Metal One-touch Fittings

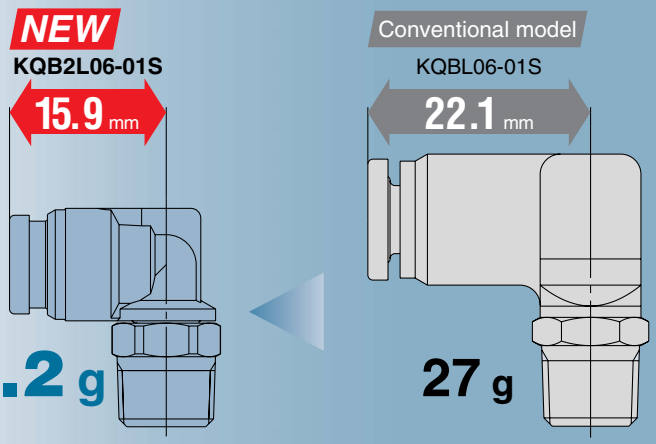
New

RoHS

Compact and Light

Dimensions Approx. **30%** Down
* Comparison with KQBL06-01S

Weight Approx. **62%** Down
* Comparison with KQBL06-01S



- More configuration variations
  17 models ◀ **9** models

Fluid temperature **−5 to 150°C**

Connection thread M, R, Rc, UNF, NPT, G

Applicable tube material FEP • PFA • Nylon • Soft nylon
Polyurethane • Polyolefin

- Electroless nickel plated (Brass parts)
- Grease-free

Variations

Added size

Connection thread	Applicable tube O.D. (mm) ø3.2	ø4	ø6	ø8	ø10	ø12	ø16
M5	●	◆	●	●	●	◆	
R1/8	●	◆	●	●	●	◆	
G1/8		●	●	●	●	●	
R1/4	●	◆	●	●	●	◆	
G1/4		●	●	●	●	●	
R3/8			◆	●	●	◆	●
G3/8			●	●	●	●	●
R1/2					●	●	●
G1/2					●	●	●
No thread	●	◆	●	●	●	◆	●

Connection thread	Applicable tube O.D. (inch) ø1/8"	ø5/32"	ø1/4"	ø5/16"	ø3/8"	ø1/2"
10-32 UNF	●	●	●			
NPT1/8	●	●	●	●	●	
NPT1/4	●	●	●	●	●	●
NPT3/8			●	●	●	●
NPT1/2					●	●
No thread	●	●	●	●	●	●

Series KQB2

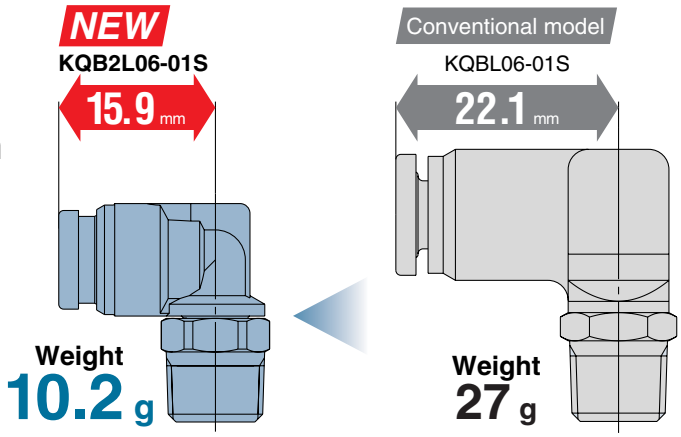
SMC

CAT.ES50-34A

Compact and light

Dimensions: Approx. 30% down
* Comparison with KQBL06-01S

Weight: Approx. 62% down
* Comparison with KQBL06-01S



More tube sizes added

ø3.2 (ø1.8") and ø16 have been added.

More configuration variations

17 models ◀ 9 models

Inch size x UNF/NPT thread, Metric size x G thread added

Applicable tube size

ø3.2 to ø16, ø1/8" to ø1/2"

Connection thread: M, R, Rc, UNF, NPT, G

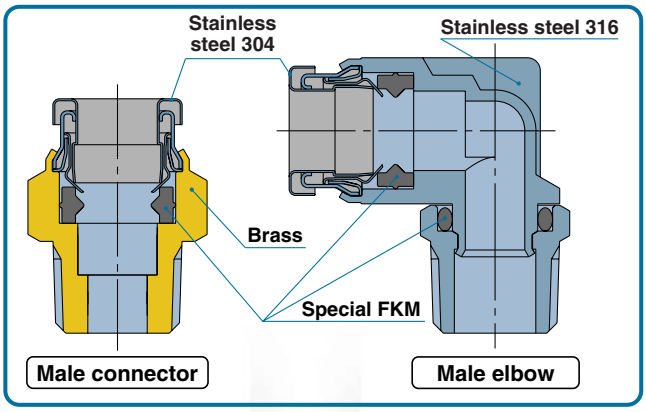
Fluid temperature: –5 to 150°C

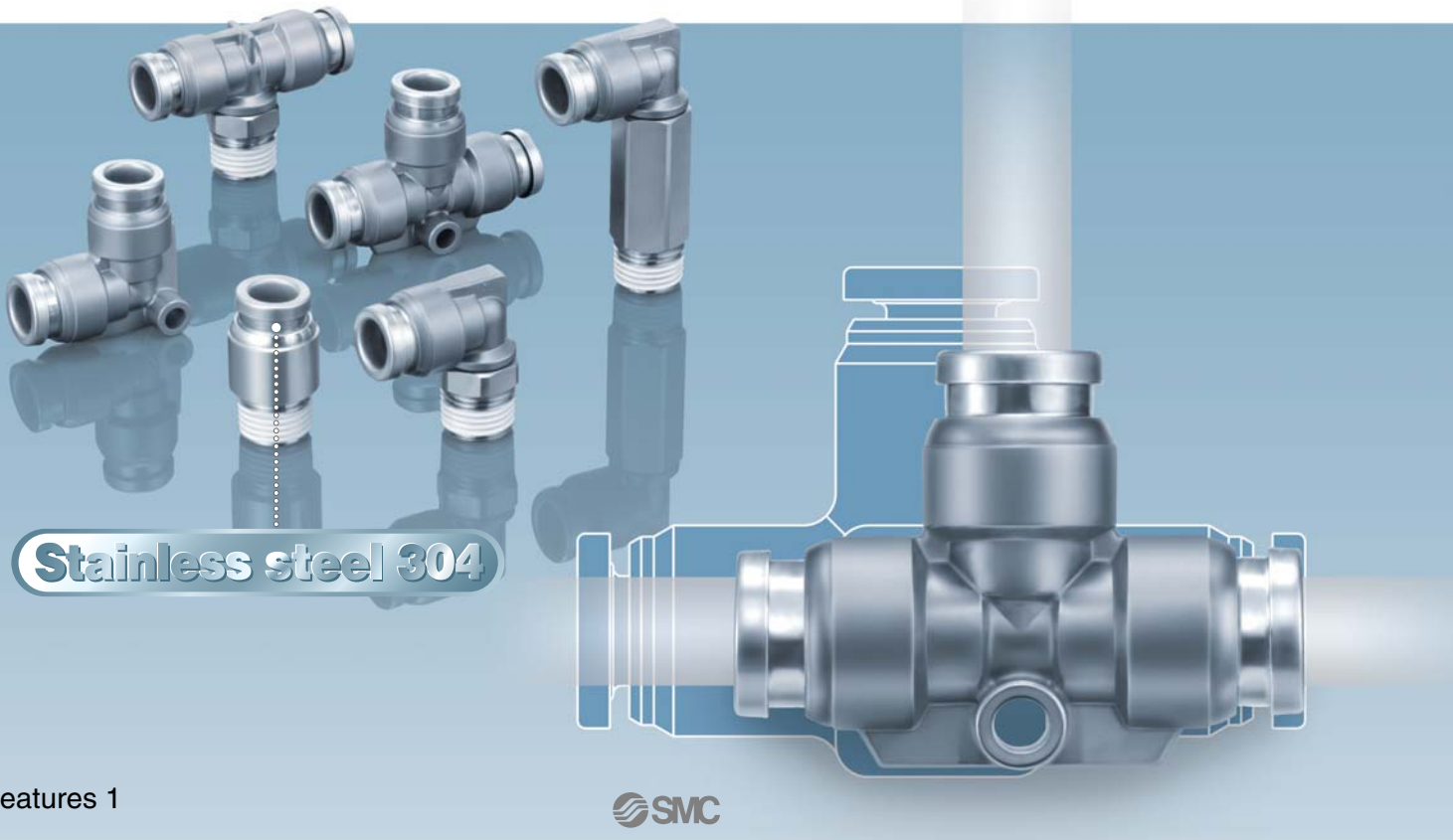
Grease-free

Applicable tube material

FEP • PFA • Nylon • Soft nylon Polyurethane • Polyolefin

Electroless nickel plated (Brass parts)





SMC

Variations

Male Connector KQB2H

Metric
R thread ····· P. 3
G thread ··· P. 16
Inch ····· P. 10

Hexagon Socket Head Male Connector KQB2S

Metric
R thread ····· P. 3
G thread ··· P. 16
Inch ····· P. 10

Straight Union KQB2H

Metric ····· P. 3
Inch ····· P. 10

Male Elbow KQB2L

Metric
R thread ····· P. 4
G thread ··· P. 17
Inch ····· P. 11

Male Branch Tee KQB2T

Metric
R thread ···· P. 4
G thread ··· P. 17
Inch ····· P. 11

Union Elbow KQB2L

Metric ····· 5
Inch ····· P. 11

Bulkhead Union KQB2E

Metric ····· P. 5
Inch ····· P. 12

Union Tee KQB2T

Metric ····· P. 5
Inch ····· P. 12

Union "Y" KQB2U

Metric ····· P. 5
Inch ····· P. 12

Different Diameter Tee KQB2T

Metric ····· P. 6
Inch ····· P. 12

Plug-in Reducer KQB2R

Metric ····· P. 6
Inch ····· P. 12

Different Diameter Straight KQB2H

Metric ····· P. 6
Inch ····· P. 13

Different Diameter Union "Y" KQB2U

Metric ····· P. 6
Inch ····· P. 13

Bulkhead Connector KQB2E

Metric
Rc thread ···· P. 7
G thread ··· P. 18
Inch ····· P. 13

Extended Male Elbow KQB2W

Metric
R thread ····· P. 7
G thread ··· P. 18
Inch ····· P. 13

Female Connector KQB2F

Metric
Rc thread ····· P. 8
G thread ··· P. 18
Inch ····· P. 14

Plug KQB2P

Metric ····· P. 8
Inch ····· P. 14

Metal One-touch Fittings

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

Series KQB2

RoHS

Applicable Tube

Tube material	FEP, PFA, Nylon, Soft nylon Note 1), Polyurethane, Polyolefin
Tube O.D.	ø3.2, ø4, ø6, ø8, ø10, ø12, ø16

Specifications

Fluid	Air, Water
Operating pressure range Note 2)	–100 kPa to 1 MPa Note 3)
Proof pressure	3.0 MPa
Ambient and fluid temperature Note 4)	–5 to 150°C (No freezing) Note 3)
Lubricant	Grease-free specification
Seal on the threads	With sealant

Note 1) For soft nylon tube, water cannot be used.
Note 2) Avoid using in a vacuum holding application such as a leak tester, since there is leakage.
Note 3) Check the operating pressure range and operating temperature range of the tube.
Note 4) It is recommended that you use the inner sleeve in the following conditions (Except ø3.2):
- When using in an environment where the fluid temperature changes drastically.
- When using at a high temperature.

