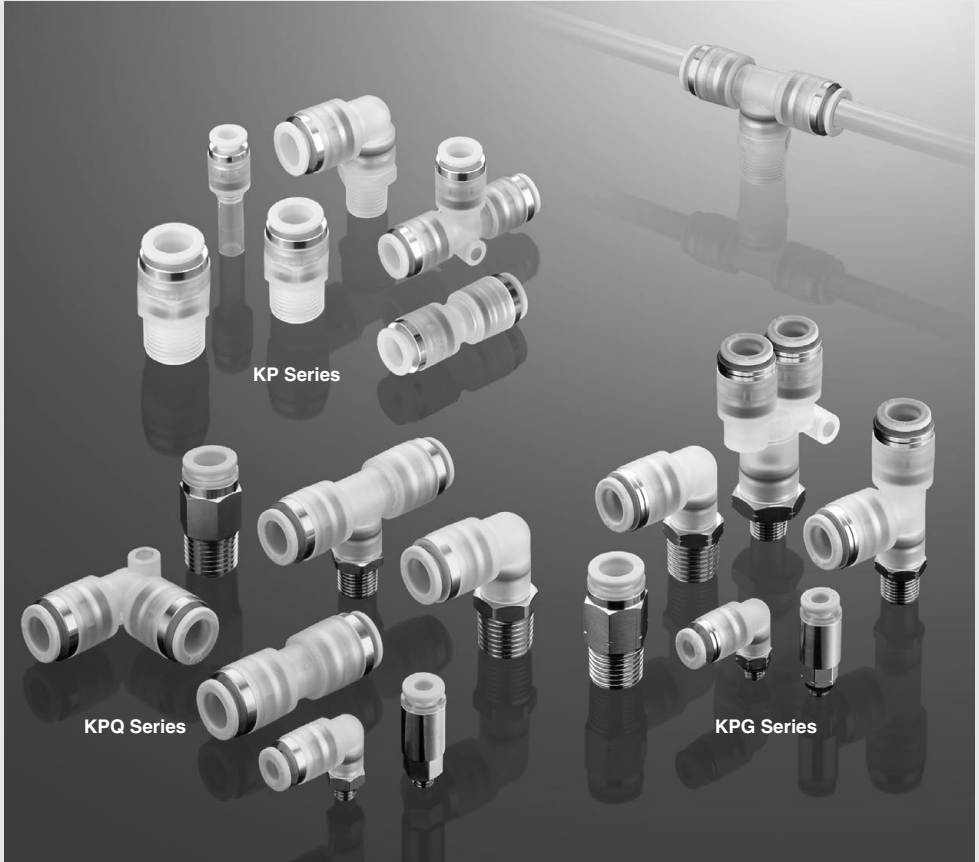


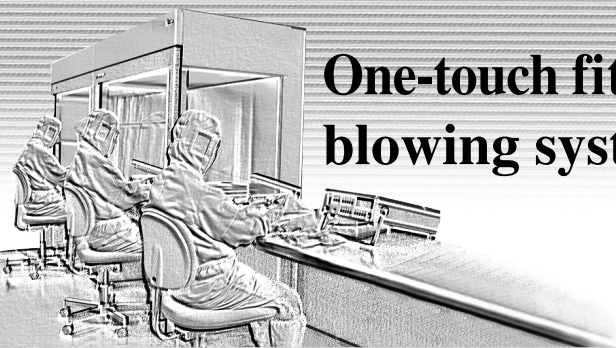
Clean One-touch Fittings

KP/KPQ/KPG Series



KQ2
KQB2
KS KX
KM
KF
M
H/DL L/LL
KC
KK
KK130
DM
KDM
KB
KR
KA
KQG2
KG
KFG2
MS
KKA
KP
LQ
MQR
T
IDK

One-touch fittings and tubing for blowing systems and drive air



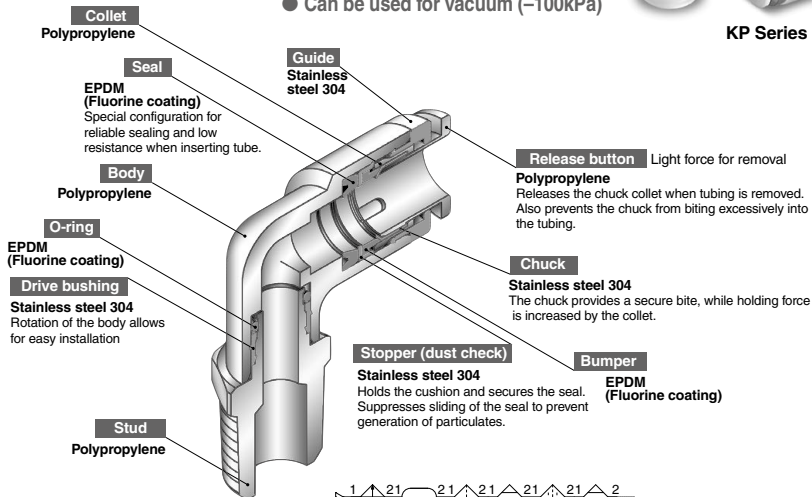
One-touch fittings (for blowing)

KP Series

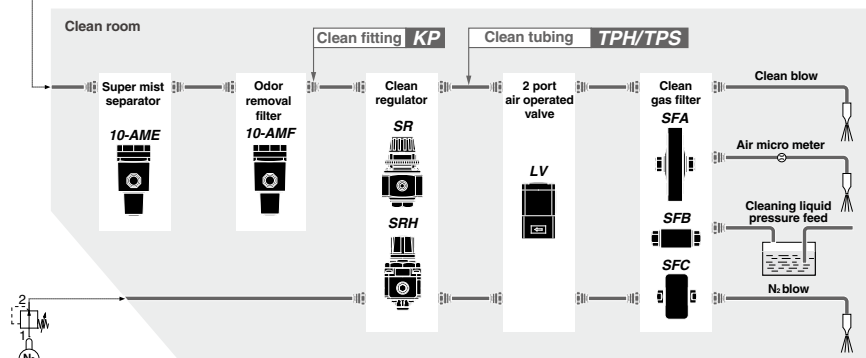
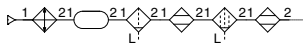
- Completely oil free (Rubber parts are fluorine-coated.)
- Liquid-contact areas are non-metallic
- Parts cleaning, assembly and double packaging in a clean room
- Can be used for vacuum (-100kPa)



KP Series



■ Clean blowing system



clean room systems

Low particulate generation

Clean performance

KPQ

Resin: PP
Metal: Brass (electroless nickel plated)

KPG

Resin: PP
Metal: Stainless steel 304

KP

Resin: PP
