

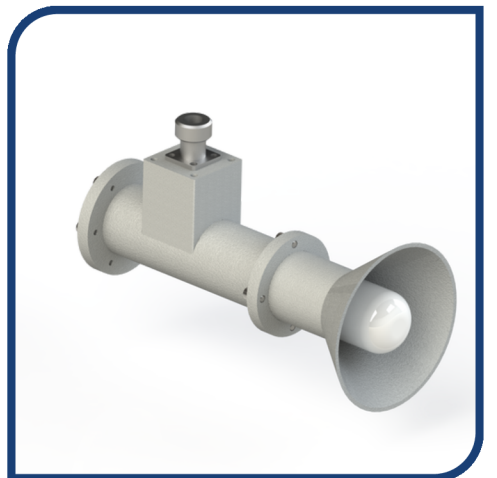
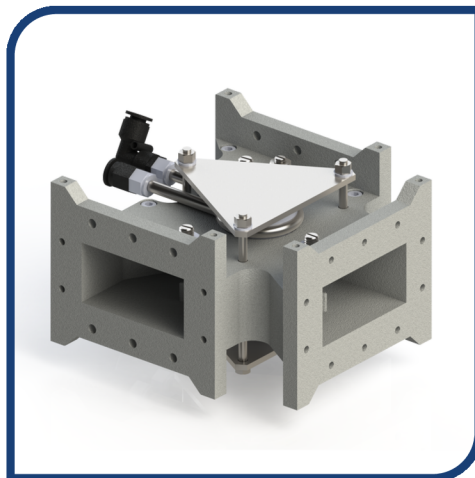
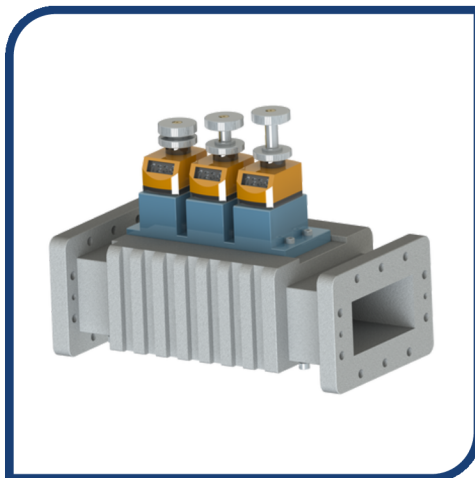
Innovation in Every Frequency,
Precision in Every Wave.

SP3 RF (A subsidiary of SP3 TECHNOLOGIES LLP). We're more than just manufacturers; we're your strategic partners in bringing innovative products to life. Leveraging our deep expertise in Original Equipment Manufacturing (OEM) and Original Design Manufacturing (ODM), we transform your ideas into market-ready realities. From concept to creation, we provide end-to-end solutions, ensuring quality, efficiency, and a collaborative journey every step of the way. Let's build the future, together.

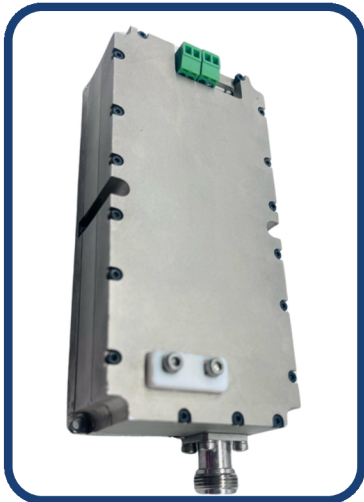
Solutions for RF & Microwave Components

Products

- **RF & Microwave Generators**
- **Waveguide**
- **Waveguide - Components**
- **Connectorized - Components**
- **Connectors**



RF & Microwave Generators



Solid State Microwave Generator

- Smaller form factor with solid state design
- Coax & Waveguide output option available
- Capable of frequency tuning the output between 2400-2500 MHz & 910-920 MHz
- Output Power range from 250W-12000W
- Remote and manual operation for easy setup, operation and troubleshooting



