

Waveguide Sections, Bends, and Twist

FEATURES

- ❖ Rugged Waveguide Configuration
- ❖ Full Band Operation
- ❖ Low Cost

APPLICATIONS

- ❖ Test Equipment
- ❖ Subsystems
- ❖ Prototypes



DESCRIPTION:

CSS, CWB, & CTS Series

Cernexwave's **CSS**, **CWB**, and **CTS** Series waveguide components line cover 1 to 325 GHz in seven waveguide bands. Other frequency bands are available per request.

Straight waveguide sections (**CSS**) offer the inter-connections between the waveguide ports and are available in 1" to 8" standard length in 1" increments as well as customer-specified lengths.

Waveguide bends (**CWB**) change the direction in the waveguide assembly and are available in H plane and E-plane version with bend angles of 30°, 45°, 60° and 90°.

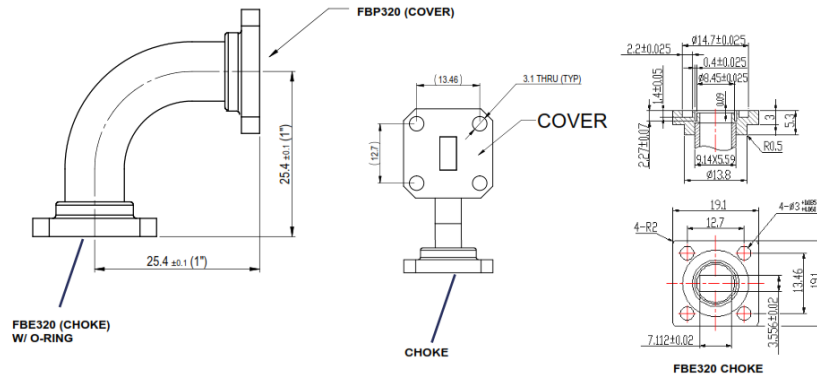
Waveguide twists (**CTS**) allow changing the orientation of the waveguide port and are available with twisting angles of 45° or 90°.

SPECIFICATIONS:

Waveguide Band	L	La	Sa	Sb	S	Cl	CII	Cs	XI	XII	X	Xs	Ku	Kb	K
Frequency Range (GHz)	1.12 to 1.70	1.70 to 2.60	2.20 to 3.30	2.60 to 3.95	3.30 to 4.90	3.95 to 5.85	4.90 to 7.05	5.85 to 8.20	7.05 to 10.0	7.00 to 11.00	8.20 to 12.40	10.0 to 15.0	12.4 to 18.0	15.00 to 22.00	18.0 to 26.5
Waveguide Size	WR-650	WR-430	WR-340	WR-284	WR-229	WR-187	WR-159	WR-137	WR-112	WR-102	WR-90	WR-75	WR-62	WR-51	WR-42
Flange Pattern	UG-417A/U	UG-435A	UG-435A	UG-53/U	-	UG-149A/U	-	UG-344/U	UG-51/U	UG-1493/U	UG-39/U	-	UG-419U	WR5-1	UG-595/U

