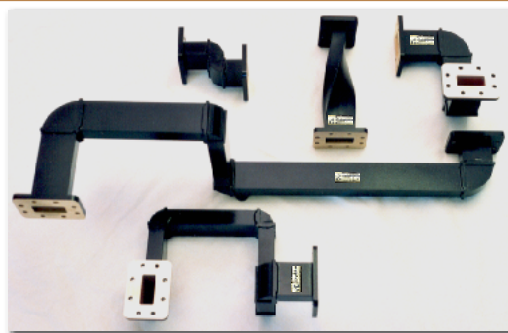


## **WAVEGUIDE PASSIVE COMPONENTS**

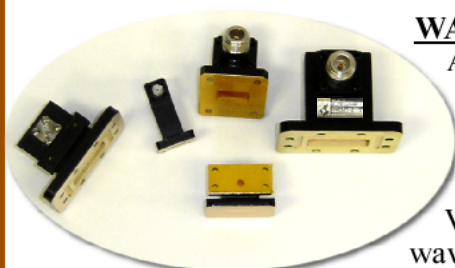
### **STRAIGHT WAVEGUIDE AND WAVEGUIDE ASSEMBLIES**

Canteq supplies simple flanged straight pieces of waveguide and combinations of waveguide and flexible waveguide including 90 degree "E" and "H" Bends. These assemblies are built to customer specifications and they are available in waveguide sizes from WR284 to WR28.



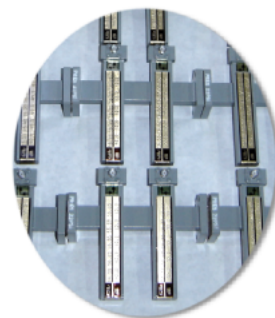
### **WAVEGUIDE TO COAXIAL ADAPTORS**

Adaptors are used to change from one transmission line to another, from coaxial to waveguide or vice versa. Our adaptors employ a dielectric loaded probe which combined with the position of the short circuit behind the probe guarantees good broadband performance over the whole waveguide band. Exceptional VSWR is achieved when the adaptors are optimized to 10% of the waveguide band. Canteq's waveguide to coaxial adaptors are available in type "N" and "SMA" connectors.



### **CROSSGUIDE COUPLERS**

Canteq's crossguide couplers are small in size, offer directivity better than 20 dB and a flat coupling response. These couplers are most commonly used to monitor and control forward and reverse power in microwave subsystems due to its reliability and precision. Canteq supplies single, double and triple crossguide couplers in a variety of forms. The form most widely used is the one of a main arm with flanged input and output ports, the secondary arm has a built-in termination and the coupled output is coaxial typically with SMA or N type connectors.



### **DIRECTIONAL COUPLERS**

Our Broadwall Directional Coupler is a high performance unit due to a multihole arrangement in the broadwall common to both secondary and main arms. It is essentially a four port device where one of its ports has been terminated and matched in order to obtain high directivity. The advantages of this device are its low VSWR, flat response over the full waveguide band and directivity greater than 40 dB.

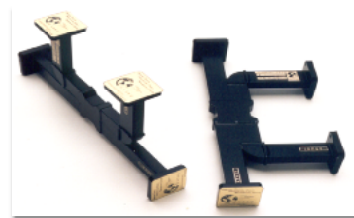
They can also be supplied as a complete Test Setup in a carrying case that can be shipped in airplanes for on site tests.



### **HIGH POWER COUPLERS**

Our waveguide hybrid coupler is a 4 port device which is generally built with a casting with a standard coupling of 3dBs. These couplers offer a good directivity, a high power carrying capacity in an exceptional compact size.

Other asymmetrical coupling values can be built with a very flat wide response coupler as shown .



