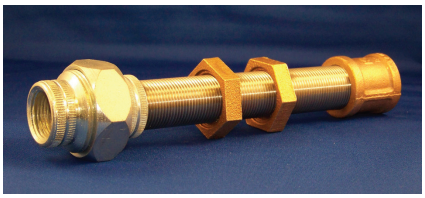

ETS-Lindgren's Waveguide Feed-throughs are available in a variety of sizes to accommodate water, gas, or air. These specially designed assemblies ensure safe and efficient transport of non-conductive gases or liquids into shielded enclosures while maintaining RF integrity. The waveguide feedthroughs prevent RF leakage, making them ideal for use in environments requiring high-performance shielding, such as MRI rooms, anechoic chambers, and RF test enclosures. Custom configurations are also available to meet specific operational and dimensional requirements, ensuring flexibility for diverse applications.

MODEL WAVEGUIDE FEED-THROUGHS

- **Accommodate Requirements Such as Fire Suppression Systems, Hydraulics, and Other Utilities**
- **Honeycomb Waveguide Insert Option Available for High Frequency or Gaseous Applications**
- **Dielectric Unions are Available to Maintain Isolation to the Ground**

Technical Specifications

Electrical	
1.27 cm (.5 in)	13.8 GHz
1.91 cm (.75 in)	9.2 GHz
2.54 cm (1 in)	6.9 GHz
3.175 cm (1.25 in)	5.5 GHz
3.81 cm (1.5 in)	4.6 GHz
4.08 cm (2 in)	3.5 GHz
6.35 cm (2.5 in)	2.8 GHz
7.62 cm (3 in)	2.3 GHz
8.16 cm (4 in)	1.7 GHz

Physical

Waveguide Feed-through Part Number	With Dielectric Option Part Number	Nominal Pipe I.D.	Length	Installation Hole Size
551060	551084	1.27 cm (.5 in)	15.24 cm (6 in)	2.22 cm (0.875 in)
551061	551085	1.91 cm (.75 in)	15.24 cm (6 in)	2.86 cm (0.125 in)
551062	551086	2.54 cm (1 in)	15.24 cm (6 in)	3.49 cm (1.375 in)
551063	551087	3.175 cm (1.25 in)	15.24 cm (6 in)	4.46 cm (1.75 in)
551064	551088	3.81 cm (1.5 in)	15.24 cm (6 in)	4.92 cm (1.9375 in)
551065	551089	5.08 cm (2 in)	20.32 cm (8 in)	6.35 cm (2.5 in)
551066	551090	6.35 cm (2.5 in)	20.32 cm (8 in)	7.30 cm (2.875 in)
551067	551083	7.62 cm (3 in)	30.48 cm (12 in)	9.21 cm (3.625 in)
551068	551091	10.16 cm (4 in)	40.64 cm (16 in)	11.75 cm (4.625 in)

For circular waveguides:
fc = c/3.412r

where:
fc = cutoff frequency
c = speed of light, 1.181 x 1010 in/s
r = radius of circular waveguide in inches

General Rule of Thumb:
For circular waveguides, make sure the waveguide length is at least four times the diameter.