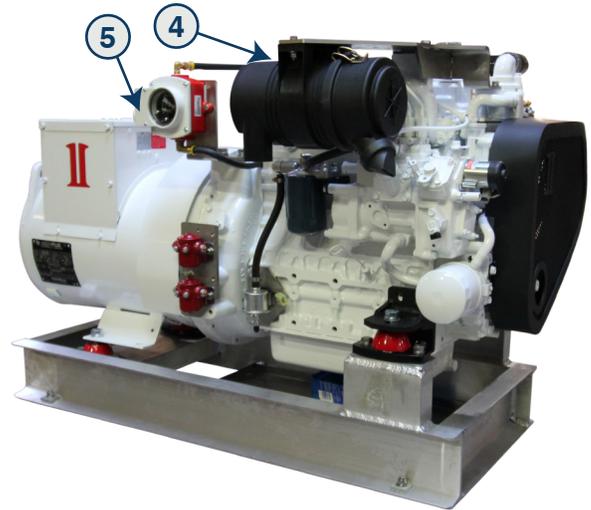
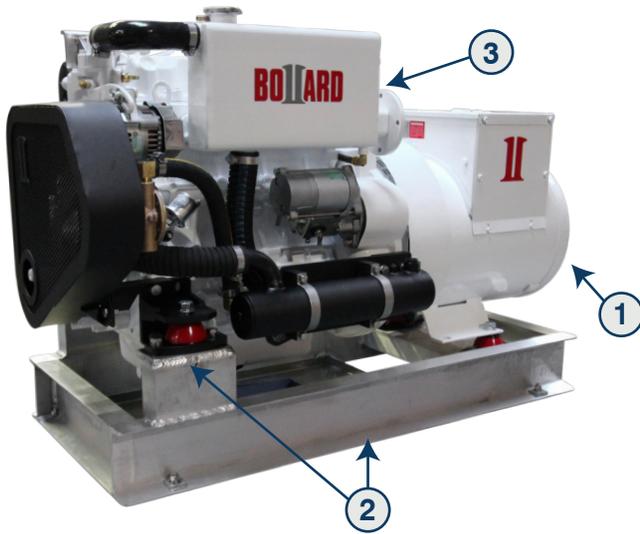


# BOLLARD™ MG22 Series

22kW Marine Generator Specifications

# II 22kW



\* Drawings or pictures may show non-standard equipment

## Features and Benefits

### Unsurpassed Quality & Reliability

- BOLLARD™ Generators are designed and built in the USA specifically for the rugged conditions of commercial use. The expected time between overhauls on the BOLLARD™ packaged generator set is 20 to 50 thousand hours.

### 1: High Efficiency Generators

- Heavy Duty windings engineered for 80 deg. C rise of 40 deg. C ambient yield extended insulation service life, high electrical efficiency for maximum fuel economy, and superior motor starting at all voltages. PMG dedicated excitation is optional, resulting in even higher motor starting together with 300% sustained short circuit capacity along with VFD and paralleling compatibility.

### Emissions

- The Bollard MG-20-28 Gen-Sets are EPA certified Tier 3 Marine, CARB, EU, and MOC. They meet the lowest emissions levels available on the market today without exhaust after-treatment resulting in reduced maintenance and operating costs while preserving our clean air and water quality.

### Keel Cooling, Heat Exchange, or Radiator Compatibility

### Premium Marine Grade Protection

- Bollard generators feature Imron™ 2 part marine epoxy overcoats on the engine, generator, and baseframe. Accessory brackets are powder coated and fasteners are primarily stainless steel to protect your investment from the harsh marine environment.

### 2: Heavy Duty Structural Steel Base Frame & Reduced Noise

- For ease of installation, structural integrity, safety and durability. Superior vibration and noise dampening with a high mass flywheel, polyurethane vibration isolators, mass loaded & stiffened baseframe, and de-noised engine.

### 3: Water Jacketed Exhaust Manifold and Expansion Tank

- Provides low engine room temperatures and greatly reduces fire hazard

### 4: Heavy Duty Air Intake Filtration & Silencing

- For increased performance, extended engine life, and quiet operation.

### 5: Controls, Gauges & Instrumentation

- Standard enclosed prewired digital auto start control panel with push button start/stop. Safety shutdowns are programmed for high water temp, low oil pressure, and over-speed. Included are LED readout of oil pressure, engine hours, DC system voltage, water temperature, engine speed in RPM, Generator Voltage and Frequency. Custom panels offer, auto-start/stop function for inverter or paralleling interface, load sharing, digital generator KW output LEDs and full function electrical distribution switchboards.

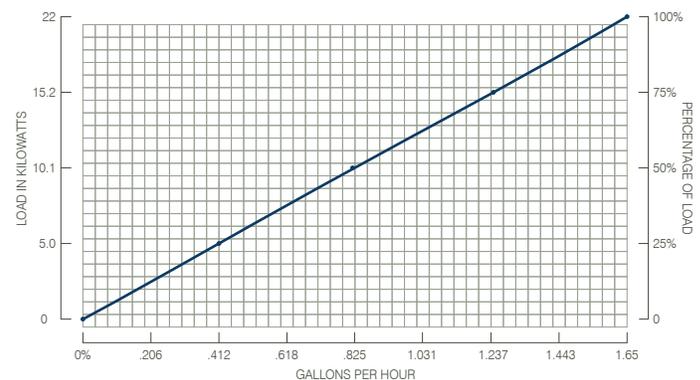
### 7: Optional SCOR™ Sea Change Oil Regeneration System

- 1μ bypass oil filter. Safely extends oil drain intervals and engine life.

