

One-touch Fittings

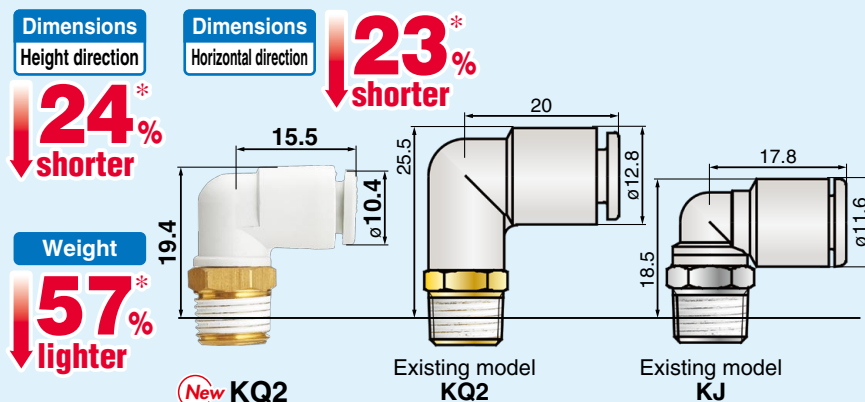
RoHS **New**

Improved tube insertion/removal



* Tube pulling out strength is ensured to be equivalent to existing model.

Compact and lightweight



To New "KQ2"

KQ, KQ2 and KJ consolidated into "KQ2"



Enhanced variation

Light weight

Compact

New Series KQ2



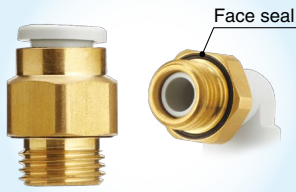
Body type: totaled **51** models Seal method: **3** types Thread material/Surface treatment (Treated or Non-treated): **2** types

| Applicable tubing O.D. | Connection thread | Seal method | | |
|------------------------|-------------------|-------------|---------------|---------------|
| | | Sealant | Gasket seal | Face seal |
| Metric size | M | P.1 | P.1 | P.73 P.65 |
| | R | | | |
| | New G | | | |
| | Uni | | | |
| Inch size | UNF | P.33 | P.101 P.33 | P.85 |
| | NPT | | | |
| | M | | | |
| | R | | | |
| | Uni | | | |
| | | | | P.57 P.95 |
| | | | | P.57 P.109 |

Series **KQ2**

Selectable seal method*

* Connection thread: R, NPT



Face seal



Sealant

Selectable surface treatment

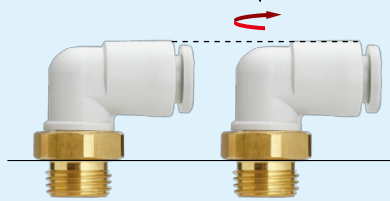
- Brass (No plating)
- Brass + Electroless nickel plated

Face seal adopted for threading

Improved installability (Reduced tool-tightening after hand-tightening)

Face seal

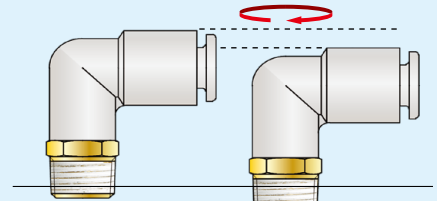
Number of rotations after hand-tightening **1/6 of a rotation or less**



At hand-tightening | After tool-tightening

Sealant

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



At hand-tightening | After tool-tightening

Prevention of sealant residue/protrusion

Existing 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 some 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.

Height with multiple usage is uniform.

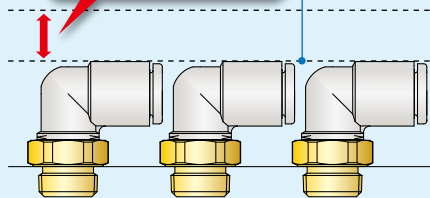


Effective space of height direction

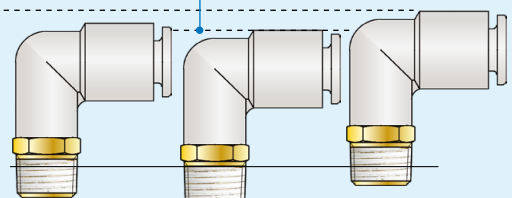
Effective space

Uniform height

Uneven heights



Face seal



Sealant

Sealant/Gasket seal

Face seal

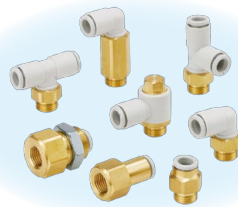
Uni One-touch Fittings Gasket seal

Uni thread type One fitting is applicable to various threads, such as Rc, G, NPT and NPTF.

Metric size



Connection thread: M, R, Rc



Connection thread: G, R, Rc



Connection thread: Rc, G, NPT, NPTF

Inch size



Connection thread: UNF, NPT, M, R, Rc






Connection thread: NPT, R







Connection thread: Rc, G, NPT, NPTF



Sealant/Gasket Seal

| Applicable tubing | Connection thread | | | | | |
|---|-------------------|---|----|-----|-----|---|
| | M | R | Rc | UNF | NPT | |
|  | ● | ● | ● | | | P.1 How to Order..... P.2 Variations..... P.3 Dimensions..... P.5 Made to Order/Clean Series/Spare Parts..... P.31 |
|  | | | | ● | ● | P.33 How to Order..... P.34 Variations..... P.35 Dimensions..... P.37 Made to Order/Clean Series/Spare Parts..... P.56 |
|  | ● | ● | ● | | | P.57 How to Order..... P.58 Variations..... P.59 Dimensions..... P.60 Made to Order/Clean Series/Spare Parts..... P.63 |

Face Seal

| Applicable tubing | Connection thread | | | | | |
|---|-------------------|---|----|-----|---|--|
| | G | R | Rc | NPT | R | |
|  | ● | | | | | P.65 How to Order..... P.66 Variations..... P.67 Dimensions..... P.68 Spare Parts..... P.72 |
|  | | ● | | | | P.73 How to Order..... P.74 Variations..... P.75 Dimensions..... P.76 |
|  | | | | ● | | P.85 How to Order..... P.86 Variations..... P.87 Dimensions..... P.88 |
|  | | | | | ● | P.95 How to Order..... P.96 Variations..... P.97 Dimensions..... P.98 |

Gasket Seal (Uni Thread)

| Applicable tubing | Connection thread | | | | |
|---|-------------------|---|-----|------|--|
| | Rc | G | NPT | NPTF | |
|  | ● | ● | ● | ● | P.101 How to Order..... P.102 Variations..... P.103 Dimensions..... P.104 Made to Order/Clean Series/Spare Parts..... P.107 |
|  | ● | ● | ● | ● | P.109 How to Order..... P.110 Variations..... P.111 Dimensions..... P.112 Made to Order/Clean Series/Spare Parts..... P.114 |

| | |
|--------------------------|------------|
| Prior to Use..... | P.115 |
| Precautions..... | P.116 |
| Safety Instructions..... | Back cover |

| | |
|---------------------|----------------------|
| 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

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

Series KQ2

Guide
Chuck
Suitable for use with nylon and urethane. Large retaining force.
The chuck provides secure retention and the collet increases the holding force on the tube.

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

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

Guide
Chuck

Body
Seal

* Fittings with all resin body material (KQ2□□-□A) are copper free specification.

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



Made to Order Specifications
(Refer to page 31 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 ^{Note 1)} |
| Operating pressure range ^{Note 2)} | | -100 kPa to 1 MPa |
| Proof pressure (at 23°C) | | 3 MPa |
| Ambient and fluid temperature | | -5 to 60°C, Water: 0 to 40°C (No freezing) |
| Thread | Mounting section | JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread) |
| | Nut section | JIS B0205 (Metric fine thread) |
| Seal on the threads | | With sealant |

Note 1) The surge pressure must be under the maximum operating pressure.

Note 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 | Male branch connector |
| 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 plated |
| 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* 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 | |

* 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" |
| | 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 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

Metric Size One-touch Fittings

Variations

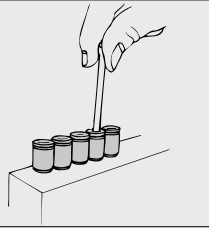
Hexagon socket head male connector

KQ2S

P.7



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



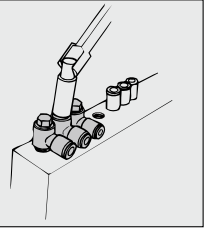
Universal male elbow

KQ2V

P.12



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



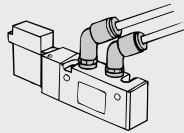
45° male elbow

KQ2K

P.11



Use to pipe a female thread at a 45° angle. The model between the male connector and male elbow.



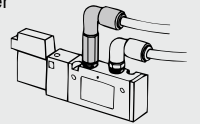
Extended male elbow

KQ2W

P.18



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.



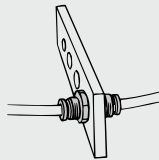
Bulkhead union

KQ2E

P.28



Use to connect tubing through a panel, etc.



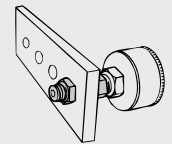
Bulkhead connector

KQ2E

P.28



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



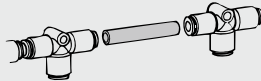
Nipple

KQ2N

P.30



Use to connect One-touch fittings.



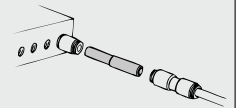
Reducer nipple

KQ2N

P.30



Use to connect One-touch fittings of different sizes.



Universal female elbow

KQ2VF

P.13



Use to branch a male or female thread at a 90° angle. Multiple connections possible.

Branch universal female elbow

KQ2ZF

P.15



Use to two-branch a male or female thread at a 90° angle. Multiple connections possible.

Male connector

KQ2H

P.5



Use to pipe a female thread. Most general model.

Cross

KQ2TW

P.21



Use to four-branch line.

Reducer elbow

KQ2L

P.9



Use to change the tube direction from One-touch fittings by 90° and to reduce size.

Female connector

KQ2F

P.6



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

Male elbow

KQ2L

P.8



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

Different diameter cross

KQ2TX

P.21



Use to branch tubing with size reduced at both 90° angles.

Straight union

KQ2H

P.5



Use to connect tubing in the same direction.

Union elbow

KQ2L

P.9



Use to connect tubing at right angles.

Male branch tee

KQ2T

P.19



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

Different diameter straight

KQ2H

P.6



Use to connect tubing of different sizes.

Plug-in elbow

KQ2L

P.9



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

Union tee

KQ2T

P.20



Use to branch tubing at both 90° angles.

Different diameter tee
KQ2T P.20



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

Different diameter tee
KQ2T P.20



Use to connect tubing for branching at 90° angle with size reduced from the same piping.

Different diameter cross
KQ2TY P.21



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

Hexagon socket head universal male elbow
KQ2VS P.12



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

Male branch connector
KQ2LU P.10



Use to branch a female thread at right angles.

Female elbow
KQ2LF P.17



Use to pipe a male thread at right angles.

Double universal male elbow
KQ2VD P.14



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

Triple universal male elbow
KQ2VT P.14



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

Branch universal male elbow
KQ2Z P.15



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

Double branch universal male elbow
KQ2ZD P.16



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

Male run tee
KQ2Y P.22



Use to branch a female thread at a 90° angle.

Triple branch universal male elbow
KQ2ZT P.16



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

Branch union elbow
KQ2LU P.9



Use to branch tubing at right angles.

Extended plug-in elbow
KQ2W P.17



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

Male delta union
KQ2D P.23



Use to branch a female thread at two right angles.

Delta union
KQ2D P.24



Use to branch tubing at three right angles.

Double branch "Y"
KQ2UD P.26



Use to four-branch a female thread.

Different diameter double union "Y"
KQ2UD P.26



Use to four-branch tubing with size reduced.

Different diameter plug-in "Y"
KQ2X P.27



Use to branch One-touch fittings with size reduced.

Double plug-in "Y"
KQ2XD P.27



Use to four-branch One-touch fittings.

Union "Y"
KQ2U P.25



Use to branch tubing in the same direction.

Different diameter union "Y"
KQ2U P.25



Use to connect tubing for branching with size reduced.

Plug-in "Y"
KQ2U P.25



Use to branch One-touch fittings.

Branch "Y"
KQ2U P.24



Use to branch a female thread.

Plug-in reducer
KQ2R P.28



Use to change size of One-touch fittings.

Bulkhead male elbow
KQ2LE P.29



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

Adapter
KQ2N P.29



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

Tube cap
KQ2C P.30



Use to plug unused tubing.

Color cap
KQ2C P.30



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

Plug
KQ2P P.29



Use to plug unused One-touch fittings.

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

Series KQ2

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

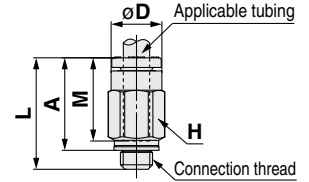
Dimensions

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 | 7 | 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 |
| | M6 x 1.0 | KQ2H04-M6□ | 8 | 7.7 | 18.7 | 14.7 | 13.3 | 4 | 4 | 3 | 3.6 |
| ø6 | M5 x 0.8 | KQ2H06-M5□ | 10 | 9.7 | 17.7 | 14.7 | 13.3 | 4 | 4 | 2.5 | 4.1 |
| | M6 x 1.0 | KQ2H06-M6□ | 10 | 9.7 | 18.8 | 14.8 | 13.3 | 4 | 4 | 3 | 4.4 |

□/A: Brass, N: Brass + Electroless nickel plated



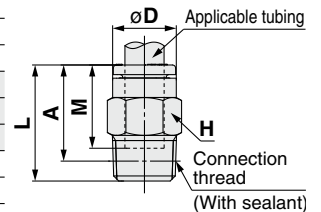
Male Connector: KQ2H (Sealant)



| 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□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 | 5.6 | 4 | 3 | 5.6 |
| | 1/4 | KQ2H04-02□S | 14 | 7.7 | 16.7 | 12 | 13.3 | 5.6 | 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 |
| | 3/8 | KQ2H06-03□S | 17 | 9.7 | 18.1 | 13 | 13.3 | 13.1 | 10.4 | 4.5 | 24.5 |
| ø8 | 1/8 | KQ2H08-01□S | 14 | 13 | 22.5 | 19.4 | 14.2 | 26.1 | 18 | 6 | 11.9 |
| | 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 |
| | 3/8 | KQ2H10-03□S | 17 | 15.6 | 23.5 | 18.4 | 15.6 | 41.5 | 29.5 | 7.5 | 22.5 |
| ø12 | 1/2 | KQ2H10-04□S | 22 | 15.6 | 22.3 | 15.9 | 15.6 | 41.5 | 29.5 | 7.5 | 44.7 |
| | 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 |
| ø16 | 1/2 | KQ2H12-04□S | 22 | 18.2 | 22.3 | 15.9 | 17 | 58.3 | 46.1 | 9 | 37.7 |
| | New 1/4 | KQ2H16-02□S | 24 | 23.6 | 32.5 | 27.8 | 20.6 | 58.3 | 46.1 | 9 | 37.4 |
| | 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 plated

* Reference dimensions after installation of R thread

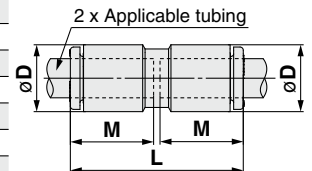


Straight Union: KQ2H



| Applicable tubing O.D. (mm) | Model | øD ^(Note) | 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 |

Note) øD is maximum diameter.



Metric Size One-touch Fittings *Series KQ2*

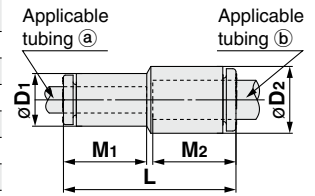
Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

Dimensions

Different Diameter Straight: KQ2H



| Applicable tubing O.D. (mm) | | Model | Note) $\phi D1$ | Note) $\phi D2$ | L | M1 | M2 | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|------------|------------|-----------------|-----------------|------|------|------|-----------------------------------|----------|----------------|------------|
| (a) | (b) | | | | | | | Nylon | Urethane | | |
| $\phi 2$ | $\phi 3.2$ | KQ2H02-23A | 5.8 | 7.1 | 26.2 | 11.9 | 13.3 | — | 0.9 | 1.4 | 1.1 |
| $\phi 2$ | $\phi 4$ | KQ2H02-04A | 5.8 | 8.2 | 26.2 | 11.9 | 13.3 | — | 0.9 | 1.4 | 1.2 |
| $\phi 3.2$ | $\phi 4$ | KQ2H23-04A | 7.1 | 8.2 | 27.6 | 13.3 | 13.3 | 3.4 | 2.9 | 2.5 | 1.5 |
| $\phi 3.2$ | $\phi 6$ | KQ2H23-06A | 7.1 | 10.4 | 27.6 | 13.3 | 13.3 | 3.4 | 2.9 | 2.5 | 1.8 |
| $\phi 4$ | $\phi 6$ | KQ2H04-06A | 8.2 | 10.4 | 27.6 | 13.3 | 13.3 | 5.6 | 5.6 | 3 | 2 |
| $\phi 6$ | $\phi 8$ | KQ2H06-08A | 10.4 | 13.2 | 28.5 | 13.3 | 14.2 | 13.1 | 10.4 | 4.5 | 2.9 |
| $\phi 8$ | $\phi 10$ | KQ2H08-10A | 13.2 | 15.9 | 30.8 | 14.2 | 15.6 | 26.1 | 18 | 6 | 4.9 |
| $\phi 10$ | $\phi 12$ | KQ2H10-12A | 15.9 | 18.5 | 33.6 | 15.6 | 17 | 41.5 | 29.5 | 7.5 | 7.2 |
| $\phi 12$ | $\phi 16$ | KQ2H12-16A | 18.5 | 23.8 | 38.6 | 17 | 20.6 | 58.3 | 46.1 | 9 | 12.4 |

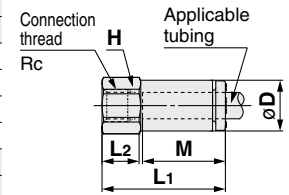


Note) $\phi D1$, $\phi D2$ are maximum diameters.

Female Connector: KQ2F



| Applicable tubing O.D. (mm) | Connection thread Rc | Model | H (Width across flats) | Note) ϕD | L1 | L2 | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|----------------------|------------|------------------------|----------------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | Nylon | Urethane | | |
| $\phi 3.2$ | 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 |
| $\phi 4$ | M3 x 0.5 | KQ2F04-M3□ | 8 | 7.9 | 17.3 | 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 |
| | 1/4 | KQ2F04-02□ | 17 | 7.9 | 29 | 12.9 | 13.3 | 5.6 | 4 | 3 | 21.5 |
| $\phi 6$ | 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 |
| | 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 |
| $\phi 8$ | 1/8 | KQ2F08-01□ | 14 | 13 | 24.1 | 8.5 | 14.2 | 26.1 | 18 | 6 | 12.9 |
| | 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 |
| $\phi 10$ | 1/4 | KQ2F10-02□ | 17 | 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 |
| $\phi 12$ | 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 |
| | 1/2 | KQ2F12-04□ | 24 | 18.2 | 36.3 | 15.9 | 17 | 58.3 | 46.1 | 9 | 46.3 |
| $\phi 16$ | 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 plated

Note) ϕD is maximum diameter.

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

Series KQ2

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

Dimensions

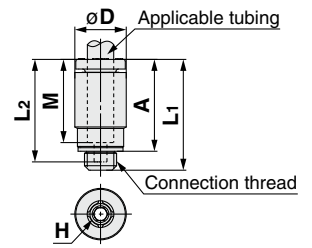
Hexagon Socket Head Male Connector: KQ2S (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread M | Model | H (Width across flats) | Note) 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 | 6 | 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 | 8 | 17.6 | 16.3 | 14.6 | 13.3 | 2.5 | 2.5 | 2 | 3 |
| | M6 x 1.0 | KQ2S04-M6□ | 3 | 8 | 20.6 | 19.6 | 16.6 | 13.3 | 4 | 4 | 3.1 | 4.1 |
| $\phi 6$ | M5 x 0.8 | KQ2S06-M5□ | 2 | 10 | 17.6 | 16.3 | 14.6 | 13.3 | 2.5 | 2.5 | 2 | 3.5 |
| | M6 x 1.0 | KQ2S06-M6□ | 3 | 10 | 20.6 | 19.6 | 16.6 | 13.3 | 4 | 4 | 3.1 | 5.1 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD is maximum diameter.



Hexagon Socket Head Male Connector: KQ2S (Sealant)

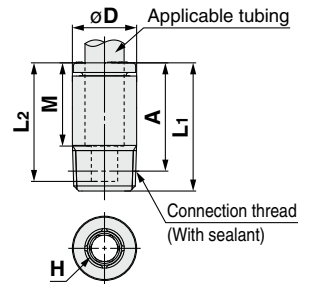


| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD | L1 | L2 | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|----------------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 1/8 | KQ2S04-01□S | 3 | 10 | 20.6 | 19.6 | 17.5 | 13.3 | 4.1 | 3.6 | 3.1 | 8.1 |
| $\phi 6$ | 1/8 | KQ2S06-01□S | 4 | 10 | 20.3 | 18.8 | 17.2 | 13.3 | 10 | 9.9 | 4.1 | 6.5 |
| | 1/4 | KQ2S06-02□S | 4 | 14 | 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 |
| | 1/2 | KQ2S10-04□S | 8 | 22 | 21.1 | 20.1 | 14.7 | 15.6 | 39 | 26.6 | 8.1 | 37.4 |
| $\phi 12$ | 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 |
| | 1/2 | KQ2S12-04□S | 10 | 22 | 22.8 | 21.8 | 16.4 | 17 | 60 | 44.5 | 10.1 | 30.5 |
| $\phi 16$ | New 1/4 | KQ2S16-02□S | 8 | 23.6 | 32.5 | 25.1 | 27.8 | 20.6 | 44 | 44 | 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 |
| | 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 plated

* Reference dimensions after installation of R thread

Note) ϕD is maximum diameter.



Metric Size One-touch Fittings *Series KQ2*

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

Dimensions

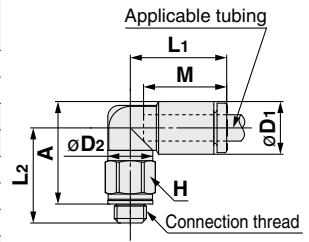
Male Elbow: KQ2L (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread M | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 |
| | 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 |
| $\phi 6$ | 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 plated

Note) ϕD_1 is maximum diameter.



Male Elbow: KQ2L (Sealant)

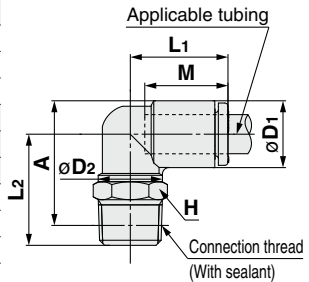


| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 | 4.2 | 4.2 | 3 | 4.8 |
| | 1/4 | KQ2L04-02□S | 14 | 8.2 | 10 | 14.8 | 21.7 | 21.1 | 13.3 | 4.2 | 4.2 | 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 |
| $\phi 8$ | 3/8 | KQ2L06-03□S | 17 | 10.4 | 10 | 15.5 | 24.1 | 24.2 | 13.3 | 11.4 | 9 | 4.5 | 26.5 |
| | 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 |
| $\phi 8$ | 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 | 27.0 | 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 |
| $\phi 12$ | 1/2 | KQ2L10-04□S | 22 | 15.9 | 17 | 19.3 | 33.6 | 35.1 | 15.6 | 35.2 | 25 | 7.5 | 44.6 |
| | 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 |
| $\phi 16$ | 1/2 | KQ2L12-04□S | 22 | 18.5 | 17 | 21.5 | 34.9 | 37.7 | 17 | 50.2 | 39.7 | 9 | 46.5 |
| | Now 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 |
| $\phi 16$ | 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 plated

* Reference dimensions after installation of R thread

Note) ϕD_1 is maximum diameter.



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

Series KQ2

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

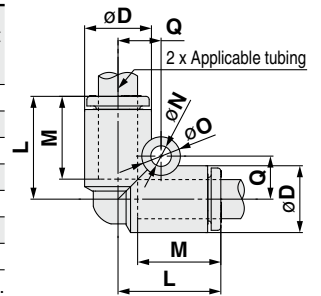
Dimensions

Union Elbow: KQ2L



| Applicable tubing O.D. (mm) | Model | Note) 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 |

Note) ϕD is maximum diameter.

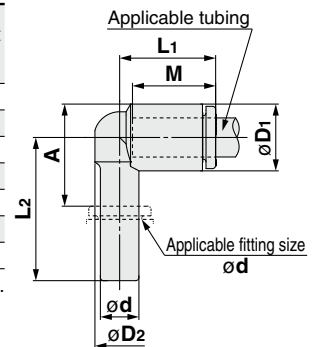


Plug-in Elbow: KQ2L



| Applicable tubing O.D. (mm) | Applicable fitting size ϕd | Model | Note) 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 |

Note) ϕD_1 is maximum diameter.

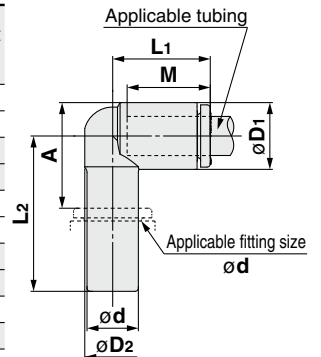


Reducer Elbow: KQ2L



| Applicable tubing O.D. (mm) | Applicable fitting size ϕd | Model | Note) 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 |

Note) ϕD_1 is maximum diameter.

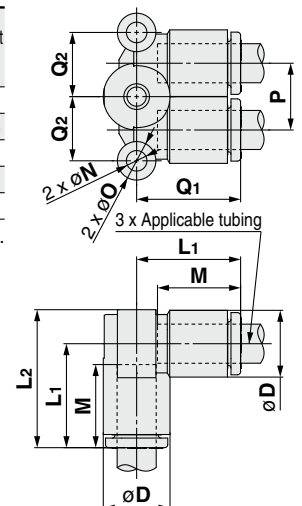


Branch Union Elbow: KQ2LU



| Applicable tubing O.D. (mm) | Model | Note) 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 |

Note) ϕD is maximum diameter.



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

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

Dimensions

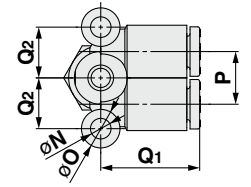
Male Branch Connector: KQ2LU (Gasket seal)



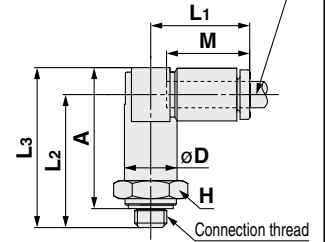
| Applicable tubing O.D. (mm) | Connection thread M | Model | H (Width across flats) | Note) ϕD | L1 | L2 | L3 | A | M | P | ϕO | ϕN | Q1 | Q2 | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|----------------|------|------|------|------|------|------|----------|----------|------|-----|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | | | | 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 plated

Note) ϕD is maximum diameter.



2 x Applicable tubing



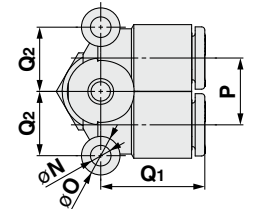
Male Branch Connector: KQ2LU (Sealant)



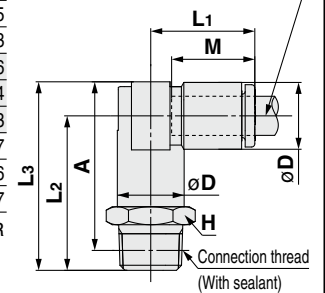
| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD | L1 | L2 | L3 | A* | M | P | ϕO | ϕN | Q1 | Q2 | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|--------------|------------------------|----------------|------|------|------|------|------|------|----------|----------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | | | | 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 |
| | 1/4 | KQ2LU06-02□S | 14 | 10.4 | 16.5 | 28.4 | 33.6 | 28.9 | 13.3 | 10.4 | 6 | 3.2 | 16.5 | 10 | 13.9 | 11 | 4.5 | 19.5 |
| | 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 |
| $\phi 12$ | 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 plated

* Reference dimensions after installation of R thread
Note) ϕD is maximum diameter.



2 x Applicable tubing



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

Series KQ2

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

Dimensions

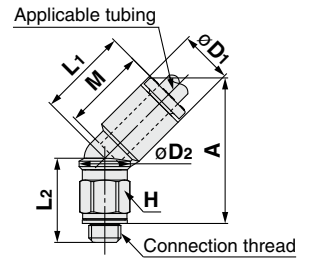
45° Male Elbow: KQ2K (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread M | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | M5 x 0.8 | KQ2K04-M5□ | 7 | 8.2 | 7 | 14.4 | 13.1 | 22.8 | 13.3 | 3.4 | 3.4 | 2.5 | 3 |
| | M6 x 1.0 | KQ2K04-M6□ | 8 | 8.2 | 7 | 14.4 | 14.1 | 22.8 | 13.3 | 3.4 | 3.4 | 2.5 | 4.1 |
| $\phi 6$ | M5 x 0.8 | KQ2K06-M5□ | 7 | 10.4 | 7 | 14.4 | 17 | 27.4 | 13.3 | 3.4 | 3.4 | 2.5 | 3.5 |
| | M6 x 1.0 | KQ2K06-M6□ | 8 | 10.4 | 7 | 14.4 | 18 | 27.4 | 13.3 | 3.4 | 3.4 | 2.5 | 4.5 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



45° Male Elbow: KQ2K (Sealant)

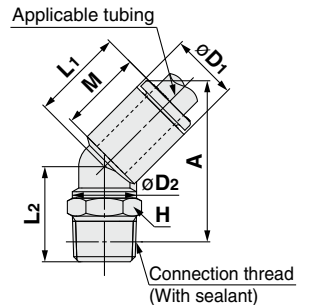


| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|----------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 1/8 | KQ2K04-01□S | 10 | 8.2 | 10 | 14.4 | 12.7 | 22.3 | 13.3 | 3.4 | 3.4 | 3 | 4.6 |
| | 1/4 | KQ2K04-02□S | 14 | 8.2 | 10 | 14.4 | 17.2 | 25.2 | 13.3 | 3.4 | 3.4 | 3 | 14.1 |
| $\phi 6$ | 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 |
| | 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 |
| $\phi 8$ | 1/8 | KQ2K08-01□S | 10 | 13.2 | 10 | 16 | 15.7 | 28 | 14.2 | 8.7 | 8.7 | 4.5 | 6 |
| | 1/4 | KQ2K08-02□S | 14 | 13.2 | 12 | 16 | 22.4 | 33.1 | 14.2 | 19.7 | 19.7 | 6 | 17.5 |
| | 3/8 | KQ2K08-03□S | 17 | 13.2 | 12 | 16 | 22.5 | 32.8 | 14.2 | 19.7 | 19.7 | 6 | 24.5 |
| $\phi 10$ | 1/8 | KQ2K10-01□S | 12 | 15.9 | 12 | 18.2 | 21.5 | 36.2 | 15.6 | 30.9 | 23.2 | 6 | 11.1 |
| | 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 |
| | 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 |
| $\phi 12$ | 1/4 | KQ2K12-02□S | 17 | 18.5 | 17 | 19.4 | 29 | 43.8 | 17 | 44.5 | 35.1 | 9 | 23.3 |
| | 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 |
| $\phi 16$ | ^(New) 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 |
| | 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 plated

* Reference dimensions after installation of R thread

Note) ϕD_1 is maximum diameter.



Metric Size One-touch Fittings *Series KQ2*

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

Dimensions

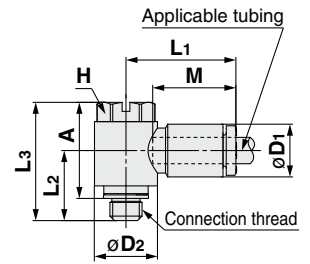
Universal Male Elbow: KQ2V (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | 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 plated

Note) ϕD_1 is maximum diameter.



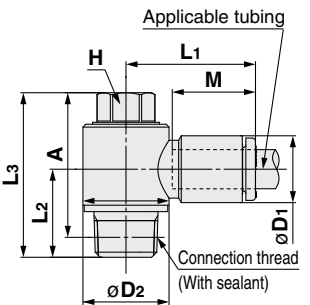
Universal Male Elbow: KQ2V (Sealant)



| Applicable tubing O.D. (mm) | Connection thread | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A* | 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 |
| | 1/2 | KQ2V12-04□S | 17 | 18.5 | 25.2 | 28.5 | 21.4 | 37.6 | 32.5 | 17 | 39 | 30.8 | 9 | 59.6 |
| $\phi 16$ | 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 plated

* Reference dimensions after installation of R thread
Note) ϕD_1 is maximum diameter.



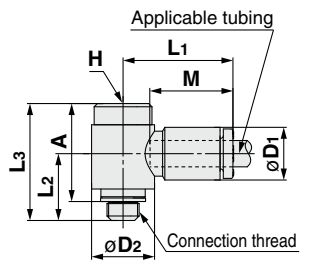
Hexagon Socket Head Universal Male Elbow: KQ2VS (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | 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 plated

Note) ϕD_1 is maximum diameter.



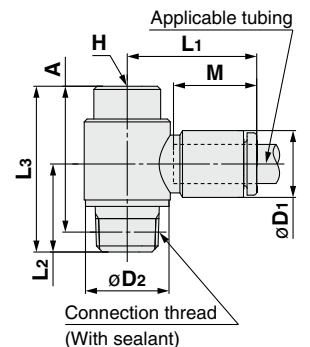
Hexagon Socket Head Universal Male Elbow: KQ2VS (Sealant)



| Applicable tubing O.D. (mm) | Connection thread | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A* | 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 |
| | 1/2 | KQ2VS12-04□S | 10 | 18.5 | 25.2 | 28.5 | 21.4 | 35.1 | 30 | 17 | 39 | 30.8 | 9 | 51.4 |
| | | | 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 plated

* Reference dimensions after installation of R thread
Note) ϕD_1 is maximum diameter.



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

Series KQ2

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

Dimensions

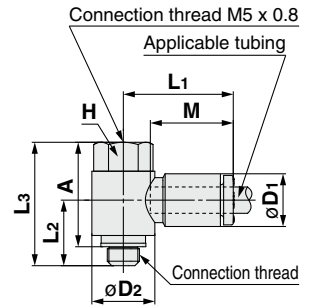
Universal Female Elbow: KQ2VF (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread M | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | 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 plated

Note) ϕD_1 is maximum diameter.



Universal Female Elbow: KQ2VF (Sealant)

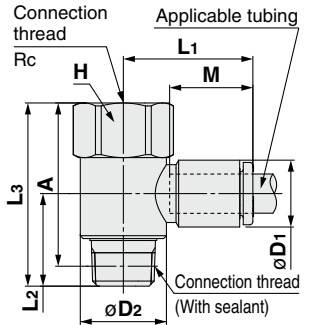


| Applicable tubing O.D. (mm) | Connection thread R, Rc | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|-------------------------|--------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | 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 |
| | 3/8 | KQ2VF08-03□S | 22 | 13.2 | 25.2 | 24.9 | 24 | 44 | 38.9 | 14.2 | 16 | 11.2 | 6 | 64.5 |
| $\phi 10$ | 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 |
| | 3/8 | KQ2VF10-03□S | 22 | 15.9 | 25.2 | 26.3 | 23.2 | 44 | 38.9 | 15.6 | 27 | 20.3 | 9 | 65.3 |
| $\phi 12$ | 3/8 | KQ2VF12-03□S | 22 | 18.5 | 25.2 | 28.5 | 22.5 | 44 | 38.9 | 17 | 39 | 30.8 | 9 | 67.2 |
| | 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 plated

* Reference dimensions after installation of R thread

Note) ϕD_1 is maximum diameter.



Metric Size One-touch Fittings *Series KQ2*

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

Dimensions

Triple Universal Male Elbow: KQ2VT (Sealant)

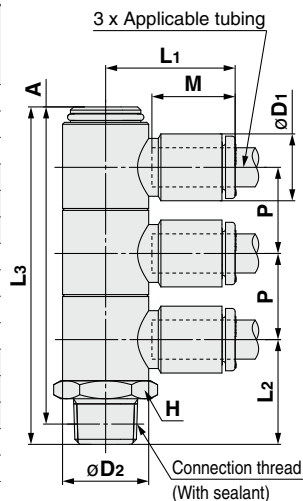


| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) $\phi D1$ | $\phi D2$ | L1 | L2 | L3 | A* | M | P | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|--------------|------------------------|-----------------|-----------|------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | 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 |
| $\phi 10$ | 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 |
| | 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 |
| $\phi 12$ | 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 |
| | 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 plated

* Reference dimensions after installation of R thread

Note) $\phi D1$ is maximum diameter.



Double Universal Male Elbow: KQ2VD (Sealant)

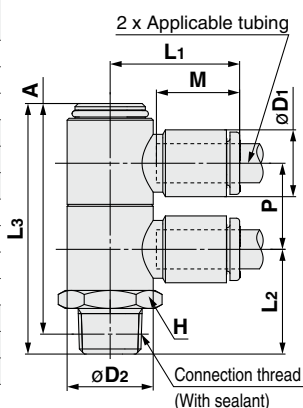


| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) $\phi D1$ | $\phi D2$ | L1 | L2 | L3 | A* | M | P | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|--------------|------------------------|-----------------|-----------|------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | 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 |
| $\phi 10$ | 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 |
| | 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 |
| $\phi 12$ | 1/2 | KQ2VD10-04□S | 22 | 15.9 | 20.6 | 25.7 | 28.7 | 60 | 53.6 | 15.6 | 19.2 | 27 | 20.3 | 7.5 | 87 |
| | 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 plated

* Reference dimensions after installation of R thread

Note) $\phi D1$ is maximum diameter.



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

Series KQ2

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

Dimensions

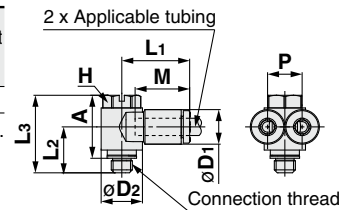
Branch Universal Male Elbow: KQ2Z (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread | Model | H (Width across flats) | Note) 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 plated

Note) ϕD_1 is maximum diameter.



Branch Universal Male Elbow: KQ2Z (Sealant)

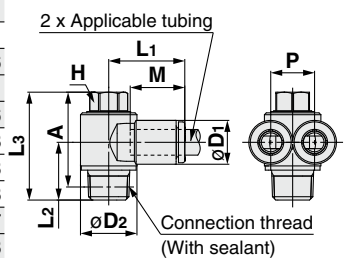


| Applicable tubing O.D. (mm) | Connection thread | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L1 | L2 | L3 | A* | M | P | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|-------------------|-----------|------------------------|------------------|------------|------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 1/8 | KQ2Z04-01 | 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 | 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 | 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 | 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 |
| $\phi 8$ | 1/8 | KQ2Z08-01 | 12 | 13.2 | 17.6 | 21.2 | 15.1 | 27.6 | 24.5 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 24.3 |
| | 1/4 | KQ2Z08-02 | 12 | 13.2 | 17.6 | 21.2 | 18.5 | 31 | 26.3 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 30.8 |
| $\phi 8$ | 3/8 | KQ2Z08-03 | 14 | 13.2 | 20.6 | 22.3 | 19.5 | 35.3 | 30.2 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 46.3 |
| | 1/4 | KQ2Z10-02 | 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 |
| $\phi 10$ | 3/8 | KQ2Z10-03 | 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 |
| | 3/8 | KQ2Z12-03 | 17 | 18.5 | 24.1 | 26.9 | 21.2 | 37.6 | 32.5 | 17 | 18.5 | 44.6 | 35.3 | 9 | 63.4 |
| $\phi 12$ | 1/2 | KQ2Z12-04 | 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 plated

* Reference dimensions after installation of R thread

Note) ϕD_1 is maximum diameter.



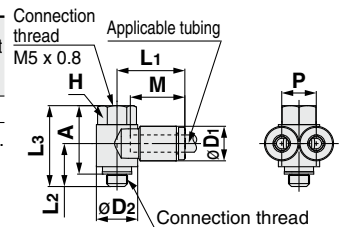
Branch Universal Female Elbow: KQ2ZF (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread | Model | H (Width across flats) | Note) 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 plated

Note) ϕD_1 is maximum diameter.



Branch Universal Female Elbow: KQ2ZF (Sealant)

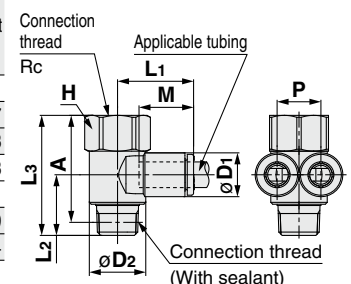


| Applicable tubing O.D. (mm) | Connection thread | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L1 | L2 | L3 | A* | M | P | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|-------------------|------------|------------------------|------------------|------------|------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 1/8 | KQ2ZF04-01 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 plated

* Reference dimensions after installation of R thread

Note) ϕD_1 is maximum diameter.



Metric Size One-touch Fittings *Series KQ2*

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

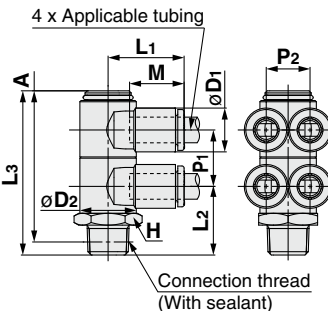
Dimensions

Double Branch Universal Male Elbow: KQ2ZD (Sealant)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L1 | L2 | L3 | A* | M | P1 | P2 | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|--------------|------------------------|------------------|------------|------|------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 1/8 | KQ2ZD04-01□S | 14 | 8.2 | 13.4 | 18.5 | 16.3 | 39 | 35.9 | 13.3 | 13.4 | 8.2 | 4.7 | 4.7 | 3 | 21.3 |
| | 1/4 | KQ2ZD04-02□S | 14 | 8.2 | 13.4 | 18.5 | 20.7 | 43.4 | 38.7 | 13.3 | 13.4 | 8.2 | 4.7 | 4.7 | 3 | 29 |
| $\phi 6$ | 3/8 | KQ2ZD04-03□S | 17 | 8.2 | 13.4 | 18.5 | 22.1 | 44.8 | 39.7 | 13.3 | 13.4 | 8.2 | 4.7 | 4.7 | 3 | 40.9 |
| | 1/8 | KQ2ZD06-01□S | 14 | 10.4 | 13.4 | 18.4 | 16.3 | 39 | 35.9 | 13.3 | 13.4 | 10.4 | 10.8 | 8.6 | 4.5 | 22.5 |
| $\phi 8$ | 1/4 | KQ2ZD06-02□S | 14 | 10.4 | 13.4 | 18.4 | 20.7 | 43.4 | 38.7 | 13.3 | 13.4 | 10.4 | 10.8 | 8.6 | 4.5 | 30.2 |
| | 3/8 | KQ2ZD06-03□S | 17 | 10.4 | 13.4 | 18.4 | 22.1 | 44.8 | 39.7 | 13.3 | 13.4 | 10.4 | 10.8 | 8.6 | 4.5 | 42.1 |
| $\phi 10$ | 1/8 | KQ2ZD08-01□S | 19 | 13.2 | 17.6 | 21.2 | 19 | 45.8 | 42.7 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 48.7 |
| | 1/4 | KQ2ZD08-02□S | 19 | 13.2 | 17.6 | 21.2 | 22.4 | 49.2 | 44.5 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 48 |
| $\phi 12$ | 3/8 | KQ2ZD08-03□S | 19 | 13.2 | 17.6 | 21.2 | 23 | 49.8 | 44.7 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 55.9 |
| | 1/2 | KQ2ZD08-04□S | 22 | 13.2 | 17.6 | 21.2 | 27.2 | 54 | 47.6 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 82.1 |
| $\phi 10$ | 1/4 | KQ2ZD10-02□S | 21 | 15.9 | 20.6 | 23.6 | 24.3 | 56.2 | 51.5 | 15.6 | 19.2 | 15.9 | 31.8 | 21.6 | 7.5 | 69 |
| | 3/8 | KQ2ZD10-03□S | 21 | 15.9 | 20.6 | 23.6 | 24.7 | 56.6 | 51.5 | 15.6 | 19.2 | 15.9 | 31.8 | 21.6 | 7.5 | 71 |
| $\phi 12$ | 1/2 | KQ2ZD10-04□S | 22 | 15.9 | 20.6 | 23.6 | 28.7 | 60 | 53.6 | 15.6 | 19.2 | 15.9 | 31.8 | 21.6 | 7.5 | 92.9 |
| | 1/4 | KQ2ZD12-02□S | 26 | 18.5 | 25.2 | 26.8 | 26.5 | 62.4 | 57.7 | 17 | 21.6 | 18.5 | 44.6 | 35.3 | 9 | 116.6 |
| $\phi 12$ | 3/8 | KQ2ZD12-03□S | 26 | 18.5 | 25.2 | 26.8 | 26.9 | 62.8 | 57.7 | 17 | 21.6 | 18.5 | 44.6 | 35.3 | 9 | 110.7 |
| | 1/2 | KQ2ZD12-04□S | 26 | 18.5 | 25.2 | 26.8 | 30.1 | 66 | 59.6 | 17 | 21.6 | 18.5 | 44.6 | 35.3 | 9 | 124.7 |

□/A: Brass, N: Brass + Electroless nickel plated * Reference dimensions after installation of R thread
 Note) ϕD_1 is maximum diameter.

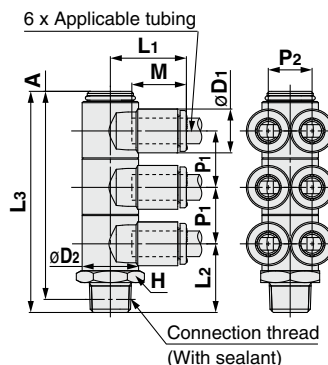


Triple Branch Universal Male Elbow: KQ2ZT (Sealant)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L1 | L2 | L3 | A* | M | P1 | P2 | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|--------------|------------------------|------------------|------------|------|------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 1/8 | KQ2ZT04-01□S | 14 | 8.2 | 13.4 | 18.5 | 16.3 | 52.5 | 49.4 | 13.3 | 13.4 | 8.2 | 4.7 | 4.7 | 3 | 27.7 |
| | 1/4 | KQ2ZT04-02□S | 14 | 8.2 | 13.4 | 18.5 | 20.7 | 56.9 | 52.2 | 13.3 | 13.4 | 8.2 | 4.7 | 4.7 | 3 | 35.3 |
| $\phi 6$ | 3/8 | KQ2ZT04-03□S | 17 | 8.2 | 13.4 | 18.5 | 22.1 | 58.3 | 53.2 | 13.3 | 13.4 | 8.2 | 4.7 | 4.7 | 3 | 47.2 |
| | 1/8 | KQ2ZT06-01□S | 14 | 10.4 | 13.4 | 18.4 | 16.3 | 52.5 | 49.4 | 13.3 | 13.4 | 10.4 | 10.8 | 8.6 | 4.5 | 29.5 |
| $\phi 8$ | 1/4 | KQ2ZT06-02□S | 14 | 10.4 | 13.4 | 18.4 | 20.7 | 56.9 | 52.2 | 13.3 | 13.4 | 10.4 | 10.8 | 8.6 | 4.5 | 37.2 |
| | 3/8 | KQ2ZT06-03□S | 17 | 10.4 | 13.4 | 18.4 | 22.1 | 58.3 | 53.2 | 13.3 | 13.4 | 10.4 | 10.8 | 8.6 | 4.5 | 49.1 |
| $\phi 10$ | 1/8 | KQ2ZT08-01□S | 19 | 13.2 | 17.6 | 21.2 | 19 | 61.8 | 58.7 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 65.1 |
| | 1/4 | KQ2ZT08-02□S | 19 | 13.2 | 17.6 | 21.2 | 22.4 | 65.2 | 60.5 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 62.3 |
| $\phi 12$ | 3/8 | KQ2ZT08-03□S | 19 | 13.2 | 17.6 | 21.2 | 23 | 65.8 | 60.7 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 70.4 |
| | 1/2 | KQ2ZT08-04□S | 22 | 13.2 | 17.6 | 21.2 | 27.2 | 70 | 63.6 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 97 |
| $\phi 10$ | 1/4 | KQ2ZT10-02□S | 21 | 15.9 | 20.6 | 23.6 | 24.3 | 75.5 | 70.8 | 15.6 | 19.2 | 15.9 | 31.8 | 21.6 | 7.5 | 90.9 |
| | 3/8 | KQ2ZT10-03□S | 21 | 15.9 | 20.6 | 23.6 | 24.7 | 75.9 | 70.8 | 15.6 | 19.2 | 15.9 | 31.8 | 21.6 | 7.5 | 90.7 |
| $\phi 12$ | 1/2 | KQ2ZT10-04□S | 22 | 15.9 | 20.6 | 23.6 | 28.7 | 79.9 | 73.5 | 15.6 | 19.2 | 15.9 | 31.8 | 21.6 | 7.5 | 112.7 |
| | 1/4 | KQ2ZT12-02□S | 26 | 18.5 | 25.2 | 26.8 | 26.5 | 84.1 | 79.4 | 17 | 21.6 | 18.5 | 44.6 | 35.3 | 9 | 152.2 |
| $\phi 12$ | 3/8 | KQ2ZT12-03□S | 26 | 18.5 | 25.2 | 26.8 | 26.9 | 84.5 | 79.4 | 17 | 21.6 | 18.5 | 44.6 | 35.3 | 9 | 142.6 |
| | 1/2 | KQ2ZT12-04□S | 26 | 18.5 | 25.2 | 26.8 | 30.1 | 87.7 | 81.3 | 17 | 21.6 | 18.5 | 44.6 | 35.3 | 9 | 155.1 |

□/A: Brass, N: Brass + Electroless nickel plated * Reference dimensions after installation of R thread
 Note) ϕD_1 is maximum diameter.



