

Part number:

One-touch Fittings

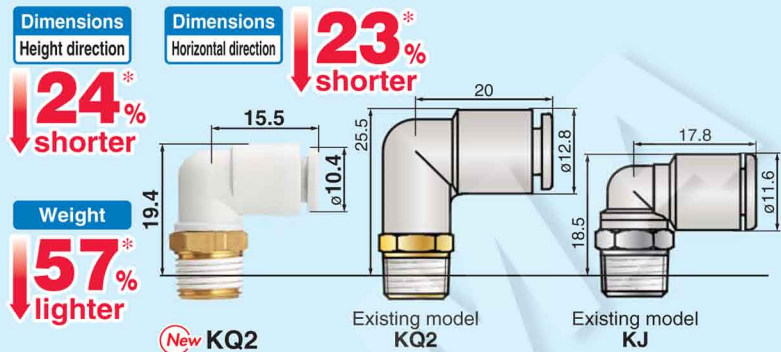
RoHS **New**

Improved tube insertion/removal



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

Compact and lightweight



* Existing model KQ2 series Male elbow/Applicable tubing O.D.: ø6/Connection thread: R1/8

To **New "KQ2"**

KQ, KQ2 and KJ consolidated into "KQ2"



Body type: totaled **51** models

Seal method: **2** types

Thread material/Surface treatment: **2** types*

* Brass, Brass + Electroless nickel plated

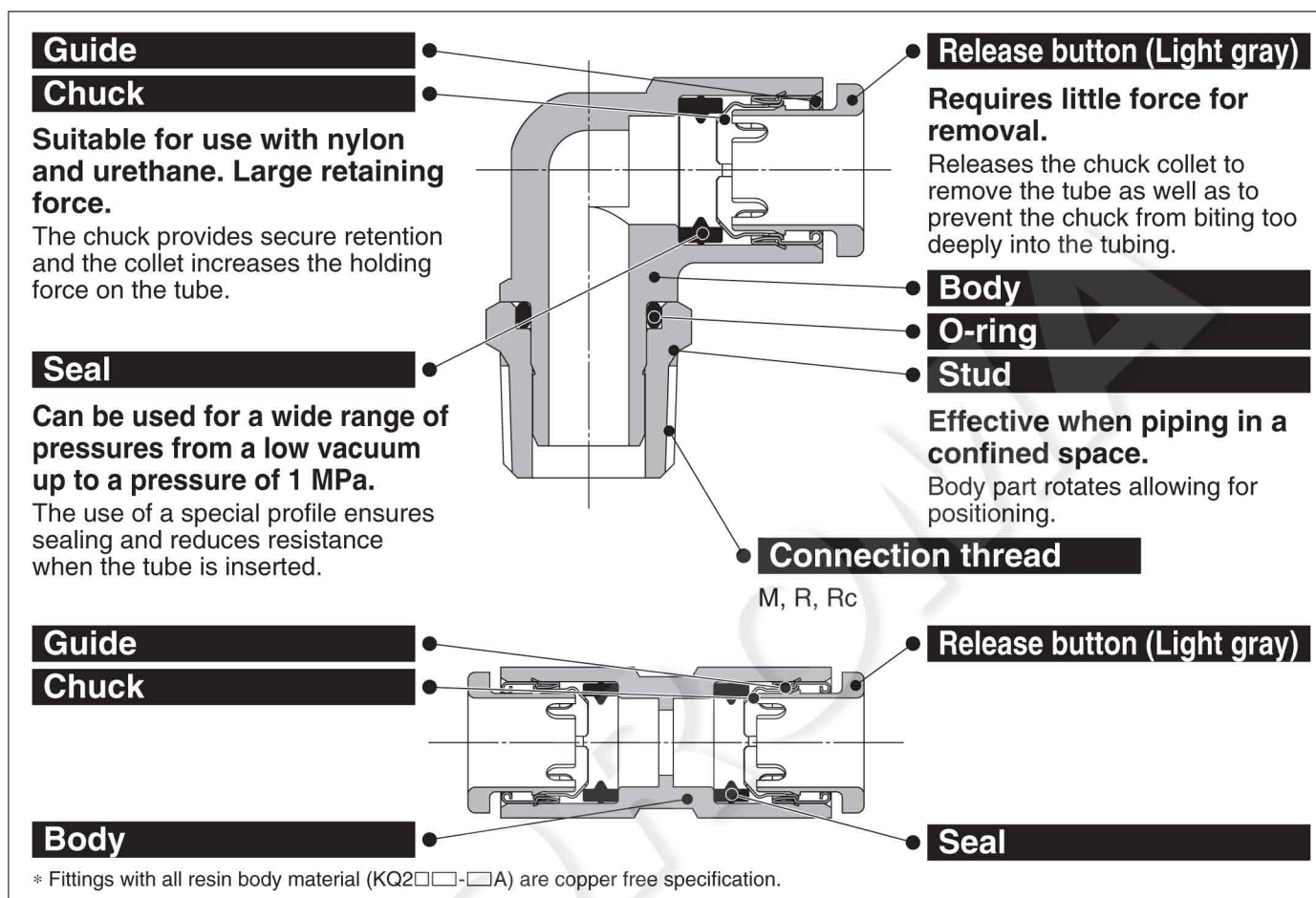
| Applicable tubing O.D. | Connection thread | Seal method | | |
|------------------------|-------------------|-------------|-------------|------|
| | | Sealant | Gasket seal | |
| Metric size | M | ● | ● | P.1 |
| | R | ● | ● | P.63 |
| | Uni | ● | ● | P.33 |
| Inch size | UNF | ● | ● | P.57 |
| | NPT | ● | ● | P.69 |
| | M | ● | ● | |
| | R | ● | ● | |
| | Uni | ● | ● | |

