

Series (21-)KPQ/KPG

Clean one-touch fittings
For drive system air piping



Series (21-) KPQ

Brass
(Electroless nickel plated)
Release button color:
Light gray



Series KPG

Stainless steel (SUS304)
Release button color:
Light blue

Recommended applicable tubing

Tubing material	Polyurethane: Series 10-
Tubing O.D.	ø4, ø6, ø8, ø10, ø12

Polyurethane tubing Series TU, Nylon tubing Series T, and Soft nylon tubing Series TS can also be used. However, the degree of cleanliness will decline.

Specifications

Particle generation grade	Grade 1 (Refer to front matter pages 13 to 22 for details.) ^{Note 1)}
Grease	Fluorine grease (21-: Lithium soap based grease)
Fluid	Air
Maximum operating pressure (20°C)	1 MPa ^{Note 2)}
Operating vacuum pressure	−100 kPa
Proof pressure (20°C)	3 MPa
Ambient and fluid temperature	−5°C to 60°C
Threads	JIS B0203 (Taper thread for piping)

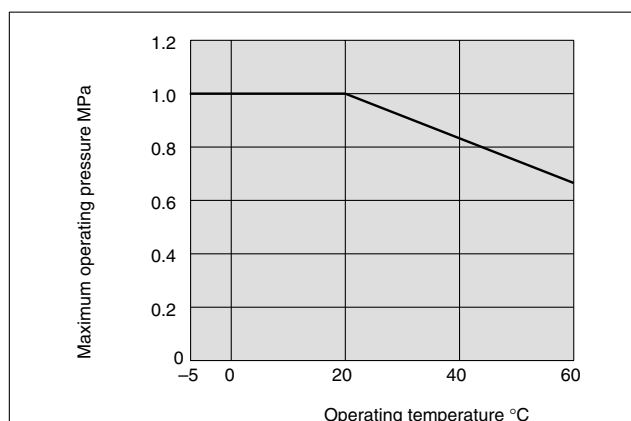
Note 1) This falls outside of the grade because grease is applied to the internal seal materials.

Note 2) The maximum operating pressure is the value at 20°C.

Principal Parts Material

Model	Series (21-)KPQ	Series KPG
Body	Polypropylene resin	
Stud	Brass (Electroless nickel plated)	Stainless steel 304
Chuck	Stainless steel 304	
Guide, Stopper	Brass (Electroless nickel plated)	Stainless steel 304
Collet, Release button	Polypropylene resin	
Seal, O-ring, Bumper	NBR	

Relationship between operating temperature and maximum operating pressure



Dimensions

Male connector: (21-)KPQH, KPGH

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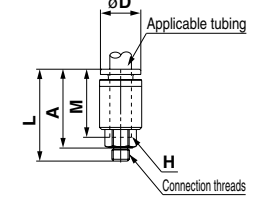
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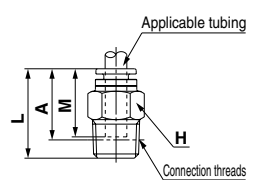
Applicable tubing O.D. (mm)	Connection thread R	Model		H (width across flats)	øD	L	A *	M	Effective area (mm ²)		Weight (g)
									TPH	TPS	
4	M5	(21-) KPQH04-M5	—	8	10	25.4	22.5	18	4	4	4
		—	KPGH04-M5			25.9					7
	1/8	(21-) KPQH04-01	KPGH04-01	10	—	25.4	19.5		10	10	14
	1/4	(21-) KPQH04-02	KPGH04-02	14	—	22.9	17				12
6	M5	(21-) KPQH06-M5	—	8	12	26.3	23	19.5	4	4	5
		—	KPGH06-M5			26.8					7
	1/8	(21-) KPQH06-01	KPGH06-01	12	—	25.6	19.5		10	10	14
	1/4	(21-) KPQH06-02	KPGH06-02	14	—	26.1	20				14
8	1/8	(21-) KPQH08-01	KPGH08-01	14	—	32.6	26.5	21.5	26	18	14
	1/4	(21-) KPQH08-02	KPGH08-02			30.6	24.5				13
	1/4	(21-) KPQH10-02	KPGH10-02	17	—	37.6	31.5	24	41	29	24
	3/8	(21-) KPQH10-03	KPGH10-03			33	26.5				23
12	3/8	(21-) KPQH12-03	KPGH12-03	19	—	34.1	27.5	25	58	46	23
	1/2	(21-) KPQH12-04	KPGH12-04	22	—	34.1	26				46