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

Series KQ2

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

Dimensions

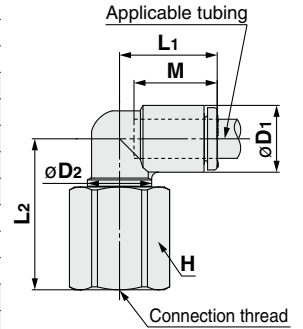
Female Elbow: KQ2LF



| Applicable tubing O.D. (mm) | Connection thread M, Rc | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|-------------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | 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 |
| | 3/8 | KQ2LF06-03□ | 19 | 10.4 | 10 | 15.5 | 28.5 | 13.3 | 11.4 | 9 | 4.5 | 34 |
| $\phi 8$ | 1/8 | KQ2LF08-01□ | 14 | 13.2 | 10 | 16.4 | 24.9 | 14.2 | 11.4 | 11.4 | 4.5 | 18.8 |
| | 1/4 | KQ2LF08-02□ | 17 | 13.2 | 12 | 17.2 | 28.8 | 14.2 | 21.6 | 14.9 | 6 | 28.7 |
| | 3/8 | KQ2LF08-03□ | 19 | 13.2 | 12 | 17.2 | 29.3 | 14.2 | 21.6 | 14.9 | 6 | 32.3 |
| $\phi 10$ | 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 plated

Note) ϕD_1 is maximum diameter.

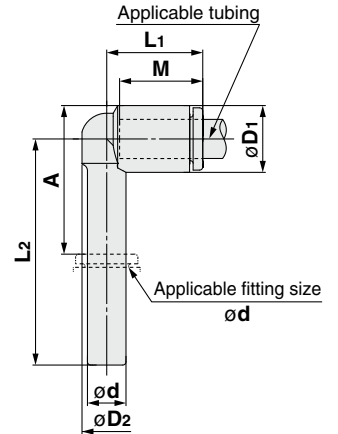


Extended Plug-in Elbow: KQ2W



| Applicable tubing O.D. (mm) | Applicable fitting size ϕd | Model | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|----------------------------------|------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | Nylon | Urethane | | |
| $\phi 3.2$ | $\phi 3.2$ | 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 |

Note) ϕD_1 is maximum diameter.



Metric Size One-touch Fittings *Series KQ2*

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

Dimensions

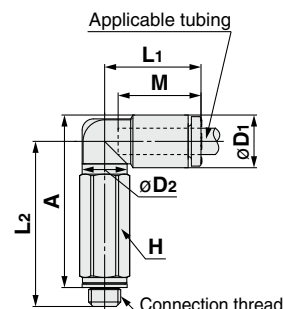
Extended Male Elbow: KQ2W (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread M | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 plated

Note) ϕD_1 is maximum diameter.



Extended Male Elbow: KQ2W (Sealant)

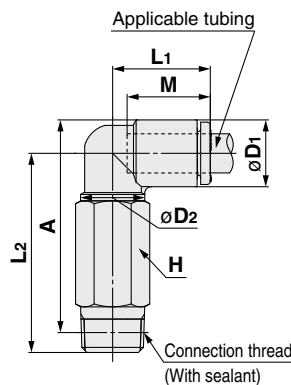


| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 |
| $\phi 8$ | 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 |
| | 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 |
| $\phi 8$ | 1/4 | KQ2W08-02□S | 14 | 13.2 | 12 | 17.2 | 39.1 | 41 | 14.2 | 20.5 | 14.2 | 6 | 40 |
| | 3/8 | KQ2W08-03□S | 17 | 13.2 | 12 | 17.2 | 39.2 | 40.7 | 14.2 | 20.5 | 14.2 | 6 | 47 |
| $\phi 10$ | 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 |
| $\phi 10$ | 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 |
| $\phi 12$ | 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 |
| $\phi 16$ | New 1/4 | KQ2W16-02□S | 17 | 23.8 | 21 | 25.1 | 59 | 66.2 | 20.6 | 47.7 | 47.7 | 9 | 67.4 |
| | 3/8 | KQ2W16-03□S | 22 | 23.8 | 21 | 27.1 | 59.7 | 66.5 | 20.6 | 71 | 58.9 | 11 | 105.5 |
| $\phi 16$ | 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 plated

* Reference dimensions after installation of R thread

Note) ϕD_1 is maximum diameter.



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

Series KQ2

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

Dimensions

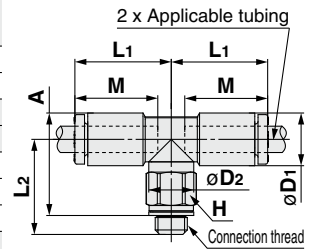
Male Branch Tee: KQ2T (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread M | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | 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 |
| | M6 x 1.0 | KQ2T04-M6□ | 8 | 8.2 | 7 | 15.4 | 15.8 | 15.9 | 13.3 | 4.5 | 4.5 | 2.5 | 4.9 |
| $\phi 6$ | 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 plated

Note) ϕD_1 is maximum diameter.



Male Branch Tee: KQ2T (Sealant)

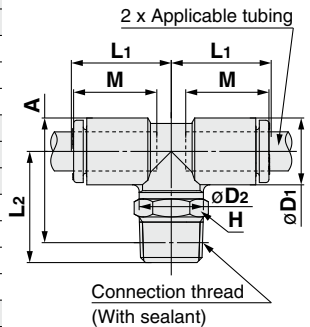


| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 |
| | 3/8 | KQ2T06-03□S | 17 | 10.4 | 10 | 15.5 | 24.1 | 24.2 | 13.3 | 13.9 | 11 | 4.5 | 27.4 |
| $\phi 8$ | 1/8 | KQ2T08-01□S | 10 | 13.2 | 10 | 16.4 | 18.7 | 22.2 | 14.2 | 14 | 14 | 4.5 | 7.9 |
| | 1/4 | KQ2T08-02□S | 14 | 13.2 | 12 | 17.2 | 25.4 | 27.3 | 14.2 | 26.3 | 18.2 | 6 | 19.4 |
| | 3/8 | KQ2T08-03□S | 17 | 13.2 | 12 | 17.2 | 25.5 | 27 | 14.2 | 26.3 | 18.2 | 6 | 26.5 |
| $\phi 10$ | 1/8 | KQ2T10-01□S | 12 | 15.9 | 12 | 18.6 | 23.5 | 28.4 | 15.6 | 21.6 | 14.9 | 6 | 13.9 |
| | 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 |
| | 1/2 | KQ2T10-04□S | 22 | 15.9 | 17 | 19.3 | 33.5 | 35.1 | 15.6 | 35.2 | 25 | 7.5 | 47.3 |
| $\phi 12$ | 1/4 | KQ2T12-02□S | 17 | 18.5 | 17 | 21.5 | 29.9 | 34.5 | 17 | 57.2 | 45.2 | 9 | 27.3 |
| | 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 |
| $\phi 16$ | New 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 |
| | 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 plated

* Reference dimensions after installation of R thread

Note) ϕD_1 is maximum diameter.



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

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

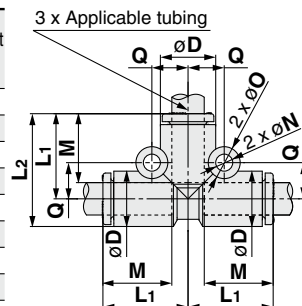
Dimensions

Union Tee: KQ2T



| Applicable tubing O.D. (mm) | Model | Note) 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 |

Note) ϕD is maximum diameter.

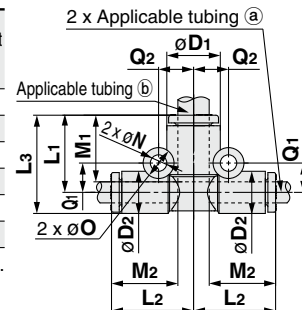


Different Diameter Tee: KQ2T



| Applicable tubing O.D. (mm) | | Model | Note) 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 |

Note) ϕD_1 is maximum diameter.

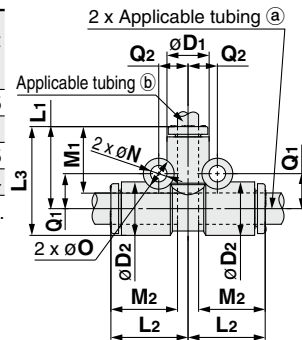


Different Diameter Tee: KQ2T



| Applicable tubing O.D. (mm) | | Model | Note) 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 |

Note) ϕD_1 is maximum diameter.



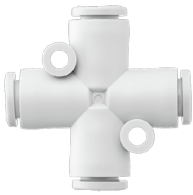
Metric Size M, R, Rc
Inch Size UNF, NPT
Metric Size M, R, Rc
Metric Size G
Metric Size R, Rc
Inch Size NPT
Inch Size R
Metric Size Uni
Inch Size Uni

Series KQ2

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

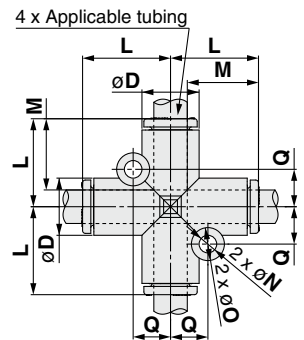
Dimensions

Cross: KQ2TW



| Applicable tubing O.D. (mm) | Model | Note) 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 |

Note) ϕD is maximum diameter.

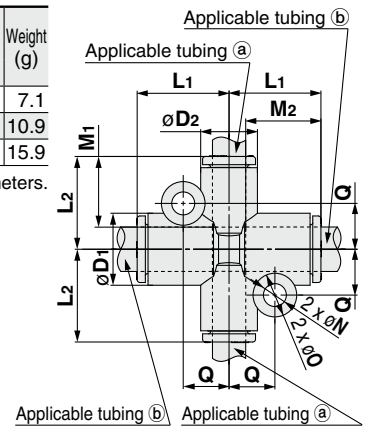


Different Diameter Cross: KQ2TX

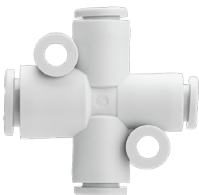


| Applicable tubing O.D. (mm) | | Model | Note) ϕD_1 | Note) ϕD_2 | L ₁ | L ₂ | Q | M ₁ | M ₂ | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|-----------|-------------|------------------|------------------|----------------|----------------|------|----------------|----------------|----------|----------|-----------------------------------|----------|----------------|------------|
| (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 |

Note) ϕD_1 , ϕD_2 are maximum diameters.

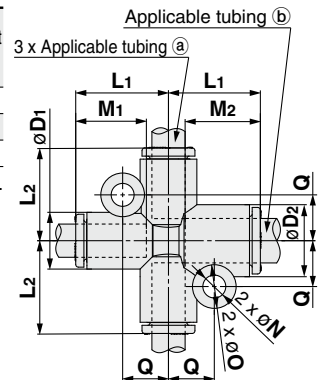


Different Diameter Cross: KQ2TY



| Applicable tubing O.D. (mm) | | Model | Note) ϕD_1 | Note) 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 |

Note) ϕD_1 , ϕD_2 are maximum diameters.



Metric Size One-touch Fittings *Series KQ2*

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

Dimensions

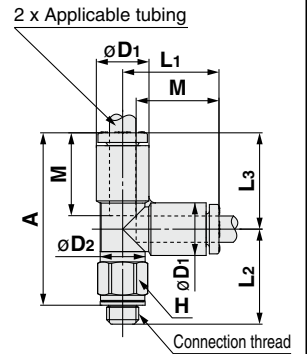
Male Run Tee: KQ2Y (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread M | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 2$ | M3 x 0.5 | KQ2Y02-M3G | 5.5 | 5.8 | 5.5 | 12.9 | 12.5 | 12.9 | 22.8 | 11.9 | — | 0.9 | 1.2 | 2 |
| | M5 x 0.8 | KQ2Y02-M5□ | 7 | 5.8 | 5.5 | 12.9 | 13 | 12.9 | 22.9 | 11.9 | — | 0.9 | 1.4 | 3.1 |
| $\phi 3.2$ | M3 x 0.5 | KQ2Y23-M3G | 7 | 7.1 | 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□ | 7 | 7.1 | 7 | 15.3 | 14.3 | 15.3 | 26.6 | 13.3 | 3.2 | 2.7 | 2.5 | 3.5 |
| $\phi 4$ | M3 x 0.5 | KQ2Y04-M3G | 7 | 8.2 | 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□ | 7 | 8.2 | 7 | 15.4 | 14.8 | 15.4 | 27.2 | 13.3 | 4.5 | 4.5 | 2.5 | 3.9 |
| $\phi 6$ | M6 x 1.0 | KQ2Y04-M6□ | 8 | 8.2 | 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□ | 7 | 10.4 | 7 | 16.3 | 16.5 | 16.3 | 29.8 | 13.3 | 4.5 | 4.5 | 2.5 | 4.6 |
| | M6 x 1.0 | KQ2Y06-M6□ | 8 | 10.4 | 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 plated

Note) ϕD_1 is maximum diameter.



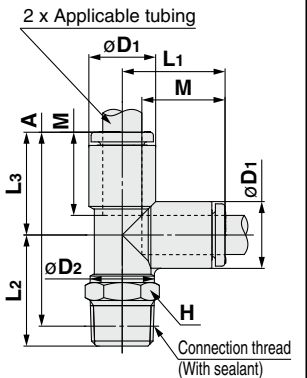
Male Run Tee: KQ2Y (Sealant)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3.2$ | 1/8 | KQ2Y23-01□S | 10 | 7.1 | 10 | 14.9 | 16.6 | 14.9 | 28.5 | 13.3 | 3.4 | 2.9 | 2.5 | 5.3 |
| | 1/4 | KQ2Y23-02□S | 14 | 7.1 | 10 | 14.9 | 21.1 | 14.9 | 31.4 | 13.3 | 3.4 | 2.9 | 2.5 | 14.7 |
| $\phi 4$ | 1/8 | KQ2Y04-01□S | 10 | 8.2 | 10 | 15.3 | 16.2 | 15.3 | 28.4 | 13.3 | 6.4 | 4.4 | 3 | 5.6 |
| | 1/4 | KQ2Y04-02□S | 14 | 8.2 | 10 | 15.3 | 21.7 | 15.3 | 32.3 | 13.3 | 6.4 | 4.4 | 3 | 15 |
| $\phi 6$ | 1/8 | KQ2Y06-01□S | 10 | 10.4 | 10 | 16.3 | 17.3 | 16.3 | 30.5 | 13.3 | 13.4 | 10.6 | 4.5 | 6.2 |
| | 1/4 | KQ2Y06-02□S | 14 | 10.4 | 10 | 16.3 | 22.8 | 16.3 | 34.4 | 13.3 | 13.4 | 10.6 | 4.5 | 15.8 |
| $\phi 8$ | 3/8 | KQ2Y06-03□S | 17 | 10.4 | 10 | 16.3 | 24.1 | 16.3 | 35.3 | 13.3 | 13.4 | 10.6 | 4.5 | 27.5 |
| | 1/8 | KQ2Y08-01□S | 10 | 13.2 | 10 | 18.2 | 18.7 | 18.2 | 33.8 | 14.2 | 13.4 | 13.4 | 4.5 | 8 |
| $\phi 8$ | 1/4 | KQ2Y08-02□S | 14 | 13.2 | 12 | 18.2 | 25.4 | 18.2 | 38.9 | 14.2 | 25.6 | 17.7 | 6 | 19.5 |
| | 3/8 | KQ2Y08-03□S | 17 | 13.2 | 12 | 18.2 | 25.5 | 18.2 | 38.6 | 14.2 | 25.6 | 17.7 | 6 | 26.5 |
| $\phi 10$ | 1/8 | KQ2Y10-01□S | 12 | 15.9 | 12 | 20.6 | 23.5 | 20.6 | 41.1 | 15.6 | 40 | 28.4 | 6 | 14 |
| | 1/4 | KQ2Y10-02□S | 17 | 15.9 | 17 | 20.6 | 28.6 | 20.6 | 44.6 | 15.6 | 40 | 28.4 | 7.5 | 24.5 |
| $\phi 10$ | 3/8 | KQ2Y10-03□S | 17 | 15.9 | 17 | 20.6 | 29.5 | 20.6 | 45.1 | 15.6 | 40 | 28.4 | 7.5 | 25 |
| | 1/2 | KQ2Y10-04□S | 22 | 15.9 | 17 | 20.6 | 33.5 | 20.6 | 47.8 | 15.6 | 40 | 28.4 | 7.5 | 47.4 |
| $\phi 12$ | 1/4 | KQ2Y12-02□S | 17 | 18.5 | 17 | 23 | 29.9 | 23 | 48.3 | 17 | 57.4 | 45.4 | 9 | 27.6 |
| | 3/8 | KQ2Y12-03□S | 17 | 18.5 | 17 | 23 | 30.8 | 23 | 48.8 | 17 | 57.4 | 45.4 | 9 | 28.2 |
| $\phi 12$ | 1/2 | KQ2Y12-04□S | 22 | 18.5 | 17 | 23 | 34.8 | 23 | 51.5 | 17 | 57.4 | 45.4 | 9 | 50.7 |
| | New 1/4 | KQ2Y16-02□S | 17 | 23.8 | 17 | 28.6 | 32.6 | 28.6 | 56.5 | 20.6 | 57.4 | 45.4 | 9 | 36 |
| $\phi 16$ | 3/8 | KQ2Y16-03□S | 22 | 23.8 | 21 | 28.6 | 35.4 | 28.6 | 58.9 | 20.6 | 81 | 60 | 11 | 48.3 |
| | 1/2 | KQ2Y16-04□S | 22 | 23.8 | 21 | 28.6 | 34.1 | 28.6 | 56.3 | 20.6 | 113 | 60 | 13 | 52 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of R thread
Note) ϕD_1 is maximum diameter.



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

Series KQ2

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

Dimensions

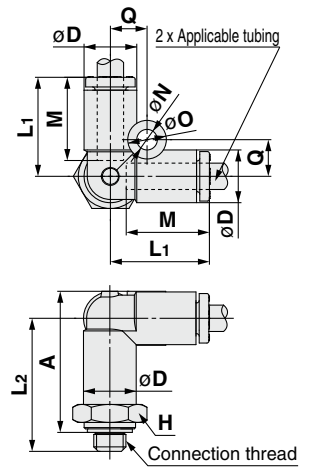
Male Delta Union: KQ2D (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread M | Model | H (Width across flats) | Note) 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 plated

Note) ϕD is maximum diameter.



Male Delta Union: KQ2D (Sealant)

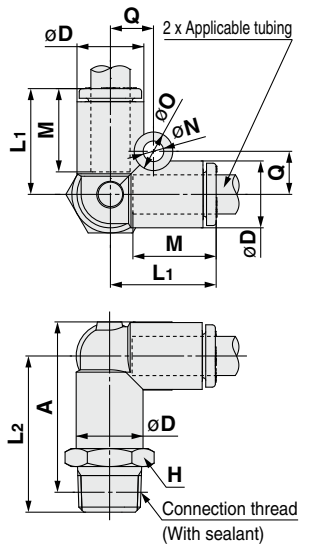


| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD | L1 | L2 | A* | M | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|----------------|------|------|------|------|------|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | 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 |
| | 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 |
| $\phi 8$ | 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 |
| | 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 |
| $\phi 10$ | 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 |
| | 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 |
| $\phi 12$ | 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 |
| | 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 plated

* Reference dimensions after installation of R thread

Note) ϕD is maximum diameter.



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

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

Dimensions

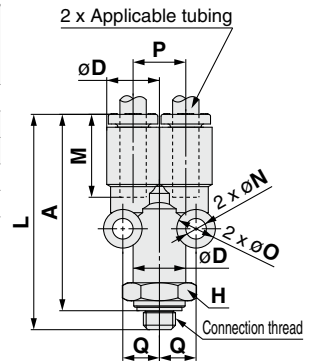
Branch "Y": KQ2U (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread M | Model | H (Width across flats) | Note) ϕD | L | A | M | P | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|------------|------------------------|----------------|------|------|------|------|-----|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3.2$ | M5 x 0.8 | KQ2U23-M5□ | 10 | 7.1 | 33.8 | 30.8 | 13.3 | 7.1 | 5.2 | 6 | 3.2 | 2.2 | 2.2 | 1.8 | 5.8 |
| $\phi 4$ | M5 x 0.8 | KQ2U04-M5□ | 10 | 8.2 | 33.9 | 30.9 | 13.3 | 8.2 | 5.7 | 6 | 3.2 | 2.2 | 2.2 | 1.8 | 6.7 |
| | M6 x 1.0 | KQ2U04-M6□ | 10 | 8.2 | 34.9 | 30.9 | 13.3 | 8.2 | 5.7 | 6 | 3.2 | 2.2 | 2.2 | 3 | 6.6 |
| $\phi 6$ | M5 x 0.8 | KQ2U06-M5□ | 12 | 10.4 | 35 | 32 | 13.3 | 10.4 | 6.8 | 6 | 3.2 | 2.2 | 2.2 | 1.8 | 10 |
| | M6 x 1.0 | KQ2U06-M6□ | 12 | 10.4 | 36 | 32 | 13.3 | 10.4 | 6.8 | 6 | 3.2 | 2.2 | 2.2 | 3 | 9.8 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD is maximum diameter.



Branch "Y": KQ2U (Sealant)

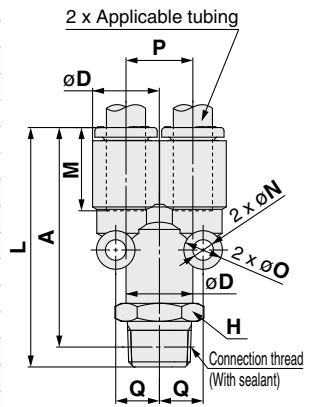


| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD | L | A* | M | P | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|----------------|------|------|------|------|------|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3.2$ | 1/8 | KQ2U23-01□S | 10 | 7.1 | 36.4 | 33.3 | 13.3 | 7.1 | 5.2 | 6 | 3.2 | 3.4 | 2.9 | 2.7 | 8.6 |
| | 1/4 | KQ2U23-02□S | 14 | 7.1 | 40.8 | 36.1 | 13.3 | 7.1 | 5.2 | 6 | 3.2 | 3.4 | 2.9 | 2.7 | 19 |
| $\phi 4$ | 1/8 | KQ2U04-01□S | 10 | 8.2 | 36.5 | 33.4 | 13.3 | 8.2 | 5.7 | 6 | 3.2 | 4.2 | 4.2 | 3.6 | 9.3 |
| | 1/4 | KQ2U04-02□S | 14 | 8.2 | 40.9 | 36.2 | 13.3 | 8.2 | 5.7 | 6 | 3.2 | 4.2 | 4.2 | 3.6 | 19.1 |
| $\phi 6$ | 1/8 | KQ2U06-01□S | 12 | 10.4 | 37.6 | 34.5 | 13.3 | 10.4 | 6.8 | 6 | 3.2 | 13.4 | 10.6 | 5.4 | 10.3 |
| | 1/4 | KQ2U06-02□S | 14 | 10.4 | 42 | 37.3 | 13.3 | 10.4 | 6.8 | 6 | 3.2 | 13.4 | 10.6 | 5.4 | 19.2 |
| | 3/8 | KQ2U06-03□S | 17 | 10.4 | 43.4 | 38.3 | 13.3 | 10.4 | 6.8 | 6 | 3.2 | 13.4 | 10.6 | 5.4 | 31.2 |
| $\phi 8$ | 1/8 | KQ2U08-01□S | 14 | 13.2 | 40.7 | 37.6 | 14.2 | 13.2 | 8.7 | 8 | 4.2 | 25.6 | 17.7 | 6 | 15.8 |
| | 1/4 | KQ2U08-02□S | 14 | 13.2 | 45.1 | 40.4 | 14.2 | 13.2 | 8.7 | 8 | 4.2 | 25.6 | 17.7 | 7.3 | 20.9 |
| | 3/8 | KQ2U08-03□S | 17 | 13.2 | 46.5 | 41.4 | 14.2 | 13.2 | 8.7 | 8 | 4.2 | 25.6 | 17.7 | 7.3 | 32.7 |
| $\phi 10$ | 1/4 | KQ2U10-02□S | 17 | 15.9 | 49 | 44.3 | 15.6 | 15.9 | 10.1 | 8 | 4.2 | 40 | 28.4 | 9 | 25.6 |
| | 3/8 | KQ2U10-03□S | 17 | 15.9 | 50.4 | 45.3 | 15.6 | 15.9 | 10.1 | 8 | 4.2 | 40 | 28.4 | 9.4 | 33.4 |
| | 1/2 | KQ2U10-04□S | 22 | 15.9 | 54.6 | 48.2 | 15.6 | 15.9 | 10.1 | 8 | 4.2 | 40 | 28.4 | 9.4 | 61.3 |
| $\phi 12$ | 1/4 | KQ2U12-02□S | 19 | 18.5 | 53 | 48.3 | 17 | 18.5 | 11.4 | 8 | 4.2 | 57.4 | 45.4 | 9 | 36 |
| | 3/8 | KQ2U12-03□S | 19 | 18.5 | 54.4 | 49.3 | 17 | 18.5 | 11.4 | 8 | 4.2 | 57.4 | 45.4 | 11 | 38.9 |
| | 1/2 | KQ2U12-04□S | 22 | 18.5 | 58.6 | 52.2 | 17 | 18.5 | 11.4 | 8 | 4.2 | 57.4 | 45.4 | 11.6 | 61 |
| $\phi 16$ | New 1/4 | KQ2U16-02□S | 24 | 23.8 | 62.4 | 57.7 | 20.6 | 23.8 | 14 | 8 | 4.2 | 57.4 | 45.4 | 9 | 67.6 |
| | 3/8 | KQ2U16-03□S | 24 | 23.8 | 63.8 | 58.7 | 20.6 | 23.8 | 14 | 8 | 4.2 | 81 | 60 | 11 | 71.5 |
| | 1/2 | KQ2U16-04□S | 24 | 23.8 | 68 | 61.6 | 20.6 | 23.8 | 14 | 8 | 4.2 | 113 | 60 | 13 | 82.6 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of R thread

Note) ϕD is maximum diameter.

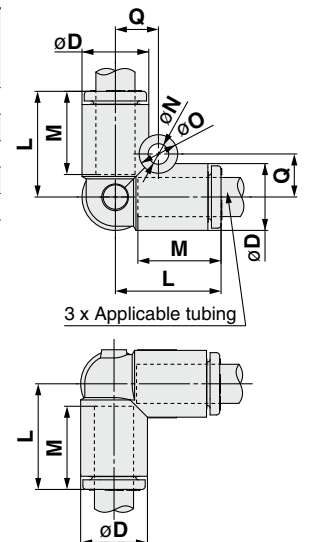


Delta Union: KQ2D



| Applicable tubing O.D. (mm) | Model | Note) ϕD | L | M | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|------------|----------------|------|------|------|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | KQ2D04-00A | 8.2 | 15.8 | 13.3 | 5.7 | 6 | 3.2 | 6 | 4.1 | 3 | 2.7 |
| $\phi 6$ | KQ2D06-00A | 10.4 | 16.8 | 13.3 | 6.7 | 6 | 3.2 | 13.9 | 11 | 4.5 | 3.8 |
| $\phi 8$ | KQ2D08-00A | 13.2 | 18.8 | 14.2 | 8.4 | 8 | 4.2 | 26.3 | 18.2 | 6 | 6.8 |
| $\phi 10$ | KQ2D10-00A | 15.9 | 21.2 | 15.6 | 9.6 | 8 | 4.2 | 40.8 | 29 | 7.5 | 10.3 |
| $\phi 12$ | KQ2D12-00A | 18.5 | 23.6 | 17 | 10.7 | 8 | 4.2 | 57.2 | 45.2 | 9 | 15.2 |

Note) ϕD is maximum diameter.



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
Inch Size Uni
Gasket Seal

Series KQ2

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

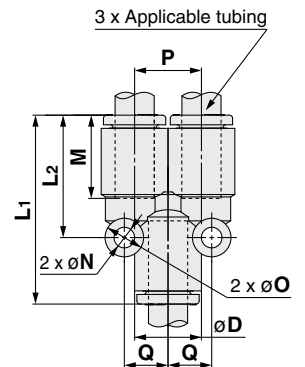
Dimensions

Union "Y": KQ2U



| Applicable tubing O.D. (mm) | Model | Note) 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 |
| $\phi 3.2$ | KQ2U03-00A | 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 |

Note) ϕD is maximum diameter.

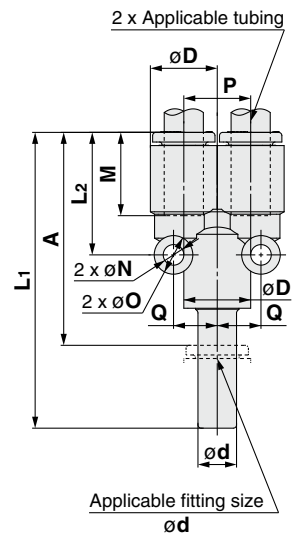


Plug-in "Y": KQ2U



| Applicable tubing O.D. (mm) | Applicable fitting size ϕd | Model | Note) ϕD | L1 | L2 | P | A | M | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|----------------------------------|------------|----------------|------|------|------|------|------|------|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3.2$ | $\phi 3.2$ | KQ2U03-99A | 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 |

Note) ϕD is maximum diameter.

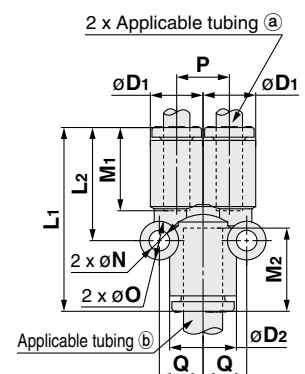


Different Diameter Union "Y": KQ2U



| Applicable tubing O.D. (mm) | | Model | Note) ϕD_1 | Note) 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 |
| $\phi 3.2$ | $\phi 4$ | KQ2U03-04A | 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 |

Note) ϕD_1 , ϕD_2 are maximum diameters.



Metric Size One-touch Fittings *Series KQ2*

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

Dimensions

Double Branch "Y": KQ2UD (Sealant)

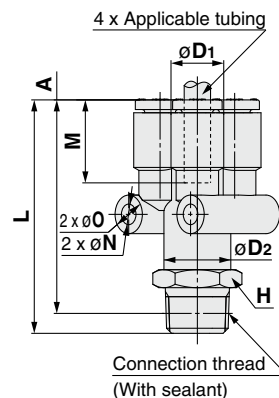
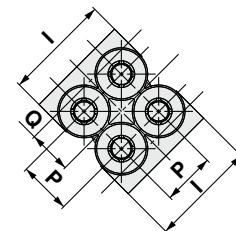


| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L | I | A* | M | P | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|--------------|------------------------|------------------|------------|------|------|------|------|------|-----|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 1/8 | KQ2UD04-01□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 plated

* Reference dimensions after installation of R thread

Note) ϕD_1 is maximum diameter.

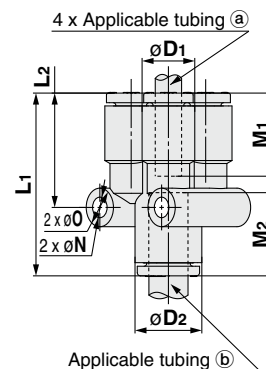
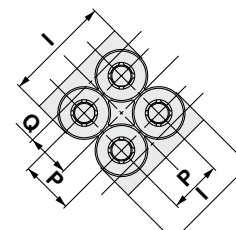


Different Diameter Double Union "Y": KQ2UD



| Applicable tubing O.D. (mm) | | Model | Note) ϕD_1 | Note) 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 |

Note) ϕD_1 , ϕD_2 are maximum diameters.



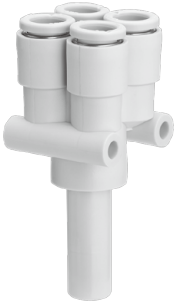
Metric Size M, R, Rc
Sealant/Gasket Seal
Inch Size UNF, NPT
Inch Size M, R, Rc
Metric Size G
Metric Size R, Rc
Face Seal
Inch Size NPT
Inch Size R
Inch Size Uni
Gasket Seal
Metric Size Uni
Inch Size Uni

Series KQ2

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

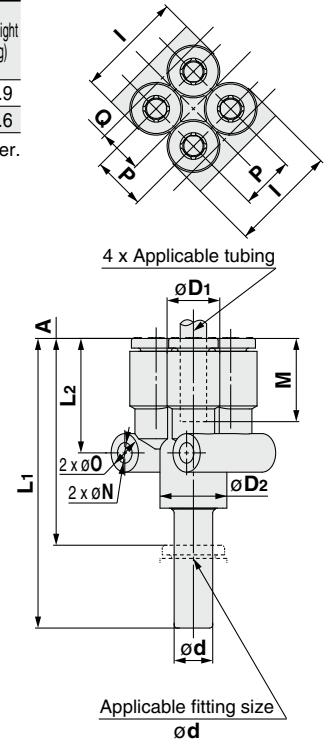
Dimensions

Double Plug-in “Y”: KQ2XD

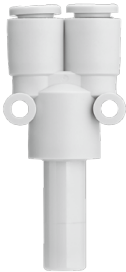


| Applicable tubing O.D. (mm) | Applicable fitting size ϕd | Model | Note) $\phi D1$ | $\phi D2$ | L1 | L2 | A | I | P | M | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|----------------------------------|-------------|-----------------|-----------|------|------|------|------|------|------|-----|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | | | 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 |

Note) $\phi D1$ is maximum diameter.

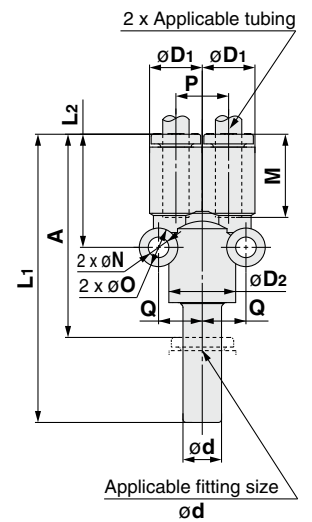


Different Diameter Plug-in “Y”: KQ2X



| Applicable tubing O.D. (mm) | Applicable fitting size ϕd | Model | Note) $\phi D1$ | Note) $\phi D2$ | 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 |

Note) $\phi D1$, $\phi D2$ are maximum diameters.



Metric Size One-touch Fittings *Series KQ2*

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

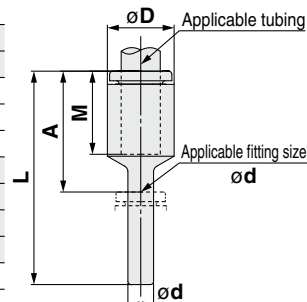
Dimensions

Plug-in Reducer: KQ2R

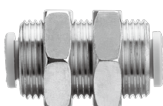


| Applicable tubing O.D. (mm) | Applicable fitting size ϕd | Model | Note) ϕD | L | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|----------------------------------|------------|----------------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | Nylon | Urethane | | |
| $\phi 2$ | $\phi 4$ | KQ2R02-04A | 5.8 | 27.8 | 14.5 | 11.9 | — | 0.9 | 1.4 | 0.6 |
| | $\phi 4$ | KQ2R23-04A | 7.1 | 28.6 | 15.3 | 13.3 | 3.4 | 2.9 | 2.5 | 0.8 |
| $\phi 3.2$ | $\phi 6$ | KQ2R23-06A | 7.1 | 29.1 | 15.8 | 13.3 | 3.4 | 2.9 | 2.5 | 1 |
| | $\phi 6$ | KQ2R04-06A | 8.2 | 28.6 | 15.3 | 13.3 | 5.6 | 4 | 3 | 1.1 |
| $\phi 4$ | $\phi 8$ | KQ2R04-08A | 8.2 | 29.6 | 15.4 | 13.3 | 5.6 | 4 | 3 | 1.3 |
| | $\phi 10$ | KQ2R04-10A | 10.4 | 31.7 | 16.1 | 13.3 | 5.6 | 4 | 3 | 2.2 |
| | $\phi 4$ | KQ2R06-04A | 10.4 | 33.6 | 20.3 | 13.3 | 4 | 4 | 2.5 | 1.4 |
| $\phi 6$ | $\phi 8$ | KQ2R06-08A | 10.4 | 31.6 | 17.4 | 13.3 | 13.1 | 10.4 | 4.5 | 1.7 |
| | $\phi 10$ | KQ2R06-10A | 10.4 | 33.9 | 18.3 | 13.3 | 13.1 | 10.4 | 4.5 | 2.1 |
| | $\phi 12$ | KQ2R06-12A | 12 | 35.7 | 18.7 | 13.3 | 13.1 | 10.4 | 4.5 | 3.2 |
| $\phi 8$ | $\phi 10$ | KQ2R08-10A | 13.2 | 35.1 | 19.5 | 14.2 | 26.1 | 18 | 6 | 2.9 |
| | $\phi 12$ | KQ2R08-12A | 13.2 | 36.5 | 19.5 | 14.2 | 26.1 | 18 | 6 | 3.4 |
| $\phi 10$ | $\phi 12$ | KQ2R10-12A | 15.9 | 39.2 | 22.2 | 15.6 | 41.5 | 32.8 | 7.5 | 4.5 |
| | $\phi 16$ | KQ2R10-16A | 16 | 44.7 | 24.1 | 15.6 | 41.5 | 32.8 | 7.5 | 6 |
| $\phi 12$ | $\phi 16$ | KQ2R12-16A | 18.5 | 45.7 | 25.1 | 17 | 58.3 | 46.1 | 9 | 7 |

Note) ϕD is maximum diameter.

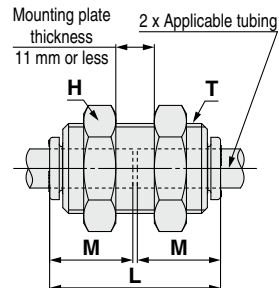


Bulkhead Union: KQ2E (Interchangeable with KQ)

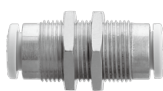


| Applicable tubing O.D. (mm) | Model | T (M) | H (Width across flats) | L | Mounting hole | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|------------|-----------|------------------------|------|---------------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | Nylon | Urethane | | |
| $\phi 3.2$ | KQ2E23-00□ | M12 x 1 | 14 | 27.3 | 13 | 13.3 | 3.4 | 2.9 | 2.5 | 24.1 |
| $\phi 4$ | KQ2E04-00□ | M12 x 1 | 14 | 27.3 | 13 | 13.3 | 5.6 | 4 | 3 | 22.9 |
| $\phi 6$ | KQ2E06-00□ | M14 x 1 | 17 | 27.3 | 15 | 13.3 | 13.1 | 10.4 | 4.5 | 28 |
| $\phi 8$ | KQ2E08-00□ | M16 x 1 | 19 | 29.1 | 17 | 14.2 | 26.1 | 18 | 6 | 34 |
| $\phi 10$ | KQ2E10-00□ | M20 x 1 | 24 | 31.9 | 21 | 15.6 | 41.5 | 29.5 | 7.5 | 64.4 |
| $\phi 12$ | KQ2E12-00□ | M22 x 1 | 27 | 34.7 | 23 | 17 | 58.3 | 46.1 | 9 | 63.8 |
| $\phi 16$ | KQ2E16-00□ | M28 x 1.5 | 32 | 41.9 | 29 | 20.6 | 113 | 67 | 13 | 120.1 |

□/A: Brass, N: Brass + Electroless nickel plated

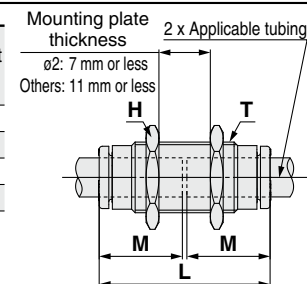


Bulkhead Union: KQ2E (Interchangeable with KJ)

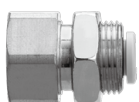


| Applicable tubing O.D. (mm) | Model | T (M) | H (Width across flats) | L | Mounting hole | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|-------------|------------|------------------------|------|---------------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | Nylon | Urethane | | |
| $\phi 2$ | KQ2E02-00□J | M7 x 0.75 | 9 | 24.5 | 8 | 11.9 | — | 0.9 | 1.4 | 5.2 |
| $\phi 3.2$ | KQ2E23-00□J | M8 x 0.75 | 10 | 27.3 | 9 | 13.3 | 3 | 2.5 | 2.5 | 6.9 |
| $\phi 4$ | KQ2E04-00□J | M9 x 0.75 | 11 | 27.3 | 10 | 13.3 | 4 | 4 | 3 | 8.3 |
| $\phi 6$ | KQ2E06-00□J | M11 x 0.75 | 14 | 27.3 | 12 | 13.3 | 10 | 10 | 4.5 | 11.2 |

□/A: Brass, N: Brass + Electroless nickel plated

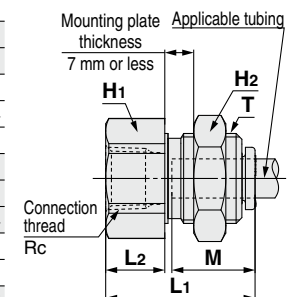


Bulkhead Connector: KQ2E



| Applicable tubing O.D. (mm) | 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 | | |
| $\phi 3.2$ | 1/4 | KQ2E23-02□ | M12 x 1 | 17 | 14 | 28.7 | 14.3 | 13 | 13.3 | 3.4 | 2.9 | 2.5 | 31.2 |
| | 1/8 | KQ2E04-01□ | M12 x 1 | 14 | 14 | 24.4 | 10 | 13 | 13.3 | 5.6 | 4 | 3 | 21.2 |
| $\phi 4$ | 1/4 | KQ2E04-02□ | M12 x 1 | 17 | 14 | 29 | 14.6 | 13 | 13.3 | 5.6 | 4 | 3 | 30.9 |
| | 1/8 | KQ2E06-01□ | M14 x 1 | 17 | 17 | 23.6 | 9.2 | 15 | 13.3 | 13.1 | 10.4 | 4.5 | 28.9 |
| $\phi 6$ | 1/4 | KQ2E06-02□ | M14 x 1 | 17 | 17 | 28.4 | 14 | 15 | 13.3 | 13.1 | 10.4 | 4.5 | 32.4 |
| | 3/8 | KQ2E06-03□ | M14 x 1 | 19 | 17 | 30.7 | 16.3 | 15 | 13.3 | 13.1 | 10.4 | 4.5 | 35.9 |
| $\phi 8$ | 1/8 | KQ2E08-01□ | M16 x 1 | 17 | 19 | 24.1 | 6.7 | 17 | 14.2 | 26.1 | 18 | 6 | 30.5 |
| | 1/4 | KQ2E08-02□ | M16 x 1 | 17 | 19 | 28.4 | 11 | 17 | 14.2 | 26.1 | 18 | 6 | 33.1 |
| $\phi 8$ | 3/8 | KQ2E08-03□ | M16 x 1 | 19 | 19 | 31.7 | 14.3 | 17 | 14.2 | 26.1 | 18 | 6 | 37.4 |
| | 1/4 | KQ2E10-02□ | M20 x 1 | 22 | 24 | 29.3 | 9.9 | 21 | 15.6 | 41.5 | 29.5 | 7.5 | 63.8 |
| $\phi 10$ | 3/8 | KQ2E10-03□ | M20 x 1 | 22 | 24 | 31.4 | 12 | 21 | 15.6 | 41.5 | 29.5 | 7.5 | 71.6 |
| | 1/2 | KQ2E12-04□ | M22 x 1 | 24 | 27 | 32.3 | 11.9 | 23 | 17 | 58.3 | 46.1 | 9 | 69.3 |
| $\phi 12$ | 1/2 | KQ2E12-04□ | M22 x 1 | 24 | 27 | 37.7 | 17.3 | 23 | 17 | 58.3 | 46.1 | 9 | 72.7 |
| | 3/8 | KQ2E16-03□ | M28 x 1.5 | 30 | 32 | 34.4 | 11.5 | 29 | 20.6 | 96 | 67 | 13 | 122.2 |
| $\phi 16$ | 1/2 | KQ2E16-04□ | M28 x 1.5 | 30 | 32 | 38.8 | 15.9 | 29 | 20.6 | 113 | 67 | 13 | 132.1 |

□/A: Brass, N: Brass + Electroless nickel plated



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

Series KQ2

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

Dimensions

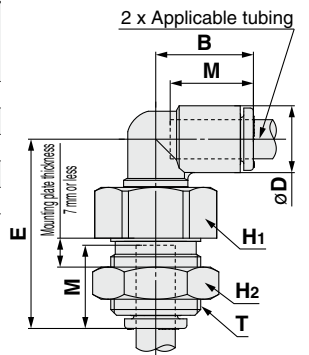
Bulkhead Male Elbow: KQ2LE



| Applicable tubing O.D. (mm) | Model | T (M) | H ₁ (Width across flats) | H ₂ (Width across flats) | B | E | Note) ϕD | Mounting hole | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|-------------|---------|-------------------------------------|-------------------------------------|------|------|----------------|---------------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | KQ2LE04-00□ | M12 x 1 | 14 | 14 | 14.8 | 28.5 | 8.2 | 13 | 13.3 | 4.2 | 4.2 | 3 | 21.2 |
| $\phi 6$ | KQ2LE06-00□ | M14 x 1 | 17 | 17 | 15.5 | 29.6 | 10.4 | 15 | 13.3 | 11.4 | 9 | 4.5 | 29.4 |
| $\phi 8$ | KQ2LE08-00□ | M16 x 1 | 17 | 19 | 17.2 | 32.3 | 13.2 | 17 | 14.2 | 21.6 | 14.9 | 6 | 30.4 |
| $\phi 10$ | KQ2LE10-00□ | M20 x 1 | 22 | 24 | 19.3 | 37.9 | 15.9 | 21 | 15.6 | 35.2 | 25 | 7.5 | 53.5 |
| $\phi 12$ | 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 plated

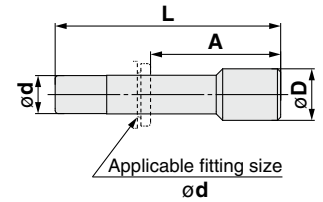
Note) ϕD is maximum diameter.



Plug: KQ2P



| Applicable fitting size ϕd | Model | ϕD | L | A | Weight (g) |
|----------------------------------|---------|----------|------|------|------------|
| $\phi 2$ | KJP-02 | 3 | 17 | 10.4 | 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 |

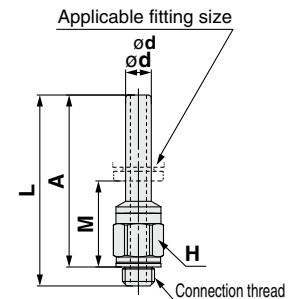


Adapter: KQ2N (Gasket seal)



| 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 plated



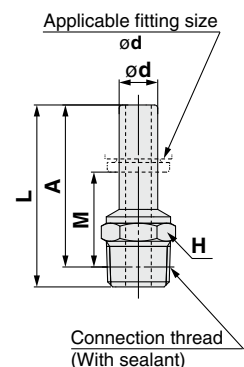
Adapter: KQ2N (Sealant)



| 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□S | 10 | 28.3 | 25.2 | 11.9 | 2.5 | 4 |
| | 1/8 | KQ2N06-01□S | 10 | 28.3 | 25.2 | 11.9 | 4 | 4.1 |
| $\phi 6$ | 1/4 | KQ2N06-02□S | 14 | 32.8 | 28.1 | 14.8 | 4 | 13.6 |
| | 1/4 | KQ2N08-02□S | 14 | 35.9 | 31.2 | 17 | 6 | 15.7 |
| $\phi 8$ | 3/8 | KQ2N08-03□S | 17 | 36 | 30.9 | 16.7 | 6 | 22.7 |
| | 3/8 | KQ2N10-03□S | 17 | 40.6 | 35.5 | 19.9 | 7.5 | 19.1 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of R thread



Metric Size One-touch Fittings *Series KQ2*

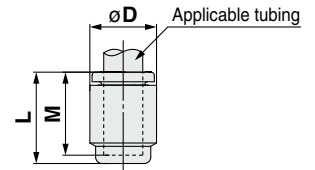
Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

Dimensions

Tube Cap: KQ2C



| Applicable tubing O.D. (mm) | Model | øD (Note) | 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 |

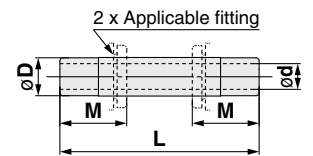


Note) øD is maximum diameter.

Nipple: KQ2N



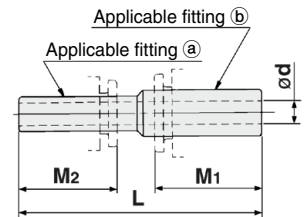
| Applicable fitting øD | Model | L | M | ød | Min. port size | Weight (g) |
|-----------------------|-----------|----|------|-----|----------------|------------|
| ø4 | KQ2N04-99 | 37 | 13.3 | 2.5 | 2.5 | 1 |
| ø6 | KQ2N06-99 | 39 | 13.3 | 4 | 4 | 2 |
| ø8 | KQ2N08-99 | 43 | 14.2 | 6 | 6 | 2 |
| ø10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



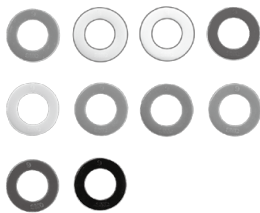
Reducer Nipple: KQ2N



| 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 |

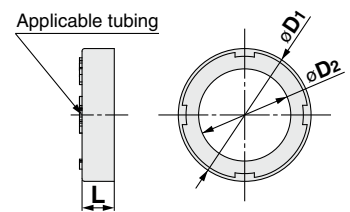


Color Cap: KQ2C



| 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 the operability, the outside diameter of the release button has been enlarged for the New KQ2 series. Along with this change, the usable color caps differ before and after the change. Refer to page 120-1 for details.

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

Series KQ2

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 <small>Note)</small> | Body color: Black Release button color: Light gray |

Note) 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 Clean Series

Please consult with SMC separately for applicable models.

| Symbol | Specifications |
|------------|---|
| 10- | Brass parts: With electroless nickel plated Lubricant: Fluorine grease Air blow in a clean room Double package 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 plated

| 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 | |
|---------------|-----------------|-------------|---------------|-------------------|---------------------|----------------------|
| Inch Size Uni | Metric Size Uni | Inch Size R | Inch Size NPT | Metric Size R, Rc | Metric Size G | Inch Size UNF, NPT |
| | | | | | | Metric Size M, R, Rc |

Inch Size One-touch Fittings

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

Series KQ2

Guide
Chuck
Suitable for use with nylon and urethane. Large retaining force.
The chuck provides secure retention and the collet increases the holding force on the tube.

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

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
Seal

* Fittings with all resin body material (KQ2□□-□A) are copper free specification.

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



Applicable Tubing

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

Specifications

| | | |
|--|-------------------------|--|
| Fluid | | Air/Water ^{Note 1)} |
| Operating pressure range ^{Note 2)} | | -100 kPa to 1 MPa |
| Proof pressure (at 23°C) | | 3 MPa |
| Ambient and fluid temperature | | -5 to 60°C, Water: 0 to 40°C (No freezing) |
| Thread | Mounting section | ANSI/ASME1.20.1 (NPT thread) JIS B0208 (UNF thread) |
| | Nut section | JIS B0208 (UNF thread) |
| Seal on the threads | | With sealant |

Note 1) The surge pressure must be under the maximum operating pressure.

