

To: Distributors
 Attn: To Whom It May Concern
 Date: March 2024
 Dear All,

Tube Fitting Brass: More shape variations and product redesign

We would like to express our sincere gratitude for your continued patronage. This is the notice to inform you of more shape type variations of Tube Fitting Brass, with an aim to increase sales opportunities in special environments. Besides, the existing types will be renewed. The details are as follows.
 We would like to thank you for your understanding.

1. Subjected model: Tube Fitting Brass (e.g.) : KC6-01, KL8-02-1 (With cover) (Without cover)
2. Purpose of the change
 To increase sales opportunities in special environments, to add variations to the shape types and sizes, to achieve light weighting and smartization, to unify parts and to improve strength of rotating parts
3. Launch of new shapes and sizes: Scheduled in Aug. 2024

Newly added shape types *Pictures are types without covers.

KLL: Long Elbow	KCF: Female straight	KLF: Female Elbow	KG: Unequal Union Straight	KGJ: Unequal Plug-in Straight
	KIJ: Union Stem	KIG: Unequal Union Stem	KTJ: PT Jack	KP: Plug

Newly added sizes:

- Metric thread (M6x1, M6x0.75)
- National taper thread (NPT 1/8, 1/4, 3/8, 1/2) , Unified fine thread (10-32UNF)
- Tube O.D. inch size (dia. 1/4, dia. 3/8, dia. 1/2)

4. Design change of existing types

(1) Appearance (Emboss processing, Removal of mounting hole on KY{Union Y} and change in outline dimension and weight

Emboss process of metal body *KL, KH, KB, KD, KV, KE, KY		Removal of mounting hole on KY{Union Y}	
Old (Current)	New	Old (Current)	New
	Emboss (No luster)		

* Pictures are types without covers.

(2) Operating temperature range (in the case of FKM 0 to 120°C → 0 to 150°C*)

*If the temperature is 120°C and above, sealing tape should be applied on the thread part.

*No change in price

*Refer to the following pages for more details.

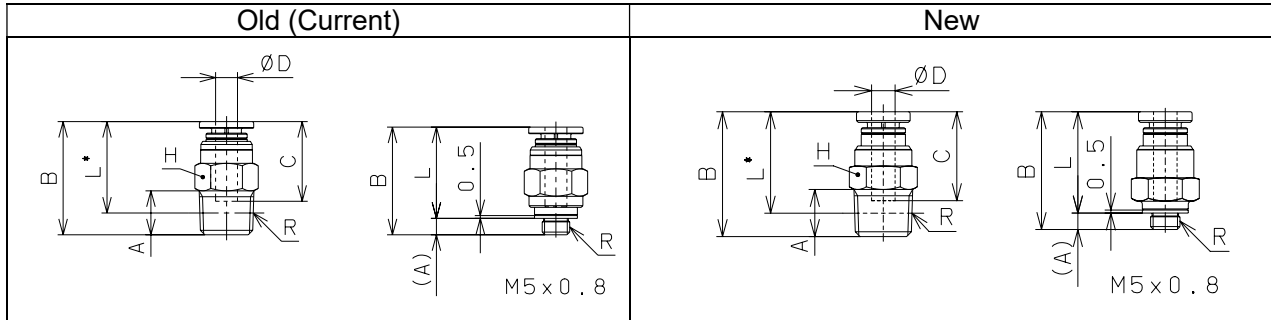
*Change implementation time: **Scheduled to start in Aug. 2024, progressively**

If you have any questions, feel free to contact PISCO.

Comparison of outline dimension *Change part indication **Red: Larger, Blue: Smaller or lighter**
 "OLD" in the below table shows current dimension.

<Types without protective cover>

[KC: Straight]

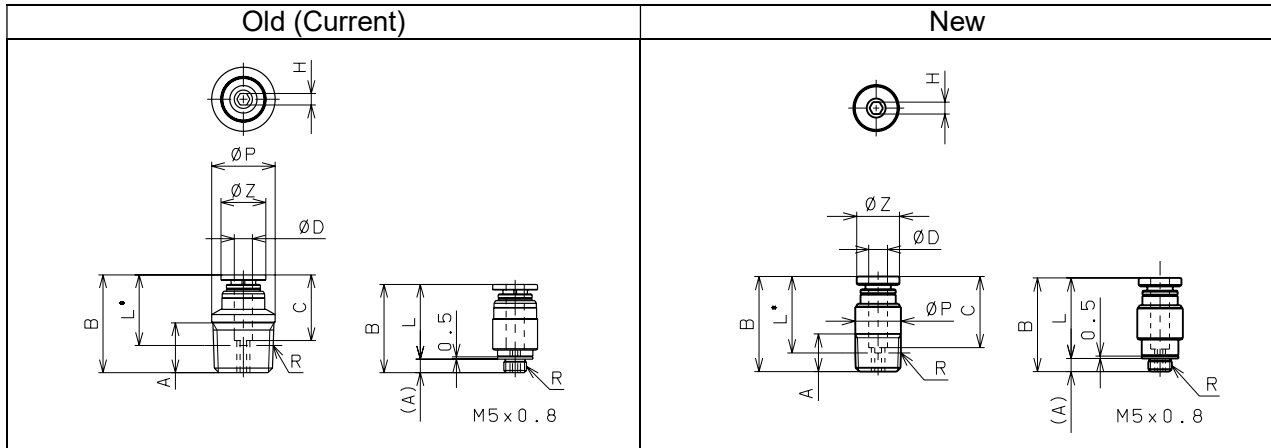


Model code	Tube O.D φD	R	A		B		L		Tube end C		Hex.H		Weight (g)		Orifice (φ mm)	
			Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New
KC4-M5-1	4	M5x0.8	3	2.8	19.6	20	16.6	17.2	14.5	15.1	10	10	10	7	1.8	2.4
KC4-M6-1	4	M6x1	-	3.8	-	21	-	17.2	-	15.1	-	10	-	7	-	3
KC4-M6P0.75-1	4	M6x0.75	-	3.8	-	21	-	17.2	-	15.1	-	10	-	7	-	3
KC4-01-1	4	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	4	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	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
KC6-M6-1	6	M6x1	-	3.8	-	23.1	-	19.3	-	17.2	-	12	-	11	-	3
KC6-M6P0.75-1	6	M6x0.75	-	3.8	-	23.1	-	19.3	-	17.2	-	12	-	10	-	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	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	8	R1/4	11	11	26.1	28.1	20.1	22.1	17.7	18.4	14	14	23	18	6	7
KC8-03-1	8	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	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	10	R1/4	11	11	30.1	30.5	24.1	24.5	20	20.9	17	17	34	22	8	8.5
KC10-03-1	10	R3/8	12	12	28.6	30	22.3	23.7	20	20.9	17	17	41	27	8	9
KC10-04-1	10	R1/2	15	15	32.6	30.6	24.4	22.4	20	20.9	22	21	62	49	8	9
KC12-02-1	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	12	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	12	R1/2	15	15	33.2	32.1	25	23.9	22.6	23.5	22	21	66	51	9	11

Newly Added inch size

Model code	Tube O.D φD	R	A	B	L	φP	Tube end C	Hex.H	Weight (g)	Orifice (φ mm)
KC4-U10-1_	4	No.10-32UNF	2.8	20	17.2	9.7	15.1	10	7	2.4
KC4-N1-1_	4	1/8-27NPT	8	21.2	17.1	9.7	15.1	12	10	3
KC4-N2-1_	4	1/4-18NPT	11	22.7	16.9	13.8	15.1	14	18	3
KC1/4-U10-1_	1/4"	No.10-32UNF	2.8	22.1	19.3	11.8	17.2	12	10	2.4
KC1/4-N1-1_	1/4"	1/8-27NPT	8	22.5	18.3	11.8	17.2	12	10	5.3
KC1/4-N2-1_	1/4"	1/4-18NPT	11	23.9	18.1	11.8	17.2	14	16	5.3
KC1/4-N3-1_	1/4"	3/8-18NPT	12	24.7	18.6	16.8	17.2	17	30	5.3
KC8-N1-1_	8	1/8-27NPT	8	28.1	24	13.7	18.4	14	16	6
KC8-N2-1_	8	1/4-18NPT	11	28.1	22.3	13.7	18.4	14	17	7
KC8-N3-1_	8	3/8-18NPT	12	25.7	19.6	16.8	18.4	17	27	7
KC3/8-N1-1_	3/8"	1/8-27NPT	8	30.5	26.4	17.5	20.9	17	26	6
KC3/8-N2-1_	3/8"	1/4-18NPT	11	30	24.2	17.5	20.9	17	24	8.5
KC3/8-N3-1_	3/8"	3/8-18NPT	12	30	23.9	17.5	20.9	17	30	9
KC3/8-N4-1_	3/8"	1/2-14NPT	15	30.6	22.5	21.8	20.9	21	51	9
KC1/2-N2-1_	1/2"	1/4-18NPT	11	35.6	29.8	20.8	23.5	21	39	8.5
KC1/2-N3-1_	1/2"	3/8-18NPT	12	31.6	25.5	20.8	23.5	21	32	11
KC1/2-N4-1_	1/2"	1/2-14NPT	15	31.6	23.5	20.8	23.5	21	46	11

[KOC: Inner Hex. Straight]

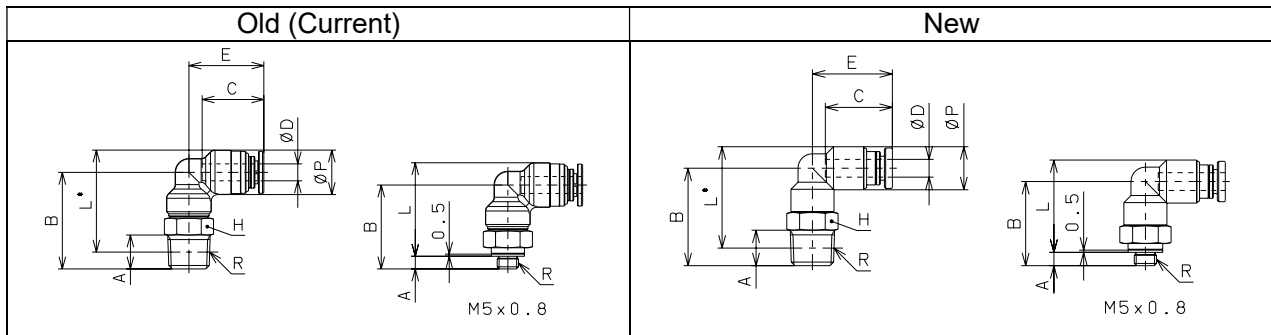


Model code	Tube O.D φD	R	A		B		L		φP		Tube end C		Hex.H		φZ		Weight (g)		Orifice (φ mm)	
			Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New
KOC4-M5-1	4	M5x0.8	3	2.8	19.5	19.9	16.5	17.1	9.9	9.7	14.5	15.1	2	2.5	9.9	9.1	10	6	2.1	2.6
KOC4-M6-1	4	M6x1	-	3.8	-	20.9	-	17.1	-	9.7	-	15.1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

Newly Added inch size

Model code	Tube O.D φD	R	A	B	L	φP	Tube end C	φZ	Hex.H	Weight (g)	Orifice (φ mm)
KOC4-U10-1_	4	No.10-32UNF	2.8	19.9	17.1	9.7	15.1	9.1	2.5	6	2.6
KOC4-N1-1_	4	1/8-27NPT	8	20.2	16.1	9.7	15.1	9.1	2.5	8	2.6
KOC4-N2-1_	4	1/4-18NPT	11	20.2	14.4	13.7	15.1	9.1	2.5	14	2.6
KOC1/4-U10-1_	1/4"	No.10-32UNF	2.8	21.5	18.7	11.8	17.2	11.3	2.5	7	2.6
KOC1/4-N1-1_	1/4"	1/8-27NPT	8	22.3	18.1	11.8	17.2	11.3	4	10	4.2
KOC1/4-N2-1_	1/4"	1/4-18NPT	11	21.5	15.7	13.7	17.2	11.3	4	14	4.2
KOC1/4-N3-1_	1/4"	3/8-18NPT	12	21.5	15.4	16.8	17.2	11.3	4	23	4.4
KOC3/8-N1-1_	3/8"	1/8-27NPT	8	30.5	26.4	17.5	20.9	16.5	5	22	5.3
KOC3/8-N2-1_	3/8"	1/4-18NPT	11	30	24.2	17.5	20.9	16.5	6	25	6.3
KOC3/8-N3-1_	3/8"	3/8-18NPT	12	29.5	23.4	17.5	20.9	16.5	6	31	6.3
KOC3/8-N4-1_	3/8"	1/2-14NPT	15	30.5	22.4	20.8	20.9	16.5	6	50	6.3

[KL: Elbow]

