



Power Generation

SOLUTION GUIDE

Edition 1/20, valid from 01/2020



A Rolls-Royce
solution

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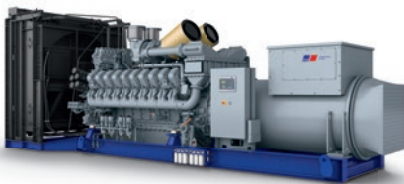
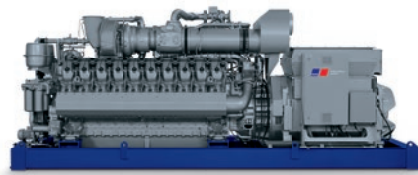
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PIONEERING THE POWER THAT MATTERS.

Rolls-Royce provides world-class power solutions and complete life-cycle support under our product and solution brand MTU. Through digitalization and electrification, we strive to develop drive and power generation solutions that are even cleaner and smarter and thus provide answers to the challenges posed by the rapidly growing societal demands for energy and mobility. We deliver and service comprehensive, powerful and reliable systems, based on both gas and diesel engines, as well as electrified hybrid systems. These clean and technologically-advanced solutions serve our customers in the marine and infrastructure sectors worldwide.

A solution provider

MTU systems power the largest yachts, the strongest tugboats and the biggest land vehicles and provide energy for the world's most important mission-critical applications. Through advanced solutions such as microgrids, we integrate renewable energies and manage the power needs of our customers.

Our customized service offerings help you maximize uptime and performance and are supported by our digital solutions, which enable remote monitoring, predictive maintenance and a range of other benefits that keep your systems running at their best.

For over 110 years, we have provided innovative power solutions for our customers – meeting even the most demanding drive requirements. Our products and services span a wide range of applications and power needs, with both standard and customized options.

An expert in technology

As part of Rolls-Royce, we have long been known for cutting-edge innovation and technological leadership in product development. That same spirit of innovation inspires our sustainability efforts. Our focus is on developing and implementing system solutions that both maximize efficiency and reduce emissions -- which in turn work to reduce our impact on the environment.

A passionate and reliable partner

We at Rolls-Royce spend every day working together with our customers, to deliver engines, systems and complete life-cycle solutions that best fit your needs. We understand that each application is different and has its own specific demands. Our engineers embrace the challenge of finding the perfect solution for your unique power requirements. Every step of the way – from project planning, through design, delivery and commissioning; to the lifetime care of your equipment – we are dedicated to helping you get the most from your MTU investment.

Rating definitions

FOR POWER SOLUTIONS.

Standby**Standardized backup (3D)**

Standardized backup applies to installations served by a reliable utility source. The standby ratings are applicable to varying loads for the duration of a power outage.

**Prime power for stationary emergency (3E)**

Prime power for stationary emergency provides classical standby power comparable to the application group standardized backup (3D). The difference is that this application group offers a 10% overload capability to cover for e.g. voltage variations or peak loads.

**Data center continuous (3F)**

Data center continuous power is a specific mission critical application. It is especially designed for the use in data centers as emergency standby units. "Data centre continuous power" offers an economic and customer friendly solution to comply to the Uptime Institute* Tier III and Tier IV standards.

**Continuous/Prime/Peak****Continuous + CHP (3A)**

Continuous power applies to installations where one or several generator sets serve as utility. At constant or varying load, the number of generator set operating hours is unlimited. Typical application here is CHP.

**Prime (3B)**

Prime power applies to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited.

**Peak^(A) (3G)**

Peak power is focused on providing additional short-term power to the grid (peak shaving). This application becomes relevant whenever renewable power sources like solar or wind are used that might not always be able to provide the full power demand for example during peak load times.



* The Uptime Institute is a pioneer in creating and operating knowledge communities for improving uptime effectiveness in data center facilities and information technology organizations.

