

Series 10-KG Stainless One-touch Fittings

RoHS

Construction

Guide
Collet
Chuck

Large retaining force

Has large retaining force while holding force is increased by the collet.

Seal

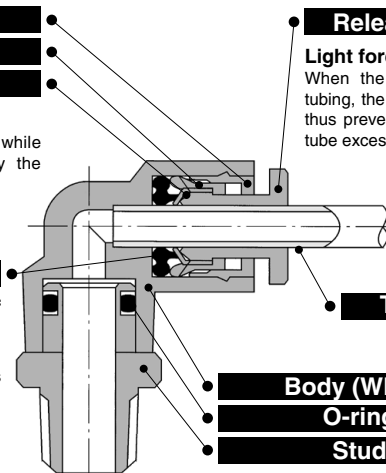
Can be used for a wide range of pressures from a low vacuum up to a pressure of 1.0 MPa

The use of a special profile ensures sealing and reduces resistance when the tube is inserted.

Release Button (White)

Light force for removal

When the fitting is removed from the tubing, the chuck and collet are released, thus preventing them from biting into the tube excessively.



Tubing

Body (White)

O-ring

Stud

Effective when piping in a confined space

The body and threaded portion can rotate.

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	Polyurethane
Tubing O.D.	ø4, ø6, ø8, ø10, ø12, ø16

Specifications

Fluid	Air, Water ^{Note 1, 2)}	
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 B0203 (Taper thread for piping)
	Nut section	JIS B0211 Class 2 (Metric fine thread)
Seal (Thread portion)	With seal or none ^{Note 3)}	
Grease	Fluorine grease	
Cleanliness class (ISO class)	Class 5	

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) Deionized water is not recommended for use as it may affect the material used in the fittings.

In addition, it is known to degrade the water quality.

Note 3) Suffix "S" to the part number, if w/ seal is desired.

Principal Parts Material

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



Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.


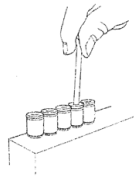

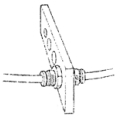

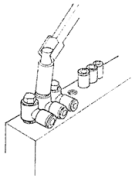

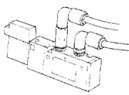


















Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Switches/ Pressure Sensors

Model

<p>Hex. socket head male connector 10-KGS</p> 	<p>Internal hex. allows thread connection by using an allen wrench for confined spaces.</p> 	<p>Bulkhead union 10-KGE</p> 	<p>Use to connect tubes through a panel.</p> 		
<p>Universal male elbow 10-KGV</p> 	<p>Universal male elbow allows thread connection by using a socket wrench for confined spaces.</p> 	<p>Extended male elbow 10-KGW</p> 	<p>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.</p> 		
<p>Male connector 10-KGH</p> 	<p>Use to pipe in the same direction from female thread. Most general model.</p>	<p>Male elbow 10-KGL</p> 	<p>Use to pipe at right angles to female thread. Most general model.</p>	<p>Male branch tee 10-KGT</p> 	<p>Use to branch line from female thread in both 90° directions.</p>
<p>Female connector 10-KGF</p> 	<p>Use to pipe from male thread such as pressure gauge.</p>	<p>Union elbow 10-KGL</p> 	<p>Use to connect tubes at right angles.</p>	<p>Union tee 10-KGT</p> 	<p>Use to connect tubes in both 90° directions.</p>
<p>Straight union 10-KGH</p> 	<p>Use to connect tubes in the same direction.</p>	<p>Plug-in elbow 10-KGL</p> 	<p>Use to change by 90° in a tube fetching direction from One-touch fittings.</p>	<p>Different diameter tee 10-KGT</p> 	<p>Use to connect tubes with size down in both 90° directions.</p>
<p>Different diameter straight 10-KGH</p> 	<p>Use to connect different size tubes.</p>	<p>Male delta union 10-KGD</p> 	<p>Use to branch line in 90° direction from female thread.</p>	<p>Male run tee 10-KGY</p> 	<p>Use to branch line in the same direction from female thread and in 90° direction.</p>
<p>Male branch connector 10-KGLU</p> 	<p>Use to branch line at right angles to female thread.</p>	<p>Delta union 10-KGD</p> 	<p>Use to branch line in triple 90° direction.</p>	<p>Different diameter double union "Y" 10-KGUD</p> 	<p>Use to four-branch line in the same direction.</p>
<p>Branch union elbow 10-KGLU</p> 	<p>Use to branch line at right angles.</p>	<p>Double branch "Y" 10-KGUD</p> 	<p>Use to four-branch line in the same direction from female thread.</p>	<p>Union "Y" 10-KGU</p> 	<p>Use to branch line in the same direction.</p>

Model

Different diameter union "Y"

10-KGU



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

Plug-in reducer

10-KGR



Use to change size of One-touch fittings.

Tube cap

10-KGC



Use to plug unused tubing.

Branch "Y"

10-KGU

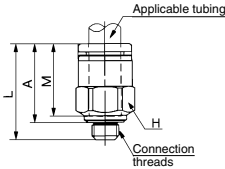


Use to branch line in the same direction from the female thread.