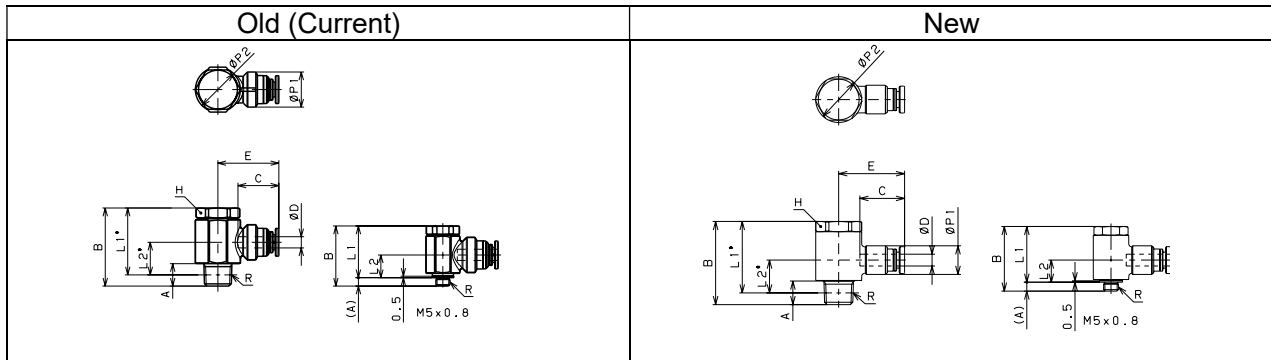


Model code	Tube O.D φD	R	A	B		L		φP		Tube end C		E		Hex. H		Weight (g)		Orifice (φmm)
				Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	
KL4-M5-1	4	M5x0.8	3	19.8	19	22.1	20.8	10.5	9.7	14.5	15.1	17.6	18	10	10	17	14	1.8
KL4-M6-1	4	M6x1	4	-	20	-	20.8	-	9.7	-	15.1	-	18	-	10	-	14	1.8
KL4-M6P0.75-1	4	M6x0.75	4	-	20	-	20.8	-	9.7	-	15.1	-	18	-	10	-	14	1.8
KL4-01-1	4	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	4	R1/4	11	25.8	25	25	23.8	10.5	9.7	14.5	15.1	17.6	18	14	14	29	21	2.5
KL6-M5-1	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
KL6-M6-1	6	M6x1	4	-	21.7	-	23.6	-	11.8	-	17.2	-	21	-	12	-	22	1.8
KL6-M6P0.75-1	6	M6x0.75	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	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	8	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	8	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	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	10	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	10	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	10	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	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	12	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	12	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

Newly Added inch size

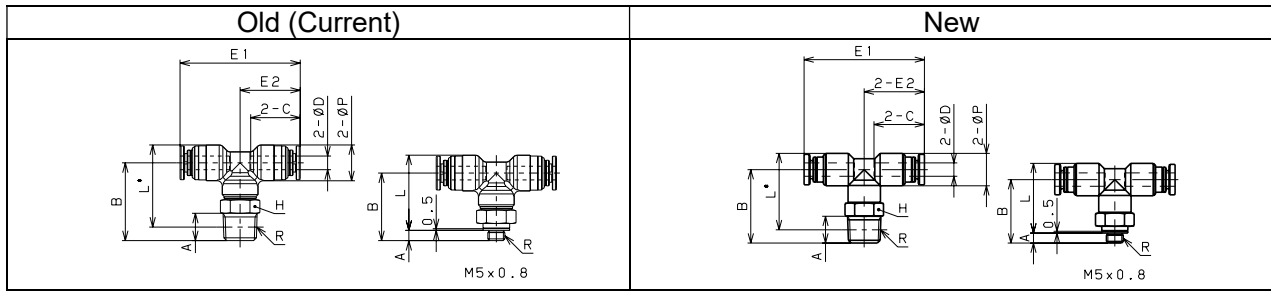
Model code	Tube O.D φD	R	A	B	L	φP	Tube end C	E	Hex.H	Weight (g)	Orifice (φmm)
KL4-U10-1	4	No.10-32UNF	3	19	20.8	9.7	15.1	18	10	14	1.8
KL4-N1-1	4	1/8-27NPT	8	22	22.7	9.7	15.1	18	12	17	2.5
KL4-N2-1	4	1/4-18NPT	11	25	24	9.7	15.1	18	14	21	2.5
KL1/4-U10-1	1/4"	No.10-32UNF	3	20.7	23.6	11.8	17.2	21	12	21	1.8
KL1/4-N1-1	1/4"	1/8-27NPT	8	23.7	25.5	11.8	17.2	21	12	23	4
KL1/4-N2-1	1/4"	1/4-18NPT	11	26.7	26.8	11.8	17.2	21	14	27	4
KL1/4-N3-1	1/4"	3/8-18NPT	12	28.5	28.3	11.8	17.2	21	17	36	4
KL8-N1-1	8	1/8-27NPT	8	25	27.7	13.7	18.4	23	14	30	6
KL8-N2-1	8	1/4-18NPT	11	28	29.1	13.7	18.4	23	14	33	6
KL8-N3-1	8	3/8-18NPT	12	29.8	30.6	13.7	18.4	23	17	45	6
KL3/8-N1-1	3/8"	1/8-27NPT	8	27.5	32.1	17.5	20.9	27	17	51	6
KL3/8-N2-1	3/8"	1/4-18NPT	11	30.5	33.5	17.5	20.9	27	17	54	8
KL3/8-N3-1	3/8"	3/8-18NPT	12	31.5	34.2	17.5	20.9	27	17	59	8
KL3/8-N4-1	3/8"	1/2-14NPT	15	34.5	35.1	17.5	20.9	27	21	77	8
KL1/2-N2-1	1/2"	1/4-18NPT	11	31	35.6	20.8	23	30.1	21	75	8
KL1/2-N3-1	1/2"	3/8-18NPT	12	32	36.3	20.8	23	30.1	21	80	9
KL1/2-N4-1	1/2"	1/2-14NPT	15	35	37.3	20.8	23	30.1	21	91	9

[KH: Single Banjo]



Model code	Tube O.D φD	R	A		B		L1		L2		φP1		φP2		Tube end C		E		Hex. H		Weight (g)		Orifice (φmm)	
			Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New
KH4-M5-1	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	10	23	20	1.8	1.8
KH4-01-1	4	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	2.5
KH6-M5-1	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	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	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	4
KH6-03-1	6	R3/8	12	12	38.8	38.9	32.5	32.6	16.8	16.8	14.5	11.8	22.5	22.5	16.6	17.2	26.4	27	21	21	89	86	4	4
KH8-01-1	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	5.6
KH8-02-1	8	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	6
KH8-03-1	8	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	6
KH10-02-1	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	7.3	7.6
KH10-03-1	10	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	8
KH10-04-1	10	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	8
KH12-03-1	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	9
KH12-04-1	12	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	9

[KB: Branch Tee]

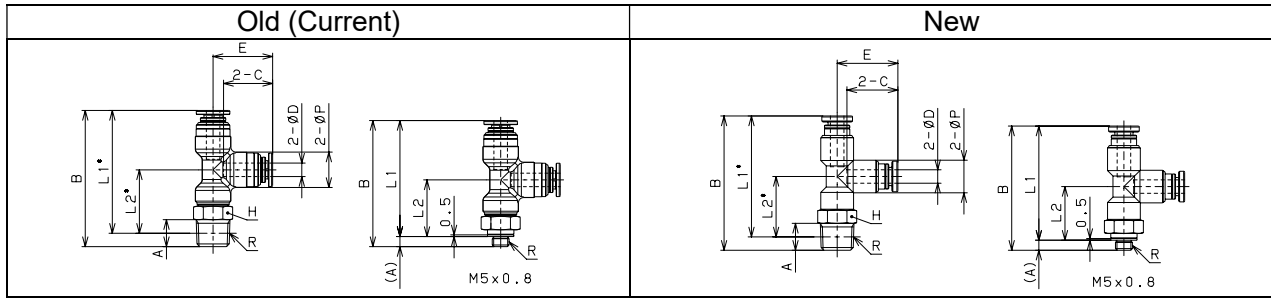


Model code	Tube O.D φD	R	A	B		L		φP		Tube end C		E1		E2		Hex. H		Weight (g)		Orifice (φmm)
				Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	
KB4-M5-1	4	M5x0.8	3	19.8	19	22.1	20.8	10.5	9.7	14.5	15.1	35.2	36	17.6	18	10	10	23	19	1.8
KB4-01-1	4	R1/8	8	22.8	22	24.1	22.8	10.5	9.7	14.5	15.1	35.2	36	17.6	18	10	10	26	21	2.5
KB4-02-1	4	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	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	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	8	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	8	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	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	10	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	10	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	10	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	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	12	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	12	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

Newly Added inch size

Model code	Tube O.D φD	R	A	B	L	φP	Tube end C	E1	E2	Hex. H	Weight (g)	Orifice (φmm)
KB4-U10-1	4	No.10-32UNF	3	19	20.8	9.7	15.1	36	18	10	19	1.8
KB4-N1-1	4	1/8-27NPT	8	22	22.7	9.7	15.1	36	18	12	22	2.5
KB4-N2-1	4	1/4-18NPT	11	25	24	9.7	15.1	36	18	14	26	2.5
KB1/4-U10-1	1/4"	No.10-32UNF	3	20.7	23.6	11.8	17.2	41.9	20.95	12	29	1.8
KB1/4-N1-1	1/4"	1/8-27NPT	8	23.7	25.5	11.8	17.2	41.9	20.95	12	29	4
KB1/4-N2-1	1/4"	1/4-18NPT	11	26.7	26.8	11.8	17.2	41.9	20.95	14	35	4
KB1/4-N3-1	1/4"	3/8-18NPT	12	28.5	28.3	11.8	17.2	41.9	20.95	17	44	4
KB3/8-N1-1	3/8"	1/8-27NPT	8	27.5	32.1	17.5	20.9	54	27	17	71	6
KB3/8-N2-1	3/8"	1/4-18NPT	11	30.5	33.5	17.5	20.9	54	27	17	74	8
KB3/8-N3-1	3/8"	3/8-18NPT	12	31.5	34.2	17.5	20.9	54	27	17	78	8
KB3/8-N4-1	3/8"	1/2-14NPT	15	34.5	35.1	17.5	20.9	54	27	21	96	8

[KD: Run Tee]

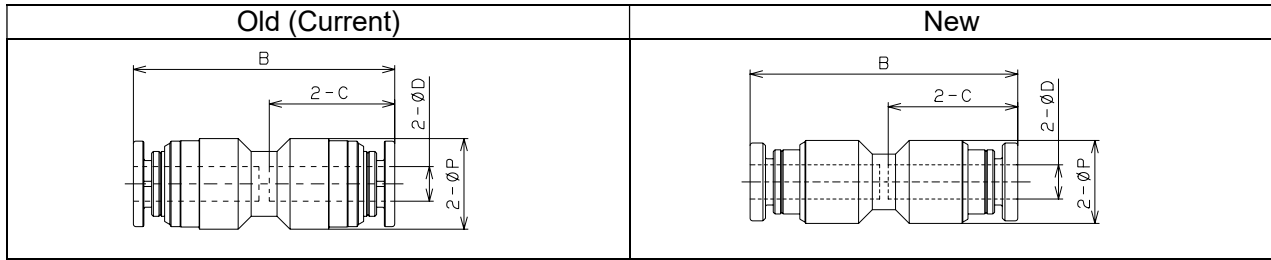


Model code	Tube O.D φD	R	A	B		L1		L2		φP		Tube end C		E		Hex. H		Weight (g)		Orifice (φmm)
				Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	
KD4-M5-1	4	M5x0.8	3	37.4	37	34.4	34	16.8	16	10.5	9.7	14.5	15.1	17.6	18	10	10	23	19	1.8
KD4-01-1	4	R1/8	8	40.4	40	36.4	36	18.8	18	10.5	9.7	14.5	15.1	17.6	18	10	10	26	20	2.5
KD4-02-1	4	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	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	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	8	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	8	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	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	10	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	10	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	10	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	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	12	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	12	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

Newly Added inch size

Model code	Tube O.D φD	R	A	B	L1	L2	φP	Tube end C	E	Hex. H	Weight (g)	Orifice (φmm)
KD4-U10-1	4	No.10-32UNF	3	37	34	16	9.7	15.1	18	10	19	1.8
KD4-N1-1	4	1/8-27NPT	8	40	35.8	17.8	9.7	15.1	18	12	22	2.5
KD4-N2-1	4	1/4-18NPT	11	43	37.2	19.2	9.7	15.1	18	14	26	2.5
KD1/4-U10-1	1/4"	No.10-32UNF	3	41.7	38.7	17.7	11.8	17.2	21	12	29	1.8
KD1/4-N1-1	1/4"	1/8-27NPT	8	44.7	40.5	19.6	11.8	17.2	21	12	32	4
KD1/4-N2-1	1/4"	1/4-18NPT	11	47.7	41.9	20.9	11.8	17.2	21	14	36	4
KD1/4-N3-1	1/4"	3/8-18NPT	12	49.5	43.4	22.4	11.8	17.2	21	17	45	4
KD3/8-N1-1	3/8"	1/8-27NPT	8	54.5	50.4	23.4	17.5	20.9	27	17	71	6
KD3/8-N2-1	3/8"	1/4-18NPT	11	57.5	51.7	24.7	17.5	20.9	27	17	74	8
KD3/8-N3-1	3/8"	3/8-18NPT	12	58.5	52.4	25.4	17.5	20.9	27	17	79	8
KD3/8-N4-1	3/8"	1/2-14NPT	15	61.5	53.4	26.4	17.5	20.9	27	21	97	8

