

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

Applicable tubing O.D.

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

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

Port size/Applicable tubing O.D.

Thread connection	Port size	Applicable tubing O.D.
M5	M5 x 0.8	
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	
06	ø6	
08	ø8	
10	ø10	
12	ø12	
16	ø16	
99	Same dia. rod	

Model

Accessory

Symbol	Name
	Nipple
KQ2N	Reducer nipple
	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

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

* 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

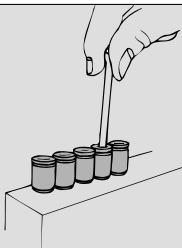
Hex. socket head male connector

KQ2S

P. 42



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



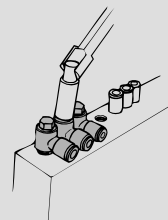
Universal male elbow

KQ2V

P. 45



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



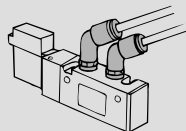
45° male elbow

KQ2K

P. 44



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



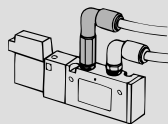
Extended male elbow

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.



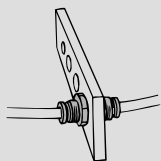
Bulkhead union

KQ2E

P. 56



Use to connect tubes through a panel.



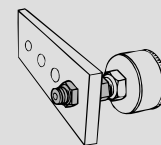
Bulkhead connector

KQ2E

P. 56



Use to connect male thread and tube through a panel.



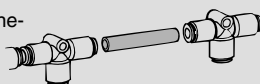
Nipple

KQ2N

P. 57



Use to connect One-touch fittings.



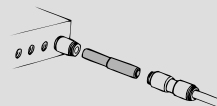
Reducer nipple

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>

<R>

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	15.5	3.4	2.9	16
4	M5 x 0.8	KQ2H04-M5	8	8	17	13.9	12.7	4	4	2.4
	M6 x 1.0	KQ2H04-M6	8	8	18	13.9	12.7	4	4	2.5
	1/8	KQ2H04-01S	10	—	21.1	18	16	5.6	4	9
	1/4	KQ2H04-02S	14	—	19	13.5	16	5.6	4	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	10	19	14.9	13.5	4	4	3.4
	1/8	KQ2H06-01S	12	—	21.6	18.5	17	13.1	10.4	16
	1/4	KQ2H06-02S	14	—	22.5	17	17	13.1	10.4	14
	3/8	KQ2H06-03S	17	—	20.9	15.5	17	13.1	10.4	27
8	1/8	KQ2H08-01S	14	—	27.1	24	18.5	26.1	18.0	21
	1/4	KQ2H08-02S	17	—	26	20.5	18.5	26.1	18.0	19
	3/8	KQ2H08-03S	17	—	20.9	15.5	18.5	26.1	18.0	26
10	1/8	KQ2H10-01S	17	—	29.1	26	21	41.5	29.5	19
	1/4	KQ2H10-02S	17	—	33	27.5	21	41.5	29.5	30
	3/8	KQ2H10-03S	17	—	27.9	22.5	21	41.5	29.5	30
	1/2	KQ2H10-04S	22	—	26.1	19	21	41.5	29.5	53
12	1/4	KQ2H12-02S	19	—	34	28.5	22	58.3	46.1	42
	3/8	KQ2H12-03S	19	—	28.9	23.5	22	58.3	46.1	34
	1/2	KQ2H12-04S	22	—	29.1	22	22	58.3	46.1	51
16	3/8	KQ2H16-03S	24	25.7	38.4	33	25	81	(81)	61
	1/2	KQ2H16-04S	24	25.7	34.6	27.5	25	113	(96)	47

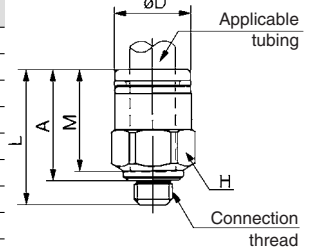
* Reference dimensions after R thread installation.



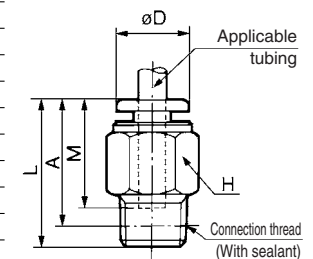
Note 1) ϕD : Max. diameter

Note 2) (): Values for soft nylon.

<M5, M6>



<R>



Hexagon Socket Head Male Connector: KQ2S

<M5, M6>

<R>

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	12.7	4	4	2.8
	1/8	KQ2S04-01S	3	9.8	—	23	19	16	4.1	3.6	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	13.5	4	4	3.4
	1/8	KQ2S06-01S	4	11.8	—	24	20	17	10.0	9.9	9
	1/4	KQ2S06-02S	4	13.8	—	24	18	17	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	18.5	17.2	16.2	11
	3/8	KQ2S08-03S	6	17	—	27.5	21	18.5	23.3	16.2	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	21	39.0	26.6	12
	3/8	KQ2S10-03S	8	22	—	28	20	21	39.0	26.6	19
	1/2	KQ2S10-04S	8	22	—	28	20	21	39.0	26.6	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	22	60.0	44.5	18
	1/2	KQ2S12-04S	10	22	—	28	20	22	60.0	44.5	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	25	113	(96)	34

* Reference dimensions after R thread installation.

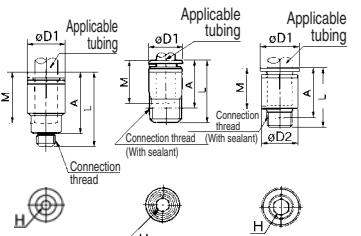


Note 1) $\phi D1$: Max. diameter

Note 2) (): Values for soft nylon.

<M5, M6> <R>

KQ2S04 to 12 KQ2S16

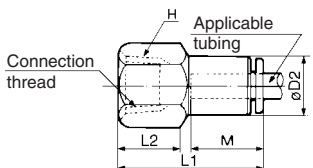


Female Connector: KQ2F

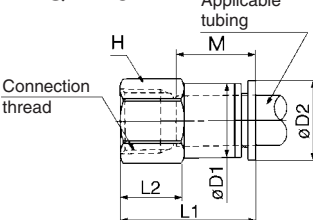


Applicable tubing O.D. (mm)	Connection thread Rc	Model	H (width across flats)	$\phi D1^{(1)}$	$\phi D2$	L1	L2	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
									Nylon	Urethane	
4	1/8	KQ2F04-01	14	—	10	27	11	16	5.6	4	15
	1/4	KQ2F04-02	17	—	10	31	14	16	5.6	4	23
6	1/8	KQ2F06-01	14	—	12	27.5	11	17	13.1	10.4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

KQ2F04 to 12



KQ2F16



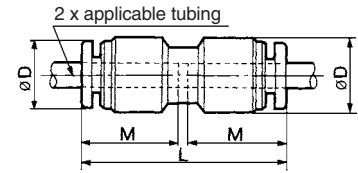
Note 1) $\phi D2$: Max. diameter

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

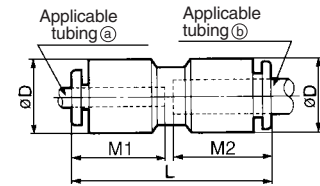


Note 1) øD: Max. diameter
Note 2) (): Values for soft nylon.

Different Diameter Straight: KQ2H



Applicable tubing O.D. (mm)		Model	Note) øD	L	M1	M2	Effective area ⁽²⁾ (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>

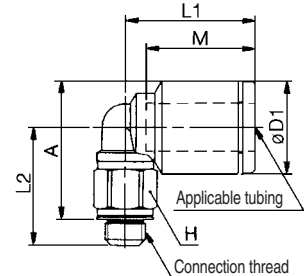


Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	øD ⁽¹⁾	øD2	L1	L2	A*	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
										Nylon	Urethane	
3.2	M5 x 0.8	KQ2L23-M5	7	8.5	—	15.3	13.2	14.3	12.7	2.6	2.2	2.5
	1/8	KQ2L23-01S	10	9.6	10	17.5	20.6	22.5	15.5	3	2.5	8
	1/4	KQ2L23-02S	14	—	—	—	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
	1/4	KQ2L12-02S	17	20.9	17	28.5	30.5	35.5	22	50.2	39.7	28
	3/8	KQ2L12-03S	—	—	—	—	31.9	37	—	—	—	38
	1/2	KQ2L12-04S	22	—	—	—	36.1	39.5	—	—	—	65
16	3/8	KQ2L16-03S	22	26.5	20.9	34	36.9	44.5	25	71	(71)	101
	1/2	KQ2L16-04S	—	—	—	—	40.1	46	—	100	(84)	105

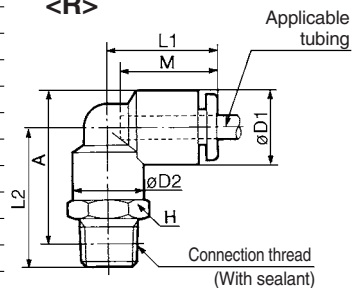


* Reference dimensions after R thread installation.
Note 1) øD1: Max. diameter
Note 2) (): Values for soft nylon.

<M5, M6>



<R>



Series KQ2

Male Branch Connector: KQ2LU

<M5, M6>



<R>

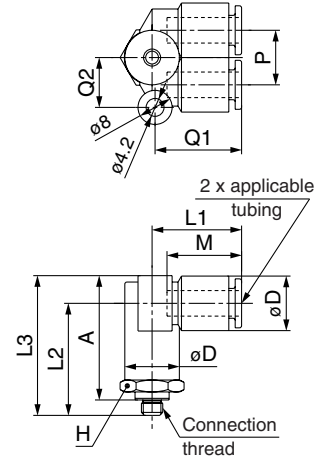


Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	Note) øD	L1	L2	L3	A*	M	P	Q1	Q2	Effective area (mm²)		Mass (g)
													Nylon	Urethane	
4	M5 x 0.8	KQ2LU04-M5	11	10.4	18.5	24	29.5	25.5	16	10.4	18.5	10	4.3	4.1	10
	M6 x 1.0	KQ2LU04-M6				24.5	30								
	1/8	KQ2LU04-01S	25.6			31.1	27.5	6.0					4.1	12	
	1/4	KQ2LU04-02S	30			35.5	30								
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								
	1/8	KQ2LU06-01S	28.6			35.1	32	13.9					11.0	15	
	1/4	KQ2LU06-02S	32.5			39	33.5								
	3/8	KQ2LU06-03S	33.9			40.4	35								
	1/2	KQ2LU06-04S	35.3			42.9	37.5								
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							
	3/8	KQ2LU08-03S				36.9	44.4	39							
	1/2	KQ2LU08-04S				39.5	49	43.5							
10	1/8	KQ2LU10-01S	19	18.5	27	39.9	49.4	44	21	18.5	28	16	40.8	29.0	41
	1/4	KQ2LU10-02S				43.6	53.1	45.5							
	3/8	KQ2LU10-03S				42	52.5	47							
	1/2	KQ2LU10-04S				42.4	52.9	47.5							
12	1/4	KQ2LU12-02S	22	20.9	29	45.6	56.1	49	22	20.9	30	18	57.2	45.2	57
	3/8	KQ2LU12-03S				45.6	56.1	49							
	1/2	KQ2LU12-04S				45.6	56.1	49							

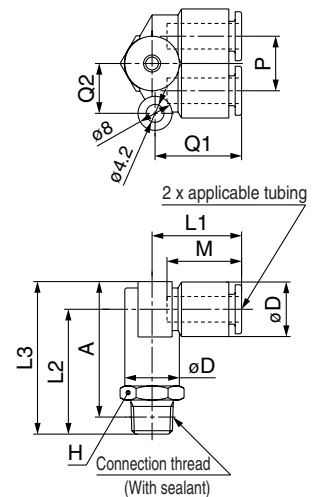
* Reference dimensions after R thread installation.
Note) øD: Max. diameter



<M5, M6>



<R>



45° Male Elbow: KQ2K

<M5, M6>



<R>



Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	øD1 ⁽¹⁾	øD2	L1	L2	A*	M	Effective area ⁽²⁾ (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				5											
	1/8	KQ2K04-01S	10		19.6		32	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	3.4	3.4	6						
	M6 x 1.0	KQ2K06-M6	18.5			15	5											
	1/8	KQ2K06-01S	10		10	19.6	33	12										
	1/4	KQ2K06-02S	14			24	35	10										
	3/8	KQ2K06-03S	17			25.4	36.5	33										
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	14				25.5	39				21						
	3/8	KQ2K08-03S	17				26.9	41				35						
10	1/8	KQ2K10-01S	17	18.5	17	24	23.1	42	21	30.9	23.2	25						
	1/4	KQ2K10-02S					26.5	43.5				26						
	3/8	KQ2K10-03S					27.9	45				36						
	1/2	KQ2K10-04S	22				32.1	47.5				63						
	1/4	KQ2K12-02S	17				20.9	17				25	27	45.5	22	44.5	35.1	28
3/8	KQ2K12-03S	28.4		47.5	38													
1/2	KQ2K12-04S	22		32.6	49.5	65												
16	3/8	KQ2K16-03S	22	26.5	20.9	30			30.9	55	25		65.8	(65.8)				52
	1/2	KQ2K16-04S							34.1	56.5			91.9	(78.3)				58

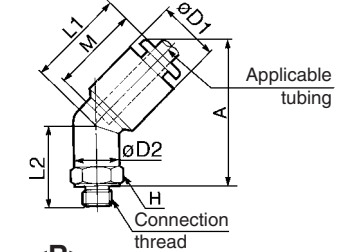
* Reference dimensions after R thread installation.

Note 1) øD1: Max. diameter

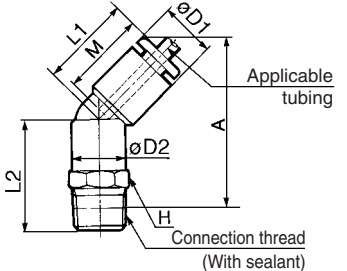
Note 2) (): Values for soft nylon.



<M5, M6>



<R>



Universal Male Elbow: KQ2V

<M5>



<R>



Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	(1) øD1	øD2	L1	L2	L3	A*	M	Effective area (2) (mm²)		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		3.8	3.8	14
6	M5 x 0.8	KQ2V06-M5	8	12.8	9.8	23.5	12	18.5	15	17	7.5	5.9	7
	1/8	KQ2V06-01S			13.4	24	13.6	25.6	22.5		7.5	5.9	15
	1/4	KQ2V06-02S	10		15.4	23.5	18	30.5	25		7.5	5.9	26
8	1/8	KQ2V08-01S	12	15.2	17.6	28.5	14.6	27.6	24.5	18.5	16	11.2	24
	1/4	KQ2V08-02S			18	31	25.5	30	25		20.5	14.3	30
	3/8	KQ2V08-03S	14		20.6	27.5	19.4	35.4	30		20.5	14.3	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			20.9	34	20.9	37.4	32		39	30.8	63
12	3/8	KQ2V12-03S	17	20.9	25.2	34	24.1	40.6	33.5	22	55	(55)	80
	1/2	KQ2V12-04S			25.4	45.4	40.5	40.5	40.5		78	(65)	103
16	3/8	KQ2V16-03S	21	26.5	32.3	39	28.6	48.6	41.5	25	78	(65)	110
	1/2	KQ2V16-04S											

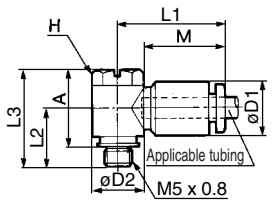
* Reference dimensions after R thread installation.

Note 1) øD1: Max. diameter

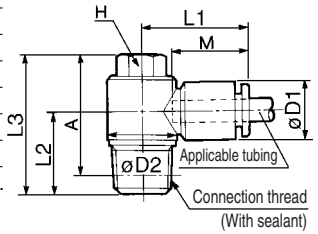
Note 2) (): Values for soft nylon.



<M5>



<R>



K□

M□

H□

KK

D□

MS

LQ

MQR

T□

Hexagon Socket Head Universal Male Elbow: KQ2VS

<M5>



<R>



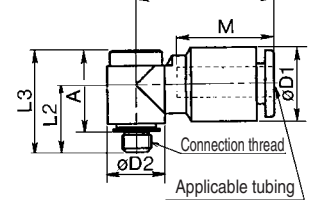
Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	Note) øD1	øD2	L1	L2	L3	A *	M	Effective area (mm²)		Mass (g)
											Nylon	Urethane	
4	M5 x 0.8	KQ2VS04-M5	4	10.4	9.8	20.5	10.5	18	15	16	2.9	2.9	6
	1/8	KQ2VS04-01S	6		13.4	22	13.6	25.6	22.5		3.8	3.8	14
6	M5 x 0.8	KQ2VS06-M5	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		7.5	5.9	15
	1/4	KQ2VS06-02S			15.3	23.5	18	26.5	21		7.5	5.9	22
8	1/8	KQ2VS08-01S	8	15.2	17.6	28.5	14.6	26.1	23	18.5	16	11.2	24
	1/4	KQ2VS08-02S			18	29.5	24	31	25		20.5	14.3	30
	3/8	KQ2VS08-03S			20.6	27.5	19.4	31.4	26		20.5	14.3	47
10	1/4	KQ2VS10-02S	8	18.5	20.6	31	19	31	25	21	27	20.3	32
	3/8	KQ2VS10-03S			20.9	34	19.4	31.4	26		39	30.8	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			24.1	38.1	31	40.5	40.5		78	78	67

* Reference dimensions after R thread installation.

