

One-touch Fittings

RoHS

The New “KQ2”

KQ, KQ2, and KJ
consolidated into the “KQ2”

- Enhanced variation
- Lightweight
- Compact



New KQ2 Series



New Oval type release button added!

Applicable tubing O.D.

Metric	ø3.2, ø4, ø6
Inch	ø1/8", ø5/32", ø3/16"





Body type: total of **51** models

Seal method: **3** types

Thread material/Surface treatment (Treated or Non-treated): **2** types^{*1}

*1 Brass, Brass + Electroless nickel plating

Applicable tubing	Connection thread	Seal method/Release button shape					
		Sealant		Gasket seal		Face seal	
		Oval Type	Round Type	Oval Type	Round Type	Oval Type	Round Type
Metric size 	M						
	R	P.5	P.101	P.5	P.101	P.65	P.173
	G					P.57	P.165
	Uni			P.87	P.201		
Inch size 	UNF			P.29	P.133		
	NPT	P.29	P.133			P.73	P.185
	M			P.49	P.157		
	R	P.49	P.157			P.81	P.195
	Uni			P.95	P.209		

KQ2 Series

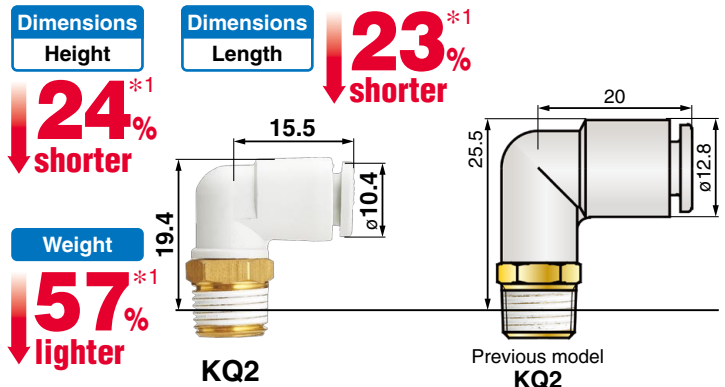


CAT.ES50-37D

◎ Improved tube insertion/removal



◎ Compact and lightweight



*1 Tube removal strength is ensured to be equivalent to previous model. *1 Previous KQ2 series model: Male elbow, applicable tubing O.D. $\phi 6$, connection thread R1/8

◎ Selectable seal method*

*1 Connection thread: R, NPT



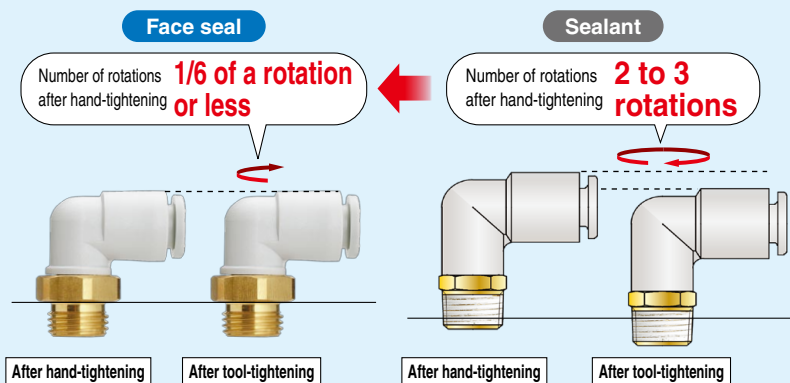
◎ Selectable surface treatment

- Brass (No plating)
- Brass + Electroless nickel plating

◎ Face seal adopted for threading.

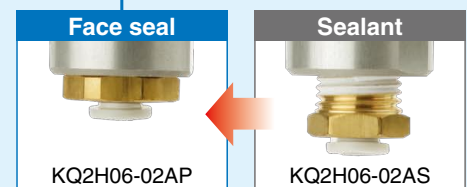
Original thread construction which allows for the use of piping taper female threads (Rc, NPT)

Improved installability (Reduction in amount of tool-tightening required after hand-tightening)

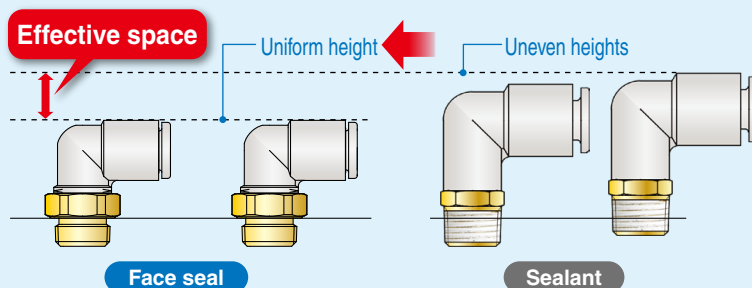


■ Allows for neat and compact piping without protruding threads

<Application example>
Mounted to a blow gun (VMG11W-02-01)



A uniform height when using multiple fittings, contributes to space saving



Prevention of sealant residue/protrusion

The current sealant type leaves residue and protrudes out from the threading when installing, making it necessary to clear away the residue using an air blower or similar. However, no residue is created when using a face seal.

