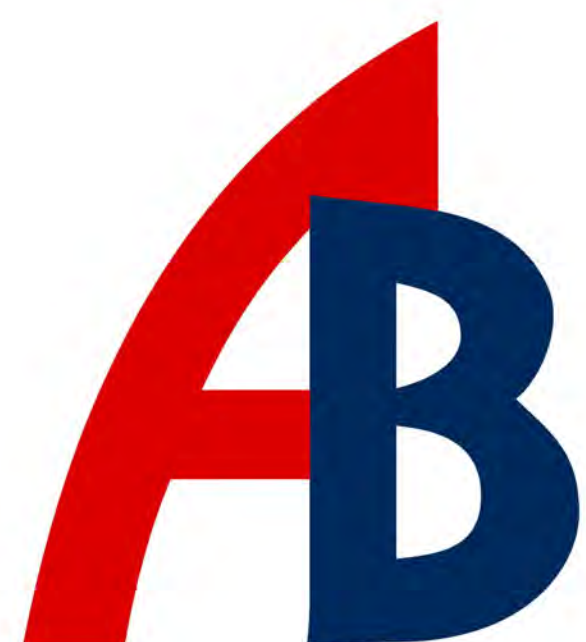




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FLEXIBLE WAVEGUIDES

Rectangular Flexible/Twistable and Flexible/Only Waveguide - electrical properties

Operating Frequency Band (GHz)	Waveguide Designation				Electrical specification								
	UK WG	IEC R	E.I.A WR	PART NUMBER FT = Flexible/Twistable FO = Flexible/Only	Atten- uation dB/m	V.S.W.R. & (Return Loss dB's)			Average power W max	Peak power KW max	*RF leak- age dB		
						300mm	600mm	900mm					
2.60 -3.95	10	32	284	FT 10 –PVZ-(**)-(**) /M(**)	0.11	1.055 (31.4)	1.070 (29.5)	1.070 (29.5)	5000	2360	50		
2.60 - 3.95	10H			FT10H –PVZ-(**)-(**) /M(**)	0.12	1.055 (31.4)	1.070 (29.5)	1.070 (29.5)	N/A	N/A	50		
3.30 - 4.90	11A	40	229	FT11A –PVZ-(**)-(**) /M(**)	0.15	1.058 (31.0)	1.070 (29.5)	1.075 (28.8)	4000	1680	50		
3.95 - 5.85	12	48	187	FT 12 –PVZ-(**)-(**) /M(**)	0.16	1.058 (31.0)	1.075 (28.8)	1.080 (28.3)	3000	1027	50		
4.90 - 7.05	13	58	159	FT 13 –PVZ-(**)-(**) /M(**)	0.18	1.058 (31.0)	1.080 (28.3)	1.085 (27.8)	2500	827	50		
5.85 - 8.20	14	70	137	FT 14 –PVZ-(**)-(**) /M(**)	0.28	1.064 (30.2)	1.085 (27.8)	1.090 (27.3)	2000	587	50		
7.05 - 10.0	15	84	112	FT 15 –PVZ-(**)-(**) /M(**)	0.30	1.064 (30.2)	1.090 (27.3)	1.092 (27.1)	1600	384	50		
8.20-12.40	16	100	90	FT 16 –PVZ-(**)-(**) /M(**)	0.40	1.064 (30.2)	1.092 (27.1)	1.094 (27.0)	1200	244	50		
10.0 - 15.0	17	120	75	FT 17 –PVZ-(**)-(**) /M(**)	0.50	1.07 (29.4)	1.094 (27.0)	1.100 (26.4)	800	195	50		
12.4 - 18.0	18	140	62	FT 18 –PVZ-(**)-(**) /M(**)	0.80	1.07 (29.4)	1.100 (26.4)	1.105 (26.0)	400	120	50		
15.0 - 22.0	19	180	51	FT 19 –PVZ-(**)-(**) /M(**)	1.00	1.100 (26.4)	1.120 (25.0)	1.120 (25.0)	200	95	50		
18.0 - 26.5	20	220	42	FT 20 –PVZ-(**)-(**) /M(**)	1.20	1.152 (23.0)	1.170 (22.1)	1.170 (22.1)	120	53	50		
22.0 - 33.0	21	260	34	FT 21 –PVZ-(**)-(**) /M(**)	1.50	1.170 (22.1)	1.195 (21.0)	1.195 (21.0)	100	42	50		
26.5 - 40.0	22	320	28	FT 22 –PVZ-(**)-(**) /M(**)	2.0	1.195 (21.0)	1.300 (17.1)	1.300 (17.7)	90	32	50		

