe at right angles to male thread.

Triple branch universal male elbow

KQ2ZT P. 69



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

Different diameter straight

KQ2H P. 65



Use to connect different sized tubes.

Double universal male elbow

KQ2VD P. 67



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

Union elbow

KQ2L P. 69



Use to connect tubes at right angles.

Male elbow

KQ2L P. 65



Use to pipe at right angles to female thread. Most general style.

Triple universal male elbow

KQ2VT P. 68



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

Plug-in elbow

KQ2L P. 69



Use to change by 90° in a tube fetching direction from One-touch fittings and to size down.

Reducer elbow

KQ2L



P. 69

Use to change by 90° in tube fetching direction from One-touch fittings and to size down.

Male branch tee

KQ2T



P. 70

Use to branch line from female thread in both 90° directions.

Union tee

KQ2T



P. 70

Use to connect tubes in both 90° directions.

Different diameter tee

KQ2T



P. 71

Use to connect tubes with size down in both 90° directions.

Cross

KQ2TW



P. 71

Use to four-branch line.

Male run tee

KQ2Y



P. 71

Use to branch line in the same direction from female thread and in 90° direction.

Branch "Y"

KQ2U



P. 72

Use to branch line in the same direction from female thread.

Union "Y"

KQ2U



P. 72

Use to branch line in the same direction.

Different dia. union "Y"

KQ2U



P. 72

Use to branch line with size down in the same direction.

Plug-in "Y"

KQ2U



P. 72

Use to branch line in the same direction from One-touch fittings.

Different diameter plug-in "Y"

KQ2X



P. 73

Use to four-branch line from One-touch fitting with size down.

Plug-in reducer

KQ2R



P. 73

Use to change size of One-touch fittings.

Bulkhead male elbow

KQ2LE



P. 73

Use to connect tubes through a panel, changing by 90° in a tube fetching direction.

Tube cap

KQ2C



P. 74

Use to plug unused tube.

Plug

KQ2P, KQP



P. 74

Use to plug unused One-touch fittings. KQP (Orange) KQ2P (Orange)

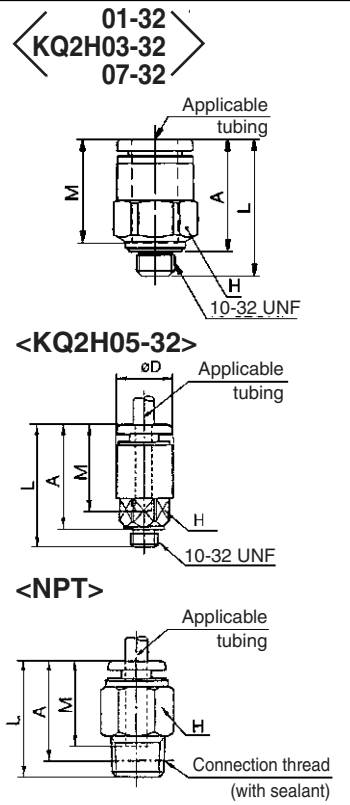
- K**
- M**
- H**
- KK**
- D**
- MS**
- LQ**
- MQR**
- T**

Series KQ2

Male Connector: KQ2H



Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) øD	L	A*	M	Min. port size	Mass (g)		
1/8	10-32 UNF	KQ2H01-32	7	-	16.7	13.7	12.7	2.3	2		
	1/16	KQ2H01-33S	11.11	-	22	18	15.5	2.5	7		
	1/8	KQ2H01-34S	-	21.1	-	9					
	1/4	KQ2H01-35S	14.29	-	19	13.5			16		
5/32	10-32 UNF	KQ2H03-32	8	-	17	14	12.7	2.3	2.4		
	1/16	KQ2H03-33S	11.11	-	22	18	16	3	7		
	1/8	KQ2H03-34S	-	21.1	-	9					
	1/4	KQ2H03-35S	14.29	-	19	13.5			16		
3/16	10-32 UNF	KQ2H05-32	8	11	24	20.4	16.5	2.3	6		
	1/8	KQ2H05-34S	12.7	-	21.1	18			3.5	11	
	1/4	KQ2H05-35S	14.29	-	20.5	15			12		
1/4	10-32 UNF	KQ2H07-32	11.11	-	18.4	15.4	13.6	2.3	3.3		
	1/8	KQ2H07-34S	12.7	-	21.6	18.5			17	4.6	10
	1/4	KQ2H07-35S	14.29	-	22.5	17					15
	3/8	KQ2H07-36S	17.46	-	20.9	16.5					27
5/16	1/8	KQ2H09-34S	14.29	-	27.6	24.5	18.5	6	15		
	1/4	KQ2H09-35S	-	26	20.5	16					
	3/8	KQ2H09-36S	17.46	-	20.9	15.5			24		
3/8	1/8	KQ2H11-34S	17.46	-	29.6	26.5	21	6	29		
	1/4	KQ2H11-35S	-	33	27.5	31					
	3/8	KQ2H11-36S	-	27.9	22.5	29					
	1/2	KQ2H11-37S	22.23	-	25.6	18.5			46		
1/2	1/4	KQ2H13-35S	-	34	28.5	22	9	9.6	44		
	3/8	KQ2H13-36S	22.23	-	31.9				26.5	44	
	1/2	KQ2H13-37S	-	29.1	22				44		

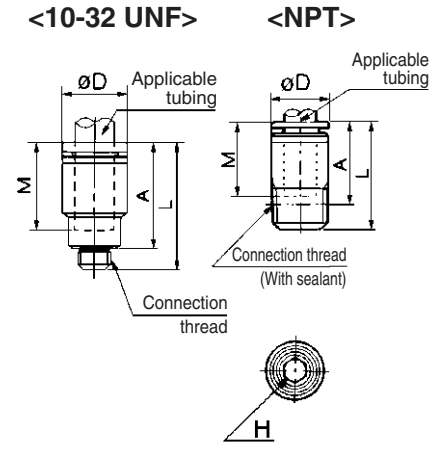


* Reference dimensions after NPT thread installation.
Note) øD: Max. diameter

Hexagon Socket Head Male Connector: KQ2S



Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) øD	L	A*	M	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2S01-32	2	7	19.7	16.6	12.7	2	2.8
	10-32 UNF	KQ2S03-32	2.5	8	18.7	15.6	12.7	2.3	2.7
5/32	1/8	KQ2S03-34S	2.78	10.5	23.5	19.5	16	2.8	8
	1/8	KQ2S05-34S	3.57	10.7	23.5	19.5	16.5	3.6	8
3/16	10-32 UNF	KQ2S07-32	2.5	10.3	19.6	16.5	13.6	2.3	3.3
	1/8	KQ2S07-34S	-	12.5	22	18	17	4.9	7
	1/4	KQ2S07-35S	4.76	13.8	23	17			12
	3/8	KQ2S07-36S	-	17	27	21			27
5/16	1/8	KQ2S09-34S	5.56	14	28	24	18.5	6.5	5.7
	1/4	KQ2S09-35S	6.35	-	25.5	19.5			11
	3/8	KQ2S09-36S	-	17.5	27.5	21			25
	1/8	KQ2S11-34S	5.56	16.5	30	26			21
3/8	1/4	KQ2S11-35S	6.35	16.5	32	26	21	6.5	21
	3/8	KQ2S11-36S	6.35	17.2	29	23			25
	1/2	KQ2S11-37S	6.35	21.3	30	22			45
	1/4	KQ2S13-35S	7.94	20	34.5	28.5			22
1/2	3/8	KQ2S13-36S	9.53	20	33	26.5	22	9.6	27
	1/2	KQ2S13-37S	9.53	21.3	31	22.5			36

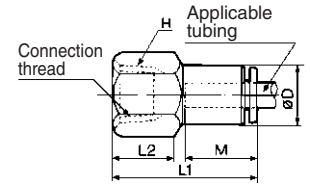


* Reference dimensions after NPT thread installation.
Note) øD: Max. diameter

Female Connector: KQ2F



Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) øD	L1	L2	M	Min. port size	Mass (g)
1/8	1/8	KQ2F01-34	14.29	9.2	26.5	11.5	15.5	2.5	16
	1/4	KQ2F01-35	17.46		30.5	14.5			26
5/32	1/8	KQ2F03-34	14.29	10	27	11	16	3	15
	1/4	KQ2F03-35	17.46		31	13.5			24
1/4	1/8	KQ2F07-34	14.29	12.5	27.5	10.5	17	4.6	17
	1/4	KQ2F07-35	17.46		31	13.5			25
	3/8	KQ2F07-36	22.23		33.5	15.5			44
5/16	1/8	KQ2F09-34	14.29	14	29	10.5	18.5	6	18
	1/4	KQ2F09-35	17.46		32.5	13.5			26
	3/8	KQ2F09-36	22.23		34.5	13			38
3/8	1/4	KQ2F11-35	17.46	16.5	34.5	15	21	7	30
	3/8	KQ2F11-36	22.23		36.5	15			48
	1/2	KQ2F11-37	23.81		40.5	19			52
1/2	3/8	KQ2F13-36	22.23	20	36.5	14.5	22	9.6	48
	1/2	KQ2F13-37	23.81		41	18.5			53



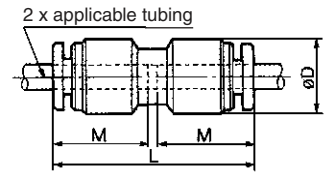
Note) øD: Max. diameter

Straight Union: KQ2H



Applicable tubing O.D. (inch)	Model	Note) ϕD	L	M	Min. port size	Mass (g)
1/8	KQ2H01-00	9.6	31.5	15.5	2.5	3
5/32	KQ2H03-00	10.4	32.5	16	3	3
3/16	KQ2H05-00	11.4	34	16.5	3.5	4
1/4	KQ2H07-00	13.2	34.5	17	4.6	4
5/16	KQ2H09-00	15.2	38.5	18.5	6	6
3/8	KQ2H11-00	17.9	42.5	21	7	11
1/2	KQ2H13-00	21.7	44.5	22	9.6	16

Note) ϕD : Max. diameter

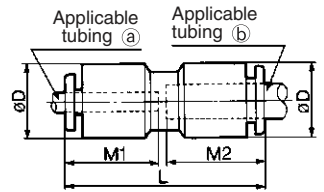


Different Diameter Straight: KQ2H



Applicable tubing O.D. (inch)		Model	Note) ϕD	L	M1	M2	Min. port size	Mass (g)
(a)	(b)							
1/8	5/32	KQ2H01-03	10.4	32.5	15.5	16	2.5	3
	1/4	KQ2H01-07	13.2	34.5		17		5
5/32	3/16	KQ2H03-05	11.4	34	16	16.5	3	4
	1/4	KQ2H03-07	13.2	34.5		17		4
3/16	1/4	KQ2H05-07	13.2	34.5	16.5	17	3.5	5
	5/16	KQ2H07-09	15.2	38.5		18.5		6
1/4	3/8	KQ2H07-11	17.9	42	17	21	4.6	11
	5/16	KQ2H09-11	17.9	42		18.5		11
5/16	3/8	KQ2H09-13	21.7	44	18.5	21	6	11
	1/2	KQ2H09-13	21.7	44		22		16
3/8	1/2	KQ2H11-13	21.7	44	21	22	7	17

Note) ϕD : Max. diameter



Male Elbow: KQ2L

01-32
KQ2L03-32
07-32



<KQ2L05-32>



<NPT>

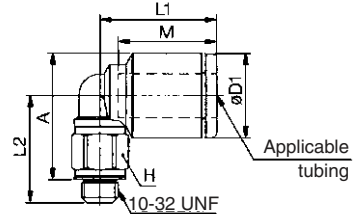


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	A*	M	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2L01-32	7	8.4	-	15.3	13.2	14.5	12.7	2.3	2.5
	1/16	KQ2L01-33S	11.11	9.6	10	17.5	21.5	22.5	15.5	2.5	8
	1/8	KQ2L01-34S	14.29				20.6	24.5			
	1/4	KQ2L01-35S	14.29				25	24.5			
10-32 UNF	KQ2L03-32	7	9.3				-	15.6			
5/32	1/16	KQ2L03-33S	11.11	10.4	10	18	22	23	16	3	8
	1/8	KQ2L03-34S	14.29				21.1	23			9
	1/4	KQ2L03-35S	14.29				25.5	25			18
3/16	10-32 UNF	KQ2L05-32	11.11	11.4	10	19.5	20	22	16.5	3.5	5
	1/8	KQ2L05-34S	14.29				21.6	24			10
	1/4	KQ2L05-35S	14.29				26	26			19
1/4	10-32 UNF	KQ2L07-32	7	12	-	16.1	15.1	18.1	13.6	2.3	3.2
	1/8	KQ2L07-34S	11.11	13.2	10	20.5	22.6	26	17	4.6	10
	1/4	KQ2L07-35S	14.29				27	28			20
3/8	KQ2L07-36S	17.46	28.4				30	32			
5/16	1/8	KQ2L09-34S	12.7	15.2	12	23.5	23.6	28	18.5	6	12
	1/4	KQ2L09-35S	14.29				28	30			20
	3/8	KQ2L09-36S	17.46				29.4	31.5			28
3/8	1/8	KQ2L11-34S	11.11	17.9	17	25.5	25.6	31.5	21	7	16
	1/4	KQ2L11-35S	14.29				29	32.5			23
	3/8	KQ2L11-36S	17.46				30.4	34			33
	1/2	KQ2L11-37S	22.23				34.6	36.5			59
1/2	1/4	KQ2L13-35S	17.46	21.7	17	28	31	36.5	22	9.6	28
	3/8	KQ2L13-36S	22.23				32.4	38.5			36
	1/2	KQ2L13-37S	22.23				36.6	40			62

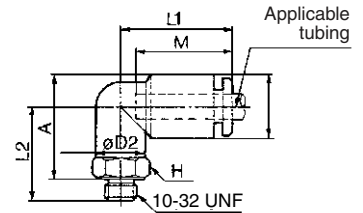
* Reference dimensions after NPT thread installation.
Note) $\phi D1$: Max. diameter



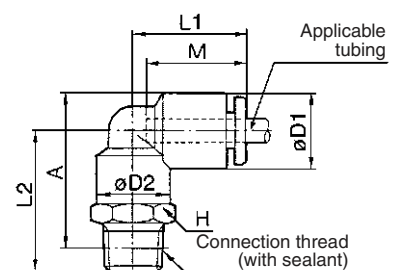
01-32
KQ2L03-32
07-32



<KQ2L05-32>



<NPT>



Series KQ2

45° Male Elbow: KQ2K

<10-32 UNF>

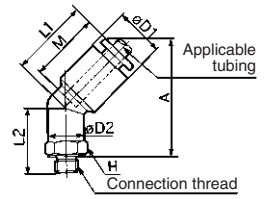


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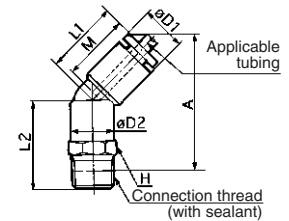


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	A*	M	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2K01-32	8	9.6	8	16.5	15	25.5	15.5	2.3	4
	1/8	KQ2K01-34S	11.11		10	16.5	21.6	33	15.5	2.5	9
5/32	10-32 UNF	KQ2K03-32	8	10.4	8	17	14.5	26	16	2.3	4
	1/8	KQ2K03-34S	11.11		10	19.6	32	16	2.8	9	
3/16	1/8	KQ2K05-34S	11.11	11.4	10	18	19.6	32.5	16.5	3.6	10
	1/8	KQ2K07-34S	11.11		18	32	17	2.3	8		
1/4	10-32 UNF	KQ2K07-32	11.11	13.2	10	19	19.6	34	17	4.6	10
	1/8	KQ2K07-34S					24	36			19
	1/4	KQ2K07-35S	14.29		24	36	19				
	3/8	KQ2K07-36S	17.46		25.4	37.5	32				
5/16	1/8	KQ2K09-34S	12.7	15.2	12	20.5	21.1	37	18.5	6	11
	1/4	KQ2K09-35S	14.29				25.5	39			19
	1/4	KQ2K09-36S	17.46				26.9	41			32
	3/8	KQ2K09-36S	17.46				26.9	41			32
3/8	1/8	KQ2K11-34S	17.46	17.9	17	23.5	23.1	42	21	7	25
	1/4	KQ2K11-35S					26.5	43			25
	3/8	KQ2K11-36S					27.9	44.5			32
	1/2	KQ2K11-37S					32.1	46.5			58
1/2	1/4	KQ2K13-35S	17.46	21.7	17	25.5	27	46.5	22	9.6	27
	3/8	KQ2K13-36S					28.4	48			35
	1/2	KQ2K13-37S					32.6	50			61

