

# We bring Power to your Life



## UP1875

U Power Generation System



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## INTRODUCTION

U Power Generation system, providing optimum performance, and reliability, for stationary standby, prime power, and continuous duty applications. All generator sets are factory build, and production tested.

### Power (kVA)

3 Phase, 50 Hz, PF 0.8

VOLTAGE	STANDBY RATING		PRIME RATING (PRP)		STANDBY AMPER
	kW	kVA	kW	kVA	
400/231	1500,00	1875	1364	1705	2706.41

**STANDBY RATING (ESP)** Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. ESP is in accordance with ISO 8528. Overload is not allowed.

**PRIME RATING (PRP)** Applicable for supplying power to varying electrical load for unlimited hours. PRP is in accordance with ISO 8528. 10 % overload capability is available for a period of 1 hour within 12-hour period of operation, in accordance with ISO 3046.

### General Characteristics

Model Name	UP 1875
Frequency (Hz)	50
Fuel Type	Diesel
Engine Made and Model	PERKINS 4012-46TAG3A
Alternator Made and Model	ECO 46-2S / 4A
Control Panel Model	7320
Canopy	UP 99

### Engine Specifications

Engine	PERKINS
Engine Model	4012-46TAG3A
Number of Cylinder (L)	12 cylinders - V Type
Bore (mm.)	160
Stroke (mm.)	190
Displacement (lt.)	45.842
Aspiration	Turbo Charged
Compression Ratio	13.0:1
RPM (d/dk)	1500

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Oil Capacity (Total With Filter) (lt)	177
Standby Power	1643/2202,41
Prime Power	1500/2010,72
Block Heater QTY	2
Block Heater Power (Watt)	3000
Fuel Type	Diesel
Injection Type and System	Direct
Type of Fuel Pump	MEUI
Governor System	Electronic
Operating Voltage (Vdc)	24 Vdc
Battery and Capacity (Qty/Ah)	4x143
Charge Alternator (A)	40
Cooling Method	Water Cooled
Cooling Fan Air Flow (m <sup>3</sup> /min)	2713
Coolant Capacity (engine only / with radiator) (lt)	339,1
Air Filter	Dry Type
Fuel Cons. Prime With %100 Load (lt/hr)	370
Fuel Cons. Prime With %75 Load (lt/hr)	275
Fuel Cons. Prime With %50 Load (lt/hr)	187

### Alternator Characteristics

Manufacturer	Mecc Alte
Alternator Brand and Model	ECP 46-2S / 4 A
Frequency (Hz)	50
Power (kVA)	1800
Voltage (V)	400
Phase	3
A.V.R.	DER1
Voltage Regulation	(+/-)1%
Insulation System	H
Protection	IP21
Rated Power Factor	0.8
Weight Wound Rotor (Kg)	904
Cooling Air (m <sup>3</sup> /min)	135

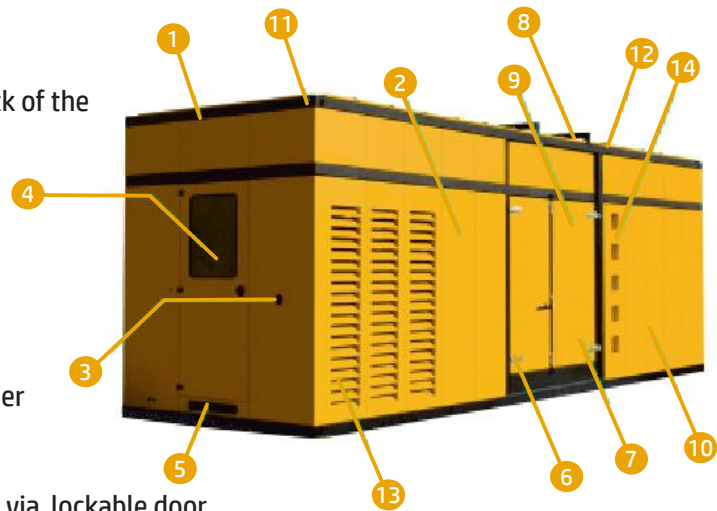
### Open Gen.Set Dimensions (mm)

Lenght	5290
Width	2220
Height	2752
Dry Weight (kg)	10400

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Lenght (mm)	9000	Width (mm)	2800	Height (mm)	3300	Tank Capacit (lt)	-
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1. Steel structure made from steel sheet and steel profiles
2. Canopy and panels made from powder coated sheet steel
3. Emergency stop push button
4. Control panel is mounted on the baseframe. Located at the back of the generator set
5. Cables out locations are under of the canopy
6. Corrosion.resistant locks and hinges
7. Oil could be drained via valve and a hose
8. Exhaust system on the canopy
9. Special large access doors (marine type) for easy maintanance
10. The cap on the canopy provides easy access to radiator cap
11. Lifting points similar to ISO container, located on each top corner of the Canopy
12. Sound proofing materials
13. Fuel tank is at front of the canopy ,easy access to the fuel tank via lockable door
14. Integrated ladder built in toside of the canopy allows access to the top of the canopy



## INTRODUCTION

Sound-attenuated and weather protective enclosures for generating sets from UPower, meet event the sound requirements and provide optimum protection from inclement weather and development by our specialist acoustic engineers. Our modular designed sound insulated canopies provide ease of access for servicing and general maintenance and interchangeable components permitting on-site repair. Enclosures are designed to optimize genset cooling performance, providing you with confidence that genset ratings and ambient capability

