

# Metal One-touch Fittings

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

# KQB2-F Series



## Applicable Tubing

Tubing material*1	FEP, PFA, Nylon, Soft nylon, Polyurethane, Polyolefin
Tubing O.D.	Ø 3.2, Ø 4, Ø 6, Ø 8, Ø 10, Ø 12, Ø 16

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

## Specifications

Fluid	Air, Water*1
Operating pressure range*2	-100 kPa to 1 MPa*3
Proof pressure	3.0 MPa
Ambient and fluid temperatures*4	-5 to 150°C (No freezing)*3
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 Check the operating pressure range and operating temperature range of the tubing.

\*4 It is recommended that you use the inner sleeve in the following conditions. (Except Ø 3.2)

- 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
O-ring	—	<b>M-5-F</b>	FDA compliant FKM
Bulkhead nut	Ø 3.2	<b>KQB223-P01-F</b>	C3604 (Electroless nickel plating)
	Ø 4		
	Ø 6		
	Ø 8		
	Ø 10		
	Ø 12		
	Ø 16	<b>KQB216-P01-F</b>	

## Cross Reference Table of the Inner Sleeve

Tubing O.D.	Tubing material			Applicable inner sleeve	
	TUS (Soft polyurethane)	TH/THI (FEP)	TL/TIL (Super PFA)	Part no.	Length
Ø 4	—	TH0402	—	<b>TJG-0402</b>	18
	TUS0425	TH0425	—	<b>TJG-0425</b>	18
	—	—	TL0403	<b>TJG-0403</b>	18
Ø 6	TUS0604	TH0604	TL0604	<b>TJG-0604</b>	19
	TUS0805	—	—	<b>TJG-0805</b>	20.5
Ø 8	—	TH0806	TL0806	<b>TJG-0806</b>	20.5
	TUS1065	—	—	<b>TJG-1065</b>	23
Ø 10	—	TH1075	—	<b>TJG-1075</b>	23
	—	TH1008	TL1008	<b>TJG-1008</b>	24
	TUS1208	—	—	<b>TJG-1208</b>	24
Ø 12	—	TH1209	—	<b>TJG-1209</b>	24
	—	TH1210	TL1210	<b>TJG-1210</b>	24
	—	—	—	—	—

\* Stainless steel 316 is used for the TJG series.

How to Order

**KQB2 H 04 - 02 - F**

Body type

Symbol	Model
H	Male connector, Straight union, Different diameter straight
S	Hexagon socket head male connector
L	Male elbow, Union elbow
T	Male branch tee, Union tee, Different diameter tee
E	Bulkhead union, Bulkhead connector
U	Union "Y", Different diameter union "Y"
R	Plug-in reducer
W	Extended male elbow
F	Female connector
P	Plug

Tubing size (Metric)

Symbol	Size
23	Ø 3.2
04	Ø 4
06	Ø 6
08	Ø 8
10	Ø 10
12	Ø 12
16	Ø 16

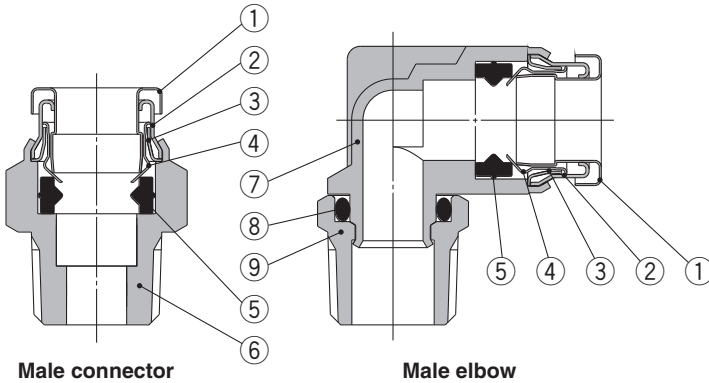
FDA compliant

Thread size, Tubing size

Symbol	Size	
M5	M5 x 0.8	Thread size
01	R1/8, Rc1/8	
02	R1/4, Rc1/4	
03	R3/8, Rc3/8	
04	R1/2, Rc1/2	Tubing size
00	Same tubing O.D.	
04	Ø 4	
06	Ø 6	
08	Ø 8	
10	Ø 10	
12	Ø 12	
16	Ø 16	

