

One-Touch Fittings Series KQ2

Features

- Wide range of pressures - Low vacuum to 10 Bar (1.0MPa) pressure.
- Wide range of tube systems (2 mm - 16 mm OD tube).
- Widest range of configuration available.
- Improved tube insertion/removal.
- Compact and lightweight.

Specifications

| | | |
|---|------------------|---|
| Fluid | | Air/Water ^{Note 1)} |
| Operating pressure range ^{Note 2)} | | -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 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.



■ Applicable tubing diameter: Metric Size

■ Connecting thread: M, R, Rc



Related Products

Series TU - Polyurethane Tubing - page 1223

Applicable Tubing

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

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

Also available

Uni-fitting series

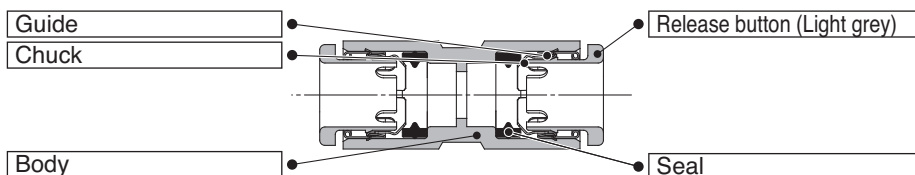
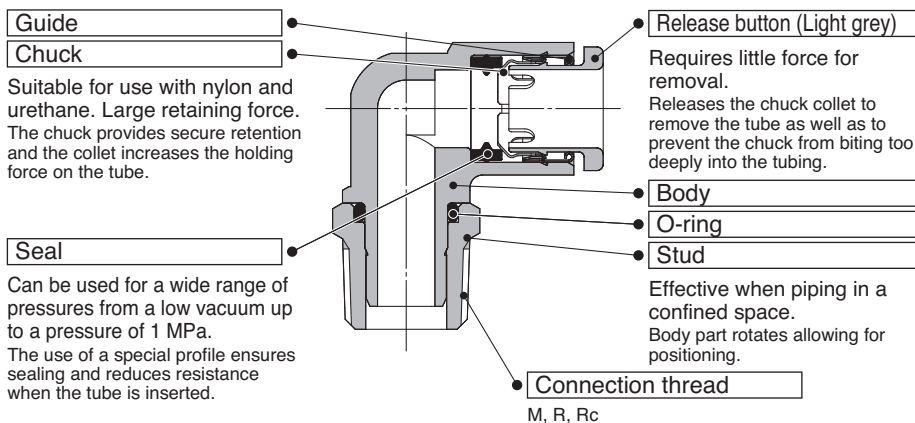
Universal application to G, Rc and NPT areas



Imperial sizes

A full range of SMC fittings is available to suit imperial size tubing from 1/8 to 1/2", with either European standard Metric and R threads or American standard UNF and NPT threads.

Contact SMC for details of these types.



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

Tubing



Female thread hole

References marked in light blue are available as ECW stocked item.

KQ2H Male Connector (Gasket seal)

Most common style used to pipe from female thread in the same direction.

| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|------------|
| ø2 | M3 x 0.5 | KQ2H02-M3G |
| | M5 x 0.8 | KQ2H02-M5□ |
| ø3.2 | M3 x 0.5 | KQ2H23-M3G |
| | M5 x 0.8 | KQ2H23-M5□ |
| ø4 | M3 x 0.5 | KQ2H04-M3G |
| | M5 x 0.8 | KQ2H04-M5□ |
| | M6 x 1.0 | KQ2H04-M6A |
| ø6 | M5 x 0.8 | KQ2H06-M5□ |
| | M6 x 1.0 | KQ2H06-M6A |

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

KQ2H Male Connector (Sealant)

Most common style used to pipe from female thread in the same direction.

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|-------------|
| ø3.2 | 1/8 | KQ2H23-01□S |
| | 1/4 | KQ2H23-02AS |
| ø4 | 1/8 | KQ2H04-01□S |
| | 1/4 | KQ2H04-02AS |
| ø6 | 1/8 | KQ2H06-01□S |
| | 1/4 | KQ2H06-02AS |
| | 3/8 | KQ2H06-03AS |
| ø8 | 1/8 | KQ2H08-01AS |
| | 1/4 | KQ2H08-02AS |
| | 3/8 | KQ2H08-03AS |
| ø10 | 1/8 | KQ2H10-01AS |
| | 1/4 | KQ2H10-02AS |
| | 3/8 | KQ2H10-03AS |
| | 1/2 | KQ2H10-04AS |
| ø12 | 1/4 | KQ2H12-02AS |
| | 3/8 | KQ2H12-03AS |
| | 1/2 | KQ2H12-04AS |
| ø16 | 1/4 | KQ2H16-02AS |
| | 3/8 | KQ2H16-03AS |
| | 1/2 | KQ2H16-04AS |

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

KQ2L Male Elbow (Gasket seal)

Most common style used to pipe from female thread at a right angle.

| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|------------|
| ø2 | M3 x 0.5 | KQ2L02-M3G |
| | M5 x 0.8 | KQ2L02-M5□ |
| ø3.2 | M3 x 0.5 | KQ2L23-M3G |
| | M5 x 0.8 | KQ2L23-M5□ |
| ø4 | M3 x 0.5 | KQ2L04-M3G |
| | M5 x 0.8 | KQ2L04-M5□ |
| | M6 x 1.0 | KQ2L04-M6□ |
| ø6 | M5 x 0.8 | KQ2L06-M5□ |
| | M6 x 1.0 | KQ2L06-M6□ |

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

KQ2L Male Elbow (Sealant)

Most common style used to pipe from female thread at a right angle.

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|-------------|
| ø3.2 | 1/8 | KQ2L23-01□S |
| | 1/4 | KQ2L23-02AS |
| ø4 | 1/8 | KQ2L04-01AS |
| | 1/4 | KQ2L04-02AS |
| ø6 | 1/8 | KQ2L06-01AS |
| | 1/4 | KQ2L06-02AS |
| | 3/8 | KQ2L06-03AS |
| ø8 | 1/8 | KQ2L08-01AS |
| | 1/4 | KQ2L08-02AS |
| | 3/8 | KQ2L08-03AS |
| ø10 | 1/8 | KQ2L10-01AS |
| | 1/4 | KQ2L10-02AS |
| | 3/8 | KQ2L10-03AS |
| | 1/2 | KQ2L10-04AS |
| ø12 | 1/4 | KQ2L12-02AS |
| | 3/8 | KQ2L12-03AS |
| | 1/2 | KQ2L12-04AS |
| ø16 | 1/4 | KQ2L16-02AS |
| | 3/8 | KQ2L16-03AS |
| | 1/2 | KQ2L16-04AS |

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



Tubing




Female thread hole

References marked in light blue are available as ECW stocked item.

45° Male Elbow: KQ2K (Gasket seal)

For piping at 45° from female thread.
Intermediate model between male connector and male elbow.




| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|------------|
| ø4 | M5 x 0.8 | KQ2K04-M5A |
| | M6 x 1.0 | KQ2K04-M6A |
| ø6 | M5 x 0.8 | KQ2K06-M5A |
| | M6 x 1.0 | KQ2K06-M6A |

<M5, M6>

45° Male Elbow: KQ2K (Sealant)

For piping at 45° from female thread.
Intermediate model between male connector and male elbow.




| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|-------------|
| ø4 | 1/8 | KQ2K04-01AS |
| | 1/4 | KQ2K04-02AS |
| ø6 | 1/8 | KQ2K06-01AS |
| | 1/4 | KQ2K06-02AS |
| ø8 | 3/8 | KQ2K06-03AS |
| | 1/8 | KQ2K08-01AS |
| | 1/4 | KQ2K08-02AS |
| ø10 | 3/8 | KQ2K08-03AS |
| | 1/8 | KQ2K10-01AS |
| | 1/4 | KQ2K10-02AS |
| ø12 | 3/8 | KQ2K10-03AS |
| | 1/2 | KQ2K10-04AS |
| | 1/4 | KQ2K12-02AS |
| ø16 | 3/8 | KQ2K12-03AS |
| | 1/2 | KQ2K12-04AS |
| | 1/4 | KQ2K16-02AS |
| ø16 | 3/8 | KQ2K16-03AS |
| | 1/2 | KQ2K16-04AS |

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Extended Male Elbow: KQ2W (Gasket seal)

Basically used in the same way as a male elbow.
But also used in 3 dimensional piping to prevent interference of fittings.




| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|------------|
| ø2 | M3 x 0.5 | KQ2W02-M3G |
| | M5 x 0.8 | KQ2W02-M5□ |
| ø3.2 | M3 x 0.5 | KQ2W23-M3G |
| | M5 x 0.8 | KQ2W23-M5□ |
| ø4 | M3 x 0.5 | KQ2W04-M3G |
| | M5 x 0.8 | KQ2W04-M5□ |
| ø6 | M5 x 0.8 | KQ2W06-M5□ |

<M3, M5>

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

Extended Male Elbow: KQ2W (Sealant)

Basically used in the same way as a male elbow.
But also used in 3 dimensional piping to prevent interference of fittings.



| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|-------------|
| ø3.2 | 1/8 | KQ2W23-01□S |
| | 1/4 | KQ2W23-02AS |
| ø4 | 1/8 | KQ2W04-01□S |
| | 1/4 | KQ2W04-02AS |
| ø6 | 1/8 | KQ2W06-01□S |
| | 1/4 | KQ2W06-02AS |
| | 3/8 | KQ2W06-03AS |
| ø8 | 1/8 | KQ2W08-01AS |
| | 1/4 | KQ2W08-02AS |
| | 3/8 | KQ2W08-03AS |
| ø10 | 1/4 | KQ2W10-02AS |
| | 3/8 | KQ2W10-03AS |
| | 1/2 | KQ2W10-04AS |
| ø12 | 1/4 | KQ2W12-02AS |
| | 3/8 | KQ2W12-03AS |
| | 1/2 | KQ2W12-04AS |
| ø16 | 1/4 | KQ2W16-02AS |
| | 3/8 | KQ2W16-03AS |
| | 1/2 | KQ2W16-04AS |

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

Tubing



Female thread hole

References marked in light blue are available as ECW stocked item.

Hexagon Socket Head Male Connector: KQ2S (Gasket seal)

The hexagon socket in the body is used to tighten the socket head male connector with a hexagon wrench. Useful in a confined space.

| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|------------|
| ø2 | M3 x 0.5 | KQ2S02-M3G |
| | M3 x 0.5 | KQ2S23-M3G |
| ø3.2 | M5 x 0.8 | KQ2S23-M5A |
| | M3 x 0.5 | KQ2S04-M3G |
| ø4 | M5 x 0.8 | KQ2S04-M5A |
| | M6 x 1.0 | KQ2S04-M6A |
| | M5 x 0.8 | KQ2S06-M5A |
| ø6 | M6 x 1.0 | KQ2S06-M6A |



<M3, M5, M6>

Hexagon Socket Head Male Connector: KQ2S (Sealant)

 For piping at 45° from female thread.
 Intermediate model between male connector and male elbow.

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|-------------|
| ø4 | 1/8 | KQ2S04-01□S |
| | 1/8 | KQ2S06-01□S |
| ø6 | 1/4 | KQ2S06-02AS |
| | 1/8 | KQ2S08-01AS |
| ø8 | 1/4 | KQ2S08-02AS |
| | 3/8 | KQ2S08-03AS |
| | 1/8 | KQ2S10-01AS |
| ø10 | 1/4 | KQ2S10-02AS |
| | 3/8 | KQ2S10-03AS |
| | 1/2 | KQ2S10-04AS |
| ø12 | 1/4 | KQ2S12-02AS |
| | 3/8 | KQ2S12-03AS |
| | 1/2 | KQ2S12-04AS |
| ø16 | 1/4 | KQ2S16-02AS |
| | 3/8 | KQ2S16-03AS |
| | 1/2 | KQ2S16-04AS |



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

Universal Male Elbow: KQ2V (Gasket seal)

The hexagon socket in the head is used to tighten the body with a hexagon wrench. Useful in a confined space.

| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|------------|
| ø4 | M5 x 0.8 | KQ2V04-M5A |
| | M5 x 0.8 | KQ2V06-M5A |



<M5>

Universal Male Elbow: KQ2V (Sealant)

The hexagon socket in the head is used to tighten the body with a hexagon wrench. Useful in a confined space.

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|-------------|
| ø4 | 1/8 | KQ2V04-01AS |
| | 1/8 | KQ2V06-01AS |
| ø6 | 1/4 | KQ2V06-02AS |
| | 1/8 | KQ2V08-01AS |
| ø8 | 1/4 | KQ2V08-02AS |
| | 3/8 | KQ2V08-03AS |
| | 1/4 | KQ2V10-02AS |
| ø10 | 3/8 | KQ2V10-03AS |
| | 3/8 | KQ2V12-03AS |
| ø12 | 1/2 | KQ2V12-04AS |
| | 3/8 | KQ2V16-03AS |
| ø16 | 1/2 | KQ2V16-04AS |



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

The hexagon head of the body is used to tighten the body with a box wrench in a confined space.

| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|-------------|
| ø4 | M5 x 0.8 | KQ2VS04-M5A |
| | M5 x 0.8 | KQ2VS06-M5A |



<M5>

Hexagon Socket Head Universal Male Elbow: KQ2VS (Sealant)

To branch the line from the female thread at 90° in each direction.

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|--------------|
| ø4 | 1/8 | KQ2VS04-01AS |
| | 1/8 | KQ2VS06-01AS |
| ø6 | 1/4 | KQ2VS06-02AS |
| | 1/8 | KQ2VS08-01AS |
| ø8 | 1/4 | KQ2VS08-02AS |
| | 3/8 | KQ2VS08-03AS |
| | 1/4 | KQ2VS10-02AS |
| ø10 | 3/8 | KQ2VS10-03AS |
| | 3/8 | KQ2VS12-03AS |
| ø12 | 1/2 | KQ2VS12-04AS |



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Tubing



Female thread hole

References marked in light blue are available as ECW stocked item.

Male Branch Tee: KQ2T (Gasket seal)

To branch the line from the female thread at 90° in each direction

| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|------------|
| ø2 | M3 x 0.5 | KQ2T02-M3G |
| | M5 x 0.8 | KQ2T02-M5□ |
| ø3.2 | M3 x 0.5 | KQ2T23-M3G |
| | M5 x 0.8 | KQ2T23-M5□ |
| ø4 | M3 x 0.5 | KQ2T04-M3G |
| | M5 x 0.8 | KQ2T04-M5□ |
| | M6 x 1.0 | KQ2T04-M6A |
| ø6 | M5 x 0.8 | KQ2T06-M5□ |
| | M6 x 1.0 | KQ2T06-M6A |



<M3, M5, M6>

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

Male Branch Tee: KQ2T (Sealant)

To branch the line from the female thread at 90° in each direction

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|-------------|
| ø3.2 | 1/8 | KQ2T23-01□S |
| | 1/4 | KQ2T23-02AS |
| ø4 | 1/8 | KQ2T04-01□S |
| | 1/4 | KQ2T04-02AS |
| ø6 | 1/8 | KQ2T06-01□S |
| | 1/4 | KQ2T06-02AS |
| | 3/8 | KQ2T06-03AS |
| ø8 | 1/8 | KQ2T08-01AS |
| | 1/4 | KQ2T08-02AS |
| | 3/8 | KQ2T08-03AS |
| ø10 | 1/8 | KQ2T10-01AS |
| | 1/4 | KQ2T10-02AS |
| | 3/8 | KQ2T10-03AS |
| | 1/2 | KQ2T10-04AS |
| ø12 | 1/4 | KQ2T12-02AS |
| | 3/8 | KQ2T12-03AS |
| | 1/2 | KQ2T12-04AS |
| ø16 | 1/4 | KQ2T16-02AS |
| | 3/8 | KQ2T16-03AS |
| | 1/2 | KQ2T16-04AS |



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

Male Run Tee: KQ2Y (Gasket seal)

To branch the line from the female thread in the same direction and at 90°.

| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|------------|
| ø2 | M3 x 0.5 | KQ2Y02-M3G |
| | M5 x 0.8 | KQ2Y02-M5□ |
| ø3.2 | M3 x 0.5 | KQ2Y23-M3G |
| | M5 x 0.8 | KQ2Y23-M5□ |
| ø4 | M3 x 0.5 | KQ2Y04-M3G |
| | M5 x 0.8 | KQ2Y04-M5□ |
| | M6 x 1.0 | KQ2Y04-M6A |
| ø6 | M5 x 0.8 | KQ2Y06-M5□ |
| | M6 x 1.0 | KQ2Y06-M6A |



<M3, M5, M6>

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

Male Run Tee: KQ2Y (Sealant)

To branch the line from the female thread in the same direction and at 90°.

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|-------------|
| ø3.2 | 1/8 | KQ2Y23-01□S |
| | 1/4 | KQ2Y23-02AS |
| ø4 | 1/8 | KQ2Y04-01□S |
| | 1/4 | KQ2Y04-02AS |
| ø6 | 1/8 | KQ2Y06-01□S |
| | 1/4 | KQ2Y06-02AS |
| | 3/8 | KQ2Y06-03AS |
| ø8 | 1/8 | KQ2Y08-01AS |
| | 1/4 | KQ2Y08-02AS |
| | 3/8 | KQ2Y08-03AS |
| ø10 | 1/8 | KQ2Y10-01AS |
| | 1/4 | KQ2Y10-02AS |
| | 3/8 | KQ2Y10-03AS |
| | 1/2 | KQ2Y10-04AS |
| ø12 | 1/4 | KQ2Y12-02AS |
| | 3/8 | KQ2Y12-03AS |
| | 1/2 | KQ2Y12-04AS |
| ø16 | 1/4 | KQ2Y16-02AS |
| | 3/8 | KQ2Y16-03AS |
| | 1/2 | KQ2Y16-04AS |



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

Tubing



Female thread hole

References marked in light blue are available as ECW stocked item.

Branch “Y”: KQ2U (Gasket seal)

To branch tubing in the same direction.

| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|------------|
| ø3.2 | M5 x 0.8 | KQ2U23-M5□ |
| | M6 x 0.8 | KQ2U04-M5□ |
| ø4 | M5 x 0.8 | KQ2U04-M5A |
| | M6 x 1.0 | KQ2U06-M5□ |
| ø6 | M5 x 0.8 | KQ2U06-M5□ |
| | M6 x 1.0 | KQ2U06-M6A |

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

Branch “Y”: KQ2U (Sealant)

To branch tubing in the same direction.

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|-------------|
| ø3.2 | 1/8 | KQ2U23-01□S |
| | 1/4 | KQ2U23-02AS |
| ø4 | 1/8 | KQ2U04-01□S |
| | 1/4 | KQ2U04-02AS |
| ø6 | 1/8 | KQ2U06-01□S |
| | 1/4 | KQ2U06-02AS |
| | 3/8 | KQ2U06-03AS |
| ø8 | 1/8 | KQ2U08-01AS |
| | 1/4 | KQ2U08-02AS |
| | 3/8 | KQ2U08-03AS |
| ø10 | 1/4 | KQ2U10-02AS |
| | 3/8 | KQ2U10-03AS |
| | 1/2 | KQ2U10-04AS |
| ø12 | 1/4 | KQ2U12-02AS |
| | 3/8 | KQ2U12-03AS |
| | 1/2 | KQ2U12-04AS |
| ø16 | 1/4 | KQ2U16-02AS |
| | 3/8 | KQ2U16-03AS |
| | 1/2 | KQ2U16-04AS |

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

Double Universal Male Elbow: KQ2VD (Sealant)

 To branch the line from the female thread at right angles.
 2 individual parts rotate freely.

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|--------------|
| ø4 | 1/8 | KQ2VD04-01AS |
| | 1/4 | KQ2VD04-02AS |
| | 3/8 | KQ2VD04-03AS |
| ø6 | 1/8 | KQ2VD06-01AS |
| | 1/4 | KQ2VD06-02AS |
| | 3/8 | KQ2VD06-03AS |
| ø8 | 1/8 | KQ2VD08-01AS |
| | 1/4 | KQ2VD08-02AS |
| | 3/8 | KQ2VD08-03AS |
| | 1/2 | KQ2VD08-04AS |
| ø10 | 1/4 | KQ2VD10-02AS |
| | 3/8 | KQ2VD10-03AS |
| | 1/2 | KQ2VD10-04AS |
| ø12 | 1/4 | KQ2VD12-02AS |
| | 3/8 | KQ2VD12-03AS |
| | 1/2 | KQ2VD12-04AS |

Triple Universal Male Elbow: KQ2VT (Sealant)

 To branch line from the female thread into 3 directions at right angles.
 3 individual parts rotate freely.

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|--------------|
| ø4 | 1/8 | KQ2VT04-01AS |
| | 1/4 | KQ2VT04-02AS |
| | 3/8 | KQ2VT04-03AS |
| ø6 | 1/8 | KQ2VT06-01AS |
| | 1/4 | KQ2VT06-02AS |
| | 3/8 | KQ2VT06-03AS |
| ø8 | 1/8 | KQ2VT08-01AS |
| | 1/4 | KQ2VT08-02AS |
| | 3/8 | KQ2VT08-03AS |
| | 1/2 | KQ2VT08-04AS |
| ø10 | 1/4 | KQ2VT10-02AS |
| | 3/8 | KQ2VT10-03AS |
| | 1/2 | KQ2VT10-04AS |
| ø12 | 1/4 | KQ2VT12-02AS |
| | 3/8 | KQ2VT12-03AS |
| | 1/2 | KQ2VT12-04AS |

Branch Universal Male Elbow: KQ2Z (Gasket seal)

 The hexagon head of the body is used to tighten the body with a box wrench.
 Used to branch the line. Elbow union for piping.

| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|------------|
| ø4 | M5 x 0.8 | KQ2Z04-M5A |

Branch Universal Male Elbow: KQ2Z (Sealant)

 The hexagon head of the body is used to tighten the body with a box wrench.
 Used to branch the line. Elbow union for piping.

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|-------------|
| ø4 | 1/8 | KQ2Z04-01AS |
| | 1/8 | KQ2Z06-01AS |
| | 1/4 | KQ2Z06-02AS |
| ø6 | 3/8 | KQ2Z06-03AS |
| | 1/8 | KQ2Z08-01AS |
| | 1/4 | KQ2Z08-02AS |
| ø8 | 3/8 | KQ2Z08-03AS |
| | 1/4 | KQ2Z10-02AS |
| ø10 | 3/8 | KQ2Z10-03AS |
| | 1/2 | KQ2Z12-04AS |



For more product options and details see our specific catalogues or on-line information.

Tubing



Female thread hole

References marked in light blue are available as ECW stocked item.

Delta Branch: KQ2UD (Sealant)

To branch the line from the female thread into 4 tubes in the same direction.



| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|--------------|
| ø4 | 1/8 | KQ2UD04-01AS |
| | 1/4 | KQ2UD04-02AS |
| ø6 | 1/8 | KQ2UD06-01AS |
| | 1/4 | KQ2UD06-02AS |

Male Branch Connector: KQ2LU (Gasket seal)

To branch tubing at a right angle from the female thread.



<M5, M6>

| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|-------------|
| ø4 | M5 x 0.8 | KQ2LU04-M5A |
| | M6 x 1.0 | KQ2LU04-M6A |
| ø6 | M5 x 0.8 | KQ2LU06-M5A |
| | M6 x 0.8 | KQ2LU06-M6A |

Male Branch Connector: KQ2LU (Sealant)

To branch tubing at a right angle from the female thread.



<R>

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|--------------|
| ø4 | 1/8 | KQ2LU04-01AS |
| | 1/4 | KQ2LU04-02AS |
| ø6 | 1/8 | KQ2LU06-01AS |
| | 1/4 | KQ2LU06-02AS |
| ø8 | 3/8 | KQ2LU06-03AS |
| | 1/8 | KQ2LU08-01AS |
| | 1/4 | KQ2LU08-02AS |
| | 3/8 | KQ2LU08-03AS |
| ø10 | 1/4 | KQ2LU10-02AS |
| | 3/8 | KQ2LU10-03AS |
| | 1/2 | KQ2LU10-04AS |
| ø12 | 1/4 | KQ2LU12-02AS |
| | 3/8 | KQ2LU12-03AS |
| | 1/2 | KQ2LU12-04AS |

Double Branch Universal Male Elbow: KQ2ZD (Sealant)

To branch the line from the female thread into 4 tubes at right angles. 2 individual parts rotate freely.



| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|--------------|
| ø4 | 1/8 | KQ2ZD04-01AS |
| | 1/4 | KQ2ZD04-02AS |
| | 3/8 | KQ2ZD04-03AS |
| ø6 | 1/8 | KQ2ZD06-01AS |
| | 1/4 | KQ2ZD06-02AS |
| | 3/8 | KQ2ZD06-03AS |
| ø8 | 1/8 | KQ2ZD08-01AS |
| | 1/4 | KQ2ZD08-02AS |
| | 3/8 | KQ2ZD08-03AS |
| | 1/2 | KQ2ZD08-04AS |
| ø10 | 1/4 | KQ2ZD10-02AS |
| | 3/8 | KQ2ZD10-03AS |
| | 1/2 | KQ2ZD10-04AS |
| ø12 | 1/4 | KQ2ZD12-02AS |
| | 3/8 | KQ2ZD12-03AS |
| | 1/2 | KQ2ZD12-04AS |

Triple Branch Universal Male Elbow: KQ2ZT (Sealant)

To branch the line from the female thread into 6 tubes at right angles. 3 individual parts rotate freely.



| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|--------------|
| ø4 | 1/8 | KQ2ZT04-01AS |
| | 1/4 | KQ2ZT04-02AS |
| | 3/8 | KQ2ZT04-03AS |
| ø6 | 1/8 | KQ2ZT06-01AS |
| | 1/4 | KQ2ZT06-02AS |
| | 3/8 | KQ2ZT06-03AS |
| ø8 | 1/8 | KQ2ZT08-01AS |
| | 1/4 | KQ2ZT08-02AS |
| | 3/8 | KQ2ZT08-03AS |
| | 1/2 | KQ2ZT08-04AS |
| ø10 | 1/4 | KQ2ZT10-02AS |
| | 3/8 | KQ2ZT10-03AS |
| | 1/2 | KQ2ZT10-04AS |
| ø12 | 1/4 | KQ2ZT12-02AS |
| | 3/8 | KQ2ZT12-03AS |
| | 1/2 | KQ2ZT12-04AS |

Tubing






Female thread hole

References marked in light blue are available as ECW stocked item.







