

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	Oval Type	Round Type
Metric size	M	P.5	P.101	P.5	P.101	P.65	P.173
	R					P.57	P.165
	G						
	Uni						
Inch size	UNF	P.29	P.133	P.87	P.201	P.73	P.185
	NPT			P.29	P.133		
	M	P.49	P.157	P.49	P.157	P.81	P.195
	R			P.95	P.209		
	Uni						

KQ2 Series

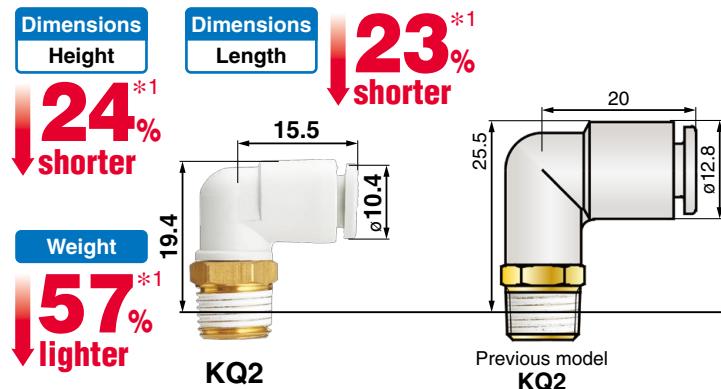
 **SMC**
CAT.ES50-37D

One-touch Fittings KQ2 Series

◎ Improved tube insertion/removal



◎ Compact and lightweight



◎ Selectable seal method*1

*1 Connection thread: R, NPT



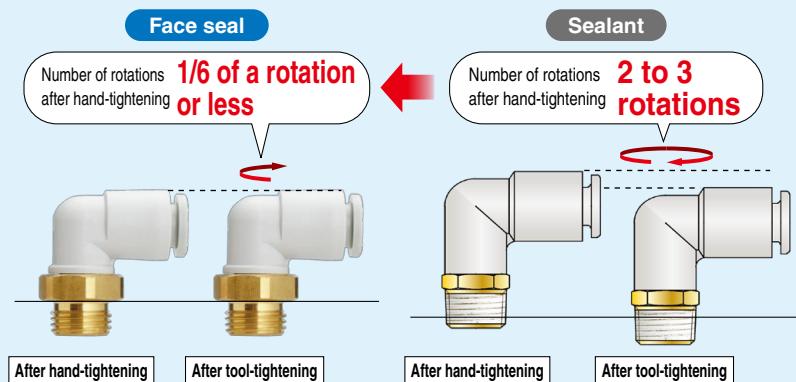
◎ Selectable surface treatment

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

◎ Face seal adopted for threading.

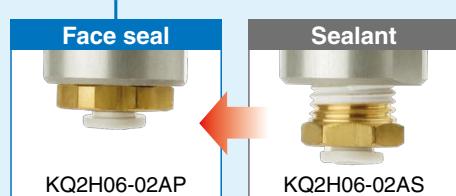
Original thread construction which allows for the use of piping taper female threads (Rc, NPT)

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

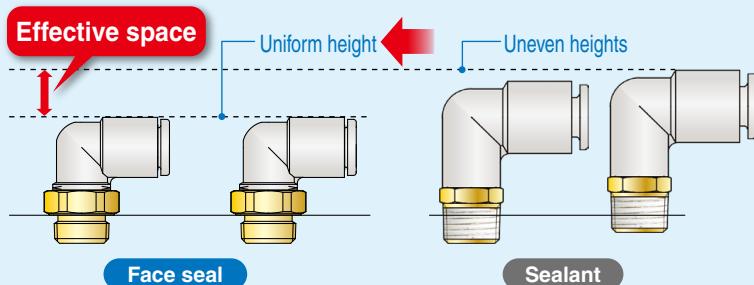


■ Allows for neat and compact piping without protruding threads

<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

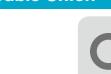
Sealant tape is necessary because sealant becomes separated with repeated installation.

One-touch Fittings KQ2 Series

	Metric size							Inch size							
	ø2	ø3.2	ø4	ø6	ø8	ø10	ø12	ø16	ø1/8"	ø5/32"	ø3/16"	ø1/4"	ø5/16"	ø3/8"	ø1/2"
Oval Type From P.5	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Round Type From P.101	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Refer to the next page for details on the applicable tubing sizes of each shape.

Oval Type/Round Type Variations

Hexagon Socket Head Male Connector KQ2S			
Universal Male Elbow KQ2V			
Male Connector KQ2H			
Cross KQ2TW			
Reducer Elbow KQ2L			
Different Diameter Tee KQ2T			
Branch Male Elbow KQ2LU			
Branch Universal Male Elbow KQ2Z			
Branch Union Elbow KQ2LU			
Double Branch "Y" KQ2UD			
Union "Y" KQ2U			
Plug-in Reducer KQ2R			
45° Male Elbow KQ2K			
Extended Male Elbow KQ2W			
Female Connector KQ2F			
Male Elbow KQ2L			
Different Diameter Cross KQ2TX			
Different Diameter Tee KQ2T			
Female Elbow KQ2LF			
Double Branch Universal Male Elbow KQ2ZD			
Extended Plug-in Elbow KQ2W			
Different Diameter Double Union "Y" KQ2UD			
Different Diameter Union "Y" KQ2U			
Bulkhead Male Elbow KQ2LE			
Bulkhead Union KQ2E			
Universal Female Elbow KQ2VF			
Branch Universal Female Elbow KQ2ZF			
Straight Union KQ2H			
Union Elbow KQ2L			
Male Branch Tee KQ2T			
Different Diameter Cross KQ2TY			
Double Universal Male Elbow KQ2VD			
Male Run Tee KQ2Y			
Triple Universal Male Elbow KQ2VT			
Triple Branch Universal Male Elbow KQ2ZT			
Delta Union KQ2D			
Double Plug-in "Y" KQ2XD			
Branch "Y" KQ2U			
Tube Cap KQ2C			

* The supported release button type (oval type/round type) is shown next to each product.



Oval Type Release Button

Sealant/Gasket Seal

Applicable tubing	Connection thread				
	M	R	Rc	UNF	NPT
	●	●	●		
Metric	Ø2	Ø3,2	Ø4	Ø6	Ø8 Ø10 Ø12 Ø16
Inch	Ø1/8"	Ø5/32"	Ø3/16"	Ø1/4"	Ø5/16" Ø3/8" Ø1/2"
	●	●	●		
Inch	Ø1/8"	Ø5/32"	Ø3/16"	Ø1/4"	Ø5/16" Ø3/8" Ø1/2"

P.5 P.29 P.49

How to Order P.6
 Variations P.7
 Dimensions P.9
 Made to Order/Clean Series/
 Spare Parts P.27

How to Order P.30
 Variations P.31
 Dimensions P.33
 Made to Order/Clean Series/
 Spare Parts P.48

How to Order P.50
 Variations P.51
 Dimensions P.52
 Made to Order/Clean Series/
 Spare Parts P.55

Face Seal

Applicable tubing	Connection thread				
	G	R	Rc	NPT	R
	●				
Metric	Ø2	Ø3,2	Ø4	Ø6	Ø8 Ø10 Ø12 Ø16
	●				
Metric	Ø2	Ø3,2	Ø4	Ø6	Ø8 Ø10 Ø12 Ø16
		●			
Inch	Ø1/8"	Ø5/32"	Ø3/16"	Ø1/4"	Ø5/16" Ø3/8" Ø1/2"
		●			
Inch	Ø1/8"	Ø5/32"	Ø3/16"	Ø1/4"	Ø5/16" Ø3/8" Ø1/2"

P.57 P.65 P.73 P.81

How to Order P.58
 Variations P.59
 Dimensions P.60
 Spare Parts P.63

How to Order P.66
 Variations P.67
 Dimensions P.68

How to Order P.74
 Variations P.75
 Dimensions P.76

How to Order P.82
 Variations P.83
 Dimensions P.84

Gasket Seal (Uni Thread)

Applicable tubing	Connection thread			
	Rc	G	NPT	NPTF
	●	●	●	●
Metric	Ø2	Ø3,2	Ø4	Ø6
	●	●	●	●
Inch	Ø1/8"	Ø5/32"	Ø3/16"	Ø1/4"
	●	●	●	●
Inch	Ø1/8"	Ø5/32"	Ø3/16"	Ø1/4"

P.87 P.95

How to Order P.88
 Variations P.89
 Dimensions P.90
 Made to Order/Clean Series/
 Spare Parts P.93

How to Order P.96
 Variations P.97
 Dimensions P.98
 Made to Order/Clean Series/
 Spare Parts P.100



Round Type Release Button

Sealant/Gasket Seal



Applicable tubing

Connection thread

M	R	Rc	UNF	NPT
---	---	----	-----	-----

Metric

$\varnothing 2$ $\varnothing 3,2$ $\varnothing 4$ $\varnothing 6$ $\varnothing 8$ $\varnothing 10$ $\varnothing 12$ $\varnothing 16$



P.101

- How to Order P.102
- Variations P.103
- Dimensions P.105
- Made to Order/Clean Series/
Spare Parts P.131



Inch

$01/8"$ $05/32"$ $03/16"$ $01/4"$ $05/16"$ $03/8"$ $01/2"$



P.133

- How to Order P.134
- Variations P.135
- Dimensions P.137
- Made to Order/Clean Series/
Spare Parts P.156



Inch

$01/8"$ $05/32"$ $03/16"$ $01/4"$ $05/16"$ $03/8"$ $01/2"$



P.157

- How to Order P.158
- Variations P.159
- Dimensions P.160
- Made to Order/Clean Series/
Spare Parts P.163

Face Seal



Applicable tubing

Connection thread

G	R	Rc	NPT	R
---	---	----	-----	---

Metric

$\varnothing 2$ $\varnothing 3,2$ $\varnothing 4$ $\varnothing 6$ $\varnothing 8$ $\varnothing 10$ $\varnothing 12$ $\varnothing 16$



P.165

- How to Order P.166
- Variations P.167
- Dimensions P.168
- Spare Parts P.172



Metric

$\varnothing 2$ $\varnothing 3,2$ $\varnothing 4$ $\varnothing 6$ $\varnothing 8$ $\varnothing 10$ $\varnothing 12$ $\varnothing 16$



P.173

- How to Order P.174
- Variations P.175
- Dimensions P.176



Inch

$01/8"$ $05/32"$ $03/16"$ $01/4"$ $05/16"$ $03/8"$ $01/2"$



P.185

- How to Order P.186
- Variations P.187
- Dimensions P.188



Inch

$01/8"$ $05/32"$ $03/16"$ $01/4"$ $05/16"$ $03/8"$ $01/2"$



P.195

- How to Order P.196
- Variations P.197
- Dimensions P.198

Gasket Seal (Uni Thread)



Applicable tubing

Connection thread

Rc	G	NPT	NPTF
----	---	-----	------

Metric

$\varnothing 2$ $\varnothing 3,2$ $\varnothing 4$ $\varnothing 6$ $\varnothing 8$ $\varnothing 10$ $\varnothing 12$ $\varnothing 16$



P.201

- How to Order P.202
- Variations P.203
- Dimensions P.204
- Made to Order/Clean Series/
Spare Parts P.207



Inch

$01/8"$ $05/32"$ $03/16"$ $01/4"$ $05/16"$ $03/8"$ $01/2"$



P.209

- How to Order P.210
- Variations P.211
- Dimensions P.212
- Made to Order/Clean Series/
Spare Parts P.214

Prior to Use P.215

Precautions P.216

Safety Instructions Back cover

Sealant/Gasket Seal
Metric Size M, R, Rc
Inch Size UNF, NPT

Inch Size M, R, Rc
Metric Size G

Face Seal
Metric Size R, Rc

Inch Size NPT
Inch Size R

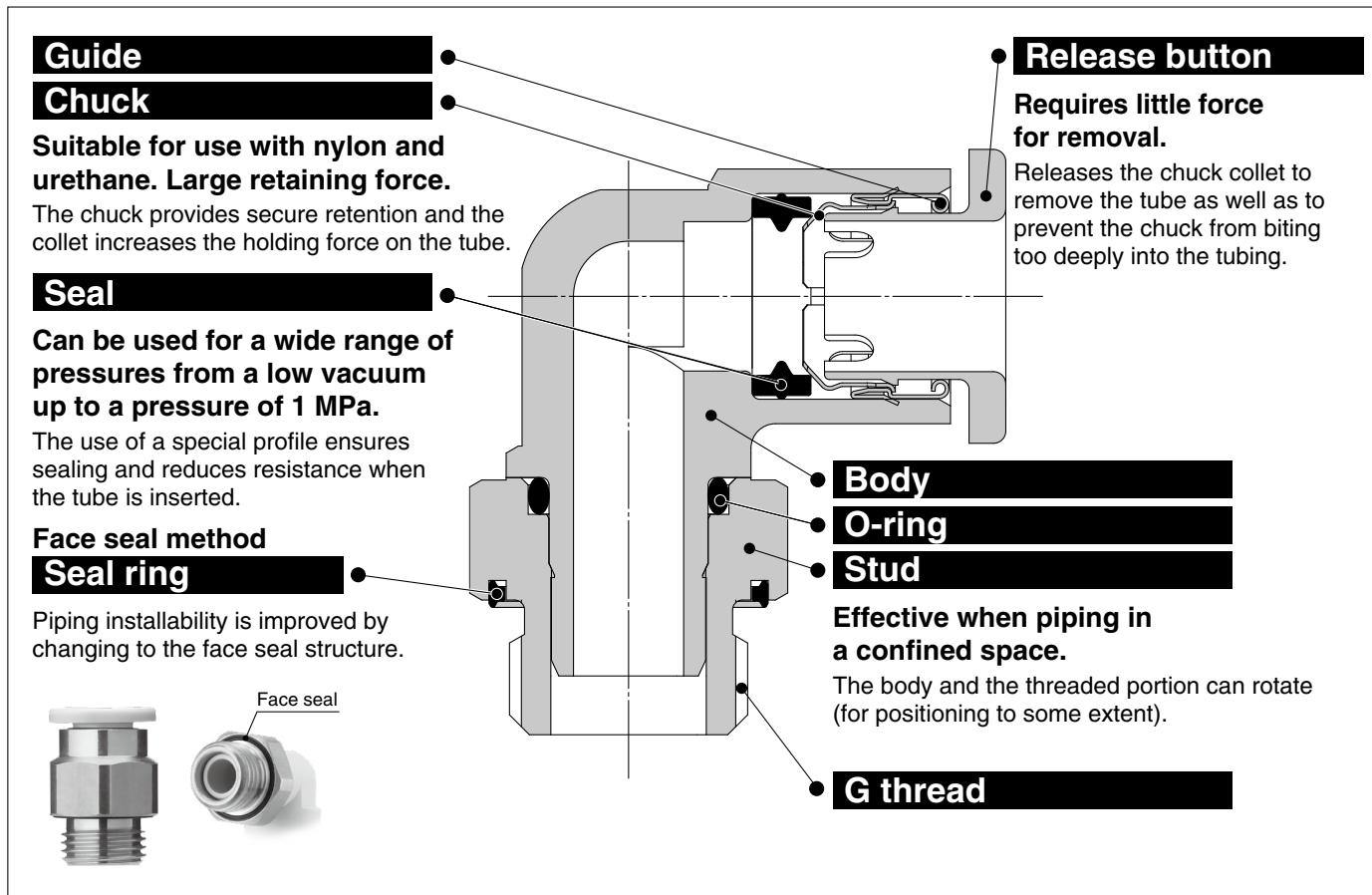
Gasket Seal
Metric Size Uni

Inch Size Uni

Oval Type Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: G

KQ2 Series



Applicable to parallel pipe thread (G).

