

INDUSTRIAL DIESEL ENGINE

Kubota 03 Series (3-Cylinder)

D1803 P1 Hybrid



Rated Power

37.0 kW @ 2700 rpm



Photograph may show non-standard equipment.

Features and Benefits

Lower Running Costs by Downsizing Engines

For some applications, high load is required for only a fraction of the total work time. With the P1 Hybrid Engine, the motor only assists for the brief periods in which high output is required. If larger engines have been chosen to compensate for the high output needed during these brief periods, the system enables such engines to be downsized.

A Space Saving Hybrid Makes Design Flexibility

With the compact structure of the motor generator in the flywheel housing keeping engine size to a minimum, installation in existing applications is simple. Moreover, the necessary components are provided by Kubota, so customer development resources can be kept to a minimum. This means existing applications can be given a power boost without hampering application development.

Improving Robustness and Ease of Maintenance

Engine assistance and regeneration can be used. Kubota supplies the devices related to hybrid systems, such as the motors and batteries. No belt drive mechanism is required, improving robustness and ease of maintenance.

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<https://global.engine.kubota.co.jp/en/contact/form.php>



Engine Specifications

Engine	Engine model		D1803 P1 Hybrid
	Emission regulation		EPA/CARB Tier 4 + EU Stage III B
	Type		Vertical, water cooled 4 cycle diesel engine
	Cylinders		3
	Bore and Stroke	mm (in)	87.0 × 102.4 (3.43 × 4.031)
	Displacement	L (cu.in)	1.826 (111.4)
	Aspiration		Turbocharged + Turbo After Cooler
	Aftertreatment		DOC
	Rated output / speed ^{*1}	kW (HP) / rpm	37.0 (49.6) / 2700
	Maximum torque / speed ^{*1}	Nm (lb-ft) / rpm	150.5 (111.0) / 1600
	Combustion system		Direct injection
	Fuel system		Common rail system
Motor Generator	Type		AC synchronous motor
	Rated output	kW	10
	Length × Width × Height ^{*2} (without aftertreatment unit)	mm (in)	680 × 554 × 726 (26.8 × 21.8 × 28.6)
	Length × Width × Height ^{*2} (with aftertreatment unit)	mm (in)	746 × 554 × 745 (29.4 × 21.8 × 29.3)
	Dry weight (with motor generator) ^{*2}	kg (lb)	232 (511)

Battery Specifications for Motor Generator

	Type		Lithium Ion
	Voltage	V	48

Specifications are subject to change without prior notice.
Dimensions and dry weight are according to Kubota's standard specification.
Dimensions and weight depend on completed specifications.

^{*1}: Gross intermittent SAE J1995
^{*2}: Exclude cooling fan

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