



The high efficient & lightweight 45 kW ATRU was designed and developed by EUROATLAS for the Airforce of India for the latest aircraft generation of the EMBRAER 145 AEW & C for powering the onboard aircraft radar system developed by DRDO India.

The EMB145 aircraft is one of the most advanced and affordable Airborne Early Warning & Control aircraft which is currently available on the market.

The ATRU fulfils exceptional demands and it meets all environmental requirements of common military standards for airborne equipment.

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## **For Military Aircraft**

## **Standard Features**

- Wide temperature range
- High efficiency > 95%
- Low weight and size
- Power density >1 kW/kg
- High reliability
- RTCA / DOD 160D
- MIL-STD 810E, 704E

#### Application

• Military Aircraft Radar

#### **Support Service**

• Complete Integrated Logistic Support (ILS)

## **Key Features of the ATRU**

- 18 pulse rectifier
- Input EMI supression filter
- Output filter
- Build in monitoring electronic
- Front panel LED indicators & external monitoring interface conector
- Power / weight ratio: > 1.0 kW/kg
- Autotransformer with strip wound core
- MTBF: > 75.000 h
- Operating temperature range: -40°C up to + 70°C
- High reliability by using passive components
- MIL-STD 810E, 704E



## **Electrical Specifications**

#### Input

Voltage	200 VAC, 3-ph
Frequency	400 Hz, ± 8%
Voltage spikes and transients	Acc. to MIL-STD 704 E
Frequency transients	Acc. to MIL-STD 704 E

#### Output

Voltage	.270 VDC
Current	. 165 A (-40° up to +50°C)
Ripple	.< 6 Vrms at 45 kW load (without capacitance load)
Overload	195 A for 5 min 260 A for 1 min 430 A for 1 s
Efficiency	. > 95 %

# **Environmental Specification**

Temperature range......-40°C to +70°C (operation) -55°C to +100°C (storage)

Humidity	< 95%
Shock	30 g/2.5 ms, 25 g/6 ms, 15 g/20 ms according to MIL-STD 810 E
Vibration	Random, 15 g RMS
Altitude	4.4 kPa (20.000 m)
EMC	According to RTCA D0160-F
Protection	IP 20 according to DIN 40050

## **Physical Characteristics**

Dimensions	Height 230 mmm
	Width 200 mm
	Depth 339 mm
Weight	30 kg

# **Design Characteristics**

Power per weight/ per volume ...... 1,500 W/kg, 28.9 kW/ltr. Dielectric resistance..... > 100 MOhm MTBF...... > 75,000 h



ATRU 2052 Block diagram

#### EUROATLAS GmbH