<10-32 UNF>



<NPT>



* Reference dimensions after NPT thread installation.
Note) øD1: Max. diameter

Universal Male Elbow: KQ2V

<10-32 UNF>

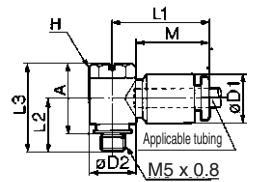


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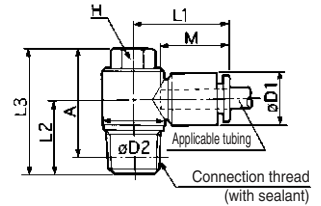


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	L3	A*	M	Min. port size	Mass (g)		
1/8	10-32 UNF	KQ2V01-32	8	9.6	8.4	9.8	17.2	11	18.5	15	12.7	2.3	5	
	1/8	KQ2V01-34S			9.6	13.4	21.5	13.6	25.6	22.5	15.5	2.5	14	
5/32	10-32 UNF	KQ2V03-32	8	10.4	9.8	20.5	11	18.5	15	16	2.3	6		
	1/8	KQ2V03-34S			13.4	22	13.6	25.6	22.5	16	2.8	14		
3/16	1/8	KQ2V05-34S	8	11.4	13.4	23	13.6	25.6	22.5	16.5	3.5	15		
	1/8	KQ2V07-32			13.4	24	12	24	20.5	17	2.3	13		
1/4	10-32 UNF	KQ2V07-34S	8	13.2	15.3	23.5	18.5	32	26.5	17	4.6	15		
	1/4	KQ2V07-35S			13.6	25.6	22.5	15						
	1/8	KQ2V09-34S			11.11	15.2	17.6	28.5	14.6	27.6	24.5	18.5	6	24
5/16	1/4	KQ2V09-35S	12.7	15.2	20.6	27.5	19.4	35.4	30	21	7	40		
	3/8	KQ2V09-36S			17.46	17.9	20.6	30.5	19.4	35.4	30	21	7	48
	1/4	KQ2V11-35S			12.7	17.9	20.6	30.5	19.4	35.4	30	21	7	40
3/8	3/8	KQ2V11-36S	12.7	17.9	20.4	34.9	30	31	31	22	9	68		
	1/2	KQ2V13-36S			17.46	21.7	27	35.5	20.4	34.9	30	22	9	85
	1/2	KQ2V13-37S			17.46	21.7	27	35.5	23.6	38.1	31	22	9	85

<10-32 UNF>



<NPT>



* Reference dimensions after NPT thread installation.
Note) øD1: Max. diameter

Hexagon Socket Head Universal Male Elbow: KQ2VS

<10-32 UNF>

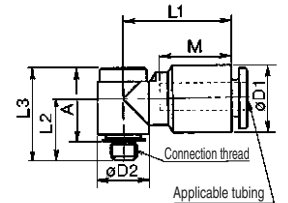


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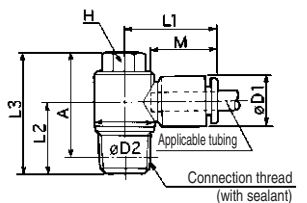


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	L3	A*	M	Min. port size	Mass (g)		
1/8	10-32 UNF	KQ2VS01-32	4	9.6	8.4	9.8	17.2	10.9	18.5	15	12.7	2.3	5	
	1/8	KQ2VS01-34S	6.35		9.6	13.4	21.5	13.6	25.6	22.5	15.5	2.5	14	
5/32	10-32 UNF	KQ2VS03-32	4	10.4	9.8	20.5	11	18.5	15	16	2.3	6		
	1/8	KQ2VS03-34S	6.35		13.4	22	13.6	25.6	22.5	16	2.8	14		
3/16	1/8	KQ2VS05-34S	8	11.4	13.4	23	13.6	25.6	22.5	16.5	3.5	15		
	1/8	KQ2VS07-32	8		13.4	24	12	24	19	17	2.3	13		
1/4	10-32 UNF	KQ2VS07-34S	6.35	13.2	15.3	23.5	18.5	28	26.5	17	4.6	15		
	1/4	KQ2VS07-35S			13.6	25.6	22.5	15						
	1/8	KQ2VS09-34S			11.11	15.2	17.6	28.5	14.6	26.1	23	18.5	6	21
5/16	1/4	KQ2VS09-35S	12.7	15.2	20.6	27.5	19.4	31.4	26	21	7	33		
	3/8	KQ2VS09-36S			17.46	17.9	20.6	31	19.4	31.4	26	21	7	42
	1/4	KQ2VS11-35S			12.7	17.9	20.6	31	19.4	31.4	26	21	7	33
3/8	3/8	KQ2VS11-36S	12.7	17.9	20.4	34.9	30	31	31	22	9	63		
	1/2	KQ2VS13-36S			17.46	21.7	27	34.5	20.4	33.4	28.5	22	9	81
	1/2	KQ2VS13-37S			17.46	21.7	27	34.5	23.6	36.6	29.5	22	9	81

<10-32 UNF>



<NPT>



* Reference dimensions after NPT thread installation.
Note) øD1: Max. diameter

Universal Female Elbow: KQ2VF

<10-32 UNF>

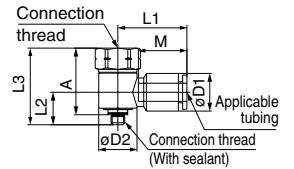


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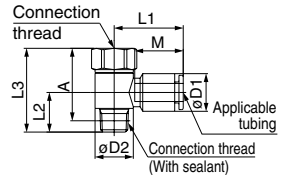


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	Min. port size	Mass (g)	
1/8	10-32 UNF	KQ2VF01-32	8	8.4	9.8	17.2	10	20	16.5	12.7	2.3	5	
	1/8	KQ2VF01-34S	14.29	9.6	13.4	21.5	13.1	28.6	25.5	15.5	2.5	18	
5/32	10-32 UNF	KQ2VF03-32	8	10.4	9.8	20.5	11	20	16	16	2.5	6	
	1/8	KQ2VF03-34S	14.29	10.4	13.4	22	14.6	28.6	25.5	16	2.8	18	
3/16	10-32 UNF	KQ2VF05-34S	14.29	11.4	13.4	23	13.1	28.6	25.5	16.5	3.5	19	
	1/8	KQ2VF07-32	14.29	13.2	13.4	24	11.5	27	23.5	17	2.3	16	
1/4	KQ2VF07-34S	13.1					28.6	25.5					
1/4	1/8	KQ2VF07-35S	17.46	15.2	17.6	25	17	38	32.5	18.5	6	4.6	37
	1/4	KQ2VF09-34S	17.46		17.6	28.5	16.1	30.1	27			30	
5/16	1/8	KQ2VF09-35S	22.23	17.9	20.6	31	17	40.5	35	21	7	60	
	3/8	KQ2VF09-36S	22.23		25.2	29.5	19.4	43.9	39			39	70
3/8	1/4	KQ2VF11-35S	22.23	21.7	20.6	31	17	40.5	35	22	9	85	
	3/8	KQ2VF11-36S	22.23		25.2	31.5	18.4	43.9	39			70	
1/2	3/8	KQ2VF13-36S	22.23	21.7	19.9	40.9	39	39	39	22	9	104	
	1/2	KQ2VF13-37S	25.4		23.1	49.1	41.5						

<10-32 UNF>



<NPT>



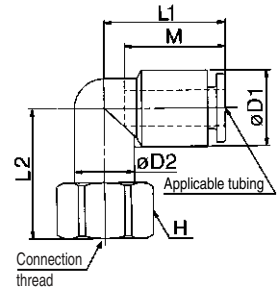
* Reference dimensions after NPT thread installation.
Note) $\phi D1$: Max. diameter

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

Female Elbow: KQ2LF



Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	M	Min. port size	Mass (g)
1/8	1/8	KQ2LF01-34	14.29	9.6	10	17.5	20	15.5	2.5	12
	1/4	KQ2LF01-35	17.46				23.5			20
5/32	1/8	KQ2LF03-34	14.29	10.4	10	18	20.5	16	3	12
	1/4	KQ2LF03-35	17.46				24			20
1/4	1/8	KQ2LF07-34	14.29	13.2	10	20.5	22	17	4.6	13
	1/4	KQ2LF07-35	17.46				25.5			21
3/8	3/8	KQ2LF07-36	22.23	17.9	17	25.5	26	21	7	33
	1/4	KQ2LF11-35	17.46				27.5			28
3/8	3/8	KQ2LF11-36	22.23	21.7	17	28	28	22	9.6	40
	1/2	KQ2LF11-37	23.81				32			45
1/2	3/8	KQ2LF13-36	22.23	21.7	17	28	30	22	9.6	44
	1/2	KQ2LF13-37	23.81				34			49



Note) $\phi D1$: Max. diameter

Double Universal Male Elbow: KQ2VD

<10-32 UNF>

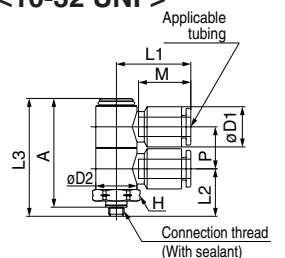


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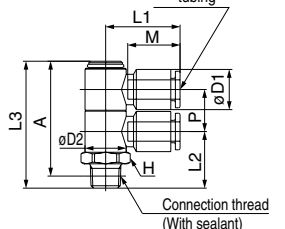


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	P	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2VD01-32	14.29	9.6	13.4	22	15.5	38.5	35	15.5	13.4	2.3	24
	1/8	KQ2VD01-34S					17.1	40.1	37				2.5
5/32	10-32 UNF	KQ2VD03-32	14.29	10.4	13.4	22	15.5	38.5	35	16	13.4	2.3	24
	1/8	KQ2VD03-34S					17.6	40.1	37				3
3/16	10-32 UNF	KQ2VD05-34S	14.29	11.4	13.4	23	17.1	40.1	37	16.5	13.4	3.5	24
	1/8	KQ2VD07-32					15.5	39	35.5				17
1/4	1/8	KQ2VD07-34S	14.29	13.2	13.4	24	17.6	40.6	37.5	17	13.8	4.6	
	1/4	KQ2VD07-35S					22.1	44	38.5				31
5/16	1/8	KQ2VD09-36S	17.46	15.2	17.6	28.5	22.4	45.4	40.5	18.5	15.9	6	44
	1/4	KQ2VD09-35S					23.1	50.1	45				49
3/8	1/8	KQ2VD09-36S	22.23	17.9	20.6	31	24.5	51.5	45.5	21	19.2	7	57
	3/8	KQ2VD09-37S					27.4	54.4	47.5				81
3/8	1/4	KQ2VD11-35S	22.23	17.9	20.6	31	25.5	57.5	52	21	19.2	7	76
	3/8	KQ2VD11-36S					25.9	57.9	52.5				77
1/2	1/2	KQ2VD11-37S	25.4	21.7	27	35.5	29.1	61.1	54	22	22.3	9.6	94
	3/8	KQ2VD13-36S					30.9	65.4	60.5				142
1/2	1/2	KQ2VD13-37S	25.4	21.7	27	35.5	34.1	68.6	61.5	22	22.3	9.6	159

<10-32 UNF>



<NPT>



* Reference dimensions after NPT thread installation.
Note) $\phi D1$: Max. diameter

Series KQ2

Triple Universal Male Elbow: KQ2VT

<10-32 UNF>

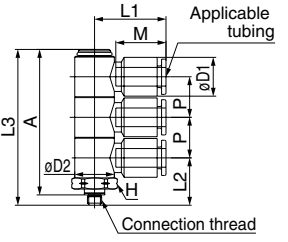


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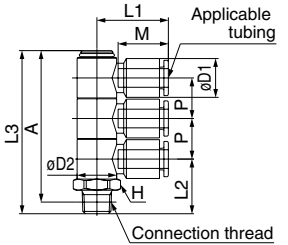


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) ϕ D1	ϕ D2	L1	L2	L3	A*	M	P	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2VT01-32	14.29	9.6	13.4	22	15.5	52	48.5	15.5	13.4	2.3	32
	1/8	KQ2VT01-34S					17.1	53.6	50.5				
5/32	10-32 UNF	KQ2VT03-32	14.29	10.4	13.4	22	15.5	52	48.5	16	13.4	2.3	32
	1/8	KQ2VT03-34S					17.6	53.6	50.5				
3/16	1/8	KQ2VT05-34S	14.29	11.4	13.4	23	17.1	53.6	50.5	16.5	13.4	3.5	31
	10-32 UNF	KQ2VT07-32					15.5	53	49.5				
1/4	1/8	KQ2VT07-34S	14.29	13.2	13.4	24	17.6	54.6	51.5	17	13.8	4.6	35
	1/4	KQ2VT07-35S					22.1	58	52.5				33
	3/8	KQ2VT07-36S					22.4	59.4	54				39
	1/4	KQ2VT09-35S					19	15.2	17.6				28.5
5/16	3/8	KQ2VT09-36S	19	15.2	17.6	28.5	24.5	67.5	61.5	18.5	15.9	6	70
	1/2	KQ2VT09-37S					27.4	70.4	63.5				94
	1/4	KQ2VT11-35S					25.5	77	71.5				98
3/8	3/8	KQ2VT11-36S	22.23	17.9	20.6	31	25.9	77.4	72	21	19.2	7	98
	1/2	KQ2VT11-37S					29.1	80.6	73				114
	3/8	KQ2VT13-36S					25.4	21.7	27				35.5
1/2	1/2	KQ2VT13-37S	25.4	21.7	27	35.5	34.1	91.1	84	22	22.3	9.6	203

<10-32 UNF>



<NPT>



* Reference dimensions after NPT thread installation. Note) ϕ D1: Max. diameter

Branch Universal Male Elbow: KQ2Z

<10-32 UNF>

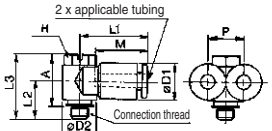


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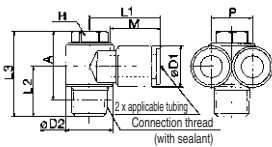


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) ϕ D1	ϕ D2	L1	L2	L3	A*	M	P	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2Z01-32	8	8.4	9.8	16	11.2	18.5	15	12.7	8.4	2.3	6
	1/8	KQ2Z01-34S											
5/32	10-32 UNF	KQ2Z03-32	8	10.4	9.8	19.5	11	18.5	15	16	10.4	2.3	8
	1/8	KQ2Z03-34S											
3/16	1/8	KQ2Z05-34S	8	11.4	13.4	21.5	13.6	25.6	22.5	16.5	11.4	3.5	17
	10-32 UNF	KQ2Z07-32											
1/4	1/8	KQ2Z07-34S	8	13.2	13.4	21.5	13.6	25.6	22.5	17	13.2	4.6	17
	1/4	KQ2Z07-35S					11.11	15.2	17.6				26
5/16	1/8	KQ2Z09-34S	11.11	15.2	17.6	26	14.6	27.6	24.5	18.5	15.2	6	27
	1/4	KQ2Z09-35S					18	31	25.5				33
	3/8	KQ2Z09-36S					12.7	20.6	27				19.4
3/8	1/4	KQ2Z11-35S	12.7	17.9	20.6	28.5	19	35	29.5	21	17.9	7	46
	3/8	KQ2Z11-36S					19.4	35.4	30				55
1/2	3/8	KQ2Z13-36S	17.46	21.7	27	33	20.4	34.9	30	22	21.7	9	76
	1/2	KQ2Z13-37S					23.6	38.1	31				93

<10-32 UNF>



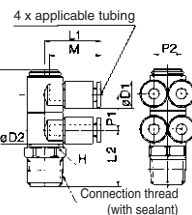
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* Reference dimensions after NPT thread installation. Note) ϕ D1: Max. diameter

