

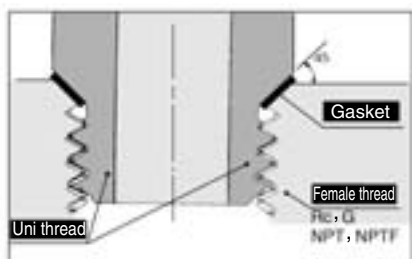
# Metric-size Uni One-touch Fittings

## Series KQ2

Applicable Tubing: Metric Size

Connection Thread: Rc, G, NPT, NPTF

**New-stand male thread for piping that reduces the screw-in time by 1/3.**



### Uni thread ridge shape

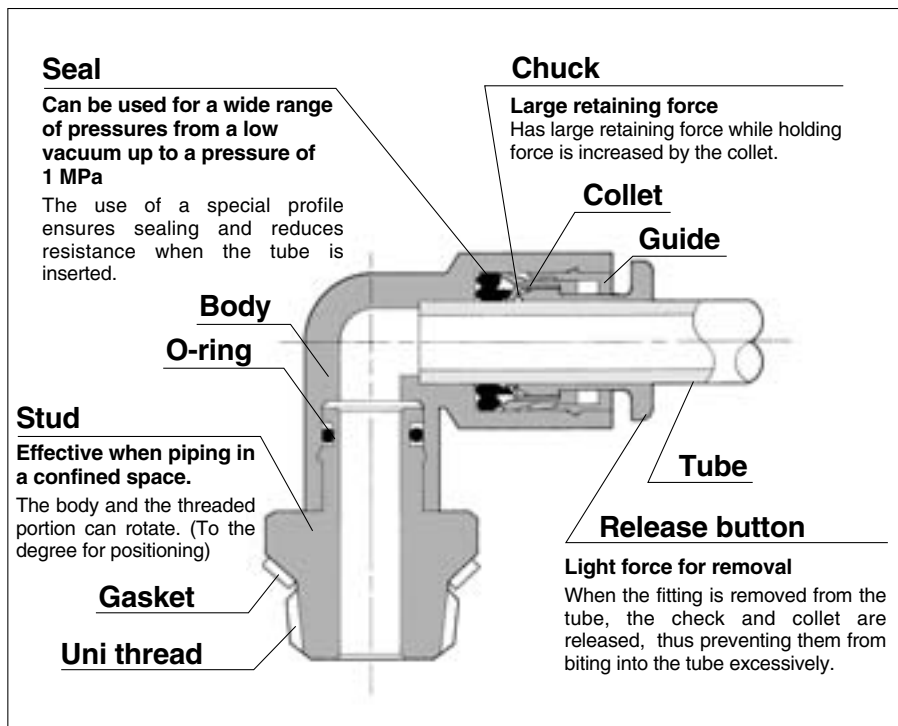
A gasket made of a stainless steel sheet covered with laminated NBR on both sides is seated on the chamfer of a female thread for a perfect sealing construction irrespective of the difference in thread diameters due to the difference in the types of female threads, variation in tolerance, or difference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

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

**The male thread for piping drastically cuts piping man-hours.**



**Made to Order**  
(Refer to page 90 for details.)



### Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon <sup>(1)</sup> , Polyurethane
Tubing O.D.	ø4, ø6, ø8, ø10, ø12, ø16

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

### Product's Color

Series	Body	Release button
Series KQ2	White	Light gray
Series KQ	Black	Blue

### Specifications

Fluid	Air/Water <sup>(2)</sup>
Operating pressure range <sup>(3)</sup>	-100 kPa to 1 MPa
Proof pressure	3 MPa
Ambient and fluid temperature	-5 to 60°C, Water: 0 to 40°C (No freezing)

Note 2) The surge pressure must be under the maximum operating pressure.  
Note 3) Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

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

## Model

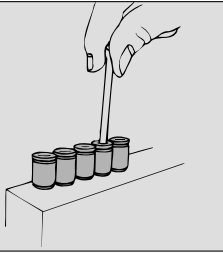
### Hex. socket head male connector

**KQ2S**

P. 89



Internal hex. allows thread connection by using an allen wrench for confined spaces.



