

FITTINGS & TUBING

FITTINGS

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FITTINGS & TUBING

TUBING

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SIZING OF TUBING SYSTEMS

SIZING OF TUBING SYSTEMS

The calculation of the valve system flow factor (Cv) is required for each application. The tube and fittings between air source and the application are part of this system as each length of pipe and each fitting has a pressure drop.

Each SMC element can be individually defined in terms of effective orifice.

The overall Cv of a tube and valve system is calculated by combining the Cv of each element as follows:

$$\frac{1}{Cv_{syst}^2} = \frac{1}{Cv_1^2} + \frac{1}{Cv_2^2} + \frac{1}{Cv_3^2} \text{ etc}$$

Quick approximate calculation can be made by assuming 50% of system pressure drop is made at the valve and 50% in the tube system.


If our calculated Cv for the system including valve and fittings is Cv_{syst} , then:

required Cv for valve = $Cv_{syst} \times \sqrt{2}$

for fittings and tube = $Cv_{syst} \times \sqrt{2}$

If tube system has 3 meters of nylon pipe and 6 KQ fittings we can consider this as 9 (3 + 6) elements so Cv for each fitting element needs to be:

$$Cv_{syst} \times \sqrt{2} \times \sqrt{9}$$



 9 elements assumed all equal ΔP
 (assumption 50% ΔP valves 50% ΔP tube etc)

The SMC fittings are quoted with effective orifice of S in mm^2 . ($18mm^2 \approx Cv1$)

Thus if system Cv required was 0.6

valve to be used has a Cv of 0.85

each fitting system element used will have a Cv of $0.6 \times \sqrt{2} \times \sqrt{9} = 2.55$

$Cv2.55 \approx 46mm^2$

From this catalog, SMC fitting KQH10-U01 has $S > 46mm^2$ \therefore use tube system $\varnothing 10mm$

TUBE FITTINGS TUBE FITTINGS: MINIATURE

MINIATURE FITTINGS: M3, M5, 1/8

- ✓ Compact and Space-Saving
- ✓ Tube has a large retaining force
- ✓ Hose Nipple ensures easy removal
- ✓ Accepts Nylon Tubes, Soft Nylon Tube and Polyurethane



PRODUCT SELECTOR
MANIFOLD:
M-5M



1/2 female diverted to 9 x M5

PRODUCT SELECTOR

BARB FITTING FOR SOFT TUBE:
M-3AU-4
M-5AU-4
M-5AU-6



PRODUCT SELECTOR

BARB ELBOW FOR SOFT TUBE:
M-3ALU-4
M-5ALU-6



PRODUCT SELECTOR

UNIVERSAL ELBOW:
M-3UL
M-5UL



PRODUCT SELECTOR

UNIVERSAL TEE:
M-3UT
M-5UT



PRODUCT SELECTOR

NIPPLE:
M-3N
M-5N



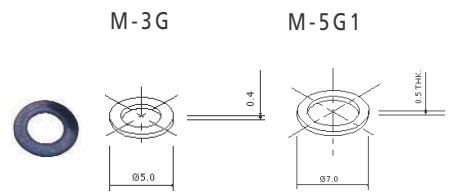
PRODUCT SELECTOR

PLUG:
M-3P
M-5P



PRODUCT SELECTOR

GASKET:



MORE SELECTIONS
SEE NEXT PAGE

HOW TO
ORDER
SEE NEXT PAGE

PRODUCT SELECTOR

HOSE NIPPLE:
M-5H-4
M-5H-6



PRODUCT SELECTOR

ELBOW:
M-5L



PRODUCT SELECTOR

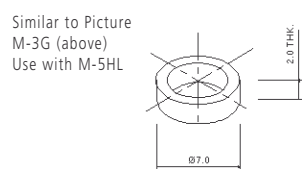
HOSE ELBOW:
M-5HL-4
M-5HL-6



Uses Gasket M-5GH

PRODUCT SELECTOR

GASKET:
M-5GH



Similar to Picture M-3G (above)
Use with M-5HL

PRODUCT SELECTOR

TEE:
M-5T



TUBE FITTINGS: MINIATURE

PRODUCT SELECTOR

EXTENSION FITTING:
M-5J



PRODUCT SELECTOR

UNIVERSAL NIPPLE:
M-5UN



PRODUCT SELECTOR

BULKHEAD:
M-5E



PRODUCT SELECTOR

BULKHEAD REDUCER:
M-5ER



M5 female to 1/8 female taper

PRODUCT SELECTOR

REDUCING BUSHING:
M-5B



M5 female to 1/8 male taper

PRODUCT SELECTOR

STRAIGHT ADAPTOR:
M-01H-4
M-01H-6



PRODUCT SELECTOR

STRAIGHT BARB CONNECTOR:
M-01AU-4
M-01AU-6

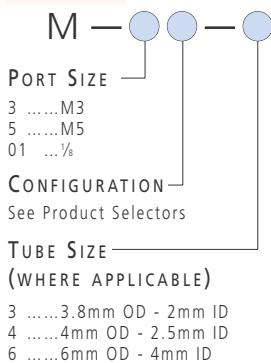


TECHNICAL SPECIFICATIONS

Applicable Tube Material		Nylon	Soft Nylon	Polyurethane
Applicable Tube Dia* OD/ID (mm)	M3	—	ø4/ø2.5	ø4/ø2.5
	M5 1/8	ø4/ø2.5 ø6/ø4	ø4/ø2.5 ø6/ø4	ø4/ø2.5, ø6/ø4
Max Operating Pressure		1MPa / 145PSI	0.8MPa / 116PSI	0.5MPa / 73PSI
Port Size		M3, M5, 1/8		
Thread		JIS B0209 class 2 (Metric coarse thread), JIS B0203 (Taper pipe thread)		

*Dimensions to BS5409 Part 1

HOW TO ORDER
MINIATURE FITTINGS



PRODUCT SELECTOR

MALE/MALE NIPPLE:
1/8-1/8 HEX
1/4-1/4 HEX
3/8-3/8 HEX
1/2-1/2 HEX
3/4-3/4 HEX



PRODUCT SELECTOR

FLUSH TAPER PLUGS:
1/8, 1/4, 3/8, 1/2, 3/4



HOW TO ORDER
MALE/MALE NIPPLE

- 1/8 BFAPP122-A
- 1/4 BFAPP122-B
- 3/8 BFAPP122-C
- 1/2 BFAPP122-D
- 3/4 BFAPP122-E

HOW TO ORDER
FLUSH TAPER PLUGS:

- 1/8 PLUG1/8
- 1/4 PLUG1/4
- 3/8 PLUG3/8
- 1/2 PLUG1/2

ONE-TOUCH MINI FITTINGS SERIES KJ

- ✔ For use with SMC miniature valves and actuators. M3 & M5 ported
- ✔ Compact One-Touch Collet Design allows easy disassembly with strong tube gripping
- ✔ For use from 10 Torr vacuum to 1MPa pressure
- ✔ Electroless Nickel Plated as standard

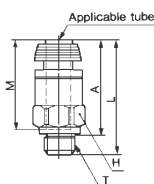


TECHNICAL SPECIFICATIONS

FluidAir
 Max Operating Pressure1MPa / 145PSI
 Operating Vacuum Pressure10 Torr~ (0.2PSI)
 Ambient and Fluid Temperature ...0~60°C / 32~140°F
 ThreadThread PortionJISB0211, class 2 (Metric Coarse Thread)
NutJISB0211, class 2 (Metric Fine Thread)
 SealFlat Gasket
 Possible to use joint avoiding copper materialC3604BD component, with electroless nickel plating

PRODUCT SELECTOR

MALE CONNECTOR: KJH

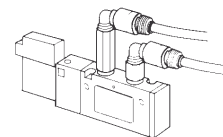
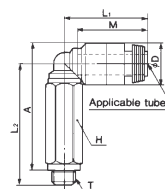


Applicable Tube O.D (mm)	Thread T	Model	H (Hex)	L	A	M	Effective Orifice (mm ²)	Weight (g)
3.2	M3x0.5	KJH23-M3	7	18	15.5	14.5	0.9	1.6
3.2	M5x0.8	KJH23-M5	7	18.5	15.5	14.5	3/2.5	2.1
3.2	R(PT)1/8	KJH23-01S	10	16.5	12.5	14.5	3/2.5	5
4	M3x0.5	KJH04-M3	8	18	15.5	14.5	0.9	1.9
4	M5x0.8	KJH04-M5	8	18.5	15.5	14.5	4	2.4
4	R(PT)1/8	KJH04-01S	10	17.5	13.5	14.5	4	3.4
6	M5x0.8	KJH06-M5	10	20	16.5	15.5	4	3.4
6	R(PT)1/8	KJH06-01S	10	21.5	17.5	15.5	10	5.1

Applicable Tube O.D (inch)	Thread T	Model	H (Hex)	L	A	M	Minimum Hole Diameter	Weight (g)
1/8	10-32UNF	KJH01-32	7	18.5	15.5	-	2.3	2.1
1/8	1/16	KJH01-33S	9.5	21.5	17.5	-	2.5	5.3
1/8	1/8	KJH01-34S	11.11	16.5	12.5	-	2.5	5
5/32	10-32UNF	KJH03-32	8	18.5	15.5	-	2.3	2.4
5/32	1/16	KJH03-33S	9.5	22	18	-	3	5.2
5/32	1/8	KJH03-34S	11.11	17.5	13.5	-	3	5.1
1/4	10-32UNF	KJH07-32	-	20.5	17.5	-	2.3	5.1
1/4	1/16	KJH07-33S	-	24	20	-	3.5	6.1
1/4	1/8	KJH07-34S	-	21	17	-	4.6	5.1

PRODUCT SELECTOR

EXTENDED MALE ELBOW: KJW



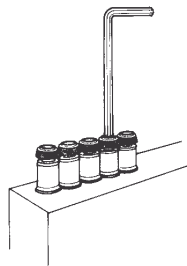
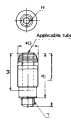
Applicable Tube O.D (mm)	Thread T	Model	H (Hex)	ØD	L1	L2	A	M	Effective Orifice (mm ²)	Weight (g)
3.2	M3x0.5	KJW23-M3	7	7.8	17	22.5	24	14.5	0.8	5
3.2	M5x0.8	KJW23-M5	7	7.8	17	25	26	14.5	2.6/2.2	6.3
3.2	R(PT)1/8	KJW23-01S	10	7.8	17	25	25	14.5	2.6/2.2	10.4
4	M3x0.5	KJW04-M3	7	8.9	17.5	23	25	14.5	0.8	5
4	M5x0.8	KJW04-M5	7	8.9	17.5	25.5	27	14.5	3.5	6.4
4	R(PT)1/8	KJW04-01S	10	8.9	17.5	25.5	26	14.5	3.5	10.6
6	M5x0.8	KJW06-M5	7	11	17.5	26.5	29	15.5	3.5	6.9
6	R(PT)1/8	KJW06-01S	10	11	19.5	28.5	30	15.5	9	11.5

Applicable Tube O.D (inch)	Thread T	Model	H (Hex)	ØD	L1	L2	A	M	Minimum Hole Diameter	Weight (g)
1/8	10-32UNF	KJW01-32	7	7.8	17	25	26	14.5	2.3	6.3
1/8	1/16	KJW01-33S	9.5	7.8	17	25	25	14.5	2.5	8.6
1/8	1/8	KJW01-34S	11.11	7.8	17	25	25	14.5	2.5	10.5
5/32	10-32UNF	KJW03-32	7	8.9	17.5	25.5	27	14.5	2.3	6.4
5/32	1/16	KJW03-33S	9.5	8.9	17.5	25.5	26	14.5	2.5	8.7
5/32	1/8	KJW03-34S	11.11	8.9	17.5	25.5	26	14.5	2.5	10.6
1/4	10-32UNF	KJW07-32	7	11.9	17.5	27	30	15.5	2.3	7.3
1/4	1/16	KJW07-33S	9.5	11.9	17.5	27	29	15.5	2.5	9.6
1/4	1/8	KJW07-34S	11.11	11.9	19.5	29.5	31.5	15.5	4.6	12.1

TUBE FITTINGS: ONE TOUCH MINI

PRODUCT SELECTOR

HEXAGON SOCKET HEAD MALE CONNECTOR: KJS

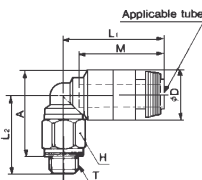


Applicable Tube O.D (mm)	Thread T	Model	H (Hex)	ØD	L	A	M	Effective Orifice (mm ²) Nylon/Urethane	Weight (g)
3.2	M3x0.5	KJS23-M3	1.5	7	18	15.5	14.5	1.4	1.4
3.2	M5x0.8	KJS23-M5	2	7	21.5	18	14.5	2.5	2.9
4	M3x0.5	KJS04-M3	1.5	8	18	15.5	14.5	1.4	1.5
4	M5x0.8	KJS04-M5	2.5	8	20.5	17	14.5	4	2.6
4	R(PT)1/8	KJS04-01S	3	9.8	21.5	17.5	14.5	4	5.3
6	M5x0.8	KJS06-M5	2.5	10	21.5	18	15.5	4	3.2
6	R(PT)1/8	KJS06-01S	4	10	22	18	15.5	10	5

Applicable Tube O.D (inch)	Thread T	Model	H (Hex)	ØD	L	A	M	Minimum Hole Diameter	Weight (g)
1/8	10-32UNF	KJS01-32	1.98	7	21.5	18.5	14.5	2	2.9
5/32	10-32UNF	KJS03-32	2.5	8	20.5	17.5	14.5	2.5	2.6
5/32	1/16	KJS03-33S	2.78	8	21.5	17.5	14.5	2.8	2.8
5/32	1/8	KJS03-34S	2.78	10.3	21.5	17.5	14.5	2.8	4.2
1/4	10-32UNF	KJS07-32	2.38	10.3	21.5	18	15.5	2.4	4.2
1/4	1/16	KJS07-33S	3.57	10.3	23	19	15.5	3.6	5
1/4	1/8	KJS07-34S	4.76	10.3	22	18	15.5	4.8	4.4

PRODUCT SELECTOR

MALE ELBOW: KJL

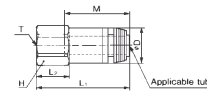


Applicable Tube O.D (mm)	Thread T	Model	H (Hex)	ØD	L1	L2	A	M	Effective Orifice (mm ²) Nylon/Urethane	Weight (g)
3.2	M3x0.5	KJL23-M3	7	7.8	17	12.5	14	14.5	0.8	2
3.2	M5x0.8	KJL23-M5	7	7.8	17	13	14	14.5	2.6/2.2	2.6
3.2	R(PT)1/8	KJL23-01S	10	7.8	17	15	15	14.5	2.6/2.2	6.7
4	M3x0.5	KJL04-M3	7	8.9	17.5	13	15	14.5	0.8	2.2
4	M5x0.8	KJL04-M5	7	8.9	17.5	13.5	15	14.5	3.5	2.7
4	R(PT)1/8	KJL04-01S	10	8.9	17.5	15.5	16	14.5	3.5	6.8
6	M5x0.8	KJL06-M5	7	11	17.5	14.5	17	15.5	3.5	3.1
6	R(PT)1/8	KJL06-01S	10	11	19.5	16.5	18	15.5	9	6.1

Applicable Tube O.D (inch)	Thread T	Model	H (Hex)	ØD	L1	L2	A	M	Minimum Hole Diameter	Weight (g)
1/8	10-32UNF	KJL01-32	7	7.8	17	13	14	14.5	2.3	2.6
1/8	1/16	KJL01-33S	9.5	7.8	17	18.5	16.3	14.5	2.5	4.4
1/8	1/8	KJL01-34S	11.11	7.8	17	15.5	15.5	14.5	2.5	5.2
5/32	10-32UNF	KJL03-32	7	8.9	17.5	13.5	15	14.5	2.3	2.7
5/32	1/16	KJL03-33S	9.5	8.9	17.5	17	17.5	14.5	2.5	4.5
5/32	1/8	KJL03-34S	11.11	8.9	17.5	16	16.5	14.5	2.5	6.8
1/4	10-32UNF	KJL07-32	7	11.9	17.5	15	18	15.5	2.3	3.3
1/4	1/16	KJL07-33S	9.5	11.9	17.5	18.5	20.5	15.5	2.5	5.3
1/4	1/8	KJL07-34S	11.11	11.9	19.5	17.5	19.5	15.5	4.6	6.4

PRODUCT SELECTOR

FEMALE UNION: KJF

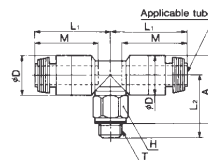


Applicable Tube O.D (mm)	Thread T	Model	H (Hex)	ØD	L	A	M	Effective Orifice (mm ²) Nylon/Urethane	Weight (g)
3.2	M3x0.5	KJF23-M3	7	7	18.5	6	14.5	3/2.5	2.6
3.2	M5x0.8	KJF23-M5	7	7	21	7.5	14.5	3/2.5	2.9
4	M3x0.5	KJF04-M3	8	8	18	5.5	14.5	4	3.2
4	M5x0.8	KJF04-M5	8	8	20.5	7.5	14.5	4	3.8
6	M5x0.8	KJF06-M5	10	10	20	7	15.5	10	5.1

Applicable Tube O.D (inch)	Thread T	Model	H (Hex)	ØD	L	A	M	Minimum Hole Diameter	Weight (g)
1/8	10-32UNF	KJF01-32	7	6.9	20.5	7.5	14.5	2.5	2.9
5/32	10-32UNF	KJF03-32	8	7.9	20.5	7.5	14.5	3	3.8
1/4	10-32UNF	KJF07-32	11.11	10.3	20	7	15.5	3	4.8

PRODUCT SELECTOR

BRANCH TEE: KJT



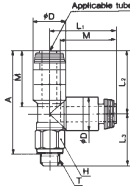
Applicable Tube O.D (mm)	Thread T	Model	H (Hex)	ØD	L1	L2	A	M	Effective Orifice (mm ²) Nylon/Urethane	Weight (g)
3.2	M3x0.5	KJT23-M3	7	7.8	17	13	14.5	14.5	0.9	2.6
3.2	M5x0.8	KJT23-M5	7	7.8	17	13.5	14.5	14.5	3.2/2.7	3.1
3.2	R(PT)1/8	KJT23-01S	10	7.8	17	15.5	15.5	14.5	3.2/2.7	7.3
4	M3x0.5	KJT04-M3	7	8.9	17	13.5	15.5	14.5	0.9	3
4	M5x0.8	KJT04-M5	7	8.9	17	14	15.5	14.5	4.5	3.5
4	R(PT)1/8	KJT04-01S	10	8.9	17	16	16.5	14.5	4.5	7.6
6	M5x0.8	KJT06-M5	7	11	17.5	15	17.5	15.5	4.5	4.2
6	R(PT)1/8	KJT06-01S	10	11	19	17.5	19	15.5	11	7.1

