

403D-11 Industrial Open Power Unit

13.7-21 kW (18.4-28.2 hp) @ 2800-3000 rpm

EU Stage IIIA/U.S. EPA Tier 4 Interim equivalent

The Perkins 400 Series is an extensive family of engines in the 0.5-2.2 litre range. The 3 cylinder 403-11 model is one of Perkins smallest engines, combining performance, low operating costs and an ultra-compact package. From a packaging point of view, the 403-11 is the ideal engine for small industrial applications. Its simple, robust mechanical fuel system makes it easy to install and maintain.

A powerful but quiet 1.1 litre engine complete with radiator cooled unit. Designed to meet EU Stage IIIA/U.S. EPA Tier 4 Interim equivalent emission standards.



Specifications

Power Rating		
Minimum power	15.1 kW	20.2 hp
Maximum power	18.1 kW	24.3 hp
Rated speed	2800-3000 rpm	
Maximum torque	64.6 Nm @ 2100 rpm	47.6 lb-ft @ 2100 rpm

Emission Standards	
Emissions	U.S. EPA Tier 4 Interim equivalent. Less than 19 kW, EU certification not required.

General		
Number of cylinders	3 inline	
Bore	77 mm	3 in
Stroke	81 mm	3.2 in
Displacement	1.1 litres	69 cubic in
Aspiration	Naturally aspirated	
Cycle	4 stroke	
Compression ratio	22.7:1	
Combustion system	Indirect injection	
Rotation (from flywheel end)	Anti-clockwise	

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Photographs are for illustrative purposes only and may not reflect final specification. All information is substantially correct at time of printing and may be altered subsequently. Final weights and dimensions will depend on completed specification.

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Cooling system	Liquid	
Total coolant capacity	5.2 litres	1.4 US gal
Total lubricating capacity	4.9 litres	1.3 US gal

Engine Dimensions*		
Length	777 mm	30.6 in
Width	438 mm	17.2 in
Height	729 mm	28.7 in
Dry weight	129 kg	284.4 lb

Disclaimer		
*Final dimensions dependent on selected options	0	0

Features and Benefits

A lifetime of low cost

The 400 Series offers highly competitive performance and fuel economy. Through appropriate use of technology, these engines have been designed to be reliable and to offer low cost of ownership in the wide variety of markets they serve.

Across an extensive power band, the 400 Series range offers you the ability to configure a solution to your specific machine, territory and market requirements.

Overlapping power bands between models and an extensive range of options gives the opportunity to optimise performance and functionality, adding customer value to the application.

We provide one year warranties for constant speed engines and two year warranties for variable speed models as standard.

As a 400 Series end user, you also benefit from Perkins world class product support and service coverage that comes from being a full range power solutions provider.

Compact design

The compact design of these engines makes them suitable for a range of applications, including skid steer loaders, mini excavators, wheel loaders, welders, lift platforms, lighting towers, small tractors, air compressors, turf care machinery and materials handling machinery.

Each of the six core engines of the 400 Series is configured for either Stage IIIA/Tier 4 Interim or Stage IIIB/Tier 4 Final emission standards, giving you flexibility depending on your market.

Performance and refinement

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The 400 Series lineup gives you a seamless power range of 8.2-50 kW (11-67 hp) in 2, 3 and 4 cylinder models designed with a family look and feel. The range offers a wide variety of ratings and configurations that can be tailored to meet the most exacting needs.

The selective use of indirect and direct injection fuel systems enables Perkins to offer world-class engine refinement and low noise levels.

