

ATLAS MARINE SYSTEMS



Docker HF Series **ShorPOWER®** FREQUENCY CONVERTERS

Atlas Marine Systems is the world leader in the design of marine electrical power systems. Atlas provides electrical engineering services to define the vessel electrical distribution system and the appropriate application of its TecPOWER® series switchboards, load management and power management systems. Additionally, the Atlas ShorPOWER product line, using either a single or dual transformer isolation approach, provides the widest selection of onboard and shore-based frequency converters available to the yachting community.



Horizontal Configuration

APPLICATION:

The ShorPOWER *Docker HF* is a shore-based electric frequency and voltage converter that supplies power to yachts that are not compatible with the locally available dockside power. The *Docker* is equipped with a low noise and weather protected enclosure. It can operate alongside a yacht without disturbing occupants or adjacent vessels. The *Docker HF* is suitable for various installations and provides an excellent return on investment for the owner, given its surprisingly short payback interval.

- **Manufacturers and refit yards** now have full access to frequency and voltage conversion.
- **Marina operators** can easily provide world class yachts the service of any frequency and voltage dockside power.
- **Yacht owners** can avoid costly and unnecessary generator operation while in port.

DIFFERENTIATING FEATURES:

- $\leq 5\%$ input current distortion - provides input power factor correction to maximize obtainable dockside power
- Outdoor configuration IAW IP55
- High Efficiency – converts more of the available dock power for onboard usage
- Internal Communication Ports - USB, RJ45 (ETHERNET), RS485 (Modbus), & RS232
- External Communication Port – USB (Service Access)
- TCP/IP/Ethernet interface (Modbus)
- Regulation of unbalanced phases - protects equipment onboard
- Output stabilized when step loads are applied - protects equipment onboard
- Unbalanced loads are not reflected on the input – maximizes the amount of power obtainable from the dock
- Generous overload capability - 10% power boost for peak usage times - no need to start generators or load shed
- Precise output voltage and frequency regulation - protects equipment onboard
- Voltage transient and lightning protection - protects equipment onboard
- High reliability with a sophisticated diagnostic and protection system

DIFFERENTIATING FEATURES (cont'd):

- Alarm indication when input current exceeds programmed dock breaker rating
- Multi Language Display (English, French, German, Italian, Portuguese, Russian and Spanish - others specify)

OPTIONS AVAILABLE:

- Parallelable for increased capacity or redundancy
- Seamless power transfer between ShorPOWER and generator
- Remote touchscreen or control panel
- Output load disconnect
- TecPOWER® switchboard data link interface
- Vertical configuration

MECHANICAL SPECIFICATIONS:

Size: See Figure 1
Weight: See Figure 1
Cooling: Forced Convection

ATLAS MARINE SYSTEMS - Docker HF Series

GENERAL SPECIFICATIONS

INPUT:

Voltage	177 to 528 volts, 3Ø, 3 or 4 wire plus ground
Frequency	50 - 60 Hz ± 10%
Input Current Distortion	≤ 5%
Power Factor	≥ 0.999
Phase Rotation	Any
Protection	Over/undervoltage, loss of phase, overcurrent, short circuit. Voltage transient protection IAW IEEE C62.41. Location Cat. B/C
Inrush Current	No greater than 50% of full load current

ENVIRONMENTAL:

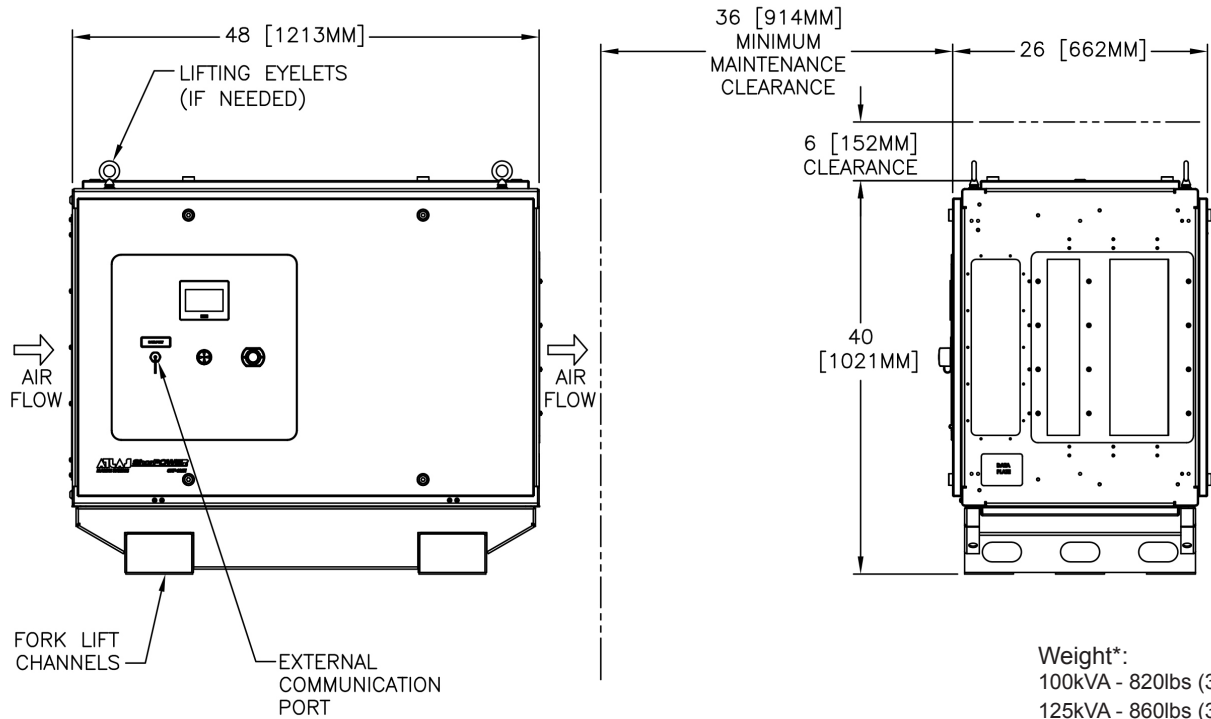
Acoustical Noise	< 65 dBA at 5 feet (1.5m)
Temperature Range	-40°C to +55°C
Relative Humidity	10 - 95%

ENERGY FACTORS:

Efficiency	92% typical at full load, 91% typical at half load; varies depending on configuration
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OUTPUT:

Unit Power Ratings	100 or 125 kVA (Specify)
System Power Ratings	200 to 1250 kVA (Specify)
Power Factor Range	0.5 lagging to 0.8 leading
Overload	100% continuous 110% for 60 min 125% for 10 min 150% for 2 min 200% for 20 sec
Voltage (specify)	
▪ Three-phase, 3-wire:	380, 400, 415, 440, 460, 480 volts
▪ Three-phase, 4-wire:	220/380, 230/400, 240/415, 265/460, 277/480 volts
Crest Factor	1.414 ± 3%
Voltage Regulation	± 1.0% under all conditions of line, balanced loads and temperature
Frequency (specify)	50 or 60 Hz ± 0.01% under all conditions of line, load and temperature
Frequency Transients	None
Phase Angle Regulation	± 2° for balanced loads; ± 4° for unbalanced loads
Harmonic Distortion	3% maximum, 2% typical (linear loads)
Protection	Overload, short circuit, over/under voltage, safety disconnect, and over temperature



Weight*:
 100kVA - 820lbs (372kg.)
 125kVA - 860lbs (390kg.)
 *Weight varies with options