

# 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

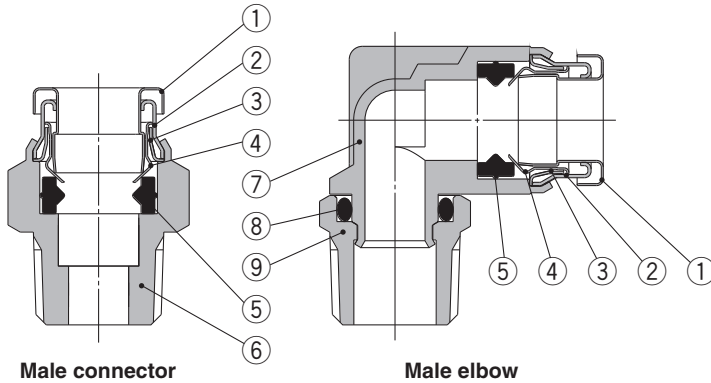
FDA compliant

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

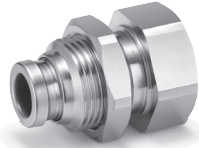
Precautions

# KQB2-F Series

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

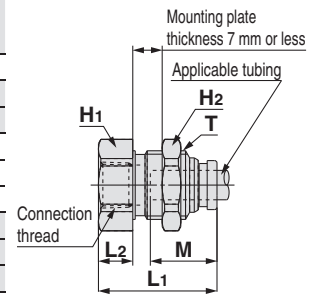
## Dimensions

### Bulkhead Connector: KQB2E



Applicable tubing O.D. (mm)	Connection thread Rc	Model	T (M)	Width across flats		L1	L2	Mounting hole	M	Effective area <sup>*1</sup> [mm <sup>2</sup> ]	Weight [g]
				H1	H2						
Ø 3.2	1/4	KQB2E23-02-F	M10 x 1	17	12	31	14.8	11	12	3.4	27.5
Ø 4	1/8	KQB2E04-01-F	M10 x 1	14	12	25.8	9.7	11	12.6	5.6	16.9
	1/4	KQB2E04-02-F		17		30.9	14.8				27.1
Ø 6	1/8	KQB2E06-01-F	M14 x 1	17	17	24.2	6.1	15	13.6	13.1	25
	1/4	KQB2E06-02-F				31.6	13.5				33.2
	3/8	KQB2E06-03-F				33	14.9				34.8
Ø 8	1/8	KQB2E08-01-F	M15 x 1	17	19	26.3	6.9	16	16.1	26.1	28.7
	1/4	KQB2E08-02-F				32.4	13				34.2
	3/8	KQB2E08-03-F				34	14.6				35.9
Ø 10	1/4	KQB2E10-02-F	M18 x 1	19	21	31.6	11.6	19	17	41.5	44
	3/8	KQB2E10-03-F				33.6	13.6				40.2
Ø 12	3/8	KQB2E12-03-F	M20 x 1	21	24	34	12.8	21	18.6	58.3	52
	1/2	KQB2E12-04-F				39.6	18.4				62.5
Ø 16	3/8	KQB2E16-03-F	M27 x 1	29	30	35.3	11.2	28	20.8	96	111
	1/2	KQB2E16-04-F				40.6	16.5				113

\*1 Value of FEP tubing  
Value of nylon tubing for Ø 16 only

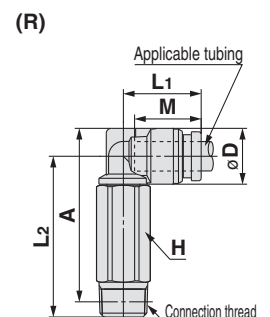
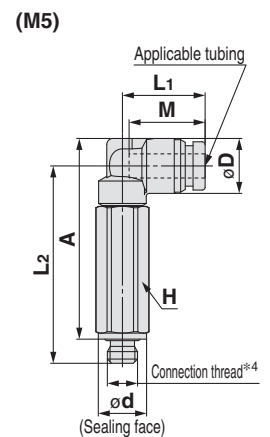