∗ Temperature Condition of Mounting the Inner Sleeve

Tube	Temperature
FEP tube/TH series	80°C or more
PFA tube/TL series	120°C or more

Spare Parts

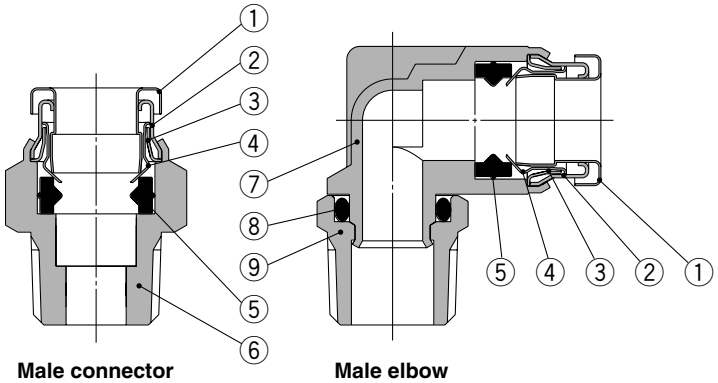
Description	Tube O.D.	Part no.	Material
Gasket	—	**M-5G3**	Stainless steel 316, Special FKM
Bulkhead nut	ø3.2 ø4	**KQB223-P01**	C3604 (Electroless nickel plated)
	ø6	**KQB206-P01**	
	ø8	**KQB208-P01**	
	ø10	**KQB210-P01**	
	ø12	**KQB212-P01**	
	ø16	**KQB216-P01**	

Cross Reference Table of the Inner Sleeve

Tube O.D.	Tube material			Applicable inner sleeve	
	TUS (Soft polyurethane)	**TH/TIH** (FEP)	**TL/TIL** (PFA)	Part no.	Length
ø4	—	TH0402	—	**TJ-0402**	18
	TUS0425	TH0425	—	**TJ-0425**	18
	—	—	TL0403	**TJ-0403**	18
ø6	TUS0604	TH0604	TL0604	**TJ-0604**	19
ø8	TUS0805	—	—	**TJ-0805**	20.5
	—	TH0806	TL0806	**TJ-0806**	20.5
ø10	TUS1065	—	—	**TJ-1065**	23
	—	TH1075	—	**TJ-1075**	23
	—	TH1008	TL1008	**TJ-1008**	23
ø12	TUS1208	—	—	**TJ-1208**	24
	—	TH1209	—	**TJ-1209**	24
	—	TH1210	TL1210	**TJ-1210**	24

∗ C2700 + Electroless nickel plated is used for the TJ series.

Construction



Male connector Male elbow

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**	Special FKM (Fluoro coated)
6	**Male connector body**	C3604 (Electroless nickel plated)
7	**Male elbow body**	Stainless steel 316
8	**O-ring**	Special FKM (Fluoro coated)
9	**Stud**	C3604 (Electroless nickel plated)

SMC

Dimensions

Male Connector: KQB2H

Applicable tube O.D. (mm)	Connection thread R, M	Model	H (Width across flat)	Note 1) øD	L	A*	M	Note 2) Effective area (mm²)	Weight (g)
ø3.2	M5 x 0.8	KQB2H23-M5	8	8	16.5	13.5	12	3	3.4
	1/8	KQB2H23-01S	10		15.4	12.3		3.4	6
	1/4	KQB2H23-02S	14		21	16.3			17.8
ø4	M5 x 0.8	KQB2H04-M5	10	8.7	17.1	14.1	12.6	4	5.3
	1/8	KQB2H04-01S			15.3	12.2		5.6	5.6
	1/4	KQB2H04-02S	14		20.9	16.2			17.2
ø6	M5 x 0.8	KQB2H06-M5	12	11.1	19.1	16.1	13.6	4	8
	1/8	KQB2H06-01S			18.1	15		13.1	7.3
	1/4	KQB2H06-02S	14		20.8	16.1			15.2
	3/8	KQB2H06-03S	17		23	17.9			28.8
ø8	1/8	KQB2H08-01S	14	13.4	24.5	21.4	16.1	26.1	13.5
	1/4	KQB2H08-02S			22.3	17.6			
	3/8	KQB2H08-03S	17		23.7	18.6			26
ø10	1/8	KQB2H10-01S	17	16.4	25.5	22.4	17	26.1	19.8
	1/4	KQB2H10-02S			27.9	23.2		41.5	22.7
	3/8	KQB2H10-03S			23	17.9			21.6
	1/2	KQB2H10-04S	22		28.6	22.2			53.9
ø12	1/4	KQB2H12-02S	19	18.5	30.5	25.8	18.6	58.3	28.8
	3/8	KQB2H12-03S			24.7	19.6			21.5
	1/2	KQB2H12-04S	22		28.7	22.3			47
ø16	3/8	KQB2H16-03S	24	24.6	33.6	28.5	20.8	81	48.3
	1/2	KQB2H16-04S			29.5	23.1		113	39.2

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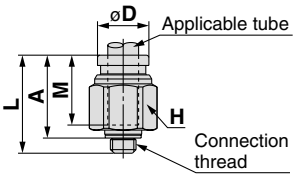

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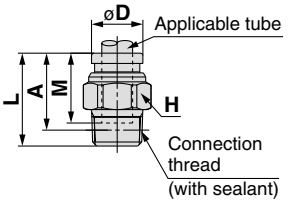

∗ Reference dimensions after installation of R thread
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.

Hexagon Socket Head Male Connector: KQB2S

Applicable tube O.D. (mm)	Connection thread R, M	Model	H (Width across flat)	Note 1) øD	L	A*	M	Note 2) Effective area (mm²)	Weight (g)
ø3.2	M5 x 0.8	KQB2S23-M5	2	9	16.5	13.5	12	3	4
ø4	M5 x 0.8	KQB2S04-M5	2	9	17.1	14.1	12.6	4	3.9
	1/8	KQB2S04-01S	3	10	20.4	17.3		4.1	7.9
ø6	M5 x 0.8	KQB2S06-M5	2	12	19.6	16.6	13.6	4	7.8
	1/8	KQB2S06-01S	4		20.6	17.5		10	9.1
	1/4	KQB2S06-02S		14		15.9		10.7	14.7
ø8	1/8	KQB2S08-01S	5	14	24.7	21.6	16.1	17.2	13
	1/4	KQB2S08-02S	6		22.9	18.2		23.3	13.5
	3/8	KQB2S08-03S		17	23.1	18			24
ø10	1/8	KQB2S10-01S	5	17	25.6	22.5	17	17.2	18.6
	1/4	KQB2S10-02S	8		27.5	22.8		39	20
	3/8	KQB2S10-03S		24		18.9			22
	1/2	KQB2S10-04S		22		17.6			39.2
ø12	1/4	KQB2S12-02S	8	19	30.6	25.9	18.6	46	26
	3/8	KQB2S12-03S	10	24.9		19.8		60	20.2
	1/2	KQB2S12-04S		22		18.5			35.3
ø16	3/8	KQB2S16-03S	10	24.6	33.2	28.1	20.8	81	43.6
	1/2	KQB2S16-04S	12		29.4	23		113	40.3

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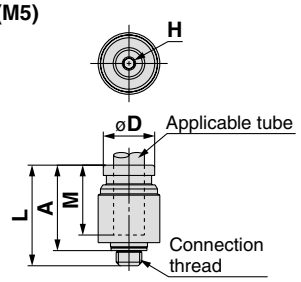

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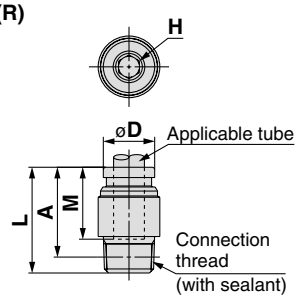
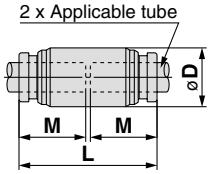


∗ Reference dimensions after installation of R thread
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.

Straight Union: KQB2H

Applicable tube O.D. (mm)	Model	øD Note 1)	L	M	Note 2) Effective area (mm²)	Weight (g)
ø3.2	KQB2H23-00	9	25	12	3.4	6.8
ø4	KQB2H04-00	9	26.2	12.6	5.6	6.8
ø6	KQB2H06-00	12	28.2	13.6	13.1	12
ø8	KQB2H08-00	14	33.2	16.1	26.1	17.4
ø10	KQB2H10-00	17	35	17	41.5	27.2
ø12	KQB2H12-00	19	38.2	18.6	58.3	33.7
ø16	KQB2H16-00	24.6	42.6	20.8	113	56.1



Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.

Dimensions

Male Elbow: KQB2L

Applicable tube O.D. (mm)	Connection thread R, M	Model	H (Width across flat)	Note 1) øD	L1	L2	A*	M	Note 2) Effective area (mm²)	Weight (g)
ø3.2	M5 x 0.8	KQB2L23-M5	8	8.3	13.1	14.8	16	12	2.6	6.5
	1/8	KQB2L23-01S	10		13.6	14.9	15.9		3	8
	1/4	KQB2L23-02S	14			18.7	18.1			16.6
ø4	M5 x 0.8	KQB2L04-M5	8	9.1	13.7	15.2	16.8	12.6	3.5	7
	1/8	KQB2L04-01S	10		14.4	15.3	16.7		4.2	8.6
	1/4	KQB2L04-02S	14			19.1	18.9			17.5
ø6	M5 x 0.8	KQB2L06-M5	8	11.4	14.7	16.3	19	13.6	3.5	9
	1/8	KQB2L06-01S	10		15.9	16.4			11.4	10.2
	1/4	KQB2L06-02S	14			20.2	21.2			19.1
	3/8	KQB2L06-03S	17			21.6	22.2			31.2
ø8	1/8	KQB2L08-01S	12	13.7	18.6	18.3	22	16.1	21.6	14.8
	1/4	KQB2L08-02S	14		19.1	21.5	23.6			20.8
	3/8	KQB2L08-03S	17			22.9	24.6			32.8
ø10	1/8	KQB2L10-01S	12	16.6	20	19.7	24.9	17	21.6	20.4
	1/4	KQB2L10-02S	14		21	22.9	26.5		35.2	23.7
	3/8	KQB2L10-03S	17			24.3	27.5			34.5
	1/2	KQB2L10-04S	22			28.5	30.4			62.6
ø12	1/4	KQB2L12-02S	14	18.7	22.6	24	28.6	18.6	50.2	27.4
	3/8	KQB2L12-03S	17		23.6	25.3	29.5			34.3
	1/2	KQB2L12-04S	22			29.5	32.4			60.8
ø16	3/8	KQB2L16-03S	19	24.6	26.3	28	34.5	20.8	71	47
	1/2	KQB2L16-04S	22		27.3	31.8	37		100	62.6

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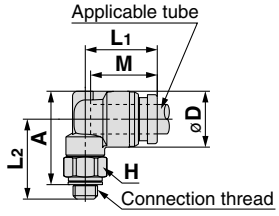

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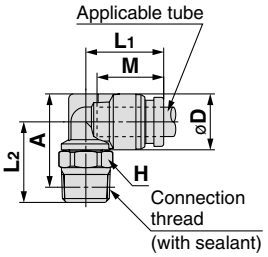

∗ Reference dimensions after installation of R thread
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.

