

# 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

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

Tubing (Rod) connection (Reducer) Different dia. tubing

With thread seal

Nil	None
S	With thread seal

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

#### Model

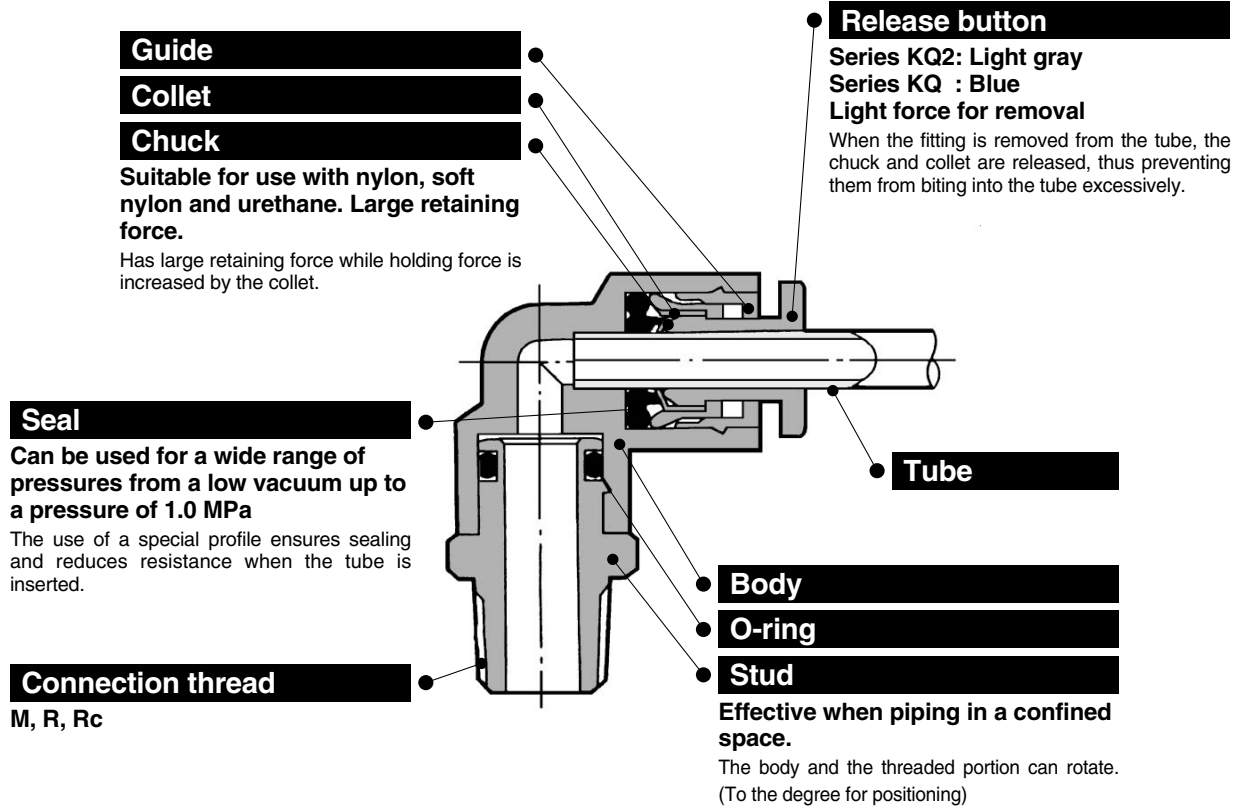
H	Male connector	T	Male branch tee
	Straight union		Union tee
S	Hex. socket head male connector	TW	Different diameter tee * Note)
			Cross*
F	Female connector	TX	Different diameter cross*
L	Male elbow	TY	Different diameter cross*
	Union elbow	Y	Male run tee
	Plug-in elbow	D	Male delta union
	Reducer elbow		Delta union
LU	Male branch connector	U	Branch
	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		

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

\* Available only for white color body.  
Note) KQT06-04, KQT08-06, KQT10-08, and KQT12-10 are available as made to order.