Drastically reduces screw-in time with the face seal method.



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	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	ISO 16030 (Parallel pipe thread)
Nut section	JIS B0205 (Metric fine thread)
Seal on the threads	Seal ring

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

How to Order**Threaded Type****KQ2 H 06-G01 A 1**

One-touch fittings

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
F	Female connector
L	Male elbow
V	Universal male elbow
W	Extended male elbow
T	Male branch tee
Y	Male run tee
E	Bulkhead connector

Oval type release button

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
A	Brass
N	Brass + Electroless nickel plating

Port size

Symbol	Size
G01	G1/8
G02	G1/4
G03	G3/8

Applicable tubing O.D.

Symbol	Size
04	ø4
06	ø6

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



Metric Size M, R, Rc
Inch Size UNF, NPT

Sealant/Gasket Seal
Inch Size M, R, Rc

Metric Size G
Inch Size R, Rc

Face Seal
Inch Size NPT

Metric Size R, Rc
Inch Size R

Gasket Seal
Inch Size Uni

Metric Size Uni
Inch Size R

Inch Size Uni
Inch Size R

Inch Size Uni
Inch Size R

Metric Size One-touch Fittings

O Oval Type Variations

Hexagon socket head male connector

KQ2S

P.60



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.



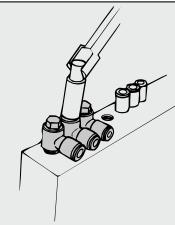
Universal male elbow

KQ2V

P.61



Hexagon head of the body allows tightening with a box wrench in confined spaces.



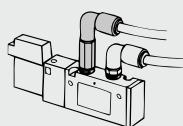
Extended male elbow

KQ2W

P.61



Basically, it is used together with a male elbow. Its extended height allows for multi-leveled piping and prevents interference among fittings.



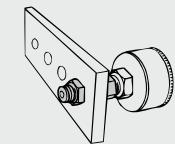
Bulkhead connector

KQ2E

P.62



Use to connect a male thread and tubing through a panel, etc.



Male connector

KQ2H

P.60



Use to pipe a female thread in the same direction. Most general model.

Male elbow

KQ2L

P.60



Use to pipe a female thread at right angles. Most general model.

Male run tee

KQ2Y

P.62



Use to branch a female thread in the same direction and at a 90° angle.

Female connector

KQ2F

P.60



Use to pipe a male thread of a pressure gauge, etc.

Male branch tee

KQ2T

P.61



Use to branch a female thread at both 90° angles.

Tubing One-touch fittings
Plug-in reducer/Plug-in elbow etc.

Tubing Union elbow/Union tee/Straight union etc.

Accessory
Nipple/Plug etc.

Refer to page 7 and after for details.

Metric Size One-touch Fittings KQ2 Series

Oval Type Applicable Tubing: Metric Size, Connection Thread: G

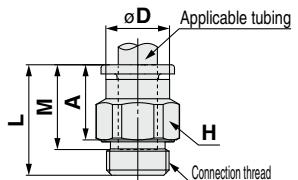
Dimensions

Male Connector: KQ2H (Face seal)

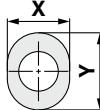


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD	Release button dimensions		L	A	M	Effective area [mm²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
$\phi 4$	1/8	KQ2H04-G01	12	7.9	7.7	10	17.1	11.6	13.3	4.8	3.4	3	7.7
	1/4	KQ2H04-G02	17	—	7.7	10	15.4	8.9	13.3	4.8	3.4	3	16.8
$\phi 6$	1/8	KQ2H06-G01	12	9.9	9.7	12	17.3	11.8	13.3	13.1	10.4	4.5	6.6
	1/4	KQ2H06-G02	17	—	9.7	12	15.4	8.9	13.3	13.1	10.4	4.5	14.8
	3/8	KQ2H06-G03	21	—	9.7	12	16.4	8.9	13.3	13.1	10.4	4.5	27.1

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

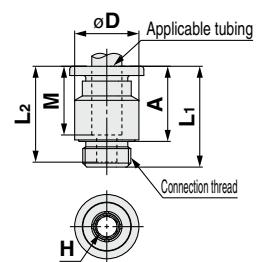


Hexagon Socket Head Male Connector: KQ2S (Face seal)

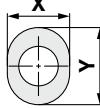


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD	Release button dimensions		L1	L2	A	M	Effective area [mm²]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
$\phi 4$	1/8	KQ2S04-G01	3	13	7.7	10	20.6	19.6	15.1	13.3	4.1	3.6	3.1	11.6
	1/8	KQ2S06-G01	4	13	9.7	12	19.8	18.8	14.3	13.3	10	9.9	4.1	9.7
$\phi 6$	1/4	KQ2S06-G02	4	18	9.7	12	19.8	18.8	13.3	13.3	10.7	10	4.1	18

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

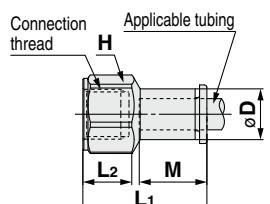


Female Connector: KQ2F

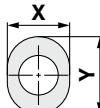


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD	Release button dimensions		L1	L2	A	M	Effective area [mm²]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
$\phi 4$	1/8	KQ2F04-G01	14	7.9	7.7	10	24.7	9.5	13.3	5.6	4	3	12.4	
	1/4	KQ2F04-G02	17	7.9	7.7	10	30.1	13.9	13.3	5.6	4	3	21.3	
$\phi 6$	1/8	KQ2F06-G01	14	9.9	9.7	12	24.3	9.5	13.3	13.1	10.4	4.5	12.6	
	1/4	KQ2F06-G02	17	9.9	9.7	12	29.6	13.9	13.3	13.1	10.4	4.5	21.4	
	3/8	KQ2F06-G03	21	9.9	9.7	12	31.1	13.7	13.3	13.1	10.4	4.5	29.6	

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

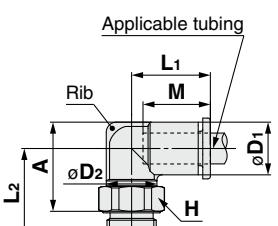


Male Elbow: KQ2L (Face seal)

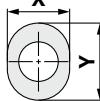


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
$\phi 4$	1/8	KQ2L04-G01	12	8.2	7.7	10	10	14.8	16.8	15.4	13.3	4.6	3.3	3	6.3
	1/4	KQ2L04-G02	17	8.2	7.7	10	10	20.3	17.9	13.3	4.6	3.3	3	16.7	
$\phi 6$	1/8	KQ2L06-G01	12	10.4	9.7	12	10	15.5	17.9	17.6	13.3	11.4	9	4.5	6.7
	1/4	KQ2L06-G02	17	10.4	9.7	12	10	15.5	21.4	20.1	13.3	11.4	9	4.5	17.2
	3/8	KQ2L06-G03	21	10.4	9.7	12	10	15.5	22.4	20.1	13.3	11.4	9	4.5	28.9

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



Oval Type

Sealant/Gasket Seal
Metric Size M, R, Rc
Inch Size UNF, NPT
Inch Size M, R, Rc

Metric Size G
Face Seal
Inch Size NPT

Inch Size R
Inch Size Uni
Gasket Seal

Inch Size R, Rc
Metric Size Uni

KQ2 Series

Oval Type Applicable Tubing: Metric Size, Connection Thread: G

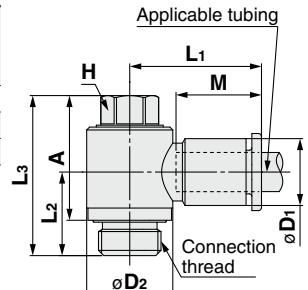
Dimensions

Universal Male Elbow: KQ2V (Face seal)

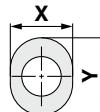


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	ϕD_1	Release button dimensions		ϕD_2	L1	L2	L3	A	M	Effective area [mm²] Nylon Urethane	Min. port size	Weight [g]	
					X	Y										
ø4	1/8	KQ2V04-G01□1	8	8.2	7.7	10	13.4	19.3	13	24.9	19.4	13.3	2.9	2.9	3	12.9
ø6	1/8	KQ2V06-G01□1	8	10.4	9.7	12	13.4	20.5	13	24.9	19.4	13.3	7.5	5.9	4.5	13.2
ø6	1/4	KQ2V06-G02□1	10	10.4	9.7	12	18	19.9	15	27.6	21.1	13.3	7.5	5.9	4.5	22.7

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

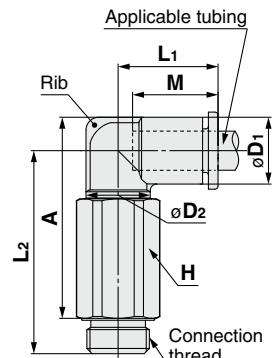


Extended Male Elbow: KQ2W (Face seal)

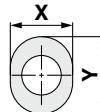


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	ϕD_1	Release button dimensions		ϕD_2	L1	L2	A	M	Effective area [mm²] Nylon Urethane	Min. port size	Weight [g]	With a rib
					X	Y									
ø4	1/8	KQ2W04-G01□1	12	8.2	7.7	10	10	14.8	30.5	29.1	13.3	4	4	3	16.5
	1/4	KQ2W04-G02□1	17	8.2	7.7	10	10	14.8	31.2	28.8	13.3	4	4	3	35.8
ø6	1/8	KQ2W06-G01□1	12	10.4	9.7	12	10	15.5	31.6	31.3	13.3	10.9	8.6	4.5	17
	1/4	KQ2W06-G02□1	17	10.4	9.7	12	10	15.5	32.3	31	13.3	10.9	8.6	4.5	36.2
	3/8	KQ2W06-G03□1	21	10.4	9.7	12	10	15.5	33.3	31	13.3	10.9	8.6	4.5	59.4

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

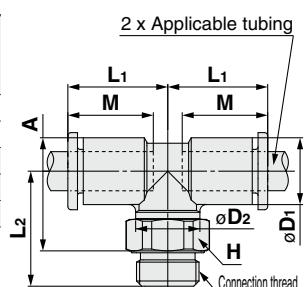


Male Branch Tee: KQ2T (Face seal)

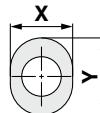


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	ϕD_1	Release button dimensions		ϕD_2	L1	L2	A	M	Effective area [mm²] Nylon Urethane	Min. port size	Weight [g]	
					X	Y									
ø4	1/8	KQ2T04-G01□1	12	8.2	7.7	10	10	14.8	16.8	15.4	13.3	6	4.1	3	7
	1/4	KQ2T04-G02□1	17	8.2	7.7	10	10	14.8	20.3	17.9	13.3	6	4.1	3	17.4
ø6	1/8	KQ2T06-G01□1	12	10.4	9.7	12	10	15.5	17.9	17.6	13.3	13.9	11	4.5	7.6
	1/4	KQ2T06-G02□1	17	10.4	9.7	12	10	15.5	21.4	20.1	13.3	13.9	11	4.5	18.1
	3/8	KQ2T06-G03□1	21	10.4	9.7	12	10	15.5	22.4	20.1	13.3	13.9	11	4.5	29.8

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



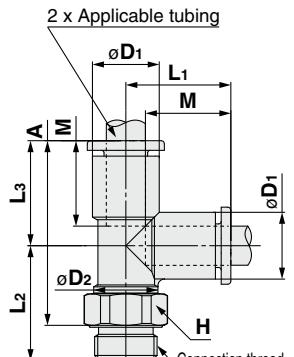
Dimensions

Male Run Tee: KQ2Y (Face seal)

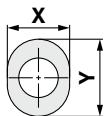


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	ϕD_1	Release button dimensions			ϕD_2	L1	L2	L3	A	M	Effective area [mm²] Nylon Urethane	Min. port size	Weight [g]
					X	Y	ϕD_1									
$\phi 4$	1/8	KQ2Y04-G01□1	12	8.2	7.7	10	10	15.3	16.8	15.3	26.6	13.3	6.4	4.4	3	7
	1/4	KQ2Y04-G02□1	17	8.2	7.7	10	10	15.3	20.3	15.3	29.1	13.3	6.4	4.4	3	17.5
$\phi 6$	1/8	KQ2Y06-G01□1	12	10.4	9.7	12	10	16.3	17.9	16.3	28.7	13.3	13.4	10.6	4.5	7.7
	1/4	KQ2Y06-G02□1	17	10.4	9.7	12	10	16.3	21.4	16.3	31.2	13.3	13.4	10.6	4.5	18.2
	3/8	KQ2Y06-G03□1	21	10.4	9.7	12	10	16.3	22.4	16.3	31.2	13.3	13.4	10.6	4.5	29.9