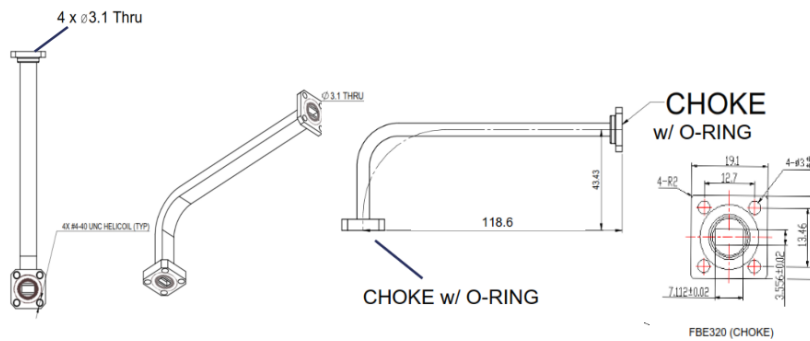
Waveguide Sections, Bends, and Twist

Waveguide Bends



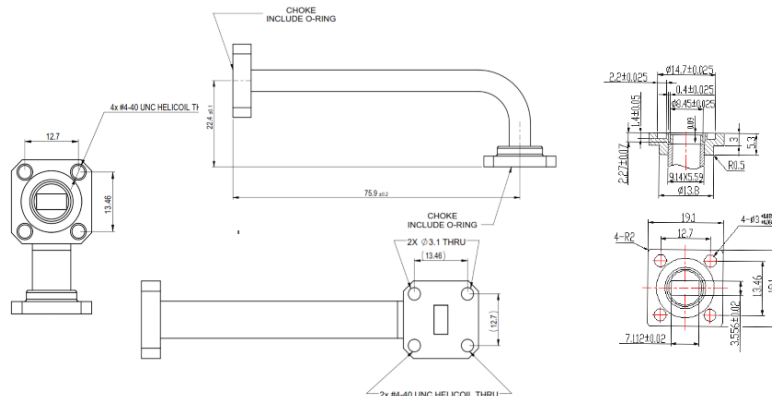
Mechanical Specifications	
Waveguide type	Rectangular Waveguide WR-28
Flange type	FBE320(Choke)/FBP320(Cover)
Material	Copper/Brass
Finish	Inside: Silver Plating Outside: Anticorrosion Black Pain
Dimension	25.4 X 25.4mm
Accessory	1 pcs O-ring for FBE320
Electrical Specifications	
Frequency Range	26.5-40 GHz
VSWR	1.15:1 max
Insertion Loss	0.85 dB max (per meter)
Input Power	100W CW max
Operating Temperature	-40 to +85°C

WR-28 90 DEGREE H-PLANE WAVEGUIDE BEND 1" (CWB28H9001 -XX)



Mechanical Specifications	
Waveguide type	Rectangular Waveguide WR-28
Flange type	FBE320(Choke) X 2
Material	Copper/Brass
Finish	Inside: Silver Plating Outside: Anticorrosion Black Paint
Dimension	43.43 X 118.6 mm
Accessory	2 pcs O-ring for FBE320
Electrical Specifications	
Frequency Range	26.5-40 GHz
VSWR	1.15:1 max
Insertion Loss	0.85 dB max (per meter)
Input Power	100W CW max
Operating Temperature	-40 to +85°C

WR28 WAVEGUIDE BEND (CWB28E9004-XX)



Mechanical Specifications	
Waveguide type	Rectangular Waveguide WR-28
Flange type	FBE320(Choke)
Material	Copper/Brass
Finish	Inside: Silver Plating Outside: Anticorrosion Black Paint
Dimension	75.9 X 22.4mm
Accessory	2 pcs O-ring for FBE320
Electrical Specifications	
Frequency Range	26.5-40 GHz
VSWR	1.25:1 max
Insertion Loss	0.85 dB max (per meter)
Input Power	100W CW max
Operating Temperature	-40 to +85°C

WR28 WAVEGUIDE BEND (CWB28E9003-XX)

Waveguide Sections, Bends, and Twist

Double-Ridge Waveguide Twists

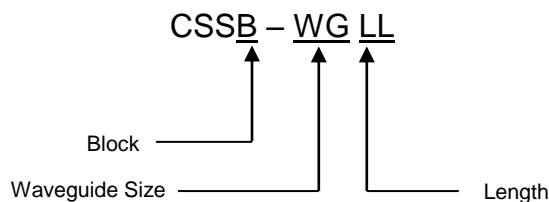
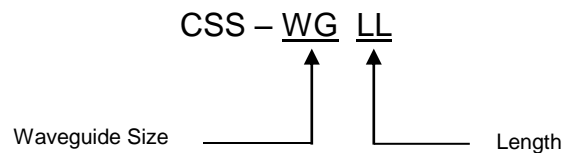
Waveguide Band	Kc	Ka	Q	U	V	E	W	F
Frequency Range (GHz)	18 to 40	2 to 4.8	2.6 to 7.8	3.5 to 8.2	4.75 to 11	5.8 to 16	6.5 to 18	7.5 to 18
Waveguide Size	WRD180	WRD200	WRD250	WRD350	WRD475	WRD580	WRD650	WRD750
VSWR (Typ)	1.15:1	1.15:1	1.15:1	1.15:1	1.15:1	1.15:1	1.15:1	1.15:1
Insertion Loss (dB)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Double-Ridge Waveguide Bend

