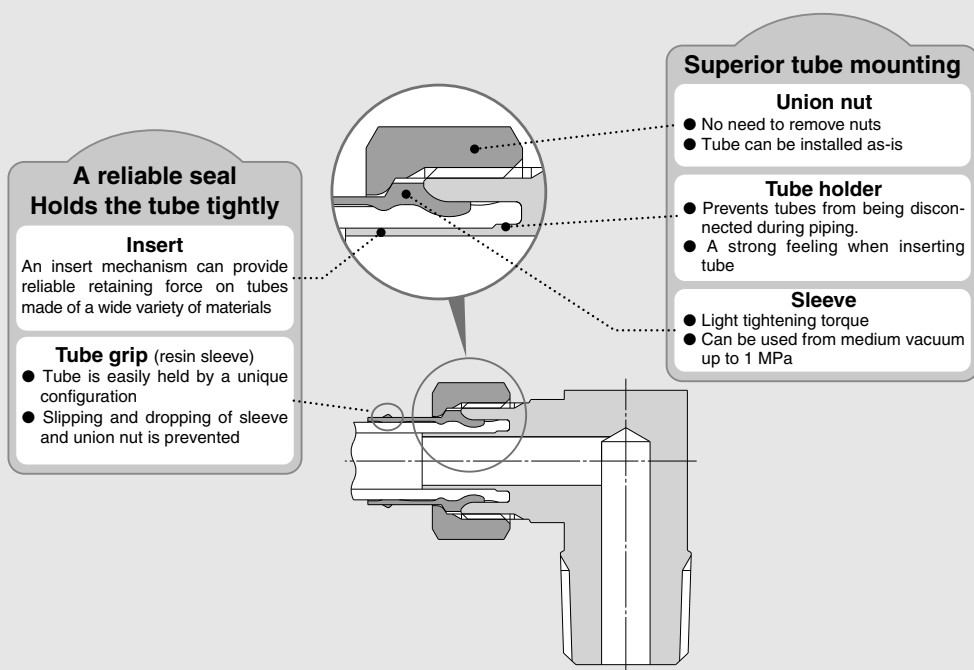


Insert Fittings

KF Series



- Material / Body, Union nut: Brass
Sleeve: Resin or Brass
- Maximum operating temperature / **150°C** (Brass sleeve)
60°C (Resin sleeve)
- Applicable tubing material /
FEP • PFA • Modified PTFE • Nylon
Soft nylon • Polyurethane
Polyolefin • Soft polyolefin
- Can be used with steam. (For brass sleeve)
- Grease-free



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

Male Connector

Use to connect tubes in the same direction from female thread. Most general type.

Applicable tubing size (mm)		Connection thread	Model	
O.D.	I.D.		Resin sleeve	Brass sleeve
ø4	ø2.5	R1/8	KFH04-01S	KFH04B-01S
		R1/4	KFH04-02S	KFH04B-02S
ø6	ø4	R1/8	KFH06-01S	KFH06B-01S
		R1/4	KFH06-02S	KFH06B-02S
		R3/8	KFH06-03S	KFH06B-03S
ø8	ø5	R1/8	KFH08U-01S	—
		R1/4	KFH08U-02S	—
		R3/8	KFH08U-03S	—
ø10	ø6	R1/8	KFH08N-01S	KFH08B-01S
		R1/4	KFH08N-02S	KFH08B-02S
		R3/8	KFH08N-03S	KFH08B-03S
ø10	ø6.5	R1/4	KFH10U-02S	—
		R3/8	KFH10U-03S	—
		R1/2	KFH10U-04S	—
ø12	ø7.5	R1/4	KFH10N-02S	KFH10B-02S
		R3/8	KFH10N-03S	KFH10B-03S
		R1/2	KFH10N-04S	KFH10B-04S
ø12	ø8	R1/4	KFH12U-02S	—
		R3/8	KFH12U-03S	—
		R1/2	KFH12U-04S	—
ø12	ø9	R1/4	KFH12N-02S	KFH12B-02S
		R3/8	KFH12N-03S	KFH12B-03S
		R1/2	KFH12N-04S	KFH12B-04S



Branch Tee

Use to branch line from female thread in both 90° directions.

Applicable tubing size (mm)		Connection thread	Model	
O.D.	I.D.		Resin sleeve	Brass sleeve
ø4	ø2.5	R1/8	KFT04-01S	KFT04B-01S
		R1/4	KFT04-02S	KFT04B-02S
ø6	ø4	R1/8	KFT06-01S	KFT06B-01S
		R1/4	KFT06-02S	KFT06B-02S
		R3/8	KFT06-03S	KFT06B-03S
ø8	ø5	R1/8	KFT08U-01S	—
		R1/4	KFT08U-02S	—
		R3/8	KFT08U-03S	—
ø10	ø6	R1/8	KFT08N-01S	KFT08B-01S
		R1/4	KFT08N-02S	KFT08B-02S
		R3/8	KFT08N-03S	KFT08B-03S
ø10	ø6.5	R1/4	KFT10U-02S	—
		R3/8	KFT10U-03S	—
		R1/2	KFT10U-04S	—
ø12	ø7.5	R1/4	KFT10N-02S	KFT10B-02S
		R3/8	KFT10N-03S	KFT10B-03S
		R1/2	KFT10N-04S	KFT10B-04S
ø12	ø8	R1/4	KFT12U-02S	—
		R3/8	KFT12U-03S	—
		R1/2	KFT12U-04S	—
ø12	ø9	R1/4	KFT12N-02S	KFT12B-02S
		R3/8	KFT12N-03S	KFT12B-03S
		R1/2	KFT12N-04S	KFT12B-04S



Male Elbow

Use to pipe at right angles to female thread. Most general type.

Applicable tubing size (mm)		Connection thread	Model	
O.D.	I.D.		Resin sleeve	Brass sleeve
ø4	ø2.5	R1/8	KFL04-01S	KFL04B-01S
		R1/4	KFL04-02S	KFL04B-02S
ø6	ø4	R1/8	KFL06-01S	KFL06B-01S
		R1/4	KFL06-02S	KFL06B-02S
		R3/8	KFL06-03S	KFL06B-03S
ø8	ø5	R1/8	KFL08U-01S	—
		R1/4	KFL08U-02S	—
		R3/8	KFL08U-03S	—
ø10	ø6	R1/8	KFL08N-01S	KFL08B-01S
		R1/4	KFL08N-02S	KFL08B-02S
		R3/8	KFL08N-03S	KFL08B-03S
ø10	ø6.5	R1/4	KFL10U-02S	—
		R3/8	KFL10U-03S	—
		R1/2	KFL10U-04S	—
ø12	ø7.5	R1/4	KFL10N-02S	KFL10B-02S
		R3/8	KFL10N-03S	KFL10B-03S
		R1/2	KFL10N-04S	KFL10B-04S
ø12	ø8	R1/4	KFL12U-02S	—
		R3/8	KFL12U-03S	—
		R1/2	KFL12U-04S	—
ø12	ø9	R1/4	KFL12N-02S	KFL12B-02S
		R3/8	KFL12N-03S	KFL12B-03S
		R1/2	KFL12N-04S	KFL12B-04S



Male Run Tee

Use to branch line in the same direction from female thread and in 90° direction.

