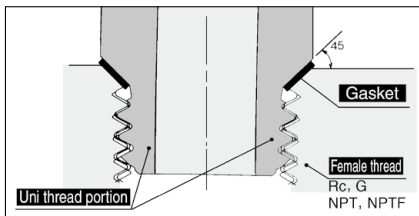
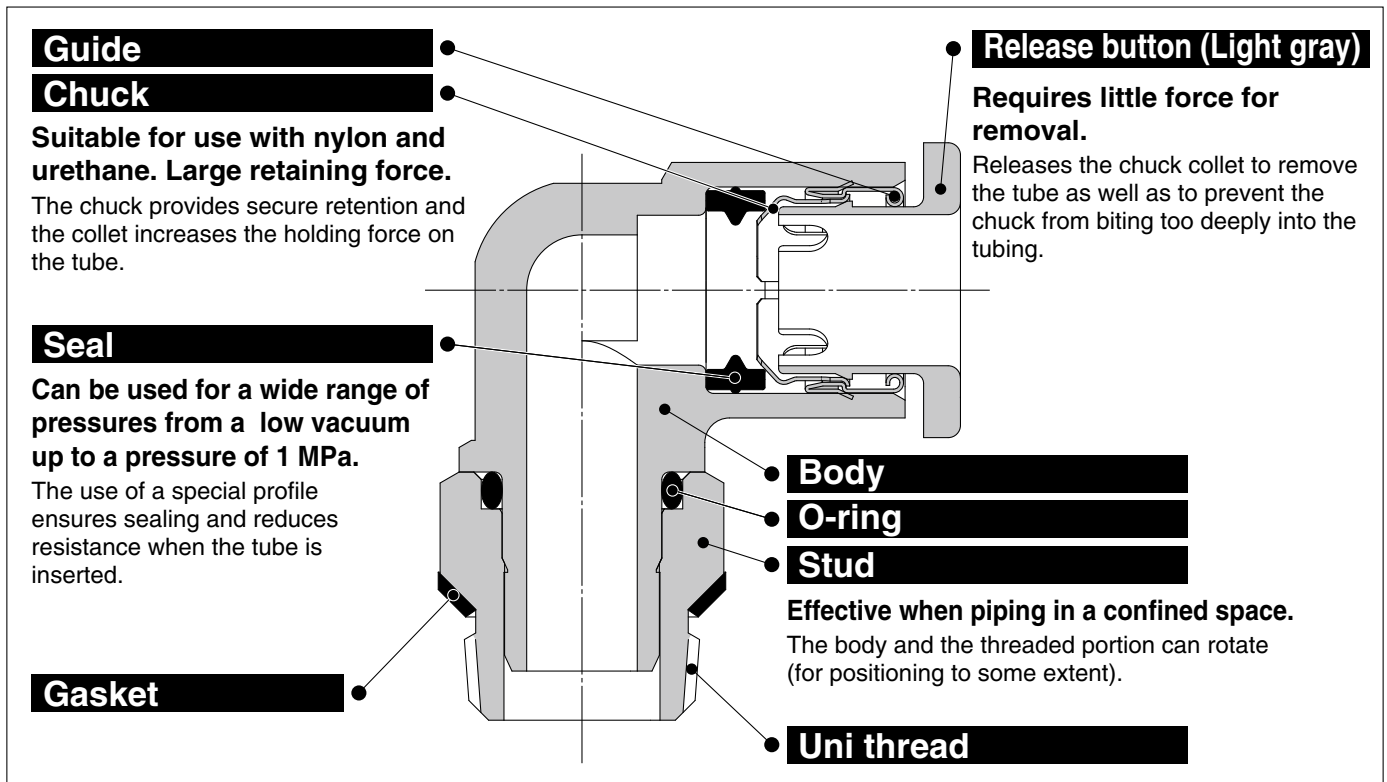


Oval Type Metric Size Uni One-touch Fittings

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

KQ2 Series



Uni thread ridge shape

A gasket made of a stainless sheet covered with laminated NBR on both sides is seated on the chamfer of a female thread for a perfect sealing construction irrespective of the difference in thread diameters due to the difference in the types of female threads, variation in tolerance, or difference in the size of chamfer. (It is applicable to any female thread with an ordinary chamfer.)

A ridge shape has been created as a Uni thread for common applications for Rc, G, NPT and NPTF.

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



Applicable Tubing

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

Specifications

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

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

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

Principal Parts Material

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



Made to Order
(Refer to page 93 for details.)

