

One-touch Fittings

The New "KQ2"

KQ, KQ2, and KJ consolidated into the "KQ2"

- Enhanced variation
- Lightweight
- Compact



New KQ2 Series

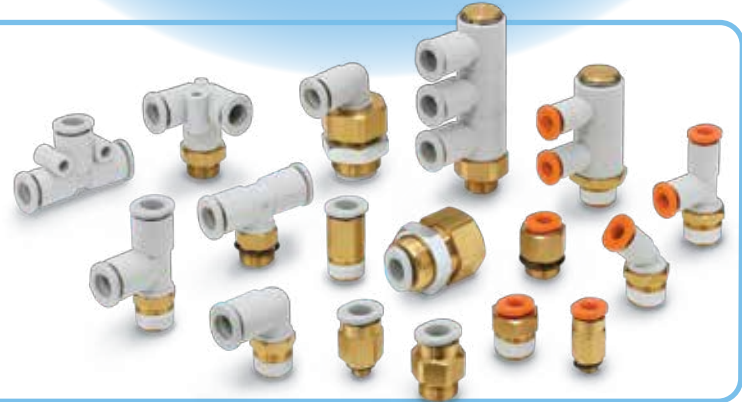


New

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			P.5	P.101		
	R	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		

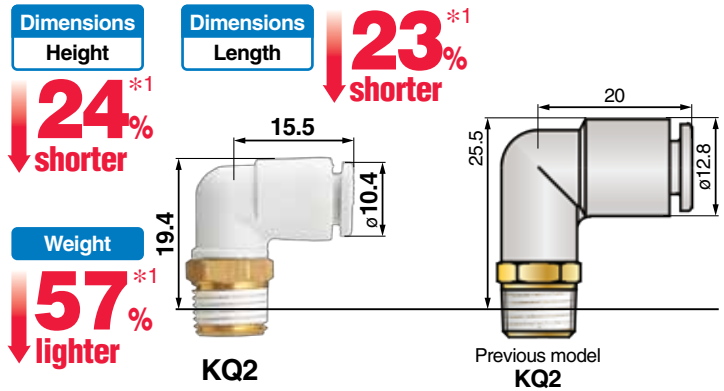
KQ2 Series

◎ Improved tube insertion/removal



*1 Tube removal strength is ensured to be equivalent to previous model.

◎ Compact and lightweight



*1 Previous KQ2 series model: Male elbow, applicable tubing O.D. $\phi 6$, connection thread R1/8

◎ Selectable seal method*1

*1 Connection thread: R, NPT



Face seal



Sealant

◎ Selectable surface treatment

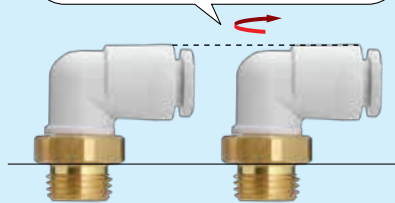
- Brass (No plating)
- Brass + Electroless nickel plating

◎ Face seal adopted for threading

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

■ Face seal

Number of rotations after hand-tightening: **1/6 of a rotation or less**

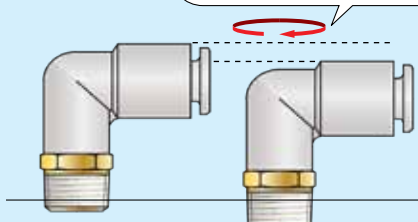


After hand-tightening

After tool-tightening

■ Sealant

Number of rotations after hand-tightening: **2 to 3 rotations**

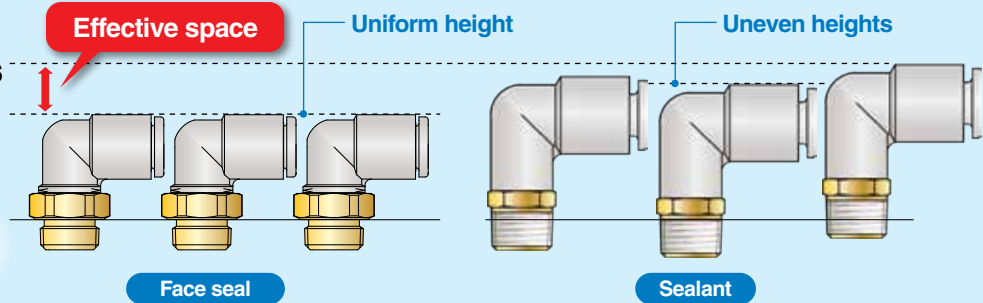


After hand-tightening

After tool-tightening

◎ Uniform height when using multiple fittings

Provides effective space above fittings



Face seal

Sealant

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.

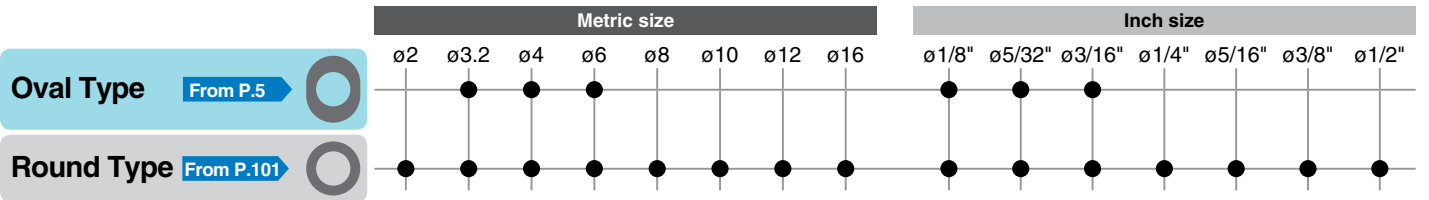
Re-piping is possible.

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/Round Type Variations

Part Name	Part Code	Oval Type	Round Type
Hexagon Socket Head Male Connector	KQ2S		
45° Male Elbow	KQ2K		
Bulkhead Union	KQ2E		
Universal Female Elbow	KQ2VF		
Universal Male Elbow	KQ2V		
Extended Male Elbow	KQ2W		
Bulkhead Connector	KQ2E		
Branch Universal Female Elbow	KQ2ZF		
Male Connector	KQ2H		
Female Connector	KQ2F		
Straight Union	KQ2H		
Different Diameter Straight	KQ2H		
Cross	KQ2TW		
Male Elbow	KQ2L		
Union Elbow	KQ2L		
Plug-in Elbow	KQ2L		
Reducer Elbow	KQ2L		
Different Diameter Cross	KQ2TX		
Male Branch Tee	KQ2T		
Union Tee	KQ2T		
Different Diameter Tee	KQ2T		
Different Diameter Tee	KQ2T		
Hexagon Socket Head Universal Male Elbow	KQ2VS		
Branch Male Elbow	KQ2LU		
Female Elbow	KQ2LF		
Double Universal Male Elbow	KQ2VD		
Triple Universal Male Elbow	KQ2VT		
Branch Universal Male Elbow	KQ2Z		
Double Branch Universal Male Elbow	KQ2ZD		
Male Run Tee	KQ2Y		
Triple Branch Universal Male Elbow	KQ2ZT		
Branch Union Elbow	KQ2LU		
Extended Plug-in Elbow	KQ2W		
Male Delta Union	KQ2D		
Delta Union	KQ2D		
Double Branch "Y"	KQ2UD		
Different Diameter Double Union "Y"	KQ2UD		
Double Universal Male Elbow	KQ2VD		
Triple Universal Male Elbow	KQ2VT		
Branch "Y"	KQ2U		
Different Diameter Union "Y"	KQ2U		
Plug-in "Y"	KQ2U		
Double Plug-in "Y"	KQ2XD		
Union "Y"	KQ2U		
Different Diameter Union "Y"	KQ2U		
Plug-in "Y"	KQ2U		
Branch "Y"	KQ2U		
Plug-in Reducer	KQ2R		
Bulkhead Male Elbow	KQ2LE		
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	
 <p>Metric</p> <p>ø2 ø3.2 ø4 ø6 ø8 ø10 ø12 ø16</p>	●	●	●			P.5 How to Order P.6 Variations P.7 Dimensions P.9 Made to Order/Clean Series/ Spare Parts P.27
 <p>Inch</p> <p>ø1/8" ø5/32" ø3/16" ø1/4" ø5/16" ø3/8" ø1/2"</p>				●	●	
 <p>Inch</p> <p>ø1/8" ø5/32" ø3/16" ø1/4" ø5/16" ø3/8" ø1/2"</p>	●	●	●			P.49 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	
 <p>Metric</p> <p>ø2 ø3.2 ø4 ø6 ø8 ø10 ø12 ø16</p>	●					P.57 How to Order P.58 Variations P.59 Dimensions P.60 Spare Parts P.63
 <p>Metric</p> <p>ø2 ø3.2 ø4 ø6 ø8 ø10 ø12 ø16</p>			●			
 <p>Inch</p> <p>ø1/8" ø5/32" ø3/16" ø1/4" ø5/16" ø3/8" ø1/2"</p>				●		P.73 How to Order P.74 Variations P.75 Dimensions P.76
 <p>Inch</p> <p>ø1/8" ø5/32" ø3/16" ø1/4" ø5/16" ø3/8" ø1/2"</p>					●	

Gasket Seal (Uni Thread)

Applicable tubing	Connection thread				
	Rc	G	NPT	NPTF	
 <p>Metric</p> <p>ø2 ø3.2 ø4 ø6 ø8 ø10 ø12 ø16</p>	●	●	●	●	P.87 How to Order P.88 Variations P.89 Dimensions P.90 Made to Order/Clean Series/ Spare Parts P.93
 <p>Inch</p> <p>ø1/8" ø5/32" ø3/16" ø1/4" ø5/16" ø3/8" ø1/2"</p>	●	●	●	●	

Round 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	●	●	●			P.101
Inch ø1/8" ø5/32" ø3/16" ø1/4" ø5/16" ø3/8" ø1/2"				●	●	P.133
Inch ø1/8" ø5/32" ø3/16" ø1/4" ø5/16" ø3/8" ø1/2"	●	●	●			P.157

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Face Seal

Applicable tubing	Connection thread					
	G	R	Rc	NPT	R	
Metric ø2 ø3.2 ø4 ø6 ø8 ø10 ø12 ø16	●					P.165
Metric ø2 ø3.2 ø4 ø6 ø8 ø10 ø12 ø16			●			P.173
Inch ø1/8" ø5/32" ø3/16" ø1/4" ø5/16" ø3/8" ø1/2"				●		P.185
Inch ø1/8" ø5/32" ø3/16" ø1/4" ø5/16" ø3/8" ø1/2"					●	P.195

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Gasket Seal (Uni Thread)

Applicable tubing	Connection thread				
	Rc	G	NPT	NPTF	
Metric ø2 ø3.2 ø4 ø6 ø8 ø10 ø12 ø16	●	●	●	●	P.201
Inch ø1/8" ø5/32" ø3/16" ø1/4" ø5/16" ø3/8" ø1/2"	●	●	●	●	P.209

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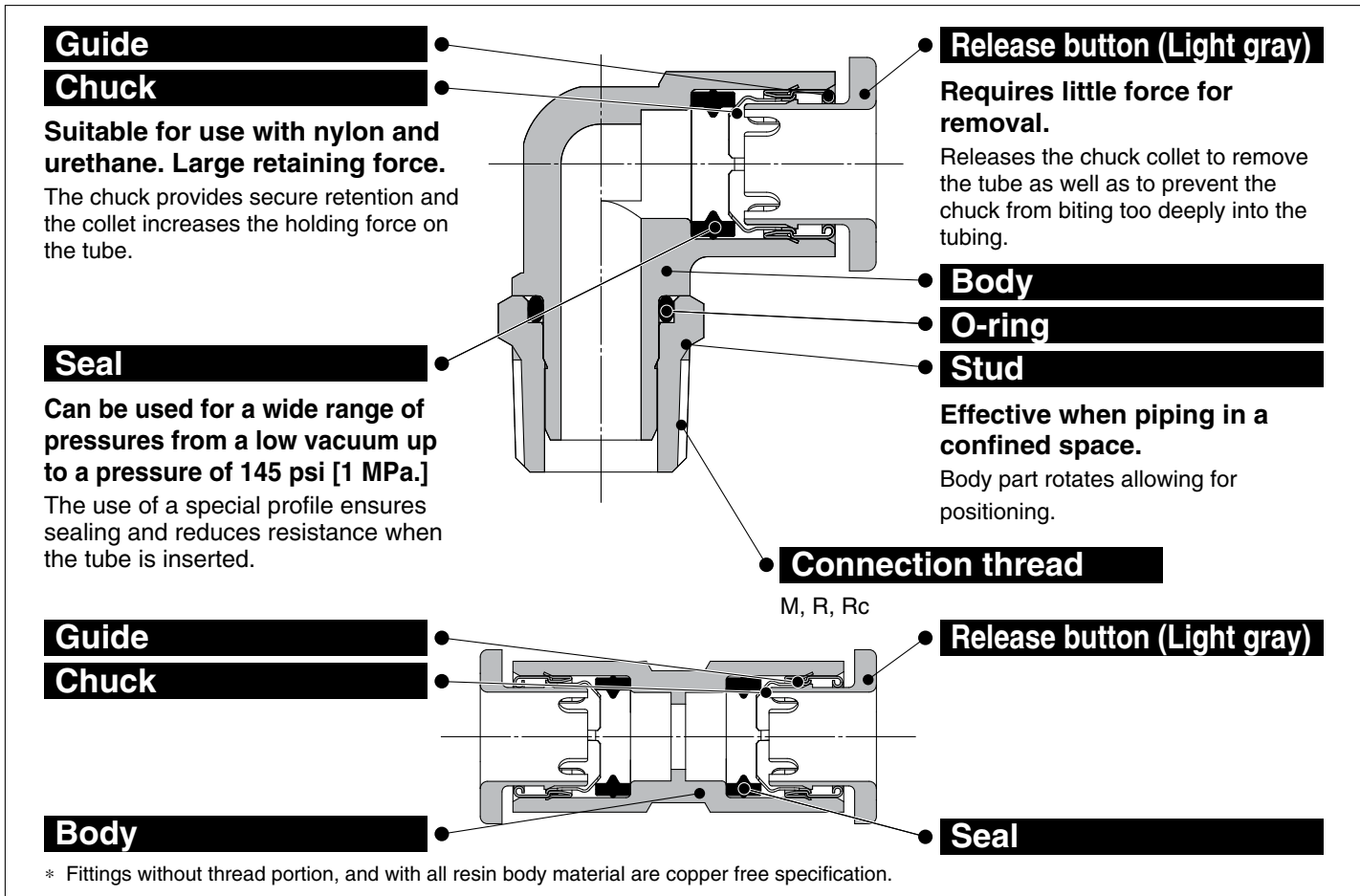


Sealant/Gasket Seal	Metric Size M, R, Rc
	Inch Size UNF, NPT
Face Seal	Metric Size G
	Metric Size R, Rc
Gasket Seal	Metric Size Uni
	Inch Size R
Gasket Seal	Inch Size NPT
	Inch Size Uni

Oval Type Metric Size One-touch Fittings

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

KQ2 Series



One-touch IN/OUT connection.
Possible to use in vacuum to -14.5 psi [-100 kPa.]



Applicable Tubing

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

Specifications

Fluid		Air, Water*1
Operating pressure range*2		-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])		435 psi [3 MPa]
Ambient and fluid temperature		23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Seal on the threads		With sealant

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

*2 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
LE	Bulkhead connector
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
Thread connection	M3 M3 x 0.5
	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

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
Different dia. tubing (Reducer)	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

Metric Size One-touch Fittings

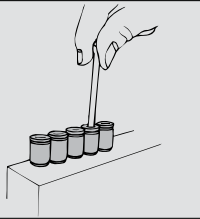
Oval Type Variations

Hexagon socket head male connector

KQ2S

P.10

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

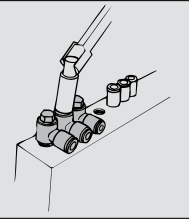


Universal male elbow

KQ2V

P.13

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

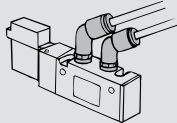


45° male elbow

KQ2K

P.13

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

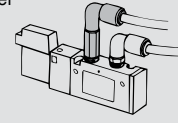


Extended male elbow

KQ2W

P.17

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

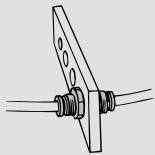


Bulkhead union

KQ2E

P.24

Use to connect tubing through a panel, etc.

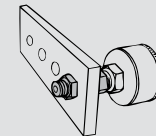


Bulkhead connector

KQ2E

P.24

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

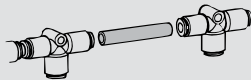


Nipple

KQ2N

P.26

Use to connect One-touch fittings.

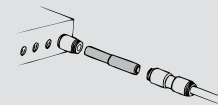


Reducer nipple

KQ2N

P.26

Use to connect One-touch fittings of different sizes.



Universal female elbow

KQ2VF

P.14

Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.



Male connector

KQ2H

P.9

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



Cross

KQ2TW

P.20

Use to four-branch a line.



Reducer elbow

KQ2L

P.12

Use to change the tube direction of One-touch fittings by 90° and connect tubing of reduced size.



Female connector

KQ2F

P.10

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



Male elbow

KQ2L

P.11

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



Different diameter cross

KQ2TX

P.20

Use to four-branch a line and connect tubing of reduced size at both 90° angles.



Straight union

KQ2H

P.9

Use to connect tubing in the same direction.



Union elbow

KQ2L

P.11

Use to connect tubing at right angles.



Male branch tee

KQ2T

P.18

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



Different diameter straight

KQ2H

P.9

Use to connect tubing of different sizes.



Plug-in elbow

KQ2L

P.12

Use to change the tube direction of One-touch fittings by 90°.



Union tee

KQ2T


P.19

Use to branch tubing at both 90° angles.






Different diameter tee
KQ2T P.19




Use to connect tubing of reduced size for branching at both 90° angles.

Triple universal male elbow
KQ2VT P.15




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

Bulkhead male elbow
KQ2LE P.24




Use to connect tubing through a panel, etc. and to change the tube direction by 90°.

Different diameter tee
KQ2T P.19




Use to connect tubing of reduced size for branching at a 90° angle from two pipes running in the same direction.

Male run tee
KQ2Y P.21




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

Adapter
KQ2N P.25




Use to connect One-touch fittings and R female threads.

Different diameter cross
KQ2TY P.20




Use to connect tubing of reduced size for branching in three directions.

Extended plug-in elbow
KQ2W P.16




Use to change the tube direction of One-touch fittings by 90°. Multi-leveled piping is also possible with the plug-in elbow.

Tube cap
KQ2C P.25




Use to plug unused tubing.

Hexagon socket head universal male elbow
KQ2VS P.14




Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

Male delta union
KQ2D P.22




Use to branch a female thread at two right angles.

Color cap
KQ2C P.26




Mount onto the release button and use different colors for piping according to applications.

Female elbow
KQ2LF P.16




Use to pipe a male thread at right angles.

Delta union
KQ2D P.23




Use to branch tubing at three right angles.

Plug
KQ2P P.25




Use to plug unused One-touch fittings.

Double universal male elbow
KQ2VD P.15

















Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

Plug-in reducer
KQ2R P.23



Use to change size of One-touch fittings.

The following models do not support oval type release buttons. Refer to the round type (from page 101).

<p>Branch universal female elbow KQ2ZF P.115</p> 	<p>Branch male elbow KQ2LU P.110</p> 	<p>Branch universal male elbow KQ2Z P.115</p> 	<p>Double branch universal male elbow KQ2ZD P.116</p> 	<p>Triple branch universal male elbow KQ2ZT P.116</p> 
<p>Branch union elbow KQ2LU P.109</p> 	<p>Double branch "Y" KQ2UD P.126</p> 	<p>Different diameter double union "Y" KQ2UD P.126</p> 	<p>Different diameter plug-in "Y" KQ2X P.127</p> 	<p>Double plug-in "Y" KQ2XD P.127</p> 
<p>Union "Y" KQ2U P.125</p> 	<p>Different diameter union "Y" KQ2U P.125</p> 	<p>Plug-in "Y" KQ2U P.125</p> 	<p>Branch "Y" KQ2U P.124</p> 	

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

KQ2 Series

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

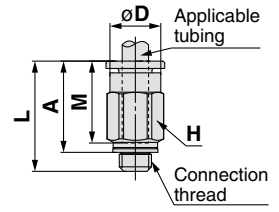
Dimensions

Male Connector: KQ2H (Gasket seal)

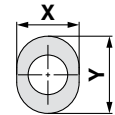


Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	øD	Release button dimensions		L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
ø3.2	M3 x 0.5	KQ2H23-M3G1	7	6.9	6.7	9.5	17	14.4	13.3	0.9	0.9	1.2	2.4
	M5 x 0.8	KQ2H23-M5□1	7	6.9	6.7	9.5	17.3	14.3	13.3	3	2.5	2.5	2.7
ø4	M3 x 0.5	KQ2H04-M3G1	8	7.9	7.7	10	17.1	14.5	13.3	0.9	0.9	1.2	2.9
	M5 x 0.8	KQ2H04-M5□1	8	7.9	7.7	10	17.7	14.7	13.3	4	4	2.5	3.3
ø6	M6 x 1.0	KQ2H04-M6□1	8	7.9	7.7	10	18.7	14.7	13.3	5.6	4	3	3.6
	M5 x 0.8	KQ2H06-M5□1	10	9.9	9.7	12	17.7	14.7	13.3	4	4	2.5	4.1
ø6	M6 x 1.0	KQ2H06-M6□1	10	9.9	9.7	12	18.8	14.8	13.3	5.6	5.6	3	4.4

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



Release button dimensions



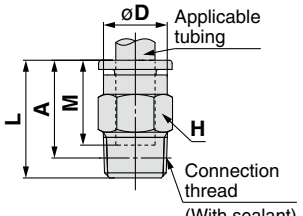
Male Connector: KQ2H (Sealant)



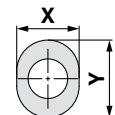
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD	Release button dimensions		L	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
ø3.2	1/8	KQ2H23-01□S1	10	—	6.7	9.5	14	10.9	13.3	3.4	2.9	2.5	6
	1/4	KQ2H23-02□S1	14	—	6.7	9.5	16.7	12	13.3	3.4	2.9	2.5	15.3
ø4	1/8	KQ2H04-01□S1	10	—	7.7	10	14.3	11.2	13.3	4.8	3.4	3	5.6
	1/4	KQ2H04-02□S1	14	—	7.7	10	16.7	12	13.3	4.8	3.4	3	14.6
ø6	1/8	KQ2H06-01□S1	10	9.9	9.7	12	18.4	15.3	13.3	13.1	10.4	4.5	5.8
	1/4	KQ2H06-02□S1	14	—	9.7	12	16.7	12	13.3	13.1	10.4	4.5	12.5
ø6	3/8	KQ2H06-03□S1	17	—	9.7	12	18.1	13	13.3	13.1	10.4	4.5	24.5

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

*1 Reference dimensions after installation of R thread



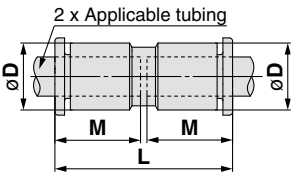
Release button dimensions (With sealant)



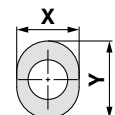
Straight Union: KQ2H



Applicable tubing O.D. [mm]	Model	øD	Release button dimensions		L	M	Effective area [mm ²]		Min. port size	Weight [g]
			X	Y			Nylon	Urethane		
ø3.2	KQ2H23-00A1	7.1	6.7	9.5	27.6	13.3	3.4	2.9	2.5	1.4
ø4	KQ2H04-00A1	8.2	7.7	10	27.6	13.3	5.6	4	3	1.6
ø6	KQ2H06-00A1	10.4	9.7	12	27.6	13.3	13.1	10.4	4.5	2.1



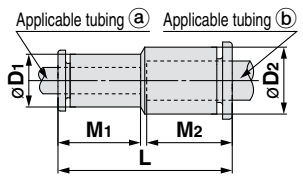
Release button dimensions



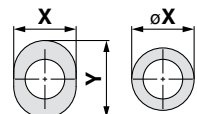
Different Diameter Straight: KQ2H



Applicable tubing O.D. [mm]		Model	øD1	Release button dimensions (a)		Release button dimensions (b)		L	M1	M2	Effective area [mm ²]		Min. port size	Weight [g]	
(a)	(b)			øX (X)	Y	øD2	øX (X)				Y	Nylon			Urethane
ø2	ø3.2	KQ2H02-23A1	5.8	5.5	—	7.1	6.7	9.5	26.2	11.9	13.3	—	0.9	1.4	1.1
ø2	ø4	KQ2H02-04A1	5.8	5.5	—	8.2	7.7	10	26.2	11.9	13.3	—	0.9	1.4	1.2
ø3.2	ø4	KQ2H23-04A1	7.1	6.7	9.5	8.2	7.7	10	27.6	13.3	13.3	3.4	2.9	2.5	1.5
ø3.2	ø6	KQ2H23-06A1	7.1	6.7	9.5	10.4	9.7	12	27.6	13.3	13.3	3.4	2.9	2.5	1.8
ø4	ø6	KQ2H04-06A1	8.2	7.7	10	10.4	9.7	12	27.6	13.3	13.3	5.6	5.6	3	2
ø6	ø8	KQ2H06-08A1	10.4	9.7	12	13.2	13	—	28.5	13.3	14.2	13.1	10.4	4.5	2.9



Release button dimensions



Applicable tubing O.D.: ø3.2, ø4, ø6



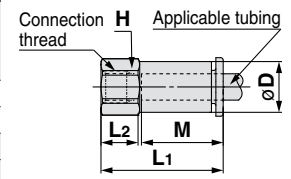
Dimensions

Female Connector: KQ2F

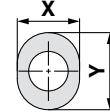


Applicable tubing O.D. [mm]	Connection thread M, Rc	Model	H (Width across flats)	øD	Release button dimensions		L1	L2	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
ø3.2	M3 x 0.5	KQ2F23-M3□1	7	6.9	6.7	9.5	17.3	5.7	13.3	3	2.5	2.5	3.1
	M5 x 0.8	KQ2F23-M5□1	7	6.9	6.7	9.5	19.7	5.7	13.3	3	2.5	2.5	3.3
ø4	M3 x 0.5	KQ2F04-M3□1	8	7.9	7.7	10	16.5	5.7	13.3	4	4	2.5	4.1
	M5 x 0.8	KQ2F04-M5□1	8	7.9	7.7	10	19.6	5.7	13.3	4	4	3	4.5
	1/8	KQ2F04-01□1	14	7.9	7.7	10	24.1	8.5	13.3	5.6	4	3	12
ø6	1/4	KQ2F04-02□1	17	7.9	7.7	10	29	12.9	13.3	5.6	4	3	21.5
	M5 x 0.8	KQ2F06-M5□1	10	9.9	9.7	12	17.6	5.7	13.3	10	10	4.1	5.5
	1/8	KQ2F06-01□1	14	9.9	9.7	12	23.6	8.5	13.3	13.1	10.4	4.5	12.2
	1/4	KQ2F06-02□1	17	9.9	9.7	12	28.5	12.9	13.3	13.1	10.4	4.5	21.6
	3/8	KQ2F06-03□1	19	9.9	9.7	12	29.9	12.7	13.3	13.1	10.4	4.5	22.7

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



Release button dimensions

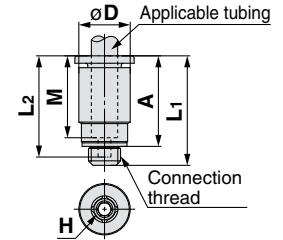


Hexagon Socket Head Male Connector: KQ2S (Gasket seal)

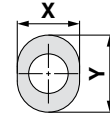


Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	øD	Release button dimensions		L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
ø3.2	M3 x 0.5	KQ2S23-M3G1	1.5	7	6.7	9.5	17.1	16.1	14.5	13.3	1.4	1.4	1.5	2.2
	M5 x 0.8	KQ2S23-M5□1	2	7	6.7	9.5	17.5	16.3	14.5	13.3	2.5	2.5	2	2.6
ø4	M3 x 0.5	KQ2S04-M3G1	1.5	8	7.7	10	17.1	16.1	14.5	13.3	1.4	1.4	1.5	2.3
	M5 x 0.8	KQ2S04-M5□1	2.5	8	7.7	10	18.6	17.8	15.6	13.3	4	4	2.5	3
	M6 x 1.0	KQ2S04-M6□1	3	8	7.7	10	18.5	17.8	14.5	13.3	4	4	3.1	4.1
ø6	M5 x 0.8	KQ2S06-M5□1	2.5	10	9.7	12	19.5	17.8	16.5	13.3	4	4	2.5	3.5
	M6 x 1.0	KQ2S06-M6□1	3	10	9.7	12	19.1	18.1	15.1	13.3	4	4	3.1	5.1

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



Release button dimensions



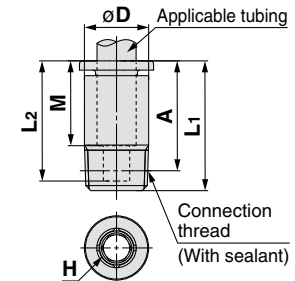
Hexagon Socket Head Male Connector: KQ2S (Sealant)



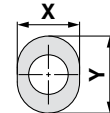
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD	Release button dimensions		L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
ø4	1/8	KQ2S04-01□S1	3	9.8	7.7	10	19.7	18.8	16.6	13.3	4.1	3.6	3.1	8.1
ø6	1/8	KQ2S06-01□S1	4	10	9.7	12	20	18.8	16.9	13.3	10	9.9	4.1	6.5
	1/4	KQ2S06-02□S1	4	13.8	9.7	12	19.8	18.8	15.1	13.3	10.7	10	4.1	13.4

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

*1 Reference dimensions after installation of R thread



Release button dimensions



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

KQ2 Series

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

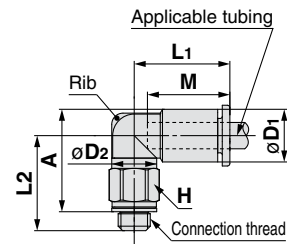
Dimensions

Male Elbow: KQ2L (Gasket seal)

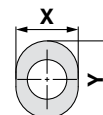


Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	Release button dimensions		L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib		
				∅D1	X					Y	∅D2				Nylon	Urethane
∅3.2	M3 x 0.5	KQ2L23-M3G1	7	7.1	6.7	9.5	7	15.3	13.8	14.8	13.3	0.8	0.8	1.2	2.7	●
	M5 x 0.8	KQ2L23-M5□1	7	7.1	6.7	9.5	7	15.3	14.3	14.9	13.3	2.6	2.2	2.5	3.1	●
∅4	M3 x 0.5	KQ2L04-M3G1	7	8.2	7.7	10	7	15.4	14.3	15.8	13.3	0.8	0.8	1.2	2.7	●
	M5 x 0.8	KQ2L04-M5□1	7	8.2	7.7	10	7	15.4	14.8	15.9	13.3	3.5	3.5	2.5	3.1	●
	M6 x 1.0	KQ2L04-M6□1	8	8.2	7.7	10	7	15.4	15.8	15.9	13.3	3.5	3.5	2.5	4.2	●
∅6	M5 x 0.8	KQ2L06-M5□1	7	10.4	9.7	12	7	14.5	16.5	18.7	13.3	3.5	3.5	2.5	3.2	●
	M6 x 1.0	KQ2L06-M6□1	8	10.4	9.7	12	7	14.5	17.5	18.7	13.3	3.5	3.5	2.5	4.3	●

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



Release button dimensions



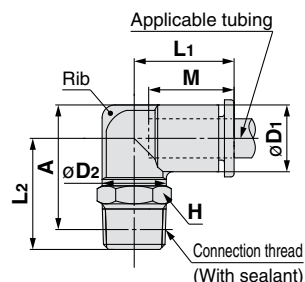
Male Elbow: KQ2L (Sealant)



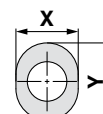
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	∅D1	Release button dimensions		L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib	
					X	Y					∅D2	Nylon				Urethane
∅3.2	1/8	KQ2L23-01□S1	10	7.1	6.7	9.5	10	14.5	16.7	17.2	13.3	3	2.5	2.5	4.6	—
	1/4	KQ2L23-02□S1	14	7.1	6.7	9.5	10	14.5	21.2	20.1	13.3	3	2.5	2.5	14.1	—
∅4	1/8	KQ2L04-01□S1	10	8.2	7.7	10	10	14.8	16.2	17.2	13.3	4.6	3.3	3	4.8	●
	1/4	KQ2L04-02□S1	14	8.2	7.7	10	10	14.8	21.7	21.1	13.3	4.6	3.3	3	14.3	●
∅6	1/8	KQ2L06-01□S1	10	10.4	9.7	12	10	15.5	17.3	19.4	13.3	11.4	9	4.5	5.2	—
	1/4	KQ2L06-02□S1	14	10.4	9.7	12	10	15.5	22.8	23.3	13.3	11.4	9	4.5	14.7	—
	3/8	KQ2L06-03□S1	17	10.4	9.7	12	10	15.5	24.1	24.2	13.3	11.4	9	4.5	26.5	—

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

*1 Reference dimensions after installation of R thread



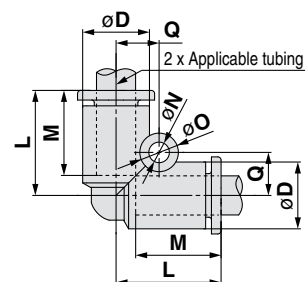
Release button dimensions



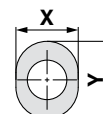
Union Elbow: KQ2L



Applicable tubing O.D. [mm]	Model	∅D	Release button dimensions		L	Q	M	∅O	∅N	Effective area [mm ²]		Min. port size	Weight [g]
			X	Y						Nylon	Urethane		
∅3.2	KQ2L23-00A1	7.1	6.7	9.5	14.9	5.4	13.3	6	3.2	3	2.5	2.5	1.6
∅4	KQ2L04-00A1	8.2	7.7	10	15.3	5.7	13.3	6	3.2	4.2	4.2	3	1.9
∅6	KQ2L06-00A1	10.4	9.7	12	16.3	6.8	13.3	6	3.2	11.4	9	4.5	2.7



Release button dimensions



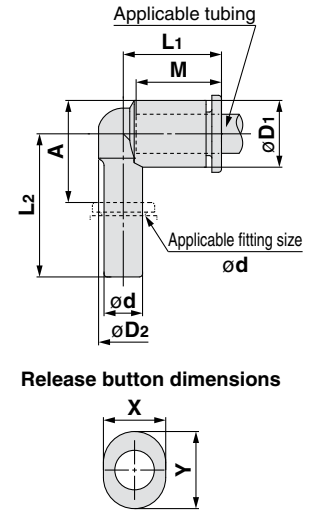


Dimensions

Plug-in Elbow: KQ2L



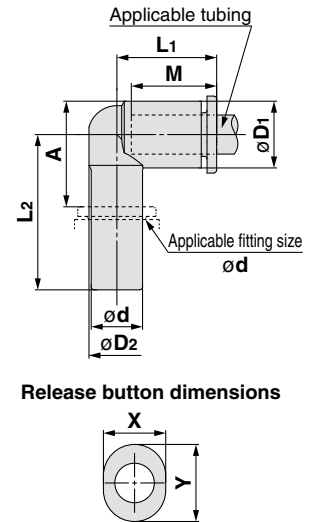
Applicable tubing O.D. [mm]	Applicable fitting size ϕd	Model	$\phi D1$	Release button dimensions		$\phi D2$	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
				X	Y						Nylon	Urethane		
$\phi 3.2$	$\phi 3.2$	KQ2L23-99A1	7.1	6.7	9.5	6.4	14.4	20.9	11.1	13.3	3	2.5	2.2	0.9
$\phi 4$	$\phi 4$	KQ2L04-99A1	8.2	7.7	10	7.2	14.5	21.1	11.9	13.3	4.2	4.2	2.5	1.2
$\phi 6$	$\phi 6$	KQ2L06-99A1	10.4	9.7	12	8	15.3	22.3	14.2	13.3	9	9	4	1.8



Reducer Elbow: KQ2L



Applicable tubing O.D. [mm]	Applicable fitting size ϕd	Model	$\phi D1$	Release button dimensions		$\phi D2$	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
				X	Y						Nylon	Urethane		
$\phi 3.2$	$\phi 4$	KQ2L23-04A1	7.1	6.7	9.5	6.4	14.5	23.9	14.1	13.3	3	2.5	2.5	1.1
	$\phi 6$	KQ2L23-06A1	7.1	6.7	9.5	6.4	14.5	24.1	14.3	13.3	3	2.5	2.5	1.3
$\phi 4$	$\phi 6$	KQ2L04-06A1	8.2	7.7	10	7.2	14.8	24.6	15.4	13.3	4.2	4.2	3	1.5
	$\phi 8$	KQ2L04-08A1	8.2	7.7	10	7.2	14.8	29.5	19.4	13.3	4.2	4.2	3	1.8
$\phi 6$	$\phi 8$	KQ2L06-08A1	10.4	9.7	12	9	15.5	24.2	15.2	13.3	11.4	9	4.5	2.1
	$\phi 10$	KQ2L06-10A1	10.4	9.7	12	9	15.5	31.6	21.2	13.3	11.4	9	4.5	2.7



Metric Size M, R, Rc

Sealant/Gasket Seal
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

KQ2 Series

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

Dimensions

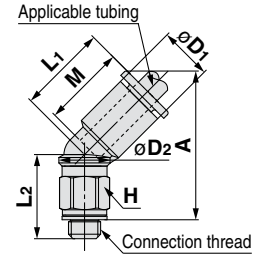
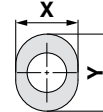
45° Male Elbow: KQ2K (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø4	M5 x 0.8	KQ2K04-M5□1	7	8.2	7.7	10	8	14.4	13.1	22.8	13.3	3.4	3.4	2.5	3
	M6 x 1.0	KQ2K04-M6□1	8	8.2	7.7	10	8	14.4	14.1	22.8	13.3	3.4	3.4	2.5	4.1
ø6	M5 x 0.8	KQ2K06-M5□1	7	10.4	9.7	12	8	14.4	17	27.4	13.3	3.4	3.4	2.5	3.5
	M6 x 1.0	KQ2K06-M6□1	8	10.4	9.7	12	8	14.4	18	27.4	13.3	3.4	3.4	2.5	4.5

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

Release button dimensions



45° Male Elbow: KQ2K (Sealant)



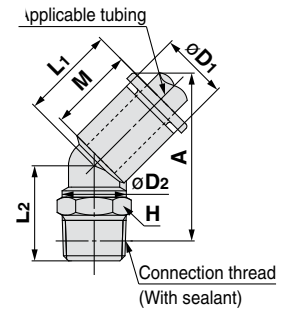
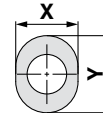
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø4	1/8	KQ2K04-01□S1	10	8.2	7.7	10	10	14.4	12.7	22.3	13.3	4.8	3.4	3	4.6
	1/4	KQ2K04-02□S1	14	8.2	7.7	10	10	14.4	17.2	25.2	13.3	4.8	3.4	3	14.1
ø6	1/8	KQ2K06-01□S1	10	10.4	9.7	12	10	14.7	14.8	25.3	13.3	8.7	6.9	4.5	5
	1/4	KQ2K06-02□S1	14	10.4	9.7	12	10	14.7	19.3	28.2	13.3	8.7	6.9	4.5	14.5
	3/8	KQ2K06-03□S1	17	10.4	9.7	12	10	14.7	20.6	29.1	13.3	8.7	6.9	4.5	26.2

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

*1 Reference dimensions after installation of R thread

Release button dimensions

12



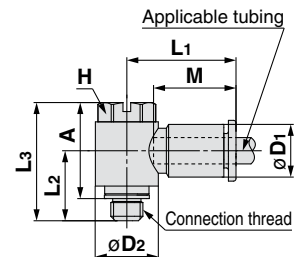
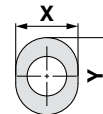
Universal Male Elbow: KQ2V (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø4	M5 x 0.8	KQ2V04-M5□1	8	8.2	7.7	10	9.8	17.5	10.9	18.4	14.9	13.3	2.9	2.9	2.5	5.4
ø6	M5 x 0.8	KQ2V06-M5□1	8	10.4	9.7	12	9.8	18.3	10.9	18.4	14.9	13.3	3.8	3.8	2.5	5.7

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

Release button dimensions



Universal Male Elbow: KQ2V (Sealant)

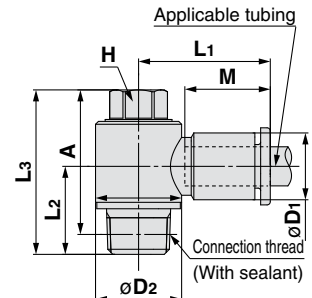
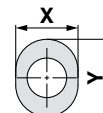


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø4	1/8	KQ2V04-01□S1	8	8.2	7.7	10	13.4	19.3	13.7	25.6	22.5	13.3	2.9	2.9	3	13.2
	1/8	KQ2V06-01□S1	8	10.4	9.7	12	13.4	20.5	13.7	25.6	22.5	13.3	7.5	5.9	4.5	13.5
ø6	1/4	KQ2V06-02□S1	10	10.4	9.7	12	15.3	19.9	17.9	30.5	25.8	13.3	7.5	5.9	4.5	24.9

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

*1 Reference dimensions after installation of R thread

Release button dimensions





Dimensions

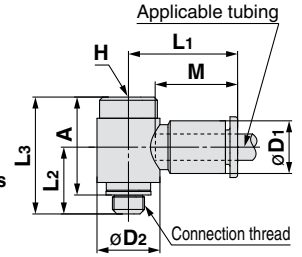
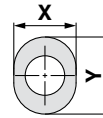
Hexagon Socket Head Universal Male Elbow: KQ2VS (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø4	M5 x 0.8	KQ2VS04-M5□1	4	8.2	7.7	10	9.8	17.5	10.4	18.2	15.2	13.3	2.9	2.9	2.5	5.3
ø6	M5 x 0.8	KQ2VS06-M5□1	4	10.4	9.7	12	9.8	18.3	10.4	18.2	15.2	13.3	3.8	3.8	2.5	5.6

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

Release button dimensions



Hexagon Socket Head Universal Male Elbow: KQ2VS (Sealant)

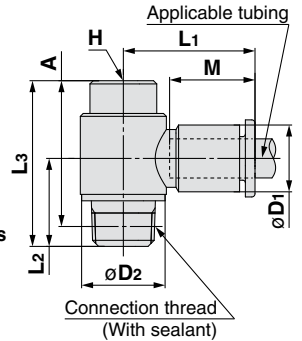
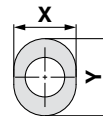


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø4	1/8	KQ2VS04-01□S1	6	8.2	7.7	10	13.4	19.3	13.7	25.8	22.7	13.3	2.9	2.9	3	13.2
ø6	1/8	KQ2VS06-01□S1	6	10.4	9.7	12	13.4	20.5	13.7	25.8	22.7	13.3	7.5	5.9	4.5	13.5
	1/4	KQ2VS06-02□S1	6	10.4	9.7	12	15.3	19.9	17.9	26.5	21.8	13.3	7.5	5.9	4.5	20.8

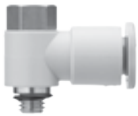
□: A (Brass), N (Brass + Electroless nickel plating)

*1 Reference dimensions after installation of R thread

Release button dimensions



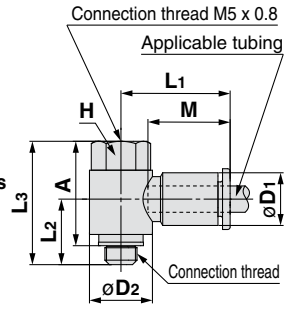
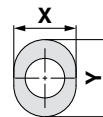
Universal Female Elbow: KQ2VF (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø4	M5 x 0.8	KQ2VF04-M5□1	8	8.2	7.7	10	9.8	17.5	10.2	19.2	16.2	13.3	2.9	2.9	2.5	5.5
ø6	M5 x 0.8	KQ2VF06-M5□1	8	10.4	9.7	12	9.8	18.3	10.2	19.2	16.2	13.3	3.8	3.8	2.5	5.8

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

Release button dimensions



Universal Female Elbow: KQ2VF (Sealant)

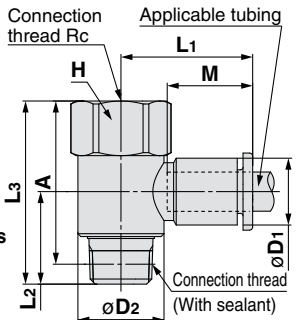
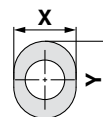


Applicable tubing O.D. [mm]	Connection thread Rc, R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø4	1/8	KQ2VF04-01□S1	14	8.2	7.7	10	13.4	19.3	14.4	28.5	25.4	13.3	2.9	2.9	3	17.3
ø6	1/8	KQ2VF06-01□S1	14	10.4	9.7	12	13.4	20.5	14.4	28.5	25.4	13.3	7.5	5.9	4.5	17.6
	1/4	KQ2VF06-02□S1	17	10.4	9.7	12	17.6	21.2	19.4	37.9	33.2	13.3	7.5	5.9	4.5	37

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

*1 Reference dimensions after installation of R thread

Release button dimensions



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

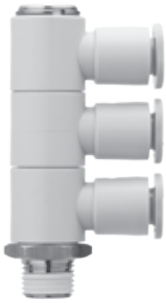
Inch Size Uni

KQ2 Series

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

Dimensions

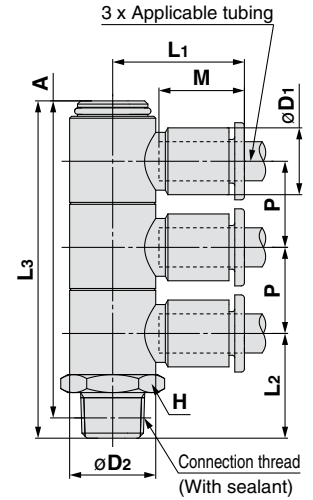
Triple Universal Male Elbow: KQ2VT (Sealant)



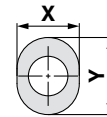
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	P	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
					ø4	1/8								KQ2VT04-01□S1	14		
1/4	KQ2VT04-02□S1	14	8.2	7.7		10	13.4	19.3	20.7	56.9	52.2	13.3	13.4	2.9	2.9	3	32.9
3/8	KQ2VT04-03□S1	17	8.2	7.7		10	13.4	19.3	22.1	58.3	53.2	13.3	13.4	2.9	2.9	3	44.8
ø6	1/8	KQ2VT06-01□S1	14	10.4	9.7	12	13.4	20.5	16.3	52.5	49.4	13.3	13.4	7.5	5.9	4.5	26.2
	1/4	KQ2VT06-02□S1	14	10.4	9.7	12	13.4	20.5	20.7	56.9	52.2	13.3	13.4	7.5	5.9	4.5	33.9
	3/8	KQ2VT06-03□S1	17	10.4	9.7	12	13.4	20.5	22.1	58.3	53.2	13.3	13.4	7.5	5.9	4.5	45.8

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

*1 Reference dimensions after installation of R thread



Release button dimensions



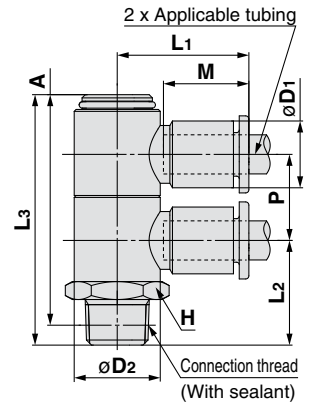
Double Universal Male Elbow: KQ2VD (Sealant)



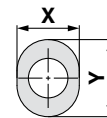
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	P	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
					ø4	1/8								KQ2VD04-01□S1	14		
1/4	KQ2VD04-02□S1	14	8.2	7.7		10	13.4	19.3	20.7	43.4	38.7	13.3	13.4	2.9	2.9	3	27.4
3/8	KQ2VD04-03□S1	17	8.2	7.7		10	13.4	19.3	22.1	44.8	39.7	13.3	13.4	2.9	2.9	3	39.3
ø6	1/8	KQ2VD06-01□S1	14	10.4	9.7	12	13.4	20.5	16.3	39	35.9	13.3	13.4	7.5	5.9	4.5	20.3
	1/4	KQ2VD06-02□S1	14	10.4	9.7	12	13.4	20.5	20.7	43.4	38.7	13.3	13.4	7.5	5.9	4.5	28
	3/8	KQ2VD06-03□S1	17	10.4	9.7	12	13.4	20.5	22.1	44.8	39.7	13.3	13.4	7.5	5.9	4.5	39.9

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

*1 Reference dimensions after installation of R thread



Release button dimensions



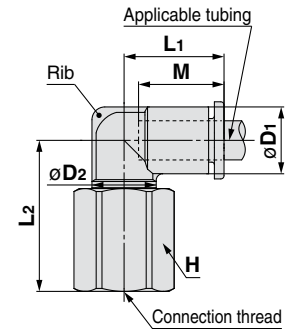
Dimensions

Female Elbow: KQ2LF

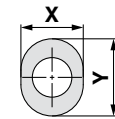


Applicable tubing O.D. [mm]	Connection thread M, Rc	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y					Nylon	Urethane			
ø4	M5 x 0.8	KQ2LF04-M5□1	8	8.2	7.7	10	7	15.4	15.3	13.3	3.5	3.5	2.5	4.7	●
	M6 x 1.0	KQ2LF04-M6□1	8	8.2	7.7	10	7	15.4	16.1	13.3	3.5	3.5	2.5	4.6	●
	1/8	KQ2LF04-01□1	14	8.2	7.7	10	10	14.8	22.4	13.3	4.2	4.2	3	17.6	—
	1/4	KQ2LF04-02□1	17	8.2	7.7	10	10	14.8	26.9	13.3	4.2	4.2	3	29.6	—
ø6	M5 x 0.8	KQ2LF06-M5□1	8	10.4	9.7	12	7	14.5	17	13.3	3.5	3.5	2.5	4.8	●
	M6 x 1.0	KQ2LF06-M6□1	8	10.4	9.7	12	7	14.5	17.8	13.3	3.5	3.5	2.5	4.7	●
	1/8	KQ2LF06-01□1	14	10.4	9.7	12	10	15.5	23.5	13.3	11.4	9	4.5	18	—
	1/4	KQ2LF06-02□1	17	10.4	9.7	12	10	15.5	28	13.3	11.4	9	4.5	30.1	—
	3/8	KQ2LF06-03□1	19	10.4	9.7	12	10	15.5	28.5	13.3	11.4	9	4.5	34	—

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



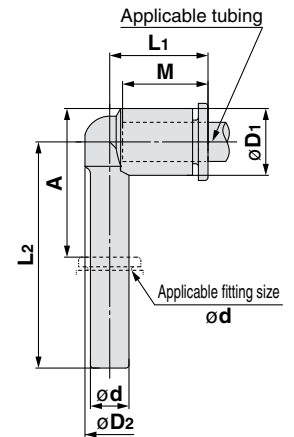
Release button dimensions



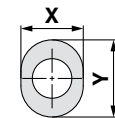
Extended Plug-in Elbow: KQ2W



Applicable tubing O.D. [mm]	Applicable fitting size ød	Model	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
				X	Y						Nylon	Urethane		
ø3.2	ø3.2	KQ2W23-99A1	7.1	6.7	9.5	6.4	14.4	30.5	20.8	13.3	3	2.5	2.5	1
ø4	ø4	KQ2W04-99A1	8.2	7.7	10	7.2	14.5	31.8	22.6	13.3	4.2	4.2	3	1.3
ø6	ø6	KQ2W06-99A1	10.4	9.7	12	8	15.3	35.2	27.1	13.3	9	9	4	2



Release button dimensions



Metric Size M, R, Rc

Sealant/Gasket Seal
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

KQ2 Series

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

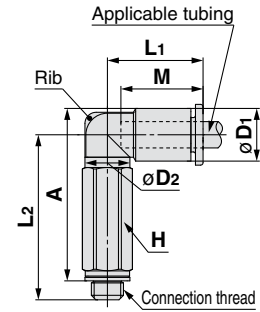
Dimensions

Extended Male Elbow: KQ2W (Gasket seal)

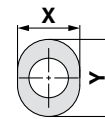


Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø3.2	M3 x 0.5	KQ2W23-M3G1	7	7.1	6.7	9.5	7	15.3	22.5	23.4	13.3	0.8	0.8	1.2	4.8	●
	M5 x 0.8	KQ2W23-M5□1	7	7.1	6.7	9.5	7	15.3	25.2	25.7	13.3	2.8	2.4	2.5	5.8	●
ø4	M3 x 0.5	KQ2W04-M3G1	7	8.2	7.7	10	7	15.4	23	24.5	13.3	0.8	0.8	1.2	4.9	●
	M5 x 0.8	KQ2W04-M5□1	7	8.2	7.7	10	7	15.4	25.7	26.8	13.3	3	3	2.5	5.8	●
ø6	M5 x 0.8	KQ2W06-M5□1	7	10.4	9.7	12	7	14.5	27.4	29.6	13.3	3	3	2.5	5.9	●

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



Release button dimensions



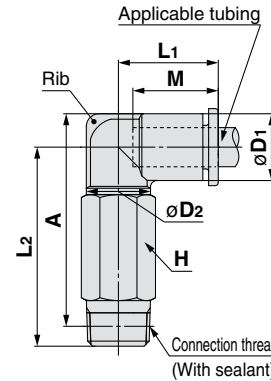
Extended Male Elbow: KQ2W (Sealant)



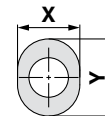
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø3.2	1/8	KQ2W23-01□S1	10	7.1	6.7	9.5	10	14.5	30.3	30.8	13.3	2.8	2.4	2.5	10.8	—
	1/4	KQ2W23-02□S1	14	7.1	6.7	9.5	10	14.5	32.8	31.7	13.3	2.8	2.4	2.5	27.3	—
ø4	1/8	KQ2W04-01□S1	10	8.2	7.7	10	10	14.8	29.9	30.9	13.3	4	4	3	11	●
	1/4	KQ2W04-02□S1	14	8.2	7.7	10	10	14.8	33.3	32.7	13.3	4	4	3	27.5	●
ø6	1/8	KQ2W06-01□S1	10	10.4	9.7	12	10	15.5	31	33.1	13.3	10.9	8.6	4.5	11.4	—
	1/4	KQ2W06-02□S1	14	10.4	9.7	12	10	15.5	34.4	34.9	13.3	10.9	8.6	4.5	28	—
	3/8	KQ2W06-03□S1	17	10.4	9.7	12	10	15.5	35.7	35.8	13.3	10.9	8.6	4.5	47.4	—

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

*1 Reference dimensions after installation of R thread



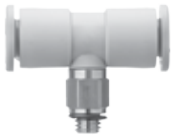
Release button dimensions





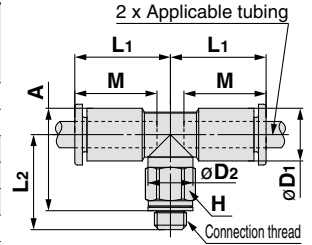
Dimensions

Male Branch Tee: KQ2T (Gasket seal)

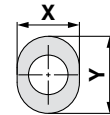


Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø3.2	M3 x 0.5	KQ2T23-M3G1	7	7.1	6.7	9.5	7	15.3	13.8	14.7	13.3	0.9	0.9	1.2	3.1
	M5 x 0.8	KQ2T23-M5□1	7	7.1	6.7	9.5	7	15.3	14.3	14.8	13.3	3.2	2.7	2.5	3.5
ø4	M3 x 0.5	KQ2T04-M3G1	7	8.2	7.7	10	7	15.4	14.3	15.8	13.3	0.9	0.9	1.2	3.4
	M5 x 0.8	KQ2T04-M5□1	7	8.2	7.7	10	7	15.4	14.8	15.9	13.3	4.5	4.5	2.5	3.9
ø6	M6 x 1.0	KQ2T04-M6□1	8	8.2	7.7	10	7	15.4	15.8	15.9	13.3	4.5	4.5	2.5	4.9
	M5 x 0.8	KQ2T06-M5□1	7	10.4	9.7	12	7	14.5	16.5	18.7	13.3	4.5	4.5	2.5	4.4
ø6	M6 x 1.0	KQ2T06-M6□1	8	10.4	9.7	12	7	14.5	17.5	18.7	13.3	4.5	4.5	2.5	5.4

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



Release button dimensions



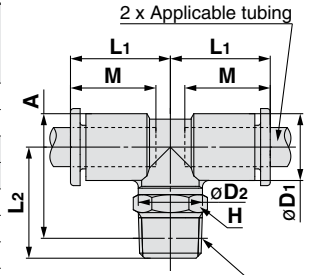
Male Branch Tee: KQ2T (Sealant)



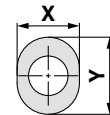
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø3.2	1/8	KQ2T23-01□S1	10	7.1	6.7	9.5	10	14.5	16.6	17.1	13.3	3.4	2.9	2.5	5.2
	1/4	KQ2T23-02□S1	14	7.1	6.7	9.5	10	14.5	21.1	20	13.3	3.4	2.9	2.5	14.7
ø4	1/8	KQ2T04-01□S1	10	8.2	7.7	10	10	14.8	16.2	17.2	13.3	6	4.1	3	5.5
	1/4	KQ2T04-02□S1	14	8.2	7.7	10	10	14.8	21.7	21.1	13.3	6	4.1	3	15
ø6	1/8	KQ2T06-01□S1	10	10.4	9.7	12	10	15.5	17.3	19.4	13.3	13.9	11	4.5	6.1
	1/4	KQ2T06-02□S1	14	10.4	9.7	12	10	15.5	22.8	23.3	13.3	13.9	11	4.5	15.6
	3/8	KQ2T06-03□S1	17	10.4	9.7	12	10	15.5	24.1	24.2	13.3	13.9	11	4.5	27.4

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

*1 Reference dimensions after installation of R thread



Release button dimensions



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

KQ2 Series

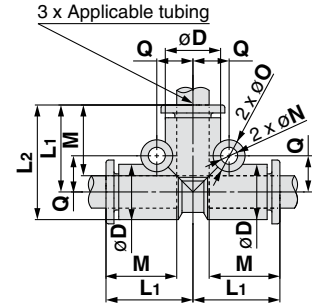
Oval Type Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

Dimensions

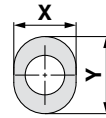
Union Tee: KQ2T



Applicable tubing O.D. [mm]	Model	øD	Release button dimensions		L1	L2	M	Q	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]
			X	Y							Nylon	Urethane		
ø3.2	KQ2T23-00A1	7.1	6.7	9.5	14.9	18.5	13.3	5.4	6	3.2	3.4	2.9	2.5	2.3
ø4	KQ2T04-00A1	8.2	7.7	10	15.3	19.4	13.3	5.7	6	3.2	6.4	4.4	3	2.8
ø6	KQ2T06-00A1	10.4	9.7	12	16.3	21.5	13.3	6.8	6	3.2	13.4	10.6	4.5	3.8



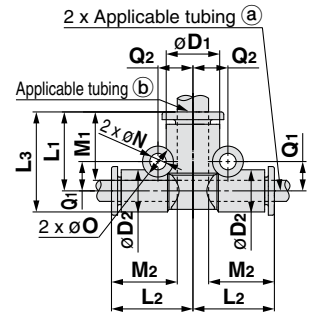
Release button dimensions



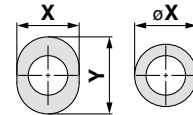
Different Diameter Tee: KQ2T



Applicable tubing O.D. [mm]		Model	Release button dimensions (a)		Release button dimensions (b)		L1	L2	L3	M1	M2	Q1	Q2	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]		
(a)	(b)		øD1	øX (X)	Y	øD2										øX (X)	Y			Nylon	Urethane
ø3.2	ø4	KQ2T23-04A1	8.2	6.7	9.5	7.1	7.7	10	14.9	15.3	18.5	13.3	13.3	5.4	5.8	6	3.2	3.8	3.5	2.5	2.6
ø4	ø6	KQ2T04-06A1	10.4	7.7	10	8.2	9.7	12	15.3	16.3	19.4	13.3	13.3	5.7	6.8	6	3.2	7.1	6.6	3	3.3
ø6	ø8	KQ2T06-08A1	13.2	9.7	12	10.4	13	—	17.2	17.3	22.4	14.2	13.3	7.3	8.4	8	4.2	16.4	16.4	4.5	5.3



Release button dimensions

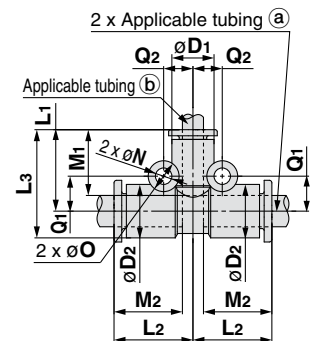


Applicable tubing O.D.:
ø3.2, ø4, ø6

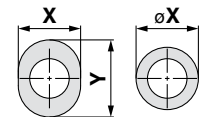
Different Diameter Tee: KQ2T



Applicable tubing O.D. [mm]		Model	Release button dimensions (a)		Release button dimensions (b)		L1	L2	L3	M1	M2	Q1	Q2	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]		
(a)	(b)		øD1	øX (X)	Y	øD2										øX (X)	Y			Nylon	Urethane
ø6	ø4	KQ2T06-04A1	8.2	9.7	12	10.4	7.7	10	16.3	15.3	21.5	13.3	13.3	6.8	5.7	6	3.2	6.4	4.4	3	3.5
ø8	ø6	KQ2T08-06A1	10.4	13	—	13.2	9.7	12	17.3	17.2	23.9	13.3	14.2	8.4	7.3	8	4.2	13.4	10.6	4.5	6



Release button dimensions



Applicable tubing O.D.:
ø4, ø6

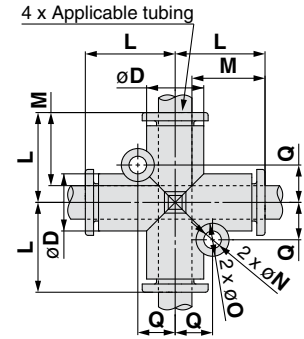


Dimensions

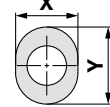
Cross: KQ2TW



Applicable tubing O.D. [mm]	Model	øD	Release button dimensions		L	Q	M	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]
			X	Y						Nylon	Urethane		
ø4	KQ2TW04-00A1	8.2	7.7	10	15.3	5.7	13.3	6	3.2	6.4	4.4	3	3.5
ø6	KQ2TW06-00A1	10.4	9.7	12	16.3	6.8	13.3	6	3.2	13.4	10.6	4.5	4.9



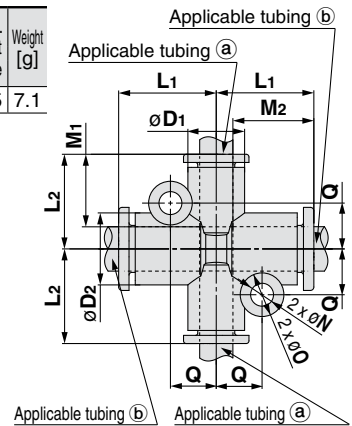
Release button dimensions



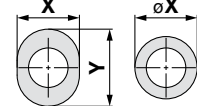
Different Diameter Cross: KQ2TX



Applicable tubing O.D. [mm]		Model	øD1	Release button dimensions (a)		Release button dimensions (b)		L1	L2	Q	M1	M2	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]	
(a)	(b)			X	Y	øX (X)	Y								Nylon	Urethane			
ø6	ø8	KQ2TX06-08A1	10.4	9.7	12	13.2	13	—	17.2	17.3	8.4	13.3	14.2	8	4.2	13.4	10.6	4.5	7.1



Release button dimensions

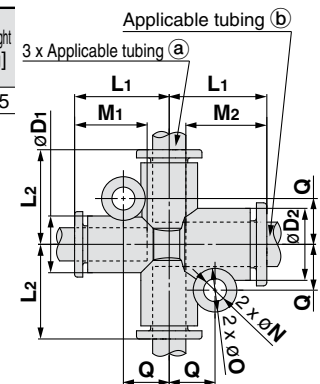


Applicable tubing O.D.: ø6

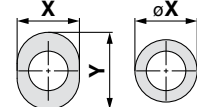
Different Diameter Cross: KQ2TY



Applicable tubing O.D. [mm]		Model	øD1	Release button dimensions (a)		Release button dimensions (b)		L1	L2	Q	M1	M2	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]	
(a)	(b)			X	Y	øX (X)	Y								Nylon	Urethane			
ø6	ø8	KQ2TY06-08A1	10.4	9.7	12	13.2	13	—	17.3	17.2	8.4	13.3	14.2	8	4.2	13.4	10.6	4.5	6.5



Release button dimensions



Applicable tubing O.D.: ø6

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

KQ2 Series

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

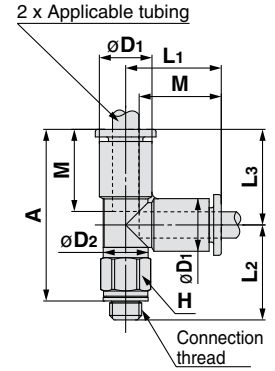
Dimensions

Male Run Tee: KQ2Y (Gasket seal)

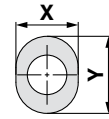


Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø3.2	M3 x 0.5	KQ2Y23-M3G1	7	7.1	6.7	9.5	7	15.3	13.8	15.3	26.5	13.3	0.9	0.9	1.2	3.1
	M5 x 0.8	KQ2Y23-M5□1	7	7.1	6.7	9.5	7	15.3	14.3	15.3	26.6	13.3	3.2	2.7	2.5	3.5
ø4	M3 x 0.5	KQ2Y04-M3G1	7	8.2	7.7	10	7	15.4	14.3	15.4	27.1	13.3	0.9	0.9	1.2	3.4
	M5 x 0.8	KQ2Y04-M5□1	7	8.2	7.7	10	7	15.4	14.8	15.4	27.2	13.3	4.5	4.5	2.5	3.9
ø6	M6 x 1.0	KQ2Y04-M6□1	8	8.2	7.7	10	7	15.4	15.8	15.4	27.2	13.3	4.5	4.5	2.5	4.9
	M5 x 0.8	KQ2Y06-M5□1	7	10.4	9.7	12	7	16.3	16.5	16.3	29.8	13.3	4.5	4.5	2.5	4.6
ø6	M6 x 1.0	KQ2Y06-M6□1	8	10.4	9.7	12	7	16.3	17.5	16.3	29.8	13.3	4.5	4.5	2.5	5.7

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



Release button dimensions



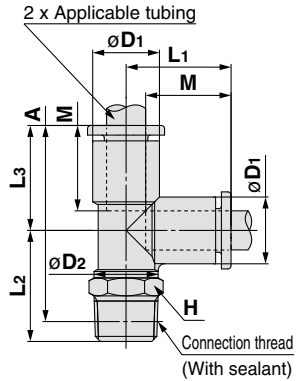
Male Run Tee: KQ2Y (Sealant)



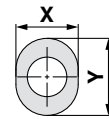
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø3.2	1/8	KQ2Y23-01□S1	10	7.1	6.7	9.5	10	14.9	16.6	14.9	28.5	13.3	3.4	2.9	2.5	5.3
	1/4	KQ2Y23-02□S1	14	7.1	6.7	9.5	10	14.9	21.1	14.9	31.4	13.3	3.4	2.9	2.5	14.7
ø4	1/8	KQ2Y04-01□S1	10	8.2	7.7	10	10	15.3	16.2	15.3	28.4	13.3	6.4	4.4	3	5.6
	1/4	KQ2Y04-02□S1	14	8.2	7.7	10	10	15.3	21.7	15.3	32.3	13.3	6.4	4.4	3	15
ø6	1/8	KQ2Y06-01□S1	10	10.4	9.7	12	10	16.3	17.3	16.3	30.5	13.3	13.4	10.6	4.5	6.2
	1/4	KQ2Y06-02□S1	14	10.4	9.7	12	10	16.3	22.8	16.3	34.4	13.3	13.4	10.6	4.5	15.8
ø6	3/8	KQ2Y06-03□S1	17	10.4	9.7	12	10	16.3	24.1	16.3	35.3	13.3	13.4	10.6	4.5	27.5

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

*1 Reference dimensions after installation of R thread



Release button dimensions



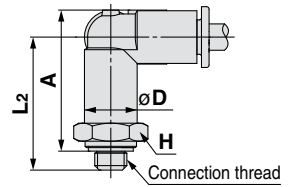
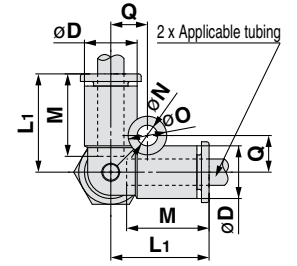
Dimensions

Male Delta Union: KQ2D (Gasket seal)

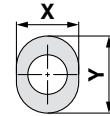


Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	øD	Release button dimensions			L1	L2	A	M	Q	øO	øN	Effective area (mm ²)		Min. port size	Weight [g]
					X	Y									Nylon	Urethane		
ø4	M5 x 0.8	KQ2D04-M5□1	10	8.2	7.7	10	15.8	20.7	21.8	13.3	5.7	6	3.2	2.2	2.2	1.8	6.6	
	M6 x 1.0	KQ2D04-M6□1	10	8.2	7.7	10	15.8	21.7	21.8	13.3	5.7	6	3.2	4.3	4.3	3	6.4	
ø6	M5 x 0.8	KQ2D06-M5□1	12	10.4	9.7	12	16.8	21.7	23.9	13.3	6.7	6	3.2	4.3	4.3	1.8	9.8	
	M6 x 1.0	KQ2D06-M6□1	12	10.4	9.7	12	16.8	22.7	23.9	13.3	6.7	6	3.2	4.3	4.3	3	9.7	

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



Release button dimensions



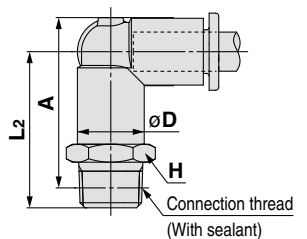
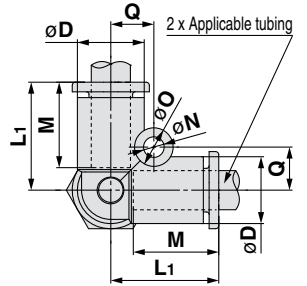
Male Delta Union: KQ2D (Sealant)



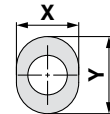
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD	Release button dimensions			L1	L2	A*1	M	Q	øO	øN	Effective area (mm ²)		Min. port size	Weight [g]
					X	Y									Nylon	Urethane		
ø4	1/8	KQ2D04-01□S1	10	8.2	7.7	10	15.8	23.3	24.3	13.3	5.7	6	3.2	6	6	3.6	9.2	
	1/4	KQ2D04-02□S1	14	8.2	7.7	10	15.8	27.7	27.1	13.3	5.7	6	3.2	6	6	3.6	19	
ø6	1/8	KQ2D06-01□S1	12	10.4	9.7	12	16.8	24.3	26.4	13.3	6.7	6	3.2	13.9	11	5.4	10.2	
	1/4	KQ2D06-02□S1	14	10.4	9.7	12	16.8	28.7	29.2	13.3	6.7	6	3.2	13.9	11	5.4	19.1	
	3/8	KQ2D06-03□S1	17	10.4	9.7	12	16.8	30.1	30.2	13.3	6.7	6	3.2	13.9	11	5.4	31	

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

*1 Reference dimensions after installation of R thread



Release button dimensions



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

Metric Size Uni

Gasket Seal
Inch Size Uni

KQ2 Series

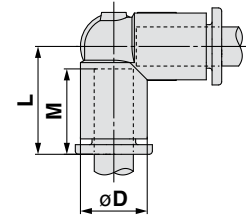
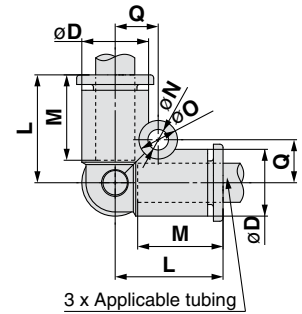
Oval Type Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