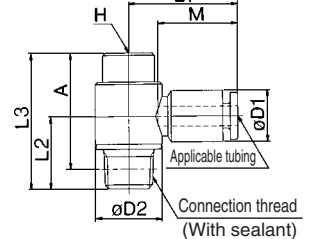
Note) øD1: Max. diameter



<M5>



<R>



Series KQ2

Universal Female Elbow: KQ2VF

<M5>



<R>

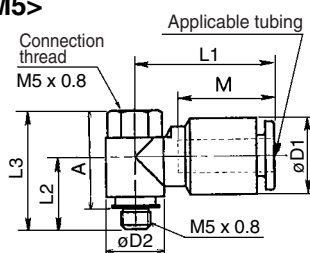


Applicable tubing O.D. (mm)	Connection thread Rc R	Model	H (width across flats)	Note) øD1	øD2	L1	L2	L3	A*	M	Mass (g)
4	M5 x 0.8	KQ2VF04-M5	8	10.4	9.8	20.5	11	20	16	16	6
	1/8	KQ2VF04-01S	14		13.4	22	14.6	28.6	25.5		19
6	M5 x 0.8	KQ2VF06-M5	8	12.8	9.8	23.5	12.5	20	16	17	7
	1/8	KQ2VF06-01S	14		13.4	24.5	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	22		19.5	38	32.5	39	37		66
	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	24	20.9	27	35	24.6	49.1	42	22	93

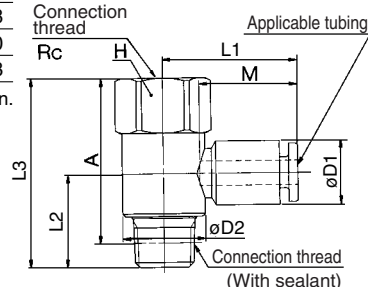
* Reference dimensions after R thread installation.

Note) øD1: Max. diameter

<M5>



<R>



Female Elbow: KQ2LF

<M5, M6>



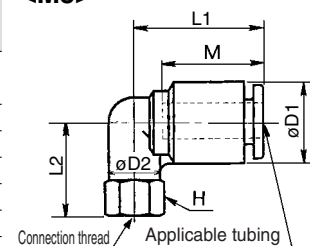
<Rc>



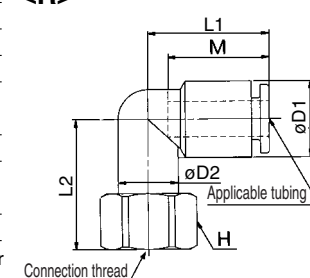
Applicable tubing O.D. (mm)	Connection thread Rc	Model	H (width across flats)	(Note) øD1	øD2	L1	L2	M	Effective area (mm ²)		Mass (g)
									Nylon	Urethane	
4	M5 x 0.8	KQ2LF04-M5	8	10.4	8	18.5	14.5	16	3.5	3.5	5
	M6 x 1.0	KQ2LF04-M6	14		15.5		4.2		4.2	13	
	1/8	KQ2LF04-01	14		21					20	
	1/4	KQ2LF04-02	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		11.4		9.0	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	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	35.2	25.0		46		
	1/2	KQ2LF10-04	24		32.5						
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	48					
	1/2	KQ2LF12-04	24		34	48					

Note) øD1: Max. diameter

<M5>



<R>



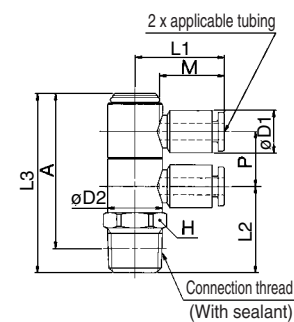
Double Universal Male Elbow: KQ2VD



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	Note) øD1	øD2	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	17				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	17				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	21				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	21				27.5	57.9	53			74
	1/2	KQ2VD10-04S	21				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	26				29.5	64.4	59			113
	1/2	KQ2VD12-04S	26				32.5	67.6	60			125

* Reference dimensions after R thread installation.

Note) øD1: Max. diameter



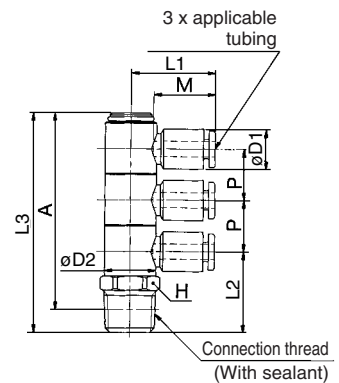
Triple Universal Male Elbow: KQ2VT



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	Note) øD1	øD2	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	14				21	57	51.5			34
	3/8	KQ2VT04-03S	17				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	14				21	57	51.5			37
	3/8	KQ2VT06-03S	17				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	21				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) øD1: Max. diameter



K□

M□

H□

KK

D□

MS

LQ

MQR

T□

Branch Universal Male Elbow: KQ2Z

<M5>



<R>



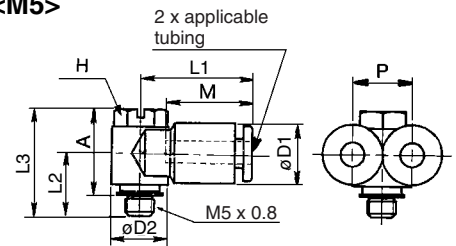
Applicable tubing O.D. (mm)	Connection thread R M Rc	Model	H (width across flats)	Note) øD1	øD2	L1	L2	L3	A*	M	P	Effective area (mm ²)	Mass (g)
4	M5 x 0.8	KQ2Z04-M5	8	10.4	9.8	19.5	11	18.5	15	16	10.4	3.4	8
	1/8	KQ2Z04-01S	8		13.4	21	13.6	25.6	22.5			4.7	16
6	1/8	KQ2Z06-01S	8	12.8	13.4	22	13.6	25.6	22.5	17	12.8	10.8	17
	1/4	KQ2Z06-02S	14		20.6	25.5	19	35	29.5			8.6	39
	3/8	KQ2Z06-03S	14		19.4	35.4	30						47
8	1/8	KQ2Z08-01S	12	15.2	14.6	27.6	24.5			18.5	15.2	20.5	27
	1/4	KQ2Z08-02S	14		18	31	25.5					14.2	33
	3/8	KQ2Z08-03S	14		20.6	27	19.4	35.4	30				49
10	1/4	KQ2Z10-02S	14	18.5	20.6	29	19	35	29.5	21	18.5	31.8	46
	3/8	KQ2Z10-03S	14		19.4	35.4	30						54
	1/2	KQ2Z10-04S	17		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
	1/2	KQ2Z12-04S											88

* Reference dimensions after R thread installation.

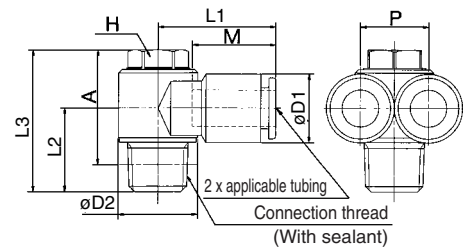
Note) øD1: Max. diameter



<M5>



<R>



Branch Universal Female Elbow: KQ2ZF

<M5>



<R>



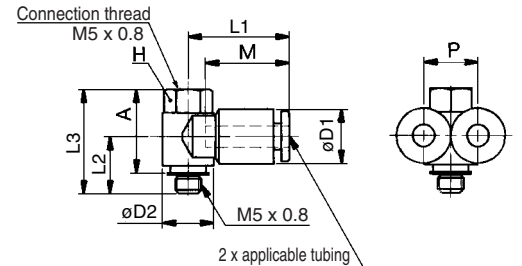
Applicable tubing O.D. (mm)	Connection thread R M Rc	Model	H (width across flats)	Note) øD1	øD2	L1	L2	L3	A*	M	P	Mass (g)
4	M5 x 0.8	KQ2ZF04-M5	8	10.4	9.8	19.5	11	20	16.5	16	10.4	8
	1/8	KQ2ZF04-01S	14		13.4	21	14.6	28.6	25.5			21
6	1/8	KQ2ZF06-01S	14	12.8	13.4	22	14.6	28.6	25.5	17	12.8	21
	1/4	KQ2ZF06-02S	19		20.6	25.5	21.5	40.5	35			47
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	19		20.6	27	21.5	40.5	35			49
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		25.2	31.5	23.4	44.4	39			74
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		27	33	24.1	49.1	42			101

* Reference dimensions after R thread installation.

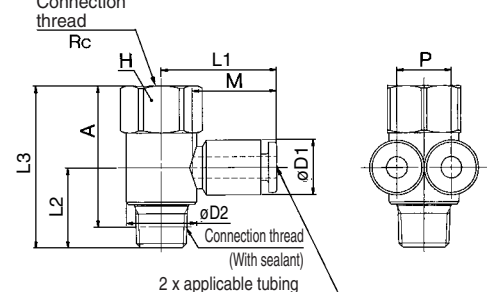
Note) øD1: Max. diameter



<M5>



<R>



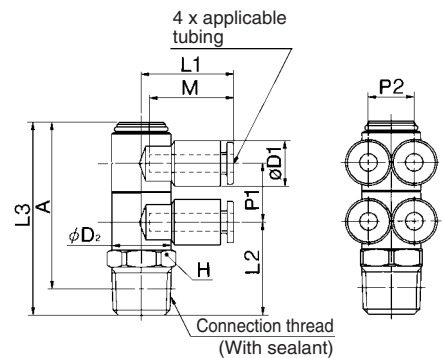
Series KQ2

Double Branch Universal Male Elbow: KQ2ZD



Applicable tubing O.D. (mm)	Connection threads R	Model	H (width across flats)	Note) øD1	øD2	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	19	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	21				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) øD1: Max. diameter

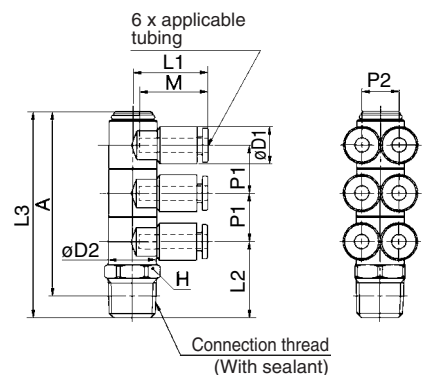


Triple Branch Universal Male Elbow: KQ2ZT



Applicable tubing O.D. (mm)	Connection threads R	Model	H (width across flats)	Note) øD1	øD2	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	19	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	21				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				178
12	1/4	KQ2ZT12-02S	26	20.9	25.2	32	28	85.5	80	22	21.6	20.9	167
	3/8	KQ2ZT12-03S	26				28.5	85.9	80.5				179
	1/2	KQ2ZT12-04S	26				31.6	89.1	82				179

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

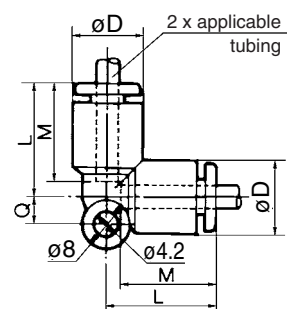


Union Elbow: KQ2L



Applicable tubing O.D. (mm)	Model	øD ⁽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) øD: Max. diameter
Note 2) (): Valves for soft nylon.



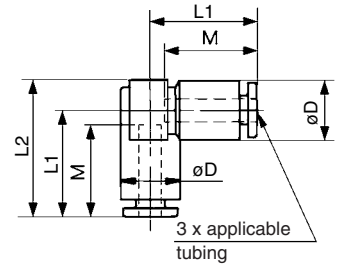
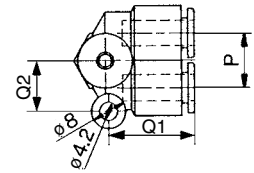
Branch Union Elbow: KQ2LU



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

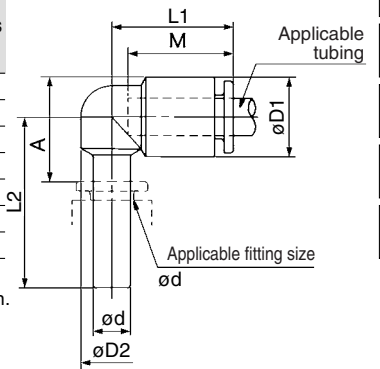


Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	(1) $\phi D1$	$\phi D2$	L1	L2	A	M	Effective area (mm ²)		Mass (g)
									Nylon	Urethane	
3.2	3.2	KQ2L23-99	9.6	7	17	24.5	14	15.5	3	2.5	2
4	4	KQ2L04-99	10.4	8	18	25	14.5	16	4.2	4.2	3
6	6	KQ2L06-99	12.8	10	20	27.5	17	17	11.4	9.0	3
8	8	KQ2L08-99	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.



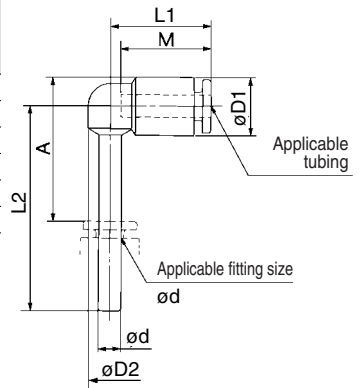
Extended Plug-in Elbow: KQ2W



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	Note) $\phi D1$	$\phi D2$	L1	L2	A	M	Effective area (mm ²)		Mass (g)
									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



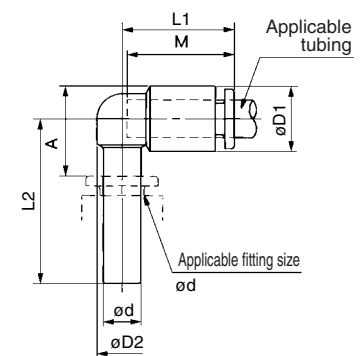
Reducer Elbow: KQ2L



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	Note) $\phi D1$	$\phi D2$	L1	L2	A	M	Effective area (mm ²)		Mass (g)
									Nylon	Urethane	
3.2	4	KQ2L23-04	9.6	7	17	25	13.5	15.5	3	2.5	2
4	6	KQ2L04-06	10.4	8	18	26	14.5	16	4.2	4.2	3
	8	KQ2L04-08		10	35	22	22				11
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				19
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				27
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



Series KQ2

Extended Male Elbow: KQ2W

<M5>



<R>



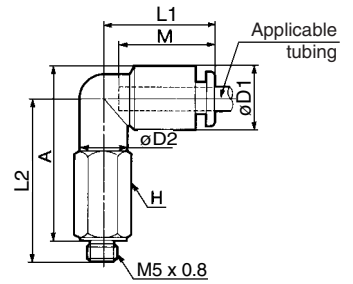
Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	ØD1 ⁽¹⁾	ØD2	L1	L2	A*	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
										Nylon	Urethane	
3.2	M5 x 0.8	KQ2W23-M5	8	9.6	8	17.5	30	31	15.5	2.8	2.4	10
	1/8	KQ2W23-01S	10		10		37	38		4.0	4.0	19
	1/4	KQ2W23-02S	14				43	42				41
4	M5 x 0.8	KQ2W04-M5	8	10.4	8	18	30	32	16	3.0	3.0	11
	1/8	KQ2W04-01S	10		10		36.6	38.5		4.0	4.0	23
	1/4	KQ2W04-02S	14				43	42.5				38
6	M5 x 0.8	KQ2W06-M5	8	12.8	8	20	30.5	33.5	17	3	3	11
	1/8	KQ2W06-01S	10		10		39.1	42.5		10.9	8.6	26
	1/4	KQ2W06-02S	14				45.5	46.5				41
	3/8	KQ2W06-03S	17				46.9	48				67
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					72.1	78		100	(84)	105

* Reference dimensions after R thread installation.

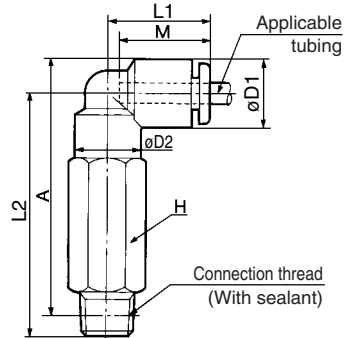
Note 1) $\phi D1$: Max. diameter

Note 2) (): Values for soft nylon

<M5>



<R>



Male Branch Tee: KQ2T

<M5>



<M6>



<R>



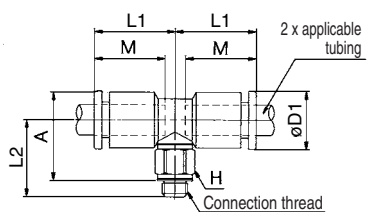
Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	(1)		L1	L2	A*	M	Effective area (2) (mm²)		Mass (g)
				øD1	øD2					Nylon	Urethane	
3.2	M5 x 0.8	KQ2T23-M5	7	8.4	—	15.3	13.2	14.3	12.7	3.2	2.7	3.2
	1/8	KQ2T23-01S	10	9.6	10	17.5	20.6	22.5	15.5	3.4	2.9	10
	1/4	KQ2T23-02S	14				25	24.5				20
4	M5 x 0.8	KQ2T04-M5	7	9.3	—	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	10.4	10	18	21.1	23	16	6.0	4.1	13
	1/4	KQ2T04-02S	14				25.5	25				19
6	M5 x 0.8	KQ2T06-M5	7	11.6	—	16.1	14.7	17.4	13.5	4.5	4.5	4.4
	M6 x 1.0	KQ2T06-M6	8				15.7	5.3				
	1/8	KQ2T06-01S	10	12.8	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
8	1/8	KQ2T08-01S	12	15.2	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
10	1/8	KQ2T10-01S	17	18.5	17	26.5	26.1	32	21	21.6	14.9	31
	1/4	KQ2T10-02S					29.5	33				29
	3/8	KQ2T10-03S					30.9	34.5		39		
	1/2	KQ2T10-04S	22				35.1	37		66		
12	1/4	KQ2T12-02S	17	20.9	17	28.5	30.5	35.5	22	57.2	45.2	31
	3/8	KQ2T12-03S					31.9	37				41
	1/2	KQ2T12-04S					22	36.1				39.5
16	3/8	KQ2T16-03S	22	26.5	20.9	34	36.9	44.5	25	71	(71)	112
	1/2	KQ2T16-04S					39.6	46		100	(100)	116

* Reference dimensions after R thread installation.