A Only available for 50Hz markets

Rating definitions

OVERVIEW

Standby	MTU Power Generation	ISO 8528-1 (ESP)
Standardized backup (3D)		
Load	variable	variable
Load factor	≤ 85%	≤ 70%
10% overload (ICXN)	no	not specified
Max. operating hours (per year)	500 h	200 h
Uptime compliant	Tier I & Tier II	not specified

Prime power for stationary emergency (3E)	MTU Power Generation	ISO 8528-1 (ESP)
Load	variable	variable
Load factor	≤ 85%	≤ 70%
10% overload (ICXN)	yes	not specified
Max. operating hours (per year)	500 h	200 h
Uptime compliant	Tier I & Tier II	not specified

Data center continuous (3F)	MTU Power Generation	ISO 8528-1 (DCP)
Load	continuous	continuous or variable
Load factor	≤ 100%	≤ 100%
10% overload (ICXN)	yes	not specified
Max. operating hours (per year)	unlimited ^(B)	unlimited
Uptime compliant	Tier I - Tier IV	not specified

Continuous/Prime/Peak	MTU Power Generation	ISO 8528-1 (COP)
Continuous + CHP (3A)		
Load	constant	constant
Load factor	≤ 100%	≤ 100%
10% overload (ICXN)	Gas: no Diesel: yes	not specified
Max. operating hours (per year)	unlimited	unlimited

Prime (3B)	MTU Power Generation	ISO 8528-1 (PRP)
Load	variable	variable
Load factor	≤ 75%	≤ 70%
10% overload (ICXN)	yes	yes
Max. operating hours (per year)	unlimited	unlimited

Peak ^(A) (3G)	MTU Power Generation	ISO 8528-1 (LTP)
Load	continuous	continuous
Load factor	≤ 100%	≤ 100%
10% overload (ICXN)	Gas: no Diesel: yes	not specified
Max. operating hours (per year)	1000 h; 500 h with 100% load w/o interruption	500 h

A Only available for 50Hz markets

B Unlimited hours in data center application where a reliable grid/utility is present.

The next generation

SERIES 4000 FOR NATURAL GAS

Operational flexibility

- Quick ramp-up and ramp-down plus a wide range of partial load operation make this product a perfect match for grid stabilization applications.
- Fulfills the highest emission standards.

30% more power

- The new genset increases its performance by 30%, withstanding hot and humid conditions.
- Highly robust against derating.

Low lifecycle costs

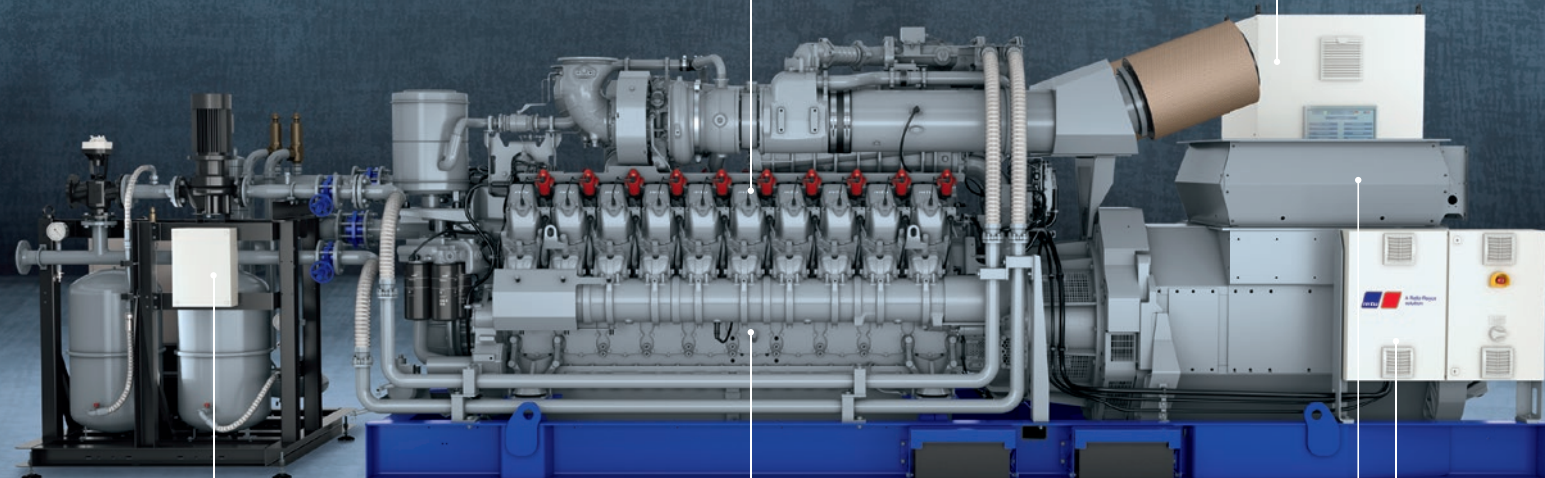
- Good serviceability.
- Favorable maintenance intervals.
- Reduced oil consumption.