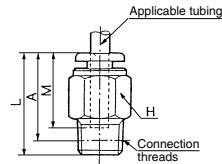


Male Connector: 10-KGH

M5



R

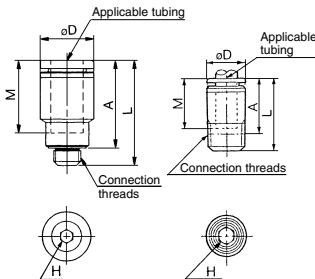


Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	L	A *	M	Effective area (mm ²)		Weight (g)	
							Urethane			
4	M5 x 0.8	10-KGH04-M5	8	17	13.9	12.7	4	2.4	2.4	
	1/8	10-KGH04-01	10	21.1	18	16				9
	1/4	10-KGH04-02	14	19	13.5					
6	M5 x 0.8	10-KGH06-M5	10	17.8	14.7	13.5	4	3.4	16	
	1/8	10-KGH06-01	12	21.6	18.5					
	1/4	10-KGH06-02	14	22.5	17					
	3/8	10-KGH06-03	17	20.9	15.5					
8	1/8	10-KGH08-01	14	27.1	24	18.5	18.0	21	19	
	1/4	10-KGH08-02		26	20.5					
	3/8	10-KGH08-03		17	20.9					15.5
10	1/8	10-KGH10-01	17	29.1	26	21	29.5	30	19	
	1/4	10-KGH10-02		33	27.5					
	3/8	10-KGH10-03		27.9	22.5					
	1/2	10-KGH10-04		22	26.1					19
12	1/4	10-KGH12-02	19	34	28.5	22	46.1	42	34	
	3/8	10-KGH12-03		28.9	23.5					
	1/2	10-KGH12-04		22	29.1					22
16	3/8	10-KGH16-03	24	38.4	33	25	68	61	51	
	1/2	10-KGH16-04		34.6	27.5					80.6

* Reference dimensions after R thread installation.

Hexagon Socket Head Male Connector: 10-KGS

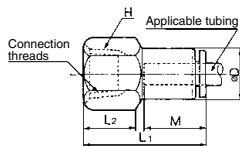
M5



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	øD	L	A *	M	Effective area (mm ²)		Weight (g)
								Urethane		
4	M5 x 0.8	10-KGS04-M5	2.5	8	18.7	15.6	12.7	4	2.6	2.6
	1/8	10-KGS04-01	3	9.8	23	19	16	3.6	8	
6	M5 x 0.8	10-KGS06-M5	2.5	10	19.5	16.4	13.5	4	3.2	3.2
	1/8	10-KGS06-01	4	11.8	24	20	17	9.9	9	
	1/4	10-KGS06-02		13.8	18					
8	1/8	10-KGS08-01	5	14	28	24	18.5	16.2	12	
	1/4	10-KGS08-02			25.5	19.5				
	3/8	10-KGS08-03			27.5	21.5				
10	1/8	10-KGS10-01	8	17	30	26	21	26.6	12	
	1/4	10-KGS10-02			27.5	21.5				
	3/8	10-KGS10-03			22	28				20
	1/2	10-KGS10-04			22	28				20
12	1/4	10-KGS12-02	8	19	33.5	27.5	22	44.5	12	
	3/8	10-KGS12-03			29	22.5				
	1/2	10-KGS12-04			22	28				20

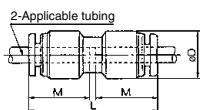
* Reference dimensions after R thread installation.

Female Connector: 10-KGF



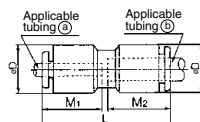
Applicable tubing O.D. (mm)	Connection thread Rc	Model	H (width across flats)	øD	L1	L2	M	Effective area (mm ²) Urethane	Weight (g)
	1/4	10-KGF04-02	17	31	14	23			
6	1/8	10-KGF06-01	14	12	27.5	11	17	10.4	15
	1/4	10-KGF06-02	17		31	13			22
	3/8	10-KGF06-03	19		33.5	15			25
8	1/8	10-KGF08-01	14	14	29	11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

Straight Union: 10-KGH



Applicable tubing O.D. (mm)	Model	øD	L	M	Effective area (mm ²) Urethane	Weight (g)
4	10-KGH04-00	10.4	32.5	16	4	3
6	10-KGH06-00	12.8	34.5	17	10.4	4
8	10-KGH08-00	15.2	38.5	18.5	18.0	6
10	10-KGH10-00	18.5	42.5	21	29.5	11
12	10-KGH12-00	20.9	44.5	22	46.1	14

Different Diameter Straight: 10-KGH

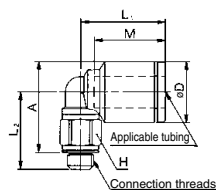


Applicable tubing O.D. (mm)		Model	øD	L	M ₁	M ₂	Effective area (mm ²) Urethane	Weight (g)
Ⓐ	Ⓑ							
4	6	10-KGH04-06	12.8	34.5	16	17	4	5
6	8	10-KGH06-08	15.2	38.5	17	18.5	10.4	6
8	10	10-KGH08-10	18.5	42	18.5	21	18.0	11
10	12	10-KGH10-12	20.9	44.5	21	22	29.5	14