* Reference dimension for R threads after installation

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Male Elbow: (21-)KPQL, KPGL

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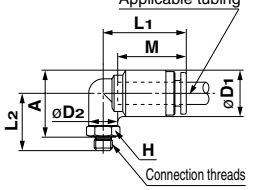
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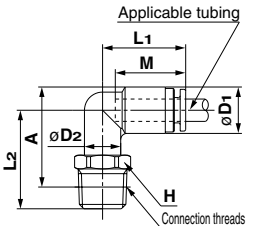
Applicable tubing O.D. (mm)	Connection thread R	Model		H (width across flats)	øD ₁ (Note 1)	øD ₂	L ₁	L ₂	A *	M	Effective area (mm ²)		Weight (g)
											TPH	TPS	
4	M5	(21-)KPQL04-M5	KPGL04-M5	8	10.4	8	20.7	15.3	17	18	4	4	4
		(21-)KPQL04-01	KPGL04-01	10		10		22	21				10
	1/4	(21-)KPQL04-02	KPGL04-02	14	10	8	22.8	26	25		3.5	3.5	19
	M5	(21-)KPQL06-M5	KPGL06-M5	8				15.8	18.5				6
6	1/8	(21-)KPQL06-01	KPGL06-01	10	12.8	10	22.8	23.2	23.5	19.5	9	9	12
		(21-)KPQL06-02	KPGL06-02	14				27.2	27.5				20
	1/4	(21-)KPQL08-01	KPGL08-01	12	15.2	12	26.3	24.4	26		26	18	13
	1/4	(21-)KPQL08-02	KPGL08-02	14				28.4	30				21
10	1/4	(21-)KPQL10-02	KPGL10-02	17	18.5	17	29.4	29.9	33	24	41	29	26
		(21-)KPQL10-03	KPGL10-03					31.9	34.5				36
	3/8	(21-)KPQL12-03	KPGL12-03	20.9	17	31.4	31.4	33.1	37		58	46	38
	1/2	(21-)KPQL12-04	KPGL12-04					37.1	39.5				65

* Reference dimension for R threads after installation
Note 1) øD₁ indicates the maximum diameter.

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Union Tee: (21-)KPQT, KPQT

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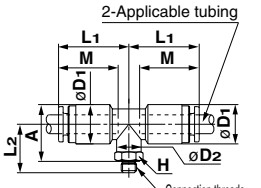
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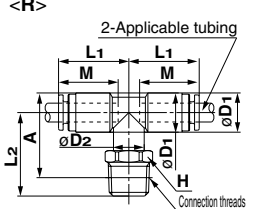
Applicable tubing O.D. (mm)	Connection thread R	Model		H (width across flats)	øD ₁ (Note 1)	øD ₂	L ₁	L ₂	A *	M	Effective area (mm ²)		Weight (g)
											TPH	TPS	
4	M5	(21-)KPQT04-M5	KPQT04-M5	8	10.4	8	20.7	15.3	17	18	4	4	6
		(21-)KPQT04-01	KPQT04-01	10		10		22	21				13
	1/4	(21-)KPQT04-02	KPQT04-02	14	10	8	22.8	26	25		4.5	4.5	19
	M5	(21-)KPQT06-M5	KPQT06-M5	8				15.8	18.5				7
6	1/8	(21-)KPQT06-01	KPQT06-01	10	12.8	10	22.8	23.2	23.5	19.5	10	10	14
		(21-)KPQT06-02	KPQT06-02	14				27.2	27.5				20
	1/4	(21-)KPQT08-01	KPQT08-01	12	15.2	12	26.3	24.4	26		26	18	14
	1/4	(21-)KPQT08-02	KPQT08-02	14				28.4	30				22
10	1/4	(21-)KPQT10-02	KPQT10-02	17	18.5	17	29.4	29.9	33	24	41	29	29
		(21-)KPQT10-03	KPQT10-03					31.9	34.5				39
	3/8	(21-)KPQT12-03	KPQT12-03	20.9	17	31.4	31.4	33.1	37		58	46	41
	1/2	(21-)KPQT12-04	KPQT12-04					37.1	39.5				38

* Reference dimension for R threads after installation
Note 1) øD₁ indicates the maximum diameter.

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Dimensions

Male Run Tee: (21-)KPQY, KPGY

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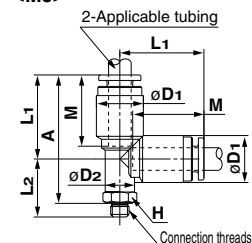