Male Delta Union: KQ2D (Gasket seal)

To branch the line from the female thread into 2 directions at right angles.

|  <M5, M6> | Applicable tubing O.D. [mm] | Connecting thread M | Model |
|---|---|---------------------|------------|
| |  <M5, M6> | $\phi 4$ | M5 x 0.8 |
| M6 x 1.0 | | | KQ2D04-M6A |
|  <M5, M6> | $\phi 6$ | M5 x 0.8 | KQ2D06-M5A |
| | | M6 x 0.8 | KQ2D06-M6A |






Male Delta Union: KQ2D (Sealant)

To branch the line from the female thread into 2 directions at right angles.

|  <R> | Applicable tubing O.D. [mm] | Connecting thread R | Model |
|--|--|---------------------|-------------|
| |  <R> | $\phi 4$ | 1/8 |
| 1/4 | | | KQ2D04-02AS |
|  <R> | $\phi 6$ | 1/8 | KQ2D06-01AS |
| | | 1/4 | KQ2D06-02AS |
| | | 3/8 | KQ2D06-03AS |
|  <R> | $\phi 8$ | 1/8 | KQ2D08-01AS |
| | | 1/4 | KQ2D08-02AS |
| | | 3/8 | KQ2D08-03AS |
|  <R> | $\phi 10$ | 1/4 | KQ2D10-02AS |
| | | 3/8 | KQ2D10-03AS |
| | | 1/2 | KQ2D10-04AS |
|  <R> | $\phi 12$ | 1/4 | KQ2D12-02AS |
| | | 3/8 | KQ2D12-03AS |
| | | 1/2 | KQ2D12-04AS |





Straight Union: KQ2H

To connect tubings in the same direction.

|  | Applicable tubing O.D. [mm] | Model |
|---|---|------------|
| |  | $\phi 2$ |
| $\phi 3.2$ | | KQ2H23-00A |
|  | $\phi 4$ | KQ2H04-00A |
| | $\phi 6$ | KQ2H06-00A |
|  | $\phi 8$ | KQ2H08-00A |
| | $\phi 10$ | KQ2H10-00A |
|  | $\phi 12$ | KQ2H12-00A |
| | $\phi 16$ | KQ2H16-00A |






Bulkhead Male Elbow: KQ2LE

To connect tubings through a panel and change the tubing entry by 90°.

|  | Applicable tubing O.D. [mm] | Model |
|---|---|-------------|
| |  | $\phi 4$ |
| $\phi 6$ | | KQ2LE06-00A |
|  | $\phi 8$ | KQ2LE08-00A |
| | $\phi 10$ | KQ2LE10-00A |
|  | $\phi 12$ | KQ2LE12-00A |




Bulkhead Union: KQ2E (Interchangeable with KQ)

To connect tubing through a panel.

|  | Applicable tubing O.D. [mm] | Model |
|---|---|------------|
| |  | $\phi 3.2$ |
| $\phi 4$ | | KQ2E04-00A |
|  | $\phi 6$ | KQ2E06-00A |
| | $\phi 8$ | KQ2E08-00A |
|  | $\phi 10$ | KQ2E10-00A |
| | $\phi 12$ | KQ2E12-00A |
|  | $\phi 16$ | KQ2E16-00A |

Bulkhead Union: KQ2E (Interchangeable with KJ)






To connect tubing through a panel.

|  | Applicable tubing O.D. [mm] | Model |
|---|---|-------------|
| |  | $\phi 2$ |
| $\phi 3.2$ | | KQ2E23-00□J |
|  | $\phi 4$ | KQ2E04-00□J |
| | $\phi 6$ | KQ2E06-00□J |

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






Union Tee: KQ2T

To branch tubing into 2 directions each at 90° to the original one.

|  | Applicable tubing O.D. [mm] | Model |
|---|---|------------|
| |  | $\phi 2$ |
| $\phi 3.2$ | | KQ2T23-00A |
|  | $\phi 4$ | KQ2T04-00A |
| | $\phi 6$ | KQ2T06-00A |
|  | $\phi 8$ | KQ2T08-00A |
| | $\phi 10$ | KQ2T10-00A |
|  | $\phi 12$ | KQ2T12-00A |
| | $\phi 16$ | KQ2T16-00A |

Union Elbow: KQ2L

To connect tubing at right angles to each other.

|  | Applicable tubing O.D. [mm] | Model |
|---|---|------------|
| |  | $\phi 3.2$ |
| $\phi 4$ | | KQ2L04-00A |
|  | $\phi 6$ | KQ2L06-00A |
| | $\phi 8$ | KQ2L08-00A |
|  | $\phi 10$ | KQ2L10-00A |
| | $\phi 12$ | KQ2L12-00A |
|  | $\phi 16$ | KQ2L16-00A |




For more product options and details see our specific catalogues or on-line information.

Tubing  Tubing

References marked in light blue are available as ECW stocked item.


Union “Y”: KQ2U

To branch tubing in the same direction.

| | Applicable tubing O.D. [mm] | | Model |
|---|-----------------------------|------|------------|
| | (a) | (b) | |
|  | ø2 | ø3.2 | KQ2U02-00A |
| | ø3.2 | ø4 | KQ2U23-00A |
| | ø4 | ø6 | KQ2U04-00A |
| | ø6 | ø8 | KQ2U06-00A |
| | ø8 | ø10 | KQ2U08-00A |
| | ø10 | ø12 | KQ2U10-00A |
| | ø12 | ø16 | KQ2U12-00A |
| | ø16 | ø16 | KQ2U16-00A |

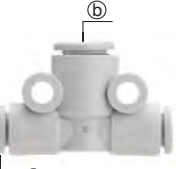
Different Diameter Straight: KQ2H

To connect tubings of different diameters.

| | Applicable tubing O.D. [mm] | | Model |
|---|-----------------------------|------|------------|
| | (a) | (b) | |
|  | ø2 | ø3.2 | KQ2H02-23A |
| | ø2 | ø4 | KQ2H02-04A |
| | ø3.2 | ø4 | KQ2H23-04A |
| | ø3.2 | ø6 | KQ2H23-06A |
| | ø4 | ø6 | KQ2H04-06A |
| | ø6 | ø8 | KQ2H06-08A |
| | ø8 | ø10 | KQ2H08-10A |
| | ø10 | ø12 | KQ2H10-12A |
| | ø12 | ø16 | KQ2H12-16A |


Different Diameter Tee: KQ2T

To branch the tubing into two at a right angle and reduce the resulting branches in size.

| | Applicable tubing O.D. [mm] | | Model |
|--|-----------------------------|-----|------------|
| | (a) | (b) | |
|  | ø3.2 | ø4 | KQ2T23-04A |
| | ø4 | ø6 | KQ2T04-06A |
| | ø6 | ø8 | KQ2T06-08A |
| | ø8 | ø10 | KQ2T08-10A |
| | ø10 | ø12 | KQ2T10-12A |
| | ø12 | ø16 | KQ2T12-16A |

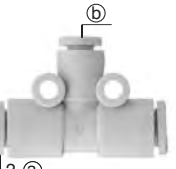
Branch Union Elbow: KQ2LU

To branch a tube at a right angle into two tubes.

| | Applicable tubing O.D. [mm] | Model |
|--|-----------------------------|-------------|
|  | ø4 | KQ2LU04-00A |
| | ø6 | KQ2LU06-00A |
| | ø8 | KQ2LU08-00A |
| | ø10 | KQ2LU10-00A |
| | ø12 | KQ2LU12-00A |


Different Diameter Tee: KQ2T

To connect tubing in the same direction as well as to branch it into another smaller tubing at 90°.

| | Applicable tubing O.D. [mm] | | Model |
|---|-----------------------------|-----|------------|
| | (a) | (b) | |
|  | ø6 | ø4 | KQ2T06-04A |
| | ø8 | ø6 | KQ2T08-06A |
| | ø10 | ø8 | KQ2T10-08A |
| | ø12 | ø10 | KQ2T12-10A |


Delta Union: KQ2D

To connect 3 tubes at right angles with each other.

| | Applicable tubing O.D. [mm] | Model |
|---|-----------------------------|------------|
|  | ø4 | KQ2D04-00A |
| | ø6 | KQ2D06-00A |
| | ø8 | KQ2D08-00A |
| | ø10 | KQ2D10-00A |
| | ø12 | KQ2D12-00A |


Different Diameter Union “Y”: KQ2U

To branch tubing into 2 smaller tubes in the same direction as the original one.

| | Applicable tubing O.D. [mm] | | Model |
|---|-----------------------------|------|------------|
| | (a) | (b) | |
|  | ø2 | ø3.2 | KQ2U02-23A |
| | ø2 | ø4 | KQ2U02-04A |
| | ø3.2 | ø4 | KQ2U23-04A |
| | ø4 | ø6 | KQ2U04-06A |
| | ø6 | ø8 | KQ2U06-08A |
| | ø8 | ø10 | KQ2U08-10A |
| | ø10 | ø12 | KQ2U10-12A |
| | ø12 | ø16 | KQ2U12-16A |

Cross: KQ2TW

To branch tubing into 4 directions.


| | Applicable tubing O.D. [mm] | Model |
|---|-----------------------------|-------------|
|  | ø4 | KQ2TW04-00A |
| | ø6 | KQ2TW06-00A |
| | ø8 | KQ2TW08-00A |
| | ø10 | KQ2TW10-00A |
| | ø12 | KQ2TW12-00A |

Tubing Tubing

References marked in light blue are available as ECW stocked item.

Different Diameter Double Union “Y”: KQ2UD

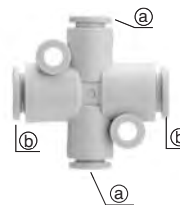
To branch the line from the female thread into 4 tubes in the same direction.



| Applicable tubing O.D. [mm] | | Model |
|-----------------------------|-----|-------------|
| (a) | (b) | |
| ø4 | ø6 | KQ2UD04-06A |
| ø6 | ø8 | KQ2UD06-08A |

Different Diameter Cross: KQ2TX

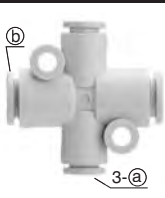
To connect 4 tubes at right angles with 2 smaller tubes on both sides.



| Applicable tubing O.D. [mm] | | Model |
|-----------------------------|-----|-------------|
| (a) | (b) | |
| ø6 | ø8 | KQ2TX06-08A |
| ø8 | ø10 | KQ2TX08-10A |
| ø10 | ø12 | KQ2TX10-12A |

Different Diameter Cross: KQ2TY


To branch tubing into smaller tubing in 3 directions.



| Applicable tubing O.D. [mm] | | Model |
|-----------------------------|-----|-------------|
| (a) | (b) | |
| ø6 | ø8 | KQ2TY06-08A |
| ø8 | ø10 | KQ2TY08-10A |
| ø10 | ø12 | KQ2TY10-12A |

Plug-in Elbow: KQ2L


To change the tubing direction from a one-touch fitting by 90°.



| Applicable tubing O.D. [mm] | Fitting size | Model |
|-----------------------------|--------------|------------|
| ø3.2 | ø3.2 | KQ2L23-99A |
| ø4 | ø4 | KQ2L04-99A |
| ø6 | ø6 | KQ2L06-99A |
| ø8 | ø8 | KQ2L08-99A |
| ø10 | ø10 | KQ2L10-99A |
| ø12 | ø12 | KQ2L12-99A |
| ø16 | ø16 | KQ2L16-99A |

Plug-in “Y”: KQ2U


To branch the line from a one-touch fitting into tubing in the same direction.



| Applicable tubing O.D. [mm] | Fitting size | Model |
|-----------------------------|--------------|------------|
| ø3.2 | ø3.2 | KQ2U23-99A |
| ø4 | ø4 | KQ2U04-99A |
| ø6 | ø6 | KQ2U06-99A |
| ø8 | ø8 | KQ2U08-99A |
| ø10 | ø10 | KQ2U10-99A |
| ø12 | ø12 | KQ2U12-99A |
| ø16 | ø16 | KQ2U16-99A |

Extended Plug-in Elbow: KQ2W


To change the tubing direction from a one-touch fitting by 90°. Applicable to 3 dimensional piping when used with a plug-in elbow.



| Applicable tubing O.D. [mm] | Fitting size | Model |
|-----------------------------|--------------|------------|
| ø3.2 | ø3.2 | KQ2W23-99A |
| ø4 | ø4 | KQ2W04-99A |
| ø6 | ø6 | KQ2W06-99A |
| ø8 | ø8 | KQ2W08-99A |
| ø10 | ø10 | KQ2W10-99A |
| ø12 | ø12 | KQ2W12-99A |

Reducer Elbow: KQ2L

To change the tubing direction from a one-touch fitting by 90° as well as to connect to tubing of a smaller diameter.



| Applicable tubing O.D. [mm] | Fitting size | Model |
|-----------------------------|--------------|------------|
| ø3.2 | ø4 | KQ2L23-04A |
| | ø6 | KQ2L23-06A |
| ø4 | ø6 | KQ2L04-06A |
| | ø8 | KQ2L04-08A |
| ø6 | ø8 | KQ2L06-08A |
| | ø10 | KQ2L06-10A |
| ø8 | ø10 | KQ2L08-10A |
| | ø12 | KQ2L08-12A |
| ø10 | ø12 | KQ2L10-12A |
| | ø16 | KQ2L12-16A |



Tubing



One-touch fittings

References marked in light blue are available as ECW stocked item.

Plug-in Reducer: KQ2R

To connect to a smaller one-touch fitting.

| Applicable tubing O.D. [mm] | Fitting size | Model |
|-----------------------------|--------------|------------|
| ø2 | ø4 | KQ2R02-04A |
| | ø4 | KQ2R23-04A |
| ø3.2 | ø6 | KQ2R23-06A |
| | ø6 | KQ2R04-06A |
| ø4 | ø8 | KQ2R04-08A |
| | ø10 | KQ2R04-10A |
| | ø4 | KQ2R06-04A |
| | ø8 | KQ2R06-08A |
| ø6 | ø10 | KQ2R06-10A |
| | ø12 | KQ2R06-12A |
| | ø10 | KQ2R08-10A |
| ø8 | ø12 | KQ2R08-12A |
| | ø12 | KQ2R10-12A |
| ø10 | ø16 | KQ2R10-16A |
| | ø16 | KQ2R12-16A |



Different Diameter Plug-in “Y”: KQ2X

To branch the line from a one-touch fitting into tubing of a smaller diameter in the same direction.

| Applicable tubing O.D. [mm] | Fitting size | Model |
|-----------------------------|--------------|------------|
| ø3.2 | ø4 | KQ2X23-04A |
| ø4 | ø6 | KQ2X04-06A |
| ø6 | ø8 | KQ2X06-08A |
| ø8 | ø10 | KQ2X08-10A |
| ø10 | ø12 | KQ2X10-12A |



Plug-in “Y”: KQ2XD

To branch the line from a one-touch fitting into 4 tubes of a smaller diameter in the same direction.

| Applicable tubing O.D. [mm] | Fitting size | Model |
|-----------------------------|--------------|-------------|
| ø4 | ø6 | KQ2XD04-06A |
| ø6 | ø8 | KQ2XD06-08A |



Female Connector: KQ2F

To pipe from the male threaded portion of a pressure gauge, etc.

| Applicable tubing O.D. [mm] | Connecting thread | Model |
|-----------------------------|-------------------|------------|
| ø3.2 | M3 x 0.5 | KQ2F23-M3□ |
| | M5 x 0.8 | KQ2F23-M5□ |
| ø4 | M3 x 0.5 | KQ2F04-M3□ |
| | M5 x 0.8 | KQ2F04-M5□ |
| | 1/8 | KQ2F04-01A |
| | 1/4 | KQ2F04-02A |
| ø6 | M5 x 0.8 | KQ2F06-M5□ |
| | 1/8 | KQ2F06-01A |
| | 1/4 | KQ2F06-02A |
| | 3/8 | KQ2F06-03A |
| | 1/8 | KQ2F08-01A |
| ø8 | 1/4 | KQ2F08-02A |
| | 3/8 | KQ2F08-03A |
| | 1/4 | KQ2F10-02A |
| ø10 | 3/8 | KQ2F10-03A |
| | 1/4 | KQ2F12-02A |
| ø12 | 3/8 | KQ2F12-03A |
| | 1/2 | KQ2F12-04A |
| | 3/8 | KQ2F16-03A |
| ø16 | 1/2 | KQ2F16-04A |



Female Elbow: KQ2LF

To pipe from the male threaded at the right angle.

| Applicable tubing O.D. [mm] | Connecting thread | Model |
|-----------------------------|-------------------|-------------|
| ø4 | M5 x 0.8 | KQ2LF04-M5A |
| | M6 x 1.0 | KQ2LF04-M6A |
| | 1/8 | KQ2LF04-01A |
| | 1/4 | KQ2LF04-02A |
| ø6 | M5 x 0.8 | KQ2LF06-M5A |
| | M6 x 1.0 | KQ2LF06-M6A |
| | 1/8 | KQ2LF06-01A |
| | 1/4 | KQ2LF06-02A |
| ø8 | 3/8 | KQ2LF06-03A |
| | 1/8 | KQ2LF08-01A |
| | 1/4 | KQ2LF08-02A |
| ø10 | 3/8 | KQ2LF08-03A |
| | 1/4 | KQ2LF10-02A |
| ø12 | 3/8 | KQ2LF10-03A |
| | 1/2 | KQ2LF10-04A |
| | 1/4 | KQ2LF12-02A |
| ø16 | 3/8 | KQ2LF12-03A |
| | 1/2 | KQ2LF12-04A |



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

Tubing



Male Thread

References marked in light blue are available as ECW stocked item.

Bulkhead Connector: KQ2E

Used for trunk connection between tubing and a male thread installed through a panel.



| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|------------|
| ø3.2 | 1/4 | KQ2E23-02A |
| | 1/8 | KQ2E04-01A |
| ø4 | 1/4 | KQ2E04-02A |
| | 1/8 | KQ2E06-01A |
| ø6 | 1/4 | KQ2E06-02A |
| | 3/8 | KQ2E06-03A |
| | 1/8 | KQ2E08-01A |
| ø8 | 1/4 | KQ2E08-02A |
| | 3/8 | KQ2E08-03A |
| | 1/4 | KQ2E10-02A |
| ø10 | 3/8 | KQ2E10-03A |
| | 3/8 | KQ2E12-03A |
| ø12 | 1/2 | KQ2E12-04A |
| | 3/8 | KQ2E16-03A |
| ø16 | 1/2 | KQ2E16-04A |

Universal Female Elbow: KQ2VF (Gasket seal)

To connect a line from a male and female thread in the same direction as well as to branch it into 2 pipes at a right angle. Multiplex connections possible.



<M5>

| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|-------------|
| ø4 | M5 x 0.8 | KQ2VF04-M5A |
| ø6 | M5 x 0.8 | KQ2VF06-M5A |

Universal Female Elbow: KQ2VF (Sealant)

To connect a line from a male and female thread in the same direction as well as to branch it into 2 pipes at a right angle. Multiplex connections possible.



<R>

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|--------------|
| ø4 | 1/8 | KQ2VF04-01AS |
| | 1/8 | KQ2VF06-01AS |
| ø6 | 1/4 | KQ2VF06-02AS |
| | 1/8 | KQ2VF08-01AS |
| ø8 | 1/4 | KQ2VF08-02AS |
| | 3/8 | KQ2VF08-03AS |
| | 1/4 | KQ2VF10-02AS |
| ø10 | 3/8 | KQ2VF10-03AS |
| | 3/8 | KQ2VF12-03AS |
| ø12 | 1/2 | KQ2VF12-04AS |

Branch Universal Female Elbow: KQ2ZF (Gasket seal)

To branch a line from a male or female thread in the same direction and at a right angle. Multiplex connections possible.



<M5>

| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|-------------|
| ø4 | M5 x 0.8 | KQ2ZF04-M5A |

Branch Universal Female Elbow: KQ2ZF (Sealant)

To branch a line from a male or female thread in the same direction and at a right angle. Multiplex connections possible.



<R>

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|--------------|
| ø4 | 1/8 | KQ2ZF04-01AS |
| | 1/8 | KQ2ZF06-01AS |
| ø6 | 1/4 | KQ2ZF06-02AS |
| | 1/8 | KQ2ZF08-01AS |
| ø8 | 1/4 | KQ2ZF08-02AS |
| | 1/4 | KQ2ZF10-02AS |
| ø10 | 3/8 | KQ2ZF10-03AS |
| | 3/8 | KQ2ZF12-03AS |
| ø12 | 1/2 | KQ2ZF12-04AS |



Accessories

References marked in light blue are available as ECW stocked item.

Plug: KQ2P

To plug unused one-touch fittings KQ2P (White), KQP (Blue).



| Applicable tubing O.D. [mm] | Model |
|-----------------------------|---------|
| ø2 | KJP-02 |
| ø3.2 | KQ2P-23 |
| ø4 | KQ2P-04 |
| ø6 | KQ2P-06 |
| ø8 | KQ2P-08 |
| ø10 | KQ2P-10 |
| ø12 | KQ2P-12 |
| ø16 | KQ2P-16 |

Tube Cap: KQ2C

To plug unused tubing.



| Applicable tubing O.D. [mm] | Model |
|-----------------------------|------------|
| ø4 | KQ2C04-00A |
| ø6 | KQ2C06-00A |
| ø8 | KQ2C08-00A |
| ø10 | KQ2C10-00A |
| ø12 | KQ2C12-00A |
| ø16 | KQ2C16-00A |

Nipple: KQ2N

To connect 2 one-touch fittings.



| Applicable tubing O.D. [mm] | Model |
|-----------------------------|-----------|
| ø4 | KQ2N04-99 |
| ø6 | KQ2N06-99 |
| ø8 | KQ2N08-99 |
| ø10 | KQ2N10-99 |
| ø12 | KQ2N12-99 |
| ø16 | KQ2N16-99 |

Reducer Nipple: KQ2N

To connect one-touch fittings of different sizes.



| Applicable fitting size | | Model |
|-------------------------|-----|-----------|
| (a) | (b) | |
| ø4 | ø6 | KQ2N04-06 |
| ø6 | ø8 | KQ2N06-08 |
| ø8 | ø10 | KQ2N08-10 |
| ø10 | ø12 | KQ2N10-12 |
| ø12 | ø16 | KQ2N12-16 |

Adaptor: KQ2N (Gasket seal)

To connect a one-touch fitting and R female thread.



<M5>

| Applicable tubing O.D. [mm] | Connecting thread M | Model |
|-----------------------------|---------------------|------------|
| ø4 | M5 x 0.8 | KQ2N04-M5A |
| ø6 | M5 x 0.8 | KQ2N06-M5A |

Adaptor: KQ2N (Sealant)

To connect a one-touch fitting and R female thread.



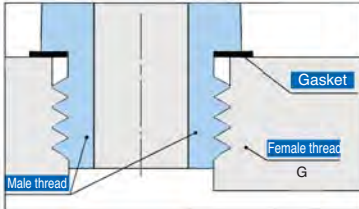
<R>

| Applicable tubing O.D. [mm] | Connecting thread R | Model |
|-----------------------------|---------------------|-------------|
| ø4 | 1/8 | KQ2N04-01AS |
| | 1/4 | KQ2N04-02AS |
| ø6 | 1/8 | KQ2N06-01AS |
| | 1/4 | KQ2N06-02AS |
| ø8 | 1/4 | KQ2N08-02AS |
| | 3/8 | KQ2N08-03AS |
| ø10 | 3/8 | KQ2N10-03AS |

One-touch Fittings (With G Type Connection Threads) Series KQ2

Features

- The seal gasket on the male thread for piping eliminates the need for pipe tape.



- G Thread.
- One-touch connection and release.
- Possible to use in vacuum to -100kPa.
- The male thread for piping drastically cuts piping manhours.
- Suitable for use with port threads conforming to ISO1179 and ISO16030.



- Applicable tubing: Dimensions mm
- With cylindrical threading/tapping: G1/8", G1/4", G3/8", G1/2"



Related Products

Series TU - Polyurethane Tubing - page 1223

Applicable Tubing

| | |
|-----------------|--|
| Tubing material | FEP,PFA, Nylon, Soft nylon (Note1), Polyurethane |
| Tubing O.D. | ø4, ø6, ø8, ø10, ø12, ø16 |

Note 1) The soft nylon tube is not available with water.

Product's Colour

| Series | Body | Release button |
|------------|-------|----------------|
| Series KQ2 | White | Light grey |

Specifications

| | | |
|-----------------------------------|---|---|
| Fluid | Air, Water (Note 2) | |
| Operating pressure range (Note 3) | -100 kPa, 1.0 MPa (Note 3) | |
| Proof pressure | 3.0 MPa | |
| Ambient and fluid temperature | -5 to 60°C, In case of water: 0 to 40°C (No freezing) | |
| Thread | Mounting | JIS B0207 (EN ISO228) |
| | Nut | JIS B0211, Class 2 (Metric fine thread) |

Note 2) The surge pressure must be under the maximum operating pressure.

Note 3) The amount of leakage is not zero, and so the use for holding vacuum such as a leak tester should be avoided.

Principal Parts Material

| | |
|------------------------|-----------------------------------|
| Body | C3604BD, PBT |
| Stud | C3604BD (Thread portion) |
| Chuck | Stainless steel 304 |
| Guide | Stainless steel 304, C3604BD, PBT |
| Collet, Release button | POM |
| Seal, O-ring | NBR |
| Gasket | Stainless steel 304, NBR |



For more product options and details see our specific catalogues or on-line information.