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

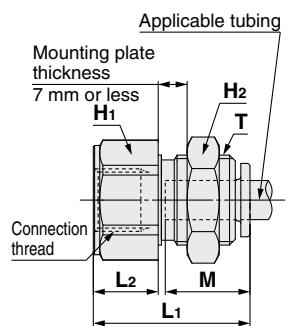


Bulkhead Connector: KQ2E

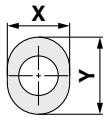


Applicable tubing O.D. [mm]	Connection thread G	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Release button dimensions			Mounting hole	M	Effective area [mm²] Nylon Urethane	Min. port size	Weight [g]
								X	Y	ϕD_1					
$\phi 4$	1/8	KQ2E04-G01□1	M12 x 1	14	14	25.1	10.7	7.7	10	13	13.3	5.6	4	3	21.3
	1/4	KQ2E04-G02□1	M12 x 1	17	14	30.7	16.3	7.7	10	13	13.3	5.6	4	3	31.5
$\phi 6$	1/8	KQ2E06-G01□1	M14 x 1	17	17	24.5	10.1	9.7	12	15	13.3	13.1	10.4	4.5	29.8
	1/4	KQ2E06-G02□1	M14 x 1	17	17	30	15.6	9.7	12	15	13.3	13.1	10.4	4.5	32.8
	3/8	KQ2E06-G03□1	M14 x 1	21	17	32	17.6	9.7	12	15	13.3	13.1	10.4	4.5	45.5

□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



Oval Type

□

Sealant/Gasket Seal
Metric Size M, R, Rc
Inch Size UNF, NPT
Inch Size M, R, Rc

Inch Size M, R, Rc
Metric Size G

Face Seal
Metric Size NPT
Inch Size R, Rc

Gasket Seal
Metric Size Uni
Inch Size R

Inch Size Uni
Inch Size R, Rc

KQ2 Series Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

1 Spare Parts

KQ2-A Series

Description	Part no.	Applicable model	Material	Surface treatment
Pipe nut	KQ04-P01A	KQ2E04-G01A1, KQ2E04-G02A1	Steel	Zinc chromated
	KQ06-P01A	KQ2E06-G01A1, KQ2E06-G02A1, KQ2E06-G03A1		

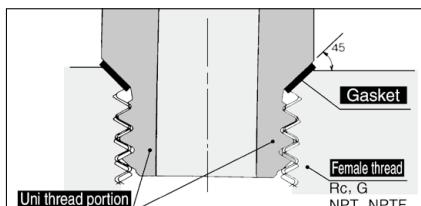
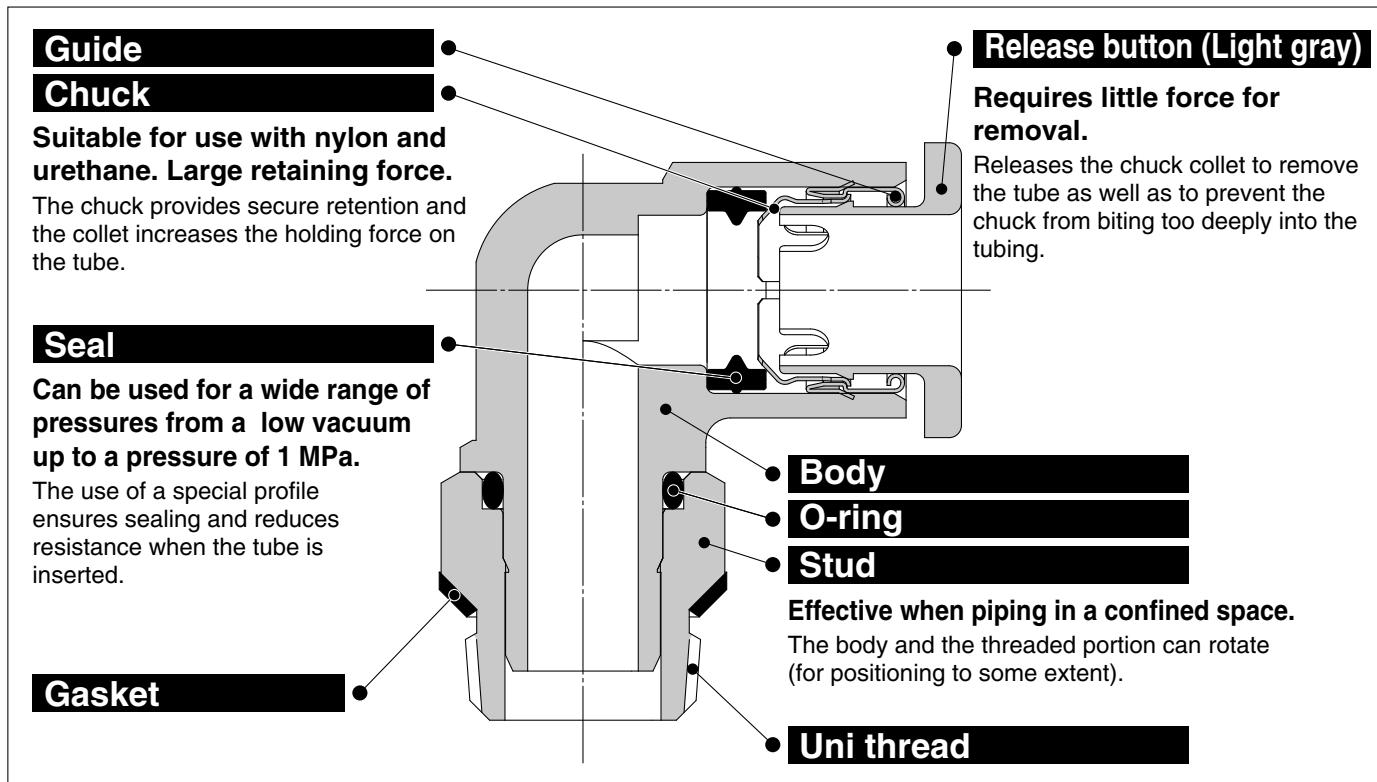
KQ2-N Series

Description	Part no.	Applicable model	Material	Surface treatment
Pipe nut	KQ04-P01N	KQ2E04-G01N1, KQ2E04-G02N1	Steel	Nickel plating
	KQ06-P01N	KQ2E06-G01N1, KQ2E06-G02N1, KQ2E06-G03N1		

Oval Type Metric Size Uni One-touch Fittings

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

KQ2 Series



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.

Drastically cuts piping work-hours with the gasket seal method.



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	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)

*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
Stud	C3604 (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 93 for details.)

How to Order**Threaded Type****KQ2 H 06 - U01 A 1**

One-touch fittings

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
L	Male elbow
K	45° male elbow
V	Universal male elbow
T	Male branch tee
W	Extended male elbow
Y	Male run tee

Applicable tubing O.D.

Symbol	Size
04	ø4
06	ø6

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

Oval type release button

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
A	Brass
N	Brass + Electroless nickel plating

Port size

Symbol	Size
Thread connection	U01 Uni1/8
	U02 Uni1/4
	U03 Uni3/8

Spare Parts**How to Order Gasket****KQG - U01**Gasket for Uni
One-touch fittings

Applicable port size

Symbol	Size
U01	Uni1/8
U02	Uni1/4
U03	Uni3/8



Metric Size M, R, Rc
Inch Size UNF, NPT

Sealant/Gasket Seal
Inch Size M, R, Rc

Metric Size G
Inch Size M, R, Rc

Face Seal
Metric Size NPT

Inch Size R
Metric Size R, Rc

Gasket Seal
Metric Size Uni

Inch Size R
Metric Size Uni

Inch Size Uni
Metric Size Uni

Inch Size Uni
Metric Size Uni

Metric Size Uni One-touch Fittings

O Oval Type Variations

Hexagon socket head male connector

KQ2S

P.90



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.

Universal male elbow

KQ2V



P.91

Hexagon head of the body allows tightening with a box wrench in confined spaces.

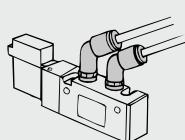
45° male elbow

KQ2K

P.91



Use to pipe a female thread at a 45° angle. Its direction is in-between that of the male connector and male elbow.



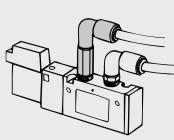
Extended male elbow

KQ2W



P.91

Basically, it is used together with a male elbow. Its extended height allows for multi-leveled piping and prevents interference among fittings.



Male connector

KQ2H

P.90



Use to pipe a female thread in the same direction. Most general model.

Male run tee

KQ2Y

P.92



Use to branch a female thread in the same direction and at a 90° angle.

Male elbow

KQ2L

P.90



Use to pipe a female thread at right angles. Most general model.

Male branch tee

KQ2T

P.92



Use to branch a female thread at both 90° angles.

Tubing → | → One-touch fittings
Plug-in reducer/Plug-in elbow etc.

Tubing → | → | → | → Tubing
Union elbow/Union tee/Straight union etc.

Accessory
Nipple/Plug etc.

Refer to page 7 and after for details.

This model does not support oval type release buttons. Refer to the round type (from page 201).

Branch "Y"

KQ2U

P.206



⚠ Box wrenches and socket wrenches may interfere with oval type release buttons. Refer to page 217 for details.

Dimensions

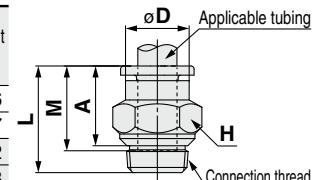
Male Connector: KQ2H (Gasket seal)



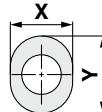
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	ϕD	Release button dimensions		L	A ^{*1}	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
$\phi 4$	1/8	KQ2H04-U01□1	10	—	7.7	10	15.9	11.1	13.3	4.8	3.4	3	6.6
	1/4	KQ2H04-U02□1	14	—	7.7	10	15.3	8.9	13.3	4.8	3.4	3	12.7
$\phi 6$	1/8	KQ2H06-U01□1	12	9.9	9.7	12	16.7	11.9	13.3	13.1	10.4	4.5	6.2
	1/4	KQ2H06-U02□1	14	—	9.7	12	17	10.6	13.3	13.1	10.4	4.5	12.8
	3/8	KQ2H06-U03□1	17	—	9.7	12	14.9	8.5	13.3	13.1	10.4	4.5	18.1

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread



Release button dimensions



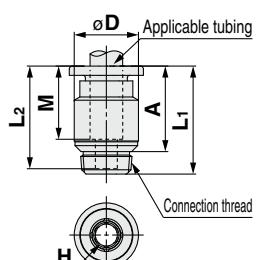
Hexagon Socket Head Male Connector: KQ2S (Gasket seal)



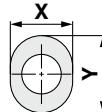
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	ϕD	Release button dimensions		L1	L2	A ^{*1}	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
$\phi 4$	1/8	KQ2S04-U01□1	3	10	7.7	10	20.6	19.6	15.8	13.3	4.1	3.6	3.1	8
	1/8	KQ2S06-U01□1	4	12	9.7	12	19.8	18.8	15	13.3	10	9.9	4.1	8.2
$\phi 6$	1/4	KQ2S06-U02□1	4	14	9.7	12	19.8	18.8	13.4	13.3	10.7	10	4.1	12.3

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread



Release button dimensions



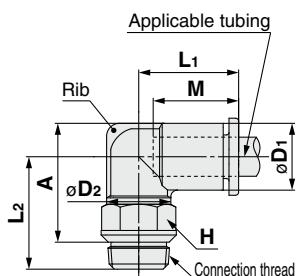
Male Elbow: KQ2L (Gasket seal)



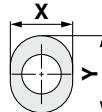
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	ϕD_1	Release button dimensions		ϕD_2	L1	L2	A ^{*1}	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
$\phi 4$	1/8	KQ2L04-U01□1	10	8.2	7.7	10	10	14.8	16.4	15.7	13.3	4.6	3.3	3	4.8 ●
	1/4	KQ2L04-U02□1	14	8.2	7.7	10	10	14.8	19.2	16.9	13.3	4.6	3.3	3	11.5 ●
$\phi 6$	1/8	KQ2L06-U01□1	10	10.4	9.7	12	10	15.5	17.5	17.9	13.3	11.4	9	4.5	5.3 —
	1/4	KQ2L06-U02□1	14	10.4	9.7	12	10	15.5	20.3	19.1	13.3	11.4	9	4.5	12 —
	3/8	KQ2L06-U03□1	17	10.4	9.7	12	10	15.5	21.4	20.2	13.3	11.4	9	4.5	21.4 —

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread



Release button dimensions



Oval Type

Sealant/Gasket Seal

Inch Size M, R, Rc

Metric Size G

Inch Size R, Rc

Metric Size R, Rc

Inch Size NPT

Face Seal

Metric Size R, Rc

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size R

Metric Size Uni

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size R

KQ2 Series

Oval Type

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

Dimensions

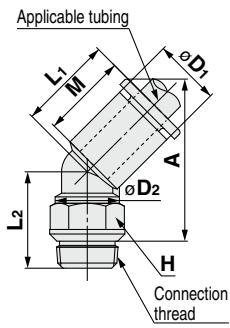
45° Male Elbow: KQ2K (Gasket seal)



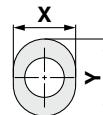
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	ϕD_1	Release button dimensions		ϕD_2	L1	L2	A ^{*1}	M	Effective area [mm ²] Nylon Urethane	Min. port size	Weight [g]	
					X	Y									
$\phi 4$	1/8	KQ2K04-U01□1	10	8.2	7.7	10	10	14.4	12.9	20.8	13.3	4.8	3.4	4.5	4.7
	1/4	KQ2K04-U02□1	14	8.2	7.7	10	10	14.4	14.7	21	13.3	4.8	3.4	4.5	11.3
$\phi 6$	1/8	KQ2K06-U01□1	10	10.4	9.7	12	10	14.7	15	23.8	13.3	8.7	6.9	4.5	5.1
	1/4	KQ2K06-U02□1	14	10.4	9.7	12	10	14.7	16.8	24	13.3	8.7	6.9	4.5	11.7
	3/8	KQ2K06-U03□1	17	10.4	9.7	12	10	14.7	17.9	25.1	13.3	8.7	6.9	4.5	21.2