Applicable tubing size (mm)		Connection thread	Model	
O.D.	I.D.		Resin sleeve	Brass sleeve
ø4	ø2.5	R1/8	KFY04-01S	KFY04B-01S
		R1/4	KFY04-02S	KFY04B-02S
ø6	ø4	R1/8	KFY06-01S	KFY06B-01S
		R1/4	KFY06-02S	KFY06B-02S
		R3/8	KFY06-03S	KFY06B-03S
ø8	ø5	R1/8	KFY08U-01S	—
		R1/4	KFY08U-02S	—
		R3/8	KFY08U-03S	—
ø10	ø6	R1/8	KFY08N-01S	KFY08B-01S
		R1/4	KFY08N-02S	KFY08B-02S
		R3/8	KFY08N-03S	KFY08B-03S
ø10	ø6.5	R1/4	KFY10U-02S	—
		R3/8	KFY10U-03S	—
		R1/2	KFY10U-04S	—
ø12	ø7.5	R1/4	KFY10N-02S	KFY10B-02S
		R3/8	KFY10N-03S	KFY10B-03S
		R1/2	KFY10N-04S	KFY10B-04S
ø12	ø8	R1/4	KFY12U-02S	—
		R3/8	KFY12U-03S	—
		R1/2	KFY12U-04S	—
ø12	ø9	R1/4	KFY12N-02S	KFY12B-02S
		R3/8	KFY12N-03S	KFY12B-03S
		R1/2	KFY12N-04S	KFY12B-04S



Female Union

Use to pipe from male thread such as pressure gauge.

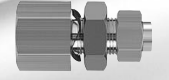
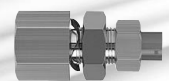
Applicable tubing size (mm)		Connection thread	Model	
O.D.	I.D.		Resin sleeve	Brass sleeve
ø4	ø2.5	R1/4	KFF04-02	KFF04B-02
		R1/4	KFF06-02	KFF06B-02
ø6	ø4	R3/8	KFF06-03	KFF06B-03
		R3/8	KFF08U-02	—
ø8	ø6	R1/4	KFF08N-02	KFF08B-02
		R1/4	KFF10U-02	—
ø10	ø7.5	R1/4	KFF10N-02	KFF10B-02
		R1/4	KFF12U-02	—
ø12	ø9	R1/4	KFF12N-02	KFF12B-02



Bulkhead Connector

Use to connect male thread and tube through a panel.

Applicable tubing size (mm)		Connection thread	Model	
O.D.	I.D.		Resin sleeve	Brass sleeve
ø6	ø4	R1/4	KFE06-02	KFE06B-02
		R3/8	KFE08U-03	—
ø8	ø6	R3/8	KFE08N-03	KFE08B-03
		R3/8	KFE10U-03	—
ø10	ø7.5	R3/8	KFE10N-03	KFE10B-03
		R3/8	KFE12U-03	—
ø12	ø9	R3/8	KFE12N-03	KFE12B-03



Swivel Elbow

Use to pipe at right angles to female thread. Swiveled at any direction.

Applicable tubing size (mm)		Connection thread	Model	
O.D.	I.D.		Resin sleeve	Brass sleeve
ø4	ø2.5	R1/8	KFV04-01S	KFV04B-01S
		R1/4	KFV04-02S	KFV04B-02S
ø6	ø4	R1/8	KFV06-01S	KFV06B-01S
		R1/4	KFV06-02S	KFV06B-02S
		R3/8	KFV06-03S	KFV06B-03S
ø8	ø5	R1/8	KFV08U-01S	—
		R1/4	KFV08U-02S	—
		R3/8	KFV08U-03S	—
	ø6	R1/8	KFV08B-01S	KFV08B-01S
		R1/4	KFV08B-02S	KFV08B-02S
		R3/8	KFV08B-03S	KFV08B-03S
ø10	ø6.5	R1/4	KFV10U-02S	—
		R3/8	KFV10U-03S	—
	ø7.5	R1/2	KFV10-03S	KFV10B-03S
		R1/4	KFV10-04S	KFV10B-04S
	ø8	R1/4	KFV12U-02S	—
		R3/8	KFV12U-03S	—
ø12	ø9	R1/2	KFV12U-04S	—
		R1/4	KFV12N-02S	KFV12B-02S
	ø12	R3/8	KFV12N-03S	KFV12B-03S
		R1/2	KFV12N-04S	KFV12B-04S



Swivel Long Elbow

Use to pipe at right angles to female thread. Swiveled at any direction. Solid piece moves fittings up from workpiece.

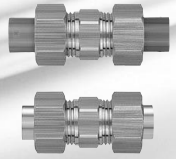
Applicable tubing size (mm)		Connection thread	Model	
O.D.	I.D.		Resin sleeve	Brass sleeve
ø4	ø2.5	R1/8	KFW04-01S	KFW04B-01S
		R1/4	KFW04-02S	KFW04B-02S
ø6	ø4	R1/8	KFW06-01S	KFW06B-01S
		R1/4	KFW06-02S	KFW06B-02S
		R3/8	KFW06-03S	KFW06B-03S
ø8	ø5	R1/8	KFW08U-01S	—
		R1/4	KFW08U-02S	—
		R3/8	KFW08U-03S	—
	ø6	R1/8	KFW08B-01S	KFW08B-01S
		R1/4	KFW08B-02S	KFW08B-02S
		R3/8	KFW08B-03S	KFW08B-03S
ø10	ø6.5	R1/4	KFW10U-02S	—
		R3/8	KFW10U-03S	—
	ø7.5	R1/2	KFW10-04S	KFW10B-04S
		R1/4	KFW10N-02S	KFW10B-02S
	ø8	R3/8	KFW12U-03S	—
		R1/2	KFW12U-04S	—
ø12	ø9	R1/4	KFW12N-02S	KFW12B-02S
		R3/8	KFW12N-03S	KFW12B-03S
		R1/2	KFW12N-04S	KFW12B-04S



Straight Union

Use to connect tubes in the same direction.

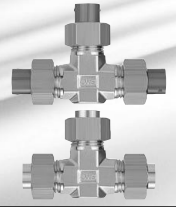
Applicable tubing size (mm)		Model	
O.D.	I.D.	Resin sleeve	Brass sleeve
ø4	ø2.5	KFH04-00	KFH04B-00
		KFH06-00	KFH06B-00
ø6	ø4	KFH08U-00	—
		KFH08N-00	KFH08B-00
ø8	ø6	KFH10U-00	—
		KFH10N-00	KFH10B-00
ø10	ø7.5	KFH12U-00	—
		KFH12N-00	KFH12B-00



Tee Union

Use to connect tubes in both 90° directions.

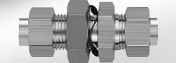
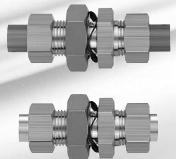
Applicable tubing size (mm)		Model	
O.D.	I.D.	Resin sleeve	Brass sleeve
ø4	ø2.5	KFT04-00	KFT04B-00
		KFT06-00	KFT06B-00
ø6	ø4	KFT08U-00	—
		KFT08N-00	KFT08B-00
ø8	ø6	KFT10U-00	—
		KFT10N-00	KFT10B-00
ø10	ø7.5	KFT12U-00	—
		KFT12N-00	KFT12B-00



Bulkhead Union

Use to connect tubes through a panel.