### Extended Male Elbow: KQB2W



Applicable tubing O.D. (mm)	Connection thread R, M	Model	H (Width across flats)	Ø D <sup>*1</sup>	Ø d	L1	L2	A <sup>*2</sup>	M	Effective area <sup>*3</sup> [mm <sup>2</sup> ]	Weight [g]
Ø 3.2	1/8	KQB2W23-01-F	10	13.6	31.3	33.6	15.3				
	1/4	KQB2W23-02-F	14	35.1	35.8	34.7					
Ø 4	M5 x 0.8	KQB2W04-M5-F	8	9.1	8	13.7	32.7	33.3	12.6	3	14.3
	1/8	KQB2W04-01-F	10			14.4	31.7	34.4			16.2
	1/4	KQB2W04-02-F	14			35.5	36.6	35.6			
Ø 6	M5 x 0.8	KQB2W06-M5-F	8	11.4	8	14.7	33.8	35.5	13.6	3	16.2
	1/8	KQB2W06-01-F	10			15.9	32.8	36.7			17.8
	1/4	KQB2W06-02-F	14			36.6	38.9	37.2			
	3/8	KQB2W06-03-F	17			38	39.9	60.3			
Ø 8	1/8	KQB2W08-01-F	12	13.7	8	18.6	37	42	16.1	20.5	28.9
	1/4	KQB2W08-02-F	14			19.1	40.2	43.6			39.2
	3/8	KQB2W08-03-F	17			41.6	44.6	63.7			
Ø 10	1/4	KQB2W10-02-F	14	16.6	8	18.6	46.6	51.5	17	33.5	42.1
	3/8	KQB2W10-03-F	17			21	45.9	50.4			64.5
	1/2	KQB2W10-04-F	22			50.1	53.3	123			
Ø 12	1/4	KQB2W12-02-F	14	18.7	8	22.6	47.7	53.6	18.6	47.7	46
	3/8	KQB2W12-03-F	17			23.6	49	54.5			58.2
	1/2	KQB2W12-04-F	22			53.2	57.4	118			
Ø 16	3/8	KQB2W16-03-F	19	24.6	8	26.3	57.6	65.4	20.8	71	89.6
	1/2	KQB2W16-04-F	22			27.3	61.4	67.9			100

\*1 For the Ø 16, this dimension refers to the O.D. of the release button.  
\*2 Reference dimensions after installation for R thread  
\*3 Value of FEP tubing  
Value of nylon tubing for Ø 16 only  
\*4 In the case of M5, the screw length ( $\text{Ø D}/2 + L2 - A$ ) is longer than that of the KQB2 series.



# Metal One-touch Fittings

Applicable Tubing: Metric Size, Connection Thread: G\*1

# KQB2-F Series

\*1 ISO 16030 compliant



## Applicable Tubing

Tubing material*1	FEP, PFA, Nylon, Soft nylon, Polyurethane, Polyolefin
Tubing O.D.	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	O-ring seal

\*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.

- 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
Bulkhead nut	Ø 4	KQB223-P01-F	C3604 (Electroless nickel plating)
	Ø 6	KQB206-P01-F	
	Ø 8	KQB208-P01-F	
	Ø 10	KQB210-P01-F	
	Ø 12	KQB212-P01-F	
	Ø 16	KQB216-P01-F	

Description	Thread size	Part no.	Material
G thread O-ring	G1/8	KQB2-G01-F	FDA compliant FKM
	G1/4	KQB2-G02-F	
	G3/8	KQB2-G03-F	
	G1/2	KQB2-G04-F	

## 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
Ø 4	—	TH0402	—	TJG-0402	18
	TUS0425	TH0425	—	TJG-0425	18
	—	—	TL0403	TJG-0403	18
Ø 6	TUS0604	TH0604	TL0604	TJG-0604	19
	TUS0805	—	—	TJG-0805	20.5
Ø 8	—	TH0806	TL0806	TJG-0806	20.5
	TUS1065	—	—	TJG-1065	23
Ø 10	—	TH1075	—	TJG-1075	23
	—	TH1008	TL1008	TJG-1008	23
	TUS1208	—	—	TJG-1008	24
Ø 12	—	TH1209	—	TJG-1209	24
	—	TH1210	TL1210	TJG-1210	24

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

EHEGDG 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

# KQB2-F Series

Applicable Tubing: Metric Size, Connection Thread: G

## How to Order

**KQB2 H 04 - G 02 - F**

• Body type

Symbol	Model
<b>H</b>	Male connector
<b>S</b>	Hexagon socket head male connector
<b>L</b>	Male elbow
<b>T</b>	Male branch tee
<b>E</b>	Bulkhead connector
<b>W</b>	Extended male elbow
<b>F</b>	Female connector