Male Branch Tee: KQB2T

Applicable tube O.D. (mm)	Connection thread R, M	Model	H (Width across flat)	Note 1) øD	L1	L2	A*	M	Note 2) Effective area (mm²)	Weight (g)
ø3.2	M5 x 0.8	KQB2T23-M5	8	8.3	13.1	14.8	16	12	3.2	8.2
	1/8	KQB2T23-01S	10		13.6	14.9	15.9		3.4	9.6
	1/4	KQB2T23-02S	14			18.7	18.1			18.4
ø4	M5 x 0.8	KQB2T04-M5	8	9.1	13.7	15.2	16.8	12.6	4.5	9.1
	1/8	KQB2T04-01S	10		14.4	15.3	16.7		6	10.6
	1/4	KQB2T04-02S	14			19.1	18.9			19.4
ø6	M5 x 0.8	KQB2T06-M5	8	11.4	14.7	16.3	19	13.6	4.5	12.1
	1/8	KQB2T06-01S	10		15.9	16.4			13.9	13.6
	1/4	KQB2T06-02S	14			20.2	21.2			22.5
	3/8	KQB2T06-03S	17			21.6	22.2			35
ø8	1/8	KQB2T08-01S	12	13.7	18.6	18.3	22	16.1	26.3	20
	1/4	KQB2T08-02S	14		19.1	21.5	23.6			26.1
	3/8	KQB2T08-03S	17			22.9	24.6			38
ø10	1/8	KQB2T10-01S	12	16.6	20	19.7	24.9	17	40.8	28.6
	1/4	KQB2T10-02S	14		21	22.9	26.5			31.5
	3/8	KQB2T10-03S	17			24.3	27.5			42.4
	1/2	KQB2T10-04S	22			28.5	30.4			70.4
ø12	1/4	KQB2T12-02S	14	18.7	22.6	24	28.6	18.6	57.2	38.1
	3/8	KQB2T12-03S	17		23.6	25.3	29.5			39.7
	1/2	KQB2T12-04S	22			29.5	32.4			70.8
ø16	3/8	KQB2T16-03S	19	24.6	26.3	28	34.5	20.8	71	64.4
	1/2	KQB2T16-04S	22		27.3	31.8	37		100	79

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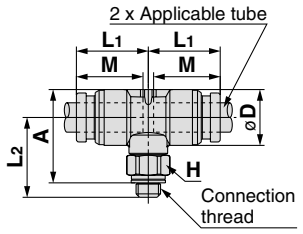

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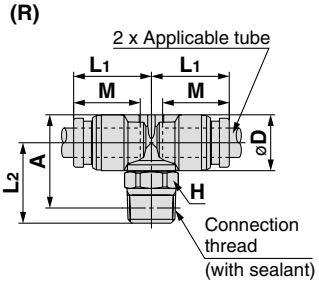


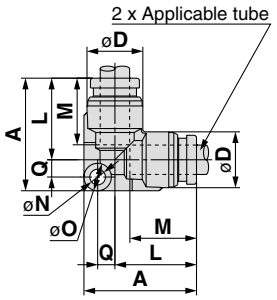
∗ Reference dimensions after installation of R thread
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.

Dimensions

Union Elbow: KQB2L

Applicable tube O.D. (mm)	Model	Note 1) øD	L	A	Q	M	øN	øO	Note 2) Effective area (mm²)	Weight (g)
ø3.2	KQB2L23-00	8.3	13.6	19.3	2.9	12	3.2	5.6	3	6.3
ø4	KQB2L04-00	9.1	14.6	20.5	3.1	12.6	3.2	5.6	4.2	7.4
ø6	KQB2L06-00	11.4	16.6	23	3.6	13.6	3.2	5.6	11.4	11
ø8	KQB2L08-00	13.7	20.1	29.1	5	16.1	4.2	8	21.6	20.2
ø10	KQB2L10-00	16.6	22	31.7	5.7	17	4.2	8	35.2	29.6
ø12	KQB2L12-00	18.7	24.6	35	6.4	18.6	4.2	8	50.2	37.1
ø16	KQB2L16-00	24.6	28.8	40.5	7.7	20.8	4.2	8	100	59.7

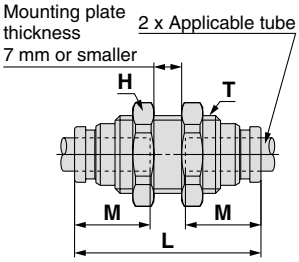
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.



Bulkhead Union: KQB2E

Applicable tube O.D. (mm)	Model	T (M)	H (Width across flat)	L	Mounting hole	M	Note 2) Effective area (mm²)	Weight (g)
ø3.2	KQB2E23-00	M10 x 1	12	32.2	11	12	3.4	14.8
ø4	KQB2E04-00	M10 x 1	12	32.4	11	12.6	5.6	14.7
ø6	KQB2E06-00	M14 x 1	17	35.4	15	13.6	13.1	29.2
ø8	KQB2E08-00	M15 x 1	19	38.8	16	16.1	26.1	34.9
ø10	KQB2E10-00	M18 x 1	21	40	19	17	41.5	47.1
ø12	KQB2E12-00	M20 x 1	24	42.4	21	18.6	58.3	58.7
ø16	KQB2E16-00	M27 x 1	30	46.8	28	20.8	113	107.2

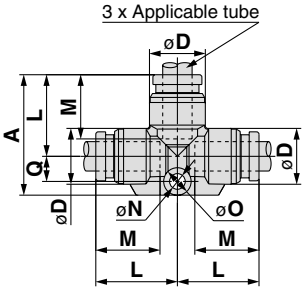
Note) Value of FEP tube.
Value of nylon tube for ø16 only.



Union Tee: KQB2T

Applicable tube O.D. (mm)	Model	Note 1) øD	L	A	Q	M	øN	øO	Note 2) Effective area (mm²)	Weight (g)
ø3.2	KQB2T23-00	8.3	13.6	20.5	4.1	12	3.2	5.6	3.4	7.9
ø4	KQB2T04-00	9.1	14.6	21.8	4.4	12.6	3.2	5.6	6.4	9.5
ø6	KQB2T06-00	11.4	16.6	24.6	5.2	13.6	3.2	5.6	13.4	14.2
ø8	KQB2T08-00	13.7	20.1	31.1	7	16.1	4.2	8	25.6	24.4
ø10	KQB2T10-00	16.6	22	34	8	17	4.2	8	40	36.8
ø12	KQB2T12-00	18.7	24.6	37.7	9.1	18.6	4.2	8	57.4	47
ø16	KQB2T16-00	24.6	28.8	43.4	10.6	20.8	4.2	8	100	75.5

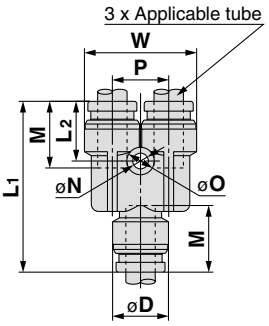
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.



Union "Y": KQB2U

Applicable tube O.D. (mm)	Model	Note 1) øD	W	L_1	L_2	P	M	øN	øO	Note 2) Effective area (mm²)	Weight (g)
ø3.2	KQB2U23-00	8.3	16.4	29	11	8.1	12	3.2	5.6	3.4	9.2
ø4	KQB2U04-00	9.1	18.2	30.4	11.3	9.1	12.6	3.2	5.6	4.2	11.1
ø6	KQB2U06-00	11.4	22.9	34.9	12.2	11.5	13.6	3.2	5.6	13.4	18.8
ø8	KQB2U08-00	13.7	28.3	40.1	14.1	14.6	16.1	4.2	8	25.6	29.7
ø10	KQB2U10-00	16.6	34.2	44	14.4	17.6	17	4.2	8	40	47.4
ø12	KQB2U12-00	18.7	38.5	48.4	15.8	19.8	18.6	4.2	8	57.4	62.1
ø16	KQB2U16-00	24.6	49.3	56.6	17.3	26	20.8	4.2	8	113	110.2

Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.

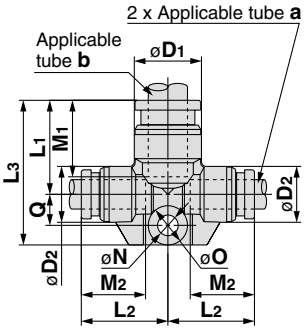


Dimensions

Different Diameter Tee: KQB2T

Applicable tube O.D. (mm) a	Applicable tube O.D. (mm) b	Model	Note 1) øD1	Note 1) øD2	L1	L2	L3	Q	M1	M2	øN	øO	Note 2) Effective area (mm²)	Weight (g)
ø3.2	ø4	KQB2T23-04	9.1	8.3	14.2	14.1	21.1	4.1	12.6	12	3.2	5.6	3.8	8.5
ø4	ø6	KQB2T04-06	11.4	9.1	15.6	15.7	22.8	4.4	13.6	12.6	3.2	5.6	7.1	11
ø6	ø8	KQB2T06-08	13.7	11.4	19.1	17.7	29.5	6.4	16.1	13.6	4.2	8	16.4	20
ø8	ø10	KQB2T08-10	16.6	13.7	21	21.2	32.1	7.1	17	16.1	4.2	8	36	29.8
ø10	ø12	KQB2T10-12	18.7	16.6	23.6	23.1	35.7	8.1	18.6	17	4.2	8	56	41.3
ø12	ø16	KQB2T12-16	24.6	18.7	26.8	26.7	39.9	9.1	20.8	18.6	4.2	8	108.5	58

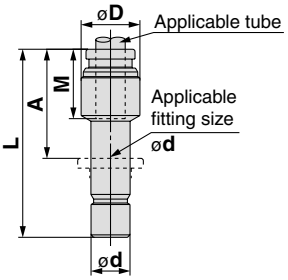
Note 1) øD1, øD2 are maximum diameters.
Note 2) Value of FEP tube.



Plug-in Reducer: KQB2R

Applicable tube O.D. (mm)	Applicable fitting size ød	Model	Note 1) øD	L	A	M	Note 2) Effective area (mm²)	Weight (g)
ø3.2	ø4	KQB2R23-04	9	32.9	20.3	12	3.4	4.9
ø4	ø6	KQB2R04-06	9	34.4	20.8	12.6	5.6	7
ø6	ø8	KQB2R06-08	12	38.4	22.3	13.6	13.1	12.7
ø8	ø10	KQB2R08-10	14	41.9	24.9	16.1	26.1	19.2
ø10	ø12	KQB2R10-12	17	44.8	26.2	17	41.5	27.8
ø12	ø16	KQB2R12-16	19	42.9	22.1	18.6	58.3	37.2

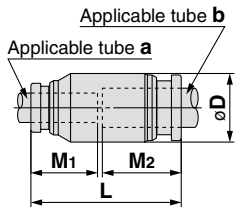
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.



Different Diameter Straight: KQB2H

Applicable tube O.D. (mm) a	Applicable tube O.D. (mm) b	Model	øD Note 1)	L	M1	M2	Note 2) Effective area (mm²)	Weight (g)
ø3.2	ø4	KQB2H23-04	9	25.6	12	12.6	3.4	6.8
ø4	ø6	KQB2H04-06	12	27.2	12.6	13.6	5.6	12.1
ø6	ø8	KQB2H06-08	14	30.7	13.6	16.1	13.1	17.1
ø8	ø10	KQB2H08-10	17	34.1	16.1	17	26.1	27.2
ø10	ø12	KQB2H10-12	19	36.6	17	18.6	41.5	34.8
ø12	ø16	KQB2H12-16	24.6	40.4	18.6	20.8	58.3	57.3

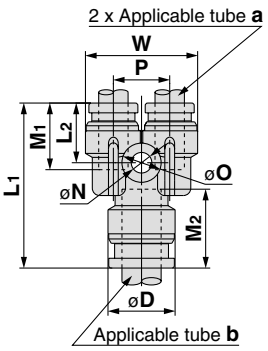
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.



Different Diameter Union "Y": KQB2U

Applicable tube O.D. (mm) a	Applicable tube O.D. (mm) b	Model	Note 1) øD	L1	L2	P	W	M1	M2	øN	øO	Note 2) Effective area (mm²)	Weight (g)
ø3.2	ø4	KQB2U23-04	9.1	27	10.8	8.1	16.4	12	12.6	3.2	5.6	3.2	8.5
ø4	ø6	KQB2U04-06	11.4	29.3	11.2	9.1	18.2	12.6	13.6	3.2	5.6	4.2	11.9
ø6	ø8	KQB2U06-08	13.7	33.7	12.2	11.5	22.9	13.6	16.1	4.2	8	13.4	19.3
ø8	ø10	KQB2U08-10	16.6	38.3	13.8	14.6	28.3	16.1	17	4.2	8	25.6	32
ø10	ø12	KQB2U10-12	18.7	43	14	17.6	34.2	17	18.6	4.2	8	40	47.6
ø12	ø16	KQB2U12-16	24.6	47.4	15.6	19.8	38.5	18.6	20.8	4.2	8	57.4	67.6

Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.

