

# Inch size Royary One-touch Fittings Standard type

## KS Series

Applicable Tubing: Inch Size

### Slide bearing

Smooth operation and longer life from an oil containing slide bearing.

### Rotary seal

A special rotary seal minimises friction while providing an excellent seal.

### Holder

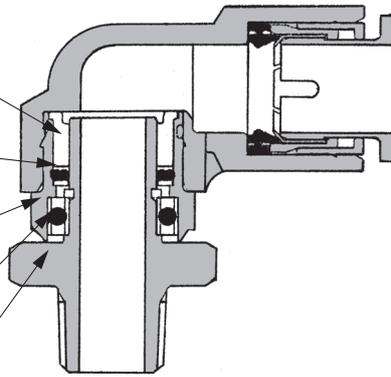
Standard nickel plated allows copper-free applications.

### Ball bearing

A ball bearing ensures low torque rotation.

### Stud

Threads are coated with a fluoropolymer based sealant for quick assembly.



### Cassette

The male connector is equipped with a "tube rotation prevention mechanism."

### Low torque rotation style Rotary One-touch fittings

Applicable to use for oscillating  
and rotating sections in robots.

Brass parts are all electroless  
nickel plated.

Thread sealant is standard.



Male elbow



Male connector

### Applicable Tubing

Tube material	FEP, PFA, Nylon, Soft nylon, Polyurethane
Tubing O. D.	Ø 5/32", Ø 1/4", Ø 5/16", Ø 3/8"

### Specifications

Fluid	Air
Operating Pressure range <sup>1)</sup>	-100 kPa to 1 MPa
Proof pressure	3 MPa
Ambient and fluid temperature	-5 to 60 °C (No freezing)
Thread	ANSI/ASME B1.20.1 B0203 (NPT thread) JIS B 0212 (UNF thread)

### Rotating Torque/Allowable Number of Rotations

Applicable tubing O. D.	Ø 5/32"	Ø 1/4"	Ø 5/16"	Ø 3/8"
Rotating torque (N·m) <sup>2)</sup>	0.006	0.012	0.014	0.020
Allowable number of rotations (S <sup>-1</sup> ) <sup>3)</sup>	8.3	8.3	6.7	5

\* 1 Rotating torque under pressure 0.5 MPa.

\* 2 Do not use the fittings with a leak tester or for vacuum retention because they are not guaranteed for zero leakage.

### Principal Parts Material

Principal parts	KS series
Body	PBT
Stud, Holder, Guide	Stainless steel 304, C3604 (with electroless nickel plated), PBT
Chuck, Retainer	Stainless steel 304
Collet, Release button, Retaining ring	Polycetal
O-ring, Packing	NBR
Rotary seal	NBR
Slide bearing	Oil-containing polycetal
Scraper	—
Ball bearing	Bearing steel
Gasket	Stainless steel 304, NBR

# KS Series

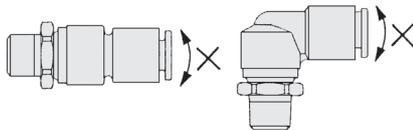
## KS Series

Model	Connection thread	Applicable tubing O.D. (inch)			
		Ø5/32 "	Ø1/4 "	Ø5/16 "	Ø3/8 "
Male connector <b>KSH</b> 	10-32 UNF	●			
	NPT 1/8	●	●	●	
	NPT 1/4		●	●	●
	NPT 3/8				●
Male elbow <b>KSL</b> 	10-32 UNF	●			
	NPT 1/8	●	●	●	
	NPT 1/4		●	●	●
	NPT 3/8				●

## 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 based grease is used on the rotating portions.

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## Male Connector: KSH (Standard)

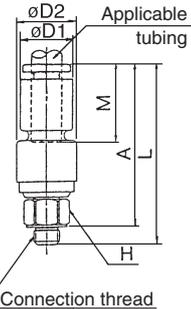
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Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	D1	D2	L	A *		M	Min. port size	Effective area (mm <sup>2</sup> )		Weight (g)
											Nylon	Urethane	
5/32	10-32 UNF	<b>KSH03-32</b>	8	10.4	12	36.5	33	33	16	2.5	4.0	4.0	9
	1/8	<b>KSH03-34S</b>	12.7				37.6	34.5					14
1/4	1/8	<b>KSH07-34S</b>	14.29	13.2	14	38.6	35.5	35.5	17	4	13.4	10.4	17
	1/4	<b>KSH07-35S</b>					42	36.5					23
5/16	1/8	<b>KSH09-34S</b>	17.46	15.2	17	43.1	40	40	18.5	6	26.1	18.0	23
	1/4	<b>KSH09-35S</b>					46.5	41					29
3/8	1/4	<b>KSH11-35S</b>	22.23	17.9	22	53.5	48	48	21	7	36.3	29.5	55
	3/8	<b>KSH11-36S</b>					53.9	48.5					63

\* Reference dimensions after NPT thread installation.

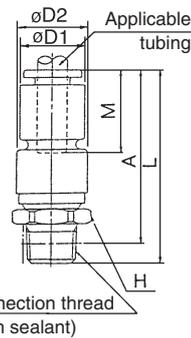
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## Male Elbow: KSL (Standard)

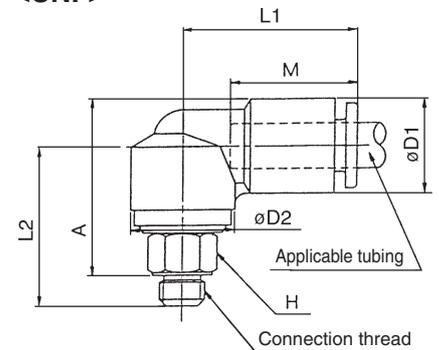
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Applicable tubing O.D. (inch)	Connection thread UNF NPT	Model	H (Width across flats)	D1	D2	L1	L2	A *		M	Min. port size	Effective area (mm <sup>2</sup> )		Weight (g)
												Nylon	Urethane	
5/32	10-32 UNF	<b>KSL03-32</b>	8	10.4	12	21	20.5	22	22	16	2.5	3.5	3.5	9
	1/8	<b>KSL03-34S</b>	12.7					21.1	23.5					14
1/4	1/8	<b>KSL07-34S</b>	14.29	13.2	14	23.5	22.1	25.5	25.5	17	4	8.6	8.6	17
	1/4	<b>KSL07-35S</b>						25.5	26.5					23
5/16	1/8	<b>KSL09-34S</b>	17.46	15.2	17	26	25.6	30	30	18.5	6	21.6	14.9	23
	1/4	<b>KSL09-35S</b>						29	31					29
3/8	1/4	<b>KSL11-35S</b>	22.23	17.9	22	31.5	33.5	37	37	21	7	30.5	25.0	56
	3/8	<b>KSL11-36S</b>						33.9	38					64

\* Reference dimensions after NPT thread installation.

<UNF>



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