

# DIESEL GENERATOR SET

## MTU 10V1600 DS560

400 – 230 V/562 kVA/50 Hz/Standby Power  
Series 1600 – MTU 10V1600



Optional equipment and finishing shown. Standard 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

- Exhaust emission EU 97/68 EC Stage III A
- 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 electrical options

#### // Warranty

- Standard 36 months warranty after shipment

APPLICATION DATA<sup>①</sup>

## // Engine

Manufacturer	MTU
Model	10V1600G80F
Type	4-cycle
Arrangement	10-V
Displacement: L	17.5
Bore: mm	122
Stroke: mm	150
Compression ratio	17.5
Rated rpm	1500
Engine governor	ECU 8
Gross power: kWm	493
Air cleaner	Dry

## // Fuel System

Max. fuel flow: L/h	342
Fuel tank capacity: OPU (EPU) in L	740 (740)
Autonomy: h	9

## // Fuel Consumption

	L/h
At 100% of power rating:	117.52

## // Liquid Capacity

Total oil system: L	60.5
Total coolant capacity: L	94

## // Generator

Generator brand	Mecc-Alte
Generator type	HM355B1
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: m <sup>3</sup> /min	28.8
Cooling air flow: m <sup>3</sup> /s	10.9

## // Exhaust System

Gas temp. (stack): °C	540
Gas volume at stack temp.: m <sup>3</sup> /min	82.8
Maximum allowable back pressure: kPa	15

## // Cooling/Radiator System

Ambient capacity of radiator in OPU (EPU): °C	50 (50)
Pressure on rad. exhaust: kPa	0.2
Heat rejection to coolant: kW	227

① Technical data is for a fuel-optimized unit.

## STANDARD AND OPTIONAL FEATURES

### // System Ratings (kW/kVA)

	MTU 10V1600 DS560
	<b>Standby operation</b>
Voltage	400 V
Phase	Three phase
Hz	50
kWel*	448.8
kVA**	561
Rated AMPS	809.7

\* cos phi = 1,0

\*\* cos phi = 0,8

Also available for following voltages 380V & 415V - for details please contact your local MTU Onsite Energy Dealer.

### // 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
- Winding temperature sensors
- 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

■ Represents standard features

□ Represents optional features

## STANDARD AND OPTIONAL FEATURES, CONTINUATION

### // Circuit Breaker/Power Distribution

- 4 poles manual circuit breaker  
(motorized with DeepSea controllers)

### // Starting/Charging System

- |                                |   |                               |
|--------------------------------|---|-------------------------------|
| ■ 24V electric system          | ■ Pre-heating resistance/jacket<br>water heater | ■ Battery charging alternator |
| ■ Starting batteries installed |   | ■ Battery disconnecter        |
|                                |   | ■ Battery charger             |

### // Air Intake System

- |   |  |
|---|--|
| ■ Exhaust turbochargers                                     | ■ Intercooler, integrated in radiator  |
| ■ Set of dry-type air filters with<br>containment indicator | <input type="checkbox"/> Heavy duty air filter with automatic<br>dust evacuation |

### // Exhaust System

- |                                |  |  |
|--------------------------------|--|--|
| ■ Industrial silencer 15 dB(A) | <input type="checkbox"/> Residential silencer 35 dB(A) | <input type="checkbox"/> Exhaust bellows |
|--------------------------------|--|--|

### // Cooling System

- |                            |   |                            |
|----------------------------|---|----------------------------|
| ■ Coolant circulation pump | ■ Front type radiator for jacket water<br>and charge aircooling circuit with<br>integrated expansion tank | ■ Engine mounted fan drive |
|----------------------------|---|----------------------------|

### // Mounting System

- |                               |   |
|-------------------------------|---|
| ■ Mounted on steel base frame | ■ Resilient mounting of engine<br>and generator |
|-------------------------------|---|

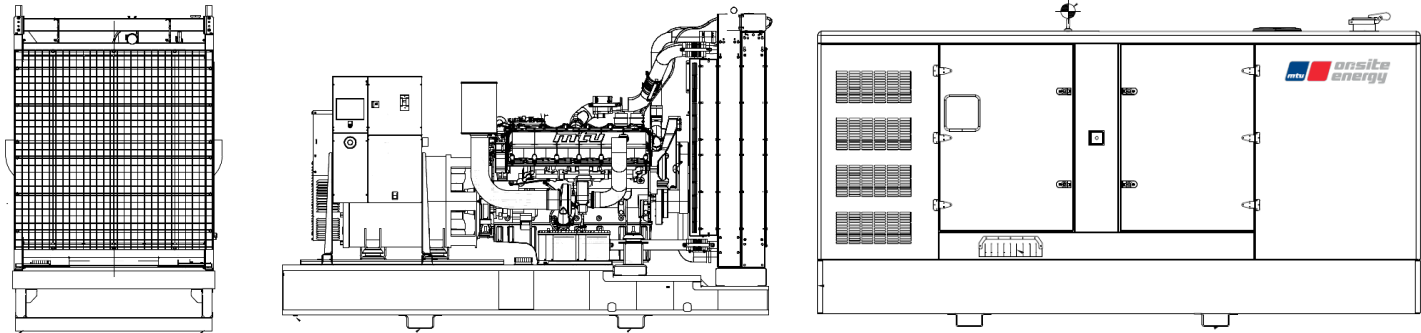
### // Enclosures

- |  |                                     |   |
|--|-------------------------------------|---|
| <input type="checkbox"/> Sound proof enclosure | <input type="checkbox"/> Socket box | <input type="checkbox"/> Increased fuel tank capacity |
|--|-------------------------------------|---|

### // Documentation & Certifications

- |                              |  |
|------------------------------|--|
| ■ Genset & component manuals | <input type="checkbox"/> CE-certification for EU |
| ■ Maintenance schedule       | ■ Fluids and lubricants specification            |

## WEIGHTS AND DIMENSIONS



Drawing above for illustration purposes only, based on standard open and enclosed 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.

System	Dimensions (LxWxH)	Weight (wet/with standard accessories)
Open Power Unit (OPU)	3.600 x 1.604 x 2.121 mm	4.002 kg
Enclosed Power Unit	4.500 x 1.800 x 2.340 mm	5.712 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

Unit Type	
Open Power Unit: dB(A)	105
Enclosed Power Unit: dB(A)	85

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

## 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.
- // Derating factor:  
Altitude: Consult your local MTU Onsite Energy Power Generation distributor for altitude derating.  
Temperature: Consult your local MTU Onsite Energy Power Generation distributor for temperature derating.

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

Materials and specifications subject to change without notice.