

4012-46TAG Electric Power Engines

Power Range 1500 rpm 906-1643 kWm (engine gross power)

Power Range 1800 rpm 974-1643 kWm (engine gross power)

Emissions

Fuel optimised

The Perkins® 4012 Series family of 12 cylinder diesel engines, designed to address today's uncompromising demands within the power generation industry with particular aim at the standby market sector.

Developed from a proven engine range that offers superior performance and reliability. The 4012 electropaKs are turbocharged, air-to-air chargecooled, 12 cylinder diesel engines.

Offered with either temperate or tropical cooling packages (with or without fuel oil cooling). Their premium design and specification features provide economic and durable operation as well as exceptional power to weight ratio, improved serviceability, low gaseous emissions, overall performance and reliability essential to the power generation market.



Features and benefits

- Individual 4 valve cylinder heads giving optimised gas flows and unit fuel injectors ensure ultra fine fuel atomisation and hence controlled rapid combustion **maximising productivity**.
- Commonality of components with other engines in the 4000 Series family for reduced stocking levels
- Designed to provide **low cost of ownership**, simple maintenance and reduced downtime.
- Perkins engines are designed and developed with our customer in mind. Keeping service cost to a minimum ensures **low periodic running costs**. This is achieved through 500 hour service intervals for oil and fuel as standard under all operating conditions.
- The **long productive life** of our products is supported through the Perkins 12 month warranty as standard for prime power applications, and the 1500 hour or two year emissions warranty. For further peace of mind, there is also the option to extend the warranty period through **Perkins® Platinum Protection**. Contact your local distributor or visit www.perkins.com/platinumprotection.
- Perkins takes pride in manufacturing all products globally to the same **high quality standard**. All of our products are manufactured in world class facilities to ensure highest quality for your peace of mind.

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Specification

	Model			
	4012-46TAG0A	4012-46TAG1A	4012-46TAG2A	4012-46TAG3A
Configuration	Electropak			
Cylinders	12 60° vee			
Displacement, litres (in ³)	45.842 (2979)			
Aspiration	Turbocharged and air-to-air chargecooled			
Bore and stroke, mm (in)	160 x 190 (6.3 x 7.5)			
Combustion system	Direct injection			
Compression ratio	13:1			
Exhaust aftertreatment	N/A			
Rotation (viewed from flywheel)	Anti-clockwise, viewed from flywheel end			
Total lubricating oil capacity, litres (US gal)	177 (46.7)			
Cooling system	Watercooled			
Total coolant capacity, litres (US gal)	207 (54.6)			

Technical information

Model	Speed	Type of Operation	Engine Power		Typical Generator Output* (Net)		Prime Fuel Consumption				
			Gross	Net			110%	100%	Baseload	75%	50%
	rpm		kWm (hp)	kWm (hp)	kVA	kWe	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh
4012-46TAG0A	1500	Baseload	906 (1215)	842 (1129)	1000	800	198	199	203	204	215
		Prime	1117 (1497)	1053 (1412)	1250	1000					
		Standby	1222 (1638)	1158 (1552)	1375	1100					
4012-46TAG1A	1500	Baseload	973 (1305)	909 (1219)	1080	864	199	196	196	195	204
		Prime	1212 (1625)	1148 (1539)	1364	1081					
		Standby	1327 (1780)	1263 (1694)	1500	1200					
	1800	Baseload	974 (1306)	914 (1226)	1085	868	213	212	213	220	236
		Prime	1213 (1627)	1153 (1546)	1369	1095					
		Standby	1327 (1780)	1267 (1699)	1505	1204					

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

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Technical information cont/d

Model	Speed	Type of Operation	Engine Power		Typical Generator Output* (Net)		Prime Fuel Consumption				
			Gross	Net			110%	100%	Baseload	75%	50%
	rpm		kWm (hp)	kWm (hp)	kVA	kWe	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh
4012-46TAG2A	1500	Baseload	1069 (1434)	1005 (1348)	1194	955	201	200	200	201	203
		Prime	1331 (1785)	1267 (1700)	1505	1204					
		Standby	1459 (1957)	1359 (1870)	1656	1325					
	1800	Baseload	1069 (1434)	1009 (1353)	1199	959	212	213	214	222	229
		Prime	1332 (1786)	1272 (1706)	1510	1208					
		Standby	1459 (1957)	1399 (1876)	1661	1329					
4012-46TAG3A	1500	Baseload	1260 (1690)	1200 (1609)	1425	1140	211	208	207	206	202
		Prime	1500 (2012)	1440 (1931)	1710	1368					
		Standby	1643 (2203)	1583 (2123)	1880	1504					
	1800	Baseload	1260 (1690)	1200 (1609)	1425	1140	213	213	210	221	222
		Prime	1500 (2012)	1440 (1931)	1710	1368					
		Standby	1643 (2203)	1583 (2123)	1880	1504					

