

# Technical Overview

## VSP<sub>5</sub> Shore Power Converter 450kVA Dual Cord Input



# MAGNUS

dependable shore power

Innovative compact modular design that delivers continuous clean power – worldwide.

### Maximizes power availability

Using the latest modular design, the VSP<sub>5</sub> provides a highly reliable, clean and efficient shore power conversion system. Active front-end technology on each shore cord input enables maximum power transfer to the yacht. Multiple input converters can be connected to any supply available and the system will not only function correctly but ensure that maximum power from each input is delivered.

### Continuous clean output power

The output converter delivers a stable and clean waveform for powering onboard equipment. Loads range from utility services (heating, lighting and air conditioning) to entertainment (television and audio) to marine (winch, pumps and navigational equipment).

### New compact modular design

The new modular design makes the system compact and highly serviceable. Individual converter modules can be removed and replaced with minimal downtime. Replacement modules are automatically configured ready for service.



## Technical Overview

**Part number** VSP<sub>5</sub> / 20450-0450  
**Description** 450kVA Shore Power Converter  
Dual Cord Input

### Input Supply

**Rectifier** Active front end  
**Cord inputs** Two  
**Type** 3 phases  
**Voltage** 340 to 520Vac  
**Frequency** 47 to 64Hz  
**Power factor** Unity  
**Rated cord current** 450 Amps

### Output Supply

**Type** 3 phases, neutral, isolated earth  
**Voltage** 400Vac L-L / 230Vac L-N  
**Distortion** < 1.5% linear load  
**Frequency** 50Hz  
**Frequency regulation** < 0.01% in standalone mode  
**Power @ 1.0PF** 450kVA  
**Overload** 150% for 30 seconds

### Environment

**Cooling** Forced ventilation / fan assisted  
**Environment** 0 to 45 deg C  
**Efficiency** > 90% at rated load

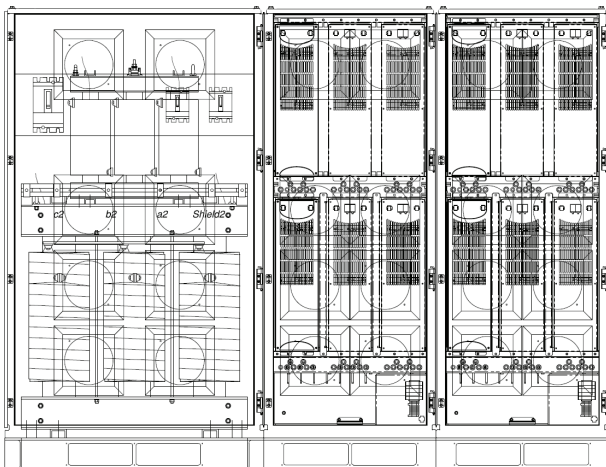
### Mechanical

**Enclosure** RAL9003  
**Protection** IP23  
**Mechanical** H: 2,150 W: 2,820 D: 800 mm  
**Total weight** 3,160 kg

### Supporting Documentation

**Service level** Service Levels Agreements 2010  
**Electrical** VSP520450-0450 E001  
**Mechanical** VSP520450-0450 M001

## Cabinet



## Benefits

- » No interference with sensitive equipment
- » No compromises when connecting to low or high voltage supplies
- » Protection from shore supply faults
- » Quiet trouble-free operation
- » Full isolation from the shore to avoid galvanic corrosion
- » Easy connection for crew
- » Unique design maximises available space in engine room or lazarette also improving ventilation

## Top 3 Selling Points

1. High power unit without compromises
2. Latest modular design provides cabinet flexibility
3. Bow / stern thruster operation