

# 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
06	ø6
08	ø8
10	ø10
12	ø12
16	ø16
99	Same dia. rod

Tubing (Rod) connection (Reducer) Different dia. tubing

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

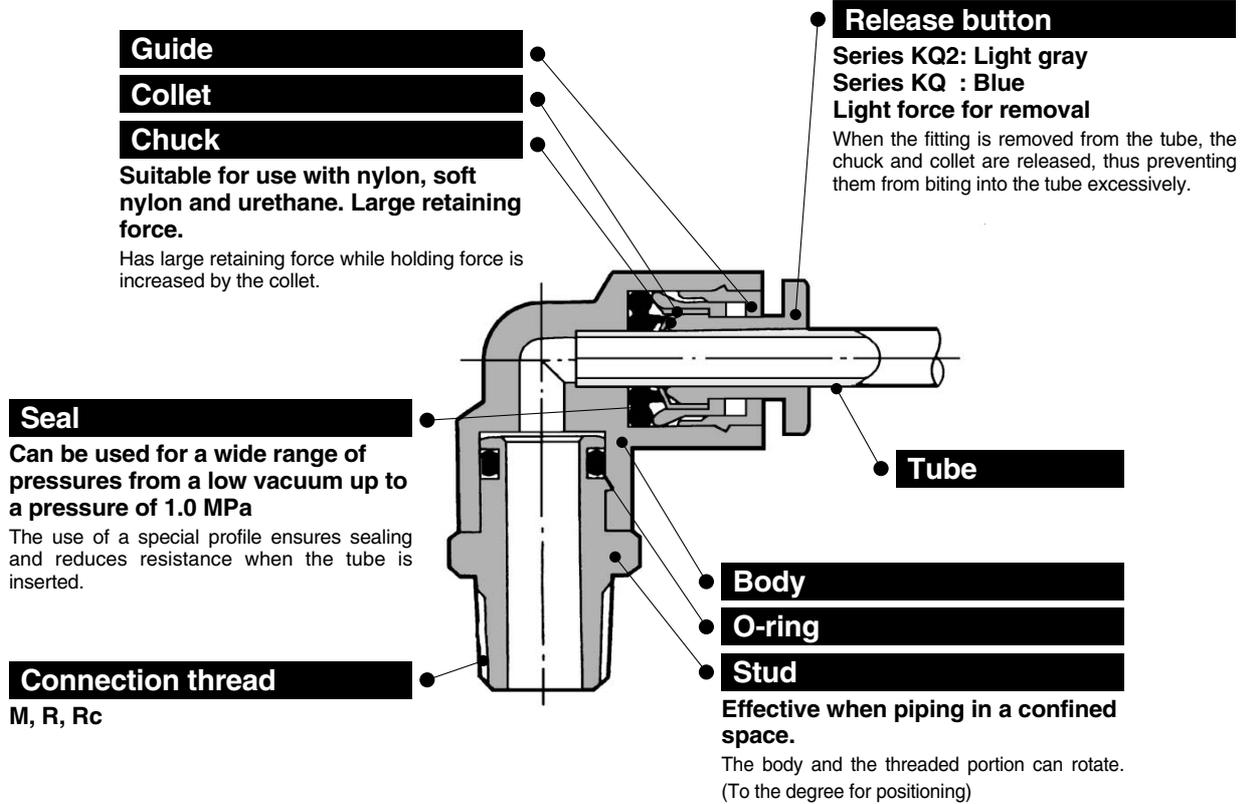
H	Male connector	T	Male branch tee
	Straight union		Union tee
S	Hex. socket head male connector	TW	Different diameter tee * Note)
			Cross*
F	Female connector	TX	Different diameter cross*
L	Male elbow	TY	Different diameter cross*
	Union elbow	Y	Male run tee
	Plug-in elbow	D	Male delta union
	Reducer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

- K
- M
- H
- D
- MS
- T
- VMG

**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
Series KQ2	White	Light gray
Series KQ	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) 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