[KU: Union Straight]

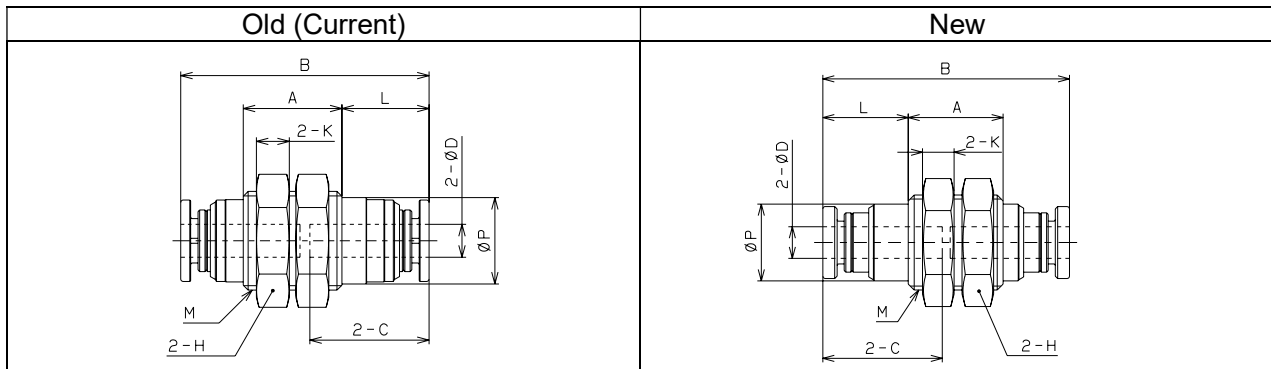


Model code	Tube O.D φD	B		φP		Tube end C		Weight (g)		Orifice (φmm)
		Old	New	Old	New	Old	New	Old	New	
KU4-1	4	30.2	31.2	10.5	9.7	14.5	15.1	12	10	2.5
KU6-1	6	34.6	35.3	12.5	11.8	16.6	17.2	18	16	4
KU8-1	8	36.9	37.8	14.5	13.7	17.7	18.4	22	19	6
KU10-1	10	41.5	42.8	18.5	17.5	20	20.9	41	34	8
KU12-1	12	46.7	48	21.5	20.8	22.6	23.5	65	55	9

Newly Added inch size

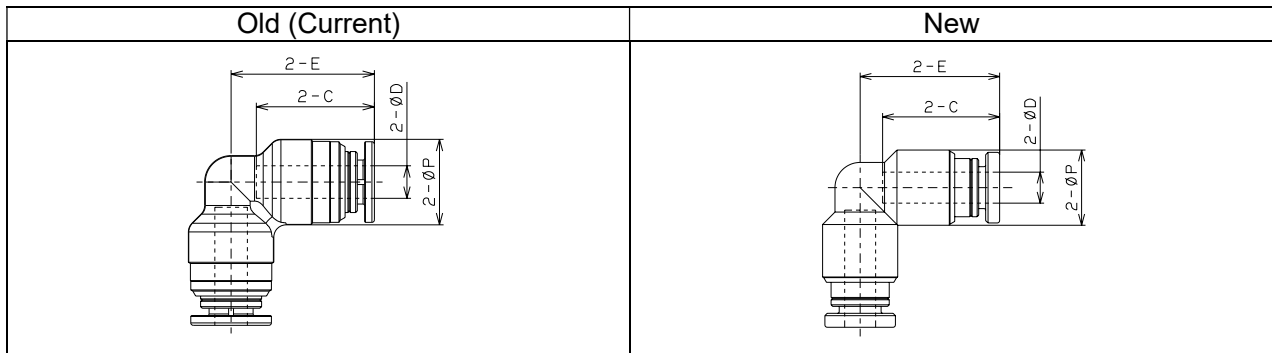
Model code	Tube O.D ΦD	B	φP	Tube end C	Weight (g)	Orifice (φmm)
KU1/4-1	1/4"	35.3	11.8	17.2	15	4
KU3/8-1	3/8"	42.8	17.5	20.9	36	8
KU1/2-1	1/2"	47	20.8	23	46	9

[KM: Bulkhead Union]



Model code	Tube O.D φD	M		A		B		L		φP		Tube end C		Hex. H	K	Weight (g)		Orifice (φmm)
		Old	New	Old	New	Old	New	Old	New	Old	New	Old	New			Old	New	
KM4-1	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	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	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	10	M20x1	M20x1	22	21.3	43.5	45.3	13.1	12.3	18.5	17.5	20	20.9	24	5	74	67	8
KM12-1	12	M24x1	M22x1	25.5	24.5	46.2	51.5	12.7	14	21.7	20.4	22.6	23.5	27	6	108	98	9

[KV: Union Elbow]

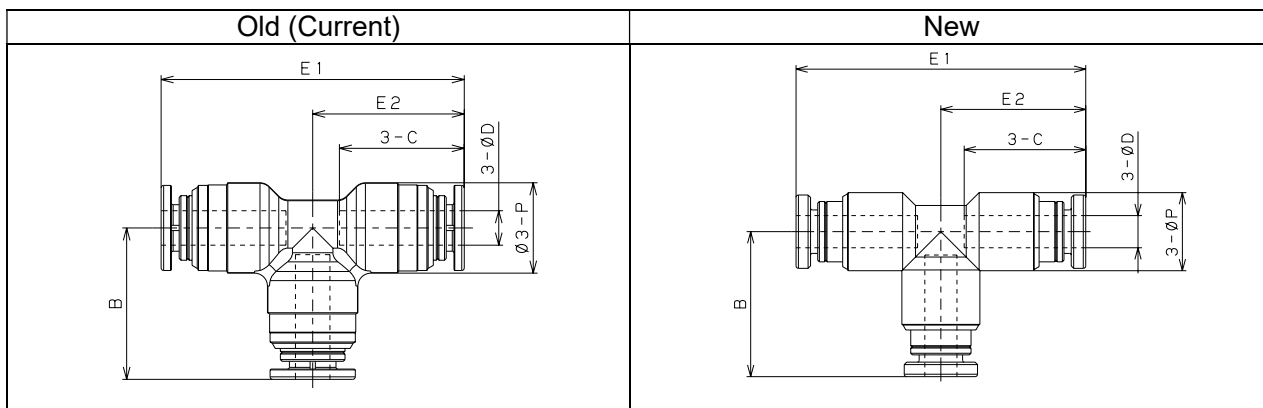


Model code	Tube O.D φD	φP		Tube end C		E		Weight (g)		Orifice (φmm)
		Old	New	Old	New	Old	New	Old	New	
KV4-1	4	10.5	9.7	14.5	15.1	17.6	18	13	12	2.5
KV6-1	6	12.5	11.8	16.6	17.2	20.2	21	19	19	4
KV8-1	8	14.5	13.7	17.7	18.4	22.3	23	25	24	6
KV10-1	10	18.5	17.5	20	20.9	26.1	27	48	46	8
KV12-1	12	21.5	20.8	22.6	23.5	29.7	30.6	79	76	9

Newly Added inch size

Model code	Tube O.D ΦD	φP	Tube end C	E	Weight (g)	Orifice (φmm)
KV1/4-1	1/4"	11.8	17.2	21	19	4
KV3/8-1	3/8"	17.5	20.9	27	48	8
KV1/2-1	1/2"	20.8	23	30.1	68	9

[KE: Union Tee]

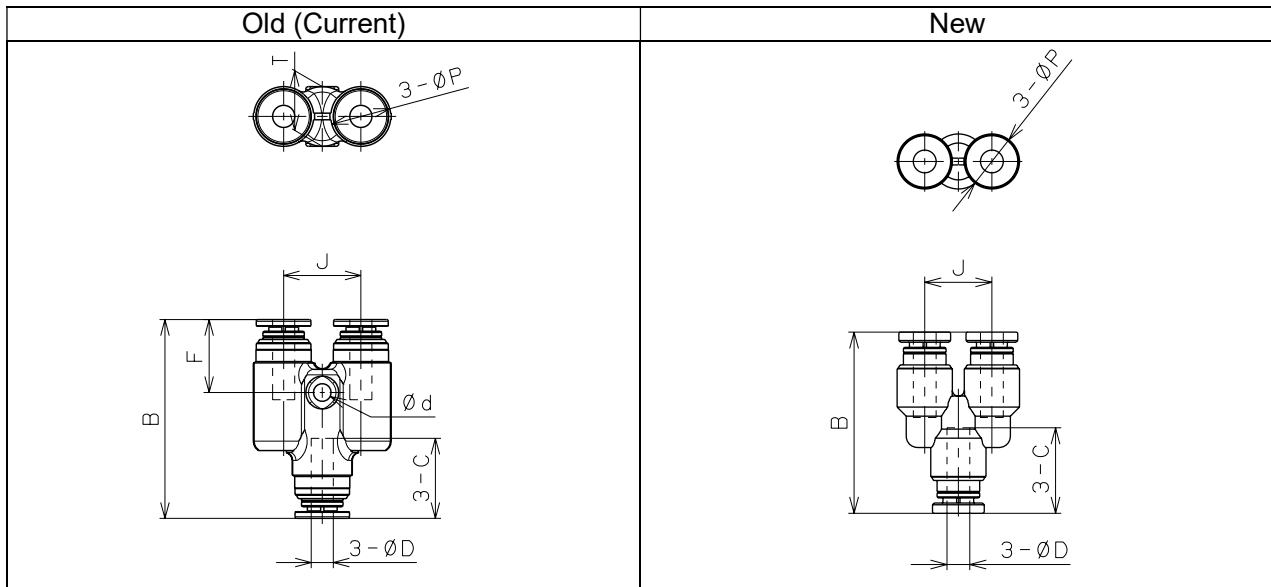


Model code	Tube O.D φD	B		φP		Tube end C		E1		E2		Weight (g)		Orifice (φmm)
		Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	
KE4-1	4	17.6	18	10.5	9.7	14.5	15.1	35.2	36	17.6	18	19	16	2.5
KE6-1	6	20.2	20.95	12.5	11.8	16.6	17.2	40.3	41.9	20.15	20.95	27	27	4
KE8-1	8	22.3	23	14.5	13.7	17.7	18.4	44.6	46	22.3	23	36	34	6
KE10-1	10	26.1	27	18.5	17.5	20	20.9	52.2	54	26.1	27	68	64	8
KE12-1	12	29.7	30.6	21.5	20.8	22.6	23.5	59.4	61.2	29.7	30.6	110	105	9

Newly Added inch size

Model code	Tube O.D φD	B	φP	Tube end C	E1	E2	Weight (g)	Orifice (φmm)
KE1/4-1	1/4"	20.95	11.8	17.2	41.9	20.95	26	4
KE3/8-1	3/8"	27	17.5	20.9	54	27	67	8
KE1/2-1	1/2"	30.1	20.8	23	60.2	30.1	93	9

[KY: Union Y]



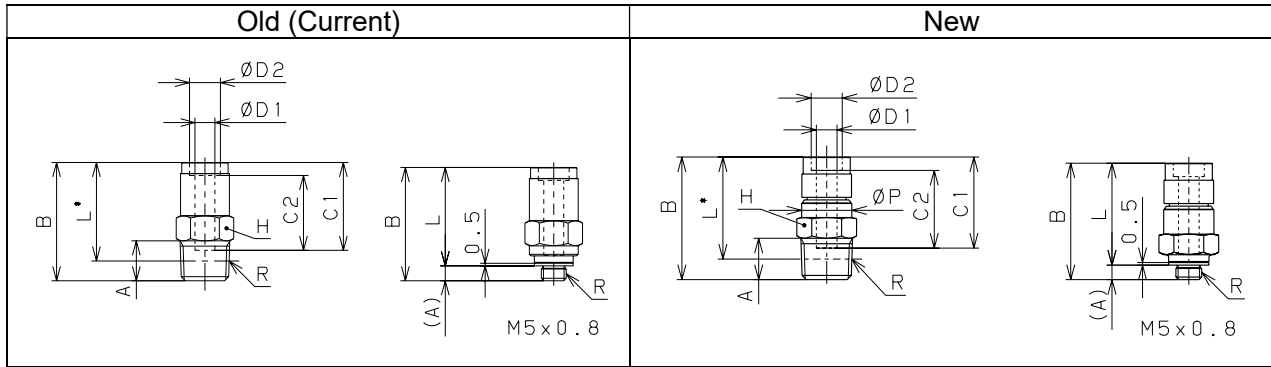
Model code	Tube O.D φD	B		φP		Tube end C		J		φd		F		T		Weight (g)		Orifice (φmm)
		Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	
KY4-1	4	36	32	10.8	9.7	14.5	15.1	14	11.8	3.2	-	13.2	-	10.8	-	32	17	2.5
KY6-1	6	39.1	36.7	12.8	11.8	16.6	17.2	16	13.9	3.2	-	14.1	-	12.8	-	43	28	4
KY8-1	8	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	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	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

