

WR-90 Seamless Flexible Waveguide in 36 Inch Using UG-39/U Square Cover Flange With a 8.2 GHz to 12.4 GHz Frequency Range

The SMW90SF005-36 is part of Fairview Microwave's family of flexible, seamless waveguides which operates in the 8.2 to 12.4 GHz range. The waveguide body is made of silver plated brass. It can be bent in both the E and H planes without impairing VSWR or attenuation. The waveguide is covered by a neoprene jacket which protects the waveguide and provides mechanical support.

Electrical Specifications

| Description | Min | Typ | Max | Units |
|-----------------|-----|--------|------|--------|
| Frequency Range | 8.2 | | 12.4 | GHz |
| VSWR | | 1.07:1 | | |
| Insertion Loss | | 0.27 | | dB |
| Input Power | | | 3 | kWatts |
| Peak Power | | | 180 | kWatts |

Mechanical Specifications

| | |
|---------------------------------------|--------------------|
| Waveguide Size | WR-90 |
| Waveguide Design | Seamless |
| Section Length | 36 in [914.4 mm] |
| E-Plane Minimum Bend Radius, One Time | 0.87 in [22.1 mm] |
| H-Plane Minimum Bend Radius, One Time | 1.69 in [42.93 mm] |
| Maximum Offset Rotation, One Time | 45 degrees/ft |

| Description | Flange 1 | Waveguide | Flange 2 |
|-------------|--------------|-----------|--------------|
| Type | Square Cover | WR-90 | Square Cover |
| Designation | UG-39/U | | UG-39/U |
| Material | Brass | Copper | Brass |
| Plating | | Silver | |
| Color | Gold | Black | Gold |

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

Plotted and Other Data

- Notes:
- Notes, Plotted Data



Features:

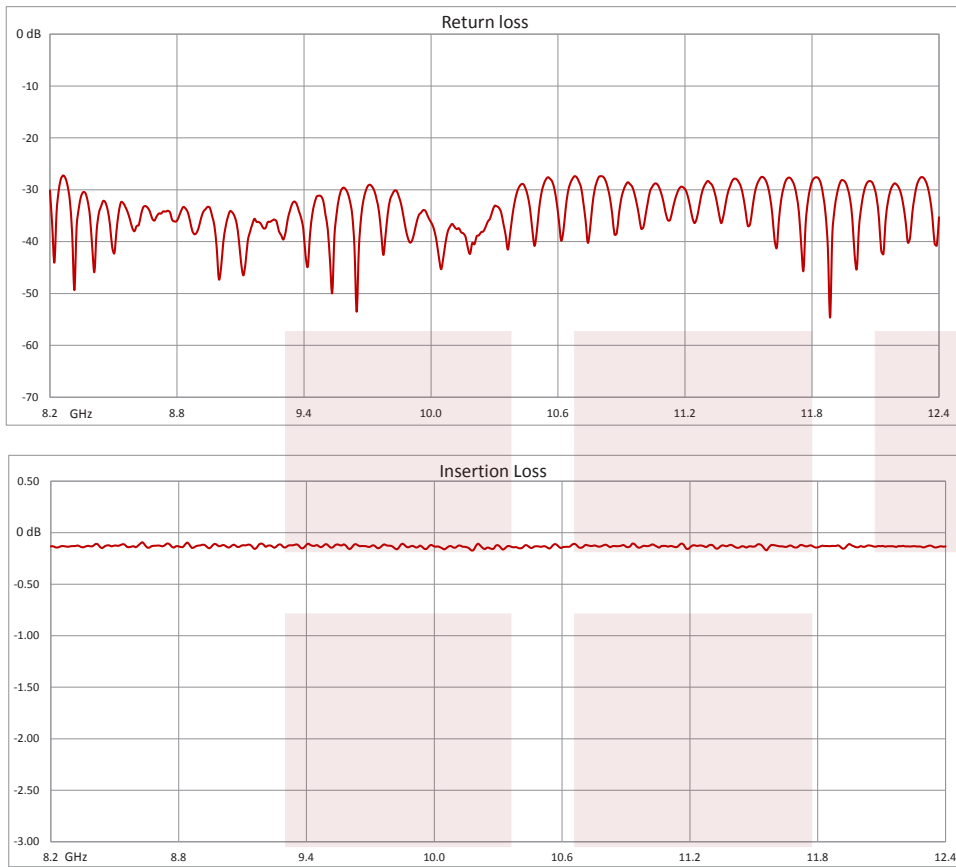
- WR-90 waveguide
- Flexes in both the E and H plane
- 8.2 GHz to 12.4 GHz Frequency Range
- Brass flanges with a silver plated brass body
- Neoprene sleeve provides added protection and mechanical support

Applications:

- Allows expansion/contraction due to thermal issues.
- Test Benches
- Microwave Radio
- Eliminates installation problems caused by misalignment.
- Pressurized waveguide systems
- Provides vibration isolation

