

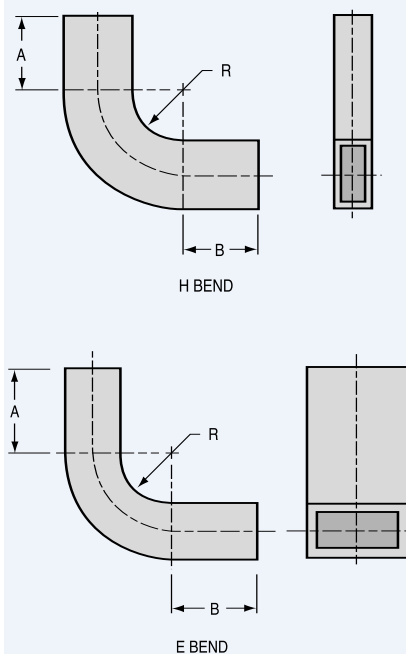
Formed Bends

MDL's line of waveguide formed bends, twists, and offsets cover band sizes WR15 through WR284 with radius from .25 inches to 18.0 inches in .12 inch increments.

Single and multiple E and H bends, twists and offsets may be ordered in the following waveguide material: OFHC, Copper, Brass, Aluminum, and Coin Silver. More difficult forms, which do not lend themselves readily to the bending process, can be electroformed or developed into a precision cast unit.

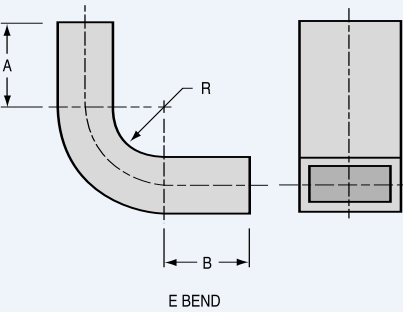
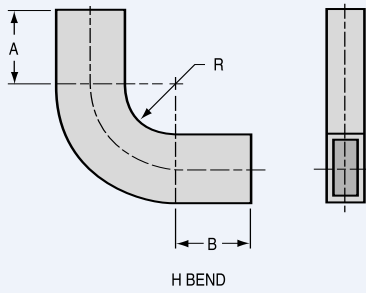
W/G Size Freq GHz	W/G Size O.D. Inches	E Bend Throat Radius (R)	H Bend Throat Radius (R)
WR28 26.5 to 40.0 GHz	0.360 x 0.220	.31	.43
		.50	.75
		.56	-
WR42 18.0 to 26.5 GHz	0.500 x 0.250	.75	.75
WR51 15.0 to 22.0 GHz	0.590 x 0.335	-	.25
		.57	.37
		1.37	1.00
WR62 12.4 to 18.0 GHz	0.702 x 0.391	.25	.15
		.30	.25
		.37	.31
		.56	.50
		.68	.62
		.75	.75
		.87	1.00
		1.25	1.09
		1.75	1.25
		2.00	1.50
WR75 10.0 to 15.0 GHz	0.850 x 0.475	.50	-
		1.25	.87
		2.00	1.25
WR90 8.20 to 12.40 GHz	1.000 x 0.500	.25	.25
		.37	.37
		.43	.50
		.50	1.00
		.62	2.00
		.69	2.50
		.75	2.75
		1.00	3.00
		1.25	-
		1.50	-
2.00	-		
2.50	-		
WR90 8.2 to 12.4 GHz	1.000 x .300 O.D.	-	.37
	1.000 x .200 I.D.	-	.50
WR102 7.00 to 11.0 GHz	1.148 x 0.638	.75	2.00
WR112 7.05 to 10.0 GHz	1.250 x 0.625	.37	.43
		.50	.62
		.75	.75
		1.50	1.37
		2.75	2.00
WR137 5.85 to 8.20 GHz	1.500 x 0.750	-	2.75
		1.00	1.00
		-	2.00
WR187	2.000 x 1.000	-	.75

FORMED BENDS

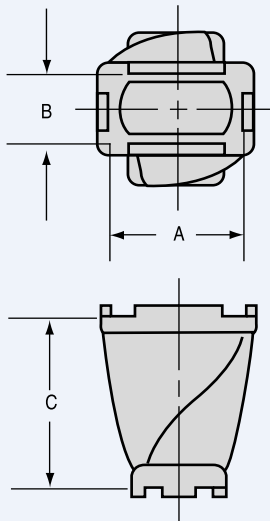


Formed Bends

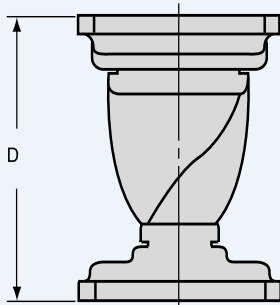
FORMED BENDS



WAVEGUIDE TWISTS



TWISTS WITH FLANGES



W/G Size Freq GHz	W/G Size O.D. Inches	E Bend Throat Radius (R)	H Bend Throat Radius (R)
3.95 to 5.85		1.00	1.00
		1.93	1.25
		3.00	1.50
		4.00	2.00
		4.50	3.25
	5.00	4.00	
WR284	3.000 x 1.500	2.25	3.00
2.60 to 3.95		3.75	6.00

Notes: When ordering Formed Bands, specify inside radius dimensions as listed. Any degree of angular change can be produced with no change to a given radius. Straight or tangent dimensions (A and B) must be specified. Minimum value of (A and B) to be .50 inches. Anything under .50 inches MDL will not guarantee that the wall thickness will be uniform.

Waveguide Twist

MDL compliments its broad line of cast components with a new high performance cast twist. A full 90° right hand waveguide twist is provided in a minimal length (approximately 3/4 of wavelength at mid-band). A graded effect in the broadwall design produces very low reflections. VSWR is 1.05 max for casting, and 1.10 for twists and flanges. Power handling capacity is approximately 90% of standard waveguide rating.

W/G Size	Freq. GHz	Model Number	A	B	C
WR22	33.0-50.0	22TW12	.306	.194	.292
WR28	26.5-40.0	28TW12	.362	.222	.408
WR34	22.0-33.0	34TW12	.422	.252	.500
WR42	18.00-26.50	42TW12	.502	.252	.625
WR51	15.00-22.00	51TW12	.592	.337	.750
WR62	12.40-18.00	62TW12	.704	.393	.875
WR75	10.00-15.00	75TW12	.852	.477	1.000
WR90	8.20-12.40	90TW12	1.002	.502	1.250
WR102	7.00-11.00	102TW12	1.150	.640	1.375
WR112	7.05-10.00	112TW12	1.252	.627	1.437
WR137	5.85-8.20	137TW12	1.503	.753	1.750
WR187	3.95-5.85	187TW12	2.004	1.004	2.500
WR284	2.60-3.95	284TW12	3.004	1.504	4.000

Twist with Flanges

W/G Size	Freq GHz	Model Number	Dimensions (D)
WR42	18.00-26.50	42TW18	1.30
WR51	15.00-22.00	51TW18	1.52
WR62	12.40-18.00	62TW18	1.75
WR75	10.00-15.00	75TW18	2.10
WR90	8.20-12.40	90TW18	2.30
WR102	7.00-11.00	102TW18	2.60
WR112	7.05-10.00	112TW18	2.90
WR137	5.85-8.20	137TW18	3.50
WR187	3.95-5.85	187TW18	4.60
WR284	2.60-3.95	284TW18	7.50