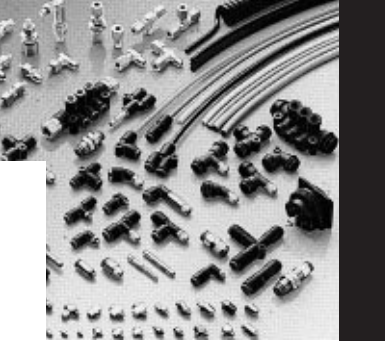


For Pneumatic Piping
Air Fittings & Tubing

General Purpose Fitting Series

Air Fitting Series

One-touch In/Out connection
Possible to use in vacuum to –100kPa

One-touch Mini
Series KJ

Applicable tube Metric size

One-touch In/Out connection
Possible to use in vacuum to –100kPa

One-touch Fittings
Series KQ2

Applicable tube Metric size

Low-torque rotation

Rotary One-touch Fittings
Series KS (Standard)
Series KX (High speed)

Applicable tube Metric size

One-touch In/Out connection
For compact and concentrated tubing applications

One-touch Fittings Manifold
Series KM

Applicable tube Metric size

Possible to use in vacuum to –101.3kPa

Insert Fittings
Series KF

Applicable tube Metric size

Tubing connection/disconnection without use of tools

Miniature Fittings
Series M

Applicable tube Metric size

Accepts soft copper tubing

Self-align Fittings
Series H, DL, L, LL

Applicable tube Metric size

Applicable tube material		Applicable tube O.D. (mm) ø3.2	ø4	ø6	ø8	ø10	ø12	ø16	W/ sealant	Electroless nickel plated	Page
Nylon, Soft nylon, Polyurethane	M3	●	●							●	2.1-1
	M5	●	●	●						●	
	1/8	●	●	●					●	●	
	Unions	●	●	●						●	
Nylon, Soft nylon, Polyurethane	M5			●	●	●	●	●			2.1-9
	M6			●	●	●	●	●			
	1/8			●	●	●	●	●	●		
	1/4			●	●	●	●	●	●		
	3/8				●	●	●	●	●		
	1/2					●	●	●	●		
	Unions			●	●	●	●	●			
Nylon, Soft nylon, Polyurethane	M5		●	●						●	2.1-31
	M6		●	●						●	
	1/8		●	●	●				●	●	
	1/4			●	●	●			●	●	
	3/8				●	●	●		●	●	
	1/2					●	●		●	●	
Nylon, Soft nylon, Polyurethane	1/4		●	●							2.1-35
	3/8				●						
	ø8		●								
	ø10			●							
	ø12				●						
Nylon, Soft nylon, Polyurethane	1/8				●	●					2.1-39
	1/4				●	●	●				
	3/8					●	●				
	1/2						●				
	Unions			●	●	●	●				
Nylon, Soft nylon, Polyurethane	M3		●							●	2.1-47
	M5		●	●						●	
	1/8			●	●					●	
Nylon, Soft nylon, Soft copper (C1220T-0)	1/8				●	●					2.1-53
	1/4				●	●	●				
	3/8					●	●				
	1/2						●				
	Unions			●	●	●	●				

General Purpose Fitting Series

Air Fitting Series

One-touch In/Out connection
With quick disconnect and air lock

Self-seal Fittings
Series KC

Applicable tube Metric size

Multi tube, One-touch In/Out connection

Multi-connector
Series DM

Applicable tube Metric size

Rectangular Multi-connector
Series KDM

Applicable tube Metric size

Centralized distribution of supply air

Piping Module
Series KB

Applicable tube Metric size

Applicable tube material	Applicable tube O.D. (mm) ø3.2 ø4 ø6 ø8 ø10 ø12 ø16	W/ sealant	Electroless nickel plated	Page
Nylon, Soft nylon, Polyurethane	M5, 1/8, 1/4, 3/8, 1/2, Unions	●	●	2.1-59
Nylon, Soft nylon, Polyurethane	6 tubes, 12 tubes			2.1-65
Nylon, Soft nylon, Polyurethane	10 tubes, 20 tubes			2.1-69
Nylon, Soft nylon, Polyurethane				2.1-72

Inch-size One-touch Fittings

Air Fitting Series

One-touch Inch-size tubing/UNF, NPT thread connection
Possible to use in vacuum to –100kPa

One-touch Mini
Series KJ

Applicable area —— U.S.A. etc.

One-touch Inch-size tubing/UNF, NPT thread connection
Possible to use in vacuum to –100kPa

One-touch Fittings
Series KQ2

Applicable area —— U.S.A. etc.

One-touch Inch-size tubing/M5, R, Rc thread connection
Possible to use in vacuum to –100kPa

One-touch Fittings
Series KQ2

Applicable area ——Australia, Japan, etc.

Applicable tube material	Applicable tube O.D. (inch) ø1/8 ø5/32 ø3/16 ø1/4 ø5/16 ø3/8 ø1/2	W/ sealant	Electroless nickel plated	Page
Nylon, Soft nylon, Polyurethane	UNF 10-32, 1/16, 1/8, Unions	●	●	2.2-1
Nylon, Soft nylon, Polyurethane	UNF 10-32, 1/16, 1/8, 1/4, 3/8, 1/2, Unions	●	●	2.2-9
Nylon, Soft nylon, Polyurethane	M5, 1/8, 1/4, 3/8, 1/2, Unions	●	●	2.2-16

K□
M□
H□
D□
MS
T□

Inch-size One-touch Fittings

Air Fitting Series

Low-torque rotation for fast swivel and oscillating applications

Rotary One-touch Fittings
Series KS (Standard)

Applicable tube Inch size
Applicable thread —— UNF, NPT

One-touch In/Out connection For compact and concentrated tubing applications

One-touch Fittings Manifold
Series KM

Applicable tube Inch size
Applicable thread —— NPT

One-touch In/Out connection Multi-tube connector

Rectangular Multi-connector
Series KDM

Applicable tube Inch size

Applicable tube material	Applicable tube O.D. (inch) ø1/8 ø5/32 ø3/16 ø1/4 ø5/16 ø3/8 ø1/2	W/ sealant	Electroless nickel plated	Page
Nylon, Soft nylon, Polyurethane	UNF 10-32, 1/8, 1/4, 3/8	●	●	2.2-22
Nylon, Soft nylon, Polyurethane	1/4, 3/8, 5/16, 3/8, 1/2			2.2-25
Nylon, Soft nylon, Polyurethane	10 tubes, 20 tubes			2.2-27

Fitting Series For Special Environments

Air Fitting Series

One-touch In/Out connection For use where weld spatter is generated Flame resistant material UL-94 V0

FR One-touch Fittings
Series KR

Applicable tube Metric size

One-touch In/Out connection For use where weld spatter is generated Flame resistant material UL-94 V0

FR One-touch Fittings Manifold
Series KRM

Applicable tube Metric size

One-touch In/Out connection For use in corrosive environments Stainless series

One-touch Fittings
Series KG

Applicable tube Metric size

One-touch In/Out connection For use in corrosive environments Stainless steel (SUS316)

Miniature Fittings
Series MS

Applicable tube Metric size

Applicable tube material	Applicable tube O.D. (mm) ø3.2 ø4 ø6 ø8 ø10 ø12 ø16	W/ sealant	Electroless nickel plated	Spatter proof	Page
FR Soft nylon FR Double layer	1/8, 1/4, 3/8, 1/2, Unions	●	●	●	2.3-1
FR Soft nylon FR Double layer	1/4, 3/8, ø10, ø12			●	2.3-7
Nylon, Soft nylon, Polyurethane	M5, 1/8, 1/4, 3/8, 1/2, Unions	●	●	●	2.3-9
Nylon, Soft nylon, Polyurethane	M5				2.3-21

Fitting Series For Special Environments

Air Fitting Series

To dissipate static electricity

Antistatic One-touch Fittings Series KA

Applicable tube material	Applicable tube O.D. (mm)	With sealant	Electroless nickel plated	Spatter proof	Page
	ø3.2 ø4 ø6 ø8 ø10 ø12				
Soft nylon, Polyurethane	M5		●		2.3-25
	M6		●		
	1/8		●		
	1/4		●		
	3/8		●		
	1/2		●		
	Unions		●		

Tubing

Tubing

General tubing
1.5MPa max. at 20˚C

Nylon Tubing Series T

Slightly flexible
1.0MPa max. at 20˚C

Soft Nylon Tubing Series TS

Flexible
0.8MPa max. at 20˚C

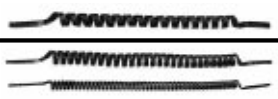
Polyurethane Tubing Series TU

Extremely flexible
0.6MPa max. at 20˚C

Soft Polyurethane Tubing Series TUS

For flexibility and moving applications

Polyurethane Coil Tubing Series TCU



For flexible multi-tube applications

Polyurethane Flat Tubing Series TFU

Color	Tube O.D.												Page
	Metric sizes (mm)							Inch sizes (inch)					
	ø4 (ø5/32)	ø6	ø8 (ø5/16)	ø10	ø12	ø16		ø1/8" (ø3.2)	ø3/16"	ø1/4"	ø3/8"	ø1/2"	
Black	●	●	●	●	●	●		●	●	●	●	●	2.4-1
White	●	●	●	●	●	●		●	●	●	●	●	
Red	●	●	●	●	●								
Blue	●	●	●	●	●								
Yellow	●	●	●	●	●								
Green	●	●	●	●	●								
Black	●	●	●	●	●	●		●	●	●	●	●	2.4-2
White	●	●	●	●	●	●		●	●	●	●	●	
Red	●	●	●	●	●								
Blue	●	●	●	●	●								
Yellow	●	●	●	●	●								
Green	●	●	●	●	●								
Black		●		●	●								2.4-3
White		●		●	●								
Red		●		●	●								
Blue		●		●	●								
Yellow		●		●	●								
Green		●		●	●								
Clear		●		●	●								
Orange		●		●	●								
Black		●		●	●								2.4-4
White		●		●	●								
Red		●		●	●								
Blue		●		●	●								
Yellow		●		●	●								
Green		●		●	●								
Opaque Yellow brown		●		●	●								
1 tube		●		●	●								2.4-5
2 tubes		●		●	●								
3 tubes		●		●	●								
2 tubes		●		●	●								2.4-6
3 tubes		●		●	●								

K□
M□
H□
D□
MS
T□

Tubing

Tubing

Use in spatter generating atmosphere/ Flame resistant material

FR Soft Nylon Tubing
Series TRS

Flame resistance (Equivalent to UL-94 standard V-0)

FR Double Layer Tubing
Series TRB

Flame resistance (Equivalent to UL-94 standard V-0)

For preventing static electricity

Antistatic Tubing
Series TA

Accessories

Accessories / Tools

Multi-tube Holder
Series TM

Multi-holder
Series TMA

Tube Cutter
Series TK

Tube Releasing Tool
Series TG

Color	Tube O.D. Metric sizes (mm)	Tube O.D. Inch sizes (inch)	Page
	ø4 (ø5/32) ø6 (ø5/16) ø8 ø10 ø12 ø16	ø1/8 (ø3.2) ø3/16 ø1/4 ø3/8 ø1/2	
Black, White, Red, Blue, Green			2.4-7
Black, White, Red, Blue, Yellow, Green			2.4-8
Black			2.4-10
			2.5-1
			2.5-2
			2.5-3
			2.5-5

Operation Guide For Air Fittings and Tubing

With Sealant and Nickel Plated Option

How to Order

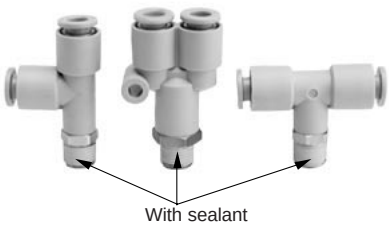
S — X2

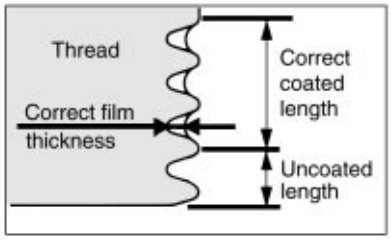
- **Option indication**
  - **X2** — With electroless nickel plated
- **With sealant**
  - — — Without sealant
  - **S** — Sealant

Note) With gasket for all of M3, M5 and M6 threads.

Fittings with Sealant

The sealant (fluoro resin) is applied to the threaded portion with the correct thickness and range. This eliminates the work of wrapping and coating sealant, which simplifies piping.





Air Fittings & Tubing/Precautions①

Be sure to read before handling. Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to the main text for more detailed precautions of every series.

Selection

⚠ Caution

❶Keep the connection part of fitting and tubing from rotating to prevent cracking. Use Rotary One-touch Fittings Series KS (Standard) or KX (High speed) for these cases.

❷The tube bending radius in the vicinity of the fitting should be at least the minimum bending radius of the tube. If bent more than the min. bending radius, tubing may fail or be crushed.

❸Do not use tubing for combustibles, explosives or poisoneous fluids like gas, fuel gas, coolant etc. They can permeate through tubing walls.

❹Applicable for general industry water. Consult SMC if using other fluids. Surge pressure must be under the max. operating pressure. If surge pressure exceeds the max. operating pressure, fitting or tubing may be damaged.

Installation

⚠ Caution

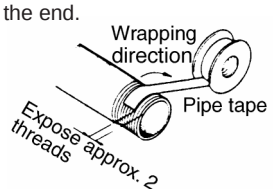
❶Check whether tubing is not damaged before installing. Confirm model size, etc.

❷Take the change in tubing length due to applied pressure into consideration when piping.

❸Do not apply unnecessary forces such as twisting, pulling, moment loads, etc. on fittings or tubing. This will cause damage to fittings and will crush, burst or release tubing.

❹Avoid wear-out of tubing, twisted piping or damage to tubing to prevent crushing, bursting or release of tubing.

❺When screwing together pipes and fittings etc., be certain that cutting dust from the pipe threads and sealing material do not get inside the piping. Furthermore, when pipe tape is used, leave 1.5 to 2 thread ridges exposed at the end.



Environment

⚠ Warning

❶Anti-static fittings (Series KA) and anti-static tubing (Series TA) are recommended for use where static electricity is a problem. Using other fittings or tubing may cause damage to the system and products.

❷Flame resistant fittings (Series KR/KRM) and tubing (Series TRS/TRB) are recommended for use in spatter applications. Fire may occur because of spattering.

❸Do not use fittings and tubing where they are directly in contact with cutting oil, lubrication or coolant. Consult SMC if using under such applications.

Maintenance

⚠ Caution

❶Replace fittings or tubing having the following problems.
a) Cracks, gouges, wearing, corrosion
b) Air leakage
c) Twists or crushing of tubing
d) Hardening, deterioration, softening of tubing

❷Do not reuse damaged fittings/tubing.

Use of One-touch Fittings

⚠ Caution

❶Tube insertion and removal from One-touch fittings
1) Installing tube
①Cut the tube perpendicularly, being careful not to damage the outside surface. Use SMC tube cutter “TK-1”, “TK-2” or “TK-3”. Do not cut the tube with pliers, nippers, scissors, etc., otherwise, the tube will be deformed and troubles may result.
②Grasp the tube, slowly push it into the One-touch fittings until it comes to a stop.
③Pull the tubing back gently to make sure it has a positive seal. Insufficient installation may cause air leakage or tube releasing.
2) Removing tube
①Push in evenly on the release button.
②Pull out the tube while keeping the release button depressed. If the release button is not held down, the tube cannot be withdrawn.
③To reuse the tubing, cut off the previously lodged portion of the tube.

❷To install the fittings, screw the fitting into the hexagonal face of the body, applying the appropriate wrench as close to the thread as possible. Use the spanner corresponding to the size of hexagonal portion, or hexagonal portion may be deformed.

❸Tightening the thread portion of an M3, M5 or M6 fittings
1) M3
First, tighten it by hand, then give it an additional 1/4 turn with a wrench.
2) M5/M6
First, tighten it by hand, then give it an additional 1/6 turn with a wrench.

Excessive tightening may damage the thread portion or deform the gasket and cause air leakage.

Air Fittings & Tubing/Precautions②

Be sure to read before handling. Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to the main text for more detailed precautions of every series.

Fittings with Sealant

⚠Caution

❶The standard thread torques of the fittings are as shown in the table below. In short, tighten by hand, then turn it two or three revolutions with a wrench.

Thread size	Standard torque (Nm)
NPT 1/16, NPT, R(PT)1/8	7 to 9
NPT, R(PT) 1/4	12 to 14
NPT, R(PT) 3/8	22 to 24
NPT, R(PT) 1/2	28 to 30

❷If the fitting is threaded in with excessive torque, a large amount of sealant will seep out. Remove the excess sealant.

❸Insufficient tightening may loosen threads, or cause air leakage.

❹Reuse

1) In most cases, two or three uses are possible.
2) Remove loose sealant stuck to the fitting by blowing air over the threaded portion of the fitting to prevent air leakage caused by entering sealant.
3) If the sealant no longer provides an effective seal, wrap sealing tape over sealant before reuse. (Sealant in any form other than tape will not work.)

❺Once the fitting has been tightened, backing it out to its original position often causes the sealant to become defective. Air leakage will occur.

Use of Tubing Other than SMC's Brand

⚠Caution

❶When using a brand of tubing other than SMC, be careful of the tolerance of the tube's O.D.

1) Nylon tubing ≤ ±0.1mm
2) Soft nylon tubing ≤ ±0.1mm
3) Polyurethane tubing ≤ +0.15mm, ≤ –0.2mm

When the tolerance of the tube's O.D. is out of range mentioned above, do not use the tubing. Tubing can not be connected and it causes air leakage or tubing may come out.

One-touch Fittings

Applicable Tube – Metric Size Connection Thread – M, R(PT), Rc(PT)

Series KQ2

How to Order

KQ 2 H 06 – 01 S

One-touch Fitting

Color

Symbol	Body	Release button
2	White	Light gray
—	Black	Blue

Applicable tube O.D.

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

Port size/Applicable tube O.D.

Thread	**M5**	M5 X 0.8	
	M6	M6 X 1.0	
	01	R(PT)1/8, Rc(PT)1/8	
	02	R(PT)1/4, Rc(PT)1/4	
	03	R(PT)3/8, Rc(PT)3/8	
	04	R(PT)1/2, Rc(PT)1/2	
Tube (Rod)	**00**	Same dia. tube	
	04	ø4	Different dia. tube (Reducer)
	06	ø6	
	08	ø8	
	10	ø10	
	12	ø12	
	16	ø16	
	99	Same dia. rod	

With sealant

—	Without sealant
S	Sealant

Note) Port size of with sealant style: Only
R(PT) 1/8
R(PT) 1/4
R(PT) 3/8
R(PT) 1/2

Model

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

* Applicable to KQ2 (white body) only.

Note) KQT06-04, KQT08-06, KQT10-08, and KQT12-10 are available as made to order.

Accessory

—	Name
KQ2N	Nipple
	Different dia. nipple
	Adapter
KQ2C	Tube cap
KQ2C	Color cap
KQ2P	Plug (White)
KQP	Plug (Blue)

Series KQ2: White body
Series KQ : Black body

Release button

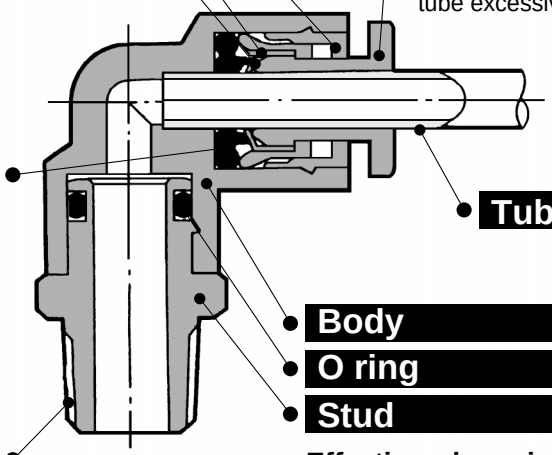
Series KQ2: Light gray
Series KQ : Blue
Small disconnecting force.
When the fitting is removed from the tubing, the chuck and collet are released, thus preventing them from biting into the tube excessively.

Guide

Collet

Chuck

Accepts nylon, and urethane tubes.
Has large retaining force.



Packing

Can be used for a wide range of pressures from a low vacuum up to a pressure of 1.0MPa
The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Tube

Body

O ring

Stud

Thread

M, R(PT), Rc(PT)

Effective when piping in a confined space.
The body and threaded portion can turn independently.

PAT.

One-touch IN/OUT connection. Possible to use in vacuum to –100KPa.

●Applications for metric size tube

●Applicable tube material ——

Nylon, soft nylon, polyurethane

Order Made P.2.1-29

Applicable Tubing

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

Color

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

Specifications

Operating fluid		Air, Water (1)
Max. operating pressure		1.0MPa
Operating vacuum pressure		–100kPa
Proof pressure		3.0MPa
Ambient and fluid temperature		–5 to 60°C (Water: 0 to 40°C)
Thread	Thread portion	JIS B0203 (Taper pipe thread) JIS B0209 Class 2 (Metric coarse thread)
	Nut	JIS B0211 Class 2 (Metric fine thread)
Sealant (Thread portion)		With sealant or none

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

Component Materials

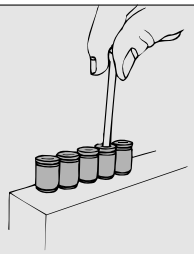
Body	C3604BD, PBT, PP
Stud	C3604BD (Thread portion)
Chuck	Stainless steel (SUS304)
Guide	SUS304, C3604BD, Polyacetal (POM)
Collet, Release button	Polyacetal (POM)
Packing, O ring	NBR
Gasket	SUS304, NBR

Model

Hex. socket head male connector

KQ2S P.2.1-13

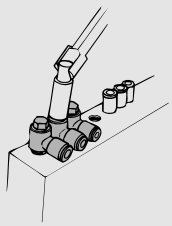
Internal hex. allows thread connection by using an Allen wrench for confined spaces.



Universal male elbow

KQ2V P.2.1-16

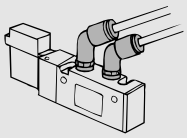
Universal male elbow allows thread connection by using a socket wrench for confined spaces.



45° male elbow

KQ2K P.2.1-15

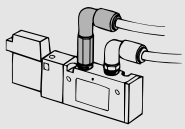
Used in applications where a 45° elbow or male connector stresses the tubing.



Extended male elbow

KQ2W P.2.1-21

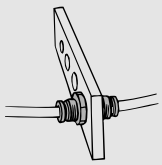
For when the elbow extends over a standard elbow for easier of connection/ disconnection of tubing.



Bulkhead union

KQ2E P.2.1-27

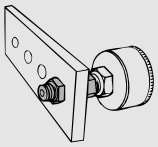
Used for junction connection of two tubes for installation of a panel.



Bulkhead connector

KQ2E P.2.1-27

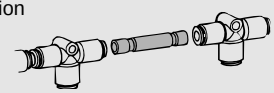
Used for transit connection of a tube and a male screw for installation of a panel.



Nipple

KQ2N P.2.1-28

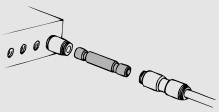
Used for connection of two One-touch fittings.



Reducer nipple

KQ2N P.2.1-28

Used for connection of two One-touch fittings that are different tube O.D.s.



Male connector

KQ2H P.2.1-13

Used to pipe in the same direction from female threaded portion. Most common style.

Male elbow

KQ2L P.2.1-14

Used to pipe in right angle to female threaded portion. Most common style.

Male branch tee

KQ2T

P.2.1-21

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

Female connector

KQ2F P.2.1-13

Used to pipe from the male threaded portion such as pressure gauge.

Union elbow

KQ2L P.2.1-19

Used to connect tubes at right angles.

Union tee

KQ2T

P.2.1-22

Used to connect tubes in both 90° directions.

Straight union

KQ2H P.2.1-14

Used to connect tubes in the same direction.

Plug-in elbow

KQ2L

P.2.1-20

Used to change by 90° in a tube fetching direction from One-touch fittings.

Different dia.tee

KQ2T

P.2.1-22

Used to connect tubes with size down in both 90° directions.

Different dia. straight

KQ2H P.2.1-14

Used to connect different size tubes.

Reducer elbow

KQ2L

P.2.1-20

Used to change by 90° in tube fetching direction from One-touch fittings and to size down.

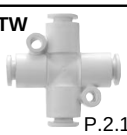
Different dia. tee

KQ2T P.2.1-22

Used to branch from in the same direction from thread and in 90° directions.

Cross

KQ2TW

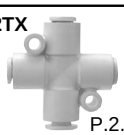


P.2.1-22

Used for four branch connections of tubes.

Different dia.cross

KQ2TX

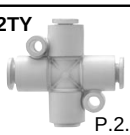


P.2.1-22

Used to connect tubes with size down in all 90° directions.

Different dia.cross

KQ2TY



P.2.1-23

Used to branch connection of tubes with size down in three directions.

Hex. socket head universal male elbow
KQ2VS P.2.1-16

Hex. on the top allows thread connection by using an Allen wrench for confined spaces.

Male branch connector
KQ2LU P.2.1-15

Used for connection at right angles from the female thread.

Universal female elbow
KQ2VF P.2.1-17

Used for the same direction or at right angles from the male or female thread. Multiplex connections possible.

Female elbow
KQ2LF P.2.1-17

Used to pipe the tube at right angles from the male elbow.

Double universal male elbow
KQ2VD P.2.1-17

Used for branch piping at right angles from the female thread. Two individual parts rotate 360°.

Triple universal male elbow
KQ2VT P.2.1-18

Used for branch piping at the right angles from the female thread. Three individual parts rotate 360°.

Branch universal male elbow
KQ2Z P.2.1-18

Hexagonal head allows thread connection by using a box wrench. Used for branch connection.

Branch universal female elbow
KQ2ZF P.2.1-18

Used for branch line in the same direction or at right angles from the male or female thread. Multiplex connection possible.

Double branch universal male elbow
KQ2ZD P.2.1-19

Used for four branch connections at right angles from the female thread. Two individual parts rotate 360°

Male run tee
KQ2Y P.2.1-23

Used for a branch line in the same direction from female thread and in 90° directions.

Triple branch universal male elbow
KQ2ZT P.2.1-19

Used for six branches at right angles from the female thread. Three individual parts rotate 360°.

Branch union elbow
KQ2LU P.2.1-20

Used for connection of tubes at right angles.

Extended plug-in elbow
KQ2W P.2.1-20

When the elbow extends over a standard elbow for ease of connection/disconnection of tubing.

Male delta union
KQ2D P.2.1-24

Used for two branch piping at right angles from the female thread.

Delta union
KQ2D P.2.1-24

Used for three branch connections of tubes at right angles.

Delta branch
KQ2UD P.2.1-25

Used for four branch piping in the same direction from the female thread.

Different dia. double union "Y"
KQ2UD P.2.1-25

Used for four branch connections in the same direction reducing the size of the tubes.

Different dia. plug-in "Y"
KQ2X P.2.1-26

Used for branch connections from the fitting reducing the size of tubes.

Double plug-in "Y"
KQ2XD P.2.1-26

Used for four branch connections from the fitting reducing the size of tube.

Union "Y"
KQ2U P.2.1-25

Used to connect tubes in the same direction.

Different dia.union "Y"
KQ2U P.2.1-25

Used to connect tubes with size down in the same direction.

Plug-in "Y"
KQ2U P.2.1-26

Used to branch tubing in the same direction from One-touch fittings.

Branch "Y"
KQ2U P.2.1-24

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

Plug-in reducer
KQ2R P.2.1-27

Used to change size of One-touch fittings.

Bulkhead male elbow
KQ2LE P.2.1-27

Used to connect two tubes through a panel changing by 90° in a tube fetching direction.

Adaptor
KQ2N P.2.1-28

Used to connect the fitting and R (PT) female thread.

Tube cap
KQ2C P.2.1-28

Used to plug the unused tube.

Color cap
KQ2C P.2.1-28

Mounted on the release button corresponding to its applications. Distinguished by color.

Plug
KQ2P, KQP P.2.1-28

Used to shut unused One-touch fittings.
KQP (Blue)
KQ2P (White)

Series KQ2

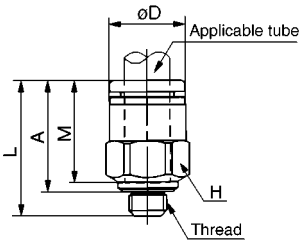
Male connector: KQ2H

<M5, M6>

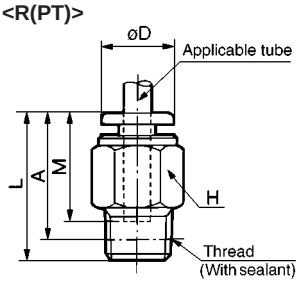
<R(PT)>

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD (1)	L	A*	M	Effective (2) area (mm²) Nylon	Effective (2) area (mm²) Urethane	Weight (g)
3.2	M5 X 0.8	KQ2H23-M5	7	7	16.7	13.6	12.7	3	2.5	2.1
	1/8	KQ2H23-01S	10	—	22	18	15.5	3.4	2.9	9
	1/4	KQ2H23-02S	14	—	19.5	13.5				16
4	M5 X 0.8	KQ2H04-M5	8	8	17	13.9	12.7	4	4	2.4
	M6 X 1.0	KQ2H04-M6	8		18					2.5
	1/8	KQ2H04-01S	10	—	22	18	16	5.6	4	9
	1/4	KQ2H04-02S	14	—	19.5	13.5				16
6	M5 X 0.8	KQ2H06-M5	10	10	17.8	14.7	13.5	4	4	3.3
	M6 X 1.0	KQ2H06-M6	10		19	14.9				3.4
	1/8	KQ2H06-01S	12	—	22.5	18.5	17	13.1	10.4	16
	1/4	KQ2H06-02S	14	—	23	17				14
	3/8	KQ2H06-03S	17	—	22	15.5				27
8	1/8	KQ2H08-01S	14	—	28	24	18.5	26.1	18.0	21
	1/4	KQ2H08-02S			26.5	20.5				19
	3/8	KQ2H08-03S	17		22	15.5				26
10	1/8	KQ2H10-01S	17	—	30	26	21	26.1	26.1	19
	1/4	KQ2H10-02S			33.5	27.5		41.5	29.5	30
	3/8	KQ2H10-03S			29	22.5				30
	1/2	KQ2H10-04S	22		27	19				53
12	1/4	KQ2H12-02S	19	—	34.5	28.5	22	58.3	46.1	42
	3/8	KQ2H12-03S			30	23.5				34
	1/2	KQ2H12-04S	22			22				51
16	3/8	KQ2H16-03S	24	25.7	39.5	33	25	81	(81)	61
	1/2	KQ2H16-04S			35.5	27.5		113	(96)	47

<M5, M6>



<R(PT)>



CAD SKQ1, #1 to #24

*Reference dimensions after R(PT) thread installation.

Note1) øD: max. diameter

Note2) ( ): Values for soft nylon

Hexagon socket head male connector: KQ2S

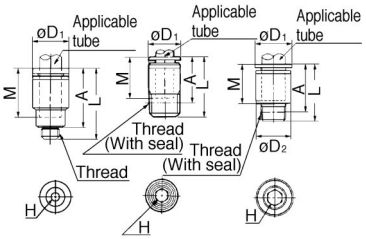
<M5, M6>

<R(PT)>

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD1 (1)	øD2	L	A*	M	Effective (2) area (mm²) Nylon	Effective (2) area (mm²) Urethane	Weight (g)
4	M5 X 0.8	KQ2S04-M5	2.5	8	—	18.7	15.6	12.7	4	4	2.7
	M6 X 1.0	KQ2S04-M6	3			18.2	14.1				2.8
	1/8	KQ2S04-01S		9.8		23	19	16	4.1	3.6	8
6	M5 X 0.8	KQ2S06-M5	2.5	10	—	19.5	16.4	13.5	4	4	3.3
	M6 X 1.0	KQ2S06-M6	3			19.1	15				3.4
	1/8	KQ2S06-01S	4	11.8		24	20	17	10.0	9.9	9
	1/4	KQ2S06-02S		13.8		24	18		10.7	10.0	15
8	1/8	KQ2S08-01S	5	14	—	28	24	18.5	17.2	16.2	12
	1/4	KQ2S08-02S	6			25.5	19.5		23.3		11
	3/8	KQ2S08-03S		17		27.5	21				24
10	1/8	KQ2S10-01S	5	17	—	30	26	21	17.2	10.0	18
	1/4	KQ2S10-02S	8			27.5	21.5		39.0	26.6	12
	3/8	KQ2S10-03S					21				19
	1/2	KQ2S10-04S		22		28	20				35
12	1/4	KQ2S12-02S	8	19	—	33.5	27.5	22	46.0	44.5	23
	3/8	KQ2S12-03S	10			29	22.5		60.0		18
	1/2	KQ2S12-04S		22		28	20				30
16	3/8	KQ2S16-03S	10	25.7	24	39	32.5	25	81	(81)	42
	1/2	KQ2S16-04S	12			35	27		113	(96)	34

<M5, M6> <R(PT)>

KQ2S04 to 12 KQ2S16



CAD KQ2S04 to KQ2S12 — SKQ1, #25 to #41

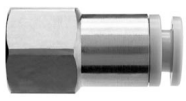
KQ2S16 ———— SKQ21, #1 to #2

*Reference dimensions after R(PT) thread installation.

Note1) øD1: max. diameter

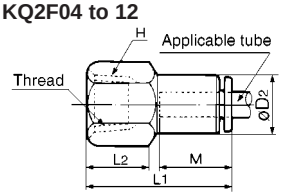
Note2) ( ): Values for soft nylon

Female connector: KQ2F

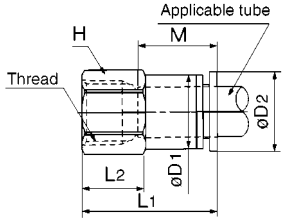


Tube O.D. (mm)	Thread Rc(PT)	Part No.	H (Hex.)	øD1	øD2 (1)	L1	L2	M	Effective (2) area (mm²) Nylon	Effective (2) area (mm²) Urethane	Weight (g)
4	1/8	KQ2F04-01	14	—	10	27	11	16	5.6	4	15
	1/4	KQ2F04-02	17			31	14				23
6	1/8	KQ2F06-01	14	—	12	27.5	11	17	13.1	10.4	15
	1/4	KQ2F06-02	17			31	13				22
	3/8	KQ2F06-03	19			33.5	15				25
8	1/8	KQ2F08-01	14	—	14	29	11	18.5	26.1	18.0	17
	1/4	KQ2F08-02	17			32.5	13				24
	3/8	KQ2F08-03	19			33.5	14				24
10	1/4	KQ2F10-02	17	—	17	34.5	14	21	41.5	29.5	27
	3/8	KQ2F10-03	19			36.5	15				30
12	1/4	KQ2F12-02	19	—	19	35	14	22	58.3	46.1	36
	3/8	KQ2F12-03				37					31
	1/2	KQ2F12-04	24			41	18				52
16	3/8	KQ2F16-03	24	24	25.7	38	15	25	81	(81)	59
	1/2	KQ2F16-04				43	19		113	(96)	58

KQ2F04 to 12



KQ2F16



CAD KQ2F04 to KQ2F12 — SKQ1, #42 to #54

KQ2F16 ———— SKQ21, #3 to #4

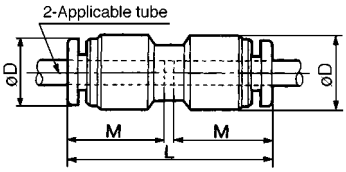
*Reference dimensions after R(PT) thread installation.

Note1) øD2: max. diameter

Note2) ( ): Values for soft nylon

Straight union: KQ2H

Tube O.D. (mm)	Part No.	øD (1)	L	M	Effective area (mm²) (2)		Weight (g)
					Nylon	Urethane	
3.2	**KQ2H23-00**	9.6	31.5	15.5	3.4	2.9	3
4	**KQ2H04-00**	10.4	32.5	16	5.6	4	3
6	**KQ2H06-00**	12.8	34.5	17	13.1	10.4	4
8	**KQ2H08-00**	15.2	38.5	18.5	26.1	18.0	6
10	**KQ2H10-00**	18.5	42.5	21	41.5	29.5	11
12	**KQ2H12-00**	20.9	44.5	22	58.3	46.1	14
16	**KQ2H16-00**	26.5	51	25	113	(96)	24

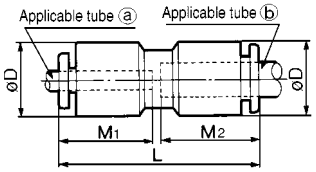


CAD KQ2H23 to KQ2H12 — SKQ2, #1 to #6
KQ2H16 ———— SKQ21, #5

Note1) øD: max. diameter
Note2) ( ): Values for soft nylon.

Different diameter straight: KQ2H

Tube O.D. (mm)		Part No.	øD (1)	L	M1	M2	Effective area (mm²)		Weight (g)
ⓐ	ⓑ						Nylon	Urethane	
3.2	**4**	**KQ2H23-04**	10.4	32.5	15.5	16	3.4	2.9	3
4	**6**	**KQ2H04-06**	12.8	34.5	16	17	5.6	5.6	5
6	**8**	**KQ2H06-08**	15.2	38.5	17	18.5	13.1	10.4	6
8	**10**	**KQ2H08-10**	18.5	42	18.5	21	26.1	18.0	11
10	**12**	**KQ2H10-12**	20.9	44.5	21	22	41.5	29.5	14
12	**16**	**KQ2H12-16**	26.5	56.5	22	25	58.3	46.1	47



CAD KQ2H23 to KQ2H12 — SKQ2, #7 to #11
KQ2H16 ———— SKQ21, #6

Note1) øD: max. diameter

Male elbow: KQ2L

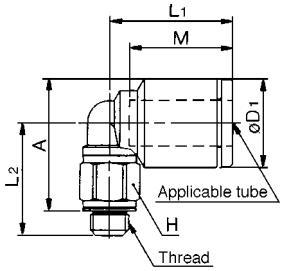
<M5>

<M6>

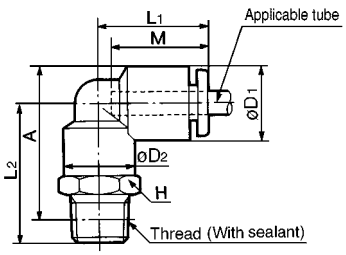
<R(PT)>

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD1 (1)	øD2	L1	L2	A	M	Effective area (mm²) (2)		Weight (g)
										Nylon	Urethane	
3.2	**M5 X 0.8**	**KQ2L23-M5**	7	8.5	–	15.3	13.2	14.3	12.7	2.6	2.2	2.5
	1/8	**KQ2L23-01S**	10	9.6	10	17.5	21.5	22.5	15.5	3	2.5	8
	1/4	**KQ2L23-02S**	14				25.5	24.5				18
4	**M5 X 0.8**	**KQ2L04-M5**	7	9.3	–	15.6	13.7	15.3	12.7	3.5	3.5	2.7
	M6 X 1.0	**KQ2L04-M6**	8				14.7					3.6
	1/8	**KQ2L04-01S**	10	10.4	10	18	22	23	16	4.2	4.2	10
	1/4	**KQ2L04-02S**	14				26	25				19
6	**M5 X 0.8**	**KQ2L06-M5**	7	11.6	–	16.1	14.7	17.4	13.5	3.5	3.5	3.2
	M6 X 1.0	**KQ2L06-M6**	8				15.7					4.1
	1/8	**KQ2L06-01S**	10	12.8	10	20	23	25.5	17	11.4	9.0	12
	1/4	**KQ2L06-02S**	14				27	27.5				22
	3/8	**KQ2L06-03S**	17				29	29				33
8	1/8	**KQ2L08-01S**	12	15.2	12	23	24.5	28	18.5	21.6	14.9	13
	1/4	**KQ2L08-02S**	14				28.5	30				21
	3/8	**KQ2L08-03S**	17				30.5	31.5				35
10	1/8	**KQ2L10-01S**	17	18.5	17	26.5	27	32	21	35.2	25.0	25
	1/4	**KQ2L10-02S**					30	33				26
	3/8	**KQ2L10-03S**					32	34.5				36
	1/2	**KQ2L10-04S**	22				36	37				63
12	1/4	**KQ2L12-02S**	17	20.9	17	28.5	31	35.5	22	50.2	39.7	28
	3/8	**KQ2L12-03S**					33	37				38
	1/2	**KQ2L12-04S**	22				37	39.5				65
16	3/8	**KQ2L16-03S**	22	26.5	20.9	34	38	44.5	25	71	(71)	101
	1/2	**KQ2L16-04S**					41	46		100	(84)	105

<M5, M6>



<R(PT)>



CAD SKQ2, #12 to #35

∗Reference dimensions after R(PT) thread installation.

Note1) øD1: max. diameter
Note2) ( ): Values for soft nylon.

Male branch connector: KQ2LU

<M5, M6>

<R(PT)>

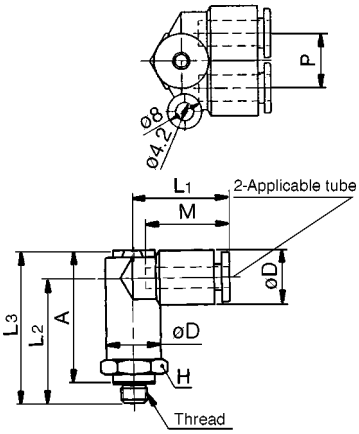
Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD (1)	L1	L2	L3	A*	M	P	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	M5 X 0.8	KQ2LU04-M5	11	10.4	18.5	24	29.5	25.5	16	10.4	4.3	4.1	10
	M6 X 1.0	KQ2LU04-M6				24.5	30						
	1/8	KQ2LU04-01S				26.5	32	27.5			6.0	4.1	12
	1/4	KQ2LU04-02S	14			30.5	36	30					21
6	M5 X 0.8	KQ2LU06-M5	13	12.8	21	26.5	33	29.5	17	12.8	4.3	4.3	13
	M6 X 1.0	KQ2LU06-M6				27	33.5						
	1/8	KQ2LU06-01S				29.5	36	32			13.9	11.0	15
	1/4	KQ2LU06-02S	14			33	39.5	33.5					22
	3/8	KQ2LU06-03S	17			35	41.5	35					35
8	1/8	KQ2LU08-01S	17	15.2	24	34	41.5	38	18.5	15.2	26.3	18.2	27
	1/4	KQ2LU08-02S				37	44.5	38.5					
	3/8	KQ2LU08-03S				38	45.5	39					35
10	1/4	KQ2LU10-02S	19	18.5	27	40	49.5	43.5	21	18.5	40.8	29.0	41
	3/8	KQ2LU10-03S				41	50.5	44					42
	1/2	KQ2LU10-04S	22			44.5	54	45.5					64
12	1/4	KQ2LU12-02S	22	20.9	29	42.5	53	47	22	20.9	57.2	45.2	57
	3/8	KQ2LU12-03S				43.5	54	47.5					58
	1/2	KQ2LU12-04S				46.5	57	49					65

CAD SKQ3, #1 to #18

*Reference dimensions after R(PT) thread installation.

Note1) øD: max. diameter

<M5, M6>



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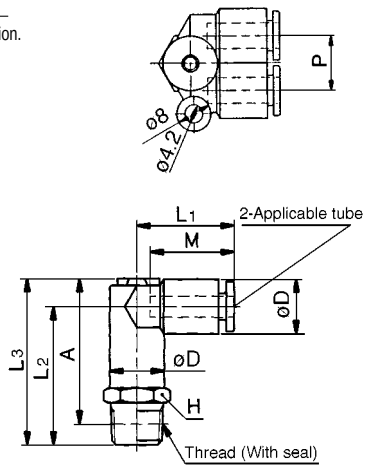


45° Male elbow: KQ2K

<M5, M6>

<R(PT)>

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD1 (1)	øD2	L1	L2	A*	M	Effective (2) area (mm²) Nylon	Effective (2) area (mm²) Urethane	Weight (g)
4	M5 X 0.8	KQ2K04-M5	8	10.4	8	17	14.5	26	16	3.4	3.4	4
	M6 X 1.0	KQ2K04-M6					15					5
	1/8	KQ2K04-01S	10		10		20.5	32				10
	1/4	KQ2K04-02S	14				24.5	34				19
6	M5 X 0.8	KQ2K06-M5	8	12.8	8	18	14.5	27.5	17	3.4	3.4	6
	M6 X 1.0	KQ2K06-M6				18.5	15					5
	1/8	KQ2K06-01S	10		10	18	20.5	33		8.7	6.9	12
	1/4	KQ2K06-02S	14				24.5	35				10
	3/8	KQ2K06-03S	17				26.5	36.5				33
8	1/8	KQ2K08-01S	12	15.2	12	20.5	22	37	18.5	19.7	19.7	13
	1/4	KQ2K08-02S	14				26	39				21
	3/8	KQ2K08-03S	17				28	41				35
10	1/8	KQ2K10-01S	17	18.5	17	24	24	42	21	30.9	23.2	25
	1/4	KQ2K10-02S					27	43.5				26
	3/8	KQ2K10-03S					29	45				36
	1/2	KQ2K10-04S	22				33	47.5				63
12	1/4	KQ2K12-02S	17	20.9	17	25	27.5	45.5	22	44.5	35.1	28
	3/8	KQ2K12-03S					29.5	47.5				38
	1/2	KQ2K12-04S	22				33.5	49.5				65
16	3/8	KQ2K16-03S	22	26.5	20.9	30	32	55	25	65.8	(65.8)	52
	1/2	KQ2K16-04S					35	56.5		91.9	(78.3)	58

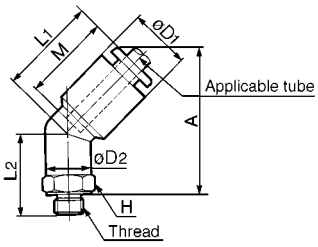
CAD KQ2K04 to KQ2K12 — SKQ4, #1 to #19
KQ2K16 ———— SKQ21, #7 to #8

*Reference dimensions after R(PT) thread installation.

