

Stainless Steel 316 One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

KQG2 Series

RoHS



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane, Polyolefin
Tubing O.D.	ø3.2, ø4, ø6, ø8, ø10, ø12, ø16

Specifications

Fluid	Air, N ₂ , Water, Steam ^{Note 1)} ^{Note 2)}
Operating pressure range ^{Note 3)}	−100 kPa to 1 MPa ^{Note 4)}
Proof pressure	3.0 MPa
Ambient and fluid temperature ^{Note 5)}	−5 to 150°C (No freezing) ^{Note 4)}
Lubricant	Grease-free specification
Seal on the threads	With sealant

Note 1) Consult with SMC regarding applicable tube separately.

Note 2) Using special FKM that is resistant even when steam is used.

Note 3) Used using in a vacuum holding application such as a leak tester, since there is leakage.

Note 4) Check the operating pressure range and operating temperature range of the tubing.

Note 5) It is recommended that you use the inner sleeve in the following conditions (Except ø3.2):

- When using in an environment where the fluid temperature changes drastically.
- When using at a high temperature.

* Temperature Condition of Mounting the Inner Sleeve

Tubing	Temperature
FEP tubing/TH Series	80°C or more
Super PFA tubing/TL Series	120°C or more

Spare Parts

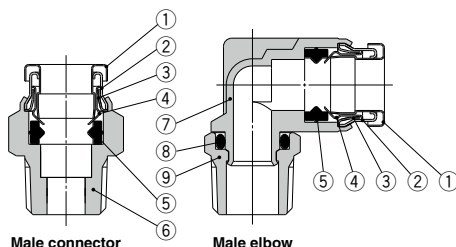
Description	Tubing O.D.	Part no.	Material
Gasket	—	M-5G3	Stainless steel 316, Special FKM
Bulkhead nut	ø3.2, ø4	KQG223-P01	Stainless steel 316
	ø6	KQG206-P01	
	ø8	KQG208-P01	
	ø10	KQG210-P01	
	ø12	KQG212-P01	
	ø16	KQG216-P01	

Cross Reference Table of the Inner Sleeve

Tubing O.D.	Tubing material			Applicable inner sleeve	
	TUS (Soft polyurethane)	TH/TH (FEP)	TL/TIL (Super PFA)	Part no.	Length
ø4	—	TH0402	—	TJG-0402	18
	TUS0425	TH0425	—	TJG-0425	18
ø6	—	—	TL0403	TJG-0403	18
	TUS0604	TH0604	TL0604	TJG-0604	19
ø8	TUS0805	—	—	TJG-0805	20.5
	—	TH0806	TL0806	TJG-0806	20.5
ø10	TUS1065	—	—	TJG-1065	23
	—	TH1075	—	TJG-1075	23
	—	TH1008	TL1008	TJG-1008	23
	TUS1208	—	—	TJG-1208	24
ø12	—	TH1209	—	TJG-1209	24
	—	TH1210	TL1210	TJG-1210	24

* Stainless steel 316 is used for the TJG series.

Construction



Component Parts

No.	Description	Material
1	Release button	Stainless steel 316
2	Guide 1	Stainless steel 316
3	Guide 2	Stainless steel 316
4	Chuck	Stainless steel 316
5	Seal	Special FKM (Fluoro coated)
6	Male connector body	Stainless steel 316
7	Male elbow body	Stainless steel 316
8	O-ring	Special FKM (Fluoro coated)
9	Stud	Stainless steel 316 (Fluoro coated)

Stainless Steel 316 One-touch Fittings **KQG2 Series**

Applicable Tubing: Metric Size, Connection Thread: M, R, Rc

Dimensions

Male Connector: KQG2H



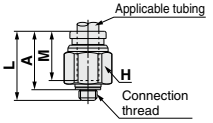
Applicable tubing O.D. (mm)	Connection thread R, M	Model	H (Width across flat)	øD	L	A*	M	Note 1) Effective area (mm²)	Weight (g)
ø3.2	M5 x 0.8	KQG2H23-M5	8	—	16.5	13.5	12	3	3.3
	1/8	KQG2H23-01S	10		15.4	12.3		3.4	5.7
	1/4	KQG2H23-02S	14		21	16.3		4	16.9
ø4	M5 x 0.8	KQG2H04-M5	8	—	17.1	14.1	12.6	4	5
	1/8	KQG2H04-01S	10		15.3	12.2		5.6	4.7
	1/4	KQG2H04-02S	14		20.9	16.2		4	15.8
ø6	M5 x 0.8	KQG2H06-M5	12	—	19.1	16.1	13.6	4	7.7
	1/8	KQG2H06-01S	12		18.1	15		13.1	7
	1/4	KQG2H06-02S	14		20.8	16.1		14.5	27.3
	3/8	KQG2H06-03S	17		23	17.9		12.8	24.7
ø8	1/8	KQG2H08-01S	14	—	24.5	21.4	16.1	26.1	12.9
	1/4	KQG2H08-02S	14		22.3	17.6		21.6	20.6
	3/8	KQG2H08-03S	17		23.7	18.6		41.5	51.1
ø10	1/8	KQG2H10-01S	17	—	25.5	22.4	17	26.1	18.9
	1/4	KQG2H10-02S	17		27.9	23.2		21.6	20.6
	3/8	KQG2H10-03S	22		23	17.9		41.5	51.1
	1/2	KQG2H10-04S	22		28.6	22.2		58.3	27.4
ø12	1/4	KQG2H12-02S	19	—	30.5	25.8	18.6	58.3	20.5
	3/8	KQG2H12-03S	22		24.7	19.6		44.6	46
	1/2	KQG2H12-04S	22		28.7	22.3		81	46
ø16	3/8	KQG2H16-03S	24	24.6	33.6	28.5	20.8	113	37.4
	1/2	KQG2H16-04S	24		29.5	23.1			

* Reference dimensions after installation for R thread

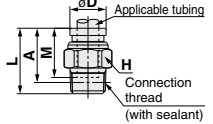
Note 1) Value of FEP tubing.

Value of nylon tubing for ø16 only.

(M5)



(R)



Hexagon Socket Head Male Connector: KQG2S



Applicable tubing O.D. (mm)	Connection thread R, M	Model	H (Width across flat)	Note 1) øD	L	A*	M	Note 2) Effective area (mm²)	Weight (g)
ø3.2	M5 x 0.8	KQG2S23-M5	2	9	16.5	13.5	12	3	3.8
ø4	M5 x 0.8	KQG2S04-M5	2	9	17.1	14.1	12.6	4	3.7
	1/8	KQG2S04-01S	3	10	19.6	16.5		4.1	7.6
ø6	M5 x 0.8	KQG2S06-M5	2	12	19.6	16.6	13.6	4	7.4
	1/8	KQG2S06-01S	4	14	20.6	17.5		10	8.7
	1/4	KQG2S06-02S	4	14	20.6	15.9		10.7	14
ø8	1/8	KQG2S08-01S	5	14	24.7	21.6	16.1	17.2	12.3
	1/4	KQG2S08-02S	6	17	22.9	18.2		23.3	12.8
	3/8	KQG2S08-03S	6	17	23.1	18		23.3	22.8
ø10	1/8	KQG2S10-01S	5	17	25.6	22.5	17	17.2	17.7
	1/4	KQG2S10-02S	8	17	27.5	22.8		39	19.1
	3/8	KQG2S10-03S	8	22	24	18.9		37.2	20.9
	1/2	KQG2S10-04S	8	22	24	17.6		46	24.8
ø12	1/4	KQG2S12-02S	8	19	30.6	25.9	18.6	60	19.3
	3/8	KQG2S12-03S	10	22	24.9	19.8		81	33.6
	1/2	KQG2S12-04S	10	22	24.9	18.5		81	41.6
ø16	3/8	KQG2S16-03S	12	24.6	33.2	28.1	20.8	113	38.4
	1/2	KQG2S16-04S	12	24.6	29.4	23		113	38.4

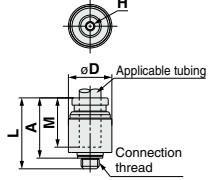
* Reference dimensions after installation for R thread

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

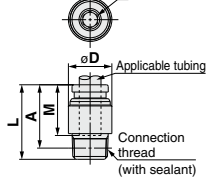
Note 2) Value of FEP tubing.

Value of nylon tubing for ø16 only.

(M5)



(R)



Straight Union: KQG2H

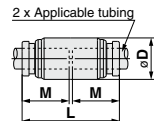


Applicable tubing O.D. (mm)	Model	øD Note 1)	L	M	Note 2) Effective area (mm²)	Weight (g)
ø3.2	KQG2H23-00	9	25	12	3.4	6.5
ø4	KQG2H04-00	9	26.2	12.6	5.6	6.5
ø6	KQG2H06-00	12	28.2	13.6	13.1	11.5
ø8	KQG2H08-00	14	33.2	16.1	26.1	16.6
ø10	KQG2H10-00	17	35	17	41.5	26
ø12	KQG2H12-00	19	38.2	18.6	58.3	32.2
ø16	KQG2H16-00	24.6	42.6	20.8	113	53.7

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

Note 2) Value of FEP tubing.