Note 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 Specifications
(Refer to page 56 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 plated |
| 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 |
| Tubing connection | 00* | Same diameter tubing |

* 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 |
| | Reducer elbow |
| R | Plug-in reducer |
| T | Union tee |
| | Different diameter tee |
| TW | Cross |
| U | Union "Y" |
| | Plug-in "Y" |
| | Different diameter union "Y" |
| X | 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 |
| KQ2C | Reducer nipple |
| KQ2P | Plug |

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
Inch Size Uni
Gasket Seal
Metric Size Uni
Inch Size Uni

Inch Size One-touch Fittings

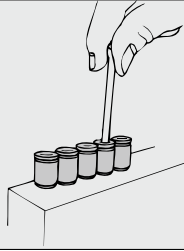
Variations

Hexagon socket head male connector

KQ2S P.39



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

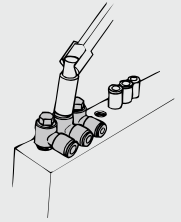


Universal male elbow

KQ2V P.42



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

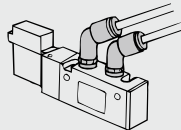


45° male elbow

KQ2K P.42



Use to pipe a female thread at a 45° angle. The model between the male connector and male elbow.

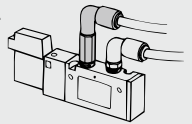


Extended male elbow

KQ2W P.47



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.

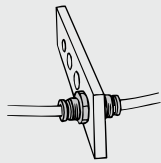


Bulkhead union

KQ2E P.53



Use to connect tubing through a panel, etc.

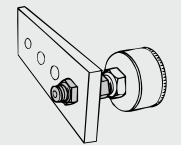


Bulkhead connector

KQ2E P.54



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

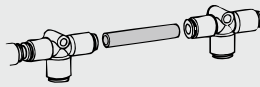


Nipple

KQ2N P.55



Use to connect One-touch fittings.

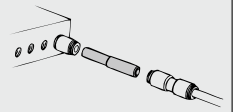


Reducer nipple

KQ2N P.55



Use to connect One-touch fittings of different sizes.



Male connector

KQ2H P.37



Use to pipe a female thread. Most general model.

Hexagon socket head universal male elbow

KQ2VS P.43



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

Branch universal male elbow

KQ2Z P.46



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

Female connector

KQ2F P.38



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

Universal female elbow

KQ2VF P.43



Use to branch a male or female thread at a 90° angle. Multiple connections possible.

Double branch universal male elbow

KQ2ZD P.46



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

Straight union

KQ2H P.38



Use to connect tubing in the same direction.

Female elbow

KQ2LF P.41



Use to pipe a male thread at right angles.

Triple branch universal male elbow

KQ2ZT P.47



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

Different diameter straight

KQ2H P.38



Use to connect tubing of different sizes.

Double universal male elbow

KQ2VD P.44



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

Union elbow

KQ2L P.41



Use to connect tubing at right angles.

Male elbow

KQ2L P.40



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

Triple universal male elbow

KQ2VT P.45



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

Plug-in elbow

KQ2L P.41



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

Reducer elbow

KQ2L

P.41



Use to change the tube direction from One-touch fittings by 90° and to reduce size.

Male branch tee

KQ2T

P.48



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

Union tee

KQ2T

P.49



Use to branch tubing at both 90° angles.

Different diameter tee

KQ2T

P.49



Use to connect tubing for branching at 90° angle with size reduced from the same piping.

Cross

KQ2TW

P.49



Use to four-branch line.

Male run tee

KQ2Y

P.50



Use to branch a female thread at a 90° angle.

Branch "Y"

KQ2U

P.51



Use to branch a female thread.

Union "Y"

KQ2U

P.52



Use to branch tubing in the same direction.

Different diameter union "Y"

KQ2U

P.52



Use to connect tubing for branching with size reduced.

Plug-in "Y"

KQ2U

P.52



Use to branch One-touch fittings.

Different diameter plug-in "Y"

KQ2X

P.53



Use to branch One-touch fittings with size reduced.

Plug-in reducer

KQ2R

P.53



Use to change size of One-touch fittings.

Bulkhead male elbow

KQ2LE

P.54



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

Tube cap

KQ2C

P.55



Use to plug unused tubing.

Plug

KQ2P

P.54



Use to plug unused One-touch fittings.

Color cap

KQ2C

P.55



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

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

Series KQ2

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

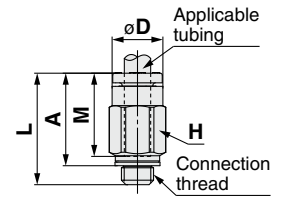
Dimensions

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 plated



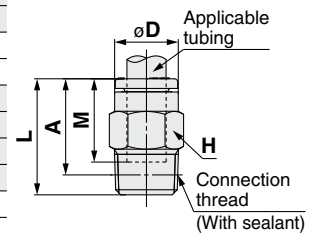
Male Connector: KQ2H (Sealant)



| 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□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 | 5.6 | 4 | 3 | 6.1 |
| | 1/8 | KQ2H03-34□S | 11.11 | 7.7 | 14 | 10.8 | 13.3 | 5.6 | 4 | 3 | 6.5 |
| | 1/4 | KQ2H03-35□S | 14.29 | 7.7 | 16.7 | 12.3 | 13.3 | 5.6 | 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 plated

* Reference dimensions after installation of NPT thread



Inch Size One-touch Fittings *Series KQ2*

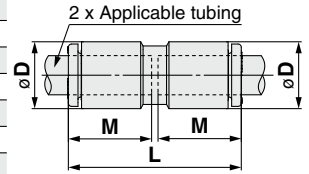
Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

Dimensions

Straight Union: KQ2H



| Applicable tubing O.D. (inch) | Model | øD (Note) | 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 |

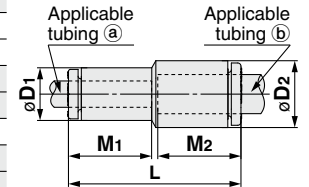


Note) øD is maximum diameter.

Different Diameter Straight: KQ2H



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

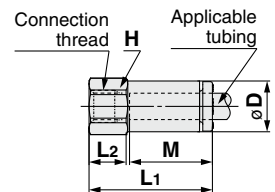


Note) øD1, øD2 are maximum diameters.

Female Connector: KQ2F



| Applicable tubing O.D. (inch) | Connection thread UNF, NPT | Model | H (Width across flats) | Note) øD | 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 |
| | 3/8 | KQ2F07-36□ | 22.23 | 10.9 | 30.5 | 13.2 | 13.3 | 13 | 11.5 | 4.6 | 38.7 |
| ø5/16 | 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 |
| | 3/8 | KQ2F09-36□ | 22.23 | 13 | 31 | 12.4 | 14.2 | 26.1 | 18 | 6 | 39.8 |
| ø3/8 | 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 |
| | 1/2 | KQ2F11-37□ | 23.81 | 15.1 | 34.9 | 15.8 | 15.6 | 35.3 | 29.1 | 8 | 45.6 |
| ø1/2 | 3/8 | KQ2F13-36□ | 22.23 | 19 | 32.6 | 12.4 | 17 | 66 | 51.7 | 10 | 43.8 |
| | 1/2 | KQ2F13-37□ | 23.81 | 19 | 35.7 | 15.8 | 17 | 66 | 51.7 | 10 | 48.6 |



□/A: Brass, N: Brass + Electroless nickel plated

Note) øD is maximum diameter.

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

Series KQ2

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

Dimensions

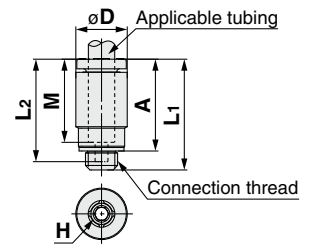
Hexagon Socket Head Male Connector: KQ2S (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread UNF | Model | H (Width across flats) | Note) ϕD | L1 | L2 | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|----------------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 10-32UNF | KQ2S01-32□ | 2 | 7 | 17.5 | 16.3 | 14.5 | 13.3 | 2.5 | 2.5 | 2 | 2.6 |
| $\phi 5/32$ | 10-32UNF | KQ2S03-32□ | 2 | 8 | 17.8 | 16.3 | 14.8 | 13.3 | 2.5 | 2.5 | 2 | 3 |
| $\phi 1/4$ | 10-32UNF | KQ2S07-32□ | 2 | 11 | 17.8 | 16.3 | 14.8 | 13.3 | 2.5 | 2.5 | 2 | 3.7 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD is maximum diameter.



Hexagon Socket Head Male Connector: KQ2S (Sealant)

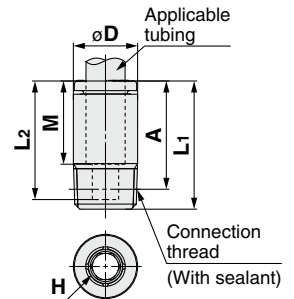


| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD | L1 | L2 | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|----------------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | Nylon | Urethane | | |
| $\phi 5/32$ | 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 | 11 | 17.3 | 16.3 | 14.1 | 13.3 | 4.1 | 3.6 | 2.8 | 6 |
| $\phi 3/16$ | 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 | 11 | 20.9 | 18.8 | 16.8 | 13.3 | 8.4 | 8.4 | 3.6 | 6.3 |
| $\phi 1/4$ | 1/8 | KQ2S07-34□S | 4.76 | 11 | 19.8 | 18.8 | 16.6 | 13.3 | 13.5 | 11.5 | 4.8 | 7.4 |
| | 1/4 | KQ2S07-35□S | 4.76 | 14 | 19.8 | 18.8 | 15.4 | 13.3 | 13.5 | 11.5 | 4.8 | 13.2 |
| | 3/8 | KQ2S07-36□S | 4.76 | 18 | 20.8 | 19.8 | 16.1 | 13.3 | 13.5 | 11.5 | 4.8 | 24 |
| $\phi 5/16$ | 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 | 18 | 20.7 | 19.7 | 16 | 14.2 | 23.3 | 16.2 | 6.4 | 21 |
| $\phi 3/8$ | 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 |
| | 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 |
| $\phi 1/2$ | 1/4 | KQ2S11-37□S | 6.35 | 22 | 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 plated

* Reference dimensions after installation of NPT thread

Note) ϕD is maximum diameter.



Inch Size One-touch Fittings *Series KQ2*

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

Dimensions

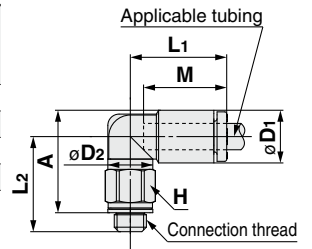
Male Elbow: KQ2L (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread UNF | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 plated

Note) ϕD_1 is maximum diameter.



Male Elbow: KQ2L (Sealant)

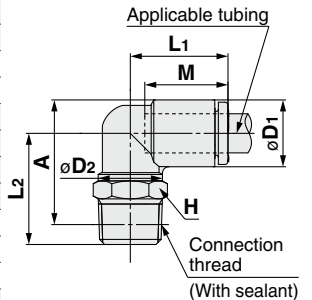


| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 | 4.2 | 4.2 | 3 | 9.3 |
| | 1/8 | KQ2L03-34□S | 11.11 | 8.2 | 10 | 14.8 | 16.2 | 17.1 | 13.3 | 4.2 | 4.2 | 3 | 5.6 |
| | 1/4 | KQ2L03-35□S | 14.29 | 8.2 | 10 | 14.8 | 21.6 | 21.3 | 13.3 | 4.2 | 4.2 | 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 |
| | 3/8 | KQ2L07-36□S | 17.46 | 11.1 | 10 | 15.6 | 24.5 | 25.4 | 13.3 | 11.3 | 10 | 4.5 | 28 |
| $\phi 5/16$ | 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 |
| | 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 |
| $\phi 3/8$ | 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 |
| | 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 plated

* Reference dimensions after installation of NPT thread

Note) ϕD_1 is maximum diameter.



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

Gasket Seal

Face Seal

Sealant/Gasket Seal

Series KQ2

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

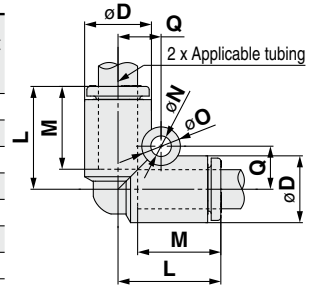
Dimensions

Union Elbow: KQ2L



| Applicable tubing O.D. (inch) | Model | Note) ϕD | L | Q | M | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-------------------|----------------|------|------|------|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | KQ2L01-00A | 7.1 | 14.9 | 5.4 | 13.3 | 6 | 3.2 | 3 | 2.5 | 2.5 | 1.6 |
| $\phi 5/32$ | KQ2L03-00A | 8.2 | 15.3 | 5.7 | 13.3 | 6 | 3.2 | 4.2 | 4.2 | 3 | 1.9 |
| $\phi 3/16$ | KQ2L05-00A | 9.1 | 15.7 | 6.2 | 13.3 | 6 | 3.2 | 6.8 | 5.6 | 3.5 | 2.2 |
| $\phi 1/4$ | KQ2L07-00A | 11.1 | 16.5 | 7.2 | 13.3 | 6 | 3.2 | 11.6 | 10 | 4.6 | 2.9 |
| $\phi 5/16$ | KQ2L09-00A | 13.2 | 18.2 | 8.4 | 14.2 | 8 | 4.2 | 21.6 | 14.9 | 6 | 4.7 |
| $\phi 3/8$ | KQ2L11-00A | 15.4 | 20.4 | 9.9 | 15.6 | 8 | 4.2 | 28.8 | 23.8 | 7 | 6.7 |
| $\phi 1/2$ | KQ2L13-00A | 19.3 | 23.4 | 11.8 | 17 | 8 | 4.2 | 56.7 | 44.4 | 9.6 | 10.8 |

Note) ϕD is maximum diameter.

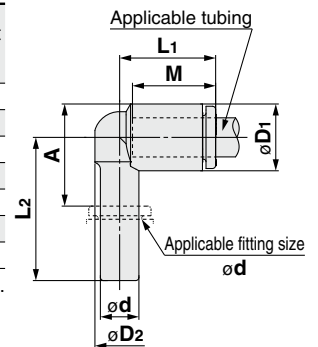


Plug-in Elbow: KQ2L



| Applicable tubing O.D. (inch) | Applicable fitting size ϕd (inch) | Model | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---|-------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | $\phi 1/8$ | KQ2L01-99A | 7.1 | 6.4 | 14.5 | 20.9 | 11.1 | 13.3 | 3 | 2.5 | 2.2 | 0.9 |
| $\phi 5/32$ | $\phi 5/32$ | KQ2L03-99A | 8.2 | 7.2 | 14.5 | 21.1 | 11.9 | 13.3 | 4.2 | 4.2 | 2.5 | 1.2 |
| $\phi 3/16$ | $\phi 3/16$ | KQ2L05-99A | 9.1 | 8 | 15 | 22.2 | 13.4 | 13.3 | 6.8 | 5.6 | 3.5 | 1.4 |
| $\phi 1/4$ | $\phi 1/4$ | KQ2L07-99A | 11.1 | 8 | 15.6 | 22.8 | 15 | 13.3 | 11.6 | 10 | 4.6 | 1.9 |
| $\phi 5/16$ | $\phi 5/16$ | KQ2L09-99A | 13.2 | 10 | 17.2 | 26.2 | 18.6 | 14.2 | 21.6 | 14.9 | 6 | 3 |
| $\phi 3/8$ | $\phi 3/8$ | KQ2L11-99A | 15.4 | 12 | 19.1 | 28 | 20.1 | 15.6 | 28.8 | 23.8 | 7 | 4.5 |
| $\phi 1/2$ | $\phi 1/2$ | KQ2L13-99A | 19.3 | 14 | 21.8 | 38.7 | 31.3 | 17 | 56.7 | 44.4 | 9.6 | 7.8 |

Note) ϕD_1 is maximum diameter.

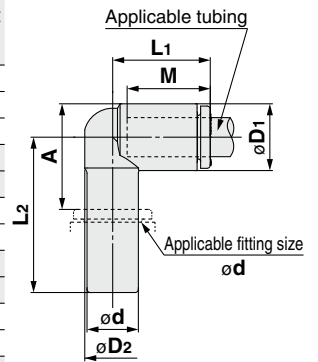


Reducer Elbow: KQ2L



| Applicable tubing O.D. (inch) | Applicable fitting size ϕd (inch) | Model | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---|-------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | $\phi 5/32$ | KQ2L01-03A | 7.1 | 6.4 | 14.5 | 23.9 | 14.1 | 13.3 | 3 | 2.5 | 2.5 | 1.1 |
| | $\phi 3/16$ | KQ2L01-05A | 7.1 | 6.4 | 14.5 | 28.4 | 18.6 | 13.3 | 3 | 2.5 | 2.5 | 1.1 |
| | $\phi 1/4$ | KQ2L01-07A | 7.1 | 6.4 | 14.5 | 24.5 | 14.7 | 13.3 | 3 | 2.5 | 2.5 | 1.3 |
| $\phi 5/32$ | $\phi 3/16$ | KQ2L03-05A | 8.2 | 7.2 | 14.8 | 29.1 | 19.9 | 13.3 | 4.2 | 4.2 | 3 | 1.3 |
| | $\phi 1/4$ | KQ2L03-07A | 8.2 | 7.2 | 14.8 | 21.1 | 11.9 | 13.3 | 4.2 | 4.2 | 3 | 1.4 |
| $\phi 3/16$ | $\phi 1/4$ | KQ2L05-07A | 9.1 | 8 | 15 | 21.6 | 12.8 | 13.3 | 6.8 | 5.6 | 3.5 | 1.5 |
| | $\phi 5/16$ | KQ2L05-09A | 9.1 | 8 | 15 | 30 | 20.3 | 13.3 | 6.8 | 5.6 | 3.5 | 1.9 |
| $\phi 1/4$ | $\phi 5/16$ | KQ2L07-09A | 11.1 | 8 | 15.6 | 30.7 | 22 | 13.3 | 11.6 | 10 | 4.6 | 2.3 |
| | $\phi 3/8$ | KQ2L07-11A | 11.1 | 8 | 15.6 | 31.1 | 21 | 13.3 | 11.6 | 10 | 4.6 | 3 |
| $\phi 5/16$ | $\phi 3/8$ | KQ2L09-11A | 13.2 | 10 | 18.8 | 34.1 | 25.1 | 14.2 | 21.6 | 14.9 | 6 | 3.7 |
| | $\phi 1/2$ | KQ2L09-13A | 13.2 | 10 | 18.8 | 35.6 | 25.2 | 14.2 | 21.6 | 14.9 | 6 | 4.6 |
| $\phi 3/8$ | $\phi 1/2$ | KQ2L11-13A | 15.4 | 12 | 19.1 | 36.5 | 27.2 | 15.6 | 28.8 | 23.8 | 7 | 5.6 |

Note) ϕD_1 is maximum diameter.



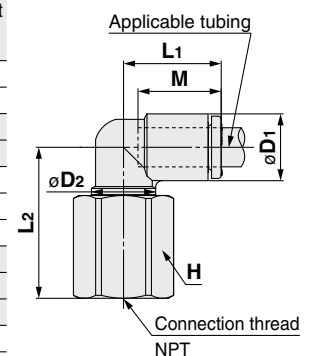
Female Elbow: KQ2LF



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|---------------------|------------------------|------------------|------------|----------------|----------------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 1/8 | KQ2LF01-34 □ | 14.29 | 7.1 | 10 | 14.5 | 22.8 | 13.3 | 3 | 2.5 | 2.5 | 18.2 |
| | 1/4 | KQ2LF01-35 □ | 17.46 | 7.1 | 10 | 14.5 | 26.3 | 13.3 | 3 | 2.5 | 2.5 | 31.7 |
| $\phi 5/32$ | 1/8 | KQ2LF03-34 □ | 14.29 | 8.2 | 10 | 14.8 | 22.4 | 13.3 | 4.2 | 4.2 | 3 | 18.3 |
| | 1/4 | KQ2LF03-35 □ | 17.46 | 8.2 | 10 | 14.8 | 26.9 | 13.3 | 4.2 | 4.2 | 3 | 31.9 |
| $\phi 1/4$ | 1/8 | KQ2LF07-34 □ | 14.29 | 11.1 | 10 | 15.6 | 23.9 | 13.3 | 11.3 | 10 | 4.5 | 18.9 |
| | 1/4 | KQ2LF07-35 □ | 17.46 | 11.1 | 10 | 15.6 | 28.4 | 13.3 | 11.3 | 10 | 4.5 | 32.4 |
| | 3/8 | KQ2LF07-36 □ | 22.23 | 11.1 | 10 | 15.6 | 28.9 | 13.3 | 11.3 | 10 | 4.5 | 53.1 |
| $\phi 3/8$ | 1/4 | KQ2LF11-35 □ | 17.46 | 15.4 | 17 | 19.3 | 27.1 | 15.6 | 28.8 | 23.8 | 7 | 28 |
| | 3/8 | KQ2LF11-36 □ | 22.23 | 15.4 | 17 | 19.3 | 33.3 | 15.6 | 28.8 | 23.8 | 7 | 49.6 |
| $\phi 1/2$ | 1/2 | KQ2LF11-37 □ | 23.81 | 15.4 | 17 | 19.3 | 36.3 | 15.6 | 28.8 | 23.8 | 7 | 56.9 |
| | 3/8 | KQ2LF13-36 □ | 22.23 | 19.3 | 17 | 21.8 | 30.4 | 17 | 56 | 44.4 | 9.5 | 51.4 |
| $\phi 1/2$ | 1/2 | KQ2LF13-37 □ | 23.81 | 19.3 | 17 | 21.8 | 33.4 | 17 | 56 | 44.4 | 9.5 | 58 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



Inch Size One-touch Fittings *Series KQ2*

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

Dimensions

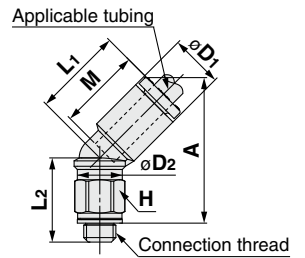
45° Male Elbow: KQ2K (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread UNF | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 10-32UNF | KQ2K01-32□ | 7 | 7.1 | 7 | 14.4 | 13 | 21.9 | 13.3 | 3 | 2.5 | 2.5 | 2.8 |
| $\phi 5/32$ | 10-32UNF | KQ2K03-32□ | 7 | 8.2 | 7 | 14.4 | 13 | 22.2 | 13.3 | 3.4 | 3.4 | 2.5 | 3 |
| $\phi 1/4$ | 10-32UNF | KQ2K07-32□ | 7 | 11.1 | 7 | 14.9 | 16.5 | 26.8 | 13.3 | 3.5 | 3.5 | 2.5 | 3.6 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



45° Male Elbow: KQ2K (Sealant)

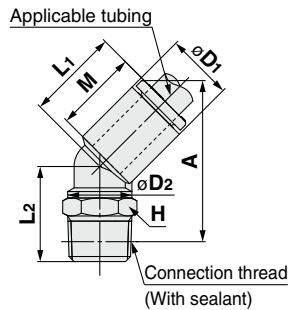


| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 1/8 | KQ2K01-34□S | 11.11 | 7.1 | 10 | 14.3 | 12.7 | 21.8 | 13.3 | 3 | 2.5 | 2.5 | 5.3 |
| $\phi 5/32$ | 1/8 | KQ2K03-34□S | 11.11 | 8.2 | 10 | 14.4 | 12.7 | 22.2 | 13.3 | 4.2 | 4.2 | 3 | 5.5 |
| $\phi 3/16$ | 1/8 | KQ2K05-34□S | 11.11 | 9.1 | 10 | 14.5 | 13.2 | 23.1 | 13.3 | 6.8 | 5.6 | 3.5 | 5.6 |
| $\phi 1/4$ | 1/8 | KQ2K07-34□S | 11.11 | 11.1 | 10 | 14.8 | 15.2 | 25.8 | 13.3 | 11.3 | 10 | 4.5 | 6 |
| | 1/4 | KQ2K07-35□S | 14.29 | 11.1 | 10 | 14.8 | 19.6 | 29 | 13.3 | 11.3 | 10 | 4.5 | 15.6 |
| | 3/8 | KQ2K07-36□S | 17.46 | 11.1 | 10 | 14.8 | 21 | 30.1 | 13.3 | 11.3 | 10 | 4.5 | 27.8 |
| $\phi 5/16$ | 1/8 | KQ2K09-34□S | 11.11 | 13.2 | 10 | 16 | 15.7 | 27.9 | 14.2 | 11.3 | 11.3 | 4.5 | 6.8 |
| | 1/4 | KQ2K09-35□S | 14.29 | 13.2 | 12 | 16 | 21.1 | 32.1 | 14.2 | 19.7 | 19.7 | 6 | 13.9 |
| | 3/8 | KQ2K09-36□S | 17.46 | 13.2 | 12 | 16 | 22.5 | 33.2 | 14.2 | 19.7 | 19.7 | 6 | 26 |
| $\phi 3/8$ | 1/8 | KQ2K11-34□S | 12.7 | 15.4 | 12 | 18.1 | 21.1 | 35.5 | 15.6 | 21.2 | 21.2 | 6 | 11.7 |
| | 1/4 | KQ2K11-35□S | 17.46 | 15.4 | 17 | 17.7 | 28.6 | 41.5 | 15.6 | 28.8 | 23.8 | 7 | 21.8 |
| | 3/8 | KQ2K11-36□S | 17.46 | 15.4 | 17 | 17.7 | 23.5 | 36.1 | 15.6 | 28.8 | 23.8 | 7 | 19.2 |
| | 1/2 | KQ2K11-37□S | 22.23 | 15.4 | 17 | 17.7 | 27.7 | 38.6 | 15.6 | 28.8 | 23.8 | 7 | 45.7 |
| $\phi 1/2$ | 1/4 | KQ2K13-35□S | 17.46 | 19.3 | 17 | 19.4 | 28.7 | 44.1 | 17 | 50.3 | 44.4 | 9 | 23.8 |
| | 3/8 | KQ2K13-36□S | 17.46 | 19.3 | 17 | 19.4 | 23.6 | 38.7 | 17 | 56 | 44.4 | 9.5 | 19.9 |
| | 1/2 | KQ2K13-37□S | 22.23 | 19.3 | 17 | 19.4 | 27.8 | 41.2 | 17 | 56 | 44.4 | 9.5 | 46 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of NPT thread

Note) ϕD_1 is maximum diameter.



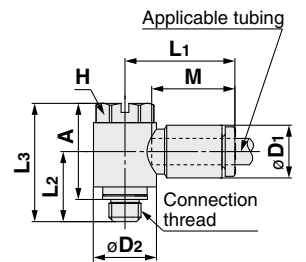
Universal Male Elbow: KQ2V (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread UNF | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 10-32UNF | KQ2V01-32□ | 8 | 7.1 | 9.8 | 17.5 | 10.4 | 17.9 | 14.4 | 13.3 | 2.2 | 1.9 | 2.5 | 5.2 |
| $\phi 5/32$ | 10-32UNF | KQ2V03-32□ | 8 | 8.2 | 9.8 | 17.5 | 10.4 | 17.9 | 14.4 | 13.3 | 2.9 | 2.9 | 2.5 | 5.3 |
| $\phi 1/4$ | 10-32UNF | KQ2V07-32□ | 8 | 11.1 | 13.4 | 20.6 | 12.1 | 24 | 20.5 | 13.3 | 2.9 | 2.9 | 2.5 | 12.2 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



Universal Male Elbow: KQ2V (Sealant)

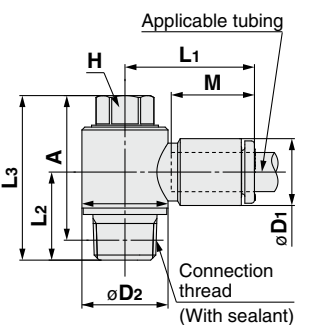


| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 1/8 | KQ2V01-34□S | 8 | 7.1 | 13.4 | 19.3 | 13.7 | 25.6 | 22.4 | 13.3 | 2.2 | 1.9 | 2.5 | 13.5 |
| $\phi 5/32$ | 1/8 | KQ2V03-34□S | 8 | 8.2 | 13.4 | 19.3 | 13.7 | 25.6 | 22.4 | 13.3 | 2.9 | 2.9 | 3 | 13.6 |
| $\phi 3/16$ | 1/8 | KQ2V05-34□S | 8 | 9.1 | 13.4 | 19.6 | 13.7 | 25.6 | 22.4 | 13.3 | 4.5 | 3.7 | 3.5 | 13.7 |
| $\phi 1/4$ | 1/8 | KQ2V07-34□S | 8 | 11.1 | 13.4 | 20.6 | 13.7 | 25.6 | 22.4 | 13.3 | 7.5 | 6.6 | 4.5 | 14.1 |
| | 1/4 | KQ2V07-35□S | 8 | 11.1 | 15.3 | 19.9 | 18.7 | 32.1 | 27.7 | 13.3 | 7.5 | 6.6 | 4.5 | 25.6 |
| $\phi 5/16$ | 1/8 | KQ2V09-34□S | 11.11 | 13.2 | 17.6 | 23.5 | 15.1 | 27.6 | 24.4 | 14.2 | 16 | 11.2 | 6 | 22.3 |
| | 1/4 | KQ2V09-35□S | 11.11 | 13.2 | 17.6 | 23.5 | 18.5 | 31 | 26.6 | 14.2 | 16 | 11.2 | 6 | 29.2 |
| | 3/8 | KQ2V09-36□S | 12.7 | 13.2 | 20.6 | 23.1 | 19.5 | 35.3 | 30.6 | 14.2 | 16 | 11.2 | 6 | 44.1 |
| $\phi 3/8$ | 1/4 | KQ2V11-35□S | 12.7 | 15.4 | 20.6 | 25.8 | 19.6 | 34.9 | 30.5 | 15.6 | 23.4 | 19.3 | 7 | 37.5 |
| | 3/8 | KQ2V11-36□S | 12.7 | 15.4 | 20.6 | 25.8 | 20 | 35.3 | 30.6 | 15.6 | 23.4 | 19.3 | 7 | 45.2 |
| $\phi 1/2$ | 3/8 | KQ2V13-36□S | 17.46 | 19.3 | 27 | 30.5 | 20.2 | 35.1 | 30.4 | 17 | 38.8 | 34.3 | 9 | 64 |
| | 1/2 | KQ2V13-37□S | 17.46 | 19.3 | 27 | 30.5 | 23.4 | 38.3 | 31.9 | 17 | 38.8 | 34.3 | 9 | 82.6 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of NPT thread

Note) ϕD_1 is maximum diameter.



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
 Inch Size Uni
 Metric Size Uni
 Inch Size Uni

Series KQ2

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

Dimensions

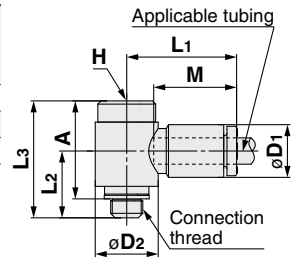
Hexagon Socket Head Universal Male Elbow: KQ2VS (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread UNF | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 10-32UNF | KQ2VS01-32□ | 4.4 | 7.1 | 9.8 | 17.5 | 10.4 | 18.2 | 14.7 | 13.3 | 2.2 | 1.9 | 2.3 | 5.3 |
| $\phi 5/32$ | 10-32UNF | KQ2VS03-32□ | 4.4 | 8.2 | 9.8 | 17.5 | 10.4 | 18.2 | 14.7 | 13.3 | 2.9 | 2.9 | 2.3 | 5.4 |
| $\phi 1/4$ | 10-32UNF | KQ2VS07-32□ | 6.35 | 11.1 | 13.4 | 20.6 | 11.1 | 23.2 | 19.7 | 13.3 | 2.9 | 2.9 | 2.5 | 11.3 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



Hexagon Socket Head Universal Male Elbow: KQ2VS (Sealant)

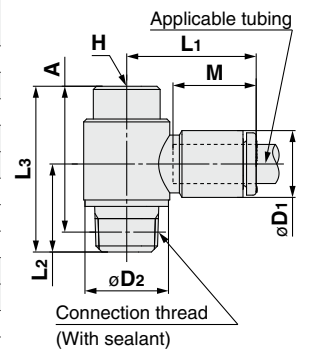


| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|--------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 1/8 | KQ2VS01-34□S | 6.35 | 7.1 | 13.4 | 19.3 | 13.7 | 25.8 | 22.6 | 13.3 | 2.2 | 1.9 | 2.5 | 13.1 |
| $\phi 5/32$ | 1/8 | KQ2VS03-34□S | 6.35 | 8.2 | 13.4 | 19.3 | 13.7 | 25.8 | 22.6 | 13.3 | 2.9 | 2.9 | 3 | 13.2 |
| $\phi 3/16$ | 1/8 | KQ2VS05-34□S | 6.35 | 9.1 | 13.4 | 19.6 | 13.7 | 25.8 | 22.6 | 13.3 | 4.5 | 3.7 | 3.5 | 13.3 |
| $\phi 1/4$ | 1/8 | KQ2VS07-34□S | 6.35 | 11.1 | 13.4 | 20.6 | 13.7 | 25.8 | 22.6 | 13.3 | 7.7 | 6.6 | 4.6 | 13.7 |
| | 1/4 | KQ2VS07-35□S | 6.35 | 11.1 | 15.3 | 19.9 | 18.7 | 28.1 | 23.7 | 13.3 | 7.7 | 6.6 | 4.6 | 20.8 |
| $\phi 5/16$ | 1/8 | KQ2VS09-34□S | 8 | 13.2 | 17.6 | 23.5 | 15.1 | 26 | 22.8 | 14.2 | 16 | 11.2 | 6 | 19.3 |
| | 1/4 | KQ2VS09-35□S | 8 | 13.2 | 17.6 | 23.5 | 18.5 | 29.5 | 25.1 | 14.2 | 16 | 11.2 | 6 | 24.6 |
| $\phi 3/8$ | 3/8 | KQ2VS09-36□S | 8 | 13.2 | 20.6 | 23.1 | 19.5 | 31.4 | 26.7 | 14.2 | 16 | 11.2 | 6 | 37.6 |
| | 1/4 | KQ2VS11-35□S | 8 | 15.4 | 20.6 | 25.8 | 19.6 | 30.8 | 26.4 | 15.6 | 23.4 | 19.3 | 7 | 29 |
| $\phi 3/8$ | 3/8 | KQ2VS11-36□S | 8 | 15.4 | 20.6 | 25.8 | 20 | 31.4 | 26.7 | 15.6 | 23.4 | 19.3 | 7 | 38.6 |
| | 3/8 | KQ2VS13-36□S | 9.53 | 19.3 | 27 | 30.5 | 20.2 | 33.6 | 28.9 | 17 | 38.8 | 34.3 | 9 | 59.2 |
| $\phi 1/2$ | 1/2 | KQ2VS13-37□S | 9.53 | 19.3 | 27 | 30.5 | 23.4 | 36.8 | 30.4 | 17 | 38.8 | 34.3 | 9 | 78.3 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of NPT thread

Note) ϕD_1 is maximum diameter.



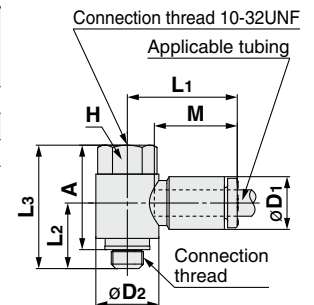
Universal Female Elbow: KQ2VF (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread UNF | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 10-32UNF | KQ2VF01-32□ | 8 | 7.1 | 9.8 | 17.5 | 10.4 | 19.4 | 15.9 | 13.3 | 2.2 | 1.9 | 2.5 | 5.4 |
| $\phi 5/32$ | 10-32UNF | KQ2VF03-32□ | 8 | 8.2 | 9.8 | 17.5 | 10.4 | 19.4 | 15.9 | 13.3 | 2.9 | 2.9 | 2.5 | 5.5 |
| $\phi 1/4$ | 10-32UNF | KQ2VF07-32□ | 14.29 | 11.1 | 13.4 | 20.6 | 12.8 | 22.4 | 18.9 | 13.3 | 2.9 | 2.9 | 2.5 | 14.2 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



Universal Female Elbow: KQ2VF (Sealant)

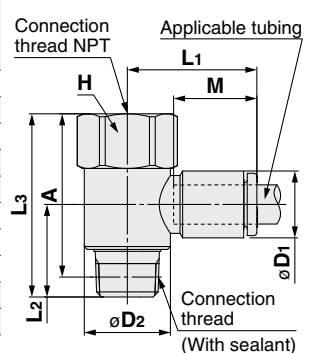


| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|--------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 1/8 | KQ2VF01-34□S | 14.29 | 7.1 | 13.4 | 19.3 | 14.4 | 28.5 | 25.3 | 13.3 | 2.2 | 1.9 | 2.5 | 18 |
| $\phi 5/32$ | 1/8 | KQ2VF03-34□S | 14.29 | 8.2 | 13.4 | 19.3 | 14.4 | 28.5 | 25.3 | 13.3 | 2.9 | 2.9 | 3 | 18.1 |
| $\phi 3/16$ | 1/8 | KQ2VF05-34□S | 14.29 | 9.1 | 13.4 | 19.6 | 14.4 | 28.5 | 25.3 | 13.3 | 4.5 | 3.7 | 3.5 | 18.2 |
| $\phi 1/4$ | 1/8 | KQ2VF07-34□S | 14.29 | 11.1 | 13.4 | 20.6 | 14.4 | 28.5 | 25.3 | 13.3 | 7.7 | 6.6 | 4.6 | 18.5 |
| | 1/4 | KQ2VF07-35□S | 17.46 | 11.1 | 17.6 | 21.3 | 19.4 | 37.9 | 33.5 | 13.3 | 7.7 | 6.6 | 4.6 | 38.4 |
| $\phi 5/16$ | 1/8 | KQ2VF09-34□S | 17.46 | 13.2 | 17.6 | 23.5 | 15.5 | 30 | 26.8 | 14.2 | 16 | 11.2 | 6 | 28.7 |
| | 1/4 | KQ2VF09-35□S | 17.46 | 13.2 | 17.6 | 23.5 | 18.9 | 37.9 | 33.5 | 14.2 | 16 | 11.2 | 6 | 39.3 |
| $\phi 3/8$ | 3/8 | KQ2VF09-36□S | 22.23 | 13.2 | 25.2 | 24.9 | 24 | 44 | 39.3 | 14.2 | 16 | 11.2 | 6 | 67.2 |
| | 1/4 | KQ2VF11-35□S | 22.23 | 15.4 | 20.6 | 25.8 | 20.7 | 40.3 | 35.9 | 15.6 | 23.4 | 19.3 | 7 | 58.7 |
| $\phi 3/8$ | 3/8 | KQ2VF11-36□S | 22.23 | 15.4 | 25.2 | 26.3 | 23.2 | 44 | 39.3 | 15.6 | 23.4 | 19.3 | 7 | 67.9 |
| | 3/8 | KQ2VF13-36□S | 25.4 | 19.3 | 27 | 30.5 | 21.2 | 40.7 | 36 | 17 | 38.8 | 34.3 | 9 | 69.8 |
| $\phi 1/2$ | 1/2 | KQ2VF13-37□S | 25.4 | 19.3 | 27 | 30.5 | 24.4 | 48.9 | 42.5 | 17 | 38.8 | 34.3 | 9 | 105.7 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of NPT thread

Note) ϕD_1 is maximum diameter.



Inch Size One-touch Fittings *Series KQ2*

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

Dimensions

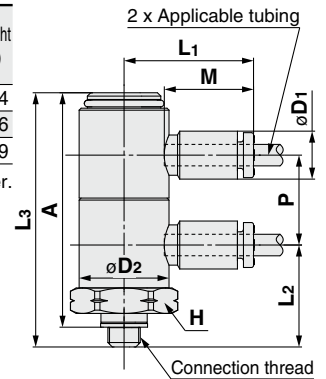
Double Universal Male Elbow: KQ2VD (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread UNF | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | 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 plated

Note) ϕD_1 is maximum diameter.



Double Universal Male Elbow: KQ2VD (Sealant)

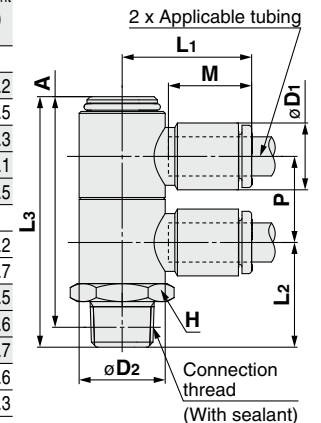


| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A* | M | P | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|--------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | 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 |
| | 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 |
| $\phi 5/16$ | 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 |
| | 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 |
| $\phi 3/8$ | 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 |
| | 3/8 | 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 |
| $\phi 1/2$ | 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 |
| | 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 |
| $\phi 1/2$ | 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 plated

* Reference dimensions after installation of NPT thread

Note) ϕD_1 is maximum diameter.



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

Series KQ2

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

Dimensions

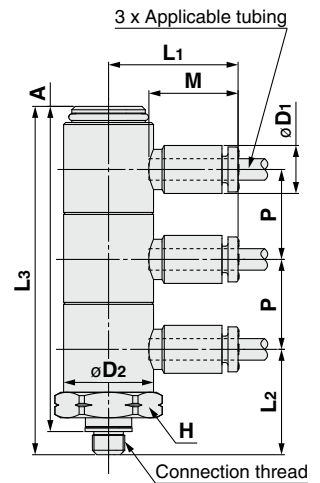
Triple Universal Male Elbow: KQ2VT (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread UNF | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | 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 plated

Note) ϕD_1 is maximum diameter.



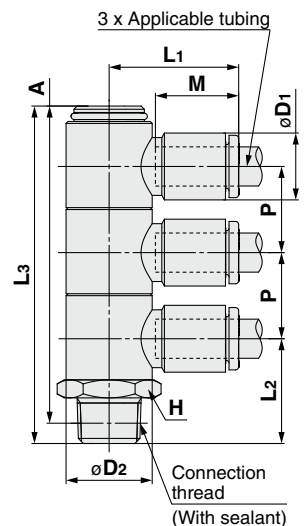
Triple Universal Male Elbow: KQ2VT (Sealant)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A* | 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 |
| $\phi 3/8$ | 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 |
| | 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 |
| $\phi 1/2$ | 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 |
| $\phi 3/8$ | 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 |
| $\phi 1/2$ | 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 plated

* Reference dimensions after installation of NPT thread
Note) ϕD_1 is maximum diameter.



Inch Size One-touch Fittings *Series KQ2*

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

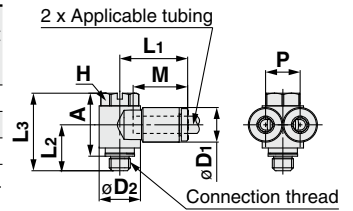
Dimensions

Branch Universal Male Elbow: KQ2Z (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread UNF | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A | M | P | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 10-32UNF | KQ2Z01-32□ | 8 | 7.1 | 9.8 | 16.5 | 10.4 | 17.9 | 14.4 | 13.3 | 7.1 | 2.2 | 1.9 | 2.5 | 5.9 |
| $\phi 5/32$ | 10-32UNF | KQ2Z03-32□ | 8 | 8.2 | 9.8 | 16.5 | 10.4 | 17.9 | 14.4 | 13.3 | 8.2 | 2.9 | 2.9 | 2.5 | 6.2 |
| $\phi 1/4$ | 10-32UNF | KQ2Z07-32□ | 8 | 11.1 | 13.4 | 18.4 | 12.1 | 24 | 20.5 | 13.3 | 11.1 | 2.9 | 2.9 | 2.5 | 13.4 |

□/A: Brass, N: Brass + Electroless nickel plated Note) ϕD_1 is maximum diameter.

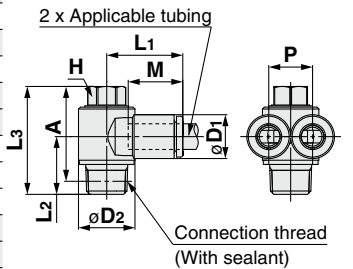


Branch Universal Male Elbow: KQ2Z (Sealant)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A* | M | P | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 1/8 | KQ2Z01-34□S | 8 | 7.1 | 13.4 | 18.5 | 13.7 | 25.6 | 22.4 | 13.3 | 7.1 | 2.2 | 1.9 | 2.5 | 14.1 |
| $\phi 5/32$ | 1/8 | KQ2Z03-34□S | 8 | 8.2 | 13.4 | 18.5 | 13.7 | 25.6 | 22.4 | 13.3 | 8.2 | 2.9 | 2.9 | 3 | 14.4 |
| $\phi 3/16$ | 1/8 | KQ2Z05-34□S | 8 | 9.1 | 13.4 | 18.4 | 13.7 | 25.6 | 22.4 | 13.3 | 9.1 | 4.5 | 3.7 | 3.5 | 14.7 |
| $\phi 1/4$ | 1/8 | KQ2Z07-34□S | 8 | 11.1 | 13.4 | 18.4 | 13.7 | 25.6 | 22.4 | 13.3 | 11.1 | 7.5 | 6.6 | 4.5 | 15.2 |
| | 1/4 | KQ2Z07-35□S | 11.11 | 11.1 | 17.6 | 20.4 | 18 | 31 | 26.6 | 13.3 | 11.1 | 7.7 | 6.6 | 4.5 | 29.5 |
| $\phi 5/16$ | 1/8 | KQ2Z09-34□S | 11.11 | 13.2 | 17.6 | 21.2 | 15.1 | 27.6 | 24.4 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 24.1 |
| | 1/4 | KQ2Z09-35□S | 11.11 | 13.2 | 17.6 | 21.2 | 18.5 | 31 | 26.6 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 31 |
| $\phi 3/8$ | 3/8 | KQ2Z09-36□S | 12.7 | 13.2 | 20.6 | 22.3 | 19.5 | 35.3 | 30.6 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 46 |
| | 1/4 | KQ2Z11-35□S | 12.7 | 15.4 | 20.6 | 25.9 | 19.1 | 34.9 | 30.5 | 15.6 | 15.4 | 23.4 | 19.3 | 7 | 40.7 |
| $\phi 3/8$ | 3/8 | KQ2Z11-36□S | 12.7 | 15.4 | 20.6 | 25.9 | 19.5 | 35.3 | 30.6 | 15.6 | 15.4 | 23.4 | 19.3 | 7 | 48.4 |
| | 3/8 | KQ2Z13-36□S | 17.46 | 19.3 | 27 | 30.1 | 20.2 | 35.1 | 30.4 | 17 | 19.3 | 38.8 | 34.3 | 9 | 69.5 |
| $\phi 1/2$ | 1/2 | KQ2Z13-37□S | 17.46 | 19.3 | 27 | 30.1 | 23.4 | 38.3 | 31.9 | 17 | 19.3 | 38.8 | 34.3 | 9 | 88.1 |

□/A: Brass, N: Brass + Electroless nickel plated * Reference dimensions after installation of NPT thread
Note) ϕD_1 is maximum diameter.

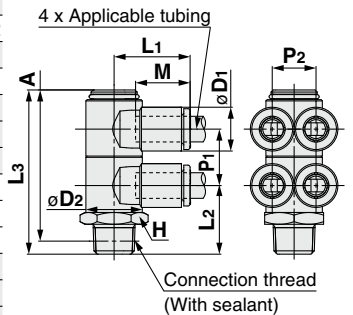


Double Branch Universal Male Elbow: KQ2ZD (Sealant)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) 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 | | |
| $\phi 1/8$ | 1/8 | KQ2ZD01-34□S | 14.29 | 7.1 | 13.4 | 18.5 | 16.3 | 39 | 35.8 | 13.3 | 13.4 | 7.1 | 2.2 | 1.9 | 2.5 | 21.2 |
| $\phi 5/32$ | 1/8 | KQ2ZD03-34□S | 14.29 | 8.2 | 13.4 | 18.5 | 16.3 | 39 | 35.8 | 13.3 | 13.4 | 8.2 | 2.9 | 2.9 | 3 | 21.8 |
| $\phi 3/16$ | 1/8 | KQ2ZD05-34□S | 14.29 | 9.1 | 13.4 | 18.4 | 16.3 | 39 | 35.8 | 13.3 | 13.4 | 9.1 | 4.5 | 3.7 | 3.5 | 22.4 |
| $\phi 1/4$ | 1/8 | KQ2ZD07-34□S | 14.29 | 11.1 | 13.4 | 18.3 | 17.7 | 40.8 | 37.6 | 13.3 | 13.8 | 11.1 | 7.7 | 6.6 | 4.6 | 25.5 |
| | 1/4 | KQ2ZD07-35□S | 14.29 | 11.1 | 13.4 | 18.3 | 21.1 | 44.2 | 39.8 | 13.3 | 13.8 | 11.1 | 7.7 | 6.6 | 4.6 | 32.4 |
| $\phi 5/16$ | 3/8 | KQ2ZD07-36□S | 17.46 | 11.1 | 13.4 | 18.3 | 22.5 | 45.6 | 40.9 | 13.3 | 13.8 | 11.1 | 7.7 | 6.6 | 4.6 | 44.8 |
| | 1/4 | KQ2ZD09-35□S | 19 | 13.2 | 17.6 | 21.95 | 22.4 | 49.2 | 44.8 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 48.7 |
| $\phi 5/16$ | 3/8 | KQ2ZD09-36□S | 19 | 13.2 | 17.6 | 21.95 | 23 | 49.8 | 45.1 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 56.8 |
| | 1/2 | KQ2ZD09-37□S | 22.23 | 13.2 | 17.6 | 21.95 | 27.2 | 54 | 47.6 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 83.3 |
| $\phi 3/8$ | 1/4 | KQ2ZD11-35□S | 22.23 | 15.4 | 20.6 | 23.6 | 24.4 | 56.3 | 51.9 | 15.6 | 19.2 | 15.4 | 23.4 | 19.3 | 7 | 71.1 |
| | 3/8 | KQ2ZD11-36□S | 22.23 | 15.4 | 20.6 | 23.6 | 24.8 | 56.7 | 52 | 15.6 | 19.2 | 15.4 | 23.4 | 19.3 | 7 | 73.2 |
| $\phi 3/8$ | 1/2 | KQ2ZD11-37□S | 22.23 | 15.4 | 20.6 | 23.6 | 28.7 | 60.6 | 54.2 | 15.6 | 19.2 | 15.4 | 23.4 | 19.3 | 7 | 93.3 |
| | 3/8 | KQ2ZD13-36□S | 25.4 | 19.3 | 27 | 27.9 | 29.6 | 64.4 | 59.7 | 17 | 22.3 | 19.3 | 43.8 | 34.3 | 9.6 | 137.2 |
| $\phi 1/2$ | 1/2 | KQ2ZD13-37□S | 25.4 | 19.3 | 27 | 27.9 | 32.8 | 67.6 | 61.2 | 17 | 22.3 | 19.3 | 43.8 | 34.3 | 9.6 | 155 |

□/A: Brass, N: Brass + Electroless nickel plated * Reference dimensions after installation of NPT thread
Note) ϕD_1 is maximum diameter.