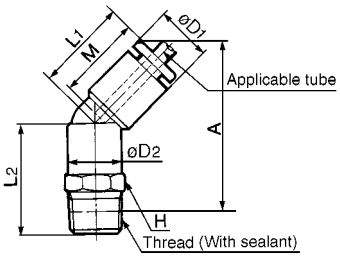
Note1) øD1: max. diameter

Note2) ( ): Values for soft nylon.

<M5, M6>



<R(PT)>



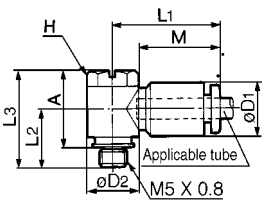
Universal male elbow: KQ2V

<M5>

<R(PT)>

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD1 (1)	øD2	L1	L2	L3	A*	M	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	M5 X 0.8	KQ2V04-M5	8	10.4	9.8	20.5	11	18.5	15	16	2.9	2.9	6
	1/8	KQ2V04-01S			13.4	22	14.5	26.5	22.5				14
6	M5 X 0.8	KQ2V06-M5	8	12.8	9.8	23.5	12	18.5	15	17	3.8	3.8	7
	1/8	KQ2V06-01S			13.4	24	14.5	26.5	22.5		7.5	5.9	15
	1/4	KQ2V06-02S	10		15.4	23.5	18.5	31	25				26
8	1/8	KQ2V08-01S	12	15.2	17.6	28.5	15.5	28.5	24.5	18.5	16	11.2	24
	1/4	KQ2V08-02S					18.5	31.5	25.5				30
	3/8	KQ2V08-03S	14		20.6	27.5	20.5	36.5	30		20.5	14.3	47
10	1/4	KQ2V10-02S	14	18.5	20.6	31	19.5	35.5	29.5	21	27	20.3	40
	3/8	KQ2V10-03S					20.5	36.5	30				49
12	3/8	KQ2V12-03S	17	20.9	25.2	34	22	38.5	32	22	39	30.8	63
	1/2	KQ2V12-04S					25	41.5	33.5				80
16	3/8	KQ2V16-03S	21	26.5	32.3	39	26.5	46.5	40.5	25	55	(55)	103
	1/2	KQ2V16-04S					29.5	49.5	41.5		78	(65)	110

<M5>



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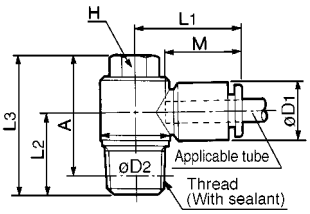


CAD SKQ5, #1 to #14

*Reference dimensions after R(PT) thread installation.

Note1) øD1: max. diameter

Note2) ( ): Values for soft nylon.

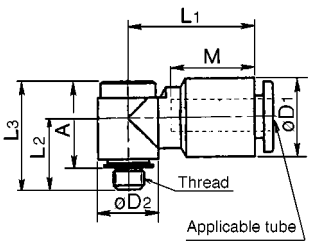
Hexagon socket head universal male elbow: KQ2VS

<M5>

<R(PT)>

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD1 (1)	øD2	L1	L2	L3	A*	M	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	M5	KQ2VS04-M5	4	10.4	9.8	20.5	10.5	18	15	16	2.9	2.9	6
	1/8	KQ2VS04-01S	6		13.4	22	14.5	26.5	22.5				14
6	M5	KQ2VS06-M5	4	12.8	9.8	23.5	12	18	15	17	3.8	3.8	7
	1/8	KQ2VS06-01S	6		13.4	24	14.5	26.5	22.5		7.5	5.9	15
	1/4	KQ2VS06-02S			15.3	23.5	18.5	27	21				22
8	1/8	KQ2VS08-01S	8	15.2	17.6	28.5	15.5	27	23	18.5	16	11.2	24
	1/4	KQ2VS08-02S					18.5	30	24				30
	3/8	KQ2VS08-03S			20.6	27.5	20.5	32.5	26		20.5	14.3	47
10	1/4	KQ2VS10-02S	8	18.5	20.6	31	19.5	31.5	25	21	27	20.3	32
	3/8	KQ2VS10-03S					20.5	32.5	26				39
12	3/8	KQ2VS12-03S	10	20.9	25.2	34	22	36	30	22	39	30.8	48
	1/2	KQ2VS12-04S					25	39	31				67

<M5>



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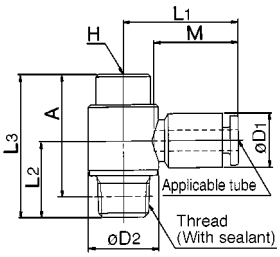


CAD SKQ5, #15 to #26

*Reference dimensions after R(PT) thread installation.

Note1) øD1: max. diameter

Universal female elbow: KQ2VF

<M5>

<R(PT)>

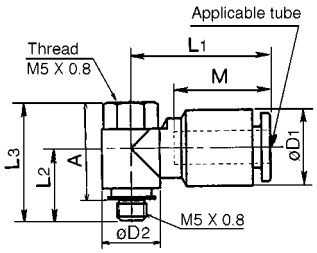
Tube O.D. (mm)	Thread Rc(PT) R(PT)	Part No.	H (Hex.)	øD1 (1)	øD2	L1	L2	L3	A*	M	Weight (g)
4	M5 X 0.8	KQ2VF04-M5	8	10.4	9.8	20.5	11	20	16	16	6
	1/8	KQ2VF04-01S	14		13.4	22	15.5	29.5	25.5		19
6	M5 X 0.8	KQ2VF06-M5	8	12.8	9.8	23.5	12.5	20	16	17	7
	1/8	KQ2VF06-01S	14		13.4	24.5	15.5	29.5	25.5		19
	1/4	KQ2VF06-02S	17		17.6	25	20	38.5	32.5		36
8	1/8	KQ2VF08-01S	17	15.2	17.6	28.5	17	31	27	18.5	29
	1/4	KQ2VF08-02S					20	38.5	32.5		37
	3/8	KQ2VF08-03S	22		25.2	29.5	25.5	45.5	39		66
10	1/4	KQ2VF10-02S	19	18.5	20.6	31.5	22	41	35	21	48
	3/8	KQ2VF10-03S	22		25.2		24.5	45.5	39		68
12	3/8	KQ2VF12-03S	22	20.9	25.2	34	24.5	45.5	39	22	70
	1/2	KQ2VF12-04S	24		27	35	25.5	50	42		93

SKQ6, #1 to #12

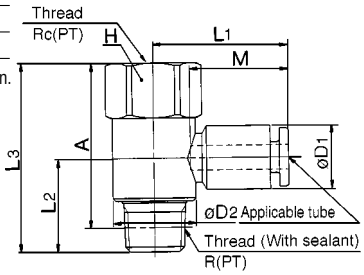
*Reference dimensions after R(PT) thread installation.

Note1) øD1: max. diameter

<M5>



<R(PT)>



Female elbow: KQ2LF

<M5, M6>

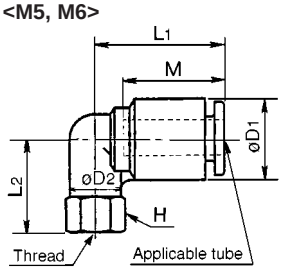
<Rc(PT)>

Tube O.D. (mm)	Thread Rc(PT)	Part No.	H (Hex.)	øD1 (1)	øD2	L1	L2	M	Effective area (mm2) Nylon	Effective area (mm2) Urethane	Weight (g)
4	M5 X 0.8	KQ2LF04-M5	8	10.4	8	18.5	14.5	16	3.5	3.5	5
	M6 X 1.0	KQ2LF04-M6					15.5				
	1/8	KQ2LF04-01	14		10		21		4.2	4.2	13
	1/4	KQ2LF04-02	17				24.5				20
6	M5 X 0.8	KQ2LF06-M5	8	12.8	8	20.5	15	17	3.5	3.5	5
	M6 X 1.0	KQ2LF06-M6					16				6
	1/8	KQ2LF06-01	14		10		22		11.4	9.0	13
	1/4	KQ2LF06-02	17				25.5				20
	3/8	KQ2LF06-03	19				26				
8	1/8	KQ2LF08-01	14	15.2	12	23.5	23	18.5	21.6	14.9	16
	1/4	KQ2LF08-02	17				26.5				22
	3/8	KQ2LF08-03	19				27				23
10	1/4	KQ2LF10-02	17	18.5	17	26.5	28	21	21.6	14.9	27
	3/8	KQ2LF10-03	19				28.5		35.2	25.0	
	1/2	KQ2LF10-04	24				32.5				46
12	1/4	KQ2LF12-02	17	20.9	17	28.5	29.5	22	50.2	39.7	29
	3/8	KQ2LF12-03	19				30				
	1/2	KQ2LF12-04	24				34				48

SKQ6 #13 to #30

Note1) øD1: max. diameter

<M5, M6>



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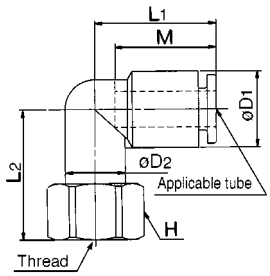


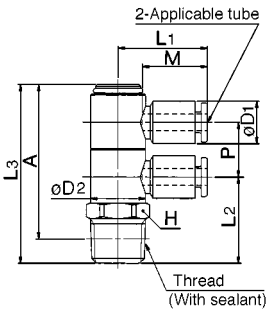
Double universal male elbow: KQ2VD

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD1 (1)	øD2	L1	L2	L3	A*	M	P	Weight (g)
4	1/8	KQ2VD04-01S	14	10.4	13.4	22	18.5	41	37	16	13.4	23
	1/4	KQ2VD04-02S					21.5	44	38			29
	3/8	KQ2VD04-03S	17				23.5	46	40			42
6	1/8	KQ2VD06-01S	14	12.8	13.4	24.5	18.5	41	37	17	13.4	24
	1/4	KQ2VD06-02S					21.5	44	38			30
	3/8	KQ2VD06-03S	17				23.5	46	40			42
8	1/8	KQ2VD08-01S	19	15.2	17.6	28.5	21	48	44	18.5	15.9	53
	1/4	KQ2VD08-02S					24	51	45			51
	3/8	KQ2VD08-03S					25	52	45.5			60
	1/2	KQ2VD08-04S	21				28.5	55.5	47.5			82
10	1/4	KQ2VD10-02S	21	18.5	20.6	31.5	26.5	58	52	21	19.2	71
	3/8	KQ2VD10-03S					27.5	59	53			74
	1/2	KQ2VD10-04S					30.5	62	54			91
12	1/4	KQ2VD12-02S	26	20.9	25.2	34	28.5	64.5	58.5	22	21.6	118
	3/8	KQ2VD12-03S					29.5	65.5	59			113
	1/2	KQ2VD12-04S					32.5	68.5	60			125

SKQ7, #1 to #16

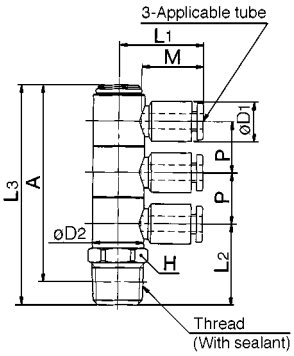
*Reference dimensions after R(PT) thread installation.

Note1) øD1: max. diameter



Triple universal male elbow: KQ2VT

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD_1 (1)	øD_2	L_1	L_2	L_3	A*	M	P	Weight (g)
4	1/8	KQ2VT04-01S	14	10.4	13.4	22	18.5	54.5	50.5	16	13.4	29
	1/4	KQ2VT04-02S					21.5	57.5	51.5			34
	3/8	KQ2VT04-03S	17				23.5	59.5	53.5			48
6	1/8	KQ2VT06-01S	14	12.8	13.4	24.5	18.5	54.5	50.5	17	13.4	31
	1/4	KQ2VT06-02S					21.5	57.5	51.5			37
	3/8	KQ2VT06-03S	17				23.5	59.5	53.5			50
8	1/8	KQ2VT08-01S	19	15.2	17.6	28.5	21	64	60	18.5	15.9	71
	1/4	KQ2VT08-02S					24	67	61			66
	3/8	KQ2VT08-03S					25	68	61.5			75
	1/2	KQ2VT08-04S	21				28.5	71.5	63.5			96
10	1/4	KQ2VT10-02S	21	18.5	20.6	31.5	26.5	77.5	71.5	21	19.2	94
	3/8	KQ2VT10-03S					27.5	78.5	72			
	1/2	KQ2VT10-04S					30.5	81.5	73.5			111
12	1/4	KQ2VT12-02S	26	20.9	25.2	34	28.5	86	80	22	21.6	153
	3/8	KQ2VT12-03S					29.5	87	80.5			142
	1/2	KQ2VT12-04S					32.5	90	82			154



SKQ8, #1 to #16

∗Reference dimensions after R(PT) thread installation.

Note1) øD_1: max. diameter

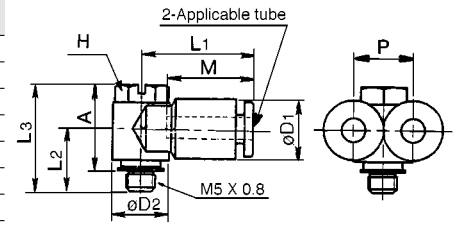
Branch universal male elbow: KQ2Z

<M5>

<R(PT)>

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD_1 (1)	øD_2	L_1	L_2	L_3	A*	M	P	Effective area (mm^2) Nylon	Effective area (mm^2) Urethane	Weight (g)
4	M5 X 0.8	KQ2Z04-M5	8	10.4	9.8	19.5	11	18.5	15	16	10.4	3.4	3.4	8
	1/8	KQ2Z04-01S			13.4	21	14.5	26.5	22.5			4.7	4.7	16
6	1/8	KQ2Z06-01S	8	12.8	13.4	22	14.5	26.5	22.5	17	12.8	10.8	8.6	17
	1/4	KQ2Z06-02S	14		20.6	25.5	19.5	35.5	29.5					39
	3/8	KQ2Z06-03S					20.5	36.5	30					47
8	1/8	KQ2Z08-01S	12	15.2	17.6	26	15.5	28.5	24.5	18.5	15.2	20.5	14.2	27
	1/4	KQ2Z08-02S					18.5	31.5	25.5					33
	3/8	KQ2Z08-03S	14		20.6	27	20.5	36.5	30					49
10	1/4	KQ2Z10-02S	14	18.5	20.6	29	19.5	35.5	29.5	21	18.5	31.8	22.6	46
	3/8	KQ2Z10-03S					20.5	36.5	30					54
12	3/8	KQ2Z12-03S	17	20.9	25.2	32.5	22	39	32.5	22	20.9	44.6	35.3	71
	1/2	KQ2Z12-04S					25	42	34					88

<M5>



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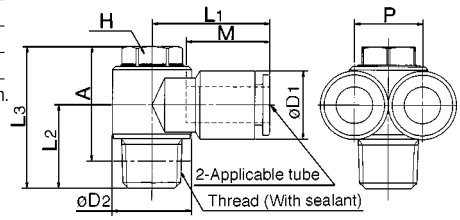


SKQ9, #1 to #22

∗Reference dimensions after R(PT) thread installation.

Note1) øD_1: max. diameter

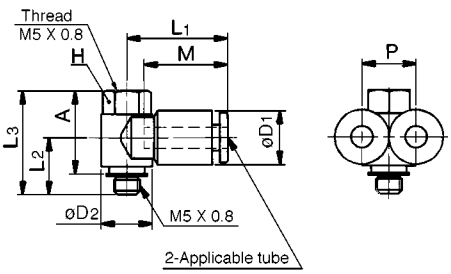
Branch universal female elbow: KQ2ZF

<M5>

<R(PT)>

Tube O.D. (mm)	Thread R(PT) Rc(PT)	Part No.	H (Hex.)	øD_1 (1)	øD_2	L_1	L_2	L_3	A*	M	P	Weight (g)
4	M5 X 0.8	KQ2ZF04-M5	8	10.4	9.8	19.5	11	20	16.5	16	10.4	8
	1/8	KQ2ZF04-01S	14		13.4	21	15.5	29.5	25.5			21
6	1/8	KQ2ZF06-01S	14	12.8	13.4	22	15.5	29.5	25.5	17	12.8	24
	1/4	KQ2ZF06-02S	19		20.6	25.5	22	41	35			47
8	1/8	KQ2ZF08-01S	17	15.2	17.6	25.5	17	31	27	18.5	15.2	32
	1/4	KQ2ZF08-02S	19		20.6	27	22	41	35			49
10	1/4	KQ2ZF10-02S	19	18.5	20.6	29	22	41	35	21	18.5	54
	3/8	KQ2ZF10-03S	22		25.2	31.5	24.5	45.5	39			74
12	3/8	KQ2ZF12-03S	22	20.9	25.2	32.5	24.5	45.5	39	22	20.9	77
	1/2	KQ2ZF12-04S	24		27	33	25	50	42			101

<M5>



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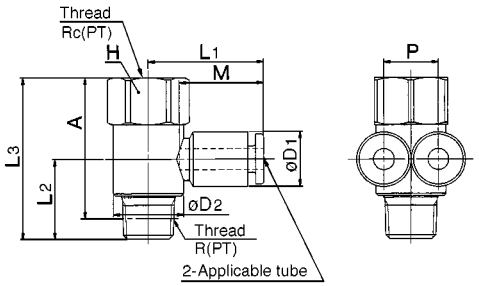


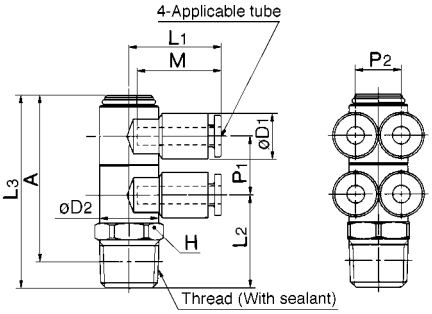
SKQ9, #13 to #22

∗Reference dimensions after R(PT) thread installation.

Note1) øD_1: max. diameter

Double branch universal male elbow: KQ2ZD

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	(1) øD1	øD2	L1	L2	L3	A*	M	P1	P2	Weight (g)
4	1/8	KQ2ZD04-01S	14	10.4	13.4	21	18.5	41	37	16	13.4	10.4	34
	1/4	KQ2ZD04-02S					21.5	44	38				40
	3/8	KQ2ZD04-03S	17				23.5	46	40				53
6	1/8	KQ2ZD06-01S	14	12.8	13.4	22	18.5	41	37	17	13.4	12.8	38
	1/4	KQ2ZD06-02S					21.5	44	38				43
	3/8	KQ2ZD06-03S	17				23.5	46	40				57
8	1/8	KQ2ZD08-01S	19	15.2	17.6	26	21	48	44	18.5	15.9	15.2	76
	1/4	KQ2ZD08-02S					24	51	45				72
	3/8	KQ2ZD08-03S					25	52	45.5				81
	1/2	KQ2ZD08-04S	21				28.5	55.5	47.5				102
10	1/4	KQ2ZD10-02S	21	18.5	20.6	29	26.5	58	52	21	19.2	18.5	111
	3/8	KQ2ZD10-03S					27.5	59	53				
	1/2	KQ2ZD10-04S					30.5	62	54				128
12	1/4	KQ2ZD12-02S	26	20.9	25.2	32	28.5	64.5	58.5	22	21.6	20.9	178
	3/8	KQ2ZD12-03S					29.5	65.5	59				167
	1/2	KQ2ZD12-04S					32.5	68.5	60				179



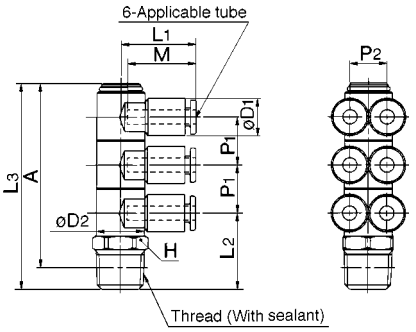
SKQ10, #1 to #16

*Reference dimensions after R(PT) thread installation.

Note1) øD1: max. diameter

Triple branch universal male elbow: KQ2ZT

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	(1) øD1	øD2	L1	L2	L3	A*	M	P1	P2	Weight (g)
4	1/8	KQ2ZT04-01S	14	10.4	13.4	21	18.5	54.5	50.5	16	13.4	10.4	25
	1/4	KQ2ZT04-02S					21.5	57.5	51.5				31
	3/8	KQ2ZT04-03S	17				23.5	59.5	53.5				44
6	1/8	KQ2ZT06-01S	14	12.8	13.4	22	18.5	54.5	50.5	17	13.4	12.8	27
	1/4	KQ2ZT06-02S					21.5	57.5	51.5				33
	3/8	KQ2ZT06-03S	17				23.5	59.5	53.5				46
8	1/8	KQ2ZT08-01S	19	15.2	17.6	26	21	64	60	18.5	15.9	15.2	56
	1/4	KQ2ZT08-02S					24	67	61				54
	3/8	KQ2ZT08-03S					25	68	61.5				62
	1/2	KQ2ZT08-04S	21				28.5	71.5	63.5				85
10	1/4	KQ2ZT10-02S	21	18.5	20.6	29	26.5	77.5	71.5	21	19.2	18.5	83
	3/8	KQ2ZT10-03S					27.5	78.5	72				85
	1/2	KQ2ZT10-04S					30.5	81.5	73.5				102
12	1/4	KQ2ZT12-02S	26	20.9	25.2	32	28.5	86	80	22	21.6	20.9	134
	3/8	KQ2ZT12-03S					29.5	87	80.5				130
	1/2	KQ2ZT12-04S					32.5	90	82				141



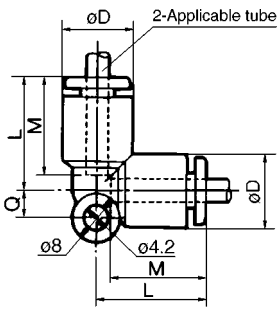
SKQ11, #1 to #16

*Reference dimensions after R(PT) thread installation.

Note1) øD1: max. diameter

Union elbow: KQ2L

Tube O.D. (mm)	Part No.	(1) øD	L	Q	M	Effective (2) area (mm²)		Weight (g)
						Nylon	Urethane	
3.2	KQ2L23-00	9.6	17.5	4.3	15.5	3	2.5	3
4	KQ2L04-00	10.4	18	4.5	16	4.2	4.2	6
6	KQ2L06-00	12.8	20	5.3	17	11.4	9.0	6
8	KQ2L08-00	15.2	23	6	18.5	21.6	14.9	10
10	KQ2L10-00	18.5	26.5	6.8	21	35.2	25.0	17
12	KQ2L12-00	20.9	28.5	7.5	22	50.2	39.7	21
16	KQ2L16-00	26.5	34	10	25	100	(84)	29



SKQ10, #17 to #23

Note1) øD: max. diameter

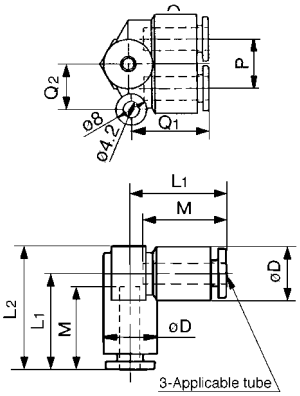
Note2) ( ): Values for soft nylon.

Branch union elbow: KQ2LU

Tube O.D. (mm)	Part No.	(1) øD	L1	L2	Q1	Q2	M	P	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	**KQ2LU04-00**	10.4	18.5	24	18.5	10	16	10.4	6.0	4.1	6
6	**KQ2LU06-00**	12.8	21	27.5	20.5	12	17	12.8	13.9	11.0	8
8	**KQ2LU08-00**	15.2	24	32	24.5	14	18.5	15.2	26.3	18.2	15
10	**KQ2LU10-00**	18.5	27	36.5	28	16	21	18.5	40.8	29.0	25
12	**KQ2LU12-00**	20.9	29	40	30	18	22	20.9	57.2	45.2	32

CAD SKQ12, #1 to #5

Note1) øD: max. diameter

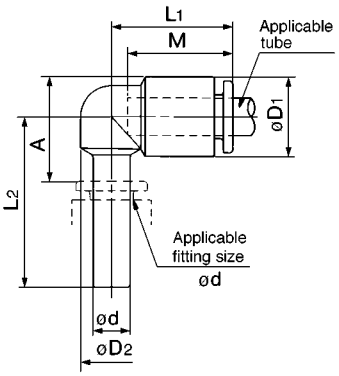


Plug-in elbow: KQ2L

Tube O.D. (mm)	Fitting size ød	Part No.	(1) øD1	øD2	L1	L2	A	M	Effective (2) area (mm²) Nylon	Effective (2) area (mm²) Urethane	Weight (g)
3.2	**3.2**	**KQ2L23-99**	9.6	7	17	24.5	14	15.5	3	2.5	2
4	**4**	**KQ2L04-99**	10.4	8	18	25	14.5	16	4.2	4.2	3
6	**6**	**KQ2L06-99**	12.8	10	20	27.5	17	17	11.4	9.0	3
8	**8**	**KQ2L08-99**	15.2	12	22.5	31.5	21	18.5	21.6	14.9	5
10	**10**	**KQ2L10-99**	18.5	14	25.5	35.5	23.5	21	35.2	25.0	9
12	**12**	**KQ2L12-99**	20.9	16	27	37.5	26	22	50.2	39.7	10
16	**16**	**KQ2L16-99**	26.5	20.9	34	53	41	25	100	(84)	42

CAD KQ2L23 to KQ2L12 — SKQ12, #6 to #11
KQ2L16 ———— SKQ21, #9

Note1) øD1: max. diameter
Note2) ( ): Values for soft nylon.

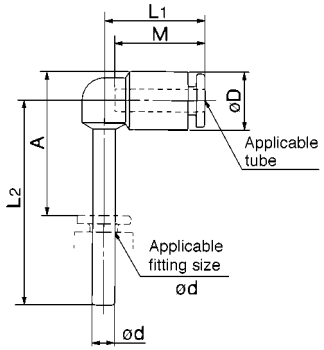


Extended plug-in elbow: KQ2W

Tube O.D. (mm)	Fitting size ød	Part No.	(1) øD	L1	L2	A	M	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
3.2	**3.2**	**KQ2W23-99**	9.6	17.5	35	24.5	15.5	3	2.5	2
4	**4**	**KQ2W04-99**	10.4	18	37	26	16	4.2	4.2	3
6	**6**	**KQ2W06-99**	12.8	20	41.5	31	17	11.4	9.0	4
8	**8**	**KQ2W08-99**	15.2	22.5	48	37	18.5	21.6	14.9	6
10	**10**	**KQ2W10-99**	18.5	25.5	55	43.5	21	35.2	25.0	9
12	**12**	**KQ2W12-99**	20.9	27	59.5	48	22	50.2	39.7	13

CAD KQ2L23 to KQ2L10 — SKQ12, #18 to #25
KQ2L12 ———— SKQ21, #10

Note1) øD: max. diameter

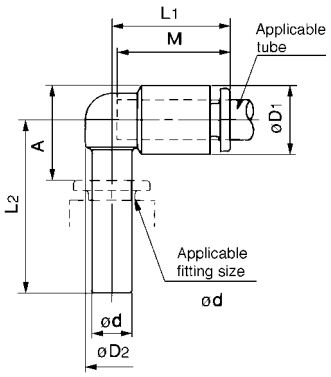


Reducer elbow: KQ2L

Tube O.D. (mm)	Fitting size ød	Part No.	(1) øD1	øD2	L1	L2	A	M	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
3.2	**4**	**KQ2L23-04**	9.6	7	17	25	13.5	15.5	3	2.5	2
4	**6**	**KQ2L04-06**	10.4	8	18	26	14.5	16	4.2	4.2	3
	8	**KQ2L04-08**		10		35	22				11
6	**8**	**KQ2L06-08**	12.8	10	19.5	30.5	18	17	11.4	9.0	12
	10	**KQ2L06-10**			20	38.5	24				19
8	**10**	**KQ2L08-10**	15.2	12	22.5	33.5	20.5	18.5	21.6	14.9	20
	12	**KQ2L08-12**			23	40.5	26				27
10	**12**	**KQ2L10-12**	18.5	17	26.5	42	30	21	35.2	25.0	29
12	**16**	**KQ2L12-16**	20.9	17	28.5	49.5	34.5	22	50.2	39.7	53

CAD SKQ12, #18 to #25

Note1) øD1: max. diameter



Extended male elbow: KQ2W

<M5>

<R(PT)>

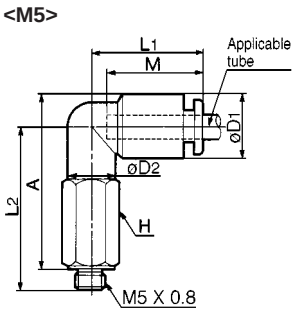
Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD1 (1)	øD2	L1	L2	A*	M	Effective area (mm²) (2) Nylon	Effective area (mm²) (2) Urethane	Weight (g)
3.2	M5 X 0.8	KQ2W23-M5	8	9.6	8	17.5	30	31	15.5	2.8	2.4	10
	1/8	KQ2W23-01S	10		10		37	38				19
	1/4	KQ2W23-02S	14				43	42				41
4	M5 X 0.8	KQ2W04-M5	8	10.4	8	18	30	32	16	3.0	3.0	11
	1/8	KQ2W04-01S	10		10		37.5	38.5		4.0	4.0	23
	1/4	KQ2W04-02S	14				43.5	42.5				38
6	M5 X 0.8	KQ2W06-M5	8	12.8	8	20	30.5	33.5	17	3	3	11
	1/8	KQ2W06-01S	10		10		40	42.5		10.9	8.6	26
	1/4	KQ2W06-02S	14				46	46.5				41
	3/8	KQ2W06-03S	17				48	48				67
8	1/8	KQ2W08-01S	12	15.2	12	23	43.5	47	18.5	20.5	14.2	30
	1/4	KQ2W08-02S	14				49.5	51				47
	3/8	KQ2W08-03S	17				51.5	52.5				74
10	1/4	KQ2W10-02S	17	18.5	17	26.5	56.5	59.5	21	33.5	23.8	66
	3/8	KQ2W10-03S					58.5	61				76
	1/2	KQ2W10-04S	22				65	66				145
12	1/4	KQ2W12-02S	17	20.9	17	28.5	57.5	62	22	47.7	37.7	68
	3/8	KQ2W12-03S					59.5	63.5				78
	1/2	KQ2W12-04S	22				66	68.5				147
16	3/8	KQ2W16-03S	22	26.5	20.9	34	69.5	76	25	71	(71)	101
	1/2	KQ2W16-04S					75	80		100	(84)	105

CAD KQ2W23 to KQ2W12 — SKQ13, #1 to #19
KQ2W16 ———— SKQ21, #11 to #12

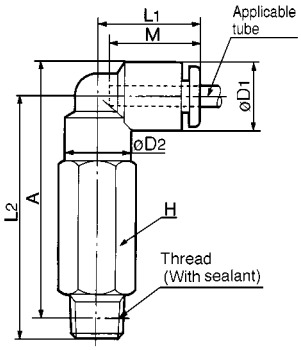
*Reference dimensions after R(PT) thread installation.

Note1) øD1: max. diameter
Note2) ( ): Values for soft nylon.

<M5>



<R(PT)>



Male branch tee: KQ2T

<M5>

<M6>

<R(PT)>

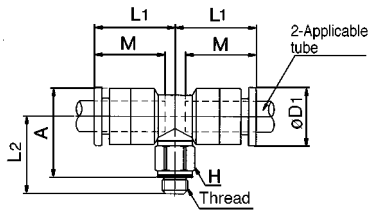
Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD1 (1)	øD2	L1	L2	A*	M	Effective area (mm²) (2) Nylon	Effective area (mm²) (2) Urethane	Weight (g)
3.2	M5 X 0.8	KQ2T23-M5	7	8.4	—	15.3	13.2	14.3	12.7	3.2	2.7	3.2
	1/8	KQ2T23-01S	10	9.6	10	17.5	21.5	22.5	15.5	3.4	2.9	10
	1/4	KQ2T23-02S	14				25.5	24.5				20
4	M5 X 0.8	KQ2T04-M5	7	9.3	—	15.6	13.7	15.3	12.7	4.5	4.5	3.5
	M6 X 1.0	KQ2T04-M6	8				14.7					4.4
	1/8	KQ2T04-01S	10	10.4	10	18	22	23	16	6.0	4.1	13
	1/4	KQ2T04-02S	14				26	25				19
6	M5 X 0.8	KQ2T06-M5	7	11.6	—	16.1	14.7	17.4	13.5	4.5	4.5	4.4
	M6 X 1.0	KQ2T06-M6	8				15.7					5.3
	1/8	KQ2T06-01S	10	12.8	10	20	23	25.5	17	13.9	11.0	12
	1/4	KQ2T06-02S	14				27	27.5				20
	3/8	KQ2T06-03S	17				29	29				34
8	1/8	KQ2T08-01S	12	15.2	12	23	24.5	28	18.5	26.3	18.2	14
	1/4	KQ2T08-02S	14				28.5	30				22
	3/8	KQ2T08-03S	17				30.5	31.5				36
10	1/8	KQ2T10-01S	17	18.5	17	26.5	27	32	21	40.8	29.0	31
	1/4	KQ2T10-02S					30	33				29
	3/8	KQ2T10-03S					32	34.5				39
	1/2	KQ2T10-04S	22				36	37				66
12	1/4	KQ2T12-02S	17	20.9	17	28.5	31	35.5	22	57.2	45.2	31
	3/8	KQ2T12-03S					33	37				41
	1/2	KQ2T12-04S	22				37	39.5				68
16	3/8	KQ2T16-03S	22	26.5	20.9	34	38	44.5	25	71	(71)	112
	1/2	KQ2T16-04S					40.5	46		100	(100)	116

CAD KQ2T23 to KQ2T12 — SKQ14, #1 to #24
KQ2T16 ———— SKQ21, #15

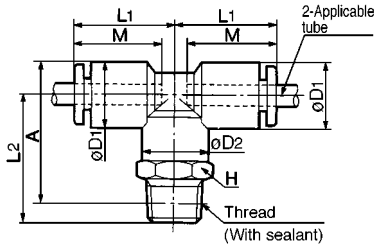
*Reference dimensions after R(PT) thread installation.

Note1) øD1: max. diameter
Note2) ( ): Values for soft nylon.

<M5, M6>



<R(PT)>

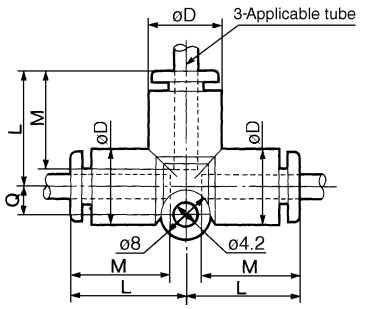


Union tee: KQ2T

Tube O.D. (mm)	Part No.	øD (1)	L	Q	M	Effective area (mm²) (2)		Weight (g)
						Nylon	Urethane	
3.2	KQ2T23-00	9.6	17.5	4.3	15.5	3.4	2.9	5
4	KQ2T04-00	10.4	18	4.5	16	6.4	4.4	7
6	KQ2T06-00	12.8	20	5.3	17	13.4	10.6	10
8	KQ2T08-00	15.2	23	6	18.5	25.6	17.7	15
10	KQ2T10-00	18.5	26.5	6.8	21	40	28.4	25
12	KQ2T12-00	20.9	28.5	7.5	22	57.4	45.4	29
16	KQ2T16-00	26.5	34	10	25	100	(84)	40

CAD SKQ15, #1 to #7

Note1) øD: max. diameter
Note2) ( ): Values for soft nylon.

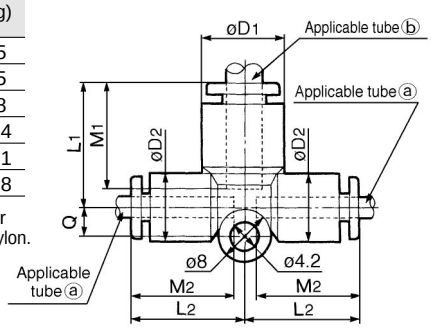


Different diameter tee: KQ2T

Tube O.D. (mm) ⓐ	Tube O.D. (mm) ⓑ	Part No.	øD1 (1)	øD2	L1	L2	Q	M1	M2	Effective area (mm²) (2) Nylon	Effective area (mm²) (2) Urethane	Weight (g)
3.2	4	KQ2T23-04	10.4	9.6	18	17.5	4.3	16	15.5	3.8	3.5	5
4	6	KQ2T04-06	12.8	10.4	19.5	18	4.5	17	16	7.1	6.5	5
6	8	KQ2T06-08	15.2	12.8	22.5	20	5.3	18.5	17	16.4	16.4	8
8	10	KQ2T08-10	18.5	15.2	26.5	23	6	21	18.5	36	27.2	14
10	12	KQ2T10-12	20.9	18.5	28.5	26.5	6.8	22	21	56	44.5	21
12	16	KQ2T12-16	26.5	26.5	34	39	10	25	22	108.5	(92.2)	88

CAD KQ2T23 to KQ2T10 — SKQ15, #8 to #12
KQ2T12 ——— SKQ21, #13

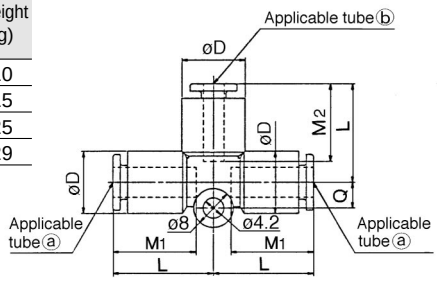
Note1) øD1: max. diameter
Note2) ( ): Valves for soft nylon.



Different diameter tee: KQ2T

Tube O.D. (mm) ⓐ	Tube O.D. (mm) ⓑ	Part No.	øD (1)	L	Q	M1	M2	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
6	4	KQ2T06-04	12.8	20	5.3	17	16	6.4	4.4	10
8	6	KQ2T08-06	15.2	23	6	18.5	17	13.4	10.6	15
10	8	KQ2T10-08	18.5	26.5	7.5	21	18.5	25.6	17.7	25
12	10	KQ2T12-10	20.9	28.5	7.5	22	21	40	28.4	29

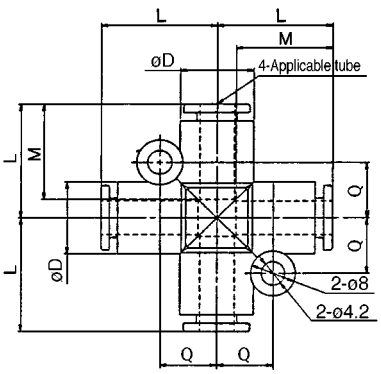
Note1) øD: max. diameter



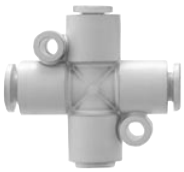
Cross: KQ2TW

Tube O.D. (mm)	Part No.	øD (1)	L	Q	M	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	KQ2TW04-00	10.4	18	8.7	16	6.4	4.4	9
6	KQ2TW06-00	12.8	20	9.9	17	13.4	10.6	13
8	KQ2TW08-00	15.2	23	11.1	18.5	25.6	17.7	20
10	KQ2TW10-00	18.5	26.5	12.8	21	40	28.4	33
12	KQ2TW12-00	20.9	28.5	13.9	22	57.4	45.4	39

Note1) øD: max. diameter

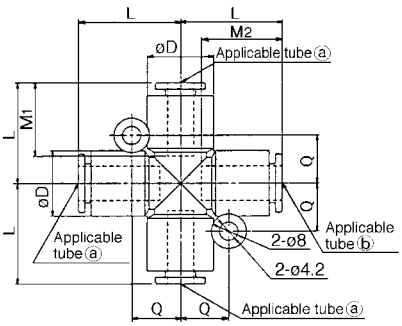


Different diameter cross: KQ2TX



Tube O.D. (mm) ⓐ	Tube O.D. (mm) ⓑ	Part No.	øD (1)	L	Q	M1	M2	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
6	8	KQ2TX06-08	15.2	23	11.1	18.5	17	13.4	10.6	13
8	10	KQ2TX08-10	18.5	26.5	12.8	21	18.5	25.6	17.7	27
10	12	KQ2TX10-12	20.9	28.5	13.9	22	21	40	28.4	36

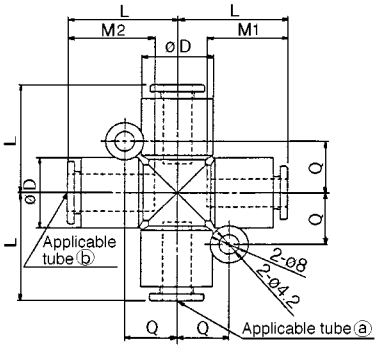
Note1) øD: max. diameter



Different diameter cross: KQ2TY

Tube O.D. (mm) ⓐ	Tube O.D. (mm) ⓑ	Part No.	øD (1)	L	Q	M1	M2	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
6	8	KQ2TY06-08	15.2	23	11.1	17	18.5	13.4	10.6	15
8	10	KQ2TY08-10	18.5	26.5	12.8	18.5	21	25.6	17.7	23
10	12	KQ2TY10-12	20.9	28.5	13.9	21	22	40	28.4	35

Note1) øD: max. diameter



Male run tee: KQ2Y

<M5>

<M6>

<R(PT)>

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD1 (1)	øD2	L1	L2	L3	A*	M	Effective area (mm²) (2) Nylon	Effective area (mm²) (2) Urethane	Weight (g)
3.2	M5 X 0.8	KQ2Y23-M5	7	8.4	—	15.4	13.2	14.8	24.9	12.7	3.2	2.7	3.2
	1/8	KQ2Y23-01S	10	9.6	10	17.5	21.5	—	35	15.5	3.4	2.9	10
	1/4	KQ2Y23-02S	14				25.5		37				20
4	M5 X 0.8	KQ2Y04-M5	7	9.3	—	15.6	13.7	14.8	25.4	12.7	4.5	4.5	3.5
	M6 X 1.0	KQ2Y04-M6	8				14.7						6
	1/8	KQ2Y04-01S	10	10.4	10	18	22	—	36	16	6.4	4.4	13
	1/4	KQ2Y04-02S	14				26		38				19
6	M5 X 0.8	KQ2Y06-M5	7	11.6	—	17.1	14.7	17.1	28.7	13.5	4.5	4.5	4.5
	M6 X 1.0	KQ2Y06-M6	8				15.7						7
	1/8	KQ2Y06-01S	10	12.8	10	20	23	—	39	17	13.4	10.6	12
	1/4	KQ2Y06-02S	14				27		41				20
	3/8	KQ2Y06-03S	17				29		42.5				34
8	1/8	KQ2Y08-01S	12	15.2	12	23	24.5	—	43.5	18.5	25.6	17.7	14
	1/4	KQ2Y08-02S	14				28.5		45.5				22
	3/8	KQ2Y08-03S	17				30.5		47				36
10	1/8	KQ2Y10-01S	17	18.5	17	26.5	27	—	49.5	21	40.0	28.4	31
	1/4	KQ2Y10-02S					30		50.5				29
	3/8	KQ2Y10-03S					32		52				39
	1/2	KQ2Y10-04S	22				36		54.5				66
12	1/4	KQ2Y12-02S	17	20.9	17	28.5	31	—	53.5	22	57.4	45.4	31
	3/8	KQ2Y12-03S					33		55				41
	1/2	KQ2Y12-04S	22				37		57.5				68
16	3/8	KQ2Y16-03S	22	26.5	20.9	34	38	—	65.5	25	81	(81)	112
	1/2	KQ2Y16-04S					41		67		113	(113)	116

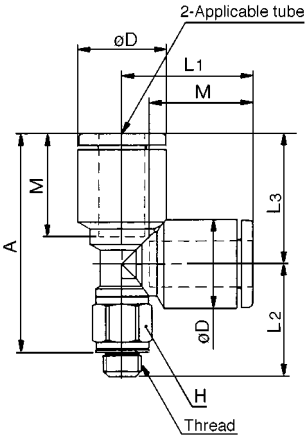
SKQ16, #1 to #24

*Reference dimensions after R(PT) thread installation.

