

# One-touch Fittings

## Series KQ2

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

### How to Order

**KQ 2 H 06 01 S**

**One-touch fittings**

**Product's color**

| Symbol | Body  | Release button |
|--------|-------|----------------|
| 2      | White | Light gray     |
| Nil    | Black | Blue           |

**Applicable tubing O.D.**

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

**Port size/Applicable tubing O.D.**

| Thread connection | Port size        | Applicable tubing O.D.             |
|-------------------|------------------|------------------------------------|
| M5                | M5 x 0.8         |                                    |
| M6                | M6 x 1.0         |                                    |
| 01                | R 1/8, Rc 1/8    |                                    |
| 02                | R 1/4, Rc 1/4    |                                    |
| 03                | R 3/8, Rc 3/8    |                                    |
| 04                | R 1/2, Rc 1/2    |                                    |
| 00                | Same dia. tubing |                                    |
| 04                | ø4               | (Reducer)<br>Different dia. tubing |
| 06                | ø6               |                                    |
| 08                | ø8               |                                    |
| 10                | ø10              |                                    |
| 12                | ø12              |                                    |
| 16                | ø16              |                                    |
| 99                | Same dia. rod    |                                    |

**With thread seal**

|     |                  |
|-----|------------------|
| Nil | None             |
| S   | With thread seal |