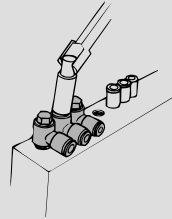
### Universal male elbow

**KQ2V**

P. 89



Universal male elbow allows thread connection by using a socket wrench for confined spaces.



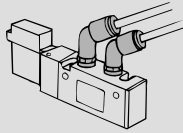
### 45° male elbow

**KQ2K**

P. 89



Use to pipe in 45° direction from female thread. Model in-between of male connector and male elbow.



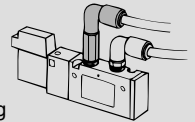
### Extended male elbow

**KQ2W**

P. 88



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



### Male connector

**KQ2H**

P. 86



Use to pipe in the same direction from female thread. Most general style.

### Male elbow

**KQ2L**

P. 86



Use to pipe at right angles to female thread. Most general style.

### Male branch tee

**KQ2T**

P. 87



Use to branch line from female thread in both 90° directions.

### Branch "Y"

**KQ2U**

P. 88



Use to branch line in the same direction from female thread.

### Male run tee

**KQ2Y**

P. 87



Use to branch line in the same direction from female thread and in 90° direction.

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

## How to Order

**KQ 2 H 06 - U01 -**

One-touch fittings

Product's color

Symbol	Body	Release button
2	White	Light gray
Nil	Black	Blue

Applicable tubing O.D.

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12
16	ø16

Port size

Thread connection	Port size
U01	Uni 1/8
U02	Uni 1/4
U03	Uni 3/8
U04	Uni 1/2

Model

H	Male connector	T	Male branch tee
S	Hex. socket head male connector	Y	Male run tee
L	Male elbow	U	Branch
K	45° male elbow		
V	Universal male elbow		
W	Extended male elbow		

● Made to Order  
Refer to page 90 for details.

### How to Order Gasket

**KQG - U01**

Gasket for Uni One-touch fittings

Applicable port size

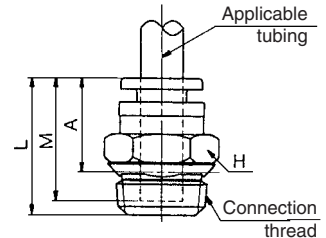
U01	Uni 1/8
U02	Uni 1/4
U03	Uni 3/8
U04	Uni 1/2

# Series KQ2

## Male Connector: KQ2H



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	L	A*	M	Effective area (mm <sup>2</sup> ) (Note)		Mass (g)
							Nylon	Urethane	
4	1/8	KQ2H04-U01	10	18.5	13.5	16	5.6	5.6	5
	1/4	KQ2H04-U02	14	16.5	10.5				10
6	1/8	KQ2H06-U01	12	19.5	14.5	17	13.1	13.1	5
	1/4	KQ2H06-U02	14		13				10
	3/8	KQ2H06-U03	17	17.5	11.5				16
8	1/8	KQ2H08-U01	14	25	20.5	18.5	26.1	18.0	11
	1/4	KQ2H08-U02		21.5	15.5				27
	3/8	KQ2H08-U03	17	19.5	13.5				33
10	1/8	KQ2H10-U01	17	23	23	21	41.5	29.5	17
	1/4	KQ2H10-U02		28	22				17
	3/8	KQ2H10-U03		24	18				14
	1/2	KQ2H10-U04	22	22	14				28
12	1/4	KQ2H12-U02	19	30.5	24.5	22	58.3	46.1	22
	3/8	KQ2H12-U03		25.5	19.5				16
	1/2	KQ2H12-U04	22	24.5	16.5				28
16	3/8	KQ2H16-U03	24	33.5	27.5	24	81	(81)	39
	1/2	KQ2H16-U04		28.5	20.5				113

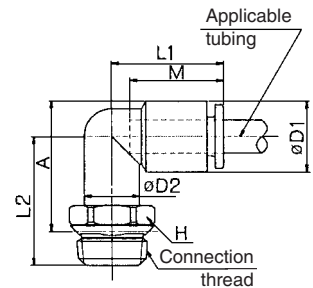


\* Reference dimensions after Uni thread installation. Note) Dimensions in ( ) are the case of soft nylon tubing.

