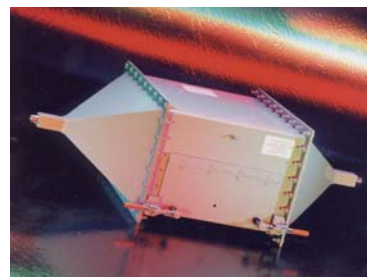
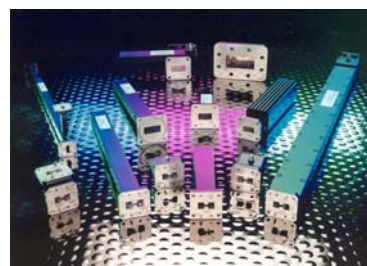
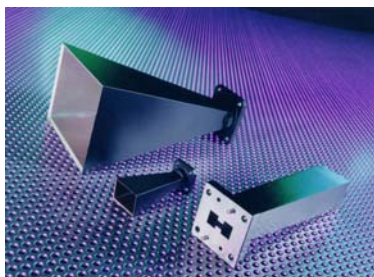
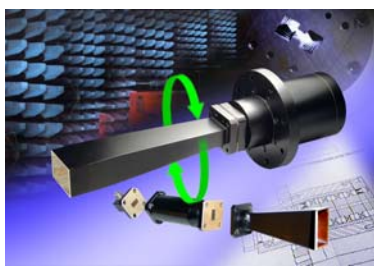


Waveguide components, Assemblies and Sub Systems



Introduction and Product categories	3-5
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WR112(WG15) 7.05-10.0 GHz	23-24
WR90(WG16) 8.20-12.40 GHz	25-26
WR75(WG17) 10.0-15.0 GHz	27-28
WR62(WG18) 12.4-18.0 GHz	29-30
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Custom Products

Link Microtek offers a wide range of specialist activities. These include, custom waveguide assemblies, horn antenna designs, TEM cells, rotary joints and custom high power TWT amplifier output arms. We also act as a design consultancy for our customers, offering advice on designs, developments and prototypes.



Link Microtek is a privately owned, Limited company which was formed in July 1995 as a specialist technical representative to supply both commercial and military customers with RF and microwave components, sub-systems and instrumentation. Link established its manufacturing capability in 1998 and upgraded its existing ISO 9000 accreditation to **BS EN ISO 9001:2000** in 2002. The current scope of registration is **“Design, manufacture and sale of RF and microwave components, systems and instrumentation. Calibration, servicing and repair of non ionising radiation safety instrumentation”**.

In addition to manufacturing, Link represent a number of world renowned specialist RF and microwave manufacturers including Narda, TriQuint and Hittite; have a comprehensive range of Radiation Hazard products and services and provide broadband wireless solutions based on IEEE 802.11 protocols.

Manufacturing Processes

- DESIGN
- DEVELOPMENT
- PRODUCTION
- SUB CONTRACT
- FINISHING
- INSPECTION/TEST
- CALIBRATION & REPAIR



Calibrated Microwave Test

- SCALAR NETWORKS ANALYSIS
0.5 - 40 GHz
- VECTOR NETWORK ANALYSIS
0.11 - 18 GHz
- SPECTRUM ANALYSIS
DC - 18 GHz
- POWER
- PFD
- FREQUENCY 0.49-40GHz



Facilities

- MICROWAVE DESIGN CAD
- MICROWAVE TEST LAB
- DRAWING CAD
- WORKSHOP
- MECHANICAL TEST
- OPERATIONS
- CALIBRATION & REPAIR LAB
- STOCK MATERIALS & PRODUCTS



Capability & Strengths

- CATALOGUE COMPONENTS SALES
- CUSTOM (FILTERS, ANTENNAS, O/P ARMS, ETC)
- SUB-SYSTEMS, MULTI-FUNCTION ASSEMBLIES
- HIGH POWER
- BUILD TO PRINT
- ISO9001:2000
- ALUMINIUM
- LOW OVERHEADS
- SHORT LEAD TIMES
- TECHNICAL EXPERIENCE
- PROFESSIONAL SALES FORCE
- WIDE BAND eg DOUBLE RIDGE (E.W.)



Certificate No. 8657

Workshop

- MILLS
- LATHES
- DRILLS
- SAWS
- VACUUM CHAMBER
- BRAZING / SOLDERING
- ALOCHROM
- PAINTING
- SUBCONTRACT
- VARIOUS – ENGRAVING, GRINDING, MOULDING



Calibrated Mechanical Inspection/Test

- SURFACE PLATES
- HEIGHT GAUGES
- VERNIER GAUGES
- MISC GAUGES
- PRESSURE TEST
- SLIPS
- CALIBRATION GAUGES



Markets

- MILITARY SYSTEMS & SPECIAL PROJECTS
- COMMERCIAL TEST SYSTEMS
- SATCOM
- MICROWAVE RADIO

Customers

- | | |
|-------------|-----------------|
| • THALES | • NOKIA |
| • MOD | • ORANGE |
| • FILTRONIC | • MOTOROLA |
| • QINETIQ | • BAE SYSTEMS |
| • T-MOBILE | • HUTCHINSON 3G |
| • MARCONI | • NTL |
| • ASTRUM | • BT |
| • VODAFONE | • AMS |
| • NORTEL | • DSTL |
| • RAYTHEON | • E2V |



Std Waveguide Components



Rectangular & Double ridged:
Adaptors, Attenuators, Assemblies, Bends, Broadwall

Couplers, Crossguide Couplers, End Launch Adaptors, Flexible assemblies, Harmonic Filters, Hybrids, Mismatches, Pressure Units, Sliding Loads, Terminations, Transitions, Twists, Water Cooled Loads.

Double ridge Waveguide



For Broadband waveguide applications. Typical military systems operating 6.5 to 18GHz and 7.5 to 18GHz

using WRD650 and WRD750 double ridge waveguide. Also dual and tri-band communications systems using WRD580, 5.8 to 16GHz waveguide.

mmWave Components



A range of mmWave waveguide components for system test and integration applications

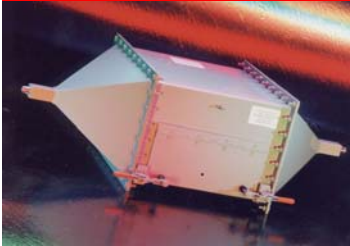
at frequencies between 18GHz and 40GHz for millimetre radios (I.o.s.) satellite communication and data distribution systems wireless access transmitters with typical frequencies of 26, 28, 38 and 40GHz. Adaptors available on short delivery/stocked.

Swivel Joints



Broadband high power 90° E & H field polarisation rotator or swivel joints with variable angles of rotation.

TEM Cells



DC to 500MHz, DC to 200MHz TEM Cells for EMC

(emissions/susceptibility) testing and field strength detector calibrations. For small or large objects. Cells designed to CISPR specifications.

Rotary Joints



WR75, 13.75 to 14.5GHz Sat Com ku-band Transmitter applications for fixed and mobile earth station up links.

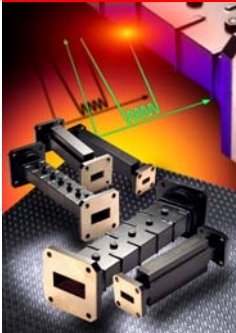
Horn Antennas



Horn Antennas from below 1GHz to above 40GHz for transmit and receive applications. Wideband

Horn Antennas also available, eg: 0.2 to 2GHz, 2 to 18GHz, 26 to 40GHz, custom designs.

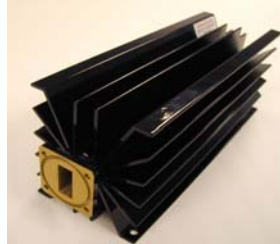
Filters



Waveguide bandpass filters featuring a Chebyshev-type response, for applications requiring a sharp frequency cut-off. The new filter series comprises four standard

parts, offering passband frequency ranges of 7.25 to 7.75GHz, 7.90 to 8.40GHz, 9.40 to 9.80 GHz and 14.00 to 14.50 GHz. Custom waveguide filters are also available.

High Power



High power waveguide components such as loads, terminations, couplers, adaptors and power samplers that

can handle powers of 100's W to many kW's of average power and even higher peak/pulsed power. Typical applications are Radar and Satellite communications.

Custom Assemblies



Link specialises in niche microwave component, assembly and sub-system projects built to custom technical requirements. The pictured

product is a custom 90° WRD750 swivel joint, 7.5 to 18GHz, with custom narrow beam width horn antenna.

Fast Track Production



Link has extensive stocks of rectangular, double-ridge and flexible waveguide, as well as key components including flanges, cast bends and various standard connectors. Using

in-house facilities, these piece-parts are machined, brazed, finished and tuned to meet customers' specific requirements for products such as adaptors, E and H bends, straight/twist sections, low-power terminations and couplers. This enables small quantities, (typically no more than ten) of components to be delivered in as little as one week.

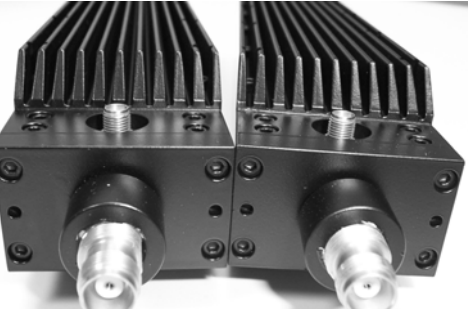


Custom Reflectometer Tuner Unit



mmWave Cross Guide Couplers

0.2-2GHz Antenna

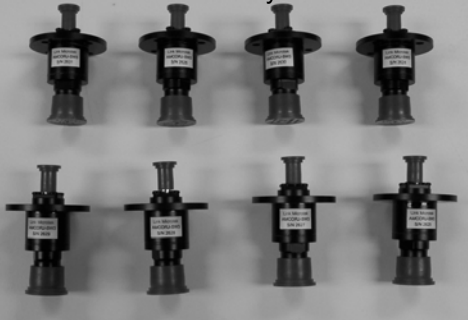


High Power Loads With Sample Ports

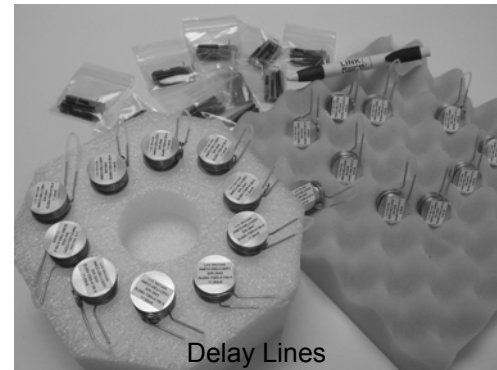


High Power Bi-directional Attenuator

Coaxial Rotary Joints

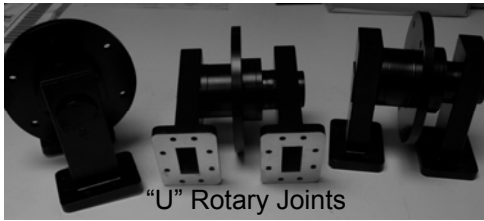


2-18GHz Antennas

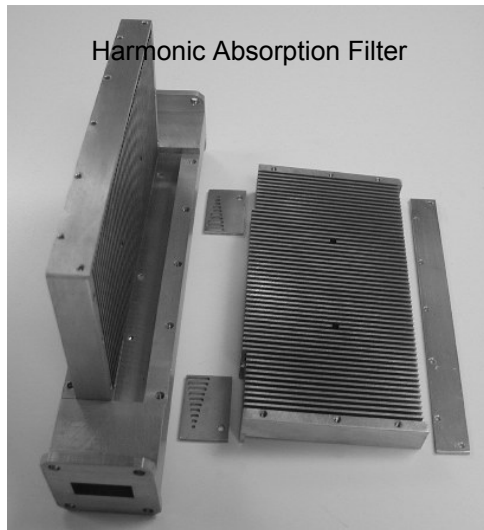


Delay Lines

"U" Rotary Joints



Harmonic Absorption Filter



Custom Double Ridge Components



In Line Rotary Joints



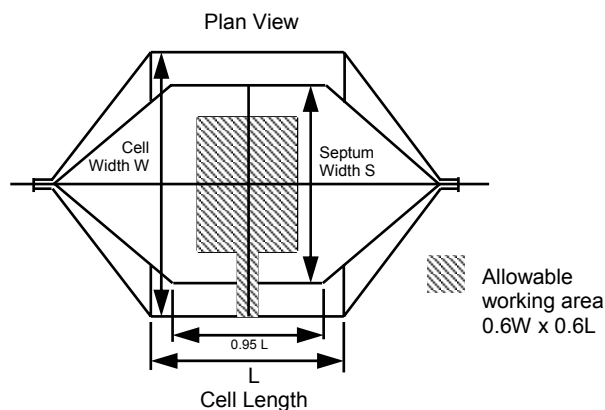
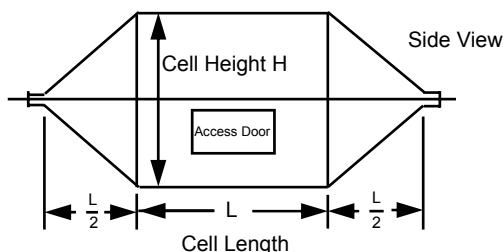
E&O Excepted. All specifications subject to change without notice.