Male Connector:

KQ2H



| Applicable tubing O.D. [mm] | Connection thread G | Model |
|-----------------------------|---------------------|------------|
| 4 | 1/8 | KQ2H04-G01 |
| | 1/4 | KQ2H04-G02 |
| 6 | 1/8 | KQ2H06-G01 |
| | 1/4 | KQ2H06-G02 |
| | 3/8 | KQ2H06-G03 |
| 8 | 1/8 | KQ2H08-G01 |
| | 1/4 | KQ2H08-G02 |
| | 3/8 | KQ2H08-G03 |
| 10 | 1/8 | KQ2H10-G01 |
| | 1/4 | KQ2H10-G02 |
| | 3/8 | KQ2H10-G03 |
| | 1/2 | KQ2H10-G04 |
| 12 | 1/4 | KQ2H12-G02 |
| | 3/8 | KQ2H12-G03 |
| | 1/2 | KQ2H12-G04 |
| 16 | 3/8 | KQ2H16-G03 |
| | 1/2 | KQ2H16-G04 |

Male Elbow:

KQ2L



| Applicable tubing O.D. [mm] | Connection thread G | Model |
|-----------------------------|---------------------|------------|
| 4 | 1/8 | KQ2L04-G01 |
| | 1/4 | KQ2L04-G02 |
| 6 | 1/8 | KQ2L06-G01 |
| | 1/4 | KQ2L06-G02 |
| | 3/8 | KQ2L06-G03 |
| 8 | 1/8 | KQ2L08-G01 |
| | 1/4 | KQ2L08-G02 |
| | 3/8 | KQ2L08-G03 |
| 10 | 1/8 | KQ2L10-G01 |
| | 1/4 | KQ2L10-G02 |
| | 3/8 | KQ2L10-G03 |
| | 1/2 | KQ2L10-G04 |
| 12 | 1/4 | KQ2L12-G02 |
| | 3/8 | KQ2L12-G03 |
| | 1/2 | KQ2L12-G04 |
| 16 | 3/8 | KQ2L16-G03 |
| | 1/2 | KQ2L16-G04 |

Male Branch Tee:

KQ2T



| Applicable tubing O.D. [mm] | Connection thread G | Model |
|-----------------------------|---------------------|------------|
| 4 | 1/8 | KQ2T04-G01 |
| | 1/4 | KQ2T04-G02 |
| 6 | 1/8 | KQ2T06-G01 |
| | 1/4 | KQ2T06-G02 |
| | 3/8 | KQ2T06-G03 |
| 8 | 1/8 | KQ2T08-G01 |
| | 1/4 | KQ2T08-G02 |
| | 3/8 | KQ2T08-G03 |
| 10 | 1/8 | KQ2T10-G01 |
| | 1/4 | KQ2T10-G02 |
| | 3/8 | KQ2T10-G03 |
| | 1/2 | KQ2T10-G04 |
| 12 | 1/4 | KQ2T12-G02 |
| | 3/8 | KQ2T12-G03 |
| | 1/2 | KQ2T12-G04 |
| 16 | 3/8 | KQ2T16-G03 |
| | 1/2 | KQ2T16-G04 |

Male Run Tee:

KQ2Y



| Applicable tubing O.D. [mm] | Connection thread G | Model |
|-----------------------------|---------------------|------------|
| 4 | 1/8 | KQ2Y04-G01 |
| | 1/4 | KQ2Y04-G02 |
| 6 | 1/8 | KQ2Y06-G01 |
| | 1/4 | KQ2Y06-G02 |
| | 3/8 | KQ2Y06-G03 |
| 8 | 1/8 | KQ2Y08-G01 |
| | 1/4 | KQ2Y08-G02 |
| | 3/8 | KQ2Y08-G03 |
| 10 | 1/8 | KQ2Y10-G01 |
| | 1/4 | KQ2Y10-G02 |
| | 3/8 | KQ2Y10-G03 |
| | 1/2 | KQ2Y10-G04 |
| 12 | 1/4 | KQ2Y12-G02 |
| | 3/8 | KQ2Y12-G03 |
| | 1/2 | KQ2Y12-G04 |
| 16 | 3/8 | KQ2Y16-G03 |
| | 1/2 | KQ2Y16-G04 |

Female Connector:

KQ2F



| Applicable tubing O.D. [mm] | Connection thread G | Model |
|-----------------------------|---------------------|------------|
| 4 | 1/8 | KQ2F04-G01 |
| | 1/4 | KQ2F04-G02 |
| 6 | 1/8 | KQ2F06-G01 |
| | 1/4 | KQ2F06-G02 |
| | 3/8 | KQ2F06-G03 |
| 8 | 1/8 | KQ2F08-G01 |
| | 1/4 | KQ2F08-G02 |
| | 3/8 | KQ2F08-G03 |
| 10 | 1/4 | KQ2F10-G02 |
| | 3/8 | KQ2F10-G03 |
| | 1/2 | KQ2F10-G04 |
| 12 | 3/8 | KQ2F12-G03 |
| | 1/2 | KQ2F12-G04 |
| 16 | 3/8 | KQ2F16-G03 |
| | 1/2 | KQ2F16-G04 |

Extended Male Elbow:

KQ2W



| Applicable tubing O.D. [mm] | Connection thread G | Model |
|-----------------------------|---------------------|------------|
| 4 | 1/8 | KQ2W04-G01 |
| | 1/4 | KQ2W04-G02 |
| 6 | 1/8 | KQ2W06-G01 |
| | 1/4 | KQ2W06-G02 |
| | 3/8 | KQ2W06-G03 |
| 8 | 1/8 | KQ2W08-G01 |
| | 1/4 | KQ2W08-G02 |
| | 3/8 | KQ2W08-G03 |
| 10 | 1/4 | KQ2W10-G02 |
| | 3/8 | KQ2W10-G03 |
| | 1/2 | KQ2W10-G04 |
| | 1/2 | KQ2W10-G04 |
| 12 | 1/4 | KQ2W12-G02 |
| | 3/8 | KQ2W12-G03 |
| | 1/2 | KQ2W12-G04 |
| 16 | 3/8 | KQ2W16-G03 |
| | 1/2 | KQ2W16-G04 |

Hexagon Socket Head Male Connector:

KQ2S



| Applicable tubing O.D. [mm] | Connection thread G | Model |
|-----------------------------|---------------------|------------|
| 4 | 1/8 | KQ2S04-G01 |
| | 1/4 | KQ2S04-G02 |
| 6 | 1/8 | KQ2S06-G01 |
| | 1/4 | KQ2S06-G02 |
| 8 | 1/8 | KQ2S08-G01 |
| | 1/4 | KQ2S08-G02 |
| | 3/8 | KQ2S08-G03 |
| 10 | 1/8 | KQ2S10-G01 |
| | 1/4 | KQ2S10-G02 |
| | 3/8 | KQ2S10-G03 |
| | 1/2 | KQ2S10-G04 |
| 12 | 1/4 | KQ2S12-G02 |
| | 3/8 | KQ2S12-G03 |
| | 1/2 | KQ2S12-G04 |
| 16 | 3/8 | KQ2S16-G03 |
| | 1/2 | KQ2S16-G04 |

Bulkhead Connector:

KQ2E



| Applicable tubing O.D. [mm] | Connection thread G | Model |
|-----------------------------|---------------------|------------|
| 4 | 1/8 | KQ2E04-G01 |
| | 1/4 | KQ2E04-G02 |
| 6 | 1/8 | KQ2E06-G01 |
| | 1/4 | KQ2E06-G02 |
| | 3/8 | KQ2E06-G03 |
| 8 | 1/8 | KQ2E08-G01 |
| | 1/4 | KQ2E08-G02 |
| | 3/8 | KQ2E08-G03 |
| 10 | 1/4 | KQ2E10-G02 |
| | 3/8 | KQ2E10-G03 |
| | 1/2 | KQ2E10-G04 |
| 12 | 3/8 | KQ2E12-G03 |
| | 1/2 | KQ2E12-G04 |
| 16 | 3/8 | KQ2E16-G03 |
| | 1/2 | KQ2E16-G04 |

Universal Male Elbow:

KQ2V



| Applicable tubing O.D. [mm] | Connection thread G | Model |
|-----------------------------|---------------------|------------|
| 4 | 1/8 | KQ2V04-G01 |
| | 1/4 | KQ2V04-G02 |
| 6 | 1/8 | KQ2V06-G01 |
| | 1/4 | KQ2V06-G02 |
| | 3/8 | KQ2V06-G03 |
| 8 | 1/8 | KQ2V08-G01 |
| | 1/4 | KQ2V08-G02 |
| | 3/8 | KQ2V08-G03 |
| 10 | 1/4 | KQ2V10-G02 |
| | 3/8 | KQ2V10-G03 |
| 12 | 3/8 | KQ2V12-G03 |
| | 1/2 | KQ2V12-G04 |
| 16 | 3/8 | KQ2V16-G03 |
| | 1/2 | KQ2V16-G04 |

Rotary One-Touch Fittings Series KS/KX

Features

- Rotary one-touch fittings for low-torque rotation.
- Applicable to oscillating and rotating sections of robots etc.
- For application requiring copper-free material (Electroless nickel plated)
- R1/8 thread sealant is standardized.

Specifications

| | |
|-------------------------------|---|
| Fluid | Air |
| Operating pressure range | -100kPa to 1MPa |
| Proof pressure | 3.0MPa |
| Ambient and fluid temperature | -5 to 60°C (With no condensation) |
| Thread | JIS B0203 (Taper thread for piping) JIS B0205 (Metric coarse thread) |

Note 1) Please avoid using in a vacuum holding application such as a leak tester, since there is leakage.
Also, when using in a vacuum, grease may enter the inside due to the nature of its construction.

Applicable Tubing

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

Rotating Torque / Allowable Number of Rotations

| Applicable tubing O.D. | ø4 | ø6 | ø8 | ø10 | ø12 | |
|--|-----------|-------|-------|-------|-------|------|
| Rotating torque N·m ^{Note 2)} | 0.006 | 0.012 | 0.014 | 0.020 | 0.022 | |
| Allowable number of rotations S ⁻¹ ^{Note 3)} | Series KS | 8.4 | 8.4 | 6.7 | 5 | 4.2 |
| | Series KX | 25 | 20 | 20 | 16.7 | 16.7 |

Note 2) Rotating torque at a 0.5 MPa pressure.

Note 3) Number of rotations per second.

Series KX (Construction)

Slide bearing

Low-torque, low-friction operation with oil containing slide bearing.

Rotary seal

The special rotary seal minimizes rotating torque and friction.

Holder

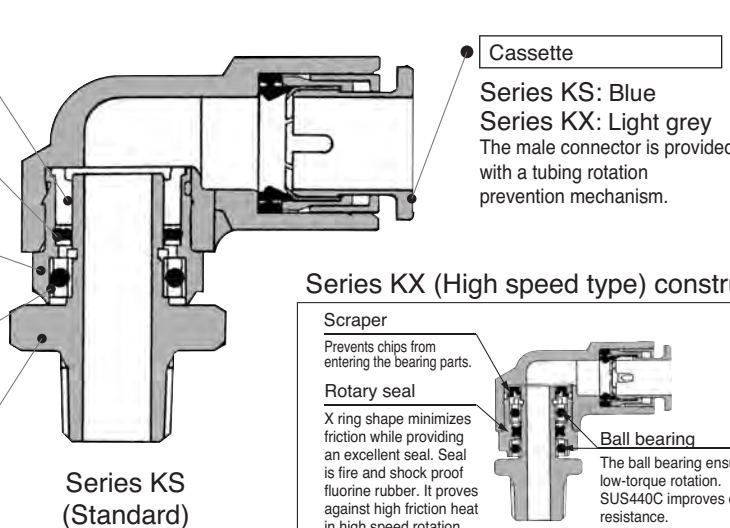
Electroless nickel plating allows copper-free applications.

Ball bearing

The ball bearing ensures low-torque rotation.

Stud

Electroless nickel plating allows copper-free applications.
Thread sealant is standardized.



Series KS
(Standard)

Cassette

Series KS: Blue
Series KX: Light grey
The male connector is provided with a tubing rotation prevention mechanism.

Series KX (High speed type) construction

Scraper

Prevents chips from entering the bearing parts.

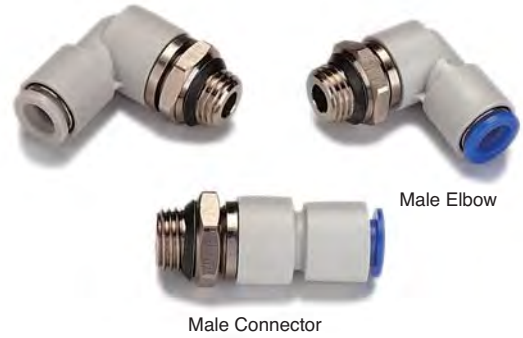
Rotary seal

X ring shape minimizes friction while providing an excellent seal. Seal is fire and shock proof fluorine rubber. It proves against high friction heat in high speed rotation and longer life.

Ball bearing

The ball bearing ensures low-torque rotation. SUS440C improves corrosion resistance.

* Other specifications are same as those of series KS.



■ Applicable tubing O.D.: Metric Size

■ Connecting thread: M,R



Related Products

Series TU - Polyurethane Tubing - page 1223

Series T - Nylon Tubing - www.smc.eu


Series TS - Soft Nylon Tubing - www.smc.eu

Standard Series KS

References marked in light blue are available as ECW stocked item.


KSH Male Connector

Most common style used to pipe from female thread in the same direction.

|  | Applicable tubing O.D. [mm] | Connecting thread | Model |
|---|-----------------------------|-------------------|-----------|
| | | | |
| <M5, M6> | 4 | M5 | KSH04-M5 |
| | | M6 | -M6 |
| | | R1/8 | -01S |
| 6 | 6 | M5 | KSH06-M5 |
| | | M6 | -M6 |
| | | R1/8 | -01S |
| | | R1/4 | -02S |
| 8 | 8 | R1/8 | KSH08-01S |
| | | R1/4 | -02S |
| | | R3/8 | -03S |
| 10 | 10 | R1/4 | KSH10-02S |
| | | R3/8 | -03S |
| | | R1/2 | -04S |
| 12 | 12 | R3/8 | KSH12-03S |
| | | R1/2 | -04S |

KSL Male Elbow


Most common style used to pipe from female thread at a right angle.

|  | Applicable tubing O.D. [mm] | Connecting thread | Model |
|---|-----------------------------|-------------------|-----------|
| | | | |
| <M5, M6> | 4 | M5 | KSL04-M5 |
| | | M6 | -M6 |
| | | R1/8 | -01S |
| 6 | 6 | M5 | KSL06-M5 |
| | | M6 | -M6 |
| | | R1/8 | -01S |
| | | R1/4 | -02S |
| 8 | 8 | R1/8 | KSL08-01S |
| | | R1/4 | -02S |
| | | R3/8 | -03S |
| 10 | 10 | R1/4 | KSL10-02S |
| | | R3/8 | -03S |
| | | R1/2 | -04S |
| 12 | 12 | R3/8 | KSL12-03S |
| | | R1/2 | -04S |

High Speed Type Series KX


KXH Male Connector

Most common style used to pipe from female thread in the same direction.

|  | Applicable tubing O.D. [mm] | Connecting thread | Model |
|---|-----------------------------|-------------------|-----------|
| | | | |
| <M5, M6> | 4 | M5 | KXH04-M5 |
| | | M6 | -M6 |
| | | R1/8 | -01S |
| 6 | 6 | M5 | KXH06-M5 |
| | | M6 | -M6 |
| | | R1/8 | -01S |
| | | R1/4 | -02S |
| 8 | 8 | R1/8 | KXH08-01S |
| | | R1/4 | -02S |
| | | R3/8 | -03S |
| 10 | 10 | R1/4 | KXH10-02S |
| | | R3/8 | -03S |
| | | R1/2 | -04S |
| 12 | 12 | R3/8 | KXH12-03S |
| | | R1/2 | -04S |

KXL Male Elbow

Most common style used to pipe from female thread at a right angle.

|  | Applicable tubing O.D. [mm] | Connecting thread | Model |
|---|-----------------------------|-------------------|-----------|
| | | | |
| <M5, M6> | 4 | M5 | KXL04-M5 |
| | | M6 | -M6 |
| | | R1/8 | -01S |
| 6 | 6 | M5 | KXL06-M5 |
| | | M6 | -M6 |
| | | R1/8 | -01S |
| | | R1/4 | -02S |
| 8 | 8 | R1/8 | KXL08-01S |
| | | R1/4 | -02S |
| | | R3/8 | -03S |
| 10 | 10 | R1/4 | KXL10-02S |
| | | R3/8 | -03S |
| | | R1/2 | -04S |
| 12 | 12 | R3/8 | KXL12-03S |
| | | R1/2 | -04S |

Tubing

Miniature Fittings Series M

Features

- Compact piping space.
The hose nipple has a large holding force, allowing easy connection and removal.
- A wide variety of models is available.
Piping in the same direction is possible at different heights.
- Hose nipple, Hose elbow.
Hose nipples and hose elbow accept nylon, soft nylon and polyurethane tubing.



■ Applicable tubing O.D.: Metric Size

■ Connecting thread: M3, M5, R1/8

Specifications

| Applicable tubing material | Nylon | Soft nylon | Polyurethane | FEP Note 2) | Modified PTFE Note 3) |
|-----------------------------------|---|------------------|--------------|--------------------------------|-----------------------|
| Applicable tubing O.D. /I.D. | M3 | — | — | — | — |
| | M5-R1/8 | ø4/ø2.5 ø6/ø4 | ø3.18/ø2.18 | ø4/ø2.5 ø6/ø4 | ø4/ø2.5 ø6/ø4 |
| Max. operating pressure (at 20°C) | 1.5MPa | 1.0MPa | 0.8MPa | 1.5MPa | 1.4MPa |
| Fluid | Air, Water Note 4) | | | | |
| Ambient and fluid temperature | -5 to 60°C, Water: 0 to 40 (No freezing) | | | | |
| Connection size | M3, M5, R1/8 | | | M5, R1/8 | |
| Thread | JIS B0205 (Metric fine thread), JIS B0203 (Taper thread for piping) | | | JIS B0205 (Metric fine thread) | |

Note 1) Soft nylon tubing is not compatible with water.

Note 2), Note 3) Compatible only with hose nipple type.

Note 4) Barb fitting, barb elbow, barb elbow (H) are not compatible with water.

Hose Nipple

Barb fittings

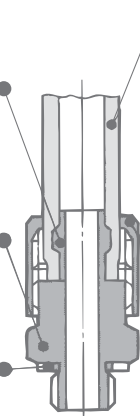
The tube allows easy tubing insertion as well as secure tubing holding.

Body

With electroless nickel plated

Gasket

Small tightening torque.
Secure sealing.



Tubing

Hose nipples and hose elbow accept nylon, soft nylon and polyurethane tubing.

Cap nut

Secure holding is achieved by manual tightening.
Easy disconnection of tubing by loosening.
Electroless nickel plated.



ø2 Miniature Fittings
Series M



Related Products

Series TU - Polyurethane Tubing - page 1223

Series T - Nylon Tubing - www.smc.eu

Series TS - Soft Nylon Tubing - www.smc.eu

Series TH - FEP Tubing - www.smc.eu

Series TD - Soft Fluoropolymer Tubing - www.smc.eu

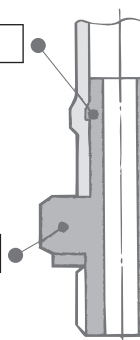
Barb Fittings

Barb fittings

The tube allows easy tubing insertion as well as secure tubing holding.

Body

With electroless nickel plated



Tubing

Gasket

Small tightening torque.
Secure sealing.

PAT.



For more product options and details see our specific catalogues or on-line information.

Miniature Fittings

References marked in light blue are available as ECW stocked item.








Series M5

| Description | Remark(s) | Model | Application | |
|--|-----------------------------------|-----------|---|--|
| Barb fittings for nylon tubing  | ø4/2.5 X M5 | M-5AN-4 | To pipe nylon tubing. | |
| | ø6/4 X M5 | M-5AN-6 | | |
| Barb fittings for soft tubing  | ø2/1.2 X M5 | M-5AU-2 | To pipe polyurethane tubing. | |
| | ø3.18/2.18 X M5 | M-5AU-3 | To pipe soft nylon tubing. | |
| | ø3.18/2 X M5 | | To pipe polyurethane tubing. | |
| | ø4/2.5 X M5 | M-5AU-4 | To pipe soft nylon, polyurethane tubing. | |
| | ø6/4 X M5 | M-5AU-6 | | |
| Barb elbow for nylon tubing  | ø4/2.5 X M5 | M-5ALN-4 | • To pipe nylon tubing • Body rotates 360° around the stud axis. Position can be fixed after alignment. | |
| | ø6/4 X M5 | M-5ALN-6 | | |
| Barb elbow for soft tubing  | ø3.18/2.18 X M5 | M-5ALU-3 | To pipe soft nylon tubing. | Body rotates 360° around the stud axis. Position can be fixed after alignment. |
| | ø3.18/2 X M5 | | To pipe polyurethane tubing. | |
| | ø4/2.5 X M5 | M-5ALU-4 | To pipe soft nylon, polyurethane tubing. | |
| | ø6/4 X M5 | M-5ALU-6 | | |
| Barb elbow for nylon tubing (H)  | ø4/2.5 X M5 | M-5ALHN-4 | • To pipe nylon tubing • Body rotates 360° around the stud axis. Position can be fixed after alignment. | |
| | ø6/4 X M5 | M-5ALHN-6 | | |
| Barb elbow for soft tubing (H)  | ø2/1.2 X M5 | M-5ALHU-2 | To pipe soft nylon tubing. | Body rotates 360° around the stud axis. Position can be fixed after alignment. |
| | ø3.18/2.18 X M5 | M-5ALHU-3 | To pipe polyurethane tubing. | |
| | ø3.18/2 X M5 | | To pipe soft nylon, polyurethane tubing. | |
| | ø4/2.5 X M5 | M-5ALHU-4 | | |
| | ø6/4 X M5 | M-5ALHU-6 | | |
| Bushing  | R1/8 X M5 female | M-5B | Connection from R1/8 piping to M5 fittings. | |
| Plug  | | M-5P | To plug unused M5 port. | |
| Hose nipple  | ø4/2.5 X M5 | M-5H-4 | To pipe nylon, soft nylon, polyurethane tubing. | |
| | ø6/4 X M5 | M-5H-6 | | |
| Hose elbow  | ø4/2.5 X M5 | M-5HL-4 | • To pipe nylon, soft nylon, polyurethane tubing. • Body rotates 360° around the stud axis. Position can be fixed after alignment. | |
| | ø6/4 X M5 | M-5HL-6 | | |
| Hose elbow(H)  | ø4/2.5 X M5 | M-5HLH-4 | | |
| | ø6/4 X M5 | M-5HLH-6 | | |
| Elbow  | M5 female X M5 female | M-5L | Perpendicular piping. | |
| Tee  | M5 female X M5 female X M5 female | M-5T | Perpendicular piping in both directions. | |
| Universal elbow  | M5 female X M5 male | M-5UL | Body rotates 360° around the stud axis. Position can be fixed after alignment. | |
| Universal tee  | M5 female X M5 female X M5 male | M-5UT | Body rotates 360° around the stud axis. Position can be fixed after alignment. | |
| Extension fitting  | M5 male X M5 female | M-5J | For 3D piping to prevent interference between fittings. | |
| Nipple  | M5 male X M5 male | M-5N | To connect fittings and equipment or to connect 2 fittings. | |
| Universal nipple  | M5 male X M5 male PAT. | M-5UN | Body rotates 360° around the stud axis. | |
| Bulkhead union  | M5 X M5 female – female | M-5E | Panel mount connection | |
| Bulkhead Reducer  | Rc1/8 X M5 female | M-5ER | Reduction from Rc1/8 to M5. Panel mounting is possible. | |
| Manifold  | Rc1/8 X M5 female (9 port) | M-5M | Rc1/8 can be diverted in up to nine M5 stations. Panel mounting is possible. | |
| Gasket  | Material: SUS304-NBR | M-5G2 | M5 thread label | |
| Gasket (H)  | Material: Nylon 66. GF 30% | M-5GH | M-5ALm-6 M-5ALHm-6 M-5HL-4, 6 M-5HLH-4, 6. | |

Fittings & Tubing

Miniature Fittings

References marked in light blue are available as ECW stocked item.

| Series M3 | | | |
|--|---------------------------------|----------|--|
| Description | Remark(s) | Model | Application |
| Barb fittings for soft tubing  | ø2/1.2 X M3 | M-3AU-2 | To pipe polyurethane tubing. |
| | ø3.18/2.18 X M3 | M-3AU-3 | To pipe soft nylon tubing. |
| | ø3.18/2 X M3 | | To pipe polyurethane tubing. |
| | ø4/2.5 X M3 | M-3AU-4 | To pipe soft nylon, polyurethane tubing. |
| Barb elbow for soft tubing  | ø2/1.2 X M3 | M-3ALU-2 | To pipe polyurethane tubing. |
| | ø3.18/2.18 X M3 | M-3ALU-3 | To pipe soft nylon tubing. |
| | ø3.18/2 X M3 | | Body rotates 360° around the stud axis. Position can be fixed after alignment. |
| | ø4/2.5 X M3 | M-3ALU-4 | To pipe soft nylon, polyurethane tubing. |
| Universal elbow  | M3 female X M3 male | M-3UL | Body rotates 360° around the stud axis. Position can be fixed after alignment. |
| | | | |
| Universal tee  | M3 female X M3 female X M3 male | M-3UT | Body rotates 360° around the stud axis. Position can be fixed after alignment. |
| | | | |
| Nipple  | M3 male X M3 male | M-3N | To connect fittings and equipment or to connect 2 fittings. |
| Plug  | | M-3P | To plug unused M3 port. |
| Gasket  | Material PVC | M-3G | Sealant (Thread portion) |

| Series R1/8 | | | |
|---|---------------------------|----------|---|
| Description | Remark(s) | Model | Application |
| Barb fittings for nylon tubing  | ø4/2.5 X R1/8 | M-01AN-4 | To pipe nylon tubing. |
| | ø6/4 X R1/8 | M-01AN-6 | |
| Barb fittings for soft tubing  | ø4/2.5 X R1/8 | M-01AU-4 | To pipe soft nylon, polyurethane tubing. |
| | ø6/4 X R1/8 | M-01AU-6 | |
| Hose nipple  | ø4/2.5 X R1/8 | M-01H-4 | To pipe nylon, soft nylon, polyurethane tubing. |
| | ø6/4 X R1/8 | M-01H-6 | |
| Hose nipple  | ø2/1.2 X 3.2 mm one-touch | M-32F-2 | To pipe polyurethane tubing. |
| | ø2/1.2 X 4 mm one-touch | M-04F-2 | |
| Plug-in reducer  | ø2/1.2 X 3.2 mm | M-32R-2 | To pipe polyurethane tubing. |
| | ø2/1.2 X 4 mm | M-04R-2 | |



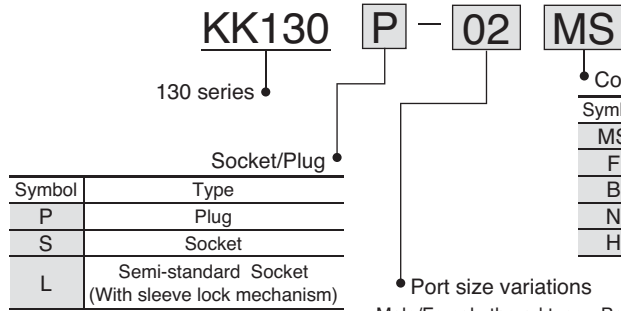
S Couplers Series KK130

Features

- Energy saving and cost reduction by pressure loss reduction.
- Compact and Lightweight.
- High strength. Outer parts of steel.
- Easy attachment and removal: Plug insertion force reduced.
- One-touch fitting available as standard.
- Sleeve lock mechanism available as semi-standard.



How to order



| Male/Female thread type | |
|-------------------------|-------------|
| Symbol | Thread size |
| 01 | R, Rc1/8 |
| 02 | R, Rc1/4 |
| 03 | R, Rc3/8 |
| 04 | R, Rc1/2 |

| Barb fitting type | |
|-------------------|--------------|
| Symbol | Hose nominal |
| 07 | 6 (1/4") |
| 09 | 8 (1/4") |
| 11 | 9 (3/8") |
| 13 | 12 (1/2") |

* The figures in () indicate the internal diameter of the applicable hose.

| Nut fitting type | |
|------------------|--------------------------------|
| Symbol | Applicable hose I.D./O.D. [mm] |
| 50 | 5/8 |
| 60 | 6/9 |
| 65 | 6.5/10 |
| 80 | 8/12 |
| 85 | 8.5/12.5 |
| 110 | 11/16 |

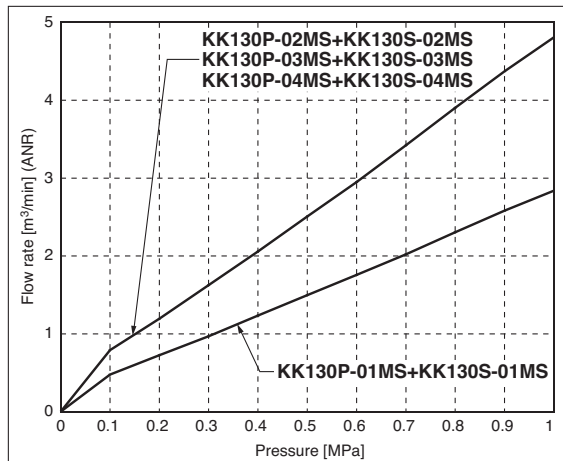
| One-touch fitting type | | |
|------------------------|---------------------------|-------------|
| Symbol | Applicable tube O.D. [mm] | |
| 06 | ø6 | Metric size |
| 08 | ø8 | |
| 10 | ø10 | |
| 12 | ø12 | |
| 07 | ø1/4" | Inch size |
| 09 | ø5/16" | |
| 11 | ø3/8" | |
| 13 | ø1/2" | |

Specifications

| | |
|-------------------------------|---|
| Fluid | Air (Note) |
| Operating pressure range | 0 to 1.5 MPa One-touch fitting type: 0 to 1.0 MPa |
| Proof pressure | 2.0 MPa |
| Ambient and fluid temperature | -20 to 80°C (No freezing) One-touch fitting type: -5 to 60°C (No freezing) |
| Plating | Sleeve: Electroless nickel plated Other external metal parts: Zinc chromated |
| Sealant | Male thread with sealant |

Note) Cannot be used for water.

Flow-rate Characteristics [Representative Value]



* This flow-rate characteristic test method complies with JIS B 8390 (Pneumatic fluid power – Components using compressible fluids – Determination of flow-rate characteristics)
* The figures are representative values when the same type of plug and socket are connected.