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread



Release button dimensions



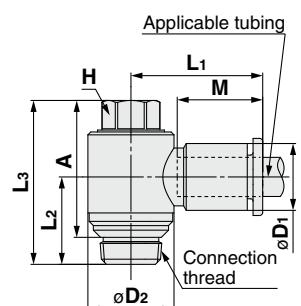
Universal Male Elbow: KQ2V (Gasket seal)



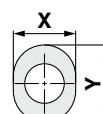
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	ϕD_1	Release button dimensions		ϕD_2	L1	L2	L3	A ^{*1}	M	Effective area [mm ²] Nylon Urethane	Min. port size	Weight [g]	
					X	Y										
$\phi 4$	1/8	KQ2V04-U01□1	8	8.2	7.7	10	13.4	19.3	13.6	25.5	20.7	13.3	2.9	2.9	4.5	13.5
	1/8	KQ2V06-U01□1	8	10.4	9.7	12	13.4	20.5	13.6	25.5	20.7	13.3	7.5	5.9	4.5	13.9
$\phi 6$	1/4	KQ2V06-U02□1	10	10.4	9.7	12	15.3	19.9	15.4	28	21.6	13.3	7.5	5.9	4.5	21.8

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread



Release button dimensions



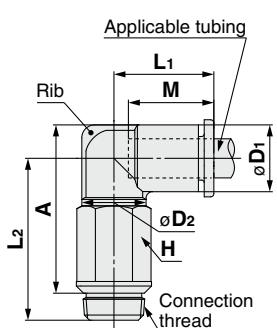
Extended Male Elbow: KQ2W (Gasket seal)



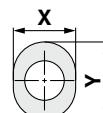
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	ϕD_1	Release button dimensions		ϕD_2	L1	L2	A ^{*1}	M	Effective area [mm ²] Nylon Urethane	Min. port size	Weight [g]	With a rib	
					X	Y										
$\phi 4$	1/8	KQ2W04-U01□1	10	8.2	7.7	10	10	14.8	24.1	23.4	13.3	4	4	3	8.3	●
	1/4	KQ2W04-U02□1	14	8.2	7.7	10	10	14.8	30.1	27.8	13.3	4	4	3	23.9	●
$\phi 6$	1/8	KQ2W06-U01□1	10	10.4	9.7	12	10	15.5	31.2	31.6	13.3	10.9	8.6	4.5	11.5	—
	1/4	KQ2W06-U02□1	14	10.4	9.7	12	10	15.5	31.2	30	13.3	10.9	8.6	4.5	24.3	—
	3/8	KQ2W06-U03□1	17	10.4	9.7	12	10	15.5	32.3	31.1	13.3	10.9	8.6	4.5	41	—

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread



Release button dimensions



Dimensions

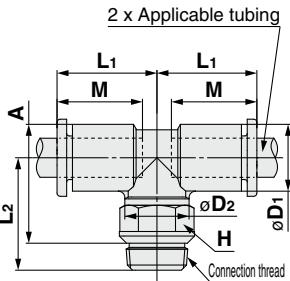
Male Branch Tee: KQ2T (Gasket seal)



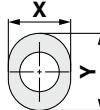
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	ϕD_1	Release button dimensions		ϕD_2	L1	L2	A ^{*1}	M	Effective area [mm ²] Nylon Urethane	Min. port size	Weight [g]	
					X	Y									
$\phi 4$	1/8	KQ2T04-U01□1	10	8.2	7.7	10	10	14.8	16.4	15.7	13.3	6	4.1	3	5.5
	1/4	KQ2T04-U02□1	14	8.2	7.7	10	10	14.8	19.2	16.9	13.3	6	4.1	3	12.2
$\phi 6$	1/8	KQ2T06-U01□1	10	10.4	9.7	12	10	15.5	17.5	17.9	13.3	13.9	11	4.5	6.2
	1/4	KQ2T06-U02□1	14	10.4	9.7	12	10	15.5	20.3	19.1	13.3	13.9	11	4.5	12.9
	3/8	KQ2T06-U03□1	17	10.4	9.7	12	10	15.5	21.4	20.2	13.3	13.9	11	4.5	22.3

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread



Release button dimensions



Oval Type

□: Sealant/Gasket Seal

□: Metric Size M, R, Rc

□: Inch Size UNF, NPT

□: Inch Size UN, NPT

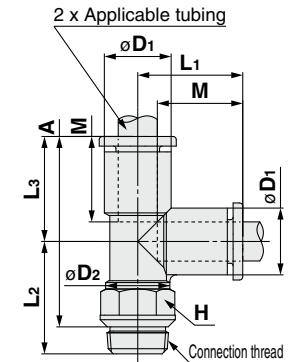
Male Run Tee: KQ2Y (Gasket seal)



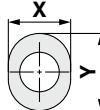
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	ϕD_1	Release button dimensions		ϕD_2	L1	L2	L3	A ^{*1}	M	Effective area [mm ²] Nylon Urethane	Min. port size	Weight [g]	
					X	Y										
$\phi 4$	1/8	KQ2Y04-U01□1	10	8.2	7.7	10	10	15.3	16.4	15.3	26.9	13.3	6.4	4	3	5.6
	1/4	KQ2Y04-U02□1	14	8.2	7.7	10	10	15.3	19.2	15.3	28.1	13.3	6.4	4	3	12.2
$\phi 6$	1/8	KQ2Y06-U01□1	10	10.4	9.7	12	10	16.3	17.5	16.3	29	13.3	13.4	10.6	4.5	6.3
	1/4	KQ2Y06-U02□1	14	10.4	9.7	12	10	16.3	20.3	16.3	30.2	13.3	13.4	10.6	4.5	13
	3/8	KQ2Y06-U03□1	17	10.4	9.7	12	10	16.3	21.4	16.3	31.3	13.3	13.4	10.6	4.5	22.5

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread



Release button dimensions



□: Face Seal

□: Metric Size NPT

□: Inch Size R, Rc

□: Metric Size G

□: Inch Size R

□: Metric Size Uni

□: Inch Size R

□: Gasket Seal

□: Metric Size Uni

□: Inch Size R

KQ2 Series Made to Order/Clean Series/Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

1 Made to Order

Symbol	Specifications
X12	Lubricant: White vaseline Release button color: White
X35 ^{*1}	Body color: Black Release button color: Light gray
X41	With fixed orifice ^{*2}

*1 The following models are not available as made-to-order: Hexagon socket head male connector/KQ2S, Male connector/KQ2H

*2 Please contact SMC for availability.

The following made-to-order products will be provided based on previous models (KQ2 series). Please contact SMC separately.

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 plating)
X39	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)

2 Clean Series

Please consult with SMC separately for applicable models.

Symbol	Specifications
10-	Brass parts: With electroless nickel plating Lubricant: Fluorine grease Air blow in a clean room Double packaging Resin body, Release button color: White

Example) 10-KQ2H06-U01N1

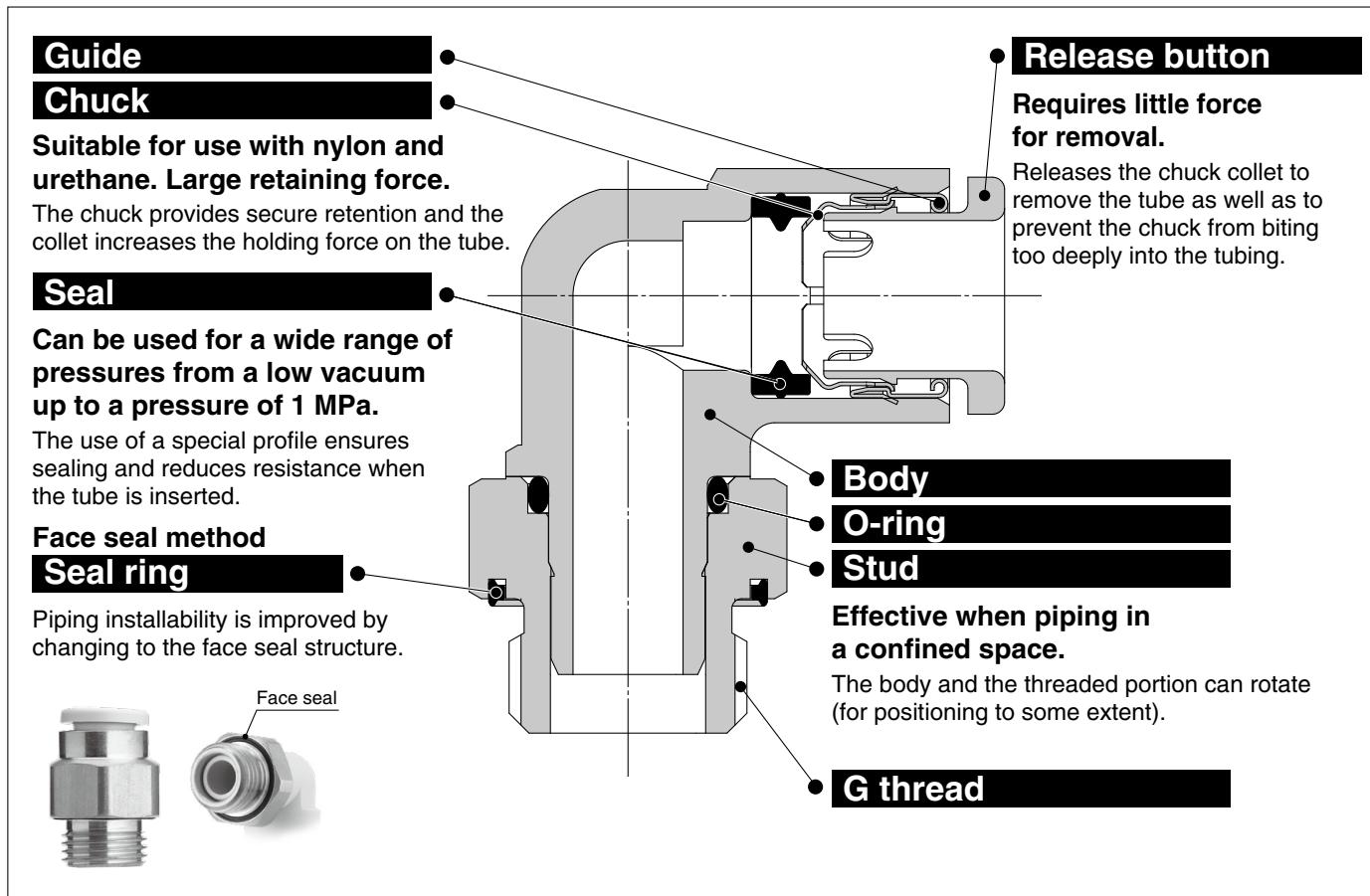
3 Spare Parts

Description	Part no.	Applicable thread
Gasket	KQG-U01	Uni1/8
	KQG-U02	Uni1/4
	KQG-U03	Uni3/8

Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: G

KQ2 Series



Applicable to parallel pipe thread (G).

Drastically reduces screw-in time with the face seal method.



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø4, ø6, ø8, ø10, ø12, ø16

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	ISO 16030 (Parallel pipe thread)
Nut section	JIS B0205 (Metric fine thread)
Seal on the threads	Seal ring

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

How to Order**Threaded Type****KQ2 H 06 - G01 A**

One-touch fittings

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
F	Female connector
L	Male elbow
V	Universal male elbow
W	Extended male elbow
T	Male branch tee
Y	Male run tee
E	Bulkhead connector

• Thread material/Surface treatment

Symbol	Thread material/Surface treatment
A	Brass
N	Brass + Electroless nickel plating

• Port size

Symbol	Size
Thread connection	G01 G1/8
	G02 G1/4
	G03 G3/8
	G04 G1/2

• Applicable tubing O.D.

Symbol	Size
04	ø4
06	ø6
08	ø8
10	ø10
12	ø12
16	ø16

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

Round Type
OMetric Size M, R, Rc
Inch Size UNF, NPTSealant/Gasket Seal
Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc
Inch Size RFace Seal
Inch Size NPTGasket Seal
Metric Size Uni
Inch Size RInch Size Uni
Metric Size Uni
Inch Size R

Metric Size One-touch Fittings

Round Type Variations

Hexagon socket head male connector

KQ2S

P.168



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.

Universal male elbow

KQ2V

P.169



Hexagon head of the body allows tightening with a box wrench in confined spaces.

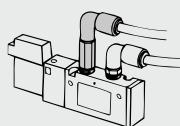
Extended male elbow

KQ2W

P.170



Basically, it is used together with a male elbow. Its extended height allows for multi-leveled piping and prevents interference among fittings.



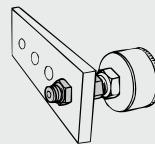
Bulkhead connector

KQ2E

P.171



Use to connect a male thread and tubing through a panel, etc.



Male connector

KQ2H

P.168



Use to pipe a female thread in the same direction. Most general model.

Male elbow

KQ2L

P.169



Use to pipe a female thread at right angles. Most general model.

Male run tee

KQ2Y

P.171



Use to branch a female thread in the same direction and at a 90° angle.

Female connector

KQ2F

P.168



Use to pipe a male thread of a pressure gauge, etc.

Male branch tee

KQ2T

P.170



Use to branch a female thread at both 90° angles.

Tubing One-touch fittings
Plug-in reducer/Plug-in elbow etc.

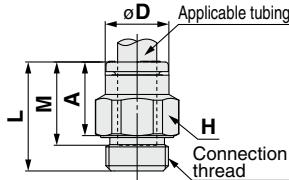
Tubing Union elbow/Union tee/Straight union etc.

Accessory
Nipple/Plug etc.

Refer to page 103 and after for details.

