

ENGINE DATASHEET



1106D-E70TAG Electric Power Engines

Power range 1500 rpm 136-189 kW (engine gross power)

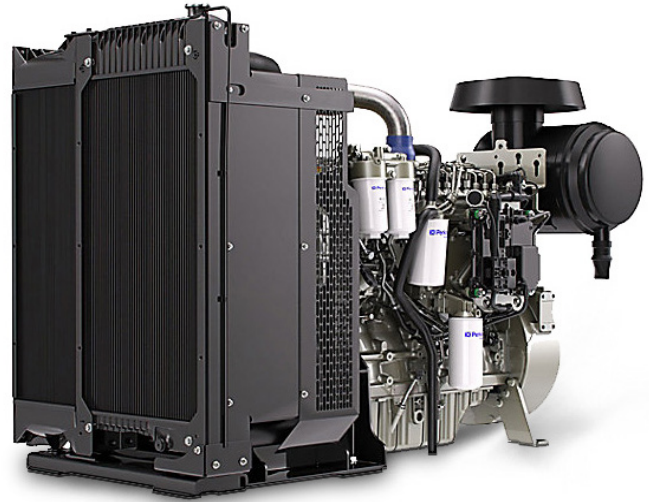
Power range 1800 rpm 156-235 kW (engine gross power)

Emissions EU Stage IIIA/U.S. EPA Tier 3/China Nonroad Stage III

Building upon Perkins proven reputation within the power generation industry, the 1106D Series range of Electropak engines now fit even closer to customers' needs.

In the world of power generation success is only gained by providing more for less. With the 1106D products, Perkins has engineered even higher levels of reliability, yet lowered the cost of ownership.

1100D engines are assembled around optimal, efficient manufacturing processes with state-of-the-art technology. They are built to provide the ideal power solution for customers who sell their applications into lesser regulated countries.



Features and benefits

- The Perkins® 1106D-E70TAG engines provide **greater productivity** through an improved power to weight ratio and have been designed for excellent load acceptance so your facility is powered quickly in all conditions.
- The 1106D high power density has been achieved in a 7 litre engine, using an electronic fuel injector system, making this engine robust for all markets which has the ability to cope with the variation of fuel qualities around the world delivering **high quality as standard**.
- Service intervals are set at 500 hours as standard assuming approved fuels and lubricating oils are used to deliver **low operating costs**.
- 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 finger tips, covering technical information, parts identification and ordering systems, all dedicated to **maximising the productivity** of your engine.
Perkins actively pursues product support excellence with our distribution network investing in their territory to provide you with a consistent quality of support across the globe.
- Throughout the entire life of a Perkins engine, we provide access to genuine factory specification parts giving reassurance that you receive excellent quality for the **lowest possible cost**, wherever your Perkins powered machine is operating in the world.

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Specification

	Model			
	1106D-E70TAG2	1106D-E70TAG3	1106D-E70TAG4	1106D-E70TAG5
Configuration	ElectropaK			
Cylinders	6 vertical in-line			
Displacement, litres (in3)	7.01 (428)			
Aspiration	Turbocharged aftercooled			
Bore and stroke, mm (in)	105 x 135 (4.1 x 5.3)			
Combustion system	Direct injection			
Compression ratio	16.8:1			
Exhaust aftertreatment	N/A			
Rotation (viewed from flywheel)	Anti-clockwise, viewed on flywheel			
Total lubricating oil capacity, litres (US gal)	16.5 (4.4)			
Cooling system	Liquid			
Total coolant capacity, litres (US gal)	21 (5.5)			

Technical information

Model	Speed	Type of Operation	Engine Power		Typical Generator Output* (Net)		Prime Fuel Consumption			
			Gross	Net			110%	100%	75%	50%
	rpm		kW (hp)	kW (hp)	kVA	kWe	g/kWh	g/kWh	g/kWh	g/kWh
1106D-E70TAG2	1500	Prime	136 (182)	129 (173)	123	114	213	217	230	234
		Standby	149 (200)	143 (192)	135	126				
	1800	Prime	156 (209)	145 (194)	162	130	212	215	231	240
		Standby	171 (229)	161 (216)	178	143				
1106D-E70TAG3	1500	Prime	148 (198)	141 (189)	136	125	210	212	223	229
		Standby	163 (219)	156 (209)	150	138				
	1800	Prime	167 (224)	157 (211)	174	139	209	212	232	239
		Standby	184 (247)	173 (232)	191	153				
1106D-E70TAG4	1500	Prime	172 (231)	165 (221)	180	144	210	211	221	235
		Standby	189 (253)	182 (244)	200	160				
	1800	Prime	190 (255)	180 (241)	200	160	208	212	227	233
		Standby	209 (280)	199 (267)	219	175				
1106D-E70TAG5	1800	Prime	212 (284)	203 (272)	227	182	210	215	229	233
		Standby	235 (315)	224 (300)	250	200				