Applicable Tube O.D (inch)	Thread T	Model	H (Hex)	ØD	L1	L2	A	M	Minimum Hole Diameter	Weight (g)
1/8	10-32UNF	KJT01-32	7	7.8	17	13.5	14.5	14.5	2.3	3.1
1/8	1/16	KJT01-33S	9.5	7.8	17	17	16.5	14.5	2.5	6.5
1/8	1/8	KJT01-34S	11.11	7.8	17	16	15.5	14.5	2.5	7.3
5/32	10-32UNF	KJT03-32	7	8.9	17	14	15.5	14.5	2.3	3.5
5/32	1/16	KJT03-33S	9.5	8.9	17	17.5	18	14.5	2.5	6.8
5/32	1/8	KJT03-34S	11.11	8.9	17	16.5	17	14.5	2.5	7.6
1/4	10-32UNF	KJT07-32	7	11.9	17.5	15.5	18.5	15.5	2.3	4.4
1/4	1/16	KJT07-33S	9.5	11.9	17.5	18.5	20.5	15.5	2.5	7.2
1/4	1/8	KJT07-34S	11.11	11.9	19	18	20	15.5	4.6	8

TUBE FITTINGS: ONE TOUCH MINI

**PRODUCT
SELECTOR**

**MALE RUN TEE:
KJY**



Applicable Tube O.D (mm)	Thread T	Model	H (Hex)	ØD	L1	L2	L3	A	M	Effective Orifice (mm ²)	Weight (g)
3.2	M3x0.5	KJY23-M3	7	7.8	17	16.5	12.5	26.5	14.5	0.9	2.7
3.2	M5x0.8	KJY23-M5	7	7.8	17	16.5	13	26.5	14.5	3.2/2.7	3.2
3.2	R(PT)1/8	KJY23-01S	10	7.8	17	16.5	15	27.5	14.5	3.2/2.7	7.3
4	M3x0.5	KJY04-M3	7	8.9	17.5	16.5	13	27	14.5	0.9	3.1
4	M5x0.8	KJY04-M5	7	8.9	17.5	16.5	13.5	27	14.5	4.5	3.5
4	R(PT)1/8	KJY04-01S	10	8.9	17.5	16.5	15.5	28	14.5	4.5	7.6
6	M5x0.8	KJY06-M5	7	11	19	19	14.5	30.5	15.5	4.5	4.3
6	R(PT)1/8	KJY06-01S	10	11	19.5	18.5	16.5	31	15.5	11	7.1

Applicable Tube O.D (inch)	Thread T	Model	H (Hex)	ØD	L1	L2	L3	A	M	Minimum Hole Diameter	Weight (g)
1/8	10-32UNF	KJY01-32	7	7.8	17	16.5	13	26.5	14.5	2.3	3.2
1/8	1/16	KJY01-33S	9.5	7.8	17	16.5	16.5	29	14.5	2.5	5
1/8	1/8	KJY01-34S	11.11	7.8	17	16.5	15.5	28	14.5	2.5	7.3
5/32	10-32UNF	KJY03-32	7	8.9	17.5	16.5	13.5	27	14.5	2.3	3.5
5/32	1/16	KJY03-33S	9.5	8.9	17.5	16.5	17	29.5	14.5	2.5	5.3
5/32	1/8	KJY03-34S	11.11	8.9	17.5	16.5	16	28.5	14.5	2.5	7.6
1/4	10-32UNF	KJY07-32	7	11.9	19.5	19.5	15	31.5	15.5	2.3	4.6
1/4	1/16	KJY07-33S	9.5	11.9	19.5	19.5	18	33.5	15.5	2.5	6.7
1/4	1/8	KJY07-34S	11.11	11.9	19	19	17	32	15.5	4.6	7.5

**HOW TO
ORDER
SERIES KJ**

CONFIGURATION

- E.....Bulkhead Union
- F.....Female
- HMale Connector
-Straight Union
-Different Diameter Straight
- L.....Elbow (Male, Union, Plug-In, Reducer)
- RPlug-In Reducer
- S.....Hex Socket Head Male Connector
- T.....Tee (Branch, Union, Different Diameter)
- UUnion Y, Branch Y, Different Diameter Union, Plug-In Y
- WExtended Elbow
- XDifferent Diameter Plug-In
- YMale Run Tee



CONNECTION THREAD

- M3 ...M3x0.5mm
- M5 ...M5x0.8mm
- 1/8(PT)
- 32 ...10-32UNF
- 33S ...1/16 NPT
- 34S ...1/8 NPT

TUBE OD

- 23 ...ø3.2mm
- 04 ...ø4mm
- 06 ...ø6mm
- 01 ...ø1/8"
- 03 ...ø5/32"
- 07 ...ø1/4"

UNI ONE TOUCH FITTINGS

FITTINGS WITH UNI-THREAD SERIES KQ: BLACK BODY FITTINGS SERIES KQ2: WHITE BODY FITTINGS



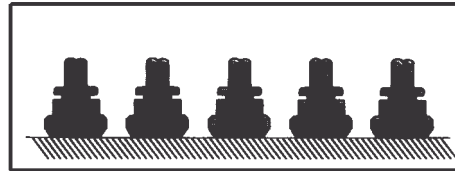
SERIES KQ2 ONE TOUCH FITTINGS



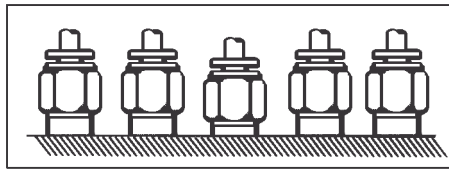
- ✓ Wide Range of Pressures low vacuum to 0.1MPa
- ✓ Wide Range of Applicable Tube Systems (4mm to 16mm)
- ✓ Minimized Resistance to Air Flow
- ✓ Easy and quick installation of tube
- ✓ A unique thread concept allows for compatibility with parallel and taper female threads. Uni-thread fits all female thread types* (Rc, Rp, G, NPT, NPTF, BSP, BSPT)
- ✓ No Thread Sealant required
- ✓ Space-Saving
- ✓ Uniform Mounting Height improves appearance
- ✓ Cuts assembly time by over 60%

✓ Constant mounting height saves space

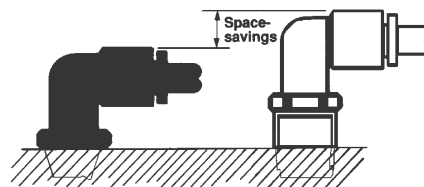
Lower height of screwed-in fittings save space and improves appearance



Uni-Threads

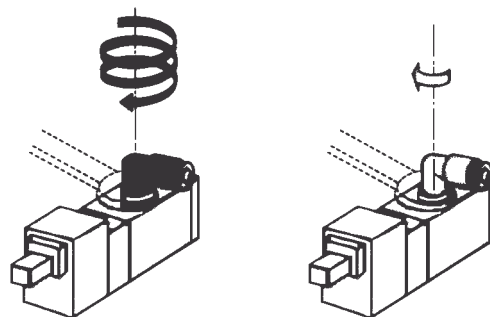


Conventional Threads



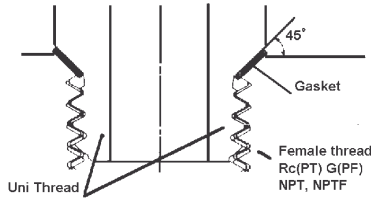
✓ Screw-In Time is reduced to 1/3

Existing Tapered Thread Series: 2 to 3 turns with a wrench after manual tightening
Uni-Thread Series: 1/4 to 1/2 turn with a wrench after manual tightening



Thread Type	Manual Tightening Time + Tool Tightening Time	Total	Ratio
Uni-Thread	6 sec + 4 sec	10 sec	1/3
Conventional Thread	4 sec + 26 sec	30 sec	1

UNITHREAD CONSTRUCTION



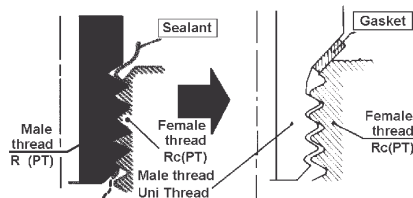
UNI THREAD RIDGE SHAPE

A new ridge shape has been created as a Uni-Thread for common application to Rc(PT), G(PF) NPT, and NPTF female threads with different thread diameters, pitches, tapered angles, ridge shapes, etc..

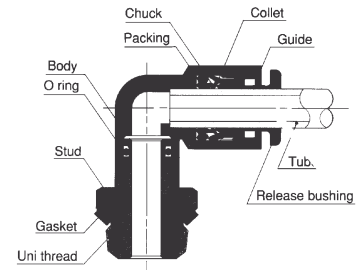
GASKET CONSTRUCTION

A gasket made of stainless sheet covered with laminated NBR on both sides is seated on the chamfer of a female thread to materialize a perfect sealing construction irrespective of the difference in thread diameters due to the difference in the types of female threads, variation in tolerance, difference in the size of chamfer.

(It is applicable to any female thread with ordinary chamfer.)



PARTS DESCRIPTION



TECHNICAL SPECIFICATIONS

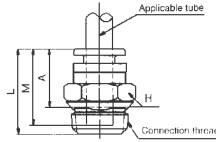
Fluid	Air
Max Operating Pressure	0.1MPa / 145PSI
Operating Vacuum Pressure	0.001MPa (Absolute) 0.2PSI
Applicable Tube Material	Nylon, Soft Nylon, Polyurethane
Proof Pressure	3MPa / 435PSI
Ambient Fluid Temperature	0 - 60°C / 32 ~ 140°F

TUBE FITTINGS UNI ONE TOUCH FITTINGS

PRODUCT
SELECTOR

MALE CONNECTOR : KQH (KQ2H)

Use to pipe in the same direction from female threaded portion. Most general type.



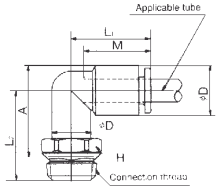
Applicable Tube OD (mm)	Connection Thread	Model	H (width Across Flats)	L	A	M	Effective Orifice (mm ²) Nylon
4	1/8	KQH04-U01	10	18.5	14.5	16	5.6
4	1/8	KQH04-U02	14	18	12	16	5.6
6	1/8	KQH06-U01	12	19.5	15.5	17	13.1
6	1/8	KQH06-U02	14	19.5	13	17	13.1
6	1/8	KQH06-U03	17	18.5	12.5	17	13.1
8	1/8	KQH08-U01	14	25	21	18.5	26.1
8	1/8	KQH08-U02	14	21.5	15.5	18.5	26.1
8	1/8	KQH08-U03	17	21	15	18.5	26.1
10	1/8	KQH10-U01	17	28	23	21	41.5
10	1/8	KQH10-U02	17	28	22	21	41.5
10	1/8	KQH10-U03	17	24	18	21	41.5
10	1/8	KQH10-U04	22	22	14	21	41.5
12	1/8	KQH12-U02	19	30.5	24.5	22	58.3
12	1/8	KQH12-U03	19	25.5	19.5	22	58.3
12	1/8	KQH12-U04	22	24.5	16.5	22	58.3
16	1/8	KQH16-U03	24	33.5	27.5	24	81
16	1/8	KQH16-U04	24	28.5	20.5	24	113

Applicable Tube OD (Inch)	Connection Thread	Model	H (width Across Flats)	L	A	M	Minimum Hole Diameter
1/8	1/8	KQH01-U01	11.11	19	15	15.5	2.5
1/8	1/4	KQH01-U02	14.29	17.5	11.5	15.5	2.5
5/32	1/8	KQH03-U01	11.11	19.5	15.5	16	3
5/32	1/4	KQH03-U02	14.29	19	13	16	3
3/16	1/8	KQH05-U01	12.7	19	15	16	3.5
3/16	1/4	KQH05-U02	14.29	17.5	11.5	16	3.5
1/4	1/8	KQH07-U01	14.29	22.5	18.5	17	4.6
1/4	1/4	KQH07-U02	14.29	20.5	14.5	17	4.6
1/4	3/8	KQH07-U03	17.46	18.5	12.5	17	4.6
5/16	1/8	KQH09-U01	14.29	25.5	21.5	18.5	6
5/16	1/4	KQH09-U02	14.29	21.5	15.5	18.5	6
5/16	3/8	KQH09-U03	17.46	21	15	18.5	6
3/8	1/4	KQH11-U02	17.46	28	22	21	7
3/8	3/8	KQH11-U03	17.46	28	22	21	7
3/8	1/2	KQH11-U04	22.23	22	14	21	7
1/2	1/4	KQH13-U02	22.23	30	24	22	33
1/2	3/8	KQH13-U03	22.23	28.5	22.5	22	30
1/2	1/2	KQH13-U04	22.23	25	17	22	28

PRODUCT
SELECTOR

MALE ELBOW : KQL (KQ2L)

Use to pipe in right angle to female threaded portion. Most general type.



Applicable Tube OD mm	Connection Thread	Model	H	øD1	øD2	L1	L2	A	M	Effective Orifice (mm ²) Nylon
4	1/8	KQL04-U01	10	10.4	10	18	20	21.5	16	4.2
4	1/8	KQL04-U02	14	10.4	10	18	22	21.5	16	4.2
6	1/8	KQL06-U01	10	12.8	10	20	21.5	23.5	17	11.4
6	1/8	KQL06-U02	14	12.8	10	20	23	23.5	17	11.4
6	1/8	KQL06-U03	17	12.8	10	20	24	23.5	17	11.4
8	1/8	KQL08-U01	12	15.2	12	23	22.5	26	18.5	21.6
8	1/8	KQL08-U02	14	15.2	12	23	24.5	26	18.5	21.6
8	1/8	KQL08-U03	17	15.2	12	23	25.5	27	18.5	21.6
10	1/8	KQL10-U01	17	18.5	17	26.5	25	29.5	21	21.6
10	1/8	KQL10-U02	17	18.5	17	26.5	26.5	30	21	35.2
10	1/8	KQL10-U03	17	18.5	17	26.5	27	30.5	21	35.2
10	1/8	KQL10-U04	22	18.5	17	26.5	30	31.5	21	35.2
12	1/8	KQL12-U02	17	20.9	17	28.5	27	31.5	22	50.2
12	1/8	KQL12-U03	17	20.9	17	28.5	28	32.5	22	50.2
12	1/8	KQL12-U04	22	20.9	17	28.5	31	33.5	22	50.2
16	1/8	KQL16-U03	22	26.5	21	33	40.5	33	24	71
16	1/8	KQL16-U04	22	26.5	21	33	40.5	35	24	100

H: Width Across Flats

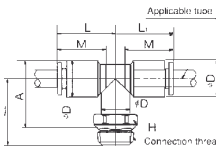
Applicable Tube OD Inch	Connection Thread	Model	H	øD1	øD2	L1	L2	A	M	Minimum Hole Diameter
1/8	1/8	KQL01-U01	11.11	9.6	10	17.5	20	21	15.5	2.5
1/8	1/4	KQL01-U02	14.29	9.6	10	17.5	22	21	15.5	2.5
5/32	1/8	KQL03-U01	11.11	10.4	10	18	20	21.5	16	3
5/32	1/4	KQL03-U02	14.29	10.4	10	18	22.5	21.5	16	3
3/16	1/8	KQL05-U01	11.11	11.4	10	19.5	20.5	22.5	16	3.5
3/16	1/4	KQL05-U02	14.29	11.4	10	19.5	20.5	22.5	16	3.5
1/4	1/8	KQL07-U01	11.11	13.2	10	20.5	21.5	24	17	4.6
1/4	1/4	KQL07-U02	14.29	13.2	10	20.5	23.5	24.5	17	4.6
1/4	3/8	KQL07-U03	17.46	13.2	10	20.5	24.5	25	17	4.6
5/16	1/8	KQL09-U01	14.29	15.2	12	23.5	22.5	26	18.5	6
5/16	1/4	KQL09-U02	14.29	15.2	12	23.5	24.5	26.5	18.5	6
5/16	3/8	KQL09-U03	17.46	15.2	12	23.5	25.5	27	18.5	6
3/8	1/4	KQL11-U02	17.46	17.9	17	25.5	26.5	29.5	21	7
3/8	3/8	KQL11-U03	17.46	17.9	17	25.5	27	30	21	7
3/8	1/2	KQL11-U04	17.46	17.9	17	25.5	30	31	21	7
1/2	1/4	KQL13-U02	17.46	21.7	17	28	28.5	33	22	9
1/2	3/8	KQL13-U04	17.46	21.7	17	28	32.5	33.5	22	9.6
1/2	1/2	KQL13-U04	22.23	21.7	17	28	32	35	22	9.6

H: Width Across Flats

PRODUCT
SELECTOR

BRANCH TEE : KQT (KQ2T)

Use to branch line from female thread of both side 90° direction.