Metal: Stainless steel 304
★ Completely oil free/Liquid-contact parts resin (Rubber parts are fluorine-coated.)

10-KQ2

Resin: PBT, POM
Metal: Brass (electroless nickel plated)

10-KG

Resin: PBT, POM
Metal: Stainless steel 303

Excellent

Environmental resistance

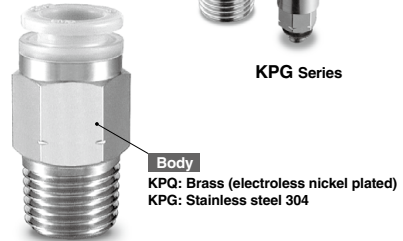
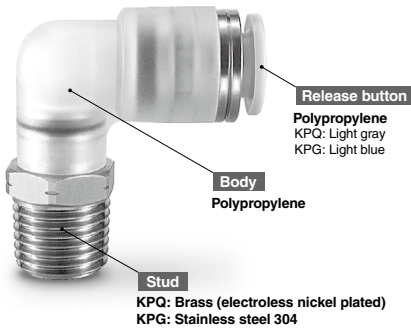
One-touch fittings (for drive system air piping)

KPQ/KPG Series

Brass (electroless nickel plated)

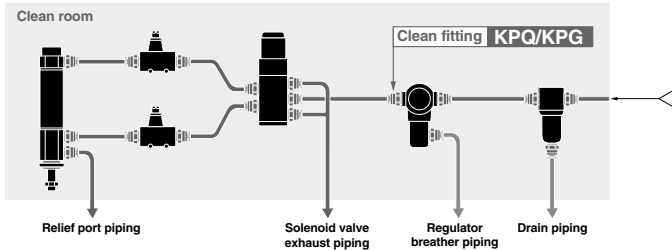
Stainless steel 304

● Resin parts are P.P. (Polypropylene)



Male connector

■ Drive air piping system



KQ2

KQB2

KS
KX

KM

KF

M

H/DL
L/LL

KC

KK

KK130

DM

KDM

KB

KR

KA

KQG2

KG

KFG2

MS

KKA

KP

LQ

MQR

T

IDK

Clean One-touch Fittings For Blowing **KP Series**

RoHS



⚠ Caution

KP series is a line of special One-touch fittings for use in clean room blowing and washing lines.

