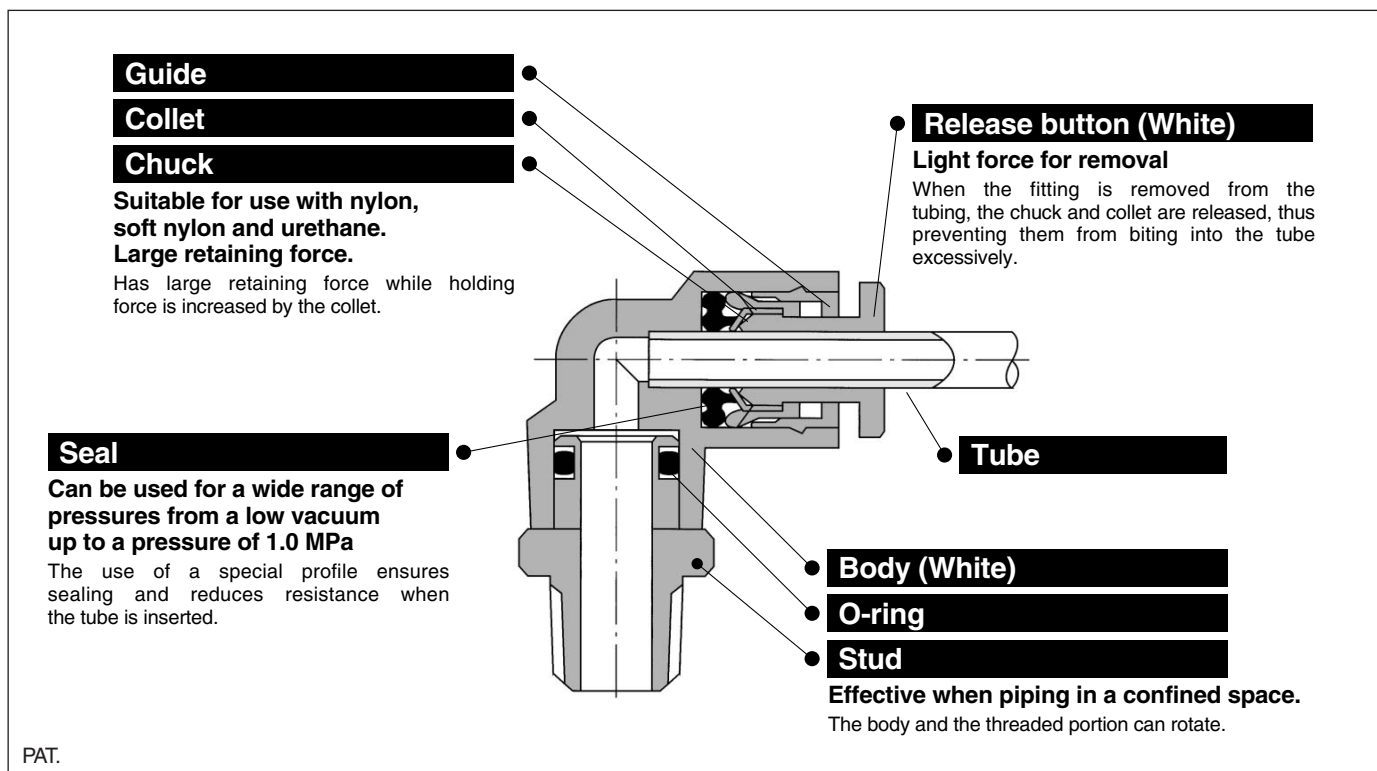


# Stainless One-touch Fittings

## Series KG



**Stainless specifications applicable to corrosive environments**

**Stainless steel 303 adopted for metal elements**

**Suitable for use in CRT production lines where contact with copper must be avoided, food processing machines where water or salt water splashes and clean room where discoloration of copper material and corrosion must be avoided.**



### Applicable Tubing

Tubing material	Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø4, ø6, ø8, ø10, ø12, ø16


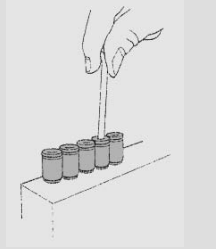

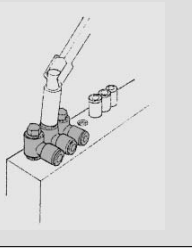







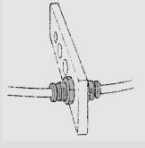

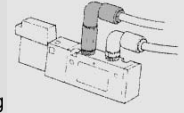

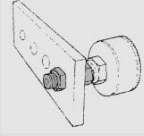












### Specifications

Fluid	Air/Water <sup>(1)</sup>	
Maximum operating pressure	1.0 MPa	
Operating vacuum pressure	-100 kPa	
Proof pressure	3.0 MPa	
Ambient and fluid temperature	-5 to 60°C (Water: 0 to 40°C) (No freezing)	
Thread	Mounting section	JIS B 0203 (Taper thread for piping)
	Nut section	JIS B 0211 Class 2 (Metric fine thread)
Seal (Thread portion)	With seal or none <sup>(2)</sup>	

