



# Generating Set

TECHNICAL DATA SHEET

## AQP88



Silent / Closed Type  
Image for illustration purposes only.

| Prime Power*  | Standby Power** | Voltage/Ph | Hz/rpm*** | PF  |
|---------------|-----------------|------------|-----------|-----|
| 80 kVA/64 kWe | 88 kVA/70 kWe   | 400/3Ph    | 50/1500   | 0.8 |

**Prime power\***

Unlimited hours usage with an average load factor of 80% of the published Prime power over each 24 hours period. A 10% overload is available for 1 hour in every 12 hours operation.

**Standby power\*\***

Limited to 500 hours annual usage with an average load factor of 80% of the published Standby power rating over each 24 hour period. Up to 300 hours of annual usage may be run continuously. No overload is permitted on Standby power.

Available in 60HZ for all voltage ratings.\*\*\*

**Standard Reference Conditions**

Note: Standard reference conditions 40°C (104°F) Air Inlet Temp, 100m (328 ft) A.S.L. 30% relative humidity.

**Diesel Generator Set**

|                                  |                                        |
|----------------------------------|----------------------------------------|
| Engine Make /Model               | PERKINS 1104A-44TG2                    |
| Alternator Make /Model           | Leroy Somer TAL-044-B                  |
| Control Panel                    | DSE 4520                               |
| Base Frame / Silent Canopy       | Robust Structure/ Corrosion Resistant  |
| Circuit Breaker Type             | 3 Pole MCCB (4P Available as optional) |
| Built in Base Fuel Tank Capacity | 190L                                   |
| Battery                          | Maintenance free Lead Acid             |

| Dimensions | Length (mm) | Width (mm) | Height (mm) | Weight (KG) |
|------------|-------------|------------|-------------|-------------|
| Close Type | 2822        | 1122       | 1375        | 1283        |
| Open Type  | 2006        | 900        | 1410        | 1010        |

**ENGINE SPECIFICATIONS**

|                             |                      |
|-----------------------------|----------------------|
| Engine Make Model           | PERKINS 1104A-44TG2  |
| No. of Cylinders            | 4 vertical in-line   |
| Cycle                       | 4 Stroke             |
| Aspiration                  | Turbocharged         |
| Cooling Method              | Water cooled         |
| Governing Type              | Mechanical           |
| Governing Class             | G2 - ISO 8528 Part 1 |
| Compression Ratio           | 17.25:1              |
| Displacement                | 4.4 L                |
| Bore/Stroke                 | 105 x 127 mm         |
| Dynamic Charging Alternator | 65AMP, 12V           |

**LUBRICATION SYSTEM**

|                    |                     |
|--------------------|---------------------|
| Oil Filter Type    | Spin-On Full Flow   |
| Total Oil Capacity | 8.0 L               |
| Oil Type           | API-CH-4 or ACEA E5 |

**AIR SYSTEM**

|                                   |                         |
|-----------------------------------|-------------------------|
| Air Filter Type                   | Dry Element             |
| Combustion Air Flow (PRP)         | 4.8 m <sup>3</sup> /min |
| Combustion Air Flow (ESP)         | 5.1 m <sup>3</sup> /min |
| Max Air Filter Intake Restriction | 8 kPa                   |

**COOLING SYSTEM**

|                              |                         |
|------------------------------|-------------------------|
| Total Coolant Capacity (L)   | 13.0 L                  |
| Cooling Fan Air Flow         | 89 m <sup>3</sup> / min |
| Radiator Fan Load            | 1.5 kW                  |
| Cooling system design        | 50°C                    |
| Heat Radiation to Room (PRP) | 14 kW                   |

**Exhaust System**

|                            |                                 |
|----------------------------|---------------------------------|
| Muffler Type               | Residential Grade               |
| Max. Back Pressure         | 10 kPa                          |
| Exhaust Gas Flow (PRP/ESP) | 12.5 /13.3 m <sup>3</sup> / min |
| Exhaust Gas Temperature    | ≤ 580°C                         |

**Comply with Standards**

ISO 3046, BS 5514, DIN 6271, NEMA-MGI, DIN EN, BS 5000, IEC 60034, IEC 60947-2

**Powered By:**



**1. Features & Benefits:**

- AQ Gen set is powered by Perkins Engine , the world leader having over 85 years of innovation and excellence, with customers support in 182 countries from 3500 outlets.
- AQ Gen set is powered by Leroy Somer France Alternator, the Global number 1 in Alternators, with over 99 years of Experience, Having 120+ active patents, in over 40 countries and over 80 service centers.
- AQ Gen set is equipped with DSE controller, one of the world's top manufacturers in UK, having over 40 years of excellence, the most advanced and user friendly controller.
- Low fuel consumption, saving on fuel spend
- Compact and rugged design, saving on transport and storage cost
- Designed to occupy less space considering critical applications and cities where space is at a premium.
- Low noise and vibration, considering critical applications where noise level matters
- Easy maintenance and long service intervals , saving on maintenance cost
- Subject to rigorous tests including load acceptance, cooling, vibration and noise level prior shipment to customer.
- Simple to operate and environment friendly in worst ambient conditions
- Equipped with built-in fuel tank sufficient for 8 to 10 hours of operations.
- Fully Engineering wide range of optional accessories available.

