



Micro Communications, Inc.

MICROWAVE A MICROWAVE TECHNIQUES COMPANY

# Rigid Waveguide

- AVAILABLE IN VARIOUS WALL THICKNESSES
- ANODIZED OR PAINTED
- CUSTOM FLANGE SIZES
- FLAT OR GROOVED FLANGES
- PRESSURIZED OR UNPRESSURIZED
- FULL AND HALF HEIGHT OPTIONS



Micro Communications Inc (MCI) supplies rigid waveguide in sizes WR90 through WR2300. All sizes are available in full and half height to meet your application.

For sizes larger than WR650, MCI offers two welding processes; full four corner welding for highest quality, optimum performance, and mechanical stability or an economical two seam welded process. In either process MCI uses precision fixtures to control twist along the longitudinal axis better than 1 degree per foot and less than 1/2 degree overall. Tolerance on flange flatness is less than 0.001 per inch and less than .010 overall.

All MCI waveguide and flanges meet or exceed EIA and mil standards, RS-261A/RS271-A and Mil-DTL-85/Mil-DTL-3922 respectively.

Waveguide sizes WR2300 through WR975 are available in lengths up to 12 feet and are made from 6061-T6 aluminum. Finish can be painted or chromate per Mil-C-5541, class 1A. Waveguide sizes WR650 though WR90 are available in Aluminum or Copper Alloy. Finish is painted ,with other options available on request.

RIGID WAVEGUIDE SPECIFICATIONS(TYPICAL)										
Size EIA	Size IEC	Frequency Range	TEM Cut-Off Mode (GHz)	Attenuation MIN/Max /2	Alloy	Inside Width Inches(mm)	Inside Height Inches(mm)	Outside Width Inches(mm)	Outside Height Inches(mm)	Wall Thickness Inches(mm)
90	100	8.20-12.40	6.56	6.45 / 4.48	Br/Al	0.9 (22.86)	0.4 (10.16)	1.00 (25.40)	0.50 (12.70)	0.050 (1.27)
112	84	7.05-10.00	5.26	4.12/ 3.21	Br/Al	1.122 (28.50)	0.497 (12.62)	1.25 (31.75)	0.625 (15.88)	0.064 (1.63)
137	70	5.85-8.20	4.29	2.87 / 2.30	Br/Al	1.372 (34.85)	0.622 (15.80)	1.50 (38.10)	0.75 (19.05)	0.064 (1.63)
159	58	4.90-7.05	3.71	-	Br/Al	1.59 (40.39)	0.795 (20.19)	1.718 (43.64)	0.923 (23.44)	0.064 (1.63)
187	48	3.95-5.85	3.16	2.08 / 1.44	Br/Al	1.872 (47.55)	0.872 (22.15)	2.00 (50.80)	1.00 (25.40)	0.064 (1.63)
229	40	3.30-4.90	2.59	-	Br/Al	2.29 (58.17)	1.145 (29.08)	2.418 (61.42)	1.273 (32.33)	0.064 (1.63)
284	32	2.60-3.95	2.08	1.102 / .752	Br/Al	2.84 (72.14)	1.34 (34.04)	3.00 (76.200)	1.50 (38.10)	0.80 (2.03)
340	26	2.20-3.30	1.735	.877 / .572	Br/Al	3.4 (86.36)	1.7 (43.18)	3.56 (90.42)	1.86 (47.24)	0.80 (2.03)
430	22	1.7-2.6	1.375	.588 / .385	Br/Al	4.300 (109.92)	2.150 (54.61)	4.460 (113.28)	2.310 (58.67)	0.80 (2.03)
650	14	1.12-1.70	0.908	.317 / .212	Br/Al	6.500 (165.10)	3.250 (82.55)	6.660 (169.2)	3.410 (86.62)	0.80 (2.03)
770	12	.96-1.45	0.766	.201 / .136	Al	7.700 (195.58)	3.850 (97.79)	7.950 (201.93)	4.100 (104.14)	0.125 (3.18)
975	9	.75-1.12	0.605	.137 / .095	Al	9.750 (247.65)	4.875 (123.83)	10.000 (254.00)	5.125 (130.18)	0.125 (3.18)
1150	8	.64-.96	0.513	.128 / .075	Al	11.500 (292.10)	5.750 (146.05)	11.750 (298.45)	6.000 (152.40)	0.125 (3.18)
1500	6	.49-.75	0.393	.069 / .050	Al	15.000 (381.00)	7.500 (190.50)	15.250 (387.35)	7.750 (196.85)	0.125 (3.18)
1800	5	.41-.62	0.328	.056 / .038	Al	18.000 (457.20)	9.000 (228.60)	18.376 (466.75)	9.376 (238.15)	0.188 (4.78)
2100	4	.35-.53	0.281	.054 / .034	Al	21.000 (533.40)	10.500 (266.70)	21.376 (542.95)	10.876 (276.25)	0.188 (4.78)
2300	3	.32-.49	0.256	.051 / .031	Al	23.000 (584.20)	11.500 (292.10)	23.376 (593.75)	11.876 (301.65)	0.188 (4.78)