Double Branch Universal Male Elbow: KQ2ZD

Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) ϕ D1	ϕ D2	L1	L2	L3	A*	M	P1	P2	Min. port size	Mass (g)
1/8	1/8	KQ2ZD01-34S	14.29	9.6	13.4	20.5	17.1	40.1	37	15.5	13.4	9.6	2.5	26
5/32	1/8	KQ2ZD03-34S	14.29	10.4	13.4	21	17.6	40.1	37	16	13.4	10.4	3	29
3/16	1/8	KQ2ZD05-34S	14.29	11.4	13.4	21.5	17.1	40.1	37	16.5	13.4	11.4	3.5	26
	1/8	KQ2ZD07-34S												
1/4	1/4	KQ2ZD07-35S	14.29	13.2	13.4	21.5	22.1	44	38.5	17	13.8	13.2	4.6	36
	3/8	KQ2ZD07-36S					22.4	45.4	40.5					49
	1/4	KQ2ZD09-35S					19	15.2	17.6					26
5/16	3/8	KQ2ZD09-36S	19	15.2	17.6	26	24.5	51.5	45.5	18.5	15.9	15.2	6	64
	1/2	KQ2ZD09-37S					27.4	54.4	47.5					88
3/8	1/4	KQ2ZD11-35S	22.23	17.9	20.6	28.5	25.5	57.5	52	21	19.2	17.9	7	88
	3/8	KQ2ZD11-36S					25.9	57.9	52.5					90
	1/2	KQ2ZD11-37S					29.1	61.1	54					106
1/2	3/8	KQ2ZD13-36S	25.4	21.7	27	33	30.9	65.4	60.5	22	22.3	21.7	9.6	158
	1/2	KQ2ZD13-37S					34.1	68.6	61.5					176

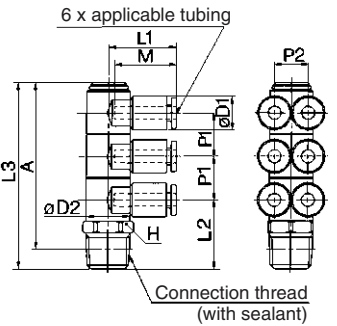


* Reference dimensions after NPT thread installation. Note) ϕ D1: Max. diameter

Triple Branch Universal Male Elbow: KQ2ZT



Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	P1	P2	Min. port size	Mass (g)
1/8	1/8	KQ2ZT01-34S	14.29	9.6	13.4	20.5	17.1	53.6	50.5	15.5	13.4	9.6	2.5	34
5/32	1/8	KQ2ZT03-34S	14.29	10.4	13.4	21	17.6	53.6	50.5	16	13.4	10.4	3	34
3/16	1/8	KQ2ZT05-34S	14.29	11.4	13.4	21.5	17.1	53.6	50.5	16.5	13.4	11.4	3.5	38
1/4	1/8	KQ2ZT07-34S	14.29	13.2	13.4	21.5	17.6	54.6	51.5	17	13.8	13.2	4.6	40
	1/4	KQ2ZT07-35S					22.1	58	52.5					46
	3/8	KQ2ZT07-36S					22.4	59.4	54					59
5/16	1/4	KQ2ZT09-35S	19	15.2	17.6	26	23.1	66.1	61.5	18.5	15.9	15.2	6	70
	3/8	KQ2ZT09-36S					24.5	67.5	61.5					80
	1/2	KQ2ZT09-37S					22.23	27.4	70.4					63.5
3/8	1/4	KQ2ZT11-35S	22.23	17.9	20.6	28.5	25.5	77	71.5	21	19.2	17.9	7	116
	3/8	KQ2ZT11-36S					25.9	77.4	72					116
	1/2	KQ2ZT11-37S					29.1	80.6	73					132
1/2	3/8	KQ2ZT13-36S	25.4	21.7	27	33	30.9	87.9	83	22	22.3	21.7	9.6	213
	1/2	KQ2ZT13-37S					34.1	91.1	84					228



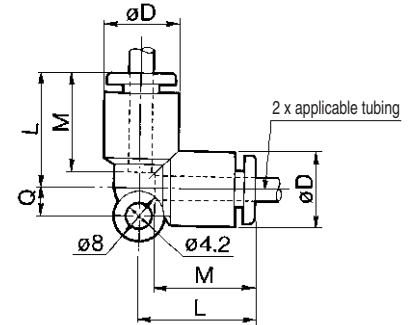
* Reference dimensions after NPT thread installation.
Note) $\phi D1$: Max. diameter

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

Union Elbow: KQ2L



Applicable tubing O.D. (inch)	Model	Note) ϕD	L	Q	M	Min. port size	Mass (g)
1/8	KQ2L01-00	9.6	17.5	4.3	15.5	2.5	3
5/32	KQ2L03-00	10.4	18	4.5	16	3	4
3/16	KQ2L05-00	11.4	19.5	4.8	16.5	3.5	5
1/4	KQ2L07-00	13.2	20.5	5.3	17	4.6	5
5/16	KQ2L09-00	15.2	23	6	18.5	6	7
3/8	KQ2L11-00	17.9	26	6.6	21	7	13
1/2	KQ2L13-00	21.7	29	7.8	22	9.6	18

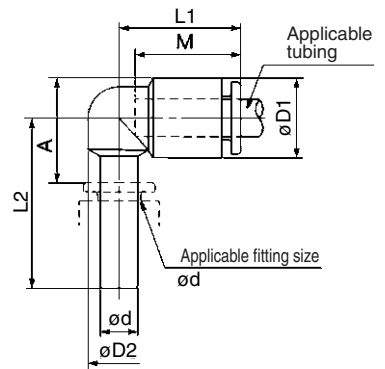


Note) ϕD : Max. diameter

Plug-in Elbow: KQ2L



Applicable tubing O.D. (inch)	Applicable fitting size ϕd (inch)	Model	Note) $\phi D1$	$\phi D2$	L1	L2	A	M	Min. port size	Mass (g)
1/8	1/8	KQ2L01-99	9.6	7	17	24.5	14	15	2.2	3
5/32	5/32	KQ2L03-99	10.4	8	18	25	14.5	16	2.5	3
3/16	3/16	KQ2L05-99	11.4	10	19.5	34	23.5	16.5	3.5	7
1/4	1/4	KQ2L07-99	13.2	10	20	27.5	17.5	17	4.6	8
5/16	5/16	KQ2L09-99	15.2	12	22.5	31.5	21	18.5	6	6
3/8	3/8	KQ2L11-99	17.9	13.6	25	35	23	21	7	19
1/2	1/2	KQ2L13-99	21.7	17	28.8	44.7	34	22	9.6	27

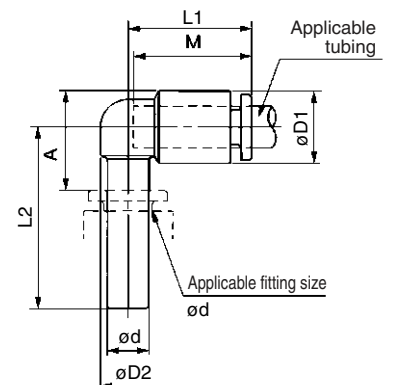


Note) $\phi D1$: Max. diameter

Reducer Elbow: KQ2L



Applicable tubing O.D. (inch)	Applicable fitting size ϕd (inch)	Model	Note) $\phi D1$	$\phi D2$	L1	L2	A	M	Min. port size	Mass (g)
1/8	5/32	KQ2L01-03	9.6	7	17	25	13.5	15.5	2.2	3
	3/16	KQ2L01-05		10	17.5	33	21.5		2.5	7
5/32	3/16	KQ2L03-05	10.4	10	18	33.5	22.5	16	3	6
	1/4	KQ2L03-07		8	26	14.5	2.5		3	
3/16	1/4	KQ2L05-07	11.4	10	19	26.5	15.5	16.5	3.5	8
	5/16	KQ2L05-09		19.5	35.5	23	11			
1/4	5/16	KQ2L07-09	13.2	10	20.5	36.5	24.5	17	4.6	12
	3/8	KQ2L07-11		13.2	39.5	23.5	17			
5/16	3/8	KQ2L09-11	15.2	12	23.5	40.5	27.5	18.5	6	17
	1/2	KQ2L09-13		15.2	41.5	30			30	
3/8	1/2	KQ2L11-13	17.9	17	25.5	43	30	21	7	25



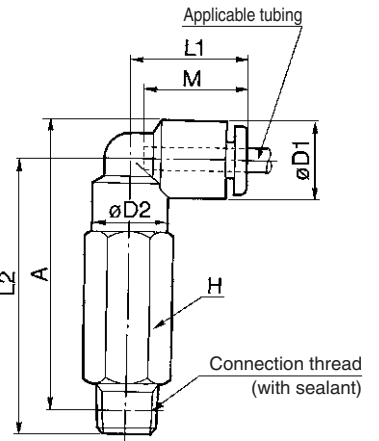
Note) $\phi D1$: Max. diameter

Series KQ2

Extended Male Elbow: KQ2W



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	A*	M	Min. port size	Mass (g)
1/8	1/8	KQ2W01-34S	11.11	9.6	10	17.5	36.1	38	15.5	2.5	19
	1/4	KQ2W01-35S	14.29				42.5	42			41
5/32	1/8	KQ2W03-34S	11.11	10.4	10	18	36.6	38.5	16	3	19
	1/4	KQ2W03-35S	14.29				43	42.5			41
3/16	1/8	KQ2W05-34S	11.11	11.4	10	19.5	37.1	40	16.5	3.5	41
	1/4	KQ2W05-35S	14.29				43.5	43.5			19
1/4	1/8	KQ2W07-34S	11.11	13.2	10	20.5	39.6	43	17	4.6	20
	1/4	KQ2W07-35S	14.29				46	47			42
	3/8	KQ2W07-36S	17.46				47.4	49			69
5/16	1/8	KQ2W09-34S	12.7	15.2	12	23.5	42.6	47	18.5	6	30
	1/4	KQ2W09-35S	14.29				49	51			47
	3/8	KQ2W09-36S	17.46				50.4	53			74
3/8	1/4	KQ2W11-35S	17.46	17.9	17	25.5	55.5	59	21	7	69
	3/8	KQ2W11-36S	17.46				56.9	61			76
	1/2	KQ2W11-37S	22.23				63.6	65.5			147
1/2	1/4	KQ2W13-35S	17.46	21.7	17	28	57.5	63	22	9	72
	3/8	KQ2W13-36S	17.46				58.9	64.5			78
	1/2	KQ2W13-37S	22.23				65.6	69			149



* Reference dimensions after NPT thread installation.
Note) $\phi D1$: Max. diameter

Male Branch Tee: KQ2T

<10-32 UNF>

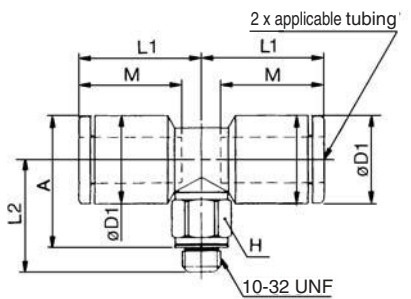


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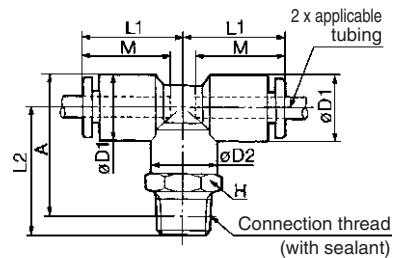


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	A	M	Min. port size	Mass (g)		
1/8	10-32 UNF	KQ2T01-32	7	8.4	-	15.3	13.2	14.4	12.7	2.3	3.2		
	1/16	KQ2T01-33S	11.11	9.6	10	17.5	21.5	22.5*	15.5	2.5	10		
	1/8	KQ2T01-34S					20.6				20		
	1/4	KQ2T01-35S					14.29				25	24.5*	20
10-32 UNF	KQ2T03-32	7					9.3				-	15.6	13.7
5/32	1/16	KQ2T03-33S	11.11	10.4	10	18	22	23*	16	3	10		
	1/8	KQ2T03-34S					21.1				11		
	1/4	KQ2T03-35S					14.29				25.5	25*	20
	10-32 UNF	KQ2T05-34S					7				11.4	10	19.5
3/16	1/4	KQ2T05-35S	14.29	11.4	10	19.5	26	26*	16.5	3.5	21		
	10-32 UNF	KQ2T07-32	7	12	-	16.1	15.1	18.1	13.6	2.3	4.4		
	1/8	KQ2T07-34S	11.11	13.2	10	20.5	22.6	26*	17	4.6	11		
	1/4	KQ2T07-35S					14.29	27			28*	21	
3/8	KQ2T07-36S	17.46					28.4	30*			34		
10-32 UNF	KQ2T09-34S	7					15.2	12			23	23.6	28*
5/16	1/4	KQ2T09-35S	14.29	15.2	12	23	28	30*	18.5	6	23		
	3/8	KQ2T09-36S	17.46	15.2	12	23	29.4	31.5*	18.5	6	35		
	1/8	KQ2T11-34S	17.46	17.9	17	25.5	25.6	31.5*	21	7	31		
	1/4	KQ2T11-35S					29	32.5*			29		
3/8	KQ2T11-36S	30.4					34.5*	38					
1/2	KQ2T11-37S	22.23					34.6	36.5*			64		
1/2	1/4	KQ2T13-35S	17.46	21.7	17	28	31	36.5*	22	9.6	34		
	3/8	KQ2T13-36S					32.4	38.5*			43		
	1/2	KQ2T13-37S					22.23	36.6			40*	69	

<10-32 UNF>



<NPT>



* Reference dimensions after NPT thread installation.
Note) $\phi D1$: Max. diameter

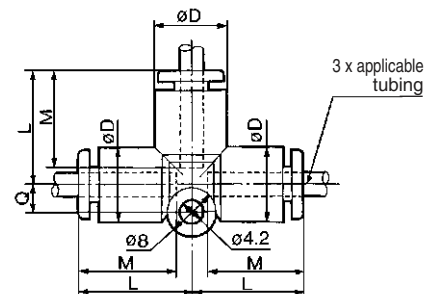
Union Tee: KQ2T



Applicable tubing O.D. (inch)	Model	Note) ϕD	L	Q	M	Min. port size	Mass (g)
1/8	KQ2T01-00	9.6	17.5	4.3	15.5	2.5	5
5/32	KQ2T03-00	10.4	18	4.5	16	3	4
3/16	KQ2T05-00	11.4	19.5	4.8	16.5	3.5	7
1/4	KQ2T07-00	13.2	20.5	5.3	17	4.6	8
5/16	KQ2T09-00	15.2	23	6	18.5	6	11
3/8	KQ2T11-00	17.9	26	6.6	21	7	18
1/2	KQ2T13-00	21.7	29	7.8	22	9.6	26



Note) ϕD : Max. diameter

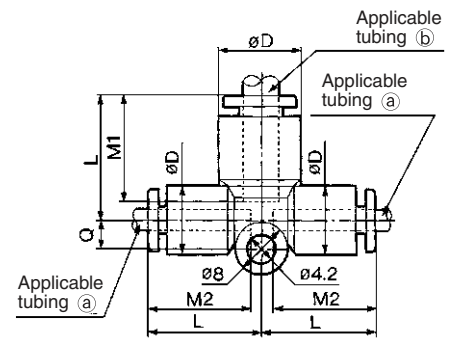


Different Diameter Tee: KQ2T



Applicable tubing O.D. (inch)		Model	Note) øD	L	Q	M1	M2	Min. port size	Mass (g)
Ⓐ	Ⓑ								
1/8	5/32	KQ2T01-03	10.4	18	4.5	16	15.5	2.5	5
	1/4	KQ2T01-07	13.2	20.5	5.3	17			8
5/32	3/16	KQ2T03-05	11.4	19.5	4.8	16.5	16	3	6
	1/4	KQ2T03-07	13.2	20.5	5.3	17			8
3/16	1/4	KQ2T05-07	13.2	20.5	5.3	17	16.5	3.5	8
1/4	5/16	KQ2T07-09	15.2	23	6	18.5	17	4.6	11
	3/8	KQ2T07-11	17.9	26	6.6	21			17
5/16	3/8	KQ2T09-11	17.9	26	6.6	21	18.5	6	17
	1/2	KQ2T09-13	21.7	29	7.8	22			26
3/8	1/2	KQ2T11-13	21.7	29	7.8	22	21	7	28

Note) øD: Max. diameter



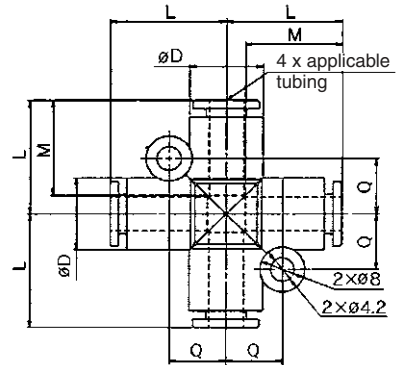
- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

