

Clean One-touch Fittings For Blowing *Series KP*



⚠ Caution

Series KP is a line of special One-touch fittings for use in clean room blowing and washing lines. Please consult with SMC regarding other types of applications.

Seal material: The durability of EPDM with respect to mineral oils is inferior, which makes it unsuitable for piping in general pneumatic equipment.

Recommended Applicable Tubing

Tubing material	Polyolefin: Series TPH Soft polyolefin: Series TPS
Tubing O.D.	ø4, ø6, ø8, ø10, ø12

Note 1) Polyurethane tubing: Series TU, Nylon tubing: Series T, and Soft nylon tubing: Series TS can also be used. However, the degree of clean performance will be reduced.

Note 2) Due to the softness of polyurethane tubing, it may fold when being inserted. Hold the end of the tubing and insert it all the way in. Refer to "Installation and Removal of Tubing" on page 15.)

Specifications

Particulate generation grade	Grade 1 Note 1)
Fluid	Air/Nitrogen gas/Water (pure water) Note 2)
Maximum operating pressure (20°C)	1MPa Note 3)
Operating vacuum pressure	-100kPa
Proof pressure (20°C)	3MPa
Ambient and fluid temperature	-20°C to 80°C
Threads	JIS B0203 (Taper thread for piping)

Note 1) Refer to particulate generation grade classifications.

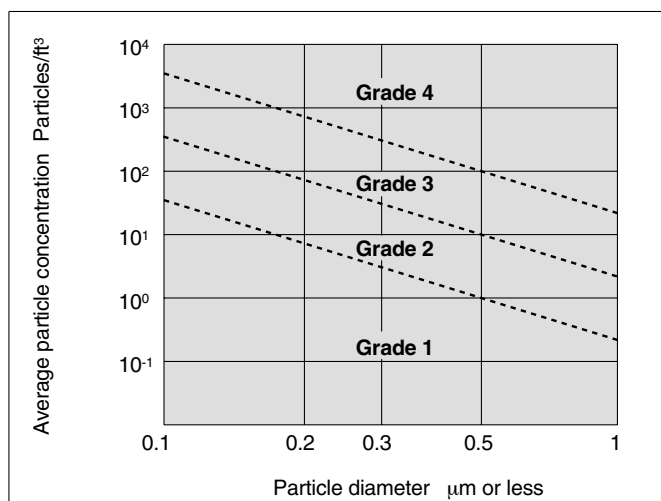
Note 2) Consult SMC regarding other fluids.

Note 3) The maximum operating pressure is the value at 20°C. Refer to the operating pressure curve for other temperatures.

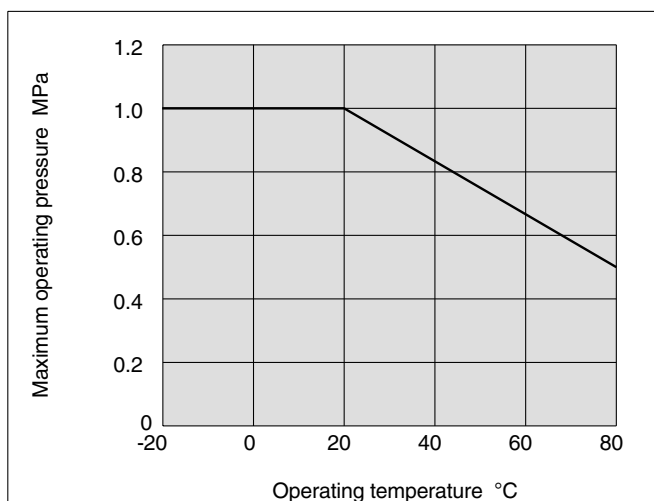
Principal Parts Material

Body	Polypropylene resin
Stud	Polypropylene resin
Chuck	Stainless steel 304
Guide, Stopper, Drive bushing	Stainless steel 304
Collet, Release button	Polypropylene resin
Seal, O-ring, Bumper	EPDM

Particulate Generation Grade Classifications



Relation between Operating Temperature and Maximum Operating Pressure



How to Order

Clean One-touch fittings (for blowing)

Model

H	Male connector, Straight union
L	Union elbow, Male elbow
T	Male branch tee, Union tee
Y	Male run tee
U	Male branch, Union "Y"
R	Plug-in reducer

Port size/Applicable tubing O.D.