Re-piping is possible.

Face seal

Repeated re-piping of up to 6 to 10 times is possible due to use of elastic sealant on seating.

Sealant

Sealant tape is necessary because sealant becomes separated with repeated installation.

Oval Type Metric Size One-touch Fittings

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

KQ2 Series

Guide

Chuck

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

The chuck provides secure retention and the collet increases the holding force on the tube.

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.

Guide

Chuck

Body

Release button (Light gray)

Requires little force for removal.

Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

Body

O-ring

Stud

Effective when piping in a confined space.

Body part rotates allowing for positioning.

Connection thread

M, R, Rc

Release button (Light gray)

Seal

* Fittings without thread portion, and with all resin body material are copper free specification.

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



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø3.2, ø4, ø6

Specifications

Fluid		Air, Water*1 *2
Operating pressure range*3		-100 kPa to 1 MPa
Proof pressure (at 23°C)		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 coarse thread)
Seal on the threads		JIS B0205 (Metric fine thread)
		With sealant

*1 The surge pressure must be under the maximum operating pressure.

*2 Deionized water is not recommended for use as it may affect the material used in the fittings. In addition, it is known to degrade the water quality.

*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, Stainless steel 303
Stud	C3604 (Thread portion), Stainless steel 303 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR



Made to Order
(Refer to page 27 for details.)

How to Order

Threaded Type

KQ2 H 06 - 01 A S 1

One-touch fittings

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
F	Female connector
L	Male 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
W	Extended male elbow
T	Male branch tee
Y	Male run tee
D	Male delta union
E	Bulkhead union
	Bulkhead connector
LE	Bulkhead male elbow
N	Adapter

Oval type release button

Male thread seal method

Symbol	Seal method
Nil	None
S	With thread sealant

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
A	Brass
N	Brass + Electroless nickel plating
G	Stainless steel 303 (Connection thread: Only male thread and M3)

Port size/Applicable tubing O.D.

Symbol		Size
Tubing connection	00 *1	Same dia. tubing
	M3	M3 x 0.5
Thread connection	M5	M5 x 0.8
	M6	M6 x 1.0
	01	R1/8, Rc1/8
	02	R1/4, Rc1/4
	03	R3/8, Rc3/8

*1 Only for "Bulkhead union" and "Bulkhead male elbow".

Applicable tubing O.D.

Symbol	Size
23	ø3.2
04	ø4
06	ø6

Spare Parts

Use the part number below to order the gasket for M3, M5, and M6 threads.

Gasket for M3 thread: M-3G2

Gasket for M5 thread: M-5G2

Gasket for M6 thread: M-6G

For details on applicable tubing O.D. and port size combinations for each model, refer to the charts on the Dimensions page.

Tube - Tube Type

KQ2 H 06 - 00 A 1

One-touch fittings

Model

Symbol	Model
H	Straight union
	Different diameter straight
L	Union elbow
	Plug-in elbow
	Reducer elbow
W	Extended plug-in elbow
T	Union tee
	Different diameter tee
TW	Cross
TX	Different diameter cross
TY	Different diameter cross
D	Delta union
R	Plug-in reducer

Oval type release button

Port size/Applicable tubing O.D.

Symbol		Size
Tubing (Rod) connection	00	Same diameter tubing
	99	Same diameter rod
	23	ø3.2
	04	ø4
	06	ø6
	08	ø8

Applicable tubing O.D.