Cross: KQ2TW



Applicable tubing O.D. (inch)	Model	Note) øD	L	Q	M	Min. port size	Mass (g)
5/32	KQ2TW03-00	10.4	18	8.7	16	3	6
1/4	KQ2TW07-00	13.2	20.5	10.1	17	4.6	10
5/16	KQ2TW09-00	15.2	23	11.1	18.5	6	14
3/8	KQ2TW11-00	17.9	26	12.5	21	7	25
1/2	KQ2TW13-00	21.7	29	14.4	22	9.6	36

Note) øD: Max. diameter

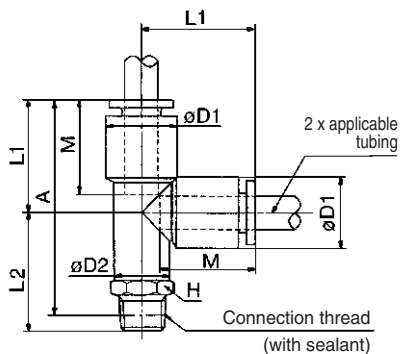


Male Run Tee: KQ2Y



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	A*	M	Min. port size	Mass (g)		
1/8	1/16	KQ2Y01-33S	11.11	9.6	10	17.5	21.5	35	15.5	2.5	10		
	1/8	KQ2Y01-34S					20.6						
	1/4	KQ2Y01-35S					25					37	20
5/32	1/16	KQ2Y03-33S	11.11	10.4	10	18	22	36	16	3	11		
	1/8	KQ2Y03-34S					21.1						
	1/4	KQ2Y03-35S					25.5					38	20
3/16	1/8	KQ2Y05-34S	11.11	11.4	10	19.5	21.6	38	16.5	3.5	12		
	1/4	KQ2Y05-35S					26					40	21
1/4	1/8	KQ2Y07-34S	11.11	13.2	10	20.5	22.6	40	17	4.6	11		
	1/4	KQ2Y07-35S					27					42	21
	3/8	KQ2Y07-36S					28.4					44	34
5/16	1/8	KQ2Y09-34S	12.7	15.2	12	23.5	23.6	44	18.5	6	15		
	1/4	KQ2Y09-35S					28					46	23
	3/8	KQ2Y09-36S					29.4					48	35
3/8	1/4	KQ2Y11-35S	17.46	17.9	17	25.5	29	49	21	7	29		
	3/8	KQ2Y11-36S					30.4					51	38
	1/2	KQ2Y11-37S					34.6					53	64
1/2	1/4	KQ2Y13-35S	17.46	21.7	17	28	31	53.5	22	9.6	34		
	3/8	KQ2Y13-36S					32.4					55.5	43
	1/2	KQ2Y13-37S					36.6					57	69

* Reference dimensions after NPT thread installation.
Note) øD1: Max. diameter

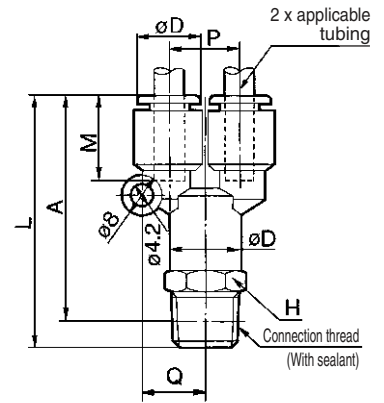


Series KQ2

Branch "Y": KQ2U



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note) ϕD	L	P	Q	A*	M	Min. port size	Mass (g)
1/8	1/8	KQ2U01-34S	12.7	9.6	39.6	9.6	9	36.5	15.5	2.5	14
	1/4	KQ2U01-35S	14.29		44			38.5			
5/32	1/8	KQ2U03-34S	12.7	10.4	41.1	10.4	9.7	38	16	3	16
	1/4	KQ2U03-35S	14.29		45.5			40			
3/16	1/8	KQ2U05-34S	12.7	11.4	43.1	11.4	10.6	40	16.5	3.5	18
	1/4	KQ2U05-35S	14.9		48			42.5			
1/4	1/8	KQ2U07-34S	14.29	13.2	45.6	13.2	12	42.5	17	4.6	19
	1/4	KQ2U07-35S			49			43.5			
	3/8	KQ2U07-36S			50.4			45			
5/16	1/8	KQ2U09-34S	17.46	15.2	51.6	15.2	13.7	48.5	18.5	6	21
	1/4	KQ2U09-35S			55			49.5			22
	3/8	KQ2U09-36S			55.4			50			35
3/8	1/4	KQ2U11-35S	19.05	17.9	59.5	17.9	15.6	54	21	7	42
	3/8	KQ2U11-36S			59.9			54.5			43
	1/2	KQ2U11-37S			63.6			56.5			56
1/2	1/4	KQ2U13-35S	22.23	21.7	64	21.7	18.8	58.5	22	9.6	31
	3/8	KQ2U13-36S			64.4			59			41
	1/2	KQ2U13-37S			67.6			60.5			68



* Reference dimensions after NPT thread installation.

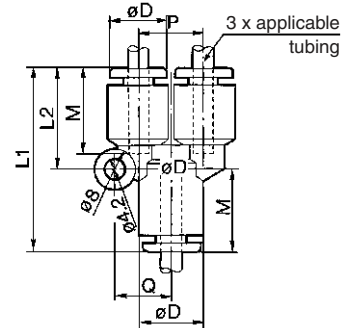
Note) ϕD : Max. diameter



Union "Y": KQ2U



Applicable tubing O.D. (inch)	Model	Note) ϕD	L1	L2	P	Q	M	Min. port size	Mass (g)
1/8	KQ2U01-00	9.6	33	17.5	9.6	9	15.5	2.5	6
5/32	KQ2U03-00	10.4	34	18	10.4	9.7	16	3	7
3/16	KQ2U05-00	11.4	36.5	20.5	11.4	10.6	16.5	3.5	9
1/4	KQ2U07-00	13.2	38	21.5	13.2	12	17	4.6	9
5/16	KQ2U09-00	15.2	42.5	24.5	15.2	13.7	18.5	6	11
3/8	KQ2U11-00	17.9	48	27.5	17.9	15.6	21	7	16



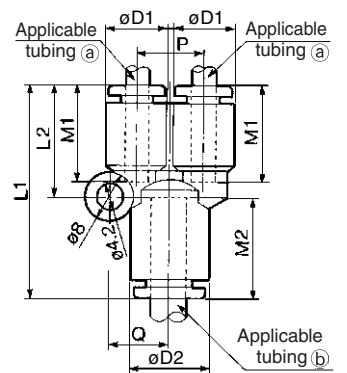
Note) ϕD : Max. diameter



Different diameter union "Y": KQ2U



Applicable tubing O.D. (inch)		Model	Note) $\phi D1$	Note) $\phi D2$	L1	L2	P	Q	M1	M2	Min. port size	Mass (g)
1/8	5/32	KQ2U01-03	9.6	10.4	33.5	17.5	9.6	9	15.5	16	2.5	5
	1/4	KQ2U01-07			38	21.5	13.2	12		17		9
5/32	3/16	KQ2U03-05	10.4	13.2	36.5	20.5	11.4	10.6	16	16.5	3	8
	1/4	KQ2U03-07			38	21.5	13.2	12		17		10
3/16	1/4	KQ2U05-07	11.4	13.2	38	21.5	13.2	12	16.5	17	3.5	9
	5/16	KQ2U07-09			42.5	24.5	15.2	13.7		17		18.5
1/4	3/8	KQ2U07-11	13.2	17.9	47	27.5	17.9	15.6	17	21	4.6	23
	5/16	KQ2U09-11			47	27.5	17.9	15.6		21		22
5/16	3/8	KQ2U09-13	15.2	21.7	51	30	21.7	18.8	18.5	22	6	34
	1/2	KQ2U09-13			51	30	21.7	18.8		22		22



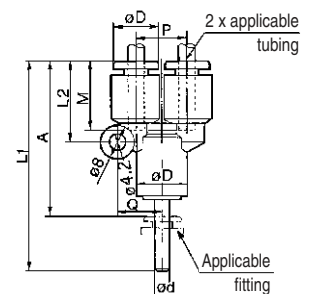
Note) $\phi D1, \phi D2$: Max. diameter



Plug-in "Y": KQ2U



Applicable tubing O.D. (inch)	Applicable fitting size ϕd (inch)	Model	Note) ϕD	L1	L2	P	Q	A	M	Min. port size	Mass (g)
1/8	1/8	KQ2U01-99	9.6	50	17.5	9.6	9	35	15.5	2	10
5/32	5/32	KQ2U03-99	10.4	51.5	18	10.4	9.7	35.5	16	2.5	12
3/16	3/16	KQ2U05-99	11.4	56	20.5	11.4	10.6	39.5	16.5	3.5	17
1/4	1/4	KQ2U07-99	13.2	56.5	21.5	13.2	12	39.5	17	4.6	18
5/16	5/16	KQ2U09-99	15.2	64.5	24.5	15.2	13.7	46	18.5	6	21



Note) ϕD : Max. diameter

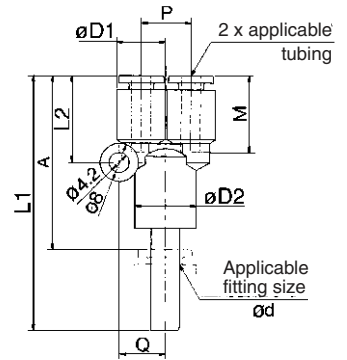


Different Diameter Plug-in “Y”: KQ2X



Applicable tubing O.D. (inch)	Applicable fitting size ϕd	Model	Note) ϕD	L1	L2	A	P	Q	M	Min. port size	Mass (g)
1/8	5/32	KQ2X01-03	10.4	51.5	18	35.5	10.4	9.7	15.5	2.5	5
5/32	3/16	KQ2X03-05	11.4	56	20.5	39.5	11.4	10.6	16	3.5	10
3/16	1/4	KQ2X05-07	13.2	56.5	21.5	39.5	13.2	12	16.5	4.6	9
1/4	5/16	KQ2X07-09	15.2	64.5	24.5	46	15.2	13.7	17	6	21

Note) ϕD : Max. diameter

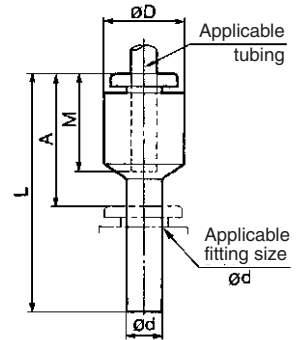


Plug-in Reducer: KQ2R



Applicable tubing O.D. (inch)	Applicable fitting size ϕd (inch)	Model	Note) ϕD	L	A	M	Min. port size	Mass (g)
1/8	5/32	KQ2R01-03	9.6	34.5	18.5	15.5	2.5	2
	3/16	KQ2R01-05	9.2	34	17.5			7
	1/4	KQ2R01-07			17			9
5/32	3/16	KQ2R03-05	10	34	17.5	16	3	8
	1/4	KQ2R03-07	10.4	34.5				9
3/16	1/4	KQ2R05-07	11.4	34.5	18.5	16.5	3.5	4
	5/16	KQ2R05-09	10.7	36.5				18
1/4	5/16	KQ2R07-09	13.2	37	18.5	17	4.6	17
	3/8	KQ2R07-11		40				19.5
5/16	3/8	KQ2R09-11	14	40	19	18.5	6	24
	1/2	KQ2R09-13		41				32
3/8	1/2	KQ2R11-13	17.9	44	22	21	7	32

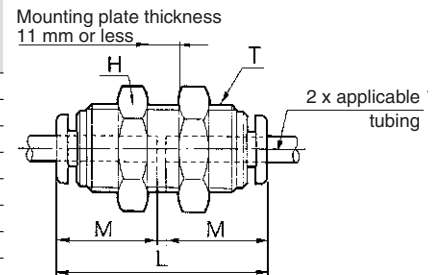
Note) ϕD : Max. diameter



Bulkhead Union: KQ2E



Applicable tubing O.D. (inch)	Model	T (UNF)	H (Width across flats)	L	Mounting hole	M	Min. port size	Mass (g)
1/8	KQ2E01-00	1/2-20	17.46	32.5	13.5	15.5	2.5	26
5/32	KQ2E03-00	1/2-20	17.46	32.5	13.5	16	3	26
3/16	KQ2E05-00	9/16-18	17.46	34	15	16.5	3.5	33
1/4	KQ2E07-00	9/16-18	17.46	34.5	15	17	4.6	33
5/16	KQ2E09-00	3/4-16	22.23	38	20	18.5	6	52
3/8	KQ2E11-00	7/8-14	25.4	42.5	23	21	7	70
1/2	KQ2E13-00	1-12	28.6	44.5	26	22	9.6	97

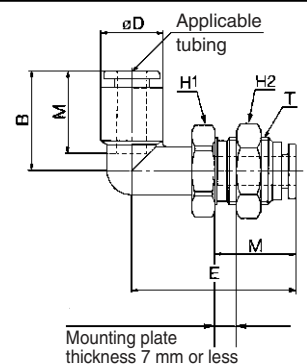


Bulkhead Male Elbow: KQ2LE



Applicable tubing O.D. (inch)	Model	T (UNF)	H1 (Width across flats)	H2 (Width across flats)	B	E	Note) ϕD	Mounting hole	M	Min. port size	Mass (g)
1/8	KQ2LE01-00	1/2-20	17.46	17.46	17.5	31	9.6	13.5	15.5	2.5	27
5/32	KQ2LE03-00	1/2-20	17.46	17.46	18	31	10.4	13.5	16	3	26
3/16	KQ2LE05-00	9/16-18	17.46	17.46	19.5	34.5	11.4	15	16.5	3.5	32
1/4	KQ2LE07-00	9/16-18	17.46	17.46	20.5	35	13.2	15	17	4.6	29
5/16	KQ2LE09-00	3/4-16	22.23	22.23	23.5	38.5	15.2	20	18.5	6	53
3/8	KQ2LE11-00	7/8-14	25.4	25.4	25.5	43	17.9	23	21	7	85
1/2	KQ2LE13-00	1-12	28.6	28.6	28	46	21.7	26	22	9.6	105

Note) ϕD : Max. diameter

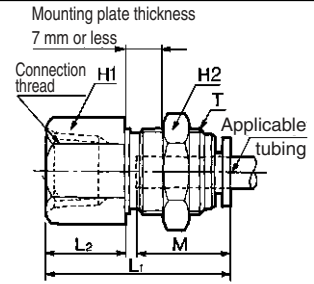


Series KQ2

Bulkhead Connector: KQ2E



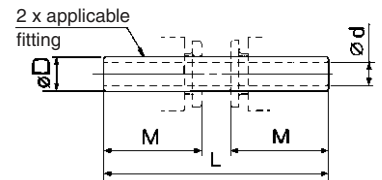
Applicable tubing O.D. (inch)	Connection thread NPT	Model	Connection thread (UNF)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	M	Min. port size	Mounting hole	Mass (g)
1/8	1/4	KQ2E01-35	1/2-20	17.46	17.46	31	15	15.5	2.5	13.5	36
5/32	1/4	KQ2E03-35	1/2-20	17.46	17.46	31	15	16	3	13.5	36
3/16	1/8	KQ2E05-34	9/16-18	17.46	17.46	28	10	16.5	3.5	15	34
1/4	1/4	KQ2E07-35	9/16-18	17.46	17.46	32.5	14.5	17	4.6	15	34
5/16	3/8	KQ2E09-36	3/4-16	22.23	22.23	35	15	18.5	6	20	52
3/8	3/8	KQ2E11-36	7/8-14	25.4	25.4	37	14.5	21	7	23	96
1/2	3/8	KQ2E13-36	1-12	28.6	28.6	37	14	22	9.6	26	125
	1/2	KQ2E13-37	1-12			41.5	18				128



Nipple: KQ2N



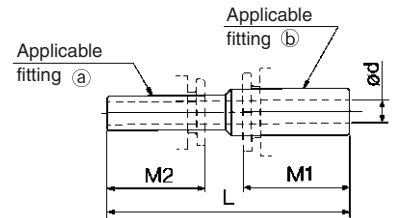
Applicable fitting ϕD	Model	L	M	ϕd	Mass (g)
1/8	KQ2N01-99	36	15.5	2.2	0.2
3/16	KQ2N05-99	38	16.5	3.5	0.4
1/4	KQ2N07-99	39	17	4.6	1
3/8	KQ2N11-99	49	21	7.5	10
1/2	KQ2N13-99	51	22	10	15