Thread connection	01	R 1/8
	02	R 1/4
	03	R 3/8
	04	R 1/2
	00	Same dia. tubing
Tubing (rod) connection	04	ø4
	06	ø6
	08	ø8
	10	ø10
	12	ø12

Applicable tubing O.D.

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12

Applicable fitting size

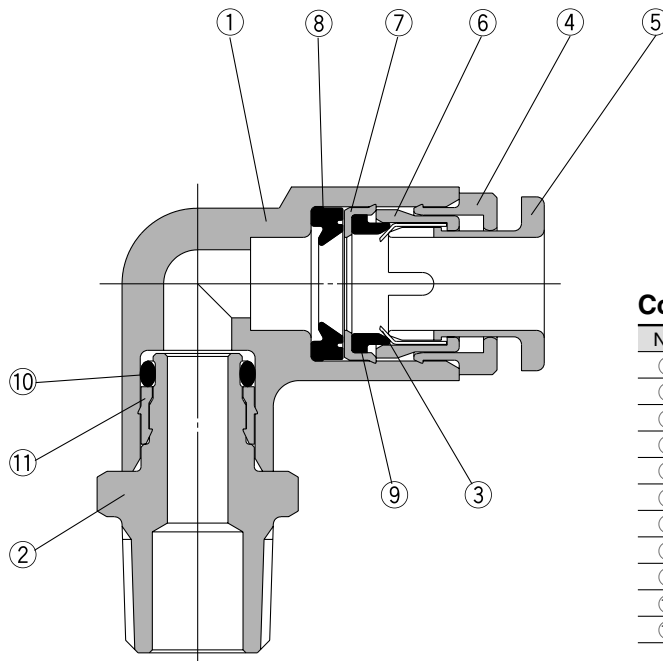
04	ø4
06	ø6
08	ø8
10	ø10
12	ø12

Plug

Clean One-touch fittings

K□
M□
H□
D□
MS
T□
VMG

Construction



Component Parts

No.	Description	Material
①	Body	Polypropylene resin
②	Stud	Polypropylene resin
③	Chuck	Stainless steel 304
④	Guide	Stainless steel 304
⑤	Release button	Polypropylene resin (color: light green)
⑥	Collet	Polypropylene resin
⑦	Stopper	Stainless steel 304
⑧	Seal	EPDM
⑨	Bumper	EPDM
⑩	O-ring	EPDM
⑪	Drive bushing	Stainless steel 304

Series KP

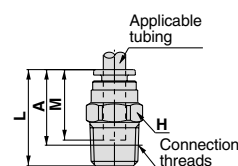
Dimensions

Male Connector: KPH



Applicable tubing O.D. mm	Connection thread R	Model	H (width across flats)	L	A*	M	Effective area mm ²		Weight g
							TPH	TPS	
4	1/8	KPH04-01	12	25.4	21.5	18	4	4	3
	1/4	KPH04-02		25.4	19.5				4
6	1/8	KPH06-01	14	25.9	22	19.5	10	10	4
	1/4	KPH06-02		26.4	20.5				5
8	1/8	KPH08-01	17	32.3	28.5	21.5	26	18	6
	1/4	KPH08-02		30.3	24.5				7
10	1/4	KPH10-02	19	37.5	32	24	41	29	10
	3/8	KPH10-03		33	27				11
12	3/8	KPH12-03	22	34	28	25	58	46	12
	1/2	KPH12-04		34.5	27				13

* Reference dimension for R threads after installation

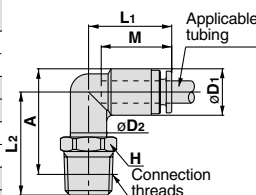


Male Elbow: KPL



Applicable tubing O.D. mm	Connection thread R	Model	H (width across flats)	Note 1) ϕD_1	ϕD_2	L ₁	L ₂	A*	M	Effective area mm ²		Weight g
										TPH	TPS	
4	1/8	KPL04-01	12	10.4	10	20.7	23.2	24.5	18	3.5	3.5	4
	1/4	KPL04-02	14				27.2	26.5				5
6	1/8	KPL06-01	12	12.8	10	22.8	24.4	27	19.5	9	9	5
	1/4	KPL06-02					28.4	29				6
8	1/8	KPL08-01	14	15.2	12	26.3	26.6	30	21.5	22	15	8
	1/4	KPL08-02					29.4	31.5				9
10	1/4	KPL10-02	17	18.5	17	29.4	32.1	35.5	24	35	25	13
	3/8	KPL10-03					33.1	36.5				14
12	3/8	KPL12-03	20.9	22	31.4		34.3	38.5	25	50	40	15
	1/2	KPL12-04					38.3	41.5				18

* Reference dimension for R threads after installation Note 1) ϕD_1 indicates the maximum diameter.