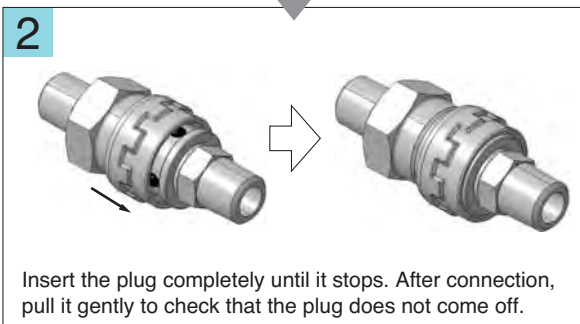
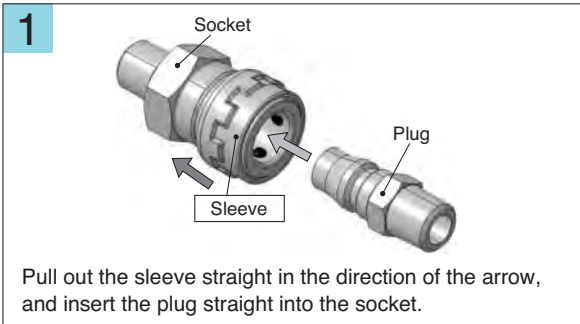
Related Products

- Series VMG - Blow Gun - page 1231
- Series AC - Air Preparation Modular Units - page 1076
- Series TU - Polyurethane Tubing - page 1223
- Series TCU - Coil Tube - page 1225

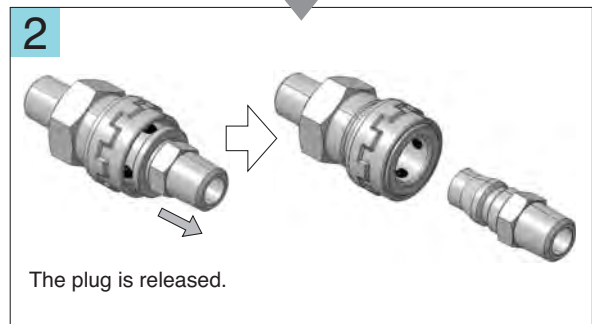
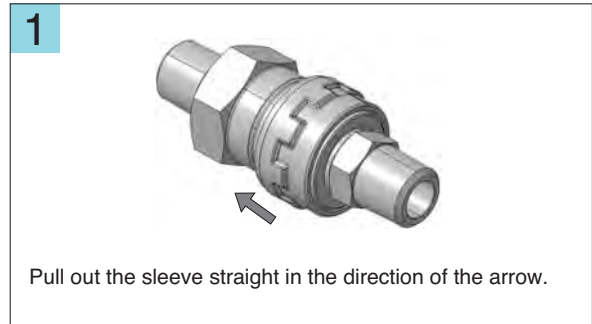
| Connection type | | | Sonic conductance C [dm ³ /(s·bar)] | Critical pressure ratio b | Flow coefficient Cv | Effective area S [mm ²] |
|------------------------|--------|------------|--|---------------------------|---------------------|-------------------------------------|
| Type | Symbol | Connection | | | | |
| Male thread | -01MS | R1/8 | 4.2 | 0.4 | 1.2 | 21 |
| | -02MS | R1/4 | 7.0 | 0.4 | 1.9 | 35 |
| | -03MS | R3/8 | 7.0 | 0.5 | 2.1 | 35 |
| | -04MS | R1/2 | 7.0 | 0.5 | 2.1 | 35 |
| Female thread | -01F | Rc1/8 | 6.0 | 0.5 | 1.8 | 30 |
| | -02F | Rc1/4 | 7.0 | 0.5 | 2.1 | 35 |
| | -03F | Rc3/8 | 7.0 | 0.5 | 2.1 | 35 |
| | -04F | Rc1/2 | 7.0 | 0.5 | 2.1 | 35 |
| With barb fitting | -07B | 6 (1/4") | 2.0 | 0.4 | 0.5 | 10 |
| | -09B | 8 (1/4") | 3.0 | 0.4 | 0.8 | 15 |
| | -11B | 10 (3/8") | 6.0 | 0.5 | 1.8 | 30 |
| With nut fitting | -13B | 12 (1/2") | 7.0 | 0.5 | 2.1 | 35 |
| | -50N | 5/8 | 2.0 | 0.4 | 0.5 | 10 |
| | -60N | 6/9 | 3.5 | 0.4 | 1.0 | 18 |
| | -65N | 6.5/10 | 4.2 | 0.4 | 1.2 | 21 |
| | -80N | 8/12 | 7.0 | 0.4 | 1.9 | 35 |
| With one-touch fitting | -85N | 8.5/12.5 | 7.0 | 0.4 | 1.9 | 35 |
| | -110N | 11/16 | 7.0 | 0.5 | 2.1 | 35 |
| | -06H | ø6 | 2.0 | 0.4 | 0.5 | 10 |
| | -08H | ø8 | 4.4 | 0.5 | 1.3 | 22 |
| | -10H | ø10 | 7.0 | 0.5 | 1.8 | 35 |
| | -12H | ø12 | 7.0 | 0.5 | 2.1 | 35 |

How to Operate

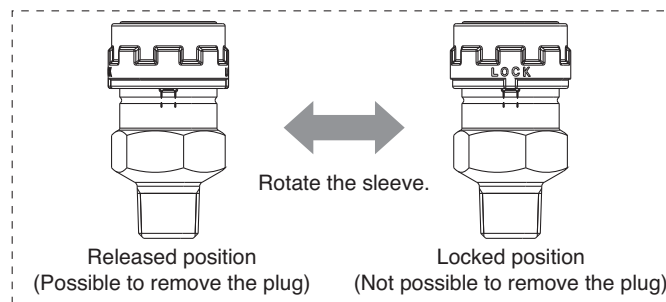
Mounting



Releasing

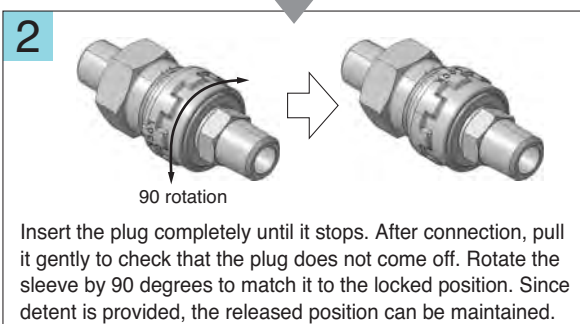
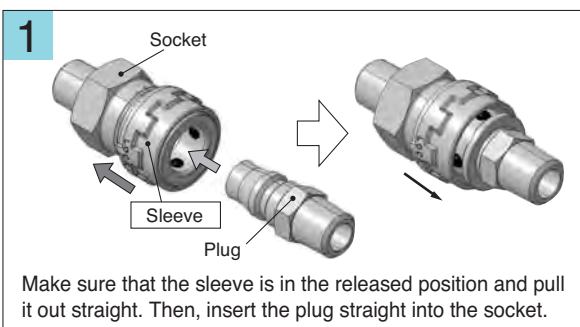


With sleeve lock mechanism (Semi-standard)

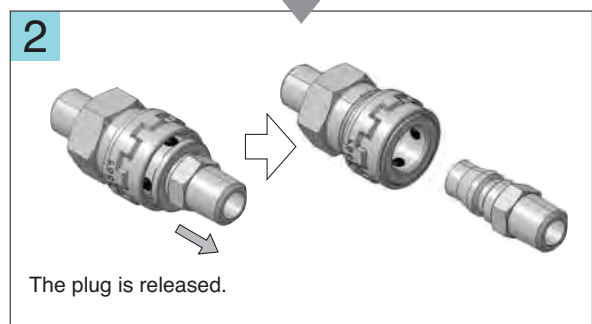
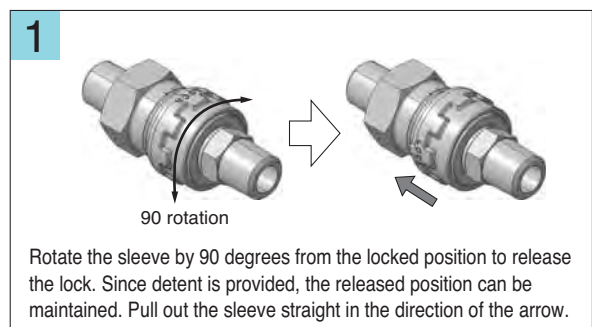


Note) Do not apply pressure when rotating the sleeve. If it is pressurised, the detent of the locked and released position may become unclear due to the pressure.

Mounting



Releasing



Series KK130 Variations



Plug (P)

Male thread type

| | Port size | Model |
|--|-----------|-------------|
| | R1/8 | KK130P-01MS |
| | R1/4 | -02MS |
| | R3/8 | -03MS |
| | R1/2 | -04MS |

Female thread type

| | Port size | Model |
|--|-----------|------------|
| | Rc1/8 | KK130P-01F |
| | Rc1/4 | -02F |
| | Rc3/8 | -03F |
| | Rc1/2 | -04F |

Barb fitting type (for rubber hose)

| | Hose nominal | Model |
|--|--------------|------------|
| | 6 (1/4") | KK130P-07B |
| | 8 (1/4") | -09B |
| | 9 (3/8") | -11B |
| | 12 (1/2") | -13B |

* The figures in () indicate the internal diameter of the applicable hose.

Nut fitting type (for fiber reinforced urethane hose)

| | Applicable hose I.D./O.D. | Model |
|--|---------------------------|------------|
| | 5/8 | KK130P-50N |
| | 6/9 | -60N |
| | 6.5/10 | -65N |
| | 8/12 | -80N |
| | 8.5/12.5 | -85N |
| | 11/16 | -110N |

One-touch fitting type

| | Applicable tube O.D. | | Model |
|--|----------------------|-------|------------|
| | Metric size mm | 6 | KK130P-06H |
| | | 8 | -08H |
| | | 10 | -10H |
| | | 12 | -12H |
| | Inch size | 1/4" | -07H |
| | | 5/16" | -09H |
| | | 3/8" | -11H |
| | | 1/2" | -13H |



Socket (S)

Male thread type

| | Port size | Model* |
|--|-----------|-------------|
| | R1/8 | KK130S-01MS |
| | R1/4 | -02MS |
| | R3/8 | -03MS |
| | R1/2 | -04MS |

* Refer to the how to order for the sleeve lock mechanism provided type.

Female thread type

| | Port size | Model* |
|--|-----------|------------|
| | Rc1/8 | KK130S-01F |
| | Rc1/4 | -02F |
| | Rc3/8 | -03F |
| | Rc1/2 | -04F |

* Refer to the how to order for the sleeve lock mechanism provided type.

Barb fitting type (for rubber hose)

| | Hose nominal | Model* |
|--|--------------|------------|
| | 6 (1/4") | KK130S-07B |
| | 8 (1/4") | -09B |
| | 9 (3/8") | -11B |
| | 12 (1/2") | -13B |

* Refer to the how to order for the sleeve lock mechanism provided type.

* The figures in () indicate the internal diameter of the applicable hose.

Nut fitting type (for fiber reinforced urethane hose)

| | Applicable hose I.D./O.D. | Model* |
|--|---------------------------|------------|
| | 5/8 | KK130S-50N |
| | 6/9 | -60N |
| | 6.5/10 | -65N |
| | 8/12 | -80N |
| | 8.5/12.5 | -85N |
| | 11/16 | -110N |

* Refer to the how to order for the sleeve lock mechanism provided type.

One-touch fitting type

| | Applicable tube O.D. | | Model* |
|--|----------------------|-------|------------|
| | Metric size mm | 6 | KK130S-06H |
| | | 8 | -08H |
| | | 10 | -10H |
| | | 12 | -12H |
| | Inch size | 1/4" | -07H |
| | | 5/16" | -09H |
| | | 3/8" | -11H |
| | | 1/2" | -13H |

* Refer to the how to order for the sleeve lock mechanism provided type.

Stainless Steel One-Touch Fittings Series KG

Features

- Stainless steel specification compatible with corrosive environment.
- 303 stainless steel used for metal parts.
- Suitable for use in CRT production lines for copper free environment, for food processing machine washing to endure water or salt splashes and for use in clean rooms to prevent particle generation resulting from corrosion.
- Tube sizes Ø4 - 16 mm

Specifications

| | | |
|-------------------------------|--|---|
| Fluid | Air, Water ^{Note1)} | |
| Max. operating pressure | 1.0MPa | |
| Operating vacuum pressure | -100kPa | |
| Proof pressure | 3.0MPa | |
| Ambient and fluid temperature | -5 to 60°C, In case of water: 0 to 40°C (With no condensation) | |
| Thread | Mounting | JIS B0203 (Taper thread for piping) |
| | Nut | JIS B0211, Class 2 (Metric fine thread) |
| Sealant (Thread portion) | With / Without sealant ^{Note2)} | |

Note1) Applicable to general industrial water. Consult SMC if using for other fluids.
Surge pressure must be under the maximum operating pressure.

Note2) Suffix "S" to part number if sealant is desired.

Corrosion Resistant



■ Applicable tubing O.D.: Metric Size

■ Connecting thread: M5, R, Rc



Related Products

Series TU - Polyurethane Tubing - page 1223

Series T - Nylon Tubing - www.smc.eu

Series TS - Soft Nylon Tubing - www.smc.eu

Applicable Tubing

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

Guide

Collet

Chuck

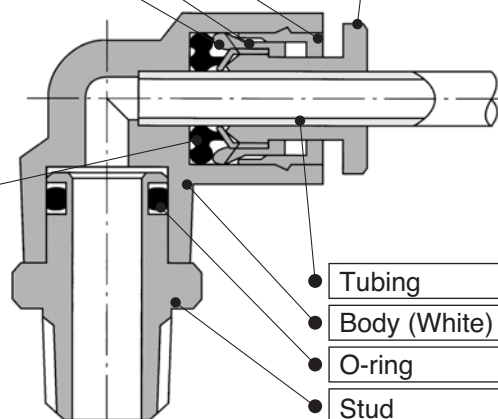
Applicable to nylon and polyurethane.
Large retaining force.
Secure engagement with chuck and large retaining force with collet.

Packing

Compatible with a wide range of pressure, from low vacuum to 1.0MPa.
The special shape ensures sealing and reduces resistance in tubing insertion.

Release button (White)

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.



Tubing

Body (White)

O-ring

Stud

Effective for piping in confined space.
The body and thread portion can be rotated.

PAT.



Stainless Steel One-Touch Fittings

References marked in light blue are available as ECW stocked item.

KGH Male Connector

Most common style used to pipe from female thread in the same direction.

| Applicable tubing O.D. [mm] | Connecting thread | Model |
|-----------------------------|-------------------|----------|
| | | |
| 4 | M5 | KGH04-M5 |
| | R1/8 | -01 |
| | R1/4 | -02 |
| 6 | M5 | KGH06-M5 |
| | R1/8 | -01 |
| | R1/4 | -02 |
| | R3/8 | -03 |
| 8 | R1/8 | KGH08-01 |
| | R1/4 | -02 |
| | R3/8 | -03 |
| 10 | R1/8 | KGH10-01 |
| | R1/4 | -02 |
| | R3/8 | -03 |
| | R1/2 | -04 |
| 12 | R1/4 | KGH12-02 |
| | R3/8 | -03 |
| | R1/2 | -04 |
| 16 | R3/8 | KGH16-03 |
| | R1/2 | -04 |

KGL Male Elbow

Most common style used to pipe from female thread at a right angle.

| Applicable tubing O.D. [mm] | Connecting thread | Model |
|-----------------------------|-------------------|----------|
| | | |
| 4 | M5 | KGL04-M5 |
| | R1/8 | -01 |
| | R1/4 | -02 |
| 6 | M5 | KGL06-M5 |
| | R1/8 | -01 |
| | R1/4 | -02 |
| | R3/8 | -03 |
| 8 | R1/8 | KGL08-01 |
| | R1/4 | -02 |
| | R3/8 | -03 |
| 10 | R1/8 | KGL10-01 |
| | R1/4 | -02 |
| | R3/8 | -03 |
| | R1/2 | -04 |
| 12 | R1/4 | KGL12-02 |
| | R3/8 | -03 |
| | R1/2 | -04 |
| 16 | R3/8 | KGL16-03 |
| | R1/2 | -04 |

KGS Hex. Socket Head Male Connector

The hexagon socket in the body is used to tighten the socket head male connector with a hexagon wrench. Useful in a confined space.

| Applicable tubing O.D. [mm] | Connecting thread | Model |
|-----------------------------|-------------------|----------|
| | | |
| 4 | M5 | KGS04-M5 |
| | R1/8 | -01 |
| 6 | M5 | KGS06-M5 |
| | R1/8 | -01 |
| | R1/4 | -02 |
| 8 | R1/8 | KGS08-01 |
| | R1/4 | -02 |
| | R3/8 | -03 |
| 10 | R1/8 | KGS10-01 |
| | R1/4 | -02 |
| | R3/8 | -03 |
| | R1/2 | -04 |
| 12 | R1/4 | KGS12-02 |
| | R3/8 | -03 |
| | R1/2 | -04 |

KGW Extended Male Elbow

Basically used in the same way as a male elbow. But also used in 3 dimensional piping to prevent interference of fittings.

| Applicable tubing O.D. [mm] | Connecting thread | Model |
|-----------------------------|-------------------|----------|
| | | |
| 4 | M5 | KGW04-M5 |
| | R1/8 | -01 |
| | R1/4 | -02 |
| 6 | M5 | KGW06-M5 |
| | R1/8 | -01 |
| | R1/4 | -02 |
| | R3/8 | -03 |
| 8 | R1/8 | KGW08-01 |
| | R1/4 | -02 |
| | R3/8 | -03 |
| 10 | R1/4 | KGW10-02 |
| | R3/8 | -03 |
| | R1/2 | -04 |
| | R1/4 | KGW12-02 |
| 12 | R3/8 | -03 |
| | R1/2 | -04 |
| | R1/2 | -04 |

KGC Tubing Cap

To plug unused tubing.

| Applicable tubing O.D. [mm] | Model |
|-----------------------------|----------|
| 4 | KGC04-00 |
| 6 | KGC06-00 |
| 8 | KGC08-00 |
| 10 | KGC10-00 |
| 12 | KGC12-00 |
| 16 | KGC16-00 |

KGL Plugin Elbow

To change the tubing direction from a one-touch fitting by 90.

| Applicable tubing O.D. [mm] | Fitting size | Model |
|-----------------------------|--------------|----------|
| 4 | 4 | KGL04-99 |
| 6 | 6 | KGL06-99 |
| 8 | 8 | KGL08-99 |
| 10 | 10 | KGL10-99 |
| 12 | 12 | KGL12-99 |

Stainless Steel One-Touch Fittings

References marked in light blue are available as ECW stocked item.

KGV Universal Male Elbow

The hexagon head of the body is used to tighten the body with a box wrench in a confined space.

| | Applicable tubing O.D. [mm] | Connecting thread | Model |
|------|-----------------------------|-------------------|----------|
| | | | |
| <M5> | 4 | M5 | KGV04-M5 |
| | | R1/8 | -01 |
| 6 | 6 | M5 | KGV06-M5 |
| | | R1/8 | -01 |
| | | R1/4 | -02 |
| 8 | 8 | R1/8 | KGV08-01 |
| | | R1/4 | -02 |
| | | R3/8 | -03 |
| 10 | 10 | R1/4 | KGV10-02 |
| | | R3/8 | -03 |
| | | R3/8 | KGV12-03 |
| <R> | 12 | R1/2 | -04 |

KGU Union "Y"

To branch tubing in the same direction.

| | Applicable tubing O.D. [mm] | Connecting thread | Model |
|------|-----------------------------|-------------------|----------|
| | | | |
| <M5> | 4 | M5 | KGU04-M5 |
| | | R1/8 | -01 |
| | | R1/4 | -02 |
| 6 | 6 | M5 | KGU06-M5 |
| | | R1/8 | -01 |
| | | R1/4 | -02 |
| | | R3/8 | -03 |
| 8 | 8 | R1/8 | KGU08-01 |
| | | R1/4 | -02 |
| | | R3/8 | -03 |
| 10 | 10 | R1/4 | KGU10-02 |
| | | R3/8 | -03 |
| | | R1/2 | -04 |
| 12 | 12 | R1/4 | KGU12-02 |
| | | R3/8 | -03 |
| | | R1/2 | -04 |

KGR Plug-In Reducer

To connect to a smaller one-touch fitting.

| | Applicable tubing O.D. [mm] | Fitting size | Model |
|----|-----------------------------|--------------|----------|
| | | | |
| 4 | 4 | 6 | KGR04-06 |
| | | 8 | -08 |
| | | 10 | -10 |
| 6 | 6 | 4 | KGR06-04 |
| | | 8 | -08 |
| | | 10 | -10 |
| | | 12 | -12 |
| 8 | 8 | 10 | KGR08-10 |
| | | 12 | -12 |
| 10 | 10 | 12 | KGR10-12 |
| | | 16 | -16 |
| 12 | 12 | 16 | KGR12-16 |

KGY Male Run Tee

To branch the line from the female thread in the same direction and at 90°.

| | Applicable tubing O.D. [mm] | Connecting thread | Model |
|----|-----------------------------|-------------------|----------|
| | | | |
| 4 | 4 | M5 | KGY04-M5 |
| | | R1/8 | -01 |
| | | R1/4 | -02 |
| 6 | 6 | M5 | KGY06-M5 |
| | | R1/8 | -01 |
| | | R1/4 | -02 |
| | | R3/8 | -03 |
| 8 | 8 | R1/8 | KGY08-01 |
| | | R1/4 | -02 |
| | | R3/8 | -03 |
| 10 | 10 | R1/8 | KGY10-01 |
| | | R1/4 | -02 |
| | | R3/8 | -03 |
| | | R1/2 | -04 |
| 12 | 12 | R1/4 | KGY12-02 |
| | | R3/8 | -03 |
| | | R1/2 | -04 |
| 16 | 16 | R3/8 | KGY16-03 |
| | | R1/2 | -04 |

KGT Male Branch Tee

To branch the line from the female thread at 90° in each direction.


| | Applicable tubing O.D. [mm] | Connecting thread | Model |
|----|-----------------------------|-------------------|----------|
| | | | |
| 4 | 4 | M5 | KGT04-M5 |
| | | R1/8 | -01 |
| | | R1/4 | -02 |
| 6 | 6 | M5 | KGT06-M5 |
| | | R1/8 | -01 |
| | | R1/4 | -02 |
| | | R3/8 | -03 |
| 8 | 8 | R1/8 | KGT08-01 |
| | | R1/4 | -02 |
| | | R3/8 | -03 |
| 10 | 10 | R1/8 | KGT10-01 |
| | | R1/4 | -02 |
| | | R3/8 | -03 |
| | | R1/2 | -04 |
| 12 | 12 | R1/4 | KGT12-02 |
| | | R3/8 | -03 |
| | | R1/2 | -04 |
| 16 | 16 | R3/8 | KGT16-03 |
| | | R1/2 | -04 |

Stainless Steel One-Touch Fittings

References marked in light blue are available as ECW stocked item.


KGLU Male Branch Connector

To branch the line from the female thread at a right angle.

|  | Applicable tubing O.D. [mm] | Connecting thread | Model |
|---|-----------------------------|-------------------|-----------|
| | | | |
| <M5> | 4 | M5 | KGLU04-M5 |
| | | R1/8 | -01 |
| | | R1/4 | -02 |
| 6 | 6 | M5 | KGLU06-M5 |
| | | R1/8 | -01 |
| | | R1/4 | -02 |
| 8 | 8 | R1/8 | KGLU08-01 |
| | | R1/4 | -02 |
| | | R3/8 | -03 |
| 10 | 10 | R1/4 | KGLU10-02 |
| | | R3/8 | -03 |
| | | R1/2 | -04 |
| 12 | 12 | R1/4 | KGLU12-02 |
| | | R3/8 | -03 |
| | | R1/2 | -04 |


KGD Delta Union

To branch the line from the female thread into 2 directions at right angles.

|  | Applicable tubing O.D. [mm] | Connecting thread | Model |
|---|-----------------------------|-------------------|----------|
| | | | |
| <M5> | 4 | M5 | KGD04-M5 |
| | | R1/8 | -01 |
| | | R1/4 | -02 |
| 6 | 6 | M5 | KGD06-M5 |
| | | R1/8 | -01 |
| | | R1/4 | -02 |
| 8 | 8 | R1/8 | KGD08-01 |
| | | R1/4 | -02 |
| | | R3/8 | -03 |
| 10 | 10 | R1/4 | KGD10-02 |
| | | R3/8 | -03 |
| | | R1/2 | -04 |
| 12 | 12 | R1/4 | KGD12-02 |
| | | R3/8 | -03 |
| | | R1/2 | -04 |


KGUD Double Branch

To branch the line from the female thread into 4 tubes in the same direction.

|  | Applicable tubing O.D. [mm] | Connecting thread | Model |
|---|-----------------------------|-------------------|-----------|
| | | | |
| 4 | 4 | R1/8 | KGUD04-01 |
| | | R1/4 | -02 |
| 6 | 6 | R1/8 | KGUD06-01 |
| | | R1/4 | -02 |


KGH Straight Union

To connect tubing in the same direction.

|  | Applicable tubing O.D. [mm] | Model |
|---|-----------------------------|----------|
| | 4 | KGH04-00 |
| 6 | KGH06-00 | |
| 8 | KGH08-00 | |
| 10 | KGH10-00 | |
| 12 | KGH12-00 | |


KGE Bulkhead Union

To connect tubing through a panel.

|  | Applicable tubing O.D. [mm] | Model |
|---|-----------------------------|----------|
| | 4 | KGE04-00 |
| 6 | KGE06-00 | |
| 8 | KGE08-00 | |
| 10 | KGE10-00 | |
| 12 | KGE12-00 | |
| 16 | KGE16-00 | |


KGL Union Elbow

To connect tubing at right angles to each other.

|  | Applicable tubing O.D. [mm] | Model |
|---|-----------------------------|----------|
| | 4 | KGL04-00 |
| 6 | KGL06-00 | |
| 8 | KGL08-00 | |
| 10 | KGL10-00 | |
| 12 | KGL12-00 | |
| 16 | KGL16-00 | |


KGT Union Tee

To branch tubing into 2 directions each at 90° to the original one.

|  | Applicable tubing O.D. [mm] | Model |
|---|-----------------------------|----------|
| | 4 | KGT04-00 |
| 6 | KGT06-00 | |
| 8 | KGT08-00 | |
| 10 | KGT10-00 | |
| 12 | KGT12-00 | |
| 16 | KGT16-00 | |

KGU Union "Y"

To branch tubing in the same direction.

|  | Applicable tubing O.D. [mm] | Model |
|---|-----------------------------|----------|
| | 4 | KGU04-00 |
| 6 | KGU06-00 | |
| 8 | KGU08-00 | |
| 10 | KGU10-00 | |
| 12 | KGU12-00 | |

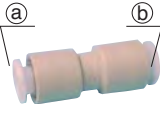
Fittings & Tubing

Stainless Steel One-Touch Fittings

References marked in light blue are available as ECW stocked item.