Applicable tubing size (mm)		Model	
O.D.	I.D.	Resin sleeve	Brass sleeve
ø4	ø2.5	KFE04-00	KFE04B-00
		KFE06-00	KFE06B-00
ø6	ø4	KFE08U-00	—
		KFE08N-00	KFE08B-00
ø8	ø6	KFE10U-00	—
		KFE10N-00	KFE10B-00
ø10	ø7.5	KFE12U-00	—
		KFE12N-00	KFE12B-00



Plug

Use to plug unused fittings.

Applicable tubing size (mm)		Model
O.D.	I.D.	
ø4	ø2.5	KFP-04
ø6	ø4	KFP-06
ø8	ø6	KFP-08
ø10	ø7.5	KFP-10
ø12	ø9	KFP-12



Insert Fittings

KF Series

RoHS



Resin sleeve



Brass sleeve

Specifications

Sleeve material	Resin	Brass
Fluid	Air, Water ^{Note 2)}	Air, Steam ^{Note 2)}
Ambient and fluid temperature	-5 to 60°C (No freezing) Water: 0 to 60°C (No freezing)	-5 to 150°C (No freezing)
Operating pressure range ^{Note 1)}	-101.3 kPa to 1 MPa	
Proof pressure	7.0 MPa (at 60°C)	
Lubricant	Grease-free	
Seal on the threads	None or with sealant	

Note 1) Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

Note 2) Swivel type is not compatible with water and steam.

Applicable Tubing

Series	Tubing O.D.	Tubing O.D. x I.D. (mm)							
		ø4 x ø2.5	ø6 x ø4	ø8 x ø5	ø8 x ø6	ø10 x ø6.5	ø10 x ø7.5	ø12 x ø8	ø12 x ø9
T	Nylon	●	●	—	●	—	●	—	●
TS	Soft nylon	●	●	—	●	—	●	—	●
TU	Polyurethane	●	●	●	—	●	—	●	—
TPH	Polyolefin	●	●	—	●	—	●	—	●
TPS	Soft polyolefin	●	●	●	—	●	—	●	—
TH	FEP	●	●	—	●	—	●	—	●
TL	Super PFA	—	●	—	—	—	—	—	—
TD	Modified PTFE	●	●	—	●	—	●	—	●
TUS	Soft polyurethane	●	●	—	—	●	—	●	—
TUH	Hard polyurethane (High pressure)	●	●	●	—	●	—	●	—

How to Order

KF H 06 — 01 S —

Type

H	Male connector
L	Straight union
T	Male elbow
T	Branch tee
F	Tee union
F	Female union
E	Bulkhead connector
E	Bulkhead union
Y	Male run tee
V	Swivel elbow
W	Swivel long elbow

Applicable tubing O.D.

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12

Bore size

Applicable tubing O.D.

Thread connection	01	R1/8
	02	R1/4, Rc1/4
	03	R3/8, Rc3/8
	04	R1/2, Rc1/2
Tubing connection	00	Same tubing size

Made to Order

Refer to page 179 for details.

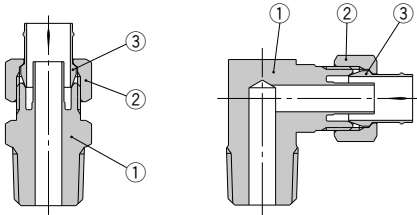
Sealant (Male thread)

NII	None
S	With sealant

Applicable tubing / Sleeve material

Applicable tubing material	Sleeve material	Tubing size (O.D. x I.D.)							
		ø4 x ø2.5	ø6 x ø4	ø8 x ø5	ø8 x ø6	ø10 x ø6.5	ø10 x ø7.5	ø12 x ø8	ø12 x ø9
Nylon	Resin	Nil	—	—	N	—	N	—	N
	Brass	B	—	—	B	—	B	—	B
Soft nylon	Resin	Nil	—	—	N	—	N	—	N
	Brass	B	—	—	B	—	B	—	B
Polyurethane	Resin	Nil	U	—	U	—	U	—	—
	Brass	—	—	—	—	—	—	—	—
Polyolefin	Resin	Nil	—	—	N	—	N	—	N
	Brass	B	—	—	B	—	B	—	B
Soft polyolefin	Resin	Nil	U	—	U	—	U	—	—
	Brass	—	—	—	—	—	—	—	—
FEP	Resin	Nil	—	—	N	—	N	—	N
	Brass	B	—	—	B	—	B	—	B
Super PFA	Resin	—	Nil	—	N	—	—	—	—
	Brass	—	B	—	B	—	—	—	—
Modified PTFE	Resin	Nil	—	—	N	—	N	—	N
	Brass	B	—	—	B	—	B	—	B
Soft polyurethane	Resin	Nil	U	—	U	—	U	—	—
	Hard polyurethane (High pressure)	Resin	Nil	U	—	U	—	U	—

Construction



Principal Parts Material

No	Part no.	Material
1	Body	C3604, C3771
2	Union nut	C3604
3	Resin sleeve, plug	Nylon 66
	Brass sleeve	C2700

Identification of Fitting Body Exterior by Applicable Tubing

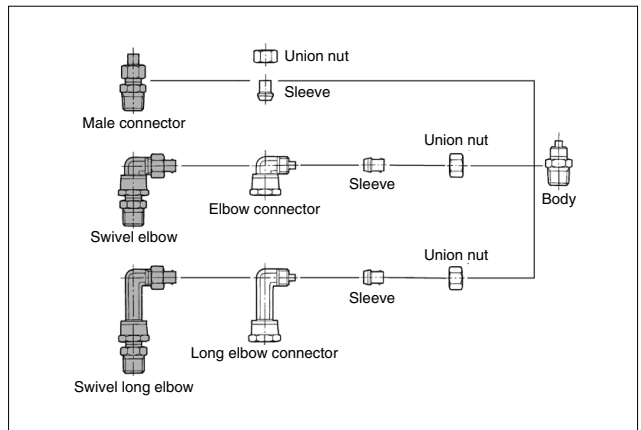
- Fittings used with polyurethane tube and soft polyolefin tube (Tube O.D. ø8, ø10 and ø12) are identified by the following marks on the body.
- Union nut and sleeve are compatible.

KF□□U-□□	KF□□-□□ KF□□N-□□ KF□□B-□□
 Marking	 Without marking
 Marking	 Without marking

Swivel Type / Part No.

Swivel type fitting parts lineup

The bodies of elbow connectors and extended elbow connectors are compatible with almost any fitting. (Exceptions are "KFV-04" and "KFW-04" which are for the body of a ø6 tube.) Swivel fittings, elbow (KFV) and (KFW) constitute the combination with a male connector (KFH) and connector as shown in the diagram.