*Generator powers are typical and based on typical alternator efficiencies and a power factor (cos θ) or 0.8.

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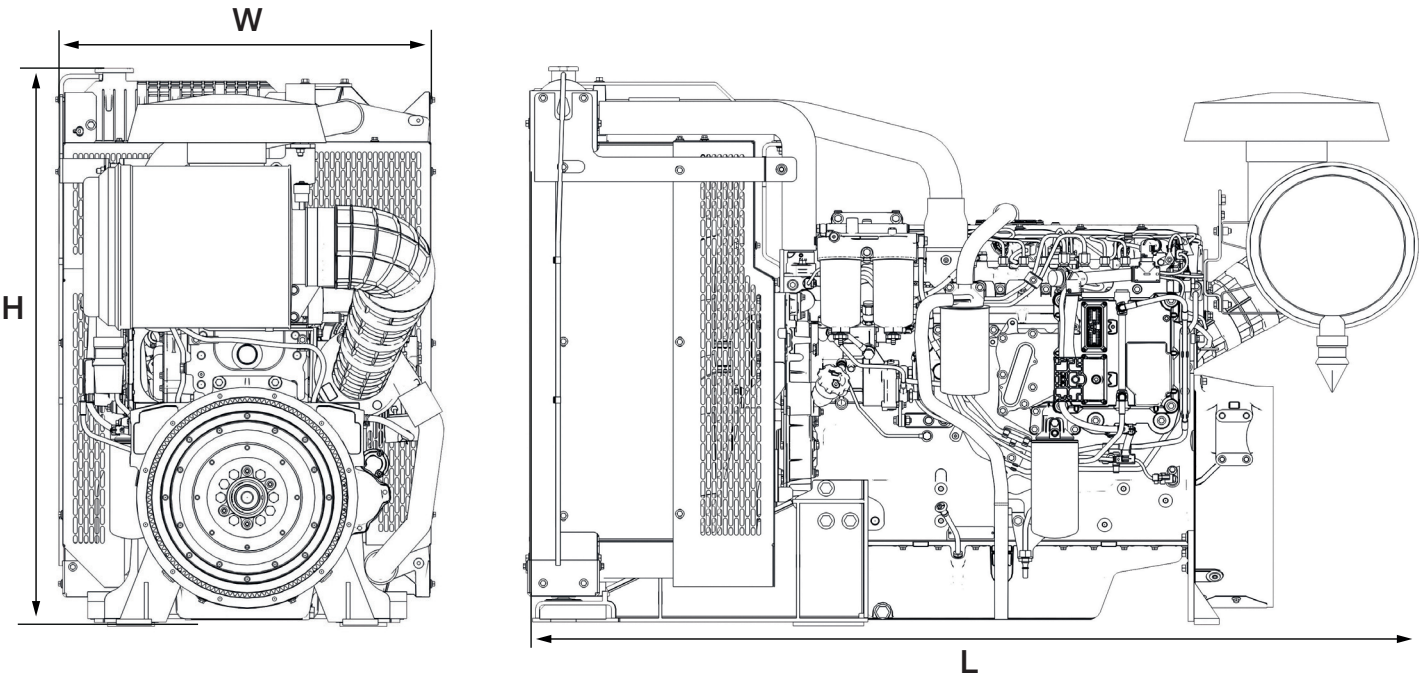
Standard equipment