KGH Different Dia. Straight

To connect tubing of different diameters.

|  | Applicable tubing O.D. [mm] | | Model |
|---|-----------------------------|-----|----------|
| | (a) | (b) | |
| | 4 | 6 | KGH04-06 |
| | 6 | 8 | KGH06-08 |
| | 8 | 10 | KGH08-10 |
| | 10 | 12 | KGH10-12 |


KGU Different Dia. Tee

To branch a tube at a right angle into two tubes.

|  | Applicable tubing O.D. [mm] | Model |
|---|-----------------------------|-----------|
| | 4 | KGLU04-00 |
| | 6 | KGLU06-00 |
| | 8 | KGLU08-00 |
| | 10 | KGLU10-00 |
| | 12 | KGLU12-00 |


KGUD Different Dia. Double Union "Y"

To branch tubing into 4 smaller tubes in the same direction as the original one.

|  | Applicable tubing O.D. [mm] | | Model |
|---|-----------------------------|-----|-----------|
| | (a) | (b) | |
| | 4 | 6 | KGUD04-06 |
| | 6 | 8 | KGUD06-08 |


KGE Bulkhead Female Connector

Used for trunk connection between tubing and a male thread installed through a panel.

|  | Applicable tubing O.D. [mm] | Connecting thread | Model |
|---|-----------------------------|-------------------|----------|
| | 4 | Rc1/8 | KGE04-01 |
| | | Rc1/4 | -02 |
| | 6 | Rc1/8 | KGE06-01 |
| | | Rc1/4 | -02 |
| | | Rc3/8 | -03 |
| | 8 | Rc1/8 | KGE08-01 |
| | | Rc1/4 | -02 |
| | | Rc3/8 | -03 |
| | 10 | Rc1/4 | KGE10-02 |
| | | Rc3/8 | -03 |
| | 12 | Rc3/8 | KGE12-03 |
| | | Rc1/2 | -04 |
| | 16 | Rc3/8 | KGE16-03 |
| | | Rc1/2 | -04 |

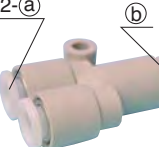
KGT Different Dia. Tee

To branch the tubing into two at a right angle and reduce the resulting branches in size.

|  | Applicable tubing O.D. [mm] | | Model |
|---|-----------------------------|-----|----------|
| | (a) | (b) | |
| | 4 | 6 | KGT04-06 |
| | 6 | 8 | KGT06-08 |
| | 8 | 10 | KGT08-10 |
| | 10 | 12 | KGT10-12 |


KGU Different Dia. Union "Y"

To branch tubing into 2 smaller tubes in the same direction as the original one.

|  | Applicable tubing O.D. [mm] | | Model |
|---|-----------------------------|-----|----------|
| | (a) | (b) | |
| | 4 | 6 | KGU04-06 |
| | 6 | 8 | KGU06-08 |
| | 8 | 10 | KGU08-10 |
| | 10 | 12 | KGU10-12 |


KGf Female Connector

To pipe from the male threaded portion of a pressure gauge, etc.

|  | Applicable tubing O.D. [mm] | Connecting thread | Model |
|---|-----------------------------|-------------------|----------|
| | 4 | Rc1/8 | KGf04-01 |
| | | Rc1/4 | -02 |
| | 6 | Rc1/8 | KGf06-01 |
| | | Rc1/4 | -02 |
| | | Rc3/8 | -03 |
| | 8 | Rc1/8 | KGf08-01 |
| | | Rc1/4 | -02 |
| | | Rc3/8 | -03 |
| | 10 | Rc1/4 | KGf10-02 |
| | | Rc3/8 | -03 |
| | 12 | Rc1/4 | KGf12-02 |
| | | Rc3/8 | -03 |
| | 12 | Rc1/2 | -04 |

KGD Delta Union

To connect 3 tubes at right angles with each other.

|  | Applicable tubing O.D. [mm] | Model |
|---|-----------------------------|----------|
| | 4 | KGD04-00 |
| | 6 | KGD06-00 |
| | 8 | KGD08-00 |
| | 10 | KGD10-00 |
| | 12 | KGD12-00 |

Metal One-touch Fittings

Applicable Tube: Metric Size, Connection Thread: M, G.
Series KQB2

RoHS

Features

- Metal one-touch fittings.
- Compact and Lightweight.
- Design flexibility up to 17 models.
- Electroless nickel plated brass parts.
- Grease-free product.



Related Products

Series TU - Polyurethane Tubing - www.smc.eu
 Series TUS - Soft Polyurethane Tubing - www.smc.eu
 Series TH - Fluoropolymer Tubing - www.smc.eu
 Series TL - High Purity Fluoropolymer Tubing - www.smc.eu
 Series TP- Polyolefine Tubing - www.smc.eu

Applicable Tube

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

Specifications

| | |
|--|--|
| Fluid | Air, Water |
| Operating pressure range ^{Note 2)} | -100 kPa to 1 MPa ^{Note 3)} |
| Proof pressure | 3.0 MPa |
| Ambient and fluid temperature ^{Note 4)} | -5 to 150°C (No freezing) ^{Note 3)} |
| Lubricant | Grease-free specification |
| Seal on the threads | With sealant |

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

Note 2) Avoid using in a vacuum holding application such as a leak tester, since there is leakage.

Note 3) Check the operating pressure range and operating temperature range of the tube.

Note 4) It is recommended that you use the inner sleeve in the following conditions: (Except ø3.2)

- When using in an environment where the fluid temperature changes drastically.
- When using at a high temperature.

* Temperature Condition of Mounting the Inner Sleeve

| Tube | Temperature |
|--------------------|---------------|
| FEP tube/TH series | 80°C or more |
| PFA tube/TL series | 120°C or more |

Cross Reference Table of the Inner Sleeve

| Tube O.D. | Tube material | | | Applicable inner sleeve | |
|-----------|-------------------------|--------------|--------------|-------------------------|--------|
| | TUS (Soft polyurethane) | TH/THI (FEP) | TL/TIL (PFA) | Part no. | Length |
| ø4 | — | TH0402 | — | TJ-0402 | 18 |
| | TUS0425 | TH0425 | — | TJ-0425 | 18 |
| | — | — | TL0403 | TJ-0403 | 18 |
| ø6 | TUS0604 | TH0604 | TL0604 | TJ-0604 | 19 |
| | TUS0805 | — | — | TJ-0805 | 20.5 |
| ø8 | — | TH0806 | TL0806 | TJ-0806 | 20.5 |
| | TUS1065 | — | — | TJ-1065 | 23 |
| | — | TH1075 | — | TJ-1075 | 23 |
| ø10 | — | TH1008 | TL1008 | TJ-1008 | 24 |
| | TUS1208 | — | — | TJ-1208 | 24 |
| | — | TH1209 | — | TJ-1209 | 24 |
| ø12 | — | TH1210 | TL1210 | TJ-1210 | 24 |
| | — | — | — | — | — |

* C2700 + Electroless nickel plated is used for the TJ series.

Dimensions

References marked in light blue are available as ECW stocked item.

Male Connector: KQB2H



| Applicable tube O.D. [mm] | Connection thread G | Model |
|---------------------------|---------------------|-------------|
| ø3.2 | M5 | KQB2H23-M5 |
| | M5 | KQB2H04-M5 |
| ø4 | 1/8 | KQB2H04-G01 |
| | 1/4 | KQB2H04-G02 |
| ø6 | M5 | KQB2H06-M5 |
| | 1/8 | KQB2H06-G01 |
| | 1/4 | KQB2H06-G02 |
| ø8 | 1/8 | KQB2H08-G01 |
| | 1/4 | KQB2H08-G02 |
| | 3/8 | KQB2H08-G03 |
| ø10 | 1/8 | KQB2H10-G01 |
| | 1/4 | KQB2H10-G02 |
| | 3/8 | KQB2H10-G03 |
| | 1/2 | KQB2H10-G04 |
| ø12 | 1/4 | KQB2H12-G02 |
| | 3/8 | KQB2H12-G03 |
| ø16 | 1/2 | KQB2H12-G04 |
| | 3/8 | KQB2H16-G03 |
| | 1/2 | KQB2H16-G04 |

Straight Union: KQB2H



| Applicable tube O.D. [mm] | Model |
|---------------------------|------------|
| ø3.2 | KQB2H23-00 |
| ø4 | KQB2H04-00 |
| ø6 | KQB2H06-00 |
| ø8 | KQB2H08-00 |
| ø10 | KQB2H10-00 |
| ø12 | KQB2H12-00 |
| ø16 | KQB2H16-00 |

Different Diameter Straight: KQB2H



| Applicable tube O.D. [mm] | | Model |
|---------------------------|-----|------------|
| a | b | |
| ø3.2 | ø4 | KQB2H23-04 |
| ø4 | ø6 | KQB2H04-06 |
| ø6 | ø8 | KQB2H06-08 |
| ø8 | ø10 | KQB2H08-10 |
| ø10 | ø12 | KQB2H10-12 |
| ø12 | ø16 | KQB2H12-16 |

Hexagon Socket Head Male Connector: KQB2S



| Applicable tube O.D. [mm] | Connection thread G | Model |
|---------------------------|---------------------|-------------|
| ø3.2 | M5 | KQB2S23-M5 |
| | M5 | KQB2S04-M5 |
| ø4 | 1/8 | KQB2S04-G01 |
| | M5 | KQB2S06-M5 |
| ø6 | 1/8 | KQB2S06-G01 |
| | 1/4 | KQB2S06-G02 |
| ø8 | 1/8 | KQB2S08-G01 |
| | 1/4 | KQB2S08-G02 |
| | 3/8 | KQB2S08-G03 |
| ø10 | 1/8 | KQB2S10-G01 |
| | 1/4 | KQB2S10-G02 |
| | 3/8 | KQB2S10-G03 |
| | 1/2 | KQB2S10-G04 |
| ø12 | 1/4 | KQB2S12-G02 |
| | 3/8 | KQB2S12-G03 |
| | 1/2 | KQB2S12-G04 |
| ø16 | 3/8 | KQB2S16-G03 |
| | 1/2 | KQB2S16-G04 |



Dimensions

Male Elbow: KQB2L



| Applicable tube O.D. [mm] | Connection thread G | Model |
|---------------------------|---------------------|-------------|
| ø3.2 | M5 | KQB2L23-M5 |
| | M5 | KQB2L04-M5 |
| ø4 | 1/8 | KQB2L04-G01 |
| | 1/4 | KQB2L04-G02 |
| ø6 | M5 | KQB2L06-M5 |
| | 1/8 | KQB2L06-G01 |
| | 1/4 | KQB2L06-G02 |
| | 3/8 | KQB2L06-G03 |
| ø8 | 1/8 | KQB2L08-G01 |
| | 1/4 | KQB2L08-G02 |
| | 3/8 | KQB2L08-G03 |
| | 1/8 | KQB2L10-G01 |
| ø10 | 1/4 | KQB2L10-G02 |
| | 3/8 | KQB2L10-G03 |
| | 1/2 | KQB2L10-G04 |
| ø12 | 1/4 | KQB2L12-G02 |
| | 3/8 | KQB2L12-G03 |
| | 1/2 | KQB2L12-G04 |
| ø16 | 3/8 | KQB2L16-G03 |
| | 1/2 | KQB2L16-G04 |

References marked in light blue are available as ECW stocked item.

Union Elbow: KQB2L



| Applicable tube O.D. [mm] | Model |
|---------------------------|------------|
| ø3.2 | KQB2L23-00 |
| ø4 | KQB2L04-00 |
| ø6 | KQB2L06-00 |
| ø8 | KQB2L08-00 |
| ø10 | KQB2L10-00 |
| ø12 | KQB2L12-00 |
| ø16 | KQB2L16-00 |

Male Branch Tee: KQB2T



| Applicable tube O.D. [mm] | Connection thread G | Model |
|---------------------------|---------------------|-------------|
| ø3.2 | M5 | KQB2T23-M5 |
| | M5 | KQB2T04-M5 |
| ø4 | 1/8 | KQB2T04-G01 |
| | 1/4 | KQB2T04-G02 |
| ø6 | M5 | KQB2T06-M5 |
| | 1/8 | KQB2T06-G01 |
| | 1/4 | KQB2T06-G02 |
| | 3/8 | KQB2T06-G03 |
| ø8 | 1/8 | KQB2T08-G01 |
| | 1/4 | KQB2T08-G02 |
| | 3/8 | KQB2T08-G03 |
| | 1/8 | KQB2T10-G01 |
| ø10 | 1/4 | KQB2T10-G02 |
| | 3/8 | KQB2T10-G03 |
| | 1/2 | KQB2T10-G04 |
| ø12 | 1/4 | KQB2T12-G02 |
| | 3/8 | KQB2T12-G03 |
| | 1/2 | KQB2T12-G04 |
| ø16 | 3/8 | KQB2T16-G03 |
| | 1/2 | KQB2T16-G04 |

Union Tee: KQB2T



| Applicable tube O.D. [mm] | Model |
|---------------------------|------------|
| ø3.2 | KQB2T23-00 |
| ø4 | KQB2T04-00 |
| ø6 | KQB2T06-00 |
| ø8 | KQB2T08-00 |
| ø10 | KQB2T10-00 |
| ø12 | KQB2T12-00 |
| ø16 | KQB2T16-00 |

Different Diameter Tee: KQB2T



| Applicable tube O.D. [mm] | | Model |
|---------------------------|-----|------------|
| a | b | |
| ø3.2 | ø4 | KQB2T23-04 |
| ø4 | ø6 | KQB2T04-06 |
| ø6 | ø8 | KQB2T06-08 |
| ø8 | ø10 | KQB2T08-10 |
| ø10 | ø12 | KQB2T10-12 |
| ø12 | ø16 | KQB2T12-16 |

Dimensions

References marked in light blue are available as ECW stocked item.

Bulkhead Connector: KQB2E



| Applicable tube O.D. [mm] | Connection thread G | Model |
|---------------------------|---------------------|-------------|
| ø4 | 1/8 | KQB2E04-G01 |
| | 1/4 | KQB2E04-G02 |
| ø6 | 1/8 | KQB2E06-G01 |
| | 1/4 | KQB2E06-G02 |
| | 3/8 | KQB2E06-G03 |
| ø8 | 1/8 | KQB2E08-G01 |
| | 1/4 | KQB2E08-G02 |
| | 3/8 | KQB2E08-G03 |
| ø10 | 1/4 | KQB2E10-G02 |
| | 3/8 | KQB2E10-G03 |
| ø12 | 3/8 | KQB2E12-G03 |
| | 1/2 | KQB2E12-G04 |
| ø16 | 3/8 | KQB2E16-G03 |
| | 1/2 | KQB2E16-G04 |

Bulkhead Union: KQB2E



| Applicable tube O.D. [mm] | Model |
|---------------------------|------------|
| ø3.2 | KQB2E23-00 |
| ø4 | KQB2E04-00 |
| ø6 | KQB2E06-00 |
| ø8 | KQB2E08-00 |
| ø10 | KQB2E10-00 |
| ø12 | KQB2E12-00 |
| ø16 | KQB2E16-00 |

Extended Male Union: KQB2W



| Applicable tube O.D. [mm] | Connection thread G | Model |
|---------------------------|---------------------|-------------|
| ø3.2 | M5 | KQB2W23-M5 |
| | M5 | KQB2W04-M5 |
| ø4 | 1/8 | KQB2W04-G01 |
| | 1/4 | KQB2W04-G02 |
| ø6 | M5 | KQB2W06-M5 |
| | 1/8 | KQB2W06-G01 |
| | 1/4 | KQB2W06-G02 |
| ø8 | 3/8 | KQB2W06-G03 |
| | 1/8 | KQB2W08-G01 |
| | 1/4 | KQB2W08-G02 |
| ø10 | 3/8 | KQB2W08-G03 |
| | 1/4 | KQB2W10-G02 |
| | 3/8 | KQB2W10-G03 |
| ø12 | 1/2 | KQB2W10-G04 |
| | 1/4 | KQB2W12-G02 |
| | 3/8 | KQB2W12-G03 |
| ø16 | 1/2 | KQB2W12-G04 |
| | 3/8 | KQB2W16-G03 |
| | 1/2 | KQB2W16-G04 |

Female Connector: KQB2F



| Applicable tube O.D. [mm] | Connection thread G | Model |
|---------------------------|---------------------|-------------|
| ø4 | 1/8 | KQB2F04-G01 |
| | 1/4 | KQB2F04-G02 |
| ø6 | 1/8 | KQB2F06-G01 |
| | 1/4 | KQB2F06-G02 |
| | 3/8 | KQB2F06-G03 |
| ø8 | 1/8 | KQB2F08-G01 |
| | 1/4 | KQB2F08-G02 |
| | 3/8 | KQB2F08-G03 |
| ø10 | 1/4 | KQB2F10-G02 |
| | 3/8 | KQB2F10-G03 |
| ø12 | 1/4 | KQB2F12-G02 |
| | 3/8 | KQB2F12-G03 |
| | 1/2 | KQB2F12-G04 |
| ø16 | 3/8 | KQB2F16-G03 |
| | 1/2 | KQB2F16-G04 |

Union "Y": KQB2U



| Applicable tube O.D. [mm] | Model |
|---------------------------|------------|
| ø3.2 | KQB2U23-00 |
| ø4 | KQB2U04-00 |
| ø6 | KQB2U06-00 |
| ø8 | KQB2U08-00 |
| ø10 | KQB2U10-00 |
| ø12 | KQB2U12-00 |
| ø16 | KQB2U16-00 |

Plug: KQB2P



| Applicable fitting size ød | Model |
|----------------------------|----------|
| ø3.2 | KQB2P-23 |
| ø4 | KQB2P-04 |
| ø6 | KQB2P-06 |
| ø8 | KQB2P-08 |
| ø10 | KQB2P-10 |
| ø12 | KQB2P-12 |
| ø16 | KQB2P-16 |



Stainless Steel 316, One-touch Fittings

Applicable Tube: Metric Size, Connection Thread: M, R, Rc
Series KQG2



Features

- Compact and Lightweight.
- Design flexibility up to 17 models.
- Fluid temperature: -5°C to 150°C.
- Grease-free product.
- Seal parts: Special FKM
- Can be used with steam



Related Products

Series TU - Polyurethane Tubing - page 1223
Series TUS - Soft Polyurethane Tubing - page www.smc.eu
Series TH - Fluoropolymer Tubing - page www.smc.eu
Series TL - High Purity Fluoropolymer Tubing - page www.smc.eu

Applicable Tube

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

Specifications

| | |
|--|--|
| Fluid | Air, Water, Steam ^{Note 2)} |
| Operating pressure range ^{Note 3)} | -100 kPa to 1 MPa ^{Note 4)} |
| Proof pressure | 3.0 MPa |
| Ambient and fluid temperature ^{Note 5)} | -5 to 150°C (No freezing) ^{Note 4)} |
| Lubricant | Grease-free specification |
| Seal on the threads | With sealant |

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

Note 2) Consult with SMC regarding applicable tube separately.

Note 3) Avoid using in a vacuum holding application such as a leak tester, since there is leakage.

Note 4) Check the operating pressure range and operating temperature range of the tube.

Note 5) It is recommended that you use the inner sleeve in the following conditions (Except ø3.2):

- When using in an environment where the fluid temperature changes drastically.
- When using at a high temperature.

* Temperature Condition of Mounting the Inner Sleeve

| Tube | Temperature |
|--------------------|---------------|
| FEP tube/TH series | 80°C or more |
| PFA tube/TL series | 120°C or more |

Cross Reference Table of the Inner Sleeve

| Tube O.D. | Tube material | | | Applicable inner sleeve | |
|-----------|-------------------------|--------------|--------------|-------------------------|--------|
| | TUS (Soft polyurethane) | TH/THH (FEP) | TL/TIL (PFA) | Part no. | Length |
| ø4 | — | TH0402 | — | TJG-0402 | 18 |
| | TUS0425 | TH0425 | — | TJG-0425 | 18 |
| ø6 | — | — | TL0403 | TJG-0403 | 18 |
| | TUS0604 | TH0604 | TL0604 | TJG-0604 | 19 |
| ø8 | TUS0805 | — | — | TJG-0805 | 20.5 |
| | — | TH0806 | TL0806 | TJG-0806 | 20.5 |
| ø10 | TUS1065 | — | — | TJG-1065 | 23 |
| | — | TH1075 | — | TJG-1075 | 23 |
| | — | TH1008 | TL1008 | TJG-1008 | 24 |
| ø12 | TUS1208 | — | — | TJG-1208 | 24 |
| | — | TH1209 | — | TJG-1209 | 24 |
| | — | TH1210 | TL1210 | TJG-1210 | 24 |

* Stainless steel 316 is used for the TJG series.

Dimensions

Male Connector: KQG2H



| Applicable tube O.D. [mm] | Connection thread R, M | Model |
|---------------------------|------------------------|-------------|
| ø3.2 | M5 | KQG2H23-M5 |
| | 1/8 | KQG2H23-01S |
| | 1/4 | KQG2H23-02S |
| ø4 | M5 | KQG2H04-M5 |
| | 1/8 | KQG2H04-01S |
| | 1/4 | KQG2H04-02S |
| ø6 | M5 | KQG2H06-M5 |
| | 1/8 | KQG2H06-01S |
| | 1/4 | KQG2H06-02S |
| | 3/8 | KQG2H06-03S |
| ø8 | 1/8 | KQG2H08-01S |
| | 1/4 | KQG2H08-02S |
| | 3/8 | KQG2H08-03S |
| ø10 | 1/8 | KQG2H10-01S |
| | 1/4 | KQG2H10-02S |
| | 3/8 | KQG2H10-03S |
| | 1/2 | KQG2H10-04S |
| ø12 | 1/4 | KQG2H12-02S |
| | 3/8 | KQG2H12-03S |
| | 1/2 | KQG2H12-04S |
| ø16 | 3/8 | KQG2H16-03S |
| | 1/2 | KQG2H16-04S |

Male Elbow: KQG2L



| Applicable tube O.D. [mm] | Connection thread R, M | Model |
|---------------------------|------------------------|-------------|
| ø3.2 | M5 | KQG2L23-M5 |
| | 1/8 | KQG2L23-01S |
| | 1/4 | KQG2L23-02S |
| ø4 | M5 | KQG2L04-M5 |
| | 1/8 | KQG2L04-01S |
| | 1/4 | KQG2L04-02S |
| ø6 | M5 | KQG2L06-M5 |
| | 1/8 | KQG2L06-01S |
| | 1/4 | KQG2L06-02S |
| | 3/8 | KQG2L06-03S |
| ø8 | 1/8 | KQG2L08-01S |
| | 1/4 | KQG2L08-02S |
| | 3/8 | KQG2L08-03S |
| ø10 | 1/8 | KQG2L10-01S |
| | 1/4 | KQG2L10-02S |
| | 3/8 | KQG2L10-03S |
| | 1/2 | KQG2L10-04S |
| ø12 | 1/4 | KQG2L12-02S |
| | 3/8 | KQG2L12-03S |
| | 1/2 | KQG2L12-04S |
| ø16 | 3/8 | KQG2L16-03S |
| | 1/2 | KQG2L16-04S |

Hexagon Socket Head Male Connector: KQG2S



| Applicable tube O.D. [mm] | Connection thread R, M | Model |
|---------------------------|------------------------|-------------|
| ø3.2 | M5 | KQG2S23-M5 |
| ø4 | M5 | KQG2S04-M5 |
| | 1/8 | KQG2S04-01S |
| ø6 | M5 | KQG2S06-M5 |
| | 1/8 | KQG2S06-01S |
| | 1/4 | KQG2S06-02S |
| ø8 | 1/8 | KQG2S08-01S |
| | 1/4 | KQG2S08-02S |
| ø10 | 3/8 | KQG2S08-03S |
| | 1/8 | KQG2S10-01S |
| | 1/4 | KQG2S10-02S |
| ø12 | 3/8 | KQG2S10-03S |
| | 1/2 | KQG2S10-04S |
| ø16 | 1/4 | KQG2S12-02S |
| | 3/8 | KQG2S12-03S |
| | 1/2 | KQG2S12-04S |
| ø16 | 3/8 | KQG2S16-03S |
| | 1/2 | KQG2S16-04S |

Male Branch Tee: KQG2T



| Applicable tube O.D. [mm] | Connection thread R, M | Model |
|---------------------------|------------------------|-------------|
| ø3.2 | M5 | KQG2T23-M5 |
| | 1/8 | KQG2T23-01S |
| | 1/4 | KQG2T23-02S |
| ø4 | M5 | KQG2T04-M5 |
| | 1/8 | KQG2T04-01S |
| | 1/4 | KQG2T04-02S |
| ø6 | M5 | KQG2T06-M5 |
| | 1/8 | KQG2T06-01S |
| | 1/4 | KQG2T06-02S |
| | 3/8 | KQG2T06-03S |
| ø8 | 1/8 | KQG2T08-01S |
| | 1/4 | KQG2T08-02S |
| | 3/8 | KQG2T08-03S |
| ø10 | 1/8 | KQG2T10-01S |
| | 1/4 | KQG2T10-02S |
| | 3/8 | KQG2T10-03S |
| | 1/2 | KQG2T10-04S |
| ø12 | 1/4 | KQG2T12-02S |
| | 3/8 | KQG2T12-03S |
| | 1/2 | KQG2T12-04S |
| ø16 | 3/8 | KQG2T16-03S |
| | 1/2 | KQG2T16-04S |

Straight Union: KQG2H



| Applicable tube O.D. [mm] | Model |
|---------------------------|------------|
| ø3.2 | KQG2H23-00 |
| ø4 | KQG2H04-00 |
| ø6 | KQG2H06-00 |
| ø8 | KQG2H08-00 |
| ø10 | KQG2H10-00 |
| ø12 | KQG2H12-00 |
| ø16 | KQG2H16-00 |

Union Elbow: KQG2L



| Applicable tube O.D. [mm] | Model |
|---------------------------|------------|
| ø3.2 | KQG2L23-00 |
| ø4 | KQG2L04-00 |
| ø6 | KQG2L06-00 |
| ø8 | KQG2L08-00 |
| ø10 | KQG2L10-00 |
| ø12 | KQG2L12-00 |
| ø16 | KQG2L16-00 |



Dimensions

Bulkhead Union: KQG2E



| Applicable tube O.D. [mm] | Model |
|---------------------------|------------|
| ø3.2 | KQG2E23-00 |
| ø4 | KQG2E04-00 |
| ø6 | KQG2E06-00 |
| ø8 | KQG2E08-00 |
| ø10 | KQG2E10-00 |
| ø12 | KQG2E12-00 |
| ø16 | KQG2E16-00 |

Different Diameter Straight: KQG2H



| Applicable tube O.D. [mm] | | Model |
|---------------------------|-----|------------|
| a | b | |
| ø3.2 | ø4 | KQG2H23-04 |
| ø4 | ø6 | KQG2H04-06 |
| ø6 | ø8 | KQG2H06-08 |
| ø8 | ø10 | KQG2H08-10 |
| ø10 | ø12 | KQG2H10-12 |
| ø12 | ø16 | KQG2H12-16 |

Union Tee: KQG2T



| Applicable tube O.D. [mm] | Model |
|---------------------------|------------|
| ø3.2 | KQG2T23-00 |
| ø4 | KQG2T04-00 |
| ø6 | KQG2T06-00 |
| ø8 | KQG2T08-00 |
| ø10 | KQG2T10-00 |
| ø12 | KQG2T12-00 |
| ø16 | KQG2T16-00 |

Different Diameter Union "Y": KQG2U



| Applicable tube O.D. [mm] | | Model |
|---------------------------|-----|------------|
| a | b | |
| ø3.2 | ø4 | KQG2U23-04 |
| ø4 | ø6 | KQG2U04-06 |
| ø6 | ø8 | KQG2U06-08 |
| ø8 | ø10 | KQG2U08-10 |
| ø10 | ø12 | KQG2U10-12 |
| ø12 | ø16 | KQG2U12-16 |

Union "Y": KQG2U



| Applicable tube O.D. [mm] | Model |
|---------------------------|------------|
| ø3.2 | KQG2U23-00 |
| ø4 | KQG2U04-00 |
| ø6 | KQG2U06-00 |
| ø8 | KQG2U08-00 |
| ø10 | KQG2U10-00 |
| ø12 | KQG2U12-00 |
| ø16 | KQG2U16-00 |

Bulkhead Connector: KQG2E



| Applicable tube O.D. [mm] | Connection thread Rc | Model |
|---------------------------|----------------------|------------|
| ø3.2 | 1/4 | KQG2E23-02 |
| | 1/8 | KQG2E04-01 |
| ø4 | 1/4 | KQG2E04-02 |
| | 1/8 | KQG2E06-01 |
| ø6 | 1/4 | KQG2E06-02 |
| | 3/8 | KQG2E06-03 |
| | 1/8 | KQG2E08-01 |
| ø8 | 1/4 | KQG2E08-02 |
| | 3/8 | KQG2E08-03 |
| | 1/4 | KQG2E10-02 |
| ø10 | 3/8 | KQG2E10-03 |
| | 3/8 | KQG2E12-03 |
| ø12 | 1/2 | KQG2E12-04 |
| | 3/8 | KQG2E16-03 |
| ø16 | 3/8 | KQG2E16-03 |
| | 1/2 | KQG2E16-04 |

Different Diameter Tee: KQG2T



| Applicable tube O.D. [mm] | | Model |
|---------------------------|-----|------------|
| a | b | |
| ø3.2 | ø4 | KQG2T23-04 |
| ø4 | ø6 | KQG2T04-06 |
| ø6 | ø8 | KQG2T06-08 |
| ø8 | ø10 | KQG2T08-10 |
| ø10 | ø12 | KQG2T10-12 |
| ø12 | ø16 | KQG2T12-16 |

Plug-in Reducer: KQG2R



| Applicable tube O.D. [mm] | Applicable fitting size ød | Model |
|---------------------------|----------------------------|------------|
| ø3.2 | ø4 | KQG2R23-04 |
| ø4 | ø6 | KQG2R04-06 |
| ø6 | ø8 | KQG2R06-08 |
| ø8 | ø10 | KQG2R08-10 |
| ø10 | ø12 | KQG2R10-12 |
| ø12 | ø16 | KQG2R12-16 |

References marked in light blue are available as ECW stocked item.

