

Flexible Rectangular Waveguide

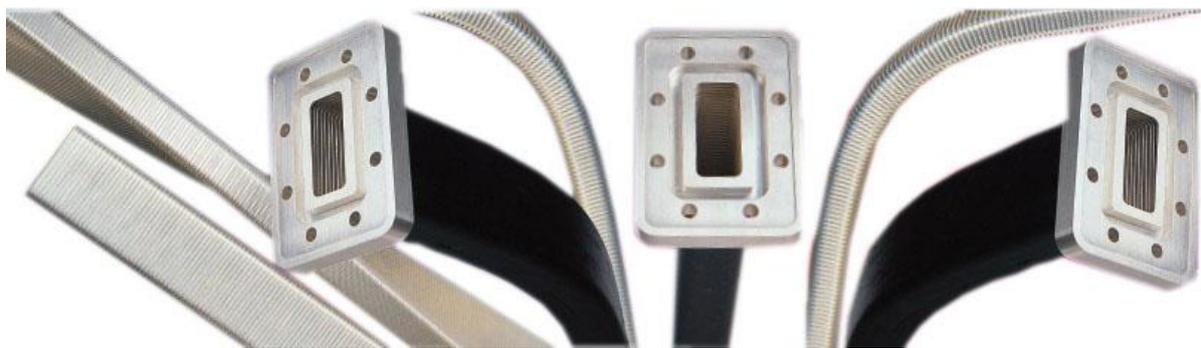
A waveguide is an electromagnetic feed line used in microwave communications, broadcasting, and radar installations. A waveguide consists of a rectangular or cylindrical metal tube or pipe. The electromagnetic field propagates lengthwise. Waveguides are most often used with horn antennas and dish antennas.

An electromagnetic field can propagate along a waveguide in various ways. Two common modes are known as transverse-magnetic (TM) and transverse-electric (TE). In TM mode, the magnetic lines of flux are perpendicular to the axis of the waveguide. In TE mode, the electric lines of flux are perpendicular to the axis of the waveguide. Either mode can provide low loss and high efficiency as long as the interior of the waveguide is kept clean and dry.

To function properly, a waveguide must have a certain minimum diameter relative to the wavelength of the signal. If the waveguide is too narrow or the frequency is too low (the wavelength is too long), the electromagnetic fields cannot propagate. At any frequency above the cutoff (the lowest frequency at which the waveguide is large enough), the feed line will work well, although certain operating characteristics vary depending on the number of wavelengths in the cross section.

Different rectangular waveguide components are available to simplify the installation especially in a shelter or to connect a radio placed near to the antenna.

Flexible Rectangular Waveguide



Flexible rectangular waveguide is a dispensable component for the connection between microwave equipment and feeder.

Our flexible rectangular waveguide is manufactured by using precision winding machines, designed, built and innovated using new techniques in precision metal manipulation. The unique design of these machines has set new levels of performance for flexible / twistable waveguide without the need to dent tune.

Storage

To prevent dirt and moisture ingress flexible waveguide, it should be transported and stored in their original packaging until installed.

Flexible waveguide standard packing is a sealed polythene moisture barrier. To make sure its performance form humidity and moisture.

Handling

To maximize performance, waveguides are manufactured to high tolerances.

Any physical or external force change the cross - sectional, it is bad for electrical performance.

Silicone: -70 to 170°C

Our flexible waveguide is encapsulated by moulded silicone rubber, to provide a high degree (IP68).

Silicone is proven that it is more resistant than the neoprene in extreme environment, such as ozone, UV, water.

Polyurethane: -30 to 90°C

Polyurethane offers an excellent alternative to neoprene, Because that temperature range of silicone is almost not required.

Polyolefin:-20 to 100°C

We can offer an adhesive lined polyolefin heat-shrink jacket for a limited number of applications and for longer lengths. Due to the nature of the jacket, moulds are not required that its lengths up to 5 meter. It depends on size of waveguide.

