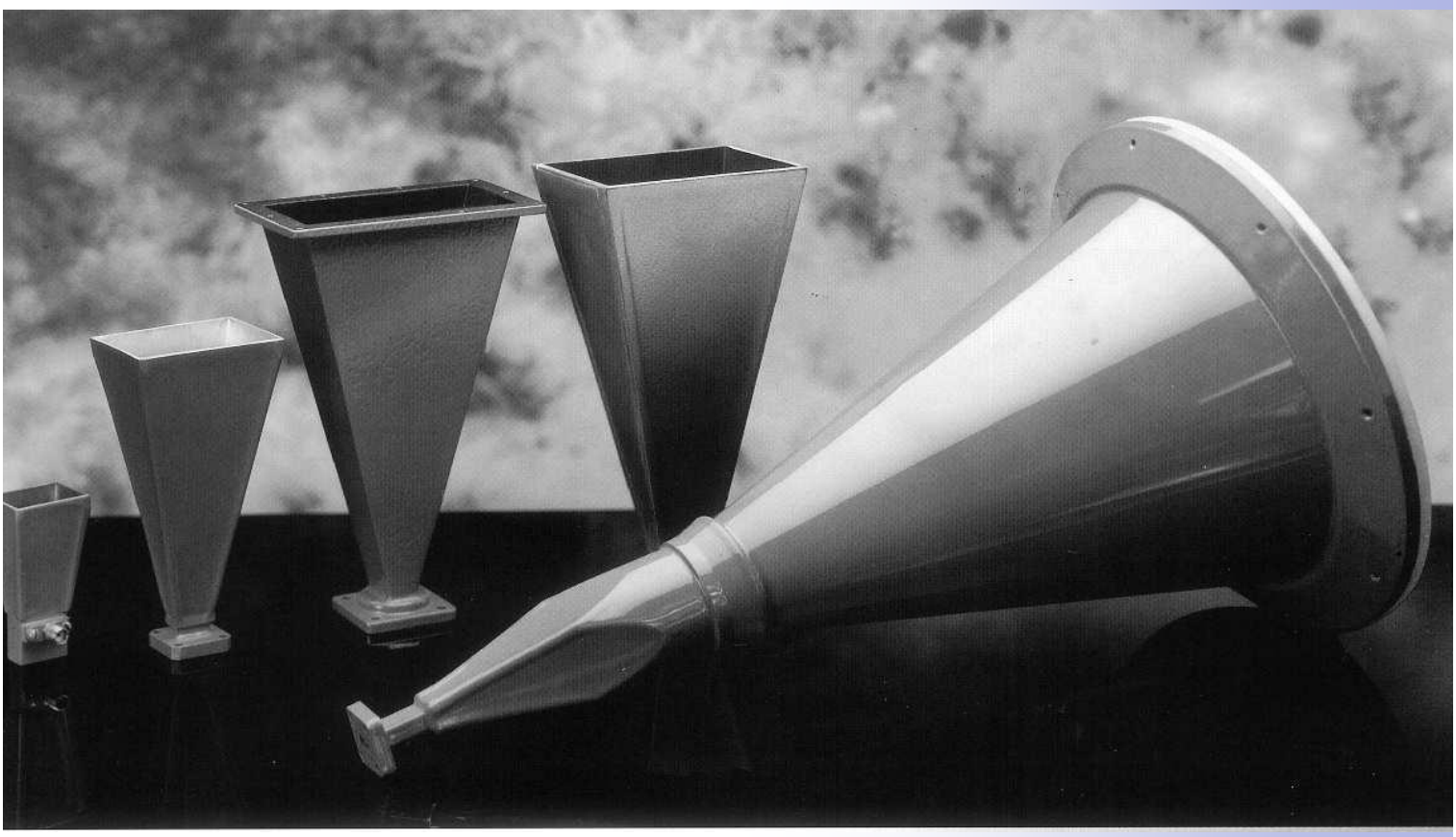
The Waveguide Solution

Waveguide Horns

Broadband Horns BH SERIES



The Waveguide Solution offer a range of standard gain Horns from the UK. WG10 (WR284) to WG22 (WR28) in three values, 10dB, 15dB and 20dB.
Precision workmanship is employed in the manufacture of these devices, the dimensions being accurately calculated to give the optimum performance. The physically larger sizes are predominantly fabricated in brass. UK WG16 through to WG 22 are generally electroformed in copper in order to maintain the tight tolerances for these smaller waveguide sizes. The BH series of horn antennas are manufactured to the highest quality standards. Horns are manufactured with the full range of International Flange Styles as shown in the TWS Flange Catalogue or with a variety of coaxial Input / Output connectors on request. All TWS Horns are offered with an attractive hard wearing, epoxy paint finish.
The Waveguide Solution facility is approved to ISO9001: 2000.

