

## Tube Fitting Brass Series



High temp.  
environment



Anti-spatter



Die temp.  
control



Suited for

## Redesigned Brass Push-in Fittings

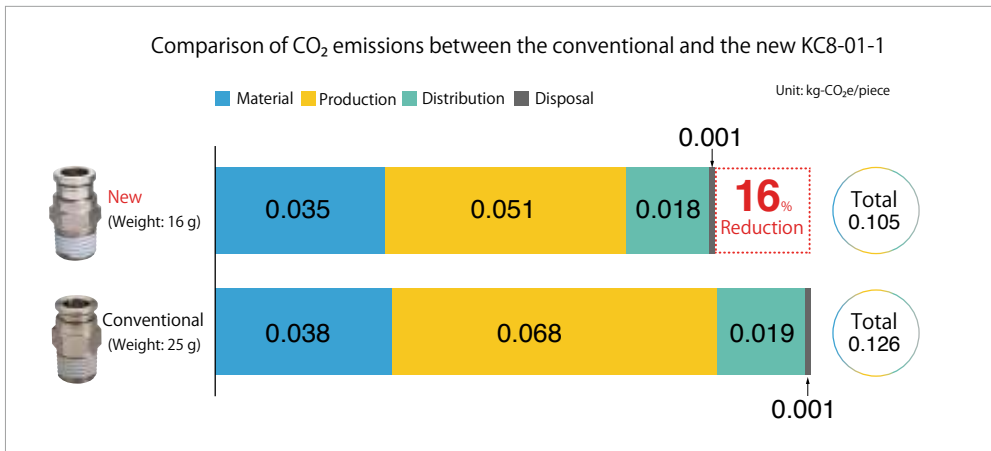
Lighter

More shapes

More sizes

Characteristics

# Lower CO<sub>2</sub> emissions compared to conventional models



\*) Citation: LCI Database IDEA version 3.3. IDEA Lab, The Research Institute of Science for Safety and Sustainability, National Institute of Advanced Industrial Science and Technology (AIST)

\*) The models used for CO<sub>2</sub> emissions calculation were selected with consideration of the shipping quantity and the weight reduction rate. Not all models of Tube Fitting Brass series have the equivalent reduction rate. Please note that CO<sub>2</sub> emissions and reduction rates vary by model.

## CO<sub>2</sub> emissions calculation of PISCO products (Carbon footprint)

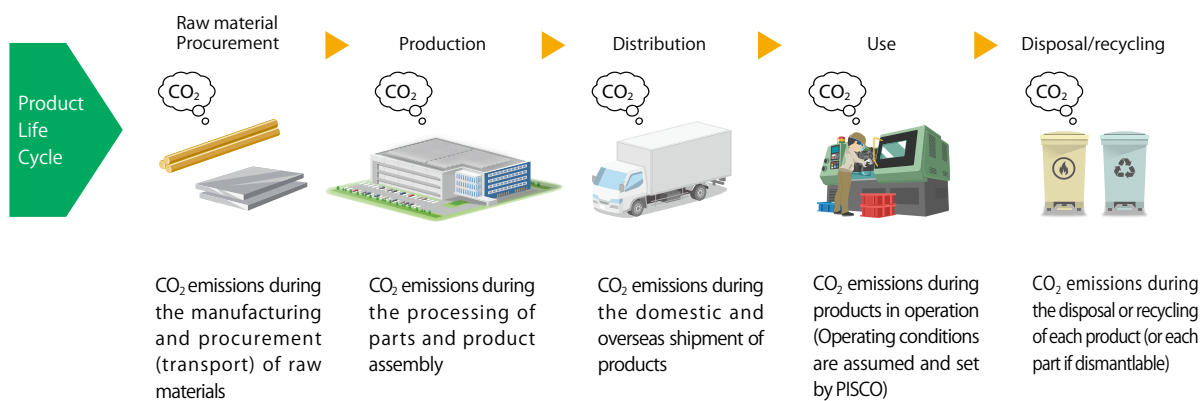
### How PISCO calculates CO<sub>2</sub> emissions of PISCO products

LCI (Life Cycle Inventory) database, which quantitatively assesses the amount of the energy consumed and the emissions of environmentally hazardous substances throughout the product life cycle (from raw material procurement, production, use, to disposal/recycling), is used to convert CO<sub>2</sub> emissions of PISCO products. Although the amount of CO<sub>2</sub> emissions varies depending on the calculation method and the database used, our calculation is based on our established calculation method and LCI database IDEA version 3.3 (IDEA Lab, The Research Institute of Science for Safety and Sustainability, National Institute of Advanced Industrial Science and Technology).

### Carbon footprint

A carbon footprint is a system to visualize the environmental impact of a product or service by converting the total amount of greenhouse gas emitted from the life cycle of a product or service from raw material procurement to its disposal or recycling into CO<sub>2</sub> emissions.

### Product life cycle



\*Each of the active masses mentioned above was calculated based on the actual values between October 2022 to September 2023.

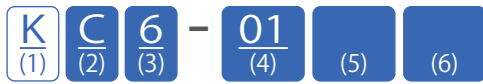
- Max. **47%** weight reduction is achieved with optimized shapes.
- Max. operating temperature is increased from 120°C to **150°C** for FKM specification.
- 9** new shapes including Unequal dia. type and Unequal Plug-in Straight type are added.



- More variations in sizes are achieved.  
Metric thread (M6 x 1, M6 x 0.75) and Tube O.D. inch size (dia. 1/4, 3/8, 1/2) are now available.
- The release-ring as well as the body is made of brass.
- Without cover type: recommended for use in high temp. environment or environment where robustness is required.
- With cover type: recommended for use in spatter generated environment.  
It is equipped with a release-ring cover to prevent malfunction of the release-ring due to spatter.
- Seal rubber material option is available.  
Seal rubber material (standard spec.: HNBR) can be changed to FKM depending on the applications.
- Release-ring cover to prevent malfunction of the release-ring is available (sold separately).

The entry of foreign objects into the clearance between the release-ring and the tube can be prevented.

Model designation (Example)



(1) Tube Fitting Brass

(2) Type

Code	Type	Code	Type	Code	Type	Code	Type	Code	Type
C	Straight	OC	Inner Hex. Straight	L	Elbow	LL	Long Elbow	H	Single Banjo
B	Branch Tee	D	Run Tee	CF	Female Straight	LF	Female Elbow	U	Union Straight
E	Union Tee	V	Union Elbow	Y	Union Y	M	Bulkhead Union	G	Unequal Union Straight
GJ	Unequal Plug-in Straight	IJ	Union Stem	IG	Unequal Union Stem	TJ	PT Jack	P	Plug

\*KTJ (PT Jack) cannot be connected to Tube Fitting Brass with cover or Tube Fitting Anti-spatter series.



(3) Tube dia. (øD)

Code	mm size					inch size		
	4	6	8	10	12	1/4	3/8	1/2
Tube O.D.	ø4 mm (ø5/32)	ø6 mm	ø8 mm (ø5/16)	ø10 mm	ø12 mm	ø1/4"	ø3/8"	ø1/2"



(4) Thread size (R)

Code	Metric thread			Taper pipe thread			
	M5	M6P0.75	M6	01	02	03	04
Size	M5x0.8	M6x0.75	M6x1	R1/8	R1/4	R3/8	R1/2

(5) Cover

Code	No code	-1
Cover	With cover	Without cover
		

(6) Seal rubber material (Optional)

Code	No code	-F
Material	HNBR	FKM
ID marking		

\*1. There is a marking of "F" on the surface of Release ring for FKM spec. There is no marking for HNBR spec.

\*2. The above illustrates a marking for ø6 mm Release ring.

## Specifications

Fluid medium	Air, Water (Conditional *1), Heat medium oil (Conditional *1)	
Max. operating pressure	1.0 MPa	
Max. vacuum	-100 kPa	
Operating temp. range	HNBR spec.	FKM spec.
	0 to 100°C (No freezing)	0 to 150°C (Conditional *2) (No freezing)

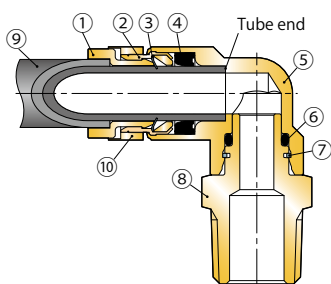
\*1. Be sure to follow the instruction below when the fluid medium is water or heat medium oil.

1. Surge pressure must be controlled lower than max. operating pressure when using water or heat medium oil as a fluid medium.
2. Tap water in Japan free from foreign substances or contamination can be used. Carry out the evaluation under an actual operating condition for using other kind of water.
3. Be sure to place Insert Ring (WR) into the tube edge when using water or heat medium oil as a fluid medium.

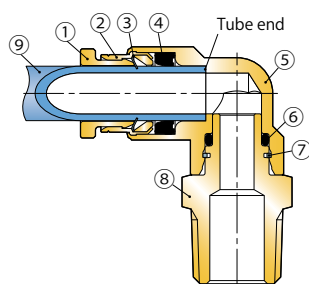
\*2. Be sure to use sealing tapes on the threads when using the product at a temperature of 120°C or above, as the sealing performance of Sealock may be compromised.

## Sectional drawing

■ Elbow type with cover (KL)



■ Elbow type without cover (KL-1)



No.	Parts	Material	
		With cover	Without cover
①	Release-ring	Nickel-plated brass	
②	Guide ring	Nickel-plated brass	
③	Lock claws	Stainless steel	
④	Elastic sleeve	HNBR (*2)	
⑤	Metallic body	Nickel-plated brass	
⑥	O ring	HNBR (*2)	
⑦	C ring	Stainless steel	
⑧	Thread body	Nickel-plated brass	
⑨	Tube	Anti-spatter	Nylon, Polyolefin, etc.
⑩	Cover	Nickel-plated brass	—

\*1. The gasket of Metric thread is SUS316 + FKM.

\*2. Seal rubber material can be changed to FKM according to the specification.

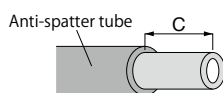
## ⚠ Detailed Safety Instructions

### ⚠ Warning

1. When the fluid medium is water or heat medium oil, do not use fittings unless the operating environment meets all the described specifications in the catalog. Otherwise, it may cause damage to the products, the escape of tubes and a fluid leakage.
2. Thread body of some types in Tube Fitting Brass series is rotatable. Do not rotate and swing it by force or continuously. It may cause damage to the products and a fluid leakage.
3. Select a seal rubber material considering sufficient margin to the operating temperature range. Seal rubber material can be worn out by heat and may cause a fluid leakage. Perform maintenance periodically and in case leaks are found, replace the product to the new one promptly.
4. Be sure to apply sealing tapes to the screw threads when using at a temperatures of 120° C or above. For use, wrap the tape leaving 1.5 to 2 threads from the end face of the screw.
5. Solidified heat medium oil on the release ring or the guide ring may cause trouble with its release/lock function. Make sure that heat medium oil does not adhere on the release ring and the guide ring when using the product. Also, make sure that the tube does not escape when re-inserting it into the product.

### ⚠ Caution

1. When using Anti-spatter Tube, peel the cover as shown in the following table. It may cause the escape of a tube, a fluid leakage or make it impossible to insert the tube into Push-In Fitting if the tube is not peeled properly.



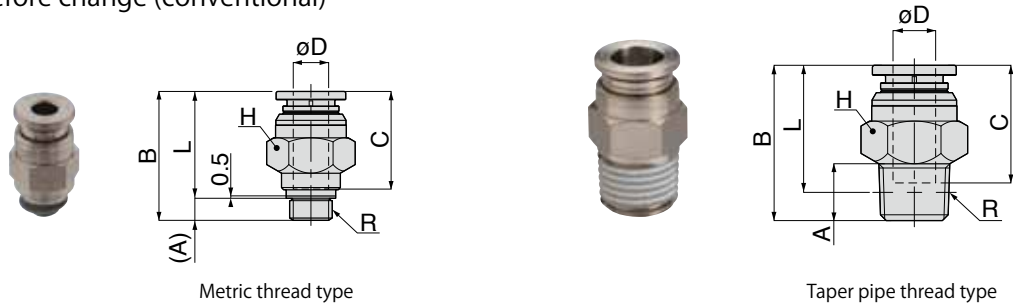
Fitting size (Tube O.D.)	φ4 mm	φ6 mm φ1/4 inch	φ8 mm	φ10 mm φ3/8 inch	φ12 mm φ1/2 inch
Peeled length (C)	15.5 mm	16.5 mm	17.5 mm	20 mm	23.5 mm

\*PISCO product "Tube Stripper for Anti-spatter Tube" can help you peel the cover easily.

2. Spatter may accumulate on the release ring when not using Anti-spatter Tubes. Consider using release ring covers as needed.

**KC** Straight (without cover)

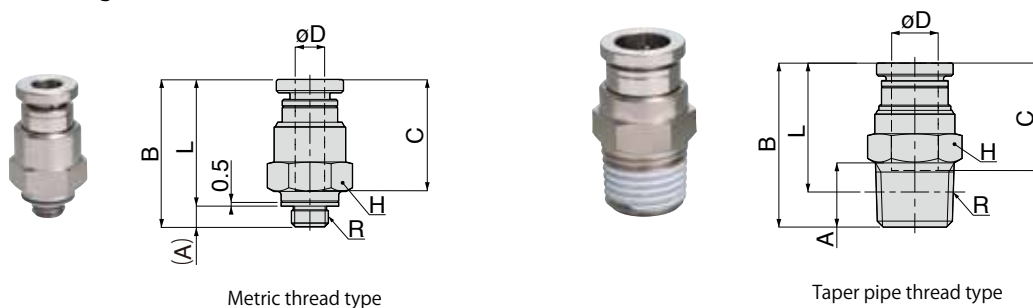
■ Before change (conventional)



Metric thread type

Taper pipe thread type

■ After change (new)



Metric thread type

Taper pipe thread type

Unit: mm

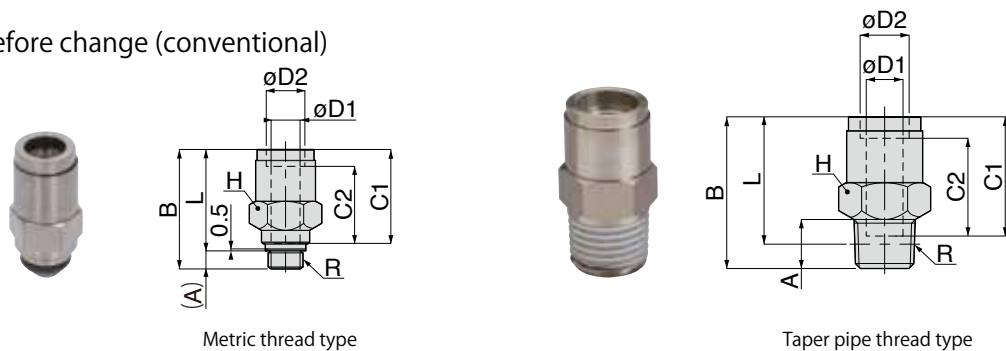
Model code	Tube O.D. øD	R	A		B		L		Tube end C		Hex. H		Weight (g)		Orifice (ø mm)	
			Before	After	Before	After	Before	After	Before	After	Before	After	Before	After		
KC4-M5-1(6)	4	M5x0.8	3	2.8	19.6	20	16.6	17.2	14.5	15.1	10	10	10	7	1.8	2.4
<b>New</b> KC4-M6P0.75-1(6)		M6x0.75	-	3.8	-	21	-	17.2	-	15.1	-	10	-	7	-	3
<b>New</b> KC4-M6-1(6)		M6x1	-	3.8	-	21	-	17.2	-	15.1	-	10	-	7	-	3
KC4-01-1(6)		R1/8	8	8	20.6	21.2	16.6	17.2	14.5	15.1	10	10	11	9	2.5	3
KC4-02-1(6)		R1/4	11	11	23.6	22.7	17.6	16.7	14.5	15.1	14	14	20	17	2.5	3
KC6-M5-1(6)	6	M5x0.8	3	2.8	22.6	22.1	19.6	19.3	16.6	17.2	12	12	15	10	1.8	2.4
<b>New</b> KC6-M6P0.75-1(6)		M6x0.75	-	3.8	-	23.1	-	19.3	-	17.2	-	12	-	10	-	3
<b>New</b> KC6-M6-1(6)		M6x1	-	3.8	-	23.1	-	19.3	-	17.2	-	12	-	11	-	3
KC6-01-1(6)		R1/8	8	8	22.2	22.5	18.2	18.5	16.6	17.2	12	12	13	10	4	5
KC6-02-1(6)		R1/4	11	11	26.2	23.9	20.1	17.8	16.6	17.2	14	14	22	15	4	5
KC6-03-1(6)	R3/8	12	12	26.2	24.7	19.8	18.3	16.6	17.2	17	17	32	30	4	5	
KC8-01-1(6)	8	R1/8	8	8	27.4	28.1	23.4	24.1	17.7	18.4	14	14	25	16	6	6
KC8-02-1(6)		R1/4	11	11	26.1	26.8	20.1	20.8	17.7	18.4	14	14	23	18	6	7
KC8-03-1(6)		R3/8	12	12	26.4	25.7	20.1	19.4	17.7	18.4	17	17	30	27	6	7
KC10-01-1(6)	10	R1/8	8	8	30.1	30.5	26.1	26.5	20	20.9	17	17	35	25	6	6
KC10-02-1(6)		R1/4	11	11	30.1	30	24.1	24	20	20.9	17	17	34	22	8	8.5
KC10-03-1(6)		R3/8	12	12	28.6	29.5	22.3	23.2	20	20.9	17	17	41	27	8	9
KC10-04-1(6)		R1/2	15	15	32.6	30.6	24.4	22.4	20	20.9	22	21	62	49	8	9
KC12-02-1(6)	12	R1/4	11	11	35.2	36.1	29.2	30.1	22.6	23.5	21	21	53	43	8.5	8.5
KC12-03-1(6)		R3/8	12	12	31.2	32.1	24.9	25.8	22.6	23.5	21	21	55	37	9	11
KC12-04-1(6)		R1/2	15	15	33.2	34.1	25	25.9	22.6	23.5	22	21	66	51	9	11

\*1. L dimension of Taper pipe thread type is a reference value after tightening thread.