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Typical Performance Data



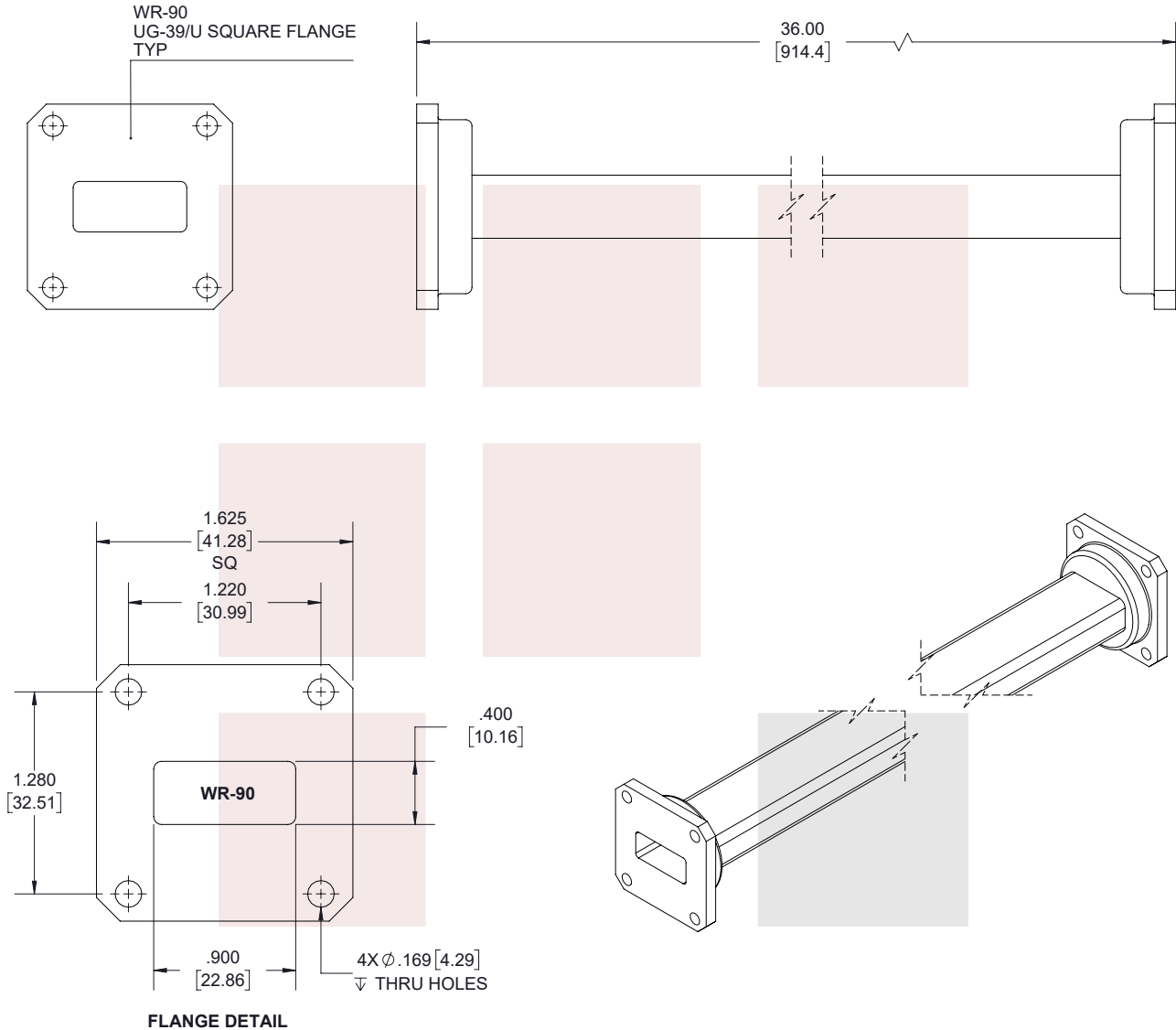
WR-90 Seamless Flexible Waveguide in 36 Inch Using UG-39/U Square Cover Flange With a 8.2 GHz to 12.4 GHz Frequency Range from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [WR-90 Seamless Flexible Waveguide in 36 Inch Using UG-39/U Square Cover Flange With a 8.2 GHz to 12.4 GHz Frequency Range SMW90SF005-36](https://www.fairviewmicrowave.com/wr-90-seamless-flexible-waveguide-ug39-square-8.2-12.4-ghz-smw90sf005-36-p.aspx)

URL: <https://www.fairviewmicrowave.com/wr-90-seamless-flexible-waveguide-ug39-square-8.2-12.4-ghz-smw90sf005-36-p.aspx>

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| REVISIONS | | | |
|-----------|--------------------|-----------|----------|
| REV. | DESCRIPTION | DATE | APPROVED |
| A | PCR PE-W90SF005-XX | 4/30/2020 | S.PONG |



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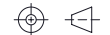
TITLE
WR-90 Seamless Flexible Waveguide in 36 Inch Using UG-39/U Square Cover Flange With a 8.2 GHz to 12.4 GHz Frequency Range

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 K.DANG | ITEM NO. SMW90SF005-36 | REV A |
|-----------|--------------------|--------------------|---------------------------|----------|

T-Rev.D