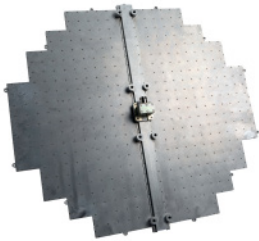
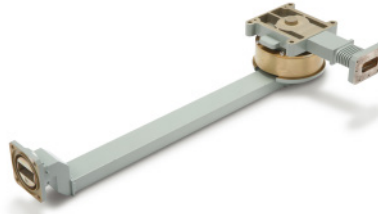


Slotted Array Antennas

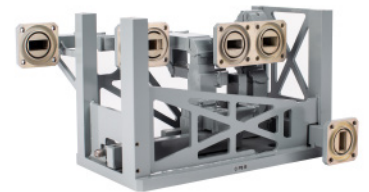
Aerospace | Defence | Space



Slotted Waveguide Antennas



Rotary Joints



Monopulse Comparators

Slotted Waveguide Antenna Arrays

Sylatech is a UK based design, engineering and manufacturing business of high-frequency, microwave slotted waveguide antennas to 40 GHz. With over 55 years of heritage in supplying radar solutions to the Aerospace, Defence and Space sectors, Sylatech's marketing leading capability is underpinned by an integrated manufacturing facility. Working within an AS9100 QMS and under Nadcap accreditation, a variety of different manufacturing techniques are used, including casting, machining, flame and dip brazing.

Sylatech can provide slotted antenna arrays on a design-to-specification basis. To discuss how Sylatech's waveguide design, engineering and manufacturing capabilities can assist your project, contact our experienced team of engineers. A range of complementary high-power waveguide components can also be designed, including custom single and dual-channel rotary joints, power dividers/combiners and monopulse comparators

Design, manufacture, and test - Sylatech's slotted waveguide antenna offering:

- Slotted waveguide antenna arrays with monopulse, dual-polarised and linear feeds
- Low mass and low profile feeds
- X, and Ka band slotted waveguide antennas for Weather Radar, SAR, and Surveillance Radar
- Custom designed RF optimised radomes
- Large antenna array formats to 1200 x 900mm.

Rotary Joints

Sylatech provides custom designed waveguide rotary joints WR137 to WR28. Pressurised and non-pressurised are available, with a selection of single or multi-channels with waveguide or coaxial connections. Sylatech's rotary joints are supplied as I-type, L-type, or U-type geometrical layouts with any combination of interfaces.

Monopulse Comparators

Sylatech's monopulse comparator designs, for narrow-band frequencies WR187 to WR28, provide isolation, typically between 30 and 35dB, ensuring excellent amplitude, phase unbalance and deep nulls. Our most popular custom comparator designs interface with flat plate antenna arrays, where the interface ports are spaced further apart than the conventional square pattern.

Typical Specifications

Part #	Frequency	Waveguide Size	Size	Feed	Gain ^{dB} _i	Beamwidth [°]	Side-Lobe ^{dB} _{min}	Return Loss ^{dB} _{min}
SA15001	9.30 - 9.40	WR112 / WG15	10" diameter	Linear (H)	25.0	10.0	25	14.0
SA16003	9.50 - 10.0	WR90 / WG16	190 mm diameter	Monopulse (V)	30.0	4.90	25	6.0 (SUM & DIFF)
SA16004	9.50 - 10.0	WR90 / WG16	600 mm diameter	Monopulse (V)	32.0	3.77	25	6.0 (SUM)
SA16008	9.40 - 9.50	WR90 / WG16	600 mm diameter	Linear (H)	34.0	3.50	30	15.0
SA16009	9.70 - 9.80	WR90 / WG16	600 mm diameter	Linear (H)	34.0	3.50	30	15.0
SA16010	9.25 - 9.37	WR90 / WG16	526 x 330 mm	Linear (H)	30.5	4.5 (Az) / 6.0 (Ei)	22	11.7
SA16012	9.20 - 9.60	WR90 / WG16	674 x 190 mm	Monopulse (V)	-	3.5 (Az) / 20.0 (Ei)	25	10.0
SA16014	9.38 - 9.44	WR90 / WG16	600 mm diameter	Linear (H)	33.0	4.0 (Az) / 4.8 (Ei)	47	9.54
SA16015	9.20 - 9.30	WR90 / WG16	1200 x 200 mm	Monopulse (V)	28.0	2.0 (Az) / 22.0 - 40.0 (Ei)	29	15.0
SA16017	9.30 - 10.0	WR90 / WG16	19" diameter	Monopulse (V)	30.0	4.9 (Az) / 4.9 (Ei)	29	4.1
SA16018	9.38 - 9.44	WR90 / WG16	12 x 18"	Linear (H)	29.3	5.2 +/- 0.2	22	15.56
SA16019	9.25 - 9.37	WR90 / WG16	20" diameter	Linear (H)	32.0	4.6	26	13.0
SA18001	13.40 - 13.0	WR62 / WG16	130 x 68 mm	Dual (V & H)	18.5	9.5 (Az) / 40 (Ei)	15	9.54
SA22001	35.02 - 35.42	WR28 / WG22	190 mm diameter	Monopulse	33.0	3.0	25	17.0 (SUM) / 13.0 (DIFF)
SA22004	33.80 +/- 250 MHz	WR28 / WG22	110 mm diameter	Monopulse	28.0	6.54	25	13.0
SA22005	35.64 +/- 250 MHz	WR28 / WG22	275 mm diameter	Linear (H)	37.0	2.18	25	10.0