Symbol	Size
23	ø3.2
04	ø4
06	ø6

Accessories

Symbol	Name
KQ2N	Nipple
	Reducer nipple
KQ2C	Tube cap
KQ2P	Plug

Oval Type

Metric Size M, R, Rc

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

Inch Size Uni One-touch Fittings **KQ2 Series**

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

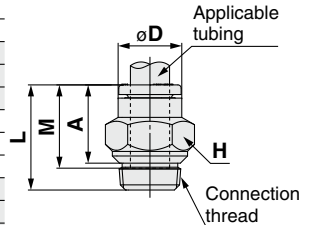
Dimensions

Male Connector: KQ2H (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	øD	L	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
ø1/8	1/8	KQ2H01-U01□	11.11	6.7	15.2	10.4	13.3	3.4	2.9	2.5	7.9
	1/4	KQ2H01-U02□	14.29	6.7	15.3	8.9	13.3	3.4	2.9	2.5	13.7
ø5/32	1/8	KQ2H03-U01□	11.11	7.7	15.7	10.9	13.3	4.8	3.4	3	7.7
	1/4	KQ2H03-U02□	14.29	7.7	15.3	8.9	13.3	4.8	3.4	3	13
ø3/16	1/8	KQ2H05-U01□	12.7	8.3	16	11.2	13.3	6.8	5.6	3.5	7.7
	1/4	KQ2H05-U02□	14.29	8.3	15.3	8.9	13.3	6.8	5.6	3.5	12.4
ø1/4	1/8	KQ2H07-U01□	12.7	10.9	18.9	14.1	13.3	11.6	10	4.6	8.7
	1/4	KQ2H07-U02□	14.29	10.9	15.3	8.9	13.3	11.6	10	4.6	10.7
ø5/16	3/8	KQ2H07-U03□	17.46	10.9	14.9	8.5	13.3	11.6	10	4.6	18.4
	1/8	KQ2H09-U01□	14.29	13	20.6	15.8	14.2	26.1	18	6	10.5
ø3/8	1/4	KQ2H09-U02□	14.29	13	18.5	12.1	14.2	26.1	18	6	10.7
	3/8	KQ2H09-U03□	17.46	13	14.9	8.5	14.2	26.1	18	6	15.5
ø1/2	1/4	KQ2H11-U02□	17.46	15.1	22.2	15.8	15.6	28.8	23.8	7	16.6
	3/8	KQ2H11-U03□	17.46	15.1	18.9	12.5	15.6	28.8	23.8	7	16.2
ø1/2	1/2	KQ2H11-U04□	22.23	15.1	17	8.4	15.6	28.8	23.8	7	30.9
	1/4	KQ2H13-U02□	22.23	19	25.2	18.8	17	50.3	44.4	9	24.9
	3/8	KQ2H13-U03□	22.23	19	23.5	17.1	17	56.7	44.4	9.6	27
	1/2	KQ2H13-U04□	22.23	19	21.7	13.1	17	56.7	44.4	9.6	29.8

□: A (Brass), N (Brass + Electroless nickel plating) *1 Reference dimensions after installation of Uni thread

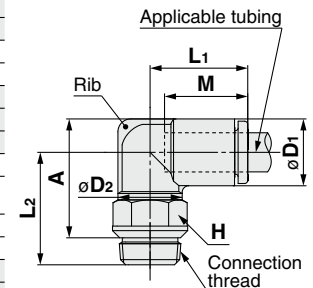


Male Elbow: KQ2L (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	øD1	øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
ø1/8	1/8	KQ2L01-U01□	11.11	7.1	10	14.5	17.9	16.7	13.3	3	2.5	2.5	6	—
	1/4	KQ2L01-U02□	14.29	7.1	10	14.5	19.2	16.4	13.3	3	2.5	2.5	12.1	—
ø5/32	1/8	KQ2L03-U01□	11.11	8.2	10	14.8	17.4	16.7	13.3	4.6	3.3	3	6.2	●
	1/4	KQ2L03-U02□	14.29	8.2	10	14.8	19.7	17.4	13.3	4.6	3.3	3	12.3	●
ø3/16	1/8	KQ2L05-U01□	11.11	9.1	10	15	17.9	17.7	13.3	6.8	5.6	3.5	6.4	—
	1/4	KQ2L05-U02□	14.29	9.1	10	15	20.2	18.4	13.3	6.8	5.6	3.5	12.5	—
ø1/4	1/8	KQ2L07-U01□	11.11	11.1	10	15.6	18.9	19.7	13.3	11.3	10	4.5	6.7	●
	1/4	KQ2L07-U02□	14.29	11.1	10	15.6	21.2	20.4	13.3	11.3	10	4.5	12.9	●
ø5/16	3/8	KQ2L07-U03□	17.46	11.1	10	15.6	22.3	21.5	13.3	11.3	10	4.5	23.1	●
	1/8	KQ2L09-U01□	11.11	13.2	10	16.4	19.9	21.7	14.2	11.4	11.4	4.5	7.4	●
ø3/8	1/4	KQ2L09-U02□	14.29	13.2	12	17.2	22.2	22.4	14.2	21.6	14.9	6	9.2	●
	3/8	KQ2L09-U03□	17.46	13.2	12	17.2	23.3	23.5	14.2	21.6	14.9	6	21.7	●
ø1/2	1/4	KQ2L11-U02□	17.46	15.4	17	19.3	24.4	25.7	15.6	28.8	23.8	7.5	18	●
	3/8	KQ2L11-U03□	17.46	15.4	17	19.3	27.0	28.3	15.6	28.8	23.8	7.5	18.7	●
ø1/2	1/2	KQ2L11-U04□	22.23	15.4	17	19.3	34.8	33.9	15.6	28.8	23.8	7.5	50	●
	1/4	KQ2L13-U02□	17.46	19.3	17	21.5	26.3	29.5	17	50.3	44.4	9	20.3	—
	3/8	KQ2L13-U03□	17.46	19.3	17	21.8	28.9	32.1	17	56	44.4	9.5	25.1	—
	1/2	KQ2L13-U04□	22.23	19.3	17	21.8	31.9	32.9	17	56	44.4	9.5	56	—