Dimensions

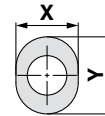
Delta Union: KQ2D



Applicable tubing O.D. [mm]	Model	øD	Release button dimensions		L	M	Q	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]
			X	Y						Nylon	Urethane		
ø4	KQ2D04-00A1	8.2	7.7	10	15.8	13.3	5.7	6	3.2	6	4.1	3	2.7
ø6	KQ2D06-00A1	10.4	9.7	12	16.8	13.3	6.7	6	3.2	13.9	11	4.5	3.8



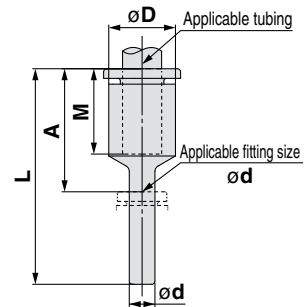
Release button dimensions



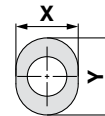
Plug-in Reducer: KQ2R



Applicable tubing O.D. [mm]	Applicable fitting size ød	Model	øD	Release button dimensions		L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
				X	Y				Nylon	Urethane		
ø3.2	ø4	KQ2R23-04A1	7.1	6.7	9.5	28.6	15.3	13.3	3.4	2.9	2.5	0.8
	ø6	KQ2R23-06A1	7.1	6.7	9.5	29.1	15.8	13.3	3.4	2.9	2.5	1
ø4	ø6	KQ2R04-06A1	8.2	7.7	10	28.6	15.3	13.3	5.6	4	3	1.1
	ø8	KQ2R04-08A1	8.2	7.7	10	29.6	15.4	13.3	5.6	4	3	1.3
	ø10	KQ2R04-10A1	10.4	7.7	10	31.7	16.1	13.3	5.6	4	3	2.2
ø6	ø4	KQ2R06-04A1	10.4	9.7	12	33.6	20.3	13.3	4	4	2.5	1.4
	ø8	KQ2R06-08A1	10.4	9.7	12	31.6	17.4	13.3	13.1	10.4	4.5	1.7
	ø10	KQ2R06-10A1	10.4	9.7	12	33.9	18.3	13.3	13.1	10.4	4.5	2.1
	ø12	KQ2R06-12A1	12	9.7	12	35.7	18.7	13.3	13.1	10.4	4.5	3.2



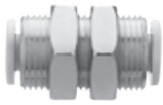
Release button dimensions





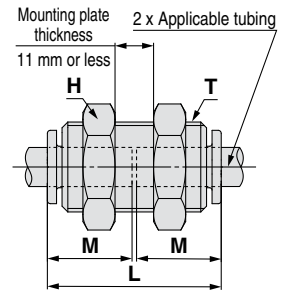
Dimensions

Bulkhead Union: KQ2E (Interchangeable with KQ)

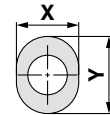


Applicable tubing O.D. [mm]	Model	T (M)	H (Width across flats)	Release button dimensions		L	Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]
				X	Y				Nylon	Urethane		
ø3.2	KQ2E23-00□1	M12 x 1	14	6.7	9.5	27.3	13	13.3	3.4	2.9	2.5	24.1
ø4	KQ2E04-00□1	M12 x 1	14	7.7	10	27.3	13	13.3	5.6	4	3	22.9
ø6	KQ2E06-00□1	M14 x 1	17	9.7	12	27.3	15	13.3	13.1	10.4	4.5	28

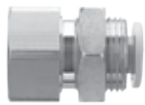
□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

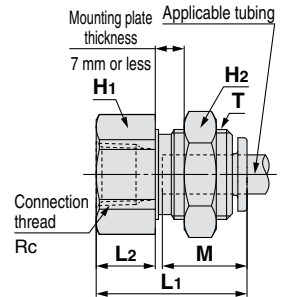


Bulkhead Connector: KQ2E

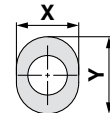


Applicable tubing O.D. [mm]	Connection thread Rc	Model	T (M)	H ₁ (Width across flats)	H ₂ (Width across flats)	L ₁	L ₂	Release button dimensions		Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]
								X	Y			Nylon	Urethane		
ø3.2	1/4	KQ2E23-02□1	M12 x 1	17	14	28.7	14.3	6.7	9.5	13	13.3	3.4	2.9	2.5	31.2
ø4	1/8	KQ2E04-01□1	M12 x 1	14	14	24.4	10	7.7	10	13	13.3	5.6	4	3	21.2
	1/4	KQ2E04-02□1	M12 x 1	17	14	29	14.6	7.7	10	13	13.3	5.6	4	3	30.9
ø6	1/8	KQ2E06-01□1	M14 x 1	17	17	23.6	9.2	9.7	12	15	13.3	13.1	10.4	4.5	28.9
	1/4	KQ2E06-02□1	M14 x 1	17	17	28.4	14	9.7	12	15	13.3	13.1	10.4	4.5	32.4
	3/8	KQ2E06-03□1	M14 x 1	19	17	30.7	16.3	9.7	12	15	13.3	13.1	10.4	4.5	35.9

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



Release button dimensions

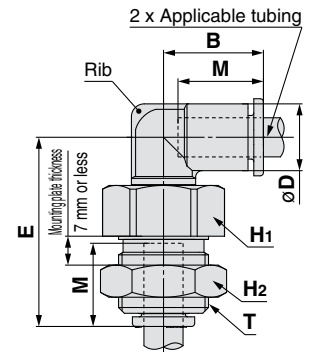


Bulkhead Male Elbow: KQ2LE

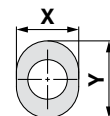


Applicable tubing O.D. [mm]	Model	T (M)	H ₁ (Width across flats)	H ₂ (Width across flats)	B	E	øD	Release button dimensions		Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
								X	Y			Nylon	Urethane			
ø4	KQ2LE04-00□1	M12 x 1	14	14	14.8	28.5	8.2	7.7	10	13	13.3	4.2	4.2	3	21.2	●
ø6	KQ2LE06-00□1	M14 x 1	17	17	15.5	29.6	10.4	9.7	12	15	13.3	11.4	9	4.5	29.4	—

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



Release button dimensions



Sealant/Gasket Seal
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

KQ2 Series

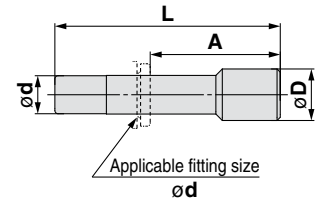
Oval Type Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

Dimensions

Plug: KQ2P



Applicable fitting size ϕd	Model	ϕD	L	A	Weight [g]
$\phi 2$	KJP-02	3	17	5.1	0.1
$\phi 3.2$	KQ2P-23	5	31.5	18.2	1
$\phi 4$	KQ2P-04	6	32	18.7	1
$\phi 6$	KQ2P-06	8	35	21.7	1
$\phi 8$	KQ2P-08	10	39	24.8	2
$\phi 10$	KQ2P-10	12	43	27.4	3.5
$\phi 12$	KQ2P-12	14	45.5	28.5	5
$\phi 16$	KQ2P-16	20.9	47	26.4	8

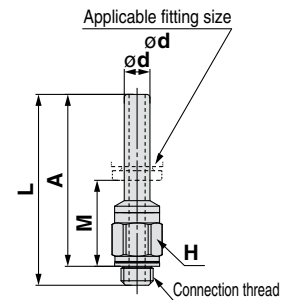


Adapter: KQ2N (Gasket seal)



Applicable fitting size ϕd	Connection thread M	Model	H (Width across flats)	L	A	M	Min. port size	Weight [g]
$\phi 4$	M5 x 0.8	KQ2N04-M5□	7	29.7	26.7	13.4	2.5	2.4
$\phi 6$	M5 x 0.8	KQ2N06-M5□	7	29.7	26.7	13.4	2.5	2.6

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



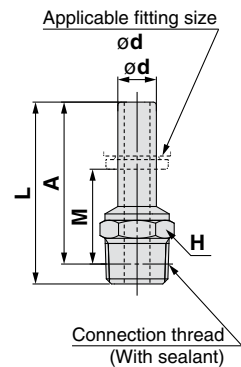
Adapter: KQ2N (Sealant)



Applicable fitting size ϕd	Connection thread R	Model	H (Width across flats)	L	A*1	M	Min. port size	Weight [g]
$\phi 4$	1/8	KQ2N04-01□S	10	28.3	25.2	11.9	2.5	4
$\phi 6$	1/8	KQ2N06-01□S	10	28.3	25.2	11.9	4	4.1
	1/4	KQ2N06-02□S	14	32.8	28.1	14.8	4	13.6
$\phi 8$	1/4	KQ2N08-02□S	14	35.9	31.2	17	6	15.7
	3/8	KQ2N08-03□S	17	36	30.9	16.7	6	22.7
$\phi 10$	3/8	KQ2N10-03□S	17	40.6	35.5	19.9	7.5	19.1

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

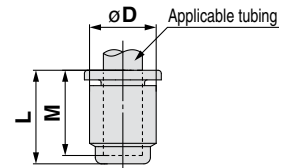
*1 Reference dimensions after installation of R thread



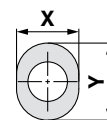
Tube Cap: KQ2C



Applicable tubing O.D. [mm]	Model	ϕD	Release button dimensions		L	M	Weight [g]
			X	Y			
$\phi 4$	KQ2C04-00A1	8.2	7.7	10	14.5	13.3	0.8
$\phi 6$	KQ2C06-00A1	10.4	9.7	12	14.6	13.3	1.1



Release button dimensions



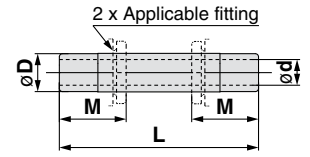


Dimensions

Nipple: KQ2N



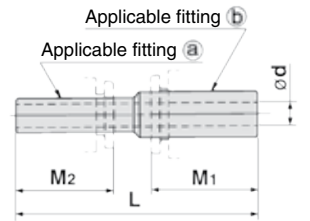
Applicable fitting ϕD	Model	L	M	ϕd	Min. port size	Weight [g]
$\phi 4$	KQ2N04-99	37	13.3	2.5	2.5	1
$\phi 6$	KQ2N06-99	39	13.3	4	4	2
$\phi 8$	KQ2N08-99	43	14.2	6	6	2
$\phi 10$	KQ2N10-99	49	15.6	7.5	7.5	4
$\phi 12$	KQ2N12-99	52	17	9	9	3.3
$\phi 16$	KQ2N16-99	57	20.6	13	13	4.8



Reducer Nipple: KQ2N



Applicable fitting		Model	L	M ₁	M ₂	ϕd Min. port size	Weight [g]
(a)	(b)						
$\phi 4$	$\phi 6$	KQ2N04-06	38	13.3	13.3	2.5	2
$\phi 6$	$\phi 8$	KQ2N06-08	42	14.2	13.3	4	2
$\phi 8$	$\phi 10$	KQ2N08-10	47	15.6	14.2	6	2
$\phi 10$	$\phi 12$	KQ2N10-12	51	17	15.6	7.5	3.1
$\phi 12$	$\phi 16$	KQ2N12-16	55	20.6	17	9	4.9

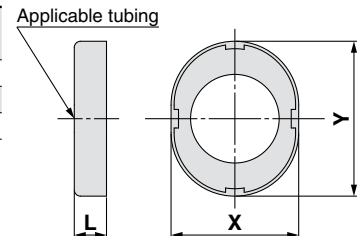


Color Cap: KQ2C



Applicable tubing O.D. [mm]	Model	X	Y	L	Weight [g]
$\phi 3.2$	KQ2C-23□B	7.3	10	2.6	0.1
$\phi 4$	KQ2C-04□B	8.3	10.5	2.6	0.1
$\phi 6$	KQ2C-06□B	10.3	12.5	2.6	0.1

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Gray), W (White), BU (Blue)



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

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, Bulkhead union/KQ2E, Bulkhead connector/KQ2E, Nipple/KQ2N, Reducer nipple/KQ2N, Male connector/KQ2H, Female connector/KQ2F, Color cap/KQ2C, Plug/KQ2P

*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)
X34	Rubber material: FKM
X39	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)
X94	Grease-free Rubber material: FKM (With fluorine coating) Release button color: Light blue

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-KQ2H06-02NS1** (With thread)

10-KQ2H06-00A1 (Without thread)

3 Spare Parts

Description	Part no.	Applicable thread
Gasket	M-3G2	M3
	M-5G2	M5
	M-6G	M6

Brass

Description	Part no.	Applicable model
Pipe nut	KQ04-P01A	KQ2E23-00A1, KQ2E04-00A1, KQ2E23-02A1
		KQ2E04-01A1, KQ2E04-02A1, KQ2LE04-00A1
	KQ06-P01A	KQ2E06-00A1, KQ2E06-01A1, KQ2E06-02A1
		KQ2E06-03A1, KQ2LE06-00A1

Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	KQ04-P01N	KQ2E23-00N1, KQ2E04-00N1, KQ2E23-02N1
		KQ2E04-01N1, KQ2E04-02N1, KQ2LE04-00N1
	KQ06-P01N	KQ2E06-00N1, KQ2E06-01N1, KQ2E06-02N1
		KQ2E06-03N1, KQ2LE06-00N1

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



Oval Type Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

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 145 psi [1 MPa].

The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Guide

Chuck

Body

Release button (Orange)

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

UNF, NPT

Release button (Orange)

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 -14.5 psi [-100 kPa].



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø1/8", ø5/32", ø3/16"

Specifications

Fluid		Air, Water*1
Operating pressure range*2		-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])		435 psi [3 MPa]
Ambient and fluid temperature		23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)
Thread	Mounting section	ANSI/ASME1.20.1 (NPT thread) JIS B0208 (UNF thread)
	Nut section	JIS B0208 (UNF thread)
Seal on the threads		With sealant

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

*2 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
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 48 for details.)



How to Order

Threaded Type

KQ2 H 05 - 34 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
E	Bulkhead union
	Bulkhead connector
LE	Bulkhead male elbow

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

Port size/Applicable tubing O.D.

Symbol	Size	
Thread connection	32	10-32UNF
	33	NPT1/16
	34	NPT1/8
	35	NPT1/4
Tubing connection	00*1	Same diameter tubing

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

Applicable tubing O.D.

Symbol	Size
01	ø1/8"
03	ø5/32"
05	ø3/16"

Spare Parts

Use the part number below to order the gasket for sealing 10-32UNF thread.
Gasket for 10-32UNF: M-5G2

Tube - Tube Type

KQ2 H 05 - 00 A 1

One-touch fittings

Model

Symbol	Model
H	Straight union
	Different diameter straight
L	Union elbow
	Plug-in elbow
	Reducer elbow
R	Plug-in reducer
T	Union tee
	Different diameter tee
TW	Cross

Oval type release button

Port size/Applicable tubing O.D.

Symbol	Size	
Tubing (Rod) connection	00	Same diameter tubing
	99	Same diameter rod
Different dia. tubing (Reducer)	01	ø1/8"
	03	ø5/32"
	05	ø3/16"

Applicable tubing O.D.

Symbol	Size
01	ø1/8"
03	ø5/32"
05	ø3/16"

Accessories

Symbol	Name
KQ2N	Nipple
	Reducer nipple
KQ2C	Tube cap
KQ2P	Plug

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

Inch Size One-touch Fittings

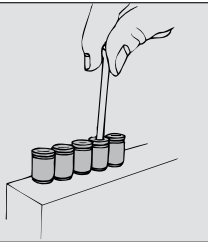
Oval Type Variations

Hexagon socket head male connector

KQ2S P.34



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

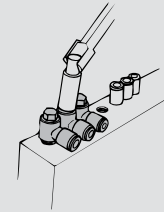


Universal male elbow

KQ2V P.37



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

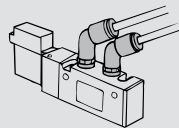


45° male elbow

KQ2K P.37



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

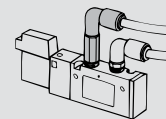


Extended male elbow

KQ2W P.41



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

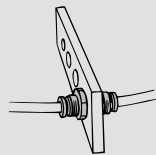


Bulkhead union

KQ2E P.45



Use to connect tubing through a panel, etc.

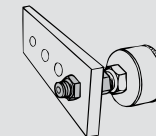


Bulkhead connector

KQ2E P.45



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

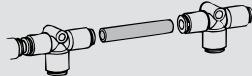


Nipple

KQ2N P.47



Use to connect One-touch fittings.

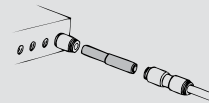


Reducer nipple

KQ2N P.47



Use to connect One-touch fittings of different sizes.



Male connector

KQ2H P.33



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

Hexagon socket head universal male elbow

KQ2VS P.38



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

Union elbow

KQ2L P.35



Use to connect tubing at right angles.

Female connector

KQ2F P.34



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

Universal female elbow

KQ2VF P.38



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

Plug-in elbow

KQ2L P.36



Use to change the tube direction of One-touch fittings by 90°.

Straight union

KQ2H P.33



Use to connect tubing in the same direction.

Female elbow

KQ2LF P.36



Use to pipe a male thread at right angles.

Reducer elbow

KQ2L P.36



Use to change the tube direction of One-touch fittings by 90° and connect tubing of reduced size.

Different diameter straight

KQ2H P.33



Use to connect tubing of different sizes.

Double universal male elbow

KQ2VD P.39



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

Male branch tee

KQ2T P.42



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

Male elbow

KQ2L P.35



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

Triple universal male elbow

KQ2VT P.40



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

Union tee

KQ2T P.43



Use to branch tubing at both 90° angles.



Different diameter tee

KQ2T P.43



Use to connect tubing of reduced size for branching at both 90° angles.

Plug-in reducer

KQ2R P.45



Use to change size of One-touch fittings.

Plug

KQ2P P.46



Use to plug unused One-touch fittings.

Cross

KQ2TW P.43



Use to four-branch a line.

Bulkhead male elbow

KQ2LE P.46



Use to connect tubing through a panel, etc. and to change the tube direction by 90°.

Color cap

KQ2C P.47



Mount onto the release button and use different colors for piping according to applications.

Male run tee

KQ2Y P.44



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

Tube cap

KQ2C P.46



Use to plug unused tubing.

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

The following models do not support oval type release buttons. Refer to the round type (from page 133).

Branch universal male elbow

KQ2Z P.146



Double branch universal male elbow

KQ2ZD P.146



Triple branch universal male elbow

KQ2ZT P.147



Branch "Y"

KQ2U P.151



Union "Y"

KQ2U P.152



Different diameter union "Y"

KQ2U P.152



Plug-in "Y"

KQ2U P.152



Different diameter plug-in "Y"

KQ2X P.153



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

KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

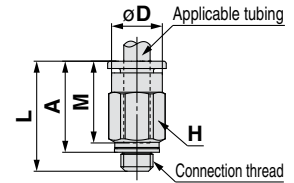
Dimensions

Male Connector: KQ2H (Gasket seal)

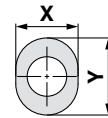


Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD	Release button dimensions		L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
ø1/8	10-32UNF	KQ2H01-32□1	7	6.9	6.7	9.5	17.4	13.9	13.3	3	2.5	2.3	2.7
ø5/32	10-32UNF	KQ2H03-32□1	8	7.9	7.7	10	17.6	14.1	13.3	3.3	3.3	2.3	3.3
ø3/16	10-32UNF	KQ2H05-32□1	8	9	8.4	11	17.7	14.2	13.3	3.4	3.4	2.3	3.4

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



Release button dimensions



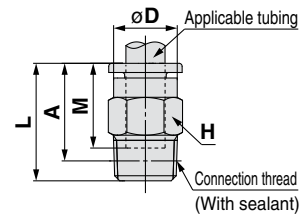
Male Connector: KQ2H (Sealant)



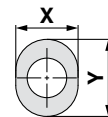
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD	Release button dimensions		L	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
ø1/8	1/16	KQ2H01-33□S1	9.5	6.9	6.7	9.5	19.3	15.2	13.3	3	2.5	2.5	6
	1/8	KQ2H01-34□S1	11.11	—	6.7	9.5	14	10.8	13.3	3	2.5	2.5	7.1
	1/4	KQ2H01-35□S1	14.29	—	6.7	9.5	16.7	12.3	13.3	3.4	2.9	2.5	16.2
ø5/32	1/16	KQ2H03-33□S1	9.5	7.9	7.7	10	20	15.9	13.3	4.8	3.4	3	6.1
	1/8	KQ2H03-34□S1	11.11	—	7.7	10	14	10.8	13.3	4.8	3.4	3	6.5
	1/4	KQ2H03-35□S1	14.29	—	7.7	10	16.7	12.3	13.3	4.8	3.4	3	15.6
ø3/16	1/8	KQ2H05-34□S1	11.11	8.55	8.4	11	17.4	14.2	13.3	7.8	6.5	3.5	7.4
	1/4	KQ2H05-35□S1	14.29	—	8.4	11	16.7	12.3	13.3	7.8	6.5	3.5	14.9

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

*1 Reference dimensions after installation of NPT thread



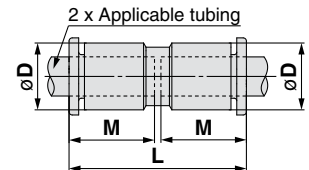
Release button dimensions



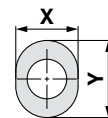
Straight Union: KQ2H



Applicable tubing O.D. [inch]	Model	øD	Release button dimensions		L	M	Effective area [mm ²]		Min. port size	Weight [g]
			X	Y			Nylon	Urethane		
ø1/8	KQ2H01-00A1	7.1	6.7	9.5	27.6	13.3	3.4	2.9	2.5	1.4
ø5/32	KQ2H03-00A1	8.2	7.7	10	27.6	13.3	5.6	4	3	1.6
ø3/16	KQ2H05-00A1	9.1	8.4	11	27.6	13.3	7.8	6.5	3.5	1.9



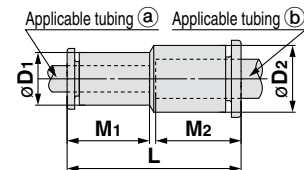
Release button dimensions



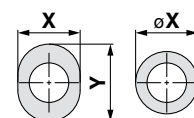
Different Diameter Straight: KQ2H



Applicable tubing O.D. [inch]	Model	øD1	Release button dimensions (a)		Release button dimensions (b)		L	M1	M2	Effective area [mm ²]		Min. port size	Weight [g]	
			X	Y	øX (X)	Y				Nylon	Urethane			
ø1/8	ø5/32	KQ2H01-03A1	7.1	6.7	9.5	8.2	7.7	10	27.6	13.3	3.4	2.9	2.5	1.5
	ø1/4	KQ2H01-07A1	7.1	6.7	9.5	11.1	10.9	—	27.6	13.3	3.4	2.9	2.5	2
ø5/32	ø3/16	KQ2H03-05A1	8.2	7.7	10	9.1	8.4	11	27.6	13.3	5.6	5.6	3	1.8
	ø1/4	KQ2H03-07A1	8.2	7.7	10	11.1	10.9	—	27.6	13.3	5.6	5.6	3	2.1
ø3/16	ø1/4	KQ2H05-07A1	9.1	8.4	11	11.1	10.9	—	27.6	13.3	7.8	6.5	3.5	2.2



Release button dimensions



Applicable tubing O.D.:
ø1/8",
ø5/32",
ø3/16"

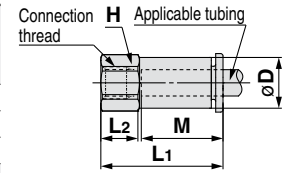
Dimensions

Female Connector: KQ2F

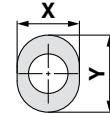


Applicable tubing O.D. [inch]	Connection thread UNF, NPT	Model	H (Width across flats)	øD	Release button dimensions		L1	L2	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
ø 1/8	10-32UNF	KQ2F01-32□1	7	6.9	6.7	9.5	19.7	5.7	13.3	3	2.5	2.5	3.4
	1/8	KQ2F01-34□1	14.29	6.9	6.7	9.5	25	9.5	13.3	3	2.5	2.5	13.4
	1/4	KQ2F01-35□1	17.46	6.9	6.7	9.5	29.8	13.3	13.3	3	2.5	2.5	24.4
ø 5/32	10-32UNF	KQ2F03-32□1	8	7.9	7.7	10	19.5	5.7	13.3	4	4	3	4.5
	1/8	KQ2F03-34□1	14.29	7.9	7.7	10	24.8	9.5	13.3	5.6	4	3	13.7
	1/4	KQ2F03-35□1	17.46	7.9	7.7	10	29.7	13.3	13.3	5.6	4	3	24.7

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



Release button dimensions

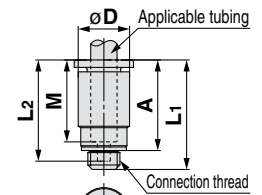


Hexagon Socket Head Male Connector: KQ2S (Gasket seal)

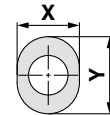


Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD	Release button dimensions		L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
ø 1/8	10-32UNF	KQ2S01-32□1	2	7	6.7	9.5	17.5	16.3	14.5	13.3	2.5	2.5	2	2.6
ø 5/32	10-32UNF	KQ2S03-32□1	2.5	8	7.7	10	18.6	17.8	15.6	13.3	4	4	2.5	3

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



Release button dimensions



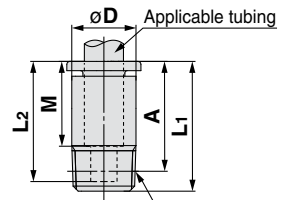
Hexagon Socket Head Male Connector: KQ2S (Sealant)



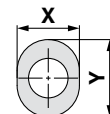
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD	Release button dimensions		L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
ø 5/32	1/16	KQ2S03-33□S1	2.78	8	7.7	10	19.8	18.8	15.7	13.3	4.1	3.6	2.8	4.5
	1/8	KQ2S03-34□S1	2.78	10.3	7.7	10	17.3	16.3	14.1	13.3	4.1	3.6	2.8	6
ø 3/16	1/8	KQ2S05-34□S1	3.57	11	8.4	11	19.8	18.8	16.6	13.3	7.8	6.5	3.6	7.5

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

*1 Reference dimensions after installation of NPT thread



Release button dimensions



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

KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

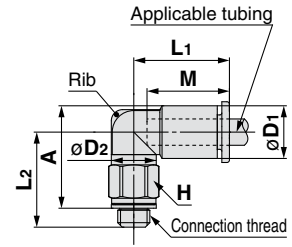
Dimensions

Male Elbow: KQ2L (Gasket seal)

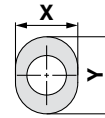


Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø1/8	10-32UNF	KQ2L01-32□1	7	7.1	6.7	9.5	7	15.3	14.2	14.3	13.3	2.6	2.2	2.5	3	●
ø5/32	10-32UNF	KQ2L03-32□1	7	8.2	7.7	10	7	15.4	14.7	15.3	13.3	3.5	3.5	2.5	3.1	●
ø3/16	10-32UNF	KQ2L05-32□1	7	9.1	8.4	11	7	14.5	15.8	16.9	13.3	3.5	3.5	2.5	3.2	●

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



Release button dimensions



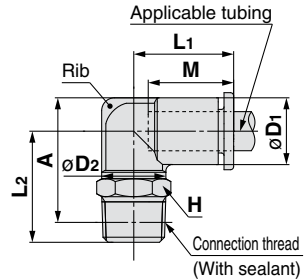
Male Elbow: KQ2L (Sealant)



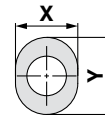
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø1/8	1/16	KQ2L01-33□S1	11.11	7.1	6.7	9.5	10	14.5	24.3	23.8	13.3	3	2.5	2.5	9.1	—
	1/8	KQ2L01-34□S1	11.11	7.1	6.7	9.5	10	14.5	16.7	17.1	13.3	3	2.5	2.5	5.5	—
	1/4	KQ2L01-35□S1	14.29	7.1	6.7	9.5	10	14.5	21.1	20.3	13.3	3	2.5	2.5	15	—
ø5/32	1/16	KQ2L03-33□S1	11.11	8.2	7.7	10	10	14.8	23.8	23.8	13.3	4.6	3.3	3	9.3	●
	1/8	KQ2L03-34□S1	11.11	8.2	7.7	10	10	14.8	16.2	17.1	13.3	4.6	3.3	3	5.6	●
	1/4	KQ2L03-35□S1	14.29	8.2	7.7	10	10	14.8	21.6	21.3	13.3	4.6	3.3	3	15.2	●
ø3/16	1/8	KQ2L05-34□S1	11.11	9.1	8.4	11	10	15	16.7	18.1	13.3	6.8	5.6	3.5	5.8	—
	1/4	KQ2L05-35□S1	14.29	9.1	8.4	11	10	15	22.1	22.3	13.3	6.8	5.6	3.5	15.4	—

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

*1 Reference dimensions after installation of NPT thread



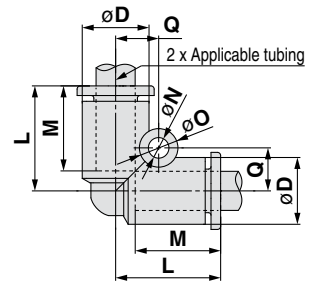
Release button dimensions



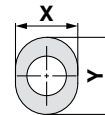
Union Elbow: KQ2L



Applicable tubing O.D. [inch]	Model	øD	Release button dimensions		L	Q	M	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]
			X	Y						Nylon	Urethane		
ø1/8	KQ2L01-00A1	7.1	6.7	9.5	14.9	5.4	13.3	6	3.2	3	2.5	2.5	1.6
ø5/32	KQ2L03-00A1	8.2	7.7	10	15.3	5.7	13.3	6	3.2	4.2	4.2	3	1.9
ø3/16	KQ2L05-00A1	9.1	8.4	11	15.7	6.2	13.3	6	3.2	6.8	5.6	3.5	2.2



Release button dimensions

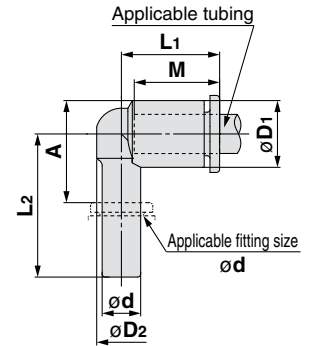


Dimensions

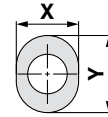
Plug-in Elbow: KQ2L



Applicable tubing O.D. [inch]	Applicable fitting size ϕd [inch]	Model	ϕD_1	Release button dimensions		ϕD_2	L ₁	L ₂	A	M	Effective area [mm ²]		Min. port size	Weight [g]
				X	Y						Nylon	Urethane		
$\phi 1/8$	$\phi 1/8$	KQ2L01-99A1	7.1	6.7	9.5	6.4	14.5	20.9	11.1	13.3	3	2.5	2.2	0.9
$\phi 5/32$	$\phi 5/32$	KQ2L03-99A1	8.2	7.7	10	7.2	14.5	21.1	11.9	13.3	4.2	4.2	2.5	1.2
$\phi 3/16$	$\phi 3/16$	KQ2L05-99A1	9.1	8.4	11	8	15	22.2	13.4	13.3	6.8	5.6	3.5	1.4



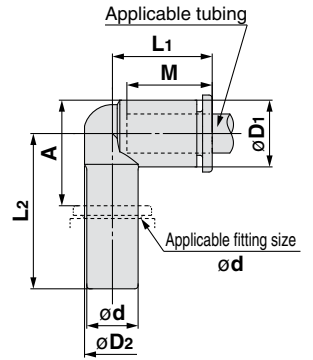
Release button dimensions



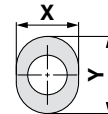
Reducer Elbow: KQ2L



Applicable tubing O.D. [inch]	Applicable fitting size ϕd [inch]	Model	ϕD_1	Release button dimensions		ϕD_2	L ₁	L ₂	A	M	Effective area [mm ²]		Min. port size	Weight [g]
				X	Y						Nylon	Urethane		
$\phi 1/8$	$\phi 5/32$	KQ2L01-03A1	7.1	6.7	9.5	6.4	14.5	23.9	14.1	13.3	3	2.5	2.5	1.1
	$\phi 3/16$	KQ2L01-05A1	7.1	6.7	9.5	6.4	14.5	28.4	18.6	13.3	3	2.5	2.5	1.1
	$\phi 1/4$	KQ2L01-07A1	7.1	6.7	9.5	6.4	14.5	24.5	14.7	13.3	3	2.5	2.5	1.3
$\phi 5/32$	$\phi 3/16$	KQ2L03-05A1	8.2	7.7	10	7.2	14.8	29.1	19.9	13.3	4.2	4.2	3	1.3
	$\phi 1/4$	KQ2L03-07A1	8.2	7.7	10	7.2	14.8	21.1	11.9	13.3	4.2	4.2	3	1.4
$\phi 3/16$	$\phi 1/4$	KQ2L05-07A1	9.1	8.4	11	8	15	21.6	12.8	13.3	6.8	5.6	3.5	1.5
	$\phi 5/16$	KQ2L05-09A1	9.1	8.4	11	8	15	30	20.3	13.3	6.8	5.6	3.5	1.9



Release button dimensions

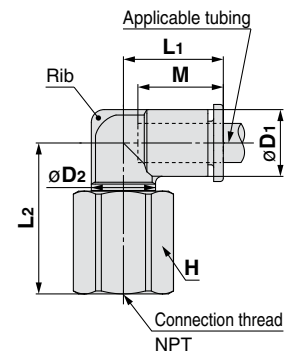


Female Elbow: KQ2LF

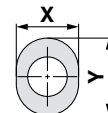


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	ϕD_1	Release button dimensions		ϕD_2	L ₁	L ₂	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y					Nylon	Urethane			
$\phi 1/8$	1/8	KQ2LF01-34□1	14.29	7.1	6.7	9.5	10	14.5	22.8	13.3	3	2.5	2.5	18.2	—
	1/4	KQ2LF01-35□1	17.46	7.1	6.7	9.5	10	14.5	26.3	13.3	3	2.5	2.5	31.7	—
$\phi 5/32$	1/8	KQ2LF03-34□1	14.29	8.2	7.7	10	10	14.8	22.4	13.3	4.2	4.2	3	18.3	●
	1/4	KQ2LF03-35□1	17.46	8.2	7.7	10	10	14.8	26.9	13.3	4.2	4.2	3	31.9	●

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



Release button dimensions



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

Metric Size Uni

Gasket Seal
Inch Size Uni

KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

Dimensions

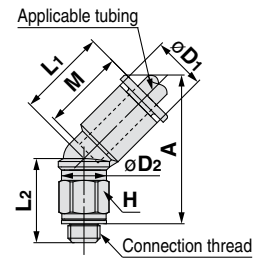
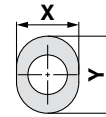
45° Male Elbow: KQ2K (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø1/8	10-32UNF	KQ2K01-32□1	7	7.1	6.7	9.5	8	14.4	13	21.9	13.3	3	2.5	2.5	2.8
ø5/32	10-32UNF	KQ2K03-32□1	7	8.2	7.7	10	8	14.4	13	22.2	13.3	3.4	3.4	2.5	3

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

Release button dimensions



45° Male Elbow: KQ2K (Sealant)

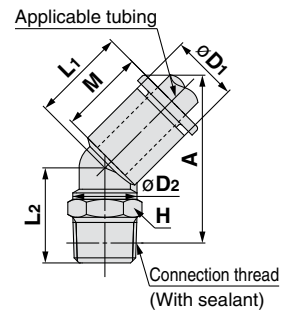
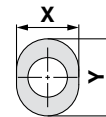


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø1/8	1/8	KQ2K01-34□S1	11.11	7.1	6.7	9.5	10	14.3	12.7	21.8	13.3	3	2.5	2.5	5.3
ø5/32	1/8	KQ2K03-34□S1	11.11	8.2	7.7	10	10	14.4	12.7	22.2	13.3	4.8	3.4	3	5.5
ø3/16	1/8	KQ2K05-34□S1	11.11	9.1	8.4	11	10	14.5	13.2	23.1	13.3	6.8	5.6	3.5	5.6

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

*1 Reference dimensions after installation of NPT thread

Release button dimensions



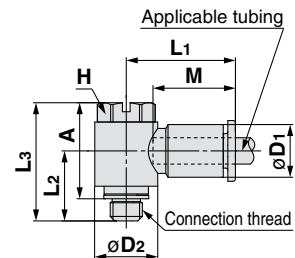
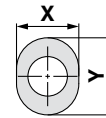
Universal Male Elbow: KQ2V (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø1/8	10-32UNF	KQ2V01-32□1	8	7.1	6.7	9.5	9.8	17.5	10.4	17.9	14.4	13.3	2.2	1.9	2.5	5.2
ø5/32	10-32UNF	KQ2V03-32□1	8	8.2	7.7	10	9.8	17.5	10.4	17.9	14.4	13.3	2.9	2.9	2.5	5.3

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

Release button dimensions



Universal Male Elbow: KQ2V (Sealant)

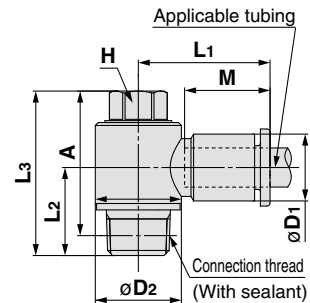
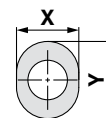


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø1/8	1/8	KQ2V01-34□S1	8	7.1	6.7	9.5	13.4	19.3	13.7	25.6	22.4	13.3	2.2	1.9	2.5	13.5
ø5/32	1/8	KQ2V03-34□S1	8	8.2	7.7	10	13.4	19.3	13.7	25.6	22.4	13.3	2.9	2.9	3	13.6
ø3/16	1/8	KQ2V05-34□S1	8	9.1	8.4	11	13.4	19.6	13.7	25.6	22.4	13.3	4.5	3.7	3.5	13.7

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

*1 Reference dimensions after installation of NPT thread

Release button dimensions





Dimensions

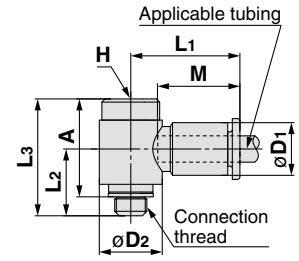
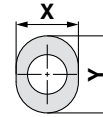
Hexagon Socket Head Universal Male Elbow: KQ2VS (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area (mm ²)		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø 1/8	10-32UNF	KQ2VS01-32□1	4	7.1	6.7	9.5	9.8	17.5	10.4	18.2	14.7	13.3	2.2	1.9	2.3	5.3
ø 5/32	10-32UNF	KQ2VS03-32□1	4	8.2	7.7	10	9.8	17.5	10.4	18.2	14.7	13.3	2.9	2.9	2.3	5.4

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

Release button dimensions



Hexagon Socket Head Universal Male Elbow: KQ2VS (Sealant)

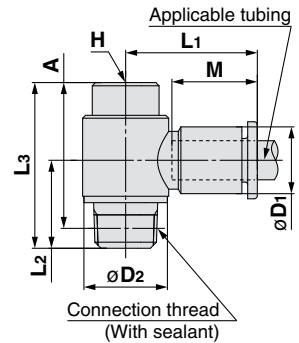
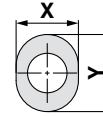


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	Effective area (mm ²)		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø 1/8	1/8	KQ2VS01-34□S1	6.35	7.1	6.7	9.5	13.4	19.3	13.7	25.8	22.6	13.3	2.2	1.9	2.5	13.1
ø 5/32	1/8	KQ2VS03-34□S1	6.35	8.2	7.7	10	13.4	19.3	13.7	25.8	22.6	13.3	2.9	2.9	3	13.2
ø 3/16	1/8	KQ2VS05-34□S1	6.35	9.1	8.4	11	13.4	19.6	13.7	25.8	22.6	13.3	4.5	3.7	3.5	13.3

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

*1 Reference dimensions after installation of NPT thread

Release button dimensions



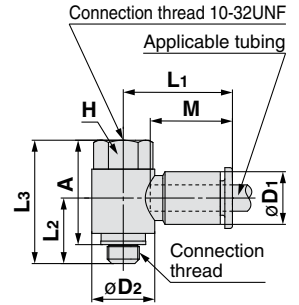
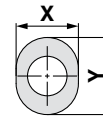
Universal Female Elbow: KQ2VF (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area (mm ²)		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø 1/8	10-32UNF	KQ2VF01-32□1	8	7.1	6.7	9.5	9.8	17.5	10.4	19.4	15.9	13.3	2.2	1.9	2.5	5.4
ø 5/32	10-32UNF	KQ2VF03-32□1	8	8.2	7.7	10	9.8	17.5	10.4	19.4	15.9	13.3	2.9	2.9	2.5	5.5

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

Release button dimensions



Universal Female Elbow: KQ2VF (Sealant)

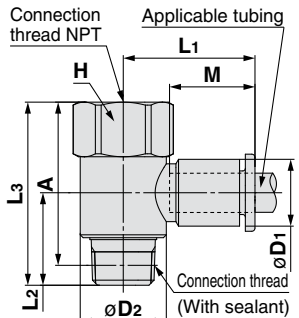
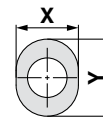


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	Effective area (mm ²)		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø 1/8	1/8	KQ2VF01-34□S1	14.29	7.1	6.7	9.5	13.4	19.3	14.4	28.5	25.3	13.3	2.2	1.9	2.5	18
ø 5/32	1/8	KQ2VF03-34□S1	14.29	8.2	7.7	10	13.4	19.3	14.4	28.5	25.3	13.3	2.9	2.9	3	18.1
ø 3/16	1/8	KQ2VF05-34□S1	14.29	9.1	8.4	11	13.4	19.6	14.4	28.5	25.3	13.3	4.5	3.7	3.5	18.2

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

*1 Reference dimensions after installation of NPT thread

Release button dimensions



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

KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

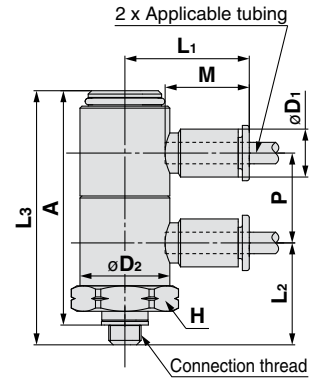
Dimensions

Double Universal Male Elbow: KQ2VD (Gasket seal)

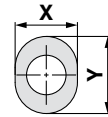


Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD1	Release button dimensions			øD2	L1	L2	L3	A	M	P	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y	Nylon								Urethane			
ø 1/8	10-32UNF	KQ2VD01-32□1	14.29	7.1	6.7	9.5	13.4	19.3	15.2	37.9	34.4	13.3	13.4	2.2	1.9	2.3	24.4	
ø 5/32	10-32UNF	KQ2VD03-32□1	14.29	8.2	7.7	10	13.4	19.3	15.2	37.9	34.4	13.3	13.4	2.5	2.5	2.3	24.6	

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



Release button dimensions



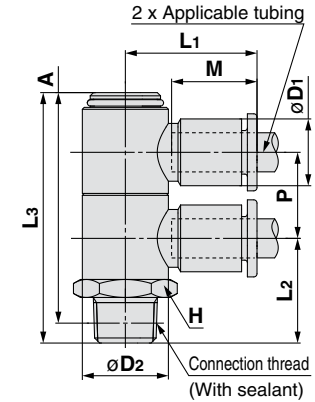
Double Universal Male Elbow: KQ2VD (Sealant)



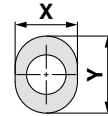
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions			øD2	L1	L2	L3	A*1	M	P	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y	Nylon								Urethane			
ø 1/8	1/8	KQ2VD01-34□S1	14.29	7.1	6.7	9.5	13.4	19.3	16.3	39	35.8	13.3	13.4	2.2	1.9	2.5	20	
ø 5/32	1/8	KQ2VD03-34□S1	14.29	8.2	7.7	10	13.4	19.3	16.3	39	35.8	13.3	13.4	2.9	2.9	3	20.2	
ø 3/16	1/8	KQ2VD05-34□S1	14.29	9.1	8.4	11	13.4	19.6	16.3	39	35.8	13.3	13.4	4.5	3.7	3.5	20.5	

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

*1 Reference dimensions after installation of NPT thread



Release button dimensions





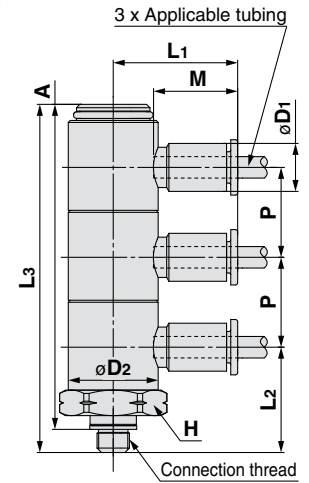
Dimensions

Triple Universal Male Elbow: KQ2VT (Gasket seal)

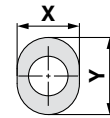


Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD1	Release button dimensions			øD2	L1	L2	L3	A	M	P	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y	Nylon								Urethane			
ø 1/8	10-32UNF	KQ2VT01-32□1	14.29	7.1	6.7	9.5	13.4	19.3	15.7	51.9	48.4	13.3	13.4	2.2	1.9	2.5	32.4	
ø 5/32	10-32UNF	KQ2VT03-32□1	14.29	8.2	7.7	10	13.4	19.3	15.7	51.9	48.4	13.3	13.4	2.9	2.9	2.5	32.7	

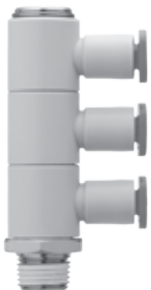
□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions



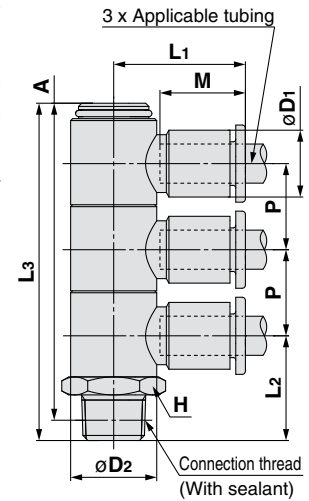
Triple Universal Male Elbow: KQ2VT (Sealant)



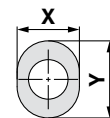
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions			øD2	L1	L2	L3	A*1	M	P	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y	Nylon								Urethane			
ø 1/8	1/8	KQ2VT01-34□S1	14.29	7.1	6.7	9.5	13.4	19.3	16.3	52.5	49.3	13.3	13.4	2.2	1.9	2.5	25.5	
ø 5/32	1/8	KQ2VT03-34□S1	14.29	8.2	7.7	10	13.4	19.3	16.3	52.5	49.3	13.3	13.4	2.9	2.9	3	25.8	
ø 3/16	1/8	KQ2VT05-34□S1	14.29	9.1	8.4	11	13.4	19.6	16.3	52.5	49.3	13.3	13.4	4.5	3.7	3.5	26.2	

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

*1 Reference dimensions after installation of NPT thread



Release button dimensions



Sealant/Gasket Seal
 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
 Gasket Seal
 Metric Size Uni
 Inch Size Uni

KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

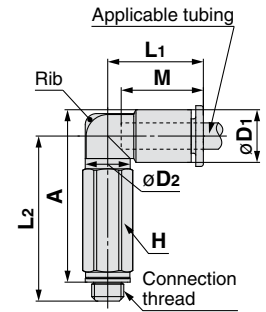
Dimensions

Extended Male Elbow: KQ2W (Gasket seal)

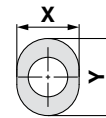


Applicable tubing O.D. [inch]	Connection thread	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø1/8	10-32UNF	KQ2W01-32□1	7	7.1	6.7	9.5	7	15.3	25.8	25.9	13.3	2.8	2.4	2.5	5.9	●
ø5/32	10-32UNF	KQ2W03-32□1	7	8.2	7.7	10	7	15.4	26.3	26.9	13.3	3	3	2.5	6	●

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



Release button dimensions



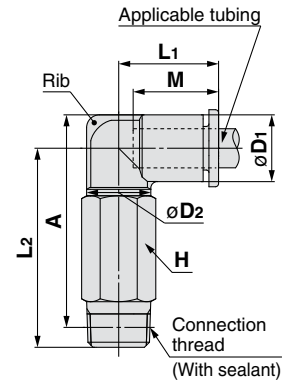
Extended Male Elbow: KQ2W (Sealant)



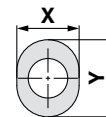
Applicable tubing O.D. [inch]	Connection thread	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø1/8	1/16	KQ2W01-33□S1	11.11	7.1	6.7	9.5	10	14.5	35.9	35.4	13.3	2.8	2.4	2.5	16.6	—
	1/8	KQ2W01-34□S1	11.11	7.1	6.7	9.5	10	14.5	30.3	30.7	13.3	2.8	2.4	2.5	13.9	—
	1/4	KQ2W01-35□S1	14.29	7.1	6.7	9.5	10	14.5	32.7	31.9	13.3	2.8	2.4	2.5	27.3	—
ø5/32	1/16	KQ2W03-33□S1	11.11	8.2	7.7	10	10	14.8	35.4	35.4	13.3	4	4	3	16.7	●
	1/8	KQ2W03-34□S1	11.11	8.2	7.7	10	10	14.8	29.9	30.8	13.3	4	4	3	14.1	●
ø3/16	1/4	KQ2W03-35□S1	14.29	8.2	7.7	10	10	14.8	33.2	32.9	13.3	4	4	3	27.5	●
	1/8	KQ2W05-34□S1	11.11	9.1	8.4	11	10	15	30.4	31.7	13.3	6.8	5.6	3.5	14.3	—
	1/4	KQ2W05-35□S1	14.29	9.1	8.4	11	10	15	33.7	33.9	13.3	6.8	5.6	3.5	27.7	—

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

*1 Reference dimensions after installation of NPT thread



Release button dimensions





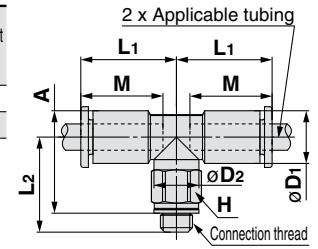
Dimensions

Male Branch Tee: KQ2T (Gasket seal)

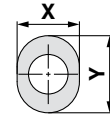


Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø1/8	10-32UNF	KQ2T01-32□1	7	7.1	6.7	9.5	7	15.3	14.2	14.2	13.3	3.2	2.7	2.5	3.5
ø5/32	10-32UNF	KQ2T03-32□1	7	8.2	7.7	10	7	15.4	14.7	15.3	13.3	4.5	4.5	2.5	3.8

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



Release button dimensions



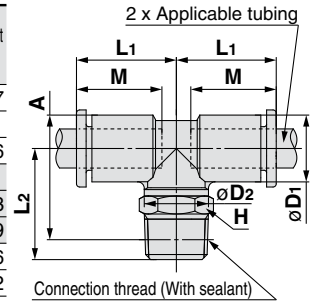
Male Branch Tee: KQ2T (Sealant)



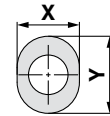
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø1/8	1/16	KQ2T01-33□S1	11.11	7.1	6.7	9.5	10	14.5	24.2	23.7	13.3	3.4	2.9	2.5	9.7
	1/8	KQ2T01-34□S1	11.11	7.1	6.7	9.5	10	14.5	16.6	17	13.3	3.4	2.9	2.5	6
	1/4	KQ2T01-35□S1	14.29	7.1	6.7	9.5	10	14.5	21	20.2	13.3	3.4	2.9	2.5	15.6
ø5/32	1/16	KQ2T03-33□S1	11.11	8.2	7.7	10	10	14.8	23.8	23.8	13.3	6	4.1	3	10
	1/8	KQ2T03-34□S1	11.11	8.2	7.7	10	10	14.8	16.2	17.1	13.3	6	4.1	3	6.3
ø3/16	1/4	KQ2T03-35□S1	14.29	8.2	7.7	10	10	14.8	21.6	21.3	13.3	6	4.1	3	15.9
	1/8	KQ2T05-34□S1	11.11	9.1	8.4	11	10	15	16.7	18	13.3	8.4	7	3.5	6.6
	1/4	KQ2T05-35□S1	14.29	9.1	8.4	11	10	15	22.1	22.2	13.3	8.4	7	3.5	16.2

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

*1 Reference dimensions after installation of NPT thread



Release button dimensions



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

KQ2 Series

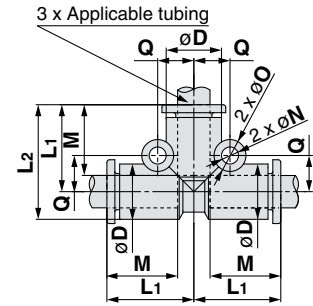
Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

Dimensions

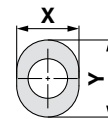
Union Tee: KQ2T



Applicable tubing O.D. [inch]	Model	øD	Release button dimensions		L1	L2	M	Q	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]
			X	Y							Nylon	Urethane		
ø1/8	KQ2T01-00A1	7.1	6.7	9.5	14.9	18.5	13.3	5.4	6	3.2	3.4	2.9	2.5	2.3
ø5/32	KQ2T03-00A1	8.2	7.7	10	15.3	19.4	13.3	5.7	6	3.2	6.4	4.4	3	2.8
ø3/16	KQ2T05-00A1	9.1	8.4	11	15.7	20.3	13.3	6.2	6	3.2	8.4	7	3.5	3.2



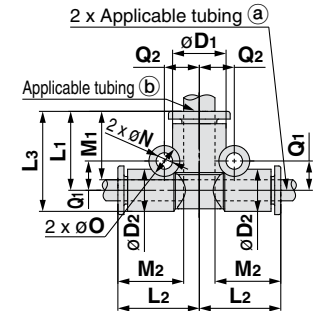
Release button dimensions



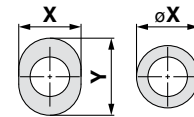
Different Diameter Tee: KQ2T



Applicable tubing O.D. [inch]		Model	øD1	Release button dimensions (a)		Release button dimensions (b)		L1	L2	L3	M1	M2	Q1	Q2	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]	
(a)	(b)			X	Y	øX (X)	Y										Nylon	Urethane			
ø1/8	ø5/32	KQ2T01-03A1	8.2	6.7	9.5	7.1	7.7	10	14.9	15.3	18.5	13.3	13.3	5.4	5.8	6	3.2	3.8	3.5	3	2.6
	ø1/4	KQ2T01-07A1	11.1	6.7	9.5	7.1	10.9	—	14.9	16.5	18.5	13.3	13.3	5.3	7.2	6	3.2	3.8	3.5	3.2	2.8
ø5/32	ø3/16	KQ2T03-05A1	9.1	7.7	10	8.2	8.4	11	15.3	15.7	19.4	13.3	13.3	5.7	6.2	6	3.2	7.1	6.6	3.5	2.6
	ø1/4	KQ2T03-07A1	11.1	7.7	10	8.2	10.9	—	15.3	16.5	19.4	13.3	13.3	5.7	7.2	6	3.2	7.1	6.6	4.1	3
ø3/16	ø1/4	KQ2T05-07A1	11.1	8.4	11	9.1	10.9	—	15.7	16.5	20.3	13.3	13.3	6.2	7.2	6	3.2	8.4	7	4.6	3.7

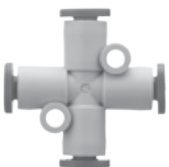


Release button dimensions

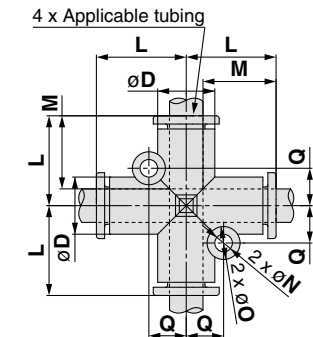


Applicable tubing O.D.:
ø1/8",
ø5/32",
ø3/16"

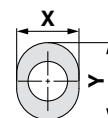
Cross: KQ2TW



Applicable tubing O.D. [inch]	Model	øD	Release button dimensions		L	Q	M	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]
			X	Y						Nylon	Urethane		
ø5/32	KQ2TW03-00A1	8.2	7.7	10	15.3	5.7	13.3	6	3.2	6.4	4.4	3	3.5



Release button dimensions





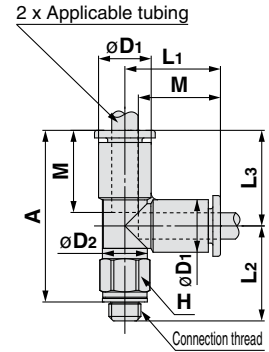
Dimensions

Male Run Tee: KQ2Y (Gasket seal)

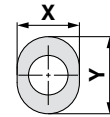


Applicable tubing O.D. (inch)	Connection thread UNF	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area (mm ²)		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø1/8	10-32UNF	KQ2Y01-32□1	7	7.1	6.7	9.5	7	15.3	14.2	15.3	26	13.3	3.2	2.7	2.5	3.5
ø5/32	10-32UNF	KQ2Y03-32□1	7	8.2	7.7	10	7	15.4	14.7	15.4	26.6	13.3	4.5	4.5	2.5	3.8

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



Release button dimensions



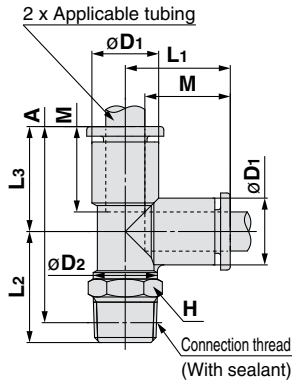
Male Run Tee: KQ2Y (Sealant)



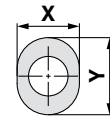
Applicable tubing O.D. (inch)	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	Effective area (mm ²)		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø1/8	1/16	KQ2Y01-33□S1	11.11	7.1	6.7	9.5	10	14.9	24.2	14.9	35.1	13.3	3.4	2.9	2.5	9.8
	1/8	KQ2Y01-34□S1	11.11	7.1	6.7	9.5	10	14.9	16.6	14.9	28.4	13.3	3.4	2.9	2.5	6.1
	1/4	KQ2Y01-35□S1	14.29	7.1	6.7	9.5	10	14.9	21	14.9	31.6	13.3	3.4	2.9	2.5	15.6
ø5/32	1/16	KQ2Y03-33□S1	11.11	8.2	7.7	10	10	15.3	23.8	15.3	35	13.3	6.4	4.4	3	10.1
	1/8	KQ2Y03-34□S1	11.11	8.2	7.7	10	10	15.3	16.2	15.3	28.3	13.3	6.4	4.4	3	6.4
ø3/16	1/4	KQ2Y03-35□S1	14.29	8.2	7.7	10	10	15.3	21.6	15.3	32.5	13.3	6.4	4.4	3	15.9
	1/8	KQ2Y05-34□S1	11.11	9.1	8.4	11	10	15.7	16.7	15.7	29.2	13.3	8.4	7	3.5	6.7
	1/4	KQ2Y05-35□S1	14.29	9.1	8.4	11	10	15.7	22.1	15.7	33.4	13.3	8.4	7	3.5	16.3

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

*1 Reference dimensions after installation of NPT thread



Release button dimensions



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

KQ2 Series

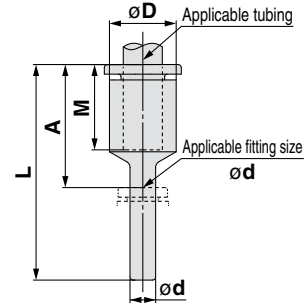
Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

Dimensions

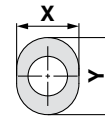
Plug-in Reducer: KQ2R



Applicable tubing O.D. [inch]	Applicable fitting size ϕd [inch]	Model	ϕD	Release button dimensions		L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
				X	Y				Nylon	Urethane		
$\phi 1/8$	$\phi 5/32$	KQ2R01-03A1	7.1	6.7	9.5	28.6	15.3	13.3	3.4	2.9	2.5	0.8
	$\phi 3/16$	KQ2R01-05A1	7.1	6.7	9.5	28.7	15.4	13.3	3.4	2.9	2.5	0.8
	$\phi 1/4$	KQ2R01-07A1	7.1	6.7	9.5	28.4	15.1	13.3	3.4	2.9	2.5	1
$\phi 5/32$	$\phi 3/16$	KQ2R03-05A1	8.2	7.7	10	28.7	15.4	13.3	5.6	4	3	1
	$\phi 1/4$	KQ2R03-07A1	8.2	7.7	10	31.8	18.5	13.3	5.6	4	3	1.2
$\phi 3/16$	$\phi 1/4$	KQ2R05-07A1	9.1	8.4	11	31.4	18.1	13.3	7.8	6.5	3.5	1.3
	$\phi 5/16$	KQ2R05-09A1	9.1	8.4	11	33.4	19.2	13.3	7.8	6.5	3.5	1.5



Release button dimensions

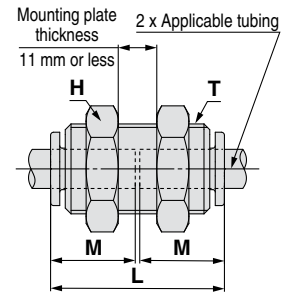


Bulkhead Union: KQ2E (Interchangeable with KQ)

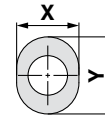


Applicable tubing O.D. [inch]	Model	T (UNF)	H (Width across flats)	Release button dimensions		L	Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]
				X	Y				Nylon	Urethane		
$\phi 1/8$	KQ2E01-00□1	1/2-20UNF	17.46	6.7	9.5	27.8	13.5	13.3	3.4	2.9	2.5	26.9
$\phi 5/32$	KQ2E03-00□1	1/2-20UNF	17.46	7.7	10	27.8	13.5	13.3	5.6	4	3	25.7
$\phi 3/16$	KQ2E05-00□1	9/16-18UNF	17.46	8.4	11	29.8	15	13.3	7.8	6.5	3.5	40.3

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



Release button dimensions

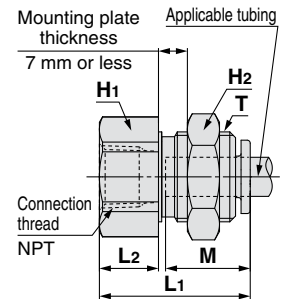


Bulkhead Connector: KQ2E

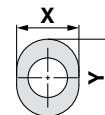


Applicable tubing O.D. [inch]	Connection thread NPT	Model	T (UNF)	H ₁ (Width across flats)	H ₂ (Width across flats)	L ₁	L ₂	Release button dimensions		Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]
								X	Y			Nylon	Urethane		
$\phi 1/8$	1/4	KQ2E01-35□1	1/2-20UNF	17.46	17.46	28.7	13.3	6.7	9.5	13.5	13.3	3.4	2.9	2.5	33.3
$\phi 5/32$	1/4	KQ2E03-35□1	1/2-20UNF	17.46	17.46	29	13.6	7.7	10	13.5	13.3	5.6	4	3	33.3
$\phi 3/16$	1/8	KQ2E05-34□1	9/16-18UNF	17.46	17.46	25.6	9.2	8.4	11	15	13.3	7.8	6.5	3.5	36.6

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



Release button dimensions





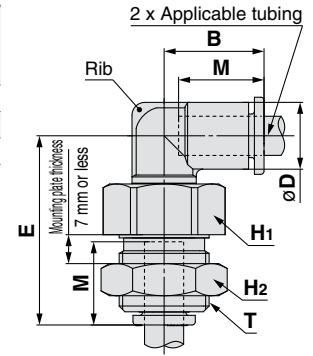
Dimensions

Bulkhead Male Elbow: KQ2LE

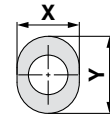


Applicable tubing O.D. [inch]	Model	T (UNF)	H1 (Width across flats)	H2 (Width across flats)	B	E	øD	Release button dimensions		Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
								X	Y			Nylon	Urethane			
ø1/8	KQ2LE01-00□1	1/2-20UNF	17.46	17.46	14.5	28.9	7.1	6.7	9.5	13.5	13.3	3	2.5	2.5	27.5	—
ø5/32	KQ2LE03-00□1	1/2-20UNF	17.46	17.46	14.8	28.5	8.2	7.7	10	13.5	13.3	4.2	4.2	3	27.1	●
ø3/16	KQ2LE05-00□1	9/16-18UNF	17.46	17.46	15	29.7	9.1	8.4	11	15	13.3	6.8	5.6	3.5	34.1	—

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



Release button dimensions

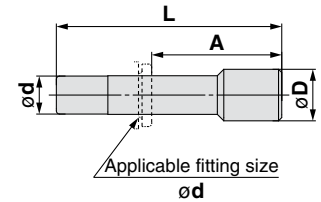


Plug: KQ2P



Applicable fitting size ød [inch]	Model	øD*1	L	A	Weight [g]
ø1/8	KQ2P-01	5	31.5	18.2	1
ø5/32	KQ2P-03	6	32	18.7	1
ø3/16	KQ2P-05	6.8	34	20.7	1
ø1/4	KQ2P-07	8.5	35	21.7	1
ø5/16	KQ2P-09	10	39	24.8	2
ø3/8	KQ2P-11	11.5	43	27.4	3.5
ø1/2	KQ2P-13	15	45.5	28.5	5

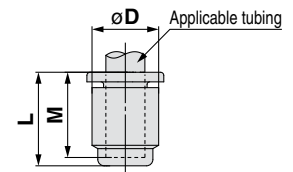
*1 øD is maximum diameter.



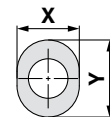
Tube Cap: KQ2C



Applicable tubing O.D. [inch]	Model	øD	Release button dimensions		L	M	Weight [g]
			X	Y			
ø5/32	KQ2C03-00A1	8.2	7.7	10	14.5	13.3	0.8



Release button dimensions



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

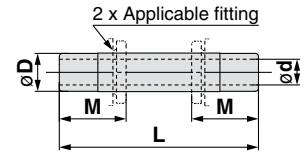
KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

Dimensions

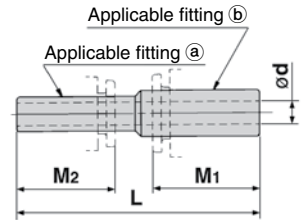
Nipple: KQ2N

Applicable fitting ϕD	Model	L	M	ϕd Min. port size	Weight [g]
$\phi 1/8$	KQ2N01-99	36	13.3	2.1	0.2
$\phi 3/16$	KQ2N05-99	38	13.3	3.4	0.4
$\phi 1/4$	KQ2N07-99	39	13.3	4.6	1
$\phi 3/8$	KQ2N11-99	49	15.6	7	2
$\phi 1/2$	KQ2N13-99	51	17	9.5	3.5



Reducer Nipple: KQ2N

Applicable fitting		Model	L	M ₁	M ₂	ϕd Min. port size	Weight [g]
(a)	(b)						
$\phi 1/8$	$\phi 5/32$	KQ2N01-03	36.5	13.3	13.3	2.1	0.2
	$\phi 3/16$	KQ2N01-05	37	13.3	13.3	2.1	0.4
$\phi 5/32$	$\phi 3/16$	KQ2N03-05	37.5	13.3	13.3	2.5	0.4
	$\phi 1/4$	KQ2N03-07	38	13.3	13.3	2.5	0.6
$\phi 3/16$	$\phi 1/4$	KQ2N05-07	38.5	13.3	13.3	3.4	0.6
	$\phi 5/16$	KQ2N05-09	41	13.3	13.3	3.4	1
$\phi 1/4$	$\phi 5/16$	KQ2N07-09	41.5	13.3	13.3	4.6	1
	$\phi 3/8$	KQ2N07-11	45	15.6	13.3	4.6	1
$\phi 5/16$	$\phi 3/8$	KQ2N09-11	46.5	15.6	14.2	6	1.8
	$\phi 1/2$	KQ2N09-13	47.5	17	14.2	6	2.6
$\phi 3/8$	$\phi 1/2$	KQ2N11-13	50	17	15.6	7	3.2

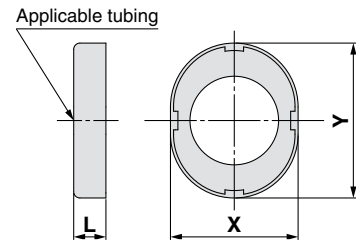


Color Cap: KQ2C



Applicable tubing O.D. [inch]	Model	X	Y	L	Weight [g]
$\phi 1/8$	KQ2C-01□B	7.3	10	2.6	0.1
$\phi 3/16$	KQ2C-05□B	8.95	11.5	2.6	0.1

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Gray), W (White), BU (Blue)



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: Orange
X41	With fixed orifice*2

*1 The following models are not available as made-to-order: Hexagon socket head male connector/KQ2S, Bulkhead union/KQ2E, Bulkhead connector/KQ2E, Nipple/KQ2N, Reducer nipple/KQ2N, Male connector/KQ2H, Female connector/KQ2F, Color cap/KQ2C, Plug/KQ2P

*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)
X34	Rubber material: FKM
X39	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)
X94	Grease-free Rubber material: FKM (With fluorine coating) Release button color: Light blue

3 Spare Parts

Description	Part no.	Applicable thread
Gasket	M-5G2	10-32UNF

Brass

Description	Part no.	Applicable model
Pipe nut	KQ01-P01A	KQ2E01-00A1, KQ2E03-00A1, KQ2E01-35A1
		KQ2E03-35A1, KQ2LE01-00A1, KQ2LE03-00A1
	KQ05-P01A	KQ2E05-00A1, KQ2E05-34A1
		KQ2LE05-00A1

Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	KQ01-P01N	KQ2E01-00N1, KQ2E03-00N1, KQ2E01-35N1
		KQ2E03-35N1, KQ2LE01-00N1, KQ2LE03-00N1
	KQ05-P01N	KQ2E05-00N1, KQ2E05-34N1
		KQ2LE05-00N1

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-KQ2H05-35NS1** (With thread)

10-KQ2H05-00A1 (Without thread)

Oval 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

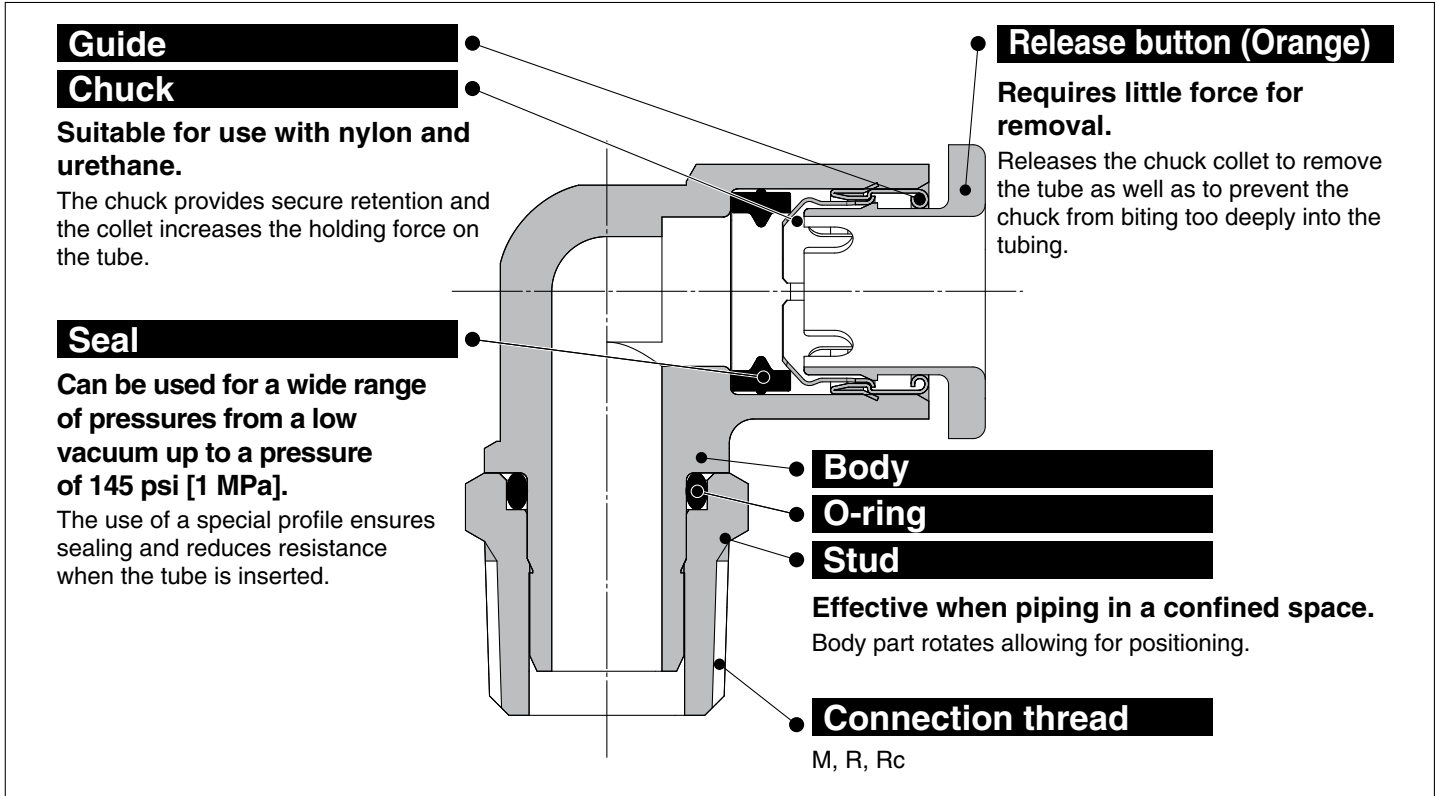
Metric Size Uni

Inch Size Uni

Oval Type Inch Size One-touch Fittings

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

KQ2 Series



One-touch IN/OUT connection.
Possible to use in vacuum to -14.5 psi [-100 kPa].



