

# TECHNICAL DATA SHEET

Powered By:



Comply With Standards:

- Engine performance according to ISO 3046, BS 5514, DIN 6271.
- Alternator performance according to NEMA-MG1, BS 5000, DIN EN, relevant ISO, IEC60034.
- Breaker complies with IEC – 60947-2.

## MPS50

| PrimePower*   | Standby Power | Voltage/Ph | Hz/rpm*** | PF  |
|---------------|---------------|------------|-----------|-----|
| 45 kVA/36 kWe | 50 kVA/40 kWe | 400/3Ph    | 50/1500   | 0.8 |

### Diesel Generator Set

|                                  |                                        |
|----------------------------------|----------------------------------------|
| Engine Make /Model               | PERKINS 1103A-33TG1                    |
| Alternator Make /Model           | Leroy Somer TAL-042-F                  |
| 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 | 90L                                    |
| Battery                          | Maintenance free Lead Acid             |

### Genset Dimensions & Weight:

| Dimensions | Length (mm) | Width (mm) | Height (mm) | Weight (KG) |
|------------|-------------|------------|-------------|-------------|
| Close Type | 2522        | 972        | 1260        | 994         |
| Open Type  | 1700        | 700        | 1345        | 737         |



#### 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 50Hz for all voltage ratings. \*\*\*

#### Prime Power Rating (PRP)

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

Silent / Closed Type  
Image for illustration purposes only.

#### Standard Reference Conditions

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

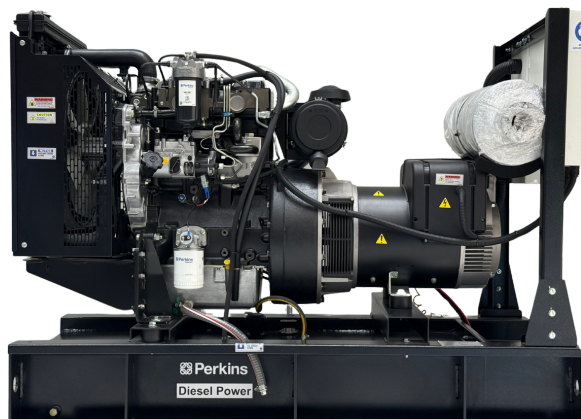
| Engine Specifications       |                      |
|-----------------------------|----------------------|
| Engine Make Model           | PERKINS 1103A-33TG1  |
| No. of Cylinders            | 3 vertical in-line   |
| Cycle                       | 4 Stroke             |
| Aspiration                  | Naturally Aspirated  |
| Cooling Method              | Water cooled         |
| Governing Type              | Mechanical           |
| Governing Class             | G2 - ISO 8528 Part 1 |
| Compression Ratio           | 19.25:1              |
| Displacement                | 3.3 L                |
| Bore/Stroke                 | 105 x 127 mm         |
| Dynamic Charging Alternator | 65AMP, 12V           |

| Cooling System               |                        |
|------------------------------|------------------------|
| Total Coolant Capacity (L)   | 10.2 L                 |
| Cooling Fan Air Flow         | 53 m <sup>3</sup> /min |
| Radiator Fan Load            | 0.4 kW                 |
| Cooling System Design        | 50° C                  |
| Heat Radiation to Room (PRP) | 8 kW                   |

| Lubrication System |                     |
|--------------------|---------------------|
| Oil Filter Type    | Spin-On Full Flow   |
| Total Oil Capacity | 8.3 L               |
| Oil Type           | API-CH-4 or ACEA E5 |

| Air System                        |                         |
|-----------------------------------|-------------------------|
| Air Filter Type                   | Dry Element             |
| Combustion Air Flow (PRP)         | 2.9 m <sup>3</sup> /min |
| Combustion Air Flow (ESP)         | 3.1 m <sup>3</sup> /min |
| Max Air Filter Intake Restriction | 8 kPa                   |

| Exhaust System             |                             |
|----------------------------|-----------------------------|
| Muffler Type               | Residential Grade           |
| Max. Back Pressure         | 10 kPa                      |
| Exhaust Gas Flow (PRP/ESP) | 7.0/7.7 m <sup>3</sup> /min |
| Exhaust Gas Temperature    | ≤ 537° C                    |