Newly Added inch size

Model code	Tube O.D φD	B	φP	Tube end C	J	Weight (g)	Orifice (φmm)
KY1/4-1	1/4"	36.7	11.8	17.2	13.9	28	4
KY3/8-1	3/8"	46.6	17.5	20.9	19.6	68	8
KY1/2-1	1/2"	51.4	20.8	23	23	94	9

<Type with protective cover>

[KC: Straight]

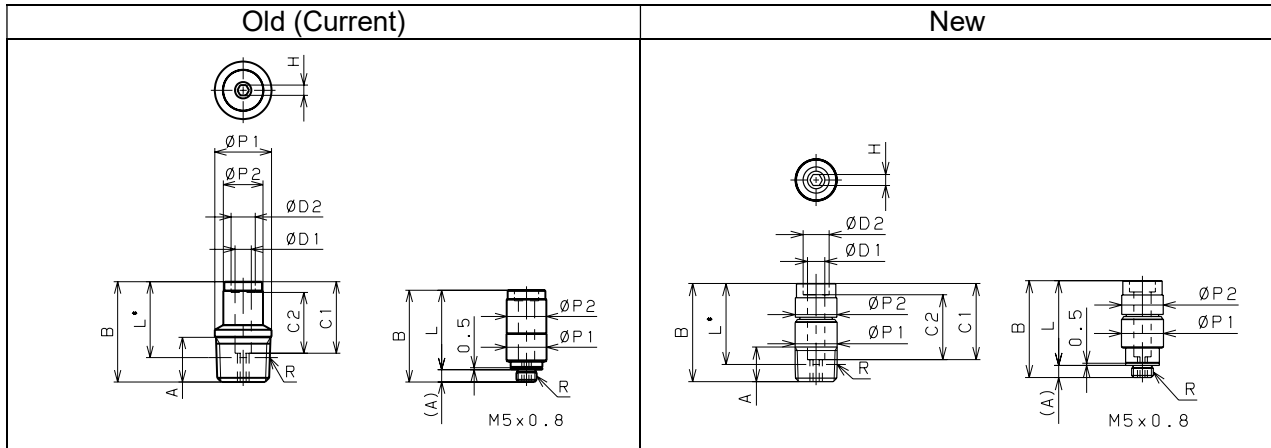


Model code	Tube O.D		R	A		B		L		P	Tube end		Hex.H		Weight (g)		Orifice (φ mm)	
	φD1	φD2		Old	New	Old	New	Old	New		C1	C2	Old	New	Old	New	Old	New
KC4-M5	4	6	M5x0.8	3	2.8	22.7	22.5	19.7	19.7	9.7	17.6	15	10	10	12	8	1.8	2.4
KC4-M6	4	6	M6x1	-	3.8	-	23.5	-	19.7	9.7	17.6	15	-	10	-	9	-	3
KC4-M6P0.75	4	6	M6x0.75	-	3.8	-	23.5	-	19.7	9.7	17.6	15	-	10	-	9	-	3
KC4-01	4	6	R1/8	8	8	23.7	23.7	19.7	19.7	9.7	17.6	15	10	10	13	10	2.5	3
KC4-02	4	6	R1/4	11	11	26.7	25.2	20.7	19.2	-	17.6	15	14	14	22	19	2.5	3
KC6-M5	6	8	M5x0.8	3	2.8	25.5	24.4	22.5	21.6	11.8	19.5	16	12	12	17	12	1.8	2.4
KC6-M6	6	8	M6x1	-	3.8	-	25.4	-	21.6	11.8	19.5	16	-	12	-	12	-	3
KC6-M6P0.75	6	8	M6x0.75	-	3.8	-	25.4	-	21.6	11.8	19.5	16	-	12	-	12	-	3
KC6-01	6	8	R1/8	8	8	25.1	24.8	21.1	20.8	11.8	19.5	16	12	12	14	12	4	5
KC6-02	6	8	R1/4	11	11	29.1	26.2	23	20.1	11.8	19.5	16	14	14	23	17	4	5
KC6-03	6	8	R3/8	12	12	29.1	27	22.7	20.6	-	19.5	16	17	17	34	31	4	5
KC8-01	8	10	R1/8	8	8	29.9	29.9	25.9	25.9	13.7	20.2	17	14	14	27	18	6	6
KC8-02	8	10	R1/4	11	11	28.6	28.6	22.6	22.6	13.7	20.2	17	14	14	25	19	6	7
KC8-03	8	10	R3/8	12	12	28.9	27.5	22.6	21.2	-	20.2	17	17	17	32	29	6	7
KC10-01	10	12	R1/8	8	8	33.3	32.8	29.3	28.8	17.5	23.2	19.5	17	17	40	30	6	6
KC10-02	10	12	R1/4	11	11	33.3	32.3	27.3	26.3	17.5	23.2	19.5	17	17	39	27	8	8.5
KC10-03	10	12	R3/8	12	12	31.8	31.8	25.5	25.5	17.5	23.2	19.5	17	17	46	32	8	9
KC10-04	10	12	R1/2	15	15	35.8	32.9	27.6	24.7	-	23.2	19.5	22	21	67	54	8	9
KC12-02	12	14	R1/4	11	11	38.9	38.9	32.9	32.9	20.8	26.3	23	21	21	61	51	8.5	8.5
KC12-03	12	14	R3/8	12	12	34.9	34.9	28.6	28.6	20.8	26.3	23	21	21	62	45	9	11
KC12-04	12	14	R1/2	15	15	36.9	36.9	28.7	28.7	20.8	26.3	23	22	21	74	59	9	11

Newly Added inch size

Model code	Tube O.D φD1	Tube O.D φD2	R	A	B	L	ΦP	Tube end C1	Tube end C2	Hex.H	Weight (g)	Orifice (φmm)
KC4-U10	4	6	No.10-32UNF	2.8	22.5	19.7	9.7	17.6	15	10	11	2.4
KC4-N1	4	6	1/8-27NPT	8	23.7	19.6	9.7	17.6	15	12	12	3
KC4-N2	4	6	1/4-18NPT	11	25.2	19.4	13.8	17.6	15	14	19	3
KC1/4-U10	1/4"	8.35	No.10-32UNF	2.8	24.4	21.6	11.8	19.5	16	12	8	2.4
KC1/4-N1	1/4"	8.35	1/8-27NPT	8	24.8	20.6	11.8	19.5	16	12	11	5.3
KC1/4-N2	1/4"	8.35	1/4-18NPT	11	26.2	20.4	11.8	19.5	16	14	18	5.3
KC1/4-N3	1/4"	8.35	3/8-18NPT	12	27	19.5	16.8	19.5	16	17	31	5.3
KC8-N1	8	10	1/8-27NPT	8	29.9	25.8	13.7	20.2	17	14	18	6
KC8-N2	8	10	1/4-18NPT	11	29.9	24.1	13.7	20.2	17	14	18	7
KC8-N3	8	10	3/8-18NPT	12	27.5	21.4	16.8	20.2	17	17	29	7
KC3/8-N1	3/8"	11.53	1/8-27NPT	8	32.8	28.7	17.5	23.2	19.5	17	31	6
KC3/8-N2	3/8"	11.53	1/4-18NPT	11	32.3	26.5	17.5	23.2	19.5	17	29	8.5
KC3/8-N3	3/8"	11.53	3/8-18NPT	12	31.8	25.7	17.5	23.2	19.5	17	35	9
KC3/8-N4	3/8"	11.53	1/2-14NPT	15	32.9	24.8	21.8	23.2	19.5	21	56	9
KC1/2-N2	1/2"	14.7	1/4-18NPT	11	38.4	32.6	20.8	26.3	23.5	21	47	8.5
KC1/2-N3	1/2"	14.7	3/8-18NPT	12	34.4	28.3	20.8	26.3	23.5	21	40	11
KC1/2-N4	1/2"	14.7	1/2-14NPT	15	36.4	28.3	20.8	26.3	23.5	21	54	11

[KOC: Inner Hex. Straight]

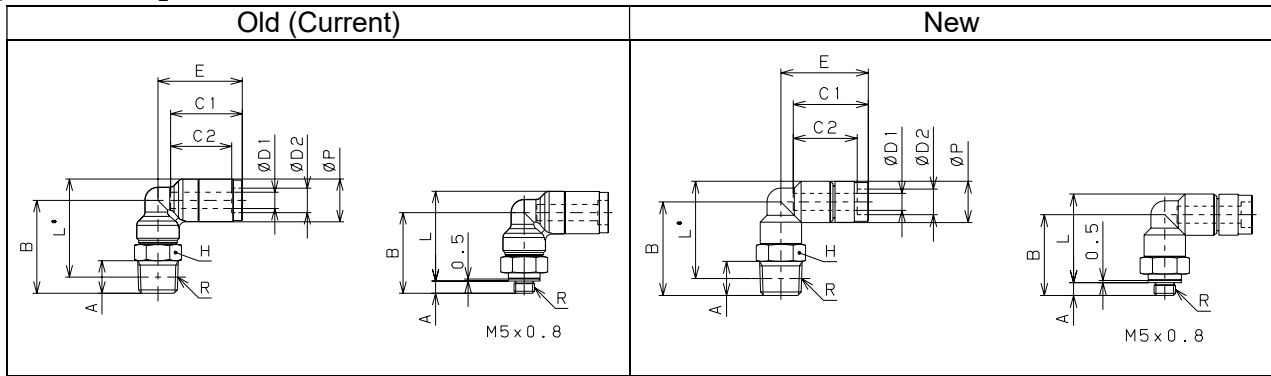


Model code	Tube O.D		R	A		B		L		φP1		φP2		Tube end		Hex.H		Weight (g)		Orifice (φ mm)	
	φD1	φD2		現行	変更後	現行	変更後	現行	変更後	現行	変更後	現行	変更後	C1	C2	現行	変更後	現行	変更後	現行	変更後
KOC4-M5	4	6	M5x0.8	3	2.8	22.6	22.4	19.6	19.6	9.9	9.7	9.8	9.6	17.6	15	2	2.5	11	7	2.1	2.6
KOC4-M6	4	6	M6x1	-	3.8	-	23.4	-	19.6	-	9.7	-	9.6	17.6	15	-	2.5	-	8	-	2.6
KOC4-M6P0.75	4	6	M6x0.75	-	3.8	-	23.4	-	19.6	-	9.7	-	9.6	17.6	15	-	2.5	-	8	-	2.6
KOC4-01	4	6	R1/8	8	8	23.7	22.7	19.7	18.7	9.9	9.9	9.8	9.8	17.6	15	2.5	2.5	12	9	2.6	2.6
KOC4-02	4	6	R1/4	11	11	24.7	22.7	18.7	16.7	14	13.7	9.8	9.6	17.6	15	2.5	2.5	19	15	2.6	2.6
KOC6-M5	6	8	M5x0.8	3	2.8	25.5	23.8	22.5	21	11.9	11.8	11.8	11.8	19.5	16	2	2.5	15	9	2.1	2.6
KOC6-M6	6	8	M6x1	-	3.8	-	24.8	-	21	-	11.8	-	11.8	19.5	16	-	3	-	10	-	3.2
KOC6-M6P0.75	6	8	M6x0.75	-	3.8	-	24.8	-	21	-	11.8	-	11.8	19.5	16	-	3	-	10	-	3.2
KOC6-01	6	8	R1/8	8	8	25.1	24.6	21.1	20.6	11.9	11.8	11.8	11.8	19.5	16	4	4	13	11	4.1	4.2
KOC6-02	6	8	R1/4	11	11	25.1	23.8	19	17.7	13.9	13.7	11.8	11.8	19.5	16	4	4	18	15	4.1	4.2
KOC6-03	6	8	R3/8	12	12	26.1	23.8	19.7	17.4	16.9	16.8	11.8	11.8	19.5	16	4	4	27	24	4.1	4.2
KOC8-01	8	10	R1/8	8	8	29.9	27.9	25.9	23.9	13.9	13.7	13.8	13.7	20.2	17	5	5	20	13	5.1	5.3
KOC8-02	8	10	R1/4	11	11	28.6	27.1	22.6	21.1	13.9	13.7	13.8	13.7	20.2	17	6	6	20	16	6.2	6.3
KOC8-03	8	10	R3/8	12	12	25.9	24.2	19.6	17.9	16.9	16.8	13.8	13.7	20.2	17	6	6	26	23	6.2	6.3
KOC10-01	10	12	R1/8	8	8	33.3	32.8	29.3	28.8	16.9	17.5	16.9	17.5	23.2	19.5	5	5	35	25	5.1	5.3
KOC10-02	10	12	R1/4	11	11	32.3	32.3	26.3	26.3	16.9	17.5	16.9	17.5	23.2	19.5	6	6	33	29	6.2	6.3
KOC10-03	10	12	R3/8	12	12	31.8	31.8	25.5	25.5	16.9	17.5	16.9	17.5	23.2	19.5	6	6	38	35	6.2	6.3
KOC10-04	10	12	R1/2	15	15	32.8	32.8	24.6	24.6	20.8	20.8	16.9	17.5	23.2	19.5	6	6	56	54	6.2	6.3
KOC12-02	12	14	R1/4	11	11	38.9	38.9	32.9	32.9	19.9	20.8	20	20.8	26.3	23	8	6	56	44	8.2	6.3
KOC12-03	12	14	R3/8	12	12	34.9	34.9	28.6	28.6	20.8	20.8	20	20.8	26.3	23	8	8	49	45	8.2	8.4
KOC12-04	12	14	R1/2	15	15	36.9	36.9	28.7	28.7	20.8	20.8	20	20.8	26.3	23	8	8	64	60	8.2	8.4