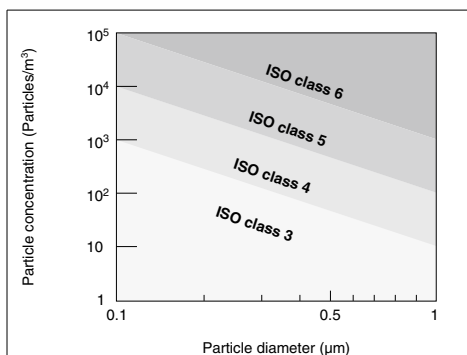
Please consult with SMC regarding other types of applications.

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



Made to Order
(Refer to page 353 for details.)

Particulate Generation Classifications



Note) Refer to "SMC Pneumatic Clean Series" (CAT.E02-23) for details.

Applicable Tubing

Tubing material	PFA, Polyolefin Soft polyolefin, Polyurethane
Tubing O.D.	ø4, ø6, ø8, ø10, ø12

Note 1) FEP, nylon and soft nylon tubing, and tubing not compatible with the clean series 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.

Specifications

Cleanliness class (ISO class)	Class 3 ^{Note 1)}
Fluid	Air/Nitrogen gas/Water/Deionized water (pure water) ^{Note 2)}
Maximum operating pressure (20°C)	1 MPa ^{Note 3)}
Operating vacuum pressure	-100 kPa {10 Torr}
Proof pressure (20°C)	3 MPa
Ambient and fluid temperature	-20°C to 80°C
Threads	JIS B0203 (Taper thread for piping)

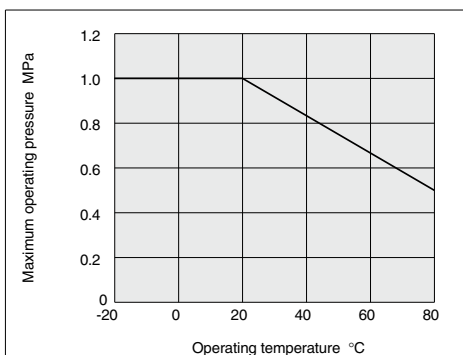
Note 1) Refer to particle generation classifications.

Note 2) The surge pressure must be under the maximum operating pressure.

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

Note 4) Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

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

Applicable tubing O.D.

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12

Port size/Applicable tubing O.D.

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

Different dia. plug-in reducer

Made to Order

X53	With pipe tape
-----	----------------

Applicable fitting size

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12

Plug

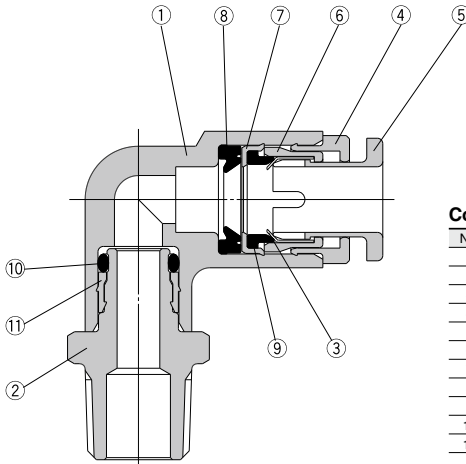
Clean One-touch fittings

Thread connection

Tubing (rod) connection

For details on applicable tubing O.D. and port size combinations for each model, refer to the charts on the Dimensions page.