Made to Order

Symbol	Specifications
X2	Copper-free (Electroless nickel plated)

Suffix "X2" to the end of part number.
Ex.) KFH06-01S-X2

Elbow Connector: KFV

Part no.	Applicable tubing O.D./I.D.
KFV-04	ø4/ø2.5
KFV-06	ø6/ø4
KFV-08U	ø8/ø5
KFV-08N	ø8/ø6
KFV-10U	ø10/ø6.5
KFV-10N	ø10/ø7.5
KFV-12U	ø12/ø8
KFV-12N	ø12/ø9

Union Nut: KFN

Part no.	Applicable tubing O.D.
KFN-04	ø4
KFN-06	ø6
KFN-08	ø8
KFN-10	ø10
KFN-12	ø12

Long Elbow Connector: KFW

Part no.	Applicable tubing O.D./I.D.
KFW-04	ø4/ø2.5
KFW-06	ø6/ø4
KFW-08U	ø8/ø5
KFW-08N	ø8/ø6
KFW-10U	ø10/ø6.5
KFW-10N	ø10/ø7.5
KFW-12U	ø12/ø8
KFW-12N	ø12/ø9

Sleeve: KFS

Part no.		Applicable tubing O.D.
Resin sleeve	Brass sleeve	
KFS-04	KFSB-04	ø4
KFS-06	KFSB-06	ø6
KFS-08	KFSB-08	ø8
KFS-10	KFSB-10	ø10
KFS-12	KFSB-12	ø12

Dimensions

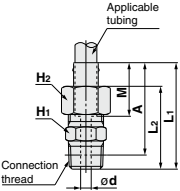
Male Connector: KFH



Resin sleeve

Brass sleeve

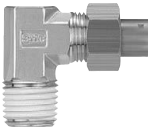
Applicable tubing size (mm)		Conne- ction thread	Model	Width across flats		L ₁	L ₂	M	ød	A*	Effective area (mm²)	Weight (g)
O.D.	I.D.			H ₁	H ₂							
ø4	ø2.5	R1/8	KFH04-01S	10		29.6	22.9	15.5		26.5		13
		R1/4	KFH04-02S	14		34	27.3			28.5		23
		R1/8	KFH04B-01S	10	10	26.5	23.5	12.4	1.5	23.4	1.6	14
		R1/4	KFH04B-02S	14		30.9	27.9			25.4		24
ø6	ø4	R1/8	KFH06-01S	10		29.3	22.6			26.2		14
		R1/4	KFH06-02S	14		33.7	27	15.2		28.2		25
		R3/8	KFH06-03S	17	12	34.1	27.4		3	28.9	6	36
		R1/8	KFH06B-01S	10		26.3	23.3			23.2		15
		R1/4	KFH06B-02S	14		30.7	27.7	12.2		25.2		26
		R3/8	KFH06B-03S	17		31.1	28.1			25.9		37
ø8	ø5	R1/8	KFH08U-01S	12		29.3	22.6			26.2		16
		R1/4	KFH08U-02S	14		33.7	27		4	28.2	11	25
		R3/8	KFH08U-03S	17		34.1	27.4			28.9		37
	ø6	R1/8	KFH08N-01S	12		29.3	22.6	16.2		26.2		16
		R1/4	KFH08N-02S	14	14	33.7	27			28.2		24
		R3/8	KFH08N-03S	17		34.1	27.4		5	28.9	17	36
		R1/8	KFH08B-01S	12		26.4	23.4			23.3		17
		R1/4	KFH08B-02S	14		30.8	27.8	13.3		25.3		25
		R3/8	KFH08B-03S	17		31.2	28.2			26.0		37
ø10	ø6.5	R1/4	KFH10U-02S			35.3	28			29.8		32
		R3/8	KFH10U-03S	17		35.7	28.4		5.5	30.5	21	40
		R1/2	KFH10U-04S	22		38.9	31.6	18.8		31.6		65
	ø7.5	R1/4	KFH10N-02S			35.3	28			29.8		31
		R3/8	KFH10N-03S	17	17	35.7	28.4			30.5		39
		R1/2	KFH10N-04S	22		38.9	31.6		6.5	31.6	30	64
		R1/4	KFH10B-02S			31.5	28.5			26.0		33
		R3/8	KFH10B-03S	17		31.9	28.9	15.0		26.7		41
		R1/2	KFH10B-04S	22		35.1	32.1			27.8		66
ø12	ø8	R1/4	KFH12U-02S			35.8	29			30.3		33
		R3/8	KFH12U-03S	17		36.2	29.4		7	31.0	35	41
		R1/2	KFH12U-04S	22		39.4	32.6	19.3		32.1		65
	ø9	R1/4	KFH12N-02S			35.8	29			30.3		31
		R3/8	KFH12N-03S	17	19	36.2	29.4			31.0		39
		R1/2	KFH12N-04S	22		39.4	32.6		8	32.1	45	64
		R1/4	KFH12B-02S			32.1	29.1			26.6		33
		R3/8	KFH12B-03S	17		32.5	29.5	15.5		27.3		41
		R1/2	KFH12B-04S	22		35.7	32.6			28.4		66



* Reference dimensions after installation of R thread.

Dimensions

Male Elbow: KFL



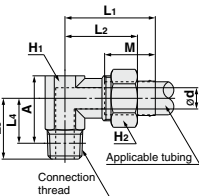
Resin sleeve



Brass sleeve

Applicable tubing size (mm)		Conne- tion thread	Model	Width across flats		L ₁	L ₂	L ₃	L ₄	M	ød	A*	Effective area (mm²)	Weight (g)												
O.D.	I.D.			H ₁	H ₂																					
ø4	ø2.5	R1/8	KFL04-01S	10	10	27.5	20.8	17	13	15.5	1.5	19.3	1.6	21												
		R1/4	KFL04-02S					19						25												
		R1/8	KFL04B-01S					17						22												
		R1/4	KFL04B-02S					19						26												
ø6	ø4	R1/8	KFL06-01S	10	12	27.2	20.5	17	13	15.2	3	19.3	6.0	22												
		R1/4	KFL06-02S					19						27												
		R3/8	KFL06-03S	12	12	30.2	23.5	20	13.7	12.2	21	38														
		R1/8	KFL06B-01S					17					23													
		R1/4	KFL06B-02S					19					28													
		R3/8	KFL06B-03S					20					39													
ø8	ø5	R1/8	KFL08U-01S	12	14	28.2	21.5	18	14	16.2	4	21.3	9.5	30												
		R1/4	KFL08U-02S					21						32												
		R3/8	KFL08U-03S					20						39												
	ø6	R1/8	KFL08N-01S					12			14	28.2	21.5	18	14	16.2	5	21.3	12	31						
		R1/4	KFL08N-02S											21						32						
		R3/8	KFL08N-03S											20						37						
		R1/8	KFL08B-01S											12			14	25.3	22.3	18	14	13.3	21.3	12	32	
		R1/4	KFL08B-02S																	21					33	
		R3/8	KFL08B-03S																	20					38	
		R1/4	KFL10U-02S	12	17	31.8	24.5		22	16										18.8					5.5	23.3
ø10	ø6.5	R3/8	KFL10U-03S					21	44																	
		R1/2	KFL10U-04S					25	66																	
	R1/4	KFL10N-02S	12					17	31.8		24.5	22	16	6.5	23.3	23	38									
	R3/8	KFL10N-03S										21					43									
	R1/2	KFL10N-04S										25					65									
	R1/4	KFL10B-02S										12					28.0	25.0	22		16	15.0	23.3	23	39	
	R3/8	KFL10B-03S																							21	44
	R1/2	KFL10B-04S																							25	66
	ø12	ø8	R1/4	KFL12U-02S	14	19	30.6	27.6	23	17	19.3	7	25.5	24	53											
R3/8			KFL12U-03S	22					57																	
R1/2			KFL12U-04S	25					68																	
ø9		R1/4	KFL12N-02S	14					19			30.6	27.6	23	17	19.3	8	25.5	27	51						
		R3/8	KFL12N-03S											22						57						
		R1/2	KFL12N-04S											25						67						
		R1/4	KFL12B-02S											14			19	30.6	27.6	23	17	15.5	24.2	25	53	
		R3/8	KFL12B-03S																	22					54	
		R1/2	KFL12B-04S																	25					69	

* Reference dimensions after installation of R thread.



