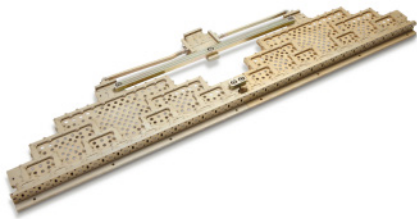
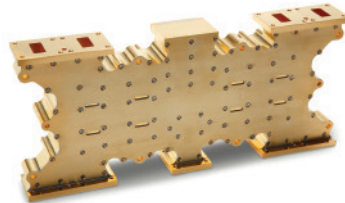


Power Dividers & Combiners

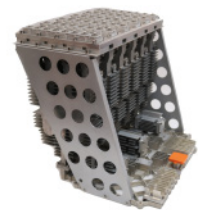
Aerospace | Defence | Space



32:1 Power Combiner



8:1 Power Combiner



48:1 Power Combiner

Power Dividers & Combiners

Combiners designs with 2:1, 4:1, 8:1, 16:1, 32:1, 64:1 configurations all use magic tees as the basic building blocks. These have parallel ports which are used as the inputs, and either H or E ports, as the output depending on the mechanical configuration.

Combiners designs with 3:1, 6:1, 12:1, 24:1, 48:1 configurations all use combinations of magic tees and hybrid couplers with fixed waveguide phase shifters to provide internal path corrections.

Waveguide Power Combiners for use with SSPAs allow the outputs from a series of low power solid state amplifiers to be combined into a single higher power. This system replaces a single high-power amplifier, which if subject to a failure would result in zero power at the output.

Sylatech Power Dividers & Combiners Waveguide Offering:

- Build-to-print waveguide power combiners
- Ideal for use in TWT replacement applications
- Available in configurations 1:2 to 1:128
- Designed to suit end-fed slotted waveguide arrays
- Tee designs are optimised to eliminate the need for fitment of extra irises or complicated shortcuts.

Magic Tees

Magic tees with variants of linear, folded E-port and folded H-port available VSWR across the selected band, is tuned to cover 10-15% of the full bandwidth.

Waveguide Components

Our capability extends to the design and manufacture of a wide range of passive microwave components to 40GHz, typically used in the manufacture of sub-systems for defence, aerospace, and satellite communications applications.

Typical Specifications

Part #	Frequency	Waveguide Size	Description	VSWR All Ports	Insertion Loss ^{dB}	Isolation Between Output Ports ^{dB}
PDC10001	2.85 - 2.86	WR284 / WG10	2:1 Variable Power Combiner	1.20:1	0.10	25
PDC10002	2.70 - 2.90	WR284 / WG10	8:1 Power Combiner	1.16:1	0.25	22
PDC10003	2.70 - 2.90	WR284 / WG10	4:1 Power Combiner	1.20:1	0.40	25
THAL515	4.40 - 5.00	WR187 / WG12	8:1 Power Combiner	1.45:1	0.40	15
PDC15001	7.25 - 7.37	WR112 / WG15	4:1 Power Combiner	1.20:1	0.15	3
PDC15002	7.25 - 7.75	WR112 / WG15	2:1 Power Combiner	1.15:1	0.15	5
SNEC501	7.90 - 8.40	WR112 / WG15	8:1 Power Combiner	1.15:1	0.30	15
PDC16001	9.40 - 9.50	WR90 / WG16	4:1 Power Combiner	1.15:1	0.50	30
PDC16002	9.38 - 9.44	WR90 / WG16	10:1 Power Combiner	1.30:1	0.20	20
PDC16003	9.38 - 9.44	WR90 / WG16	18:1 Power Combiner	1.30:1	0.30	20
PDC16004	9.60 - 10.40	WR90 / WG16	48:1 Power Combiner	1.22:1	0.40	20
THAL520	8.50 - 9.60	WR90 / WG16	8:1 Power Combiner	1.30:1	0.30	17
PDC16006	8.50 - 9.60	WR90 / WG16	8:1 Power Combiner	1.20:1	0.50	20
PDC19001	18.00 - 18.70	WR51 / WG19	Adjustable Power Combiner	1.15:1	0.20	28
PDC19002	19.50 - 20.30	WR51 / WG19	Adjustable Power Combiner	1.15:1	0.20	28
PDC19004	17.70 - 21.20	WR51 / WG19	2:1 Power Combiner	1.15:1	0.10	5
SAC511	20.00 - 21.50	WR51 / WG19	Variable Power Combiner	1.15:1	0.10	5
TEL501	30.00 - 31.00	WR28 / WG22	8:1 Power Combiner	1.25:1	0.30	23
THAL521	34.50 - 35.60	WR28 / WG22	4:1 Power Combiner	1.25:1	0.30	20
NEC501	35.00 - 36.00	WR28 / WG22	32:1 Power Combiner / Divider	1.50:1	0.80	15
PBN502	40.50 - 42.50	WR19 / WG24	Power Divider	1.20:1	0.20	25