120405



TEM Cells may be used for:-

- Testing of susceptibility of equipment to RF fields
- Testing of equipment RF emission levels
- Testing portable communication products
- Testing/calibration of Radiation monitors/meters



Model	Frequency Range	Impedance Of Cell	Port VSWR	Device Under Test Recommended Dimensions	TEM Cell Total Dimensions					Connectors
	(MHz)				Total Length Of TEM Cell	Cell Length L	Cell Height H	Cell Width W	Septum Width S	
					(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
AM250-TEM	DC - 250	50 Ohm \pm 2	1.2:1 MAX DC - 250 MHz	100 High 200 Wide 300 Long	2000	900	600	1000	740	N-Type(F)
AM500-TEM	DC - 500	50 Ohm \pm 2	1.2:1 MAX DC - 250 MHz 1.4:1 MAX DC - 500 MHz	50 High 100 Wide 150 Long	1000	450	300	500	370	N-Type(F)
AM100-TEM (CISPR)	DC - 100	50 Ohm \pm 2	1.2:1 MAX DC - 100 MHz	200 High 720 Wide 720 Long	2400 ie 1200+600+600	1200	1200	1200	1000	N-Type(F)
AM200-TEM-1 (CISPR)	DC - 200	50 Ohm \pm 2	1.2:1 MAX DC - 200 MHz	93 High 568 Wide 374 Long	1248 ie 624+312+312	624	560	946	700	N-Type(F)
AM200-TEM-2 (CISPR)	DC - 200	50 Ohm \pm 2	1.2:1 MAX DC - 200 MHz	100 High 360 Wide 360 Long	1200 ie 600+300+300	600	600	600	500	N-Type(F)
AM300-TEM (CISPR)	DC - 300	50 Ohm \pm 2	1.2:1 MAX DC - 300 MHz	50 High 300 Wide 300 Long	1000 ie 500+250+250	500	300	500	360	N-Type(F)
AM500-TEM (CISPR)	DC - 500	50 Ohm \pm 2	1.2:1 MAX DC - 250 MHz 1.4:1 MAX DC - 500 MHz	33 High 180 Wide 180 Long	600 ie 300+150+150	300	200	300	230	N-Type(F)

Notes

- The models AM***-TEM are for general use and may be used to test the susceptibility of equipment to RF fields, and also to monitor equipment emissions. There is a side access screened door for the placement of equipment in addition to top and side access ports for cables and probes etc.
- The models AM***-TEM(CISPR) have been designed to conform to the CISPR 25 specification for the testing of automotive electronic systems (up to 200 MHz) and integrated circuits (up to 500 MHz). These cells are provided with a side access screened door and come with an equipment support tray at the correct height for measurement, marked with the recommended dimensions for testing.
- All units are fabricated from aluminium and finish is alochrome and epoxy paint.



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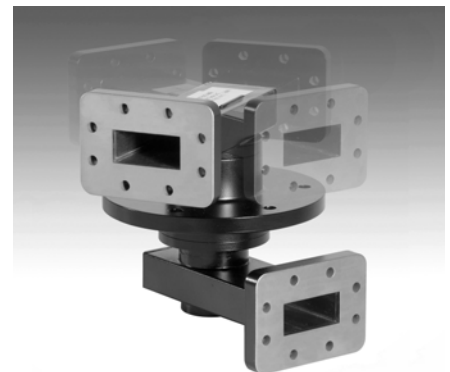
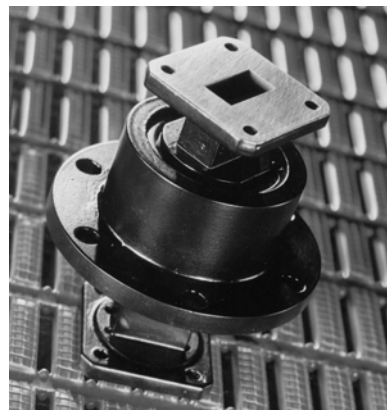
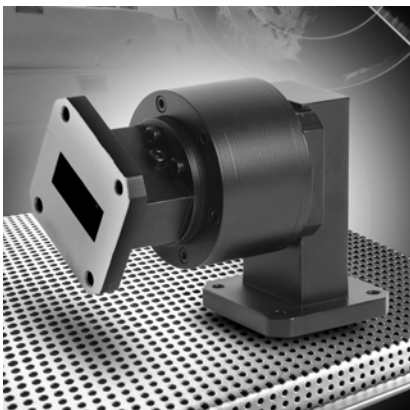
- **Rugged, long-life, non-contacting design**
- **Available as in-line, L and U- style**
- **Includes Satcom applications – Ku, X and C band SNG, VSAT**
- **High power 500W**
- **IP65 rated, can be pressurized**
- **Alternative flange styles available**

Model	Waveguide Size	Type	Frequency Range GHz	Standard Flange	VSWR (max.)	Ins. Loss (max.) dB	Dimensions		
							A mm	B mm	C mm
AM137RJI	WR137 (WG14)	IN-LINE	5.8 – 6.8	UDR70	1.2 : 1	0.15	127	67	-
AM137RJU	WR137 (WG14)	U-TYPE	7.9 – 8.4	UDR70	1.2 : 1	0.15	83	67	77
AM137RJL	WR137 (WG14)	L-TYPE	7.9 – 8.4	UDR70	1.2 : 1	0.15	105	67	77
AM112RJI	WR112 (WG15)	IN-LINE	7.9 – 8.4	UBR84	1.1 : 1	0.15	102	57	-
AM112RJU	WR112 (WG15)	U-TYPE	7.9 – 8.4	UBR84	1.1 : 1	0.15	61	57	51
AM112RJL	WR112 (WG15)	L-TYPE	7.9 – 8.4	UBR84	1.1 : 1	0.15	82	57	51
AM90RJI	WR90 (WG16)	IN-LINE	8.2 – 11.0	UBR100	1.35 : 1	0.15	95	46	-
AM90RJU	WR90 (WG16)	U-TYPE	8.2 – 11.0	UBR100	1.35 : 1	0.15	51	46	48
AM90RJL	WR90 (WG16)	L-TYPE	8.2 – 11.0	UBR100	1.35 : 1	0.15	82	46	48
AM75RJI	WR75 (WG17)	IN-LINE	13.75 – 14.5	UBR120	1.1 : 1	0.15	89	50	-
AM75RJIW	WR75 (WG17)	IN-LINE	11.0 – 14.5	UBR120	1.5 : 1	0.3	89	50	-
AM75RJU	WR75 (WG17)	U-TYPE	11.0 – 14.5	UBR120	1.5 : 1	0.3	91	50	44
AM75RJL	WR75 (WG17)	L-TYPE	11.0 – 14.5	UBR120	1.5 : 1	0.3	67	50	44
AM62RJI	WR62 (WG18)	IN-LINE	17.8 – 18.4	UBR140	1.25 : 1	0.15	77	50	-
AM62RJI-1	WR62 (WG18)	IN-LINE	12.4 – 15.0	UBR140	1.25 : 1	0.15	77	50	-
AM62RJU	WR62 (WG18)	U-TYPE	12.4 – 15.0	UBR140	1.25 : 1	0.15	51	50	39
AM62RJL	WR62 (WG18)	L-TYPE	12.4 – 15.0	UBR140	1.25 : 1	0.15	64	50	39

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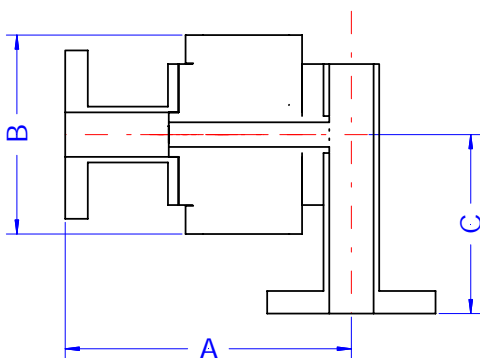
Typical Specifications of all models

- Power 500W mean
- Insertion Loss 0.15 dB
- VSWR 1.25:1 on narrowband models
- Min 10,000 rotations
- Temp: -20 to +70 deg C
- Bulkhead flange optional
- Material: Aluminium
- Finish: Alocrom, painted satin black

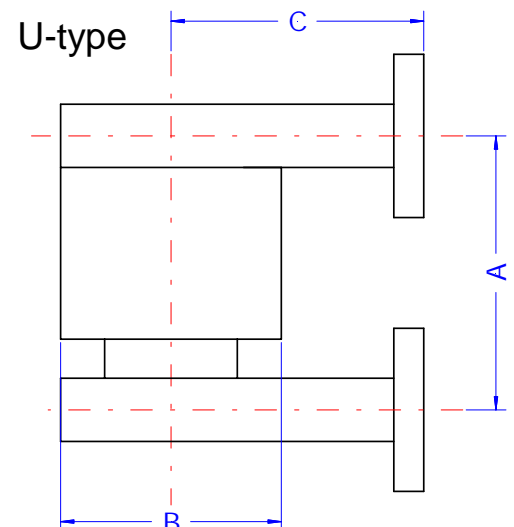
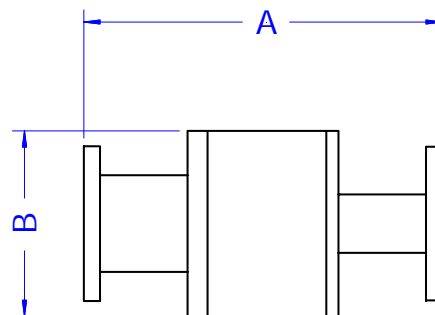


Outline Drawings

L-type



In-line type



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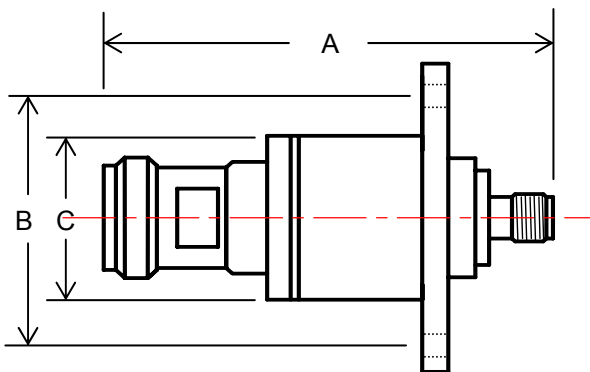
0906



- High spec, long life, non-contacting design
- Precision N(f) and SMA(f) connectors
- VSWR 1.2:1 max
- Insertion loss 0.3dB max
- Satcom applications - Ku, X & C band
- Designed & manufactured in the UK by Link Microtek

Model	Frequency Range dB	Connectors	VSWR max	Insertion Loss dB max	Dimensions mm		
					A	B	C
AMCORJ-WB1	8.2 – 18.0	Precision N or SMA	1.38:1	0.4			
AMCORJ-KU1	13.75 - 14.50	Precision N or SMA	1.2:1	0.3			
AMCORJ-X1	7.90 – 8.40	Precision N or SMA	1.2:1	0.3			
AMCORJ-C1	5.80 – 6.40	Precision N or SMA	1.2:1	0.3			
AMCORJ-L1	1.00 – 2.50	Precision N or SMA	1.2:1	0.3			

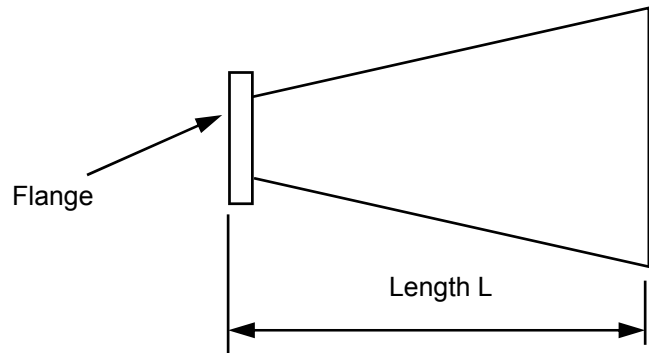
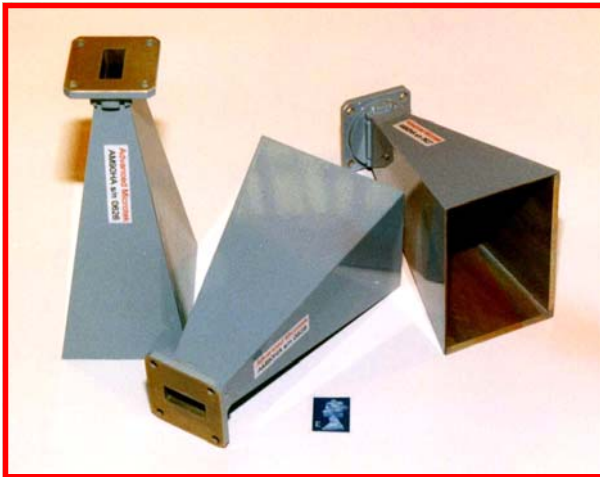
Outline Drawing



Typical Specification for all models

- Power 100W peak, 25W average
- Impedance 50 Ohms
- Max speed: 5 rpm
- Min 10,000 rotations
- Temp: -20 to +70 deg C
- Amplitude WOW: 0.05 db max
- Bulkhead flange optional
- Material: Aluminium
- Finish: Alocrom , painted satin black
- Options : Connector choice, Bulkhead flange
- Other frequency ranges available





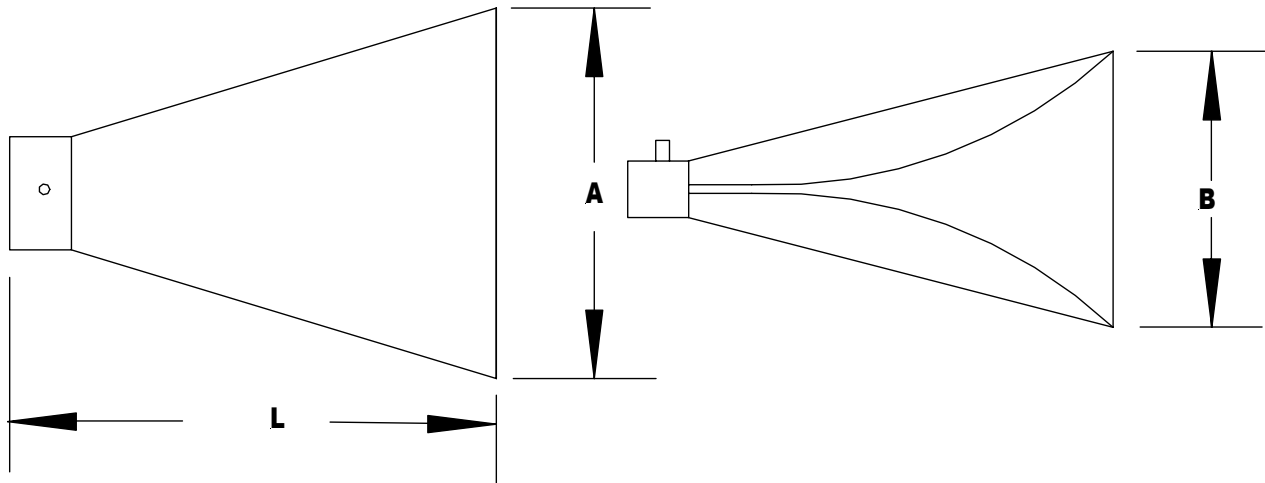
Standard gain horns are available as specified in the table below. Additionally, we have a custom design service to supply the options shown opposite.

