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High Ambient 50°C

50DEGPKG

Package Upgrade — P1500P3 – P1875E1, High Ambient

This option includes a 50°C radiator and suitable alternator, allowing the generator set to operate without derate at 50°C.

Engine

	P1500P3/ P1650E3	P1700P1/ P1875E1
Engine Model:	4012-46TAG2A	4012-46TAG3A
Frequency:	50 Hz	50 Hz
Engine Speed: rpm	1500	1500
Gross Engine Power: kW (hp)		
Standby	1459 (1957)	1643 (2203)
Prime	1331 (1785)	1500 (2012)
BMEP: kPa (psi)		
Standby	2546 (369)	2852 (416)
Prime	2323 (336)	2618 (380)

Air System

	P1500P3/ P1650E3	P1700P1/ P1875E1
Air Filter Type:	Replaceable Element	
Combustion Air Flow		
m ³ /min (cfm)		
Standby	128 (4520)	135 (4767)
Prime	120 (4238)	125 (4414)
Max. Combustion Air Intake Restriction:		
kPa (in H ₂ O)	4.0 (16.1)	4.0 (16.1)
Radiator Cooling Air Flow:		
m ³ /min (cfm)	1944 (68652)	1896 (66957)
External Restrictions to Cooling Air Flow:		
Pa (in H ₂ O)	200 (0.8)	250 (1.0)

Lubrication

Oil Filter Type:	Spin-On, Full Flow
Total Oil Capacity: l (US Gal)	177 (46.8)
Oil Pan Capacity: l (US Gal)	159 (42.0)
Oil Type:	API CH4 15W-40
Oil Cooling Method:	Water

Exhaust System (Optional)

	P1500P3/ P1650E3	P1700P1	P1875E1
Silencer Type:	Industrial		
Silencer Model & Quantity:	IND-Optional – (1)		
Pressure Drop across Silencer System:			
kPa (in Hg)	3.10 (0.915)	3.10 (0.915)	3.70 (1.093)
Silencer Noise Reduction Level: dB	12.2	12.2	13.5
Maximum Allowable Back Pressure: KPa (in Hg)	5.0 (1.5)	5.0 (1.5)	5.0 (1.5)
Exhaust Gas Flow:			
m ³ /min (cfm)			
Prime	309 (10912)	315 (11124)	315 (11124)
Standby	309 (10912)	315 (11124)	315 (11124)
Exhaust Gas Temperature:			
°C (°F)			
Prime	500 (932)	520 (968)	520 (968)
Standby	500 (932)	520 (968)	520 (968)

Cooling System

	P1500P3/ P1650E3	P1700P1/ P1875E1
Cooling System Capacity:		
l (US gal)	210 (55.5)	210 (55.5)
Water Pump Type:	Centrifugal	
Heat Injected to Water and Lube Oil: kW (Btu/min)		
Standby	501 (28491)	625 (35543)
Prime	457 (25989)	510 (29003)
Heat Radiation to Room:		
kW (Btu/min)		
Standby	162.0 (92132)	189.6 (10782)
Prime	147.8 (8405)	171.4 (9747)
Radiator Fan Load: kW (hp)	64 (85)	61 (81.8)

Alternator Physical Data

	P1500P3	P1650E3	P1700P1	P1875E1
Alternator manufactured for FG Wilson by:	Leroy Somer	Leroy Somer	Leroy Somer	Leroy Somer
Model:	LL8224P	LL9324F	LL9324F	LL9324H
No. of Bearings:	1	1	1	1
Insulation Class:	H	H	H	H
Winding Pitch Code:	2/3 – 6S	2/3 – 6S	2/3 – 6S	2/3 – 6S
Wires:	6	6	6	6
Ingress Protection Rating:	IP23	IP23	IP23	IP23
Excitation System:	AREP	AREP	AREP	AREP
AVR Model:	R450	R449	R449	R449

Alternator Operating Data

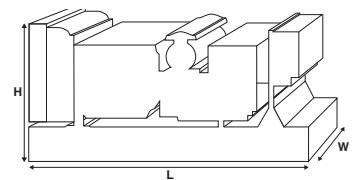
Overspeed:	2250	2250	2250	2250
Voltage Regulation (steady state) (%):	±0.5	±0.5	±0.5	±0.5
Wave Form NEMA = TIF:	50	50	50	50
Wave Form IEC = THF:	2.0%	2.0%	2.0%	2.0%
Total Harmonic Content LL/LN:	3.5%	3.5%	3.5%	3.5%
Radio Interference:	EN61000-6	EN61000-6	EN61000-6	EN61000-6
Radiant Heat: kW (btu/min)	51.8 (2294)	52.3 (2974)	54.5 (3095)	57.3 (3259)

Alternator Technical Data

	P1500P3			P1650E3			P1700P1			P1875E1			
	415/ 240V	400/ 230V	380/ 220V	415/ 240V	400/ 230V	380/ 220V	415/ 240V	400/ 230V	380/ 220V	415/ 240V	400/ 230V	380/ 220V	
Motor Starting Capability: kV	4592	4282	3883	5086	4740	4295	5086	4740	4295	6816	6351	5754	
Short Circuit Capability:	300	300	300	300	300	300	300	300	300	300	300	300	
Reactances Per Unit:													
	Xd	3.07	3.31	3.67	3.027	3.259	3.611	3.119	3.358	3.720	2.972	3.199	3.545
	X'd	0.19	0.21	0.23	0.240	0.258	0.286	0.247	0.266	0.294	0.229	0.246	0.273
	X''d	0.107	0.115	0.128	0.124	0.133	0.147	0.127	0.137	0.152	0.120	0.129	0.143

Weights & Dimensions

	P1500P3	P1650E3	P1700P1	P1875E1
Net (+ lube oil): kg (lb)	10725 (23645)	10997 (24244)	11549 (25461)	11594 (25461)
Wet (+ lube oil & coolant): kg (lb)	10935 (24108)	11207 (24707)	11759 (25924)	11759 (25924)
Length (L): mm (in)	5223 (205.6)	5259 (207.0)	5219 (205.5)	5219 (205.5)
Width (W): mm (in)	2201 (86.7)	2192 (86.3)	2164 (85.2)	2164 (85.2)
Height (H): mm (in)	2486 (97.9)	2453 (96.6)	2660 (104.7)	2660 (104.7)



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50DEDPKG1500-1875TAG/0515/GB