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

Construction



Component Parts

No.	Description	Material
1	Release button	Stainless steel 304
2	Guide 1	Stainless steel 304
3	Guide 2	Stainless steel 304
4	Chuck	Stainless steel 304
5	Seal	FDA compliant FKM (NSF H1 grease)
6	Male connector body	C3604 (Electroless nickel plating)
7	Male elbow body	Stainless steel 316
8	O-ring	FDA compliant FKM (NSF H1 grease)
9	Stud	C3604 (Electroless nickel plating)

EHEDG Compliant

Metric M, G KFG2H□-E

Clean Design

Metric M, G KFG2H□-C

FDA Compliant

Metric M, R, Rc KQG2-F

Inch UNF, NPT KQG2-F

Metric G KQG2-F

Metric M, R, Rc KQB2-F

Inch UNF, NPT KQB2-F

Metric G KQB2-F

Metric R, Rc KFG2-F

Inch NPT KFG2-F

Metric G KFG2-F

Precautions

# Metal One-touch Fittings **KQB2-F Series**

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

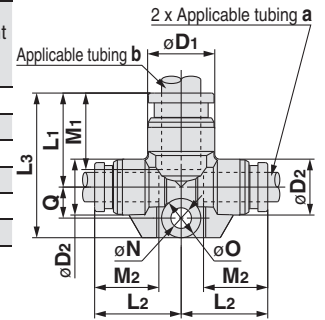
## Dimensions

### Different Diameter Tee: KQB2T



Applicable tubing O.D. [mm]		Model	Ø <sup>*1</sup> D <sub>1</sub>	Ø <sup>*1</sup> D <sub>2</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	Q	M <sub>1</sub>	M <sub>2</sub>	Ø N	Ø O	Effective area [mm <sup>2</sup> ] <sup>*2</sup>	Weight [g]
a	b													
Ø 3.2	Ø 4	KQB2T23-04-F	9.1	8.3	14.2	14.1	21.1	4.1	12.6	12	3.2	5.6	3.8	8.5
Ø 4	Ø 6	KQB2T04-06-F	11.4	9.1	15.6	15.7	22.8	4.4	13.6	12.6	3.2	5.6	7.1	11
Ø 6	Ø 8	KQB2T06-08-F	13.7	11.4	19.1	17.7	29.5	6.4	16.1	13.6	4.2	8	16.4	20
Ø 8	Ø 10	KQB2T08-10-F	16.6	13.7	21	21.2	32.1	7.1	17	16.1	4.2	8	36	29.8
Ø 10	Ø 12	KQB2T10-12-F	18.7	16.6	23.6	23.1	35.7	8.1	18.6	17	4.2	8	56	41.3
Ø 12	Ø 16	KQB2T12-16-F	24.6	18.7	26.8	26.7	39.9	9.1	20.8	18.6	4.2	8	108.5	58

\*1 For the Ø 16, this dimension refers to the O.D. of the release button.  
\*2 Value of FEP tubing

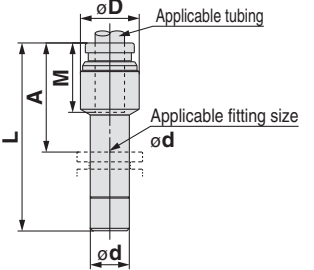


### Plug-in Reducer: KQB2R



Applicable tubing O.D. [mm]		Applicable fitting size Ø d	Model	Ø D	L	A	M	Effective area [mm <sup>2</sup> ] <sup>*1</sup>	Weight [g]
a	b								
Ø 3.2	Ø 4	KQB2R23-04-F	9	32.9	20.3	12	3.4	4.9	
Ø 4	Ø 6	KQB2R04-06-F	9	34.4	20.8	12.6	5.6	7	
Ø 6	Ø 8	KQB2R06-08-F	12	38.4	22.3	13.6	13.1	12.7	
Ø 8	Ø 10	KQB2R08-10-F	14	41.9	24.9	16.1	26.1	19.2	
Ø 10	Ø 12	KQB2R10-12-F	17	44.8	26.2	17	41.5	27.8	
Ø 12	Ø 16	KQB2R12-16-F	19	42.9	22.1	18.6	58.3	37.2	