- Gains and beamwidths to suit individual requirements.
- Radomes.
- Optimisation, for example, of the far field distance.
- Broadband units, double ridge input.
- Coaxial input—SMA, N-Type etc.

Model	Frequency Range GHz	Flange	Waveguide size WR	Performance lowest to highest frequency			Length L mm
				Gain dB	Mid-band E-plane 3 dB BW Deg	Mid-band H-plane 3 dB BW Deg	
AMR650HA	1.12 – 1.7	UDR14	650	19 - 22	20 - 13	23 - 15	1989
AM510HA	1.45 – 2.2	UDR18	510	19 - 23	20 - 13	23 - 15	1800
AM430HA	1.7 – 2.6	UDR22	430	19 - 23	20 - 13	23 - 15	1600
AM340HA	2.2 – 3.3	UDR26	340	19 - 22	20 - 14	23 - 15	1020
AM284HA	2.6 – 3.95	UDR32	284	19 - 22	20 - 13	23 - 15	856
AM229HA	3.3 – 4.9	UDR40	229	19 - 22	20 - 14	23 - 15	684
AM187HA	3.95 – 5.85	UDR48	187	19 - 22	20 - 13	23 - 16	572
AM159HA	4.9 – 7.05	UDR58	159	19 - 22	20 - 14	22 - 15	469
AM137HA	5.85 – 8.2	UDR70	137	19 - 22	19 - 14	22 - 16	399
AM112HA	7.05 – 10.0	UBR84	112	19 - 22	20 - 14	22 - 16	329
AM90HA	8.2 – 12.4	UBR100	90	19 - 22	20 - 13	23 - 15	272
AM75HA	10.0 – 15.0	UBR120	75	19 - 22	20 - 13	23 - 15	224
AM62HA	12.4 – 18.0	UBR140	62	19 - 22	20 - 14	23 - 16	184
AM51HA	15.0 – 22.0	UBR180	51	19 - 22	20 - 13	23 - 15	151
AM42HA	18.0 – 26.5	UBR220	42	19 - 22	20 - 13	23 - 15	126
AM34HA	22.0 – 33.0	UBR260	34	19 - 22	20 - 14	23 - 15	105
AM28HA	26.5 – 40.0	UBR320	28	19 - 22	20 - 13	23 - 15	84

All units are supplied with VSWR plots together with theoretical gain and beamwidth plots. Units are available in Aluminium, Copper or Brass, all with matt black paint finish.





Ultra Wideband Horns

Wideband Horns are available as specified below. Additionally, we have a custom design service to supply the following options :

- Gains and beamwidths to suit individual requirements.
- Radomes.
- Optimisation, for example, of the far field distance.
- Integral support brackets.

All units are supplied with VSWR plots and antenna factor. A fixing bracket is provided for attachment onto a standard ¼ UNC tripod mount. Units are available in Aluminium, with matt black paint finish.

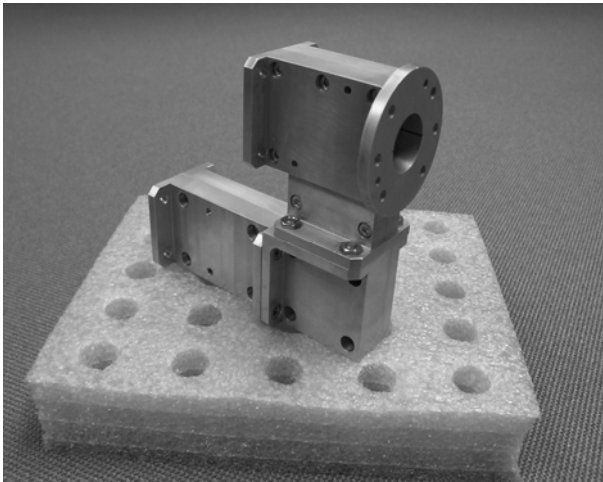
Model	Frequency Range GHz	Antenna Factor	VSWR	Connector	Typical performance lowest to highest frequency			Length L mm	Dim A mm	Dim B mm	Typ max Wgt g
					Gain dBi	Mid-band E-plane 3 dB BW Deg	Mid-band H-plane 3 dB BW Deg				
AM2-18HA	2.00-18.00		3:1 max 2:1 typ	N-Type	5-13	55-17	45-12	200	250	150	1670
AM0.2-2HA	0.2-2.00	Typ 10dB/m increasing approx linearly with freq to 31dB/m	3:1 max 2:1 typ	N-Type	6-10	90-55	80-40	940	980	730	
AM0.1-1HA	0.1-1.00	Typ 6dB/m increasing approx linearly with freq to 20dB/m	3:1 max 2:1 typ	N-Type	4-10	2-20	2-20	2000	2000	1500	

Octave Band Horns: 1-2 GHz, 2-4 GHz, 4-8 GHz

Double Ridge Horns: 7.5-18 GHz



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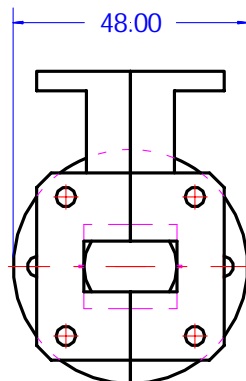
- **Designed for satellite communications applications**
- **Integrated unit**
- **Assembly options include transmit and receive filtering**

The picture above shows an example of a Ku-band OMT which has been designed to incorporate an integral low pass (corrugated) waveguide filter on the RX port.

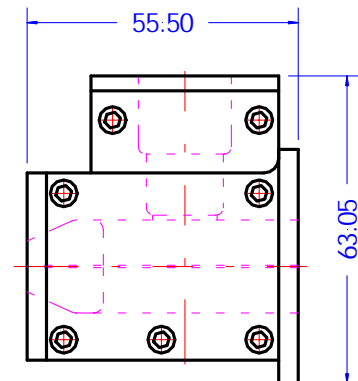
These units can be designed for other waveguide sizes and frequency bands.

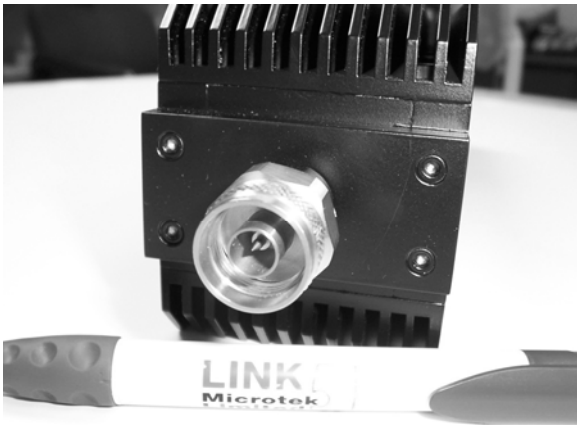
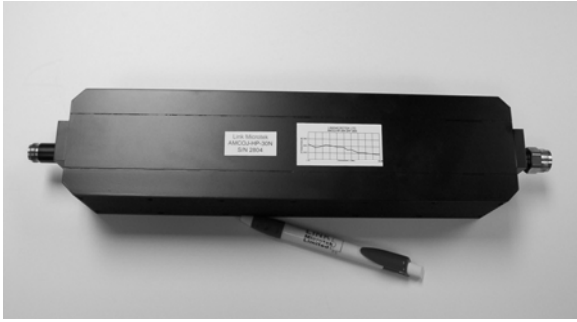
Specifications	Orthogonal port (Rx):	11.0 – 12.75 GHz
	In-line port (Tx-Rx2):	11.0 -14.50GHz
	Rx port Return Loss:	>15 dB @ 11.0 – 12.75 GHz
	Tx-Rx2 port Return Loss:	>15 dB @ 11.0 -14.50GHz
	Insertion Loss (Rx port to feedhorn port):	<0.1 dB @ 11.0 – 12.75 GHz
	Insertion Loss (Tx-Rx2 port to feedhorn port):	<0.1 dB @ 11.0 -14.50GHz
	X-Polar @ common port (Tx-Rx2 & Rx):	<-35 dB @ 11.0 – 14.50 GHz
	Isolation rectangular ports (Tx-Rx2 & Rx):	>40dB @ 11.0 – 14.50 GHz
	Rating:	IP65
	Operating temperature:	-30 to +50°C
	Max Power (Tx):	56dBm
	Material	Aluminium
	Finish	Alochrom, painted satin black

Outline Drawings



Dimensions in mm





- Frequency 7.5 - 18 GHz
- Power 300W average
- Bi-directional
- Type N coaxial
- Attenuation 10, 20 & 30dB

Model	Frequency Range GHz	Attenuation (dB)		Power (Av) Watts	VSWR	Connector
		Nominal	Deviation			
AMCOJ-HP-10N	7.5 - 18	10	±1.5	300	1.3	N (f)
						N (m)
AMCOJ-HP-20N	7.5 - 18	20	±1.5	300	1.3	N (f)
						N (m)
AMCOJ-HP-30N	7.5 - 18	30	±1.5	300	1.3	N (f)
						N (m)

Notes: other attenuation values, frequency ranges and powers are available on request. Different connection options may also be specified.

Outline Drawing

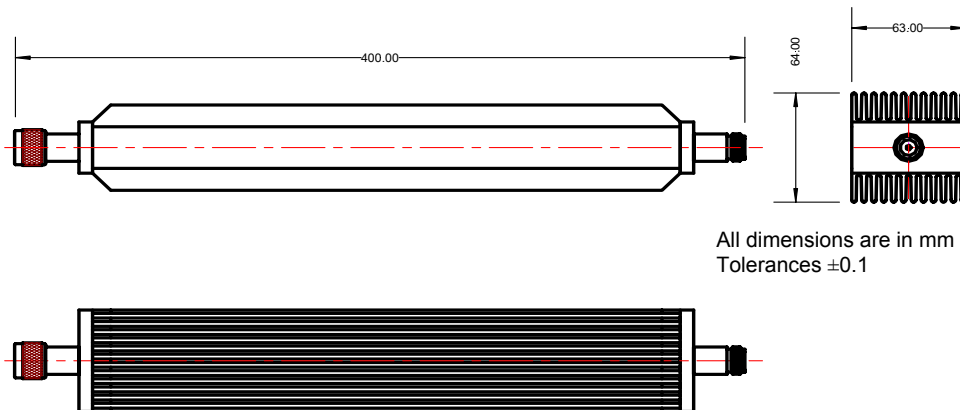
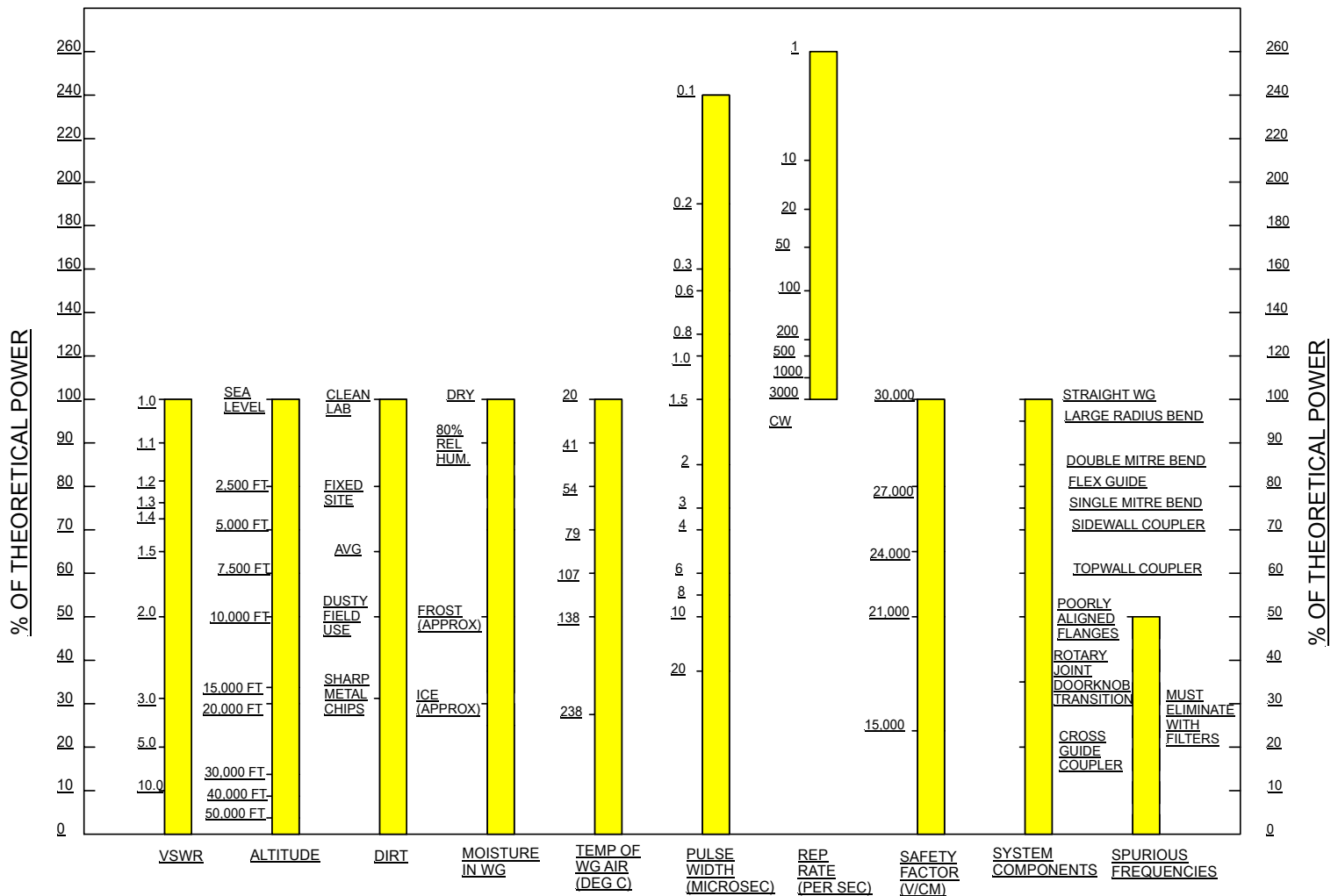


