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**: 4-L
- **Displacement**: 3.2 L
- **Bore**: 99 mm
- **Stroke**: 104 mm
- **Compression ratio**: 17.1
- **Rated rpm**: 1500
- **Engine governor**: mechanical
- **Gross power**: 38.2 kW (prime) / 42 kW (standby)
- **Air cleaner**: dry

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

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

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

#### Generator
- **Generator brand**: Mecc-Alte
- **Generator type**: HM200A3N
- **Insulation class**: H-class
- **Bearing**: single bearing
- **Enclosure**: IP23 M
- **Voltage regulation**: A.V.R. (electronic)
- **Exciting system**: self-excited, brushless

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

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

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

#### Cooling/radiator system
- **Ambient capacity of radiator**: 50 (40) °C
- **Fan power consumption**: 0.5 kW

#### Standard and optional features

### System ratings (kW/kVA)

<table>
<thead>
<tr>
<th>MTU 4R0080 DS45</th>
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</thead>
<tbody>
<tr>
<td><strong>Prime operation</strong></td>
<td><strong>Standby operation</strong></td>
</tr>
<tr>
<td><strong>Voltage</strong></td>
<td>400 V</td>
</tr>
<tr>
<td><strong>Phase</strong></td>
<td>Three phase</td>
</tr>
<tr>
<td><strong>Hz</strong></td>
<td>50</td>
</tr>
<tr>
<td><strong>kWel</strong></td>
<td>32.8</td>
</tr>
<tr>
<td><strong>kVA</strong></td>
<td>41</td>
</tr>
<tr>
<td><strong>Rated AMPS</strong></td>
<td>59.2</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.
# Standard and optional features

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

## 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, synconos, 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
- Fluids and lubricants specification

■ Represents standard features
□ Represents optional features
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></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.