Series KQ2: White body  
Series KQ : Black body



PAT.

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

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

- Applications for metric size tubing
- Applicable tubing material—Nylon, Soft nylon, Polyurethane

### Applicable Tubing

Tube material	Nylon, Soft nylon, Polyurethane
Tube O.D.	ø3.2, ø4, ø6, ø8, ø10, ø12, ø16

### Product's Color

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

### 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	JIS B 0203 (Taper thread for piping) JIS B 0209 Class 2 (Metric coarse thread)
	Nut section	JIS B 0211 Class 2 (Metric fine thread)
Seal (Thread portion)	With seal or none	

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.


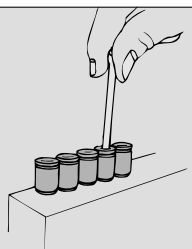

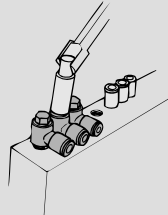

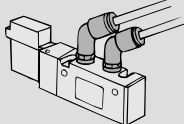

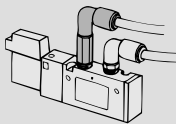

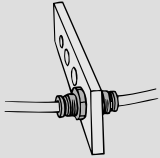

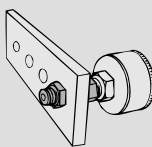

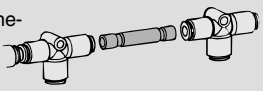

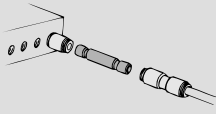









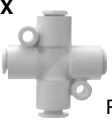





### Principal Parts Material

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



**Made to Order** P. 15-2-30

# Series KQ2

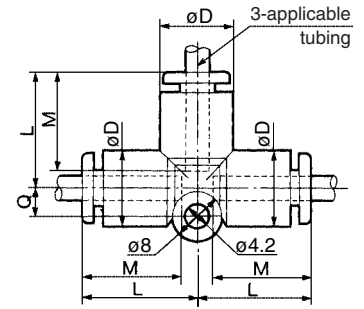
Model			
<b>Hex. socket head male connector</b> <b>KQ2S</b> P. 14 	Internal hex. allows thread connection by using an allen wrench for confined spaces. 	<b>Universal male elbow</b> <b>KQ2V</b> P. 17 	Universal male elbow allows thread connection by using a socket wrench for confined spaces. 
<b>45° male elbow</b> <b>KQ2K</b> P. 16 	Use to pipe in 45° direction from female thread. Model in-between of male connector and male elbow. 	<b>Extended male elbow</b> <b>KQ2W</b> P. 22 	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. 
<b>Bulkhead union</b> <b>KQ2E</b> P. 28 	Use to connect tubes through a panel. 	<b>Bulkhead connector</b> <b>KQ2E</b> P. 28 	Use to connect male thread and tube through a panel. 
<b>Nipple</b> <b>KQ2N</b> P. 29 	Use to connect One-touch fittings. 	<b>Reducer nipple</b> <b>KQ2N</b> P. 29 	Use to connect One-touch fittings that are different tubing O.D.s. 
<b>Male connector</b> <b>KQ2H</b> P. 14 	Use to pipe in the same direction from female thread. Most general style. 	<b>Male elbow</b> <b>KQ2L</b> P. 15 	Use to pipe at right angles to female thread. Most general style. 
<b>Female connector</b> <b>KQ2F</b> P. 14 	Use to pipe from male thread such as pressure gauge. 	<b>Union elbow</b> <b>KQ2L</b> P. 20 	Use to connect tubes at right angles. 
<b>Straight union</b> <b>KQ2H</b> P. 15 	Use to connect tubes in the same direction. 	<b>Plug-in elbow</b> <b>KQ2L</b> P. 21 	Use to change by 90° in a tube fetching from One-touch direction fittings. 
<b>Different diameter straight</b> <b>KQ2H</b> P. 15 	Use to connect different sized tubes. 	<b>Reducer elbow</b> <b>KQ2L</b> P. 21 	Use to change by 90° in a tube fetching direction from One touch fittings and to size down. 
<b>Cross</b> <b>KQ2TW</b> P. 23 	Use to four-branch line. 	<b>Different diameter cross</b> <b>KQ2TX</b> P. 23 	Use to connect tubes with size down in all 90° directions. 
		<b>Male branch tee</b> <b>KQ2T</b> P. 22 	Use to branch line from female thread in both 90° directions. 
		<b>Union tee</b> <b>KQ2T</b> P. 23 	Use to connect tubes in both 90° directions. 
		<b>Different diameter tee</b> <b>KQ2T</b> P. 23 	Use to connect tubes with size down in both 90° directions. 
		<b>Different diameter tee</b> <b>KQ2T</b> P. 23 	Use to branch line with size down in both side 90° direction. 
		<b>Different diameter cross</b> <b>KQ2TY</b> P. 24 	Use to branch line with size down in three directions. 