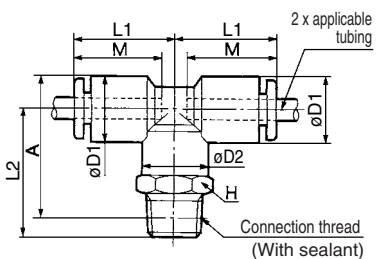
Note 1) $\phi D1$: Max. diameter

Note 2) (): Values for soft nylon.

<M5, M6>



<R>



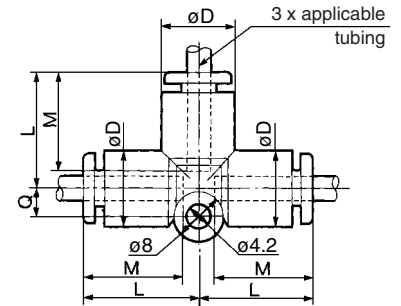
Union Tee: KQ2T



Applicable tubing O.D. (mm)	Model	⁽¹⁾ øD	L	Q	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
						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) øD: Max. diameter
Note 2) (): Valves for soft nylon.



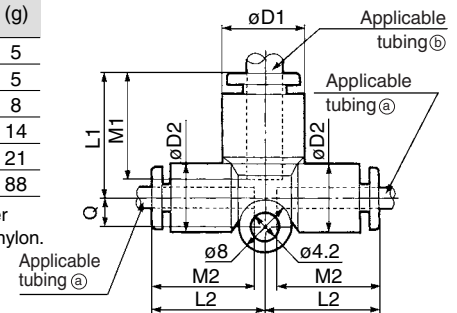
Different Diameter Tee: KQ2T



Applicable tubing O.D. (mm)		Model	⁽¹⁾ øD1 øD2		L1	L2	Q	M1	M2	Effective area ⁽²⁾ (mm ²)		Mass (g)
(a)	(b)									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) øD1: Max. diameter
Note 2) (): Values for soft nylon.



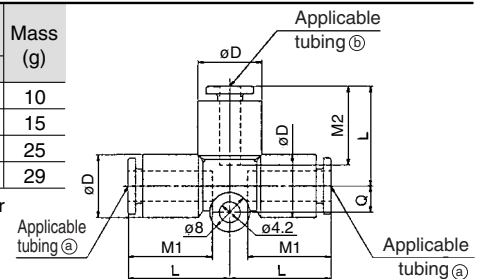
Different Diameter Tee: KQ2T



Applicable tubing O.D. (mm)		Model	^{Note)} øD	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) øD: Max. diameter



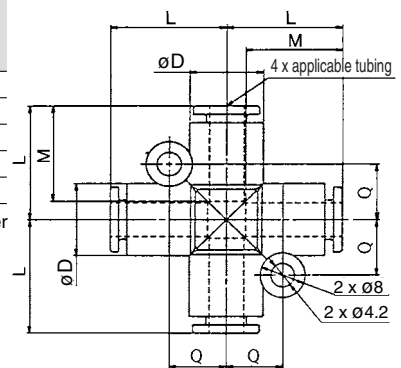
Cross: KQ2TW



Applicable tubing O.D. (mm)		Model	^{Note)} øD	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) øD: Max. diameter



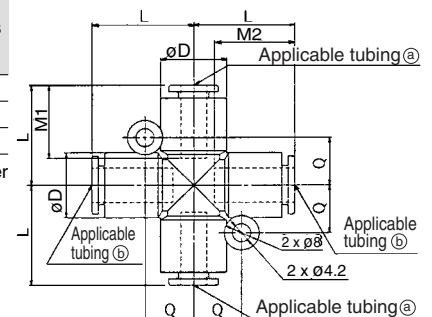
Different Diameter Cross: KQ2TX



Applicable tubing O.D. (mm)		Model	^{Note)} øD	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) øD: Max. diameter



Series KQ2

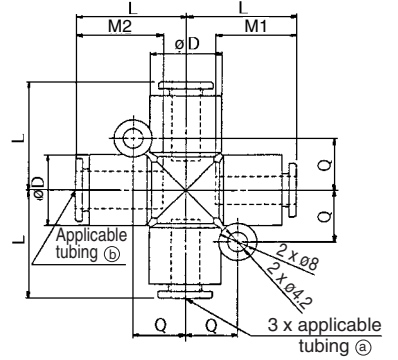
Different Diameter Cross: KQ2TY



Applicable tubing O.D. (mm)		Model	Note) øD	L	Q	M1	M2	Effective area (mm ²)		Mass (g)
①	②							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)	øD ⁽¹⁾	øD2	L1	L2	L3	A*	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
											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	—	—	—	—	—	6
	1/8	KQ2Y04-01S	10	10.4	10	18	21.1	—	36	16	6.4	4.4	13
6	1/4	KQ2Y04-02S	14	—	—	—	25.5	—	38	—	—	—	19
	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	—	—	—	—	—	7
8	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
	3/8	KQ2Y06-03S	17	—	—	—	27.9	—	42.5	—	—	—	34
10	1/8	KQ2Y08-01S	12	15.2	12	23	23.6	—	43.5	18.5	25.6	17.7	14
	1/4	KQ2Y08-02S	14	—	—	—	28	—	45.5	—	—	—	22
	3/8	KQ2Y08-03S	17	—	—	—	29.4	—	47	—	—	—	36
12	1/8	KQ2Y10-01S	17	18.5	17	26.5	26.1	—	49.5	21	40.0	28.4	31
	1/4	KQ2Y10-02S	—	—	—	—	29.5	—	50.5	—	—	—	29
	3/8	KQ2Y10-03S	—	—	—	—	30.9	—	52	—	—	—	39
16	1/2	KQ2Y10-04S	22	—	—	—	35.1	—	54.5	—	—	—	66
	1/4	KQ2Y12-02S	17	20.9	17	28.5	30.5	—	53.5	22	57.4	45.4	31
	3/8	KQ2Y12-03S	—	—	—	—	31.9	—	55	—	—	—	41
	1/2	KQ2Y12-04S	22	—	—	—	36.1	—	57.5	—	—	—	68
16	3/8	KQ2Y16-03S	—	—	—	—	36.9	—	65.5	25	81	(81)	112
	1/2	KQ2Y16-04S	—	—	—	—	40.1	—	67	—	113	(113)	116

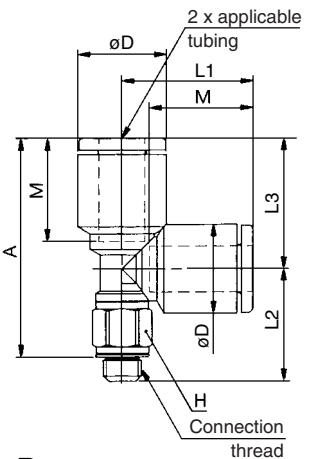


* Reference dimensions after R thread installation.

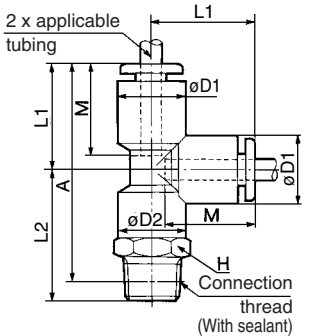
Note 1) øD1: Max. diameter

Note 2) (): Values for soft nylon

<M5, M6>



<R>



Male Delta Union: KQ2D

<M5, M6>



<R>



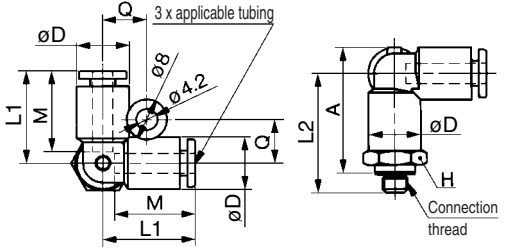
Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	Note) øD	L1	L2	A ^{*c}	M	Q	Effective area (mm²)		Mass (g)		
										Nylon	Urethane			
4	M5 x 0.8	KQ2D04-M5	11	10.4	18.5	24	25.5	16	8.7	2.2	2.2	10		
	M6 x 1.0	KQ2D04-M6				24.5				4.3	4.3			
	1/8	KQ2D04-01S	14			25.6	27.5			6.0	6.0	12		
	1/4	KQ2D04-02S				30	29.5					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								
	1/8	KQ2D06-01S	14			28.1	31.5			13.9	11.0	14		
	1/4	KQ2D06-02S				32	33					21		
	3/8	KQ2D06-03S	17			33.4	34.5					34		
8	1/8	KQ2D08-01S	17	15.2	23.5	32.6	37	18.5	11.1	26.3	18.2	26		
	1/4	KQ2D08-02S				36	38					36.4	38.5	39
	3/8	KQ2D08-03S												
	1/4	KQ2D10-02S				19	18.5					26.5	39	43
3/8	KQ2D10-03S	39.4	43.5	40										
1/2	KQ2D10-04S	22	43.1	45	62									
12	1/4	KQ2D12-02S	22	20.9	28.5	41.5		46.5	22	13.9	57.2		45.2	55
	3/8	KQ2D12-03S				41.9	47	56						
	1/2	KQ2D12-04S				45.1	48.5	63						

* Reference dimensions after R thread installation.

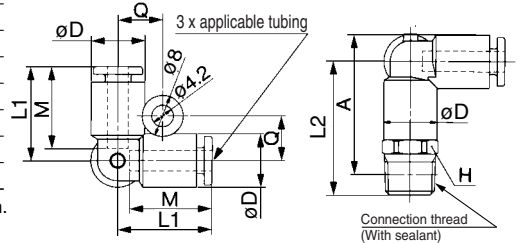
Note) øD: Max. diameter



<M5, M6>



<R>

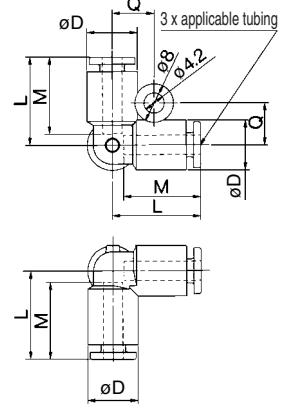


Delta Union: KQ2D



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)	øD ⁽¹⁾	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		36				10
	1/8	KQ2U04-01S			41.1		38		4.2	4.2	11
	1/4	KQ2U04-02S	14		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		39				
	1/8	KQ2U06-01S	44.6		41.5		13.4		10.6	11	
	1/4	KQ2U06-02S	14		48.5		43				21
	3/8	KQ2U06-03S	17		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			55		49.5				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			22		64.1		57		
	1/4	KQ2U12-02S	22		64		58.5		22	57.4	45.4
3/8	KQ2U12-03S	64.4		59			40				
1/2	KQ2U12-04S	67.6		60.5			65				
12	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

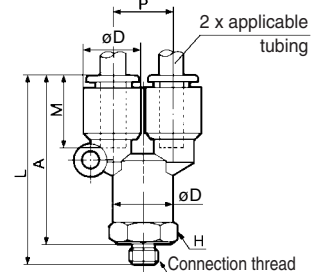
* Reference dimensions after R thread installation.

Note 1) øD: Max. diameter

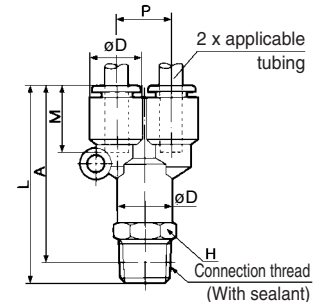
Note 2) (): Values for soft nylon



<M5, M6>



<R>



Series KQ2

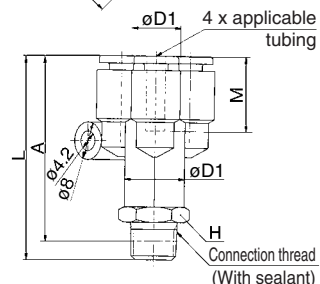
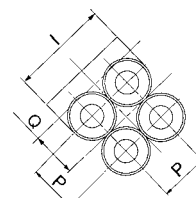
Delta Branch: KQ2UD



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											
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	17											

* Reference dimensions after R thread installation.

Note) $\phi D1$: Max. diameter



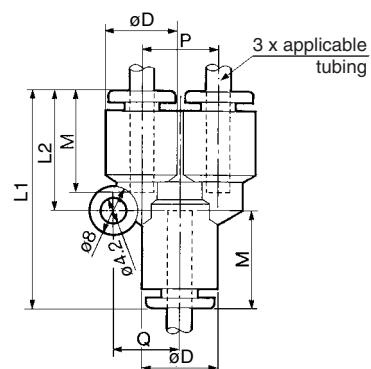
Union "Y": KQ2U



Applicable tubing O.D. (mm)	Model	ϕD (1)	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.

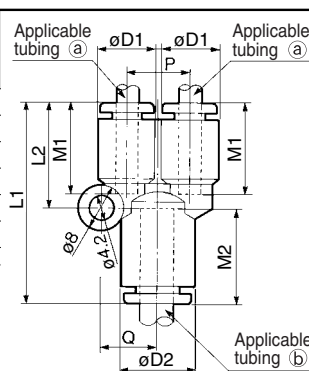


Different Diameter Union "Y": KQ2U



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

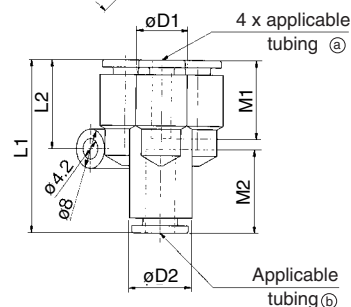
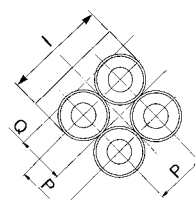


Different Diameter Double Union "Y": KQ2UD



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



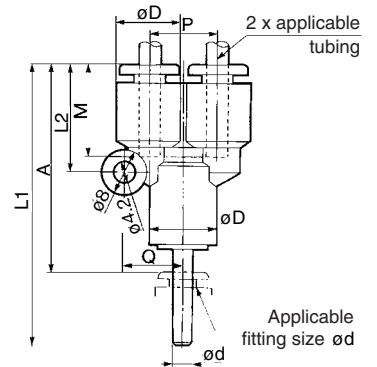
Plug-in “Y”: KQ2U



Applicable tubing O.D. (mm)	Applicable fitting size ød	Model	øD ⁽¹⁾	L1	L2	P	Q	A	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
										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.



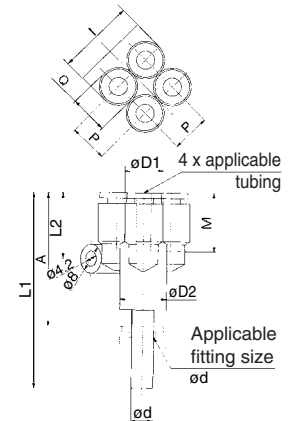
Double Plug-in “Y”: KQ2XD



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



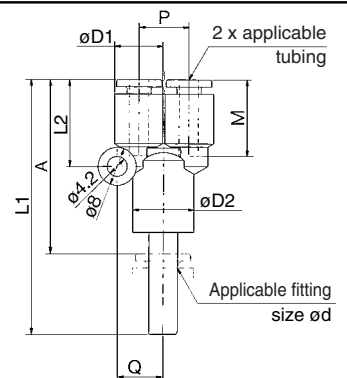
Different Diameter Plug-in “Y”: KQ2X



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



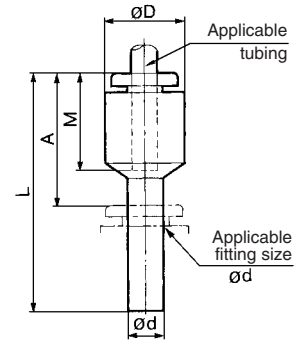
K ☐
M ☐
H ☐
KK ☐
D ☐
MS ☐
LQ ☐
MQR ☐
T ☐

Series KQ2

Plug-in Reducer: KQ2R



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	⁽¹⁾ ϕD	L	A	M	Effective area ⁽²⁾ (mm ²)		Mass (g)
							Nylon	Urethane	
3.2	4	KQ2R23-04	9.6	33.5	18.5	15.5	3.4	2.9	2
4	6	KQ2R04-06	10.4	34.5	17.5	16	5.6	4	1.8
	8	KQ2R04-08		36.5	18				2.0
	10	KQ2R04-10	12.8	39.5	18.5				3.3
6	4	KQ2R06-04	12.8	37	21	17	4	4	2.5
	8	KQ2R06-08	12.8	37	18.5		13.1	10.4	2.5
	10	KQ2R06-10		39.5	18.5				3
8	12	KQ2R06-12	15.2	42	20				4.7
	10	KQ2R08-10	15.2	41	20	18.5	26.1	18.0	4.0
	12	KQ2R08-12		42					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)	42
12	16	KQ2R12-16	20.9	50.5	25.5	22	58.3	(46.1)	37



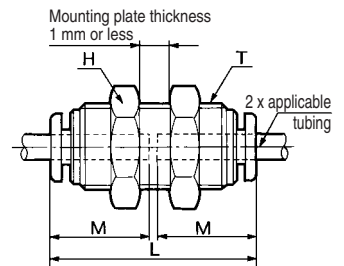
Note 1) ϕD : Max. diameter

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

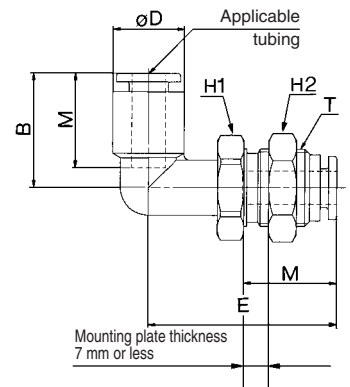


Note) (): Values for soft nylon.