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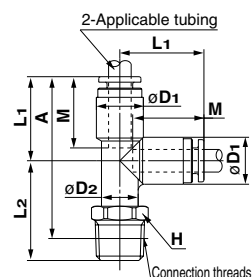
Applicable tubing O.D. (mm)	Connection thread R	Model		H (width across flats)	øD1 Note 1)	øD2	L1	L2	A *	M	Effective area (mm ²)		Weight (g)
											TPH	TPS	
4	M5	(21-)KPQY04-M5	KPGY04-M5	8	10.4	8	20.7	15.3	32.5	18	4	4	6
	1/8	(21-)KPQY04-01	KPGY04-01	10				22	36.5				13
	1/4	(21-)KPQY04-02	KPGY04-02	14				26	40.5				19
6	M5	(21-)KPQY06-M5	KPGY06-M5	8	12.8	8	22.8	15.8	35	19.5	10	10	7
	1/8	(21-)KPQY06-01	KPGY06-01	10				23.2	40				14
	1/4	(21-)KPQY06-02	KPGY06-02	14				27.2	44				20
8	1/8	(21-)KPQY08-01	KPGY08-01	12	15.2	12	26.3	24.4	44.5	21.5	26	18	14
	1/4	(21-)KPQY08-02	KPGY08-02	14				28.4	48.5				22
10	1/4	(21-)KPQY10-02	KPGY10-02	17	17	17	29.4	29.9	53.5	24	41	29	29
	3/8	(21-)KPQY10-03	KPGY10-03					31.9	55				39
12	3/8	(21-)KPQY12-03	KPGY12-03	22	20.9	17	31.4	33.1	58	25	58	46	41
	1/2	(21-)KPQY12-04	KPGY12-04					37.1	60.5				68

* Reference dimension for R threads after installation.
Note 1) øD1 indicates the maximum diameter.

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Male Branch: (21-)KPQU, KPGU

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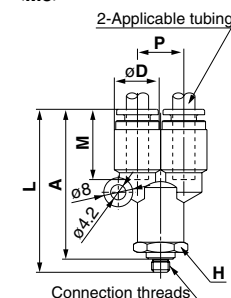


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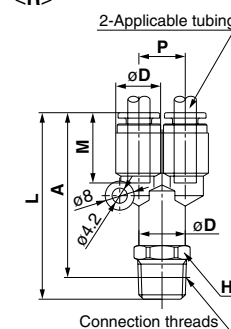
Applicable tubing O.D. (mm)	Connection thread R	Model		H (width across flats)	øD Note 1)	L	P	A *	M	Effective area (mm ²)		Weight (g)
										TPH	TPS	
4	M5	(21-)KPQU04-M5	KPGU04-M5	11	10.4	41.7	10.4	38	18	4	4	10
	1/8	(21-)KPQU04-01	KPGU04-01	10		44.2		38				11
	1/4	(21-)KPQU04-02	KPGU04-02	14		48.2		42				20
6	M5	(21-)KPQU06-M5	KPGU06-M5	13	12.8	44.9	12.8	41.5	19.5	10	10	12
	1/8	(21-)KPQU06-01	KPGU06-01	13		47.4		41.5				11
	1/4	(21-)KPQU06-02	KPGU06-02	14		51.4		45.5				21
8	1/8	(21-)KPQU08-01	KPGU08-01	17	15.2	55.5	15.2	49.5	21.5	26	18	15
	1/4	(21-)KPQU08-02	KPGU08-02			60.6		54.5				23
10	1/4	(21-)KPQU10-02	KPGU10-02	19	18.5	63.8	18.5	58	24	41	29	30
	3/8	(21-)KPQU10-03	KPGU10-03			61.3		55				40
12	3/8	(21-)KPQU12-03	KPGU12-03	22	20.9	67	20.9	60.5	25	58	46	40
	1/2	(21-)KPQU12-04	KPGU12-04			71.4		63.5				65

* Reference dimension for R threads after installation.
Note 1) øD indicates the maximum diameter.

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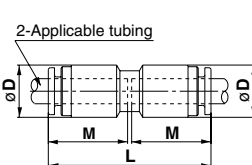


Straight Union: (21-)KPQH, KPGH



Applicable tubing O.D. (mm)	Model		øD Note 1)	L	M	Effective area (mm ²)		Weight (g)
						TPH	TPS	
4	(21-)KPQH04-00	KPGH04-00	10.4	37.4	18	4	4	4
6	(21-)KPQH06-00	KPGH06-00	12.8	39.6	19.5	10	10	6
8	(21-)KPQH08-00	KPGH08-00	15.2	44.4	21.5	26	18	10
10	(21-)KPQH10-00	KPGH10-00	18.5	48.6	24	41	29	15
12	(21-)KPQH12-00	KPGH12-00	20.9	50.6	25	58	46	18

Note 1) øD indicates the maximum diameter.