Up to 44.3% el. efficiency

- An advanced, proven Series 4000 engine optimized for natural gas operation. Its combustion chambers ensure top levels of efficiency in its performance category.

Digitally connected

- The system is equipped with a data logger providing access to digital solutions from MTU, including remote monitoring, fast and reliable service support and – coming soon – further features such as predictive failure prevention and operational optimization.



Ignition system

Ignition systems for individual cylinders allow for the most efficient level of operation for all cylinders, even with variable CH₄ content. The ignition voltage display gives customers information on the state of the spark plugs.

Generator

Perfectly tuned to the engine and made by renowned manufacturers, the generator ensures a high level of reliability and optimum efficiency.

Heat Recovery Unit

Well proven design perfectly suits the genset and provides the basis for optimized auxiliary efficiencies. The unit is fully integrated in the automation concept and is both safe and certified (CE).

Knock detection

Cylinder-specific knock detection and regulation protect the engine from abnormal operating conditions, and guarantee safe operation even with natural gas containing low levels of methane.

Automation Systems

MIP & MMC
Motor interface panel (MIP) with stand-alone MTU Module Control (MMC). The MMC provides all the functions necessary for controlling the system. All the auxiliary drives required for the CHP system can be operated from here. The integrated power circuitry minimizes the customer's need for cabling on site.

20 years of top performance. Now in the 4th generation.

MTU SERIES 4000

More available power

- Industry-leading load factors.
- More operating hours, compared to ISO 8528-1 requirements.

Highly robust against derating

- Even under rough ambient conditions.
- Engine Site Condition Management.

Excellent load acceptance

- Overachieving ISO 8528-5 performance class G3.
- Load steps with 1st load step > 50%.
- 100% block load acceptance (NFPA 110).

