



WR-90 Twistable Flexible Waveguide 36 Inch, UG-39/U
Square Cover Flange Operating From 8.2 GHz to 12.4 GHz

Flexible Waveguides Technical Data Sheet

PE-W90TF005-36

Features

- Thirty six inch long WR-90 waveguide
- Twistable
- Flexes in both the E and H plane
- Neoprene sleeve allows pressurization
- 8.2 GHz to 12.4 GHz Frequency Range
- Brass flanges with a silver plated brass body

Applications

- Simplifies positioning parabolic reflectors for line of sight microwave radio links.
- Test Benches
- Eliminates installation problems caused by misalignment.
- Allows expansion/contraction due to thermal issues.
- Pressurized waveguide systems
- Provides vibration isolation
- Microwave Radio

Description

The PE-W90TF005-36 is part of Pasternack’s family of flexible, twistable waveguides which operates in the 8.2 to 12.4 GHz range. The waveguide body is made of a helically wound silver coated brass strip. It can be twisted and/or 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, provides mechanical support and allows the waveguide to be pressurized.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	8.2		12.4	GHz
VSWR		1.1:1		
Insertion Loss		0.45		dB
Input Power			1	kWatts
Peak Power			180	kWatts

Mechanical Specifications

Waveguide Size	WR-90
Waveguide Design	Twistable
Section Length	36 [in [914.4 mm]]
E-Plane Minimum Bend Radius, One Time	2.5 in [63.5 mm]
E-Plane Minimum Bend Radius, Repeated	10 in [254 mm]
H-Plane Minimum Bend Radius, One Time	5 in [127 mm]
H-Plane Minimum Bend Radius, Repeated	20 in [508 mm]
Maximum Offset Rotation, One Time	96 degrees/ft
Maximum Offset Rotation, Repeated	24 degrees/ft
Maximum Operating Pressure	45 psig

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: [WR-90 Twistable Flexible Waveguide 36 Inch, UG-39/U Square Cover Flange Operating From 8.2 GHz to 12.4 GHz PE-W90TF005-36](#)



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

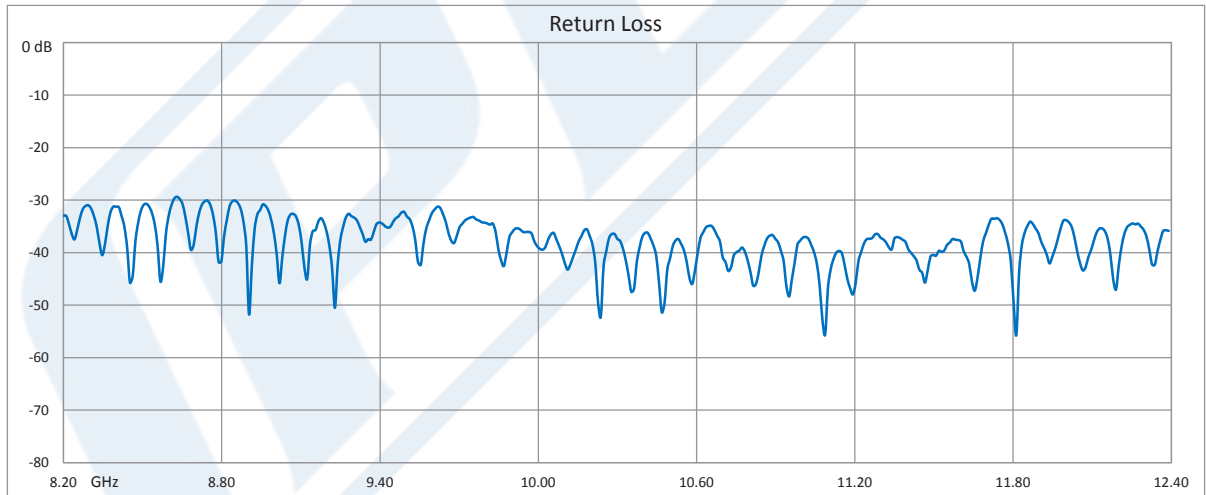
Environmental Specifications

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

Plotted and Other Data

Notes:

