

Shin Kwang Tech



SKT

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ROTARY JOINT

SKT
Shin Kwang Tech



Rotary Joint for **Machine Tools**

To provide the Highest design technology and **Know-How** from many years **experiences**.

Shin Kwang Tech

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ROTARY JOINT

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SRJ01-Type ROTARY JOINT

- ▶ Integrated type : developed for machine tools and special designated machine line which are Operated under condition of high rotating speed and pressure.
- ▶ During Rotary motion, high rotating speed and pressure make more friction and abrasion relevantly, SKT Rotary Joint confirms excellent performance and life time via the use of SKT own developed High quality Seal and up-to-date pressed-in methods.



SRJ 01 TYPE

SRJ 01 Axial type Selection chart

Model	Media	Pressure	Temperature	Max.Speed	Max.Flow
SRJ01-201-01	Coolant / Oil 	100 bar 10 bar	70°C	20,000 min ⁻¹	24 L/min
SRJ01-201-02					80 L/min
SRJ01-202-01				7,000 min ⁻¹	24 L/min
SRJ01-202-02				7,000 min ⁻¹	24 L/min
SRJ01-202-03				15,000 min ⁻¹	80 L/min
SRJ01-202-04				7,000 min ⁻¹	24 L/min
SRJ01-202-05				15,000 min ⁻¹	80 L/min
SRJ01-203-01				24,000 min ⁻¹	24 L/min
SRJ01-204-01				24,000 min ⁻¹	24 L/min

 SRJ 01 Radial type Selection chart

Model	Media	Pressure	Temperature	Max.Speed	Max.Flow
SRJ01-101-01	Coolant / Oil 	30 bar 10 bar	120°C	4,000 min ⁻¹	80 L/min
SRJ01-101-02					
SRJ01-101-03					
SRJ01-101-04					
SRJ01-201-11	Coolant / Oil 	100 bar 10 bar	70°C	20,000 min ⁻¹	24 L/min
SRJ01-201-12				80 L/min	
SRJ01-202-11				7,000 min ⁻¹	24 L/min
SRJ01-202-12				7,000 min ⁻¹	24 L/min
SRJ01-202-13				15,000 min ⁻¹	80 L/min
SRJ01-202-14				7,000 min ⁻¹	24 L/min
SRJ01-202-15				15,000 min ⁻¹	80 L/min
SRJ01-202-41				10,000 min ⁻¹	6.7 L/min
SRJ01-203-02				24,000 min ⁻¹	24 L/min
SRJ01-205-01				10,000 min ⁻¹	24 L/min



SRJ 03 TYPE

 SRJ 03 (2-PORT) Radial type Selection chart

Model	Media	Pressure	Temperature	Max.Speed	Max.Flow
SRJ03-101-01	Coolant / Oil Air	70 bar 10 bar	70°C	7,000 min ⁻¹	65 L/min



SRJ02-Type ROTARY JOINT

▶ Detachable type : developed for the machine tools application with growing high precision cutting technology which must endure the high pressure with high rotating speed.

▶ During Rotary motion, high rotating speed and pressure make more friction and abrasion relevantly, SKT Rotary Joint confirms excellent performance and life time via the use of SKT own developed High quality Seal and up-to-date pressed-in methods.



SRJ 02 TYPE

SRJ 02 Axial type Selection chart

Model	Media	Pressure	Temperature	Max.Speed	Max.Flow
SRJ02-101-01	Coolant / Oil 	100 bar 10 bar	70°C	40,000 min ⁻¹	26 L/min
SRJ02-101-02					26 L/min
SRJ02-102-01					48 L/min
SRJ02-103-01					20 L/min
SRJ02-103-02					20 L/min

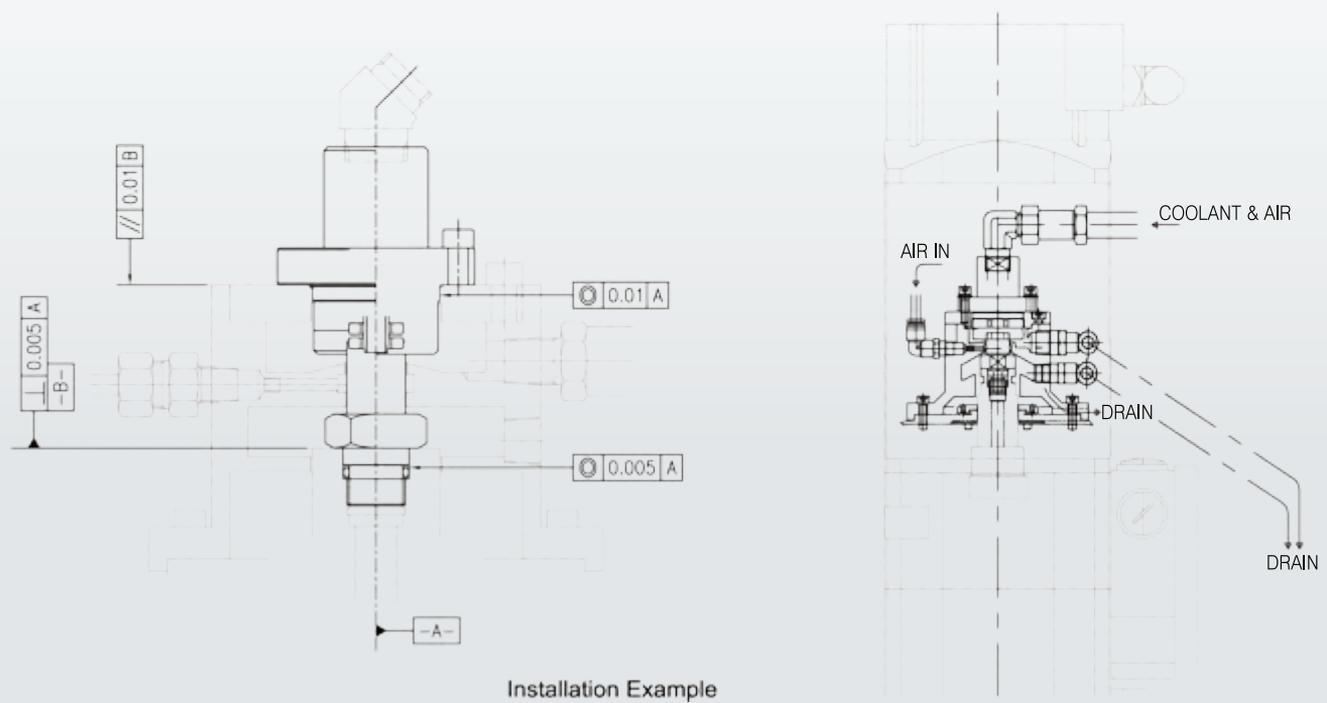
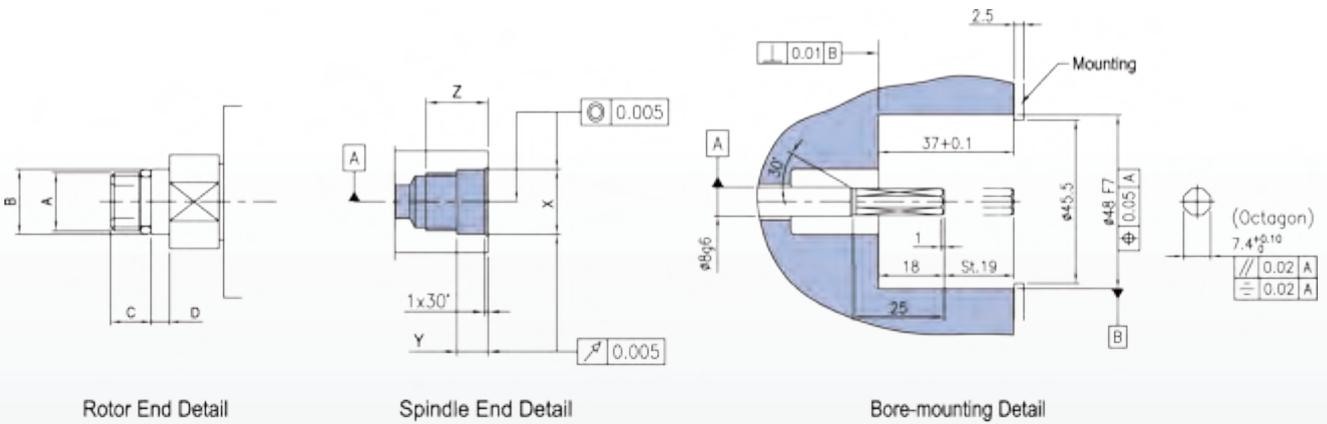
SRJ 02 Radial type Selection chart