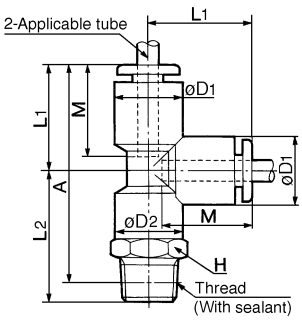
Note1) øD1: max. diameter

Note2) ( ): Values for soft nylon

<M5, M6>



<R(PT)>



Male delta: KQ2D

<M5, M6>

<R(PT)>

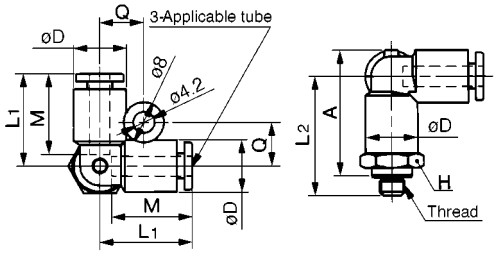
Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD (1)	L1	L2	A*	M	Q	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	M5 X 0.8	KQ2D04-M5	11	10.4	18.5	24	25.5	16	8.7	2.2	2.2	10
	M6 X 1.0	KQ2D04-M6				24.5				4.3	4.3	
	1/8	KQ2D04-01S				26.5	27.5			6.0	6.0	12
	1/4	KQ2D04-02S	14			30.5	29.5					21
6	M5 X 0.8	KQ2D06-M5	13	12.8	20.5	26	28.5	17	9.9	4.3	4.3	12
	M6 X 1.0	KQ2D06-M6				26.5						
	1/8	KQ2D06-01S				29	31.5			13.9	11.0	14
	1/4	KQ2D06-02S	14			32.5	33					21
	3/8	KQ2D06-03S	17			34.5	34.5					34
8	1/8	KQ2D08-01S	17	15.2	23.5	33.5	37	18.5	11.1	26.3	18.2	26
	1/4	KQ2D08-02S				36.5	38					
	3/8	KQ2D08-03S				37.5	38.5					35
10	1/4	KQ2D10-02S	19	18.5	26.5	39.5	43	21	12.8	40.8	29.0	39
	3/8	KQ2D10-03S				40.5	43.5					40
	1/2	KQ2D10-04S	22			44	45					62
12	1/4	KQ2D12-02S	22	20.9	28.5	42	46.5	22	13.9	57.2	45.2	55
	3/8	KQ2D12-03S				43	47					56
	1/2	KQ2D12-04S				46	48.5					63

CAD SKQ17, #1 to #18

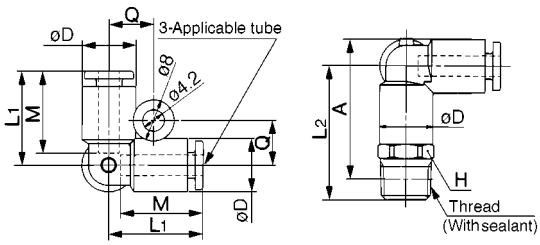
∗Reference dimensions after R(PT) thread installation.

Note1) øD: max. diameter

<M5, M6>



<R(PT)>

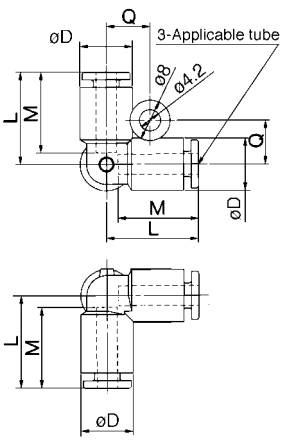


Delta union: KQ2D

Tube O.D. (mm)	Part No.	øD (1)	L	Q	M	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	KQ2D04-00	10.4	18.5	8.7	16	6.0	4.1	5
6	KQ2D06-00	12.8	20.5	9.9	17	13.9	11.0	7
8	KQ2D08-00	15.2	23.5	11.1	18.5	26.3	18.2	11
10	KQ2D10-00	18.5	26.5	12.8	21	40.8	29.0	19
12	KQ2D12-00	20.9	28.5	13.9	22	57.2	45.2	24

CAD SKQ17, #19 to #23

Note1) øD: max. diameter



Branch "Y": KQ2U

<M5, M6>

<R(PT)>

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD (1)	L	P	A*	M	Effective (2) area (mm²) Nylon	Effective (2) area (mm²) Urethane	Weight (g)
3.2	M5 X 0.8	KQ2U23-M5	10	9.6	38	9.6	34.5	15.5	2.2	2.2	9
	1/8	KQ2U23-01S	11		41		37		3.4	2.9	14
	1/4	KQ2U23-02S	14		44		38				
4	M5 X 0.8	KQ2U04-M5	11	10.4	39.5	10.4	36	16	2.2	2.2	4
	M6 X 1.0	KQ2U04-M6			40						10
	1/8	KQ2U04-01S			42		38		4.2	4.2	11
	1/4	KQ2U04-02S	14		46		40				20
6	M5 X 0.8	KQ2U06-M5	13	12.8	42.5	12.8	39	17	2.2	2.2	12
	M6 X 1.0	KQ2U06-M6			43						
	1/8	KQ2U06-01S			45.5		41.5		13.4	10.6	11
	1/4	KQ2U06-02S	14		49		43				21
	3/8	KQ2U06-03S	17		51		44.5				34
8	1/8	KQ2U08-01S	17	15.2	52.5	15.2	48.5	18.5	25.6	17.7	15
	1/4	KQ2U08-02S			55.5		49.5				23
	3/8	KQ2U08-03S			56.5		50				35
10	1/4	KQ2U10-02S	19	18.5	61	18.5	55	21	40	28.4	30
	3/8	KQ2U10-03S			62		55.5				40
	1/2	KQ2U10-04S	22		65		57				65
12	1/4	KQ2U12-02S	22	20.9	64.5	20.9	58.5	22	57.4	45.4	32
	3/8	KQ2U12-03S			65.5		59				40
	1/2	KQ2U12-04S			68.5		60.5				65
16	3/8	KQ2U16-03S	27	26.5	76	26.5	69.5	25	81	(81)	106
	1/2	KQ2U16-04S			79		71		113	(96)	111

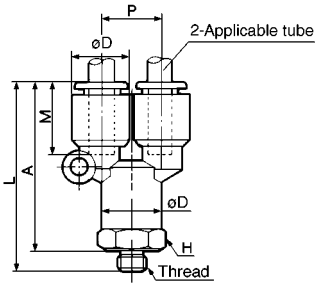
CAD KQ2U23 to KQ2U12 — SKQ18, #1 to #21
KQ2U16 ———— SKQ21, #14

∗Reference dimensions after R(PT) thread installation.

Note1) øD: max. diameter

Note2) ( ): Values for soft nylon

<M5, M6>



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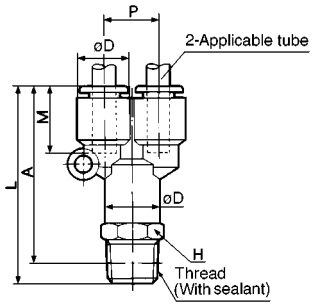


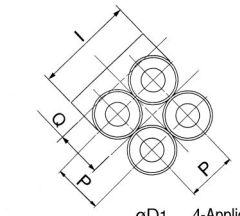
Delta branch: KQ2UD

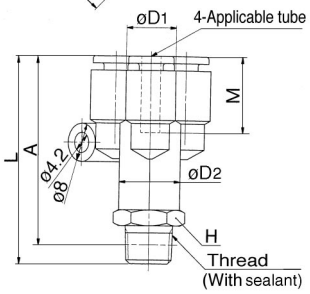
Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD_1 (1)	øD_2	L	I	A*	Q	M	P	Effective area (mm^2) Nylon	Effective area (mm^2) Urethane	Weight (g)
4	1/8	KQ2UD04-01S	13	10.4	12.8	43.5	21	39.5	9.7	16	10.4	4.2	4.2	17
	1/4	KQ2UD04-02S	14			47		41						25
6	1/8	KQ2UD06-01S	17	12.8	15.2	50.5	26	46.5	11.7	17	12.8	13.4	10.6	29
	1/4	KQ2UD06-02S				53.5		47.5						

CAD SKQ18, #22 to #25

*Reference dimensions after R(PT) thread installation.

Note1) øD_1: max. diameter



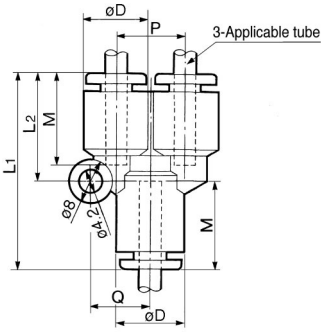


Union "Y": KQ2U

Tube O.D. (mm)	Part No.	øD (1)	L_1	L_2	P	Q	M	Effective area (mm^2) (2) Nylon	Effective area (mm^2) (2) Urethane	Weight (g)
3.2	KQ2U23-00	9.6	33	17.5	9.6	9	15.5	3.4	2.9	5
4	KQ2U04-00	10.4	34	18	10.4	9.7	16	4.2	4.2	7
6	KQ2U06-00	12.8	37	20	12.8	11.7	17	13.4	10.6	9
8	KQ2U08-00	15.2	42.5	24.5	15.2	13.7	18.5	25.6	17.7	11
10	KQ2U10-00	18.5	48	27.5	18.5	16.1	21	40	28.4	16
12	KQ2U12-00	20.9	51	30	20.9	18.1	22	57.4	45.4	23
16	KQ2U16-00	26.5	61.5	36.5	26.5	23	25	113	(96)	54

CAD KQ2U23 to KQU12 — SKQ19, #1 to #6
KQ2U16 ——— SKQ21, #16

Note1) øD: max. diameter
Note2) ( ): Values for soft nylon.

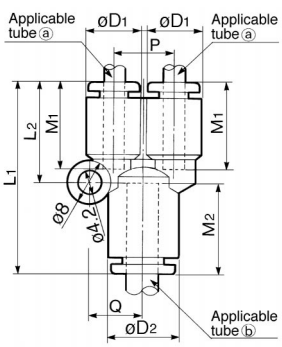


Different diameter union "Y": KQ2U

Tube O.D. (mm) ⓐ	Tube O.D. (mm) ⓑ	Part No.	øD_1 (1)	øD_2 (1)	L_1	L_2	P	Q	M_1	M_2	Effective area (mm^2) Nylon	Effective area (mm^2) Urethane	Weight (g)
3.2	4	KQ2U23-04	9.6	10.4	33.5	17.5	9.6	9	15.5	16	3.2	2.7	5
4	6	KQ2U04-06	10.4	12.8	35	18	10.4	9.7	16	17	4.2	4.2	6
6	8	KQ2U06-08	12.8	15.2	39.5	20	12.8	11.7	17	18.5	13.4	10.6	11
8	10	KQ2U08-10	15.2	18.5	45	24.5	15.2	13.7	18.5	21	25.6	17.7	18
10	12	KQ2U10-12	18.5	20.9	49	27.5	18.5	16.1	21	22	40	28.4	27
12	16	KQ2U12-16	26.5	26.5	66.5	41.5	26.5	23	22	25	57.4	45.4	100

CAD KQ2U23 to KQU10 — SKQ19, #7 to #11
KQ2U12 ——— SKQ21, #17

Note1) øD_1, øD_2: max. diameter

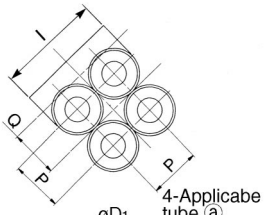


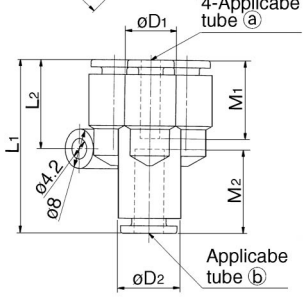
Different diameter double union "Y": KQ2UD

Tube O.D. (mm) ⓐ	Tube O.D. (mm) ⓑ	Part No.	øD_1 (1)	øD_2 (1)	L_1	L_2	P	I	Q	M_1	M_2	Effective area (mm^2) Nylon	Effective area (mm^2) Urethane	Weight (g)
4	6	KQ2UD04-06	10.4	12.8	35.5	18.2	10.4	21	9.7	16	17	4.2	4.2	10
6	8	KQ2UD06-08	12.8	15.2	40.5	20.3	12.8	26	11.7	17	18.5	13.4	10.6	17

CAD SKQ19, #2 to #13

Note1) øD_1, øD_2: max. diameter



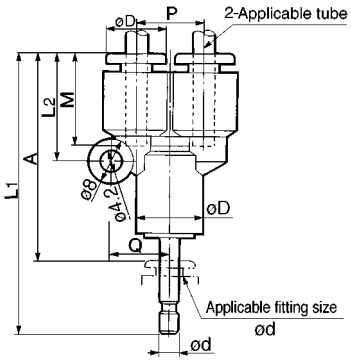


Plug-in "Y": KQ2U

Tube O.D. (mm)	Fitting size ød	Part No.	(1) øD	L1	L2	P	Q	A	M	Effective area (mm²) (2) Nylon	Effective area (mm²) (2) Urethane	Weight (g)
3.2	**3.2**	**KQ2U23-99**	9.6	50	17.5	9.6	9	35	15.5	3.4	2.9	6
4	**4**	**KQ2U04-99**	10.4	51.5	18	10.4	9.7	35.5	16	4.2	4.2	12
6	**6**	**KQ2U06-99**	12.8	55.5	20	12.8	11.7	38.5	17	13.4	10.6	18
8	**8**	**KQ2U08-99**	15.2	64.5	24.5	15.2	13.7	46	18.5	25.6	17.7	21
10	**10**	**KQ2U10-99**	18.5	71.5	27.5	18.5	16.1	50.5	21	40	28.4	26
12	**12**	**KQ2U12-99**	20.9	75.5	30	20.9	18.1	53.5	22	57.4	45.4	32
16	**16**	**KQ2U16-99**	26.5	90	36.5	26.5	23	65	25	113	(96)	78

CAD KQ2U23 to KQU12 — SKQ19, #14 to #19
KQ2U16 ——— SKQ21, #18

Note1) øD: max. diameter
Note2) ( ): Values for soft nylon.

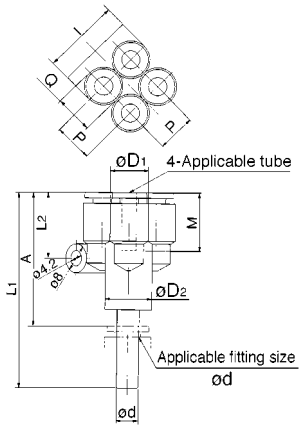


Double plug-in "Y": KQ2XD

Tube O.D. (mm)	Fitting size ød	Part No.	(1) øD1	øD2	L1	L2	I	Q	A	P	M	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	**6**	**KQ2XD04-06**	10.4	12.8	54	18.2	21	9.7	37	10.4	16	4.2	4.2	10
6	**8**	**KQ2XD06-08**	12.8	15.2	62.5	20.3	26	11.7	44	12.8	17	13.4	10.6	23

CAD SKQ19, #20, #21

Note1) øD1: max. diameter

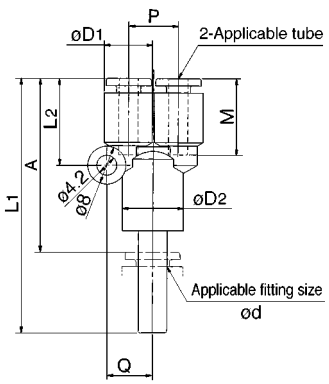


Different diameter plug-in "Y": KQ2X

Tube O.D. (mm)	Fitting size ød	Part No.	(1) øD1	øD2	L1	L2	A	P	Q	M	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	**6**	**KQ2X04-06**	10.4	12.8	53.5	18.5	36.5	10.4	9.7	16	4.2	4.2	7
6	**8**	**KQ2X06-08**	12.8	15.2	61.5	20.5	43	12.8	11.7	17	13.4	10.6	18
8	**10**	**KQ2X08-10**	15.2	18.5	68.5	24.5	47.5	15.2	13.7	18.5	25.6	17.7	28
10	**12**	**KQ2X10-12**	18.5	20.9	73.5	27.5	51.5	18.5	16.1	21	40	28.4	42

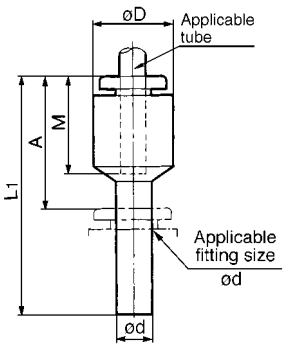
CAD SKQ19, #22 to #25

Note1) øD1: max. diameter



Plug-in reducer: KQ2R

Tube O.D. (mm)	Fitting size ød	Part No.	øD (1)	L	A	M	Effective area (mm²) (2) Nylon	Effective area (mm²) (2) Urethane	Weight (g)
3.2	4	KQ2R23-04	9.6	33.5	18.5	15.5	3.4	2.9	2
4	6	KQ2R04-06	10.4	34.5	17.5	16	5.6	4	1.8
	8	KQ2R04-08		36.5	18				2.0
	10	KQ2R04-10	12.8	39.5	18.5				3.3
6	4	KQ2R06-04	12.8	37	21	17	4	4	2.5
	8	KQ2R06-08	12.8	37	18.5		13.1	10.4	2.5
	10	KQ2R06-10		39.5	18.5				3
	12	KQ2R06-12	15.2	42	20				4.7
8	10	KQ2R08-10	15.2	41	20	18.5	26.1	18.0	4.0
	12	KQ2R08-12		42					4.6
10	12	KQ2R10-12	18.5	44.5	23	21	41.5	32.8	33
	16	KQ2R10-16	20.9	50.5	25.5			(29.5)	42
12	16	KQ2R12-16	20.9	50.5	25.5	22	58.3	(46.1)	37

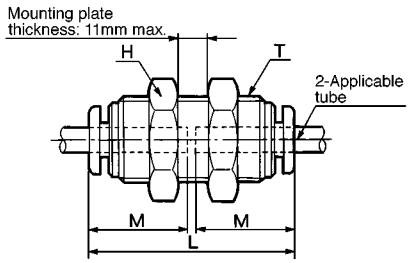


SKQ20, #1 to #13

Note1) øD: max. diameter
Note2) ( ): Values for soft nylon.

Bulkhead union: KQ2E

Tube O.D. (mm)	Part No.	T (M)	H (Hex.)	L	Mounting hole	M	Effective area (mm²) (1) Nylon	Effective area (mm²) (1) Urethane	Weight (g)
3.2	KQ2E23-00	M12 X 1	14	31.5	13	15.5	3.4	2.9	26
4	KQ2E04-00	M12 X 1	14	32.5	13	16	5.6	4	26
6	KQ2E06-00	M14 X 1	17	34.5	15	17	13.1	10.4	33
8	KQ2E08-00	M16 X 1	19	38	17	18.5	26.1	18.0	52
10	KQ2E10-00	M20 X 1	24	42.5	21	21	41.5	29.5	70
12	KQ2E12-00	M22 X 1	27	44	23	22	58.3	46.1	90
16	KQ2E16-00	M28 X 1.5	32	51	29	25	113	(96)	115

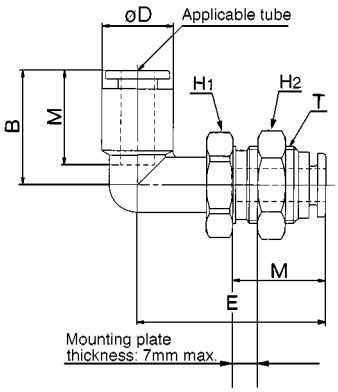


SKQ20, #14 to #20

Note1) ( ): Values for soft nylon.

Bulkhead male elbow: KQ2LE

Tube O.D. (mm)	Part No.	T	H1 (Hex.)	H2 (Hex.)	B	E	øD (1)	Mounting hole	M	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	KQ2LE04-00	M12 X 1	14	14	18.5	31	10.4	13	16	4.2	4.2	18
6	KQ2LE06-00	M14 X 1	17	17	20.5	34	12.8	15	17	11.4	9.0	25
8	KQ2LE08-00	M16 X 1	17	19	23.5	38.5	15.2	17	18.5	21.6	14.9	33
10	KQ2LE10-00	M20 X 1	22	24	26.5	43.5	18.5	21	21	35.2	25.0	63
12	KQ2LE12-00	M22 X 1	24	27	28.5	45.5	20.9	23	22	50.2	39.7	77

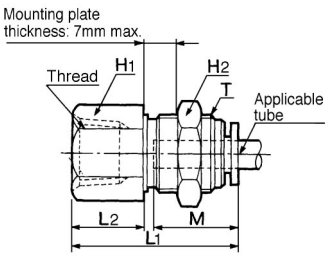


SKQ20, #21 to #25

Note1) øD: max. diameter

Bulkhead connector: KQ2E

Tube O.D. (mm)	Thread Rc(PT)	Part No.	T (M)	H1 (Hex.)	H2 (Hex.)	L1	L2	Mounting hole	M	Effective area (mm²) (1) Nylon	Effective area (mm²) (1) Urethane	Weight (g)
3.2	1/4	KQ2E23-02	M12 X 1	17	14	31.5	15	13	15.5	3.4	2.9	13
4	1/8	KQ2E04-01	M12 X 1	14	14	27.5	11	13	16	5.6	4	16
	1/4	KQ2E04-02		17		31	15					35
6	1/8	KQ2E06-01	M14 X 1	17	17	28	11	15	17	13.1	10.4	30
	1/4	KQ2E06-02				31.5	15					
	3/8	KQ2E06-03		19		33.5	17					29
8	1/8	KQ2E08-01	M16 X 1	17	19	27.5	7.5	17	18.5	26.1	18.0	28
	1/4	KQ2E08-02				33	13					27
	3/8	KQ2E08-03		19		35	15					48
10	1/4	KQ2E10-02	M20 X 1	22	24	34.5	12.5	21	21	41.5	29.5	53
	3/8	KQ2E10-03		22		36.5	15					67
12	3/8	KQ2E12-03	M22 X 1	24	27	37	14	23	22	58.3	46.1	92
	1/2	KQ2E12-04				41	18					59
16	3/8	KQ2E16-03	M28 X 1.5	30	32	40	14	29	25	96	(96)	127
	1/2	KQ2E16-04				44	18			113		132

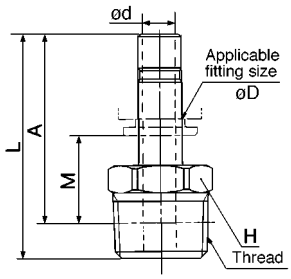


SKQ20, #26 to #40

Note1) ( ): Values for soft nylon.

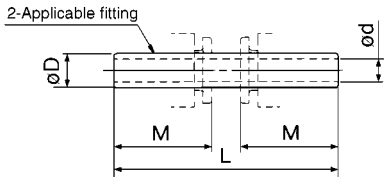
Adaptor: KQ2N

Fitting size øD	Thread R(PT)	Part No.	H (Hex.)	L	A	M	ød	Weight (g)
4	M5 X 0.8	KQ2N04-M5	7	32	29	13	2.5	2
	1/8	KQ2N04-01S	10	34	30	14		6
6	M5 X 0.8	KQ2N06-M5	7	33	30	13	2.5	2
	1/8	KQ2N06-01S	10	35	31	14	4.5	5
	1/4	KQ2N06-02S	14	37.5	31.5	14.5		14
8	1/4	KQ2N08-02S	14	39	33	14.5	6	17
	3/8	KQ2N08-03S	17	41	34.5	16		30
10	3/8	KQ2N10-03S	17	46	39.5	18.5	7.5	31



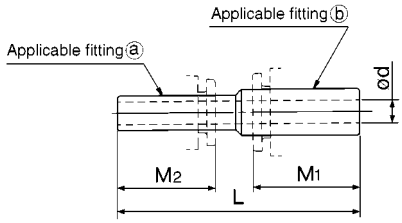
Nipple: KQ2N

Fitting size øD	Part No.	L	M	ød	Weight (g)
4	KQ2N04-99	37	16	2.5	1
6	KQ2N06-99	39	17	4	2
8	KQ2N08-99	43	18.5	6	2
10	KQ2N10-99	49	21	7.5	4
12	KQ2N12-99	52	22	9	20.6
16	KQ2N16-99	57	25	13	31



Reducer nipple: KQ2N

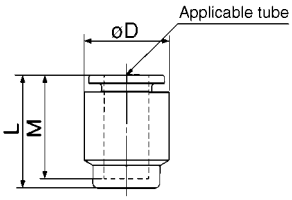
Fitting size ⓐ	Fitting size ⓑ	Part No.	L	M1	M2	ød	Weight (g)
4	6	KQ2N04-06	38	17	16	2.5	2
6	8	KQ2N06-08	42	18.5	17	4	2
8	10	KQ2N08-10	47	21	18.5	6	13.2
10	12	KQ2N10-12	51	22	21	8	18.2
12	16	KQ2N12-16	55	25	22	9	29



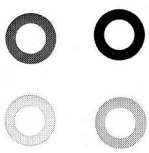
Tube cap: KQ2C

Tube O.D. (mm)	Part No.	øD (1)	L	M	Weight (g)
4	KQ2C04-00	10.4	17	16	3
6	KQ2C06-00	12.8	18.5	17	3
8	KQ2C08-00	15.2	20.5	18.5	4
10	KQ2C10-00	18.5	23	21	6
12	KQ2C12-00	20.9	24	22	8
16	KQ2C16-00	26.5	28	25	13

Note1) øD: max. diameter

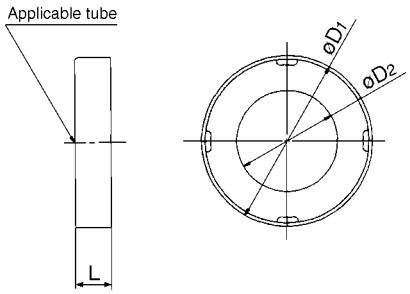


Color cap: KQ2C



Tube O.D. (mm)	Part No.	øD1	øD2	L	Weight (g)	
4	KQ2C-04□	10.1	5.2	2.9	0.1	
4	KQ2C-04A-□	8.5	5	2.2	0.1	KQH, KQ2H04-M5, M6 KQS, KQ2S04-M5, M6
4	KQ2C-04B-□	9.7	5	2.2	0.1	KQL, KQ2L04-M5, M6 KQT, KQ2T04-M5, M6 KQY, KQ2Y04-M5, M6
6	KQ2C-06□	12.1	7.2	2.9	0.1	
6	KQ2C-06A-□	10.5	7	2.2	0.1	KQH, KQ2H06-M5, M6 KQS, KQ2S06-M5, M6
6	KQ2C-06B-□	12.0	7	2.2	0.1	KQL, KQ2L06-M5, M6 KQT, KQ2T06-M5, M6 KQY, KQ2Y06-M5, M6
8	KQ2C-08□	14.1	9.2	2.9	0.1	
10	KQ2C-10□	17.1	11.2		0.2	
12	KQ2C-12□	19.1	13.2		0.2	
16	KQ2C-16□	26.3	17.2	3.9	0.3	

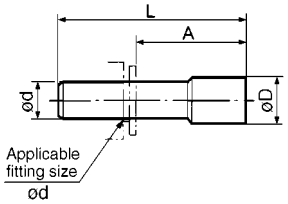
□ → B (black), R (red), YR (orange), BR (brown), Y (yellow), G (green), CB (sky blue), GR (gray), W (white), BU (blue)



Plug: KQ2P, KQP

Fitting size ød	Part No.		øD	L	A	Weight (g)
3.2	KQ2P-23	KQP-23	5	31.5	16	1
4	KQ2P-04	KQP-04	6	32	16	1
6	KQ2P-06	KQP-06	8	35	18	1
8	KQ2P-08	KQP-08	10	39	20.5	2
10	KQ2P-10	KQP-10	12	43	22	3.5
12	KQ2P-12	KQP-12	14	45.5	24	5
16	KQ2P-16	KQP-16	20.9	47	22	8

Note) KQ2P (white), KQP (blue)



Series KQ2
Made to Order

Consult SMC for detailed specifications, dimentions and delivery.

Order Made

❶Oil free applications —— Vaseline™ is used as lubricant.

For use in oil free applications, for example, paint air lines.

Specifications —— Same as Series KQ2.
Dimensions ——— Same as Series KQ2.
How to Order —— Add "-X12" at the end of the standard part number.
(Example: KQ2H06-02-X12)

❷Stainless One-touch fittings

For use in highiy corrosive atmospheres where brass is not acceptable.

Specifications —— Same as series KQ2.
Dimensions ——— Same as series KQ2.
(Some may be different, consult SMC)

Materials in each part

Body*	SUS□, PBT
Stud*	SUS□ (Thread portion)
Chuck	SUS304
Guide*	SUS□, POM
Collet, Release button	POM
Packing, O ring	NBR

*Every one of SUS303, SUS304 and SUS316 is possible to use.

How to Order ———— Consult SMC.

One-touch Fittings Manifold

Series KM

Compact piping.
Many varieties (40 types) available.
One-touch fittings give the most efficient operation.

Model

Model	Porting		Number of Port A	Port B size	Port A size		
	Port A	Port B			ø4	ø6	ø8
KM11	One-touch fitting	One-touch fitting	6, 10	ø8	●		
				ø10		●	
				ø12			●
KM12	One-touch fitting	Rc(PT)female thread	6, 10	Rc(PT) 1/4	●	●	
				Rc(PT) 3/8			●
KM13	One-touch fitting	One-touch fitting	3	ø6	●		
				ø8	●	●	
				ø10		●	●
KM14	One-touch fitting	One-touch fitting R(PT)male thread	3	ø6, R(PT) 1/8	●		
				ø6, R(PT) 1/4	●		
				ø6, R(PT) 3/8	●		
				ø8 ,R(PT) 1/8	●	●	
				ø8, R(PT) 1/4	●	●	
				ø8, R(PT) 3/8	●	●	
				ø10, R(PT) 1/4		●	●
				ø10, R(PT) 3/8		●	●
				ø10, R(PT) 1/4		●	●
KM15	One-touch fitting	One-touch fitting Rod	3	ø6	●		
				ø8	●	●	
				ø10		●	●
KM16	One-touch fitting	One-touch fitting	3	ø4	●		
				ø6	●	●	

Applicable Tubing

Tube material	Nylon, Soft nylon, Polyurethane
Tube O.D.	ø4, ø6, ø8, ø10, ø12

Specifications

Model	KM11	KM12	KM13	KM14	KM15	KM16
Fluid	Air, Water (1)					
Max. operating pressure	1.0MPa					
Proof pressure	3.0MPa					
Ambient and fluid temperature	–5 to 60°C, Water: 0 to 40°C (No freezing)					
Thread	—	JIS B0203 (Taper thread)	—	JIS B0203 (Taper thread)	—	—
Accessories	None	Hexagon socket head blank plug with sealant: 1 pc.	None	None	None	None

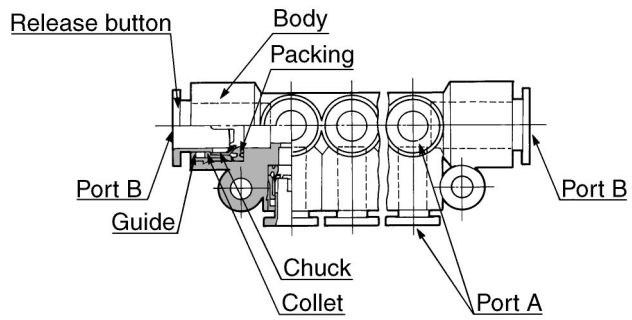
Note1) Applicable for general industry water. Consult SMC if using for other kinds of fluid.
Surge pressure must be under the max. operating pressure.

Component Materials

Model	KM11	KM12	KM13	KM14	KM15	KM16
Body	PBT					
Stud	—	C3604BD	—	C3604BD	C3604BD·PBT	—
Chuck	Stainless steel (SUS304)					
Guide	C3604BD, Stainless steel (SUS304)					
Collet, Release button	Polyacetal (POM)					
Packing, O ring	NBR					

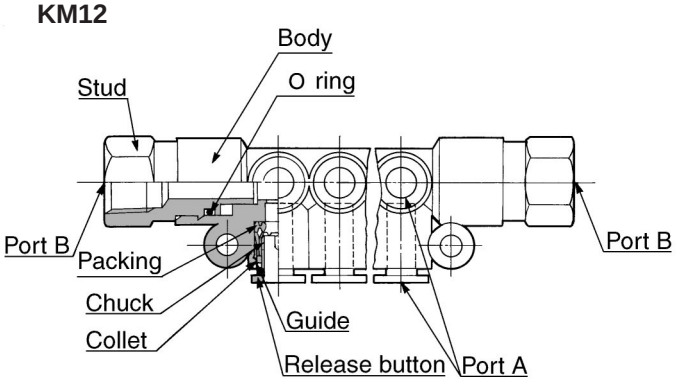
Construction

KM11



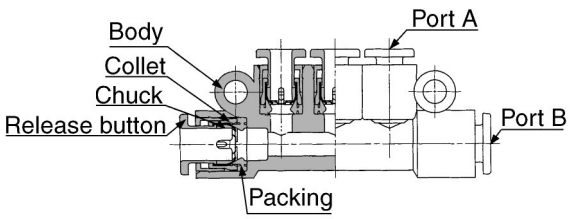
Port A: One-touch fitting
Port B: One-touch fitting

KM12



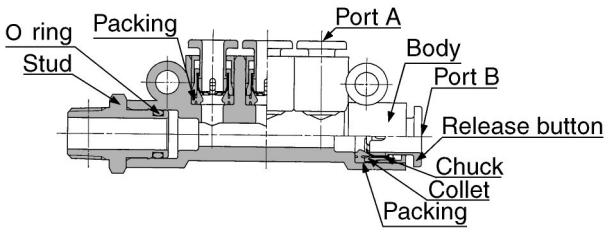
Port A: One-touch fitting
Port B: Rc(PT) female thread

KM13



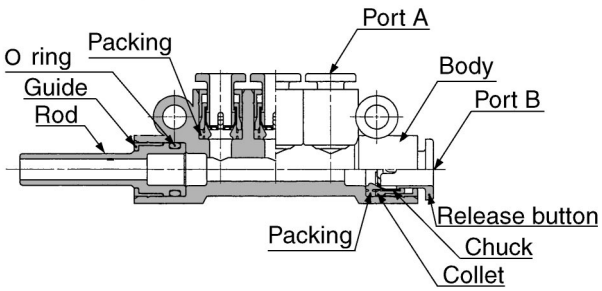
Port A: One-touch fitting
Port B: One-touch fitting

KM14



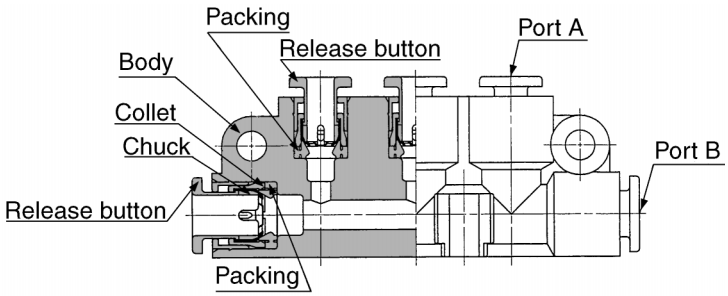
Port A: One-touch fitting
Port B: One-touch fitting, R(PT) male thread

KM15



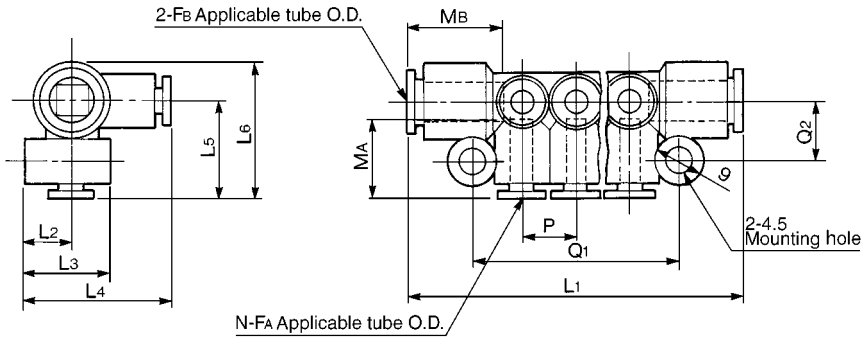
Port A: One-touch fitting
Port B: One-touch fitting
stud

KM16



Port A: One-touch fitting
Port B: One-touch fitting

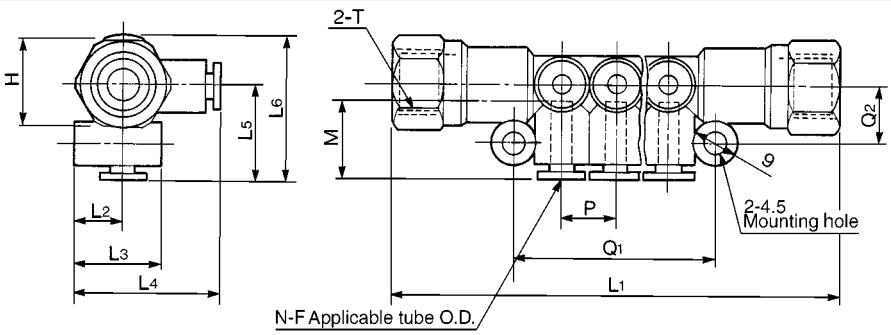
KM11



Tube O.D. (mm)		Part No.	N	L1	L2	L3	L4	L5	L6	P	Q1	Q2	MA	MB	Port B min. port size	Weight (g)
FA	FB															
4	8	KM11-04-08-6	6	65	10	18	29.5	19.5	27	10.6	40	12	16	18.5	6	19
		KM11-04-08-10	10	86							61.5					26
6	10	KM11-06-10-6	6	76	10	19.5	31.5	21.5	31	13	47	13.5	17	21	7.5	29
		KM11-06-10-10	10	102							73					39
8	12	KM11-08-12-6	6	85	11.5	22.5	35.5	24	34.5	15.5	55	14.7	18.5	22	9	41
		KM11-08-12-10	10	116							86					57

SKM, #1 to #6

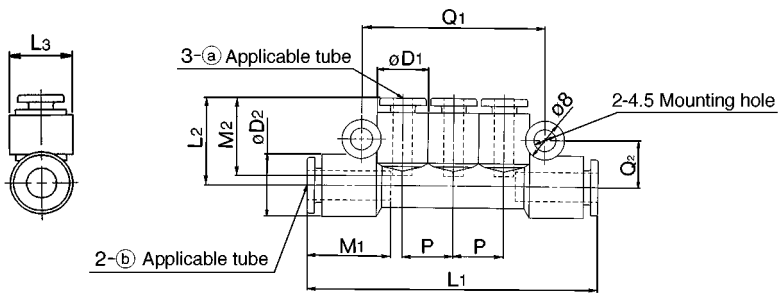
KM12



Tube O.D. F (mm)	Thread Rc(PT) T	Part No.	N	H (Hex.)	L1	L2	L3	L4	L5	L6	P	Q1	Q2	M	Port B min. port size	Weight (g)
4	1/4	KM12-04-02-6	6	17	89	10	18	29.5	19.5	29	10.6	40	12	16	6	65
		KM12-04-02-10	10		110							61.5				72
6	1/4	KM12-06-02-6	6	17	99	10	19.5	31.5	21.5	31	13	47	13.5	17	7.5	81
		KM12-06-02-10	10		125							73				91
8	3/8	KM12-08-03-6	6	19	108	11.5	22.5	35.5	24	34.5	15.5	55	14.7	18.5	9	97
		KM12-08-03-10	10		139							86				112

SKM, #7 to #12

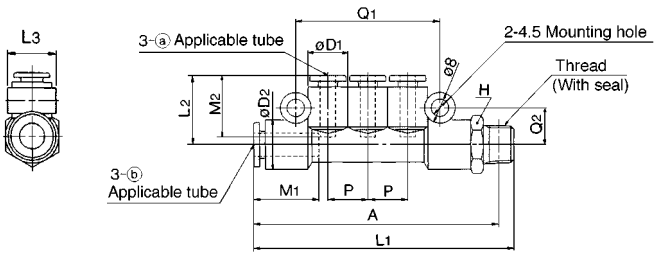
KM13



Tube O.D. (mm)		Part No.	øD1	øD2	L1	L2	L3	P	Q1	Q2	M1	M2	Port B min. port size	Weight (g)
ⓐ	ⓑ													
4	6	KM13-04-06-3	10.4	12.8	60	18	13	10.4	38.2	9.9	17	16	4.5	11
	8	KM13-04-08-3		15.2	63.5	19	15.5			11.1	18.5		6	14
6	8	KM13-06-08-3	12.8	15.2	70.5	20	15.5	12.8	45.4	11.1	18.5	17	6	16
	10	KM13-06-10-3		18.5	74.5	21	19			12.8	21		7.5	22
8	10	KM13-08-10-3	15.2	18.5	81.5	22.5	19	15.2	52.6	12.8	21	18.5	7.5	26

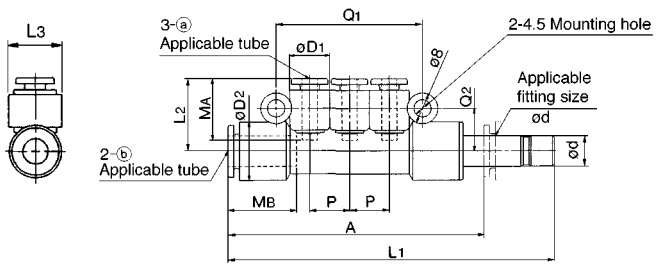
Use Series KM11.

KM14



Tube O.D. (mm) ⓐ	Tube O.D. (mm) ⓑ	Thread R(PT)	Part No.	H (Hex.)	øD1	øD2	L1	L2	L3	P	A	Q1	Q2	M1	M2	Port B min. port size	Weight (g)
4	6	1/8	**KM14-04-06-01S-3**	13	10.4	12.8	68	18	13	10.4	64	38.2	9.9	17	16	4.5	18
		1/4	**KM14-04-06-02S-3**	14			71.5				65.5						25
		3/8	**KM14-04-06-03S-3**	17			73.5				67.5						38
4	8	1/8	**KM14-04-08-01S-3**	17	10.4	15.2	73.5	19	15.5	10.4	69.5	38.2	11.1	18.5	16	6	30
		1/4	**KM14-04-08-02S-3**				76.5				70.5						
		3/8	**KM14-04-08-03S-3**				77.5				71						38
6	8	1/8	**KM14-06-08-01S-3**	17	12.8	15.2	80	20	15.5	12.8	76.5	45.4	11.1	18.5	17	6	31
		1/4	**KM14-06-08-02S-3**				83				77						
		3/8	**KM14-06-08-03S-3**				84				78						39
6	10	1/4	**KM14-06-10-02S-3**	19	12.8	18.5	87.5	21	19	12.8	81.5	45.4	12.8	21	17	7.5	43
		3/8	**KM14-06-10-03S-3**				88.5				82						44
		1/2	**KM14-06-10-04S-3**	22			92				84						66
8	10	1/4	**KM14-08-10-02S-3**	19	15.2	18.5	94	22.5	19	15.2	88	52.6	12.8	21	18.5	7.5	47
		3/8	**KM14-08-10-03S-3**				95				89						
		1/2	**KM14-08-10-04S-3**	22			98.5				90.5						70

KM15



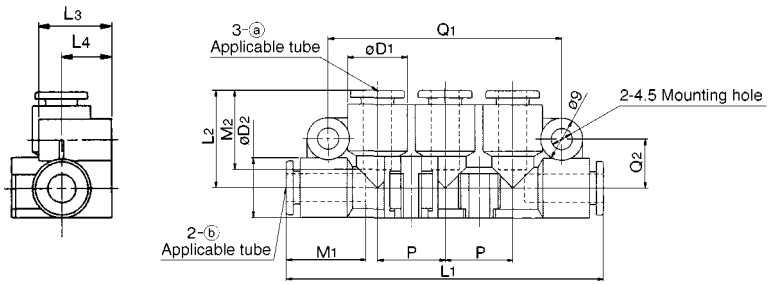
Tube O.D. (mm) ⓐ	Tube O.D. (mm) ⓑ	Fitting size ød	Part No.	øD1	øD2	L1	L2	L3	P	Q1	Q2	A	MA	MB	Port B min. port size	Weight (g)
4	6	6	**KM15-04-06-3**	10.4	12.8	78.5	18	13	10.4	38.2	9.9	61.5	16	17	4.5	12
	8	8	**KM15-04-08-3**		15.2	85.5	19	15.5			11.1	67		18.5	6	24
6	8	8	**KM15-06-08-3**	12.8	15.2	92.5	20	15.5	12.8	45.4	11.1	74	17	18.5	6	25
	10	10	**KM15-06-10-3**		18.5	98	21	19			12.8	77		21	7.5	37
8	10	10	**KM15-08-10-3**	15.2	18.5	105	22.5	19	15.2	52.6	12.8	85	18.5	21	7.5	41

Precautions for the use with One-touch fittings

⚠ Caution

Refer to “Air Fittings & Tubing Precautions” for the details of installation/removal of One-touch fittings.

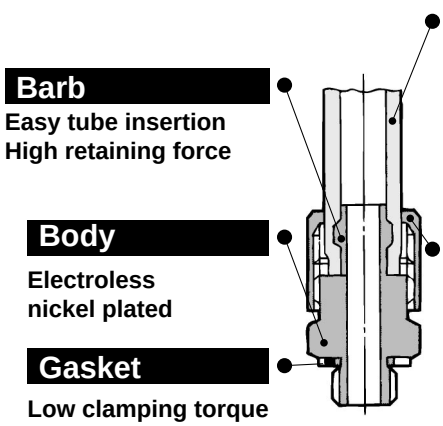
KM16



Tube O.D. (mm) ⓐ	Tube O.D. (mm) ⓑ	Part No.	øD1	øD2	L1	L2	L3	L4	P	Q1	Q2	M1	M2	Port B min. port size	Weight (g)
4	4	**KM16-04-04-3**	12.8	12.8	68	20.9	16	11	14.5	50	10.5	16	16	3	18
4	6	**KM16-04-06-3**										17	16	4.5	16
6	6	**KM16-06-06-3**										17	17	4.5	15

Miniature Fittings
M3, M5, R(PT)1/8
Series M

Hose nipple



Barb
Easy tube insertion
High retaining force

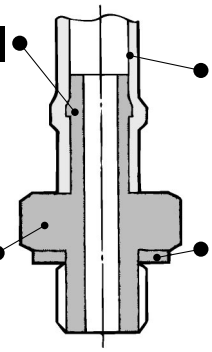
Body
Electroless nickel plated

Gasket
Low clamping torque

Tube
Either nylon, soft nylon and polyurethane tubing.