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
Metric Size NPT
Inch Size NPT
Inch Size R
Inch Size R
Gasket Seal
Metric Size Uni
Inch Size Uni

Series KQ2

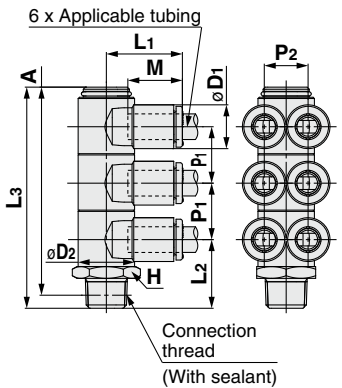
Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

Dimensions

Triple Universal Male Elbow: KQ2ZT (Sealant)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) 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 | | |
| $\phi 1/8$ | 1/8 | KQ2ZT01-34□S | 14.29 | 7.1 | 13.4 | 18.5 | 16.3 | 52.5 | 49.3 | 13.3 | 13.4 | 7.1 | 2.2 | 1.9 | 2.5 | 27.3 |
| $\phi 5/32$ | 1/8 | KQ2ZT03-34□S | 14.29 | 8.2 | 13.4 | 18.5 | 16.3 | 52.5 | 49.3 | 13.3 | 13.4 | 8.2 | 2.9 | 2.9 | 3 | 28.2 |
| $\phi 3/16$ | 1/8 | KQ2ZT05-34□S | 14.29 | 9.1 | 13.4 | 18.4 | 16.3 | 52.5 | 49.3 | 13.3 | 13.4 | 9.1 | 4.5 | 3.7 | 3.5 | 29 |
| $\phi 1/4$ | 1/8 | KQ2ZT07-34□S | 14.29 | 11.1 | 13.4 | 18.3 | 17.7 | 54.6 | 51.4 | 13.3 | 13.8 | 11.1 | 7.7 | 6.6 | 4.6 | 33.1 |
| | 1/4 | KQ2ZT07-35□S | 14.29 | 11.1 | 13.4 | 18.3 | 21.1 | 58 | 53.6 | 13.3 | 13.8 | 11.1 | 7.7 | 6.6 | 4.6 | 40 |
| | 3/8 | KQ2ZT07-36□S | 17.46 | 11.1 | 13.4 | 18.3 | 22.5 | 59.4 | 54.7 | 13.3 | 13.8 | 11.1 | 7.7 | 6.6 | 4.6 | 52.4 |
| $\phi 5/16$ | 1/4 | KQ2ZT09-35□S | 17.46 | 13.2 | 17.6 | 21.2 | 22.4 | 65.2 | 60.8 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 60.9 |
| | 3/8 | KQ2ZT09-36□S | 19 | 13.2 | 17.6 | 21.2 | 23 | 65.8 | 61.1 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 70.8 |
| | 1/2 | KQ2ZT09-37□S | 22.23 | 13.2 | 17.6 | 21.2 | 27.2 | 70 | 63.6 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 97.3 |
| $\phi 3/8$ | 1/4 | KQ2ZT11-35□S | 22.23 | 15.4 | 20.6 | 23.6 | 24.4 | 75.6 | 71.2 | 15.6 | 19.2 | 15.4 | 23.4 | 19.3 | 7 | 100.2 |
| | 3/8 | KQ2ZT11-36□S | 22.23 | 15.4 | 20.6 | 23.6 | 24.8 | 76 | 71.3 | 15.6 | 19.2 | 15.4 | 23.4 | 19.3 | 7 | 100.2 |
| | 1/2 | KQ2ZT11-37□S | 22.23 | 15.4 | 20.6 | 23.6 | 28.7 | 79.9 | 73.5 | 15.6 | 19.2 | 15.4 | 23.4 | 19.3 | 7 | 100.2 |
| $\phi 1/2$ | 3/8 | KQ2ZT13-36□S | 25.4 | 19.3 | 27 | 27.9 | 29.6 | 86.8 | 82.1 | 17 | 22.3 | 19.3 | 43.8 | 34.3 | 9.6 | 182.3 |
| | 1/2 | KQ2ZT13-37□S | 25.4 | 19.3 | 27 | 27.9 | 32.8 | 90 | 83.6 | 17 | 22.3 | 19.3 | 43.8 | 34.3 | 9.6 | 200 |



□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of NPT thread
Note) ϕD_1 is maximum diameter.

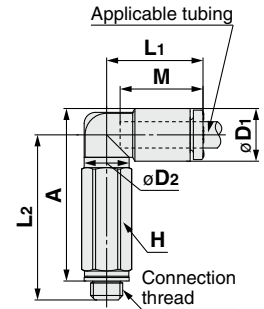
Extended Male Elbow: KQ2W (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread UNF | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 10-32UNF | KQ2W01-32□ | 7 | 7.1 | 7 | 15.3 | 25.8 | 25.9 | 13.3 | 2.8 | 2.4 | 2.5 | 5.9 |
| $\phi 5/32$ | 10-32UNF | KQ2W03-32□ | 7 | 8.2 | 7 | 15.4 | 26.3 | 26.9 | 13.3 | 3 | 3 | 2.5 | 6 |
| $\phi 1/4$ | 10-32UNF | KQ2W07-32□ | 7 | 11.1 | 7 | 15.4 | 27.6 | 29.7 | 13.3 | 3.5 | 3.5 | 2.5 | 6.4 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



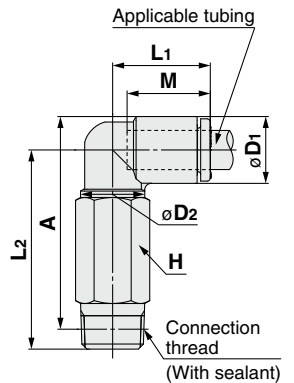
Extended Male Elbow: KQ2W (Sealant)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 1/16 | KQ2W01-33□S | 11.11 | 7.1 | 10 | 14.5 | 35.9 | 35.4 | 13.3 | 2.8 | 2.4 | 2.5 | 16.6 |
| | 1/8 | KQ2W01-34□S | 11.11 | 7.1 | 10 | 14.5 | 30.3 | 30.7 | 13.3 | 2.8 | 2.4 | 2.5 | 13.9 |
| | 1/4 | KQ2W01-35□S | 14.29 | 7.1 | 10 | 14.5 | 32.7 | 31.9 | 13.3 | 2.8 | 2.4 | 2.5 | 27.3 |
| $\phi 5/32$ | 1/16 | KQ2W03-33□S | 11.11 | 8.2 | 10 | 14.8 | 35.4 | 35.4 | 13.3 | 4 | 4 | 3 | 16.7 |
| | 1/8 | KQ2W03-34□S | 11.11 | 8.2 | 10 | 14.8 | 29.9 | 30.8 | 13.3 | 4 | 4 | 3 | 14.1 |
| | 1/4 | KQ2W03-35□S | 14.29 | 8.2 | 10 | 14.8 | 33.2 | 32.9 | 13.3 | 4 | 4 | 3 | 27.5 |
| $\phi 3/16$ | 1/8 | KQ2W05-34□S | 11.11 | 9.1 | 10 | 15 | 30.4 | 31.7 | 13.3 | 6.8 | 5.6 | 3.5 | 14.3 |
| | 1/4 | KQ2W05-35□S | 14.29 | 9.1 | 10 | 15 | 33.7 | 33.9 | 13.3 | 6.8 | 5.6 | 3.5 | 27.7 |
| $\phi 1/4$ | 1/16 | KQ2W07-33□S | 11.11 | 11.1 | 10 | 15.6 | 36.9 | 38.4 | 13.3 | 6.8 | 6.8 | 3.5 | 17.3 |
| | 1/8 | KQ2W07-34□S | 11.11 | 11.1 | 10 | 15.6 | 31.4 | 33.7 | 13.3 | 11.3 | 10 | 4.5 | 14.6 |
| | 1/4 | KQ2W07-35□S | 14.29 | 11.1 | 10 | 15.6 | 34.7 | 35.9 | 13.3 | 11.3 | 10 | 4.5 | 28 |
| $\phi 5/16$ | 3/8 | KQ2W07-36□S | 17.46 | 11.1 | 10 | 15.6 | 36.1 | 37 | 13.3 | 11.3 | 10 | 4.5 | 50.2 |
| | 1/8 | KQ2W09-34□S | 11.11 | 13.2 | 10 | 16.4 | 32.4 | 35.8 | 14.2 | 11.3 | 11.3 | 4.5 | 15.4 |
| | 1/4 | KQ2W09-35□S | 14.29 | 13.2 | 12 | 17.2 | 37.8 | 40 | 14.2 | 20.5 | 14.2 | 6 | 26.5 |
| $\phi 3/8$ | 3/8 | KQ2W09-36□S | 17.46 | 13.2 | 12 | 17.2 | 39.2 | 41.1 | 14.2 | 20.5 | 14.2 | 6 | 50 |
| | 1/4 | KQ2W11-35□S | 17.46 | 15.4 | 17 | 19.3 | 48.3 | 51.6 | 15.6 | 28.8 | 23.8 | 7.5 | 54.3 |
| | 3/8 | KQ2W11-36□S | 17.46 | 15.4 | 17 | 19.3 | 45.1 | 48.1 | 15.6 | 28.8 | 23.8 | 7.5 | 37.8 |
| $\phi 1/2$ | 1/2 | KQ2W11-37□S | 22.23 | 15.4 | 17 | 19.3 | 49.3 | 50.6 | 15.6 | 28.8 | 23.8 | 7.5 | 86.5 |
| | 1/4 | KQ2W13-35□S | 17.46 | 19.3 | 17 | 21.5 | 50.2 | 55.5 | 17 | 50.3 | 44.4 | 9 | 56.6 |
| | 3/8 | KQ2W13-36□S | 17.46 | 19.3 | 17 | 21.8 | 46 | 51 | 17 | 56 | 44.4 | 9.5 | 42.8 |
| | 1/2 | KQ2W13-37□S | 22.23 | 19.3 | 17 | 21.8 | 50.2 | 53.5 | 17 | 56 | 44.4 | 9.5 | 95.5 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of NPT thread
Note) ϕD_1 is maximum diameter.



Inch Size One-touch Fittings *Series KQ2*

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

Dimensions

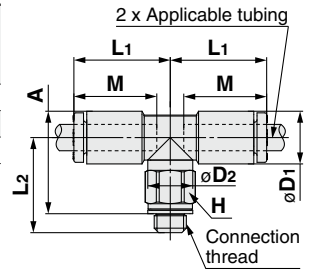
Male Branch Tee: KQ2T (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread UNF | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 10-32UNF | KQ2T01-32□ | 7 | 7.1 | 7 | 15.3 | 14.2 | 14.2 | 13.3 | 3.2 | 2.7 | 2.5 | 3.5 |
| $\phi 5/32$ | 10-32UNF | KQ2T03-32□ | 7 | 8.2 | 7 | 15.4 | 14.7 | 15.3 | 13.3 | 4.5 | 4.5 | 2.5 | 3.8 |
| $\phi 1/4$ | 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 plated

Note) ϕD_1 is maximum diameter.



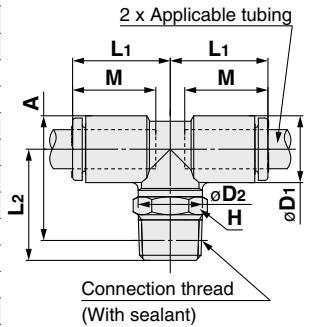
Male Branch Tee: KQ2T (Sealant)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 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 |
| $\phi 5/32$ | 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 |
| $\phi 3/16$ | 1/4 | KQ2T03-35□S | 14.29 | 8.2 | 10 | 14.8 | 21.6 | 21.3 | 13.3 | 6 | 4.1 | 3 | 15.9 |
| | 1/8 | KQ2T05-34□S | 11.11 | 9.1 | 10 | 15 | 16.7 | 18 | 13.3 | 8.4 | 7 | 3.5 | 6.6 |
| $\phi 1/4$ | 1/4 | KQ2T05-35□S | 14.29 | 9.1 | 10 | 15 | 22.1 | 22.2 | 13.3 | 8.4 | 7 | 3.5 | 16.2 |
| | 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 |
| $\phi 5/16$ | 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 |
| | 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 |
| | 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 |
| $\phi 3/8$ | 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 |
| | 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 |
| $\phi 1/2$ | 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 |
| | 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 plated

* Reference dimensions after installation of NPT thread
Note) ϕD_1 is maximum diameter.



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
 Metric Size NPT
 Inch Size NPT
 Inch Size R
 Inch Size R
 Metric Size Uni
 Inch Size Uni

Series KQ2

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

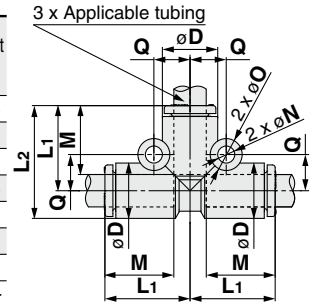
Dimensions

Union Tee: KQ2T



| Applicable tubing O.D. (inch) | Model | Note) 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 |

Note) ϕD is maximum diameter.

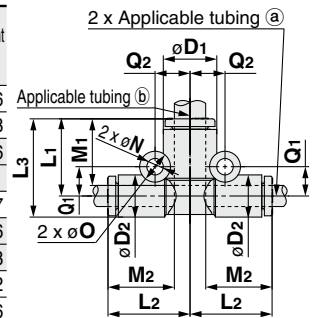


Different Diameter Tee: KQ2T



| Applicable tubing O.D. (inch) | Model | Note) ϕD_1 | ϕD_2 | L1 | L2 | L3 | M1 | M2 | Q1 | Q2 | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---|------------------|------------|------|------|------|------|------|-----|------|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | | 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 |
| $\phi 3/16$ | $\phi 3/16$ 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 |
| | $\phi 3/8$ 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 |
| | $\phi 3/8$ $\phi 1/2$ 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 |

Note) ϕD_1 is maximum diameter.

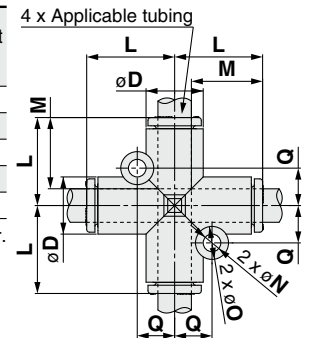


Cross: KQ2TW



| Applicable tubing O.D. (inch) | Model | Note) ϕD | 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 |

Note) ϕD is maximum diameter.



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

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

Dimensions

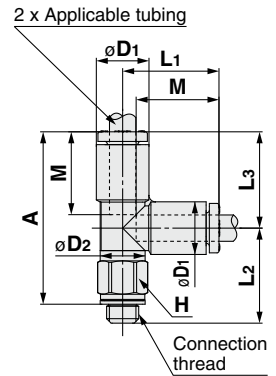
Male Run Tee: KQ2Y (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread UNF | Model | H (Width across flats) | Note) $\phi D1$ | $\phi D2$ | L1 | L2 | L3 | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|-----------------|-----------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 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 |
| $\phi 5/32$ | 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 |
| $\phi 1/4$ | 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 plated

Note) $\phi D1$ is maximum diameter.



Male Run Tee: KQ2Y (Sealant)

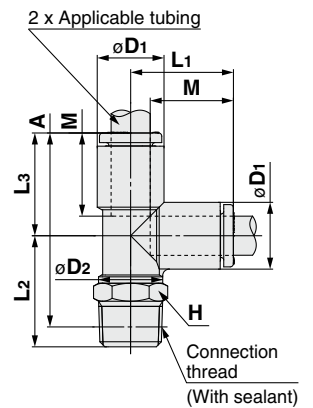


| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) $\phi D1$ | $\phi D2$ | L1 | L2 | L3 | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|-----------------|-----------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 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 |
| $\phi 5/32$ | 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 |
| $\phi 3/16$ | 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 |
| $\phi 1/4$ | 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 |
| | 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 |
| $\phi 5/16$ | 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 |
| | 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 |
| $\phi 3/8$ | 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 |
| | 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 |
| $\phi 1/2$ | 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 |
| | 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 plated

* Reference dimensions after installation of NPT thread

Note) $\phi D1$ is maximum diameter.



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

Series KQ2

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

Dimensions

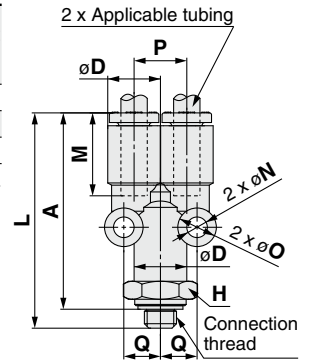
Branch "Y": KQ2U (Gasket seal)



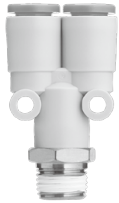
| Applicable tubing O.D. (inch) | Connection thread UNF | Model | H (Width across flats) | Note) ϕD | L | P | A | M | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|----------------|------|------|------|------|-----|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 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 |
| $\phi 5/32$ | 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 |
| $\phi 1/4$ | 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 plated

Note) ϕD is maximum diameter.



Branch "Y": KQ2U (Sealant)

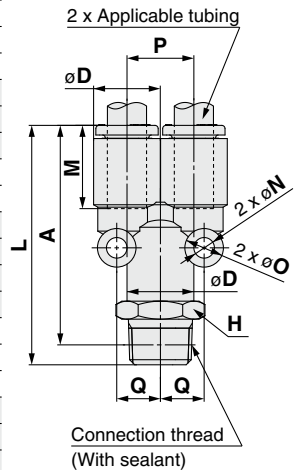


| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD | L | P | A* | M | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|----------------|------|------|------|------|------|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 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 |
| $\phi 5/32$ | 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 |
| $\phi 3/16$ | 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 |
| $\phi 1/4$ | 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 |
| $\phi 5/16$ | 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 |
| $\phi 3/8$ | 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 |
| | 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 |
| $\phi 1/2$ | 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 |
| | 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 plated

* Reference dimensions after installation of NPT thread

Note) ϕD is maximum diameter.



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

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

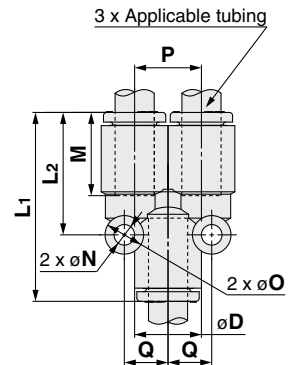
Dimensions

Union "Y": KQ2U

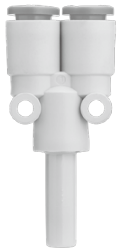


| Applicable tubing O.D. (inch) | Model | Note) ϕD | L1 | L2 | P | M | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-------------------|----------------|------|------|------|------|-----|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 |

Note) ϕD is maximum diameter.

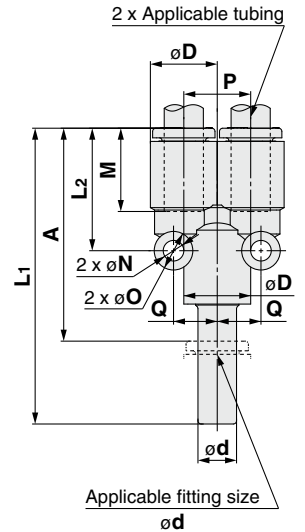


Plug-in "Y": KQ2U



| Applicable tubing O.D. (inch) | Applicable fitting size ϕd (inch) | Model | Note) 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 |

Note) ϕD is maximum diameter.

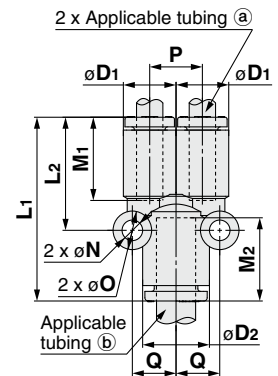


Different Diameter Union "Y": KQ2U



| Applicable tubing O.D. (inch) | Model | Note) $\phi D1$ | Note) $\phi D2$ | 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 |
| | $\phi 5/16$ | 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 |
| $\phi 1/4$ | $\phi 3/8$ | 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 |
| | $\phi 5/16$ | 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 |
| $\phi 5/16$ | $\phi 1/2$ | 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 |
| | $\phi 3/8$ | 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 |

Note) $\phi D1$, $\phi D2$ are maximum diameters.



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
Metric Size NPT
Inch Size NPT
Inch Size R
Inch Size Uni
Gasket Seal
Metric Size Uni
Inch Size Uni

Series KQ2

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

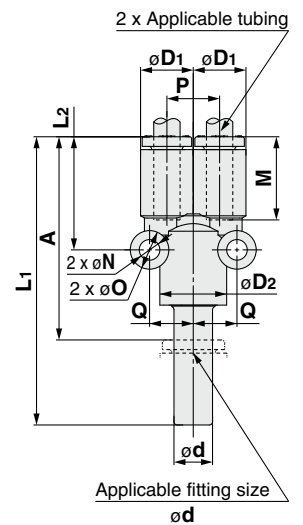
Dimensions

Different Diameter Plug-in "Y": KQ2X



| Applicable tubing O.D. (inch) | Applicable fitting size ϕd (inch) | Model | Note) $\phi D1$ | Note) $\phi D2$ | 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 |

Note) $\phi D1$, $\phi D2$ are maximum diameters.

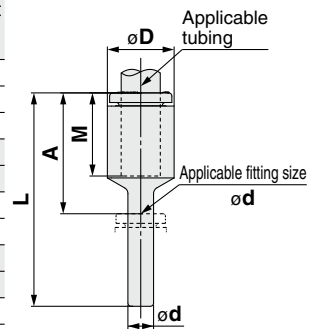


Plug-in Reducer: KQ2R

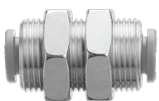


| Applicable tubing O.D. (inch) | Applicable fitting size ϕd (inch) | Model | Note) ϕD | L | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---|------------|----------------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | 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 |

Note) ϕD is maximum diameter.

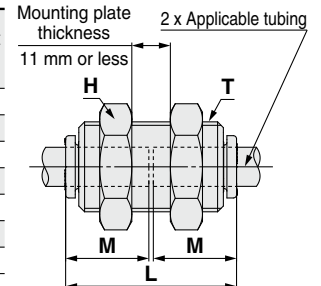


Bulkhead Union: KQ2E (Interchangeable with KQ)

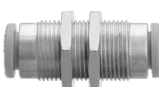


| Applicable tubing O.D. (inch) | Model | T (UNF) | H (Width across flats) | L | Mounting hole | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|------------|------------|------------------------|------|---------------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | 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 plated

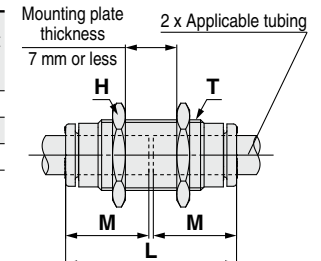


Bulkhead Union: KQ2E (Interchangeable with KJ)



| 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 plated

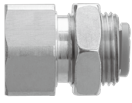


Inch Size One-touch Fittings *Series KQ2*

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

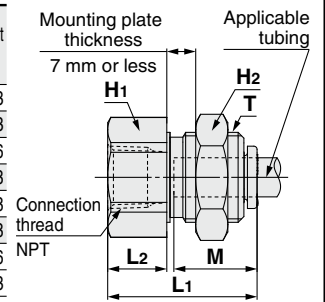
Dimensions

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 | 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 plated



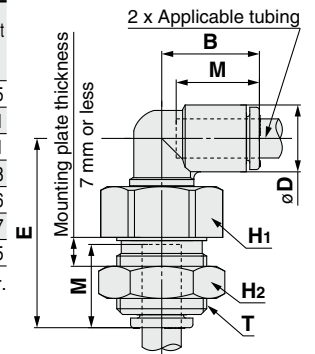
Bulkhead Male Elbow: KQ2LE



| Applicable tubing O.D. (inch) | Model | T (UNF) | H ₁ (Width across flats) | H ₂ (Width across flats) | B | E | Note) øD | Mounting hole | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-------------|------------|-------------------------------------|-------------------------------------|------|------|----------|---------------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 plated

Note) øD is maximum diameter.

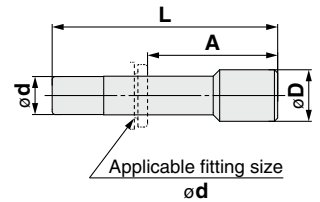


Plug: KQ2P



| Applicable fitting size ød (inch) | Model | Note) øD | 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 |

Note) øD is maximum diameter.



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

Series KQ2

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

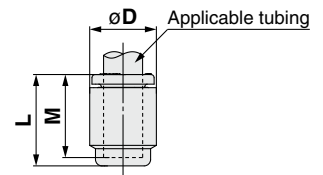
Dimensions

Tube Cap: KQ2C



| Applicable tubing O.D. (inch) | Model | Note) ϕD | 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 |

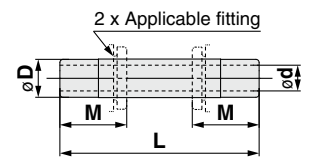
Note) ϕD is maximum diameter.



Nipple: KQ2N



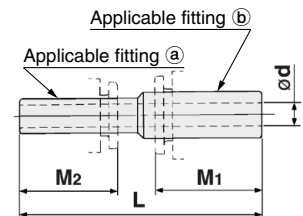
| Applicable fitting ϕD | Model | L | M | ϕd Min. port size | Weight (g) |
|-----------------------------|------------------|----|------|-------------------------|------------|
| $\phi 1/8$ | KQ2N01-99 | 36 | 13.3 | 2.1 | 0.2 |
| $\phi 3/16$ | KQ2N05-99 | 38 | 13.3 | 3.4 | 0.4 |
| $\phi 1/4$ | KQ2N07-99 | 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 |



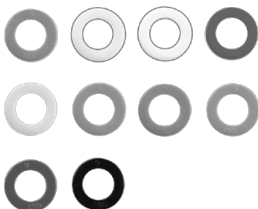
Reducer Nipple: KQ2N



| 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 |

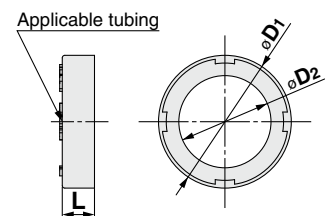


Color Cap: KQ2C



| 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 | |
| $\phi 1/4$ | 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)



In order to improve the operability, the outside diameter of the release button has been enlarged for the New KQ2 series. Along with this change, the usable color caps differ before and after the change. Refer to page 120-1 for details.

Series KQ2

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 <small>Note)</small> | Body color: Black Release button color: Orange |

Note) 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 Clean Series

Please consult with SMC separately for applicable models.

| Symbol | Specifications |
|------------|---|
| 10- | Brass parts: With electroless nickel plated Lubricant: Fluorine grease Air blow in a clean room Double package 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 plated

| 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 | øD1 | øD2 | L | Weight g | Note |
|-----------------------------|------------------|------|------|-----|----------|--|
| ø1/4 | KQ2C-07□A | 10.7 | 7.5 | 2.6 | 0.1 | Applicable for products before enlargement of outside diameter of release button |
| 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 | |

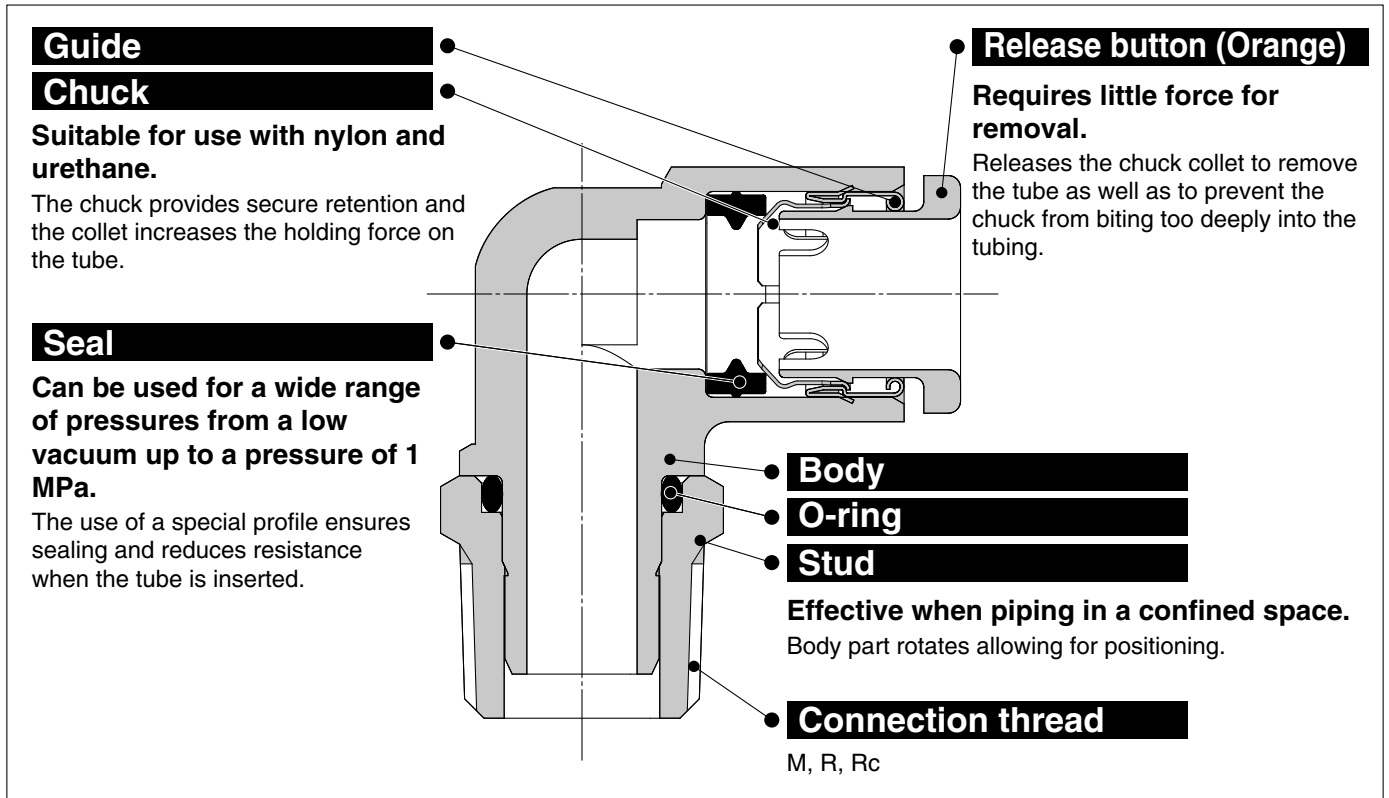
□: B (Black), R (Red), YR (Orange), BR (Brown), Y (Yellow), G (Green), CB (Sky blue), GR (Gray), W (White), BU (Blue)

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
 Inch Size R
 Metric Size Uni
 Inch Size Uni

Inch Size One-touch Fittings

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

Series KQ2



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



Made to Order Specifications
(Refer to page 63 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 ^{Note 1)} |
| Operating pressure range ^{Note 2)} | | -100 kPa to 1 MPa |
| Proof pressure (at 23°C) | | 3 MPa |
| Ambient and fluid temperature | | -5 to 60°C, Water: 0 to 40°C (No freezing) |
| Thread | Mounting section | JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread) |
| | Nut section | JIS B0205 (Metric fine thread) |
| Seal on the threads | | With sealant |

Note 1) The surge pressure must be under the maximum operating pressure.

Note 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 05 - 01 A S

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" |
| E | Bulkhead union |
| | Bulkhead connector |

Applicable tubing O.D.

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

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 plated |
| Bulkhead union | M □ Only for "Bulkhead union" |

* □: A, N

Port size

| Symbol | Size |
|------------|----------------------|
| M5 | M5 x 0.8 |
| 01 | 1/8 |
| 02 | 1/4 |
| 03 | 3/8 |
| 04 | 1/2 |
| 00* | Same diameter tubing |

* 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 |
| Face Seal | Metric Size G |
| | Metric Size R, Rc |
| Gasket Seal | Inch Size R |
| | Metric Size Uni |
| | Inch Size Uni |

Inch Size One-touch Fittings

Variations

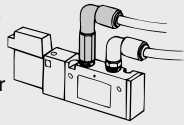
Extended male elbow

KQ2W

P.61



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.



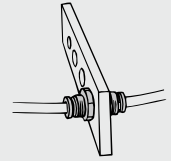
Bulkhead union

KQ2E

P.62



Use to connect tubing through a panel, etc.



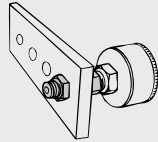
Bulkhead connector

KQ2E

P.62



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



Male connector

KQ2H

P.60



Use to pipe a female thread. Most general model.

Male branch tee

KQ2T

P.61



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

Branch "Y"

KQ2U

P.62



Use to branch a female thread.

Male elbow

KQ2L

P.60



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

Male run tee

KQ2Y

P.61



Use to branch a female thread at a 90° angle.

Inch Size One-touch Fittings *Series KQ2*

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

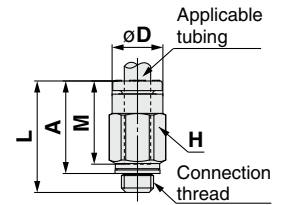
Dimensions

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□ | 12 | 10.9 | 18.4 | 15.4 | 13.3 | 4.0 | 4.0 | 2.5 | 6.5 |

□/A: Brass, N: Brass + Electroless nickel plated



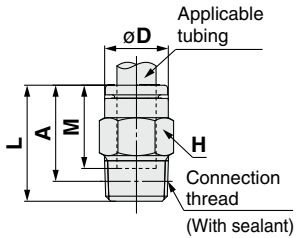
Male Connector: KQ2H (Sealant)



| Applicable tubing O.D. (inch) | Connection thread R | Model | H (Width across flats) | øD | L | A* | 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 plated

* Reference dimensions after installation of R thread



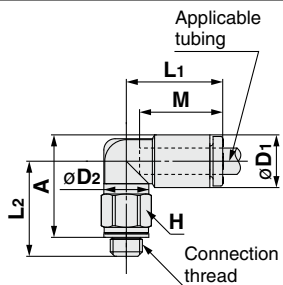
Male Elbow: KQ2L (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread M | Model | H (Width across flats) | Note) øD1 | øD2 | L1 | L2 | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---------------------|------------|------------------------|-----------|-----|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 plated

Note) øD1 is maximum diameter.



Male Elbow: KQ2L (Sealant)

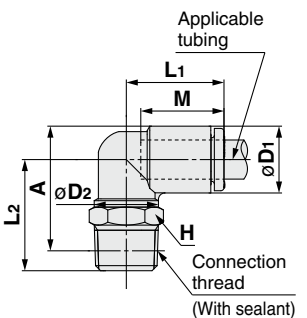


| Applicable tubing O.D. (inch) | Connection thread R | Model | H (Width across flats) | Note) øD1 | øD2 | L1 | L2 | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---------------------|-------------|------------------------|-----------|-----|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 |
| | 1/4 | KQ2L09-02□S | 14 | 13.2 | 12 | 17.2 | 25.4 | 27.3 | 14.2 | 21.6 | 14.9 | 6 | 17.7 |
| | 3/8 | KQ2L09-03□S | 17 | 13.2 | 12 | 17.2 | 28.5 | 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 |
| | 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 |
| ø1/2 | 1/4 | 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 plated

* Reference dimensions after installation of R thread

Note) øD1 is maximum diameter.



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

Series KQ2

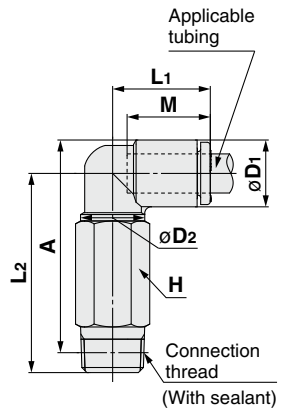
Applicable Tubing: Inch Size, Connection Thread: M, R, Rc

Dimensions

Extended Male Elbow: KQ2W (Sealant)



| Applicable tubing O.D. (inch) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3/16$ | 1/8 | KQ2W05-01□S | 10 | 9.1 | 10 | 15 | 30.4 | 31.8 | 13.3 | 6.8 | 5.6 | 3.5 | 11.2 |
| | 1/4 | KQ2W05-02□S | 14 | 9.1 | 10 | 15 | 33.8 | 33.7 | 13.3 | 6.8 | 5.6 | 3.5 | 27.7 |
| $\phi 1/4$ | 1/8 | KQ2W07-01□S | 10 | 11.1 | 10 | 15.6 | 31.4 | 33.8 | 13.3 | 11.6 | 10.0 | 4.5 | 11.5 |
| | 1/4 | KQ2W07-02□S | 14 | 11.1 | 10 | 15.6 | 34.8 | 35.7 | 13.3 | 11.6 | 10.0 | 4.5 | 28 |
| | 3/8 | KQ2W07-03□S | 17 | 11.1 | 10 | 15.6 | 36.1 | 36.6 | 13.3 | 11.6 | 10.0 | 4.5 | 47.4 |
| $\phi 5/16$ | 1/8 | KQ2W09-01□S | 10 | 13.2 | 10 | 16.4 | 32.4 | 35.9 | 14.2 | 11.6 | 11.6 | 4.5 | 12.2 |
| | 1/4 | KQ2W09-02□S | 14 | 13.2 | 12 | 17.2 | 39.1 | 41 | 14.2 | 21.5 | 14.9 | 6 | 40 |
| $\phi 3/8$ | 3/8 | KQ2W09-03□S | 17 | 13.2 | 12 | 17.2 | 39.2 | 40.7 | 14.2 | 21.5 | 14.9 | 6 | 47 |
| | 1/4 | KQ2W11-02□S | 17 | 15.4 | 17 | 19.3 | 52.7 | 55.7 | 15.6 | 28.8 | 23.8 | 7 | 58.8 |
| $\phi 1/2$ | 3/8 | KQ2W11-03□S | 17 | 15.4 | 17 | 19.3 | 48.3 | 50.9 | 15.6 | 28.8 | 23.8 | 7 | 51.1 |
| | 1/2 | KQ2W11-04□S | 22 | 15.4 | 17 | 19.3 | 52.3 | 53.6 | 15.6 | 28.8 | 23.8 | 7 | 91.8 |
| $\phi 1/2$ | 1/4 | KQ2W13-02□S | 17 | 19.3 | 17 | 21.5 | 54.6 | 59.6 | 17 | 56.7 | 44.4 | 9 | 61 |
| | 3/8 | KQ2W13-03□S | 17 | 19.3 | 17 | 21.8 | 48.2 | 52.8 | 17 | 56.7 | 44.4 | 9.5 | 48.4 |
| $\phi 1/2$ | 1/2 | KQ2W13-04□S | 22 | 19.3 | 17 | 21.8 | 50.2 | 53.5 | 17 | 56.7 | 44.4 | 9.5 | 92.3 |



□/A: Brass, N: Brass + Electroless nickel plated

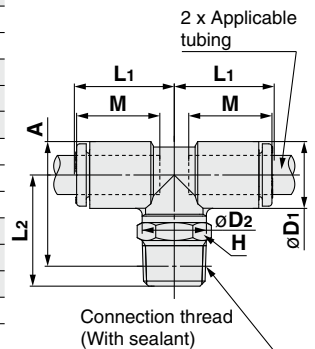
* Reference dimensions after installation of R thread

Note) ϕD_1 is maximum diameter.

Male Branch Tee: KQ2T (Sealant)



| Applicable tubing O.D. (inch) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3/16$ | 1/8 | KQ2T05-01□S | 10 | 9.1 | 10 | 15 | 16.7 | 18.1 | 13.3 | 8.4 | 7.0 | 3.5 | 5.8 |
| | 1/4 | KQ2T05-02□S | 14 | 9.1 | 10 | 15 | 22.2 | 22 | 13.3 | 8.4 | 7.0 | 3.5 | 15.3 |
| $\phi 1/4$ | 1/8 | KQ2T07-01□S | 10 | 11.1 | 10 | 15.6 | 17.7 | 20.1 | 13.3 | 14.4 | 12.4 | 4.5 | 6.5 |
| | 1/4 | KQ2T07-02□S | 14 | 11.1 | 10 | 15.6 | 23.2 | 24 | 13.3 | 14.4 | 12.4 | 4.5 | 16 |
| | 3/8 | KQ2T07-03□S | 17 | 11.1 | 10 | 15.6 | 24.5 | 24.9 | 13.3 | 14.4 | 12.4 | 4.5 | 27.7 |
| $\phi 5/16$ | 1/8 | KQ2T09-01□S | 10 | 13.2 | 10 | 16.4 | 18.7 | 22.2 | 14.2 | 14.4 | 14.4 | 4.5 | 7.9 |
| | 1/4 | KQ2T09-02□S | 14 | 13.2 | 12 | 17.2 | 25.4 | 27.3 | 14.2 | 26.3 | 18.2 | 6 | 19.4 |
| $\phi 3/8$ | 3/8 | KQ2T09-03□S | 17 | 13.2 | 12 | 17.2 | 25.5 | 27 | 14.2 | 26.3 | 18.2 | 6 | 26.5 |
| | 1/4 | KQ2T11-02□S | 17 | 15.4 | 17 | 19.3 | 28.4 | 31.4 | 15.6 | 28.8 | 23.8 | 7.5 | 23.9 |
| $\phi 1/2$ | 3/8 | KQ2T11-03□S | 17 | 15.4 | 17 | 19.3 | 29.3 | 31.9 | 15.6 | 28.8 | 23.8 | 7.5 | 24.4 |
| | 1/2 | KQ2T11-04□S | 22 | 15.4 | 17 | 19.3 | 33.3 | 34.6 | 15.6 | 28.8 | 23.8 | 7.5 | 46.9 |
| $\phi 1/2$ | 1/4 | KQ2T13-02□S | 17 | 19.3 | 17 | 21.5 | 30.3 | 35.3 | 17 | 57.3 | 50.6 | 9 | 27.9 |
| | 3/8 | KQ2T13-03□S | 17 | 19.3 | 17 | 21.8 | 28.4 | 33 | 17 | 63.8 | 50.6 | 9.5 | 27.4 |
| $\phi 1/2$ | 1/2 | KQ2T13-04□S | 22 | 19.3 | 17 | 21.8 | 30.4 | 33.7 | 17 | 63.8 | 50.6 | 9.5 | 48.8 |



□/A: Brass, N: Brass + Electroless nickel plated

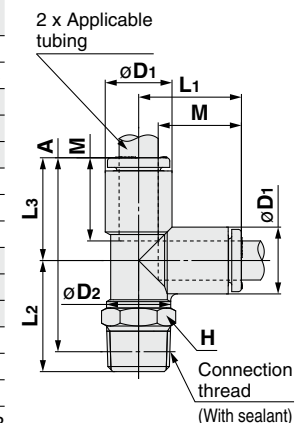
* Reference dimensions after installation of R thread

Note) ϕD_1 is maximum diameter.

Male Run Tee: KQ2Y (Sealant)



| Applicable tubing O.D. (inch) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3/16$ | 1/8 | KQ2Y05-01□S | 10 | 9.1 | 10 | 15.7 | 16.7 | 15.7 | 29.3 | 13.3 | 8.4 | 7.0 | 3.5 | 5.9 |
| | 1/4 | KQ2Y05-02□S | 14 | 9.1 | 10 | 15.7 | 22.2 | 15.7 | 33.2 | 13.3 | 8.4 | 7.0 | 3.5 | 15.4 |
| $\phi 1/4$ | 1/8 | KQ2Y07-01□S | 10 | 11.1 | 10 | 16.5 | 17.7 | 16.5 | 31.1 | 13.3 | 14.0 | 12.4 | 4.5 | 6.5 |
| | 1/4 | KQ2Y07-02□S | 14 | 11.1 | 10 | 16.5 | 23.2 | 16.5 | 35 | 13.3 | 14.0 | 12.4 | 4.5 | 16 |
| | 3/8 | KQ2Y07-03□S | 17 | 11.1 | 10 | 16.5 | 24.5 | 16.5 | 35.9 | 13.3 | 14.0 | 12.4 | 4.5 | 27.7 |
| $\phi 5/16$ | 1/8 | KQ2Y09-01□S | 10 | 13.2 | 10 | 18.2 | 18.7 | 18.2 | 33.8 | 14.2 | 14.0 | 14.0 | 4.5 | 8 |
| | 1/4 | KQ2Y09-02□S | 14 | 13.2 | 12 | 18.2 | 25.4 | 18.2 | 38.9 | 14.2 | 26.3 | 18.3 | 6 | 19.5 |
| $\phi 3/8$ | 3/8 | KQ2Y09-03□S | 17 | 13.2 | 12 | 18.2 | 25.5 | 18.2 | 38.6 | 14.2 | 26.3 | 18.3 | 6 | 26.5 |
| | 1/4 | KQ2Y11-02□S | 17 | 15.4 | 17 | 20.4 | 28.4 | 20.4 | 44.1 | 15.6 | 28.8 | 23.8 | 7.5 | 24.1 |
| $\phi 1/2$ | 3/8 | KQ2Y11-03□S | 17 | 15.4 | 17 | 20.4 | 29.3 | 20.4 | 44.6 | 15.6 | 28.8 | 23.8 | 7.5 | 24.5 |
| | 1/2 | KQ2Y11-04□S | 22 | 15.4 | 17 | 20.4 | 33.3 | 20.4 | 47.3 | 15.6 | 28.8 | 23.8 | 7.5 | 47 |
| $\phi 1/2$ | 1/4 | KQ2Y13-02□S | 17 | 19.3 | 17 | 23.4 | 30.3 | 23.4 | 49 | 17 | 57.3 | 50.6 | 9 | 28.3 |
| | 3/8 | KQ2Y13-03□S | 17 | 19.3 | 17 | 23.4 | 28.4 | 23.4 | 46.7 | 17 | 64.6 | 50.6 | 9.5 | 27.6 |
| $\phi 1/2$ | 1/2 | KQ2Y13-04□S | 22 | 19.3 | 17 | 23.4 | 30.4 | 23.4 | 47.4 | 17 | 64.6 | 50.6 | 9.5 | 49 |



□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of R thread

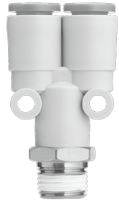
Note) ϕD_1 is maximum diameter.

Inch Size One-touch Fittings *Series KQ2*

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

Dimensions

Branch "Y": KQ2U (Sealant)

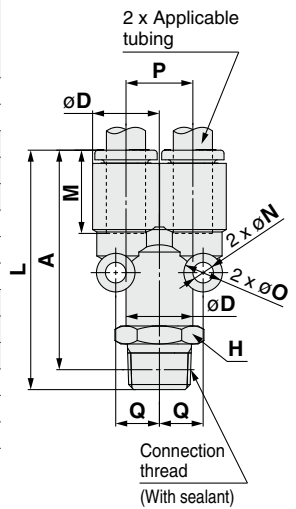


| Applicable tubing O.D. (inch) | Connection thread R | Model | H (Width across flats) | Note) ϕD | L | P | A* | M | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---------------------|-------------|------------------------|----------------|------|------|------|------|------|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3/16$ | 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 |
| $\phi 1/4$ | 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 |
| $\phi 5/16$ | 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 |
| | 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 |
| $\phi 3/8$ | 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 |
| $\phi 1/2$ | 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 |
| | 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 plated

* Reference dimensions after installation of R thread

Note) ϕD is maximum diameter.