Reducer Nipple: KQ2N



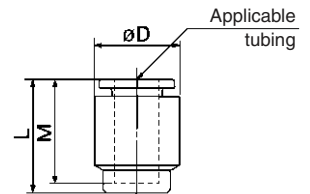
Applicable fitting O.D. (inch)		Model	L	M1	M2	ϕd	Mass (g)
Ⓐ	Ⓑ						
1/8	5/32	KQ2N01-03	36.5	16	15.5	2.2	0.2
	3/16	KQ2N01-05	37	16.5			0.4
5/32	3/16	KQ2N03-05	37.5	16.5	16	2.5	0.4
	1/4	KQ2N03-07	38	17			0.6
3/16	1/4	KQ2N05-07	38.5	17	16.5	3.5	0.6
	5/16	KQ2N05-09	41	18.5			1
	5/16	KQ2N07-09	41.5	18.5			1
1/4	3/8	KQ2N07-11	45	21	17	4.6	1
	3/8	KQ2N09-11	46.5	21			11
5/16	1/2	KQ2N09-13	47.5	22	18.5	6	22
	1/2	KQ2N11-13	50	22			24



Tube Cap: KQ2C



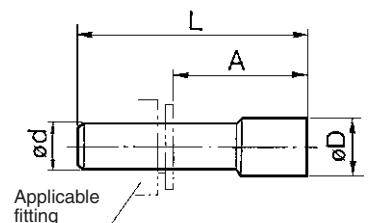
Applicable tubing O.D. (inch)	Model	$\phi D1$	L	M	Mass (g)
5/32	KQ2C03-00	10.4	17	16	1
1/4	KQ2C07-00	13.2	18	17	2
5/16	KQ2C09-00	15.2	20.5	18.5	3
3/8	KQ2C11-00	17.9	22.5	21	6



Plug: KQ2P, KQP



Applicable fitting size ϕd (inch)	Model (Note)		ϕD	L	A	Mass (g)
1/8	KQ2P-01	KQP-01	5	31.5	16	1
5/32	KQ2P-03	KQP-03	6	32	16	1
3/16	KQ2P-05	KQP-05	6.8	34	17.5	1
1/4	KQ2P-07	KQP-07	8.5	35	18	1
5/16	KQ2P-09	KQP-09	10	39	20.5	2
3/8	KQ2P-11	KQP-11	11.5	43	22	3.5
1/2	KQ2P-13	KQP-13	15	46	24	5



Note) KQ2P and KQP: Orange



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

1 Grease-free Specifications

Symbol	Specifications
X17	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue
X29	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Copper-free (With electroless nickel plated)
X39	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double package, resin body: white)
X94	Grease-free Rubber material: FKM (With fluorine coating) Release button color: Light blue

 K

 M

 H

 KK

 D

 MS

 LQ

 MQR

 T

2 Other Specifications

Symbol	Specifications
X2	Copper-free (With electroless nickel plated)
X12	Lubricant: White Vaseline Release button color: White
X23	Metal material: Stainless steel 303 Width across flats: Metric size
X34	Rubber material: FKM
X41	With fixed throttle ^{Note)}

Note) Compatible with male connector and male elbow only
Consult SMC separately for the available fixed throttle diameters.

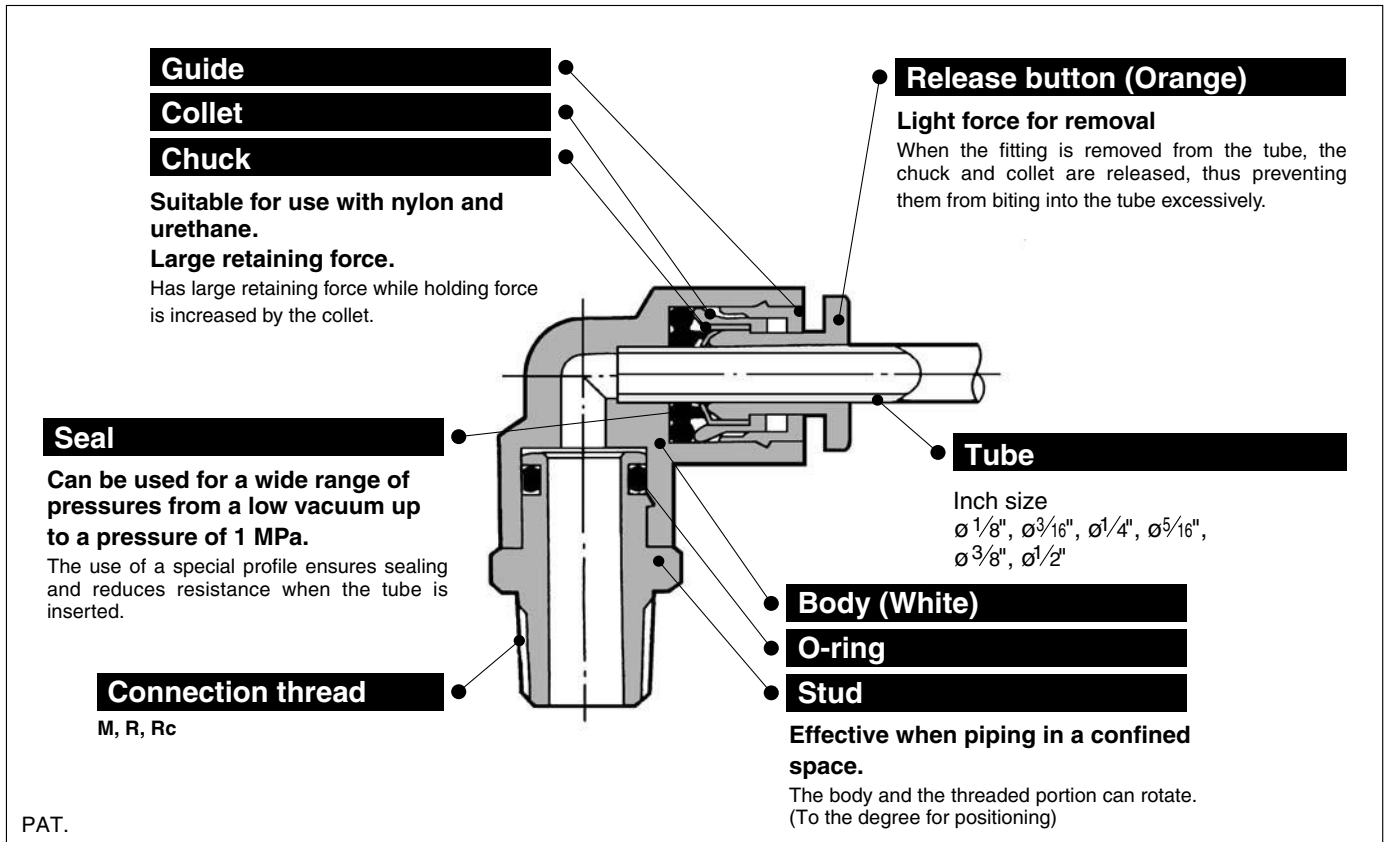
Spare Parts

Description	Part no.	Applicable thread	Material	Applicable model
Gasket	M-10/32G	10-32 UNF	Stainless steel 304, NBR	—
Pipe nut	KQ01-P01	—	—	KQ2E01-00, KQ2E03-00, KQ2E01-35 KQ2E03-35, KQ2LF01-00, KQ2LE03-00
	KQ05-P01	—	—	KQ2E05-00, KQ2E07-00, KQ2E05-34 KQ2E07-35, KQ2LF05-00, KQ2LE07-00
	KQ09-P01	—	—	KQ2E09-00, KQ2E09-36, KQ2LE09-00
	KQ11-P01	—	—	KQ2E11-00, KQ2E11-36, KQ2LE11-00
	KQ13-P01	—	—	KQ2E13-00, KQ2E13-36 KQ2E13-37, KQ2LE13-00

Inch-size One-touch Fittings

Series KQ2

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



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon ⁽¹⁾ , Polyurethane
Tubing O.D.	ø 1/8", ø 3/16", ø 1/4", ø 5/16", ø 3/8", ø 1/2"

Note 1) Soft nylon tubing is not compatible with water.

Specifications

Fluid	Air/Water ⁽²⁾	
Operating pressure range⁽³⁾	-100 kPa to 1 MPa	
Proof pressure	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 fine thread)
Seal on the threads	With sealant or none	

Note 2) The surge pressure must be under the maximum operating pressure.
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, PBT, PP
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304, C3604, PBT
Collet	POM
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR



Made to Order
(Refer to page 82 for details.)

Model

Male connector

KQ2H



P. 78

Use to pipe in the same direction from female thread. Most general style.

Extended male elbow

KQ2W



P. 79

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

Branch "Y"

KQ2U



P. 81

Use to branch line in the same direction from female thread.

Male elbow

KQ2L



P. 78

Use to pipe at right angles to female thread. Most general style.

Male branch tee

KQ2T



P. 79

Use to branch line from female thread in both 90° directions.

Bulkhead union

KQ2E



P. 81

Use to connect male thread and tube through a panel.

Male run tee

KQ2Y



P. 80

Use to branch line in the same direction from female thread and 90° direction.

Bulkhead connector

KQ2E



P. 81

Use to connect male thread and tube through a panel.

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

How to Order

KQ2 H 05 - 02 S -

One-touch fittings

Model

H	Male connector *
L	Male elbow *
W	Extended male elbow *
T	Male branch tee *
Y	Male run tee *
U	Branch "Y" *
E	Bulkhead union
	Bulkhead connector

*mark: With sealant is available.

Made to Order

Refer to page 82 for details.

With thread sealant

Nil	Without sealant
S	With thread sealant

Port size

M5	M5 x 0.8
01	1/8
02	1/4
03	3/8
04	1/2
00	Same dia. tubing



Note) Port size with sealant: Only
R 1/8
R 1/4
R 3/8
R 1/2

Applicable tubing O.D.

01	ø 1/8"
05	ø 3/16"
07	ø 1/4"
09	ø 5/16"
11	ø 3/8"
13	ø 1/2"

Series KQ2

Male Connector: KQ2H

KQ2H01-M5
KQ2H07-M5



<KQ2H05-M5>



<R>

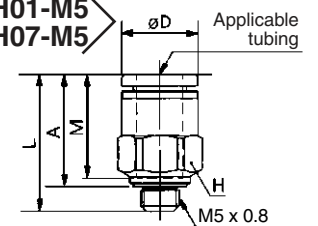


Applicable tubing O.D. (inch)	Connection thread R M	Model	H (Width across flats)	Note) ϕD	L	A*	M	Min. port size	Mass (g)	
1/8	M5 x 0.8	KQ2H01-M5	7	—	16.7	13.6	12.7	2.5	2	
	1/8	KQ2H01-01S	10	—	21.1	18	15.5		9	
	1/4	KQ2H01-02S	14	—	19	13.5			16	
3/16	M5 x 0.8	KQ2H05-M5	8	10.7	24	20.5	16.5	2.5	6	
	1/8	KQ2H05-01S	11	—	21.1	18			3.5	11
	1/4	KQ2H05-02S	14	—	20.5	15				12
1/4	M5 x 0.8	KQ2H07-M5	11	10.3	18.4	15.3	13.6	2.5	3.3	
	1/8	KQ2H07-01S	13	—	21.6	18.5			17	10
	1/4	KQ2H07-02S	14	—	22.5	17				15
	3/8	KQ2H07-03S	17	—	21.9	16.5				27
5/16	1/8	KQ2H09-01S	14	—	27.1	24	18.5	6	15	
	1/4	KQ2H09-02S		—	26	20.5			16	
	3/8	KQ2H09-03S		—	21.4	15.5			24	
3/8	1/4	KQ2H11-02S	17	—	33	27.5	21	7	31	
	3/8	KQ2H11-03S		—	27.9	22.5			29	
	1/2	KQ2H11-04S		22	—	26.1			19	46
1/2	1/4	KQ2H13-02S	22	—	34	28.5	22	9	44	
	3/8	KQ2H13-03S		—	32.4	27			9.6	44
	1/2	KQ2H13-04S		—	29.1	22				44

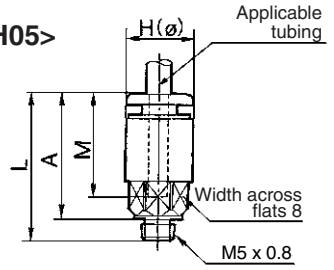
* Reference dimensions after R thread installation.
Note) ϕD : Max. diameter



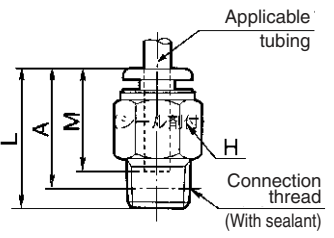
KQ2H01-M5
KQ2H07-M5



<KQ2H05>



<R>



Male Elbow: KQ2L

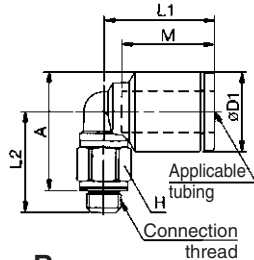


Applicable tubing O.D. (inch)	Connection thread R M	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	A*	M	Min. port size	Mass (g)				
1/8	M5 x 0.8	KQ2L01-M5	7	8.4	—	15.3	13.2	14.3	12.7	2.3	2.5				
3/16	1/8	KQ2L05-01S	10	11.4	10	19.5	21.6	24	16.5	3.5	10				
	1/4	KQ2L05-02S	14								26	26	19		
1/4	M5 x 0.8	KQ2L07-M5	7	12	—	16.1	15.1	18	13.6	2.3	3.2				
	1/8	KQ2L07-01S	10								22.6	26	10		
	1/4	KQ2L07-02S	14								27	28	17	4.6	20
	3/8	KQ2L07-03S	17								28.4	29.5	32		
5/16	1/8	KQ2L09-01S	12	15.2	12	23.5	23.6	28	18.5	6	12				
	1/4	KQ2L09-02S	14								28	30	20		
	3/8	KQ2L09-03S	17								29.4	31.5	28		
3/8	1/4	KQ2L11-02S	17	17.9	17	25.5	30.4	34	21	7	23				
	3/8	KQ2L11-03S									—	34.6	36.5	33	
	1/2	KQ2L11-04S									22	36.6	40	59	
1/2	1/4	KQ2L13-02S	17	21.7	17	28	31	36.5	22	9	28				
	3/8	KQ2L13-03S									—	32.4	38.5	36	
	1/2	KQ2L13-04S									22	36.6	40	62	

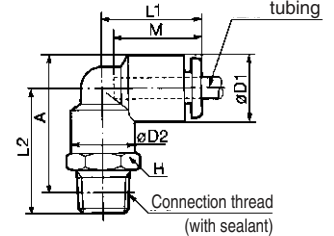
* Reference dimensions after R thread installation.
Note) $\phi D1$: Max. diameter



<M5>



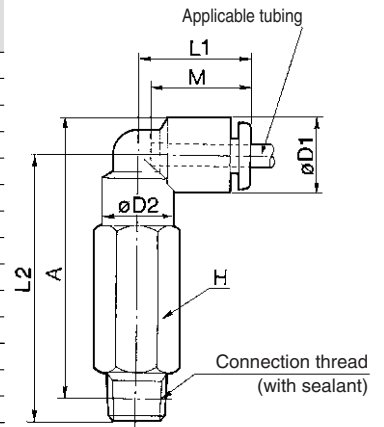
<R>



Extended Male Elbow: KQ2W



Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	A*	M	Min. port size	Mass (g)
3/16	1/8	KQ2W05-01S	10	11.4	10	19.5	37.1	40	16.5	3.5	19
	1/4	KQ2W05-02S	14				43.5	43.5			41
1/4	1/8	KQ2W07-01S	10	13.2	10	20.5	39.6	43	17	4.6	20
	1/4	KQ2W07-02S	14				46	47			45
	3/8	KQ2W07-03S	17				47.4	49			69
5/16	1/8	KQ2W09-01S	12	15.2	12	23.5	42.6	47	18.5	6	30
	1/4	KQ2W09-02S	14				49	51			47
	3/8	KQ2W09-03S	17				50.4	53			74
3/8	1/4	KQ2W11-02S	17	17.9	17	25.5	55.5	59	21	7	69
	3/8	KQ2W11-03S					56.9	61			76
	1/2	KQ2W11-04S					22	63.6			65.5
1/2	1/4	KQ2W13-02S	17	21.7	17	28	57.5	63	22	9.6	9
	3/8	KQ2W13-03S					58.9	64.5			78
	1/2	KQ2W13-04S					22	65.6			69



* Reference dimensions after R thread installation.
Note) $\phi D1$: Max. diameter