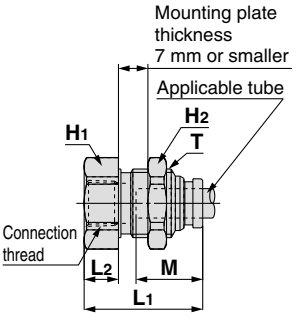


Dimensions

Bulkhead Connector: KQB2E

Applicable tube O.D. (mm)	Connection thread Rc	Model	T (M)	Width across flat H_1	Width across flat H_2	L_1	L_2	Mounting hole	M	Note) Effective area (mm²)	Weight (g)
ø3.2	1/4	KQB2E23-02	M10 x 1	17	12	31	14.8	11	12	3.4	27.5
ø4	1/8	KQB2E04-01	M10 x 1	14	12	25.8	9.7	11	12.6	5.6	16.9
	1/4	KQB2E04-02		17		30.9	14.8				27.1
ø6	1/8	KQB2E06-01	M14 x 1	17	17	24.2	6.1	15	13.6	13.1	25
	1/4	KQB2E06-02				31.6	13.5				33.2
	3/8	KQB2E06-03		19		33	14.9				34.8
ø8	1/8	KQB2E08-01	M15 x 1	17	19	26.3	6.9	16	16.1	26.1	28.7
	1/4	KQB2E08-02				32.4	13				34.2
	3/8	KQB2E08-03		19		34	14.6				35.9
ø10	1/4	KQB2E10-02	M18 x 1	19	21	31.6	11.6	19	17	41.5	44
	3/8	KQB2E10-03				33.6	13.6				40.2
ø12	3/8	KQB2E12-03	M20 x 1	21	24	34	12.8	21	18.6	58.3	52
	1/2	KQB2E12-04		24		39.6	18.4				62.5
ø16	3/8	KQB2E16-03	M27 x 1	29	30	35.3	11.2	28	20.8	96	111
	1/2	KQB2E16-04				40.6	16.5			113	118.2

Note) Value of FEP tube.
Value of nylon tube for ø16 only.

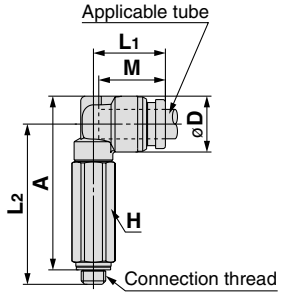


Extended Male Elbow: KQB2W

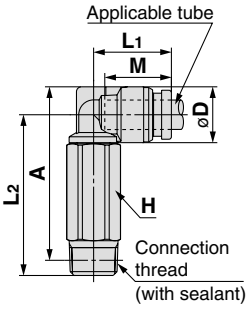
Applicable tube O.D. (mm)	Connection thread R, M	Model	H (Width across flat)	Note 1) øD	L_1	L_2	A*	M	Note 2) Effective area (mm²)	Weight (g)
ø3.2	M5 x 0.8	KQB2W23-M5	8	8.3	13.1	31.2	32.4	12	2.8	13.5
	1/8	KQB2W23-01S	10		13.6	31.3	32.3			15.3
	1/4	KQB2W23-02S	14			35.1	34.5			34.7
ø4	M5 x 0.8	KQB2W04-M5	8	9.1	13.7	31.6	33.2	12.6	3	14.1
	1/8	KQB2W04-01S	10		14.4	31.7	33.1		4	16.2
	1/4	KQB2W04-02S	14			35.5	35.3			35.6
ø6	M5 x 0.8	KQB2W06-M5	8	11.4	14.7	32.7	35.4	13.6	3	16
	1/8	KQB2W06-01S	10		15.9	32.8			10.9	17.8
	1/4	KQB2W06-02S	14			36.6	37.6			37.2
	3/8	KQB2W06-03S	17			38	38.6			60.3
ø8	1/8	KQB2W08-01S	12	13.7	18.6	37	40.7	16.1	20.5	28.9
	1/4	KQB2W08-02S	14		19.1	40.2	42.3			39.2
	3/8	KQB2W08-03S	17			41.6	43.3			63.7
ø10	1/4	KQB2W10-02S	14	16.6	21	46.6	50.2	17	33.5	42.1
	3/8	KQB2W10-03S	17			45.9	49.1			64.5
	1/2	KQB2W10-04S	22			50.1	52			123
ø12	1/4	KQB2W12-02S	14	18.7	22.6	47.7	52.3	18.6	47.7	46
	3/8	KQB2W12-03S	17		23.6	49	53.2			58.2
	1/2	KQB2W12-04S	22			53.2	56.1			118
ø16	3/8	KQB2W16-03S	19	24.6	26.3	57.6	64.1	20.8	71	89.6
	1/2	KQB2W16-04S	22		27.3	61.4	66.6		100	116

* Reference dimensions after installation of R thread
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.

(M5)



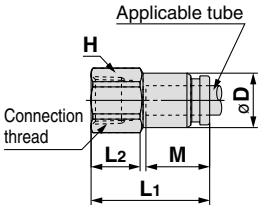
(R)



Dimensions

Female Connector: KQB2F

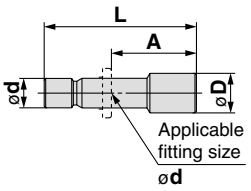
Applicable tube O.D. (mm)	Connection thread Rc	Model	H (Width across flat)	Note 1) øD	L1	L2	M	Note 2) Effective area (mm²)	Weight (g)
ø3.2	1/8	KQB2F23-01	12	8	23.3	9.8	12	3.4	9.3
ø4	1/8	KQB2F04-01	12	8.7	23.7	9.8	12.6	5.6	9.7
	1/4	KQB2F04-02	17		28.7	13.2			22.7
ø6	1/8	KQB2F06-01	12	11.1	24.2	10	13.6	13.1	11.1
	1/4	KQB2F06-02	17		29.2	13.4			24.3
	3/8	KQB2F06-03	19		30.6	14.2			25.8
ø8	1/8	KQB2F08-01	14	13.4	26.3	9.6	16.1	26.1	17.1
	1/4	KQB2F08-02	17		31.3	13.7			26.8
	3/8	KQB2F08-03	19		32.7	14.4			28.4
ø10	1/4	KQB2F10-02	17	16.4	31.6	13.9	17	41.5	30.3
	3/8	KQB2F10-03	19		33	14.7			32
ø12	1/4	KQB2F12-02	19	18.5	32.6	13.3	18.6	58.3	39.4
	3/8	KQB2F12-03			34	14.7			33.9
	1/2	KQB2F12-04	24		39.3	18.4			52.9
ø16	3/8	KQB2F16-03	24	24.6	35.3	13.5	20.8	81	62.8
	1/2	KQB2F16-04			40.6	18.8		113	59.9



Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.

Plug: KQB2P

Applicable fitting size ød	Model	øD	L	A	Weight (g)
ø3.2	KQB2P-23	5	28.9	16.9	2.8
ø4	KQB2P-04	6	29.6	17	4.3
ø6	KQB2P-06	8	30.8	17.2	9
ø8	KQB2P-08	10	33.7	17.6	16.3
ø10	KQB2P-10	12	34.6	17.6	25.4
ø12	KQB2P-12	14	36.5	17.9	37.8
ø16	KQB2P-16	18	38.6	17.8	69.2



Metal One-touch Fittings

Applicable Tube: Inch Size, Connection Thread: UNF, NPT

Series KQB2

RoHS

Applicable Tube

Tube material	FEP, PFA, Nylon, Soft nylon Note 1), Polyurethane, Polyolefin
Tube O.D.	ø1/8", ø5/32", ø1/4", ø5/16", ø3/8", ø1/2"

Specifications

Fluid	Air, Water
Operating pressure range Note 2)	–100 kPa to 1 MPa Note 3)
Proof pressure	3.0 MPa
Ambient and fluid temperature Note 4)	–5 to 150°C (No freezing) Note 3)
Lubricant	Grease-free specification
Seal on the threads	With sealant

Note 1) For soft nylon tube, water cannot be used.
Note 2) Avoid using in a vacuum holding application such as a leak tester, since there is leakage.
Note 3) Check the operating pressure range and operating temperature range of the tube.
Note 4) It is recommended that you use the inner sleeve in the following conditions (Except ø1/8"):
- When using in an environment where the fluid temperature changes drastically.
- When using at a high temperature.

∗ Temperature Condition of Mounting the Inner Sleeve

Tube	Temperature
FEP tube/TH series	80°C or more
PFA tube/TL series	120°C or more

Spare Parts

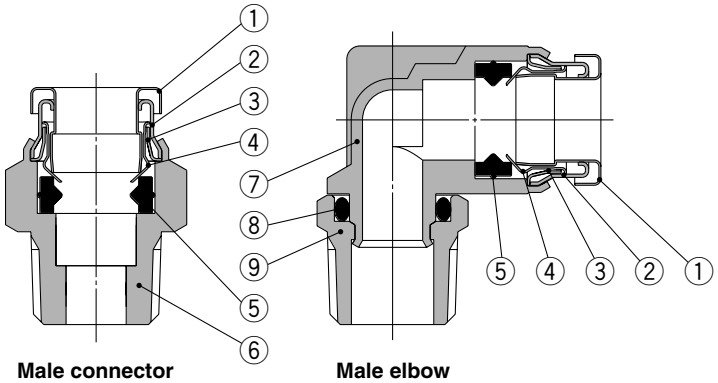
Description	Tube O.D.	Part no.	Material
Gasket	—	**M-5G3**	Stainless steel 316, Special FKM
Bulkhead nut	ø1/8" ø5/32"	**KQB201-P01**	C3604 (Electroless nickel plated)
	ø1/4"	**KQB207-P01**	
	ø5/16"	**KQB209-P01**	
	ø3/8"	**KQB211-P01**	
	ø1/2"	**KQB213-P01**	

Cross Reference Table of the Inner Sleeve

Tube O.D.	Tube material		Applicable inner sleeve	
	TH/TIH (FEP)	**TL/TIL** (PFA)	Part no.	Length
ø5/32"	TH0402	—	**TJ-0402**	18
	TH0425	—	**TJ-0425**	18
	—	TL0403	**TJ-0403**	18
ø1/4"	TIHB07	TIL07	**TJ-0604**	19
	TIHA07	—	**TJ-0746**	19
ø5/16"	TH0806	TL0806	**TJ-0806**	20.5
ø3/8"	TIHB11	TIL11	**TJ-1065**	23
	TIHA11	—	**TJ-1107**	23
ø1/2"	TIH13	TIL13	**TJ-1395**	24

∗ C2700 + Electroless nickel plated is used for the TJ series.

Construction



Male connector **Male elbow**

Component Parts

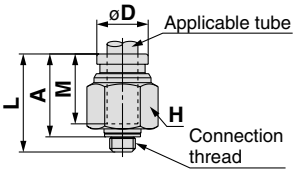
No.	Description	Material
1	**Release button**	Stainless steel 304
2	**Guide 1**	Stainless steel 304
3	**Guide 2**	Stainless steel 304
4	**Chuck**	Stainless steel 304
5	**Seal**	Special FKM (Fluoro coated)
6	**Male connector body**	C3604 (Electroless nickel plated)
7	**Male elbow body**	Stainless steel 316
8	**O-ring**	Special FKM (Fluoro coated)
9	**Stud**	C3604 (Electroless nickel plated)

Dimensions

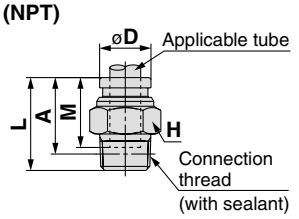
Male Connector: KQB2H

Applicable tube O.D. (inch)	Connection thread UNF, NPT	Model	H (Width across flat)	Note 1) øD	L	A*	M	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	10-32UNF	**KQB2H01-32**	8	8	16.5	13.5	12	3	3.5
	1/8	**KQB2H01-N01S**	11.11		17.1	13.9		3.4	7.9
	1/4	**KQB2H01-N02S**	14.29		20.9	16.5			18
ø5/32"	10-32UNF	**KQB2H03-32**	11.11	8.7	17.1	14.1	12.6	4	6.5
	1/8	**KQB2H03-N01S**			17	13.8		5.6	7.4
	1/4	**KQB2H03-N02S**	14.29		20.9	16.5			17.5
ø1/4"	10-32UNF	**KQB2H07-32**	12.7	11.2	19	16	13.5	4	9
	1/8	**KQB2H07-N01S**			20	16.8		13.1	9.8
	1/4	**KQB2H07-N02S**	14.29		20.6	16.2			15.1
	3/8	**KQB2H07-N03S**	17.46		23.8	19.1			31
ø5/16"	1/8	**KQB2H09-N01S**	14.29	13.4	24.2	21	16.1	26.1	13.8
	1/4	**KQB2H09-N02S**			23.1	18.7			14.9
	3/8	**KQB2H09-N03S**	17.46		24.6	19.9			28.3
ø3/8"	1/8	**KQB2H11-N01S**	17.46	16	25	21.8	16.6	26.1	21.5
	1/4	**KQB2H11-N02S**			26.3	21.9		41.5	22.3
	3/8	**KQB2H11-N03S**			23.6	18.9			24.4
	1/2	**KQB2H11-N04S**	22.23		28.3	21.9			55
ø1/2"	1/4	**KQB2H13-N02S**	22.23	19.3	30.5	26.1	18.5	58.3	39.4
	3/8	**KQB2H13-N03S**			28.4	23.7			36.8
	1/2	**KQB2H13-N04S**				22			46.1

(10-32UNF)



(NPT)

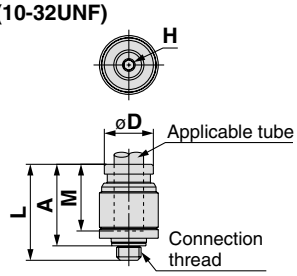


∗ Reference dimensions after installation of NPT thread
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.