CHART FOR DETERMINATION OF THE THEORETICAL POWER HANDLING OF WAVEGUIDE COMPONENTS

REF. J. CIAVOLELLA, MICROWAVES , JUNE 1972



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Waveguide Designations, Frequency Bands and Nominal Dimensions

OFFICIAL DESIGNATION			RECOMMENDED OPERATING RANGE FOR TE ₁₀ MODE		Commercial Designation		THEORETICAL		CUT-OFF FOR TE ₁₀ CW POWER		FLANGE INFORMATION				WG DIMENSIONS		
I.E.C.	U.K. (RCSC)	U.S. (EIA)	FREQ GHz	WAVELENGTH cm	UK	US	MW	FREQ GHz	WAVELENGTH cm	MAT.	JAN	CHOKE	PLAIN	INSIDE mm	OUTSIDE mm	INSIDE inches	OUTSIDE inches
R14	WG6	WR650	1.12-1.7	26.76-17.63		L	11.9-17.2	0.908	33.0	Cu A1	69 103		417A 418A	165.10 × 82.55	169.16 × 86.61	6.500 × 3.250	6.660 × 3.410
R18	WG7	WR510	1.45-2.2	20.67-13.62		L		1.157	25.9					129.54 × 64.77	133.60 × 68.83	5.100 × 2.5500	5.260 × 2.710
R22	WG8	WR430	1.7-2.6	17.63-11.53			5.2-7.5	1.372	21.8	Cu A1	104 105		435A 437A	109.22 × 54.61	113.28 × 58.67	4.300 × 2.1500	4.460 × 2.310
R26	WG9A	WR340	2.2-3.3	13.63-9.08			3.1-4.5	1.736	17.3	Cu A1	112 113		553 554	86.36 × 43.18	90.42 × 47.24	3.400 × 1.7000	3.560 × 1.860
R32	WG10	WR284	2.6-3.95	11.53-7.59	S	S	2.2-3.2	2.078	14.4	Cu A1	48 75	54A 585	53 584	72.14 × 34.04	76.20 × 38.10	2.8400 × 1.3400	3.000 × 1.500
R40	WG11A	WR229	3.3-4.9	9.08-6.12				2.577	11.6					58.17 × 29.083	61.42 × 32.33	2.2900 × 1.1450	2.418 × 1.273
R48	WG12	WR187	3.95-5.85	7.59-5.12	C	C	1.4-2.0	3.152	9.51	Cu A1	49 95	149A 406A	149A 407	47.55 × 22.149	50.80 × 25.40	1.8720 × 0.8720	2.000 × 1.000
R58	WG13	WR159	4.9-7.05	6.12-4.25				3.711	8.08					40.39 × 20.193	43.64 × 23.44	1.5900 × 0.7950	1.718 × 0.923
R70	WG14	WR137	5.85-8.2	5.12-3.66			0.56-0.71	4.301	6.97	Cu A1	50 106	343A 440A	344 441	34.85 × 15.799	38.10 × 19.05	1.3720 × 0.6220	1.500 × 0.750
R84	WG15	WR112	7.05-10.0	4.25-2.99		XL	0.35-0.46	5.259	5.70	Cu A1	51 68	52A 137A	51 138	28.499 × 12.624	31.75 × 15.88	1.122 × 0.4970	1.250 × 0.625
R100	WG16	WR90	8.2-12.4	3.66-2.42	X	X	0.20-0.29	6.557	4.57	Cu A1	52 67	40A 136A	39 135	22.860 × 10.160	25.40 × 12.70	0.9000 × 0.4000	1.000 × 0.500
R120	WG17	WR75	10.0-15.0	2.99-2.00				7.868	3.81					19.050 × 9.525	21.59 × 12.06	0.7500 × 0.3750	0.850 × 0.475
R140	WG18	WR62	12.4-18.0	2.42-1.66	J	Ku	0.12-0.16	9.486	3.16	Cu A1 Ag	91 107	341 —	419 —	15.799 × 7.899	17.83 × 9.93	0.6220 × 0.3110	0.702 × 0.391
R180	WG19	WR51	15.0-22.0	2.00-1.36				11.574	2.59					12.954 × 6.477	14.99 × 8.51	0.5100 × 0.2550	0.590 × 0.335
R220	WG20	WR42	18.0-26.5	1.66-1.13		K	0.043-0.058	14.047	2.13	Cu A1 Ag	53 121 66	596 598 —	595 597 —	10.668 × 4.318	12.70 × 6.35	0.4200 × 0.1700	0.500 × 0.250
R260	WG21	WR34	22.0-33.0	1.36-0.91				17.328	1.73					8.636 × 4.318	10.67 × 6.35	0.3400 × 0.1700	0.420 × 0.250
R320	WG22	WR28	26.5-40.0	1.13-0.75	Q	Ka	0.022-0.081	21.081	1.42	Cu A1 Ag	— 96	600 —	599 —	7.112 × 3.556	9.14 × 5.59	0.2800 × 0.1400	0.360 × 0.220
R400	WG23	WR22	33.0-50.0	0.91-0.60		Q	0.014-0.020	26.342	1.14	Cu A1 Ag	— 97	— —	383 —	5.690 × 2.845	7.72 × 4.88	0.2240 × 0.1120	0.304 × 0.192
R500	WG24	WR19	40.0-60.0	0.75-0.50		U		31.357	0.96					4.775 × 2.388	6.81 × 4.42	0.1880 × 0.0940	0.268 × 0.174
R620	WG25	WR15	50.0-75.0	0.60-0.40		V	0.006-0.009	39.863	0.75	Cu Ag	98	385	—	3.759 × 1.880	5.79 × 3.91	0.1480 × 0.0740	0.228 × 0.154
R740	WG26	WR12	60.0-90.0	0.50-0.33	O	E	0.004-0.006	48.350	0.62	Cu Ag	— 99	387	—	3.099 × 1.549	5.13 × 3.58	0.1220 × 0.610	0.202 × 0.141
R900	WG27	WR10	75.0-110.0	0.40-0.27		W		59.014	0.51					2.54 × 1.27	4.57 × 3.3	.1 × .05	.18 × .13
R1200	WG28	WR8	90.0-140.0	0.33-0.21		F		73.67	4.1					2.032 × 1.016	4.06 × 3.05	.08 × .04	.16 × .12
R1400	WG29	WR7	110.0-170.0	0.27-0.18		D		90.791	3.3					1.651 × 0.826	—	0.65 × 0.325	—
R1800	WG30	WR5	114.0-220.0	0.21-0.14		G		115.750	2.6					1.295 × 0.648	—	0.51 × 0.255	—

Note: - We have tried to ensure that the information contained in the table is correct, but the Company cannot accept any liability for errors.



All rectangular components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - contact factory for details. Standard flange - UDR/UBR Type - for other flanges specify when ordering.

Description	Model No.	Specifications		
Adaptors		VSWR(max)	Length (mm)	Av Power max (W)

Waveguide to coax adaptor	AM187A-#	1.06	51	-
Waveguide to coax adaptor - High Power	AM187A-N(HP)	1.25	51	1100
Waveguide to coax adaptor - End Launch	AM187A-#(EL)	1.50	155	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7=APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

Transitions		Frequency (GHz)	Length (mm)	VSWR (max)
Transition - WR229 to WR187	AM229-187	3.95 - 4.90	115	1.06
WR187 to WR159	AM187-159	4.90 - 5.85	90	1.06

Bends		Centreline Radius (mm)	VSWR (max)
E-Bend	AM187E	77	1.06
H-Bend	AM187H	115	1.06

Twist/Straight Sections		Length	VSWR (max)
Twist	AM187T	204	1.06
Straight	AM187S- $\delta\delta$	-	1.06

$\delta\delta$ defines length in mm to a maximum of 4000mm.

Terminations		Length	VSWR (max)	Av Power (max) W
Low Power Termination	AM187L-1	330	1.03	5
Short Length Termination	AM187L-1S	57	1.10	1
Sliding Termination	AM187L-1SL	59	1.03	5
Medium Power Termination	AM187L-2	610	1.10	1000
High Power Termination	AM187L-3	760	1.10	1500
Liquid Cooled Termination	AM187L-(WL)	760	1.10	1500

When ordering liquid cooled terminations specify power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

Attenuators		Length	VSWR (max)	Av Power (max) W
Attenuator Fixed	AM187J-**	178	1.10	1

** Defines attenuation value; 3 to 40 dB.

Flexible Sections		VSWR (max)	Max Attenuation Typically (dB/m)
Flexible Waveguide	AM187F- $\delta\delta$	1.10	0.100
Flexible/Twistable Waveguide	AM187T- $\delta\delta$	1.10	0.165

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin.



Description	Model No.	Specifications						
Couplers/ Sampler		Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)

Power Sampler	AM187P-§§#	20,30,40, 50	1.0	1.0	1.06	-	0	64
Broadwall Coupler	AM187C-§§#	3,6,10,20,30 40	0.5	0.5	1.06	1.10	40	850
Crossguide Coupler	AM187X-§§#	20,30,40,50	0.5	1.0	1.06	1.10	15	125

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

§§ defines coupling value; 3 to 40 dB.

Dual directional & short length couplers are also available as standard items - contact factory for details.

Pressure Window		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max
Window	AM187M	1.10	0.04	1500	15	7

Horn Antenna		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max
Antenna	AM187HA	2.00	19-22	8	E-plane 20-13 H-plane 23-15	572

Many custom units available on request - consult factory for details.

Pressure Inlet		VSWR	Inlet Connector (BSP)	Length (mm) max
Inlet	AM187PIN	1.06	1/8	64

Pressure inlets and drains can be incorporated into any unit or flange.

Gaskets		Material	Temperature (°C)
Pressure & RF Gasket	AM187RS	Silver loaded silicon	-75 to +260
Pressure Gasket	AM187GS	Silicon	-75 to +260

Mismatch

Mismatch AM187MIS-¢

¢ Defines the maximum VSWR required. Low and high power handling units are available.

Harmonic Filters		P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
Filter	AM187Q-HARM							

Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

Waveguide Tees & Hybrids		Power Split	VSWR	Port Isolation
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Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements



All rectangular components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - contact factory for details. Standard flange - UDR/VBR Type - for other flanges specify when ordering.

Description	Model No.	Specifications		
Adaptors		VSWR(max)	Length (mm)	Av Power max (W)

Waveguide to coax adaptor	AM159A-#	1.06	45	-
Waveguide to coax adaptor - High Power	AM159A-N(HP)	1.25	45	1000
Waveguide to coax adaptor - End Launch	AM159A-#(EL)	1.50	129	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

Transitions		Frequency (GHz)	Length (mm)	VSWR (max)
Transition - WR187 to WR159	AM187-159	4.90 - 5.85	90	1.06
Transition - WR159 to WR137	AM159-137	5.85 - 7.05	90	1.06

Bends		Centreline Radius (mm)	VSWR (max)
E-Bend	AM159E	108	1.06
H-Bend	AM159H	108	1.06

Twist/Straight Sections		Length	VSWR (max)
Twist	AM159T	178	1.06
Straight	AM159S- $\delta\delta$	-	1.06

$\delta\delta$ defines length in mm to a maximum of 4000mm.

Terminations		Length	VSWR (max)	Av Power (max) W
Low Power Termination	AM159-1	324	1.03	3
Short Length Termination	AM159L-1S	33	1.10	1
Sliding Termination	AM159-1SL	421	1.03	3
Medium Power Termination	AM159L-2	610	1.10	1000
High Power Termination	AM159L-3	760	1.10	1500
Liquid Cooled Termination	AM159L-(WL)	760	1.10	1500

When ordering liquid cooled terminations specify power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

Attenuators		Length	VSWR (max)	Av Power (max) W
Attenuator Fixed	AM159J-**	152	1.10	1

** Defines attenuation value; 3 to 40 dB.

Flexible Sections		VSWR (max)	Max Attenuation Typically (dB/m)
Flexible Waveguide	AM159F- $\delta\delta$	1.10	0.130
Flexible/Twistable Waveguide	AM159FT- $\delta\delta$	1.10	0.200

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin.



