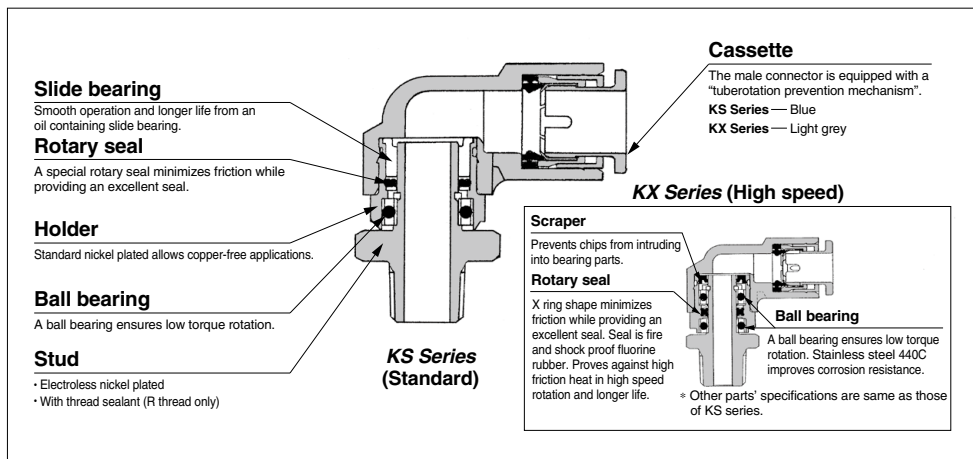


Rotary One-touch Fittings Standard Type/High Speed Type **KS/KX Series**

RoHS



**Low torque rotation type
Rotary One-touch fittings**
**Applicable to use for
oscillating and rotating
sections in robots.**
Copper-free specifications
**Brass parts are all
electroless nickel plated.**
Sealant is standard.



Applicable Tubing

Tubing material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø4, ø6, ø8, ø10, ø12

Specifications

Fluid	Air
Operating pressure range ⁽¹⁾	—100 kPa to 1 MPa
Proof pressure	3 MPa
Ambient and fluid temperature	—5 to 60°C (No freezing)
Thread	JIS B 0203 (Taper thread for piping), JIS B 0205 (Metric coarse thread)

Note 1) Please avoid using in a vacuum holding application such as a leak tester, since there is leakage.
Also, when using in a vacuum, grease may enter the inside due to the nature of its construction.

Rotating Torque/Allowable Number of Rotations

Applicable tubing O.D.	ø4	ø6	ø8	ø10	ø12
Rotating torque (N·m) ⁽²⁾	0.006	0.012	0.014	0.020	0.022
Allowable number of rotations(S ⁻¹) ⁽³⁾	KS Series KX Series	8.4 25	8.4 20	6.7 20	5 16.7

Note 2) Rotating torque under pressure 0.5 MPa

Note 3) Number of rotations per second

Principal Parts Material

Principal parts	KS Series	KX Series
Body	PBT	
Stud, Holder, Guide	C3604 (Electroless nickel plated), Stainless steel 304	
Chuck, Retainer	Stainless steel (Stainless steel 304) (Retainer (C) of KX series: C3604 (electroless nickel plated))	
Collet, Release button, Retaining ring	Polyacetal	
O-ring, Packing	NBR	
Rotary seal	NBR	FKM
Slide bearing	Oil-containing polyacetal	
Scraper	—	
Ball bearing	Bearing steel	Stainless steel 440C
Gasket	Stainless steel 304, NBR	

KS Series/KX Series

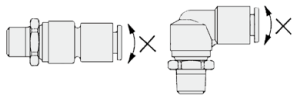
Model	Connection thread	Applicable tubing O.D. (mm)				
		ø4	ø6	ø8	ø10	ø12
Male connector KSH KXH	M5 x 0.8	●	●			
	M6 x 1	●	●			
	R 1/8	●	●	●		
	R 1/4		●	●	●	
	R 3/8			●	●	●
	R 1/2				●	●
Male elbow KSL KXL	M5 x 0.8	●	●			
	M6 x 1	●	●			
	R 1/8	●	●	●		
	R 1/4		●	●	●	
	R 3/8			●	●	●
	R 1/2				●	●

⚠ Precautions

Be sure to read this before handling the products.
Refer to back page 50 for Safety Instructions and pages 13 to 17 for Fittings and Tubing Precautions.