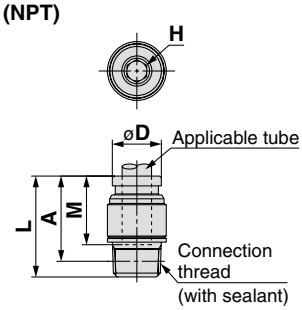
Hexagon Socket Head Male Connector: KQB2S

Applicable tube O.D. (inch)	Connection thread UNF, NPT	Model	H (Width across flat)	Note 1) øD	L	A*	M	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	10-32UNF	**KQB2S01-32**	2	9	16.5	13.5	12	3	3.9
ø5/32"	10-32UNF	**KQB2S03-32**	2	9	17.1	14.1	12.6	4	3.9
	1/8	**KQB2S03-N01S**	2.78	11	21.4	18.2		4.1	8.9
ø1/4"	10-32UNF	**KQB2S07-32**	2	12	19.5	16.5	13.5	4	7.5
	1/8	**KQB2S07-N01S**	4.76		20.5	17.3		10	8.5
	1/4	**KQB2S07-N02S**		14		16.1		10.7	14.1
	3/8	**KQB2S07-N03S**		18	21.5	16.8			23.8
ø5/16"	1/8	**KQB2S09-N01S**	5.56	14	24.7	21.5	16.1	17.2	12.6
	1/4	**KQB2S09-N02S**	6.35		23.1	18.7		23.3	13.4
	3/8	**KQB2S09-N03S**		18		18.4			24.7
ø3/8"	1/8	**KQB2S11-N01S**	5.56	17	25.2	22	16.6	17.2	18.7
	1/4	**KQB2S11-N02S**	6.35		27.1	22.7		39	22.2
	3/8	**KQB2S11-N03S**		18	23.6	18.9			25
	1/2	**KQB2S11-N04S**		22		17.2			40.6
ø1/2"	1/4	**KQB2S13-N02S**	8	20	30.5	26.1	18.5	46	27.9
	3/8	**KQB2S13-N03S**	9.53		29.4	24.7		60	30.4
	1/2	**KQB2S13-N04S**		22	25.5	19.1			36.5

(10-32UNF)



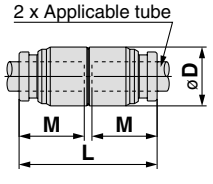
(NPT)



∗ Reference dimensions after installation of NPT thread
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.

Straight Union: KQB2H

Applicable tube O.D. (inch)	Model	øD Note 1)	L	M	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	**KQB2H01-00**	9	25	12	3.4	6.8
ø5/32"	**KQB2H03-00**	9	26.2	12.6	5.6	6.8
ø1/4"	**KQB2H07-00**	12	28	13.5	13.1	11.5
ø5/16"	**KQB2H09-00**	14	33.2	16.1	26.1	17.4
ø3/8"	**KQB2H11-00**	16	34.2	16.6	41.5	23.7
ø1/2"	**KQB2H13-00**	20	38	18.5	58.3	37



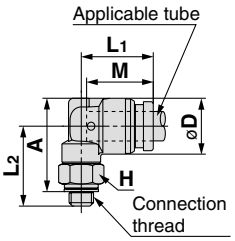
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.

Dimensions

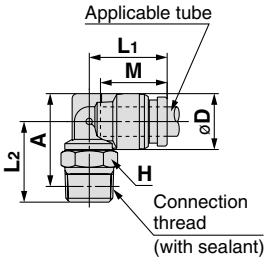
Male Elbow: KQB2L

Applicable tube O.D. (inch)	Connection thread UNF, NPT	Model	H (Width across flat)	Note 1) øD	L1	L2	A*	M	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	10-32UNF	**KQB2L01-32**	8	8.3	13.1	14.8	16	12	2.6	6.5
	1/8	**KQB2L01-N01S**	11.11		13.6	14.9	15.8		3	8.8
	1/4	**KQB2L01-N02S**	14.29			18.7	18.4			17.7
ø5/32"	10-32UNF	**KQB2L03-32**	8	9.1	13.7	15.2	16.8	12.6	3.5	7
	1/8	**KQB2L03-N01S**	11.11		14.4	15.3	16.6		4.2	9.7
	1/4	**KQB2L03-N02S**	14.29			19.1	19.2			18.5
ø1/4"	10-32UNF	**KQB2L07-32**	8	11.7	14.7	16.5	19.3	13.5	3.5	9.1
	1/8	**KQB2L07-N01S**	11.11		15.9	16.6	19.2		11.4	11.4
	1/4	**KQB2L07-N02S**	14.29			20.4	21.8			20.3
	3/8	**KQB2L07-N03S**	17.46			22.2	23.3			33.7
ø5/16"	1/8	**KQB2L09-N01S**	12.7	13.7	18.6	18.3	21.9	16.1	21.6	15.8
	1/4	**KQB2L09-N02S**	14.29		19.1	21.5	23.9			21.9
	3/8	**KQB2L09-N03S**	17.46			23.3	25.4			35
ø3/8"	1/8	**KQB2L11-N01S**	12.7	16	20	19.4	24.2	16.6	21.6	20.5
	1/4	**KQB2L11-N02S**	14.29		21	22.6	26.2		35.2	23.9
	3/8	**KQB2L11-N03S**	17.46			24.4	27.7			35.8
	1/2	**KQB2L11-N04S**	22.23			28.2	29.8			63.1
ø1/2"	1/4	**KQB2L13-N02S**	14.29	19.6	22.7	24.4	29.8	18.5	50.2	30.1
	3/8	**KQB2L13-N03S**	17.46		23.7	26.1	31.2			37.9
	1/2	**KQB2L13-N04S**	22.23			29.9	33.3			63.8

(10-32UNF)



(NPT)

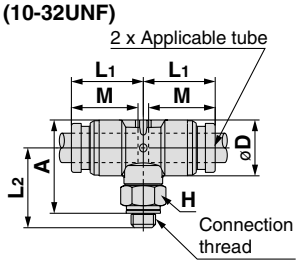


∗ Reference dimensions after installation of NPT thread
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.

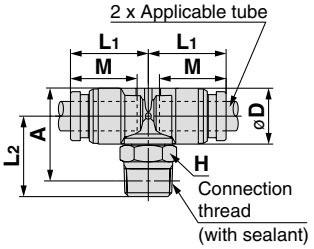
Male Branch Tee: KQB2T

Applicable tube O.D. (inch)	Connection thread UNF, NPT	Model	H (Width across flat)	Note 1) øD	L1	L2	A*	M	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	10-32UNF	**KQB2T01-32**	8	8.3	13.1	14.8	16	12	3.2	8.2
	1/8	**KQB2T01-N01S**	11.11		13.6	14.9	15.8		3.4	10.6
	1/4	**KQB2T01-N02S**	14.29			18.7	18.4			19.5
ø5/32"	10-32UNF	**KQB2T03-32**	8	9.1	13.7	15.2	16.8	12.6	4.5	9.1
	1/8	**KQB2T03-N01S**	11.11		14.4	15.3	16.6		6	11.6
	1/4	**KQB2T03-N02S**	14.29			19.1	19.2			20.5
ø1/4"	10-32UNF	**KQB2T07-32**	8	11.7	14.7	16.5	19.3	13.5	4.5	12.3
	1/8	**KQB2T07-N01S**	11.11		15.9	16.6	19.2		13.9	14.9
	1/4	**KQB2T07-N02S**	14.29			20.4	21.8			23.8
	3/8	**KQB2T07-N03S**	17.46			22.2	23.3			37.1
ø5/16"	1/8	**KQB2T09-N01S**	12.7	13.7	18.6	18.3	21.9	16.1	26.3	21.2
	1/4	**KQB2T09-N02S**	14.29		19.1	21.5	23.9			27.1
	3/8	**KQB2T09-N03S**	17.46			23.3	25.4			40.3
ø3/8"	1/8	**KQB2T11-N01S**	12.7	16	20	19.4	24.2	16.6	40.8	28.1
	1/4	**KQB2T11-N02S**	14.29		21	22.6	26.2			31.1
	3/8	**KQB2T11-N03S**	17.46			24.4	27.7			43.1
	1/2	**KQB2T11-N04S**	22.23			28.2	29.8			70.4
ø1/2"	1/4	**KQB2T13-N02S**	14.29	19.6	22.7	24.4	29.8	18.5	57.2	41.8
	3/8	**KQB2T13-N03S**	17.46		23.7	26.1	31.2			49
	1/2	**KQB2T13-N04S**	22.23			29.9	33.3			74.9

(10-32UNF)



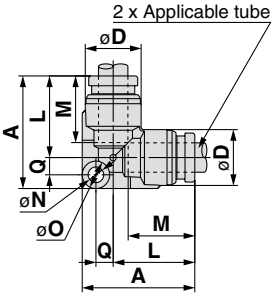
(NPT)



∗ Reference dimensions after installation of NPT thread
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.

Union Elbow: KQB2L

Applicable tube O.D. (inch)	Model	Note 1) øD	L	A	Q	M	øN	øO	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	**KQB2L01-00**	8.3	13.6	19.3	2.9	12	3.2	5.6	3	6.3
ø5/32"	**KQB2L03-00**	9.1	14.6	20.5	3.1	12.6	3.2	5.6	4.2	7.4
ø1/4"	**KQB2L07-00**	11.7	16.7	23.2	3.7	13.5	3.2	5.6	11.4	11.5
ø5/16"	**KQB2L09-00**	13.7	20.1	29.1	5	16.1	4.2	8	21.6	20.2
ø3/8"	**KQB2L11-00**	16	21.4	31.1	5.7	16.6	4.2	8	35.2	28.2
ø1/2"	**KQB2L13-00**	19.6	24.9	35.3	6.4	18.5	4.2	8	50.2	41.7



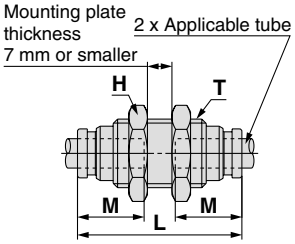
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.

