



Aircraft Ground Servicing Systems (AGSS)

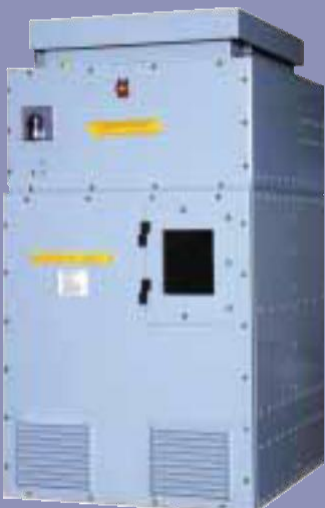
- Complete system integration
- Flexible architecture
 - single service position to multi-service position capability
- System covers all embarked aircraft power requirements
 - _ 200V 400Hz
 - 28V dc
 - 270V dc
- Advanced control and distribution system offering:
 - improved operability
 - safety interlocking
 - prevention of system overloads
 - prioritisation to service positions
 - protection of aircraft through operational cycle
 - system can be programmed with aircraft characteristics

The defence power systems business unit of PMES is an established supplier of innovative high technology power conversion and control systems for defence applications worldwide.

PMES's AGSS provides all the electrical power requirements of embarked aircraft in a flexible, cost effective system.

- Servicing
- Starting
- Compressor washing
- Aircraft systems

The AGSS encompasses all the power supplies, control and distribution equipment required to produce the necessary electrical services at aircraft service positions on the flight deck, in the hangar and maintenance positions in the aviation workshops.



The Type 45 AGSS encompasses:

- Power supplies
- Control and distribution equipment
- Cabling and connectors

Provides electrical services at:

- Aircraft service positions (flight deck)
- Aircraft service positions (hangar)
- Aviation workshops

The Type 45 AGSS is illustrated in a simplified block diagram format. The equipment is located in three areas. A 400Hz Static Frequency Converter (SFC), DC Transformer Rectifier Unit (TRU) and their associated distribution panels are located in a centralised air-conditioned compartment. A control station and AC/DC socket box are located both on the flight deck and in the hangar.

As indicated, the distribution panels feed 400Hz and 28V dc supplies to either of the hangar and flight deck socket boxes. Supplies are also fed to the maintenance areas. There are also communication links between the control stations and the distribution panels for the purpose of controlling the connection of supplies. AC and DC cable assemblies for connection from the socket boxes to the helicopter are also included.

On previous UK platforms, power conversion from the ships 440V, 60Hz system to the 200V, 400Hz required by the aircraft has been performed using Rotary Frequency Converters. A significant innovation for the AGSS selected on Type 45 has been the adoption of Static Frequency Converters (SFC). This offers a number of benefits to the platform:

- Lower through-life costs with greatly reduced routine maintenance
- High availability (high MTBF and low MTTR)
- Simple to operate, plus in-built diagnostics to speed repair
- Modular construction: repair by interchangeable sub-module replacement
- Low weight (40kVA Rotary Converter 1060kg, Static Converter 550kg)
- Front access only (reduced maintenance envelope)
- Low audible and structure-borne noise profiles
- Flexibility of location in platform
- Higher efficiency (less wild heat)



Single/twin service position



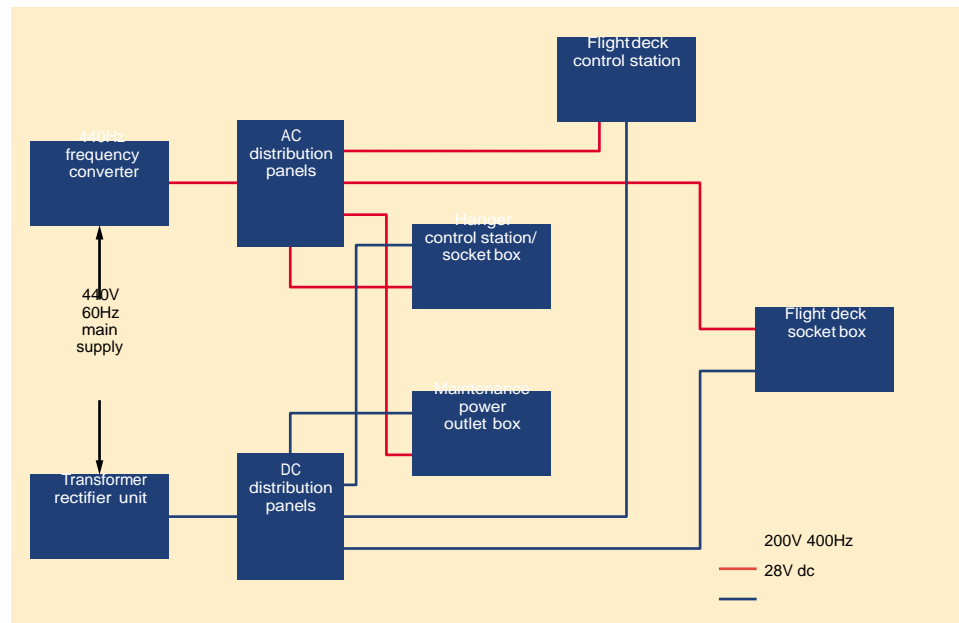
Multi service position

The AGSS system capability covers single spot platforms such as frigates, twin spot platforms such as the auxiliary vessels and multi spot platforms such as aircraft carriers



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