Newly Added inch size

Model code	Tube O.D φD1	Tube O.D φD2	R	A	B	L	φP1	φP2	Tube end C1	Tube end C2	Hex. H	Weight (g)	Orifice (φmm)
KOC4-U10	4	6	No.10-32UNF	2.8	22.4	19.6	9.7	9.6	17.6	15	2.5	7	2.6
KOC4-N1	4	6	1/8-27NPT	8	2.7	18.6	9.7	9.6	17.6	15	2.5	10	2.6
KOC4-N2	4	6	1/4-18NPT	11	22.7	16.9	13.7	9.6	17.6	15	2.5	16	2.6
KOC1/4-U10	1/4"	8.35	No.10-32UNF	2.8	23.8	21	11.8	11.8	19.5	16	2.5	9	2.6
KOC1/4-N1	1/4"	8.35	1/8-27NPT	8	24.6	20.4	11.8	11.8	19.5	16	4	11	4.2
KOC1/4-N2	1/4"	8.35	1/4-18NPT	11	23.8	18	13.7	11.8	19.5	16	4	16	4.2
KOC1/4-N3	1/4"	8.35	3/8-18NPT	12	23.8	17.7	16.8	11.8	19.5	16	4	24	4.4
KOC3/8-N1	3/8"	11.53	1/8-27NPT	8	32.8	28.7	17.5	17.5	23.2	19.5	5	27	5.3
KOC3/8-N2	3/8"	11.53	1/4-18NPT	11	32.3	26.5	17.5	17.5	23.2	19.5	6	30	6.3
KOC3/8-N3	3/8"	11.53	3/8-18NPT	12	31.8	25.7	17.5	17.5	23.2	19.5	6	36	6.3
KOC3/8-N4	3/8"	11.53	1/2-14NPT	15	32.8	24.7	20.8	17.5	23.2	19.5	6	55	6.3

[KL: Elbow]

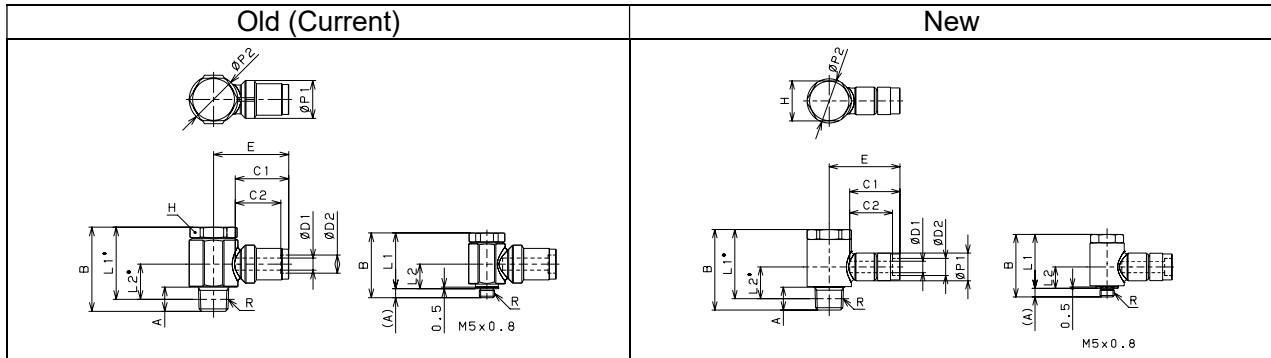


Model code	Tube O.D.		R	A	B		L		φP		Tube end		E		Hex. H		Weight (g)		Orifice (φmm)
	φD1	φD2			Old	New	Old	New	Old	New	C1	C2	Old	New	Old	New	Old	New	
KL4-M5	4	6	M5x0.8	3	19.8	19	22.1	20.8	10.5	9.7	17.6	15	20.7	20.5	10	10	18	15	1.8
KL4-M6	4	6	M6x1	4	-	20	-	20.8	-	9.7	17.6	15	-	20.5	-	10	-	15	1.8
KL4-M6P0.75	4	6	M6x0.75	4	-	20	-	20.8	-	9.7	17.6	15	-	20.5	-	10	-	16	1.8
KL4-01	4	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	4	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	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
KL6-M6	6	8	M6x1	4	-	21.7	-	23.6	-	11.8	19.5	16	-	23.3	-	12	-	23	1.8
KL6-M6P0.75	6	8	M6x0.75	4	-	21.7	-	23.6	-	11.8	19.5	16	-	23.3	-	12	-	23	1.8
KL6-01	6	8	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	8	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	8	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	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	8	10	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	8	10	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	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	10	12	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	10	12	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	10	12	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	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	12	14	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	12	14	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

Newly Added inch size

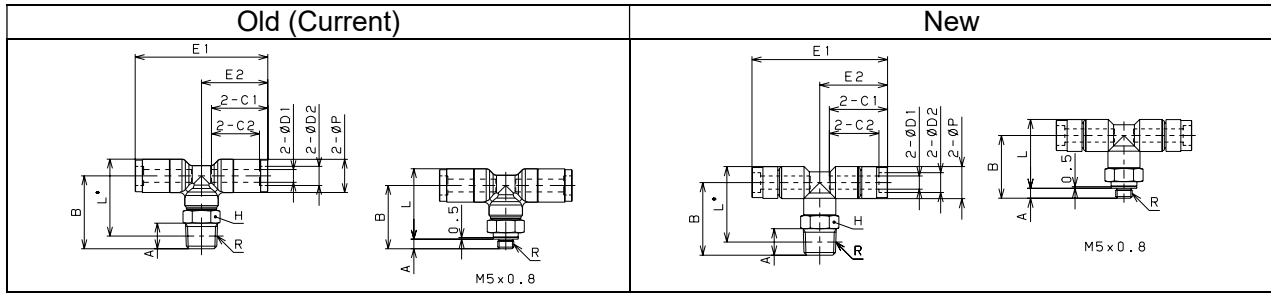
Model code	Tube O.D. φD1	Tube O.D. φD2	R	A	B	L	φP	Tube end C1	Tube end C2
KL4-U10	4	6	No.10-32UNF	3	19	20.8	9.7	17.6	15
KL4-N1	4	6	1/8-27NPT	8	22	22.7	9.7	17.6	15
KL4-N2	4	6	1/4-18NPT	11	25	24	9.7	17.6	15
KL1/4-U10	1/4"	8.35	No.10-32UNF	3	20.7	23.6	11.8	19.5	16
KL1/4-N1	1/4"	8.35	1/8-27NPT	8	23.7	25.5	11.8	19.5	16
KL1/4-N2	1/4"	8.35	1/4-18NPT	11	26.7	26.8	11.8	19.5	16
KL1/4-N3	1/4"	8.35	3/8-18NPT	12	28.5	28.3	11.8	19.5	16
KL8-N1	8	10	1/8-27NPT	8	25	27.7	13.7	20.2	17
KL8-N2	8	10	1/4-18NPT	11	28	29.1	13.7	20.2	17
KL8-N3	8	10	3/8-18NPT	12	29.8	30.6	13.7	20.2	17
KL3/8-N1	3/8"	11.53	1/8-27NPT	8	27.5	32.1	17.5	23.2	19.5
KL3/8-N2	3/8"	11.53	1/4-18NPT	11	30.5	33.5	17.5	23.2	19.5
KL3/8-N3	3/8"	11.53	3/8-18NPT	12	31.5	34.2	17.5	23.2	19.5
KL3/8-N4	3/8"	11.53	1/2-14NPT	15	34.5	35.1	17.5	23.2	19.5
KL1/2-N2	1/2"	14.7	1/4-18NPT	11	31	35.6	20.8	25.8	23
KL1/2-N3	1/2"	14.7	3/8-18NPT	12	32	36.3	20.8	25.8	23
KL1/2-N4	1/2"	14.7	1/2-14NPT	15	35	37.3	20.8	25.8	23

[KH: Single Banjo]



Model code	Tube O.D		R	A		B		L1		L2		φP1		φP2		Tube end		E		Hex. H		Weight (g)		Orifice (φmm)	
	φD1	φD2		Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	C1	C2	Old	New	Old	New	Old	New	Old	New
	KH4-M5	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
KH4-01	4	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	2.5
KH6-M5	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	1.8
KH6-01	6	8	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	4
KH6-02	6	8	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	4
KH6-03	6	8	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	4
KH8-01	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	5.6
KH8-02	8	10	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	6
KH8-03	8	10	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	6
KH10-02	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	7.3	7.6
KH10-03	10	12	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	8
KH10-04	10	12	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	8
KH12-03	12	14	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	9
KH12-04	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	9

[KB: Branch Tee]

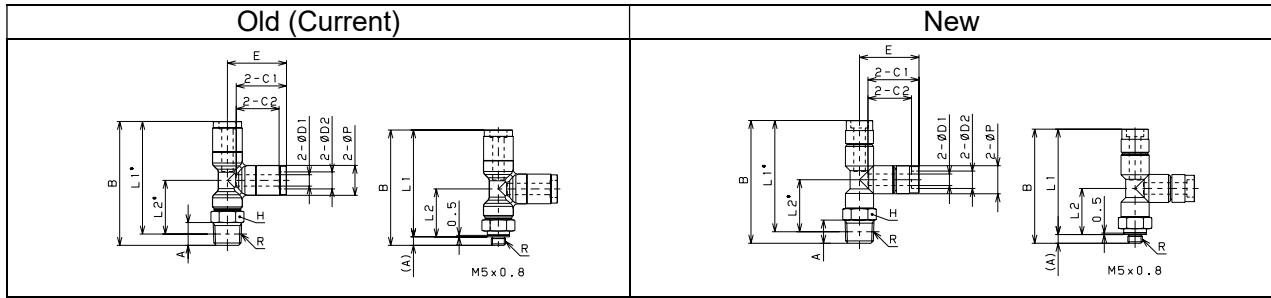


Model code	Tube O.D		R	A	B		L		φP		Tube end		E1		E2		Hex. H		Weight (g)		Orifice (φmm)
	φD1	φD2			Old	New	Old	New	Old	New	C1	C2	Old	New	Old	New	Old	New	Old	New	
KB4-M5	4	6	M5x0.8	3	19.8	19	22.1	20.8	10.5	9.7	17.6	15	41.4	41	20.7	20.5	10	10	26	21	1.8
KB4-01	4	6	R1/8	8	22.8	22	24.1	22.8	10.5	9.7	17.6	15	41.4	41	20.7	20.5	10	10	29	23	2.5
KB4-02	4	6	R1/4	11	25.8	25	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	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	8	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	8	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	8	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	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	8	10	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	8	10	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	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	10	12	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	10	12	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	10	12	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	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	12	14	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	12	14	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

Newly Added inch size

Model code	Tube O.D φD1	Tube O.D φD2	R	A	B	L	φP	Tube end C1	Tube end C2	E1	E2	Hex. H	Weight (g)	Orifice (φmm)
KB4-U10	4	6	No.10-32UNF	3	19	20.8	9.7	17.6	15	41	20.5	10	21	1.8
KB4-N1	4	6	1/8-27NPT	8	22	22.7	9.7	17.6	15	41	20.5	12	24	2.5
KB4-N2	4	6	1/4-18NPT	11	25	24	9.7	17.6	15	41	20.5	14	29	2.5
KB1/4-U10	1/4"	8.35	No.10-32UNF	3	20.7	23.6	11.8	19.5	16	46.5	23.25	12	32	1.8
KB1/4-N1	1/4"	8.35	1/8-27NPT	8	23.7	25.5	11.8	19.5	16	46.5	23.25	12	32	4
KB1/4-N2	1/4"	8.35	1/4-18NPT	11	26.7	26.8	11.8	19.5	16	46.5	23.25	14	38	4
KB1/4-N3	1/4"	8.35	3/8-18NPT	12	28.5	28.3	11.8	19.5	16	46.5	23.25	17	47	4
KB3/8-N1	3/8"	11.53	1/8-27NPT	8	27.5	32.1	17.5	23.2	19.5	58.6	29.3	17	81	6
KB3/8-N2	3/8"	11.53	1/4-18NPT	11	30.5	33.5	17.5	23.2	19.5	58.6	29.3	17	83	8
KB3/8-N3	3/8"	11.53	3/8-18NPT	12	31.5	34.2	17.5	23.2	19.5	58.6	29.3	17	88	8
KB3/8-N4	3/8"	11.53	1/2-14NPT	15	34.5	35.1	17.5	23.2	19.5	58.6	29.3	21	106	8

