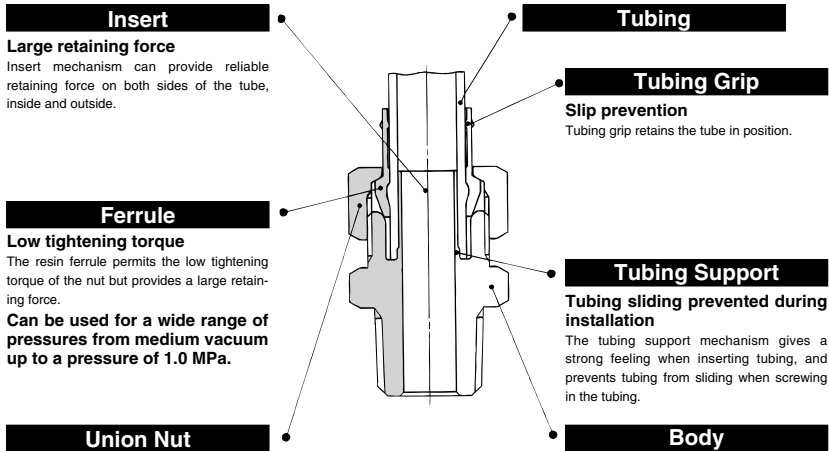


# Series 10-KF

## Insert Fittings

RoHS

### Construction



### Specifications

<b>Fluid</b>	Air, Water <small>Note 3, 4)</small>
<b>Operating pressure range</b> <small>Note 1)</small>	-101.3 kPa to 1.0 MPa
<b>Proof pressure</b>	7.0 MPa
<b>Ambient and fluid temperature</b>	-5 to 60°C (No freezing)
<b>Seal (Thread portion)</b> <small>Note 2)</small>	None or with sealant
<b>Cleanliness class (ISO class)</b>	Class 3

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) Male elbow, Male branch tee and Male run tee with seal are manufactured upon receipt of order.

Note 3) Swivel type is not compatible with water.

Note 4) 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.

### Applicable Tubing

Tubing size	O.D.	4	6	8	10	12
	I.D.	2.5	4	5	6.5	8
Material <b>Polyurethane tubing</b>		●	●	●	●	●

### Principal Parts Material

<b>Body</b>	Electroless nickel plated C3371BE, C3604BD
<b>Nut</b>	Electroless nickel plated C360BD
<b>Ferrule</b>	Nylon 66

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**

**Male connector**

10-KFH



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

**Female connector**

10-KFF



Use to pipe from male thread such as pressure gauge.

**Straight union**

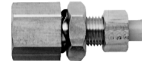
10-KFH



Use to connect tubes in the same direction.

**Bulkhead connector**

10-KFE



Use to connect male thread and tube through a panel.

**Male elbow**

10-KFL



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

**Bulkhead union**

10-KFE



Use to connect tubes through a panel.

**Union tee**

10-KFT



Use to connect tubes in both 90° directions.

**Male run tee**

10-KFY



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

**Male branch tee**

10-KFT



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

**Plug**

10-KFP



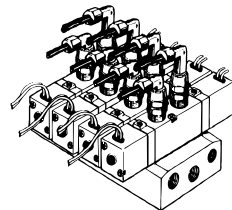
Use to plug unused fittings.