Note 1) Applicable for general industrial water. Please consult with SMC if using for other kinds of fluid. Also, the surge pressure must be under the maximum operating pressure.  
Note 2) Suffix "S" to the part number, if w/ seal is desired.

### Principal Parts Material

Body	Stainless steel 303, PBT
Stud	Stainless steel 303
Chuck	Stainless steel 304
Guide	Stainless steel 304, Stainless steel 303, POM
Collet, Release button	POM
Seal, O-ring	NBR

Model				
<b>Hex. socket head male connector</b>				
<b>KGS</b>	P. 10		Internal hex. allows thread connection by using an allen wrench for confined spaces.	
<b>Universal male elbow</b>				
<b>KGV</b>	P. 12		Universal male elbow allows thread connection by using a socket wrench for confined spaces.	
<b>Male connector</b>				
<b>KGH</b>	P. 10		Use to pipe in the same direction from female thread. Most general style.	
<b>Female connector</b>				
<b>KGF</b>	P. 11		Use to pipe from male thread such as pressure gauge.	
<b>Straight union</b>				
<b>KGH</b>	P. 11		Use to connect tubes in the same direction.	
<b>Different diameter straight</b>				
<b>KGH</b>	P. 11		Use to connect different sized tubes.	
<b>Male branch connector</b>				
<b>KGLU</b>	P. 12		Use to branch line at right angles to female thread.	
<b>Branch union elbow</b>				
<b>KGLU</b>	P. 13		Use to branch line at right angles.	
<b>Bulkhead union</b>				
<b>KGE</b>	P. 18		Use to connect tubes through a panel.	
<b>Extended male elbow</b>				
<b>KGW</b>	P. 14		Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid from interfering with each other by making the piping two-level.	
<b>Bulkhead connector</b>				
<b>KGE</b>	P. 18		Use to connect male thread and tube through a panel.	
<b>Male elbow</b>				
<b>KGL</b>	P. 11		Use to pipe at right angles to female thread. Most general style.	
<b>Union elbow</b>				
<b>KGL</b>	P. 13		Use to connect tubes at right angles.	
<b>Plug-in elbow</b>				
<b>KGL</b>	P. 13		Use to change by 90° in a tube fetching direction from One-touch fittings.	
<b>Male delta union</b>				
<b>KGD</b>	P. 15		Use to branch line in 90° direction from female thread.	
<b>Delta union</b>				
<b>KGD</b>	P. 16		Use to branch line in tripple 90° direction.	
<b>Delta branch</b>				
<b>KGUD</b>	P. 16		Use to four-branch line in the same direction from female thread.	
<b>Male branch tee</b>				
<b>KGT</b>	P. 14		Use to branch line from female thread in both 90° directions.	
<b>Union tee</b>				
<b>KGT</b>	P. 14		Use to connect tubes in both 90° directions.	
<b>Different diameter tee</b>				
<b>KGT</b>	P. 15		Use to connect tubes with size down in both 90° directions.	
<b>Male run tee</b>				
<b>KGY</b>	P. 15		Use to branch line in the same direction from female thread and in 90° direction.	
<b>Different dia. double union "Y"</b>				
<b>KGUD</b>	P. 17		Use to four-branch line in the same direction.	
<b>Union "Y"</b>				
<b>KGU</b>	P. 17		Use to branch line in the same direction.	

- K
- M
- H
- D
- MS
- T
- VMG

# Series KG

## Model

### Different dia. union "Y"



P. 17

Use to connect tubes in the same direction, reducing the size of tubes.

### Plug-in reducer



P. 17

Use to change size of One-touch fittings.

### Tube cap



P. 18

Use to plug unused tubing.

### Branch

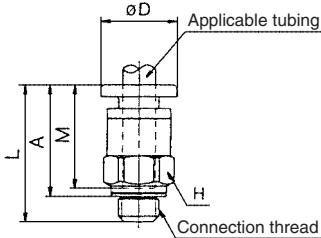


P. 16

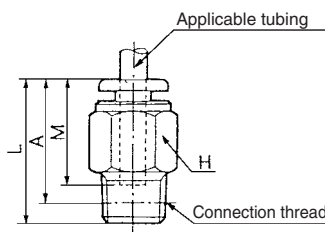
Use to branch line in the same direction from the female thread.