Note) Port size with seal: Only  
R 1/8  
R 1/4  
R 3/8  
R 1/2

### Model

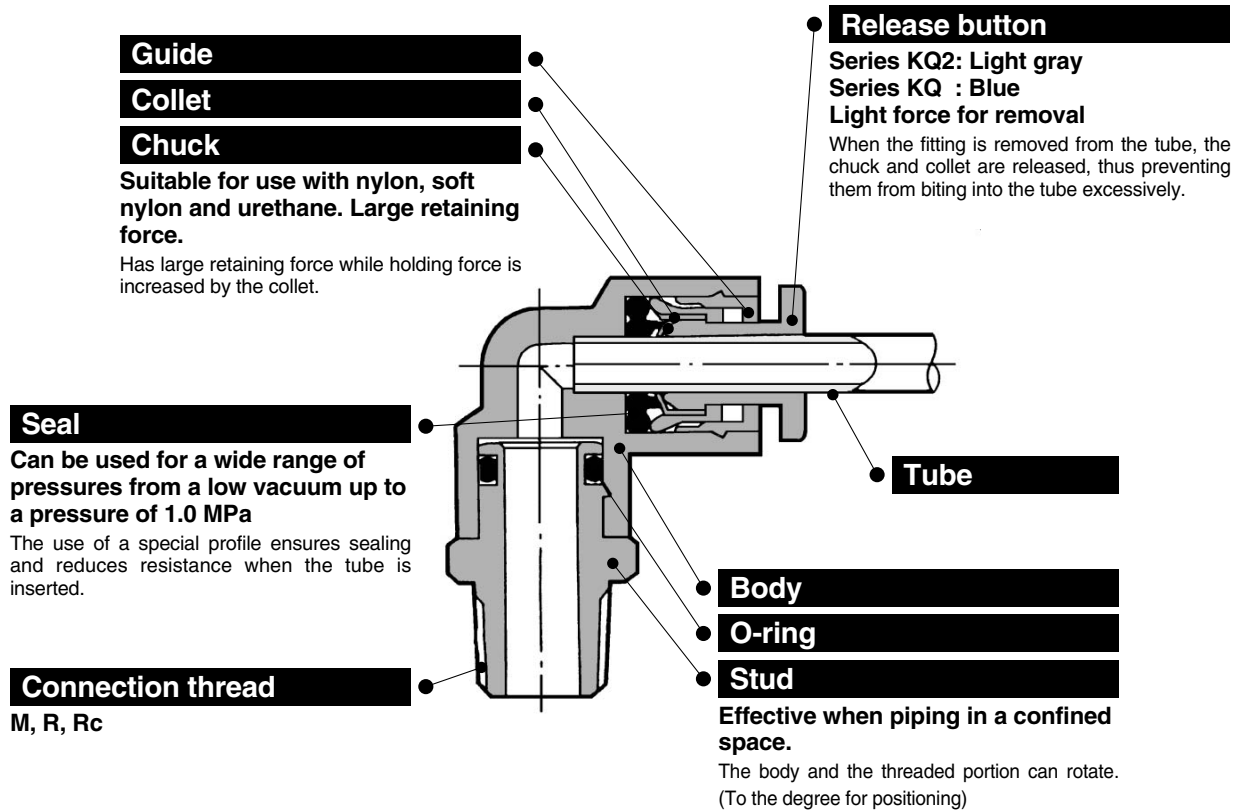
|    |                                          |    |                                 |
|----|------------------------------------------|----|---------------------------------|
| H  | Male connector                           | T  | Male branch tee                 |
|    | Straight union                           |    | Union tee                       |
|    | Different diameter straight              |    | Different diameter tee * Note)  |
| S  | Hex. socket head male connector          | TW | Cross*                          |
| F  | Female connector                         | TX | Different diameter cross*       |
|    | Male elbow                               | TY | Different diameter cross*       |
| L  | Union elbow                              | Y  | Male run tee                    |
|    | Plug-in elbow                            | D  | Male delta union                |
|    | Reducer elbow                            |    | Delta union                     |
| LU | Male branch connector                    | U  | Branch                          |
|    | Branch union elbow                       |    | Union "Y"                       |
| K  | 45° male elbow                           |    | Different dia. union "Y"        |
| V  | Universal male elbow                     |    | Plug-in "Y"                     |
| VS | Hexagon socket head universal male elbow | UD | Delta branch                    |
| VF | Universal female elbow                   |    | Different dia. double union "Y" |
| LF | Female elbow                             | XD | Double plug-in "Y"              |
| VD | Double universal male elbow              | X  | Different diameter plug-in "Y"  |
| VT | Triple universal male elbow              | R  | Plug-in reducer                 |
| Z  | Branch universal male elbow              | E  | Bulkhead union                  |
| ZF | Branch universal female elbow            |    | Bulkhead connector              |
| ZD | Double branch universal male elbow       | LE | Bulkhead male elbow             |
| ZT | Triple branch universal male elbow       |    |                                 |
| W  | Extended plug-in elbow                   |    |                                 |
|    | Extended male elbow                      |    |                                 |

| Accessory |                |
|-----------|----------------|
| Symbol    | Name           |
| KQ2N      | Nipple         |
|           | Reducer nipple |
|           | Adaptor        |
| KQ2C      | Tube cap       |
| KQ2C      | Color cap      |
| KQ2P      | Plug (White)   |
| KQP       | Plug (Blue)    |

Use the below part number to order the gasket for M5 and M6 threads.  
Gasket for M5 thread: M-5G2  
Gasket for M6 thread: M-6G

\* Available only for white color body.  
Note) KQT06-04, KQT08-06, KQT10-08, and KQT12-10 are available as made to order.

Series KQ2: White body  
Series KQ : Black body



PAT.

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

• **Applications for metric size tubing**

• **Applicable tubing material—Nylon, Soft nylon, Polyurethane**

## Applicable Tubing

|                 |                                 |
|-----------------|---------------------------------|
| Tubing material | Nylon, Soft nylon, Polyurethane |
| Tubing O.D.     | ø3.2, ø4, ø6, ø8, ø10, ø12, ø16 |

## Product's Color

| Series            | Body  | Release button |
|-------------------|-------|----------------|
| <b>Series KQ2</b> | White | Light gray     |
| <b>Series KQ</b>  | Black | Blue           |