Dimensions

References marked in light blue are available as ECW stocked item.

Extended Male Elbow: KQG2W



| Applicable tube O.D. [mm] | Connection thread R, M | Model |
|---------------------------|------------------------|-------------|
| ø3.2 | M5 | KQG2W23-M5 |
| | 1/8 | KQG2W23-01S |
| | 1/4 | KQG2W23-02S |
| ø4 | M5 | KQG2W04-M5 |
| | 1/8 | KQG2W04-01S |
| | 1/4 | KQG2W04-02S |
| ø6 | M5 | KQG2W06-M5 |
| | 1/8 | KQG2W06-01S |
| | 1/4 | KQG2W06-02S |
| | 3/8 | KQG2W06-03S |
| ø8 | 1/8 | KQG2W08-01S |
| | 1/4 | KQG2W08-02S |
| | 3/8 | KQG2W08-03S |
| ø10 | 1/4 | KQG2W10-02S |
| | 3/8 | KQG2W10-03S |
| | 1/2 | KQG2W10-04S |
| ø12 | 1/4 | KQG2W12-02S |
| | 3/8 | KQG2W12-03S |
| | 1/2 | KQG2W12-04S |
| ø16 | 3/8 | KQG2W16-03S |
| | 1/2 | KQG2W16-04S |

Female Connector: KQG2F



| Applicable tube O.D. [mm] | Connection thread Rc | Model |
|---------------------------|----------------------|------------|
| ø3.2 | 1/8 | KQG2F23-01 |
| ø4 | 1/8 | KQG2F04-01 |
| | 1/4 | KQG2F04-02 |
| ø6 | 1/8 | KQG2F06-01 |
| | 1/4 | KQG2F06-02 |
| | 3/8 | KQG2F06-03 |
| ø8 | 1/8 | KQG2F08-01 |
| | 1/4 | KQG2F08-02 |
| ø10 | 3/8 | KQG2F08-03 |
| | 1/4 | KQG2F10-02 |
| ø12 | 3/8 | KQG2F10-03 |
| | 1/4 | KQG2F12-02 |
| | 3/8 | KQG2F12-03 |
| ø16 | 1/2 | KQG2F12-04 |
| | 3/8 | KQG2F16-03 |
| | 1/2 | KQG2F16-04 |

Plug: KQG2P



| Applicable fitting size ød | Model |
|----------------------------|----------|
| ø3.2 | KQG2P-23 |
| ø4 | KQG2P-04 |
| ø6 | KQG2P-06 |
| ø8 | KQG2P-08 |
| ø10 | KQG2P-10 |
| ø12 | KQG2P-12 |
| ø16 | KQG2P-16 |



Stainless Steel 316, Insert Fittings

Applicable Tube: Metric Size, Connection Thread: R, Rc
Series KFG2

RoHS



Features

- Compact and Lightweight.
- Design flexibility up to 9 models.
- Easy maintenance by a sleeveless sealing structure.
- Expanded operating temperature from -65 to 260 °C.
- Grease-free product.



Related Products

Series TU - Polyurethane Tubing - page 1223
Series TUS - Soft Polyurethane Tubing - www.smc.eu
Series TH - Fluoropolymer Tubing - www.smc.eu
Series TL - High Purity Fluoropolymer Tubing - www.smc.eu

Applicable Tube

| | |
|--------------------------------|---|
| Tube material ^{Note)} | FEP, PFA, Modified PTFE, Nylon, Soft nylon ^{Note)} , Polyurethane, Soft polyurethane, Polyolefin, Soft polyolefin, Antistatic soft nylon, Antistatic polyurethane, Hard polyurethane |
| Tube size | ø4 x ø2.5, ø4 x ø3, ø6 x ø4, ø8 x ø6, ø10 x ø7.5 ø10 x ø8, ø12 x ø9, ø12 x ø10, ø16 x ø13 |

Note) For soft nylon tube, soft polyurethane tube, hard polyurethane tube, antistatic polyurethane tube, water cannot be used.

| Series | Tube material | Tube O.D. x I.D. [mm] | | | | | | | | |
|--------|-----------------------------------|-----------------------|---------|---------|---------|------------|----------|----------|-----------|-----------|
| | | ø4 x ø2.5 | ø4 x ø3 | ø6 x ø4 | ø8 x ø6 | ø10 x ø7.5 | ø10 x ø8 | ø12 x ø9 | ø12 x ø10 | ø16 x ø13 |
| TH | FEP | ● | — | ● | ● | ● | ● | ● | ● | — |
| TL | PFA | — | ● | ● | ● | ● | ● | — | ● | — |
| TD | Modified PTFE | ● | — | ● | ● | ● | — | ● | — | — |
| T | Nylon | ● | ● | ● | ● | ● | — | ● | — | ● |
| TS | Soft nylon | ● | — | ● | — | ● | — | ● | — | — |
| TU | Polyurethane | ● | — | ● | — | — | — | — | — | — |
| TPH | Polyolefin | ● | — | ● | ● | ● | — | ● | — | — |
| TUS | Soft polyurethane | ● | — | ● | — | — | — | — | — | — |
| TUH | Hard polyurethane (High pressure) | ● | — | ● | — | — | — | — | — | — |
| TPS | Soft polyolefin | ● | — | ● | — | — | — | — | — | — |
| TAS | Antistatic soft nylon | ● | — | ● | — | — | — | — | — | — |
| TAU | Antistatic polyurethane | ● | — | ● | — | — | — | — | — | — |

Specifications

| | |
|---|---|
| Fluid | Air, Water, Steam ^{Note 2)} ^{Note 3)} |
| Operating pressure range ^{Note 1)} | -100 kPa to 1 MPa ^{Note 4)} |
| Proof pressure | 3.0 MPa |
| Ambient and fluid temperature | -65 to 260°C (No freezing) ^{Note 4)} [Swivel elbow and with sealant types: -5 to 150°C] |
| Lubricant | Grease-free specification |
| Seal on the threads | Without sealant (With sealant type compatible) ^{Note 5)} |

Note 1) Avoid using in a vacuum holding application such as a leak tester, since there is leakage.

Note 2) Consult with SMC regarding applicable tube separately.

Note 3) Using special FKM that is resistant even when steam is used.

Note 4) Check the operating pressure range and operating temperature range of the tube.

Note 5) With sealant: Suffix "S" to the end of part number.

Note 6) Union nut is shipped together.

Dimensions

References marked in light blue are available as ECW stocked item.

Male Connector: KFG2H



| Applicable tube size [mm] | | Connection thread R | Model |
|---------------------------|------|---------------------|---------------|
| O.D. | I.D. | | |
| ø4 | ø2.5 | 1/8 | KFG2H0425-01S |
| | | 1/4 | KFG2H0425-02S |
| ø4 | ø3 | 1/8 | KFG2H0403-01S |
| | | 1/4 | KFG2H0403-02S |
| ø6 | ø4 | 1/8 | KFG2H0604-01S |
| | | 1/4 | KFG2H0604-02S |
| ø8 | ø6 | 1/8 | KFG2H0806-01S |
| | | 1/4 | KFG2H0806-02S |
| | | 3/8 | KFG2H0806-03S |
| ø10 | ø7.5 | 1/4 | KFG2H1075-02S |
| | | 3/8 | KFG2H1075-03S |
| | | 1/2 | KFG2H1075-04S |
| ø10 | ø8 | 1/4 | KFG2H1008-02S |
| | | 3/8 | KFG2H1008-03S |
| | | 1/2 | KFG2H1008-04S |
| ø12 | ø9 | 1/4 | KFG2H1209-02S |
| | | 3/8 | KFG2H1209-03S |
| | | 1/2 | KFG2H1209-04S |
| ø12 | ø10 | 1/4 | KFG2H1210-02S |
| | | 3/8 | KFG2H1210-03S |
| | | 1/2 | KFG2H1210-04S |
| ø16 | ø13 | 3/8 | KFG2H1613-03S |
| | | 1/2 | KFG2H1613-04S |

Male Branch Tee: KFG2T



| Applicable tube size [mm] | | Connection thread R | Model |
|---------------------------|------|---------------------|---------------|
| O.D. | I.D. | | |
| ø4 | ø2.5 | 1/8 | KFG2T0425-01S |
| | | 1/4 | KFG2T0425-02S |
| ø4 | ø3 | 1/8 | KFG2T0403-01S |
| | | 1/4 | KFG2T0403-02S |
| ø6 | ø4 | 1/8 | KFG2T0604-01S |
| | | 1/4 | KFG2T0604-02S |
| ø8 | ø6 | 1/8 | KFG2T0806-01S |
| | | 1/4 | KFG2T0806-02S |
| | | 3/8 | KFG2T0806-03S |
| ø10 | ø7.5 | 1/4 | KFG2T1075-02S |
| | | 3/8 | KFG2T1075-03S |
| | | 1/2 | KFG2T1075-04S |
| ø10 | ø8 | 1/4 | KFG2T1008-02S |
| | | 3/8 | KFG2T1008-03S |
| | | 1/2 | KFG2T1008-04S |
| ø12 | ø9 | 1/4 | KFG2T1209-02S |
| | | 3/8 | KFG2T1209-03S |
| | | 1/2 | KFG2T1209-04S |
| ø12 | ø10 | 1/4 | KFG2T1210-02S |
| | | 3/8 | KFG2T1210-03S |
| | | 1/2 | KFG2T1210-04S |
| ø16 | ø13 | 3/8 | KFG2T1613-03S |
| | | 1/2 | KFG2T1613-04S |

Male Elbow: KFG2L



| Applicable tube size [mm] | | Connection thread R | Model |
|---------------------------|------|---------------------|---------------|
| O.D. | I.D. | | |
| ø4 | ø2.5 | 1/8 | KFG2L0425-01S |
| | | 1/4 | KFG2L0425-02S |
| ø4 | ø3 | 1/8 | KFG2L0403-01S |
| | | 1/4 | KFG2L0403-02S |
| ø6 | ø4 | 1/8 | KFG2L0604-01S |
| | | 1/4 | KFG2L0604-02S |
| ø8 | ø6 | 1/8 | KFG2L0806-01S |
| | | 1/4 | KFG2L0806-02S |
| | | 3/8 | KFG2L0806-03S |
| ø10 | ø7.5 | 1/4 | KFG2L1075-02S |
| | | 3/8 | KFG2L1075-03S |
| | | 1/2 | KFG2L1075-04S |
| ø10 | ø8 | 1/4 | KFG2L1008-02S |
| | | 3/8 | KFG2L1008-03S |
| | | 1/2 | KFG2L1008-04S |
| ø12 | ø9 | 1/4 | KFG2L1209-02S |
| | | 3/8 | KFG2L1209-03S |
| | | 1/2 | KFG2L1209-04S |
| ø12 | ø10 | 1/4 | KFG2L1210-02S |
| | | 3/8 | KFG2L1210-03S |
| | | 1/2 | KFG2L1210-04S |
| ø16 | ø13 | 3/8 | KFG2L1613-03S |
| | | 1/2 | KFG2L1613-04S |

Straight Union: KFG2H



| Applicable tube size [mm] | | Model |
|---------------------------|------|--------------|
| O.D. | I.D. | |
| ø4 | ø2.5 | KFG2H0425-00 |
| ø4 | ø3 | KFG2H0403-00 |
| ø6 | ø4 | KFG2H0604-00 |
| ø8 | ø6 | KFG2H0806-00 |
| ø10 | ø7.5 | KFG2H1075-00 |
| ø10 | ø8 | KFG2H1008-00 |
| ø12 | ø9 | KFG2H1209-00 |
| ø12 | ø10 | KFG2H1210-00 |
| ø16 | ø13 | KFG2H1613-00 |

Union Tee: KFG2T



| Applicable tube size [mm] | | Model |
|---------------------------|------|--------------|
| O.D. | I.D. | |
| ø4 | ø2.5 | KFG2T0425-00 |
| ø4 | ø3 | KFG2T0403-00 |
| ø6 | ø4 | KFG2T0604-00 |
| ø8 | ø6 | KFG2T0806-00 |
| ø10 | ø7.5 | KFG2T1075-00 |
| ø10 | ø8 | KFG2T1008-00 |
| ø12 | ø9 | KFG2T1209-00 |
| ø12 | ø10 | KFG2T1210-00 |
| ø16 | ø13 | KFG2T1613-00 |

Dimensions

Bulkhead Union: KFG2E



| Applicable tube size [mm] | | Model |
|---------------------------|------|--------------|
| O.D. | I.D. | |
| ø4 | ø2.5 | KFG2E0425-00 |
| ø4 | ø3 | KFG2E0403-00 |
| ø6 | ø4 | KFG2E0604-00 |
| ø8 | ø6 | KFG2E0806-00 |
| ø10 | ø7.5 | KFG2E1075-00 |
| ø10 | ø8 | KFG2E1008-00 |
| ø12 | ø9 | KFG2E1209-00 |
| ø12 | ø10 | KFG2E1210-00 |
| ø16 | ø13 | KFG2E1613-00 |

References marked in light blue are available as ECW stocked item.

Female Connector: KFG2F



| Applicable tube size [mm] | | Connection thread Rc | Model |
|---------------------------|------|----------------------|--------------|
| O.D. | I.D. | | |
| ø4 | ø2.5 | 1/4 | KFG2F0425-02 |
| ø4 | ø3 | 1/4 | KFG2F0403-02 |
| ø6 | ø4 | 1/4 | KFG2F0604-02 |
| ø8 | ø6 | 3/8 | KFG2F0806-03 |
| ø10 | ø7.5 | 3/8 | KFG2F1075-03 |
| ø10 | ø8 | 3/8 | KFG2F1008-03 |
| ø12 | ø9 | 3/8 | KFG2F1209-03 |
| ø12 | ø10 | 3/8 | KFG2F1210-03 |
| ø16 | ø13 | 1/2 | KFG2F1613-04 |

Union Elbow: KFG2L



| Applicable tube size [mm] | | Model |
|---------------------------|------|--------------|
| O.D. | I.D. | |
| ø4 | ø2.5 | KFG2L0425-00 |
| ø4 | ø3 | KFG2L0403-00 |
| ø6 | ø4 | KFG2L0604-00 |
| ø8 | ø6 | KFG2L0806-00 |
| ø10 | ø7.5 | KFG2L1075-00 |
| ø10 | ø8 | KFG2L1008-00 |
| ø12 | ø9 | KFG2L1209-00 |
| ø12 | ø10 | KFG2L1210-00 |
| ø16 | ø13 | KFG2L1613-00 |

Union Nut: KFG2N



| Applicable tube O.D. [mm] | Model |
|---------------------------|----------|
| ø4 | KFG2N-04 |
| ø6 | KFG2N-06 |
| ø8 | KFG2N-08 |
| ø10 | KFG2N-10 |
| ø12 | KFG2N-12 |
| ø16 | KFG2N-16 |

Swivel Elbow: KFG2V



| Applicable tube size [mm] | | Connection thread R | Model |
|---------------------------|------|---------------------|---------------|
| O.D. | I.D. | | |
| ø4 | ø2.5 | 1/8 | KFG2V0425-01S |
| | | 1/4 | KFG2V0425-02S |
| ø4 | ø3 | 1/8 | KFG2V0403-01S |
| | | 1/4 | KFG2V0403-02S |
| ø6 | ø4 | 1/8 | KFG2V0604-01S |
| | | 1/4 | KFG2V0604-02S |
| ø8 | ø6 | 1/8 | KFG2V0806-01S |
| | | 1/4 | KFG2V0806-02S |
| | | 3/8 | KFG2V0806-03S |
| ø10 | ø7.5 | 1/4 | KFG2V1075-02S |
| | | 3/8 | KFG2V1075-03S |
| | | 1/2 | KFG2V1075-04S |
| ø10 | ø8 | 1/4 | KFG2V1008-02S |
| | | 3/8 | KFG2V1008-03S |
| | | 1/2 | KFG2V1008-04S |
| ø12 | ø9 | 1/4 | KFG2V1209-02S |
| | | 3/8 | KFG2V1209-03S |
| | | 1/2 | KFG2V1209-04S |
| ø12 | ø10 | 1/4 | KFG2V1210-02S |
| | | 3/8 | KFG2V1210-03S |
| | | 1/2 | KFG2V1210-04S |
| ø16 | ø13 | 3/8 | KFG2V1613-03S |
| | | 1/2 | KFG2V1613-04S |

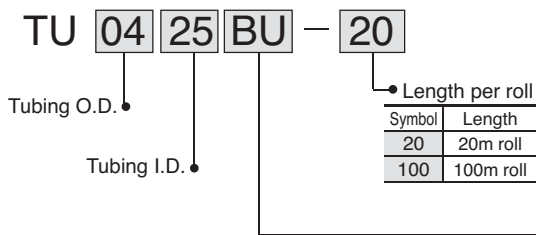
Polyurethane Tubing Series TU

Features

- Flexible Tubing sizes 2mm to 16mm OD.
- For general industrial air and water applications.
- 20m and 100m coils.
- 29 colour options.



How to Order



Colour indication

| Symbol | Colour | Symbol | Colour |
|--------|-------------|--------|--------------|
| B | Black | G2 | Clear green |
| W | White | G3 | Neon green |
| R | Red | G4 | Dark green |
| BU | Blue | GR1 | Grey |
| Y | Yellow | GR2 | Light grey |
| G | Green | P1 | Neon pink |
| C | Transparent | PU1 | Solid purple |
| YR | Orange | PU2 | Clear purple |
| BU1 | Solid blue | R1 | Solid red |
| BU2 | Clear blue | R2 | Clear red |
| BU3 | Medium blue | S1 | Silver |
| BR1 | Brown | Y1 | Solid yellow |
| G1 | Solid green | Y2 | Clear yellow |
| | | Y3 | Neon yellow |
| | | YR1 | Clear orange |
| | | YR2 | Neon orange |



Accessories and Related Products

(Accessories)

Series TM - Multi-tube Holder - www.smc.eu

Series TK - Tube Cutter - www.smc.eu

Series TG - Tube Releasing Tool - www.smc.eu

Series TB - Tube Stand&Reel - www.smc.eu

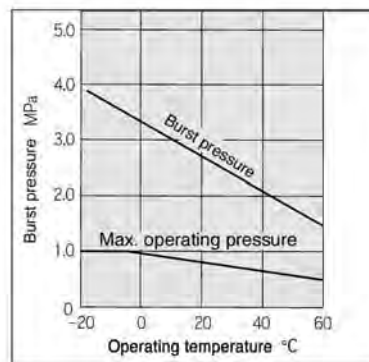
(Related Products)

Series KQ2 - Fittings - page 1184

Series AS - Speed Controllers - page 1238

Series VMG - Blow Gun - page 1231

Burst Pressure Characteristics and Operating Pressure Curve



Product Recommendation



Stocked items for fast delivery

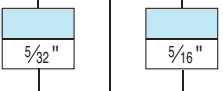
| Model: TU O.D. - I.D. [mm] | Roll Length [m] | Available Colours |
|----------------------------|-----------------|---|
| TU0425 | 20 | B, BR1, BU, BU2, BU3, C, G, GR1, GR2, P1, R, R2, S1, W, Y, YR |
| | 100 | BU, BU1, C, G, R, S1, W, Y, Y1, YR |
| TU0604 | 20 | B, BR1, BU, BU2, BU3, C, G, GR1, R, R2, S1, W, Y, YR |
| | 100 | B, BU, BU1, BU3, C, G, G4, R, S1, W, Y, YR |
| TU0805 | 20 | B, BU, BU1, BU3, C, G, GR1, R, S1, W, Y, YR |
| | 100 | B, BU, BU1, BU3, C, G, GR1, R, S1, W, Y, YR |
| TU1065 | 20 | B, BU1, BU, BU3, C, G, G4, R, S1, W, Y, YR |
| | 100 | B, BU, BU1, BU3, C, G, R, S1, W, Y, YR |
| TU1208 | 20 | B, BU, BU3, C, G, G4, R1, R, S1, W, Y, YR |
| | 100 | B, BU, BU1, C, G, R, S1, W, Y |
| TU1610 | 20 | B, BU, C, W |
| | 100 | B, BU |



Model/Specifications

● – 20 m roll □ – 100 m roll (TU1610 is reel.)

| Model | Tubing size | | | | | | |
|--------------------|-------------------------|--------|--------|--------|--------|--------|--------|
| | Metric size (Series TU) | | | | | | |
| | TU0212 | TU0425 | TU0604 | TU0805 | TU1065 | TU1208 | TU1610 |
| Tubing O.D. [mm] | 2 | 4 | 6 | 8 | 10 | 12 | 16 |
| Tubing I.D. [mm] | 1.2 | 2.5 | 4 | 5 | 6.5 | 8 | 10 |
| Black (B) | ● | ● | ● | ● | ● | ● | ● |
| White (W) | ● | ● | ● | ● | ● | ● | □ |
| Red (R) | ● | ● | ● | ● | ● | ● | ● |
| Blue (BU) | ● | ● | ● | ● | ● | ● | □ |
| Yellow (Y) | ● | ● | ● | ● | ● | ● | ● |
| Green (G) | ● | ● | ● | ● | ● | ● | ● |
| Transparent (C) | ● | ● | ● | ● | ● | ● | □ |
| Orange (YR) | | ● | ● | ● | ● | ● | ● |
| Solid blue (BU1) | | ● | ● | ● | ● | ● | ● |
| Clear blue (BU2) | | ● | ● | ● | ● | ● | ● |
| Medium blue (BU3) | | ● | ● | ● | ● | ● | ● |
| Brown (BR1) | | ● | ● | ● | ● | ● | ● |
| Solid green (G1) | | ● | ● | ● | ● | ● | ● |
| Clear green (G2) | | ● | ● | ● | ● | ● | ● |
| Neon green (G3) | | ● | ● | ● | ● | ● | ● |
| Dark green (G4) | | ● | ● | ● | ● | ● | ● |
| Gray (GR1) | | ● | ● | ● | ● | ● | ● |
| Light gray (GR2) | | ● | ● | ● | ● | ● | ● |
| Neon pink (P1) | | ● | ● | ● | ● | ● | ● |
| Solid purple (PU1) | | ● | ● | ● | ● | ● | ● |
| Clear purple (PU2) | | ● | ● | ● | ● | ● | ● |
| Solid red (R1) | | ● | ● | ● | ● | ● | ● |
| Clear red (R2) | | ● | ● | ● | ● | ● | ● |
| Silver (S1) | | ● | ● | ● | ● | ● | ● |
| Solid yellow (Y1) | | ● | ● | ● | ● | ● | ● |
| Clear yellow (Y2) | | ● | ● | ● | ● | ● | ● |
| Neon yellow (Y3) | | ● | ● | ● | ● | ● | ● |
| Clear orange (YR1) | | ● | ● | ● | ● | ● | ● |
| Neon orange (YR2) | | ● | ● | ● | ● | ● | ● |



| | | | | | | | |
|---------------------------------|--|----|----|----|----|----|----|
| Fluid | Air/Water | | | | | | |
| Max. operating pressure at 20°C | 0.8 MPa | | | | | | |
| Burst pressure | Refer to the burst pressure characteristics curve. | | | | | | |
| Min. bending radius [mm] | 4 | 10 | 15 | 20 | 27 | 35 | 45 |
| Operating temperature | -20 to +60°C (Water: 0 to 40°C) (No freezing) | | | | | | |
| Material | Polyurethane | | | | | | |

Fittings & Tubing

Polyurethane Coil Tubing Series TCU

Features

- Single or multi-core option.
- For flexible piping applications.
- For compact piping.



How to Order

TCU **04** **25** **B** - **1**

Number of cores

| Model | N° Cores |
|-------|----------|
| 0425 | 1, 2, 3 |
| 0604 | 1 |
| 0805 | 1 |

Colour

Black (Standard)
Note) More colours available as "Made to order"

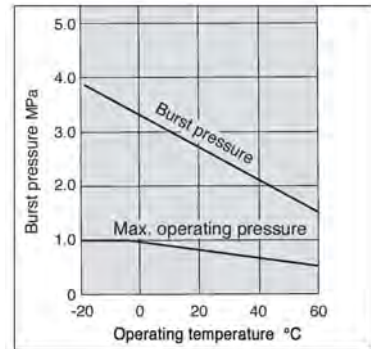
Diameters

| Model | O.D. [mm] |
|-------|-----------|
| 0425 | 4 |
| 0604 | 6 |
| 0805 | 8 |

| Model | I.D. [mm] |
|-------|-----------|
| 0425 | 2.5 |
| 0604 | 4 |
| 0805 | 5 |

■ Tubing Size: Metric Size

Burst Pressure Characteristics and Operating Pressure Curve



Product Recommendation



Stocked items for fast delivery

| | |
|------------|------------|
| TCU0425B-1 | TCU0604B-2 |
| TCU0425B-2 | TCU0604B-3 |
| TCU0425B-3 | TCU0805B-1 |
| TCU0604B-1 | |



Accessories and Related Products

(Accessories)

Series TM - Multi-tube Holder - www.smc.eu

Series TK - Tube Cutter - www.smc.eu

Series TG - Tube Releasing Tool - www.smc.eu

Series TB - Tube Stand&Reel - www.smc.eu

(Related Products)

Series KQ2 - Fittings - page 1184

Series AS - Speed Controllers - page 1238

Series VMG - Blow Gun - page 1231

Specifications

| Model | TCU 0425B-1 | TCU 0425B-2 | TCU 0425B-3 | TCU 0604B-1 | TCU 0604B-2 | TCU 0604B-3 | TCU 0805B-1 |
|--|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Number of cores | 1 | 2 | 3 | 1 | 2 | 3 | 1 |
| Tubing O.D. mm | 4 | | | 6 | | | 8 |
| Tubing I.D. mm | 2.5 | | | 4 | | | 5 |
| Fluid | Air Note 1) | | | | | | |
| Max. operating pressure (20°C) Note 2) | 0.8MPa | | | | | | |
| Burst pressure | Refer to burst pressure characteristics curve. | | | | | | |
| Operating temperature | -20 to 60°C | | | | | | |
| Material | Polyurethane | | | | | | |
| colour | Black | | | | | | |

Note 1) Consult SMC regarding other fluids.

Note 2) Refer to the burst pressure characteristics and operating pressure curve for other temperatures. Avoid abnormal temperature rises due to adiabatic compression.

Coil Tubing

| O.D. | I.D. | colour | Number of rolls | Max. operating length [m] | Model |
|------|------|-----------|-----------------|---------------------------|------------|
| 4 | 2.5 | Black (B) | 1 | 1.5 | TCU0425B-1 |
| | | Black (B) | 2 | | TCU0425B-2 |
| | | Black (B) | 3 | 1 | TCU0425B-3 |
| 6 | 4 | Black (B) | 1 | 2 | TCU0604B-1 |
| | | Black (B) | 2 | 1.5 | TCU0604B-2 |
| | | Black (B) | 3 | 1 | TCU0604B-3 |
| 8 | 5 | Black (B) | 1 | 2 | TCU0805B-1 |

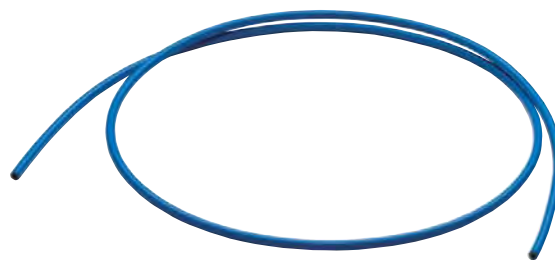


For more product options and details see our specific catalogues or on-line information.

Flame Resistant Three-layer Polyurethane Tubing Series TRTU

Features

- Aluminium spark-proof middle layer.
- 6 external colour variations.



