



# R Series Fiber Optic Rotary Joint



[www.princetel.com](http://www.princetel.com)

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# R Series Fiber Optic Rotary Joint

## Description

The R series Single-channel (SM or MM) rotary joints are the most versatile designs Princetel has ever produced. The rugged body allows fiber pigtail, ST, or FC receptacles on either the rotor side or the stator side. One can configure the package to fit his need exactly. The standard base models are RPT, RFC, and FST for pigtails, FC/UPC, and ST/PC receptacles.

The R series features extremely low insertion loss and impressive return loss performance for both singlemode and multimode fibers. These rugged devices can operate under arctic temperature environment. All three models are dust and water tight for harsh environment. Optional pressure compensation is available with model RPT for underwater applications.

## Specifications

Wavelength range	635-1650 nm
Insertion loss	<2 dB (typical: <0.5 dB)
Insertion loss variation	<0.5 dB (typical: 0.3 dB)
Return loss (SM & MM)	>40 dB
Maximum rotation speed	2,000 rpm
Pressure compensation	10,000 psi (RPT only)
Maximum load	10 N
Startup torque	~ 0.1 Nm
Optical power handling	23 dBm
Operating temperature	-40 to 65 C
Storage temperature	-50 to 85 C

## Physical Properties

Package type	Pigtailed, ST, FC/UPC, or any combination
Housing Material	Stainless steel
Fiber types	Singlemode or multimode (See fiber code for details)
Jacket types	900 um tight or loose buffer with 3 mm jacket (Kevlar)
Connector types (for RPT)	FC, SC, ST, LC, SMA, FC/APC, SC/APC, or LC/APC
Dimensions	17 mm dia. (body) x 26 mm dia. (flange)
Weight	~50 g
Pressure compensation	10,000 psi (optional)

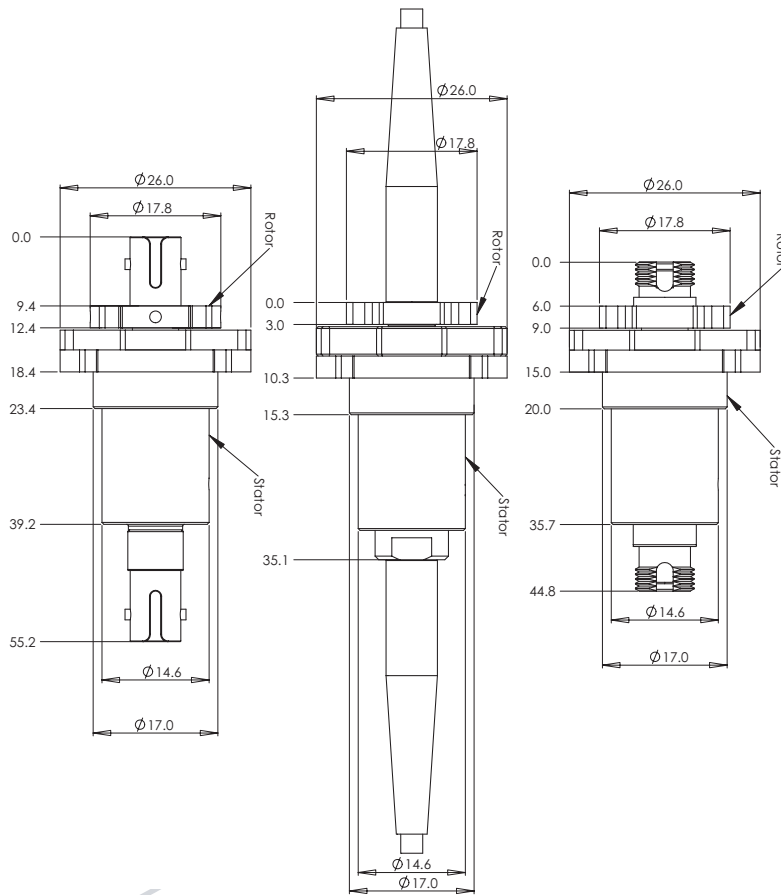
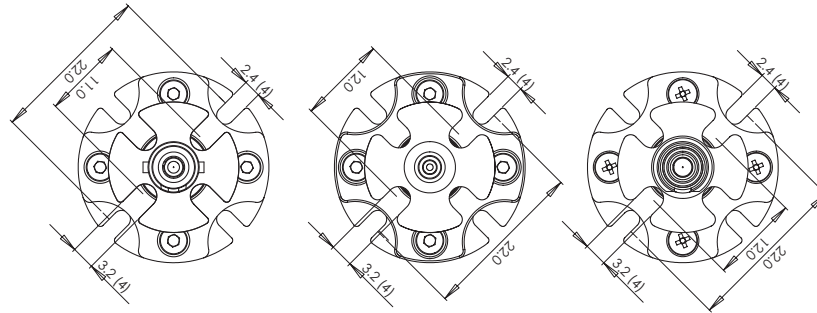
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Mechanical



Unit: mm

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## Part Number



### CONFIGURATION

- PT=Pigtail (both ends)
- FC=FC/PC
- ST=ST/PC
- PF=Pigtail (R)-FC (S)\*
- PS=Pigtail (R)-ST (S)
- FP=FC (R)-pigtail (S)
- SP=ST (R)-pigtail (S)
- FS=FC (R)-ST (S)
- SF=ST (R)-FC (S)

### WAVELENGTH\*\*

- 165=1625 nm
- 162=1625 nm
- 159=1590 nm
- 155=1550 nm
- 153=1530 nm
- 148=1480 nm
- 131=1310 nm
- 106=1064 nm
- 980=980 nm
- 850=850 nm
- 780=780 nm
- 670=670 nm
- 650=650 nm
- 635=635 nm
- 532=532 nm

### FIBER

- 28=Corning SMF28 (1290-1650 nm)
- 56=Singlemode (980 nm)
- 42=Singlemode (850 nm)
- 32=Singlemode (635 nm)
- 46=Singlemode (532 nm)
- 50=GI 50/125 multimode
- 62=GI 62.5/125 multimode
- 10=SI 100/125 multimode

### CONNECTOR

- FC=FCPC
- FA=FCAPC
- SC=SC/PC
- SA=SC/APC
- ST=ST
- LC=LC/PC
- LA=LC/APC
- SMA=SMA905

\* R: Rotor, S: Stator  
 \*\* For testing purpose only