⚠ Caution

1. Implement the tube piping in such a way that lateral load should not be applied on the ball bearings at the rotating part, otherwise it may adversely affect the life expectancy.
A flexible polyurethane tube is recommended when lateral load is applied.



2. Do not use in an environment where it will be exposed to water.
Contact with water will cause outflow of the lubricating oil used in the ball bearings, and adversely affect rotating performance and equipment lifespan.
3. Fluorine grease is used on the rotating portions.

KQ2

KQB2

KS
KX

KM

KF

M

H/DL
L/LL

KC

KK

KK130

DM

KDM

KB

KR

KA

KQG2

KG

KFG2

MS

KKA

KP

LQ

MQR

T

IDK

KS/KX Series

Male connector: KSH (Standard)

<M5, M6>



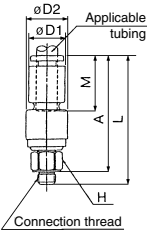
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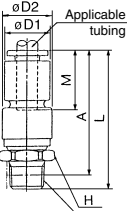
Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	D1	D2	L	A *	M	Min. port size	Effective area (mm ²) Nylon Urethane		Weight (g)					
4	M5 x 0.8	KSH04-M5	8	10.4	12	36.5	33	16	2.5	4.0	4.0	9					
	M6 x 1	KSH04-M6				37											
	1/8	KSH04-01S	12			37.1	34										
6	M5 x 0.8	KSH06-M5	8	12.8	14	37.5	33.5	17	2.5	4.0	4.0	12					
	M6 x 1	KSH06-M6				38	34										
	1/8	KSH06-01S	14			38.6	35.5	4	10.4	10.4	17						
	1/4	KSH06-02S				42	36.5										
8	1/8	KSH08-01S	17	15.2	17	43.1	40	18.5	6	26.1	18.0	23					
	1/4	KSH08-02S				46.5	41										
	3/8	KSH08-03S				46.9	41.5						21	7	36.3	29.5	63
	1/2	KSH10-04S				56.6	49.5										
10	3/8	KSH10-03S	22	18.5	22	53.9	48.5	21	7	36.3	29.5	61					
	1/2	KSH10-04S				56.6	49.5										
	3/4	KSH10-05S				55.9	50.5										
12	1/2	KSH12-04S	24	20.9	24	59.1	52	22	8	46.1	46.1	75					
	3/4	KSH12-03S				59.1	50.5										

* Reference dimensions after R thread installation.

<M5, M6>



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Male Connector: KXH (High speed)

<M5, M6>



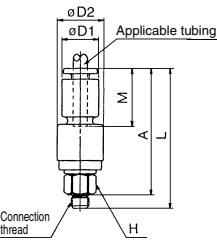
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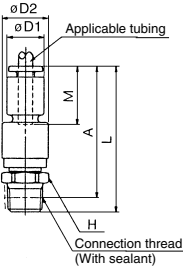
Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	D1	D2	L	A *	M	Min. port size	Effective area (mm ²) Nylon Urethane	Weight (g)	
4	M5 x 0.8	KXH04-M5	8	10.4	13	38.5	35	16	2.5	4.0	4.0	
	M6 x 1	KXH04-M6				39						
	1/8	KXH04-01S	12			39.1	36					
6	M5 x 0.8	KXH06-M5	8	12.8	15.5	39.5	36	17	2.5	4.0	4.0	
	M6 x 1	KXH06-M6				40						
	1/8	KXH06-01S	14			41.1	38	4	10.4	10.4		
	1/4	KXH06-02S				44.5	39					
8	1/8	KXH08-01S	17	15.2	18	45.1	42	18.5	6	26.1	18.0	
	1/4	KXH08-02S				48.5	43					
	3/8	KXH08-03S				48.9	44					
	1/2	KXH08-04S				57.5	52					
10	3/8	KXH10-03S	22	18.5	24.5	57.9	53	21	7	36.3	29.5	
	1/2	KXH10-04S				61.1	53					
	3/4	KXH10-05S				58.9	54					
	1/2	KXH12-04S				62.1	55					
12	3/8	KXH12-03S	24	20.9	27.5	56.9	55	22	8	46.1	46.1	
	1/2	KXH12-04S										

* Reference dimensions after R thread installation.