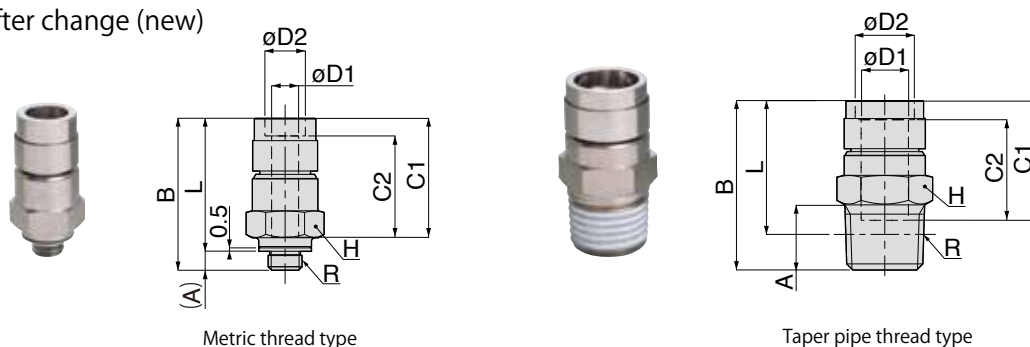
\*2. For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

**KC** Straight (with cover)

■ Before change (conventional)



■ After change (new)



Unit: mm

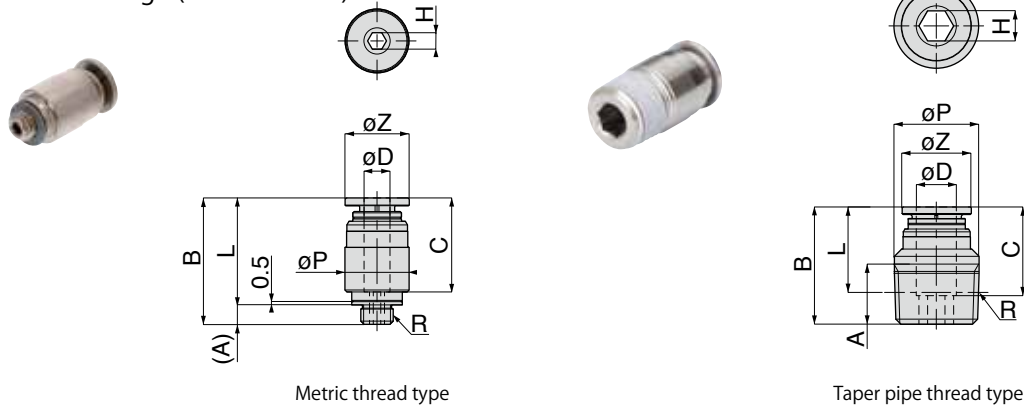
Model code	Tube O.D.		R	A		B		L		Tube end		Hex. H		Weight (g)		Orifice (ø mm)			
	øD1	øD2		Before	After	Before	After	Before	After	C1	C2	Before	After	Before	After	Before	After		
KC4-M5(6)	4	6	M5x0.8	3	2.8	22.7	22.5	19.7	19.7	17.6	15	10	10	12	8	1.8	2.4		
<b>New</b> KC4-M6P0.75(6)																			
<b>New</b> KC4-M6(6)																			
KC4-01(6)					R1/8	8	8	23.7	23.7	19.7	19.7	17.6	15	10	10	13	10	2.5	3
KC4-02(6)					R1/4	11	11	26.7	25.2	20.7	19.2	17.6	15	14	14	22	19	1.8	3
KC6-M5(6)	6	8	M5x0.8	3	2.8	25.5	24.4	22.5	21.6	19.5	16	12	12	17	12	-	2.4		
<b>New</b> KC6-M6P0.75(6)																			
<b>New</b> KC6-M6(6)																			
KC6-01(6)					R1/8	8	8	25.1	24.8	21.1	20.8	19.5	16	12	12	14	12	4	5
KC6-02(6)					R1/4	11	11	29.1	26.2	23	20.1	19.5	16	14	14	23	17	4	5
KC6-03(6)			R3/8	12	12	29.1	27	22.7	20.6	19.5	16	17	17	34	31	4	5		
KC8-01(6)	8	10	R1/8	8	8	29.9	29.9	25.9	25.9	20.2	17	14	14	27	18	6	6		
KC8-02(6)					R1/4	11	11	28.6	28.6	22.6	22.6	20.2	17	14	14	25	19	6	7
KC8-03(6)					R3/8	12	12	28.9	27.5	22.6	21.2	20.2	17	17	17	32	29	6	7
KC10-01(6)	10	12	R1/8	8	8	33.3	32.8	29.3	28.8	23.2	19.5	17	17	40	30	6	6		
KC10-02(6)					R1/4	11	11	33.3	32.3	27.3	26.3	23.2	19.5	17	17	39	27	8	8.5
KC10-03(6)					R3/8	12	12	31.8	31.8	25.5	25.5	23.2	19.5	17	17	46	32	8	9
KC10-04(6)					R1/2	15	15	35.8	32.9	27.6	24.7	23.2	19.5	22	21	67	54	8	9
KC12-02(6)	12	14	R1/4	11	11	38.9	38.9	32.9	32.9	26.3	23	21	21	61	51	8.5	8.5		
KC12-03(6)					R3/8	12	12	34.9	34.9	28.6	28.6	26.3	23	21	21	62	45	9	11
KC12-04(6)					R1/2	15	15	36.9	36.9	28.7	28.7	26.3	23	22	21	74	59	9	11

\*1. L dimension of Taper pipe thread type is a reference value after tightening thread.

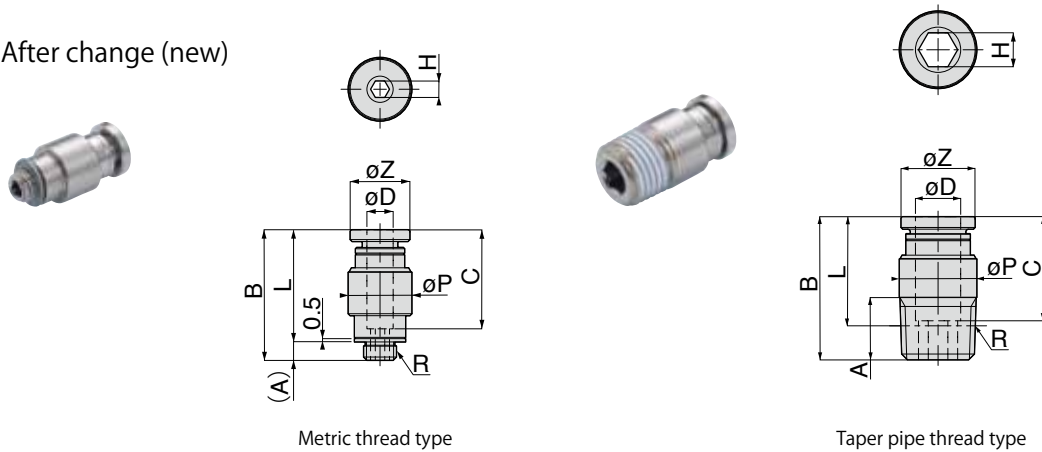
\*2. For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

**KOC** Inner Hex. Straight (without cover)

■ Before change (conventional)



■ After change (new)



Unit: mm

Model code	Tube O.D. øD	R	A		B		L		øP		Tube end C		øZ		Hex. H		Weight (g)		Orifice (ø mm)	
			Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
KOC4-M5-1(6)	4	M5x0.8	3	2.8	19.5	19.9	16.5	17.1	9.9	9.7	14.5	15.1	9.9	9.1	2	2.5	10	6	2.1	2.6
<b>New</b> KOC4-M6P0.75-1(6)		M6x0.75	-	3.8	-	20.9	-	17.1	-	9.7	-	15.1	-	9.1	-	2.5	-	7	-	2.6
<b>New</b> KOC4-M6-1(6)		M6x1	-	3.8	-	20.9	-	17.1	-	9.7	-	15.1	-	9.1	-	2.5	-	7	-	2.6
KOC4-01-1(6)		R1/8	8	8	20.6	20.2	16.6	16.2	9.9	9.7	14.5	15.1	9.9	9.1	2.5	2.5	11	8	2.6	2.6
KOC4-02-1(6)		R1/4	11	11	21.6	20.2	15.6	14.2	14	13.7	14.5	15.1	9.9	9.1	2.5	2.5	17	14	2.6	2.6
KOC6-M5-1(6)	6	M5x0.8	3	2.8	22.6	21.5	19.6	18.7	11.9	11.8	16.6	17.2	11.8	11.3	2	2.5	13	8	2.1	2.6
<b>New</b> KOC6-M6P0.75-1(6)		M6x0.75	-	3.8	-	22.5	-	18.7	-	11.8	-	17.2	-	11.3	-	3	-	8	-	3.2
<b>New</b> KOC6-M6-1(6)		M6x1	-	3.8	-	22.5	-	18.7	-	11.8	-	17.2	-	11.3	-	3	-	8	-	3.2
KOC6-01-1(6)		R1/8	8	8	22.2	22.3	18.2	18.3	11.9	11.8	16.6	17.2	11.8	11.3	4	4	12	10	4.1	4.2
KOC6-02-1(6)		R1/4	11	11	22.2	21.5	16.1	15.4	13.9	13.7	16.6	17.2	11.8	11.3	4	4	16	14	4.1	4.2
KOC6-03-1(6)	R3/8	12	12	23.2	21.5	16.8	15.1	16.9	16.8	16.6	17.2	11.8	11.3	4	4	25	23	4.1	4.2	
KOC8-01-1(6)	8	R1/8	8	8	27.4	26.1	23.4	22.1	13.9	13.7	17.7	18.4	13.8	13.1	5	5	18	11	5.1	5.3
KOC8-02-1(6)		R1/4	11	11	26.1	25.3	20.1	19.3	13.9	13.7	17.7	18.4	13.8	13.1	6	6	18	15	6.2	6.3
KOC8-03-1(6)		R3/8	12	12	23.4	22.4	17.1	16.1	16.9	16.8	17.7	18.4	13.8	13.1	6	6	24	21	6.2	6.3
KOC10-01-1(6)	10	R1/8	8	8	30.1	30.5	26.1	26.5	16.9	17.5	20	20.9	16.8	16.5	5	5	31	20	5.1	5.3
KOC10-02-1(6)		R1/4	11	11	29.1	30	23.1	24	16.9	17.5	20	20.9	16.8	16.5	6	6	28	24	6.2	6.3
KOC10-03-1(6)		R3/8	12	12	28.6	29.5	22.3	23.2	16.9	17.5	20	20.9	16.8	16.5	6	6	33	30	6.2	6.3
KOC10-04-1(6)		R1/2	15	15	29.6	30.5	21.4	22.3	20.8	20.8	20	20.9	16.8	16.5	6	6	51	49	6.2	6.3
KOC12-02-1(6)	12	R1/4	11	11	35.2	36.1	29.2	30.1	19.9	20.8	22.6	23.5	19.8	19.8	8	6	48	36	8.2	6.3
KOC12-03-1(6)		R3/8	12	12	31.2	32.1	24.9	25.8	20.8	20.8	22.6	23.5	19.8	19.8	8	8	41	37	8.2	8.4
KOC12-04-1(6)		R1/2	15	15	33.2	34.1	25	25.9	20.8	20.8	22.6	23.5	19.8	19.8	8	8	56	52	8.2	8.4

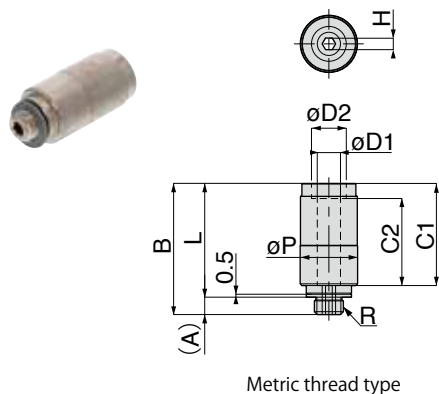
\*1. L dimension of Taper pipe thread type is a reference value after tightening thread.

\*2. For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

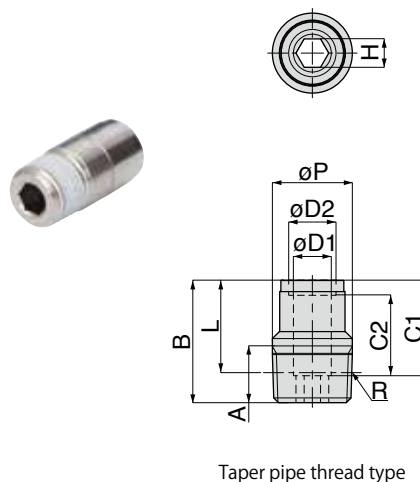


**KOC** Inner Hex. Straight (with cover)

■ Before change (conventional)

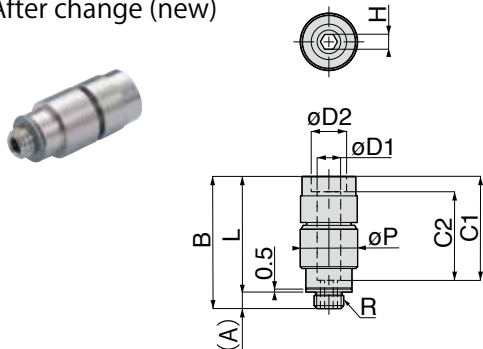


Metric thread type

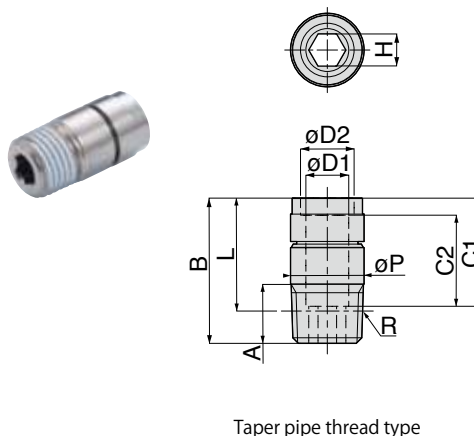


Taper pipe thread type

■ After change (new)



Metric thread type



Taper pipe thread type

Unit: mm

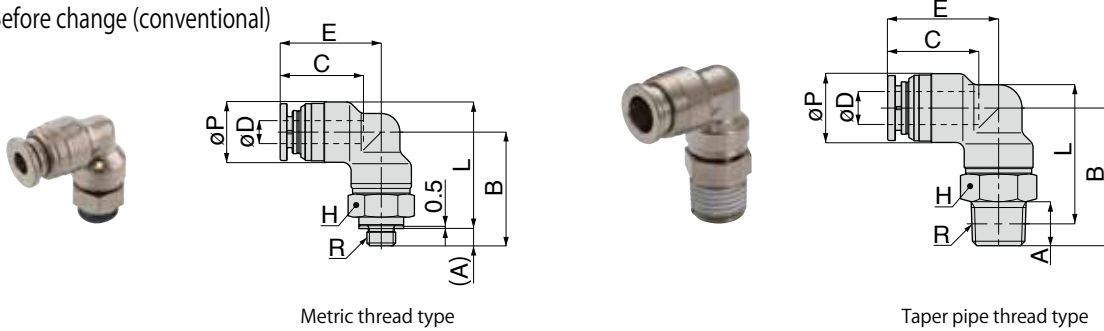
Model code	Tube O.D.		R	A		B		L		øP		Tube end		Hex. H		Weight (g)		Orifice (ø mm)	
	øD1	øD2		Before	After	Before	After	Before	After	Before	After	C1	C2	Before	After	Before	After	Before	After
KOC4-M5(6)	4	6	M5x0.8	3	2.8	22.5	22.4	19.6	19.6	9.9	9.7	17.6	15	2	2.5	11	7	2.1	2.6
KOC4-M6P0.75(6)			M6x0.75	-	3.8	-	23.4	-	19.6	-	9.7	17.6	15	-	2.5	-	8	-	2.6
KOC4-M6(6)			M6x1	-	3.8	-	23.4	-	19.6	-	9.7	17.6	15	-	2.5	-	8	-	2.6
KOC4-01(6)			R1/8	8	8	23.7	22.7	19.7	18.7	9.9	9.7	17.6	15	2.5	2.5	12	9	2.6	2.6
KOC4-02(6)			R1/4	11	11	24.7	22.7	18.7	16.7	14	13.7	17.6	15	2.5	2.5	19	15	2.6	2.6
KOC6-M5(6)	6	8	M5x0.8	3	2.8	25.5	23.8	22.5	21	11.9	11.8	19.5	16	2	2.5	15	9	2.1	2.6
KOC6-M6P0.75(6)			M6x0.75	-	3.8	-	24.8	-	21	-	11.8	19.5	16	-	3	-	10	-	3.2
KOC6-M6(6)			M6x1	-	3.8	-	24.8	-	21	-	11.8	19.5	16	-	3	-	10	-	3.2
KOC6-01(6)			R1/8	8	8	25.1	24.6	21.1	20.6	11.9	11.8	19.5	16	4	4	13	11	4.1	4.2
KOC6-02(6)			R1/4	11	11	25.1	23.8	19	17.7	13.9	13.7	19.5	16	4	4	18	15	4.1	4.2
KOC6-03(6)	R3/8	12	12	26.1	23.8	19.7	17.4	16.9	16.8	19.5	16	4	4	27	24	4.1	4.2		
KOC8-01(6)	8	10	R1/8	8	8	29.9	27.9	25.9	23.9	13.9	13.7	20.2	17	5	5	20	13	5.1	5.3
KOC8-02(6)			R1/4	11	11	28.6	27.1	22.6	21.1	13.9	13.7	20.2	17	6	6	20	16	6.2	6.3
KOC8-03(6)			R3/8	12	12	25.9	24.2	19.6	17.9	16.9	16.8	20.2	17	6	6	26	23	6.2	6.3
KOC10-01(6)	10	12	R1/8	8	8	33.3	32.8	29.3	28.8	16.9	17.5	23.2	19.5	5	5	35	25	5.1	5.3
KOC10-02(6)			R1/4	11	11	32.3	32.3	26.3	26.3	16.9	17.5	23.2	19.5	6	6	33	29	6.2	6.3
KOC10-03(6)			R3/8	12	12	31.8	31.8	25.5	25.5	16.9	17.5	23.2	19.5	6	6	38	35	6.2	6.3
KOC10-04(6)			R1/2	15	15	32.8	32.8	24.6	24.6	20.8	20.8	23.2	19.5	6	6	56	54	6.2	6.3
KOC12-02(6)	12	14	R1/4	11	11	38.9	38.9	32.9	32.9	19.9	20.8	26.3	23	8	6	56	44	8.2	6.3
KOC12-03(6)			R3/8	12	12	34.9	34.9	28.6	28.6	20.8	20.8	26.3	23	8	8	49	45	8.2	8.4
KOC12-04(6)			R1/2	15	15	36.9	36.9	28.7	28.7	20.8	20.8	26.3	23	8	8	64	60	8.2	8.4

\*1. L dimension of Taper pipe thread type is a reference value after tightening thread.