## Specifications

|                               |                                            |                                                                                   |
|-------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------|
| Fluid                         | Air/Water <sup>Note)</sup>                 |                                                                                   |
| Maximum operating pressure    | 1.0 MPa                                    |                                                                                   |
| Operating vacuum pressure     | -100 kPa                                   |                                                                                   |
| Proof pressure                | 3.0 MPa                                    |                                                                                   |
| Ambient and fluid temperature | -5 to 60°C, Water: 0 to 40°C (No freezing) |                                                                                   |
| Thread                        | Mounting section                           | JIS B 0203 (Taper thread for piping)<br>JIS B 0209 Class 2 (Metric coarse thread) |
|                               | Nut section                                | JIS B 0211 Class 2 (Metric fine thread)                                           |
| Seal (Thread portion)         |                                            | With seal or none                                                                 |

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

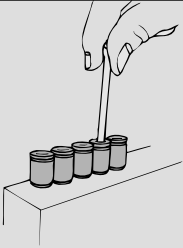
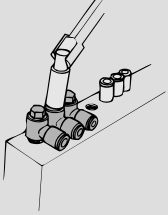
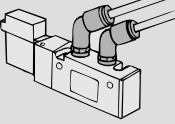
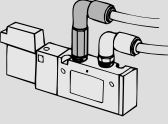
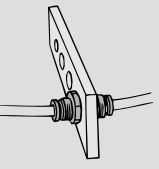
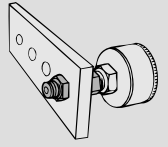
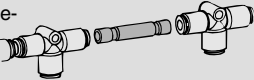
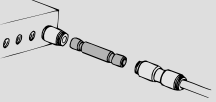
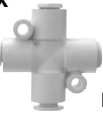
## Principal Parts Material