• FDA compliant

• Thread size

Symbol	Size
<b>01</b>	G1/8
<b>02</b>	G1/4
<b>03</b>	G3/8
<b>04</b>	G1/2

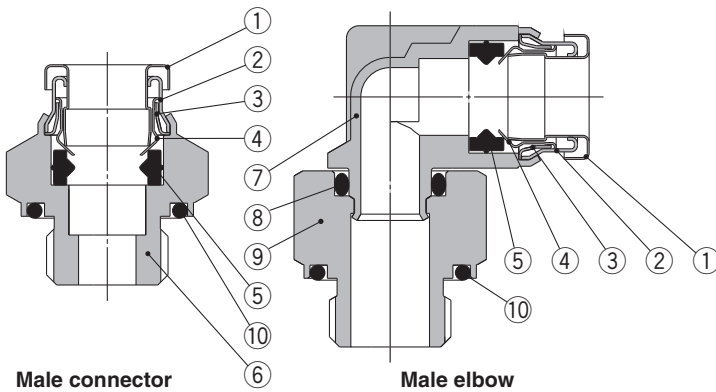
• Tubing size (Metric)

Symbol	Size
<b>23</b>	Ø 3.2
<b>04</b>	Ø 4
<b>06</b>	Ø 6
<b>08</b>	Ø 8
<b>10</b>	Ø 10
<b>12</b>	Ø 12
<b>16</b>	Ø 16

• Thread type

Symbol	Type
<b>G</b>	G

## Construction

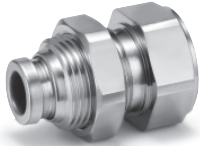


### Component Parts

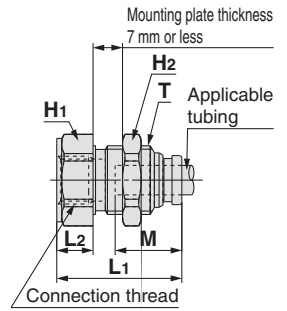
No.	Description	Material
1	<b>Release button</b>	Stainless steel 304
2	<b>Guide 1</b>	Stainless steel 304
3	<b>Guide 2</b>	Stainless steel 304
4	<b>Chuck</b>	Stainless steel 304
5	<b>Seal</b>	FDA compliant FKM (NSF H1 grease)
6	<b>Male connector body</b>	C3604 (Electroless nickel plating)
7	<b>Male elbow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

**Dimensions**

**Bulkhead Connector: KQB2E**



Applicable tubing O.D. [mm]	Connection thread G	Model	T (M)	Width across flats		L1	L2	Mounting hole	M	Effective area [mm <sup>2</sup> ] <sup>*1</sup>	Weight [g]
				H1	H2						
Ø 4	1/8	KQB2E04-G01-F	M10 x 1	17	12	27.1	11	11	12.6	5.6	25.1
	1/4	KQB2E04-G02-F		19		32.7	16.6				36.9
Ø 6	1/8	KQB2E06-G01-F	M14 x 1	17		25.5	7.4	15	13.6	13.1	26.8
	3/8	KQB2E06-G03-F		19	17	33.5	15.4				42.7
Ø 8	1/8	KQB2E08-G01-F	M15 x 1	24		35	16.9	16	16.1	26.1	62
	1/4	KQB2E08-G02-F		17		27.6	8.2				30.4
	3/8	KQB2E08-G03-F		19	19	34.5	15.1				43.9
Ø 10	1/4	KQB2E10-G02-F	M18 x 1	24		36	16.6	19	17	41.5	66.2
	3/8	KQB2E10-G03-F		19	21	33.5	13.5				46.8
	1/2	KQB2E10-G04-F		24		35.6	15.6				65.4
Ø 12	3/8	KQB2E12-G03-F	M20 x 1	24	24	35.9	14.7	21	18.6	58.3	119.2
	1/2	KQB2E12-G04-F		27		42.2	21				91.9
Ø 16	3/8	KQB2E16-G03-F	M27 x 1	29	30	37.2	13.1	28	20.8	96	118.2
	1/2	KQB2E16-G04-F		43.1	19	113	128.7				

