

# 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	1/8
03	5/32
05	3/16
07	1/4
09	5/16
11	3/8
13	1/2

Port size/Applicable tubing O.D.

Thread connection	Port size/Applicable tubing O.D.
32	10-32 UNF
33	NPT 1/16
34	NPT 1/8
35	NPT 1/4
36	NPT 3/8
37	NPT 1/2
00	Same dia. tubing
99	Same dia. rod
01	1/8 tubing
03	5/32 tubing
05	3/16 tubing
07	1/4 tubing
09	5/16 tubing
11	3/8 tubing
13	1/2 tubing

With thread seal

Nil	None
S	With thread seal



Note) Port size with seal: 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	Tripple 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).

- K
- M
- H
- D
- MS
- T
- VMG

#### Accessory

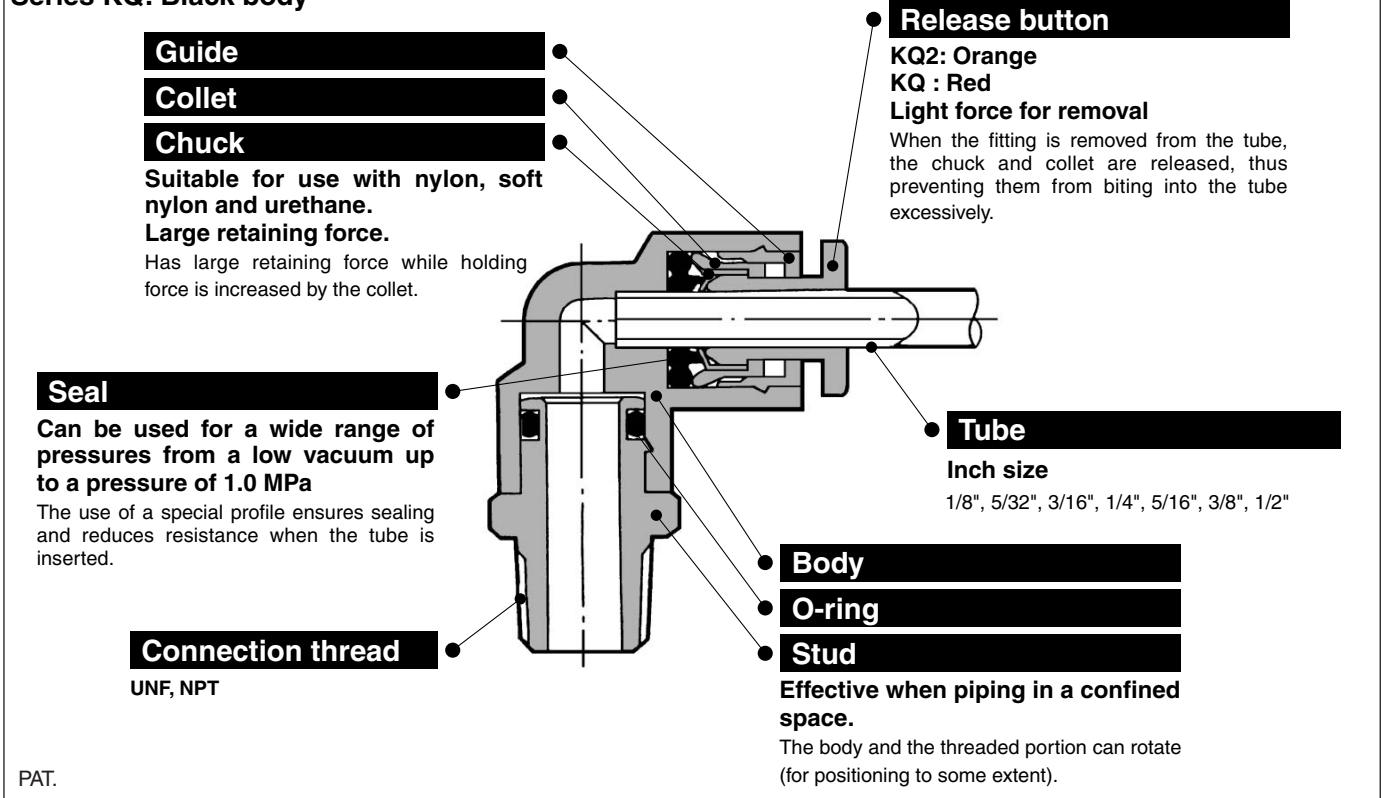
Symbol	Name
KQ2N	Nipple
	Reducer nipple
KQ2C	Tube cap
KQ2P (KQP)	Plug (Orange)

