

## WR-90 Waveguide Rotary Joint, UG Round Choke Flanges, L-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, FMW90RJ0003 from Fairview is a WR-90 waveguide rotary joint that operates in the frequency range of 9.24 GHz to 9.64 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 Choke/UG Choke 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	9.24		9.64	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 Round Choke
Flange Type 2	UG Round Choke
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 9.24 GHz to 9.64 GHz
- UG Choke/UG Choke Flanges
- L-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

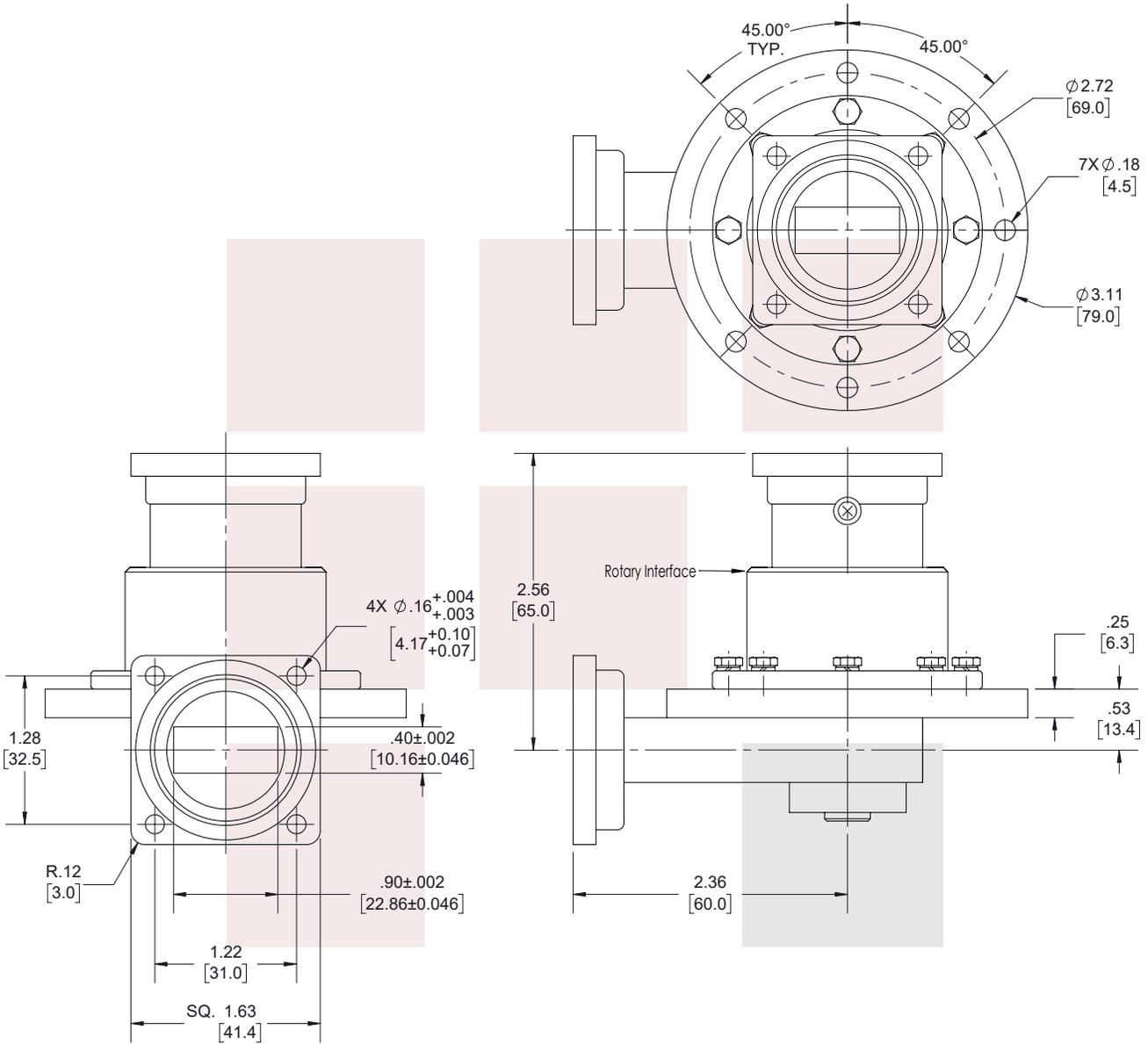
WR-90 Waveguide Rotary Joint, UG Round Choke Flanges, L-Style in Aluminum from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [WR-90 Waveguide Rotary Joint, UG Round Choke Flanges, L-Style in Aluminum FMW90RJ0003](#)

URL: <https://www.fairviewmicrowave.com/undefined-url-for-pn-fmw90rj0003-fmw90rj0003-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.

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



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TITLE

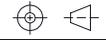
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UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES  
DIMENSIONS IN [ ] ARE MILLIMETERS

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. FMW90RJ0003	REV A
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