[KD: Run Tee]

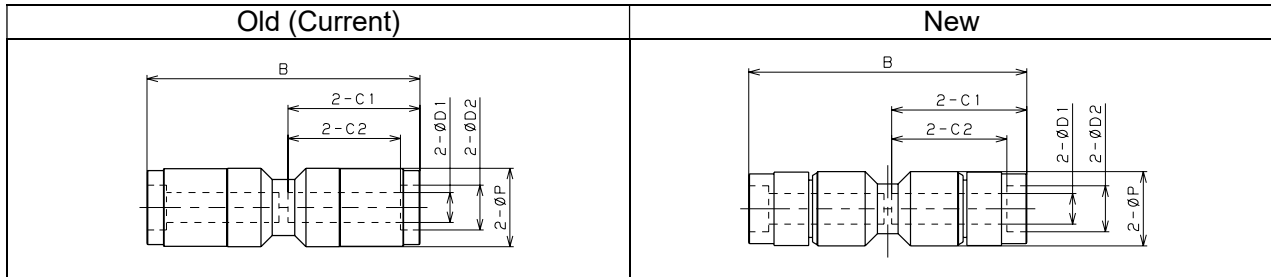


Model code	Tube O.D		R	A	B		L1		L2		φP		Tube end		E		Hex. H		Weight (g)		Orifice (φmm)
	φD1	φD2			Old	New	Old	New	Old	New	Old	New	C1	C2	Old	New	Old	New	Old	New	
KD4-M5	4	6	M5x0.8	3	40.5	39.5	37.5	36.5	16.8	16	10.5	9.7	17.6	15	20.7	20.5	10	10	26	21	1.8
KD4-01	4	6	R1/8	8	43.5	42.5	39.5	38.5	18.8	18	10.5	9.7	17.6	15	20.7	20.5	10	10	29	23	2.5
KD4-02	4	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	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	8	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	8	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	8	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	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	8	10	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	8	10	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	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	10	12	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	10	12	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	10	12	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	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	12	14	R3/8	12	71.9	65.4	65.6	59.1	32.2	26.2	21.6	20.8	26.3	23	33.4	33.4	21	21	153	130	9
KD12-04	12	14	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

Newly Added inch size

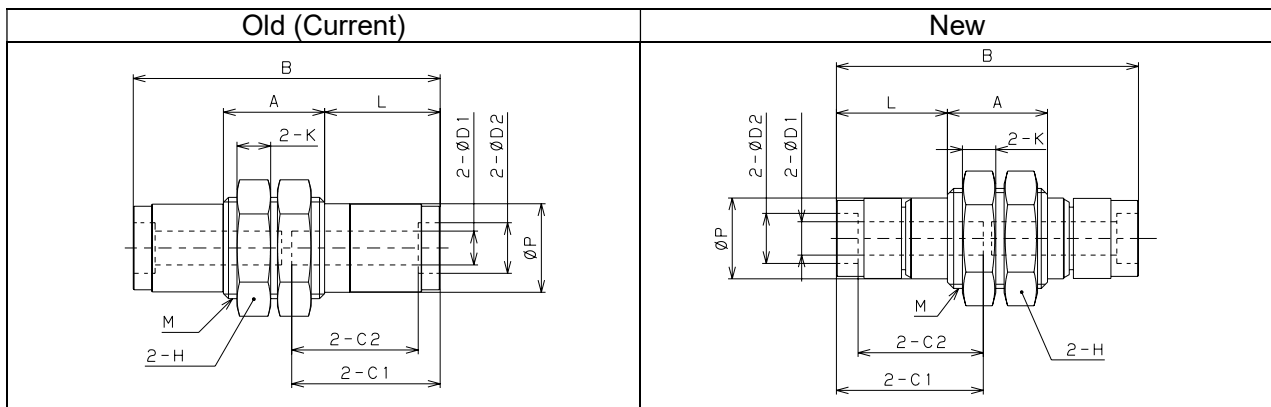
Model code	Tube O.D φD1	Tube O.D φD2	R	A	B	L1	L2	φP	Tube End C1	Tube End C2	E	Hex. H	Weight (g)	Orifice (φmm)
KD4-U10	4	6	No.10-32UNF	3	39.5	36.5	16	9.7	17.6	15	20.5	10	21	1.8
KD4-N1	4	6	1/8-27NPT	8	42.5	38.3	17.8	9.7	17.6	15	20.5	12	24	2.5
KD4-N2	4	6	1/4-18NPT	11	45.5	39.7	19.2	9.7	17.6	15	20.5	14	28	2.5
KD1/4-U10	1/4"	8.35	No.10-32UNF	3	44	41	17.7	11.8	19.5	16	23.3	12	32	1.8
KD1/4-N1	1/4"	8.35	1/8-27NPT	8	47	42.8	19.6	11.8	19.5	16	23.3	12	34	4
KD1/4-N2	1/4"	8.35	1/4-18NPT	11	50	44.2	20.9	11.8	19.5	16	23.3	14	39	4
KD1/4-N3	1/4"	8.35	3/8-18NPT	12	51.8	45.7	22.4	11.8	19.5	16	23.3	17	48	4
KD3/8-N1	3/8"	11.53	1/8-27NPT	8	56.8	52.7	23.4	17.5	23.2	19.5	29.3	17	81	6
KD3/8-N2	3/8"	11.53	1/4-18NPT	11	59.8	54	24.7	17.5	23.2	19.5	29.3	17	84	8
KD3/8-N3	3/8"	11.53	3/8-18NPT	12	60.8	54.7	25.4	17.5	23.2	19.5	29.3	17	89	8
KD3/8-N4	3/8"	11.53	1/2-14NPT	15	63.8	55.7	26.4	17.5	23.2	19.5	29.3	21	106	8

[KU: Union Straight]



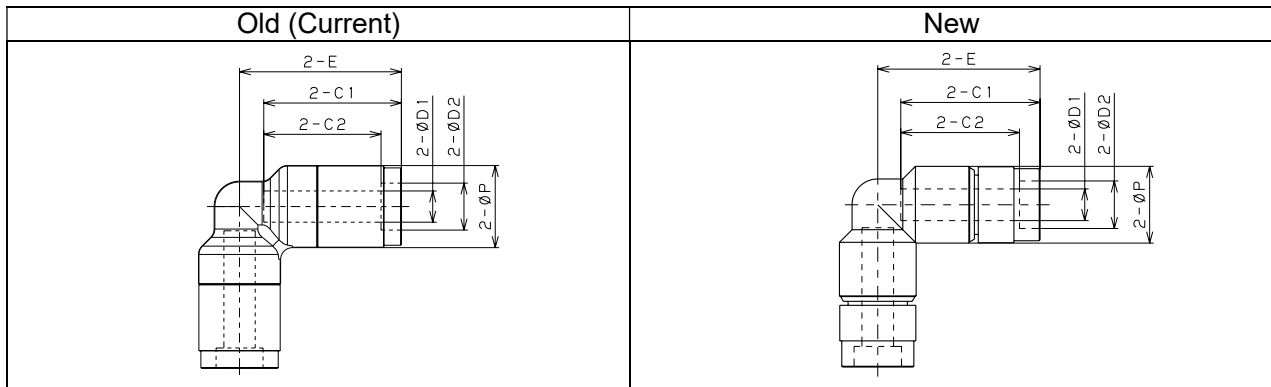
Model code	Tube O.D		B		φP		Tube end		Weight (g)		Orifice (φmm)
	φD1	φD2	Old	New	Old	New	C1	C2	Old	New	
KU4	4	6	36.4	36.2	10.5	9.7	17.6	15	16	12	2.5
KU6	6	8	40.4	39.9	12.5	11.8	19.5	16	21	18	4
KU8	8	10	41.9	41.4	14.5	13.7	20.2	17	26	23	6
KU10	10	12	47.9	47.4	18.6	17.5	23.2	19.5	51	43	8
KU12	12	14	54.1	53.6	21.6	20.8	26.3	23	80	70	9

[KM: Bulkhead Union]



Model code	Tube O.D		M		A		B		L		φP		Tube end		Hex. H	K	Weight (g)		Orifice (φmm)
	φD1	φD2	Old	New	Old	New	Old	New	Old	New	Old	New	C1	C2			Old	New	
KM4	4	6	M12x1	M12x1	12	12	36.4	36	13.7	13.3	10.5	9.7	17.6	15	14	4	23	20	2.5
KM6	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	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	10	12	M20x1	M20x1	22	21.3	49.9	49.9	16.3	14.6	18.5	17.5	23.2	19.5	24	5	83	77	8
KM12	12	14	M24x1	M22x1	25.5	24.5	53.6	57.1	16.4	16.8	21.7	20.4	26.3	23	27	6	123	114	9

[KV: Union Elbow]

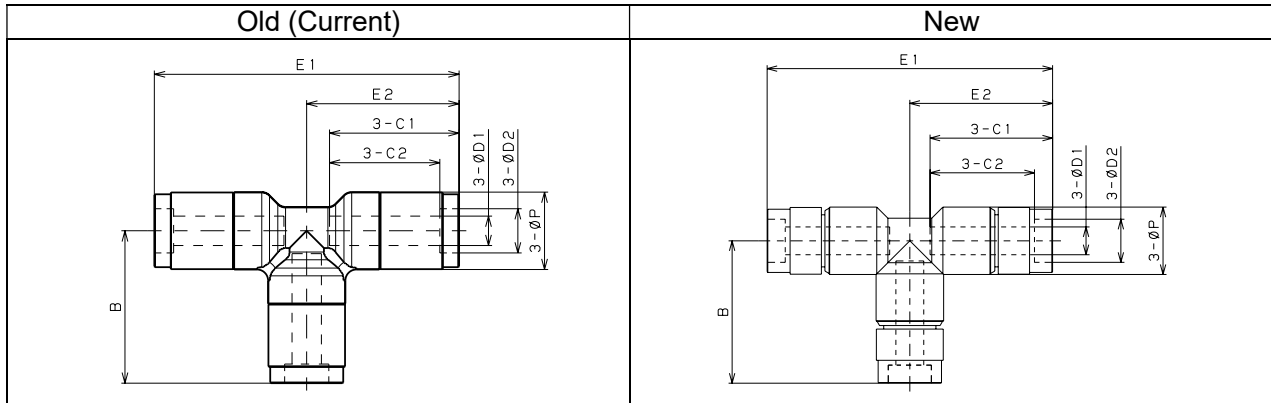


Model code	Tube O.D		φP		Tube end		E		Weight (g)		Orifice (φmm)
	φD1	φD2	Old	New	C1	C2	Old	New	Old	New	
KV4	4	6	10.5	9.7	17.6	15	20.7	20.5	17	14	2.5
KV6	6	8	12.5	11.8	19.5	16	23.1	23.3	23	22	4
KV8	8	10	14.5	13.7	20.2	17	24.8	24.8	29	28	6
KV10	10	12	18.6	17.5	23.2	19.5	29.3	29.3	58	55	8
KV12	12	14	21.6	20.8	26.3	23	33.4	33.4	94	91	9

Newly Added inch size

Model code	Tube O.D φD1	Tube O.D φD2	φP	Tube end C1	Tube end C2	E	Weight (g)	Orifice (φmm)
KV1/4	1/4"	8.35	11.8	19.5	16	23.3	21	4
KV3/8	3/8"	11.53	17.5	23.2	19.5	29.3	58	8
KV1/2	1/2"	14.7	20.8	25.8	23	32.9	83	9

[KE: Union Tee]