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø1/8", ø3/16"

Specifications

Fluid		Air, Water*1
Operating pressure range*2		-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])		435 psi [3 MPa]
Ambient and fluid temperature		23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Seal on the threads		With sealant

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

*2 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 55 for details.)



How to Order

Threaded Type

KQ2 H 05 - 01 A S 1

One-touch Fittings

Model

Symbol	Model
H	Male connector
L	Male elbow
T	Male branch tee
W	Extended male elbow
Y	Male run tee
E	Bulkhead union
	Bulkhead connector

Applicable tubing O.D.

Symbol	Size
01	ø1/8"
05	ø3/16"

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
Bulkhead union	M <input type="checkbox"/> Only for "Bulkhead union"

* : A, N

Port size

Symbol	Size
M5	M5 x 0.8
01	1/8
02	1/4
00 *1	Same diameter tubing

*1 Only for "Bulkhead union".

Spare Parts

Use the part number below to order the gasket for M5 thread.
Gasket for M5 thread: M-5G2

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

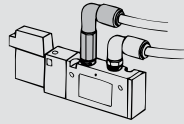
Inch Size One-touch Fittings

Oval Type Variations

Extended male elbow
KQ2W P.53



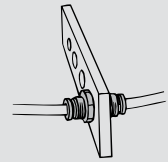
Basically, it is used together with a male elbow. Its extended height allows for multi-level piping and prevents interference among fittings.



Bulkhead union
KQ2E P.54



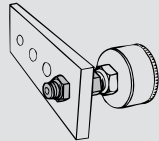
Use to connect tubing through a panel, etc.



Bulkhead connector
KQ2E P.54



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



Male connector
KQ2H P.52



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

Male branch tee
KQ2T P.53



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

Male elbow
KQ2L P.52



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

Male run tee
KQ2Y P.53



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

This model does not support oval type release buttons. Refer to the round type (from page 157).

Branch "Y"
KQ2U P.162



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

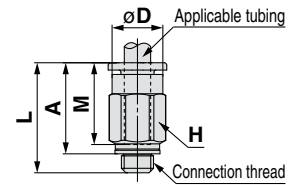
Dimensions

Male Connector: KQ2H (Gasket seal)

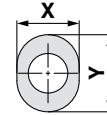


Applicable tubing O.D. [inch]	Connection thread M	Model	H (Width across flats)	øD	Release button dimensions		L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
ø1/8	M5 x 0.8	KQ2H01-M5□1	7	6.7	6.7	9.5	17.3	14.3	13.3	3.0	2.5	2.5	2.7
ø3/16	M5 x 0.8	KQ2H05-M5□1	10	8.3	8.4	11	17.6	14.6	13.3	4.0	4.0	2.5	4.6

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



Release button dimensions



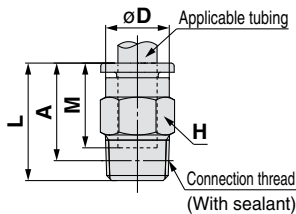
Male Connector: KQ2H (Sealant)



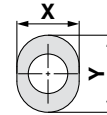
Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	øD	Release button dimensions		L	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
ø1/8	1/8	KQ2H01-01□S1	10	6.7	6.7	9.5	14	10.9	13.3	3.4	2.9	2.5	6
	1/4	KQ2H01-02□S1	14	6.7	6.7	9.5	16.7	12	13.3	3.4	2.9	2.5	15.3
ø3/16	1/8	KQ2H05-01□S1	10	8.3	8.4	11	17.9	14.8	13.3	7.8	6.5	3.5	6.4
	1/4	KQ2H05-02□S1	14	8.3	8.4	11	16.7	12	13.3	7.8	6.5	3.5	13.9

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

*1 Reference dimensions after installation of R thread



Release button dimensions

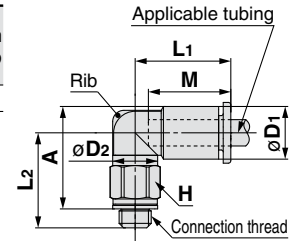


Male Elbow: KQ2L (Gasket seal)

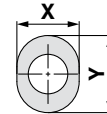


Applicable tubing O.D. [inch]	Connection thread M	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø1/8	M5 x 0.8	KQ2L01-M5□1	7	7.1	6.7	9.5	7	15.3	14.3	14.9	13.3	2.6	2.2	2.5	3.1	●

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



Release button dimensions



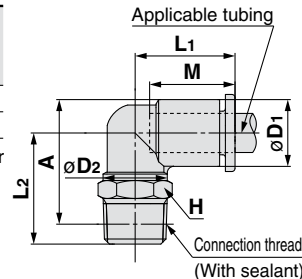
Male Elbow: KQ2L (Sealant)



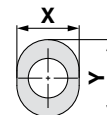
Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø3/16	1/8	KQ2L05-01□S1	10	9.1	8.4	11	10	15	16.7	18.2	13.3	6.8	5.6	3.5	5
	1/4	KQ2L05-02□S1	14	9.1	8.4	11	10	15	22.2	22.1	13.3	6.8	5.6	3.5	14.5

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

*1 Reference dimensions after installation of R thread



Release button dimensions



Sealant/Gasket Seal
Metric Size M, R, Rc

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

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal
Metric Size NPT

Inch Size R

Inch Size R

Gasket Seal
Metric Size Uni

Inch Size Uni

KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: M, R, Rc

Dimensions

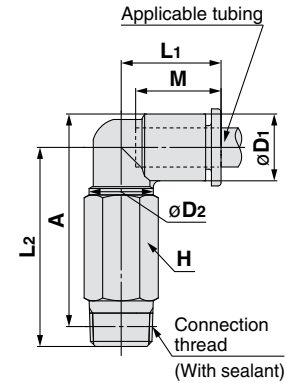
Extended Male Elbow: KQ2W (Sealant)



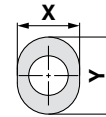
Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø3/16	1/8	KQ2W05-01□S1	10	9.1	8.4	11	10	15	30.4	31.8	13.3	6.8	5.6	3.5	11.2
	1/4	KQ2W05-02□S1	14	9.1	8.4	11	10	15	33.8	33.7	13.3	6.8	5.6	3.5	27.7

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

*1 Reference dimensions after installation of R thread



Release button dimensions



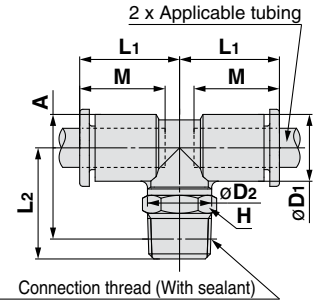
Male Branch Tee: KQ2T (Sealant)



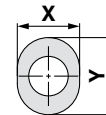
Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø3/16	1/8	KQ2T05-01□S1	10	9.1	8.4	11	10	15	16.7	18.1	13.3	8.4	7	3.5	5.8
	1/4	KQ2T05-02□S1	14	9.1	8.4	11	10	15	22.2	22	13.3	8.4	7	3.5	15.3

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

*1 Reference dimensions after installation of R thread



Release button dimensions



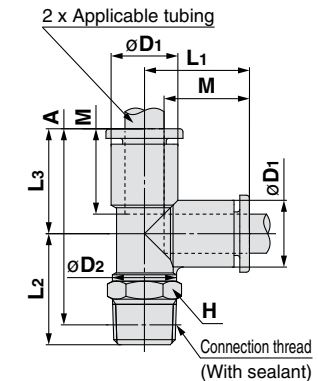
Male Run Tee: KQ2Y (Sealant)



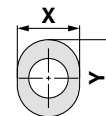
Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø3/16	1/8	KQ2Y05-01□S1	10	9.1	8.4	11	10	15.7	16.7	15.7	29.3	13.3	8.4	7	3.5	5.9
	1/4	KQ2Y05-02□S1	14	9.1	8.4	11	10	15.7	22.2	15.7	33.2	13.3	8.4	7	3.5	15.4

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

*1 Reference dimensions after installation of R thread



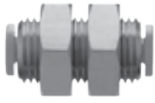
Release button dimensions





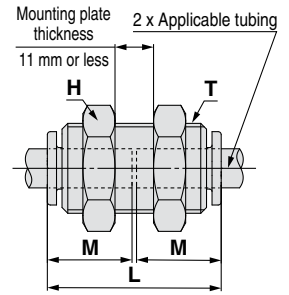
Dimensions

Bulkhead Union: KQ2E

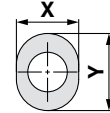


Applicable tubing O.D. [inch]	Model	T (M)	H (Width across flats)	Release button dimensions		L	Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]
				X	Y				Nylon	Urethane		
ø3/16	KQ2E05-00M□1	M14 x 1	17	8.4	11	27.3	15	13.3	7.8	6.5	3.5	30.5

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



Release button dimensions

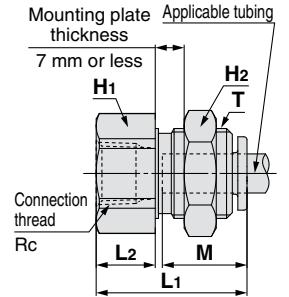


Bulkhead Connector: KQ2E

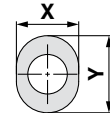


Applicable tubing O.D. [inch]	Connection thread Rc	Model	T (M)	Release button dimensions		H ₁ (Width across flats)	H ₂ (Width across flats)	L ₁	L ₂	Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]
				X	Y	17	17	23.9	9.5			Nylon	Urethane		
ø3/16	1/8	KQ2E05-01□1	M14 x 1	8.4	11	17	17	23.9	9.5	15	13.3	7.8	6.5	3.5	30.8

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



Release button dimensions



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

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: Orange
X41	With fixed orifice*2

*1 The following models are not available as made-to-order: Bulkhead union/KQ2E, Bulkhead connector/KQ2E, 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)
X34	Rubber material: FKM
X39	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)
X94	Grease-free Rubber material: FKM (With fluorine coating) Release button color: Light blue

3 Spare Parts

Description	Part no.	Applicable thread
Gasket	M-5G2	M5

Brass

Description	Part no.	Applicable model
Pipe nut	KQ06-P01A	KQ2E05-00MA1
		KQ2E05-01A1

Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	KQ06-P01N	KQ2E05-00MN1
		KQ2E05-01N1

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-KQ2H05-02NS1**

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



Oval Type Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: G

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 145 psi [1 MPa].
 The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Face seal method

Seal ring
 Piping installability is improved by changing to the face seal structure.

Release button
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.
 The body and the threaded portion can rotate (for positioning to some extent).

G thread

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	
Operating pressure range*2	-14.5 to 145 psi [-100 kPa to 1 MPa]	
Proof pressure (at 73°F [23°C])	435 psi [3 MPa]	
Ambient and fluid temperature	23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)	
Thread	Mounting section	ISO 16030 (Parallel pipe thread)
	Nut section	JIS B0205 (Metric fine thread)
Sealant on the threads	Seal ring	

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

*2 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

Oval type release button

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

Applicable tubing O.D.

Symbol	Size
04	ø4
06	ø6

Sealant/Gasket Seal

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

Inch Size M, R, Rc

Face Seal

Metric Size G

Metric Size R, Rc
Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni
Inch Size Uni

Metric Size One-touch Fittings

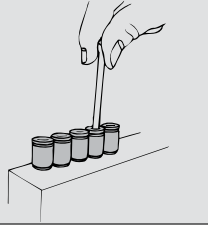
Oval Type Variations

Hexagon socket head male connector

KQ2S P.60



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

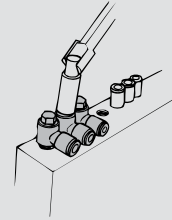


Universal male elbow

KQ2V P.61



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

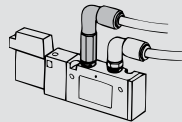


Extended male elbow

KQ2W P.61



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

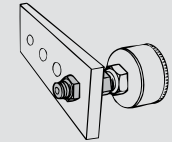


Bulkhead connector

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.



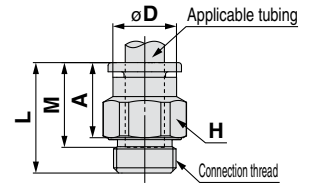
Dimensions

Male Connector: KQ2H (Face seal)

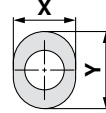


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD	Release button dimensions		L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
					ø4	1/8				KQ2H04-G01□1	12		
	1/4	KQ2H04-G02□1	17	—	7.7	10	15.4	8.9	13.3	4.8	3.4	3	16.8
ø6	1/8	KQ2H06-G01□1	12	9.9	9.7	12	17.3	11.8	13.3	13.1	10.4	4.5	6.6
	1/4	KQ2H06-G02□1	17	—	9.7	12	15.4	8.9	13.3	13.1	10.4	4.5	14.8
	3/8	KQ2H06-G03□1	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

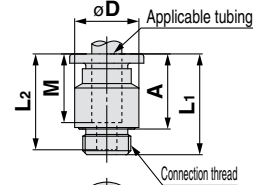


Hexagon Socket Head Male Connector: KQ2S (Face seal)

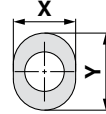


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD	Release button dimensions		L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
					ø4	1/8					KQ2S04-G01□1	3		
ø6	1/8	KQ2S06-G01□1	4	13	9.7	12	19.8	18.8	14.3	13.3	10	9.9	4.1	9.7
	1/4	KQ2S06-G02□1	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

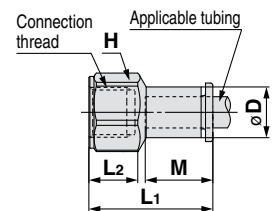


Female Connector: KQ2F

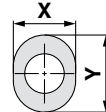


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD	Release button dimensions		L1	L2	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
					ø4	1/8				KQ2F04-G01□1	14		
1/4	KQ2F04-G02□1	17	7.9	7.7		10	30.1	13.9	13.3	5.6	4	3	21.3
ø6	1/8	KQ2F06-G01□1	14	9.9	9.7	12	24.3	9.5	13.3	13.1	10.4	4.5	12.6
	1/4	KQ2F06-G02□1	17	9.9	9.7	12	29.6	13.9	13.3	13.1	10.4	4.5	21.4
	3/8	KQ2F06-G03□1	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

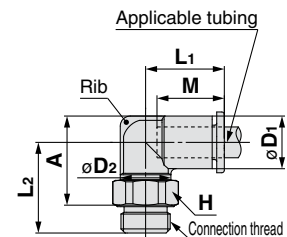


Male Elbow: KQ2L (Face seal)

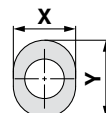


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
					ø4	1/8						KQ2L04-G01□1	12			
1/4	KQ2L04-G02□1	17	8.2	7.7		10	10	14.8	20.3	17.9	13.3	4.6	3.3	3	16.7	●
ø6	1/8	KQ2L06-G01□1	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□1	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□1	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



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

KQ2 Series

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

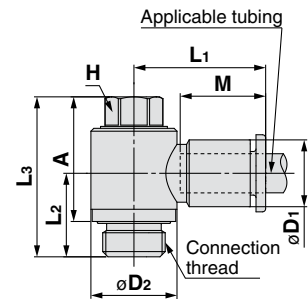
Dimensions

Universal Male Elbow: KQ2V (Face seal)

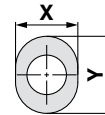


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø4	1/8	KQ2V04-G01□1	8	8.2	7.7	10	13.4	19.3	13	24.9	19.4	13.3	2.9	2.9	3	12.9
	1/4	KQ2V04-G02□1	8	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	1/8	KQ2V06-G01□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
	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

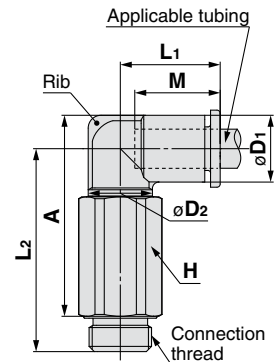


Extended Male Elbow: KQ2W (Face seal)

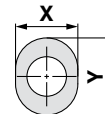


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø4	1/8	KQ2W04-G01□1	12	8.2	7.7	10	10	14.8	30.5	29.1	13.3	4	4	3	16.5	●
	1/4	KQ2W04-G02□1	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

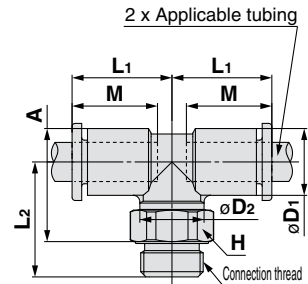


Male Branch Tee: KQ2T (Face seal)

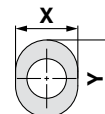


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø4	1/8	KQ2T04-G01□1	12	8.2	7.7	10	10	14.8	16.8	15.4	13.3	6	4.1	3	7
	1/4	KQ2T04-G02□1	17	8.2	7.7	10	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



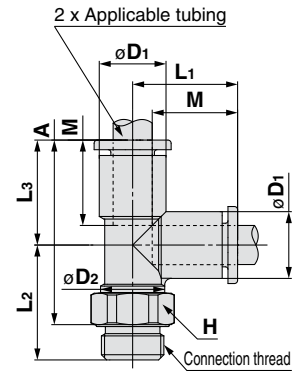
Dimensions

Male Run Tee: KQ2Y (Face seal)

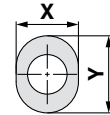


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø4	1/8	KQ2Y04-G01□1	12	8.2	7.7	10	10	15.3	16.8	15.3	26.6	13.3	6.4	4.4	3	7
	1/4	KQ2Y04-G02□1	17	8.2	7.7	10	10	15.3	20.3	15.3	29.1	13.3	6.4	4.4	3	17.5
ø6	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

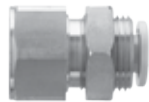
□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

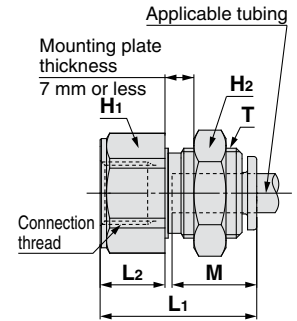


Bulkhead Connector: KQ2E

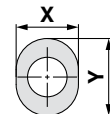


Applicable tubing O.D. [mm]	Connection thread G	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Release button dimensions		Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]
								X	Y			Nylon	Urethane		
ø4	1/8	KQ2E04-G01□1	M12 x 1	14	14	25.1	10.7	7.7	10	13	13.3	5.6	4	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
ø6	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



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

KQ2 Series Spare Parts

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

1 Spare Parts

Brass

Description	Part no.	Applicable model
Pipe nut	KQ04-P01A	KQ2E04-G01A1, KQ2E04-G02A1
	KQ06-P01A	KQ2E06-G01A1, KQ2E06-G02A1, KQ2E06-G03A1

Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	KQ04-P01N	KQ2E04-G01N1, KQ2E04-G02N1
	KQ06-P01N	KQ2E06-G01N1, KQ2E06-G02N1, KQ2E06-G03N1

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

Oval Type Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: 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

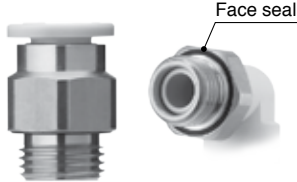
Can be used for a wide range of pressures from a low vacuum up to a pressure of 145 psi [1 MPa].

The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Face seal method

Seal ring

Piping installability is improved by changing to the face seal structure.



Face seal

Release button

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

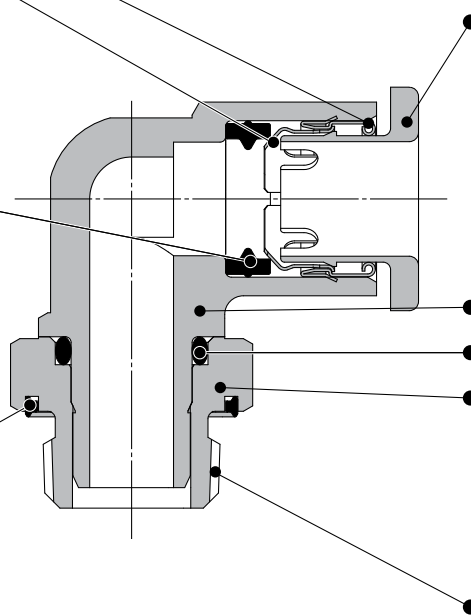
Stud

Effective when piping in a confined space.

Body part rotates allowing for positioning.

Connection thread

R, Rc



One-touch IN/OUT connection.

Possible to use in vacuum to -14.5 psi [-100 kPa].

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



Applicable Tubing

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

Specifications

Fluid		Air, Water*1
Operating pressure range*2		-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])		435 psi [3 MPa]
Ambient and fluid temperature		23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Sealant on the threads		Seal ring

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

*2 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 - 01 A P 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
VS	Hexagon socket head universal male elbow
VF	Universal 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

Oval type release button

Face seal

Thread material/Surface treatment

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

Port size/Applicable tubing O.D.

Symbol	Size	
Thread connection	01	R1/8, Rc1/8
	02	R1/4, Rc1/4
	03	R3/8, Rc3/8

Applicable tubing O.D.

Symbol	Size
23	ø3.2
04	ø4
06	ø6

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

Metric Size One-touch Fittings

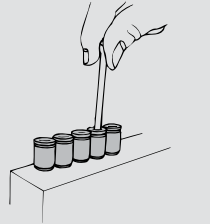
Oval Type Variations

Hexagon socket head male connector

KQ2S P.68



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

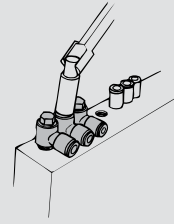


Universal male elbow

KQ2V P.69



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

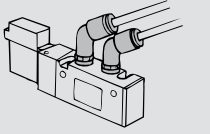


45° male elbow

KQ2K P.68



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

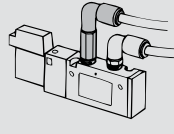


Extended male elbow

KQ2W P.71



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

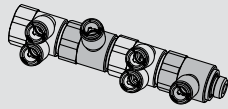


Universal female elbow

KQ2VF P.69



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.



Male connector

KQ2H P.68



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

Hexagon socket head universal male elbow

KQ2VS P.69



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

Male run tee

KQ2Y P.71



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

Male elbow

KQ2L P.68



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

Double universal male elbow

KQ2VD P.70



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

Male delta union

KQ2D P.72



Use to branch a female thread at two right angles.

Male branch tee

KQ2T P.71



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

Triple universal male elbow

KQ2VT P.70



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

The following models do not support oval type release buttons. Refer to the round type (from page 173).

Branch universal female elbow

KQ2ZF P.180



Branch male elbow

KQ2LU P.177



Branch universal male elbow

KQ2Z P.180



Double branch universal male elbow

KQ2ZD P.180



Triple branch universal male elbow

KQ2ZT P.181



Double branch "Y"

KQ2UD P.184



Branch "Y"

KQ2U P.183



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

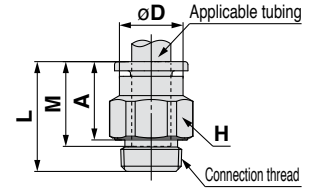
Dimensions

Male Connector: KQ2H (Face seal)

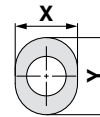


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD	Release button dimensions		L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
ø3.2	1/8	KQ2H23-01□P1	12	6.9	6.7	9.5	14.1	8.9	13.3	3.4	2.9	2.5	6.3
	1/4	KQ2H23-02□P1	17	—	6.7	9.5	15	7.4	13.3	3.4	2.9	2.5	15.1
ø4	1/8	KQ2H04-01□P1	12	7.9	7.7	10	16.4	11.2	13.3	4.8	3.4	3	6.9
	1/4	KQ2H04-02□P1	17	—	7.7	10	15	7.4	13.3	4.8	3.4	3	14.5
ø6	1/8	KQ2H06-01□P1	12	9.9	9.7	12	17.2	12	13.3	13.1	10.4	4.5	6.5
	1/4	KQ2H06-02□P1	17	—	9.7	12	14	6.4	13.3	13.1	10.4	4.5	10.6
	3/8	KQ2H06-03□P1	21	—	9.7	12	15.2	7.6	13.3	13.1	10.4	4.5	22.8

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



Release button dimensions

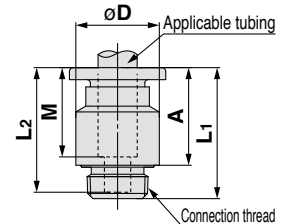


Hexagon Socket Head Male Connector: KQ2S (Face seal)

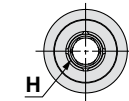
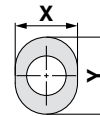


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD	Release button dimensions		L ₁	L ₂	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
ø4	1/8	KQ2S04-01□P1	3	13	7.7	10	20.6	19.6	15.4	13.3	4.1	3.6	3.1	11.6
ø6	1/8	KQ2S06-01□P1	4	13	9.7	12	19.8	18.8	14.6	13.3	10	4	9.6	
	1/4	KQ2S06-02□P1	4	18	9.7	12	19.8	18.8	12.2	13.3	10.7	4.1	16.3	

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



Release button dimensions

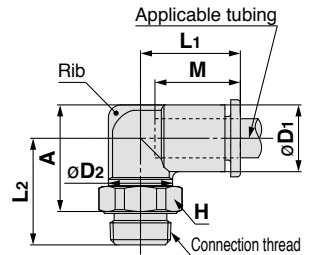


Male Elbow: KQ2L (Face seal)

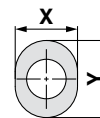


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD ₁	Release button dimensions		øD ₂	L ₁	L ₂	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø3.2	1/8	KQ2L23-01□P1	12	7.1	6.7	9.5	10	14.5	16	14.3	13.3	3	2.5	2.5	5.1	—
	1/4	KQ2L23-02□P1	17	7.1	6.7	9.5	10	14.5	19.4	15.3	13.3	3	2.5	2.5	14.3	—
ø4	1/8	KQ2L04-01□P1	12	8.2	7.7	10	10	14.8	15.5	14.4	13.3	4.6	3.3	3	5.2	●
	1/4	KQ2L04-02□P1	17	8.2	7.7	10	10	14.8	19.9	16.4	13.3	4.6	3.3	3	14.5	●
ø6	1/8	KQ2L06-01□P1	12	10.4	9.7	12	10	15.5	16.6	16.6	13.3	11.4	9	4.5	5.7	—
	1/4	KQ2L06-02□P1	17	10.4	9.7	12	10	15.5	21	18.6	13.3	11.4	9	4.5	15	—
	3/8	KQ2L06-03□P1	21	10.4	9.7	12	10	15.5	23	20.6	13.3	11.4	9	4.5	30.2	—

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



Release button dimensions

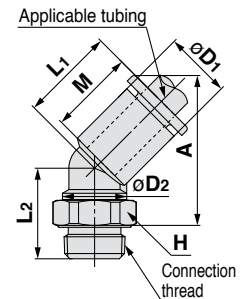


45° Male Elbow: KQ2K (Face seal)

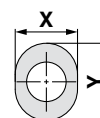


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD ₁	Release button dimensions		øD ₂	L ₁	L ₂	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø4	1/8	KQ2K04-01□P1	12	8.2	7.7	10	10	14.4	12	19.5	13.3	4.8	3.4	3	5.1
	1/4	KQ2K04-02□P1	17	8.2	7.7	10	10	14.4	15.4	20.5	13.3	4.8	3.4	3	14.3
ø6	1/8	KQ2K06-01□P1	12	10.4	9.7	12	10	14.7	14.1	22.5	13.3	8.7	6.9	4.5	5.5
	1/4	KQ2K06-02□P1	17	10.4	9.7	12	10	14.7	17.5	23.5	13.3	8.7	6.9	4.5	14.7
	3/8	KQ2K06-03□P1	21	10.4	9.7	12	10	14.7	19.5	25.5	13.3	8.7	6.9	4.5	29.9

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



Release button dimensions



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

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Face Seal
Inch Size NPT

Inch Size R

Metric Size Uni

Gasket Seal
Inch Size Uni

KQ2 Series

Oval Type Applicable Tubing: Metric Size, Connection Thread: R, Rc

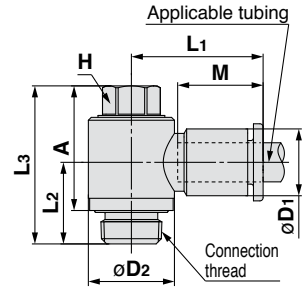
Dimensions

Universal Male Elbow: KQ2V (Face seal)

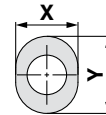


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø4	1/8	KQ2V04-01□P1	8	8.2	7.7	10	13.4	19.3	12.7	24.6	19.4	13.3	2.9	2.9	3	12.6
ø6	1/8	KQ2V06-01□P1	8	10.4	9.7	12	13.4	20.5	12.7	24.6	19.4	13.3	7.5	5.9	4.5	12.9
	1/4	KQ2V06-02□P1	10	10.4	9.7	12	18	19.9	16.1	28.7	21.1	13.3	7.5	5.9	4.5	23.2

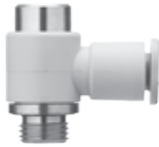
□: A (Brass), N (Brass + Electroless nickel plating)



Release button dimensions

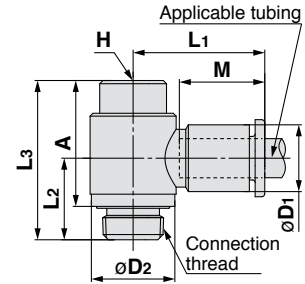


Hexagon Socket Head Universal Male Elbow: KQ2VS (Face seal)

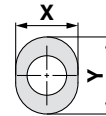


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø4	1/8	KQ2VS04-01□P1	6	8.2	7.7	10	13.4	19.3	12.7	24.8	19.6	13.3	2.9	2.9	3	12.6
ø6	1/8	KQ2VS06-01□P1	6	10.4	9.7	12	13.4	20.5	12.7	24.8	19.6	13.3	7.5	5.9	4.5	12.9
	1/4	KQ2VS06-02□P1	6	10.4	9.7	12	18	19.9	16.1	24.7	17.1	13.3	7.5	5.9	4.5	19.2

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



Release button dimensions

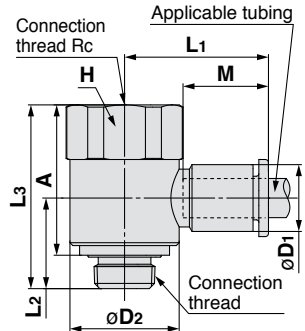


Universal Female Elbow: KQ2VF (Face seal)

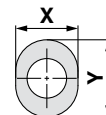


Applicable tubing O.D. [mm]	Connection thread R, Rc	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø4	1/8	KQ2VF04-01□P1	17	8.2	7.7	10	17	21.2	14.1	28.6	23.4	13.3	2.9	2.9	3	28.5
ø6	1/8	KQ2VF06-01□P1	17	10.4	9.7	12	17	22.4	14.1	28.6	23.4	13.3	7.5	5.9	4.5	28.9
	1/4	KQ2VF06-02□P1	22	10.4	9.7	12	21.7	23.2	17.6	36.4	28.8	13.3	7.5	5.9	4.5	60.3

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



Release button dimensions





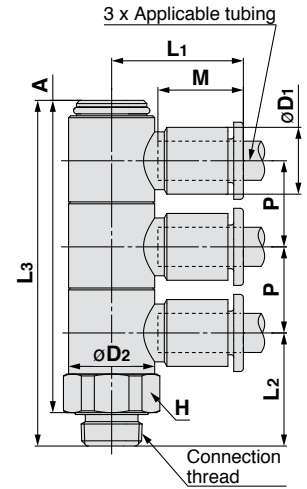
Dimensions

Triple Universal Male Elbow: KQ2VT (Face seal)

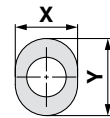


Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	P	Effective area (mm ²)		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
ø4	1/8	KQ2VT04-01□P1	14	8.2	7.7	10	13.4	19.3	17.6	53.8	48.6	13.3	13.4	2.9	2.9	3	27.5
	1/4	KQ2VT04-02□P1	17	8.2	7.7	10	13.4	19.3	21	57.2	49.6	13.3	13.4	2.9	2.9	3	36.8
	3/8	KQ2VT04-03□P1	21	8.2	7.7	10	13.4	19.3	23	59.2	51.6	13.3	13.4	2.9	2.9	3	54.4
ø6	1/8	KQ2VT06-01□P1	14	10.4	9.7	12	13.4	20.5	17.6	53.8	48.6	13.3	13.4	7.5	5.9	4.5	28.5
	1/4	KQ2VT06-02□P1	17	10.4	9.7	12	13.4	20.5	21	57.2	49.6	13.3	13.4	7.5	5.9	4.5	37.8
	3/8	KQ2VT06-03□P1	21	10.4	9.7	12	13.4	20.5	23	59.2	51.6	13.3	13.4	7.5	5.9	4.5	55.4

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



Release button dimensions

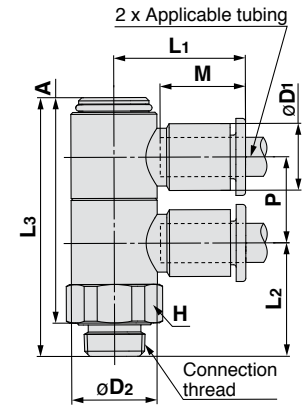


Double Universal Male Elbow: KQ2VD (Face seal)

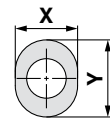


Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	P	Effective area (mm ²)		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
ø4	1/8	KQ2VD04-01□P1	14	8.2	7.7	10	13.4	19.3	17.6	40.3	35.1	13.3	13.4	2.9	2.9	3	22
	1/4	KQ2VD04-02□P1	17	8.2	7.7	10	13.4	19.3	21	43.7	36.1	13.3	13.4	2.9	2.9	3	31.2
	3/8	KQ2VD04-03□P1	21	8.2	7.7	10	13.4	19.3	23	45.7	38.1	13.3	13.4	2.9	2.9	3	48.7
ø6	1/8	KQ2VD06-01□P1	14	10.4	9.7	12	13.4	20.5	17.6	40.3	35.1	13.3	13.4	7.5	5.9	4.5	22.6
	1/4	KQ2VD06-02□P1	17	10.4	9.7	12	13.4	20.5	21	43.7	36.1	13.3	13.4	7.5	5.9	4.5	31.8
	3/8	KQ2VD06-03□P1	21	10.4	9.7	12	13.4	20.5	23	45.7	38.1	13.3	13.4	7.5	5.9	4.5	49.3

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



Release button dimensions



Metric Size M, R, Rc

Sealant/Gasket Seal
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

KQ2 Series

Oval Type Applicable Tubing: Metric Size, Connection Thread: R, Rc

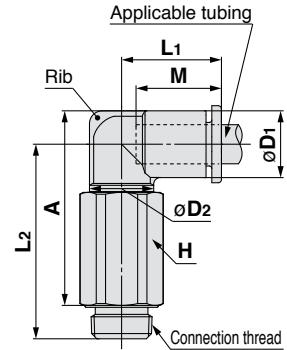
Dimensions

Extended Male Elbow: KQ2W (Face seal)

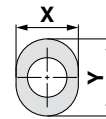


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø3.2	1/8	KQ2W23-01□P1	12	7.1	6.7	9.5	10	14.5	29.6	28	13.3	2.8	2.4	2.5	15.3	—
	1/4	KQ2W23-02□P1	17	7.1	6.7	9.5	10	14.5	31	27	13.3	2.8	2.4	2.5	34.6	—
ø4	1/8	KQ2W04-01□P1	12	8.2	7.7	10	10	14.8	29.2	28.1	13.3	4	4	3	15.5	●
	1/4	KQ2W04-02□P1	17	8.2	7.7	10	10	14.8	31.5	28	13.3	4	4	3	34.9	●
ø6	1/8	KQ2W06-01□P1	12	10.4	9.7	12	10	15.5	30.3	30.3	13.3	10.9	8.6	4.5	15.9	—
	1/4	KQ2W06-02□P1	17	10.4	9.7	12	10	15.5	32.6	30.2	13.3	10.9	8.6	4.5	35.3	—
	3/8	KQ2W06-03□P1	21	10.4	9.7	12	10	15.5	34.6	32.2	13.3	10.9	8.6	4.5	62.8	—

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



Release button dimensions

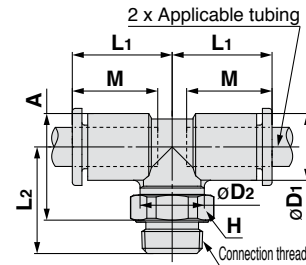


Male Branch Tee: KQ2T (Face seal)

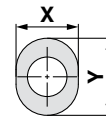


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø3.2	1/8	KQ2T23-01□P1	12	7.1	6.7	9.5	10	14.5	15.9	14.3	13.3	3.4	2.9	2.5	5.7
	1/4	KQ2T23-02□P1	17	7.1	6.7	9.5	10	14.5	19.3	15.3	13.3	3.4	2.9	2.5	14.9
ø4	1/8	KQ2T04-01□P1	12	8.2	7.7	10	10	14.8	15.5	14.4	13.3	6	4.1	3	5.9
	1/4	KQ2T04-02□P1	17	8.2	7.7	10	10	14.8	19.9	16.4	13.3	6	4.1	3	15.2
ø6	1/8	KQ2T06-01□P1	12	10.4	9.7	12	10	15.5	16.6	16.6	13.3	13.9	11	4.5	6.6
	1/4	KQ2T06-02□P1	17	10.4	9.7	12	10	15.5	21	18.6	13.3	13.9	11	4.5	15.9
	3/8	KQ2T06-03□P1	21	10.4	9.7	12	10	15.5	23	20.6	13.3	13.9	11	4.5	31.1

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



Release button dimensions

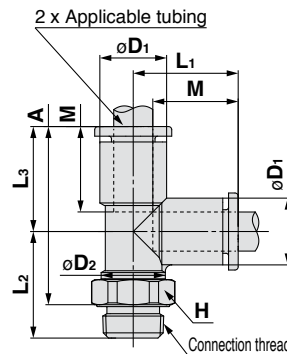


Male Run Tee: KQ2Y (Face seal)

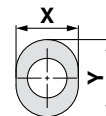


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø3.2	1/8	KQ2Y23-01□P1	12	7.1	6.7	9.5	10	14.9	15.9	14.9	25.7	13.3	3.4	2.9	2.5	5.7
	1/4	KQ2Y23-02□P1	17	7.1	6.7	9.5	10	14.9	19.3	14.9	26.7	13.3	3.4	2.9	2.5	14.9
ø4	1/8	KQ2Y04-01□P1	12	8.2	7.7	10	10	15.3	15.5	15.3	25.6	13.3	6.4	4.4	3	6
	1/4	KQ2Y04-02□P1	17	8.2	7.7	10	10	15.3	19.9	15.3	27.6	13.3	6.4	4.4	3	15.2
ø6	1/8	KQ2Y06-01□P1	12	10.4	9.7	12	10	16.3	16.6	16.3	27.7	13.3	13.4	10.6	4.5	6.7
	1/4	KQ2Y06-02□P1	17	10.4	9.7	12	10	16.3	21	16.3	29.7	13.3	13.4	10.6	4.5	16
	3/8	KQ2Y06-03□P1	21	10.4	9.7	12	10	16.3	23	16.3	31.7	13.3	13.4	10.6	4.5	31.2

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



Release button dimensions



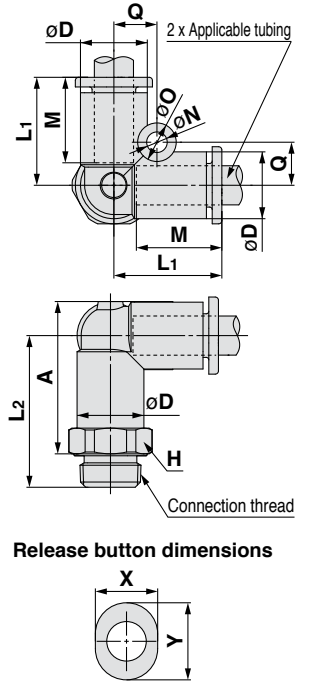
Dimensions

Male Delta Union: KQ2D (Face seal)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	øD	Release button dimensions		L1	L2	A	M	Q	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
ø4	1/8	KQ2D04-01□P1	12	8.2	7.7	10	15.8	22.6	21.5	13.3	5.7	6	3.2	6	6	3.6	9.1
	1/4	KQ2D04-02□P1	17	8.2	7.7	10	15.8	26	22.5	13.3	5.7	6	3.2	6	6	3.6	19
ø6	1/8	KQ2D06-01□P1	12	10.4	9.7	12	16.8	23.6	23.6	13.3	6.7	6	3.2	13.9	11	5.4	9.7
	1/4	KQ2D06-02□P1	17	10.4	9.7	12	16.8	27	24.6	13.3	6.7	6	3.2	13.9	11	5.4	19.3
	3/8	KQ2D06-03□P1	21	10.4	9.7	12	16.8	26.5	24.1	13.3	6.7	6	3.2	13.9	11	5.4	27.6

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



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

Oval Type Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: NPT

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.

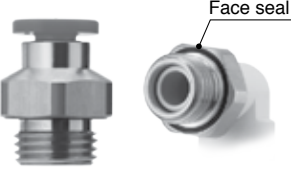
Seal

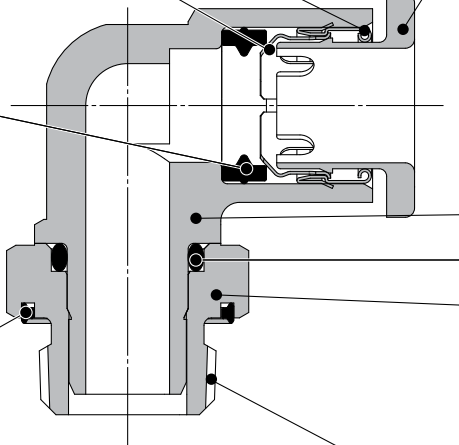
Can be used for a wide range of pressures from a low vacuum up to a pressure of 145 psi [1 MPa].
The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Face seal method

Seal ring

Piping installability is improved by changing to the face seal structure.





Release button

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

NPT

One-touch IN/OUT connection.
Possible to use in vacuum to -14.5 psi [-100 kPa.]

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



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø1/8", ø5/32", ø3/16"

Specifications

Fluid		Air, Water*1
Operating pressure range*2		-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])		435 psi [3 MPa]
Ambient and fluid temperature		23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)
Thread	Mounting section	ANSI/ASME1.20.1 (NPT thread) JIS B0208 (UNF thread)
	Nut section	JIS B0208 (UNF thread)
Sealant on the threads		Seal ring

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

*2 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 05 - 34 A P 1

One-touch fittings

Oval type release button

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
L	Male elbow
K	45° male elbow
V	Universal male elbow
VS	Hexagon socket head universal male elbow
VF	Universal female elbow
VD	Double universal male elbow
VT	Triple universal male elbow
W	Extended male elbow
T	Male branch tee
Y	Male run tee

Face seal

Thread material/Surface treatment

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

Port size/Applicable tubing O.D.

Symbol	Size
33	NPT1/16
34	NPT1/8
35	NPT1/4

Applicable tubing O.D.

Symbol	Size
01	ø1/8"
03	ø5/32"
05	ø3/16"

Sealant/Gasket Seal

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Face Seal

Metric Size G

Metric Size R, Rc

Gasket Seal

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Inch Size One-touch Fittings

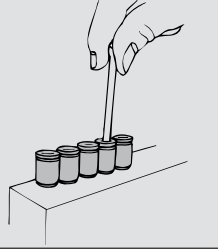
Oval Type Variations

Hexagon socket head male connector

KQ2S P.76



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

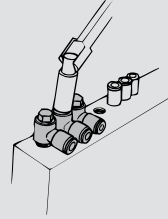


Universal male elbow

KQ2V P.77



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

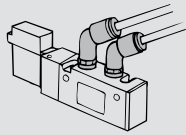


45° male elbow

KQ2K P.77



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

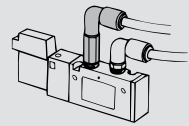


Extended male elbow

KQ2W P.79



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.76



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

Universal female elbow

KQ2VF P.78



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

Male branch tee

KQ2T P.79



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

Male elbow

KQ2L P.76



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

Double universal male elbow

KQ2VD P.78



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

Male run tee

KQ2Y P.79



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

Hexagon socket head universal male elbow

KQ2VS P.77



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

Triple universal male elbow

KQ2VT P.78



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

The following models do not support oval type release buttons. Refer to the round type (from page 185).

Branch universal male elbow

KQ2Z P.191



Double branch universal male elbow

KQ2ZD P.192



Triple branch universal male elbow

KQ2ZT P.192



Branch "Y"

KQ2U P.194



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

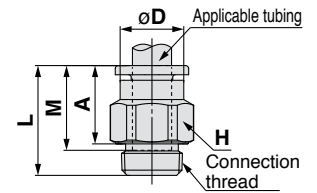
Dimensions

Male Connector: KQ2H (Face seal)

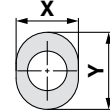


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD	Release button dimensions		L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
ø1/8	1/16	KQ2H01-33□P1	11.11	6.7	6.7	9.5	16.8	11.4	13.3	3	2.5	2.5	14.9
	1/8	KQ2H01-34□P1	12.7	6.7	6.7	9.5	14.3	8.9	13.3	3	2.5	2.5	8.7
	1/4	KQ2H01-35□P1	17.46	6.7	6.7	9.5	15.6	7.5	13.3	3.4	2.9	2.5	16.6
ø5/32	1/16	KQ2H03-33□P1	11.11	7.7	7.7	10	19	13.6	13.3	4.8	3.4	3	13.9
	1/8	KQ2H03-34□P1	12.7	7.7	7.7	10	16.4	11	13.3	4.8	3.4	3	7.6
	1/4	KQ2H03-35□P1	17.46	7.7	7.7	10	15.6	7.5	13.3	4.8	3.4	3	16
ø3/16	1/8	KQ2H05-34□P1	12.7	8.3	8.4	11	16.9	11.5	13.3	7.8	6.5	3.6	7.8
	1/4	KQ2H05-35□P1	17.46	8.3	8.4	11	15.6	7.5	13.3	7.8	6.5	3.5	15.3

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



Release button dimensions

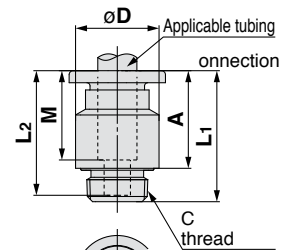


Hexagon Socket Head Male Connector: KQ2S (Face seal)

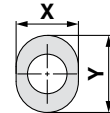


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD	Release button dimensions		L ₁	L ₂	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
ø5/32	1/16	KQ2S03-33□P1	2.78	12	7.7	10	19	16.3	13.6	13.3	4.1	3.6	2.8	7.5
	1/8	KQ2S03-34□P1	2.78	14	7.7	10	17.3	16.3	11.9	13.3	4.1	3.6	2.8	9.2
ø3/16	1/8	KQ2S05-34□P1	3.57	14	8.4	11	19.8	18.8	14.4	13.3	7.8	6.5	3.6	11.7

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



Release button dimensions

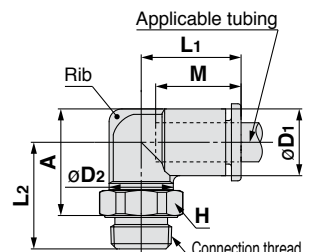


Male Elbow: KQ2L (Face seal)

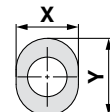


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD ₁	Release button dimensions		øD ₂	L ₁	L ₂	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø1/8	1/16	KQ2L01-33□P1	11.11	7.1	6.7	9.5	10	14.5	21.6	19.8	13.3	3	2.5	2.5	14.6	—
	1/8	KQ2L01-34□P1	12.7	7.1	6.7	9.5	10	14.5	16.7	14.9	13.3	3	2.5	2.5	6.1	—
	1/4	KQ2L01-35□P1	17.46	7.1	6.7	9.5	10	14.5	21.4	16.9	13.3	3	2.5	2.5	18.3	—
ø5/32	1/16	KQ2L03-33□P1	11.11	8.2	7.7	10	10	14.8	21.1	19.8	13.3	4.6	3.3	3	14.9	●
	1/8	KQ2L03-34□P1	12.7	8.2	7.7	10	10	14.8	16.2	14.9	13.3	4.6	3.3	3	6.3	●
	1/4	KQ2L03-35□P1	17.46	8.2	7.7	10	10	14.8	21.9	17.9	13.3	4.6	3.3	3	18.5	●
ø3/16	1/8	KQ2L05-34□P1	12.7	9.1	8.4	11	10	15	16.7	15.8	13.3	6.8	5.6	3.5	6.5	—
	1/4	KQ2L05-35□P1	17.46	9.1	8.4	11	10	15	22.4	18.8	13.3	6.8	5.6	3.5	18.7	—

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



Release button dimensions



Sealant/Gasket Seal
Metric Size M, R, Rc
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

KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: NPT

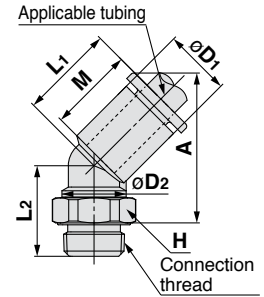
Dimensions

45° Male Elbow: KQ2K (Face seal)

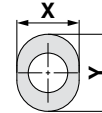


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø1/8	1/8	KQ2K01-34□P1	12.7	7.1	6.7	9.5	10	14.3	12.7	19.6	13.3	3	2.5	2.5	5.9
ø5/32	1/8	KQ2K03-34□P1	12.7	8.2	7.7	10	10	14.4	12.7	20	13.3	4.8	3.4	3	6.1
ø3/16	1/8	KQ2K05-34□P1	12.7	9.1	8.4	11	10	14.5	13.2	20.9	13.3	6.8	5.6	3.5	6.3

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



Release button dimensions

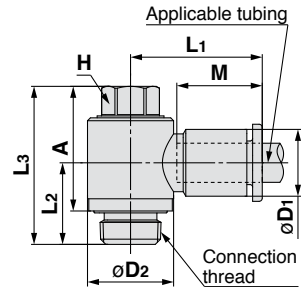


Universal Male Elbow: KQ2V (Face seal)

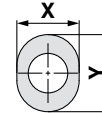


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø1/8	1/8	KQ2V01-34□P1	8	7.1	6.7	9.5	14	19.3	12.9	24.8	19.4	13.3	2.2	1.9	2.5	13.1
ø5/32	1/8	KQ2V03-34□P1	8	8.2	7.7	10	14	19.3	12.9	24.8	19.4	13.3	2.9	2.9	3	13.2
ø3/16	1/8	KQ2V05-34□P1	8	9.1	8.4	11	14	19.6	12.9	24.8	19.4	13.3	4.5	3.7	3.5	13.4

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



Release button dimensions

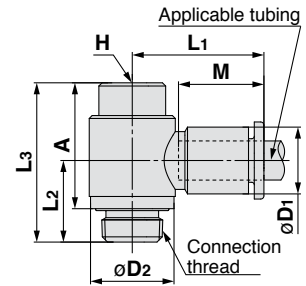


Hexagon Socket Head Universal Male Elbow: KQ2VS (Face seal)

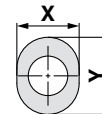


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø1/8	1/8	KQ2VS01-34□P1	6.35	7.1	6.7	9.5	14	19.3	12.9	25	19.6	13.3	2.2	1.9	2.5	12.7
ø5/32	1/8	KQ2VS03-34□P1	6.35	8.2	7.7	10	14	19.3	12.9	25	19.6	13.3	2.9	2.9	3	12.8
ø3/16	1/8	KQ2VS05-34□P1	6.35	9.1	8.4	11	14	19.6	12.9	25	19.6	13.3	4.5	3.7	3.5	13.1

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



Release button dimensions



Dimensions

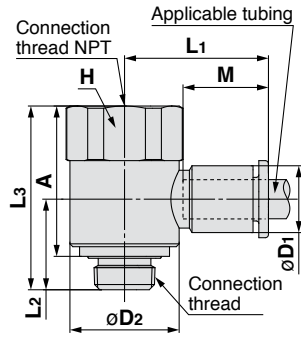
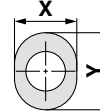
Universal Female Elbow: KQ2VF (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø1/8	1/8	KQ2VF01-34□P1	17.46	7.1	6.7	9.5	17	21.2	14.3	28.8	23.4	13.3	2.2	1.9	2.5	28.4
ø5/32	1/8	KQ2VF03-34□P1	17.46	8.2	7.7	10	17	21.2	14.3	28.8	23.4	13.3	2.9	2.9	3	28.5
ø3/16	1/8	KQ2VF05-34□P1	17.46	9.1	8.4	11	17	21.5	14.3	28.8	23.4	13.3	4.5	3.7	3.5	28.7

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

Release button dimensions



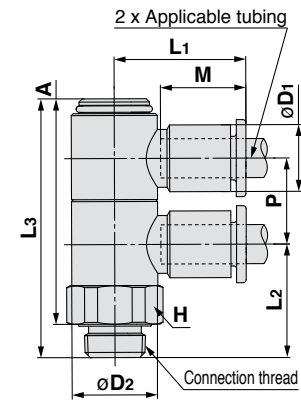
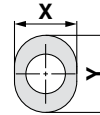
Double Universal Male Elbow: KQ2VD (Face seal)



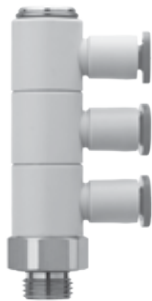
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	P	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
ø1/8	1/8	KQ2VD01-34□P1	14.29	7.1	6.7	9.5	13.4	19.3	18.2	40.9	35.5	13.3	13.4	2.2	1.9	2.5	22.8
ø5/32	1/8	KQ2VD03-34□P1	14.29	8.2	7.7	10	13.4	19.3	18.2	40.9	35.5	13.3	13.4	2.9	2.9	3	23.1
ø3/16	1/8	KQ2VD05-34□P1	14.29	9.1	8.4	11	13.4	19.6	18.2	40.9	35.5	13.3	13.4	4.5	3.7	3.5	23.3

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

Release button dimensions



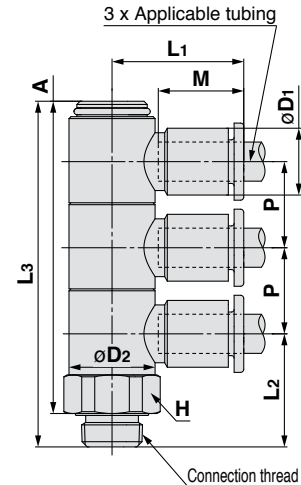
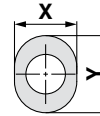
Triple Universal Male Elbow: KQ2VT (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	P	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y								Nylon	Urethane		
ø1/8	1/8	KQ2VT01-34□P1	14.29	7.1	6.7	9.5	13.4	19.3	18.2	54.4	49	13.3	13.4	2.2	1.9	2.5	28.3
ø5/32	1/8	KQ2VT03-34□P1	14.29	8.2	7.7	10	13.4	19.3	18.2	54.4	49	13.3	13.4	2.9	2.9	3	28.7
ø3/16	1/8	KQ2VT05-34□P1	14.29	9.1	8.4	11	13.4	19.6	18.2	54.4	49	13.3	13.4	4.5	3.7	3.5	29

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

Release button dimensions



Sealant/Gasket Seal
Metric Size M, R, Rc

Inch Size M, R, Rc

Inch Size UNF, NPT

Metric Size G

Metric Size R, Rc

Face Seal
Inch Size NPT

Inch Size R

Gasket Seal
Metric Size Uni

Inch Size Uni

KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: NPT

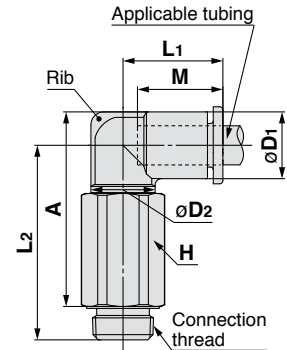
Dimensions

Extended Male Elbow: KQ2W (Face seal)

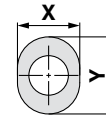


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø1/8	1/16	KQ2W01-33□P1	11.11	7.1	6.7	9.5	10	14.5	33.2	31.4	13.3	2.8	2.4	2.5	14.3	—
	1/8	KQ2W01-34□P1	12.7	7.1	6.7	9.5	10	14.5	30.3	28.5	13.3	2.8	2.4	2.5	18	—
	1/4	KQ2W01-35□P1	17.46	7.1	6.7	9.5	10	14.5	33	28.5	13.3	2.8	2.4	2.5	39.9	—
ø5/32	1/16	KQ2W03-33□P1	11.11	8.2	7.7	10	10	14.8	32.7	31.4	13.3	4	4	3	14.4	●
	1/8	KQ2W03-34□P1	12.7	8.2	7.7	10	10	14.8	29.9	28.6	13.3	4	4	3	18.2	●
	1/4	KQ2W03-35□P1	17.46	8.2	7.7	10	10	14.8	33.5	29.5	13.3	4	4	3	40.1	●
ø3/16	1/8	KQ2W05-34□P1	12.7	9.1	8.4	11	10	15	30.4	29.5	13.3	6.8	5.6	3.5	18.4	—
	1/4	KQ2W05-35□P1	17.46	9.1	8.4	11	10	15	34	30.5	13.3	6.8	5.6	3.5	40.3	—

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



Release button dimensions

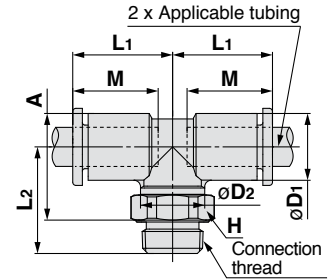


Male Branch Tee: KQ2T (Face seal)

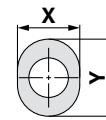


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø1/8	1/16	KQ2T01-33□P1	11.11	7.1	6.7	9.5	10	14.5	21.5	19.7	13.3	3.4	2.9	2.5	7.7
	1/8	KQ2T01-34□P1	12.7	7.1	6.7	9.5	10	14.5	16.6	14.8	13.3	3.4	2.9	2.5	6.7
	1/4	KQ2T01-35□P1	17.46	7.1	6.7	9.5	10	14.5	21.3	16.8	13.3	3.4	2.9	2.5	18.9
ø5/32	1/16	KQ2T03-33□P1	11.11	8.2	7.7	10	10	14.8	21.1	19.8	13.3	6	4.1	3	16.3
	1/8	KQ2T03-34□P1	12.7	8.2	7.7	10	10	14.8	16.2	14.9	13.3	6	4.1	3	7
	1/4	KQ2T03-35□P1	17.46	8.2	7.7	10	10	14.8	21.9	17.9	13.3	6	4.1	3	19.2
ø3/16	1/8	KQ2T05-34□P1	12.7	9.1	8.4	11	10	15	16.7	15.8	13.3	8.4	7	3.5	7.3
	1/4	KQ2T05-35□P1	17.46	9.1	8.4	11	10	15	22.4	18.8	13.3	8.4	7	3.5	19.5

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



Release button dimensions

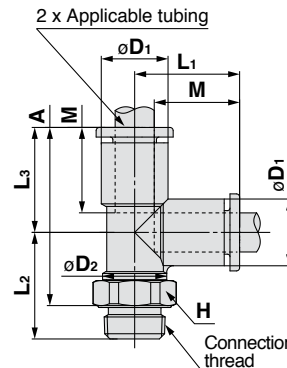


Male Run Tee: KQ2Y (Face seal)

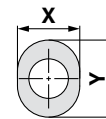


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø1/8	1/16	KQ2Y01-33□P1	11.11	7.1	6.7	9.5	10	14.9	21.5	14.9	31.1	13.3	3.4	2.9	2.5	15.8
	1/8	KQ2Y01-34□P1	12.7	7.1	6.7	9.5	10	14.9	16.6	14.9	26.2	13.3	3.4	2.9	2.5	6.7
	1/4	KQ2Y01-35□P1	17.46	7.1	6.7	9.5	10	14.9	21.3	14.9	28.2	13.3	3.4	2.9	2.5	18.9
ø5/32	1/16	KQ2Y03-33□P1	11.11	8.2	7.7	10	10	15.3	21.1	15.3	31	13.3	6.4	4.4	3	16.4
	1/8	KQ2Y03-34□P1	12.7	8.2	7.7	10	10	15.3	16.2	15.3	26.1	13.3	6.4	4.4	3	7
	1/4	KQ2Y03-35□P1	17.46	8.2	7.7	10	10	15.3	21.9	15.3	29.1	13.3	6.4	4.4	3	19.2
ø3/16	1/8	KQ2Y05-34□P1	12.7	9.1	8.4	11	10	15.7	16.7	15.7	27	13.3	8.4	7	3.5	7.3
	1/4	KQ2Y05-35□P1	17.46	9.1	8.4	11	10	15.7	22.4	15.7	30	13.3	8.4	7	3.5	19.6

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



Release button dimensions



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



Oval Type Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: R

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

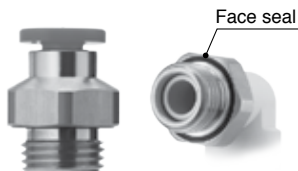
Can be used for a wide range of pressures from a low vacuum up to a pressure of 145psi [1 MPa].

The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Face seal method

Seal ring

Piping installability is improved by changing to the face seal structure.



Face seal

Release button

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

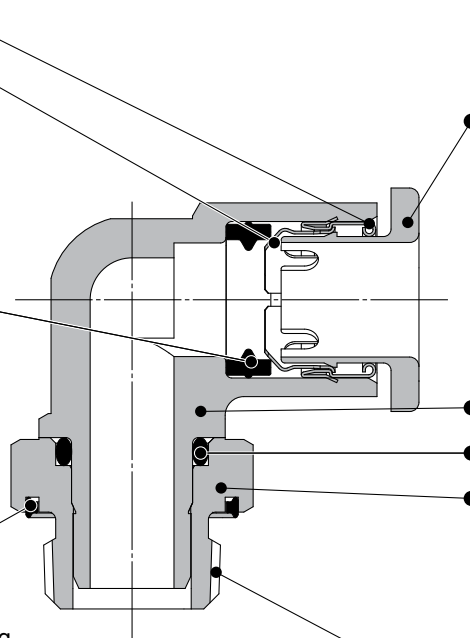
Stud

Effective when piping in a confined space.

Body part rotates allowing for positioning.

Connection thread

R



One-touch IN/OUT connection.

Possible to use in vacuum to -14.5 psi [-100 kPa].

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



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø1/8", ø3/16"

Specifications

Fluid		Air, Water*1
Operating pressure range*2		-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])		435 psi [3 MPa]
Ambient and fluid temperature		23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Sealant on the threads		Seal ring

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

*2 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 05 - 01 A P 1

One-touch fittings

Model

Symbol	Model
H	Male connector
L	Male elbow
T	Male branch tee
W	Extended male elbow
Y	Male run tee

Oval type release button

Face seal

Thread material/Surface treatment

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

Port size

Symbol	Size
01	R1/8
02	R1/4

Applicable tubing O.D.

Symbol	Size
01	ø1/8"
05	ø3/16"

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

Inch Size One-touch Fittings

Oval Type Variations

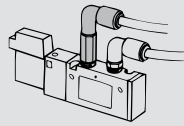
Extended male elbow

KQ2W

P.84



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



Male connector

KQ2H

P.84



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

Male branch tee

KQ2T

P.85



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

Male elbow

KQ2L

P.84



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

Male run tee

KQ2Y

P.85



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

This model does not support oval type release buttons. Refer to the round type (from page 195).

Branch "Y"

KQ2U

P.199



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



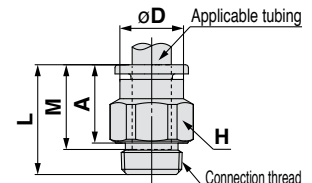
Dimensions

Male Connector: KQ2H (Face seal)

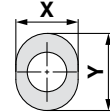


Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	øD	Release button dimensions		L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
ø1/8	1/8	KQ2H01-01□P1	12	6.7	6.7	9.5	14.1	8.9	13.3	3.4	2.9	2.5	6.3
	1/4	KQ2H01-02□P1	17	6.7	6.7	9.5	15	7.4	13.3	3.4	2.9	2.5	15.1
ø3/16	1/8	KQ2H05-01□P1	12	8.3	8.4	11	16.7	11.5	13.3	7.8	6.5	3.5	6.8
	1/4	KQ2H05-02□P1	17	8.3	8.4	11	15	7.4	13.3	7.8	6.5	3.5	13.9

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



Release button dimensions

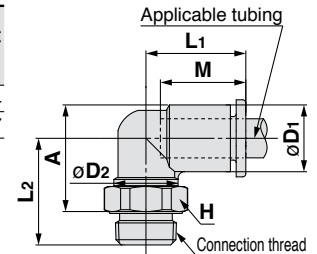


Male Elbow: KQ2L (Face seal)

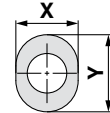


Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø3/16	1/8	KQ2L05-01□P1	12	9.1	8.4	11	10	15	16	15.3	13.3	6.8	5.6	3.5	5.4
	1/4	KQ2L05-02□P1	17	9.1	8.4	11	10	15	20.4	17.3	13.3	6.8	5.6	3.5	14.7

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



Release button dimensions

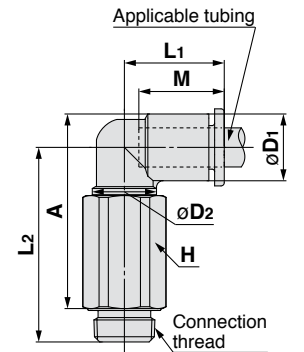


Extended Male Elbow: KQ2W (Face seal)

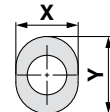


Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø3/16	1/8	KQ2W05-01□P1	12	9.1	8.4	11	10	15	29.7	29	13.3	6.8	5.6	3.5	15.7
	1/4	KQ2W05-02□P1	17	9.1	8.4	11	10	15	32	29	13.3	6.8	5.6	3.5	35.1

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



Release button dimensions



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

KQ2 Series

Oval Type Applicable Tubing: Inch Size, Connection Thread: R

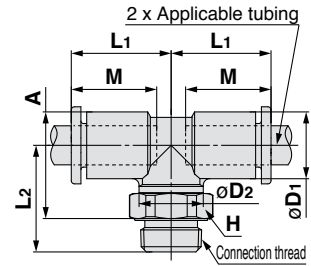
Dimensions

Male Branch Tee: KQ2T (Face seal)

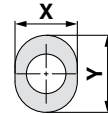


Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Release button dimensions		øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
				X	Y						Nylon	Urethane		
ø3/16	1/8	KQ2T05-01□P1	12	9.1	8.4	11	10	15	15.3	13.3	8.4	7	3.5	6.2
	1/4	KQ2T05-02□P1	17	9.1	8.4	11	10	15	20.4	17.3	13.3	8.4	7	3.5

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



Release button dimensions

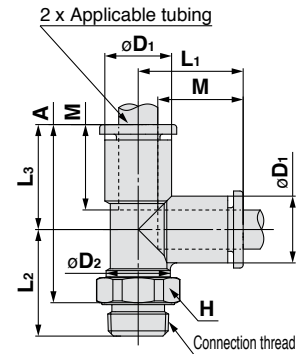


Male Run Tee: KQ2Y (Face seal)

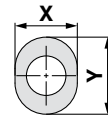


Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	Release button dimensions		øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]	
				X	Y							Nylon	Urethane			
ø3/16	1/8	KQ2Y05-01□P1	12	9.1	8.4	11	10	15.7	16	15.7	26.5	13.3	8.4	7	3.5	6.3
	1/4	KQ2Y05-02□P1	17	9.1	8.4	11	10	15.7	20.4	15.7	28.5	13.3	8.4	7	3.5	15.6

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



Release button dimensions



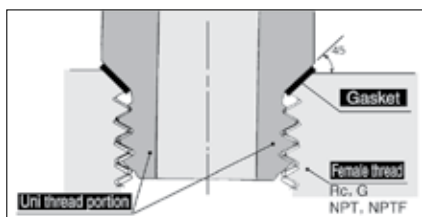
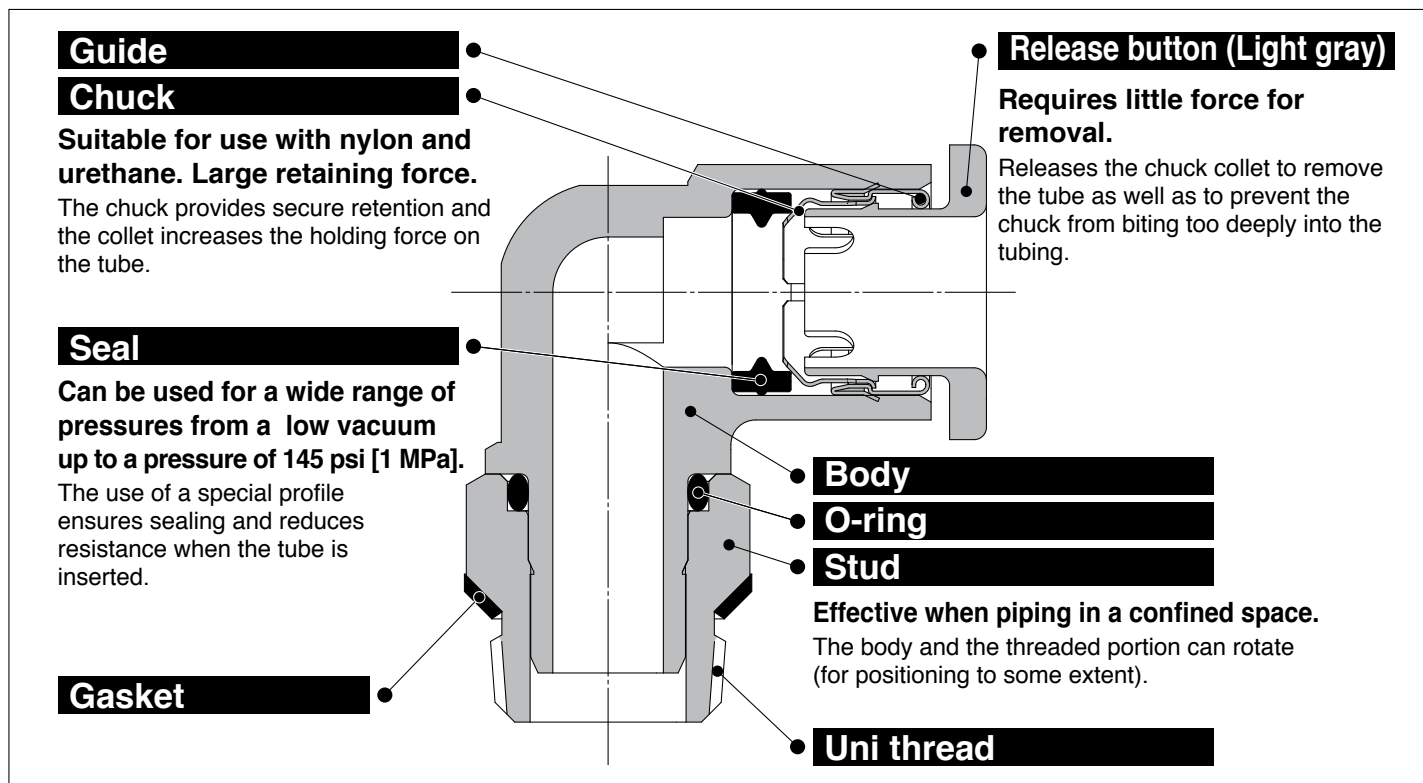
Gasket Seal		Face Seal		Sealant/Gasket Seal	
Inch Size Uni	Metric Size Uni	Inch Size NPT	Metric Size R, Rc	Inch Size M, R, Rc	Metric Size M, R, Rc
Inch Size R					



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
Operating pressure range*2	-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])	435 psi [3 MPa]
Ambient and fluid temperature	23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)

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

*2 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

Oval type release button

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

Applicable tubing O.D.