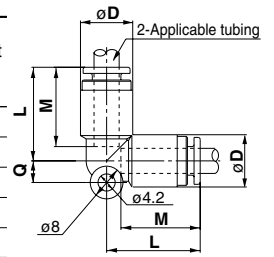
Dimensions

Elbow: (21-)KPQL, KPGL



Applicable tubing O.D. (mm)	Model		øD Note 1)	L	Q	M	Effective area (mm ²)		Weight (g)
							TPH	TPS	
4	(21-)KPQL04-00	KPGL04-00	10.4	20.7	4.5	18	3.5	3.5	3
6	(21-)KPQL06-00	KPGL06-00	12.8	22.8	5.3	19.5	9	9	7
8	(21-)KPQL08-00	KPGL08-00	15.2	26.3	6	21.5	22	15	11
10	(21-)KPQL10-00	KPGL10-00	18.5	29.4	6.8	24	35	25	16
12	(21-)KPQL12-00	KPGL12-00	20.9	31.4	7.5	25	50	40	20

Note 1) øD indicates the maximum diameter.

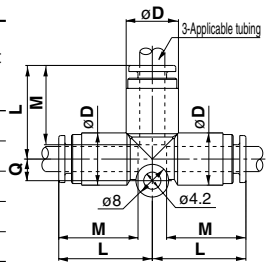


Union Tee: (21-)KPQT, KPGT



Applicable tubing O.D. (mm)	Model		øD Note 1)	L	Q	M	Effective area (mm ²)		Weight (g)
							TPH	TPS	
4	(21-)KPQT04-00	KPGT04-00	10.4	20.7	4.5	18	4	4	7
6	(21-)KPQT06-00	KPGT06-00	12.8	22.8	5.3	19.5	10	10	9
8	(21-)KPQT08-00	KPGT08-00	15.2	26.3	6	21.5	26	18	16
10	(21-)KPQT10-00	KPGT10-00	18.5	29.4	6.8	24	41	29	25
12	(21-)KPQT12-00	KPGT12-00	20.9	31.4	7.5	25	58	46	29

Note 1) øD indicates the maximum diameter.

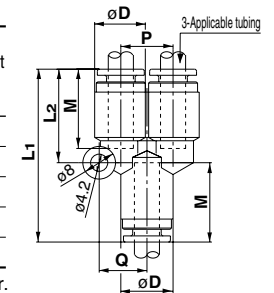


Union "Y": (21-)KPQU, KPQU



Applicable tubing O.D. (mm)	Model		øD Note 1)	L ₁	L ₂	P	Q	M	Effective area (mm ²)		Weight (g)
									TPH	TPS	
4	(21-)KPQU04-00	KPGU04-00	10.4	38.8	20.6	10.4	9.7	18	4	4	7
6	(21-)KPQU06-00	KPGU06-00	12.8	42.1	22.8	12.8	11.7	19.5	10	10	10
8	(21-)KPQU08-00	KPGU08-00	15.2	48.7	27.5	15.2	13.7	21.5	26	18	17
10	(21-)KPQU10-00	KPGU10-00	18.5	54	30.7	18.5	16.1	24	41	29	26
12	(21-)KPQU12-00	KPGU12-00	20.9	57.2	32.9	20.9	18.1	25	58	46	32

Note 1) øD indicates the maximum diameter.

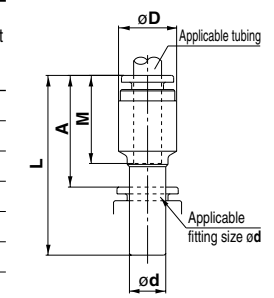


Plug-in reducer: (21-)KPQR, KPGR



Applicable tubing O.D. (mm)	Applicable fitting size ød	Model		øD Note 1)	L	A	M	Effective area (mm ²)		Weight (g)
								TPH	TPS	
4	6	(21-)KPQR04-06	KPGR04-06	10.4	39.4	20.1	18	4	4	3
	8	(21-)KPQR04-08	KPGR04-08		41.9	20.2				4
6	8	(21-)KPQR06-08	KPGR06-08	12.8	42.5	20.8	19.5	10	10	4
	10	(21-)KPQR06-10	KPGR06-10		45	21.2				5
8	10	(21-)KPQR08-10	KPGR08-10	15.2	47	23.2	21.5	26	18	5
	12	(21-)KPQR08-12	KPGR08-12		48	23.2				6
10	12	(21-)KPQR10-12	KPGR10-12	18.5	50.5	25.7	24	41	29	9

Note 1) øD indicates the maximum diameter.



Plug: (21-)KPP



Applicable fitting size ød	Model	øD	L	A	Weight (g)
4	(21-)KPP-04	6	32	13.8	0.4
6	(21-)KPP-06	8	35	15.7	0.7
8	(21-)KPP-08	10	39	17.3	1.1
10	(21-)KPP-10	12	43	19.2	1.7
12	(21-)KPP-12	14	45.5	20.7	2.5

* The plug is common for series KPQ, KPG and KP.