\*2. For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

**KL** Elbow (without cover)

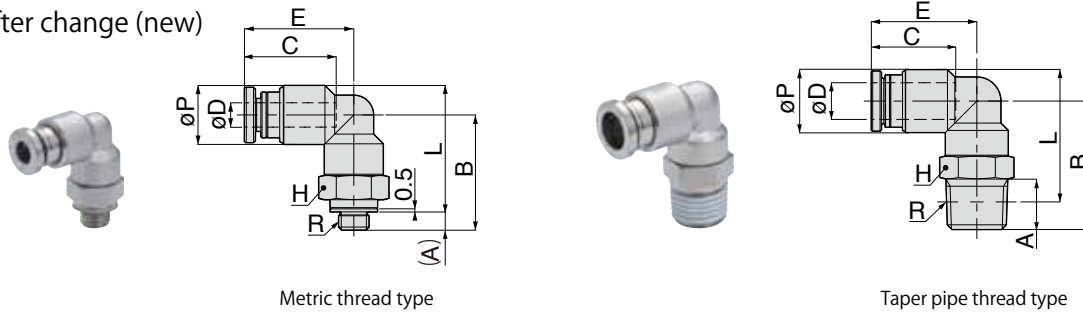
■ Before change (conventional)



Metric thread type

Taper pipe thread type

■ After change (new)



Metric thread type

Taper pipe thread type

Unit: mm

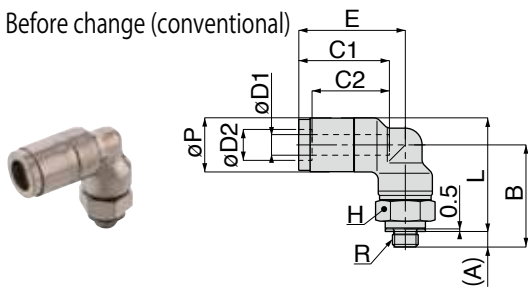
Model code	Tube O.D. $\phi D$	R	A	B		L		$\phi P$		Tube end C		E		Hex. H		Weight (g)		Orifice ( $\phi$ mm)
				Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	
KL4-M5-1(6)	4	M5x0.8	3	19.8	19	22.1	20.8	10.5	9.7	14.5	15.1	17.6	18	10	10	17	14	1.8
<b>New</b> KL4-M6P0.75-1(6)		M6x0.75	4	-	20	-	20.8	-	9.7	-	15.1	-	18	-	10	-	14	1.8
<b>New</b> KL4-M6-1(6)		M6x1	4	-	20	-	20.8	-	9.7	-	15.1	-	18	-	10	-	14	1.8
KL4-01-1(6)		R1/8	8	22.8	22	24.1	22.8	10.5	9.7	14.5	15.1	17.6	18	10	10	20	16	2.5
KL4-02-1(6)		R1/4	11	25.8	25	23.8	23.8	10.5	9.7	14.5	15.1	17.6	18	14	14	29	21	2.5
KL6-M5-1(6)	6	M5x0.8	3	22	20.7	25.3	23.6	12.5	11.8	16.6	17.2	20.2	21	12	12	24	21	1.8
<b>New</b> KL6-M6P0.75-1(6)		M6x0.75	4	-	21.7	-	23.6	-	11.8	-	17.2	-	21	-	12	-	22	1.8
<b>New</b> KL6-M6-1(6)		M6x1	4	-	21.7	-	23.6	-	11.8	-	17.2	-	21	-	12	-	22	1.8
KL6-01-1(6)		R1/8	8	25	23.7	27.3	25.6	12.5	11.8	16.6	17.2	20.2	21	12	12	27	23	4
KL6-02-1(6)		R1/4	11	28	26.7	28.2	26.6	12.5	11.8	16.6	17.2	20.2	21	14	14	35	28	4
KL6-03-1(6)	R3/8	12	29.8	28.5	29.7	28.1	12.5	11.8	16.6	17.2	20.2	21	17	17	47	37	4	
KL8-01-1(6)	8	R1/8	8	28	25	31.3	27.9	14.5	13.7	17.7	18.4	22.3	23	14	14	34	30	6
KL8-02-1(6)		R1/4	11	31	28	32.2	28.8	14.5	13.7	17.7	18.4	22.3	23	14	14	40	33	6
KL8-03-1(6)		R3/8	12	32.8	29.8	33.7	30.3	14.5	13.7	17.7	18.4	22.3	23	17	17	53	43	6
KL10-01-1(6)	10	R1/8	8	32.5	27.5	37.8	32.3	18.5	17.5	20	20.9	26.1	27	17	17	62	55	6
KL10-02-1(6)		R1/4	11	35.5	30.5	38.7	33.2	18.5	17.5	20	20.9	26.1	27	17	17	64	53	8
KL10-03-1(6)		R3/8	12	36.5	31.5	39.4	33.9	18.5	17.5	20	20.9	26.1	27	17	17	73	53	8
KL10-04-1(6)		R1/2	15	39.5	34.5	40.6	35.1	18.5	17.5	20	20.9	26.1	27	22	21	99	75	8
KL12-02-1(6)	12	R1/4	11	37.5	31	42.2	35.4	21.5	20.8	22.6	23.5	29.7	30.6	21	21	100	79	8
KL12-03-1(6)		R3/8	12	38.5	32	42.9	36.1	21.5	20.8	22.6	23.5	29.7	30.6	21	21	106	84	9
KL12-04-1(6)		R1/2	15	41.5	35	44.1	37.2	21.5	20.8	22.6	23.5	29.7	30.6	22	21	121	95	9

\*1. L dimension of Taper pipe thread type is a reference value after tightening thread.

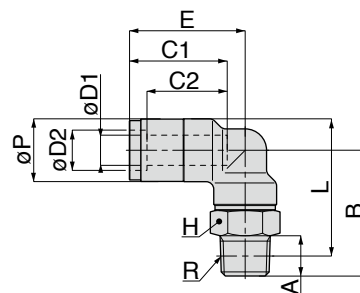
\*2. For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

**KL Elbow (with cover)**

■ Before change (conventional)

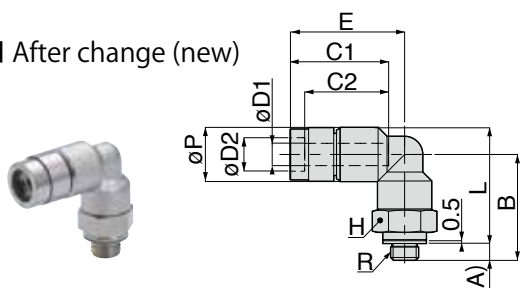


Metric thread type

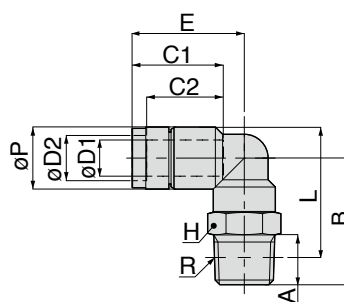


Taper pipe thread type

■ After change (new)



Metric thread type



Taper pipe thread type

Unit: mm

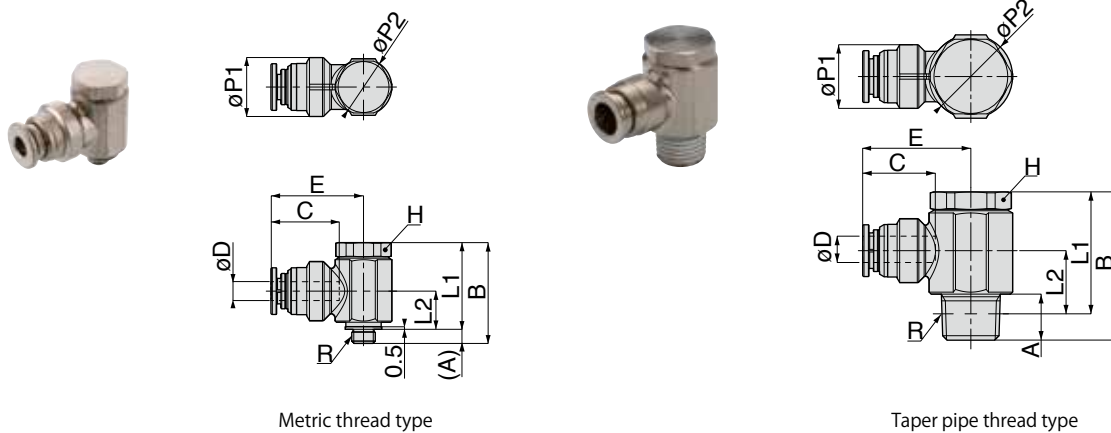
Model code	Tube O.D.		R	A	B		L		øP		Tube end		E		Hex. H		Weight (g)		Orifice (ø mm)
	øD1	øD2			Before	After	Before	After	Before	After	C1	C2	Before	After	Before	After	Before	After	
KL4-M5(6)	4	6	M5x0.8	3	19.8	19	22.1	20.8	10.5	9.7	17.6	15	20.7	20.5	10	10	18	15	1.8
<b>New</b> KL4-M6P0.75(6)			M6x0.75	4	-	20	-	20.8	-	9.7	17.6	15	-	20.5	-	10	-	16	1.8
<b>New</b> KL4-M6(6)			M6x1	4	-	20	-	20.8	-	9.7	17.6	15	-	20.5	-	10	-	15	1.8
KL4-01(6)			R1/8	8	22.8	22	24.1	22.8	10.5	9.7	17.6	15	20.7	20.5	10	10	21	17	2.5
KL4-02(6)			R1/4	11	25.8	25	25	23.8	10.5	9.7	17.6	15	20.7	20.5	14	14	31	22	2.5
KL6-M5(6)	6	8	M5x0.8	3	22	20.7	25.3	23.6	12.5	11.8	19.5	16	23.1	23.3	12	12	26	23	1.8
<b>New</b> KL6-M6P0.75(6)			M6x0.75	4	-	21.7	-	23.6	-	11.8	19.5	16	-	23.3	-	12	-	23	1.8
<b>New</b> KL6-M6(6)			M6x1	4	-	21.7	-	23.6	-	11.8	19.5	16	-	23.3	-	12	-	23	1.8
KL6-01(6)			R1/8	8	25	23.7	27.3	25.6	12.5	11.8	19.5	16	23.1	23.3	12	12	28	25	4
KL6-02(6)			R1/4	11	28	26.7	28.2	26.6	12.5	11.8	19.5	16	23.1	23.3	14	14	36	29	4
KL6-03(6)	R3/8	12	29.8	28.5	29.7	28.1	12.5	11.8	19.5	16	23.1	23.3	17	17	49	39	4		
KL8-01(6)	8	10	R1/8	8	28	25	31.3	27.9	14.5	13.7	20.2	17	24.8	24.8	14	14	36	32	6
KL8-02(6)			R1/4	11	31	28	32.2	28.8	14.5	13.7	20.2	17	24.8	24.8	14	14	41	35	6
KL8-03(6)			R3/8	12	32.8	29.8	33.7	30.3	14.5	13.7	20.2	17	24.8	24.8	17	17	55	44	6
KL10-01(6)	10	12	R1/8	8	32.5	27.5	37.8	32.3	18.6	17.5	23.2	19.5	29.3	29.3	17	17	67	55	6
KL10-02(6)			R1/4	11	35.5	30.5	38.8	33.2	18.6	17.5	23.2	19.5	29.3	29.3	17	17	69	58	8
KL10-03(6)			R3/8	12	36.5	31.5	39.5	33.9	18.6	17.5	23.2	19.5	29.3	29.3	17	17	78	58	8
KL10-04(6)			R1/2	15	39.5	34.5	40.6	35.1	18.6	17.5	23.2	19.5	29.3	29.3	22	21	104	80	8
KL12-02(6)	12	14	R1/4	11	37.5	31	42.3	35.4	21.6	20.8	26.3	23	33.4	33.4	21	21	107	87	8
KL12-03(6)			R3/8	12	38.5	32	43	36.1	21.6	20.8	26.3	23	33.4	33.4	21	21	113	92	9
KL12-04(6)			R1/2	15	41.5	35	44.1	37.2	21.6	20.8	26.3	23	33.4	33.4	22	21	129	103	9

\*1. L dimension of Taper pipe thread type is a reference value after tightening thread.

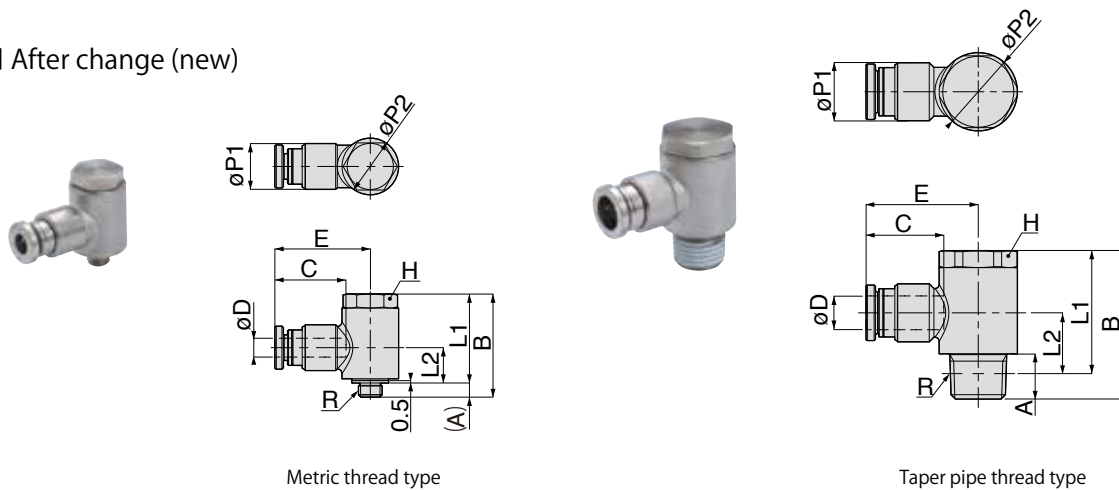
\*2. For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

**KH** Single Banjo (without cover)

■ Before change (conventional)



■ After change (new)