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

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

# Series KQ2

Series KQ2: White body  
Series KQ: Black body



## Product's Color

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

## Applicable Tubing

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
























## Specifications

Fluid	Air/Water <sup>Note)</sup>	
Maximum operating pressure	1.0 MPa	
Operating vacuum pressure	-100 kPa	
Proof pressure	3.0 MPa	
Ambient and fluid temperature	-5 to 60°C, Water: 0 to 40°C (No freezing)	
Thread	Mounting section	ANSI/ASME B1.20.1-1983 (NTP thread) JIS B 0212 2A, Class 2B (UNF thread)
	Nut section	JIS B 0212 2A, Class 2B (UNF thread)
Seal (Thread portion)	With thread seal	

Note) Applicable for general industrial water. Please consult with SMC if using for other kinds of fluid.  
Also, the surge pressure must be under the maximum operating pressure.

## Principal Parts Material

Body	C3604BD, PBT, PP
Stud	C3604BD (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304, C3604BD, POM
Collet	POM
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR

Model	
<b>Hex. socket head male connector</b> <b>KQ2S</b> P. 13  Internal hex. allows thread connection by using an allen wrench for confined spaces.	<b>Universal male elbow</b> <b>KQ2V</b> P. 15  Universal male elbow allows thread connection by using a socket wrench for confined spaces.
<b>45° male elbow</b> <b>KQ2K</b> P. 15  Use to pipe in 45° angle direction from female thread. Model in-between of male connector and male elbow.	<b>Extended male elbow</b> <b>KQ2W</b> P. 19  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.
<b>Bulkhead union</b> <b>KQ2E</b> P. 22  Use to connect tubes through a panel.	<b>Bulkhead connector</b> <b>KQ2E</b> P. 23  Use to connect male thread and tube through a panel.
<b>Nipple</b> <b>KQ2N</b> P. 23  Use to connect One-touch fittings.	<b>Reducer nipple</b> <b>KQ2N</b> P. 23  Use to connect One-touch fittings that are different tubing O.Ds.
<b>Male connector</b> <b>KQ2H</b> P. 13  Use to pipe in the same direction from female thread. Most general style.	<b>Hexagon socket head universal male elbow</b> <b>KQ2VS</b> P. 15  Hex. on the top allows thread connection by using an allen wrench for confined spaces.
<b>Female connector</b> <b>KQ2F</b> P. 13  Use to pipe from male thread such as pressure gauge.	<b>Universal female elbow</b> <b>KQ2VF</b> P. 16  Use to branch line in the same direction or at right angles from male or female thread. Multiplex connection possible.
<b>Straight union</b> <b>KQ2H</b> P. 14  Use to connect tubes in the same direction.	<b>Female elbow</b> <b>KQ2LF</b> P. 16  Use to pipe at right angles to male thread.
<b>Different diameter straight</b> <b>KQ2H</b> P. 14  Use to connect different sized tubes.	<b>Double universal male elbow</b> <b>KQ2VD</b> P. 16  Use to branch line at right angles to female thread. Two individual parts rotate 360°.
<b>Male elbow</b> <b>KQ2L</b> P. 14  Use to pipe at right angles to female thread. Most general style.	<b>Triple universal male elbow</b> <b>KQ2VT</b> P. 17  Use to three-branch line at right angles from female thread. Three individual parts rotate 360°.
	<b>Branch universal male elbow</b> <b>KQ2Z</b> P. 17  Hexagonal head allows thread connection by using a box wrench. Use for branch connection.
	<b>Double branch universal male elbow</b> <b>KQ2ZD</b> P. 17  Use to four-branch line at right angles from female thread. Two individual parts rotate 360°.
	<b>Triple branch universal male elbow</b> <b>KQ2ZT</b> P. 18  Use to six-branch line at right angles from female thread. Three individual parts rotate 360°.
	<b>Union elbow</b> <b>KQ2L</b> P. 18  Use to connect tubes at right angles.
	<b>Plug-in elbow</b> <b>KQ2L</b> P. 18  Use to change by 90° in a tube fetching direction from One-touch fittings and to size down.