## Male Elbow: KQ2L



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	(1)		L1	L2	A*	M	Effective area (mm <sup>2</sup> ) (2)		Mass (g)
				øD1	øD2					Nylon	Urethane	
4	1/8	KQ2L04-U01	10	10.4	10	18	20	20.5	16	4.2	4.2	8
	1/4	KQ2L04-U02	14				22	21.5				14
6	1/8	KQ2L06-U01	10	12.8	10	20	21.5	23.5	17	11.4	11.4	9
	1/4	KQ2L06-U02	14				23	24.5				15
	3/8	KQ2L06-U03	17				24	24.5				23
8	1/8	KQ2L08-U01	12	15.2	12	23	22.5	25.5	18.5	21.6	14.9	11
	1/4	KQ2L08-U02	14				24.5	26				16
	3/8	KQ2L08-U03	17				25.5	27				24
10	1/8	KQ2L10-U01	17	18.5	17	26.5	25	29.5	21	35.2	25.0	24
	1/4	KQ2L10-U02					26.5	30				21
	3/8	KQ2L10-U03					27	30.5				25
	1/2	KQ2L10-U04	22				30	31.5				45
12	1/4	KQ2L12-U02	17	20.9	17	28.5	27	31.5	22	50.2	39.7	23
	3/8	KQ2L12-U03					28	32.5				27
	1/2	KQ2L12-U04	22				31	33.5				48
16	3/8	KQ2L16-U03	22	26.5	21	33	33	40.5	24	71	(71)	49
	1/2	KQ2L16-U04					35	40.5				100



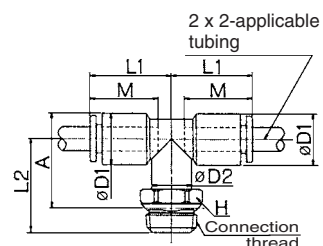
\* Reference dimensions after Uni thread installation. Note 1) øD1: Max. diameter  
Note 2) Dimensions in ( ) are the case of soft nylon tubing.

## Male Branch Tee: KQ2T



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	<sup>(1)</sup>		L1	L2	A*	M	Effective area (mm <sup>2</sup> ) <sup>(2)</sup>		Mass (g)
				øD1	øD2					Nylon	Urethane	
4	1/8	KQ2T04-U01	10	10.4	10	18	20	21.5	16	6.0	6.0	9
	1/4	KQ2T04-U02	14				22					15
6	1/8	KQ2T06-U01	10	12.8	10	20	21.5	23.5	17	13.9	13.9	11
	1/4	KQ2T06-U02	14				23					17
	3/8	KQ2T06-U03	17				24	24.5				26
	1/8	KQ2T08-U01	12				22.5	26				15
8	1/4	KQ2T08-U02	14	15.2	12	23	24.5	27	18.5	26.3	18.2	20
	3/8	KQ2T08-U03	17				25.5					28
	1/8	KQ2T10-U01	10				25	29.5				30
10	1/4	KQ2T10-U02	17	18.5	17	26.5	26.5	30	21	35.2	25	27
	3/8	KQ2T10-U03	17				27					30.5
	1/2	KQ2T10-U04	22				30	31.5				51
	1/4	KQ2T12-U02	17				27	31.5				31
12	3/8	KQ2T12-U03	17	20.9	17	28.5	28	32.5	22	57.2	45.2	34
	1/2	KQ2T12-U04	22				31					33.5
	3/8	KQ2T16-U03	22				26.5	21				33
1/2	KQ2T16-U04	22	35	40.5	100	(100)	63					

\* Reference dimensions after Uni thread installation. Note 1) øD1: Max. diameter  
 Note 2) Dimensions in ( ) are the case of soft nylon tubing.