Unit: mm

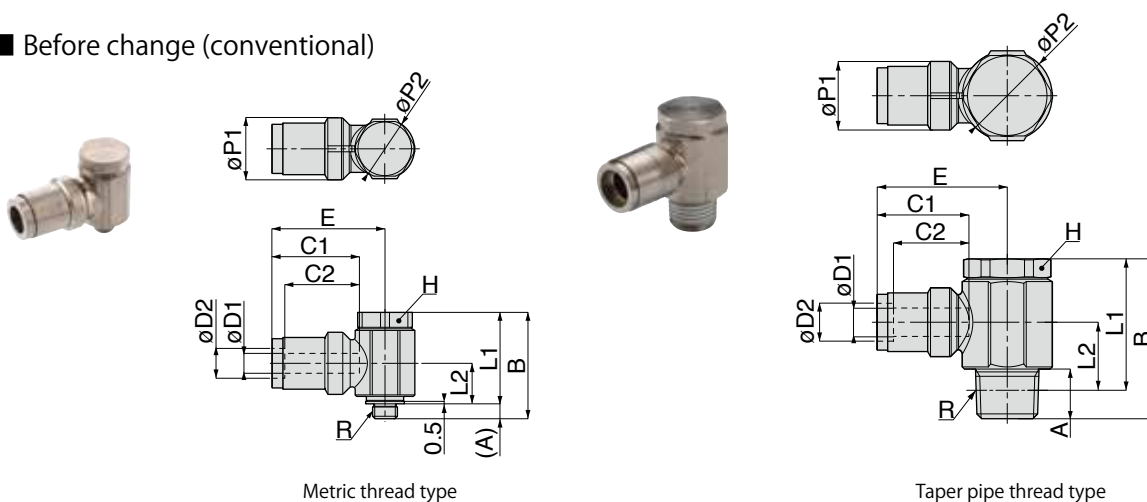
Model code	Tube O.D. $\phi D$	R	A		B		L1		L2		$\phi P1$		$\phi P2$		Tube end C		E		Hex. H		Weight (g)		Orifice ( $\phi$ mm)
			Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After			
			KH4-M5-1(6)	4	M5x0.8	3	3	21.4	21.9	18.4	18.9	8.1	7.5	12.5	9.7	12	12	14.5	15.1	19.7	20.3	11	
KH4-01-1(6)	R1/8	8	8		27.8	28.2	23.8	24.2	11.6	11.1	12.5	9.7	16	15.5	14.5	15.1	21.7	22.3	14	14	37	33	2.5
KH6-M5-1(6)	6	M5x0.8	3	3	21.4	21.9	18.4	18.9	8.1	7.5	12.5	11.8	12	12	16.6	17.2	21.2	21.8	11	10	24	22	1.8
KH6-01-1(6)		R1/8	8	8	27.8	28.2	23.8	24.2	11.6	11.1	12.5	11.8	16	15.5	16.6	17.2	23.2	23.8	14	14	37	35	4
KH6-02-1(6)		R1/4	10.5	10.5	33.8	35.1	27.8	29.1	14.4	14.4	14.5	11.8	19	18.5	16.6	17.2	24.7	25.3	17	17	57	56	4
KH6-03-1(6)		R3/8	12	12	38.8	38.9	32.5	32.6	16.8	16.4	14.5	11.8	22.5	22.5	16.6	17.2	26.4	27	21	21	89	86	4
KH8-01-1(6)	8	R1/8	8	8	27.8	28.2	23.8	24.2	11.6	11.1	14.5	13.7	16	15.5	17.7	18.4	24.4	25.1	14	14	40	36	5.6
KH8-02-1(6)		R1/4	10.5	10.5	33.8	35.1	27.8	29.1	14.4	14.4	14.5	13.7	19	18.5	17.7	18.4	25.9	26.6	17	17	57	57	6
KH8-03-1(6)		R3/8	12	12	38.8	38.9	32.5	32.6	16.8	16.4	14.5	13.7	22.5	22.5	17.7	18.4	27.6	28.3	21	21	89	87	6
KH10-02-1(6)	10	R1/4	10.5	10.5	33.8	35.1	27.8	29.1	14.4	14.4	18.5	17.5	19	18.5	20	20.9	28	28.7	17	17	68	65	7.6
KH10-03-1(6)		R3/8	12	12	38.8	38.9	32.5	32.6	16.8	16.4	21.5	17.5	22.5	22.5	20	20.9	29.8	30.4	21	21	107	95	8
KH10-04-1(6)		R1/2	13.1	15	41.6	43.6	33.4	35.4	16.9	18.5	21.5	17.5	27.5	26	20	20.9	32.3	33	27	24	158	125	8
KH12-03-1(6)	12	R3/8	12	12	38.8	38.9	32.5	32.6	16.8	16.4	21.5	20.8	22.5	22.5	22.6	23.5	32.4	33.3	21	21	111	104	9
KH12-04-1(6)		R1/2	13.1	15	41.6	43.6	33.4	35.4	16.9	18.5	21.5	20.8	27.5	26	22.6	23.5	34.9	35.9	27	24	162	133	9

\*1. L1 and L2 dimensions of Taper pipe thread type are reference values after tightening thread.

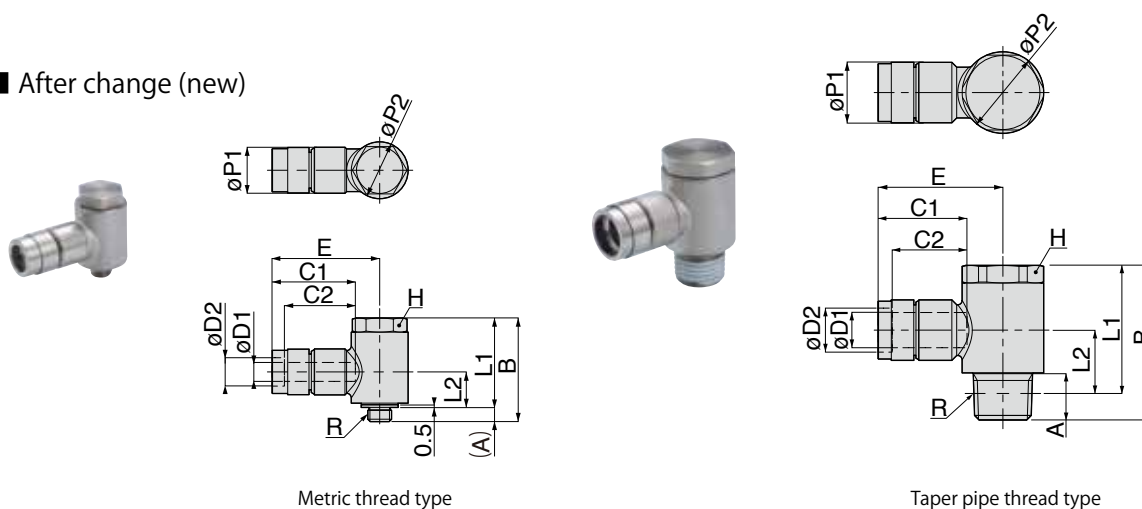
\*2. For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

**KH** Single Banjo (with cover)

■ Before change (conventional)



■ After change (new)



Unit: mm

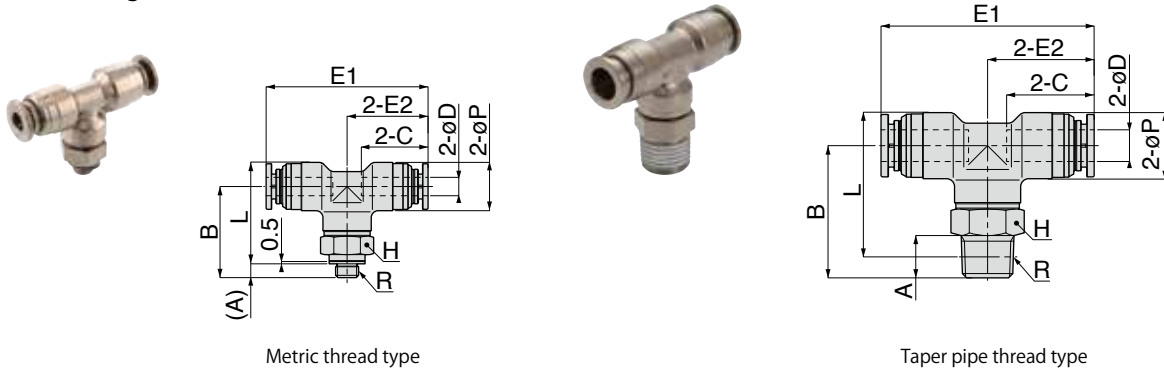
Model code	Tube O.D.		R	A		B		L1		L2		$\phi P1$		$\phi P2$		Tube end		E		Hex. H		Weight (g)		Orifice ( $\phi$ mm)
	$\phi D1$	$\phi D2$		Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	
				C1	C2	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After							
KH4-M5(6)	4	6	M5x0.8	3	3	21.4	21.9	18.4	18.9	8.1	7.5	12.5	9.7	12	12	17.6	15	22.8	22.8	11	10	25	22	1.8
KH4-01(6)			R1/8	8	8	27.8	28.2	23.8	24.2	11.6	11.1	12.5	9.7	16	15.5	17.6	15	24.8	24.8	14	14	39	34	2.5
KH6-M5(6)	6	8	M5x0.8	3	3	21.4	21.9	18.4	18.9	8.1	7.5	12.5	11.8	12	12	19.5	16	24.1	24.1	11	10	25	23	1.8
KH6-01(6)			R1/8	8	8	27.8	28.2	23.8	24.2	11.6	11.1	12.5	11.8	16	15.5	19.5	16	26.1	26.1	14	14	39	36	4
KH6-02(6)			R1/4	10.5	10.5	33.8	35.1	27.8	29.1	14.4	14.4	14.5	11.8	19	18.5	19.5	16	27.6	28.4	17	17	59	57	4
KH6-03(6)			R3/8	12	12	38.8	38.9	32.5	32.6	16.8	16.4	14.5	11.8	22.5	22.5	19.5	16	29.3	29.3	21	21	91	88	4
KH8-01(6)	8	10	R1/8	8	8	27.8	28.2	23.8	24.2	11.6	11.1	14.5	13.7	16	15.5	20.2	17	26.9	26.9	14	14	41	38	5.6
KH8-02(6)			R1/4	10.5	10.5	33.8	35.1	27.8	29.1	14.4	14.4	14.5	13.7	19	18.5	20.2	17	28.4	28.4	17	17	59	59	6
KH8-03(6)			R3/8	12	12	38.8	38.9	32.5	32.6	16.8	16.4	14.5	13.7	22.5	22.5	20.2	17	30.1	30.1	21	21	91	89	6
KH10-02(6)	10	12	R1/4	10.5	10.5	33.8	35.1	27.8	29.1	14.4	14.4	18.6	17.5	19	18.5	23.2	19.5	31.2	31	17	17	73	70	7.6
KH10-03(6)			R3/8	12	12	38.8	38.9	32.5	32.6	16.8	16.4	21.5	17.5	22.5	22.5	23.2	19.5	33	32.7	21	21	112	100	8
KH10-04(6)	12	14	R1/2	13.1	15	41.6	43.6	33.4	35.4	16.9	18.5	21.5	17.5	27.5	26	23.2	19.5	35.5	35.3	27	24	163	129	8
KH12-03(6)			R3/8	12	12	38.8	38.9	32.5	32.6	16.8	16.4	21.6	20.8	22.5	22.5	26.3	23	36.1	36.1	21	21	118	112	9
KH12-04(6)	12	14	R1/2	13.1	15	41.6	43.6	33.4	35.4	16.9	18.5	21.6	20.8	27.5	26	26.3	23	38.6	38.7	27	24	169	141	9

\*1. L1 and L2 dimensions of Taper pipe thread type are reference values after tightening thread.

\*2. For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

**KB** Branch Tee (without cover)

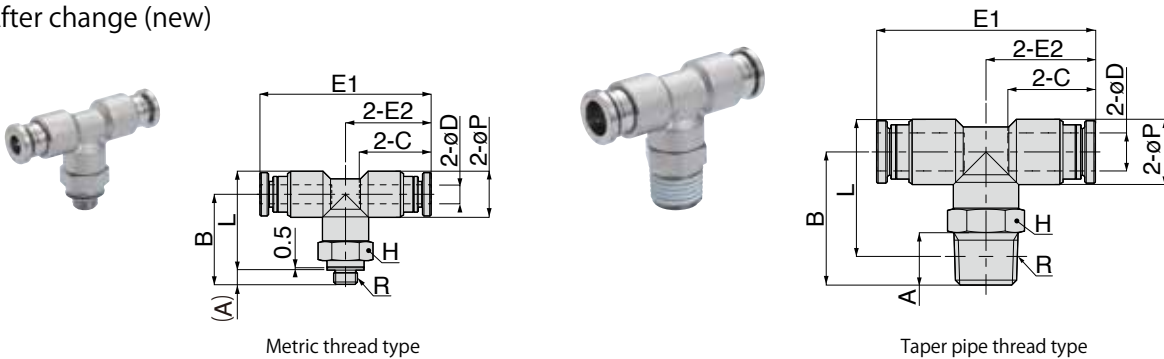
■ Before change (conventional)



Metric thread type

Taper pipe thread type

■ After change (new)



Metric thread type

Taper pipe thread type

Unit: mm

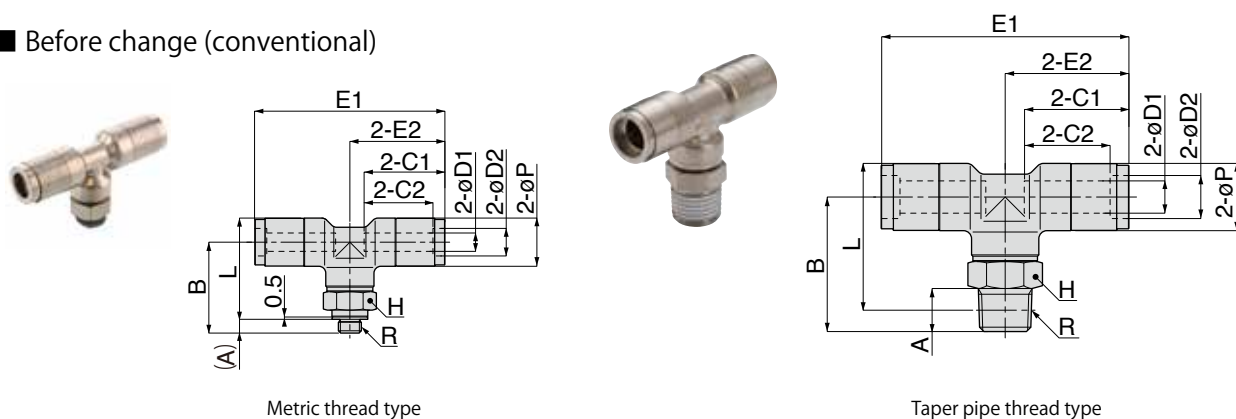
Model code	Tube O.D. øD	R	A	B		L		øP		Tube end C		E1		E2		Hex. H		Weight (g)		Orifice (ø mm)
				Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	
KB4-M5-1(6)	4	M5x0.8	3	19.8	19	22.1	20.8	10.5	9.7	14.5	15.1	35.2	36	17.6	18	10	10	23	19	1.8
KB4-01-1(6)		R1/8	8	22.8	22	24.1	22.8	10.5	9.7	14.5	15.1	35.2	36	17.6	18	10	10	26	21	2.5
KB4-02-1(6)		R1/4	11	25.8	25	25	23.8	10.5	9.7	14.5	15.1	35.2	36	17.6	18	14	14	35	26	2.5
KB6-M5-1(6)	6	M5x0.8	3	22	20.7	25.3	23.6	12.5	11.8	16.6	17.2	40.3	41.9	20.15	20.95	12	12	33	29	1.8
KB6-01-1(6)		R1/8	8	25	23.7	27.3	25.6	12.5	11.8	16.6	17.2	40.3	41.9	20.15	20.95	12	12	35	31	4
KB6-02-1(6)		R1/4	11	28	26.7	28.2	26.6	12.5	11.8	16.6	17.2	40.3	41.9	20.15	20.95	14	14	43	36	4
KB6-03-1(6)		R3/8	12	29.8	28.5	29.7	28.1	12.5	11.8	16.6	17.2	40.3	41.9	20.15	20.95	17	17	56	45	4
KB8-01-1(6)	8	R1/8	8	28	25	31.3	27.9	14.5	13.7	17.7	18.4	44.6	46	22.3	23	14	14	44	40	6
KB8-02-1(6)		R1/4	11	31	28	32.2	28.8	14.5	13.7	17.7	18.4	44.6	46	22.3	23	14	14	50	43	6
KB8-03-1(6)		R3/8	12	32.8	29.8	33.7	30.3	14.5	13.7	17.7	18.4	44.6	46	22.3	23	17	17	63	53	6
KB10-01-1(6)	10	R1/8	8	32.5	27.5	37.8	32.3	18.5	17.5	20	20.9	52.2	54	26.1	27	17	17	80	69	6
KB10-02-1(6)		R1/4	11	35.5	30.5	38.7	33.2	18.5	17.5	20	20.9	52.2	54	26.1	27	17	17	83	71	8
KB10-03-1(6)		R3/8	12	36.5	31.5	39.4	33.9	18.5	17.5	20	20.9	52.2	54	26.1	27	17	17	91	81	8
KB10-04-1(6)		R1/2	15	39.5	34.5	40.6	35.1	18.5	17.5	20	20.9	52.2	54	26.1	27	22	21	118	94	8
KB12-02-1(6)	12	R1/4	11	37.5	31	42.2	35.4	21.5	20.8	22.6	23.5	59.4	61.2	29.7	30.6	21	21	132	109	8
KB12-03-1(6)		R3/8	12	38.5	32	42.9	36.1	21.5	20.8	22.6	23.5	59.4	61.2	29.7	30.6	21	21	138	113	9
KB12-04-1(6)		R1/2	15	41.5	35	44.1	37.2	21.5	20.8	22.6	23.5	59.4	61.2	29.7	30.6	22	21	154	125	9

\*1. L dimension of Taper pipe thread type is a reference value after tightening thread.

