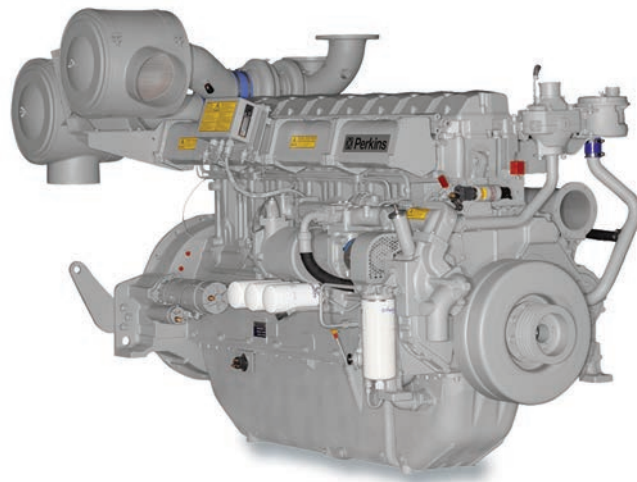


4000 Series 4008TAG2A Diesel Engine – Electropak

947 kWm @ 1500 rpm net standby power

The Perkins® 4000 Series family of 6, 8, 12 and 16 cylinder diesel engines was designed in advance of today's uncompromising demands within the power generation industry and includes superior performance and reliability.

The 4008TAG2A is a turbocharged and air-to-air charge cooled, 8 cylinder diesel engine offered with either temperate or tropical cooling. Its premium features and design provide economic and durable operation as well as an exceptional power to weight ratio, excellent load acceptance and improved gaseous emissions, plus the overall performance and reliability characteristics essential to the power generation market.



Specification		
Number of cylinders	8 vertical in-line	
Bore and stroke	160 x 190 mm	6.3 x 7.5 in
Displacement	30.561 litres	1845 in ³
Aspiration	Turbocharged and air-to-air charge cooled	
Cycle	4 stroke	
Combustion system	Direct injection	
Compression ratio	13.6:1	
Rotation	Anti-clockwise, viewed from flywheel end	
Total lubricating capacity	153 litres	40.4 US gal
Cooling system	Water-cooled	
Total coolant capacity	162 litres	42.8 US gal

www.perkins.com

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 **Perkins®**

THE HEART OF EVERY GREAT MACHINE

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947 kWm @ 1500 rpm net standby power

Features and benefits

Dependable power

- Individual 4 valve cylinder heads giving optimised gas flows
- Unit fuel injectors ensure ultra fine fuel atomisation and hence controlled rapid combustion
- Commonality of components with other engines in the 4000 Series family for reduced stocking levels
- Capable emissions of 1/2 TA Luft (1986)

Low operating costs

- Oil change service intervals are set at 500 hours as standard
- Designed to provide low cost of ownership, simple maintenance and reduced downtime
- Class leading warranty
- Prime power - 12 months unlimited hours. For engines that operate less than 6,000 hours the warranty is available for two years or until the application reaches 6,000 hours (whichever is sooner).
Standby power - three years or 1,500 hours (whichever is sooner).
See Perkins Warranty Policy for further details
- Perkins Platinum Protection - comprehensive cover from as little as 5 percent* of the cost of your engine
Talk to your local distributor or visit www.perkins.com/platinum protection for more details

World class product support

- Our 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 disposal, 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 customers with a consistent quality of support across the globe
- Throughout the entire life of a Perkins engine, we provide access to genuine parts giving 100% reassurance that you receive the very best in terms of quality for lowest possible cost, wherever your Perkins powered machine is
To find your local distributor: www.perkins.com/distributor

*Terms and Conditions apply

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THE HEART OF EVERY GREAT MACHINE

4000 Series 4008TAG2A Diesel Engine – ElectropaK

947 kWm @ 1500 rpm net standby power

Technical information

Air inlet

- Mounted air filter and turbocharger

Fuel system

- Direct fuel injection system with fuel lift pump
- Digital governing to ISO 8528-5 Class G2 with isochronous capability
- Full-flow spin-on fuel oil filters

Lubrication system

- Wet full aluminium sump with filler and dipstick
- Full-flow spin-on oil filters

Cooling system

- Twin thermostats
- System designed for ambient temperatures of up to 50°C

Electrical equipment

- 24V starter motor and 24V alternator with integral regulator and DC output
- Turbine inlet temperature protection
- High coolant temperature protection switch
- Low oil pressure protection switch