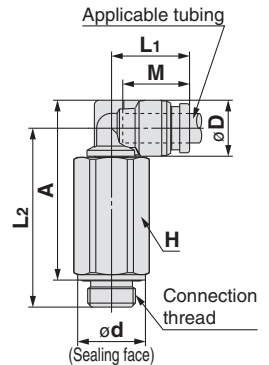


\*1 Value of FEP tubing  
Value of nylon tubing for Ø 16 only

**Extended Male Elbow: KQB2W**

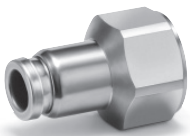


Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	Ø D <sup>*1</sup>	Ø d	L1	L2	A	M	Effective area [mm <sup>2</sup> ] <sup>*2</sup>	Weight [g]			
												Ø 4	1/8	KQB2W04-G01-F
	1/4	KQB2W04-G02-F	19	17.8	38.7	36.7	70.6							
Ø 6	1/8	KQB2W06-G01-F	14	11.4	13.8	15.9	36.4	36.6	13.6	10.9	36.1			
		1/4	KQB2W06-G02-F								19	17.8	39.8	39
Ø 8	3/8	KQB2W06-G03-F	22		21.8		42.3	40.5			106.7			
	1/8	KQB2W08-G01-F	14	13.7	13.8	18.6	40	41.3	16.1	20.5	41.3			
	1/4	KQB2W08-G02-F	19								17.8	43.4	43.7	76.7
3/8	KQB2W08-G03-F	22	21.8								45.9	45.2	112.9	
Ø 10	1/4	KQB2W10-G02-F	19	16.6	17.8	21	49.8	51.6	17	33.5	84.8			
	3/8	KQB2W10-G03-F	22								21.8	50.2	51	116.6
	1/2	KQB2W10-G04-F	27								26.5	54.2	53.5	196.6
Ø 12	1/4	KQB2W12-G02-F	19	18.7	17.8	22.6	50.9	53.7	18.6	47.7	88.7			
	3/8	KQB2W12-G03-F	22								21.8	53.3	55.1	111.6
	1/2	KQB2W12-G04-F	27								26.5	57.3	57.6	193.8
Ø 16	3/8	KQB2W16-G03-F	22	24.6	21.8	26.3	62	66.1	20.8	71	133.6			
	1/2	KQB2W16-G04-F	27								26.5	27.3	66	68.6

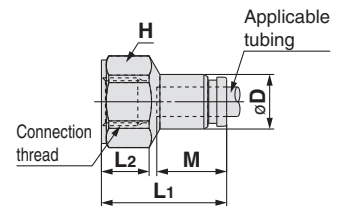


\*1 For the Ø 16, this dimension refers to the O.D. of the release button.  
\*2 Value of FEP tubing  
Value of nylon tubing for Ø 16 only

**Female Connector: KQB2F**



Applicable tubing O.D. [mm]	Connection thread G	Model	H1 (Width across flats)	Ø D <sup>*1</sup>	L1	L2	M	Effective area [mm <sup>2</sup> ] <sup>*2</sup>	Weight [g]			
										Ø 4	1/8	KQB2F04-G01-F
	1/4	KQB2F04-G02-F	19	30.6	14.5	32						
Ø 6	1/8	KQB2F06-G01-F	17	11.1	25.5	9.7	13.6	13.1	22.6	22.6		
		1/4	KQB2F06-G02-F							19	31.1	14.7
Ø 8	3/8	KQB2F06-G03-F	24		32.6	14.6				51.1		
	1/8	KQB2F08-G01-F	17	13.4	27.6	10	16.1	26.1	58.3	25.1		
	1/4	KQB2F08-G02-F	19							33.2	14.9	36.3
3/8	KQB2F08-G03-F	24	34.6							14.7	53.8	
Ø 10	1/4	KQB2F10-G02-F	19	16.4	33.5	15.2	17	41.5	58.3	39.9		
	3/8	KQB2F10-G03-F	24							34.9	15	57.7
	1/4	KQB2F12-G02-F	19							34.5	15.2	41.8
Ø 12	3/8	KQB2F12-G03-F	24	18.5	35.9	15	18.6	81	113	59.7		
	1/2	KQB2F12-G04-F	27							41.8	19.9	81.6
	3/8	KQB2F16-G03-F	24							24.6	37.2	15.4
1/2	KQB2F16-G04-F	27	43.1	20.4	89.1							



\*1 For the Ø 10, Ø 12, and Ø 16, this dimension refers to the O.D. of the release button.  
\*2 Value of FEP tubing  
Value of nylon tubing for Ø 16 only

EHEHG  
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