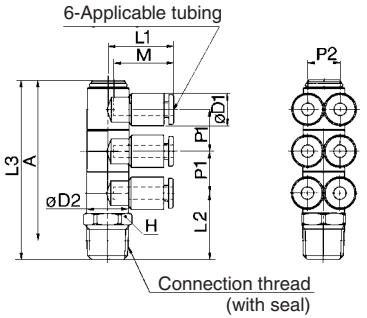
- K
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- VMG

# Series KQ2

## 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	Weight (g)
1/8	1/8	KQ2ZT01-34S	14.29	9.6	13.4	20.5	18	54.5	50.5	15.5	13.4	9.6	2.5	34
5/32	1/8	KQ2ZT03-34S	14.29	10.4	13.4	21	18.5	54.5	50.5	16	13.4	10.4	3	34
3/16	1/8	KQ2ZT05-34S	14.29	11.4	13.4	21.5	18	54.5	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	18.5	55.5	51.5	17	13.8	13.2	4.6	40
	1/4	KQ2ZT07-35S					21.5	58.5	52.5					70
	3/8	KQ2ZT07-36S					23.5	60.5	54					59
5/16	1/8	KQ2ZT09-35S	19	15.2	17.6	26	24	67	61	18.5	15.9	15.2	6	70
	1/4	KQ2ZT09-36S					25	68	61.5					80
	3/8	KQ2ZT09-37S					22.23	28.5	71.5					63.5
3/8	1/4	KQ2ZT11-35S	22.23	17.9	20.6	28.5	26	77.5	71.5	21	19.2	17.9	7	116
	3/8	KQ2ZT11-36S					27	78.5	72					116
	1/2	KQ2ZT11-37S					30	81.5	73					132
1/2	3/8	KQ2ZT13-36S	25.4	21.7	27	33	32	89	83	22	22.3	21.7	9.6	213
	1/2	KQ2ZT13-37S					35	92	84					228

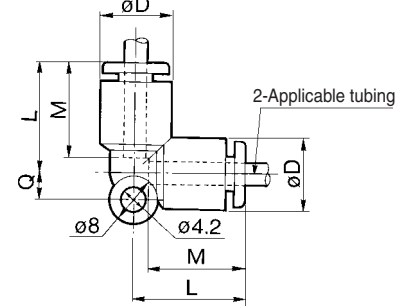


\* Reference dimensions after NPT thread installation.  
Note)  $\phi D1$ : Max. diameter

## Union Elbow: KQ2L



Applicable tubing O.D. (inch)	Model	Note) $\phi D$	L	Q	M	Min. port size	Weight (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

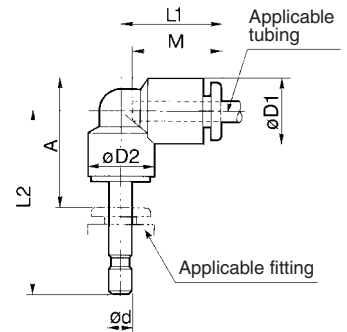


Note)  $\phi D$ : Max. diameter

## Plug-in Elbow: KQ2L



Applicable tubing O.D. (inch)	Applicable fitting size $\phi d$ (inch)	Model	Note) $\phi D1$	$\phi D2$	L1	L2	A	M	Min. port size	Weight (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	44.5	34	22	9.6	27

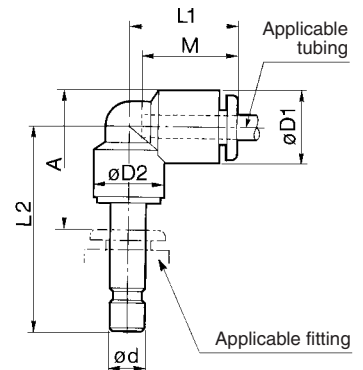


Note)  $\phi D1$ : Max. diameter

## Reducer Elbow: KQ2L



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



Note)  $\phi D1$ : Max. diameter