How to Order

Threaded Type

KQ2 H 06 - U01 A 1

One-touch fittings

Model

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

Applicable tubing O.D.

| Symbol | Size |
|--------|------|
| 04 | ø4 |
| 06 | ø6 |

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

Oval type release button

Thread material/Surface treatment

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

Port size

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

Spare Parts

How to Order Gasket

KQG - U01

Gasket for Uni One-touch fittings

Applicable port size

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



Metric Size Uni One-touch Fittings

Oval Type Variations

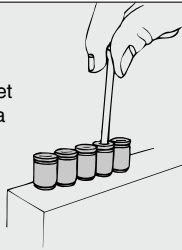
Hexagon socket head male connector

KQ2S

P.90



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



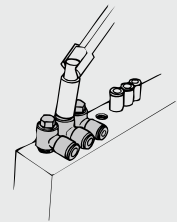
Universal male elbow

KQ2V

P.91



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



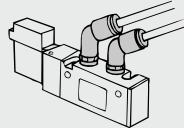
45° male elbow

KQ2K

P.91



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



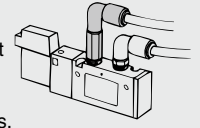
Extended male elbow

KQ2W

P.91



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



Male connector

KQ2H

P.90



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

Male run tee

KQ2Y

P.92



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

Male elbow

KQ2L

P.90



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

Male branch tee

KQ2T

P.92



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

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

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

Accessory
Nipple/Plug etc.

Refer to page 7 and after for details.


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

Branch "Y"

KQ2U

P.206



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

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

Oval Type

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

Dimensions

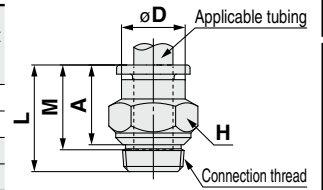
Male Connector: KQ2H (Gasket seal)



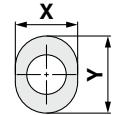
| Applicable tubing O.D. [mm] | Connection thread Uni | Model | H (Width across flats) | øD | Release button dimensions | | L | A*1 | M | Effective area [mm ²] | | Min. port size | Weight [g] |
|-----------------------------|-----------------------|--------------|------------------------|-----|---------------------------|----|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | X | Y | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2H04-U01□1 | 10 | — | 7.7 | 10 | 15.9 | 11.1 | 13.3 | 4.8 | 3.4 | 3 | 6.6 |
| | 1/4 | KQ2H04-U02□1 | 14 | — | 7.7 | 10 | 15.3 | 8.9 | 13.3 | 4.8 | 3.4 | 3 | 12.7 |
| ø6 | 1/8 | KQ2H06-U01□1 | 12 | 9.9 | 9.7 | 12 | 16.7 | 11.9 | 13.3 | 13.1 | 10.4 | 4.5 | 6.2 |
| | 1/4 | KQ2H06-U02□1 | 14 | — | 9.7 | 12 | 17 | 10.6 | 13.3 | 13.1 | 10.4 | 4.5 | 12.8 |
| | 3/8 | KQ2H06-U03□1 | 17 | — | 9.7 | 12 | 14.9 | 8.5 | 13.3 | 13.1 | 10.4 | 4.5 | 18.1 |

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

*1 Reference dimensions after installation of Uni thread



Release button dimensions



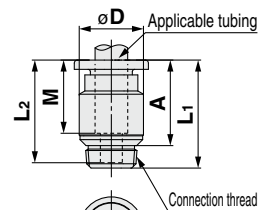
Hexagon Socket Head Male Connector: KQ2S (Gasket seal)



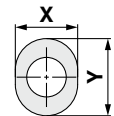
| Applicable tubing O.D. [mm] | Connection thread Uni | Model | H (Width across flats) | øD | Release button dimensions | | L ₁ | L ₂ | A*1 | M | Effective area [mm ²] | | Min. port size | Weight [g] |
|-----------------------------|-----------------------|--------------|------------------------|----|---------------------------|----|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | X | Y | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2S04-U01□1 | 3 | 10 | 7.7 | 10 | 20.6 | 19.6 | 15.8 | 13.3 | 4.1 | 3.6 | 3.1 | 8 |
| ø6 | 1/8 | KQ2S06-U01□1 | 4 | 12 | 9.7 | 12 | 19.8 | 18.8 | 15 | 13.3 | 10 | 9.9 | 4.1 | 8.2 |
| | 1/4 | KQ2S06-U02□1 | 4 | 14 | 9.7 | 12 | 19.8 | 18.8 | 13.4 | 13.3 | 10.7 | 10 | 4.1 | 12.3 |