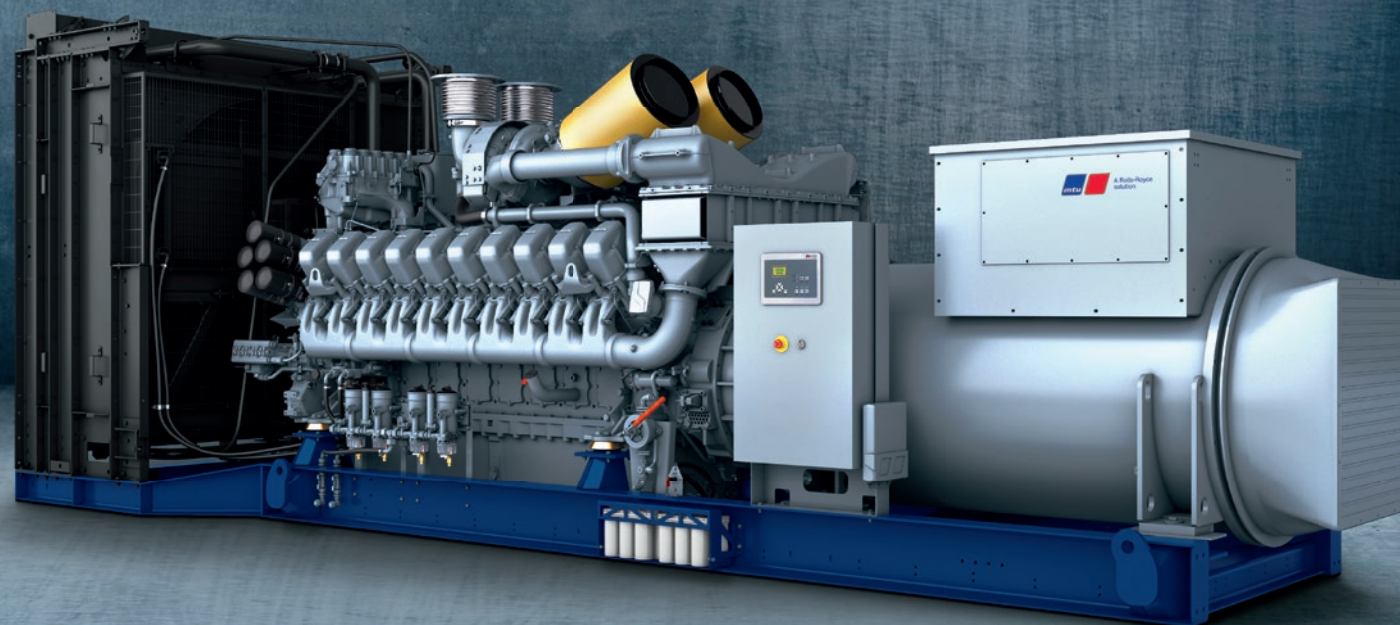
High-grade electricity

- Superior transient behavior.
- Protection for sensitive electrical infrastructure & IT equipment.
- Simplification of electrical infrastructure.

High power density

- Less investment in new installations.
- Easy retrofit and system integration.

Key technical data	MTU S4000 G04 50Hz
Cylinder version	12V, 16V, 20V
Power output/ frequency	12V: 2100 – 2300 kVA – 50Hz 16V: 2600 – 2850 kVA – 50Hz 20V: 3380 – 4000 kVA – 50Hz
Ratings	Standby, prime, data center continuous, prime power for stationary emergency
Optimization	Fuel consumption optimized, emission optimized (NEA & Tier 2 compliant)



MTU 20V4000 DS4000

The scalable all-in-one solution

ENERGYPACK 40 FT.

Flexibility

- Plug and play design.
- Scalable in size.

Ultra-fast

- Immediate response.

High power density

- Compact system design.
- Small footprint.

Power control

- Condition monitoring.

Digital connectivity

- Access to digital solutions from MTU.

Integrated solution

- Seamless integration in power generation systems.
- Stand-alone ability.

Safety features

- Fulfills highest safety standards.

Key technical data	MTU EnergyPack
Dimensions	Compact (Enclosure)/20ft./40ft.
Nominal power output	40 - 2,000 kVA
Nominal capacities	70 - 2,600 kWh
Application	Continuous, prime/peak, standard backup, mission critical (on- & off-grid)
Nominal grid voltages	400 V (others on request)
Round trip efficiency w/o HVAC	88%
Grid frequency	50/60 Hz
Nominal power factor (λ_{nom})	-1 to 1

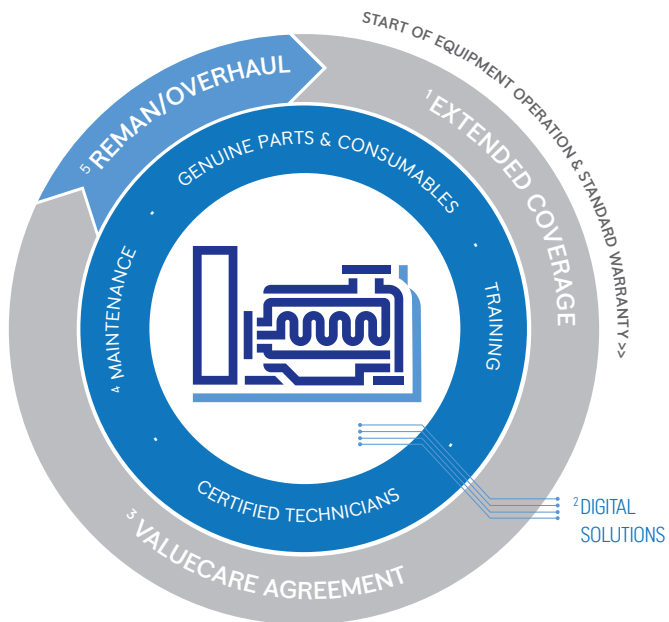


SERVICE SOLUTIONS DESIGNED AROUND YOUR PRIORITIES

With us you get the power, performance and peace of mind to focus on what matters most – your business. Our digitally connected power systems, wrapped in MTU ValueCare Agreements, make it easy to keep your equipment operating reliably and reduce your total cost of ownership through proactive monitoring and preventive maintenance. So go ahead, focus on what matters most to you – and leave the rest to us.

Partners in productivity

MTU ValueCare Agreements wrap around your investment—providing comprehensive support throughout the life of your equipment, for maximum uptime and optimized lifecycle costs.



- 1 Avoid the unexpected with added protection beyond the standard warranty.
- 2 Make better decisions faster with digitally-enhanced tools.
- 3 Maximize availability and optimize lifecycle costs with a ValueCare Agreement.