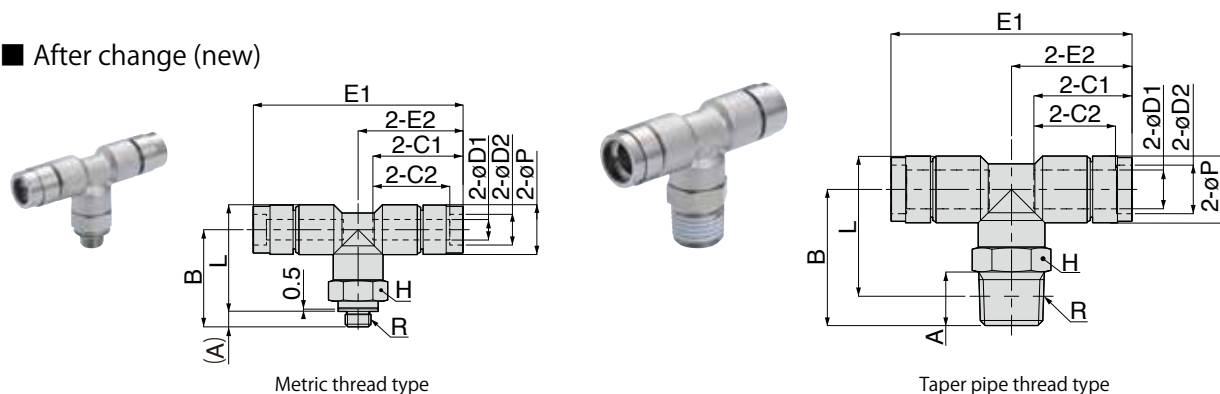
\*2. For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

**KB** Branch Tee (with cover)

■ Before change (conventional)



■ After change (new)



Unit: mm

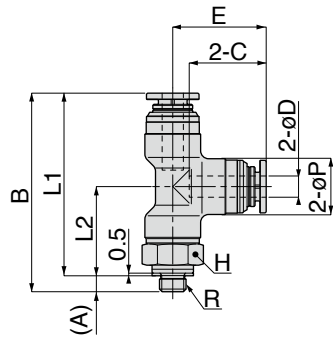
Model code	Tube O.D.		R	A	B		L		øP		Tube end		E1		E2		Hex. H		Weight (g)		Orifice (ø mm)
	øD1	øD2			Before	After	Before	After	Before	After	C1	C2	Before	After	Before	After	Before	After	Before	After	
KB4-M5(6)	4	6	M5x0.8	3	19.8	19	22.1	20.8	10.5	9.7	17.6	15	41.4	41	20.7	20.5	10	10	26	21	1.8
KB4-01(6)			R1/8	8	22.8	22	24.1	22.8	10.5	9.7	17.6	15	41.4	41	20.7	20.5	10	10	29	23	2.5
KB4-02(6)			R1/4	11	25.8	25	23.8	10.5	9.7	17.6	15	41.4	41	20.7	20.5	14	14	38	29	2.5	
KB6-M5(6)	6	8	M5x0.8	3	22	20.7	25.3	23.6	12.5	11.8	19.5	16	46.1	46.5	23.05	23.25	12	12	36	32	1.8
KB6-01(6)			R1/8	8	25	23.7	27.3	25.6	12.5	11.8	19.5	16	46.1	46.5	23.05	23.25	12	12	38	34	4
KB6-02(6)			R1/4	11	28	26.7	28.2	26.6	12.5	11.8	19.5	16	46.1	46.5	23.05	23.25	14	14	46	39	4
KB6-03(6)			R3/8	12	29.8	28.5	29.7	28.1	12.5	11.8	19.5	16	46.1	46.5	23.05	23.25	17	17	59	48	4
KB8-01(6)	8	10	R1/8	8	28	25	31.3	27.9	14.5	13.7	20.2	17	49.6	49.6	24.8	24.8	14	14	48	44	6
KB8-02(6)			R1/4	11	31	28	32.2	28.8	14.5	13.7	20.2	17	49.6	49.6	24.8	24.8	14	14	54	47	6
KB8-03(6)			R3/8	12	32.8	29.8	33.7	30.3	14.5	13.7	20.2	17	49.6	49.6	24.8	24.8	17	17	67	56	6
KB10-01(6)	10	12	R1/8	8	32.5	27.5	37.8	32.3	18.6	17.5	23.2	19.5	58.6	58.6	29.3	29.3	17	17	90	78	6
KB10-02(6)			R1/4	11	35.5	30.5	38.7	33.2	18.6	17.5	23.2	19.5	58.6	58.6	29.3	29.3	17	17	93	81	8
KB10-03(6)			R3/8	12	36.5	31.5	39.4	33.9	18.6	17.5	23.2	19.5	58.6	58.6	29.3	29.3	17	17	101	81	8
KB10-04(6)			R1/2	15	39.5	34.5	40.6	35.1	18.6	17.5	23.2	19.5	58.6	58.6	29.3	29.3	22	21	128	103	8
KB12-02(6)	12	14	R1/4	11	37.5	31	42.4	35.4	21.6	20.8	26.3	23	66.8	66.8	33.4	33.4	21	21	147	125	8
KB12-03(6)			R3/8	12	38.5	32	43	36.1	21.6	20.8	26.3	23	66.8	66.8	33.4	33.4	21	21	153	129	9
KB12-04(6)			R1/2	15	41.5	35	44.1	37.2	21.6	20.8	26.3	23	66.8	66.8	33.4	33.4	22	21	169	141	9

\*1. L dimension of Taper pipe thread type is a reference value after tightening thread.

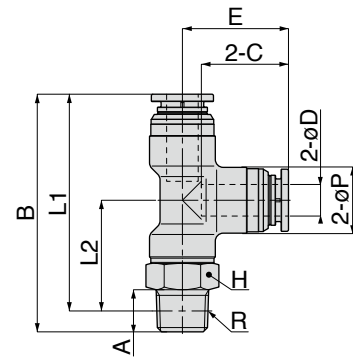
\*2. For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

**KD** Run Tee (without cover)

■ Before change (conventional)

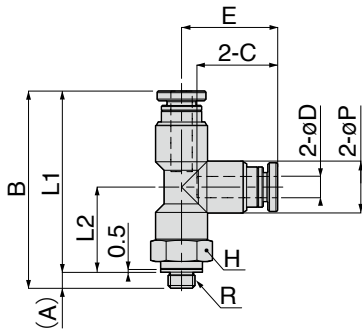


Metric thread type

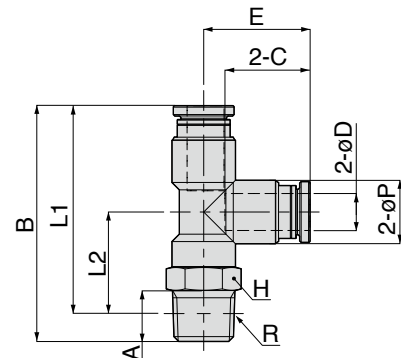


Taper pipe thread type

■ After change (new)



Metric thread type



Taper pipe thread type

Unit: mm

Model code	Tube O.D. øD	R	A	B		L1		L2		øP		Tube end C		E		Hex. H		Weight (g)		Orifice (ø mm)
				Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	
KD4-M5-1(6)	4	M5x0.8	3	37.4	37	34.4	34	16.8	16	10.5	9.7	14.5	15.1	17.6	18	10	10	23	19	1.8
KD4-01-1(6)		R1/8	8	40.4	40	36.4	36	18.8	18	10.5	9.7	14.5	15.1	17.6	18	10	10	26	20	2.5
KD4-02-1(6)		R1/4	11	43.4	43	37.4	36.9	19.8	18.9	10.5	9.7	14.5	15.1	17.6	18	14	14	35	26	2.5
KD6-M5-1(6)	6	M5x0.8	3	42.2	41.7	39.2	38.7	19	17.7	12.5	11.8	16.6	17.2	20.2	21	12	12	33	30	1.8
KD6-01-1(6)		R1/8	8	45.2	44.7	41.2	40.7	21	19.7	12.5	11.8	16.6	17.2	20.2	21	12	12	35	32	4
KD6-02-1(6)		R1/4	11	48.2	47.7	42.1	41.6	22	20.7	12.5	11.8	16.6	17.2	20.2	21	14	14	43	36	4
KD6-03-1(6)		R3/8	12	50	49.5	43.6	43.1	23.5	22.2	12.5	11.8	16.6	17.2	20.2	21	17	17	56	46	4
KD8-01-1(6)	8	R1/8	8	50.3	48	46.3	44	24	21	14.5	13.7	17.7	18.4	22.3	23	14	14	44	40	6
KD8-02-1(6)		R1/4	11	53.3	51	47.3	45	25	22	14.5	13.7	17.7	18.4	22.3	23	14	14	50	43	6
KD8-03-1(6)		R3/8	12	55.1	52.8	48.8	46.5	26.5	23.5	14.5	13.7	17.7	18.4	22.3	23	17	17	63	52	6
KD10-01-1(6)	10	R1/8	8	58.6	54.5	54.6	50.5	28.5	23.5	18.5	17.5	20	20.9	26.1	27	17	17	80	69	6
KD10-02-1(6)		R1/4	11	61.6	57.5	55.6	51.5	29.5	24.5	18.5	17.5	20	20.9	26.1	27	17	17	83	72	8
KD10-03-1(6)		R3/8	12	62.6	58.5	56.3	52.2	30.2	25.2	18.5	17.5	20	20.9	26.1	27	17	17	91	72	8
KD10-04-1(6)		R1/2	15	65.6	61.5	57.4	53.3	31.3	26.3	18.5	17.5	20	20.9	26.1	27	22	21	118	94	8
KD12-02-1(6)	12	R1/4	11	67.2	61.6	61.2	55.6	31.5	25	21.5	20.8	22.6	23.5	29.7	30.6	21	21	132	109	8
KD12-03-1(6)		R3/8	12	68.2	62.6	61.9	56.3	32.2	25.7	21.5	20.8	22.6	23.5	29.7	30.6	21	21	138	114	9
KD12-04-1(6)		R1/2	15	71.2	65.6	63	57.4	33.3	26.8	21.5	20.8	22.6	23.5	29.7	30.6	22	21	154	126	9

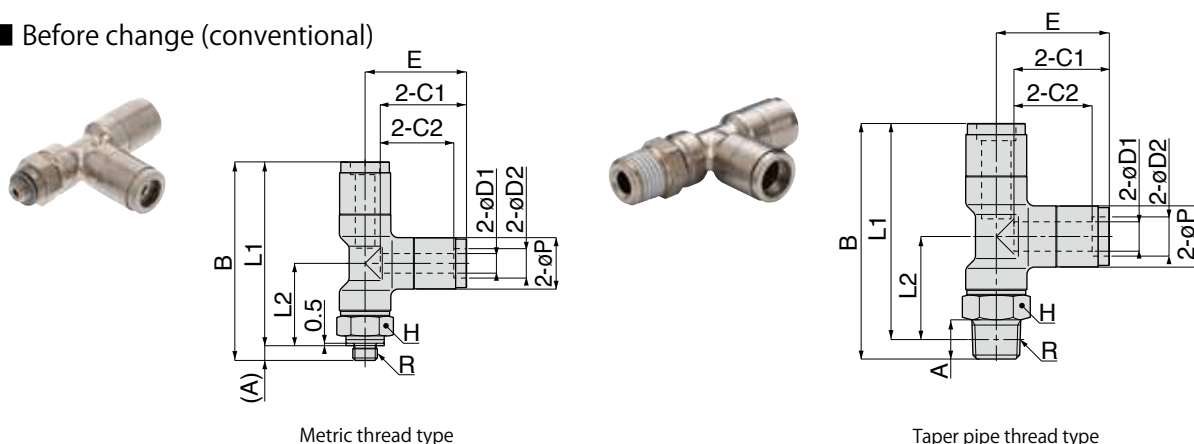
\*1. L1 and L2 dimensions of Taper pipe thread type are reference value after tightening thread.

\*2. For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

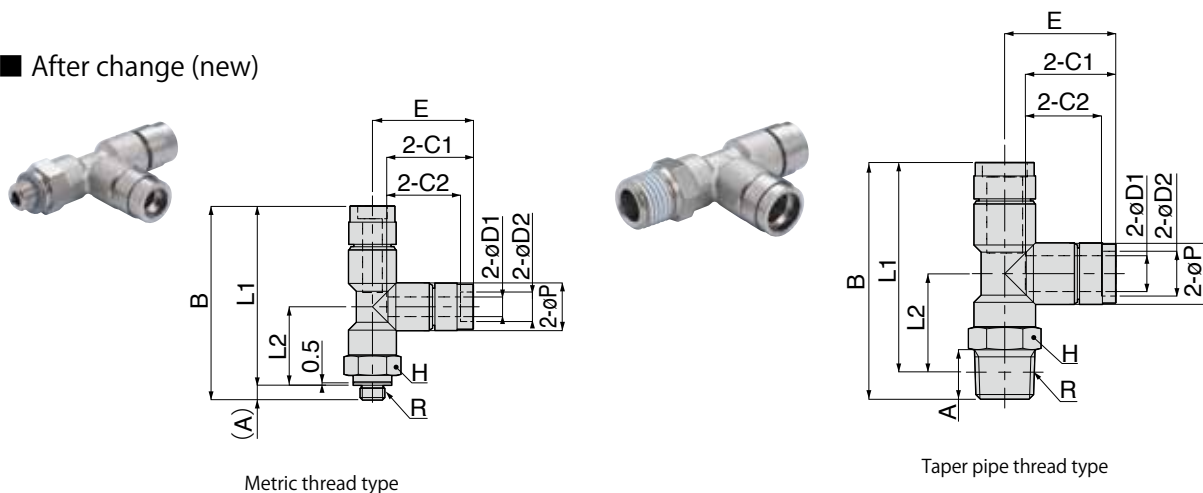


**KD** Run Tee (with cover)

■ Before change (conventional)



■ After change (new)



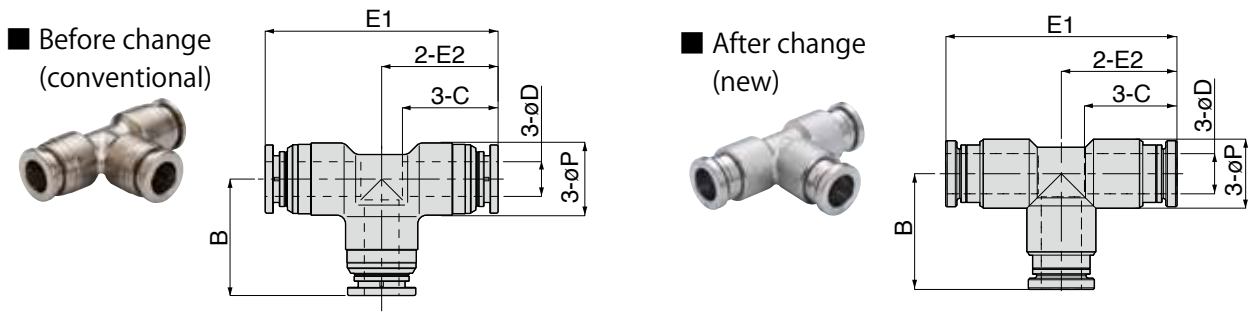
Unit: mm

Model code	Tube O.D.		R	A	B		L1		L2		φP		Tube end		E		Hex. H		Weight (g)		Orifice (φ mm)
	φD1	φD2			Before	After	Before	After	Before	After	Before	After	C1	C2	Before	After	Before	After	Before	After	
					Before	After	Before	After	Before	After	Before	After	Before	After	Before	After					
KD4-M5(6)	4	6	M5x0.8	3	40.5	39.5	37.5	36.5	16.8	16	10.5	9.7	17.6	15	20.7	20.5	10	10	26	21	1.8
KD4-01(6)			R1/8	8	43.5	42.5	39.5	38.5	18.8	18	10.5	9.7	17.6	15	20.7	20.5	10	10	29	23	2.5
KD4-02(6)			R1/4	11	46.5	45.5	40.5	39.4	19.8	18.9	10.5	9.7	17.6	15	20.7	20.5	14	14	38	29	2.5
KD6-M5(6)	6	8	M5x0.8	3	45.1	44	42.1	41	19	17.7	12.5	11.8	19.5	16	23.1	23.3	12	12	36	33	1.8
KD6-01(6)			R1/8	8	48.1	47	44.1	43	21	19.7	12.5	11.8	19.5	16	23.1	23.3	12	12	38	35	4
KD6-02(6)			R1/4	11	51.1	50	45	43.9	22	20.7	12.5	11.8	19.5	16	23.1	23.3	14	14	46	39	4
KD6-03(6)			R3/8	12	52.9	51.8	46.5	45.4	23.4	22.2	12.5	11.8	19.5	16	23.1	23.3	17	17	59	49	4
KD8-01(6)	8	10	R1/8	8	52.8	49.8	48.8	45.8	24	21	14.5	13.7	20.2	17	24.8	24.8	14	14	48	44	6
KD8-02(6)			R1/4	11	55.8	52.8	49.8	46.8	25	22	14.5	13.7	20.2	17	24.8	24.8	14	14	54	47	6
KD8-03(6)			R3/8	12	57.6	54.6	51.3	48.3	26.5	23.5	14.5	13.7	20.2	17	24.8	24.8	17	17	67	56	6
KD10-01(6)	10	12	R1/8	8	61.8	56.8	57.8	52.8	28.5	23.5	18.6	17.5	23.2	19.5	29.3	29.3	17	17	90	79	6
KD10-02(6)			R1/4	11	64.8	59.8	58.8	53.8	29.5	24.5	18.6	17.5	23.2	19.5	29.3	29.3	17	17	93	81	8
KD10-03(6)			R3/8	12	65.8	60.8	59.5	54.5	30.2	25.2	18.6	17.5	23.2	19.5	29.3	29.3	17	17	101	81	8
KD10-04(6)			R1/2	15	68.8	63.8	60.6	55.6	31.4	26.3	18.6	17.5	23.2	19.5	29.3	29.3	22	21	128	104	8
KD12-02(6)	12	14	R1/4	11	70.9	64.4	64.9	58.4	31.5	25	21.6	20.8	26.3	23	33.4	33.4	21	21	147	125	8
KD12-03(6)			R3/8	12	71.9	65.4	65.6	59.1	32.2	25.7	21.6	20.8	26.3	23	33.4	33.4	21	21	153	130	9
KD12-04(6)			R1/2	15	74.9	68.4	66.7	60.2	33.3	26.8	21.6	20.8	26.3	23	33.4	33.4	22	21	169	142	9

\*1. L1 and L2 dimensions of Taper pipe thread type are reference values after tightening thread.

\*2. For (6) in the model code, enter "F" if selecting FKM for seal rubber material.