<M5, M6>



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Union Elbow: KSL (Standard)

<M5, M6>



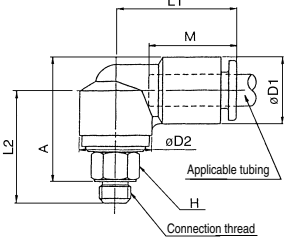
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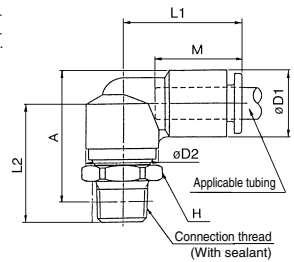
Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	D1	D2	L1	L2	A *	M	Min. port size	Effective area (mm ²)		Weight (g)
4	M5 x 0.8	KSL04-M5	8	10.4	12	21	20.5	22	16	2.5	3.5	3.5	9
	M6 x 1	KSL04-M6	12				21						
	1/8	KSL04-01S	12				21.1						
6	M5 x 0.8	KSL06-M5	8	12.8	14	23	21	23.5	17	2.5	3.5	3.5	12
	M6 x 1	KSL06-M6	14				21.5						
	1/8	KSL06-01S	14				22.1						
8	M5 x 0.8	KSL08-M5	8	17	17	26	25.5	26.5	4	8.6	8.6	17	23
	1/4	KSL08-01S	17				29						
	3/8	KSL08-03S	17				29.9						
10	M5 x 0.8	KSL10-M5	8	22	18.5	22	31.5	33.9	21	7	30.5	25.0	64
	1/4	KSL10-01S	22				33.5						
	3/8	KSL10-03S	22				37.1						
12	M5 x 0.8	KSL12-M5	8	24	20.9	24	34	35.4	22	8	35.1	35.1	76
	1/2	KSL12-01S	24				38.6						
	3/4	KSL12-04S	24				42						

* Reference dimensions after R thread installation.

<M5, M6>



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Male Elbow: KXL (High speed)

<M5, M6>



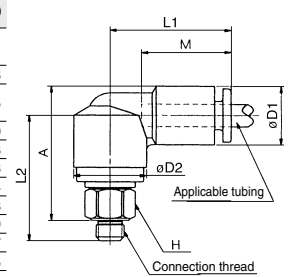
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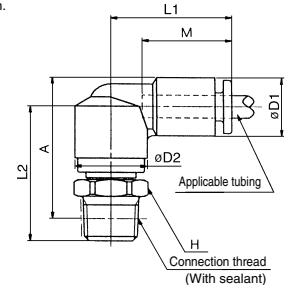
Applicable tubing O.D. (mm)	Connection thread R M	Model	H (width across flats)	D1	D2	L1	L2	A *	M	Min. port size	Effective area (mm ²)		Weight (g)
4	M5 x 0.8	KXL04-M5	8	10.4	13	22	22.5	24	16	2.5	3.5	3.5	11
	M6 x 1	KXL04-M6	12				23						
	1/8	KXL04-01S	12				23.1						
6	M5 x 0.8	KXL06-M5	8	12.8	15.5	24	23.5	26	17	2.5	3.5	3.5	15
	M6 x 1	KXL06-M6	14				24						
	1/8	KXL06-01S	14				24.1						
8	M5 x 0.8	KXL08-M5	8	17	15.2	18	27	31.5	18.5	6	21.6	14.9	34
	1/4	KXL08-01S	17				28.1						
	3/8	KXL08-03S	17				31.9						
10	M5 x 0.8	KXL10-M5	8	22	18.5	24.5	32	37.9	21	7	30.5	25.0	69
	1/4	KXL10-01S	22				37.5						
	3/8	KXL10-03S	22				41.1						
12	M5 x 0.8	KXL12-M5	8	24	20.9	27.5	35	42.1	22	8	35.1	35.1	89
	1/2	KXL12-01S	24				39.9						
	3/4	KXL12-04S	24				44						

* Reference dimensions after R thread installation.

<M5, M6>



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