Symbol	Size
04	ø4
06	ø6

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

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

Metric Size Uni One-touch Fittings

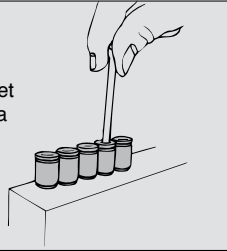
Oval Type Variations

Hexagon socket head male connector

KQ2S P.90



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

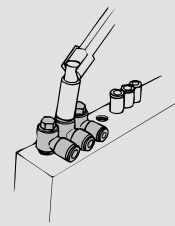


Universal male elbow

KQ2V P.91



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

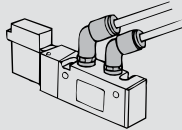


45° male elbow

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.

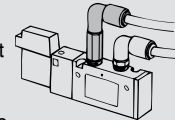


Extended male elbow

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.

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

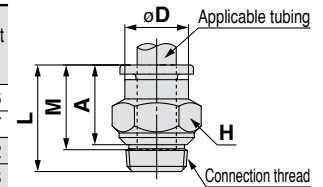
Male Connector: KQ2H (Gasket seal)



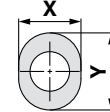
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	øD	Release button dimensions		L	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
ø4	1/8	KQ2H04-U01□1	10	7.7	7.7	10	15.9	11.1	13.3	4.8	3.4	3	6.6
	1/4	KQ2H04-U02□1	14	7.7	7.7	10	15.3	8.9	13.3	4.8	3.4	3	12.7
ø6	1/8	KQ2H06-U01□1	12	9.7	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	9.7	12	17	10.6	13.3	13.1	10.4	4.5	12.8
	3/8	KQ2H06-U03□1	17	9.7	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



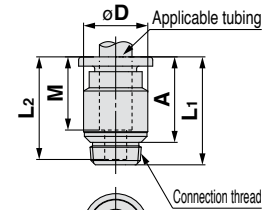
Hexagon Socket Head Male Connector: KQ2S (Gasket seal)



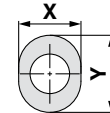
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	øD	Release button dimensions		L ₁	L ₂	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y					Nylon	Urethane		
ø4	1/8	KQ2S04-U01□1	3	10	7.7	10	20.6	19.6	15.8	13.3	4.1	3.6	3.1	8
ø6	1/8	KQ2S06-U01□1	4	12	9.7	12	19.8	18.8	15	13.3	10	9.9	4.1	8.2
	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



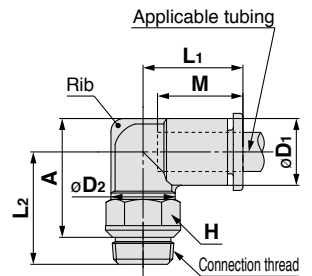
Male Elbow: KQ2L (Gasket seal)



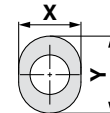
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	øD ₁	Release button dimensions		øD ₂	L ₁	L ₂	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø4	1/8	KQ2L04-U01□1	10	8.2	7.7	10	10	14.8	16.4	15.7	13.3	4.6	3.3	3	4.8	●
	1/4	KQ2L04-U02□1	14	8.2	7.7	10	10	14.8	19.2	16.9	13.3	4.6	3.3	3	11.5	●
ø6	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



Metric Size M, R, Rc

Sealant/Gasket Seal
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

KQ2 Series

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

Dimensions

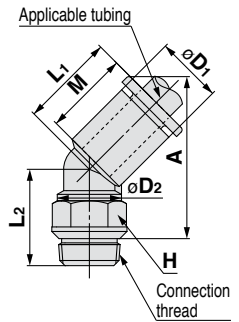
45° Male Elbow: KQ2K (Gasket seal)



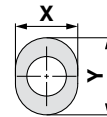
Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area (mm ²)		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
					ø4	1/8						KQ2K04-U01□1	10		
	1/4	KQ2K04-U02□1	14	8.2	7.7	10	10	14.4	14.7	21	13.3	4.8	3.4	4.5	11.3
ø6	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



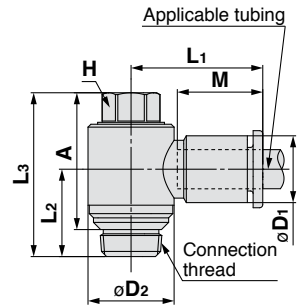
Universal Male Elbow: KQ2V (Gasket seal)



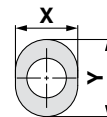
Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	Effective area (mm ²)		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
					ø4	1/8							KQ2V04-U01□1	8		
ø6	1/8	KQ2V06-U01□1	8	10.4	9.7	12	13.4	20.5	13.6	25.5	20.7	13.3	7.5	5.9	4.5	13.9
	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



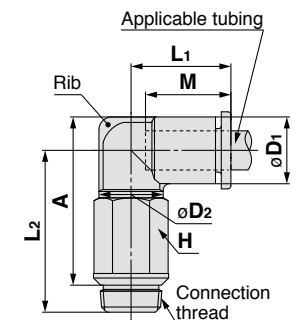
Extended Male Elbow: KQ2W (Gasket seal)



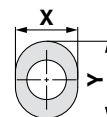
Applicable tubing O.D. (mm)	Connection thread Uni	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area (mm ²)		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
					ø4	1/8						KQ2W04-U01□1	10			
1/4	KQ2W04-U02□1	14	8.2	7.7		10	10	14.8	30.1	27.8	13.3	4	4	3	23.9	●
ø6	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

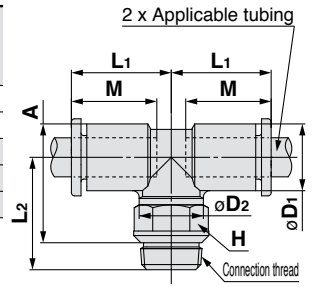
Male Branch Tee: KQ2T (Gasket seal)



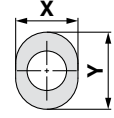
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø4	1/8	KQ2T04-U01□1	10	8.2	7.7	10	10	14.8	16.4	15.7	13.3	6	4.1	3	5.5
	1/4	KQ2T04-U02□1	14	8.2	7.7	10	10	14.8	19.2	16.9	13.3	6	4.1	3	12.2
ø6	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



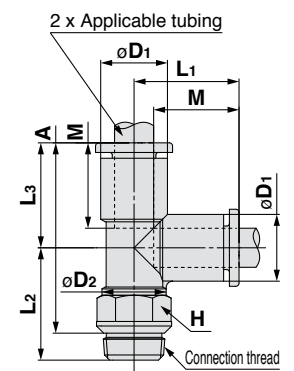
Male Run Tee: KQ2Y (Gasket seal)



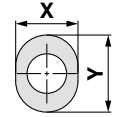
Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø4	1/8	KQ2Y04-U01□1	10	8.2	7.7	10	10	15.3	16.4	15.3	26.9	13.3	6.4	4	3	5.6
	1/4	KQ2Y04-U02□1	14	8.2	7.7	10	10	15.3	19.2	15.3	28.1	13.3	6.4	4	3	12.2
ø6	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



Sealant/Gasket Seal
Metric Size M, R, Rc
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

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)

3 Spare Parts

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

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**

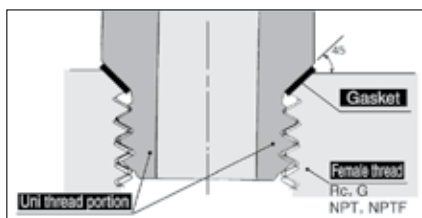
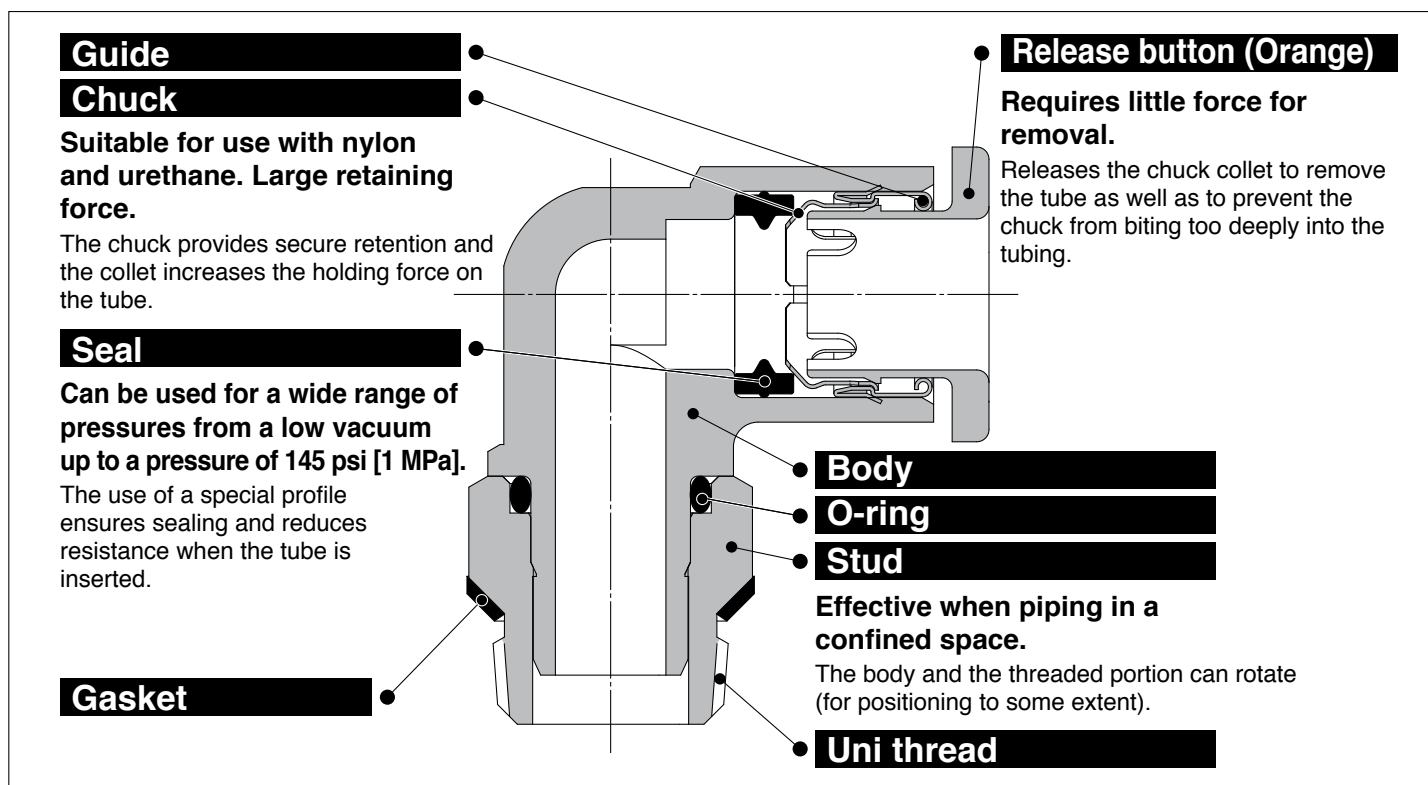
Gasket Seal		Face Seal		Sealant/Gasket Seal	
Inch Size Uni	Metric Size Uni	Inch Size R	Inch Size NPT	Inch Size M, R, Rc	Metric Size M, R, Rc
		Metric Size R, Rc	Metric Size G	Inch Size UNF, NPT	



Oval Type Inch Size Uni One-touch Fittings

Applicable Tubing: Inch 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.	ø1/8", ø5/32", ø3/16"

Specifications

Fluid	Air, Water*1
Operating pressure range*2	-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 23°C)	435 psi [3 MPa]
Ambient and fluid temperature	23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)

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

*2 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 100 for details.)



How to Order

Threaded Type

KQ2 H 05 - U01 A 1

One-touch fittings

Model

Symbol	Model
H	Male connector
L	Male elbow
T	Male branch tee
W	Extended male elbow
Y	Male run tee

Applicable tubing O.D.

Symbol	Size
01	ø1/8"
03	ø5/32"
05	ø3/16"

Oval type release button

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

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

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

Inch Size Uni One-touch Fittings

Oval Type Variations

Male connector

KQ2H

P.98



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

Male elbow

KQ2L

P.98



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

Extended male elbow

KQ2W

P.98



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

Male run tee

KQ2Y

P.99



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

Male branch tee

KQ2T

P.99



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

This model does not support oval type release buttons. Refer to the round type (from page 209).

Branch "Y"

KQ2U

P.213



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



Dimensions

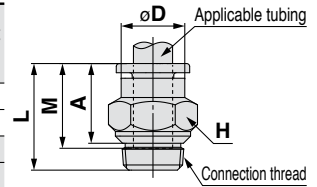
Male Connector: KQ2H (Gasket seal)



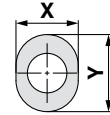
Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	øD	Release button dimensions		L	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y				Nylon	Urethane		
ø1/8	1/8	KQ2H01-U01□1	11.11	—	6.7	9.5	15.2	10.4	13.3	3.4	2.9	2.5	7.9
	1/4	KQ2H01-U02□1	14.29	—	6.7	9.5	15.3	8.9	13.3	3.4	2.9	2.5	13.7
ø5/32	1/8	KQ2H03-U01□1	11.11	—	7.7	10	15.7	10.9	13.3	4.8	3.4	3	7.7
	1/4	KQ2H03-U02□1	14.29	—	7.7	10	15.3	8.9	13.3	4.8	3.4	3	13
ø3/16	1/8	KQ2H05-U01□1	12.7	8.55	8.4	11	16	11.2	13.3	6.8	5.6	3.5	7.7
	1/4	KQ2H05-U02□1	14.29	—	8.4	11	15.3	8.9	13.3	6.8	5.6	3.5	12.4

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

*1 Reference dimensions after installation of Uni thread



Release button dimensions



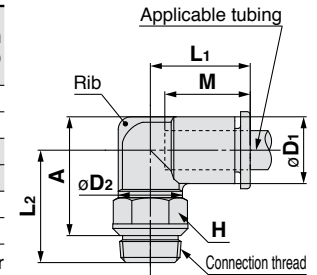
Male Elbow: KQ2L (Gasket seal)



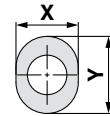
Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø1/8	1/8	KQ2L01-U01□1	11.11	7.1	6.7	9.5	10	14.5	17.9	16.7	13.3	3	2.5	2.5	6	—
	1/4	KQ2L01-U02□1	14.29	7.1	6.7	9.5	10	14.5	19.2	16.4	13.3	3	2.5	2.5	12.1	—
ø5/32	1/8	KQ2L03-U01□1	11.11	8.2	7.7	10	10	14.8	17.4	16.7	13.3	4.6	3.3	3	6.2	●
	1/4	KQ2L03-U02□1	14.29	8.2	7.7	10	10	14.8	19.7	17.4	13.3	4.6	3.3	3	12.3	●
ø3/16	1/8	KQ2L05-U01□1	11.11	9.1	8.4	11	10	15	17.9	17.7	13.3	6.8	5.6	3.5	6.4	—
	1/4	KQ2L05-U02□1	14.29	9.1	8.4	11	10	15	20.2	18.4	13.3	6.8	5.6	3.5	12.5	—

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

*1 Reference dimensions after installation of Uni thread



Release button dimensions



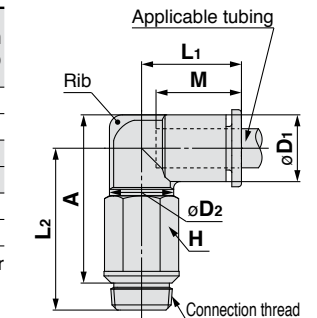
Extended Male Elbow: KQ2W (Gasket seal)



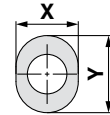
Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
					X	Y						Nylon	Urethane			
ø1/8	1/8	KQ2W01-U01□1	11.11	7.1	6.7	9.5	10	14.5	31.5	30.3	13.3	2.8	2.4	2.5	14.5	—
	1/4	KQ2W01-U02□1	14.29	7.1	6.7	9.5	10	14.5	30.8	28	13.3	2.8	2.4	2.5	26	—
ø5/32	1/8	KQ2W03-U01□1	11.11	8.2	7.7	10	10	14.8	31.1	30.4	13.3	4	4	3	14.6	●
	1/4	KQ2W03-U02□1	14.29	8.2	7.7	10	10	14.8	31.3	29	13.3	4	4	3	26.2	●
ø3/16	1/8	KQ2W05-U01□1	11.11	9.1	8.4	11	10	15	31.6	31.3	13.3	6.8	5.6	3.5	14.8	—
	1/4	KQ2W05-U02□1	14.29	9.1	8.4	11	10	15	31.8	30	13.3	6.8	5.6	3.5	26.4	—

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

*1 Reference dimensions after installation of Uni thread



Release button dimensions



Sealant/Gasket Seal

Inch Size M, R, Rc

Metric Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

KQ2 Series

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

Dimensions

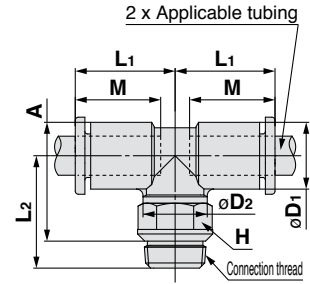
Male Branch Tee: KQ2T (Gasket seal)



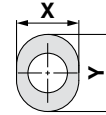
Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y						Nylon	Urethane		
ø1/8	1/8	KQ2T01-U01□1	11.11	7.1	6.7	9.5	10	14.5	17.8	16.6	13.3	3.4	2.9	2.5	6.6
	1/4	KQ2T01-U02□1	14.29	7.1	6.7	9.5	10	14.5	19.1	16.3	13.3	3.4	2.9	2.5	12.7
ø5/32	1/8	KQ2T03-U01□1	11.11	8.2	7.7	10	10	14.8	17.4	16.7	13.3	6	4.1	3	6.9
	1/4	KQ2T03-U02□1	14.29	8.2	7.7	10	10	14.8	19.7	17.4	13.3	6	4.1	3	13
ø3/16	1/8	KQ2T05-U01□1	11.11	9.1	8.4	11	10	15	17.9	17.6	13.3	6.8	5.6	3.5	7.1
	1/4	KQ2T05-U02□1	14.29	9.1	8.4	11	10	15	20.2	18.3	13.3	6.8	5.6	3.5	13.3

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

*1 Reference dimensions after installation of Uni thread



Release button dimensions



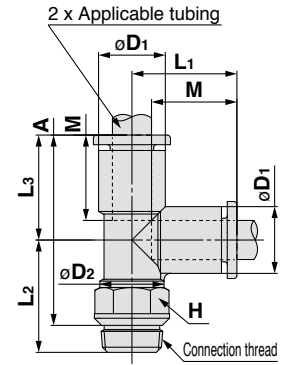
Male Run Tee: KQ2Y (Gasket seal)



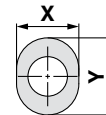
Applicable tubing O.D. [inch]	Connection thread Uni	Model	H (Width across flats)	øD1	Release button dimensions		øD2	L1	L2	L3	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
					X	Y							Nylon	Urethane		
ø1/8	1/8	KQ2Y01-U01□1	11.11	7.1	6.7	9.5	10	14.9	17.8	14.9	28	13.3	3.4	2.9	2.5	6.6
	1/4	KQ2Y01-U02□1	14.29	7.1	6.7	9.5	10	14.9	19.1	14.9	27.7	13.3	3.4	2.9	2.5	12.8
ø5/32	1/8	KQ2Y03-U01□1	11.11	8.2	7.7	10	10	15.3	17.4	15.3	27.9	13.3	6.4	4.4	3	6.9
	1/4	KQ2Y03-U02□1	14.29	8.2	7.7	10	10	15.3	19.7	15.3	28.6	13.3	6.4	4.4	3	13.1
ø3/16	1/8	KQ2Y05-U01□1	11.11	9.1	8.4	11	10	15.7	17.9	15.7	28.8	13.3	6.8	5.6	3.5	7.2
	1/4	KQ2Y05-U02□1	14.29	9.1	8.4	11	10	15.7	20.2	15.7	29.5	13.3	6.8	5.6	3.5	13.4

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

*1 Reference dimensions after installation of Uni thread



Release button dimensions



KQ2 Series

Made to Order/Clean Series/Spare Parts

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

Oval 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

1 Made to Order

Symbol	Specifications
X12	Lubricant: White vaseline Release button color: White
X35 *1	Body color: Black Release button color: Orange
X41	With fixed orifice*2

*1 The following model is not available as made-to-order: 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)

3 Spare Parts

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

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-KQ2H05-U01N1**

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 145psi [1 MPa].

The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Guide

Chuck

Body

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

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

One-touch IN/OUT connection.

Possible to use in vacuum to 14.5 psi [-100 kPa].



Made to Order
(Refer to page 131 for details.)

Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø2, ø3.2, ø4, ø6, ø8, ø10, ø12, ø16

Specifications

Fluid		Air, Water*1
Operating pressure range*2		-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])		435 psi [3 MPa]
Ambient and fluid temperature		23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Seal on the threads		With sealant

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

*2 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

How to Order

Threaded Type

KQ2 H 06 - 01 A S

One-touch fittings

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
F	Female connector
L	Male elbow
LU	Branch 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
Z	Branch universal male elbow
ZF	Branch universal female elbow
ZD	Double branch universal male elbow
ZT	Triple branch universal male elbow
W	Extended male elbow
T	Male branch tee
Y	Male run tee
D	Male delta union
U	Branch "Y"
UD	Double branch "Y"
E	Bulkhead union
	Bulkhead connector
LE	Bulkhead male elbow
N	Adapter

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)
Bulkhead union	<input type="checkbox"/> J Interchangeable with KJE

* : A, N

Port size/Applicable tubing O.D.

Symbol	Size
Tubing connection	00*1 Same dia. tubing
Thread connection	M3 M3 x 0.5
	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
04 R1/2, Rc1/2	

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

Applicable tubing O.D.

Symbol	Size
02	ø2
23	ø3.2
04	ø4
06	ø6
08	ø8
10	ø10
12	ø12
16	ø16

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

Tube - Tube Type

KQ2 H 06 - 00 A

One-touch fittings

Model

Symbol	Model
H	Straight union
	Different diameter straight
L	Union elbow
	Plug-in elbow
	Reducer elbow
LU	Branch union 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
	Union "Y"
U	Plug-in "Y"
	Different diameter union "Y"
	UD Different diameter double union "Y"
X	Different diameter plug-in "Y"
R	Plug-in reducer
XD	Double plug-in "Y"

Port size/Applicable tubing O.D.

Symbol	Size	
Tubing (Rod) connection	00 Same diameter tubing	
	99 Same diameter rod	
	Different dia. tubing (Reducer)	23 ø3.2
		04 ø4
		06 ø6
		08 ø8
		10 ø10
		12 ø12
16 ø16		

Applicable tubing O.D.

Symbol	Size
02	ø2
23	ø3.2
04	ø4
06	ø6
08	ø8
10	ø10
12	ø12
16	ø16

Accessories

Symbol	Name
KQ2N	Nipple
	Reducer nipple
KQ2C	Tube cap
KQ2P	Plug

Metric Size One-touch Fittings

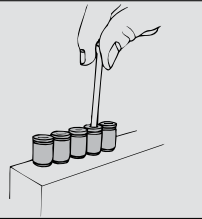
Round Type Variations

Hexagon socket head male connector

KQ2S P.107



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

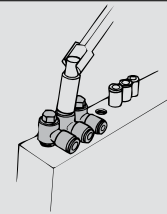


Universal male elbow

KQ2V P.112



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

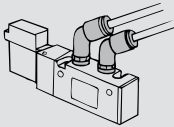


45° male elbow

KQ2K P.111



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

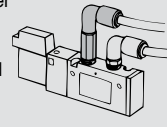


Extended male elbow

KQ2W P.118



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

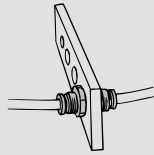


Bulkhead union

KQ2E P.128



Use to connect tubing through a panel, etc.

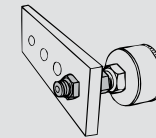


Bulkhead connector

KQ2E P.128



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

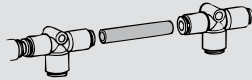


Nipple

KQ2N P.130



Use to connect One-touch fittings.

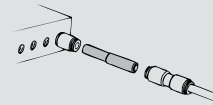


Reducer nipple

KQ2N P.130



Use to connect One-touch fittings of different sizes.



Universal female elbow

KQ2VF P.113



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

Branch universal female elbow

KQ2ZF P.115



Use to two-branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

Male connector

KQ2H P.105



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

Cross

KQ2TW P.121



Use to four-branch a line.

Reducer elbow

KQ2L P.109



Use to change the tube direction of One-touch fittings by 90° and connect tubing of reduced size.

Female connector

KQ2F P.106



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

Male elbow

KQ2L P.108



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

Different diameter cross

KQ2TX P.121



Use to four-branch a line and connect tubing of reduced size at both 90° angles.

Straight union

KQ2H P.105



Use to connect tubing in the same direction.

Union elbow

KQ2L P.109



Use to connect tubing at right angles.

Male branch tee

KQ2T P.119



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

Different diameter straight

KQ2H P.106



Use to connect tubing of different sizes.

Plug-in elbow

KQ2L P.109



Use to change the tube direction of One-touch fittings by 90°.

Union tee

KQ2T P.120



Use to branch tubing at both 90° angles.



Different diameter tee
KQ2T P.120



Use to connect tubing of reduced size for branching at both 90° angles.

Different diameter tee
KQ2T P.120



Use to connect tubing of reduced size for branching at a 90° angle from two pipes running in the same direction.

Different diameter cross
KQ2TY P.121



Use to connect tubing of reduced size for branching in three directions.

Hexagon socket head universal male elbow
KQ2VS P.112



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

Branch male elbow
KQ2LU P.110



Use to two-branch a female thread at right angles.

Female elbow
KQ2LF P.117



Use to pipe a male thread at right angles.

Double universal male elbow
KQ2VD P.114



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

Triple universal male elbow
KQ2VT P.114



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

Branch universal male elbow
KQ2Z P.115



Hexagon head of the body allows tightening with a box wrench. Use for branch connections.

Double branch universal male elbow
KQ2ZD P.116



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

Male run tee
KQ2Y P.122



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

Triple branch universal male elbow
KQ2ZT P.116



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

Branch union elbow
KQ2LU P.109



Use to branch tubing at right angles.

Extended plug-in elbow
KQ2W P.117



Use to change the tube direction of One-touch fittings by 90°. Multi-leveled piping is also possible with the plug-in elbow.

Male delta union
KQ2D P.123



Use to branch a female thread at two right angles.

Delta union
KQ2D P.124



Use to branch tubing at three right angles.

Double branch "Y"
KQ2UD P.126



Use to four-branch a female thread.

Different diameter double union "Y"
KQ2UD P.126



Use to connect tubing of reduced size for four-branching in the same direction.

Different diameter plug-in "Y"
KQ2X P.127



Use to branch One-touch fittings and connect tubing of reduced size in the same direction.

Double plug-in "Y"
KQ2XD P.127



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

Union "Y"
KQ2U P.125



Use to branch tubing in the same direction.

Different diameter union "Y"
KQ2U P.125



Use to connect tubing of reduced size for branching in the same direction.

Plug-in "Y"
KQ2U P.125



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

Branch "Y"
KQ2U P.124



Use to branch a female thread in the same direction.

Plug-in reducer
KQ2R P.128



Use to change size of One-touch fittings.

Bulkhead male elbow
KQ2LE P.129



Use to connect tubing through a panel, etc. and to change the tube direction by 90°.

Adapter
KQ2N P.129



Use to connect One-touch fittings and R female threads.

Tube cap
KQ2C P.130



Use to plug unused tubing.

Color cap
KQ2C P.130



Mount onto the release button and use different colors for piping according to applications.

Plug
KQ2P P.129



Use to plug unused One-touch fittings.

KQ2 Series

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

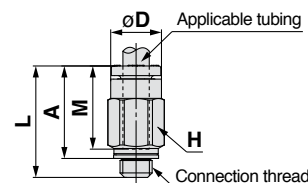
Dimensions

Male Connector: KQ2H (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	øD	L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
ø2	M3 x 0.5	KQ2H02-M3G	5.5	5.5	15.6	13	11.9	—	0.9	1.2	1.5
	M5 x 0.8	KQ2H02-M5□	7	5.5	13.8	10.8	11.9	—	0.9	1.4	2
ø3.2	M3 x 0.5	KQ2H23-M3G	7	6.7	17	14.4	13.3	0.9	0.9	1.2	2.4
	M5 x 0.8	KQ2H23-M5□	7	6.7	17.3	14.3	13.3	3	2.5	2.5	2.7
ø4	M3 x 0.5	KQ2H04-M3G	8	7.7	17.1	14.5	13.3	0.9	0.9	1.2	2.9
	M5 x 0.8	KQ2H04-M5□	8	7.7	17.7	14.7	13.3	4	4	2.5	3.3
ø6	M6 x 1.0	KQ2H04-M6□	8	7.7	18.7	14.7	13.3	5.6	4	3	3.6
	M5 x 0.8	KQ2H06-M5□	10	9.7	17.7	14.7	13.3	4	4	2.5	4.1
ø6	M6 x 1.0	KQ2H06-M6□	10	9.7	18.8	14.8	13.3	5.6	5.6	3	4.4

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

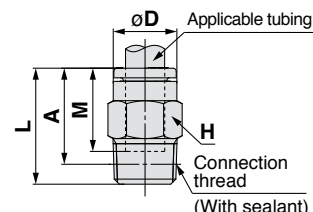


Male Connector: KQ2H (Sealant)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD	L	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
ø3.2	1/8	KQ2H23-01□S	10	6.7	14	10.9	13.3	3.4	2.9	2.5	6
	1/4	KQ2H23-02□S	14	6.7	16.7	12	13.3	3.4	2.9	2.5	15.3
ø4	1/8	KQ2H04-01□S	10	7.7	14.3	11.2	13.3	4.8	3.4	3	5.6
	1/4	KQ2H04-02□S	14	7.7	16.7	12	13.3	4.8	3.4	3	14.6
ø6	1/8	KQ2H06-01□S	10	9.7	18.4	15.3	13.3	13.1	10.4	4.5	5.8
	1/4	KQ2H06-02□S	14	9.7	16.7	12	13.3	13.1	10.4	4.5	12.5
ø6	3/8	KQ2H06-03□S	17	9.7	18.1	13	13.3	13.1	10.4	4.5	24.5
	1/8	KQ2H08-01□S	14	13	22.5	19.4	14.2	26.1	18	6	11.9
ø8	1/4	KQ2H08-02□S	14	13	22	17.3	14.2	26.1	18	6	13.9
	3/8	KQ2H08-03□S	17	13	18.1	13	14.2	26.1	18	6	21
ø10	1/8	KQ2H10-01□S	17	15.6	23.8	20.7	15.6	26.1	26.1	6	16.9
	1/4	KQ2H10-02□S	17	15.6	27.3	22.6	15.6	41.5	29.5	7.5	22.1
ø10	3/8	KQ2H10-03□S	17	15.6	23.5	18.4	15.6	41.5	29.5	7.5	22.5
	1/2	KQ2H10-04□S	22	15.6	22.3	15.9	15.6	41.5	29.5	7.5	44.7
ø12	1/4	KQ2H12-02□S	19	18.2	28.7	24	17	58.3	46.1	9	24.3
	3/8	KQ2H12-03□S	19	18.2	25.9	20.8	17	58.3	46.1	9	25.2
ø12	1/2	KQ2H12-04□S	22	18.2	22.3	15.9	17	58.3	46.1	9	37.7
	1/4	KQ2H16-02□S	24	23.6	32.5	27.8	20.6	58.3	58.3	9	37.4
ø16	3/8	KQ2H16-03□S	24	23.6	33.1	28	20.6	81	67	11	42.4
	1/2	KQ2H16-04□S	24	23.6	32.1	25.7	20.6	113	67	13	44.6

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

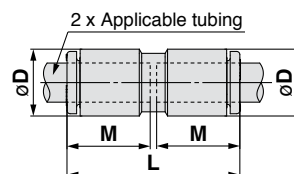


Straight Union: KQ2H



Applicable tubing O.D. [mm]	Model	øD*1	L	M	Effective area [mm ²]		Min. port size	Weight [g]
					Nylon	Urethane		
ø2	KQ2H02-00A	5.8	24.8	11.9	—	0.9	1.4	0.8
ø3.2	KQ2H23-00A	7.1	27.6	13.3	3.4	2.9	2.5	1.4
ø4	KQ2H04-00A	8.2	27.6	13.3	5.6	4	3	1.6
ø6	KQ2H06-00A	10.4	27.6	13.3	13.1	10.4	4.5	2.1
ø8	KQ2H08-00A	13.2	29.4	14.2	26.1	18	6	3.7
ø10	KQ2H10-00A	15.9	32.2	15.6	41.5	29.5	7.5	5.5
ø12	KQ2H12-00A	18.5	35	17	58.3	46.1	9	8.2
ø16	KQ2H16-00A	23.8	42.2	20.6	113	67	13	15.2

*1 øD is maximum diameter.



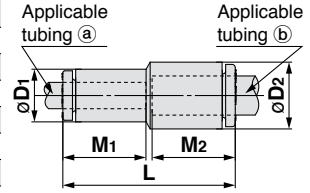


Dimensions

Different Diameter Straight: KQ2H



Applicable tubing O.D. [mm]		Model	*1 øD1	*1 øD2	L	M1	M2	Effective area [mm ²]		Min. port size	Weight [g]
(a)	(b)							Nylon	Urethane		
ø2	ø3.2	KQ2H02-23A	5.8	7.1	26.2	11.9	13.3	—	0.9	1.4	1.1
ø2	ø4	KQ2H02-04A	5.8	8.2	26.2	11.9	13.3	—	0.9	1.4	1.2
ø3.2	ø4	KQ2H23-04A	7.1	8.2	27.6	13.3	13.3	3.4	2.9	2.5	1.5
ø3.2	ø6	KQ2H23-06A	7.1	10.4	27.6	13.3	13.3	3.4	2.9	2.5	1.8
ø4	ø6	KQ2H04-06A	8.2	10.4	27.6	13.3	13.3	5.6	5.6	3	2
ø6	ø8	KQ2H06-08A	10.4	13.2	28.5	13.3	14.2	13.1	10.4	4.5	2.9
ø8	ø10	KQ2H08-10A	13.2	15.9	30.8	14.2	15.6	26.1	18	6	4.9
ø10	ø12	KQ2H10-12A	15.9	18.5	33.6	15.6	17	41.5	29.5	7.5	7.2
ø12	ø16	KQ2H12-16A	18.5	23.8	38.6	17	20.6	58.3	46.1	9	12.4

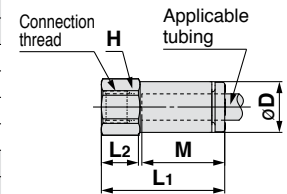


*1 øD1, øD2 are maximum diameters.

Female Connector: KQ2F



Applicable tubing O.D. [mm]	Connection thread Rc	Model	H (Width across flats)	*1 øD	L1	L2	M	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
ø3.2	M3 x 0.5	KQ2F23-M3□	7	6.9	17.3	5.7	13.3	3	2.5	2.5	3.1
	M5 x 0.8	KQ2F23-M5□	7	6.9	19.7	5.7	13.3	3	2.5	2.5	3.3
ø4	M3 x 0.5	KQ2F04-M3□	8	7.9	16.5	5.7	13.3	4	4	2.5	4.1
	M5 x 0.8	KQ2F04-M5□	8	7.9	19.6	5.7	13.3	4	4	3	4.5
	1/8	KQ2F04-01□	14	7.9	24.1	8.5	13.3	5.6	4	3	12
ø6	1/4	KQ2F04-02□	17	7.9	29	12.9	13.3	5.6	4	3	21.5
	M5 x 0.8	KQ2F06-M5□	10	9.9	17.6	5.7	13.3	10	10	4.1	5.5
	1/8	KQ2F06-01□	14	9.9	23.6	8.5	13.3	13.1	10.4	4.5	12.2
ø8	1/4	KQ2F06-02□	17	9.9	28.5	12.9	13.3	13.1	10.4	4.5	21.6
	3/8	KQ2F06-03□	19	9.9	29.9	12.7	13.3	13.1	10.4	4.5	22.7
	1/8	KQ2F08-01□	14	13	24.1	8.5	14.2	26.1	18	6	12.9
ø10	1/4	KQ2F08-02□	17	13	29	12.2	14.2	26.1	18	6	22.1
	3/8	KQ2F08-03□	19	13	30.4	13.4	14.2	26.1	18	6	30.7
ø12	1/4	KQ2F10-02□	19	15.6	30	12.9	15.6	41.5	29.5	7.5	24.2
	3/8	KQ2F10-03□	19	15.6	31.3	13.3	15.6	41.5	29.5	7.5	25.5
ø16	1/4	KQ2F12-02□	19	18.2	30.9	12.1	17	58.3	46.1	9	32.6
	3/8	KQ2F12-03□	19	18.2	32.3	13.3	17	58.3	46.1	9	27.6
ø16	1/2	KQ2F12-04□	24	18.2	36.3	15.9	17	58.3	46.1	9	46.3
	3/8	KQ2F16-03□	24	23.6	34.7	12.6	20.6	81	67	13	53.8
	1/2	KQ2F16-04□	24	23.6	38.7	15.9	20.6	113	67	13	51.6



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

*1 øD is maximum diameter.

Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

KQ2 Series

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

Dimensions

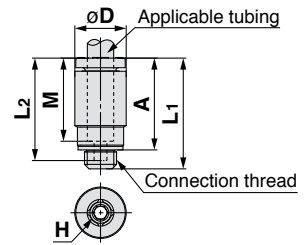
Hexagon Socket Head Male Connector: KQ2S (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 ϕD	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
									Nylon	Urethane		
$\phi 2$	M3 x 0.5	KQ2S02-M3G	1.5	5.5	15.7	14.7	13.1	11.9	—	0.9	1.5	1.7
$\phi 3.2$	M3 x 0.5	KQ2S23-M3G	1.5	7	17.1	16.1	14.5	13.3	1.4	1.4	1.5	2.2
	M5 x 0.8	KQ2S23-M5□	2	7	17.5	16.3	14.5	13.3	2.5	2.5	2	2.6
$\phi 4$	M3 x 0.5	KQ2S04-M3G	1.5	8	17.1	16.1	14.5	13.3	1.4	1.4	1.5	2.3
	M5 x 0.8	KQ2S04-M5□	2.5	8	18.6	17.8	15.6	13.3	4	4	2.5	3
$\phi 6$	M6 x 1.0	KQ2S04-M6□	3	8	18.5	17.8	14.5	13.3	4	4	3.1	4.1
	M5 x 0.8	KQ2S06-M5□	2.5	10	19.5	17.8	16.5	13.3	4	4	2.5	3.5
$\phi 6$	M6 x 1.0	KQ2S06-M6□	3	10	19.1	18.1	15.1	13.3	4	4	3.1	5.1

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

*1 ϕD is maximum diameter.



Hexagon Socket Head Male Connector: KQ2S (Sealant)

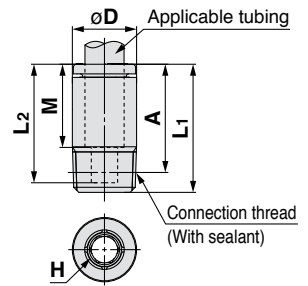


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 ϕD	L1	L2	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]
									Nylon	Urethane		
$\phi 4$	1/8	KQ2S04-01□S	3	9.8	19.7	18.8	16.6	13.3	4.1	3.6	3.1	8.1
$\phi 6$	1/8	KQ2S06-01□S	4	10	20	18.8	16.9	13.3	10	9.9	4.1	6.5
	1/4	KQ2S06-02□S	4	13.8	19.8	18.8	15.1	13.3	10.7	10	4.1	13.4
$\phi 8$	1/8	KQ2S08-01□S	5	13	22.9	19.7	19.8	14.2	17.2	16.2	5.1	10.2
	1/4	KQ2S08-02□S	6	14	23.2	19.5	18.5	14.2	23.3	16.2	6.1	14.3
	3/8	KQ2S08-03□S	6	17	20.7	19.7	15.6	14.2	23.3	16.2	6.1	21.1
$\phi 10$	1/8	KQ2S10-01□S	5	15.6	24.3	21.1	21.2	15.6	17.2	16.2	5.1	12
	1/4	KQ2S10-02□S	8	15.6	24.6	20.1	19.9	15.6	39	26.6	8.1	12.4
	3/8	KQ2S10-03□S	8	17	25.1	20.1	20	15.6	39	26.6	8.1	23.2
$\phi 12$	1/2	KQ2S10-04□S	8	22	21.1	20.1	14.7	15.6	39	26.6	8.1	37.4
	1/4	KQ2S12-02□S	8	18.2	29	21.5	24.3	17	46	44.5	8.1	21
	3/8	KQ2S12-03□S	10	18.2	26.4	21.8	21.3	17	60	44.5	10.1	21.2
$\phi 16$	1/2	KQ2S12-04□S	10	22	22.8	21.8	16.4	17	60	44.5	10.1	30.5
	1/4	KQ2S16-02□S	8	23.6	32.5	25.1	27.8	20.6	46	46	8.1	25.7
	3/8	KQ2S16-03□S	10	23.6	33.5	25.4	28.4	20.6	81	67	10.1	38.3
$\phi 16$	1/2	KQ2S16-04□S	12	23.6	33.4	26.1	27	20.6	113	67	12.1	43.5

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

*1 ϕD is maximum diameter.

*2 Reference dimensions after installation of R thread





Dimensions

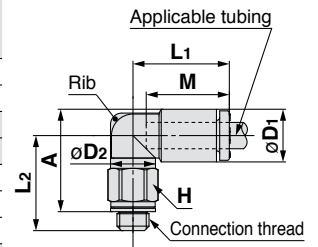
Male Elbow: KQ2L (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 $\phi D1$	$\phi D2$	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
$\phi 2$	M3 x 0.5	KQ2L02-M3G	5.5	5.8	5.5	12.6	12.5	12.8	11.9	—	0.8	1.2	1.6	●
	M5 x 0.8	KQ2L02-M5□	7	5.8	5.5	12.6	13	12.9	11.9	—	0.8	1.4	2.7	●
$\phi 3.2$	M3 x 0.5	KQ2L23-M3G	7	7.1	7	15.3	13.8	14.8	13.3	0.8	0.8	1.2	2.7	●
	M5 x 0.8	KQ2L23-M5□	7	7.1	7	15.3	14.3	14.9	13.3	2.6	2.2	2.5	3.1	●
$\phi 4$	M3 x 0.5	KQ2L04-M3G	7	8.2	7	15.4	14.3	15.8	13.3	0.8	0.8	1.2	2.7	●
	M5 x 0.8	KQ2L04-M5□	7	8.2	7	15.4	14.8	15.9	13.3	3.5	3.5	2.5	3.1	●
$\phi 6$	M6 x 1.0	KQ2L04-M6□	8	8.2	7	15.4	15.8	15.9	13.3	3.5	3.5	2.5	4.2	●
	M5 x 0.8	KQ2L06-M5□	7	10.4	7	14.5	16.5	18.7	13.3	3.5	3.5	2.5	3.2	●
	M6 x 1.0	KQ2L06-M6□	8	10.4	7	14.5	17.5	18.7	13.3	3.5	3.5	2.5	4.3	●

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

*1 $\phi D1$ is maximum diameter.



Male Elbow: KQ2L (Sealant)



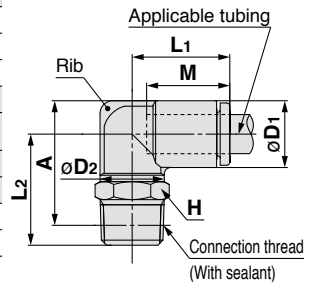
Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 $\phi D1$	$\phi D2$	L1	L2	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
$\phi 3.2$	1/8	KQ2L23-01□S	10	7.1	10	14.5	16.7	17.2	13.3	3	2.5	2.5	4.6	—
	1/4	KQ2L23-02□S	14	7.1	10	14.5	21.2	20.1	13.3	3	2.5	2.5	14.1	—
$\phi 4$	1/8	KQ2L04-01□S	10	8.2	10	14.8	16.2	17.2	13.3	4.6	3.3	3	4.8	●
	1/4	KQ2L04-02□S	14	8.2	10	14.8	21.7	21.1	13.3	4.6	3.3	3	14.3	●
$\phi 6$	1/8	KQ2L06-01□S	10	10.4	10	15.5	17.3	19.4	13.3	11.4	9	4.5	5.2	—
	1/4	KQ2L06-02□S	14	10.4	10	15.5	22.8	23.3	13.3	11.4	9	4.5	14.7	—
	3/8	KQ2L06-03□S	17	10.4	10	15.5	24.1	24.2	13.3	11.4	9	4.5	26.5	—
$\phi 8$	1/8	KQ2L08-01□S	10	13.2	10	16.4	18.7	22.2	14.2	11.4	11.4	4.5	6.1	●
		*3 KQ2L08-01□QS	12	13.2	12	17.2	23.5	27.0	14.2	21.6	14.9	6	9.3	●
	1/4	KQ2L08-02□S	14	13.2	12	17.2	25.4	27.3	14.2	21.6	14.9	6	17.7	●
	3/8	KQ2L08-03□S	17	13.2	12	17.2	25.5	28.0	14.2	21.6	14.9	6	24.7	●
$\phi 10$	1/8	KQ2L10-01□S	12	15.9	12	18.6	23.6	28.4	15.6	21.6	14.9	6	11.1	●
	1/4	KQ2L10-02□S	17	15.9	17	19.3	28.7	31.9	15.6	35.2	25	7.5	21.7	●
	3/8	KQ2L10-03□S	17	15.9	17	19.3	29.6	32.4	15.6	35.2	25	7.5	22.2	●
	1/2	KQ2L10-04□S	22	15.9	17	19.3	33.6	35.1	15.6	35.2	25	7.5	44.6	●
$\phi 12$	1/4	KQ2L12-02□S	17	18.5	17	21.5	30.0	34.5	17	50.2	39.7	9	23.5	●
	3/8	KQ2L12-03□S	17	18.5	17	21.5	30.9	35.0	17	50.2	39.7	9	24.1	●
	1/2	KQ2L12-04□S	22	18.5	17	21.5	34.9	37.7	17	50.2	39.7	9	46.5	●
$\phi 16$	1/4	KQ2L16-02□S	17	23.8	17	25.1	32.6	39.8	20.6	50.2	50.2	9	27.8	●
	3/8	KQ2L16-03□S	22	23.8	21	27.1	35.4	42.2	20.6	71	58.9	11	40.8	—
	1/2	KQ2L16-04□S	22	23.8	21	27.1	34.1	39.6	20.6	100	58.9	13	44.5	—

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

*1 $\phi D1$ is maximum diameter.

*2 Reference dimensions after installation of R thread

*3 For details, refer to page 131.



KQ2 Series

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

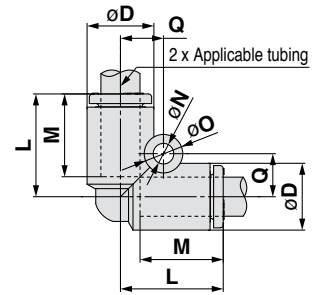
Dimensions

Union Elbow: KQ2L



Applicable tubing O.D. [mm]	Model	*1 ϕD	L	Q	M	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
$\phi 3.2$	KQ2L23-00A	7.1	14.9	5.4	13.3	6	3.2	3	2.5	2.5	1.6
$\phi 4$	KQ2L04-00A	8.2	15.3	5.7	13.3	6	3.2	4.2	4.2	3	1.9
$\phi 6$	KQ2L06-00A	10.4	16.3	6.8	13.3	6	3.2	11.4	9	4.5	2.7
$\phi 8$	KQ2L08-00A	13.2	18.2	8.4	14.2	8	4.2	21.6	14.9	6	4.7
$\phi 10$	KQ2L10-00A	15.9	20.6	9.6	15.6	8	4.2	35.2	25	7.5	7.1
$\phi 12$	KQ2L12-00A	18.5	23	10.7	17	8	4.2	50.2	39.7	9	10.3
$\phi 16$	KQ2L16-00A	23.8	28.6	13.4	20.6	8	4.2	100	58.9	13	19.7

*1 ϕD is maximum diameter.

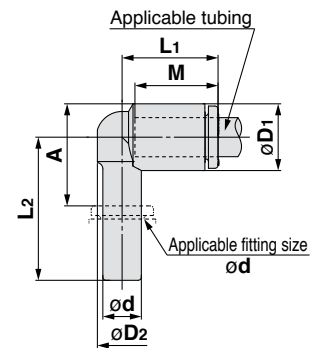


Plug-in Elbow: KQ2L



Applicable tubing O.D. [mm]	Applicable fitting size ϕd	Model	*1 ϕD_1	ϕD_2	L ₁	L ₂	A	M	Effective area [mm ²]		Min. port size	Weight [g]
									Nylon	Urethane		
$\phi 3.2$	$\phi 3.2$	KQ2L23-99A	7.1	6.4	14.4	20.9	11.1	13.3	3	2.5	2.2	0.9
$\phi 4$	$\phi 4$	KQ2L04-99A	8.2	7.2	14.5	21.1	11.9	13.3	4.2	4.2	2.5	1.2
$\phi 6$	$\phi 6$	KQ2L06-99A	10.4	8	15.3	22.3	14.2	13.3	9	9	4	1.8
$\phi 8$	$\phi 8$	KQ2L08-99A	13.2	10	17.2	26.2	18.6	14.2	21.6	14.9	6	3
$\phi 10$	$\phi 10$	KQ2L10-99A	15.9	12	19.3	28.2	20.5	15.6	35.2	25	7.5	4.7
$\phi 12$	$\phi 12$	KQ2L12-99A	18.5	14	21.5	31	23.2	17	50.2	39.7	9	7
$\phi 16$	$\phi 16$	KQ2L16-99A	23.8	20	27.1	36.8	28.1	20.6	100	58.9	13	13.7

*1 ϕD_1 is maximum diameter.

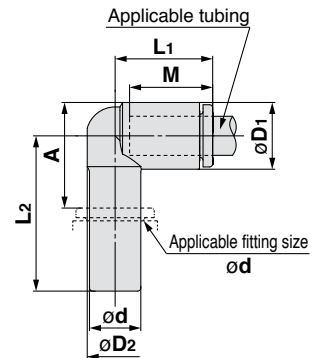


Reducer Elbow: KQ2L



Applicable tubing O.D. [mm]	Applicable fitting size ϕd	Model	*1 ϕD_1	ϕD_2	L ₁	L ₂	A	M	Effective area [mm ²]		Min. port size	Weight [g]
									Nylon	Urethane		
$\phi 3.2$	$\phi 4$	KQ2L23-04A	7.1	6.4	14.5	23.9	14.1	13.3	3	2.5	2.5	1.1
	$\phi 6$	KQ2L23-06A	7.1	6.4	14.5	24.1	14.3	13.3	3	2.5	2.5	1.3
$\phi 4$	$\phi 6$	KQ2L04-06A	8.2	7.2	14.8	24.6	15.4	13.3	4.2	4.2	3	1.5
	$\phi 8$	KQ2L04-08A	8.2	7.2	14.8	29.5	19.4	13.3	4.2	4.2	3	1.8
$\phi 6$	$\phi 8$	KQ2L06-08A	10.4	9	15.5	24.2	15.2	13.3	11.4	9	4.5	2.1
	$\phi 10$	KQ2L06-10A	10.4	9	15.5	31.6	21.2	13.3	11.4	9	4.5	2.7
$\phi 8$	$\phi 10$	KQ2L08-10A	13.2	10	18.8	27.1	18.1	14.2	21.6	14.9	6	3.5
	$\phi 12$	KQ2L08-12A	13.2	10	18.8	34	23.6	14.2	21.6	14.9	6	4.9
$\phi 10$	$\phi 12$	KQ2L10-12A	15.9	12	19.3	35.6	26.5	15.6	35.2	25	7.5	5.6
$\phi 12$	$\phi 16$	KQ2L12-16A	18.5	14	21.5	42.6	31.2	17	50.2	39.7	9	8.7

*1 ϕD_1 is maximum diameter.

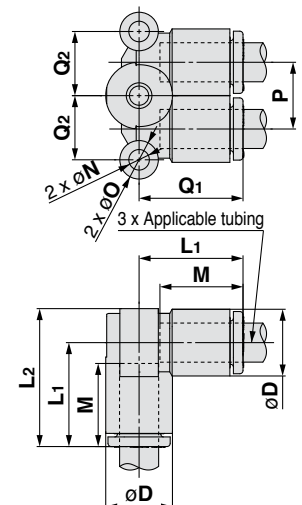


Branch Union Elbow: KQ2LU



Applicable tubing O.D. [mm]	Model	*1 ϕD	L ₁	L ₂	Q ₁	Q ₂	M	P	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
$\phi 4$	KQ2LU04-00A	8.2	15.8	19.9	15.8	7.9	13.3	8.2	6	3.2	6	4.1	3	3.1
$\phi 6$	KQ2LU06-00A	10.4	16.5	21.7	16.5	10	13.3	10.4	6	3.2	13.9	11	4.5	4.4
$\phi 8$	KQ2LU08-00A	13.2	18.2	24.8	18.2	13.1	14.2	13.2	8	4.2	26.3	18.2	6	8
$\phi 10$	KQ2LU10-00A	15.9	20.3	28.3	20.3	15.9	15.6	15.9	8	4.2	40.8	29	7.5	12.2
$\phi 12$	KQ2LU12-00A	18.5	22.5	31.7	22.5	17.9	17	18.5	8	4.2	57.2	45.2	9	18.1

*1 ϕD is maximum diameter.





Dimensions

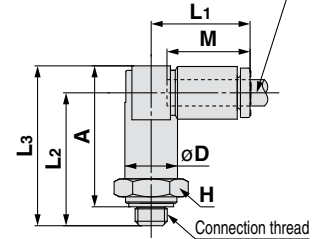
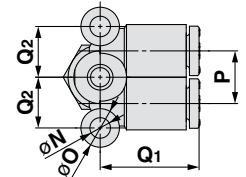
Branch Male Elbow: KQ2LU (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 ϕD	L1	L2	L3	A	M	P	ϕO	ϕN	Q1	Q2	Effective area [mm ²]		Min. port size	Weight [g]
															Nylon	Urethane		
$\phi 4$	M5 x 0.8	KQ2LU04-M5□	10	8.2	15.8	20.7	24.8	21.8	13.3	8.2	6	3.2	15.8	7.9	4.3	4.1	1.8	6.9
	M6 x 1.0	KQ2LU04-M6□	10	8.2	15.8	21.7	25.8	21.8	13.3	8.2	6	3.2	15.8	7.9	4.3	4.1	3	6.8
$\phi 6$	M5 x 0.8	KQ2LU06-M5□	12	10.4	16.5	21.4	26.6	23.6	13.3	10.4	6	3.2	16.5	10	4.3	4.3	1.8	10.3
	M6 x 1.0	KQ2LU06-M6□	12	10.4	16.5	22.4	27.6	23.6	13.3	10.4	6	3.2	16.5	10	4.3	4.3	3	10.3

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

*1 ϕD is maximum diameter.



Branch Male Elbow: KQ2LU (Sealant)

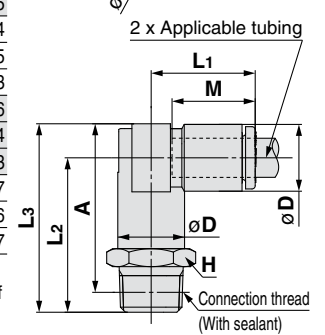
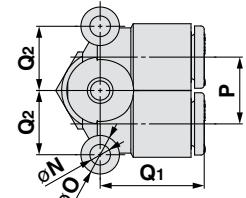


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 ϕD	L1	L2	L3	A*2	M	P	ϕO	ϕN	Q1	Q2	Effective area [mm ²]		Min. port size	Weight [g]
															Nylon	Urethane		
$\phi 4$	1/8	KQ2LU04-01□S	10	8.2	15.8	23.3	27.4	24.3	13.3	8.2	6	3.2	15.8	7.9	6	4.1	3	9.5
	1/4	KQ2LU04-02□S	14	8.2	15.8	27.7	31.8	27.1	13.3	8.2	6	3.2	15.8	7.9	6	4.1	3	19.3
$\phi 6$	1/8	KQ2LU06-01□S	12	10.4	16.5	24	29.2	26.1	13.3	10.4	6	3.2	16.5	10	13.9	11	4.5	10.6
	3/8	KQ2LU06-03□S	17	10.4	16.5	29.8	35	29.9	13.3	10.4	6	3.2	16.5	10	13.9	11	4.5	31.5
$\phi 8$	1/8	KQ2LU08-01□S	14	13.2	18.2	25.7	32.3	29.2	14.2	13.2	8	4.2	18.2	13.1	26.3	18.2	6	16.4
	1/4	KQ2LU08-02□S	14	13.2	18.2	30.1	36.7	32	14.2	13.2	8	4.2	18.2	13.1	26.3	18.2	6	21.5
$\phi 10$	3/8	KQ2LU08-03□S	17	13.2	18.2	31.5	38.1	33	14.2	13.2	8	4.2	18.2	13.1	26.3	18.2	6	33.3
	1/4	KQ2LU10-02□S	17	15.9	20.3	32.2	40.2	35.5	15.6	15.9	8	4.2	20.3	15.9	40.8	29	7.5	26.6
$\phi 12$	3/8	KQ2LU10-03□S	17	15.9	20.3	33.6	41.6	36.5	15.6	15.9	8	4.2	20.3	15.9	40.8	29	7.5	34.4
	1/2	KQ2LU10-04□S	22	15.9	20.3	37.8	45.8	39.4	15.6	15.9	8	4.2	20.3	15.9	40.8	29	7.5	62.3
$\phi 12$	1/4	KQ2LU12-02□S	19	18.5	22.5	34.4	43.6	38.9	17	18.5	8	4.2	22.5	17.9	57.2	45.2	9	37.7
	3/8	KQ2LU12-03□S	19	18.5	22.5	35.8	45	39.9	17	18.5	8	4.2	22.5	17.9	57.2	45.2	9	40.6
	1/2	KQ2LU12-04□S	22	18.5	22.5	40	49.2	42.8	17	18.5	8	4.2	22.5	17.9	57.2	45.2	9	62.7

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

*1 ϕD is maximum diameter.

*2 Reference dimensions after installation of R thread



KQ2 Series

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

Dimensions

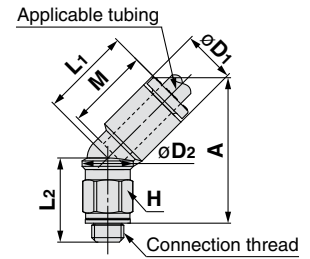
45° Male Elbow: KQ2K (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread	Model	H (Width across flats)	*1 øD1	øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
										Nylon	Urethane		
ø4	M5 x 0.8	KQ2K04-M5□	7	8.2	8	14.4	13.1	22.8	13.3	3.4	3.4	2.5	3
	M6 x 1.0	KQ2K04-M6□	8	8.2	8	14.4	14.1	22.8	13.3	3.4	3.4	2.5	4.1
ø6	M5 x 0.8	KQ2K06-M5□	7	10.4	8	14.4	17	27.4	13.3	3.4	3.4	2.5	3.5
	M6 x 1.0	KQ2K06-M6□	8	10.4	8	14.4	18	27.4	13.3	3.4	3.4	2.5	4.5

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

*1 øD1 is maximum diameter.



45° Male Elbow: KQ2K (Sealant)



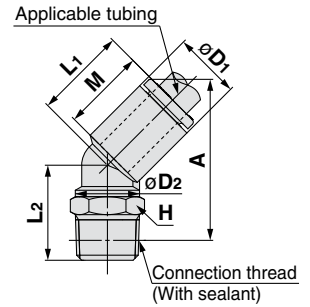
Applicable tubing O.D. [mm]	Connection thread	Model	H (Width across flats)	*1 øD1	øD2	L1	L2	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]
										Nylon	Urethane		
ø4	1/8	KQ2K04-01□S	10	8.2	10	14.4	12.7	22.3	13.3	4.8	3.4	3	4.6
	1/4	KQ2K04-02□S	14	8.2	10	14.4	17.2	25.2	13.3	4.8	3.4	3	14.1
ø6	1/8	KQ2K06-01□S	10	10.4	10	14.7	14.8	25.3	13.3	8.7	6.9	4.5	5
	1/4	KQ2K06-02□S	14	10.4	10	14.7	19.3	28.2	13.3	8.7	6.9	4.5	14.5
ø6	3/8	KQ2K06-03□S	17	10.4	10	14.7	20.6	29.1	13.3	8.7	6.9	4.5	26.2
		KQ2K08-01□S	10	13.2	10	16	15.7	28	14.2	8.7	8.7	4.5	6
ø8	1/8	KQ2L08-01□S	12	13.2	12	16	20.5	32.8	14.2	19.7	19.7	6	9.1
	1/4	KQ2K08-02□S	14	13.2	12	16	22.4	33.1	14.2	19.7	19.7	6	17.5
ø8	3/8	KQ2K08-03□S	17	13.2	12	16	22.5	32.8	14.2	19.7	19.7	6	24.5
	1/8	KQ2K10-01□S	12	15.9	12	18.2	21.5	36.2	15.6	30.9	23.2	6	11.1
ø10	1/4	KQ2K10-02□S	17	15.9	17	17.6	29.1	41.8	15.6	30.9	23.2	7.5	21.8
	3/8	KQ2K10-03□S	17	15.9	17	17.6	24.3	36.6	15.6	30.9	23.2	7.5	21.7
ø10	1/2	KQ2K10-04□S	22	15.9	17	17.6	28.3	39.3	15.6	30.9	23.2	7.5	44.1
	1/4	KQ2K12-02□S	17	18.5	17	19.4	29	43.8	17	44.5	35.1	9	23.3
ø12	3/8	KQ2K12-03□S	17	18.5	17	19.4	24.2	38.6	17	44.5	35.1	9	23.2
	1/2	KQ2K12-04□S	22	18.5	17	19.4	28.2	41.3	17	44.5	35.1	9	45.7
ø16	1/4	KQ2K16-02□S	17	23.8	17	24.3	29.6	49.2	20.6	44.5	44.5	9	27.7
	3/8	KQ2K16-03□S	22	23.8	21	23.8	31.4	50.2	20.6	65.8	58	11	39.2
ø16	1/2	KQ2K16-04□S	22	23.8	21	23.8	30.1	47.6	20.6	91.9	58	13	42.9

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

*1 øD1 is maximum diameter.

*2 Reference dimensions after installation of R thread

*3 For details, refer to page 131.





Dimensions

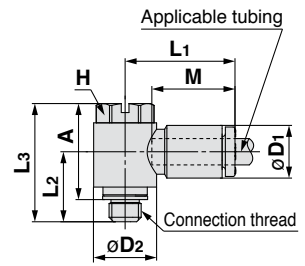
Universal Male Elbow: KQ2V (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
$\phi 4$	M5 x 0.8	KQ2V04-M5□	8	8.2	9.8	17.5	10.9	18.4	14.9	13.3	2.9	2.9	2.5	5.4
$\phi 6$	M5 x 0.8	KQ2V06-M5□	8	10.4	9.8	18.3	10.9	18.4	14.9	13.3	3.8	3.8	2.5	5.7

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

*1 ϕD_1 is maximum diameter.



Universal Male Elbow: KQ2V (Sealant)

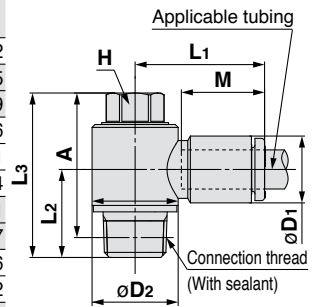


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
$\phi 4$	1/8	KQ2V04-01□S	8	8.2	13.4	19.3	13.7	25.6	22.5	13.3	2.9	2.9	3	13.2
$\phi 6$	1/8	KQ2V06-01□S	8	10.4	13.4	20.5	13.7	25.6	22.5	13.3	7.5	5.9	4.5	13.5
	1/4	KQ2V06-02□S	10	10.4	15.3	19.9	17.9	30.5	25.8	13.3	7.5	5.9	4.5	24.9
$\phi 8$	1/8	KQ2V08-01□S	12	13.2	17.6	23.5	15.1	27.6	24.5	14.2	16	11.2	6	22.6
	1/4	KQ2V08-02□S	12	13.2	17.6	23.5	18.5	31	26.3	14.2	16	11.2	6	29.1
$\phi 10$	3/8	KQ2V08-03□S	14	13.2	20.6	23.1	19.5	35.3	30.2	14.2	16	11.2	6	44.4
	1/4	KQ2V10-02□S	14	15.9	20.6	25.9	19.9	34.9	30.2	15.6	27	20.3	7.5	38.1
$\phi 12$	3/8	KQ2V10-03□S	14	15.9	20.6	25.9	20.3	35.3	30.2	15.6	27	20.3	7.5	45.7
	3/8	KQ2V12-03□S	17	18.5	25.2	28.5	21.4	37.6	32.5	17	39	30.8	9	59.6
$\phi 16$	1/2	KQ2V12-04□S	17	18.5	25.2	28.5	24.6	40.8	34.4	17	39	30.8	9	78.2
	3/8	KQ2V16-03□S	21	23.8	32.3	34.2	25.1	45.4	40.3	20.6	55	46	11	99.5
	1/2	KQ2V16-04□S	21	23.8	32.3	34.2	28.3	48.6	42.2	20.6	78	46	13	107.9

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

*1 ϕD_1 is maximum diameter.

*2 Reference dimensions after installation of R thread



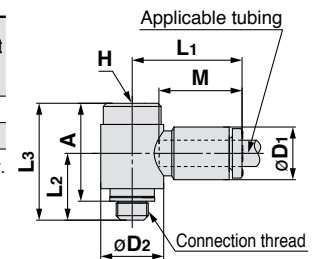
Hexagon Socket Head Universal Male Elbow: KQ2VS (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
$\phi 4$	M5 x 0.8	KQ2VS04-M5□	4	8.2	9.8	17.5	10.4	18.2	15.2	13.3	2.9	2.9	2.5	5.3
$\phi 6$	M5 x 0.8	KQ2VS06-M5□	4	10.4	9.8	18.3	10.4	18.2	15.2	13.3	3.8	3.8	2.5	5.6

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

*1 ϕD_1 is maximum diameter.



Hexagon Socket Head Universal Male Elbow: KQ2VS (Sealant)

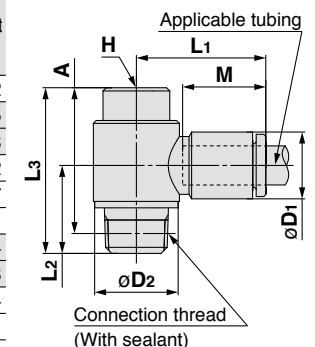


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
$\phi 4$	1/8	KQ2VS04-01□S	6	8.2	13.4	19.3	13.7	25.8	22.7	13.3	2.9	2.9	3	13.2
$\phi 6$	1/8	KQ2VS06-01□S	6	10.4	13.4	20.5	13.7	25.8	22.7	13.3	7.5	5.9	4.5	13.5
	1/4	KQ2VS06-02□S	6	10.4	15.3	19.9	17.9	26.5	21.8	13.3	7.5	5.9	4.5	20.8
$\phi 8$	1/8	KQ2VS08-01□S	8	13.2	17.6	23.5	15.1	26	22.9	14.2	16	11.2	6	19.2
	1/4	KQ2VS08-02□S	8	13.2	17.6	23.5	18.5	29.5	24.8	14.2	16	11.2	6	25.7
$\phi 10$	3/8	KQ2VS08-03□S	8	13.2	20.6	23.1	19.5	31.4	26.3	14.2	16	11.2	6	37
	1/4	KQ2VS10-02□S	8	15.9	20.6	25.9	19.7	30.8	26.1	15.6	27	20.3	7.5	30.4
$\phi 12$	3/8	KQ2VS10-03□S	8	15.9	20.6	25.9	20.3	31.4	26.3	15.6	27	20.3	7.5	38.3
	3/8	KQ2VS12-03□S	10	18.5	25.2	28.5	21.4	35.1	30	17	39	30.8	9	51.4
	1/2	KQ2VS12-04□S	10	18.5	25.2	28.5	24.6	38.3	31.9	17	39	30.8	9	70

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

*1 ϕD_1 is maximum diameter.

*2 Reference dimensions after installation of R thread



KQ2 Series

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

Dimensions

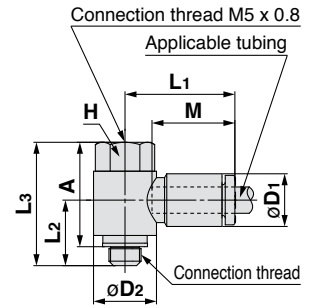
Universal Female Elbow: KQ2VF (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
$\phi 4$	M5 x 0.8	KQ2VF04-M5□	8	8.2	9.8	17.5	10.2	19.2	16.2	13.3	2.9	2.9	2.5	5.5
$\phi 6$	M5 x 0.8	KQ2VF06-M5□	8	10.4	9.8	18.3	10.2	19.2	16.2	13.3	3.8	3.8	2.5	5.8

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

*1 ϕD_1 is maximum diameter.



Universal Female Elbow: KQ2VF (Sealant)

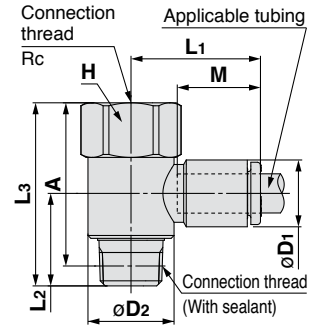


Applicable tubing O.D. [mm]	Connection thread R, Rc	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
$\phi 4$	1/8	KQ2VF04-01□S	14	8.2	13.4	19.3	14.4	28.5	25.4	13.3	2.9	2.9	3	17.3
$\phi 6$	1/8	KQ2VF06-01□S	14	10.4	13.4	20.5	14.4	28.5	25.4	13.3	7.5	5.9	4.5	17.6
	1/4	KQ2VF06-02□S	17	10.4	17.6	21.2	19.4	37.9	33.2	13.3	7.5	5.9	4.5	37
$\phi 8$	1/8	KQ2VF08-01□S	17	13.2	17.6	23.5	15.5	30	26.9	14.2	16	11.2	6	27.5
	1/4	KQ2VF08-02□S	17	13.2	17.6	23.5	18.9	37.9	33.2	14.2	16	11.2	6	38.1
$\phi 10$	3/8	KQ2VF08-03□S	22	13.2	25.2	24.9	24	44	38.9	14.2	16	11.2	6	64.5
	1/4	KQ2VF10-02□S	19	15.9	20.6	25.9	20.4	40.3	35.6	15.6	27	20.3	7.5	46.4
$\phi 12$	3/8	KQ2VF10-03□S	22	15.9	25.2	26.3	23.2	44	38.9	15.6	27	20.3	7.5	65.3
	1/2	KQ2VF12-04□S	24	18.5	27	29.9	24.4	48.9	42.5	17	39	30.8	9	95.6

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

*1 ϕD_1 is maximum diameter.