Model	Media	Pressure	Temperature	Max.Speed	Max.Flow
SRJ02-101-11	Coolant / Oil 	100 bar 10 bar	70°C	40,000 min ⁻¹	26 L/min
SRJ02-101-12					



MOUNTING TOLERANCES

Rotor End				Spindle End			Tightening Torque	Remark
A	B	C	D	X	Y	Z		
M10 X 1.0 LH	10.994/10.989	11	3	11.007/10.997	6	15.5	10 Nm	
M12 X 1.25 LH	13.994/13.983	11	5	14.007/13.997	8.5	17	15 Nm	SRJ02-101-02
M12 X 1.25 LH	13.000/12.995	15	6	13.011/13.006	8.2	21	15 Nm	SRJ02-103-01
M16 X 1.5 LH	17.994/17.983	11	5	18.007/17.997	8.5	17	35 Nm	



SRJ 01-101



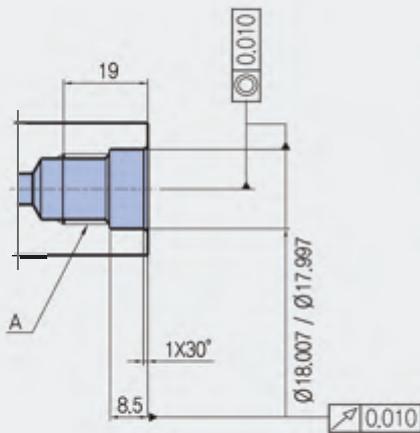
► Coolant / Pneumatic Rotary Joint

- Anodizing Aluminum Body.
- Stainless Steel Rotor due to resisting property for corrosion, abrasion, heat and cold condition

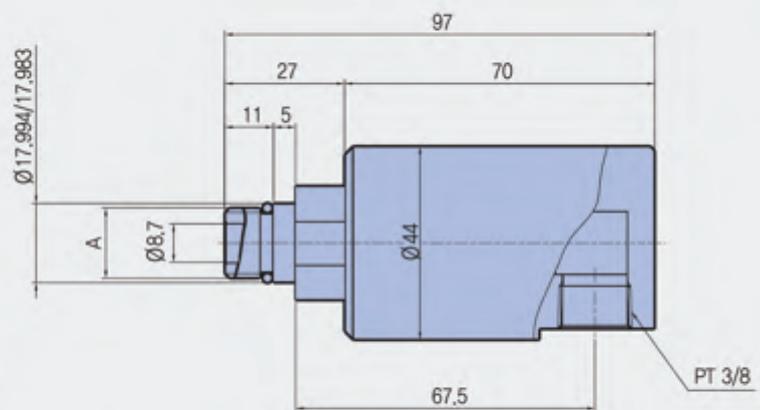


Operating Data

Max. Pressure : 30 bar (Air 10 bar)
 Max. Speed : 4,000 min⁻¹
 Media : Coolant, Air
 Max. Temperature : 120 °C
 Max. Flow : 80 L/min



Spindle Detail



Radial Connection

Model	A	Max. Flow
SRJ01-101-01	M16X 1.5 LH	80 L/min
SRJ01-101-02	M16X 2.0 RH	

SRJ 01-101

► Coolant / Pneumatic Rotary Joint

- Anodizing Aluminum Body.
- Stainless Steel Rotor due to resisting property for corrosion, abrasion, heat and cold condition



Operating Data

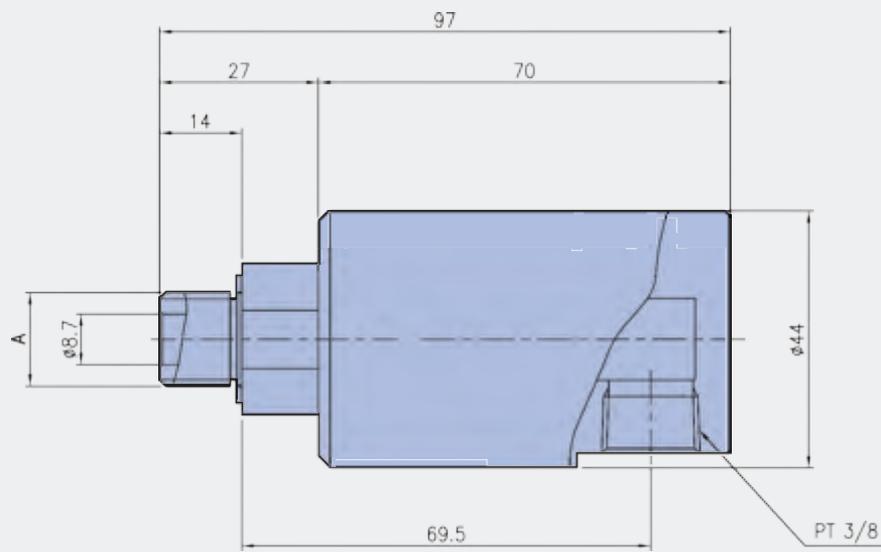
Max. Pressure : 30 bar (Air 10 bar)

Max. Speed : 4,000 min⁻¹

Media : Coolant, Air

Max. Temperature : 120 °C

Max. Flow : 80 L/min



Radial Connection



SRJ 01-101

Model	A	Max. Flow
SRJ01-101-03	M16 X 2.0 RH	80 L/min
SRJ01-101-04	5/8-18 UNF LH	

SRJ 01-201

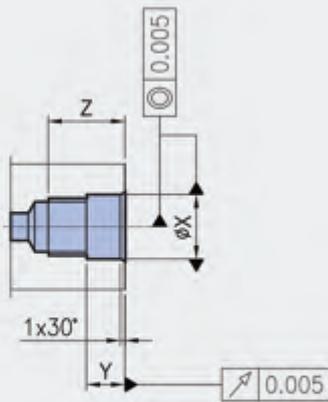


- Available for high speed operating without media, thanks to SKT own developed high quality Seal.
- Anodizing Aluminum Body.
- Silicon carbide Seal: long time endurable quality for harsh operating condition
- Stainless Steel Rotor due to resisting property for corrosion, abrasion, heat and cold condition
- DRY RUN available