<i>Description</i>	<i>Model No.</i>	<i>Specifications</i>						
<i>Couplers/ Sampler</i>		Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)

Power Sampler	AM159P- $\S\S$ #	20,30,40, 50	1.0	1.0	1.06	-	0	64
Broadwall Coupler	AM159C- $\S\S$ #	3,6,10,20,30 40	0.5	0.5	1.06	1.10	40	730
Crossguide Coupler	AM159X- $\S\S$ #	20,30,40,50	0.5	1.0	1.06	1.10	15	127

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

$\S\S$ defines coupling value; 3 to 40 dB.

Dual directional & short length couplers are also available as standard items - contact factory for details.

<i>Pressure Window</i>		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max
Window	AM159M	1.10	0.04	1200	25	7

<i>Horn Antenna</i>		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max
Antenna	AM159HA	2.00	19-22	4.3	E-plane 19-14 H-plane 22-15	469

Many custom units available on request - consult factory for details.

<i>Pressure Inlet</i>		VSWR	Inlet Connector	Length (mm) max
Inlet	AM159PIN	1.06	1/8	64

Pressure inlets and drains can be incorporated into any unit or flange.

<i>Gaskets</i>		Material	Temperature (°C)
Pressure & RF Gasket	AM159RS	Silver loaded silicon	-75 to +260
Pressure Gasket	AM159GS	Silicon	-75 to +260

<i>Mismatch</i>	
Mismatch	AM159MIS- ϕ

ϕ Defines the maximum VSWR required. Low and high power handling units are available.

<i>Harmonic Filters</i>		P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
Filter	AM159Q-HARM							

Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

<i>Waveguide Tees & Hybrids</i>		Power Split	VSWR	Port Isolation
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Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements



All rectangular components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - contact factory for details. Standard flange - UDR/VBR Type - for other flanges specify when ordering.

Description	Model No.	Specifications		
Adaptors		VSWR(max)	Length (mm)	Av Power max (W)

Waveguide to coax adaptor	AM137A-#	1.06	38	-
Waveguide to coax adaptor - High Power	AM137A-N(HP)	1.25	38	1000
Waveguide to coax adaptor - End Launch	AM137A-#(EL)	1.50	115	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

Transitions		Frequency (GHz)	Length (mm)	VSWR (max)
Transition - WR159 to WR137	AM159-137	5.85 - 7.05	90	1.06
Transition - WR137 to WR112	AM137-112	7.05 - 8.20	90	1.06
Transition - WR137 to WR102	AM137-102	7.00 - 8.20	90	1.06

Bends		Centreline Radius (mm)	VSWR (max)
E-Bend	AM137E	61	1.06
H-Bend	AM137H	70	1.06

Twist/Straight Sections		Length	VSWR (max)
Twist	AM137T	153	1.06
Straight	AM137S- $\delta\delta$	-	1.06

$\delta\delta$ defines length in mm to a maximum of 4000mm.

Terminations		Length	VSWR (max)	Av Power (max) W
Low Power Termination	AM137-1	267	1.03	3
Short Length Termination	AM137L-1S	41	1.10	1
Sliding Termination	AM137-1SL	347	1.03	3
Medium Power Termination	AM137L-2	508	1.10	1000
High Power Termination	AM137L-3	610	1.10	2000
Liquid Cooled Termination	AM137L-(WL)	610	1.10	2000

When ordering liquid cooled terminations specify power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

Attenuators		Length	VSWR (max)	Av Power (max) W
Attenuator Fixed	AM137J-**	127	1.10	1

** Defines attenuation value; 3 to 40 dB.

Flexible Sections		VSWR (max)	Max Attenuation Typically (dB/m)
Flexible Waveguide	AM137F- $\delta\delta$	1.15	0.165
Flexible/Twistable Waveguide	AM137FT- $\delta\delta$	1.15	0.260

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin.



<i>Description</i>	<i>Model No.</i>	<i>Specifications</i>						
<i>Couplers/ Sampler</i>		Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)

Power Sampler	AM137P- $\S\S\#$	20,30,40, 50	1.0	1.0	1.06	-	0	51
Broadwall Coupler	AM137C- $\S\S\#$	3,6,10,20,30 40	0.5	0.5	1.06	1.10	40	705
Crossguide Coupler	AM137X- $\S\S\#$	20,30,40,50	0.5	1.0	1.06	1.10	15	102

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

$\S\S$ defines coupling value; 3 to 40 dB.

Dual directional & short length couplers are also available as standard items - contact factory for details.

<i>Pressure Window</i>		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max
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Window	AM137M	1.10	0.05	1000	25	5
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<i>Horn Antenna</i>		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max
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Antenna	AM137HA	2.00	19-22	3.5	E-plane 19-14 H-plane 22-16	399
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Many custom units available on request - consult factory for details.

<i>Pressure Inlet</i>		VSWR	Inlet Connector	Length (mm) max
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Inlet	AM137PIN	1.06	1/8	51
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Pressure inlets and drains can be incorporated into any unit or flange.

<i>Gaskets</i>		Material	Temperature (°C)
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Pressure & RF Gasket	AM137RS	Silver loaded silicon	-75 to +260
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Pressure Gasket	AM137GS	Silicon	-75 to +260
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Mismatch

Mismatch	AM137MIS- ϕ
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ϕ Defines the maximum VSWR required. Low and high power handling units are available.

<i>Harmonic Filters</i>		P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
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Filter	AM137Q-HARM
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Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

<i>Waveguide Tees & Hybrids</i>		Power Split	VSWR	Port Isolation
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Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements



All rectangular components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - contact factory for details. Standard flange - UDR/VBR Type - for other flanges specify when ordering.

Description	Model No.	Specifications		
Adaptors		VSWR(max)	Length (mm)	Av Power max (W)

Waveguide to coax adaptor	AM112A-#	1.06	37	-
Waveguide to coax adaptor - High Power	AM112A-N(HP)	1.25	37	900
Waveguide to coax adaptor - End Launch	AM112A-#(EL)	1.50	105	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

Transitions		Frequency (GHz)	Length (mm)	VSWR (max)
Transition - WR137 to WR112	AM137-112	7.05 - 8.20	90	1.06
Transition - WR112 to WR102	AM112-102	7.05 - 10.00	90	1.06
Transition - WR112 to WR90	AM112-90	8.20-10.00	90	1.06

Bends		Centreline Radius (mm)	VSWR (max)
E-Bend	AM112E	38	1.06
H-Bend	AM112H	67	1.06

Twist/Straight Sections		Length	VSWR (max)
Twist	AM112T	153	1.06
Straight	AM112S- $\delta\delta$	-	1.06

$\delta\delta$ defines length in mm to a maximum of 4000mm.

Terminations		Length	VSWR (max)	Av Power (max) W
Low Power Termination	AM112-1	267	1.03	2
Short Length Termination	AM112S-1S	32	1.10	1
Sliding Termination	AM112L-1SL	347	1.03	2
Medium Power Termination	AM112L-2	381	1.10	450
High Power Termination	AM112L-3	458	1.10	900
Liquid Cooled Termination	AM112L-(WL)	458	1.10	900

When ordering liquid cooled terminations specify power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

Attenuators		Length	VSWR (max)	Av Power (max) W
Attenuator Fixed	AM112J-**	114	1.10	1

** Defines attenuation value; 3 to 40 dB.

Flexible Sections		VSWR (max)	Max Attenuation Typically (dB/m)
Flexible Waveguide	AM112F- $\delta\delta$	1.15	0.200
Flexible/Twistable Waveguide	AM112FT- $\delta\delta$	1.15	0.260

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin..



<i>Description</i>	<i>Model No.</i>	<i>Specifications</i>						
<i>Couplers/ Sampler</i>		Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)

Power Sampler	AM112P- $\S\S$ #	20,30,40, 50	1.0	1.0	1.06	-	0	51
Broadwall Coupler	AM112C- $\S\S$ #	3,6,10,20,30 40	0.5	0.5	1.06	1.10	40	580
Crossguide Coupler	AM112X- $\S\S$ #	20,30,40,50	0.5	1.0	1.06	1.10	15	89

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.
 $\S\S$ defines coupling value; 3 to 40 dB.

Dual directional & short length couplers are also available as standard items - contact factory for details.

<i>Pressure Window</i>		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max
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Window AM112M

<i>Horn Antenna</i>		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max
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Antenna AM112HA 2.00 19-22 1.7 E-plane 19-14 H-plane 22-16

Many custom units available on request - consult factory for details.

<i>Pressure Inlet</i>		VSWR	Inlet Connector (BSP)	Length (mm) max
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Inlet AM112PIN 1.06 1/8 51

Pressure inlets and drains can be incorporated into any unit or flange.

<i>Gaskets</i>		Material	Temperature (°C)
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Pressure & RF Gasket AM112RS Silver loaded silicon -75 to +260

Pressure Gasket AM112GS Silicon -75 to +260

Mismatch

Mismatch AM112MIS- ϕ

ϕ Defines the maximum VSWR required. Low and high power handling units are available.

<i>Harmonic Filters</i>		P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
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Filter AM112Q-HARM

Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

<i>Waveguide Tees & Hybrids</i>		Power Split	VSWR	Port Isolation
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Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements



All rectangular components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - contact factory for details. Standard flange - UDR/VBR Type - for other flanges specify when ordering.

Description	Model No.	Specifications		
Adaptors		VSWR(max)	Length (mm)	Av Power max (W)
Waveguide to coax adaptor	AM90A-#	1.06	27	-
Waveguide to coax adaptor - High Power	AM90A-N(HP)	1.25	27	800
Waveguide to coax adaptor - End Launch	AM90A-#(EL)	1.50	78	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

Transitions		Frequency (GHz)	Length (mm)	VSWR (max)
Transition - WR112 to WR90	AM112-90	8.20 - 10.00	90	1.06
Transition - WR102 to WR90	AM102-90	8.20 - 11.00	90	1.06
Transition - WR90 to WR75	AM90-75	10.00-12.40	77	1.06

Bends		Centreline Radius (mm)	VSWR (max)
E-Bend	AM90E	38	1.06
H-Bend	AM90H	43	1.06

Twist/Straight Sections		Length	VSWR (max)
Twist	AM90T	153	1.06
Straight	AM90S- $\delta\delta$	-	1.06

$\delta\delta$ defines length in mm to a maximum of 4000mm.

Terminations		Length	VSWR (max)	Av Power (max) W
Low Power Termination	AM90-1	240	1.03	2
Short Length Termination	AM90S-1S	33	1.10	1
Sliding Termination	AM90L-1SL	312	1.03	2
Medium Power Termination	AM90L-2	381	1.10	400
High Power Termination	AM90L-3	458	1.10	800
Liquid Cooled Termination	AM90L-(WL)	458	1.10	800

When ordering liquid cooled terminations specify power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

Attenuators		Length	VSWR (max)	Av Power (max) W
Attenuator Fixed	AM90J-**	102	1.10	1

** Defines attenuation value; 3 to 40 dB.

Flexible Sections		VSWR (max)	Max Attenuation Typically (dB/m)
Flexible Waveguide	AM90F- $\delta\delta$	1.15	0.33
Flexible/Twistable Waveguide	AM90FT- $\delta\delta$	1.15	0.33

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin..



Description		Model No.	Specifications						
Couplers/ Sampler			Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)

Power Sampler	AM90P- $\S\S\#$	20,30,40, 50	1.0	1.0	1.0	1.06	-	0	51
Broadwall Coupler	AM90C- $\S\S\#$	3,6,10,20,30 40	0.5	0.5	0.5	1.06	1.10	40	520
Crossguide Coupler	AM90X- $\S\S\#$	20,30,40,50	0.5	1.0	1.0	1.06	1.10	15	76

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.
 $\S\S$ defines coupling value; 3 to 40 dB.

Dual directional & short length couplers are also available as standard items - contact factory for details.

Pressure Window		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max
Window	AM90M	1.15	0.08	1000	30	3.5

Horn Antenna		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max
Antenna	AM90HA	2.00	19-22	1.5	E-plane 20-13 H-plane 23-15	272

Many custom units available on request - consult factory for details.

Pressure Inlet		VSWR	Inlet Connector (BSP)	Length (mm) max
Inlet	AM90PIN	1.06	1/8	51

Pressure inlets and drains can be incorporated into any unit or flange.

Gaskets		Material	Temperature (°C)
Pressure & RF Gasket	AM90RS	Silver loaded silicon	-75 to +260
Pressure Gasket	AM90GS	Silicon	-75 to +260

Mismatch

Mismatch AM90MIS- ϕ

ϕ Defines the maximum VSWR required. Low and high power handling units are available.

Harmonic Filters		P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
Filter	AM90Q-HARM							

Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

Waveguide Tees & Hybrids		Power Split	VSWR	Port Isolation
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Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements



All rectangular components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - contact factory for details. Standard flange - UDR/VBR Type - for other flanges specify when ordering.

Description	Model No.	Specifications		
Adaptors		VSWR(max)	Length (mm)	Av Power max (W)

Waveguide to coax adaptor	AM75A-#	1.06	27	-
Waveguide to coax adaptor - High Power	AM75A-N(HP)	1.25	27	750
Waveguide to coax adaptor - End Launch	AM75A-#(EL)	1.50	67	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

Transitions		Frequency (GHz)	Length (mm)	VSWR (max)
Transition - WR102 to WR75	AM102-75	10.00 - 11.00	77	1.06
Transition - WR90 to WR75	AM90-75	10.00 - 12.40	77	1.06
Transition - WR75 to WR62	AM75-62	12.40 - 15.00	77	1.06

Bends		Centreline Radius (mm)	VSWR (max)
E-Bend	AM75E	38	1.06
H-Bend	AM75H	43	1.06

Twist/Straight Sections		Length	VSWR (max)
Twist	AM75T	153	1.06
Straight	AM75S- $\delta\delta$	-	1.06

$\delta\delta$ defines length in mm to a maximum of 4000mm.