Cap nut
Hose nipple tubing connection/disconnection is simple while keeping a large retaining force. Electroless nickel plated.

Barb fitting



Barb
Easy tube insertion
High retaining force

Body
Electroless nickel plated

Tube

Gasket
Low clamping torque
Certain sealing effect

PAT.

Simple Connection/ Disconnection
Hose nipple tubing connection/ disconnection is simple while keeping a large retaining force.

Miniature Size
For air connection in confined areas.

Accepts Many Styles of Plastic Tubing
Hose nipple and hose elbow accepts nylon, soft nylon, and polyurethane tubing.

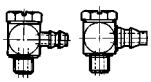
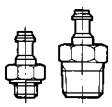
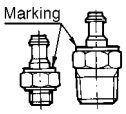
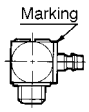
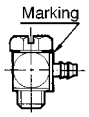
Specifications

Applicable tube material		Nylon	Soft nylon		Polyurethane
Applicable tube dia.	M3	—	ø3.18/ø2.18	ø4/ø2.5	ø3.18/ø2, ø4/ø2.5
	M5-R(PT) 1/8	ø4/ø2.5 ø6/ø4		ø4/ø2.5 ø6/ø4	ø3.18/ø2, ø4/ø2.5, ø6/ø4
Max. operating pressure (at 20°C)		1.5MPa	1.0MPa		0.8MPa
Port size		M3, M5, R(PT)1/8			
Thread		JIS B0209 Class 2 (Metric coarse thread), JIS B0203 (Taper pipe thread)			

Component Materials

Material	Body	C3604BD (Nipple M-3N, M-5N: Stainless steel (SUS 303))
	Gasket	PVC, Nylon66: GF30%

Fitting Markings for Applicable Tube Material (Barb fitting, Barb elbow, Barb elbow (H))
Tube material determines the compatible fittings. (See diagram below.)

Connection	Tube	Fitting marking for applicable tube material			Surface treatment (Color)
		Barb fitting	Barb elbow	Barb elbow (H)	
M3	Soft nylon tube Polyurethane tube		——		Electroless nickel plated (Silver color)
R(PT)1/8, M5	Nylon tube				Electroless nickel plated (Silver color)
	Soft nylon tube Polyurethane tube				Electroless nickel plated (Black color) [Except stud]

Series M3, R(PT)1/8

Series/Model		Style	Application		Note
M3	M-3AU-3	**Barb fitting**  P.2.1-49	For soft nylon tube		ø3.18/2.18 X M3
			For polyurethane tube		ø3.18/2 X M3
	M-3AU-4		For soft nylon and polyurethane tube		ø4/2.5 X M3
	M-3ALU-3	**Barb fitting**  P.2.1-49	Body rotates 360° around the stud axis.	Soft nylon tube	ø3.18/2.18 X M3
				poly-urethane	ø3.18/2 X M3
	M-3ALU-4			soft nylon and poly-urethane	ø4/2.5 X M3
	M-3UL	**Universal elbow**  P.2.1-49	Body rotates at 360° around the stud axis		M3 female X M3 male
	M-3UT	**Universal tee**  P.2.1-49	Body rotates at 360° around the stud axis		M3 female X M3 female X M3 male
	M-3N	**Nipple**  P.2.1-49	Fitting to work-piece and fitting - fitting connection possible		M3 male X M3 male
	M-3P	**Plug**  P.2.1-49	To plug unused M3 port		
	M-3G	**Gasket**  P.2.1-49	To seal M3 thread		

Series/Model		Style	Application	Note
R (PT) 1/8	M-01AN-4	**Barb fitting**  P.2.1-49	For nylon tube	ø4/2.5 X R(PT)1/8
	M-01AN-6			ø6/4 X R(PT)1/8
	M-01AU-4	**Barb fitting**  P.2.1-49	For soft nylon and polyurethane tube	ø4/2.5 X R(PT)1/8
	M-01AU-6			ø6/4 X R(PT)1/8
	M-01H-4	**Hose nipple**  P.2.1-49	For nylon, soft nylon and poly-urethane tube	ø4/2.5 X R(PT)1/8
	M-01H-6			ø6/4 X R(PT)1/8

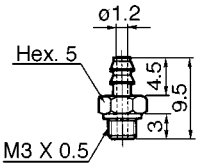
Series M5

Series/Model		Style	Application		Note
M5	M-5AN-4	**Barb fitting**  P.2.1-50	For nylon tube		ø4/2.5 X M3
	M-5AN-6				ø6/4 X M5
	M-5AU-3	**Barb fitting**  P.2.1-50	For soft nylon tube		ø3.18/2.18 X M5
			For polyurethane tube		ø3.18/2 X M5
	M-5AU-4		For soft nylon and polyurethane tube		ø4/2.5 X M5
	M-5AU-6				ø6/4 X M5
	M-5ALN-4	**Barb elbow**  P.2.1-50	●For nylon tube ●Body rotates at 360° around stud		ø4/2.5 X M5
	M-5ALN-6				ø6/4 X M5
	M-5ALU-3	**Barb elbow**  P.2.1-50	Body rotates at 360° around the stud axis	soft nylon	ø3.18/2.18 X M5
				poly-urethane	ø3.18/2 X M5
	M-5ALU-4			soft nylon and poly-urethane	ø4/2.5 X M5
	M-5ALU-6				ø6/4 X M5
	M-5ALHN-4	**Barb elbow (H)**  P.2.1-50	Body rotates at 360° around the stud axis	For nylon tube	ø4/2.5 X M5
	M-5ALHN-6				ø6/4 X M5
	M-5ALHU-3	**Barb elbow (H)**  P.2.1-50	Body rotates at 360° around the stud axis	soft nylon	ø3.18/2.18 X M5
				poly-urethane	ø3.18/2 X M5
	M-5ALHU-4			soft nylon and poly-urethane	ø4/2.5 X M5
	M-5ALHU-6				ø6/4 X M5
	M-5H-4	**Hose nipple**  P.2.1-50	For nylon, soft nylon, and poly-urethane tube		ø4/2.5 X M5
	M-5H-6				ø6/4 X M5
	M-5HL-4	**Hose elbow**  P.2.1-51	●For nylon, soft nylon, and polyurethane tube ●Body rotates at 360° around the stud axis		ø4/2.5 X M5
	M-5HL-6				ø6/4 X M5
	M-5HLH-4	**Hose elbow (H)**  P.2.1-51			ø4/2.5 X M5
	M-5HLH-6				ø6/4 X M5
	M-5L	**Elbow**  P.2.1-51	One-sided 90° elbow		M5 female X M5 female

Series/Model		Style	Application	Note
M5	M-5T	**Tee**  P.2.1-51	Both sides allows 90° connection	M5 female X M5 female X M5 female
	M-5UL	**Universal elbow**  P.2.1-51	Body rotates at 360° around the stud axis	M5 female X M5 male
	M-5UT	**Universal tee**  P.2.1-51	Body rotates at 360° around the stud axis	M5 female X M5 female X M5 male
	M-5J	**Extention fitting**  P.2.1-51	Solid piece moves fitting up from workpiece	M5 male X M5 female
	M-5N	**Nipple**  P.2.1-51	Fitting to workpiece and fitting - fitting connection	M5 male X M5 male
	M-5UN	**Union nipple**  P.2.1-51	Body rotates at 360° around the stud axis	M5 male X M5 male PAT
	M-5E	**Bulkhead union**  P.2.1-51	Panel mount connection	M5 female X M5 female
	M-5ER	**Bulkhead reducer**  P.2.1-52	Reduction from Rc(PT)1/8 to M5 and includes panel mounting	Rc(PT)1/8 X M5 female
	M-5M	**Manifold**  P.2.1-52	Rc(PT)1/8 can be diverted in up to 9, M5 stations, includes panel or bracket mounting	Rc(PT)1/8 X M5 female (9 stations)
	M-5B	**Reducer bushing**  P.2.1-52	For reducing Rc(PT)1/8 female to M5 female	Rc(PT)1/8 X M5 female
	M-5P	**Plug**  P.2.1-52	To plug unused M5 port	
	M-5G1	**Gasket**  P.2.1-52	To seal M5 thread	Material: PVC
	M-5GH	**Gasket (H)**  P.2.1-52	M-5AL□-6 M-5ALH□-6 M-5HL-4, 6 M-5HLH-4, 6	Material: Nylon66 GF30%

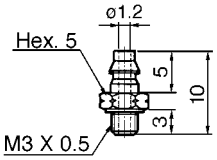
Series M3

Barb fitting for soft tube: M-3AU-3



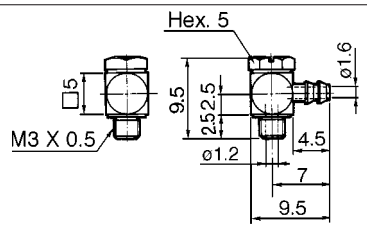
Effective area: 0.9mm^2 Weight: 0.6g

Barb fitting for soft tube: M-3AU-4



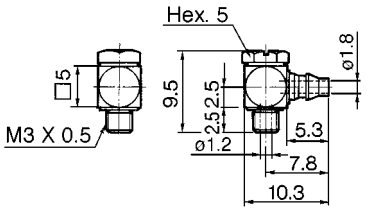
Effective area: 0.9mm^2 Weight: 0.7g

Barb elbow for soft tube: M-3ALU-3



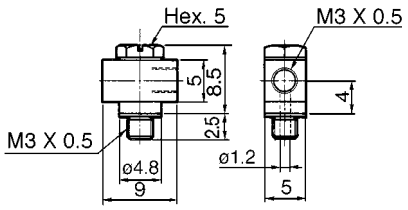
Effective area: 0.6mm^2 Weight: 0.8g

Barb elbow for soft tube: M-3ALU-4



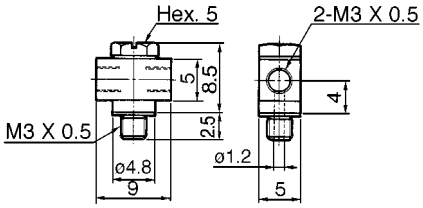
Effective area: 0.6mm^2 Weight: 0.9g

Universal elbow: M-3UL



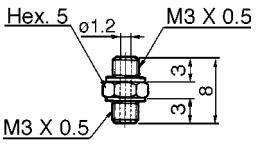
Effective area: 0.6mm^2 Weight: 1.6g

Universal tee: M-3UT



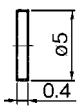
Effective area: 0.6mm^2 Weight: 1.4g

Nipple: M-3N



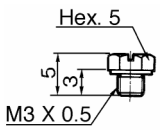
Weight: 0.6g
Effective area: 0.9mm^2

Gasket: M-3G



Weight: 0.005g

Plug: M-3P



Weight: 0.5g

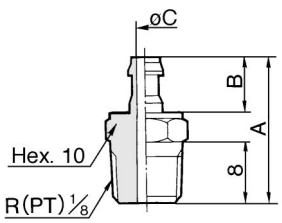
SM3A, #1 to #7

Series R(PT)1/8

Barb fitting for nylon tube, soft tube: M-01A□-4, -6

Tube	Part No.	A	B	øC	Effective area (mm^2)	Weight (g)
Nylon tube	**M-01AN-4**	16	5	1.8	2.1	6.4
	M-01AN-6	18	7	2.5	4.0	6.6
Soft tube	**M-01AU-4**	16	5	1.8	2.1	6.5
	M-01AU-6	18	7	2.5	4.0	6.7

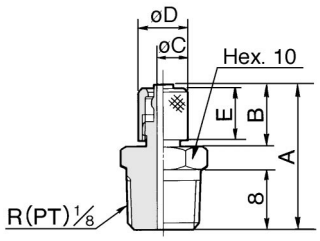
SM3A, #8 to #11



Hose nipple: M-01H-4, -6

Part No.	A	B	øC	øD	E	Effective area (mm^2)	Weight (g)
M-01H-4	19.5	8.5	1.8	6.5	7	2.1	7.1
M-01H-6	20.5	9.5	3	8.5	8	5.5	7.7

SM3A, #12/#13

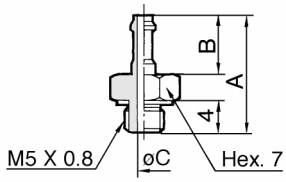


Series M5

Barb fitting for nylon tube: M-5AN-4, -6

Part No.	A	B	øC	Effective area (mm^2)	Weight (g)
M-5AN-4	12	5	1.8	2.1	1.6
M-5AN-6	14	8	2.5	4.0	1.7

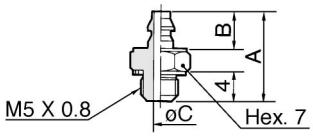
SM5B, #1/#2



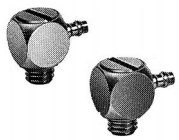
Barb fitting for soft tube: M-5AU-3, -4, -6

Part No.	A	B	øC	Effective area (mm^2)	Weight (g)
M-5AU-3	11.5	4.5	1.6	1.7	1.5
M-5AU-4	12	5	1.8	2.1	1.6
M-5AU-6	14	7	2.5	4.0	1.8

SM5B, #3 to #5



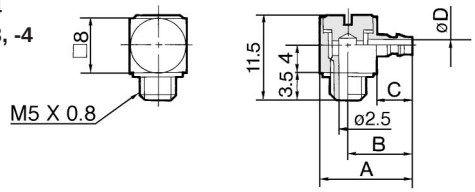
Barb elbow for nylon tube: M-5ALN-4, -6
Barb elbow for soft tube: M-5ALU-3, -4, -6



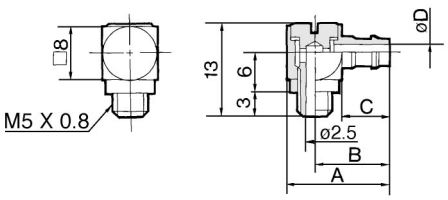
Part No.	A	B	C	øD	Effective area (mm^2)	Weight (g)
M-5ALN-4	13	9	5	1.8	1.4	4.0
M-5ALN-6	15	11	7	2.5	2.4	4.4
M-5ALU-3	12.5	8.5	4.5	1.6	1.1	4.0
M-5ALU-4	13.3	9.3	5	1.8	1.4	4.1
M-5ALU-6	15.3	11.3	7	2.5	2.4	4.5

SM5B, #6 to #10

M-5ALN-4
M-5ALU-3, -4



M-5ALN-6
M-5ALU-6

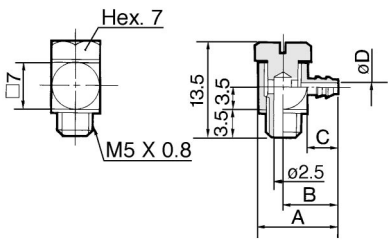


Barb elbow for nylon tube: M-5ALHN-4, -6
Barb elbow for soft tube: M-5ALHU-3, -4, -6

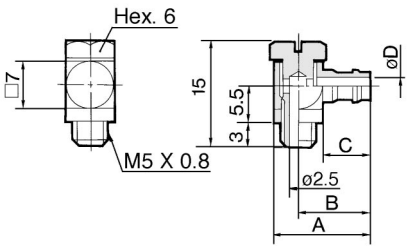
Part No.	A	B	C	øD	Effective area (mm^2)	Weight (g)
M-5ALHN-4	12	8.5	5	1.8	1.4	3.2
M-5ALHN-6	14	10.5	7	2.5	2.4	3.7
M-5ALHU-3	11.5	8	4.5	1.6	1.1	3.2
M-5ALHU-4	12.3	8.8	5	1.8	1.4	3.3
M-5ALHU-6	14.3	10.8	7	2.5	2.4	3.9

SM5B, #11 to #15

M-5ALHN-4
M-5ALHU-3, -4



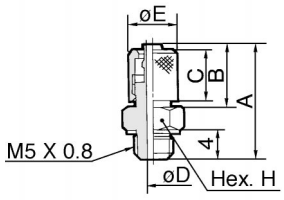
M-5ALHN-6
M-5ALHU-6



Hose nipple: M-5H-4, -6

Part No.	A	B	C	øD	øE	H	Effective area (mm^2)	Weight (g)
M-5H-4	15.5	8.5	7	1.8	6.5	7	2.1	2.7
M-5H-6	16.5	9.5	8	2.5	8.5	8	4.0	3.9

SM5B, #16/#17

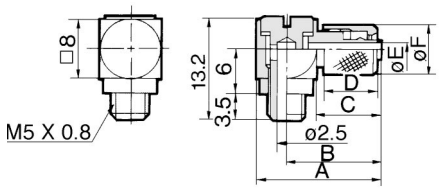


Series M5

Hose elbow: M-5HL-4, -6

Part No.	A	B	C	D	øE	øF	Effective area (mm²)	Weight (g)
M-5HL-4	16.5	12.5	8.5	7	1.8	6.5	1.4	4.4
M-5HL-6	17.5	13.5	9.5	8	2.5	8.5	2.4	5.2

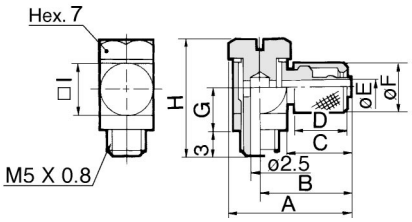
SM5B, #18/#19



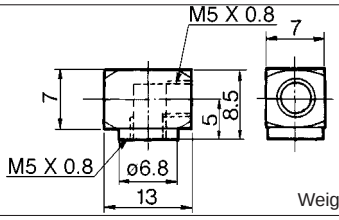
Hose elbow: M-5HLH-4, -6

Part No.	A	B	C	D	øE	øF	G	H	□I	Effective area (mm²)	Weight (g)
M-5HLH-4	15.5	12	8.5	7	1.8	6.5	5.5	15	7	1.4	4.5
M-5HLH-6	17.5	13.5	9.5	8	2.5	8.5	6	16	8	2.4	6.6

SM5B, #20/#21

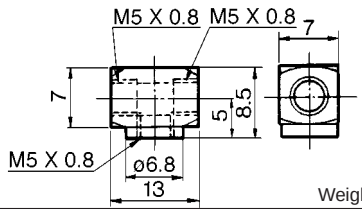


Elbow: M-5L



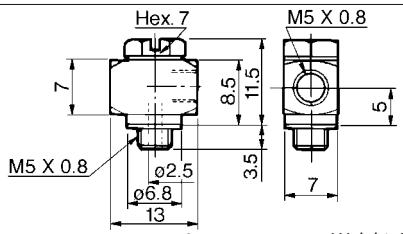
Weight: 4.2g

Tee: M-5T



Weight: 3.5g

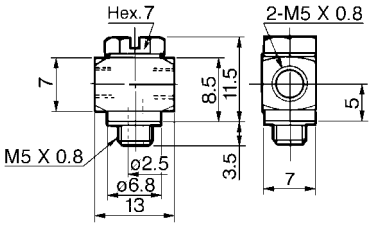
Universal elbow: M-5UL



Effective area: 2.4mm²

Weight: 5.3g

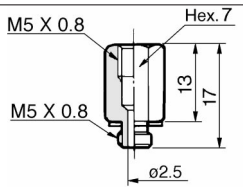
Universal tee: M-5UT



Effective area: 2.4mm²

Weight: 4.8g

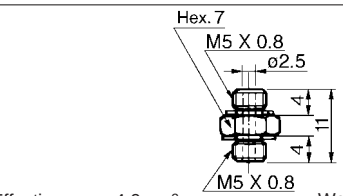
Extension fitting: M-5J



Effective area: 4.0mm²

Weight: 3.6g

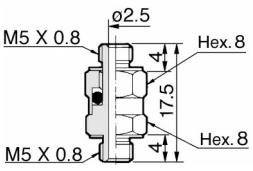
Nipple: M-5N



Effective area: 4.0mm²

Weight: 1.5g

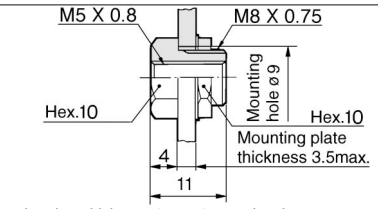
Universal nipple: M-5UN



Effective area: 4.0mm²

Weight: 3.9g

Bulkhead union: M-5E



For the plate thickness 3.5 to 6mm, give the plate tapping M8 X 0.75, and then screw-in.

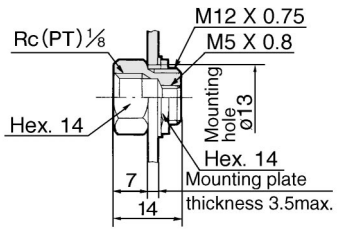
Weight: 4.6g

SM5B, #22 to #27

CAD

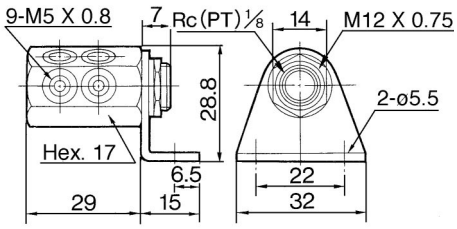
Series M5

Bulkhead reducer: M-5ER



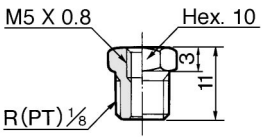
For the plate thickness 3.5 to 6mm, give the plate tapping M12 X 0.75, and then screw-in. Weight: 12g

Manifold: M-5M



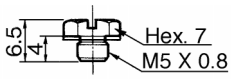
Panel mounting plate thickness max. 3.5mm
For the plate thickness 3.5 to 6mm, give the plate tapping M12 X 0.75, and then screw-in. Weight: 59g

Bushing: M-5B



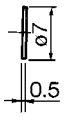
Weight: 5.8g

Plug: M-5P



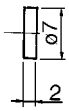
Weight: 1.3g

Gasket: M-5G1



Weight: 0.01g

Gasket: M-5GH



Weight: 0.04g

CAD SM5B, #28 to #31

⚠ Precautions

Be sure to read before handling.
Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.0-7 and 2.0-8 for more detailed precautions of every series.

Tightening of M3 or M5 thread

⚠ Caution

①Tighten by hand, and give it an additional 1/4 rotation with wrench. (The additional rotation should be doubled to 1/2 when using the universal elbow, universal tee, etc. which have two gaskets.) If tightened too much, thread portion may be damaged and gasket may be deformed. This will cause air leakage. On the contrary, if tightening is not sufficient, thread may loosen causing air leakage.

Use of tubing with hose nipple

⚠ Caution

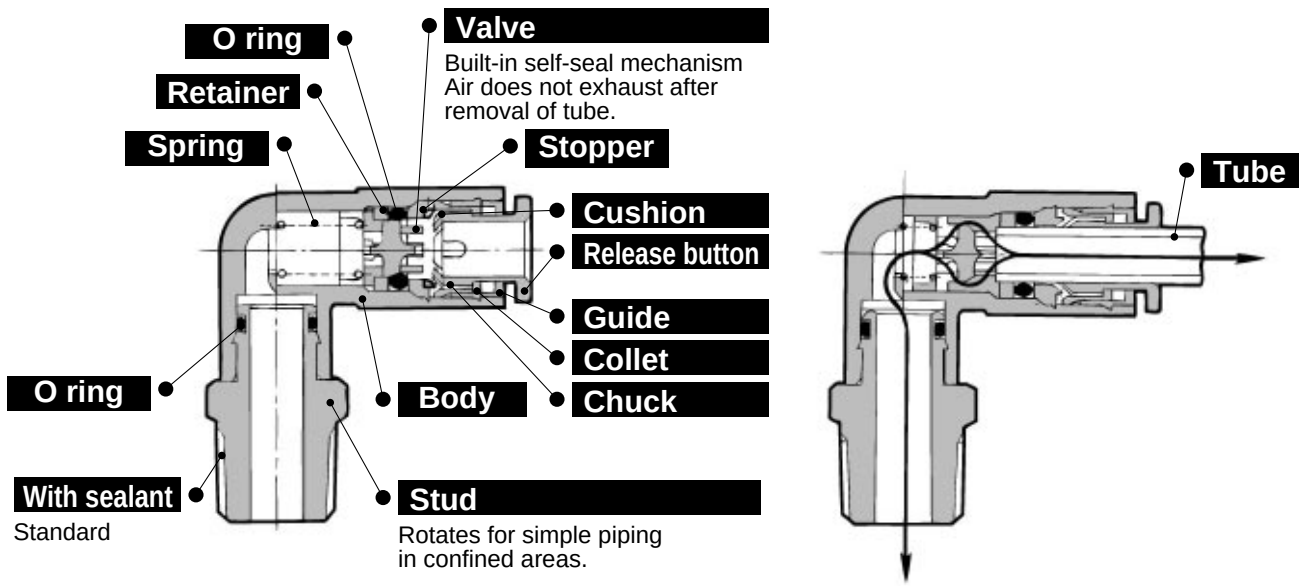
①Cut the tube perpendicularly to the tube axis to a little longer length than required length. (Use tube cutter "TK-1", "TK-2" or "TK-3".)
②Pass the tubing through the cap nut.
③Push the tube until it comes to the end of the barb portion, or it may cause air leakage or hose releasing.
④Tighten the cap nut firmly by hand on the fitting.

Use of tube with barb fitting

⚠ Caution

①Cut the tube perpendicularly to the tube axis with a little longer length than required length. (Use tube cutter "TK-1", "TK-2" or "TK-3".)
②Push the tube in until it comes to the end of the barb portion, or it may cause air leakage or hose releasing.

Self-seal Fittings
Series KC



PAT.

One-touch fitting (With built-in self-seal mechanism) to prevent air exhaust when removing tube.

Best for multiple use areas when pressure cannot be shut down.

10 styles are available.

Electroless nickel plated for copper-free applications.

Applicable Tubing

Tube material	Nylon, Soft nylon, Polyurethane
Tube O.D.	ø4, ø6, ø8, ø10, ø12

Specifications

Operating fluid		Air
Max. operating pressure		1.0MPa
Proof pressure		3.0MPa
Ambient and fluid temperature		–5 to 60°C (No freezing)
Thread	Thread portion	JIB B0203 (Taper pipe thread)
	Nut	JIB B0211 Class 2 (Metric fine thread)
Sealant (Thread portion)		With sealant (Standard)
Copper-free application		All brass parts with electroless nickel plated

Component Materials

Body	C3604BD, PBT
Stud	C3604BD (Thread portion)
Chuck, Spring	Stainless Steel (SUS304)
Guide	SUS304, C3604BD, Polyacetal (POM)
Collet, Release button	Polyacetal (POM)
Valve, Retainer	Polyacetal (POM)
Stopper	C3604BD, Polyacetal (POM)
Packing, O ring	NBR

Model

Male connector

KCH P.2.1-62

Used to pipe in the same direction from female threaded portion.

Male elbow

KCL P.2.1-62

Used to pipe in right angles to female threaded portion. Most common style.

Union tee

KCT P.2.1-62

Used to connect tubes in both 90° directions.

Union "Y"

KCU P.2.1-62

Used to connect tubes in the same direction.2 branched ports has a self-seal function.

Check adaptor

KCJ P.2.1-63

Used to add the self-seal mechanism to the usual One-touch fittings, Series KQ.

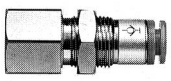
Bulkhead union

KCE P.2.1-63

Used for junction connection of tubes for installation on a panel. One of two ports has a self-seal function.

Bulkhead female union

KCE P.2.1-63



Used for transit connection of a tube and a male screw for installation on a panel.

Straight union

KCH P.2.1-63

Used to connect tubes in the same direction. One of two ports has a self-seal function.

Straight plug for frequent use

KCH P.2.1-63

Used to connect a self-seal fitting and a tube in the same direction. It can save the tube cutting labor in the case of frequent tube installation and removal.

Elbow plug for frequent use

KCL P.2.1-64

Used to pipe a tube at right angles to a self-seal fitting. It can save the tube cutting labor in the case of frequent tube installation and removal.

⚠ Precautions

Be sure to read before handling. Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.0-7 and 2.0-8 for more detailed precautions of every series.

Tube Insertion and Removal from Self-seal Fitting

⚠ Caution

●Installing Tube

①Cut the tube perpendicularly, taking care not to damage the outside surface. (Use tube cutter TK-1, 2 or 3. Do not cut the tube with cutting pliers, nippers, scissors, etc.) Flat or angled cuts will make it difficult to connect to fittings or, if connected, tube will release or air leakage will occur.

②Grasp the tube, then slowly push it until it comes to a stop.

③Pull it back gently to make sure that it has a positive seal.
Incomplete installation may cause air leakage or tube release.

●Removing Tube

①Push the release button into the fitting.
The button should be pushed evenly.

②Pull out the tube while keeping the release button depressed. (If the release button is not held down, the tube cannot be withdrawn.)

③To reuse the tubing, cut off the previously lodged portion of the tube.
If using tubing without cutting the damaged portion off, it may cause the air leakage or make it difficult to release the tube.

The Number of Insertions and Removals from Self-seal Fitting

⚠ Caution

①The number of insertions and removals as a rough quide is as follows.

- Tube……300 times
- Metal stem……1000 times

Installation of Self-seal Fitting

⚠ Caution

①The fitting should be installed (Installation of R (PT) thread portion) by screwing with a spanner at the hexagonal portion of the body.
The position of spanner should be a root as close as possible to R (PT) thread.
Use the spanner corresponding to the size of hexagonal portion, or hexagonal portion may be deformed.

Tightening the thread portion of an M5 size fitting

⚠ Caution

①First, tighten it by hand, then give it an additional 1/6 turn with a wrench.
Excessive tightening may damage the threaded portion or deform the gasket to cause air leakage. Insufficient tightening may leave the thread loosened or cause air leakage.

Distinction of plug and applicable fitting

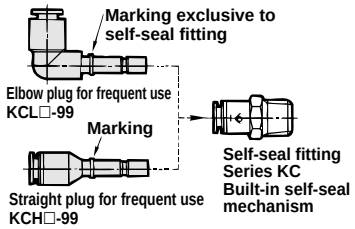
⚠ Caution

①The applicable fitting should be chosen depending on the style of plug.

- Check adaptor
  How to use: Use it for addition of self-seal mechanism to a standard One-touch fitting series KQ.
  Self-seal fittings with check adaptor are not available. It causes the air leakage.

Check adaptor KCJ□-99 — One-touch fitting series KQ

- Elbow plug for frequent use, straight plug for frequent use.
  How to use: For use in the case of frequent tube installation and removing, tube cutting labor can be saved. These plugs are not available for a standard One-touch fittings Series KQ.
  If trying to install the plug into a KQ, plug will jump out of the fitting. Note the exclusive marking for self-seal fittings before use.



Tube Insertion and Removal under a pressurized condition

⚠ Caution

①When inserting/removing of the tube is difficult under a pressurized condition, it should be inserted or removed by lowering the pressure or after fully exhausting.

Male connector: KCH

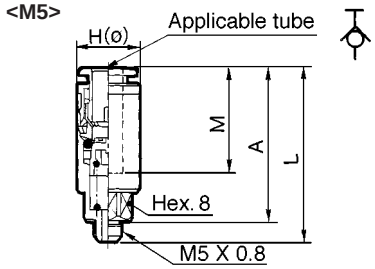
<M5>

<R(PT)>

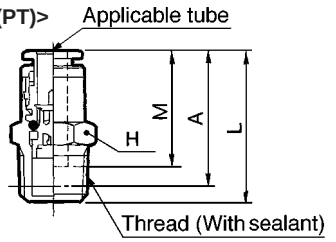
Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	L	A*	M	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	M5 X 0.8	KCH04-M5	9.8	30.8	27.3	18	2.1	2.1	8
	1/8	KCH04-01S	10	26.1	22.1		2.6	2.6	
6	M5 X 0.8	KCH06-M5	11.8	32.4	28.9	19.5	2.4	2.4	10
	1/8	KCH06-01S	12	37.4	33.4	19	6.8	6.8	16
	1/4	KCH06-02S	14	28.9	22.9				14
8	1/8	KCH08-01S	14	42.4	38.4	21.5	16.2	13.1	20
	1/4	KCH08-02S		45.7	39.7				27
	3/8	KCH08-03S	17	34	27.5				25
10	1/4	KCH10-02S	17	50.5	44.5	24	25.6	20.4	34
	3/8	KCH10-03S		51.5	45				43
12	3/8	KCH12-03S	19	54.2	47.7	25.5	35.4	30.4	48
	1/2	KCH12-04S	22	41.6	33.6				41

*Reference dimensions after R(PT) installation.

<M5>

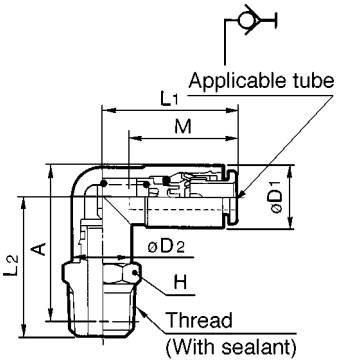


<R(PT)>



Male elbow: KCL

Tube O.D. (mm)	Thread R(PT)	Part No.	H (Hex.)	øD1 (1)	øD2	L1	L2	A*	M	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	M5 X 0.8	KCL04-M5	8	10.4	8	25.3	16.7	18.4	18	1.9	1.9	6
	1/8	KCL04-01S	10		10		23	24.2		2.3	2.3	11
6	M5 X 0.8	KCL06-M5	8	12.8	8	26.8	17.4	20.3	19.5	2.2	2.2	7
	1/8	KCL06-01S	12		12	28	25.1	27.5	19	6.2	6.2	13
	1/4	KCL06-02S	14				29.1	29.5				21
8	1/8	KCL08-01S	14	15.2	14	34.1	27.1	30.7	21.5	13.0	10.5	16
	1/4	KCL08-02S					31.1	32.7				24
	3/8	KCL08-03S	17					34.2				37
10	1/4	KCL10-02S	17	18.5	17	38	33.9	37.2	24	19.5	16.5	29
	3/8	KCL10-03S					35.9	38.7				38
12	3/8	KCL12-03S	22	20.9	20.9	40.7	40.3	44.3	25.5	24.8	21.3	63
	1/2	KCL12-04S					43.2	45.7				81



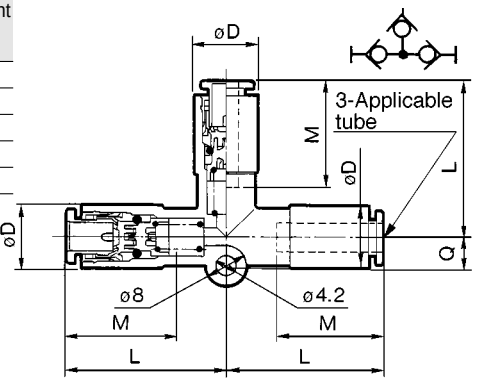
*Reference dimensions after R(PT) installation.

Note1) øD1: max. diameter

Union tee: KCT

Tube O.D. (mm)	Part No.	øD (1)	L	Q	M	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	KCT04-00	10.4	28.6	5.3	18	2.8	2.8	8
6	KCT06-00	12.8	32.7	6.1	19	7.6	7.6	15
8	KCT08-00	15.2	39.2	7.1	21.5	13.7	11.1	23
10	KCT10-00	18.5	45.5	7.9	24	21.1	19.0	39
12	KCT12-00	20.9	49.2	8.6	25.5	28.3	24.3	52

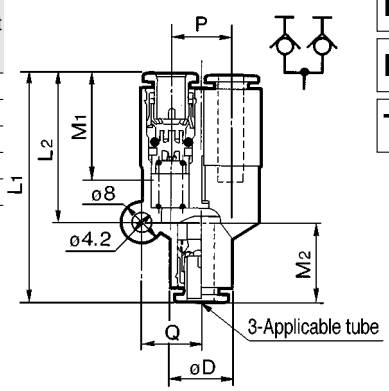
Note1) øD: max. diameter



Union "Y": KCU

Tube O.D. (mm)	Part No.	øD (1)	L1	L2	P	Q	M1	M2	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	KCU04-00	10.4	43.1	27.3	10.4	10.6	18	16	3.7	3.7	8
6	KCU06-00	12.8	48	31.2	12.8	12.5	19	17	10.0	10.0	14
8	KCU08-00	15.2	57.6	38.9	15.2	14.7	21.5	18.5	21.7	15.1	22
10	KCU10-00	18.5	65.2	44.9	18.5	17.1	24	21	33.3	25.6	37
12	KCU12-00	20.9	70.1	48.8	20.9	19.1	25.5	22	48.9	38.7	49

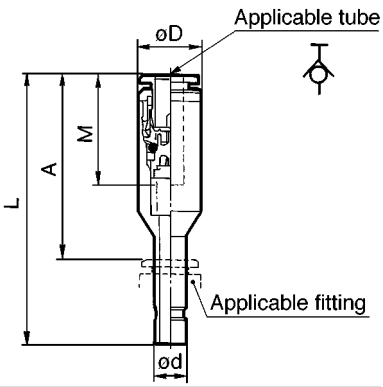
Note1) øD: max. diameter



Check adaptor: KCJ

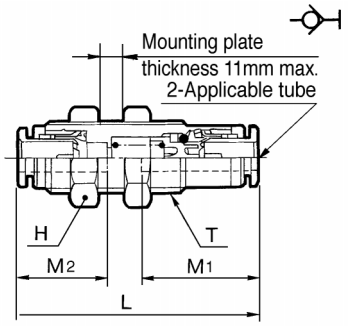
Tube O.D. (mm)	Part No.	ød	øD(1)	L	A	M	Effective area (mm²)		Weight (g)
							Nylon	Urethane	
4	**KCJ04-99**	4	9.8	49.5	33.5	18	2.6	2.6	9
6	**KCJ06-99**	6	11.8	54	37	19	6.8	6.8	13
8	**KCJ08-99**	8	14	61	42.5	21.5	16.2	13.1	20
10	**KCJ10-99**	10	17	70.4	49.4	24	25.6	20.4	33
12	**KCJ12-99**	12	19	74.4	52.4	25.5	35.4	30.4	43

Note1) øD: max. diameter

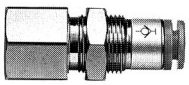


Bulkhead union: KCE

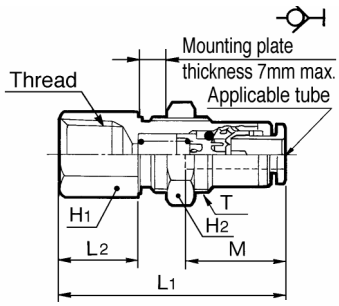
Tube O.D. (mm)	Part No.	T (M)	H (Hex.)	L	Mounting hole	M1	M2	Effective area (mm²)		Weight (g)
								Nylon	Urethane	
4	**KCE04-00**	M12 X 1	14	42	13	18	16	2.6	2.6	21
6	**KCE06-00**	M14 X 1	17	45.5	15	19	17	6.8	6.8	30
8	**KCE08-00**	M16 X 1	19	52.5	17	21.5	18.5	16.2	13.1	39
10	**KCE10-00**	M20 X 1	24	59.5	21	24	21	25.6	20.4	84
12	**KCE12-00**	M22 X 1	27	63.2	23	25.5	22	35.4	30.4	115



Bulkhead female union: KCE



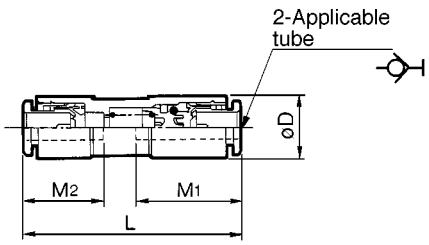
Tube O.D. (mm)	Thread Rc (PT)	Part No.	T (M)	H1 (Hex.)	H2 (Hex.)	L1	L2	Mounting hole	M	Effective area (mm²)		Weight (g)
										Nylon	Urethane	
4	1/4	**KCE04-02**	M12 X 1	17	14	40.5	14.7	13	18	2.6	2.6	32
6	1/4	**KCE06-02**	M14 X 1	17	17	42.7	14.7	15	19	6.8	6.8	36
8	3/8	**KCE08-03**	M16 X 1	19	19	49.4	15	17	21.5	16.2	13.1	42
10	3/8	**KCE10-03**	M20 X 1	22	24	53.9	14.2	21	24	25.6	20.4	79
12	3/8	**KCE12-03**	M22 X 1	24	27	56.1	13.7	23	25.5	35.4	30.4	105



Straight union: KCH

Tube O.D. (mm)	Part No.	øD(1)	L	M1	M2	Effective area (mm²)		Weight (g)
						Nylon	Urethane	
4	**KCH04-00**	10.4	42.1	18	16	2.6	2.6	5
6	**KCH06-00**	12.8	45.8	19	17	6.8	6.8	7
8	**KCH08-00**	15.2	52.8	21.5	18.5	16.2	13.1	10
10	**KCH10-00**	18.5	59.8	24	21	25.6	20.4	18
12	**KCH12-00**	20.9	63.5	25.5	22	35.4	30.4	24

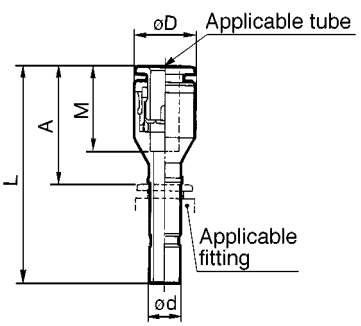
Note1) øD: max. diameter



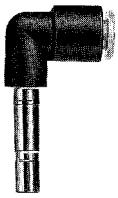
Straight plug for frequent use: KCH

Tube O.D. (mm)	Part No.	ød	øD(1)	L	A	M	Effective area (mm²)		Weight (g)
							Nylon	Urethane	
4	**KCH04-99**	4	9.8	40.6	22.6	16	5.6	4	5
6	**KCH06-99**	6	11.8	43.1	24.1	17	13.1	10.4	8
8	**KCH08-99**	8	14	46.7	25.2	18.5	26.1	18.0	11
10	**KCH10-99**	10	17	52.6	28.6	21	41.5	29.5	18
12	**KCH12-99**	12	19	54.9	29.4	22	58.3	46.1	24

Note1) øD: max. diameter

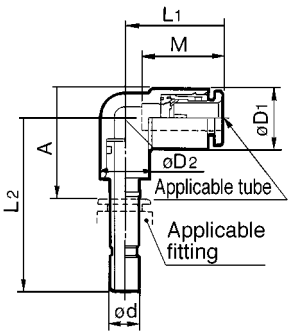


Elbow plug for frequent use: KCL



Tube O.D. (mm)	Part No.	ød	øD1 (1)	øD2 (1)	L1	L2	A	M	Effective area (mm²)		Weight (g)
									Nylon	Urethane	
4	**KCL04-99**	4	10.4	10	18	34.3	22.6	16	4.2	4.2	7
6	**KCL06-99**	6	12.8	10	20	36.5	24.1	17	11.4	9.0	8
8	**KCL08-99**	8	15.2	12	23	40.3	25.2	18.5	21.6	14.9	12
10	**KCL10-99**	10	18.5	17	26.5	44.3	28.6	21	35.2	25.0	25
12	**KCL12-99**	12	20.9	17	28.5	46.8	29.4	22	50.2	39.7	30

Note1) øD1, øD2: max. diameter



Multi-connector

Series DM

The use of the multi-connector enables panel mount connections with other apparatus and can provide the reliability of one-touch installation and removal of multi-tubes(nylon, polyurethane). As a result, separate transportation of panel and machinery equipment and backup unit exchange are made possible.

One-touch installation and removal

Employs the unique built-in keying mechanism which provides one-touch installation and removal capability even in hard to see locations. In addition, it prevents installation mistakes when re-connecting.

Installation processes are reduced considerably

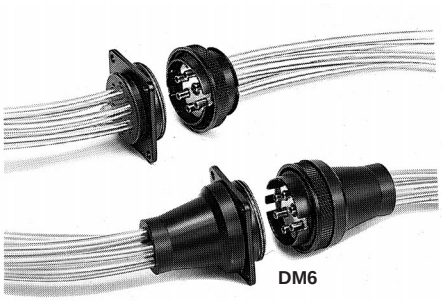
As compared with the use of many bulkhead unions, this installation is very easy and installation time is reduced considerably.

Reliable tube retaining force

This construction mechanism enables clamping and unclamping every tube in use by one operation and can provide a reliable tube retaining force.