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Standard equipment

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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	✓	✓	✓	✓
Air filter, engine mounted	✓	✓	✓	✓
Engine ECM, engine mounted	N/A	N/A	N/A	N/A
Wiring harness to ECM	N/A	N/A	N/A	N/A
Wiring harness (all connectors to single customer interface)	N/A	N/A	N/A	N/A
Starter motor	✓	✓	✓	✓
Battery charging alternator	✓	✓	✓	✓
Flywheel housing	✓	✓	✓	✓
Flywheel	✓	✓	✓	✓
Fan	✓	✓	✓	✓
Fan guard	✓	✓	✓	✓
Temp and oil pressure for automatic stop/alarm configurable	✓	✓	✓	✓

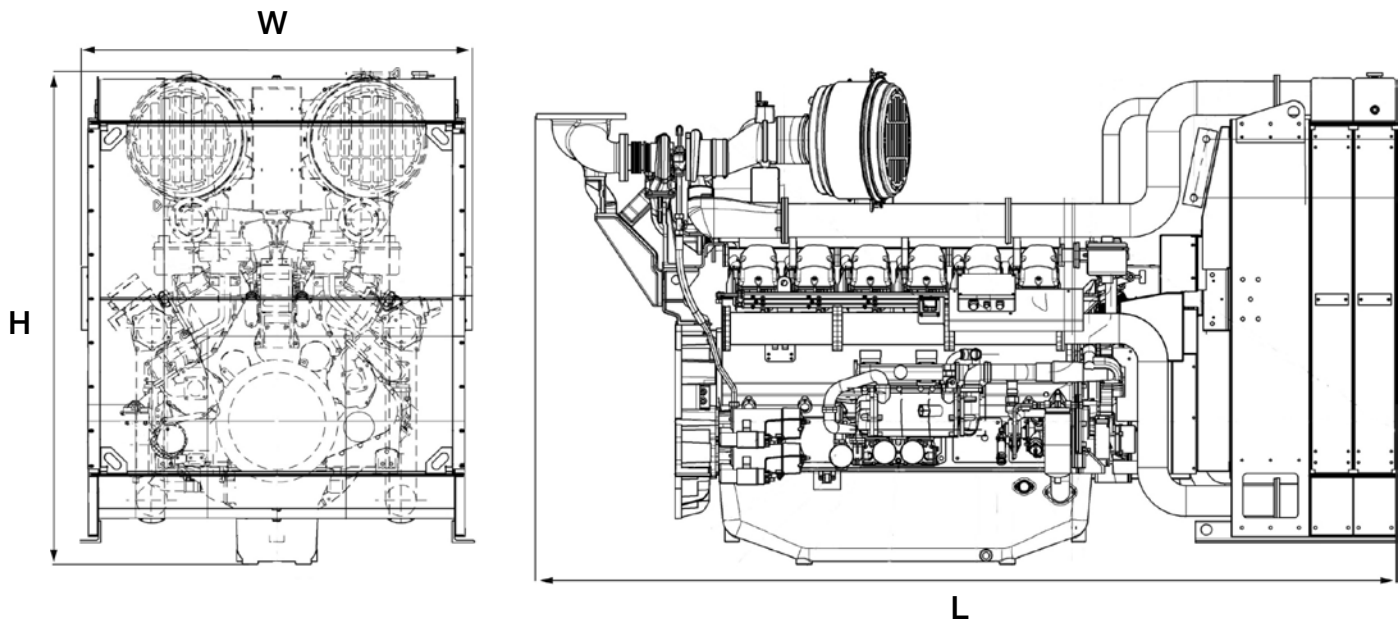
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Engine package weights and dimensions



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	4012-46TAG0A	4012-46TAG1A	4012-46TAG2A	4012-46TAG3A
Configuration	ElectropaK			
Temperate dimensions, H x L x W, mm (in)		2255 x 3916 x 1775 (89 x 154 x 70)		2259 x 3915 x 2198 (89 x 154 x 87)
Temperate dry weight, kg (lb)		4400 (9700)		
Tropical dimensions, H x L x W, mm (in)	2258 x 3 916 x 2198 (89 x 154 x 87)			2610 x 3883 x 2164 (85 x 153 x 85)
Tropical dry weight, kg (lb)	4406 (9700)			

Baseload: Unlimited hours usage with an average load factor of 100% of the published baseload power rating.

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.

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All information in this document is substantially correct at time of printing and may be altered subsequently.
Final weight and dimensions will depend on completed specification.
Information subject to selected configuration, and subject to change without notice.