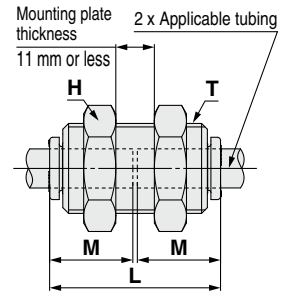


Bulkhead Union: KQ2E

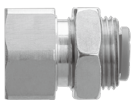


| Applicable tubing O.D. (inch) | Model | T (M) | H (Width across flats) | L | Mounting hole | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-------------|---------|------------------------|------|---------------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | Nylon | Urethane | | |
| $\phi 3/16$ | KQ2E05-00M□ | M14 x 1 | 17 | 27.3 | 15 | 13.3 | 7.8 | 6.5 | 3.5 | 30.5 |
| $\phi 1/4$ | KQ2E07-00M□ | M14 x 1 | 17 | 27.3 | 15 | 13.3 | 13.5 | 11.5 | 4.6 | 27.2 |
| $\phi 5/16$ | KQ2E09-00M□ | M16 x 1 | 19 | 29.1 | 17 | 14.2 | 26.1 | 18 | 6 | 34 |
| $\phi 3/8$ | KQ2E11-00M□ | M20 x 1 | 24 | 31.9 | 21 | 15.6 | 35.3 | 29.1 | 7 | 66.1 |
| $\phi 1/2$ | KQ2E13-00M□ | M22 x 1 | 27 | 34.7 | 23 | 17 | 66.0 | 51.7 | 9.6 | 59.9 |

□/A: Brass, N: Brass + Electroless nickel plated

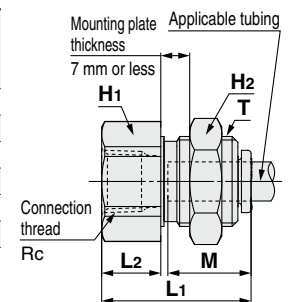


Bulkhead Connector: KQ2E



| Applicable tubing O.D. (inch) | Connection thread Rc | Model | T (M) | 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) |
|-------------------------------|----------------------|------------|---------|-------------------------------------|-------------------------------------|----------------|----------------|---------------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3/16$ | 1/8 | KQ2E05-01□ | M14 x 1 | 17 | 17 | 23.9 | 9.5 | 15 | 13.3 | 7.8 | 6.5 | 3.5 | 30.8 |
| $\phi 1/4$ | 1/4 | KQ2E07-02□ | M14 x 1 | 17 | 17 | 28.4 | 14 | 15 | 13.3 | 13.5 | 11.5 | 4.6 | 32 |
| $\phi 5/16$ | 3/8 | KQ2E09-03□ | M16 x 1 | 19 | 19 | 31.7 | 14.3 | 17 | 14.2 | 26.1 | 18 | 6 | 59.2 |
| $\phi 3/8$ | 3/8 | KQ2E11-03□ | M20 x 1 | 22 | 24 | 31.5 | 12.1 | 21 | 15.6 | 35.3 | 29.1 | 7 | 62.7 |
| $\phi 1/2$ | 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 plated



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

Series KQ2

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 <small>Note)</small> | Body color: Black Release button color: Orange |

Note) The following models are not available as made-to-order: Bulkhead union/KQ2E, Bulkhead connector/KQ2E, Male connector/KQ2H

2 Clean Series

Please consult with SMC separately for applicable models.

| Symbol | Specifications |
|------------|---|
| 10- | Brass parts: With electroless nickel plated Lubricant: Fluorine grease Air blow in a clean room Double package Resin body/Release button color: White |

Example) **10-KQ2H07-02NS**

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 |
| | KQ10-P01A | KQ2E11-00MA, KQ2E11-03A |
| | KQ12-P01A | KQ2E13-00MA KQ2E13-03A, KQ2E13-04A |

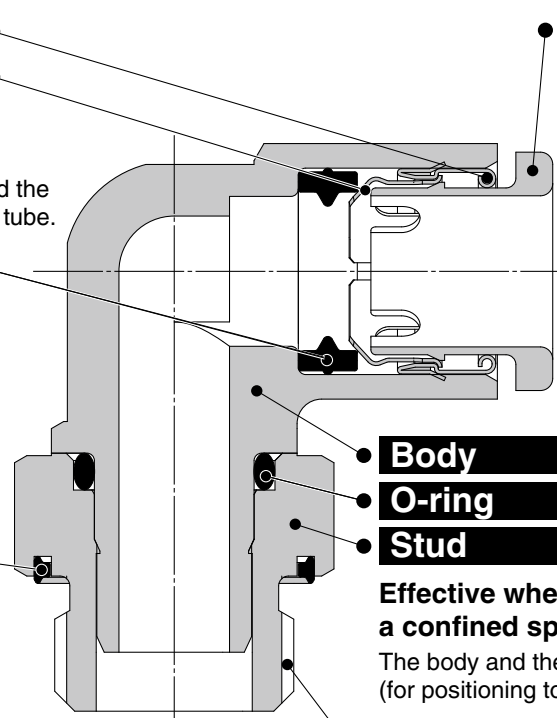
Brass + Electroless nickel plated

| Description | Part no. | Applicable model |
|-------------|------------------|--|
| Pipe nut | KQ06-P01N | KQ2E05-00MN, KQ2E07-00MN KQ2E05-01N, KQ2E07-02N |
| | KQ08-P01N | KQ2E09-00MN, KQ2E09-03N |
| | KQ10-P01N | KQ2E11-00MN, KQ2E11-03N |
| | KQ12-P01N | KQ2E13-00MN KQ2E13-03N, KQ2E13-04N |

Metric Size One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: G

Series KQ2



Guide

Chuck
Suitable for use with nylon and urethane. Large retaining force.
The chuck provides secure retention and the collet increases the holding force on the tube.

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

Face seal method

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

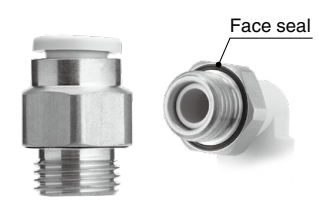
Release button
Requires little force for removal.
Releases the chuck collet to remove the tube as well as to prevent the chuck from biting too deeply into the tubing.

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).

New thread for piping that drastically reduced the screw-in time thanks to 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 (Note 1) |
| Operating pressure range (Note 2) | | -100 kPa to 1 MPa |
| Proof pressure (at 23°C) | | 3 MPa |
| Ambient and fluid temperature | | -5 to 60°C, Water: 0 to 40°C (No freezing) |
| Thread | Mounting section | ISO 16030 (Parallel pipe thread) |
| | Nut section | JIS B0205 (Metric fine thread) |
| Sealant on the threads | | Seal ring |

Note 1) The surge pressure must be under the maximum operating pressure.

Note 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

| 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 |

• Model

• Thread material/Surface treatment

| Symbol | Thread material/Surface treatment |
|----------|-----------------------------------|
| A | Brass |
| N | Brass + Electroless nickel plated |

• 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

Sealant/Gasket Seal
Inch Size UNF, NPT

Sealant/Gasket Seal
Inch Size M, R, Rc

Sealant/Gasket Seal
Metric Size G

Face Seal
Metric Size R, Rc

Face Seal
Inch Size NPT

Face Seal
Inch Size R

Gasket Seal
Metric Size Uni

Gasket Seal
Inch Size Uni

Metric Size One-touch Fittings

Variations

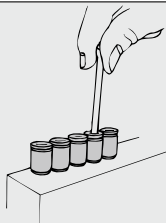
Hexagon socket head male connector

KQ2S

P.68



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



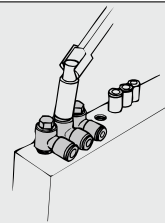
Universal male elbow

KQ2V

P.69



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



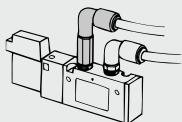
Extended male elbow

KQ2W

P.70



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.



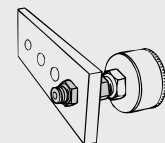
Bulkhead connector

KQ2E

P.71



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



Male connector

KQ2H

P.68



Use to pipe a female thread. Most general model.

Male elbow

KQ2L

P.69



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

Male run tee

KQ2Y

P.71



Use to branch a female thread at a 90° angle.

Female connector

KQ2F

P.68



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

Male branch tee

KQ2T

P.70



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

Metric Size One-touch Fittings *Series KQ2*

Applicable Tubing: Metric Size, Connection Thread: G

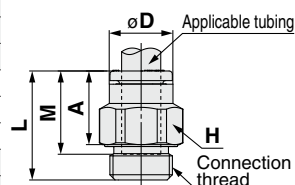
Dimensions

Male Connector: KQ2H (Face seal)



| Applicable tubing O.D. (mm) | Connection thread G | Model | H (Width across flats) | øD | L | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2H04-G01□ | 12 | 7.7 | 17.1 | 11.6 | 13.3 | 5.6 | 4 | 3 | 7.7 |
| | 1/4 | KQ2H04-G02□ | 17 | 7.7 | 15.4 | 8.9 | 13.3 | 5.6 | 4 | 3 | 16.8 |
| ø6 | 1/8 | KQ2H06-G01□ | 12 | 9.7 | 17.3 | 11.8 | 13.3 | 13.1 | 10.4 | 4.5 | 6.6 |
| | 1/4 | KQ2H06-G02□ | 17 | 9.7 | 15.4 | 8.9 | 13.3 | 13.1 | 10.4 | 4.5 | 14.8 |
| ø6 | 3/8 | KQ2H06-G03□ | 21 | 9.7 | 16.4 | 8.9 | 13.3 | 13.1 | 10.4 | 4.5 | 27.1 |
| | 1/8 | KQ2H08-G01□ | 14 | 13 | 21.4 | 15.9 | 14.2 | 26.1 | 18 | 6 | 7.5 |
| ø8 | 1/4 | KQ2H08-G02□ | 17 | 13 | 19.9 | 13.4 | 14.2 | 26.1 | 18 | 6 | 15.5 |
| | 3/8 | KQ2H08-G03□ | 21 | 13 | 16.4 | 8.9 | 14.2 | 26.1 | 18 | 6 | 23.8 |
| ø10 | 1/8 | KQ2H10-G01□ | 17 | 15.6 | 23.2 | 17.7 | 15.6 | 26.1 | 26.1 | 6 | 15.7 |
| | 1/4 | KQ2H10-G02□ | 17 | 15.6 | 22.8 | 16.3 | 15.6 | 41.5 | 29.5 | 7.5 | 16.8 |
| | 3/8 | KQ2H10-G03□ | 21 | 15.6 | 21.8 | 14.3 | 15.6 | 41.5 | 29.5 | 7.5 | 26.1 |
| ø10 | 1/2 | KQ2H10-G04□ | 27 | 15.6 | 17.9 | 8.9 | 15.6 | 41.5 | 29.5 | 7.5 | 39.9 |
| | 1/4 | KQ2H12-G02□ | 19 | 18.2 | 25.3 | 18.8 | 17 | 58.3 | 46.1 | 9 | 15.1 |
| ø12 | 3/8 | KQ2H12-G03□ | 21 | 18.2 | 23.6 | 16.1 | 17 | 58.3 | 46.1 | 9 | 25.6 |
| | 1/2 | KQ2H12-G04□ | 27 | 18.2 | 24.8 | 15.8 | 17 | 58.3 | 46.1 | 9 | 46.9 |
| ø16 | 3/8 | KQ2H16-G03□ | 27 | 23.6 | 30.5 | 23 | 20.6 | 81 | 67 | 11 | 47.1 |
| | 1/2 | KQ2H16-G04□ | 27 | 23.6 | 29.7 | 20.7 | 20.6 | 113 | 67 | 13 | 48.8 |

□/A: Brass, N: Brass + Electroless nickel plated



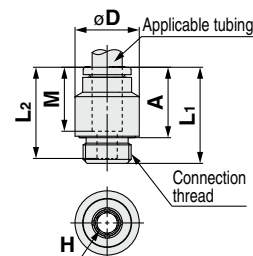
Hexagon Socket Head Male Connector: KQ2S (Face seal)



| Applicable tubing O.D. (mm) | Connection thread G | Model | H (Width across flats) | Note) øD | L1 | L2 | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|----------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2S04-G01□ | 3 | 13 | 20.6 | 19.6 | 15.1 | 13.3 | 4.1 | 3.6 | 3.1 | 11.6 |
| ø6 | 1/8 | KQ2S06-G01□ | 4 | 13 | 19.8 | 18.8 | 14.3 | 13.3 | 10 | 9.9 | 4.1 | 9.7 |
| | 1/4 | KQ2S06-G02□ | 4 | 18 | 19.8 | 18.8 | 13.3 | 13.3 | 10.7 | 10 | 4.1 | 18 |
| ø8 | 1/8 | KQ2S08-G01□ | 5 | 13 | 21.7 | 19.7 | 16.2 | 14.2 | 17.2 | 16.2 | 5.1 | 9.5 |
| | 1/4 | KQ2S08-G02□ | 6 | 18 | 20.5 | 19.5 | 14 | 14.2 | 23.3 | 16.2 | 6.1 | 17.2 |
| ø8 | 3/8 | KQ2S08-G03□ | 6 | 22 | 20.7 | 19.7 | 13.2 | 14.2 | 23.3 | 16.2 | 6.1 | 27.1 |
| | 1/8 | KQ2S10-G01□ | 5 | 15.6 | 23 | 21.1 | 17.5 | 15.6 | 17.2 | 16.2 | 5.1 | 10.9 |
| ø10 | 1/4 | KQ2S10-G02□ | 8 | 18 | 24.1 | 20.1 | 17.6 | 15.6 | 39 | 26.6 | 8.1 | 19.2 |
| | 3/8 | KQ2S10-G03□ | 8 | 22 | 21.4 | 20.1 | 13.9 | 15.6 | 39 | 26.6 | 8.1 | 25 |
| ø10 | 1/2 | KQ2S10-G04□ | 8 | 26 | 21.1 | 20.1 | 12.1 | 15.6 | 39 | 26.6 | 8.1 | 34.1 |
| | 1/4 | KQ2S12-G02□ | 8 | 18.2 | 25.6 | 21.5 | 19.1 | 17 | 46 | 44.5 | 8.1 | 18.3 |
| ø12 | 3/8 | KQ2S12-G03□ | 10 | 22 | 23.8 | 21.8 | 16.3 | 17 | 60 | 44.5 | 10.1 | 25.7 |
| | 1/2 | KQ2S12-G04□ | 10 | 26 | 22.8 | 21.8 | 13.8 | 17 | 60 | 44.5 | 10.1 | 35.6 |
| ø16 | 3/8 | KQ2S16-G03□ | 10 | 23.6 | 30.8 | 25.4 | 23.3 | 20.6 | 81 | 67 | 10.1 | 29.2 |
| | 1/2 | KQ2S16-G04□ | 12 | 26 | 30.3 | 26.1 | 21.3 | 20.6 | 113 | 67 | 12.1 | 45.8 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) øD is maximum diameter.



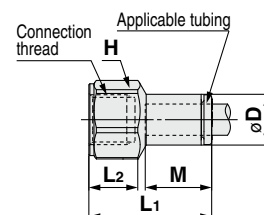
Female Connector: KQ2F



| Applicable tubing O.D. (mm) | Connection thread G | Model | H (Width across flats) | Note) øD | L1 | L2 | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|----------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2F04-G01□ | 14 | 7.9 | 24.7 | 9.5 | 13.3 | 5.6 | 4 | 3 | 12.4 |
| | 1/4 | KQ2F04-G02□ | 17 | 7.9 | 30.1 | 13.9 | 13.3 | 5.6 | 4 | 3 | 21.3 |
| ø6 | 1/8 | KQ2F06-G01□ | 14 | 9.9 | 24.3 | 9.5 | 13.3 | 13.1 | 10.4 | 4.5 | 12.6 |
| | 1/4 | KQ2F06-G02□ | 17 | 9.9 | 29.6 | 13.9 | 13.3 | 13.1 | 10.4 | 4.5 | 21.4 |
| ø6 | 3/8 | KQ2F06-G03□ | 21 | 9.9 | 31.1 | 13.7 | 13.3 | 13.1 | 10.4 | 4.5 | 29.6 |
| | 1/8 | KQ2F08-G01□ | 14 | 13 | 24.7 | 9.5 | 14.2 | 26.1 | 18 | 6 | 15.1 |
| ø8 | 1/4 | KQ2F08-G02□ | 17 | 13 | 30.1 | 13.9 | 14.2 | 26.1 | 18 | 6 | 24 |
| | 3/8 | KQ2F08-G03□ | 21 | 13 | 31.6 | 13.7 | 14.2 | 26.1 | 18 | 6 | 32.3 |
| ø10 | 1/4 | KQ2F10-G02□ | 17 | 15.6 | 31.1 | 13.9 | 15.6 | 41.5 | 29.5 | 7.5 | 24.1 |
| | 3/8 | KQ2F10-G03□ | 21 | 15.6 | 32.6 | 13.7 | 15.6 | 41.5 | 29.5 | 7.5 | 32.6 |
| ø12 | 1/4 | KQ2F12-G02□ | 19 | 18.2 | 32 | 13.8 | 17 | 58.3 | 46.1 | 9 | 33 |
| | 3/8 | KQ2F12-G03□ | 21 | 18.2 | 33.5 | 13.7 | 17 | 58.3 | 46.1 | 9 | 34.1 |
| ø12 | 1/2 | KQ2F12-G04□ | 27 | 18.2 | 38.6 | 16.9 | 17 | 58.3 | 46.1 | 9 | 64.9 |
| | 3/8 | KQ2F16-G03□ | 24 | 23.6 | 36 | 14.4 | 20.6 | 81 | 67 | 13 | 55.7 |
| ø16 | 1/2 | KQ2F16-G04□ | 27 | 23.6 | 41.1 | 16.9 | 20.6 | 113 | 67 | 13 | 71.7 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) øD is maximum diameter.



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
Metric Size NPT
Inch Size NPT
Inch Size R
Metric Size Uni
Gasket Seal
Metric Size Uni
Inch Size Uni

Series KQ2

Applicable Tubing: Metric Size, Connection Thread: G

Dimensions

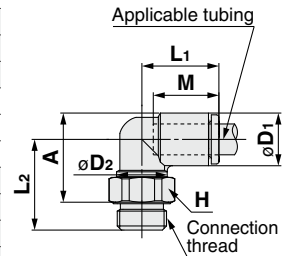
Male Elbow: KQ2L (Face seal)



| Applicable tubing O.D. (mm) | Connection thread G | Model | H (Width across flats) | Note) $\phi D1$ | $\phi D2$ | L1 | L2 | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|------------|------------------------|-----------------|-----------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 1/8 | KQ2L04-G01 | 12 | 8.2 | 10 | 14.8 | 16.8 | 15.4 | 13.3 | 4.2 | 4.2 | 3 | 6.3 |
| | 1/4 | KQ2L04-G02 | 17 | 8.2 | 10 | 14.8 | 20.3 | 17.9 | 13.3 | 4.2 | 4.2 | 3 | 16.7 |
| $\phi 6$ | 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 |
| $\phi 8$ | 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 |
| $\phi 10$ | 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 |
| $\phi 12$ | 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 |
| $\phi 16$ | 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 plated

Note) $\phi D1$ is maximum diameter.



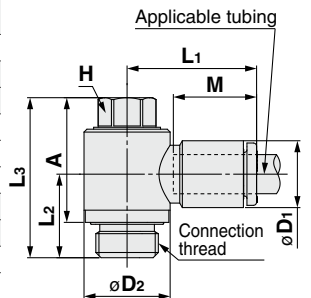
Universal Male Elbow: KQ2V (Face seal)



| Applicable tubing O.D. (mm) | Connection thread G | Model | H (Width across flats) | Note) $\phi D1$ | $\phi D2$ | L1 | L2 | L3 | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|------------|------------------------|-----------------|-----------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 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 |
| $\phi 6$ | 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 |
| | 1/4 | KQ2V06-G02 | 10 | 10.4 | 15.3 | 19.9 | 15 | 27.6 | 21.1 | 13.3 | 7.5 | 5.9 | 4.5 | 22.7 |
| $\phi 8$ | 1/8 | KQ2V08-G01 | 12 | 13.2 | 17.6 | 23.5 | 15 | 27.5 | 22 | 14.2 | 16 | 11.2 | 5 | 24.5 |
| | 1/4 | KQ2V08-G02 | 12 | 13.2 | 17.6 | 23.5 | 15.6 | 28.1 | 21.6 | 14.2 | 16 | 11.2 | 6 | 26.8 |
| | 3/8 | KQ2V08-G03 | 14 | 13.2 | 20.6 | 23.1 | 17.3 | 33.1 | 25.6 | 14.2 | 16 | 11.2 | 7.5 | 42.1 |
| $\phi 10$ | 1/4 | KQ2V10-G02 | 14 | 15.9 | 20.6 | 25.9 | 17.9 | 32.9 | 26.4 | 15.6 | 27 | 20.3 | 7.5 | 37.5 |
| | 3/8 | KQ2V10-G03 | 14 | 15.9 | 20.6 | 25.9 | 18.1 | 33.1 | 25.6 | 15.6 | 27 | 20.3 | 7.5 | 43.4 |
| $\phi 12$ | 3/8 | KQ2V12-G03 | 17 | 18.5 | 25.2 | 28.5 | 20.5 | 36.7 | 29.2 | 17 | 39 | 30.8 | 9 | 60.5 |
| | 1/2 | KQ2V12-G04 | 17 | 18.5 | 25.2 | 28.5 | 21.1 | 37.3 | 28.3 | 17 | 39 | 30.8 | 9 | 71 |
| $\phi 16$ | 3/8 | KQ2V16-G03 | 21 | 23.8 | 32.3 | 34.2 | 24.2 | 44.5 | 37 | 20.6 | 55 | 46 | 11 | 101.7 |
| | 1/2 | KQ2V16-G04 | 21 | 23.8 | 32.3 | 34.2 | 26.2 | 46.5 | 37.5 | 20.6 | 78 | 46 | 13 | 106.6 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of G thread
Note) $\phi D1$ is maximum diameter.



Metric Size One-touch Fittings *Series KQ2*

Applicable Tubing: Metric Size, Connection Thread: G

Dimensions

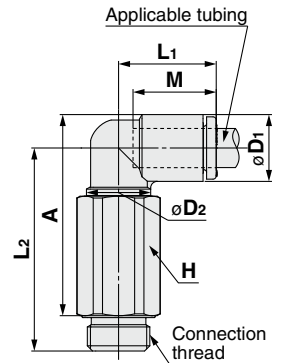
Extended Male Elbow: KQ2W (Face seal)



| Applicable tubing O.D. (mm) | Connection thread G | Model | H (Width across flats) | Note) $\phi D1$ | $\phi D2$ | L1 | L2 | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|------------|------------------------|-----------------|-----------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 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 |
| $\phi 6$ | 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 |
| | 3/8 | KQ2W06-G03 | 21 | 10.4 | 10 | 15.5 | 33.3 | 31 | 13.3 | 10.9 | 8.6 | 4.5 | 59.4 |
| $\phi 8$ | 1/8 | KQ2W08-G01 | 12 | 13.2 | 10 | 16.4 | 33 | 34.1 | 14.2 | 10.9 | 10.9 | 4.5 | 17.8 |
| | 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 |
| $\phi 10$ | 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 |
| | 1/2 | KQ2W10-G04 | 27 | 15.9 | 17 | 19.3 | 48.1 | 47.1 | 15.6 | 33.5 | 23.8 | 7.5 | 120.2 |
| $\phi 12$ | 1/4 | KQ2W12-G02 | 17 | 18.5 | 17 | 21.5 | 50.1 | 52.9 | 17 | 47.7 | 37.7 | 9 | 46.9 |
| | 3/8 | KQ2W12-G03 | 21 | 18.5 | 17 | 21.5 | 47.9 | 49.7 | 17 | 47.7 | 37.7 | 9 | 64.5 |
| $\phi 16$ | 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 plated

Note) $\phi D1$ is maximum diameter.



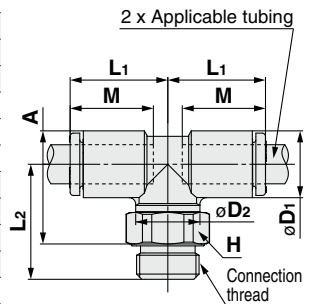
Male Branch Tee: KQ2T (Face seal)



| Applicable tubing O.D. (mm) | Connection thread G | Model | H (Width across flats) | Note) $\phi D1$ | $\phi D2$ | L1 | L2 | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|------------|------------------------|-----------------|-----------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 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 |
| $\phi 6$ | 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 |
| | 3/8 | KQ2T06-G03 | 21 | 10.4 | 10 | 15.5 | 22.4 | 20.1 | 13.3 | 13.9 | 11 | 4.5 | 29.8 |
| $\phi 8$ | 1/8 | KQ2T08-G01 | 12 | 13.2 | 10 | 16.4 | 19.3 | 20.4 | 14.2 | 14 | 14 | 4.5 | 9.4 |
| | 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 |
| $\phi 10$ | 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 |
| | 3/8 | KQ2T10-G03 | 21 | 15.9 | 17 | 19.3 | 27.6 | 28.1 | 15.6 | 35.2 | 25 | 7.5 | 25.3 |
| $\phi 12$ | 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 |
| $\phi 16$ | 3/8 | KQ2T16-G03 | 21 | 23.8 | 21 | 27.1 | 33.1 | 37.5 | 20.6 | 71 | 58.9 | 11 | 42.1 |
| | 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 plated

Note) $\phi D1$ 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

Series KQ2

Applicable Tubing: Metric Size, Connection Thread: G

Dimensions

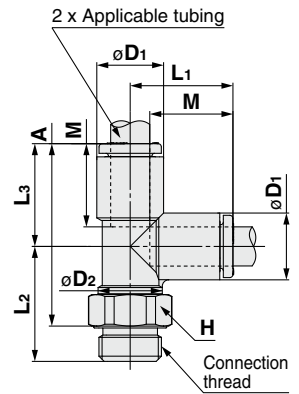
Male Run Tee: KQ2Y (Face seal)



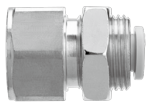
| Applicable tubing O.D. (mm) | Connection thread G | Model | H (Width across flats) | Note) $\phi D1$ | $\phi D2$ | L1 | L2 | L3 | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|-----------------|-----------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 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 |
| $\phi 6$ | 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 |
| | 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 |
| $\phi 8$ | 1/8 | KQ2Y08-G01□ | 12 | 13.2 | 10 | 18.2 | 19.3 | 18.2 | 32 | 14.2 | 13.4 | 13.4 | 4.5 | 9.5 |
| | 1/4 | KQ2Y08-G02□ | 17 | 13.2 | 12 | 18.2 | 22.8 | 18.2 | 34.5 | 14.2 | 25.6 | 17.7 | 6 | 17.7 |
| | 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 |
| $\phi 10$ | 1/8 | KQ2Y10-G01□ | 12 | 15.9 | 12 | 20.6 | 22.5 | 20.6 | 37.5 | 15.6 | 40 | 28.4 | 6 | 13.2 |
| | 1/4 | KQ2Y10-G02□ | 17 | 15.9 | 17 | 20.6 | 24.6 | 20.6 | 38.6 | 15.6 | 40 | 28.4 | 7.5 | 20.3 |
| | 3/8 | KQ2Y10-G03□ | 21 | 15.9 | 17 | 20.6 | 27.7 | 20.6 | 40.7 | 15.6 | 40 | 28.4 | 7.5 | 25.4 |
| $\phi 12$ | 1/2 | KQ2Y10-G04□ | 27 | 15.9 | 17 | 20.6 | 29.2 | 20.6 | 40.7 | 15.6 | 40 | 28.4 | 7.5 | 45.3 |
| | 1/4 | KQ2Y12-G02□ | 17 | 18.5 | 17 | 23 | 25.9 | 23 | 42.3 | 17 | 57.4 | 45.4 | 9 | 23.4 |
| | 3/8 | KQ2Y12-G03□ | 21 | 18.5 | 17 | 23 | 29 | 23 | 44.4 | 17 | 57.4 | 45.4 | 9 | 28.6 |
| $\phi 16$ | 1/2 | KQ2Y12-G04□ | 27 | 18.5 | 17 | 23 | 30.4 | 23 | 44.4 | 17 | 57.4 | 45.4 | 9 | 48.5 |
| | 3/8 | KQ2Y16-G03□ | 21 | 23.8 | 21 | 28.6 | 33.1 | 28.6 | 54.2 | 20.6 | 81 | 60 | 11 | 42.7 |
| | 1/2 | KQ2Y16-G04□ | 27 | 23.8 | 21 | 28.6 | 33.8 | 28.6 | 53.4 | 20.6 | 113 | 60 | 13 | 66.2 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) $\phi D1$ is maximum diameter.

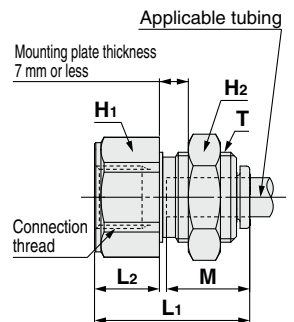


Bulkhead Connector: KQ2E



| 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 | | |
| $\phi 4$ | 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 |
| $\phi 6$ | 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 |
| | 3/8 | KQ2E06-G03□ | M14 x 1 | 21 | 17 | 32 | 17.6 | 15 | 13.3 | 13.1 | 10.4 | 4.5 | 45.5 |
| $\phi 8$ | 1/8 | KQ2E08-G01□ | M16 x 1 | 17 | 19 | 24.7 | 7.3 | 17 | 14.2 | 26.1 | 18 | 6 | 30.9 |
| | 1/4 | KQ2E08-G02□ | M16 x 1 | 17 | 19 | 30 | 12.6 | 17 | 14.2 | 26.1 | 18 | 6 | 33.5 |
| | 3/8 | KQ2E08-G03□ | M16 x 1 | 21 | 19 | 33.1 | 15.7 | 17 | 14.2 | 26.1 | 18 | 6 | 46.1 |
| $\phi 10$ | 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 |
| $\phi 12$ | 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 |
| $\phi 16$ | 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 plated



Series KQ2 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-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 plated

| 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 |
| Face Seal | Metric Size R, Rc |
| | Inch Size R |
| Gasket Seal | Metric Size G |
| | Inch Size Uni |

Metric Size One-touch Fittings

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

Series KQ2

Guide
Chuck
Suitable for use with nylon and urethane. Large retaining force.
The chuck provides secure retention and the collet increases the holding force on the tube.

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

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 -100 kPa

New thread for piping that drastically reduced the screw-in time thanks to 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 ^{Note 1)} |
| Operating pressure range ^{Note 2)} | | -100 kPa to 1 MPa |
| Proof pressure (at 23°C) | | 3 MPa |
| Ambient and fluid temperature | | -5 to 60°C, Water: 0 to 40°C (No freezing) |
| Thread | Mounting section | JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread) |
| | Nut section | JIS B0205 (Metric fine thread) |
| Sealant on the threads | | Seal ring |

Note 1) The surge pressure must be under the maximum operating pressure.

Note 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, 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 | Male branch connector |
| 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 plated |

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 |
| | 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 |

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

Metric Size One-touch Fittings

Variations

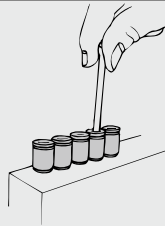
Hexagon socket head male connector

KQ2S

P.76



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



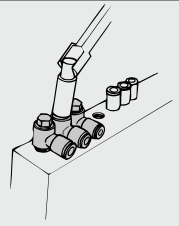
Universal male elbow

KQ2V

P.78



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



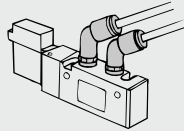
45° male elbow

KQ2K

P.78



Use to pipe a female thread at a 45° angle. The model between the male connector and male elbow.



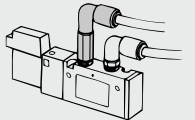
Extended male elbow

KQ2W

P.81



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.



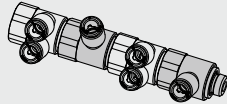
Universal female elbow

KQ2VF

P.79



Use to branch a male or female thread at a 90° angle. Multiple connections possible.



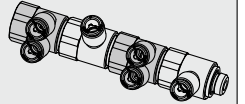
Branch universal female elbow

KQ2ZF

P.80



Use to two-branch a male or female thread at a 90° angle. Multiple connections possible.



Male connector

KQ2H

P.76



Use to pipe a female thread. Most general model.

Double universal male elbow

KQ2VD

P.79



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

Male elbow

KQ2L

P.77



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

Triple universal male elbow

KQ2VT

P.79



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

Male branch tee

KQ2T

P.82



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

Branch universal male elbow

KQ2Z

P.80



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

Hexagon socket head universal male elbow

KQ2VS

P.78



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

Double branch universal male elbow

KQ2ZD

P.80



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

Male branch connector

KQ2LU

P.77



Use to branch a female thread at right angles.

Male run tee

KQ2Y

P.82



Use to branch a female thread at a 90° angle.

Adapter

KQ2N

P.84



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

Metric Size One-touch Fittings *Series KQ2*

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

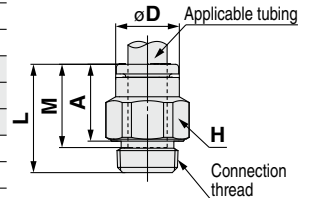
Dimensions

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 | 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 | 5.6 | 4 | 3 | 6.9 |
| | 1/4 | KQ2H04-02□P | 17 | 7.7 | 15 | 7.4 | 13.3 | 5.6 | 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 |
| ø10 | 3/8 | KQ2H08-03□P | 21 | 13 | 15.2 | 7.6 | 14.2 | 26.1 | 18 | 6 | 19.6 |
| | 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 |
| ø12 | 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 |
| | 1/4 | KQ2H12-02□P | 19 | 18.2 | 26.6 | 19 | 17 | 58.3 | 46.1 | 9 | 22 |
| ø16 | 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 |
| | ^{New} 1/4 | KQ2H16-02□P | 24 | 23.6 | 30.6 | 23 | 20.6 | 58.3 | 46.1 | 9 | 42.5 |
| ø16 | 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 plated



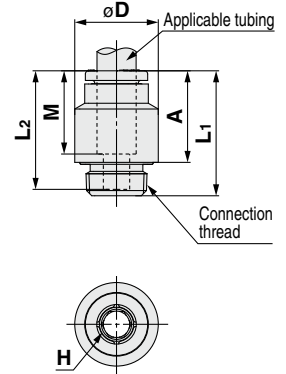
Hexagon Socket Head Male Connector: KQ2S (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) 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 |
| ø12 | 1/2 | KQ2S10-04□P | 8 | 26 | 21.1 | 20.1 | 10.7 | 15.6 | 39 | 26.6 | 8.1 | 40.6 |
| | 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 |
| ø16 | 1/2 | KQ2S12-04□P | 10 | 26 | 25.2 | 21.8 | 14.8 | 17 | 60 | 44.5 | 10.1 | 40.7 |
| | ^{New} 1/4 | KQ2S16-02□P | 8 | 23.6 | 30.6 | 25.1 | 23 | 20.6 | 44 | 44 | 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 |
| ø16 | 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 plated

Note) øD is maximum diameter.



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

Series KQ2

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

Dimensions

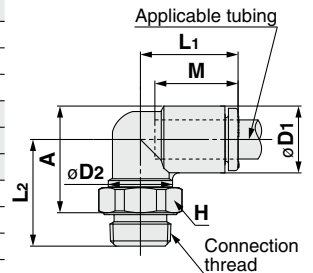
Male Elbow: KQ2L (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) $\phi D1$ | $\phi D2$ | L1 | L2 | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|-----------------|-----------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3.2$ | 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 |
| $\phi 4$ | 1/8 | KQ2L04-01□P | 12 | 8.2 | 10 | 14.8 | 15.5 | 14.4 | 13.3 | 4.2 | 4.2 | 3 | 5.2 |
| | 1/4 | KQ2L04-02□P | 17 | 8.2 | 10 | 14.8 | 19.9 | 16.4 | 13.3 | 4.2 | 4.2 | 3 | 14.5 |
| $\phi 6$ | 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 |
| | 3/8 | KQ2L06-03□P | 21 | 10.4 | 10 | 15.5 | 23 | 20.6 | 13.3 | 11.4 | 9 | 4.5 | 30.2 |
| $\phi 8$ | 1/8 | KQ2L08-01□P | 12 | 13.2 | 10 | 16.4 | 18 | 19.4 | 14.2 | 11.4 | 11.4 | 4.5 | 6.5 |
| | 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 |
| $\phi 10$ | 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 |
| | 1/2 | KQ2L10-04□P | 27 | 15.9 | 17 | 19.3 | 30.6 | 28.1 | 15.6 | 35.2 | 25 | 7.5 | 45.1 |
| $\phi 12$ | 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 |
| | 1/2 | KQ2L12-04□P | 27 | 18.5 | 17 | 21.5 | 31.9 | 30.7 | 17 | 50.2 | 39.7 | 9 | 47 |
| $\phi 16$ | ^{New} 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 |
| | 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 plated

Note) $\phi D1$ is maximum diameter.



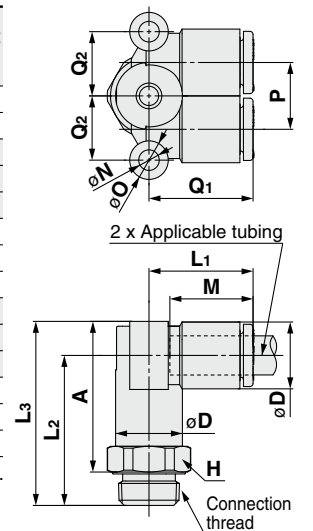
Male Branch Connector: KQ2LU (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD | L1 | L2 | L3 | A | M | P | O | N | Q1 | Q2 | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|--------------|------------------------|----------------|------|------|------|------|------|------|---|-----|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 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 |
| $\phi 6$ | 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 |
| $\phi 8$ | 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 |
| | 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 |
| $\phi 10$ | 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 |
| | 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 |
| $\phi 12$ | 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 plated

Note) ϕD is maximum diameter.



Metric Size One-touch Fittings *Series KQ2*

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

Dimensions

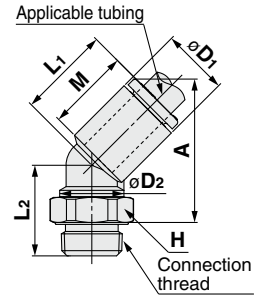
45° Male Elbow: KQ2K (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2K04-01□P | 12 | 8.2 | 10 | 14.4 | 12 | 19.5 | 13.3 | 3.4 | 3.4 | 3 | 5.1 |
| | 1/4 | KQ2K04-02□P | 17 | 8.2 | 10 | 14.4 | 15.4 | 20.5 | 13.3 | 3.4 | 3.4 | 3 | 14.3 |
| ø6 | 1/8 | KQ2K06-01□P | 12 | 10.4 | 10 | 14.7 | 14.1 | 22.5 | 13.3 | 8.7 | 6.9 | 4.5 | 5.5 |
| | 1/4 | KQ2K06-02□P | 17 | 10.4 | 10 | 14.7 | 17.5 | 23.5 | 13.3 | 8.7 | 6.9 | 4.5 | 14.7 |
| | 3/8 | KQ2K06-03□P | 21 | 10.4 | 10 | 14.7 | 19.5 | 25.5 | 13.3 | 8.7 | 6.9 | 4.5 | 29.9 |
| ø8 | 1/8 | KQ2K08-01□P | 12 | 13.2 | 10 | 16 | 15 | 25.2 | 14.2 | 8.7 | 8.7 | 4.5 | 6.4 |
| | 1/4 | KQ2K08-02□P | 17 | 13.2 | 12 | 16 | 19.4 | 27.2 | 14.2 | 19.7 | 19.7 | 6 | 13.5 |
| | 3/8 | KQ2K08-03□P | 21 | 13.2 | 12 | 16 | 21.4 | 29.2 | 14.2 | 19.7 | 19.7 | 6 | 28.5 |
| ø10 | 1/8 | KQ2K10-01□P | 12 | 15.9 | 12 | 18.2 | 20.1 | 32.7 | 15.6 | 30.9 | 23.2 | 6 | 10.1 |
| | 1/4 | KQ2K10-02□P | 17 | 15.9 | 17 | 17.6 | 26.1 | 35.9 | 15.6 | 30.9 | 23.2 | 7.5 | 18 |
| | 3/8 | KQ2K10-03□P | 21 | 15.9 | 17 | 17.6 | 20.5 | 30.3 | 15.6 | 30.9 | 23.2 | 7.5 | 17.3 |
| ø12 | 1/2 | KQ2K10-04□P | 27 | 15.9 | 17 | 17.6 | 25.3 | 32.3 | 15.6 | 30.9 | 23.2 | 7.5 | 44.6 |
| | 1/4 | KQ2K12-02□P | 17 | 18.5 | 17 | 19.4 | 26 | 37.9 | 17 | 44.5 | 35.1 | 9 | 19.5 |
| | 3/8 | KQ2K12-03□P | 21 | 18.5 | 17 | 19.4 | 20.4 | 32.3 | 17 | 44.5 | 35.1 | 9 | 18.8 |
| ø16 | 1/2 | KQ2K12-04□P | 27 | 18.5 | 17 | 19.4 | 25.2 | 34.3 | 17 | 44.5 | 35.1 | 9 | 46.1 |
| | ^{New} 1/4 | KQ2K16-02□P | 17 | 23.8 | 17 | 24.3 | 26.6 | 43.3 | 20.6 | 44.5 | 44.5 | 9 | 23.9 |
| | 3/8 | KQ2K16-03□P | 21 | 23.8 | 21 | 23.8 | 28.7 | 45 | 20.6 | 65.8 | 58 | 11 | 32.2 |
| | 1/2 | KQ2K16-04□P | 27 | 23.8 | 21 | 23.8 | 30.7 | 44.2 | 20.6 | 91.9 | 58 | 13 | 58.3 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



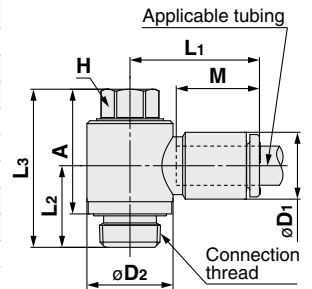
Universal Male Elbow: KQ2V (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2V04-01□P | 8 | 8.2 | 13.4 | 19.3 | 12.7 | 24.6 | 19.4 | 13.3 | 2.9 | 2.9 | 3 | 12.6 |
| ø6 | 1/8 | KQ2V06-01□P | 8 | 10.4 | 13.4 | 20.5 | 12.7 | 24.6 | 19.4 | 13.3 | 7.5 | 5.9 | 4.5 | 12.9 |
| | 1/4 | KQ2V06-02□P | 10 | 10.4 | 15.3 | 19.9 | 16.1 | 28.7 | 21.1 | 13.3 | 7.5 | 5.9 | 4.5 | 23.2 |
| ø8 | 1/8 | KQ2V08-01□P | 12 | 13.2 | 17.6 | 23.5 | 14.1 | 26.6 | 21.4 | 14.2 | 16 | 11.2 | 6 | 22.7 |
| | 1/4 | KQ2V08-02□P | 12 | 13.2 | 17.6 | 23.5 | 16.7 | 29.2 | 21.6 | 14.2 | 16 | 11.2 | 6 | 27.2 |
| | 3/8 | KQ2V08-03□P | 14 | 13.2 | 20.6 | 23.1 | 17.4 | 33.2 | 25.6 | 14.2 | 16 | 11.2 | 6 | 42.1 |
| ø10 | 1/4 | KQ2V10-02□P | 14 | 15.9 | 20.6 | 25.9 | 18.1 | 33.1 | 25.5 | 15.6 | 27 | 20.3 | 7.5 | 36.5 |
| | 3/8 | KQ2V10-03□P | 14 | 15.9 | 20.6 | 25.9 | 18.2 | 33.2 | 25.6 | 15.6 | 27 | 20.3 | 7.5 | 43.4 |
| ø12 | 3/8 | KQ2V12-03□P | 17 | 18.5 | 25.2 | 28.5 | 19.3 | 35.5 | 27.9 | 17 | 39 | 30.8 | 9 | 56.7 |
| | 1/2 | KQ2V12-04□P | 17 | 18.5 | 25.2 | 28.5 | 22.6 | 38.8 | 28.4 | 17 | 39 | 30.8 | 9 | 72.2 |
| ø16 | 3/8 | KQ2V16-03□P | 21 | 23.8 | 32.3 | 34.2 | 23 | 43.3 | 35.7 | 20.6 | 55 | 46 | 11 | 99.9 |
| | 1/2 | KQ2V16-04□P | 21 | 23.8 | 32.3 | 34.2 | 26.3 | 46.6 | 36.2 | 20.6 | 78 | 46 | 13 | 113 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



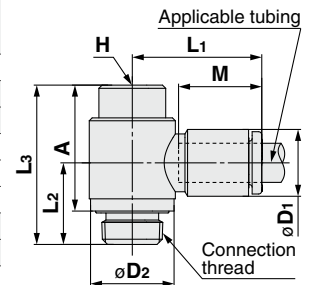
Hexagon Socket Head Universal Male Elbow: KQ2VS (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|--------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2VS04-01□P | 6 | 8.2 | 13.4 | 19.3 | 12.7 | 24.8 | 19.6 | 13.3 | 2.9 | 2.9 | 3 | 12.6 |
| ø6 | 1/8 | KQ2VS06-01□P | 6 | 10.4 | 13.4 | 20.5 | 12.7 | 24.8 | 19.6 | 13.3 | 7.5 | 5.9 | 4.5 | 12.9 |
| | 1/4 | KQ2VS06-02□P | 6 | 10.4 | 15.3 | 19.9 | 16.1 | 24.7 | 17.1 | 13.3 | 7.5 | 5.9 | 4.5 | 19.2 |
| ø8 | 1/8 | KQ2VS08-01□P | 8 | 13.2 | 17.6 | 23.5 | 14.1 | 25 | 19.8 | 14.2 | 16 | 11.2 | 6 | 19.3 |
| | 1/4 | KQ2VS08-02□P | 8 | 13.2 | 17.6 | 23.5 | 16.7 | 27.7 | 20.1 | 14.2 | 16 | 11.2 | 6 | 23.8 |
| | 3/8 | KQ2VS08-03□P | 8 | 13.2 | 20.6 | 23.1 | 17.4 | 29.3 | 21.7 | 14.2 | 16 | 11.2 | 6 | 34.4 |
| ø10 | 1/4 | KQ2VS10-02□P | 8 | 15.9 | 20.6 | 25.9 | 18.1 | 29.2 | 21.6 | 15.6 | 27 | 20.3 | 7.5 | 29.2 |
| | 3/8 | KQ2VS10-03□P | 8 | 15.9 | 20.6 | 25.9 | 18.2 | 29.3 | 21.7 | 15.6 | 27 | 20.3 | 7.5 | 35.6 |
| ø12 | 3/8 | KQ2VS12-03□P | 10 | 18.5 | 25.2 | 28.5 | 19.3 | 33 | 25.4 | 17 | 39 | 30.8 | 9 | 48.6 |
| | 1/2 | KQ2VS12-04□P | 10 | 18.5 | 25.2 | 28.5 | 22.6 | 36.3 | 25.9 | 17 | 39 | 30.8 | 9 | 64.1 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



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

Series KQ2

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

Dimensions

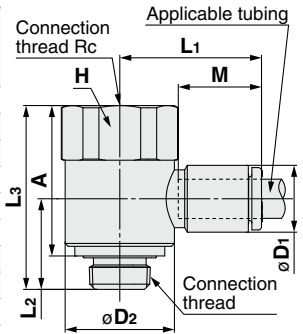
Universal Female Elbow: KQ2VF (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R, Rc | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|-------------------------|--------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 1/8 | KQ2VF04-01□P | 17 | 8.2 | 17 | 21.2 | 14.1 | 28.6 | 23.4 | 13.3 | 2.9 | 2.9 | 3 | 28.5 |
| | 1/8 | KQ2VF06-01□P | 17 | 10.4 | 17 | 22.4 | 14.1 | 28.6 | 23.4 | 13.3 | 7.5 | 5.9 | 4.5 | 28.9 |
| $\phi 6$ | 1/4 | KQ2VF06-02□P | 22 | 10.4 | 21.7 | 23.2 | 17.6 | 36.4 | 28.8 | 13.3 | 7.5 | 5.9 | 4.5 | 60.3 |
| | 1/8 | KQ2VF08-01□P | 17 | 13.2 | 17.6 | 23.5 | 14.8 | 29.3 | 24.1 | 14.2 | 16 | 11.2 | 6 | 27.2 |
| $\phi 8$ | 1/4 | KQ2VF08-02□P | 22 | 13.2 | 21.6 | 25.1 | 17.8 | 36.4 | 28.8 | 14.2 | 16 | 11.2 | 6 | 61.2 |
| | 3/8 | KQ2VF08-03□P | 27 | 13.2 | 27.7 | 26.2 | 22.2 | 42.2 | 34.6 | 14.2 | 16 | 11.2 | 6 | 90.2 |
| $\phi 10$ | 1/4 | KQ2VF10-02□P | 22 | 15.9 | 22.6 | 26.9 | 18.8 | 38.7 | 31.1 | 15.6 | 27 | 20.3 | 7.5 | 61 |
| | 3/8 | KQ2VF10-03□P | 27 | 15.9 | 26.6 | 27.6 | 21.4 | 42.2 | 34.6 | 15.6 | 27 | 20.3 | 7.5 | 90 |
| $\phi 12$ | 3/8 | KQ2VF12-03□P | 27 | 18.5 | 26.6 | 29.9 | 20.9 | 42.2 | 34.6 | 17 | 39 | 30.8 | 9 | 91.6 |
| | 1/2 | KQ2VF12-04□P | 30 | 18.5 | 31.6 | 32.1 | 22.3 | 47.2 | 36.8 | 17 | 39 | 30.8 | 9 | 144.1 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



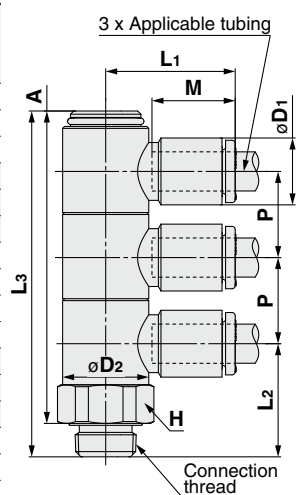
Triple Universal Male Elbow: KQ2VT (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A | M | P | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|--------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 1/8 | KQ2VT04-01□P | 14 | 8.2 | 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□P | 17 | 8.2 | 13.4 | 19.3 | 21 | 57.2 | 49.6 | 13.3 | 13.4 | 2.9 | 2.9 | 3 | 36.8 |
| | 3/8 | KQ2VT04-03□P | 21 | 8.2 | 13.4 | 19.3 | 23 | 59.2 | 51.6 | 13.3 | 13.4 | 2.9 | 2.9 | 3 | 54.4 |
| $\phi 6$ | 1/8 | KQ2VT06-01□P | 14 | 10.4 | 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□P | 17 | 10.4 | 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□P | 21 | 10.4 | 13.4 | 20.5 | 23 | 59.2 | 51.6 | 13.3 | 13.4 | 7.5 | 5.9 | 4.5 | 55.4 |
| $\phi 8$ | 1/8 | KQ2VT08-01□P | 19 | 13.2 | 17.6 | 23.7 | 21 | 63.8 | 58.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 67 |
| | 1/4 | KQ2VT08-02□P | 19 | 13.2 | 17.6 | 23.7 | 23.4 | 66.2 | 58.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 60.8 |
| | 3/8 | KQ2VT08-03□P | 21 | 13.2 | 17.6 | 23.7 | 24.4 | 67.2 | 59.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 72.7 |
| $\phi 10$ | 1/2 | KQ2VT08-04□P | 27 | 13.2 | 17.6 | 23.7 | 29.2 | 72 | 61.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 112.8 |
| | 1/4 | KQ2VT10-02□P | 21 | 15.9 | 20.6 | 25.7 | 25.8 | 77 | 69.4 | 15.6 | 19.2 | 27 | 20.3 | 7.5 | 89.7 |
| | 3/8 | KQ2VT10-03□P | 21 | 15.9 | 20.6 | 25.7 | 25.8 | 77 | 69.4 | 15.6 | 19.2 | 27 | 20.3 | 7.5 | 86.5 |
| $\phi 12$ | 1/2 | KQ2VT10-04□P | 27 | 15.9 | 20.6 | 25.7 | 30.6 | 81.8 | 71.4 | 15.6 | 19.2 | 27 | 20.3 | 7.5 | 125.5 |
| | 1/4 | KQ2VT12-02□P | 26 | 18.5 | 25.2 | 28.9 | 29.1 | 86.7 | 79.1 | 17 | 21.6 | 39 | 30.8 | 9 | 158.6 |
| | 3/8 | KQ2VT12-03□P | 26 | 18.5 | 25.2 | 28.9 | 29.1 | 86.7 | 79.1 | 17 | 21.6 | 39 | 30.8 | 9 | 145.4 |
| 1/2 | KQ2VT12-04□P | 27 | 18.5 | 25.2 | 28.9 | 31.9 | 89.5 | 79.1 | 17 | 21.6 | 39 | 30.8 | 9 | 155.4 | |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



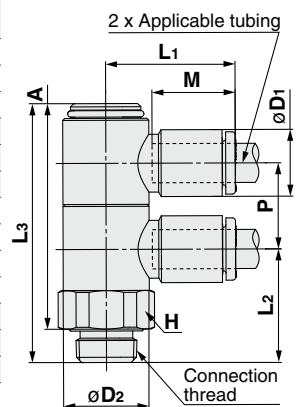
Double Universal Male Elbow: KQ2VD (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A | M | P | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|--------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 1/8 | KQ2VD04-01□P | 14 | 8.2 | 13.4 | 19.3 | 17.6 | 40.3 | 35.1 | 13.3 | 13.4 | 2.9 | 2.9 | 3 | 22 |
| | 1/4 | KQ2VD04-02□P | 17 | 8.2 | 13.4 | 19.3 | 21 | 43.7 | 36.1 | 13.3 | 13.4 | 2.9 | 2.9 | 3 | 31.2 |
| | 3/8 | KQ2VD04-03□P | 21 | 8.2 | 13.4 | 19.3 | 23 | 45.7 | 38.1 | 13.3 | 13.4 | 2.9 | 2.9 | 3 | 48.7 |
| $\phi 6$ | 1/8 | KQ2VD06-01□P | 14 | 10.4 | 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□P | 17 | 10.4 | 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□P | 21 | 10.4 | 13.4 | 20.5 | 23 | 45.7 | 38.1 | 13.3 | 13.4 | 7.5 | 5.9 | 4.5 | 49.3 |
| $\phi 8$ | 1/8 | KQ2VD08-01□P | 19 | 13.2 | 17.6 | 23.7 | 21 | 47.8 | 42.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 52.4 |
| | 1/4 | KQ2VD08-02□P | 19 | 13.2 | 17.6 | 23.7 | 23.4 | 50.2 | 42.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 48.6 |
| | 3/8 | KQ2VD08-03□P | 21 | 13.2 | 17.6 | 23.7 | 24.4 | 51.2 | 43.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 60.4 |
| $\phi 10$ | 1/2 | KQ2VD08-04□P | 27 | 13.2 | 17.6 | 23.7 | 29.2 | 56 | 45.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 100.4 |
| | 1/4 | KQ2VD10-02□P | 21 | 15.9 | 20.6 | 25.7 | 25.8 | 57.7 | 50.1 | 15.6 | 19.2 | 27 | 20.3 | 7.5 | 70.6 |
| | 3/8 | KQ2VD10-03□P | 21 | 15.9 | 20.6 | 25.7 | 25.8 | 57.7 | 50.1 | 15.6 | 19.2 | 27 | 20.3 | 7.5 | 69.5 |
| $\phi 12$ | 1/2 | KQ2VD10-04□P | 27 | 15.9 | 20.6 | 25.7 | 30.6 | 62.5 | 52.1 | 15.6 | 19.2 | 27 | 20.3 | 7.5 | 108.2 |
| | 1/4 | KQ2VD12-02□P | 26 | 18.5 | 25.2 | 28.9 | 29.1 | 65 | 57.4 | 17 | 21.6 | 39 | 30.8 | 9 | 125.8 |
| | 3/8 | KQ2VD12-03□P | 26 | 18.5 | 25.2 | 28.9 | 29.1 | 65 | 57.4 | 17 | 21.6 | 39 | 30.8 | 9 | 117.4 |
| 1/2 | KQ2VD12-04□P | 27 | 18.5 | 25.2 | 28.9 | 31.9 | 67.8 | 57.4 | 17 | 21.6 | 39 | 30.8 | 9 | 128.8 | |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



Metric Size One-touch Fittings *Series KQ2*

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

Dimensions

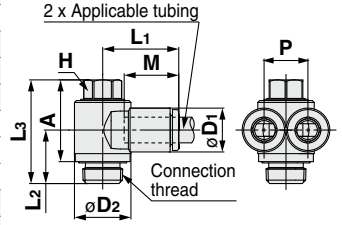
Branch Universal Male Elbow: KQ2Z (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note | øD1 | øD2 | L1 | L2 | L3 | A | M | P | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|------|------|------|------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2Z04-01□P | 8 | | 8.2 | 13.4 | 18.5 | 12.7 | 24.6 | 19.4 | 13.3 | 8.2 | 4.7 | 4.7 | 3 | 13.4 |
| | 1/8 | KQ2Z06-01□P | 8 | | 10.4 | 13.4 | 18.4 | 12.7 | 24.6 | 19.4 | 13.3 | 10.4 | 10.8 | 8.6 | 4.5 | 14 |
| ø6 | 1/4 | KQ2Z06-02□P | 14 | | 10.4 | 20.6 | 21.5 | 17.3 | 33.1 | 25.5 | 13.3 | 10.4 | 10.8 | 8.6 | 4.5 | 35.4 |
| | 3/8 | KQ2Z06-03□P | 14 | | 10.4 | 20.6 | 21.5 | 17.4 | 33.2 | 25.6 | 13.3 | 10.4 | 10.8 | 8.6 | 4.5 | 42.3 |
| ø8 | 1/8 | KQ2Z08-01□P | 12 | | 13.2 | 17.6 | 21.2 | 14.1 | 26.6 | 21.4 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 24.5 |
| | 1/4 | KQ2Z08-02□P | 12 | | 13.2 | 17.6 | 21.2 | 16.7 | 29.2 | 21.6 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 28.9 |
| ø8 | 3/8 | KQ2Z08-03□P | 14 | | 13.2 | 20.6 | 22.3 | 17.4 | 33.2 | 25.6 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 44 |
| | 1/4 | KQ2Z10-02□P | 14 | | 15.9 | 21.6 | 23.6 | 18.1 | 33.1 | 25.5 | 15.6 | 15.9 | 31.8 | 22.6 | 7.5 | 40 |
| ø10 | 3/8 | KQ2Z10-03□P | 14 | | 15.9 | 21.6 | 23.6 | 18.2 | 33.2 | 25.6 | 15.6 | 15.9 | 31.8 | 22.6 | 7.5 | 46.9 |
| | 1/2 | KQ2Z12-04□P | 17 | | 18.5 | 24.1 | 26.9 | 19.1 | 35.5 | 27.9 | 17 | 18.5 | 44.6 | 35.3 | 9 | 60.5 |
| ø12 | 3/8 | KQ2Z12-03□P | 17 | | 18.5 | 24.1 | 26.9 | 19.1 | 35.5 | 27.9 | 17 | 18.5 | 44.6 | 35.3 | 9 | 60.5 |
| | 1/2 | KQ2Z12-04□P | 17 | | 18.5 | 24.1 | 26.9 | 22.4 | 38.8 | 28.4 | 17 | 18.5 | 44.6 | 35.3 | 9 | 76 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) øD1 is maximum diameter.