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

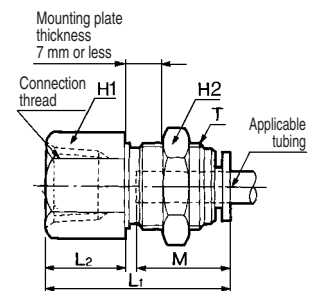


Note) ϕD : Max. diameter

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
4	1/8	KQ2E04-01	M12 x 1	14	14	27.5	11	13	16	5.6	4	16
	1/4	KQ2E04-02		17		31	15					35
6	1/8	KQ2E06-01	M14 x 1	17	17	28	11	15	17	13.1	10.4	30
	1/4	KQ2E06-02				31.5	15					30
	3/8	KQ2E06-03				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				33	13					33
	3/8	KQ2E08-03				35	15					34
10	1/4	KQ2E10-02	M20 x 1	22	24	34.5	12.5	21	21	41.5	29.5	53
	3/8	KQ2E10-03				36.5	14					67
12	3/8	KQ2E12-03	M22 x 1	24	27	37	14	23	22	58.3	46.1	92
	1/2	KQ2E12-04				41	18					59
16	3/8	KQ2E16-03	M28 x 1.5	30	32	40	14	29	25	96	(96)	127
	1/2	KQ2E16-04				44	18					132



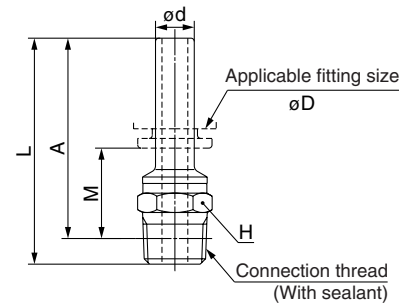
Note) (): Values for soft nylon.

Adaptor: KQ2N



Applicable fitting size øD	Connection thread R	Model	H (width across flats)	L	A*	M	ød	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	2.5	6
6	M5 x 0.8	KQ2N06-M5	7	33	30	13	2.5	2
	1/8	KQ2N06-01S	10	34.1	31	14	4.5	5
	1/4	KQ2N06-02S	14	37	31.5	14.5	4.5	14
8	1/4	KQ2N08-02S	14	38.5	33	14.5	6	17
	3/8	KQ2N08-03S	17	39.9	34.5	16	6	30
10	3/8	KQ2N10-03S	17	44.9	39.5	18.5	7.5	31

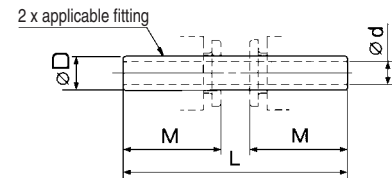
* Reference dimensions after R thread is screwed in.



Nipple: KQ2N



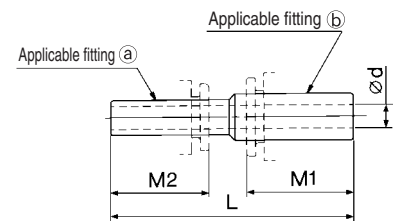
Applicable fitting øD	Model	L	M	ød	Mass (g)
4	KQ2N04-99	37	16	2.5	1
6	KQ2N06-99	39	17	4	2
8	KQ2N08-99	43	18.5	6	2
10	KQ2N10-99	49	21	7.5	4
12	KQ2N12-99	52	22	9	20.6
16	KQ2N16-99	57	25	13	31



Reducer Nipple: KQ2N



Applicable fitting		Model	L	M1	M2	ød	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

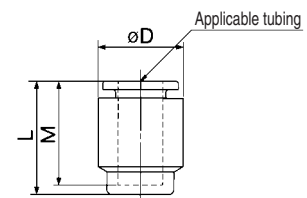


Tube Cap: KQ2C

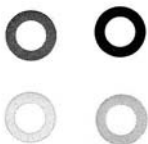


Applicable tubing O.D. (mm)	Model	Note) øD	L	M	Mass (g)
4	KQ2C04-00	10.4	17	16	3
6	KQ2C06-00	12.8	18.5	17	3
8	KQ2C08-00	15.2	20.5	18.5	4
10	KQ2C10-00	18.5	23	21	6
12	KQ2C12-00	20.9	24	22	8
16	KQ2C16-00	26.5	28	25	13

Note) øD: Max. diameter

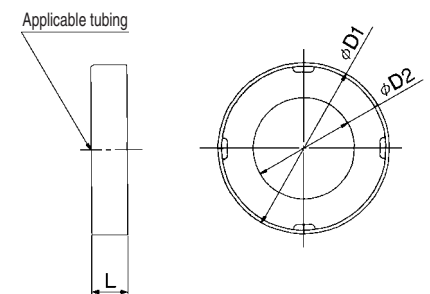


Color Cap: KQ2C



Applicable tubing O.D. (mm)	Model	øD1	øD2	L	Mass (g)	Application
4	KQ2C-04□	10.1	5.2	2.9	0.1	
4	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		0.3	

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

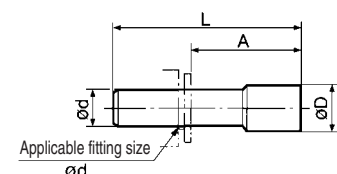


Plug: KQ2P, KQP



Applicable fitting size ød	Model Note)		øD	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)



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	
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
Tubing (Rod) connection	
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 *



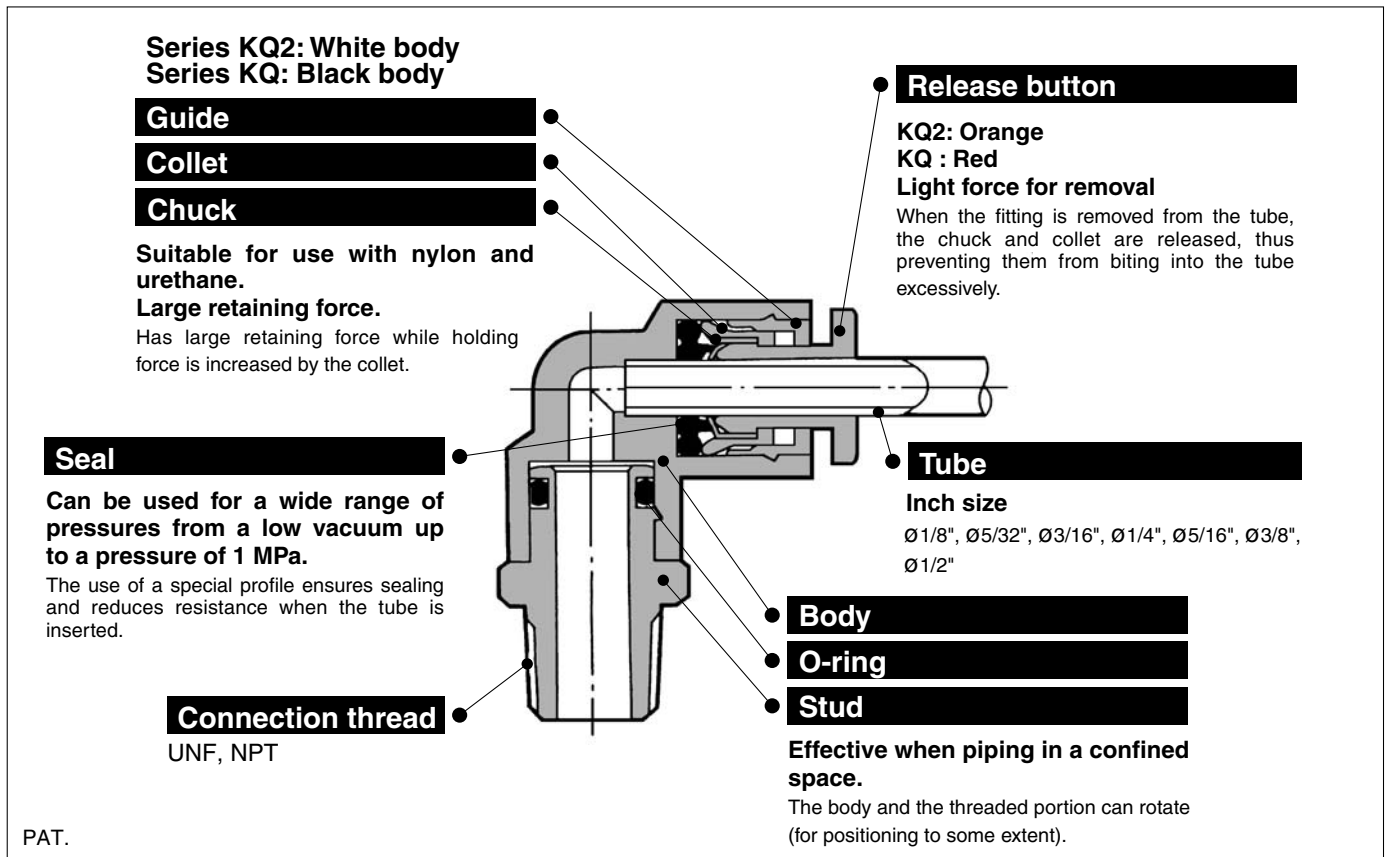
* Available only for KQ2 (White color body).

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



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

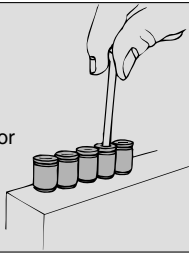
Hex. socket head male connector

KQ2S

P. 64



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



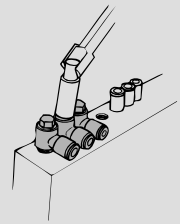
Universal male elbow

KQ2V

P. 66



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



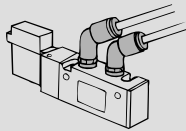
45° male elbow

KQ2K

P. 66



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



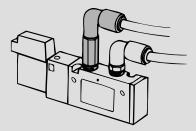
Extended male elbow

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.



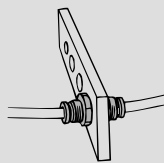
Bulkhead union

KQ2E

P. 73



Use to connect tubes through a panel.



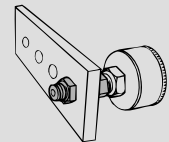
Bulkhead connector

KQ2E

P. 74



Use to connect male thread and tube through a panel.



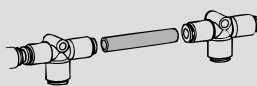
Nipple

KQ2N

P. 74



Use to connect One-touch fittings.



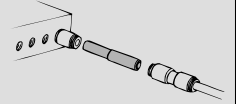
Reducer nipple

KQ2N

P. 74



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



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 ☐

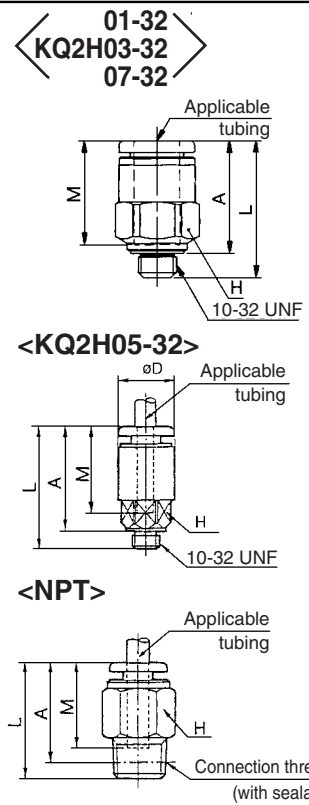
Series KQ2

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
	10-32 UNF	KQ2H07-32	11.11	—	18.4	15.4	13.6	2.3	3.3
1/4	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
	1/8	KQ2H09-34S	14.29	—	27.6	24.5	18.5	6	15
5/16	1/4	KQ2H09-35S	—	—	26	20.5	—	—	16
	3/8	KQ2H09-36S	17.46	—	20.9	15.5	—	—	24
	1/8	KQ2H11-34S	—	—	29.6	26.5	21	6	29
	1/4	KQ2H11-35S	17.46	—	33	27.5	—	—	31
3/8	3/8	KQ2H11-36S	—	—	27.9	22.5	—	7	29
	1/2	KQ2H11-37S	22.23	—	25.6	18.5	—	—	46
	1/4	KQ2H13-35S	—	—	34	28.5	22	9	44
	3/8	KQ2H13-36S	22.23	—	31.9	26.5	—	9.6	44
1/2	1/2	KQ2H13-37S	—	—	29.1	22	—	—	44

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

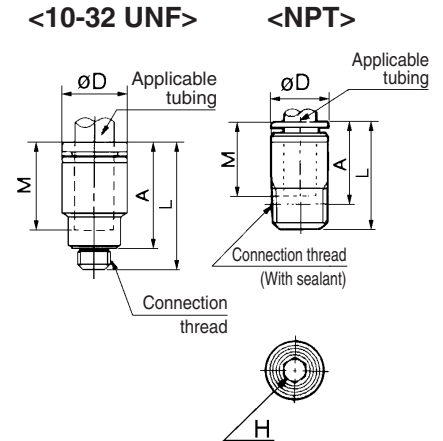


Hexagon Socket Head Male Connector: KQ2S



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
5/32	10-32 UNF	KQ2S03-32	2.5	8	18.7	15.6	12.7	2.3	2.7
	1/8	KQ2S03-34S	2.78	10.5	23.5	19.5	16	2.8	8
3/16	1/8	KQ2S05-34S	3.57	10.7	23.5	19.5	16.5	3.6	8
	10-32 UNF	KQ2S07-32	2.5	10.3	19.6	16.5	13.6	2.3	3.3
1/4	1/8	KQ2S07-34S	—	12.5	22	18	—	—	7
	1/4	KQ2S07-35S	4.76	13.8	23	17	17	4.9	12
	3/8	KQ2S07-36S	—	17	27	21	—	—	27
	1/8	KQ2S09-34S	5.56	14	28	24	18.5	5.7	12
5/16	1/4	KQ2S09-35S	6.35	—	25.5	19.5	—	6.5	11
	3/8	KQ2S09-36S	—	17.5	27.5	21	—	—	25
	1/8	KQ2S11-34S	5.56	16.5	30	26	21	5.7	17
	1/4	KQ2S11-35S	—	16.5	32	26	—	—	21
3/8	3/8	KQ2S11-36S	6.35	17.2	29	23	21	6.5	25
	1/2	KQ2S11-37S	—	21.3	30	22	—	—	45
	1/4	KQ2S13-35S	7.94	20	34.5	28.5	22	8	26
	3/8	KQ2S13-36S	—	—	33	26.5	—	—	27
1/2	1/2	KQ2S13-37S	9.53	21.3	31	22.5	22	9.6	36

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

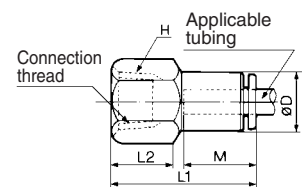


Female Connector: KQ2F



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
5/32	1/4	KQ2F01-35	17.46	—	30.5	14.5	—	—	26
	1/8	KQ2F03-34	14.29	10	27	11	16	3	15
1/4	1/4	KQ2F03-35	17.46	—	31	13.5	—	—	24
	1/8	KQ2F07-34	14.29	—	27.5	10.5	—	—	17
	1/4	KQ2F07-35	17.46	12.5	31	13.5	17	4.6	25
	3/8	KQ2F07-36	22.23	—	33.5	15.5	—	—	44
5/16	1/8	KQ2F09-34	14.29	—	29	10.5	—	—	18
	1/4	KQ2F09-35	17.46	14	32.5	13.5	18.5	6	26
	3/8	KQ2F09-36	22.23	—	34.5	13	—	—	38
	1/4	KQ2F11-35	17.46	—	34.5	15	—	—	30
3/8	3/8	KQ2F11-36	22.23	16.5	36.5	19	21	7	48
	1/2	KQ2F11-37	23.81	—	40.5	19	—	—	52
	3/8	KQ2F13-36	22.23	—	36.5	14.5	—	—	48
	1/2	KQ2F13-37	23.81	20	41	18.5	22	9.6	53

Note) øD: Max. diameter

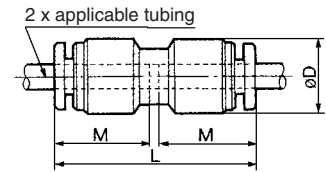


Straight Union: KQ2H



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

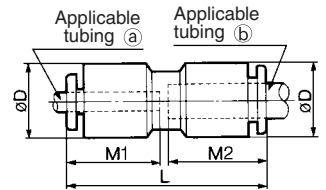


Different Diameter Straight: KQ2H



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	17	2.5	5
5/32	3/16	KQ2H03-05	11.4	34	16	16.5	3	4
	1/4	KQ2H03-07	13.2	34.5	17	17	3	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	18.5	3.5	6
1/4	3/8	KQ2H07-11	17.9	42	21	21	4.6	11
	5/16	KQ2H09-11	17.9	42	21	21	4.6	11
5/16	3/8	KQ2H09-11	17.9	42	21	21	6	11
	1/2	KQ2H09-13	21.7	44	22	22	6	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>