	Model			
	1106D-E70TAG2	1106D-E70TAG3	1106D-E70TAG4	1106D-E70TAG5
Electro unit or electropaK	ElectropaK	ElectropaK	ElectropaK	ElectropaK
Radiator fitted	✓	✓	✓	✓
Fuel filter, engine mounted	✓	✓	✓	✓
Water separator	✓	✓	✓	✓
Fuel priming pump (manual/electric)	Manual	Manual	Manual	Manual
Fuel cooler (not required for most installations)	✗	✗	✗	✗
Air filter, engine mounted	✓	✓	✓	✓
Engine ECM, engine mounted	✓	✓	✓	✓
Wiring harness to ECM	✓	✓	✓	✓
Wiring harness (all connectors to single customer interface)	✗	✗	✗	✗
Starter motor	✓	✓	✓	✓
Battery charging alternator	✓	✓	✓	✓
Flywheel housing	✓	✓	✓	✓
Flywheel	✓	✓	✓	✓
Fan	✓	✓	✓	✓
Fan guard	✓	✓	✓	✓
Temperature and oil pressure for automatic stop/alarm configurable	✓	✓	✓	✓

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Power range 1500 rpm **136-189 kW** (engine gross power)
Power range 1800 rpm **156-235 kW** (engine gross power)
Emissions **EU Stage IIIA/U.S. EPA Tier 3/China Nonroad Stage III**

Engine package weights and dimensions



	Model			
	1106D-E70TAG2	1106D-E70TAG3	1106D-E70TAG4	1106D-E70TAG5
Configuration	ElectropaK			
Dimensions, H x L x W, mm (in)	1142 x 1763 x 768 (45 x 69.4 x 30.2)			
Dry weight, kg (lb)	788 (1738)			

Prime power: Power available at variable load in lieu of a main power network. Overload of 10% is permitted for 1 hour in every 12 hours of operation.

Standby (maximum): Power available at variable load in the event of a main power network failure. No overload is permitted.

1100 Series 1106D-E70TAG3 Diesel Engine – ElectropaK

137 kWm prime power / 158 kWm standby power @ 1500 rpm
159 kWm prime power / 178 kWm standby power @ 1800 rpm

Building upon Perkins proven reputation within the power generation industry, the 1100 Series range of ElectropaK engines now fit even closer to customers needs.

In the world of power generation success is only gained by providing more for less. With the 1106D-E70TAG3 Perkins has engineered even higher levels of reliability, yet lowered the cost of ownership.

1100A units are designed for territories that do not require compliance to EPA or EU emissions legislation. These engines are assembled around optimal, efficient manufacturing processes with state-of-the-art technology. They are built to provide the exact power solution for customers who sell their applications into lesser regulated countries.

Focusing on our common platform theme, changes to engine envelope dimensions and connection points have been kept to a minimum.



Dependable power

- The Perkins® 1106D-E70TAG3 delivers up to 172 kVA standby at 50 Hz and 153 kWe at 60 Hz, providing greater productivity through an improved power to weight ratio
 - This world-class power density has been achieved in a 7 litre engine, using an electronic fuel injection system; making this engine robust for all markets, with the ability to cope with the variation of fuel qualities around the world
- The 1106D has been designed for excellent load acceptance to ensure your facility is powered quickly at all conditions

Low operating costs

- Service intervals are set at 500 hours as standard assuming approved fuels and lubrication oils are used
- Perkins provides comprehensive warranty cover for two years (up to 3,000 hours), with three years on major engine components
- A low usage warranty package is also available

World class product support

- 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 finger tips, covering technical information, parts identification and ordering systems, all dedicated to maximising the productivity of your engine
- Perkins actively pursues product support excellence by insisting our distribution network invest in their territory to provide you with a consistent quality of support across the globe
- Throughout the entire life of a Perkins engine, we provide access to genuine OE specification parts giving 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

Discover more

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www.perkins.com/distributor

To find your local distributor

Engine Speed rpm	Type of Operation	Typical Generator Output (Net)		Engine Power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime Power	150	120	137	184	131	176
	Standby (maximum)	172	138	158	212	152	204
1800	Prime Power	170	136	159	214	150	202
	Standby (maximum)	191	153	178	239	169	227

