



WR-90 Waveguide Rotary Joint, UG Round Choke Flanges, U-Style in Aluminum

TECHNICAL DATA SHEET

PEW90RJ0001

Features

- WR-90 Waveguide
- Operating Frequency Range from 9.24 GHz to 9.64 GHz
- UG Choke/UG Choke Flanges
- U-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 x 10⁴ Revolutions

Applications

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

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, PEW90RJ0001 from Pasternack 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 x 10⁴ Revolutions. Waveguide rotary joints are part of Pasternack's comprehensive waveguide product offerings which are available in stock and ready for same-day shipment.

Electrical Specifications (Values at 25°C, sea level)

| Description | Minimum | Typical | Maximum | 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

| Description | Minimum | Typical | Maximum | Units |
|-----------------------|---------|---------|-----------|-------|
| Temperature | | | | |
| Operating Temperature | | | -40 to 70 | °C |
| Storage Temperature | | | -55 to 85 | °C |
| Humidity | | | 85% (Max) | |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [WR-90 Waveguide Rotary Joint, UG Round Choke Flanges, U-Style in Aluminum PE-W90RJ0001](#)



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Size

Weight 0.0622 lbs [28.21 g]

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 x 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 |

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

Plotted and Other Data

WR-90 Waveguide Rotary Joint, UG Round Choke Flanges, U-Style in Aluminum from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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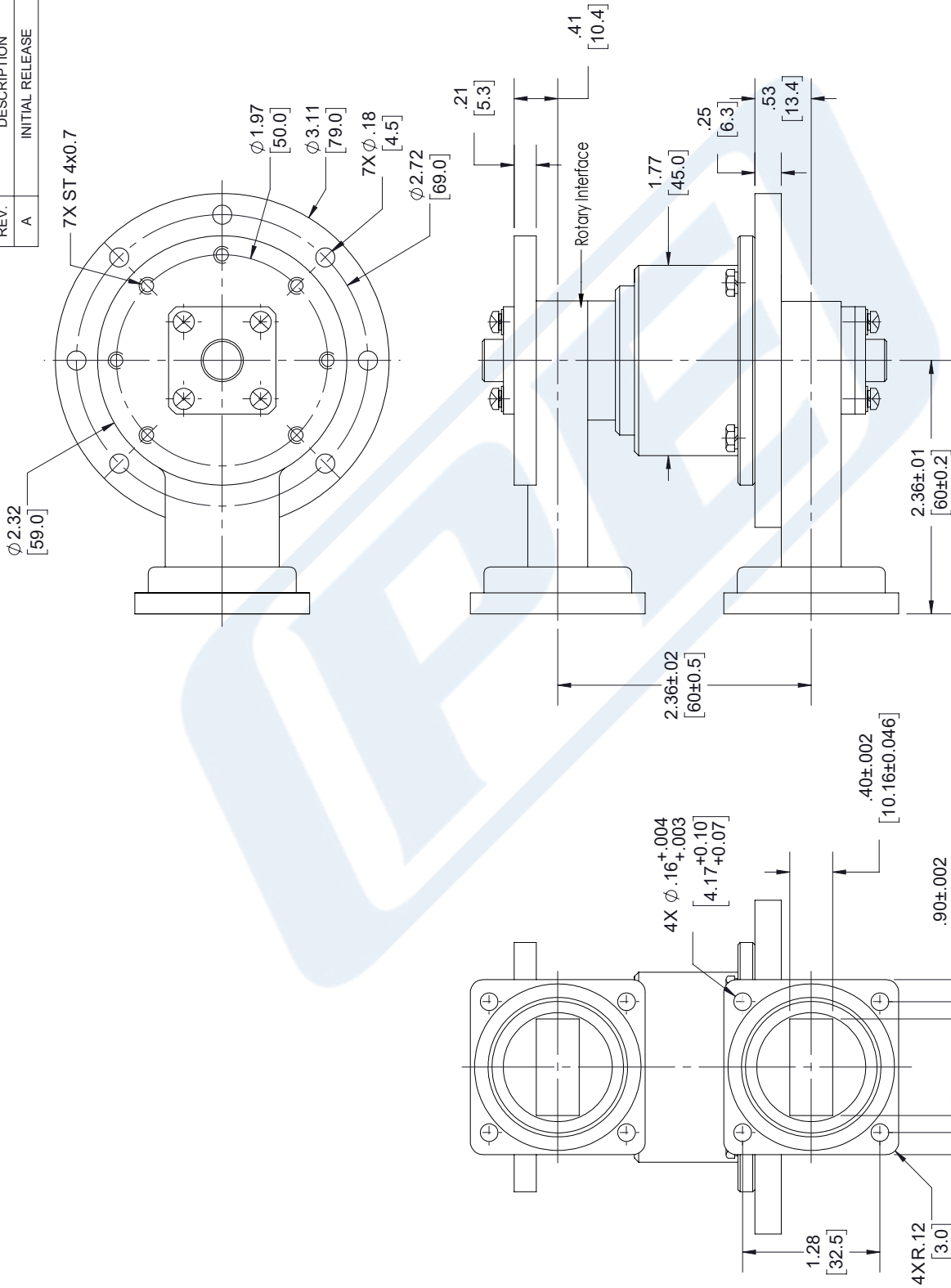
URL: <https://www.pasternack.com/pew90rj0001-p.aspx>

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. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

PEW90RJ0001 CAD Drawing

WR-90 Waveguide Rotary Joint, UG Round Choke Flanges, U-Style in Aluminum

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



THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

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

TOLERANCES:

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

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

ITEM NO. PEW90RJ0001

SIZE A

CAGE CODE 53919

DRAWN BY MVEERAPPAN

REV A

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