Typical Performance Data



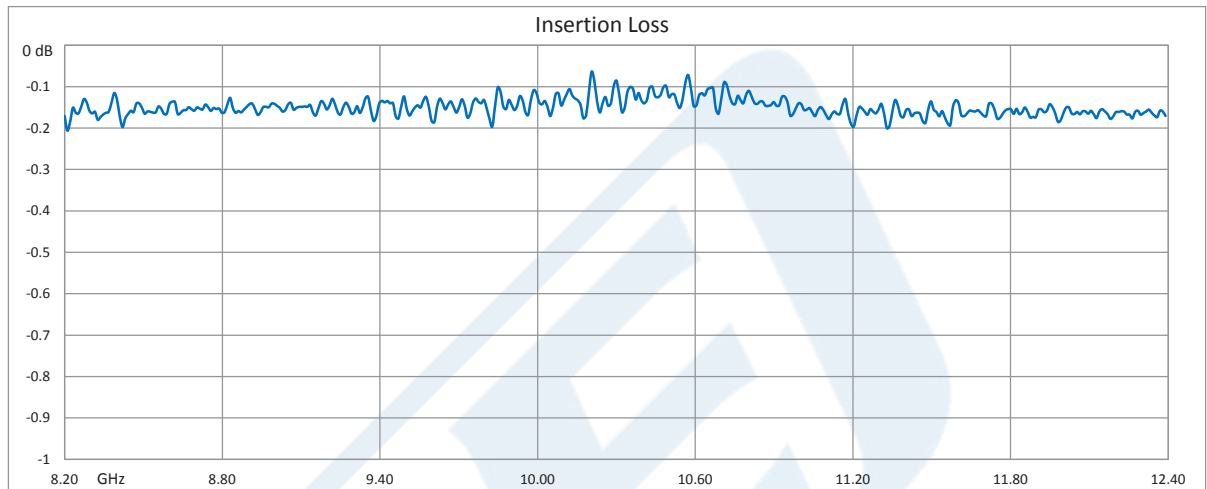
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WR-90 Twistable Flexible Waveguide 36 Inch, UG-39/U Square Cover Flange Operating From 8.2 GHz to 12.4 GHz from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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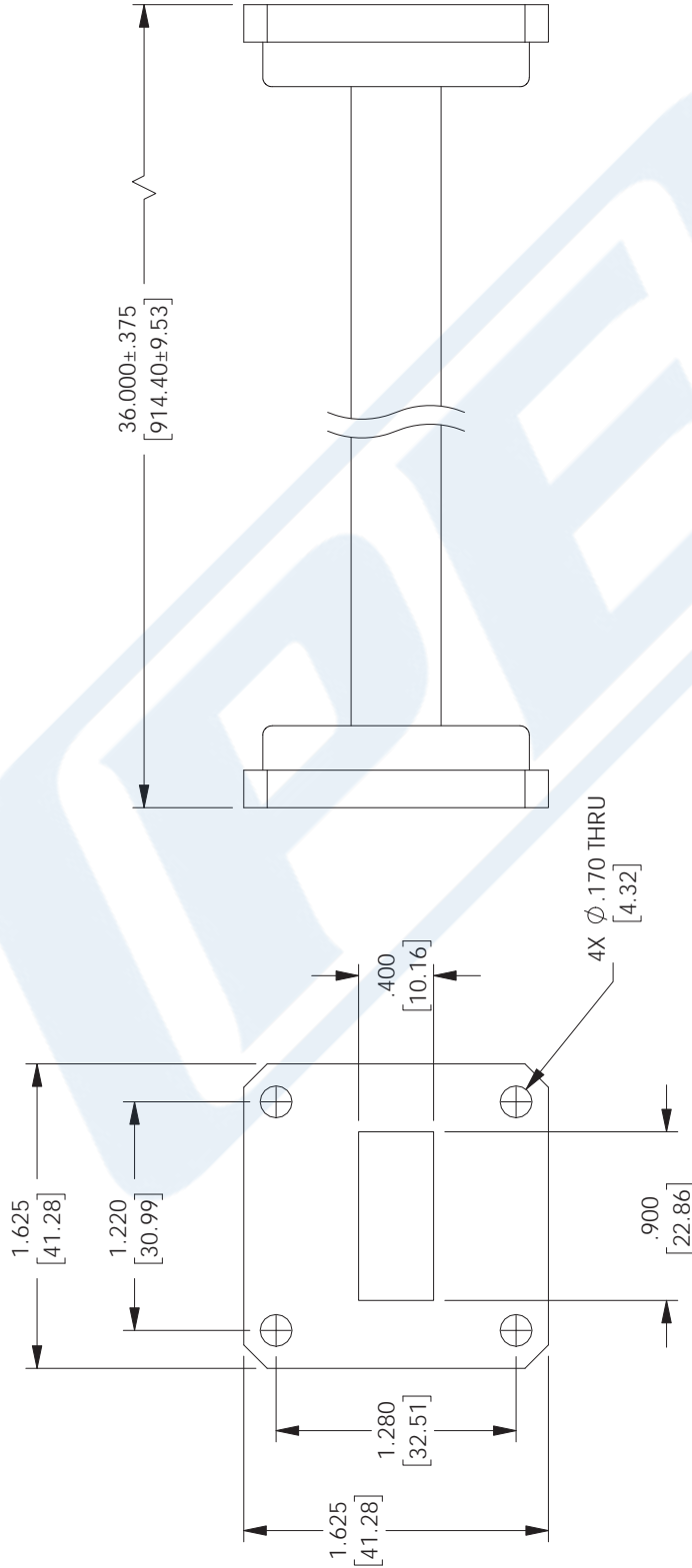
URL: <https://www.pasternack.com/wr90-twistable-flexible-waveguide-ug39-square-8.2-12.4-ghz-pe-w90tf005-36-p.aspx>

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.

PE-W90TF005-36 CAD Drawing

WR-90 Twistable Flexible Waveguide 36 Inch, UG-39/U Square Cover Flange Operating From 8.2 GHz to 12.4 GHz

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
B	INITIAL RELEASE	09/21/2021	DR



UG 39/U WR 90
COVER FLANGE

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% / -0

ALL DIMENSIONS SHOWN
ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A
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SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	DFRISIELLO	PE-W90TF005-36

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