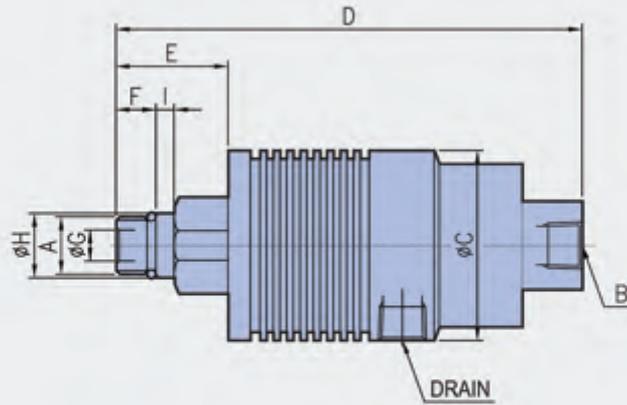


Operating Data

Max. Pressure : 100 bar
 Max. Speed : 20,000 min⁻¹
 Max. Temperature : 70 °C
 Max. Flow : 24 L/min, 80 L/min



Spindle Detail



Axial Connection

SRJ 01-201

Model	A	B	C	D	E	F	G	H	I
SRJ01-201-01	M16 X 1.5 LH	PT 1/4	53	132.9	31	11.1	8.7	17.993/17.988	5
SRJ01-201-02	M16 X 1.5 LH	PT 3/8	53	133.9	31	11.1	8.7	17.993/17.988	5

X	Y	Z	Max. Flow
18.007 / 17.997	8.5	17	24 L/min
18.007 / 17.997	8.5	17	80 L/min

SRJ 01-201

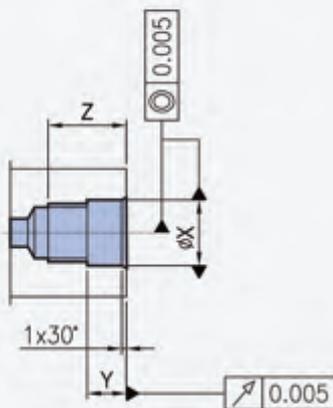


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- Silicon carbide Seal: long time endurable quality for harsh operating condition
- Stainless Steel Rotor due to resisting property for corrosion, abrasion, heat and cold condition
- DRY RUN available

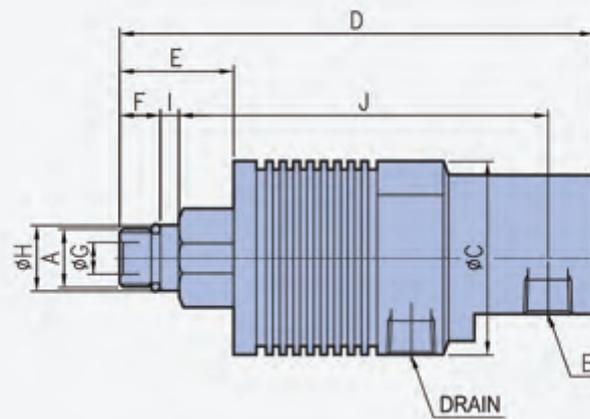


Operating Data

Max. Pressure : 100 bar
 Max. RPM : 20,000 min⁻¹
 Max. Temperature : 70 °C
 Max. Flow : 24 L/min, 80 L/min



Spindle Detail



Radial Connection



SRJ 01-201

Model	A	B	C	D	E	F	G	H	I
SRJ01-201-11	M16 X 1.5 LH	PT 1/4	53	132.9	31.4	11.1	8.7	17.993/17.988	5
SRJ01-201-12	M16 X 1.5 LH	PT 3/8	53	133.9	31.4	11.1	8.7	17.993/17.988	5

X	Y	Z	Max. Flow
18.007 / 17.997	8.5	17	24 L/min
18.007 / 17.997	8.5	17	80 L/min

SRJ 01-202

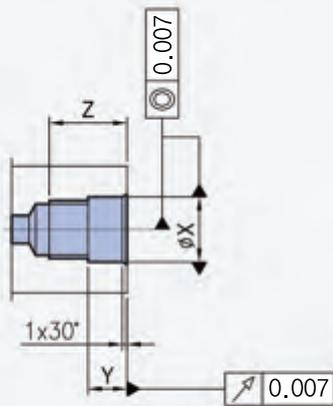


- Available for high speed operating without media, thanks to SKT own developed high quality Seal.
- Anodizing Aluminum Body.
- Silicon carbide Seal: long time endurable quality for harsh operating condition
- Stainless Steel Rotor due to resisting property for corrosion, abrasion, heat and cold condition
- DRY RUN See the table below.

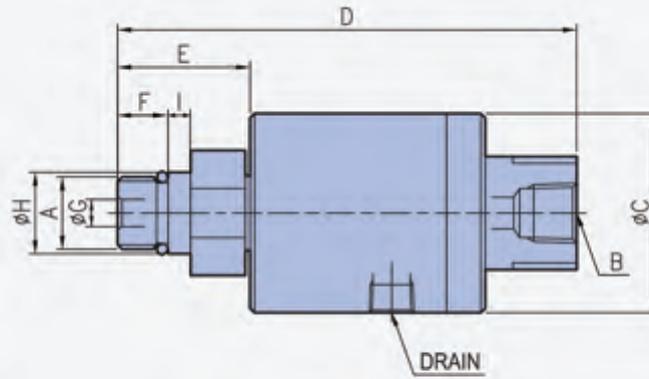


Operating Data

Max. Pressure : 100 bar
 Max. Speed : 7,000 min⁻¹, 15,000 min⁻¹
 Max. Temperature : 70 °C
 Max. Flow : 24 L/min, 80 L/min



Spindle Detail



Axial Connection

SRJ 01-202

Model	A	B	C	D	E	F	G	H	I
SRJ01-202-01	M16 X 1.5 LH	PT 1/4	44	100.5	29	11	6	17.994 / 17.983	5
SRJ01-202-02	M16 X 1.5 LH	PT 1/4	44	100.5	29	11	6	15.994 / 15.983	5
SRJ01-202-03	M16 X 1.5 LH	PT 3/8	44	100.5	28	11	9	15.994 / 15.983	5
SRJ01-202-04	5/8-18 UNF LH	PT 3/8	44	104.5	33	14	6	16.650 / 16.645	6
SRJ01-202-05	M16 X 1.5 LH	PT 3/8	44	100.5	28	11	9	17.994 / 17.983	5

Model	X	Y	Z	Max. Speed	Max. Flow	Max. Pressure	Dry Run
SRJ01-202-01	18.007 / 17.997	8.5	19	7,000 min ⁻¹	24 L/min	100 bar	No
SRJ01-202-02	16.007 / 15.997	8.5	19	7,000 min ⁻¹	24 L/min	100 bar	No
SRJ01-202-03	16.007 / 15.997	8.5	19	15,000 min ⁻¹	80 L/min	100 bar	Yes
SRJ01-202-04	16.650 / 16.645	9.5	22	7,000 min ⁻¹	24 L/min	100 bar	No
SRJ01-202-05	18.007 / 17.997	8.5	19	15,000 min ⁻¹	80 L/min	100 bar	Yes

SRJ 01-202

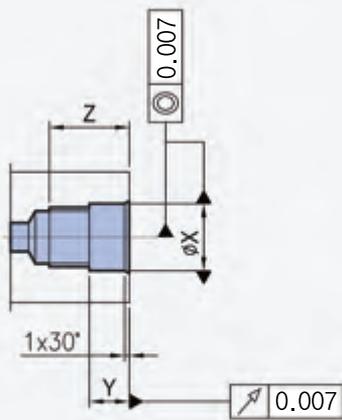


- Available for high speed operating without media, thanks to SKT own developed high quality Seal.
- Anodizing Aluminum Body.
- Silicon carbide Seal: long time endurable quality for harsh operating condition
- Stainless Steel Rotor due to resisting property for corrosion, abrasion, heat and cold condition
- DRY RUN See the table below.

