

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	KQB223-P01-F	C3604 (Electroless nickel plating)	
	Ø 4			
	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

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

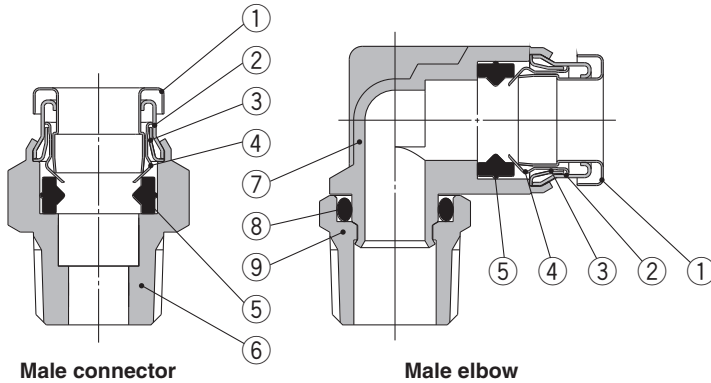
FDA compliant

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

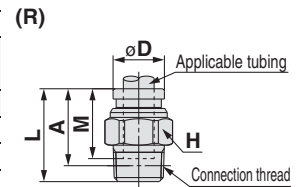
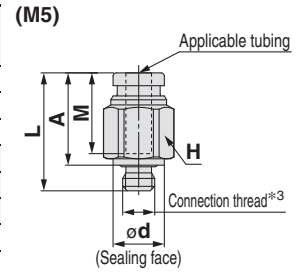
Dimensions

Male Connector: KQB2H



Applicable tubing O.D. [mm]	Connection thread R, M	Model	H (Width across flats)	Ø D	Ø d	L	A*1	M	Effective area [mm ²]*2	Weight [g]	
Ø 3.2	M5 x 0.8	KQB2H23-M5-F	8	—	—	17.8	13.8	12	3	3.7	
	1/8	KQB2H23-01-F	10			15.4	13.6		3.4	6	
	1/4	KQB2H23-02-F	14			21	17.6		17.8		
Ø 4	M5 x 0.8	KQB2H04-M5-F	10	—	—	18.4	14.4	12.6	4	5.7	
	1/8	KQB2H04-01-F	10			15.3	13.5		5.6	5.6	
	1/4	KQB2H04-02-F	14			20.9	17.5		17.2		
Ø 6	M5 x 0.8	KQB2H06-M5-F	12	—	—	19.6	15.6	13.6	4	7.8	
	1/8	KQB2H06-01-F	12			18.1	16.3		7.3	7.3	
	1/4	KQB2H06-02-F	14			20.8	17.4		15.2	15.2	
	3/8	KQB2H06-03-F	17			23	19.2		28.8	28.8	
Ø 8	1/8	KQB2H08-01-F	14	—	—	24.5	22.7	16.1	26.1	13.5	
	1/4	KQB2H08-02-F	14			22.3	18.9			26	26
	3/8	KQB2H08-03-F	17			23.7	19.9			26	26
Ø 10	1/8	KQB2H10-01-F	17	—	—	25.5	23.7	17	26.1	19.8	
	1/4	KQB2H10-02-F	17			27.9	24.5			22.7	22.7
	3/8	KQB2H10-03-F	17			23	19.2			41.5	21.6
Ø 12	1/2	KQB2H10-04-F	22	—	—	28.6	23.5	18.6	58.3	53.9	
	1/4	KQB2H12-02-F	19			30.5	27.1			28.8	28.8
	3/8	KQB2H12-03-F	19			24.7	20.9			21.5	21.5
Ø 16	1/2	KQB2H12-04-F	22	—	—	28.7	23.6	20.8	81	47	
	3/8	KQB2H16-03-F	24			24.6	—			33.6	29.8
	1/2	KQB2H16-04-F	24	24.6	—	29.5	24.4	113	113	39.2	

*1 Reference dimensions after installation for R thread
 *2 Value of FEP tubing
 Value of nylon tubing for Ø 16 only
 *3 In the case of M5, the screw length (L - A) is longer than that of the KQB2 series.