Dimensions
Male Connector: KQ2H (Face seal)

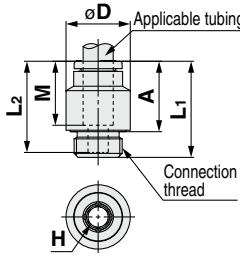

Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD	L	A	M	Effective area [mm²]		Min. port size	Weight [g]
								Nylon	Urethane		
ø4	1/8	KQ2H04-G01□	12	7.7	17.1	11.6	13.3	4.8	3.4	3	7.7
	1/4	KQ2H04-G02□	17	7.7	15.4	8.9	13.3	4.8	3.4	3	16.8
ø6	1/8	KQ2H06-G01□	12	9.7	17.3	11.8	13.3	13.1	10.4	4.5	6.6
	1/4	KQ2H06-G02□	17	9.7	15.4	8.9	13.3	13.1	10.4	4.5	14.8
ø8	1/8	KQ2H08-G01□	14	13	21.4	15.9	14.2	26.1	18	6	7.5
	1/4	KQ2H08-G02□	17	13	19.9	13.4	14.2	26.1	18	6	15.5
ø10	1/8	KQ2H10-G01□	17	15.6	23.2	17.7	15.6	26.1	26.1	6	15.7
	1/4	KQ2H10-G02□	17	15.6	22.8	16.3	15.6	41.5	29.5	7.5	16.8
ø12	1/8	KQ2H12-G03□	21	15.6	21.8	14.3	15.6	41.5	29.5	7.5	26.1
	1/4	KQ2H12-G04□	27	15.6	17.9	8.9	15.6	41.5	29.5	7.5	39.9
ø16	1/8	KQ2H16-G03□	27	18.2	25.3	18.8	17	58.3	46.1	9	15.1
	1/4	KQ2H16-G04□	27	18.2	23.6	16.1	17	58.3	46.1	9	25.6



□: A (Brass), N (Brass + Electroless nickel plating)

Hexagon Socket Head Male Connector: KQ2S (Face seal)

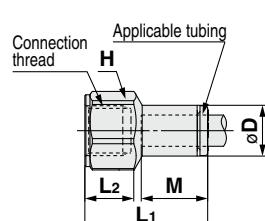

Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD	L1	L2	A	M	Effective area [mm²]		Min. port size	Weight [g]
									Nylon	Urethane		
ø4	1/8	KQ2S04-G01□	3	13	20.6	19.6	15.1	13.3	4.1	3.6	3.1	11.6
	1/4	KQ2S06-G01□	4	13	19.8	18.8	14.3	13.3	10	9.9	4.1	9.7
ø6	1/8	KQ2S06-G02□	4	18	19.8	18.8	13.3	13.3	10.7	10	4.1	18
	1/4	KQ2S08-G01□	5	13	21.7	19.7	16.2	14.2	17.2	16.2	5.1	9.5
ø8	1/4	KQ2S08-G02□	6	18	20.5	19.5	14	14.2	23.3	16.2	6.1	17.2
	3/8	KQ2S08-G03□	6	22	20.7	19.7	13.2	14.2	23.3	16.2	6.1	27.1
ø10	1/8	KQ2S10-G01□	5	15.6	23	21.1	17.5	15.6	17.2	16.2	5.1	10.9
	1/4	KQ2S10-G02□	8	18	24.1	20.1	17.6	15.6	39	26.6	8.1	19.2
ø12	1/8	KQ2S10-G03□	8	22	21.4	20.1	13.9	15.6	39	26.6	8.1	25
	1/4	KQ2S10-G04□	8	26	21.1	20.1	12.1	15.6	39	26.6	8.1	34.1
ø16	1/4	KQ2S12-G02□	8	18.2	25.6	21.5	19.1	17	46	44.5	8.1	18.3
	3/8	KQ2S12-G03□	10	22	23.8	21.8	16.3	17	60	44.5	10.1	25.7



□: A (Brass), N (Brass + Electroless nickel plating)

Female Connector: KQ2F


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD	L1	L2	M	Effective area [mm²]		Min. port size	Weight [g]
								Nylon	Urethane		
ø4	1/8	KQ2F04-G01□	14	7.9	24.7	9.5	13.3	5.6	4	3	12.4
	1/4	KQ2F04-G02□	17	7.9	30.1	13.9	13.3	5.6	4	3	21.3
ø6	1/8	KQ2F06-G01□	14	9.9	24.3	9.5	13.3	13.1	10.4	4.5	12.6
	1/4	KQ2F06-G02□	17	9.9	29.6	13.9	13.3	13.1	10.4	4.5	21.4
ø8	1/8	KQ2F08-G03□	21	9.9	31.1	13.7	13.3	13.1	10.4	4.5	29.6
	1/4	KQ2F08-G01□	14	13	24.7	9.5	14.2	26.1	18	6	15.1
ø10	1/4	KQ2F10-G02□	17	15.6	31.1	13.9	15.6	41.5	29.5	7.5	24.1
	3/8	KQ2F10-G03□	21	15.6	32.6	13.7	15.6	41.5	29.5	7.5	32.6
ø12	1/4	KQ2F12-G02□	19	18.2	32	13.8	17	58.3	46.1	9	33
	3/8	KQ2F12-G03□	21	18.2	33.5	13.7	17	58.3	46.1	9	34.1
ø16	1/2	KQ2F16-G04□	27	23.6	38.6	16.9	17	58.3	46.1	9	64.9



□: A (Brass), N (Brass + Electroless nickel plating)

 Round Type
O

 Sealant/Gasket Seal
Inch Size M, R, Rc

 Metric Size G
Face Seal

 Face Seal
Inch Size NPT
Inch Size R, Rc

 Gasket Seal
Metric Size Uni
Inch Size Uni
Inch Size R

KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: G

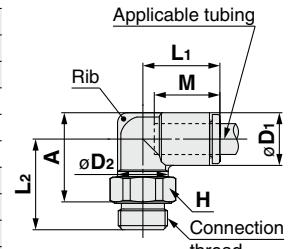
Dimensions

Male Elbow: KQ2L (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD1	øD2	L1	L2	A	M	Effective area [mm²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
ø4	1/8	KQ2L04-G01□	12	8.2	10	14.8	16.8	15.4	13.3	4.6	3.3	3	6.3	●
	1/4	KQ2L04-G02□	17	8.2	10	14.8	20.3	17.9	13.3	4.6	3.3	3	16.7	●
ø6	1/8	KQ2L06-G01□	12	10.4	10	15.5	17.9	17.6	13.3	11.4	9	4.5	6.7	—
	1/4	KQ2L06-G02□	17	10.4	10	15.5	21.4	20.1	13.3	11.4	9	4.5	17.2	—
ø8	3/8	KQ2L08-G03□	21	10.4	10	15.5	22.4	20.1	13.3	11.4	9	4.5	28.9	—
	1/8	KQ2L08-G01□	12	13.2	10	16.4	19.3	20.4	14.2	11.4	11.4	4.5	7.6	●
ø10	1/4	KQ2L08-G02□	17	13.2	12	17.2	22.8	22.9	14.2	21.6	14.9	6	15.9	●
	3/8	KQ2L08-G03□	21	13.2	12	17.2	23.8	22.9	14.2	21.6	14.9	6	27.9	●
ø10	1/8	KQ2L10-G01□	12	15.9	12	18.6	22.5	24.9	15.6	21.6	14.9	6	10.3	●
	1/4	KQ2L10-G02□	17	15.9	17	19.3	24.6	26.0	15.6	35.2	25	7.5	17.5	●
ø10	3/8	KQ2L10-G03□	21	15.9	17	19.3	27.7	28.1	15.6	35.2	25	7.5	22.6	●
	1/2	KQ2L10-G04□	27	15.9	17	19.3	29.2	28.1	15.6	35.2	25	7.5	42.5	●
ø12	1/4	KQ2L12-G02□	17	18.5	17	21.5	25.9	28.6	17	50.2	39.7	9	19.3	●
	3/8	KQ2L12-G03□	21	18.5	17	21.5	29.0	30.7	17	50.2	39.7	9	24.5	●
ø16	1/2	KQ2L16-G04□	27	18.5	17	21.5	30.5	30.7	17	50.2	39.7	9	44.4	●
	3/8	KQ2L16-G03□	21	23.8	21	27.1	33.1	37.5	20.6	71	58.9	11	35.2	—
	1/2	KQ2L16-G04□	27	23.8	21	27.1	33.8	36.7	20.6	100	58.9	13	58.7	—

□: A (Brass), N (Brass + Electroless nickel plating)

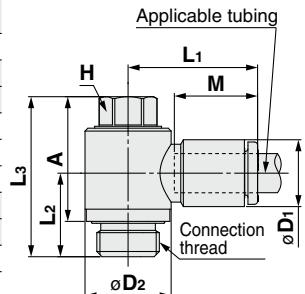


Universal Male Elbow: KQ2V (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD1	øD2	L1	L2	L3	A	M	Effective area [mm²]		Min. port size	Weight [g]
											Nylon	Urethane		
ø4	1/8	KQ2V04-G01□	8	8.2	13.4	19.3	13	24.9	19.4	13.3	2.9	2.9	3	12.9
	1/8	KQ2V06-G01□	8	10.4	13.4	20.5	13	24.9	19.4	13.3	7.5	5.9	4.5	13.2
ø6	1/4	KQ2V06-G02□	10	10.4	18	19.9	15	27.6	21.1	13.3	7.5	5.9	4.5	22.7
	1/8	KQ2V08-G01□	12	13.2	17.6	23.5	15	27.5	22	14.2	16	11.2	5	24.5
ø8	1/4	KQ2V08-G02□	12	13.2	18	23.5	15	27.5	28.1	21.6	14.2	16	11.2	6
	3/8	KQ2V08-G03□	14	13.2	22	23.1	17.3	33.1	25.6	14.2	16	11.2	7.5	42.1
ø10	1/4	KQ2V10-G02□	14	15.9	20.6	25.9	17.9	32.9	26.4	15.6	27	20.3	7.5	37.5
	3/8	KQ2V10-G03□	14	15.9	22	25.9	18.1	33.1	25.6	15.6	27	20.3	7.5	43.4
ø12	3/8	KQ2V12-G03□	17	18.5	25.2	28.5	20.5	36.7	29.2	17	39	30.8	9	60.5
	1/2	KQ2V12-G04□	17	18.5	26	28.5	21.1	37.3	28.3	17	39	30.8	9	71
ø16	3/8	KQ2V16-G03□	21	23.8	32.3	34.2	24.2	44.5	37	20.6	55	46	11	101.7
	1/2	KQ2V16-G04□	21	23.8	32.3	34.2	26.2	46.5	37.5	20.6	78	46	13	106.6

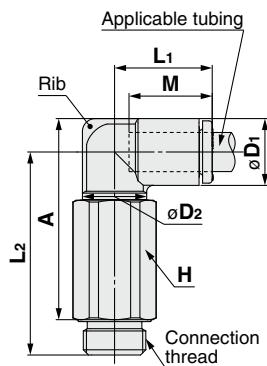
□: A (Brass), N (Brass + Electroless nickel plating)



Dimensions**Extended Male Elbow: KQ2W (Face seal)**

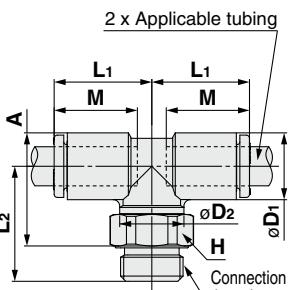
Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	Effective area [mm²]							Min. port size	Weight [g]	With a rib	
				øD1	øD2	L1	L2	A	M	Nylon	Urethane			
ø4	1/8	KQ2W04-G01□	12	8.2	10	14.8	30.5	29.1	13.3	4	4	3	16.5	●
	1/4	KQ2W04-G02□	17	8.2	10	14.8	31.2	28.8	13.3	4	4	3	35.8	●
ø6	1/8	KQ2W06-G01□	12	10.4	10	15.5	31.6	31.3	13.3	10.9	8.6	4.5	17	—
	1/4	KQ2W06-G02□	17	10.4	10	15.5	32.3	31	13.3	10.9	8.6	4.5	36.2	—
ø8	3/8	KQ2W08-G03□	21	10.4	10	15.5	33.3	31	13.3	10.9	8.6	4.5	59.4	—
	1/8	KQ2W08-G01□	12	13.2	10	16.4	33	34.1	14.2	10.9	10.9	4.5	17.8	●
ø10	1/4	KQ2W08-G02□	17	13.2	12	17.2	36.5	36.6	14.2	20.5	14.2	6	37.5	●
	3/8	KQ2W08-G03□	21	13.2	12	17.2	37.5	36.6	14.2	20.5	14.2	6	63.9	●
ø12	1/4	KQ2W10-G02□	17	15.9	17	19.3	48.8	50.3	15.6	33.5	23.8	7.5	45.1	●
	3/8	KQ2W10-G03□	21	15.9	17	19.3	46.6	47.1	15.6	33.5	23.8	7.5	62.6	●
ø16	1/2	KQ2W10-G04□	27	15.9	17	19.3	48.1	47.1	15.6	33.5	23.8	7.5	120.2	●
	1/4	KQ2W12-G02□	17	18.5	17	21.5	50.1	52.9	17	47.7	37.7	9	46.9	●
ø18	3/8	KQ2W12-G03□	21	18.5	17	21.5	47.9	49.7	17	47.7	37.7	9	64.5	●
	1/2	KQ2W12-G04□	27	18.5	17	21.5	49.4	49.7	17	47.7	37.7	9	122.1	●
ø22	3/8	KQ2W16-G03□	21	23.8	21	27.1	57.4	61.8	20.6	71	58.9	11	71.7	—
	1/2	KQ2W16-G04□	27	23.8	21	27.1	58.1	61	20.6	100	58.9	13	144.1	—

□: A (Brass), N (Brass + Electroless nickel plating)

Round Type
OSealant/Gasket Seal
Inch Size M, R, Rc
Metric Size M, R, NPTMetric Size G
Inch Size M, R, RcFace Seal
Metric Size NPT
Inch Size R, RcGasket Seal
Metric Size Uni
Inch Size Uni
Inch Size R
Inch Size Uni**Male Branch Tee: KQ2T (Face seal)**

Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	Effective area [mm²]							Min. port size	Weight [g]	
				øD1	øD2	L1	L2	A	M	Nylon	Urethane		
ø4	1/8	KQ2T04-G01□	12	8.2	10	14.8	16.8	15.4	13.3	6	4.1	3	7
	1/4	KQ2T04-G02□	17	8.2	10	14.8	20.3	17.9	13.3	6	4.1	3	17.4
ø6	1/8	KQ2T06-G01□	12	10.4	10	15.5	17.9	17.6	13.3	13.9	11	4.5	7.6
	1/4	KQ2T06-G02□	17	10.4	10	15.5	21.4	20.1	13.3	13.9	11	4.5	18.1
ø8	3/8	KQ2T06-G03□	21	10.4	10	15.5	22.4	20.1	13.3	13.9	11	4.5	29.8
	1/8	KQ2T08-G01□	12	13.2	10	16.4	19.3	20.4	14.2	14	14	4.5	9.4
ø10	1/4	KQ2T08-G02□	17	13.2	12	17.2	22.8	22.9	14.2	26.3	18.2	6	17.6
	3/8	KQ2T08-G03□	21	13.2	12	17.2	23.8	22.9	14.2	26.3	18.2	6	29.6
ø12	1/8	KQ2T10-G01□	12	15.9	12	18.6	22.4	24.9	15.6	21.6	14.9	6	13.1
	1/4	KQ2T10-G02□	17	15.9	17	19.3	24.5	26	15.6	35.2	25	7.5	20.1
ø16	3/8	KQ2T10-G03□	21	15.9	17	19.3	27.6	28.1	15.6	35.2	25	7.5	25.3
	1/2	KQ2T10-G04□	27	15.9	17	19.3	29.1	28.1	15.6	35.2	25	7.5	45.2
ø22	1/4	KQ2T12-G02□	17	18.5	17	21.5	25.8	28.6	17	57.2	45.2	9	23.1
	3/8	KQ2T12-G03□	21	18.5	17	21.5	28.9	30.7	17	57.2	45.2	9	28.4
ø28	1/2	KQ2T12-G04□	27	18.5	17	21.5	30.4	30.7	17	57.2	45.2	9	48.3
	3/8	KQ2T16-G03□	21	23.8	21	27.1	33.1	37.5	20.6	71	58.9	11	42.1
ø32	1/2	KQ2T16-G04□	27	23.8	21	27.1	33.8	36.7	20.6	100	58.9	13	65.7

□: A (Brass), N (Brass + Electroless nickel plating)

Gasket Seal
Inch Size M, R, Rc
Metric Size M, R, NPTMetric Size G
Inch Size M, R, RcFace Seal
Metric Size NPT
Inch Size R, Rc

KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: G

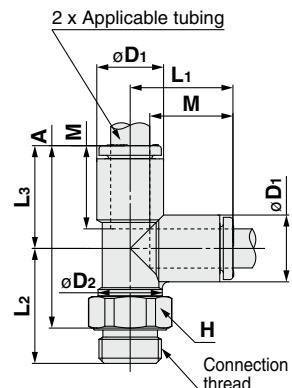
Dimensions

Male Run Tee: KQ2Y (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	Effective area [mm²]		Min. port size	Weight [g]							
				Nylon	Urethane									
ø4	1/8	KQ2Y04-G01□	12	8.2	10	15.3	16.8	15.3	26.6	13.3	6.4	4.4	3	7
	1/4	KQ2Y04-G02□	17	8.2	10	15.3	20.3	15.3	29.1	13.3	6.4	4.4	3	17.5
ø6	1/8	KQ2Y06-G01□	12	10.4	10	16.3	17.9	16.3	28.7	13.3	13.4	10.6	4.5	7.7
	1/4	KQ2Y06-G02□	17	10.4	10	16.3	21.4	16.3	31.2	13.3	13.4	10.6	4.5	18.2
ø8	3/8	KQ2Y08-G03□	21	10.4	10	16.3	22.4	16.3	31.2	13.3	13.4	10.6	4.5	29.9
	1/8	KQ2Y08-G01□	12	13.2	10	18.2	19.3	18.2	32	14.2	13.4	13.4	4.5	9.5
	1/4	KQ2Y08-G02□	17	13.2	12	18.2	22.8	18.2	34.5	14.2	25.6	17.7	6	17.7
ø10	3/8	KQ2Y08-G03□	21	13.2	12	18.2	23.8	18.2	34.5	14.2	25.6	17.7	6	29.7
	1/8	KQ2Y10-G01□	12	15.9	12	20.6	22.5	20.6	37.5	15.6	40	28.4	6	13.2
	1/4	KQ2Y10-G02□	17	15.9	17	20.6	24.6	20.6	38.6	15.6	40	28.4	7.5	20.3
	3/8	KQ2Y10-G03□	21	15.9	17	20.6	27.7	20.6	40.7	15.6	40	28.4	7.5	25.4
ø12	1/2	KQ2Y10-G04□	27	15.9	17	20.6	29.2	20.6	40.7	15.6	40	28.4	7.5	45.3
	1/4	KQ2Y12-G02□	17	18.5	17	23	25.9	23	42.3	17	57.4	45.4	9	23.4
	3/8	KQ2Y12-G03□	21	18.5	17	23	29	23	44.4	17	57.4	45.4	9	28.6
ø16	1/2	KQ2Y12-G04□	27	18.5	17	23	30.4	23	44.4	17	57.4	45.4	9	48.5
	3/8	KQ2Y16-G03□	21	23.8	21	28.6	33.1	28.6	54.2	20.6	81	60	11	42.7
	1/2	KQ2Y16-G04□	27	23.8	21	28.6	33.8	28.6	53.4	20.6	113	60	13	66.2

□: A (Brass), N (Brass + Electroless nickel plating)

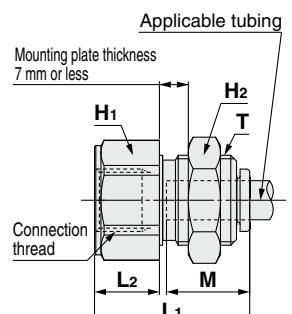


Bulkhead Connector: KQ2E



Applicable tubing O.D. [mm]	Connection thread G	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Mounting hole	M	Effective area [mm²]		Min. port size	Weight [g]
										Nylon	Urethane		
ø4	1/8	KQ2E04-G01□	M12 x 1	14	14	25.1	10.7	13	13.3	5.6	4	3	21.3
	1/4	KQ2E04-G02□	M12 x 1	17	14	30.7	16.3	13	13.3	5.6	4	3	31.5
ø6	1/8	KQ2E06-G01□	M14 x 1	17	17	24.5	10.1	15	13.3	13.1	10.4	4.5	29.8
	1/4	KQ2E06-G02□	M14 x 1	17	17	30	15.6	15	13.3	13.1	10.4	4.5	32.8
ø8	3/8	KQ2E06-G03□	M14 x 1	21	17	32	17.6	15	13.3	13.1	10.4	4.5	45.5
	1/8	KQ2E08-G01□	M16 x 1	17	19	24.7	7.3	17	14.2	26.1	18	6	30.9
	1/4	KQ2E08-G02□	M16 x 1	17	19	30	12.6	17	14.2	26.1	18	6	33.5
ø10	3/8	KQ2E08-G03□	M16 x 1	21	19	33.1	15.7	17	14.2	26.1	18	6	46.1
	1/4	KQ2E10-G02□	M20 x 1	22	24	31	11.6	21	15.6	41.5	29.5	7.5	66.7
	3/8	KQ2E10-G03□	M20 x 1	22	24	32.5	13.1	21	15.6	41.5	29.5	7.5	61.6
ø12	3/8	KQ2E12-G03□	M22 x 1	24	27	33.5	13.1	23	17	58.3	46.1	9	70.4
	1/2	KQ2E12-G04□	M22 x 1	27	27	39.9	19.5	23	17	58.3	46.1	9	94
ø16	3/8	KQ2E16-G03□	M28 x 1.5	30	32	35.9	13	29	20.6	96	67	13	127.6
	1/2	KQ2E16-G04□	M28 x 1.5	30	32	41	18.1	29	20.6	113	67	13	137.2

□: A (Brass), N (Brass + Electroless nickel plating)



KQ2 Series

Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

1 Spare Parts

KQ2-A Series

Description	Part no.	Applicable model	Material	Surface treatment
Pipe nut	KQ04-P01A	KQ2E04-G01A, KQ2E04-G02A	Steel	Zinc chromated
	KQ06-P01A	KQ2E06-G01A, KQ2E06-G02A, KQ2E06-G03A		
	KQ08-P01A	KQ2E08-G01A, KQ2E08-G02A, KQ2E08-G03A		
	KQ10-P01A	KQ2E10-G02A, KQ2E10-G03A		
	KQ12-P01A	KQ2E12-G03A, KQ2E12-G04A		
	KQ16-P01A	KQ2E16-G03A, KQ2E16-G04A		

KQ2-N Series

Description	Part no.	Applicable model	Material	Surface treatment
Pipe nut	KQ04-P01N	KQ2E04-G01N, KQ2E04-G02N	Steel	Nickel plating
	KQ06-P01N	KQ2E06-G01N, KQ2E06-G02N, KQ2E06-G03N		
	KQ08-P01N	KQ2E08-G01N, KQ2E08-G02N, KQ2E08-G03N		
	KQ10-P01N	KQ2E10-G02N, KQ2E10-G03N		
	KQ12-P01N	KQ2E12-G03N, KQ2E12-G04N		
	KQ16-P01N	KQ2E16-G03N, KQ2E16-G04N		



Metric Size M, R, Rc
Inch Size UNF, NPT

Sealant/Gasket Seal
Inch Size M, R, Rc

Inch Size G
Metric Size R, Rc

Metric Size R, Rc
Inch Size NPT

Face Seal
Gasket Seal

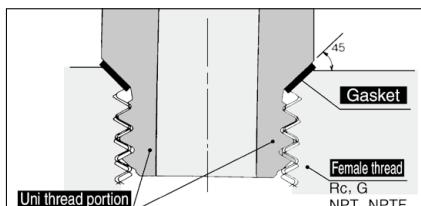
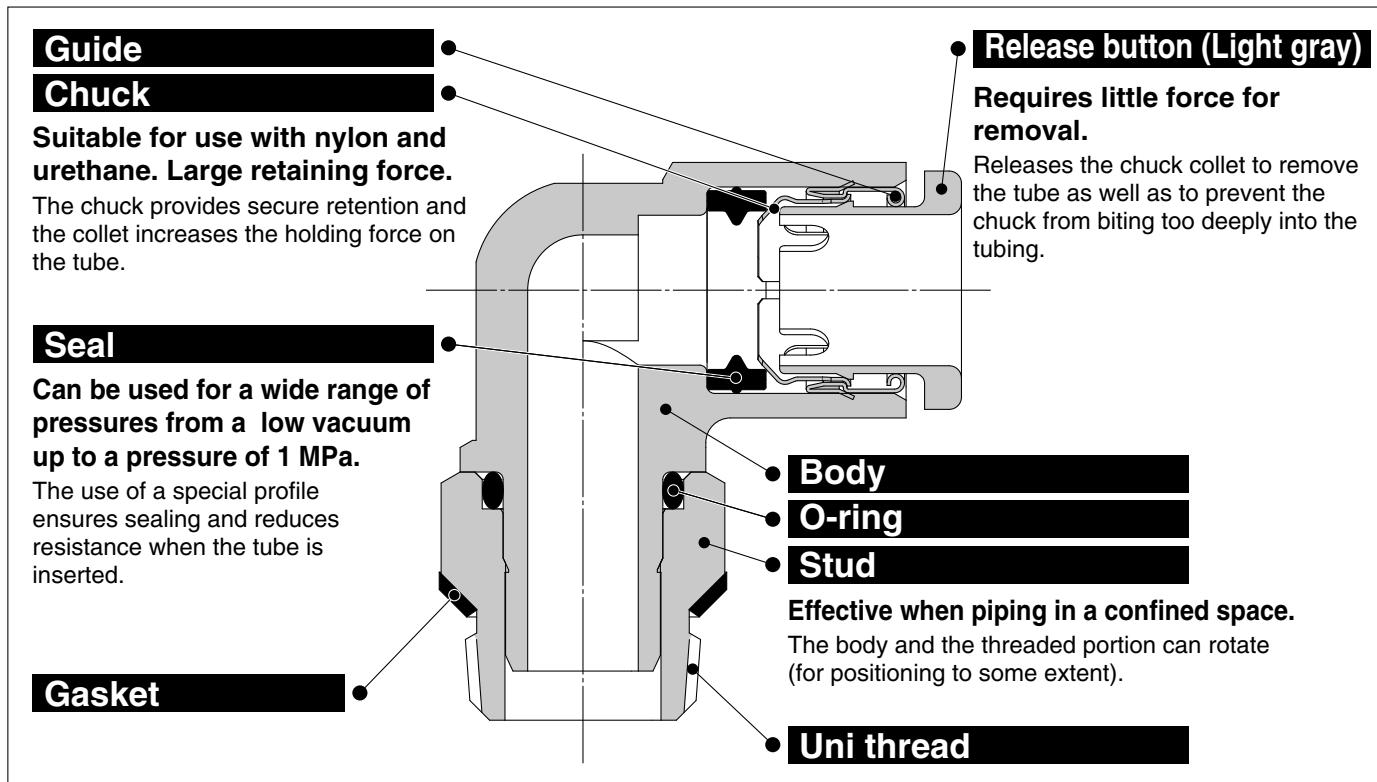
Metric Size Uni
Inch Size Uni

Inch Size R
Metric Size R, Rc

Metric Size Uni One-touch Fittings

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

KQ2 Series



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.

Drastically cuts piping work-hours with the gasket seal method.



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø4, ø6, ø8, ø10, ø12, ø16

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)

*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
Stud	C3604 (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 207 for details.)

How to Order**Threaded Type****KQ2 H 06 - U01 A**

One-touch fittings

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
L	Male elbow
K	45° male elbow
V	Universal male elbow
T	Male branch tee
W	Extended male elbow
Y	Male run tee
U	Branch "Y"

Applicable tubing O.D.