Construction



Component Parts

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

KQ2

KQB2

KS
KX

KM

KF

M

H/DL
L/LL

KC

KK

KK130

DM

KDM

KB

KR

KA

KQG2

KG

KFG2

MS

KKA

KP

LQ

MQR

T

IDK

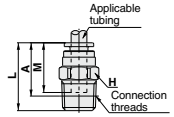
KP Series

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	24.4	20.5	17	4	4	3
	1/4	KPH04-02			18.5				4
6	1/8	KPH06-01	14	24.9	21	18.5	10	10	4
	1/4	KPH06-02			19.5				5
8	1/8	KPH08-01	17	31.3	27.5	20.5	26	18	6
	1/4	KPH08-02			23.5				7
10	1/4	KPH10-02	19	36.5	31	23	41	29	10
	3/8	KPH10-03			26				11
12	3/8	KPH12-03	22	33	27	24	58	46	12
	1/2	KPH12-04			26				13

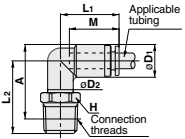


* Reference dimension for R threads after installation

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	19.7	23.2	24.5	17	3.5	3.5	4
	1/4	KPL04-02					27.2	26.5				5
6	1/8	KPL06-01	12	12.8	10	21.8	24.4	27	18.5	9	9	5
	1/4	KPL06-02					28.4	29				6
8	1/8	KPL08-01	14	15.2	12	25.3	26.6	30	20.5	22	15	8
	1/4	KPL08-02					29.4	31.5				9
10	1/4	KPL10-02	17	18.5	17	28.4	32.1	35.5	23	35	25	13
	3/8	KPL10-03					33.1	36.5				14
12	3/8	KPL12-03	22	20.9	22	30.4	34.3	38.5	24	50	40	15
	1/2	KPL12-04					38.3	41.5				18

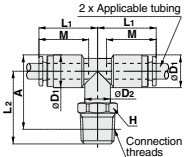


* Reference dimension for R threads after installation Note 1) ϕD_1 indicates the maximum diameter.

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	19.7	23.2	24.5	17	4.1	4.1	6
	1/4	KPT04-02					27.2	26.5				7
6	1/8	KPT06-01	12	12.8	10	21.8	24.4	27	18.5	11	11	8
	1/4	KPT06-02					28.4	29				9
8	1/8	KPT08-01	14	15.2	12	25.3	26.6	30	20.5	26.3	18.2	12
	1/4	KPT08-02					29.4	31.5				13
10	1/4	KPT10-02	17	18.5	17	28.4	32.1	35.5	23	40.8	29	20
	3/8	KPT10-03					33.1	36.5				21
12	3/8	KPT12-03	22	20.9	22	30.4	34.3	38.5	24	57.2	45.2	24
	1/2	KPT12-04					38.3	41.5				27

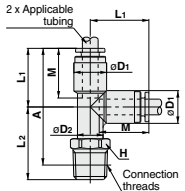


* Reference dimension for R threads after installation Note 1) ϕD_1 indicates the maximum diameter.

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	19.7	23.2	39	17	7.5	7.5	6
	1/4	KPY04-02					27.2	41				7
6	1/8	KPY06-01	12	12.8	10	21.8	24.4	42	18.5	11	11	8
	1/4	KPY06-02					28.4	44.5				9
8	1/8	KPY08-01	14	15.2	12	25.3	26.6	48	20.5	21	21	12
	1/4	KPY08-02					29.4	49				13
10	1/4	KPY10-02	17	18.5	17	28.4	32.1	55	23	45	45	19
	3/8	KPY10-03					33.1	55.5				20
12	3/8	KPY12-03	22	20.9	22	30.4	34.3	58.5	24	57	57	21
	1/2	KPY12-04					38.3	61.5				24

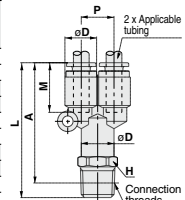


* Reference dimension for R threads after installation Note 1) ϕD_1 indicates the maximum diameter.

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	44.4	10.4	40.5	17	7.5	7.5	7
	1/4	KPU04-02					42.5				8
6	1/8	KPU06-01	14	12.8	48.6	12.8	44.5	18.5	18	18	9
	1/4	KPU06-02					45.5				10
8	1/8	KPU08-01	17	15.2	55.7	15.2	51.5	20.5	26	26	15
	1/4	KPU08-02					54.5				17
10	1/4	KPU10-02	19	18.5	63.5	18.5	58	23	45	45	23
	3/8	KPU10-03					60.5				20
12	3/8	KPU12-03	22	20.9	68.7	20.9	62.5	24	70	70	29
	1/2	KPU12-04					64.5				30



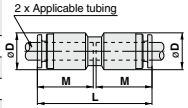
* Reference dimension for R threads after installation Note 1) ϕD indicates the maximum diameter.