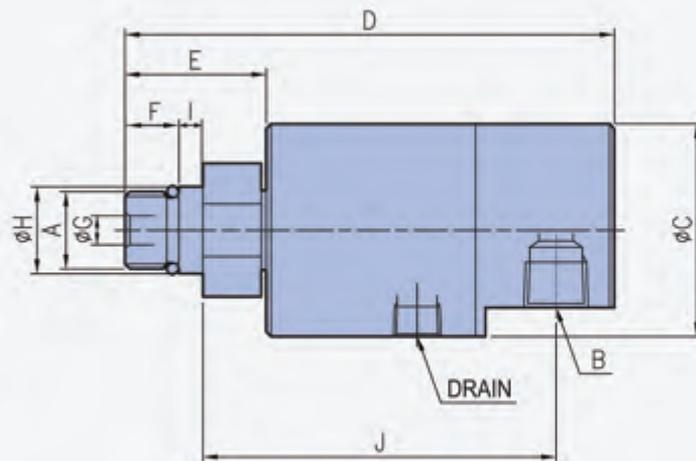


Operating Data

Max. Pressure : 100 bar
 Max. Speed : 7,000 min⁻¹, 15,000 min⁻¹
 Max. Temperature : 70 °C
 Max. Flow : 24 L/min, 80 L/min



Spindle Detail



Radial Connection



SRJ 01-202

Model	A	B	C	D	E	F	G	H	I
SRJ01-202-11	M16 X 1.5 LH	PT 1/4	44	100.5	29	11	6	17.994 / 17.983	5
SRJ01-202-12	M16 X 1.5 LH	PT 1/4	44	100.5	29	11	6	15.994 / 15.983	5
SRJ01-202-13	M16 X 1.5 LH	PT 3/8	44	106	28	11	9	15.994 / 15.983	5
SRJ01-202-14	5/8-18 UNF LH	PT 3/8	44	110	33	14	6	16.650 / 16.645	6
SRJ01-202-15	M16 X 1.5 LH	PT 3/8	44	106	28	11	9	17.994 / 17.983	5

Model	X	Y	Z	Max. Speed	Max. Flow	Max. Pressure	Dry Run
SRJ01-202-11	18.007 / 17.997	8.5	19	7,000 min ⁻¹	24 L/min	100 bar	No
SRJ01-202-12	16.007 / 15.997	8.5	19	7,000 min ⁻¹	24 L/min	100 bar	No
SRJ01-202-13	16.007 / 15.997	8.5	19	15,000 min ⁻¹	80 L/min	100 bar	Yes
SRJ01-202-14	16.660 / 16.653	9.5	22	7,000 min ⁻¹	24 L/min	100 bar	No
SRJ01-202-15	18.007 / 17.997	8.5	19	15,000 min ⁻¹	80 L/min	100 bar	Yes

★Please request for customized model and Subject to technical change without notice.

SRJ 01-202



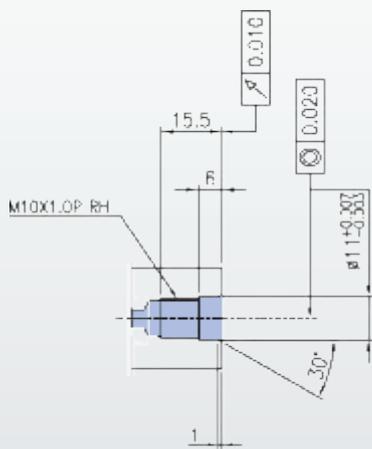
- Available for high speed operating without media, thanks to SKT own developed high quality Seal.
- Anodizing Aluminum Body.
- Silicon carbide Seal: long time endurable quality for harsh operating condition
- Stainless Steel Rotor due to resisting property for corrosion, abrasion, heat and cold condition
- No DRY RUN



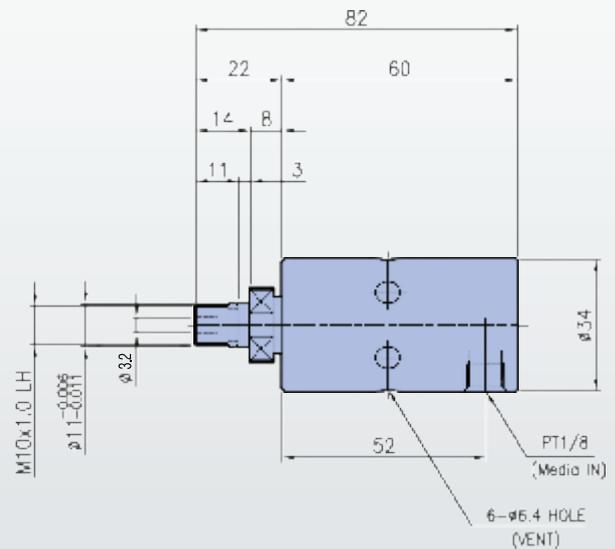
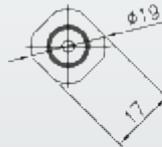
Operating Data

- Max. Pressure : 100 bar
- Max. Speed: 10,000 min⁻¹
- Max. Temperature : 70 °C
- Max. Flow : 6.7 L/min