Terminations		Length	VSWR (max)	Av Power (max) W
Low Power Termination	AM75L-1	230	1.03	2
Short Length Termination	AM75L-1S	32	1.10	1
Sliding Termination	AM75L-1SL	299	1.03	2
Medium Power Termination	AM75L-2	305	1.10	350
High Power Termination	AM75L-3	356	1.10	700
Liquid Cooled Termination	AM75L-(WL)	356	1.10	700

When ordering liquid cooled terminations specify power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

Attenuators		Length	VSWR (max)	Av Power (max) W
Attenuator Fixed	AM75J-**	89	1.10	1

** Defines attenuation value; 3 to 40 dB.

Flexible Sections		VSWR (max)	Max Attenuation Typically (dB/m)
Flexible Waveguide	AM75F- $\delta\delta$	1.15	0.400
Flexible/Twistable Waveguide	AM75FT- $\delta\delta$	1.15	0.500

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin.



Description Model No. Specifications

Couplers/ Sampler		Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)
Power Sampler	AM75P- $\S\S$ #	20,30,40,50	1.0	1.0	1.06	-	0	51
Broadwall Coupler	AM75C- $\S\S$ #	3,6,10,20,30 40	0.5	0.5	1.06	1.10	40	410
Crossguide Coupler	AM75X- $\S\S$ #	20,30,40,50	0.5	1.0	1.06	1.10	15	70

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

$\S\S$ defines coupling value; 3 to 40 dB.

Dual directional & short length couplers are also available as standard items - contact factory for details.

Pressure Window		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max
Window	AM75M	1.15	0.12	750	45	3.5

Horn Antenna		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max
Antenna	AM75HA	2.00	19-22	0.86	E-plane 20-13 H-plane 23-15	224

Many custom units available on request - consult factory for details.

Pressure Inlet		VSWR	Inlet Connector (BSP)	Length (mm) max
Inlet	AM75PIN	1.06	1/8	51

Pressure inlets and drains can be incorporated into any unit or flange.

Gaskets		Material	Temperature (°C)
Pressure & RF Gasket	AM75RS	Silver loaded silicon	-75 to +260
Pressure Gasket	AM75GS	Silicon	-75 to +260

Mismatch

Mismatch AM75MIS- ϕ

ϕ Defines the maximum VSWR required. Low and high power handling units are available.

Harmonic Filters		P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
Filter	AM75Q- HARM							

Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

Waveguide Tees & Hybrids		Power Split	VSWR	Port Isolation
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Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements



All rectangular components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - contact factory for details. Standard flange - UDR/VBR Type - for other flanges specify when ordering.

Description	Model No.	Specifications		
Adaptors		VSWR(max)	Length (mm)	Av Power max (W)

Waveguide to coax adaptor	AM62A-#	1.06	29	-
Waveguide to coax adaptor - High Power	AM62A-N(HP)	1.25	29	500
Waveguide to coax adaptor - End Launch	AM62A-#(EL)	1.50	59	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

Transitions		Frequency (GHz)	Length (mm)	VSWR (max)
Transition - WR75 to WR62	AM72-62	12.4 - 15.00	77	1.06
Transition - WR62 to WR51	AM62-51	15.00 - 18.00	77	1.06

Bends		Centreline Radius (mm)	VSWR (max)
E-Bend	AM62E	43	1.06
H-Bend	AM62H	47	1.06

Twist/Straight Sections		Length	VSWR (max)
Twist	AM62T	153	1.06
Straight	AM62S- $\delta\delta$	-	1.06

$\delta\delta$ defines length in mm to a maximum of 4000mm.

Terminations		Length	VSWR (max)	Av Power (max) W
Low Power Termination	AM62-1	216	1.03	1
Short Length Termination	AM62S-1S	24	1.10	1
Sliding Termination	AM62L-1SL	280	1.03	1
Medium Power Termination	AM62L-2	254	1.10	200
High Power Termination	AM62L-3	305	1.10	400
Liquid Cooled Termination	AM62L-(WL)	305	1.10	400

When ordering liquid cooled terminations specify power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

Attenuators		Length	VSWR (max)	Av Power (max) W
Attenuator Fixed	AM62J-**	76	1.10	1

** Defines attenuation value; 3 to 40 dB.

Flexible Sections		VSWR (max)	Max Attenuation Typically (dB/m)
Flexible Waveguide	AM62F- $\delta\delta$	1.15	0.500
Flexible/Twistable Waveguide	AM62FT- $\delta\delta$	1.15	0.660

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin.



Description		Model No.	Specifications						
Couplers/ Sampler			Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)

Power Sampler	AM62P- \#\#\#	20,30,40, 50	1.0	1.0	1.0	-	0	51
Broadwall Coupler	AM62C- \#\#\#	3,6,10,20,30 40	0.5	0.5	1.06	1.10	40	350
Crossguide Coupler	AM62X- \#\#\#	20,30,40,50	0.5	1.0	1.06	1.10	15	70

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.
 \#\#\# defines coupling value; 3 to 40 dB.

Dual directional & short length couplers are also available as standard items - contact factory for details.

Pressure Window		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max
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Window	AM62M	1.15	0.15	400	45	3.5
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Horn Antenna		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max
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Antenna	AM62HA	2.00	19-22	1.5	E-plane 20-14 H-plane 22-15	184
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Many custom units available on request - consult factory for details.

Pressure Inlet		VSWR	Inlet Connector (BSP)	Length (mm) max
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Inlet	AM62PIN	1.06	1/8	51
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Pressure inlets and drains can be incorporated into any unit or flange.

Gaskets		Material	Temperature (°C)
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Pressure & RF Gasket	AM62RS	Silver loaded silicon	-75 to +260
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Pressure Gasket	AM62GS	Silicon	-75 to +260
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Mismatch	
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Mismatch	AM62MIS- ϕ
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ϕ Defines the maximum VSWR required. Low and high power handling units are available.

Harmonic Filters	P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
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Filter	AM62Q-HARM						
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Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

Waveguide Tees & Hybrids	Power Split	VSWR	Port Isolation
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Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements



All rectangular components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - contact factory for details. Standard flange - UDR/VBR Type - for other flanges specify when ordering.

Description	Model No.	Specifications		
Adaptors		VSWR(max)	Length (mm)	Av Power max (W)

Waveguide to coax adaptor	AM51A-#	1.06	28	-
Waveguide to coax adaptor - High Power	AM51A-N(HP)	1.25	28	400
Waveguide to coax adaptor - End Launch	AM51A-#(EL)	1.50	55	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

Transitions		Frequency (GHz)	Length (mm)	VSWR (max)
Transition - WR62 to WR51	AM62-51	15.00 - 18.00	77	1.06
Transition - WR51 to WR42	AM51-42	18.00 - 22.00	51	1.06

Bends		Centreline Radius (mm)	VSWR (max)
E-Bend	AM51E	39	1.06
H-Bend	AM51H	39	1.06

Twist/Straight Sections		Length	VSWR (max)
Twist	AM51T	102	1.06
Straight	AM51S- $\delta\delta$	-	1.06

$\delta\delta$ defines length in mm to a maximum of 4000mm.

Terminations		Length	VSWR (max)	Av Power (max) W
Low Power Termination	AM51-1	216	1.03	1
Short Length Termination	AM51S-1S	30	1.10	1
Sliding Termination	AM51L-1SL	280	1.03	1
Medium Power Termination	AM51L-2	229	1.10	150
High Power Termination	AM51L-3	305	1.10	300
Liquid Cooled Termination	AM51L-(WL)	305	1.10	300

When ordering liquid cooled terminations specify power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

Attenuators		Length	VSWR (max)	Av Power (max) W
Attenuator Fixed	AM51J-**	76	1.10	1

** Defines attenuation value; 3 to 40 dB.

Flexible Sections		VSWR (max)	Max Attenuation Typically (dB/m)
Flexible Waveguide	AM51F- $\delta\delta$	1.2	0.67
Flexible/Twistable Waveguide	AM51T- $\delta\delta$	1.2	0.98

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin.



Description Model No. Specifications								
Couplers/ Sampler		Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)

Power Sampler	AM51P- $\S\S$ #	20,30,40, 50	1.0	1.0	1.06	-	0	26
Broadwall Coupler	AM51C- $\S\S$ #	3,6,10,20,30 40	0.5	0.5	1.06	1.10	40	280
Crossguide Coupler	AM51X- $\S\S$ #	20,30,40,50	0.5	1.0	1.06	1.10	15	64

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.
 $\S\S$ defines coupling value; 3 to 40 dB.

Dual directional & short length couplers are also available as standard items - contact factory for details.

Pressure Window		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max
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Window	AM51M	1.15	0.24	250	45	3.5
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Horn Antenna		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max
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Antenna	AM51HA	2.00	19-22	0.6	E-plane 20-13 H-plane 23-15	151
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Many custom units available on request - consult factory for details.

Pressure Inlet		VSWR	Inlet Connector (BSP)	Length (mm) max
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Inlet	AM51PIN	1.06	1/8	26
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Pressure inlets and drains can be incorporated into any unit or flange.

Gaskets		Material	Temperature (°C)
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Pressure & RF Gasket	AM51RS	Silver loaded silicon	-75 to +260
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Pressure Gasket	AM51GS	Silicon	-75 to +260
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Mismatch	
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Mismatch	AM51MIS- ϕ
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ϕ Defines the maximum VSWR required. Low and high power handling units are available.

Harmonic Filters	P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
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Filter	AM51Q-HARM						
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Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

Waveguide Tees & Hybrids	Power Split	VSWR	Port Isolation
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Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements



All rectangular components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - contact factory for details. Standard flange - UDR/VBR Type - for other flanges specify when ordering.

Description	Model No.	Specifications		
Adaptors		VSWR(max)	Length (mm)	Av Power max (W)

Waveguide to coax adaptor	AM42A-#	1.20	23	-
Waveguide to coax adaptor - High Power	-	-	-	-
Waveguide to coax adaptor - End Launch	AM42A-#(EL)	1.50	52	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

Transitions		Frequency (GHz)	Length (mm)	VSWR (max)
Transition - WR51 to WR42	AM51-42	18.00 - 22.00	51	1.06
Transition - WR42 to WR34	AM42-34	22.00 - 26.50	51	1.06

Bends		Centreline Radius (mm)	VSWR (max)
E-Bend	AM42E	39	1.06
H-Bend	AM42H	39	1.06

Twist/Straight Sections		Length	VSWR (max)
Twist	AM42T	89	1.06
Straight	AM42S- $\delta\delta$	-	1.06

$\delta\delta$ defines length in mm to a maximum of 4000mm.

Terminations		Length	VSWR (max)	Av Power (max) W
Low Power Termination	AM42-1	203	1.03	1
Short Length Termination	AM42S-1S	30	1.10	1
Sliding Termination	AM42L-1SL	263	1.03	1
Medium Power Termination	AM42L-2	203	1.10	100
High Power Termination	AM42L-3	254	1.10	200
Liquid Cooled Termination	AM42L-(WL)	254	1.10	200

When ordering liquid cooled terminations specify power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

Attenuators		Length	VSWR (max)	Av Power (max) W
Attenuator Fixed	AM42J-**	76	1.10	1

** Defines attenuation value; 3 to 40 dB.

Flexible Sections		VSWR (max)	Max Attenuation Typically (dB/m)
Flexible Waveguide	AM42F- $\delta\delta$	1.35	1.106
Flexible/Twistable Waveguide	AM42T- $\delta\delta$	1.40	1.150

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin.



Description Model No. Specifications

Couplers/ Sampler		Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)
Power Sampler	AM42P-§§#	20,30,40, 50	1.0	1.0	1.06	-	0	26
Broadwall Coupler	AM42C-§§#	3,6,10,20,30 40	0.5	0.5	1.06	1.10	40	254
Crossguide Coupler	AM42X-§§#	20,30,40,50	0.5	1.0	1.06	1.10	15	57

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.
§§ defines coupling value; 3 to 40 dB.

Dual directional & short length couplers are also available as standard items - contact factory for details.

Pressure Window		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max
Window	AM42M	1.15	0.24	250	45	3.5

Horn Antenna		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max
Antenna	AM42HA	2.00	19-22	0.16	E-plane 20-13 H-plane 23-15	126

Many custom units available on request - consult factory for details.

Pressure Inlet		VSWR	Inlet Connector (BSP)	Length (mm) max
Inlet	AM42PIN	1.06	1/8	26

Pressure inlets and drains can be incorporated into any unit or flange.

Gaskets		Material	Temperature (°C)
Pressure & RF Gasket	AM42RS	Silver loaded silicon	-75 to +260
Pressure Gasket	AM42GS	Silicon	-75 to +260

Mismatch

Mismatch AM42MIS-¢

¢ Defines the maximum VSWR required. Low and high power handling units are available.

Harmonic Filters		P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
Filter	AM42Q-HARM							

Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

Waveguide Tees & Hybrids		Power Split	VSWR	Port Isolation
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Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements



All rectangular components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - contact factory for details. Standard flange - UDR/VBR Type - for other flanges specify when ordering.