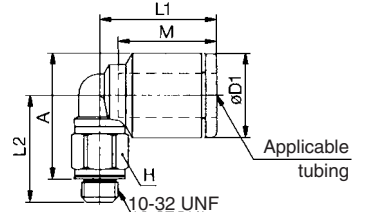


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	A*	M	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2L01-32	7	8.4	—	15.3	13.2	14.5	12.7	2.3	2.5
	1/16	KQ2L01-33S	11.11	9.6	10	17.5	21.5	22.5	15.5	2.5	8
	1/8	KQ2L01-34S	14.29	—	—	—	20.6	—	—	—	—
	1/4	KQ2L01-35S	14.29	—	—	—	25	24.5	—	—	18
5/32	10-32 UNF	KQ2L03-32	7	9.3	—	15.6	13.7	15.4	12.7	2.3	2.7
	1/16	KQ2L03-33S	11.11	10.4	10	18	22	23	16	3	8
	1/8	KQ2L03-34S	14.29	—	—	—	21.1	—	—	—	9
	1/4	KQ2L03-35S	14.29	—	—	—	25.5	25	—	—	18
3/16	10-32 UNF	KQ2L05-32	11.11	—	—	—	20	22	—	2.3	5
	1/8	KQ2L05-34S	14.29	11.4	10	19.5	21.6	24	16.5	3.5	10
	1/4	KQ2L05-35S	14.29	—	—	—	26	26	—	—	19
	10-32 UNF	KQ2L07-32	7	12	—	16.1	15.1	18.1	13.6	2.3	3.2
1/4	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
	1/8	KQ2L09-34S	12.7	15.2	12	23.5	23.6	28	18.5	6	12
5/16	1/4	KQ2L09-35S	14.29	—	—	—	28	30	—	—	20
	3/8	KQ2L09-36S	17.46	—	—	—	29.4	31.5	—	—	28
	1/8	KQ2L11-34S	17.46	17.9	17	25.5	25.6	31.5	21	6	16
	1/4	KQ2L11-35S	22.23	—	—	—	29	32.5	—	—	23
3/8	3/8	KQ2L11-36S	22.23	—	—	—	30.4	34	—	7	33
	1/2	KQ2L11-37S	22.23	—	—	—	34.6	36.5	—	—	59
	1/4	KQ2L13-35S	17.46	21.7	17	28	31	36.5	—	9	28
	3/8	KQ2L13-36S	22.23	—	—	—	32.4	38.5	22	9.6	36
1/2	1/2	KQ2L13-37S	22.23	—	—	—	36.6	40	—	—	62

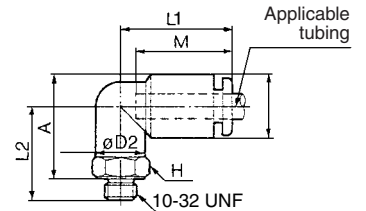
* Reference dimensions after NPT thread installation.
Note) $\phi D1$: Max. diameter



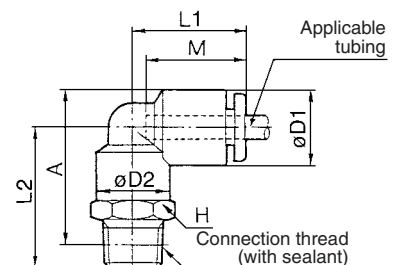
01-32
KQ2L03-32
07-32



<KQ2L05-32>



<NPT>



Series KQ2

45° Male Elbow: KQ2K

<10-32 UNF>

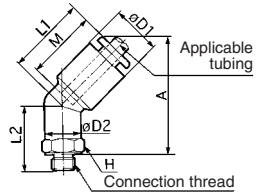


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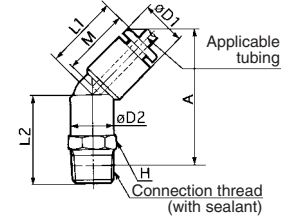


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	A*	M	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2K01-32	8	9.6	8	16.5	15	25.5	15.5	2.3	4
	1/8	KQ2K01-34S	11.11		10	16.5	21.6	33	15.5	2.5	9
5/32	10-32 UNF	KQ2K03-32	8	10.4	8	17	14.5	26	16	2.3	4
	1/8	KQ2K03-34S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

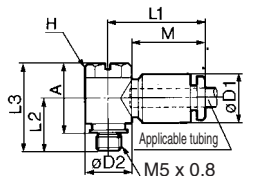


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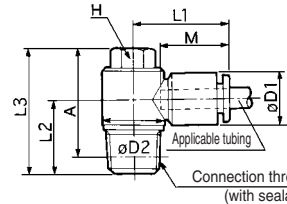


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	L3	A*	M	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2V01-32	8	8.4	9.8	17.2	11	18.5	15	12.7	2.3	5
	1/8	KQ2V01-34S		9.6	13.4	21.5	13.6	25.6	22.5	15.5	2.5	14
5/32	10-32 UNF	KQ2V03-32	8	10.4	9.8	20.5	11	18.5	15	16	2.3	6
	1/8	KQ2V03-34S			13.4	22	13.6	25.6	22.5	16.5	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
1/4	10-32 UNF	KQ2V07-32	8	13.2	13.4	24	12	24	20.5	17	2.3	13
	1/8	KQ2V07-34S			15.3	23.5	18.5	32	26.5		4.6	15
	1/4	KQ2V07-35S			17.6	28.5	14.6	27.6	24.5			25
	3/8	KQ2V09-34S			20.6	27.5	19.4	35.4	30		6	24
5/16	1/8	KQ2V09-34S	11.11	15.2	17.6	28.5	18	31	25.5	18.5	6	30
	1/4	KQ2V09-35S	12.7		20.6	27.5	19.4	35.4	30			46
	3/8	KQ2V09-36S	12.7		20.6	27.5	19.4	35.4	30		7	40
	1/2	KQ2V11-36S	17.46		21.7	27	20.4	34.9	30		9	68
1/2	3/8	KQ2V13-36S	17.46	21.7	27	35.5	23.6	38.1	31	22		85
	1/2	KQ2V13-37S					23.6	38.1	31			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>

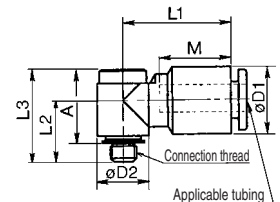


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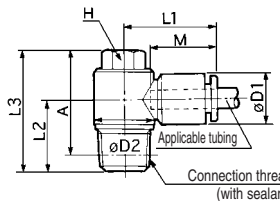


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	L3	A*	M	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2VS01-32	4	8.4	9.8	17.2	10.9	18.5	15	12.7	2.3	5
	1/8	KQ2VS01-34S	6.35	9.6	13.4	21.5	13.6	25.6	22.5	15.5	2.5	14
5/32	10-32 UNF	KQ2VS03-32	4	10.4	9.8	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	16.5	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
1/4	10-32 UNF	KQ2VS07-32	6.35	13.2	13.4	24	12	24	19	17	2.3	13
	1/8	KQ2VS07-34S			15.3	23.5	18.5	28	22.5		4.6	15
	1/4	KQ2VS07-35S			17.6	28.5	14.6	26.1	23			22
	3/8	KQ2VS09-34S			20.6	27.5	19.4	31.4	26		6	21
5/16	1/8	KQ2VS09-34S	8	15.2	17.6	28.5	18	29.5	24	18.5	6	27
	1/4	KQ2VS09-35S			20.6	27.5	19.4	31.4	26			39
	3/8	KQ2VS09-36S			20.6	27.5	19.4	31.4	26		7	33
	1/2	KQ2VS11-35S			21.7	27	20.4	33.4	28.5		9	42
3/8	1/4	KQ2VS11-35S	8	17.9	20.6	31	19	31	25.5	21		63
	3/8	KQ2VS11-36S					19.4	31.4	26			81
	1/2	KQ2VS13-36S					20.4	33.4	28.5			
	1/2	KQ2VS13-37S					23.6	36.6	29.5			

<10-32 UNF>



<NPT>



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

Universal Female Elbow: KQ2VF

<10-32 UNF>



<NPT>

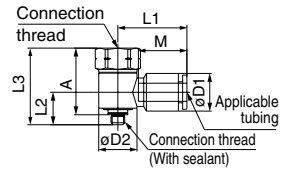


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2VF01-32	8	8.4	9.8	17.2	10	20	16.5	12.7	2.3	5
	1/8	KQ2VF01-34S	14.29	9.6	13.4	21.5	13.1	28.6	25.5	15.5	2.5	18
5/32	10-32 UNF	KQ2VF03-32	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	KQ2VF07-34S	14.29	13.2	13.4	24	11.5	27	23.5	17	2.3	16
1/4	10-32 UNF	KQ2VF07-34S	14.29	13.2	13.4	24	11.5	27	23.5	17	2.3	16
	1/4	KQ2VF07-35S	17.46	15.2	17.6	25	17	38	32.5	18.5	4.6	37
5/16	1/8	KQ2VF09-34S	17.46	15.2	17.6	28.5	16.1	30.1	27	18.5	6	30
	1/4	KQ2VF09-35S	22.23	17.9	19.5	38	19.5	38	32.5	21	7	60
3/8	3/8	KQ2VF09-36S	22.23	21.7	25.2	29.5	19.4	43.9	39	22	9	85
	1/2	KQ2VF11-35S	22.23	21.7	20.6	31	17	40.5	35	21	7	60
1/2	3/8	KQ2VF11-36S	22.23	21.7	25.2	31.5	18.4	43.9	39	22	9	85
	1/2	KQ2VF13-37S	25.4	21.7	27	35.5	19.9	40.9	39	22	9	85
							23.1	49.1	41.5			104

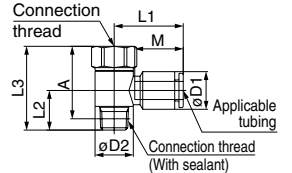


* Reference dimensions after NPT thread installation.
Note) $\phi D1$: Max. diameter

<10-32 UNF>



<NPT>



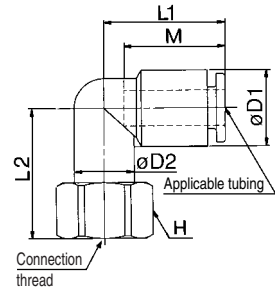
Female Elbow: KQ2LF



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			
5/32	1/8	KQ2LF03-34	14.29	10.4	10	18	20.5	16	3	12
	1/4	KQ2LF03-35	17.46				24			
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			
3/8	3/8	KQ2LF07-36	22.23	17.9	17	25.5	26	21	7	33
	1/2	KQ2LF11-35	22.23				27.5			
1/2	3/8	KQ2LF11-36	22.23	21.7	17	28	28	22	9.6	40
	1/2	KQ2LF11-37	23.81				32			
1/2	3/8	KQ2LF13-36	22.23	21.7	17	28	30	22	9.6	44
	1/2	KQ2LF13-37	23.81				34			



Note) $\phi D1$: Max. diameter



Double Universal Male Elbow: KQ2VD

<10-32 UNF>



<NPT>

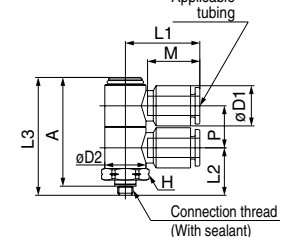


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	P	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2VD01-32	14.29	9.6	13.4	22	15.5	38.5	35	15.5	13.4	2.3	24
	1/8	KQ2VD01-34S	14.29				17.1	40.1	37				
5/32	10-32 UNF	KQ2VD03-32	14.29	10.4	13.4	22	15.5	38.5	35	16	13.4	2.3	24
	1/8	KQ2VD03-34S	14.29				17.6	40.1	37				
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	14.29				15.5	39	35.5				
1/4	10-32 UNF	KQ2VD07-34S	14.29	13.2	13.4	24	17.6	40.6	37.5	17	13.8	4.6	25
	1/4	KQ2VD07-35S	17.46				22.1	44	38.5				
5/16	3/8	KQ2VD09-36S	22.23	15.2	17.6	28.5	22.4	45.4	40.5	18.5	15.9	6	57
	1/2	KQ2VD09-35S	22.23				23.1	50.1	45				
3/8	3/8	KQ2VD11-35S	22.23	17.9	20.6	31	25.5	57.5	52	21	19.2	7	77
	1/2	KQ2VD11-37S	22.23				29.1	61.1	54				
1/2	3/8	KQ2VD13-36S	25.4	21.7	27	35.5	30.9	65.4	60.5	22	22.3	9.6	142
	1/2	KQ2VD13-37S	25.4				34.1	68.6	61.5				

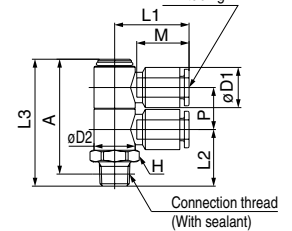


* Reference dimensions after NPT thread installation.
Note) $\phi D1$: Max. diameter

<10-32 UNF>



<NPT>



Series KQ2

Triple Universal Male Elbow: KQ2VT

<10-32 UNF>



<NPT>

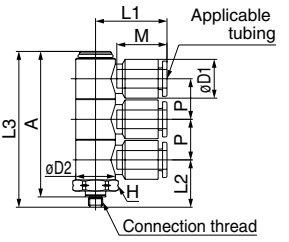


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	L3	A*	M	P	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2VT01-32	14.29	9.6	13.4	22	15.5	52	48.5	15.5	13.4	2.3	32
	1/8	KQ2VT01-34S					17.1	53.6	50.5			2.5	30
5/32	10-32 UNF	KQ2VT03-32	14.29	10.4	13.4	22	15.5	52	48.5	16	13.4	2.3	32
	1/8	KQ2VT03-34S					17.6	53.6	50.5			3	29
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
1/4	10-32 UNF	KQ2VT07-32	14.29	13.2	13.4	24	15.5	53	49.5	17	13.8	4.6	35
	1/8	KQ2VT07-34S					17.6	54.6	51.5				33
	1/4	KQ2VT07-35S	22.1				58	52.5	39				
	3/8	KQ2VT07-36S	17.46				22.4	59.4	54				52
5/16	1/4	KQ2VT09-35S	19	15.2	17.6	28.5	23.1	66.1	61	18.5	15.9	6	59
	3/8	KQ2VT09-36S					24.5	67.5	61.5				70
	1/2	KQ2VT09-37S	22.23				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				30.9
1/2	KQ2VT13-37S	34.1		91.1	84	203							

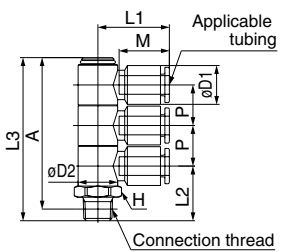


* Reference dimensions after NPT thread installation.
Note) øD1: Max. diameter

<10-32 UNF>



<NPT>



Branch Universal Male Elbow: KQ2Z

<10-32 UNF>



<NPT>

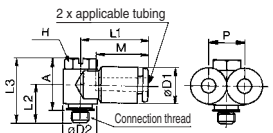


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	L3	A*	M	P	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2Z01-32	8	8.4	9.8	16	11.2	18.5	15	12.7	8.4	2.3	6
	1/8	KQ2Z01-34S		9.6	13.4	20.5	13.6	25.6	22.5	15.5	9.6	2.5	16
5/32	10-32 UNF	KQ2Z03-32	8	10.4	9.8	19.5	11	18.5	15	16	10.4	2.3	8
	1/8	KQ2Z03-34S		13.4	21	13.6	25.6	22.5	2.8			16	
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
1/4	10-32 UNF	KQ2Z07-32	8	13.2	13.4	21.5	12	24	20.5	17	13.2	2.3	15
	1/8	KQ2Z07-34S					13.6	25.6	22.5			4.6	17
	1/4	KQ2Z07-35S					11.11	15.2	17.6			26	18
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

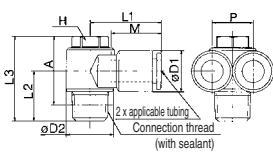


* Reference dimensions after NPT thread installation.
Note) øD1: Max. diameter

<10-32 UNF>



<NPT>



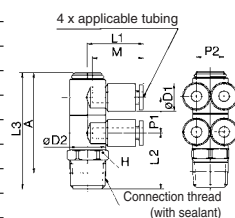
Double Branch Universal Male Elbow: KQ2ZD



Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	(Note) øD1	øD2	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	26
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	29
1/4	1/8	KQ2ZD07-34S	14.29	13.2	13.4	21.5	17.6	40.6	37.5	17	13.8	13.2	4.6	30
	1/4	KQ2ZD07-35S					22.1	44	38.5					36
	3/8	KQ2ZD07-36S	17.46				22.4	45.4	40.5					49
5/16	1/4	KQ2ZD09-35S	19	15.2	17.6	26	23.1	50.1	45	18.5	15.9	15.2	6	56
	3/8	KQ2ZD09-36S					24.5	51.5	45.5					64
	1/2	KQ2ZD09-37S					22.23	27.4	54.4					47.5
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



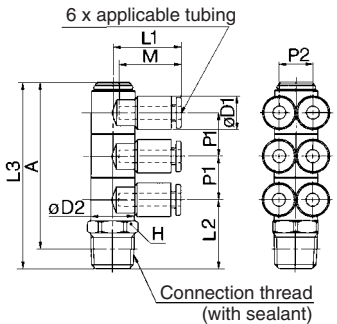
* Reference dimensions after NPT thread installation.
Note) øD1: Max. diameter