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

*1 Reference dimensions after installation of Uni thread



Release button dimensions



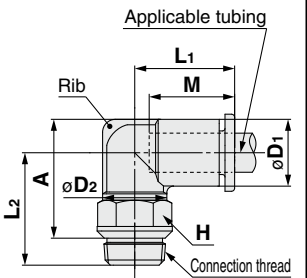
Male Elbow: KQ2L (Gasket seal)



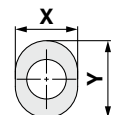
| Applicable tubing O.D. [mm] | Connection thread Uni | Model | H (Width across flats) | øD ₁ | Release button dimensions | | øD ₂ | L ₁ | L ₂ | A*1 | M | Effective area [mm ²] | | Min. port size | Weight [g] | With a rib |
|-----------------------------|-----------------------|--------------|------------------------|-----------------|---------------------------|----|-----------------|----------------|----------------|------|------|-----------------------------------|----------|----------------|------------|------------|
| | | | | | X | Y | | | | | | Nylon | Urethane | | | |
| ø4 | 1/8 | KQ2L04-U01□1 | 10 | 8.2 | 7.7 | 10 | 10 | 14.8 | 16.4 | 15.7 | 13.3 | 4.6 | 3.3 | 3 | 4.8 | ● |
| | 1/4 | KQ2L04-U02□1 | 14 | 8.2 | 7.7 | 10 | 10 | 14.8 | 19.2 | 16.9 | 13.3 | 4.6 | 3.3 | 3 | 11.5 | ● |
| ø6 | 1/8 | KQ2L06-U01□1 | 10 | 10.4 | 9.7 | 12 | 10 | 15.5 | 17.5 | 17.9 | 13.3 | 11.4 | 9 | 4.5 | 5.3 | — |
| | 1/4 | KQ2L06-U02□1 | 14 | 10.4 | 9.7 | 12 | 10 | 15.5 | 20.3 | 19.1 | 13.3 | 11.4 | 9 | 4.5 | 12 | — |
| | 3/8 | KQ2L06-U03□1 | 17 | 10.4 | 9.7 | 12 | 10 | 15.5 | 21.4 | 20.2 | 13.3 | 11.4 | 9 | 4.5 | 21.4 | — |

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

*1 Reference dimensions after installation of Uni thread



Release button dimensions



Oval Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Gasket Seal

KQ2 Series

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

Dimensions

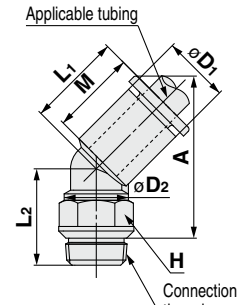
45° Male Elbow: KQ2K (Gasket seal)



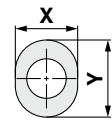
| Applicable tubing O.D. [mm] | Connection thread Uni | Model | H (Width across flats) | øD1 | Release button dimensions | | øD2 | L1 | L2 | A*1 | M | Effective area [mm ²] | | Min. port size | Weight [g] |
|-----------------------------|-----------------------|--------------|------------------------|------|---------------------------|----|-----|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | X | Y | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2K04-U01□1 | 10 | 8.2 | 7.7 | 10 | 10 | 14.4 | 12.9 | 20.8 | 13.3 | 4.8 | 3.4 | 4.5 | 4.7 |
| | 1/4 | KQ2K04-U02□1 | 14 | 8.2 | 7.7 | 10 | 10 | 14.4 | 14.7 | 21 | 13.3 | 4.8 | 3.4 | 4.5 | 11.3 |
| ø6 | 1/8 | KQ2K06-U01□1 | 10 | 10.4 | 9.7 | 12 | 10 | 14.7 | 15 | 23.8 | 13.3 | 8.7 | 6.9 | 4.5 | 5.1 |
| | 1/4 | KQ2K06-U02□1 | 14 | 10.4 | 9.7 | 12 | 10 | 14.7 | 16.8 | 24 | 13.3 | 8.7 | 6.9 | 4.5 | 11.7 |
| | 3/8 | KQ2K06-U03□1 | 17 | 10.4 | 9.7 | 12 | 10 | 14.7 | 17.9 | 25.1 | 13.3 | 8.7 | 6.9 | 4.5 | 21.2 |