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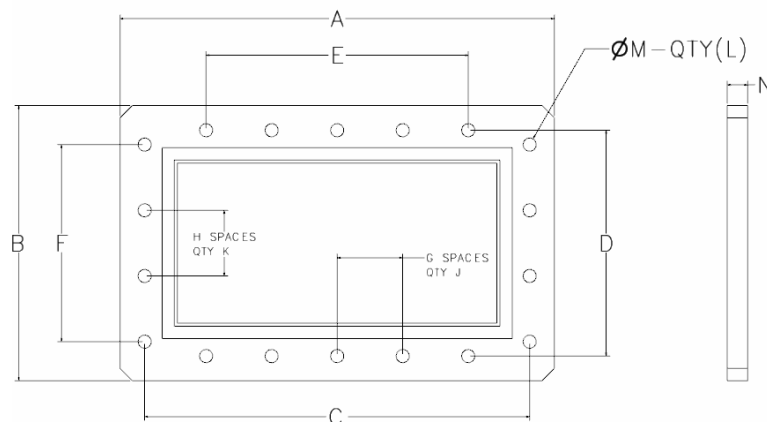
# RIGID WAVEGUIDE FLANGE SIZES WR90– WR340

- FLAT OR GROOVED FLANGE STYLES AVAILABLE FOR VARIOUS WALL THICKNESSES
- PRESSURIZED OR UNPRESSURIZED APPLICATIONS
- FULL AND HALF HEIGHT OPTIONS



RIGID WAVEGUIDE FLANGE SPECIFICATION- (CPRF STYLE)

Size	WR90	WR112	WR137	WR159	WR187	WR229	WR284	WR340
Model#	56010-090	56010-112	56010-137	56010-159	56010-187	56010-229	56010-284	56010-340
A	2.09 (53.09)	2.50 (63.50)	2.69 (68.33)	3.19 (81.03)	3.50 (88.90)	3.88 (98.55)	4.50 (114.30)	5.44 (138.18)
B	1.59 (40.39)	1.75 (44.45)	1.94 (48.28)	2.44 (61.98)	2.50 (63.50)	2.75 (69.85)	3.0 (76.20)	3.75 (95.25)
C	1.654 (42.01)	1.906 (48.41)	2.188 (55.58)	2.546 (64.67)	2.828 (71.83)	3.24 (82.30)	3.828 (97.23)	4.688 (119.08)
D	1.156 (29.36)	1.28 (32.51)	1.438 (36.53)	1.75 (44.45)	1.828 (46.43)	2.10 (53.34)	2.326 (59.08)	3.0 (76.20)
E	0.624 (15.85)	0.75 (19.05)	0.876 (22.25)	1.0 (25.40)	1.124 (28.55)	1.24 (54.36)	2.562 (65.07)	2.688 (68.28)
F	0.624 (15.85)	0.624 (15.85)	0.626 (15.90)	0.75 (19.05)	0.876 (22.25)	1.0 (25.40)	1.156 (29.36)	1.342 (34.09)
G	0.624 (15.85)	0.75 (19.05)	0.876 (22.25)	1.0 (25.40)	1.124 (28.55)	1.07 (27.18)	1.281 (32.54)	1.344 (34.14)
H	0.624 (15.85)	0.624 (15.85)	0.626 (15.90)	0.75 (19.05)	0.876 (22.25)	1.0 (25.40)	1.156 (29.36)	1.342 (34.09)
J	1.000	1.000	1.000	1.000	1.000	2.000	2.000	2.000
K	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
L	8.000	8.000	8.000	8.000	8.000	10.000	10.000	10.000
M	0.17 (4.32)	0.17 (4.32)	0.198 (5.03)	0.256 (6.50)	0.256 (6.50)	0.256 (6.50)	0.256 (6.50)	0.266 (6.76)
N	0.25 (6.35)	0.25 (6.35)	0.25 (6.35)	0.25 (6.35)	0.25 (6.35)	0.25 (6.35)	0.38 (9.65)	0.38 (9.65)
Weight (lbs)	.07AL/.21BR	.09AL/.28BR	.10AL/.31BR	.15AL/.47BR	.16AL/.51BR	.18AL/.58BR	.33AL/1.04BR	.52AL/1.64BR