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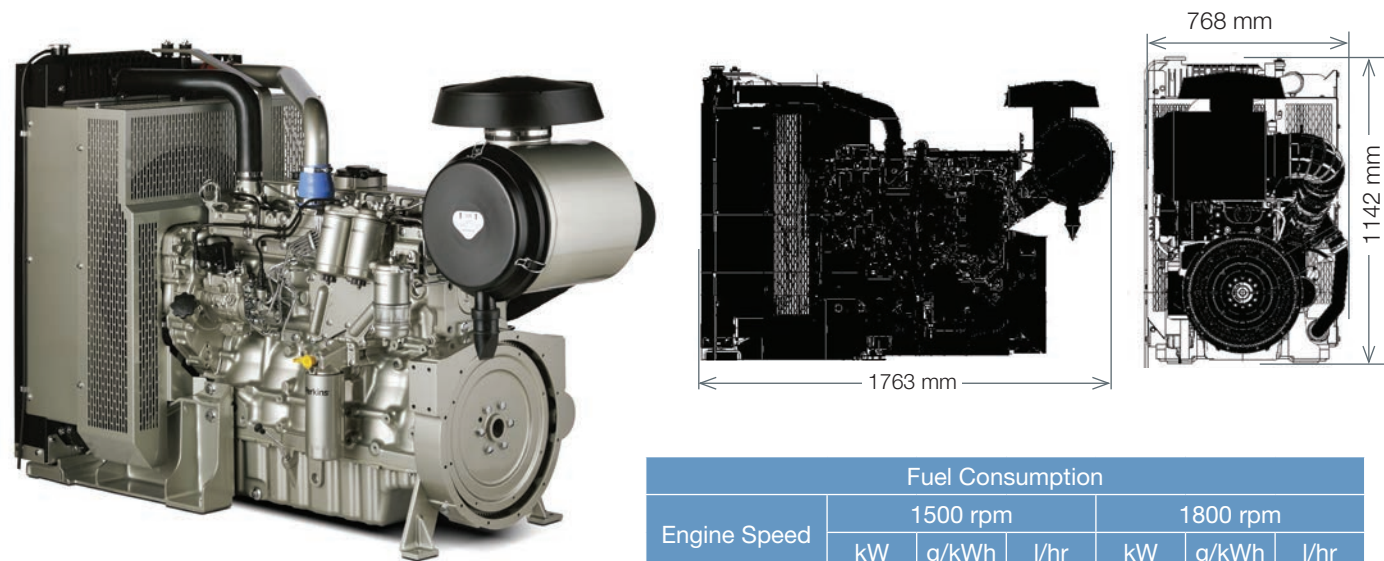
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 **Perkins®**

THE HEART OF EVERY GREAT MACHINE

1100 Series 1106D-E70TAG3 Diesel Engine – ElectropaK

137 kWm prime power / 158 kWm standby power @ 1500 rpm
159 kWm prime power / 178 kWm standby power @ 1800 rpm



Engine specification

- Tropical radiator pipes and guards
- Flywheel housing
- Flywheel and starter ring
- Oil filters
- Starter motor
- Air cleaners and brackets
- Lubricating oil sump
- Alternator
- Induction manifolds
- Exhaust manifolds
- Fuel filter
- Cold start aid
- Engine mountings

Engine Speed	Fuel Consumption					
	1500 rpm			1800 rpm		
	kW	g/kWh	l/hr	kW	g/kWh	l/hr
110% of Prime Power	162.8	210.1	40.9	183.6	209.0	45.9
Prime Power	148.2	212.0	37.5	167.0	212.1	42.3
75% of Prime Power	111.1	223.2	29.7	125.3	231.7	34.7
50% of Prime Power	74.1	229.2	20.3	83.6	238.7	23.8
25% of Prime Power	37.1	246.1	10.9	41.8	260.2	13.0

Engine data

Number of cylinders Vertical in-line 6 cylinder
Bore and stroke..... 105 x 135 mm (4.13 x 5.31 in)
Displacement 7.01 litres (428 cubic in)
Aspiration Turbocharged aftercooled
Cycle 4 stroke
Combustion system.....Direct injection
Compression ratio 16.8:1
Engine rotationAnti-clockwise viewed on flywheel
Cooling system.....Liquid
Total lubrication capacity..... 16.5 litres (4.36 US gal)
Total coolant capacity 21 litres (5.5 US gal)
Dimensions – Length with air cleaner 1763 mm (69.4 in)
Width 768 mm (30.2 in)
Height 1142 mm (45 in)
Dry weight 788 kg (1737 lbs)
Final weight and dimensions will depend on completed specification

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