Diesel Generator Set

mtu 4R0113 DS80

400 – 230 V/73 kVA/50 Hz/prime power
400 – 230 V/80 kVA/50 Hz/standby power
IVECO – NEF45 SM 2A

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

Optional equipment and finishing shown. Standard may vary.
Application data

Engine
Manufacturer: IVECO
Model: NEF45 SM 2A
Type: 4-cycle
Arrangement: 4-L
Bore: mm 104
Stroke: mm 132
Compression ratio: 17.5
Rated rpm: 1500
Engine governor: mechanical
Gross power: kWm (prime/standby)
Prime operation: 66
Standby operation: 73

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

Fuel consumption
At standby power rating:
At 100% of power rating:
At 50% of power rating:

Liquid capacity
Total oil system: l 12.8
Total coolant capacity: l 18.5

Generator
Generator brand: Mecc-Alte
Generator type: HM200B3N
Insulation class: H-class
Bearing: single bearing
Enclosure: IP23 M
Exciting system: self-excited, brushless

Electrical
Electric system volts DC 12
Battery capacity: Ah 100

Air requirements
Aspirating: m³/hr 295
Cooling air flow: m³/s 2.2

Exhaust system
Gas temp. (stack): °C 525
Gas volume at stack temp.: kg/hr 371
Maximum allowable back pressure: kPa 5

Cooling/radiator system
Ambient capacity of radiator: OPU (EPU) in °C 50 (40)

Standard and optional features

System ratings (kW/kVA)

<table>
<thead>
<tr>
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<th>mtu 4R0113 DS80</th>
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<tbody>
<tr>
<td></td>
<td>Prime operation</td>
<td>Standby operation</td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>400 V</td>
<td>400 V</td>
<td></td>
</tr>
<tr>
<td>Phase</td>
<td>Three phase</td>
<td>Three phase</td>
<td></td>
</tr>
<tr>
<td>Hz</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>kWm*</td>
<td>58.4</td>
<td>64.0</td>
<td></td>
</tr>
<tr>
<td>kVA**</td>
<td>73</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Rated AMPS</td>
<td>105.4</td>
<td>115.5</td>
<td></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.
### Engine
- 4-strokes 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 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, 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
- Resilient 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
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 (LxWxH)</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>974 kg</td>
</tr>
<tr>
<td>Enclosed power unit</td>
<td>2750 x 1100 x 1760 mm</td>
<td>1564 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>
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<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.

Rolls-Royce Group
www.mtu-solutions.com/powergen