Flanges

Flexible Waveguide offer a wide variety of flanges, including European "154 IEC" standard, American MIL specification "UG" flanges and American EIA "CPR" types. Standard flanges are CNC machined from corrosion resistant, marine grade brass and are supplied un-plated unless otherwise specified.

Seamless Rectangular Waveguide

Features

- Low VSWR ,Low loss
- High power performance
- Good flexibility
- Preform to be a desired shape



Construction

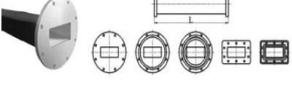
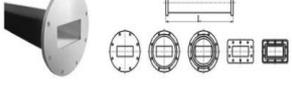
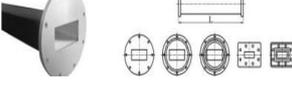
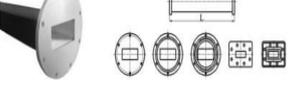
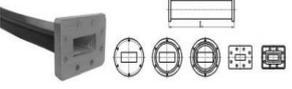
Inner:Silver-plated brass tube

Outer:Silicone/polysulfide sealant

Application

Radar, Satellite earth station.

Microwave measure, microwave medical and digital microwave communication.

Model Number	Waveguide Size			Frequency GHz	Insertion Loss dB/m	VSWR	Minimum Bend Radius		Molexy Drawing
	WR	WG	R				E Plane	H Plane	
WG516039	430	8	22	1.70 ~ 2.60	0.13	1.10	312	624	
WG516040	340	9	26	2.17 ~ 3.30	0.14	1.10	260	520	
WG516041	284	10	32	2.60 ~ 3.95	0.15	1.10	204	408	
WG516042	229	11A	40	3.30 ~ 4.90	0.17	1.10	166	332	
WG516043	187	12	48	3.95 ~ 5.85	0.24	1.10	160	320	
WG516044	159	13	58	4.90 ~ 7.05	0.26	1.10	129	258	
WG516045	137	14	70	5.85 ~ 8.20	0.30	1.10	100	200	
WG516046	112	15	84	7.05 ~ 10.00	0.35	1.10	76	152	
WG516047	90	16	100	8.20 ~ 12.40	0.45	1.10	66	120	
WG516048	75	17	120	10.00 ~ 15.00	0.65	1.12	64	120	
WG516049	62	18	140	12.40 ~ 18.00	0.74	1.12	54	105	
WG516050	42	20	220	17.70 ~ 26.50	1.40	1.20	41	78	
WG516051	28	22	320	26.50 ~ 40.00	2.40	1.30	20	40	

Twist-Flex Rectangular Waveguide

Features

- Low VSWR ,Low loss
- Good flexibility and twistability
- Stable performance during flexing and twisting



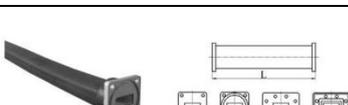
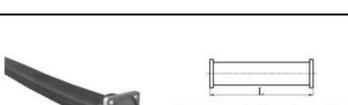
Construction

Inner:Brass tube

Outer:Silicone/polysulfide sealant

Application

- Microwave relay,Broadcast.
- Digital microwave communication

Model Number	Waveguide Size			Frequency GHz	Insertion Loss dB/m	VSWR	Minimum Bend Radius		Molexy Drawing
	WR	WG	R				E Plane	H Plane	
WG516032	159	13	58	4.90 ~ 7.05	0.20	1.10	116	232	
WG516033	137	14	70	5.85 ~ 8.20	0.25	1.10	100	200	
WG516034	112	15	84	7.05 ~ 10.00	0.30	1.10	76	152	
WG516035	90	16	100	8.20 ~ 12.40	0.40	1.15	66	120	
WG516036	75	17	120	10.00 ~ 15.00	0.50	1.15	64	120	
WG516037	62	18	140	12.40 ~ 18.00	0.55	1.15	54	105	
WG516038	42	20	220	17.70 ~ 26.50	1.30	1.25	41	78	