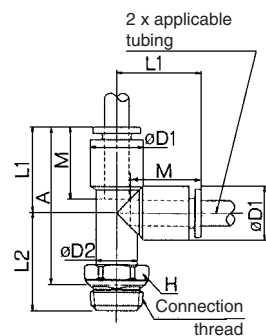
- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T

## Male Run Tee: KQ2Y



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	<sup>(1)</sup>		L1	L2	A*	M	Effective area (mm <sup>2</sup> ) <sup>(2)</sup>		Mass (g)
				øD1	øD2					Nylon	Urethane	
4	1/8	KQ2Y04-U01	10	10.4	10	18	20	34	16	6.4	6.4	9
	1/4	KQ2Y04-U02	14				22	34.5				15
6	1/8	KQ2Y06-U01	10	12.8	10	20	21.5	37.5	17	13.4	13.4	11
	1/4	KQ2Y06-U02	14				23	37				17
	3/8	KQ2Y06-U03	17				24	38				26
	1/8	KQ2Y08-U01	12				22.5	41.5				15
8	1/4	KQ2Y08-U02	14	15.2	12	23	24.5	27	18.5	25.6	17.7	19
	3/8	KQ2Y08-U03	17				25.5					42.5
	1/8	KQ2Y10-U01	10				25	46.5				30
10	1/4	KQ2Y10-U02	17	18.5	17	26.5	26.5	47.5	21	40.0	28.4	27
	3/8	KQ2Y10-U03	17				27					48
	1/2	KQ2Y10-U04	22				30	49				51
	1/4	KQ2Y12-U02	17				27	49.5				31
12	3/8	KQ2Y12-U03	17	20.9	17	28.5	28	50.5	22	57.4	45.4	35
	1/2	KQ2Y12-U04	22				31					51.5
	3/8	KQ2Y16-U03	22				26.5	21				33
1/2	KQ2Y16-U04	22	63	113	(113)	62						

\* Reference dimensions after Uni thread installation. Note 1) øD1: Max. diameter  
 Note 2) Dimensions in ( ) are the case of soft nylon tubing.



# Series KQ2

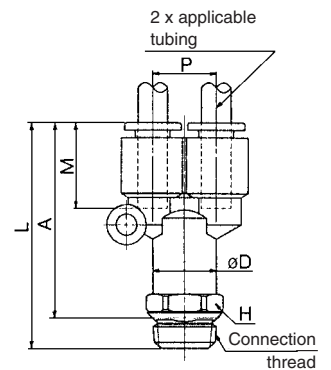
## Branch "Y": KQ2U



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	<sup>(1)</sup> $\phi D1$	L	P	A*	M	Effective area (mm <sup>2</sup> )		Mass (g)
									Nylon	Urethane	
4	1/8	KQ2U04-U01	11	10.4	40	10.4	36	16	4.2	4.2	11
	1/4	KQ2U04-U02	14		42						16
6	1/8	KQ2U06-U01	13	12.8	43.5	12.8	39	17	13.4	13.4	14
	1/4	KQ2U06-U02	14		45						18
	3/8	KQ2U06-U03	17		46						26
8	1/8	KQ2U08-U01	17	15.2	50.5	15.2	46	18.5	25.6	17.7	27
	1/4	KQ2U08-U02			52						25
	3/8	KQ2U08-U03			51.5						28
10	1/4	KQ2U10-U03	19	18.5	57.5	18.5	51.5	21	40	28.4	38
	3/8	KQ2U10-U03			59						36
	1/2	KQ2U10-U04			51						51
12	1/4	KQ2U12-U02	22	20.9	61	20.9	55	22	57.4	45.4	53
	3/8	KQ2U12-U03			62.5						52
	1/2	KQ2U12-U04			54.5						52

\* Reference dimensions after Uni thread installation.