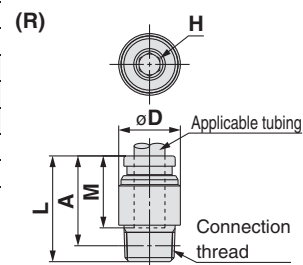
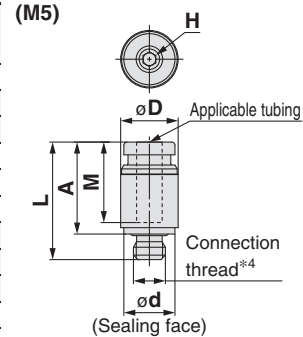


Hexagon Socket Head Male Connector: KQB2S



Applicable tubing O.D. [mm]	Connection thread R, M	Model	H (Width across flats)	Ø D*1	Ø d	L	A*2	M	Effective area [mm ²]*3	Weight [g]	
Ø 3.2	M5 x 0.8	KQB2S23-M5-F	2	9	8	17.8	13.8	12	3	4.3	
Ø 4	M5 x 0.8	KQB2S04-M5-F	2	9	8	18.4	14.4	12.6	4	4.2	
	1/8	KQB2S04-01-F	3	10	—	20.4	18.6		4.1	7.9	
Ø 6	M5 x 0.8	KQB2S06-M5-F	2	12	8	20.1	16.1	13.6	4	7.7	
	1/8	KQB2S06-01-F	4			20.6	17.2		10	9.1	
	1/4	KQB2S06-02-F	4			20.6	17.2		10.7	14.7	
Ø 8	1/8	KQB2S08-01-F	5	14	—	24.7	22.9	16.1	17.2	13	
	1/4	KQB2S08-02-F	6			22.9	19.5		23.3	13.5	
	3/8	KQB2S08-03-F	6			23.1	19.3		24	24	
Ø 10	1/8	KQB2S10-01-F	5	17	—	25.6	23.8	17	17.2	18.6	
	1/4	KQB2S10-02-F	8			27.5	24.1		20	20	
	3/8	KQB2S10-03-F	8			24	20.2		39	22	
Ø 12	1/2	KQB2S10-04-F	22	22	—	24	18.9	18.6	39	39.2	
	1/4	KQB2S12-02-F	8			19	30.6		27.2	46	26
	3/8	KQB2S12-03-F	10			24.9	21.1		60	20.2	
Ø 16	1/2	KQB2S12-04-F	10	24.6	—	24.9	19.8	20.8	60	35.3	
	3/8	KQB2S16-03-F	10			33.2	29.4		81	43.6	
	1/2	KQB2S16-04-F	12	24.6	—	29.4	24.3	113	113	40.3	

*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 (L - A) is longer than that of the KQB2 series.

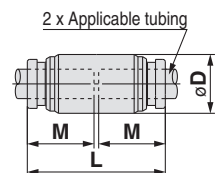


Straight Union: KQB2H



Applicable tubing O.D. [mm]	Model	Ø D*1	L	M	Effective area [mm ²]*2	Weight [g]
Ø 3.2	KQB2H23-00-F	9	25	12	3.4	6.8
Ø 4	KQB2H04-00-F	9	26.2	12.6	5.6	6.8
Ø 6	KQB2H06-00-F	12	28.2	13.6	13.1	12
Ø 8	KQB2H08-00-F	14	33.2	16.1	26.1	17.4
Ø 10	KQB2H10-00-F	17	35	17	41.5	27.2
Ø 12	KQB2H12-00-F	19	38.2	18.6	58.3	33.7
Ø 16	KQB2H16-00-F	24.6	42.6	20.8	113	56.1

*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

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.

EDEDG 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
H	Male connector
S	Hexagon socket head male connector
L	Male elbow
T	Male branch tee
E	Bulkhead connector
W	Extended male elbow
F	Female connector

• **FDA compliant**

• **Thread size**

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

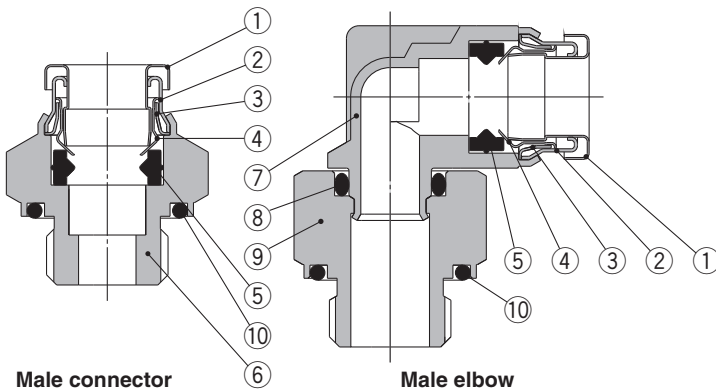
• **Tubing size (Metric)**

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

• **Thread type**

Symbol	Type
G	G

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)
10	G thread O-ring	FDA compliant FKM