Magnetron based Microwave Generator

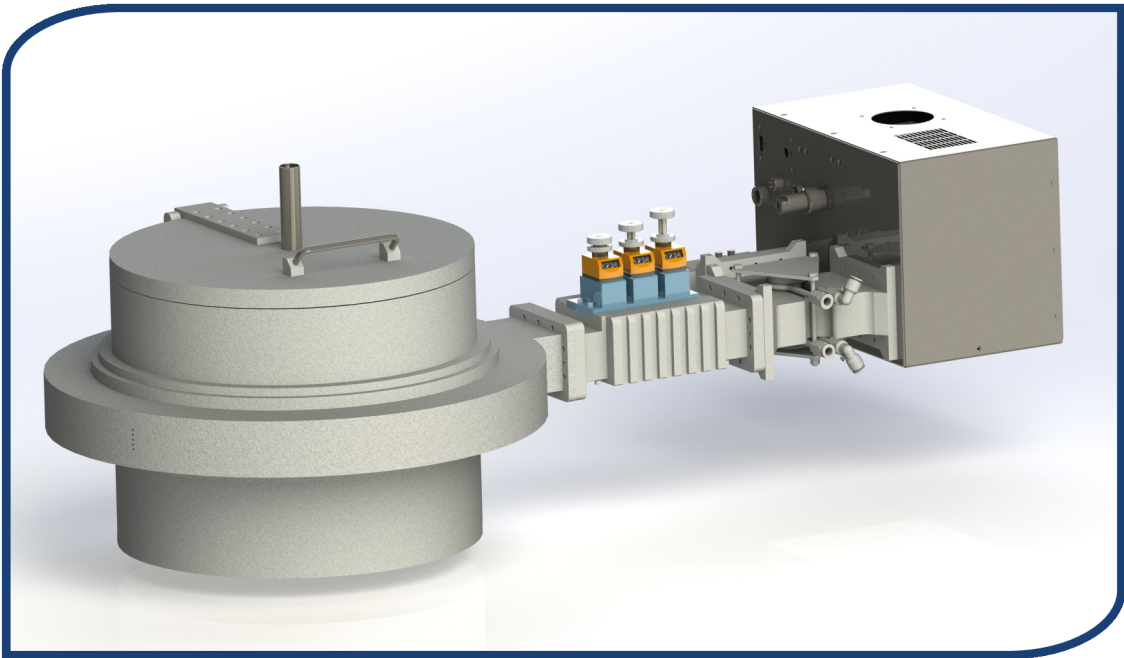
- Reliable magnetron head
- Proven switch mode technology
- Reliable and cost-effective
- Extremely compact and light weight
- Configurable & remotely controllable
- Stable CW microwave power output
- Offers up to 10 kW with magnetron head and integrated isolator/circulator



Intelligent Switch mode Power Supply for Magnetron

- Available in 3,6 & 10 kW output power
- Intelligent filament control system for extended tube lifespan
- Low ripple HVDC output
- Accurate power measurement and feedback ensures high repeatability
- Compact, modular design enhances cross-platform compatibility

SP3RF Enhanced Microwave Furnace System



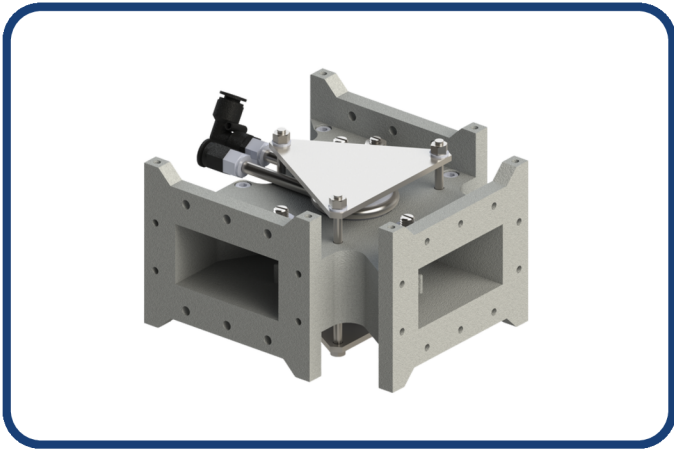
SP3RF enhances the Microwave Furnace System with remote-controlled and advanced capabilities, making it indispensable across a wide range of industries and research applications. Designed to achieve and maintain extreme temperatures of up to 1600°C, the system is ideal for synthesizing advanced materials and performing high-precision heat treatment processes. Its **SLAN aluminum body chamber** ensures uniform wave propagation through a slotted waveguide antenna.

Parameter	Specification
Microwave Propagation	Slotted Waveguide Antenna
Max Temperature	1600°C
Heating Rate	10-25°C/min (programmable)
Temperature Accuracy	±1°C at soaking
Continuous Operation	Up to 6 hours

At SP3RF, we specialize in designing and selling advanced Waveguide & Connectorized Components tailored to meet diverse industry needs. Here are our some of the standard products plus we also cater with custom product development as per our customer requirement.