## **WAVEGUIDE PASSIVE COMPONENTS**

### **VARIABLE POWER COMBINERS (VPC)**

The VPC is a four port device. Two inputs and two outputs. The VPC also known as variable ratio combiner (VRC) is generally used to send two high power signals at different frequencies and power levels to one common output. The VPC works as a dynamic variable power splitter. Thus the output power level of both output signals seem to be linked together in the sense that an increase in one output signal level corresponds to a decrease in the other output signal level.

This is accomplished by varying the position of the polarizer under full power conditions which makes the VPC the most versatile combiner in the industry.

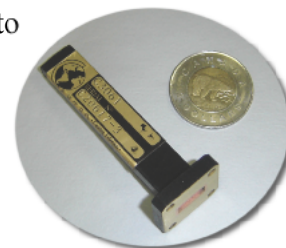


### **FLEXIBLE WAVEGUIDE**

We offer a full line of convoluted twistable flexible and corrugated seamless flexible waveguide. The advantage of the High Power seamless flex is that is 100 % RF leakage free and does not require a jacket to be pressurized. Flexible waveguides are used to isolate vibration and help with tolerance build-ups on long complex transmission line installations.

### **TERMINATIONS/LOADS**

Canteq supplies low, medium and high power loads. Our terminations are designed to terminate a transmission line with the lowest possible reflection over the operating frequency band. Our low power terminations use specially designed and shaped dissipative elements manufactured with iron loaded resins which are capable of absorbing the RF signal without loss of performance. Our high power terminations are extremely compact due to the combination of a special high temperature ceramic made of silicone carbide and a special coupling technique, which presents uniform power absorption.



### **WAVEGUIDE CIRCULATORS AND ISOLATORS**

Our circulators are designed to force the RF signal in a predetermined given direction in the most common transmission and receiving bands. Applications include channel combination and separation, antenna multiplexing and protection of amplifier's tube among others.

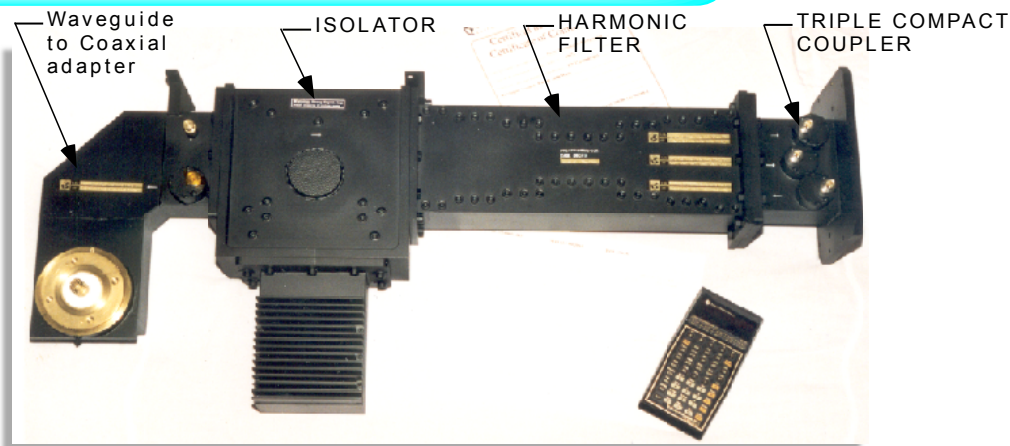
An isolator is simply a waveguide circulator where one of its ports has been terminated to isolate the original source from any returning signal.

### **FILTERS AND FILTER DIPLEXERS**

Canteq supplies a tremendous variety of filter types including low pass filters, bandpass filters, elliptical filter and filter diplexers. In addition our product line includes extremely low loss filters, generally called transmit reject filters which are used at the receiving front end where signals are extremely weak. Canteq has also developed state of the art low loss filter diplexers for High Power DBS applications in 14 GHz and 17.5 GHz.