**Swivel elbow**

10-KFV



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

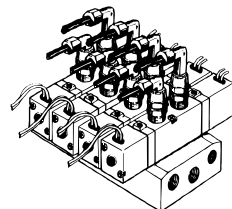


**Swivel extended elbow**

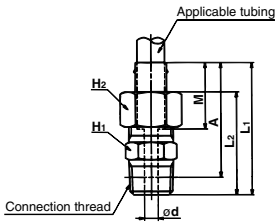
10-KFW



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



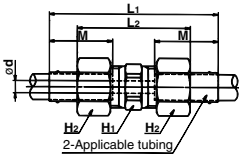
**Male Connector: 10-KFH**



Applicable tubing size (mm)		Connection thread R	Model	H <sub>1</sub> (width across flats)	H <sub>2</sub> (width across flats)	L <sub>1</sub>	L <sub>2</sub>	M	d	A *	Effective area (mm <sup>2</sup> )	Weight (g)		
O.D.	I.D.													
4	2.5	1/8	10-KFH04-01	10	29.6	22.9	17	13	15.5	1.5	26.5	13		
		1/4	10-KFH04-02	14	34	27.3							28.5	23
6	4	1/8	10-KFH06-01	10	29.3	22.6	12	13	15.2	3	26.2	14		
		1/4	10-KFH06-02	14	33.7	27							28.2	25
		3/8	10-KFH06-03	17	34.1	27.4							28.9	36
8	5	1/8	10-KFH08U-01	12	29.3	22.6	14	14	16.2	4	26.2	16		
		1/4	10-KFH08U-02	14	33.7	27							28.2	25
		3/8	10-KFH08U-03	17	34.1	27.4							28.9	37
10	6.5	1/4	10-KFH10U-02	17	35.3	28	17	17	18.8	5.5	29.8	32		
		3/8	10-KFH10U-03	17	35.7	28.4							30.5	40
		1/2	10-KFH10U-04	22	38.9	31.6							31.6	65
12	8	1/4	10-KFH12U-02	17	35.8	29	19	19	19.3	7	30.3	33		
		3/8	10-KFH12U-03	17	36.2	29.4							31	35
		1/2	10-KFH12U-04	22	39.4	32.6							32.1	65

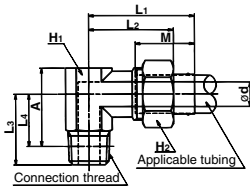
\* Reference dimensions after R thread installation.

**Straight Union: 10-KFH**



Applicable tubing size (mm)		Model	H <sub>1</sub> (width across flats)	H <sub>2</sub> (width across flats)	L <sub>1</sub>	L <sub>2</sub>	M	d	Effective area (mm <sup>2</sup> )	Weight (g)
O.D.	I.D.									
4	2.5	10-KFH04-00	8	10	40.9	27.6	15.5	1.5	1.6	13
6	4	10-KFH06-00	10	12	40.3	27	15.2	3	6	17
8	5	10-KFH08U-00	12	14	41.3	28	16.2	4	11	23
10	6.5	10-KFH10U-00	17	17	44.6	30	18.8	5.5	21	36
12	8	10-KFH12U-00	17	19	45.5	32	19.3	7	35	42

**Male Elbow: 10-KFL**

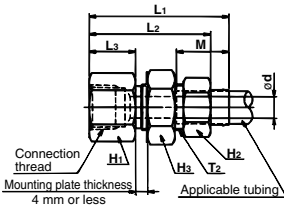


Applicable tubing size (mm)		Connection thread R	Model	H <sub>1</sub> (width across flats)	H <sub>2</sub> (width across flats)	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub> *	M	d	A *	Effective area (mm <sup>2</sup> )	Weight (g)				
O.D.	I.D.																	
4	2.5	1/8	10-KFL04-01	10	10	27.5	20.8	17	13	15.5	1.5	19.3	1.6	21				
		1/4	10-KFL04-02												19	25		
6	4	1/8	10-KFL06-01	10	12	27.2	20.5	17	13	15.2	3	19.3	6	22				
		1/4	10-KFL06-02												19	27		
		3/8	10-KFL06-03												12	30.2	23.5	20
8	5	1/8	10-KFL08U-01	12	14	28.2	21.5	18	14	16.2	4	21.3	9.5	30				
		1/4	10-KFL08U-02												21	15	21	32
		3/8	10-KFL08U-03												12	30.2	23.5	20
10	6.5	1/4	10-KFL10U-02	12	17	31.8	24.5	22	16	18.8	5.5	23.3	18	38				
		3/8	10-KFL10U-03												21	14.7	22	44
		1/2	10-KFL10U-04												14	33.8	26.5	25
12	8	1/4	10-KFL12U-02	14	19	34.3	27.5	23	17	19.3	7	25.5	24	53				
		3/8	10-KFL12U-03												22	15.7	24.2	53
		1/2	10-KFL12U-04												25	16.8	25.3	68

\* Reference dimensions after R thread installation.