Technical Information

Air inlet system

- Cast iron exhaust manifold - side outlet
- Inlet manifold
- Mounted air cleaner

Control system

- 12 volt alternator
- 12 volt starter motor
- Electronic Shut Off Solenoid (ESOS)

Cooling system

- Coolant pump belt driven
- Coolant temperature switch
- Mounted radiator and fan

Flywheel and flywheel housing

- SAE 5 flywheel housing
- SAE flywheel size 165.1 mm (6½ in)

Fuel system

- Fuel injection pump
- Fuel filter

General

- Cast iron engine block
- Glow plug starting aid

Oil system

- Lubricating oil pressure switch
- Lubricating oil sump
- Spin on lubricating oil filter

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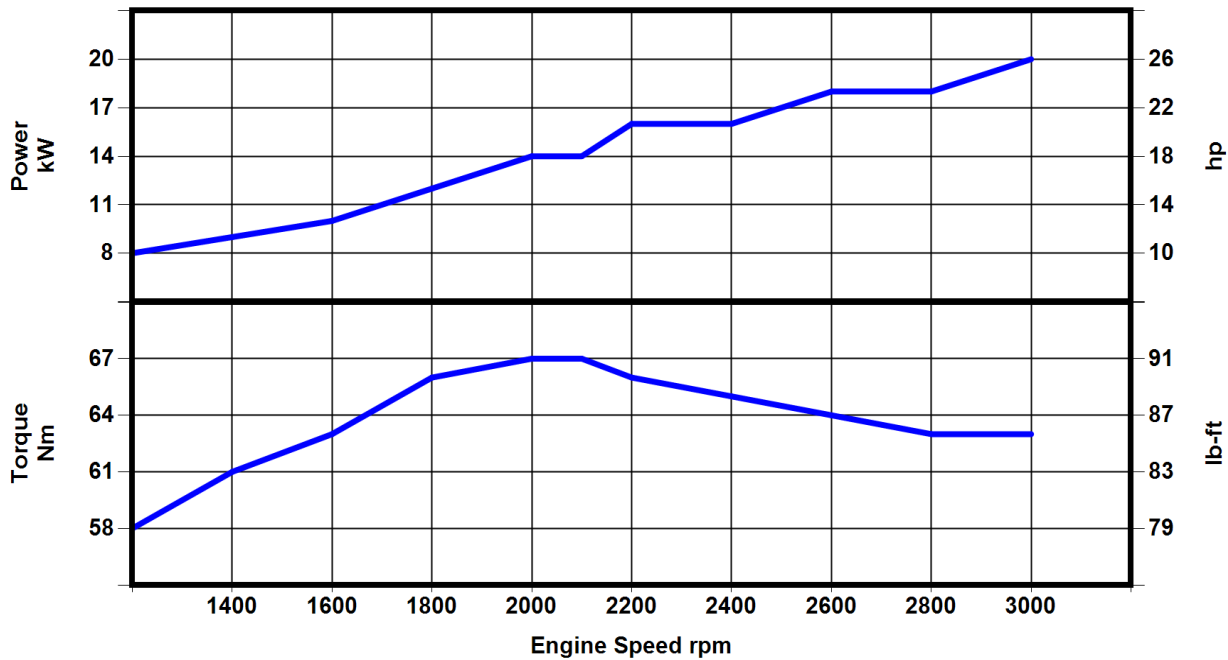
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400 Series 403D-11 INDUSTRIAL ENGINE

EU Stage IIIA/U.S. EPA Tier 4 Interim equivalent

19.5-19.5 kW / 26.1-26.1 hp



Power kW	Power hp	Rated Speed (rpm)	Torque Nm	Torque lb-ft	Speed (rpm)	Rating Type
19.5	26.1	3000	66.9	90.6	2100	Industrial C intermittent rating

Rating Standard ISO 14396:2002

Additional ratings are available for specific customer requirements. Consult your Perkins distributor.

Unless otherwise specified, all stated data is for maximum rated speed and 100% load.

B rating performance data will be added upon availability

Rating Definitions and Conditions

IND-C (Intermittent) Rating

Is the horsepower and speed capability of the engine where maximum power and/or speed are cyclic (time at full load not to exceed 50%).

Rating Conditions for Diesel Engines – up to 7.1 liters are based on ISO/TR14396, inlet air standard conditions with a total barometric pressure of 100 kPa (29.5 in. Hg), with a vapor pressure of 1 kPa (0.295 in Hg) and 25°C (77°F). Performance is measured using fuel to specification EPA 2D 89.330-96 with a density of 0.845-0.850 kg/L @ 15°C (59°F) and fuel inlet temperature 40°C (104°F).

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