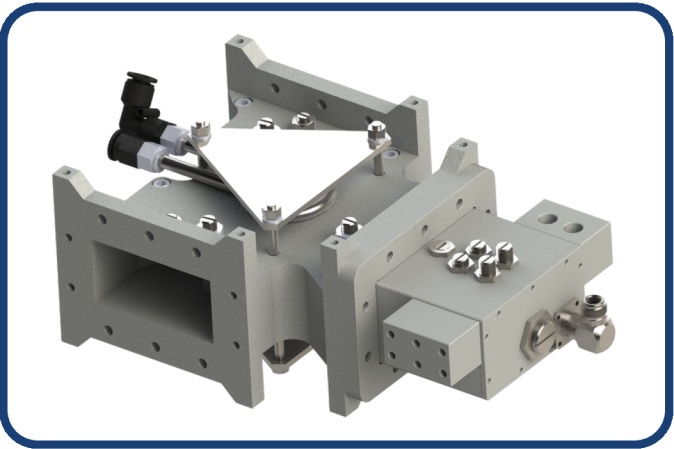
Waveguide Components

The customized lengths, different flange and different material types may be available as per requirement.



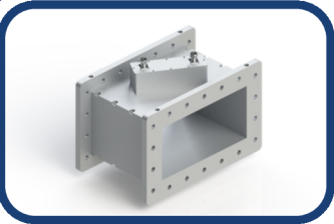
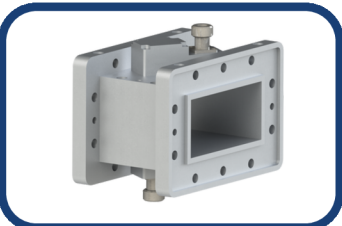
Circulator

Our Waveguide Circulator featuring standard WR freq. band with high power handling, minimum losses and excellent VSWR. Manufactured to rigid specifications, with high quality material, these components provide efficient overall system output.



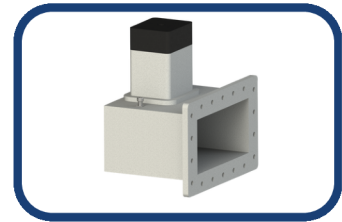
Isolator

Our Waveguide Isolator featuring standard WR freq. band with high power handling, minimum losses and excellent VSWR. Manufactured to rigid specifications, with high quality material, these components provide efficient overall system output



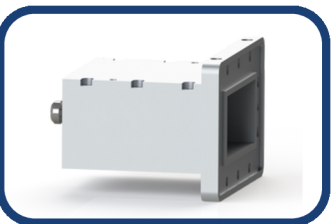
Dir./Dual Coupler

Our Waveguide Directional/Dual Coupler is designed for standard WR frequency bands, offering high directivity, low insertion loss, and excellent VSWR. Precision-engineered with high-quality materials and manufactured to rigid specifications, these components ensure efficient overall system performance.



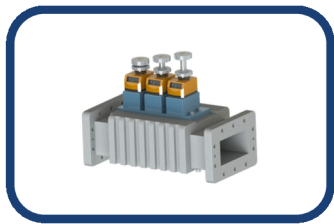
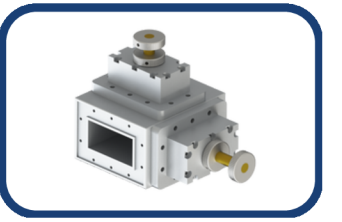
Waveguide Load

Our Waveguide Load featuring standard WR freq. band with low to high power handling capacity. It Features Water cooled, Oil cooled and Air-Finn Loads type. Manufactured to rigid specifications, with high quality material, these components provide efficient overall system output.



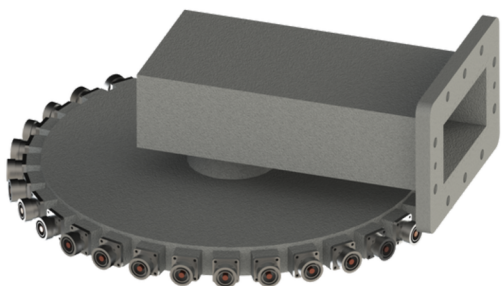
Waveguide to Coaxial Adaptor

Our Waveguide to coaxial Adaptor featuring standard WR freq. band with low transmission loss. These adaptors are available with rectangular and circular flanges, In-line(STEP) and right angle options. Manufactured to rigid specifications with high quality material, these components provide efficient overall system output.