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



P. 15-2-30

# Series KQ2

| Model                                                                               |       |                                                                                                                                                                                |                                                                                       |
|-------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Hex. socket head male connector</b>                                              |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2S</b>                                                                         | P. 14 | Internal hex. allows thread connection by using an allen wrench for confined spaces.                                                                                           |      |
|    |       |                                                                                                                                                                                |                                                                                       |
| <b>Universal male elbow</b>                                                         |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2V</b>                                                                         | P. 17 | Universal male elbow allows thread connection by using a socket wrench for confined spaces.                                                                                    |    |
|    |       |                                                                                                                                                                                |                                                                                       |
| <b>45° male elbow</b>                                                               |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2K</b>                                                                         | P. 16 | Use to pipe in 45° direction from female thread. Model in-between of male connector and male elbow.                                                                            |      |
|    |       |                                                                                                                                                                                |                                                                                       |
| <b>Extended male elbow</b>                                                          |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2W</b>                                                                         | P. 22 | Basically, it is used together with male elbow. Different point is that it is used for with fittings to avoid from interfering with each other by making the piping two-level. |    |
|    |       |                                                                                                                                                                                |                                                                                       |
| <b>Bulkhead union</b>                                                               |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2E</b>                                                                         | P. 28 | Use to connect tubes through a panel.                                                                                                                                          |      |
|    |       |                                                                                                                                                                                |                                                                                       |
| <b>Bulkhead connector</b>                                                           |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2E</b>                                                                         | P. 28 | Use to connect male thread and tube through a panel.                                                                                                                           |    |
|    |       |                                                                                                                                                                                |                                                                                       |
| <b>Nipple</b>                                                                       |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2N</b>                                                                         | P. 29 | Use to connect One-touch fittings.                                                                                                                                             |    |
|  |       |                                                                                                                                                                                |                                                                                       |
| <b>Reducer nipple</b>                                                               |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2N</b>                                                                         | P. 29 | Use to connect One-touch fittings that are different tubing O.D.s.                                                                                                             |  |
|  |       |                                                                                                                                                                                |                                                                                       |
| <b>Male connector</b>                                                               |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2H</b>                                                                         | P. 14 | Use to pipe in the same direction from female thread. Most general style.                                                                                                      |                                                                                       |
|  |       |                                                                                                                                                                                |                                                                                       |
| <b>Male elbow</b>                                                                   |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2L</b>                                                                         | P. 15 | Use to pipe at right angles to female thread. Most general style.                                                                                                              |                                                                                       |
|  |       |                                                                                                                                                                                |                                                                                       |
| <b>Male branch tee</b>                                                              |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2T</b>                                                                         | P. 22 | Use to branch line from female thread in both 90° directions.                                                                                                                  |  |
|                                                                                     |       |                                                                                                                                                                                |                                                                                       |
| <b>Female connector</b>                                                             |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2F</b>                                                                         | P. 14 | Use to pipe from male thread such as pressure gauge.                                                                                                                           |                                                                                       |
|  |       |                                                                                                                                                                                |                                                                                       |
| <b>Union elbow</b>                                                                  |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2L</b>                                                                         | P. 20 | Use to connect tubes at right angles.                                                                                                                                          |    |
|                                                                                     |       |                                                                                                                                                                                |                                                                                       |
| <b>Union tee</b>                                                                    |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2T</b>                                                                         | P. 23 | Use to connect tubes in both 90° directions.                                                                                                                                   |  |
|                                                                                     |       |                                                                                                                                                                                |                                                                                       |
| <b>Straight union</b>                                                               |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2H</b>                                                                         | P. 15 | Use to connect tubes in the same direction.                                                                                                                                    |    |
|                                                                                     |       |                                                                                                                                                                                |                                                                                       |
| <b>Different diameter straight</b>                                                  |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2H</b>                                                                         | P. 15 | Use to connect different sized tubes.                                                                                                                                          |    |
|                                                                                     |       |                                                                                                                                                                                |                                                                                       |
| <b>Plug-in elbow</b>                                                                |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2L</b>                                                                         | P. 21 | Use to change by 90° in a tube fetching from One-touch direction fittings.                                                                                                     |    |
|                                                                                     |       |                                                                                                                                                                                |                                                                                       |
| <b>Reducer elbow</b>                                                                |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2L</b>                                                                         | P. 21 | Use to change by 90° in a tube fetching direction from One touch fittings and to size down.                                                                                    |    |
|                                                                                     |       |                                                                                                                                                                                |                                                                                       |
| <b>Different diameter tee</b>                                                       |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2T</b>                                                                         | P. 23 | Use to connect tubes with size down in both 90° directions.                                                                                                                    |  |
|                                                                                     |       |                                                                                                                                                                                |                                                                                       |
| <b>Different diameter tee</b>                                                       |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2T</b>                                                                         | P. 23 | Use to branch line with size down in both side 90° direction.                                                                                                                  |  |
|                                                                                     |       |                                                                                                                                                                                |                                                                                       |
| <b>Cross</b>                                                                        |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2TW</b>                                                                        | P. 23 | Use to four-branch line.                                                                                                                                                       |    |
|                                                                                     |       |                                                                                                                                                                                |                                                                                       |
| <b>Different diameter cross</b>                                                     |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2TX</b>                                                                        | P. 23 | Use to connect tubes with size down in all 90° directions.                                                                                                                     |    |
|                                                                                     |       |                                                                                                                                                                                |                                                                                       |
| <b>Different diameter cross</b>                                                     |       |                                                                                                                                                                                |                                                                                       |
| <b>KQ2TY</b>                                                                        | P. 24 | Use to branch line with size down in three directions.                                                                                                                         |  |
|                                                                                     |       |                                                                                                                                                                                |                                                                                       |