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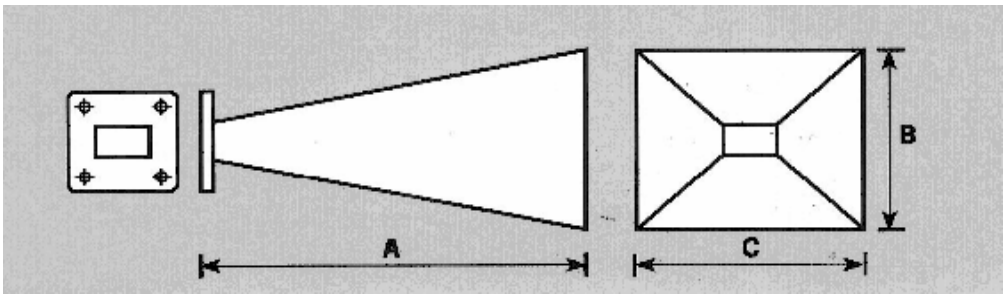
BROADBAND HORNS (Gain 10 dB)

Standard Rectangular

Specification: V.S.W.R. – 1.25 Max
Beamwidth (approx) = 50 deg
Material: Brass, Copper or Aluminium
Finish: Blue Paint, Silver Plated Iridited or Chromated Flanges
Full Band Flatness: B & C are given for the inside dimensions of the Horn aperture



Operating Frequency Band (GHz)	Waveguide Designation			TWS PART NUMBER	Length "A".	Height "B"	Width "C"	Body material	Fabricated	Electroformed
	UK WG	IEC R	E.I.A. WR							
3.95 – 5.85	12	48	187	BH 12-SQH-(***)-A-10	152	57	76	Al	✓	
5.85 – 8.20	14	70	137	BH 14-SQB-(***)-B-10	113	41	70	Br	✓	
7.05 – 10.0	15	84	112	BH 15-SQB-(***)-C-10	89	34	44	Br		✓
8.20 – 12.40	16	100	90	BH 16-SQB-(***)-C-10	70	29	42	Al		✓
10.0 – 15.0	17	120	75	BH 17-SQB-(***)-B-10	64	26	35	Al	✓	
12.4 – 18.0	18	140	62	BH 18-SQB-(***)-C-10	54	21	25	Br		✓
18.0 – 26.5	20	220	42	BH 20-SQB-(***)-C-10	38	14	17	Cu		✓
26.5 – 40.0	22	320	28	BH 22-SQB-(***)-C-10	29	11	14	Cu		✓

*** For 3 Digit Rectangular Flange part number, refer to the TWS Flange Catalogue, or consult the factory.

Note: The Waveguide Solution only offer test data for return loss into freespace up to 75GHz. All other characteristics are based upon the mechanical design.

BROADBAND HORNS (Gain 15 dB)

Standard Rectangular

Specification: V.S.W.R. – 1.25 Max
Beamwidth (approx) = 32 deg
Material: Brass, Copper or Aluminium
Finish: Blue Paint, Silver Plated Irdited or Chromated Flanges
Full Band Flatness: B & C are given for the inside dimensions of the Horn aperture

Operating Frequency Band (GHz)	Waveguide Designation			TWS PART NUMBER	Length "A"	Height "B"	Width "C"	Body material	Fabricated	Electroformed
	UK WG	IEC R	E.I.A. WR							
2.60 – 3.95	10	32	284	BH 10-SQH-(***)-A-15	435	146	200	Al	✓	
3.30 – 4.90	11A	40	229	BH 11A-SQH-(***)-B-15	343	119	159	Br	✓	
3.95 – 5.85	12	48	187	BH 12-SQH-(***)-B-15	279	95	127	Br	✓	
4.90 – 7.05	13	58	159	BH 13-SQH-(***)-B-15	241	81	109	Br	✓	
5.85 – 8.20	14	70	137	BH 14-SQH-(***)-B-15	203	67	90	Br	✓	
7.05 – 10.0	15	84	112	BH 15-SQH-(***)-C-15	159	54	73	Cu		✓
8.20 – 12.40	16	100	90	BH 16-SQH-(***)-C-15	157	50	67	Cu		✓
12.4 – 18.0	18	140	62	BH 18-SQH-(***)-C-15	97	32	41	Cu		✓
26.5 – 40.0	22	320	28	BH 22-SQH-(***)-C-15	51	16	22	Cu		✓

*** For 3 Digit Rectangular Flange part number, refer to the TWS Flange Catalogue, or consult the factory.

BROADBAND HORNS (Gain 20 dB)