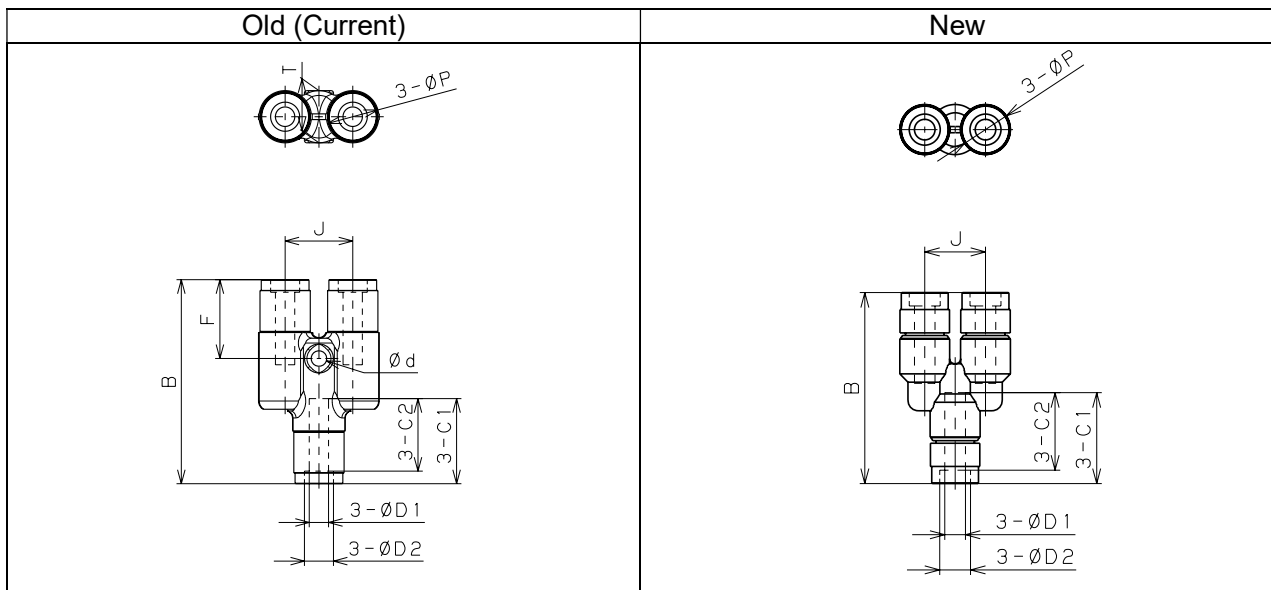


Model code	Tube O.D		B		φP		Tube end		E1		E2		Weight (g)		Orifice (φmm)
	φD1	φD2	Old	New	Old	New	C1	C2	Old	New	Old	New	Old	New	
KE4	4	6	41.4	20.5	10.5	9.7	17.6	15	41.4	41	20.7	20.5	24	20	2.5
KE6	6	8	46.1	23.3	12.5	11.8	19.5	16	46.1	46.5	23.05	23.25	32	31	4
KE8	8	10	49.6	24.8	14.5	13.7	20.2	17	49.6	49.6	24.8	24.8	42	39	6
KE10	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	12	14	66.8	33.4	21.6	20.8	26.3	23	66.8	66.8	33.4	33.4	132	129	9

Newly Added inch size

Model code	Tube O.D φD1	Tube O.D φD2	B	φP	Tube end C1	Tube end C2	E1	E2	Weight (g)	Orifice (φmm)
KE1/4	1/4"	8.35	23.25	11.8	19.5	16	46.5	23.25	31	4
KE3/8	3/8"	11.53	29.3	17.5	23.2	19.5	58.6	29.3	82	8
KE1/2	1/2"	14.7	32.9	20.8	25.8	23	65.8	32.9	116	9

[KY: Union Y]



Model code	Tube O.D		B		φP		Tube end		J		φd		F		T		Weight (g)		Orifice (φmm)
	φD1	φD2	Old	New	Old	New	C1	C2	Old	New	Old	New	Old	New	Old	New	Old	New	
KY4	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	8	44.9	41.3	12.8	11.8	19.5	16	16	13.9	3.2	-	17	-	12.8	-	48	33	4
KY8	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	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	12	14	63.9	58	21.8	20.8	26.3	23	26.5	23	4.2	-	22.5	-	21.8	-	204	129	9

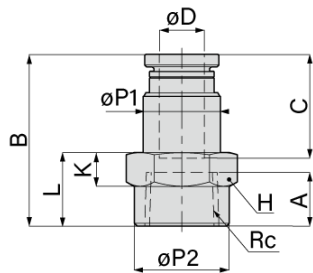
Newly Added inch size

Model code	Tube O.D φD1	Tube O.D φD2	B	φP	Tube end C1	Tube end C2	J	Weight (g)	Orifice (φmm)
K1/4	1/4"	8.35	41.3	11.8	19.5	16	13.9	32	4
KY3/8	3/8"	11.53	51.2	17.5	23.2	19.5	19.6	82	8
KY1/2	1/2"	14.7	57.6	20.8	26.3	23	23	117	9

Newly added Shape types

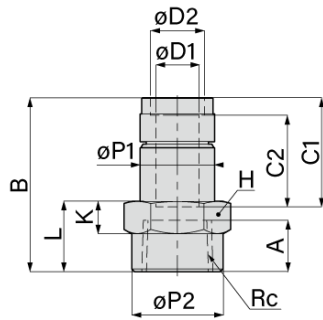
[KCF: Female Straight]

<Type without protective cover>



Model code	Tube O.D φD	Rc	A	B	L	φP1	φP2	Tube end C	Hex. H	K	Weight (g)	Orifice (φmm)
KCF4-M5-1	4	M5x0.8	4.5	21.6	8	9.7	9	15.1	10	4	9	3
KCF4-01-1	4	Rc1/8	7	24.1	10	9.7	13.8	15.1	14	5	14	3
KCF6-M5-1	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	8	Rc1/8	7	27.4	10	13.7	13.8	18.4	14	5	18	7
KCF8-02-1	8	Rc1/4	9.5	30.4	13	13.7	16.8	18.4	17	6	24	7
KCF8-03-1	8	Rc3/8	10.5	31.4	14	13.7	20.8	18.4	21	6.5	33	7
KCF10-01-1	10	Rc1/8	7	29.9	11	17.5	13.8	20.9	17	6	29	8
KCF10-02-1	10	Rc1/4	9.5	32.9	13	17.5	16.8	20.9	17	6	32	8.5
KCF10-03-1	10	Rc3/8	10.5	33.9	14	17.5	20.8	20.9	21	6.5	40	8.5
KCF10-04-1	10	Rc1/2	13	36.9	17	17.5	25	20.9	24	7	49	9
KCF12-02-1	12	Rc1/4	9.5	35	13.5	20.8	16.8	23.5	21	6.5	49	11
KCF12-03-1	12	Rc3/8	10.5	36.5	14	20.8	20.8	23.5	21	6.5	51	11
KCF12-04-1	12	Rc1/2	13	39.5	17	20.8	25	23.5	24	7	61	11
KCF4-N1-1	4	1/8-27NPT	7	24.1	10	9.7	13.8	15.1	14	5	14	3
KCF1/4-N1-1	1/4"	1/8-27NPT	7	26.2	10	11.8	13.8	17.2	14	5	15	5.3
KCF1/4-N2-1	1/4"	1/4-18NPT	9.5	29.2	13	11.8	17.2	17.2	17	6	22	5.3
KCF3/8-N2-1	3/8"	1/4-18NPT	9.5	32.9	12	17.5	16.8	20.9	17	5	32	8.5
KCF3/8-N3-1	3/8"	3/8-18NPT	10.5	33.9	14	17.5	21.8	20.9	21	6.5	42	8.5

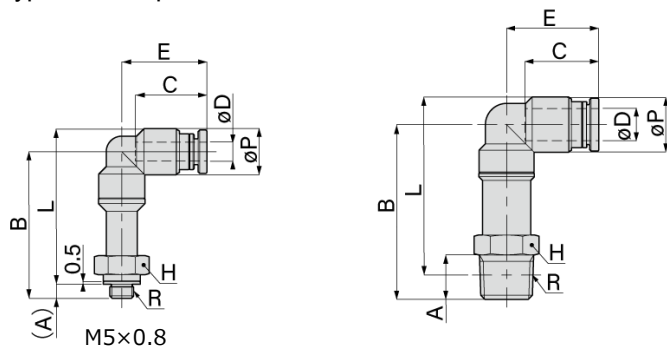
<Type with protective cover>



Model code	Tube O.D		Rc	A	B	L	φP1	φP2	Tube end		Hex. H	K	Weight (g)	Orifice (φmm)
	φD1	φD2							C1	C2				
KCF4-M5	4	6	M5x0.8	4.5	24.1	8	9.7	9	17.6	15	10	4	10	3
KCF4-01	4	6	Rc1/8	7	26.6	10	9.7	13.8	17.6	15	14	5	16	3
KCF6-M5	6	8	M5x0.8	5	24.5	9	11.8	9	19.5	16	12	5	13	4.1
KCF6-01	6	8	Rc1/8	7	28.5	10	11.8	13.8	19.5	16	14	5	18	5
KCF6-02	6	8	Rc1/4	9.5	31.5	13	11.8	16.8	19.5	16	17	6	24	5
KCF8-01	8	10	Rc1/8	7	29.2	10	13.7	13.8	20.2	17	14	5	20	7
KCF8-02	8	10	Rc1/4	9.5	32.2	13	13.7	16.8	20.2	17	17	6	26	7
KCF8-03	8	10	Rc3/8	10.5	33.2	14	13.7	20.8	20.2	17	21	6.5	34	7
KCF10-01	10	12	Rc1/8	7	32.2	11	17.5	13.8	23.2	19.5	17	6	34	8
KCF10-02	10	12	Rc1/4	9.5	35.2	13	17.5	16.8	23.2	19.5	17	6	37	8.5
KCF10-03	10	12	Rc3/8	10.5	36.2	14	17.5	20.8	23.2	19.5	21	6.5	45	8.5
KCF10-04	10	12	Rc1/2	13	39.2	17	17.5	25	23.2	19.5	24	7	54	9
KCF12-02	12	14	Rc1/4	9.5	37.8	13.5	20.8	16.8	26.3	23	21	6.5	57	11
KCF12-03	12	14	Rc3/8	10.5	39.3	14	20.8	20.8	26.3	23	21	6.5	59	11
KCF12-04	12	14	Rc1/2	13	42.3	17	20.8	25	26.3	23	24	7	68	11
KCF4-N1	4	6	1/8-27NPT	7	26.6	10	9.7	13.8	17.6	15	14	5	15	3
KCF1/4-N1	1/4"	8.35	1/8-27NPT	7	28.5	10	11.8	13.8	19.5	16	14	5	16	5.3
KCF1/4-N2	1/4"	8.35	1/4-18NPT	9.5	31.5	13	11.8	17.2	19.5	16	17	6	24	5.3
KCF3/8-N2	3/8"	11.53	1/4-18NPT	9.5	35.2	12	17.5	16.8	23.2	19.5	17	5	37	8.5
KCF3/8-N3	3/8"	11.53	3/8-18NPT	10.5	36.2	14	17.5	21.8	23.2	19.5	21	6.5	47	8.5

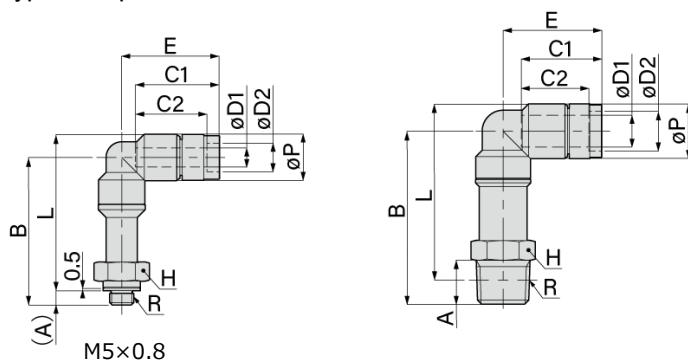
[KLL: Long Elbow]

<Type without protective cover>



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

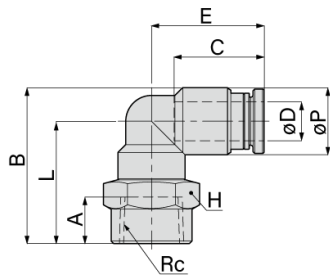
<Type with protective cover>



Model code	Tube O.D		R	A	B	L	φP	Tube end		E	Hex. H	Weight (g)	Orifice (φmm)
	φD1	φD2						C1	C2				
KLL4-M5	4	6	M5x0.8	3	31	32.8	9.7	17.6	15	20.5	10	19	1.8
KLL6-01	6	8	R1/8	8	36.7	38.6	11.8	19.5	16	23.3	12	30	4
KLL6-02	6	8	R1/4	11	39.7	39.6	11.8	19.5	16	23.3	14	34	4
KLL8-02	8	10	R1/4	11	43.5	44.3	13.7	20.2	17	24.8	14	43	6
KLL8-03	8	10	R3/8	12	45.3	45.8	13.7	20.2	17	24.8	17	53	6
KLL10-02	10	12	R1/4	11	49	51.7	17.5	23.2	19.5	29.3	17	78	8
KLL10-03	10	12	R3/8	12	50	52.4	17.5	23.2	19.5	29.3	17	78	8
KLL12-04	12	14	R1/2	15	57	59.2	20.8	26.3	23	33.4	21	127	9

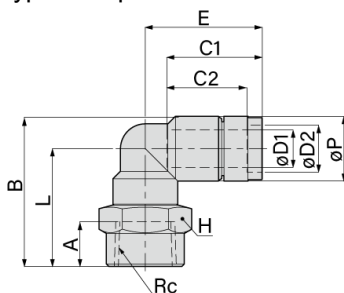
[KLF: Female Elbow]

