

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	—	M-5-F	FDA compliant FKM
Bulkhead nut	Ø 3.2 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	

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	—	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	24
	TUS1208	—	—	TJG-1208	24
Ø 12	—	TH1209	—	TJG-1209	24
	—	TH1210	TL1210	TJG-1210	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

FDA compliant

Thread size, Tubing size

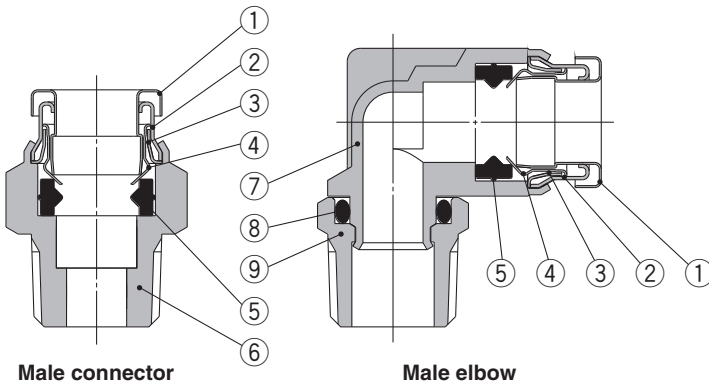
Symbol	Size	
M5	M5 x 0.8	Thread size
01	R1/8, Rc1/8	
02	R1/4, Rc1/4	
03	R3/8, Rc3/8	
04	R1/2, Rc1/2	Tubing size
00	Same tubing O.D.	
04	Ø 4	
06	Ø 6	
08	Ø 8	
10	Ø 10	
12	Ø 12	
16	Ø 16	

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

* 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

Union Elbow: KQB2L

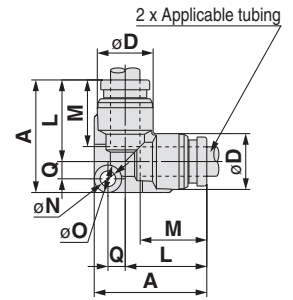


Applicable tubing O.D. [mm]	Model	Ø D ^{*1}	L	A	Q	M	Ø N	Ø O	Effective area [mm ²] ^{*2}	Weight [g]
Ø 3.2	KQB2L23-00-F	8.3	13.6	19.3	2.9	12	3.2	5.6	3	6.3
Ø 4	KQB2L04-00-F	9.1	14.6	20.5	3.1	12.6	3.2	5.6	4.2	7.4
Ø 6	KQB2L06-00-F	11.4	16.6	23	3.6	13.6	3.2	5.6	11.4	11
Ø 8	KQB2L08-00-F	13.7	20.1	29.1	5	16.1	4.2	8	21.6	20.2
Ø 10	KQB2L10-00-F	16.6	22	31.7	5.7	17	4.2	8	35.2	29.6
Ø 12	KQB2L12-00-F	18.7	24.6	35	6.4	18.6	4.2	8	50.2	37.1
Ø 16	KQB2L16-00-F	24.6	28.8	40.5	7.7	20.8	4.2	8	100	59.7

*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



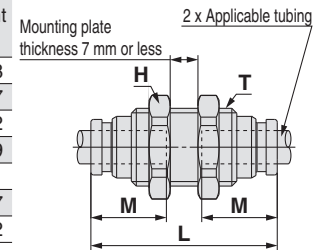
Bulkhead Union: KQB2E



Applicable tubing O.D. [mm]	Model	T (M)	H (Width across flats)	L	Mounting hole	M	Effective area [mm ²] ^{*1}	Weight [g]
Ø 3.2	KQB2E23-00-F	M10 x 1	12	32.2	11	12	3.4	14.8
Ø 4	KQB2E04-00-F	M10 x 1	12	32.4	11	12.6	5.6	14.7
Ø 6	KQB2E06-00-F	M14 x 1	17	35.4	15	13.6	13.1	29.2
Ø 8	KQB2E08-00-F	M15 x 1	19	38.8	16	16.1	26.1	34.9
Ø 10	KQB2E10-00-F	M18 x 1	21	40	19	17	41.5	47.1
Ø 12	KQB2E12-00-F	M20 x 1	24	42.4	21	18.6	58.3	58.7
Ø 16	KQB2E16-00-F	M27 x 1	30	46.8	28	20.8	113	107.2