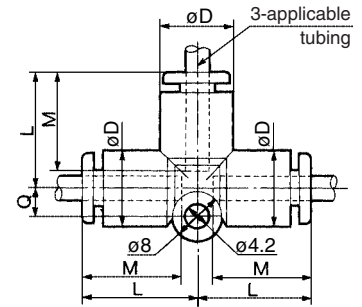
## Union Tee: KQ2T



| Applicable tubing O.D. (mm) | Model     | øD <sup>(1)</sup> | L    | Q   | M    | Effective area <sup>(2)</sup> (mm <sup>2</sup> ) |          | Weight (g) |
|-----------------------------|-----------|-------------------|------|-----|------|--------------------------------------------------|----------|------------|
|                             |           |                   |      |     |      | Nylon                                            | Urethane |            |
| 3.2                         | KQ2T23-00 | 9.6               | 17.5 | 4.3 | 15.5 | 3.4                                              | 2.9      | 5          |
| 4                           | KQ2T04-00 | 10.4              | 18   | 4.5 | 16   | 6.4                                              | 4.4      | 7          |
| 6                           | KQ2T06-00 | 12.8              | 20   | 5.3 | 17   | 13.4                                             | 10.6     | 10         |
| 8                           | KQ2T08-00 | 15.2              | 23   | 6   | 18.5 | 25.6                                             | 17.7     | 15         |
| 10                          | KQ2T10-00 | 18.5              | 26.5 | 6.8 | 21   | 40                                               | 28.4     | 25         |
| 12                          | KQ2T12-00 | 20.9              | 28.5 | 7.5 | 22   | 57.4                                             | 45.4     | 29         |
| 16                          | KQ2T16-00 | 26.5              | 34   | 10  | 25   | 100                                              | (84)     | 40         |



Note 1) øD: Max. diameter  
Note 2) ( ): Valves for soft nylon.



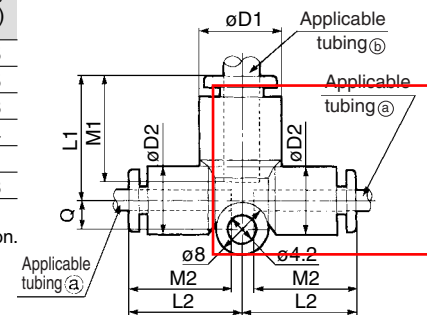
## Different Diameter Tee: KQ2T



| Applicable tubing O.D. (mm) |    | Model     | øD <sup>(1)</sup> | øD2  | L1   | L2   | Q   | M1   | M2   | Effective area <sup>(2)</sup> (mm <sup>2</sup> ) |          | Weight (g) |
|-----------------------------|----|-----------|-------------------|------|------|------|-----|------|------|--------------------------------------------------|----------|------------|
| ①                           | ②  |           |                   |      |      |      |     |      |      | Nylon                                            | Urethane |            |
| 3.2                         | 4  | KQ2T23-04 | 10.4              | 9.6  | 18   | 17.5 | 4.3 | 16   | 15.5 | 3.8                                              | 3.5      | 5          |
| 4                           | 6  | KQ2T04-06 | 12.8              | 10.4 | 19.5 | 18   | 4.5 | 17   | 16   | 7.1                                              | 6.5      | 5          |
| 6                           | 8  | KQ2T06-08 | 15.2              | 12.8 | 22.5 | 20   | 5.3 | 18.5 | 17   | 16.4                                             | 16.4     | 8          |
| 8                           | 10 | KQ2T08-10 | 18.5              | 15.2 | 26.5 | 23   | 6   | 21   | 18.5 | 36                                               | 27.2     | 14         |
| 10                          | 12 | KQ2T10-12 | 20.9              | 18.5 | 28.5 | 26.5 | 6.8 | 22   | 21   | 56                                               | 44.5     | 21         |
| 12                          | 16 | KQ2T12-16 | 26.5              | 26.5 | 34   | 39   | 10  | 25   | 22   | 108.5                                            | (92.2)   | 88         |



Note 1) øD1: Max. diameter  
Note 2) ( ): Values for soft nylon.