Value of nylon tubing for ø16 only.



Stainless Steel 316 One-touch Fittings

Applicable Tubing: Inch Size, Connection Thread: UNF, NPT

KQG2 Series

RoHS



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane, Polyolefin
Tubing O.D.	ø1/8", ø5/32", ø1/4", ø5/16", ø3/8", ø1/2"

Specifications

Fluid	Air, N ₂ , Water, Steam ^{Note 1)} ^{Note 2)}
Operating pressure range ^{Note 3)}	-100 kPa to 1 MPa ^{Note 4)}
Proof pressure	3.0 MPa
Ambient and fluid temperature ^{Note 5)}	-5 to 150°C (No freezing) ^{Note 4)}
Lubricant	Grease-free specification
Seal on the threads	With sealant

Note 1) Consult with SMC regarding applicable tubing separately.

Note 2) Using special FKM that is resistant even when steam is used.

Note 3) Avoid using in a vacuum holding application such as a leak tester, since there is leakage.

Note 4) Check the operating pressure range and operating temperature range of the tubing.

Note 5) It is recommended that you use the inner sleeve in the following conditions (Except ø1/8"):

- When using in an environment where the fluid temperature changes drastically.
- When using at a high temperature.

* Temperature Condition of Mounting the Inner Sleeve

Tubing	Temperature
FEP tubing/TH Series	80°C or more
Super PFA tubing/TL Series	120°C or more

Spare Parts

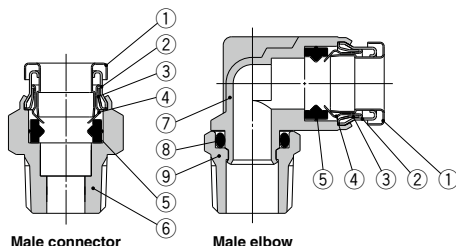
Description	Tubing O.D.	Part no.	Material
Gasket	—	M-5G3	Stainless steel 316, Special FKM
Bulkhead nut	ø1/8", ø5/32"	KQG201-P01	Stainless steel 316
	ø1/4"	KQG207-P01	
	ø5/16"	KQG209-P01	
	ø3/8"	KQG211-P01	
	ø1/2"	KQG213-P01	

Cross Reference Table of the Inner Sleeve

Tubing O.D.	Tubing material		Applicable inner sleeve	
	TH/THI (FEP)	TL/TIL (Super PFA)	Part no.	Length
ø5/32"	TH0402	—	TJG-0402	18
	TH0425	—	TJG-0425	18
	—	TL0403	TJG-0403	18
ø1/4"	TIHB07	TIL07	TJG-0604	19
	TIHA07	—	TJG-0746	19
ø5/16"	TH0806	TL0806	TJG-0806	20.5
ø3/8"	TIHB11	TIL11	TJG-1065	23
	TIHA11	—	TJG-1107	23
ø1/2"	TIH13	TIL13	TJG-1395	24

* Stainless steel 316 is used for the TJG series.

Construction



Component Parts

No.	Description	Material
1	Release button	Stainless steel 316
2	Guide 1	Stainless steel 316
3	Guide 2	Stainless steel 316
4	Chuck	Stainless steel 316
5	Seal	Special FKM (Fluoro coated)
6	Male connector body	Stainless steel 316
7	Male elbow body	Stainless steel 316
8	O-ring	Special FKM (Fluoro coated)
9	Stud	Stainless steel 316 (Fluoro coated)