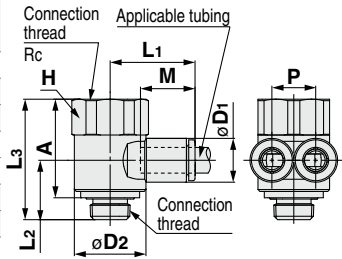
Branch Universal Female Elbow: KQ2ZF (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R, Rc | Model | H (Width across flats) | Note | øD1 | øD2 | L1 | L2 | L3 | A | M | P | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|-------------------------|--------------|------------------------|------|------|------|------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2ZF04-01□P | 17 | | 8.2 | 17 | 20.5 | 14.1 | 28.6 | 23.4 | 13.3 | 8.2 | 4.7 | 4.7 | 3 | 29.3 |
| | 1/8 | KQ2ZF06-01□P | 17 | | 10.4 | 17 | 20.5 | 14.1 | 28.6 | 23.4 | 13.3 | 10.4 | 10.8 | 8.6 | 4.5 | 29.9 |
| ø6 | 1/4 | KQ2ZF06-02□P | 22 | | 10.4 | 21.7 | 22.5 | 17.6 | 36.4 | 28.8 | 13.3 | 10.4 | 10.8 | 8.6 | 4.5 | 61.3 |
| | 3/8 | KQ2ZF06-03□P | 22 | | 10.4 | 21.7 | 22.5 | 17.6 | 36.4 | 28.8 | 13.3 | 10.4 | 10.8 | 8.6 | 4.5 | 61.3 |
| ø8 | 1/8 | KQ2ZF08-01□P | 17 | | 13.2 | 17.6 | 21.2 | 14.8 | 29.3 | 24.1 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 28.9 |
| | 1/4 | KQ2ZF08-02□P | 22 | | 13.2 | 21.4 | 23.3 | 17.8 | 36.4 | 28.8 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 62.8 |
| ø10 | 1/4 | KQ2ZF10-02□P | 22 | | 15.9 | 22.6 | 24.6 | 18.8 | 38.7 | 31.1 | 15.6 | 15.9 | 31.8 | 22.6 | 7.5 | 63.8 |
| | 3/8 | KQ2ZF10-03□P | 27 | | 15.9 | 26.6 | 26.9 | 21.4 | 42.2 | 34.6 | 15.6 | 15.9 | 31.8 | 22.6 | 7.5 | 93 |
| ø12 | 3/8 | KQ2ZF12-03□P | 27 | | 18.5 | 26.6 | 28.1 | 20.9 | 42.2 | 34.6 | 17 | 18.5 | 44.6 | 35.3 | 9 | 96 |
| | 1/2 | KQ2ZF12-04□P | 30 | | 18.5 | 31.6 | 32 | 22.3 | 47.2 | 36.8 | 17 | 18.5 | 44.6 | 35.3 | 9 | 148.8 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) øD1 is maximum diameter.



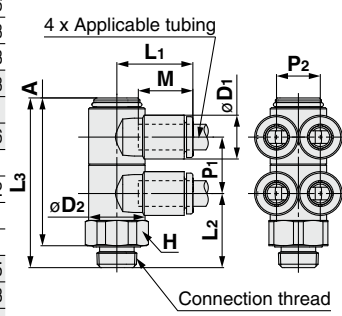
Double Branch Universal Male Elbow: KQ2ZD (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note | øD1 | øD2 | L1 | L2 | L3 | A | M | P1 | P2 | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|--------------|------------------------|------|------|------|------|------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2ZD04-01□P | 14 | | 8.2 | 13.4 | 18.5 | 17.6 | 40.3 | 35.1 | 13.3 | 13.4 | 8.2 | 4.7 | 4.7 | 3 | 23.6 |
| | 1/4 | KQ2ZD04-02□P | 17 | | 8.2 | 13.4 | 18.5 | 21 | 43.7 | 36.1 | 13.3 | 13.4 | 8.2 | 4.7 | 4.7 | 3 | 32.8 |
| | 3/8 | KQ2ZD04-03□P | 21 | | 8.2 | 13.4 | 18.5 | 23 | 45.7 | 38.1 | 13.3 | 13.4 | 8.2 | 4.7 | 4.7 | 3 | 50.3 |
| ø6 | 1/8 | KQ2ZD06-01□P | 14 | | 10.4 | 13.4 | 18.4 | 17.6 | 40.3 | 35.1 | 13.3 | 13.4 | 10.4 | 10.8 | 8.6 | 4.5 | 24.8 |
| | 1/4 | KQ2ZD06-02□P | 17 | | 10.4 | 13.4 | 18.4 | 21 | 43.7 | 36.1 | 13.3 | 13.4 | 10.4 | 10.8 | 8.6 | 4.5 | 34 |
| | 3/8 | KQ2ZD06-03□P | 21 | | 10.4 | 13.4 | 18.4 | 23 | 45.7 | 38.1 | 13.3 | 13.4 | 10.4 | 10.8 | 8.6 | 4.5 | 51.6 |
| ø8 | 1/8 | KQ2ZD08-01□P | 19 | | 13.2 | 17.6 | 21.2 | 21 | 47.8 | 42.6 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 56.1 |
| | 1/4 | KQ2ZD08-02□P | 19 | | 13.2 | 17.6 | 21.2 | 23.4 | 50.2 | 42.6 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 52.2 |
| | 3/8 | KQ2ZD08-03□P | 21 | | 13.2 | 17.6 | 21.2 | 24.4 | 51.2 | 43.6 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 64.1 |
| ø10 | 1/2 | KQ2ZD08-04□P | 27 | | 13.2 | 17.6 | 21.2 | 29.2 | 56 | 45.6 | 14.2 | 15.9 | 13.2 | 20.5 | 14.2 | 6 | 104.1 |
| | 1/4 | KQ2ZD10-02□P | 21 | | 15.9 | 20.6 | 23.6 | 25.8 | 57.7 | 50.1 | 15.6 | 19.2 | 15.9 | 31.8 | 21.6 | 7.5 | 76.5 |
| | 3/8 | KQ2ZD10-03□P | 21 | | 15.9 | 20.6 | 23.6 | 25.8 | 57.7 | 50.1 | 15.6 | 19.2 | 15.9 | 31.8 | 21.6 | 7.5 | 75.3 |
| ø12 | 1/2 | KQ2ZD10-04□P | 27 | | 15.9 | 20.6 | 23.6 | 30.6 | 62.5 | 52.1 | 15.6 | 19.2 | 15.9 | 31.8 | 21.6 | 7.5 | 114 |
| | 1/4 | KQ2ZD12-02□P | 26 | | 18.5 | 25.2 | 26.8 | 29.1 | 65 | 57.4 | 17 | 21.6 | 18.5 | 44.6 | 35.3 | 9 | 134.4 |
| | 3/8 | KQ2ZD12-03□P | 26 | | 18.5 | 25.2 | 26.8 | 29.1 | 65 | 57.4 | 17 | 21.6 | 18.5 | 44.6 | 35.3 | 9 | 126 |
| ø12 | 1/2 | KQ2ZD12-04□P | 27 | | 18.5 | 25.2 | 26.8 | 31.9 | 67.8 | 57.4 | 17 | 21.6 | 18.5 | 44.6 | 35.3 | 9 | 137.4 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) øD1 is maximum diameter.



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

Series KQ2

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

Dimensions

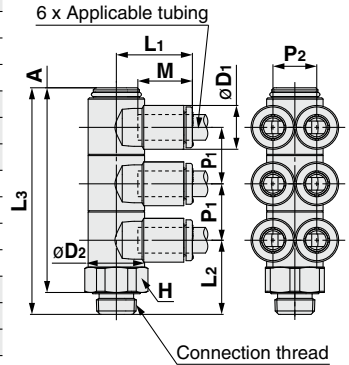
Triple Branch Universal Male Elbow: KQ2ZT (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) 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 | | |
| $\phi 4$ | 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 |
| $\phi 6$ | 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 |
| $\phi 8$ | 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 |
| $\phi 10$ | 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 |
| $\phi 12$ | 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 plated

Note) ϕD_1 is maximum diameter.



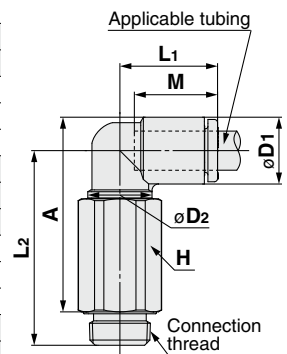
Extended Male Elbow: KQ2W (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3.2$ | 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 |
| $\phi 4$ | 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 |
| $\phi 6$ | 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 |
| | 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 |
| $\phi 8$ | 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 |
| | 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 |
| $\phi 10$ | 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 |
| | 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 |
| $\phi 12$ | 1/4 | KQ2W12-02□P | 17 | 18.5 | 17 | 21.5 | 51.4 | 53.1 | 17 | 47.7 | 37.7 | 9 | 56 |
| | 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 |
| $\phi 16$ | New 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 |
| | 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 plated

Note) ϕD_1 is maximum diameter.



Metric Size One-touch Fittings *Series KQ2*

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

Dimensions

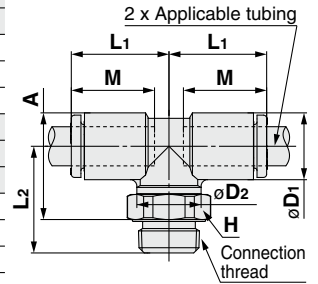
Male Branch Tee: KQ2T (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3.2$ | 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 |
| $\phi 4$ | 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 |
| $\phi 6$ | 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 |
| $\phi 8$ | 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 |
| $\phi 10$ | 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 |
| $\phi 12$ | 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 |
| $\phi 16$ | New 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 plated

Note) ϕD_1 is maximum diameter.



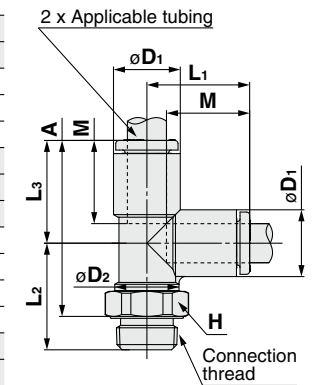
Male Run Tee: KQ2Y (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3.2$ | 1/8 | KQ2Y23-01□P | 12 | 7.1 | 10 | 14.9 | 15.9 | 14.9 | 25.6 | 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 | 26.6 | 13.3 | 3.4 | 2.9 | 2.5 | 14.9 |
| $\phi 4$ | 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 |
| $\phi 6$ | 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 |
| $\phi 8$ | 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 |
| $\phi 10$ | 1/8 | KQ2Y10-01□P | 12 | 15.9 | 12 | 20.6 | 22.1 | 20.6 | 37.5 | 15.6 | 40 | 28.4 | 6 | 13 |
| | 1/4 | KQ2Y10-02□P | 17 | 15.9 | 17 | 20.6 | 25.6 | 20.6 | 38.6 | 15.6 | 40 | 28.4 | 7.5 | 20.7 |
| | 3/8 | KQ2Y10-03□P | 21 | 15.9 | 17 | 20.6 | 25.7 | 20.6 | 38.7 | 15.6 | 40 | 28.4 | 7.5 | 20.6 |
| $\phi 12$ | 1/4 | KQ2Y12-02□P | 17 | 18.5 | 17 | 23 | 26.9 | 23 | 42.3 | 17 | 57.4 | 45.4 | 9 | 23.8 |
| | 3/8 | KQ2Y12-03□P | 21 | 18.5 | 17 | 23 | 27 | 23 | 42.4 | 17 | 57.4 | 45.4 | 9 | 23.8 |
| | 1/2 | KQ2Y12-04□P | 27 | 18.5 | 17 | 23 | 31.8 | 23 | 44.4 | 17 | 57.4 | 45.4 | 9 | 51.1 |
| $\phi 16$ | New 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 plated

Note) ϕD_1 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

Series KQ2

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

Dimensions

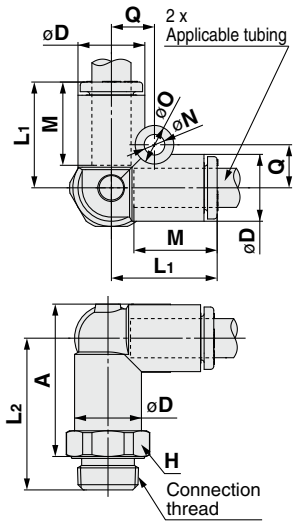
Male Delta Union: KQ2D (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD | L ₁ | L ₂ | A | M | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|---------------------|-------------|------------------------|----------------|----------------|----------------|------|------|------|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 4$ | 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 |
| $\phi 6$ | 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 |
| $\phi 8$ | 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 |
| $\phi 10$ | 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 |
| $\phi 12$ | 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 plated

Note) ϕD is maximum diameter.



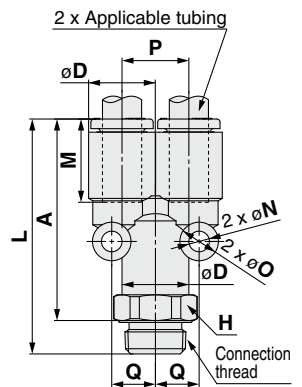
Branch "Y": KQ2U (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) ϕD | L | A | M | P | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|----------------------|-------------|------------------------|----------------|------|------|------|------|------|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3.2$ | 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 |
| $\phi 4$ | 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 |
| $\phi 6$ | 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 |
| $\phi 8$ | 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 |
| $\phi 10$ | 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 |
| $\phi 12$ | 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 |
| $\phi 16$ | ^(New) 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 plated

Note) ϕD is maximum diameter.



Metric Size One-touch Fittings *Series KQ2*

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

Dimensions

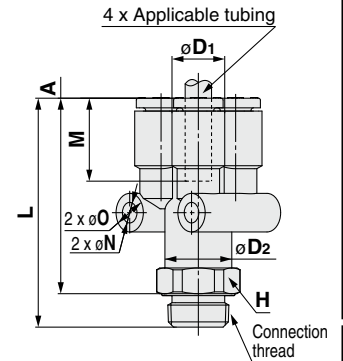
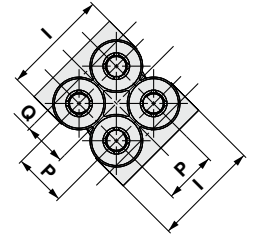
Double Branch "Y": KQ2UD (Face seal)



| Applicable tubing O.D. (mm) | Connection thread R | Model | H (Width across flats) | Note) 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 plated

Note) ϕD_1 is maximum diameter.

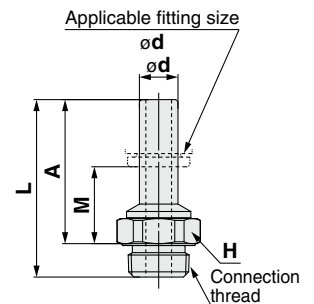


Adapter: KQ2N (Face seal)



| 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 |
| $\phi 6$ | 1/8 | KQ2N06-01□P | 12 | 27.6 | 22.4 | 9.1 | 4 | 4.6 |
| | 1/4 | KQ2N06-02□P | 17 | 31 | 23.4 | 10.1 | 4 | 13.8 |
| $\phi 8$ | 1/4 | KQ2N08-02□P | 17 | 32.9 | 25.3 | 11.1 | 6 | 11.8 |
| | 3/8 | KQ2N08-03□P | 21 | 34.9 | 27.3 | 13.1 | 6 | 26.7 |
| $\phi 10$ | 3/8 | KQ2N10-03□P | 21 | 36.8 | 29.2 | 13.6 | 7.5 | 14.7 |

□/A: Brass, N: Brass + Electroless nickel plated

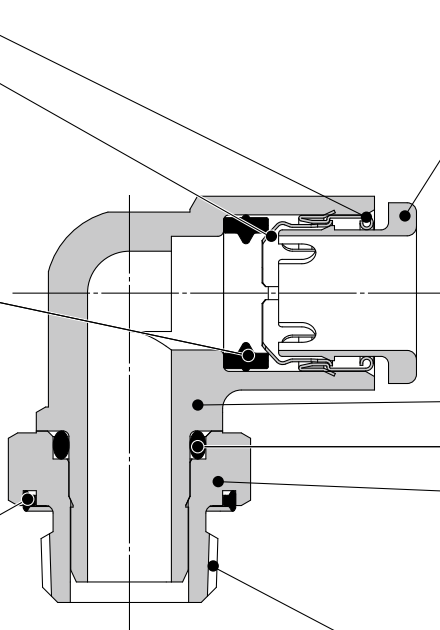


Sealant/Gasket Seal
Metric Size M, R, Rc
Inch Size UNF, NPT
Inch Size M, R, Rc
Metric Size G
Metric Size R, Rc
Face Seal
Metric Size NPT
Inch Size NPT
Inch Size R
Gasket Seal
Metric Size Uni
Inch Size Uni

Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: NPT

Series KQ2



Guide

Chuck

Suitable for use with nylon and urethane. Large retaining force. The chuck provides secure retention and the collet increases the holding force on the tube.

Seal

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

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

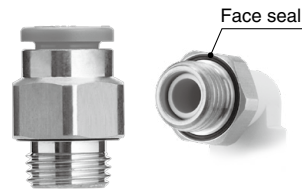
O-ring

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 -100 kPa

New thread for piping that drastically reduced the screw-in time thanks to 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 ^{Note 1)} | |
| Operating pressure range ^{Note 2)} | -100 kPa to 1 MPa | |
| Proof pressure (at 23°C) | 3 MPa | |
| Ambient and fluid temperature | -5 to 60°C, Water: 0 to 40°C (No freezing) | |
| Thread | Mounting section | ANSI/ASME1.20.1 (NPT thread) JIS B0208 (UNF thread) |
| | Nut section | JIS B0208 (UNF thread) |
| Sealant on the threads | Seal ring | |

Note 1) The surge pressure must be under the maximum operating pressure.

Note 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, 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 plated |

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

Metric Size R, Rc

Face Seal
Inch Size NPT

Inch Size R

Gasket Seal
Metric Size Uni

Inch Size Uni

Inch Size One-touch Fittings

Variations

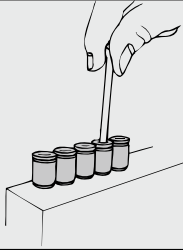
Hexagon socket head male connector

KQ2S

P.88



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



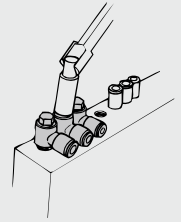
Universal male elbow

KQ2V

P.90



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



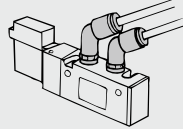
45° male elbow

KQ2K

P.89



Use to pipe a female thread at a 45° angle. The model between the male connector and male elbow.



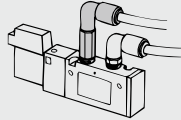
Extended male elbow

KQ2W

P.93



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.



Male connector

KQ2H

P.88



Use to pipe a female thread. Most general model.

Double universal male elbow

KQ2VD

P.91



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

Triple branch universal male elbow

KQ2ZT

P.92



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

Male elbow

KQ2L

P.89



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

Triple universal male elbow

KQ2VT

P.91



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

Male branch tee

KQ2T

P.93



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

Hexagon socket head universal male elbow

KQ2VS

P.90



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

Branch universal male elbow

KQ2Z

P.91



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

Male run tee

KQ2Y

P.94



Use to branch a female thread at a 90° angle.

Universal female elbow

KQ2VF

P.90



Use to branch a male or female thread at a 90° angle. Multiple connections possible.

Double branch universal male elbow

KQ2ZD

P.92



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

Branch "Y"

KQ2U

P.94



Use to branch a female thread.

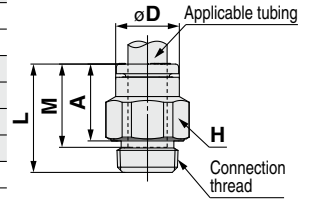
Dimensions

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 | 2.9 | 2.5 | 16.6 |
| ø5/32 | 1/16 | KQ2H03-33□P | 11.11 | 7.7 | 19 | 13.6 | 13.3 | 5.6 | 4 | 3 | 13.9 |
| | 1/8 | KQ2H03-34□P | 12.7 | 7.7 | 16.4 | 11 | 13.3 | 5.6 | 4 | 3 | 7.6 |
| | 1/4 | KQ2H03-35□P | 17.46 | 7.7 | 15.6 | 7.5 | 13.3 | 5.6 | 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 plated



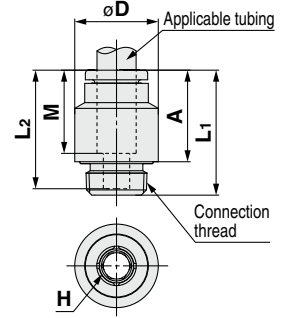
Hexagon Socket Head Male Connector: KQ2S (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) øD | L1 | L2 | 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 | 2 | 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 plated

Note) øD is maximum diameter.



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
 Inch Size Uni
 Metric Size Uni

Series KQ2

Applicable Tubing: Inch Size, Connection Thread: NPT

Dimensions

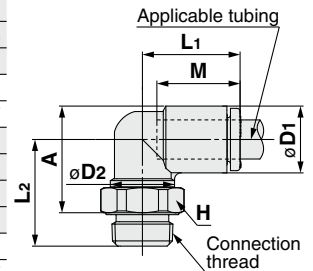
Male Elbow: KQ2L (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 | 4.2 | 4.2 | 3 | 14.9 |
| | 1/8 | KQ2L03-34□P | 12.7 | 8.2 | 10 | 14.8 | 16.2 | 14.9 | 13.3 | 4.2 | 4.2 | 3 | 6.3 |
| | 1/4 | KQ2L03-35□P | 17.46 | 8.2 | 10 | 14.8 | 21.9 | 17.9 | 13.3 | 4.2 | 4.2 | 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 plated

Note) ϕD_1 is maximum diameter.



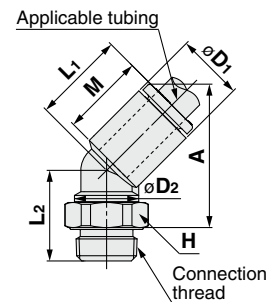
45° Male Elbow: KQ2K (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | 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 | 4.2 | 4.2 | 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 |
| $\phi 1/4$ | 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 |
| | 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 plated

Note) ϕD_1 is maximum diameter.



Inch Size One-touch Fittings *Series KQ2*

Applicable Tubing: Inch Size, Connection Thread: NPT

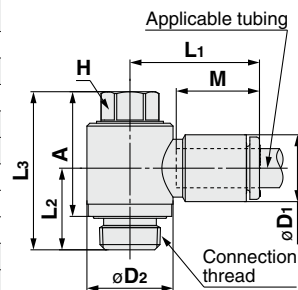
Dimensions

Universal Male Elbow: KQ2V (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) 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 | 13.4 | 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 | 13.4 | 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 | 13.4 | 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 | 13.4 | 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 | 15.3 | 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 | 17.6 | 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 | 20.6 | 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 | 20.6 | 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 plated * Reference dimensions after installation of NPT thread
 Note) øD1 is maximum diameter.

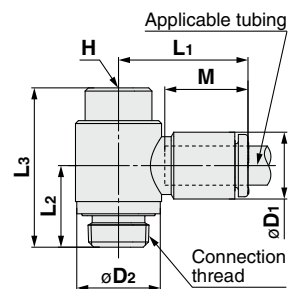


Hexagon Socket Head Universal Male Elbow: KQ2VS (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) 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 | 13.4 | 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 | 13.4 | 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 | 13.4 | 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 | 13.4 | 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 | 15.3 | 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 | 17.6 | 23.5 | 17.2 | 28.2 | 20.1 | 14.2 | 16 | 11.2 | 6 | 24.5 |
| | 3/8 | KQ2VS09-36□P | 8 | 13.2 | 20.6 | 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 | 20.6 | 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 plated * Reference dimensions after installation of NPT thread
 Note) øD1 is maximum diameter.

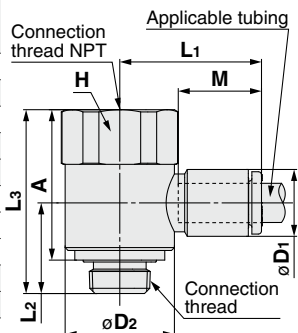


Universal Female Elbow: KQ2VF (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) 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 plated * Reference dimensions after installation of NPT thread
 Note) 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

Metric Size Uni
Gasket Seal

Inch Size Uni

Series KQ2

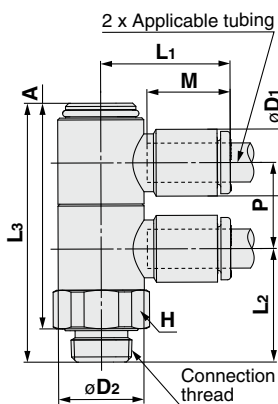
Applicable Tubing: Inch Size, Connection Thread: NPT

Dimensions

Double Universal Male Elbow: KQ2VD (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) øD1 | øD2 | L1 | L2 | L3 | A | M | P | Effective area (mm²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|--------------|---------------------------|--------------|------|------|------|------|------|------|------|----------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| ø1/8 | 1/8 | KQ2VD01-34□P | 14.29 | 7.1 | 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□P | 14.29 | 8.2 | 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□P | 14.29 | 9.1 | 13.4 | 19.6 | 18.2 | 40.9 | 35.5 | 13.3 | 13.4 | 4.5 | 3.7 | 3.5 | 23.3 |
| | | KQ2VD07-34□P | 14.29 | 11.1 | 13.4 | 20.6 | 19.2 | 42.3 | 36.9 | 13.3 | 13.8 | 7.7 | 6.6 | 4.6 | 25.6 |
| | | KQ2VD07-36□P | 22 | 11.1 | 13.4 | 20.6 | 23.9 | 47 | 38.9 | 13.3 | 13.8 | 7.7 | 6.6 | 4.6 | 53.4 |
| ø1/4 | 1/4 | KQ2VD09-35□P | 19 | 13.2 | 17.6 | 23.7 | 23.9 | 50.7 | 42.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 49.3 |
| | | KQ2VD09-36□P | 22 | 13.2 | 17.6 | 23.7 | 24.9 | 51.7 | 43.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 63.4 |
| | | KQ2VD09-37□P | 28.57 | 13.2 | 17.6 | 23.7 | 30.2 | 57 | 46.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 113.5 |
| ø5/16 | 3/8 | KQ2VD11-35□P | 22 | 15.4 | 20.6 | 25.3 | 26.1 | 58 | 49.9 | 15.6 | 19.2 | 23.4 | 19.3 | 7 | 72.2 |
| | | KQ2VD11-36□P | 22 | 15.4 | 20.6 | 25.3 | 26.1 | 58 | 49.9 | 15.6 | 19.2 | 23.4 | 19.3 | 7 | 71.2 |
| | | KQ2VD11-37□P | 28.57 | 15.4 | 20.6 | 25.3 | 31.4 | 63.3 | 52.9 | 15.6 | 19.2 | 23.4 | 19.3 | 7 | 119.3 |
| ø1/2 | 3/8 | KQ2VD13-36□P | 28.57 | 19.3 | 27 | 30.5 | 31 | 65.8 | 57.7 | 17 | 22.3 | 43.8 | 34.3 | 9.6 | 150.7 |
| | | KQ2VD13-37□P | 28.57 | 19.3 | 27 | 30.5 | 33.3 | 68.1 | 57.7 | 17 | 22.3 | 43.8 | 34.3 | 9.6 | 161.2 |



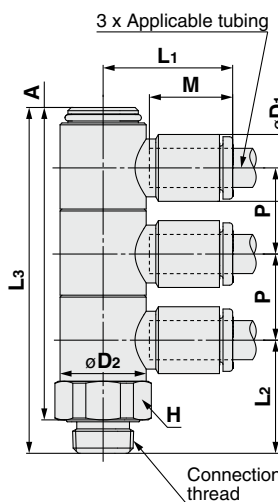
□/A: Brass, N: Brass + Electroless nickel plated

Note) øD1 is maximum diameter.

Triple Universal Male Elbow: KQ2VT (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) øD1 | øD2 | L1 | L2 | L3 | A | M | P | Effective area (mm²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|--------------|---------------------------|--------------|------|------|------|------|------|------|------|----------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| ø1/8 | 1/8 | KQ2VT01-34□P | 14.29 | 7.1 | 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□P | 14.29 | 8.2 | 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□P | 14.29 | 9.1 | 13.4 | 19.6 | 18.2 | 54.4 | 49 | 13.3 | 13.4 | 4.5 | 3.7 | 3.5 | 29 |
| | | KQ2VT07-34□P | 14.29 | 11.1 | 13.4 | 20.6 | 19.2 | 56.1 | 50.7 | 13.3 | 13.8 | 7.7 | 6.6 | 4.6 | 32.1 |
| | | KQ2VT07-36□P | 22 | 11.1 | 13.4 | 20.6 | 23.9 | 60.8 | 52.7 | 13.3 | 13.8 | 7.7 | 6.6 | 4.6 | 59.9 |
| ø1/4 | 1/4 | KQ2VT09-35□P | 19 | 13.2 | 17.6 | 23.7 | 23.9 | 66.7 | 58.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 61.4 |
| | | KQ2VT09-36□P | 22 | 13.2 | 17.6 | 23.7 | 24.9 | 67.7 | 59.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 75.5 |
| | | KQ2VT09-37□P | 28.57 | 13.2 | 17.6 | 23.7 | 30.2 | 73 | 62.6 | 14.2 | 15.9 | 16 | 11.2 | 6 | 125.4 |
| ø5/16 | 3/8 | KQ2VT11-35□P | 22 | 15.4 | 20.6 | 25.3 | 26.1 | 77.3 | 69.2 | 15.6 | 19.2 | 23.4 | 19.3 | 7 | 90.8 |
| | | KQ2VT11-36□P | 22 | 15.4 | 20.6 | 25.3 | 26.1 | 77.3 | 69.2 | 15.6 | 19.2 | 23.4 | 19.3 | 7 | 87.8 |
| | | KQ2VT11-37□P | 28.57 | 15.4 | 20.6 | 25.3 | 31.4 | 82.6 | 72.2 | 15.6 | 19.2 | 23.4 | 19.3 | 7 | 136 |
| ø3/8 | 3/8 | KQ2VT13-36□P | 28.57 | 19.3 | 27 | 30.5 | 31 | 88.2 | 80.1 | 17 | 22.3 | 43.8 | 34.3 | 9.6 | 191.4 |
| | | KQ2VT13-37□P | 28.57 | 19.3 | 27 | 30.5 | 33.3 | 90.5 | 80.1 | 17 | 22.3 | 43.8 | 34.3 | 9.6 | 191.5 |



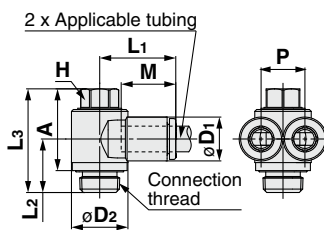
□/A: Brass, N: Brass + Electroless nickel plated

Note) øD1 is maximum diameter.

Branch Universal Male Elbow: KQ2Z (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) øD1 | øD2 | L1 | L2 | L3 | A | M | P | Effective area (mm²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|---------------------------|--------------|------|------|------|------|------|------|------|----------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| ø1/8 | 1/8 | KQ2Z01-34□P | 8 | 7.1 | 13.4 | 18.5 | 12.9 | 24.8 | 19.4 | 13.3 | 7.1 | 2.2 | 1.9 | 2.5 | 13.8 |
| ø5/32 | 1/8 | KQ2Z03-34□P | 8 | 8.2 | 13.4 | 18.5 | 12.9 | 24.8 | 19.4 | 13.3 | 8.2 | 2.9 | 2.9 | 3 | 14 |
| ø3/16 | 1/8 | KQ2Z05-34□P | 8 | 9.1 | 13.4 | 18.4 | 12.9 | 24.8 | 19.4 | 13.3 | 9.1 | 4.5 | 3.7 | 3.5 | 14.3 |
| | | KQ2Z07-34□P | 8 | 11.1 | 13.4 | 18.4 | 12.9 | 24.8 | 19.4 | 13.3 | 11.1 | 7.5 | 6.6 | 4.5 | 14.8 |
| | | KQ2Z07-35□P | 11.11 | 11.1 | 17.6 | 20.4 | 16.7 | 29.7 | 21.6 | 13.3 | 11.1 | 7.7 | 6.6 | 4.6 | 27.6 |
| ø1/4 | 1/8 | KQ2Z09-34□P | 11.11 | 13.2 | 17.6 | 21.2 | 14.3 | 26.8 | 21.4 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 24.1 |
| | | KQ2Z09-35□P | 11.11 | 13.2 | 17.6 | 21.2 | 17.2 | 29.7 | 21.6 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 29 |
| | | KQ2Z09-36□P | 12.7 | 13.2 | 20.6 | 22.3 | 17.9 | 33.7 | 25.6 | 14.2 | 13.2 | 20.5 | 14.2 | 6 | 43.2 |
| ø5/16 | 3/8 | KQ2Z11-35□P | 12.7 | 15.4 | 20.6 | 25.9 | 17.8 | 33.6 | 25.5 | 15.6 | 15.4 | 23.4 | 19.3 | 7 | 38.9 |
| | | KQ2Z11-36□P | 12.7 | 15.4 | 20.6 | 25.9 | 17.9 | 33.7 | 25.6 | 15.6 | 15.4 | 23.4 | 19.3 | 7 | 45.6 |
| | | KQ2Z13-36□P | 17.46 | 19.3 | 27 | 30.1 | 18.6 | 33.5 | 25.4 | 17 | 19.3 | 26.9 | 26.9 | 7.5 | 70.6 |
| ø1/2 | 1/2 | KQ2Z13-37□P | 17.46 | 19.3 | 27 | 30.1 | 21.3 | 36.2 | 25.8 | 17 | 19.3 | 38.8 | 34.3 | 9 | 80.6 |



□/A: Brass, N: Brass + Electroless nickel plated

Note) øD1 is maximum diameter.

Inch Size One-touch Fittings *Series KQ2*

Applicable Tubing: Inch Size, Connection Thread: NPT

Dimensions

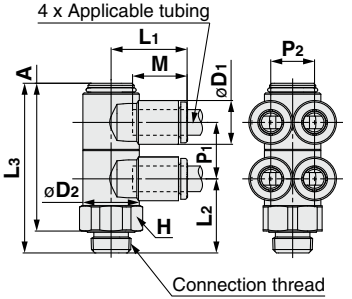
Double Branch Universal Male Elbow: KQ2ZD (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) 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 | | |
| $\phi 1/8$ | 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 |
| $\phi 5/32$ | 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 |
| $\phi 3/16$ | 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 |
| $\phi 1/4$ | 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 |
| | 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 |
| $\phi 5/16$ | 1/4 | 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 |
| | 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 |
| $\phi 3/8$ | 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 |
| | 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 |
| $\phi 1/2$ | 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 |
| | 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 plated

Note) ϕD_1 is maximum diameter.



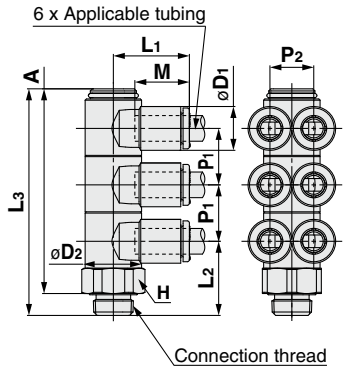
Triple Branch Universal Male Elbow: KQ2ZT (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) 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 | | |
| $\phi 1/8$ | 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 |
| $\phi 5/32$ | 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 |
| $\phi 3/16$ | 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 |
| $\phi 1/4$ | 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 |
| | 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 |
| $\phi 5/16$ | 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 |
| | 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 |
| $\phi 3/8$ | 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 |
| | 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 |
| $\phi 1/2$ | 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 plated

Note) ϕD_1 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

Series KQ2

Applicable Tubing: Inch Size, Connection Thread: NPT

Dimensions

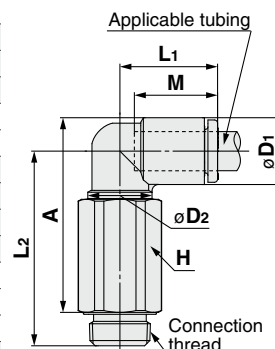
Extended Male Elbow: KQ2W (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 1/16 | KQ2W01-33□P | 11.11 | 7.1 | 10 | 14.5 | 33.2 | 31.4 | 13.3 | 2.8 | 2.4 | 2.5 | 14.3 |
| | 1/8 | KQ2W01-34□P | 12.7 | 7.1 | 10 | 14.5 | 30.3 | 28.5 | 13.3 | 2.8 | 2.4 | 2.5 | 18 |
| | 1/4 | KQ2W01-35□P | 17.46 | 7.1 | 10 | 14.5 | 33 | 28.5 | 13.3 | 2.8 | 2.4 | 2.5 | 39.9 |
| $\phi 5/32$ | 1/16 | KQ2W03-33□P | 11.11 | 8.2 | 10 | 14.8 | 32.7 | 31.4 | 13.3 | 4 | 4 | 3 | 14.4 |
| | 1/8 | KQ2W03-34□P | 12.7 | 8.2 | 10 | 14.8 | 29.9 | 28.6 | 13.3 | 4 | 4 | 3 | 18.2 |
| | 1/4 | KQ2W03-35□P | 17.46 | 8.2 | 10 | 14.8 | 33.5 | 29.5 | 13.3 | 4 | 4 | 3 | 40.1 |
| $\phi 3/16$ | 1/8 | KQ2W05-34□P | 12.7 | 9.1 | 10 | 15 | 30.4 | 29.5 | 13.3 | 6.8 | 5.6 | 3.5 | 18.4 |
| | 1/4 | KQ2W05-35□P | 17.46 | 9.1 | 10 | 15 | 34 | 30.5 | 13.3 | 6.8 | 5.6 | 3.5 | 40.3 |
| $\phi 1/4$ | 1/16 | KQ2W07-33□P | 11.11 | 11.1 | 10 | 15.6 | 34.2 | 34.4 | 13.3 | 6.8 | 6.8 | 3.5 | 15 |
| | 1/8 | KQ2W07-34□P | 12.7 | 11.1 | 10 | 15.6 | 31.4 | 31.5 | 13.3 | 11.3 | 10 | 4.5 | 18.7 |
| | 1/4 | KQ2W07-35□P | 17.46 | 11.1 | 10 | 15.6 | 35 | 32.5 | 13.3 | 11.3 | 10 | 4.5 | 40.7 |
| | 3/8 | KQ2W07-36□P | 22 | 11.1 | 10 | 15.6 | 35.5 | 33 | 13.3 | 11.3 | 10 | 4.5 | 67.5 |
| $\phi 5/16$ | 1/8 | KQ2W09-34□P | 12.7 | 13.2 | 10 | 16.4 | 32.4 | 33.6 | 14.2 | 11.3 | 11.3 | 4.5 | 19.5 |
| | 1/4 | KQ2W09-35□P | 17.46 | 13.2 | 12 | 17.2 | 37.1 | 35.6 | 14.2 | 20.5 | 14.2 | 6 | 38.9 |
| | 3/8 | KQ2W09-36□P | 22 | 13.2 | 12 | 17.2 | 38.6 | 37.1 | 14.2 | 20.5 | 14.2 | 6 | 69.6 |
| $\phi 3/8$ | 1/4 | KQ2W11-35□P | 17.46 | 15.4 | 17 | 19.3 | 45.1 | 44.7 | 15.6 | 28.8 | 23.8 | 7.5 | 49.7 |
| | 3/8 | KQ2W11-36□P | 22 | 15.4 | 17 | 19.3 | 42 | 41.6 | 15.6 | 28.8 | 23.8 | 7.5 | 55.8 |
| | 1/2 | KQ2W11-37□P | 28.57 | 15.4 | 17 | 19.3 | 47.3 | 44.6 | 15.6 | 28.8 | 23.8 | 7.5 | 128.9 |
| $\phi 1/2$ | 1/4 | KQ2W13-35□P | 17.46 | 19.3 | 17 | 21.5 | 47 | 48.6 | 17 | 50.3 | 44.4 | 9 | 52 |
| | 3/8 | KQ2W13-36□P | 22 | 19.3 | 17 | 21.8 | 47.9 | 49.5 | 17 | 56 | 44.4 | 9.5 | 86.7 |
| | 1/2 | KQ2W13-37□P | 28.57 | 19.3 | 17 | 21.8 | 53 | 52.3 | 17 | 56 | 44.4 | 9.5 | 168 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



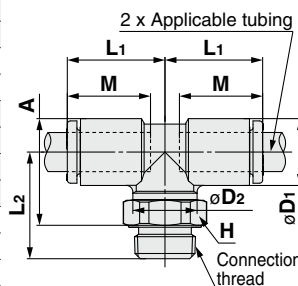
Male Branch Tee: KQ2T (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 1/16 | KQ2T01-33□P | 11.11 | 7.1 | 10 | 14.5 | 21.5 | 19.7 | 13.3 | 3.4 | 2.9 | 2.5 | 7.7 |
| | 1/8 | KQ2T01-34□P | 12.7 | 7.1 | 10 | 14.5 | 16.6 | 14.8 | 13.3 | 3.4 | 2.9 | 2.5 | 6.7 |
| | 1/4 | KQ2T01-35□P | 17.46 | 7.1 | 10 | 14.5 | 21.3 | 16.8 | 13.3 | 3.4 | 2.9 | 2.5 | 18.9 |
| $\phi 5/32$ | 1/16 | KQ2T03-33□P | 11.11 | 8.2 | 10 | 14.8 | 21.1 | 19.8 | 13.3 | 6 | 4.1 | 3 | 16.3 |
| | 1/8 | KQ2T03-34□P | 12.7 | 8.2 | 10 | 14.8 | 16.2 | 14.9 | 13.3 | 6 | 4.1 | 3 | 7 |
| | 1/4 | KQ2T03-35□P | 17.46 | 8.2 | 10 | 14.8 | 21.9 | 17.9 | 13.3 | 6 | 4.1 | 3 | 19.2 |
| $\phi 3/16$ | 1/8 | KQ2T05-34□P | 12.7 | 9.1 | 10 | 15 | 16.7 | 15.8 | 13.3 | 8.4 | 7 | 3.5 | 7.3 |
| | 1/4 | KQ2T05-35□P | 17.46 | 9.1 | 10 | 15 | 22.4 | 18.8 | 13.3 | 8.4 | 7 | 3.5 | 19.5 |
| $\phi 1/4$ | 1/16 | KQ2T07-33□P | 11.11 | 11.1 | 10 | 15.6 | 22.6 | 22.7 | 13.3 | 8.5 | 8.5 | 3.5 | 9.1 |
| | 1/8 | KQ2T07-34□P | 12.7 | 11.1 | 10 | 15.6 | 17.7 | 17.8 | 13.3 | 14 | 12.4 | 4.5 | 7.9 |
| | 1/4 | KQ2T07-35□P | 17.46 | 11.1 | 10 | 15.6 | 23.4 | 20.8 | 13.3 | 14 | 12.4 | 4.5 | 20.2 |
| | 3/8 | KQ2T07-36□P | 22 | 11.1 | 10 | 15.6 | 23.9 | 21.3 | 13.3 | 14 | 12.4 | 4.5 | 33.7 |
| $\phi 5/16$ | 1/8 | KQ2T09-34□P | 12.7 | 13.2 | 10 | 16.4 | 18.7 | 19.9 | 14.2 | 14 | 14 | 4.5 | 9.4 |
| | 1/4 | KQ2T09-35□P | 17.46 | 13.2 | 12 | 17.2 | 23.4 | 21.9 | 14.2 | 26.3 | 18.2 | 6 | 17.4 |
| | 3/8 | KQ2T09-36□P | 22 | 13.2 | 12 | 17.2 | 24.9 | 23.4 | 14.2 | 26.3 | 18.2 | 6 | 32.5 |
| $\phi 3/8$ | 1/8 | KQ2T11-34□P | 12.7 | 15.4 | 12 | 18.6 | 22.1 | 24.4 | 15.6 | 21.2 | 21.2 | 6 | 13.3 |
| | 1/4 | KQ2T11-35□P | 17.46 | 15.4 | 17 | 19.3 | 25.3 | 24.9 | 15.6 | 28.8 | 23.8 | 7.5 | 20.5 |
| | 3/8 | KQ2T11-36□P | 22 | 15.4 | 17 | 19.3 | 26 | 25.6 | 15.6 | 28.8 | 23.8 | 7.5 | 21.4 |
| | 1/2 | KQ2T11-37□P | 28.57 | 15.4 | 17 | 19.3 | 31.3 | 28.6 | 15.6 | 28.8 | 23.8 | 7.5 | 56.4 |
| $\phi 1/2$ | 1/4 | KQ2T13-35□P | 17.46 | 19.3 | 17 | 21.5 | 27.2 | 28.8 | 17 | 57.3 | 50.6 | 9 | 24.5 |
| | 3/8 | KQ2T13-36□P | 22 | 19.3 | 17 | 21.8 | 28.1 | 29.7 | 17 | 63.8 | 50.6 | 9.5 | 38.9 |
| | 1/2 | KQ2T13-37□P | 28.57 | 19.3 | 17 | 21.8 | 33.2 | 32.5 | 17 | 63.8 | 50.6 | 9.5 | 80.6 |

□/A: Brass, N: Brass + Electroless nickel plated

Note) ϕD_1 is maximum diameter.