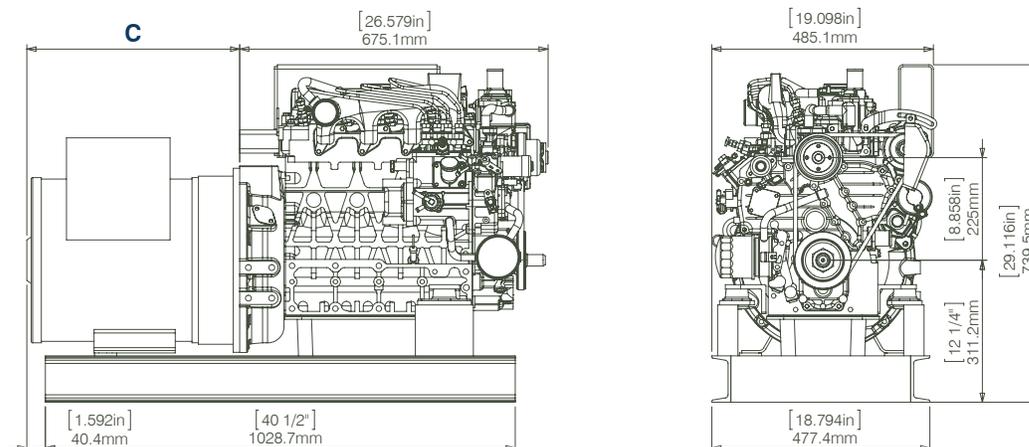
## General Specifications

Engine Model	V2403-M-E3B
Engine Type	In-Line   4 Cycle   4 Cylinder   Diesel
Displacement - L (cu.in)	2.434 (148.5)
Bore x Stroke - mm (in)	87 (3.43) x 102 (4.03)
Aspiration	Naturally Aspirated
Oil Sump Capacity - qts (L)	10 (9.5)
Emission Regulation	US EPA Tier 3 Marine Certified
Prime - 60hz, 1800RPM (HP)	22 kW (29.48)
Standby - 60Hz, 1800RPM (HP)	24 kW (32.16)
Motor Starting Range - HP	6.4 - 22 (Code G Motor @ 208VAC)
Voltage Regulation	+/-1%
Starter	12v   2.0 kW
Alternator	12v   40 Amp
Operating Angle	20° (Constant)   30° (Intermittent)
Dry Weight - lbs	865lbs (engine, 283 gen, skid, manifold)
Length x Width x Height - inches	38.5-48.5" x 21.5" x 29.0" (Details on Back)

## Fuel Performance



## Dimensions



### Alternate Dimensions

### C - Length - In

### Weight

283-1507	20.8" (25.4" w/ PMG)	275
284-1508	22.8" (27.4" w/ PMG)	350
PI144H	25.43" (28.63" w/ EBS)	380
PI144K	27.20" (30.4" w/ EBS)	425

\* Drawings or pictures may show non-standard equipment

\* Dimensions are subject to change without notice and or with the use of alternate generators and cooling systems.

\* Please confirm exact configuration if dimensions are critical.

### Load Performance

### 25%

### 50%

### 75%

### 100%

Load in kW	5.5	11	16.5	22
Pounds Per Hour	2.93	5.85	8.78	11.7
Gallons Per Hour	0.41	0.82	1.24	1.65
kW Per Gallons Per Hour	12.15	12.28	12.28	12.15
Pounds Per Gallon	7.1	7.1	7.1	7.1
Continuous kW Output	22	22	22	22
Horsepower At Load	7.6	15.2	22.8	30.4
Horsepower Continuous	30.4	30.4	30.4	30.4
Pounds Per Horsepower Per Hour	0.385	0.385	0.385	0.385

## Customizable Options and Accessories

Engine	Controls & Instrumentation	DC Electrical System	Exhaust	Additional Options
Single Circuit Keel Cooling Package	Control Panel	Battery: 12v   24v	SS Wet Exhaust Mixing Elbow	Sea Trial Start Up
Single Circuit Heat Exchange Package	Custom Harness Length	Battery Rack & Cables	Dry Exhaust Matching Flange	MER Site Start-Up w/ Load Bank
Single Circuit Marine Radiator Package	Auxiliary Start Panel	Battery Isolation Switch	SUPERFLEX™ Exhaust Bellows	Custom Frame / Skid
	Auto Start/Stop		Cowl & EM Exhaust Silencers	Crank Vent Filtration Kit
<b>Motor Starting Upgrade Options</b>	Pre-Alarm Senders	<b>Fuel-Lube Oil System</b>	Heat Recovery Silencer	Dual Vibration Isolation Mounts
<b>(Code G Motor @ 208VAC)</b>	AC Meter Panel	SCOR™ Oil Regeneration System		Custom Sound Enclosure
Up to 1:1 HP per kW	Low Coolant Level Shutdown	Oil Drain Extension W/ Valve	<b>Power Take Off</b>	Galvanized or Powder Coated
	High Water Temp. Shutdown	Oil Drain Pump To Engine	SEADRIVE™ Clutched Front PTO	Skids & Accessories
<b>Air Intake &amp; Filtration</b>	Low Oil Pressure Shutdown	Move Dipstick To Opposite Side	Clutch: Air   Oil   Electric	Racor Fuel Water Separator
K&N Air Filters	Low Oil Level Gauge/Shutdown	High/Low Oil Level Shut Down	SEADRIVE™ Direct Drive Front PTO	
Donaldson Air Silencer	Overspeed Shutdown	Custom Oil Drain Hose Length	Aux. A/B 2 Sheave Universal Pulley	
Closed Crank Case Vent Loop	Paralleling & Load Share	Single Side Service	Aux. A/B 4 Sheave Universal Pulley	
	Over-Voltage Alarm	Lube Oil Drip Pan	Additional Belts	
	Over-Current Alarm			
	Under-Current Alarm			