Applicable Tube OD mm	Connection Thread	Model	H	øD1	øD2	L1	L2	A	M	Effective Orifice (mm ²) Nylon
4	1/8	KQT04-U01	10	10.4	10	18	20	21.5	16	6.0
4	1/8	KQT04-U02	14	10.4	10	18	22	21.5	16	6.0
6	1/8	KQT06-U01	10	12.8	10	20	21.5	23.5	17	13.9
6	1/8	KQT06-U02	14	12.8	10	20	23	23.5	17	13.9
6	1/8	KQT06-U03	17	12.8	10	20	24	24.5	17	13.9
8	1/8	KQT08-U01	12	15.2	12	23	22.5	26	18.5	26.3
8	1/8	KQT08-U02	14	15.2	12	23	24.5	26	18.5	26.3
8	1/8	KQT08-U03	17	15.2	12	23	25.5	27	18.5	26.3
10	1/8	KQT10-U01	17	18.5	17	26.5	25	29.5	21	40.8
10	1/8	KQT10-U02	17	18.5	17	26.5	26.5	30	21	40.8
10	1/8	KQT10-U03	17	18.5	17	26.5	27	30.5	21	40.8
10	1/8	KQT10-U04	22	18.5	17	26.5	30	31.5	21	40.8
12	1/8	KQT12-U02	17	20.9	17	28.5	27	31.5	22	57.2
12	1/8	KQT12-U03	17	20.9	17	28.5	28	32.5	22	57.2
12	1/8	KQT12-U04	22	20.9	17	28.5	31	33.5	22	57.2
16	1/8	KQT16-U03	22	26.5	21	33	40.5	33	24	71
16	1/8	KQT16-U04	22	26.5	21	33	40.5	35	24	100

H: Width Across Flats

Applicable Tube OD Inch	Connection Thread	Model	H	øD1	øD2	L1	L2	A	M	Minimum Hole Diameter
1/8	1/8	KQT01-U01	11.11	9.6	10	17.5	20	21	15.5	2.5
1/8	1/4	KQT01-U02	14.29	9.6	10	17.5	22	21	15.5	2.5
5/32	1/8	KQT03-U01	11.11	10.4	10	18	20	21.5	16	3
5/32	1/4	KQT03-U02	14.29	10.4	10	18	22.5	21.5	16	3
3/16	1/8	KQT05-U01	11.11	11.4	10	19.5	20.5	22.5	16.5	3.5
3/16	1/4	KQT05-U02	14.29	11.4	10	19.5	20.5	22.5	16.5	3.5
1/4	1/8	KQT07-U01	11.11	13.2	10	20.5	21.5	24	17	4.6
1/4	1/4	KQT07-U02	14.29	13.2	10	20.5	23.5	24.5	17	4.6
1/4	3/8	KQT07-U03	17.46	13.2	10	20.5	24.5	25	17	4.6
5/16	1/8	KQT09-U01	12.7	15.2	12	23.5	22.5	26	18.5	6
5/16	1/4	KQT09-U02	14.29	15.2	12	23.5	24.5	26.5	18.5	6
5/16	3/8	KQT09-U03	17.46	15.2	12	23.5	25.5	27	18.5	6
3/8	1/4	KQT11-U01	17.46	17.9	17	25.5	26.5	29.5	21	7
3/8	3/8	KQT11-U02	17.46	17.9	17	25.5	27	30	21	7
3/8	1/2	KQT11-U03	17.46	17.9	17	25.5	30	31	21	7
1/2	1/4	KQT13-U02	17.46	21.7	17	28	28.5	33	22	9
1/2	3/8	KQT13-U03	17.46	21.7	17	28	32.5	33.5	22	9.6
1/2	1/2	KQT13-U04	22.23	21.7	17	28	32	35	22	9.6

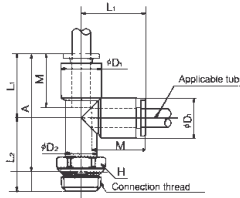
H: Width Across Flats

MORE SELECTIONS
SEE NEXT PAGE

PRODUCT
SELECTOR

MALE RUN TEE : KQY (KQ2Y)

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



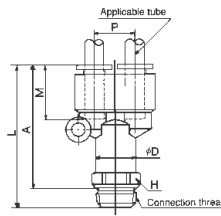
Applicable Tube OD mm	Connection Thread Uni thread	Model	H (Width Across Flats)	øD1	øD2	L1	L2	A	M	Effective Orifice (mm ²) Nylon
4	1/8	KQY04-U01	10	10.4	10	18	20	34	16	6.4
4	1/4	KQY04-U02	14	10.4	10	18	22	34.5	16	6.4
6	1/8	KQY06-U01	10	12.8	10	20	21.5	37.5	17	13.4
6	1/4	KQY06-U02	14	12.8	10	20	23	37	17	13.4
6	3/8	KQY06-U03	17	12.8	10	20	24	38	17	13.4
8	1/8	KQY08-U01	12	15.2	12	23	22.5	41.5	18.5	25.6
8	1/4	KQY08-U02	14	15.2	12	23	24.5	41.5	18.5	25.6
8	3/8	KQY08-U03	17	15.2	12	23	25.5	42.5	18.5	25.6
10	1/8	KQY10-U01	17	18.5	17	26.5	25	46.5	21	40
10	1/4	KQY10-U02	17	18.5	17	26.5	26.5	47.5	21	40
10	3/8	KQY10-U03	17	18.5	17	26.5	27	48	21	40
10	1/2	KQY10-U04	22	18.5	17	26.5	30	49	21	40
12	1/8	KQY12-U01	17	20.9	17	28.5	27	49.5	22	57.4
12	1/4	KQY12-U03	17	20.9	17	28.5	28	50.5	22	57.4
12	3/8	KQY12-U04	22	20.9	17	28.5	31	51.5	22	57.4
16	1/8	KQY16-U03	22	26.5	21	33	40.5	66	24	81
16	1/2	KQY16-U04	22	26.5	21	33	40.5	63	24	113

Applicable Tube OD Inch	Connection Thread Uni thread	Model	H (Width Across Flats)	øD1	øD2	L1	L2	A	M	Minimum Hole Diameter
1/8	1/8	KQY01-U01	11.11	9.6	10	17.5	20	33.5	15.5	2.5
1/8	1/4	KQY01-U02	14.29	9.6	10	17.5	22	33.5	15.5	2.5
5/32	1/8	KQY03-U01	11.11	10.4	10	18	20	34	16	3
5/32	1/4	KQY03-U02	14.29	10.4	10	18	22.5	34.5	16	3
3/16	1/8	KQY05-U01	11.11	11.4	10	19.5	20.5	36	16.5	3.5
3/16	1/4	KQY05-U02	14.29	11.4	10	19.5	23	36.5	16.5	3.5
1/4	1/8	KQY07-U01	11.11	13.2	10	20.5	21.5	38	17	4.6
1/4	1/4	KQY07-U02	14.29	13.2	10	20.5	23.5	37.5	17	4.6
1/4	3/8	KQY07-U03	17.46	13.2	10	20.5	24.5	39	17	4.6
5/16	1/8	KQY09-U01	12.7	15.2	12	23.5	22.5	42	18.5	6
5/16	1/4	KQY09-U02	14.29	15.2	12	23.5	24.5	42	18.5	6
5/16	3/8	KQY09-U03	17.46	15.2	12	23.5	25.5	43	18.5	6
3/8	1/4	KQY11-U02	17.46	17.9	17	25.5	26.5	46	21	7
3/8	3/8	KQY11-U03	17.46	17.9	17	25.5	27	46.5	21	7
3/8	1/2	KQY11-U04	22.23	17.9	17	25.5	30	47.5	21	7
1/2	1/4	KQY13-U02	17.46	21.7	17	28	28.5	50.5	22	9
1/2	3/8	KQY13-U03	17.46	21.7	17	28	28.5	50.5	22	9.6
1/2	1/2	KQY13-U04	22.23	21.7	17	28	32	52	22	9.6

PRODUCT
SELECTOR

BRANCH "Y" : KQU (KQ2U)

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



Applicable Tube OD mm	Connection Thread Uni Thread	Model	H (Width Across Flats)	øD	L	P	A	M	Effective Orifice (mm ²) Nylon
4	1/8	KQU04-U01	11	10.4	40	10.4	36	16	4.2
4	1/4	KQU04-U02	14	10.4	42	10.4	36	16	4.2
6	1/8	KQU06-U01	13	12.8	43.5	12.8	39.5	17	13.4
6	1/4	KQU06-U02	14	12.8	45	12.8	39	17	13.4
6	3/8	KQU06-U03	17	12.8	46	12.8	40	17	13.4
8	1/8	KQU08-U01	17	15.2	50.5	15.2	46.5	18.5	25.6
8	1/4	KQU08-U02	17	15.2	52	15.2	46	18.5	25.6
8	3/8	KQU08-U03	17	15.2	51.5	15.2	45.5	18.5	25.6
10	1/8	KQU10-U02	19	18.5	57.5	18.5	51.5	21	40
10	1/4	KQU10-U03	19	18.5	57.5	18.5	51.5	21	40
10	3/8	KQU10-U04	22	18.5	59	18.5	51	21	40
12	1/8	KQU12-U02	22	20.9	61	20.9	55	22	57.4
12	1/4	KQU12-U03	22	20.9	61	20.9	55	22	57.4
12	3/8	KQU12-U04	22	20.9	62.5	20.9	54.5	22	57.4

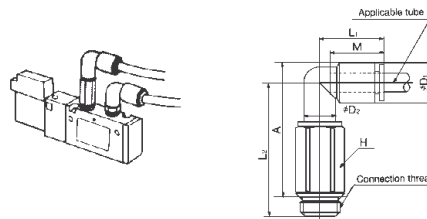
Applicable Tube OD Inch	Connection Thread Uni Thread	Model	H (Width Across Flats)	øD	L	P	A	M	Minimum Hole Diameter
1/8	1/8	KQU01-U01	12.7	9.6	38.5	9.6	34.5	15.5	2.5
1/8	1/4	KQU01-U02	14.29	9.6	40.5	9.6	34.5	15.5	2.5
5/32	1/8	KQU03-U01	12.7	10.4	40	10.4	36	16	3
5/32	1/4	KQU03-U02	14.29	10.4	42	10.4	36	16	3
3/16	1/8	KQU05-U01	12.7	11.4	42	11.4	38	16.5	3.5
3/16	1/4	KQU05-U02	14.29	11.4	44.5	11.4	39	16.5	3.5
1/4	1/8	KQU07-U01	14.29	13.2	44.5	13.2	40.5	17	4.6
1/4	1/4	KQU07-U02	14.29	13.2	46	13.2	40	17	4.6
1/4	3/8	KQU07-U03	17.46	13.2	46.5	13.2	40.5	17	4.6
5/16	1/8	KQU09-U03	17.46	15.2	50.5	15.2	46.5	18.5	6
5/16	1/4	KQU09-U04	17.46	15.2	52	15.2	46	18.5	6
5/16	3/8	KQU09-U02	17.46	15.2	51.5	15.2	45.5	18.5	6
3/8	1/4	KQU11-U02	19.05	17.9	56.5	17.9	50.5	21	7
3/8	3/8	KQU11-U03	19.05	17.9	56.5	17.9	50.5	21	7
3/8	1/2	KQU11-U04	22.23	17.9	59	17.9	51	21	7
1/2	1/4	KQU13-U02	22.23	21.7	61	21.7	55	22	9.6
1/2	3/8	KQU13-U03	22.23	21.7	61	21.7	55	22	9.6
1/2	1/2	KQU13-U04	22.23	21.7	62.7	21.7	54.7	22	9.6

PRODUCT
SELECTOR

EXTENDED MALE ELBOW : KQW (KQ2W)

Basically use in the same way as elbow union.

Point of difference is that it is used to prevent interference of joints for stereoping.



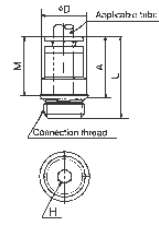
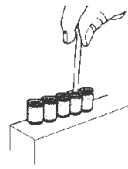
Applicable Tube OD mm	Connection Thread Uni Thread	Model	H (Width Across Flats)	øD1	øD2	L1	L2	A	M	Effective Orifice (mm ²) Nylon
4	1/8	KQW04-U01	10	10.4	10	18	34.5	35.5	16	4
4	1/4	KQW04-U02	14	10.4	10	18	37	38.5	16	4
6	1/8	KQW06-U01	10	12.8	10	20	38.5	41	17	10.9
6	1/4	KQW06-U02	14	12.8	10	20	40.5	41	17	10.9
6	3/8	KQW06-U03	17	12.8	10	20	41.5	42	17	10.9
8	1/8	KQW08-U01	12	15.2	12	23	43.5	47.5	18	20.5
8	1/4	KQW08-U02	14	15.2	12	23	45.5	47	18	20.5
8	3/8	KQW08-U03	17	15.2	12	23	46.5	48	18	20.5
10	1/8	KQW10-U02	17	18.5	17	26.5	52.5	56	21	33.5
10	1/4	KQW10-U03	17	18.5	17	26.5	52.5	56	21	33.5
10	3/8	KQW10-U04	22	18.5	17	26.5	54.5	56	21	33.5
12	1/8	KQW12-U02	17	20.9	17	28.5	54	58.5	22	47.7
12	1/4	KQW12-U03	17	20.9	17	28.5	54	58.5	22	47.7
12	3/8	KQW12-U04	22	20.9	17	28.5	56	58.5	22	47.7

Applicable Tube OD Inch	Connection Thread Uni Thread	Model	H (Width Across Flats)	øD1	øD2	L1	L2	A	M	Minimum Hole Diameter
1/8	1/8	KQW01-U01	11.11	9.6	10	17.5	35	35.5	15.5	2.5
1/8	1/4	KQW01-U02	14.29	9.6	10	17.5	36	35	15.5	2.5
5/32	1/8	KQW03-U01	11.11	10.4	10	18	35.5	36.5	16	3
5/32	1/4	KQW03-U02	14.29	10.4	10	18	41.5	41	16	3
3/16	1/8	KQW05-U01	11.11	11.4	10	19.5	36	37.5	16.5	3.5
3/16	1/4	KQW05-U02	14.29	11.4	10	19.5	40	40	16.5	3.5
1/4	1/8	KQW07-U01	11.11	13.2	10	20.5	39	41.5	17	4.6
1/4	1/4	KQW07-U02	14.29	13.2	10	20.5	41	41.5	17	4.6
1/4	3/8	KQW07-U03	17.46	13.2	10	20.5	42	42.5	17	4.6
5/16	1/8	KQW09-U01	12.7	15.2	12	23.5	40	43.5	18.5	6
5/16	1/4	KQW09-U02	14.29	15.2	12	23.5	45	47	18.5	6
5/16	3/8	KQW09-U03	17.46	15.2	12	23.5	45.5	47	18.5	6
3/8	1/4	KQW11-U02	17.46	17.9	17	25.5	51	54	21	7
3/8	3/8	KQW11-U03	17.46	17.9	17	25.5	51.5	54.5	21	7
3/8	1/2	KQW11-U04	22.23	17.9	17	25.5	55.5	56.5	21	7
1/2	1/4	KQW13-U02	17.46	21.7	17	28	53	58	22	9
1/2	3/8	KQW13-U03	17.46	21.7	17	28	53.5	58.5	22	9.6
1/2	1/2	KQW13-U04	22.23	21.7	17	28	57.5	60.5	22	9.6

TUBE FITTINGS UNI ONE TOUCH FITTINGS

PRODUCT
SELECTOR

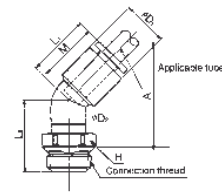
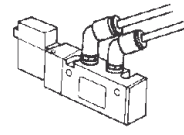
HEXAGON SOCKET HEAD MALE CONNECTOR : KQS (KQ2S)
Male connector for narrow space to tighten hexagon socket head in body by hexagon wrench.



Applicable Tube OD mm	Connection Thread Uni Thread	Model	H (Width Across Flats)	ϕD	L	A	M	Effective Orifice (mm ²)	Nylon
4	1/8	KQS04-U01	3	10	23	18	16	4.1/3.6	
6	1/8	KQS06-U01	4	11.8	24	19	17	10/9.9	
6	1/8	KQS06-U02	4	13.5	25	18.5	17	10.7/10	
8	1/8	KQS08-U01	5	14	29	22	18.5	17.2/16.2	
8	1/8	KQS08-U02	6	14	28	21.5	18.5	23.3/16.2	
8	1/8	KQS08-U03	6	17	26.5	20	18.5	23.3/16.2	
10	1/8	KQS10-U01	5	17	31.5	24.5	21	17.2/10	
10	1/8	KQS10-U02	8	17	28.5	22	21	39/26.6	
10	1/8	KQS10-U03	8	17	26.5	20	21	39/26.6	
10	1/8	KQS10-U04	8	21	27	19	21	39/26.6	
12	1/8	KQS12-U02	8	19	35	25.5	22	46/44.5	
12	1/8	KQS12-U03	9	19	28	19	22	60/44.5	
12	1/8	KQS12-U04	9	21	27	19	22	60/44.5	

PRODUCT
SELECTOR

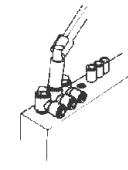
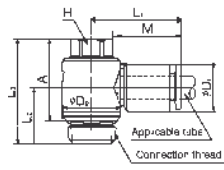
45° MALE ELBOW : KQK (KQ2K)
Use to tubing toward 45° from the thread part.
Intermediate type between the male connector and the male elbow.



Applicable Tube OD mm	Connection Thread Uni Thread	Model	H (Width Across Flats)	ϕD_1	ϕD_2	L1	L2	A	M	Effective Orifice (mm ²)	Nylon
4	1/8	KQK04-U01	10	10.4	10	17	18.5	30	16	3.4	
4	1/8	KQK04-U02	14	10.4	10	17	20.5	30.5	16	3.4	
6	1/8	KQK06-U01	10	12.8	10	18	18.5	31	17	8.7	
6	1/8	KQK06-U02	14	12.8	10	18	20.5	31	17	8.7	
6	1/8	KQK06-U03	17	12.8	10	18	21.5	32	17	8.7	
8	1/8	KQK08-U01	12	15.2	12	20.5	20	35	18.5	19.7	
8	1/8	KQK08-U02	14	15.2	12	20.5	22	35	18.5	19.7	
8	1/8	KQK08-U03	17	15.2	12	20.5	23	36	18.5	19.7	
10	1/8	KQK10-U01	17	18.5	17	24	22	38	21	30.9	
10	1/8	KQK10-U02	17	18.5	17	24	23.5	40.5	21	30.9	
10	1/8	KQK10-U03	17	18.5	17	24	24	41	21	30.9	
10	1/8	KQK10-U04	22	18.5	17	24	27	42	21	30.9	
12	1/8	KQK12-U02	17	20.9	17	25	24	42	22	44.5	
12	1/8	KQK12-U03	17	20.9	17	25	24.5	42.5	22	44.5	
12	1/8	KQK12-U04	22	20.9	17	25	27.5	43.5	22	44.5	

PRODUCT
SELECTOR

UNIVERSAL MALE ELBOW : KQV (KQ2V)
Elbow union for a narrow space to clamp the hexagon head of body with box wrench.