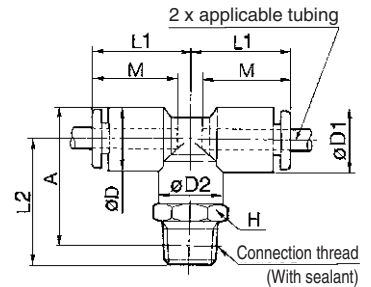


- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

Male Branch Tee: KQ2T



Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	A*	M	Min. port size	Mass (g)
3/16	1/8	KQ2T05-01S	10	11.4	10	19.5	21.6	24	16.5	3.5	12
	1/4	KQ2T05-02S	14				26	26			21
1/4	1/8	KQ2T07-01S	10	13.2	10	20.5	22.6	26	17	4.6	11
	1/4	KQ2T07-02S	14				27	28			21
	3/8	KQ2T07-03S	17				28.4	30			34
5/16	1/8	KQ2T09-01S	12	15.2	12	23	23.6	28	18.5	6	15
	1/4	KQ2T09-02S	14				28	30			23
	3/8	KQ2T09-03S	17				29.4	31.5			35
3/8	1/4	KQ2T11-02S	17	17.9	17	25.5	29	32.5	21	7	29
	3/8	KQ2T11-03S					30.4	34.5			38
	1/2	KQ2T11-04S					22	34.6			36.5
1/2	1/4	KQ2T13-02S	17	21.7	17	28	31	36.5	22	9.6	34
	3/8	KQ2T13-03S					32.4	38.5			43
	1/2	KQ2T13-04S					22	36.6			40



* Reference dimensions after R thread installation.
Note) $\phi D1$: Max. diameter

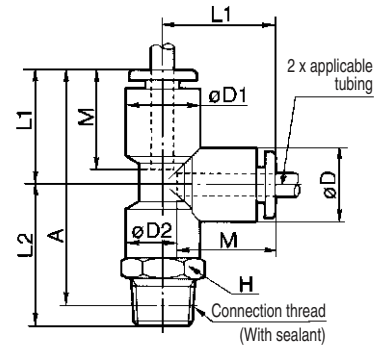


Series KQ2

Male Run Tee: KQ2Y



Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	A*	M	Min. port size	Mass (g)
3/16	1/8	KQ2Y05-01S	10	11.4	10	19.5	21.6	38	16.5	3.5	12
	1/4	KQ2Y05-02S	14				26	40			21
1/4	1/8	KQ2Y07-01S	10	13.2	10	20.5	22.6	40	17	4.6	11
	1/4	KQ2Y07-02S	14				27	42			21
	3/8	KQ2Y07-03S	17				28.4	44			34
5/16	1/8	KQ2Y09-01S	12	15.2	12	23.5	23.6	40	18.5	6	15
	1/4	KQ2Y09-02S	14				28	40			23
	3/8	KQ2Y09-03S	17				29.4	48			35
3/8	1/4	KQ2Y11-02S	17	17.9	17	25.5	29	49	21	7	29
	3/8	KQ2Y11-03S	17				30.4	51			38
	1/2	KQ2Y11-04S	22				34.6	53			64
1/2	1/4	KQ2Y13-02S	17	21.7	17	28	31	53.5	22	9.5	9
	3/8	KQ2Y13-03S	17				32.4	55.5			43
	1/2	KQ2Y13-04S	22				36.6	57			69

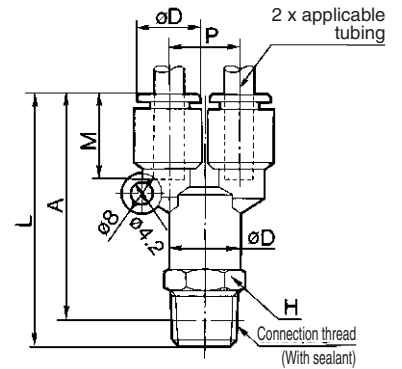


* Reference dimensions after R thread installation.
Note) $\phi D1$: Max. diameter

Branch "Y": KQ2U



Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Note) ϕD	L	P	A*	M	Min. port size	Mass (g)
3/16	1/8	KQ2U05-01S	12	11.4	43.1	11.4	40	16.5	3.5	18
	1/4	KQ2U05-02S	14		48		42.5			18
1/4	1/8	KQ2U07-01S	14	13.2	45.6	13.2	42.5	17	4.6	19
	1/4	KQ2U07-02S	14		49					19
	3/8	KQ2U07-03S	17		50.4					45
5/16	1/8	KQ2U09-01S	17	15.2	51.6	15.2	48.5	18.5	6	21
	1/4	KQ2U09-02S	17		55		50			22
	3/8	KQ2U09-03S	17		55.4		50			35
3/8	1/4	KQ2U11-02S	19	17.9	59.5	17.9	54	21	7	42
	3/8	KQ2U11-03S	19		59.9		54.5			43
	1/2	KQ2U11-04S	22		63.6		56.5			56
1/2	1/4	KQ2U13-02S	17	21.7	64	21.7	58.5	22	9.5	31
	3/8	KQ2U13-03S	17		64.4		59			41
	1/2	KQ2U13-04S	22		67.6		60.5			68

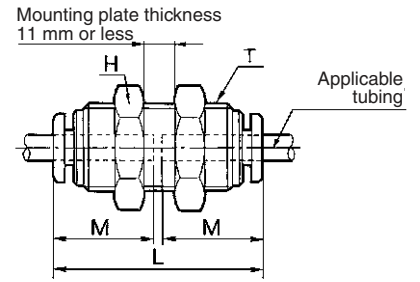


* Reference dimensions after R thread installation.
Note) ϕD : Max. diameter

Bulkhead Union: KQ2E



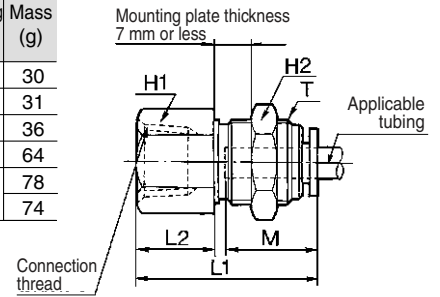
Applicable tubing O.D. (inch)	Model	T (M)	H (Width across flats)	L	Mounting hole	M	Min. port size	Mass (g)
3/16	KQ2E05-00M	M14 x 1	17	34	15	16.5	3.5	30
1/4	KQ2E07-00M	M14 x 1	17	34.5	15	17	4.6	30
5/16	KQ2E09-00M	M16 x 1	19	38	17	18.5	6	48
3/8	KQ2E11-00M	M20 x 1	24	42.5	21	21	7	62
1/2	KQ2E13-00M	M22 x 1	27	44.5	23	22	9.6	85



Bulkhead Connector: KQ2E



Applicable tubing O.D. (inch)	Connection thread Rc	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	M	Min. port size	Mounting hole	Mass (g)
3/16	1/8	KQ2E05-01	M14 x 1	17	17	28	11.5	16.5	3.5	15	30
1/4	1/4	KQ2E07-02	M14 x 1	17	17	32.5	14.5	17	4.6	15	31
5/16	3/8	KQ2E09-03	M16 x 1	19	19	35	15	18.5	6	17	36
3/8	3/8	KQ2E11-03	M20 x 1	22	24	35	14.5	21	7	21	64
		KQ2E13-03	M22 x 1	24	27	37	14.5	22	9.6	23	78
1/2	1/2	KQ2E13-04	M22 x 1	24	27	41.5	18.5	22	9.6	23	74



- K**
- M**
- H**
- KK**
- D**
- MS**
- LQ**
- MQR**
- T**



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

1 Grease-free Specifications

Symbol	Specifications
X17	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue
X29	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Copper-free (With electroless nickel plated)
X39	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double package, resin body: white)
X94	Grease-free Rubber material: FKM (With fluorine coating) Release button color: Light blue

2 Other Specifications

Symbol	Specifications
X2	Copper-free (With electroless nickel plated)
X12	Lubricant: White Vaseline Release button color: White
X34	Rubber material: FKM
X41	With fixed throttle ^{Note)}

Note) Compatible with male connector and male elbow only
Consult SMC separately for the available fixed throttle diameters.

Spare Parts

Description	Part no.	Applicable thread	Material	Applicable model
Gasket	M-5G2	M5	Stainless steel 304, NBR	—
Pipe nut	KQ06-P01	—	—	KQ2E05-01, KQ2E07-02 KQ2E05-00M, KQ2E07-00M
	KQ08-P01	—	—	KQ2E09-03, KQ2E09-00M
	KQ10-P01	—	—	KQ2E11-03, KQ2E11-00M
	KQ12-P01	—	—	KQ2E13-03, KQ2E11-04, KQ2E13-00M

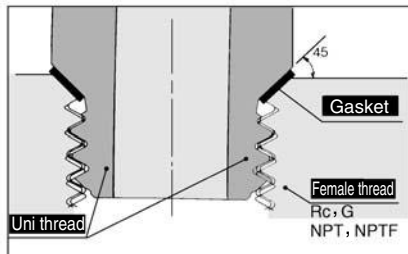
Metric-size Uni One-touch Fittings

Series KQ2

Applicable Tubing: Metric Size

Connection Thread: Rc, G, NPT, NPTF

New-stand male thread for piping that reduces the screw-in time by 1/3.

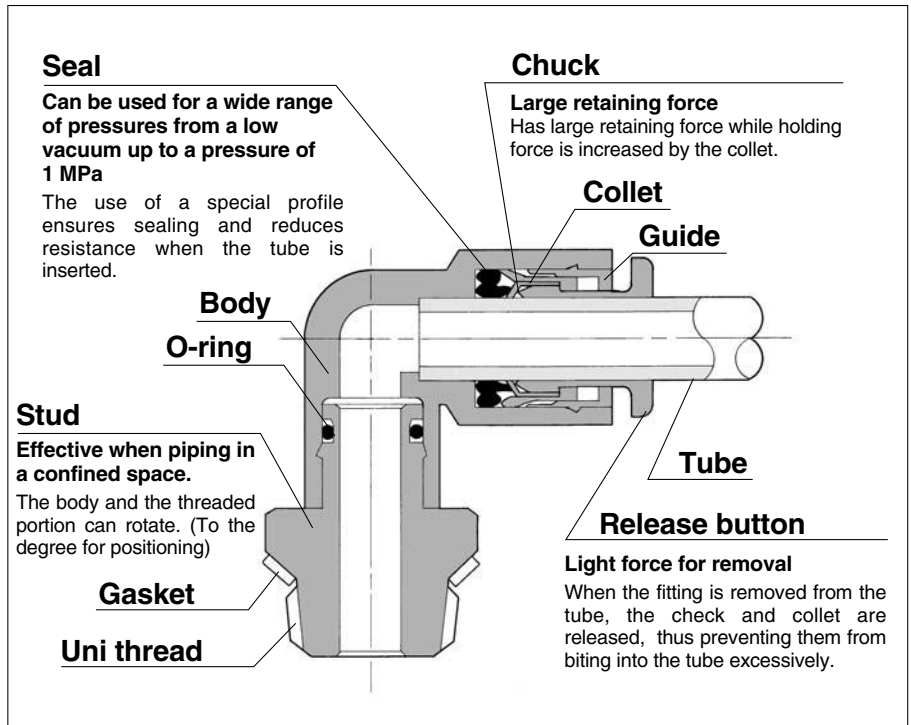


Uni thread ridge shape

A gasket made of a stainless steel 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.)

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

The male thread for piping drastically cuts piping man-hours.



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon ⁽¹⁾ , Polyurethane
Tubing O.D.	ø4, ø6, ø8, ø10, ø12, ø16

Note 1) Soft nylon tubing is not compatible with water.

Product's Color

Series	Body	Release button
Series KQ2	White	Light gray
Series KQ	Black	Blue

Specifications

Fluid	Air/Water ⁽²⁾
Operating pressure range ⁽³⁾	-100 kPa to 1 MPa
Proof pressure	3 MPa
Ambient and fluid temperature	-5 to 60°C, Water: 0 to 40°C (No freezing)



Note 2) The surge pressure must be under the maximum operating pressure.
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, PBT
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304, C3604, PBT
Collet, Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR

Made to Order
(Refer to page 90 for details.)

Model

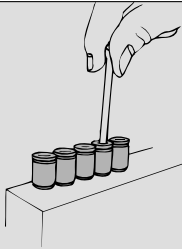
Hex. socket head male connector

KQ2S

P. 89



Internal hex. allows thread connection by using an allen wrench for confined spaces.



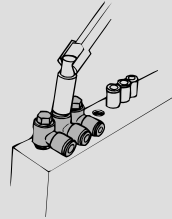
Universal male elbow

KQ2V

P. 89



Universal male elbow allows thread connection by using a socket wrench for confined spaces.



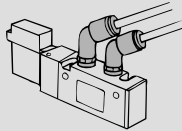
45° male elbow

KQ2K

P. 89



Use to pipe in 45° direction from female thread. Model in-between of male connector and male elbow.



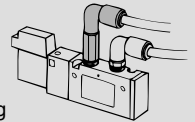
Extended male elbow

KQ2W

P. 88



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



Male connector

KQ2H

P. 86



Use to pipe in the same direction from female thread. Most general style.

Male elbow

KQ2L

P. 86



Use to pipe at right angles to female thread. Most general style.

Male branch tee

KQ2T

P. 87



Use to branch line from female thread in both 90° directions.

Branch "Y"

KQ2U

P. 88



Use to branch line in the same direction from female thread.

Male run tee

KQ2Y

P. 87



Use to branch line in the same direction from female thread and in 90° direction.

K

M

H

KK

D

MS

LQ

MQR

T

How to Order

KQ 2 H 06 - U01 -

One-touch fittings

Product's color

Symbol	Body	Release button
2	White	Light gray
Nil	Black	Blue

Applicable tubing O.D.

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12
16	ø16

Port size

Thread connection	Port size
U01	Uni 1/8
U02	Uni 1/4
U03	Uni 3/8
U04	Uni 1/2

Made to Order
Refer to page 90 for details.

Model

H	Male connector	T	Male branch tee
S	Hex. socket head male connector	Y	Male run tee
L	Male elbow	U	Branch
K	45° male elbow		
V	Universal male elbow		
W	Extended male elbow		

How to Order Gasket

KQG - U01

Gasket for Uni One-touch fittings

Applicable port size

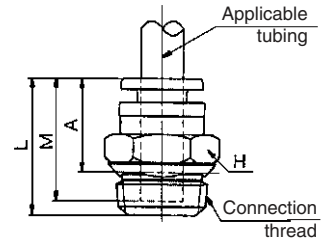
U01	Uni 1/8
U02	Uni 1/4
U03	Uni 3/8
U04	Uni 1/2

Series KQ2

Male Connector: KQ2H



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	L	A*	M	Effective area (mm ²) ^(Note)		Mass (g)
							Nylon	Urethane	
4	1/8	KQ2H04-U01	10	18.5	13.5	16	5.6	5.6	5
	1/4	KQ2H04-U02	14	16.5	10.5				10
6	1/8	KQ2H06-U01	12	19.5	14.5	17	13.1	13.1	5
	1/4	KQ2H06-U02	14		13				10
	3/8	KQ2H06-U03	17	17.5	11.5				16
8	1/8	KQ2H08-U01	14	25	20.5	18.5	26.1	18.0	11
	1/4	KQ2H08-U02		21.5	15.5				27
	3/8	KQ2H08-U03	17	19.5	13.5				33
10	1/8	KQ2H10-U01	17	28	23	21	41.5	29.5	17
	1/4	KQ2H10-U02		22	17				
	3/8	KQ2H10-U03		24	18				14
	1/2	KQ2H10-U04	22	22	14				28
12	1/4	KQ2H12-U02	19	30.5	24.5	22	58.3	46.1	22
	3/8	KQ2H12-U03		25.5	19.5				16
	1/2	KQ2H12-U04	22	24.5	16.5				28
16	3/8	KQ2H16-U03	24	33.5	27.5	24	81	(81)	39
	1/2	KQ2H16-U04		28.5	20.5				113

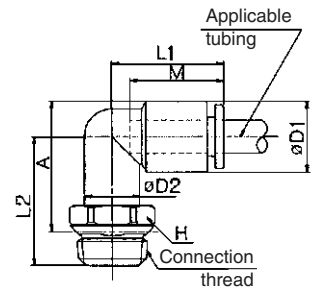


* Reference dimensions after Uni thread installation. Note) Dimensions in () are the case of soft nylon tubing.