Description	Model No.	Specifications		
Adaptors		VSWR(max)	Length (mm)	Av Power max (W)

Waveguide to coax adaptor	AM28A-#	1.20	23	-
Waveguide to coax adaptor - High Power	-	-	-	-
Waveguide to coax adaptor - End Launch	AM28A-#(EL)	1.50	39	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

Transitions		Frequency (GHz)	Length (mm)	VSWR (max)
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Transition - WR34 to WR28	AM34-28	26.5 - 33.00	51	1.06
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Bends		Centreline Radius (mm)	VSWR (max)
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E-Bend	AM28E	28	1.06
H-Bend	AM28H	30	1.06

Twist/Straight Sections		Length	VSWR (max)
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Twist	AM28T	51	1.06
Straight	AM28S- $\delta\delta$	-	1.06

$\delta\delta$ defines length in mm to a maximum of 4000mm.

Terminations		Length	VSWR (max)	Av Power (max) W
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Low Power Termination	AM28-1	135	1.03	1
Short Length Termination	AM28S-1S	20	1.10	1
Sliding Termination	AM28L-1SL	175	1.03	1
Medium Power Termination	AM28L-2	203	1.10	50
High Power Termination	AM28L-3	254	1.10	175
Liquid Cooled Termination	AM28L-(WL)	254	1.10	175

When ordering liquid cooled terminations specify power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

Attenuators		Length	VSWR (max)	Av Power (max) W
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Attenuator Fixed	AM28J-**	76	1.10	1
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** Defines attenuation value; 3 to 40 dB.

Flexible Sections		VSWR (max)	Max Attenuation Typically (dB/m)
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Flexible Waveguide	AM28F- $\delta\delta$	1.40	2.29
Flexible/Twistable Waveguide	AM28T- $\delta\delta$	1.60	2.90

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin.



<i>Description</i>	<i>Model No.</i>	<i>Specifications</i>						
<i>Couplers/ Sampler</i>		Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)

Power Sampler	AM28P- $\S\S$ #	20,30,40, 50	1.0	1.0	1.06	-	0	26
Broadwall Coupler	AM28C- $\S\S$ #	3,6,10,20,30 40	0.5	0.5	1.06	1.10	40	244
Crossguide Coupler	AM28X- $\S\S$ #	20,30,40,50	0.5	1.0	1.06	1.10	15	46

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.
 $\S\S$ defines coupling value; 3 to 40 dB.

Dual directional & short length couplers are also available as standard items - contact factory for details.

<i>Pressure Window</i>		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max
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Window	AM28M	1.15	0.48	250	45	3.5
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<i>Horn Antenna</i>		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max
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Antenna	AM28HA	2.00	19-22	0.07	E-plane 20-13 H-plane 23-15	84
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Many custom units available on request - consult factory for details.

<i>Pressure Inlet</i>		VSWR	Inlet Connector (BSP)	Length (mm) max
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Inlet	AM28PIN	1.06	1/8	26
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Pressure inlets and drains can be incorporated into any unit or flange.

<i>Gaskets</i>		Material	Temperature (°C)
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Pressure & RF Gasket	AM28RS	Silver loaded silicon	-75 to +260
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Pressure Gasket	AM28GS	Silicon	-75 to +260
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<i>Mismatch</i>	
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Mismatch	AM28MIS- ϕ
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ϕ Defines the maximum VSWR required. Low and high power handling units are available.

<i>Harmonic Filters</i>	P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
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Filter	AM28Q-HARM						
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Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

<i>Waveguide Tees & Hybrids</i>	Power Split	VSWR	Port Isolation
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Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements



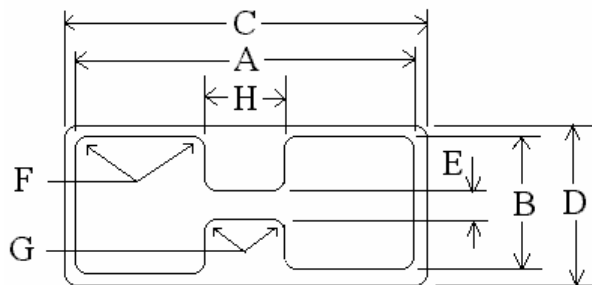
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Waveguide Size	Recommended Frequency Range TE10 Mode GHz	TE10 Mode Cut Off Frequency FC10 GHz	Theoretical Attenuation at $F=\sqrt{3}FC10$ (Aluminium Alloy) dB/FT	Theoretical Peak Power Handling Capacity at $F=\sqrt{3}FC10$ KW	INS A (mm)	INS B (mm)	INS C (mm)	INS D (mm)	INS E (mm)	INS F Max (mm)	INS G $\pm 10\%$ (mm)	INS H (mm)
WRD-200D24A	2.00- 4.80	1.666§	0.013	472.50	2.590 ± 0.004 (65.79)	1.205 ± 0.004 (30.61)	2.750 ± 0.004 (69.85)	1.365 ± 0.004 (34.67)	0.512 ± 0.002 (13.00)	0.050 (1.27)	0.102 (2.59)	0.648 ± 0.002 (16.46)
WRD-250D30A	2.60-7.80	1.937#	0.025	120.00	1.655 ± 0.004 (42.04)	0.715 ± 0.004 (18.16)	2.000 ± 0.004 (50.80)	1.000 ± 0.004 (25.40)	0.150 ± 0.002 (3.81)	0.020 (0.51)	0.092 (2.34)	0.440 ± 0.002 (11.18)
WRD-350D24A	3.50-8.20	2.915§	0.013	151.30	1.480 ± 0.003 (37.59)	0.688 ± 0.003 (17.48)	1.608 ± 0.004 (40.84)	0.816 ± 0.004 (20.73)	0.292 ± 0.002 (7.42)	0.030 (0.76)	0.058 (1.47)	0.370 ± 0.002 (9.40)
WRD-475D24A	4.75-11.00	3.961§	0.049	83.72	1.090 ± 0.003 (27.69)	0.506 ± 0.003 (12.85)	1.190 ± 0.003 (30.23)	0.606 ± 0.003 (15.39)	0.215 ± 0.002 (5.46)	0.030 (0.76)	0.043 (1.09)	0.272 ± 0.002 (6.91)
WRD-500D36A	5.00-18.00	4.237§§	0.192	13.59	0.752 ± 0.003 (19.10)	0.323 ± 0.003 (8.20)	0.852 ± 0.003 (21.64)	0.423 ± 0.003 (10.74)	0.063 ± 0.001 (1.60)	0.015 (0.38)	0.013 (0.33)	0.188 ± 0.001 (4.78)
WRD-580D28A	5.80-16.00	4.894#	0.093	32.68	0.780 ± 0.003 (19.81)	0.370 ± 0.003 (9.40)	0.880 ± 0.003 (22.35)	0.470 ± 0.003 (11.94)	0.120 ± 0.001 (3.05)	0.020 (0.51)	0.043 (1.09)	0.200 ± 0.001 (5.08)
WRD-650D28A	6.50-18.00	5.317#	0.106	23.95	0.720 ± 0.003 (18.29)	0.320 ± 0.003 (8.13)	0.820 ± 0.003 (20.83)	0.420 ± 0.003 (10.67)	0.101 ± 0.001 (2.57)	0.020 (0.51)	0.022 (0.56)	0.173 ± 0.001 (4.39)
WRD-750D24A	7.50-18.00	6.239§	0.096	33.58	0.691 ± 0.003 (17.55)	0.321 ± 0.003 (8.15)	0.791 ± 0.003 (20.09)	0.421 ± 0.003 (10.69)	0.136 ± 0.002 (3.45)	0.020 (0.51)	0.027 (0.69)	0.173 ± 0.002 (4.39)
WRD-110C24A	11.00-26.50	9.363§	0.171	15.63	0.471 ± 0.003 (11.96)	0.219 ± 0.003 (5.56)	0.551 ± 0.003 (14.00)	0.299 ± 0.003 (7.59)	0.093 ± 0.002 (2.36)	0.015 (0.38)	0.019 (0.48)	0.118 ± 0.002 (3.00)
WRD-180C24A	18.00-40.00	14.995§	0.385	5.384	0.288 ± 0.003 (7.32)	0.134 ± 0.003 (3.40)	0.368 ± 0.003 (0.35)	0.214 ± 0.003 (5.44)	0.057 ± 0.002 (1.45)	0.015 (0.38)	0.011 (0.28)	0.072 ± 0.002 (1.83)

Notes

- Actual attenuation of waveguide may be considerably greater depending on operating frequency and temperature. Typical resistivity of aluminium alloy (6061) assumed as 4 microhm-cm.
- Actual power values were calculated based on the E-field producing breakdown in a non pressurised air dielectric waveguide under continuous wave (cw) conditions. The breakdown strength of air was considered to be 15000 volts per cm, corner radii considered.
- Cutoff frequencies from: §MIL-W-23351/4B §§MIL-W-23351/2B #Transverse resonance analysis



<i>Description</i>	<i>Model No.</i>	<i>Specifications</i>		
<i>Adaptors</i>		VSWR(max)	Length (mm)	Av Power max (W)
Waveguide to coax adaptor	AM350A-#	1.20	37	-
Waveguide to coax adaptor -	AM350A-N(HP)	1.25	37	700
Waveguide to coax adaptor -	AM350A-#(EL)	1.33	197	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

<i>Transitions</i>		Frequency (GHz)	Length (mm)	VSWR (max)
Double Ridge to WR284 Transition	AM350-284	3.50 - 3.95	153	1.06
Double Ridge to WR229 Transition	AM350-229	3.50 - 4.90	153	1.06
Double Ridge to WR187 Transition	AM350-187	3.95 - 5.85	146	1.06
Double Ridge to WR159 Transition	AM350-159	4.90 - 7.05	146	1.06
Double Ridge to WR137 Transition	AM350-137	5.85 - 8.20	146	1.06
Double Ridge to WR112 Transition	AM350-112	7.05 - 8.20	114	1.06
Double Ridge to WR102 Transition	AM350-102	7.00 - 8.20	127	1.06

<i>Bends</i>		Centreline Radius (mm)	VSWR (max)
E-Bend	AM350E	76	1.10
H-Bend	AM350H	89	1.10
'Zero Radius' E-bend	AM350ME	42	1.08
'Zero Radius' H-bend	AM350MH	42	1.08

<i>Twist/Straight Sections</i>		Length	VSWR (max)
Twist	AM350T	153	1.08
Straight	AM350S- $\delta\delta$	-	1.08

$\delta\delta$ defines length in mm to a maximum of 4000mm.

<i>Terminations</i>		Length	VSWR (max)	Av Power (max) W
Low Power Termination	AM350-1	292	1.04	50
Short Length Termination	AM350L-1S	152	1.15	5
Sliding Termination	AM350-1SL	367	1.04	50
Medium Power Termination	AM350L-2	292	1.06	200
High Power Termination	AM350L-3	318	1.06	700
Very High Power Termination	AM350L-4	400	1.10	1000
Liquid Cooled Termination	AM350L-(WL)	400	1.10	1000

When ordering liquid cooled terminations specify: power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

<i>Attenuators</i>		Length	VSWR (max)	Av Power (max) W
Attenuator Fixed	AM350J-**	150	1.10	1

** Defines attenuation value; 3 to 40 dB.

<i>Flexible Sections</i>		VSWR (max)	Max Attenuation Typ. (dB/metre)
Flexible Waveguide	AM350F- $\delta\delta$	1.10	0.100
Flexible/Twistable Waveguide	AM350FT- $\delta\delta$	1.10	0.165

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin.



Description	Model No.	Specifications						
Couplers/ Sampler		Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)
Power Sampler	AM350P- $\S\S\#$	30,40, 50	1.0	1.5	1.08	-	0	51
Broadwall	AM350C- $\S\S\#$	10,20,30,40,	1.0	1.0	1.08	1.40	35	762
Crossguide	AM350X- $\S\S\#$	30,40,50	1.0	1.0	1.08	-	10	133

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

$\S\S$ Defines coupling value; 3 to 40 dB

Dual directional & short length couplers are also available as standard items - contact factory for details.

Pressure Window		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max		
Window	AM350M	1.10	0.08	800	30	13		

Horn Antenna		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max	Frequency (GHz)
Antenna	AM350HA	2.00	16-24	8	E-plane 27-11	479	3.5 - 4.8

Many custom units available on request - consult factory for details. Radome optional.

Pressure Inlet		VSWR	Inlet Connector	Length (mm) max
Inlet	AM350PIN	1.08	1/8	100

Pressure inlets and drains can be incorporated into any unit or flange.

Gaskets		Material	Temperature (°C)
Pressure & RF	AM350RS	Silver loaded	-75 to +260
Pressure Gasket	AM350GS	Silicon	-75 to +260

Mismatch

Mismatch AM350MIS- ϵ

ϵ Defines the maximum VSWR required. Low and high power handling units are available.

Harmonic Filters		P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
Filter	AM350Q-							

Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

Waveguide Tees & Hybrids		Power Split	VSWR	Port Isolation	Dim. (mm)
Magic Tee		-	-	-	-

Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements

All double ridge components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - including single ridge - contact factory for details. Standard flange - UDR/VBR Type - for other flanges specify when ordering.



