Diesel Generator Set

MTU 12V1600 DS730

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

Optional equipment shown. Standard equipment may vary.

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

A Rolls-Royce solution
### Application data

#### Engine
- **Manufacturer**: MTU
- **Model**: 12V1600G80F
- **Type**: 4-cycle
- **Displacement**: l 21
- **Bore**: mm 122
- **Stroke**: mm 150
- **Compression ratio**: 17.5
- **Rated rpm**: 1500
- **Engine governor**: ECU 8
- **Gross power**: kWm 634
- **Air cleaner**: dry

#### Fuel system
- **Max. fuel flow**: l/hr 342
- **Fuel tank capacity**: OPU (EPU) in l 740 (950)
- **Autonomy**: hr 7

#### Fuel consumption
- **At 100% of power rating**: l/hr 141.54

#### Liquid capacity
- **Total oil system**: l 72.5
- **Total coolant capacity**: l 99

#### Generator
- **Generator brand**: Mecc-Alte
- **Generator type**: HM355B3
- **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**: 24
- **Number of batteries**: 2
- **Capacity**: Ah 2x 75

#### Air requirements
- **Aspirating**: m³/min 45
- **Cooling air flow**: m³/s 11.7

#### Exhaust system
- **Gas temp. (stack)**: °C 485
- **Gas volume at stack temp.**: m³/min 120
- **Maximum allowable back pressure**: kPa 15

#### Cooling/radiator system
- **Ambient capacity of radiator**: OPU (EPU) in °C 40 (35)
- **Pressure on rad. exhaust**: kPa 0.2
- **Heat rejection to coolant**: kW 255

### Standard and optional features

#### System ratings (kW/kVA)

<table>
<thead>
<tr>
<th>12V1600 DS730</th>
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<tbody>
<tr>
<td><strong>Standby operation</strong></td>
</tr>
<tr>
<td><strong>Voltage</strong>: 400 V</td>
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<tr>
<td><strong>Phase</strong>: Three phase</td>
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<tr>
<td><strong>Hz</strong>: 50</td>
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<tr>
<td><strong>kWel</strong>*: 582.4</td>
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<tr>
<td><strong>kVA</strong>**: 728</td>
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<td><strong>Rated AMPS</strong>: 1050.8</td>
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1) Technical data is for a fuel-optimized unit.

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* 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-stroke 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, synconos, 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

### 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

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

#### 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

#### 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
- Resilent 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

— 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.