How to Order

TRTU1065 B - 20

| Tubing model | | Colour | |
|--------------|-----------------------------|--------|--------|
| Model | Inner tube O.D. x I.D. [mm] | Symbol | Colour |
| TRTU0604 | 6 x 4 | B | Black |
| TRTU0805 | 8 x 5 | W | White |
| TRTU1065 | 10 x 6.5 | R | Red |
| TRTU1208 | 12 x 8 | BU | Blue |
| | | Y | Yellow |
| | | G | Green |

| Length per roll | |
|-----------------|------------|
| Symbol | Length |
| 20 | 20 m roll |
| 100 | 100 m reel |

Product Recommendation



Stocked items for fast delivery

| | | | |
|---------------|---------------|---------------|---------------|
| TRTU0604B-20 | TRTU0805B-20 | TRTU1065B-20 | TRTU1208B-20 |
| TRTU0604B-100 | TRTU0805B-100 | TRTU1065BU-20 | TRTU1208BU-20 |
| TRTU0604BU-20 | TRTU0805BU-20 | TRTU1065Y-20 | TRTU1208Y-20 |



Accessories and Related Products

(Accessories)

Series TM - Multiple Tubing Holder - www.smc.eu

Series TG - Tubing Release Tool - www.smc.eu

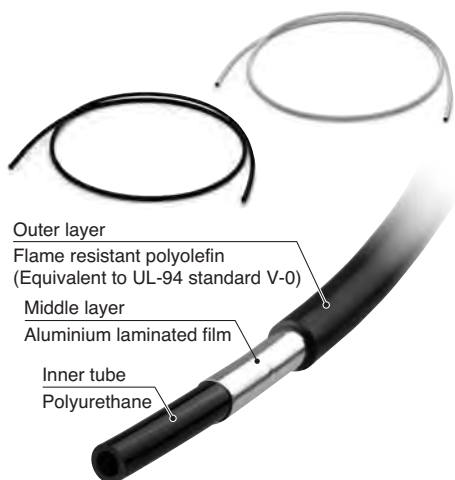
(Related Products)

Series KR - Spatter Proof One-touch Fittings - www.smc.eu

Series KRM - Spatter Proof One-touch Fitting Manifold - www.smc.eu

Series KQB2 - Metal One-touch Fittings - page 1212

Specifications



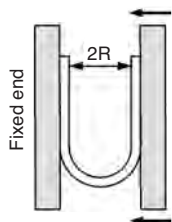
Outer layer
Flame resistant polyolefin
(Equivalent to UL-94 standard V-0)

Middle layer
Aluminium laminated film

Inner tube
Polyurethane

For general pneumatic and water piping in environments exposed to sparks from arc welding, etc.

How to measure the minimum bending radius



Bend the tube into the U-form at a temperature of 20°C. Fix one end and close loop gradually. Measure 2R when the deformed ratio of the tube diameter at bending reaches 5%.

Model

● - 20 m roll □ - 100 m reel

| Model | TRTU0604 | TRTU0805 | TRTU1065 | TRTU1208 |
|----------------------------|----------|----------|----------|----------|
| Inner tube O.D. [mm] | 6 | 8 | 10 | 12 |
| Inner tube I.D. [mm] | 4 | 5 | 6.5 | 8 |
| Outer layer thickness [mm] | 1 | 1 | 1 | 1 |

| Outer layer colour | Model | | | |
|--------------------|----------|----------|----------|----------|
| | TRTU0604 | TRTU0805 | TRTU1065 | TRTU1208 |
| Black (B) | ● | ● | ● | ● |
| White (W) | ● | ● | ● | ● |
| Red (R) | ● | ● | ● | ● |
| Blue (BU) | ● | ● | ● | ● |
| Yellow (Y) | ● | ● | ● | ● |
| Green (G) | ● | ● | ● | ● |

Specifications

| | | | | |
|---|--|---|----|----|
| Fluid ^{Note 1)} | Air, Water | | | |
| Applicable fittings | FR one-touch fittings: Series KR-W2 Metal one-touch fittings: Series KQB2 | | | |
| Max. operating pressure | At 20°C | 0.8 MPa | | |
| | At 40°C | 0.65 MPa | | |
| | At 60°C | 0.5 MPa | | |
| Burst pressure | Refer to the burst pressure characteristics curve. | | | |
| Min. bending radius [mm] ^{Note 2)} | 50 | 60 | 70 | 80 |
| Ambient and fluid temperature | -20 to +60°C Water: 0 to 40°C (No freezing) | | | |
| Material | Inner tube | Polyurethane | | |
| | Middle layer | Aluminium laminated film | | |
| | Outer layer | Polyolefin (Equivalent to UL-94 standard V-0) | | |

Note 1) Applicable for general industrial water. Please consult with SMC if using for the other kind of fluid. Also, the surge pressure must be under the maximum operating pressure.

If the surge pressure exceeds the maximum operating pressure, it will result in damage to fittings and tubes.

Note 2) The minimum bending radius is the representative value measured as shown in the left figure. Allow extra length when piping since the tube may be bent if used under the minimum bending radius.

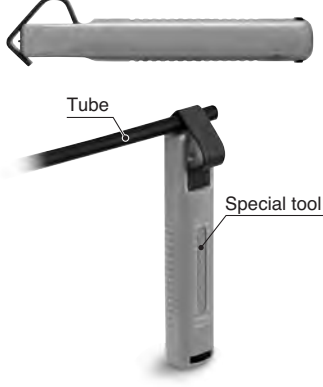
Note 3) The colour of all inner tubes is black.

Accessories

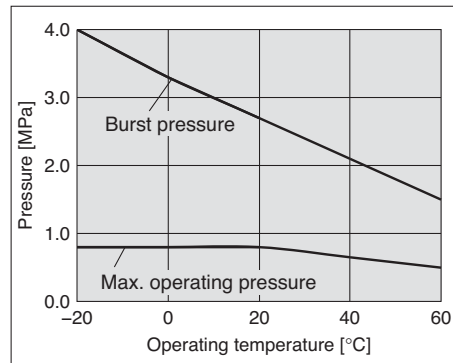
Use a special tool for stripping off the outer layer.

Part no.: YS-100

* Refer to the Operation Manual for details of how to use the special tool.

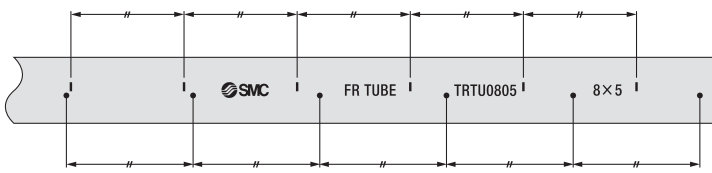


Burst Pressure Characteristics Curve and Operating Pressure



Installation on One-touch Fittings

Pitch indication (Series KQB2): All installation lengths with the same pitch

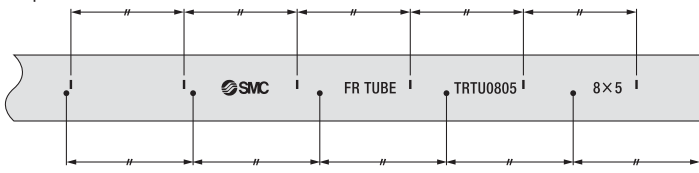


Pitch indication (Series KR-W2): All installation lengths with the same pitch

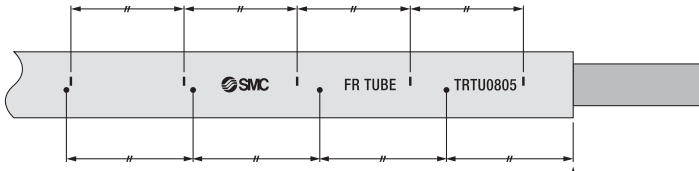
Identification of the pitch length for installation
 " // ": Series KQB2
 " • ": Series KR-W2

Installation on the KR-W2 series

Step 1

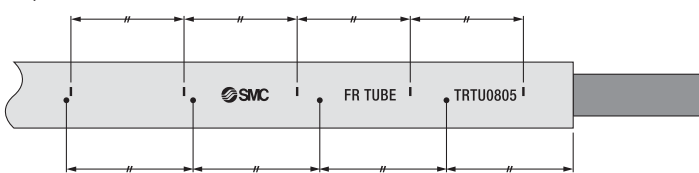


Step 2



Outer layer, aluminium laminated film and inner tube are cut at the " • " mark.

Step 3



Strip off the outer layer.

Strip off the aluminium laminated film to prevent the inner tube from being damaged.



For more product options and details see our specific catalogues or on-line information.

Low Torque Metal Seal Type Rotary Joint Series MQR

1 circuit, 2 circuits, 4 circuits, 8 circuits, 12 circuits, 16 circuits

Features

- Start-up torque unaffected by supply pressure and temperature fluctuations.
- Use of metal seals prevents the spool from sticking to the rotating surface even after a long period of non-operation.
- Operating pressure - 100kPa - 1MPa.
- Piping ports are aligned in a spiral line for easy piping.



How to Order

| | | | | | | |
|---|--|-----------------|--------------------|---------------------|--|-----------|
| MQR | | F | 4 | – | | M5 |
| Low torque rotary joint (Metal seal type) | | Options | Number of circuits | Connection diameter | | |
| | | — Standard | 1 1 circuit | M5 M5 x 0.8 | | |
| | | F (Note) Flange | 2 2 circuits | 8 8 circuits | | |
| Note: No flange type in 1 circuit system | | | 4 4 circuits | 12 12 circuits | | |
| | | | | 16 16 circuits | | |

Product Recommendation



Stocked items for fast delivery

| | | |
|----------|----------|-----------|
| MQR1-M5 | MQR4-M5 | MQRF8-M5 |
| MQR2-M5 | MQRF4-M5 | MQR12-M5 |
| MQRF2-M5 | MQR8-M5 | MQRF12-M5 |



Related Products

Series KQ2 - Fittings - page 1184
Series TU - Tubing - page 1223

Options/Mounting Bracket

| Number of circuits | Flange part number |
|--------------------|--------------------|
| 2 circuits | MQR2-F |
| 4 circuits | MQR4-F |
| 8 circuits | MQR8-F |
| 12 circuits | MQR12-F |
| 16 circuits | MQR16-F |

Specifications

| Model | MQR1-M5 | MQR2-M5 | MQR4-M5 | MQR8-M5 | MQR12-M5 | MQR16-M5 |
|---|--|---|---|--|--|--|
| Number of circuits (Number of ports) | 1 | 2 | 4 | 8 | 12 | 16 |
| Fluid | Air / Inert gas | | | | | |
| Seal structure | Metal seal | | | | | |
| Guide structure | Bearing supported at both ends | | | | | |
| Port size | Male R1/8 | | M5 x 0.8 | | | |
| | Female M5 x 0.8 | | | | | |
| Flow rate characteristics | C[dm ³ /(s·bar)] | | b | | Cv | |
| | 0.50 | | 0.40 | | 0.17 | |
| Lubrication | Not required | | | | | |
| Min. operating pressure | -100kPa | | | | | |
| Max. operating pressure | 1.0MPa | | | | | |
| Ambient temperature and operating fluid temperature ^{Note 1)} | -10 to 80 °C | | | | | |
| Max. start-up rotation torque ^{Note 2)} | 0.003 N·m or less | 0.03 N·m or less | 0.05 N·m or less | 0.10 N·m or less | 0.20 N·m or less | 0.50 N·m or less |
| Allowable rotation number | 3000 min ⁻¹ (r.p.m.) or less ^{Note 3)} | 2000 min ⁻¹ (r.p.m.) or less | 1500 min ⁻¹ (r.p.m.) or less | 900 min ⁻¹ (r.p.m.) or less | 600 min ⁻¹ (r.p.m.) or less | 200 min ⁻¹ (r.p.m.) or less |
| Allowable radial load (allowable coupling axis reaction) ^{Note 4)} | 1N or less | 15N or less | 30N or less | 40N or less | 50N or less | 50N or less |
| Allowable axial load | | | | | | |
| Weight | 0.025kg | 0.16kg | 0.39kg | 0.76kg | 1.26kg | 2.80kg |

Note 1) The temperature 80°C includes temperature rise during rotation.

Note 2) The start-up torque does not change with the supply pressure or with non-use (remains within the maximum start-up rotation torque) but it speed does change with the rotation number.

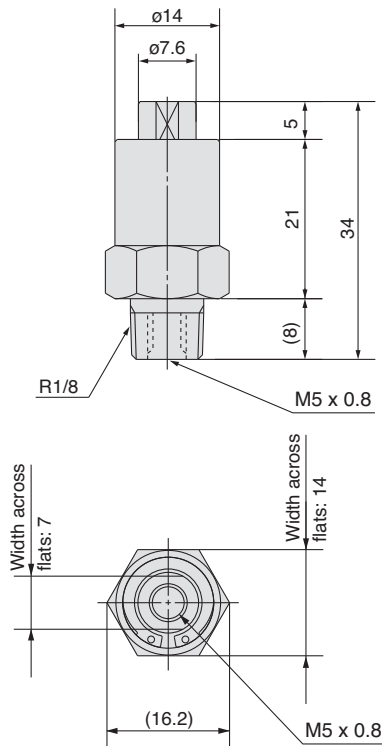
Note 3) If using at a speed above 600 min⁻¹ (r.p.m.), ensure rotation is in the direction in which the joint is fastened.

Note 4) Rubber / resin couplings are recommended due to their excellent absorption of off center, shocks, and vibrations.

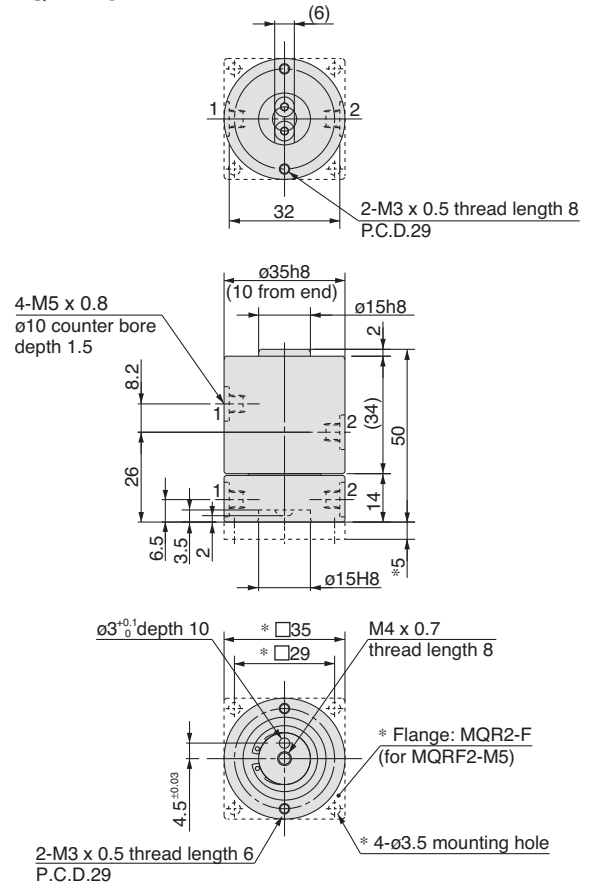
Dimensions: Standard Type/Flange Type

* Symbol indicates flange dimensions

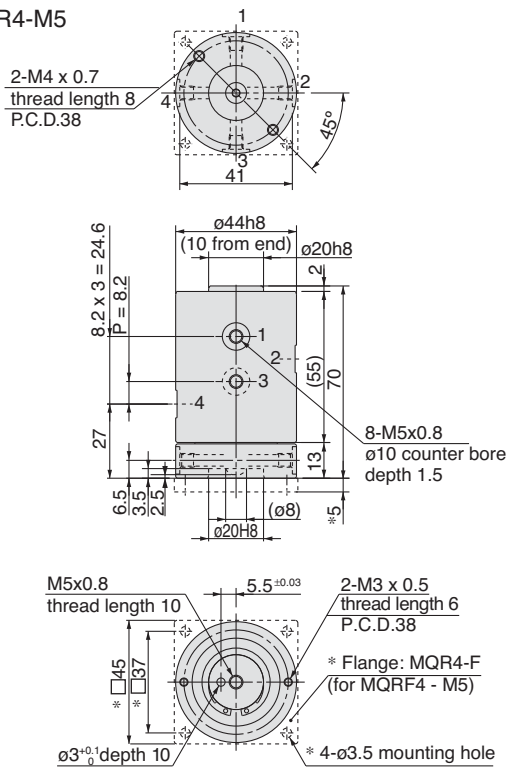
MQR1-M5



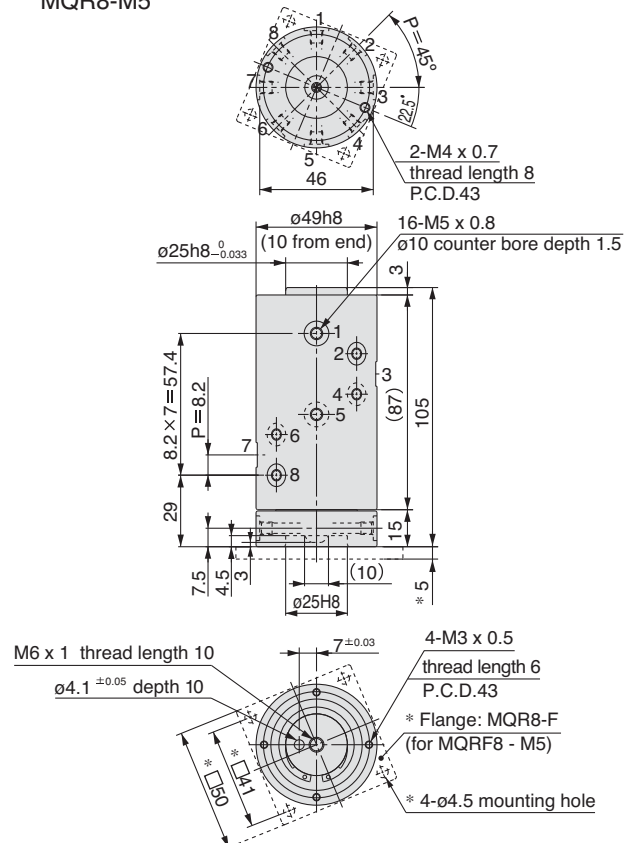
MQR2-M5



MQR4-M5



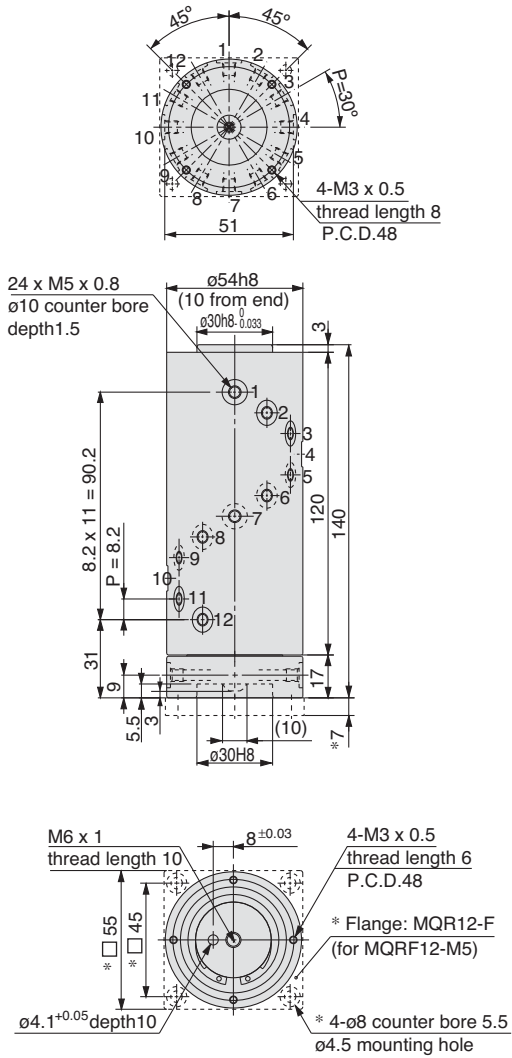
MQR8-M5



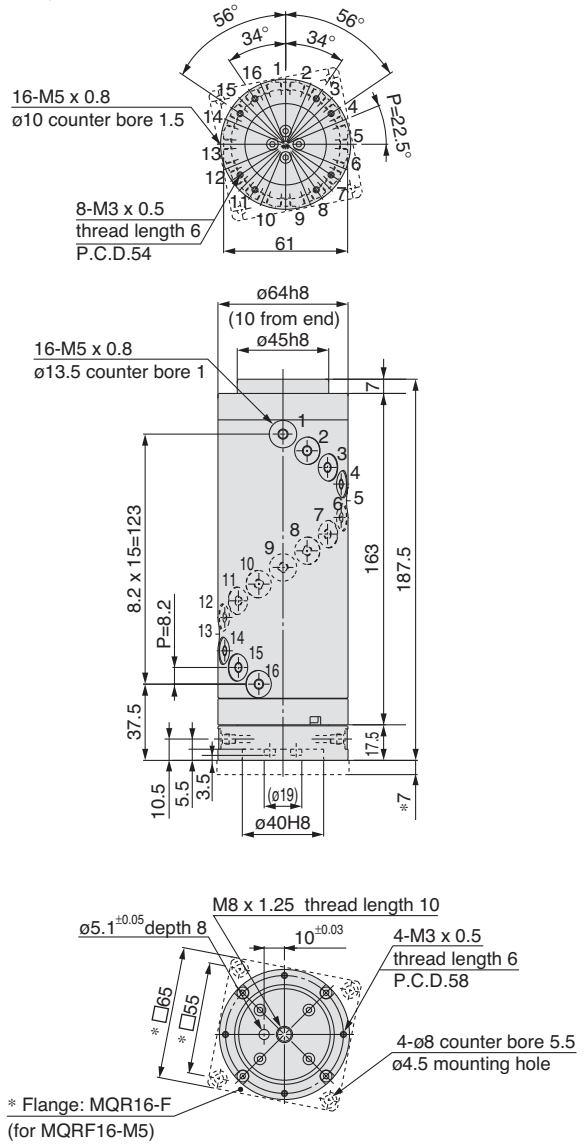
Dimensions: Standard Type/Flange Type

*Symbol indicates flange dimensions

MQR12-M5



MQR16-M5



Fittings & Tubing

Blow Gun Series VMG

Features

- Special valve design and construction saves energy.
- Choice of bottom or top piping.
- Selection of nozzles can be added (see KN section).
- Threaded or one-touch connection.
- Typical pressure loss is less than 1%.
- Effective sectional area 30mm². (Without Nozzle)
- Provides constant trigger force irrespective of the supply pressure.



Bottom Piping

Top Piping

How to Order

VMG 1 1 W - 02 - 01

| | | | |
|-----------------|--------------------------|-------------------------|-------------|
| Blow gun | | Standard type | |
| Series | | 1 Resin body lever type | |
| Piping entry | | 1 | Bottom |
| | | 2 | Top |
| Body colour | | W | Urban white |
| | | BU | Dark blue |
| Connection size | | | |
| | Piping connection system | Size and part no. | |
| F02 | Screw-in type | Port size | 1/4 |
| F03 | | | 3/8 |
| 11 | With S coupler plug | Plug part no. | KK4P-02MS |
| 12 | | | KK130P-02MS |

| | Type | Nozzle model | Nozzle size | |
|----------------|-----------------------------------|---------------|-----------------|------|
| Without nozzle | | | | |
| 01 | Male thread nozzle | KN-R02-100 | ø1 | |
| 02 | | KN-R02-150 | ø1.5 | |
| 03 | | KN-R02-200 | ø2 | |
| 04 | | KN-R02-250 | ø2.5 | |
| 11 | High efficiency nozzle | KNH-R02-100 | ø1 | |
| 12 | | KNH-R02-150 | ø1.5 | |
| 13 | | KNH-R02-200 | ø2 | |
| 21 | Low noise nozzle with male thread | KNS-R02-075-4 | ø0.75 x 4 | |
| 22 | | KNS-R02-090-8 | ø0.9 x 8 | |
| 23 | | KNS-R02-100-4 | ø1 x 4 | |
| 24 | | KNS-R02-110-8 | ø1.1 x 8 | |
| 31 | Copper extension nozzle | Length 300mm | VMG1-06-150-300 | ø1.5 |
| 32 | | | VMG1-06-200-200 | ø2 |
| 33 | | Length 600mm | VMG1-06-150-600 | ø1.5 |
| 34 | | | VMG1-06-200-600 | ø2 |

Note 1) Part number for set of extension nozzle and fitting.
 Extension nozzle and fitting are included in the same package.
 When a copper extension nozzle is ordered separately, a self-align fitting will also be required for connection. Order one with the above part number in addition to the nozzle.

Product Recommendation



Stocked items for fast delivery

| | |
|----------------|----------------|
| VMG11BU-F02 | VMG11BU-F02-04 |
| VMG12BU-F02 | VMG11BU-F02-13 |
| VMG12W-F02 | VMG11BU-F03 |
| VMG11W-F02 | VMG11W-F03 |
| VMG11BU-F02-01 | VMG12BU-F03 |
| VMG11BU-F02-02 | VMG12W-F03 |
| VMG11BU-F02-03 | VMG11BU-F03-24 |



Accessories and Related Products

(Accessories)
Series KN - Blow Gun Nozzles - page 1233

(Related Products)
Series KK - S Couplers - page 1204
Series KQ2 - Fittings - page 1184
Series TCU - Coil Tube - page 1225
Series AC - Air Preparation Modular Units - page 1076

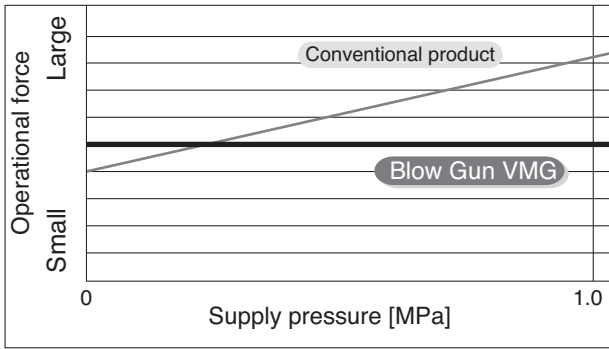
Specifications

| | | |
|--|------------------------------------|-----|
| Fluid | Air | |
| Operating pressure range | 0 to 1.0MPa | |
| Proof pressure | 1.5MPa | |
| Ambient and fluid temperature | -5 to 60°C (With no freezing) | |
| Effective area | 30mm ² (without nozzle) | |
| Port size | 1/4, 3/8 | |
| Piping entry | Bottom | Top |
| Nozzle port size | Rc1/4 | |
| Weight | 180g | |
| Operational force (when the valve is fully open) | 7N | |



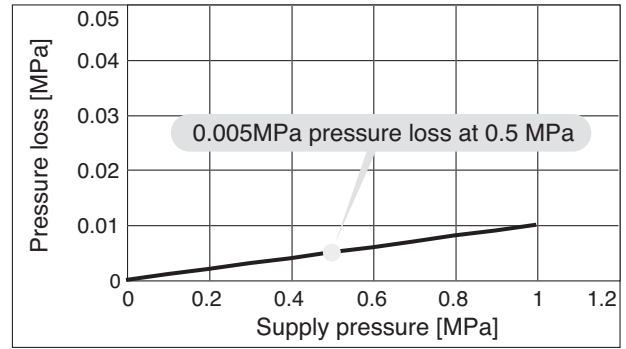
For more product options and details see our specific catalogues or on-line information.