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

Dimensions

Straight Union: KFH

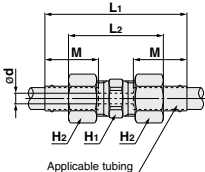


Resin sleeve



Brass sleeve

Applicable tubing size (mm)		Model	Width across flats		L ₁	L ₂	M	ød	Effective area (mm²)	Weight (g)
O.D.	I.D.		H ₁	H ₂						
ø4	ø2.5	KFH04-00	8	10	40.9	27.6	15.5	1.5	1.6	13
		KFH04B-00			34.7	28.8	12.4			14
ø6	ø4	KFH06-00	10	12	40.3	27	15.2	3	6	17
		KFH06B-00			34.3	28.4	12.2			19
ø8	ø5	KFH08U-00	12	14	41.3	28	16.2	4	11	23
	KFH08N-00	35.5			29.6	13	5	17	22	
ø10	ø6	KFH08B-00								24
	ø6.5	KFH10U-00			44.6	30	18.8	5.5	21	36
ø10	ø7.5	KFH10N-00	17	17				6.5	30	
	KFH10B-00	37.0			31.0	15.0				39
ø12	ø8	KFH12U-00	17	19	45.5	32	19.3	7	35	42
	KFH12N-00									41
	ø9	KFH12B-00			38.1	32.2	15.5	8	45	44



Applicable tubing

Tee Union: KFT

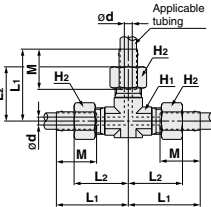


Resin sleeve



Brass sleeve

Applicable tubing size (mm)		Model	Width across flats		L ₁	L ₂	M	ød	Effective area (mm ²)	Weight (g)
O.D.	I.D.		H ₁	H ₂						
ø4	ø2.5	KFT04-00	10	10	27.5	20.8	15.5	1.5	1.6	33
		KFT04B-00			24.4	21.4	12.4			35
	ø6	ø4	KFT06-00	10	12	27.2	20.5	15.2	3	6
KFT06B-00		24.2	21.2			12.2	39			
ø8	ø5	KFT08U-00	12	14	30.2	23.5	16.2	4	11	54
	ø6	KFT08N-00			27.3	24.3	13.3	5	17	53
		KFT08B-00			27.3	24.3	13.3	5	17	56
ø10	ø6.5	KFT10U-00	12	17	31.8	24.5	18.8	5.5	21	65
	ø7.5	KFT10N-00			28.0	25.0	15.0	6.5	30	63
		KFT10B-00			28.0	25.0	15.0	6.5	30	67
ø12	ø8	KFT12U-00	14	19	34.3	27.5	19.3	7	35	89
	ø9	KFT12N-00			30.6	27.6	15.5	8	45	85
		KFT12B-00			30.6	27.6	15.5	8	45	90



Dimensions

Branch Tee: KFT



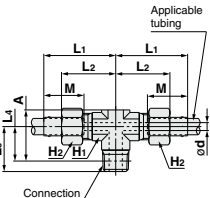
Resin sleeve



Brass sleeve

Applicable tubing size (mm)		Con- nection thread R	Model	Width across flats		L ₁	L ₂	L ₃	L ₄	M	ød	A*	Effective area (mm²)	Weight (g)									
O.D.	I.D.			H ₁	H ₂																		
ø4	ø2.5	R1/8	KFT04-01S	10	10	27.5	20.8	17	13	15.5	1.5	19.3	3	29									
		R1/4	KFT04-02S					19						34									
		R1/8	KFT04B-01S					17						30									
		R1/4	KFT04B-02S					19						36									
ø6	ø4	R1/8	KFT06-01S	10		27.2	20.5	17	13	15.2		19.3	10	32									
		R1/4	KFT06-02S					19						37									
		R3/8	KFT06-03S	12	12	30.2	23.5	22	15.7	3	23	12	53										
		R1/8	KFT06B-01S					17					34										
		R1/4	KFT06B-02S	12	12	24.2	21.2	19	13	12.2		19.3	10	39									
		R3/8	KFT06B-03S					22						55									
ø8	ø5	R1/8	KFT08U-01S			30.2	23.5	20	16	16.2	4	24.3	14	49									
		R1/4	KFT08U-02S					23						50									
		R3/8	KFT08U-03S					22						56									
		R1/8	KFT08N-01S					20						46									
	ø6	R1/4	KFT08N-02S	12	14	27.3	24.3	23	17	13.3	5	24.3	25	49									
		R3/8	KFT08N-03S					22						54									
		R1/8	KFT08B-01S					20						46									
		R1/4	KFT08B-02S					23						51									
	ø6.5	R3/8	KFT08B-03S	12		31.8	24.5	22	15.7		5.5	24.3	27	46									
		R1/2	KFT10U-04S					27						63									
		R1/4	KFT10N-02S					12						17	31.8	24.5	23	17	18.8	6.5	24.3	30	57
		R3/8	KFT10N-03S														22						62
ø10	ø7.5	R1/2	KFT10N-04S	14	17	33.8	26.5	27	18.8		7	26.2	41	88									
		R1/4	KFT10B-02S					23						60									
		R3/8	KFT10B-03S	12		28.0	25.0	22	15.7	15.0	23	30	65										
		R1/2	KFT10B-04S					27					91										
		ø12	ø8	R1/4	KFT12U-02S			34.3	27.5	25	19	19.3	7	27.5	32	75							
				R3/8	KFT12U-03S					24						81							
R1/2	KFT12U-04S			27	94																		
R1/4	KFT12N-02S			25	78																		
ø9	R3/8		KFT12N-03S	14	19	30.6	27.6	24	17.7	15.5	8	26.2	48	93									
	R1/2		KFT12N-04S					27						98									
	R1/4	KFT12B-02S	25					78															
	R3/8	KFT12B-03S	24					81															
ø12	R1/2	KFT12B-04S			30.6	27.6	27	18.8			27.3	48	96										

* Reference dimensions after installation of R thread.