Male Elbow: KQ2L



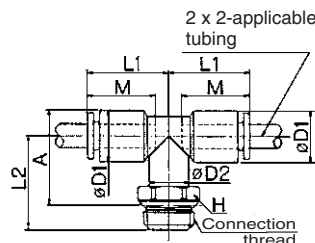
Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	(1)		L1	L2	A*	M	Effective area (mm ²) ⁽²⁾		Mass (g)
				øD1	øD2					Nylon	Urethane	
4	1/8	KQ2L04-U01	10	10.4	10	18	20	20.5	16	4.2	4.2	8
	1/4	KQ2L04-U02	14				22	21.5				14
6	1/8	KQ2L06-U01	10	12.8	10	20	21.5	23.5	17	11.4	11.4	9
	1/4	KQ2L06-U02	14				23	24.5				15
	3/8	KQ2L06-U03	17				24	24.5				23
8	1/8	KQ2L08-U01	12	15.2	12	23	22.5	25.5	18.5	21.6	14.9	11
	1/4	KQ2L08-U02	14				24.5	26				16
	3/8	KQ2L08-U03	17				25.5	27				24
10	1/8	KQ2L10-U01	17	18.5	17	26.5	25	29.5	21	35.2	25.0	24
	1/4	KQ2L10-U02					26.5	30				21
	3/8	KQ2L10-U03					27	30.5				25
	1/2	KQ2L10-U04	22				30	31.5				45
12	1/4	KQ2L12-U02	17	20.9	17	28.5	27	31.5	22	50.2	39.7	23
	3/8	KQ2L12-U03					28	32.5				27
	1/2	KQ2L12-U04	22				31	33.5				48
16	3/8	KQ2L16-U03	22	26.5	21	33	33	40.5	24	71	(71)	49
	1/2	KQ2L16-U04					35	40.5				100



* Reference dimensions after Uni thread installation. Note 1) øD1: Max. diameter
Note 2) Dimensions in () are the case of soft nylon tubing.

Male Branch Tee: KQ2T

Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	⁽¹⁾		L1	L2	A*	M	Effective area (mm ²) ⁽²⁾		Mass (g)	
				øD1	øD2					Nylon	Urethane		
4	1/8	KQ2T04-U01	10	10.4	10	18	20	21.5	16	6.0	6.0	9	
	1/4	KQ2T04-U02	14				22					15	
6	1/8	KQ2T06-U01	10	12.8	10	20	21.5	23.5	17	13.9	13.9	11	
	1/4	KQ2T06-U02	14				23					17	
	3/8	KQ2T06-U03	17				24					26	
	1/8	KQ2T08-U01	12				22.5					15	
8	1/4	KQ2T08-U02	14	15.2	12	23	24.5	26	18.5	26.3	18.2	20	
	3/8	KQ2T08-U03	17				25.5					28	
	1/8	KQ2T10-U01	10				25					30	21.6
10	1/4	KQ2T10-U02	17	18.5	17	26.5	26.5	30	21	35.2	25	27	
	3/8	KQ2T10-U03	17				27					30.5	31
	1/2	KQ2T10-U04	22				30					31.5	51
12	1/4	KQ2T12-U02	17	20.9	17	28.5	27	31.5	22	57.2	45.2	31	
	3/8	KQ2T12-U03	17				28					32.5	34
	1/2	KQ2T12-U04	22				31					33.5	54
16	3/8	KQ2T16-U03	22	26.5	21	33	33	40.5	24	71	(71)	62	
	1/2	KQ2T16-U04	22				35					40.5	100

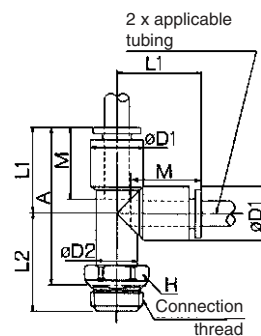


* Reference dimensions after Uni thread installation. Note 1) øD1: Max. diameter
 Note 2) Dimensions in () are the case of soft nylon tubing.

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

Male Run Tee: KQ2Y

Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	⁽¹⁾		L1	L2	A*	M	Effective area (mm ²) ⁽²⁾		Mass (g)	
				øD1	øD2					Nylon	Urethane		
4	1/8	KQ2Y04-U01	10	10.4	10	18	20	34	16	6.4	6.4	9	
	1/4	KQ2Y04-U02	14				22					34.5	15
6	1/8	KQ2Y06-U01	10	12.8	10	20	21.5	37.5	17	13.4	13.4	11	
	1/4	KQ2Y06-U02	14				23					37	17
	3/8	KQ2Y06-U03	17				24					38	26
	1/8	KQ2Y08-U01	12				22.5					41.5	15
8	1/4	KQ2Y08-U02	14	15.2	12	23	24.5	41.5	18.5	25.6	17.7	19	
	3/8	KQ2Y08-U03	17				25.5					42.5	28
	1/8	KQ2Y10-U01	10				25					46.5	30
10	1/4	KQ2Y10-U02	17	18.5	17	26.5	26.5	47.5	21	40.0	28.4	27	
	3/8	KQ2Y10-U03	17				27					48	31
	1/2	KQ2Y10-U04	22				30					49	51
12	1/4	KQ2Y12-U02	17	20.9	17	28.5	27	49.5	22	57.4	45.4	31	
	3/8	KQ2Y12-U03	17				28					50.5	35
	1/2	KQ2Y12-U04	22				31					51.5	55
16	3/8	KQ2Y16-U03	22	26.5	21	33	40.5	66	24	81	(81)	61	
	1/2	KQ2Y16-U04	22				63					113	(113)



* Reference dimensions after Uni thread installation. Note 1) øD1: Max. diameter
 Note 2) Dimensions in () are the case of soft nylon tubing.

Series KQ2

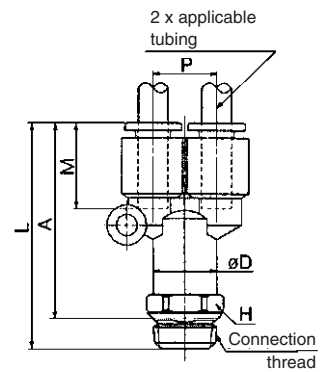
Branch "Y": KQ2U



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	⁽¹⁾ $\phi D1$	L	P	A*	M	Effective area (mm ²)		Mass (g)
									Nylon	Urethane	
4	1/8	KQ2U04-U01	11	10.4	40	10.4	36	16	4.2	4.2	11
	1/4	KQ2U04-U02	14		42						16
6	1/8	KQ2U06-U01	13	12.8	43.5	12.8	39	17	13.4	13.4	14
	1/4	KQ2U06-U02	14		45						18
	3/8	KQ2U06-U03	17		46						26
8	1/8	KQ2U08-U01	17	15.2	50.5	15.2	46	18.5	25.6	17.7	27
	1/4	KQ2U08-U02			52						25
	3/8	KQ2U08-U03			51.5						28
10	1/4	KQ2U10-U03	19	18.5	57.5	18.5	51.5	21	40	28.4	38
	3/8	KQ2U10-U03			59						36
	1/2	KQ2U10-U04			51						51
12	1/4	KQ2U12-U02	22	20.9	61	20.9	55	22	57.4	45.4	53
	3/8	KQ2U12-U03			62.5						52
	1/2	KQ2U12-U04			54.5						52

* Reference dimensions after Uni thread installation.

Note 1) ϕD : Max. diameter



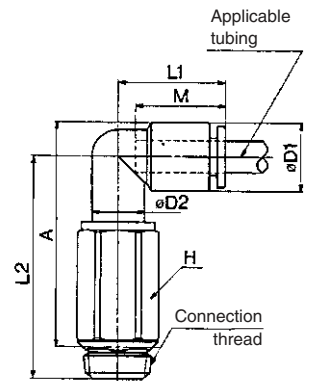
Extended Male Elbow: KQ2W



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	⁽¹⁾ $\phi D1$	$\phi D2$	L1	L2	A*	M	Effective area (mm ²)		Mass (g)
										Nylon	Urethane	
4	1/8	KQ2W04-U01	10	10.4	10	18	34.5	35.5	16	4.0	4.0	16
	1/4	KQ2W04-U02	14				37	38.5				26
6	1/8	KQ2W06-U01	10	12.8	10	20	38.5	41	17	10.9	10.9	18
	1/4	KQ2W06-U02	14				40.5	42				29
	3/8	KQ2W06-U03	17				41.5	46				40
8	1/8	KQ2W08-U01	12	15.2	12	23	43.5	46.5	18	20.5	14.2	28
	1/4	KQ2W08-U02	14				45.5	47				35
	3/8	KQ2W08-U03	17				46	48				46
10	1/4	KQ2W10-U02	17	18.5	17	26.5	52.5	56	21	33.5	23.8	67
	3/8	KQ2W10-U03					54.5	57				
	1/2	KQ2W10-U04					54.5	98				
12	1/4	KQ2W12-U02	17	20.9	17	28.5	54	58.5	22	47.7	37.7	69
	3/8	KQ2W12-U03					56	59				
	1/2	KQ2W12-U04					56	99				

* Reference dimensions after Uni thread installation.

Note 1) $\phi D1$: Max. diameter



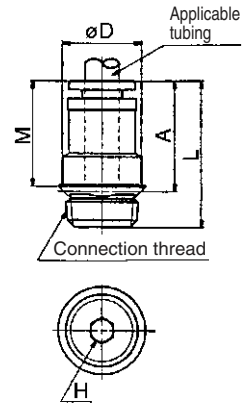
Hexagon Socket Head Male Connector: KQ2S



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	(Note)		L	A*	M	Effective area (mm ²)		Mass (g)
				øD1	øD2				Nylon	Urethane	
4	1/8	KQ2S04-U01	3	10	23.5	18.5	16	4.1	3.6	7	
	1/8	KQ2S06-U01	4	11.8	24	19	17	10.0	9.9	9	
6	1/4	KQ2S06-U02	4	13.5	24	18	17	10.7	10.0	12	
	1/8	KQ2S08-U01	5	14	27.5	22.5	18.5	17.2		12	
8	1/4	KQ2S08-U02	5	14	28	22	18.5	23.3	16.2	14	
	3/8	KQ2S08-U03	6	17	27.5	21.5	18.5	23.3	16.2	24	
10	1/8	KQ2S10-U01	5	17	30	25	21	17.2	10.0	18	
	1/4	KQ2S10-U02	5	17	29	23	21	17.2	10.0	17	
	3/8	KQ2S10-U03	8	19	28.5	22.5	21	39.0	26.6	19	
	1/2	KQ2S10-U04	8	21	29	21	21	39.0	26.6	36	
12	1/4	KQ2S12-U02	8	19	30.5	25	22	46.0		20	
	3/8	KQ2S12-U03	9	19	31	25	22	60.0	44.5	22	
	1/2	KQ2S12-U04	9	21	28.5	20.5	22	60.0	44.5	30	

* Reference dimensions after Uni thread installation.

Note) øD: Max. diameter



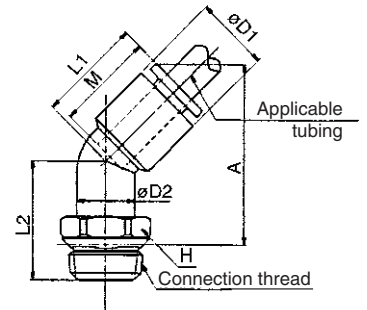
45° Male Elbow: KQ2K



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	(Note)		L1	L2	A*	M	Effective area (mm ²)		Mass (g)
				øD1	øD2					Nylon	Urethane	
4	1/8	KQ2K04-U01	10	10.4	10	17	18.5	30	16	3.4	3.4	6
	1/4	KQ2K04-U02	14	10.4	10	17	20.5	30.5	16	3.4	3.4	13
6	1/8	KQ2K06-U01	10	12.8	10	18	18.5	31	17	8.7	8.7	7
	1/4	KQ2K06-U02	14	12.8	10	18	20.5	31	17	8.7	8.7	13
	3/8	KQ2K06-U03	17	12.8	10	18	21.5	32	17	8.7	8.7	23
8	1/8	KQ2K08-U01	12	15.2	12	20.5	20	35	18.5	19.7	13.6	11
	1/4	KQ2K08-U02	14	15.2	12	20.5	22	35	18.5	19.7	13.6	15
	3/8	KQ2K08-U03	17	15.2	12	20.5	23	36	18.5	19.7	13.6	24
10	1/8	KQ2K10-U01	12	18.5	17	24	22	38	21	21.6	14.9	24
	1/4	KQ2K10-U02	17	18.5	17	24	23.5	40.5	21	21.6	14.9	21
	3/8	KQ2K10-U03	17	18.5	17	24	24	41	21	30.9	23.2	25
	1/2	KQ2K10-U04	22	18.5	17	24	27	42	21	30.9	23.2	45
12	1/4	KQ2K12-U02	17	20.9	17	25	24	42	22	44.5	35.1	23
	3/8	KQ2K12-U03	17	20.9	17	25	24.5	42.5	22	44.5	35.1	27
	1/2	KQ2K12-U04	22	20.9	17	25	27.5	43.5	22	44.5	35.1	46

* Reference dimensions after Uni thread installation.

Note) øD1: Max. diameter



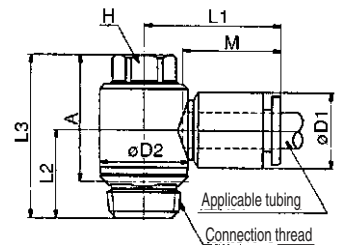
Universal Male Elbow: KQ2V



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	(Note)		L1	L2	L3	A*	M	Effective area (mm ²)		Mass (g)
				øD1	øD2						Nylon	Urethane	
4	1/8	KQ2V04-U01	8	10.4	13.4	22	13.5	25.5	20.5	16	2.9	2.9	12
	1/8	KQ2V06-U01	8	12.8	13.4	24	13.5	25.5	20.5	17	7.5	7.5	13
6	1/4	KQ2V06-U02	10	12.8	15.4	23.5	15.5	28	22	17	7.5	7.5	21
	1/8	KQ2V08-U01	12	15.2	17.6	28.5	14.5	27.5	22.5	18.5	11.2	24	22
8	1/4	KQ2V08-U02	12	15.2	17.6	28.5	16.5	29.5	23.5	18.5	11.2	30	25
	3/8	KQ2V08-U03	14	15.2	20.6	27.5	18.5	34	28	18.5	14.3	47	36
10	1/4	KQ2V10-U02	14	18.5	20.6	31	18.5	34	28	21	27	20.3	35
	3/8	KQ2V10-U03	14	18.5	20.6	31	18.5	34	28	21	27	20.3	38
12	3/8	KQ2V12-U03	17	20.9	25.2	34	20	36.5	30.5	22	39	30.8	52
	1/2	KQ2V12-U04	17	20.9	25.2	34	22.5	39.5	31.5	22	39	30.8	62

* Reference dimensions after Uni thread installation.

Note) øD1: Max. diameter



- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T



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

1 Grease-free Specifications

Symbol	Specifications
X17	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue
X29	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Copper-free (With electroless nickel plated)
X39	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double package, resin body: white)

2 Other Specifications

Symbol	Specifications
X2	Copper-free (With electroless nickel plated)
X12	Lubricant: White Vaseline Release button color: White
X41	With fixed throttle ^{Note)}

Note) Compatible with male connector and male elbow only
Consult SMC separately for the available fixed throttle diameters.

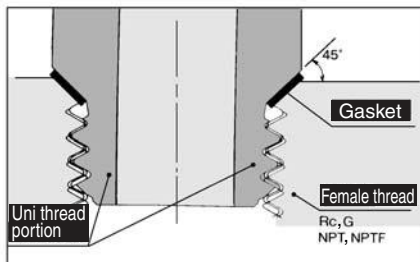
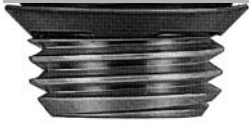
Spare Parts

Description	Part no.	Applicable thread
Gasket	KQG-U01	Uni 1/8
	KQG-U02	Uni 1/4
	KQG-U03	Uni 3/8
	KQG-U04	Uni 1/2

Inch-size Uni One-touch Fittings Series KQ2

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

New-stand male thread for piping that reduces the screw-in time by 1/3.



Uni thread ridge shape

A gasket made of a stainless steel 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.)

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

The male thread for piping drastically cuts piping man-hours.