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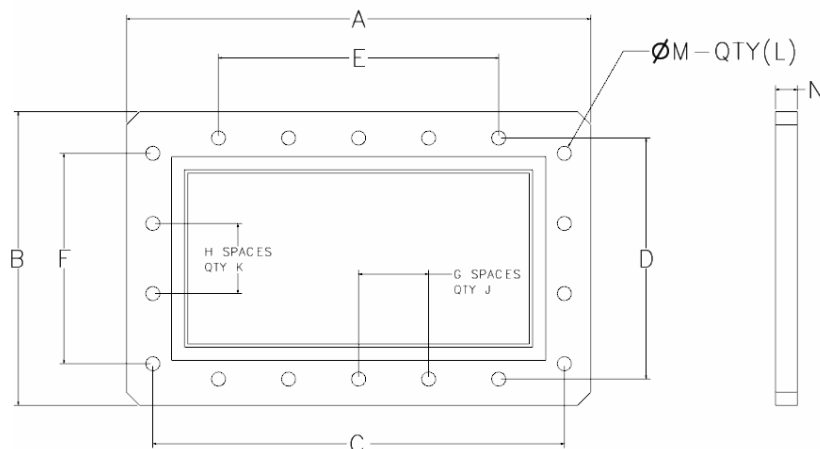
# RIGID WAVEGUIDE FLANGE SIZES WR430-WR2300

- FLAT OR GROOVED FLANGE STYLES AVAILABLE FOR VARIOUS WALL THICKNESSES
- PRESSURIZED OR UNPRESSURIZED APPLICATIONS
- FULL AND HALF HEIGHT OPTIONS



RIGID WAVEGUIDE FLANGE SPECIFICATIONS(CPRF STYLE)

Size	WR430	WR650	WR770	WR975	WR1150	WR1500	WR1800	WR2100	WR2300
Model#	56013	56014	56015	56016	56017	56018	56019	56020	56021
A	6.34 (161.04)	8.69 (220.65)	11.22 (284.94)	13.25 (336.55)	15.00 (381.00)	18.5 (469.90)	21.5 (546.10)	24.63 (625.48)	26.63 (676.28)
B	4.19 (106.35)	5.44 (138.10)	7.38 (187.45)	8.38 (212.85)	9.25 (234.95)	11.00 (279.40)	12.5 (317.50)	14.13 (358.78)	15.13 (384.18)
C	5.59 (141.99)	7.87 (200.00)	9.70 (246.38)	11.75 (298.45)	13.50 (342.90)	17.00 (431.80)	20.00 (508.00)	23.50 (596.90)	25.5 (647.70)
D	3.44 (87.38)	4.62 (117.40)	5.85 (148.59)	6.88 (174.63)	7.75 (196.85)	9.50 (241.30)	11.00 (279.40)	13.00 (330.20)	14.00 (355.60)
E	3.57 (90.78)	4.75 (120.60)	8.00 (203.20)	8.00 (203.20)	10.00 (254.00)	14.00 (355.60)	16.00 (406.40)	18.28 (464.24)	20.06 (509.55)
F	1.88 (47.65)	2.50 (63.45)	2.00 (50.80)	6.00 (152.40)	5.81 (147.68)	6.00 (152.40)	9.06 (203.20)	7.80 (198.12)	9.30 (236.27)
G	1.79 (45.40)	2.37 (60.20)	2.00 (50.80)	2.00 (50.80)	2.00 (50.80)	2.00 (50.80)	2.00 (50.80)	2.61 (66.32)	2.23 (56.62)
H	1.88 (47.65)	2.50 (63.45)	2.00 (50.80)	2.00 (50.80)	1.94 (49.23)	2.00 (50.80)	1.81 (46.05)	2.60 (66.04)	1.86 (47.24)
J	2	2	4	4	5	7	8	7	9
K	1	1	1	3	3	3	5	3	5
L	10	10	14	18	20	24	30	28	36
M	0.27 (6.67)	0.33 (8.26)	0.41 (10.31)	0.41 (10.31)	0.41 (10.31)	0.41 (10.31)	0.41 (10.31)	0.53 (13.49)	0.53 (13.49)
N	0.50 (12.70)	0.50 (12.70)	0.50 (12.70)	0.63 (15.88)	0.63 (15.88)	0.63 (15.88)	0.63 (15.88)	0.75 (19.05)	0.75 (19.05)
Weight (lbs)	0.6	1.2	1.8	3.2	3.7	5	6.1	7.9	8.3



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