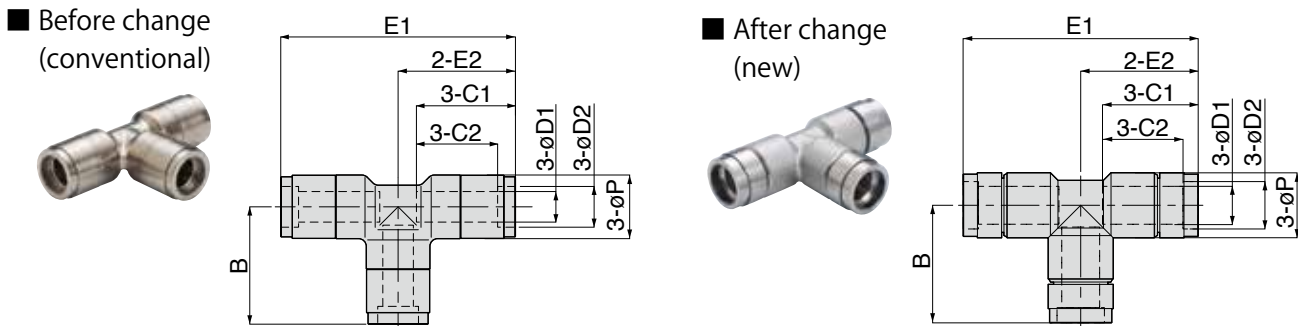
**KE Union Tee (without cover)**



Unit: mm

Model code	Tube O.D. øD	B		øP		Tube end C		E1		E2		Weight (g)		Orifice (ø mm)
		Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	
KE4-1(6)	4	17.6	18	10.5	9.7	14.5	15.1	35.2	36	17.6	18	19	16	2.5
KE6-1(6)	6	20.2	20.95	12.5	11.8	16.6	17.2	40.3	41.9	20.15	20.95	27	27	4
KE8-1(6)	8	22.3	23	14.5	13.7	17.7	18.4	44.6	46	22.3	23	36	34	6
KE10-1(6)	10	26.1	27	18.5	17.5	20	20.9	52.2	54	26.1	27	68	64	8
KE12-1(6)	12	29.7	30.6	21.5	20.8	22.6	23.5	59.4	61.2	29.7	30.6	110	105	9
<b>New</b> KE1/4-1(6)	1/4	-	20.95	-	11.8	-	17.2	-	41.9	-	20.95	-	26	4
<b>New</b> KE3/8-1(6)	3/8	-	27	-	17.5	-	20.9	-	54	-	27	-	67	8
<b>New</b> KE1/2-1(6)	1/2	-	30.1	-	20.8	-	23	-	60.2	-	30.1	-	93	9

**KE Union Tee (with cover)**



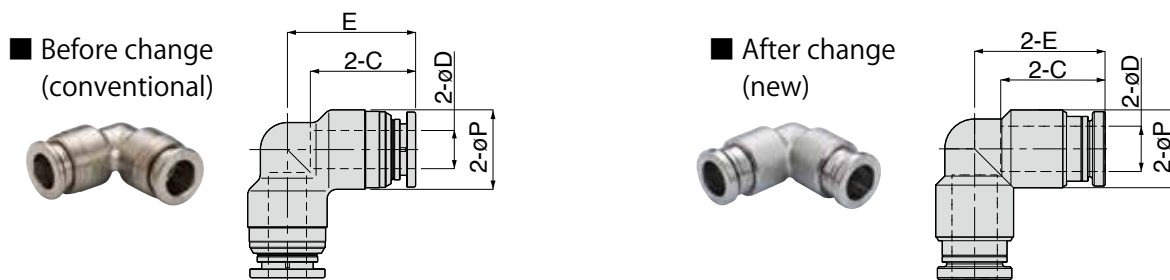
Unit: mm

Model code	Tube O.D.		B		øP		Tube end		E1		E2		Weight (g)		Orifice (ø mm)
	øD1	øD2	Before	After	Before	After	C1	C2	Before	After	Before	After	Before	After	
KE4(6)	4	6	41.4	20.5	10.5	9.7	17.6	15	41.4	41	20.7	20.5	24	20	2.5
KE6(6)	6	8	46.1	23.25	12.5	11.8	19.5	16	46.1	46.5	23.05	23.25	32	31	4
KE8(6)	8	10	49.6	24.8	14.5	13.7	20.2	17	49.6	49.6	24.8	24.8	42	39	6
KE10(6)	10	12	58.6	29.3	18.6	17.5	23.2	19.5	58.6	58.6	29.3	29.3	83	78	8
KE12(6)	12	14	66.8	33.4	21.6	20.8	26.3	23	66.8	66.8	33.4	33.4	132	129	9
<b>New</b> KE1/4(6)	1/4	8.35	-	23.25	-	11.8	19.5	16	-	46.5	-	23.25	-	31	4
<b>New</b> KE3/8(6)	3/8	11.53	-	29.3	-	17.5	23.2	19.5	-	58.6	-	29.3	-	82	8
<b>New</b> KE1/2(6)	1/2	14.7	-	32.9	-	20.8	25.8	23	-	65.8	-	32.9	-	116	9

<Note>

\*For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

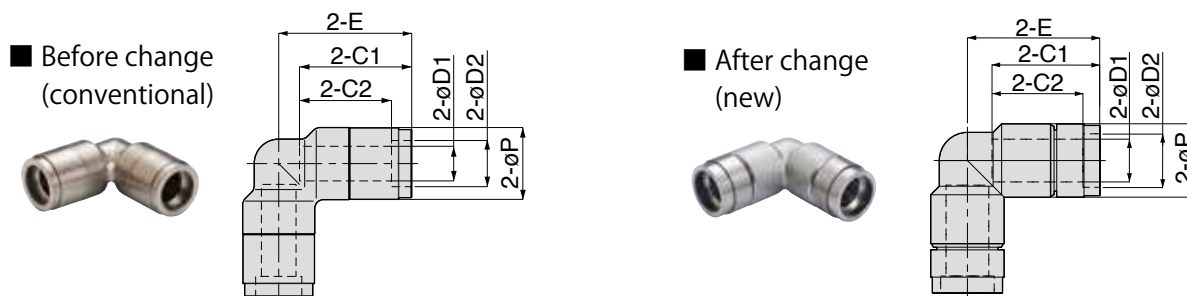
**KV Union Elbow (without cover)**



Unit: mm

Model code	Tube O.D. øD	øP		Tube end C		E		Weight (g)		Orifice (ø mm)
		Before	After	Before	After	Before	After	Before	After	
KV4-1(6)	4	10.5	9.7	14.5	15.1	17.6	18	13	12	2.5
KV6-1(6)	6	12.5	11.8	16.6	17.2	20.2	21	19	19	4
KV8-1(6)	8	14.5	13.7	17.7	18.4	22.3	23	25	24	6
KV10-1(6)	10	18.5	17.5	20	20.9	26.1	27	48	46	8
KV12-1(6)	12	21.5	20.8	22.6	23.5	29.7	30.6	79	76	9
<b>New</b> KV1/4-1(6)	1/4	-	11.8	-	17.2	-	21	-	19	4
<b>New</b> KV3/8-1(6)	3/8	-	17.5	-	20.9	-	27	-	48	8
<b>New</b> KV1/2-1(6)	1/2	-	20.8	-	23	-	30.1	-	68	9

**KV Union Elbow (with cover)**



Unit: mm

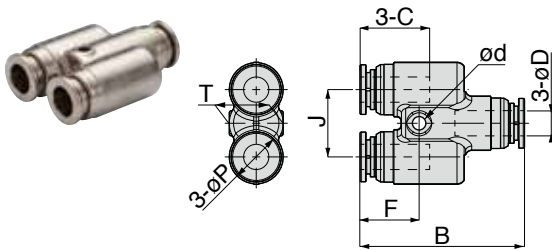
Model code	Tube O.D.		øP		Tube end		E		Weight (g)		Orifice (ø mm)
	øD1	øD2	Before	After	C1	C2	Before	After	Before	After	
KV4(6)	4	6	10.5	9.7	17.6	15	20.7	20.5	17	14	2.5
KV6(6)	6	8	12.5	11.8	19.5	16	23.1	23.3	23	22	4
KV8(6)	8	10	14.5	13.7	20.2	17	24.8	24.8	29	28	6
KV10(6)	10	12	18.6	17.5	23.2	19.5	29.3	29.3	58	55	8
KV12(6)	12	14	21.6	20.8	26.3	23	33.4	33.4	94	91	9
<b>New</b> KV1/4(6)	1/4	8.35	-	11.8	19.5	16	-	23.3	-	21	4
<b>New</b> KV3/8(6)	3/8	11.53	-	17.5	23.2	19.5	-	29.3	-	58	8
<b>New</b> KV1/2(6)	1/2	14.7	-	20.8	25.8	23	-	32.9	-	83	9

<Note>

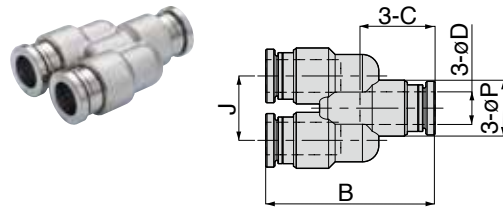
\*For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

**KY** Union Y (without cover)

■ Before change (conventional)



■ After change (new)

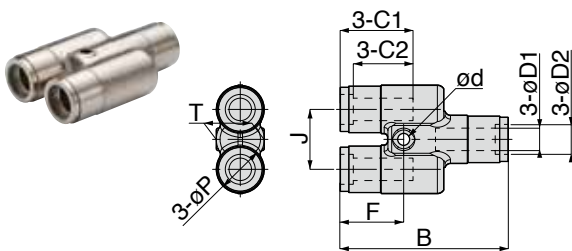


Unit: mm

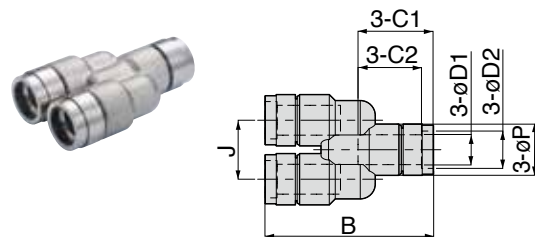
Model code	Tube O.D. øD	B		øP		Tube end C		J		ød		F		T		Weight (g)		Orifice (ø mm)
		Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After			
KY4-1(6)	4	36	32	10.8	9.7	14.5	15.1	14	11.8	3.2	-	13.2	-	10.8	-	32	17	2.5
KY6-1(6)	6	39.1	36.7	12.8	11.8	16.6	17.2	16	13.9	3.2	-	14.1	-	12.8	-	43	28	4
KY8-1(6)	8	44.4	41.5	14.8	13.7	17.7	18.4	18.5	15.8	3.2	-	15.6	-	14.8	-	64	37	6
KY10-1(6)	10	51.1	46.6	18.8	17.5	20	20.9	23	19.6	4.2	-	16.5	-	18.8	-	120	64	8
KY12-1(6)	12	56.5	52.4	21.8	20.8	22.6	23.5	26.5	23	4.2	-	18.8	-	21.8	-	181	106	9
<b>New</b> KY1/4-1(6)	1/4	-	36.7	-	11.8	-	17.2	-	13.9	-	-	-	-	-	-	-	28	4
<b>New</b> KY3/8-1(6)	3/8	-	46.6	-	17.5	-	20.9	-	19.6	-	-	-	-	-	-	-	68	8
<b>New</b> KY1/2-1(6)	1/2	-	51.4	-	20.8	-	23	-	23	-	-	-	-	-	-	-	94	9

**KY** Union Y (with cover)

■ Before change (conventional)



■ After change (new)



Unit: mm

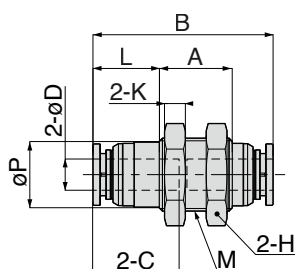
Model code	Tube O.D.		B		øP		Tube end C1 C2		J		ød		F		T		Weight (g)		Orifice (ø mm)
	øD1	øD2	Before	After	Before	After	C1	C2	Before	After	Before	After	Before	After	Before	After			
KY4(6)	4	6	42.2	37	10.8	9.7	17.6	15	14	11.8	3.2	-	16.3	-	10.8	-	37	21	2.5
KY6(6)	6	8	44.9	41.3	12.8	11.8	19.5	16	16	13.9	3.2	-	17	-	12.8	-	48	33	4
KY8(6)	8	10	49.4	45.1	14.8	13.7	20.2	17	18.5	15.8	3.2	-	18.1	-	14.8	-	69	43	6
KY10(6)	10	12	57.5	51.2	18.8	17.5	23.2	19.5	23	19.6	4.2	-	19.7	-	18.8	-	135	79	8
KY12(6)	12	14	63.9	58	21.8	20.8	26.3	23	26.5	23	4.2	-	22.5	-	21.8	-	204	129	9
<b>New</b> K1/4(6)	1/4	8.35	-	41.3	-	11.8	19.5	16	-	13.9	-	-	-	-	-	-	-	32	4
<b>New</b> KY3/8(6)	3/8	11.53	-	51.2	-	17.5	23.2	19.5	-	19.6	-	-	-	-	-	-	-	82	8
<b>New</b> KY1/2(6)	1/2	14.7	-	57.6	-	20.8	26.3	23	-	23	-	-	-	-	-	-	-	117	9

<Note>

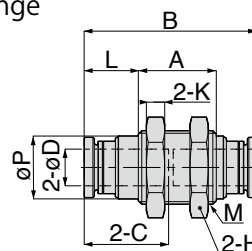
\*For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

### KM Bulkhead Union (without cover)

■ Before change (conventional)



■ After change (new)

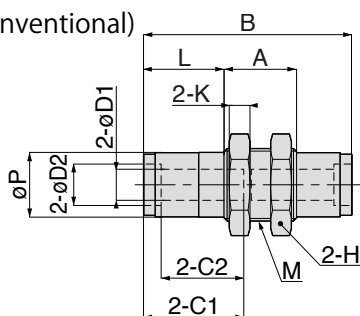


Unit: mm

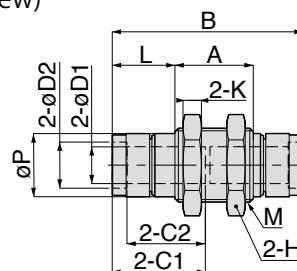
Model code	Tube O.D. øD	M		A		B		L		øP		Tube end C		Hex. H	K	Weight (g)		Orifice (ø mm)
		Before	After	Before	After	Before	After	Before	After	Before	After	Before	After			Before	After	
KM4-1(6)	4	M12x1	M12x1	12	12	30.2	31.2	10.6	10.8	10.5	9.7	14.5	15.1	14	4	19	18	2.5
KM6-1(6)	6	M14x1	M14x1	14	14	34.6	35.3	12.8	11.5	12.5	11.8	16.6	17.2	17	4	29	27	4
KM8-1(6)	8	M16x1	M16x1	17	17	37.9	37.8	12.7	11.8	14.5	13.7	17.7	18.4	19	4	38	34	6
KM10-1(6)	10	M20x1	M20x1	22	21.3	43.5	45.3	13.1	13.3	18.5	17.5	20	20.9	24	5	74	67	8
KM12-1(6)	12	M24x1	M22x1	25.5	24.5	46.2	51.5	12.7	15	21.7	20.4	22.6	23.5	27	6	108	98	9
New KM1/4-1(6)	1/4	-	M14x1	-	14	-	35.3	-	11.5	-	11.8	-	17.2	17	4	-	27	4
New KM3/8-1(6)	3/8	-	M20x1	-	21.3	-	45.3	-	13.3	-	17.5	-	20.9	24	5	-	70	8
New KM1/2-1(6)	1/2	-	M22x1	-	24.5	-	50.5	-	14.5	-	20.4	-	23	27	6	-	89	9

### KM Bulkhead union (with cover)

■ Before change (conventional)



■ After change (new)



Unit: mm

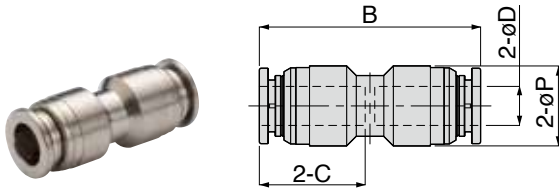
Mode code	Tube O.D.		M		A		B		L		øP		Tube end C		Hex. H	K	Weight (g)		Orifice (ø mm)
	øD1	øD2	Before	After	Before	After	Before	After	Before	After	Before	After	C1	C2			Before	After	
KM4(6)	4	6	M12x1	M12x1	12	12	36.4	36.2	13.7	13.3	10.5	9.7	17.6	15	14	4	23	20	2.5
KM6(6)	6	8	M14x1	M14x1	14	14	40.4	39.9	15.7	13.8	12.5	11.8	19.5	16	17	4	33	30	4
KM8(6)	8	10	M16x1	M16x1	17	17	42.9	41.4	15.2	13.6	14.5	13.7	20.2	17	19	4	42	38	6
KM10(6)	10	12	M20x1	M20x1	22	21.3	49.9	49.9	16.3	15.6	18.5	17.5	23.2	19.5	24	5	83	77	8
KM12(6)	12	14	M24x1	M22x1	25.5	24.5	53.6	57.1	16.4	17.8	21.7	20.4	26.3	23	27	6	123	114	9
New KM1/4(6)	1/4	8.35	-	M14x1	-	14	-	39.9	-	13.8	-	11.8	19.5	16	17	4	-	29	4
New KM3/8(6)	3/8	11.53	-	M20x1	-	21.3	-	49.9	-	15.6	-	17.5	23.2	19.5	24	5	-	79	8
New KM1/2(6)	1/2	14.7	-	M22x1	-	24.5	-	56.1	-	17.3	-	20.4	25.8	23	27	6	-	105	9

<Note>

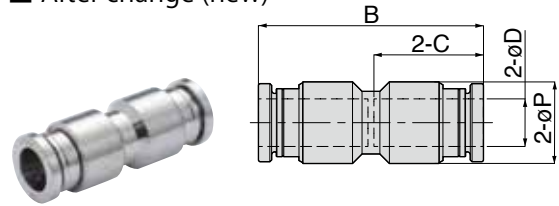
\*For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