(Contd.)

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WE MAKE YOUR POWER SOLUTIONS SUSTAINABLE

# Generating Set

TECHNICAL DATA SHEET

**AQP88**



Open Type

Image for illustration purposes only.



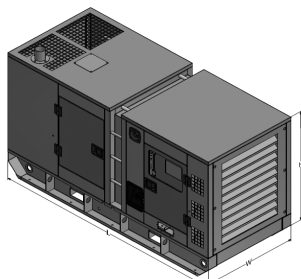
PERKINS Engine  
1103A-33TG2



Leroy Somer  
TAL-044-B



DSE4520 MKII  
AUTO START & AUTO MAINS  
FAILURE CONTROL



AQ ENCLOSURE/ CANOPY

| Engine Fuel System        |                 |
|---------------------------|-----------------|
| Recommended Fuel          | Class A2 Diesel |
| Fuel Consumption Standby  | 20.5 L/hr       |
| Fuel Consumption 100% PRP | 18.7 L/hr       |
| Fuel Consumption 75% PRP  | 14.0 L/hr       |
| Fuel Consumption 50% PRP  | 9.7 L/hr        |

| ALTERNATOR SPECIFICATIONS    |                           |
|------------------------------|---------------------------|
| Alternator Make /Model       | Leroy Somer TAL-044-B     |
| AVR Model                    | R120                      |
| Number of Poles              | 4                         |
| Number of Winding Leads      | 6                         |
| Type of Bearing              | Single Bearing            |
| Insulation Class - Temp Rise | Cont. H - 125/40°C        |
| Ingress Protection Rating    | IP 23                     |
| Excitation System            | Self Excited              |
| Voltage Regulation           | +/- 1%                    |
| Harmonic Coefficient THF     | < 2%                      |
| Tel. influence TIF           | < 50                      |
| Cooling air flow             | 0.25 m <sup>3</sup> / Sec |

| Controller Make & Model   | DeepSea 4520                         |
|---------------------------|--------------------------------------|
| Operation Mode            | AMF                                  |
| Display                   | Graphic Back-lit LCD (128x64) pixels |
| Ingress Protection Rating | IP65                                 |
| Binary Inputs/Outputs     | 4 / 4                                |
| Analog Inputs             | 3                                    |
| Measurement               | Vac, A, Hz, kVA, kW, Vdc             |
| Event Log                 | Alarms log, Hrs log                  |
| Communication             | USB                                  |

Please refer to Controller Data Sheet for more details.

| Enclosure Type         | Acoustic & Weather Proof                                |
|------------------------|---------------------------------------------------------|
| Drainage               | Fuel and Water Drainage Provision                       |
| Transportation         | Tested Single Point Lifting Facility & Forklift Pockets |
| Ingress Protection     | IP 23                                                   |
| Lifting                | ISO Standard Lifting                                    |
| Canopy RAL Color       | RAL 9010 - Powder coated                                |
| Base frame RAL Color   | RAL 9011 - Powder coated                                |
| Noise Pressure level @ | 63.1db(A) @ 7 mt                                        |

Distributed & Serviced by:



## 2. WARRANTY POLICY:

- Al Qabandi Generator technology products has a warranty for all prime equipment, limited to 2000 running hours or 12 months warranty & For Standby equipment, Limited to 500 running hours or 12 months warranty whichever occur first against manufacturing defect.
- Wearing parts (filters), incorrect man-made operation, Back up Genset maintenance failures are excluded from the warranty policy
- For more details please refer to <http://bahmanigt.com>

## 3. DOCUMENTATION

Operation and Maintenance Manual, GAD, Wiring Diagram & FAT Report are Accompanied with Genset.

## 4. OPTIONAL FEATURES

### A. Engine

- Heavy-Duty Air Filter
- Coolant Heater
- Lubricant Oil Heater
- Fuel and Water Separator
- Lube Oil Rotary Pump

### B. Alternator

- Anti Condensation Heater
- PMG + AVR
- Double Bearing Alternator
- RTDs For Bearing and Winding

### C. Cooling System:

- 55 degree Radiator
- Remote Radiator

### D. Control System:

- AMF / Parallel
- Remote Annunciators
- 4 p manual/Motorized Circuit breaker

### E. Automatic Transfer Switch (ATS):

- Contractor or Breaker type ATS
- Motorized changeover type ATS

### F. Start Battery:

- Nickel-cadmium battery
- Maintenance-free battery
- Battery charger and selector switch
- Charging current meter

### G. Exhaust Muffler:

- Residential grade
- Critical grade
- Hospital grade

### H. Available for voltages :

400/230V,480/277V,380/220V,440/254V,  
416/240V,220/127V, 208/120V

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Due to continuous research & product development, we reserve the right to change specification with out notice