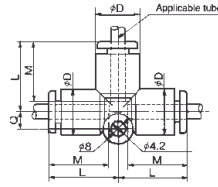


Applicable Tube OD mm	Connection Thread Uni Thread	Model	H (Width Across Flats)	ϕD_1	ϕD_2	L1	L2	L3	A	M	Effective Orifice (mm ²)	Nylon
4	1/8	KQV04-U01	8	10.4	13.4	22	13.5	25.5	21.5	16	2.9	
6	1/8	KQV06-U01	8	12.8	13.4	24	13.5	25.5	21.5	17	7.5	
6	1/8	KQV06-U02	10	12.8	15.4	23.5	15.5	28	22	17	7.5	
8	1/8	KQV08-U01	12	15.2	17.6	28.5	14.5	27.5	23.5	18.5	11.2	
8	1/8	KQV08-U02	12	15.2	17.6	28.5	16.5	29.5	23.5	18.5	11.2	
8	1/8	KQV08-U03	14	15.2	20.6	27.5	18.5	34	28	18.5	14.3	
10	1/8	KQV10-U02	14	18.5	20.6	31	18.5	34	28	21	27	
10	1/8	KQV10-U03	14	18.5	20.6	31	18.5	34	28	21	27	
12	1/8	KQV12-U03	17	20.9	25.2	34	20	36.5	30.5	22	39	
12	1/8	KQV12-U04	17	20.9	25.2	34	22.5	39.5	31.5	22	39	

PRODUCT SELECTOR

UNION TEE : KQT (KQ2T)

Use to branch connection of tubes of both side 90° direction.



UNION TEE : KQT (KQ2T)

Applicable Tube OD Inch	Model	ϕD	L	Q	M	Minimum Hole Dia
1/8	KQT01-00	9.6	17.5	4.3	15.5	2.5
5/32	KQT03-00	10.4	18	4.5	16	3
3/16	KQT05-00	11.4	19.5	4.8	16.5	3.5
1/4	KQT07-00	13.2	20.5	5.3	17	4.6
5/8	KQT09-00	15.2	23	6	18.5	6
3/8	KQT11-00	17.9	26	6.6	21	7
1/2	KQT13-00	21.7	29	7.8	22	9.6

UNION TEE : KQT (KQ2T)

Applicable Tube OD mm	Model	ϕD	L	Q	M	Effective Orifice (mm ²)	
						Nylon	Urethane
3.2	KQT23-00	9.6	17.5	4.3	15.5	3.4	2.9
4	KQT04-00	10.4	18	4.5	16	6.4	6.4
6	KQT06-00	12.8	20	5.3	17	13.4	13.4
8	KQT08-00	15.2	23	6	18.5	25.6	17.7
10	KQT10-00	18.5	26.5	6.8	21	40	28.4
12	KQT12-00	20.9	28.5	7.5	22	57.4	45.4
16	KQT16-00	26.5	33	10	24	100	(84)

Note) Parenthesized Dimensions are for Soft Nylon

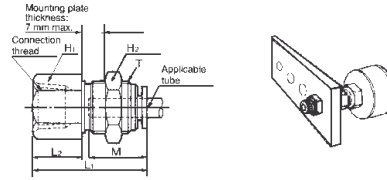
DIFFERENT DIAMETER UNION TEE : KQT (KQ2T)

Applicable Tube OD mm	Model	ϕD_1	ϕD_2	L ₁	L ₂	Q	M ₁	M ₂	Effective Orifice (mm ²)		
									Nylon	Urethane	
3.2	4	KQT23-04	10.4	9.6	18.3	17.5	4.3	16	15.5	3.8	3.5
4	6	KQT04-06	12.8	10.4	19.3	18	4.5	17	16	7.1	6.5
6	8	KQT06-08	15.2	12.8	22.7	20	5.3	18.5	17	16.4	16.4
8	10	KQT08-10	18.5	15.2	26.4	23	6	21	18.5	36	27.2
10	12	KQT10-12	20.9	18.5	28.4	26.5	6.8	22	21	56	44.5

PRODUCT SELECTOR

BULKHEAD CONNECTOR : KQE (KQ2E)

Use for connection of a tube and a male thread for installation on panel.



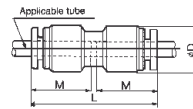
Applicable Tube OD mm	Connection Thread Rc(PT)	Model	T (M)	H1	H2	L1	L2	Mounting Hole	M	Effective Orifice (mm ²) Nylon/Ureth
				(Width Across Flats)	(Width Across Flats)					
3.2	1/8	KQE23-02	M12x1	17	14	31.5	15.5	13	15.5	3.4/2.9
4	1/4	KQE04-01	M12x1	14	14	27.5	11	13	16	5.6
4	1/4	KQE04-02	M12x1	17	14	31	15	13	16	5.6
6	3/8	KEQ06-01	M14x1	17	17	28	11	15	17	13.1
6	1/2	KQE06-02	M14x1	17	17	31.5	15	15	17	13.1
6	3/8	KQE06-03	M14x1	19	17	33.5	17	15	17	13.1
8	1/2	KQE08-02	M16x1	17	19	33	12	17	18.5	26.1/18
8	3/4	KQE08-03	M16x1	19	19	35	15	17	18.5	26.1/18
10	3/4	KEQ10-02	M20x1	22	24	35	12	21	21	41.5/29.5
10	1/2	KQE10-03	M20x1	24	24	34.5	15	21	21	41.5/29.5
12	3/4	KQE12-03	M22x1	24	27	37	15	23	22	58.3/46.1
12	1/2	KQE12-04	M22x1	24	27	41	18	23	22	58.3/46.1
16	3/4	KQE16-03	M26x1.5	30	30	39	14	27	24	96(96)
16	1/2	KQE16-04	M26x1.5	30	30	41	18	27	24	113(96)

Applicable Tube OD Inch	Connection Thread Rc(PT)	Model	T UNF	H1	H2	L1	L2	Mounting Hole	M	Minimum Hole Diameter
				(Width Across Flats)	(Width Across Flats)					
1/8	1/4	KQE01-35	1/2-20	17.46	17.46	31.5	15	14	15.5	2.5
5/32	1/4	KQE03-35	1/2-20	17.46	17.46	31.5	15	14	16	3
3/16	1/8	KQE05-34	9/16-18	17.46	17.46	28.5	13	15	16.5	3.5
1/4	1/4	KEQ07-35	9/16-18	17.46	17.46	30.5	14.5	15	17	4.6
5/16	3/8	KQE09-36	3/4-16	22.23	22.23	35.5	15	20	18.5	6
3/8	3/8	KQE11-36	1/8-14	25.4	25.4	35.5	14.5	23	21	7
1/2	3/8	KQE13-36	1-12	28.57	28.57	36.5	14.5	26	22	9.6
1/2	1/2	KQE13-37	1-12	28.57	28.57	40.5	18.5	26	22	9.6

PRODUCT SELECTOR

STRAIGHT UNION : KQH (KQ2H)

Use to connect tubes in the same direction.



Applicable Tube OD mm	Model	ϕD	L	M	Effective Orifice (mm ²) Nylon/ Urethane
3.2	KQH23-00	9.6	31.5	15.5	3.4/2.9
4	KQH04-00	10.4	32.5	16	5.6/5.6
6	KQH06-00	12.8	34.5	17	13.1/13.1
8	KQH08-00	15.2	38.5	18.5	26.1/18
10	KQH10-00	18.5	42.5	21	41.5/29.5
12	KQH12-00	20.9	44.5	22	58.3/46.1

Applicable Tube OD Inch	Model	ϕD	L	M	Minimum Hole Diameter
1/8	KQH01-00	9.6	31.5	15.5	2.5
5/32	KQH03-00	10.4	32.5	16	3
3/16	KQH05-00	11.4	34	16.5	3.5
1/4	KQH07-00	13.2	34.5	17	4.6
5/16	KQH09-00	15.2	38.5	18.5	6
3/8	KQH11-00	17.9	42.5	21	7
1/2	KQH13-00	21.7	44.5	22	9.6

DIFFERENT DIAMETER STRAIGHT UNION : KQH (KQ2H)

Applicable Tube OD mm	Model	ϕD	L	M ₁	M ₂	Effective Orifice (mm ²)		
						Nylon	Urethane	
3.2	4	KQH23-04	10.4	32.5	15.5	16	3.2	2.7
4	6	KQH04-06	12.8	34.5	16	17	4.2	4.2
6	8	KQH06-08	15.2	38.5	17	18.5	10.7	10.7
8	10	KQH08-10	18.5	42	18.5	21	24.1	16.7
10	12	KQH10-12	20.9	44.5	21	22	37.6	28.2

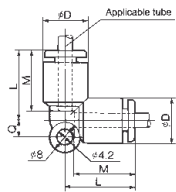
SERIES KQ2 ONE TOUCH FITTINGS



TUBE FITTINGS ONE TOUCH FITTINGS

**PRODUCT
SELECTOR**

UNION ELBOW : KQL (KQ2L)
Use to connect tubes in right angle.

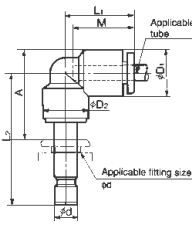


Applicable Tube OD mm	Model	øD	L	Q	M	Effective Orifice (mm ²) Nylon/Urethane
3.2	KQL23-00	9.6	17.5	4.3	15.5	3/2.5
4	KQL04-00	10.4	18	4.5	16	4.2/4.2
6	KQL06-00	12.8	20	5.3	17	11.4/11.4
8	KQL08-00	15.2	23	6	18.5	21.6/14.9
10	KQL10-00	18.5	26.5	6.8	21	35.2/25
12	KQL12-00	20.9	28.5	7.5	22	50.2/39.7
16	KQL16-00	26.5	33	10	24.5	100/(84)

Applicable Tube OD Inch	Model	øD	L	Q	M	Minimum Hole Diameter
1/8	KQL01-00	9.6	17.5	4.3	15.5	2.5
5/32	KQL03-00	10.4	18	4.5	16	3
3/16	KQL05-00	11.4	19.5	4.8	16.5	3.5
1/4	KQL07-00	13.2	20.5	5.3	17	4.6
5/16	KQL09-00	15.2	23	6	18.5	6
3/8	KQL11-00	17.9	26	6.6	21	7
1/2	KQL13-00	21.7	29	7.8	22	9.6

**PRODUCT
SELECTOR**

PLUG-IN ELBOW : KQL (KQ2L)
Use to change by 90° in a tube fetching direction from one-touch fittings.



REDUCER ELBOW : KQL (KQ2L)
Use to change by 90° in tube fetching direction from one-touch fittings and to size down.

Plug-in Elbow: KQL/KQ2L

Applicable Tube OD mm	Applicable Fitting Size ø mm	Model	øD1	øD2	L1	L2	A	M	Effective Orifice (mm ²) Nylon/Urethane
3.2	3.2	KQL23-99	9.6	10	17.5	33	22	15.5	3/2.5
4	4	KQL04-99	10.4	10	18	32	21	16	4.2/4.2
6	6	KQL06-99	12.8	10	20	34.5	24	17	11.4/11.4
8	8	KQL08-99	15.2	12	23	37.5	26	18.5	21.6/14.9
10	10	KQL10-99	18.5	17	26.5	41	29	21	35.2/25
12	12	KQL12-99	20.9	17	28.5	43.5	32	22	50.2/39.7

Reducer Elbow: KQL/KQ2L

Applicable Tube OD mm	Applicable Fitting Size ø mm	Model	øD1	øD2	L1	L2	A	M	Effective Orifice (mm ²) Nylon/Urethane
3.2	4	KQL23-04	9.6	10	17.5	33	21.5	15.5	3/2.5
4	6	KQL04-06	10.4	10	18	33	21.5	16	4.2/4.2
4	8	KQL04-08	10.4	10	18	35	22	16	4.2/4.2
6	8	KQL06-08	12.8	10	20	36.5	24.5	17	11.4/11.4
6	10	KQL06-10	12.8	10	20	38.5	24	17	11.4/11.4
8	10	KQL08-10	15.2	12	23	39.5	26	18.5	21.6/14.9
8	12	KQL08-12	15.2	12	23	40.5	26	18.5	21.6/14.9
10	12	KQL10-12	18.5	17	26.5	42	30	21	35.2/25

Plug-in Elbow: KQL/KQ2L

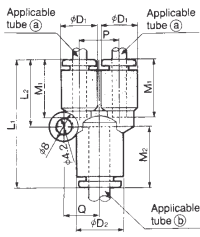
Applicable Tube OD Inch	Applicable Fitting Size ø	Model	øD1	øD2	L1	L2	A	M	Minimum Hole Diameter
1/8	3.2(1/8)	KQL01-99	9.6	10	17.5	33	22	15.5	2
5/32	4(5/32)	KQL03-99	10.4	10	18	33	22	16	2.5
3/16	4.8(3/16)	KQL05-99	11.4	10	19.5	34	23.5	16.5	3.5
1/4	6.3(1/4)	KQL07-99	13.2	10	20.5	35.5	25	17	4.6
5/16	8(5/16)	KQL09-99	15.2	12	23.5	38.5	27	18.5	6
3/8	9.5(3/8)	KQL11-99	17.9	17	25.5	42	30	21	7
1/2	12.7(1/2)	KQL13-99	21.7	17	28	44.5	34	22	9.6

Reducer Elbow: KQL/KQ2L

Applicable Tube OD Inch	Applicable Fitting Size ø	Model	øD1	øD2	L1	L2	A	M	Effective Orifice
1/8	4(5/32)	KQL01-03	9.6	10	17.5	33	21.5	15.5	2.5
1/8	4.8(3/16)	KQL01-05	9.6	10	17.5	33	21.5	15.5	2.5
5/32	4.8(3/16)	KQL03-05	10.4	10	18	33.5	22.5	16	3
5/32	6.3(1/4)	KQL03-07	10.4	10	18	34	22.5	16	3
3/16	6.3(1/4)	KQL05-07	11.4	10	19.5	34.5	23.5	16.5	3.5
3/16	8(5/16)	KQL05-09	11.4	10	19.5	36.5	24	16.5	3.5
1/4	8(5/16)	KQL07-09	13.2	10	20.5	37.5	25.5	17	4.6
1/4	9.5(3/8)	KQL07-11	13.2	10	20.5	39.5	25	17	4.6
5/16	9.5(3/8)	KQL09-11	15.2	12	23.5	40.5	27.5	18.5	6
5/16	12.7(1/2)	KQL09-73	15.2	12	23.5	41.5	27.5	18.5	6
3/8	12.7(1/2)	KQL11-13	17.9	17	25.5	30	30	21	7

**PRODUCT
SELECTOR**

UNION "Y" : KQU (KQ2U) & DIFFERENT DIAMETER UNION 'Y' KQU (KQ2U)
Use to branch connection of tubes in the same direction.



UNION "Y" : KQU (KQ2U)

Applicable Tube OD mm	Model	øD1	L1	L2	P	Q	M	Effective Orifice (mm ²) Nylon/Urethane
3.2	KQU23-00	9.6	33	17.5	9.6	9	15.5	3.4/2.9
4	KQU04-00	10.4	34	18	10.4	9.7	16	4.2/4.2
6	KQU06-00	12.8	37	20	12.8	11.7	17	13.4/13.4
8	KQU08-00	15.2	42.5	24.5	15.2	13.7	18.5	25.6/17.7
10	KQU10-00	18.5	48	27.5	18.5	16.1	21	40/28.4
12	KQU12-00	20.9	51	30	20.9	18.1	22	57.4/45.4

DIFFERENT DIA. UNION 'Y' KQU (KQ2U)

Applicable Tube OD mm	Model	øD1	øD2	L1	L2	P	Q	M1	M2	Effective Orifice (mm ²) Nylon/Urethane	
3.2	4	KQU23-04	9.6	10.4	33.5	17.5	9.6	9	15.5	16	3.2/2.7
4	6	KQU04-06	10.4	12.8	35	18	10.4	9.7	16	17	4.2/4.2
6	8	KQU06-08	12.8	15.2	39.5	20	12.8	11.7	17	18.5	13.4/13.4
8	10	KQU08-10	15.2	18.5	45	24.5	15.2	13.7	18.5	21	25.6/17.7
10	12	KQU10-12	18.5	20.9	49	27.5	18.5	16.1	21	22	40/28.4

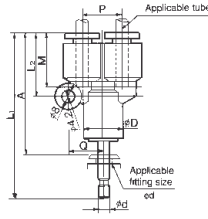
UNION "Y" : KQU (KQ2U)

Applicable Tube OD Inch	Model	øD1	L1	L2	P	Q	M	Minimum Hole Diameter
1/8	KQU01-00	9.6	33	17.5	9.6	9	15.5	2.5
5/32	KQU03-00	10.4	34	18	10.4	9.7	16	3
3/16	KQU05-00	11.4	36.5	20.5	11.4	10.6	16.5	3.5
1/4	KQU07-00	13.2	38	21.5	13.2	12	17	4.6
5/16	KQU09-00	15.2	42.5	24.5	15.2	13.7	18.5	6

PRODUCT SELECTOR

PLUG-IN "Y" : KQU (KQ2U)

Use to branch tubing in the same direction from one-touch fittings.



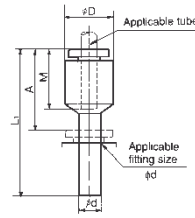
Applicable Tube OD mm	Applicable Fitting Size ϕd	Model	$\phi D1$	L1	L2	P	Q	A	M	Effective Orifice (mm ²) Nylon/Urethane
3.2	3.2	KQU23-99	9.6	52	17.5	9.6	9	36.5	15.5	3.4/2.9
4	4	KQU04-99	10.4	53	18	10.4	9.7	37	16	4.2/4.2
6	6	KQU06-99	12.8	57	20	12.8	11.7	40	17	13.4/16.3, 4
8	8	KQU08-99	15.2	64.5	24.5	15.2	13.7	46	18.5	25.6/17.7
10	10	KQU10-99	18.5	71.5	27.5	18.5	16.1	50.5	21	40/28.4
12	12	KQU12-99	20.9	75.5	30	20.9	18.1	53.5	22	57.4/45.4

Applicable Tube OD Inch	Applicable Fitting Size ϕd	Model	$\phi D1$	L1	L2	P	Q	A	M	Minimum Hole Diameter
1/8	3.2(1/8)	KQU01-99	9.6	52	17.5	9.6	9	36.5	15.5	2
5/32	4(5/32)	KQU03-99	10.4	53	18	10.4	9.7	37	16	2.5
3/16	4.8(3/16)	KQU05-99	11.4	56	20.5	11.4	10.6	39.5	16.5	3.5
1/4	6.3(1/4)	KQU07-99	13.2	58	21.5	13.2	12	41	17	4.6
5/16	8(5/16)	KQU09-99	15.2	64.5	24.5	15.2	13.7	46	18.5	6

PRODUCT SELECTOR

PLUG-IN REDUCER: KQR(KQ2R)

Use to change size of one-touch fittings.