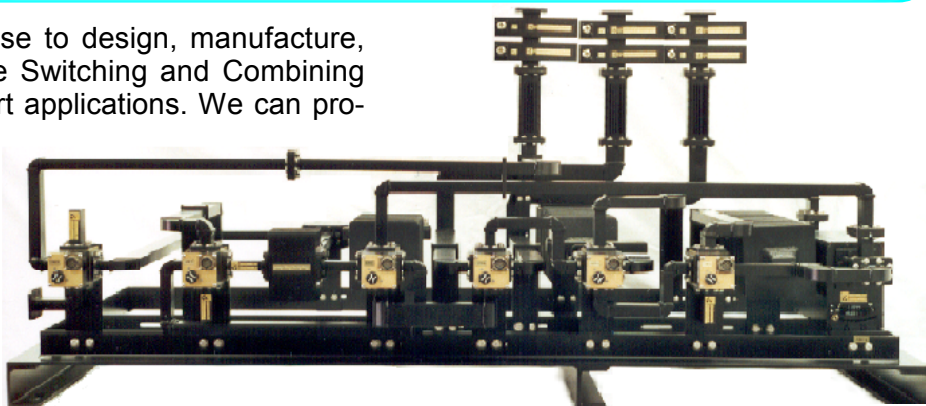


## HIGH POWER OUTPUT ARMS



## MATRIX SWITCHING & COMBINING NETWORKS

**Canteq** has the know how and expertise to design, manufacture, integrate and test complete Waveguide Switching and Combining Networks for Earth Stations and Teleport applications. We can provide simple or very complex Networks. If Combining into one antenna is needed, Canteq has several solutions from diplexing to simple 3 dB combining or the use of our very popular Variable Power Combiner (VPC) all designed and manufacture in our plant.

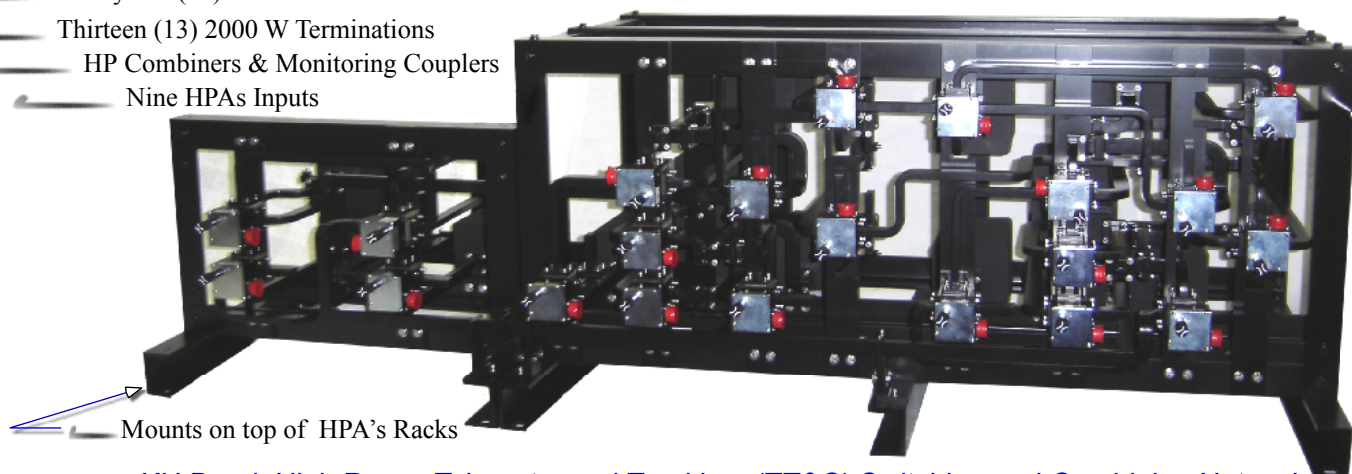


Twenty one (21) Switches

Thirteen (13) 2000 W Terminations

HP Combiners & Monitoring Couplers

Nine HPAs Inputs



KU Band High Power Telemetry and Tracking (TT&C) Switching and Combining Network