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	18.5	15.9	15.2	6	70
	3/8	KQ2ZT09-36S					24.5	67.5	61.5					80
	1/2	KQ2ZT09-37S					27.4	70.4	63.5					104
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

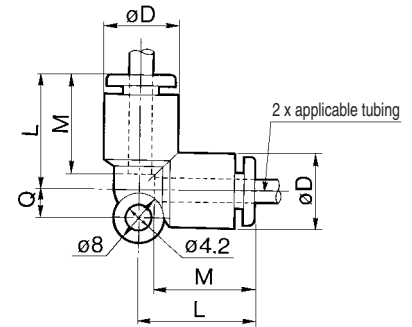
Union Elbow: KQ2L



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



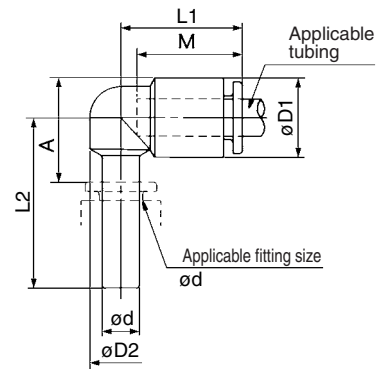
Plug-in Elbow: KQ2L



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



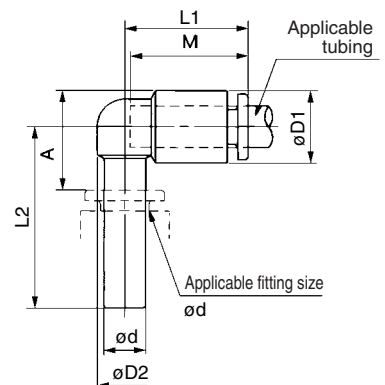
Reducer Elbow: KQ2L



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
3/16	1/4	KQ2L05-07	11.4	10	19	26.5	15.5	16.5	3.5	8
	5/16	KQ2L05-09		10	19.5	35.5	23		11	11
1/4	5/16	KQ2L07-09	13.2	10	20.5	36.5	24.5	17	4.6	12
	3/8	KQ2L07-11		10	39.5	23.5	17		17	17
5/16	3/8	KQ2L09-11	15.2	12	23.5	40.5	27.5	18.5	6	17
	1/2	KQ2L09-13		12	41.5	27.5	18.5		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

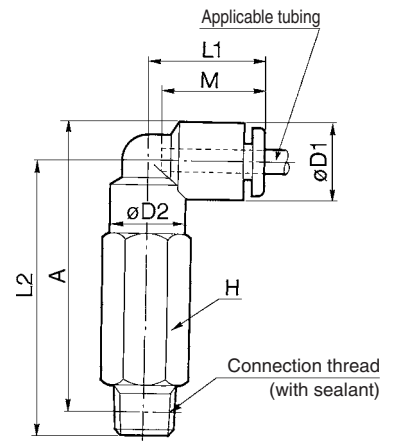
Extended Male Elbow: KQ2W



Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note) øD1	øD2	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
	1/8	KQ2W09-34S	12.7				42.6	47			30
5/16	1/4	KQ2W09-35S	14.29	15.2	12	23.5	49	51	18.5	6	47
	3/8	KQ2W09-36S	17.46				50.4	53			74
	1/4	KQ2W11-35S	14.29			25.5	55.5	59			69
	3/8	KQ2W11-36S	17.46				56.9	61			76
3/8	1/2	KQ2W11-37S	22.23	17.9	17	25.5	63.6	65.5	21	7	147
	1/4	KQ2W13-35S	17.46				57.5	63			72
	3/8	KQ2W13-36S	17.46				58.9	64.5			78
1/2	1/2	KQ2W13-37S	22.23	21.7	17	28	65.6	69	22	9.6	149



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



Male Branch Tee: KQ2T

<10-32 UNF>



<NPT>

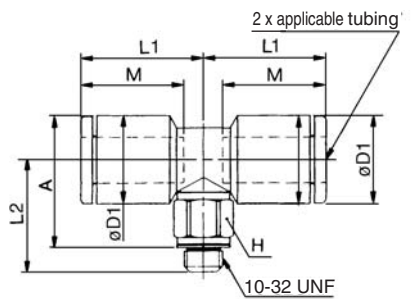


Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	A	M	Min. port size	Mass (g)
1/8	10-32 UNF	KQ2T01-32	7	8.4	—	15.3	13.2	14.4	12.7	2.3	3.2
	1/16	KQ2T01-33S	11.11	9.6	10	17.5	21.5	22.5*	15.5	2.5	10
	1/8	KQ2T01-34S	14.29				20.6	20.6			20
	1/4	KQ2T01-35S	14.29				25	24.5*			20
5/32	10-32 UNF	KQ2T03-32	7	9.3	—	15.6	13.7	15.4	12.7	2.3	3.5
	1/16	KQ2T03-33S	11.11	10.4	10	18	22	23*	16	3	10
	1/8	KQ2T03-34S	14.29				21.1	21.1			11
	1/4	KQ2T03-35S	14.29				25.5	25*			20
3/16	1/8	KQ2T05-34S	11.11	11.4	10	19.5	21.6	24*	16.5	3.5	12
	1/4	KQ2T05-35S	14.29				26	26*			21
1/4	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
5/16	1/8	KQ2T09-34S	12.7	15.2	12	23	23.6	28*	18.5	6	15
	1/4	KQ2T09-35S	14.29				28	30*			23
	3/8	KQ2T09-36S	17.46				29.4	31.5*			35
3/8	1/8	KQ2T11-34S	17.46	17.9	17	25.5	25.6	31.5*	21	7	31
	1/4	KQ2T11-35S	17.46				29	32.5*			29
	3/8	KQ2T11-36S	17.46				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	17.46				32.4	38.5*			43
	1/2	KQ2T13-37S	22.23				36.6	40*			69

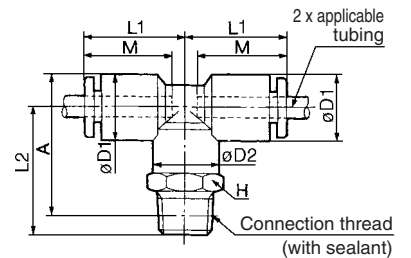


* Reference dimensions after NPT thread installation.
Note) øD1: Max. diameter

<10-32 UNF>



<NPT>



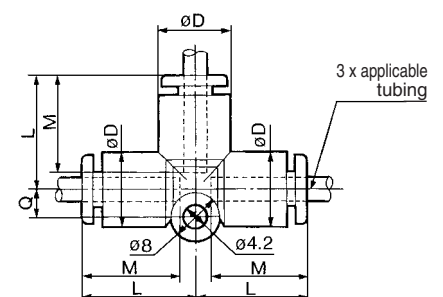
Union Tee: KQ2T



Applicable tubing O.D. (inch)	Model	Note) øD	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) øD: Max. diameter



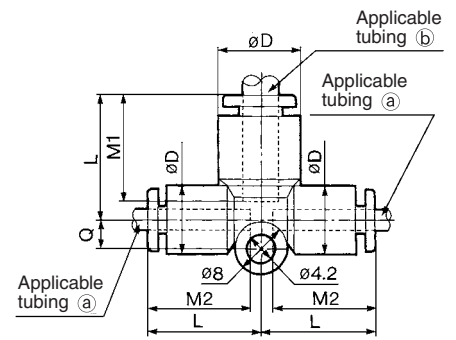
Different Diameter Tee: KQ2T



Applicable tubing O.D. (inch)		Model	Note) øD	L	Q	M1	M2	Min. port size	Mass (g)
①	②								
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
	5/16	KQ2T07-09	15.2	23	6	18.5			11
1/4	3/8	KQ2T07-11	17.9	26	6.6	21	17	4.6	17
	3/8	KQ2T09-11	17.9	26	6.6	21			17
5/16	3/8	KQ2T09-13	21.7	29	7.8	22	18.5	6	26
	1/2	KQ2T11-13	21.7	29	7.8	22			28
3/8	1/2	KQ2T11-13	21.7	29	7.8	22	21	7	28



Note) øD: Max. diameter



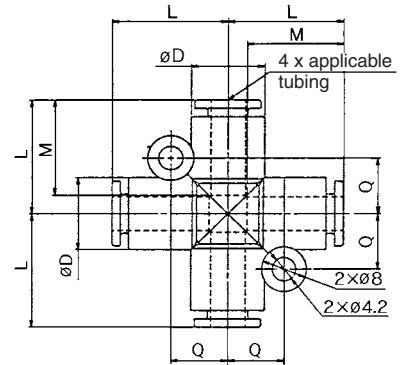
Cross: KQ2TW



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

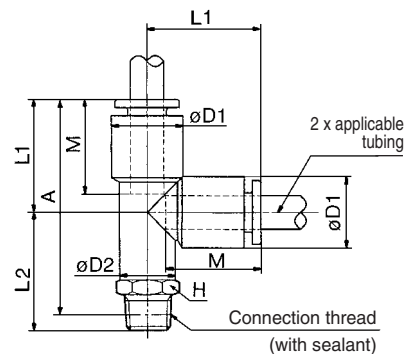


Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	A*	M	Min. port size	Mass (g)
1/8	1/16	KQ2Y01-33S	11.11	9.6	10	17.5	21.5	35	15.5	2.5	10
	1/8	KQ2Y01-34S	11.11				20.6	37			20
	1/4	KQ2Y01-35S	14.29				25	37			20
5/32	1/16	KQ2Y03-33S	11.11	10.4	10	18	22	36	16	3	10
	1/8	KQ2Y03-34S	11.11				21.1	36			11
	1/4	KQ2Y03-35S	14.29				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	14.29				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	14.29				27	42			21
	3/8	KQ2Y07-36S	17.46				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	14.29				28	46			23
	3/8	KQ2Y09-36S	17.46				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	17.46				30.4	51			38
	1/2	KQ2Y11-37S	22.23				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	17.46				32.4	55.5			43
	1/2	KQ2Y13-37S	22.23				36.6	57			69

* Reference dimensions after NPT thread installation.



Note) øD1: Max. diameter



Series KQ2

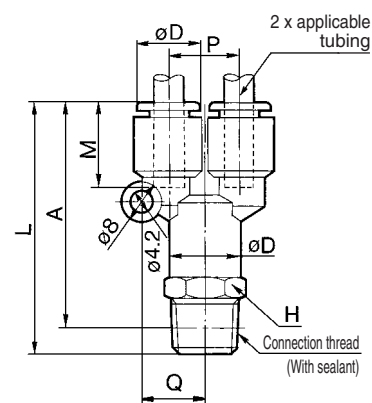
Branch “Y”: KQ2U



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

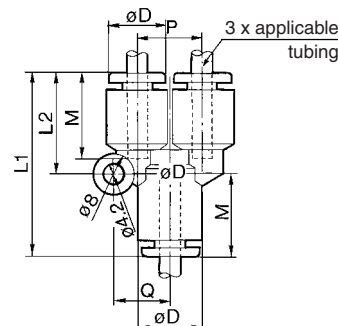


Union “Y”: KQ2U



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

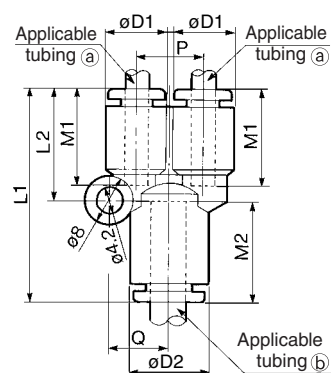


Different diameter union “Y”: KQ2U



Applicable tubing O.D. (inch)		Model	Note) $\phi D1$	Note) $\phi D2$	L1	L2	P	Q	M1	M2	Min. port size	Mass (g)
①	②											
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		13.2	38	21.5	13.2	12		17		9
5/32	3/16	KQ2U03-05	10.4	11.4	36.5	20.5	11.4	10.6	16	16.5	3	8
	1/4	KQ2U03-07		13.2	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		15.2	42.5	24.5	15.2	13.7		18.5		12
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		17.9	47	27.5	17.9	15.6		21		22
5/16	1/2	KQ2U09-13	15.2	21.7	51	30	21.7	18.8	18.5	22	6	34
	3/8	KQ2U11-13		21.7	51.5	30.5	21.7	18.8		22		36

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

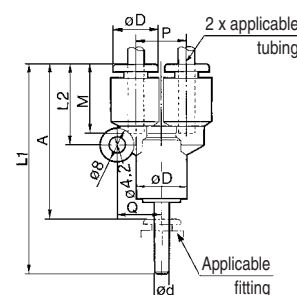


Plug-in “Y”: KQ2U



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



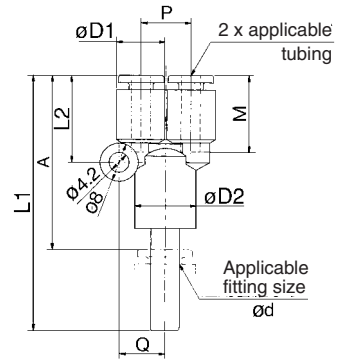
Different Diameter Plug-in “Y”: KQ2X



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



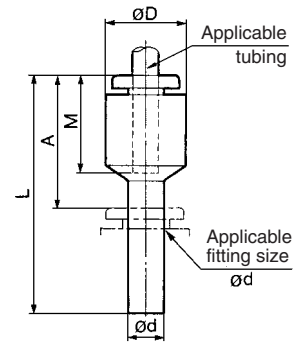
Plug-in Reducer: KQ2R



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			14
1/4	5/16	KQ2R07-09	13.2	37	18.5	17	4.6	17
	3/8	KQ2R07-11		40	19.5			19
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

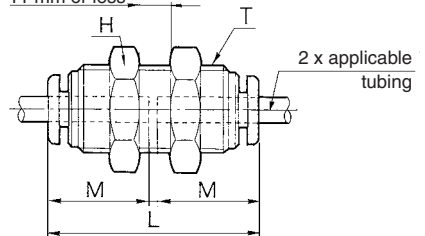


Bulkhead Union: KQ2E



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

Mounting plate thickness 11 mm or less



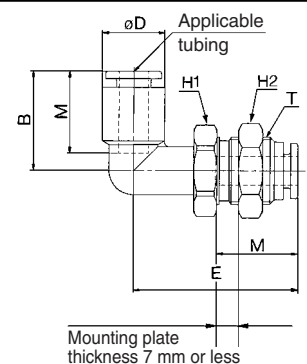
Bulkhead Male Elbow: KQ2LE



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

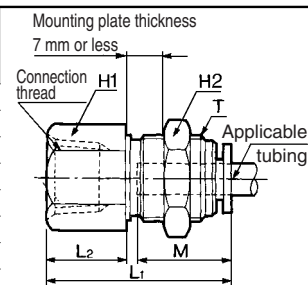


Series KQ2

Bulkhead Connector: KQ2E



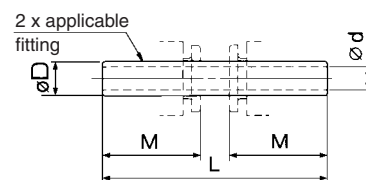
Applicable tubing O.D. (inch)	Connection thread NPT	Model	Connection thread (UNF)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	M	Min. port size	Mounting hole	Mass (g)
1/8	1/4	KQ2E01-35	1/2-20	17.46	17.46	31	15	15.5	2.5	13.5	36
5/32	1/4	KQ2E03-35	1/2-20	17.46	17.46	31	15	16	3	13.5	36
3/16	1/8	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



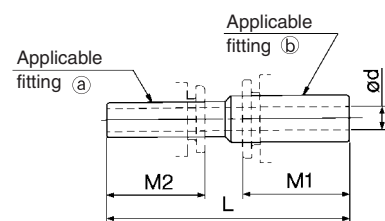
Applicable fitting øD	Model	L	M	ød	Mass (g)
1/8	KQ2N01-99	36	15.5	2.2	0.2
3/16	KQ2N05-99	38	16.5	3.5	0.4
1/4	KQ2N07-99	39	17	4.6	1
3/8	KQ2N11-99	49	21	7.5	10
1/2	KQ2N13-99	51	22	10	15



Reducer Nipple: KQ2N



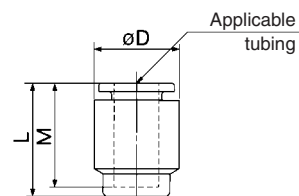
Applicable fitting O.D. (inch)		Model	L	M1	M2	ød	Mass (g)
Ⓐ	Ⓑ						
1/8	5/32	KQ2N01-03	36.5	16	15.5	2.2	0.2
	3/16	KQ2N01-05	37	16.5			0.4
5/32	3/16	KQ2N03-05	37.5	16.5	16	2.5	0.4
	1/4	KQ2N03-07	38	17			0.6
3/16	1/4	KQ2N05-07	38.5	17	16.5	3.5	0.6
	5/16	KQ2N05-09	41	18.5			1
1/4	5/16	KQ2N07-09	41.5	18.5	17	4.6	1
	3/8	KQ2N07-11	45	21			1
5/16	3/8	KQ2N09-11	46.5	21	18.5	6	11
	1/2	KQ2N09-13	47.5	22			22
3/8	1/2	KQ2N11-13	50	22	21	7	24



Tube Cap: KQ2C



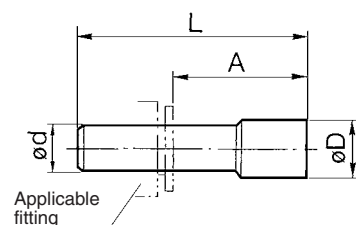
Applicable tubing O.D. (inch)	Model	øD1	L	M	Mass (g)
5/32	KQ2C03-00	10.4	17	16	1
1/4	KQ2C07-00	13.2	18	17	2
5/16	KQ2C09-00	15.2	20.5	18.5	3
3/8	KQ2C11-00	17.9	22.5	21	6



Plug: KQ2P, KQP



Applicable fitting size ød (inch)	Model (Note)		øD	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

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.