## Male Connector: KGH

### <M5>



### <R>

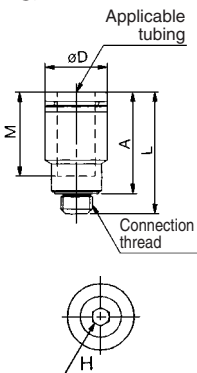


Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	$\varnothing D$ <sup>(1)</sup>	L	A*	M	Effective area <sup>(2)</sup> (mm <sup>2</sup> )		Weight (g)
								Nylon	Urethane	
4	M5 x 0.8	KGH04-M5	8	8	17	14	13	4	4	2.4
	1/8	KGH04-01	10	—	22	18	16	5.6	4	9
	1/4	KGH04-02	14	—	19.5	13.5				16
6	M5 x 0.8	KGH06-M5	10	10	18.5	15	14	4	4	3.4
	1/8	KGH06-01	12	—	22.5	18.5	17	13.1	10.4	16
	1/4	KGH06-02	14	—	23	17				14
	3/8	KGH06-03	17	—	22	15.5				27
8	1/8	KGH08-01	14	—	28	24	18.5	26.1	18.0	21
	1/4	KGH08-02			26.5	20.5				19
	3/8	KGH08-03	17	—	22	15.5				26
10	1/8	KGH10-01	17	—	30	26	21	41.5	29.5	19
	1/4	KGH10-02			33.5	27.5				30
	3/8	KGH10-03	29	22.5	30					
	1/2	KGH10-04	22	—	27	19				53
12	1/4	KGH12-02	19	—	34.5	28.5	22	58.3	46.1	42
	3/8	KGH12-03			—	23.5				34
	1/2	KGH12-04	22	—	30	22				51
16	3/8	KGH16-03	24	—	39.5	32	24	81	(81)	61
	1/2	KGH16-04			35.5	26.5				113

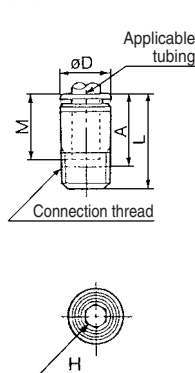
\* Reference dimensions after R thread installation.  
 Note 1)  $\varnothing D$ : Max. diameter  
 Note 2) ( ): Values for nylon.

## Hexagon Socket Head Male Connector: KGS

### <M5>



### <R>

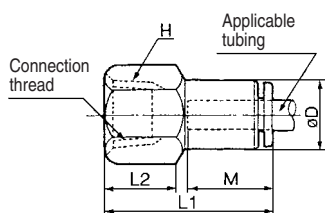


Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	$\varnothing D$ <sup>Note)</sup>	L	A*	M	Effective area (mm <sup>2</sup> )		Weight (g)
								Nylon	Urethane	
4	M5 x 0.8	KGS04-M5	2.5	9.5	19	15.5	13	4	4	2.6
	1/8	KGS04-01	3	9.8	23	19	16	4.1	3.6	8
6	M5 x 0.8	KGS06-M5	2.5	11.5	20	16.5	14	4	4	3.2
	1/8	KGS06-01	4	11.8	24	20	17	10.0	9.9	9
	1/4	KGS06-02								13.8
3/8	KGS06-03	—	—	—	—	17.2				16.2
8	1/8	KGS08-01	5	14	28	24	18.5	23.3	16.2	11
	1/4	KGS08-02	6		25.5	19.5				24
	3/8	KGS08-03	6	17	27.5	21				24
10	1/8	KGS10-01	5	17	30	26	21	39.0	26.6	18
	1/4	KGS10-02	8		27.5	21.5				21
	3/8	KGS10-03		22						
	1/2	KGS10-04	8	22	28	20				35
12	1/4	KGS12-02	8	19	33.5	27.5	22	46.0	44.5	23
	3/8	KGS12-03			10	29				22.5
	1/2	KGS12-04	10	22	28	20				30

\* Reference dimensions after R thread installation.  
 Note)  $\varnothing D$ : Max. diameter