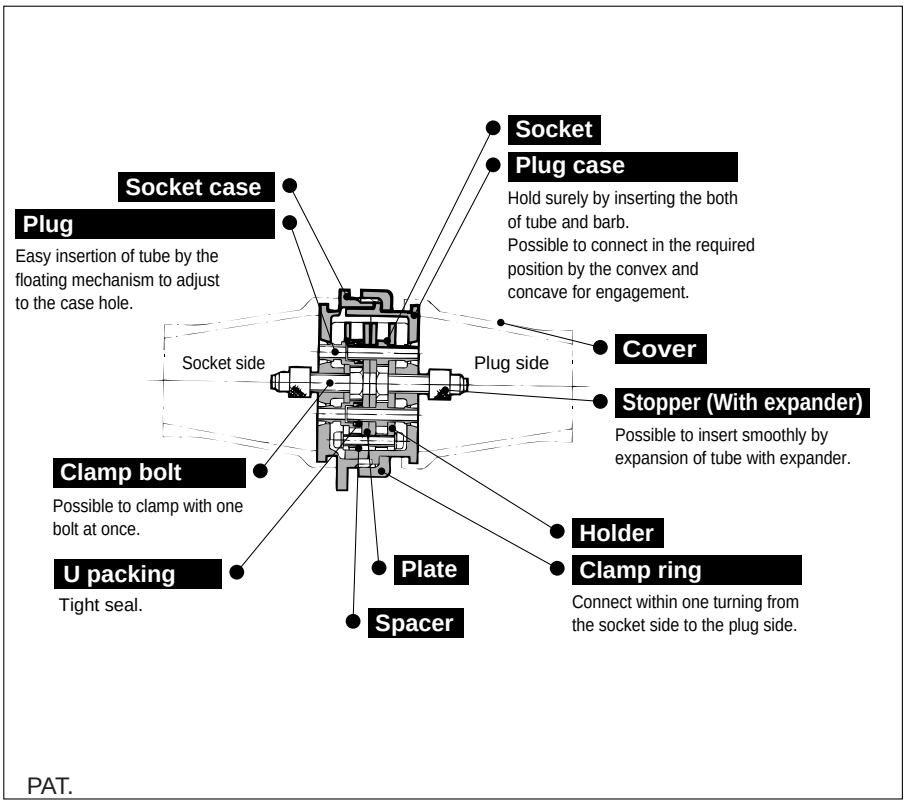
Number of connecting tubes

2 styles - 6 tubes & 12 tubes.



DM6

DM12



PAT.

Model

No. of connecting tubes	Part No.			Applicable tubing			Accessories (optional)
	Multiconnector	Plug side only	Socket side only	Nylon	Soft nylon	Polyurethane	
6	**DM6-04N**	**DM6P-04N**	**DM6S-04N**	T0425	—	—	DM-C-6
	DM6-04NU	**DM6P-04NU**	**DM6S-04NU**	T0403	TS0425	TU0425	
	DM6-06N	**DM6P-06N**	**DM6S-06N**	T0604	—	—	
	DM6-06NU	**DM6P-06NU**	**DM6S-06NU**	T0645	TS0604	TU0604	
12	**DM12-04N**	**DM12P-04N**	**DM12S-04N**	T0425	—	—	DM-C-12
	DM12-04NU	**DM12P-04NU**	**DM12S-04NU**	T0403	TS0425	TU0425	
	DM12-06N	**DM12P-06N**	**DM12S-06N**	T0604	—	—	
	DM12-06NU	**DM12P-06NU**	**DM12S-06NU**	T0645	TS0604	TU0604	

Specifications

Operating fluid	Air
Max. operating pressure	1.0MPa
Ambient and fluid temperature	–5 to 60°C (No freezing)

Component Materials

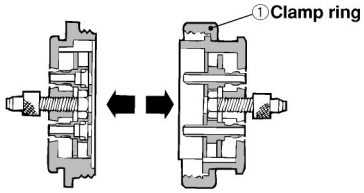
Socket case, Plug case, Clamp ring	ADC12 Black anodized
Plate	SPCC, Chromated
Holder	SPCC, Zinc chromated
Socket, Plug, Stopper	C3604BD
U packing	NBR
Cover	CR
Cross recessed head screw, Clamp bolt	SWRM Zinc chromated
Spacer	SPC Zinc chromated

How to Use

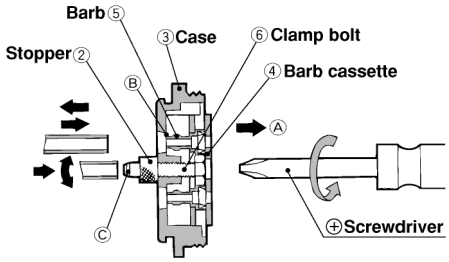
⚠Caution

Removing

Loosen clamp ring ①, and separate the multi-connector into two parts, socket side and plug side.



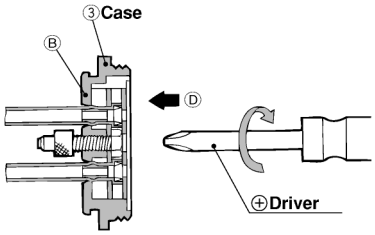
Insertion and removal of tube



①Turn the clamp bolt ⑥ to the left with a screwdriver, loosen until the stopper ② touches the case ③, and barb cassette ④ will be pulled out in the direction Ⓐ.Then clamp portion Ⓑ, consisting of barb ⑤ and case ③, will be freed. Next, insert or remove the tube.
②The corresponding numbers are stamped on both the socket and plug sides for each tube connection.
③If it is hard to insert the tube, enlarge the tube end with the head of stopper, expander Ⓒ, before inserting tube.
④Insert tube until it clears mountain of barb ⑤ completely.

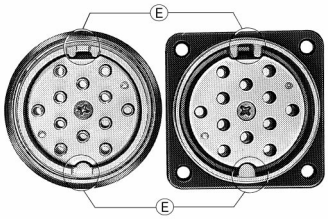
Clamping of tube

①After inserting tube, tighten clamp bolt ⑥ clockwise with a screwdriver.
②Barb cassette creeps into the direction Ⓓ and the tube will be clamped at the Ⓑ clamp portion ⑤ consisting of barb ③ and case.



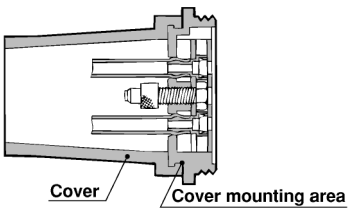
Connection

①Push together and rotate both of the cases, and the plug side will slide into the socket side at the proper position.
②The ring Ⓔ, male and female, of the plug side and socket side will interlock with each other at the proper position by pushing together and rotating.
③Final process of connection is to screw-in the clamp ring.



Cover mounting

①Cover is mountable on both sides, plug side and socket side.
②Enlarge cover and mount cover onto mounting area.



How to Order

DM 6 ☐ — 04 N — ☐

Number of connecting tubes

6	6
12	12

Style

—	Multi-connector
P	Plug side
S	Socket side

Tube O.D.

04	4mm
06	6mm

Tube material

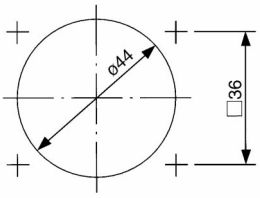
N	Nylon
NU	Soft nylon Polyurethane

Accessories (optional)

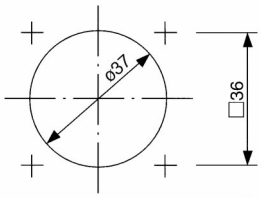
C1	1 cover (One side)
C2	2 covers (Both sides)

Dimensions/DM6,12

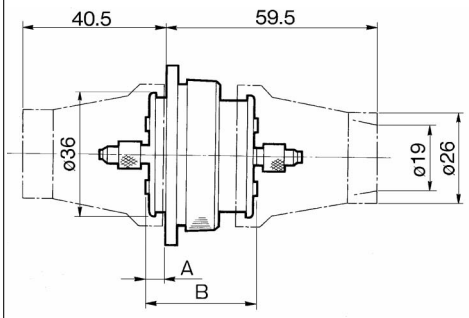
DM6

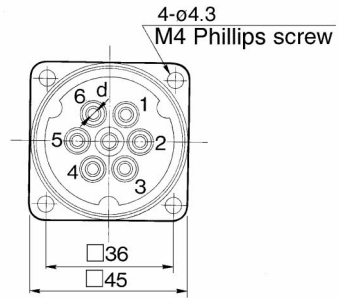


Panel mounting hole
(with the cover at socket side)

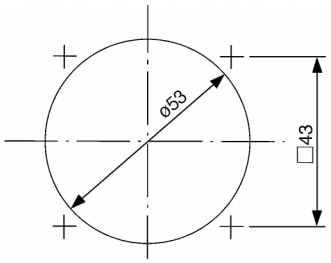


Panel mounting hole

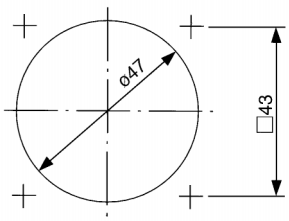




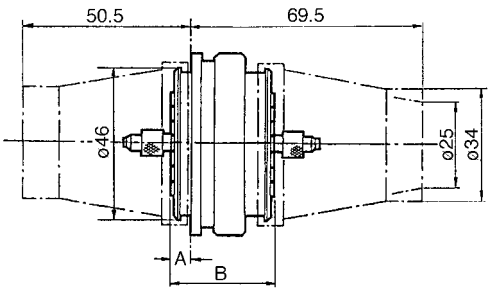
DM12

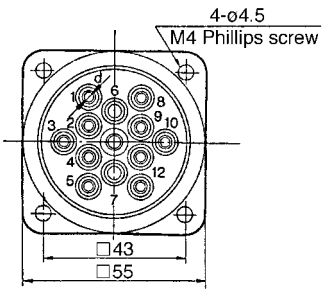


Panel mounting hole
(with the cover at socket side)



Panel mounting hole





Part No.		Barb I.D. (d)	A	B
DM6-04N	**DM12-04N**	1.6	5	29
DM6-06N	**DM12-06N**	3		
DM6-04NU	**DM12-04NU**	1.6	6	31
DM6-06NU	**DM12-06NU**	3		

⚠ Precautions

Be sure to read before handling. Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.0-7 and 2.0-8 for more detailed precautions of every series.

Insertion of tube

⚠ Caution

①Be sure to insert the tube slowly so that you will feel it move smoothly and can feel it touch the end. Once the tube has been properly inserted, pull it back gently, to make sure that it has a positive seal. If not inserted properly, it may cause the air leakage or tube releasing.
②In case the number of tubes to be used is less than 6 (DM6) or 12 (DM12), the positioning of the tube should be symmetrical to the center.

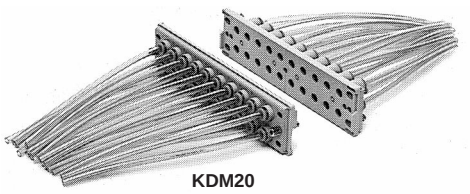
Rectangular Multi-connector
Connecting Tube: 10, 20
Series KDM

Multi-connector is effective in saving labor for separate transportation of the panel and the machine and for exchanging units due to failure.

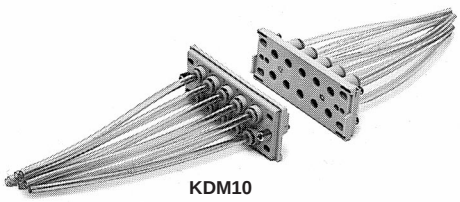
Substantial reduction in mounting space
In comparison with a model requiring many union joints for panels and partitions, this model needs only a small space.

One-touch connection/ disconnection of connector
Multiple pipes can be connected/disconnected in one-touch opperation without connection error. Thus man-hours for connection/disconnection is cut down substantially.

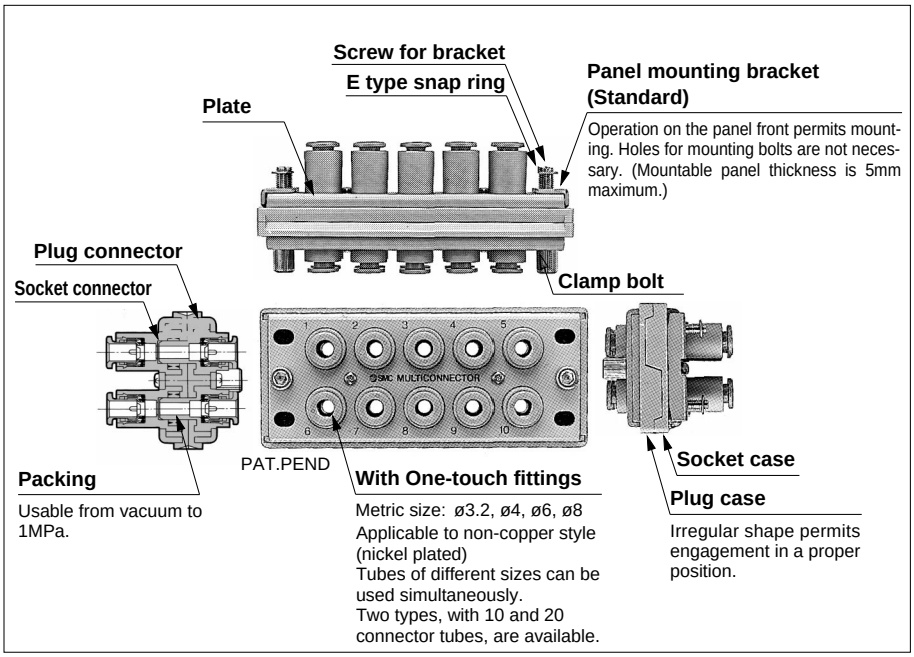
One-touch tube connection
One-touch fittings substantially cuts down man-hours for piping.



KDM20



KDM10



Model

No. of connecting tubes	Tube O.D.	Part No.	Weight	Color of release button
10	ø3.2	**KDM10-23**	300g	Blue
	ø4	**KDM10-04**		
	ø6	**KDM10-06**		
	ø8	**KDM10-08**	520g	
20	ø3.2	**KDM20-23**	520g	
	ø4	**KDM20-04**		
	ø6	**KDM20-06**		
	ø8	**KDM20-08**	950g	

Applicable Tubing

Tube material	Nylon, Soft nylon, Polyurethane
Tube O.D.	ø3.2, ø4, ø6, ø8

Specifications

Operating fluid	Air
Max.operating pressure	1.0MPa
Max.operating vacuum pressure	–100kPa
Proof pressure	1.5MPa
Ambient and fluid temperature	–5 to 60°C (No freezing)

⚠Caution

Be sure to read before handling. Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.0-7 and 2.0-8 for more detailed precautions of every series.

Component Materials

Plug case, Socket case		Polyacetal (POM)
Plate, Bracket		SPCC Plated
Plug connector, Socket connector	Body	PBT, C3604BD Electroless nickel plated (ø8)
	Chuck	SUS304
	Guide	Stainless steel (SUS304), C3604BD Electroless nickel plated, POM (ø8)
	Collet, Release button	Polyacetal (POM)
	Packing	NBR
Clamp bolt, Screw for bracket, Cross-recessed head machine screw		SWRM, Nickel plated
E type snap ring		Stainless steel (SUS304)

Part Numbers

No.of connecting tubes	Tube O.D.	Part No.		Color of release button
		Plug	Socket	
10	ø3.2	**KDM10P-23**	**KDM10S-23**	Blue
	ø4	**KDM10P-04**	**KDM10S-04**	
	ø6	**KDM10P-06**	**KDM10S-06**	
	ø8	**KDM10P-08**	**KDM10S-08**	
20	ø3.2	**KDM20P-23**	**KDM20S-23**	
	ø4	**KDM20P-04**	**KDM20S-04**	
	ø6	**KDM20P-06**	**KDM20S-06**	
	ø8	**KDM20P-08**	**KDM20S-08**	

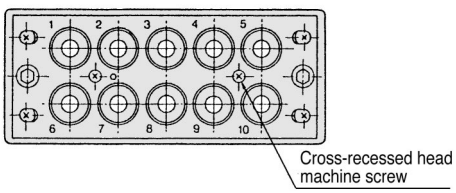
Mixed Sizes of Plug Connectors and Socket Connectors

The rectangular multi-connector permits connector exchange in any desired position, thus allowing use of different sizes of tubes.

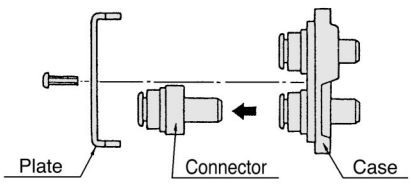
Part Numbers

Connector	Tube O.D.	Part No.	Color of release button
Plug connector	ø3.2	**KDMP-23**	Blue
	ø4	**KDMP-04**	
	ø6	**KDMP-06**	
	ø8	**KDMP-08**	
Socket co nnector (With packing)	ø3.2	**KDMS-23**	
	ø4	**KDMS-04**	
	ø6	**KDMS-06**	
	ø8	**KDMS-08**	

①Loosen the cross-recessed head machine screw using a Phillips screwdriver to remove the plate from the case.



②After exchanging connectors in desired places, fix the plate with a Phillips screwdriver to the case.

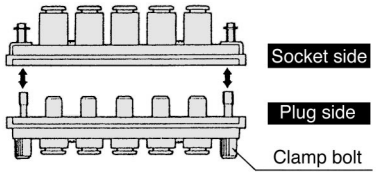


How to Use

⚠Caution

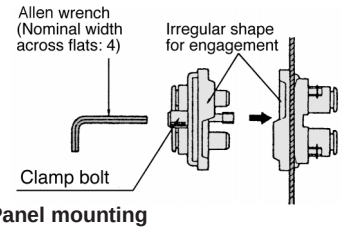
Separation

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



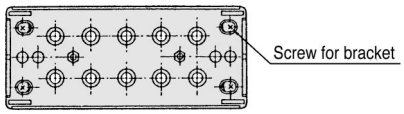
Connection

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 allen wrench(nominal width across flats: 4).

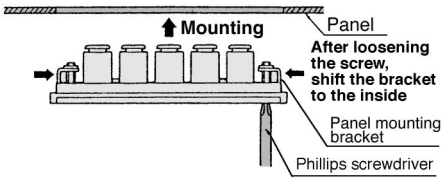


Panel mounting

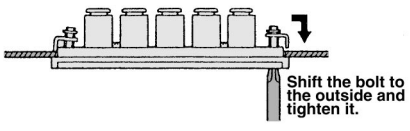
①Loosen (4) screws for bracket on the socket side using a Phillips screwdriver (JIS nominal No.2) until the bracket touches the stop ring.



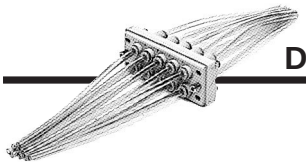
②Shift the panel mounting bracket to the inside (Move the screw for bracket in the longitudinal direction of the slot) and put the connector in the panel mounting hole. (Panel mounting hole: See Dimensions.)



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

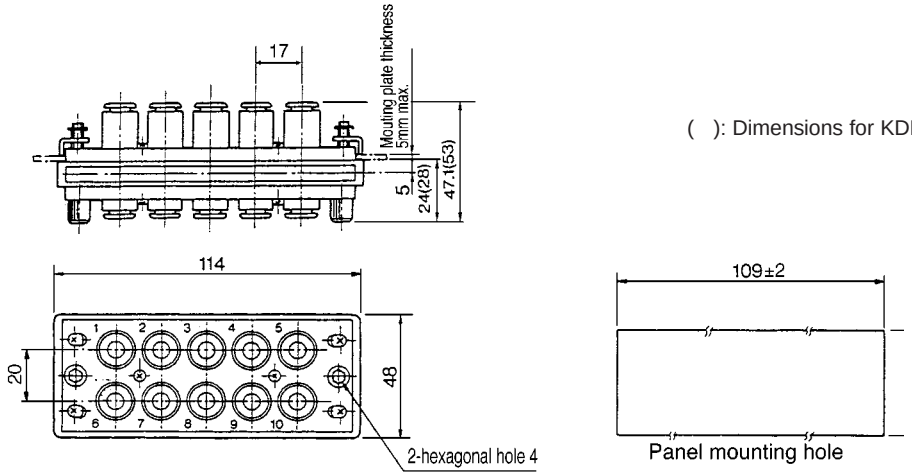


④Loosen the screw for bracket until the bracket touches the stop ring and shift the bracket to the inside to remove the connector from the panel.



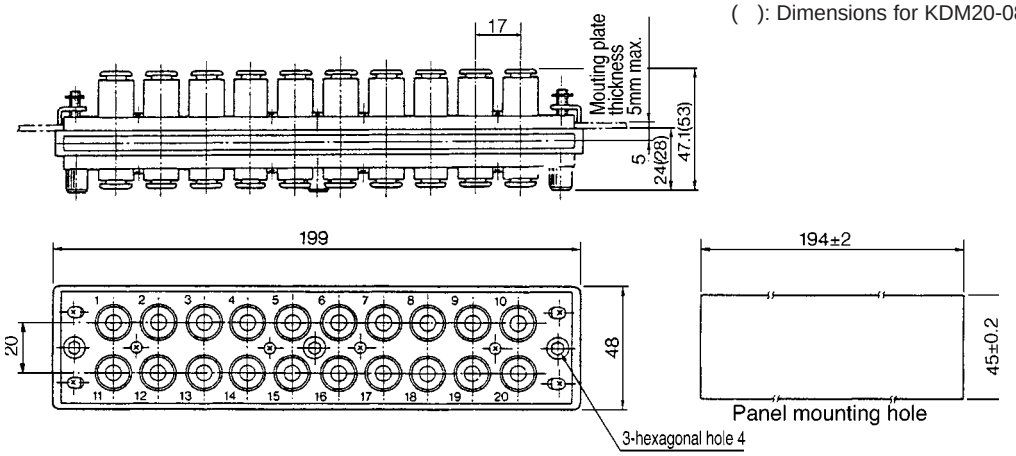
Dimensions

KDM10



( ): Dimensions for KDM10-08

KDM20



( ): Dimensions for KDM20-08

CAD KDM10 ——— SKDM102, #1 to #4
KDM20 ——— SKDM202, #1 to #4

Made to Order

Contact SMC for detailed specifications, dimensions and delivery.

■Mixed tube sizes

Mixed tube size manifolds are available to meet your individual requirements. Consult your SMC sales representative for availability.

■Other tube sizes

Tube size (O.D.)	Number of tubes	Part No.
ø10	6	IN-254-52
ø12	6	IN-254-53

Inch-size One-touch Mini

Series KJ

Applicable Tubing — ø1/8", ø5/32", ø1/4" Thread — 10-32UNF, NPT1/16, NPT1/8

Guide 1

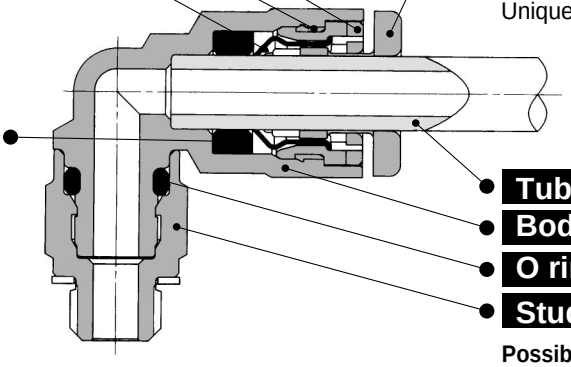
Guide 2

Chuck

Accepts nylon and polyurethane tubes.
Has large retaining force.

Packing

Can be used for a wide range of pressures from a low vacuum up to a pressure of 1.0MPa.
The use of a special profile ensures sealing and reduces resistance when the tube is inserted.



Release button (Orange)

Low disconnecting force.
When the fitting is removed, the chuck and collet are released, thus preventing them from biting into the tube excessively.
Unique shape for easy tube release.

Tube

Body (White)

O ring

Stud

Possible to tube in narrower space.
- The body and threaded portion can turn independently.
- Stud is electroless nickel plated.

PAT.PEND

Optimum piping in less space with 20% reduction of the outside diameter

Thread sealant as standard

Possible to use in application where copper-free material is required.

Possible to use in vacuum: –100kPa

Applicable Tubing

Tube material	Nylon, Soft nylon, Polyurethane
Tube O.D.	ø1/8, ø5/32, ø1/4

Specifications

Operating fluid		Air, Water (1)
Max. operating pressure		1.0MPa
Max. operating vacuum pressure		–100kPa
Proof pressure		3.0MPa
Ambient and fluid temperature		–5 to 60°C (Water: 0 to 40°C) (No freezing)
Thread	Thread portion	ANSI/ASMEB1.20.1-1983 (NPT thread), JIS B0212 2A, Class 2B (UNF thread)
	Nut	JIS B0212 2A, Class 2B (UNF thread)
Sealant (Thread portion)		With sealant (Standard)
Copper-free specification		All brass parts electroless nickel plated

Note1) Applicable for general industry water. Consult SMC if using for other kinds of fluid.
Surge pressure must be under the max. operating pressure.

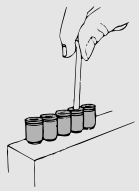
Component Materials

Body	SUS303, C3604BD, PBT
Stud	C3604BD (Thread portion)
Chuck, Guide 2	SUS304
Release button, Guide 1	POM
Packing, O ring	NBR
Gasket	SUS304, NBR

Model

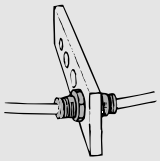
Hex. socket head male connector
KJS P.2.2-3

Internal hex. allows thread connection by using a hex. key wrench, for confined spaces.



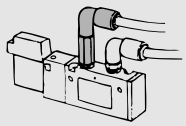
Bulkhead union
KJE P.2.2-8

Used to connect two tubes through a panel.



Extended male elbow
KJW P.2.2-5

When the elbow extends over a standard elbow for ease of connection/ disconnection of tubing.



Male connector
KJH P.2.3-3

Used to pipe in the same direction from female threaded portion. Most common style.

Female connector
KJF P.2.2-3

Used to pipe from male threaded portion such as pressure gauge.

Straight union
KJH P.2.2-3

Used to connect tubes in the same direction.

Different dia. straight
KJH P.2.2-4

Used to connect different size tubes.

Male elbow
KJL P.2.2-4

Used to pipe at right angles to female threaded portion. Most common style.

Union elbow
KJL P.2.2-4

Used to connect tubes at right angles.

Plug-in elbow
KJL P.2.2-4

Used to change by 90° in a tube fetching direction from One-touch fittings.

Reducer elbow
KJL P.2.2-5

Used to change by 90° in tube fetching direction from One-touch fittings and to size down.

Branch tee
KJT P.2.2-5

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

Union tee
KJT P.2.2-6

Used to connect tubes in both 90° directions.

Different dia. tee
KJT P.2.2-6

Used to connect tubes with size down in both 90° directions.

Male run tee
KJY P.2.2-6

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

Union "Y"
KJU P.2.2-7

Used connect tubes in the same direction.

Different dia. union "Y"
KJU P.2.2-7

Used to connect tubes with size down in the same direction.

Plug-in "Y"
KJU P.2.2-7

Used to branch tubing in the same direction One-touch fittings.

Different dia. plug in "Y"
KJX P.2.2-7

Used branch line of size down in the same direction with One-touch fittings.

Branch "Y"
KJU P.2.2-8

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

Plug-in reducer
KJR P.2.2-8

Used to change size of One-touch fittings.

⚠Precautions

Be sure to read before handling.
Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.0-7 and 2.0-8 for more detailed precautions of every series.

Interchangeability of Series KJ/KQ

⚠ Caution

①Do not use the plug-in KQ Series with the KJ Series, it will not hold.
②For combinations other than the plug-in KQ, they are interchangeable.

Installation and Removal of One-touch Mini Fittings

⚠ Caution

Installing Tube

①Cut the tube perpendicularly, using caution not to damage its surface. (Use tube cutter "TK-1", "TK-2" or "TK-3". Do not cut the tube with cutting pliers, nippers, scissors, etc.)
②Grasp the tube, then slowly push it until it comes to a stop.
③Then pull it back gently to make sure that it does not pull out.

Removing Tube

(Use one hand for removal.)
①Hold the release button with the thumb and forefinger.
②Grasp the tube with the remaining three fingers and palm.
③Then pull out the tube by the three fingers and palm while pushing in the release button with the thumb and the forefinger.
④To re-use the released tube, cut off the damaged portion of the tube.

Male connector: KJH

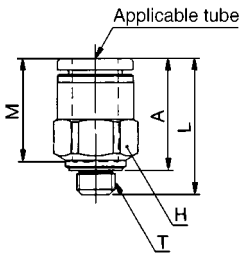
<10-32UNF>

<NPT>

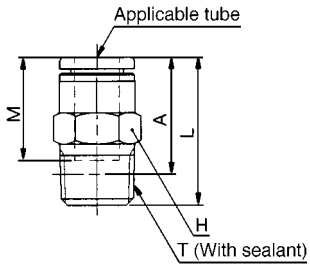
Tube O.D. (inch)	Thread (T) UNF NPT	Part No.	H (Hex.)	L	A	M	Min. hole dia.	Weight (g)
1/8	**10-32UNF**	**KJH01-32**	7	16.7	13.6	12.7	2.3	2
	1/16	**KJH01-33S**	9.5	18.8	14.8*		2.5	5
	1/8	**KJH01-34S**	11.11	13.8	9.8*			4.7
5/32	**10-32UNF**	**KJH03-32**	8	17	13.9	12.7	2.3	2.4
	1/16	**KJH03-33S**	9.5	19.5	15.5*		3	4.7
	1/8	**KJH03-34S**	11.11	14.8	10.8*			4.6
1/4	**10-32UNF**	**KJH07-32**	11.11	18.4	15.3	13.6	2.3	3.3
	1/16	**KJH07-33S**		22	18*		3.5	6.2
	1/8	**KJH07-34S**		18.4	14.4*		4.6	5.2

∗ Reference dimensions after NPT thread installation.

<10-32UNF>



<NPT>



Hexagon socket head male connector: KJS

<10-32UNF>

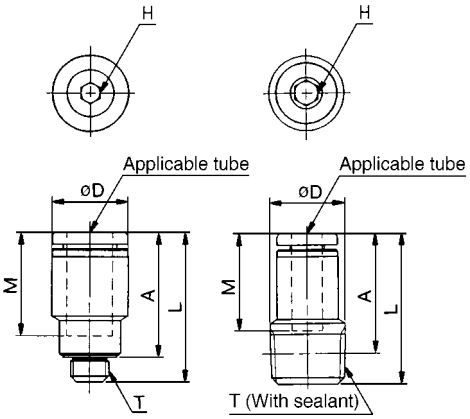
<NPT>

Tube O.D. (inch)	Thread (T) UNF NPT	Part No.	H (Hex.)	øD(1)	L	A	M	Min. hole dia.	Weight (g)
1/8	**10-32UNF**	**KJS01-32**	2	7	19.7	16.6	12.7	2	2.8
5/32	**10-32UNF**	**KJS03-32**	2.5	8	18.7	15.6	12.7	2.5	2.7
	1/16	**KJS03-33S**	2.78		19.6	15.6*		2.8	4
	1/8	**KJS03-34S**		10.3					5.4
1/4	**10-32UNF**	**KJS07-32**	2.5	10.3	19.6	16.5	13.6	2.5	3.3
	1/16	**KJS07-33S**	3.57		21.1	17.1*		3.6	5.8
	1/8	**KJS07-34S**	4.76		20.1	16.1*		4.8	5.2

∗ Reference dimensions after NPT thread installation.

Note1) øD: max. diameter

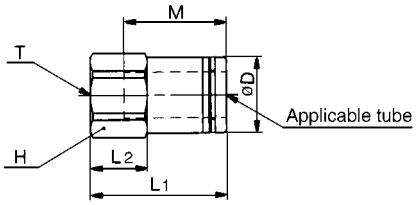
<10-32UNF> <NPT>



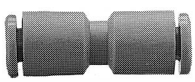
Female connector: KJF

Tube O.D. (inch)	Thread (T) UNF	Part No.	H (Hex.)	øD(1)	L1	L2	M	Min. hole dia.	Weight (g)
1/8	**10-32UNF**	**KJF01-32**	7	6.9	18.8	7.9	12.7	2.5	2.8
5/32	**10-32UNF**	**KJF03-32**	8	7.9	18.7	7.8	12.7	3	3.8
1/4	**10-32UNF**	**KJF07-32**	11.11	10.3	18	7.5	13.6	4	5.3

Note1) øD: max. diameter

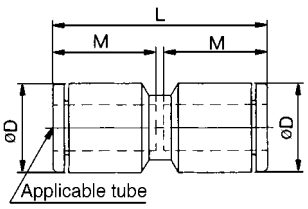


Straight union: KJH

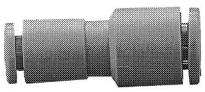


Tube O.D. (inch)	Part No.	øD(1)	L	M	Min. hole dia.	Weight (g)
1/8	**KJH01-00**	8.4	26.3	12.7	2.5	1.4
5/32	**KJH03-00**	9.3	26.3	12.7	3	1.7
1/4	**KJH07-00**	12	28.1	13.6	4.6	2.6

Note1) øD: max. diameter

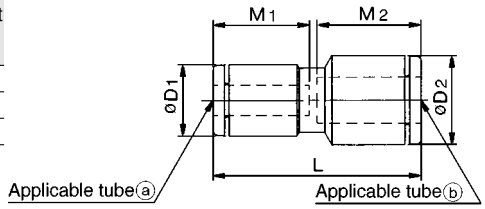


Different diameter straight: KJH



Tube O.D. (inch) ⓐ	Tube O.D. (inch) ⓑ	Part No.	øD1 (1)	øD2 (1)	L	M1	M2	Min. hole dia.	Weight (g)
1/8	5/32	**KJH01-03**	8.4	9.3	26.3	12.7	12.7	2.5	1.6
	1/4	**KJH01-07**		12	27.2		13.6		2.1
5/32	1/4	**KJH03-07**	9.3	12	27.2	12.7	13.6	3	2.3

Note1) øD1, øD2: max. diameter



Male elbow: KJL

<10-32UNF>

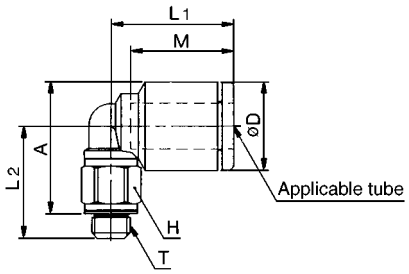
<NPT>

Tube O.D. (inch)	Thread (T) UNF NPT	Part No.	H (Hex.)	øD (1)	L1	L2	A	M	Min. hole dia.	Weight (g)
1/8	**10-32UNF**	**KJL01-32**	7	8.4	15.3	13.2	14.3	12.7	2.3	2.5
	1/16	**KJL01-33S**	9.5			16.4	16.6*		2.5	5.9
	1/8	**KJL01-34S**	11.11			15.4	15.6*			6.7
5/32	**10-32UNF**	**KJL03-32**	7	9.3	15.6	13.7	15.3	12.7	2.3	2.7
	1/16	**KJL03-33S**	9.5			16.9	17.6*		2.5	4.5
	1/8	**KJL03-34S**	11.11			15.9	16.6*			6.8
1/4	**10-32UNF**	**KJL07-32**	7	12	16.1	15.1	18	13.6	2.3	3.2
	1/16	**KJL07-33S**	9.5			18.3	20.3*		2.5	5.3
	1/8	**KJL07-34S**	11.11		17.8	17.3	19.3*		4.6	6.4

∗ Reference dimensions after NPT thread installation.

Note1) øD: max. diameter

<10-32UNF>



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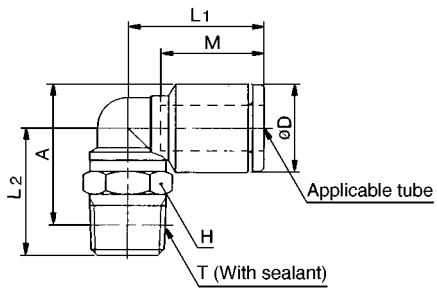
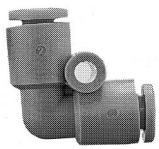
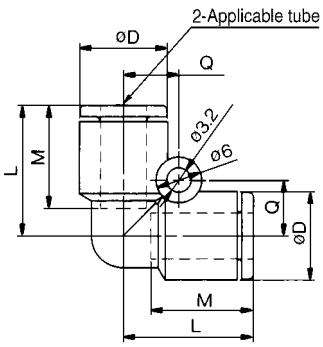


Union elbow: KJL



Tube O.D. (inch)	Part No.	øD (1)	L	Q	M	Min. hole dia.	Weight (g)
1/8	**KJL01-00**	8.4	15	5.8	12.7	2.5	1.6
5/32	**KJL03-00**	9.3	15.8	6.3	12.7	3	2
1/4	**KJL07-00**	12	17.4	7.6	13.6	4.6	3.3

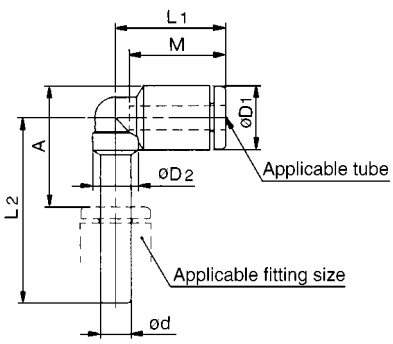
Note1) øD: max. diameter



Plug-in elbow: KJL

Tube O.D. (inch)	Fitting size ød (inch)	Part No.	øD1 (1)	øD2	L1	L2	A	M	Min. hole dia.	Weight (g)
1/8	1/8	**KJL01-99**	8.4	6	14.5	23.8	15.3	12.7	2.2	1
5/32	5/32	**KJL03-99**	9.3	6	15.6	24.7	16.7	12.7	2.5	1.2
1/4	1/4	**KJL07-99**	12	7.6	16.7	27	19.4	13.6	4.6	2.1

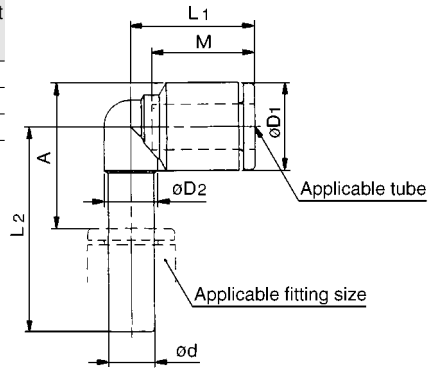
Note1) øD1: max. diameter



Reducer elbow: KJL

Tube O.D. (inch)	Fitting size ød (inch)	Part No.	øD_1 (1)	øD_2	L_1	L_2	A	M	Min. hole dia.	Weight (g)
1/8	5/32	**KJL01-03**	8.4	6	14.5	24.3	15.8	12.7	2.2	1.1
	1/4	**KJL01-07**		6.35	14.7	25.8	16.4		2.2	1.3
5/32	1/4	**KJL03-07**	9.3	6.35	14.9	26.2	17.3	12.7	2.5	1.5

Note1) øD_1: max. diameter



Extended male elbow: KJW

<10-32UNF>

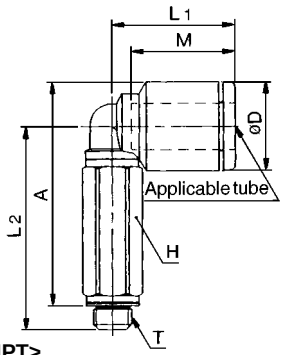
Tube O.D. (inch)	Thread (T) UNF NPT	Part No.	H (Hex.)	øD (1)	L_1	L_2	A	M	Min. hole dia.	Weight (g)
1/8	**10-32UNF**	**KJW01-32**	7	8.4	15.3	26.2	27.3	12.7	2.3	6.2
	1/16	**KJW01-33S**	9.5			29.4	29.6*		2.5	11.5
	1/8	**KJW01-34S**	11.11			25.7	25.9*			13.4
5/32	**10-32UNF**	**KJW03-32**	7	9.3	15.6	26.7	28.3	12.7	2.3	6.4
	1/16	**KJW03-33S**	9.5			29.9	30.6*		2.5	11.7
	1/8	**KJW03-34S**	11.11			26.2	26.9*			13.6
1/4	**10-32UNF**	**KJW07-32**	7	12	16.1	28.1	31	13.6	2.3	6.9
	1/16	**KJW07-33S**	9.5			31.3	33.3*		2.5	10.7
	1/8	**KJW07-34S**	11.11		17.8	30.3	32.3*		4.6	13.2

<NPT>

∗ Reference dimensions after NPT thread installation.

Note1) øD: max. diameter

<10-32UNF>



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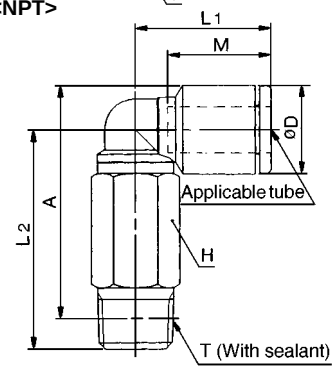
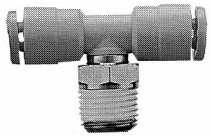


Male branch tee: KJT

<10-32UNF>

Tube O.D. (inch)	Thread (T) UNF NPT	Part No.	H (Hex.)	øD (1)	L_1	L_2	A	M	Min. hole dia.	Weight (g)
1/8	**10-32UNF**	**KJT01-32**	7	8.4	15.3	13.2	14.3	12.7	2.3	3.2
	1/16	**KJT01-33S**	9.5			16.4	16.6*		2.5	6.6
	1/8	**KJT01-34S**	11.11			15.4	15.6*			7.4
5/32	**10-32UNF**	**KJT03-32**	7	9.3	15.6	13.7	15.3	12.7	2.3	3.5
	1/16	**KJT03-33S**	9.5			16.9	17.6*		2.5	6.9
	1/8	**KJT03-34S**	11.11			15.9	16.6*			7.7
1/4	**10-32UNF**	**KJT07-32**	7	12	16.1	15.1	18	13.6	2.3	4.4
	1/16	**KJT07-33S**	9.5			18.3	20.3*		2.5	6.8
	1/8	**KJT07-34S**	11.11		17.8	17.3	19.3*		4.6	7.6

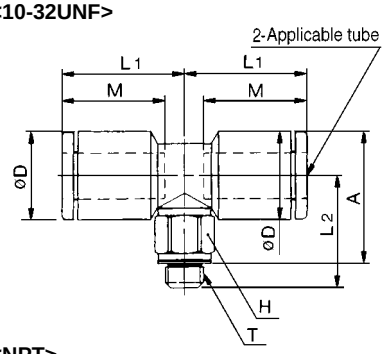
<NPT>



∗ Reference dimensions after NPT thread installation.

Note1) øD: max. diameter

<10-32UNF>



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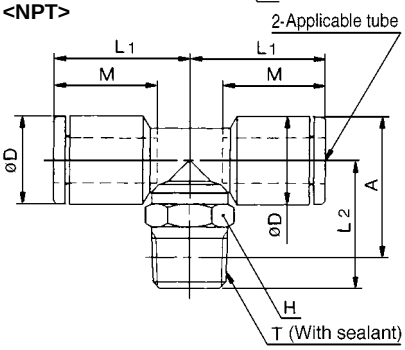
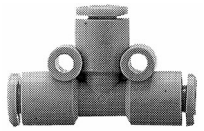
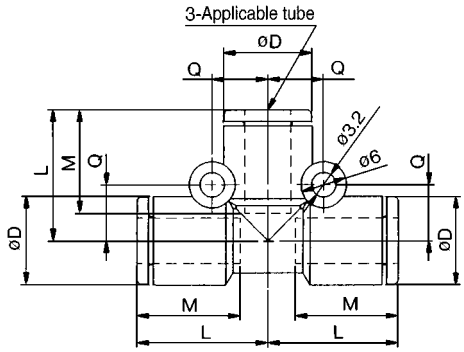


Union tee: KJT

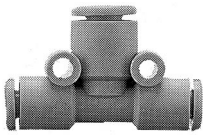


Tube O.D. (inch)	Part No.	øD (1)	L	Q	M	Min. hole dia.	Weight (g)
1/8	**KJT01-00**	8.4	15	5.8	12.7	2.5	2.5
5/32	**KJT03-00**	9.3	15.8	6.3	12.7	3	3
1/4	**KJT07-00**	12	17.4	7.6	13.6	4.6	4.8

Note1) øD: max. diameter

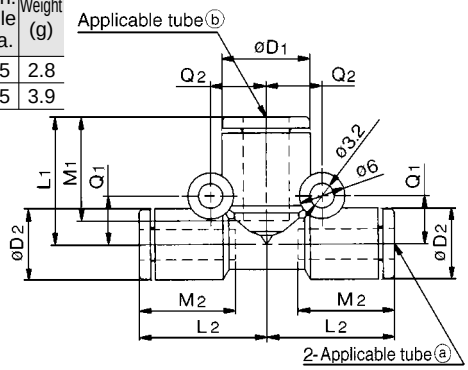


Different dia. tee: KJT



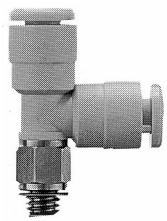
Tube O.D. (inch) ⓐ	Tube O.D. (inch) ⓑ	Part No.	øD1 (1)	øD2 (1)	L1	L2	Q1	Q2	M1	M2	Min. hole dia.	Weight (g)
1/8	5/32	**KJT01-03**	9.3	8.4	15.3	15.8	5.8	6.3	12.7	12.7	2.5	2.8
5/32	1/4	**KJT03-07**	12	9.3	16.4	16.8	6.3	7.6	13.6	12.7	2.5	3.9

Note1) øD1, øD2: max. diameter



Male run tee: KJY

<10-32UNF>

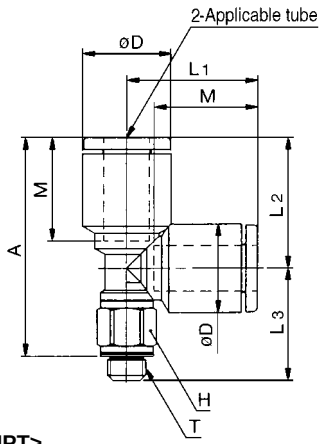


Tube O.D. (inch)	Thread (T) UNF NPT	Part No.	H (Hex.)	øD (1)	L1	L2	L3	A	M	Min. hole dia.	Weight (g)
1/8	**10-32UNF**	**KJY01-32**	7	8.4	15.4	14.8	13.2	24.9	12.7	2.3	3.2
	1/16	**KJY01-33S**	9.5				16.4	27.2*		2.5	5.1
	1/8	**KJY01-34S**	11.11				15.4	26.2*			7.4
5/32	**10-32UNF**	**KJY03-32**	7	9.3	15.6	14.8	13.7	25.4	12.7	2.3	3.5
	1/16	**KJY03-33S**	9.5				16.9	27.7*		2.5	5.4
	1/8	**KJY03-34S**	11.11				15.9	26.7*			7.7
1/4	**10-32UNF**	**KJY07-32**	7	12	17.6	17.6	15.1	29.6	13.6	2.3	4.5
	1/16	**KJY07-33S**	9.5				18.3	31.9*		2.5	6.7
	1/8	**KJY07-34S**	11.11		17.9	17	17.3	30.3*		4.6	7.5

* Reference dimensions after NPT thread installation.