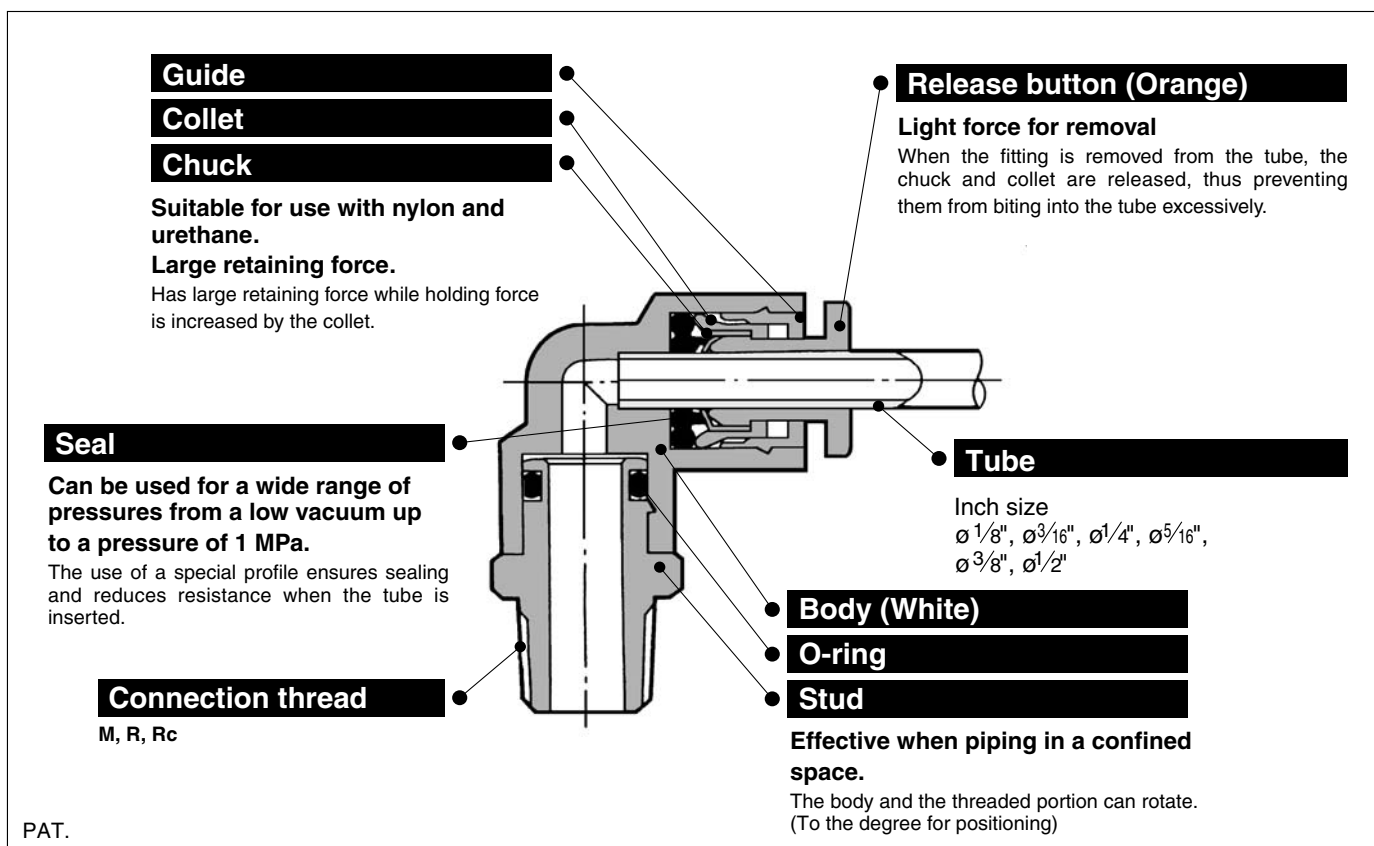
Spare Parts

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.

Male elbow
KQ2L P. 78



Use to pipe at right angles to 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.

Male branch tee
KQ2T P. 79



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

Male run tee
KQ2Y P. 80



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

Branch "Y"
KQ2U P. 81



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

Bulkhead union
KQ2E P. 81



Use to connect male thread and tube through a panel.

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
E	Bulkhead connector

*mark: With sealant is available.

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"

Port size

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

Made to Order
Refer to page 82 for details.

With thread sealant

Nil	Without sealant
S	With thread sealant

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

Series KQ2

Male Connector: KQ2H

KQ2H01-M5
KQ2H07-M5



<KQ2H05-M5>



<R>

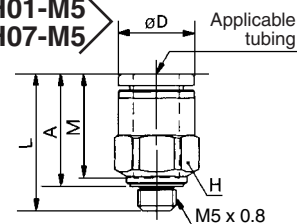


Applicable tubing O.D. (inch)	Connection thread R M	Model	H (Width across flats)	Note) øD	L	A*	M	Min. port size	Mass (g)
1/8	M5 x 0.8	KQ2H01-M5	7	—	16.7	13.6	12.7	2.5	2
	1/8	KQ2H01-01S	10	—	21.1	18	15.5		9
	1/4	KQ2H01-02S	14	—	19	13.5			16
3/16	M5 x 0.8	KQ2H05-M5	8	10.7	24	20.5	16.5	2.5	6
	1/8	KQ2H05-01S	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	4.6	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		17	—	21.4			15.5
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
1/2	1/4	KQ2H13-02S	22	—	34	28.5	22	9	44
	3/8	KQ2H13-03S		—	32.4	27		9.6	
	1/2	KQ2H13-04S		—	29.1	22			

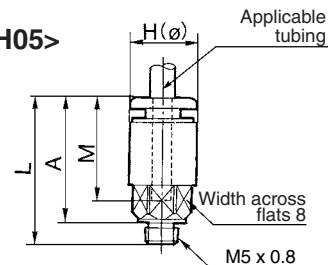
* Reference dimensions after R thread installation.
Note) øD: Max. diameter



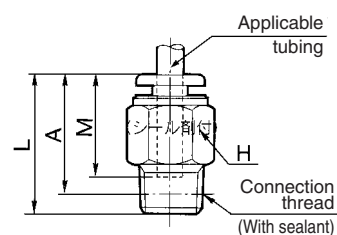
KQ2H01-M5
KQ2H07-M5



<KQ2H05>



<R>



Male Elbow: KQ2L

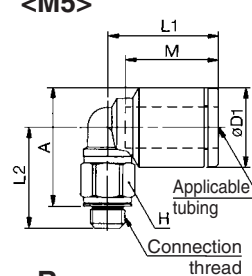


Applicable tubing O.D. (inch)	Connection thread R M	Model	H (Width across flats)	Note) øD1	øD2	L1	L2	A *	M	Min. port size	Mass (g)
1/8	M5 x 0.8	KQ2L01-M5	7	8.4	—	15.3	13.2	14.3	12.7	2.3	2.5
3/16	1/8	KQ2L05-01S	10	11.4	10	19.5	21.6	24	16.5	3.5	10
	1/4	KQ2L05-02S	14				26	26			19
1/4	M5 x 0.8	KQ2L07-M5	7	12	—	16.1	15.1	18	13.6	2.3	3.2
	1/8	KQ2L07-01S	10	13.2	10	20.5	22.6	26	17	4.6	10
	1/4	KQ2L07-02S	14				27	28			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	29	32.5	21	7	23
	3/8	KQ2L11-03S					30.4	34			33
	1/2	KQ2L11-04S					22	34.6			36.5
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		9.6	36
	1/2	KQ2L13-04S					22	36.6			40

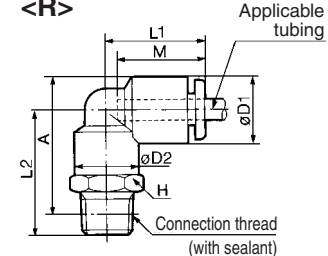
* Reference dimensions after R thread installation.
Note) øD1: Max. diameter



<M5>



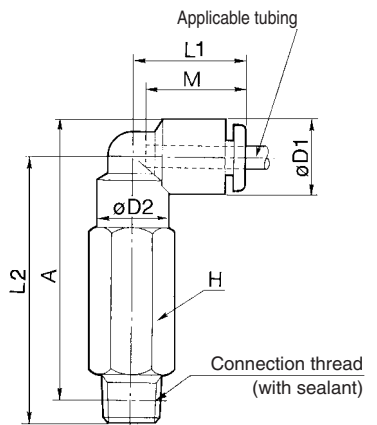
<R>



Extended Male Elbow: KQ2W



Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Note) øD1	øD2	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	17				56.9	61			76
	1/2	KQ2W11-04S	22				63.6	65.5			147
1/2	1/4	KQ2W13-02S	17	21.7	17	28	57.5	63	22	9.6	72
	3/8	KQ2W13-03S	17				58.9	64.5			78
	1/2	KQ2W13-04S	22				65.6	69			149



* Reference dimensions after R thread installation.

Note) øD1: Max. diameter



K□

M□

H□

KK

D□

MS

LQ

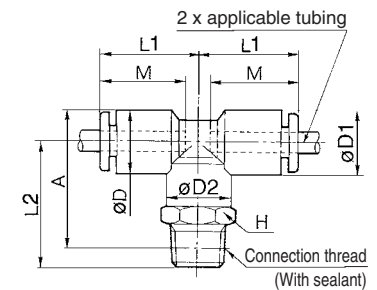
MQR

T□

Male Branch Tee: KQ2T



Applicable tubing O.D. (inch)	Connection thread R	Model	H (Width across flats)	Note) øD1	øD2	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	17				30.4	34.5			38
	1/2	KQ2T11-04S	22				34.6	36.5			64
1/2	1/4	KQ2T13-02S	17	21.7	17	28	31	36.5	22	9.6	34
	3/8	KQ2T13-03S	17				32.4	38.5			43
	1/2	KQ2T13-04S	22				36.6	40			69



* Reference dimensions after R thread installation.

Note) øD1: Max. diameter

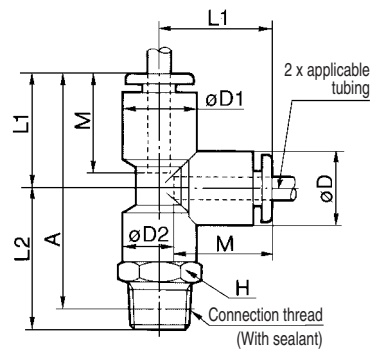


Series KQ2

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	34
	3/8	KQ2Y13-03S	17				32.4	55.5			43
	1/2	KQ2Y13-04S	22				36.6	57			69



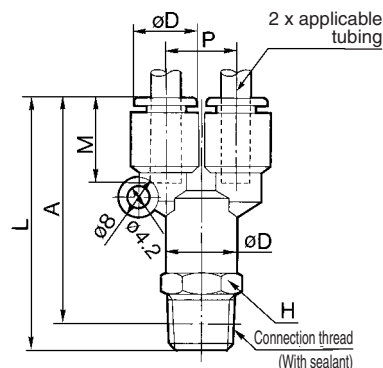
* Reference dimensions after R thread installation.

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		42.5			19
	3/8	KQ2U07-03S	17		50.4		45			19
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		49.5			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	22	21.7	64	21.7	58.5	22	9.5	31
	3/8	KQ2U13-03S	22		64.4		59			41
	1/2	KQ2U13-04S	22		67.6		60.5			68



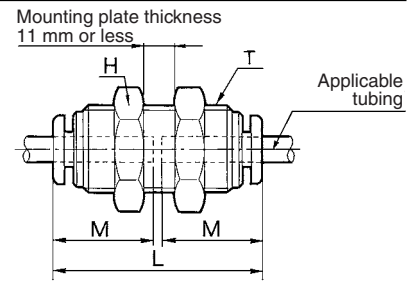
* Reference dimensions after R thread installation.

Note) ϕD : Max. diameter

Bulkhead Union: KQ2E



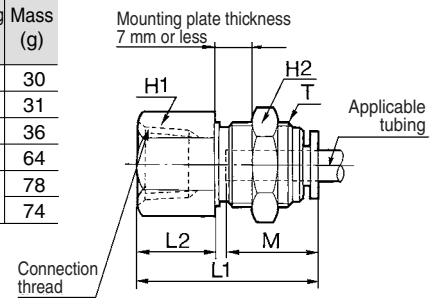
Applicable tubing O.D. (inch)	Model	T (M)	H (Width across flats)	L	Mounting hole	M	Min. port size	Mass (g)
3/16	KQ2E05-00M	M14 x 1	17	34	15	16.5	3.5	30
1/4	KQ2E07-00M	M14 x 1	17	34.5	15	17	4.6	30
5/16	KQ2E09-00M	M16 x 1	19	38	17	18.5	6	48
3/8	KQ2E11-00M	M20 x 1	24	42.5	21	21	7	62
1/2	KQ2E13-00M	M22 x 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
1/2	3/8	KQ2E13-03	M22 x 1	24	27	37	14.5	22	9.6	23	78
	1/2	KQ2E13-04	M22 x 1			41.5	18.5				74



K□

M□

H□

KK

D□

MS

LQ

MQR

T□

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

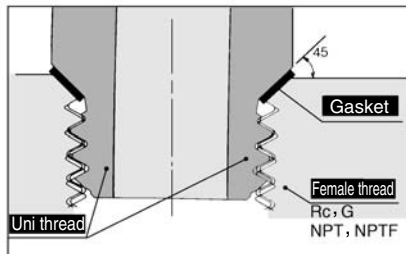
Description	Part no.	Applicable thread	Material	Applicable model
Gasket	M-5G2	M5	Stainless steel 304, NBR	—
Pipe nut	KQ06-P01	—	—	KQ2E05-01, KQ2E07-02 KQ2E05-00M, KQ2E07-00M
	KQ08-P01	—	—	KQ2E09-03, KQ2E09-00M
	KQ10-P01	—	—	KQ2E11-03, KQ2E11-00M
	KQ12-P01	—	—	KQ2E13-03, KQ2E11-04, KQ2E13-00M

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.

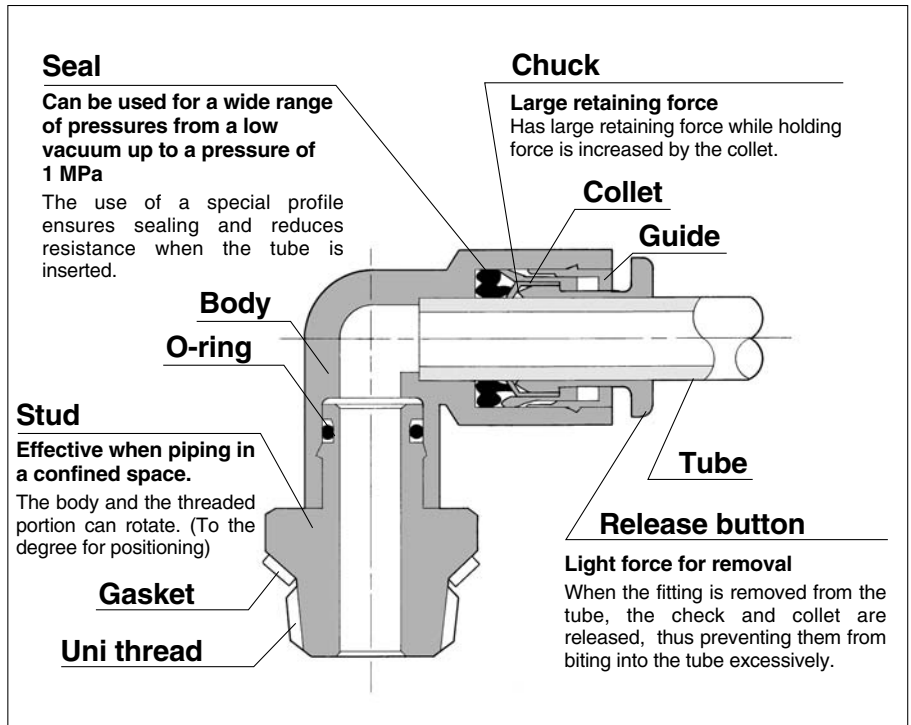


Uni thread ridge shape

A gasket made of a stainless 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

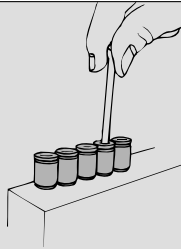
Hex. socket head male connector

KQ2S

P. 89



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



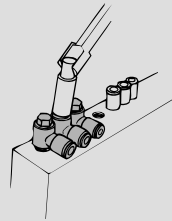
Universal male elbow

KQ2V

P. 89



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



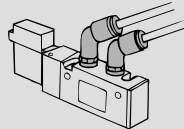
45° male elbow

KQ2K

P. 89



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



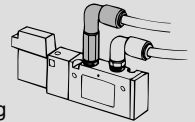
Extended male elbow

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.