Dimensions

Bulkhead Union: KQB2E

Applicable tube O.D. (inch)	Model	T (UNF)	H (Width across flat)	L	Mounting hole	M	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	**KQB2E01-00**	7/16-20UNF	14.29	34.2	12.5	12	3.4	21.8
ø5/32"	**KQB2E03-00**	7/16-20UNF	14.29	34.4	12.5	12.6	5.6	21.6
ø1/4"	**KQB2E07-00**	1/2-20UNF	17.46	36.2	14	13.5	13.1	30.2
ø5/16"	**KQB2E09-00**	5/8-18UNF	22.23	41.2	17	16.1	26.1	43.9
ø3/8"	**KQB2E11-00**	3/4-16UNF	22.23	42.4	20.5	16.6	41.5	64.2
ø1/2"	**KQB2E13-00**	7/8-14UNF	25.4	47	23.5	18.5	58.3	94.2

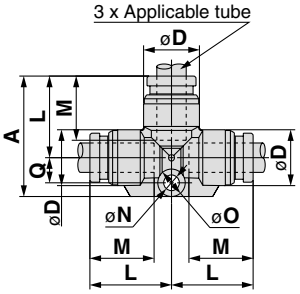
Note) Value of FEP tube.



Union Tee: KQB2T

Applicable tube O.D. (inch)	Model	Note 1) øD	L	A	Q	M	øN	øO	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	**KQB2T01-00**	8.3	13.6	20.5	4.1	12	3.2	5.6	3.4	7.9
ø5/32"	**KQB2T03-00**	9.1	14.6	21.8	4.4	12.6	3.2	5.6	6.4	9.5
ø1/4"	**KQB2T07-00**	11.7	16.7	24.7	5.2	13.5	3.2	5.6	13.4	14.7
ø5/16"	**KQB2T09-00**	13.7	20.1	31.1	7	16.1	4.2	8	25.6	24.4
ø3/8"	**KQB2T11-00**	16	21.4	33.4	8	16.6	4.2	8	40	34.7
ø1/2"	**KQB2T13-00**	19.6	24.9	37.9	9	18.5	4.2	8	57.4	52.3

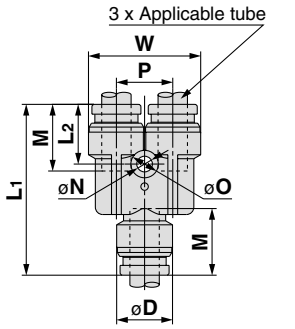
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.



Union "Y": KQB2U

Applicable tube O.D. (inch)	Model	Note 1) øD	W	L_1	L_2	P	M	øN	øO	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	**KQB2U01-00**	8.3	16.4	29	11	8.1	12	3.2	5.6	3.4	9.2
ø5/32"	**KQB2U03-00**	9.1	18.2	30.4	11.3	9.1	12.6	3.2	5.6	4.2	11.1
ø1/4"	**KQB2U07-00**	11.7	23.9	34.5	12.1	12.2	13.5	3.2	5.6	13.4	19.6
ø5/16"	**KQB2U09-00**	13.7	28.3	40.1	14.1	14.6	16.1	4.2	8	25.6	29.7
ø3/8"	**KQB2U11-00**	16	33.2	42.2	14	17.2	16.6	4.2	8	40	43.1
ø1/2"	**KQB2U13-00**	19.6	40.2	47.3	15.8	20.6	18.5	4.2	8	57.4	66.4

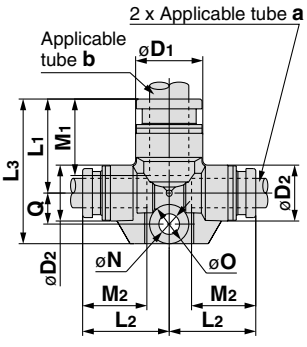
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.



Different Diameter Tee: KQB2T

Applicable tube O.D. (inch) a	Applicable tube O.D. (inch) b	Model	Note 1) $øD_1$	Note 1) $øD_2$	L_1	L_2	L_3	Q	M_1	M_2	øN	øO	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	ø5/32"	**KQB2T01-03**	9.1	8.3	14.2	14.1	21.1	4.1	12.6	12	3.2	5.6	3.8	8.5
ø5/32"	ø1/4"	**KQB2T03-07**	11.7	9.1	15.5	15.9	22.7	4.4	13.5	12.6	3.2	5.6	7.1	11.7
ø1/4"	ø5/16"	**KQB2T07-09**	13.7	11.7	19.3	17.6	29.6	6.3	16.1	13.5	4.2	8	16.4	20.2
ø5/16"	ø3/8"	**KQB2T09-11**	16	13.7	20.6	21	31.7	7.1	16.6	16.1	4.2	8	36	28.9
ø3/8"	ø1/2"	**KQB2T11-13**	19.6	16	23.3	23	35.4	8.1	18.5	16.6	4.2	8	56	41.8

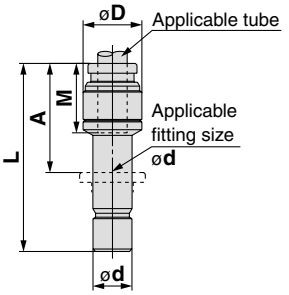
Note 1) $øD_1$, $øD_2$ are maximum diameters.
Note 2) Value of FEP tube.



Plug-in Reducer: KQB2R

Applicable tube O.D. (inch)	Applicable fitting size ød	Model	Note 1) øD	L	A	M	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	ø5/32"	**KQB2R01-03**	9	32.9	20.3	12	3.4	4.9
ø5/32"	ø1/4"	**KQB2R03-07**	9	33.7	20.2	12.6	5.6	7.4
ø1/4"	ø5/16"	**KQB2R07-09**	12	38.4	22.3	13.5	13.1	12.5
ø5/16"	ø3/8"	**KQB2R09-11**	14	41.6	25	16.1	26.1	17.7
ø3/8"	ø1/2"	**KQB2R11-13**	17	39.8	21.3	16.6	41.5	24.7

Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.

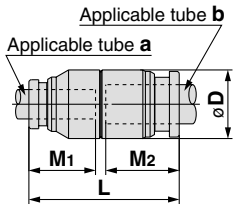


Dimensions

Different Diameter Straight: KQB2H

Applicable tube O.D. (inch) a	Applicable tube O.D. (inch) b	Model	øD Note 1)	L	M1	M2	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	ø5/32"	**KQB2H01-03**	9	25.6	12	12.6	3.4	6.8
ø5/32"	ø1/4"	**KQB2H03-07**	12	27.1	12.6	13.5	5.6	11.9
ø1/4"	ø5/16"	**KQB2H07-09**	14	30.6	13.5	16.1	13.1	16.8
ø5/16"	ø3/8"	**KQB2H09-11**	16	33.7	16.1	16.6	26.1	23.9
ø3/8"	ø1/2"	**KQB2H11-13**	20	36.1	16.6	18.5	41.5	38.8

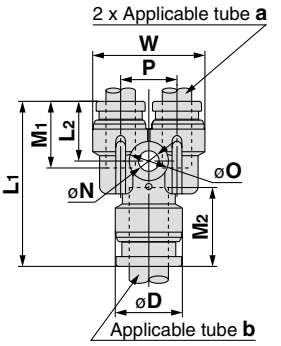
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.



Different Diameter Union "Y": KQB2U

Applicable tube O.D. (inch) a	Applicable tube O.D. (inch) b	Model	Note 1) øD	L1	L2	P	W	M1	M2	øN	øO	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	ø5/32"	**KQB2U01-03**	9.1	27	10.8	8.1	16.4	12	12.6	3.2	5.6	3.2	8.5
ø5/32"	ø1/4"	**KQB2U03-07**	11.7	28.8	11.4	9.1	18.2	12.6	13.5	3.2	5.6	4.2	11.8
ø1/4"	ø5/16"	**KQB2U07-09**	13.7	33.8	12	12.2	23.9	13.5	16.1	4.2	8	13.4	20
ø5/16"	ø3/8"	**KQB2U09-11**	16	38.3	13.8	14.6	28.3	16.1	16.6	4.2	8	25.6	31
ø3/8"	ø1/2"	**KQB2U11-13**	19.6	40.5	13.7	17.2	33.2	16.6	18.5	4.2	8	40	45

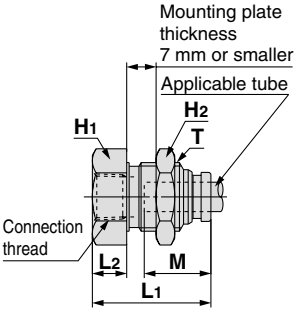
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.



Bulkhead Connector: KQB2E

Applicable tube O.D. (inch)	Connection thread NPT	Model	T (UNF)	Width across flat H1	Width across flat H2	L1	L2	Mounting hole	M	Note) Effective area (mm²)	Weight (g)
ø1/8"	1/4	**KQB2E01-N02**	7/16-20UNF	17.46	14.29	32.8	15.3	12.5	12	3.4	34.1
ø5/32"	1/4	**KQB2E03-N02**	7/16-20UNF	17.46	14.29	32.6	15.3	12.5	12.6	5.6	33.5
ø1/4"	1/4	**KQB2E07-N02**	1/2-20UNF	17.46	17.46	33.1	14.8	14	13.5	13.1	36.5
ø5/16"	3/8	**KQB2E09-N03**	5/8-18UNF	22.23	22.23	35.8	15.1	17	16.1	26.1	56.1
ø3/8"	3/8	**KQB2E11-N03**	3/4-16UNF	22.23	22.23	35.2	13.7	20.5	16.6	41.5	62.9
ø1/2"	3/8	**KQB2E13-N03**	7/8-14UNF	23.81	25.4	34.6	11	23.5	18.5	58.3	76.6
	1/2	**KQB2E13-N04**				42.2	18.6				80.2

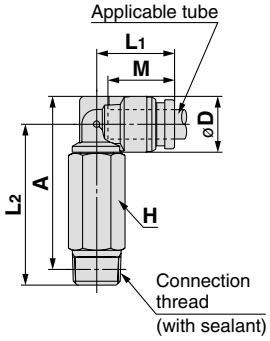
Note) Value of FEP tube.



Extended Male Elbow: KQB2W

Applicable tube O.D. (inch)	Connection thread NPT	Model	H (Width across flat)	Note 1) øD	L1	L2	A*	M	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	1/8	**KQB2W01-N01S**	11.11	8.3	13.6	31.6	32.5	12	2.8	19.5
	1/4	**KQB2W01-N02S**	14.29			35.4	35.1			37.3
ø5/32"	1/8	**KQB2W03-N01S**	11.11	9.1	14.4	32	33.3	12.6	4	20.3
	1/4	**KQB2W03-N02S**	14.29			35.8	35.9			38.2
ø1/4"	1/8	**KQB2W07-N01S**	11.11	11.7	15.9	33.3	35.9	13.5	10.9	22.1
	1/4	**KQB2W07-N02S**	14.29			37.1	38.5			39.9
	3/8	**KQB2W07-N03S**	17.46			38.9	40			65.6
ø5/16"	1/8	**KQB2W09-N01S**	12.7	13.7	18.6	34.7	38.3	16.1	20.5	30.4
	1/4	**KQB2W09-N02S**	14.29		19.1	40.2	42.6			41.6
	3/8	**KQB2W09-N03S**	17.46			42	44.1			68.5
ø3/8"	1/4	**KQB2W11-N02S**	14.29	16	21	47.2	50.8	16.6	33.5	44.9
	3/8	**KQB2W11-N03S**	17.46			45.4	48.7			67.8
	1/2	**KQB2W11-N04S**	22.23			49.2	50.8			124.2
ø1/2"	1/4	**KQB2W13-N02S**	14.29	19.6	22.7	49	54.4	18.5	47.7	51.1
	3/8	**KQB2W13-N03S**	17.46		23.7	50.7	55.8			66
	1/2	**KQB2W13-N04S**	22.23			54.5	57.9			125.9

∗ Reference dimensions after installation of NPT thread
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.



