EURO POWER®

EP Series

EP20

Features:

- Rotate speed governor: Mechanical governor
- Excitation system: self-excited SHUNT
- A.V.R model: R220
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 1x12V sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy

(Only for Soundproofed sets)

- 50℃radiator
- Oil pump on the engine
- Steel base frame with fork holes
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for daily running
- Drain points for fuel tank
- Operation Manual / Specifications

Output Ratings

Generating Set Model	Prime Power*	Standby Power**
EP20	20kVA/16kW	22kVA/18kW

Ratings at 0.8 power factor

Dimensions and Weights

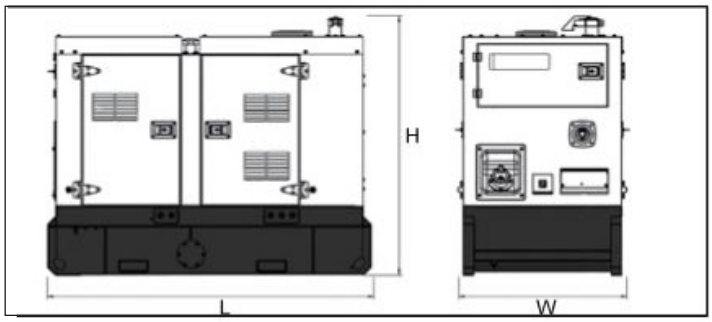
Model	Length (L) mm	Width (W) mm	Height (H) mm	Dry Weight kg
EP20	2250	1050	1250	942

Notes:

***Prime Power**
Continuous duty operation, under variable load 24/24h-10% over load permissible 1 hour/12 hours;

****Standby Power**
Standby duty, operation under variable load, without over load;

Standard Reference Conditions
Note: Standard reference conditions 25°C (77°F) Air Inlet Temp, 100m(328 ft) A.S.L. 30% relative humidity.
Fuel consumption data at full load with diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998, Class A2.



Ratings and Performance Data

Engine Make & Model:	Perkins 403D-22G
Alternator Brand:	MECC
Alternator Model:	ECP28-1LN/4
Control System:	Auto Gen
Circuit Breaker Type:	3 Pole MCCB
Frequency & Phase:	50Hz & 3PH
Engine Speed: RPM	1500
Fuel Tank Capacity: litres **EP20**	 150
Fuel Consumption: l/hr (100% Load) **- Prime Power** **-Standby Power**	 5.3 6.1

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Engine model:403D-22G

Engine Technical Data

No. of Cylinders / Alignment:	4 / Vertical in-line
Cycle:	4 Stroke
Bore / Stroke: mm	84/100
Induction:	Naturally aspirated
Cooling Method:	Water cooled
Governing Type:	Mechanical
Governing Class:	N/A
Compression Ratio:	23.3:1
Displacement: L	2.216L
Moment of Inertia: kg m²	0.44
Engine Electrical System: **- Voltage / Ground** **- Battery Charger Amps**	 12/Negative 12/65
Weight: kg **- Dry** **- Wet**	242 N/A

Cooling System

Capacity with radiator: l	7.0
Capacity without radiator: l	3.6
Energy to coolant and lubricating oil: **kWt - Prime** **- Standby**	 17.0 19.6
Energy to Radiation: kWt **- Prime 3.3** **- Standby 4.4**	
Energy to cooling fan: kWt	0.3
Radiator Cooling Airflow: m³/min	N/A
External Restriction to Cooling Airflow: Pa	N/A

Designed to operate in ambient conditions up to 50°C (122°F).

Performance

Engine Speed: rpm	1500
Gross Engine Power: kWb **- Prime** **- Standby**	 18.7 20.6
BMEP: kPa **- Prime** **- Standby**	 669 650

Fuel System

Fuel Filter Type: Replaceable Element

Recommended Fuel: Diesel Class A2

Fuel Consumption: l/hr

Prime	110% Load	100% Load	75% Load	50% Load
EP20	6.1	5.3	4.0	2.9

(Based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869,Class A2)

Lubrication System

Oil Filter Type:	Spin-On, Full Flow
Total Oil Capacity: l	10.6
Minimum: l	8.9
Oil Type:	API-CH4/ACEA E5
Oil Cooling Method:	Water

Exhaust System

Silencer Type:	Industrial
Exhaust outlet size:	42mm
Silencer Noise Reduction Level:	N/A
Maximum Allowable Back Pressure: kPa	10.2
Exhaust Gas Flow: m³/min **- Prime** **- Standby**	 3.64 3.94
Exhaust Gas Temperature: °C **- Prime** **- Standby**	 445 505

Air Systems

Air Filter Type:	Dry element type
Combustion Air Flow: m³/min **- Prime** **- Standby**	 1.45 1.45
Max. Air Intake Restriction: -clean filter -dirty filter	 3.0 6.4

The weights are approximate and without fuel.

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Alternator model: ECP28-1LN/4

Alternator Physical Data	
Manufactured by:	MECC
Model:	ECP28-1LN/4
No. of Bearings:	
Insulation Class:	H
Winding Pitch Code:	
Wires:	12
Ingress Protection Rating:	IP23
Excitation System:	
AVR Model:	

Alternator Operating Data	
Overspeed: rpm	2250
Voltage Regulation: (Steady state)	
Wave Form NEMA = TIF:	<45
Wave Form IEC = THF:	<2%
Total Harmonic content LL/LN:	
Radiant Heat: kW (Btu/min)	
EP20	

Alternator Performance Data:	EP20
Data Item	
Motor Starting Capability* kVA	
Short Circuit Ratio** %	0.53/0.62/0.87/1.45
Reactances: Per Unit Xd	199.4/180/167.2/133.9
X'd	18.61/16.8/15.61/12.50
X"d	10.64/9.6/8.92/7.14

Voltage Technical Data	EP20			
Voltage	**Prime:**		**Standby:**	
	kVA	kW	kVA	kW
380V	18.5	14.8	20	16
400V	18.5	14.8	20	16
415V	18.5	14.8	20	16
440V	17	13.6	18	14.4

Control System

PLC-920

FEATURES

- Parameter configuration via RS-232 serial communication;
- Log last 50 events & alarm information with measured values;
- Statistics records;
- Remote start/stop;
- Speed sensing from alternator voltage or magnetic pickup;
- Configurable 3 inputs and 6 outputs;
- ECU powers, ECU stop, STOP or fuel solenoid selection;
- Automatic transfer switching control and engine control;
- Adjustable start, load and stop timers.