## Control Panel

Control Module	DSE	Control Module Model	7320	Communication Ports	Modbus
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1. Menu navigation buttons
2. Close mains button
3. Main Status and instrumentation display
4. Alarm LED's
5. Close generator button
6. Status LED's
7. Operation selecting buttons

## Devices

DSE, model 7320 Auto Mains Failure control module Static battery charger Emergency stop push button and fuses for control circuits

## Construction and Finish

- Comonents installed in sheet steel enclosure.
- Phosphate chemical, pre-coating of steel provides corrosion resistant surface
- Polyester composite powder topcoat forms high gloss and extremely durable finish
- Lockable hinged panel door provides for easy component access

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## Installation

Control panel is mounted generating set baseframe on robust steel stand or power module. Located at side of generating set with properly panel visibility

## Generating Set Control Unit

» The DSE 7320 control module is a standard addition to our generator sets from 220 kVA upwards and it has been designed to start and stop diesel and gas generating sets that include electronic and non electronic engines

» The DSE 7320 includes the additional capability of being able to monitor a mains (utility) supply and is therefore suitable for controlling a standby generating set in conjunction with an automatic transfer switch

» The DSE7320 also indicates operational status and fault conditions, automatically shutting down the generating set and indicating faults by means of its LCD display on the front panel

## Standard Specifications

Microprocessor controlled

- 132 x 64 pixel LCD display makes information easy to read
- Front panel programming and also via PC software
- Soft touch membrane keypad and five key menu navigation
- Remote communications via RS232, RS485 and ethernet and SMS messaging
- Event logging (50) showing date and time
- Multiple date and time engine exercise mode and maintenance scheduler
- Engine block heater control.
- Controls; stop, manual, auto, test, start, mute lamp test/transfer to generator, transfer to mains, menu navigation

### ENGINE

Engine speed  
Oil pressure  
Coolant temperature  
Run time Battery volts  
Engine maintenance due

### ELECTRICAL TRIP

Earth fault  
kW over load  
Generator over current  
Negative phase sequence

### PRE-ALARMS

Low oil pressure  
High engine temperature  
Low engine temperature  
Over /Under speed  
Under/over generator frequency  
Under/over generator voltage  
ECU warning

### SHUT DOWNS

Fail to start  
Emergency stop  
Low oil pressure  
High engine temperature  
Low coolant level  
Over /Under speed  
Under/over generator frequency  
Under/over generator voltage  
Oil pressure sensor open  
Phase rotation

### GENERATOR

Voltage (L-L, L-N)  
Current (L1-L2-L3)  
Frequency  
Earth current  
kW  
Pf  
kVAh  
kWh, kVAh, kVAh  
Phase sequence

### WARNING

Charge failure  
Battery under voltage  
Fail to stop  
Low fuel level (opt.)  
kW over load  
Negative phase sequence  
Loss of speed signal

### MAINS

Voltage (L-L, L-N)  
Frequency

## Instruments

### Options

High oil temperature shut down  
Low fuel level shut down  
Low fuel level alarm  
High fuel level alarm

### Expansion Modules

Editional LED module (2548)  
Expansion relay module (2157)  
Expansion input module (2130)

### Standards

Electrical Safety / EMC compatibility  
BS EN 60950 Electrical business equipment  
BS EN 61000-6-2 EMC immunity standard  
BS EN 61000-6-4 EMC emission standard

## Static Battery Charger

- » Battery charger is manufactured with switching-mode and SMD technology and it has high efficiency.
- » Battery charger models' output V-I characteristic is very close to square
- » 2405 has fully output short circuit protection and it can be used as a current source.
- » 2405 charger has high efficiency, long life, low failure rate, light weight and low heat radiated in accordance with linear alternatives.
- » The charger is fitted with a protection diode across the output.
- » Charge fail output is available.
- » Connect charge fail relay coil between positive output and CF output.
- » Input: 196-264V.
- » Output: 27,6V 5A or 13,8V 5A

## Standard Specifications

- Water cooled diesel engine
- Radiator with mechanical fan
- Protective grille for rotating and hot parts
- Electric starter and charge alternator
- Starting battery (with lead acid) including rack and cables
- Engine coolant heater
- Steel base frame and anti-vibration isolators
- Spare external fuel tank (open set)
- Flexible fuel connection hoses
- Single bearing, class H alternator
- Industrial exhaust silencer and steel bellows supplied separately
- Static battery charger
- Manual for application and installation

## Optional Equipments

### ENGINE

- Fuel-Water Separator Filter
- Oil heater

### ALTERNATOR

- Anti-Condensation Heater
- Over sized alternator
- Main line circuit breaker

### CONTROL SYSTEM

- Automatic synchronising and power control system (multi gen-set Parallel)
- Transition synchronization with mains
- Remote annunciator panel
- Remote relay output
- Alarm output relays
- Remote communication with modem
- Earth fault, single set
- Charge Ammeter

### TRANSFER SWITCH

- Three or four pole contactor
- Three or four pole motor operated circuit breaker

### OTHER ACCESSORIES

- Main Fuel Tank
- Automatic or manual fuel filling system
- Manual oil drain pump
- Electrical oil drain pump
- Low and high fuel level alarm
- Residential silencer
- Enclosure: weater protective or sound attenuated
- Duct adapter (on radiator)
- Inlet and outlet motorised louvers
- Inlet and outlet acoustic baffles
- Tool kit for maintenance
- 1500/3000 hours maintenance kit
- Supplied with oil and coolant - 30 °C

## CERTIFICATES



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