Applicable Tube OD mm	Applicable Fitting Size ϕd	Model	ϕD	L	A	M	Effective Orifice (mm ²) Nylon/Urethane
3.2	4	KQR23-04	9.2	34	17.5	15.5	3.4/2.9
4	6	KQR04-06	10.4	34.5	17.5	16	5.6/5.6
4	8	KQR04-08	10.4	36.5	18.5	16	5.6/5.6
4	10	KQR04-10	12.8	39.5	18.5	16	5.6/5.6
6	4	KQR06-04	12	37.5	21.5	17	4/4
6	8	KQR06-08	12.8	37	18.5	17	13.1/13.1
6	10	KQR06-10	12.8	39.5	18	17	13.1/13.1
6	12	KQR06-12	12.8	42	20	17	13.1/13.1
8	10	KQR08-10	15.2	41	20	18.5	26.1/18
8	12	KQR08-12	15.2	42	20	18.5	26.1/18
10	12	KQR10-12	17	42	20	21	41.5/32.8
10	16	KQR10-16	21	50.5	26.5	21	41.5/(29.5)
12	16	KQR12-16	21	50.5	26.5	22	58.3/(46.1)

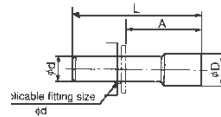
Applicable Tube OD Inch	Applicable Fitting Size ϕd	Model	ϕD	L	A	M	Minimum Hole Diameter
1/8	9(5/32)	KQR01-03	10	37	21	15.5	2.5
1/8	4.8(3/16)	KQR01-05	10	37.5	21	15.5	2.5
5/32	4.8(3/16)	KQR03-05	11	38	21.5	16	3
5/32	6.3(1/4)	KQR03-07	11	36	19	16	3
3/16	6.3(1/4)	KQR05-07	12	39	22	16.5	3.5
3/16	8(5/16)	KQR05-09	12	38	19.5	16.5	3.5
1/4	8(5/16)	KQR07-09	14	41.5	23	17	4.6
1/4	9.5(3/8)	KQR07-11	14	40	20	17	4.6
5/16	9.5(3/8)	KQR09-11	16	45.5	25	18.5	6
5/16	12.7(1/2)	KQR09-13	16	42.5	21	18.5	6
3/8	12.7(1/2)	KQR11-13	48	44.5	22.5	21	7

Note: () Dimensions are for Soft Nylon

PRODUCT SELECTOR

PLUG : KQP (KQ2P)

Use to shut no use one-touch fittings.



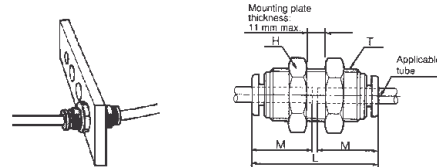
Applicable Fitting Size ϕd mm	Model	ϕD	L	A
3.2	KQP-23	3.2	31.5	16
4	KQP-04	6	32	16
6	KQP-06	8	35	18
8	KQP-08	10	39	20.5
10	KQP-10	12	43	22
12	KQP-12	14	46	24
16	KQP-14	21	47	23

Applicable Fitting Size ϕd Inch	Model	ϕD	L	A
3.2(1/8)	KQP-01	5	31.5	16
4(5/32)	KQP-03	6	32	16
4.8(3/16)	KQP-05	6.8	34	17.5
6.3(1/4)	KQP-07	8.5	35	18
8(5/16)	KQP-09	10	39	20.5
9.5(3/8)	KQP-11	11.5	43	22
12.7(1/2)	KQP-13	15	46	24

PRODUCT SELECTOR

BULKHEAD UNION : KQE (KQ2E)

Use to junction connection of tubes for installation of panel.



Applicable Tube OD mm	Model	T (M)	H (Width Across Flats)	L	Mounting Hole	M	Effective Orifice (mm ²) Nylon/Urethane
3.2	KQE23-00	M12x1	14	31.5	13	15.5	3.4/2.9
4	KQE04-00	M12x1	14	32.5	13	16	5.6/5.6
6	KQE06-00	M14x1	17	34.5	15	17	13.1/13.1
8	KQE08-00	M16x1	19	38	17	18.5	26.1/18
10	KQE10-00	M20x1	24	42.5	21	21	41.5/29.5
12	KQE12-00	M22x1	27	44.5	23	22	58.3/46.1
16	KQE16-00	M26x1.5	30	49.5	27	24	113/96

Applicable Tube OD Inch	Model	T (UNF)	H (Width Across Flats)	L	Mounting Hole	M	Minimum Hole Diameter
1/8	KQE01-00	1/2-20	17.46	31.5	13.5	15.5	2.5
5/32	KQE03-00	1/2-20	17.46	32.5	13.5	16	3
3/16	KQE05-00	3/16-18	17.46	34	15.08	16.5	3.5
1/4	KQE07-00	5/16-18	17.46	34.5	15.08	17	4.6
5/16	KQE09-00	3/4-16	22.23	38	19.8	18.5	6
3/8	KQE11-00	1/8-14	25.4	42.5	23	21	7
1/2	KQE13-00	1-12	28.6	44.5	26.2	22	9.6

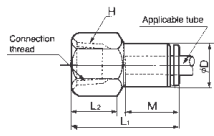
Note: () Dimensions are for Soft Nylon

TUBE FITTINGS ONE TOUCH FITTINGS

**PRODUCT
SELECTOR**

FEMALE UNION : KQF (KQ2F)

Use to pipe from male thread portion such as pressure gauge.



Applicable Tube OD mm	Connection Thread	Model	H (Width Across Flats)	øD	L1	L2	M	Effective Orifice (mm ²) Nylon
4	1/8	KQF04-01	14	10	27	11	16	5.6
4	1/4	KQF04-02	17	10	31	14	16	5.6
6	1/8	KQF06-01	14	12	27.5	11	17	13.1
6	1/4	KQF06-02	17	12	31	13	17	13.1
6	3/8	KQF06-03	19	12	33.5	15	17	13.1
8	1/8	KQF08-01	14	14	29	11	18.5	26.1
8	1/4	KQF08-02	17	14	32.5	13	18.5	26.1
8	3/8	KQF08-03	19	14	33.5	14	18.5	26.1
10	1/4	KQF10-02	17	17	34.5	14	21	41.5
10	3/8	KQF10-03	19	17	36.5	15	21	41.5
12	1/4	KQF12-02	19	19	35	14	22	58.3
12	3/8	KQF12-03	19	19	37	14	22	58.3
12	1/2	KQF12-04	24	19	41	18	22	58.3

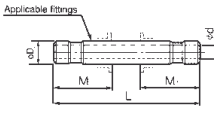
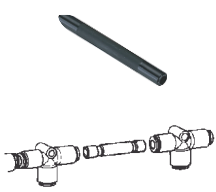
**PRODUCT
SELECTOR**

NIPPLE : KQN (KQ2N)

Use to connect the one-touch fittings

DIFFERENT DIAMETER NIPPLE : KQN (KQ2N)

Use to connect different size one-touch fittings.



Differential Diameter Nipple KQN

Applicable Fittings øD	Model	L	M	øD	Weight g
4	KQN04-99	37	16	2.5	2.2
6	KQN06-99	39	17	4.4	3.9
8	KQN08-99	43	18.5	6	7.3
10	KQN10-99	49	21	8	10.4
12	KQN12-99	52	22	9	20.6

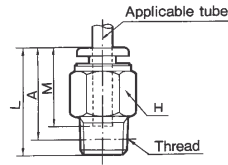
Differential Diameter Nipple KQN

Applicable Fittings	Model	L	M1	M2	øD	Weight g	
a	b						
4	6	KQN04-06	38	17	16	2.5	4.7
6	8	KQN06-08	42	18.5	17	4	8.7
8	10	KQN08-10	47	21	18.5	6	13.2
10	12	KQN10-12	51	22	21	8	18.2

NOTE: There are no grooves in the KQN (KQ2N) Fitting.

**PRODUCT
SELECTOR**

MALE CONNECTOR: KQH (KQ2H)



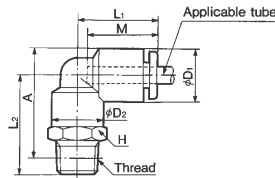
Applicable Tube OD (mm)	Thread R(PT)	Model	H (Hex)	L	•A	M	Effective Orifice (mm ²) Nylon Urethane		Weight (g)
3.2	M5x0.8	KQH23-M5	8.7	22.5	20	15.5	3.4	2.9	5
3.2	1/8	KQH23-01S	10	22	18	15.5	3.4	2.9	9
3.2	1/4	KQH23-02S	14	21	15	15.5	3.4	2.9	16
4	M5x0.8	KQH04-M5	9.8	23.5	20	16	4	4	8
4	1/8	KQH04-01S	10	22	18	16	5.6	5.6	9
4	1/4	KQH04-02S	14	21	15	16	5.6	5.6	16
6	M5x0.8	KQH06-M5	11.8	24	20.5	17	4	4	9
6	1/8	KQH06-01S	12	22.5	18.5	17	13.1	13.1	10
6	1/4	KQH06-02S	14	23	17	17	13.1	13.1	15
6	3/8	KQH06-03S	17	23	16.5	17	13.1	13.1	27
8	1/8	KQH08-01S	14	28	24	18.5	26.1	18	21
8	1/4	KQH08-02S	14	26.5	20.5	18.5	26.1	18.0	19
8	3/8	KQH08-03S	17	23.5	17	18.5	26.1	18.0	26
10	1/8	KQH10-01S	17	30	26	21	41.5	29.5	19
10	1/4	KQH10-02S	17	33.5	27.5	21	41.5	29.5	30
10	3/8	KQH10-03S	17	29	22.5	21	41.5	29.5	30
10	1/2	KQH10-04S	22	27	19	21	41.5	29.5	53
12	1/4	KQH12-02S	19	34.5	28.5	22	58.3	46.1	42
12	3/8	KQH12-03S	19	30	23.5	22	58.3	46.1	34
12	1/2	KQH12-04S	22	30	22	22	58.3	46.1	51
16	3/8	KQH16-03S	24	38.5	32	24	81	(81)	61
16	1/2	KQH16-04S	24	34.5	26.5	24	113	(96)	47

Applicable Tube OD (Inch)	Thread UNF NPT	Model	H (Hex)	L	•A	M	Minimum Hole Diameter	Weight (g)
1/8	UNF10-32	KQH01-32	8.7	22.5	20	15.5	2.3	5
1/8	1/16	KQH01-33S	11.11	22	18	15.5	2.5	7
1/8	1/8	KQH01-34S	11.11	22	18	15.5	2.5	9
1/8	1/4	KQH01-35S	14.29	21	15	16	2.5	16
5/32	UNF10-32	KQH03-32	9.8	22.5	20	16	2.5	5
5/32	1/16	KQH03-33S	11.11	22	18	16	3	7
5/32	1/8	KQH03-34S	11.11	22	18	16	3	9
5/32	1/4	KQH03-35S	14.29	21	15	16	3	16
3/16	1/8	KQH05-34S	12.7	22	18	16	3.5	11
3/16	1/4	KQH05-35S	14.29	21	15	16	3.5	12
1/4	1/8	KQH07-34S	14.29	22.5	18.5	17	4.6	10
1/4	1/4	KQH07-35S	14.29	22	17	17	4.6	15
1/4	3/8	KQH07-36S	17.46	23	16.5	17	4.6	27
5/16	1/8	KQH09-34S	14.29	28.5	24.5	18.5	6	15
5/16	1/4	KQH09-35S	14.29	26.5	20.5	18.5	6	16
5/16	3/8	KQH09-36S	17.46	23.5	17	18.5	6	24
3/8	1/4	KQH11-35S	17.46	33.5	27.5	21	7	31
3/8	3/8	KQH11-36S	17.46	29	22.5	21	7	29
3/8	1/2	KQH11-37S	22.23	27	19	21	7	46
1/2	1/4	KQH13-35S	22.23	34.5	28.5	22	9	44
1/2	3/8	KQH13-36S	22.23	33.5	27	22	9.6	44
1/2	1/2	KQH13-37S	22.23	30	22	22	9.6	44

• Reference dimensions after PT thread installation.
Note: The dimensions in brackets are for Soft Nylon.

**PRODUCT
SELECTOR**

MALE ELBOW: KQL (KQ2L)



Applicable Tube OD (mm)	Thread R(PT)	Model	H (Hex)	OD ₁	OD ₂	L ₁	L ₂	•A	M	Effective Orifice (mm ²) Nylon/Urethane		Weight (g)
3.2	M5x0.8	KQL23-M5	8	9.6	8	17.5	15	16	15.5	3/2.5	6	
3.2	1/8	KQL23-01S	10	9.6	10	17.5	21.5	22.5	15.5	3/2.5	8	
3.2	1/4	KQL23-02S	14	9.6	10	17.5	25.5	24.5	15.5	3/2.5	18	
4	M5x0.8	KQL04-M5	8	10.4	8	18	15.5	16	16	3.5/3.5	4	
4	1/8	KQL04-01S	10	10.4	10	18	22	23	16	4.2/4.2	10	
4	1/4	KQL04-02S	14	10.4	10	18	26	25	16	4.2/4.2	19	
6	M5x0.8	KQL06-M5	8	12.8	8	20	16	18	17	3.5/3.5	6	
6	1/8	KQL06-01S	10	12.8	10	20	23	25.5	17	11.4/11.4	12	
6	1/4	KQL06-02S	14	12.8	10	20	27	27.5	17	11.4/11.4	10	
6	3/8	KQL06-03S	17	12.8	10	20	29	29	17	11.4/11.4	33	
8	1/8	KQL08-01S	12	15.2	12	23	24.5	28	18.5	21.6/14.9	13	
8	1/4	KQL08-02S	14	15.2	12	23	28.5	30	18.5	21.6/14.9	21	
8	3/8	KQL08-03S	17	15.2	12	23	30.5	31.5	18.5	21.6/14.9	35	
10	1/8	KQL10-01S	17	18.5	17	26.5	27	32	21	21.6/14.9	25	
10	1/4	KQL10-02S	17	18.5	17	26.5	30	33	21	35.2/25.0	26	
10	3/8	KQL10-03S	17	18.5	17	26.5	32	34.5	21	35.2/25.0	36	
10	1/2	KQL10-04S	22	18.5	17	26.5	36	37	21	35.2/25.0	63	
12	1/8	KQL12-02S	17	20.9	17	28.5	31	35.5	22	50.2/39.7	28	
12	3/8	KQL12-03S	17	20.9	17	28.5	33	37	22	50.2/39.7	38	
12	1/2	KQL12-04S	22	20.9	17	28.5	37	39.5	22	50.2/39.7	65	
16	3/8	KQL16-03S	22	26.5	21	33	38	44.5	24	71/(71)	101	
16	1/2	KQL16-04S	22	26.5	21	33	41	46	24	100/(84)	105	

• Reference dimensions after PT thread installation.
Note: The dimensions in brackets are for soft nylon.

SERIES KQ2 ONE TOUCH FITTINGS



SEE NEXT PAGE FOR MORE DIMENSIONS

TUBE FITTINGS: ONE TOUCH FITTINGS KQ, KQ2 SEALANT TYPE

**PRODUCT
SELECTOR**

MALE ELBOW: KQL (KQ2L)

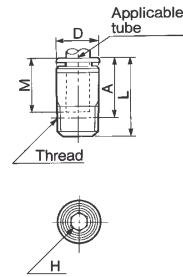
Applicable Tube OD (Inch)	Thread UNF NPT	Model	H (Hex)	ØD ₁	ØD ₂	L ₁	L ₂	•A	M	Minimum Hole Diameter	Weight (g)
1/8	1/16	KQL01-33S	11.11	9.6	10	17.5	21.5	22.5	15.5	2.5	8
1/8	1/8	KQL01-34S	11.11	9.6	10	17.5	21.5	22.5	15.5	2.5	8
1/8	1/4	KQL01-35S	14.29	9.6	10	17.5	25.5	24.5	15.5	2.5	18
5/32	1/16	KQL03-33S	11.11	10.4	10	18	22	23	16	3	8
5/32	1/8	KQL03-34S	11.11	10.4	10	18	22	23	16	3	9
5/32	1/4	KQL03-35S	14.29	10.4	10	18	26	25	16	3	18
3/16	1/8	KQL05-34S	11.11	11.4	10	19.5	22.5	24	16.5	3.5	10
3/16	1/4	KQL05-35S	14.29	11.4	10	19.5	26.5	26	16.5	3.5	19
1/4	1/8	KQL07-34S	11.11	13.2	10	20.5	23.5	26	17	4.6	10
1/4	1/4	KQL07-35S	14.29	13.2	10	20.5	27.5	28	17	4.6	20
1/4	3/8	KQL07-36S	17.46	13.2	10	20.5	29.5	29.5	17	4.6	32
5/16	1/8	KQL09-34S	12.7	15.2	12	23.5	24.5	28	18.5	6	12
5/16	1/4	KQL09-35S	14.29	15.2	12	23.5	28.5	30	18.5	6	20
5/16	3/8	KQL09-36S	17.46	15.2	12	23.5	30.5	31.5	18.5	6	28
3/8	1/4	KQL11-35S	17.46	17.9	17	25.5	29.5	32.5	21	7	23
3/8	3/8	KQL11-36S	17.46	17.9	17	25.5	31.5	34	21	7	33
3/8	1/2	KQL11-37S	17.46	17.9	17	25.5	35.5	36.5	21	7	59
1/2	1/4	KQL13-35S	17.46	21.7	17	28	31.5	36.5	22	9	28
1/2	3/8	KQL13-36S	17.46	21.7	17	28	33.5	38.5	22	9.6	36
1/2	1/2	KQL13-37S	22.23	21.7	17	28	37.5	40	22	9.6	62

**PRODUCT
SELECTOR**

HEXAGON SOCKET HEAD
MALE CONNECTOR: KQS (KQ2S)

Applicable Tube OD (mm)	Thread R(PT)	Model	H (Hex)	ØD	L	•A	M	Effective Orifice (mm ²)		Weight (g)
								Nylon	Urethane	
4	M5x0.8	KQS04-M5	2	9.8	23	19.5	16	2.7	2.7	6.3
4	1/8	KQS04-01S	3	9.8	23	19	16	4.1	3.6	7.8
6	M5x0.8	KQS06-M5	2	11.8	24	20.5	17	2.7	2.7	8.5
6	1/8	KQS06-01S	4	11.8	24	20	17	10.0	9.9	8.9
6	1/4	KQS06-02S	4	13.8	25	19	17	10.7	10.0	14.8
8	1/8	KQS08-01S	5	14	28	24	18.5	17.2	16.2	12.4
8	1/4	KQS08-02S	6	14	25.5	19.5	18.5	23.3	16.2	11.3
8	3/8	KQS08-03S	6	17	26.5	20	18.5	23.3	16.2	23.8
10	1/8	KQS10-01S	5	17	30	26	21	17.2	10.0	17.9
10	1/4	KQS10-02S	8	17	26.5	20.5	21	39	26.6	11.8
10	3/8	KQS10-03S	8	17	26.5	20	21	39	26.6	18.5
10	1/2	KQS10-04S	8	22	27	19	21	39	26.6	35.2
12	1/4	KQS12-02S	8	19	33.5	27.5	22	46.0	44.5	23.4
12	3/8	KQS12-03S	9	19	28	21.5	22	60	44.5	17.7
12	1/2	KQS12-04S	9	22	27	19	22	60	44.5	29.6

• Reference dimensions after PT thread installation.