□: A (Brass), N (Brass + Electroless nickel plating) *1 Reference dimensions after installation of Uni thread
*2 For details, refer to page 214.

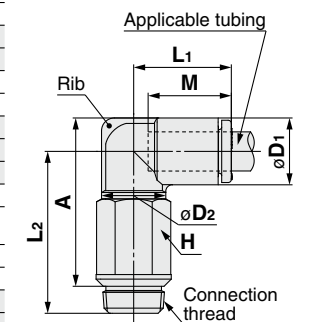


Extended Male Elbow: KQ2W (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	øD1	øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
ø1/8	1/8	KQ2W01-U01□	11.11	7.1	10	14.5	31.5	30.3	13.3	2.8	2.4	2.5	14.5	—
	1/4	KQ2W01-U02□	14.29	7.1	10	14.5	30.8	28	13.3	2.8	2.4	2.5	26	—
ø5/32	1/8	KQ2W03-U01□	11.11	8.2	10	14.8	31.1	30.4	13.3	4	4	3	14.6	●
	1/4	KQ2W03-U02□	14.29	8.2	10	14.8	31.3	29	13.3	4	4	3	26.2	●
ø3/16	1/8	KQ2W05-U01□	11.11	9.1	10	15	31.6	31.3	13.3	6.8	5.6	3.5	14.8	—
	1/4	KQ2W05-U02□	14.29	9.1	10	15	31.8	30	13.3	6.8	5.6	3.5	26.4	—
ø1/4	1/8	KQ2W07-U01□	11.11	11.1	10	15.6	32.6	33.3	13.3	11.3	10	4.5	15.1	●
	1/4	KQ2W07-U02□	14.29	11.1	10	15.6	32.8	32	13.3	11.3	10	4.5	26.8	●
ø5/16	3/8	KQ2W07-U03□	17.46	11.1	10	15.6	33.9	33.1	13.3	11.3	10	4.5	45.3	●
	1/8	KQ2W09-U01□	11.11	13.2	10	16.4	33.6	35.4	14.2	11.3	11.3	4.5	15.9	●
ø3/8	1/4	KQ2W09-U02□	14.29	13.2	12	17.2	35.9	36.1	14.2	20.5	14.2	6	25.7	●
	3/8	KQ2W09-U03□	17.46	13.2	12	17.2	37	37.2	14.2	20.5	14.2	6	45.5	●
ø1/2	1/4	KQ2W11-U02□	17.46	15.4	17	19.3	44.1	45.4	15.6	28.8	23.8	7.5	50.6	●
	3/8	KQ2W11-U03□	17.46	15.4	17	19.3	42.9	44.2	15.6	28.8	23.8	7.5	45	●
ø1/2	1/2	KQ2W11-U04□	22.23	15.4	17	19.3	50.7	49.8	15.6	28.8	23.8	7.5	90.9	●
	1/4	KQ2W13-U02□	17.46	19.3	17	21.5	46	49.3	17	50.3	44.4	9	52.9	—
	3/8	KQ2W13-U03□	17.46	19.3	17	21.8	48.6	51.9	17	56	44.4	9.5	52.6	—
	1/2	KQ2W13-U04□	22.23	19.3	17	21.8	51.6	52.7	17	56	44.4	9.5	114.1	—

□: A (Brass), N (Brass + Electroless nickel plating) *1 Reference dimensions after installation of Uni thread
*2 For details, refer to page 214.



Round Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni