

Stainless Steel 316 Insert Fittings

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

KFG2-F Series

RoHS



Applicable Tubing

Tubing material*1, *2	FEP, PFA, Modified PTFE, 2-layer soft fluoropolymer, Nylon, Soft nylon, Polyurethane, Soft polyurethane, Polyolefin, Soft polyolefin, Antistatic soft nylon, Antistatic polyurethane, Hard polyurethane
Tubing size	Ø 4 x Ø 2.5, Ø 4 x Ø 3, Ø 6 x Ø 4, Ø 8 x Ø 6, Ø 10 x Ø 7.5, Ø 10 x Ø 8, Ø 12 x Ø 9, Ø 12 x Ø 10, Ø 16 x Ø 13

*1 Considering the product application, FDA-compliant products are recommended.

*2 For soft polyurethane tubing, hard polyurethane tubing, and antistatic polyurethane tubing, water cannot be used.

Series	Tubing material	Tubing O.D. x I.D. [mm]								
		Ø4xØ2.5	Ø4xØ3	Ø6xØ4	Ø8xØ6	Ø10xØ7.5	Ø10xØ8	Ø12xØ9	Ø12xØ10	Ø16xØ13
TH	FEP*1	●	—	●	●	●	●	●	●	—
TL	Super PFA*1	—	●	●	●	—	●	—	●	—
TLM	PFA*1	●	●	●	●	●	●	●	●	●
TD	Modified PTFE*1	●	—	●	●	●	—	●	—	—
TQ	Special fluoropolymer	●	—	●	●	—	●	●	—	—
T	Nylon	●	●	●	●	●	—	●	—	●
TS	Soft nylon	●	—	●	●	●	—	●	—	—
TU	Polyurethane	●	—	●	—	—	—	—	—	—
TU-X214	Polyurethane*1	●	—	●	—	—	—	—	—	—
TPH	Polyolefin*1	●	—	●	●	●	—	●	—	—
TUS	Soft polyurethane	●	—	●	—	—	—	—	—	—
TUH	Hard polyurethane (High pressure)	●	—	●	—	—	—	—	—	—
TPS	Soft polyolefin*1	●	—	●	—	—	—	—	—	—
TAS	Antistatic soft nylon	●	—	●	—	—	—	—	—	—
TAU	Antistatic polyurethane	●	—	●	—	—	—	—	—	—

*1 FDA compliant tubing (Refer to page 4.)

Spare Parts

Description	Tubing O.D.	Part no.	Material
Bulkhead nut	Ø 4	KFG204-P01	Stainless steel 316
	Ø 6	KFG206-P01	
	Ø 8	KFG208-P01	
	Ø 10	KFG210-P01	
	Ø 12	KFG212-P01	
	Ø 16	KFG216-P01	

Specifications

Fluid	Air, Water*1, Steam*3
Operating pressure range*2	–100 kPa to 1 MPa*4
Proof pressure	3.0 MPa
Ambient and fluid temperatures	–65 to 260°C (No freezing)*4 [Swivel elbow: –5 to 150°C]
Lubricant	NSF H1 grease
Seal on the threads	Without sealant

*1 Deionised 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.

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

*3 Please contact SMC for applicable tubing separately.

*4 Check the operating pressure range and operating temperature range of the tubing.

How to Order

KFG2 H 0425 - 02 - F

Body type

Symbol	Model
H	Male connector, Straight union
L	Male elbow, Union elbow
T	Male branch tee, Union tee
E	Bulkhead union
V	Swivel elbow
F	Female connector

FDA compliant

Thread size

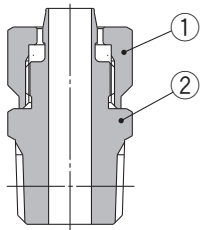
Symbol	Size
01	R1/8
02	R1/4, Rc1/4
03	R3/8, Rc3/8
04	R1/2, Rc1/2

* Sealant is unavailable for this product as no FDA-compliant material is available.

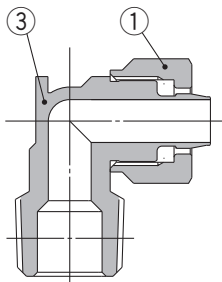
Tubing size (Metric)

Symbol	O.D.	I.D.
0425	Ø 4	Ø 2.5
0403	Ø 4	Ø 3
0604	Ø 6	Ø 4
0806	Ø 8	Ø 6
1075	Ø 10	Ø 7.5
1008	Ø 10	Ø 8
1209	Ø 12	Ø 9
1210	Ø 12	Ø 10
1613	Ø 16	Ø 13

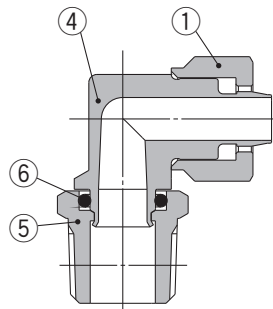
Construction



Male connector



Male elbow



Swivel elbow

Principal Parts Material

No.	Description	Material	Note
1	Union nut	Stainless steel 316	NSF H1 grease
2	Male connector body	Stainless steel 316	
3	Male elbow body	Stainless steel 316	
4	Swivel elbow body	Stainless steel 316	NSF H1 grease
5	Stud	Stainless steel 316	
6	O-ring	FDA compliant FKM	NSF H1 grease