## Union Tee: KQ2T



Applicable tubing O.D. (mm)	Model	øD <sup>(1)</sup>	L	Q	M	Effective area <sup>(2)</sup> (mm <sup>2</sup> )		Weight (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	20	5.3	17	13.4	10.6	10
8	KQ2T08-00	15.2	23	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.

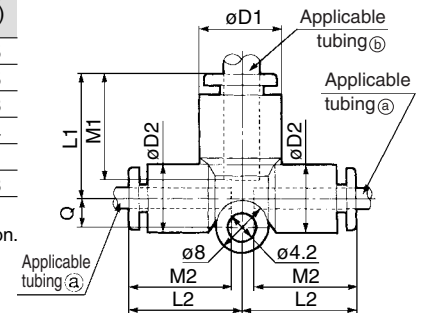


## Different Diameter Tee: KQ2T



Applicable tubing O.D. (mm)		Model	øD <sup>(1)</sup>	øD2	L1	L2	Q	M1	M2	Effective area <sup>(2)</sup> (mm <sup>2</sup> )		Weight (g)
Ⓐ	Ⓑ									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	20	5.3	18.5	17	16.4	16.4	8
8	10	KQ2T08-10	18.5	15.2	26.5	23	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.

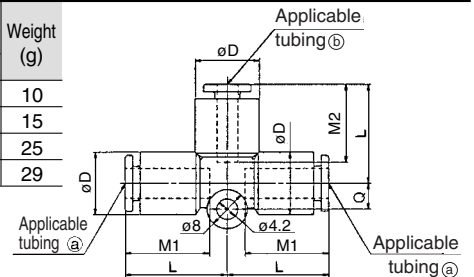


## Different Diameter Tee: KQ2T



Applicable tubing O.D. (mm)		Model	øD <sup>Note)</sup>	L	Q	M1	M2	Effective area (mm <sup>2</sup> )		Weight (g)
Ⓐ	Ⓑ							Nylon	Urethane	
6	4	KQ2T06-04	12.8	20	5.3	17	16	6.4	4.4	10
8	6	KQ2T08-06	15.2	23	6	18.5	17	13.4	10.6	15
10	8	KQ2T10-08	18.5	26.5	7.5	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

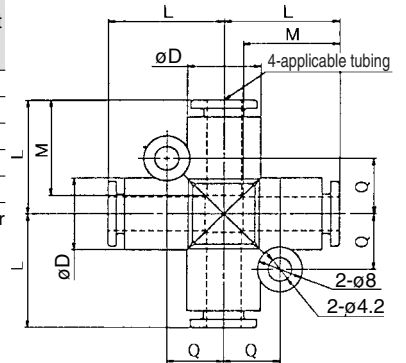


## Cross: KQ2TW



Applicable tubing O.D. (mm)	Model	øD <sup>Note)</sup>	L	Q	M	Effective area (mm <sup>2</sup> )		Weight (g)
						Nylon	Urethane	
4	KQ2TW04-00	10.4	18	8.7	16	6.4	4.4	9
6	KQ2TW06-00	12.8	20	9.9	17	13.4	10.6	13
8	KQ2TW08-00	15.2	23	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