Note1) øD: max. diameter

<10-32UNF>



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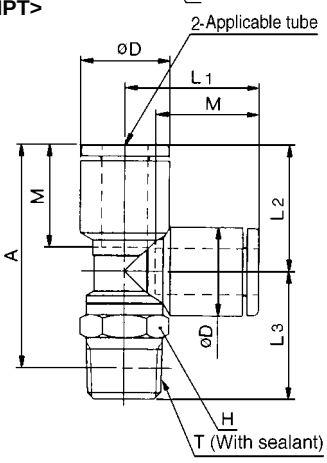
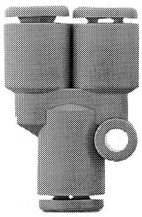
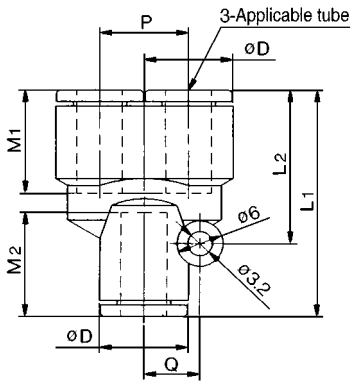


Union "Y": KJU

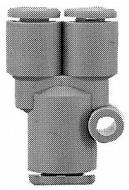


Tube O.D. (inch)	Part No.	øD (1)	L1	L2	P	Q	M1	M2	Min. hole dia.	Weight (g)
1/8	**KJU01-00**	8.4	28.5	19	8.4	5.8	12.7	12.9	2.5	2.6
5/32	**KJU03-00**	9.3	27.9	18.3	9.3	6.3	12.7	12.9	3	3
1/4	**KJU07-00**	12	32.3	22.7	12	7.6	13.6	13.8	4.6	5

Note1) øD: max. diameter

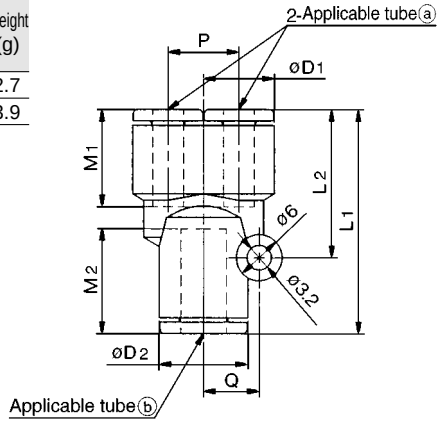


Different diameter union "Y": KJU

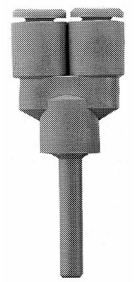


Tube O.D. (inch) ⓐ	Tube O.D. (inch) ⓑ	Part No.	øD1 (1)	øD2 (1)	L1	L2	P	Q	M1	M2	Min. hole dia.	Weight (g)
1/8	5/32	**KJU01-03**	8.4	9.3	27.5	18.3	8.4	6.3	12.7	12.9	2.5	2.7
5/32	1/4	**KJU03-07**	9.3	12	30.4	20.6	9.3	7.6	12.7	13.8	3	3.9

Note1) øD1, øD2: max. diameter

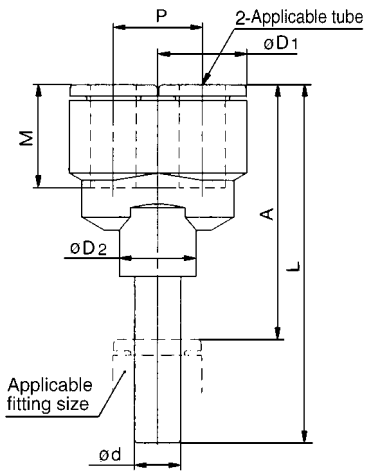


Plug-in "Y": KJU

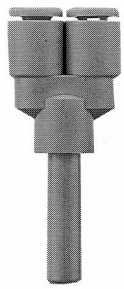


Tube O.D. (inch)	Fitting size ød (inch)	Part No.	øD1 (1)	øD2	L	P	A	M	Min. hole dia.	Weight (g)
1/8	1/8	**KJU01-99**	8.4	10	43.5	8.4	34.1	12.7	2.5	2.7
5/32	5/32	**KJU03-99**	9.3	10	44.7	9.3	35.3	12.7	3	3.2
1/4	1/4	**KJU07-99**	12	10	49.9	12	39.6	13.6	4.6	4.7

Note1) øD1: max. diameter

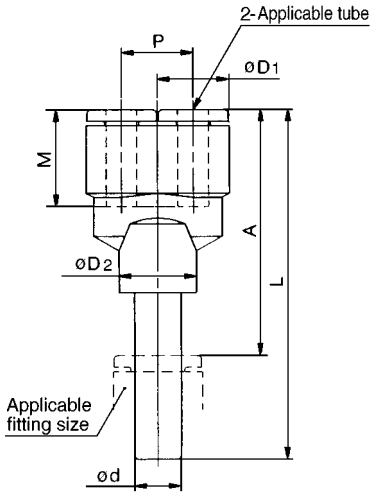


Different diameter Plug-in "Y": KJX



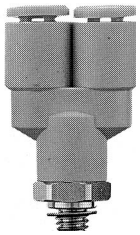
Tube O.D. (inch)	Fitting size ød (inch)	Part No.	øD1 (1)	øD2	L	P	A	M	Min. hole dia.	Weight (g)
1/8	5/32	**KJX01-03**	8.4	10	44	8.4	34.6	12.7	2.5	2.8
5/32	1/4	**KJX03-07**	9.3	10	45.7	9.3	35.4	12.7	3	3.6

Note1) øD1: max. diameter



Branch "Y": KJU

<10-32UNF>

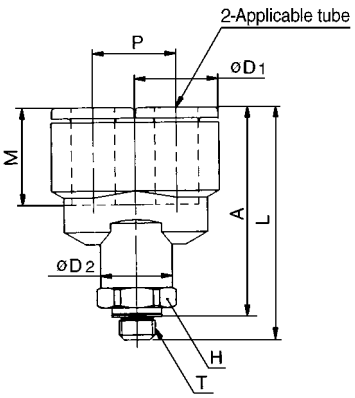


Tube O.D. (inch)	Thread (T) UNF NPT	Part No.	H (Hex.)	øD1 (1)	øD2 (1)	L	P	A	M	Min. hole dia.	Weight (g)
1/8	**10-32UNF**	**KJU01-32**	11.11	8.4	10	30.6	8.4	27.5	12.7	1.8	5.9
	1/16	**KJU01-33S**				34.1		30.1*		2.5	8.1
	1/8	**KJU01-34S**									8.3
5/32	**10-32UNF**	**KJU03-32**	11.11	9.3	10	31.3	9.3	28.2	12.7	1.8	6.4
	1/16	**KJU03-33S**				34.8		30.8*		3.5	8.8
	1/8	**KJU03-34S**									8.8
1/4	**10-32UNF**	**KJU07-32**	11.11	12	10	35.5	12	32.4	13.6	2.3	7.4
	1/16	**KJU07-33S**				39		35*		3.5	10
	1/8	**KJU07-34S**								4.6	10

∗ Reference dimensions after NPT thread installation.

Note1) øD1: max. diameter

<UNF10-32>



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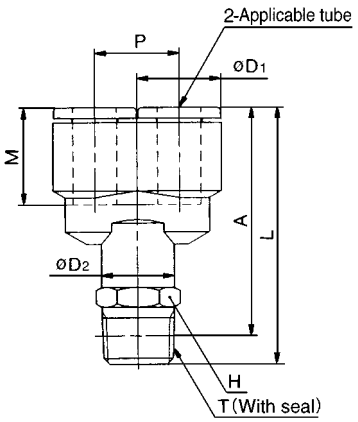
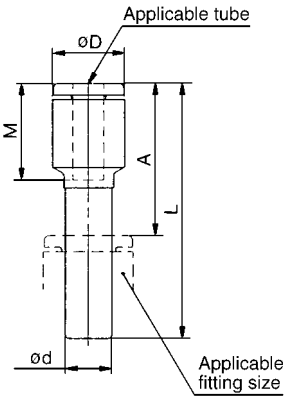


Plug-in reducer: KJR

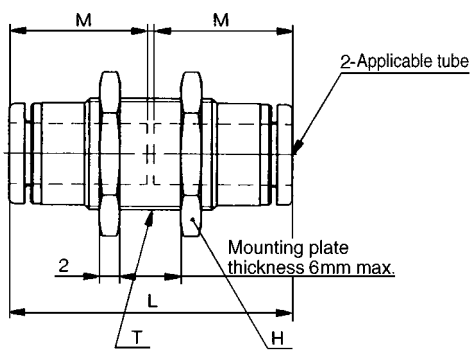
Tube O.D. (inch)	Fitting size ød (inch)	Part No.	øD (1)	L	A	M	Min. hole dia.	Weight (g)
1/8	5/32	**KJR01-03**	8.4	32	19.3	12.7	2.5	0.9
	1/4	**KJR01-07**		33	19.4		2.5	1.2
5/32		**KJR03-07**	9.3	33.5	19.9	12.7	3	1.4

Note1) øD: max. diameter



Bulkhead union: KJE

Tube O.D. (inch)	Part No.	Thread (T) UNF	H (Hex.)	L	Mounting hole	M	Min. hole dia.	Weight (g)
1/8	**KJE01-00**	3/8 -24	12.7	26	10.5	12.7	2.5	8.1
5/32	**KJE03-00**	3/8 -24	12.7	26	10.5	12.7	3	
1/4	**KJE07-00**	1/2 -20	15.88	27.8	14	13.6	4.6	15.7



Inch-size One-touch Fittings

Series KQ2

Applicable Tubing — Inch Size Thread — UNF, NPT

KQ2: White body
KQ : Black body

Guide

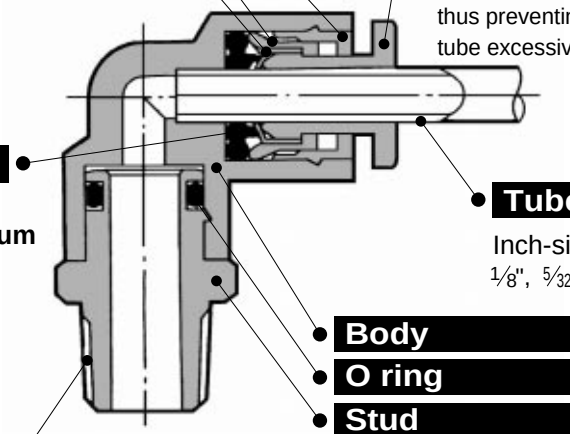
Collet

Chuck

Accepts nylon, soft nylon and polyurethane tubes. Has large retaining force.

Release button (Red)

KQ2: Orange
KQ : Red
Low disconnecting force.
When the fitting is removed from the tubing, the chuck and collet are released, thus preventing them from biting into the tube excessively.



Packing

Can be used for a wide range of pressures from a low vacuum up to a pressure of 1.0MPa.
The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Tube

Inch-sizes
1/8", 5/32", 3/16", 1/4", 5/16", 3/8", 1/2"

Body

O ring

Stud

Thread
UNF, NPT

Effective when piping in a confined spaces.
The body and threaded portion can turn independently.

PAT.

Color

Series	Body	Release button
KQ2	White	Orange
KQ	Black	Red

Applicable Tubing

Tube material	Nylon, Soft nylon, Polyurethane
Tube O.D. (inch)	ø1/8, ø5/32, ø3/16, ø1/4, ø5/16, ø3/8, ø1/2

Specifications

Operating fluid		Air, Water (1)
Max. operating pressure		1.0MPa
Proof pressure		3.0MPa
Ambient and fluid temperature		–5 to 60°C (Water: 0 to 40°C)
Thread	Thread portion	ANSI/ASMEB1.20.1-1983 (NTP thread) JIS B0212 2A, Class 2B (UNF thread)
	Nut	JIS B 0212 2A, Class 2B (UNF thread)
Sealant (Thread portion)		With sealant

Note1) Applicable for general industry water. Consult SMC if using for other kind of fluids. Surge pressure must be under the max. operating pressure.

Component Materials

Body	C3604BD, PBT, PP
Stud	C3604BD (Thread portion)
Chuck	Stainless Steel (SUS304)
Guide	Stainless Steel (SUS304), C3604BD, POM
Collet	POM
Release button	POM
Packing, O ring	NBR
Gasket	PVC

Model

Male connector
KQ2H P.2.2-11

Used to pipe in the same direction from female threaded portion.
Most common style.

Straight union
KQ2H P.2.2-11

Used to connect tubes in the same direction.

Male elbow
KQ2L P.2.2-11

Used to pipe at right angle to female threaded portion.
Most common style.

Union elbow
KQ2L P.2.2-12

Used to connect tubes at right angles.

Plug-in elbow
KQ2L P.2.2-12

Used to change by 90° in a tube fetching direction from One-touch fittings.

Reducer elbow
KQ2L P.2.2-12

Used to change by 90° in tube fetching direction from One-touch fittings and to size down.

Extended male elbow
KQ2W P.2.2-12

For when the elbow extends over a standard elbow for easier of connection/disconnection of tubing.

Male branch tee
KQ2T P.2.2-13

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

Union tee
KQ2T P.2.2-13

Used to connect tubes in both 90° directions.

Male run tee
KQ2Y P.2.2-13

Used for a branch line in the same direction from female thread and in 90° directions.

Plug-in reducer
KQ2R P.2.2-14

Used to change size of One-touch fittings.

Union "Y"
KQ2U P.2.2-14

Used to connect tubes in the same direction.

Plug-in "Y"
KQ2U P.2.2-14

Used to branch tubing in the same direction from One-touch fittings.

Branch "Y"
KQ2U P.2.2-14

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

Bulkhead union
KQ2E P.2.2-15

Used for junction connection of two tubes for installation of a panel.

Bulkhead connector
KQ2E P.2.2-15

Used for transit connection of a tube and a male screw for installation of a panel.

Plug
KQ2P, KQP P.2.2-15

Used to shut unused One-touch fittings.
KQ2P (Orange)
KQP (Orange)

How to Order

KQ | 2 | H | 05 — 34 | S

One-touch fitting

Color

Symbol	Body	Release button
2	White	Orange
—	Black	Red

Model

H	Male connector*
	Straight union
L	Male elbow*
	Union elbow
	Plug-in elbow
	Reducer elbow
W	Extended male elbow*
T	Male branch tee*
	Union tee
Y	Male run tee*
U	Union "Y"
	Plug-in "Y"*
	Branch "Y"
R	Plug-in reducer
E	Bulkhead union
	Bulkhead connector

Applicable tube diameter

01	1/8
03	5/32
05	3/16
07	1/4
09	5/16
11	3/8
13	1/2

Port size

32	10-32UNF
33	NPT 1/16
34	NPT 1/8
35	NPT 1/4
36	NPT 3/8
37	NPT 1/2
00	Same dia. tube
99	Same dia. rod
01	1/8 Tube
03	5/32 Tube
05	3/16 Tube
07	1/4 Tube
09	5/16 Tube
11	3/8 Tube
13	1/2 Tube

Sealant

—	Without sealant
S	Sealant

Accessory

Symbol	Description
KQ2P, KQP	Plug (Orange)

With ∗mark: With sealant style is available.

∗Additional models are available. See p.2.2-15.

Male connector: KQ2H

01-32 / KQ2H03-32 / 07-32

<KQ2H05-32>

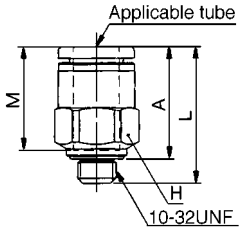
<NPT>

Tube O.D. (inch)	Thread UNF NPT	Part No.	H (Hex.)	øD (1)	L	A	M	Min. hole dia.	Weight (g)
1/8	10-32UNF	KQ2H01-32	7	—	16.7	13.7	12.7	2.5	2
	1/16	KQ2H01-33S	11.11	—	22	18*	15.5		7
	1/8	KQ2H01-34S		—					9
	1/4	KQ2H01-35S	14.29	—	19.5	13.5*			16
5/32	10-32UNF	KQ2H03-32	8	—	17	14	12.7	2.5	2.4
	1/16	KQ2H03-33S	11.11	—	22	18*	16	3	7
	1/8	KQ2H03-34S		—					9
	1/4	KQ2H03-35S	14.29	—	19.5	13.5*			16
3/16	10-32UNF	KQ2H05-32	8	11	24	20.4	16.5	2.5	6
	1/8	KQ2H05-34S	12.7	—	22	18*		3.5	11
	1/4	KQ2H05-35S	14.29	—	21	15*			12
1/4	10-32UNF	KQ2H07-32	11.11	—	18.4	15.4	13.6	2.5	3.3
	1/8	KQ2H07-34S	14.29	—	22.5	18.5*	17	4.6	10
	1/4	KQ2H07-35S		—	23	17*			15
	3/8	KQ2H07-36S	17.46	—	22	16.5*			27
5/16	1/8	KQ2H09-34S	14.29	—	28.5	24.5*	18.5	6	15
	1/4	KQ2H09-35S		—	26.5	20.5*			16
	3/8	KQ2H09-36S	17.46	—	22	15.5*			24
3/8	1/8	KQ2H11-34S	17.46	—	30.5	26.5*	21	6	29
	1/4	KQ2H11-35S		—	33.5	27.5*		7	31
	3/8	KQ2H11-36S		—	29	22.5*			29
	1/2	KQ2H11-37S	22.23	—	26.5	18.5*			46
1/2	1/4	KQ2H13-35S	22.23	—	34.5	28.5*	22	9	44
	3/8	KQ2H13-36S		—	33	26.5*		9.6	44
	1/2	KQ2H13-37S		—	30	22*			44

* Reference dimensions after NPT thread installation.

Note1) øD: max. diameter

01-32 / KQ2H03-32 / 07-32



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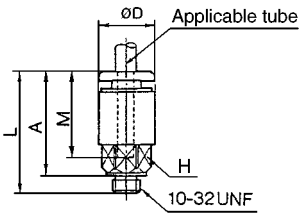

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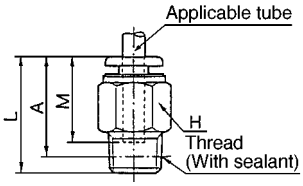
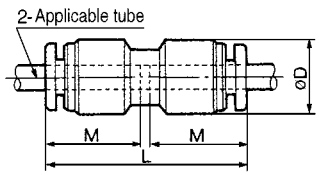


Straight union: KQ2H

Tube O.D. (inch)	Part No.	øD (1)	L	M	Min. hole dia.	Weight (g)
1/8	KQ2H01-00	9.6	31.5	15.5	2.5	3
5/32	KQ2H03-00	10.4	32.5	16	3	3
3/16	KQ2H05-00	11.4	34	16.5	3.5	4
1/4	KQ2H07-00	13.2	34.5	17	4.6	4
5/16	KQ2H09-00	15.2	38.5	18.5	6	6
3/8	KQ2H11-00	17.9	42.5	21	7	11
1/2	KQ2H13-00	21.7	44.5	22	9.6	16

Note1) øD: max. diameter



Male elbow: KQ2L

01-32 / KQ2L03-32 / 07-32

<KQ2L05-32>

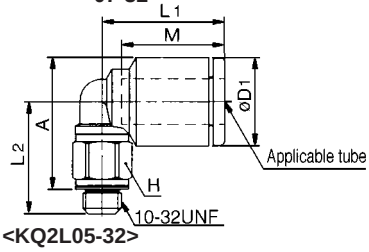
<NPT>

Tube O.D. (inch)	Thread UNF NPT	Part No.	H (Hex.)	øD1 (1)	øD2	L1	L2	A	M	Min. hole dia.	Weight (g)
1/8	10-32UNF	KQ2L01-32	7	8.4	—	15.3	13.2	14	12.7	2.5	2.5
	1/16	KQ2L01-33S	11.11	9.6	10	17.5	21.5	22.5*	15.5		8
	1/8	KQ2L01-34S									
	1/4	KQ2L01-35S	14.29				25.5	24.5*			18
5/32	10-32UNF	KQ2L03-32	7	9.3	—	15.6	13.7	15.4	12.7	2.5	2.7
	1/16	KQ2L03-33S	11.11	10.4	10	18	22	23*	16	3	8
	1/8	KQ2L03-34S									9
	1/4	KQ2L03-35S	14.29				26	25*			18
3/16	10-32UNF	KQ2L05-32	11.11	11.4	10	19.5	20	22	16.5	2.5	5
	1/8	KQ2L05-34S					22.5	24*		3.5	10
	1/4	KQ2L05-35S	14.29				26.5	26*			19
1/4	10-32UNF	KQ2L07-32	7	12	—	16.1	15.1	18.1	13.6	2.5	3.2
	1/8	KQ2L07-34S	11.11	13.2	10	20.5	23.5	26*	17	4.6	10
	1/4	KQ2L07-35S	14.29				27.5	28*			20
	3/8	KQ2L07-36S	17.46				29.5	30*			32
5/16	1/8	KQ2L09-34S	12.7	15.2	12	23.5	24.5	28*	18.5	6	12
	1/4	KQ2L09-35S	14.29				28.5	30*			20
	3/8	KQ2L09-36S	17.46				30.5	31.5*			28
3/8	1/8	KQ2L11-34S	17.46	17.9	17	25.5	26.5	31.5*	21	6	16
	1/4	KQ2L11-35S					29.5	32.5*		7	23
	3/8	KQ2L11-36S					31.5	34*			33
	1/2	KQ2L11-37S	22.23				35.5	36.5*			59
1/2	1/4	KQ2L13-35S	17.46	21.7	17	28	31.5	36.5*	22	9	28
	3/8	KQ2L13-36S					33.5	38.5*		9.6	36
	1/2	KQ2L13-37S	22.23				37.5	40*			62

* Reference dimensions after NPT thread installation.

Note1) øD1: max. diameter

01-32 / KQ2L03-32 / 07-32



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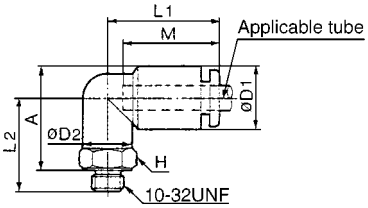

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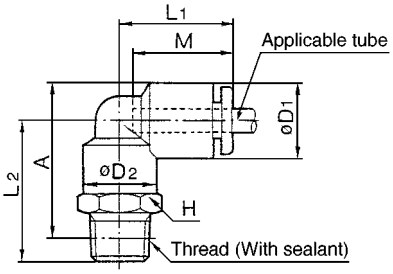
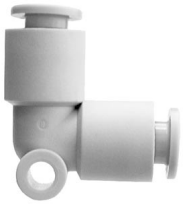
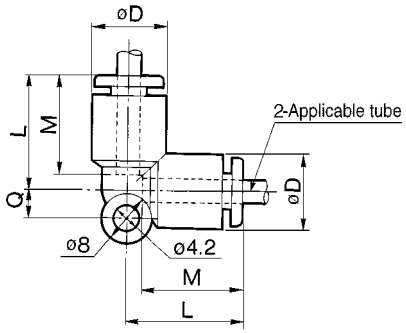


Union elbow: KQ2L



Tube O.D. (inch)	Part No.	øD (1)	L	Q	M	Min. hole dia.	Weight (g)
1/8	**KQ2L01-00**	9.6	17.5	4.3	15.5	2.5	3
5/32	**KQ2L03-00**	10.4	18	4.5	16	3	4
3/16	**KQ2L05-00**	11.4	19.5	4.8	16.5	3.5	5
1/4	**KQ2L07-00**	13.2	20.5	5.3	17	4.6	5
5/16	**KQ2L09-00**	15.2	23	6	18.5	6	7
3/8	**KQ2L11-00**	17.9	26	6.6	21	7	13
1/2	**KQ2L13-00**	21.7	29	7.8	22	9.6	18

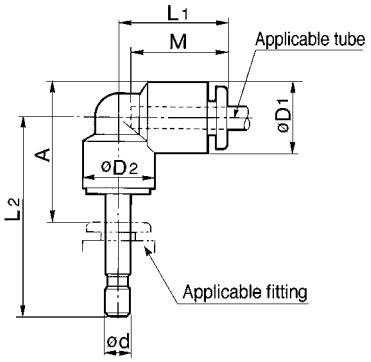
Note1) øD: max. diameter



Plug-in elbow: KQ2L

Tube O.D. (inch)	Fitting size ød (inch)	Part No.	øD1 (1)	øD2	L1	L2	A	M	Min. hole dia.	Weight (g)
1/8	1/8	**KQ2L01-99**	9.6	7	17	24.5	14	15	2.2	3
5/32	5/32	**KQ2L03-99**	10.4	8	18	25	14.5	16	2.5	3
3/16	3/16	**KQ2L05-99**	11.4	10	19.5	34	23.5	16.5	3.5	7
1/4	1/4	**KQ2L07-99**	13.2	10	20	27.5	17.5	17	4.6	8
5/16	5/16	**KQ2L09-99**	15.2	12	22.5	31.5	21	18.5	6	6
3/8	3/8	**KQ2L11-99**	17.9	13.6	25	35	23	21	7	19
1/2	1/2	**KQ2L13-99**	21.7	17	28	44.5	34	22	9.6	27

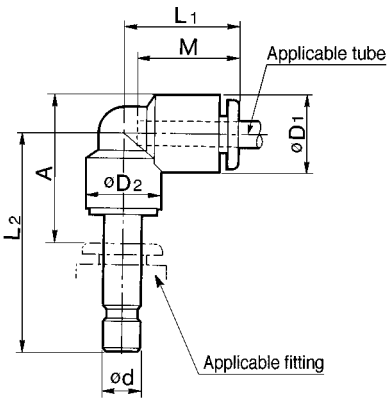
Note1) øD1: max. diameter



Reducer elbow: KQ2L

Tube O.D. (inch)	Fitting size ød (inch)	Part No.	øD1 (1)	øD2	L1	L2	A	M	Min. hole dia.	Weight (g)
1/8	5/32	**KQ2L01-03**	9.6	7	17	25	13.5	15.5	2.2	3
	3/16	**KQ2L01-05**		10	17.5	33	21.5		2.5	7
5/32	3/16	**KQ2L03-05**	10.4	10	18	33.5	22.5	16	3	6
	1/4	**KQ2L03-07**		8		26	14.5		2.5	3
3/16	1/4	**KQ2L05-07**	11.4	10	19	26.5	15.5	16.5	3.5	8
	5/16	**KQ2L05-09**			19.5	35.5	23			11
1/4	5/16	**KQ2L07-09**	13.2	10	20.5	36.5	24.5	17	4.6	12
	3/8	**KQ2L07-11**				39.5	23.5			17
5/16	3/8	**KQ2L09-11**	15.2	12	23.5	40.5	27.5	18.5	6	17
	1/2	**KQ2L09-13**				41.5				30
3/8	1/2	**KQ2L11-13**	17.9	17	25.5	43	30	21	7	25

Note1) øD1: max. diameter

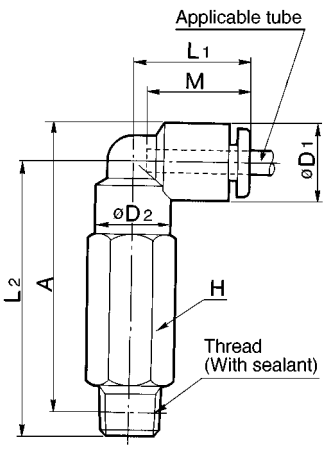


Extended male elbow: KQ2W

Tube O.D. (inch)	Thread NPT	Part No.	H (Hex.)	øD1 (1)	øD2	L1	L2	A*	M	Min. hole dia.	Weight (g)
1/8	1/8	**KQ2W01-34S**	11.11	9.6	10	17.5	37	38	15.5	2.5	19
	1/4	**KQ2W01-35S**	14.29				43	42			41
5/32	1/8	**KQ2W03-34S**	11.11	10.4	10	18	37.5	38.5	16	3	19
	1/4	**KQ2W03-35S**	14.29				43.5	42.5			41
3/16	1/8	**KQ2W05-34S**	11.11	11.4	10	19.5	38	40	16.5	3.5	41
	1/4	**KQ2W05-35S**	14.29				44	43.5			19
1/4	1/8	**KQ2W07-34S**	11.11	13.2	10	20.5	40.5	43	17	4.6	20
	1/4	**KQ2W07-35S**	14.29				46.5	47			42
	3/8	**KQ2W07-36S**	17.46				48.5	49			69
5/16	1/8	**KQ2W09-34S**	12.7	15.2	12	23.5	43.5	47	18.5	6	30
	1/4	**KQ2W09-35S**	14.29				49.5	51			47
	3/8	**KQ2W09-36S**	17.46				51.5	53			74
3/8	1/4	**KQ2W11-35S**	17.46	17.9	17	25.5	56	59	21	7	69
	3/8	**KQ2W11-36S**					58	61			76
	1/2	**KQ2W11-37S**	22.23				64.5	65.5			147
1/2	1/4	**KQ2W13-35S**	17.46	21.7	17	28	58	63	22	9	72
	3/8	**KQ2W13-36S**					60	64.5		9.6	78
	1/2	**KQ2W13-37S**	22.23				66.5	69			149

∗ Reference dimensions after NPT thread installation.

Note1) øD1: max. diameter



Male branch tee: KQ2T

<10-32UNF>

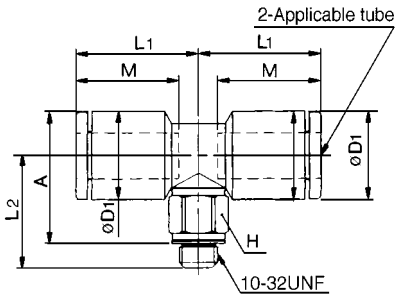
<R(PT)>

Tube O.D. (inch)	Thread UNF NPT	Part No.	H (Hex.)	øD_1 (1)	øD_2	L_1	L_2	A*	M	Min. hole dia.	Weight (g)
1/8	**10-32UNF**	**KQ2T01-32**	7	8.4	—	15.3	13.2	14.4	12.7	2.5	3.2
	1/16	**KQ2T01-33S**	11.11	9.6	10	17.5	21.5	22.5*	15.5		10
	1/8	**KQ2T01-34S**									
	1/4	**KQ2T01-35S**	14.29				25.5	24.5*			20
5/32	**10-32UNF**	**KQ2T03-32**	7	9.3	—	15.6	13.7	15.4	12.7	2.5	3.5
	1/16	**KQ2T03-33S**	11.11	10.4	10	18	22	23*	16	3	10
	1/8	**KQ2T03-34S**									11
	1/4	**KQ2T03-35S**	14.29				26	25*			20
3/16	1/8	**KQ2T05-34S**	11.11	11.4	10	19.5	22.5	24*	16.5	3.5	12
	1/4	**KQ2T05-35S**	14.29				26.5	26*			21
1/4	**10-32UNF**	**KQ2T07-32**	7	12	—	16.1	15.1	18.1	13.6	2.5	4.4
	1/8	**KQ2T07-34S**	11.11	13.2	10	20.5	23.5	26*	17	4.6	11
	1/4	**KQ2T07-35S**	14.29				27.5	28*			21
	3/8	**KQ2T07-36S**	17.46				29.5	30*			34
5/16	1/8	**KQ2T09-34S**	12.7	15.2	12	23	24.5	28*	18.5	6	15
	1/4	**KQ2T09-35S**	14.29				28.5	30*			23
	3/8	**KQ2T09-36S**	17.46				30.5	31.5*			35
3/8	1/8	**KQ2T11-34S**	17.46	17.9	17	25.5	26.5	31.5*	21	6	31
	1/4	**KQ2T11-35S**					29.5	32.5*		7	29
	3/8	**KQ2T11-36S**					31.5	34.5*			38
	1/2	**KQ2T11-37S**	22.23				35.5	36.5*			64
1/2	1/4	**KQ2T13-35S**	17.46	21.7	17	28	31.5	36.5*	22	9	34
	3/8	**KQ2T13-36S**					33.5	38.5*		9.6	43
	1/2	**KQ2T13-37S**	22.23				37.5	40*			69

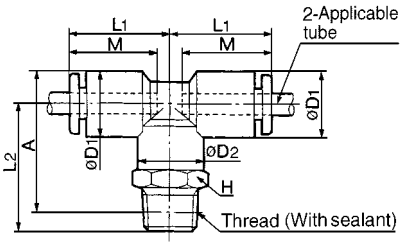
∗ Reference dimensions after NPT thread installation.

Note1) øD_1: max. diameter

<10-32UNF>



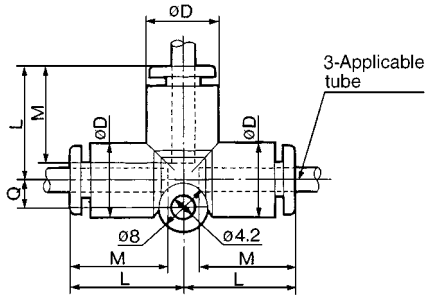
<R(PT)>



Union tee: KQ2T

Tube O.D. (inch)	Part No.	øD (1)	L	Q	M	Min. hole dia.	Weight (g)
1/8	**KQ2T01-00**	9.6	17.5	4.3	15.5	2.5	5
5/32	**KQ2T03-00**	10.4	18	4.5	16	3	4
3/16	**KQ2T05-00**	11.4	19.5	4.8	16.5	3.5	7
1/4	**KQ2T07-00**	13.2	20.5	5.3	17	4.6	8
5/16	**KQ2T09-00**	15.2	23	6	18.5	6	11
3/8	**KQ2T11-00**	17.9	26	6.6	21	7	18
1/2	**KQ2T13-00**	21.7	29	7.8	22	9.6	26

Note1) øD_1: max. diameter

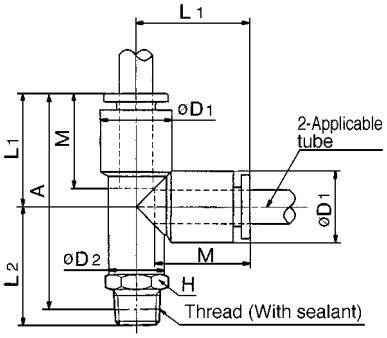


Male run tee: KQ2Y

Tube O.D. (inch)	Thread NPT	Part No.	H (Hex.)	øD_1 (1)	øD_2	L_1	L_2	A*	M	Min. hole dia.	Weight (g)
1/8	1/16	**KQ2Y01-33S**	11.11	9.6	10	17.5	21.5	35	15.5	2.5	10
	1/8	**KQ2Y01-34S**									
	1/4	**KQ2Y01-35S**	14.29				25.5	37			20
5/32	1/16	**KQ2Y03-33S**	11.11	10.4	10	18	22	36	16	3	10
	1/8	**KQ2Y03-34S**									11
	1/4	**KQ2Y03-35S**	14.29				26	38			20
3/16	1/8	**KQ2Y05-34S**	11.11	11.4	10	19.5	22.5	38	16.5	3.5	12
	1/4	**KQ2Y05-35S**	14.29				26.5	40			21
1/4	1/8	**KQ2Y07-34S**	11.11	13.2	10	20.5	23.5	44	17	4.6	11
	1/4	**KQ2Y07-35S**	14.29				27.5	42			21
	3/8	**KQ2Y07-36S**	17.46				29.5	44			34
5/16	1/8	**KQ2Y09-34S**	12.7	15.2	12	23.5	24.5	40	18.5	6	15
	1/4	**KQ2Y09-35S**	14.29				28.5	46			23
	3/8	**KQ2Y09-36S**	17.46				30.5	48			35
3/8	1/4	**KQ2Y11-35S**	17.46	17.9	17	25.5	29.5	49	21	7	29
	3/8	**KQ2Y11-36S**					31.5	51			38
	1/2	**KQ2Y11-37S**	22.23				35.5	53			64
1/2	1/4	**KQ2Y13-35S**	17.46	21.7	17	28	31.5	53.5	22	9	34
	3/8	**KQ2Y13-36S**					33.5	55.5		9.6	43
	1/2	**KQ2Y13-37S**	22.23				37.5	57			69

∗ Reference dimensions after NPT thread installation.

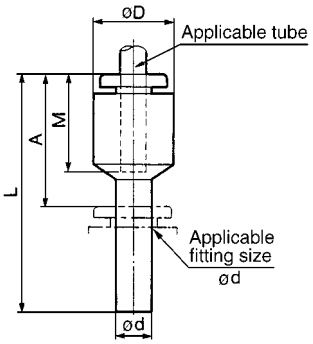
Note1) øD_1: max. diameter



Plug-in reducer: KQ2R

Tube O.D. (inch)	Fitting size ød (inch)	Part No.	øD (1)	L	A	M	Min. hole dia.	Weight (g)
1/8	5/32	**KQ2R01-03**	9.6	34.5	18.5	15.5	2.5	2
	3/16	**KQ2R01-05**	9.2	34	17.5			7
	1/4	**KQ2R01-07**			17			9
5/32	3/16	**KQ2R03-05**	10	34	17.5	16	3	8
	1/4	**KQ2R03-07**	10.4	34.5				9
3/16	1/4	**KQ2R05-07**	11.4	34.5	18.5	16.5	3.5	4
	5/16	**KQ2R05-09**	10.7	36.5	18			14
1/4	5/16	**KQ2R07-09**	13.2	37	18.5	17	4.6	17
	3/8	**KQ2R07-11**		40	19.5			19
5/16	3/8	**KQ2R09-11**	14	40	19	18.5	6	24
	1/2	**KQ2R09-13**		41				32
3/8	1/2	**KQ2R11-13**	17.9	44	22	21	7	32

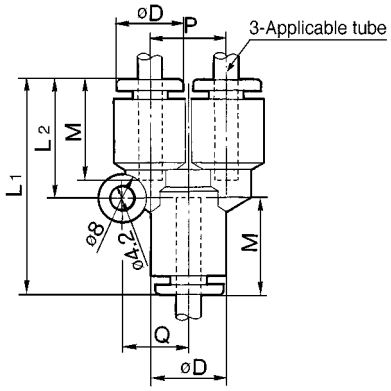
Note1) øD: max. diameter



Union "Y": KQ2U

Tube O.D. (inch)	Part No.	øD (1)	L1	L2	P	Q	M	Min. hole dia.	Weight (g)
1/8	**KQ2U01-00**	9.6	33	17.5	9.6	9	15.5	2.5	6
5/32	**KQ2U03-00**	10.4	34	18	10.4	9.7	16	3	7
3/16	**KQ2U05-00**	11.4	36.5	20.5	11.4	10.6	16.5	3.5	9
1/4	**KQ2U07-00**	13.2	38	21.5	13.2	12	17	4.6	9
5/16	**KQ2U09-00**	15.2	42.5	24.5	15.2	13.7	18.5	6	11
3/8	**KQ2U11-00**	17.9	48	27.5	17.9	15.6	21	7	16

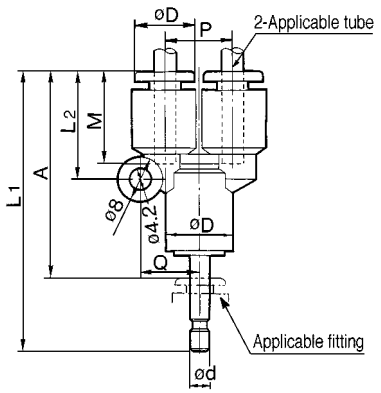
Note1) øD: max. diameter



Plug-in "Y": KQ2U

Tube O.D. (inch)	Fitting size ød (inch)	Part No.	øD (1)	L1	L2	P	Q	A	M	Min. hole dia.	Weight (g)
1/8	1/8	**KQ2U01-99**	9.6	50	17.5	9.6	9	35	15.5	2	10
5/32	5/32	**KQ2U03-99**	10.4	51.5	18	10.4	9.7	35.5	16	2.5	12
3/16	3/16	**KQ2U05-99**	11.4	56	20.5	11.4	10.6	39.5	16.5	3.5	17
1/4	1/4	**KQ2U07-99**	13.2	56.5	21.5	13.2	12	39.5	17	4.6	19
5/16	5/16	**KQ2U09-99**	15.2	64.5	24.5	15.2	13.7	46	18.5	6	22

Note1) øD: max. diameter

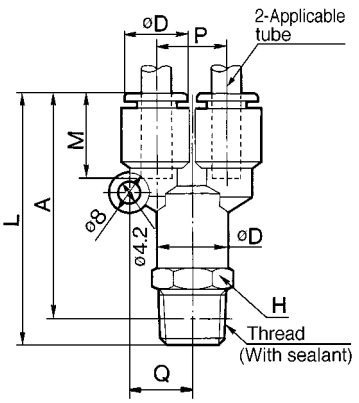


Branch "Y": KQ2U

Tube O.D. (inch)	Thread NPT	Part No.	H (Hex.)	øD (1)	L	P	Q	A*	M	Min. hole dia.	Weight (g)
1/8	1/8	**KQ2U01-34S**	12.7	9.6	40.5	9.6	9	36.5	15.5	2.5	14
	1/4	**KQ2U01-35S**	14.29		44.5			38.5			
5/32	1/8	**KQ2U03-34S**	12.7	10.4	42	10.4	9.7	38	16	3	16
	1/4	**KQ2U03-35S**	14.29		46			40			
3/16	1/8	**KQ2U05-34S**	12.7	11.4	44	11.4	10.6	40	16.5	3.5	18
	1/4	**KQ2U05-35S**	14.9		48.5			42.5			
1/4	1/8	**KQ2U07-34S**	14.29	13.2	46.5	13.2	12	42.5	17	4.6	20
	1/4	**KQ2U07-35S**			49.5			43.5			
	3/8	**KQ2U07-36S**	17.46		51.5			45			
5/16	1/8	**KQ2U09-34S**	17.46	15.2	52.5	15.2	13.7	48.5	18.5	6	21
	1/4	**KQ2U09-35S**			55.5			49.5			22
	3/8	**KQ2U09-36S**			56.5			50			35
3/8	1/4	**KQ2U11-35S**	19.05	17.9	60	17.9	15.6	54	21	7	42
	3/8	**KQ2U11-36S**			61			54.5			43
	1/2	**KQ2U11-37S**	22.23		64.5			56.5			56
1/2	1/4	**KQ2U13-35S**	22.23	21.7	64.5	21.7	18.8	58.5	22	9.6	31
	3/8	**KQ2U13-36S**			65.5			59			41
	1/2	**KQ2U13-37S**			68.5			60.5			68

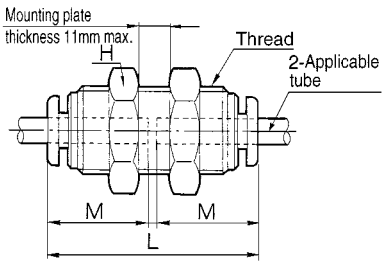
∗ Reference dimensions after NPT thread installation.