Double Ridge Rectangular Flexible/Twistable and Flexible/Only Waveguide - electrical properties

Operating Frequency Band (GHz)	Waveguide Designation		Electrical specification									
	Waveguide Designation	PART NUMBER FT = Flexible/Twistable FO = Flexible/Only	Atten- uation dB/m	V.S.W.R. & (Return Loss dB's)						Average power KW max	Peak power MW max	*RF Leak- age dB
				300mm		600mm		900mm				
4.75 - 11.0	WRD475 D24	FT475 –PVZ-(***)-(***) /M(**)	0.65	1.110	(25.7)	1.150	(23.1)	1.150	(23.1)	N/A	N/A	50
5.8 - 16.0	WRD580 D28	FT 80 –PVZ-(***)-(***) /M(**)	1.20	1.180	(21.5)	1.250	(19.1)	1.300	(17.7)	N/A	N/A	50
6.5 - 18.0	WRD650 D24	FT650 –PVZ-(***)-(***) /M(**)	1.31	1.200	(20.8)	1.250	(19.1)	1.350	(16.6)	N/A	N/A	50
7.5 - 18.0	WRD750 D24	FT 50 –PVZ-(***)-(***) /M(**)	1.31	1.200	(20.8)	1.250	(19.1)	1.300	(17.1)	N/A	N/A	50
11.0 - 26.5	WRD110 C24	FT 10 –PVZ-(***)-(***) /M(**)	3.61	1.220	(20.0)	1.350	(16.6)	1.350	(18.6)	N/A	N/A	50
18.0 - 40.0	WRD180 C24	FT 80 –PVZ-(***)-(***) /M(**)	2.79	1.375	(16.0)	1.500	(14.0)	1.500	(14.0)	N/A	N/A	50

*The electrical properties of flex/only core are essentially the same as for the flexible/twistable core, with the exception of the RF leakage figure which is not applicable to flex/only core.
A conductive silicone jacket is available for standard flexible/twistable waveguides, which guarantees RF leakage better than - 90dB - insert the letter "E" in the jacket field of the part number (eg FT 20PEB 403-402/M300)
** Insert flexible Waveguide length in mm
*** For the 3 digit waveguide flange part number, refer to the Flange catalogue, or consult the factory.
H = Half Height Waveguide

Notes

1. RF Leakage specification based on the method of test detailed in the data sheet.
2. V.S.W.R. figures are based on Plain to Plain flanges. Degraded figures can be expected with Plain to Choke flanges.
3. Average power specifications are based on figures published in IEC 636 for complete jacketed assemblies and are the maximum recommended at the lowest frequency in the designated band.
4. Peak power rating is calculated mid-band with a load match of 1.5:1, a power safety factor of 2.25 and assumes a voltage breakdown at NTP of 30,000V/cm. Power ratings are for information only.
5. The match of the waveguide can generally be optimised over a reduced frequency band. Please specify the operating band when ordering.