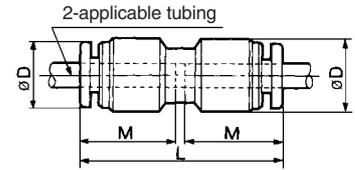


**Made to Order** P. 15-2-30

## Straight Union: KQ2H



Applicable tubing O.D. (mm)	Model	øD <sup>(1)</sup>	L	M	Effective area <sup>(2)</sup> (mm <sup>2</sup> )		Weight (g)
					Nylon	Urethane	
3.2	KQ2H23-00	9.6	31.5	15.5	3.4	2.9	3
4	KQ2H04-00	10.4	32.5	16	5.6	4	3
6	KQ2H06-00	12.8	34.5	17	13.1	10.4	4
8	KQ2H08-00	15.2	38.5	18.5	26.1	18.0	6
10	KQ2H10-00	18.5	42.5	21	41.5	29.5	11
12	KQ2H12-00	20.9	44.5	22	58.3	46.1	14
16	KQ2H16-00	26.5	51	25	113	(96)	24

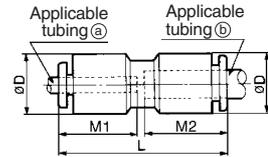


Note 1) øD: Max. diameter  
 Note 2) ( ): Values for soft nylon.

## Different Diameter Straight: KQ2H



Applicable tubing O.D. (mm)		Model	Note) øD	L	M1	M2	Effective area (mm <sup>2</sup> )		Weight (g)
Ⓐ	Ⓑ						Nylon	Urethane	
3.2	4	KQ2H23-04	10.4	32.5	15.5	16	3.4	2.9	3
4	6	KQ2H04-06	12.8	34.5	16	17	5.6	5.6	5
6	8	KQ2H06-08	15.2	38.5	17	18.5	13.1	10.4	6
8	10	KQ2H08-10	18.5	42	18.5	21	26.1	18.0	11
10	12	KQ2H10-12	20.9	44.5	21	22	41.5	29.5	14
12	16	KQ2H12-16	26.5	56.5	22	25	58.3	46.1	47



Note) øD: Max. diameter

## Male Elbow: KQ2L

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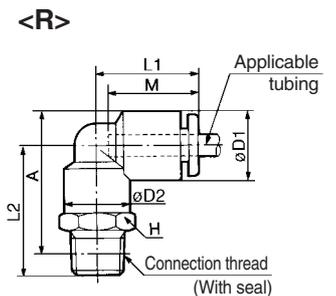
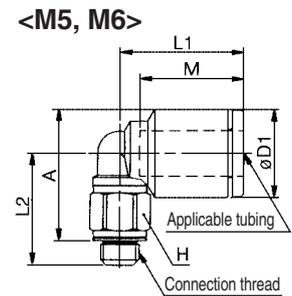
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<R>



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	Note 1) øD <sup>(1)</sup>		L1	L2	A*	M	Effective area <sup>(2)</sup> (mm <sup>2</sup> )		Weight (g)
				øD1	øD2					Nylon	Urethane	
3.2	M5 x 0.8	KQ2L23-M5	7	8.5	—	15.3	13.2	14.3	12.7	2.6	2.2	2.5
	1/8	KQ2L23-01S	10	9.6	10	17.5	21.5	22.5	15.5	3	2.5	8
	1/4	KQ2L23-02S	14	—	—	—	25.5	24.5	—	—	—	18
4	M5 x 0.8	KQ2L04-M5	7	9.3	—	15.6	13.7	15.3	12.7	3.5	3.5	2.7
	M6 x 1.0	KQ2L04-M6	8	—	—	—	14.7	—	—	—	—	3.6
	1/8	KQ2L04-01S	10	10.4	10	18	22	23	16	4.2	4.2	10
6	1/4	KQ2L04-02S	14	—	—	—	26	25	—	—	—	19
	M5 x 0.8	KQ2L06-M5	7	11.6	—	16.1	14.7	17.4	13.5	3.5	3.5	3.2
	M6 x 1.0	KQ2L06-M6	8	—	—	—	15.7	—	—	—	—	4.1
	1/8	KQ2L06-01S	10	—	—	—	23	25.5	—	—	—	12
	1/4	KQ2L06-02S	14	12.8	10	20	27	27.5	17	11.4	9.0	22
	3/8	KQ2L06-03S	17	—	—	—	29	29	—	—	—	33
8	1/8	KQ2L08-01S	12	—	—	—	24.5	28	—	—	—	13
	1/4	KQ2L08-02S	14	15.2	12	23	28.5	30	18.5	21.6	14.9	21
	3/8	KQ2L08-03S	17	—	—	—	30.5	31.5	—	—	—	35
10	1/8	KQ2L10-01S	—	—	—	—	27	32	—	21.6	14.9	25
	1/4	KQ2L10-02S	17	18.5	17	26.5	30	33	21	—	—	26
	3/8	KQ2L10-03S	—	—	—	—	32	34.5	—	35.2	25.0	36
	1/2	KQ2L10-04S	22	—	—	—	36	37	—	—	—	63
12	1/4	KQ2L12-02S	—	—	—	—	31	35.5	—	—	—	28
	3/8	KQ2L12-03S	17	20.9	17	28.5	33	37	22	50.2	39.7	38
	1/2	KQ2L12-04S	22	—	—	—	37	39.5	—	—	—	65
16	3/8	KQ2L16-03S	—	—	—	—	38	44.5	25	71	(71)	101
	1/2	KQ2L16-04S	22	26.5	20.9	34	41	46	—	100	(84)	105