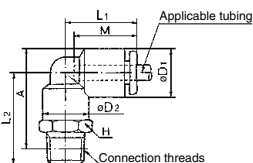
Male Elbow: 10-KGL



M5



R



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	øD ¹⁾	øD ₂	L ₁	L ₂	A *	M	Effective area (mm ²) Urethane	Weight (g)		
												4	M5 x 0.8
4	1/8	10-KGL04-01	10	10.4	10	18	21.1	23	16	4.2	10		
		10-KGL04-02	14				25.5	25				19	
6	M5 x 0.8	10-KGL06-M5	7	11.6	—	16.1	14.7	17.4	13.5	3.5	3.1		
	1/8	10-KGL06-01	10	12.8	10	20	22.1	25.5	17	9.0	10		
	1/4	10-KGL06-02	14				26.5	27.5				12	
	3/8	10-KGL06-03	17				27.9	29				13	
	1/8	10-KGL08-01	12				23.6	28				13	
1/4	10-KGL08-02	14	28				30	14.9					
8	3/8	10-KGL08-03	17	15.2	12	23	29.4	31.5	18.5	14.9	21		
		1/8	10-KGL10-01				12	26.1				32	25
10	1/4	10-KGL10-02	17	18.5	17	26.5	29.5	33	21	25.0	26		
		3/8	10-KGL10-03				17	30.9				34.5	36
		1/2	10-KGL10-04				22	35.1				37	63
		1/4	10-KGL12-02				17	30.5				35.5	28
12	3/8	10-KGL12-03	17	20.9	17	28.5	31.9	37	22	39.7	38		
		1/2	10-KGL12-04				22	36.1				39.5	65
		3/8	10-KGL16-03				17	36.9				44.5	59.6
16	1/2	10-KGL16-04	22	26.5	20.9	34	40.1	46	25	70.6	105		

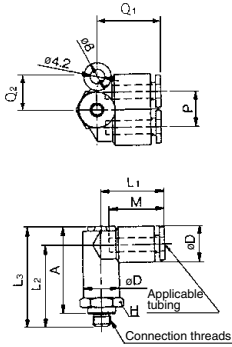
* Reference dimensions after R thread installation.

Note 1) For the ø16, this dimension refers to the O.D. of the release button.



Male Branch Connector: 10-KGLU

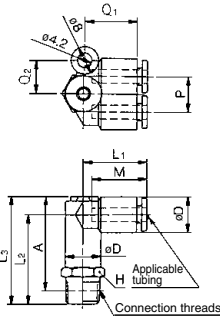
M5



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	øD	L1	L2	L3	A *	M	P	Q1	Q2	Effective area (mm ²)	Weight (g)			
													Urethane				
4	M5 x 0.8	10-KGLU04-M5	11	10.4	18.5	24	28.5	25.5	16	10.4	18.5	10	4.1	10			
	1/8	10-KGLU04-01											25.6	31.1	27.5	4.1	12
	1/4	10-KGLU04-02											30	35.5	30	4.1	21
6	M5 x 0.8	10-KGLU06-M5	13	12.8	21	26.5	33	29.5	17	12.8	20.5	12	11.0	4.3	13		
	1/8	10-KGLU06-01												28.6	35.1	32	15
	1/4	10-KGLU06-02												32.5	39	33.5	22
	3/8	10-KGLU06-03												33.9	40.4	35	35
8	1/8	10-KGLU08-01	17	15.2	24	36.5	44	38.5	18.5	15.2	24.5	14	18.2	27			
	1/4	10-KGLU08-02												33.1	40.6	38	35
	3/8	10-KGLU08-03												36.9	44.4	39	41
10	1/4	10-KGLU10-02	19	18.5	27	39.5	49	43.5	21	18.5	28	16	29.0	42			
	3/8	10-KGLU10-03												39.9	48.4	44	64
	1/2	10-KGLU10-04												43.6	53.1	45.5	57
12	1/4	10-KGLU12-02	22	20.9	29	42.4	52.9	47.5	22	20.9	30	18	45.2	58			
	3/8	10-KGLU12-03												45.6	56.1	49	65
	1/2	10-KGLU12-04															

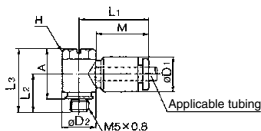
* Reference dimensions after R thread installation.