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

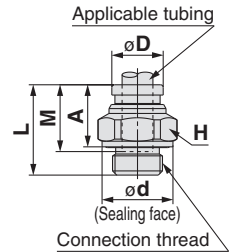
Applicable Tubing: Metric Size, Connection Thread: G

Dimensions

Male Connector: KQB2H



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	∅ D	∅ d	L	A	M	Effective area [mm ²] ^{*1}	Weight [g]
∅ 4	1/8	KQB2H04-G01-F	14	—	13.8	16.6	11.1	12.6	5.6	9.2
	1/4	KQB2H04-G02-F	19		17.8	20.6	14.1			23.6
∅ 6	1/8	KQB2H06-G01-F	14	—	13.8	17.6	12.1	13.6	13.1	8.9
	1/4	KQB2H06-G02-F	19		17.8	20.5	14			21.6
	3/8	KQB2H06-G03-F	22		21.8	23.4	15.9			38.3
∅ 8	1/8	KQB2H08-G01-F	14	—	13.8	23.9	18.4	16.1	26.1	13.2
	1/4	KQB2H08-G02-F	19		17.8	21.2	14.7			19.1
	3/8	KQB2H08-G03-F	22		21.8	24	16.5			35.2
∅ 10	1/8	KQB2H10-G01-F	17	—	13.8	25.1	19.6	17	26.1	19.9
	1/4	KQB2H10-G02-F	19		17.8	24.9	18.4			24.8
	3/8	KQB2H10-G03-F	22		21.8	23.3	15.8	41.5	30.9	
	1/2	KQB2H10-G04-F	27		26.5	27.7	18.7	64.4		
∅ 12	1/4	KQB2H12-G02-F	19	—	17.8	27.7	21.2	18.6	58.3	26.3
	3/8	KQB2H12-G03-F	22		21.8	23.5	16			25.5
	1/2	KQB2H12-G04-F	27		26.5	27.9	18.9			58
∅ 16	3/8	KQB2H16-G03-F	24	24.6	21.8	31.3	23.8	20.8	81	44.5
	1/2	KQB2H16-G04-F	27		26.5	27.3	18.3			113

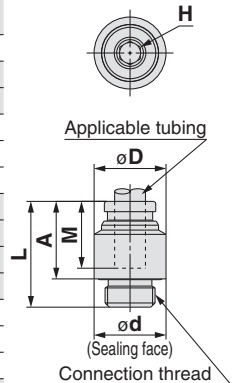


*1 Value of FEP tubing
Value of nylon tubing for ∅ 16 only

Hexagon Socket Head Male Connector: KQB2S



Applicable tubing O.D. [mm]	Connection thread G	Model	H (Width across flats)	∅ D	∅ d	L	A	M	Effective area [mm ²] ^{*1}	Weight [g]
∅ 4	1/8	KQB2S04-G01-F	3	14	14	20.4	14.9	12.6	4.1	13.5
∅ 6	1/8	KQB2S06-G01-F	4	14	14	20.6	15.1	13.6	10	12.1
	1/4	KQB2S06-G02-F		18	18		14.1		10.7	19.9
∅ 8	1/8	KQB2S08-G01-F	5	14	14	23.9	18.4	16.1	17.2	12.5
	1/4	KQB2S08-G02-F	6	18	18	22.9	16.4		20.1	
	3/8	KQB2S08-G03-F	22	22	23.1	15.6	23.3		31.1	
∅ 10	1/8	KQB2S10-G01-F	5	17	14	25.1	19.6	17	17.2	18.5
	1/4	KQB2S10-G02-F	8	18	18	24.9	18.4		20.4	
	3/8	KQB2S10-G03-F	22	22	24	16.5	39	31.2		
	1/2	KQB2S10-G04-F	27	26.5	15	45.3				
∅ 12	1/4	KQB2S12-G02-F	8	19	18	27.7	21.2	18.6	46	23.6
	3/8	KQB2S12-G03-F	10	22	22	24.9	17.4		60	27.4
	1/2	KQB2S12-G04-F	27	26.5	15.9	42.6				
∅ 16	3/8	KQB2S16-G03-F	10	24.6	22	31.3	23.8	20.8	81	41
	1/2	KQB2S16-G04-F	12	27	26.5	27.8	18.8		113	42.9



*1 Value of FEP tubing
Value of nylon tubing for ∅ 16 only

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