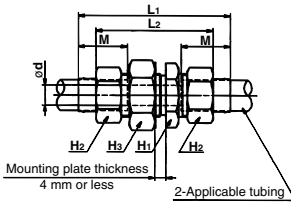
## Insert Fittings 10-KF

### Bulkhead Connector: 10-KFE



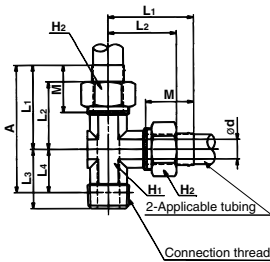
Applicable tubing size (mm)		Connection thread Rc	Model	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	M	d	T <sub>2</sub>	Mounting hole	Effective area (mm <sup>2</sup> )	Weight (g)
O.D.	I.D.			(width across flats)	(width across flats)	(width across flats)									
6	4	1/4	10-KFE06-02	17	12	17	44.2	37.5	16	15.2	3	M10 x 1	11	6	41
8	5	3/8	10-KFE08U-03	19	14	19	46.2	39.5	17	16.2	4	M12 x 1	13	11	49
10	6.5	3/8	10-KFE10U-03	19	17	22	48.8	41.5	17	18.8	5.5	M15 x 1	16	21	63
12	8	3/8	10-KFE12U-03	22	19	24	51.3	44.5	17	19.3	7	M17 x 1	18	35	93

### Bulkhead Union: 10-KFE



Applicable tubing size (mm)		Model	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	L <sub>1</sub>	L <sub>2</sub>	M	d	Mounting hole	Effective area (mm <sup>2</sup> )	Weight (g)
O.D.	I.D.		(width across flats)	(width across flats)	(width across flats)							
4	2.5	10-KFE04-00	12	10	13	50.9	37.6	15.5	1.5	9	1.6	23
6	4	10-KFE06-00	14	12	17	51.3	38	15.2	3	11	6	34
8	5	10-KFE08U-00	17	14	19	52.3	39	16.2	4	13	11	47
10	6.5	10-KFE10U-00	19	17	22	56.6	42	18.8	5.5	16	21	67
12	8	10-KFE12U-00	22	19	24	59.5	46	19.3	7	18	35	87

### Male Run Tee: 10-KFY



Applicable tubing size (mm)		Connection thread R	Model	H <sub>1</sub>	H <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub> *	M	d	A*	Effective area (mm <sup>2</sup> )	Weight (g)							
O.D.	I.D.			(width across flats)	(width across flats)																
4	2.5	1/8	10-KFY04-01	10	10	27.5	20.8	17	13	15.5	1.5	40.5	3.5	28							
	1/4	10-KFY04-02	17												32						
6	4	1/8	10-KFY06-01	10	12	27.2	20.5	17	13	15.2	3	40.2	11	31							
		1/4	10-KFY06-02												19	37					
	3/8	10-KFY06-03	12												30.2	23.5	22	15.7	45.8	13	51
		10-KFY08U-01	12												20	16	46.2	15	48		
8	5	1/4	10-KFY08U-02	12	14	30.2	23.5	23	17	16.2	4	47.2	21	50							
		3/8	10-KFY08U-03												22	15.7	48.8	55			
	1/4	10-KFY10U-02	12												23	17	48.8	58			
10	6.5	3/8	10-KFY10U-03	12	17	31.8	24.5	22	15.7	18.8	5.5	47.4	30	63							
		1/2	10-KFY10U-04												14	33.8	26.5	27	18.8	52.6	38
	1/4	10-KFY12U-02	14												25	19	53.3	34	79		
12	8	3/8	10-KFY12U-03	14	19	34.3	27.5	24	17.7	19.3	7	51.9	49	79							
		1/2	10-KFY12U-04												27	18.8	53.1	93			

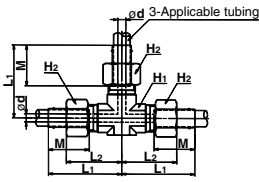
\* Reference dimensions after R thread installation.