Standard Rectangular

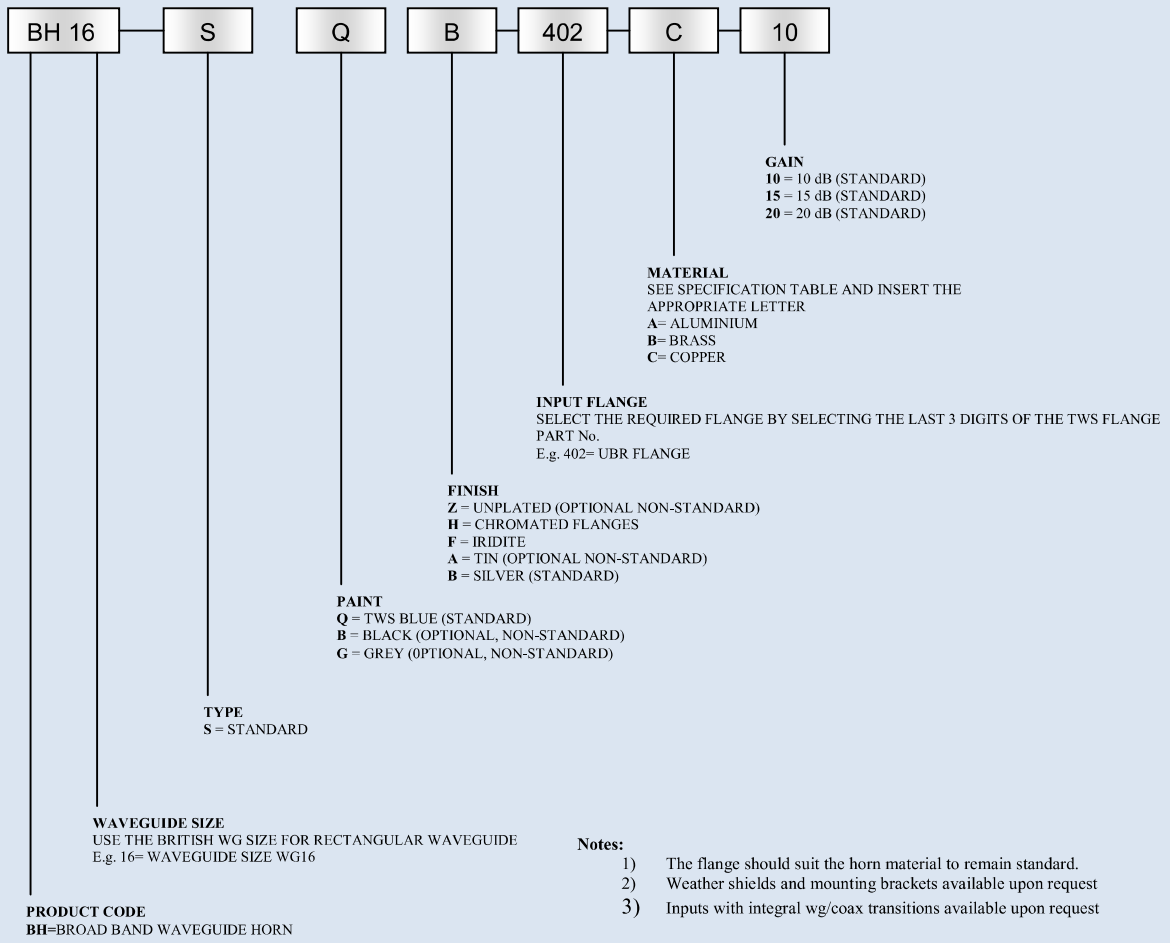
Specification: V.S.W.R. – 1.25 Max
Beamwidth (approx) = 20 deg
Material: Brass, Copper or Aluminium
Finish: Blue Paint, Silver Plated Iridited or Chromated Flanges
Full Band Flatness: B & C are given for the inside dimensions of the Horn aperture

Operating Frequency Band (GHz)	Waveguide Designation			TWS PART NUMBER	Length "A".	Height "B"	Width "C"	Body material	Fabricated	Electroformed
	UK WG	IEC R	E.I.A. WR							
2.60 – 3.95	10	32	284	BH 10-SQH-(***)-A-20	797	276	375	Al	✓	
3.30 – 4.90	11A	40	229	BH 11A-SQH-(***)-A-20	483	260	351	Al	✓	
3.95 – 5.85	12	48	187	BH 12-SQB-(***)-B-20	421	170	230	Br	✓	
4.90 – 7.05	13	58	159	BH 13-SQB-(***)-B-20	413	239	297	Br	✓	
5.85 – 8.20	14	70	137	BH 14-SQB-(***)-B-20	343	121	162	Br	✓	
7.05 – 10.0	15	84	112	BH 15-SQB-(***)-B-20	300	95	130	Br	✓	
8.20 – 12.40	16	100	90	BH 16-SQB-(***)-B-20	273	95	127	Br	✓	
10.0 –15.0	17	120	75	BH 17-SQB-(***)-B-20	216	67	87	Br	✓	
12.4 – 18.0	18	140	62	BH 18-SQB-(***)-C-20	162	54	73	Cu		✓
18.0 – 26.5	20	220	42	BH 20-SQB-(***)-C-20	111	38	51	Cu		✓
26.5 – 40.0	22	320	28	BH 22-SQB-(***)-C-20	84	29	38	Cu		✓

*** For 3 Digit Rectangular Flange part number, refer to the TWS Flange Catalogue, or consult the factory.

Note: The Waveguide Solution only offer test data for return loss into freespace up to 75 GHz. All other operating characteristics are based upon the mechanical design

Ordering Information



For assistance selecting RoHS compliant options please contact the factory

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The Waveguide Solution Limited