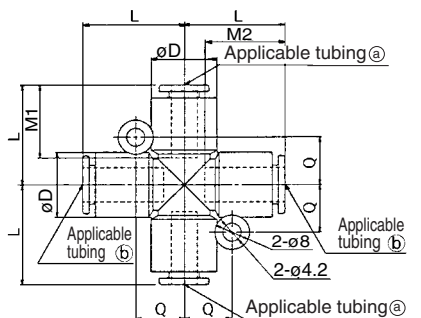


## Different Diameter Cross: KQ2TX



Applicable tubing O.D. (mm)		Model	øD <sup>Note)</sup>	L	Q	M1	M2	Effective area (mm <sup>2</sup> )		Weight (g)
Ⓐ	Ⓑ							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



K□  
M□  
H□  
D□  
MS  
T□  
VMG

# Series KQ2

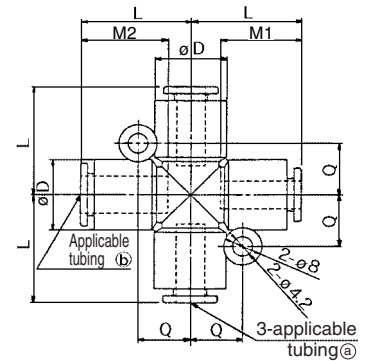
## Different Diameter Cross: KQ2TY



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



Note) øD: max. diameter



## Male Run Tee: KQ2Y

<M5>



<M6>



<R>



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	øD <sup>(1)</sup>	øD2	L1	L2	L3	A*	M	Effective area <sup>(2)</sup> (mm <sup>2</sup> )		Weight (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	21.5	—	35	15.5	3.4	2.9	10
	1/4	KQ2Y23-02S	14				25.5						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	22	—	36	16	6.4	4.4	13
	1/4	KQ2Y04-02S	14				26						19
	M5 x 0.8	KQ2Y06-M5	7				11.6						—
M6 x 1.0	KQ2Y06-M6	8	12.8	10	20	15.7	—	41	17	13.4	10.6	—	7
1/8	KQ2Y06-01S	10				23							12
1/4	KQ2Y06-02S	14				27							20
8	3/8	KQ2Y06-03S	17	15.2	12	23	29	—	42.5	18.5	25.6	17.7	34
	1/8	KQ2Y08-01S	12				24.5						14
	1/4	KQ2Y08-02S	14				28.5						22
	3/8	KQ2Y08-03S	17	30.5	36								
	1/8	KQ2Y10-01S	17	18.5	17	26.5	27	—	49.5	21	40.0	28.4	31
1/4	KQ2Y10-02S	17	30				29						
3/8	KQ2Y10-03S	17	32				39						
10	1/2	KQ2Y10-04S	22	20.9	17	28.5	36	—	54.5	22	57.4	45.4	66
	1/4	KQ2Y12-02S	17				31						31
	3/8	KQ2Y12-03S	17				33						41
	1/2	KQ2Y12-04S	22	37	68								
12	3/8	KQ2Y16-03S	17	26.5	20.9	34	38	—	65.5	25	81	(81)	112
	1/2	KQ2Y16-04S	22				41						116
	3/8	KQ2Y16-03S	17				38						113
16	1/2	KQ2Y16-04S	22	26.5	20.9	34	41	—	67	25	113	(113)	116

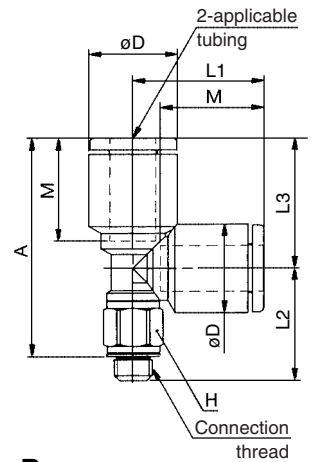


\* Reference dimensions after R thread installation.

Note 1) øD: Max. diameter

Note 2) ( ): Values for soft nylon

<M5, M6>



<R>