Note 1)  $\phi D$ : Max. diameter



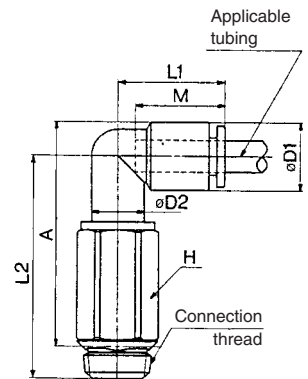
## Extended Male Elbow: KQ2W



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	<sup>(1)</sup> $\phi D1$	$\phi D2$	L1	L2	A*	M	Effective area (mm <sup>2</sup> )		Mass (g)
										Nylon	Urethane	
4	1/8	KQ2W04-U01	10	10.4	10	18	34.5	35.5	16	4.0	4.0	16
	1/4	KQ2W04-U02	14				37	38.5				26
6	1/8	KQ2W06-U01	10	12.8	10	20	38.5	41	17	10.9	10.9	18
	1/4	KQ2W06-U02	14				40.5	42				29
	3/8	KQ2W06-U03	17				41.5	46				40
8	1/8	KQ2W08-U01	12	15.2	12	23	43.5	46.5	18	20.5	14.2	28
	1/4	KQ2W08-U02	14				45.5	47				35
	3/8	KQ2W08-U03	17				46	48				46
10	1/4	KQ2W10-U02	17	18.5	17	26.5	52.5	56	21	33.5	23.8	67
	3/8	KQ2W10-U03					54.5	57				
	1/2	KQ2W10-U04					54.5	98				
12	1/4	KQ2W12-U02	17	20.9	17	28.5	54	58.5	22	47.7	37.7	69
	3/8	KQ2W12-U03					56	59				
	1/2	KQ2W12-U04					56	99				

\* Reference dimensions after Uni thread installation.

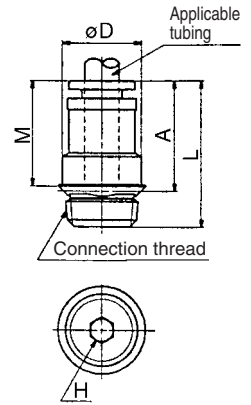
Note 1)  $\phi D1$ : Max. diameter



**Hexagon Socket Head Male Connector: KQ2S**



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	(Note)		L	A*	M	Effective area (mm <sup>2</sup> )		Mass (g)
				øD1	øD2				Nylon	Urethane	
4	1/8	KQ2S04-U01	3	10	23.5	18.5	16	4.1	3.6	7	
	1/8	KQ2S06-U01	4	11.8	24	19	17	10.0	9.9	9	
6	1/4	KQ2S06-U02	4	13.5	24	18	17	10.7	10.0	12	
	1/8	KQ2S08-U01	5	14	27.5	22.5	18.5	17.2		12	
8	1/4	KQ2S08-U02	5	14	28	22	18.5	23.3	16.2	14	
	3/8	KQ2S08-U03	6	17	27.5	21.5	18.5	23.3	16.2	24	
10	1/8	KQ2S10-U01	5	17	30	25	21	17.2	10.0	18	
	1/4	KQ2S10-U02	5	17	29	23	21	17.2	10.0	17	
	3/8	KQ2S10-U03	8	17	28.5	22.5	21	39.0	26.6	19	
	1/2	KQ2S10-U04	8	21	29	21	21	39.0	26.6	36	
12	1/4	KQ2S12-U02	8	19	30.5	25	22	46.0		20	
	3/8	KQ2S12-U03	8	19	31	25	22	60.0	44.5	22	
	1/2	KQ2S12-U04	9	21	28.5	20.5	22	60.0	44.5	30	



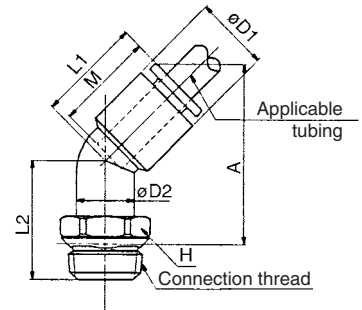
\* Reference dimensions after Uni thread installation.

