Perkins SABRE MARINE POWER

Diesel Engine - Marine Gen Set Power

4.4TWGM

75.0 kWm 1500 rev/min
82.7 kWm 1800 rev/min

Building upon Perkins and Sabre's proven reputation within the marine power generation industry, the newly introduced 4.4 Series range of Marine Gen-set engines now fit even closer to the needs of their customers'.

In the world of power generation success is greeted for those providing more for even less. Therefore with this new 4.4TWGM unit, Perkins Sabre has engineered for its customers even higher levels of reliability, yet lowered the cost of ownership. And with six cylinder capability from a four cylinder package performance increases, but crucially, bare engine noise is lower than ever before.

Rapid starting and pick-up are naturally built in especially for cold operation, but where legislation or local markets demand an emissions capability, then the 4.4TWGM satisfies US EPA Tier 2 standards.

4.4 Series see the match of technology to customer need. An inline 4 cylinder, 4.4 litre unit very quietly setting a new standard in prime power supply and standby for the marine power generation industry.

Economic Power

One side servicing and cast aluminium header tank for reduced service time and cost. Extended service intervals, including 500 hour (or 12 months) oil change period, and competitively priced parts provide low cost of ownership

Durable Power

Maximum cooling efficiency is provided by a gear driven water pump. Leak free operation is ensured by Viton crankshaft seals and sophisticated controlled swell joints, giving protection in the toughest conditions. Inserted valve seats, oil spray cooled pistons and compact plate cooler give enhanced engine life.

Reliable Power

Suitable for operation in ambient temperatures up to 50°C and sea waters up to 38°C. Fuelled starting aid for temperatures down to –15°C. Over 4,000 distributors and dealers in 160 countries offer full parts and service support. Approved by classification societies and marine authorities.

Engine Speed rev/min	Type of Operation	Typical Generator Output (net)		Engine Power Gross	
		kWe	kVA	kW	bhp
1500	Prime Power	67.5	84.4	75.0	100.6
	Standby (maximum)	74.3	92.8	82.5	110.6
1800	Prime Power	74.4	93.0	82.7	110.9
	Standby (maximum)	81.9	102.4	91.0	122.0

Note: All engine rating data based on operation under BS5514:1996, ISO 3046/1:1995 and DIN 6271 conditions.
Test Conditions Air temperature 25°C (80.6°F), barometric pressure 100 kPa (29.5 in Hg), relative humidity 30%, maximum exhaust back pressure 6 kPa, maximum inlet restriction 3 kPa.
For operation outside of these conditions please consult your Perkins or Sabre Engines contact. Performance tolerance quoted by Perkins is ±5%.
Electrical ratings assume a power factor of 0.8 and a generator efficiency of 90%.
Rating Definitions
Prime Power: Power available at variable load in lieu of main power network. An overload of 10% is permitted for one hour in every twelve hours of operation.
Standby Power: Power available at variable load in the event of a main power network failure. No overload is permitted.

4.4TWGM

Standard Engine Specification

Base engine with:-

Water jacketed exhaust manifold
Flat bottomed cast iron sump
Wiring harness with 23 way connector
Electronic governor (control to ISO 8528 G3)
Rotary fuel injection pump
Spin on fuel oil filter and separator
Spin on full flow lub oil filter with integral lubrication oil cooler on left side of engine
Thermostatically controlled cooling water system
Gear driven fresh water pump
Air filter
Closed engine breather system
Deareation header tank
Users handbook

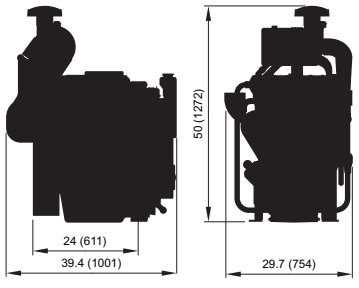
Optional Equipment

Backend – SAE 3
Engine mounting brackets
Exhaust outlets – either dry with bellows and silencer or water injected
12 or 24 volt insulated electrics
Heat exchanger or keel cooling with radiator cooled versions available
PTO facility
5000 hours parts kit
Tool kit
Belt cover
Classification Society certification

General Data

Number of Cylinders	4
Cylinder Arrangement	Vertical in-line
Cycle	4-stroke
Induction System	Turbocharged, air to water cooled
Combustion System	Direct injection
Cooling System	Fresh water heat exchanger or adapted for keel cooling
Displacement	4.4 litres
Bore & Stroke	105 mm (4.13 in) x 127.0 mm (5.0 in)
Compression Ratio	19:3
Direction of Rotation	Clockwise viewed from front
Firing order	1, 3, 4, 2
Total Lubrication Oil System Capacity	8.5 litres
Coolant Capacity (heat exchanger cooled)	15 litres
Total weight (dry)	495kg (1091lbs)
Total weight (wet)	522kg (1151lbs)

Typical Fuel Consumption				
rev/min	1500 rpm		1800 rpm	
	litre/hr	UKgall/hr	litre/hr	UKgall/hr
At 110% of power rating	20.4	4.49	24.1	5.30
At 100% of power rating	19.0	4.18	22.0	4.84
At 75% of power rating	14.3	8.15	16.6	3.65
At 50% of power rating	9.5	2.09	11.8	2.60



Perkins®
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A Partnership in Marine Power

SABRE

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