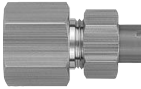


KQ2
KQB2
KS KX
KM
KF
M
H/DL L/LL
KC
KK
KK130
DM
KDM
KB
KR
KA
KQG2
KG
KFG2
MS
KKA
KP
LQ
MQR
T
IDK

KF Series

Dimensions

Female Union: KFF

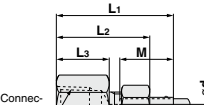


Resin sleeve



Brass sleeve

Applicable tubing size (mm)		Connection thread Rc	Model	Width across flats		L ₁	L ₂	L ₃	M	ød	Effective area (mm ²)	Weight (g)	
O.D.	I.D.			H ₁	H ₂								
ø4	ø2.5	Rc1/4	KFF04-02	17	10	33.5	26.8	15	15.5	1.5	1.6	25	
			KFF04B-02			30.4	27.4					26	
ø6	ø4	Rc1/4	KFF06-02	17	12	33.2	26.5	15	15.2	3	6	27	
		Rc3/8	KFF06-03	19		35.2	28.5					30	
		Rc1/4	KFF06B-02	17		30.2	27.2	15	12.2			28	
		Rc3/8	KFF06B-03	19		32.2	29.2					31	
ø8	ø5	Rc1/4	KFF08U-02	17	14	33.2	26.5	15	16.2	4	11	28	
	ø6		KFF08N-02							5	17	29	
ø10	ø6.5	Rc1/4	KFF10U-02	17	17	34.8	27.5	15	18.8	5.5	21	32	
	ø7.5		KFF10N-02							6.5	30	33	
ø12	ø8	Rc1/4	KFF12U-02	17	19	35.3	28.5	15	19.3	7	35	35	
	ø9		KFF12N-02							8	45	36	
			KFF12B-02				31.6	28.6		15.5		38	



Technical drawing illustrating the dimensions of the fitting. The drawing shows a cross-section of the fitting with labels for L₁, L₂, L₃, M, ød, H₁, H₂, and the connection thread. The applicable tubing is shown inserted into the fitting.

Bulkhead Connector: KFE

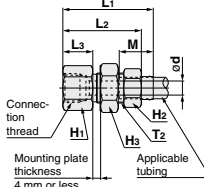


Resin sleeve

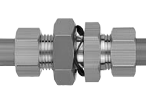
Applicable tubing size (mm)		Connection thread Rc	Model	Width across flats			L ₁	L ₂	L ₃	M	ød	T ₂	Mounting hole	Effective area (mm ²)	Weight (g)
O.D.	I.D.			H ₁	H ₂	H ₃									
ø6	ø4	Rc1/4	KFE06-02	17	12	17	44.2	37.5	16	15.2	3	M10 x 1	11	6	41
			KFE06B-02				41.2	38.2							42
ø8	ø5	Rc3/8	KFE08U-03	19	14	19	46.2	39.5	17	16.2	4	M12 x 1	13	17	49
	ø6		KFE08B-03								5				50
ø10	ø6.5	Rc3/8	KFE10U-03	19	17	22	48.8	41.5	17	18.8	5.5	M15 x 1	16	30	63
	ø7.5		KFE10B-03								6.5				62
ø12	ø8	Rc3/8	KFE12U-03	22	19	24	51.3	44.5	17	19.3	7	M17 x 1	18	35	93
	ø9		KFE12N-03								8				91
			KFE12B-03				47.6	44.6		15.5				45	93



Brass sleeve



Bulkhead Union: KFE

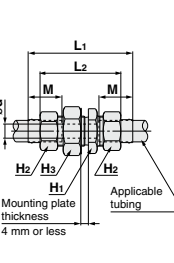


Resin sleeve



Brass sleeve

Applicable tubing size (mm)		Model	Width across flats			L ₁	L ₂	M	ød	Mounting hole	Effective area (mm ²)	Weight (g)
O.D.	I.D.		H ₁	H ₂	H ₃							
ø4	ø2.5	KFE04-00	12	10	13	50.9	37.6	15.5	1.5	9	1.6	23
		KFE04B-00				44.7	38.8	12.4				24
ø6	ø4	KFE06-00	14	12	17	51.3	38	15.2	3	11	6	34
		KFE06B-00				45.3	39.4	12.2				36
ø8	ø5	KFE08U-00	17	14	19	52.3	39	16.2	4	13	11	47
	ø6	KFE08N-00							5			46
ø10	ø6.5	KFE10U-00	19	17	22	56.6	42	18.8	5.5	16	21	67
	ø7.5	KFE10N-00							6.5			66
ø12	ø8	KFE12U-00	22	19	24	59.5	46	19.3	7	18	35	87
	ø9	KFE12N-00							8			85
		KFE12B-00				52.1	46.2	15.5			45	88



Dimensions

Male Run Tee: KFY



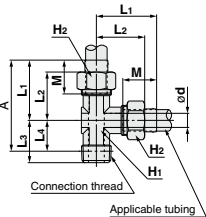
Resin sleeve



Brass sleeve

Applicable tubing size (mm)		Connection thread R	Model	Width across flats		L ₁	L ₂	L ₃	L ₄ *	M	ød	A*	Effective area (mm²)	Weight (g)											
O.D.	I.D.			H ₁	H ₂																				
ø4	ø2.5	R1/8	KFY04-01S	10	10	27.5	20.8	17	13	15.5	1.5	40.5	3.5	28											
		R1/4	KFY04-02S					19						32											
		R1/8	KFY04B-01S					17						29											
		R1/4	KFY04B-02S					19						33											
ø6	ø4	R1/8	KFY06-01S	10	12	27.2	20.5	17	13	15.2	3	40.2	11	31											
		R1/4	KFY06-02S					19						37											
		R3/8	KFY06-03S					22						51											
		R1/8	KFY06B-01S					17						33											
	ø6	R1/4	KFY06B-02S	10	12	24.2	21.2	19	13	12.2	3	37.2	11	39											
		R3/8	KFY06B-03S					22						53											
		ø8	ø5					R1/8						KFY08U-01S			30.2	23.5	20	16	16.2	4	46.2	15	48
								R1/4						KFY08U-02S					23						50
R3/8	KFY08U-03S			22	55																				
R1/8	KFY08N-01S			20	47																				
ø6	R1/4		KFY08N-02S	12	14	23	17	20	16	13.3	5	47.2	27	48											
	R3/8		KFY08N-03S											22	53										
	R1/8		KFY08B-01S											20	49										
	R1/4		KFY08B-02S											23	50										
ø10	ø6.5	R3/8	KFY08B-03S	12	14	27.3	24.3	22	17	13.3	4	44.3	27	55											
		R1/4	KFY10U-02S					23						57											
		R3/8	KFY10U-03S					22						63											
		R1/2	KFY10U-04S					27						89											
		R1/4	KFY10N-02S					23						57											
		R3/8	KFY10N-03S					22						62											
		R1/2	KFY10N-04S					27						88											
		R1/4	KFY10B-02S					23						60											
	ø7.5	R3/8	KFY10B-03S	12	14	28.0	25.0	22	17	15.0	5	43.6	46	65											
		R1/2	KFY10B-04S					27						91											
		R1/4	KFY12U-02S					25						79											
		R3/8	KFY12U-03S					24						77											
		R1/2	KFY12U-04S					27						93											
		R1/4	KFY12N-02S					25						79											
		R3/8	KFY12N-03S					24						77											
		R1/2	KFY12N-04S					27						92											
ø12	ø9	R1/4	KFY12B-02S	14	19	30.6	27.6	25	19	15.5	8	49.6	36	79											
		R3/8	KFY12B-03S					24						81											
		R1/2	KFY12B-04S					27						95											
		R1/2	KFY12B-04S					27						95											

* Reference dimensions after installation of R thread.