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

*1 Reference dimensions after installation of Uni thread



Release button dimensions



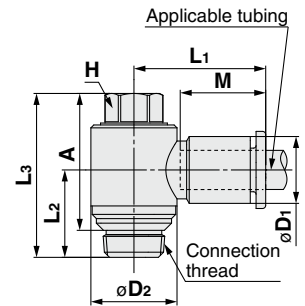
Universal Male Elbow: KQ2V (Gasket seal)



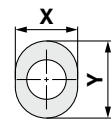
| Applicable tubing O.D. [mm] | Connection thread Uni | Model | H (Width across flats) | øD1 | Release button dimensions | | øD2 | L1 | L2 | L3 | A*1 | M | Effective area [mm ²] | | Min. port size | Weight [g] |
|-----------------------------|-----------------------|--------------|------------------------|------|---------------------------|----|------|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | X | Y | | | | | | | Nylon | Urethane | | |
| ø4 | 1/8 | KQ2V04-U01□1 | 8 | 8.2 | 7.7 | 10 | 13.4 | 19.3 | 13.6 | 25.5 | 20.7 | 13.3 | 2.9 | 2.9 | 4.5 | 13.5 |
| ø6 | 1/8 | KQ2V06-U01□1 | 8 | 10.4 | 9.7 | 12 | 13.4 | 20.5 | 13.6 | 25.5 | 20.7 | 13.3 | 7.5 | 5.9 | 4.5 | 13.9 |
| | 1/4 | KQ2V06-U02□1 | 10 | 10.4 | 9.7 | 12 | 15.3 | 19.9 | 15.4 | 28 | 21.6 | 13.3 | 7.5 | 5.9 | 4.5 | 21.8 |

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

*1 Reference dimensions after installation of Uni thread



Release button dimensions



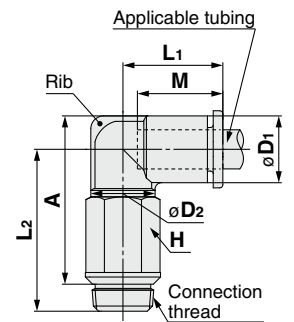
Extended Male Elbow: KQ2W (Gasket seal)



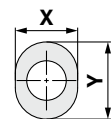
| Applicable tubing O.D. [mm] | Connection thread Uni | Model | H (Width across flats) | øD1 | Release button dimensions | | øD2 | L1 | L2 | A*1 | M | Effective area [mm ²] | | Min. port size | Weight [g] | With a rib |
|-----------------------------|-----------------------|--------------|------------------------|------|---------------------------|----|-----|------|------|------|------|-----------------------------------|----------|----------------|------------|------------|
| | | | | | X | Y | | | | | | Nylon | Urethane | | | |
| ø4 | 1/8 | KQ2W04-U01□1 | 10 | 8.2 | 7.7 | 10 | 10 | 14.8 | 24.1 | 23.4 | 13.3 | 4 | 4 | 3 | 8.3 | ● |
| | 1/4 | KQ2W04-U02□1 | 14 | 8.2 | 7.7 | 10 | 10 | 14.8 | 30.1 | 27.8 | 13.3 | 4 | 4 | 3 | 23.9 | ● |
| ø6 | 1/8 | KQ2W06-U01□1 | 10 | 10.4 | 9.7 | 12 | 10 | 15.5 | 31.2 | 31.6 | 13.3 | 10.9 | 8.6 | 4.5 | 11.5 | — |
| | 1/4 | KQ2W06-U02□1 | 14 | 10.4 | 9.7 | 12 | 10 | 15.5 | 31.2 | 30 | 13.3 | 10.9 | 8.6 | 4.5 | 24.3 | — |
| | 3/8 | KQ2W06-U03□1 | 17 | 10.4 | 9.7 | 12 | 10 | 15.5 | 32.3 | 31.1 | 13.3 | 10.9 | 8.6 | 4.5 | 41 | — |

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

*1 Reference dimensions after installation of Uni thread



Release button dimensions



Dimensions

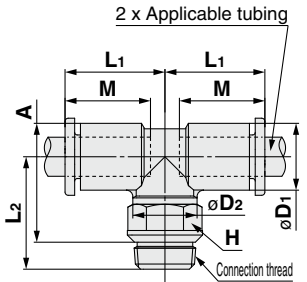
Male Branch Tee: KQ2T (Gasket seal)