R



Universal Male Elbow: 10-KGV

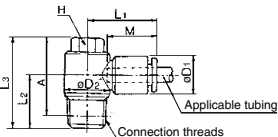
M5



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	øD1	øD2	L1	L2	L3	A *	M	P	Q1	Q2	Effective area (mm ²)	Weight (g)					
														Urethane						
4	M5 x 0.8	10-KGV04-M5	8	10.4	9.8	20.5	11	18.5	15	16	10.4	18.5	10	2.9	6					
	1/8	10-KGV04-01												13.4	22	13.6	25.6	22.5	3.8	7
	1/4	10-KGV04-02												17.6	28.5	14.6	27.6	24.5	5.9	15
6	M5 x 0.8	10-KGV06-M5	8	12.8	13.4	24	13.6	25.6	22.5	17	12.8	20.5	12	11.0	26					
	1/8	10-KGV06-01													15.3	23.5	18	30.5	25	24
	1/4	10-KGV06-02													17.6	28.5	14.6	27.6	24.5	30
8	1/8	10-KGV08-01	12	15.2	17.6	28.5	19.4	35.4	30	18.5	15.2	24.5	14	11.2						
	1/4	10-KGV08-02												18	31	25.5	30			
	3/8	10-KGV08-03												20.6	27.5	19.4	35.4	30	47	
10	1/4	10-KGV10-02	14	18.5	20.6	31	19	35	29.5	21	18.5	28	16	20.3						
	3/8	10-KGV10-03												19.4	35.4	30	49			
	1/2	10-KGV10-04												20.9	37.4	32	63			
12	3/8	10-KGV12-03	17	20.9	25.2	34	20.9	37.4	32	22	20.9	30	18	80						
	1/2	10-KGV12-04												24.1	40.6	33.5				

* Reference dimensions after R thread installation.

R



Directional Control Valves

Air Cylinders

Rotary Actuators

Air Grippers

Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

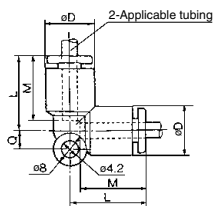
Fittings & Tubing

Flow Control Equipment

Pressure Switches/ Pressure Sensors



Union Elbow: 10-KGL

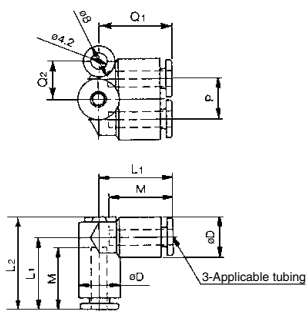


Applicable tubing O.D. (mm)	Model	øD ^{Note 1)}	L	Q	M2	Effective area (mm ²) Urethane	Weight (g)
4	10-KGL04-00	10.4	18	4.5	16	4.2	6
6	10-KGL06-00	12.8	20	5.3	17	9.0	6
8	10-KGL08-00	15.2	23	6	18.5	14.9	10
10	10-KGL10-00	18.2	26.5	6.8	21	25.0	17
12	10-KGL12-00	20.9	28.5	7.5	22	39.7	21
16	10-KGL16-00	26.5	34	10	25	70.6	29

Note 1) For the ø16, this dimension refers to the O.D. of the release button.



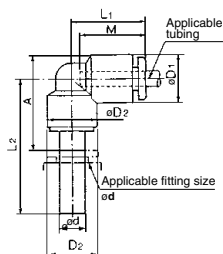
Branch Union Elbow: 10-KGLU



Applicable tubing O.D. (mm)	Model	øD	L ₁	L ₂	Q ₁	Q ₂	M	P	Effective area (mm ²) Urethane	Weight (g)
4	10-KGLU04-00	10.4	18.5	24	18.5	10	16	10.4	4.1	6
6	10-KGLU06-00	12.8	21	27.5	20.5	12	17	12.8	11.0	8
8	10-KGLU08-00	15.2	24	32	24.5	14	18.5	15.2	18.2	15
10	10-KGLU10-00	18.5	27	36.5	28	16	21	18.5	29.0	25
12	10-KGLU12-00	20.9	29	40	30	18	22	20.9	45.2	32



Plug-in Elbow: 10-KGL

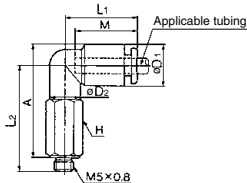


Applicable tubing O.D. (mm)	Applicable fitting size ød	Model	øD ₁	øD ₂	L ₁	L ₂	A	M	Effective area (mm ²) Urethane	Weight (g)
4	4	10-KGL04-99	10.4	8	18	25	14.5	16	4.2	8
6	6	10-KGL06-99	12.8	10	20	27.5	17	17	9.0	10
8	8	10-KGL08-99	15.2	12	22.5	31.5	21	18.5	14.9	14
10	10	10-KGL10-99	18.5	14	25.5	35.5	23.5	21	25.0	25
12	12	10-KGL12-99	20.9	16	27	37.5	26	22	39.7	28

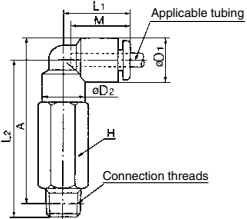


Extended Male Elbow: 10-KGW

M5



R



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	øD ₁	øD ₂	L ₁	L ₂	A *	M	Effective area (mm ²) Urethane	Weight (g)
4	M5 x 0.8	10-KGW04-M5	8	10.4	8	18	30	32	16	3.0	11
	1/8	10-KGW04-01	10								23
	1/4	10-KGW04-02	14								38
6	M5 x 0.8	10-KGW06-M5	8	12.8	8	20	30.5	33.5	17	3.0	11
	1/8	10-KGW06-01	10								26
	1/4	10-KGW06-02	14								41
8	1/8	10-KGW08-01	12	15.2	12	23	42.6	47	18.5	14.2	30
	1/4	10-KGW08-02	14								47
	3/8	10-KGW08-03	17								74
10	1/4	10-KGW10-02	17	18.5	17	26.5	57.4	61	21	23.8	66
	3/8	10-KGW10-03	17								76
	1/2	10-KGW10-04	22								145
12	1/4	10-KGW12-02	17	20.9	17	28.5	57	62	22	37.7	68
	3/8	10-KGW12-03	17								78
	1/2	10-KGW12-04	22								147

* Reference dimensions after R thread installation.