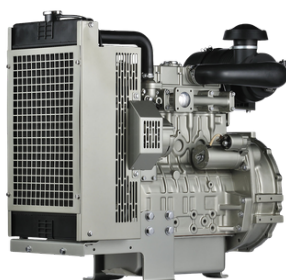
Open Type  
Image for illustration purposes only.

| Engine Fuel System        |                 |
|---------------------------|-----------------|
| Recommended Fuel          | Class A2 Diesel |
| Fuel Consumption Standby  | 11.70 L/hr      |
| Fuel Consumption 100% PRP | 10.52 L/hr      |
| Fuel Consumption 75% PRP  | 7.98 L/hr       |
| Fuel Consumption 50% PRP  | 5.85 L/hr       |

| Alternator Specifications    |                           |
|------------------------------|---------------------------|
| Alternator Make /Model       | Leroy Somer TAL-042-F     |
| 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             | 0.10 m <sup>3</sup> / Sec |

| Controller Make & Model   |                                      |
|---------------------------|--------------------------------------|
| 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,H,z,kVA,kW,Vdc                 |
| Event Log                 | Alarms log; Hrs. log                 |
| Communication             | USB                                  |

Please refer to Controller Data Sheet for more details.



**PERKINS ENGINE**  
1103A-33TG1



**Leroy Somer**  
TAL-042-F



**DSE4520 MKII**  
AUTO START &  
AUTO MAINS  
FAILURE CONTROL

# TECHNICAL DATA SHEET



#### Comply With Standards:

- Engine performance according to ISO 3046, BS 5514, DIN 6271.
- Alternator performance according to NEMA-MG1, BS 5000, DIN EN, relevant ISO, IEC60034.
- Breaker complies with IEC – 60947-2.

| 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 @ | 58.8db(A)/+/-3 db @ 7 mt                                |

## Optional Features:

### Engine

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

### Automatic Transfer Switch (ATS)

- Contractor or Breaker Type ATS
- Motorized Changeover Type ATS

### Alternator

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

### Start Battery

- Nickel-cadmium Battery
- Maintenance-free Battery
- Battery Charger and Selector Switch
- Charging Current Meter

### Cooling System

- 55-degree Radiator
- Remote Radiator

### Exhaust Muffler

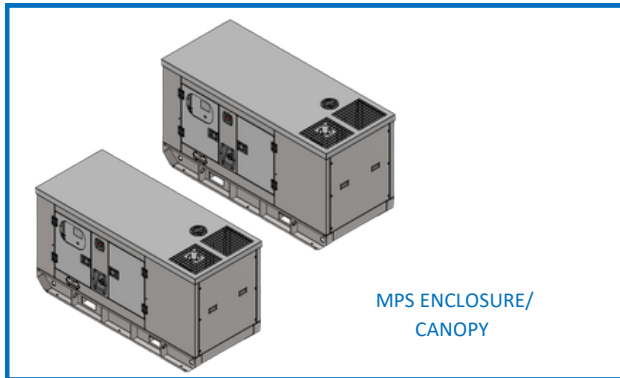
- Residential Grade
- Critical Grade
- Hospital Grade

### Control System

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

### Available for voltages

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



## Why M Energy Power Solution FZE Generator Technology (MPS)?

M Energy Power Solution FZE delivers cutting-edge generator technology, combining robust engineering, exceptional fuel efficiency, and smart digital monitoring to ensure uninterrupted global industrial power.

### Our Brands:



### Documentation:

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

### Key Features & Benefits:

MPS 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.

MPS 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.

MPS 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

Equipped with built-in fuel tank sufficient for 8 to 10 hours of operations.

Compact and rugged design, saving on transport and storage cost

Fully Engineering wide range of optional accessories available.

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

### Warranty Policy:

- M Energy Power Solution FZE Generator technology products have 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 manmade operation, Back up Genset maintenance failures are excluded from the warranty policy
- For more details, please refer to [www.menergypowersolutions.com](http://www.menergypowersolutions.com)

Please Note: Due to continuous research & product development, we reserve the right to change specification without notice.

## CONTACT US

**Address:** JAFZA One Office #B725, Jebel Ali Free Zone, Dubai, UAE

✉ [info@mpsfe.com](mailto:info@mpsfe.com) ☎ +971 48742229 🌐 [www.mpsfe.com](http://www.mpsfe.com)