

# 400 Series 415GM Marine Auxiliary Engine

12.3 kW (16.5 hp) gross prime power @ 1500 rpm

Based on the Perkin 400 Series, the 415GM provides compact power from a robust family of 3 and 4 cylinder diesel engines, designed to meet today's uncompromising demands within the power generation industry.

The 415GM is a compact 3-cylinder naturally aspirated diesel engine. Its premium features provide economic and durable operation for prime duty, and is designed to comply with all current emission legislation.

You can expect world-class quality from our engines and team.



Specification		
Number of cylinders	3 vertical in-line	
Bore and stroke	84 x 90 mm	3.3 x 3.5 in
Displacement	1.5 litres	91.5 in <sup>3</sup>
Aspiration	Natural	
Cycle	4 stroke	
Combustion system	Indirect injection	
Compression ratio	22.5:1	
Rotation	Anti-clockwise, viewed on flywheel	
Total lubricating capacity	6 litres	1.5 US gal
Cooling system	Water cooled	
Total coolant capacity	8 litres	2 US gal

[www.Perkins.com/Marine](http://www.Perkins.com/Marine)

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Final weight and dimensions will depend on completed specification.

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 **Perkins**<sup>®</sup>

THE HEART OF EVERY GREAT MACHINE

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## Features and benefits

### Powered by your needs

- Perkins engines can be tailored specifically for you.

These engines offer a choice of standard build configurations to match the needs of customers for a diverse range of applications

### Lower operating costs

- Service intervals 500 hours as standard and Perkins provides comprehensive warranty cover for two years, with three years on major engine components

### Compact, efficient power

- A class-leading engine package coupled with an innovative cooling package providing optimum power density. Designed for use in all territories and markets worldwide

### Quiet, clean power

- The 415GM has an exceptionally low noise signature making it the ideal choice for power generation in any environment. A high compression ratio also ensures clean rapid starting in all conditions. Design features ensure maximum cleanliness in terms of emissions throughout the engines operating life

### Reliable power

- Developed and tested using the latest engineering techniques this engine reliably provides power when you need it. Operating and maintenance costs are reduced through excellent fuel and oil economy whilst whole-life costs are enhanced by a 500 hours service interval and a 2 year warranty for added peace of mind
- Excellent service access further improves ease of maintenance. Suitable for operation in ambient temperatures up to 50°C and sea water up to 38°C

### Product support

- Perkins actively pursues product support excellence by ensuring our distribution network invest in their territory – strengthening relationships and providing more value to you, our customer
- Through an experienced global network of distributors and dealers, fully trained engine experts deliver total service support around the clock, 365 days a year. They have a comprehensive suite of web based tools at their fingertips covering technical information, parts identification and ordering systems, all dedicated to maximising the productivity of your engine
- Throughout the entire life of a Perkins engine, we provide access to genuine OE specification parts and service. We give 100% reassurance that you receive the very best in terms of quality for lowest possible cost .. wherever your Perkins powered machine is operating in the world
- To find your local distributor: [www.perkins.com/distributor](http://www.perkins.com/distributor)

E-mail: [Marine@Perkins.com](mailto:Marine@Perkins.com) Web: [www.Perkins.com/Marine](http://www.Perkins.com/Marine)

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**Marine Power**

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## Technical information

### Benefits

- Excellent power to weight
- Ease of Installation
- Clean, quiet, smooth operation
- Excellent fuel economy
- Easy to maintain with 500hr Service interval
- Reliability

### Standard features

- Mounted air filters
- Electronically governed cassette type fuel injection pump
- Single element fuel filter
- Wet steel sump with filler and dipstick
- Spin-on-full-flow lube oil filter
- Thermostatically-controlled system with belt driven circulating pump
- Fresh water heat exchanger cooled engine with gear driven self priming raw water pump and ceramic seals
- Fresh water cooled exhaust manifold incorporating header tank assembly
- 12 Volt starter motor and 12 Volt 55 Amp alternator with DC output
- Oil pressure and coolant temperature switches
- Glow plug cold start aid and heater/starter switch
- High inertia flywheel to SAE J620 Size 7½ Heavy
- Flywheel housing SAE 4 Long
- Front and rear mounting brackets
- User's handbook

### Optional equipment

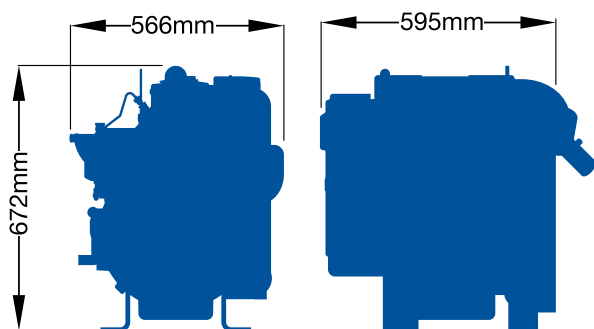
- Keel cooling kit
- Onboard spares kit
- Factory test certificate
- 90 Amp 12 Volt alternator
- 24 Volt starter motor and 24 Volt 60 Amp alternator with DC output

E-mail: [Marine@Perkins.com](mailto:Marine@Perkins.com) Web: [www.Perkins.com/Marine](http://www.Perkins.com/Marine)

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Engine package weights and dimensions		
Length	595 mm	23 in
Width	566 mm	22 in
Height	672 mm	26 in
Weight (dry)	206 kg	454 lb

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Speed rpm	Type of operation	Typical generator output (Net)		Engine power			
				Gross		Net	
		kVA	kWe	kW	hp	kW	hp
1500	Prime power	13.8	11.1	12.3	16.5	12.3	16.5
	110%	15.2	12.2	13.5	18.1	13.5	18.1

## Rating definitions

**Prime power:** Power for continuous service. Overload of 10% is permitted for 1 hour in very 12 hours' operation.

For further details on definitions please contact your local Perkins distributor.

Percent of prime power	Fuel consumption at 1500 rpm g/kWh	Fuel consumption at 1500 rpm l/hr
100% power	0.8	3.7
110% power	0.9	4.2

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1.

Derating may be required for conditions outside these; consult your Perkins contact.

Generator powers are typical and are based on typical alternator efficiencies of 90% and a power factor (cos.θ) of 0.8.

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