Dimensions

Straight Union: KPH



Applicable tubing O.D. mm	Model	Note 1) ϕD	L	M	Effective area mm ²		Weight g
					TPH	TPS	
4	KPH04-00	10.4	35.4	17	4	4	4
6	KPH06-00	12.8	37.6	18.5	10	10	6
8	KPH08-00	15.2	42.4	20.5	26	18	10
10	KPH10-00	18.5	46.6	23	41	29	15
12	KPH12-00	20.9	48.6	24	58	46	18

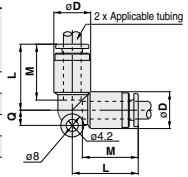


Note 1) ϕD indicates the maximum diameter.

Elbow: KPL



Applicable tubing O.D. mm	Model	Note 1) ϕD	L	Q	M	Effective area mm ²		Weight g
						TPH	TPS	
4	KPL04-00	10.4	19.7	4.5	17	3.5	3.5	3
6	KPL06-00	12.8	21.8	5.3	18.5	9	9	7
8	KPL08-00	15.2	25.3	6	20.5	22	15	11
10	KPL10-00	18.5	28.4	6.8	23	35	25	16
12	KPL12-00	20.9	30.4	7.5	24	50	40	20

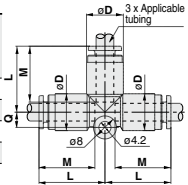


Note 1) ϕD indicates the maximum diameter.

Union Tee: KPT



Applicable tubing O.D. mm	Model	Note 1) ϕD	L	Q	M	Effective area mm ²		Weight g
						TPH	TPS	
4	KPT04-00	10.4	19.7	4.5	17	4	4	7
6	KPT06-00	12.8	21.8	5.3	18.5	10	10	9
8	KPT08-00	15.2	25.3	6	20.5	26	18	16
10	KPT10-00	18.5	28.4	6.8	23	41	29	25
12	KPT12-00	20.9	30.4	7.5	24	58	46	29

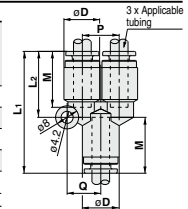


Note 1) ϕD indicates the maximum diameter.

Union "Y": KPU



Applicable tubing O.D. mm	Model	Note 1) ϕD	L ₁	L ₂	P	Q	M	Effective area mm ²		Weight g
								TPH	TPS	
4	KPU04-00	10.4	36.8	19.6	10.4	9.7	17	4	4	7
6	KPU06-00	12.8	40.1	21.8	12.8	11.7	18.5	10	10	10
8	KPU08-00	15.2	46.7	26.5	15.2	13.7	20.5	26	18	17
10	KPU10-00	18.5	52	29.7	18.5	16.1	23	41	29	26
12	KPU12-00	20.9	55.2	31.9	20.9	18.1	24	58	46	32

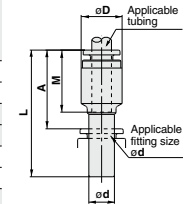


Note 1) ϕD indicates the maximum diameter.

Plug-in Reducer: KPR



Applicable tubing O.D. mm	Applicable fitting size ϕd	Model	Note 1) ϕD	L	A	M	Effective area mm ²		Weight g
							TPH	TPS	
4	6	KPR04-06	10.4	38.4	19.1	17	4	4	3
	8	KPR04-08		40.9	19.2				
6	8	KPR06-08	12.8	41.5	19.8	18.5	10	10	4
		KPR06-10		44	20.2				
8	10	KPR08-10	15.2	46	22.2	20.5	26	18	5
		KPR08-12		47					
10	12	KPR10-12	18.5	49.5	24.7	23	41	29	9

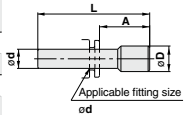


Note 1) ϕD indicates the maximum diameter.

Plug: KPP



Applicable fitting size ϕd	Model	ϕD	L	A	Weight g
4	KPP-04	6	32	13.8	0.4
6	KPP-06	8	35	15.7	0.7
8	KPP-08	10	39	17.3	1.1
10	KPP-10	12	43	19.2	1.7
12	KPP-12	14	45.5	20.7	2.5



KQ2

KQB2

KS
KX

KM

KF

M

H/DL
L/LL

KC

KK

KK130

DM

KDM

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KR

KA

KQG2

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KFG2

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KKA

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IDK