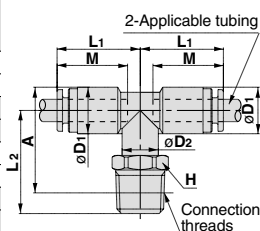


Male Branch Tee: KPT



Applicable tubing O.D. mm	Connection thread R	Model	H (width across flats)	Note 1) ϕD_1	ϕD_2	L ₁	L ₂	A*	M	Effective area mm ²		Weight g
										TPH	TPS	
4	1/8	KPT04-01	12	10.4	10	20.7	23.2	24.5	18	4.1	4.1	6
	1/4	KPT04-02	14				27.2	26.5				7
6	1/8	KPT06-01	12	12.8	10	22.8	24.4	27	19.5	11	11	8
	1/4	KPT06-02					28.4	29				9
8	1/8	KPT08-01	14	15.2	12	26.3	26.6	30	21.5	26.3	18.2	12
	1/4	KPT08-02					29.4	31.5				13
10	1/4	KPT10-02	17	18.5	17	29.4	32.1	35.5	24	40.8	29	20
	3/8	KPT10-03					33.1	36.5				21
12	3/8	KPT12-03	20.9	22	31.4		34.3	38.5	25	57.2	45.2	24
	1/2	KPT12-04					38.3	41.5				27

* Reference dimension for R threads after installation Note 1) ϕD_1 indicates the maximum diameter.

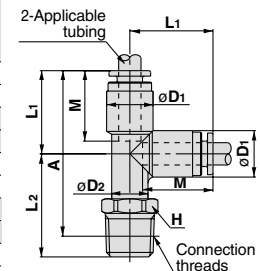


Male Run Tee: KPY



Applicable tubing O.D. mm	Connection thread R	Model	H (width across flats)	Note 1) ϕD_1	ϕD_2	L ₁	L ₂	A*	M	Effective area mm ²		Weight g
										TPH	TPS	
4	1/8	KPY04-01	12	10.4	10	20.7	23.2	40	18	7.5	7.5	6
	1/4	KPY04-02	14				27.2	42				7
6	1/8	KPY06-01	12	12.8	10	22.8	24.4	43	19.5	11	11	8
	1/4	KPY06-02					28.4	45.5				9
8	1/8	KPY08-01	14	15.2	12	26.3	26.6	49	21.5	21	21	12
	1/4	KPY08-02					29.4	50				13
10	1/4	KPY10-02	17	18.5	17	29.4	32.1	56	24	45	45	19
	3/8	KPY10-03					33.1	56.5		57	52	20
12	3/8	KPY12-03	20.9	22	31.4		34.3	59.5	25	57	57	21
	1/2	KPY12-04					38.3	62.5				24

*Reference dimension for R threads after installation Note 1) ϕD_1 indicates the maximum diameter.



Male Branch "Y": KPU



Applicable tubing O.D. mm	Connection thread R	Model	H (width across flats)	Note 1) ϕD	L	P	A*	M	Effective area mm ²		Weight g
									TPH	TPS	
4	1/8	KPU04-01	12	10.4	45.4	10.4	41.5	18	7.5	7.5	7
	1/4	KPU04-02					43.5				8
6	1/8	KPU06-01	14	12.8	49.6	12.8	45.5	19.5	18	18	9
	1/4	KPU06-02					46.5				10
8	1/8	KPU08-01	17	15.2	56.7	15.2	52.5	21.5	26	26	15
	1/4	KPU08-02					55.5		45	35	17
10	1/4	KPU10-02	19	18.5	64.5	18.5	59	24	45	45	23
	3/8	KPU10-03					61.5		70	55	25
12	3/8	KPU12-03	22	20.9	69.7	20.9	63.5	25	70	70	29
	1/2	KPU12-04					65.5		100	90	30

* Reference dimension for R threads after installation Note 1) ϕD indicates the maximum diameter.

