

# Your Own Power House

# EXEL<sup>®</sup>

*Your own power house*



## AC Generators

15 to 80 KVA Single Phase

15 to 125 KVA Three Phase

Also available in Single Bearing Construction



## Specifications

### Electrical Features include:

- Insulation of 'F/H' class material for both Stator & Rotor.
- Tropicalized Windings.
- Low-loss lamination used.
- Voltage adjustment by an Electronic Regulator/ Compounding Transformer.

### Mechanical features include:

- Steel Casing with end side covers in cast iron.
- Shaft is of high-tensile C40 steel.
- Rotor is of laminated steel (with salient poles for a better waveform) to keep sturdy while holding runaway speed of drive motors.
- Rotor equipped with damping cage to allow satisfactory operation even in single-phase, distorted loads.
- Bearings with life-long lubrication up to size 6313.
- Self-ventilation enabled through a fan fitted onto the shaft.

### Degree of Protection:

- Drip Proof: Standard IP 23.

### Operating Conditions:

- All ratings are based at 40°C ambient, for operations at Altitude not exceeding 1000 m ASL.

### Asynchronous Motor Start:

- 1 HP for each kVA of alternator can be started.

### Short Circuit Current:

- In 3-phase symmetric short circuit, the permanent current exceeds rated current by 300%, ensuring correct operation of protection.

### Overloads:

- 10% overload for 1 hour every 6 hours is normally accepted.
- Short overloads can be very high (3 times the rated current).

### Recovery Time:

- At full load, voltage returns to nominal value in less than 0.1 seconds.

### Radio Interference:

- Standard units meet EN50081-1 and EN50082-1 standards. Upon request, filters can be studied & produced according to more restrictive specifications.

### Operating at Slow Speed:

- Self-regulation of Brushless alternators allows slow speed operations without danger of undergoing damages.

### Terminal Board & Terminal Box:

- Terminal box is of sheet steel & contains main terminal board & automatic voltage regulator/Compounding Transformer. Dimensions of Terminal box allow easy access for connecting terminals on terminal board. A lateral opening allows access to potentiometer on regulator and set the voltage without opening the terminals box.

### Single Phase Duty:

- Single-phase output power is approximately 40% of 3-phase rated power in star connections (using phase voltage) or 65% of 3-phase rated power in delta connections.

### Output Voltage Waveform:

- Waveform of no-load line voltage or applying a balanced linear 3-phase load is sinusoidal with harmonical residual less than 5%.

### Voltage Accuracy:

- Voltage accuracy in static conditions is within  $\pm 1\%$  (with AVR) or within  $\pm 5\%$  (with Compounding transformer).

### Transient Voltage Drop:

- At full load, the transient voltage drop is less than 10%.

### Reference standards:

- Brushless series alternators manufactured pursuant to provisions of IS 4722 & IS 13364 directives.

### Electronic Regulator (AVR):

- Electronic regulators made of state-of-the-art electronic components to assure high performance & reliability. Electronic regulators equipped with output voltage regular trimmer, a stability control trimmer & a low frequency protection trimmer.
- Small and compact size.
- Durable under dust, damp and vibration.
- Under frequency protection : When the generator frequency drops below the set point, generator output voltage is decreased with the curve proportional to the frequency.
- Over Excitation : In case of over excitation the AVR shuts down the output to protect the generator winding coil from burning out.

Continuous development of our products entitle us to change specifications and details without notice.

## Green Power Generators (P) Ltd.

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