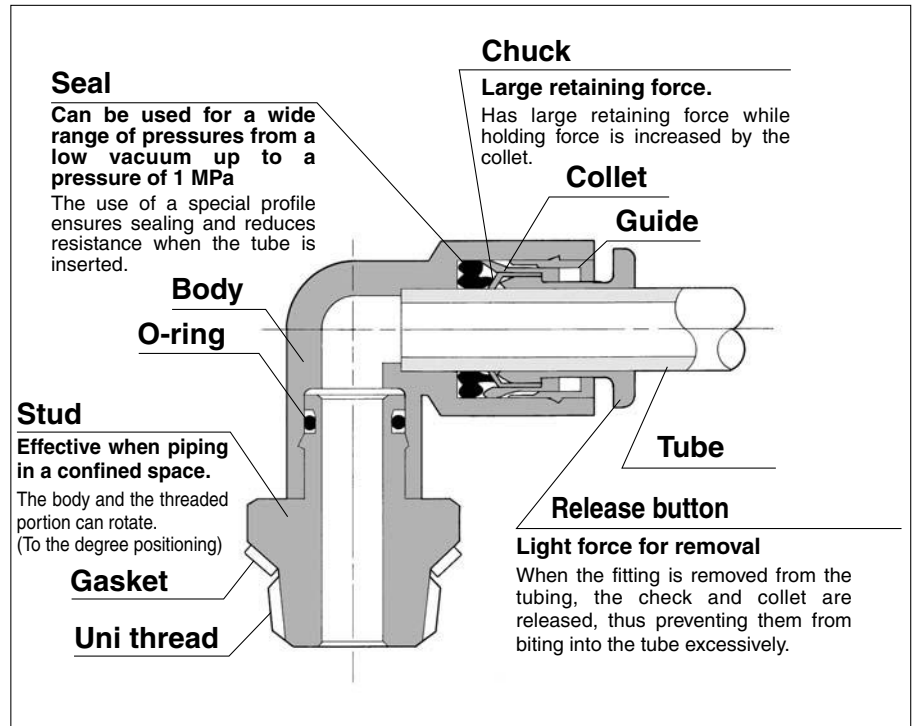


Product's Color

Series	Body	Release button
Series KQ2	White	Orange
Series KQ	Black	Red



Made to Order
Refer to page 97 for details.



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon ⁽¹⁾ , Polyurethane
Tubing O.D.	ø1/8", ø5/32", ø3/16", ø1/4", ø5/16", ø3/8", ø1/2"

Note 1) Soft nylon tubing is not compatible with water.

Specifications

Fluid	Air/Water ⁽²⁾
Operating pressure range ⁽³⁾	-100 kPa to 1 MPa
Proof pressure	3 MPa
Ambient and fluid temperature	-5 to 60°C, Water: 0 to 40°C (No freezing)



Note 2) The surge pressure must be under the maximum operating pressure.

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

Model

Male connector

KQ2H

P. 94



Use to pipe in the same direction from female thread. Most general style.

Male elbow

KQ2L

P. 94



Use to pipe at right angles to female thread. Most general style.

Male branch tee

KQ2T

P. 95



Use to branch line from female thread in both 90° directions.

Male run tee

KQ2Y

P. 95



Use to branch line in the same direction from female thread and in 90° direction.

Branch "Y"

KQ2U

P. 96



Use to branch line in the same direction from female thread.

Extended male elbow

KQ2W

P. 96



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

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

How to Order

KQ 2 H 05 - U01 -

One-touch fittings

Product's color

Symbol	Body	Release button
2	White	Orange
NII	Black	Red

Model

H	Male connector
L	Male elbow
W	Extended male elbow
T	Male branch tee
Y	Male run tee
U	Branch "Y"

Applicable tubing O.D.

01	ø 1/8"
03	ø 5/32"
05	ø 3/16"
07	ø 1/4"
09	ø 5/16"
11	ø 3/8"
13	ø 1/2"

Port size

U01	Uni 1/8"
U02	Uni 1/4"
U03	Uni 3/8"
U04	Uni 1/2"

• Made to Order
Refer to page 97 for details.

How to Order Gasket

KQG - U01

Gasket for Uni One-touch fittings

Applicable port size

U01	Uni 1/8"
U02	Uni 1/4"
U03	Uni 3/8"
U04	Uni 1/2"

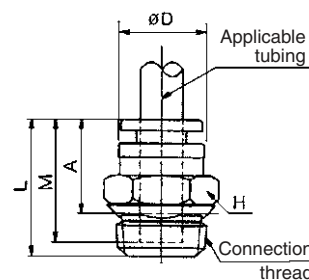
Series KQ2

Male Connector: KQ2H



Applicable tubing O.D. (inch)	Connection thread Uni thread	Model	H (Width across flats)	L	A *	M	Min. port size	Mass (g)
1/8	1/8	KQ2H01-U01	11.11	18.5	13.5	15.5	2.5	7
	1/4	KQ2H01-U02	14.29	16	10			6
5/32	1/8	KQ2H03-U01	11.11	18.5	13.5	16	3	6
	1/4	KQ2H03-U02	14.29	16.5	10.5			10
3/16	1/8	KQ2H05-U01	12.7	18.5	13.5	16	3.5	7
	1/4	KQ2H05-U02	14.29	17	11			9
1/4	1/8	KQ2H07-U01	12.7	22.5	17.5	17	4.6	9
	1/4	KQ2H07-U02	14.29	20.5	14.5			11
	3/8	KQ2H07-U03	17.46	17.5	11.5			16
5/16	1/8	KQ2H09-U01	14.29	25	20.5	18.5	6	12
	1/4	KQ2H09-U02		21.5	15.5			9
	3/8	KQ2H09-U03	17.46	19.5	13.5			16
3/8	1/4	KQ2H11-U02	17.46	28	22	21	7	19
	3/8	KQ2H11-U03						16
	1/2	KQ2H11-U04	22.23	22	14			30
1/2	1/4	KQ2H13-U02	22.23	30	24	22	9.6	33
	3/8	KQ2H13-U03		28.5	22.5			30
	1/2	KQ2H13-U04		25	17			28

* Reference dimensions after Uni thread installation.

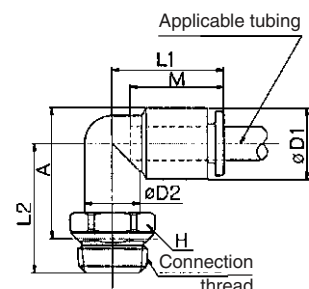


Male Elbow: KQ2L



Applicable tubing O.D. (inch)	Connection thread Uni thread	Model	H (Width across flats)	øD1	øD2	L1	L2	A *	M	Min. port size	Mass (g)
1/8	1/8	KQ2L01-U01	11.11	9.6	10	17.5	20	20.5	15.5	2.5	6
	1/4	KQ2L01-U02	14.29				22	21			13
5/32	1/8	KQ2L03-U01	11.11	10.4	10	18	20	21.5	16	3	7
	1/4	KQ2L03-U02	14.29				22.5	22.5			13
3/16	1/8	KQ2L05-U01	11.11	11.4	10	19.5	20.5	22.5	16	3.5	8
	1/4	KQ2L05-U02	14.29				23	23			14
1/4	1/8	KQ2L07-U01	11.11	13.2	10	20.5	21.5	24	17	4.6	8
	1/4	KQ2L07-U02	14.29				23.5	24.5			15
	3/8	KQ2L07-U03	17.46				24.5	25			21
5/16	1/8	KQ2L09-U01	12.7	15.2	12	23.5	22.5	25.5	18.5	6	10
	1/4	KQ2L09-U02	14.29				24.5	26.5			15
	3/8	KQ2L09-U03	17.46				25.5	27			17
3/8	1/4	KQ2L11-U02	17.46	17.9	17	25.5	26.5	29.5	21	7	18
	3/8	KQ2L11-U03					27	30			22
	1/2	KQ2L11-U04	30				31	41			
1/2	1/4	KQ2L13-U02	17.46	21.7	17	28	28.5	33	22	9.6	23
	3/8	KQ2L13-U03					28.5	33.5			31
	1/2	KQ2L13-U04					22.23	32			35

* Reference dimensions after Uni thread installation.

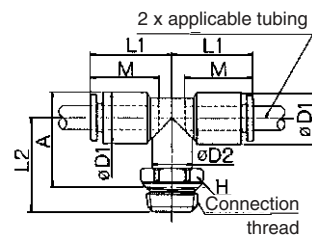


Male Branch Tree: KQ2T



Applicable tubing O.D. (inch)	Connection thread Uni thread	Model	H (Width across flats)	øD1	øD2	L1	L2	A*	M	Min. port size	Mass (g)	
1/8	1/8	KQ2T01-U01	11.11	9.6	10	17.5	20	21	15.5	2.5	8	
	1/4	KQ2T01-U02	14.29				22				15	
5/32	1/8	KQ2T03-U01	11.11	10.4	10	18	20	21.5	16	3	9	
	1/4	KQ2T03-U02	14.29				22.5				15	
3/16	1/8	KQ2T05-U01	11.11	11.4	10	19.5	20.5	22.5	16.5	3.5	10	
	1/4	KQ2T05-U02	14.29				23				16	
1/4	1/8	KQ2T07-U01	11.11	13.2	10	20.5	21.5	24	17	4.6	10	
	1/4	KQ2T07-U02	14.29				23.5				24.5	17
	3/8	KQ2T07-U03	17.46				24.5				25	24
5/16	1/8	KQ2T09-U01	12.7	15.2	12	23.5	22.5	26	18.5	6	14	
	1/4	KQ2T09-U02	14.29				24.5				26.5	19
	3/8	KQ2T09-U03	17.46				25.5				27	25
3/8	1/4	KQ2T11-U02	17.46	17.9	17	25.5	26.5	29.5	21	7	24	
	3/8	KQ2T11-U03					27				30	27
	1/2	KQ2T11-U04					22.23				30	31
1/2	1/4	KQ2T13-U02	17.46	21.7	17	28	33	33	22	9.6	29	
	3/8	KQ2T13-U03					28.5				33.5	32
	1/2	KQ2T13-U04					22.23				32	35

* Reference dimensions after Uni thread installation.



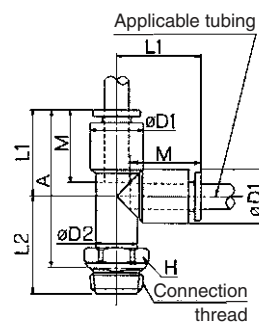
- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

Male Run Tree: KQ2Y



Applicable tubing O.D. (inch)	Connection thread Uni thread	Model	H (Width across flats)	øD1	øD2	L1	L2	A*	M	Min. port size	Mass (g)	
1/8	1/8	KQ2Y01-U01	11.11	9.6	10	17.5	20	33.5	15.5	2.5	8	
	1/4	KQ2Y01-U02	14.29				22				15	
5/32	1/8	KQ2Y03-U01	11.11	10.4	10	18	20	34	16	3	9	
	1/4	KQ2Y03-U02	14.29				22.5				34.5	15
3/16	1/8	KQ2Y05-U01	11.11	11.4	10	19.5	20.5	36	16.5	3.5	10	
	1/4	KQ2Y05-U02	14.29				23				36.5	16
1/4	1/8	KQ2Y07-U01	11.11	13.2	10	20.5	21.5	38	17	4.6	10	
	1/4	KQ2Y07-U02	14.29				23.5				37.5	17
	3/8	KQ2Y07-U03	17.46				24.5				39	24
5/16	1/8	KQ2Y09-U01	12.7	15.2	12	23.5	22.5	42	18.5	6	14	
	1/4	KQ2Y09-U02	14.29				24.5				43	19
	3/8	KQ2Y09-U03	17.46				25.5				43	25
3/8	1/4	KQ2Y11-U02	17.46	17.9	17	25.5	26.5	46	21	7	24	
	3/8	KQ2Y11-U03					27				46.5	27
	1/2	KQ2Y11-U04					22.23				30	47.5
1/2	1/4	KQ2Y13-U02	17.46	21.7	17	28	28.5	50.5	22	9.6	29	
	3/8	KQ2Y13-U03					32				52	32
	1/2	KQ2Y13-U04					22.23				32	52

* Reference dimensions after Uni thread installation.



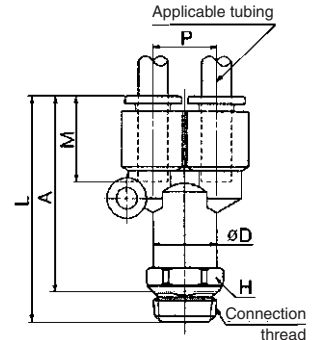
Series KQ2

Branch "Y": KQ2U



Applicable tubing O.D. (inch)	Connection thread Uni thread	Model	H (Width across flats)	øD	L	P	A*	M	Min. port size	Mass (g)
1/8	1/8	KQ2U01-U01	12.7	9.6	38.5	9.6	34.5	15.5	2.5	10
	1/4	KQ2U01-U02	14.29		40.5					
5/32	1/8	KQ2U03-U01	12.7	10.4	40	10.4	36	16	3	12
	1/4	KQ2U03-U02	14.29		42					
3/16	1/8	KQ2U05-U01	12.7	11.4	42	11.4	38	16.5	3.5	14
	1/4	KQ2U05-U02	14.29		44.5					
1/4	1/8	KQ2U07-U01	14.29	13.2	44.5	13.2	40.5	17	4.6	15
	1/4	KQ2U07-U02			46		40			
	3/8	KQ2U07-U03			46.5		40.5			
5/16	1/8	KQ2U09-U01	17.46	15.2	50.5	15.2	46.5	18.5	6	20
	1/4	KQ2U09-U02			52		46			18
	3/8	KQ2U09-U03			51.5		45.5			25
3/8	1/4	KQ2U11-U02	19.05	17.9	56.5	17.9	50.5	21	7	37
	3/8	KQ2U11-U03			59		51			32
	1/2	KQ2U11-U04								38
1/2	1/4	KQ2U13-U02	22.23	21.7	61	21.7	55	22	9.6	26
	3/8	KQ2U13-U03			62.7		54.7			30
	1/2	KQ2U13-U04								50

* Reference dimensions after Uni thread installation.

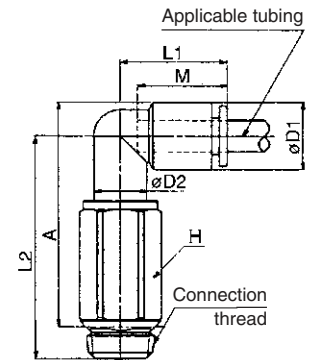


Extended Male Elbow: KQ2W



Applicable tubing O.D. (inch)	Connection thread Uni thread	Model	H (Width across flats)	øD1	øD2	L1	L2	A*	M	Min. port size	Mass (g)	
1/8	1/8	KQ2W01-U01	11.11	9.6	10	17.5	34.5	34	15.5	2.5	17	
	1/4	KQ2W01-U02	14.29				36.5	35.5			26	
5/32	1/8	KQ2W03-U01	11.11	10.4	10	18	34.5	35.5	16	3	18	
	1/4	KQ2W03-U02	14.29				37	36.1			26	
3/16	1/8	KQ2W05-U01	11.11	11.4	10	19.5	35	36	16.5	3.5	19	
	1/4	KQ2W05-U02	14.29				40	39.5			27	
1/4	1/8	KQ2W07-U01	11.11	13.2	10	20.5	36	37.5	17	4.6	21	
	1/4	KQ2W07-U02	14.29				41	41.5			31	
	3/8	KQ2W07-U03	17.46				41.5	42			39	
5/16	1/8	KQ2W09-U01	12.7	15.2	12	23.5	43.5	46.5	18.5	6	26	
	1/4	KQ2W09-U02	14.29				45.5	47			35	
	3/8	KQ2W09-U03	17.46				46	48			39	
3/8	1/4	KQ2W11-U02	17.46	17.9	17	25.5	52.5	55.5	21	7	59	
	3/8	KQ2W11-U03	22.23				54.5	55.5			55	97
	1/2	KQ2W11-U04									97	
1/2	1/4	KQ2W13-U02	17.46	21.7	17	28	54	59	22	9.6	9	
	3/8	KQ2W13-U03	22.23				56	59			64	
	1/2	KQ2W13-U04									100	

* Reference dimensions after Uni thread installation.





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

1 Grease-free Specifications

Symbol	Specifications
X17	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue
X29	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Copper-free (With electroless nickel plated)
X39	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double package, resin body: white)

- K**
- M**
- H**
- KK**
- D**
- MS**
- LQ**
- MQR**
- T**

2 Other Specifications

Symbol	Specifications
X2	Copper-free (With electroless nickel plated)
X12	Lubricant: White Vaseline Release button color: White
X41	With fixed throttle ^{Note)}

Note) Compatible with male connector and male elbow only
Consult SMC separately for the available fixed throttle diameters.

Spare Parts

Description	Part no.	Applicable thread
Gasket	KQG-U01	Uni 1/8
	KQG-U02	Uni 1/4
	KQG-U03	Uni 3/8
	KQG-U04	Uni 1/2