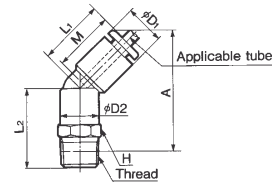


**PRODUCT
SELECTOR**

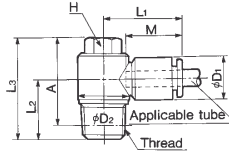
45° MALE ELBOW: KQK (KQ2K)

Applicable Tube OD (mm)	Thread R(PT)	Model	H (Hex)	ØD ₁	ØD ₂	L ₁	L ₂	•A	M	Effective Orifice (mm ²)		Weight (g)
										Nylon	Urethane	
4	M5x0.8	KQK04-M5	8	10.4	8	17	14.5	26	16	3.4	3.4	4
4	1/8	KQK04-01S	10	10.4	10	17	20.5	32	16	3.4	3.4	10
4	1/4	KQK04-02S	14	10.4	10	17	24.5	34	16	3.4	3.4	19
6	M5x0.8	KQK06-M5	8	12.8	8	18	14.5	26	17	3.4	3.4	6
6	1/8	KQK06-01S	10	12.8	10	18	20.5	33	17	8.7	8.7	12
6	1/4	KQK06-02S	14	12.8	10	18	24.5	35	17	8.7	8.7	10
6	3/8	KQK06-03S	17	12.8	10	18	26.5	36.5	17	8.7	8.7	33
8	1/8	KQK08-01S	12	15.2	12	20.5	22	37	18.5	19.7	19.7	13
8	1/4	KQK08-02S	14	15.2	12	20.5	26	39	18.5	19.7	19.7	21
8	3/8	KQK08-03S	17	15.2	12	20.5	28	40.5	18.5	19.7	19.7	35
10	1/8	KQK10-01S	17	18.5	17	24	24	42	21	30.9	23.2	25
10	1/4	KQK10-02S	17	18.5	17	24	27	43.5	21	30.9	23.2	26
10	3/8	KQK10-03S	17	18.5	17	24	29	45	21	30.9	23.2	36
10	1/2	KQK10-04S	22	18.5	17	24	33	47.5	21	30.9	23.2	63
12	1/4	KQK12-02S	17	20.9	17	25	27.5	45.5	22	44.5	35.1	28
12	3/8	KQK12-03S	17	20.9	17	25	29.5	47	22	44.5	35.1	38
12	1/2	KQK12-04S	22	20.9	17	25	33.5	49.5	22	44.5	35.1	65

• Reference dimensions after PT thread installation.



PRODUCT SELECTOR
UNIVERSAL MALE ELBOW: KQV (KQ2V)



Applicable Tube OD (mm)	Thread R(PT)	Model	H (Hex)	ØD ₁	ØD ₂	L ₁	L ₂	L ₃	•A	M	Effective Orifice (mm ²)		Weight (g)
											Nylon	Urethane	
4	M5x0.8	KQV04-M5	8	10.4	9.8	20.5	11	18.5	15	16	2.9	2.9	6
4	1/8	KQV04-01S	8	10.4	13.4	22	14.5	26.5	22.5	16	2.9	2.9	14
6	M5x0.8	KQV06-M5	8	12.8	9.8	23.5	12	18.5	15	17	3.8	3.8	7
6	1/8	KQV06-01S	8	12.8	13.4	24	14.5	26.5	22.5	17	7.5	7.5	15
6	1/4	KQV06-02S	10	12.8	15.4	23.5	18.5	31	25	17	7.5	7.5	26
8	1/8	KQV08-01S	12	15.2	17.6	28.5	15.5	28.5	24.5	18.5	11.2	24	24
8	1/4	KQV08-02S	12	15.2	17.6	28.5	18.5	31.5	25.5	18.5	11.2	30	30
8	3/8	KQV08-03S	14	15.2	20.6	27.5	20.5	36.5	30	18.5	14.3	47	47
10	1/4	KQV10-02S	14	18.5	20.6	31	19.5	35.5	29.5	21	27	20.3	40
10	3/8	KQV10-03S	14	18.5	20.6	31	20.9	36.5	30	21	27	20.3	49
12	1/2	KQV12-03S	17	20.9	25.2	34	22	38.5	32	22	39	30.8	63
12	3/4	KQV12-04S	17	20.9	25.2	34	25	41.5	33.5	22	39	30.8	80

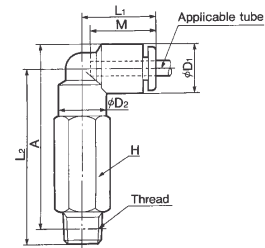
• Reference dimensions after PT thread installation.

PRODUCT SELECTOR
EXTENDED MALE ELBOW: KQW (KQ2W)



Applicable Tube OD (mm)	Thread R(PT)	Model	H (Hex)	ØD ₁	ØD ₂	L ₁	L ₂	•A	M	Effective Orifice (mm ²)		Weight (g)
										Nylon	Urethane	
3.2	M5x0.8	KQW23-M5	8	9.6	8	17.5	30	31	15.5	2.8	2.4	10
3.2	1/8	KQW23-01S	10	9.6	10	17.5	37	22.5	15.5	2.8	2.4	19
3.2	1/4	KQW23-02S	14	9.6	10	17.5	43	42	15.5	2.8	2.4	41
4	M5x0.8	KQW04-M5	8	10.4	8	18	30	32	16	3.0	3.0	11
4	1/8	KQW04-01S	10	10.4	10	18	37.5	38.5	16	4.0	4.0	23
4	1/4	KQW04-02S	14	10.4	10	18	43.5	42.5	16	4.0	4.0	38
6	M5x0.8	KQW06-M5	8	12.8	8	20	30.5	33.5	17	3.0	3.0	11
6	1/8	KQW06-01S	10	12.8	10	20	40	42.5	17	10.9	10.9	26
6	1/4	KQW06-02S	14	12.8	10	20	46	46.5	17	10.9	10.9	41
6	3/8	KQW06-03S	17	12.8	10	20	48	48	17	10.9	10.9	67
8	1/8	KQW08-01S	12	15.2	12	23	43.5	47	18	20.5	14.2	30
8	1/4	KQW08-02S	14	15.2	12	23	49.5	51	18	20.5	14.2	47
8	3/8	KQW08-03S	17	15.2	12	23	51.5	52.5	18	20.5	14.2	74
10	1/4	KQW10-02S	17	18.5	17	26.5	56.5	59.5	21	33.5	23.8	66
10	3/8	KQW10-03S	17	18.5	17	26.5	58.5	61	21	33.5	23.8	76
10	1/2	KQW10-04S	22	18.5	17	26.5	65	66	21	33.5	23.8	145
12	1/4	KQW12-02S	17	20.9	17	28.5	57.5	62	22	47.7	37.7	68
12	3/8	KQW12-03S	17	20.9	17	28.5	59.5	63.5	22	47.7	37.7	78
12	1/2	KQW12-04S	22	20.9	17	28.5	66	68.5	22	47.7	37.7	147

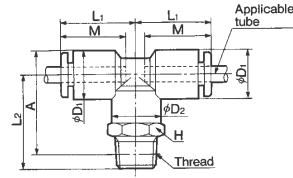
• Reference dimensions after PT thread installation.



Applicable Tube OD (Inch)	Thread UNF NPT	Model	H (Hex)	ØD ₁	ØD ₂	L ₁	L ₂	•A	M	Minimum Hole Diameter	Weight (g)
1/8	1/8	KQW01-34S	11.11	9.6	10	17.5	37	38	15.5	2.5	19
1/8	1/4	KQW01-35S	14.29	9.6	10	17.5	43	42	15.5	2.5	41
5/32	1/8	KQW03-34S	11.11	10.4	10	18	37.5	38.5	16	3	19
5/32	1/4	KQW03-35S	14.29	10.4	10	18	48.5	42.5	16	3	41
3/16	1/8	KQW05-34S	11.11	11.4	10	19.5	38	40	16.5	3.5	41
3/16	1/4	KQW05-35S	14.29	11.4	10	19.5	47	43.5	16.5	3.5	19
1/4	1/8	KQW07-34S	11.11	13.2	10	20.5	40.5	43	17	4.6	20
1/4	1/4	KQW07-35S	14.29	13.2	10	20.5	46.5	47	17	4.6	42
1/4	3/8	KQW07-36S	17.46	13.2	10	20.5	48.5	48.5	17	4.6	69
5/16	1/8	KQW09-34S	12.7	15.2	12	23.5	43.5	47	18.5	6	30
5/16	1/4	KQW09-35S	14.29	15.2	12	23.5	49.5	51	18.5	6	47
5/16	3/8	KQW09-36S	17.46	15.2	12	23.5	51.5	52.5	18.5	6	74
3/8	1/4	KQW11-35S	17.46	17.9	17	25.5	56	59	21	7	69
3/8	3/8	KQW11-36S	17.46	17.9	17	25.5	58	60.5	21	7	76
3/8	1/2	KQW11-37S	22.23	17.9	17	25.5	64.5	65.5	21	7	147
1/2	1/4	KQW13-35S	17.46	21.7	17	28	58	63	22	9	72
1/2	3/8	KQW13-36S	17.46	21.7	17	28	60	64.5	22	9.6	78
1/2	1/2	KQW13-37S	22.23	21.7	17	28	66.5	69	22	9.6	149

TUBE FITTINGS: ONE TOUCH FITTINGS KQ, KQ2 SEALANT TYPE

PRODUCT
SELECTOR
BRANCH TEE: KQT (KQ2T)



Applicable Tube OD (mm)	Thread R(PT)	Model	H (Hex)	ØD ₁	ØD ₂	L ₁	L ₂	•A	M	Effective Orifice (mm ²)		Weight (g)
										Nylon	Urethane	
3.2	M5x0.8	KQT23-M5	8	9.6	8	17.5	15	16	15.5	3.4	2.9	8
3.2	1/8	KQT23-01S	10	9.6	10	17.5	21.5	22.5	15.5	3.4	2.9	10
3.2	1/4	KQT23-02S	14	9.6	10	17.5	25.5	24.5	15.5	3.4	2.9	20
4	M5x0.8	KQT04-M5	8	10.4	8	18	15.5	17	16	4.3	4.3	6
4	1/8	KQT04-01S	10	10.4	10	18	22	23	16	6.0	6.0	13
4	1/4	KQT04-02S	14	10.4	10	18	26	25	16	6.0	6.0	19
6	M5x0.8	KQT06-M5	8	12.8	8	20	16	18	17	4.3	4.3	8
6	1/8	KQT06-01S	10	12.8	10	20	23	25.5	17	13.9	13.9	13
6	1/4	KQT06-02S	14	12.8	10	20	27	27.5	17	13.9	13.9	21
6	3/8	KQT06-03S	17	12.8	10	20	29	29	17	13.9	13.9	35
8	1/8	KQT08-01S	12	15.2	12	23	24.5	28	18.5	26.3	18.2	15
8	1/4	KQT08-02S	14	15.2	12	23	28.5	30	18.5	26.3	18.2	23
8	3/8	KQT08-03S	17	15.2	12	23	30.5	31.5	18.5	26.3	18.2	37
10	1/8	KQT10-01S	17	18.5	17	26.5	27	32	21	40.8	29.0	31
10	1/4	KQT10-02S	17	18.5	17	26.5	30	33	21	40.8	29.0	29
10	3/8	KQT10-03S	17	18.5	17	26.5	32	34.5	21	40.8	29.0	39
10	1/2	KQT10-04S	22	18.5	17	26.5	36	37	21	40.8	29.0	66
12	1/8	KQT12-02S	17	20.9	17	28.5	31	35.5	22	57.2	45.2	31
12	3/8	KQT12-03S	17	20.9	17	28.5	33	37	22	57.2	45.2	41
12	1/2	KQT12-04S	22	20.9	17	28.5	37	39.5	22	57.2	45.2	68
16	3/8	KQT16-03S	22	26.5	21	33	38	44.5	24	71	(71)	112
16	1/2	KQT16-04S	22	26.5	21	33	41	46	24	100	(100)	116

• Reference dimensions after PT thread installation.
Note: The dimensions in brackets are for Soft Nylon.

Applicable Tube OD (Inch)	Thread UNF NPT	Model	H (Hex)	ØD ₁	ØD ₂	L ₁	L ₂	•A	M	Minimum Hole Diameter	Weight (g)
1/8	1/16	KQT01-33S	11.11	9.6	10	17.5	21.5	22.5	15.5	2.5	10
1/8	1/8	KQT01-34S	11.11	9.6	10	17.5	21.5	22.5	15.5	2.5	10
1/8	1/4	KQT01-35S	14.29	9.6	10	17.5	25.5	24.5	15.5	2.5	20
5/32	1/16	KQT03-33S	11.11	10.4	10	18	22	23	16	3	10
5/32	1/8	KQT03-34S	11.11	10.4	10	18	22	23	16	3	11
5/32	1/4	KQT03-35S	14.29	10.4	10	18	26	25	16	3	20
3/16	1/8	KQT05-34S	11.11	11.4	10	19.5	22.5	24	16.5	3.5	12
3/16	1/4	KQT05-35S	14.29	11.4	10	19.5	26.5	26	16.5	3.5	21
1/4	1/8	KQT07-34S	11.11	13.2	10	20.5	23.5	26	17	4.6	12
1/4	1/4	KQT07-35S	14.29	13.2	10	20.5	27.5	28	17	4.6	22
1/4	3/8	KQT07-36S	17.46	13.2	10	20.5	29.5	29.5	17	4.6	35
5/16	1/8	KQT09-34S	12.7	15.2	12	23.5	28	28	18.5	6	16
5/16	1/4	KQT09-35S	14.29	15.2	12	23.5	30	30	18.5	6	24
5/16	3/8	KQT09-36S	17.46	15.2	12	23.5	31.5	31.5	18.5	6	36
3/8	1/4	KQT11-35S	17.46	17.9	17	25.5	29.5	32.5	21	7	29
3/8	3/8	KQT11-36S	17.46	17.9	17	25.5	31.5	34	21	7	38
3/8	1/2	KQT11-37S	22.23	17.9	17	25.5	35.5	36.5	21	7	64
1/2	1/4	KQT13-35S	17.46	21.7	17	28	31.5	36.5	22	9	34
1/2	3/8	KQT13-36S	17.46	21.7	17	28	33.5	38.5	22	9.6	43
1/2	1/2	KQT13-37S	22.23	21.7	17	28	37.5	40	22	9.6	69

SERIES KQ2 ONE TOUCH FITTINGS

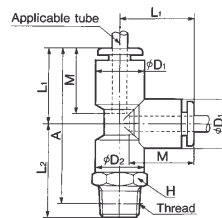


TUBE FITTINGS: ONE TOUCH FITTINGS KQ, KQ2 SEALANT TYPE

4.19

PRODUCT
SELECTOR

MALE RUN TEE: KQY (KQ2Y)



Applicable Tube OD (mm)	Thread R(PT)	Model	H (Hex)	OD ₁	OD ₂	L ₁	L ₂	•A	M	Effective Orifice (mm ²)		Weight (g)
										Nylon	Urethane	
3.2	M5x0.8	KQY23-M5	8	9.6	8	17.5	15	28.5	15.5	3.4	2.9	8
3.2	1/8	KQY23-01S	10	9.6	10	17.5	21.5	35	15.5	3.4	2.9	10
3.2	1/4	KQY23-02S	14	9.6	10	17.5	25.5	37	15.5	3.4	2.9	20
4	M5x0.8	KQY04-M5	8	10.4	8	18	15.5	29.5	16	4.6	4.6	6
4	1/8	KQY04-01S	10	10.4	10	18	22	36	16	6.4	6.4	13
4	1/4	KQY04-02S	14	10.4	10	18	26	38	16	6.4	6.4	19
6	M5x0.8	KQY06-M5	8	12.8	8	20	16	32	17	4.6	4.6	8
6	1/8	KQY06-01S	10	12.8	10	20	23	39	17	13.4	13.4	13
6	1/4	KQY06-02S	14	12.8	10	20	27	41	17	13.4	13.4	21
6	3/8	KQY06-03S	17	12.8	10	20	29	42.5	17	13.4	13.4	35
8	1/8	KQY08-01S	12	15.2	12	23	24.5	43.5	18.5	25.6	17.7	15
8	1/4	KQY08-02S	14	15.2	12	23	28.5	45.5	18.5	25.6	17.7	23
8	3/8	KQY08-03S	17	15.2	12	23	30.5	47	18.5	25.6	17.7	37
10	1/8	KQY10-01S	17	18.5	17	26.5	27	49.5	21	40.0	28.4	31
10	1/4	KQY10-02S	17	18.5	17	26.5	30	50.5	21	40.0	28.4	29
10	3/8	KQY10-03S	17	18.5	17	26.5	32	52	21	40.0	28.4	39
10	1/2	KQY10-04S	22	18.5	17	26.5	36	54.5	21	40.0	28.4	66
12	1/8	KQY12-02S	17	20.9	17	28.5	31	53.5	22	57.4	45.4	31
12	3/8	KQY12-03S	17	20.9	17	28.5	33	55	22	57.4	45.4	41
12	1/2	KQY12-04S	22	20.9	17	28.5	37	57.5	22	57.4	45.4	68
16	3/8	KQY16-03S	22	26.5	21	33	38	77.5	24	81	(81)	112
16	1/2	KQY16-04S	22	26.5	21	33	41	74	24	113	(113)	116

• Reference dimensions after PT thread installation.
Note: The dimensions in brackets are for soft nylon.