Directional Control Valves

Air Cylinders

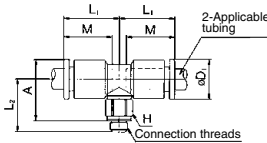
Rotary Actuators

Air Grippers

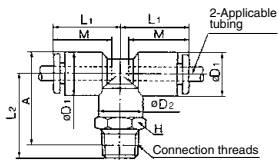


Male Branch Tee: 10-KGT

M5



R



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	øD ₁ ^{Note 1}	øD ₂	L ₁	L ₂	A *	M	Effective area (mm ²) Urethane	Weight (g)
4	M5 x 0.8	10-KGT04-M5	7	9.3	—	15.6	13.7	15.3	12.7	4.5	3.5
	1/8	10-KGT04-01	10	10.4	10	18	21.1	23	16	4.1	13
	1/4	10-KGT04-02	14	—	—	—	25.5	25	—	—	19
6	M5 x 0.8	10-KGT06-M5	7	11.6	—	16.1	14.7	17.4	13.5	4.5	4.4
	1/8	10-KGT06-01	10	12.8	10	20	22.1	25.5	17	11.0	12
	1/4	10-KGT06-02	14	—	—	—	26.5	27.5	—	—	20
8	1/8	10-KGT08-01	12	15.2	12	23	27.9	29	18.5	18.2	34
	1/4	10-KGT08-02	14								28
	3/8	10-KGT08-03	17								36
10	1/8	10-KGT10-01	12	18.5	17	26.5	26.1	32	21	29.0	31
	1/4	10-KGT10-02	17								29.5
	3/8	10-KGT10-03	17								39
12	1/2	10-KGT10-04	22	20.9	17	28.5	35.1	37	22	45.2	66
	1/4	10-KGT12-02	17								31
	3/8	10-KGT12-03	17								41
16	1/2	10-KGT12-04	22	26.5	20.9	34	36.1	39.5	25	84	68
	3/8	10-KGT16-03	22								112
	1/2	10-KGT16-04	22								116

* Reference dimensions after R thread installation.
Note 1) For the ø16, this dimension refers to the O.D. of the release button.

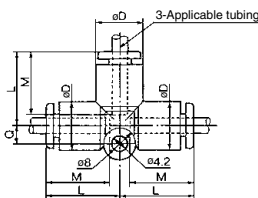
Air Preparation Equipment

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Union Tee: 10-KGT



Applicable tubing O.D. (mm)	Model	øD ^{Note 1)}	L	Q	M	Effective area (mm ²) Urethane	Weight (g)
4	10-KGT04-00	10.4	18	4.5	16	4.4	7
6	10-KGT06-00	12.8	20	5.3	17	10.6	10
8	10-KGT08-00	15.2	23	6	18.5	17.7	15
10	10-KGT10-00	18.5	26.5	6.8	21	28.4	25
12	10-KGT12-00	20.9	28.5	7.5	22	45.4	29
16	10-KGT16-00	26.5	34	10	25	70.6	40

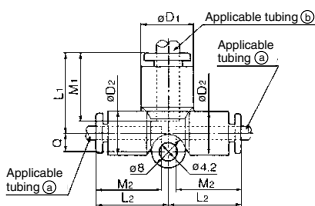
Note 1) For the ø16, this dimension refers to the O.D. of the release button.

Flow Control Equipment

Pressure Switches/ Pressure Sensors



Different Diameter Tee: 10-KGT

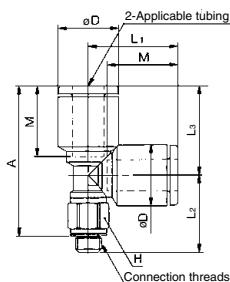


Applicable tubing O.D. (mm)		Model	ϕD_1	ϕD_2	L_1	L_2	Q	M_1	M_2	Effective area (mm ²) Urethane	Weight (g)
(A)	(B)										
4	6	10-KGT04-06	12.8	10.4	19.5	18	4.5	17	16	6.5	5
6	8	10-KGT06-08	15.2	12.8	22.5	20	5.3	18.5	17	16.4	8
8	10	10-KGT08-10	18.5	15.2	26.5	23	6	21	18.5	27.2	14
10	12	10-KGT10-12	20.9	18.5	28.5	26.5	6.8	22	21	44.5	21

