Diesel Generator Set

MTU 4R0113 DS94

400 – 230 V/85 kVA/50 Hz/prime power
400 – 230 V/94 kVA/50 Hz/standby power
IVECO – NEF45 SM5

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 fullfills performance level G2
— Generator meets BS5000; NEMA MG 1; ISO; DIN EN and IEC standards
— NFPA 110

Available emissions optimizations
— 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**: NEF45 SM5
- **Type**: 4-cycle
- **Arrangement**: L
- **Bore**: mm 104
- **Stroke**: mm 132
- **Compression ratio**: 17.5
- **Rated rpm**: 1500
- **Engine governor**: mechanical
- **Air cleaner**: dry

#### Fuel system
- **Fuel tank capacity**: OPU (EPU) in l 145 (288)
- **Autonomy**: hr 11

#### Fuel consumption
- **At standby power rating**: l/hr 19
- **At 100% of power rating**: l/hr 17.1
- **At 50% of power rating**: l/hr 8.6

#### Liquid capacity
- **Total oil system**: l 12.8
- **Total coolant capacity**: l 18.5

#### Generator
- **Generator brand**: Mecc-Alte
- **Generator type**: HM250B1
- **Insulation class**: H-class
- **Bearing**: single bearing
- **Voltage regulation**: A.V.R. (electronic)
- **Exciting system**: self-excited, brushless

#### System ratings (kW/kVA)

<table>
<thead>
<tr>
<th>MTU 4R0113 DS94</th>
<th>MTU 4R0113 DS94</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prime operation</strong></td>
<td><strong>Standby operation</strong></td>
</tr>
<tr>
<td><strong>MTU 4R0113 DS94</strong></td>
<td><strong>MTU 4R0113 DS94</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>68.0</td>
</tr>
<tr>
<td><strong>kVA</strong></td>
<td>85</td>
</tr>
<tr>
<td><strong>Rated AMPS</strong></td>
<td>122.7</td>
</tr>
<tr>
<td><strong>MTU 4R0113 DS94</strong></td>
<td><strong>MTU 4R0113 DS94</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>75.2</td>
</tr>
<tr>
<td><strong>kVA</strong></td>
<td>94</td>
</tr>
<tr>
<td><strong>Rated AMPS</strong></td>
<td>135.7</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-strokes diesel engine
- Flywheel housing SAE 3
- Flywheel 11½''
- 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, synchronos, 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
- Resilient mounting of engine and generator

Enclosures
- Sound proof enclosure
- Socket box
- Increased fuel tank capacity

Documentation & certifications
- Genset & component manuals
- Maintenance schedule
- CE-certification for EU
- 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>2150 x 780 x 1500 mm</td>
<td>978 kg</td>
</tr>
<tr>
<td>Enclosed power unit</td>
<td>2750 x 1100 x 1760 mm</td>
<td>1568 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>69</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. 500hr/year.

Consult your local MTU distributor for derating information.

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