Applicable Tube OD (Inch)	Thread UNF NPT	Model	H (Hex)	OD ₁	OD ₂	L ₁	L ₂	•A	M	Minimum Hole Diameter	Weight (g)
1/8	1/16	KQY01-33S	11.11	9.6	10	17.5	21.5	22.5	15.5	2.5	10
1/8	1/8	KQY01-34S	11.11	9.6	10	17.5	21.5	22.5	15.5	2.5	10
1/8	1/4	KQY01-35S	14.29	9.6	10	17.5	25.5	24.5	15.5	2.5	20
5/32	1/16	KQY03-33S	11.11	10.4	10	18	22	23	16	3	10
5/32	1/8	KQY03-34S	11.11	10.4	10	18	22	23	16	3	11
5/32	1/4	KQY03-35S	14.29	10.4	10	18	26	25	16	3	20
3/16	1/8	KQY05-34S	11.11	11.4	10	19.5	22.5	24	16.5	3.5	12
3/16	1/4	KQY05-35S	14.29	11.4	10	19.5	26.5	26	16.5	3.5	21
1/4	1/8	KQY07-34S	11.11	13.2	10	20.5	23.5	26	17	4.6	12
1/4	1/4	KQY07-35S	14.29	13.2	10	20.5	27.5	28	17	4.6	22
1/4	3/8	KQY07-36S	17.46	13.2	10	20.5	29.5	29.5	17	4.6	35
5/16	1/8	KQY09-34S	12.7	15.2	12	23.5	24.5	28	18.5	6	16
5/16	1/4	KQY09-35S	14.29	15.2	12	23.5	28.5	30	18.5	6	24
5/16	3/8	KQY09-36S	17.46	15.2	12	23.5	30.5	31.5	18.5	6	36
3/8	1/4	KQY11-35S	17.46	17.9	17	25.5	29.5	32.5	21	7	29
3/8	3/8	KQY11-36S	17.46	17.9	17	25.5	31.5	34	21	7	38
3/8	1/2	KQY11-37S	22.23	17.9	17	25.5	35.5	36.5	21	7	64
1/2	1/4	KQY13-35S	17.46	21.7	17	28	31.5	36.5	22	9	34
1/2	3/8	KQY13-36S	17.46	21.7	17	28	33.5	38.5	22	9.6	43
1/2	1/2	KQY13-37S	22.23	21.7	17	28	37.5	40	22	9.6	69

EXTENDED RANGE ONE TOUCH FITTINGS

ONE TOUCH FITTINGS: EXTENDED RANGE

- ✓ Extensive range of esoteric designs for yet more applications
- ✓ SMC design gives high flow for given tube size
- ✓ Fittings from 10 Torr (vacuum) to 10 bar

- ✓ One-touch collet design allows easy dis-assembly with strong tube gripping
- ✓ Wide range of threads: M5 (gasket type) to taper (R $\frac{1}{2}$)
- ✓ Large range of tube sizes from Ø4mm to Ø16mm
- ✓ Threads come with applied sealant (no tape required)

PRODUCT SELECTOR

SINGLE BANJO: KQVS/KQ2VS
6mm - R $\frac{1}{2}$ (Allen)



PRODUCT SELECTOR

TWIN MALE ELBOW: KQLU/KQ2LU
TWIN UNION ELBOW: KQLU/KQ2LU
4mm - R $\frac{1}{2}$ & 4mm tube for union



PRODUCT SELECTOR

SINGLE BANJO: KQVF/KQ2VF
6mm - R $\frac{1}{2}$ (Stack)



PRODUCT SELECTOR

90° FEMALE ELBOW: KQLF/KQ2LF
6mm - R $\frac{1}{2}$



PRODUCT SELECTOR

DOUBLE BANJO: KQVD/KQ2VD
4mm - R $\frac{1}{2}$



PRODUCT SELECTOR

TRIPLE BANJO: KQVT/KQ2VT
4mm - R $\frac{1}{2}$



PRODUCT SELECTOR

TWIN BANJO: KQZ/KQ2Z
6mm - R $\frac{1}{2}$



PRODUCT SELECTOR

TWIN BANJO: KQZF/KQ2ZF
6mm - R $\frac{1}{2}$ (Stack)



PRODUCT SELECTOR

QUADRUPLE BANJO: KQZD/KQ2ZD
4mm - R $\frac{1}{2}$



PRODUCT SELECTOR

SEXTUPLE BANJO: KQZT/KQ2ZT
4mm - R $\frac{1}{2}$



PRODUCT SELECTOR

LONG STEM ELBOW: KQW/KQ2W
6mm



PRODUCT SELECTOR

CORNER MALE ELBOW: KQD/KQ2D
CORNER UNION ELBOW: KQD/KQ2D
4mm - R $\frac{1}{2}$ & 6mm tube for union



PRODUCT SELECTOR

MALE Y: KQUD/KQ2UD
4 x 4mm - R $\frac{1}{2}$



PRODUCT SELECTOR

UNION Y: KQUD/KQ2UD
4 x 4mm - 6mm



PRODUCT SELECTOR

STEM Y: KQX/KQ2X
2 x 6mm - 8mm



PRODUCT SELECTOR

STEM Y: KQXD/KQ2XD
4 x 4mm - 6mm



PRODUCT SELECTOR

BULKHEAD UNION ELBOW: KQLE/KQ2LE
6mm Tube



PRODUCT SELECTOR

STEM MALE NIPPLE: KQN/KQ2N
6mm - R $\frac{1}{2}$



PRODUCT SELECTOR

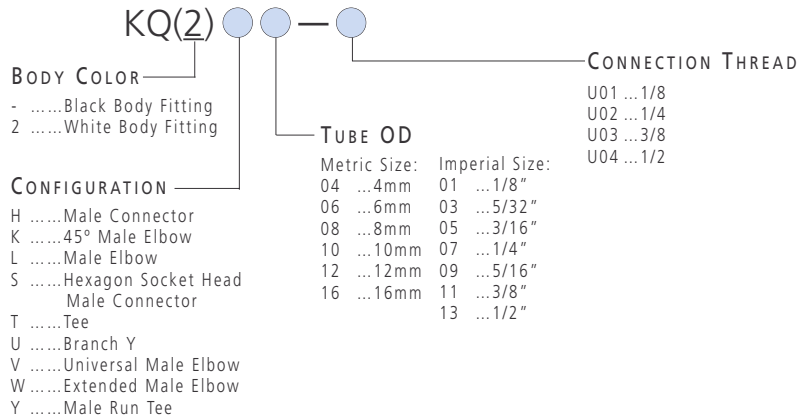
UNION BLANK: KQC/KQ2C
6mm Tube



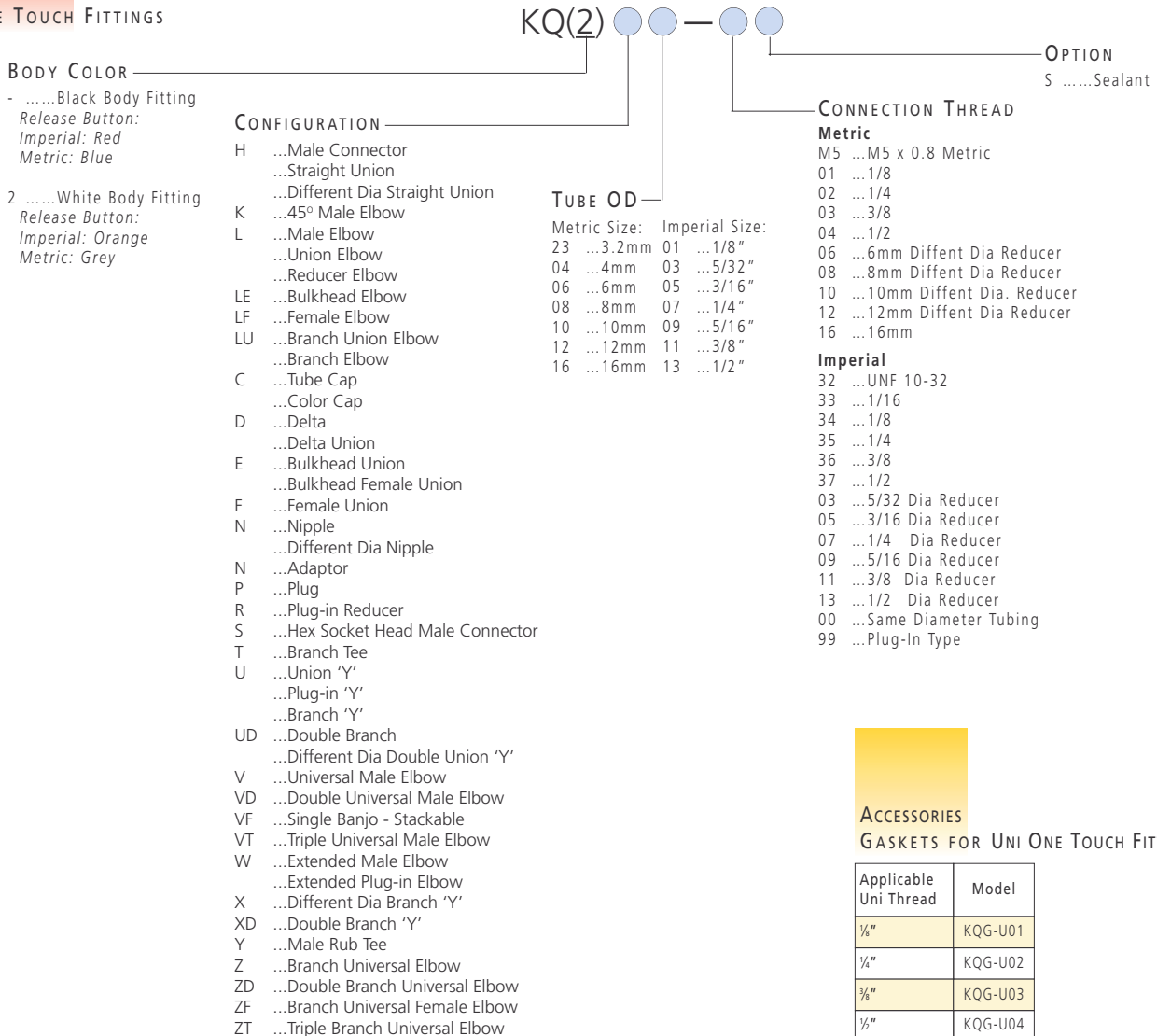
How To ORDER SEE NEXT PAGE

SMC ONE TOUCH FITTINGS

HOW TO ORDER
UNI ONE TOUCH FITTINGS



HOW TO ORDER
ONE TOUCH FITTINGS



ACCESSORIES
GASKETS FOR UNI ONE TOUCH FITTINGS

Applicable Uni Thread	Model
1/8"	KQG-U01
1/4"	KQG-U02
3/8"	KQG-U03
1/2"	KQG-U04

Some are available in metric only - consult SMC for more information.

TUBE FITTINGS ROTARY ONE TOUCH FITTINGS

ROTARY ONE TOUCH FITTINGS SERIES KS/KX

- ✔ Ball Race Bearing for oscillating or rotating applications
- ✔ KX Series fitted with double ball race bearing for high speed applications
- ✔ Tube Sizes 4, 6, 8, 10, 12mm
- ✔ Low torque, low friction rotation
- ✔ Thread options: M5, R $\frac{1}{8}$ ~ R $\frac{1}{2}$ and Uni $\frac{1}{8}$ ~ Uni $\frac{1}{2}$
- ✔ One Touch Collet includes anti tube rotation mechanism
- ✔ Suitable for copper free
- ✔ Pressure or Vacuum Applications

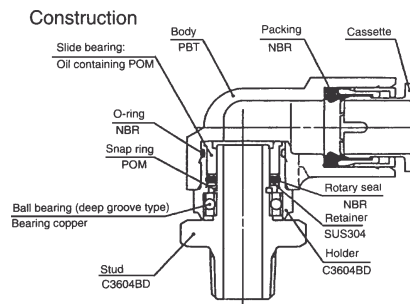


TECHNICAL SPECIFICATIONS

Fluid	Air				
Max Operating Pressure	1.02MPa / 150PSI				
Operating Vacuum Pressure	0.001MPa Absolute 0.2PSI				
Proof Pressure	3.06MPa / 445PSI				
Ambient and Fluid Temperature	0 ~ 60°C / 32 ~ 140°F				
Speed Allowable Rotations (rpm)	KS	500	400	300	250
	KX	1500	1200	1000	1000
Starting Torque Nm x 10 ⁻³	6	12	14	20	22
Thread	JIS B0203, JIS B0205				

For higher speed (up to 1500rpm) applications, contact SMC Customer Service

CONSTRUCTION SPECIFICATIONS



An ambient atmosphere that causes rust is non permissible.

HOW TO ORDER

ROTARY ONE TOUCH FITTINGS SERIES KS/KX



SPEED RATING

- SHigh speed
- XVery high speed

CONFIGURATION

- HStraight
- LElbow

TUBE SIZE

- 04 ...Ø4mm
- 06 ...Ø6mm
- 08 ...Ø8mm
- 10 ...Ø10mm
- 12 ...Ø12mm

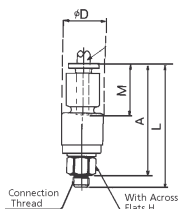
THREAD SIZE

- M5 ...M5 (4, 6mm tube sizes only) METRIC
- 01S ... $\frac{1}{8}$ (4, 6, 8mm tube sizes only) TAPER with sealant
- 02S ... $\frac{1}{4}$ (6, 8, 10mm tube sizes only) TAPER with sealant
- 03S ... $\frac{3}{8}$ (8, 10, 12mm tube sizes only) TAPER with sealant
- 04S ... $\frac{1}{2}$ (10, 12mm tube sizes only) TAPER with sealant
- U01 ...1/8 (4, 6, 8mm tube sizes only) UNITHREAD
- U02 ...1/4 (6, 8, 10mm tube sizes only) UNITHREAD
- U03 ...3/8 (8, 10, 12mm tube sizes only) UNITHREAD
- U04 ...1/2 (10, 12mm tube sizes only) UNITHREAD

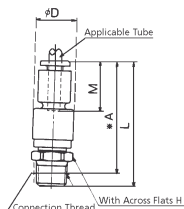


DIMENSIONS

STRAIGHT CONNECTOR: KSH



Metric thread connection



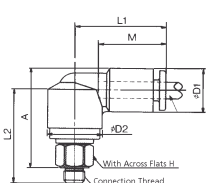
Male pipe thread connection

Dimensions in mm

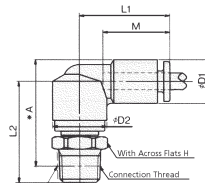
Applicable Tube OD mm	Connection Thread	Model	H (Width Across Flats)	øD	L	*A	M	Min Hole Diameter	Effective Orifice (mm ²) / Nylon	Mass (g)
4	M5 x0.8	KSH04-M5	8	12.5	36.5	33	16	2.5	4	9
	1/8	KSH04-01S	12	12.5	38	34	16	2.5	4	14
6	1/8	KSH06-01S	14	14.5	39.5	35.5	17	4	13.4	17
	1/4	KSH06-02S	14	14.5	42.5	36.5	17	4	13.4	23
8	1/8	KSH08-01S	17	17.5	44	40	18.5	6	26.1	23
	1/4	KSH08-02S	17	17.5	47	41	18.5	6	26.1	29
	3/8	KSH08-03S	17	17.5	48	41.5	18.5	6	26.1	37
10	1/4	KSH10-02S	22	22.5	54	48	21	7	36.3	55
	3/8	KSH10-03S	22	22.5	55	48.5	21	7	36.3	63
	1/2	KSH10-04S	22	22.5	57.5	49.5	21	7	36.3	81
12	3/8	KSH12-03S	24	24.5	57	50.5	22	8	46.1	75
	1/2	KSH12-04S	24	24.5	60	52	22	8	46.1	92

DIMENSIONS

ELBOW CONNECTOR: KSL



Metric thread connection



Male pipe thread connection

Dimensions in mm

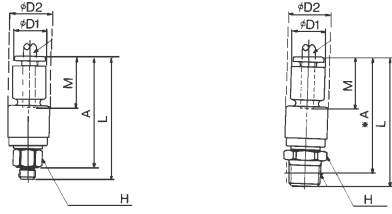
Applicable tube O.D. (mm)	Connection thread	Model	H (Width across flats)	øD ₁	øD ₂	L ₁	L ₂	*A	M	Min. hole dia.	Effective orifice (mm ²)	Mass (g)
											Nylon	
4	M5x0.8	KSL04-M5	8	10.4	12	21	20.5	22	16	2.5	3.5	9
	1/8	KSL04-01S	12				22	23.5				14
6	1/8	KSL06-01S	14	12.8	14	23	23	25.5	17	4	8.6	17
	1/4	KSL06-02S					26	26.5				23
8	1/8	KSL08-01S	17	15.2	17	26	26.5	30	18.5	6	21.6	23
	1/4	KSL08-02S					29.5	31				29
	3/8	KSL08-03S					31	32				38
10	1/4	KSL10-02S	22	18.5	22	31.5	34	37.5	21	7	30.5	56
	3/8	KSL10-03S					35	38				64
	1/2	KSL10-04S					38	39.5				82
12	3/8	KSL12-03S	24	20.9	24	34	36.5	40.5	22	8	35.1	76
	1/2	KSL12-04S					39.5	42				93

* reference dimensions after thread installation.