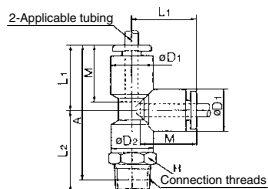


Male Run Tee: 10-KGY

M5



R



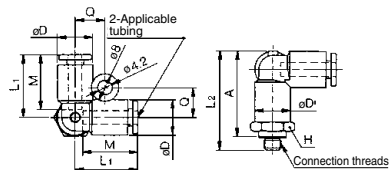
Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	ϕD_1 ^{M5}	ϕD_2	L_1	L_2	L_3	A*	M	Effective area (mm ²) Urethane	Weight (g)
4	M5 x 0.8	10-KGY04-M5	7	9.3	—	15.6	13.7	14.8	25.4	12.7	4.5	3.5
	1/8	10-KGY04-01	10	10.4	10	18	21.1	—	36	16	4.4	13
	1/4	10-KGY04-02	14	—	—	25.5	—	38	—	—	—	19
6	M5 x 0.8	10-KGY06-M5	7	11.6	—	17.1	14.7	17.1	28.7	13.5	4.5	4.3
	1/8	10-KGY06-01	10	—	—	22.1	—	39	—	—	—	12
	1/4	10-KGY06-02	14	12.8	10	20	26.5	—	41	17	10.6	20
8	3/8	10-KGY06-03	17	—	—	27.9	—	42.5	—	—	—	34
	1/2	10-KGY08-01	12	—	—	23.6	—	43.5	17	10.6	14	
	3/4	10-KGY08-02	14	15.2	12	23	28	—	45.5	18.5	17.7	22
10	1/2	10-KGY08-03	17	—	—	29.4	—	47	—	—	—	36
	3/4	10-KGY10-01	17	—	—	26.1	—	49.5	—	—	—	31
	1/2	10-KGY10-02	17	18.5	17	26.5	—	50.5	—	21	28.4	29
12	3/4	10-KGY10-03	22	—	—	30.9	—	52	—	—	—	39
	1/2	10-KGY10-04	22	—	—	35.1	—	54.5	—	—	—	66
	3/4	10-KGY12-02	17	—	—	30.5	—	53.5	—	—	—	31
16	3/4	10-KGY12-03	22	20.9	17	28.5	31.9	—	55	22	45.4	41
	1/2	10-KGY12-04	22	—	—	36.1	—	57.5	—	—	—	68
	3/4	10-KGY16-03	22	26.5	20.9	34	36.9	—	65.5	—	68	112
	1/2	10-KGY16-04	22	—	—	40.1	—	67	25	94.9	116	

* Reference dimensions after R thread installation.
Note 1) For the $\phi 16$, this dimension refers to the O.D. of the release button.

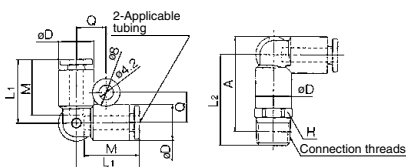


Male Delta Union: 10-KGD

M5



R

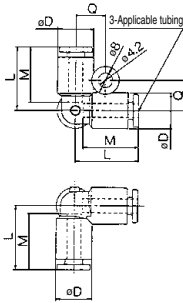


Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	ϕD	L_1	L_2	A*	M	Q	Effective area (mm ²) Urethane	Weight (g)	
												ϕD_1
4	M5 x 0.8	10-KGD04-M5	11	—	—	24	25.5	—	—	—	4.3	10
	1/8	10-KGD04-01	14	10.4	18.5	25.6	27.5	16	8.7	—	6.0	12
	1/4	10-KGD04-02	14	—	—	30	30	—	—	—	—	21
6	M5 x 0.8	10-KGD06-M5	13	—	—	26	28.5	—	—	—	4.3	12
	1/8	10-KGD06-01	14	12.8	20.5	28.1	31.3	17	9.9	—	11.0	14
	1/4	10-KGD06-02	14	—	—	32	33.5	—	—	—	—	21
8	3/8	10-KGD06-03	17	—	—	33.4	34.5	—	—	—	—	34
	1/2	10-KGD08-01	17	—	—	32.6	37	—	—	—	—	26
	3/4	10-KGD08-02	17	15.2	23.5	36	38	18.5	11.1	18.2	—	35
10	1/2	10-KGD08-03	22	—	—	36.4	38.5	—	—	—	—	39
	3/4	10-KGD10-02	19	—	—	39	43	—	—	—	—	39
	1/2	10-KGD10-03	22	18.5	26.5	39.4	43.5	21	12.8	29.0	40	
12	3/4	10-KGD10-04	22	—	—	43.1	45	—	—	—	—	62
	1/2	10-KGD12-02	22	20.9	28.5	41.5	46.5	—	—	—	—	55
	3/8	10-KGD12-03	22	—	—	41.9	47	22	13.9	45.2	56	
	1/2	10-KGD12-04	22	—	—	45.1	48.5	—	—	—	—	63

* Reference dimensions after R thread installation.