<Type without protective cover>



Model code	Tube O.D		Rc	A	B	L	φP	Tube end C		E	Hex. H	Weight (g)	Orifice(φmm)
	φD												
KLF4-M5-1	4		M5x0.8	5	21.3	16.5	9.7	15.1	18	10	19	2.8	
KLF4-01-1	4		Rc1/8	7	24.8	20	9.7	15.1	18	14	20	2.8	
KLF6-M5-1	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	8		Rc1/8	7	28.9	22	13.7	18.4	23	14	29	6.0	
KLF8-02-1	8		Rc1/4	9.5	31.9	25	13.7	18.4	23	17	34	6.7	
KLF8-03-1	8		Rc3/8	10.5	32.9	26	13.7	18.4	23	21	43	6.7	
KLF10-01-1	10		Rc1/8	7	31.3	22.5	17.5	20.9	27	17	48	8.0	
KLF10-02-1	10		Rc1/4	9.5	35.3	26.5	17.5	20.9	27	19	56	8.0	
KLF10-03-1	10		Rc3/8	10.5	36.3	27.5	17.5	20.9	27	21	58	8.3	
KLF10-04-1	10		Rc1/2	13	40.3	31.5	17.5	20.9	27	24	70	8.3	
KLF12-02-1	12		Rc1/4	9.5	37.4	27	20.8	23.5	30.6	21	79	10.0	
KLF12-03-1	12		Rc3/8	10.5	38.4	28	20.8	23.5	30.6	21	78	10.0	
KLF12-04-1	12		Rc1/2	13	42.4	32	20.8	23.5	30.6	24	90	10.3	
KLF1/4-N1-1	1/4"		1/8-27NPT	7	26.6	20.7	11.8	17.2	21	14	23	4.6	
KLF1/4-N2-1	1/4"		1/4-18NPT	9.5	29.6	23.7	11.8	17.2	21	17	28	5.3	

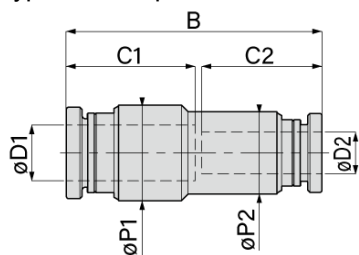
<Type with protective cover>



Model code	Tube O.D		Rc	A	B	L	φP	Tube end		E	Hex. H	Weight (g)	Orifice (φmm)
	φD1	φD2						C1	C2				
KLF4-M5	4	6	M5x0.8	5	21.3	16.5	9.7	17.6	15	20.5	10	15	2.8
KLF4-01	4	6	Rc1/8	7	24.8	20	9.7	17.6	15	20.5	14	20	2.8
KLF6-M5	6	8	M5x0.8	5	23.1	17.2	11.8	19.5	16	23.3	12	23	4.1
KLF6-01	6	8	Rc1/8	7	26.6	20.7	11.8	19.5	16	23.3	14	26	4.2
KLF6-02	6	8	Rc1/4	9.5	29.6	23.7	11.8	19.5	16	23.3	17	31	4.3
KLF8-01	8	10	Rc1/8	7	28.9	22	13.7	20.2	17	24.8	14	31	6.0
KLF8-02	8	10	Rc1/4	9.5	31.9	25	13.7	20.2	17	24.8	17	36	6.7
KLF8-03	8	10	Rc3/8	10.5	32.9	26	13.7	20.2	17	24.8	21	44	6.7
KLF10-01	10	12	Rc1/8	7	31.3	22.5	17.5	23.2	19.5	29.3	17	53	8.0
KLF10-02	10	12	Rc1/4	9.5	35.3	26.5	17.5	23.2	19.5	29.3	19	61	8.0
KLF10-03	10	12	Rc3/8	10.5	36.3	27.5	17.5	23.2	19.5	29.3	21	63	8.3
KLF10-04	10	12	Rc1/2	13	40.3	31.5	17.5	23.2	19.5	29.3	24	75	8.3
KLF12-02	12	14	Rc1/4	9.5	37.4	27	20.8	26.3	23	33.4	21	87	10.0
KLF12-03	12	14	Rc3/8	10.5	38.4	28	20.8	26.3	23	33.4	21	86	10.0
KLF12-04	12	14	Rc1/2	13	42.4	32	20.8	26.3	23	33.4	24	98	10.3
KLF1/4-N1	1/4"	8.35	1/8-27NPT	7	26.6	20.7	11.8	19.5	16	23.3	14	25	4.6
KLF1/4-N2	1/4"	8.35	1/4-18NPT	9.5	26.6	20.7	11.8	19.5	16	23.3	17	29	5.3

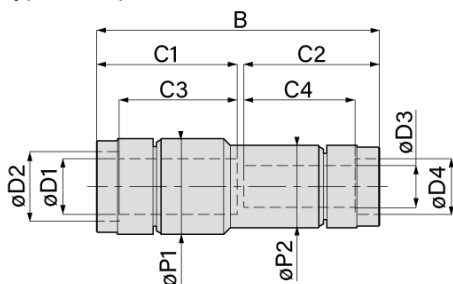
[KG : Unequal Plug-in Straight]

<Type without protective cover>



Model code	Tube O.D		B	φP1	φP2	Tube end		Weight (g)	Orifice (φmm)
	φD1	φD2				C1	C2		
KG6-4-1	6	4	33.3	11.8	9.7	17.2	15.1	14	2.5
KG8-6-1	8	6	36.6	13.7	11.8	18.4	17.2	19	4
KG10-8-1	10	8	40.3	17.5	13.7	20.9	18.4	28	6
KG12-10-1	12	10	45.4	20.8	17.5	23.5	20.9	49	8
KG1/4-4-1	1/4	4	33.3	11.8	9.7	17.2	15.1	13	2.5
KG8-1/4-1	8	1/4	36.6	13.7	11.8	18.4	17.2	19	4
KG3/8-8-1	3/8	8	40.3	17.5	13.7	20.9	18.4	29	6
KG1/2-3/8-1	1/2	3/8	44.9	20.8	17.5	23	20.9	46	8

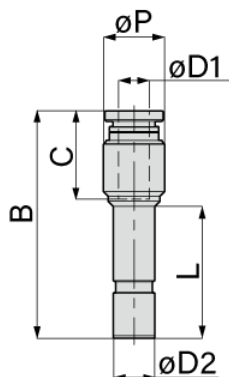
<Type with protective cover>



Model code	Tube O.D				B	φP1	φP2	Tube end				Weight (g)	Orifice (φmm)
	φD1	φD2	φD3	φD4				C1	C2	C3	C4		
KG6-4	6	4	8	6	38.1	11.8	9.7	19.5	17.6	16	15	16	2.5
KG8-6	8	6	10	8	40.7	13.7	11.8	20.2	19.5	17	16	22	4
KG10-8	10	8	12	10	44.4	17.5	13.7	23.2	20.2	19.5	17	34	6
KG12-10	12	10	14	12	50.5	20.8	17.5	26.3	23.2	23	19.5	57	8
KG1/4-4	1/4	4	8.35	6	38.1	11.8	9.7	19.5	17.6	16	15	16	2.5
KG8-1/4	8	1/4	10	8.35	40.7	13.7	11.8	20.2	19.5	17	16	21	4
KG3/8-8	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	1/2	3/8	14.7	11.53	50	20.8	17.5	25.8	23.2	23	19.5	58	8

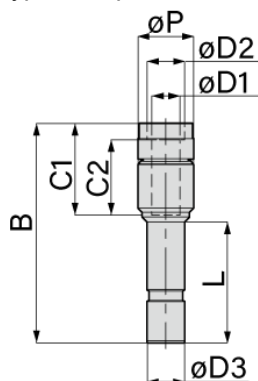
[KGJ : Unequal Plug-in Straight]

<Type without protective cover>



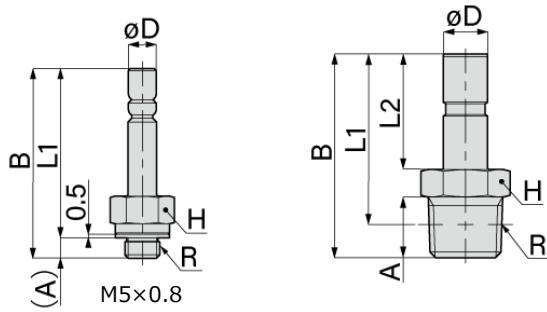
Model code	Tube O.D øD1	Tube dia. øD2	B	L	øP	Tube end C	Weight (g)	Orifice (ømm)
KGJ4-6-1	6	4	41.3	22.7	11.8	17.2	9	2
KGJ6-4-1	4	6	41.5	24.6	9.7	15.1	9	2.5
KGJ6-8-1	8	6	44.8	24.6	13.7	18.4	14	4
KGJ8-6-1	6	8	44.3	25.7	11.8	17.2	13	4
KGJ8-10-1	10	8	48.7	25.7	17.5	20.9	25	6
KGJ10-6-1	6	10	45.5	28.9	11.8	17.2	15	4
KGJ10-8-1	8	10	47.1	28.9	13.7	18.4	16	6
KGJ10-12-1	12	10	54.9	28.9	20.8	23.5	40	8
KGJ12-10-1	10	12	53.2	30.2	17.5	20.9	30	6
KGJ1/4-4-1	4	1/4	41.5	24.6	9.7	15.1	9	2.5
KGJ8-1/4-1	1/4	8	44.3	25.7	11.8	17.2	13	4
KGJ3/8-8-1	8	3/8	47.1	28.9	13.7	18.4	16	6
KGJ1/2-3/8-1	3/8	1/2	53.2	30.2	17.5	20.9	35	6

<Type with protective cover>



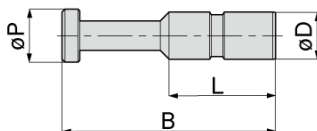
Model code	Tube O.D		Tube dia. øD3	B	L	øP	Tube end		Weight (g)	Orifice (ømm)
	øD1	øD2					C1	C2		
KGJ4-6	6	8	4	43.6	22.7	11.8	19.5	16	12	2
KGJ6-4	4	6	6	44	24.6	9.7	17.6	15	10	2.5
KGJ6-8	8	10	6	46.6	24.6	13.7	20.2	17	16	4
KGJ8-6	6	8	8	46.6	25.7	11.8	19.5	16	15	4
KGJ8-10	10	12	8	51	25.7	17.5	23.2	19.5	28	6
KGJ10-6	6	8	10	47.8	28.9	11.8	19.5	16	16	4
KGJ10-8	8	10	10	48.9	28.9	13.7	20.2	17	18	6
KGJ10-12	12	14	10	57.7	28.9	20.8	26.3	23	44	8
KGJ12-10	10	12	12	55.5	30.2	17.5	23.2	19.5	34	6
KGJ1/4-4	4	6	1/4	44	24.6	9.7	17.6	15	11	2.5
KGJ8-1/4	1/4	8.35	8	46.6	25.7	11.8	19.5	16	14	4
KGJ3/8-8	8	10	3/8	48.9	28.9	13.7	20.2	17	18	6
KGJ1/2-3/8	3/8	11.53	1/2	55.5	30.2	17.5	23.2	19.5	40	6

[KTJ: PT Jack]



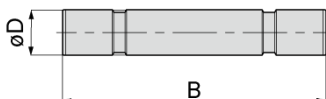
Model code	Tube dia. φD	R	A	B	L1	L2	Hex. H	Weight (g)	Orifice(φmm)
KTJ4-M5	4	M5x0.8	3	27.5	24.5	18.5	8	4.1	1.8
KTJ4-01	4	R1/8	8	30.5	26.5	18.5	10	8.4	2.2
KTJ6-M5	6	M5x0.8	3	30.5	27.5	20.5	8	5.5	1.8
KTJ6-01	6	R1/8	8	32.5	28.5	20.5	10	8.7	4
KTJ6-02	6	R1/4	11	36.5	30.5	20.5	14	19	4
KTJ8-01	8	R1/8	8	34	30	21	10	8.6	6
KTJ8-02	8	R1/4	11	37	31	21	14	18	6
KTJ8-03	8	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

[KP: Plug]



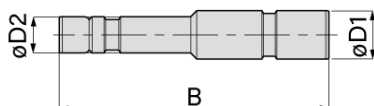
Model code	Tube dia. φD	B	φP	L	Weight (g)
KP4	4	27.5	5	14.9	2.5
KP6	6	32.5	6.5	17	4.3
KP8	8	36.5	9	18.2	7.6
KP10	10	42	11	20.7	11.4
KP12	12	44	13	23.3	16.9

[KIJ: Union Stem]



Model code	Tube O.D φD	B	Weight(g)	Orifice(φmm)
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]



Model code	Tube dia. φD1	Tube dia. φD2	B	Weight (g)	Orifice(φmm)
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