Series KQ2

Metric Size One-touch Fittings

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

Series KQ2



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



Applicable Tubing

| | |
|-----------------|---|
| Tubing material | FEP, PFA, Nylon, Soft nylon ^{Note 1)} , Polyurethane |
| Tubing O.D. | ø2, ø3.2, ø4, ø6, ø8, ø10, ø12, ø16 |

Note 1) For soft nylon tubing, water cannot be used.

Specifications

| | | |
|--|--|---|
| Fluid | Air/Water ^{Note 2)} | |
| Operating pressure range ^{Note 3)} | -100 kPa to 1 MPa | |
| Proof pressure | 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 2) The surge pressure must be under the maximum operating pressure.

Note 3) Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

Principal Parts Material

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

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 | Union 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 | Delta branch |
| E | Bulkhead union |
| | Bulkhead connector |
| LE | Bulkhead male elbow |
| N | Adaptor |

Male thread seal method

| Symbol | Seal method |
|--------|---------------------|
| — | None |
| S | With thread sealant |

Thread material/Surface treatment

| Symbol | Thread material/Surface treatment |
|----------------------|--|
| A | Brass |
| N ^{Note 1)} | Brass + Electroless nickel plated |
| G | Stainless steel 303 (Connection thread/Only male thread and M3) |
| Bulkhead union | <input type="checkbox"/> J ^{Note 2)} Interchangeable with KJE |

Note 1) Refer to the Dimensions to check the electroless nickel plated availability of each model.

Note 2) 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 |
| U | Union "Y" |
| | Plug-in "Y" |
| | Different diameter union "Y" |
| UD | Different diameter double union "Y" |
| X | Different diameter plug-in "Y" |
| R | Plug-in reducer |
| XD | Double plug-in "Y" |

Port size/Applicable tubing O.D.

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

Applicable tubing O.D.

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

Accessory

| Symbol | Name |
|--------|----------------|
| KQ2N | Nipple |
| | Reducer nipple |
| KQ2C | Tube cap |
| KQ2P | Plug |

Metric Size
M, R, Rc

Inch Size
UNF, NPT

Inch Size
M, R, Rc

Metric Size
Uni

Inch Size
Uni

Metric Size One-touch Fittings

Variations

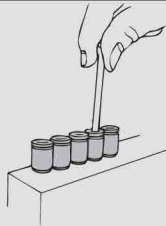
Hexagon socket head male connector

KQ2S

P.7



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



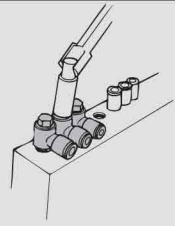
Universal male elbow

KQ2V

P.12



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



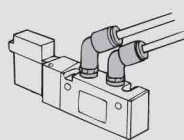
45° male elbow

KQ2K

P.11



Use to pipe a female thread at a 45° angle. Model inbetween of male connector and male elbow.



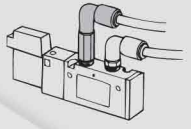
Extended male elbow

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.



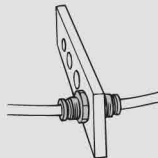
Bulkhead union

KQ2E

P.28



Use to connect tubing through a panel, etc.



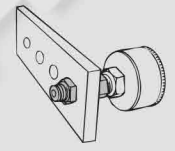
Bulkhead connector

KQ2E

P.28



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



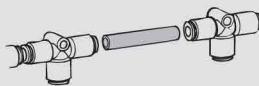
Nipple

KQ2N

P.30



Use to connect One-touch fittings.



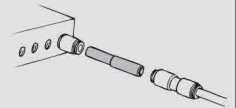
Reducer nipple

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.

Delta branch
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°.

Adaptor
KQ2N P.29



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

Tube cap
KQ2C P.30



Use to plug unused tubing.

Plug
KQ2P P.29



Use to plug unused One-touch fittings.