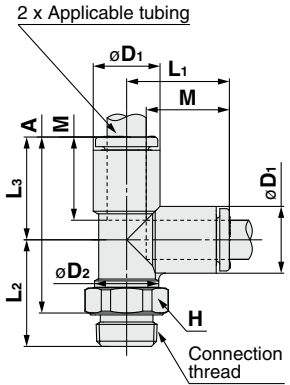
Dimensions

Male Run Tee: KQ2Y (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| ø1/8 | 1/16 | KQ2Y01-33□P | 11.11 | 7.1 | 10 | 14.9 | 21.5 | 14.9 | 31.1 | 13.3 | 3.4 | 2.9 | 2.5 | 15.8 |
| | 1/8 | KQ2Y01-34□P | 12.7 | 7.1 | 10 | 14.9 | 16.6 | 14.9 | 26.2 | 13.3 | 3.4 | 2.9 | 2.5 | 6.7 |
| | 1/4 | KQ2Y01-35□P | 17.46 | 7.1 | 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□P | 11.11 | 8.2 | 10 | 15.3 | 21.1 | 15.3 | 31 | 13.3 | 6.4 | 4.4 | 3 | 16.4 |
| | 1/8 | KQ2Y03-34□P | 12.7 | 8.2 | 10 | 15.3 | 16.2 | 15.3 | 26.1 | 13.3 | 6.4 | 4.4 | 3 | 7 |
| | 1/4 | KQ2Y03-35□P | 17.46 | 8.2 | 10 | 15.3 | 21.9 | 15.3 | 29.1 | 13.3 | 6.4 | 4.4 | 3 | 19.2 |
| ø3/16 | 1/8 | KQ2Y05-34□P | 12.7 | 9.1 | 10 | 15.7 | 16.7 | 15.7 | 27 | 13.3 | 8.4 | 7 | 3.5 | 7.3 |
| | 1/4 | KQ2Y05-35□P | 17.46 | 9.1 | 10 | 15.7 | 22.4 | 15.7 | 30 | 13.3 | 8.4 | 7 | 3.5 | 19.6 |
| ø1/4 | 1/16 | KQ2Y07-33□P | 11.11 | 11.1 | 10 | 16.5 | 22.6 | 16.5 | 33.7 | 13.3 | 8.5 | 8.5 | 3.5 | 9.2 |
| | 1/8 | KQ2Y07-34□P | 12.7 | 11.1 | 10 | 16.5 | 17.7 | 16.5 | 28.8 | 13.3 | 14 | 12.4 | 4.5 | 8 |
| | 1/4 | KQ2Y07-35□P | 17.46 | 11.1 | 10 | 16.5 | 23.4 | 16.5 | 31.8 | 13.3 | 14 | 12.4 | 4.5 | 20.2 |
| | 3/8 | KQ2Y07-36□P | 22 | 11.1 | 10 | 16.5 | 23.9 | 16.5 | 32.3 | 13.3 | 14 | 12.4 | 4.5 | 33.7 |
| ø5/16 | 1/8 | KQ2Y09-34□P | 12.7 | 13.2 | 10 | 18.2 | 18.7 | 18.2 | 31.5 | 14.2 | 14 | 14 | 4.5 | 9.4 |
| | 1/4 | KQ2Y09-35□P | 17.46 | 13.2 | 12 | 18.2 | 23.4 | 18.2 | 33.5 | 14.2 | 25.6 | 17.7 | 6 | 17.5 |
| ø3/8 | 3/8 | KQ2Y09-36□P | 22 | 13.2 | 12 | 18.2 | 24.9 | 18.2 | 35 | 14.2 | 25.6 | 17.7 | 6 | 32.6 |
| | 1/4 | KQ2Y11-35□P | 17.46 | 15.4 | 17 | 20.4 | 25.3 | 20.4 | 37.6 | 15.6 | 28.8 | 23.8 | 7.5 | 20.7 |
| ø1/2 | 3/8 | KQ2Y11-36□P | 22 | 15.4 | 17 | 20.4 | 26 | 20.4 | 38.3 | 15.6 | 28.8 | 23.8 | 7.5 | 21.5 |
| | 1/2 | KQ2Y11-37□P | 28.57 | 15.4 | 17 | 20.4 | 31.3 | 20.4 | 41.3 | 15.6 | 28.8 | 23.8 | 7.5 | 56.5 |
| ø1/2 | 1/4 | KQ2Y13-35□P | 17.46 | 19.3 | 17 | 23.4 | 27.2 | 23.4 | 42.5 | 17 | 57.3 | 50.6 | 9 | 24.9 |
| | 3/8 | KQ2Y13-36□P | 22 | 19.3 | 17 | 23.4 | 28.1 | 23.4 | 43.4 | 17 | 63.8 | 50.6 | 9.5 | 39.1 |
| ø1/2 | 1/2 | KQ2Y13-37□P | 28.57 | 19.3 | 17 | 23.4 | 33.2 | 23.4 | 46.2 | 17 | 63.8 | 50.6 | 9.5 | 80.8 |

□/A: Brass, N: Brass + Electroless nickel plated * Reference dimensions after installation of NPT thread
Note) ϕD_1 is maximum diameter.

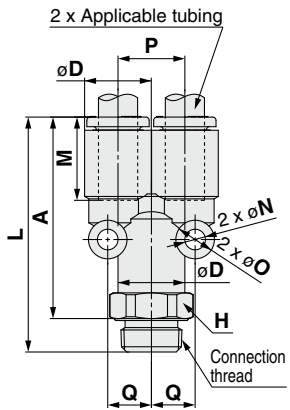


Branch "Y": KQ2U (Face seal)



| Applicable tubing O.D. (inch) | Connection thread NPT | Model | H (Width across flats) | Note) ϕD | L | P | A* | M | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|-------------|------------------------|----------------|------|------|------|------|------|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| ø1/8 | 1/16 | KQ2U01-33□P | 11.11 | 7.1 | 35.9 | 7.1 | 30.5 | 13.3 | 5.2 | 6 | 3.2 | 3.4 | 2.9 | 2.5 | 7.2 |
| | 1/8 | KQ2U01-34□P | 12.7 | 7.1 | 35.9 | 7.1 | 30.5 | 13.3 | 5.2 | 6 | 3.2 | 3.4 | 2.9 | 2.7 | 9.8 |
| | 1/4 | KQ2U01-35□P | 17.46 | 7.1 | 39.6 | 7.1 | 31.5 | 13.3 | 5.2 | 6 | 3.2 | 3.4 | 2.9 | 2.7 | 20.3 |
| ø5/32 | 1/16 | KQ2U03-33□P | 11.11 | 8.2 | 36 | 8.2 | 30.6 | 13.3 | 5.7 | 6 | 3.2 | 4.2 | 4.2 | 3.6 | 7.5 |
| | 1/8 | KQ2U03-34□P | 12.7 | 8.2 | 36 | 8.2 | 30.6 | 13.3 | 5.7 | 6 | 3.2 | 4.2 | 4.2 | 3.6 | 10.1 |
| ø3/16 | 1/4 | KQ2U03-35□P | 17.46 | 8.2 | 39.7 | 8.2 | 31.6 | 13.3 | 5.7 | 6 | 3.2 | 4.2 | 4.2 | 3.6 | 20.5 |
| | 1/8 | KQ2U05-34□P | 12.7 | 9.1 | 36.6 | 9.1 | 31.2 | 13.3 | 6.2 | 6 | 3.2 | 8.4 | 7 | 4.1 | 10.6 |
| ø1/4 | 1/4 | KQ2U05-35□P | 17.46 | 9.1 | 40.3 | 9.1 | 32.2 | 13.3 | 6.2 | 6 | 3.2 | 8.4 | 7 | 4.1 | 20.9 |
| | 1/16 | KQ2U07-33□P | 12.7 | 11.1 | 37.3 | 11.1 | 31.9 | 13.3 | 7.6 | 8 | 4 | 8.5 | 8.5 | 3.5 | 12.2 |
| ø1/4 | 1/8 | KQ2U07-34□P | 12.7 | 11.1 | 37.3 | 11.1 | 31.9 | 13.3 | 7.6 | 8 | 4 | 14.4 | 12.4 | 5.6 | 11.7 |
| | 1/4 | KQ2U07-35□P | 17.46 | 11.1 | 41 | 11.1 | 32.9 | 13.3 | 7.6 | 8 | 4 | 14.4 | 12.4 | 5.6 | 21.6 |
| | 3/8 | KQ2U07-36□P | 22 | 11.1 | 40.5 | 11.1 | 32.4 | 13.3 | 7.6 | 8 | 4 | 14.4 | 12.4 | 5.6 | 30.6 |
| ø5/16 | 1/8 | KQ2U09-34□P | 14.29 | 13.2 | 40.2 | 13.2 | 34.8 | 14.2 | 8.7 | 8 | 4.2 | 25.6 | 17.7 | 6 | 16.3 |
| | 1/4 | KQ2U09-35□P | 17.46 | 13.2 | 43.9 | 13.2 | 35.8 | 14.2 | 8.7 | 8 | 4.2 | 25.6 | 17.7 | 7.3 | 22.6 |
| ø3/8 | 3/8 | KQ2U09-36□P | 22 | 13.2 | 43.4 | 13.2 | 35.3 | 14.2 | 8.7 | 8 | 4.2 | 25.6 | 17.7 | 7.3 | 31.5 |
| | 1/4 | KQ2U11-35□P | 17.46 | 15.4 | 47.4 | 15.4 | 39.3 | 15.6 | 9.9 | 8 | 4.2 | 28.8 | 23.8 | 8.9 | 23.8 |
| ø1/2 | 3/8 | KQ2U11-36□P | 22 | 15.4 | 46.9 | 15.4 | 38.8 | 15.6 | 9.9 | 8 | 4.2 | 28.8 | 23.8 | 8.9 | 32.9 |
| | 1/2 | KQ2U11-37□P | 28.57 | 15.4 | 48.7 | 15.4 | 38.3 | 15.6 | 9.9 | 8 | 4.2 | 28.8 | 23.8 | 8.9 | 53.2 |
| ø1/2 | 1/4 | KQ2U13-35□P | 22 | 19.3 | 52.2 | 19.3 | 44.1 | 17 | 11.8 | 8 | 4.2 | 57.3 | 50.6 | 9 | 41.4 |
| | 3/8 | KQ2U13-36□P | 22 | 19.3 | 51.7 | 19.3 | 43.6 | 17 | 11.8 | 8 | 4.2 | 64.6 | 50.6 | 11 | 39 |
| ø1/2 | 1/2 | KQ2U13-37□P | 28.57 | 19.3 | 53.5 | 19.3 | 43.1 | 17 | 11.8 | 8 | 4.2 | 64.6 | 50.6 | 12.1 | 54.8 |

□/A: Brass, N: Brass + Electroless nickel plated * Reference dimensions after installation of NPT thread
Note) ϕD is maximum diameter.



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

Inch Size One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: R

Series KQ2

Guide
Chuck
Suitable for use with nylon and urethane. Large retaining force.
The chuck provides secure retention and the collet increases the holding force on the tube.

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

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 -100 kPa

New thread for piping that drastically reduced the screw-in time thanks to 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 ^{Note 1)} |
| Operating pressure range ^{Note 2)} | | -100 kPa to 1 MPa |
| Proof pressure (at 23°C) | | 3 MPa |
| Ambient and fluid temperature | | -5 to 60°C, Water: 0 to 40°C (No freezing) |
| Thread | Mounting section | JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread) |
| | Nut section | JIS B0205 (Metric fine thread) |
| Sealant on the threads | | Seal ring |

Note 1) The surge pressure must be under the maximum operating pressure.

Note 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, 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 plated |

• 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

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Inch Size One-touch Fittings

Variations

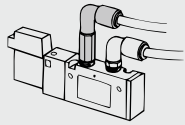
Extended male elbow

KQ2W

P.98



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.



Male connector

KQ2H

P.98



Use to pipe a female thread. Most general model.

Male branch tee

KQ2T

P.99



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

Branch "Y"

KQ2U

P.99



Use to branch a female thread.

Male elbow

KQ2L

P.98



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

Male run tee

KQ2Y

P.99



Use to branch a female thread at a 90° angle.

Dimensions

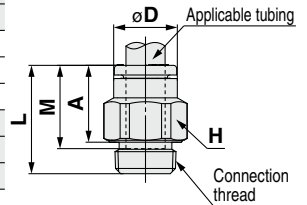
Male Connector: KQ2H (Face seal)



| Applicable tubing O.D. (inch) | Connection thread R | Model | H (Width across flats) | øD | L | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---------------------|-------------|------------------------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | Nylon | Urethane | | |
| ø1/8 | 1/8 | KQ2H01-01□P | 12 | 6.7 | 14.1 | 8.9 | 13.3 | 3.4 | 2.9 | 2.5 | 6.3 |
| | 1/4 | KQ2H01-02□P | 17 | 6.7 | 15 | 7.4 | 13.3 | 3.4 | 2.9 | 2.5 | 15.1 |
| ø3/16 | 1/8 | KQ2H05-01□P | 12 | 8.3 | 16.7 | 11.5 | 13.3 | 7.8 | 6.5 | 3.5 | 6.8 |
| | 1/4 | KQ2H05-02□P | 17 | 8.3 | 15 | 7.4 | 13.3 | 7.8 | 6.5 | 3.5 | 13.9 |
| ø1/4 | 1/8 | KQ2H07-01□P | 12 | 10.9 | 19.4 | 14.2 | 13.3 | 13.5 | 11.5 | 4.6 | 8.2 |
| | 1/4 | KQ2H07-02□P | 17 | 10.9 | 15 | 7.4 | 13.3 | 13.5 | 11.5 | 4.6 | 12.2 |
| | 3/8 | KQ2H07-03□P | 21 | 10.9 | 14.5 | 6.9 | 13.3 | 13.5 | 11.5 | 4.6 | 20.4 |
| ø5/16 | 1/8 | KQ2H09-01□P | 14 | 13 | 21.1 | 15.9 | 14.2 | 26.1 | 18 | 6 | 11.8 |
| | 1/4 | KQ2H09-02□P | 17 | 13 | 19.9 | 12.3 | 14.2 | 26.1 | 18 | 6 | 13.9 |
| ø3/8 | 3/8 | KQ2H09-03□P | 21 | 13 | 15.2 | 7.6 | 14.2 | 26.1 | 18 | 6 | 19.6 |
| | 1/4 | KQ2H11-02□P | 17 | 15.1 | 23.9 | 16.3 | 15.6 | 35.3 | 29.1 | 7 | 18 |
| ø3/8 | 3/8 | KQ2H11-03□P | 21 | 15.1 | 21.2 | 13.6 | 15.6 | 35.3 | 29.1 | 7 | 24.3 |
| | 1/2 | KQ2H11-04□P | 27 | 15.1 | 18.8 | 8.4 | 15.6 | 35.3 | 29.1 | 7 | 42 |
| ø1/2 | 1/4 | KQ2H13-02□P | 19 | 19 | 26.8 | 19.2 | 17 | 58.5 | 51.7 | 9 | 21.3 |
| | 3/8 | KQ2H13-03□P | 21 | 19 | 25.6 | 18 | 17 | 66.0 | 51.7 | 9.6 | 28.9 |
| ø1/2 | 1/2 | KQ2H13-04□P | 27 | 19 | 26.5 | 16.1 | 17 | 66.0 | 51.7 | 9.6 | 50.9 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of R thread



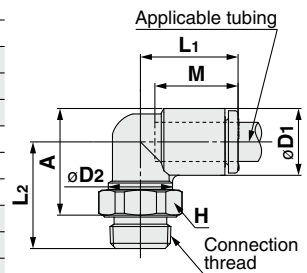
Male Elbow: KQ2L (Face seal)



| Applicable tubing O.D. (inch) | Connection thread R | Model | H (Width across flats) | Note) øD1 | øD2 | L1 | L2 | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---------------------|-------------|------------------------|-----------|-----|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| ø3/16 | 1/8 | KQ2L05-01□P | 12 | 9.1 | 10 | 15 | 16.0 | 15.3 | 13.3 | 6.8 | 5.6 | 3.5 | 5.4 |
| | 1/4 | KQ2L05-02□P | 17 | 9.1 | 10 | 15 | 20.4 | 17.3 | 13.3 | 6.8 | 5.6 | 3.5 | 14.7 |
| ø1/4 | 1/8 | KQ2L07-01□P | 12 | 11.1 | 10 | 15.6 | 17.0 | 17.3 | 13.3 | 11.3 | 10 | 4.5 | 5.8 |
| | 1/4 | KQ2L07-02□P | 17 | 11.1 | 10 | 15.6 | 21.4 | 19.3 | 13.3 | 11.3 | 10 | 4.5 | 15 |
| ø1/4 | 3/8 | KQ2L07-03□P | 21 | 11.1 | 10 | 15.6 | 23.4 | 21.3 | 13.3 | 11.3 | 10 | 4.5 | 30.3 |
| | 1/8 | KQ2L09-01□P | 12 | 13.2 | 10 | 16.4 | 18.0 | 19.4 | 14.2 | 11.4 | 11.4 | 4.5 | 6.5 |
| ø5/16 | 1/4 | KQ2L09-02□P | 17 | 13.2 | 12 | 17.2 | 22.4 | 21.4 | 14.2 | 21.6 | 14.9 | 6 | 13.7 |
| | 3/8 | KQ2L09-03□P | 21 | 13.2 | 12 | 17.2 | 24.4 | 23.4 | 14.2 | 21.6 | 14.9 | 6 | 28.7 |
| ø3/8 | 1/4 | KQ2L11-02□P | 17 | 15.4 | 17 | 19.3 | 25.5 | 25.5 | 15.6 | 28.8 | 23.8 | 7.5 | 17.7 |
| | 3/8 | KQ2L11-03□P | 21 | 15.4 | 17 | 19.3 | 25.6 | 25.6 | 15.6 | 28.8 | 23.8 | 7.5 | 17.6 |
| ø3/8 | 1/2 | KQ2L11-04□P | 27 | 15.4 | 17 | 19.3 | 30.4 | 27.6 | 15.6 | 28.8 | 23.8 | 7.5 | 44.8 |
| | 1/4 | KQ2L13-02□P | 17 | 19.3 | 17 | 21.5 | 27.4 | 29.4 | 17 | 50.3 | 44.4 | 9 | 20 |
| ø1/2 | 3/8 | KQ2L13-03□P | 21 | 19.3 | 17 | 21.8 | 27.7 | 29.7 | 17 | 56.7 | 44.4 | 9.5 | 32.6 |
| | 1/2 | KQ2L13-04□P | 27 | 19.3 | 17 | 21.8 | 32.3 | 31.5 | 17 | 56.7 | 44.4 | 9.5 | 64.5 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of R thread
Note) øD1 is maximum diameter.



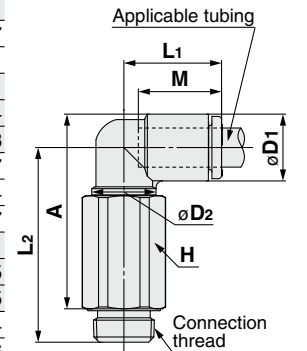
Extended Male Elbow: KQ2W (Face seal)



| Applicable tubing O.D. (inch) | Connection thread R | Model | H (Width across flats) | Note) øD1 | øD2 | L1 | L2 | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---------------------|-------------|------------------------|-----------|-----|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| ø3/16 | 1/8 | KQ2W05-01□P | 12 | 9.1 | 10 | 15 | 29.7 | 29 | 13.3 | 6.8 | 5.6 | 3.5 | 15.7 |
| | 1/4 | KQ2W05-02□P | 17 | 9.1 | 10 | 15 | 32 | 29 | 13.3 | 6.8 | 5.6 | 3.5 | 35.1 |
| ø1/4 | 1/8 | KQ2W07-01□P | 12 | 11.1 | 10 | 15.6 | 30.7 | 31 | 13.3 | 11.6 | 10.0 | 4.5 | 16 |
| | 1/4 | KQ2W07-02□P | 17 | 11.1 | 10 | 15.6 | 33 | 31 | 13.3 | 11.6 | 10.0 | 4.5 | 35.4 |
| ø1/4 | 3/8 | KQ2W07-03□P | 21 | 11.1 | 10 | 15.6 | 35 | 33 | 13.3 | 11.6 | 10.0 | 4.5 | 62.8 |
| | 1/8 | KQ2W09-01□P | 12 | 13.2 | 10 | 16.4 | 31.7 | 33.1 | 14.2 | 11.6 | 11.6 | 4.5 | 16.7 |
| ø5/16 | 1/4 | KQ2W09-02□P | 17 | 13.2 | 12 | 17.2 | 36.1 | 35.1 | 14.2 | 21.5 | 14.9 | 6 | 35.4 |
| | 3/8 | KQ2W09-03□P | 21 | 13.2 | 12 | 17.2 | 38.1 | 37.1 | 14.2 | 21.5 | 14.9 | 6 | 64.7 |
| ø3/8 | 1/4 | KQ2W11-02□P | 17 | 15.4 | 17 | 19.3 | 49.9 | 50 | 15.6 | 28.8 | 23.8 | 7 | 54.1 |
| | 3/8 | KQ2W11-03□P | 21 | 15.4 | 17 | 19.3 | 44.5 | 44.6 | 15.6 | 28.8 | 23.8 | 7 | 57.5 |
| ø3/8 | 1/2 | KQ2W11-04□P | 27 | 15.4 | 17 | 19.3 | 49.3 | 46.6 | 15.6 | 28.8 | 23.8 | 7 | 122.5 |
| | 1/4 | KQ2W13-02□P | 17 | 19.3 | 17 | 21.5 | 51.8 | 53.9 | 17 | 56.7 | 44.4 | 9 | 56.4 |
| ø1/2 | 3/8 | KQ2W13-03□P | 21 | 19.3 | 17 | 21.8 | 47.4 | 49.5 | 17 | 56.7 | 44.4 | 9.5 | 81.6 |
| | 1/2 | KQ2W13-04□P | 27 | 19.3 | 17 | 21.8 | 52 | 51.3 | 17 | 56.7 | 44.4 | 9.5 | 143.9 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of R thread
Note) 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

Metric Size Uni

Gasket Seal
Inch Size Uni

Series KQ2

Applicable Tubing: Inch Size, Connection Thread: R

Dimensions

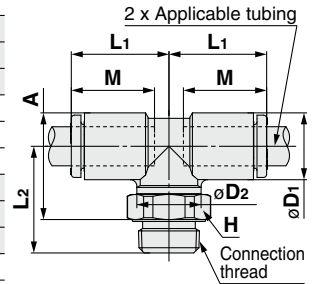
Male Branch Tee: KQ2T (Face seal)



| Applicable tubing O.D. (inch) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3/16$ | 1/8 | KQ2T05-01□P | 12 | 9.1 | 10 | 15 | 16 | 15.3 | 13.3 | 8.4 | 7.0 | 3.5 | 6.2 |
| | 1/4 | KQ2T05-02□P | 17 | 9.1 | 10 | 15 | 20.4 | 17.3 | 13.3 | 8.4 | 7.0 | 3.5 | 15.5 |
| $\phi 1/4$ | 1/8 | KQ2T07-01□P | 12 | 11.1 | 10 | 15.6 | 17 | 17.3 | 13.3 | 14.4 | 12.4 | 4.5 | 6.9 |
| | 1/4 | KQ2T07-02□P | 17 | 11.1 | 10 | 15.6 | 21.4 | 19.3 | 13.3 | 14.4 | 12.4 | 4.5 | 16.2 |
| | 3/8 | KQ2T07-03□P | 21 | 11.1 | 10 | 15.6 | 23.4 | 21.3 | 13.3 | 14.4 | 12.4 | 4.5 | 31.5 |
| $\phi 5/16$ | 1/8 | KQ2T09-01□P | 12 | 13.2 | 10 | 16.4 | 18 | 19.4 | 14.2 | 14.4 | 14.4 | 4.5 | 8.3 |
| | 1/4 | KQ2T09-02□P | 17 | 13.2 | 12 | 17.2 | 22.4 | 21.4 | 14.2 | 26.3 | 18.2 | 6 | 15.5 |
| | 3/8 | KQ2T09-03□P | 21 | 13.2 | 12 | 17.2 | 24.4 | 23.4 | 14.2 | 26.3 | 18.2 | 6 | 30.4 |
| $\phi 3/8$ | 1/4 | KQ2T11-02□P | 17 | 15.4 | 17 | 19.3 | 25.4 | 25.5 | 15.6 | 28.8 | 23.8 | 7.5 | 20.1 |
| | 3/8 | KQ2T11-03□P | 21 | 15.4 | 17 | 19.3 | 25.5 | 25.6 | 15.6 | 28.8 | 23.8 | 7.5 | 20 |
| | 1/2 | KQ2T11-04□P | 27 | 15.4 | 17 | 19.3 | 30.3 | 27.6 | 15.6 | 28.8 | 23.8 | 7.5 | 47.3 |
| $\phi 1/2$ | 1/4 | KQ2T13-02□P | 17 | 19.3 | 17 | 21.5 | 27.3 | 29.4 | 17 | 57.3 | 50.6 | 9 | 24.1 |
| | 3/8 | KQ2T13-03□P | 21 | 19.3 | 17 | 21.8 | 27.6 | 29.7 | 17 | 63.8 | 50.6 | 9.5 | 36.7 |
| | 1/2 | KQ2T13-04□P | 27 | 19.3 | 17 | 21.8 | 32.2 | 31.5 | 17 | 63.8 | 50.6 | 9.5 | 68.7 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of R thread
Note) ϕD_1 is maximum diameter.



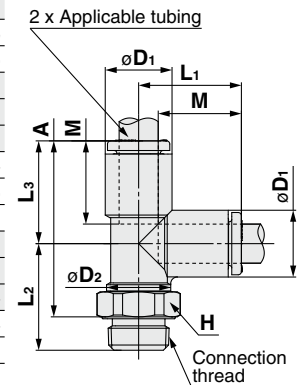
Male Run Tee: KQ2Y (Face seal)



| Applicable tubing O.D. (inch) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | L ₃ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3/16$ | 1/8 | KQ2Y05-01□P | 12 | 9.1 | 10 | 15.7 | 16 | 15.7 | 26.5 | 13.3 | 8.4 | 7.0 | 3.5 | 6.3 |
| | 1/4 | KQ2Y05-02□P | 17 | 9.1 | 10 | 15.7 | 20.4 | 15.7 | 28.5 | 13.3 | 8.4 | 7.0 | 3.5 | 15.6 |
| $\phi 1/4$ | 1/8 | KQ2Y07-01□P | 12 | 11.1 | 10 | 16.5 | 17 | 16.5 | 28.3 | 13.3 | 14.0 | 12.4 | 4.5 | 6.9 |
| | 1/4 | KQ2Y07-02□P | 17 | 11.1 | 10 | 16.5 | 21.4 | 16.5 | 30.3 | 13.3 | 14.0 | 12.4 | 4.5 | 16.2 |
| | 3/8 | KQ2Y07-03□P | 21 | 11.1 | 10 | 16.5 | 23.4 | 16.5 | 32.3 | 13.3 | 14.0 | 12.4 | 4.5 | 31.5 |
| $\phi 5/16$ | 1/8 | KQ2Y09-01□P | 12 | 13.2 | 10 | 18.2 | 18 | 18.2 | 31 | 14.2 | 14.0 | 14.0 | 4.5 | 8.4 |
| | 1/4 | KQ2Y09-02□P | 17 | 13.2 | 12 | 18.2 | 22.4 | 18.2 | 33 | 14.2 | 26.3 | 18.3 | 6 | 15.6 |
| | 3/8 | KQ2Y09-03□P | 21 | 13.2 | 12 | 18.2 | 24.4 | 18.2 | 35 | 14.2 | 26.3 | 18.3 | 6 | 30.5 |
| $\phi 3/8$ | 1/4 | KQ2Y11-02□P | 17 | 15.4 | 17 | 20.4 | 25.4 | 20.4 | 38.2 | 15.6 | 28.8 | 23.8 | 7.5 | 20.2 |
| | 3/8 | KQ2Y11-03□P | 21 | 15.4 | 17 | 20.4 | 25.5 | 20.4 | 38.3 | 15.6 | 28.8 | 23.8 | 7.5 | 20.1 |
| | 1/2 | KQ2Y11-04□P | 27 | 15.4 | 17 | 20.4 | 30.3 | 20.4 | 40.3 | 15.6 | 28.8 | 23.8 | 7.5 | 47.4 |
| $\phi 1/2$ | 1/4 | KQ2Y13-02□P | 17 | 19.3 | 17 | 23.4 | 27.3 | 23.4 | 43.1 | 17 | 57.3 | 50.6 | 9 | 24.4 |
| | 3/8 | KQ2Y13-03□P | 21 | 19.3 | 17 | 23.4 | 27.6 | 23.4 | 43.4 | 17 | 64.6 | 50.6 | 9.5 | 37 |
| | 1/2 | KQ2Y13-04□P | 27 | 19.3 | 17 | 23.4 | 32.2 | 23.4 | 45.2 | 17 | 64.6 | 50.6 | 9.5 | 68.9 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of R thread
Note) ϕD_1 is maximum diameter.



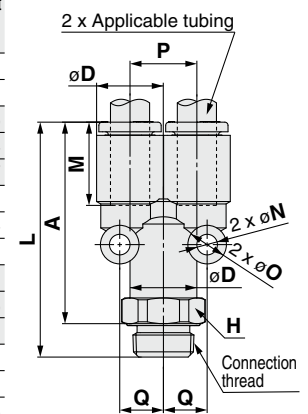
Branch "Y": KQ2U (Face seal)



| Applicable tubing O.D. (inch) | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | L | P | A* | M | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|---------------------|-------------|------------------------|------------------|------|------|------|------|------|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| $\phi 3/16$ | 1/8 | KQ2U05-01□P | 12 | 9.1 | 36.4 | 9.1 | 31.2 | 13.3 | 6.2 | 6 | 3.2 | 8.4 | 7.0 | 4.1 | 9.8 |
| | 1/4 | KQ2U05-02□P | 17 | 9.1 | 39.8 | 9.1 | 32.2 | 13.3 | 6.2 | 6 | 3.2 | 8.4 | 7.0 | 4.1 | 19.6 |
| $\phi 1/4$ | 1/8 | KQ2U07-01□P | 14 | 11.1 | 37.1 | 11.1 | 31.9 | 13.3 | 7.6 | 8 | 4 | 14.4 | 12.4 | 5.6 | 12.3 |
| | 1/4 | KQ2U07-02□P | 17 | 11.1 | 40.5 | 11.1 | 32.9 | 13.3 | 7.6 | 8 | 4 | 14.4 | 12.4 | 5.6 | 20.4 |
| | 3/8 | KQ2U07-03□P | 21 | 11.1 | 40 | 11.1 | 32.4 | 13.3 | 7.6 | 8 | 4 | 14.4 | 12.4 | 5.6 | 28.7 |
| $\phi 5/16$ | 1/8 | KQ2U09-01□P | 14 | 13.2 | 40 | 13.2 | 34.8 | 14.2 | 8.7 | 8 | 4.2 | 26.3 | 18.3 | 6 | 15.8 |
| | 1/4 | KQ2U09-02□P | 17 | 13.2 | 43.4 | 13.2 | 35.8 | 14.2 | 8.7 | 8 | 4.2 | 26.3 | 18.3 | 7.3 | 21.4 |
| | 3/8 | KQ2U09-03□P | 21 | 13.2 | 42.9 | 13.2 | 35.3 | 14.2 | 8.7 | 8 | 4.2 | 26.3 | 18.3 | 7.3 | 29.8 |
| $\phi 3/8$ | 1/4 | KQ2U11-02□P | 17 | 15.4 | 46.9 | 15.4 | 39.3 | 15.6 | 9.9 | 8 | 4.2 | 28.8 | 23.8 | 8.9 | 22.8 |
| | 3/8 | KQ2U11-03□P | 21 | 15.4 | 46.4 | 15.4 | 38.8 | 15.6 | 9.9 | 8 | 4.2 | 28.8 | 23.8 | 8.9 | 31.3 |
| | 1/2 | KQ2U11-04□P | 27 | 15.4 | 48.7 | 15.4 | 38.3 | 15.6 | 9.9 | 8 | 4.2 | 28.8 | 23.8 | 8.9 | 49.6 |
| $\phi 1/2$ | 1/4 | KQ2U13-02□P | 21 | 19.3 | 51.2 | 19.3 | 43.6 | 17 | 11.8 | 8 | 4.2 | 57.3 | 50.6 | 9 | 38.8 |
| | 3/8 | KQ2U13-03□P | 21 | 19.3 | 51.2 | 19.3 | 43.6 | 17 | 11.8 | 8 | 4.2 | 64.6 | 50.6 | 11 | 37.6 |
| | 1/2 | KQ2U13-04□P | 27 | 19.3 | 53.5 | 19.3 | 43.1 | 17 | 11.8 | 8 | 4.2 | 64.6 | 50.6 | 12.1 | 51.3 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of R thread
Note) ϕD_1 is maximum diameter.

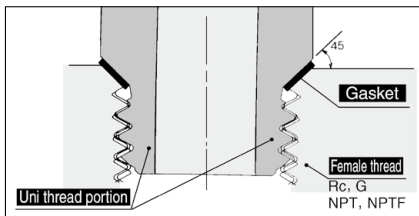
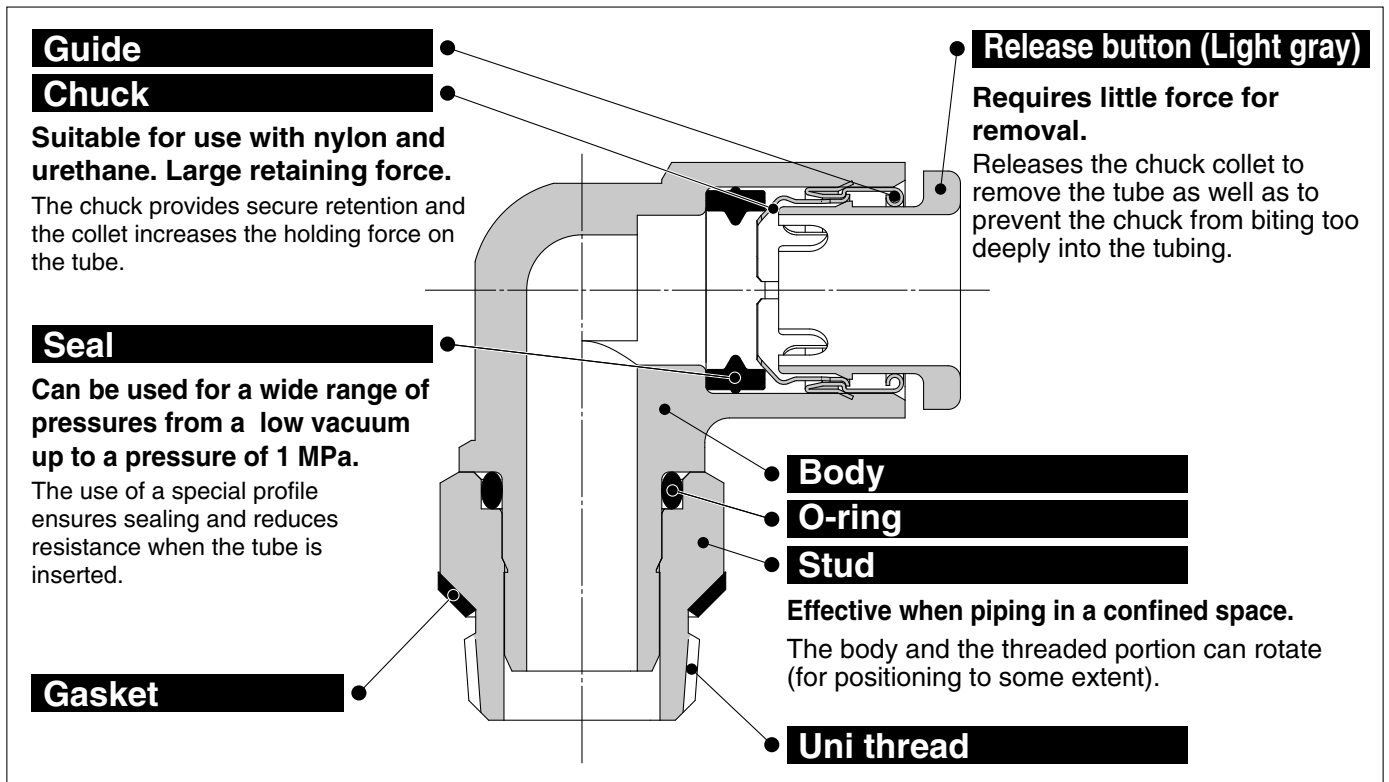


| Gasket Seal | | Face Seal | | | Sealant/Gasket Seal | | |
|---------------|-----------------|-------------|---------------|-------------------|---------------------|--------------------|----------------------|
| Inch Size Uni | Metric Size Uni | Inch Size R | Inch Size NPT | Metric Size R, Rc | Metric Size G | 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

Series KQ2



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.

The male thread for piping drastically cuts piping manhours.



Applicable Tubing

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

Specifications

| | |
|---|---|
| Fluid | Air/Water ^{Note 1)} |
| Operating pressure range ^{Note 2)} | -100 kPa to 1 MPa |
| Proof pressure (at 23°C) | 3 MPa |
| Ambient and fluid temperature | -5 to 60°C, Water: 0 to 40°C (No freezing) |

Note 1) The surge pressure must be under the maximum operating pressure.

Note 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 Specifications
(Refer to page 107 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 plated |

Port size

| Symbol | | Size |
|-------------------|------------|--------|
| Thread connection | 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

Metric Size R, Rc

Face Seal

Inch Size NPT

Inch Size R

Gasket Seal

Metric Size Uni

Inch Size Uni

Metric Size Uni One-touch Fittings

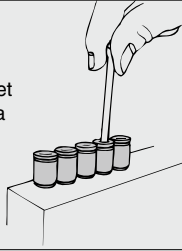
Variations

Hexagon socket head male connector

KQ2S P.104



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

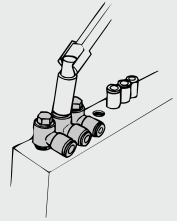


Universal male elbow

KQ2V P.105



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

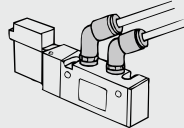


45° male elbow

KQ2K P.105



Use to pipe a female thread at a 45° angle. The model between the male connector and male elbow.

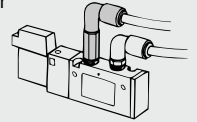


Extended male elbow

KQ2W P.105



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.



Male connector

KQ2H P.104



Use to pipe a female thread. Most general model.

Male elbow

KQ2L P.104



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

Male branch tee

KQ2T P.106



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

Branch "Y"

KQ2U P.106



Use to branch a female thread.

Male run tee

KQ2Y P.106



Use to branch a female thread at a 90° angle.

Metric Size Uni One-touch Fittings *Series KQ2*

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

Dimensions

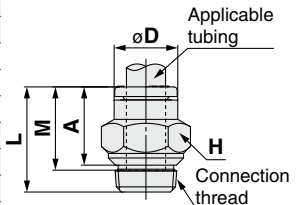
Male Connector: KQ2H (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread Uni | Model | H (Width across flats) | øD | L | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|-----------------------|-------------|------------------------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2H04-U01□ | 10 | 7.7 | 15.9 | 11.1 | 13.3 | 5.6 | 4 | 3 | 6.6 |
| | 1/4 | KQ2H04-U02□ | 14 | 7.7 | 15.3 | 8.9 | 13.3 | 5.6 | 4 | 3 | 12.7 |
| ø6 | 1/8 | KQ2H06-U01□ | 12 | 9.7 | 16.7 | 11.9 | 13.3 | 13.1 | 10.4 | 4.5 | 6.2 |
| | 1/4 | KQ2H06-U02□ | 14 | 9.7 | 17 | 10.6 | 13.3 | 13.1 | 10.4 | 4.5 | 12.8 |
| ø8 | 3/8 | KQ2H06-U03□ | 17 | 9.7 | 14.9 | 8.5 | 13.3 | 13.1 | 10.4 | 4.5 | 18.1 |
| | 1/8 | KQ2H08-U01□ | 14 | 13 | 20.6 | 15.8 | 14.2 | 26.1 | 18 | 6 | 7 |
| ø8 | 1/4 | KQ2H08-U02□ | 14 | 13 | 18.5 | 12.1 | 14.2 | 26.1 | 18 | 6 | 10.1 |
| | 3/8 | KQ2H08-U03□ | 17 | 13 | 14.9 | 8.5 | 14.2 | 26.1 | 18 | 6 | 15 |
| ø10 | 1/8 | KQ2H10-U01□ | 17 | 15.6 | 22.4 | 17.6 | 15.6 | 26.1 | 18 | 6 | 13.9 |
| | 1/4 | KQ2H10-U02□ | 17 | 15.6 | 23.7 | 17.3 | 15.6 | 41.5 | 29.5 | 7.5 | 17.6 |
| | 3/8 | KQ2H10-U03□ | 17 | 15.6 | 19.5 | 13.1 | 15.6 | 41.5 | 29.5 | 7.5 | 15.6 |
| ø12 | 1/2 | KQ2H10-U04□ | 22 | 15.6 | 17 | 8.4 | 15.6 | 41.5 | 29.5 | 7.5 | 29.5 |
| | 1/4 | KQ2H12-U02□ | 19 | 18.2 | 24.8 | 18.4 | 17 | 58.3 | 46.1 | 9 | 13.8 |
| | 3/8 | KQ2H12-U03□ | 19 | 18.2 | 21.8 | 15.4 | 17 | 58.3 | 46.1 | 9 | 17.9 |
| ø16 | 1/2 | KQ2H12-U04□ | 22 | 18.2 | 17.7 | 9.1 | 17 | 58.3 | 46.1 | 9 | 25.4 |
| | 3/8 | KQ2H16-U03□ | 24 | 23.6 | 29.2 | 22.8 | 20.6 | 81 | 67 | 11 | 33.9 |
| ø16 | 1/2 | KQ2H16-U04□ | 24 | 23.6 | 26.8 | 18.2 | 20.6 | 113 | 67 | 13 | 31.5 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of Uni thread



Hexagon Socket Head Male Connector: KQ2S (Gasket seal)

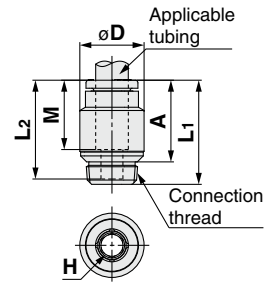


| Applicable tubing O.D. (mm) | Connection thread Uni | Model | H (Width across flats) | Note) øD | L1 | L2 | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|-----------------------|-------------|------------------------|----------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2S04-U01□ | 3 | 10 | 20.6 | 19.6 | 15.8 | 13.3 | 4.1 | 3.6 | 3.1 | 8 |
| ø6 | 1/8 | KQ2S06-U01□ | 4 | 12 | 19.8 | 18.8 | 15 | 13.3 | 10 | 9.9 | 4.1 | 8.2 |
| | 1/4 | KQ2S06-U02□ | 4 | 14 | 19.8 | 18.8 | 13.4 | 13.3 | 10.7 | 10 | 4.1 | 12.3 |
| ø8 | 1/8 | KQ2S08-U01□ | 5 | 14 | 20.7 | 19.7 | 15.9 | 14.2 | 17.2 | 16.2 | 5.1 | 9.4 |
| | 1/4 | KQ2S08-U02□ | 6 | 14 | 20.5 | 19.5 | 14.1 | 14.2 | 23.3 | 16.2 | 6.1 | 10.9 |
| ø8 | 3/8 | KQ2S08-U03□ | 6 | 17 | 20.7 | 19.7 | 14.3 | 14.2 | 23.3 | 16.2 | 6.1 | 19.8 |
| | 1/8 | KQ2S10-U01□ | 5 | 15.6 | 22.4 | 21.9 | 16.8 | 15.6 | 17.2 | 16.2 | 5.1 | 10.5 |
| ø10 | 1/4 | KQ2S10-U02□ | 8 | 17 | 23.7 | 20.1 | 17.3 | 15.6 | 39 | 26.6 | 8.1 | 15.4 |
| | 3/8 | KQ2S10-U03□ | 8 | 17 | 21.1 | 20.1 | 14.7 | 15.6 | 39 | 26.6 | 8.1 | 16.4 |
| ø12 | 1/2 | KQ2S10-U04□ | 8 | 21 | 21.1 | 20.1 | 12.5 | 15.6 | 39 | 26.6 | 8.1 | 29.7 |
| | 1/4 | KQ2S12-U02□ | 8 | 18.2 | 27.8 | 21.5 | 21.4 | 17 | 46 | 44.5 | 8.1 | 20.7 |
| ø12 | 3/8 | KQ2S12-U03□ | 10 | 18.2 | 22.8 | 21.8 | 16.4 | 17 | 60 | 44.5 | 10.1 | 16.1 |
| | 1/2 | KQ2S12-U04□ | 10 | 21 | 22.8 | 21.8 | 14.2 | 17 | 60 | 44.5 | 10.1 | 28.1 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of Uni thread

Note) øD is maximum diameter.



Male Elbow: KQ2L (Gasket seal)

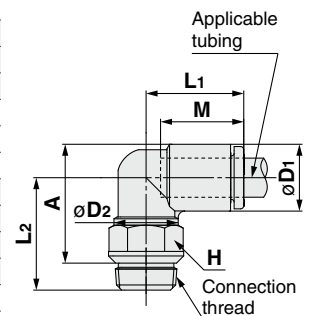


| Applicable tubing O.D. (mm) | Connection thread Uni | Model | H (Width across flats) | Note) øD1 | Note) øD2 | L1 | L2 | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|-----------------------|-------------|------------------------|-----------|-----------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2L04-U01□ | 10 | 8.2 | 10 | 14.8 | 16.4 | 15.7 | 13.3 | 4.2 | 4.2 | 3 | 4.8 |
| | 1/4 | KQ2L04-U02□ | 14 | 8.2 | 10 | 14.8 | 19.2 | 16.9 | 13.3 | 4.2 | 4.2 | 3 | 11.5 |
| ø6 | 1/8 | KQ2L06-U01□ | 10 | 10.4 | 10 | 15.5 | 17.5 | 17.9 | 13.3 | 11.4 | 9 | 4.5 | 5.3 |
| | 1/4 | KQ2L06-U02□ | 14 | 10.4 | 10 | 15.5 | 20.3 | 19.1 | 13.3 | 11.4 | 9 | 4.5 | 12 |
| ø6 | 3/8 | KQ2L06-U03□ | 17 | 10.4 | 10 | 15.5 | 21.4 | 20.2 | 13.3 | 11.4 | 9 | 4.5 | 21.4 |
| | 1/8 | KQ2L08-U01□ | 10 | 13.2 | 10 | 16.4 | 18.9 | 20.7 | 14.2 | 11.4 | 11.4 | 4.5 | 6.1 |
| ø8 | 1/4 | KQ2L08-U02□ | 14 | 13.2 | 12 | 17.2 | 21.7 | 21.9 | 14.2 | 21.6 | 14.9 | 6 | 10.9 |
| | 3/8 | KQ2L08-U03□ | 17 | 13.2 | 12 | 17.2 | 22.8 | 23.0 | 14.2 | 21.6 | 14.9 | 6 | 20.2 |
| ø10 | 1/8 | KQ2L10-U01□ | 14 | 15.9 | 12 | 18.6 | 21.5 | 24.6 | 15.6 | 21.6 | 14.9 | 6 | 12.3 |
| | 1/4 | KQ2L10-U02□ | 17 | 15.9 | 17 | 19.3 | 24.3 | 25.8 | 15.6 | 35.2 | 25 | 7.5 | 16.9 |
| ø10 | 3/8 | KQ2L10-U03□ | 17 | 15.9 | 17 | 19.3 | 26.9 | 28.4 | 15.6 | 35.2 | 25 | 7.5 | 17.9 |
| | 1/2 | KQ2L10-U04□ | 22 | 15.9 | 17 | 19.3 | 34.5 | 33.8 | 15.6 | 35.2 | 25 | 7.5 | 48.2 |
| ø12 | 1/4 | KQ2L12-U02□ | 17 | 18.5 | 17 | 21.5 | 25.6 | 28.4 | 17 | 50.2 | 39.7 | 9 | 18.7 |
| | 3/8 | KQ2L12-U03□ | 17 | 18.5 | 17 | 21.5 | 28.2 | 31.0 | 17 | 50.2 | 39.7 | 9 | 19.8 |
| ø16 | 1/2 | KQ2L12-U04□ | 22 | 18.5 | 17 | 21.5 | 35.8 | 36.4 | 17 | 50.2 | 39.7 | 9 | 50 |
| | 3/8 | KQ2L16-U03□ | 22 | 23.8 | 21 | 27.1 | 32.4 | 37.9 | 20.6 | 71 | 58.9 | 11 | 37.4 |
| ø16 | 1/2 | KQ2L16-U04□ | 22 | 23.8 | 21 | 27.1 | 35.0 | 38.3 | 20.6 | 100 | 58.9 | 13 | 47.9 |

□/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of Uni thread

Note) øD1, øD2 are maximum diameters.