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

Dimensions

Swivel Elbow: KVF

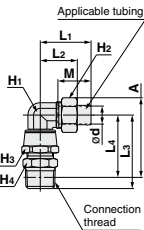


Resin sleeve



Brass sleeve

Applicable tubing size (mm)		Connec-tion thread R	Model	Width across flats				L ₁	L ₂	L ₃	L ₄ *	M	ød	A*	Effective area (mm²)	Weight (g)	
O.D.	I.D.			H ₁	H ₂	H ₃	H ₄										
ø4	ø2.5	R1/8	KFV04-01S				10	26	19.3						35.5		40
		R1/4	KFV04-02S				14					15.5			37.5		50
		R1/8	KFV04B-01S	10	10	14	10	22.9	19.9			12.4			35.5	1.4	41
		R1/4	KFV04B-02S				14							37.5		51	
ø6	ø4	R1/8	KFV06-01S				10								36.6		42
		R1/4	KFV06-02S				14	25.7	19			15.2			37.2		52
		R3/8	KFV06-03S				17							39.3		64	
		R1/8	KFV06B-01S	10	12	14	10						3		36.6	5	43
		R1/4	KFV06B-02S				14	22.7	19.7			12.2			38.6		53
		R3/8	KFV06B-03S				17							39.3		65	
ø8	ø5	R1/8	KFV08U-01S				12								38.8		52
		R1/4	KFV08U-02S				14						4		40.8	9.4	61
		R3/8	KFV08U-03S				17	27.2	20.5			16.2			41.5		73
		R1/8	KFV08N-01S				12							38.8		57	
	ø6	R1/4	KFV08N-02S	12	14	17	14								40.8		60
		R3/8	KFV08N-03S				17							41.5		72	
		R1/8	KFV08B-01S				12						5		38.8	14	58
		R1/4	KFV08B-02S				14	24.3	21.3			13.3			40.8		61
ø10	ø6.5	R3/8	KFV10U-03S				22								44.5		73
		R1/2	KFV10U-04S				22	28.8	21.5				5.5		45.2	18	81
		R1/4	KFV10N-02S				17								44.5		72
		R3/8	KFV10N-03S	14	17	19	17							45.2		80	
	ø7.5	R1/2	KFV10N-04S				22								46.3		104
		R1/4	KFV10B-02S				17						6.5		44.5	25	73
		R3/8	KFV10B-03S				17	25.0	22.0			15.0			45.2		81
		R1/2	KFV10B-04S				22								46.3		105
ø12	ø8	R1/4	KFV12U-02S				17								46.7		92
		R3/8	KFV12U-03S				22						7		47.4	30	100
		R1/2	KFV12U-04S				22	30.3	23.5			19.3			48.5		124
		R1/4	KFV12N-02S				17								46.7		90
	ø9	R3/8	KFV12N-03S	17	19	22	17								47.4		98
		R1/2	KFV12N-04S				22								48.5		123
		R1/4	KFV12B-02S				17						8		46.7	38	92
		R3/8	KFV12B-03S				17	26.6	23.6			15.5			47.4		100
ø12	ø9	R1/2	KFV12B-04S				22							48.5		125	



* Reference dimensions after installation of R thread.

Dimensions

Swivel Long Elbow: KFW



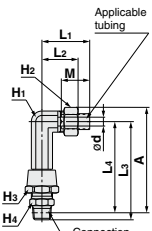
Resin sleeve



Brass sleeve

Type: KFW																(mm)										
Applicable tubing size (mm)		Connection thread R	Model	Width across flats				L ₁	L ₂	L ₃	L ₄ *	M	ød	A*	Effective area (mm²)	Weight (g)										
O.D.	I.D.			H ₁	H ₂	H ₃	H ₄																			
ø4	ø2.5	R1/8	KFW04-01S	10	10	14	10	26	19.3	52.8	49.7	15.5		55.5	1.4	58										
		R1/4	KFW04-02S				14			57.2	51.7			57.5		63										
		R1/8	KFW04B-01S				10			52.8	49.7			55.5		59										
		R1/4	KFW04B-02S				14			57.2	51.7			57.5		64										
ø6	ø4	R1/8	KFW06-01S	10	12	14	10	25.7	19.0	53.8	50.7	15.2		57.6	5.0	61										
		R1/4	KFW06-02S				14			58.2	52.7			59.6		66										
		R3/8	KFW06-03S				17			58.6	53.4			60.3		77										
		R1/8	KFW06B-01S				10			53.8	50.7			57.6		62										
		R1/4	KFW06B-02S				14			58.2	52.7			59.6		67										
		R3/8	KFW06B-03S				17			58.6	53.4			60.3		78										
		ø8	ø6				R1/8			KFW08U-01S	12			14		17	12	27.2	20.5	54.8	51.7	16.2		59.8	9.4	81
							R1/4			KFW08U-02S							14			59.2	53.7			61.8		83
R3/8	KFW08U-03S			17	59.6	54.4	62.5	90																		
R1/8	KFW08N-01S			12	54.8	51.7	59.8	81																		
R1/4	KFW08N-02S			14	59.2	53.7	61.8	83																		
R3/8	KFW08N-03S			17	59.6	54.4	62.5	88																		
R1/8	KFW08B-01S			12	54.8	51.7	59.8	82																		
R1/4	KFW08B-02S			14	59.2	53.7	61.8	84																		
R3/8	KFW08B-03S	17	59.6	54.4	62.5	89																				
ø10	ø6.5	R1/4	KFW10U-02S	14	17	19	17	28.8	21.5	61.2	55.7	18.8		65.5	18	100										
		R3/8	KFW10U-03S				22			61.6	56.4			66.2		106										
		R1/2	KFW10U-04S				22			64.8	57.5			67.3		128										
		R1/4	KFW10N-02S				17			61.2	55.7			65.5		99										
		R3/8	KFW10N-03S				22			61.6	56.4			66.2		104										
		R1/2	KFW10N-04S				22			64.8	57.5			67.3		126										
		R1/4	KFW10B-02S				17			61.2	55.7			65.5		100										
		R3/8	KFW10B-03S				22			61.6	56.4			66.2		105										
ø12	ø8	R1/2	KFW10B-04S	17	19	22	22	25.0	22.0	64.8	57.5	15.0		67.3	30	127										
		R1/4	KFW12U-02S				17			64.2	58.7			69.7		146										
		R3/8	KFW12U-03S				22			64.6	59.4			70.4		146										
		R1/2	KFW12U-04S				22			67.8	60.5			71.5		161										
		R1/4	KFW12N-02S				17			64.2	58.7			69.7		144										
		R3/8	KFW12N-03S				22			64.6	59.4			70.4		145										
		R1/2	KFW12N-04S				22			67.8	60.5			71.5		159										
		R1/4	KFW12B-02S				17			64.2	58.7			69.7		146										
R3/8	KFW12B-03S	22	64.6	59.4	70.4	147																				
R1/2	KFW12B-04S	22	67.8	60.5	71.5	161																				

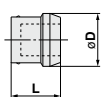
* Reference dimensions after installation of R thread.



