

FLEXIBLE WAVEGUIDE



ELECTRICAL SPECIFICATIONS FOR TWISTABLE M1640

DASH #	IEC-R ()	WG SIZE (WR)	MATCHING RIGID W/G INTERNAL DIMENSIONS (IN)	OPERATING FREQUENCY BAND (GHz)	NOMINAL TEST FREQUENCY FOR ATTENUATION (GHz)	MAXIMUM IL ATTENUATION dB/ft	MAXIMUM VSWR CPR OR COVER FLANGES		MAXIMUM VSWR PLAIN/CHOKE FLANGES		POWER RATING CW (kW)
							<36"	>36"	<36"	>36"	
01	32	284	2.840 x 1.340	2.60 - 3.95	3.15	0.03	1.03	1.07	1.07	1.10	6.50
02	40	229	2.290 x 1.145	3.30 - 4.90	3.85	0.03	1.03	1.07	-	-	-
03	48	187	1.872 x 0.872	3.95 - 5.85	4.75	0.04	1.04	1.07	1.07	1.10	3.00
04	58	159	1.590 x 0.795	4.90 - 7.05	5.90	0.05	1.04	1.08	1.08	1.10	2.50
05	70	137	1.372 x 0.622	5.85 - 8.20	6.45	0.06	1.04	1.09	1.09	1.10	2.00
06	84	112	1.122 x 0.497	7.05 - 10.00	9.40	0.07	1.06	1.10	1.10	1.13	1.26
07	100	90	0.900 x 0.400	8.20 - 12.40	9.40	0.09	1.06	1.10	1.10	1.13	0.96
08	120	75	0.750 x 0.375	10.00 - 15.00	13.70	0.13	1.08	1.10	1.10	1.13	0.75
09	140	62	0.622 x 0.311	12.40 - 18.00	14.00	0.16	1.09	1.13	1.13	1.16	0.22
10	180	51	0.510 x 0.255	15.00 - 22.00	18.50	0.35	1.12	1.18	1.17	1.20	0.14
11	220	42	0.420 x 0.170	18.00 - 26.50	22.00	0.38	1.17	1.23	1.20	1.25	0.10
13	320	28	0.280 x 0.140	26.50 - 40.00	34.00	0.60	1.19		1.30 - 36"		0.10

MECHANICAL SPECIFICATIONS FOR TWISTABLE M1640

DASH #	IEC-R ()	WG SIZE (WR)	BENDING RATING				TWISTING RATING			MAXIMUM OPERATING PRESSURE psig	
			STATIC		REPEATED		TOLERANCE (±deg./ft.)	TWIST (±deg./ft.)	NON-TWIST (±in./ft.)		
			E-plane Rad (in)	H-plane Rad (in)	E-plane Rad (in)	H-plane Rad (in)					LENGTH
01	32	284	7.0	14.0	28.0	56.0	32	8	1/8	20	
02	40	229	6.5	13.0	26.0	52.0	40	10	1/8	30	
03	48	187	6.5	13.0	26.0	52.0	48	12	1/8	30	
04	58	159	5.0	10.0	20.0	40.0	56	14	1/8	30	
05	70	137	4.0	8.0	16.0	32.0	64	16	1/8	30	
06	84	112	3.0	6.0	12.0	24.0	80	20	1/8	35	
07	100	90	2.5	5.0	10.0	20.0	96	24	1/8	45	
08	120	75	2.5	4.5	10.0	20.0	112	28	1/8	45	
09	140	62	2.0	4.0	8.0	16.0	136	34	1/8	45	
10	180	51	2.0	4.0	8.0	16.0	136	34	1/8	45	
11	220	42	1.5	3.0	6.0	12.0	155	45	1/8	45	
13	320	28	TBA								

ORDERING INFORMATION

MODEL #	WG SIZE	LENGTH (in or MM)	JACKET	FLANGES AND FLANGE FINISH
M1640	07	12	N	06-07-

The above is a WR90, 12" long, Neoprene Jacket, Cover & Choke flanges, Flanges unplated, iridized & polished. Specify Flange Material. *Brass unless otherwise required

CONSTRUCTION

The basic construction of the guide is similar for both twistable and non-twistable versions and, irrespective of size or individual specification, consists of an inner core, two connecting flanges soft-soldered into position, and a protective outer jacket.

THE CORE

The core is manufactured from pre-convoluted brass strip helically wound to extremely close tolerances around a rectangular mandrel.

Twistable cores (M1640) are silver-clad and are locked by a plated copper sealing wire inserted into their seam during winding. At this stage pressurization is not possible. In order to hold pressure the flexible twistable waveguide must be encased in a rubber jacket.

Non-twistable cores (M1650) are also silver-clad and are locked by solder wire which is then melted to form a continuous solder fillet running the entire length of the seam. (M1650) can be pressurized without a rubber jacket.

NEOPRENE

- Shore hardness: 45° -50°
- Operating temp.: -50°C to + 100°C

SILICONE

- Shore hardness: 50° -55°
- Operating temp.: -55°C to + 135°C