Waveguide Band	Kc	Ka	Q	U	V	E	W	F
Frequency Range (GHz)	18 to 40	2 to 4.8	2.6 to 7.8	3.5 to 8.2	4.75 to 11	5.8 to 16	6.5 to 18	7.5 to 18
Waveguide Size	WRD180	WRD200	WRD250	WRD350	WRD475	WRD580	WRD650	WRD750
VSWR (Typ)	1.10:1	1.10:1	1.10:1	1.10:1	1.10:1	1.10:1	1.10:1	1.10:1
Insertion Loss (dB)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

HOW TO ORDER:

- **Straight Waveguide Sections**
Specify Model Number

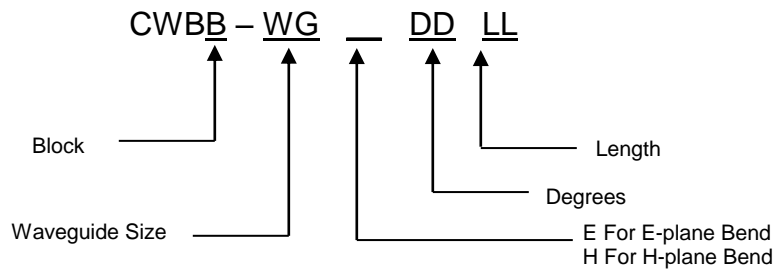
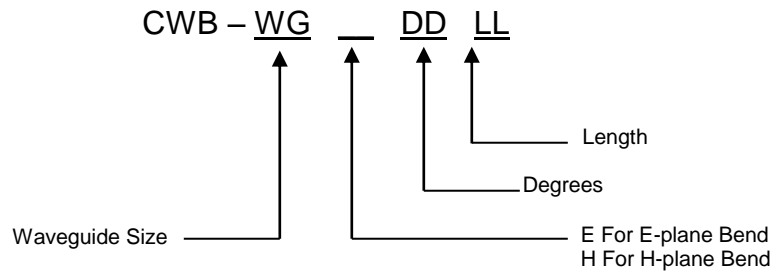


Waveguide Sections, Bends, and Twist

Example: To order a 2" long, WR-15 straight waveguide section, specify CSS-1502.

- **Waveguide Bends**

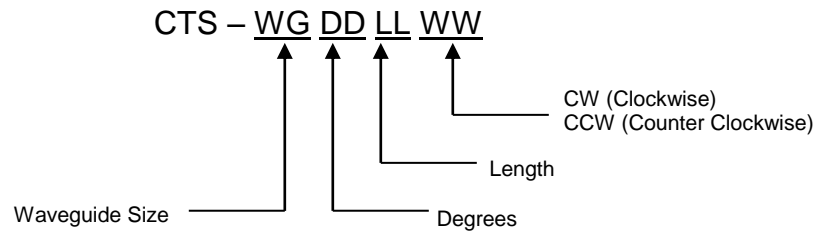
Specify Model Number



Example: To order a WR-28, E-plane, 30° waveguide bend 1" Long, specify CWB-28E3001.

- **Waveguide Twists**

Specify Model Number



Example: To order a 45°, 1" long, WR-12 waveguide twist, specify CTS-124501.

CERNEXWAVE RESERVE THE RIGHT TO CHANGE THE SPECIFICATIONS WITHOUT NOTICE.