\* Reference dimensions after R thread installation.  
 Note 1) øD1: Max. diameter  
 Note 2) ( ): Values for soft nylon.

K□

M□

H□

D□

MS

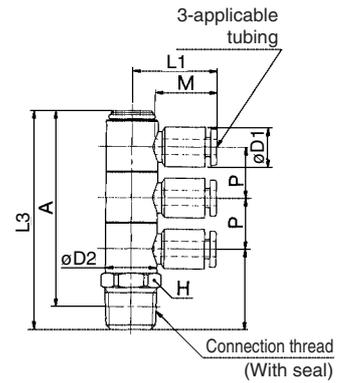
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VMG

## Triple Universal Male Elbow: KQ2VT



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	P	Weight (g)
4	1/8	KQ2VT04-01S	14	10.4	13.4	22	18.5	54.5	50.5	16	13.4	29
	1/4	KQ2VT04-02S					21.5	57.5	51.5			34
	3/8	KQ2VT04-03S					23.5	59.5	53.5			48
6	1/8	KQ2VT06-01S	14	12.8	13.4	24.5	18.5	54.5	50.5	17	13.4	31
	1/4	KQ2VT06-02S					21.5	57.5	51.5			37
	3/8	KQ2VT06-03S					23.5	59.5	53.5			50
8	1/8	KQ2VT08-01S	19	15.2	17.6	28.5	21	64	60	18.5	15.9	71
	1/4	KQ2VT08-02S					24	67	61			66
	3/8	KQ2VT08-03S					25	68	61.5			75
	1/2	KQ2VT08-04S					28.5	71.5	63.5			96
10	1/4	KQ2VT10-02S	21	18.5	20.6	31.5	26.5	77.5	71.5	21	19.2	94
	3/8	KQ2VT10-03S					27.5	78.5	72			111
	1/2	KQ2VT10-04S					30.5	81.5	73.5			
12	1/4	KQ2VT12-02S	26	20.9	25.2	34	28.5	86	80	22	21.6	153
	3/8	KQ2VT12-03S					29.5	87	80.5			142
	1/2	KQ2VT12-04S					32.5	90	82			154



\* Reference dimensions after R thread installation.  
Note)  $\phi D1$ : Max. diameter

- K
- M
- H
- D
- MS
- T
- VMG

## Branch Universal Male Elbow: KQ2Z

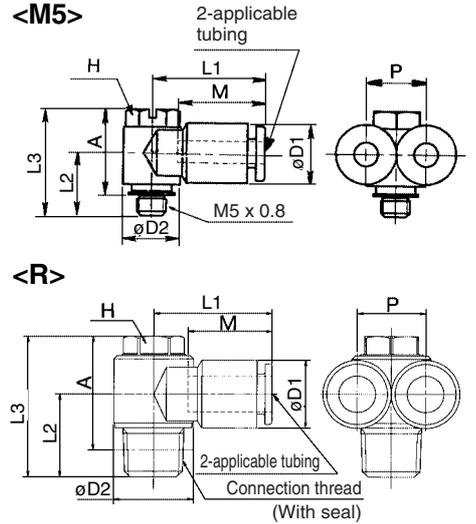
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Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	P	Effective area (mm <sup>2</sup> )		Weight (g)
												Nylon	Urethane	
4	M5 x 0.8	KQ2Z04-M5	8	10.4	9.8	19.5	11	18.5	15	16	10.4	3.4	3.4	8
												4.7	4.7	16
6	1/8	KQ2Z06-01S	8	12.8	13.4	21	14.5	26.5	22.5	17	12.8	10.8	8.6	17
														39
														47
8	1/8	KQ2Z08-01S	12	15.2	17.6	26	15.5	28.5	24.5	18.5	15.2	20.5	14.2	27
														33
														49
10	1/4	KQ2Z10-02S	14	18.5	20.6	29	19.5	35.5	29.5	21	18.5	31.8	22.6	46
														54
														71
12	3/8	KQ2Z12-03S	17	20.9	25.2	32.5	22	39	32.5	22	20.9	44.6	35.3	71
							25	42	34					88