\*1 Value of FEP tubing

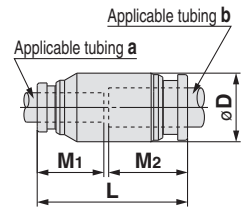


### Different Diameter Straight: KQB2H



Applicable tubing O.D. [mm]		Model	Ø D <sup>*1</sup>	L	M <sub>1</sub>	M <sub>2</sub>	Effective area [mm <sup>2</sup> ] <sup>*2</sup>	Weight [g]
a	b							
Ø 3.2	Ø 4	KQB2H23-04-F	9	25.6	12	12.6	3.4	6.8
Ø 4	Ø 6	KQB2H04-06-F	12	27.2	12.6	13.6	5.6	12.1
Ø 6	Ø 8	KQB2H06-08-F	14	30.7	13.6	16.1	13.1	17.1
Ø 8	Ø 10	KQB2H08-10-F	17	34.1	16.1	17	26.1	27.2
Ø 10	Ø 12	KQB2H10-12-F	19	36.6	17	18.6	41.5	34.8
Ø 12	Ø 16	KQB2H12-16-F	24.6	40.4	18.6	20.8	58.3	57.3

\*1 For the Ø 16, this dimension refers to the O.D. of the release button.  
\*2 Value of FEP tubing

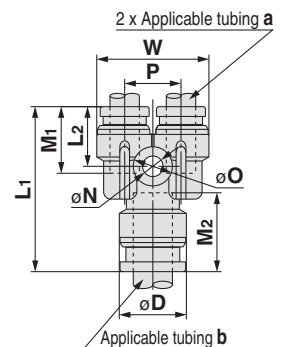


### Different Diameter Union "Y": KQB2U



Applicable tubing O.D. [mm]		Model	Ø <sup>*1</sup> D	L <sub>1</sub>	L <sub>2</sub>	P	W	M <sub>1</sub>	M <sub>2</sub>	Ø N	Ø O	Effective area [mm <sup>2</sup> ] <sup>*2</sup>	Weight [g]
a	b												
Ø 3.2	Ø 4	KQB2U23-04-F	9.1	27	10.8	8.1	16.4	12	12.6	3.2	5.6	3.2	8.5
Ø 4	Ø 6	KQB2U04-06-F	11.4	29.3	11.2	9.1	18.2	12.6	13.6	3.2	5.6	4.2	11.9
Ø 6	Ø 8	KQB2U06-08-F	13.7	33.7	12.2	11.5	22.9	13.6	16.1	4.2	8	13.4	19.3
Ø 8	Ø 10	KQB2U08-10-F	16.6	38.3	13.8	14.6	28.3	16.1	17	4.2	8	25.6	32
Ø 10	Ø 12	KQB2U10-12-F	18.7	43	14	17.6	34.2	17	18.6	4.2	8	40	47.6
Ø 12	Ø 16	KQB2U12-16-F	24.6	47.4	15.6	19.8	38.5	18.6	20.8	4.2	8	57.4	67.6

\*1 For the Ø 16, this dimension refers to the O.D. of the release button.  
\*2 Value of FEP tubing



EHEDG  
Compliant

Metric M, G  
KFG2H□-E

Clean  
Design

Metric M, G  
KFG2H□-C

FDA  
Compliant

Metric M, R, Rc  
KQG2-F

Inch UNF, NPT  
KQG2-F

Metric G  
KQG2-F

Metric M, R, Rc  
KQB2-F

Inch UNF, NPT  
KQB2-F

Metric G  
KQB2-F

Metric R, Rc  
KFG2-F

Inch NPT  
KFG2-F

Metric G  
KFG2-F

Precautions