<i>Description</i>	<i>Model No.</i>	<i>Specifications</i>		
<i>Adaptors</i>		VSWR(max)	Length (mm)	Av Power max (W)
Waveguide to coax adaptor	AM650A-#	1.20	29	-
Waveguide to coax adaptor - High Power	AM650A-N(HP)	1.25	29	500
Waveguide to coax adaptor - End Launch	AM650A-#(EL)	1.33	106	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

<i>Transitions</i>		Frequency (GHz)	Length (mm)	VSWR (max)
Double Ridge to WR159 Transition	AM650-159	6.50 - 7.05	146	1.06
Double Ridge to WR137 Transition	AM650-137	6.50 - 8.20	146	1.06
Double Ridge to WR112 Transition	AM650-112	7.05 - 10.00	114	1.06
Double Ridge to WR102 Transition	AM650-102	7.00 - 11.00	127	1.06
Double Ridge to WR90 Transition	AM650-90	8.20 - 12.40	127	1.06
Double Ridge to WR75 Transition	AM650-75	10.00 - 15.00	114	1.06
Double Ridge to WR62 Transition	AM650-62	12.40 - 18.00	102	1.06
Double Ridge to WR51 Transition	AM650-51	15.00 - 18.00	89	1.06

<i>Bends</i>		Centreline Radius (mm)	VSWR (max)
E-Bend	AM650E	41	1.10
H-Bend	AM650H	43	1.10
'Zero Radius' E-bend	AM650ME	24	1.08
'Zero Radius' H-bend	AM650MH	24	1.08

<i>Twist/Straight Sections</i>		Length	VSWR (max)
Twist	AM650T	127	1.08
Straight	AM650S- $\delta\delta$	-	1.08

$\delta\delta$ defines length in mm to a maximum of 4000mm.

<i>Terminations</i>		Length	VSWR (max)	Av Power (max) W
Low Power Termination	AM650-1	200	1.04	15
Short Length Termination	AM650L-1S	115	1.15	2
Sliding Termination	AM650-1SL	237	1.04	15
Medium Power Termination	AM650L-2	200	1.06	75
High Power Termination	AM650L-3	262	1.06	400
Very High Power Termination	AM650L-4	394	1.10	850
Liquid Cooled Termination	AM650L-(WL)	394	1.10	850

When ordering liquid cooled terminations specify power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

<i>Attenuators</i>		Length	VSWR (max)	Av Power (max) W
Attenuator Fixed	AM650J-**	120	1.10	1

** Defines attenuation value; 3 to 40 dB.

<i>Flexible Sections</i>		VSWR (max)	Max Attenuation Typ. (dB/metre)
Flexible Waveguide	AM650F $\delta\delta$	1.10	0.100
Flexible/Twistable Waveguide	AM650FT- $\delta\delta$	1.10	0.165

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin.

E&O Excepted. All specifications subject to change without notice.

Cat Issue 5.0



Description	Model No.	Specifications						
Couplers/ Sampler		Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)

Power Sampler	AM650P- $\$ \#$	30,40, 50	1.0	1.5	1.08	-	0	51
Broadwall Coupler	AM650C- $\$ \#$	10,20,30,40, 50	1.0	1.0	1.08	1.40	35	534
Crossguide Coupler	AM650X- $\$ \#$	30,40,50	1.0	1.0	1.08	-	10	81

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

$\$ \#$ Defines coupling value; 3 to 40 dB

Dual directional & short length couplers are also available as standard items - contact factory for details.

Pressure Window		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max
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Window	AM650M	1.10	0.09	250	30	10
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Horn Antenna		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max	Frequency (GHz)
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Antenna	AM650HA	2.00	15-24	1.2	E-plane 30-11 H-plane 34-12	229	3.5 - 4.8
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Many custom units available on request - consult factory for details. Radome optional.

Pressure Inlet		VSWR	Inlet Connector (BSP)	Length (mm) max
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Inlet	AM650PIN	1.08	1/8	100
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Pressure inlets and drains can be incorporated into any unit or flange.

Gaskets		Material	Temperature (°C)
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Pressure & RF Gasket	AM650RS	Silver loaded silicon	-75 to +260
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Pressure Gasket	AM650GS	Silicon	-75 to +260
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Mismatch

Mismatch	AM650MIS- ϕ
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ϕ Defines the maximum VSWR required. Low and high power handling units are available.

Harmonic Filters		P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
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Filter	AM650Q-HARM	0.4	1.30	10	300	18.00 GHz	40dB	1kW Peak 30W CW
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Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

Waveguide Tees&Hybrids		Power Split (dB)		VSWR	Port Isolation (dB)		Dim. (mm)
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Magic Tee	AM650MT	3.1+/-0.3 typ	3.1+/-0.4 max	1.30 typ 1.50 max	colinear 17 typ 12 min	E-H 30 min	51x31x31
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Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements

All double ridge components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - including single ridge - contact factory for details. Standard flange - UDR/VBR Type - for other flanges specify when ordering.



Description	Model No.	Specifications		
		VSWR(max)	Length (mm)	Av Power max (W)
Adaptors				
Waveguide to coax adaptor	AM750A-#	1.20	31	-
Waveguide to coax adaptor - High Power	AM750A-N(HP)	1.25	31	500
Waveguide to coax adaptor - End Launch	AM750A-#(EL)	1.33	92	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

Transitions		Frequency (GHz)	Length (mm)	VSWR (max)
Double Ridge to WR137 Transition	AM750-137	7.50 - 8.20	146	1.06
Double Ridge to WR112 Transition	AM750-112	7.50 - 10.00	114	1.06
Double Ridge to WR102 Transition	AM750-102	7.50 - 11.00	127	1.06
Double Ridge to WR90 Transition	AM750-90	8.20 - 12.40	127	1.06
Double Ridge to WR75 Transition	AM750-75	10.00 - 15.00	114	1.06
Double Ridge to WR62 Transition	AM750-62	12.40 - 18.00	102	1.06
Double Ridge to WR51 Transition	AM750-51	15.00 - 18.00	89	1.06

Bends		Centreline Radius (mm)	VSWR (max)
E-Bend	AM750E	41	1.10
H-Bend	AM750H	43	1.10
'Zero Radius' E-bend	AM750ME	24	1.08
'Zero Radius' H-bend	AM750MH	24	1.08

Twist/Straight Sections		Length	VSWR (max)
Twist	AM750T	127	1.08
Straight	AM750S- $\delta\delta$	-	1.08

$\delta\delta$ defines length in mm to a maximum of 4000mm.

Terminations		Length	VSWR (max)	Av Power (max) W
Low Power Termination	AM750-1	178	1.04	15
Short Length Termination	AM750L-1S	115	1.15	2
Sliding Termination	AM750-1SL	213	1.04	15
Medium Power Termination	AM750L-2	178	1.06	75
High Power Termination	AM750L-3	262	1.06	400
Very High Power Termination	AM750L-4	394	1.10	850
Liquid Cooled Termination	AM750L-(WL)	394	1.10	850

When ordering liquid cooled terminations specify power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

Attenuators		Length	VSWR (max)	Av Power (max) W
Attenuator Fixed	AM750J-**	120	1.10	1

** Defines attenuation value; 3 to 40 dB.

Flexible Sections		VSWR (max)	Max Attenuation Typ. (dB/metre)
Flexible Waveguide	AM750F- $\delta\delta$	1.25	0.70
Flexible/Twistable Waveguide	AM750FT- $\delta\delta$	1.25	0.70

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin.



Description	Model No.	Specifications						
Couplers/ Sampler		Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)

Power Sampler	AM750P-\$\$#	30,40, 50	1.0	1.5	1.08	-	0	51
Broadwall Coupler	AM750C-\$\$#	10,20,30,40, 50	1.0	1.0	1.08	1.40	35	458
Crossguide Coupler	AM750X-\$\$#	30,40,50	1.0	1.0	1.08	-	10	76

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male,

7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

\$\$ Defines coupling value; 3 to 40 dB

Dual directional & short length couplers are also available as standard items - contact factory for details.

Pressure Window		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max
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Window	AM750M	1.10	0.09	250	30	10
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Horn Antenna		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max	Frequency (GHz)
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Antenna	AM750HA	2.00	16-24	1.30	E-plane 27-11 H-plane 31-13	220	7.5 - 18
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Many custom units available on request - consult factory for details. Radome optional.

Pressure Inlet		VSWR	Inlet Connector (BSP)	Length (mm) max
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Inlet	AM750PIN	1.08	1/8	100
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Pressure inlets and drains can be incorporated into any unit or flange.

Gaskets		Material	Temperature (°C)
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Pressure & RF Gasket	AM750RS	Silver loaded silicon	-75 to +260
Pressure Gasket	AM750GS	Silicon	-75 to +260

Mismatch

Mismatch	AM750MIS-¢
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¢ Defines the maximum VSWR required. Low and high power handling units are available.

Harmonic Filters		P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
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Filter	AM750Q-HARM	0.4	1.30	10	300	18.00 GHz	40dB	1kW Peak 30W CW
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Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

Waveguide Tees&Hybrids		Power Split (dB)		VSWR	Port Isolation (dB)		Dim. (mm)
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Magic Tee	AM750MT	3.1+/-0.3 typ	3.1+/-0.4 max	1.30 typ 1.50 max	colinear 17 typ 12 min	E-H 30 min	51x31x31
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Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements

All double ridge components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - including single ridge - contact factory for details. Standard flange - UDR/VBR Type - for other flanges specify when ordering.



Description	Model No.	Specifications		
		VSWR(max)	Length (mm)	Av Power max (W)
Adaptors				
Waveguide to coax adaptor	AM180A-#	1.20	25	-
Waveguide to coax adaptor - High Power	-	-	-	-
Waveguide to coax adaptor - End Launch	-	-	-	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male, 7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

Transitions		Frequency (GHz)	Length (mm)	VSWR (max)
Double Ridge to WR51 Transition	AM180-51	18.00 - 22.00	114	1.06
Double Ridge to WR42 Transition	AM180-42	18.00 - 26.50	114	1.06
Double Ridge to WR34 Transition	AM180-34	22.00 - 33.00	102	1.06
Double Ridge to WR28 Transition	AM180-28	26.50 - 40.00	89	1.06
Double Ridge to WR22 Transition	AM180-22	33.00 - 40.00	89	1.06

Bends		Centreline Radius (mm)	VSWR (max)
E-Bend	AM180E	38	1.10
H-Bend	AM180H	38	1.10
'Zero Radius' E-bend	-	-	-
'Zero Radius' H-bend	-	-	-

Twist/Straight Sections		Length	VSWR (max)
Twist	AM180T	80	1.08
Straight	AM180S- $\delta\delta$	-	1.08

$\delta\delta$ defines length in mm to a maximum of 4000mm.

Terminations		Length	VSWR (max)	Av Power (max) W
Low Power Termination	AM180-1	102	1.04	3
Short Length Termination	AM180L-1S	51	1.15	2
Sliding Termination	AM180-1SL	117	1.04	3
Medium Power Termination	AM180L-2	102	1.06	20
High Power Termination	AM180L-3	127	1.06	125
Very High Power Termination	AM180L-4	190	1.10	250
Liquid Cooled Termination	AM180L-(WL)	190	1.10	250

When ordering liquid cooled terminations specify power handling, coolant, inlet & outlet temperatures, flow rate, coolant connectors & mounting details.

Attenuators		Length	VSWR (max)	Av Power (max) W
Attenuator Fixed	AM650J-**	120	1.10	1

** Defines attenuation value; 3 to 40 dB.

Flexible Sections		VSWR (max)	Max Attenuation Typ. (dB/metre)
Flexible Waveguide	-	-	-
Flexible/Twistable Waveguide	-	-	-

$\delta\delta$ defines length in mm. Jacket may be silicon or polyolefin.



Description	Model No.	Specifications						
Couplers/ Sampler		Coupling (dB)	Coupling Variation (+/-dB)	Frequency Sensitivity (+/-dB)	VSWR max (Main Line)	VSWR max (Secondary)	Directivity (dB) min	Length (mm)

Power Sampler	AM180P-\$\$\$	30,40, 50	1.0	1.5	1.08	-	0	51
Broadwall Coupler	AM180C-\$\$\$	10,20,30,40, 50	1.0	1.0	1.08	1.40	30	280
Crossguide Coupler	-	-	-	-	-	-	-	-

defines connector. N=N female, S=SMA female, T=TNC female, N(M)=N Male, S(M)=SMA Male, T(M)=TNC Male,

7= APC-7, SS=SSMA female, K=K-Type, 3.5=APC-3.5. Other connectors available on request.

\$\$ Defines coupling value; 3 to 40 dB

Dual directional & short length couplers are also available as standard items - contact factory for details.

Pressure Window		VSWR (max)	Attenuation (dB) max	CW Power max (W)	Pressure (PSIG)	Length (mm) max
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Window	AM180M	1.40	0.09	100	30	4.5
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Horn Antenna		VSWR (typ)	Gain (dBi) typ.	Power Handling (kW) CW	Beamwidth (deg) typ.	Length (mm) max	Frequency (GHz)
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Antenna	AM180HA	2.00	17-24	0.18	E-plane 26-12 H-plane 29-13	97	18.0 - 40.0
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Many custom units available on request - consult factory for details. Radome optional.

Pressure Inlet		VSWR	Inlet Connector (BSP)	Length (mm) max
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Inlet	AM180PIN	1.08	1/8	100
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Pressure inlets and drains can be incorporated into any unit or flange.

Gaskets		Material	Temperature (°C)
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Pressure & RF Gasket	AM180RS	Silver loaded silicon	-75 to +260
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Pressure Gasket	AM180GS	Silicon	-75 to +260
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Mismatch

Mismatch	AM180MIS-¢
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¢ Defines the maximum VSWR required. Low and high power handling units are available.

Harmonic Filters		P/B.Ins. loss	VSWR max	Peak kW	CW power	Cutoff freq	Min Rejection	Harm. Power
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Filter	AM180Q-HARM							
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Contact factory with your requirements. Bandpass, Lowpass, & Highpass filters also available.

Waveguide Tees&Hybrids		Power Split (dB)	VSWR	Port Isolation (dB)	Dim. (mm)
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Magic Tee		-	-	-	-
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Units are available with integral loads and/or coaxial adaptors-Contact factory with your requirements

All double ridge components are specified full band. The standard build is aluminium with Alocrom 1200 and painted matt black; all units are available in brass and copper. Custom variations of these units are available - including single ridge - contact factory for details. Standard flange - UDR/VBR Type - for other flanges specify when ordering.





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