Diesel Generator Set

MTU 4R0080 DS45

400 – 230 V/41 kVA/50 Hz/prime power
400 – 230 V/45 kVA/50 Hz/standby power
IVECO – F32 SM 1A

Optional equipment and finishing shown. Standard may vary.

Product highlights

Benefits
— Low fuel consumption
— Emissions optimizations available
— High availability and reliability
— Outstanding load acceptance
— Long maintenance intervals

Support
— Global product support offered

Standards
— Engine-generator set is designed and manufactured in facilities certified to standards ISO 2008:9001
— Generator set complies to ISO 8528 and fulfills performance level G2
— Generator meets BS5000; NEMA MG 1; ISO; DIN EN and IEC standards
— NFPA 110

Available emissions optimizations
— Exhaust emission EU 97/68 EC Stage II
— Fuel optimized

Wide standard scope of supply
— 4P circuit breaker
— Island operation control panel
— Integrated fuel tank
— Industrial silencer (15 dB(A))
— Batteries & battery charger

Complete range of accessories available
— Sound attenuated enclosure
— Fuel system accessories
— Control panel & ATS
— Range of additional electronical options

Warranty
— Standard 36 months warranty after shipment
**Application data**

**Engine**
- Manufacturer: IVECO
- Model: F32 SM 1A
- Type: 4-cycle
- Arrangement: L
- Bore: mm 99
- Stroke: mm 104
- Compression ratio: 17.1
- Rated rpm: 1500
- Engine governor: mechanical
- Gross power: kWm (prime/standby) 38.2/42
- Air cleaner: dry

**Fuel system**
- Fuel tank capacity: OPU (EPU) in l 120 (100)
- Autonomy: h 14

**Fuel consumption**
- At standby power rating: l/hr 5.6
- At 100% of power rating: 10.6
- At 50% of power rating: 11.7

**Liquid capacity**
- Total oil system: l 10.5
- Total coolant capacity: l 19.27

**Generator**
- Generator brand: Mecc-Alte
- Generator type: HM200A3N
- Insulation class: H-class
- Bearing: single bearing
- Exciting system: self-excited, brushless

**Electrical**
- Electric system volts DC 12
- Battery capacity: Ah 100

**Air requirements**
- Aspirating: m³/hr 163.5
- Cooling air flow: m³/s 1.6

**Exhaust system**
- Gas temp. (stack): °C 523
- Gas volume at stack temp.: kg/hr 221
- Maximum allowable back pressure: kPa 5

**Cooling/radiator system**
- Ambient capacity of radiator: OPU (EPU) in °C 50 (40)
- Fan power consumption: kWm 0.5

**System ratings (kW/kVA)**

<table>
<thead>
<tr>
<th></th>
<th>MTU 4R0080 DS45</th>
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</thead>
<tbody>
<tr>
<td><strong>Prime operation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>400 V</td>
<td>400 V</td>
</tr>
<tr>
<td>Phase</td>
<td>Three phase</td>
<td>Three phase</td>
</tr>
<tr>
<td>Hz</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>kWel*</td>
<td>32.8</td>
<td>36.0</td>
</tr>
<tr>
<td>kVA**</td>
<td>41</td>
<td>45</td>
</tr>
<tr>
<td>Rated AMPS</td>
<td>59.2</td>
<td>65.0</td>
</tr>
</tbody>
</table>

* cos phi = 1.0
** cos phi = 0.8  Also available for following voltages 380V & 415V - for details please contact your local MTU dealer.

1 Technical data is for 100% power.
2 Technical data is for prime power.
3 Technical data is for standby power.
## Standard and optional features

### Engine
- 4-stroke diesel engine
- Flywheel housing SAE 3
- Flywheel 11 1/2"
- Oil pan
- Lube oil circulation pump
- Lube oil filter
- Dry exhaust manifolds
- Hot components and radiator guards
- Mobile components guards
- Electronic engine regulat

### Fuel system
- Fuel filter with water-separator
- Direct fuel injection system
- Automatic fuel transfer pump
- Heavy-duty fuel pre-filter with water separator
- 3-way valve for fuel filling
- Integrated fuel tank (level sensor and drain cap incl.)

### Generator
- 3-Phase, syncronos, brushless, self exciting, self regulating, self ventilating alternator
- IP23 M protection degree
- IP23 protection cover
- Winding temperature sensors
- Insulation class H
- Anti condensation

### Control panel & electric options
- Control and power electric panel, with measurements devices and controller
- ATS (Automatic Transfer Switch)
- Control version for parallel operation
- Control version for synchronizing a single genset with mains
- Programmable timer for MM7 and MC7
- Remote display
- Expansion module for CAN communication
- Change over power supply for MC7
- Input Output/LED expansion modules for DeepSea controllers
- ModBus connection to customer systems TCP/IP
- Control version for synchronizing with mains without blackout
- Converter kits CAN to RS485/USB/LAN

### Circuit breaker/power distribution
- 4 poles manual circuit breaker (motorized with DeepSea controllers)

### Starting/charging system
- 12V electric system
- Starting batteries installed
- Pre-heating resistance/jacket water heater
- Battery charging alternator
- Battery disconnector
- Battery charger

### Air intake system
- Dry-type air filter
- Heavy duty air filter with automatic dust evacuation

- Represents standard features
- Represents optional features
Standard and optional features

Exhaust System

☑ Industrial silencer 15 dB(A)
☐ Residential silencer 35 dB(A)

Cooling system

☑ Coolant circulation pump
☐ Front type radiator for jacket water
☐ Engine mounted fan drive

Mounting system

☑ Mounted on steel base frame
☐ Resilent mounting of engine and generator

Enclosures

☐ Sound proof enclosure
☐ Socket box
☐ Increased fuel tank capacity

Documentation & certifications

☑ Genset & component manuals
☐ CE-certification for EU
☐ Maintenance schedule
☐ Fluids and lubricants specification
Weights and dimensions

Drawing above for illustration purposes only, based on a standard open power 400 Volt engine-generator set. Lengths may vary with other voltages. Do not use for installation design. See website for unit specific template drawings.

<table>
<thead>
<tr>
<th>System</th>
<th>Dimensions (L x W x H)</th>
<th>Weight (wet/with standard accessories)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open power unit (OPU)</td>
<td>1850 x 780 x 1500 mm</td>
<td>714 kg</td>
</tr>
<tr>
<td>Enclosed power unit</td>
<td>2100 x 975 x 1349 mm</td>
<td>1044 kg</td>
</tr>
</tbody>
</table>

Consult the factory for accurate weights and dimensions for your specific engine-generator set. Lengths may vary with other voltages. Do not use for installation design.

Sound data

<table>
<thead>
<tr>
<th>Unit type</th>
<th>dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open power unit: dB(A)</td>
<td>on request</td>
</tr>
<tr>
<td>Enclosed power unit: dB(A)</td>
<td>62</td>
</tr>
</tbody>
</table>

According to 2000/14/CE.
Sound data is provided at 7m for 75% prime power.

Rating definitions and conditions

- Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO 8528-1, ISO 3046-1, BS 5514, AS 2789 and DIN 6271. Average load factor: < 75%.
- Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. No overload capability for this rating. Ratings are in accordance with ISO 8528-1, ISO 3046-1, BS 5514, AS 2789 and DIN 6271. Average load factor: < 85%, max. 500h/year.

- Consult your local MTU distributor for derating information.

Rated power for reference conditions at 25°C and 100m above sea level.