SRJ 01-202-41



Spindle Detail



Radial Connection

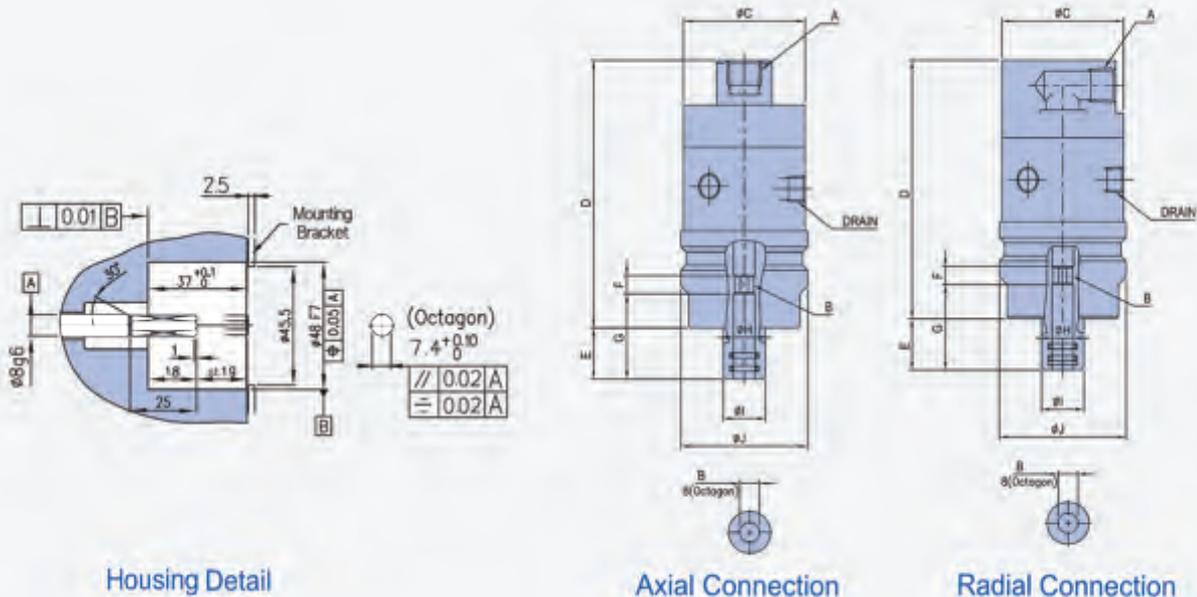
SRJ 01-203

- Available for high speed operating without media, thanks to SKT own developed high quality Seal.
- Silicon carbide Seal: long time durable quality for harsh operating condition
- Stainless Steel Body and Rotor due to resisting property for corrosion, abrasion, heat and cold condition
- DRY RUN available



Operating Data

Max. Pressure : 100 bar
 Max. Speed : 24,000 min⁻¹
 Max. Temperature : 70 °C
 Max. Flow : 24 L/min



SRJ 01-203

Model	Supply Direction	A	B	C	D	E	F	G
SRJ01-203-01	Axial Connection	PT 1/4	8 $\frac{7.4}{0}^{+0.1}$	46	102	19.5	7	32.5
SRJ01-203-02	Radial Connection	PT 1/4	8 $\frac{7.4}{0}^{+0.1}$	46	96	19.5	7	32.5

H	I	J
8.1 H7	16 $\frac{0}{-0.1}$	48 $\frac{-0.009}{-0.025}$
8.1 H7	16 $\frac{0}{-0.1}$	48 $\frac{-0.009}{-0.025}$

SRJ 01-204



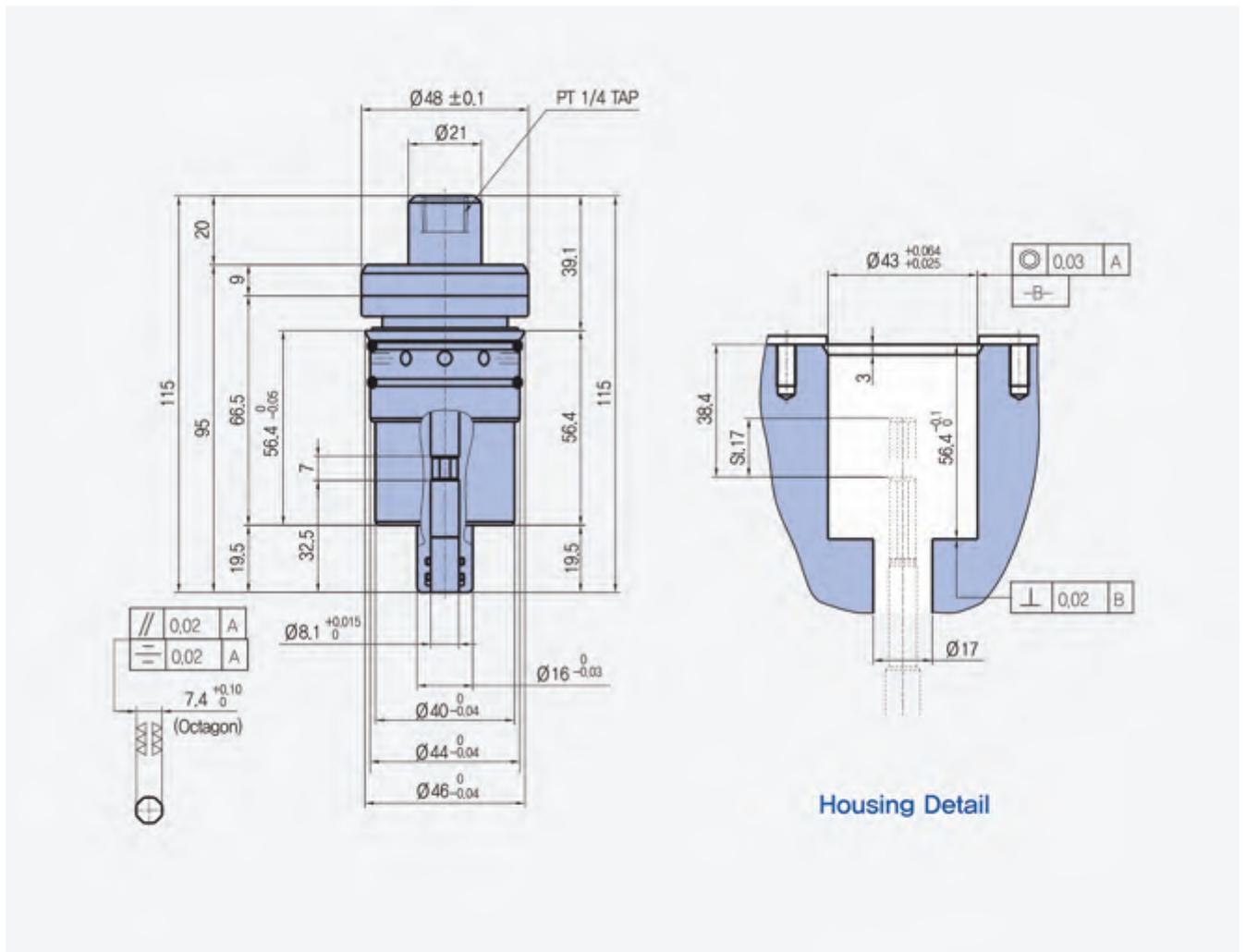
- Available for high speed operating without media, thanks to SKT own developed high quality Seal.
- Silicon carbide Seal: long time endurable quality for harsh operating condition
- Stainless Steel Body and Rotor due to resisting property for corrosion, abrasion, heat and cold condition
- DRY RUN available



Operating Data

Max. Pressure : 100 bar
 Max. Speed: 24,000 min⁻¹
 Media : Coolant, **Air** 
 Max. Temperature : 70 °C
 Max. Flow : 24 L/min

SRJ 01-204-01



SRJ 01-205

- Available for high speed operating without media, thanks to SKT own developed high quality Seal.
- Silicon carbide Seal: long time endurable quality for harsh operating condition
- Anodizing Aluminum Body.
- Stainless Steel Rotor due to resisting property for corrosion, abrasion, heat and cold condition
- DRY RUN available