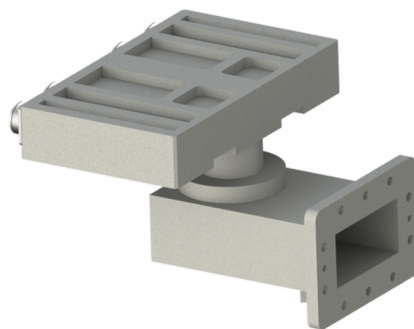
Tuner

Our Waveguide Tuner featuring standard WR freq. band and with different flange configuration. These Tuner provides matching the Load Impedance with the source Impedance. Manufactured to rigid specifications with high quality material, these components provide efficient overall system output.



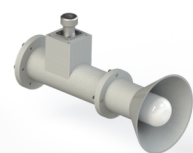
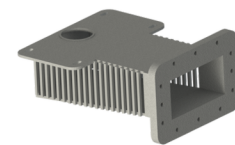
Radial Power Divider/Combiner

Our RADIAL Power Divider/Combiner featuring different frequency ranges that begin from MHz to GHz range, with different N-Way options available. These Power Divider/Combiner divide or combine in a single step and offer many advantages Like Lower Insertion Loss, Amplitude and Phase stable.



Spatial Combiner & Launcher

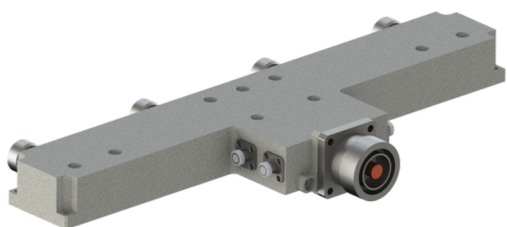
Our Waveguide Spatial Combiner & Launcher consist of Launcher with spatial Combiner mounted over for Very High Power requirement. Manufactured to rigid specifications with high quality material, these components provide efficient overall system output.



EM Bean Launcher

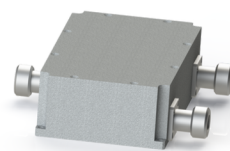
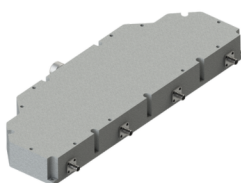
Our Waveguide Electromagnetic Bean Launcher featuring standard WR freq. band and with different flange configuration. These Launcher are used to feed EM energy from Magnetron to the chamber. Manufactured to rigid specifications with high quality material, these components provide efficient overall system output

Connectorized Components



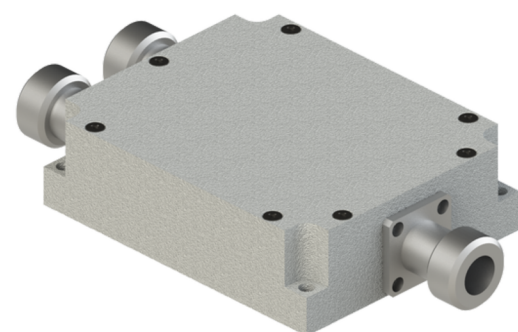
Spatial Power Divider/Combiner

Our SPATIAL Power Divider/Combiner featuring different frequency ranges that begin at MHz to GHz range, with different N-Way options available. These Power Divider/Combiner divide or combine in a single step, offer the lower insertion loss and higher combining efficiency compared to planer divider/combiner.



GyselPower Divider/Combiner

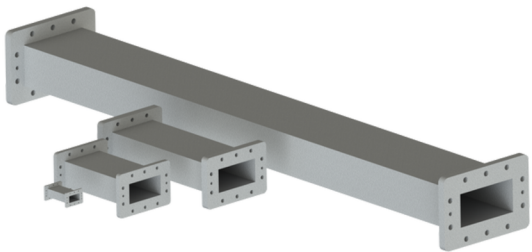
Our GYSEL Power Divider/Combiner featuring narrow band frequency ranges with different N-Way options available. These Power Divider/Combiner divide or combine offer narrow band, high Power handling and can handle more Power Imbalance.



Wilkinson Power Divider/Combiner

Our WILKINSON Power Divider/Combiner featuring wide band frequency ranges with different N-Way options available. These Power Divider/Combiner divide or combine offer broad band, lower insertion loss, excellent Phase & amplitude balance and high Isolation.