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

Series KQ2

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

Dimensions

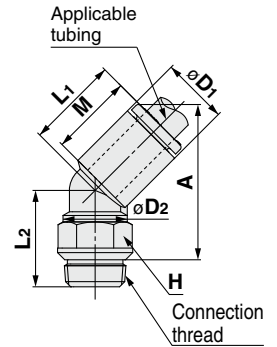
45° Male Elbow: KQ2K (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread Uni | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L1 | L2 | A* | 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 | 3.4 | 3.4 | 4.5 | 4.7 |
| | 1/4 | KQ2K04-U02 | 14 | 8.2 | 10 | 14.4 | 14.7 | 21 | 13.3 | 3.4 | 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 | 18.7 | 27.7 | 14.2 | 19.7 | 19.7 | 6 | 10.7 |
| | 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 plated

* Reference dimensions after installation of Uni thread
Note) ϕD_1 is maximum diameter.



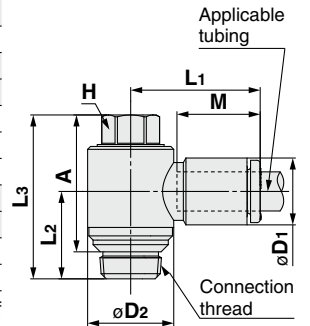
Universal Male Elbow: KQ2V (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread Uni | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L1 | L2 | L3 | A* | 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 plated

* Reference dimensions after installation of Uni thread
Note) ϕD_1 is maximum diameter.



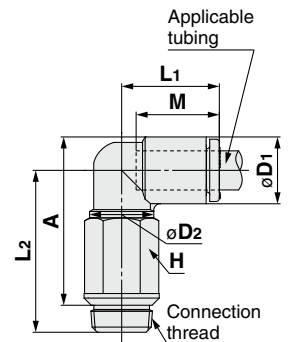
Extended Male Elbow: KQ2W (Gasket seal)



| Applicable tubing O.D. (mm) | Connection thread Uni | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L1 | L2 | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-----------------------------|-----------------------|------------|------------------------|------------------|------------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 plated

* Reference dimensions after installation of Uni thread
Note) ϕD_1 is maximum diameter.



Series KQ2

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 <small>Note)</small> | Body color: Black Release button color: Light gray |

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

2 Clean Series

Please consult with SMC separately for applicable models.

| Symbol | Specifications |
|------------|---|
| 10- | Brass parts: With electroless nickel plated Lubricant: Fluorine grease Air blow in a clean room Double package Resin body/Release button color: White |

Example) **10-KQ2H06-U01N**

3 Spare Parts

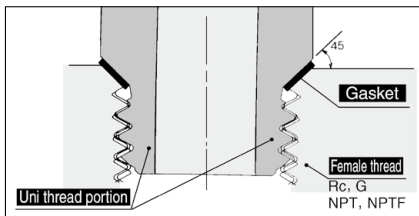
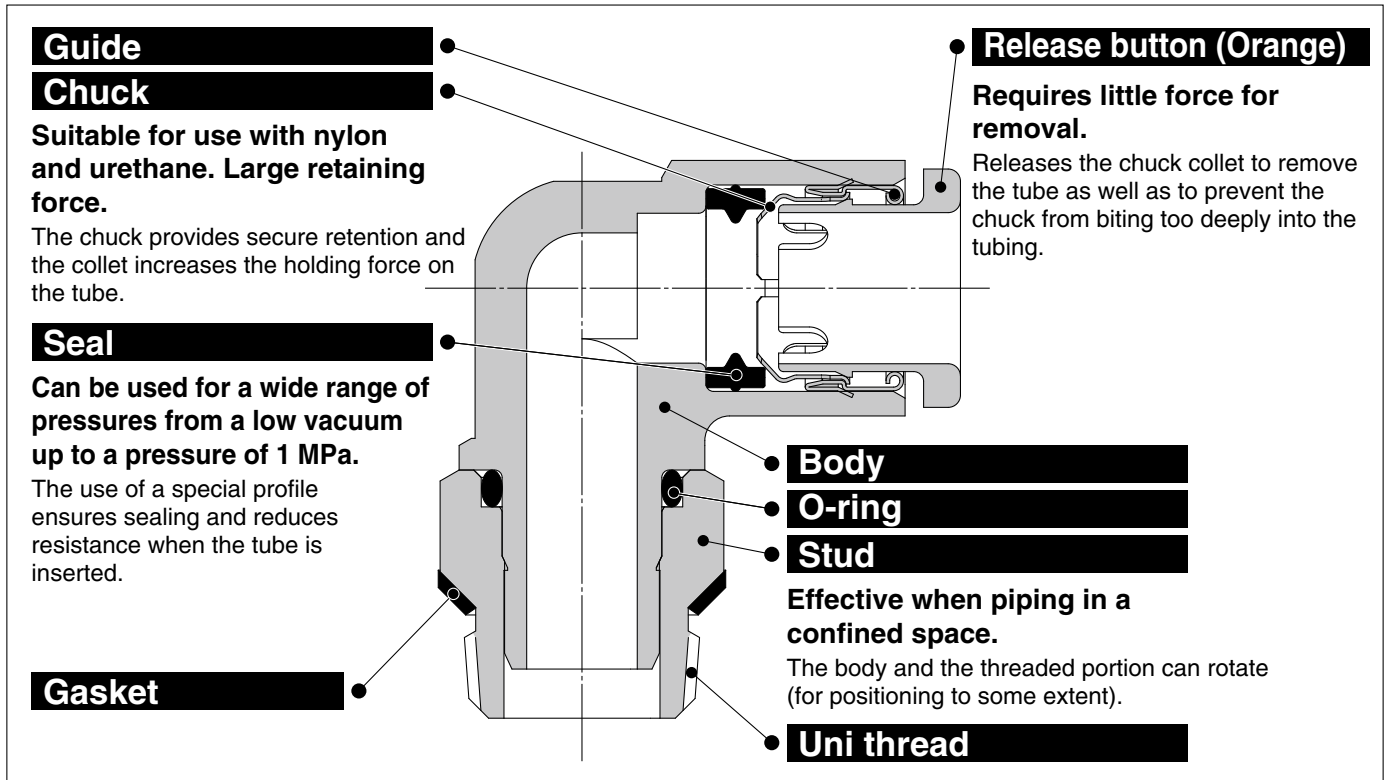
| Description | Part no. | Applicable thread |
|-------------|----------------|-------------------|
| Gasket | KQG-U01 | Uni1/8 |
| | KQG-U02 | Uni1/4 |
| | KQG-U03 | Uni3/8 |
| | KQG-U04 | Uni1/2 |

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

Inch Size Uni One-touch Fittings

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

Series KQ2



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.

The male thread for piping drastically cuts piping manhours.



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 ^{Note 1)} |
| Operating pressure range ^{Note 2)} | -100 kPa to 1 MPa |
| Proof pressure (at 23°C) | 3 MPa |
| Ambient and fluid temperature | -5 to 60°C, Water: 0 to 40°C (No freezing) |

Note 1) The surge pressure must be under the maximum operating pressure.

Note 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 Specifications
(Refer to page 114 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" |

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" |

Thread material/Surface treatment

| Symbol | Thread material/Surface treatment |
|--------|-----------------------------------|
| A | Brass |
| N | Brass + Electroless nickel plated |

Port size

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

Spare Parts

How to Order Gasket

KQG - U01

Gasket for Uni One-touch fittings

Applicable port size

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

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

Face Seal

Gasket Seal

Sealant/Gasket Seal

Inch Size Uni One-touch Fittings

Variations

Male connector

KQ2H

P.112



Use to pipe a female thread. Most general model.

Male elbow

KQ2L

P.112



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

Male branch tee

KQ2T

P.113



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

Male run tee

KQ2Y

P.113



Use to branch a female thread at a 90° angle.

Branch "Y"

KQ2U

P.113



Use to branch a female thread.

Extended male elbow

KQ2W

P.112



Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid interfering with each other by making the piping multi-level.

Inch Size Uni One-touch Fittings *Series KQ2*

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

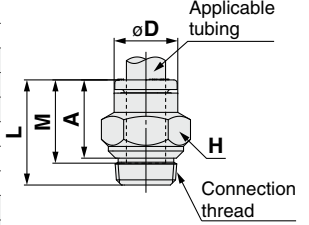
Dimensions

Male Connector: KQ2H (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread Uni | Model | H (Width across flats) | ϕD | L | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|----------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 1/8 | KQ2H01-U01 | 11.11 | 6.7 | 15.2 | 10.4 | 13.3 | 3.4 | 2.9 | 2.5 | 7.9 |
| | 1/4 | KQ2H01-U02 | 14.29 | 6.7 | 15.3 | 8.9 | 13.3 | 3.4 | 2.9 | 2.5 | 13.7 |
| $\phi 5/32$ | 1/8 | KQ2H03-U01 | 11.11 | 7.7 | 15.7 | 10.9 | 13.3 | 5.6 | 4 | 3 | 7.7 |
| | 1/4 | KQ2H03-U02 | 14.29 | 7.7 | 15.3 | 8.9 | 13.3 | 5.6 | 4 | 3 | 13 |
| $\phi 3/16$ | 1/8 | KQ2H05-U01 | 12.7 | 8.3 | 16 | 11.2 | 13.3 | 6.8 | 5.6 | 3.5 | 7.7 |
| | 1/4 | KQ2H05-U02 | 14.29 | 8.3 | 15.3 | 8.9 | 13.3 | 6.8 | 5.6 | 3.5 | 12.4 |
| $\phi 1/4$ | 1/8 | KQ2H07-U01 | 12.7 | 10.9 | 18.9 | 14.1 | 13.3 | 11.6 | 10 | 4.6 | 8.7 |
| | 1/4 | KQ2H07-U02 | 14.29 | 10.9 | 15.3 | 8.9 | 13.3 | 11.6 | 10 | 4.6 | 10.7 |
| | 3/8 | KQ2H07-U03 | 17.46 | 10.9 | 14.9 | 8.5 | 13.3 | 11.6 | 10 | 4.6 | 18.4 |
| $\phi 5/16$ | 1/8 | KQ2H09-U01 | 14.29 | 13 | 20.6 | 15.8 | 14.2 | 26.1 | 18 | 6 | 10.5 |
| | 1/4 | KQ2H09-U02 | 14.29 | 13 | 18.5 | 12.1 | 14.2 | 26.1 | 18 | 6 | 10.7 |
| | 3/8 | KQ2H09-U03 | 17.46 | 13 | 14.9 | 8.5 | 14.2 | 26.1 | 18 | 6 | 15.5 |
| $\phi 3/8$ | 1/4 | KQ2H11-U02 | 17.46 | 15.1 | 22.2 | 15.8 | 15.6 | 28.8 | 23.8 | 7 | 16.6 |
| | 3/8 | KQ2H11-U03 | 17.46 | 15.1 | 18.9 | 12.5 | 15.6 | 28.8 | 23.8 | 7 | 16.2 |
| | 1/2 | KQ2H11-U04 | 22.23 | 15.1 | 17 | 8.4 | 15.6 | 28.8 | 23.8 | 7 | 30.9 |
| $\phi 1/2$ | 1/4 | KQ2H13-U02 | 22.23 | 19 | 25.2 | 18.8 | 17 | 50.3 | 44.4 | 9 | 24.9 |
| | 3/8 | KQ2H13-U03 | 22.23 | 19 | 23.5 | 17.1 | 17 | 56.7 | 44.4 | 9.6 | 27 |
| | 1/2 | KQ2H13-U04 | 22.23 | 19 | 21.7 | 13.1 | 17 | 56.7 | 44.4 | 9.6 | 29.8 |

* □/A: Brass, N: Brass + Electroless nickel plated * Reference dimensions after installation of Uni thread



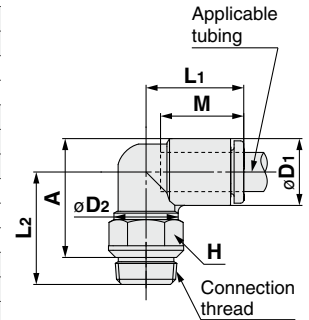
Metric Size M, R, Rc
Inch Size UNF, NPT
Inch Size M, R, Rc

Male Elbow: KQ2L (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread Uni | Model | H (Width across flats) | Note) $\phi D1$ | $\phi D2$ | L ₁ | L ₂ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|-----------------|-----------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 1/8 | KQ2L01-U01 | 11.11 | 7.1 | 10 | 14.5 | 17.9 | 16.7 | 13.3 | 3 | 2.5 | 2.5 | 6 |
| | 1/4 | KQ2L01-U02 | 14.29 | 7.1 | 10 | 14.5 | 19.2 | 16.4 | 13.3 | 3 | 2.5 | 2.5 | 12.1 |
| $\phi 5/32$ | 1/8 | KQ2L03-U01 | 11.11 | 8.2 | 10 | 14.8 | 17.4 | 16.7 | 13.3 | 4.2 | 4.2 | 3 | 6.2 |
| | 1/4 | KQ2L03-U02 | 14.29 | 8.2 | 10 | 14.8 | 19.7 | 17.4 | 13.3 | 4.2 | 4.2 | 3 | 12.3 |
| $\phi 3/16$ | 1/8 | KQ2L05-U01 | 11.11 | 9.1 | 10 | 15 | 17.9 | 17.7 | 13.3 | 6.8 | 5.6 | 3.5 | 6.4 |
| | 1/4 | KQ2L05-U02 | 14.29 | 9.1 | 10 | 15 | 20.2 | 18.4 | 13.3 | 6.8 | 5.6 | 3.5 | 12.5 |
| $\phi 1/4$ | 1/8 | KQ2L07-U01 | 11.11 | 11.1 | 10 | 15.6 | 18.9 | 19.7 | 13.3 | 11.3 | 10 | 4.5 | 6.7 |
| | 1/4 | KQ2L07-U02 | 14.29 | 11.1 | 10 | 15.6 | 21.2 | 20.4 | 13.3 | 11.3 | 10 | 4.5 | 12.9 |
| $\phi 5/16$ | 1/8 | KQ2L09-U01 | 11.11 | 13.2 | 10 | 16.4 | 19.9 | 21.7 | 14.2 | 11.4 | 11.4 | 4.5 | 7.4 |
| | 1/4 | KQ2L09-U02 | 14.29 | 13.2 | 12 | 17.2 | 22.2 | 22.4 | 14.2 | 21.6 | 14.9 | 6 | 11.6 |
| $\phi 3/8$ | 1/8 | KQ2L09-U03 | 17.46 | 13.2 | 12 | 17.2 | 23.3 | 23.5 | 14.2 | 21.6 | 14.9 | 6 | 21.7 |
| | 1/4 | KQ2L11-U02 | 17.46 | 15.4 | 17 | 19.3 | 24.4 | 25.7 | 15.6 | 28.8 | 23.8 | 7.5 | 18 |
| $\phi 3/8$ | 3/8 | KQ2L11-U03 | 17.46 | 15.4 | 17 | 19.3 | 27.0 | 28.3 | 15.6 | 28.8 | 23.8 | 7.5 | 18.7 |
| | 1/2 | KQ2L11-U04 | 22.23 | 15.4 | 17 | 19.3 | 34.8 | 33.9 | 15.6 | 28.8 | 23.8 | 7.5 | 50 |
| $\phi 1/2$ | 1/4 | KQ2L13-U02 | 17.46 | 19.3 | 17 | 21.5 | 26.3 | 29.5 | 17 | 50.3 | 44.4 | 9 | 20.3 |
| | 3/8 | KQ2L13-U03 | 17.46 | 19.3 | 17 | 21.8 | 28.9 | 32.1 | 17 | 56 | 44.4 | 9.5 | 25.1 |
| | 1/2 | KQ2L13-U04 | 22.23 | 19.3 | 17 | 21.8 | 31.9 | 32.9 | 17 | 56 | 44.4 | 9.5 | 56 |

* □/A: Brass, N: Brass + Electroless nickel plated * Reference dimensions after installation of Uni thread
Note) $\phi D1$ is maximum diameter.



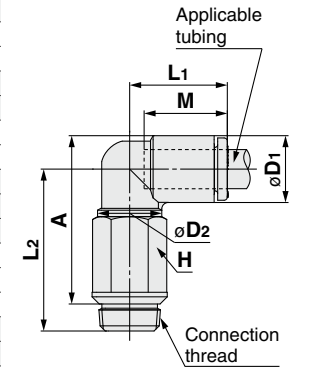
Metric Size G
Metric Size R, Rc
Inch Size NPT
Inch Size R

Extended Male Elbow: KQ2W (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread Uni | Model | H (Width across flats) | Note) $\phi D1$ | $\phi D2$ | L ₁ | L ₂ | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|-----------------|-----------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| $\phi 1/8$ | 1/8 | KQ2W01-U01 | 11.11 | 7.1 | 10 | 14.5 | 31.5 | 30.3 | 13.3 | 2.8 | 2.4 | 2.5 | 14.5 |
| | 1/4 | KQ2W01-U02 | 14.29 | 7.1 | 10 | 14.5 | 30.8 | 28 | 13.3 | 2.8 | 2.4 | 2.5 | 26 |
| $\phi 5/32$ | 1/8 | KQ2W03-U01 | 11.11 | 8.2 | 10 | 14.8 | 31.1 | 30.4 | 13.3 | 4 | 4 | 3 | 14.6 |
| | 1/4 | KQ2W03-U02 | 14.29 | 8.2 | 10 | 14.8 | 31.3 | 29 | 13.3 | 4 | 4 | 3 | 26.2 |
| $\phi 3/16$ | 1/8 | KQ2W05-U01 | 11.11 | 9.1 | 10 | 15 | 31.6 | 31.3 | 13.3 | 6.8 | 5.6 | 3.5 | 14.8 |
| | 1/4 | KQ2W05-U02 | 14.29 | 9.1 | 10 | 15 | 31.8 | 30 | 13.3 | 6.8 | 5.6 | 3.5 | 26.4 |
| $\phi 1/4$ | 1/8 | KQ2W07-U01 | 11.11 | 11.1 | 10 | 15.6 | 32.6 | 33.3 | 13.3 | 11.3 | 10 | 4.5 | 15.1 |
| | 1/4 | KQ2W07-U02 | 14.29 | 11.1 | 10 | 15.6 | 32.8 | 32 | 13.3 | 11.3 | 10 | 4.5 | 26.8 |
| | 3/8 | KQ2W07-U03 | 17.46 | 11.1 | 10 | 15.6 | 33.9 | 33.1 | 13.3 | 11.3 | 10 | 4.5 | 45.3 |
| $\phi 5/16$ | 1/8 | KQ2W09-U01 | 11.11 | 13.2 | 10 | 16.4 | 33.6 | 35.4 | 14.2 | 11.3 | 11.3 | 4.5 | 15.9 |
| | 1/4 | KQ2W09-U02 | 14.29 | 13.2 | 12 | 17.2 | 35.9 | 36.1 | 14.2 | 20.5 | 14.2 | 6 | 25.7 |
| $\phi 3/8$ | 1/4 | KQ2W09-U03 | 17.46 | 13.2 | 12 | 17.2 | 37 | 37.2 | 14.2 | 20.5 | 14.2 | 6 | 45.5 |
| | 3/8 | KQ2W11-U02 | 17.46 | 15.4 | 17 | 19.3 | 44.1 | 45.4 | 15.6 | 28.8 | 23.8 | 7.5 | 50.6 |
| $\phi 3/8$ | 1/4 | KQ2W11-U03 | 17.46 | 15.4 | 17 | 19.3 | 42.9 | 44.2 | 15.6 | 28.8 | 23.8 | 7.5 | 45 |
| | 1/2 | KQ2W11-U04 | 22.23 | 15.4 | 17 | 19.3 | 50.7 | 49.8 | 15.6 | 28.8 | 23.8 | 7.5 | 90.9 |
| $\phi 1/2$ | 1/4 | KQ2W13-U02 | 17.46 | 19.3 | 17 | 21.5 | 46 | 49.3 | 17 | 50.3 | 44.4 | 9 | 52.9 |
| | 3/8 | KQ2W13-U03 | 17.46 | 19.3 | 17 | 21.8 | 48.6 | 51.9 | 17 | 56 | 44.4 | 9.5 | 52.6 |
| 1/2 | KQ2W13-U04 | 22.23 | 19.3 | 17 | 21.8 | 51.6 | 52.7 | 17 | 56 | 44.4 | 9.5 | 114.1 | |

* □/A: Brass, N: Brass + Electroless nickel plated * Reference dimensions after installation of Uni thread
Note) $\phi D1$ is maximum diameter.



Metric Size Uni
Inch Size Uni

Series KQ2

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

Dimensions

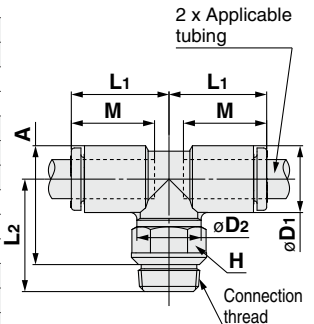
Male Branch Tee: KQ2T (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread Uni | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L1 | L2 | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|------------------|------------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | Nylon | Urethane | | |
| | | | | | | | | | | | | | |
| $\phi 1/8$ | 1/8 | KQ2T01-U01 | 11.11 | 7.1 | 10 | 14.5 | 17.8 | 16.6 | 13.3 | 3.4 | 2.9 | 2.5 | 6.6 |
| | 1/4 | KQ2T01-U02 | 14.29 | 7.1 | 10 | 14.5 | 19.1 | 16.3 | 13.3 | 3.4 | 2.9 | 2.5 | 12.7 |
| $\phi 5/32$ | 1/8 | KQ2T03-U01 | 11.11 | 8.2 | 10 | 14.8 | 17.4 | 16.7 | 13.3 | 6 | 4.1 | 3 | 6.9 |
| | 1/4 | KQ2T03-U02 | 14.29 | 8.2 | 10 | 14.8 | 19.7 | 17.4 | 13.3 | 6 | 4.1 | 3 | 13 |
| $\phi 3/16$ | 1/8 | KQ2T05-U01 | 11.11 | 9.1 | 10 | 15 | 17.9 | 17.6 | 13.3 | 6.8 | 5.6 | 3.5 | 7.1 |
| | 1/4 | KQ2T05-U02 | 14.29 | 9.1 | 10 | 15 | 20.2 | 18.3 | 13.3 | 6.8 | 5.6 | 3.5 | 13.3 |
| $\phi 1/4$ | 1/8 | KQ2T07-U01 | 11.11 | 11.1 | 10 | 15.6 | 18.9 | 19.6 | 13.3 | 11.3 | 10 | 4.5 | 7.8 |
| | 1/4 | KQ2T07-U02 | 14.29 | 11.1 | 10 | 15.6 | 21.2 | 20.3 | 13.3 | 11.3 | 10 | 4.5 | 14.1 |
| | 3/8 | KQ2T07-U03 | 17.46 | 11.1 | 10 | 15.6 | 22.3 | 21.4 | 13.3 | 11.3 | 10 | 4.5 | 24.3 |
| $\phi 5/16$ | 1/8 | KQ2T09-U01 | 11.11 | 13.2 | 10 | 16.4 | 19.9 | 21.7 | 14.2 | 13.9 | 13.9 | 4.5 | 9.3 |
| | 1/4 | KQ2T09-U02 | 14.29 | 13.2 | 12 | 17.2 | 22.2 | 22.4 | 14.2 | 26.3 | 18.2 | 6 | 13.4 |
| | 3/8 | KQ2T09-U03 | 17.46 | 13.2 | 12 | 17.2 | 23.3 | 23.5 | 14.2 | 26.3 | 18.2 | 6 | 23.4 |
| $\phi 3/8$ | 1/4 | KQ2T11-U02 | 17.46 | 15.4 | 17 | 19.3 | 24.3 | 25.6 | 15.6 | 28.8 | 23.8 | 7.5 | 20.4 |
| | 3/8 | KQ2T11-U03 | 17.46 | 15.4 | 17 | 19.3 | 26.9 | 28.2 | 15.6 | 28.8 | 23.8 | 7.5 | 21.2 |
| | 1/2 | KQ2T11-U04 | 22.23 | 15.4 | 17 | 19.3 | 34.7 | 33.8 | 15.6 | 28.8 | 23.8 | 7.5 | 52.5 |
| $\phi 1/2$ | 1/4 | KQ2T13-U02 | 17.46 | 19.3 | 17 | 21.5 | 26.2 | 29.5 | 17 | 50.3 | 44.4 | 9 | 24.4 |
| | 3/8 | KQ2T13-U03 | 17.46 | 19.3 | 17 | 21.8 | 28.8 | 32.1 | 17 | 56 | 44.4 | 9.5 | 29.3 |
| | 1/2 | KQ2T13-U04 | 22.23 | 19.3 | 17 | 21.8 | 31.8 | 32.9 | 17 | 56 | 44.4 | 9.5 | 60.2 |

* □/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of Uni thread
Note) ϕD_1 is maximum diameter.



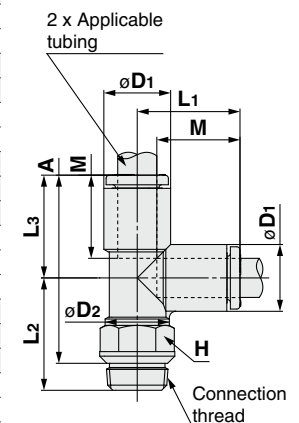
Male Run Tee: KQ2Y (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread Uni | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L1 | L2 | L3 | A* | M | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|------------------|------------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | Nylon | Urethane | | |
| | | | | | | | | | | | | | | |
| $\phi 1/8$ | 1/8 | KQ2Y01-U01 | 11.11 | 7.1 | 10 | 14.9 | 17.8 | 14.9 | 28 | 13.3 | 3.4 | 2.9 | 2.5 | 6.6 |
| | 1/4 | KQ2Y01-U02 | 14.29 | 7.1 | 10 | 14.9 | 19.1 | 14.9 | 27.7 | 13.3 | 3.4 | 2.9 | 2.5 | 12.8 |
| $\phi 5/32$ | 1/8 | KQ2Y03-U01 | 11.11 | 8.2 | 10 | 15.3 | 17.4 | 15.3 | 27.9 | 13.3 | 6.4 | 4.4 | 3 | 6.9 |
| | 1/4 | KQ2Y03-U02 | 14.29 | 8.2 | 10 | 15.3 | 19.7 | 15.3 | 28.6 | 13.3 | 6.4 | 4.4 | 3 | 13.1 |
| $\phi 3/16$ | 1/8 | KQ2Y05-U01 | 11.11 | 9.1 | 10 | 15.7 | 17.9 | 15.7 | 28.8 | 13.3 | 6.8 | 5.6 | 3.5 | 7.2 |
| | 1/4 | KQ2Y05-U02 | 14.29 | 9.1 | 10 | 15.7 | 20.2 | 15.7 | 29.5 | 13.3 | 6.8 | 5.6 | 3.5 | 13.4 |
| $\phi 1/4$ | 1/8 | KQ2Y07-U01 | 11.11 | 11.1 | 10 | 16.5 | 18.9 | 16.5 | 30.6 | 13.3 | 11.3 | 10 | 4.5 | 7.9 |
| | 1/4 | KQ2Y07-U02 | 14.29 | 11.1 | 10 | 16.5 | 21.2 | 16.5 | 31.3 | 13.3 | 11.3 | 10 | 4.5 | 14.1 |
| | 3/8 | KQ2Y07-U03 | 17.46 | 11.1 | 10 | 16.5 | 22.3 | 16.5 | 32.4 | 13.3 | 11.3 | 10 | 4.5 | 24.3 |
| $\phi 5/16$ | 1/8 | KQ2Y09-U01 | 11.11 | 13.2 | 10 | 18.2 | 19.9 | 18.2 | 33.3 | 14.2 | 13.4 | 13.4 | 4.5 | 9.3 |
| | 1/4 | KQ2Y09-U02 | 14.29 | 13.2 | 12 | 18.2 | 22.2 | 18.2 | 34 | 14.2 | 25.6 | 17.7 | 6 | 13.4 |
| | 3/8 | KQ2Y09-U03 | 17.46 | 13.2 | 12 | 18.2 | 23.3 | 18.2 | 35.1 | 14.2 | 25.6 | 17.7 | 6 | 23.5 |
| $\phi 3/8$ | 1/4 | KQ2Y11-U02 | 17.46 | 15.4 | 17 | 20.4 | 24.3 | 20.4 | 38.3 | 15.6 | 28.8 | 23.8 | 7.5 | 20.5 |
| | 3/8 | KQ2Y11-U03 | 17.46 | 15.4 | 17 | 20.4 | 26.9 | 20.4 | 40.9 | 15.6 | 28.8 | 23.8 | 7.5 | 21.3 |
| | 1/2 | KQ2Y11-U04 | 22.23 | 15.4 | 17 | 20.4 | 34.7 | 20.4 | 46.5 | 15.6 | 28.8 | 23.8 | 7.5 | 52.6 |
| $\phi 1/2$ | 1/4 | KQ2Y13-U02 | 17.46 | 19.3 | 17 | 23.4 | 26.2 | 23.4 | 43.2 | 17 | 50.3 | 44.4 | 9 | 24.7 |
| | 3/8 | KQ2Y13-U03 | 17.46 | 19.3 | 17 | 23.4 | 28.8 | 23.4 | 45.8 | 17 | 56 | 44.4 | 9.5 | 29.5 |
| | 1/2 | KQ2Y13-U04 | 22.23 | 19.3 | 17 | 23.4 | 31.8 | 23.4 | 46.6 | 17 | 56 | 44.4 | 9.5 | 60.4 |

* □/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of Uni thread
Note) ϕD_1 is maximum diameter.



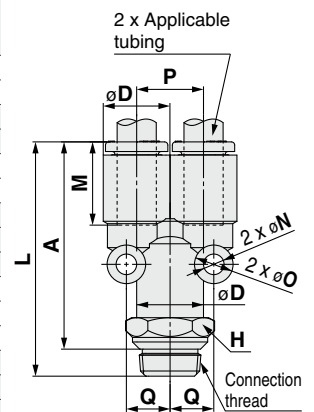
Branch "Y": KQ2U (Gasket seal)



| Applicable tubing O.D. (inch) | Connection thread Uni | Model | H (Width across flats) | Note) ϕD | L | P | A* | M | Q | ϕO | ϕN | Effective area (mm ²) | | Min. port size | Weight (g) |
|-------------------------------|-----------------------|------------|------------------------|----------------|------|------|------|------|------|----------|----------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | | | Nylon | Urethane | | |
| | | | | | | | | | | | | | | | |
| $\phi 1/8$ | 1/8 | KQ2U01-U01 | 11.11 | 7.1 | 35.1 | 7.1 | 30.3 | 13.3 | 5.2 | 6 | 3.2 | 3.4 | 2.9 | 2.7 | 8.2 |
| | 1/4 | KQ2U01-U02 | 14.29 | 7.1 | 37.4 | 7.1 | 31 | 13.3 | 5.2 | 6 | 3.2 | 3.4 | 2.9 | 2.7 | 14.6 |
| $\phi 5/32$ | 1/8 | KQ2U03-U01 | 11.11 | 8.2 | 35.4 | 8.2 | 30.6 | 13.3 | 5.7 | 6 | 3.2 | 4.2 | 4.2 | 3.6 | 8.7 |
| | 1/4 | KQ2U03-U02 | 14.29 | 8.2 | 37.4 | 8.2 | 31 | 13.3 | 5.7 | 6 | 3.2 | 4.2 | 4.2 | 3.6 | 14.8 |
| $\phi 3/16$ | 1/8 | KQ2U05-U01 | 11.11 | 9.1 | 35.8 | 9.1 | 31 | 13.3 | 6.2 | 6 | 3.2 | 6.8 | 5.6 | 4.1 | 9 |
| | 1/4 | KQ2U05-U02 | 14.29 | 9.1 | 38.1 | 9.1 | 31.7 | 13.3 | 6.2 | 6 | 3.2 | 6.8 | 5.6 | 4.1 | 15.3 |
| $\phi 1/4$ | 1/8 | KQ2U07-U01 | 12.7 | 11.1 | 37.7 | 11.1 | 32.9 | 13.3 | 7.6 | 8 | 4 | 11.6 | 10 | 5.6 | 12 |
| | 1/4 | KQ2U07-U02 | 14.29 | 11.1 | 38.8 | 11.1 | 32.4 | 13.3 | 7.6 | 8 | 4 | 11.6 | 10 | 5.6 | 16.3 |
| | 3/8 | KQ2U07-U03 | 17.46 | 11.1 | 39.7 | 11.1 | 33.3 | 13.3 | 7.6 | 8 | 4 | 11.6 | 10 | 5.6 | 25.1 |
| $\phi 5/16$ | 1/8 | KQ2U09-U01 | 14.29 | 13.2 | 41.6 | 13.2 | 36.8 | 14.2 | 8.7 | 8 | 4.2 | 25.6 | 17.7 | 6 | 17.9 |
| | 1/4 | KQ2U09-U02 | 14.29 | 13.2 | 42.6 | 13.2 | 36.2 | 14.2 | 8.7 | 8 | 4.2 | 25.6 | 17.7 | 7.3 | 18.6 |
| | 3/8 | KQ2U09-U03 | 17.46 | 13.2 | 42.4 | 13.2 | 36 | 14.2 | 8.7 | 8 | 4.2 | 25.6 | 17.7 | 7.3 | 26.1 |
| $\phi 3/8$ | 1/4 | KQ2U11-U02 | 17.46 | 15.4 | 47.2 | 15.4 | 40.8 | 15.6 | 9.9 | 8 | 4.2 | 28.8 | 23.8 | 8.9 | 24.8 |
| | 3/8 | KQ2U11-U03 | 19 | 15.4 | 47.1 | 15.4 | 40.7 | 15.6 | 9.9 | 8 | 4.2 | 28.8 | 23.8 | 8.9 | 31.5 |
| | 1/2 | KQ2U11-U04 | 22.23 | 15.4 | 49.3 | 15.4 | 40.7 | 15.6 | 9.9 | 8 | 4.2 | 81 | 23.8 | 8.9 | 48.9 |
| $\phi 1/2$ | 1/4 | KQ2U13-U02 | 22.23 | 19.3 | 52.5 | 19.3 | 46.1 | 17 | 11.8 | 8 | 4.2 | 113 | 50.6 | 9 | 44.3 |
| | 3/8 | KQ2U13-U03 | 22.23 | 19.3 | 52.4 | 19.3 | 46 | 17 | 11.8 | 8 | 4.2 | 113 | 50.6 | 11 | 43 |
| | 1/2 | KQ2U13-U04 | 22.23 | 19.3 | 54 | 19.3 | 45.4 | 17 | 11.8 | 8 | 4.2 | 113 | 50.6 | 12.1 | 50 |

* □/A: Brass, N: Brass + Electroless nickel plated

* Reference dimensions after installation of Uni thread
Note) ϕD is maximum diameter.



Series KQ2

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 <small>Note)</small> | Body color: Black Release button color: Orange |

Note) The following model is not available as made-to-order: Male connector/KQ2H

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 plated Lubricant: Fluorine grease Air blow in a clean room Double package Resin body/Release button color: White |

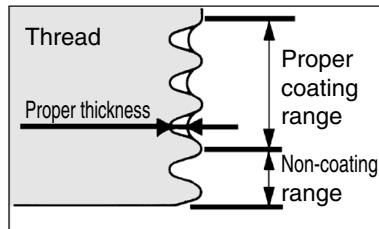
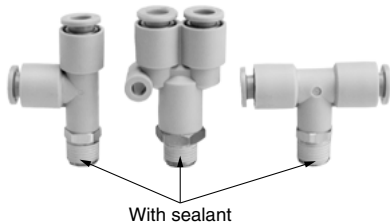
Example) **10-KQ2H07-U01N**

| | |
|---------------------|----------------------|
| Sealant/Gasket Seal | Metric Size M, R, Rc |
| | Inch Size UNF, NPT |
| Face Seal | Metric Size G |
| | Metric Size R, Rc |
| Gasket Seal | 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 (fluororesin) 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.

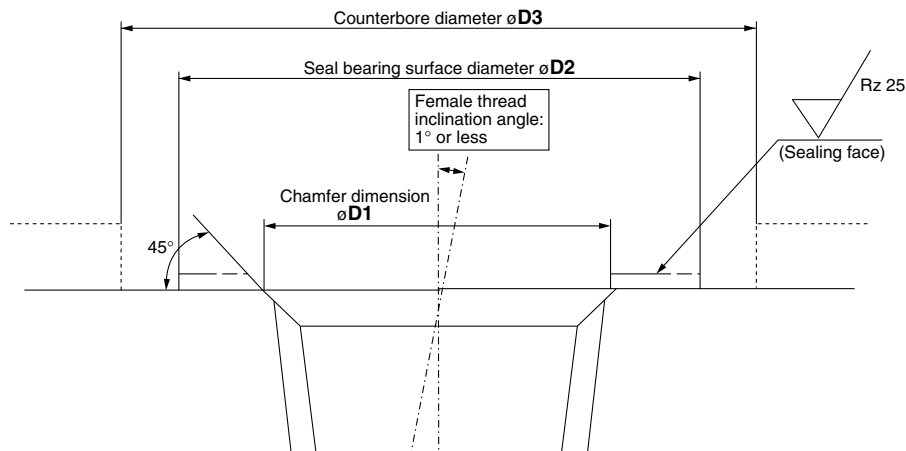


Table 1

| 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 conventional 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.

Design/Selection

Warning

1. Check the specifications.

The products in this catalog are designed to be used in compressed air systems (including vacuum) only.

If the products are used in an environment where pressure or temperature is out of the specified range, damage and/or malfunction may result. Do not use under such conditions. (Refer to the specifications.)

Please consult with 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 (Series KS or KX) 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.

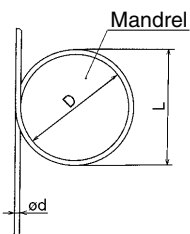
If the bending radius is less than the min. value, fittings may damage, or tubing may crack or be crushed. The minimum bending radius, with the exception of TS soft nylon tubing, TU polyurethane tubing, TUH hard polyurethane tubing, TUS soft polyurethane tubing, TRBU FR double layer polyurethane tubing, 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 wrapping the same radius mandrel tube.

$$\eta = \left(1 - \frac{L - D}{2d}\right) \times 100$$

Tube deformation ratio at the minimum bending radius

Here, η : Deformation ratio (%)
 d : Tubing diameter (mm)
 L : Measured length (mm)
 D : Mandrel diameter (mm)
(Twice against the minimum bending radius)
Test temperature: 20 ±5°C
Relative humidity: 65 ±5%



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. Ensure sufficient space for maintenance activities.

When installing the products, allow access for maintenance.

3. Adhere to the thread tightening method.

When installing the products, refer to "Connection Thread Tightening Method".

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

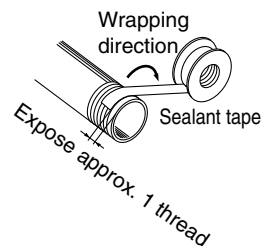
1. Preparation before piping

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. Wrapping of sealant tape

When screwing together pipes and fittings, etc., be certain that chips from the pipe threads and sealant does not get inside the pipe.

Also, when the sealant tape is used, leave approx. 1 thread ridges 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. 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.

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 droplet 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. It causes malfunction of pneumatic equipment.

If the drain bowl is difficult to check and remove, installation of a drain bowl with an auto drain option is recommended.

For details on the above compressed air quality, refer to SMC's Best Pneumatics catalog.

4. Use clean air.

Do not use compressed air that contains chemicals, synthetic oils including organic solvents, salt or corrosive gases, etc., as it can cause damage or malfunction.

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 droplet separator, etc.

Compressed air that contains a large amount of drainage can cause malfunction of pneumatic equipment. Therefore, take appropriate measures to ensure air quality, such as by providing an aftercooler, air dryer, or water droplet separator.

3. Ensure that the fluid and ambient temperature are within the specified range.

If the fluid temperature is 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.

For details on the above compressed air quality, refer to SMC's Best Pneumatics catalog.

Operating Environment

Warning

1. Do not use in an atmosphere having corrosive gases, chemicals, sea water, water, water steam, or where there is direct contact with any of these.

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 shock.

4. Do not mount the product in locations where it is exposed to radiant heat.

Operating Environment

Warning

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 (Series KA) and antistatic tubing (Series TA) 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 (Series KR/KRM) and flame resistant tubing (Series TRS/TRB) 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.

Maintenance

Warning

1. Perform maintenance inspection 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. 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 machinery is restarted, proceed with caution after confirming that appropriate measures are in place to prevent cylinders from sudden movement.



Fittings & Tubing Precautions 3

Be sure to read this before handling.

Maintenance

⚠ 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", "TK-2" or "TK-3". 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 $\varnothing 2$, +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.
 - (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.
 - 2) Removal of tubing
 - (1) Push the release button flange evenly and sufficiently to release the tube.
 - (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 (Series KC, old Series KQ, Series KN, and Series KM, etc.) cannot be connected to Series KQ2 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.

One-touch Fittings Mounting/Piping

⚠ Caution

3. When mounting tubes, resin plugs, reducers etc., do not press the release button.

Also, do not press the release button before mounting. This may result in detachment.

In particular, when piping products, such as plug-in elbows or reducers, etc. the release button may be pressed easily due to product handling during piping work.

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. 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.

Note) 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) | Tightening torque (N·m) |
|------------------------------------|----------------------------|
| 1/16, 1/8 | 3 to 5 |
| 1/4 | 8 to 12 |
| 3/8 | 15 to 20 |
| 1/2 | 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 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, wrap 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.



Fittings & Tubing Precautions 4

Be sure to read this before handling.

Connection Thread Tightening Method

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 (N·m) |
|------------------------------------|--------------------------------|
| 1/16, 1/8 | 3 to 5 |
| 1/4 | 8 to 12 |
| 3/8 | 15 to 20 |
| 1/2 | 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 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 angle, refer to the table below.

Connection Female Thread: Rc, NPT, NPTF

| Uni thread size | Wrench tightening angle after hand-tightening (deg) | Tightening torque (N·m) |
|-----------------|---|-------------------------|
| 1/8 | 30 to 60 | 3 to 5 |
| 1/4 | 30 to 60 | 8 to 12 |
| 3/8 | 15 to 45 | 14 to 16 |
| 1/2 | 15 to 30 | 20 to 22 |

Connection Female Thread: G

| Uni thread size | Wrench tightening angle after hand-tightening (deg) | Tightening torque (N·m) |
|-----------------|---|-------------------------|
| 1/8 | 30 to 45 | 3 to 4 |
| 1/4 | 15 to 30 | 4 to 5 |
| 3/8 | 15 to 30 | 8 to 9 |
| 1/2 | 15 to 30 | 14 to 15 |

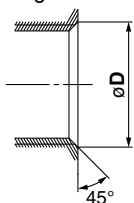
- 2) The gasket can be reused 6 to 10 times. It can be replaced easily when it has sustained damage. A broken gasket can be removed by holding it and then turning it in the same direction as loosening the thread. If gasket is difficult to remove, cut it with nippers, etc. In such a case, use caution not to scratch the seat face because the seat face of 45° gasket of fitting is the sealing face.

Chamfer Dimension for Female Thread



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.

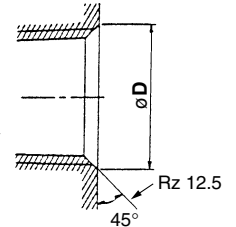


| Connection thread size | Chamfer dimension ϕD (Recommended value) (mm) |
|------------------------|---|
| M3 | 3.1 to 3.4 |
| M5 | 5.1 to 5.4 |
| 10-32UNF | 5.0 to 5.3 |

Chamfer Dimension for Female Thread



2. Chamfer dimension of R and NPT thread with sealant, and Uni thread



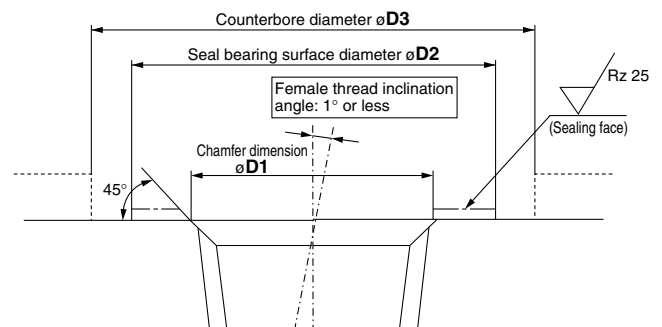
| Connection thread size | Chamfer dimension ϕD (Recommended value) | | |
|------------------------|--|--------------|--------------|
| | G | Rc | NPT, NPTF |
| 1/16 | — | — | 8.2 to 8.4 |
| 1/8 | 10.2 to 10.6 | 10.2 to 10.4 | 10.5 to 10.7 |
| 1/4 | 13.6 to 14.0 | 13.6 to 13.8 | 14.1 to 14.3 |
| 3/8 | 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.

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 |





Fittings & Tubing Precautions 5

Be sure to read this before handling.

Recommended Piping Conditions

- 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.)

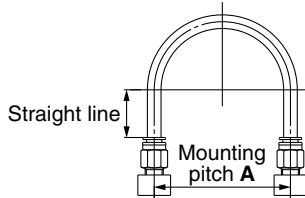


Fig. 1 Recommended piping

Unit: mm

| Tubing size | Mounting pitch A | | | Straight line length |
|-------------|------------------|-------------------|---------------------|----------------------|
| | Nylon tubing | Soft nylon tubing | Polyurethane tubing | |
| ø2 | — | — | 13 or more | 10 or more |
| ø3.2, 1/8" | 44 or more | 35 or more | 25 or more | 16 or more |
| ø4, 5/32" | 56 or more | 44 or more | 26 or more | 20 or more |
| ø3/16" | 67 or more | 52 or more | 38 or more | 24 or more |
| ø6 | 84 or more | 66 or more | 39 or more | 30 or more |
| ø1/4" | 89 or more | 70 or more | 57 or more | 32 or more |
| ø8, 5/16" | 112 or more | 88 or more | 52 or more | 40 or more |
| ø10 | 140 or more | 110 or more | 69 or more | 50 or more |
| ø3/8" | 134 or more | 105 or more | 69 or more | 48 or more |
| ø12 | 168 or more | 132 or more | 88 or more | 60 or more |
| ø1/2" | 178 or more | 140 or more | 93 or more | 64 or more |
| ø16 | 224 or more | 176 or more | 114 or more | 80 or more |

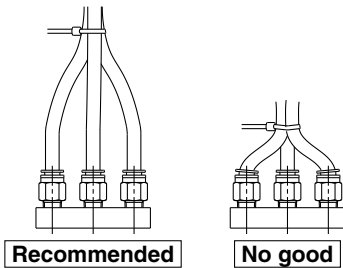


Fig. 2 When using a tying band to bind the piping together

Tubing Design/Selection

Caution

- 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, ø2M

- When using fittings other than those from SMC, be certain to confirm that operating conditions are such that no problems will arise.



Series KQ2C

Notes when Ordering Color Caps

In order to improve the operability, the outside diameter of the release button has been enlarged for the **New KQ2** series. Along with this change, the usable color caps differ before and after the change. Please contact SMC if anything is unclear.

Applicable Sizes and Models

| | Applicable tubing O.D. | Model |
|-------------|------------------------|-------------|
| Metric size | ø8, ø10, ø12, ø16 | All models* |
| Inch size | ø1/4", ø3/8", ø1/2" | |

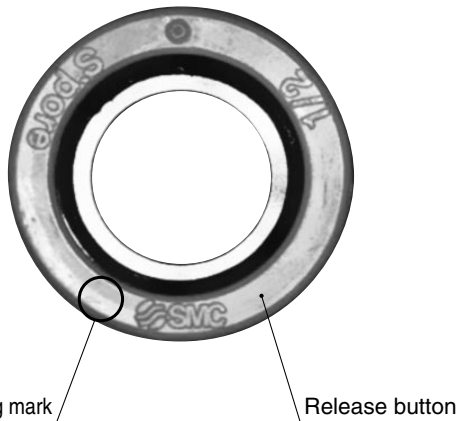
* Excluding models without release buttons

How to Identify Release Buttons Before and After Change

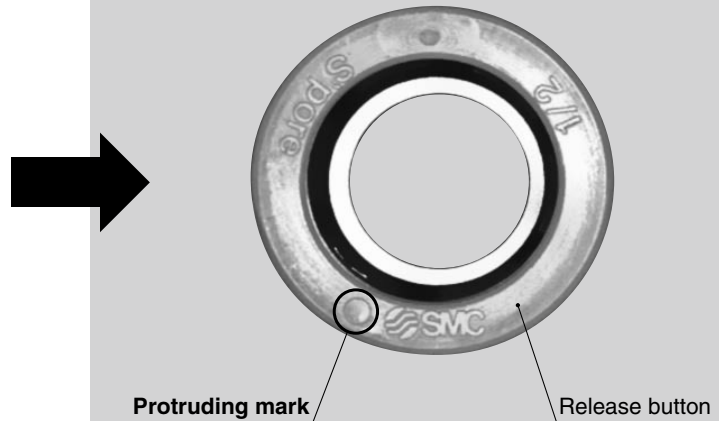
The release button for both the fitting/**KQ2** and color cap/**KQ2C** after the change can be identified by the protruding mark on the left side of the **SMC** logo, and the release button before the change has no protruding mark. The same identification method is used for metric size and inch size.

* 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



After change



Applicable color cap

Metric Size

| Applicable tubing O.D. mm | Model | øD1 | øD2 | L | Weight g |
|---------------------------|-----------|------|------|-----|----------|
| ø2 | KQ2C-02□A | 6.1 | 3.2 | 2.6 | 0.1 |
| 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□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 |
|-----------------------------|-----------|------|------|-----|----------|
| ø1/8 | KQ2C-01□A | 7.3 | 4.3 | 2.6 | 0.1 |
| ø3/16 | KQ2C-05□A | 9 | 5.9 | 2.6 | 0.1 |
| 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)

Applicable color cap

Metric Size

| Applicable tubing O.D. mm | Model | øD1 | øD2 | L | Weight g |
|---------------------------|-----------|------|------|-----|----------|
| ø2 | KQ2C-02□A | 6.1 | 3.2 | 2.6 | 0.1 |
| 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)


Inch Size


| Applicable tubing O.D. inch | Model | øD1 | øD2 | L | Weight g |
|-----------------------------|-----------|------|------|-----|----------|
| ø1/8 | KQ2C-01□A | 7.3 | 4.3 | 2.6 | 0.1 |
| ø3/16 | KQ2C-05□A | 9 | 5.9 | 2.6 | 0.1 |
| 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”.

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)
Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
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.


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
* Addition of Made to Order (White vaseline, Black body)
* Addition of clean series

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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
* Number of pages from 88 to 124

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 **Safety Instructions** Be sure to read “Handling Precautions for SMC Products” (M-E03-3) before using.