### Plug: 10-KFP



Applicable fitting size (mm)	Model	L	D	Weight (g)
4	10-KFP-04	12	6.5	0.3
6	10-KFP-06	12	8.5	0.5
8	10-KFP-08	12	10.4	0.7
10	10-KFP-10	13.5	13	1.0
12	10-KFP-12	14	15	1.4

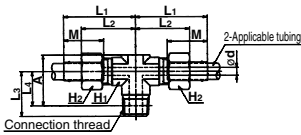
**Union Tee: 10-KFT**



Applicable tubing size (mm)		Model	H <sub>1</sub>	H <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	M	d	Effective area (mm <sup>2</sup> )	Weight (g)
O.D.	I.D.		(width across flats)	(width across flats)						
4	2.5	<b>10-KFT04-00</b>	10	10	27.5	20.8	15.5	1.5	1.6	33
6	4	<b>10-KFT06-00</b>		12	27.2	20.5	15.2	3	6	37
8	5	<b>10-KFT08U-00</b>	12	14	30.2	23.5	16.2	4	11	54
10	6.5	<b>10-KFT10U-00</b>	12	17	31.8	24.5	18.8	5.5	21	65
12	8	<b>10-KFT12U-00</b>	14	19	34.3	27.5	19.3	7	35	89

Directional Control Valves  
Air Cylinders

**Male Branch Tee: 10-KFT**

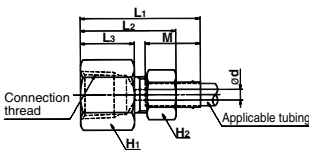


Applicable tubing size (mm)		Connection thread R	Model	H <sub>1</sub>	H <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub> *	M	d	A*	Effective area (mm <sup>2</sup> )	Weight (g)
O.D.	I.D.			(width across flats)	(width across flats)									
4	2.5	1/8	<b>10-KFT04-01</b>	10	10	27.5	20.8	17	13	15.5	1.5	19.3	3	29
		1/4	<b>10-KFT04-02</b>											19
6	4	1/8	<b>10-KFT06-01</b>	10	12	27.2	20.5	17	13	15.2	3	19.3	10	37
		1/4	<b>10-KFT06-02</b>											19
8	5	3/8	<b>10-KFT06-03</b>	12	14	30.2	23.5	22	15.7	16.2	4	23	12	57
		1/8	<b>10-KFT08U-01</b>											20
8	5	1/4	<b>10-KFT08U-02</b>	12	14	30.2	23.5	23	17	16.2	4	24.3	19	50
		3/8	<b>10-KFT08U-03</b>											23
10	6.5	1/4	<b>10-KFT10U-02</b>	12	17	31.8	24.5	23	17	18.8	5.5	24.3	27	46
		3/8	<b>10-KFT10U-03</b>											22
12	8	1/2	<b>10-KFT10U-04</b>	14	19	33.8	26.5	27	18.8	19.3	7	27.3	34	90
		1/4	<b>10-KFT12U-02</b>											25
12	8	3/8	<b>10-KFT12U-03</b>	14	19	34.3	27.5	24	17.7	19.3	7	26.2	44	81
		1/2	<b>10-KFT12U-04</b>											27

\* Reference dimensions after R thread installation.

Rotary Actuators  
Air Grippers  
Air Preparation Equipment

**Female Connector: 10-KFF**

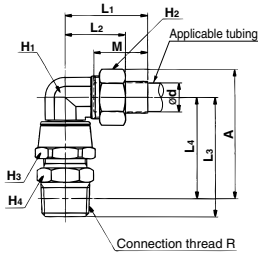


Applicable tubing size (mm)		Connection thread Rc	Model	H <sub>1</sub>	H <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	M	d	Effective area (mm <sup>2</sup> )	Weight (g)
O.D.	I.D.			(width across flats)	(width across flats)							
4	2.5	1/4	<b>10-KFF04-02</b>	17	10	33.5	26.8	15	15.5	1.5	1.6	25
6	4	1/4	<b>10-KFF06-02</b>	17	12	33.2	26.5	15	15.2	3	6	27
		3/8	<b>10-KFF06-03</b>									19
8	5	1/4	<b>10-KFF08U-02</b>	17	14	33.2	26.5	15	16.2	4	11	28
10	6.5	1/4	<b>10-KFF10U-02</b>	17	17	34.8	27.5	15	18.8	5.5	21	32
12	8	1/4	<b>10-KFF12U-02</b>	17	19	35.3	28.5	15	19.3	7	35	35

