

HIGH POWER FREQUENCY CONVERTERS



**30KVA, 400Hz
FREQUENCY CONVERTER
FOR HAL, NASIK**

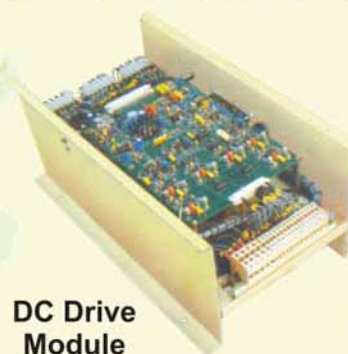
Statcon's Rotary Frequency Converters are designed to meet the rugged but specific AC power requirements in different frequency ranges. It can be used to convert 50Hz/60Hz into any other frequency of 50Hz/60Hz/100Hz/200Hz or 400Hz

The Rotary Frequency Converters (RFCs) are designed and manufactured using company's rich experience in Rotary Machine's Controllers, Power Electronics and Ground Power Unit. It uses DC motor with digital control for the prime mover while brushless alternator is used to get AC output of a desired frequency and voltage.

Statcon's RFCs are available in both fixed skid mounted as well as wheel mounted trolley. It is also supplied with suitable cable and aircraft connectors.

The laminated Yoke DC motor is driven through precision SCR controlled DC drive. In order to get high degree of frequency stability, high accuracy tacho generator is used whose feed back is used to get very accurate speed control as well as fast transient response in case of sudden loading (say jerk load) of the RFC.

Similarly, modern state - of the - art electronic Automatic Voltage Regulator (AVR) is used to get AC voltage regulation of RFC output. It also gives fast transient response of output voltage against transient loading.



**DC Drive
Module**



**AVR
Module**

Both rotary parts i.e motor and alternator are rigidly coupled and they are provided with anti vibration pads to reduce vibration.



The control and monitoring display uses microprocessor controller based circuit, which helps in accurate setting and monitoring of the output parameters. There is a provision to set the tripping levels of voltage, frequency and overload w.r.t.

the pre-fixed time interval for protection and alarm annunciation.

TECHNICAL SPECIFICATION

Input Voltage	:	415V \pm 10%, 50Hz / 60Hz, 3 Phase AC
Output Power	:	10KVA to 180KVA (other ratings available on request)
Output Voltages	:	415V / 210V / 115V (other voltages on request)
Output Frequency	:	50Hz / 60Hz / 100Hz / 200Hz / 400Hz
Frequency Stability	:	\pm 1% from No load to Full load
Operating Temperature	:	-20°C to +55°C
Voltage Regulation	:	\pm 1% for 10% to 100% load change
Harmonic distortion	:	<3% THD
Crest Factor	:	1.414 \pm 3%
Overload	:	125% for 10 minutes 150% for 1 minute
Max. Voltage imbalance	:	Max. 2V between phase to phase
Transient Response	:	As per MIL standard 704E
Type of output connector	:	Bus bar type terminals or through 6 pin NATO with suitable cable
Type of enclosure	:	Skid mounted or Trolley mounted

Note : Parameters given above are standard and can be changed without any prior intimation.

OTHER PRODUCTS:

- Ground Power Unit for Aircraft starting / Servicing.
- Portable GPU for Helicopters / Light Aircrafts.
- Helicopter Starting Rectifier.
- Frequency Converter upto 140kVA.
- Battery Discharger-Capacity Tester.
- Cell monitoring System for Aircraft Battery.
- Custom built High Power Rectifiers / Controls.
- Load Bank for Alternator / DG set testing.
- AC-DC & DC-DC Converters.
- Battery Chargers from 24V/48V/110V/220V upto 1500A.
- Micro Controller based Battery Chargers.
- Integrated Power Supply for Railway Signalling.
- SMPS based chargers for Telecom (48V) & Power Sector (110V / 220V).
- Embedded System based product development.

Statcon Power Controls Ltd.