Delta Union: 10-KGD



Applicable tubing O.D. (mm)	Model	øD	L	Q	M	Effective area (mm ²)		Weight (g)
						Urethane		
4	10-KGD04-00	10.4	18.5	8.7	16	4.1	5	
6	10-KGD06-00	12.8	20.5	9.9	17	11.0	7	
8	10-KGD08-00	15.2	23.5	11.1	18.5	18.2	11	
10	10-KGD10-00	18.5	26.5	12.8	21	29.0	19	
12	10-KGD12-00	20.9	28.5	13.9	22	45.2	24	

Directional Control Valves

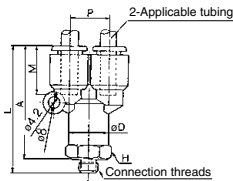
Air Cylinders

Rotary Actuators

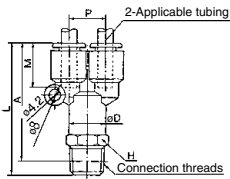


Branch "Y": 10-KGU

M5



R



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	øD	L	P	A *	M	Effective area (mm ²)		Weight (g)	
									Urethane			
4	M5 x 0.8	10-KGU04-M5	11	10.4	18.5	10.4	36	16	2.2	4		
	1/8	10-KGU04-01	14						45.5	40	4.2	11
	1/4	10-KGU04-02	14						42.5	39	2.2	12
6	M5 x 0.8	10-KGU06-M5	13	12.8	20.5	12.8	41.5	17	44.6	41.5	11	
	1/8	10-KGU06-01	14						48.5	43	10.6	21
	1/4	10-KGU06-02	14						49.9	44.5	21	34
	3/8	10-KGU06-03	17						51.6	48.5	15	15
8	1/8	10-KGU08-01	17	15.2	23.5	15.2	49.5	18.5	55.4	50	23	
	1/4	10-KGU08-02	17						60.5	55	17.7	35
	3/8	10-KGU08-03	19						64.1	57	30	30
10	1/4	10-KGU10-02	19	18.5	26.5	18.5	55.5	21	64.1	57	40	
	3/8	10-KGU10-03	22						64.1	57	65	65
	1/2	10-KGU10-04	22						64	58.5	32	32
12	1/4	10-KGU12-02	22	20.9	28.5	20.9	59	22	64	58.5	40	
	3/8	10-KGU12-03	22						67.6	60.5	45.4	40
	1/2	10-KGU12-04	22						67.6	60.5	65	65

* Reference dimensions after R thread installation.

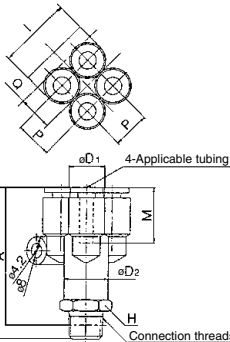
Air Grippers

Air Preparation Equipment

Modular F. R.



Double Branch "Y": 10-KGUD



Applicable tubing O.D. (mm)	Connection thread R	Model	H (width across flats)	øD1	øD2	L	I	A *	Q	M	P	Effective area (mm ²)		Weight (g)
												Urethane		
4	1/8	10-KGUD04-01	13	10.4	12.8	42.6	21	39.5	9.7	16	10.4	4.2	17	
	1/4	10-KGUD04-02	14									46.5	41	25
6	1/8	10-KGUD06-01	17	12.8	15.2	49.6	26	46.5	11.7	17	12.8	10.6	29	
	1/4	10-KGUD06-02	17									53	47.5	29

* Reference dimensions after R thread installation.

Pressure Control Equipment

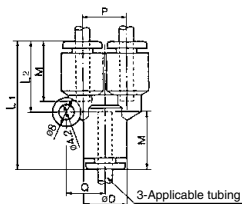
Fittings & Tubing

Flow Control Equipment

Pressure Switches/ Pressure Sensors



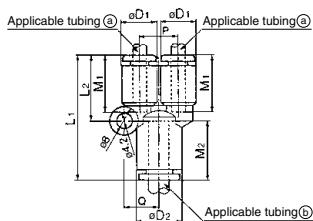
Union "Y": 10-KGU



Applicable tubing O.D. (mm)	Model	øD	L ₁	L ₂	P	Q	M	Effective area (mm ²)		Weight (g)
								Urethane		
4	10-KGU04-00	10.4	34	18	10.4	9.7	16	4.2	7	
6	10-KGU06-00	12.8	37	20	12.8	11.7	17	10.6	9	
8	10-KGU08-00	15.2	42.5	24.5	15.2	13.7	18.5	17.7	11	
10	10-KGU10-00	18.5	48	27.5	18.5	16.1	21	28.4	16	
12	10-KGU12-00	20.9	51	30	20.9	18.1	22	45.4	23	



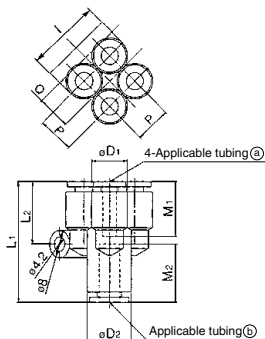
Different Diameter Union "Y": 10-KGU



Applicable tubing O.D. (mm)		Model	øD ₁	øD ₂	L ₁	L ₂	P	Q	M ₁	M ₂	Effective area (mm ²)		Weight (g)
Ⓐ	Ⓑ										Urethane		
4	6	10-KGU04-06	10.4	12.8	35	18	10.4	9.7	16	17	4.2	6	
6	8	10-KGU06-08	12.8	15.2	39.5	20	12.8	11.7	17	18.5	10.6	11	
8	10	10-KGU08-10	15.2	18.5	45	24.5	15.2	13.7	18.5	21	17.7	18	
10	12	10-KGU10-12	18.5	20.9	49	27.5	18.5	16.1	21	22	28.4	27	

