

## WR-90 Waveguide Rotary Joint, UG Cover/UG Grooved Flanges, Inline Style in Aluminum

### Description

Waveguide rotary joints are used to connect waveguide components which need to rotate or change orientation during operation within a waveguide system. Designed to perform in harsh operating environment, FMW90RJ0002 from Fairview is a WR-90 waveguide rotary joint that operates in the frequency range of 9.2 GHz to 9.5 GHz. This WR-90 waveguide rotary joint has a Max VSWR of 1.2:1. This waveguide rotary joint is made of painted aluminum and incorporates UG Cover/UG Grooved flange interface with maximum rotary speed of 30 RPM and minimum life time of  $500 \times 10^4$  Revolutions. Waveguide rotary joints are part of Fairview's comprehensive waveguide product offerings which are available in stock and ready for same-day shipment.

### Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	9.2		9.5	GHz
VSWR			1.2:1	
VSWR 1, Rotational Variance			0.05	
Insertion Loss			0.3	dB
Input Power (CW)			300	Watts
Peak Power			3	kWatts
Insertion Loss Rotational Variance			0.05	dB
Phase Rotational Variance			2	Degrees

### Mechanical Specifications

#### Temperature

Operating Temperature	-40 to 70 °C
Storage Temperature	-55 to 85 °C
Humidity	85% (Max)

#### Interface

Waveguide Size	WR-90
Flange Type 1	UG Cover
Flange Type 2	UG Grooved
Body Material and Plating	Aluminum, Paint
Rotating Speed	30 RPM
Lifetime	$500 \times 10^4$ Revolutions
Starting Torque	1.77 in-lbs [0.2 Nm]
Torque During Rotation	0.88 in-lbs [0.1 Nm]
IP Protection Level	IP54



### Features:

- WR-90 Waveguide
- Operating Frequency Range from 9.2 GHz to 9.5 GHz
- UG Cover/UG Grooved Flanges
- Inline Style Configuration
- 1.2:1 Max VSWR
- 300 Watts (CW) Max Power Handling
- Insertion loss(Max): 0.3 dB
- Rotating Speed (Max): 30 RPM
- Lifetime (Min):  $500 \times 10^4$  Revolutions

### Applications:

- Radar Systems
- Military and Space
- Wireless Radio Systems
- Communication Systems
- R&D Labs
- Maritime Waveguide Systems

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**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

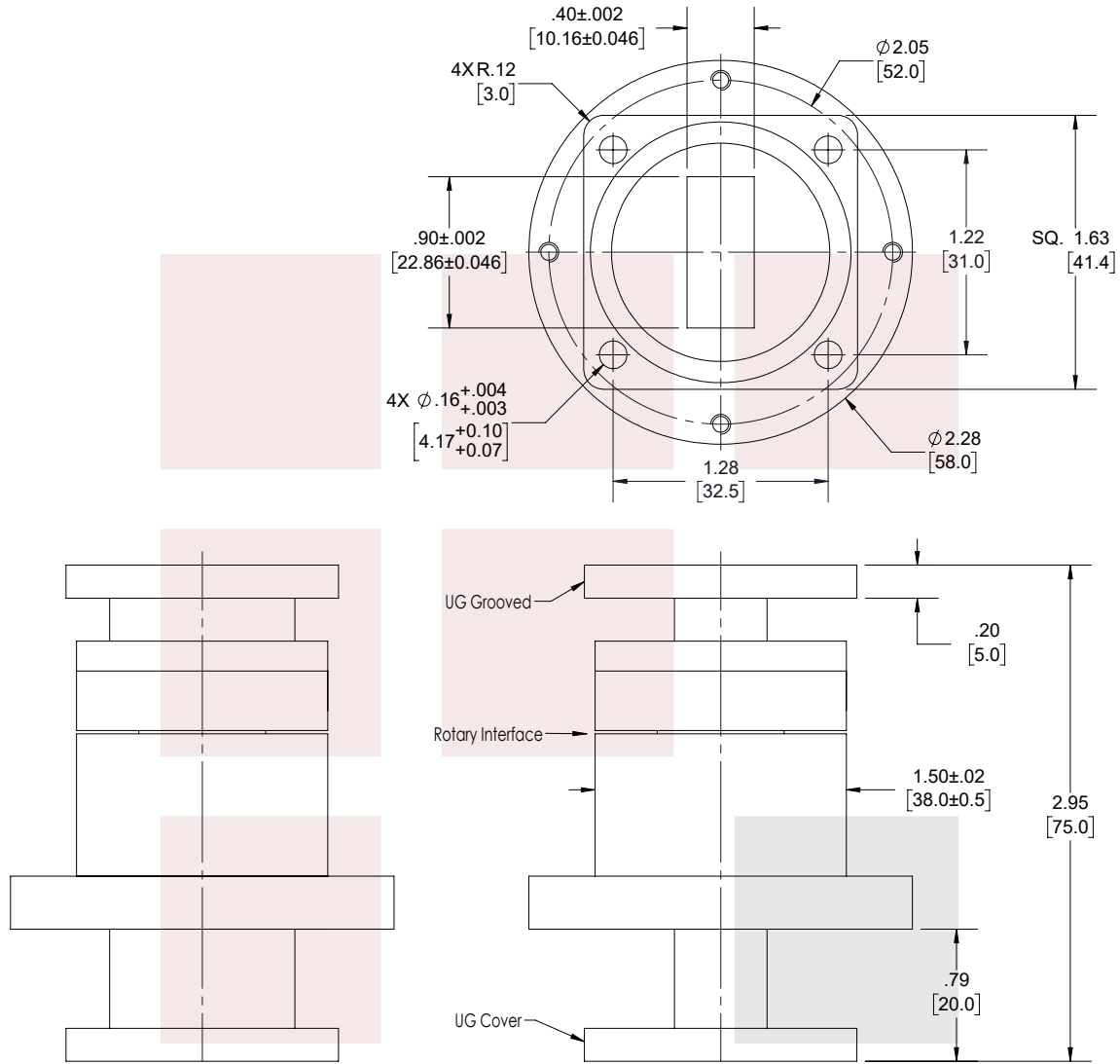
WR-90 Waveguide Rotary Joint, UG Cover/UG Grooved Flanges, Inline Style in Aluminum from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [WR-90 Waveguide Rotary Joint, UG Cover/UG Grooved Flanges, Inline Style in Aluminum FMW90RJ0002](#)

URL: <https://www.fairviewmicrowave.com/undefined-url-for-pn-fmw90rj0002-fmw90rj0002-p.aspx>

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	10/04/2021	SPONG



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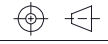
TITLE  
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UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES  
DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES: CABLE LENGTH (L) TOLERANCES:

.X = ±.2 [5.08]	FRACTIONS	L ≤ 12 [305] = +1 [25] / -0
.XX = ±.02 [.51]	± 1/32	12 [305] < L ≤ 60 [1524] = +2 [51] / -0
.XXX = ±.005 [.13]	ANGLES ± 1°	60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
		120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
		300 [7620] < L = +5%L / -0

THIRD-ANGLE PROJECTION



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SHEET 1 OF 1

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY MVEERAPPAN	ITEM NO. FMW90RJ0002	REV A
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