Rectangular Flexible/Twistable and Flexible/Only Waveguide - mechanical properties

Waveguide Designation				Mechanical specification								
UK WG	IEC R	E.I.A WR	PART NUMBER FT = Flexible/Twistable FO = Flexible/Only	Sheath size mm	Weight Unflanged Kg/m	Maximum Operating Pressure lb/in sq	Minimum Bend Radius				*Twisting Rating	
							Static E Plane mm	Static H Plane mm	Repeat -ed E Plane mm	Repeat -ed H Plane mm	Static deg/m	Repeat -ed deg/m
10	32	284	FT 10 –PVZ-(**)-(**) /M(**)	86X48	0.803	20	180	355	710	1420	105	25
10H			FT10H –PVZ-(**)-(**) /M(**)	85X24	0.658	20	150	405	810	1625	105	25
11A	40	229	FT 11A –PVZ-(**)-(**) /M(**)	74X43	0.729	30	165	330	880	1320	130	35
12	48	187	FT 12 –PVZ-(**)-(**) /M(**)	61X36	0.560	30	165	330	880	1320	155	40
13	58	159	FT 13 –PVZ-(**)-(**) /M(**)	53X36	0.533	30	125	255	610	1020	185	45
14	70	137	FT 14 –PVZ-(**)-(**) /M(**)	48X25	0.331	30	100	205	405	815	210	52
15	84	112	FT 15 –PVZ-(**)-(**) /M(**)	38X20	0.274	35	95	150	305	810	260	68
16	100	90	FT 16 –PVZ-(**)-(**) /M(**)	31X15	0.226	45	85	125	255	510	315	76
17	120	75	FT 17 –PVZ-(**)-(**) /M(**)	23x15	0.186	45	85	115	255	510	365	92
18	140	62	FT 18 –PVZ-(**)-(**) /M(**)	23X15	0.162	45	50	100	205	405	445	112
19	180	51	FT 19 –PVZ-(**)-(**) /M(**)	23x15	0.120	45	50	100	205	405	445	112
20	220	42	FT 20 –PVZ-(**)-(**) /M(**)	18X13	0.078	45	30	85	125	255	630	157
21	260	34	FT 21 –PVZ-(**)-(**) /M(**)	18X13	0.078	45	30	85	125	255	630	157
22	320	28	FT 22 –PVZ-(**)-(**) /M(**)	13 dia	0.057	45	25	50	100	205	920	230

Double Ridge Rectangular Flexible/Twistable and Flexible/Only Waveguide - mechanical properties

Waveguide Designation		Mechanical specification								
Waveguide Designation	PART NUMBER FT = Flexible/Twistable FO = Flexible/Only	Sheath size mm	Weight Unflanged Kg/m	Maximum Operating Pressure lb/in sq	Minimum Bend Radius				*Twisting Rating	
					Static E Plane mm	Static H Plane mm	Repeat-ed E Plane mm	Repeat-ed H Plane mm	Static deg/m	Repeat-ed deg/m
WRD475 C24	FT 475 –PVZ-(**)-(**) /M(**)	36X20	0.274	30	89	180	355	915	295	98
WRD580 C28	FT 580 –PVZ-(**)-(**) /M(**)	26X15	0.186	45	76	155	305	510	490	130
WRD650 C24	FT 650 –PVZ-(**)-(**) /M(**)	25X15	0.186	45	76	155	305	510	390	115
WRD750 C24	FT 750 –PVZ-(**)-(**) /M(**)	19X13	0.078	45	50	100	205	405	490	130
WRD110 C24	FT 110 –PVZ-(**)-(**) /M(**)	19X13	0.078	45	50	100	205	405	590	196
WRD180 C24	FT 180 –PVZ-(**)-(**) /M(**)	13 dia	0.057	45	25	50	100	205	720	246

* Twisting Rating not applicable to flex/only core

Length of Flexible Twistable Assemblies

This overall length of waveguide assemblies, is measured as the distance between the front face of both flanges. The maximum length of flexible and flexible twistable waveguide is dictated by the mechanical strength of the waveguide and the production tooling available.

The following is a list of the standard recommended length for the various waveguide sizes. Other lengths may be available on request but may be subject to tooling and design charges.

MM: 75, 150, 230, 300, 380, 460, 500, 600, 650, 760, 900, 1000, 1250 and 1500

INCHES: 12, 24, 36 and 48.

All lengths are subject to a tolerance on the length of 1.5% or 2mm or whichever is greater

