

PowerStep™

Power Solutions

YOUR PARTNER IN POWER

Meet PowerTel.

Variable speed DC power Supply.



- ✓ 10 KW
- ✓ 50 volts DC
- ✓ <1% Volts Ripple
- ✓ Fuel Efficient
- ✓ Quiet



For Telecom base station and battery charging applications.



Deep Sea Electronics.

Control panel with Deepsea engine monitoring emergency stop button and 100 amp 3 pole isolator.



Scope of standard supply:

- ✓ Perkins 403D-11G variable speed diesel engine
- ✓ Tropical radiator
- ✓ 12 volt dc system
- ✓ Mecc-Alte ECP28-0S/4 alternator
- ✓ 1000 rpm to 2000 rpm
- ✓ Electronic governor
- ✓ Anti vibration mounts
- ✓ Mercurio power converter

Protections For:

- Short circuit
- Overload
- Battery reverse polarity
- Battery over temperature
- Engine over speed/ low oil pressure & high temperature



Optional Extras:

Remote monitoring / control
Grid input (via transformers)
Wind and Solar inputs
Extended service intervals (with sump top up system)
Fork lift facility
Bunded base fuel tank

65 and 75 dba @ 1m acoustic enclosure
Zinc plated powder coated
50 deg c ambient temperature cooling clearance
2 lockable side doors allowing full access to service points
1 lockable rear door

Benefits Over Conventional Fixed Speed Sets:

The smart monitoring system automatically monitors the base station battery voltage , starts and stops the engine and varies the engine speed according to the charge state of the batteries and load demand.

Thereby saving fuel, oil, and reducing wear and tear and emissions to the environment compared to an engine running unnecessarily at a constant speed.

The smart battery monitoring/cycle charging system also helps to reduce battery sulphation and can give significant fuel cost savings.

BENEFITS OVER PMG DC SYSTEMS:

PowerTel converts the output of a conventional AC alternator to DC and as such is not captive to the unpredictable supply & pricing of rare earth magnets used in PMG DC systems. It also gives the operators the advantage of converting the unit to a conventional AC generator for re-sale.

Fuel Consumption Profile

engine : Perkins 403d - 11g variable speed

alt. : Meccalte ECP28-os/4 (optimised with mercurio configured avr)

dc system : Meccalte Mercurio 10KW

battery type : lead acid (Crown WEF13)

battery a/h : 750

cells : 24

ambient : 10 deg C

speed range : 1000 to 2000 rpmTest

Base Load	Start Threshold Battery	Base Load	Initial Charge +load	Stop Threshold Charge	Stop Duration	Charge total	Duty Cycle total	Start fuel	Stop fuel	duty cycle fuel used @0.85.s.g	duty cycle consumption	daily	annually
Watts	Watts	amps	amps	amps	hours	hours	hours	kg's	kg's	litres	litres/hour	litres	litres
500	46	10	130(140)	20	33,5	4,9	38,4	22	13,6	9,88	0,26	6,18	2,254
1000	46	20	130(150)	20	16,1	4,8	20,9	22	13,5	10,00	0,48	11,48	4,191
2000	46	40	130(170)	20	7,6	4,9	12,5	22	13,2	10,35	0,83	19,88	7,255
3000	46	60	130(190)	20	3,9	4,9	8,8	22	13,1	10,47	1,19	28,56	10,423

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