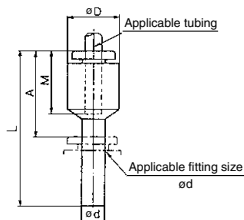


Different Diameter Double Union "Y": 10-KGUD



Applicable tubing O.D. (mm)		Model	øD ₁	øD ₂	L ₁	L ₂	P	I	Q	M ₁	M ₂	Effective area (mm ²)		Weight (g)
Ⓐ	Ⓑ											Urethane		
4	6	10-KGUD04-06	10.4	12.8	35.5	18.2	10.4	21	9.7	16	17	4.2	10	
6	8	10-KGUD06-08	12.8	15.2	40.5	20.3	12.8	26	11.7	17	18.5	10.6	17	

Plug-in Reducer: 10-KGR

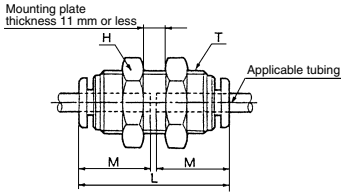


Applicable tubing O.D. (mm)	Applicable fitting size ød	Model	øD	L	A	M	Effective area (mm ²)		Weight (g)
							Urethane		
4	6	10-KGR04-06	10.4	34.5	17.5	16	4	1.8	
	8	10-KGR04-08						2.0	
	10	10-KGR04-10						3.3	
6	4	10-KGR06-04	12.8	37	21	17	10.4	3	
	8	10-KGR06-08						2.5	
	10	10-KGR06-10						3	
	12	10-KGR06-12						4.7	
8	10	10-KGR08-10	15.2	41	20	18.5	18.0	4.0	
	12	10-KGR08-12						4.6	
	16	10-KGR08-16						20.9	50.5
10	16	10-KGR10-16	20.9	50.5	25.5	22	38.7	24.8	
	12	10-KGR12-16						20.9	50.5





Bulkhead Union: 10-KGE

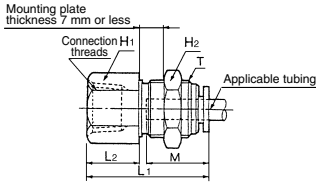


Applicable tubing O.D. (mm)	Model	T (M)	H (width across flats)	L	Mounting hole	M	Effective area (mm ²)		Weight (g)
							Urethane		
4	10-KGE04-00	M12 x 1	14	32.5	13	16	4		26
6	10-KGE06-00	M14 x 1	17	34.5	15	17	10.4		33
8	10-KGE08-00	M16 x 1	19	38	17	18.5	18.0		52
10	10-KGE10-00	M20 x 1	24	42.5	21	21	29.5		70
12	10-KGE12-00	M22 x 1	27	44	23	22	46.1		90
16	10-KGE16-00	M28 x 1.5	32	51	29	25	80.6		115

Directional Control Valves

Air Cylinders

Bulkhead Connector: 10-KGE



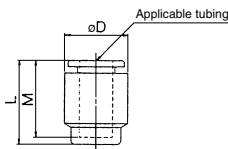
Applicable tubing O.D. (mm)	Connection thread Rc	Model	T (M)	H1 (width across flat)	H2 (width across flat)	L1	L2	Mounting hole	M	Effective area (mm ²)		Weight (g)
										Urethane		
4	1/8	10-KGE04-01	M12 x 1	14	14	27.5	11	13	16	4		16
	1/4	10-KGE04-02								31 15		
6	1/8	10-KGE06-01	M14 x 1	17	17	28	11	15	17	10.4		30
	1/4	10-KGE06-02								31.5 15		
8	3/8	10-KGE06-03	M16 x 1	19	19	27.5	7.5	17	18.5	18.0		48
	1/2	10-KGE08-01								33 13		
10	3/8	10-KGE08-03	M20 x 1	22	24	34.5	12.5	21	21	29.5		67
	1/2	10-KGE10-02								36.5 14		
12	3/8	10-KGE12-03	M22 x 1	24	27	37	14	23	22	46.1		59
	1/2	10-KGE12-04								41 18		
16	3/8	10-KGE16-03	M28 x 1.5	30	32	40	14	29	25	80.6		132
	1/2	10-KGE16-04								44 18		

Rotary Actuators

Air Grippers

Air Preparation Equipment

Tube Cap: 10-KGC



Applicable tubing O.D. (mm)	Model	(Note) øD	L	M	Weight (g)
4	10-KGC04-00	10.4	17	16	3
6	10-KGC06-00	12.8	18.5	17	3
8	10-KGC08-00	15.2	20.5	18.5	4
10	10-KGC10-00	18.5	23	21	6
12	10-KGC12-00	20.9	24	22	8
16	10-KGC16-00	26.5	28	25	13

Note) For the øD, this dimension refers to the O.D. of the release button.

Modular F. R.

Pressure Control Equipment

Fittings & Tubing

Flow Control Equipment

Pressure Switches/ Pressure Sensors