Note1) øD: max. diameter



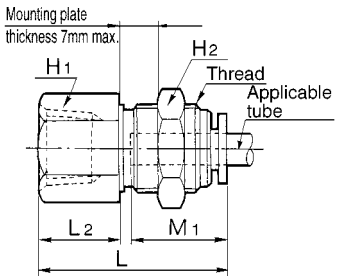
Bulkhead union: KQ2E

Tube O.D. (inch)	Part No.	Thread UNF	H (Hex.)	L	Mounting hole	M	Min. hole dia.	Weight (g)
1/8	**KQ2E01-00**	1/2-20	17.46	32.5	13.5	15.5	2.5	26
5/32	**KQ2E03-00**	1/2-20	17.46	32.5	13.5	16	3	26
3/16	**KQ2E05-00**	9/16-18	17.46	34	15	16.5	3.5	33
1/4	**KQ2E07-00**	9/16-18	17.46	34.5	15	17	4.6	33
5/16	**KQ2E09-00**	3/4-16	22.23	38	20	18.5	6	52
3/8	**KQ2E11-00**	7/8-14	25.4	42.5	23	21	7	70
1/2	**KQ2E13-00**	1-12	28.6	44.5	26	22	9.6	97



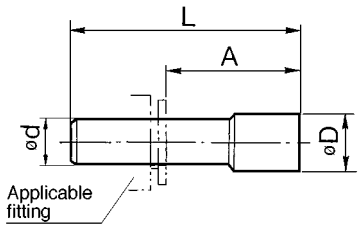
Bulkhead connector: KQ2E

Tube O.D. (inch)	Thread NPT	Part No.	Thread UNF	H_1 (Hex.)	H_2 (Hex.)	L_1	L_2	M	Min. hole dia.	Mounting hole	Weight (g)
1/8	1/4	**KQ2E01-35**	1/2-20	17.46	17.46	31	15	15.5	2.5	13.5	36
5/32	1/4	**KQ2E03-35**	1/2-20	17.46	17.46	31	15	16	3	13.5	36
3/16	1/8	**KQ2E05-34**	9/16-18	17.46	17.46	28	10	16.5	3.5	15	34
1/4	1/4	**KQ2E07-35**	9/16-18	17.46	17.46	32.5	14.5	17	4.6	15	34
5/16	3/8	**KQ2E09-36**	3/4-16	22.23	22.23	35	15	18.5	6	20	52
3/8	3/8	**KQ2E11-36**	7/8-14	25.4	25.4	37	14.5	21	7	23	96
1/2	3/8	**KQ2E13-36**	1-12	28.6	28.6	37	14	22	9.6	26	125
	1/2	**KQ2E13-37**	1-12			41.5	18				128



Plug: KQ2P, KQP

Fitting size ød (inch)	Part No.(1)	øD	L	A	Weight (g)
1/8	**KQ2P-01**	5	31.5	16	1
5/32	**KQ2P-03**	6	32	16	1
3/16	**KQ2P-05**	6.8	34	17.5	1
1/4	**KQ2P-07**	8.5	35	18	1
5/16	**KQ2P-09**	10	39	20.5	2
3/8	**KQ2P-11**	11.5	43	22	3.5
1/2	**KQ2P-13**	15	46	24	5



Inch-size One-touch Fittings Additional Models

● Available

Style	Model	Port size	Tube O.D. (inch) 1/8	5/32	3/16	1/4	5/16	3/8	1/2
Hex. socket head male connector	**KQ2S**	10-32UNF	●	●		●			
		NPT 1/8		●	●	●	●	●	
		NPT 1/4				●	●	●	●
		NPT 3/8				●	●	●	●
		NPT 1/2						●	●
45° male elbow	**KQ2K**	10-32UNF	●	●		●			
		NPT 1/8	●	●	●	●	●	●	
		NPT 1/4				●	●	●	●
		NPT 3/8				●	●	●	●
		NPT 1/2						●	●
Universal male elbow	**KQ2V**	10-32UNF	●	●		●			
		NPT 1/8	●	●	●	●	●		
		NPT 1/4				●	●	●	
		NPT 3/8					●	●	●
		NPT 1/2							●
Hex. socket head universal male elbow	**KQ2VS**	10-32UNF	●	●		●			
		NPT 1/8	●	●	●	●	●		
		NPT 1/4				●	●	●	
		NPT 3/8					●	●	●
		NPT 1/2							●
Double universal male elbow	**KQ2VD**	10-32UNF	●	●		●			
		NPT 1/8	●	●	●	●			
		NPT 1/4				●	●	●	
		NPT 3/8				●	●	●	●
		NPT 1/2					●	●	●
Universal female elbow	**KQ2VF**	10-32UNF	●	●		●			
		NPT 1/8	●	●	●	●	●		
		NPT 1/4				●	●	●	
		NPT 3/8					●	●	●
		NPT 1/2							●
Branch universal male elbow	**KQ2Z**	10-32UNF	●	●		●			
		NPT 1/8	●	●	●	●	●		
		NPT 1/4				●	●	●	
		NPT 3/8					●	●	●
		NPT 1/2							●

Style	Model	Port size	Tube O.D. (inch) 1/8	5/32	3/16	1/4	5/16	3/8	1/2
Triple universal male elbow	**KQ2VT**	10-32UNF	●	●		●			
		NPT 1/8	●	●	●	●			
		NPT 1/4				●	●	●	
		NPT 3/8				●	●	●	●
		NPT 1/2					●	●	●
Double branch universal male elbow	**KQ2ZD**	NPT 1/8	●	●	●	●			
		NPT 1/4				●	●	●	
		NPT 3/8				●	●	●	●
		NPT 1/2					●	●	●
Triple branch universal male elbow	**KQ2ZT**	NPT 1/8	●	●	●	●			
		NPT 1/4				●	●	●	
		NPT 3/8				●	●	●	●
		NPT 1/2					●	●	●
Female connector	**KQ2F**	NPT 1/8	●	●		●	●		
		NPT 1/4	●	●		●	●	●	
		NPT 3/8				●	●	●	●
		NPT 1/2						●	●
Female elbow	**KQ2LF**	NPT 1/8	●	●		●			
		NPT 1/4	●	●		●		●	
		NPT 3/8				●		●	●
		NPT 1/2						●	●
Different dia. straight	**KQ2H**	5/32	●						
		3/16		●					
		1/4	●	●	●				
		5/16				●			
		3/8				●	●		
		1/2					●	●	
		5/8							
Different dia. tee	**KQ2T**	5/32	●						
		3/16		●					
		1/4	●	●	●				
		5/16				●			
		3/8				●	●		
		1/2					●	●	

Style	Model	Port size	Tube O.D. (inch) 1/8	5/32	3/16	1/4	5/16	3/8	1/2
Different dia. union "Y"	**KQ2U**	5/32	●						
		3/16		●					
		1/4	●	●	●				
		5/16				●			
		3/8				●	●		
		1/2					●	●	
Cross	**KQ2TW**			●		●	●	●	●
Bulkhead male elbow	**KQ2LE**		●	●	●	●	●	●	●
Different dia. Plug-in "Y"	**KQ2X**	5/32	●						
		3/16		●					
		1/4			●				
		5/16				●			
Nipple	**KQ2N**		●	●	●	●	●	●	●
Reducer nipple	**KQ2N**	5/32	●						
		3/16	●	●					
		1/4		●	●				
		5/16			●	●			
		3/8				●	●		
		1/2					●	●	
Tube cap	**KQ2C**			●		●	●	●	

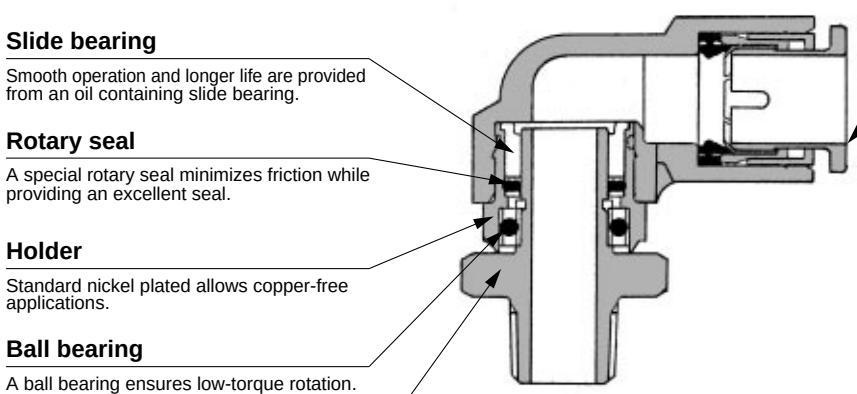
∗Refer to p.2.1-11 and 2.1-12 for more information on styles.

Inch-size Rotary One-touch Fittings

Series KS (Standard)

CAD

Applicable Tubing — Inch-size



Slide bearing
Smooth operation and longer life are provided from an oil containing slide bearing.

Rotary seal
A special rotary seal minimizes friction while providing an excellent seal.

Holder
Standard nickel plated allows copper-free applications.

Ball bearing
A ball bearing ensures low-torque rotation.

Stud
Threads are coated with a Teflon™ based sealant for quick assembly.

Cassette (Red)
The half union style is equipped with a "tube rotation prevention mechanism."

Low-torque rotation style Rotary One-touch fittings

Applicable to use for oscillating and rotating sections in robots.

Brass parts are all electroless nickel plated.

Thread sealant is standard.

Male elbow

Male connector

Applicable Tubing

Tube material (1)	Nylon, Soft nylon, Polyurethane
Tube O.D.	ø5/32", ø1/4", ø5/16", ø3/8"

Note1) Be careful about the max. operating pressure for Soft nylon and Polyurethane.

Specifications

Fluid	Air
Max. operating pressure	1.0MPa
Max. operating vacuum pressure	–100kPa
Proof pressure	3.0MPa
Ambient and fluid temperature	–5 to 60°C (No freezing)
Thread	ANSI/ASMEB1.20.1-1983 (NTP thread) JIS B0212 2A, Class 2B (UNF thread)

Rotating Torque/Allowable Number of Rotations

Applicable tube O.D.	ø5/32"	ø1/4"	ø5/16"	ø3/8"
Rotating torque Nm (1)	0.006	0.012	0.014	0.020
Allowable number of rotations (rpm)	500	500	400	300

Note1) Value under pressure 0.5MPa

Component Materials

Principal element	Series **KS**
Body	PBT
Stud, Holder, Guide	SUS304,C3604BD (With electroless nickel plated)
Chuck, Retainer	Stainless Steel (SUS304)
Collet, Release button, Snap ring	Polyacetal
O ring, Packing	NBR
Rotary seal	NBR
Slide bearing	Oil-containing polyacetal
Scraper	—
Ball bearing	Bearing steel
Gasket	Stainless Steel (SUS304), NBR

Series KS

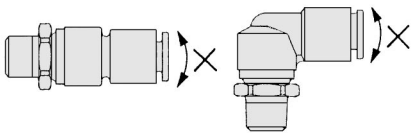
Model	Connection thread	Applicable tube O.D.(inch) ø5/32"	ø1/4"	ø5/16"	ø3/8"
Male connector **KSH** 	10-32 UNF	●			
	NPT 1/8	●	●	●	
	NPT 1/4		●	●	●
	NPT 3/8				●
Male elbow **KSL** 	10-32UNF	●			
	NPT 1/8	●	●	●	
	NPT 1/4		●	●	●
	NPT 3/8				●

⚠ Precautions

Be sure to read before handling.
Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.0-7 and 2.0-8 for more detailed precautions of every series.

⚠ Caution

①Minimize the load shown below to protect the ball bearing. A flexible polyurethane tube is recommended.



Male connector: KSH (Standard)

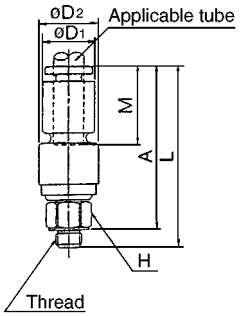
<UNF>

Tube O.D. (inch)	Thread UNF NPT	Part No.	H (Hex.)	D_1	D_2	L	A*	M	Min. hole dia.	Effective area (mm^2) Nylon	Effective area (mm^2) Urethane	Weight (g)
5/32	10-32 UNF	KSH03-32	8	10.4	12	36.5	33	16	2.5	4.0	4.0	9
	1/8	KSH03-34S	12.7			38.5	34.5					14
1/4	1/8	KSH07-34S	14.29	13.2	14	39.5	35.5	17	4	13.4	10.4	17
	1/4	KSH07-35S				42.5	36.5					23
5/16	1/8	KSH09-34S	17.46	15.2	17	44	40	18.5	6	26.1	18.0	23
	1/4	KSH09-35S				47	41					29
3/8	1/4	KSH11-35S	22.23	17.9	22	54	48	21	7	36.3	29.5	55
	3/8	KSH11-36S				55	48.5					63

SKSINCH, #1 to #8

∗ Reference dimensions after NPT thread installation.

<UNF>



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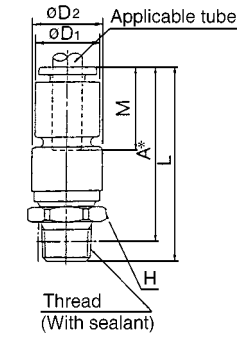


Male elbow: KSL (Standard)

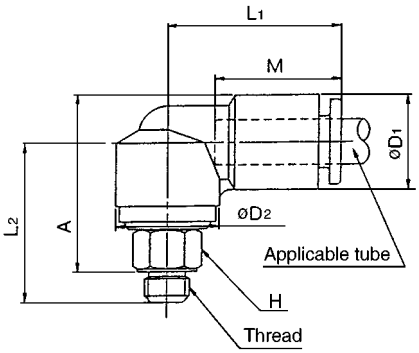
<UNF>

Tube O.D. (inch)	Thread UNF NPT	Part No.	H (Hex.)	D_1	D_2	L_1	L_2	A*	M	Min. hole dia.	Effective area (mm^2) Nylon	Effective area (mm^2) Urethane	Weight (g)
5/32	10-32 UNF	KSL03-32	8	10.4	12	21	20.5	22	16	2.5	3.5	3.5	9
	1/8	KSL03-34S	12.7				22	23.5					14
1/4	1/8	KSL07-34S	14.29	13.2	14	23.5	23	25.5	17	4	8.6	8.6	17
	1/4	KSL07-35S					26	26.5					23
5/16	1/8	KSL09-34S	17.46	15.2	17	26	26.5	30	18.5	6	21.6	14.9	23
	1/4	KSL09-35S					29.5	31					29
3/8	1/4	KSL11-35S	22.23	17.9	22	31.5	34	37	21	7	30.5	25.0	56
	3/8	KSL11-36S					35	38					64

SKSINCH, #9 to #16

∗ Reference dimensions after NPT thread installation.

<UNF>



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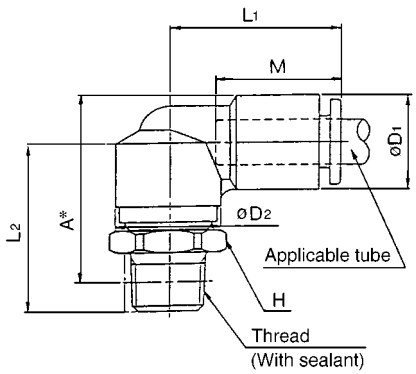
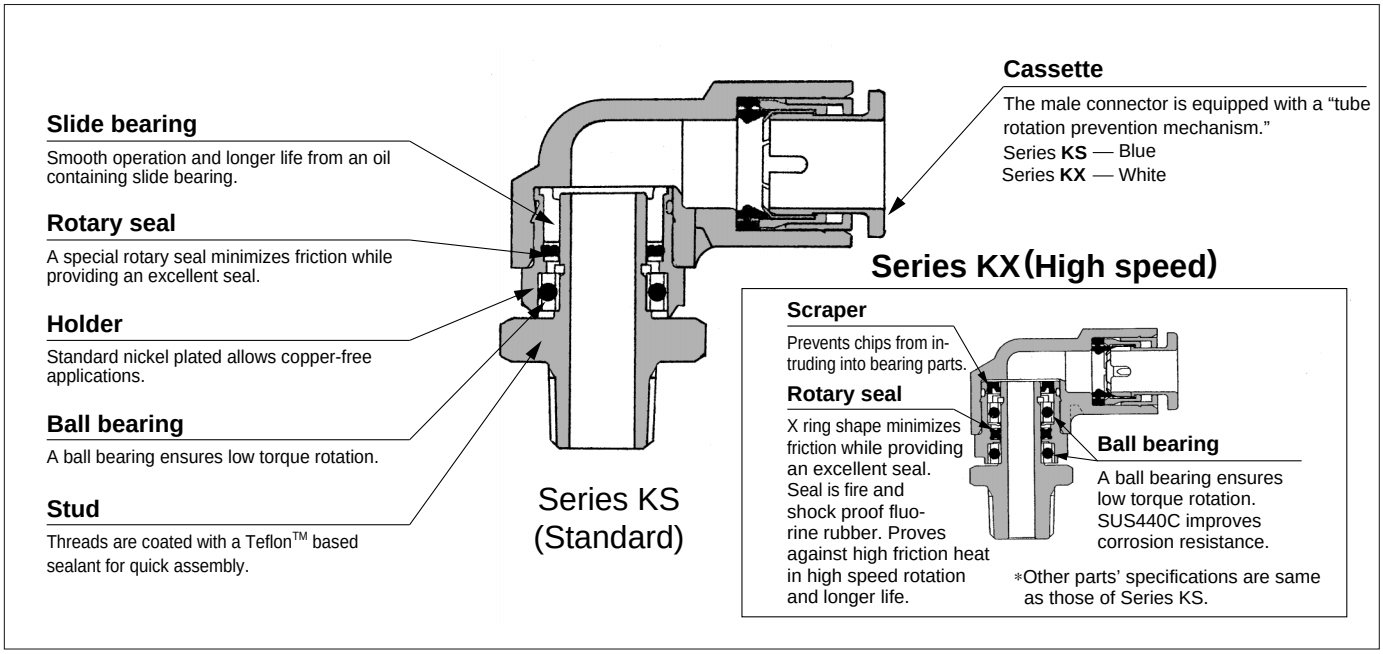


Rotary One-touch Fittings

Series KS/KX

(Standard) (High Speed)



Low torque rotation style Rotary One-touch fittings

Applicable to use for oscillating and rotating sections in robots.

Brass parts are all electroless nickel plated.

Thread sealant is standard.

Applicable Tubing

Tube material (1)	Nylon, Soft nylon, Polyurethane
Tube O.D.	ø4, ø6, ø8, ø10, ø12

Note1) Be careful about the max. operating pressure for Soft nylon and Polyurethane.

Specifications

Operating fluid	Air
Max. operating pressure	1.0MPa
Max. operating vacuum pressure	–100kPa
Proof pressure	3.0MPa
Ambient and fluid temperature	–5 to 60°C (No freezing)
Thread	JIS B0203, JIS B0209

Rotating Torque/Allowable Number of Rotations

Applicable tube O.D.		ø4	ø6	ø8	ø10	ø12
Rotating torque (Nm) (1)		0.006	0.012	0.014	0.020	0.022
Allowable number of rotations (rpm)	Series **KS**	500	500	400	300	250
	Series **KX**	1500	1200	1200	1000	1000

Note1) Value under pressure 0.5MPa

Component Materials

Principal element	Series **KS**	Series **KX**
Body	PBT	
Stud, Holder, Guide	C3604BD (electroless nickel plated), SUS304	
Chuck, Retainer	Stainless steel (SUS304) (1)	
Collet, Release button, Snap ring	Polyacetal	
O ring, Packing	NBR	
Rotary seal	NBR	FPM
Slide bearing	Oil-containing polyacetal	—
Scraper	—	NBR
Ball bearing	Bearing steel	Stainless (SUS440C)
Gasket	Stainless steel (SUS304), NBR	

Note1) Retainer (C) of Series KX: C3604BD (electroless nickel plated)

Series KS/Series KX

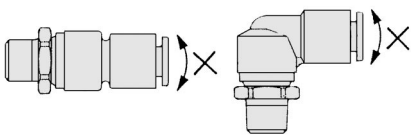
Model	Connection thread	Applicable tube O.D. (mm) ø4	ø6	ø8	ø10	ø12
Male connector **KSH** **KXH** 	M5 X 0.8	●	●			
	M6 X 1.0	●	●			
	R(PT) 1/8	●	●	●		
	R(PT) 1/4		●	●	●	
	R(PT) 3/8			●	●	●
	R(PT) 1/2				●	●
Male elbow **KSL** **KXL** 	M5 X 0.8	●	●			
	M6 X 1.0	●	●			
	R(PT) 1/8	●	●	●		
	R(PT) 1/4		●	●	●	
	R(PT) 3/8			●	●	●
	R(PT) 1/2				●	●

⚠ Precautions

Be sure to read before handling.
Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.0-7 and 2.0-8 for more detailed precautions of every series.

⚠ Caution

①Minimize the load shown below to protect the ball bearing. A flexible polyurethane tube is recommended.



Male connector: KSH (Standard)

<M5, M6>

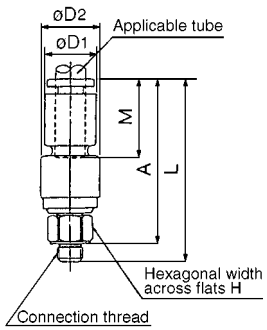
<R(PT)>

Tube O.D. (mm)	Connection thread R(PT)	Part No.	H (Hex.)	D1	D2	L	A	M	Min. hole dia.	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	M5 X 0.8	KSH04-M5	8	10.4	12	36.5	33	16	2.5	4.0	4.0	9
	M6 X 1.0	KSH04-M6				37						
	1/8	KSH04-01S	12			38	34					14
6	M5 X 0.8	KSH06-M5	8	12.8	14	37.5	33.5	17	2.5	4.0	4.0	12
	M6 X 1.0	KSH06-M6				38	34		3	5.6	5.6	
	1/8	KSH06-01S	14			39.5	35.5		4	10.4	10.4	17
	1/4	KSH06-02S				42.5	36.5					23
8	1/8	KSH08-01S	17	15.2	17	44	40	18.5	6	26.1	18.0	23
	1/4	KSH08-02S				47	41					29
	3/8	KSH08-03S				48	41.5					37
10	1/4	KSH10-02S	22	18.5	22	54	48	21	7	36.3	29.5	55
	3/8	KSH10-03S				55	48.5					63
	1/2	KSH10-04S				57.5	49.5					81
12	3/8	KSH12-03S	24	20.9	24	57	50.5	22	8	46.1	16.1	75
	1/2	KSH12-04S				60	52					92

CAD SKS, #1 to #15

∗Reference dimensions after R(PT) thread installation.

<M5, M6>



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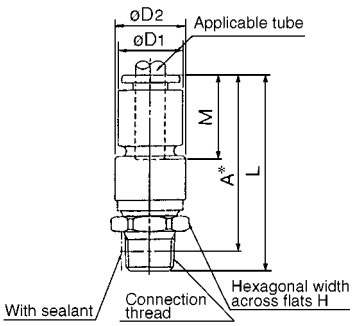


Male connector: KXH (High speed)

<M5, M6>

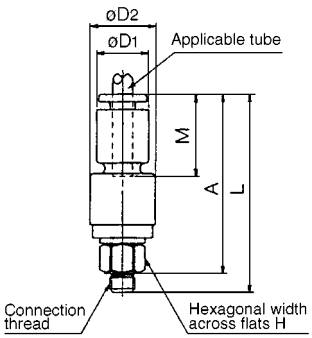
<R(PT)>

Tube O.D. (mm)	Connection thread R(PT)	Part No.	H (Hex.)	D1	D2	L	A	M	Min. hole dia.	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	M5 X 0.8	KXH04-M5	8	10.4	13	38.5	35	16	2.5	4.0	4.0	11
	M6 X 1.0	KXH04-M6				39						
	1/8	KXH04-01S	12			40	36					16
6	M5 X 0.8	KXH06-M5	8	12.8	15	39.5	36	17	2.5	4.0	4.0	15
	M6 X 1.0	KXH06-M6				40			3	5.6	5.6	
	1/8	KXH06-01S	14			42	38		4	10.4	10.4	20
	1/4	KXH06-02S				45	39					26
8	1/8	KXH08-01S	17	15.2	18	46	42	18.5	6	26.1	18.0	28
	1/4	KXH08-02S				49	43					34
	3/8	KXH08-03S				50	44					42
10	1/4	KXH10-02S	22	18.5	23.5	58	52	21	7	36.3	29.5	68
	3/8	KXH10-03S				59						76
	1/2	KXH10-04S				62	53					94
12	3/8	KXH12-03S	24	20.9	26	60	54	22	8	46.1	46.1	88
	1/2	KXH12-04S				63	55					105

CAD SKX, #1 to #15

∗Reference dimensions after R(PT) thread installation.

<M5, M6>



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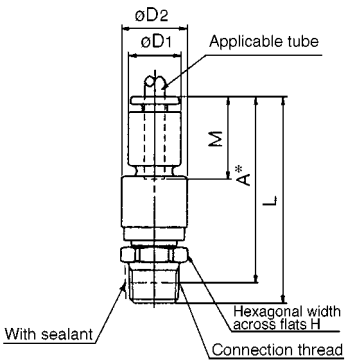


Male elbow: KSL (Standard) CAD

<M5, M6>

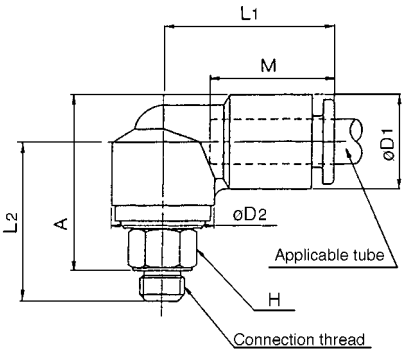
<R(PT)>

Tube O.D. (mm)	Connection thread R(PT)	Part No.	H (Hex.)	D1	D2	L1	L2	A	M	Min. hole dia.	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	M5 X 0.8	KSL04-M5	8	10.4	12	21	20.5	22	16	2.5	3.5	3.5	9
	M6 X 1.0	KSL04-M6					21						
	1/8	KSL04-01S	12				22	23.5					14
6	M5 X 0.8	KSL06-M5	8	12.8	14	23	21	23.5	17	2.5	3.5	3.5	12
	M6 X 1.0	KSL06-M6					21.5	24		3	5.0	5.0	
	1/8	KSL06-01S	14				23	25.5		4	8.6	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	14.9	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	25.0	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	35.1	76
	1/2	KSL12-04S					39.5	42					93

CAD SKS, #16 to #30

∗Reference dimensions after R(PT) thread installation.

<M5, M6>



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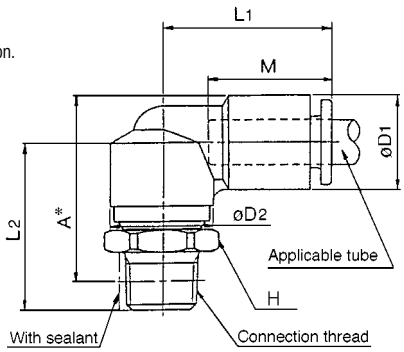


Male elbow: KXL (High speed)

<M5, M6>

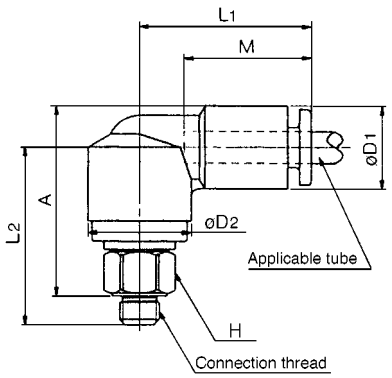
<R(PT)>

Tube O.D. (mm)	Connection thread R(PT)	Part No.	H (Hex.)	D1	D2	L1	L2	A	M	Min. hole dia.	Effective area (mm²) Nylon	Effective area (mm²) Urethane	Weight (g)
4	M5 X 0.8	KXL04-M5	8	10.4	13	22	22.5	24	16	2.5	3.5	3.5	11
	M6 X 1.0	KXL04-M6					23						
	1/8	KXL04-01S	12				24	25					16
6	M5 X 0.8	KXL06-M5	8	12.8	15	24	23.5	26	17	2.5	3.5	3.5	15
	M6 X 1.0	KXL06-M6					24			3	5.0	5.0	
	1/8	KXL06-01S	14				25	28		4	8.6	8.6	20
	1/4	KXL06-02S					28	29					26
8	1/8	KXL08-01S	17	15.2	18	27	29	32	18.5	6	21.6	14.9	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	25.0	69
	3/8	KXL10-03S					39						77
	1/2	KXL10-04S					42	43					95
12	3/8	KXL12-03S	24	20.9	26	35	40	44	22	8	35.1	35.1	89
	1/2	KXL12-04S					43	45					106

CAD SKX, #16 to #30

∗Reference dimensions after R(PT) thread installation.

<M5, M6>



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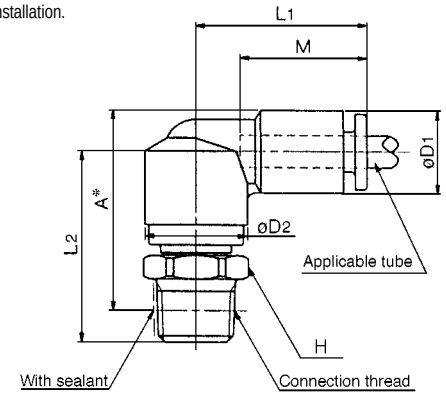


Inch-size One-touch Fittings Manifold

Series KM

Applicable Tubing — Inch-size

Compact piping possible.
Manifold piping possible.
Many varieties (12 styles) available.
One-touch fittings-efficient operation possible.

KM11

KM12

Model

Model	Porting		Number of Port A	Port B size	Port A size		
	Port A	Port B			ø5/32	ø1/4	ø5/16
KM11	One-touch fitting	One-touch fitting	6, 10	ø5/16	●		
				ø3/8		●	
				ø1/2			●
KM12	One-touch fitting	NPT thread	6, 10	NPT 1/4	●	●	
				NPT3/8			●

Applicable Tubing

Tube material	Nylon, Soft nylon, Polyurethane
Tube O.D.	ø5/32, ø1/4, ø5/16, ø3/8, ø1/2

Specifications

Model	**KM11**	**KM12**
Fluid	Air, Water (1)	
Max. operating pressure	1.0MPa	
Proof pressure	3.0MPa	
Ambient and fluid temperature	–5 to 60°C (Water: 0 to 40°C) (No freezing)	
Thread	—	ANSI/ASMEB1.20. 1-1983 (NTP thread)

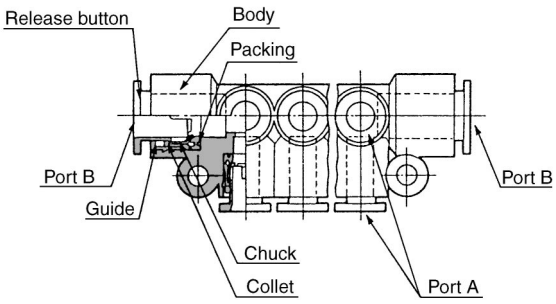
Note1) Applicable for general industry water. Consult SMC if using for other kinds of fluid. Surge pressure must be under the max. operationg pressure.

Component Materials

Model	**KM11**	**KM12**
Body	PBT	
Stud	—	C3604BD
Chuck	SUS304	
Guide	SUS304, C3604BD	
Collet, Release button	POM	
Packing, O ring	NBR	

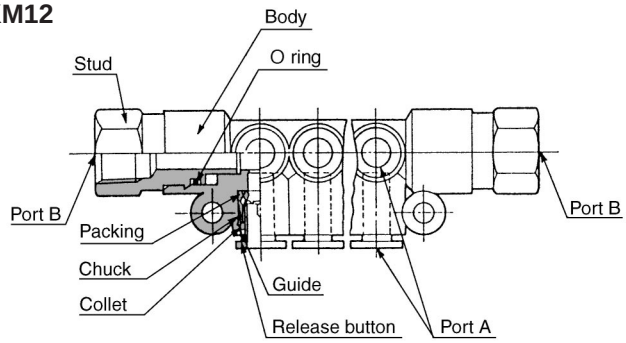
Construction

KM11



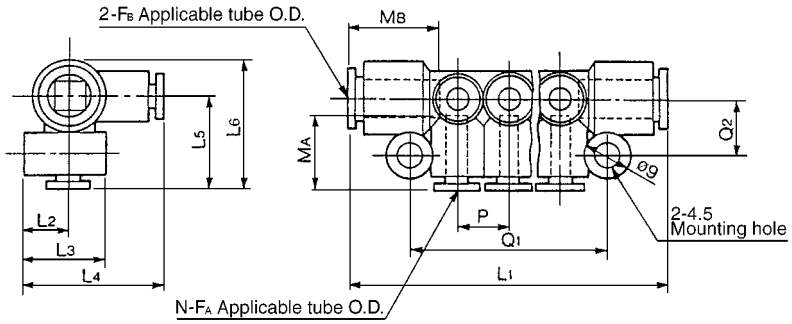
Port A: One-touch fitting
Port B: One-touch fitting

KM12



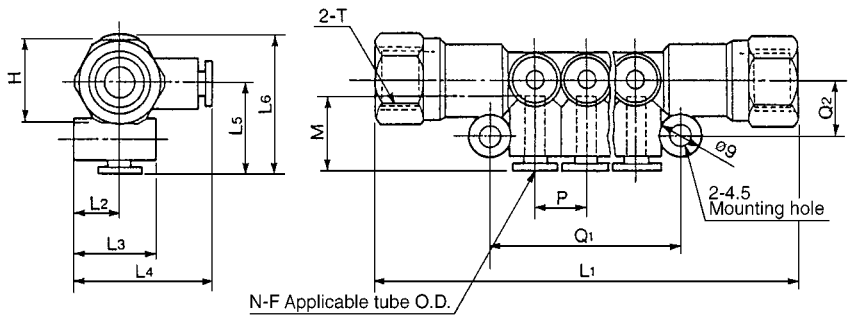
Port A: One-touch fitting
Port B: NPT female thread

KM11



Applicable tube O.D. (inch)		Part No.	N	L1	L2	L3	L4	L5	L6	P	Q1	Q2	MA	MB	Port B Min. port size	Weight (g)
FA	FB															
5/32	5/16	**KM11-03-09-6**	6	65	10	18	29.5	19.5	27	10.6	40	12	16	18.5	6	19
		KM11-03-09-10	10	86							61.5					26
1/4	3/8	**KM11-07-11-6**	6	77.8	10	19.5	31.5	21.5	30.5	13.2	48	13	17	21	7	30
		KM11-07-11-10	10	104							73.5					40
5/16	1/2	**KM11-09-13-6**	6	85	12.7	23.7	37.7	25	35.9	15.2	52.8	15	18.5	22	9.5	41
		KM11-09-13-10	10	115							83					57

KM12



Applicable tube O.D. F (inch)	Thead NPT T	Part No.	N	H (Hex.)	L1	L2	L3	L4	L5	L6	P	Q1	Q2	M	Port B Min. port size	Weight (g)
5/32	1/4	**KM12-03-35-6**	6	17.46	87	10	18	29.5	19.5	29	10.6	40	12	16	6	65
		KM12-03-35-10	10		110							61.5				72
1/4	1/4	**KM12-07-35-6**	6	17.46	95	10	19.5	31.5	21.5	31.25	13.2	48	13	17	7	82
		KM12-07-35-10	10		121							73.5				92
5/16	3/8	**KM12-09-36-6**	6	22.22	102	12.7	23.7	37.7	25	37.5	15.2	52.8	15	18.5	9.5	97
		KM12-09-36-10	10		132							83				112

Precautions for the use with One-touch fittings

⚠ Caution

Refer to “Air Fittings & Tubing Precautions” for the installation/removal of One-touch fittings and other precautions.

Inch-size Rectangular Multi-connector

Series KDM

Connecting Tubing: 10, 20

Multi-connector is effective in saving labor for separate transportation of the panel and the machine and for exchanging units due to failure.

Substantial reduction in mounting space

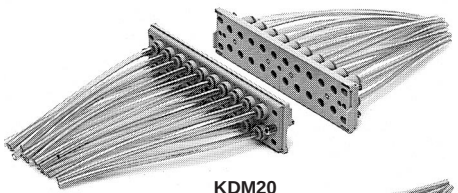
In comparison with a model requiring many union joints for panels and partitions, this model needs only a small space.

One-touch connection/ disconnection of connector

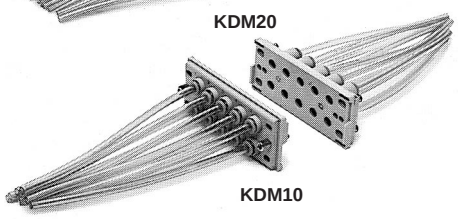
Multiple pipes can be connected/disconnected in one-touch operation without connection error. Thus man-hours for connection/disconnection is cut down substantially.

One-touch tube connection

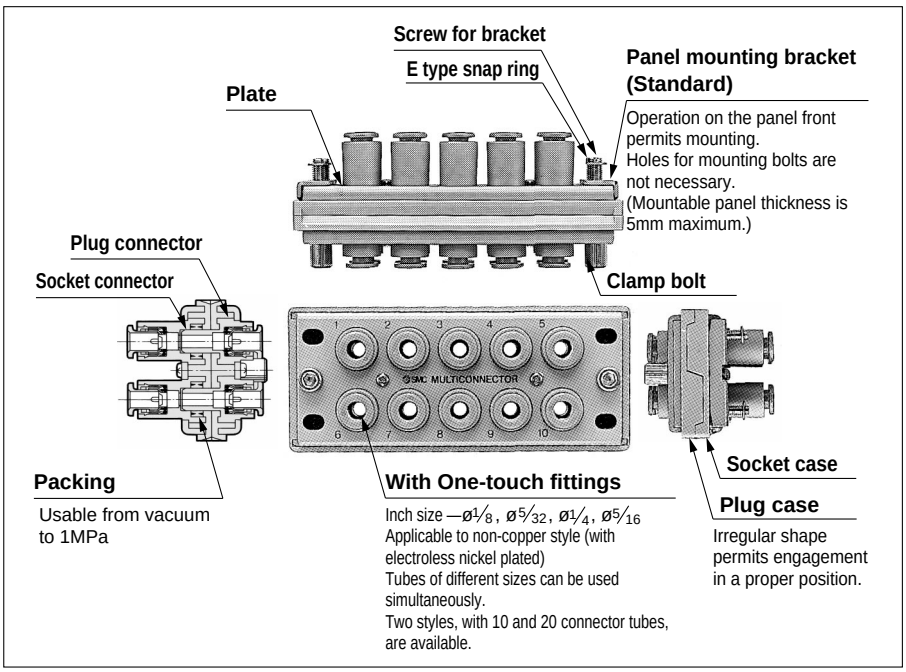
One-touch fittings substantially cut down man-hours for piping.



KDM20



KDM10



Model

Number of connecting tubes	Tube O. D.	Part No.	Weight	Color of release button
10	ø1/8	**KDM10-01**	300g	Red
	ø5/32	**KDM10-03**		
	ø1/4	**KDM10-07**		
	ø5/16	**KDM10-09**	520g	
20	ø1/8	**KDM20-01**	520g	
	ø5/32	**KDM20-03**		
	ø1/4	**KDM20-07**		
	ø5/16	**KDM20-09**	950g	

Applicable Tubing

Tube material	Nylon, Soft nylon, Polyurethane
Tube O.D.	ø1/8, ø5/32, ø1/4, ø5/16

Specifications

Fluid	Air
Max. operating pressure	1.0MPa
Max. operating vacuum pressure	–100kPa
Proof pressure	1.5MPa
Ambient and fluid temperature	–5 to 60°C (No freezing)

Material

Plug case, Socket case		POM
Plate, Bracket		SPCC Plated
Plug connector Socket connector	Body	PBT, C3604BD Electroless nickel plated (ø5/16)
	Chuck	Stainless steel (SUS304)
	Guide	SUS304, C3604BD Electroless nickel plated, POM (ø5/16)
	Collet Release button	POM
	Packing	NBR
Clamp bolt, Screw for bracket, Cross recessed head machine screw		SWRM, Nickel Plated
E type snap ring		Stainless steel (SUS304)

Part No.

No. of connecting tubes	Tube O.D.	Part No.		Color of release button
		Plug	Socket	
10	ø1/8	**KDM10P-01**	**KDM10S-01**	Red
	ø5/32	**KDM10P-03**	**KDM10S-03**	
	ø1/4	**KDM10P-07**	**KDM10S-07**	
	ø5/16	**KDM10P-09**	**KDM10S-09**	
20	ø1/8	**KDM20P-01**	**KDM20S-01**	
	ø5/32	**KDM20P-03**	**KDM20S-03**	
	ø1/4	**KDM20P-07**	**KDM20S-07**	
	ø5/16	**KDM20P-09**	**KDM20S-09**	

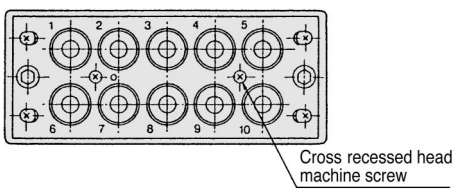
Mixed Sizes of Plug Connectors and Socket Connectors

The rectangular multi-connector permits connector exchange in any desired position, thus allowing use of different sizes of tubes.

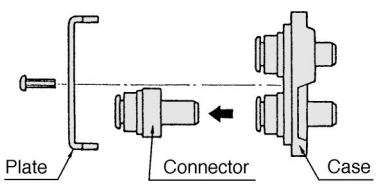
Part No.

Connector	Tube O.D.	Part No.	Color of release button
Plug connector	ø1/8	**KDMP-01**	Red
	ø5/32	**KDMP-03**	
	ø1/4	**KDMP-07**	
	ø5/16	**KDMP-09**	
Socket connector (With packing)	ø1/8	**KDMS-01**	
	ø5/32	**KDMS-03**	
	ø 1/4	**KDMS-07**	
	ø5/16	**KDMS-09**	

①Loosen the cross recessed head machine screw using a Phillips screwdriver to remove the plate from the case.



②After exchanging connectors in desired places, fix the plate with a Phillips screwdriver to the case.

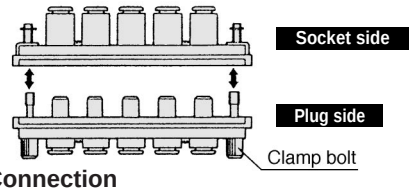


How to Use

⚠Caution

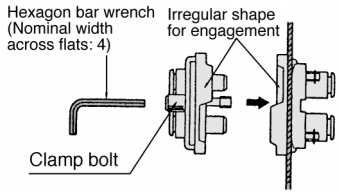
Separation

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



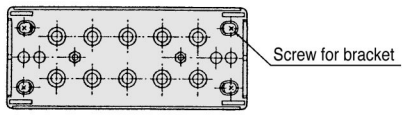
Connection

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)

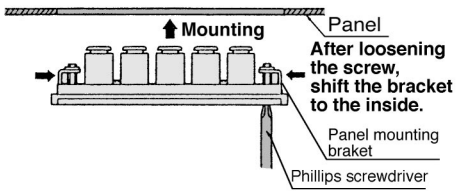


Panel mounting

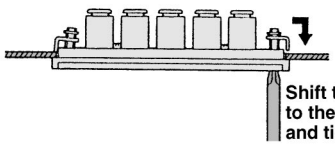
①Loosen (4) screws for bracket on the socket side using a Phillips screwdriver (JIS nominal No.2) until the bracket touches the stop ring.



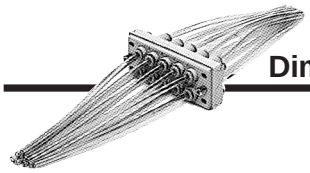
②Shift the panel mounting bracket to the inside (Move the screw for bracket in the longitudinal direction of the slot) and put the connector in the panel mounting hole. (Panel mounting hole: See Dimensions.)



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

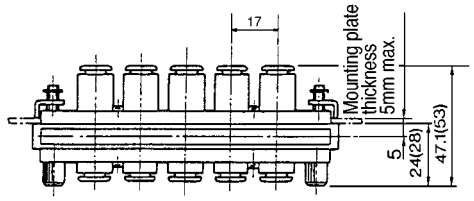


④Loosen the screw for bracket until the bracket touches the stop ring and shift the bracket to the inside to remove the connector from the panel.

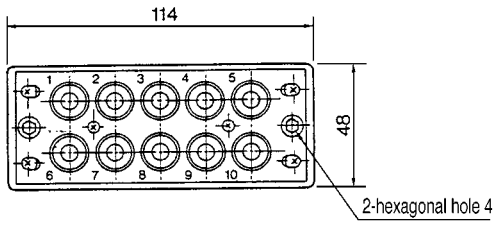


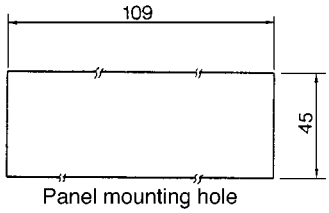
Dimensions CAD

KDM10

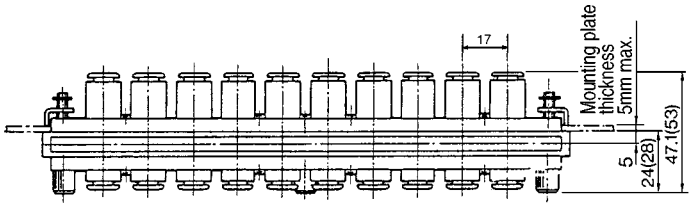


( ): Dimensions for KDM10-09

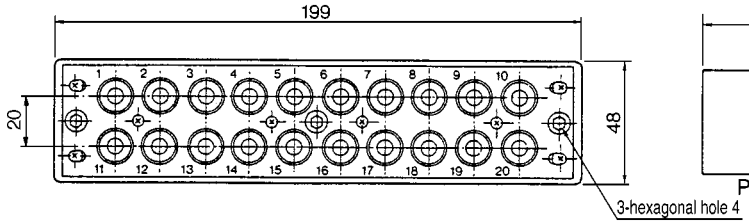


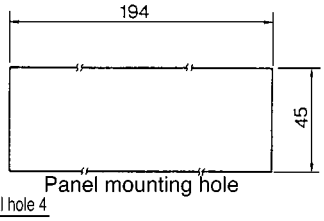


KDM20



( ): Dimensions for KDM20-09





CAD
KDM10 ——— SKDM102, #1 to #4
KDM20 ——— SKDM202, #1 to #4

Precautions for the use with One-touch fittings

⚠ Caution

Refer to “Air Fittings & Tubing Precautions” for the details of installation/removal of One-touch fittings and other precautions.

Made to Order

Contact SMC for detailed specifications, dimensions and delivery.

■Mixed tube sizes

Mixed tube size manifolds are available to meet your individual requirements. Consult your SMC sales representative for availability.

Miniature Fittings/SUS316

Series MS

Possible to use in corrosive applications

Stainless Steel Material (SUS316)

Compact piping space

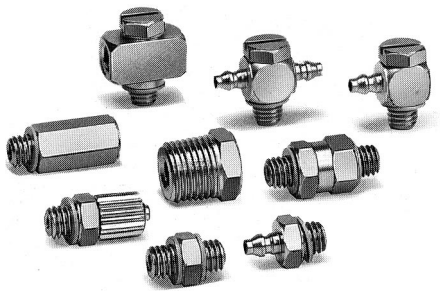
Tube has a large retaining force. Hose nipple assures easy installation and removal.