Metric Size
M, R, Rc

Inch Size
UNF, NPT

Inch Size
M, R, Rc

Metric Size
Uni

Inch Size
Uni

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

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

Dimensions

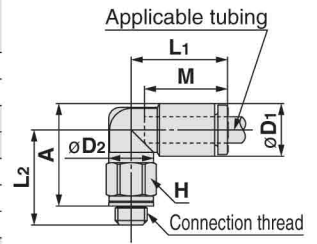
Male Elbow: KQ2L (Gasket seal)



| 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 |
| $\phi 6$ | M5 x 0.8 | KQ2L06-M5□ | 7 | 10.4 | 7 | 14.55 | 16.5 | 18.7 | 13.3 | 3.5 | 3.5 | 2.5 | 3.2 |
| | M6 x 1.0 | KQ2L06-M6A | 8 | 10.4 | 7 | 14.55 | 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)

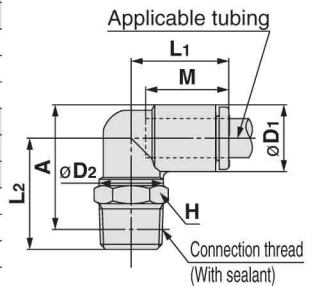


| Applicable tubing O.D. [mm] | Connection thread R | Model | H (Width across flats) | Note) ϕD_1 | ϕD_2 | L ₁ | L ₂ | A* | M | Effective area [mm ²] | | Min. port size | Weight [g] |
|-----------------------------|---------------------|-------------|------------------------|------------------|------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | | | | | | 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 | KQ2L23-02AS | 14 | 7.1 | 10 | 14.5 | 21.2 | 20.1 | 13.3 | 3 | 2.5 | 2.5 | 14.1 |
| $\phi 4$ | 1/8 | KQ2L04-01AS | 10 | 8.2 | 10 | 14.8 | 16.2 | 17.2 | 13.3 | 4.2 | 4.2 | 3 | 4.8 |
| | 1/4 | KQ2L04-02AS | 14 | 8.2 | 10 | 14.8 | 21.7 | 21.1 | 13.3 | 4.2 | 4.2 | 3 | 14.3 |
| $\phi 6$ | 1/8 | KQ2L06-01AS | 10 | 10.4 | 10 | 15.5 | 17.3 | 19.4 | 13.3 | 11.4 | 9 | 4.5 | 5.2 |
| | 1/4 | KQ2L06-02AS | 14 | 10.4 | 10 | 15.5 | 22.8 | 23.3 | 13.3 | 11.4 | 9 | 4.5 | 14.7 |
| $\phi 8$ | 3/8 | KQ2L06-03AS | 17 | 10.4 | 10 | 15.5 | 24.1 | 24.2 | 13.3 | 11.4 | 9 | 4.5 | 26.5 |
| | 1/8 | KQ2L08-01AS | 10 | 13.2 | 10 | 16.4 | 18.7 | 22.2 | 14.2 | 11.4 | 11.4 | 4.5 | 6.1 |
| $\phi 10$ | 1/4 | KQ2L08-02AS | 14 | 13.2 | 12 | 17.2 | 25.4 | 27.3 | 14.2 | 21.6 | 14.9 | 6 | 17.7 |
| | 3/8 | KQ2L08-03AS | 17 | 13.2 | 12 | 17.2 | 25.5 | 27.0 | 14.2 | 21.6 | 14.9 | 6 | 24.7 |
| $\phi 12$ | 1/8 | KQ2L10-01AS | 12 | 15.9 | 12 | 18.6 | 23.6 | 28.4 | 15.6 | 21.6 | 14.9 | 6 | 11.1 |
| | 1/4 | KQ2L10-02AS | 17 | 15.9 | 17 | 19.3 | 28.7 | 31.9 | 15.6 | 35.2 | 25 | 7.5 | 21.7 |
| $\phi 16$ | 3/8 | KQ2L10-03AS | 17 | 15.9 | 17 | 19.3 | 29.6 | 32.4 | 15.6 | 35.2 | 25 | 7.5 | 22.2 |
| | 1/2 | KQ2L10-04AS | 22 | 15.9 | 17 | 19.3 | 33.6 | 35.1 | 15.6 | 35.2 | 25 | 7.5 | 44.6 |
| $\phi 12$ | 1/4 | KQ2L12-02AS | 17 | 18.5 | 17 | 21.5 | 30.0 | 34.5 | 17 | 50.2 | 39.7 | 9 | 23.5 |
| | 3/8 | KQ2L12-03AS | 17 | 18.5 | 17 | 21.5 | 30.9 | 35.0 | 17 | 50.2 | 39.7 | 9 | 24.1 |
| $\phi 16$ | 1/2 | KQ2L12-04AS | 22 | 18.5 | 17 | 21.5 | 34.9 | 37.7 | 17 | 50.2 | 39.7 | 9 | 46.5 |
| | New 1/4 | KQ2L16-02AS | 17 | 23.8 | 17 | 25.1 | 32.6 | 39.8 | 20.6 | 50.2 | 50.2 | 9 | 27.8 |
| $\phi 16$ | 3/8 | KQ2L16-03AS | 22 | 23.8 | 21 | 27.1 | 35.4 | 42.2 | 20.6 | 71 | 71 | 11 | 40.8 |
| | 1/2 | KQ2L16-04AS | 22 | 23.8 | 21 | 27.1 | 34.1 | 39.6 | 20.6 | 100 | 84 | 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

Inch Size
M, R, Rc

Metric Size
Uni

Inch Size
Uni