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	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

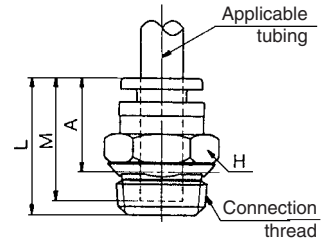
Series KQ2

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)		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		23		21	26.1	26.1	17
	1/4	KQ2H10-U02	17	28	22		41.5	29.5	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	(96)	25

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



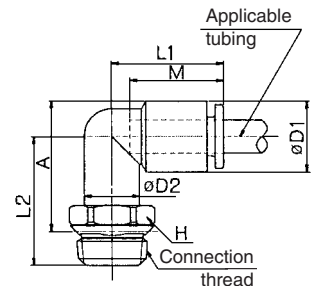
Male Elbow: KQ2L



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)		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				21.5	23.5	17	11.4	11.4	9
	1/4	KQ2L06-U02	14	12.8	10	20	23					15
	3/8	KQ2L06-U03	17				24	24.5				23
8	1/8	KQ2L08-U01	12				22.5	25.5	18.5	21.6	14.9	11
	1/4	KQ2L08-U02	14	15.2	12	23	24.5	26				16
	3/8	KQ2L08-U03	17				25.5	27				24
10	1/8	KQ2L10-U01					25	29.5		21.6	14.9	24
	1/4	KQ2L10-U02	17	18.5	17	26.5	26.5	30	21	35.2	25.0	21
	3/8	KQ2L10-U03					27	30.5				25
	1/2	KQ2L10-U04	22				30	31.5				45
12	1/4	KQ2L12-U02	17				27	31.5				23
	3/8	KQ2L12-U03		20.9	17	28.5	28	32.5	22	50.2	39.7	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	(84)	50

* 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

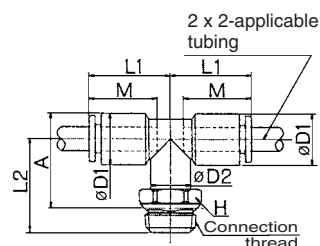


Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	⁽¹⁾ øD1	øD2	L1	L2	A*	M	Effective area (mm ²)		Mass (g)
										Nylon	Urethane	
4	1/8	KQ2T04-U01	10	10.4	10	18	20	21.5	16	6.0	6.0	9
	1/4	KQ2T04-U02	14				22					15
6	1/8	KQ2T06-U01	10	12.8	10	20	21.5	23.5	17	13.9	13.9	11
	1/4	KQ2T06-U02	14				23					17
	3/8	KQ2T06-U03	17				24					26
	1/2	KQ2T06-U04	22				25.5					31
8	1/8	KQ2T08-U01	12	15.2	12	23	22.5	26	18.5	26.3	18.2	15
	1/4	KQ2T08-U02	14				24.5					20
	3/8	KQ2T08-U03	17				25.5					28
	1/2	KQ2T08-U04	22				27					31
10	1/8	KQ2T10-U01	10	18.5	17	26.5	25	29.5	21	35.2	25	30
	1/4	KQ2T10-U02	14				26.5					27
	3/8	KQ2T10-U03	17				27					31
	1/2	KQ2T10-U04	22				30					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					34
	1/2	KQ2T12-U04	22				31					54
	1/2	KQ2T12-U04	22				31					54
16	3/8	KQ2T16-U03	22	26.5	21	33	33	40.5	24	71	(71)	62
	1/2	KQ2T16-U04	22				35					63

* 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

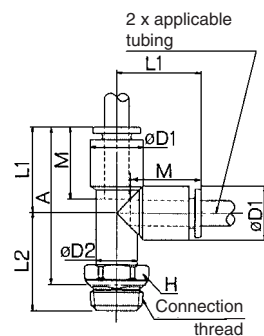


Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	⁽¹⁾ øD1	øD2	L1	L2	A*	M	Effective area (mm ²)		Mass (g)
										Nylon	Urethane	
4	1/8	KQ2Y04-U01	10	10.4	10	18	20	34	16	6.4	6.4	9
	1/4	KQ2Y04-U02	14				22					15
6	1/8	KQ2Y06-U01	10	12.8	10	20	21.5	37.5	17	13.4	13.4	11
	1/4	KQ2Y06-U02	14				23					17
	3/8	KQ2Y06-U03	17				24					26
	1/2	KQ2Y06-U04	22				25.5					31
8	1/8	KQ2Y08-U01	12	15.2	12	23	22.5	41.5	18.5	25.6	17.7	15
	1/4	KQ2Y08-U02	14				24.5					19
	3/8	KQ2Y08-U03	17				25.5					28
	1/2	KQ2Y08-U04	22				27					31
10	1/8	KQ2Y10-U01	10	18.5	17	26.5	25	46.5	21	40.0	28.4	30
	1/4	KQ2Y10-U02	14				26.5					27
	3/8	KQ2Y10-U03	17				27					31
	1/2	KQ2Y10-U04	22				30					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					35
	1/2	KQ2Y12-U04	22				31					55
	1/2	KQ2Y12-U04	22				31					55
16	3/8	KQ2Y16-U03	22	26.5	21	33	40.5	66	24	81	(81)	61
	1/2	KQ2Y16-U04	22				63					62

* Reference dimensions after Uni thread installation.

Note 1) øD1: Max. diameter

Note 2) Dimensions in () are the case of soft nylon tubing.



Series KQ2

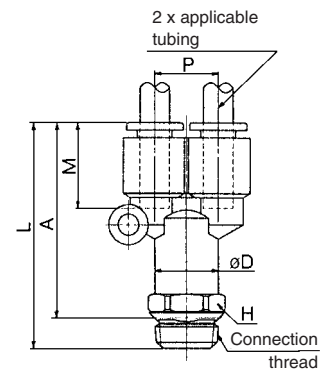
Branch “Y”: KQ2U



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	⁽¹⁾ øD1	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	39.5	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		15.2	50.5	15.2	46	18.5	25.6	17.7	27
	1/4	KQ2U08-U02	17		52						25
	3/8	KQ2U08-U03			51.5						28
10	1/4	KQ2U10-U02	19	18.5	57.5	18.5	51.5	21	40	28.4	38
	3/8	KQ2U10-U03									36
	1/2	KQ2U10-U04	22		59						51
12	1/4	KQ2U12-U02		20.9	61	20.9	55	22	57.4	45.4	53
	3/8	KQ2U12-U03	22								52
	1/2	KQ2U12-U04			62.5						52

* Reference dimensions after Uni thread installation.

Note 1) øD: Max. diameter



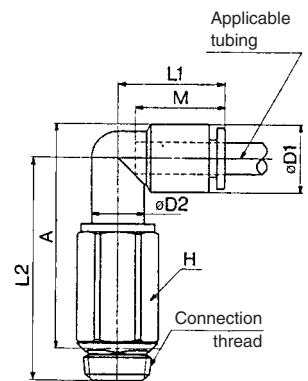
Extended Male Elbow: KQ2W



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	⁽¹⁾ øD1	øD2	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	46.5				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	22									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	22									99

* Reference dimensions after Uni thread installation.

Note 1) øD1: Max. diameter



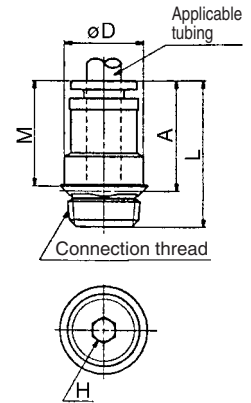
Hexagon Socket Head Male Connector: KQ2S



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	(Note)	L	A*	M	Effective area (mm²)		Mass (g)
				øD1				Nylon	Urethane	
4	1/8	KQ2S04-U01	3	10	23.5	18.5	16	4.1	3.6	7
6	1/8	KQ2S06-U01	4	11.8	24	19	17	10.0	9.9	9
	1/4	KQ2S06-U02		13.5		18		10.7	10.0	12
8	1/8	KQ2S08-U01	5	14	27.5	22.5	18.5	17.2	16.2	12
	1/4	KQ2S08-U02	6		28	22		23.3		14
	3/8	KQ2S08-U03		17	27.5	21.5				24
10	1/8	KQ2S10-U01	5	17	30	25	21	17.2	10.0	18
	1/4	KQ2S10-U02	8		29	23		39.0	26.6	17
	3/8	KQ2S10-U03		28.5	22.5	19				
	1/2	KQ2S10-U04		21	29	21				
12	1/4	KQ2S12-U02	8	19	30.5	25	22	46.0	44.5	20
	3/8	KQ2S12-U03	9	31		60.0		22		
	1/2	KQ2S12-U04		21	28.5			20.5		30

* Reference dimensions after Uni thread installation.

Note) ϕD : Max. diameter



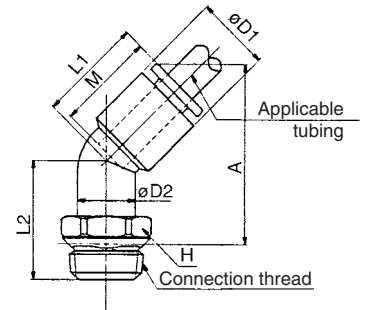
45° Male Elbow: KQ2K



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	(Note)	øD1	øD2	L1	L2	A*	M	Effective area (mm²)		Mass (g)
											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				20.5	30.5				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				20.5					13	
	3/8	KQ2K06-U03	17				21.5	32				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				22					15	
	3/8	KQ2K08-U03	17				23	36				24	
10	1/8	KQ2K10-U01	17	18.5	17	24	22	38	21	21.6	14.9	24	
	1/4	KQ2K10-U02					23.5	40.5				21	
	3/8	KQ2K10-U03					24	41		30.9	23.2	25	
	1/2	KQ2K10-U04					22	27				42	45
12	1/4	KQ2K12-U02	17	20.9	17	25	24	42	22	44.5	35.1	23	
	3/8	KQ2K12-U03					24.5	42.5				27	
	1/2	KQ2K12-U04					22	27.5				43.5	46

* Reference dimensions after Uni thread installation.

Note) $\phi D1$: Max. diameter



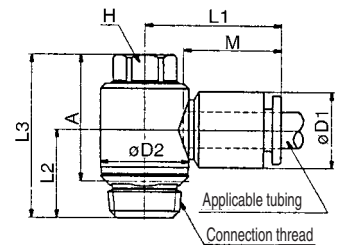
Universal Male Elbow: KQ2V



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	(Note)	øD1	øD2	L1	L2	L3	A*	M	Effective area (mm²)		Mass (g)
												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
6	1/8	KQ2V06-U01	8	12.8	13.4	24	13.5	25.5	20.5	17		7.5	7.5	13
	1/4	KQ2V06-U02	10		15.4	23.5	15.5	28	22				21	
8	1/8	KQ2V08-U01	12	15.2	17.6	28.5	14.5	27.5	22.5	18.5		11.2	24	22
	1/4	KQ2V08-U02					16.5	29.5	16.5			30	25	
	3/8	KQ2V08-U03	14		20.6	27.5	18.5	34	28			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											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											22.5	39.5

* Reference dimensions after Uni thread installation.

Note) $\phi D1$: Max. diameter





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

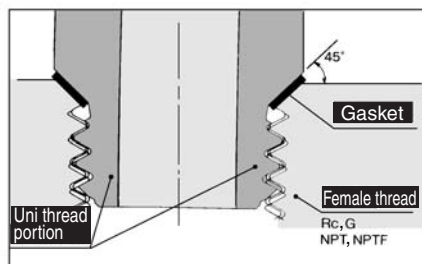
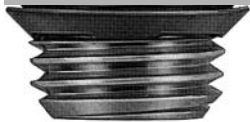
Description	Part no.	Applicable thread
Gasket	KQG-U01	Uni 1/8
	KQG-U02	Uni 1/4
	KQG-U03	Uni 3/8
	KQG-U04	Uni 1/2

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 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.



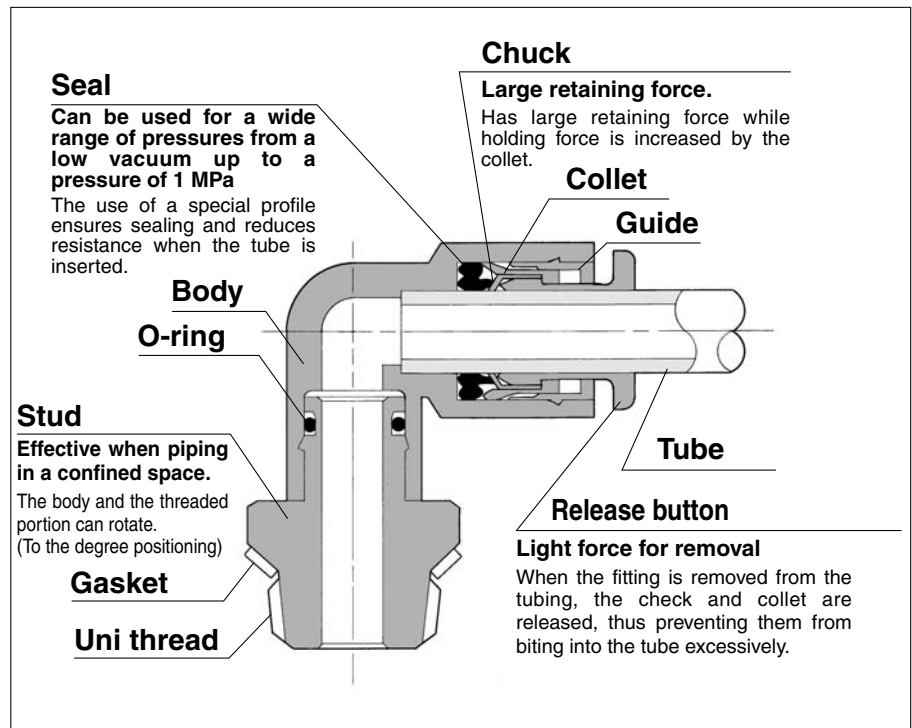
Product's Color

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.

How to Order

KQ 2 H 05 - U01 -

One-touch fittings

Product's color

Symbol	Body	Release button
2	White	Orange
Nil	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"

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

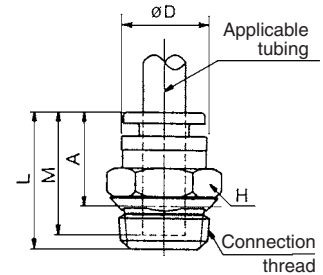
Series KQ2

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			10
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.

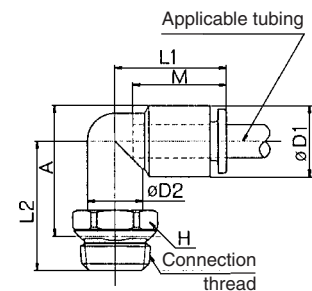


Male Elbow: KQ2L



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			44

* Reference dimensions after Uni thread installation.

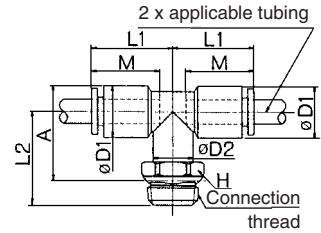


Male Branch Tree: KQ2T



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				17
	3/8	KQ2T07-U03	17.46				24.5				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				19
	3/8	KQ2T09-U03	17.46				25.5				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				27
	1/2	KQ2T11-U04					30				46
1/2	1/4	KQ2T13-U02	17.46	21.7	17	28	28.5	33.5	22	9.6	29
	3/8	KQ2T13-U03					30				32
	1/2	KQ2T13-U04					32				51

* Reference dimensions after Uni thread installation.



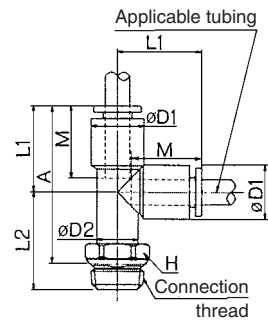
K□
M□
H□
KK
D□
MS
LQ
MQR
T□

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				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				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				17
	3/8	KQ2Y07-U03	17.46				24.5				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				19
	3/8	KQ2Y09-U03	17.46				25.5				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				27
	1/2	KQ2Y11-U04					30				46
1/2	1/4	KQ2Y13-U02	17.46	21.7	17	28	28.5	50.5	22	9.6	29
	3/8	KQ2Y13-U03					30				32
	1/2	KQ2Y13-U04					32				51

* Reference dimensions after Uni thread installation.



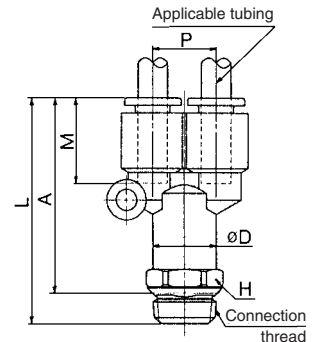
Series KQ2

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	17.46		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	22.23							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.

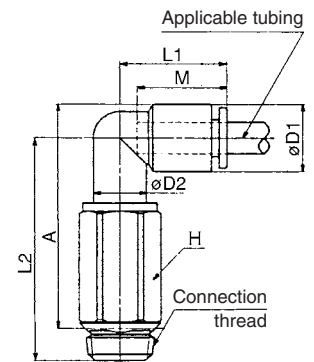


Extended Male Elbow: KQ2W



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					52	55			55			
	1/2	KQ2W11-U04	22.23				54.5	55.5			97			
1/2	1/4	KQ2W13-U02	17.46	21.7	17	28	54	59	22	9.6	64			
	3/8	KQ2W13-U03					56				64			
	1/2	KQ2W13-U04									100			

* Reference dimensions after Uni thread installation.





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

K ☐

M ☐

H ☐

KK ☐

D ☐

MS ☐

LQ ☐

MQR ☐

T ☐