

MAR-KIM

MP22

INDUSTRIAL RANGE

Perkins



## GENERATING SETS

WATER COOLED
 THREE PHASES
 50 HZ
 DIESEL

| Service               |         | Standby | Prime   |
|-----------------------|---------|---------|---------|
| Power                 | kVA     | 22      | 20      |
| Power                 | kW      | 17.6    | 16      |
| Rated Speed           | r.p.m   |         | 1500    |
| Standart Voltage      | V       |         | 400/230 |
| Rated At Power Factor | Cos Phi |         | 0,8     |

MAR-KIM Company with quality certification ISO 9001

MAR-KIM gensets are compliant with EC mark which includes the following directives:

- 2006/42/CE Machinery safety.
- 2014/30/UE Electromagnetic compatibility.
- 2014/35/UE electrical equipment designed for use within certain voltage limits
- 2000/14/EC Sound Power level. Noise emissions outdoor equipment. (amended by 2005/88/EC)
- 97/68/EC Emissions of gaseous and particulate pollutants. (amended by 2002/88/EC & 2004/26/EC)
- EN 12100, EN 13857, EN 60204

Ambient conditions of reference according to ISO 8528-1:2005 normative: 1000 mbar, 25°C, 30% relative humidity.

G2 class load acceptance in accordance with ISO 8528-5:2013

### MAR-KIM CHEMICALS CO.LTD.

KINONDONI TUNISIA ROAD. PLOT NO:137 DAR ES SALAM-TANZANIA

TEL : +2550786323584 | +255 0677 062 017 | +255 0677062024

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## SPECIFICATIONS



### Engine



### Alternator

#### Engine Specifications

|                                             |                 |                       |
|---------------------------------------------|-----------------|-----------------------|
| Rated Output                                | <i>kW</i>       | 20                    |
| Manufacturer                                |                 | Perkins               |
| Model                                       |                 | 1103A-33G             |
| Engine Type                                 |                 | 4 Stroke - Diesel     |
| Injection Type                              |                 | Direct Injection      |
| Aspiration Type                             |                 | Naturally Aspirated   |
| Number of cylinder                          |                 | 3 L                   |
| Bore and Stroke                             | <i>mm</i>       | 105x127               |
| Displacement                                | <i>L</i>        | 3,3                   |
| Cooling System                              |                 | Water Cooling         |
| Heating Power                               | <i>Watt</i>     | 1000W                 |
| Fuel Consumption 50% PRP                    | <i>l/h</i>      | 4,06                  |
| Fuel Consumption 75% PRP                    | <i>l/h</i>      | 5,61                  |
| Fuel Consumption 100 % PRP                  | <i>l/h</i>      | 7,2                   |
| Fuel Consumption Standby                    | <i>l/h</i>      | 8,1                   |
| Lube oil consumption with full load         | <i>(% fuel)</i> | < 0,15                |
| Total oil capacity including tubes, filters | <i>L</i>        | 8,3                   |
| Total coolant capacity                      | <i>L</i>        | 10,2                  |
| Governor                                    | <i>Type</i>     | Mechanical/Electronic |
| Battery Capacity                            | <i>A</i>        | 60                    |

#### Alternator Specifications

|                                 |             |              |
|---------------------------------|-------------|--------------|
| Manufacturer                    |             | Maranello    |
| Model                           |             | M22          |
| Output Voltage                  | <i>V</i>    | 230/400      |
| Frequency                       | <i>HZ</i>   | 50           |
| Automatic Voltage Regulation    | <i>±%</i>   | 1            |
| Alternator Stand By Power       | <i>kVA</i>  | 33           |
| Alternator Continuous Power     | <i>kVA</i>  | 30           |
| Power Factor                    | <i>Cosφ</i> | 0,8          |
| Number of Wires                 |             | 12           |
| Winding                         |             | 2/3          |
| Protection Class                |             | IP23 / H     |
| Excitation System               |             | Self-excited |
| AVR Model                       |             | SX460        |
| Performance - PF 0,8 / %75 Load | <i>%</i>    | 88           |

#### Prime Power (PRP):

According to ISO 8528-1:2005, Prime power is the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output (Ppp) over 24 h of operation shall not exceed 70 % of the PRP.

#### Emergency Standby Power (ESP):

According to ISO 8528-1:2005, Emergency standby power is the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24 h of operation shall not exceed 70 % of the ESP.