*2 Reference dimensions after installation of R thread

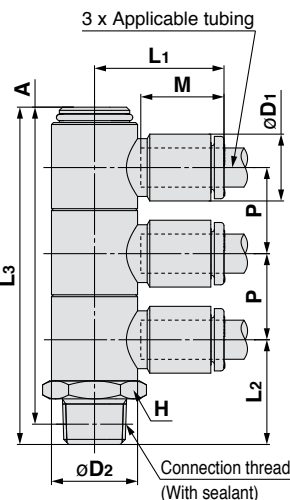


Dimensions

Triple Universal Male Elbow: KQ2VT (Sealant)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A*2	M	P	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 4$	1/8	KQ2VT04-01□S	14	8.2	13.4	19.3	16.3	52.5	49.4	13.3	13.4	2.9	2.9	3	25.3
	1/4	KQ2VT04-02□S	14	8.2	13.4	19.3	20.7	56.9	52.2	13.3	13.4	2.9	2.9	3	32.9
	3/8	KQ2VT04-03□S	17	8.2	13.4	19.3	22.1	58.3	53.2	13.3	13.4	2.9	2.9	3	44.8
$\phi 6$	1/8	KQ2VT06-01□S	14	10.4	13.4	20.5	16.3	52.5	49.4	13.3	13.4	7.5	5.9	4.5	26.2
	1/4	KQ2VT06-02□S	14	10.4	13.4	20.5	20.7	56.9	52.2	13.3	13.4	7.5	5.9	4.5	33.9
	3/8	KQ2VT06-03□S	17	10.4	13.4	20.5	22.1	58.3	53.2	13.3	13.4	7.5	5.9	4.5	45.8
$\phi 8$	1/8	KQ2VT08-01□S	19	13.2	17.6	23.7	19	61.8	58.7	14.2	15.9	16	11.2	6	59.6
	1/4	KQ2VT08-02□S	19	13.2	17.6	23.7	22.4	65.2	60.5	14.2	15.9	16	11.2	6	56.8
	3/8	KQ2VT08-03□S	19	13.2	17.6	23.7	23	65.8	60.7	14.2	15.9	16	11.2	6	64.9
	1/2	KQ2VT08-04□S	22	13.2	17.6	23.7	27.2	70	63.6	14.2	15.9	16	11.2	6	91.5
$\phi 10$	1/4	KQ2VT10-02□S	21	15.9	20.6	25.7	24.3	75.5	70.8	15.6	19.2	27	20.3	7.5	82
	3/8	KQ2VT10-03□S	21	15.9	20.6	25.7	24.7	75.9	70.8	15.6	19.2	27	20.3	7.5	81.9
	1/2	KQ2VT10-04□S	22	15.9	20.6	25.7	28.7	79.9	73.5	15.6	19.2	27	20.3	7.5	103.9
$\phi 12$	1/4	KQ2VT12-02□S	26	18.5	25.2	28.9	26.5	84.1	79.4	17	21.6	39	30.8	9	139.3
	3/8	KQ2VT12-03□S	26	18.5	25.2	28.9	26.9	84.5	79.4	17	21.6	39	30.8	9	129.7
	1/2	KQ2VT12-04□S	26	18.5	25.2	28.9	30.1	87.7	81.3	17	21.6	39	30.8	9	142.2

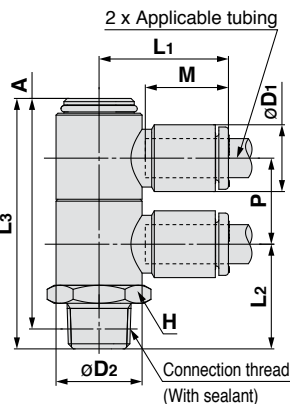


□: A (Brass), N (Brass + Electroless nickel plating) *1 ϕD_1 is maximum diameter.
 *2 Reference dimensions after installation of R thread

Double Universal Male Elbow: KQ2VD (Sealant)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A*2	M	P	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 4$	1/8	KQ2VD04-01□S	14	8.2	13.4	19.3	16.3	39	35.9	13.3	13.4	2.9	2.9	3	19.7
	1/4	KQ2VD04-02□S	14	8.2	13.4	19.3	20.7	43.4	38.7	13.3	13.4	2.9	2.9	3	27.4
	3/8	KQ2VD04-03□S	17	8.2	13.4	19.3	22.1	44.8	39.7	13.3	13.4	2.9	2.9	3	39.3
$\phi 6$	1/8	KQ2VD06-01□S	14	10.4	13.4	20.5	16.3	39	35.9	13.3	13.4	7.5	5.9	4.5	20.3
	1/4	KQ2VD06-02□S	14	10.4	13.4	20.5	20.7	43.4	38.7	13.3	13.4	7.5	5.9	4.5	28
	3/8	KQ2VD06-03□S	17	10.4	13.4	20.5	22.1	44.8	39.7	13.3	13.4	7.5	5.9	4.5	39.9
$\phi 8$	1/8	KQ2VD08-01□S	19	13.2	17.6	23.7	19	45.8	42.7	14.2	15.9	16	11.2	6	45.1
	1/4	KQ2VD08-02□S	19	13.2	17.6	23.7	22.4	49.2	44.5	14.2	15.9	16	11.2	6	44.3
	3/8	KQ2VD08-03□S	19	13.2	17.6	23.7	23	49.8	44.7	14.2	15.9	16	11.2	6	52.3
	1/2	KQ2VD08-04□S	22	13.2	17.6	23.7	27.2	54	47.6	14.2	15.9	16	11.2	6	78.4
$\phi 10$	1/4	KQ2VD10-02□S	21	15.9	20.6	25.7	24.3	56.2	51.5	15.6	19.2	27	20.3	7.5	63.1
	3/8	KQ2VD10-03□S	21	15.9	20.6	25.7	24.7	56.6	51.5	15.6	19.2	27	20.3	7.5	65.1
	1/2	KQ2VD10-04□S	22	15.9	20.6	25.7	28.7	60.6	54.2	15.6	19.2	27	20.3	7.5	87
$\phi 12$	1/4	KQ2VD12-02□S	26	18.5	25.2	28.9	26.5	62.4	57.7	17	21.6	39	30.8	9	107
	3/8	KQ2VD12-03□S	26	18.5	25.2	28.9	26.9	62.8	57.7	17	21.6	39	30.8	9	102.1
	1/2	KQ2VD12-04□S	26	18.5	25.2	28.9	30.1	66	59.6	17	21.6	39	30.8	9	116.1



□: A (Brass), N (Brass + Electroless nickel plating) *1 ϕD_1 is maximum diameter.
 *2 Reference dimensions after installation of R thread

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

KQ2 Series

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

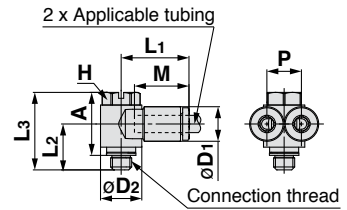
Dimensions

Branch Universal Male Elbow: KQ2Z (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A	M	P	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 4$	M5 x 0.8	KQ2Z04-M5□	8	8.2	9.8	16.5	10.9	18.4	14.9	13.3	8.2	3.4	3.4	2.5	6.2

□: A (Brass), N (Brass + Electroless nickel plating) *1 ϕD_1 is maximum diameter.

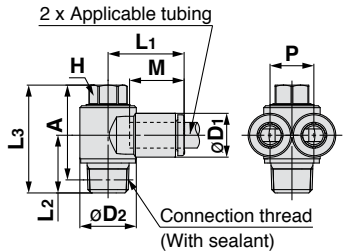


Branch Universal Male Elbow: KQ2Z (Sealant)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A*2	M	P	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 4$	1/8	KQ2Z04-01□S	8	8.2	13.4	18.5	13.7	25.6	22.5	13.3	8.2	4.7	4.7	3	14
	1/8	KQ2Z06-01□S	8	10.4	13.4	18.4	13.7	25.6	22.5	13.3	10.4	10.8	8.6	4.5	14.6
$\phi 6$	1/4	KQ2Z06-02□S	14	10.4	20.6	21.5	19.1	34.9	30.2	13.3	10.4	10.8	8.6	4.5	37
	3/8	KQ2Z06-03□S	14	10.4	20.6	21.5	19.5	35.3	30.2	13.3	10.4	10.8	8.6	4.5	44.6
$\phi 8$	1/4	KQ2Z08-01□S	12	13.2	17.6	21.2	15.1	27.6	24.5	14.2	13.2	20.5	14.2	6	24.3
	3/8	KQ2Z08-02□S	12	13.2	17.6	21.2	18.5	31	26.3	14.2	13.2	20.5	14.2	6	30.8
$\phi 10$	1/4	KQ2Z10-01□S	14	15.9	21.6	23.6	19.9	34.9	30.2	15.6	15.9	31.8	22.6	7.5	41.7
	3/8	KQ2Z10-02□S	14	15.9	21.6	23.6	20.3	35.3	30.2	15.6	15.9	31.8	22.6	7.5	49.3
$\phi 12$	3/8	KQ2Z12-03□S	17	18.5	24.1	26.9	21.2	37.6	32.5	17	18.5	44.6	35.3	9	63.4
	1/2	KQ2Z12-04□S	17	18.5	24.1	26.9	24.4	40.8	34.4	17	18.5	44.6	35.3	9	82

□: A (Brass), N (Brass + Electroless nickel plating) *1 ϕD_1 is maximum diameter.
*2 Reference dimensions after installation of R thread

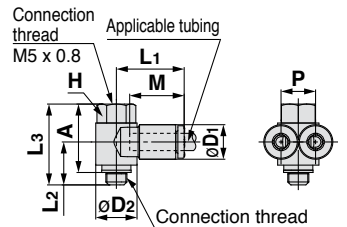


Branch Universal Female Elbow: KQ2ZF (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A	M	P	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 4$	M5 x 0.8	KQ2ZF04-M5□	8	8.2	9.8	16.5	10.2	19.2	16.2	13.3	8.2	3.4	3.4	2.5	6.3

□: A (Brass), N (Brass + Electroless nickel plating) *1 ϕD_1 is maximum diameter.

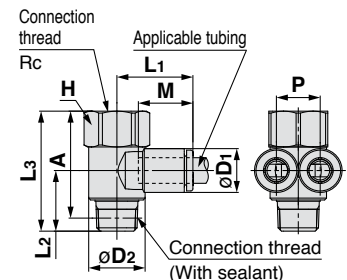


Branch Universal Female Elbow: KQ2ZF (Sealant)



Applicable tubing O.D. [mm]	Connection thread R, Rc	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A*2	M	P	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 4$	1/8	KQ2ZF04-01□S	14	8.2	13.4	18.5	14.4	28.5	25.4	13.3	8.2	4.7	4.7	3	18.1
$\phi 6$	1/8	KQ2ZF06-01□S	14	10.4	13.4	18.4	14.4	28.5	25.4	13.3	10.4	10.8	8.6	4.5	18.7
	1/4	KQ2ZF06-02□S	19	10.4	20.6	21.5	21.2	40.3	35.6	13.3	10.4	10.8	8.6	4.5	45.3
$\phi 8$	1/8	KQ2ZF08-01□S	17	13.2	17.6	21.2	15.5	30	26.9	14.2	13.2	20.5	14.2	6	29.3
	1/4	KQ2ZF08-02□S	19	13.2	20.6	22.3	21.2	40.3	35.6	14.2	13.2	20.5	14.2	6	47
$\phi 10$	1/4	KQ2ZF10-02□S	19	15.9	21.6	23.6	20.4	40.3	35.6	15.6	15.9	31.8	22.6	7.5	49.9
	3/8	KQ2ZF10-03□S	22	15.9	25.2	25.5	23.2	44	38.9	15.6	15.9	31.8	22.6	7.5	68.4
$\phi 12$	3/8	KQ2ZF12-03□S	22	18.5	24.1	26.9	22.7	44	38.9	17	18.5	44.6	35.3	9	71
	1/2	KQ2ZF12-04□S	24	18.5	27	29.9	24.4	48.9	42.5	17	18.5	44.6	35.3	9	100.5

□: A (Brass), N (Brass + Electroless nickel plating) *1 ϕD_1 is maximum diameter.
*2 Reference dimensions after installation of R thread



KQ2 Series

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

Dimensions

Female Elbow: KQ2LF

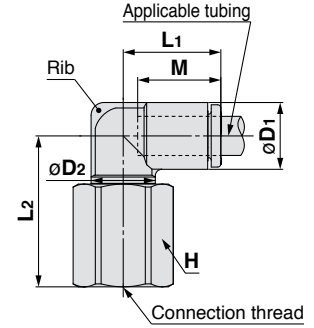


Applicable tubing O.D. [mm]	Connection thread M, Rc	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
									Nylon	Urethane			
$\phi 4$	M5 x 0.8	KQ2LF04-M5□	8	8.2	7	15.4	15.3	13.3	3.5	3.5	2.5	4.7	●
	M6 x 1.0	KQ2LF04-M6□	8	8.2	7	15.4	16.1	13.3	3.5	3.5	2.5	4.6	●
	1/8	KQ2LF04-01□	14	8.2	10	14.8	22.4	13.3	4.2	4.2	3	17.6	●
	1/4	KQ2LF04-02□	17	8.2	10	14.8	26.9	13.3	4.2	4.2	3	29.6	●
$\phi 6$	M5 x 0.8	KQ2LF06-M5□	8	10.4	7	14.5	17	13.3	3.5	3.5	2.5	4.8	●
	M6 x 1.0	KQ2LF06-M6□	8	10.4	7	14.5	17.8	13.3	3.5	3.5	2.5	4.7	●
	1/8	KQ2LF06-01□	14	10.4	10	15.5	23.5	13.3	11.4	9	4.5	18	—
	1/4	KQ2LF06-02□	17	10.4	10	15.5	28	13.3	11.4	9	4.5	30.1	—
$\phi 8$	3/8	KQ2LF06-03□	19	10.4	10	15.5	28.5	13.3	11.4	9	4.5	34	—
	1/8	KQ2LF08-01□	14	13.2	10	16.4	24.9	14.2	11.4	11.4	4.5	18.8	●
		KQ2LF08-01□ ^{*2} Q	14	13.2	12	17.2	23	14.2	21.6	14.9	6	14.6	●
	1/4	KQ2LF08-02□	17	13.2	12	17.2	28.8	14.2	21.6	14.9	6	28.7	●
$\phi 10$	3/8	KQ2LF08-03□	19	13.2	12	17.2	29.3	14.2	21.6	14.9	6	32.3	●
	1/4	KQ2LF10-02□	17	15.9	17	19.3	27.4	15.6	21.6	14.9	7.5	26.4	●
	3/8	KQ2LF10-03□	19	15.9	17	19.3	33.5	15.6	35.2	25	7.5	31	●
	1/2	KQ2LF10-04□	24	15.9	17	19.3	36.5	15.6	35.2	25	7.5	57.6	●
$\phi 12$	1/4	KQ2LF12-02□	17	18.5	17	21.5	28.7	17	50.2	39.7	9	28.2	●
	3/8	KQ2LF12-03□	19	18.5	17	21.5	34.8	17	50.2	39.7	9	32.9	●
	1/2	KQ2LF12-04□	24	18.5	17	21.5	37.8	17	50.2	39.7	9	59.5	●

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

*1 ϕD_1 is maximum diameter.

*2 For details, refer to page 131.

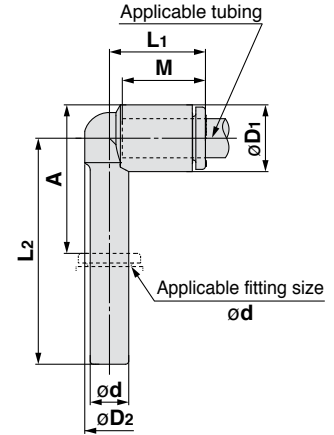


Extended Plug-in Elbow: KQ2W



Applicable tubing O.D. [mm]	Applicable fitting size ϕd	Model	*1 ϕD_1	ϕD_2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
									Nylon	Urethane		
$\phi 3.2$	$\phi 3.2$	KQ2W23-99A	7.1	6.4	14.4	30.5	20.8	13.3	3	2.5	2.5	1
$\phi 4$	$\phi 4$	KQ2W04-99A	8.2	7.2	14.5	31.8	22.6	13.3	4.2	4.2	3	1.3
$\phi 6$	$\phi 6$	KQ2W06-99A	10.4	8	15.3	35.2	27.1	13.3	9	9	4	2
$\phi 8$	$\phi 8$	KQ2W08-99A	13.2	10	17.2	41.9	34.3	14.2	21.6	14.9	6	3.5
$\phi 10$	$\phi 10$	KQ2W10-99A	15.9	12	19.3	46.6	38.9	15.6	35.2	25	7.5	5.5
$\phi 12$	$\phi 12$	KQ2W12-99A	18.5	14	21.5	52	44.2	17	50.2	39.7	9	8.4

*1 ϕD_1 is maximum diameter.





Dimensions

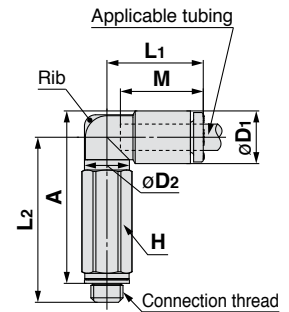
Extended Male Elbow: KQ2W (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 $\phi D1$	$\phi D2$	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
$\phi 2$	M3 x 0.5	KQ2W02-M3G	5.5	5.8	5.5	12.6	18.8	19.1	11.9	—	0.8	1.2	2.6	●
	M5 x 0.8	KQ2W02-M5□	7	5.8	5.5	12.6	19.3	19.2	11.9	—	0.8	1.2	4.6	●
$\phi 3.2$	M3 x 0.5	KQ2W23-M3G	7	7.1	7	15.3	22.5	23.4	13.3	0.8	0.8	1.2	4.8	●
	M5 x 0.8	KQ2W23-M5□	7	7.1	7	15.3	25.2	25.7	13.3	2.8	2.4	2.5	5.8	●
$\phi 4$	M3 x 0.5	KQ2W04-M3G	7	8.2	7	15.4	23	24.5	13.3	0.8	0.8	1.2	4.9	●
	M5 x 0.8	KQ2W04-M5□	7	8.2	7	15.4	25.7	26.8	13.3	3	3	2.5	5.8	●
$\phi 6$	M5 x 0.8	KQ2W06-M5□	7	10.4	7	14.5	27.4	29.6	13.3	3	3	2.5	5.9	●

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

*1 $\phi D1$ is maximum diameter.



Extended Male Elbow: KQ2W (Sealant)



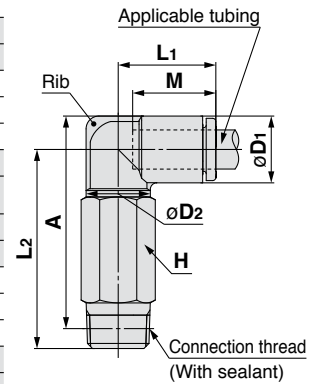
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 $\phi D1$	$\phi D2$	L1	L2	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
$\phi 3.2$	1/8	KQ2W23-01□S	10	7.1	10	14.5	30.3	30.8	13.3	2.8	2.4	2.5	10.8	—
	1/4	KQ2W23-02□S	14	7.1	10	14.5	32.8	31.7	13.3	2.8	2.4	2.5	27.3	—
$\phi 4$	1/8	KQ2W04-01□S	10	8.2	10	14.8	29.9	30.9	13.3	4	4	3	11	●
	1/4	KQ2W04-02□S	14	8.2	10	14.8	33.3	32.7	13.3	4	4	3	27.5	●
$\phi 6$	1/8	KQ2W06-01□S	10	10.4	10	15.5	31	33.1	13.3	10.9	8.6	4.5	11.4	—
	1/4	KQ2W06-02□S	14	10.4	10	15.5	34.4	34.9	13.3	10.9	8.6	4.5	28	—
	3/8	KQ2W06-03□S	17	10.4	10	15.5	35.7	35.8	13.3	10.9	8.6	4.5	47.4	—
$\phi 8$	1/8	KQ2W08-01□S	10	13.2	10	16.4	32.4	35.9	14.2	10.9	10.9	4.5	12.2	●
		KQ2W08-01□QS	12	13.2	12	17.2	42.4	45.9	14.2	20.5	14.2	6	23.7	●
	1/4	KQ2W08-02□S	14	13.2	12	17.2	39.1	41	14.2	20.5	14.2	6	40	●
$\phi 10$	3/8	KQ2W08-03□S	17	13.2	12	17.2	39.2	40.7	14.2	20.5	14.2	6	47	●
	1/4	KQ2W10-02□S	17	15.9	17	19.3	52.9	56.2	15.6	33.5	23.8	7.5	59	●
	3/8	KQ2W10-03□S	17	15.9	17	19.3	48.5	51.4	15.6	33.5	23.8	7.5	51.3	●
$\phi 12$	1/2	KQ2W10-04□S	22	15.9	17	19.3	52.5	54.1	15.6	33.5	23.8	7.5	92	●
	1/4	KQ2W12-02□S	17	18.5	17	21.5	54.2	58.8	17	47.7	37.7	9	60.7	●
$\phi 16$	3/8	KQ2W12-03□S	17	18.5	17	21.5	49.8	54	17	47.7	37.7	9	53.2	●
	1/2	KQ2W12-04□S	22	18.5	17	21.5	53.8	56.7	17	47.7	37.7	9	93.9	●
	1/4	KQ2W16-02□S	17	23.8	17	25.1	56.9	64.1	20.6	47.7	47.7	9	67.4	●
$\phi 16$	3/8	KQ2W16-03□S	22	23.8	21	27.1	59.7	66.5	20.6	71	58.9	11	105.5	—
	1/2	KQ2W16-04□S	22	23.8	21	27.1	58.4	63.9	20.6	100	58.9	13	101.7	—

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

*1 $\phi D1$ is maximum diameter.

*2 Reference dimensions after installation of R thread

*3 For details, refer to page 131.



KQ2 Series

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

Dimensions

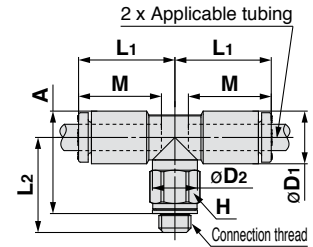
Male Branch Tee: KQ2T (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread M	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
										Nylon	Urethane		
$\phi 2$	M3 x 0.5	KQ2T02-M3G	5.5	5.8	5.5	12.6	12.5	12.8	11.9	—	0.9	1.2	1.9
	M5 x 0.8	KQ2T02-M5□	7	5.8	5.5	12.6	13	12.9	11.9	—	0.9	1.4	3
$\phi 3.2$	M3 x 0.5	KQ2T23-M3G	7	7.1	7	15.3	13.8	14.7	13.3	0.9	0.9	1.2	3.1
	M5 x 0.8	KQ2T23-M5□	7	7.1	7	15.3	14.3	14.8	13.3	3.2	2.7	2.5	3.5
$\phi 4$	M3 x 0.5	KQ2T04-M3G	7	8.2	7	15.4	14.3	15.8	13.3	0.9	0.9	1.2	3.4
	M5 x 0.8	KQ2T04-M5□	7	8.2	7	15.4	14.8	15.9	13.3	4.5	4.5	2.5	3.9
$\phi 6$	M5 x 0.8	KQ2T06-M5□	7	10.4	7	14.5	16.5	18.7	13.3	4.5	4.5	2.5	4.4
	M6 x 1.0	KQ2T06-M6□	8	10.4	7	14.5	17.5	18.7	13.3	4.5	4.5	2.5	5.4

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

*1 ϕD_1 is maximum diameter.



Male Branch Tee: KQ2T (Sealant)



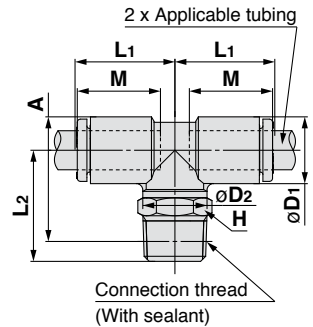
Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]
										Nylon	Urethane		
$\phi 3.2$	1/8	KQ2T23-01□S	10	7.1	10	14.5	16.6	17.1	13.3	3.4	2.9	2.5	5.2
	1/4	KQ2T23-02□S	14	7.1	10	14.5	21.1	20	13.3	3.4	2.9	2.5	14.7
$\phi 4$	1/8	KQ2T04-01□S	10	8.2	10	14.8	16.2	17.2	13.3	6	4.1	3	5.5
	1/4	KQ2T04-02□S	14	8.2	10	14.8	21.7	21.1	13.3	6	4.1	3	15
$\phi 6$	1/8	KQ2T06-01□S	10	10.4	10	15.5	17.3	19.4	13.3	13.9	11	4.5	6.1
	1/4	KQ2T06-02□S	14	10.4	10	15.5	22.8	23.3	13.3	13.9	11	4.5	15.6
$\phi 8$	3/8	KQ2T06-03□S	17	10.4	10	15.5	24.1	24.2	13.3	13.9	11	4.5	27.4
	1/8	KQ2T08-01□S	10	13.2	10	16.4	18.7	22.2	14.2	14	14	4.5	7.9
$\phi 8$		KQ2T08-01□*3	12	13.2	12	17.2	23.5	27	14.2	26.3	18.2	6	11.0
	1/4	KQ2T08-02□S	14	13.2	12	17.2	25.4	27.3	14.2	26.3	18.2	6	19.4
$\phi 8$	3/8	KQ2T08-03□S	17	13.2	12	17.2	25.5	27	14.2	26.3	18.2	6	26.5
	1/8	KQ2T10-01□S	12	15.9	12	18.6	23.5	28.4	15.6	21.6	14.9	6	13.9
$\phi 10$	1/4	KQ2T10-02□S	17	15.9	17	19.3	28.6	31.9	15.6	35.2	25	7.5	24.3
	3/8	KQ2T10-03□S	17	15.9	17	19.3	29.5	32.4	15.6	35.2	25	7.5	24.8
$\phi 10$	1/2	KQ2T10-04□S	22	15.9	17	19.3	33.5	35.1	15.6	35.2	25	7.5	47.3
	1/4	KQ2T12-02□S	17	18.5	17	21.5	29.9	34.5	17	57.2	45.2	9	27.3
$\phi 12$	3/8	KQ2T12-03□S	17	18.5	17	21.5	30.8	35	17	57.2	45.2	9	28
	1/2	KQ2T12-04□S	22	18.5	17	21.5	34.8	37.7	17	57.2	45.2	9	50.4
$\phi 16$	1/4	KQ2T16-02□S	17	23.8	17	25.1	32.6	39.8	20.6	57.2	57.2	9	35.5
	3/8	KQ2T16-03□S	22	23.8	21	27.1	35.4	42.2	20.6	71	58.9	11	47.7
$\phi 16$	1/2	KQ2T16-04□S	22	23.8	21	27.1	34.1	39.6	20.6	100	58.9	13	51.4

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

*1 ϕD_1 is maximum diameter.

*2 Reference dimensions after installation of R thread

*3 For details, refer to page 131.





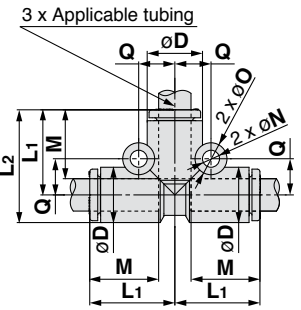
Dimensions

Union Tee: KQ2T



Applicable tubing O.D. [mm]	Model	*1 ϕD	L1	L2	M	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
									Nylon	Urethane		
$\phi 2$	KQ2T02-00A	5.8	12.9	15.8	11.9	4.5	6	3.2	—	0.9	1.4	1.4
$\phi 3.2$	KQ2T23-00A	7.1	14.9	18.5	13.3	5.4	6	3.2	3.4	2.9	2.5	2.3
$\phi 4$	KQ2T04-00A	8.2	15.3	19.4	13.3	5.7	6	3.2	6.4	4.4	3	2.8
$\phi 6$	KQ2T06-00A	10.4	16.3	21.5	13.3	6.8	6	3.2	13.4	10.6	4.5	3.8
$\phi 8$	KQ2T08-00A	13.2	18.2	24.8	14.2	8.4	8	4.2	25.6	17.7	6	7
$\phi 10$	KQ2T10-00A	15.9	20.6	28.6	15.6	9.6	8	4.2	40	28.4	7.5	11
$\phi 12$	KQ2T12-00A	18.5	23	32.3	17	10.7	8	4.2	57.4	45.4	9	15.7
$\phi 16$	KQ2T16-00A	23.8	28.6	40.5	20.6	13.4	8	4.2	100	58.9	13	29.8

*1 ϕD is maximum diameter.

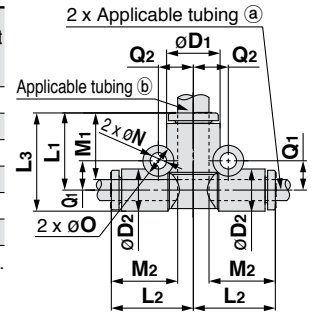


Different Diameter Tee: KQ2T



Applicable tubing O.D. [mm]		Model	*1 ϕD_1	ϕD_2	L1	L2	L3	M1	M2	Q1	Q2	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
(a)	(b)													Nylon	Urethane		
$\phi 3.2$	$\phi 4$	KQ2T23-04A	8.2	7.1	14.9	15.3	18.5	13.3	13.3	5.4	5.8	6	3.2	3.8	3.5	2.5	2.6
$\phi 4$	$\phi 6$	KQ2T04-06A	10.4	8.2	15.3	16.3	19.4	13.3	13.3	5.7	6.8	6	3.2	7.1	6.6	3	3.3
$\phi 6$	$\phi 8$	KQ2T06-08A	13.2	10.4	17.2	17.3	22.4	14.2	13.3	7.3	8.4	8	4.2	16.4	16.4	4.5	5.3
$\phi 8$	$\phi 10$	KQ2T08-10A	15.9	13.2	19.6	19.2	26.2	15.6	14.2	8.4	9.6	8	4.2	36	27.2	6	8.3
$\phi 10$	$\phi 12$	KQ2T10-12A	18.5	15.9	22	21.6	30	17	15.6	9.6	10.7	8	4.2	56	44.5	7.5	12.2
$\phi 12$	$\phi 16$	KQ2T12-16A	23.8	18.5	26.6	25	35.9	20.6	17	10.7	13.4	8	4.2	108.5	74	9	20.1

*1 ϕD_1 is maximum diameter.

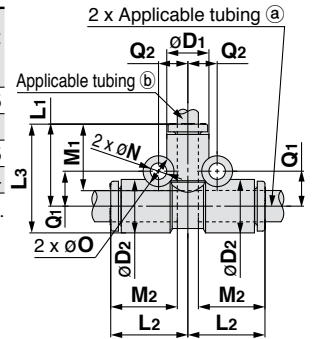


Different Diameter Tee: KQ2T



Applicable tubing O.D. [mm]		Model	*1 ϕD_1	ϕD_2	L1	L2	L3	M1	M2	Q1	Q2	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
(a)	(b)													Nylon	Urethane		
$\phi 6$	$\phi 4$	KQ2T06-04A	8.2	10.4	16.3	15.3	21.5	13.3	13.3	6.8	5.7	6	3.2	6.4	4.4	3	3.5
$\phi 8$	$\phi 6$	KQ2T08-06A	10.4	13.2	17.3	17.2	23.9	13.3	14.2	8.4	7.3	8	4.2	13.4	10.6	4.5	6
$\phi 10$	$\phi 8$	KQ2T10-08A	13.2	15.9	19.2	19.6	27.2	14.2	15.6	9.6	8.4	8	4.2	25.6	17.7	6	9.5
$\phi 12$	$\phi 10$	KQ2T12-10A	15.9	18.5	21.6	22	30.9	15.6	17	10.7	9.6	8	4.2	40	28.4	7.5	13.4

*1 ϕD_1 is maximum diameter.



KQ2 Series

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

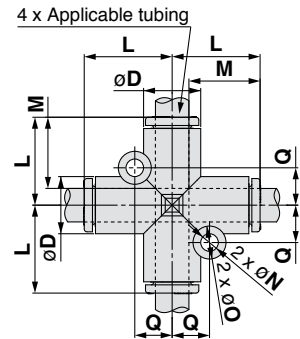
Dimensions

Cross: KQ2TW



Applicable tubing O.D. [mm]	Model	*1 ϕD	L	Q	M	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
$\phi 4$	KQ2TW04-00A	8.2	15.3	5.7	13.3	6	3.2	6.4	4.4	3	3.5
$\phi 6$	KQ2TW06-00A	10.4	16.3	6.8	13.3	6	3.2	13.4	10.6	4.5	4.9
$\phi 8$	KQ2TW08-00A	13.2	18.2	8.4	14.2	8	4.2	25.6	17.7	6	8.5
$\phi 10$	KQ2TW10-00A	15.9	20.6	9.6	15.6	8	4.2	40	28.4	7.5	12.7
$\phi 12$	KQ2TW12-00A	18.5	23	10.7	17	8	4.2	57.4	45.4	9	18.4

*1 ϕD is maximum diameter.

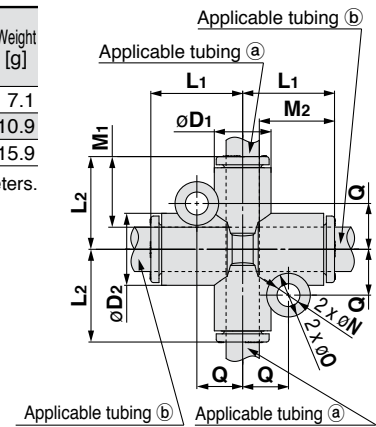


Different Diameter Cross: KQ2TX



Applicable tubing O.D. [mm]		Model	*1 ϕD_1	*1 ϕD_2	L ₁	L ₂	Q	M ₁	M ₂	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
(a)	(b)											Nylon	Urethane		
$\phi 6$	$\phi 8$	KQ2TX06-08A	10.4	13.2	17.2	17.3	8.4	13.3	14.2	8	4.2	13.4	10.6	4.5	7.1
$\phi 8$	$\phi 10$	KQ2TX08-10A	13.2	15.9	19.6	19.2	9.6	14.2	15.6	8	4.2	25.6	17.7	6	10.9
$\phi 10$	$\phi 12$	KQ2TX10-12A	15.9	18.5	22	21.6	10.7	15.6	17	8	4.2	40	28.4	7.5	15.9

*1 ϕD_1 , ϕD_2 are maximum diameters.

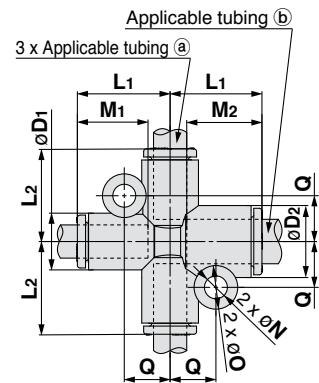


Different Diameter Cross: KQ2TY



Applicable tubing O.D. [mm]		Model	*1 ϕD_1	*1 ϕD_2	L ₁	L ₂	Q	M ₁	M ₂	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
(a)	(b)											Nylon	Urethane		
$\phi 6$	$\phi 8$	KQ2TY06-08A	10.4	13.2	17.3	17.2	8.4	13.3	14.2	8	4.2	13.4	10.6	4.5	6.5
$\phi 8$	$\phi 10$	KQ2TY08-10A	13.2	15.9	19.2	19.6	9.6	14.2	15.6	8	4.2	25.6	17.7	6	10.2
$\phi 10$	$\phi 12$	KQ2TY10-12A	15.9	18.5	21.6	22	10.7	15.6	17	8	4.2	40	28.4	7.5	14.9

*1 ϕD_1 , ϕD_2 are maximum diameters.



KQ2 Series

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

Dimensions

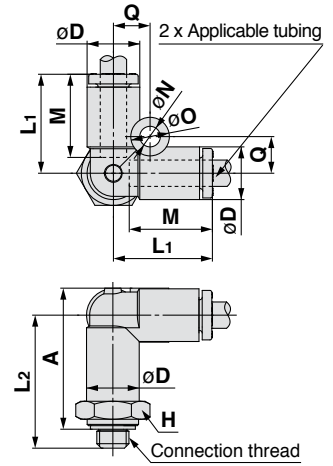
Male Delta Union: KQ2D (Gasket seal)



Applicable tubing O.D. (mm)	Connection thread M	Model	H (Width across flats)	*1 ϕD	L1	L2	A	M	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 4$	M5 x 0.8	KQ2D04-M5□	10	8.2	15.8	20.7	21.8	13.3	5.7	6	3.2	2.2	2.2	1.8	6.6
	M6 x 1.0	KQ2D04-M6□	10	8.2	15.8	21.7	21.8	13.3	5.7	6	3.2	4.3	4.3	3	6.4
$\phi 6$	M5 x 0.8	KQ2D06-M5□	12	10.4	16.8	21.7	23.9	13.3	6.7	6	3.2	4.3	4.3	1.8	9.8
	M6 x 1.0	KQ2D06-M6□	12	10.4	16.8	22.7	23.9	13.3	6.7	6	3.2	4.3	4.3	3	9.7

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

*1 ϕD is maximum diameter.



Male Delta Union: KQ2D (Sealant)

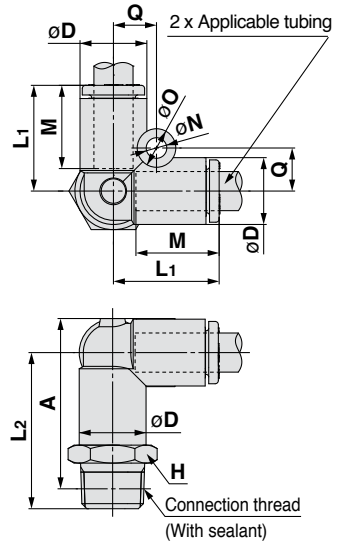


Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	*1 ϕD	L1	L2	A*2	M	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 4$	1/8	KQ2D04-01□S	10	8.2	15.8	23.3	24.3	13.3	5.7	6	3.2	6	6	3.6	9.2
	1/4	KQ2D04-02□S	14	8.2	15.8	27.7	27.1	13.3	5.7	6	3.2	6	6	3.6	19
$\phi 6$	1/8	KQ2D06-01□S	12	10.4	16.8	24.3	26.4	13.3	6.7	6	3.2	13.9	11	5.4	10.2
	1/4	KQ2D06-02□S	14	10.4	16.8	28.7	29.2	13.3	6.7	6	3.2	13.9	11	5.4	19.1
$\phi 8$	3/8	KQ2D06-03□S	17	10.4	16.8	30.1	30.2	13.3	6.7	6	3.2	13.9	11	5.4	31
	1/8	KQ2D08-01□S	14	13.2	18.8	26.3	29.8	14.2	8.4	8	4.2	26.3	18.2	6	15.3
$\phi 10$	1/4	KQ2D08-02□S	14	13.2	18.8	30.7	32.6	14.2	8.4	8	4.2	26.3	18.2	7.3	20.4
	3/8	KQ2D08-03□S	17	13.2	18.8	32.1	33.6	14.2	8.4	8	4.2	26.3	18.2	7.3	32.1
$\phi 12$	1/4	KQ2D10-02□S	17	15.9	21.2	33.1	36.3	15.6	9.6	8	4.2	40.8	29	9	24.9
	3/8	KQ2D10-03□S	17	15.9	21.2	34.5	37.3	15.6	9.6	8	4.2	40.8	29	9.4	32.7
$\phi 12$	1/2	KQ2D10-04□S	22	15.9	21.2	38.7	40.2	15.6	9.6	8	4.2	40.8	29	9.4	60.6
	1/4	KQ2D12-02□S	19	18.5	23.6	35.5	40	17	10.7	8	4.2	57.2	45.2	9	35
$\phi 12$	3/8	KQ2D12-03□S	19	18.5	23.6	36.9	41	17	10.7	8	4.2	57.2	45.2	11	38
	1/2	KQ2D12-04□S	22	18.5	23.6	41.1	43.9	17	10.7	8	4.2	57.2	45.2	11.6	60

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

*1 ϕD is maximum diameter.

*2 Reference dimensions after installation of R thread



KQ2 Series

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

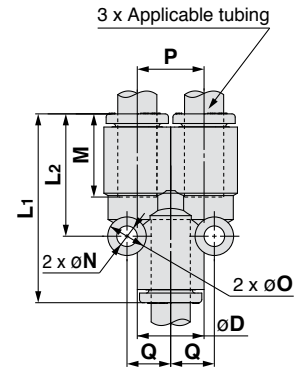
Dimensions

Union "Y": KQ2U



Applicable tubing O.D. [mm]	Model	*1 ϕD	L1	L2	P	M	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
										Nylon	Urethane		
$\phi 2$	KQ2U02-00A	5.8	25.8	16.1	5.8	11.9	4.5	6	3.2	—	0.9	1.2	1.6
$\phi 3.2$	KQ2U23-00A	7.1	28.9	18	7.1	13.3	5.2	6	3.2	3.4	2.9	2.5	2.4
$\phi 4$	KQ2U04-00A	8.2	29	18.2	8.2	13.3	5.7	6	3.2	4.2	4.2	3	2.9
$\phi 6$	KQ2U06-00A	10.4	30.1	19.4	10.4	13.3	6.8	6	3.2	13.4	10.6	4.5	4.1
$\phi 8$	KQ2U08-00A	13.2	33.2	22.3	13.2	14.2	8.7	8	4.2	25.6	17.7	6	7.4
$\phi 10$	KQ2U10-00A	15.9	37.1	25	15.9	15.6	10.1	8	4.2	40	28.4	7.5	11.2
$\phi 12$	KQ2U12-00A	18.5	41.1	27.8	18.5	17	11.4	8	4.2	57.4	45.4	9	16.4
$\phi 16$	KQ2U16-00A	23.8	51.5	35	23.8	20.6	14	8	4.2	113	60	13	30.6

*1 ϕD is maximum diameter.

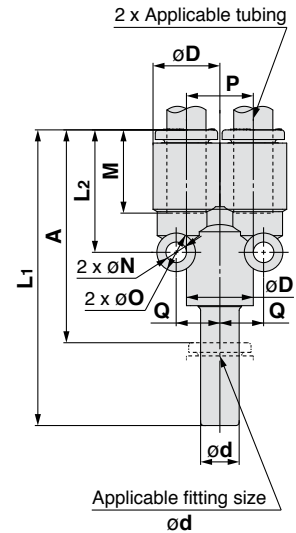


Plug-in "Y": KQ2U



Applicable tubing O.D. [mm]	Applicable fitting size ϕd	Model	*1 ϕD	L1	L2	P	A	M	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 3.2$	$\phi 3.2$	KQ2U23-99A	7.1	45.1	18	7.1	31.8	13.3	5.2	6	3.2	3.4	2.9	2	2.5
$\phi 4$	$\phi 4$	KQ2U04-99A	8.2	44.8	18.2	8.2	31.5	13.3	5.7	6	3.2	4.2	4.2	2.5	3.1
$\phi 6$	$\phi 6$	KQ2U06-99A	10.4	46.3	19.4	10.4	33	13.3	6.8	6	3.2	13.4	10.6	4	4.5
$\phi 8$	$\phi 8$	KQ2U08-99A	13.2	52.1	22.3	13.2	37.9	14.2	8.7	8	4.2	25.6	17.7	6	8
$\phi 10$	$\phi 10$	KQ2U10-99A	15.9	57.3	25	15.9	41.7	15.6	10.1	8	4.2	40	28.4	7.5	12.3
$\phi 12$	$\phi 12$	KQ2U12-99A	18.5	63	27.8	18.5	46	17	11.4	8	4.2	57.4	45.4	9	18.3
$\phi 16$	$\phi 16$	KQ2U16-99A	23.8	75.9	35	23.8	55.3	20.6	14	8	4.2	113	60	13	33.5

*1 ϕD is maximum diameter.

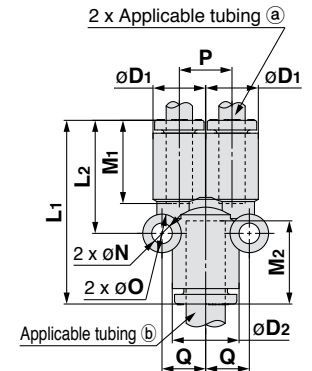


Different Diameter Union "Y": KQ2U



Applicable tubing O.D. [mm]		Model	*1 ϕD_1	*1 ϕD_2	L1	L2	P	M1	M2	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
(a)	(b)												Nylon	Urethane		
$\phi 2$	$\phi 3.2$	KQ2U02-23A	5.8	7.1	28.2	16.6	5.8	11.9	13.3	5.2	6	3.2	—	0.9	1.2	1.9
$\phi 2$	$\phi 4$	KQ2U02-04A	5.8	8.2	27.6	15.7	5.8	11.9	13.3	5.7	6	3.2	—	0.9	1.2	2.1
$\phi 3.2$	$\phi 4$	KQ2U23-04A	7.1	8.2	28.9	18	7.1	13.3	13.3	5.7	6	3.2	3.2	2.7	2.5	2.7
$\phi 4$	$\phi 6$	KQ2U04-06A	8.2	10.4	29	18	8.2	13.3	13.3	6.8	6	3.2	4.2	4.2	3	3.3
$\phi 6$	$\phi 8$	KQ2U06-08A	10.4	13.2	31	19.3	10.4	13.3	14.2	8.2	6	3.2	13.4	10.6	4.5	5
$\phi 8$	$\phi 10$	KQ2U08-10A	13.2	15.9	34.6	22.3	13.2	14.2	15.6	10.1	8	4.2	25.6	17.7	6	8.6
$\phi 10$	$\phi 12$	KQ2U10-12A	15.9	18.5	38.5	25	15.9	15.6	17	11.4	8	4.2	40	28.4	7.5	12.7
$\phi 12$	$\phi 16$	KQ2U12-16A	18.5	23.8	47.9	31	18.5	17	20.6	14	8	4.2	57.4	45.4	9	21.2

*1 ϕD_1 , ϕD_2 are maximum diameters.





Dimensions

Double Branch "Y": KQ2UD (Sealant)

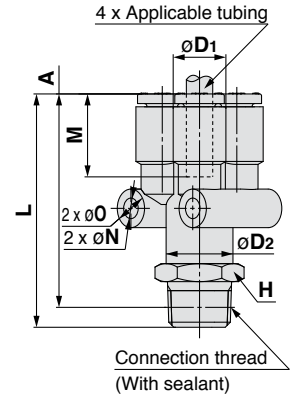
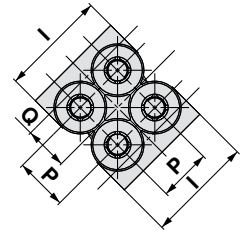


Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L	I	A*2	M	P	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
														Nylon	Urethane		
$\phi 4$	1/8	KQ2UD04-01□S	12	8.2	10.4	36.7	16.6	33.6	13.3	8.2	6.8	6	3.2	4.2	4.2	5.4	11.7
	1/4	KQ2UD04-02□S	14	8.2	10.4	41.1	16.6	36.4	13.3	8.2	6.8	6	3.2	4.2	4.2	5.4	20.6
$\phi 6$	1/8	KQ2UD06-01□S	14	10.4	13.2	39.5	21	36.4	13.3	10.4	8.2	6	3.2	13.4	10.6	6	16.4
	1/4	KQ2UD06-02□S	14	10.4	13.2	43.9	21	39.2	13.3	10.4	8.2	6	3.2	13.4	10.6	7.3	21.6

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

*1 ϕD_1 is maximum diameter.

*2 Reference dimensions after installation of R thread

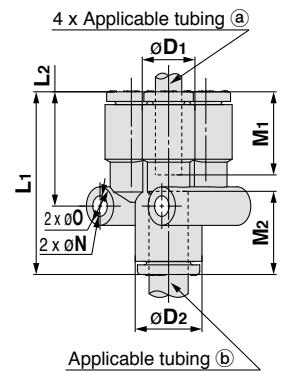
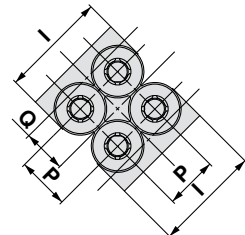


Different Diameter Double Union "Y": KQ2UD



Applicable tubing O.D. [mm]		Model	*1 ϕD_1	*1 ϕD_2	L ₁	L ₂	P	I	M ₁	M ₂	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
(a)	(b)													Nylon	Urethane		
$\phi 4$	$\phi 6$	KQ2UD04-06A	8.2	10.4	29.2	18.2	8.2	16.6	13.3	13.3	6.8	6	3.2	4.2	4.2	3	5.4
$\phi 6$	$\phi 8$	KQ2UD06-08A	10.4	13.2	32	20.5	10.4	21	13.3	14.2	8.2	6	3.2	13.4	10.6	4.5	8.1

*1 ϕD_1 , ϕD_2 are maximum diameters.



KQ2 Series

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

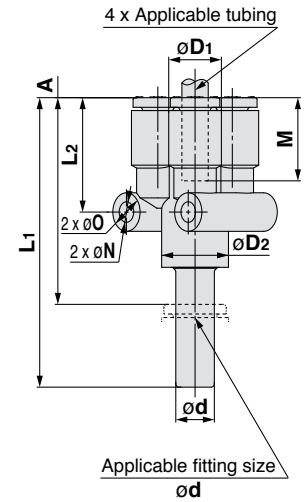
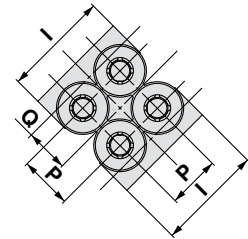
Dimensions

Double Plug-in "Y": KQ2XD



Applicable tubing O.D. [mm]	Applicable fitting size ϕd	Model	*1 ϕD_1	ϕD_2	L1	L2	A	I	P	M	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
														Nylon	Urethane		
$\phi 4$	$\phi 6$	KQ2XD04-06A	8.2	10.4	45.4	18.2	32.1	16.6	8.2	13.3	6.8	6	3.2	4.2	4.2	3	5.9
$\phi 6$	$\phi 8$	KQ2XD06-08A	10.4	13.2	50.9	20.5	36.7	21	10.4	13.3	8.2	6	3.2	13.4	10.6	4.5	8.6

*1 ϕD_1 is maximum diameter.

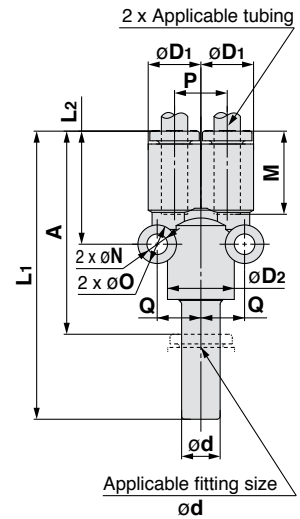


Different Diameter Plug-in "Y": KQ2X



Applicable tubing O.D. [mm]	Applicable fitting size ϕd	Model	*1 ϕD_1	*1 ϕD_2	L1	L2	A	P	M	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
													Nylon	Urethane		
$\phi 3.2$	$\phi 4$	KQ2X23-04A	7.1	8.2	44.7	18	31.4	7.1	13.3	5.7	6	3.2	3.2	2.7	2.5	2.8
$\phi 4$	$\phi 6$	KQ2X04-06A	8.2	10.4	45.2	18	31.9	8.2	13.3	6.8	6	3.2	4.2	4.2	3	3.8
$\phi 6$	$\phi 8$	KQ2X06-08A	10.4	13.2	49.9	19.3	35.7	10.4	13.3	8.2	6	3.2	13.4	10.6	4.5	5.5
$\phi 8$	$\phi 10$	KQ2X08-10A	13.2	15.9	54.8	22.3	39.2	13.2	14.2	10.1	8	4.2	25.6	17.7	6	9.8
$\phi 10$	$\phi 12$	KQ2X10-12A	15.9	18.5	60.4	25	43.4	15.9	15.6	11.4	8	4.2	40	28.4	7.5	14.6

*1 $\phi D_1, \phi D_2$ are maximum diameters.



KQ2 Series

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

Dimensions

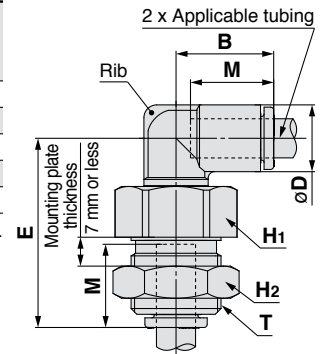
Bulkhead Male Elbow: KQ2LE



Applicable tubing O.D. (mm)	Model	T (M)	H ₁ (Width across flats)	H ₂ (Width across flats)	B	E	*1 øD	Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
ø4	KQ2LE04-00□	M12 x 1	14	14	14.8	28.5	8.2	13	13.3	4.2	4.2	3	21.2	●
ø6	KQ2LE06-00□	M14 x 1	17	17	15.5	29.6	10.4	15	13.3	11.4	9	4.5	29.4	—
ø8	KQ2LE08-00□	M16 x 1	17	19	17.2	32.3	13.2	17	14.2	21.6	14.9	6	30.4	●
ø10	KQ2LE10-00□	M20 x 1	22	24	19.3	37.9	15.9	21	15.6	35.2	25	7.5	53.5	●
ø12	KQ2LE12-00□	M22 x 1	24	27	21.5	40.8	18.5	23	17	50.2	39.7	9	61	●

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

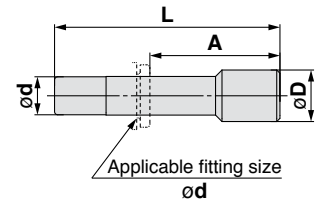
*1 øD is maximum diameter.



Plug: KQ2P



Applicable fitting size ød	Model	øD	L	A	Weight [g]
ø2	KJP-02	3	17	5.1	0.1
ø3.2	KQ2P-23	5	31.5	18.2	1
ø4	KQ2P-04	6	32	18.7	1
ø6	KQ2P-06	8	35	21.7	1
ø8	KQ2P-08	10	39	24.8	2
ø10	KQ2P-10	12	43	27.4	3.5
ø12	KQ2P-12	14	45.5	28.5	5
ø16	KQ2P-16	20.9	47	26.4	8

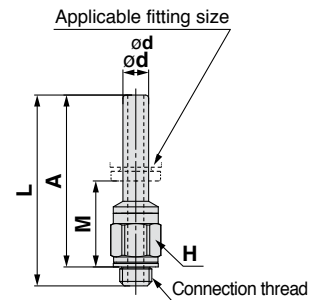


Adapter: KQ2N (Gasket seal)



Applicable fitting size ød	Connection thread M	Model	H (Width across flats)	L	A	M	Min. port size	Weight [g]
ø4	M5 x 0.8	KQ2N04-M5□	7	29.7	26.7	13.4	2.5	2.4
ø6	M5 x 0.8	KQ2N06-M5□	7	29.7	26.7	13.4	2.5	2.6

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



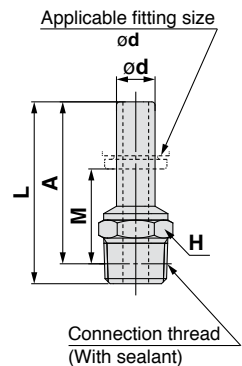
Adapter: KQ2N (Sealant)



Applicable fitting size ød	Connection thread R	Model	H (Width across flats)	L	A*1	M	Min. port size	Weight [g]
ø4	1/8	KQ2N04-01□S	10	28.3	25.2	11.9	2.5	4
ø6	1/8	KQ2N06-01□S	10	28.3	25.2	11.9	4	4.1
	1/4	KQ2N06-02□S	14	32.8	28.1	14.8	4	13.6
ø8	1/4	KQ2N08-02□S	14	35.9	31.2	17	6	15.7
	3/8	KQ2N08-03□S	17	36	30.9	16.7	6	22.7
ø10	3/8	KQ2N10-03□S	17	40.6	35.5	19.9	7.5	19.1

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

*1 Reference dimensions after installation of R thread



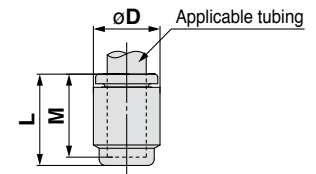


Dimensions

Tube Cap: KQ2C



Applicable tubing O.D. [mm]	Model	øD*1	L	M	Weight [g]
ø4	KQ2C04-00A	8.2	14.5	13.3	0.8
ø6	KQ2C06-00A	10.4	14.6	13.3	1.1
ø8	KQ2C08-00A	13.2	15.7	14.2	2
ø10	KQ2C10-00A	15.9	17.3	15.6	2.9
ø12	KQ2C12-00A	18.5	18.9	17	4.5
ø16	KQ2C16-00A	23.8	23	20.6	8.4

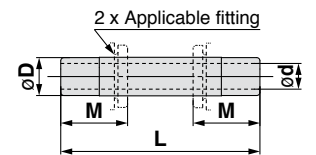


*1 øD is maximum diameter.

Nipple: KQ2N



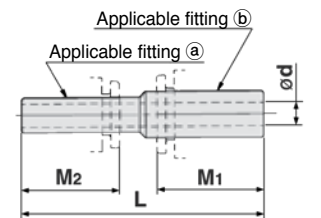
Applicable fitting øD	Model	L	M	ød	Min. port size	Weight [g]
ø4	KQ2N04-99	37	13.3	2.5	2.5	1
ø6	KQ2N06-99	39	13.3	4	4	2
ø8	KQ2N08-99	43	14.2	6	6	2
ø10	KQ2N10-99	49	15.6	7.5	7.5	4
ø12	KQ2N12-99	52	17	9	9	3.3
ø16	KQ2N16-99	57	20.6	13	13	4.8



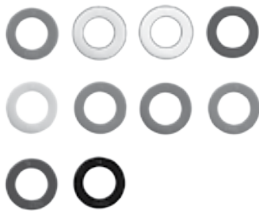
Reducer Nipple: KQ2N



Applicable fitting		Model	L	M ₁	M ₂	ød Min. port size	Weight [g]
(a)	(b)						
ø4	ø6	KQ2N04-06	38	13.3	13.3	2.5	2
ø6	ø8	KQ2N06-08	42	14.2	13.3	4	2
ø8	ø10	KQ2N08-10	47	15.6	14.2	6	2
ø10	ø12	KQ2N10-12	51	17	15.6	7.5	3.1
ø12	ø16	KQ2N12-16	55	20.6	17	9	4.9

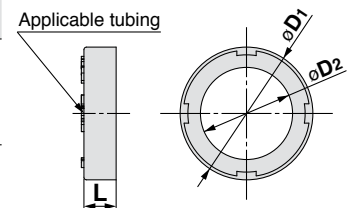


Color Cap: KQ2C



Applicable tubing O.D. [mm]	Model	øD ₁	øD ₂	L	Weight [g]	Note
ø2	KQ2C-02□A	6.1	3.2	2.6	0.1	Applicable for products with enlarged outside diameter of release button
ø3.2	KQ2C-23□A	7.3	4.3	2.6	0.1	
ø4	KQ2C-04□A	8.3	5.2	2.6	0.1	
ø6	KQ2C-06□A	10.3	7.2	2.6	0.1	
ø8	KQ2C-08□B	13.6	9.2	2.6	0.1	
ø10	KQ2C-10□B	16.2	11.2	2.7	0.1	
ø12	KQ2C-12□B	18.8	13.2	2.7	0.2	
ø16	KQ2C-16□B	24.2	17.2	3.2	0.3	

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Gray), W (White), BU (Blue)



In order to improve operability, the outside diameter of the release button has been enlarged for the new KQ2 series. Therefore, the usable color caps will differ between pre-change and post-change products. Refer to page 221 for details.

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□08-01□□	Effective area is interchangeable with the current product (KQ series). Applicable model: Male elbow, 45° male elbow, Female elbow, Extended male elbow, Male branch tee, Male run tee Applicable tubing O.D./Port size: ø8/R1/8 Thread material/Surface treatment: Brass, Brass + Electroless nickel plating Example) KQ2L08-01AQS

*1 The following models are not available as made-to-order: Hexagon socket head male connector/KQ2S, Bulkhead union/KQ2E, Bulkhead connector/KQ2E, Nipple/KQ2N, Reducer nipple/KQ2N, Male connector/KQ2H, Female connector/KQ2F, Color cap/KQ2C, Plug/KQ2P

*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)
X34	Rubber material: FKM
X39	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)
X94	Grease-free Rubber material: FKM (With fluorine coating) Release button color: Light blue

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-KQ2H06-02NS** (With thread)

10-KQ2H06-00A (Without thread)

3 Spare Parts

Description	Part no.	Applicable thread
Gasket	M-3G2	M3
	M-5G2	M5
	M-6G	M6

Brass

Description	Part no.	Applicable model
Pipe nut	KQ02-P01AJ	KQ2E02-00AJ
	KQ23-P01AJ	KQ2E23-00AJ
	KQ04-P01AJ	KQ2E04-00AJ
	KQ06-P01AJ	KQ2E06-00AJ
	KQ04-P01A	KQ2E23-00A, KQ2E04-00A, KQ2E23-02A KQ2E04-01A, KQ2E04-02A, KQ2LE04-00A
	KQ06-P01A	KQ2E06-00A, KQ2E06-01A, KQ2E06-02A KQ2E06-03A, KQ2LE06-00A
	KQ08-P01A	KQ2E08-00A, KQ2E08-01A, KQ2E08-02A KQ2E08-03A, KQ2LE08-00A
	KQ10-P01A	KQ2E10-00A, KQ2E10-02A, KQ2E10-03A KQ2LE10-00A
	KQ12-P01A	KQ2E12-00A, KQ2E12-03A, KQ2E12-04A KQ2LE12-00A
	KQ16-P01A	KQ2E16-00A KQ2E16-03A, KQ2E16-04A

Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	KQ02-P01NJ	KQ2E02-00NJ
	KQ23-P01NJ	KQ2E23-00NJ
	KQ04-P01NJ	KQ2E04-00NJ
	KQ06-P01NJ	KQ2E06-00NJ
	KQ04-P01N	KQ2E23-00N, KQ2E04-00N, KQ2E23-02N KQ2E04-01N, KQ2E04-02N, KQ2LE04-00N
	KQ06-P01N	KQ2E06-00N, KQ2E06-01N, KQ2E06-02N KQ2E06-03N, KQ2LE06-00N
	KQ08-P01N	KQ2E08-00N, KQ2E08-01N, KQ2E08-02N KQ2E08-03N, KQ2LE08-00N
	KQ10-P01N	KQ2E10-00N, KQ2E10-02N, KQ2E10-03N KQ2LE10-00N
	KQ12-P01N	KQ2E12-00N, KQ2E12-03N, KQ2E12-04N KQ2LE12-00N
	KQ16-P01N	KQ2E16-00N KQ2E16-03N, KQ2E16-04N

Color Cap

Applicable tubing O.D. [mm]	Model	øD1	øD2	L	Weight [g]	Note
ø8	KQ2C-08□A	12.8	9.2	2.6	0.1	Applicable for products before enlargement of outside diameter of release button
ø10	KQ2C-10□A	15.2	11.2	2.7	0.1	
ø12	KQ2C-12□A	17.6	13.2	2.7	0.1	
ø16	KQ2C-16□A	22.4	17.2	3.2	0.2	

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Gray), W (White), BU (Blue)

Gasket Seal		Face Seal			Sealant/Gasket Seal		Round Type
Inch Size Uni	Metric Size Uni	Inch Size R	Inch Size NPT	Metric Size R, Rc	Metric Size G	Inch Size M, R, Rc	Metric Size M, R, Rc

Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

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 145 psi [1 MPa].
The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Release button (Orange)
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
UNF, NPT

Guide
Chuck
Body
Release button (Orange)
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 -14.5 psi [-100 kPa].



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø1/8", ø5/32", ø3/16", ø1/4", ø5/16", ø3/8", ø1/2"

Specifications

Fluid		Air, Water*1
Operating pressure range*2		-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])		435 psi [3 MPa]
Ambient and fluid temperature		23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)
Thread	Mounting section	ANSI/ASME1.20.1 (NPT thread) JIS B0208 (UNF thread)
	Nut section	JIS B0208 (UNF thread)
Seal on the threads		With sealant

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

*2 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
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 156 for details.)



How to Order

Threaded Type

KQ2 H 05 - 34 A S

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
Z	Branch universal male elbow
ZD	Double branch universal male elbow
ZT	Triple branch universal male elbow
W	Extended male elbow
T	Male branch tee
Y	Male run tee
U	Branch "Y"
E	Bulkhead union
	Bulkhead connector
LE	Bulkhead male elbow

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
Bulkhead union	<input type="checkbox"/> J Interchangeable with KJE

* : A, N

Port size/Applicable tubing O.D.

Symbol	Size	
Thread connection	32	10-32UNF
	33	NPT1/16
	34	NPT1/8
	35	NPT1/4
	36	NPT3/8
	37	NPT1/2
Tubing connection	00*1	Same diameter tubing

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

Applicable tubing O.D.

Symbol	Size
01	ø1/8"
03	ø5/32"
05	ø3/16"
07	ø1/4"
09	ø5/16"
11	ø3/8"
13	ø1/2"

Spare Parts

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

Gasket for 10-32UNF: M-5G2

Tube - Tube Type

KQ2 H 05 - 00 A

One-touch fittings

Model

Symbol	Model
H	Straight union
	Different diameter straight
L	Union elbow
	Plug-in elbow
R	Reducer elbow
	Plug-in reducer
T	Union tee
TW	Different diameter tee
U	Cross
	Union "Y"
X	Plug-in "Y"
	Different diameter plug-in "Y"

Port size/Applicable tubing O.D.

Symbol	Size	
Tubing (Rod) connection Different dia. tubing (Reducer)	00	Same diameter tubing
	99	Same diameter rod
	01	ø1/8"
	03	ø5/32"
	05	ø3/16"
	07	ø1/4"
	09	ø5/16"
	11	ø3/8"
	13	ø1/2"

Applicable tubing O.D.

Symbol	Size
01	ø1/8"
03	ø5/32"
05	ø3/16"
07	ø1/4"
09	ø5/16"
11	ø3/8"
13	ø1/2"

Accessories

Symbol	Name
KQ2N	Nipple
	Reducer nipple
KQ2C	Tube cap
KQ2P	Plug

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

Inch Size One-touch Fittings

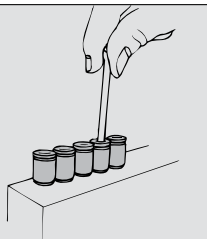
Round Type Variations

Hexagon socket head male connector

KQ2S P.139



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

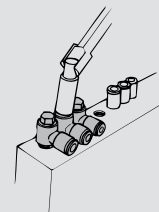


Universal male elbow

KQ2V P.142



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

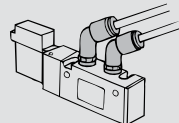


45° male elbow

KQ2K P.142



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

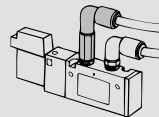


Extended male elbow

KQ2W P.147



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

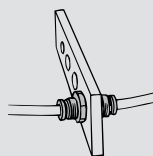


Bulkhead union

KQ2E P.153



Use to connect tubing through a panel, etc.

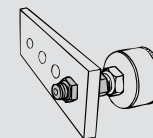


Bulkhead connector

KQ2E P.154



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

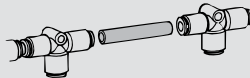


Nipple

KQ2N P.155



Use to connect One-touch fittings.

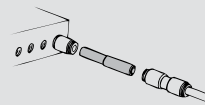


Reducer nipple

KQ2N P.155



Use to connect One-touch fittings of different sizes.



Male connector

KQ2H P.137



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

Hexagon socket head universal male elbow

KQ2VS P.143



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

Branch universal male elbow

KQ2Z P.146



Hexagon head of the body allows tightening with a box wrench. Use for branch connections.

Female connector

KQ2F P.138



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

Universal female elbow

KQ2VF P.143



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

Double branch universal male elbow

KQ2ZD P.146



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

Straight union

KQ2H P.138



Use to connect tubing in the same direction.

Female elbow

KQ2LF P.141



Use to pipe a male thread at right angles.

Triple branch universal male elbow

KQ2ZT P.147



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

Different diameter straight

KQ2H P.138



Use to connect tubing of different sizes.

Double universal male elbow

KQ2VD P.144



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

Union elbow

KQ2L P.141



Use to connect tubing at right angles.

Male elbow

KQ2L P.140



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

Triple universal male elbow

KQ2VT P.145



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

Plug-in elbow

KQ2L P.141



Use to change the tube direction of One-touch fittings by 90°.



Reducer elbow

KQ2L P.141



Use to change the tube direction of One-touch fittings by 90° and connect tubing of reduced size.

Branch "Y"

KQ2U P.151



Use to branch a female thread in the same direction.

Bulkhead male elbow

KQ2LE P.154



Use to connect tubing through a panel, etc. and to change the tube direction by 90°.

Male branch tee

KQ2T P.148



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

Union "Y"

KQ2U P.152



Use to branch tubing in the same direction.

Tube cap

KQ2C P.155



Use to plug unused tubing.

Union tee

KQ2T P.149



Use to branch tubing at both 90° angles.

Different diameter union "Y"

KQ2U P.152



Use to connect tubing of reduced size for branching in the same direction.

Plug

KQ2P P.154



Use to plug unused One-touch fittings.

Different diameter tee

KQ2T P.149



Use to connect tubing of reduced size for branching at both 90° angles.

Plug-in "Y"

KQ2U P.152



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

Color cap

KQ2C P.155



Mount onto the release button and use different colors for piping according to applications.

Cross

KQ2TW P.149



Use to four-branch a line.

Different diameter plug-in "Y"

KQ2X P.153



Use to branch One-touch fittings and connect tubing of reduced size in the same direction.

Male run tee

KQ2Y P.150



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

Plug-in reducer

KQ2R P.153



Use to change size of One-touch fittings.