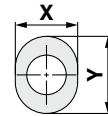
| Applicable tubing O.D. [mm] | Connection thread Uni | Model | H (Width across flats) | øD1 | Release button dimensions | | øD2 | L1 | L2 | A*1 | M | Effective area [mm ²] | | Min. port size | Weight [g] |
|-----------------------------|-----------------------|--------------|------------------------|------|---------------------------|-----|-----|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | X | Y | | | | | | Nylon | Urethane | | |
| | | | | | ø4 | 1/8 | | | | | | KQ2T04-U01□1 | 10 | | |
| | 1/4 | KQ2T04-U02□1 | 14 | 8.2 | 7.7 | 10 | 10 | 14.8 | 19.2 | 16.9 | 13.3 | 6 | 4.1 | 3 | 12.2 |
| ø6 | 1/8 | KQ2T06-U01□1 | 10 | 10.4 | 9.7 | 12 | 10 | 15.5 | 17.5 | 17.9 | 13.3 | 13.9 | 11 | 4.5 | 6.2 |
| | 1/4 | KQ2T06-U02□1 | 14 | 10.4 | 9.7 | 12 | 10 | 15.5 | 20.3 | 19.1 | 13.3 | 13.9 | 11 | 4.5 | 12.9 |
| | 3/8 | KQ2T06-U03□1 | 17 | 10.4 | 9.7 | 12 | 10 | 15.5 | 21.4 | 20.2 | 13.3 | 13.9 | 11 | 4.5 | 22.3 |

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

*1 Reference dimensions after installation of Uni thread



Release button dimensions



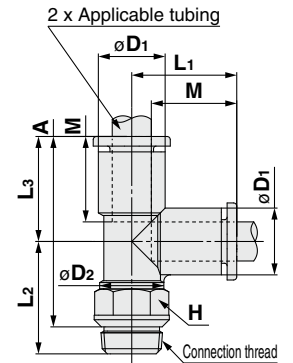
Male Run Tee: KQ2Y (Gasket seal)



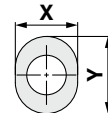
| Applicable tubing O.D. [mm] | Connection thread Uni | Model | H (Width across flats) | øD1 | Release button dimensions | | øD2 | L1 | L2 | L3 | A*1 | M | Effective area [mm ²] | | Min. port size | Weight [g] |
|-----------------------------|-----------------------|--------------|------------------------|------|---------------------------|-----|-----|------|------|------|------|------|-----------------------------------|----------|----------------|------------|
| | | | | | X | Y | | | | | | | Nylon | Urethane | | |
| | | | | | ø4 | 1/8 | | | | | | | KQ2Y04-U01□1 | 10 | | |
| | 1/4 | KQ2Y04-U02□1 | 14 | 8.2 | 7.7 | 10 | 10 | 15.3 | 19.2 | 15.3 | 28.1 | 13.3 | 6.4 | 4 | 3 | 12.2 |
| ø6 | 1/8 | KQ2Y06-U01□1 | 10 | 10.4 | 9.7 | 12 | 10 | 16.3 | 17.5 | 16.3 | 29 | 13.3 | 13.4 | 10.6 | 4.5 | 6.3 |
| | 1/4 | KQ2Y06-U02□1 | 14 | 10.4 | 9.7 | 12 | 10 | 16.3 | 20.3 | 16.3 | 30.2 | 13.3 | 13.4 | 10.6 | 4.5 | 13 |
| | 3/8 | KQ2Y06-U03□1 | 17 | 10.4 | 9.7 | 12 | 10 | 16.3 | 21.4 | 16.3 | 31.3 | 13.3 | 13.4 | 10.6 | 4.5 | 22.5 |

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

*1 Reference dimensions after installation of Uni thread



Release button dimensions



Oval Type

Metric Size M, R, Rc

Inch Size UNF, NPT

Inch Size M, R, Rc

Metric Size G

Metric Size R, Rc

Inch Size NPT

Inch Size R

Metric Size Uni

Inch Size Uni

Face Seal

Gasket Seal

KQ2 Series

Made to Order/Clean Series/Spare Parts

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

1 Made to Order

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

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

*2 Please contact SMC for availability.

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

| Symbol | Specifications |
|------------|---|
| X17 | Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue |
| X29 | Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Copper-free (With electroless nickel plating) |
| X39 | Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double packaging, resin body: white) |

3 Spare Parts

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

2 Clean Series

Please consult with SMC separately for applicable models.