Modular F. R.  
Pressure Control Equipment  
Fittings & Tubing

Flow Control Equipment  
Pressure Switches/  
Pressure Sensors

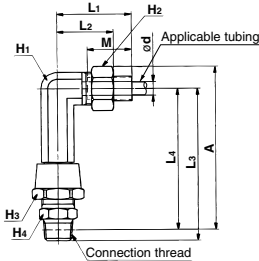
**Swivel Elbow: 10-KFV**



Applicable tubing size (mm) O.D., I.D.	Connection thread R	Model	H1 (inch)	H2 (inch)	H3 (inch)	H4 (inch)	L1	L2	L3	L4 *	M	d	A *	Effective area (mm <sup>2</sup> )	Weight (g)
4 2.5	1/8	<b>10-KFV04-01</b>	10	10	14	10	26	19.3	32.8	29.7	15.5	1.5	35.5	1.4	40
	1/4	<b>10-KFV04-02</b>				14			37.2	31.7			37.5		
6 4	1/8	<b>10-KFV06-01</b>	10	12	14	10	25.7	19	32.8	29.7	15.2	3	36.6	5	42
	1/4	<b>10-KFV06-02</b>				14			37.2	31.7			38.6		
	3/8	<b>10-KFV06-03</b>				17			37.6	32.4			39.3		
8 5	1/8	<b>10-KFV08U-01</b>	12	14	17	12	27.2	20.5	33.8	30.7	16.2	4	38.8	9.4	52
	1/4	<b>10-KFV08U-02</b>				14			38.2	32.7			40.8		
	3/8	<b>10-KFV08U-03</b>				17			38.6	33.4			41.5		
10 6.5	1/4	<b>10-KFV10U-02</b>	14	17	19	17	28.8	21.5	40.2	34.7	18.8	5.5	44.5	18	81
	3/8	<b>10-KFV10U-03</b>				22			40.6	35.4			45.2		
	1/2	<b>10-KFV10U-04</b>				22			43.8	36.5			46.3		
12 8	1/4	<b>10-KFV12U-02</b>	17	19	22	17	30.3	23.5	41.2	35.7	19.3	7	46.7	30	100
	3/8	<b>10-KFV12U-03</b>				22			41.6	36.4			47.4		
	1/2	<b>10-KFV12U-04</b>				22			44.8	37.5			48.5		

\* Reference dimensions after R thread installation.

**Swivel Extended Elbow: 10-KFW**



Applicable tubing size (mm) O.D., I.D.	Connection thread R	Model	H1 (inch)	H2 (inch)	H3 (inch)	H4 (inch)	L1	L2	L3	L4 *	M	d	A *	Effective area (mm <sup>2</sup> )	Weight (g)
4 2.5	1/8	<b>10-KFW04-01</b>	10	10	14	10	26	19.3	52.8	49.7	15.5	1.5	55.5	1.4	58
	1/4	<b>10-KFW04-02</b>				14			57.2	51.7			57.5		
6 4	1/8	<b>10-KFW06-01</b>	10	12	14	10	25.7	19	53.8	50.7	15.2	3	57.6	5	61
	1/4	<b>10-KFW06-02</b>				14			58.2	52.7			59.6		
	3/8	<b>10-KFW06-03</b>				17			58.6	53.4			60.3		
8 5	1/8	<b>10-KFW08U-01</b>	12	14	17	12	27.2	20.5	54.8	51.7	16.2	4	59.8	9.4	83
	1/4	<b>10-KFW08U-02</b>				14			59.2	53.7			61.8		
	3/8	<b>10-KFW08U-03</b>				17			59.6	54.4			62.5		
10 6.5	1/4	<b>10-KFW10U-02</b>	14	17	19	17	28.8	21.5	61.2	55.7	18.8	5.5	65.5	18	106
	3/8	<b>10-KFW10U-03</b>				22			61.6	56.4			66.2		
	1/2	<b>10-KFW10U-04</b>				22			64.8	57.5			67.3		
12 8	1/4	<b>10-KFW12U-02</b>	17	19	22	17	30.3	23.5	64.2	58.7	19.3	7	69.7	30	146
	3/8	<b>10-KFW12U-03</b>				22			64.6	59.4			70.4		
	1/2	<b>10-KFW12U-04</b>				22			67.8	60.5			71.5		

\* Reference dimensions after R thread installation.