Flywheel and housing

- Flywheel to SAE J620 size 18
- SAE 0 flywheel housing

Optional equipment

4 metre wiring harness

Secondary electric start

Immersion heater

Single exhaust outlet pipe

Exhaust counter flanges

Temperate radiator kit

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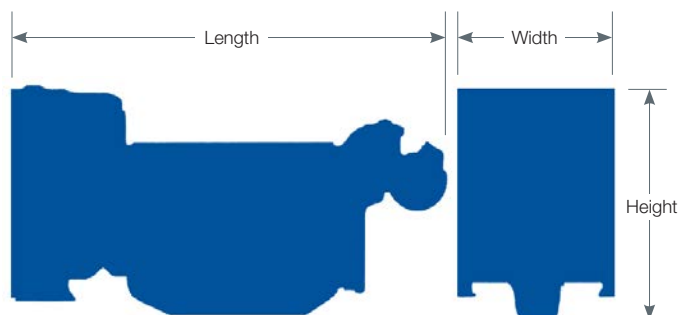
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THE HEART OF EVERY GREAT MACHINE

4000 Series 4008TAG2A Diesel Engine – Electropak

947 kWm @ 1500 rpm net standby power



Engine package weights and dimensions				
	Temperate cooling		Tropical cooling	
Length	3852 mm	151.7 in	3711 mm	146 in
Width	2046 mm	80.5 in	2046 mm	80.5 in
Height	2067 mm	81.3 in	2146 mm	84.5 in
Weight (dry)	4270 kg*	9414 lb	4320 kg*	9524 lb

* For fuel cooler, add 6 kg

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Speed rpm Radiator type	Type of operation	Typical generator output (Net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	hp	kWm	hp
1500 Tropical	Baseload power	809	647	719	964	681	913
	Prime power	1022	818	899	1206	861	1155
	Standby (maximum)	1125	900	985	1321	947	1270

The above ratings represent the engine performance capabilities guaranteed within plus or minus 3% at the reference conditions equivalent to those specified in ISO 8528/1, ISO 3046/1, BS5514/1.

Rating conditions: 25°C air inlet temperature, barometric pressure 100 kPa, relative humidity 30%. Please consult your distributor or the factory for ratings in other ambient conditions. **Note:** For full ratings please refer to Perkins Engines Company Limited. All electrical ratings are based on an average alternator efficiency and a power factor of 0.8. **Full specification:** BS2869: Class A1 + A2 or ASTM D975 No 2D.

Rating definitions

Baseload power: Power available for continuous full load operation. No overload is permitted. **Prime power:** Power available for variable load with an average load factor not exceeding 80% of the prime power rating in any 24 hour period. Overload of 10% permitted for one hour in every twelve hours operation. **Standby (maximum):** Power available at variable load in the event of a main power network failure up to a maximum of 500 hours per year. No overload is permitted.

Percent of prime power	Fuel consumption for temperate and tropical at 1500 rpm	
	g/kWh	l/hr
Standby (maximum)	209	240
Prime power	206	215
Continuous baseload power	206	172
75%	206	162
50%	207	111

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THE HEART OF EVERY GREAT MACHINE

TAL A49

730 - 1250 kVA



Leroy-Somer is a leading global supplier of alternators for emergency power. Our new TAL low voltage alternators, with optimal performance for commercial and industrial applications, are a simple, efficient solution for your onsite power requirements.

Leroy-Somer's TAL alternators are specially designed to meet the power needs of telecom towers and commercial and industrial buildings. TAL is compatible with most engine brands.

Common Data

Insulation class	H	Excitation system	SHUNT	AREP / PMG
Winding pitch	2/3 (Winding 6S)	AVR type	R 150	R 180
Number of wires	6	Voltage regulation (*)	± 1 %	
Protection	IP 23	Total Harmonic distortion THD (**) in no-load	< 3.5 % according to C.E.I.	
Altitude	≤ 1000 m	Total Harmonic distortion THD (**) in linear load:	< 5 % according to C.E.I.	
Overspeed	2250 R.P.M.	Waveform: NEMA = TIF (**)	< 50	
Air flow (m³/s)	50Hz: 1	Waveform: I.E.C. = THF (**)	< 2%	
	60Hz: 1.2	(*) Steady state. (**) Total harmonic distortion between phases, no-load or on-load (non-distorting)		

