

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		
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	(Reducer) Different dia. tubing
06	ø6	
08	ø8	
10	ø10	
12	ø12	
16	ø16	
99	Same dia. rod	

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
	Different diameter straight		Different diameter tee * Note)
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		Male delta union
	Reducer elbow	D	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
KQ2N	Nipple
	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.

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

Tubing material	Nylon, Soft nylon, Polyurethane
Tubing 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 ^{Note)}
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.

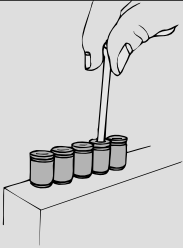
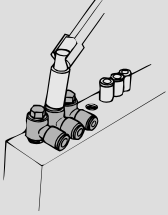
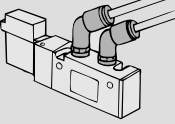
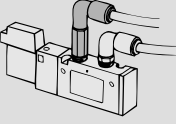
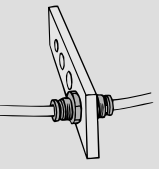
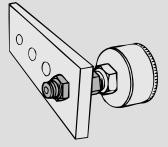
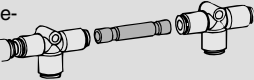
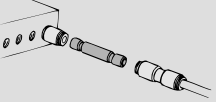
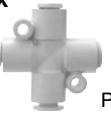
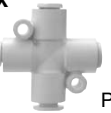
Principal Parts Material

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



P. 15-2-30

Series KQ2

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

Hexagon socket head universal male elbow

KQ2VS P. 17



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

Triple branch universal male elbow

KQ2ZT P. 20



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

Union "Y"

KQ2U P. 26



Use to branch line in the same direction.

Male branch connector

KQ2LU P. 16



Use to branch piping at right angles to female thread.

Branch union elbow

KQ2LU P. 21



Use to branch line at right angles.

Different dia. union "Y"

KQ2U P. 26



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

Universal female elbow

KQ2VF P. 18



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

Extended plug-in elbow

KQ2W P. 21



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

Plug-in "Y"

KQ2U P. 27



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

Female elbow

KQ2LF P. 18



Use to pipe at right angles to male thread.

Male delta union

KQ2D P. 25



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

Branch "Y"

KQ2U P. 25



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

Double universal male elbow

KQ2VD P. 18



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

Delta union

KQ2D P. 25



Use to branch in tripple 90° direction.

Plug-in reducer

KQ2R P. 28



Use to change size of One-touch fittings.

Triple universal male elbow

KQ2VT P. 19



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

Delta branch

KQ2UD P. 26



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

Bulkhead male elbow

KQ2LE P. 28



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

Branch universal male elbow

KQ2Z P. 19



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

Different dia. double union "Y"

KQ2UD P. 26



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

Adaptor

KQ2N P. 28



Use to connect fitting and R female thread.

Branch universal female elbow

KQ2ZF P. 19



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

Different diameter plug-in "Y"

KQ2X P. 27



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

Tube cap

KQ2C P. 29



Use to plug unused tube.

Double branch universal male elbow

KQ2ZD P. 20



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

Double plug-in "Y"

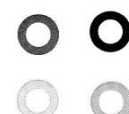
KQ2XD P. 27



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

Color cap

KQ2C P. 29



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

Male run tee

KQ2Y P. 24



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

Gasket/Seal for M5 and M6 thread

Part no.: M-5G2 (For M5 thread)
M-6G (For M6 thread)
Material: Stainless steel 304, NBR

Plug

KQ2P, KQP P. 29



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

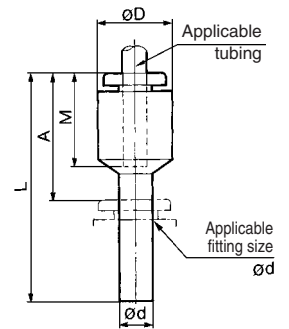
K□
M□
H□
D□
MS
T□
VMG

Series KQ2

Plug-in Reducer: KQ2R



Applicable tubing O.D. (mm)	Applicable fitting size ϕd	Model	$\phi D^{(1)}$	L	A	M	Effective area ⁽²⁾ (mm ²)		Weight (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
	12	KQ2R06-12	15.2	42	20				4.7
8	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



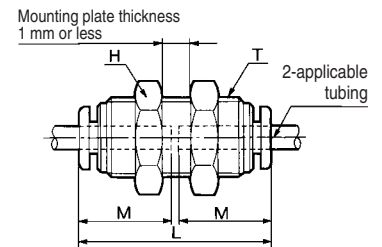
Note 1) ϕD : Max. diameter

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)		Weight (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

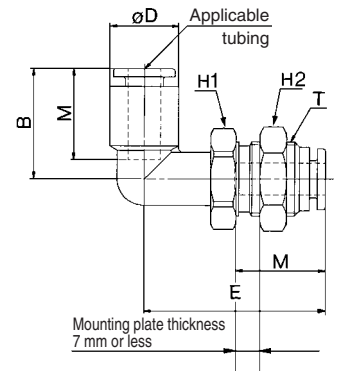


Note) (): Values for soft nylon.

Bulkhead Male Elbow: KQ2LE



Applicable tubing O.D. (mm)	Model	T	H1 (Hex. across flats)	H2 (Hex. across flats)	B	E	Note) øD	Mounting hole	M	Effective area (mm ²)		Weight (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

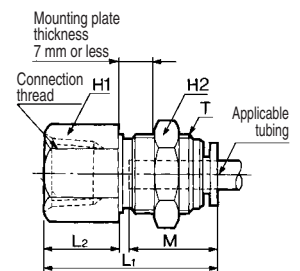


Note) ϕD : Max. diameter

Bulkhead Connector: KQ2E



Applicable tubing O.D. (mm)	Connection thread Rc	Model	T (M)	H1 (Hex. across flats)	H2 (Hex. across flats)	L1	L2	Mounting hole	M	Effective area ^{Note)} (mm ²)		Weight (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	25
	1/4	KQ2E06-02				31.5	15					40
	3/8	KQ2E06-03				33.5	17					29
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					27
	3/8	KQ2E08-03				35	15					48
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		22		36.5	15					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			113		132



Note) (): Values for soft nylon.