Sealant/Gasket Seal

Inch Size M, R, Rc
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

KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

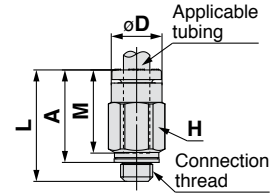
Dimensions

Male Connector: KQ2H (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD	L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
ø1/8	10-32UNF	KQ2H01-32□	7	6.7	17.4	13.9	13.3	3	2.5	2.3	2.7
ø5/32	10-32UNF	KQ2H03-32□	8	7.7	17.6	14.1	13.3	3.3	3.3	2.3	3.3
ø3/16	10-32UNF	KQ2H05-32□	8	8.3	17.7	14.2	13.3	3.4	3.4	2.3	3.4
ø1/4	10-32UNF	KQ2H07-32□	11.11	10.9	18	14.5	13.3	3.4	3.4	2.3	5.2

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



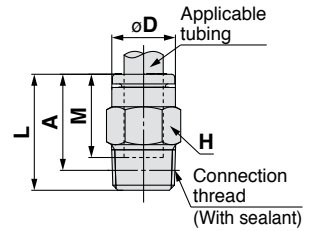
Male Connector: KQ2H (Sealant)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD	L	A*1	M	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
ø1/8	1/16	KQ2H01-33□S	9.5	6.7	19.3	15.2	13.3	3	2.5	2.5	6
	1/8	KQ2H01-34□S	11.11	6.7	14	10.8	13.3	3	2.5	2.5	7.1
	1/4	KQ2H01-35□S	14.29	6.7	16.7	12.3	13.3	3.4	2.9	2.5	16.2
ø5/32	1/16	KQ2H03-33□S	9.5	7.7	20	15.9	13.3	4.8	3.4	3	6.1
	1/8	KQ2H03-34□S	11.11	7.7	14	10.8	13.3	4.8	3.4	3	6.5
	1/4	KQ2H03-35□S	14.29	7.7	16.7	12.3	13.3	4.8	3.4	3	15.6
ø3/16	1/8	KQ2H05-34□S	11.11	8.3	17.4	14.2	13.3	7.8	6.5	3.5	7.4
	1/4	KQ2H05-35□S	14.29	8.3	16.7	12.3	13.3	7.8	6.5	3.5	14.9
ø1/4	1/16	KQ2H07-33□S	11.11	10.9	22.5	18.4	13.3	13.5	11.5	4.6	7.6
	1/8	KQ2H07-34□S	11.11	10.9	18	14.8	13.3	13.5	11.5	4.6	6.5
	1/4	KQ2H07-35□S	14.29	10.9	16.7	12.3	13.3	13.5	11.5	4.6	13.1
	3/8	KQ2H07-36□S	17.46	10.9	18.1	13.4	13.3	13.5	11.5	4.6	25.7
ø5/16	1/8	KQ2H09-34□S	14.29	13	22.2	19	14.2	26.1	18	6	12.6
	1/4	KQ2H09-35□S	14.29	13	22.1	17.7	14.2	26.1	18	6	15.2
	3/8	KQ2H09-36□S	17.46	13	18.1	13.4	14.2	26.1	18	6	22.5
ø3/8	1/8	KQ2H11-34□S	17.46	15.1	24.1	20.9	15.6	26	26	6	19.5
	1/4	KQ2H11-35□S	17.46	15.1	25.1	20.7	15.6	35.3	29.1	7	21
	3/8	KQ2H11-36□S	17.46	15.1	22.7	18	15.6	35.3	29.1	7	23.5
	1/2	KQ2H11-37□S	22.23	15.1	22.3	15.9	15.6	35.3	29.1	7	49.1
ø1/2	1/4	KQ2H13-35□S	22.23	19	28.8	24.4	17	58.5	51.7	9	34.4
	3/8	KQ2H13-36□S	22.23	19	27.5	22.8	17	66	51.7	9.6	36.2
	1/2	KQ2H13-37□S	22.23	19	28	21.6	17	66	51.7	9.6	47.1

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

*1 Reference dimensions after installation of NPT thread



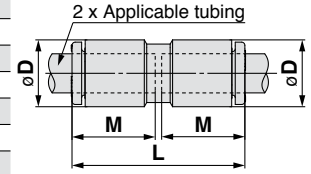


Dimensions

Straight Union: KQ2H



Applicable tubing O.D. [inch]	Model	øD*1	L	M	Effective area [mm ²]		Min. port size	Weight [g]
					Nylon	Urethane		
ø1/8	KQ2H01-00A	7.1	27.6	13.3	3.4	2.9	2.5	1.4
ø5/32	KQ2H03-00A	8.2	27.6	13.3	5.6	4	3	1.6
ø3/16	KQ2H05-00A	9.1	27.6	13.3	7.8	6.5	3.5	1.9
ø1/4	KQ2H07-00A	11.1	27.6	13.3	13.5	11.5	4.6	2.4
ø5/16	KQ2H09-00A	13.2	29.4	14.2	26.1	18	6	3.7
ø3/8	KQ2H11-00A	15.4	32.2	15.6	35.3	29.1	7	5.2
ø1/2	KQ2H13-00A	19.3	35	17	66	51.7	9.6	8.7

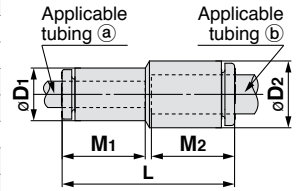


*1 øD is maximum diameter.

Different Diameter Straight: KQ2H



Applicable tubing O.D. [inch]	Model	øD1*1	øD2*1	L	M1	M2	Effective area [mm ²]		Min. port size	Weight [g]
							(a)	(b)		
ø1/8	KQ2H01-03A	7.1	8.2	27.6	13.3	13.3	3.4	2.9	2.5	1.5
	KQ2H01-07A	7.1	11.1	27.6	13.3	13.3	3.4	2.9	2.5	2
ø5/32	KQ2H03-05A	8.2	9.1	27.6	13.3	13.3	5.6	5.6	3	1.8
	KQ2H03-07A	8.2	11.1	27.6	13.3	13.3	5.6	5.6	3	2.1
ø3/16	KQ2H05-07A	9.1	11.1	27.6	13.3	13.3	7.8	6.5	3.5	2.2
	KQ2H07-09A	11.1	13.2	28.5	13.3	14.2	13.5	11.5	4.6	3.2
ø1/4	KQ2H07-11A	11.1	15.4	29.9	13.3	15.6	13.5	11.5	4.6	4.1
	KQ2H09-11A	13.2	15.4	30.8	14.2	15.6	26.1	18	6	4.7
ø5/16	KQ2H09-13A	13.2	19.3	32.2	14.2	17	26.1	18	6	6.6
	KQ2H11-13A	15.4	19.3	33.6	15.6	17	35.3	29.1	7	7.3

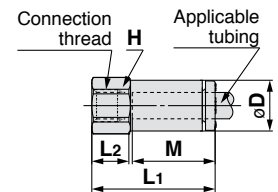


*1 øD1, øD2 are maximum diameters.

Female Connector: KQ2F



Applicable tubing O.D. [inch]	Connection thread UNF, NPT	Model	H (Width across flats)	øD*1	L1	L2	M	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
ø1/8	10-32UNF	KQ2F01-32□	7	6.9	19.7	5.7	13.3	3	2.5	2.5	3.4
	1/8	KQ2F01-34□	14.29	6.9	25	9.5	13.3	3	2.5	2.5	13.4
	1/4	KQ2F01-35□	17.46	6.9	29.8	13.3	13.3	3	2.5	2.5	24.4
ø5/32	10-32UNF	KQ2F03-32□	8	7.9	19.5	5.7	13.3	4	4	3	4.5
	1/8	KQ2F03-34□	14.29	7.9	24.8	9.5	13.3	5.6	4	3	13.7
	1/4	KQ2F03-35□	17.46	7.9	29.7	13.3	13.3	5.6	4	3	24.7
ø1/4	10-32UNF	KQ2F07-32□	11.11	10.9	17.7	5.5	13.3	10.1	10.1	3.9	6.7
	1/8	KQ2F07-34□	14.29	10.9	24.4	9.5	13.3	13	11.5	4.6	14.2
	1/4	KQ2F07-35□	17.46	10.9	29.2	13.3	13.3	13	11.5	4.6	25.1
ø5/16	3/8	KQ2F07-36□	22.23	10.9	30.5	13.2	13.3	13	11.5	4.6	38.7
	1/8	KQ2F09-34□	14.29	13	24.8	9.2	14.2	26.1	18	6	15.2
	1/4	KQ2F09-35□	17.46	13	29.7	11.8	14.2	26.1	18	6	26.2
ø3/8	3/8	KQ2F09-36□	22.23	13	31	12.4	14.2	26.1	18	6	39.8
	1/4	KQ2F11-35□	17.46	15.1	30.5	11.8	15.6	35.3	29.1	8	27.2
	3/8	KQ2F11-36□	22.23	15.1	31.8	12.4	15.6	35.3	29.1	8	40.7
ø1/2	1/2	KQ2F11-37□	23.81	15.1	34.9	15.8	15.6	35.3	29.1	8	45.6
	3/8	KQ2F13-36□	22.23	19	32.6	12.4	17	66	51.7	10	43.8
ø1/2	1/2	KQ2F13-37□	23.81	19	35.7	15.8	17	66	51.7	10	48.6



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

*1 øD is maximum diameter.

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

Metric Size Uni

Gasket Seal
Inch Size Uni

KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

Dimensions

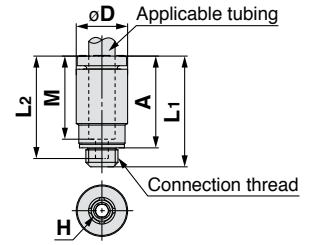
Hexagon Socket Head Male Connector: KQ2S (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD*1	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
									Nylon	Urethane		
ø1/8	10-32UNF	KQ2S01-32□	2	7	17.5	16.3	14.5	13.3	2.5	2.5	2	2.6
ø5/32	10-32UNF	KQ2S03-32□	2.5	8	18.6	17.8	15.6	13.3	4	4	2.5	3
ø1/4	10-32UNF	KQ2S07-32□	2.5	10.3	19	17.8	16	13.3	4	4	2.5	3.7

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

*1 øD is maximum diameter.



Hexagon Socket Head Male Connector: KQ2S (Sealant)

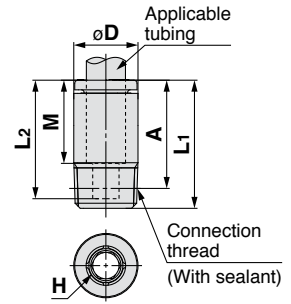


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD*1	L1	L2	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]
									Nylon	Urethane		
ø5/32	1/16	KQ2S03-33□S	2.78	8	19.8	18.8	15.7	13.3	4.1	3.6	2.8	4.5
	1/8	KQ2S03-34□S	2.78	10.3	17.3	16.3	14.1	13.3	4.1	3.6	2.8	6
ø3/16	1/8	KQ2S05-34□S	3.57	11	19.8	18.8	16.6	13.3	7.8	6.5	3.6	7.5
	1/16	KQ2S07-33□S	3.57	10.3	20.9	18.8	16.8	13.3	8.4	8.4	3.6	6.3
ø1/4	1/8	KQ2S07-34□S	4.76	10.3	19.8	18.8	16.6	13.3	13.5	11.5	4.8	7.4
	1/4	KQ2S07-35□S	4.76	13.8	19.8	18.8	15.4	13.3	13.5	11.5	4.8	13.2
	3/8	KQ2S07-36□S	4.76	17	20.8	19.8	16.1	13.3	13.5	11.5	4.8	24
ø5/16	1/8	KQ2S09-34□S	5.56	13	22.3	19.7	19.1	14.2	17.2	16.2	5.6	9.7
	1/4	KQ2S09-35□S	6.35	14	21.2	20.1	16.8	14.2	23.3	16.2	6.4	12.6
	3/8	KQ2S09-36□S	6.35	17.5	20.7	19.7	16	14.2	23.3	16.2	6.4	21
	1/8	KQ2S11-34□S	5.56	15.1	23.7	21.1	20.5	15.6	22.7	22.7	5.6	12.1
ø3/8	1/4	KQ2S11-35□S	6.35	15.1	24.4	21.1	20	15.6	29.6	29.1	6.4	15.2
	3/8	KQ2S11-36□S	6.35	18	22.1	21.1	17.4	15.6	29.6	29.1	6.4	22.7
ø1/2	1/2	KQ2S11-37□S	6.35	21.3	22.1	21.1	15.7	15.6	29.6	29.1	6.4	40.6
	1/4	KQ2S13-35□S	8	19	28.5	22.5	24.1	17	48	48	8.1	18.9
	3/8	KQ2S13-36□S	9.53	19	26.3	22.5	21.6	17	66	51.7	9.6	20.7
	1/2	KQ2S13-37□S	9.53	22	23.5	22.5	17.1	17	66	51.7	9.6	33.3

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

*1 øD is maximum diameter.

*2 Reference dimensions after installation of NPT thread





Dimensions

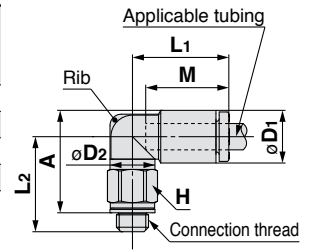
Male Elbow: KQ2L (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
$\phi 1/8$	10-32UNF	KQ2L01-32□	7	7.1	7	15.3	14.2	14.3	13.3	2.6	2.2	2.5	3	●
$\phi 5/32$	10-32UNF	KQ2L03-32□	7	8.2	7	15.4	14.7	15.3	13.3	3.5	3.5	2.5	3.1	●
$\phi 3/16$	10-32UNF	KQ2L05-32□	7	9.1	7	14.5	15.8	16.9	13.3	3.5	3.5	2.5	3.2	●
$\phi 1/4$	10-32UNF	KQ2L07-32□	7	11.1	7	15.4	16	18.1	13.3	3.5	3.5	2.5	3.5	●

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

*1 ϕD_1 is maximum diameter.



Male Elbow: KQ2L (Sealant)



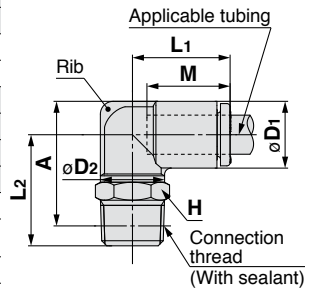
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
$\phi 1/8$	1/16	KQ2L01-33□S	11.11	7.1	10	14.5	24.3	23.8	13.3	3	2.5	2.5	9.1	—
	1/8	KQ2L01-34□S	11.11	7.1	10	14.5	16.7	17.1	13.3	3	2.5	2.5	5.5	—
	1/4	KQ2L01-35□S	14.29	7.1	10	14.5	21.1	20.3	13.3	3	2.5	2.5	15	—
$\phi 5/32$	1/16	KQ2L03-33□S	11.11	8.2	10	14.8	23.8	23.8	13.3	4.6	3.3	3	9.3	●
	1/8	KQ2L03-34□S	11.11	8.2	10	14.8	16.2	17.1	13.3	4.6	3.3	3	5.6	●
	1/4	KQ2L03-35□S	14.29	8.2	10	14.8	21.6	21.3	13.3	4.6	3.3	3	15.2	●
$\phi 3/16$	1/8	KQ2L05-34□S	11.11	9.1	10	15	16.7	18.1	13.3	6.8	5.6	3.5	5.8	—
	1/4	KQ2L05-35□S	14.29	9.1	10	15	22.1	22.3	13.3	6.8	5.6	3.5	15.4	—
$\phi 1/4$	1/16	KQ2L07-33□S	11.11	11.1	10	15.6	25.3	26.8	13.3	6.8	6.8	3.5	9.8	●
	1/8	KQ2L07-34□S	11.11	11.1	10	15.6	17.7	20.1	13.3	11.3	10	4.5	6.1	●
	1/4	KQ2L07-35□S	14.29	11.1	10	15.6	23.1	24.3	13.3	11.3	10	4.5	15.7	●
$\phi 5/16$	3/8	KQ2L07-36□S	17.46	11.1	10	15.6	24.5	25.4	13.3	11.3	10	4.5	28	●
	1/8	KQ2L09-34□S	11.11	13.2	10	16.4	18.7	22.1	14.2	11.4	11.4	4.5	6.9	●
		KQ2L09-34□QS	*3	12.7	13.2	12	17.2	23.5	26.9	14.2	21.6	14.9	6	9.9
$\phi 3/8$	1/4	KQ2L09-35□S	14.29	13.2	12	17.2	24.1	26.3	14.2	21.6	14.9	6	14.1	●
	3/8	KQ2L09-36□S	17.46	13.2	12	17.2	25.5	27.4	14.2	21.6	14.9	6	26.2	●
	1/8	KQ2L11-34□S	12.7	15.4	12	18.6	23.2	27.7	15.6	21.2	21.2	6	11.8	●
$\phi 1/2$	1/4	KQ2L11-35□S	17.46	15.4	17	19.3	28.6	31.9	15.6	28.8	23.8	7.5	21.7	●
	3/8	KQ2L11-36□S	17.46	15.4	17	19.3	29.2	32.2	15.6	28.8	23.8	7.5	19.8	●
	1/2	KQ2L11-37□S	22.23	15.4	17	19.3	33.4	34.7	15.6	28.8	23.8	7.5	46.2	●
$\phi 1/2$	1/4	KQ2L13-35□S	17.46	19.3	17	21.5	30.5	35.7	17	50.3	44.4	9	24	—
	3/8	KQ2L13-36□S	17.46	19.3	17	21.8	26.3	31.2	17	56	44.4	9.5	20.3	—
	1/2	KQ2L13-37□S	22.23	19.3	17	21.8	30.5	33.7	17	56	44.4	9.5	46.3	—

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

*1 ϕD_1 is maximum diameter.

*2 Reference dimensions after installation of NPT thread

*3 For details, refer to page 156.



Sealant/Gasket Seal

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

Inch Size M, R, Rc
Metric Size G

Metric Size R, Rc
Inch Size NPT

Face Seal
Inch Size R

Gasket Seal
Metric Size Uni
Inch Size Uni



Dimensions

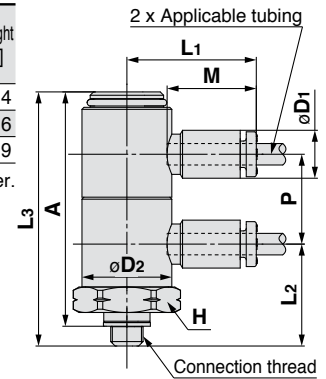
Double Universal Male Elbow: KQ2VD (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A	M	P	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 1/8$	10-32UNF	KQ2VD01-32□	14.29	7.1	13.4	19.3	15.2	37.9	34.4	13.3	13.4	2.2	1.9	2.3	24.4
$\phi 5/32$	10-32UNF	KQ2VD03-32□	14.29	8.2	13.4	19.3	15.2	37.9	34.4	13.3	13.4	2.5	2.5	2.3	24.6
$\phi 1/4$	10-32UNF	KQ2VD07-32□	14.29	11.1	13.4	20.6	15.6	38.7	35.2	13.3	13.8	2.5	2.5	2.3	26.9

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

*1 ϕD_1 is maximum diameter.



Double Universal Male Elbow: KQ2VD (Sealant)

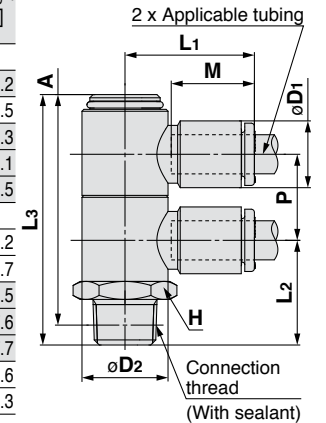


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A*2	M	P	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 1/8$	1/8	KQ2VD01-34□S	14.29	7.1	13.4	19.3	16.3	39	35.8	13.3	13.4	2.2	1.9	2.5	20
$\phi 5/32$	1/8	KQ2VD03-34□S	14.29	8.2	13.4	19.3	16.3	39	35.8	13.3	13.4	2.9	2.9	3	20.2
$\phi 3/16$	1/8	KQ2VD05-34□S	14.29	9.1	13.4	19.6	16.3	39	35.8	13.3	13.4	4.5	3.7	3.5	20.5
$\phi 1/4$	1/8	KQ2VD07-34□S	14.29	11.1	13.4	20.6	17.7	40.8	37.6	13.3	13.8	7.7	6.6	4.6	23.3
	1/4	KQ2VD07-35□S	14.29	11.1	13.4	20.6	21.1	44.2	39.8	13.3	13.8	7.7	6.6	4.6	30.1
$\phi 3/8$	3/8	KQ2VD07-36□S	17.46	11.1	13.4	20.6	22.5	45.6	40.9	13.3	13.8	7.7	6.6	4.6	42.5
	1/4	KQ2VD09-35□S	19	13.2	17.6	23.7	22.4	49.2	44.8	14.2	15.9	16	11.2	6	45
$\phi 5/16$	3/8	KQ2VD09-36□S	19	13.2	17.6	23.7	23	49.8	45.1	14.2	15.9	16	11.2	6	53.2
	1/2	KQ2VD09-37□S	22.23	13.2	17.6	23.7	27.2	54	47.6	14.2	15.9	16	11.2	6	79.7
$\phi 3/8$	1/4	KQ2VD11-35□S	22.23	15.4	20.6	25.3	24.4	56.3	51.9	15.6	19.2	23.4	19.3	7	65.5
	3/8	KQ2VD11-36□S	22.23	15.4	20.6	25.3	24.8	56.7	52	15.6	19.2	23.4	19.3	7	67.6
$\phi 1/2$	1/2	KQ2VD11-37□S	22.23	15.4	20.6	25.3	28.7	60.6	54.2	15.6	19.2	23.4	19.3	7	87.7
	3/8	KQ2VD13-36□S	25.4	19.3	27	30.5	29.6	64.4	59.7	17	22.3	43.8	34.3	9.6	128.6
	1/2	KQ2VD13-37□S	25.4	19.3	27	30.5	32.8	67.6	61.2	17	22.3	43.8	34.3	9.6	146.3

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

*1 ϕD_1 is maximum diameter.

*2 Reference dimensions after installation of NPT thread



Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size M, R, Rc

Metric Size G

Metric Size R, Rc

Metric Size R

Metric Size Uni

Inch Size Uni

KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

Dimensions

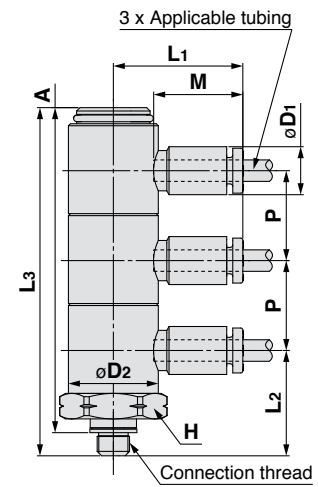
Triple Universal Male Elbow: KQ2VT (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A	M	P	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 1/8$	10-32UNF	KQ2VT01-32□	14.29	7.1	13.4	19.3	15.7	51.9	48.4	13.3	13.4	2.2	1.9	2.5	32.4
$\phi 5/32$	10-32UNF	KQ2VT03-32□	14.29	8.2	13.4	19.3	15.7	51.9	48.4	13.3	13.4	2.9	2.9	2.5	32.7
$\phi 1/4$	10-32UNF	KQ2VT07-32□	14.29	11.1	13.4	20.6	16.1	53	49.5	13.3	13.8	2.3	2.3	2.5	35.4

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

*1 ϕD_1 is maximum diameter.



Triple Universal Male Elbow: KQ2VT (Sealant)

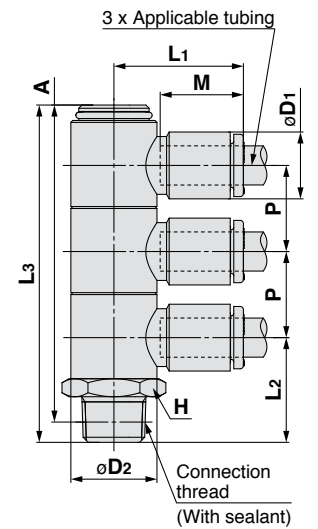


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A*2	M	P	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 1/8$	1/8	KQ2VT01-34□S	14.29	7.1	13.4	19.3	16.3	52.5	49.3	13.3	13.4	2.2	1.9	2.5	25.5
$\phi 5/32$	1/8	KQ2VT03-34□S	14.29	8.2	13.4	19.3	16.3	52.5	49.3	13.3	13.4	2.9	2.9	3	25.8
$\phi 3/16$	1/8	KQ2VT05-34□S	14.29	9.1	13.4	19.6	16.3	52.5	49.3	13.3	13.4	4.5	3.7	3.5	26.2
$\phi 1/4$	1/8	KQ2VT07-34□S	14.29	11.1	13.4	20.6	17.7	54.6	51.4	13.3	13.8	7.7	6.6	4.6	29.7
	1/4	KQ2VT07-35□S	14.29	11.1	13.4	20.6	21.1	58	53.6	13.3	13.8	7.7	6.6	4.6	36.6
$\phi 5/16$	3/8	KQ2VT07-36□S	17.46	11.1	13.4	20.6	22.5	59.4	54.7	13.3	13.8	7.7	6.6	4.6	49
	1/4	KQ2VT09-35□S	17.46	13.2	17.6	23.7	22.4	65.2	60.8	14.2	15.9	16	11.2	6	55.4
	3/8	KQ2VT09-36□S	19	13.2	17.6	23.7	23	65.8	61.1	14.2	15.9	16	11.2	6	65.3
$\phi 3/8$	1/2	KQ2VT09-37□S	22.23	13.2	17.6	23.7	27.2	70	63.6	14.2	15.9	16	11.2	6	91.8
	1/4	KQ2VT11-35□S	22.23	15.4	20.6	25.3	24.4	75.6	71.2	15.6	19.2	23.4	19.3	7	84.2
	3/8	KQ2VT11-36□S	22.23	15.4	20.6	25.3	24.8	76	71.3	15.6	19.2	23.4	19.3	7	91.8
$\phi 1/2$	1/2	KQ2VT11-37□S	22.23	15.4	20.6	25.3	28.7	79.9	73.5	15.6	19.2	23.4	19.3	7	104.4
	3/8	KQ2VT13-36□S	25.4	19.3	27	30.5	29.6	86.8	82.1	17	22.3	43.8	34.3	9.6	169.3
	1/2	KQ2VT13-37□S	25.4	19.3	27	30.5	32.8	90	83.6	17	22.3	43.8	34.3	9.6	187

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

*1 ϕD_1 is maximum diameter.

*2 Reference dimensions after installation of NPT thread



Dimensions

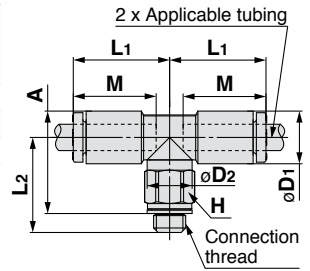
Male Branch Tee: KQ2T (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD1*1	øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
										Nylon	Urethane		
ø1/8	10-32UNF	KQ2T01-32□	7	7.1	7	15.3	14.2	14.2	13.3	3.2	2.7	2.5	3.5
ø5/32	10-32UNF	KQ2T03-32□	7	8.2	7	15.4	14.7	15.3	13.3	4.5	4.5	2.5	3.8
ø1/4	10-32UNF	KQ2T07-32□	7	11.1	7	15.4	16	18	13.3	4.5	4.5	2.5	4.7

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

*1 øD1 is maximum diameter.



Male Branch Tee: KQ2T (Sealant)



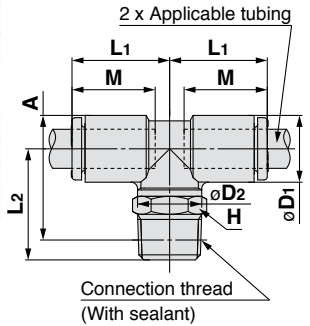
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1*1	øD2	L1	L2	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]
										Nylon	Urethane		
ø1/8	1/16	KQ2T01-33□S	11.11	7.1	10	14.5	24.2	23.7	13.3	3.4	2.9	2.5	9.7
	1/8	KQ2T01-34□S	11.11	7.1	10	14.5	16.6	17	13.3	3.4	2.9	2.5	6
	1/4	KQ2T01-35□S	14.29	7.1	10	14.5	21	20.2	13.3	3.4	2.9	2.5	15.6
ø5/32	1/16	KQ2T03-33□S	11.11	8.2	10	14.8	23.8	23.8	13.3	6	4.1	3	10
	1/8	KQ2T03-34□S	11.11	8.2	10	14.8	16.2	17.1	13.3	6	4.1	3	6.3
	1/4	KQ2T03-35□S	14.29	8.2	10	14.8	21.6	21.3	13.3	6	4.1	3	15.9
ø3/16	1/8	KQ2T05-34□S	11.11	9.1	10	15	16.7	18	13.3	8.4	7	3.5	6.6
	1/4	KQ2T05-35□S	14.29	9.1	10	15	22.1	22.2	13.3	8.4	7	3.5	16.2
ø1/4	1/16	KQ2T07-33□S	11.11	11.1	10	15.6	25.3	26.8	13.3	8.5	8.5	3.5	11
	1/8	KQ2T07-34□S	11.11	11.1	10	15.6	17.7	20	13.3	14	12.4	4.5	7.3
	1/4	KQ2T07-35□S	14.29	11.1	10	15.6	23.1	24.2	13.3	14	12.4	4.5	16.9
ø5/16	3/8	KQ2T07-36□S	17.46	11.1	10	15.6	24.5	25.3	13.3	14	12.4	4.5	29.2
	1/8	KQ2T09-34□S	11.11	13.2	10	16.4	18.7	22.1	14.2	14	14	4.5	8.7
		KQ2T09-34□QS*3	12.7	13.2	12	17.2	23.5	26.9	14.2	26.3	18.2	6	11.7
ø3/8	1/4	KQ2T09-35□S	14.29	13.2	12	17.2	24.1	26.3	14.2	26.3	18.2	6	15.9
	3/8	KQ2T09-36□S	17.46	13.2	12	17.2	25.5	27.4	14.2	26.3	18.2	6	27.9
	1/8	KQ2T11-34□S	12.7	15.4	12	18.6	23.1	27.6	15.6	21.2	21.2	6	14.4
ø1/2	1/4	KQ2T11-35□S	17.46	15.4	17	19.3	28.5	31.8	15.6	28.8	23.8	7.5	24.1
	3/8	KQ2T11-36□S	17.46	15.4	17	19.3	29.1	32.1	15.6	28.8	23.8	7.5	22.2
	1/2	KQ2T11-37□S	22.23	15.4	17	19.3	33.3	34.6	15.6	28.8	23.8	7.5	48.7
ø1/2	1/4	KQ2T13-35□S	17.46	19.3	17	21.5	30.4	35.7	17	57.3	50.6	9	28.1
	3/8	KQ2T13-36□S	17.46	19.3	17	21.8	26.2	31.2	17	63.8	50.6	9.5	24.4
	1/2	KQ2T13-37□S	22.23	19.3	17	21.8	30.4	33.7	17	63.8	50.6	9.5	50.5

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

*1 øD1 is maximum diameter.

*2 Reference dimensions after installation of NPT thread

*3 For details, refer to page 156.



Sealant/Gasket Seal

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

KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

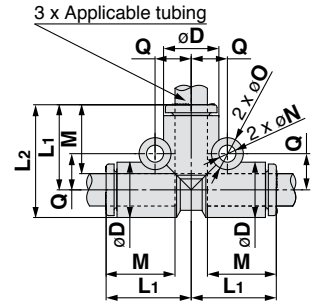
Dimensions

Union Tee: KQ2T



Applicable tubing O.D. [inch]	Model	*1 ϕD	L1	L2	M	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
									Nylon	Urethane		
$\phi 1/8$	KQ2T01-00A	7.1	14.9	18.5	13.3	5.4	6	3.2	3.4	2.9	2.5	2.3
$\phi 5/32$	KQ2T03-00A	8.2	15.3	19.4	13.3	5.7	6	3.2	6.4	4.4	3	2.8
$\phi 3/16$	KQ2T05-00A	9.1	15.7	20.3	13.3	6.2	6	3.2	8.4	7	3.5	3.2
$\phi 1/4$	KQ2T07-00A	11.1	16.5	22.1	13.3	7.2	6	3.2	14.4	12.4	4.6	4.3
$\phi 5/16$	KQ2T09-00A	13.2	18.2	24.8	14.2	8.4	8	4.2	25.6	17.7	6	7
$\phi 3/8$	KQ2T11-00A	15.4	20.4	28.1	15.6	9.9	8	4.2	28.8	23.8	7	10.2
$\phi 1/2$	KQ2T13-00A	19.3	23.4	33	17	11.8	8	4.2	64.6	50.6	9.6	16.9

*1 ϕD is maximum diameter.

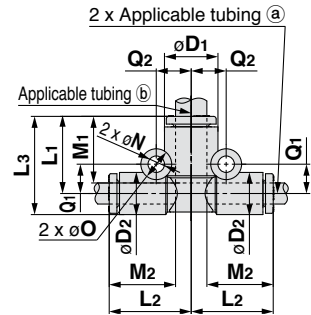


Different Diameter Tee: KQ2T



Applicable tubing O.D. [inch]		Model	*1 $\phi D1$	$\phi D2$	L1	L2	L3	M1	M2	Q1	Q2	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
(a)	(b)													Nylon	Urethane		
$\phi 1/8$	$\phi 5/32$	KQ2T01-03A	8.2	7.1	14.9	15.3	18.5	13.3	13.3	5.4	5.8	6	3.2	3.8	3.5	3	2.6
	$\phi 1/4$	KQ2T01-07A	11.1	7.1	14.9	16.5	18.5	13.3	13.3	5.3	7.2	6	3.2	3.8	3.5	3.2	2.8
$\phi 5/32$	$\phi 3/16$	KQ2T03-05A	9.1	8.2	15.3	15.7	19.4	13.3	13.3	5.7	6.2	6	3.2	7.1	6.6	3.5	2.6
	$\phi 1/4$	KQ2T03-07A	11.1	8.2	15.3	16.5	19.4	13.3	13.3	5.7	7.2	6	3.2	7.1	6.6	4.1	3
$\phi 3/16$	$\phi 1/4$	KQ2T05-07A	11.1	9.1	15.7	16.5	20.3	13.3	13.3	6.2	7.2	6	3.2	8.4	7	4.6	3.7
	$\phi 5/16$	KQ2T07-09A	13.2	11.1	17.4	17.3	23	14.2	13.3	7.4	8.4	8	4.2	14.4	12.4	6	5.6
$\phi 1/4$	$\phi 3/8$	KQ2T07-11A	15.4	11.1	18.8	18.1	24.4	15.6	13.3	7.7	9.9	8	4.2	14.4	12.4	6.4	6.8
	$\phi 5/16$	KQ2T09-11A	15.4	13.2	19.6	19	26.2	15.6	14.2	8.7	9.9	8	4.2	26.3	18.3	7	8.2
$\phi 5/16$	$\phi 1/2$	KQ2T09-13A	19.3	13.2	21	20.6	27.6	17	14.2	8.7	11.8	8	4.2	26.3	18.3	8.1	10.6
	$\phi 3/8$	KQ2T11-13A	19.3	15.4	21.8	22	29.5	17	15.6	9.9	11.8	8	4.2	28.8	23.8	9.6	12.4

*1 $\phi D1$ is maximum diameter.

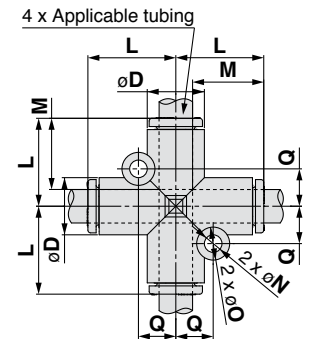


Cross: KQ2TW



Applicable tubing O.D. [inch]	Model	*1 $\phi D1$	L	Q	M	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
$\phi 5/32$	KQ2TW03-00A	8.2	15.3	5.7	13.3	6	3.2	6.4	4.4	3	3.5
$\phi 1/4$	KQ2TW07-00A	11.1	16.5	7.2	13.3	6	3.2	14.4	12.4	4.6	5.4
$\phi 5/16$	KQ2TW09-00A	13.2	18.2	8.4	14.2	8	4.2	25.6	17.7	6	8.5
$\phi 3/8$	KQ2TW11-00A	15.4	20.4	9.9	15.6	8	4.2	28.8	23.8	7	12
$\phi 1/2$	KQ2TW13-00A	19.3	23.4	11.8	17	8	4.2	64.6	50.6	9.6	19.7

*1 ϕD is maximum diameter.





Dimensions

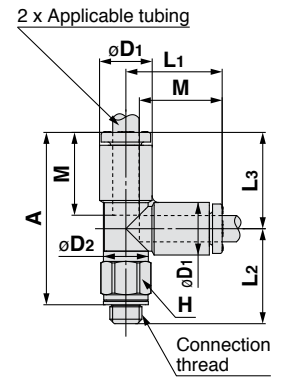
Male Run Tee: KQ2Y (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	øD1*1	øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
ø1/8	10-32UNF	KQ2Y01-32□	7	7.1	7	15.3	14.2	15.3	26	13.3	3.2	2.7	2.5	3.5
ø5/32	10-32UNF	KQ2Y03-32□	7	8.2	7	15.4	14.7	15.4	26.6	13.3	4.5	4.5	2.5	3.8
ø1/4	10-32UNF	KQ2Y07-32□	7	11.1	7	16.5	16	16.5	29	13.3	4.5	4.5	2.5	4.7

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

*1 øD1 is maximum diameter.



Male Run Tee: KQ2Y (Sealant)



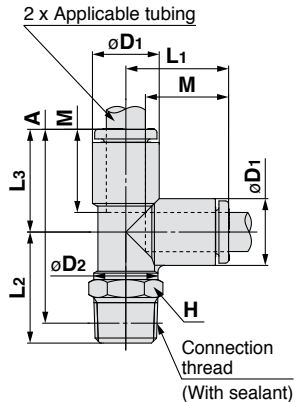
Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD1*1	øD2	L1	L2	L3	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
ø1/8	1/16	KQ2Y01-33□S	11.11	7.1	10	14.9	24.2	14.9	35.1	13.3	3.4	2.9	2.5	9.8
	1/8	KQ2Y01-34□S	11.11	7.1	10	14.9	16.6	14.9	28.4	13.3	3.4	2.9	2.5	6.1
	1/4	KQ2Y01-35□S	14.29	7.1	10	14.9	21	14.9	31.6	13.3	3.4	2.9	2.5	15.6
ø5/32	1/16	KQ2Y03-33□S	11.11	8.2	10	15.3	23.8	15.3	35	13.3	6.4	4.4	3	10.1
	1/8	KQ2Y03-34□S	11.11	8.2	10	15.3	16.2	15.3	28.3	13.3	6.4	4.4	3	6.4
	1/4	KQ2Y03-35□S	14.29	8.2	10	15.3	21.6	15.3	32.5	13.3	6.4	4.4	3	15.9
ø3/16	1/8	KQ2Y05-34□S	11.11	9.1	10	15.7	16.7	15.7	29.2	13.3	8.4	7	3.5	6.7
	1/4	KQ2Y05-35□S	14.29	9.1	10	15.7	22.1	15.7	33.4	13.3	8.4	7	3.5	16.3
ø1/4	1/16	KQ2Y07-33□S	11.11	11.1	10	16.5	25.3	16.5	37.7	13.3	8.5	8.5	3.5	11
	1/8	KQ2Y07-34□S	11.11	11.1	10	16.5	17.7	16.5	31	13.3	14	12.4	4.5	7.3
	1/4	KQ2Y07-35□S	14.29	11.1	10	16.5	23.1	16.5	35.2	13.3	14	12.4	4.5	16.9
ø5/16	3/8	KQ2Y07-36□S	17.46	11.1	10	16.5	24.5	16.5	36.3	13.3	14	12.4	4.5	29.2
	1/8	KQ2Y09-34□S	11.11	13.2	10	18.2	18.7	18.2	33.7	14.2	14	14	4.5	8.8
		KQ2Y09-34□S	12.7	13.2	12	18.2	23.5	18.2	38.6	14.2	25.6	17.7	6	11.7
ø3/8	1/4	KQ2Y09-35□S	14.29	13.2	12	18.2	24.1	18.2	37.9	14.2	25.6	17.7	6	16
	3/8	KQ2Y09-36□S	17.46	13.2	12	18.2	25.5	18.2	39	14.2	25.6	17.7	6	28
	1/4	KQ2Y11-35□S	17.46	15.4	17	20.4	28.5	20.4	44.5	15.6	28.8	23.8	7.5	24.3
ø1/2	3/8	KQ2Y11-36□S	17.46	15.4	17	20.4	29.1	20.4	44.8	15.6	28.8	23.8	7.5	22.3
	1/2	KQ2Y11-37□S	22.23	15.4	17	20.4	33.3	20.4	47.3	15.6	28.8	23.8	7.5	48.8
	1/4	KQ2Y13-35□S	17.46	19.3	17	23.4	30.4	23.4	49.4	17	57.3	50.6	9	28.5
ø1/2	3/8	KQ2Y13-36□S	17.46	19.3	17	23.4	26.2	23.4	44.9	17	63.8	50.6	9.5	24.7
	1/2	KQ2Y13-37□S	22.23	19.3	17	23.4	30.4	23.4	47.4	17	63.8	50.6	9.5	50.7

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

*1 øD1 is maximum diameter.

*2 Reference dimensions after installation of NPT thread

*3 For details, refer to page 156.



Sealant/Gasket Seal

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric 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

KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

Dimensions

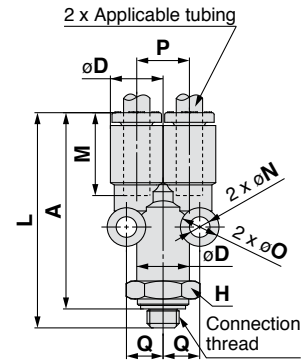
Branch "Y": KQ2U (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread UNF	Model	H (Width across flats)	*1 øD	L	P	A	M	Q	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
ø1/8	10-32UNF	KQ2U01-32□	8	7.1	33.8	7.1	30.3	13.3	5.2	6	3.2	2.2	2.2	1.8	5
ø5/32	10-32UNF	KQ2U03-32□	10	8.2	33.9	8.2	30.4	13.3	5.7	6	3.2	2.2	2.2	1.8	6.6
ø1/4	10-32UNF	KQ2U07-32□	12	11.1	35.2	11.1	31.7	13.3	7.6	8	4	2.2	2.2	1.8	11.2

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

*1 øD is maximum diameter.



Branch "Y": KQ2U (Sealant)

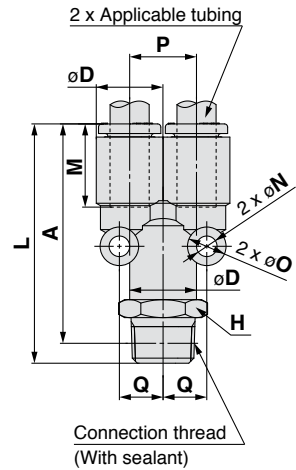


Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 øD	L	P	A*2	M	Q	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
ø1/8	1/16	KQ2U01-33□S	9	7.1	37.3	7.1	33.2	13.3	5.2	6	3.2	3.4	2.9	2.5	7.1
	1/8	KQ2U01-34□S	11.11	7.1	36.4	7.1	33.2	13.3	5.2	6	3.2	3.4	2.9	2.7	9.5
	1/4	KQ2U01-35□S	14.29	7.1	40.8	7.1	36.4	13.3	5.2	6	3.2	3.4	2.9	2.7	20
ø5/32	1/16	KQ2U03-33□S	9	8.2	37.4	8.2	33.3	13.3	5.7	6	3.2	4.2	4.2	3.6	7.3
	1/8	KQ2U03-34□S	11.11	8.2	36.5	8.2	33.3	13.3	5.7	6	3.2	4.2	4.2	3.6	9.8
	1/4	KQ2U03-35□S	14.29	8.2	40.9	8.2	36.5	13.3	5.7	6	3.2	4.2	4.2	3.6	20.1
ø3/16	1/8	KQ2U05-34□S	11.11	9.1	37.1	9.1	33.9	13.3	6.2	6	3.2	8.4	7	4.1	10.2
	1/4	KQ2U05-35□S	14.29	9.1	41.5	9.1	37.1	13.3	6.2	6	3.2	8.4	7	4.1	20.5
ø1/4	1/16	KQ2U07-33□S	12.7	11.1	38.7	11.1	34.6	13.3	7.6	8	4	14.4	12.4	4.6	11.6
	1/8	KQ2U07-34□S	12.7	11.1	37.8	11.1	34.6	13.3	7.6	8	4	14.4	12.4	5.6	12
	1/4	KQ2U07-35□S	14.29	11.1	42.2	11.1	37.8	13.3	7.6	8	4	14.4	12.4	5.6	21.1
	3/8	KQ2U07-36□S	17.46	11.1	43.6	11.1	38.9	13.3	7.6	8	4	14.4	12.4	5.6	33.5
ø5/16	1/8	KQ2U09-34□S	14.29	13.2	40.7	13.2	37.5	14.2	8.7	8	4.2	25.6	17.7	6	16.4
	1/4	KQ2U09-35□S	14.29	13.2	45.1	13.2	40.7	14.2	8.7	8	4.2	25.6	17.7	7.3	21.9
	3/8	KQ2U09-36□S	17.46	13.2	46.5	13.2	41.8	14.2	8.7	8	4.2	25.6	17.7	7.3	34.1
ø3/8	1/4	KQ2U11-35□S	17.46	15.4	48.6	15.4	44.2	15.6	9.9	8	4.2	28.8	23.8	8.9	25.7
	3/8	KQ2U11-36□S	17.46	15.4	50	15.4	45.3	15.6	9.9	8	4.2	28.8	23.8	8.9	35
	1/2	KQ2U11-37□S	22.23	15.4	54.2	15.4	47.8	15.6	9.9	8	4.2	28.8	23.8	8.9	62.8
ø1/2	1/4	KQ2U13-35□S	22	19.3	53.4	19.3	49	17	11.8	8	4.2	57.3	50.6	9	42
	3/8	KQ2U13-36□S	22	19.3	54.8	19.3	50.1	17	11.8	8	4.2	64.6	50.6	11	45.8
	1/2	KQ2U13-37□S	22.23	19.3	59	19.3	52.6	17	11.8	8	4.2	64.6	50.6	12.1	62.1

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

*1 øD is maximum diameter.

*2 Reference dimensions after installation of NPT thread





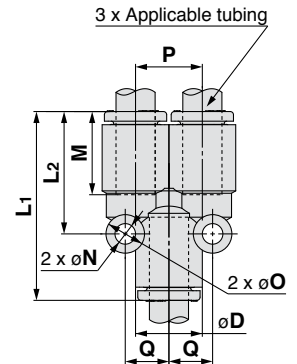
Dimensions

Union "Y": KQ2U



Applicable tubing O.D. [inch]	Model	*1 ϕD	L1	L2	P	M	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
										Nylon	Urethane		
$\phi 1/8$	KQ2U01-00A	7.1	28.9	18	7.1	13.3	5.2	6	3.2	3.4	2.9	3.2	2.4
$\phi 5/32$	KQ2U03-00A	8.2	29	18.2	8.2	13.3	5.7	6	3.2	4.2	4.2	4.1	2.9
$\phi 3/16$	KQ2U05-00A	9.1	29.6	18.9	9.1	13.3	6.2	6	3.2	8.4	7	4.8	3.5
$\phi 1/4$	KQ2U07-00A	11.1	30.3	20.2	11.1	13.3	7.6	8	4	14.4	12.4	6.4	5
$\phi 5/16$	KQ2U09-00A	13.2	33.2	22.3	13.2	14.2	8.7	8	4.2	25.6	17.7	8.1	7.4
$\phi 3/8$	KQ2U11-00A	15.4	36.7	24.6	15.4	15.6	9.9	8	4.2	28.8	23.8	9.6	10.4

*1 ϕD is maximum diameter.

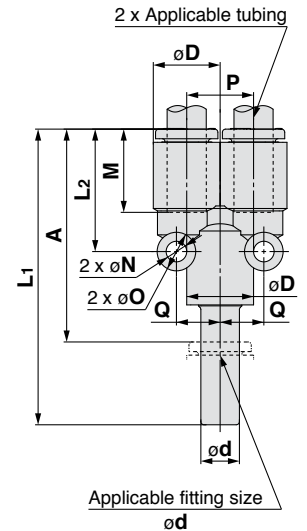


Plug-in "Y": KQ2U



Applicable tubing O.D. [inch]	Applicable fitting size ϕd [inch]	Model	*1 ϕD	L1	L2	P	A	M	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
$\phi 1/8$	$\phi 1/8$	KQ2U01-99A	7.1	45.1	18	7.1	31.8	13.3	5.2	6	3.2	3.4	2.9	2	2.5
$\phi 5/32$	$\phi 5/32$	KQ2U03-99A	8.2	44.8	18.2	8.2	31.5	13.3	5.7	6	3.2	4.2	4.2	2.5	3.1
$\phi 3/16$	$\phi 3/16$	KQ2U05-99A	9.1	46.1	18.9	9.1	32.8	13.3	6.2	6	3.2	8.4	7	3.5	3.6
$\phi 1/4$	$\phi 1/4$	KQ2U07-99A	11.1	46.8	20.2	11.1	33.5	13.3	7.6	8	4	14.4	12.4	4.6	5.5
$\phi 5/16$	$\phi 5/16$	KQ2U09-99A	13.2	52.1	22.3	13.2	37.9	14.2	8.7	8	4.2	25.6	17.7	6	8

*1 ϕD is maximum diameter.

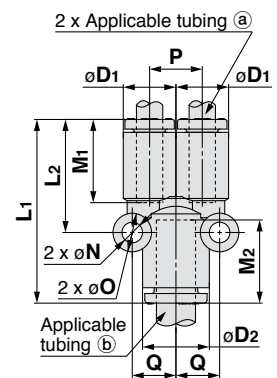


Different Diameter Union "Y": KQ2U



Applicable tubing O.D. [inch]	Model	*1 $\phi D1$	*1 $\phi D2$	L1	L2	P	M1	M2	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]	
												Nylon	Urethane			
$\phi 1/8$	$\phi 5/32$	KQ2U01-03A	7.1	8.2	28.9	18	7.1	13.3	13.3	5.7	6	3.2	3.2	2.7	3.3	2.7
	$\phi 1/4$	KQ2U01-07A	7.1	11.1	30.3	18.5	7.1	13.3	13.3	7.2	6	3.2	3.2	2.7	3.3	3.3
$\phi 5/32$	$\phi 3/16$	KQ2U03-05A	8.2	9.1	29.6	18.8	8.2	13.3	13.3	6.2	6	3.2	4.2	4.2	4.1	3.2
	$\phi 1/4$	KQ2U03-07A	8.2	11.1	30.3	19	8.2	13.3	13.3	7.2	6	3.2	4.2	4.2	4.1	3.6
$\phi 3/16$	$\phi 1/4$	KQ2U05-07A	9.1	11.1	30.6	19.8	9.1	13.3	13.3	7.2	6	3.2	8.4	7	4.8	3.9
$\phi 1/4$	$\phi 5/16$	KQ2U07-09A	11.1	13.2	32.3	21.3	11.1	13.3	14.2	8.6	8	4	14.4	12.4	6.4	6
$\phi 5/16$	$\phi 3/8$	KQ2U07-11A	11.1	15.4	34.4	21.7	11.1	13.3	15.6	9.8	8	4	14.4	12.4	6.4	7.2
	$\phi 3/8$	KQ2U09-11A	13.2	15.4	35.3	23	13.2	14.2	15.6	9.9	8	4.2	26.3	18.3	8.1	8.5
$\phi 3/8$	$\phi 1/2$	KQ2U09-13A	13.2	19.3	38.7	24.2	13.2	14.2	17	11.8	8	4.2	26.3	18.3	8.1	11.2
$\phi 3/8$	$\phi 1/2$	KQ2U11-13A	15.4	19.3	40.1	26.6	15.4	15.6	17	11.8	8	4.2	28.8	23.8	9.6	13

*1 $\phi D1, \phi D2$ are maximum diameters.



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

KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

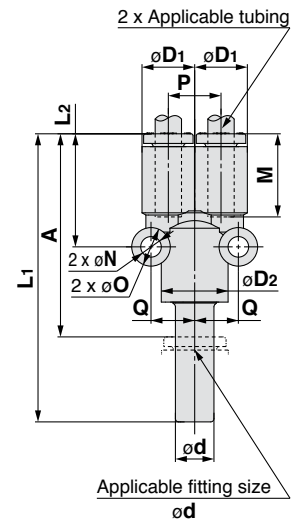
Dimensions

Different Diameter Plug-in "Y": KQ2X



Applicable tubing O.D. [inch]	Applicable fitting size ϕd [inch]	Model	*1 $\phi D1$	*1 $\phi D2$	L1	L2	A	P	M	Q	ϕO	ϕN	Effective area [mm ²]		Min. port size	Weight [g]
													Nylon	Urethane		
$\phi 1/8$	$\phi 5/32$	KQ2X01-03A	7.1	8.2	44.7	18	42.2	7.1	13.3	5.7	6	3.2	3.2	2.7	2.5	2.8
$\phi 5/32$	$\phi 3/16$	KQ2X03-05A	8.2	9.1	46.1	18.8	42.6	8.2	13.3	6.2	6	3.2	3.4	2.9	3.5	3.3
	$\phi 1/4$	KQ2X03-07A	8.2	11.1	46.8	19	42.2	8.2	13.3	7.2	6	3.2	3.4	2.9	4.1	4
$\phi 3/16$	$\phi 1/4$	KQ2X05-07A	9.1	11.1	47.1	19.8	42.5	9.1	13.3	7.2	6	3.2	8.4	7	4.6	4.4
$\phi 1/4$	$\phi 5/16$	KQ2X07-09A	11.1	13.2	51.2	21.3	45.2	11.1	13.3	8.6	8	4	14.4	12.4	6	6.5

*1 $\phi D1, \phi D2$ are maximum diameters.

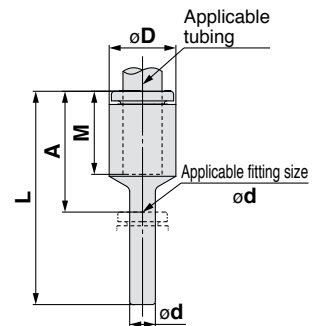


Plug-in Reducer: KQ2R



Applicable tubing O.D. [inch]	Applicable fitting size ϕd [inch]	Model	ϕD *1	L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
							Nylon	Urethane		
$\phi 1/8$	$\phi 5/32$	KQ2R01-03A	7.1	28.6	15.3	13.3	3.4	2.9	2.5	0.8
	$\phi 3/16$	KQ2R01-05A	7.1	28.7	15.4	13.3	3.4	2.9	2.5	0.8
	$\phi 1/4$	KQ2R01-07A	7.1	28.4	15.1	13.3	3.4	2.9	2.5	1
$\phi 5/32$	$\phi 3/16$	KQ2R03-05A	8.2	28.7	15.4	13.3	5.6	4	3	1
	$\phi 1/4$	KQ2R03-07A	8.2	31.8	18.5	13.3	5.6	4	3	1.2
$\phi 3/16$	$\phi 1/4$	KQ2R05-07A	9.1	31.4	18.1	13.3	7.8	6.5	3.5	1.3
	$\phi 5/16$	KQ2R05-09A	9.1	33.4	19.2	13.3	7.8	6.5	3.5	1.5
$\phi 1/4$	$\phi 5/16$	KQ2R07-09A	11.1	33.3	19.1	13.3	13.5	11.5	4.6	1.7
	$\phi 3/8$	KQ2R07-11A	11.1	35.9	20.3	13.3	13.5	11.5	4.6	2.2
$\phi 5/16$	$\phi 3/8$	KQ2R09-11A	13.2	36.2	20.6	14.2	26	18.1	6	2.8
	$\phi 1/2$	KQ2R09-13A	13.2	37.2	20.2	14.2	26	18.1	6	3.5
$\phi 3/8$	$\phi 1/2$	KQ2R11-13A	15.4	39.5	22.5	15.6	35.3	29.1	7	4.2

*1 ϕD is maximum diameter.

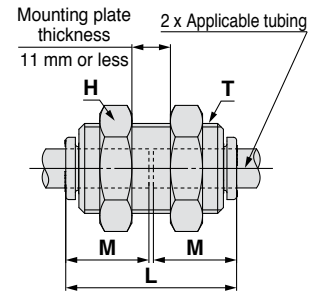


Bulkhead Union: KQ2E (Interchangeable with KQ)



Applicable tubing O.D. [inch]	Model	T (UNF)	H (Width across flats)	L	Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]
							Nylon	Urethane		
$\phi 1/8$	KQ2E01-00□	1/2-20UNF	17.46	27.8	13.5	13.3	3.4	2.9	2.5	26.9
$\phi 5/32$	KQ2E03-00□	1/2-20UNF	17.46	27.8	13.5	13.3	5.6	4	3	25.7
$\phi 3/16$	KQ2E05-00□	9/16-18UNF	17.46	29.8	15	13.3	7.8	6.5	3.5	40.3
$\phi 1/4$	KQ2E07-00□	9/16-18UNF	17.46	29.8	15	13.3	13.5	11.5	4.6	36.9
$\phi 5/16$	KQ2E09-00□	3/4-16UNF	22.23	31.8	20	14.2	26.1	18	6	61.2
$\phi 3/8$	KQ2E11-00□	7/8-14UNF	25.4	33.8	23	15.6	35.3	29.1	7	83.4
$\phi 1/2$	KQ2E13-00□	1-12UNF	28.57	37.8	26	17	66	51.7	9.6	109.2

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

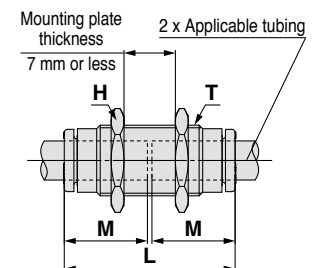


Bulkhead Union: KQ2E (Interchangeable with KJ)



Applicable tubing O.D. [inch]	Model	T (UNF)	H (Width across flats)	L	Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]
							Nylon	Urethane		
$\phi 1/8$	KQ2E01-00□J	3/8-24UNF	12.7	27.3	10.5	13.3	3	2.5	2.5	12.6
$\phi 5/32$	KQ2E03-00□J	3/8-24UNF	12.7	27.3	10.5	13.3	4	4	3	11.9
$\phi 1/4$	KQ2E07-00□J	1/2-20UNF	15.88	27.3	14	13.3	13.5	11.5	4.6	19.2

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





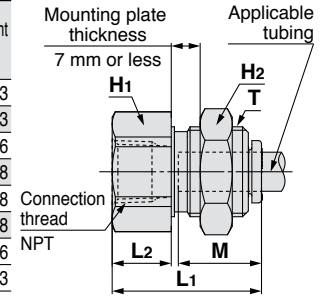
Dimensions

Bulkhead Connector: KQ2E



Applicable tubing O.D. [inch]	Connection thread NPT	Model	T (UNF)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]
										Nylon	Urethane		
ø1/8	1/4	KQ2E01-35□	1/2-20UNF	17.46	17.46	28.7	13.3	13.5	13.3	3.4	2.9	2.5	33.3
ø5/32	1/4	KQ2E03-35□	1/2-20UNF	17.46	17.46	29	13.6	13.5	13.3	5.6	4	3	33.3
ø3/16	1/8	KQ2E05-34□	9/16-18UNF	17.46	17.46	25.6	9.2	15	13.3	7.8	6.5	3.5	36.6
ø1/4	1/4	KQ2E07-35□	9/16-18UNF	17.46	17.46	29.9	13.5	15	13.3	13.5	11.5	4.6	38.8
ø5/16	3/8	KQ2E09-36□	3/4-16UNF	22.23	22.23	31	13.6	20	14.2	26.1	18	6	61.8
ø3/8	3/8	KQ2E11-36□	7/8-14UNF	25.4	25.4	31.4	12	23	15.6	35.3	29.1	7	83.8
ø1/2	3/8	KQ2E13-36□	1-12UNF	28.57	28.57	32	11.6	26	17	66	51.7	9.6	106.6
	1/2	KQ2E13-37□	1-12UNF	28.57	28.57	36.1	15.7	26	17	66	51.7	9.6	114.3

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



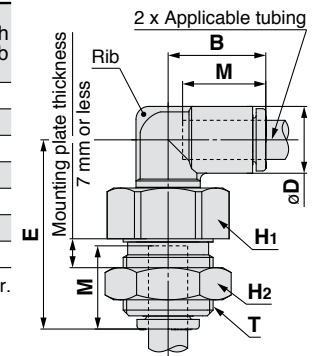
Bulkhead Male Elbow: KQ2LE



Applicable tubing O.D. [inch]	Model	T (UNF)	H1 (Width across flats)	H2 (Width across flats)	B	E	*1 øD	Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
ø1/8	KQ2LE01-00□	1/2-20UNF	17.46	17.46	14.5	28.9	7.1	13.5	13.3	3	2.5	2.5	27.5	—
ø5/32	KQ2LE03-00□	1/2-20UNF	17.46	17.46	14.8	28.5	8.2	13.5	13.3	4.2	4.2	3	27.1	●
ø3/16	KQ2LE05-00□	9/16-18UNF	17.46	17.46	15	29.7	9.1	15	13.3	6.8	5.6	3.5	34.1	—
ø1/4	KQ2LE07-00□	9/16-18UNF	17.46	17.46	15.6	30.7	11.1	15	13.3	11.3	10	4.5	32.8	●
ø5/16	KQ2LE09-00□	3/4-16UNF	22.23	22.23	17.2	34.2	13.2	20	14.2	21.6	14.9	6	55.6	●
ø3/8	KQ2LE11-00□	7/8-14UNF	25.4	25.4	19.3	32.6	15.4	23	15.6	28.8	23.8	7	67.7	●
ø1/2	KQ2LE13-00□	1-12UNF	28.57	28.57	21.8	43.2	19.3	26	17	56	44.4	9.5	121.5	—

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

*1 øD is maximum diameter.

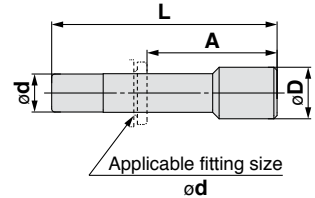


Plug: KQ2P



Applicable fitting size ød [inch]	Model	ød*1	L	A	Weight [g]
ø1/8	KQ2P-01	5	31.5	18.2	1
ø5/32	KQ2P-03	6	32	18.7	1
ø3/16	KQ2P-05	6.8	34	20.7	1
ø1/4	KQ2P-07	8.5	35	21.7	1
ø5/16	KQ2P-09	10	39	24.8	2
ø3/8	KQ2P-11	11.5	43	27.4	3.5
ø1/2	KQ2P-13	15	45.5	28.5	5

*1 øD is maximum diameter.



Sealant/Gasket Seal

Inch Size M, R, Rc

Metric Size G

Inch Size NPT

Metric Size R, Rc

Face Seal

Inch Size R

Metric Size Uni

Gasket Seal

Inch Size Uni

KQ2 Series

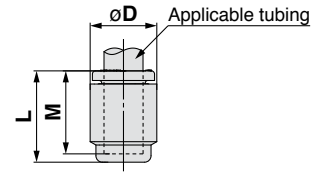
Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

Dimensions

Tube Cap: KQ2C



Applicable tubing O.D. [inch]	Model	ϕD^{*1}	L	M	Weight [g]
$\phi 5/32$	KQ2C03-00A	8.2	14.5	13.3	0.8
$\phi 1/4$	KQ2C07-00A	11.1	14.8	13.3	1.3
$\phi 5/16$	KQ2C09-00A	13.2	15.7	14.2	2
$\phi 3/8$	KQ2C11-00A	15.4	17.3	15.6	2.8

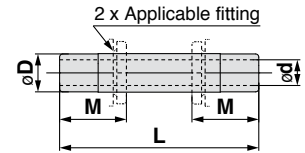


*1 ϕD is maximum diameter.

Nipple: KQ2N



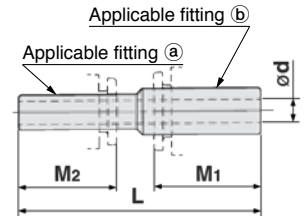
Applicable fitting ϕD	Model	L	M	ϕd Min. port size	Weight [g]
$\phi 1/8$	KQ2N01-99	36	13.3	2.1	0.2
$\phi 3/16$	KQ2N05-99	38	13.3	3.4	0.4
$\phi 1/4$	KQ2N07-99	39	13.3	4.6	1
$\phi 3/8$	KQ2N11-99	49	15.6	7	2
$\phi 1/2$	KQ2N13-99	51	17	9.5	3.5



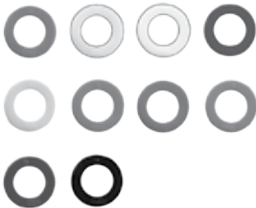
Reducer Nipple: KQ2N



Applicable fitting	Model		L	M ₁	M ₂	ϕd Min. port size	Weight [g]
	(a)	(b)					
$\phi 1/8$	$\phi 5/32$	KQ2N01-03	36.5	13.3	13.3	2.1	0.2
	$\phi 3/16$	KQ2N01-05	37	13.3	13.3	2.1	0.4
$\phi 5/32$	$\phi 3/16$	KQ2N03-05	37.5	13.3	13.3	2.5	0.4
	$\phi 1/4$	KQ2N03-07	38	13.3	13.3	2.5	0.6
$\phi 3/16$	$\phi 1/4$	KQ2N05-07	38.5	13.3	13.3	3.4	0.6
	$\phi 5/16$	KQ2N05-09	41	13.3	13.3	3.4	1
$\phi 1/4$	$\phi 5/16$	KQ2N07-09	41.5	13.3	13.3	4.6	1
	$\phi 3/8$	KQ2N07-11	45	15.6	13.3	4.6	1
$\phi 5/16$	$\phi 3/8$	KQ2N09-11	46.5	15.6	14.2	6	1.8
	$\phi 1/2$	KQ2N09-13	47.5	17	14.2	6	2.6
$\phi 3/8$	$\phi 1/2$	KQ2N11-13	50	17	15.6	7	3.2



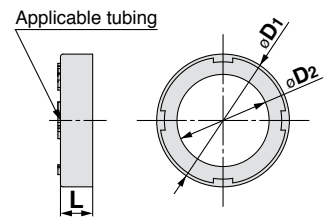
Color Cap: KQ2C



Applicable tubing O.D. [inch]	Model	ϕD_1	ϕD_2	L	Weight [g]	Note
$\phi 1/8$	KQ2C-01 □A	7.3	4.3	2.6	0.1	Applicable for products with enlarged outside diameter of release button
$\phi 3/16$	KQ2C-05 □A	9	5.9	2.6	0.1	
$\phi 1/4^{*1}$	KQ2C-07 □B	11.5	7.5	2.6	0.1	
$\phi 3/8$	KQ2C-11 □B	15.7	10.7	2.7	0.1	
$\phi 1/2$	KQ2C-13 □B	19.6	13.9	2.7	0.2	

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Gray), W (White), BU (Blue)

*1 The KQ2S07-32□, KQ2S07-33□S, and KQ2S07-34□S are not applicable for products with enlarged outside diameter of release button. The applicable color cap is KQ2C-07□A.



In order to improve operability, the outside diameter of the release button has been enlarged for the new KQ2 series. Therefore, the usable color caps will differ between pre-change and post-change products. Refer to page 221 for details.

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: Orange
X41	With fixed orifice*2
KQ2□09-34□□	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: $\phi 5/16''$ /NPT1/8 Thread material/Surface treatment: Brass, Brass + Electroless nickel plating Example) KQ2L09-34AQS

*1 The following models are not available as made-to-order: Hexagon socket head male connector/KQ2S, Bulkhead union/KQ2E, Bulkhead connector/KQ2E, Nipple/KQ2N, Reducer nipple/KQ2N, Male connector/KQ2H, Female connector/KQ2F, Color cap/KQ2C, Plug/KQ2P

*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)
X34	Rubber material: FKM
X39	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)
X94	Grease-free Rubber material: FKM (With fluorine coating) Release button color: Light blue

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-KQ2H07-35NS** (With thread)

10-KQ2H07-00A (Without thread)

3 Spare Parts

Description	Part no.	Applicable thread
Gasket	M-5G2	10-32UNF

Brass

Description	Part no.	Applicable model
Pipe nut	KQ01-P01AJ	KQ2E01-00AJ, KQ2E03-00AJ
	KQ07-P01AJ	KQ2E07-00AJ
	KQ01-P01A	KQ2E01-00A, KQ2E03-00A, KQ2E01-35A KQ2E03-35A, KQ2LF01-00A, KQ2LE03-00A
	KQ05-P01A	KQ2E05-00A, KQ2E07-00A, KQ2E05-34A KQ2E07-35A, KQ2LF05-00A, KQ2LE07-00A
	KQ09-P01A	KQ2E09-00A, KQ2E09-36A, KQ2LE09-00A
	KQ11-P01A	KQ2E11-00A, KQ2E11-36A, KQ2LE11-00A
	KQ13-P01A	KQ2E13-00A, KQ2E13-36A KQ2E13-37A, KQ2LE13-00A

Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	KQ01-P01NJ	KQ2E01-00NJ, KQ2E03-00NJ
	KQ07-P01NJ	KQ2E07-00NJ
	KQ01-P01N	KQ2E01-00N, KQ2E03-00N, KQ2E01-35N KQ2E03-35N, KQ2LF01-00N, KQ2LE03-00N
	KQ05-P01N	KQ2E05-00N, KQ2E07-00N, KQ2E05-34N KQ2E07-35N, KQ2LF05-00N, KQ2LE07-00N
	KQ09-P01N	KQ2E09-00N, KQ2E09-36N, KQ2LE09-00N
	KQ11-P01N	KQ2E11-00N, KQ2E11-36N, KQ2LE11-00N
	KQ13-P01N	KQ2E13-00N, KQ2E13-36N KQ2E13-37N, KQ2LE13-00N

Color Cap

Applicable tubing O.D. [inch]	Model	ϕD_1	ϕD_2	L	Weight [g]	Note
$\phi 1/4$	KQ2C-07□A	10.7	7.5	2.6	0.1	Applicable for products before enlargement of outside diameter of release button
$\phi 3/8$	KQ2C-11□A	14.8	10.7	2.7	0.1	
$\phi 1/2$	KQ2C-13□A	18.5	13.9	2.7	0.1	

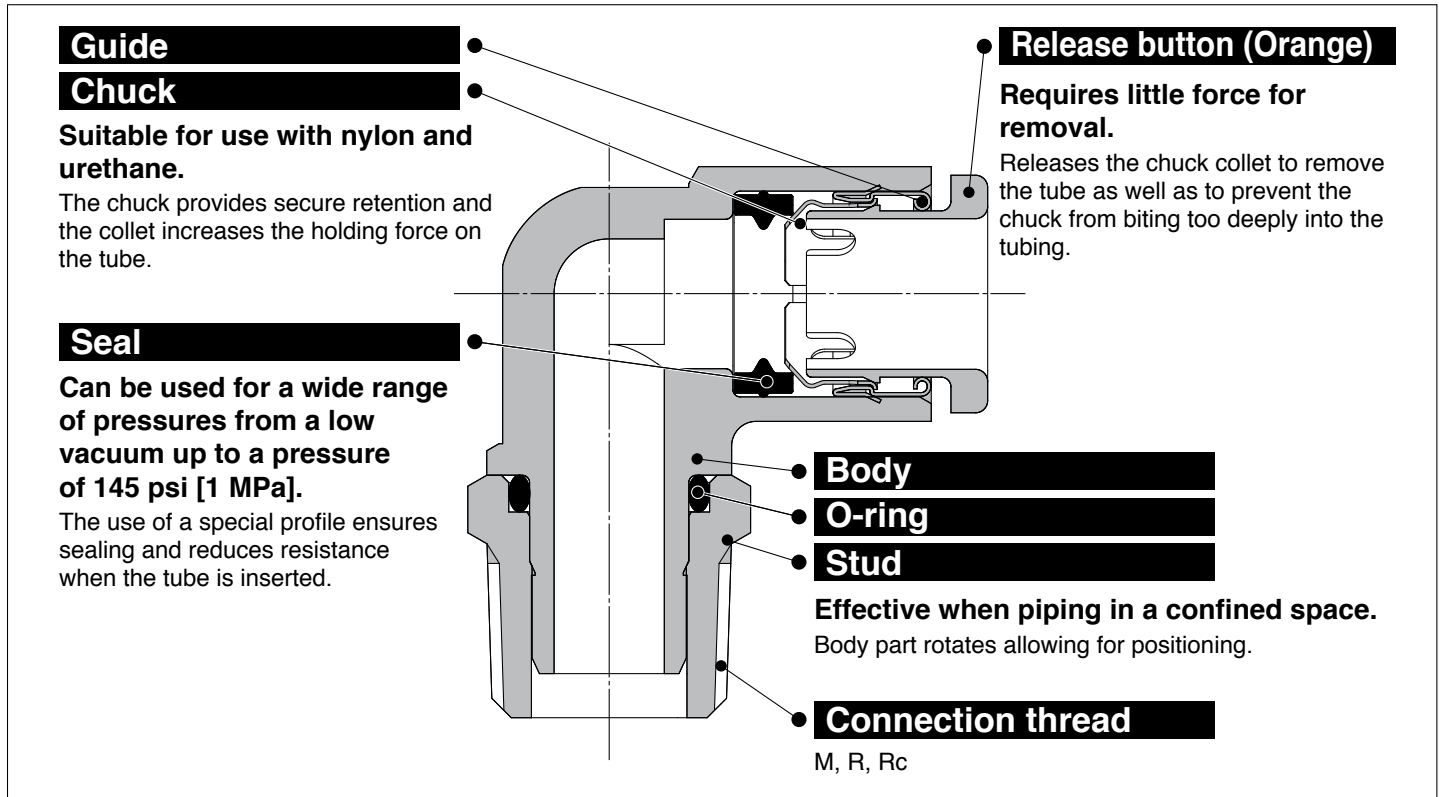
□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Gray), W (White), BU (Blue)



Inch Size One-touch Fittings

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

KQ2 Series



One-touch IN/OUT connection.