Symbol	Size
04	ø4
06	ø6
08	ø8
10	ø10
12	ø12
16	ø16

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

Thread material/Surface treatment

Symbol	Thread material/Surface treatment
A	Brass
N	Brass + Electroless nickel plating

Port size

Symbol	Size
U01	Uni1/8
U02	Uni1/4
U03	Uni3/8
U04	Uni1/2

Spare Parts**How to Order Gasket****KQG - U01**Gasket for Uni
One-touch fittings

Applicable port size

Symbol	Size
U01	Uni1/8
U02	Uni1/4
U03	Uni3/8
U04	Uni1/2



Sealant/Gasket Seal	Metric Size M, R, Rc
Inch Size UNF, NPT	Inch Size UNF, NPT

Face Seal	Metric Size G
Inch Size M, R, Rc	Inch Size M, R, Rc

Gasket Seal	Metric Size R, Rc
Inch Size R	Inch Size R

Face Seal	Metric Size NPT
Inch Size R	Inch Size R

Gasket Seal	Metric Size Uni
Inch Size Uni	Inch Size Uni

Face Seal	Metric Size Uni
Inch Size Uni	Inch Size Uni

Metric Size Uni One-touch Fittings

Round Type Variations

Hexagon socket head male connector

KQ2S

P.204



Internal hexagon socket allows tightening with a hexagon wrench in confined spaces.

Universal male elbow

KQ2V



P.205

Hexagon head of the body allows tightening with a box wrench in confined spaces.

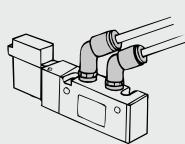
45° male elbow

KQ2K

P.205



Use to pipe a female thread at a 45° angle. Its direction is in-between that of the male connector and male elbow.



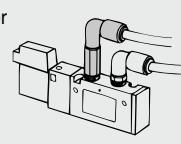
Extended male elbow

KQ2W



P.205

Basically, it is used together with a male elbow. Its extended height allows for multi-leveled piping and prevents interference among fittings.



Male connector

KQ2H

P.204



Use to pipe a female thread in the same direction. Most general model.

Male elbow

KQ2L



P.204

Use to pipe a female thread at right angles. Most general model.

Branch "Y"

KQ2U

P.206



Use to branch a female thread in the same direction.

Male run tee

KQ2Y



P.206

Use to branch a female thread in the same direction and at a 90° angle.

Male branch tee

KQ2T



P.206

Use to branch a female thread at both 90° angles.

Tubing One-touch fittings
Plug-in reducer/Plug-in elbow etc.

Tubing Tubing
Union elbow/Union tee/Straight union etc.

Accessory
Nipple/Plug etc.

Refer to page 103 and after for details.

Dimensions

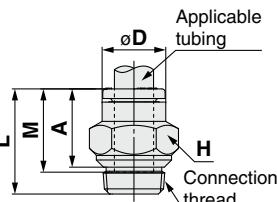
Male Connector: KQ2H (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	øD	L	A ^{*1}	M	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
ø4	1/8	KQ2H04-U01□	10	7.7	15.9	11.1	13.3	4.8	3.4	3	6.6
	1/4	KQ2H04-U02□	14	7.7	15.3	8.9	13.3	4.8	3.4	3	12.7
ø6	1/8	KQ2H06-U01□	12	9.7	16.7	11.9	13.3	13.1	10.4	4.5	6.2
	1/4	KQ2H06-U02□	14	9.7	17	10.6	13.3	13.1	10.4	4.5	12.8
	3/8	KQ2H06-U03□	17	9.7	14.9	8.5	13.3	13.1	10.4	4.5	18.1
ø8	1/8	KQ2H08-U01□	14	13	20.6	15.8	14.2	26.1	18	6	7
	1/4	KQ2H08-U02□	14	13	18.5	12.1	14.2	26.1	18	6	10.1
	3/8	KQ2H08-U03□	17	13	14.9	8.5	14.2	26.1	18	6	15
ø10	1/8	KQ2H10-U01□	17	15.6	22.4	17.6	15.6	26.1	18	6	13.9
	1/4	KQ2H10-U02□	17	15.6	23.7	17.3	15.6	41.5	29.5	7.5	17.6
	3/8	KQ2H10-U03□	17	15.6	19.5	13.1	15.6	41.5	29.5	7.5	15.6
	1/2	KQ2H10-U04□	22	15.6	17	8.4	15.6	41.5	29.5	7.5	29.5
ø12	1/4	KQ2H12-U02□	19	18.2	24.8	18.4	17	58.3	46.1	9	13.8
	3/8	KQ2H12-U03□	19	18.2	21.8	15.4	17	58.3	46.1	9	17.9
	1/2	KQ2H12-U04□	22	18.2	17.7	9.1	17	58.3	46.1	9	25.4
ø16	3/8	KQ2H16-U03□	24	23.6	29.2	22.8	20.6	81	67	11	33.9
	1/2	KQ2H16-U04□	24	23.6	26.8	18.2	20.6	113	67	13	31.5

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread



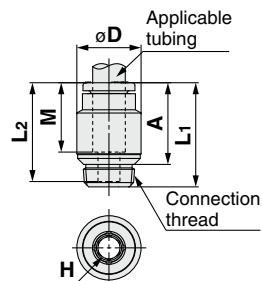
Hexagon Socket Head Male Connector: KQ2S (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	øD	L1	L2	A ^{*1}	M	Effective area [mm ²]		Min. port size	Weight [g]
									Nylon	Urethane		
ø4	1/8	KQ2S04-U01□	3	10	20.6	19.6	15.8	13.3	4.1	3.6	3.1	8
	1/4	KQ2S06-U01□	4	12	19.8	18.8	15	13.3	10	9.9	4.1	8.2
ø6	1/4	KQ2S06-U02□	4	14	19.8	18.8	13.4	13.3	10.7	10	4.1	12.3
	1/8	KQ2S08-U01□	5	14	20.7	19.7	15.9	14.2	17.2	16.2	5.1	9.4
ø8	1/4	KQ2S08-U02□	6	14	20.5	19.5	14.1	14.2	23.3	16.2	6.1	10.9
	3/8	KQ2S08-U03□	6	17	20.7	19.7	14.3	14.2	23.3	16.2	6.1	19.8
	1/8	KQ2S10-U01□	5	15.6	22.4	21.1	17.6	15.6	17.2	16.2	5.1	10.5
ø10	1/4	KQ2S10-U02□	8	17	23.7	20.1	17.3	15.6	39	26.6	8.1	15.4
	3/8	KQ2S10-U03□	8	17	21.1	20.1	14.7	15.6	39	26.6	8.1	16.4
	1/2	KQ2S10-U04□	8	21	21.1	20.1	12.5	15.6	39	26.6	8.1	29.7
	1/4	KQ2S12-U02□	8	18.2	27.8	21.5	21.4	17	46	44.5	8.1	20.7
ø12	3/8	KQ2S12-U03□	10	18.2	22.8	21.8	16.4	17	60	44.5	10.1	16.1
	1/2	KQ2S12-U04□	10	21	22.8	21.8	14.2	17	60	44.5	10.1	28.1

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread



Male Elbow: KQ2L (Gasket seal)

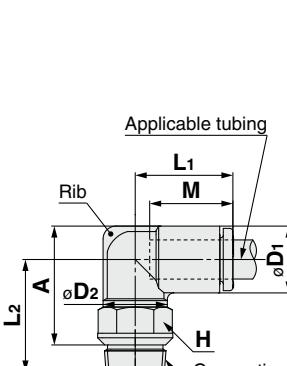


Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	øD1	øD2	L1	L2	A ^{*1}	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
ø4	1/8	KQ2L04-U01□	10	8.2	10	14.8	16.4	15.7	13.3	4.6	3.3	3	4.8	●
	1/4	KQ2L04-U02□	14	8.2	10	14.8	19.2	16.9	13.3	4.6	3.3	3	11.5	●
ø6	1/8	KQ2L06-U01□	10	10.4	10	15.5	17.5	17.9	13.3	11.4	9	4.5	5.3	—
	1/4	KQ2L06-U02□	14	10.4	10	15.5	20.3	19.1	13.3	11.4	9	4.5	12	—
ø8	3/8	KQ2L06-U03□	17	10.4	10	15.5	21.4	20.2	13.3	11.4	9	4.5	21.4	—
	1/8	KQ2L08-U01□	10	13.2	10	16.4	18.9	20.7	14.2	11.4	11.4	4.5	6.1	●
ø10	1/8	KQ2L08-U01 ^{**2} Q	12	13.2	12	17.2	22.7	25.0	14.2	21.6	14.9	6	8.6	●
	1/4	KQ2L08-U02□	14	13.2	12	17.2	21.7	21.9	14.2	21.6	14.9	6	10.9	●
ø12	3/8	KQ2L10-U03□	17	13.2	12	17.2	22.8	23.0	14.2	21.6	14.9	6	20.2	●
	1/8	KQ2L10-U01□	14	15.9	12	18.6	21.5	24.6	15.6	21.6	14.9	6	12.3	●
ø14	1/8	KQ2L10-U02□	17	15.9	17	19.3	24.3	25.8	15.6	35.2	25	7.5	16.9	●
	3/8	KQ2L10-U03□	17	15.9	17	19.3	26.9	28.4	15.6	35.2	25	7.5	17.9	●
ø16	1/2	KQ2L10-U04□	22	15.9	17	19.3	34.5	33.8	15.6	35.2	25	7.5	48.2	●
	1/4	KQ2L12-U02□	17	18.5	17	21.5	25.6	28.4	17	50.2	39.7	9	18.7	●
ø18	3/8	KQ2L12-U03□	17	18.5	17	21.5	28.2	31.0	17	50.2	39.7	9	19.8	●
	1/2	KQ2L12-U04□	22	18.5	17	21.5	35.8	36.4	17	50.2	39.7	9	50	●
ø20	3/8	KQ2L16-U03□	22	23.8	21	27.1	32.4	37.9	20.6	71	58.9	11	37.4	—
	1/2	KQ2L16-U04□	22	23.8	21	27.1	35.0	38.3	20.6	100	58.9	13	47.9	—

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread

*2 For details, refer to page 207.



KQ2 Series

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

Dimensions

45° Male Elbow: KQ2K (Gasket seal)

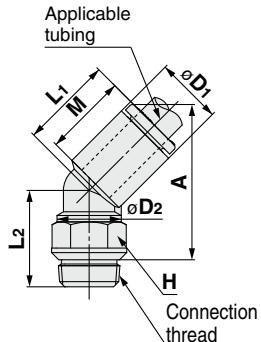


Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	ϕD_1	ϕD_2	L ₁	L ₂	A ^{*1}	M	Effective area [mm ²]		Min. port size	Weight [g]
										Nylon	Urethane		
$\phi 4$	1/8	KQ2K04-U01□	10	8.2	10	14.4	12.9	20.8	13.3	4.8	3.4	4.5	4.7
	1/4	KQ2K04-U02□	14	8.2	10	14.4	14.7	21	13.3	4.8	3.4	4.5	11.3
$\phi 6$	1/8	KQ2K06-U01□	10	10.4	10	14.7	15	23.8	13.3	8.7	6.9	4.5	5.1
	1/4	KQ2K06-U02□	14	10.4	10	14.7	16.8	24	13.3	8.7	6.9	4.5	11.7
$\phi 8$	3/8	KQ2K06-U03□	17	10.4	10	14.7	17.9	25.1	13.3	8.7	6.9	4.5	21.2
	1/8	KQ2K08-U01□	10	13.2	10	16	15.9	26.5	14.2	8.7	8.7	4.5	6
$\phi 10$	^{*2}	KQ2K08-U01□Q	12	13.2	12	16	19.7	30.8	14.2	19.7	13.6	6	8.4
		KQ2K08-U02□	14	13.2	12	16	18.7	27.7	14.2	19.7	19.7	6	10.7
$\phi 12$	3/8	KQ2K08-U03□	17	13.2	12	16	19.8	28.8	14.2	19.7	19.7	6	20
	1/8	KQ2K10-U01□	14	15.9	12	18.2	19.4	32.4	15.6	30.9	23.2	6	12.2
$\phi 14$	1/4	KQ2K10-U02□	17	15.9	17	17.6	24.7	35.7	15.6	30.9	23.2	7.5	17
	3/8	KQ2K10-U03□	17	15.9	17	17.6	21.6	32.6	15.6	30.9	23.2	7.5	17.4
$\phi 16$	1/2	KQ2K10-U04□	22	15.9	17	17.6	29.2	38	15.6	30.9	23.2	7.5	47.7
	1/4	KQ2K12-U02□	17	18.5	17	19.4	24.6	37.7	17	44.5	35.1	9	18.5
$\phi 18$	3/8	KQ2K12-U03□	17	18.5	17	19.4	21.5	34.6	17	44.5	35.1	9	18.9
	1/2	KQ2K12-U04□	22	18.5	17	19.4	29.1	40	17	44.5	35.1	9	49.2

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread

*2 For details, refer to page 207.