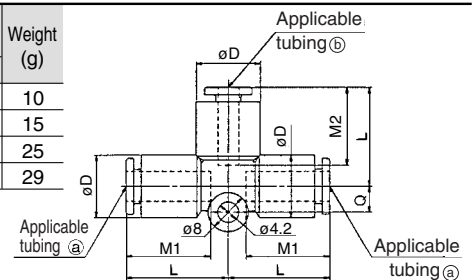
## Different Diameter Tee: KQ2T



| Applicable tubing O.D. (mm) |    | Model     | Note) øD | L    | Q   | M1   | M2   | Effective area (mm <sup>2</sup> ) |          | Weight (g) |
|-----------------------------|----|-----------|----------|------|-----|------|------|-----------------------------------|----------|------------|
| ①                           | ②  |           |          |      |     |      |      | Nylon                             | Urethane |            |
| 6                           | 4  | KQ2T06-04 | 12.8     | 20   | 5.3 | 17   | 16   | 6.4                               | 4.4      | 10         |
| 8                           | 6  | KQ2T08-06 | 15.2     | 23   | 6   | 18.5 | 17   | 13.4                              | 10.6     | 15         |
| 10                          | 8  | KQ2T10-08 | 18.5     | 26.5 | 7.5 | 21   | 18.5 | 25.6                              | 17.7     | 25         |
| 12                          | 10 | KQ2T12-10 | 20.9     | 28.5 | 7.5 | 22   | 21   | 40                                | 28.4     | 29         |



Note) øD: Max. diameter



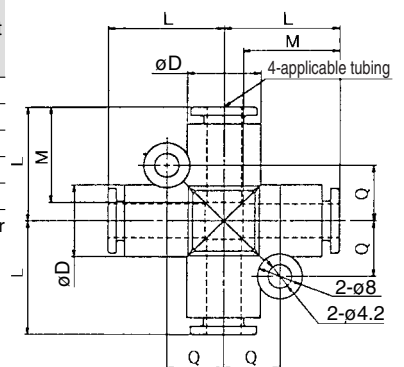
## Cross: KQ2TW



| Applicable tubing O.D. (mm) | Model      | Note) øD | L    | Q    | M    | Effective area (mm <sup>2</sup> ) |          | Weight (g) |
|-----------------------------|------------|----------|------|------|------|-----------------------------------|----------|------------|
|                             |            |          |      |      |      | Nylon                             | Urethane |            |
| 4                           | KQ2TW04-00 | 10.4     | 18   | 8.7  | 16   | 6.4                               | 4.4      | 9          |
| 6                           | KQ2TW06-00 | 12.8     | 20   | 9.9  | 17   | 13.4                              | 10.6     | 13         |
| 8                           | KQ2TW08-00 | 15.2     | 23   | 11.1 | 18.5 | 25.6                              | 17.7     | 20         |
| 10                          | KQ2TW10-00 | 18.5     | 26.5 | 12.8 | 21   | 40                                | 28.4     | 33         |
| 12                          | KQ2TW12-00 | 20.9     | 28.5 | 13.9 | 22   | 57.4                              | 45.4     | 39         |



Note) øD: Max. diameter



## Different Diameter Cross: KQ2TX



| Applicable tubing O.D. (mm) |    | Model      | Note) øD | L    | Q    | M1   | M2   | Effective area (mm <sup>2</sup> ) |          | Weight (g) |
|-----------------------------|----|------------|----------|------|------|------|------|-----------------------------------|----------|------------|
| ①                           | ②  |            |          |      |      |      |      | Nylon                             | Urethane |            |
| 6                           | 8  | KQ2TX06-08 | 15.2     | 23   | 11.1 | 18.5 | 17   | 13.4                              | 10.6     | 13         |
| 8                           | 10 | KQ2TX08-10 | 18.5     | 26.5 | 12.8 | 21   | 18.5 | 25.6                              | 17.7     | 27         |
| 10                          | 12 | KQ2TX10-12 | 20.9     | 28.5 | 13.9 | 22   | 21   | 40                                | 28.4     | 36         |



Note) øD: Max. diameter