*1 Value of FEP tubing

Value of nylon tubing for Ø 16 only



Union Tee: KQB2T

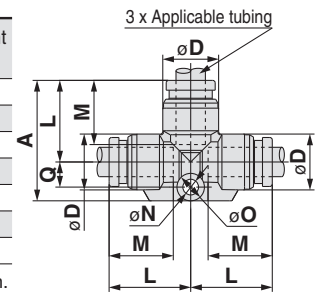


Applicable tubing O.D. [mm]	Model	Ø D ^{*1}	L	A	Q	M	Ø N	Ø O	Effective area [mm ²] ^{*2}	Weight [g]
Ø 3.2	KQB2T23-00-F	8.3	13.6	20.5	4.1	12	3.2	5.6	3.4	7.9
Ø 4	KQB2T04-00-F	9.1	14.6	21.8	4.4	12.6	3.2	5.6	6.4	9.5
Ø 6	KQB2T06-00-F	11.4	16.6	24.6	5.2	13.6	3.2	5.6	13.4	14.2
Ø 8	KQB2T08-00-F	13.7	20.1	31.1	7	16.1	4.2	8	25.6	24.4
Ø 10	KQB2T10-00-F	16.6	22	34	8	17	4.2	8	40	36.8
Ø 12	KQB2T12-00-F	18.7	24.6	37.7	9.1	18.6	4.2	8	57.4	47
Ø 16	KQB2T16-00-F	24.6	28.8	43.4	10.6	20.8	4.2	8	100	75.5

*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



Union "Y": KQB2U

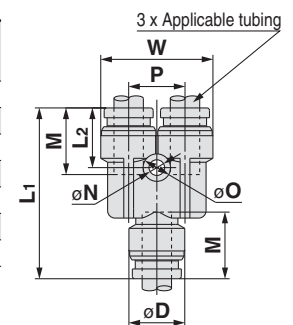


Applicable tubing O.D. [mm]	Model	Ø D ^{*1}	W	L ₁	L ₂	P	M	Ø N	Ø O	Effective area [mm ²] ^{*2}	Weight [g]
Ø 3.2	KQB2U23-00-F	8.3	16.4	29	11	8.1	12	3.2	5.6	3.4	9.2
Ø 4	KQB2U04-00-F	9.1	18.2	30.4	11.3	9.1	12.6	3.2	5.6	4.2	11.1
Ø 6	KQB2U06-00-F	11.4	22.9	34.9	12.2	11.5	13.6	3.2	5.6	13.4	18.8
Ø 8	KQB2U08-00-F	13.7	28.3	40.1	14.1	14.6	16.1	4.2	8	25.6	29.7
Ø 10	KQB2U10-00-F	16.6	34.2	44	14.4	17.6	17	4.2	8	40	47.4
Ø 12	KQB2U12-00-F	18.7	38.5	48.4	15.8	19.8	18.6	4.2	8	57.4	62.1
Ø 16	KQB2U16-00-F	24.6	49.3	56.6	17.3	26	20.8	4.2	8	113	110.2

*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



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

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

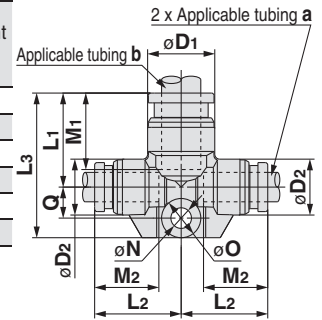
Dimensions

Different Diameter Tee: KQB2T



Applicable tubing O.D. [mm]		Model	Ø ^{*1} D ₁	Ø ^{*1} D ₂	L ₁	L ₂	L ₃	Q	M ₁	M ₂	Ø N	Ø O	Effective area [mm ²] ^{*2}	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

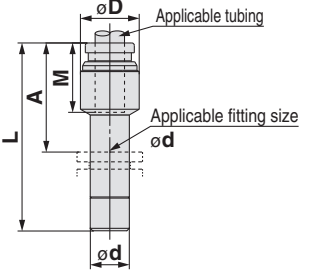


Plug-in Reducer: KQB2R



Applicable tubing O.D. [mm]		Applicable fitting size Ø d	Model	Ø D	L	A	M	Effective area [mm ²] ^{*1}	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

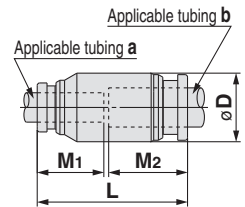


Different Diameter Straight: KQB2H



Applicable tubing O.D. [mm]		Model	Ø D ^{*1}	L	M ₁	M ₂	Effective area [mm ²] ^{*2}	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

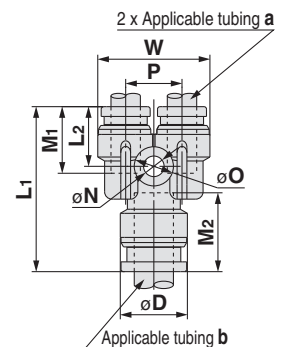


Different Diameter Union "Y": KQB2U



Applicable tubing O.D. [mm]		Model	Ø ^{*1} D	L ₁	L ₂	P	W	M ₁	M ₂	Ø N	Ø O	Effective area [mm ²] ^{*2}	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