Possible to use in vacuum to -14.5 psi [-100 kPa].



Made to Order
(Refer to page 163 for details.)

Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø1/8", ø3/16", ø1/4", ø5/16", ø3/8", ø1/2"

Specifications

Fluid		Air, Water*1
Operating pressure range*2		-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 77°F [23°C])		435 psi [3 MPa]
Ambient and fluid temperature		23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Seal on the threads		With sealant

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

*2 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
Stud	C3604 (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304
Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR



How to Order

Threaded Type

KQ2 H 05 - 01 A S

One-touch Fittings

Symbol	Model
H	Male connector
L	Male elbow
T	Male branch tee
W	Extended male elbow
Y	Male run tee
U	Branch "Y"
E	Bulkhead union
	Bulkhead connector

Model

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
Bulkhead union	Only for "Bulkhead union"
M <input type="checkbox"/>	

* : A, N

Applicable tubing O.D.

Symbol	Size
01	ø1/8"
05	ø3/16"
07	ø1/4"
09	ø5/16"
11	ø3/8"
13	ø1/2"

Port size

Symbol	Size
M5	M5 x 0.8
01	1/8
02	1/4
03	3/8
04	1/2
00 *1	Same diameter tubing

*1 Only for "Bulkhead union".

Spare Parts

Use the part number below to order the gasket for M5 thread.
Gasket for M5 thread: M-5G2

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

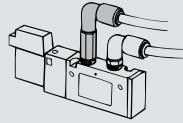
Inch Size One-touch Fittings

Round Type Variations

Extended male elbow
KQ2W P.161



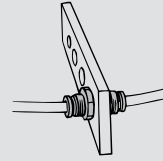
Basically, it is used together with a male elbow. Its extended height allows for multi-leveled piping and prevents interference among fittings.



Bulkhead union
KQ2E P.162



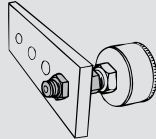
Use to connect tubing through a panel, etc.



Bulkhead connector
KQ2E P.162



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



Male connector
KQ2H P.160



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

Male branch tee
KQ2T P.161



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

Branch "Y"
KQ2U P.162



Use to branch a female thread in the same direction.

Male elbow
KQ2L P.160



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

Male run tee
KQ2Y P.161



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

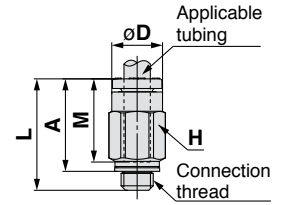
Dimensions

Male Connector: KQ2H (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread M	Model	H (Width across flats)	øD	L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
ø1/8	M5 x 0.8	KQ2H01-M5□	7	6.7	17.3	14.3	13.3	3.0	2.5	2.5	2.7
ø3/16	M5 x 0.8	KQ2H05-M5□	10	8.3	17.6	14.6	13.3	4.0	4.0	2.5	4.6
ø1/4	M5 x 0.8	KQ2H07-M5□	11	10.9	18.4	15.4	13.3	4.0	4.0	2.5	6.5

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

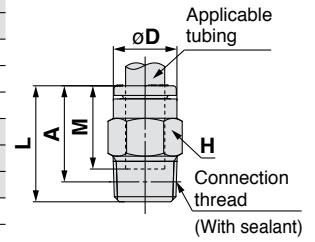


Male Connector: KQ2H (Sealant)



Applicable tubing O.D. [inch]	Connection thread R	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	KQ2H01-01□S	10	6.7	14	10.9	13.3	3.4	2.9	2.5	6
	1/4	KQ2H01-02□S	14	6.7	16.7	12	13.3	3.4	2.9	2.5	15.3
ø3/16	1/8	KQ2H05-01□S	10	8.3	17.9	14.8	13.3	7.8	6.5	3.5	6.4
	1/4	KQ2H05-02□S	14	8.3	16.7	12	13.3	7.8	6.5	3.5	13.9
ø1/4	1/8	KQ2H07-01□S	12	10.9	18.2	15.1	13.3	13.5	11.5	4.6	7.1
	1/4	KQ2H07-02□S	14	10.9	16.7	12	13.3	13.5	11.5	4.6	12.1
	3/8	KQ2H07-03□S	17	10.9	18.1	13	13.3	13.5	11.5	4.6	24
ø5/16	1/8	KQ2H09-01□S	14	13	22.5	19.4	14.2	26.1	18	6	11.9
	1/4	KQ2H09-02□S	14	13	22	17.3	14.2	26.1	18	6	13.9
	3/8	KQ2H09-03□S	17	13	18.1	13	14.2	26.1	18	6	21
ø3/8	1/4	KQ2H11-02□S	17	15.1	26.9	22.2	15.6	35.3	29.1	7	22.5
	3/8	KQ2H11-03□S	17	15.1	23.2	18.1	15.6	35.3	29.1	7	22.9
	1/2	KQ2H11-04□S	22	15.1	22.3	15.9	15.6	35.3	29.1	7	45.9
ø1/2	1/4	KQ2H13-02□S	19	19	28.7	24	17	58.5	51.7	9	23.3
	3/8	KQ2H13-03□S	19	19	27.2	22.1	17	66.0	51.7	9.6	26.2
	1/2	KQ2H13-04□S	22	19	22.3	15.9	17	66.0	51.7	9.6	35.4

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

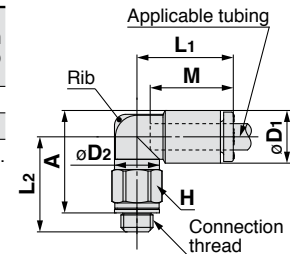


Male Elbow: KQ2L (Gasket seal)



Applicable tubing O.D. [inch]	Connection thread M	Model	H (Width across flats)	øD1*1	øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
ø1/8	M5 x 0.8	KQ2L01-M5□	7	7.1	7	15.3	14.3	14.9	13.3	2.6	2.2	2.5	3.1	●
ø1/4	M5 x 0.8	KQ2L07-M5□	7	11.1	7	15.4	16.1	18.7	13.3	3.5	3.5	2.5	3.6	●

□: A (Brass), N (Brass + Electroless nickel plating) *1 øD1 is maximum diameter.

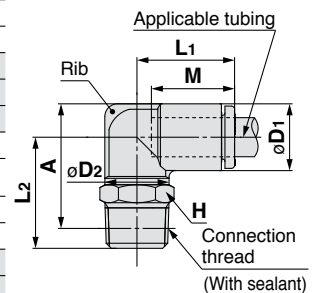


Male Elbow: KQ2L (Sealant)



Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	øD1*1	øD2	L1	L2	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
ø3/16	1/8	KQ2L05-01□S	10	9.1	10	15	16.7	18.2	13.3	6.8	5.6	3.5	5	—
	1/4	KQ2L05-02□S	14	9.1	10	15	22.2	22.1	13.3	6.8	5.6	3.5	14.5	—
ø1/4	1/8	KQ2L07-01□S	10	11.1	10	15.6	17.7	20.2	13.3	11.3	10	4.5	5.3	●
	1/4	KQ2L07-02□S	14	11.1	10	15.6	23.2	24.1	13.3	11.3	10	4.5	14.8	●
	3/8	KQ2L07-03□S	17	11.1	10	15.6	24.5	25.0	13.3	11.3	10	4.5	26.5	●
ø5/16	1/8	KQ2L09-01□S	10	13.2	10	16.4	18.7	22.2	14.2	11.4	11.4	4.5	6.1	●
		KQ2L09-01□QS	12	13.2	12	17.2	23.5	27.0	14.2	21.6	14.9	6	9.3	●
	1/4	KQ2L09-02□S	14	13.2	12	17.2	25.4	27.3	14.2	21.6	14.9	6	17.7	●
		KQ2L09-03□S	17	13.2	12	17.2	25.5	27.0	14.2	21.6	14.9	6	24.7	●
ø3/8	1/4	KQ2L11-02□S	17	15.4	17	19.3	28.5	31.5	15.6	28.8	23.8	7.5	21.5	●
	3/8	KQ2L11-03□S	17	15.4	17	19.3	29.4	32.0	15.6	28.8	23.8	7.5	22	●
ø1/2	1/2	KQ2L11-04□S	22	15.4	17	19.3	33.4	34.7	15.6	28.8	23.8	7.5	44.4	●
		KQ2L13-02□S	17	19.3	17	21.5	30.4	35.3	17	50.3	44.4	9	23.8	—
	3/8	KQ2L13-03□S	17	19.3	17	21.8	28.5	33.0	17	56.7	44.4	9.5	23.2	—
	1/2	KQ2L13-04□S	22	19.3	17	21.8	30.5	33.7	17	56.7	44.4	9.5	44.6	—

□: A (Brass), N (Brass + Electroless nickel plating) *1 øD1 is maximum diameter.
 *2 Reference dimensions after installation of R thread
 *3 For details, refer to page 163.





Dimensions

Branch "Y": KQ2U (Sealant)

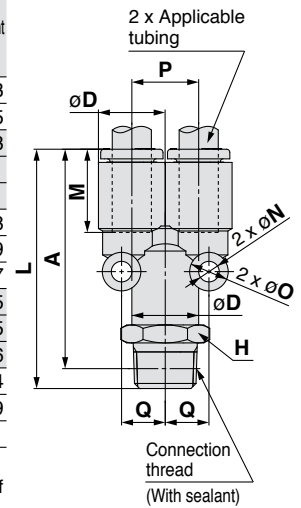


Applicable tubing O.D. [inch]	Connection thread R	Model	H (Width across flats)	*1 øD	L	P	A*2	M	Q	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
ø3/16	1/8	KQ2U05-01□S	12	9.1	37.1	9.1	34	13.3	6.2	6	3.2	8.4	7.0	3.5	10.3
	1/4	KQ2U05-02□S	14	9.1	41.5	9.1	36.8	13.3	6.2	6	3.2	8.4	7.0	3.5	19.5
ø1/4	1/8	KQ2U07-01□S	12	11.1	37.8	11.1	34.7	13.3	7.6	8	4	14.4	12.4	4.6	11.3
	1/4	KQ2U07-02□S	14	11.1	42.2	11.1	37.5	13.3	7.6	8	4	14.4	12.4	4.6	20.1
	3/8	KQ2U07-03□S	17	11.1	43.6	11.1	38.5	13.3	7.6	8	4	14.4	12.4	4.6	32
	1/8	KQ2U09-01□S	14	13.2	40.7	13.2	37.6	14.2	8.7	8	4.2	26.3	18.3	6	15.8
ø5/16	1/4	KQ2U09-02□S	14	13.2	45.1	13.2	40.4	14.2	8.7	8	4.2	26.3	18.3	6	20.9
	3/8	KQ2U09-03□S	17	13.2	46.5	13.2	41.4	14.2	8.7	8	4.2	26.3	18.3	6	32.7
ø3/8	1/4	KQ2U11-02□S	17	15.4	48.6	15.4	43.9	15.6	9.9	8	4.2	28.8	23.8	7	24.5
	3/8	KQ2U11-03□S	17	15.4	50	15.4	44.9	15.6	9.9	8	4.2	28.8	23.8	7	33.5
	1/2	KQ2U11-04□S	22	15.4	54.2	15.4	47.8	15.6	9.9	8	4.2	28.8	23.8	7	61.6
	1/4	KQ2U13-02□S	21	19.3	53.4	19.3	48.7	17	11.8	8	4.2	57.3	50.6	9	40.4
ø1/2	3/8	KQ2U13-03□S	21	19.3	54.8	19.3	49.7	17	11.8	8	4.2	64.6	50.6	9.6	43.9
	1/2	KQ2U13-04□S	22	19.3	59	19.3	52.6	17	11.8	8	4.2	64.6	50.6	9.6	61

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

*1 øD is maximum diameter.

*2 Reference dimensions after installation of R thread

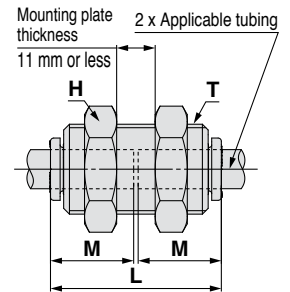


Bulkhead Union: KQ2E



Applicable tubing O.D. [inch]	Model	T (M)	H (Width across flats)	L	Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]
							Nylon	Urethane		
ø3/16	KQ2E05-00M□	M14 x 1	17	27.3	15	13.3	7.8	6.5	3.5	30.5
ø1/4	KQ2E07-00M□	M14 x 1	17	27.3	15	13.3	13.5	11.5	4.6	27.2
ø5/16	KQ2E09-00M□	M16 x 1	19	29.1	17	14.2	26.1	18	6	34
ø3/8	KQ2E11-00M□	M20 x 1	24	31.9	21	15.6	35.3	29.1	7	66.1
ø1/2	KQ2E13-00M□	M22 x 1	27	34.7	23	17	66.0	51.7	9.6	59.9

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

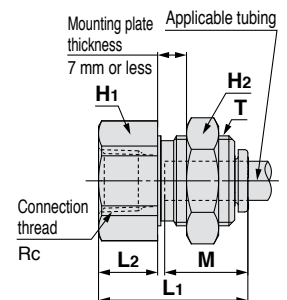


Bulkhead Connector: KQ2E



Applicable tubing O.D. [inch]	Connection thread Rc	Model	T (M)	H1 (Width across flats)	H2 (Width across flats)	L1	L2	Mounting hole	M	Effective area [mm ²]		Min. port size	Weight [g]
										Nylon	Urethane		
ø3/16	1/8	KQ2E05-01□	M14 x 1	17	17	23.9	9.5	15	13.3	7.8	6.5	3.5	30.8
ø1/4	1/4	KQ2E07-02□	M14 x 1	17	17	28.4	14	15	13.3	13.5	11.5	4.6	32
ø5/16	3/8	KQ2E09-03□	M16 x 1	19	19	31.7	14.3	17	14.2	26.1	18	6	59.2
ø3/8	3/8	KQ2E11-03□	M20 x 1	22	24	31.5	12.1	21	15.6	35.3	29.1	7	62.7
ø1/2	3/8	KQ2E13-03□	M22 x 1	24	27	32.1	11.7	23	17	66.0	51.7	9.6	66.7
	1/2	KQ2E13-04□	M22 x 1	24	27	37.7	17.3	23	17	66.0	51.7	9.6	70.6

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



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: Orange
X41	With fixed orifice*2
KQ2□09-01□Q□	Effective area is interchangeable with the current product (KQ series). Applicable model: Male elbow Extended male elbow Male branch tee Male run tee Applicable tubing O.D./Port size: ø5/16"/R1/8 Thread material/Surface treatment: Brass, Brass + Electroless nickel plating Example) KQ2L09-01AQS

*1 The following models are not available as made-to-order: Bulkhead union/KQ2E, Bulkhead connector/KQ2E, 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)
X34	Rubber material: FKM
X39	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double packaging, resin body: white)
X94	Grease-free Rubber material: FKM (With fluorine coating) Release button color: Light blue

3 Spare Parts

Description	Part no.	Applicable thread
Gasket	M-5G2	M5

Brass

Description	Part no.	Applicable model
Pipe nut	KQ06-P01A	KQ2E05-00MA, KQ2E07-00MA
		KQ2E05-01A, KQ2E07-02A
	KQ08-P01A	KQ2E09-00MA, KQ2E09-03A
		KQ2E11-00MA, KQ2E11-03A
KQ10-P01A	KQ2E13-00MA	
	KQ2E13-03A, KQ2E13-04A	

Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	KQ06-P01N	KQ2E05-00MN, KQ2E07-00MN
		KQ2E05-01N, KQ2E07-02N
	KQ08-P01N	KQ2E09-00MN, KQ2E09-03N
		KQ2E11-00MN, KQ2E11-03N
KQ10-P01N	KQ2E13-00MN	
	KQ2E13-03N, KQ2E13-04N	

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-KQ2H07-02NS**

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

Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: G

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 145 psi [1 MPa].
The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Face seal method
Seal ring
Piping installability is improved by changing to the face seal structure.

Release button
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.
The body and the threaded portion can rotate (for positioning to some extent).

G thread

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
Operating pressure range*2		-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])		435 psi [3 MPa]
Ambient and fluid temperature		23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)
Thread	Mounting section	ISO 16030 (Parallel pipe thread)
	Nut section	JIS B0205 (Metric fine thread)
Sealant on the threads		Seal ring

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

*2 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

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

Metric Size One-touch Fittings

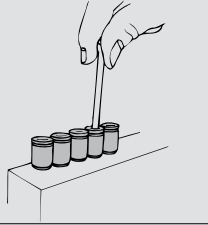
Round Type Variations

Hexagon socket head male connector

KQ2S P.168



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

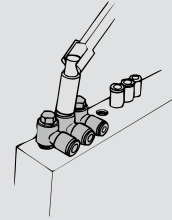


Universal male elbow

KQ2V P.169



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

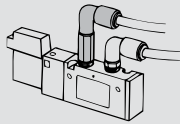


Extended male elbow

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.

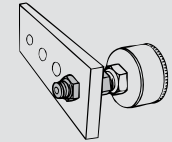


Bulkhead connector

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.

KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: G

Dimensions

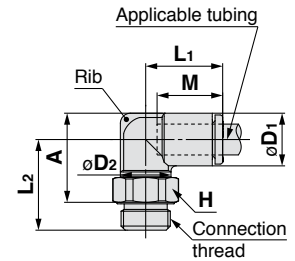
Male Elbow: KQ2L (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	*1 øD1	øD2	L1	L2	A	M	Effective area [mm ²]		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	—
	3/8	KQ2L06-G03□	21	10.4	10	15.5	22.4	20.1	13.3	11.4	9	4.5	28.9	—
ø8	1/8	KQ2L08-G01□	12	13.2	10	16.4	19.3	20.4	14.2	11.4	11.4	4.5	7.6	●
	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	●
	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	●
	1/2	KQ2L12-G04□	27	18.5	17	21.5	30.5	30.7	17	50.2	39.7	9	44.4	●
ø16	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)

*1 øD1 is maximum diameter.



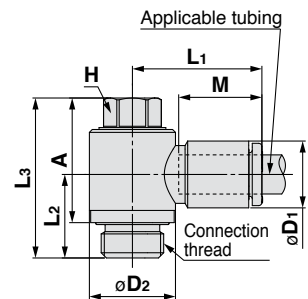
Universal Male Elbow: KQ2V (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	*1 øD1	øD2	L1	L2	L3	A	M	Effective area [mm ²]		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	15.6	28.1	21.6	14.2	16	11.2	6	26.8
	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
	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
ø10	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
	3/8	KQ2V12-G03□	17	18.5	25.2	28.5	20.5	36.7	29.2	17	39	30.8	9	60.5
ø12	1/2	KQ2V12-G04□	17	18.5	26	28.5	21.1	37.3	28.3	17	39	30.8	9	71
	3/8	KQ2V16-G03□	21	23.8	32.3	34.2	24.2	44.5	37	20.6	55	46	11	101.7
ø16	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)

*1 øD1 is maximum diameter.

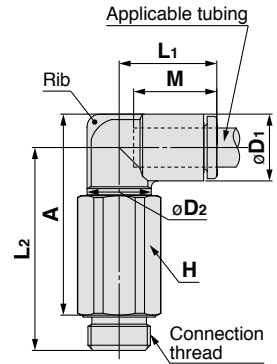


Dimensions

Extended Male Elbow: KQ2W (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD1 ^{*1}	øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										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	KQ2W06-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	●
ø12	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	●
ø16	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	—



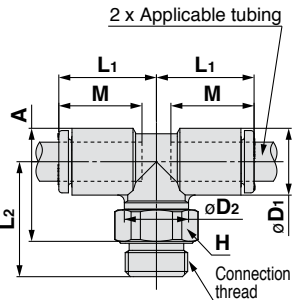
□: A (Brass), N (Brass + Electroless nickel plating)

*1 øD1 is maximum diameter.

Male Branch Tee: KQ2T (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	øD1 ^{*1}	øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
										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
ø12	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
ø16	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
ø16	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)

*1 øD1 is maximum diameter.

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

KQ2 Series

Applicable Tubing: Metric Size, Connection Thread: G

Dimensions

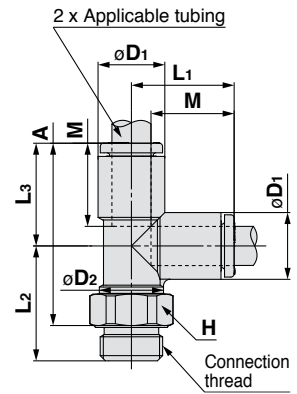
Male Run Tee: KQ2Y (Face seal)



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A	M	Effective area [mm ²]		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	KQ2Y06-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
ø8	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
	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
ø10	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
ø10	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
	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
ø12	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
ø12	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
ø16	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)

*1 ϕD_1 is maximum diameter.

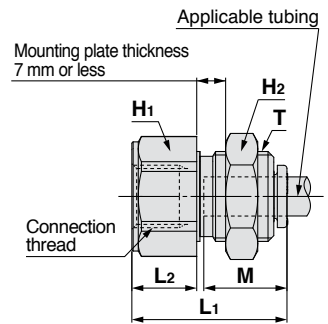


Bulkhead Connector: KQ2E



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 [mm ²]		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
ø6	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
ø8	1/4	KQ2E08-G02	M16 x 1	17	19	30	12.6	17	14.2	26.1	18	6	33.5
	3/8	KQ2E08-G03	M16 x 1	21	19	33.1	15.7	17	14.2	26.1	18	6	46.1
ø10	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.

Round
Type



1 Spare Parts

Brass

Description	Part no.	Applicable model
Pipe nut	KQ04-P01A	KQ2E04-G01A, KQ2E04-G02A
	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

Brass + Electroless nickel plating

Description	Part no.	Applicable model
Pipe nut	KQ04-P01N	KQ2E04-G01N, KQ2E04-G02N
	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

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

Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: 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

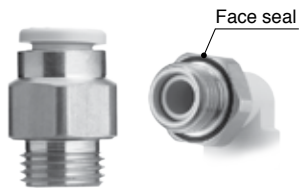
Can be used for a wide range of pressures from a low vacuum up to a pressure of 145 psi [1 MPa].

The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Face seal method

Seal ring

Piping installability is improved by changing to the face seal structure.



Release button

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

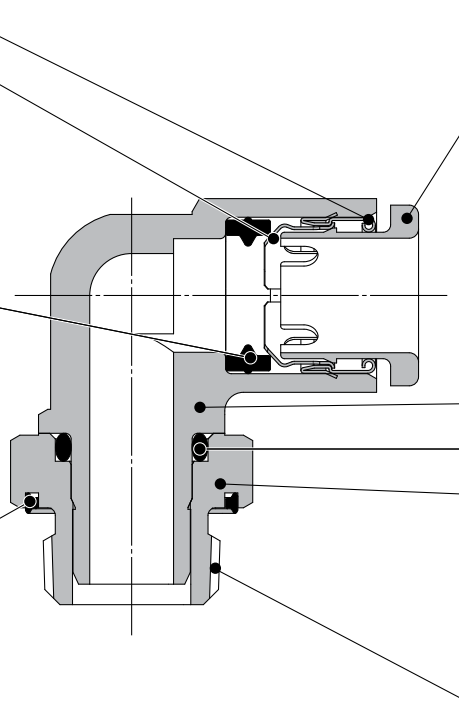
Stud

Effective when piping in a confined space.

Body part rotates allowing for positioning.

Connection thread

R, Rc



One-touch IN/OUT connection.

Possible to use in vacuum to -14.5 psi [-100 kPa].

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



Applicable Tubing

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

Specifications

Fluid		Air, Water*1
Operating pressure range*2		-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])		435 psi [3 MPa]
Ambient and fluid temperature		23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Sealant on the threads		Seal ring

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

*2 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 - 01 A P

One-touch fittings

Face seal

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
L	Male elbow
LU	Branch male elbow
K	45° male elbow
V	Universal male elbow
VS	Hexagon socket head universal male elbow
VF	Universal female elbow
VD	Double universal male elbow
VT	Triple universal male elbow
Z	Branch universal male elbow
ZF	Branch universal female elbow
ZD	Double branch universal male elbow
ZT	Triple branch universal male elbow
W	Extended male elbow
T	Male branch tee
Y	Male run tee
D	Male delta union
U	Branch "Y"
UD	Double branch "Y"
N	Adapter

Thread material/Surface treatment

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

Port size/Applicable tubing O.D.

Symbol	Size
01	R1/8, Rc1/8
02	R1/4, Rc1/4
03	R3/8, Rc3/8
04	R1/2, Rc1/2

Applicable tubing O.D.

Symbol	Size
23	ø3.2
04	ø4
06	ø6
08	ø8
10	ø10
12	ø12
16	ø16

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

Metric Size One-touch Fittings

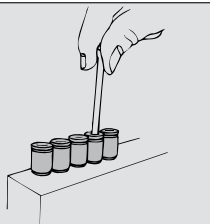
Round Type Variations

Hexagon socket head male connector

KQ2S P.176



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

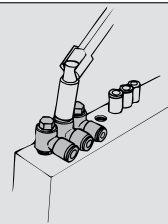


Universal male elbow

KQ2V P.178



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

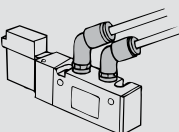


45° male elbow

KQ2K P.178



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

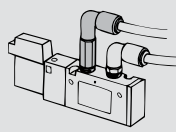


Extended male elbow

KQ2W P.181



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

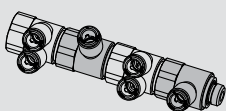


Universal female elbow

KQ2VF P.179



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

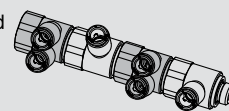


Branch universal female elbow

KQ2ZF P.180



Use to two-branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.



Male connector

KQ2H P.176



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

Double universal male elbow

KQ2VD P.179



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

Triple branch universal male elbow

KQ2ZT P.181



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

Male elbow

KQ2L P.177



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

Triple universal male elbow

KQ2VT P.179



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

Male delta union

KQ2D P.183



Use to branch a female thread at two right angles.

Male branch tee

KQ2T P.182



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

Branch universal male elbow

KQ2Z P.180



Hexagon head of the body allows tightening with a box wrench. Use for branch connections.

Double branch "Y"

KQ2UD P.184



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

Hexagon socket head universal male elbow

KQ2VS P.178



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

Double branch universal male elbow

KQ2ZD P.180



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

Branch "Y"

KQ2U P.183



Use to branch a female thread in the same direction.

Branch male elbow

KQ2LU P.177



Use to two-branch a female thread at right angles.

Male run tee

KQ2Y P.182



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

Adapter

KQ2N P.184



Use to connect One-touch fittings and R female threads.



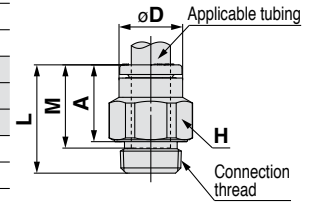
Dimensions

Male Connector: KQ2H (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD	L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
ø3.2	1/8	KQ2H23-01□P	12	6.7	14.1	8.9	13.3	3.4	2.9	2.5	6.3
	1/4	KQ2H23-02□P	17	6.7	15	7.4	13.3	3.4	2.9	2.5	15.1
ø4	1/8	KQ2H04-01□P	12	7.7	16.4	11.2	13.3	4.8	3.4	3	6.9
	1/4	KQ2H04-02□P	17	7.7	15	7.4	13.3	4.8	3.4	3	14.5
ø6	1/8	KQ2H06-01□P	12	9.7	17.2	12	13.3	13.1	10.4	4.5	6.5
	1/4	KQ2H06-02□P	17	9.7	14	6.4	13.3	13.1	10.4	4.5	10.6
	3/8	KQ2H06-03□P	21	9.7	15.2	7.6	13.3	13.1	10.4	4.5	22.8
ø8	1/8	KQ2H08-01□P	14	13	21.1	15.9	14.2	26.1	18	6	11.8
	1/4	KQ2H08-02□P	17	13	19.9	12.3	14.2	26.1	18	6	13.9
	3/8	KQ2H08-03□P	21	13	15.2	7.6	14.2	26.1	18	6	19.6
ø10	1/8	KQ2H10-01□P	17	15.6	22.9	17.7	15.6	26.1	26.1	6	16.3
	1/4	KQ2H10-02□P	17	15.6	24.4	16.8	15.6	41.5	29.5	7.5	17.9
	3/8	KQ2H10-03□P	21	15.6	21.2	13.6	15.6	41.5	29.5	7.5	23.7
	1/2	KQ2H10-04□P	27	15.6	18.8	8.4	15.6	41.5	29.5	7.5	40.9
ø12	1/4	KQ2H12-02□P	19	18.2	26.6	19	17	58.3	46.1	9	22
	3/8	KQ2H12-03□P	21	18.2	25.1	17.5	17	58.3	46.1	9	28.6
	1/2	KQ2H12-04□P	27	18.2	25.1	14.7	17	58.3	46.1	9	45
ø16	1/4	KQ2H16-02□P	24	23.6	30.6	23	20.6	58.3	58.3	9	42.5
	3/8	KQ2H16-03□P	24	23.6	30.6	23	20.6	81	67	11	39.2
	1/2	KQ2H16-04□P	27	23.6	32.1	21.7	20.6	113	67	13	55

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



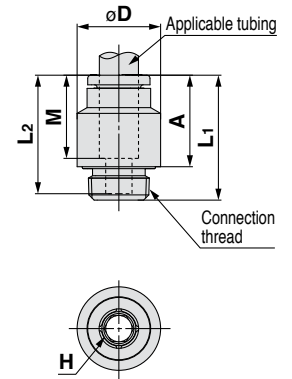
Hexagon Socket Head Male Connector: KQ2S (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 øD	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
									Nylon	Urethane		
ø4	1/8	KQ2S04-01□P	3	13	20.6	19.6	15.4	13.3	4.1	3.6	3.1	11.6
ø6	1/8	KQ2S06-01□P	4	13	19.8	18.8	14.6	13.3	10	10	4	9.6
	1/4	KQ2S06-02□P	4	18	19.8	18.8	12.2	13.3	10.7	10	4.1	16.3
ø8	1/8	KQ2S08-01□P	5	13	21.2	19.7	16	14.2	17.2	16.2	5.1	9
	1/4	KQ2S08-02□P	6	18	20.4	19.5	12.8	14.2	23.3	16.2	6.1	15.5
	3/8	KQ2S08-03□P	6	22	20.7	19.7	13.1	14.2	23.3	16.2	6.1	26.3
ø10	1/8	KQ2S10-01□P	5	18	23	21.1	17.8	15.6	17.2	16.2	5.1	17.8
	1/4	KQ2S10-02□P	8	18	28.8	20.1	21.2	15.6	39	26.6	8.1	19.2
	3/8	KQ2S10-03□P	8	22	21.1	20.1	13.5	15.6	39	26.6	8.1	23.4
	1/2	KQ2S10-04□P	8	26	21.1	20.1	10.7	15.6	39	26.6	8.1	40.6
ø12	1/4	KQ2S12-02□P	8	18.2	30.2	21.5	22.6	17	46	44.5	8.1	24.3
	3/8	KQ2S12-03□P	10	22	25.1	21.8	17.5	17	60	44.5	10.1	28.2
	1/2	KQ2S12-04□P	10	26	25.2	21.8	14.8	17	60	44.5	10.1	40.7
ø16	1/4	KQ2S16-02□P	8	23.6	30.6	25.1	23	20.6	46	46	8.1	35.1
	3/8	KQ2S16-03□P	10	23.6	30.6	25.4	23	20.6	81	67	10.1	27.9
	1/2	KQ2S16-04□P	12	26	32.1	26.1	21.7	20.6	113	67	12.1	48.2

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

*1 øD is maximum diameter.



Sealant/Gasket Seal

Sealant/Gasket Seal

Metric Size G

Face Seal

Face Seal

Face Seal

Gasket Seal

Gasket Seal

KQ2 Series

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

Dimensions

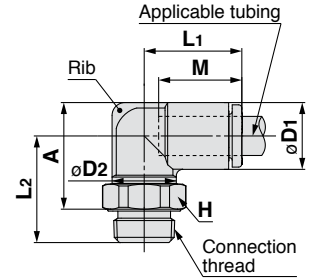
Male Elbow: KQ2L (Face seal)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	*1 øD1	øD2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
ø3.2	1/8	KQ2L23-01□P	12	7.1	10	14.5	16	14.3	13.3	3	2.5	2.5	5.1	—
	1/4	KQ2L23-02□P	17	7.1	10	14.5	19.4	15.3	13.3	3	2.5	2.5	14.3	—
ø4	1/8	KQ2L04-01□P	12	8.2	10	14.8	15.5	14.4	13.3	4.6	3.3	3	5.2	●
	1/4	KQ2L04-02□P	17	8.2	10	14.8	19.9	16.4	13.3	4.6	3.3	3	14.5	●
ø6	1/8	KQ2L06-01□P	12	10.4	10	15.5	16.6	16.6	13.3	11.4	9	4.5	5.7	—
	1/4	KQ2L06-02□P	17	10.4	10	15.5	21	18.6	13.3	11.4	9	4.5	15	—
ø8	3/8	KQ2L06-03□P	21	10.4	10	15.5	23	20.6	13.3	11.4	9	4.5	30.2	—
	1/8	KQ2L08-01□P	12	13.2	10	16.4	18	19.4	14.2	11.4	11.4	4.5	6.5	●
ø8	1/4	KQ2L08-02□P	17	13.2	12	17.2	22.4	21.4	14.2	21.6	14.9	6	13.7	●
	3/8	KQ2L08-03□P	21	13.2	12	17.2	24.4	23.4	14.2	21.6	14.9	6	28.7	●
ø10	1/8	KQ2L10-01□P	12	15.9	12	18.6	22.2	24.9	15.6	21.6	14.9	6	10.1	●
	1/4	KQ2L10-02□P	17	15.9	17	19.3	25.7	26.0	15.6	35.2	25	7.5	17.9	●
	3/8	KQ2L10-03□P	21	15.9	17	19.3	25.8	26.1	15.6	35.2	25	7.5	17.8	●
ø10	1/2	KQ2L10-04□P	27	15.9	17	19.3	30.6	28.1	15.6	35.2	25	7.5	45.1	●
	1/4	KQ2L12-02□P	17	18.5	17	21.5	27	28.6	17	50.2	39.7	9	19.6	●
	3/8	KQ2L12-03□P	21	18.5	17	21.5	27.1	28.7	17	50.2	39.7	9	19.7	●
ø12	1/2	KQ2L12-04□P	27	18.5	17	21.5	31.9	30.7	17	50.2	39.7	9	47	●
	1/4	KQ2L16-02□P	17	23.8	17	25.1	29.6	33.9	20.6	50.2	50.2	9	24	●
	3/8	KQ2L16-03□P	21	23.8	21	27.1	32.7	37.0	20.6	71	58.9	11	33.8	—
ø16	1/2	KQ2L16-04□P	27	23.8	21	27.1	34.7	36.2	20.6	100	58.9	13	59.9	—

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

*1 øD1 is maximum diameter.



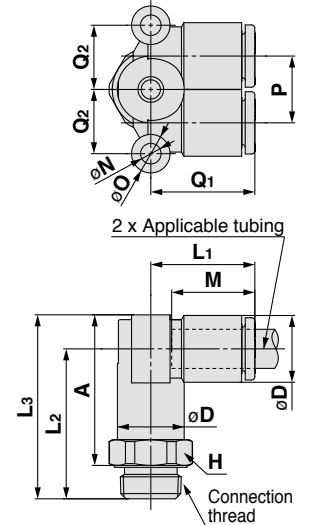
Branch Male Elbow: KQ2LU (Face seal)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	*1 øD	L1	L2	L3	A	M	P	O	N	Q1	Q2	Effective area [mm ²]		Min. port size	Weight [g]
															Nylon	Urethane		
ø4	1/8	KQ2LU04-01□P	12	8.2	15.8	22.6	26.7	21.5	13.3	8.2	6	3.2	15.8	7.9	6	4.1	3	9.5
	1/4	KQ2LU04-02□P	17	8.2	15.8	26	30.1	22.5	13.3	8.2	6	3.2	15.8	7.9	6	4.1	3	19.4
ø6	1/8	KQ2LU06-01□P	12	10.4	16.5	23.3	28.5	23.3	13.3	10.4	6	3.2	16.5	10	13.9	11	4.5	10.2
	1/4	KQ2LU06-02□P	17	10.4	16.5	26.7	31.9	24.3	13.3	10.4	6	3.2	16.5	10	13.9	11	4.5	19.8
	3/8	KQ2LU06-03□P	21	10.4	16.5	26.2	31.4	23.8	13.3	10.4	6	3.2	16.5	10	13.9	11	4.5	28.1
ø8	1/8	KQ2LU08-01□P	14	13.2	18.2	25	31.6	26.4	14.2	13.2	8	4.2	18.2	13.1	26.3	18.2	6	16.4
	1/4	KQ2LU08-02□P	17	13.2	18.2	28.4	35	27.4	14.2	13.2	8	4.2	18.2	13.1	26.3	18.2	6	22
ø8	3/8	KQ2LU08-03□P	21	13.2	18.2	27.9	34.5	26.9	14.2	13.2	8	4.2	18.2	13.1	26.3	18.2	6	30.4
	1/4	KQ2LU10-02□P	17	15.9	20.3	30.5	38.5	30.9	15.6	15.9	8	4.2	20.3	15.9	40.8	29	7.5	24.9
ø10	3/8	KQ2LU10-03□P	21	15.9	20.3	30	38	30.4	15.6	15.9	8	4.2	20.3	15.9	40.8	29	7.5	32.4
	1/2	KQ2LU10-04□P	27	15.9	20.3	32.3	40.3	29.9	15.6	15.9	8	4.2	20.3	15.9	40.8	29	7.5	50.5
ø12	1/4	KQ2LU12-02□P	21	18.5	22.5	32.7	41.9	34.3	17	18.5	8	4.2	22.5	17.9	57.2	45.2	9	39.3
	3/8	KQ2LU12-03□P	21	18.5	22.5	32.2	41.4	33.8	17	18.5	8	4.2	22.5	17.9	57.2	45.2	9	37
	1/2	KQ2LU12-04□P	27	18.5	22.5	34.5	43.7	33.3	17	18.5	8	4.2	22.5	17.9	57.2	45.2	9	52.5

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

*1 øD is maximum diameter.



KQ2 Series

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

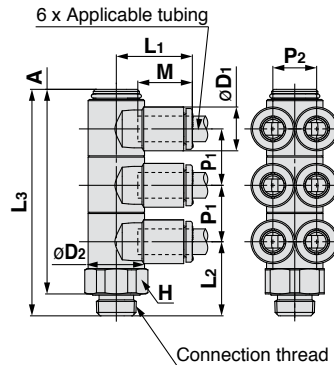
Dimensions

Triple Branch Universal Male Elbow: KQ2ZT (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 øD1	øD2	L1	L2	L3	A	M	P1	P2	Effective area [mm²]		Min. port size	Weight [g]
													Nylon	Urethane		
ø4	1/8	KQ2ZT04-01□P	14	8.2	13.4	18.5	17.6	53.8	48.6	13.3	13.4	8.2	4.7	4.7	3	29.9
	1/4	KQ2ZT04-02□P	17	8.2	13.4	18.5	21	57.2	49.6	13.3	13.4	8.2	4.7	4.7	3	39.2
	3/8	KQ2ZT04-03□P	21	8.2	13.4	18.5	23	59.2	51.6	13.3	13.4	8.2	4.7	4.7	3	56.8
ø6	1/8	KQ2ZT06-01□P	14	10.4	13.4	18.4	17.6	53.8	48.6	13.3	13.4	10.4	10.8	8.6	4.5	31.8
	1/4	KQ2ZT06-02□P	17	10.4	13.4	18.4	21	57.2	49.6	13.3	13.4	10.4	10.8	8.6	4.5	41.1
	3/8	KQ2ZT06-03□P	21	10.4	13.4	18.4	23	59.2	51.6	13.3	13.4	10.4	10.8	8.6	4.5	58.7
ø8	1/8	KQ2ZT08-01□P	19	13.2	17.6	21.2	21	63.8	58.6	14.2	15.9	13.2	20.5	14.2	6	72.5
	1/4	KQ2ZT08-02□P	19	13.2	17.6	21.2	23.4	66.2	58.6	14.2	15.9	13.2	20.5	14.2	6	66.3
	3/8	KQ2ZT08-03□P	21	13.2	17.6	21.2	24.4	67.2	59.6	14.2	15.9	13.2	20.5	14.2	6	78.2
	1/2	KQ2ZT08-04□P	27	13.2	17.6	21.2	29.2	72	61.6	14.2	15.9	13.2	20.5	14.2	6	118.3
ø10	1/4	KQ2ZT10-02□P	21	15.9	20.6	23.6	25.8	77	69.4	15.6	19.2	15.9	31.8	21.6	7.5	98.5
	3/8	KQ2ZT10-03□P	21	15.9	20.6	23.6	25.8	77	69.4	15.6	19.2	15.9	31.8	21.6	7.5	95.3
	1/2	KQ2ZT10-04□P	27	15.9	20.6	23.6	30.6	81.8	71.4	15.6	19.2	15.9	31.8	21.6	7.5	134.3
ø12	1/4	KQ2ZT12-02□P	26	18.5	25.2	26.8	29.1	86.7	79.1	17	21.6	18.5	44.6	35.3	9	171.5
	3/8	KQ2ZT12-03□P	26	18.5	25.2	26.8	29.1	86.7	79.1	17	21.6	18.5	44.6	35.3	9	158.3
	1/2	KQ2ZT12-04□P	27	18.5	25.2	26.8	31.9	89.5	79.1	17	21.6	18.5	44.6	35.3	9	168.3

□: A (Brass), N (Brass + Electroless nickel plating) *1 øD1 is maximum diameter.

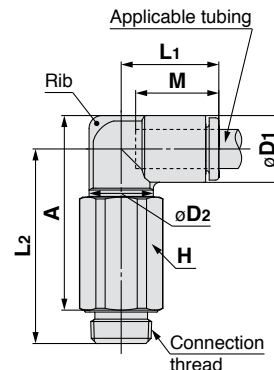


Extended Male Elbow: KQ2W (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 øD1	øD2	L1	L2	A	M	Effective area [mm²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
ø3.2	1/8	KQ2W23-01□P	12	7.1	10	14.5	29.6	28	13.3	2.8	2.4	2.5	15.3	—
	1/4	KQ2W23-02□P	17	7.1	10	14.5	31	27	13.3	2.8	2.4	2.5	34.6	—
ø4	1/8	KQ2W04-01□P	12	8.2	10	14.8	29.2	28.1	13.3	4	4	3	15.5	●
	1/4	KQ2W04-02□P	17	8.2	10	14.8	31.5	28	13.3	4	4	3	34.9	●
ø6	1/8	KQ2W06-01□P	12	10.4	10	15.5	30.3	30.3	13.3	10.9	8.6	4.5	15.9	—
	1/4	KQ2W06-02□P	17	10.4	10	15.5	32.6	30.2	13.3	10.9	8.6	4.5	35.3	—
ø8	3/8	KQ2W06-03□P	21	10.4	10	15.5	34.6	32.2	13.3	10.9	8.6	4.5	62.8	—
	1/8	KQ2W08-01□P	12	13.2	10	16.4	31.7	33.1	14.2	10.9	10.9	4.5	16.7	●
ø8	1/4	KQ2W08-02□P	17	13.2	12	17.2	36.1	35.1	14.2	20.5	14.2	6	35.4	●
	3/8	KQ2W08-03□P	21	13.2	12	17.2	38.1	37.1	14.2	20.5	14.2	6	64.7	●
ø10	1/4	KQ2W10-02□P	17	15.9	17	19.3	50.1	50.5	15.6	33.5	23.8	7.5	54.3	●
	3/8	KQ2W10-03□P	21	15.9	17	19.3	44.7	45.1	15.6	33.5	23.8	7.5	57.8	●
ø10	1/2	KQ2W10-04□P	27	15.9	17	19.3	49.5	47.1	15.6	33.5	23.8	7.5	122.8	●
	1/4	KQ2W12-02□P	17	18.5	17	21.5	51.4	53.1	17	47.7	37.7	9	56	●
ø12	3/8	KQ2W12-03□P	21	18.5	17	21.5	46	47.7	17	47.7	37.7	9	59.7	●
	1/2	KQ2W12-04□P	27	18.5	17	21.5	50.8	49.7	17	47.7	37.7	9	124.6	●
ø16	1/4	KQ2W16-02□P	17	23.8	17	25.1	54.1	58.4	20.6	47.7	47.7	9	60.4	●
	3/8	KQ2W16-03□P	22	23.8	21	27.1	57	61.3	20.6	71	58.9	11	89.1	—
ø16	1/2	KQ2W16-04□P	27	23.8	21	27.1	59	60.5	20.6	100	58.9	13	155.9	—

□: A (Brass), N (Brass + Electroless nickel plating) *1 øD1 is maximum diameter.

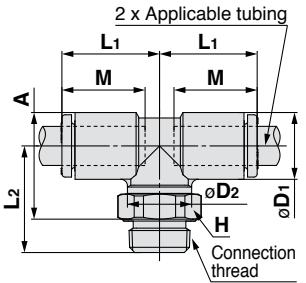


Dimensions

Male Branch Tee: KQ2T (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD ₁ *1	øD ₂	L ₁	L ₂	A	M	Effective area [mm ²]		Min. port size	Weight [g]
										Nylon	Urethane		
ø3.2	1/8	KQ2T23-01□P	12	7.1	10	14.5	15.9	14.3	13.3	3.4	2.9	2.5	5.7
	1/4	KQ2T23-02□P	17	7.1	10	14.5	19.3	15.3	13.3	3.4	2.9	2.5	14.9
ø4	1/8	KQ2T04-01□P	12	8.2	10	14.8	15.5	14.4	13.3	6	4.1	3	5.9
	1/4	KQ2T04-02□P	17	8.2	10	14.8	19.9	16.4	13.3	6	4.1	3	15.2
ø6	1/8	KQ2T06-01□P	12	10.4	10	15.5	16.6	16.6	13.3	13.9	11	4.5	6.6
	1/4	KQ2T06-02□P	17	10.4	10	15.5	21	18.6	13.3	13.9	11	4.5	15.9
	3/8	KQ2T06-03□P	21	10.4	10	15.5	23	20.6	13.3	13.9	11	4.5	31.1
ø8	1/8	KQ2T08-01□P	12	13.2	10	16.4	18	19.4	14.2	14	14	4.5	8.3
	1/4	KQ2T08-02□P	17	13.2	12	17.2	22.4	21.4	14.2	26.3	18.2	6	15.5
	3/8	KQ2T08-03□P	21	13.2	12	17.2	24.4	23.4	14.2	26.3	18.2	6	30.4
ø10	1/8	KQ2T10-01□P	12	15.9	12	18.6	22.1	24.9	15.6	21.6	14.9	6	12.9
	1/4	KQ2T10-02□P	17	15.9	17	19.3	25.6	26	15.6	35.2	25	7.5	20.5
	3/8	KQ2T10-03□P	21	15.9	17	19.3	25.7	26.1	15.6	35.2	25	7.5	20.4
	1/2	KQ2T10-04□P	27	15.9	17	19.3	30.5	28.1	15.6	35.2	25	7.5	47.7
ø12	1/4	KQ2T12-02□P	17	18.5	17	21.5	26.9	28.6	17	57.2	45.2	9	23.5
	3/8	KQ2T12-03□P	21	18.5	17	21.5	27	28.7	17	57.2	45.2	9	23.6
	1/2	KQ2T12-04□P	27	18.5	17	21.5	31.8	30.7	17	57.2	45.2	9	50.8
ø16	1/4	KQ2T16-02□P	17	23.8	17	25.1	29.6	33.9	20.6	57.2	57.2	9	31.7
	3/8	KQ2T16-03□P	21	23.8	21	27.1	32.7	37	20.6	71	58.9	11	40.8
	1/2	KQ2T16-04□P	27	23.8	21	27.1	34.7	36.2	20.6	100	58.9	13	66.8

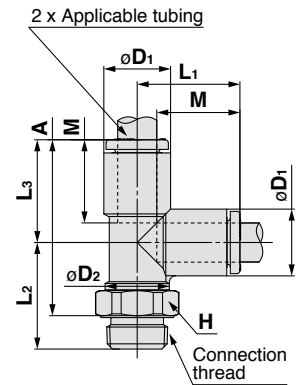


□: A (Brass), N (Brass + Electroless nickel plating) *1 øD₁ is maximum diameter.

Male Run Tee: KQ2Y (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	øD ₁ *1	øD ₂	L ₁	L ₂	L ₃	A	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
ø3.2	1/8	KQ2Y23-01□P	12	7.1	10	14.9	15.9	14.9	25.7	13.3	3.4	2.9	2.5	5.7
	1/4	KQ2Y23-02□P	17	7.1	10	14.9	19.3	14.9	26.7	13.3	3.4	2.9	2.5	14.9
ø4	1/8	KQ2Y04-01□P	12	8.2	10	15.3	15.5	15.3	25.6	13.3	6.4	4.4	3	6
	1/4	KQ2Y04-02□P	17	8.2	10	15.3	19.9	15.3	27.6	13.3	6.4	4.4	3	15.2
ø6	1/8	KQ2Y06-01□P	12	10.4	10	16.3	16.6	16.3	27.7	13.3	13.4	10.6	4.5	6.7
	1/4	KQ2Y06-02□P	17	10.4	10	16.3	21	16.3	29.7	13.3	13.4	10.6	4.5	16
	3/8	KQ2Y06-03□P	21	10.4	10	16.3	23	16.3	31.7	13.3	13.4	10.6	4.5	31.2
ø8	1/8	KQ2Y08-01□P	12	13.2	10	18.2	18	18.2	31	14.2	13.4	13.4	4.5	8.4
	1/4	KQ2Y08-02□P	17	13.2	12	18.2	22.4	18.2	33	14.2	25.6	17.7	6	15.6
	3/8	KQ2Y08-03□P	21	13.2	12	18.2	24.4	18.2	35	14.2	25.6	17.7	6	30.5
ø10	1/8	KQ2Y10-01□P	12	15.9	12	20.6	22.1	20.6	37.6	15.6	40	28.4	6	13
	1/4	KQ2Y10-02□P	17	15.9	17	20.6	25.6	20.6	38.7	15.6	40	28.4	7.5	20.7
	3/8	KQ2Y10-03□P	21	15.9	17	20.6	25.7	20.6	38.8	15.6	40	28.4	7.5	20.6
	1/2	KQ2Y10-04□P	27	15.9	17	20.6	30.5	20.6	40.8	15.6	40	28.4	7.5	47.9
ø12	1/4	KQ2Y12-02□P	17	18.5	17	23	26.9	23	42.4	17	57.4	45.4	9	23.8
	3/8	KQ2Y12-03□P	21	18.5	17	23	27	23	42.5	17	57.4	45.4	9	23.8
	1/2	KQ2Y12-04□P	27	18.5	17	23	31.8	23	44.5	17	57.4	45.4	9	51.1
ø16	1/4	KQ2Y16-02□P	17	23.8	17	28.6	29.6	28.6	50.6	20.6	57.4	45.4	9	32.2
	3/8	KQ2Y16-03□P	21	23.8	21	28.6	32.7	28.6	53.7	20.6	81	60	11	41.3
	1/2	KQ2Y16-04□P	27	23.8	21	28.6	34.7	28.6	52.9	20.6	113	60	13	67.3



□: A (Brass), N (Brass + Electroless nickel plating) *1 øD₁ is maximum diameter.

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

KQ2 Series

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

Dimensions

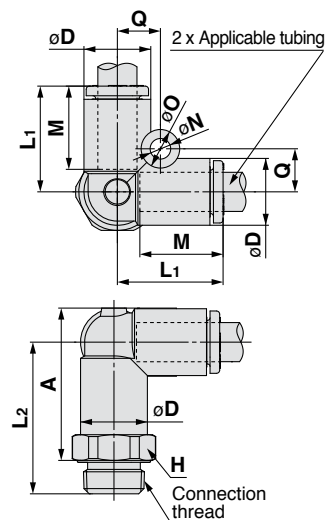
Male Delta Union: KQ2D (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 øD	L1	L2	A	M	Q	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
ø4	1/8	KQ2D04-01□P	12	8.2	15.8	22.6	21.5	13.3	5.7	6	3.2	6	6	3.6	9.1
	1/4	KQ2D04-02□P	17	8.2	15.8	26	22.5	13.3	5.7	6	3.2	6	6	3.6	19
ø6	1/8	KQ2D06-01□P	12	10.4	16.8	23.6	23.6	13.3	6.7	6	3.2	13.9	11	5.4	9.7
	1/4	KQ2D06-02□P	17	10.4	16.8	27	24.6	13.3	6.7	6	3.2	13.9	11	5.4	19.3
	3/8	KQ2D06-03□P	21	10.4	16.8	26.5	24.1	13.3	6.7	6	3.2	13.9	11	5.4	27.6
ø8	1/8	KQ2D08-01□P	14	13.2	18.8	25.6	27	14.2	8.4	8	4.2	26.3	18.2	6	15.2
	1/4	KQ2D08-02□P	17	13.2	18.8	29	28	14.2	8.4	8	4.2	26.3	18.2	7.3	20.9
	3/8	KQ2D08-03□P	21	13.2	18.8	28.5	27.5	14.2	8.4	8	4.2	26.3	18.2	7.3	29.3
ø10	1/4	KQ2D10-02□P	17	15.9	21.2	31.4	31.7	15.6	9.6	8	4.2	40.8	29	9	23.2
	3/8	KQ2D10-03□P	21	15.9	21.2	30.9	31.2	15.6	9.6	8	4.2	40.8	29	9.4	30.7
	1/2	KQ2D10-04□P	27	15.9	21.2	33.2	30.7	15.6	9.6	8	4.2	40.8	29	9.4	48.8
ø12	1/4	KQ2D12-02□P	21	18.5	23.6	33.8	35.4	17	10.7	8	4.2	57.2	45.2	9	36.6
	3/8	KQ2D12-03□P	21	18.5	23.6	33.3	34.9	17	10.7	8	4.2	57.2	45.2	11	34.3
	1/2	KQ2D12-04□P	27	18.5	23.6	35.6	34.4	17	10.7	8	4.2	57.2	45.2	11.6	49.8

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

*1 øD is maximum diameter.



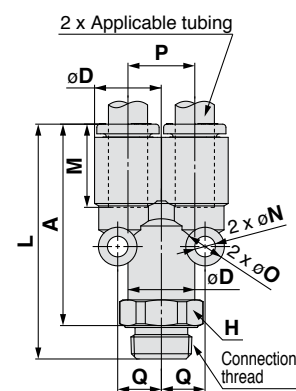
Branch “Y”: KQ2U (Face seal)



Applicable tubing O.D. [mm]	Connection thread R	Model	H (Width across flats)	*1 øD	L	A	M	P	Q	øO	øN	Effective area [mm ²]		Min. port size	Weight [g]
												Nylon	Urethane		
ø3.2	1/8	KQ2U23-01□P	12	7.1	35.7	30.5	13.3	7.1	5.2	6	3.2	3.4	2.9	2.7	9
	1/4	KQ2U23-02□P	17	7.1	39.1	31.5	13.3	7.1	5.2	6	3.2	3.4	2.9	2.7	19
ø4	1/8	KQ2U04-01□P	12	8.2	35.8	30.6	13.3	8.2	5.7	6	3.2	4.2	4.2	3.6	9.3
	1/4	KQ2U04-02□P	17	8.2	39.2	31.6	13.3	8.2	5.7	6	3.2	4.2	4.2	3.6	19.2
ø6	1/8	KQ2U06-01□P	12	10.4	36.9	31.7	13.3	10.4	6.8	6	3.2	13.4	10.6	5.4	9.9
	1/4	KQ2U06-02□P	17	10.4	40.3	32.7	13.3	10.4	6.8	6	3.2	13.4	10.6	5.4	19.5
	3/8	KQ2U06-03□P	21	10.4	39.8	32.2	13.3	10.4	6.8	6	3.2	13.4	10.6	5.4	27.8
ø8	1/8	KQ2U08-01□P	14	13.2	40	34.8	14.2	13.2	8.7	8	4.2	25.6	17.7	6	15.8
	1/4	KQ2U08-02□P	17	13.2	43.4	35.8	14.2	13.2	8.7	8	4.2	25.6	17.7	7.3	21.4
	3/8	KQ2U08-03□P	21	13.2	42.9	35.3	14.2	13.2	8.7	8	4.2	25.6	17.7	7.3	29.8
ø10	1/4	KQ2U10-02□P	17	15.9	47.3	39.7	15.6	15.9	10.1	8	4.2	40	28.4	9	23.9
	3/8	KQ2U10-03□P	21	15.9	46.8	39.2	15.6	15.9	10.1	8	4.2	40	28.4	9.4	31.4
	1/2	KQ2U10-04□P	27	15.9	49.1	38.7	15.6	15.9	10.1	8	4.2	40	28.4	9.4	49.5
ø12	1/4	KQ2U12-02□P	21	18.5	51.3	43.7	17	18.5	11.4	8	4.2	57.4	45.4	9	37.6
	3/8	KQ2U12-03□P	21	18.5	50.8	43.2	17	18.5	11.4	8	4.2	57.4	45.4	11	35.2
	1/2	KQ2U12-04□P	27	18.5	53.1	42.7	17	18.5	11.4	8	4.2	57.4	45.4	11.6	50.8
ø16	1/4	KQ2U16-02□P	24	23.8	60.7	53.1	20.6	23.8	14	8	4.2	57.4	45.4	9	68.2
	3/8	KQ2U16-03□P	24	23.8	60.2	52.6	20.6	23.8	14	8	4.2	81	60	11	64.7
	1/2	KQ2U16-04□P	27	23.8	62.5	52.1	20.6	23.8	14	8	4.2	113	60	13	70

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

*1 øD is maximum diameter.





Dimensions

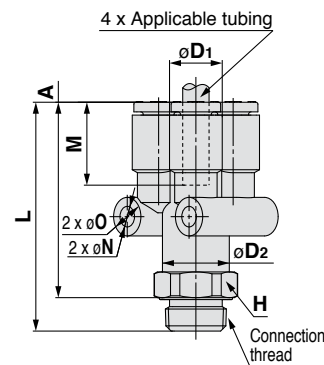
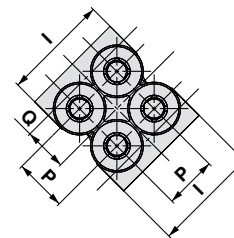
Double Branch "Y": KQ2UD (Face seal)



Applicable tubing O.D. (mm)	Connection thread R	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L	I	A	M	P	Q	ϕO	ϕN	Effective area (mm ²)		Min. port size	Weight [g]
														Nylon	Urethane		
$\phi 4$	1/8	KQ2UD04-01□P	12	8.2	10.4	36	16.6	30.8	13.3	8.2	6.8	6	3.2	4.2	4.2	5.4	11.3
	1/4	KQ2UD04-02□P	17	8.2	10.4	39.4	16.6	31.8	13.3	8.2	6.8	6	3.2	4.2	4.2	5.4	20.8
$\phi 6$	1/8	KQ2UD06-01□P	14	10.4	13.2	38.8	21	33.6	13.3	10.4	8.2	6	3.2	13.4	10.6	6	16.4
	1/4	KQ2UD06-02□P	17	10.4	13.2	42.2	21	34.6	13.3	10.4	8.2	6	3.2	13.4	10.6	7.3	22.1

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

*1 ϕD_1 is maximum diameter.

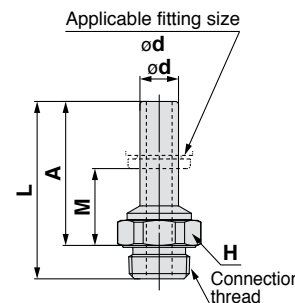


Adapter: KQ2N (Face seal)



Applicable fitting size ϕd	Connection thread R	Model	H (Width across flats)	L	A	M	Min. port size	Weight [g]
$\phi 4$	1/8	KQ2N04-01□P	12	27.6	22.4	9.1	2.5	4.4
	1/4	KQ2N04-02□P	17	27.6	22.4	9.1	4	4.6
$\phi 6$	1/8	KQ2N06-01□P	12	27.6	22.4	9.1	4	13.8
	1/4	KQ2N06-02□P	17	31	23.4	10.1	6	11.8
$\phi 8$	1/4	KQ2N08-02□P	17	32.9	25.3	11.1	6	26.7
	3/8	KQ2N08-03□P	21	34.9	27.3	13.1	7.5	14.7
$\phi 10$	3/8	KQ2N10-03□P	21	36.8	29.2	13.6		

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



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

Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: NPT

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

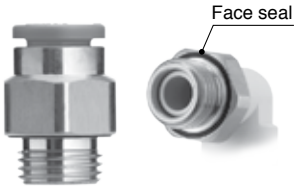
Can be used for a wide range of pressures from a low vacuum up to a pressure of 145 psi [1 MPa].

The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Face seal method

Seal ring

Piping installability is improved by changing to the face seal structure.



Face seal

Release button

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

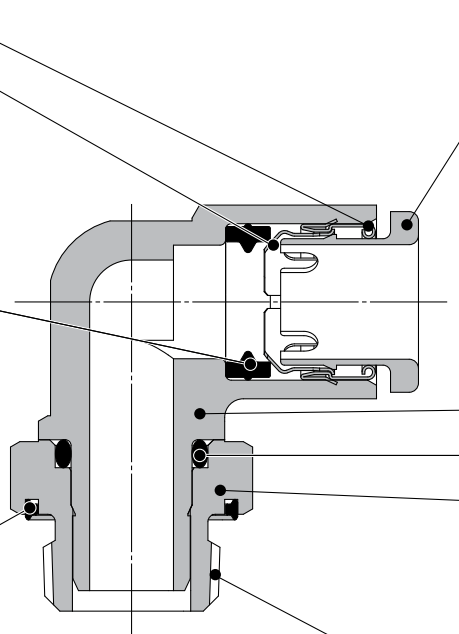
Stud

Effective when piping in a confined space.

Body part rotates allowing for positioning.

Connection thread

NPT



One-touch IN/OUT connection.

Possible to use in vacuum to -14.5 psi [-100 kPa].

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



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø1/8", ø5/32", ø3/16", ø1/4", ø5/16", ø3/8", ø1/2"

Specifications

Fluid		Air, Water*1
Operating pressure range*2		-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])		435 psi [3 MPa]
Ambient and fluid temperature		23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)
Thread	Mounting section	ANSI/ASME1.20.1 (NPT thread) JIS B0208 (UNF thread)
	Nut section	JIS B0208 (UNF thread)
Sealant on the threads		Seal ring

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

*2 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 05 - 34 A P

One-touch fittings

Face seal

Model

Symbol	Model
H	Male connector
S	Hexagon socket head male connector
L	Male elbow
K	45° male elbow
V	Universal male elbow
VS	Hexagon socket head universal male elbow
VF	Universal female elbow
VD	Double universal male elbow
VT	Triple universal male elbow
Z	Branch universal male elbow
ZD	Double branch universal male elbow
ZT	Triple branch universal male elbow
W	Extended male elbow
T	Male branch tee
Y	Male run tee
U	Branch "Y"

Thread material/Surface treatment

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

Port size/Applicable tubing O.D.

Symbol	Size
33	NPT1/16
34	NPT1/8
35	NPT1/4
36	NPT3/8
37	NPT1/2

Applicable tubing O.D.

Symbol	Size
01	ø1/8"
03	ø5/32"
05	ø3/16"
07	ø1/4"
09	ø5/16"
11	ø3/8"
13	ø1/2"

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

Inch Size One-touch Fittings

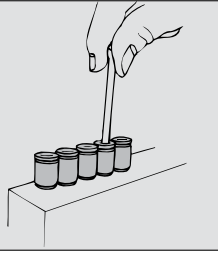
Round Type Variations

Hexagon socket head male connector

KQ2S P.188



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

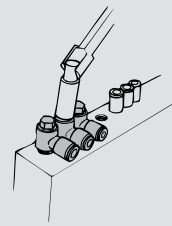


Universal male elbow

KQ2V P.190



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

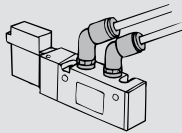


45° male elbow

KQ2K P.189



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

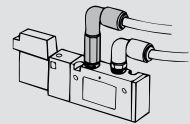


Extended male elbow

KQ2W P.193



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.188



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

Double universal male elbow

KQ2VD P.191



Use to two-branch a female thread at right angles. Two individual parts rotate 360°.

Triple branch universal male elbow

KQ2ZT P.192



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

Male elbow

KQ2L P.189



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

Triple universal male elbow

KQ2VT P.191



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

Male branch tee

KQ2T P.193



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

Hexagon socket head universal male elbow

KQ2VS P.190



Hexagon socket on the top allows tightening with a hexagon wrench in confined spaces.

Branch universal male elbow

KQ2Z P.191



Hexagon head of the body allows tightening with a box wrench. Use for branch connections.

Male run tee

KQ2Y P.194



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

Universal female elbow

KQ2VF P.190



Use to branch a male or female thread in the same direction and at a 90° angle. Multiple connections possible.

Double branch universal male elbow

KQ2ZD P.192



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

Branch "Y"

KQ2U P.194



Use to branch a female thread in the same direction.



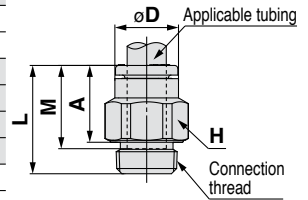
Dimensions

Male Connector: KQ2H (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	øD	L	A	M	Effective area [mm ²]		Min. port size	Weight [g]
								Nylon	Urethane		
ø1/8	1/16	KQ2H01-33□P	11.11	6.7	16.8	11.4	13.3	3	2.5	2.5	14.9
	1/8	KQ2H01-34□P	12.7	6.7	14.3	8.9	13.3	3	2.5	2.5	8.7
	1/4	KQ2H01-35□P	17.46	6.7	15.6	7.5	13.3	3.4	2.9	2.5	16.6
ø5/32	1/16	KQ2H03-33□P	11.11	7.7	19	13.6	13.3	4.8	3.4	3	13.9
	1/8	KQ2H03-34□P	12.7	7.7	16.4	11	13.3	4.8	3.4	3	7.6
	1/4	KQ2H03-35□P	17.46	7.7	15.6	7.5	13.3	4.8	3.4	3	16
ø3/16	1/8	KQ2H05-34□P	12.7	8.3	16.9	11.5	13.3	7.8	6.5	3.6	7.8
	1/4	KQ2H05-35□P	17.46	8.3	15.6	7.5	13.3	7.8	6.5	3.5	15.3
ø1/4	1/16	KQ2H07-33□P	11.11	10.9	19.9	14.5	13.3	13.5	11.5	3.5	6.4
	1/8	KQ2H07-34□P	12.7	10.9	19.5	14.1	13.3	13.5	11.5	4.6	9.4
	1/4	KQ2H07-35□P	17.46	10.9	15.6	7.5	13.3	13.5	11.5	4.6	13.6
	3/8	KQ2H07-36□P	22	10.9	15.1	7	13.3	13.5	11.5	4.6	22.5
ø5/16	1/8	KQ2H09-34□P	17.46	13	21.3	15.9	14.2	26.1	18	6	17.8
	1/4	KQ2H09-35□P	17.46	13	20.5	12.4	14.2	26.1	18	6	15.7
	3/8	KQ2H09-36□P	22	13	15.2	7.1	14.2	26.1	18	6	20
ø3/8	1/8	KQ2H11-34□P	17.46	15.1	23.1	17.7	15.6	26	26	6	18.4
	1/4	KQ2H11-35□P	17.46	15.1	24.5	16.4	15.6	35.3	29.1	7	19.8
	3/8	KQ2H11-36□P	22	15.1	21.7	13.6	15.6	35.3	29.1	7	26.3
	1/2	KQ2H11-37□P	28.57	15.1	16.9	6.5	15.6	35.3	29.1	7	36.5
ø1/2	1/4	KQ2H13-35□P	22	19	27.1	19	17	58.5	51.7	9	29.7
	3/8	KQ2H13-36□P	22	19	26.2	18.1	17	66	51.7	9.6	31.8
	1/2	KQ2H13-37□P	28.57	19	25.8	15.4	17	66	51.7	9.6	52.5

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



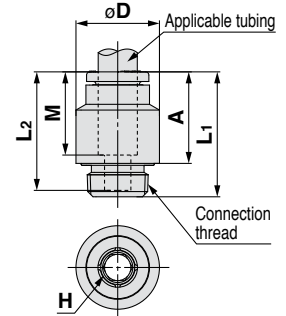
Hexagon Socket Head Male Connector: KQ2S (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 øD	L ₁	L ₂	A	M	Effective area [mm ²]		Min. port size	Weight [g]
									Nylon	Urethane		
ø5/32	1/16	KQ2S03-33□P	2.78	12	19	16.3	13.6	13.3	4.1	3.6	2.8	7.5
	1/8	KQ2S03-34□P	2.78	14	17.3	16.3	11.9	13.3	4.1	3.6	2.8	9.2
ø3/16	1/8	KQ2S05-34□P	3.57	14	19.8	18.8	14.4	13.3	7.8	6.5	3.6	11.7
	1/16	KQ2S07-33□P	2.78	12	19.9	16.3	14.5	13.3	8.4	8.4	2.8	7.1
ø1/4	1/8	KQ2S07-34□P	4.76	14	19.8	18.8	14.4	13.3	13.5	11.5	4.8	10.6
	1/4	KQ2S07-35□P	4.76	18	19.8	18.8	11.7	13.3	13.5	11.5	4.8	15.6
	3/8	KQ2S07-36□P	4.76	22	19.8	18.8	11.7	13.3	13.5	11.5	4.8	26.4
ø5/16	1/8	KQ2S09-34□P	5.56	13	20.9	19.7	15.5	14.2	17.2	16.2	5.6	8.6
	1/4	KQ2S09-35□P	6.35	18	20.7	19.7	12.6	14.2	23.3	16.2	6.4	15.3
	3/8	KQ2S09-36□P	6.35	22	20.7	19.7	12.6	14.2	23.3	16.2	6.4	25
ø3/8	1/8	KQ2S11-34□P	5.56	15.1	23.1	21.1	17.7	15.6	22.7	22.7	5.6	12.1
	1/4	KQ2S11-35□P	6.35	18	24.5	21.1	16.4	15.6	29.6	29.1	6.4	19.9
	3/8	KQ2S11-36□P	6.35	22	22.1	21.1	14	15.6	29.6	29.1	6.4	26.8
	1/2	KQ2S11-37□P	6.35	26	22.1	21.1	11.7	15.6	29.6	29.1	6.4	42.8
ø1/2	1/4	KQ2S13-35□P	8	19	31.2	22.5	23.1	17	48	48	8.1	23.9
	3/8	KQ2S13-36□P	9.53	22	26.2	22.5	18.1	17	66	51.7	9.6	30.2
	1/2	KQ2S13-37□P	9.53	26	25.6	22.5	15.2	17	66	51.7	9.6	43.6

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

*1 øD is maximum diameter.