Plug: KFP



(mm)				
Applicable tubing size (mm)	Model	L ₁	ød	Weight (g)
ø4	KFP-04	12	6.5	0.3
ø6	KFP-06	12	8.5	0.5
ø8	KFP-08	12	10.4	0.7
ø10	KFP-10	13.5	13	1.0
ø12	KFP-12	14	15	1.4



KQ2
KQB2
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L/L
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KDM
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KA
KQG2
KG
KFG2
MS
KKA
KP
LQ
MQR
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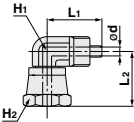
KF Series

Dimensions

Elbow Connector: KFY



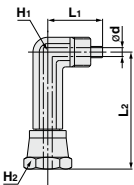
Applicable tubing size (mm)		Model	Width across flats		L ₁	L ₂	ød	Weight (g)
O.D.	I.D.		H ₁	H ₂				
ø4	ø2.5	KFY-04	10	14	18.5	18.5	1.5	21.1
ø6	ø4	KFY-06	10	14	18.5	18.5	3	21.6
ø8	ø5	KFY-08U	12	17	20	19.5	4	32.8
	ø6	KFY-08N					5	32.9
ø10	ø6.5	KFY-10U	14	19	21	21.5	5.5	41.9
	ø7.5	KFY-10N					6.5	41.7
ø12	ø8	KFY-12U	17	22	22	22.5	7	61.8
	ø9	KFY-12N					8	61.6



Long Elbow Connector: KFW



Applicable tubing size (mm)		Model	Width across flats		L ₁	L ₂	ød	Weight (g)
O.D.	I.D.		H ₁	H ₂				
ø4	ø2.5	KFW-04	10	14	18.5	38.5	1.5	31.7
ø6	ø4	KFW-06	10	14	18.5	39.5	3	33.0
ø8	ø5	KFW-08U	12	17	20	40.5	4	48.0
	ø6	KFW-08N					5	46.8
ø10	ø6.5	KFW-10U	14	19	21	42.5	5.5	62.4
	ø7.5	KFW-10N					6.5	63.4
ø12	ø8	KFW-12U	17	22	22	45.5	7	94.0
	ø9	KFW-12N					8	94.5



Sleeve: KFS



Resin sleeve



Brass sleeve

Applicable tubing size (mm)		Model	L	øD	Weight (g)
O.D.	I.D.				
ø4		KFS-04	12	6.5	0.1
		KFSB-04	8.7		0.6
ø6		KFS-06	12	8.5	0.1
		KFSB-06	8.8		0.9
ø8		KFS-08	12	10.5	0.2
		KFSB-08	8.8		1.2
ø10		KFS-10	13.5	13	0.3
		KFSB-10	9.6		1.7
ø12		KFS-12	14	15	0.4
		KFSB-12	10.1		2.1



Union Nut: KFN



Applicable tubing size (mm)		Model	Width across flats H	L	Weight (g)
O.D.	I.D.				
ø4		KFN-04	10	8	3.0
ø6		KFN-06	12	8	3.8
ø8		KFN-08	14	8	4.7
ø10		KFN-10	17	9	7.0
ø12		KFN-12	19	10	9.5





KF Series

Specific Product Precautions 1

Be sure to read this before handling the products.

Refer to back page 50 for Safety Instructions and pages 13 to 17 for Fittings and Tubing Precautions.

Selection

⚠ Caution

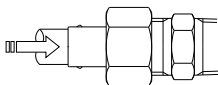
1. Please consult with SMC regarding fluids other than air and steam.

Piping

⚠ Caution

1. Installation of tubing

- 1) Take a tube having no flaws on its periphery and cut it off at right angles. Do not use pinchers, nippers or scissors, etc. The tubing might be cut diagonally or flattened, making installation impossible or causing problems such as disconnection and leakage.
- 2) Without loosening the union nut, grab the tube and gently push it thoroughly into the fitting.
- 3) After insertion, confirm that the tube will not disconnect.



- 4) When the union is loose, tighten it additionally, temporarily by hand.
- 5) After fixing the body with the tightening tool, tighten the union nut with an appropriate wrench, applying the torque as shown below. After tightening the clearance between the union nut and the body in the axial direction is about 2 mm.

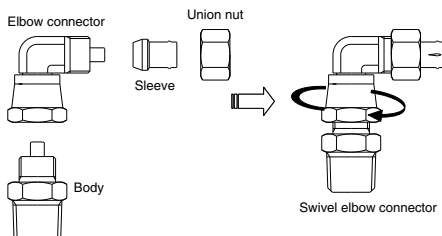
Fitting size	Sleeve material			
	Resin		Brass	
	Appropriate tightening rotations	Equivalent tightening torque (N·m)	Appropriate tightening rotations	Equivalent tightening torque (N·m)
KF□04	1.5 to 2.0	2 to 7	1.5	2 to 4
KF□06	1.5 to 2.0	3 to 8	1.5	4 to 6
KF□08	1.5 to 2.0	4 to 9	1.5	6 to 9
KF□10	1.5 to 2.0	6 to 9	1.5	10 to 12
KF□12	1.5 to 2.0	9 to 12	1.5	10 to 12

Piping

⚠ Caution

2. How to connect elbow type connector

- 1) First tighten by hand, then use an appropriate wrench to tighten 1/6 to 1/3 turns additionally. Refer to the table below for equivalent tightening torque.



Fitting size	Appropriate tightening rotations	Equivalent tightening torque (N·m)
KF□-04	1/6 to 1/3	3 to 7
KF□-06	1/6 to 1/3	3 to 7
KF□-08	1/6 to 1/3	3 to 7
KF□-10	1/6 to 1/3	5 to 10
KF□-12	1/6 to 1/3	5 to 10

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



KF Series

Specific Product Precautions 2

Be sure to read this before handling the products.

Refer to back page 50 for Safety Instructions and pages 13 to 17 for Fittings and Tubing Precautions.

Operating Environment

Warning

1. Do not use in environments or locations where there is a danger of damage to the fittings and tubing.
For fitting and tubing materials, refer to specifications and construction drawings, etc.

Maintenance

Caution

1. Pre-maintenance inspection
When the product is removed, turn off the power, cut off the supply pressure, and confirm that fluid in the piping has been discharged.
2. During regular maintenance, check for the following and replace any components as necessary.
 - a) Scratches, gouges, abrasion, corrosion
 - b) Leakage
 - c) Flattening or distortion of tubing
 - d) Hardening, deterioration or softness of tubing
3. Do not repair the fittings or patch the tubing for reuse.
4. Using this product for extended periods of time can result in leaks due to the material change. In such cases, tighten the union nut additionally.
A guide for the additional tightening is 1/6 to 1/4 turns. But in case of the brass sleeve, the limit for additional tightening is 1/2 turns.
When there is a leak even after additional tightening, replace the sleeve with new one.
5. Sleeve is not recyclable. Replace it every time piping is performed.