Waveguide



Straight Sections Waveguide

Our straight waveguide section is available as per EIA/IEC standard WR series covers Standard Frequency(GHz) and aperture(inch), including rectangular flanges, circular flanges and cover flanges. Also included ridge and non-ridge waveguides.



Flexible Waveguide

Our Flexible waveguide is available as per EIA/IEC standard WR series covers Standard Frequency(GHz) with low insertion loss and low VSWR and can handle High Power continuously. Also included ridge and non-ridge waveguides.



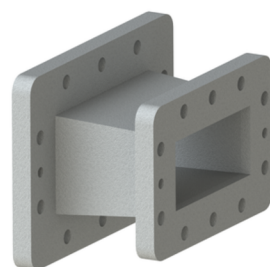
Twisted Waveguide

Our Twisted waveguide is available as per EIA/IEC standard WR series covers standard Frequency(GHz) with low insertion loss and low VSWR and can handle High Power continuously. Also included ridge and non-ridge waveguides. It includes both side 45 and 90 degree twists.



Bend E-H Plane Waveguide

Our Bend E-H Plane waveguide is available as per EIA/IEC standard WR series covers standard Frequency(GHz) with low insertion loss and low VSWR and can handle High Power continuously. Also included ridge and non-ridge waveguides. It includes both E bend & H Bend configuration.



Transition Waveguide

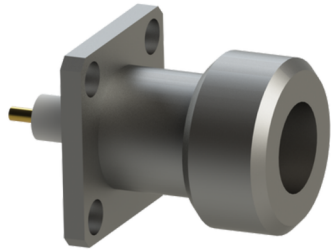
Our Transition waveguide is available as per EIA/IEC standard WR series covers standard Frequency(GHz). These Transition waveguides are structures that connect waveguides to other types of transmission lines



Flanges

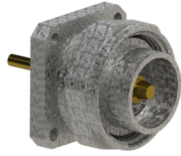
Our waveguide flanges are available as per EIA/IEC standard WR series and cover standard Frequency (GHz). These waveguide flanges are mechanical interfaces that connect waveguide sections, providing secure alignment and a low-loss, robust connection.

Connectors



Specialized N Type Connector

Our N Type Panel Mount connector along with four screw holes are capable of handling frequencies upto 18GHz with normal Impedance 50Ω. These connectors are built as per precise microwave and RF industry standard.



7/16 DIN Panel Mount Connector

Our 7/16 DIN, is 50Ω, threaded Panel Mount connector having 7mm Outer Dia. of inner contact, 16mm Inner Dia. of outer contact. These connectors provide better interference and intermodulation rejection and higher power handling at RF frequencies.

dBm to Watts Conversion Table

dBm	Watts	dBm	Watts	dBm	Watts	dBm	Watts	dBm	Watts	dBm	Watts	dBm	Watts
30	1.00 W	40	10.00 W	50	100.00 W	60	1.00 kW	70	10.00 kW	80	100.00 kW	90	1.00 MW
31	1.26 W	41	12.59 W	51	125.89 W	61	1.26 kW	71	12.59 kW	81	125.89 kW	91	1.26 MW
32	1.58 W	42	15.85 W	52	158.49 W	62	1.58 kW	72	15.85 kW	82	158.49 kW	92	1.58 MW
33	2.00 W	43	19.95 W	53	199.53 W	63	2.00 kW	73	19.95 kW	83	199.53 kW	93	2.00 MW
34	2.51 W	44	25.12 W	54	251.19 W	64	2.51 kW	74	25.12 kW	84	251.19 kW	94	2.51 MW
35	3.16 W	45	31.62 W	55	316.23 W	65	3.16 kW	75	31.62 kW	85	316.23 kW	95	3.16 MW
36	3.98 W	46	39.81 W	56	398.11 W	66	3.98 kW	76	39.81 kW	86	398.11 kW	96	3.98 MW
37	5.01 W	47	50.12 W	57	501.19 W	67	5.01 kW	77	50.12 kW	87	501.19 kW	97	5.01 MW
38	6.31 W	48	63.10 W	58	630.96 W	68	6.31 kW	78	63.10 kW	88	630.96 kW	98	6.31 MW
39	7.94 W	49	79.43 W	59	794.33 W	69	7.94 kW	79	79.43 kW	89	794.33 kW	99	7.94 MW
												100	10.00 MW



Please contact our Sales Team to meet your design requirement.

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