KQ2 Series

Applicable Tubing: Inch Size, Connection Thread: NPT

Dimensions

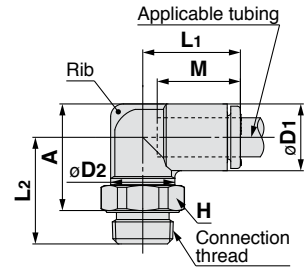
Male Elbow: KQ2L (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
$\phi 1/8$	1/16	KQ2L01-33□P	11.11	7.1	10	14.5	21.6	19.8	13.3	3	2.5	2.5	14.6	—
	1/8	KQ2L01-34□P	12.7	7.1	10	14.5	16.7	14.9	13.3	3	2.5	2.5	6.1	—
	1/4	KQ2L01-35□P	17.46	7.1	10	14.5	21.4	16.9	13.3	3	2.5	2.5	18.3	—
$\phi 5/32$	1/16	KQ2L03-33□P	11.11	8.2	10	14.8	21.1	19.8	13.3	4.6	3.3	3	14.9	●
	1/8	KQ2L03-34□P	12.7	8.2	10	14.8	16.2	14.9	13.3	4.6	3.3	3	6.3	●
	1/4	KQ2L03-35□P	17.46	8.2	10	14.8	21.9	17.9	13.3	4.6	3.3	3	18.5	●
$\phi 3/16$	1/8	KQ2L05-34□P	12.7	9.1	10	15	16.7	15.8	13.3	6.8	5.6	3.5	6.5	—
	1/4	KQ2L05-35□P	17.46	9.1	10	15	22.4	18.8	13.3	6.8	5.6	3.5	18.7	—
$\phi 1/4$	1/16	KQ2L07-33□P	11.11	11.1	10	15.6	22.6	22.7	13.3	6.8	6.8	3.5	8	●
	1/8	KQ2L07-34□P	12.7	11.1	10	15.6	17.7	17.8	13.3	11.3	10	4.5	6.8	●
	1/4	KQ2L07-35□P	17.46	11.1	10	15.6	23.4	20.8	13.3	11.3	10	4.5	19	●
	3/8	KQ2L07-36□P	22	11.1	10	15.6	23.9	21.3	13.3	11.3	10	4.5	32.5	●
$\phi 5/16$	1/8	KQ2L09-34□P	12.7	13.2	10	16.4	18.7	19.9	14.2	11.4	11.4	4.5	7.5	●
	1/4	KQ2L09-35□P	17.46	13.2	12	17.2	23.4	21.9	14.2	21.6	14.9	6	15.7	●
	3/8	KQ2L09-36□P	22	13.2	12	17.2	24.9	23.4	14.2	21.6	14.9	6	30.8	●
$\phi 3/8$	1/8	KQ2L11-34□P	12.7	15.4	12	18.6	22.2	24.5	15.6	21.2	21.2	6	10.7	●
	1/4	KQ2L11-35□P	17.46	15.4	17	19.3	25.4	24.9	15.6	28.8	23.8	7.5	18.1	●
	3/8	KQ2L11-36□P	22	15.4	17	19.3	26.1	25.6	15.6	28.8	23.8	7.5	19	●
	1/2	KQ2L11-37□P	28.57	15.4	17	19.3	31.4	28.6	15.6	28.8	23.8	7.5	53.9	●
$\phi 1/2$	1/4	KQ2L13-35□P	17.46	19.3	17	21.5	27.3	28.8	17	50.3	44.4	9	20.4	—
	3/8	KQ2L13-36□P	22	19.3	17	21.8	28.2	29.7	17	56	44.4	9.5	34.7	—
	1/2	KQ2L13-37□P	28.57	19.3	17	21.8	33.3	32.5	17	56	44.4	9.5	76.4	—

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

*1 ϕD_1 is maximum diameter.



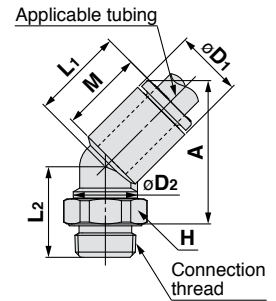
45° Male Elbow: KQ2K (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	A	M	Effective area [mm ²]		Min. port size	Weight [g]
										Nylon	Urethane		
$\phi 1/8$	1/8	KQ2K01-34□P	12.7	7.1	10	14.3	12.7	19.6	13.3	3	2.5	2.5	5.9
$\phi 5/32$	1/8	KQ2K03-34□P	12.7	8.2	10	14.4	12.7	20	13.3	4.8	3.4	3	6.1
$\phi 3/16$	1/8	KQ2K05-34□P	12.7	9.1	10	14.5	13.2	20.9	13.3	6.8	5.6	3.5	6.3
	1/8	KQ2K07-34□P	12.7	11.1	10	14.8	15.2	23.6	13.3	11.3	10	4.5	6.7
$\phi 1/4$	1/4	KQ2K07-35□P	17.46	11.1	10	14.8	19.9	25.6	13.3	11.3	10	4.5	18.9
	3/8	KQ2K07-36□P	22	11.1	10	14.8	20.4	26.1	13.3	11.3	10	4.5	32.4
$\phi 5/16$	1/8	KQ2K09-34□P	12.7	13.2	10	16	15.7	25.7	14.2	11.3	11.3	4.5	7.4
	1/4	KQ2K09-35□P	17.46	13.2	12	16	20.4	27.7	14.2	19.7	19.7	6	15.5
	3/8	KQ2K09-36□P	22	13.2	12	16	21.9	29.2	14.2	19.7	19.7	6	30.6
$\phi 3/8$	1/8	KQ2K11-34□P	12.7	15.4	12	18.1	20.1	32.3	15.6	21.2	21.2	6	10.6
	1/4	KQ2K11-35□P	17.46	15.4	17	17.7	25.4	34.6	15.6	28.8	23.8	7	18.2
	3/8	KQ2K11-36□P	22	15.4	17	17.7	20.4	29.6	15.6	28.8	23.8	7	18.4
	1/2	KQ2K11-37□P	28.57	15.4	17	17.7	25.7	32.6	15.6	28.8	23.8	7	53.4
$\phi 1/2$	1/4	KQ2K13-35□P	17.46	19.3	17	19.4	25.5	37.2	17	50.3	44.4	9	20.2
	3/8	KQ2K13-36□P	22	19.3	17	19.4	25.5	37.2	17	56	44.4	9.5	34.4
	1/2	KQ2K13-37□P	28.57	19.3	17	19.4	30.6	40	17	56	44.4	9.5	76.1

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

*1 ϕD_1 is maximum diameter.



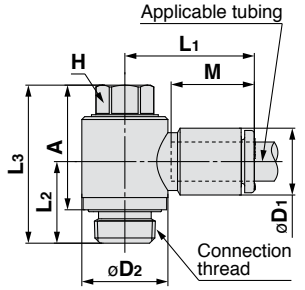


Dimensions

Universal Male Elbow: KQ2V (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 øD1	øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
ø1/8	1/8	KQ2V01-34□P	8	7.1	14	19.3	12.9	24.8	19.4	13.3	2.2	1.9	2.5	13.1
ø5/32	1/8	KQ2V03-34□P	8	8.2	14	19.3	12.9	24.8	19.4	13.3	2.9	2.9	3	13.2
ø3/16	1/8	KQ2V05-34□P	8	9.1	14	19.6	12.9	24.8	19.4	13.3	4.5	3.7	3.5	13.4
ø1/4	1/8	KQ2V07-34□P	8	11.1	14	20.6	12.9	24.8	19.4	13.3	7.5	6.6	4.5	13.7
	1/4	KQ2V07-35□P	8	11.1	18	19.9	17.4	30.8	22.7	13.3	7.5	6.6	4.5	23.9
ø5/16	1/8	KQ2V09-34□P	11.11	13.2	17.6	23.5	14.3	26.8	21.4	14.2	16	11.2	6	22.4
	1/4	KQ2V09-35□P	11.11	13.2	18	23.5	17.2	29.7	21.6	14.2	16	11.2	6	27.2
	3/8	KQ2V09-36□P	12.7	13.2	22	23.1	17.9	33.7	25.6	14.2	16	11.2	6	41.3
ø3/8	1/4	KQ2V11-35□P	12.7	15.4	20.6	25.8	18.3	33.6	25.5	15.6	23.4	19.3	7	35.7
	3/8	KQ2V11-36□P	12.7	15.4	22	25.8	18.4	33.7	25.6	15.6	23.4	19.3	7	42.4
ø1/2	3/8	KQ2V13-36□P	17.46	19.3	27	30.5	18.6	33.5	25.4	17	38.8	34.3	7.5	65.1
	1/2	KQ2V13-37□P	17.46	19.3	27	30.5	21.3	36.2	25.8	17	38.8	34.3	9	75.2



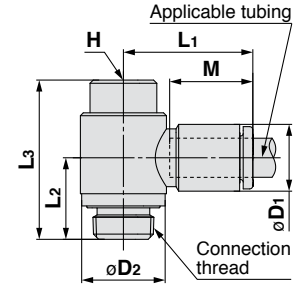
□: A (Brass), N (Brass + Electroless nickel plating)

*1 øD1 is maximum diameter.

Hexagon Socket Head Universal Male Elbow: KQ2VS (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 øD1	øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
ø1/8	1/8	KQ2VS01-34□P	6.35	7.1	14	19.3	12.9	25	19.6	13.3	2.2	1.9	2.5	12.7
ø5/32	1/8	KQ2VS03-34□P	6.35	8.2	14	19.3	12.9	25	19.6	13.3	2.9	2.9	3	12.8
ø3/16	1/8	KQ2VS05-34□P	6.35	9.1	14	19.6	12.9	25	19.6	13.3	4.5	3.7	3.5	13.1
ø1/4	1/8	KQ2VS07-34□P	6.35	11.1	14	20.6	12.9	25	19.6	13.3	7.7	6.6	4.6	13.4
	1/4	KQ2VS07-35□P	6.35	11.1	18	19.9	17.4	26.8	18.7	13.3	7.7	6.6	4.6	20.9
ø5/16	1/8	KQ2VS09-34□P	8	13.2	17.6	23.5	14.3	25.2	19.8	14.2	16	11.2	6	19.6
	1/4	KQ2VS09-35□P	8	13.2	18	23.5	17.2	28.2	20.1	14.2	16	11.2	6	24.5
	3/8	KQ2VS09-36□P	8	13.2	22	23.1	17.9	29.8	21.7	14.2	16	11.2	6	35.1
ø3/8	1/4	KQ2VS11-35□P	8	15.4	20.6	25.8	18.3	29.5	21.4	15.6	23.4	19.3	7	29.3
	3/8	KQ2VS11-36□P	8	15.4	22	25.8	18.4	29.8	21.7	15.6	23.4	19.3	7	36.3
ø1/2	3/8	KQ2VS13-36□P	9.53	19.3	27	30.5	18.6	32	23.9	17	38.8	34.3	9	57.6
	1/2	KQ2VS13-37□P	9.53	19.3	27	30.5	21.3	34.7	24.3	17	38.8	34.3	9	70.9



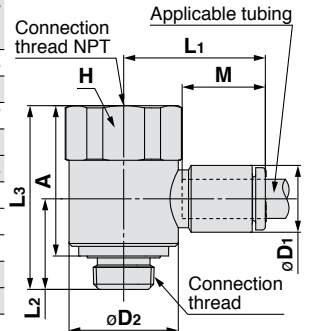
□: A (Brass), N (Brass + Electroless nickel plating)

*1 øD1 is maximum diameter.

Universal Female Elbow: KQ2VF (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 øD1	øD2	L1	L2	L3	A	M	Effective area [mm ²]		Min. port size	Weight [g]
											Nylon	Urethane		
ø1/8	1/8	KQ2VF01-34□P	17.46	7.1	17	21.2	14.3	28.8	23.4	13.3	2.2	1.9	2.5	28.4
ø5/32	1/8	KQ2VF03-34□P	17.46	8.2	17	21.2	14.3	28.8	23.4	13.3	2.9	2.9	3	28.5
ø3/16	1/8	KQ2VF05-34□P	17.46	9.1	17	21.5	14.3	28.8	23.4	13.3	4.5	3.7	3.5	28.7
ø1/4	1/8	KQ2VF07-34□P	17.46	11.1	17	22.5	14.3	28.8	23.4	13.3	7.7	6.6	4.6	29
	1/4	KQ2VF07-35□P	22.23	11.1	21.7	23.2	18.1	36.9	28.8	13.3	7.7	6.6	4.6	62.4
ø5/16	1/8	KQ2VF09-34□P	17.46	13.2	17.6	23.5	15	30.5	25.1	14.2	16	11.2	6	30.2
	1/4	KQ2VF09-35□P	22.23	13.2	21.6	25.1	18.3	36.9	28.8	14.2	16	11.2	6	63.2
	3/8	KQ2VF09-36□P	25.4	13.2	27.7	26.2	22.7	42.7	34.6	14.2	16	11.2	6	87.2
ø3/8	1/4	KQ2VF11-35□P	22.23	15.4	22.6	26.4	19.7	39.2	31.1	15.6	23.4	19.3	7	62.1
	3/8	KQ2VF11-36□P	25.4	15.4	27.7	27.6	22.2	42.7	34.6	15.6	23.4	19.3	7	88
ø1/2	3/8	KQ2VF13-36□P	25.4	19.3	27.7	30.7	20.9	42.7	34.6	17	38.8	34.3	9	90.2
	1/2	KQ2VF13-37□P	28.57	19.3	31.6	32.8	22.6	47.1	36.7	17	38.8	34.3	9	136



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

*1 øD1 is maximum diameter.

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

Gasket Seal

Inch Size R

Metric Size Uni

Inch Size Uni



Dimensions

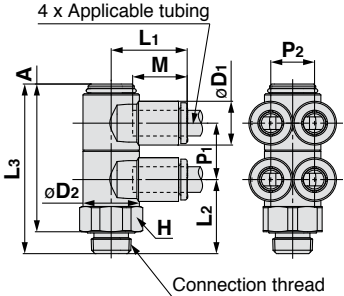
Double Branch Universal Male Elbow: KQ2ZD (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L ₁	L ₂	L ₃	A	M	P ₁	P ₂	Effective area [mm ²]		Min. port size	Weight [g]
													Nylon	Urethane		
ø1/8	1/8	KQ2ZD01-34□P	14.29	7.1	13.4	18.5	18.2	40.9	35.5	13.3	13.4	7.1	2.2	1.9	2.5	24.1
ø5/32	1/8	KQ2ZD03-34□P	14.29	8.2	13.4	18.5	18.2	40.9	35.5	13.3	13.4	8.2	2.9	2.9	3	24.7
ø3/16	1/8	KQ2ZD05-34□P	14.29	9.1	13.4	18.4	18.2	40.9	35.5	13.3	13.4	9.1	4.5	3.7	3.5	25.2
ø1/4	1/8	KQ2ZD07-34□P	14.29	11.1	13.4	18.3	19.2	42.3	36.9	13.3	13.8	11.1	7.7	6.6	4.6	27.9
	1/4	KQ2ZD07-35□P	17.46	11.1	13.4	18.3	22.4	45.5	37.4	13.3	13.8	11.1	7.7	6.6	4.6	37.7
ø1/2	3/8	KQ2ZD07-36□P	22	11.1	13.4	18.3	23.9	47	38.9	13.3	13.8	11.1	7.7	6.6	4.6	55.7
	1/2	KQ2ZD09-35□P	19	13.2	17.6	21.2	23.9	50.7	42.6	14.2	15.9	13.2	20.5	14.2	6	52.9
ø5/16	3/8	KQ2ZD09-36□P	22	13.2	17.6	21.2	24.9	51.7	43.6	14.2	15.9	13.2	20.5	14.2	6	67
	1/2	KQ2ZD09-37□P	28.57	13.2	17.6	21.2	30.2	57	46.6	14.2	15.9	13.2	20.5	14.2	6	117.1
ø3/8	1/4	KQ2ZD11-35□P	22	15.4	20.6	23.6	26.1	58	49.9	15.6	19.2	15.4	23.4	19.3	7	77.8
	3/8	KQ2ZD11-36□P	22	15.4	20.6	23.6	26.1	58	49.9	15.6	19.2	15.4	23.4	19.3	7	76.8
ø1/2	1/2	KQ2ZD11-37□P	28.57	15.4	20.6	23.6	31.4	63.3	52.9	15.6	19.2	15.4	23.4	19.3	7	124.9
	3/8	KQ2ZD13-36□P	28.57	19.3	27	27.9	31	65.8	57.7	17	22.3	19.3	43.8	34.3	9.6	159.4
ø1/2	1/2	KQ2ZD13-37□P	28.57	19.3	27	27.9	33.3	68.1	57.7	17	22.3	19.3	43.8	34.3	9.6	169.9

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

*1 ϕD_1 is maximum diameter.



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

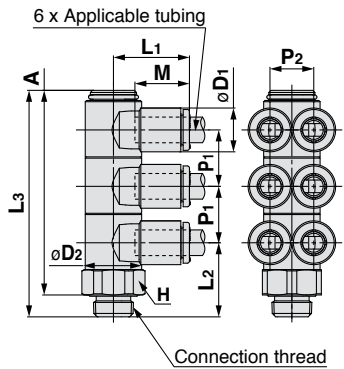
Triple Branch Universal Male Elbow: KQ2ZT (Face seal)



Applicable tubing O.D. [inch]	Connection thread NPT	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L ₁	L ₂	L ₃	A	M	P ₁	P ₂	Effective area [mm ²]		Min. port size	Weight [g]
													Nylon	Urethane		
ø1/8	1/8	KQ2ZT01-34□P	14.29	7.1	13.4	18.5	18.2	54.4	49	13.3	13.4	7.1	2.2	1.9	2.5	30.2
ø5/32	1/8	KQ2ZT03-34□P	14.29	8.2	13.4	18.5	18.2	54.4	49	13.3	13.4	8.2	2.9	2.9	3	31.1
ø3/16	1/8	KQ2ZT05-34□P	14.29	9.1	13.4	18.4	18.2	54.4	49	13.3	13.4	9.1	4.5	3.7	3.5	31.9
ø1/4	1/8	KQ2ZT07-34□P	14.29	11.1	13.4	18.3	19.2	56.1	50.7	13.3	13.8	11.1	7.7	6.6	4.6	35.5
	1/4	KQ2ZT07-35□P	17.46	11.1	13.4	18.3	22.4	59.3	51.2	13.3	13.8	11.1	7.7	6.6	4.6	45.3
ø1/2	3/8	KQ2ZT07-36□P	22	11.1	13.4	18.3	23.9	60.8	52.7	13.3	13.8	11.1	7.7	6.6	4.6	63.3
	1/4	KQ2ZT09-35□P	19	13.2	17.6	21.2	23.9	66.7	58.6	14.2	15.9	13.2	20.5	14.2	6	66.9
ø5/16	3/8	KQ2ZT09-36□P	22	13.2	17.6	21.2	24.9	67.7	59.6	14.2	15.9	13.2	20.5	14.2	6	81
	1/2	KQ2ZT09-37□P	28.57	13.2	17.6	21.2	30.2	73	62.6	14.2	15.9	13.2	20.5	14.2	6	130.9
ø3/8	1/4	KQ2ZT11-35□P	22	15.4	20.6	23.6	26.1	77.3	69.2	15.6	19.2	15.4	23.4	19.3	7	96.2
	3/8	KQ2ZT11-36□P	22	15.4	20.6	23.6	26.1	77.3	69.2	15.6	19.2	15.4	23.4	19.3	7	96.2
ø1/2	1/2	KQ2ZT11-37□P	28.57	15.4	20.6	23.6	31.4	82.6	72.2	15.6	19.2	15.4	23.4	19.3	7	96.3
	3/8	KQ2ZT13-36□P	28.57	19.3	27	27.9	31	88.2	80.1	17	22.3	19.3	43.8	34.3	9.6	204.4
ø1/2	1/2	KQ2ZT13-37□P	28.57	19.3	27	27.9	33.3	90.5	80.1	17	22.3	19.3	43.8	34.3	9.6	204.4

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

*1 ϕD_1 is maximum diameter.

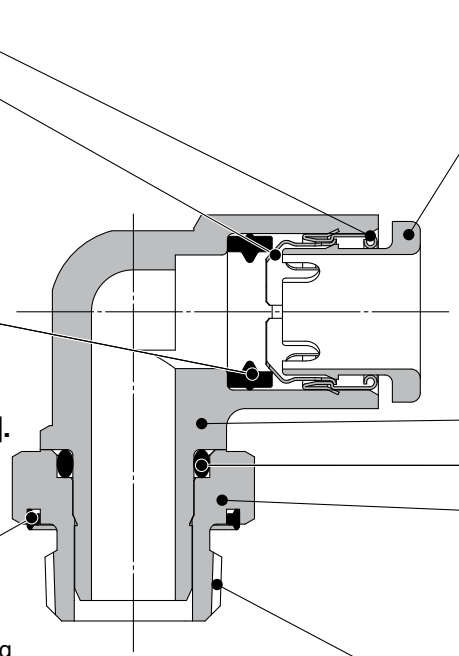


Metric Size G
Metric Size R, Rc
Face Seal
Metric Size NPT
Inch Size NPT
Inch Size R
Inch Size Uni
Metric Size Uni
Inch Size Uni

Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: R

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 145 psi [1 MPa]. The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Face seal method

Seal ring

Piping installability is improved by changing to the face seal structure.

Release button

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

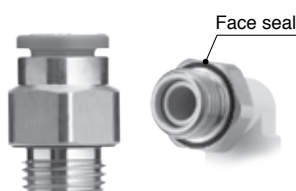
O-ring

Stud

Effective when piping in a confined space. Body part rotates allowing for positioning.

Connection thread

R



One-touch IN/OUT connection.
Possible to use in vacuum to 14.5 psi [-100 kPa].

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



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø1/8", ø3/16", ø1/4", ø5/16", ø3/8", ø1/2"

Specifications

Fluid		Air, Water*1
Operating pressure range*2		-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])		435 psi [3 MPa]
Ambient and fluid temperature		23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)
Thread	Mounting section	JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread)
	Nut section	JIS B0205 (Metric fine thread)
Sealant on the threads		Seal ring

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

*2 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 05 - 01 A P

One-touch fittings

Model

Symbol	Model
H	Male connector
L	Male elbow
T	Male branch tee
W	Extended male elbow
Y	Male run tee
U	Branch "Y"

Face seal

Thread material/Surface treatment

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

Port size

Symbol	Size
01	R1/8
02	R1/4
03	R3/8
04	R1/2

Applicable tubing O.D.

Symbol	Size
01	ø1/8"
05	ø3/16"
07	ø1/4"
09	ø5/16"
11	ø3/8"
13	ø1/2"

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

Inch Size One-touch Fittings

Round Type Variations

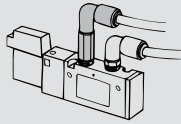
Extended male elbow

KQ2W

P.198



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.198



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

Male branch tee

KQ2T

P.199



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

Branch "Y"

KQ2U

P.199



Use to branch a female thread in the same direction.

Male elbow

KQ2L

P.198



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

Male run tee

KQ2Y

P.199



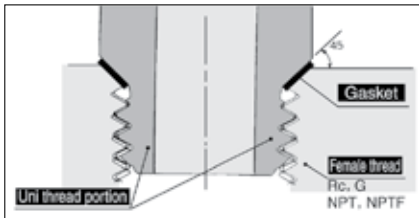
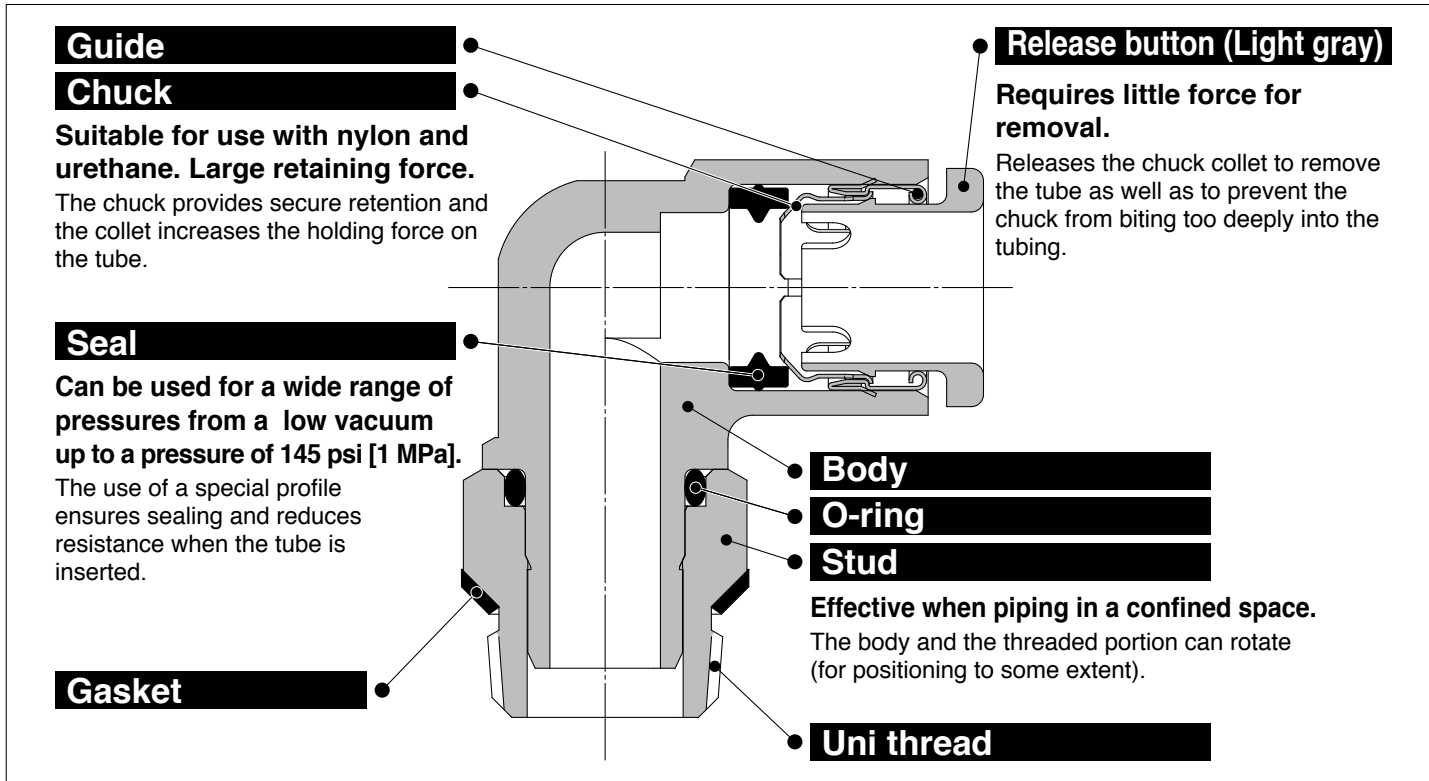
Use to branch a female thread in the same direction and at a 90° angle.

Gasket Seal				Face Seal		Sealant/Gasket Seal		Round Type
Inch Size Uni	Metric Size Uni	Inch Size R	Inch Size NPT	Metric Size R, Rc	Metric Size G	Inch Size M, R, Rc	Inch Size UNF, NPT	Metric Size M, 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
Operating pressure range* ²	-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])	435 psi [3 MPa]
Ambient and fluid temperature	23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)

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

*2 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"

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

Applicable tubing O.D.

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

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 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

Metric Size Uni One-touch Fittings

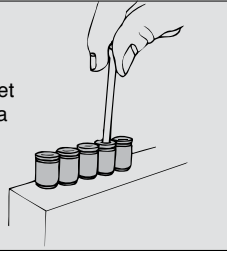
Round Type Variations

Hexagon socket head male connector

KQ2S P.204



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

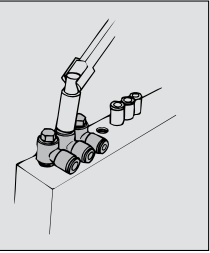


Universal male elbow

KQ2V P.205



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

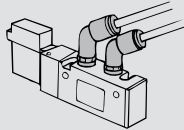


45° male elbow

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.

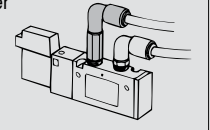


Extended male elbow

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.

Male branch tee

KQ2T P.206



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

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.

KQ2 Series

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

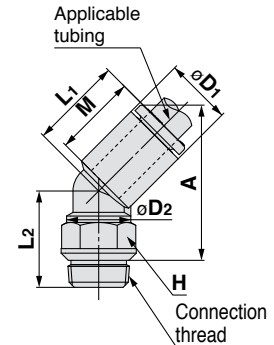
Dimensions

45° Male Elbow: KQ2K (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	A*2	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
	3/8	KQ2K06-U03□	17	10.4	10	14.7	17.9	25.1	13.3	8.7	6.9	4.5	21.2
$\phi 8$	1/8	KQ2K08-U01□	10	13.2	10	16	15.9	26.5	14.2	8.7	8.7	4.5	6
	1/4	KQ2K08-U02□	14	13.2	12	16	19.7	30.8	14.2	19.7	13.6	6	8.4
	3/8	KQ2K08-U03□	17	13.2	12	16	19.8	28.8	14.2	19.7	19.7	6	20
$\phi 10$	1/8	KQ2K10-U01□	14	15.9	12	18.2	19.4	32.4	15.6	30.9	23.2	6	12.2
	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
	1/2	KQ2K10-U04□	22	15.9	17	17.6	29.2	38	15.6	30.9	23.2	7.5	47.7
$\phi 12$	1/4	KQ2K12-U02□	17	18.5	17	19.4	24.6	37.7	17	44.5	35.1	9	18.5
	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 ϕD_1 is maximum diameter.
 *2 Reference dimensions after installation of Uni thread
 *3 For details, refer to page 207.

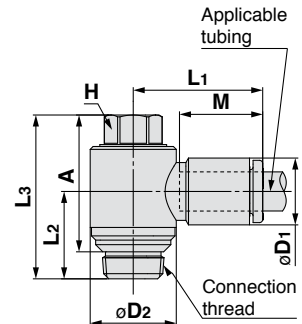


Universal Male Elbow: KQ2V (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	L3	A*2	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
$\phi 6$	1/8	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
	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
$\phi 8$	1/8	KQ2V08-U01□	12	13.2	17.6	23.5	15	27.5	22.7	14.2	16	11.2	6	23.7
	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 ϕD_1 is maximum diameter.
 *2 Reference dimensions after installation of Uni thread

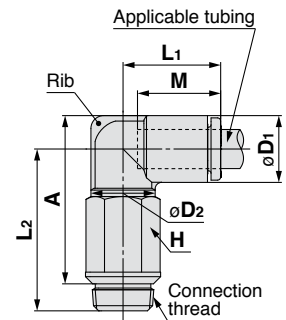


Extended Male Elbow: KQ2W (Gasket seal)



Applicable tubing O.D. [mm]	Connection thread Uni	Model	H (Width across flats)	*1 ϕD_1	ϕD_2	L1	L2	A*2	M	Effective area [mm ²]		Min. port size	Weight [g]	With a rib
										Nylon	Urethane			
$\phi 4$	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	—
	3/8	KQ2W06-U03□	17	10.4	10	15.5	32.3	31.1	13.3	10.9	8.6	4.5	41	—
$\phi 8$	1/8	KQ2W08-U01□	10	13.2	10	16.4	32.6	34.4	14.2	10.9	10.9	4.5	12.3	●
	1/4	KQ2W08-U02□	14	13.2	12	17.2	35.4	35.6	14.2	20.5	14.2	6	24.1	●
	3/8	KQ2W08-U03□	17	13.2	12	17.2	36.5	36.7	14.2	20.5	14.2	6	42.5	●
$\phi 10$	1/4	KQ2W10-U02□	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	●
	1/2	KQ2W10-U04□	22	15.9	17	19.3	53.4	52.8	15.6	33.5	23.8	7.5	95.5	●
$\phi 12$	1/4	KQ2W12-U02□	17	18.5	17	21.5	49.8	52.7	17	47.7	37.7	9	55.9	●
	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 ϕD_1 is maximum diameter.
 *2 Reference dimensions after installation of Uni thread
 *3 For details, refer to page 207.



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)

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

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

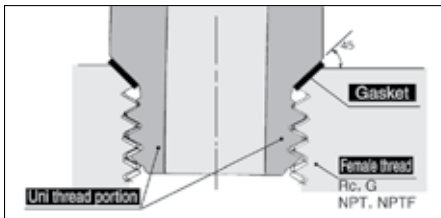
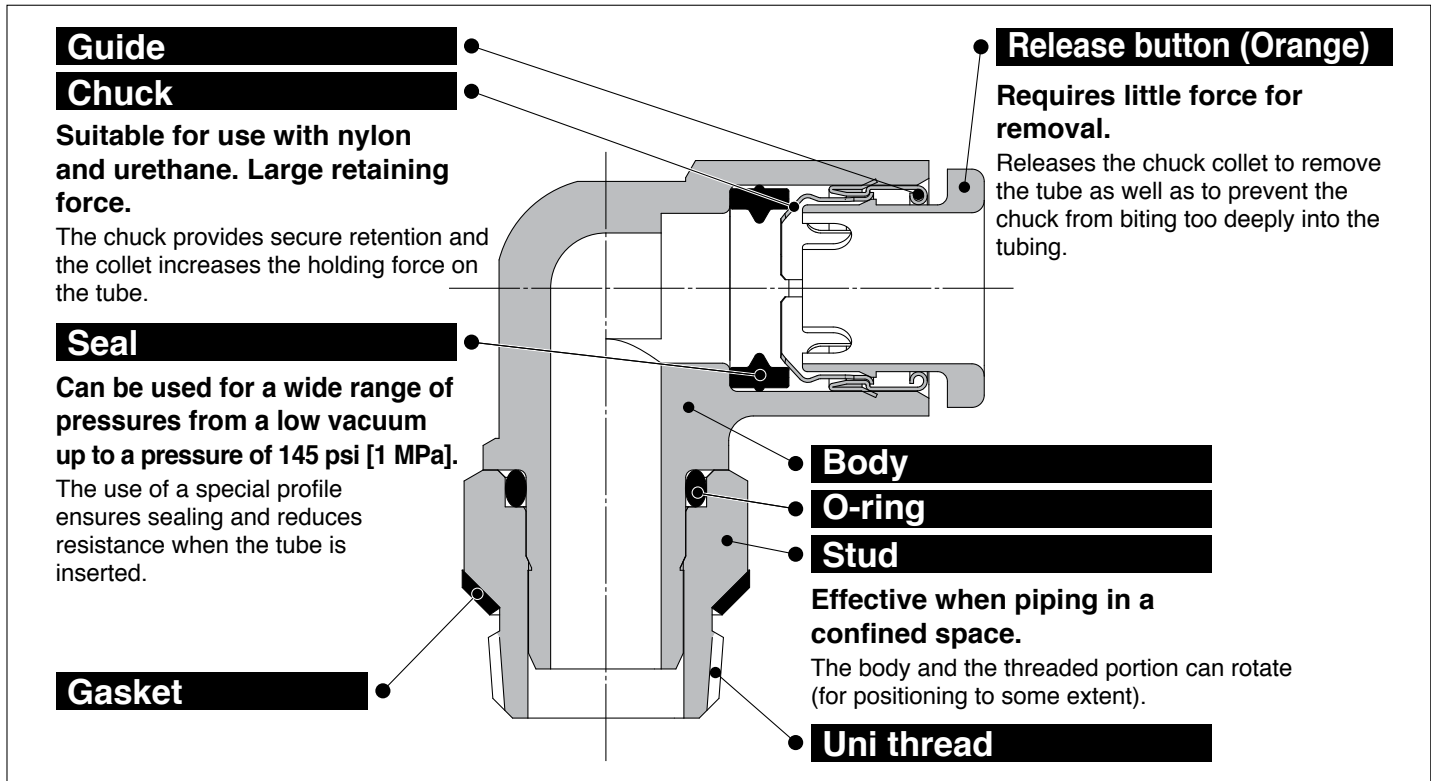
Example) **10-KQ2H06-U01N**

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

Inch Size Uni One-touch Fittings

Applicable Tubing: Inch 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.	ø1/8", ø5/32", ø3/16", ø1/4", ø5/16", ø3/8", ø1/2"

Specifications

Fluid	Air, Water*1
Operating pressure range*2	-14.5 to 145 psi [-100 kPa to 1 MPa]
Proof pressure (at 73°F [23°C])	435 psi [3 MPa]
Ambient and fluid temperature	23 to 140°F [-5 to 60°C], Water: 32 to 104°F [0 to 40°C] (No freezing)

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

*2 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 214 for details.)



How to Order

Threaded Type

KQ2 H 05 - U01 A

One-touch fittings •

Model •

Symbol	Model
H	Male connector
L	Male elbow
T	Male branch tee
W	Extended male elbow
Y	Male run tee
U	Branch "Y"

• 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

Applicable tubing O.D. •

Symbol	Size
01	ø1/8"
03	ø5/32"
05	ø3/16"
07	ø1/4"
09	ø5/16"
11	ø3/8"
13	ø1/2"

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 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

Round Type Variations

Male connector

KQ2H P.212



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

Male elbow

KQ2L P.212



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

Male branch tee

KQ2T P.213



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

Male run tee

KQ2Y P.213



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

Branch "Y"

KQ2U P.213



Use to branch a female thread in the same direction.

Extended male elbow

KQ2W P.212



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

KQ2 Series

Made to Order/Clean Series/Spare Parts

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

Round Type



Metric Size M, R, Rc

1 Made to Order

Symbol	Specifications
X12	Lubricant: White vaseline Release button color: White
X35 *1	Body color: Black Release button color: Orange
X41	With fixed orifice*2
KQ2□09-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: ø5/16"/Uni1/8 Thread material/Surface treatment: Brass, Brass + Electroless nickel plating Example) KQ2L09-U01AQ

*1 The following model is not available as made-to-order: 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)

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

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-KQ2H07-U01N**

Sealant/Gasket Seal

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

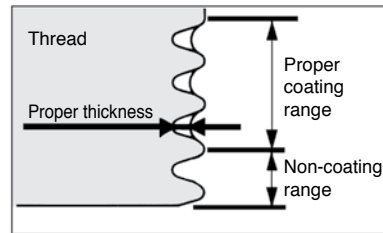
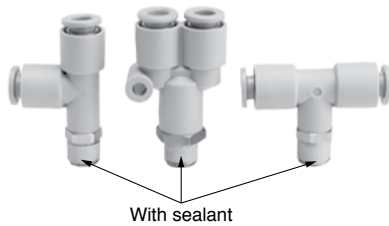
Metric Size Uni

Inch Size Uni

For Pneumatic Piping/Fittings & Tubing Prior to Use

Fittings with Sealant

Seal material (fluoresin) is coated on the thread part with the proper thickness and range, that reduces the piping work, such as coating the seal on the thread.



Female Thread Conditions Applicable to Face Seal

1. Surface roughness of bearing surface: Rz 25 or less
2. Chamfer dimension: $\phi D1$, Seal bearing surface diameter: $\phi D2$ (Refer to the table below.)
3. Female thread inclination angle: 1° or less
4. Counterbore diameter when the female thread is counterbored.: $\phi D3$
 - Models with width across flats: Body width across flats x 1.1 or more
 - Models other than hexagon (Hexagon socket head male connector etc.): Body dimensions + 0.2 mm or more
- * The width across flats and the body dimensions differ depending on the model even when the same thread size is used. Refer to the dimensions in the catalog.
5. If oil content or sealant is sticking to the female thread, this may cause damage of the product. Remove it before piping.

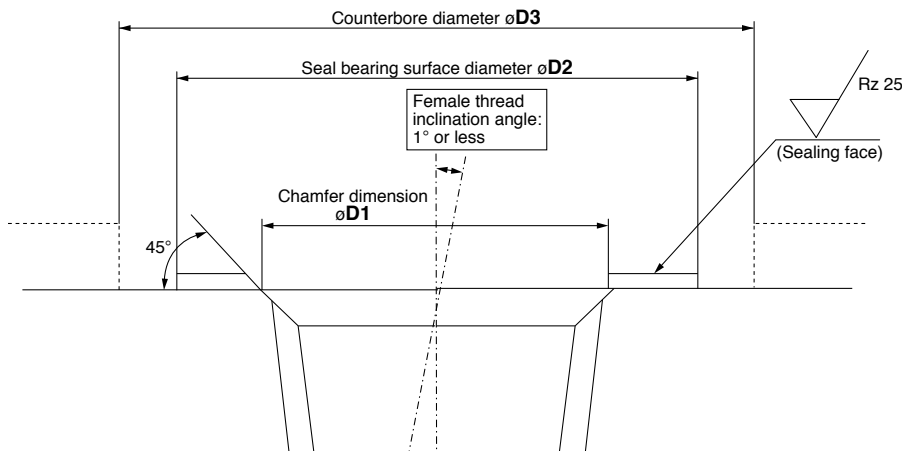


Table 1

Connection thread size	Chamfer dimension $\phi D1$ [mm]	Seal bearing surface diameter $\phi D2$ [mm]
R1/8	10.2 to 10.4	12 or more
R1/4	13.6 to 13.8	17 or more
R3/8	17.1 to 17.3	21 or more
R1/2	21.4 to 21.6	27 or more
NPT1/16	8.2 to 8.4	11.11 or more
NPT1/8	10.5 to 10.7	12.7 or more
NPT1/4	14.1 to 14.3	17.46 or more
NPT3/8	17.4 to 17.6	22 or more
NPT1/2	21.7 to 21.9	28.7 or more
G1/8	10.2 to 10.6	12 or more
G1/4	13.6 to 14.0	17 or more
G3/8	17.1 to 17.5	21 or more
G1/2	21.4 to 21.8	27 or more

⚠ Precautions

For products that do not satisfy the female thread conditions shown above and the piping with a piping pitch narrower than the product dimension, use the current sealant type.

- * The rubber parts of the face seal cannot be replaced.
- * The rubber parts of the face seal may fall off by the air blow and they cannot be mounted again. Be careful not to perform the air blow.



Fittings & Tubing Precautions 1

Be sure to read this before handling products.

Design / Selection

⚠ Warning

1. Confirm the specifications.

Products represented in this catalog are designed only for use in compressed air systems (including vacuum). Do not operate at pressures, temperatures, etc., beyond the range of specifications, as this can cause damage or malfunction. (Refer to the specifications.) Please contact SMC when using a fluid other than compressed air (including vacuum).

We do not guarantee against any damage if the product is used outside of the specification range.

2. Do not disassemble the product or make any modifications, including additional machining.

It may cause human injury and/or an accident.

3. Check if PTFE can be used in application.

PTFE powder (Polytetrafluoroethylene resin) is included in the sealant. Confirm that the use of it will not cause any adverse affect on the system.

⚠ Caution

1. Keep the connection part of fittings and tubing from rotating or oscillating movement. Use Rotary

One-touch Fittings (KS or KX series) in these cases.

The fittings may be damaged if they are used in the above manner.

2. The tubing bending radius in the vicinity of the fitting should be at least the minimum bending radius of the tubing.

If the bending radius is less than the minimum value, fittings may damage, or tubing may crack or be crushed. The minimum bending radius, with the exception of TS soft nylon tubing, TU polyurethane tubing, TUH hard polyurethane tubing, TUS soft polyurethane tubing, TRBU FR double layer polyurethane tubing, TH FEP tubing, TL PFA tubing, TD modified PTFE tubing, is measured as following in accordance with JIS B 8381-1995.

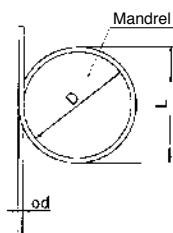
Tubing deformation ratio at the minimum bending radius is obtained through the following formula, based on tubing diameter and mandrel diameter by winding the same radius mandrel tube.

$$\eta = \left(1 - \frac{L - D}{2d}\right) \times 100$$

Here, η : Deformation ratio [%]
d : Tubing diameter [mm]
L : Measured length [mm]
D : Mandrel diameter [mm]
(Twice against the minimum bending radius)

Test temperature: 68 ±9°F [20 ±5°C]
Relative humidity: 65 ±5%

Tube deformation ratio at the minimum bending radius



3. Do not use fluids other than listed on the specifications.

Applicable fluids are air and water. Please consult with SMC if using other fluids.

4. When it is used with water, the fittings or tubing may be damaged depending on the surge pressure.

Mounting / Piping

⚠ Warning

1. Operation manual

Install the products and operate them only after reading the operation manual carefully and understanding its contents. Also, keep the manual where it can be referred to as necessary.

2. Maintenance space

Allow sufficient space for maintenance and inspection.

3. Adhere to the thread tightening method.

Refer to "Connection Thread Tightening Method" when mounting the product.

4. There may be cases of the tubing detaching from the fitting and thrashing around uncontrollably due to tubing degradation or fitting breakage.

To prevent the situation from becoming uncontrollable, fit the tubing with a protective cover or fix it in place.

⚠ Caution

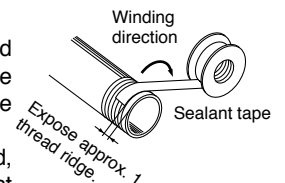
1. Preparation before piping

Before piping is connected, it should be thoroughly blown out with air (flushing) or washed to remove chips, cutting oil and other debris from inside the pipe.

2. Winding of sealant tape

When screwing together pipes and fittings, etc., be certain that chips from the pipe threads and sealant do not get inside the pipe.

Also, when the sealant tape is used, leave approx. 1 thread ridge exposed at the end of the threads.



3. Check the model, type and size before installation.

Also, confirm that there is no scratches, gouges or cracks on the product.

4. When connecting the tubing, take pressure or possible changes to the tubing length into account, and allow a sufficient margin.

Failure to do so may result in fitting breakage or detachment of the tubing. Refer to the recommended piping conditions.

5. Do not apply unnecessary forces such as twisting, pulling, moment loads, vibration and impact, etc. on fittings or tubing.

This will cause damage to fittings and will crush, burst or release tubing.

6. Tubing, with the exception of coiled tubing, requires stationary installation. Do not use standard tubing (non-coiled) in applications where tubing is required to travel inside the flexible moving tube. Tubing that travels may sustain abrasion, extension, or severance due to tensile force, or may result in removal of tubing from fitting. Use caution prior to use for proper application.

7. To install the fitting, screw the fitting into the hexagonal face of the body, and tighten with an appropriate wrench.

Affix the wrench at the base of the thread. If the size of hexagonal face and wrench do not match, or tightening takes place near the tube side, it may cause collapse or deformation of the hexagonal face, or damage to the equipment. After installing, confirm that there is no damage to the fitting, etc.



Fittings & Tubing Precautions 2

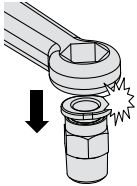
Be sure to read this before handling products.

Mounting / Piping

⚠ Caution

8. Interference in oval type release button

The following models cannot be used if a box wrench or socket wrench is used.



KQ2 Series

Model	Applicable tubing	Connection thread	Part number
Male connector	ø3.2	M3 x 0.5	KQ2H23-M3G1
	ø3.2	M5 x 0.8	KQ2H23-M5□1
	ø4	M3 x 0.5	KQ2H04-M3G1
	ø4	M5 x 0.8	KQ2H04-M5□1
	ø4	M6 x 1.0	KQ2H04-M6□1
	ø6	M5 x 0.8	KQ2H06-M5□1
	ø6	M6 x 1.0	KQ2H06-M6□1
	ø6	R1/8	KQ2H06-01□S1
	ø1/8	10-32UNF	KQ2H01-32□1
	ø5/32	10-32UNF	KQ2H03-32□1
	ø3/16	10-32UNF	KQ2H05-32□1
	ø5/32	NPT1/16	KQ2H03-33□S1
	ø1/8	M5 x 0.8	KQ2H01-M5□1
	ø3/16	M5 x 0.8	KQ2H05-M5□1
Female connector	ø4	M3 x 0.5	KQ2F04-M3□1
	ø4	M5 x 0.8	KQ2F04-M5□1
	ø6	M5 x 0.8	KQ2F06-M5□1
	ø1/8	10-32UNF	KQ2F01-32□1
	ø5/32	10-32UNF	KQ2F03-32□1
	ø1/8	M3 x 0.5	KQ2F23-M3□1
	ø1/8	M5 x 0.8	KQ2F23-M5□1
	ø3/16	R1/8	KQ2H05-01□S1

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

KQ2-G Stainless Steel Series

Model	Applicable tubing	Connection thread	Part number
Male connector	ø4	M5 x 0.8	KQ2H04-M5G1
	ø6	M5 x 0.8	KQ2H06-M5G1
	ø6	R1/8	KQ2H06-01GS1

Air Supply

⚠ Warning

1. Type of fluids

Please consult with SMC when using the product in applications other than compressed air.

Regarding products for general fluids, please contact SMC concerning applicable fluids.

2. When there is a large amount of drainage

Compressed air containing a large amount of drainage can cause malfunction of pneumatic equipment. An air dryer or water separator should be installed upstream from filters.

3. Drain flushing

If condensation in the drain bowl is not emptied on a regular basis, the bowl will overflow and allow the condensation to enter the compressed air lines. This causes the malfunction of pneumatic equipment.

If the drain bowl is difficult to check and remove, the installation of a drain bowl with an auto drain option is recommended.

Refer to "SMC Air Preparation System" for further details on compressed air quality.

4. Use clean air.

Do not use compressed air that contains chemicals, synthetic oils that include organic solvents, salt, corrosive gases, etc., as they can cause damage or malfunction.

Air Supply

⚠ Caution

1. Install an air filter.

Install an air filter at the upstream side of valve.

Select an air filter with a filtration degree of 5 µm or finer.

2. Install an aftercooler, air dryer or water separator, etc.

Compressed air containing a large amount of drainage can cause the malfunction of pneumatic equipment. Therefore, take appropriate measures to ensure air quality, such as by providing an aftercooler, air dryer, or water separator.

3. Ensure that the fluid and ambient temperature are within the specified range.

If the fluid temperature is 41°F [5°C] or less, the moisture in the circuit could freeze, causing damage to the seals and leading to equipment malfunction. Therefore, take appropriate measures to prevent freezing. Refer to "SMC Air Preparation System" for further details on compressed air quality.

Operating Environment

⚠ Warning

1. Do not use in an atmosphere where corrosive gases, chemicals, sea water, water, or water steam is present. Do not use in cases where there is direct contact with any of the above.

Refer to each construction drawing on the fittings and tubing material.

2. Do not expose the product to direct sunlight for an extended period of time.

3. Do not use in a place subject to heavy vibration and/or impact.

4. Do not mount the product in locations where it is exposed to radiant heat.

5. Do not use the ordinary fittings and tubing in locations where static electricity would be problematic.

It may result in the system failure and trouble. In such places, use of antistatic fittings (KA series) and antistatic tubing (TA series) are recommended.

6. Do not use the ordinary fittings and tubing in locations where spatter is generated.

Spattering may result in a fire hazard. In such a place, use of flame resistant fittings (KR/KRM series) and flame resistant tubing (TRS/TRB series) are recommended.

7. Do not use in an environment where the product is directly exposed to cutting oil, lubricant, coolant oil, etc.

Please contact SMC if using for an environment exposed to cutting oil, lubricant or coolant oil, etc.

8. Take note that if nylon tubing and soft nylon tubing are used in a clean room.

The antioxidant on the surface of the soft nylon tubing may come off, thereby lowering the cleanliness level.

9. Do not use in environments where foreign matter may stick to the product or get mixed in the product's interior.

This may cause leakage or disconnection of the tubing.



Fittings & Tubing Precautions 3

Be sure to read this before handling products.

Maintenance

Warning

1. Perform maintenance inspections according to the procedures indicated in the operation manual.

If handled improperly, malfunction and damage of machinery or equipment may occur.

2. Maintenance work

If handled improperly, compressed air can be dangerous. The assembly, handling, repair, and element replacement of pneumatic systems should be performed by a knowledgeable and experienced person.

3. Drain flushing

Remove drainage from air filters regularly.

4. Removal of equipment and supply/exhaust of compressed air

When components are removed, first confirm that measures are in place to prevent workpieces from dropping, run-away equipment, etc. Then, cut off the supply pressure and electric power, and exhaust all compressed air from the system using the residual pressure release function.

When the equipment is restarted, proceed with caution after confirming that appropriate measures are in place to prevent cylinders from sudden movement.

Caution

1. Be certain to wear safety glasses at all times during periodical inspections.

2. Replace fittings or tubing having the following problems.

- 1) Cracks, gouges, wearing, corrosion
 - 2) Air leakage
 - 3) Twists or crushing of tubing
 - 4) Hardening, deterioration, softening of tubing
3. When replacing tubes or fittings, do not try to mend or repair and then reuse them.

One-touch Fittings

Mounting / Piping

Caution

1. Installation and removal of tubing for One-touch fittings

1) Installation of tubing

- (1) Cut the tubing perpendicularly, being careful not to damage the outside surface. Use an SMC tube cutter TK-1, 2, 3, 5 or 6. Do not cut the tubing with pliers, nippers, scissors, etc., otherwise, the tubing will be deformed and trouble may result.
- (2) The outside diameter of the polyurethane tubing swells when internal pressure is applied to it. Therefore, it may be possible that the tubing cannot be re-inserted into the One-touch fitting. Check the tubing outside diameter, and when the accuracy of the outside diameter is +0.07 mm or larger for $\phi 2$, +0.15 mm or larger for other sizes, insert into the One-touch fitting again, without cutting the tubing to use it. When the tubing is re-inserted into the One-touch fitting, confirm that the tubing goes through the release button smoothly.

One-touch Fittings

Mounting / Piping

Caution

(3) Grasp the tubing, slowly push it straight (0 to 5°) into the One-touch fitting until it comes to a stop.

(4) Pull the tubing back gently to make sure it has a positive seal. Insufficient installation may cause air to leak or the tubing to release.

As a guide for checking the tubing is not pulled out, refer to the following table.

Tubing size	Tensile force of tubing lbf [N]
$\phi 2$, 3.2, 1/8"	1.1 [5]
$\phi 4$, 5/32", 3/16"	1.8 [8]
$\phi 6$, 1/4"	2.7 [12]
$\phi 8$, 5/16"	4.5 [20]
$\phi 10$, 3/8"	6.7 [30]
$\phi 12$, 1/2"	7.9 [35]
$\phi 16$	11.2 [50]

2) Removal of tubing

(1) Push the release button flange evenly and sufficiently to release the tube. Do not push in the tubing before pressing the release button.

(2) Pull out the tubing while keeping the release button depressed. If the release button is not held down sufficiently, the tubing cannot be withdrawn.

(3) To reuse the tubing, remove the previously lodged portion of the tubing. If the lodged portion is left on without being removed, it may result in air leakage and removal of the tubing difficult.

2. Connecting products with metal rods

Products with metal rods (KC series, previous KQ series, KN series, and KM series, etc.) cannot be connected to KQ2 series One-touch fittings. If connected, the metal rod cannot be retained by the chuck of the One-touch fitting and products with metal rods may project during pressurization, causing serious personal injury or accident.

Even when products with metal rods can be connected to other One-touch fittings, do not use any tube, resin plug, or reducer after connection. This may cause releasing.

For details about One-touch fittings that can connect products with metal rods, contact SMC.



Fittings & Tubing Precautions 4

Be sure to read this before handling products.

Connection Thread Tightening Method

1. Connection thread: M3

First, tighten by hand, then use a wrench appropriate for the hexagon flats of the body to tighten an additional 1/4 turn.

A reference value for the tightening torque is 0.4 to 0.5 N·m.

2. Connection thread: M5 and 10-32UNF

First, tighten by hand, then use a wrench appropriate for the hexagon flats of the body to tighten an additional 1/6 to 1/4 turn.

A reference value for the tightening torque is 1 to 1.5 N·m.

3. Connection thread: M6

First, tighten by hand, then use a wrench appropriate for the hexagon flats of the body to tighten an additional 1/6 to 1/4 turn.

* Excessive tightening may damage the thread portion or deform the gasket and cause air leakage.

Insufficient tightening may loosen the threads, or cause air leakage.

4. Fittings with sealant: R, NPT

1) First, tighten the fitting by hand, then use a wrench appropriate for the hexagon flats of the body to tighten it a further two or three turns.

For a tightening torque guide, see the table below.

Connection thread size (R, NPT)	Proper tightening torque lbf-ft [N·m]
1/16, 1/8	2.2 to 3.7 [3 to 5]
1/4	5.9 to 8.9 [8 to 12]
3/8	11 to 15 [15 to 20]
1/2	15 to 18 [20 to 25]

2) If the fitting is tightened with excessive torque, a large amount of sealant will seep out. Remove the excess sealant.

3) Insufficient tightening may cause seal failure, or loosen the threads.

4) Reuse

(1) Normally, fittings with a sealant can be reused up to 2 to 3 times.

(2) To prevent air leakage through the sealant, remove any loose sealant stuck to the fitting by blowing air over the threaded portion.

(3) If the sealant no longer provides effective sealing, wind sealing tape over the sealant before reusing. Do not use the sealant in any form other than a tape type.

(4) Once the fitting has been tightened, backing it out to its original position often causes the sealant to become defective. Air leakage will occur.

5. Face seal fittings: R, NPT, G

1) Tighten fittings with sealant using the proper tightening torques in the table below.

Connection thread size (R, NPT, G)	Proper tightening torque lbf-ft [N·m]
1/16, 1/8	2.2 to 3.7 [3 to 5]
1/4	5.9 to 8.9 [8 to 12]
3/8	11 to 15 [15 to 20]
1/2	15 to 18 [20 to 25]

2) Insufficient tightening may cause seal failure, or loosen the threads.

3) Reuse

(1) Normally, fittings with a sealant can be reused up to 6 to 10 times.

(2) The seal ring cannot be replaced.

6. Uni thread fittings

1) First, tighten the threaded portion by hand, then use a proper wrench, which could be suitable for the width across flats of the hexagon body, to tighten it further at a wrench tightening angle shown below. As a reference value for the tightening torque, refer to the table below.

Connection Female Thread: Rc, NPT, NPTF

Uni thread size	Wrench tightening angle after hand-tightening [deg]	Proper tightening torque lbf-ft [N·m]
1/8	30 to 60	2.2 to 3.7 [3 to 5]
1/4	30 to 60	5.9 to 8.9 [8 to 12]
3/8	15 to 45	10 to 12 [14 to 16]
1/2	15 to 30	15 to 16 [20 to 22]

Connection Female Thread: G

Uni thread size	Wrench tightening angle after hand-tightening [deg]	Proper tightening torque lbf-ft [N·m]
1/8	30 to 45	2.2 to 3.0 [3 to 4]
1/4	15 to 30	3.0 to 3.7 [4 to 5]
3/8	15 to 30	5.9 to 6.6 [8 to 9]
1/2	15 to 30	10 to 11 [14 to 15]

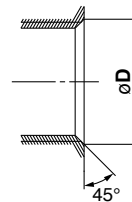
2) The gasket can be reused up to 6 to 10 times. It can be replaced easily when it has sustained damage. A broken gasket can be removed by holding it and then turning it in the same direction as loosening the thread. If gasket is difficult to remove, cut it with nippers, etc. In such a case, use caution not to scratch the seat face because the seat face of 45° gasket of fitting is the sealing face.

Chamfer Dimension for Female Thread

Caution

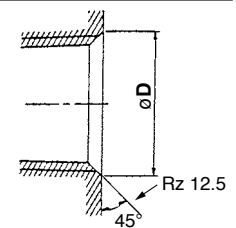
1. Chamfer dimension for female thread of the connection thread M3, M5, 10-32UNF

Confirming to ISO 16030 (air pressure fluid dynamics – connection – ports and stud ends), the chamfer dimensions shown below are recommended. By chamfering as shown in the following table, machining of threads is easier and effective for burr prevention.



Connection thread size	Chamfer dimension øD (Recommended value) [mm]
M3	3.1 to 3.4
M5	5.1 to 5.4
10-32UNF	5.0 to 5.3

2. Chamfer dimension of R and NPT thread with sealant, and Uni thread



Connection thread size	Chamfer dimension øD (Recommended value)		
	G	Rc	NPT, NPTF
1/16	—	—	8.2 to 8.4
1/8	10.2 to 10.6	10.2 to 10.4	10.5 to 10.7
1/4	13.6 to 14.0	13.6 to 13.8	14.1 to 14.3
3/8	17.1 to 17.5	17.1 to 17.3	17.4 to 17.6
1/2	21.4 to 21.8	21.4 to 21.6	21.7 to 21.9

* For Uni thread, Rz 12.5 is necessary for sealing at the chamfered part.



Fittings & Tubing Precautions 5

Be sure to read this before handling products.

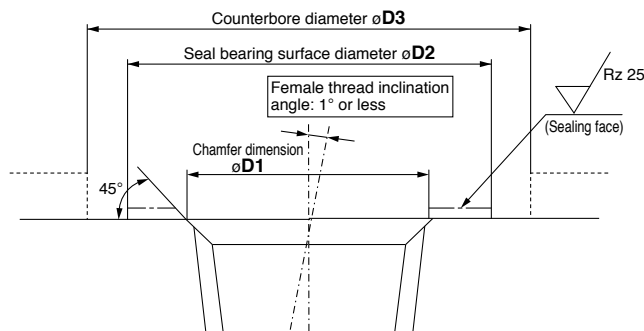
Chamfer Dimension for Female Thread

⚠ Caution

3. Chamfer dimension for female thread of face seal fitting (R, NPT, G)

- 1) Surface roughness of bearing surface: Rz 25 or less
- 2) Chamfer dimension: $\phi D1$, Seal bearing surface diameter: $\phi D2$ (Refer to the table below.)
- 3) Female thread inclination angle: 1° or less
- 4) Counterbore diameter when the female thread is counterbored.: $\phi D3$
 - Models with width across flats: Body width across flats x 1.1 or more
 - Models other than hexagon (Hexagon socket head male connector etc.): Body dimensions + 0.2 mm or more
- * The width across flats and the body dimensions differ depending on the model even when the same thread size is used. Refer to the dimensions in the catalog.
- 5) If oil content or sealant is sticking to the female thread, this may cause damage of the product. Remove it before piping.

Connection thread size	Chamfer dimension $\phi D1$ [mm]	Seal bearing surface diameter $\phi D2$ [mm]
R1/8	10.2 to 10.4	12 or more
R1/4	13.6 to 13.8	17 or more
R3/8	17.1 to 17.3	21 or more
R1/2	21.4 to 21.6	27 or more
NPT1/16	8.2 to 8.4	11.11 or more
NPT1/8	10.5 to 10.7	12.7 or more
NPT1/4	14.1 to 14.3	17.46 or more
NPT3/8	17.4 to 17.6	22 or more
NPT1/2	21.7 to 21.9	28.7 or more
G1/8	10.2 to 10.6	12 or more
G1/4	13.6 to 14.0	17 or more
G3/8	17.1 to 17.5	21 or more
G1/2	21.4 to 21.8	27 or more



Recommended Piping Conditions

1. When connecting piping to the One-touch fitting, use pipe length with sufficient margin, in accordance with the piping conditions shown in Fig. 1.

Also, when using a tying band, etc., to bind the piping together, make sure that external force does not come to bear on the fitting. (See Fig. 2.)

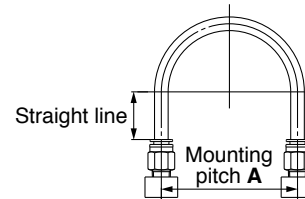


Fig. 1 Recommended piping

Unit: [mm]

Tubing size	Mounting pitch A			Straight line length
	Nylon tubing	Soft nylon tubing	Polyurethane tubing	
$\phi 2$	—	—	13 or more	10 or more
$\phi 3.2, 1/8"$	44 or more	35 or more	25 or more	16 or more
$\phi 4, 5/32"$	56 or more	44 or more	26 or more	20 or more
$\phi 3/16"$	67 or more	52 or more	38 or more	24 or more
$\phi 6$	84 or more	66 or more	39 or more	30 or more
$\phi 1/4"$	89 or more	70 or more	57 or more	32 or more
$\phi 8, 5/16"$	112 or more	88 or more	52 or more	40 or more
$\phi 10$	140 or more	110 or more	69 or more	50 or more
$\phi 3/8"$	134 or more	105 or more	69 or more	48 or more
$\phi 12$	168 or more	132 or more	88 or more	60 or more
$\phi 1/2"$	178 or more	140 or more	93 or more	64 or more
$\phi 16$	224 or more	176 or more	114 or more	80 or more

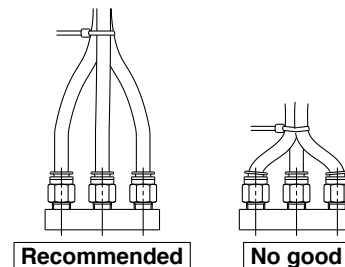


Fig. 2 When using a tying band to bind the piping together

Tubing Design / Selection

⚠ Caution

1. When using a tubing other than from SMC, be careful of the tolerance of the tubing O.D. and tubing material.

- 1) Nylon tubing Within ± 0.1 mm
- 2) Soft nylon tubing Within ± 0.1 mm
- 3) Polyurethane tubing Within $+0.15$ mm, Within -0.2 mm

Do not use the tubing which does not satisfy the specified tubing O.D. accuracy, or if the tubing has a different I.D., material, hardness, or surface roughness from those of SMC's tubing. Please consult SMC if there is anything unclear. It may cause difficulty in connecting the tubing, leakage, disconnection of the tubing, or fitting damage.

When used with tubing other than those from SMC, due to their properties, the products listed below are not subject to warranty.

KQG2, KQB2, KFG2, KF, $\phi 2M$

2. When using fittings other than those from SMC, be certain to confirm that operating conditions are such that no problems will arise.



KQ2C Series

Notes when Ordering Color Caps

In order to improve operability, the outside diameter of the release button has been enlarged for the **new KQ2** series. Therefore, the usable color caps will differ between pre-change and post-change products. Please contact SMC if anything is unclear.

Applicable Sizes and Models

	Applicable tubing O.D.	Model
Metric size	ø8, ø10, ø12, ø16	All models*1
Inch size	ø1/4", ø3/8", ø1/2"	

*1 Excluding models without release buttons

How to Identify Release Buttons Before and After Change

The release button for both the fitting/**KQ2** and color cap/**KQ2C** after the change can be identified by the protruding mark on the left side of the **SMC** logo, and the release button before the change has no protruding mark. The same identification method is used for metric size and inch size.

- * Along with the change of the release button, the model of the color cap/**KQ2C** is changed from **KQ2C-□A** to **KQ2C-□B**.
- * There is no change of the model for the fitting/**KQ2**.

Before change



No protruding mark

Release button

Applicable color cap

Metric Size

Applicable tubing O.D. [mm]	Model	øD1	øD2	L	Weight [g]
ø8	KQ2C-08□A	12.8	9.2	2.6	0.1
ø10	KQ2C-10□A	15.2	11.2	2.7	0.1
ø12	KQ2C-12□A	17.6	13.2	2.7	0.1
ø16	KQ2C-16□A	22.4	17.2	3.2	0.2

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Gray), W (White), BU (Blue)

Inch Size

Applicable tubing O.D. [inch]	Model	øD1	øD2	L	Weight [g]
ø1/4	KQ2C-07□A	10.7	7.5	2.6	0.1
ø3/8	KQ2C-11□A	14.8	10.7	2.7	0.1
ø1/2	KQ2C-13□A	18.5	13.9	2.7	0.1

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Gray), W (White), BU (Blue)

After change



Protruding mark

Release button

Applicable color cap

Metric Size

Applicable tubing O.D. [mm]	Model	øD1	øD2	L	Weight [g]
ø8	KQ2C-08□B	13.6	9.2	2.6	0.1
ø10	KQ2C-10□B	16.2	11.2	2.7	0.1
ø12	KQ2C-12□B	18.8	13.2	2.7	0.2
ø16	KQ2C-16□B	24.2	17.2	3.2	0.3

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Gray), W (White), BU (Blue)

Inch Size

Applicable tubing O.D. [inch]	Model	øD1	øD2	L	Weight [g]
ø1/4	KQ2C-07□B	11.5	7.5	2.6	0.1
ø3/8	KQ2C-11□B	15.7	10.7	2.7	0.1
ø1/2	KQ2C-13□B	19.6	13.9	2.7	0.2

□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Gray), W (White), BU (Blue)

⚠ Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of “**Caution**,” “**Warning**” or “**Danger**.” They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)*1), and other safety regulations.

⚠ Caution: **Caution** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

⚠ Warning: **Warning** indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

⚠ Danger : **Danger** indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

*1) ISO 4414: Pneumatic fluid power – General rules relating to systems.
 ISO 4413: Hydraulic fluid power – General rules relating to systems.
 IEC 60204-1: Safety of machinery – Electrical equipment of machines.
 (Part 1: General requirements)
 ISO 10218-1: Manipulating industrial robots – Safety.
 etc.

⚠ Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.

Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalog information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment.

The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.

1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.

1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalog.
3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

⚠ Caution

1. The product is provided for use in manufacturing industries.

The product herein described is basically provided for peaceful use in manufacturing industries.
 If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary.
 If anything is unclear, contact your nearest sales branch.

Limited warranty and Disclaimer/ Compliance Requirements

The product used is subject to the following “Limited warranty and Disclaimer” and “Compliance Requirements” and “Compliance Requirements”.
 Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first.*2)
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided. This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalog for the particular products.

*2) **Vacuum pads are excluded from this 1 year warranty.**
 A vacuum pad is a consumable part, so it is warranted for a year after it is delivered. Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

⚠ Caution

SMC products are not intended for use as instruments for legal metrology.

Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology (measurement) laws of each country. Therefore, SMC products cannot be used for business or certification ordained by the metrology (measurement) laws of each country.

Revision History

Edition B * Correction of errors in dimensions * Pages 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 22, 24, 25, 26, 27, 28, 29, 38, 39, 41, 49, 52, 53, 60, 68, 70 * Addition of proof pressure conditions * Change of tightening conditions (Torque, Number of rotations) * Addition of color cap	Edition C * Addition of face seal * Correction of errors in dimensions Pages 11, 13, 15, 16, 23, 26, 40, 46, 51, 60, 61, 104, 105 * Deletion of the note about “Applicable Tubing” Pages 1, 33, 57, 65, 101, 109	Edition D * Addition of oval type release button * Addition of products with interchangeable effective area (KQ2□□-□□□□) * Addition of made to order * Number of pages increased from 124 to 224	* Addition of made to order (White vaseline, Black body) * Addition of Clean Series RS * Number of pages increased from 88 to 124 RZ * Addition of made to order * Number of pages increased from 124 to 224 UX
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⚠ Safety Instructions Be sure to read the “Handling Precautions for SMC Products” (M-E03-3) and “Operation Manual” before use.

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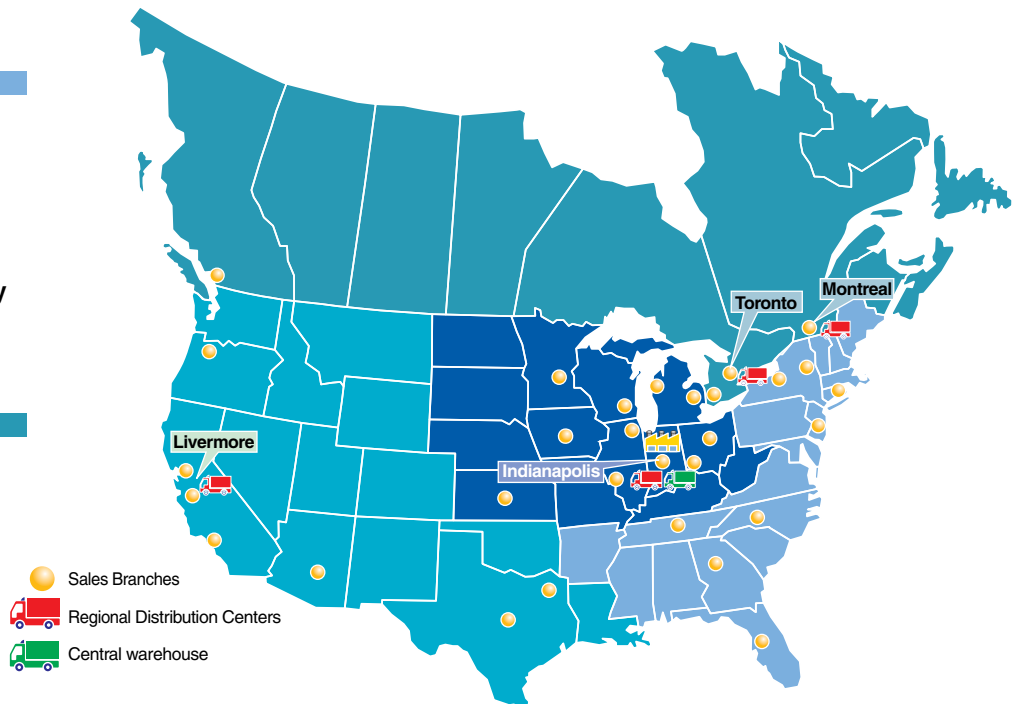
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