TUBE FITTINGS ROTARY ONE TOUCH FITTINGS

DIMENSIONS

**STRAIGHT CONNECTOR:
KXH**



Metric thread connection

Male pipe thread connection

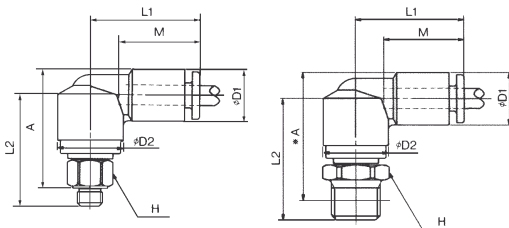
Dimensions in mm

Applicable tube O.D. (mm)	Connection Thread	Model	H (Width across flats)	ØD	L	*A	M	Min. hole dia.	Effective orifice (mm ²)	Mass (g)
									Nylon	
4	M5x0.8	KXH04-M5	8	10.4	38.5	35	16	2.5	4.0	11
	1/8"	KXH04-01S	12		40	36				16
6	1/8"	KXH06-01S	14	12.8	41.5	38	17	4	13.4	20
	1/4"	KXH06-02S			44	39				26
8	1/8"	KXH08-01S	17	15.2	46	42	18.5	6	26.1	28
	1/4"	KXH08-02S			49	43				34
	3/8"	KXH08-03S			50	44				42
10	1/4"	KXH10-02S	22	18.5	58	52	21	7	36.3	68
	3/8"	KXH10-03S			59	52				76
	1/2"	KXH10-04S			62	53				94
12	3/8"	KXH12-03S	24	20.9	60	54	22	8	46.1	88
	1/2"	KXH12-04S			63	55				105

* reference dimensions after thread installation.

DIMENSIONS

**ELBOW CONNECTOR:
KXL**



Metric thread connection

Male pipe thread connection

Dimensions in mm

Applicable tube O.D. (mm)	Connection thread	Model	H (Width across flats)	ØD ₁	ØD ₂	L ₁	L ₂	*A	M	Min. hole dia.	Effective orifice (mm ²)	Mass (g)
											Nylon	
4	M5x0.8	KXL04-M5	8	10.4	13	22	22.5	24	16	2.5	3.5	11
	1/8"	KXL04-01S	12				23	25				16
6	1/8"	KXL06-01S	14	12.8	15	24	25	28	17	4	8.6	20
	1/4"	KXL06-02S					28	29				26
8	1/8"	KXL08-01S	17	15.2	17	27	29	32	18.5	6	21.6	28
	1/4"	KXL08-02S					32	33				34
	3/8"	KXL08-03S					33	34				43
10	1/4"	KXL10-02S	22	18.5	23.5	32	38	42	21	7	30.5	69
	3/8"	KXL10-03S					39	42				77
	1/2"	KXL10-04S					42	43				95
12	3/8"	KXL12-03S	24	20.9	26	35	40	44	22	8	35.1	89
	1/2"	KXL12-04S					43	45				106

* reference dimensions after thread installation.

SELF SEAL FITTINGS SERIES KC

- ✓ One Touch Fitting (with Built-in Self-seal Mechanism) to prevent air exhaust when tube removed
- ✓ Most suitable for rationalizing and labor saving during piping work
- ✓ Many Options: 10 Types available



TECHNICAL SPECIFICATIONS

Fluid	Air	
Max Operating Pressure	10 Bar / 145PSI	
Ambient and Fluid Temperature	5-60°C / 40-140°F	
Thread	Thread Portion	JIB B0203 (Taper pipe thread)
	Nut	JIB B0211 class 2 (Metric fine thread)
Sealant (Thread portion)	With sealant (Standard)	
Applicable for Copper Free Applications	Brass Component (Electroless nickel plated)	
Applicable Tube*	Nylon, Soft nylon, Polyurethane	

SYMBOLS



*Dimensions to BS5409 part 1

PRODUCT SELECTOR

KCT



PRODUCT SELECTOR

KCJ



PRODUCT SELECTOR

KCE



PRODUCT SELECTOR

KCL



PRODUCT SELECTOR

KCL



PRODUCT SELECTOR

KCE



PRODUCT SELECTOR

KCU



How To ORDER

UNI ONE TOUCH FITTINGS

CONFIGURATION

- HStraight
- LElbow
- TTee
- JStraight plug
- UY Connector
- EBulkhead

TUBE O.D.

- 044mm
- 066mm
- 088mm
- 1010mm
- 1212mm

SEALANT

- SWith sealant
-(all male threads except M5)

CONNECTION THREAD

- M5M5
- 011/8
- 021/4
- 033/8
- 041/2
- 00Same dia. tube
- 99Stem fitting

PRODUCT SELECTOR

KCH



PRODUCT SELECTOR

KCH STRAIGHT PLUG FOR FREQUENT USE



TUBE FITTINGS ONE TOUCH FITTINGS-MANIFOLDS

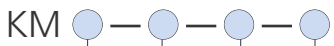
ONE TOUCH FITTINGS-MANIFOLDS SERIES KM

- ✓ Compact and Lightweight
- ✓ Threaded or One-touch Fitting Inlet or Plug-in Stem
- ✓ Ø4, 6, 8mm and ø5/32", 1/4", 5/16" Tube Outlet OD
- ✓ 3, 6 or 10 way
- ✓ Many variations available



**How To
ORDER**

MANIFOLD SERIES KM



INLET CONNECTION

- 11 ...One-Touch (Inch & Metric)
- 12 ...Threaded (Female) (Inch & Metric)
- 13 ...One-Touch (Metric Only)
- 14 ...One-Touch (Metric Only)
- 15 ...One Touch Fitting Rod (Metric Only)
- 16 ...One Touch Fitting Rod (Metric Only)

NUMBER OF OUTLETS

- 33 (KM13, 14, 15, 16)
- 66 (KM11, 12)
- 1010 (KM11, 12)

OUTLET TUBE OD

- 04 ...4mm 03 ...5/32"
- 06 ...6mm 07 ...1/4"
- 08 ...8mm 09 ...5/16"

**INLET PORT THREAD
OR TUBE OD**

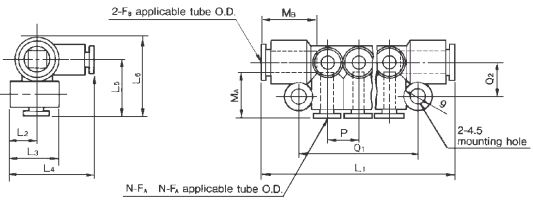
- 02 ...1/4 35 ...1/4"
- 03 ...3/8 36 ...3/8"
- 08 ...8mm 09 ...5/16"
- 10 ...10mm 11 ...3/8"
- 12 ...12mm 13 ...1/2"

**TECHNICAL
SPECIFICATIONS**

Fluid	Air
Operating pressure	Vacuum to 1MPa / 145PSI
Proof pressure	3MPa / 435PSI
Ambient and fluid temperature	0-60°C / 32-140°F
Thread (where applicable)	JIS B0203 (Taper pipe thread)
Applicable tube*	Nylon, Soft nylon, Polyurethane

*Dimensions to BS5409 Part 1

**DIMENSIONS
KM11**



Dimensions in mm

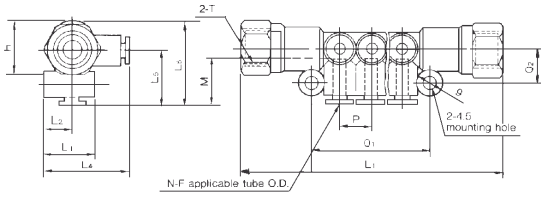
Model (Metric Size)	F _A	F _B	N	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	P	Q ₁	Q ₂	M _A	M _B	Port B min Port Size	Mass (g)
KM11-04-08-6	4	8	6	65	10	18	29.5	19.5	27	10.6	40	12	16	18.5	6	22
KM11-04-08-10			10	86							61.5					30
KM11-06-10-6	6	10	6	76	10	19.5	31.5	21.5	31	13	47	13.5	17	21	7.5	32
KM11-06-10-10			10	102							73					44
KM11-08-12-6	8	12	6	85	11.5	22.5	35.5	24	34.5	15.5	55	14.7	18.5	22	9	44
KM11-08-12-10			10	116							86					62

Model (Inch Size)	F _A	F _B	N	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	P	Q ₁	Q ₂	M _A	M _B	B Port Min Inside Dia	Weight (g)
KM11-03-09-6	5/32	5/16	6	65	10	18	29.5	19.5	27	10.6	40	12	16	18.5	6	22
KM11-03-09-10	5/32	5/16	10	86	10	18	29.5	19.5	27	10.6	61.5	12	16	18.5	6	30
KM11-07-11-6	1/4	3/8	6	77.8	10	19.5	31.5	21.5	30.5	13.3	48	13	17	21	7	32
KM11-07-11-10	1/4	3/8	10	104	10	19.5	31.5	21.5	30.5	13.3	73.5	13	17	21	7	44
KM11-09-13-6	5/16	1/2	6	85	12.8	24	37.7	25	35.9	15.2	52.8	15	18.5	22	9.5	44
KM11-09-13-10	5/16	1/2	10	115	12.8	24	37.7	25	35.9	15.2	83	15	18.5	22	9.5	62

MORE DIMENSIONS
SEE NEXT PAGE

ONE TOUCH FITTINGS-MANIFOLDS

DIMENSIONS
KM12



Dimensions in mm

Model (Metric Size)	F	T Rc(PT)	N	H (Hex)	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	P	Q ₁	Q ₂	M	Port B min port size	Mass (g)
KM12-04-02-6	4	1/4	6	17	89	10	18	29.5	19.5	29	10.6	40	12	16	6	67
			10	110	61.5							75				
KM12-06-02-6	6	1/4	6	17	99	10	19.5	31.5	21.5	31	13	47	13.5	17	7.5	84
			10	125	73							96				
KM12-08-03-6	8	3/8	6	19	108	11.5	22.5	35.5	24	34.5	15.5	55	14.7	18.5	9	100
			10	139	86							117				

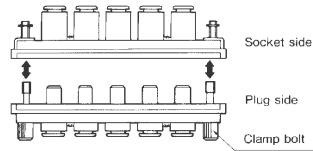
Model (Inch Size)	F	T NPT	N	H Hex	L ₁	L ₂	L ₃	L ₄	L ₅	L ₆	P	Q ₁	Q ₂	M	B Port Min Inside Dia	Weight (g)
KM12-03-35-6	5/32	1/4	6	-	87	10	18	29.5	19.5	29	16	40	12	16	6	67
KM12-03-35-10	5/32	1/4	10	11/16	110	10	18	29.5	19.5	29	16	61.5	12	16	6	75
KM12-07-35-6	1/4	1/4	6	-	95	10	19.5	31.5	21.5	31.25	17	48	13	17	7	84
KM12-07-35-10	1/4	1/4	10	11/16	121.2	10	19.5	31.5	21.5	31.25	17	73.5	13	17	7	96
KM12-09-36-6	5/16	3/8	6	-	102	12.8	24	37.7	25	37.5	18.5	52.8	15	18.5	9.5	100
KM12-09-36-10	5/16	3/8	10	7/8	132	12.8	24	37.7	25	37.5	18.5	83	15	18.5	9.5	117

RECTANGULAR MULTI-CONNECTOR

HOW TO USE

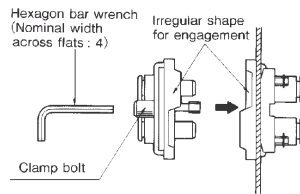
Separation

Loosen the clamp bolt to separate the plug side from the socket side.



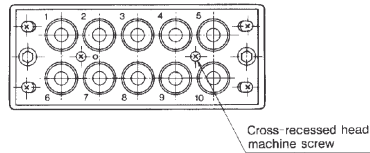
Connection

Put together the irregular faces for engagement and connect the plug case to the socket. After tightening the clamp bolt by hand, tighten it further with hexagon bar wrench (nominal width across flats:4).

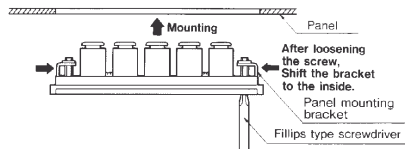


Panel Mounting

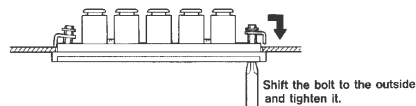
1 Loosen (4) screws for bracket on the socket side using a Phillips type screwdriver (JIS nominal No 2) until the bracket touches the stop ring.



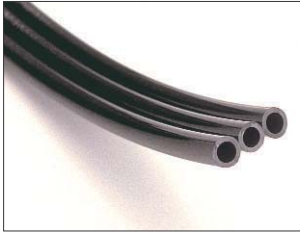
2 Shift the panel mounting bracket to the inside (move the screw for bracket in the longitudinal direction of the slot) and put the connector in the panel mounting hole. (Panel mounting hole: See dimensions).



3 After shifting the bolt for bracket to the outside, tighten the bolt with a Phillips type screwdriver to fix the socket case.



4 Loosen the screw for bracket until the bracket touches the stop ring and shift the bracket to the inside to remove the connector from the panel.



POLYURETHANE FLAT TUBING SERIES TFU

2 or 3 core flat tubing for neat presentation

**HOW TO
ORDER**
POLYURETHANE FLAT TUBING
SERIES TFU

TFU **B** — **B**

OD/ID
0425.....4mm OD 2.5mm ID
0604.....6mm OD 4mm ID
0805.....8mm OD 5mm ID

NUMBER OF TUBES
22
33

TECHNICAL SPECIFICATIONS

Model	TFU 0425B-2	TFU 0425B-3	TFU 0604B-2	TFU 0604B-3	TFU 0805B-2	TFU 0805B-3
Number of Tubes	2	3	2	3	2	3
Tube OD (mm)	4		6		8	
Tube ID (mm)	2.5		4		5	
Flow Factor Cv/Meters ^{note 3)}	0.11		0.39		0.70	
Max Operating Pressure	0.8MPa ^{note 2)} / 120PSI					
Operating Temperature	-20~+60°C / 4~140°F					
Material	Polyurethane					
Color	Black					
^{Note 1)} Min Bending Radius (mm)	10		15		20	
Tube Length per roll (m)	10					

Note 1) The value for bending at a temperature of 20°C

Note 2) Safety allowance x3 at 20°C

Note 3) To calculate flow factor for longer lengths of tube divide factor for 1 metre by $\sqrt{\text{actual length in meters}}$.

POLYURETHANE COIL TUBING SERIES TCU

- ✓ Single or multi-core option
- ✓ For flexible piping applications



**HOW TO
ORDER**
POLYURETHANE COIL TUBING
SERIES TCU

TCU **B** — **B**

OD/ID
4mm OD 2.5mm ID0425
6mm OD 4mm ID0604
8mm OD 5mm ID0805

NO OF TUBES
11
22
33

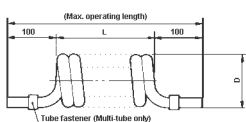
TECHNICAL SPECIFICATIONS

Model	TCU 0425B-1	TCU 0425B-2	TCU 0425B-3	TCU 0604B-1	TCU 0604B-2	TCU 0604B-3	TCU 0805B-1
Number of tubes core	1	2	3	1	2	3	1
Tube OD (mm)	4			6			8
Tube ID (mm)	2.5			4			5
Max operating pressure	0.8MPa ^{note 2)} / 120PSI						
Operating temperature	-20~+60°C / 4~140°F						
Material	Polyurethane						
Color	Black						

Note 1) The value for bending at a temperature of 20°C

Note 2) Safety allowance x3 at 20°C

DIMENSIONS POLYURETHANE COIL TUBING



Specifications Model	Tube size (mm)		Dimension of coil (mm)		Number of tube core	Number of coil winding per tube length	Max operating length (m)
	OD	ID	L	D			
TCU0425B-1	4	2.5	210	18	1	52	1.5
TCU0425B-2			280	28	2	35	
TCU0425B-3			265		3	22	
TCU0604B-1	6	4	325	24	1	54	2
TCU0604B-2				37	2	27	1.5
TCU0604B-3			305		3	17	1
TCU0805B-1	8	5	330	31	1	41	2

MULTITUBE HOLDER & TUBE CUTTER

MULTITUBE HOLDER SERIES TM

- ✓ Arranges Tubes neatly
- ✓ Accepts Ø4mm-12mm
- ✓ 6-12 Tube Design



TECHNICAL SPECIFICATIONS

Tube Material	Nylon, Soft Nylon, Polyurethane
Tube OD	ø4, ø6, ø8, ø10, ø12
Ambient (*C)	-20 ~ 60°C / 4 ~ 140°F
Material	Flame Resistant Polypropylene
Color	Black

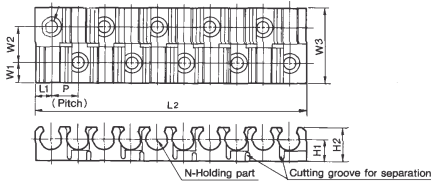
HOW TO ORDER

TM MULTITUBE HOLDER

TM — ●

- 04 ...4mm (12 Connecting Tubes)
- 06 ...6mm (12 Connecting Tubes)
- 08 ...8mm (8 Connecting Tubes)
- 10 ...10mm (6 Connecting Tubes)
- 12 ...12mm (6 Connecting Tubes)

DIMENSIONS



Dimensions in mm

Applicable Tube OD (mm)	Model	N (Number of Holding Parts)	P	L1	L2	W1	W2	W3	H1	H2	ØD	Mounting Tapping Screw Size
												Nominal x Length
4	TM-04	12	6	3.25	72.5	4.5	8	17	5	7.5	2.2	M2x6
6	TM-06	12	7.5	4.5	91.5	5.5	10	21	6.5	10	2.8	M2.6x8
8	TM-08	8	9.5	5.5	77.5	6	11	23	7.5	12	2.8	M2.6x8
10	TM-10	6	12.5	7.5	77.5	6.5	12	25	8.8	14.3	3.2	M3x8
12	TM-12	6	15	9	93	6.5	12	25	9.8	16.3	3.2	M3x8

TUBE CUTTER SERIES TK

- ✓ Perpendicular Cutting
- ✓ Enclosure/Safety Lock Contained



DIMENSIONS
TK 1 TUBE CUTTER

Dimensions in mm



TECHNICAL SPECIFICATIONS

Model	TK-1	TK-2
Applicable Tube Material	Nylon, Soft Nylon, Polyurethane and other soft plastic tube	
Applicable Tube OD	13mm or less	18mm or less

HOW TO ORDER
TK TUBE CUTTER

TK-1
TKA-1