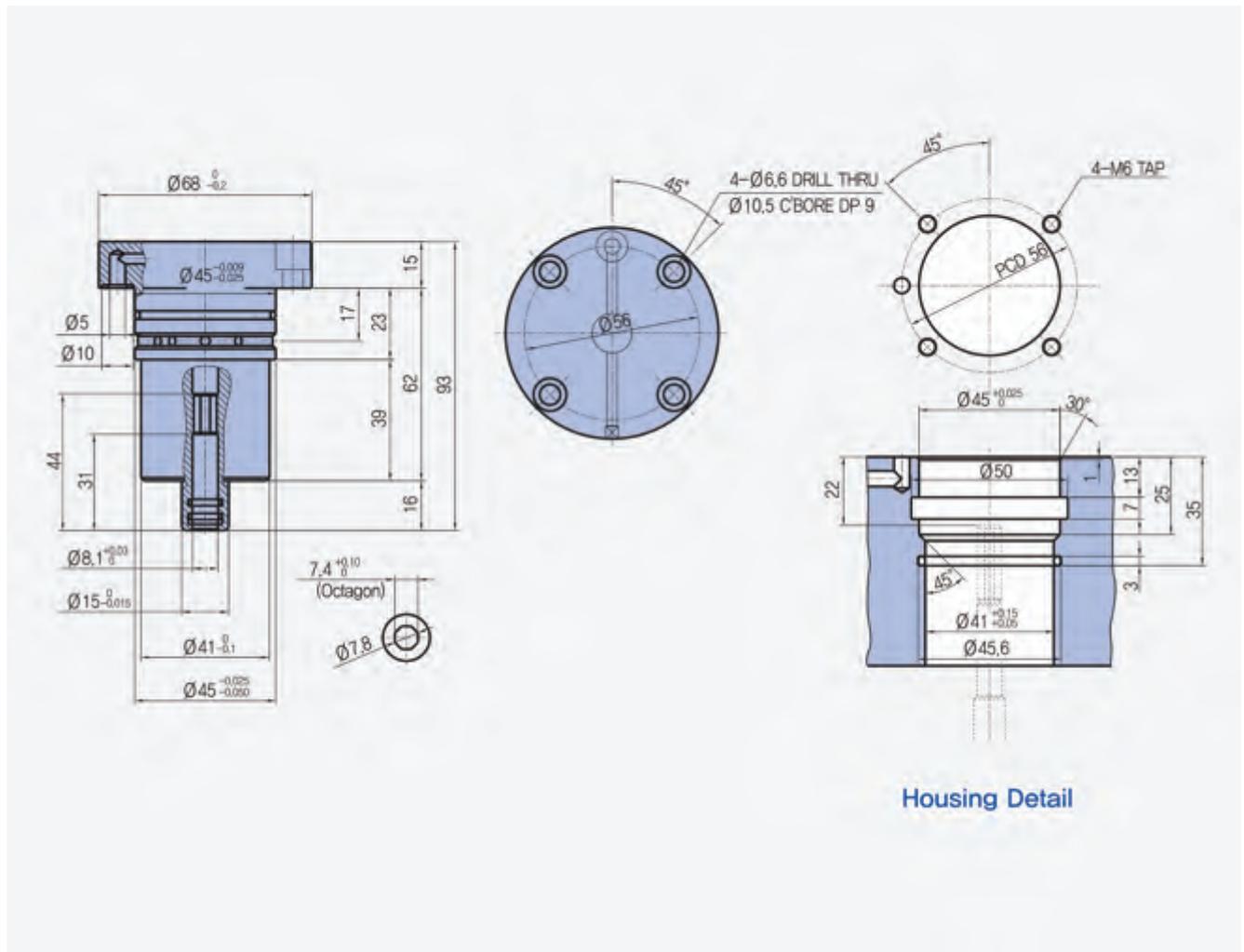


Operating Data

Max. Pressure : 100 bar (Air 10 bar)
 Max. Speed : 10,000 min⁻¹
 Media : Coolant, Air 
 Max. Temperature : 70 °C
 Max. Flow : 24 L/min



SRJ 01-205-01



SRJ 02-101

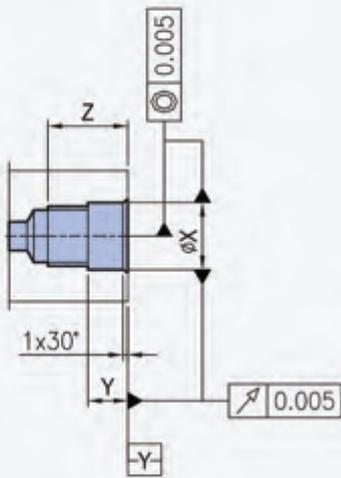


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- Silicon carbide Seal: long time endurable quality for harsh operating condition
- Stainless Steel Body and Rotor due to resisting property for corrosion, abrasion, heat and cold condition
- DRY RUN available

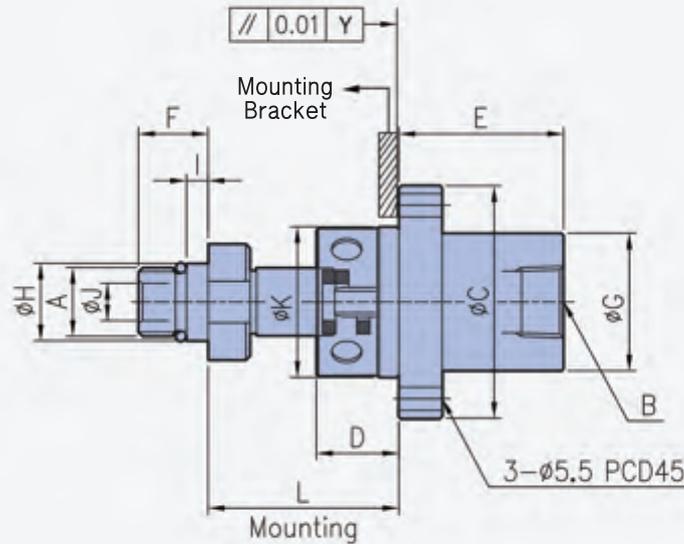


Operating Data

Max. Pressure : 100 bar
 Max. Speed: 40,000 min⁻¹
 Max. Temperature : 70 °C
 Max. Flow : 48 L/min



Spindle Detail



Axial Connection



SRJ 02-101

Model	A	B	C	D	E	F	G	H	I
SRJ02-101-01	M16 X 1.5 LH	PT 3/8	54	19	38	16	32	17.994 / 17.983	5
SRJ02-101-02	M12 X 1.25 LH	PT 3/8	54	19	38	16	32	13.994 / 13.983	5