Provides constant operational force irrespective of the supply pressure



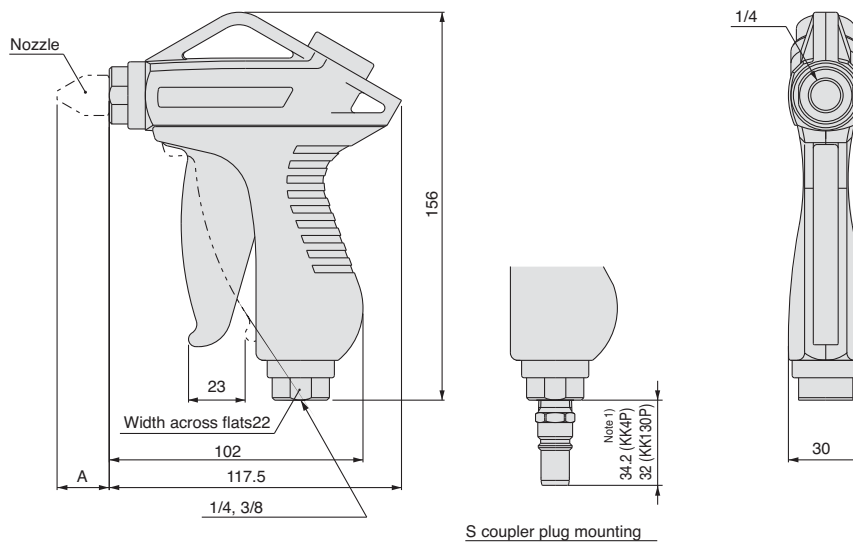
Pressure loss

*Male thread nozzle $\phi 2.5$

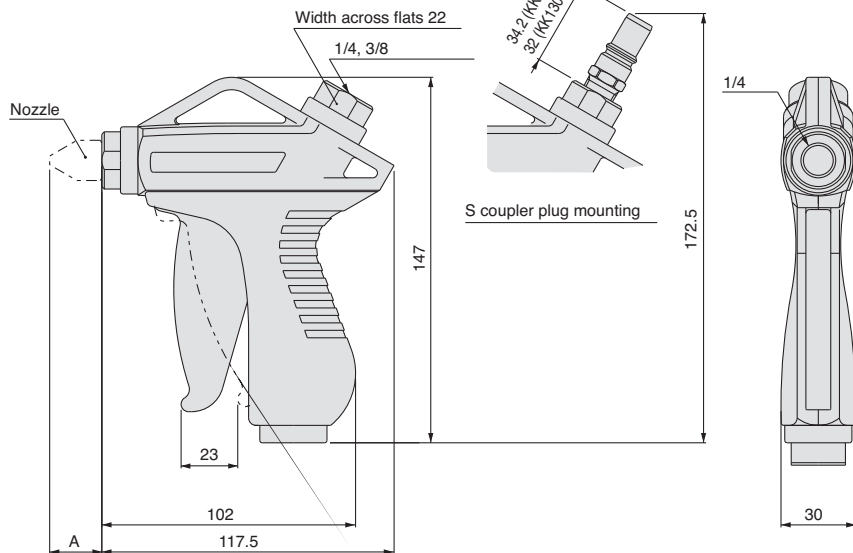


Dimensions

VMG11/Piping entry: Bottom



VMG12/Piping entry: Top



| Type | Nozzle model | Nozzle size | A ^{Note 1)} [mm] |
|------------------------|--------------|-------------|---------------------------|
| Male thread nozzle | KN-R02-100 | $\phi 1$ | 23.4 |
| | KN-R02-150 | $\phi 1.5$ | 23 |
| | KN-R02-200 | $\phi 2$ | 22.5 |
| | KN-R02-250 | $\phi 2.5$ | 22.1 |
| High efficiency nozzle | KNH-R02-100 | $\phi 1$ | 44 |
| | KNH-R02-150 | $\phi 1.5$ | 44 |
| | KNH-R02-200 | $\phi 2$ | 44 |

| Type | Nozzle model | Nozzle size | A ^{Note 1)} [mm] |
|-----------------------------------|-----------------|----------------------|---------------------------|
| Low noise nozzle with male thread | KNS-R02-075-4 | $\phi 0.75 \times 4$ | 12 |
| | KNS-R02-090-8 | $\phi 0.9 \times 8$ | 12 |
| | KNS-R02-100-4 | $\phi 1 \times 4$ | 12 |
| | KNS-R02-110-8 | $\phi 1.1 \times 8$ | 12 |
| Copper extension nozzle | VMG1-06-150-300 | $\phi 1.5$ | 298 |
| | VMG1-06-200-300 | $\phi 2$ | 298 |
| | VMG1-06-150-600 | $\phi 1.5$ | 598 |
| | VMG1-06-200-600 | $\phi 2$ | 598 |

Note 1) Reference dimensions after installation

Nozzles for Blowing Series KN

Features

- Nozzle system for air blowing and back pressure sensing.
- Complete range of delivery nozzles with different fittings.
- Lower air consumption for dramatic cost savings in use.
- Deliver a controlled amount of air where needed.
- Consistent performance for assured results.
- Easier to set up than improvised nozzles and jets.



Specifications Nozzle (KN, KNK, KNH, KNS, KNL)

| | | |
|-------------------------------|--|-------------------------------------|
| Applicable tubing material | Nylon, Soft nylon, Flexible copper pipe (C1220T), OST pipe | |
| Applicable piping O.D. [mm] | ø4, ø6, ø8, ø10, ø12, ø16, ø20 | |
| Fluid | Air, Coolant | |
| Max. operating pressure | 1.0MPa (0.3MPa with OST pipe) | |
| Ambient and fluid temperature | -5 to 60°C (with no freezing) | |
| Threads | Mounting | JISB0203 (taper threads for piping) |
| | Nut | JISB0205, (Metric fine thread) |
| Seal for R threads | None | |

Sensing head (KNP)

| | |
|-----------------------------------|-------------------------------|
| Applicable fitting size | ø4 |
| Fluid | Air |
| Max. operating pressure (at 20°C) | 0.8MPa |
| Ambient and fluid temperature | -5 to 60°C (with no freezing) |

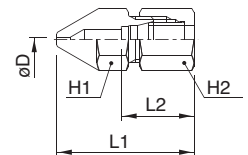


Related Products

- Series VMG - Blow Gun - page 1231
- Series KK - S Couplers - page 1204
- Series KQ2 - Fittings - page 1184
- Series TCU - Coil Tube - page 1225
- Series AC - Air Preparation Modular Units - page 1076

Nozzle with self-align fitting/KN

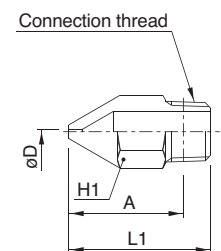
| Model | Nozzle size D | Connection size | Width across flats | | L ₁ | L ₂ |
|-----------|---------------|-----------------|--------------------|----------------|----------------|----------------|
| | | | H ₁ | H ₂ | | |
| KN-04-100 | ø1 | ø4 | 10 | 10 | 27 | 15 |
| KN-04-150 | ø1.5 | ø4 | 10 | 10 | 27.7 | 15 |
| KN-06-100 | ø1 | ø6 | 12 | 12 | 30.1 | 16 |
| KN-06-150 | ø1.5 | ø6 | 12 | 12 | 30.8 | 16 |
| KN-06-200 | ø2 | ø6 | 12 | 12 | 31.5 | 16 |
| KN-08-150 | ø1.5 | ø8 | 14 | 14 | 33.8 | 16 |
| KN-08-200 | ø2 | ø8 | 14 | 14 | 34.6 | 16 |
| KN-10-250 | ø2.5 | ø10 | 14 | 17 | 35.6 | 17 |
| KN-10-300 | ø3 | ø10 | 14 | 17 | 36.3 | 17 |
| KN-10-350 | ø3.5 | ø10 | 14 | 17 | 37.1 | 17 |
| KN-10-400 | ø4 | ø10 | 14 | 17 | 29.5 | 17 |
| KN-10-600 | ø6 | ø10 | 14 | 17 | 27.7 | 17 |
| KN-12-350 | ø3.5 | ø12 | 17 | 19 | 40.4 | 17 |
| KN-12-400 | ø4 | ø12 | 17 | 19 | 41.3 | 17 |
| KN-12-600 | ø6 | ø12 | 17 | 19 | 31.2 | 17 |
| KN-16-400 | ø4 | ø16 | 22 | 24 | 40.1 | 17 |
| KN-16-600 | ø6 | ø16 | 22 | 24 | 38.4 | 17 |
| KN-20-400 | ø4 | ø20 | 26 | 27 | 45.6 | 17 |
| KN-20-600 | ø6 | ø20 | 26 | 27 | 43.9 | 17 |



[mm]

Nozzle with male thread/KN

| Model | Nozzle size D | Connection size | Width across flats | L ₁ | A |
|------------|---------------|-----------------|--------------------|----------------|------|
| | | | H ₁ | | |
| KN-R01-100 | ø1 | R1/8 | 10 | 21.4 | 17.4 |
| KN-R01-150 | ø1.5 | R1/8 | 10 | 21 | 17 |
| KN-R02-100 | ø1 | R1/4 | 14 | 31.4 | 25.4 |
| KN-R02-150 | ø1.5 | R1/4 | 14 | 31 | 25 |
| KN-R02-200 | ø2 | R1/4 | 14 | 30.5 | 24.5 |
| KN-R02-250 | ø2.5 | R1/4 | 14 | 30.1 | 24.1 |
| KN-R02-600 | ø6 | R1/4 | 14 | 27.1 | 21.1 |
| KN-R03-400 | ø4 | R3/8 | 17 | 31.8 | 25.4 |
| KN-R03-600 | ø6 | R3/8 | 17 | 30.1 | 23.7 |
| KN-R04-400 | ø4 | R1/2 | 22 | 41.8 | 33.6 |
| KN-R04-600 | ø6 | R1/2 | 22 | 40.1 | 31.8 |
| KN-R06-600 | ø6 | R3/4 | 27 | 49.6 | 40.1 |
| KN-R06-800 | ø8 | R3/4 | 27 | 47.8 | 38 |
| KN-R10-800 | ø8 | R1 | 36 | 62.8 | 52.4 |



[mm]



For more product options and details see our specific catalogues or on-line information.

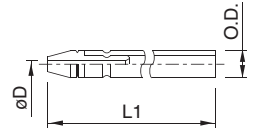
References marked in light blue are available as ECW stocked item.

Copper extension nozzle/KNL

[mm]



| Model | Nozzle size D | Outside diameter | L ₁ |
|-------------|---------------|------------------|----------------|
| KNL3-06-150 | ø1.5 | ø6 | 300 |
| KNL3-06-200 | ø2 | ø6 | 300 |
| KNL3-08-200 | ø2 | ø8 | 300 |
| KNL3-08-250 | ø2.5 | ø8 | 300 |
| KNL3-10-250 | ø2.5 | ø10 | 300 |
| KNL3-10-300 | ø3 | ø10 | 300 |
| KNL6-06-150 | ø1.5 | ø6 | 600 |
| KNL6-06-200 | ø2 | ø6 | 600 |
| KNL6-08-200 | ø2 | ø8 | 600 |
| KNL6-08-250 | ø2.5 | ø8 | 600 |
| KNL6-10-250 | ø2.5 | ø10 | 600 |
| KNL6-10-300 | ø3 | ø10 | 600 |



Self-align fitting (For copper extension nozzle connection).

Half union
eg: H06-02



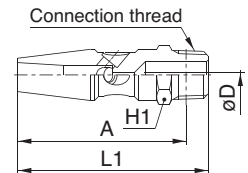
High efficiency nozzle:KNH

[mm]



The air blow thrust is improved by 10%.

| Model | Nozzle size D | Connection thread | Width across flats H ₁ | L ₁ | A |
|-------------|---------------|-------------------|-----------------------------------|----------------|----|
| KNH-R02-100 | ø1 | R 1/4 | 14 | 52 | 46 |
| KNH-R02-150 | ø1.5 | R 1/4 | 14 | 52 | 46 |
| KNH-R02-200 | ø2 | R 1/4 | 14 | 52 | 46 |

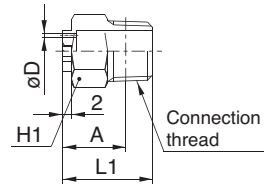


Low noise nozzle with male thread: KNS

[mm]



| Model | Nozzle size D | Connection size | Width across flats | L ₁ | A |
|---------------|---------------|-----------------|--------------------|----------------|----|
| | | | H ₁ | | |
| KNS-R01-075-4 | ø0.75 x 4 | R 1/8 | 12 | 18 | 14 |
| KNS-R01-100-4 | ø1 x 4 | R 1/8 | 12 | 18 | 14 |
| KNS-R01-090-8 | ø0.9 x 8 | R 1/8 | 12 | 18 | 14 |
| KNS-R02-075-4 | ø0.75 x 4 | R 1/4 | 14 | 20 | 14 |
| KNS-R02-090-8 | ø0.9 x 8 | R 1/4 | 14 | 20 | 14 |
| KNS-R02-100-4 | ø1 x 4 | R 1/4 | 14 | 20 | 14 |
| KNS-R02-110-8 | ø1.1 x 8 | R 1/4 | 14 | 20 | 14 |



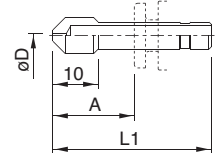
Nozzle for One-touch fitting/KN

[mm]



Note) Not applicable to KJ series and the connection threads (M5, M6) of the KQ Series.

| Model | Nozzle size D | Connection size | L ₁ | A |
|------------|---------------|-----------------|----------------|------|
| KN-Q06-100 | ø1 | ø6 | 35 | 18 |
| KN-Q06-150 | ø1.5 | ø6 | 35 | 18 |
| KN-Q06-200 | ø2 | ø6 | 35 | 18 |
| KN-Q08-150 | ø1.5 | ø8 | 39 | 20.5 |
| KN-Q08-200 | ø2 | ø8 | 39 | 20.5 |
| KN-Q10-200 | ø2 | ø10 | 43 | 22 |
| KN-Q10-250 | ø2.5 | ø10 | 43 | 22 |
| KN-Q12-250 | ø2.5 | ø12 | 45.5 | 24 |
| KN-Q12-300 | ø3 | ø12 | 45.5 | 24 |

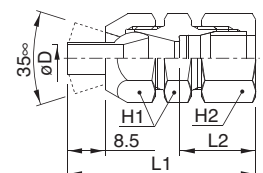


Pivoting nozzle with self-align fitting/KNK

[mm]



| Model | Nozzle size D | Connection size | Width across flats | | L ₁ | L ₂ |
|------------|---------------|-----------------|--------------------|----------------|----------------|----------------|
| | | | H ₁ | H ₂ | | |
| KNK-10-400 | ø4 | ø10 | 17 | 17 | 41.7 | 17 |
| KNK-10-600 | ø6 | ø10 | 17 | 17 | 41.7 | 17 |
| KNK-12-400 | ø4 | ø12 | 17 | 19 | 41.2 | 17 |
| KNK-12-600 | ø6 | ø12 | 17 | 19 | 41.2 | 17 |
| KNK-16-400 | ø4 | ø16 | 17 | 24 | 41.8 | 17 |
| KNK-16-600 | ø6 | ø16 | 17 | 24 | 41.8 | 17 |
| KNK-20-400 | ø4 | ø20 | 17 | 27 | 43.8 | 17 |
| KNK-20-600 | ø6 | ø20 | 17 | 27 | 43.8 | 17 |



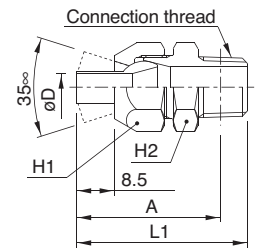
References marked in light blue are available as ECW stocked item.

Pivoting nozzle with male thread/KNK

[mm]



| Model | Nozzle size D | Connection size | Width across flats | | L ₁ | A |
|-------------|---------------|-----------------|--------------------|----------------|----------------|------|
| | | | H ₁ | H ₂ | | |
| KNK-R02-400 | ø4 | R1/4 | 17 | 17 | 38 | 31.9 |
| KNK-R02-600 | ø6 | R1/4 | 17 | 17 | 38 | 31.9 |
| KNK-R03-400 | ø4 | R3/8 | 17 | 17 | 39 | 32.4 |
| KNK-R03-600 | ø6 | R3/8 | 17 | 17 | 39 | 32.4 |
| KNK-R04-400 | ø4 | R1/2 | 17 | 22 | 42.2 | 34.1 |
| KNK-R04-600 | ø6 | R1/2 | 17 | 22 | 42.2 | 34.1 |

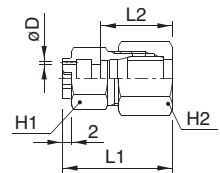


Low noise nozzle with self-align fitting/KNS

[mm]



| Model | Nozzle size D | Connection size | Width across flats | | L ₁ | L ₂ |
|--------------|---------------|-----------------|--------------------|----------------|----------------|----------------|
| | | | H ₁ | H ₂ | | |
| KNS-08-075-4 | ø0.75 x 4 | ø8 | 12 | 14 | 24.3 | 16 |
| KNS-08-100-4 | ø1 x 4 | ø8 | 12 | 14 | 24.3 | 16 |
| KNS-10-075-4 | ø0.75 x 4 | ø10 | 14 | 17 | 24 | 17 |
| KNS-10-090-8 | ø0.9 x 8 | ø10 | 14 | 17 | 24 | 17 |
| KNS-10-100-4 | ø1 x 4 | ø10 | 14 | 17 | 24 | 17 |



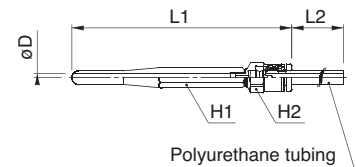
Sensing Heads

Standard sensing head

[mm]



| Model | Nozzle size D | Connection size | Width across flats | | L ₁ | L ₂ |
|-------|---------------|-----------------|--------------------|----------------|----------------|----------------|
| | | | H ₁ | H ₂ | | |
| KNP-1 | ø2.5 | ø4 | 5 | 8 | 63.7 | 987.3 |

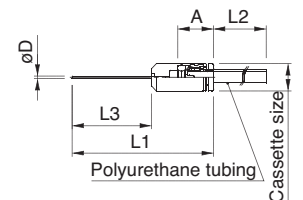


Needle sensing head

[mm]



| Model | Nozzle size D | Connection size | H ₁ | A | L ₁ | L ₂ | L ₃ |
|-------|---------------|-----------------|----------------|---|----------------|----------------|----------------|
| | | | | | | | |



Air Amplifier Series ZH-X185

Features

- Flow amplifier:
 - A blow flow rate 4 times the supply air
 - A vacuum flow rate 3 times the supply air
- Compact design, simple & lightweight.
- Large passage diameter available for suction of machining chips, particles, etc.
- Mounting bracket available.
- Maintenance free.



How to Order

ZH **20** – **B** – X185

| Passage diameter | | Bracket | |
|------------------|---------|---------|--------------|
| 10 | 13 mm | – | No bracket |
| 20 | 21.6 mm | B | With bracket |
| 30 | 30 mm | | |
| 40 | 42 mm | | |

Product Recommendation



Stocked items for fast delivery

| | |
|-------------|-------------|
| ZH10-B-X185 | ZH30-B-X185 |
| ZH20-B-X185 | ZH40-B-X185 |



Related Products

- Series AC - Air Preparation - page 1076
- Series TU - Tubing - page 1223
- Series KQ2 - Fittings - page 1184
- Series AS - Speed Controllers - page 1238
- Series PF2A - Digital Flow Switch for Air- page 1309

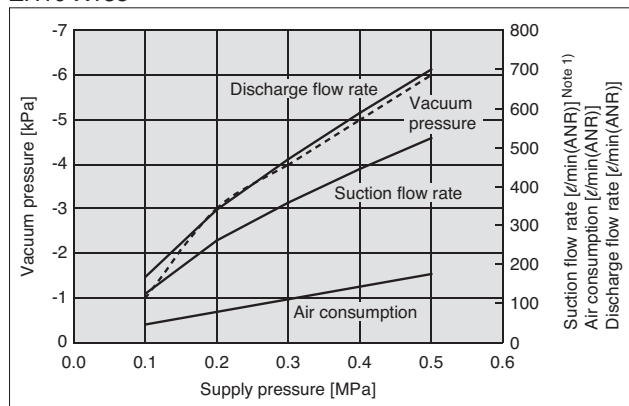
Specifications

| Model | ZH10-X185 | ZH20-X185 | ZH30-X185 | ZH40-X185 |
|-----------------------|----------------------------------|-------------|-------------|-------------|
| Body material | Aluminium alloy ^{Note)} | | | |
| Seal material | NBR | | | |
| Passage diameter | ø13 | ø21.6 | ø30 | ø42 |
| Fluid used | Air | | | |
| Supply pressure range | 0 ~ 0.7MPa | | | |
| Weight [g] | 110 | 430 | 970 | 2000 |
| Bracket assembly | ZH-BK1-10-A | ZH-BK1-20-A | ZH-BK1-30-A | ZH-BK1-40-A |

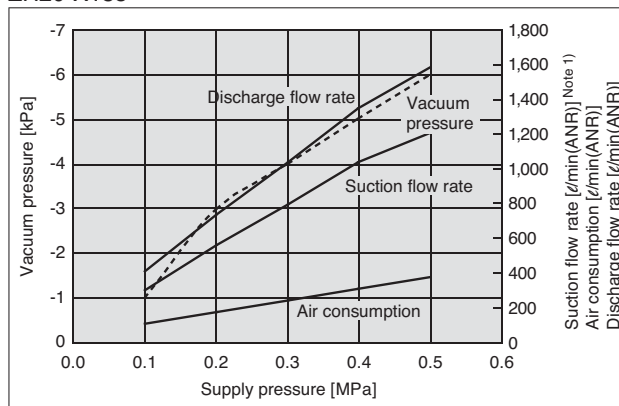
Note) Body material in SUS 304 with FKM seals available as special product.

Flow rate characteristics

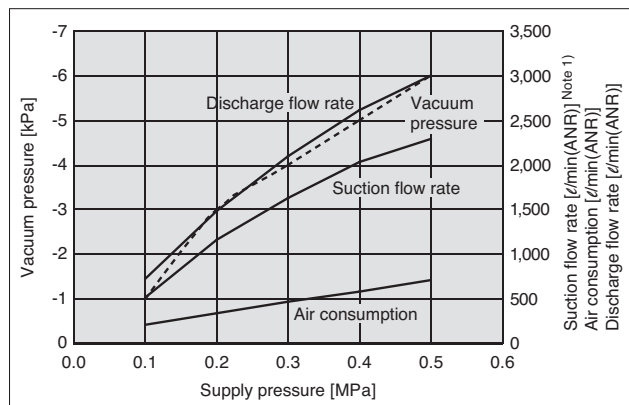
ZH10-X185



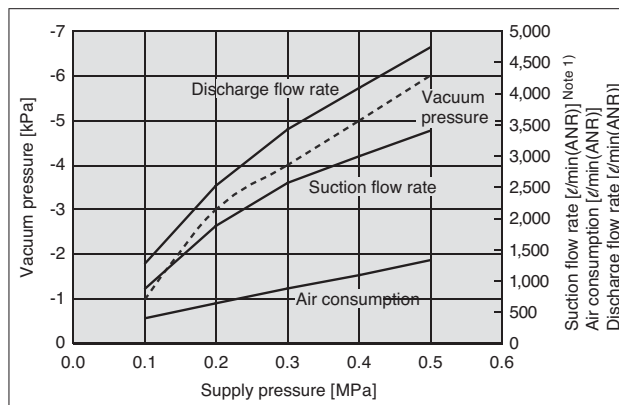
ZH20-X185



ZH30-X185



ZH40-X185



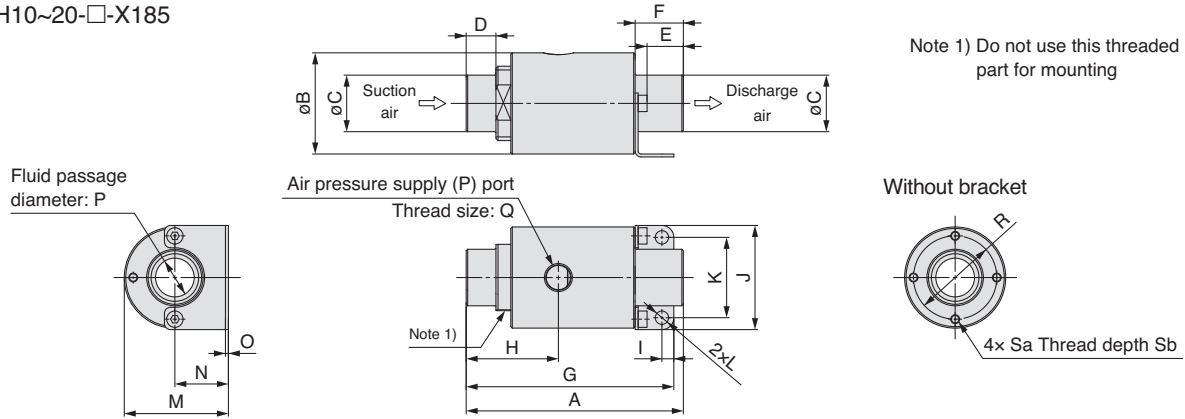
Note 1) Suction flow rate is a theoretical value.

Note 2) The characteristics above show the values when the discharge pressure is atmospheric pressure.

Note 3) If the filter is installed to collect dust in the outlet side piping, make sure it does not cause back pressure.

Dimensions

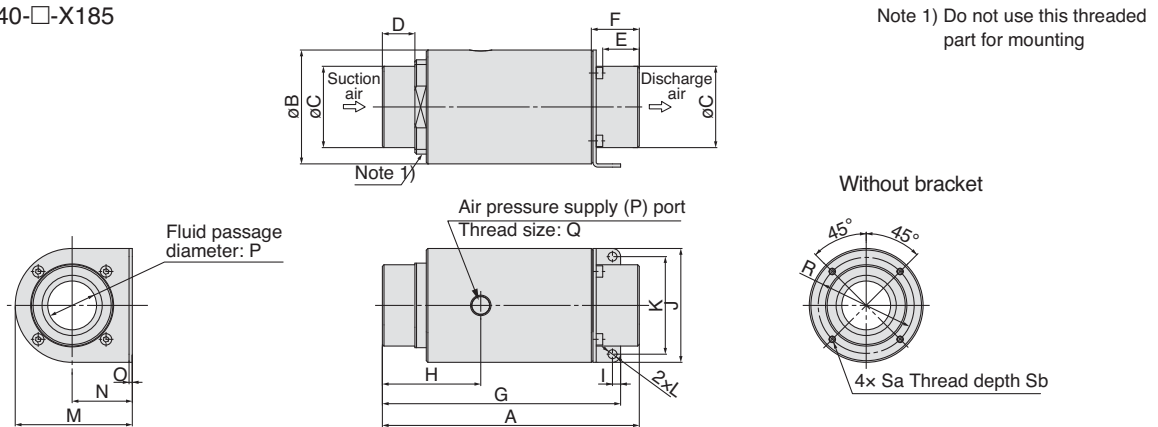
ZH10~20-□-X185



| Model | A | ϕB | ϕC | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | Sa | Sb |
|-------------|-------|----------|----------|----|------|------|------|----|---|----|----|-----|------|----|---|------|-------|----|--------|----|
| ZH10-□-X185 | 73 | 34 | 19 | 10 | 13.2 | 16.2 | 69.8 | 31 | 4 | 35 | 27 | 4.5 | 35 | 18 | 1 | 13 | Rc1/8 | 28 | M3x0.5 | 5 |
| ZH20-□-X185 | 119.5 | 55 | 32 | 15 | 19.5 | 23.5 | 111 | 48 | 4 | 56 | 48 | 4.5 | 56.5 | 29 | 1 | 21.6 | Rc1/4 | 44 | M4x0.7 | 8 |

[mm]

ZH30~40-□-X185



| Model | A | ϕB | ϕC | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | Sa | Sb |
|-------------|-----|----------|----------|----|------|------|-------|------|---|----|----|-----|----|----|-----|----|-------|----|--------|----|
| ZH30-□-X185 | 158 | 70 | 50 | 20 | 24.5 | 28.5 | 146.5 | 60.5 | 5 | 70 | 60 | 5.5 | 72 | 37 | 2 | 30 | Rc1/4 | 59 | M4x0.7 | 10 |
| ZH40-□-X185 | 203 | 90 | 64 | 25 | 27.2 | 33.5 | 196.8 | 74.5 | 6 | 90 | 78 | 6.5 | 92 | 47 | 2.3 | 42 | Rc3/8 | 76 | | |

[mm]

Note) threaded model available as special product.