## KU Union Straight (without cover)

■ Before change (conventional)



■ After change (new)

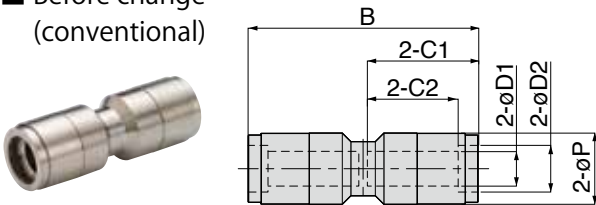


Unit: mm

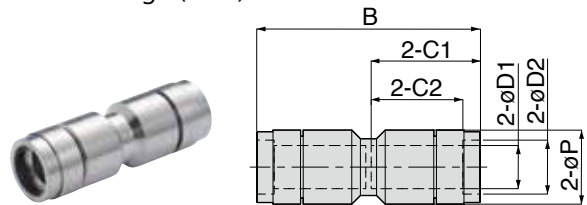
Model code	Tube O.D. øD	B		øP		Tube end C		Weight (g)		Orifice (ø mm)
		Before	After	Before	After	Before	After	Before	After	
KU4-1(6)	4	30.2	31.2	10.5	9.7	14.5	15.1	12	10	2.5
KU6-1(6)	6	34.6	35.3	12.5	11.8	16.6	17.2	18	16	4
KU8-1(6)	8	36.9	37.8	14.5	13.7	17.7	18.4	22	19	6
KU10-1(6)	10	41.5	42.8	18.5	17.5	20	20.9	41	34	8
KU12-1(6)	12	46.7	48	21.5	20.8	22.6	23.5	65	55	9
<b>New</b> KU1/4-1(6)	1/4	-	35.3	-	11.8	-	17.2	-	15	4
<b>New</b> KU3/8-1(6)	3/8	-	42.8	-	17.5	-	20.9	-	36	8
<b>New</b> KU1/2-1(6)	1/2	-	47	-	20.8	-	23	-	46	9

## KU Union Straight (with cover)

■ Before change  
(conventional)



■ After change (new)



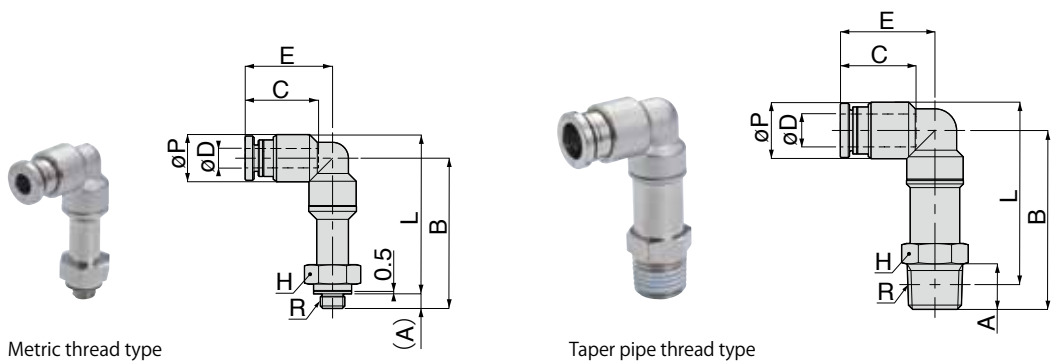
Unit: mm

Model code	Tube O.D.		B		øP		Tube end		Weight (g)		Orifice (ø mm)
	øD1	øD2	Before	After	Before	After	C1	C2	Before	After	
KU4(6)	4	6	36.4	36.2	10.5	9.7	17.6	15	16	12	2.5
KU6(6)	6	8	40.4	39.9	12.5	11.8	19.5	16	21	18	4
KU8(6)	8	10	41.9	41.4	14.5	13.7	20.2	17	26	23	6
KU10(6)	10	12	47.9	47.4	18.6	17.5	23.2	19.5	51	43	8
KU12(6)	12	14	54.1	53.6	21.6	20.8	26.3	23	80	70	9
<b>New</b> KU1/4(6)	1/4	8.35	-	39.9	-	11.8	19.5	16	-	18	4
<b>New</b> KU3/8(6)	3/8	11.53	-	47.4	-	17.5	23.2	19.5	-	46	8
<b>New</b> KU1/2(6)	1/2	14.7	-	52.6	-	20.8	25.8	23	-	62	9

<Note>

\*For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

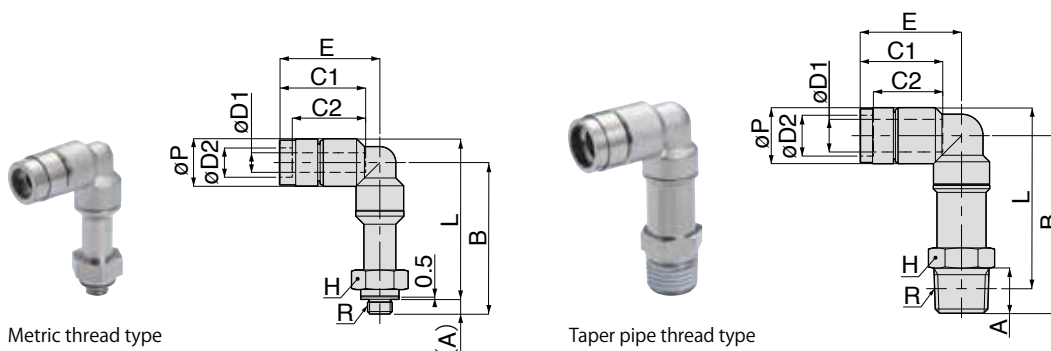
**KLL** Long Elbow (without cover) **New**



Unit: mm

Model code	Tube O.D. øD	R	A	B	L	øP	Tube end C	E	Hex. H	Weight (g)	Orifice (ø mm)
KLL4-M5-1(6)	4	M5x0.8	3	31	32.8	9.7	15.1	18	10	17	1.8
KLL6-01-1(6)	6	R1/8	8	36.7	38.6	11.8	17.2	21	12	29	4
KLL6-02-1(6)		R1/4	11	39.7	39.6	11.8	17.2	21	14	32	4
KLL8-02-1(6)	8	R1/4	11	43.5	44.3	13.7	18.4	23	14	42	6
KLL8-03-1(6)		R3/8	12	45.3	45.8	13.7	18.4	23	17	51	6
KLL10-02-1(6)	10	R1/4	11	49	51.7	17.5	23.2	27	17	73	8
KLL10-03-1(6)		R3/8	12	50	52.4	17.5	23.2	27	17	74	8
KLL12-04-1(6)	12	R1/2	15	57	59.2	20.8	23.5	30.6	21	119	9

**KLL** Long Elbow (with cover) **New**



Unit: mm

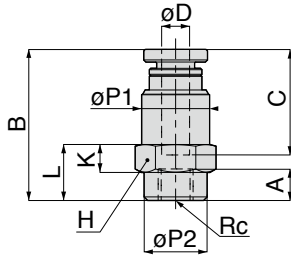
Mode code	Tube O.D.		R	A	B	L	øP	Tube end		E	Hex. H	Weight (g)	Orifice (ø mm)
	øD1	øD2						C1	C2				
KLL4-M5(6)	4	6	M5x0.8	3	31	32.8	9.7	17.6	15	20.5	10	19	1.8
KLL6-01(6)	6	8	R1/8	8	36.7	38.6	11.8	19.5	16	23.3	12	30	4
KLL6-02(6)			R1/4	11	39.7	39.6	11.8	19.5	16	23.3	14	34	4
KLL8-02(6)	8	10	R1/4	11	43.5	44.3	13.7	20.2	17	24.8	14	43	6
KLL8-03(6)			R3/8	12	45.3	45.8	13.7	20.2	17	24.8	17	53	6
KLL10-02(6)	10	12	R1/4	11	49	51.7	17.5	23.2	19.5	29.3	17	78	8
KLL10-03(6)			R3/8	12	50	52.4	17.5	23.2	19.5	29.3	17	78	8
KLL12-04(6)	12	14	R1/2	15	57	59.2	20.8	26.3	23	33.4	21	127	9

<Note>

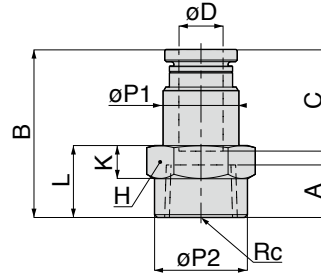
\*1. L dimension of Taper pipe thread type is a reference value after tightening thread.

\*2. For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

**KCF** Female Straight (without cover) **New**



Metric thread type



Taper pipe thread type

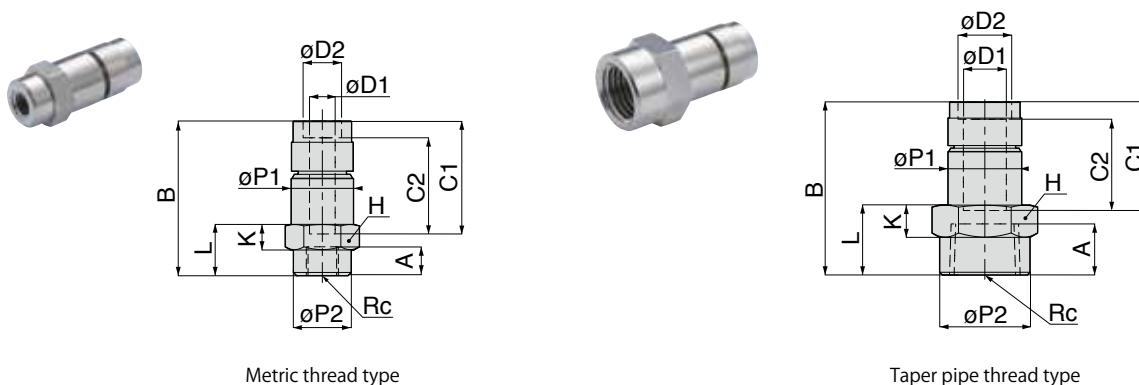
Unit: mm

Model code	Tube O.D. øD	Rc	A	B	L	øP1	øP2	Tube end C	Hex. H	K	Weight (g)	Orifice (ø mm)
KCF4-M5-1(6)	4	M5x0.8	4.5	21.6	8	9.7	9	15.1	10	4	9	3
KCF4-01-1(6)		Rc1/8	7	24.1	10	9.7	13.8	15.1	14	5	14	3
KCF6-M5-1(6)	6	M5x0.8	5	22.2	9	11.8	9	17.2	12	5	12	4.1
KCF6-01-1(6)		Rc1/8	7	26.2	10	11.8	13.8	17.2	14	5	17	5
KCF6-02-1(6)		Rc1/4	9.5	29.2	13	11.8	16.8	17.2	17	6	23	5
KCF8-01-1(6)	8	Rc1/8	7	27.4	10	13.7	13.8	18.4	14	5	18	7
KCF8-02-1(6)		Rc1/4	9.5	30.4	13	13.7	16.8	18.4	17	6	24	7
KCF8-03-1(6)		Rc3/8	10.5	31.4	14	13.7	20.8	18.4	21	6.5	33	7
KCF10-01-1(6)	10	Rc1/8	7	29.9	11	17.5	13.8	20.9	17	6	29	8
KCF10-02-1(6)		Rc1/4	9.5	32.9	13	17.5	16.8	20.9	17	6	32	8.5
KCF10-03-1(6)		Rc3/8	10.5	33.9	14	17.5	20.8	20.9	21	6.5	40	8.5
KCF10-04-1(6)		Rc1/2	13	36.9	17	17.5	25	20.9	24	7	49	9
KCF12-02-1(6)	12	Rc1/4	9.5	35	13.5	20.8	16.8	23.5	21	6.5	49	11
KCF12-03-1(6)		Rc3/8	10.5	36.5	14	20.8	20.8	23.5	21	6.5	51	11
KCF12-04-1(6)		Rc1/2	13	39.5	17	20.8	25	23.5	24	7	61	11

\*For (6) in the model code, enter "F" if selecting FKM for seal rubber material.



KCF Female Straight (with cover) **New**



Metric thread type

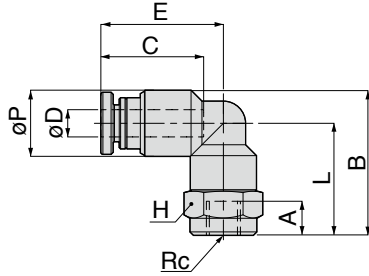
Taper pipe thread type

Unit: mm

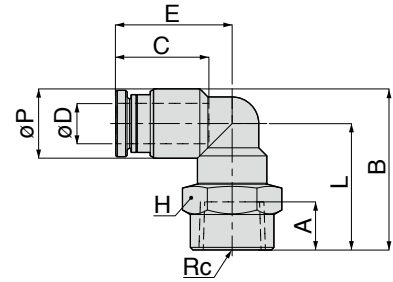
Model code	Tube O.D.		Rc	A	B	L	øP1	øP2	Tube end		Hex. H	K	Weight (g)	Orifice (ø mm)
	øD1	øD2							C1	C2				
KCF4-M5(6)	4	6	M5x0.8	4.5	24.1	8	9.7	9	17.6	15	10	4	10	3
KCF4-01(6)			Rc1/8	7	26.6	10	9.7	13.8	17.6	15	14	5	16	3
KCF6-M5(6)	6	8	M5x0.8	5	24.5	9	11.8	9	19.5	16	12	5	13	4.1
KCF6-01(6)			Rc1/8	7	28.5	10	11.8	13.8	19.5	16	14	5	18	5
KCF6-02(6)			Rc1/4	9.5	31.5	13	11.8	16.8	19.5	16	17	6	24	5
KCF8-01(6)	8	10	Rc1/8	7	29.2	10	13.7	13.8	20.2	17	14	5	20	7
KCF8-02(6)			Rc1/4	9.5	32.2	13	13.7	16.8	20.2	17	17	6	26	7
KCF8-03(6)			Rc3/8	10.5	33.2	14	13.7	20.8	20.2	17	21	6.5	34	7
KCF10-01(6)	10	12	Rc1/8	7	32.2	11	17.5	13.8	23.2	19.5	17	6	34	8
KCF10-02(6)			Rc1/4	9.5	35.2	13	17.5	16.8	23.2	19.5	17	6	37	8.5
KCF10-03(6)			Rc3/8	10.5	36.2	14	17.5	20.8	23.2	19.5	21	6.5	45	8.5
KCF10-04(6)			Rc1/2	13	39.2	17	17.5	25	23.2	19.5	24	7	54	9
KCF12-02(6)	12	14	Rc1/4	9.5	37.8	13.5	20.8	16.8	26.3	23	21	6.5	57	11
KCF12-03(6)			Rc3/8	10.5	39.3	14	20.8	20.8	26.3	23	21	6.5	59	11
KCF12-04(6)			Rc1/2	13	42.3	17	20.8	25	26.3	23	24	7	68	11

\*For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

**KLF** Female Elbow (without cover) **New**



Metric thread type



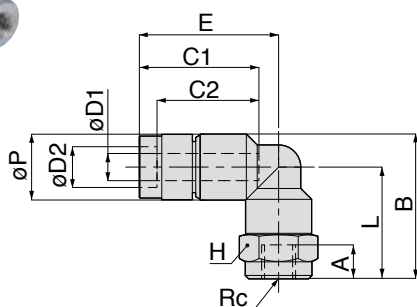
Taper pipe thread type

Unit: mm

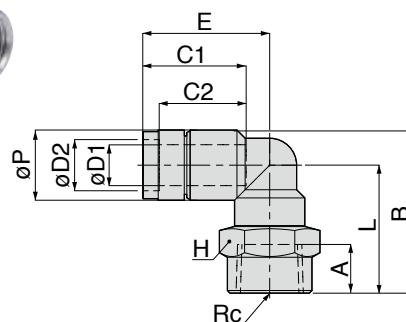
Model code	Tube O.D. øD	Rc	A	B	L	øP	Tube end C	E	Hex. H	Weight (g)	Orifice (ø mm)
KLF4-M5-1(6)	4	M5x0.8	5	21.3	16.5	9.7	15.1	18	10	19	2.8
KLF4-01-1(6)		Rc1/8	7	24.8	20	9.7	15.1	18	14	20	2.8
KLF6-M5-1(6)	6	M5x0.8	5	23.1	17.2	11.8	17.2	21	12	21	4.1
KLF6-01-1(6)		Rc1/8	7	26.6	20.7	11.8	17.2	21	14	24	4.2
KLF6-02-1(6)		Rc1/4	9.5	29.6	23.7	11.8	17.2	21	17	29	4.3
KLF8-01-1(6)	8	Rc1/8	7	28.9	22	13.7	18.4	23	14	29	6.0
KLF8-02-1(6)		Rc1/4	9.5	31.9	25	13.7	18.4	23	17	34	6.7
KLF8-03-1(6)		Rc3/8	10.5	32.9	26	13.7	18.4	23	21	43	6.7
KLF10-01-1(6)	10	Rc1/8	7	31.3	22.5	17.5	20.9	27	17	48	8.0
KLF10-02-1(6)		Rc1/4	9.5	35.3	26.5	17.5	20.9	27	19	56	8.0
KLF10-03-1(6)		Rc3/8	10.5	36.3	27.5	17.5	20.9	27	21	58	8.3
KLF10-04-1(6)		Rc1/2	13	40.3	31.5	17.5	20.9	27	24	70	8.3
KLF12-02-1(6)	12	Rc1/4	9.5	37.4	27	20.8	23.5	30.6	21	79	10.0
KLF12-03-1(6)		Rc3/8	10.5	38.4	28	20.8	23.5	30.6	21	78	10.0
KLF12-04-1(6)		Rc1/2	13	42.4	32	20.8	23.5	30.6	24	90	10.3