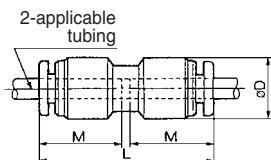
## Female Connector: KGF



Applicable tubing O.D. (mm)	Connection thread Rc	Model	H (width across flats)	Note) $\phi D$	L1	L2	M	Effective area (mm <sup>2</sup> )		Weight (g)
								Nylon	Urethane	
4	1/8	KGF04-01	14	10	27	11	16	5.6	4	15
	1/4	KGF04-02	17		31	14				23
6	1/8	KGF06-01	14	12	27.5	11	17	13.1	10.4	15
	1/4	KGF06-02	17		31	13				22
	3/8	KGF06-03	19		33.5	15				25
8	1/8	KGF08-01	14	14	29	11	18.5	26.1	18.0	17
	1/4	KGF08-02	17		32.5	13				24
	3/8	KGF08-03	19		33.5	14				24
10	1/4	KGF10-02	17	17	34.5	14	21	41.5	29.5	27
	3/8	KGF10-03	19		36.5	15				30
12	1/4	KGF12-02	19	19	35	14	22	58.3	46.1	36
	3/8	KGF12-03			37					31
	1/2	KGF12-04	24		41	18				52

Note)  $\phi D$ : Max. diameter

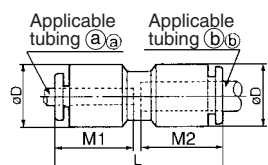
## Straight Union: KGH



Applicable tubing O.D. (mm)	Model	Note) $\phi D$	L	M	Effective area (mm <sup>2</sup> )		Weight (g)
					Nylon	Urethane	
4	KGH04-00	10.4	32.5	16	5.6	4	3
6	KGH06-00	12.8	34.5	17	13.1	10.4	4
8	KGH08-00	15.2	38.5	18.5	26.1	18.0	6
10	KGH10-00	18.5	42.5	21	41.5	29.5	11
12	KGH12-00	20.9	44.5	22	58.3	46.1	14

Note)  $\phi D$ : Max. diameter

## Different Diameter Straight: KGH

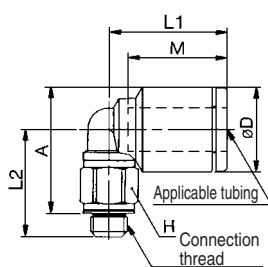


Applicable tubing O.D. (mm)		Model	Note) $\phi D$	L	M1	M2	Effective area (mm <sup>2</sup> )		Weight (g)
(a)	(b)						Nylon	Urethane	
4	6	KGH04-06	12.8	34.5	16	17	5.6	4	5
6	8	KGH06-08	15.2	38.5	17	18.5	13.1	10.4	6
8	10	KGH08-10	18.5	42	18.5	21	26.1	18.0	11
10	12	KGH10-12	20.9	44.5	21	22	41.5	29.5	14

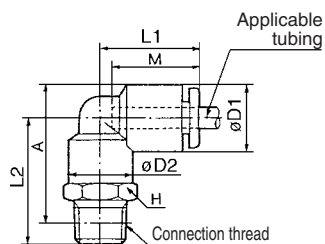
Note)  $\phi D$ : Max. diameter

## Male Elbow: KGL

<M5>



<R>



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	(1) $\phi D1$	$\phi D2$	L1	L2	A*	M	Effective area (2) mm <sup>2</sup>		Weight (g)	
										Nylon	Urethane		
4	M5 x 0.8	KGL04-M5	7	9.5	—	16	13.5	15	13	3.5	3.5	2.7	
		KGL04-01	10	10.4	10	18	22	23	16	4.2	4.2	10	
		KGL04-02	14			26	25	19					
6	M5 x 0.8	KGL06-M5	7	11.5	—	16	14.5	17	14	3.5	3.5	3.1	
		KGL06-01	10	12.8	10	20	23	25.5	17	11.4	9.0	12	
		KGL06-02	14			27	27.5	10					
		KGL06-03	17			29	29	33					
KGL06-04	19	31	31			33							
8	1/8	KGL08-01	12	15.2	12	23	24.5	28	18.5	21.6	14.9	13	
		KGL08-02	14			28.5	30	21					
		KGL08-03	17			30.5	31.5	35					
10	1/8	KGL10-01	14	17	18.5	17	26.5	27	32	21	21.6	14.9	25
		KGL10-02	17				30	33	26				
		KGL10-03	19				32	34.5	36				
		KGL10-04	22				36	37	63				
12	1/4	KGL12-02	17	20.9	17	28.5	31	35.5	22	50.2	39.7	28	
		KGL12-03	19			33	37	38					
		KGL12-04	22			37	39.5	65					
16	3/8	KGL16-03	22	26.5	20.9	34	38	44.5	24	71	(71)	101	
		KGL16-04	24			41	46	105					

\* Reference dimensions after R thread installation.  
 Note 1)  $\phi D1$ : Max. diameter  
 Note 2) ( ): Values for nylon.