**Note:** All data based on operation to ISO 3046/1, BS 5514 and DIN 6271 standard reference conditions

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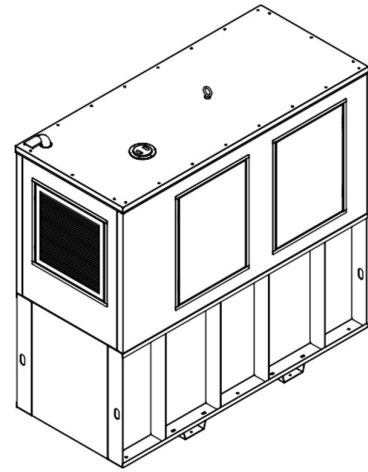
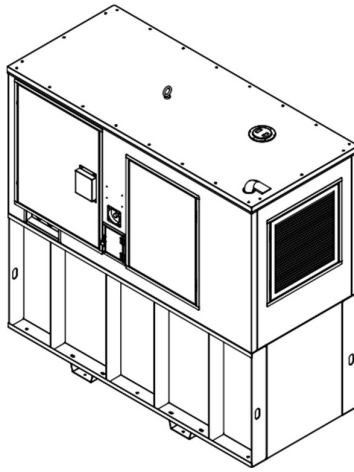
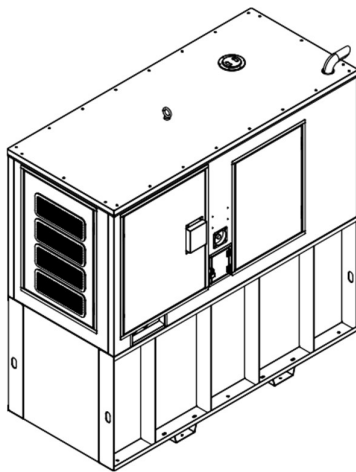


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## DIMENSIONS



### CANOPIED

|           |    |               |
|-----------|----|---------------|
| LxWxH     | mm | 2225x970x2236 |
| Weight    | kg | 1515          |
| Fuel Tank | lt | 1000          |

#### Sound Proof Canopy

- Special design for minimizing acoustic level.
- Galvanized steel construction further protected by polyester powder coat paint.
- Black finish stainless steel locks and hinges.
- Control panel viewing window in a lockable access door.
- Emergency stop push button (red) mounted on enclosure exterior.
- Lifting, drag and jacking points on base frame.
- Radiator fill via removable, flush mounted rain cap fitted with compression seal.
- Acoustic insulation with moisture-repellent and non-flammable material

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# Perkins

## CONTROL UNIT



### Control Unit

#### DSE7410 - DEEP SEA

|                                      |                                |
|--------------------------------------|--------------------------------|
| ATS unit with uninterrupted transfer | Internet Central Monitoring    |
| AMF unit with uninterrupted transfer | SMS / E-mail message sending   |
| Remote / Manuel start controller     | Flexible with plug-in modules  |
| Engine controller                    | Free PC software: Rainbow Plus |
| GSM-GPRS-GPS-Ethernet Port           | Modbus RTU                     |
| 8 configurable digital inputs        |                                |

## ATS PANEL

MAR-KIM automatic transfer switches are reliable, rugged, versatile, and compact assemblies for transferring essential loads and electrical distribution systems from one power source to another. MAR-KIM's contactor-based transfer switch is rated 40–3600A and can be supplied in separate enclosures for standalone applications or can be supplied as an integral component Contactors inside the ATS panels are well known and internationally recognized brands such as ABB, SCHNEIDER, HYUNDAI and ANDELI.



telergon  
görlan team

ANDELI

HYUNDAI

socomec  
Innovative Power Solutions



## OPTIONAL EQUIPMENTS

Some Optional Equipments that MAR-KIM provides with Generator Sets;

- Medium voltage alternator,
- Remote radiator applications,
- Automatic fuel filling system,
- Fuel tank, oil pan, dashboard, alternator, coil heaters,
- Alternator with double AVR and PMG,
- Synchronization systems, The generator output breaker,
- Grid-generator transfer switches,
- Accordance with the specific volume of demand-insulated cabins,
- Seismic solutions,
- Trailer,
- Remote monitoring.
- SMPS 12/24V 10A

Control Panel

- Datakom D500
- Datakom D700
- ComAp AMF9
- ComAp AMF25

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