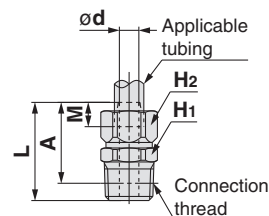
KFG2-F Series

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

Dimensions**Male Connector: KFG2H**

Applicable tubing size [mm]		Connection thread R	Model	Width across flats		L	M	Ø d	A*1	Effective area [mm²]	Weight [g]
O.D.	I.D.			H1	H2						
Ø 4	Ø	1/8	KFG2H0425-01-F	10	8	19.4	5	1.8	16.3	1.6	8
	2.5	1/4	KFG2H0425-02-F	14		23.8			19.1		14
Ø 4	Ø 3	1/8	KFG2H0403-01-F	10	8	19.4	5	2.3	16.3	2.6	8
		1/4	KFG2H0403-02-F	14		23.8			19.1		14
Ø 6	Ø 4	1/8	KFG2H0604-01-F	10	10	20.9	5.8	3.3	17.8	6	10
		1/4	KFG2H0604-02-F	14		25.3			20.6		16
Ø 8	Ø 6	1/8	KFG2H0806-01-F	14	14	23.3	6.6	5.3	20.2	17	18
		1/4	KFG2H0806-02-F			26.7			22		24
		3/8	KFG2H0806-03-F			28.1			23		36
Ø 10	Ø 7.5	1/4	KFG2H1075-02-F	17	17	29.7	7.6	6.8	25	30	34
		3/8	KFG2H1075-03-F			30.1			27.1		41
		1/2	KFG2H1075-04-F			33.5			27.1		67
Ø 10	Ø 8	1/4	KFG2H1008-02-F	17	17	29.7	7.3	7.3	25	35	33
		3/8	KFG2H1008-03-F			30.1			27.1		40
		1/2	KFG2H1008-04-F			33.5			27.1		66
Ø 12	Ø 9	1/4	KFG2H1209-02-F	17	17	31.3	8.5	8	26.6	45	33
		3/8	KFG2H1209-03-F			31.7			28.7		40
		1/2	KFG2H1209-04-F			35.1			28.7		66
Ø 12	Ø 10	1/4	KFG2H1210-02-F	17	17	31.3	9	9	26.6	57	30
		3/8	KFG2H1210-03-F			31.7			28.7		38
		1/2	KFG2H1210-04-F			35.1			28.7		63
Ø 16	Ø 13	3/8	KFG2H1613-03-F	22	22	33.1	9.3	12	28	101	51
		1/2	KFG2H1613-04-F			36.3			29.9		67

*1 Reference dimensions after installation of R thread

**Male Elbow: KFG2L**

Applicable tubing size [mm]		Connection thread R	Model	Width across flats	Width across flats	L1	L2	M	Ø d	A*1	Effective area [mm²]	Weight [g]
O.D.	I.D.			H1	H2							
Ø 4	Ø	1/8	KFG2L0425-01-F	10	8	13.5	12.5	5	1.8	13.8	1.6	10
	2.5	1/4	KFG2L0425-02-F				15.9			15.6		14
Ø 4	Ø 3	1/8	KFG2L0403-01-F	10	8	13.5	12.5	5	2.3	13.8	2.6	10
		1/4	KFG2L0403-02-F				15.9			15.6		14
Ø 6	Ø 4	1/8	KFG2L0604-01-F	10	10	15	13.6	5.8	3.3	16	6	12
		1/4	KFG2L0604-02-F				17			17.8		16
Ø 8	Ø 6	1/8	KFG2L0806-01-F	12	14	17.4	15.8	6.6	5.3	20.4	12	20
		1/4	KFG2L0806-02-F				19.2			22.2		24
		3/8	KFG2L0806-03-F				19.6			22.2		27
Ø 10	Ø 7.5	1/4	KFG2L1075-02-F	15	17	20.9	20.9	7.6	6.8	25.6	23	38
		3/8	KFG2L1075-03-F				21.3			27.5		41
		1/2	KFG2L1075-04-F				24.5			27.5		51
Ø 10	Ø 8	1/4	KFG2L1008-02-F	15	17	20.9	20.9	7.3	7.3	25.6	27	37
		3/8	KFG2L1008-03-F				21.3			27.5		41
		1/2	KFG2L1008-04-F				24.5			27.5		50
Ø 12	Ø 9	1/4	KFG2L1209-02-F	16	17	23.5	20.9	8.5	8	25.6	27	41
		3/8	KFG2L1209-03-F				21.3			27.5		45
		1/2	KFG2L1209-04-F				24.5			27.5		57
Ø 12	Ø 10	1/4	KFG2L1210-02-F	16	17	23.5	20.9	9	9	25.6	34	42
		3/8	KFG2L1210-03-F				21.3			27.5		43
		1/2	KFG2L1210-04-F				24.5			27.5		53
Ø 16	Ø 13	3/8	KFG2L1613-03-F	21	22	26.2	24	9.3	12	31	79	72
		1/2	KFG2L1613-04-F				27.2			32.9		78

*1 Reference dimensions after installation of R thread