\*For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

**KLF** Female Elbow (with cover) **New**



Metric thread type



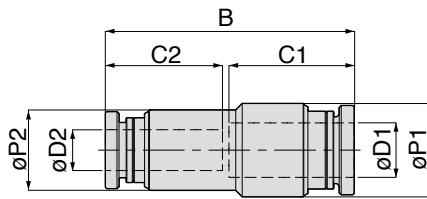
Taper pipe thread type

Unit: mm

Model code	Tube O.D.		Rc	A	B	L	øP	Tube end		E	Hex. H	Weight (g)	Orifice (ø mm)
	øD1	øD2						C1	C2				
KLF4-M5(6)	4	6	M5x0.8	5	21.3	16.5	9.7	17.6	15	20.5	10	15	2.8
KLF4-01(6)			Rc1/8	7	24.8	20	9.7	17.6	15	20.5	14	20	2.8
KLF6-M5(6)	6	8	M5x0.8	5	23.1	17.2	11.8	19.5	16	23.3	12	23	4.1
KLF6-01(6)			Rc1/8	7	26.6	20.7	11.8	19.5	16	23.3	14	26	4.2
KLF6-02(6)			Rc1/4	9.5	29.6	23.7	11.8	19.5	16	23.3	17	31	4.3
KLF8-01(6)	8	10	Rc1/8	7	28.9	22	13.7	20.2	17	24.8	14	31	6.0
KLF8-02(6)			Rc1/4	9.5	31.9	25	13.7	20.2	17	24.8	17	36	6.7
KLF8-03(6)			Rc3/8	10.5	32.9	26	13.7	20.2	17	24.8	21	44	6.7
KLF10-01(6)	10	12	Rc1/8	7	31.3	22.5	17.5	23.2	19.5	29.3	17	53	8.0
KLF10-02(6)			Rc1/4	9.5	35.3	26.5	17.5	23.2	19.5	29.3	19	61	8.0
KLF10-03(6)			Rc3/8	10.5	36.3	27.5	17.5	23.2	19.5	29.3	21	63	8.3
KLF10-04(6)			Rc1/2	13	40.3	31.5	17.5	23.2	19.5	29.3	24	75	8.3
KLF12-02(6)	12	14	Rc1/4	9.5	37.4	27	20.8	26.3	23	33.4	21	87	10.0
KLF12-03(6)			Rc3/8	10.5	38.4	28	20.8	26.3	23	33.4	21	86	10.0
KLF12-04(6)			Rc1/2	13	42.4	32	20.8	26.3	23	33.4	24	98	10.3

\*For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

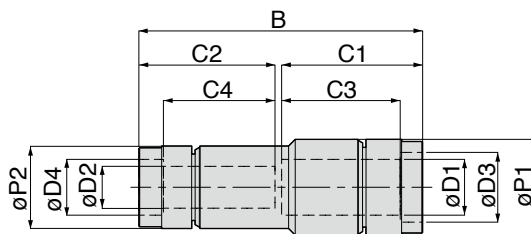
**KG** Unequal Union Straight (without cover) **New**



Unit: mm

Model code	Tube O.D.		B	$\phi P1$	$\phi P2$	Tube end		Weight (g)	Orifice ( $\phi$ mm)
	$\phi D1$	$\phi D2$				C1	C2		
KG6-4-1(6)	6	4	33.3	11.8	9.7	17.2	15.1	14	2.5
KG8-6-1(6)	8	6	36.6	13.7	11.8	18.4	17.2	19	4
KG10-8-1(6)	10	8	40.3	17.5	13.7	20.9	18.4	28	6
KG12-10-1(6)	12	10	45.4	20.8	17.5	23.5	20.9	49	8
KG1/4-4-1(6)	1/4	4	33.3	11.8	9.7	17.2	15.1	13	2.5
KG8-1/4-1(6)	8	1/4	36.6	13.7	11.8	18.4	17.2	19	4
KG3/8-8-1(6)	3/8	8	40.3	17.5	13.7	20.9	18.4	29	6
KG1/2-3/8-1(6)	1/2	3/8	44.9	20.8	17.5	23	20.9	46	8

**KG** Unequal Union Straight (with cover) **New**



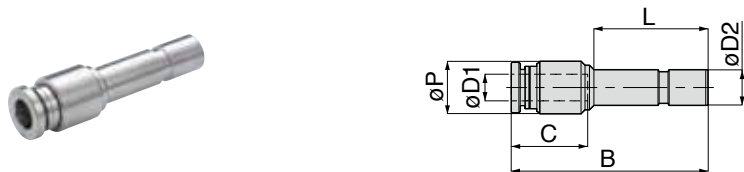
Unit: mm

Model code	Tube O.D.				B	$\phi P1$	$\phi P2$	Tube end				Weight (g)	Orifice ( $\phi$ mm)
	$\phi D1$	$\phi D2$	$\phi D3$	$\phi D4$				C1	C2	C3	C4		
KG6-4(6)	6	4	8	6	38.1	11.8	9.7	19.5	17.6	16	15	16	2.5
KG8-6(6)	8	6	10	8	40.7	13.7	11.8	20.2	19.5	17	16	22	4
KG10-8(6)	10	8	12	10	44.4	17.5	13.7	23.2	20.2	19.5	17	34	6
KG12-10(6)	12	10	14	12	50.5	20.8	17.5	26.3	23.2	23	19.5	57	8
KG1/4-4(6)	1/4	4	8.35	6	38.1	11.8	9.7	19.5	17.6	16	15	16	2.5
KG8-1/4(6)	8	1/4	10	8.35	40.7	13.7	11.8	20.2	19.5	17	16	21	4
KG3/8-8(6)	3/8	8	11.53	10	44.4	17.5	13.7	23.2	20.2	19.5	17	36	6
KG1/2-3/8(6)	1/2	3/8	14.7	11.53	50	20.8	17.5	25.8	23.2	23	19.5	58	8

<Note>

\*For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

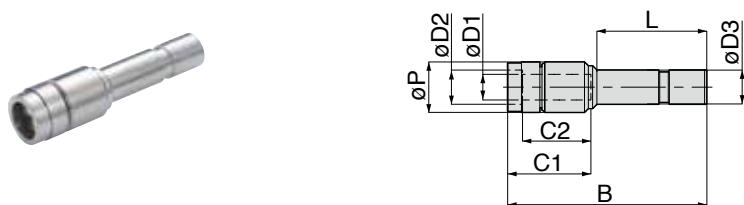
**KGJ** Unequal Plug-in Straight (without cover) **New**



Unit: mm

Model code	Tube O.D. $\phi D1$	Applicable Fitting dia. $\phi D2$	B	L	$\phi P$	Tube end C	Weight (g)	Orifice ( $\phi$ mm)
KGJ4-6-1(6)	6	4	41.3	22.7	11.8	17.2	9	2
KGJ6-4-1(6)	4	6	41.5	24.6	9.7	15.1	9	2.5
KGJ6-8-1(6)	8	6	44.8	24.6	13.7	18.4	14	4
KGJ8-6-1(6)	6	8	44.3	25.7	11.8	17.2	13	4
KGJ8-10-1(6)	10	8	48.7	25.7	17.5	20.9	25	6
KGJ10-6-1(6)	6	10	45.5	28.9	11.8	17.2	15	4
KGJ10-8-1(6)	8	10	47.1	28.9	13.7	18.4	16	6
KGJ10-12-1(6)	12	10	54.9	28.9	20.8	23.5	40	8
KGJ12-10-1(6)	10	12	53.2	30.2	17.5	20.9	30	6
KGJ1/4-4-1(6)	4	1/4	41.5	24.6	9.7	15.1	9	2.5
KGJ8-1/4-1(6)	1/4	8	44.3	25.7	11.8	17.2	13	4
KGJ3/8-8-1(6)	8	3/8	47.1	28.9	13.7	18.4	16	6
KGJ1/2-3/8-1(6)	3/8	1/2	53.2	30.2	17.5	20.9	35	6

**KGJ** Unequal Plug-in Straight (with cover) **New**



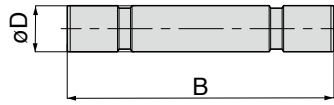
Unit: mm

Model code	Tube O.D.		Applicable Fitting dia. $\phi D3$	B	L	$\phi P$	Tube end		Weight (g)	Orifice ( $\phi$ mm)
	$\phi D1$	$\phi D2$					C1	C2		
KGJ4-6(6)	6	8	4	43.6	22.7	11.8	19.5	16	12	2
KGJ6-4(6)	4	6	6	44	24.6	9.7	17.6	15	10	2.5
KGJ6-8(6)	8	10	6	46.6	24.6	13.7	20.2	17	16	4
KGJ8-6(6)	6	8	8	46.6	25.7	11.8	19.5	16	15	4
KGJ8-10(6)	10	12	8	51	25.7	17.5	23.2	19.5	28	6
KGJ10-6(6)	6	8	10	47.8	28.9	11.8	19.5	16	16	4
KGJ10-8(6)	8	10	10	48.9	28.9	13.7	20.2	17	18	6
KGJ10-12(6)	12	14	10	57.7	28.9	20.8	26.3	23	44	8
KGJ12-10(6)	10	12	12	55.5	30.2	17.5	23.2	19.5	34	6
KGJ1/4-4(6)	4	6	1/4	44	24.6	9.7	17.6	15	11	2.5
KGJ8-1/4(6)	1/4	8.35	8	46.6	25.7	11.8	19.5	16	14	4
KGJ3/8-8(6)	8	10	3/8	48.9	28.9	13.7	20.2	17	18	6
KGJ1/2-3/8(6)	3/8	11.53	1/2	55.5	30.2	17.5	23.2	19.5	40	6

<Note>

\*For (6) in the model code, enter "-F" if selecting FKM for seal rubber material.

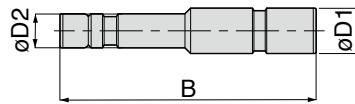
**KIJ** Union Stem **New**



Union: mm

Model code	Applicable Fitting dia. $\varnothing D$	B	Weight (g)	Orifice ( $\varnothing$ mm)
KIJ4	4	40.4	3	2
KIJ6	6	44.2	5.3	4
KIJ8	8	46.4	8.1	6
KIJ10	10	52.8	11.7	8
KIJ12	12	58	19.1	9.5

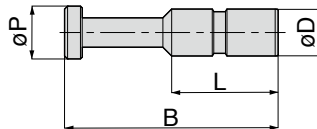
**KIG** Unequal Union Stem **New**



Unit: mm

Model code	Applicable Fitting dia. $\varnothing D1$	Applicable Fitting dia. $\varnothing D2$	B	Weight (g)	Orifice ( $\varnothing$ mm)
KIG6-4	6	4	42.3	4.3	2
KIG8-6	8	6	45.3	6.9	4
KIG10-8	10	8	49.6	10.1	6
KIG12-10	12	10	55.4	15.6	8

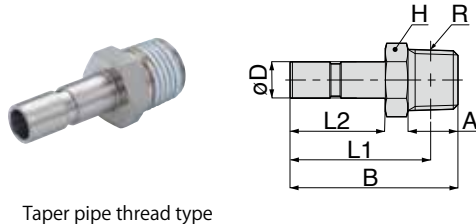
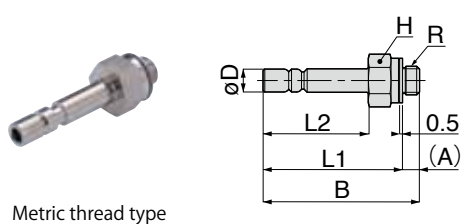
**KP** Plug **New**



Unit: mm

Model code	Applicable Fitting dia. $\varnothing D$	B	$\varnothing P$	L	Weight (g)
KP4	4	27.5	5	14.9	2.5
KP6	6	32.5	6.5	17	4.3
KP8	8	36.5	9	18.2	7.6
KP10	10	42	11	20.7	11.4
KP12	12	44	13	23.3	16.9

**KTJ** PT Jack New



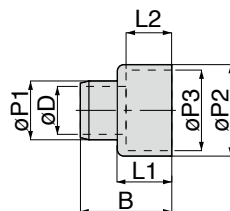
Unit: mm

Model code	Appl. Fitting dia. $\phi D$	R	A	B	L1	L2	Hex. H	Weight (g)	Orifice ( $\phi$ mm)
KTJ4-M5	4	M5x0.8	3	27.5	24.5	18.5	8	4.1	1.8
KTJ4-01		R1/8	8	30.5	26.5	18.5	10	8.4	2.2
KTJ6-M5	6	M5x0.8	3	30.5	27.5	20.5	8	5.5	1.8
KTJ6-01		R1/8	8	32.5	28.5	20.5	10	8.7	4
KTJ6-02		R1/4	11	36.5	30.5	20.5	14	19	4
KTJ8-01	8	R1/8	8	34	30	21	10	8.6	6
KTJ8-02		R1/4	11	37	31	21	14	18	6
KTJ8-03		R3/8	12	38.8	32.5	21	17	31	6
KTJ10-03	10	R3/8	12	41.5	35.2	23.5	17	30	8

\*1. L1 dimension of Taper pipe thread type is a reference value after tightening thread.

\*2. KTJ (PT Jack) cannot be connected to Tube Fitting Brass with cover types.

**CS** Release-ring cover



Unit: mm

Model code	Tube O.D. $\phi D$	B	L1	L2	$\phi P1$	$\phi P2$	$\phi P3$	Weight (g)
CS6	6	17	11.5	10	8.1	14	12	0.9
CS8	8	19	12.5	11	10.1	16	14	1.2
CS10	10	19.4	12.2	10.5	13.1	20	17	2.2
CS12	12	22.9	13.7	11.5	15.1	23.5	20.5	3.1

\*CS (Release-ring cover) can not be applied to Union Y (KY) types with tube size  $\phi$  8mm and bigger.

Related products

*Suitable for piping in high temp. and spatter generated environments*

Tube Fitting Anti-spatter

Tube fitting



- ▶ Flame-retardant resin (equivalent to UL94 V-O) is used.

Fluid medium	Air, Water
Max. operating press. (MPa)	0.9
Max. vacuum (kPa)	-100
Operating temp. range (°C)	0 to 60 (No freezing)

Throttle (Needle) Valve Brass

Flow control



- ▶ The release ring as well as the main body are made of brass.
- ▶ Suitable for flow control in spatter generated and high temp. environments.

Fluid medium	Air, Water	
Max. operating press. (MPa)	1.0	
Max. vacuum (kPa)	-100	
Operating temp. range (°C)	HNBR spec. 0 to 100 (No freezing)	FKM spec. 0 to 120 (No freezing)

Speed Controller Anti-spatter

Speed control



- ▶ Flame-retardant resin (equivalent to UL94 V-O) is used.
- ▶ Protective covers on both needle and joint parts for protection from sparks.

Fluid medium	Air
Operating press. range (MPa)	0.1 to 0.9 (Low cracking press. type: 0.05 to 0.5)
Check valve opening press. (MPa)	0.05 (Low cracking press. type: 0.02)
Operating temp. range (°C)	0 to 60 (No freezing)

Speed Controller Brass

Speed control

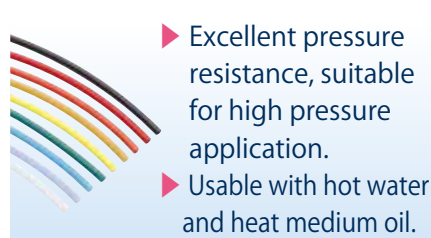


- ▶ The release ring as well as the main body are made of brass.
- ▶ Suitable for speed control in spatter generated and high temp. environments.

Fluid medium	Air	
Operating press. range (MPa)	0.1 to 1.0 (at 20°C in the operating environment and fluid temperature)	
Check valve opening press. (MPa)	0.05	
Operating temp. range (°C)	HNBR spec. 0 to 100 (No freezing)	FKM spec. 0 to 120 (No freezing)

Nylon Tube

Tube

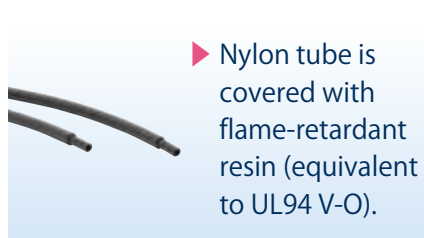


- ▶ Excellent pressure resistance, suitable for high pressure application.
- ▶ Usable with hot water and heat medium oil.

Fluid medium	Air, Water, Heat medium oil
Max. operating press. (MPa)	2.0 (65% RH at 20°C)
Max. vacuum (kPa)	-100
Operating temp. range (°C)	Air: -20 to 100 (No freezing) Water, Heat medium oil: -15 to 90 (No freezing)
Min. bending radius (JIS) (mm)	Tube O.D. ø4 mm: 10 Tube O.D. ø6 mm: 15

Anti-spatter Tube

Tube



- ▶ Nylon tube is covered with flame-retardant resin (equivalent to UL94 V-O).

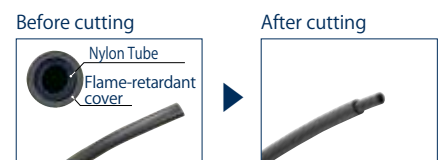
Fluid medium	Air, Heat medium oil, Water
Max. operating press. (MPa)	1.0 (65% RH at 20°C)
Max. vacuum (kPa)	-100
Operating temp. range (°C)	-15 to 90 (No freezing)
Min. bending radius (JIS) (mm)	Tube O.D. ø4 mm: 14 Tube O.D. ø6 mm: 18

Tube Stripper for Anti-spatter

Accessories



- ▶ Cover stripping cutter for PISCO Anti-spatter Tube.
- ▶ Transparent cover for easy checking on cutting progress.



PISCO®

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