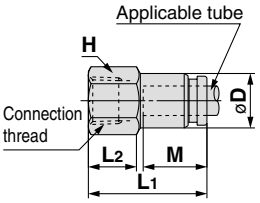
Applicable Tube: Inch Size, Connection Thread: UNF, NPT

Dimensions

Female Connector: KQB2F

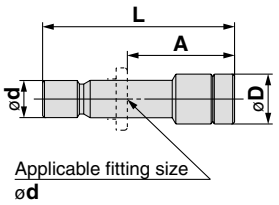
Applicable tube O.D. (inch)	Connection thread NPT	Model	H (Width across flat)	Note 1) øD	L1	L2	M	Note 2) Effective area (mm²)	Weight (g)
ø1/8"	1/8	**KQB2F01-N01**	12.7	8	24.1	10.4	12	3.4	11.3
	1/4	**KQB2F01-N02**	17.46		29.1	13.7			25.4
ø5/32"	1/8	**KQB2F03-N01**	12.7	8.7	24.6	10.5	12.6	5.6	11.8
	1/4	**KQB2F03-N02**	17.46		29.6	13.8			25.9
ø1/4"	1/8	**KQB2F07-N01**	12.7	11.2	25	10.7	13.5	13.1	13
	1/4	**KQB2F07-N02**	17.46		30	14.1			27.5
	3/8	**KQB2F07-N03**	22.23		31.2	14.6			41.1
ø5/16"	1/8	**KQB2F09-N01**	14.29	13.4	27.2	10.3	16.1	26.1	18.8
	1/4	**KQB2F09-N02**	17.46		32.2	14.3			30.1
	3/8	**KQB2F09-N03**	22.23		33.4	14.8			44
ø3/8"	1/4	**KQB2F11-N02**	17.46	16	32.1	14.4	16.6	41.5	32.9
	3/8	**KQB2F11-N03**	22.23		33.3	14.9			47
	1/2	**KQB2F11-N04**	23.81		38.6	18.6			50.4
ø1/2"	3/8	**KQB2F13-N03**	22.23	19.3	34.6	14.7	18.5	58.3	51.3
	1/2	**KQB2F13-N04**	23.81		39.9	18.8			55.1

Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.



Plug: KQB2P

Applicable fitting size ød	Model	øD	L	A	Weight (g)
ø1/8"	**KQB2P-01**	5	28.9	16.9	2.8
ø5/32"	**KQB2P-03**	6	29.6	17	4.3
ø1/4"	**KQB2P-07**	8	30.3	16.8	9.4
ø5/16"	**KQB2P-09**	10	33.7	17.6	16.3
ø3/8"	**KQB2P-11**	11	34.1	17.5	22.2
ø1/2"	**KQB2P-13**	14	36.4	17.9	40.7



Metal One-touch Fittings

Applicable Tube: Metric Size, Connection Thread: G

Series KQB2

RoHS

Applicable Tube

Tube material	FEP, PFA, Nylon, Soft nylon Note 1), Polyurethane, Polyolefin
Tube O.D.	ø4, ø6, ø8, ø10, ø12, ø16

Specifications

Fluid	Air, Water
Operating pressure range Note 2)	–100 kPa to 1 MPa Note 3)
Proof pressure	3.0 MPa
Ambient and fluid temperature Note 4)	–5 to 150°C (No freezing) Note 3)
Lubricant	Grease-free specification
Seal on the threads	With sealant

Note 1) For soft nylon tube, water cannot be used.
Note 2) Avoid using in a vacuum holding application such as a leak tester, since there is leakage.
Note 3) Check the operating pressure range and operating temperature range of the tube.
Note 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

Tube	Temperature
FEP tube/TH series	80°C or more
PFA tube/TL series	120°C or more

Spare Parts

Description	Tube O.D.	Part no.	Material
Bulkhead nut	ø4	**KQB223-P01**	C3604 (Electroless nickel plated)
	ø6	**KQB206-P01**	
	ø8	**KQB208-P01**	
	ø10	**KQB210-P01**	
	ø12	**KQB212-P01**	
	ø16	**KQB216-P01**	

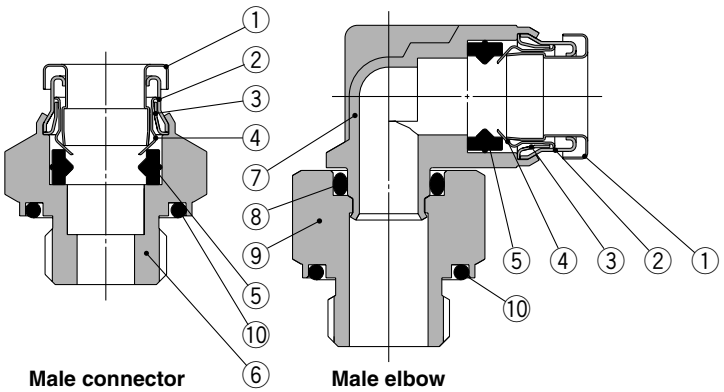
Description	Thread size	Part no.	Material
G thread O-ring	G1/8	**KQB2-G01**	Special FKM (Fluoro coated)
	G1/4	**KQB2-G02**	
	G3/8	**KQB2-G03**	
	G1/2	**KQB2-G04**	

Cross Reference Table of the Inner Sleeve

Tube O.D.	Tube material			Applicable inner sleeve	
	TUS (Soft polyurethane)	**TH/TIH** (FEP)	**TL/TIL** (PFA)	Part no.	Length
ø4	—	TH0402	—	**TJ-0402**	18
	TUS0425	TH0425	—	**TJ-0425**	18
	—	—	TL0403	**TJ-0403**	18
ø6	TUS0604	TH0604	TL0604	**TJ-0604**	19
ø8	TUS0805	—	—	**TJ-0805**	20.5
	—	TH0806	TL0806	**TJ-0806**	20.5
ø10	TUS1065	—	—	**TJ-1065**	23
	—	TH1075	—	**TJ-1075**	23
	—	TH1008	TL1008	**TJ-1008**	23
ø12	TUS1208	—	—	**TJ-1208**	24
	—	TH1209	—	**TJ-1209**	24
	—	TH1210	TL1210	**TJ-1210**	24

∗ C2700 + Electroless nickel plated is used for the TJ series.

Construction



Male connector **Male elbow**

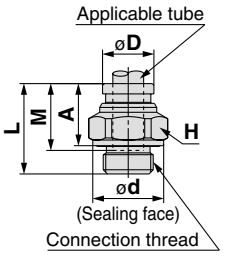
Component Parts

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**	Special FKM (Fluoro coated)
6	**Male connector body**	C3604 (Electroless nickel plated)
7	**Male elbow body**	Stainless steel 316
8	**O-ring**	Special FKM (Fluoro coated)
9	**Stud**	C3604 (Electroless nickel plated)
10	**G thread O-ring**	Special FKM (Fluoro coated)

Dimensions

Male Connector: KQB2H

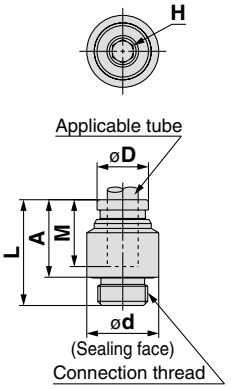
Applicable tube O.D. (mm)	Connection thread G	Model	H (Width across flat)	Note 1) øD	ød	L	A	M	Note 2) Effective area (mm²)	Weight (g)
ø4	1/8	KQB2H04-G01	14	8.7	13.8	16.6	11.1	12.6	5.6	9.2
	1/4	KQB2H04-G02	19		17.8	20.6	14.1			23.6
ø6	1/8	KQB2H06-G01	14	11.1	13.8	17.6	12.1	13.6	13.1	8.9
	1/4	KQB2H06-G02	19		17.8	20.5	14			21.6
	3/8	KQB2H06-G03	22		21.8	23.4	15.9			38.3
ø8	1/8	KQB2H08-G01	14	13.4	13.8	23.9	18.4	16.1	26.1	13.2
	1/4	KQB2H08-G02	19		17.8	21.2	14.7			19.1
	3/8	KQB2H08-G03	22		21.8	24	16.5			35.2
ø10	1/8	KQB2H10-G01	17	16.4	13.8	25.1	19.6	17	26.1	19.9
	1/4	KQB2H10-G02	19		17.8	24.9	18.4		41.5	24.8
	3/8	KQB2H10-G03	22		21.8	23.3	15.8			30.9
	1/2	KQB2H10-G04	27		26.5	27.7	18.7			64.4
ø12	1/4	KQB2H12-G02	19	18.5	17.8	27.7	21.2	18.6	58.3	26.3
	3/8	KQB2H12-G03	22		21.8	23.5	16			25.5
	1/2	KQB2H12-G04	27		26.5	27.9	18.9			58
ø16	3/8	KQB2H16-G03	24	24.6	21.8	31.3	23.8	20.8	81	44.5
	1/2	KQB2H16-G04	27		26.5	27.3	18.3		113	43



Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.

Hexagon Socket Head Male Connector: KQB2S

Applicable tube O.D. (mm)	Connection thread G	Model	H (Width across flat)	Note 1) øD	ød	L	A	M	Note 2) Effective area (mm²)	Weight (g)
ø4	1/8	KQB2S04-G01	3	14	14	20.4	14.9	12.6	4.1	13.5
ø6	1/8	KQB2S06-G01	4	14	14	20.6	15.1	13.6	10	12.1
	1/4	KQB2S06-G02		18	18		14.1		10.7	19.9
ø8	1/8	KQB2S08-G01	5	14	14	23.9	18.4	16.1	17.2	12.5
	1/4	KQB2S08-G02	6	18	18	22.9	16.4		23.3	20.1
	3/8	KQB2S08-G03		22	22	23.1	15.6			31.1
ø10	1/8	KQB2S10-G01	5	17	14	25.1	19.6	17	17.2	18.5
	1/4	KQB2S10-G02	8	18	18	24.9	18.4		39	20.4
	3/8	KQB2S10-G03		22	22	24	16.5			31.2
	1/2	KQB2S10-G04		27	26.5		15			45.3
ø12	1/4	KQB2S12-G02	8	19	18	27.7	21.2	18.6	46	23.6
	3/8	KQB2S12-G03	10	22	22	24.9	17.4		60	27.4
	1/2	KQB2S12-G04		27	26.5		15.9			42.6
ø16	3/8	KQB2S16-G03	10	24.6	22	31.3	23.8	20.8	81	41
	1/2	KQB2S16-G04	12	27	26.5	27.8	18.8		113	42.9



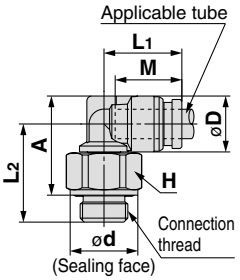
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.

Dimensions

Male Elbow: KQB2L

Applicable tube O.D. (mm)	Connection thread G	Model	H (Width across flat)	Note 1) øD	ød	L1	L2	A	M	Note 2) Effective area (mm²)	Weight (g)
ø4	1/8	KQB2L04-G01	14	9.1	13.8	14.4	18.9	17.9	12.6	4.2	15.6
	1/4	KQB2L04-G02	19		17.8		22.3	20.3			33
ø6	1/8	KQB2L06-G01	14	11.4	13.8	15.9	20	20.2	13.6	11.4	17.2
	1/4	KQB2L06-G02	19		17.8		23.4	22.6			34.6
	3/8	KQB2L06-G03	22		21.8		25.9	24.1			54.5
ø8	1/8	KQB2L08-G01	14	13.7	13.8	18.6	21.3	22.6	16.1	21.6	20.2
	1/4	KQB2L08-G02	19		17.8	19.1	24.7	25			36
	3/8	KQB2L08-G03	22		21.8		27.2	26.5			55.6
ø10	1/8	KQB2L10-G01	14	16.6	13.8	20	22.7	25.5	17	21.6	25.7
	1/4	KQB2L10-G02	19		17.8	21	26.1	27.9		35.2	38.2
	3/8	KQB2L10-G03	22		21.8		28.6	29.4			56.2
	1/2	KQB2L10-G04	27		26.5		32.6	31.9			97.9
ø12	1/4	KQB2L12-G02	19	18.7	17.8	22.6	27.2	30	18.6	50.2	41.9
	3/8	KQB2L12-G03	22		21.8	23.6	29.6	31.4			54.3
	1/2	KQB2L12-G04	27		26.5		33.6	33.9			94.6
ø16	3/8	KQB2L16-G03	22	24.6	21.8	26.3	32.4	36.5	20.8	71	64.7
	1/2	KQB2L16-G04	27		26.5	27.3	36.4	39		100	95.7

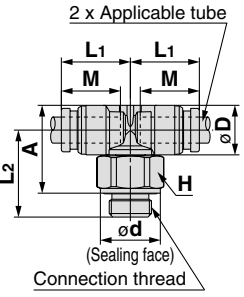
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.



