MTU 12V1600 DS730
400 – 230 V/728 kVA/50 Hz/standby power/series 1600 – 12V1600

Product highlights

Benefits
— Industry-leading average load factor
— 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 G3
— Generator meets BS5000; NEMA MG 1; ISO; DIN EN and IEC standards

Available optimizations
— NEA Singapore for off road diesel engines (ORDE)
— 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 shown. Standard equipment may vary.
Application data

<table>
<thead>
<tr>
<th>Engine</th>
<th>Generator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>MTU</td>
</tr>
<tr>
<td>Model</td>
<td>12V1600G80F</td>
</tr>
<tr>
<td>Type</td>
<td>4-cycle</td>
</tr>
<tr>
<td>Arrangement</td>
<td>12V</td>
</tr>
<tr>
<td>Displacement: l</td>
<td>21</td>
</tr>
<tr>
<td>Bore: mm</td>
<td>122</td>
</tr>
<tr>
<td>Stroke: mm</td>
<td>150</td>
</tr>
<tr>
<td>Compression ratio</td>
<td>17.5</td>
</tr>
<tr>
<td>Rated rpm</td>
<td>1500</td>
</tr>
<tr>
<td>Engine governor</td>
<td>ECU 8</td>
</tr>
<tr>
<td>Gross power: kWm</td>
<td>634</td>
</tr>
<tr>
<td>Air cleaner</td>
<td>dry</td>
</tr>
<tr>
<td>Fuel system</td>
<td>Generator brand</td>
</tr>
<tr>
<td>Max. fuel flow: l/hr</td>
<td>Generator type</td>
</tr>
<tr>
<td>Fuel tank capacity: OPU (EPU) in l</td>
<td>Insulation class</td>
</tr>
<tr>
<td>Autonomy: hr</td>
<td>Bearing</td>
</tr>
<tr>
<td>Fuel consumption</td>
<td>Enclosure</td>
</tr>
<tr>
<td>At 100% of power rating:</td>
<td>Voltage regulation</td>
</tr>
<tr>
<td></td>
<td>Exciting system</td>
</tr>
<tr>
<td>Liquid capacity</td>
<td>Electrical</td>
</tr>
<tr>
<td>Total oil system: l</td>
<td>Electric system volts DC</td>
</tr>
<tr>
<td>Total coolant capacity: l</td>
<td>Number of batteries</td>
</tr>
<tr>
<td></td>
<td>Capacity: Ah</td>
</tr>
<tr>
<td></td>
<td>Air requirements</td>
</tr>
<tr>
<td></td>
<td>Aspirating: m³/min</td>
</tr>
<tr>
<td></td>
<td>Cooling air flow: m³/s</td>
</tr>
<tr>
<td></td>
<td>Exhaust system</td>
</tr>
<tr>
<td></td>
<td>Gas temp. (stack): °C</td>
</tr>
<tr>
<td></td>
<td>Gas volume at stack temp.: m³/min</td>
</tr>
<tr>
<td></td>
<td>Maximum allowable back pressure: kPa</td>
</tr>
<tr>
<td></td>
<td>Cooling/radiator system</td>
</tr>
<tr>
<td></td>
<td>Ambient capacity of radiator: OPU (EPU) in °C</td>
</tr>
<tr>
<td></td>
<td>Pressure on rad. exhaust: kPa</td>
</tr>
<tr>
<td></td>
<td>Heat rejection to coolant: kW</td>
</tr>
</tbody>
</table>

Standard and optional features

System ratings (kW/kVA)

<table>
<thead>
<tr>
<th>12V1600 DS730</th>
<th>12V1600 DS730</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>Standby operation</td>
</tr>
<tr>
<td>Phase</td>
<td>400 V</td>
</tr>
<tr>
<td>Hz</td>
<td>Three phase</td>
</tr>
<tr>
<td>kWe*</td>
<td>582.4</td>
</tr>
<tr>
<td>kVA**</td>
<td>728</td>
</tr>
<tr>
<td>Rated AMPS</td>
<td>1050.8</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 a fuel-optimized unit.
## Standard and optional features

### Engine
- 4-strokes diesel engine
- Flywheel housing SAE 1
- Flywheel 14"
- Four-valve, overhead camshaft
- Piston cooling via oil spray nozzle
- Forged crankshaft & connecting rods
- Oil pan
- Lube oil circulation pump
- Dry exhaust manifolds
- Hot components and radiator guards
- Mobile components guards
- Lube oil filter

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

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

### 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
- 24V electric system
- Starting batteries installed
- Pre-heating resistance/jacket water heater
- Battery charging alternator
- Battery disconnector
- Battery charger

### Air intake system
- Exhaust turbochargers
- Set of dry-type air filters with containment indicator
- Intercooler, integrated in radiator
- 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)
- □ Exhaust bellows

**Cooling system**
- ■ Coolant circulation pump
- ■ Front type radiator for jacket water and charge aircooling circuit with integrated expansion tank
- □ 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

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Rating definitions and conditions

- 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.

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System | Dimensions (L x W x H) | Weight (wet/with standard accessories)
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Open power unit (OPU) | 3600 x 1604 x 2121 mm | 4671 kg
Enclosed power unit | 5000 x 2100 x 2369 mm | 6881 kg

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</td>
<td>110</td>
</tr>
<tr>
<td>Enclosed power unit</td>
<td>90</td>
</tr>
</tbody>
</table>

According to 2000/14/CE.
Sound data is provided at 1m for 75% prime power.