Note) øD: Max. diameter

**45° Male Elbow: KQ2K**



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	(Note)		L1	L2	A*	M	Effective area (mm <sup>2</sup> )		Mass (g)
				øD1	øD2					Nylon	Urethane	
4	1/8	KQ2K04-U01	10	10.4	10	17	18.5	30	16	3.4	3.4	6
	1/4	KQ2K04-U02	14	10.4	10	17	20.5	30.5	16	3.4	3.4	13
6	1/8	KQ2K06-U01	10	12.8	10	18	18.5	31	17	8.7	8.7	7
	1/4	KQ2K06-U02	14	12.8	10	18	20.5	31	17	8.7	8.7	13
	3/8	KQ2K06-U03	17	12.8	10	18	21.5	32	17	8.7	8.7	23
8	1/8	KQ2K08-U01	12	15.2	12	20.5	20	35	18.5	19.7	13.6	11
	1/4	KQ2K08-U02	14	15.2	12	20.5	22	35	18.5	19.7	13.6	15
	3/8	KQ2K08-U03	17	15.2	12	20.5	23	36	18.5	19.7	13.6	24
10	1/8	KQ2K10-U01	12	18.5	17	24	22	38	21	21.6	14.9	24
	1/4	KQ2K10-U02	17	18.5	17	24	23.5	40.5	21	21.6	14.9	21
	3/8	KQ2K10-U03	17	18.5	17	24	24	41	21	30.9	23.2	25
	1/2	KQ2K10-U04	22	18.5	17	24	27	42	21	30.9	23.2	45
12	1/4	KQ2K12-U02	17	20.9	17	25	24	42	22	44.5	35.1	23
	3/8	KQ2K12-U03	17	20.9	17	25	24.5	42.5	22	44.5	35.1	27
	1/2	KQ2K12-U04	22	20.9	17	25	27.5	43.5	22	44.5	35.1	46



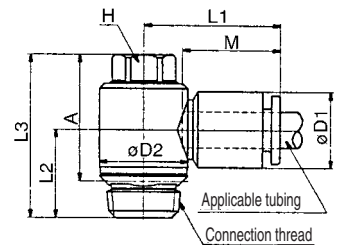
\* Reference dimensions after Uni thread installation.

Note) øD1: Max. diameter

**Universal Male Elbow: KQ2V**



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	(Note)		L1	L2	L3	A*	M	Effective area (mm <sup>2</sup> )		Mass (g)
				øD1	øD2						Nylon	Urethane	
4	1/8	KQ2V04-U01	8	10.4	13.4	22	13.5	25.5	20.5	16	2.9	2.9	12
	1/8	KQ2V06-U01	8	12.8	13.4	24	13.5	25.5	20.5	17	7.5	7.5	13
6	1/4	KQ2V06-U02	10	12.8	15.4	23.5	15.5	28	22	17	7.5	7.5	21
	1/8	KQ2V08-U01	12	15.2	17.6	28.5	14.5	27.5	22.5	18.5	11.2	24	22
8	1/4	KQ2V08-U02	12	15.2	17.6	28.5	16.5	29.5	23.5	18.5	11.2	30	25
	3/8	KQ2V08-U03	14	15.2	20.6	27.5	18.5	34	28	18.5	14.3	47	36
10	1/4	KQ2V10-U02	14	18.5	20.6	31	18.5	34	28	21	27	20.3	35
	3/8	KQ2V10-U03	14	18.5	20.6	31	18.5	34	28	21	27	20.3	38
12	3/8	KQ2V12-U03	17	20.9	25.2	34	20	36.5	30.5	22	39	30.8	52
	1/2	KQ2V12-U04	17	20.9	25.2	34	22.5	39.5	31.5	22	39	30.8	62



\* Reference dimensions after Uni thread installation.

Note) øD1: Max. diameter

- K
- M
- H
- KK
- D
- MS
- LQ
- MQR
- T



Please contact SMC for detailed dimensions, specifications, and delivery.

## 1 Grease-free Specifications

Symbol	Specifications
<b>X17</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue
<b>X29</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Copper-free (With electroless nickel plated)
<b>X39</b>	Grease-free Rubber material: NBR (With fluorine coating) Release button color: Light blue Clean (Copper-free, air blow, double package, resin body: white)

## 2 Other Specifications

Symbol	Specifications
<b>X2</b>	Copper-free (With electroless nickel plated)
<b>X12</b>	Lubricant: White Vaseline Release button color: White
<b>X41</b>	With fixed throttle <sup>Note)</sup>

Note) Compatible with male connector and male elbow only  
Consult SMC separately for the available fixed throttle diameters.

## Spare Parts

Description	Part no.	Applicable thread
Gasket	KQG-U01	Uni 1/8
	KQG-U02	Uni 1/4
	KQG-U03	Uni 3/8
	KQG-U04	Uni 1/2