Dimensions

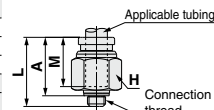
Male Connector: KQG2H



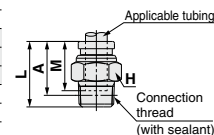
Applicable tubing O.D. (inch)	Connection thread UNF, NPT	Model	H (Width across flat)	L	A*	M	Note) Effective area (mm ²)	Weight (g)
ø1/8"	10-32UNF	KQG2H01-32	8	16.5	13.5	12	3	3.3
	1/8	KQG2H01-N01S	12	17.1	13.9		3.4	8.1
	1/4	KQG2H01-N02S	14	20.9	16.5		4	16.9
ø5/32"	10-32UNF	KQG2H03-32	10	17.1	14.1	12.6	4	5
	1/8	KQG2H03-N01S	12	17	13.8		5.6	7.6
	1/4	KQG2H03-N02S	14	20.9	16.5		5.6	16.4
ø1/4"	10-32UNF	KQG2H07-32	12	19	16	13.5	4	7.5
	1/8	KQG2H07-N01S	12	20	16.8		13.1	8.6
	1/4	KQG2H07-N02S	14	20.6	16.2		13.1	14.2
ø5/16"	3/8	KQG2H07-N03S	19	23.8	19.1	16.1	26.1	31.4
	1/8	KQG2H09-N01S	14	24.2	21		26.1	12.6
	1/4	KQG2H09-N02S	14	23.1	18.7		26.1	13.9
ø3/8"	3/8	KQG2H09-N03S	19	24.6	19.9	16.6	26.1	28.9
	1/8	KQG2H11-N01S	17	25	21.8		41.5	19.4
	1/4	KQG2H11-N02S	17	26.3	21.9		41.5	20.3
ø1/2"	3/4	KQG2H11-N03S	19	23.6	18.9	18.5	58.3	25.2
	1/2	KQG2H11-N04S	22	28.3	21.9		58.3	51.8
	1/4	KQG2H13-N02S	22	30.5	26.1		58.3	36.7
	3/8	KQG2H13-N03S	22	28.4	23.7			34.4
	1/2	KQG2H13-N04S	22		22			43.4

* Reference dimensions after installation for NPT thread
Note) Value of FEP tubing.

(10-32UNF)



(NPT)



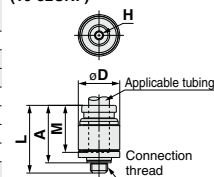
Hexagon Socket Head Male Connector: KQG2S



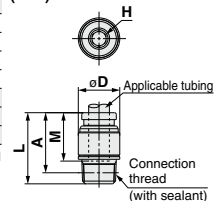
Applicable tubing O.D. (inch)	Connection thread UNF, NPT	Model	H (Width across flat)	øD	L	A*	M	Note) Effective area (mm²)	Weight (g)
ø1/8"	10-32UNF	KQG2S01-32	2	9	16.5	13.5	12	3	3.8
	10-32UNF	KQG2S03-32	2	9	17.1	14.1		4	3.7
ø5/32"	1/8	KQG2S03-N01S	2.78	11	19.6	16.4	12.6	4.1	8.5
	10-32UNF	KQG2S07-32	2		19.5	16.5		4	7.2
ø1/4"	1/8	KQG2S07-N01S	4.76	12		17.3	13.5	10	8.1
	1/4	KQG2S07-N02S		14	20.5	16.1		10.7	13.4
	3/8	KQG2S07-N03S		18		15.8			22.6
ø5/16"	1/8	KQG2S09-N01S	5.56	14	24.7	21.5		17.2	12
	1/4	KQG2S09-N02S	6.35	18	23.1	18.7	16.1	23.3	12.8
	3/8	KQG2S09-N03S				18.4		23.3	23.5
ø3/8"	1/8	KQG2S11-N01S	5.56	17	25.2	22		17.2	17.8
	1/4	KQG2S11-N02S	6.35	18	27.1	22.7	16.6	39	21.2
	3/8	KQG2S11-N03S				18.9			23.8
ø1/2"	1/2	KQG2S11-N04S	9.53	20	28.6	17.2			38.6
	1/4	KQG2S13-N02S		22	30.5	26.1	18.5	46	26.6
	3/8	KQG2S13-N03S			20	29.4		24.7	60
	1/2	KQG2S13-N04S		22	25.5	19.1			34.8

* Reference dimensions after installation for NPT thread
Note) Value of FEP tubing.

(10-32UNF)



(NPT)



Straight Union: KQG2H



Applicable tubing O.D. (inch)	Model	øD	L	M	Note) Effective area (mm ²)	Weight (g)
ø1/8"	KQG2H01-00	9	25	12	3.4	6.5
ø5/32"	KQG2H03-00	9	26.2	12.6	5.6	6.5
ø1/4"	KQG2H07-00	12	28	13.5	13.1	11
ø5/16"	KQG2H09-00	14	33.2	16.1	26.1	16.6
ø3/8"	KQG2H11-00	16	34.2	16.6	41.5	22.7
ø1/2"	KQG2H13-00	20	38	18.5	58.3	35.5

Note) Value of FEP tubing.