\* Reference dimensions after R thread installation.  
Note)  $\phi D1$ : Max. diameter

## Branch Universal Female Elbow: KQ2ZF

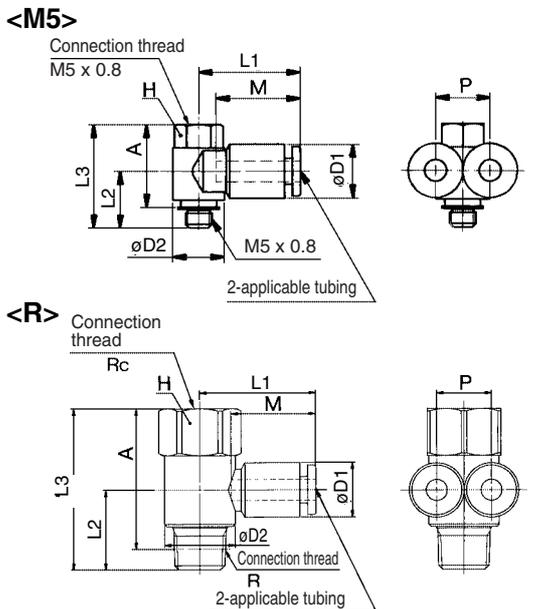
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<R>



Applicable tubing O.D. (mm)	Connection thread R Rc	Model	H (width across flats)	Note) $\phi D1$	$\phi D2$	L1	L2	L3	A*	M	P	Weight (g)
4	M5 x 0.8	KQ2ZF04-M5	8	10.4	9.8	19.5	11	20	16.5	16	10.4	8
												21
6	1/8	KQ2ZF06-01S	14	12.8	13.4	22	15.5	29.5	25.5	17	12.8	21
												47
												32
8	1/8	KQ2ZF08-01S	17	15.2	17.6	25.5	17	31	27	18.5	15.2	32
												49
												54
10	1/4	KQ2ZF10-02S	19	18.5	20.6	29	22	41	35	21	18.5	74
												77
												101
12	3/8	KQ2ZF12-03S	22	20.9	25.2	32.5	24.5	45.5	39	22	20.9	77
												101



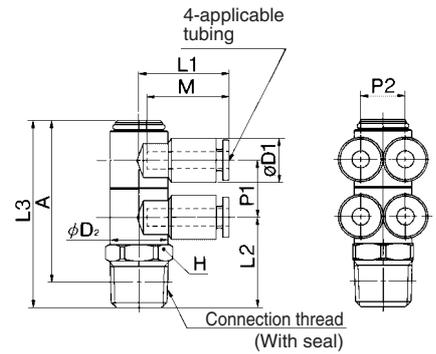
\* Reference dimensions after R thread installation.  
Note)  $\phi D1$ : Max. diameter