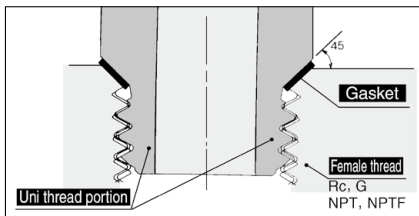
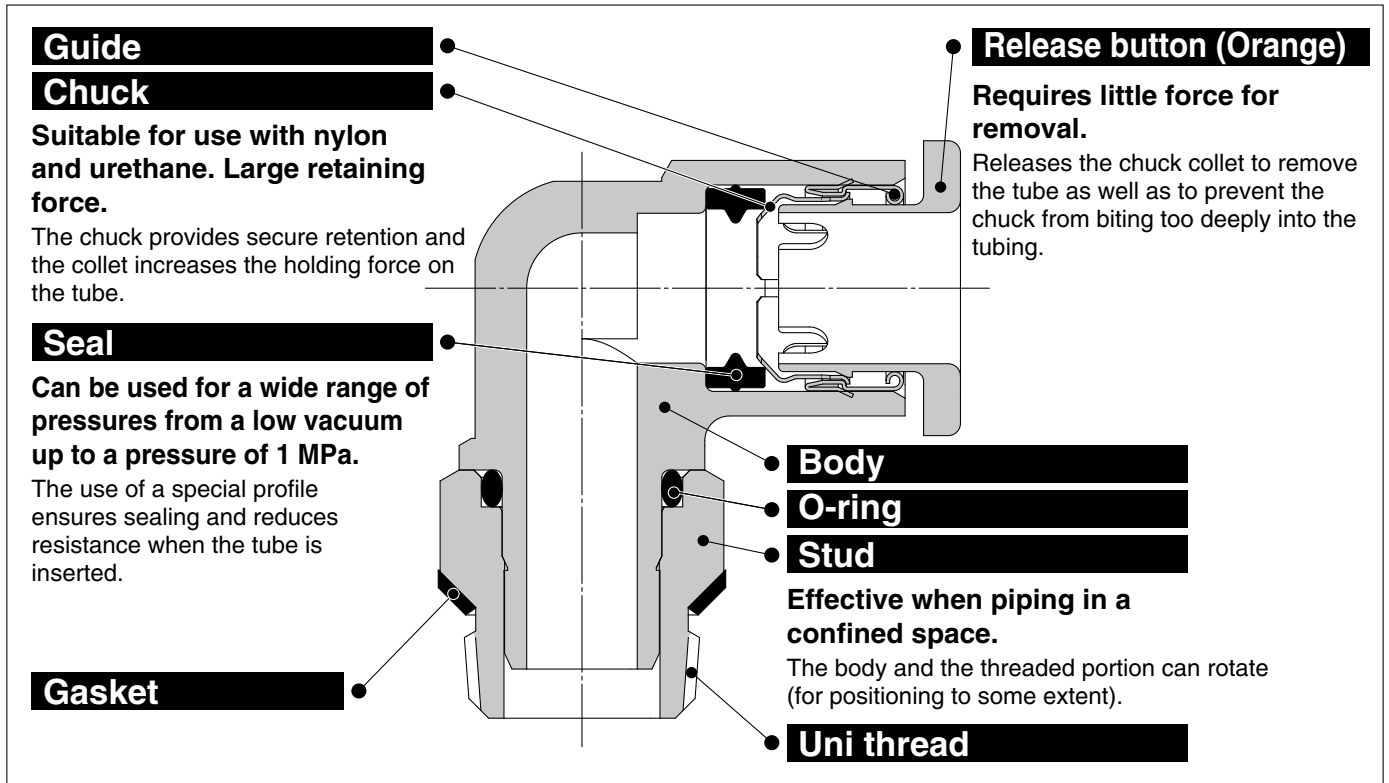
| Symbol | Specifications |
|------------|---|
| 10- | Brass parts: With electroless nickel plating Lubricant: Fluorine grease Air blow in a clean room Double packaging Resin body, Release button color: White |

Example) **10-KQ2H06-U01N1**

Oval Type Inch Size Uni One-touch Fittings

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

KQ2 Series



Uni thread ridge shape

A gasket made of a stainless sheet covered with laminated NBR on both sides is seated on the chamfer of a female thread for a perfect sealing construction irrespective of the difference in thread diameters due to the difference in the types of female threads, variation in tolerance, or difference in the size of chamfer. (It is applicable to any female thread with an ordinary chamfer.)

A ridge shape has been created as a Uni thread for common applications for Rc, G, NPT and NPTF.

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



Applicable Tubing

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

Specifications

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

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

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

Principal Parts Material

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



Made to Order
(Refer to page 100 for details.)