Line up various styles

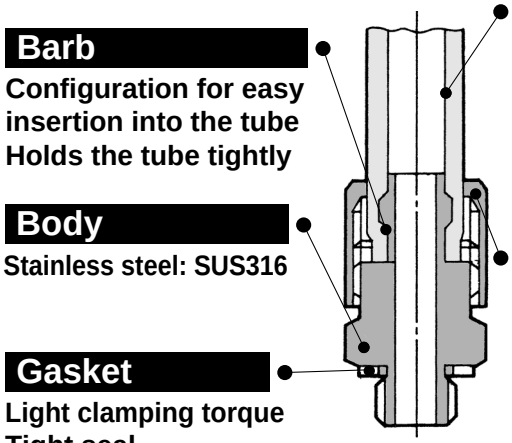
Possible for special tubing in a same direction.

Accepts many styles of plastic tubing

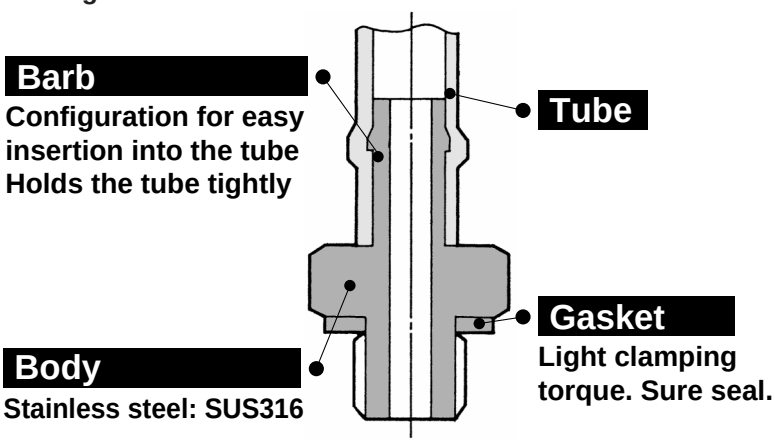
Hose nipple and hose elbow accepts nylon, soft nylon, and polyurethane tubing.



Hose nipple



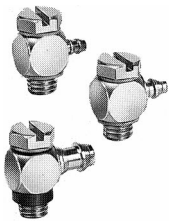
Barb fitting



Specifications

Applicable tube material		Nylon	Soft nylon		Polyurethane
Applicable tube dia.		ø4/ø2.5 ø6/ø4	ø3.18/ø2.18	ø4/ø2.5 ø6/ø4	ø3.18/ø2 ø4/ø2.5, ø6/ø4
Max. operating pressure		1.5MPa	1.0MPa		0.8MPa
Port size		M5 (JIS B0209 class 2)			
Material	Body	Stainless steel (SUS316)			
	Gasket	PVC, nylon 66/GF30%			

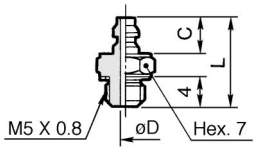
Model

Model	Style	Application	Tube O.D./I.D.
MS-5AU-3	**Barb fitting**  P.2.3-23	For soft nylon tube	ø3.18/ø2.18 X M5
		For polyurethane tube	ø3.18/ø2 X M5
MS-5AU-4		For soft nylon and polyurethane tube	ø4/ø2.5 X M5
MS-5AU-6			ø6/ø4 X M5
MS-5ALHU-3	**Barb elbow**  P.2.3-23	For soft nylon tube	ø3.18/ø2.18 X M5
		For polyurethane tube	ø3.18/ø2 X M5
MS-5ALHU-4		●For soft nylon and polyurethane tube ●Body rotates at 360° around the stud axis	ø4/ø2.5 X M5
MS-5ALHU-6			ø6/ø4 X M5
MS-5H-4	**Hose nipple**  P.2.3-23	For nylon, soft nylon, and polyurethane tube	ø4/ø2.5 X M5
MS-5H-6			ø6/ø4 X M5
MS-5HLH-4	**Hose elbow**  P.2.3-23	●For nylon, soft nylon, and polyurethane tube ●Body rotates at 360° around the stud axis	ø4/ø2.5 X M5
MS-5HLH-6			ø6/ø4 X M5
M-5G1	**Gasket**  P.2.3-24	To seal M5 thread	Material: PVC

Model	Style	Application	Tube O.D./I.D.
MS-5UL	**Universal elbow**  P.2.3-23	Body rotates at 360° around the stud axis	M5 female X M5 male
MS-5UT	**Universal tee**  P.2.3-23	Body rotates at 360° around the stud axis	M5 female X M5 female X M5 male
MS-5B	**Bushing**  P.2.3-24	For reducing Rc(PT)1⁄8 female to M5 female	Rc(PT)1⁄8male X M5 female
MS-5P	**Plug**  P.2.3-24	To plug unused M5 port	
MS-5J	**Extention fitting**  P.2.3-24	Solid piece-moves fitting up from work piece	M5 male X M5 female
MS-5N	**Nipple**  P.2.3-24	Fitting to work piece and fitting to fitting connection	M5 male X M5 male
MS-5UN	**Unilversal nipple**  P.2.3-24	Body rotates at 360° around the stud axis	M5 male X M5 male PAT
MS-5ATHU-3	**Barb tee for soft tubing**   P.2.3-24	For soft nylon tube	ø3.18/ø2.18 X M5
		For polyurethane tube	ø3.18/ø2 X M5
MS-5ATHU-4		●For soft nylon and polyurethane tube ●Body rotates at 360° around the stud axis	ø4/ø2.5 X M5
MS-5ATHU-6			ø6/ø4 X M5
M-5GH	**Gasket (H)**  P.2.3-24	MS-5ALHU-6 MS-5HLH-4 MS-5HLH-6 MS-5ATHU-6 only	Material: Nylon 66 GF 30%

Barb fitting for soft nylon: MS-5AU-3, -4, -6

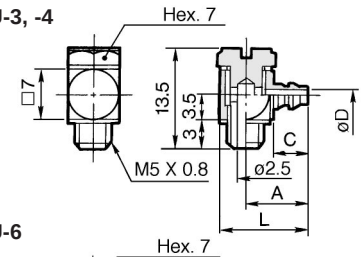
Part No.	C	øD	L	Effective area (mm²)	Weight (g)
MS-5AU-3	4.5	1.6	11.5	1.7	1.4
MS-5AU-4	5	1.8	12	2.1	1.5
MS-5AU-6	7	2.5	14	4.0	1.7



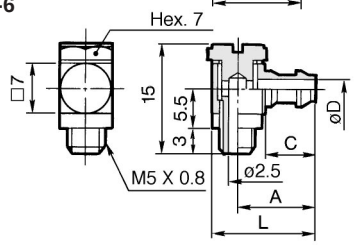
Barb elbow for soft nylon: MS-5ALHU-3, -4, -6

Part No.	A	C	øD	L	Effective area (mm²)	Weight (g)
MS-5ALHU-3	8	4.5	1.6	11.8	1.1	3.0
MS-5ALHU-4	8.8	5.0	1.8	12.6	1.4	3.1
MS-5ALHU-6	10.8	7.0	2.5	14.6	2.4	3.7

MS-5ALHU-3, -4

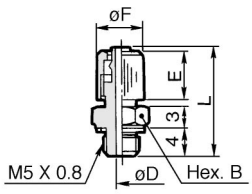


MS-5ALHU-6



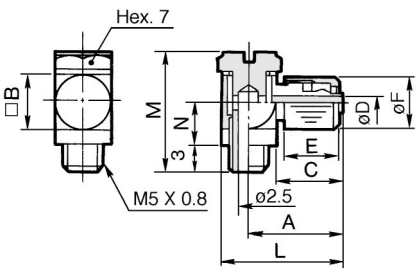
Hose nipple: MS-5H-4, -6

Part No.	B	øD	L	E	øF	Effective area (mm²)	Weight (g)
MS-5H-4	7	1.8	15.5	7	6.5	2.1	2.5
MS-5H-6	8	2.5	16.5	8	8.5	4.0	3.7

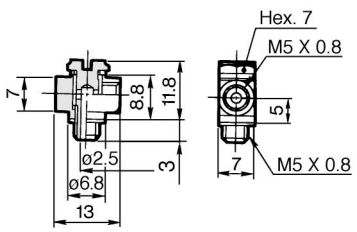


Hose elbow: MS-5HLH-4, -6

Part No.	A	□B	C	øD	E	øF	L	M	N	Effective area (mm²)	Weight (g)
MS-5HLH-4	12	7	8.5	1.8	7	6.5	15.8	15	5.5	1.4	4.2
MS-5HLH-6	13.5	8	9.5	2.5	8	8.5	17.8	16	6	2.4	6.2

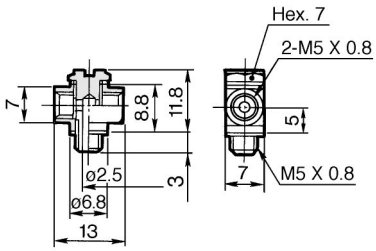


Universal elbow: MS-5UL



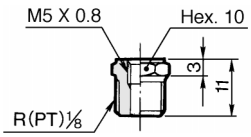
Effective area: 2.4mm²
Weight: 4.5g

Universal tee: MS-5UT



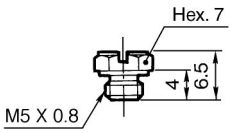
Effective area: 2.4mm²
Weight: 4.5g

Bushing: MS-5B



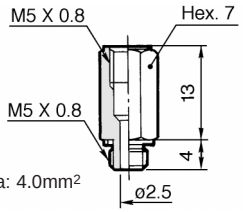
Effective area: 12mm²
Weight: 5.5g

Plug: MS-5P



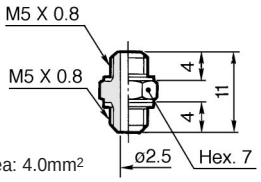
Weight: 1.2g

Extension fitting: MS-5J



Effective area: 4.0mm²
Weight: 3.4g

Nipple: MS-5N

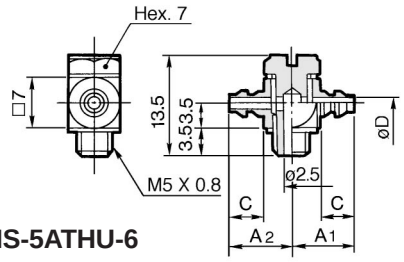


Effective area: 4.0mm²
Weight: 1.4g

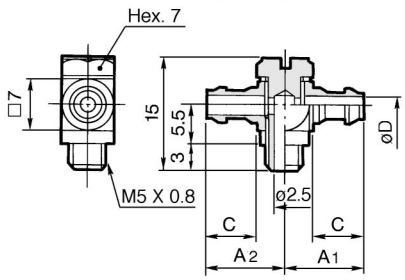
Barb tee for soft tubing: MS-5ATHU-3, -4, -6

Part No.	A1	A2	C	øD	Effective area (mm²)	Weight (g)
MS-5ATHU-3	8	8.3	4.5	1.6	1.1	3.4
MS-5ATHU-4	8.8	8.8	5.0	1.8	1.4	3.6
MS-5ATHU-6	10.8	10.8	7.0	2.5	2.4	4.2

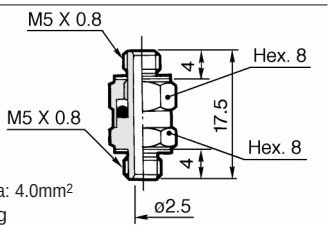
MS-5ATHU-3, -4



MS-5ATHU-6



Universal nipple: MS-5UN



Effective area: 4.0mm²
Weight: 3.7g

Gasket: M-5G1, M-5GH

Weight: 0.01g Weight: 0.04g

⚠Precautions

Be sure to read before handling.
Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.0-7 and 2.0-8 for more detailed precautions of every series.

Tightening of M5 thread

⚠ Caution

①Tighten by hand, and give it an additional 1/4 rotation with a wrench. (The additional rotation should be doubled to 1/2 when using the universal elbow, universal tee, etc. which have two gaskets.) If tightened too much, thread portion may be damaged and gasket may be deformed. This will cause air leakage. On the contrary, if tightening is not sufficient, thread may loosen causing air leakage.

Use of tube with hose nipple

⚠ Caution

①Cut the tube perpendicularly to the tube axis to a little longer length than required length. (Use tube cutter “TK-1”, “TK-2” or “TK-3”.)
②Pass the tube through the cap nut.
③Push the tube until it comes to the end of the barb portion, or it may cause air leakage or hose releasing.
④Tighten the cap nut firmly by hand on the fitting.

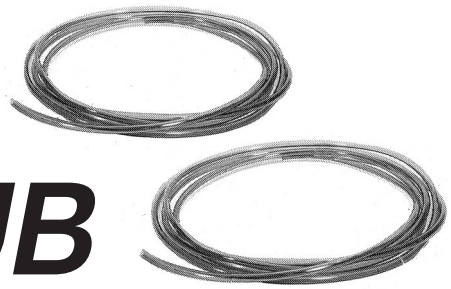
Use of tube with barb fitting

⚠ Caution

①Cut the tube perpendicularly to the tube axis to a little longer length than required length. (Use tube cutter “TK-1”, “TK-2” or “TK-3”.)
②Push the tube in until it comes to the end of the barb portion, or it may cause air leakage or release hose.

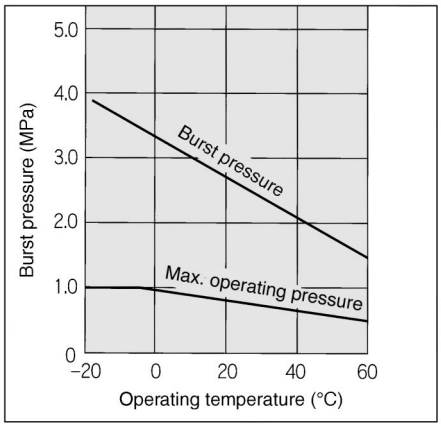
Polyurethane Tubing

Series TU, TIUB



For general air pressure tubing
Orange color now becomes standard
100m roll available for all color types

Burst Pressure Characteristics Curve



Series Table

●: 20m roll ☐: 100m roll

	Tube size									
	Metric size (Series TU)					Inch size (Series TIUB)				
Model	TU0425	TU0604	TU0805	TU1065	TU1208	TIUB01	TIUB05	TIUB07	TIUB11	TIUB13
Tube O.D. (mm)	4	6	8	10	12	3.18	4.76	6.35	9.53	12.7
Tube I. D. (mm)	2.5	4	5	6.5	8	2	3.18	4.23	6.35	8.46
Black (B)	●	●	●	●	●	●	●	●	●	●
White (W)	●	●	●	●	●	●	●	●	●	●
Red (R)	●	●	●	●	●	●	●	●	●	●
Blue (BU)	●	●	●	●	●	●	●	●	●	●
Yellow (Y)	●	●	●	●	●	●	●	●	●	●
Green (G)	●	●	●	●	●	●	●	●	●	●
Clear (C)	●	●	●	●	●	●	●	●	●	●
Orange (YR)	●	●	●	●	●	●	●	●	●	●
	5/32"		5/16"			Nominal size (inch)				
						1/8"	3/16"	1/4"	3/8"	1/2"

Specifications

Fluid	Air, Water									
Max. operating pressure	0.8MPa at 20°C									
Burst prssure	Refer to pressure characteristics curve.									
Min. bending radius (mm)	10	15	20	27	35	10	15	23	27	35
Operating temperature	–20 to +60°C (Water: 0 to 40°C) (No freezing)									
Material	Polyurethane									

⚠Precautions

Be sure to read before handling.
Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.0-7 and 2.0-8 for more detailed precautions of every series.

⚠ Caution

①Applicable for general industry water. Consult SMC if using for other kinds of fluids. Surge pressure must be under the max. operating pressure. If exceeding that value, fitting may damaged and tubing may burst.

②The value of the max. operating pressure is at a temperature of 20°C. Refer to the burst pressure characteristics curve for other temperatures. Avoid abnormal temperature rises which may burst the tubing.

③The values of the min. bending radius is at a temperature of 20°C. Higher temperatures allows the tubing to bend more.

How to Order

TU0425 | BU | — | 20

Indication of tube model

Color indication

Symbol	Color
B	Black
W	White
R	Red
BU	Blue
Y	Yellow
G	Green
C	Clear
YR	Orange

Length per roll

Symbol	Roll size*
20	20m roll
100	100m roll

Made to Order

① 100m roll for Metric size (black, white, red, blue, yellow, green) and Inch size (black, white, red, blue, yellow, green)

Suffix "-X3" to the end of part number.
Ex.) TIUB01Y-100-X3
* Consult SMC in case of ø16.

② 20m roll for Inch size (except black and white)

Suffix "-X4" to the end of part number.
Ex.) TIUB01Y-20-X4

③ Longer roll length (black, white, red, blue, yellow, green)

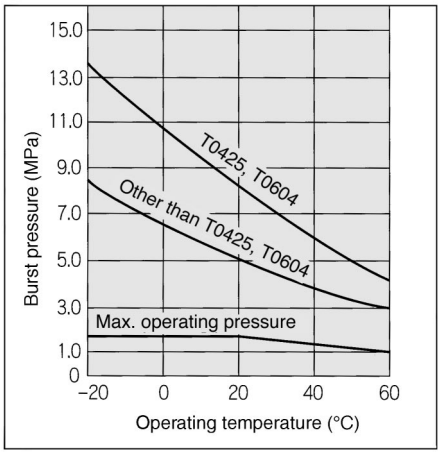
Suffix "-X3" to the end of part number.
Ex.) TU0425B-500-X3
* Available 150m for ø10, 200m for ø8, 500m for ø4 and ø6. Contact SMC for other lengths.

Nylon Tubing

Series T,TIA

For general air tubing
Nylon tubing

Burst Pressure Characteristics Curve



Series Table

●: 20m roll ☐: 100m roll

	Tube size												
	Metric size (Series T)								Inch size (Series TIA)				
Model	T0425	T0403	T0604	T0645	T0806	T1075	T1209	T1613	TIA01	TIA05	TIA07	TIA11	TIA13
Tube O.D. (mm)	4	4	6	6	8	10	12	16	3.18	4.76	6.35	9.53	12.7
Tube I. D. (mm)	2.5	3	4	4.5	6	7.5	9	13	2.18	3.48	4.57	6.99	9.56
Black (B)	●	●	●	●	●	●	●	●	●	●	●	●	●
White (W)	●	●	●	●	●	●	●	●	●	●	●	●	●
Red (R)	●	●	●	●	●	●	●						
Blue (BU)	●	●	●	●	●	●	●						
Yellow (Y)	●	●	●	●	●	●	●						
Green (G)	●	●	●	●	●	●	●						
	5/32"				5/16"				Nominal size (inch)				
									1/8"	3/16"	1/4"	3/8"	1/2"

Specifications

Fluid	Air, Water												
Max. operating pressure	1.5MPa at 20°C												
Burst pressure	Refer to burst pressure characteristics curve.												
Min. bending radius (mm)	13	25	24	36	48	60	75	100	15	20	30	60	75
Operating temp.	–20 to +60°C (Water: 0 to 40° C) (No freezing)												
Material	Nylon 12												

⚠Precautions

Be sure to read before handling.
Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.0-7 and 2.0-8 for more detailed precautions of every series.

⚠ Caution

①Applicable for general industrial water. Consult SMC if using for other kinds of fluid. Surge pressure must be under the max. operating pressure. If exceeding that value, fitting may be damaged and tubing may be burst.

②The value of the max. operating pressure is at a temperature of 20°C. Refer to the burst pressure characteristics curve for other temperatures. Avoid abnormal temperature rise which may burst the tubing.

③The values of the min. bending radius is at a temperature of 20°C and O.D. variable rate 10% max. In case that operating temperature is higher than 20°C, O.D. variable rate may be over 10% even if bending radius is within the specified range.

How to Order

T0425 | B | — | 20

Indication of tube model

Color indication

Symbol	Color
B	Black
W	White
R	Red
BU	Blue
Y	Yellow
G	Green

Length per roll

Symbol	Roll size*
20	20m roll
100	100m roll (Black and white only)

② 20m roll for Inch size (except black and white)

Suffix "-X4" to the end of part number.
Ex.) TIA01BU-20-X4

Made to Order

① 100m roll for Metric size (black, white, red, blue, yellow, green) and Inch size (black, white, red, blue, yellow, green)

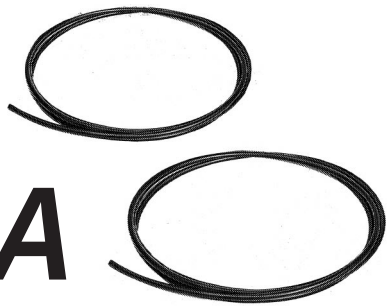
Suffix "-X3" to the end of part number.
Ex.) T0425R-100-X3
* Consult SMC in case of ø16.

③ Longer roll length (black, white, red, blue, yellow, green)

Suffix "-X3" to the end of part number.
Ex.) T0425B-500-X3
* Available 150m for ø10, 200m for ø8, 500m for ø4 and ø6. Contact SMC for other lengths.

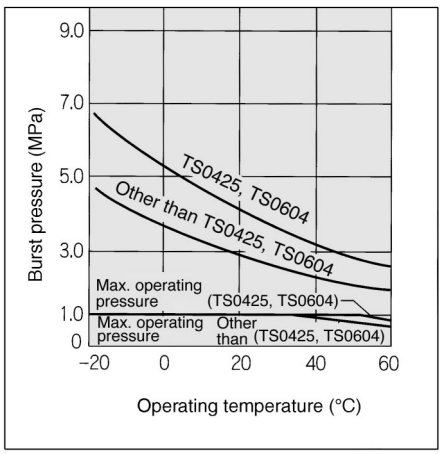
Soft Nylon Tubing

Series TS, TISA



For general air pressure Playable

Burst Pressure Characteristics Curve



Series Table

● : 20m roll ☐ : 100m roll

	Tube size										
	Metric size (Series TS)						Inch size (Series TISA)				
Model	**TS0425**	**TS0604**	**TS0806**	**TS1075**	**TS1209**	**TS1612**	**TISA01**	**TISA05**	**TISA07**	**TISA11**	**TISA13**
Tube O.D. (mm)	4	6	8	10	12	16	3.18	4.76	6.35	9.53	12.7
Tube I.D. (mm)	2.5	4	6	7.5	9	12	2.18	3.48	4.57	6.99	9.56
Black (B)	●	●	●	●	●	●	●	●	●	●	●
White (W)	●	●	●	●	●	●	●	●	●	●	●
Red (R)	●	●	●	●	●						
Blue (BU)	●	●	●	●	●						
Yellow (Y)	●	●	●	●	●						
Green (G)	●	●	●	●	●						
	5/32"		5/16"				Nominal size (inch)				
							1/8"	3/16"	1/4"	3/8"	1/2"

Specifications

Fluid	Air										
Max. operating pressure	1.0MPa at 20°C										
Burst prssure	Refer to pressure characteristics curve.										
Min. bending radius (mm)	12	15	23	27	31	60	12	15	23	30	40
Operating temperature	–20 to +60°C (No freezing)										
Material	Nylon 12										

⚠Precautions

Be sure to read before handling.
Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.0-7 and 2.0-8 for more detailed precautions of every series.

⚠ Caution

①Use nylon or polyurethane tubing for general industry water. If using soft-nylon tubing, air leakage or tubing coming out caused by the contraction may occur.

②The value of the max. operating pressure is at a temperature of 20°C. Refer to the burst pressure characteristics curve for other temperatures. Avoid abnormal temperature rises which may burst the tubing.

③The value of the min. bending radius is at a temperature of 20°C and O.D. variable rate 10% max. In case that operating temperature is higher than 20°C, O.D. variable rate may be over 10% even if bending radius is within the specified range.

How to Order

TS0604 W — 100

Indication of tube model

Color indication

Symbol	Color
B	Black
W	White
R	Red
BU	Blue
Y	Yellow
G	Green

Length per roll

Symbol	Roll size*
20	20m roll
100	100m roll (Black and white only)

② 20m roll for Inch size (except black and white)

Suffix "-X4" to the end of part number.
Ex.) TISA01BU-20-X4

Made to Order

① 100m roll for Metric size (black, white, red, blue, yellow, green) and Inch size (black, white, red, blue, yellow, green)

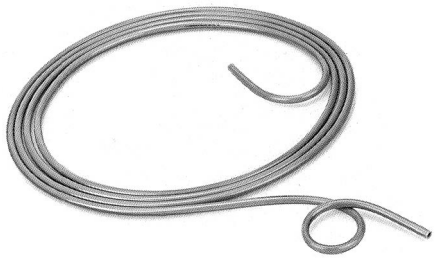
Suffix "-X3" to the end of part number.
Ex.) TS0604BU-100-X3
* Consult SMC in case of ø16.

③ Longer roll length (black, white, red, blue, yellow, green)

Suffix "-X3" to the end of part number.
Ex.) TS425B-500-X3
* Available 150m for ø10, 200m for ø8, 500m for ø4 and ø6. Contact SMC for other lengths.

Soft Polyurethane Tubing

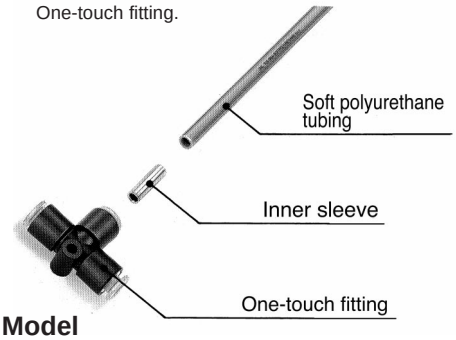
Series TUS



Suitable for piping in confined spaces
Extremely flexible
Soft Polyurethane Tubing

TUS related accessories
Inner Sleeve
Series TJ

Reinforces soft polyurethane tubing.
Insert an inner sleeve into soft polyurethane tubing when used with a One-touch fitting.



Model

Part No.	Applicable tube model	Length
TJ-0425	TUS0425	18
TJ-0604	TUS0604	19
TJ-0805	TUS0805	20.5
TJ-1065	TUS1065	23
TJ-1208	TUS1208	24

Specifications

Material	C2700T (Nickel plated)
Wall thickness	0.2mm

⚠Precautions

Be sure to read before handling.
Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.0-7 and 2.0-8 for more detailed precautions of every series.

⚠ Caution

①Use nylon or polyurethane tubing for general industry water to prevent the tubing from coming out or bursting due to possibility of surge pressure generation.
②The value of the max. operating pressure is at a temperature of 20°C. Refer to the burst pressure characteristics curve for other temperatures. Avoid abnormal temperature rise which may burst the tubing.
③The value of the min. bending radius is at a temperature of 20°C. Higher temperatures allows the tubing to bend more.
④Use inner sleeve taking the removing force into consideration when used with One-touch fittings.

Series Table

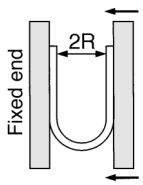
● : 20m roll ☐ : 100m roll

Model	TUS0425	TUS0604	TUS0805	TUS1065	TUS1208
Tube O.D. (mm)	4	6	8	10	12
Tube I.D. (mm)	2.5	4	5	6.5	8
Black (B)	●	●	●	●	●
White (W)	☐	☐	☐	☐	☐
Red (R)	☐	☐	☐	☐	☐
Blue (BU)	●	●	●	●	●
Yellow (Y)	☐	☐	☐	☐	☐
Green (G)	☐	☐	☐	☐	☐
Opaque (N) (1)	☐	☐	☐	☐	☐
Yellow brown (YB)	☐	☐	☐	☐	☐

Specifications

Fluid		Air				
Max. operating pressure		0.6MPa at 20°C				
Burst pressure		Refer to burst pressure characteristics curve.				
Applicable tube fitting		One-touch fitting, Insert tube fitting, Hose nipple (3)				
Min. bending radius (mm) (2)		8	15	15	22	29
Operating temperature		–20 to +60°C (No freezing)				
Material		Polyurethane				
Tube drawing strenght N (Using One-touch fitting)	Without inner sleeve	15	60	60	85	110
	With inner sleeve	80	230	250	300	480

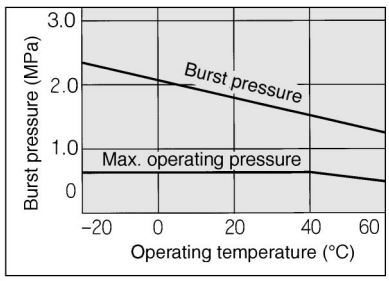
Note1) Not clear but opaque due to material.
Note2) Min. bending radius is measured as shown in the figure below.



Bend the tube into U-form at a temperature of 20°C.
Fix one end and close loop gradually. Measure 2R when the tube breaks or is crushed.

Note3) Always use inner sleeve (Series TJ) in safety circuit or critical area.

Burst Pressure Characteristics Curve



How to Order

TUS1065 | B | — | 100

Indication of tube model

Color indication

Symbol	Color
B	Black
W	White
R	Red
BU	Blue
Y	Yellow
G	Green
N	Opaque
YB	Yellow brown

Length per roll

Symbol	Roll size
20	20m roll
100	100m roll (Black, Blue only)

Accessories/Tools

Multi-tube Holder

Series TM

Easy arrangement of tubing

Easy loading and firm holding of tube

Possible to separate options depending on number of connecting tubes

Use of flame resistance resin (V-0)

Applicable Tubing

Tube material	Nylon, Soft nylon, Polyurethane
Tube O.D.	ø4, ø6, ø8, ø10, ø12

Specifications

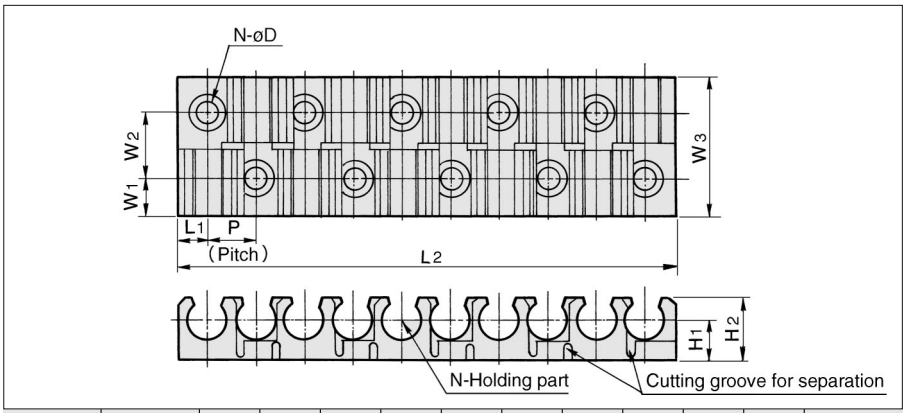
Ambient temperature	–20 to 60°C
Material	Flame resistance polypropylene (UL-94 standard, V-0)
Color	Black
Accessories	For mounting Cross recessed head countersunk tapping screw (Black zinc chromate treatment)

Part No.	Size (Nominal X Length)	No. of tubings
TM-04	2 X 6	4
TM-06	2.6 X 8	
TM-08		
TM-10	3 X 8	
TM-12		

Model

Tube O.D. (mm)	Part No.	No. of connecting tubes (MAX.)		
		6	8	12
4	**TM-04**			●
6	**TM-06**			●
8	**TM-08**		●	
10	**TM-10**	●		
12	**TM-12**	●		

Multi-tube Holder/Dimensions



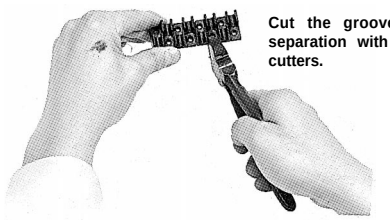
Tube O.D. (mm)	Model	N (No. of holding parts)	P	L1	L2	W1	W2	W3	H1	H2	øD	Mounting screw Nominal X Length
4	**TM-04**	12	6	3.25	72.5	4.5	8	17	5	7.5	2.2	2 X 6
6	**TM-06**	12	7.5	4.5	91.5	5.5	10	21	6.5	10	2.8	2.6 X 8
8	**TM-08**	8	9.5	5.5	77.5	6	11	23	7.5	12	2.8	2.6 X 8
10	**TM-10**	6	12.5	7.5	77.5	6.5	12	25	8.8	14.3	3.2	3 X 8
12	**TM-12**	6	15	9	93	6.5	12	25	9.8	16.3	3.2	3 X 8

How to Use

⚠ Caution

①Cut the multi-tube holder depending on number of tubes to be connected.

<Cutting method>



Cut the groove for separation with side cutters.

②Install the multi-tube holder to equip-ment by use of the phillips head recessed, countersunk tapping screw.

③Lay the tube across the gripper and push on the tube.

④For removing the tubes, pull up the tubes from the gripper.

Multi-holder

Series TMA

Can be used to secure the KE□series exhaust valve with One-touch fitting

One-touch fitting can also be secured.
Union tee: KQT
Elbow: KQL
Straight: KQH

Depending on the number of holders required, they can be separated as desired (align the cutter with the cutting groove and cut the holder)

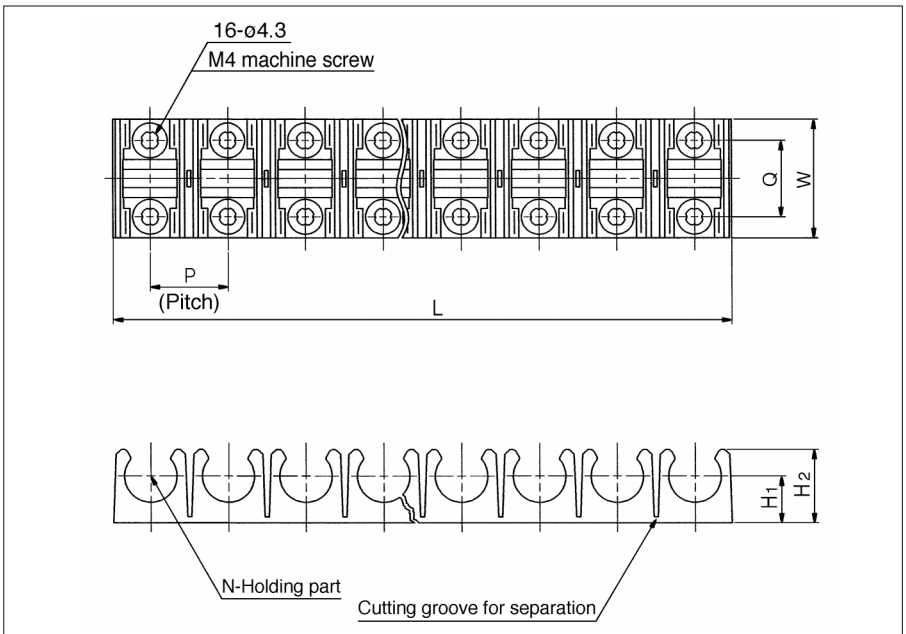
Specifications

Ambient temperature (°C)	–20 to 60°C
Material	Flame resistance polypropylene (UL-94 standard V-0)
Color	Black

Model

Model	Number of tubes	Applicable exhaust valve	Applicable one touch fitting		
			Union tee	Union elbow	Straight union
TMA-06	**8**	**KEA06**	**KQT06-00**	**KQL06-00**	**KQH06-00**
		KEB06			
TMA-08	**8**	**KEA08**	**KQT08-00**	**KQL08-00**	**KQH08-00**
		KEB08			
		KEC-02			
TMA-10	**6**	**KEA-10**	**KQT10-00**	**KQL10-00**	**KQH10-00**
		KEB-10			
TMA-12	**6**	**KEA-12**	**KQT12-00**	**KQL12-00**	**KQH12-00**
		KEB-12			
		KEC-03			

Multi-holder/Dimensions



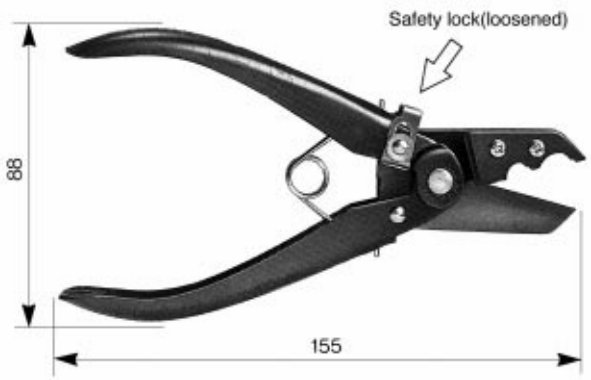
Tube O.D. (mm)	Model	P	L	W	H_1	H_2	Q
6	**TMA-06**	19	151	28	11.4	17.9	18.6
8	**TMA-08**	21.7	172.5	31.8	12.6	20.3	18.6
10	**TMA-10**	25.4	151.2	35	15	24.3	22
12	**TMA-12**	28.1	167.3	37	16.2	26.7	22

Tube Cutter

Series TK

Tube Cutter: TK-1

Perpendicular cutting
Reduced operating force
Enclosure/safety lock contained

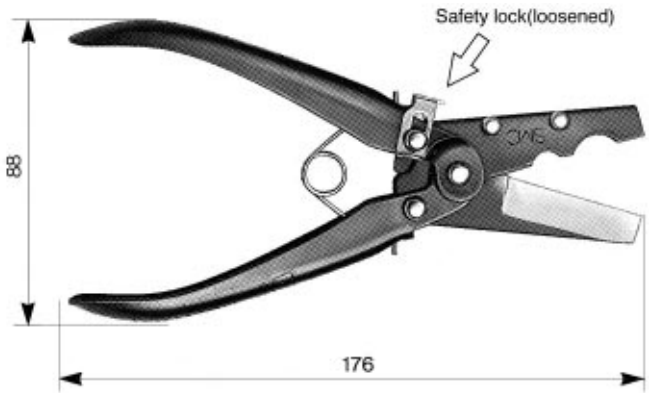


Note) Never cut metals such as electric wires.

Part No.	TK-1
Tube material	Nylon, soft nylon, polyurethane, and other soft plastic tube
Tube O.D.	13mm or less
Weight	140g

Tube Cutter: TK-2

Possible to cut a tube up to 18mm.



Note) Never cut metals such as electric wires.

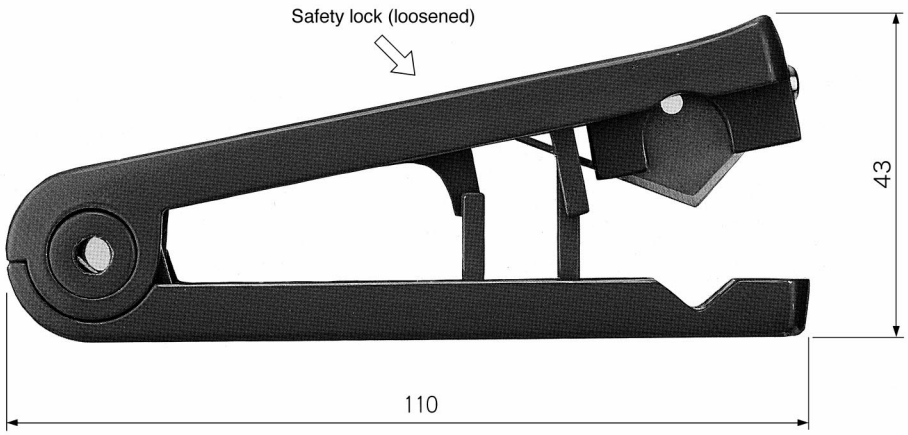
Part No.	TK-2
Tube material	Nylon, soft nylon, polyurethane, and other soft plastic tube
Tube O.D.	18mm or less
Weight	140g

Tube Cutter

Series TK

Tube Cutter: TK-3 (Useful type)

Safety lock contained.

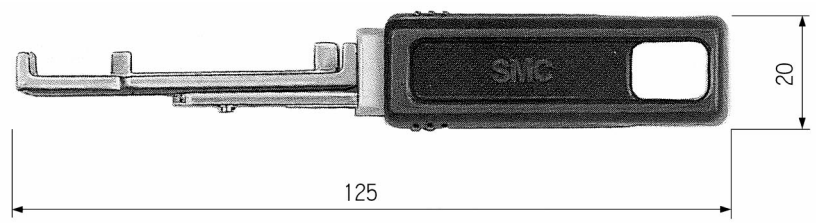


Note) Never cut metals such as electric wires.

Part No.	**TK-3**
Tube material	Nylon, soft nylon, polyurethane, and other soft plastic tube
Tube O.D.	12mm or less
Weight	32g

Accessories/Tools
Tube Releasing Tool
Series TG

- **For loading and unloading of tubes for One-touch fittings mounted in a narrow space or on manifolds.**
- **Easy one-hand operation**
- **Available for two sizes of applicable tubes. Easy exchange with one hand.**



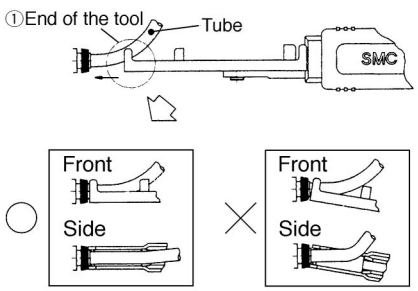
Part No.	Tube size		Tube material	Color	Weight
TG-1	Metric size	ø4, ø6	Nylon, Soft nylon, Polyurethane	Blue	33g
TG-2	Inch size	ø1/8", ø1/4"		Red	

How to Use

⚠ Caution

Process

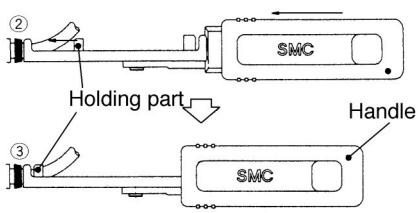
①Put the end of tool into the release button parallel to the tube.



②After inserting, grasp the handle tightly and insert the end of the tubing to the stroke end.

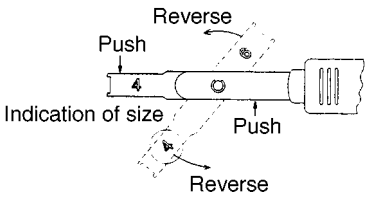
Note) Insert firmly to guard against accidental tube release.

③After inserting end of tube, relax your grip on the tool. Returning force of spring releases the tube.



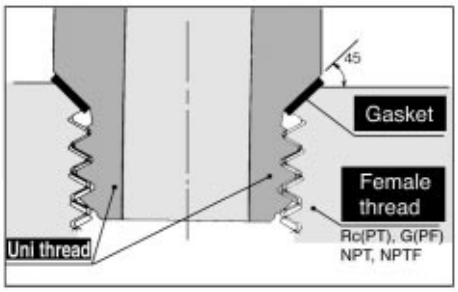
Size change

Push both sides at once to release. Reverse and fix at the same position as before. Applicable tube size is indicated on the back side.



Uni One-touch Fittings

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



Uni thread ridge shape

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

A ridge shape has been created as a Uni thread for common applications for Rc(PT), G(PF), NPT and NPTF

The male thread for piping drastically cuts piping man-hours

Applicable tubing /Metric size

Style	Model	Port size	Tube O.D. (mm)					
			ø4	ø6	ø8	ø10	ø12	ø16
Male connector	KQH	1/8	●	●	●	●		
		1/4	●	●	●	●	●	
		3/8		●	●	●	●	●
		1/2				●	●	●
Male elbow	KQL	1/8	●	●	●	●		
		1/4	●	●	●	●	●	
		3/8		●	●	●	●	●
		1/2				●	●	●
Branch tee	KQT	1/8	●	●	●	●		
		1/4	●	●	●	●	●	
		3/8		●	●	●	●	●
		1/2				●	●	●
Male run tee	KQY	1/8	●	●	●	●		
		1/4	●	●	●	●	●	
		3/8		●	●	●	●	●
		1/2				●	●	●
Branch "Y"	KQU	1/8	●	●	●			
		1/4	●	●	●	●	●	
		3/8		●	●	●	●	
		1/2				●	●	
Extended male elbow	KQW	1/8	●	●	●			
		1/4	●	●	●	●	●	
		3/8		●	●	●	●	
		1/2				●	●	
Hexagon socket head male connector	KQS	1/8	●	●	●	●		
		1/4		●	●	●	●	
		3/8			●	●	●	
		1/2				●	●	
45° Male elbow	KQK	1/8	●	●	●	●		
		1/4	●	●	●	●	●	
		3/8		●	●	●	●	
		1/2				●	●	
Universal male elbow	KQV	1/8	●	●	●			
		1/4		●	●	●		
		3/8			●	●	●	
		1/2					●	

Applicable tubing /Inch size

Style	Model	Port size	Tube O.D. (inch)						
			1/8	5/32	3/16	1/4	5/16	3/8	1/2
Male connector	KQH	1/8	●	●	●	●	●		
		1/4	●	●	●	●	●	●	●
		3/8				●	●	●	●
		1/2						●	●
Male elbow	KQL	1/8	●	●	●	●	●		
		1/4	●	●	●	●	●	●	●
		3/8				●	●	●	●
		1/2						●	●
Branch tee	KQT	1/8	●	●	●	●	●		
		1/4	●	●	●	●	●	●	●
		3/8				●	●	●	●
		1/2						●	●
Male run tee	KQY	1/8	●	●	●	●	●		
		1/4	●	●	●	●	●	●	●
		3/8				●	●	●	●
		1/2						●	●
Branch "Y"	KQU	1/8	●	●	●	●	●		
		1/4	●	●	●	●	●	●	●
		3/8				●	●	●	●
		1/2						●	●
Extended male elbow	KQW	1/8	●	●	●	●	●		
		1/4	●	●	●	●	●	●	●
		3/8				●	●	●	●
		1/2						●	●

* Refer to the catalog No. CAT. E505 for the details.