# Series KQ2

## Double Branch Universal Male Elbow: KQ2ZD



Applicable tubing O.D. (mm)	Connection threads R	Model	H (width across flats)	Note) øD1	øD2	L1	L2	L3	A*	M	P1	P2	Weight (g)
4	1/8	KQ2ZD04-01S	14	10.4	13.4	21	18.5	41	37	16	13.4	10.4	34
	1/4	KQ2ZD04-02S					21.5	44	38				40
	3/8	KQ2ZD04-03S					23.5	46	40				53
6	1/8	KQ2ZD06-01S	14	12.8	13.4	22	18.5	41	37	17	13.4	12.8	38
	1/4	KQ2ZD06-02S					21.5	44	38				43
	3/8	KQ2ZD06-03S					23.5	46	40				57
8	1/8	KQ2ZD08-01S	19	15.2	17.6	26	21	48	44	18.5	15.9	15.2	76
	1/4	KQ2ZD08-02S					24	51	45				72
	3/8	KQ2ZD08-03S					25	52	45.5				81
	1/2	KQ2ZD08-04S					28.5	55.5	47.5				102
10	1/4	KQ2ZD10-02S	21	18.5	20.6	29	26.5	58	52	21	19.2	18.5	111
	3/8	KQ2ZD10-03S					27.5	59	53				128
	1/2	KQ2ZD10-04S					30.5	62	54				178
12	1/4	KQ2ZD12-02S	26	20.9	25.2	32	28.5	64.5	58.5	22	21.6	20.9	167
	3/8	KQ2ZD12-03S					29.5	65.5	59				179
	1/2	KQ2ZD12-04S					32.5	68.5	60				

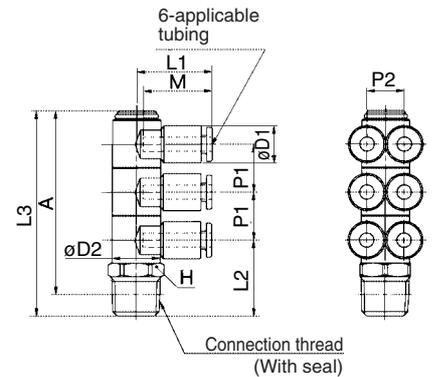


\* Reference dimensions after R thread installation.  
Note) øD1: Max. diameter

## Triple Branch Universal Male Elbow: KQ2ZT



Applicable tubing O.D. (mm)	Connection threads R	Model	H (width across flats)	Note) øD1	øD2	L1	L2	L3	A*	M	P1	P2	Weight (g)
4	1/8	KQ2ZT04-01S	14	10.4	13.4	21	18.5	54.5	50.5	16	13.4	10.4	25
	1/4	KQ2ZT04-02S					21.5	57.5	51.5				31
	3/8	KQ2ZT04-03S					23.5	59.5	53.5				44
6	1/8	KQ2ZT06-01S	14	12.8	13.4	22	18.5	54.5	50.5	17	13.4	12.8	27
	1/4	KQ2ZT06-02S					21.5	57.5	51.5				33
	3/8	KQ2ZT06-03S					23.5	59.5	53.5				46
8	1/8	KQ2ZT08-01S	19	15.2	17.6	26	21	64	60	18.5	15.9	15.2	56
	1/4	KQ2ZT08-02S					24	67	61				54
	3/8	KQ2ZT08-03S					25	68	61.5				62
	1/2	KQ2ZT08-04S					28.5	71.5	63.5				85
10	1/4	KQ2ZT10-02S	21	18.5	20.6	29	26.5	77.5	71.5	21	19.2	18.5	83
	3/8	KQ2ZT10-03S					27.5	78.5	72				85
	1/2	KQ2ZT10-04S					30.5	81.5	73.5				102
12	1/4	KQ2ZT12-02S	26	20.9	25.2	32	28.5	86	80	22	21.6	20.9	134
	3/8	KQ2ZT12-03S					29.5	87	80.5				130
	1/2	KQ2ZT12-04S					32.5	90	82				141

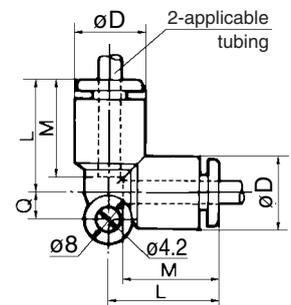


\* Reference dimensions after R thread installation.  
Note) øD1: Max. diameter

## Union Elbow: KQ2L



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	KQ2L23-00	9.6	17.5	4.3	15.5	3	2.5	3
4	KQ2L04-00	10.4	18	4.5	16	4.2	4.2	6
6	KQ2L06-00	12.8	20	5.3	17	11.4	9.0	6
8	KQ2L08-00	15.2	23	6	18.5	21.6	14.9	10
10	KQ2L10-00	18.5	26.5	6.8	21	35.2	25.0	17
12	KQ2L12-00	20.9	28.5	7.5	22	50.2	39.7	21
16	KQ2L16-00	26.5	34	10	25	100	(84)	29



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