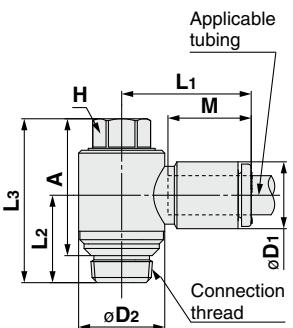
Universal Male Elbow: KQ2V (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	ϕD_1	ϕD_2	L ₁	L ₂	L ₃	A ^{*1}	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
$\phi 4$	1/8	KQ2V04-U01□	8	8.2	13.4	19.3	13.6	25.5	20.7	13.3	2.9	2.9	4.5	13.5
	1/4	KQ2V06-U01□	8	10.4	13.4	20.5	13.6	25.5	20.7	13.3	7.5	5.9	4.5	13.9
$\phi 6$	1/4	KQ2V06-U02□	10	10.4	15.3	19.9	15.4	28	21.6	13.3	7.5	5.9	4.5	21.8
	1/8	KQ2V08-U01□	12	13.2	17.6	23.5	15	27.5	22.7	14.2	16	11.2	6	23.7
$\phi 8$	1/4	KQ2V08-U02□	12	13.2	17.6	23.5	17	29.5	23.1	14.2	16	11.2	6	28
	3/8	KQ2V08-U03□	14	13.2	20.6	23.1	18.2	34	27.6	14.2	20.5	14.3	7.5	43.1
$\phi 10$	1/4	KQ2V10-U02□	14	15.9	20.6	25.9	19	34	27.6	15.6	27	20.3	7.5	38.9
	3/8	KQ2V10-U03□	14	15.9	20.6	25.9	19	34	27.6	15.6	27	20.3	7.5	44.4
$\phi 12$	3/8	KQ2V12-U03□	17	18.5	25.2	28.5	20.2	36.4	30	17	39	30.8	9	60.5
	1/2	KQ2V12-U04□	17	18.5	25.2	28.5	22.9	39.1	30.5	17	39	30.8	9	74.5

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread



Extended Male Elbow: KQ2W (Gasket seal)

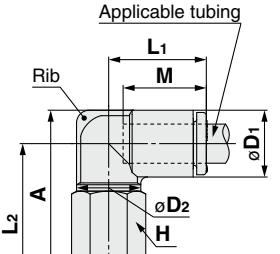


Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	ϕD_1	ϕD_2	L ₁	L ₂	L ₃	A ^{*1}	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	With a rib		
$\phi 4$	1/8	KQ2W04-U01□	10	8.2	10	14.8	24.1	23.4	13.3	4	4	3	8.3	●
	1/4	KQ2W04-U02□	14	8.2	10	14.8	30.1	27.8	13.3	4	4	3	23.9	●
$\phi 6$	1/8	KQ2W06-U01□	10	10.4	10	15.5	31.2	31.6	13.3	10.9	8.6	4.5	11.5	—
	1/4	KQ2W06-U02□	14	10.4	10	15.5	31.2	30	13.3	10.9	8.6	4.5	24.3	—
$\phi 8$	1/8	KQ2W08-U01□	10	13.2	10	16.4	32.6	34.4	14.2	10.9	10.9	4.5	12.3	●
	^{*2}	KQ2W08-U01□Q	12	13.2	12	17.2	43.6	45.4	14.2	20.5	14.2	6	24.7	●
$\phi 10$	1/4	KQ2W10-U02□	14	13.2	12	17.2	35.4	35.6	14.2	20.5	14.2	6	24.1	●
	3/8	KQ2W10-U03□	17	13.2	12	17.2	36.5	36.7	14.2	20.5	14.2	6	42.5	●
$\phi 12$	1/4	KQ2W10-U04□	17	15.9	17	19.3	48.5	50.1	15.6	33.5	23.8	7.5	54.2	●
	3/8	KQ2W10-U03□	17	15.9	17	19.3	45.8	47.4	15.6	33.5	23.8	7.5	47	●
$\phi 14$	1/2	KQ2W10-U04□	22	15.9	17	19.3	53.4	52.8	15.6	33.5	23.8	7.5	95.5	●
	1/4	KQ2W12-U02□	17	18.5	17	21.5	49.8	52.7	17	47.7	37.7	9	55.9	●
$\phi 16$	3/8	KQ2W12-U03□	17	18.5	17	21.5	47.1	50	17	47.7	37.7	9	48.9	●
	1/2	KQ2W12-U04□	22	18.5	17	21.5	54.7	55.4	17	47.7	37.7	9	97.4	●

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread

*2 For details, refer to page 207.



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

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

Dimensions

Male Branch Tee: KQ2T (Gasket seal)

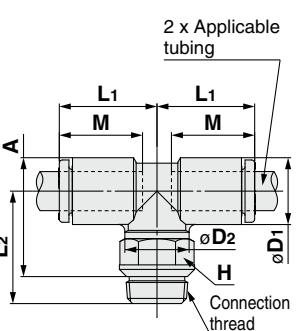


Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	M						Effective area [mm ²] Nylon Urethane	Min. port size	Weight [g]	
				øD1	øD2	L1	L2	A ^{*1}	M				
ø4	1/8	KQ2T04-U01□	10	8.2	10	14.8	16.4	15.7	13.3	6	4.1	3	5.5
	1/4	KQ2T04-U02□	14	8.2	10	14.8	19.2	16.9	13.3	6	4.1	3	12.2
ø6	1/8	KQ2T06-U01□	10	10.4	10	15.5	17.5	17.9	13.3	13.9	11	4.5	6.2
	1/4	KQ2T06-U02□	14	10.4	10	15.5	20.3	19.1	13.3	13.9	11	4.5	12.9
ø8	3/8	KQ2T06-U03□	17	10.4	10	15.5	21.4	20.2	13.3	13.9	11	4.5	22.3
	1/8	KQ2T08-U01□	10	13.2	10	16.4	18.9	20.7	14.2	13.9	13.9	4.5	7.9
ø10	1/8	KQ2T08-U01 ^{*2} Q	12	13.2	12	17.2	22.7	25	14.2	26.3	18.2	6	10.3
	1/4	KQ2T08-U02□	14	13.2	12	17.2	21.7	21.9	14.2	26.3	18.2	6	12.6
ø12	3/8	KQ2T08-U03□	17	13.2	12	17.2	22.8	23	14.2	26.3	18.2	6	21.9
	1/8	KQ2T10-U01□	14	15.9	12	18.6	21.4	24.6	15.6	21.6	14.9	6	15.1
ø14	1/4	KQ2T10-U02□	17	15.9	17	19.3	24.2	25.8	15.6	35.2	25	7.5	19.5
	3/8	KQ2T10-U03□	17	15.9	17	19.3	26.8	28.4	15.6	35.2	25	7.5	20.5
ø16	1/2	KQ2T10-U04□	22	15.9	17	19.3	34.4	33.8	15.6	35.2	25	7.5	50.8
	1/4	KQ2T12-U02□	17	18.5	17	21.5	25.5	28.4	17	57.2	45.2	9	22.5
ø18	3/8	KQ2T12-U03□	17	18.5	17	21.5	28.1	31	17	57.2	45.2	9	23.6
	1/2	KQ2T12-U04□	22	18.5	17	21.5	35.7	36.4	17	57.2	45.2	9	53.9
ø20	3/8	KQ2T16-U03□	22	23.8	21	27.1	32.4	37.9	20.6	71	58.9	11	44.3
	1/2	KQ2T16-U04□	22	23.8	21	27.1	35	38.3	20.6	100	58.9	13	54.8

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread

*2 For details, refer to page 207.



Male Run Tee: KQ2Y (Gasket seal)

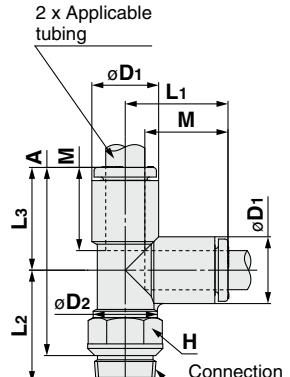


Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	M						Effective area [mm ²] Nylon Urethane	Min. port size	Weight [g]		
				øD1	øD2	L1	L2	L3	A ^{*1}					
ø4	1/8	KQ2Y04-U01□	10	8.2	10	15.3	16.4	15.3	26.9	13.3	6.4	4	3	5.6
	1/4	KQ2Y04-U02□	14	8.2	10	15.3	19.2	15.3	28.1	13.3	6.4	4	3	12.2
ø6	1/8	KQ2Y06-U01□	10	10.4	10	16.3	17.5	16.3	29	13.3	13.4	10.6	4.5	6.3
	1/4	KQ2Y06-U02□	14	10.4	10	16.3	20.3	16.3	30.2	13.3	13.4	10.6	4.5	13
ø8	3/8	KQ2Y06-U03□	17	10.4	10	16.3	21.4	16.3	31.3	13.3	13.4	10.6	4.5	22.5
	1/8	KQ2Y08-U01□	10	13.2	10	18.2	18.9	18.2	32.3	14.2	13.4	13.4	4.5	8
ø10	1/8	KQ2Y08-U01 ^{*2} Q	12	13.2	12	18.2	22.7	18.2	36.7	14.2	25.6	17.7	6	10.4
	1/4	KQ2Y08-U02□	14	13.2	12	18.2	21.7	18.2	33.5	14.2	25.6	17.7	6	12.7
ø12	3/8	KQ2Y08-U03□	17	13.2	12	18.2	22.8	18.2	34.6	14.2	25.6	17.7	6	22
	1/8	KQ2Y10-U01□	14	15.9	12	20.6	21.4	20.6	37.3	15.6	40	28.4	6	15.2
ø14	1/4	KQ2Y10-U02□	17	15.9	17	20.6	24.2	20.6	38.5	15.6	40	28.4	7.5	19.7
	3/8	KQ2Y10-U03□	17	15.9	17	20.6	26.8	20.6	41.1	15.6	40	28.4	7.5	20.7
ø16	1/2	KQ2Y10-U04□	22	15.9	17	20.6	34.4	20.6	46.5	15.6	40	28.4	7.5	50.9
	1/4	KQ2Y12-U02□	17	18.5	17	23	25.5	23	42.2	17	57.4	45.4	9	22.8
ø18	3/8	KQ2Y12-U03□	17	18.5	17	23	28.1	23	44.8	17	57.4	45.4	9	23.9
	1/2	KQ2Y12-U04□	22	18.5	17	23	35.7	23	50.2	17	57.4	45.4	9	54.2
ø20	3/8	KQ2Y16-U03□	22	23.8	21	28.6	32.4	28.6	54.6	20.6	81	60	11	44.9
	1/2	KQ2Y16-U04□	22	23.8	21	28.6	35	28.6	55	20.6	113	60	13	55.4

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread

*2 For details, refer to page 207.



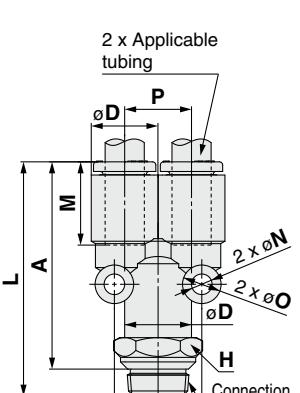
Branch "Y": KQ2U (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	M						Mounting hole øO øN Thickness	Effective area [mm ²] Nylon Urethane	Min. port size	Weight [g]			
				øD	L	P	A ^{*1}	M	Q							
ø4	1/8	KQ2U04-U01□	11	8.2	35.4	8.2	30.6	13.3	5.7	6	3.2	8.2	4.2	3.6	8.6	
	1/4	KQ2U04-U02□	14	8.2	37.4	8.2	31	13.3	5.7	6	3.2	8.2	4.2	3.6	14.6	
ø6	1/8	KQ2U06-U01□	12	10.4	36.8	10.4	32	13.3	6.8	6	3.2	10.4	13.4	10.6	5.4	10
	1/4	KQ2U06-U02□	14	10.4	38.5	10.4	32.1	13.3	6.8	6	3.2	10.4	13.4	10.6	5.4	15
ø8	3/8	KQ2U06-U03□	17	10.4	39.3	10.4	32.9	13.3	6.8	6	3.2	10.4	13.4	10.6	5.4	23.3
	1/8	KQ2U08-U01□	14	13.2	41.6	13.2	36.8	14.2	8.7	8	4.2	13.2	25.6	17.7	6	17.6
ø10	1/4	KQ2U08-U02□	14	13.2	42.6	13.2	36.2	14.2	8.7	8	4.2	13.2	25.6	17.7	7.3	18.3
	3/8	KQ2U08-U03□	17	13.2	42.4	13.2	36	14.2	8.7	8	4.2	13.2	25.6	17.7	7.3	25.5
ø12	1/4	KQ2U10-U02□	17	15.9	47.6	15.9	41.2	15.6	10.1	8	4.2	15.9	40	28.4	9	25.3
	3/8	KQ2U10-U03□	19	15.9	47.5	15.9	41.1	15.6	10.1	8	4.2	15.9	40	28.4	9.4	31.6
ø14	1/2	KQ2U10-U04□	22	15.9	49.4	15.9	40.8	15.6	10.1	8	4.2	15.9	40	28.4	9.4	47.6
	1/4	KQ2U12-U02□	22	18.5	52.1	18.5	45.7	17	11.4	8	4.2	18.5	57.4	45.4	9	42.6
ø16	3/8	KQ2U12-U03□	22	18.5	52	18.5	45.6	17	11.4	8	4.2	18.5	57.4	45.4	11	41.2
	1/2	KQ2U12-U04□	22	18.5	53.4	18.5	44.8	17	11.4	8	4.2	18.5	57.4	45.4	11.6	48.8

□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of Uni thread



KQ2 Series

Made to Order/Clean Series/Spare Parts

Please contact SMC for detailed dimensions, specifications, and lead times.

1 Made to Order

Symbol	Specifications
X12	Lubricant: White vaseline Release button color: White
X35 ^{*1}	Body color: Black Release button color: Light gray
X41	With fixed orifice ^{*2}
KQ2□08-U01□Q	Effective area is interchangeable with the current product (KQ series). Applicable model: Male elbow 45° male elbow Extended male elbow Male branch tee Male run tee Applicable tubing O.D./Port size: ø8/Uni1/8 Thread material/Surface treatment: Brass, Brass + Electroless nickel plating Example) KQ2L08-U01AQ

*1 The following models are not available as made-to-order: Hexagon socket head male connector/KQ2S, Male connector/KQ2H

*2 Please contact SMC for availability.

The following made-to-order products will be provided based on previous models (KQ2 series). Please contact SMC separately.

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 plating)
X39	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)

2 Clean Series

Symbol	Specifications
10-	Brass parts: With electroless nickel plating Lubricant: Fluorine grease Air blow in a clean room Double packaging Resin body, Release button color: White

Example) 10-KQ2H06-U01N

3 Spare Parts

Description	Part no.	Applicable thread
Gasket	KQG-U01	Uni1/8
	KQG-U02	Uni1/4
	KQG-U03	Uni3/8
	KQG-U04	Uni1/2