

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 fullfills 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 consumption 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 data¹⁾

Engine

Manufacturer	MTU	Generator brand
Model	12V1600G80F	Generator type
Туре	4-cycle	Insulation class
Arrangement	12V	Bearing
Displacement: l	21	Enclosure
Bore: mm	122	Voltage regulation
Stroke: mm	150	Exciting system
Compression ratio	17.5	
Rated rpm	1500	Electrical
Engine governor	ECU 8	Electric system volts D
Gross power: kWm	634	Number of batteries
Air cleaner	dry	Capacity: Ah
Fuel system		Air requirements
Max. fuel flow: l/hr	342	Aspirating: m³/min
Fuel tank capacity: OPU (EPU) in l	740 (950)	Cooling air flow: m ³ /s
Autonomy: hr	7	
		Exhaust system
Fuel consumption	l/hr	Gas temp. (stack): °C
At 100% of power rating:	141.54	Gas volume at stack te
		Maximum allowable ba
Liquid capacity		
Total oil system: l	72.5	Cooling/radiator syste
Total coolant capacity: l	99	Ambient capacity of ra
		-

Mecc-Alte HM355B3 H-class single bearing IP23 M A.V.R. (electronic) self-excited, brushless DC 24 2 2x 75 45 11.7 485 temp.: m³/min 120 back pressure: kPa 15 tem Ambient capacity of radiator: OPU (EPU) in °C 40 (35) Pressure on rad. exhaust: kPa 0.2

255

Generator

Heat rejection to coolant: kW

Standard and optional features

System ratings (kW/kVA)

	12V1600 DS730
	Standby operation
Voltage	400 V
Phase	Three phase
Hz	50
kWel*	582.4
kVA**	728
Rated AMPS	1050.8

* 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- strokes diesel engine
- Flywheel housing SAE 1
- Flywheel 14"
- Four-valve, overhead camshaft
- Piston cooling via oil spray nozzle
- Forged crankshaft & connecting rodsOil 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 seperator
- Common rail fuel injection
- Integrated fuel tank (level sensor and drain cap incl.)
- $\hfill\square$ Automatic fuel transfer pump
- Heavy-duty fuel pre-filter with water seperator
- □ 3-way valve for fuel filling
- □ Fuel cooler

Generator

- 3-Phase, syncronos, 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 contoller
- $\hfill\square$ 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

Represents standard features

Standard and optional features

Air intake system

- Exhaust turbochargers
- Set of dry-type air filters with contaiment 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

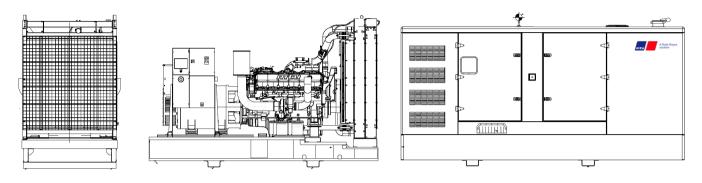
□ Increased fuel tank capacity

Documentation & certifications

- Genset & component manuals
- Maintenance schedule
- $\hfill\square$ CE-certification for EU
- Fluids and lubricants specification

- Represents standard features
- Represents optional features

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.

System	Dimensions (LxWxH)	Weight (wet/with standard accessories)
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

Unit type	
Open power unit: dB(A)	110
Enclosed power unit: dB(A)	90

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.
- Consult your local *mtu* distributor for derating information.

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