Male Branch Tee: KQB2T

Applicable tube O.D. (mm)	Connection thread G	Model	H (Width across flat)	Note 1) øD	ød	L1	L2	A	M	Note 2) Effective area (mm²)	Weight (g)
ø4	1/8	KQB2T04-G01	14	9.1	13.8	14.4	18.9	17.9	12.6	6	17.5
	1/4	KQB2T04-G02	19		17.8		22.3	20.3			34.9
ø6	1/8	KQB2T06-G01	14	11.4	13.8	15.9	20	20.2	13.6	13.9	21
	1/4	KQB2T06-G02	19		17.8		23.4	22.6			38
	3/8	KQB2T06-G03	22		21.8		25.9	24.1			57.9
ø8	1/8	KQB2T08-G01	14	13.7	13.8	18.6	21.3	22.6	16.1	26.3	25.6
	1/4	KQB2T08-G02	19		17.8	19.1	24.7	25			41.2
	3/8	KQB2T08-G03	22		21.8		27.2	26.5			60.8
ø10	1/8	KQB2T10-G01	14	16.6	13.8	20	22.7	25.5	17	40.8	34
	1/4	KQB2T10-G02	19		17.8	21	26.1	27.9			46
	3/8	KQB2T10-G03	22		21.8		28.6	29.4			64
	1/2	KQB2T10-G04	27		26.5		32.6	31.9			105.8
ø12	1/4	KQB2T12-G02	19	18.7	17.8	22.6	27.2	30	18.6	57.2	53
	3/8	KQB2T12-G03	22		21.8	23.6	29.6	31.4			54.3
	1/2	KQB2T12-G04	27		26.5		33.6	33.9			105
ø16	3/8	KQB2T16-G03	22	24.6	21.8	26.3	32.4	36.5	20.8	71	82.2
	1/2	KQB2T16-G04	27		26.5	27.3	36.4	39		100	112.1

Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.

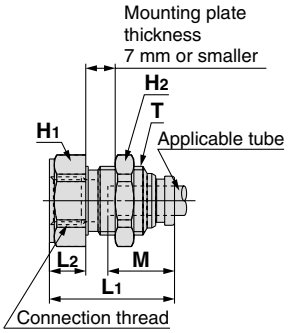


Dimensions

Bulkhead Connector: KQB2E

Applicable tube O.D. (mm)	Connection thread G	Model	T (M)	Width across flat H1	Width across flat H2	L1	L2	Mounting hole	M	Note) Effective area (mm²)	Weight (g)
ø4	1/8	KQB2E04-G01	M10 x 1	17	12	27.1	11	11	12.6	5.6	25.1
	1/4	KQB2E04-G02		19		32.7	16.6				36.9
ø6	1/8	KQB2E06-G01	M14 x 1	17	17	25.5	7.4	15	13.6	13.1	26.8
	1/4	KQB2E06-G02		19		33.5	15.4				42.7
	3/8	KQB2E06-G03		24		35	16.9				62
ø8	1/8	KQB2E08-G01	M15 x 1	17	19	27.6	8.2	16	16.1	26.1	30.4
	1/4	KQB2E08-G02		19		34.5	15.1				43.9
	3/8	KQB2E08-G03		24		36	16.6				66.2
ø10	1/4	KQB2E10-G02	M18 x 1	19	21	33.5	13.5	19	17	41.5	46.8
	3/8	KQB2E10-G03		24		35.6	15.6				65.4
ø12	3/8	KQB2E12-G03	M20 x 1	24	24	35.9	14.7	21	18.6	58.3	119.2
	1/2	KQB2E12-G04		27		42.2	21				91.9
ø16	3/8	KQB2E16-G03	M27 x 1	29	30	37.2	13.1	28	20.8	96	118.2
	1/2	KQB2E16-G04				43.1	19			113	128.7

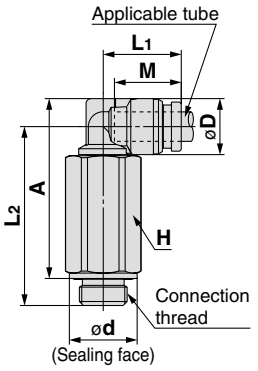
Note) Value of FEP tube.
Value of nylon tube for ø16 only.



Extended Male Union: KQB2W

Applicable tube O.D. (mm)	Connection thread G	Model	H (Width across flat)	Note 1) øD	ød	L1	L2	A	M	Note 2) Effective area (mm²)	Weight (g)
ø4	1/8	KQB2W04-G01	14	9.1	13.8	14.4	35.3	34.3	12.6	4	34.5
	1/4	KQB2W04-G02	19		17.8		38.7	36.7			70.6
ø6	1/8	KQB2W06-G01	14	11.4	13.8	15.9	36.4	36.6	13.6	10.9	36.1
	1/4	KQB2W06-G02	19		17.8		39.8	39			72.2
	3/8	KQB2W06-G03	22		21.8		42.3	40.5			106.7
ø8	1/8	KQB2W08-G01	14	13.7	13.8	18.6	40	41.3	16.1	20.5	41.3
	1/4	KQB2W08-G02	19		17.8	19.1	43.4	43.7			76.7
	3/8	KQB2W08-G03	22		21.8		45.9	45.2			112.9
ø10	1/4	KQB2W10-G02	19	16.6	17.8	21	49.8	51.6	17	33.5	84.8
	3/8	KQB2W10-G03	22		21.8		50.2	51			116.6
	1/2	KQB2W10-G04	27		26.5		54.2	53.5			196.6
ø12	1/4	KQB2W12-G02	19	18.7	17.8	22.6	50.9	53.7	18.6	47.7	88.7
	3/8	KQB2W12-G03	22		21.8	23.6	53.3	55.1			111.6
	1/2	KQB2W12-G04	27		26.5		57.3	57.6			193.8
ø16	3/8	KQB2W16-G03	22	24.6	21.8	26.3	62	66.1	20.8	71	133.6
	1/2	KQB2W16-G04	27		26.5	27.3	66	68.6		100	201.6

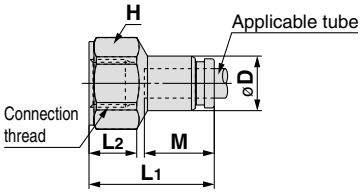
Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.



Female Connector: KQB2F

Applicable tube O.D. (mm)	Connection thread G	Model	H (Width across flat)	Note 1) øD	L1	L2	M	Note 2) Effective area (mm²)	Weight (g)
ø4	1/8	KQB2F04-G01	17	8.7	25	9.5	12.6	5.6	21
	1/4	KQB2F04-G02	19		30.6	14.5			32
ø6	1/8	KQB2F06-G01	17	11.1	25.5	9.7	13.6	13.1	22.6
	1/4	KQB2F06-G02	19		31.1	14.7			33
	3/8	KQB2F06-G03	24		32.6	14.6			51.1
ø8	1/8	KQB2F08-G01	17	13.4	27.6	10	16.1	26.1	25.1
	1/4	KQB2F08-G02	19		33.2	14.9			36.3
	3/8	KQB2F08-G03	24		34.6	14.7			53.8
ø10	1/4	KQB2F10-G02	19	16.4	33.5	15.2	17	41.5	39.9
	3/8	KQB2F10-G03	24		34.9	15			57.7
ø12	1/4	KQB2F12-G02	19	18.5	34.5	15.2	18.6	58.3	41.8
	3/8	KQB2F12-G03	24		35.9	15			59.7
	1/2	KQB2F12-G04	27		41.8	19.9			81.6
ø16	3/8	KQB2F16-G03	24	24.6	37.2	15.4	20.8	81	66.6
	1/2	KQB2F16-G04	27		43.1	20.4		113	89.1

Note 1) øD is maximum diameter.
Note 2) Value of FEP tube.
Value of nylon tube for ø16 only.



Series KQB2
Specific Product Precautions

Be sure to read before handling. Refer to back cover for Safety Instructions, "Handling Precautions for SMC Products" (M-E03-3) for Fittings and Tubing Precautions.

Selection

⚠Caution

1. **The surge pressure must be under the maximum operating pressure. If the surge pressure exceeds the maximum operating pressure, it will result in damage to fittings and tubes or the tube may result in being fallen out.**
2. **If using a fluororesin tube in an environment where the fluid temperature changes drastically, it is recommended to use an inner sleeve. Otherwise, air leakage may occur or the tube may release from fitting due to deformation of the tube.**
3. **The particle generation of the KQB2 series depends on the operating conditions and operating environment. If you are concerned about the effects on machinery and equipment, check the particle generation with your machine before use.**

   The components of the KQB2 series may slide due to changes in the internal pressure, which may generate particles. When using male elbow, male branch tee, and extended male elbow fittings, particles may be generated by rotation for positioning after connecting.

Mounting

⚠Caution

1. **The union elbow, union tee, union "Y", different diameter tee, and different diameter union "Y" fittings should be fixed through the mounting hole.**

   Otherwise, air leakage or breaking can occur due to a pulling force or moment load created by the product's weight.
2. **The male elbow, male branch tee, and extended male elbow fittings can be rotated for positioning, but they cannot be used rotating.**

   This will cause metal debris by wearing, which may enter the operating fluid or cause fitting damage.
3. **Keep the connection part of fittings and tubes from rotating or oscillating movement.**

Installation and Removal of Tube

⚠Caution

1. **Installation of tube**
   1) Grease is not used for the KQB2 series, therefore a greater insertion force is required when the tube is installed. In particular, polyurethane tube may fold when inserted due to its softness. Hold the end of the tube, and insert it all the way in slowly and securely. Refer to dimension "M" in the dimension drawings for guidance on the insertion depth of tube.
2. **Removal of tube**
   1) For tube used at a high temperature or for an extended period of time, there is a possibility that it will not fit into a one-touch fitting again due to an enlarged O.D. Dispose of the tube and replace it with a new one.

G Thread Fittings

⚠Caution

1. **The standard thread torques of the fittings are as shown in the below table.**

Connection thread size	Proper tightening torque N·m
G1/8	2.9 to 3.2
G1/4	5.7 to 6.3
G3/8	9.5 to 10.5
G1/2	14.3 to 15.8

⚠ Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of **"Caution," "Warning"** or **"Danger."** They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)*1), and other safety regulations.

⚠ Caution: **Caution** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

⚠ Warning: **Warning** indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

⚠ Danger : **Danger** indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

*1) ISO 4414: Pneumatic fluid power – General rules relating to systems.
ISO 4413: Hydraulic fluid power – General rules relating to systems.
IEC 60204-1: Safety of machinery – Electrical equipment of machines.
(Part 1: General requirements)
ISO 10218-1: Manipulating industrial robots - Safety.
etc.

⚠ Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.
Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalog information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment.
The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.
1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.
1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalog.
3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

⚠ Caution

1. The product is provided for use in manufacturing industries.
The product herein described is basically provided for peaceful use in manufacturing industries.
If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary.
If anything is unclear, contact your nearest sales branch.

Limited warranty and Disclaimer/ Compliance Requirements

The product used is subject to the following "Limited warranty and Disclaimer" and "Compliance Requirements".
Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered.*2)
Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided.
This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalog for the particular products.

*2) **Vacuum pads are excluded from this 1 year warranty.**
A vacuum pad is a consumable part, so it is warranted for a year after it is delivered.
Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

⚠ Safety Instructions	Be sure to read "Handling Precautions for SMC Products" (M-E03-3) before using.

SMC Corporation
Akihabara UDX 15F,
4-14-1, Sotokanda, Chiyoda-ku, Tokyo 101-0021, JAPAN
Phone: 03-5207-8249 Fax: 03-5298-5362
URL http://www.smcworld.com

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