J	K	L
8.7	35 ^{-0.1} _{-0.3}	41.5 ± 2.5
8.7	35 ^{-0.1} _{-0.3}	38 ± 2.5

X	Y	Z
18.007 / 17.997	8.5	17
14.007 / 13.997	8.5	17

SRJ 02-101

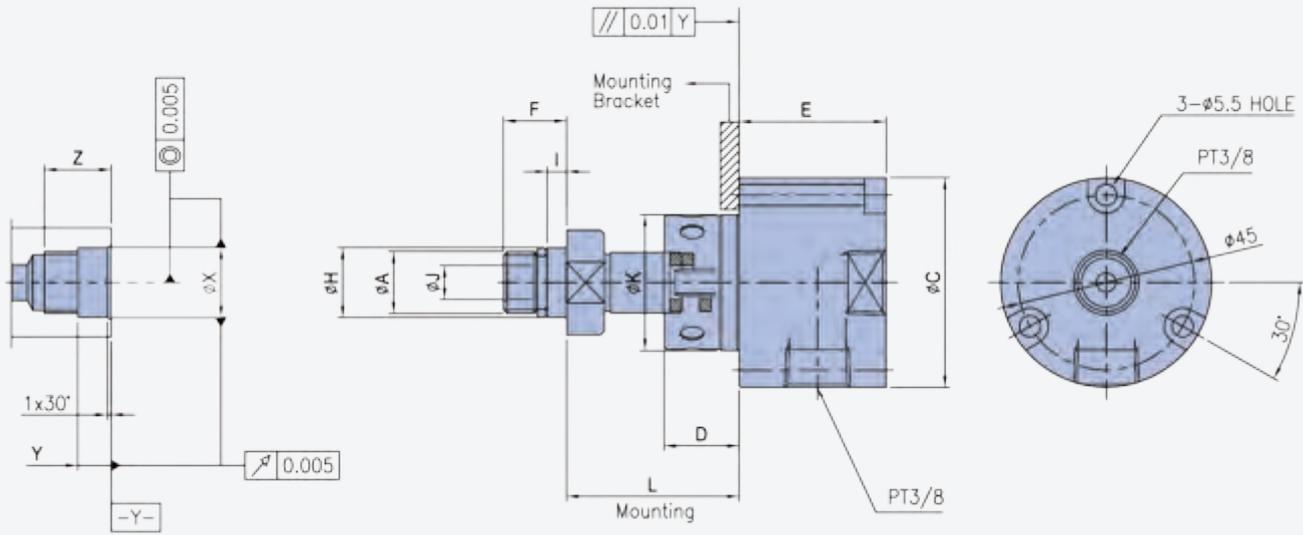


- Available for high speed operating without media, thanks to SKT own developed high quality Seal.
- Silicon carbide Seal: long time endurable quality for harsh operating condition
- Stainless Steel Body and Rotor due to resisting property for corrosion, abrasion, heat and cold condition
- DRY RUN available



Operating Data

Max. Pressure : 100 bar
 Max. Speed : 40,000 min⁻¹
 Max. Temperature : 70 °C
 Max. Flow : 48 L/min



Spindle Detail

Radial Connection



SRJ 02-101

Model	A	B	C	D	E	F	H	I
SRJ02-101-11	M12 X 1.25 LH	PT 3/8	54	19	37.5	16	13.994 / 13.983	5
SRJ02-101-12	M16 X 1.5 LH	PT 3/8	54	19	37.5	16	17.994 / 17.983	5

J	K	L
8.7	35 ^{-0.1} _{-0.3}	41.5 ± 2.5
8.7	35 ^{-0.1} _{-0.3}	38 ± 2.5

X	Y	Z
14.007 / 13.997	8.5	17
18.007 / 17.997	8.5	17

★Please request for customized model and Subject to technical change without notice.

SRJ 02-102

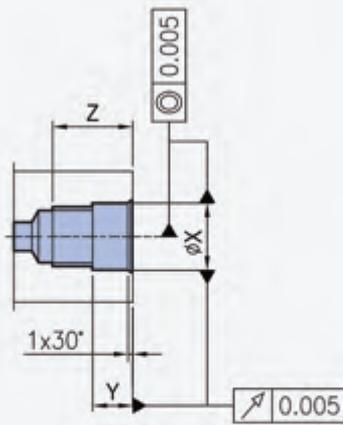


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- Stainless Steel Body and Rotor due to resisting property for corrosion, abrasion, heat and cold condition
- DRY RUN available

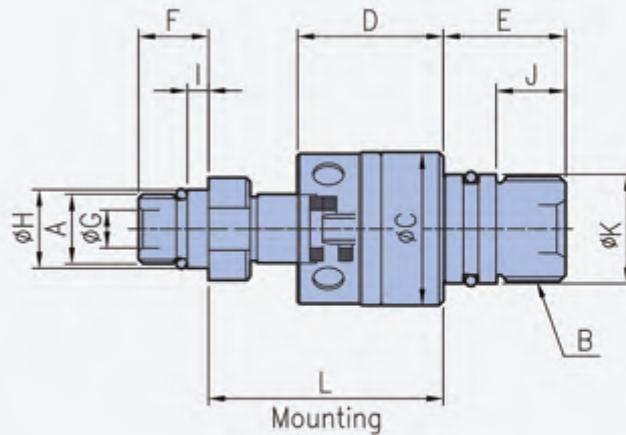


Operating Data

Max. Pressure : 100 bar
 Max. Speed: 40,000 min⁻¹
 Max. Temperature : 70 °C
 Max. Flow : 48 L/min



Spindle Detail



Axial Connection

SRJ 02-102

Model	A	B	C	D	E	F	G	H	I
SRJ02-102-01	M16 X 1.5 LH	M24 X 1.5 LH	35 ^{-0.1} _{-0.3}	33	27.8	16	8.7	17.994 / 17.983	5

J	K	L
15.8	25 ^{-0.009} _{-0.025}	52 ± 2.5

X	Y	Z
18.007 / 17.997	8.5	17

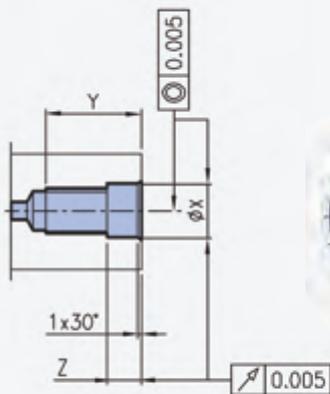
SRJ 02-103

- Available for high speed operating without media, thanks to SKT own developed high quality Seal.
- Silicon carbide Seal: long time endurable quality for harsh operating condition
- Stainless Steel Body and Rotor due to resisting property for corrosion, abrasion, heat and cold condition
- DRY RUN available

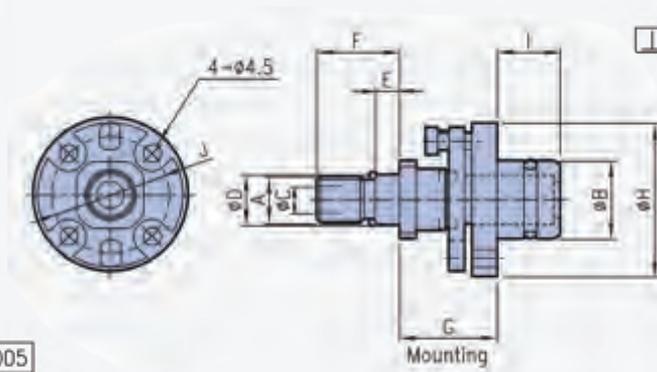


Operating Data

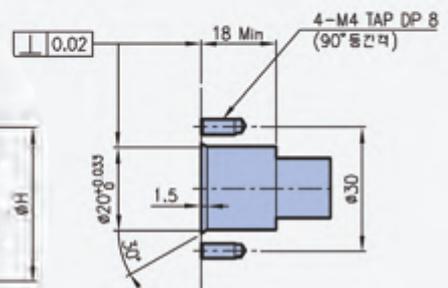
Max. Pressure : 100 bar
 Max. RPM : 40,000 min⁻¹
 Max. Temperature : 70 °C
 Max. Flow : 26 L/min



Spindle Detail



Axial Connection



Housing Detail



SRJ 02-103

Model	A	B	C	D	E	F	G	H	I	J
SRJ02-103-01	M12 X 1.25 LH	20 ^{-0.040} _{-0.061}	6	13 ⁰ _{-0.005}	6	21	25 ± 1.5	39.5	15.9	PCD30
SRJ02-103-02	M16 X 1.5 LH	20 ^{-0.040} _{-0.061}	8.7	18 ^{-0.006} _{-0.017}	6	21	25 ± 1.5	39.5	15.9	PCD30

Model	X	Y	Z
SRJ02-103-01	13 ^{+0.011} _{+0.006}	23	8.2
SRJ02-103-02	18 ^{+0.007} ₀	23	8.2

★Please request for customized model and Subject to technical change without notice.