Ratings (50 Hz – 1500 r.p.m and 60 Hz – 1800 r.p.m.)

kVA / kW - P.F. = 0.8														
TAL A49		50 Hz - 1500 R.P.M.						60 Hz - 1800 R.P.M.						
Duty/T°C	Continuous / 40°C			Stand-by / 27°C			Continuous / 40°C				Stand-by / 27°C			
Class/T°K	H / 125°K			H / 163°K			H / 125°K				H / 163°K			
	Rating kVA			Rating kVA			Rating kVA				Rating kVA			
Phase	3 ph.			3 ph.			3 ph.				3 ph.			
Y	380V	400V	415V	380V	400V	415V	380V	416V	440V	480V	380V	416V	440V	480V
Δ	220V	230V	240V	220V	230V	240V	220V	240V	254V	277V	220V	240V	254V	277V
TAL-A49-B	730	730	730	805	805	805	725	795	840	915	800	875	925	1005
TAL-A49-C	820	820	820	910	910	910	815	890	940	1025	895	980	1040	1130
TAL-A49-D	910	910	910	1010	1010	1010	905	990	1045	1140	1000	1090	1155	1255
TAL-A49-E	1000	1000	1000	1100	1100	1100	990	1083	1146	1250	1089	1192	1260	1375

Efficiencies (%)

Class H / 40 ° C

Three Phase: 400 V - 50 Hz

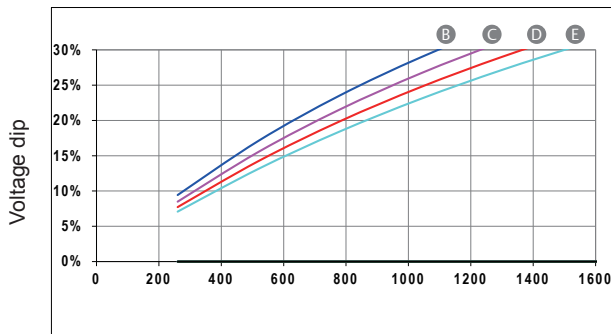
Three Phase: 480 V - 60 Hz

	P.F. = 0.8					P.F. = 1					P.F. = 0.8					P.F. = 1					
	1/4	2/4	3/4	4/4	St.By	1/4	2/4	3/4	4/4	St.By	1/4	2/4	3/4	4/4	St.By	1/4	2/4	3/4	4/4	St.By	
	TAL-A49-B	93.6	94.8	94.4	93.6	93.2	94.4	96.0	96.0	95.7	95.5	TAL-A44-C	92.6	94.4	94.3	93.7	93.4	93.3	95.5	95.8	95.6
TAL-A49-C	92.9	94.6	94.5	93.9	93.6	93.6	95.8	96.1	96.0	95.8	TAL-A44-D	91.9	94.2	94.4	94.0	93.8	92.6	95.3	95.9	95.9	95.8
TAL-A49-D	94.3	95.4	95.1	94.5	94.1	94.9	96.4	96.5	96.3	96.1	TAL-A44-E	93.4	95.1	95.1	94.6	94.3	94.0	96.0	96.3	96.2	96.1
TAL-A49-E	93.9	95.4	95.4	94.9	94.7	94.6	96.4	96.7	96.5	96.4	TAL-A44-H	93.1	95.1	95.3	95.0	94.8	93.6	96.0	96.4	96.4	96.4

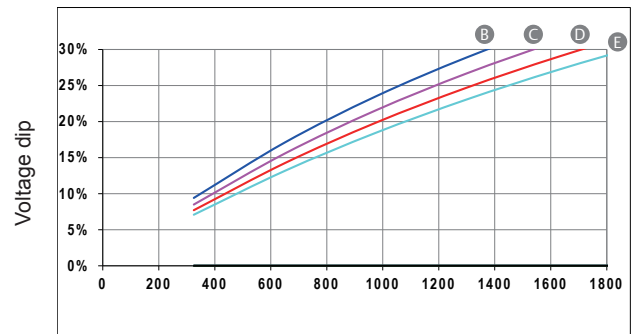
Transient Voltage Variation – Motor Starting

400V - 50 Hz

480V - 60 Hz



KVA at P.F.=0.6



KVA at P.F.=0.6

Locked Rotor – kVA at Ø 0.6 Power Factor