MTU 10V1600 DS560
400 – 230 V/510 kVA/50 Hz/prime power/series 1600 – 10V1600

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 fullfills performance level G3
— Generator meets BS5000; NEMA MG 1; ISO; DIN EN and IEC standards

Available optimizations
— NOx emission optimized (NOx < 1500mg/m³ i:N.)
— EU Nonroad St IIIA comp (97/68/EC)
— NEA Singapore for off road diesel engines (ORDE)
— ARAI CPCB 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

<table>
<thead>
<tr>
<th>Engine</th>
<th></th>
<th>Generator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>MTU</td>
<td>Generator brand</td>
</tr>
<tr>
<td>Model</td>
<td>10V1600G20F</td>
<td>Generator type</td>
</tr>
<tr>
<td>Type</td>
<td>4-cycle</td>
<td>Insulation class</td>
</tr>
<tr>
<td>Arrangement</td>
<td>10V</td>
<td>Bearing</td>
</tr>
<tr>
<td>Displacement: l</td>
<td>17.5</td>
<td>Enclosure</td>
</tr>
<tr>
<td>Bore: mm</td>
<td>122</td>
<td>Voltage regulation</td>
</tr>
<tr>
<td>Stroke: mm</td>
<td>150</td>
<td>Exciting system</td>
</tr>
<tr>
<td>Compression ratio</td>
<td>17.5</td>
<td></td>
</tr>
<tr>
<td>Rated rpm</td>
<td>1500</td>
<td></td>
</tr>
<tr>
<td>Engine governor</td>
<td>ECU 8</td>
<td></td>
</tr>
<tr>
<td>Gross power: kWm</td>
<td>448</td>
<td></td>
</tr>
<tr>
<td>Air cleaner</td>
<td>dry</td>
<td></td>
</tr>
</tbody>
</table>

#### Fuel system

- Max. fuel flow: l/hr | 342 |
- Fuel tank capacity: OPU (EPU) in l | 740 (740) |
- Autonomy: hr | 9 |

#### Fuel consumption

- At 100% of power rating: l/h | 108.87 |
- At 75% of power rating: l/h | 86.34 |
- At 50% of power rating: l/h | 60.69 |

#### Liquid capacity

- Total oil system: l | 60.5 |
- Total coolant capacity: l | 94 |

#### Standard and optional features

### System ratings (kW/kVA)

<table>
<thead>
<tr>
<th>10V1600 DS560</th>
<th>Prime operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>400 V</td>
</tr>
<tr>
<td>Phase</td>
<td>Three phase</td>
</tr>
<tr>
<td>Hz</td>
<td>50</td>
</tr>
<tr>
<td>kWel*</td>
<td>408.0</td>
</tr>
<tr>
<td>kVA**</td>
<td>510</td>
</tr>
<tr>
<td>Rated AMPS</td>
<td>736.1</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.

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1 Technical data is for a fuel-optimized unit.

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1)
### 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, synchro, 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
- Winding temperature sensors
- 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 air cooling 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
- Maintenance schedule
- CE-certification for EU
- Fluids and lubricants specification
Weights and dimensions

Drawing above for illustration purposes only, based on 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>3600 x 1604 x 2121 mm</td>
<td>4002 kg</td>
</tr>
<tr>
<td>Enclosed power unit</td>
<td>4500 x 1800 x 2340 mm</td>
<td>5712 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>dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open power unit: dBA</td>
<td>104</td>
</tr>
<tr>
<td>Enclosed power unit: dBA</td>
<td>85</td>
</tr>
</tbody>
</table>

According to 2000/14/CE.
Sound data is provided at 1 m 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%.
— Consult your local MTU distributor for derating information.

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