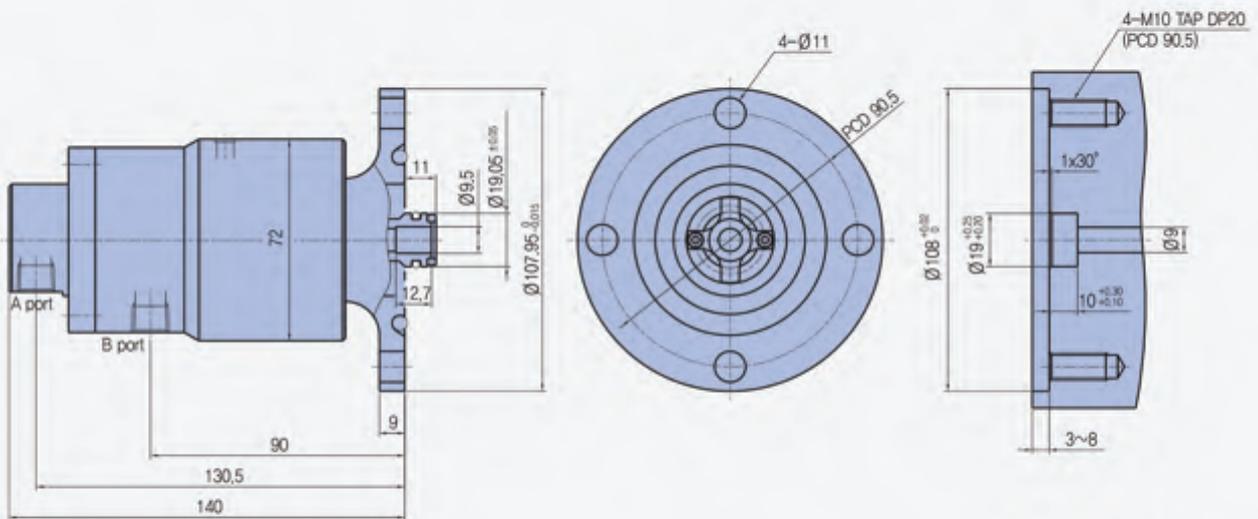
SRJ 03-101

- Available for high speed operating without media, thanks to SKT own developed high quality Seal.
- Coolant / Pneumatic Rotary Joint with Two Channels
- Anodizing Aluminum body.
- Stainless Steel Flange type Rotor due to resisting property for Corrosion, abrasion, heat and cold condition.



Operating Data

- Max. Pressure : A port – 70 bar
- Max. Pressure : B port – 10 bar
- Max. Speed: 7,000 min⁻¹
- Media : A port – Coolant, Air
- Media : B port – Air
- Max. Temperature : 70 °C
- Max. Flow : 70 L/min

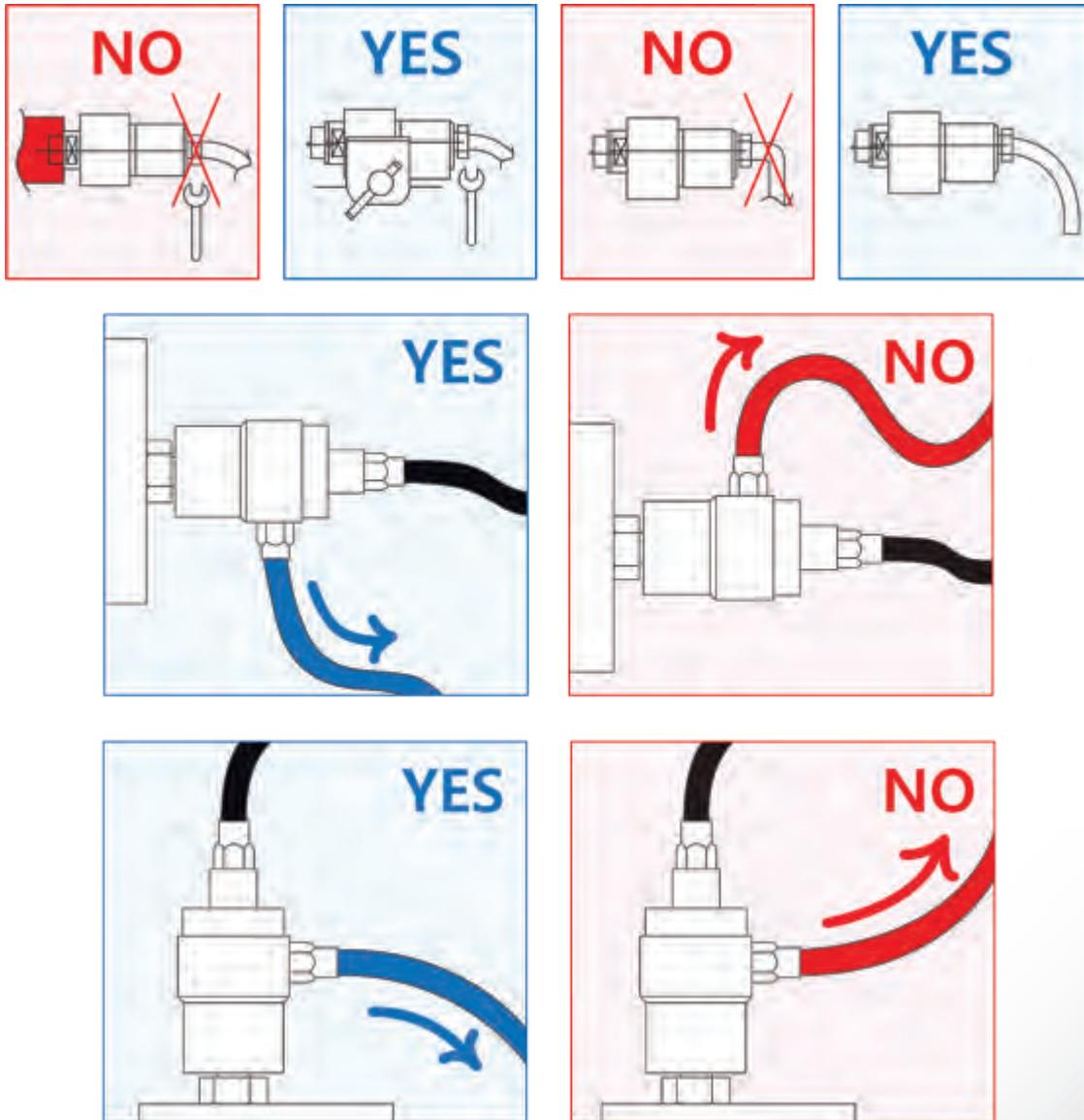


Radial Connection

Housing Detail



Attaching method and example for Flexible hose



Machine Type	Machining Center	<input type="checkbox"/>
	Turning Center	<input type="checkbox"/>
	Gun Drilling	<input type="checkbox"/>
	Gang Head	<input type="checkbox"/>
	Special Machine	<input type="checkbox"/>
	Other	<input type="checkbox"/>
Media	Coolant	<input type="checkbox"/>
	Oil	<input type="checkbox"/>
	Air	<input type="checkbox"/>
	MQL	<input type="checkbox"/>
	Others	<input type="checkbox"/>
Max. pressure		bar
Max. speed		rpm
Max. flow		L/min
Rotor Style		
Remark		





Shin Kwang Tech

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