- 4 Improve system performance and extend equipment life with on-demand support.
- 5 Keep a good thing going with factory reman/overhaul solutions.

MTU ValueCare Agreements help you:



Increase operational uptime



Guarantee parts availability and service quality



Predict equipment-related costs



Optimize maintenance planning



Get connected 24/7



Gold

Maximize operational uptime

- Operational uptime commitment to meet or exceed your availability targets
- Regular supervision by local service partner (e.g. monitoring of parts stock, improvements)
- 24/7 emergency assistance with on-site support
- Monthly reports, including availability and average repair times
- Asset health monitoring
- Annual performance meetings and trend analysis with us to address technical updates, engine fleet data, operational optimization and more

Gold also includes all benefits of Silver & Bronze levels

Silver

Eliminate unexpected maintenance costs

- Proactive maintenance planning, troubleshooting and remote engine health monitoring
- Fixed pricing per operating hour for maintenance and repairs
- Key corrective maintenance components always in-stock at our main warehouses
- 24/7 standby service with remote technical support
- Quarterly reports, including reliability analysis (mean time between failure)

Silver also includes all benefits of Bronze level

Bronze

Ensure parts availability and price stability

- Digital connectivity (Go! Connect) and platform access (Go! Manage)
- Automated delivery of parts (preventive) at a predefined rate based on operating hours
- Preventive maintenance labor options to fit your business needs
- Dedicated support for technical issues
- Quarterly reporting of completed and upcoming maintenance and costs
- Annual on-site engine health check by our technician



Service Network

LOCAL SUPPORT. WORLDWIDE.

The most important part of your power system isn't a part at all—it's your local service team. With more than 1,200 service locations worldwide—backed by regional Parts Logistics Centers in Europe, Asia and America—you can count on responsive support by expert technicians, wherever work takes you. To find your local service partner, visit www.mtu-solutions.com.

Always on call, 24/7

Whether it's connecting you with a local service partner or assigning an urgent problem to a dedicated team of our experts, we're ready to assist you—wherever you are, whatever you need.

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Digital Solutions

THE FUTURE
IS DIGITAL.

For over 100 years, we've been known for technological innovation and leadership—driving efficiency and reliability to new heights. Today, we're applying that same spirit of innovation to digitalization. Fueled by your system's data—and supplemented with MTU's exclusive expertise, smart analytics and

extensive database—our digital solutions magnify the power of your MTU investment. From proactive failure prevention and intelligent troubleshooting to instant failure support and smart maintenance planning, digital solutions unlock the full potential of your power generation system.



Go! Act
Service in your pocket

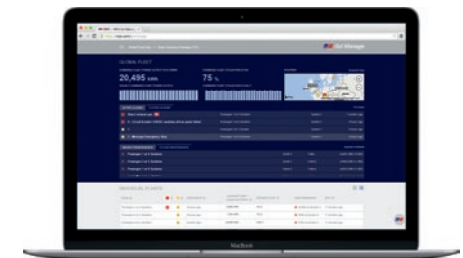
Designed to support on-site operators of MTU-powered equipment, Go! Act:

- Receives push notification of failure codes from connected assets
- Provides crew members with vital information about failure codes
- Supports event reporting with convenient photo capture functionality
- Enables direct communication with fleet managers or the MTU Customer Assistance Center


Go! Manage
Monitor your equipment

Built for operators of MTU-powered equipment, Go! Manage:

- Provides a live overview of asset and engine conditions
- Displays active and closed alarms
- Enables interaction and communication with on-site staff via Go! Act
- Shows maintenance schedule, with completed tasks clearly marked
- Enables remote trouble shooting



Standby – Diesel Generator Sets

STANDARDIZED BACKUP (3D) –
50 HZ/1500 RPM.

MTU 0080/0113 DS

Power output ¹⁾		Available voltages			Emissions					
25°C kVA	25°C kWe	380 - 415V (3 Phase)	6300 - 6600 kV (3 Phase)	10000 -11000 V (3 Phase)	Fuel consumption optimized	NOx emission optimized	NEA Singapore for ORDE	US EPA Tier 2 compliant	EU Nonroad Stage II compliant (97/68/EC)	EU Nonroad Stage IIIA compliant (97/68/EC)
56	45	x							x	
67	53	x							x	
82	66	x							x	
90	72	x			x					
MTU 1600 DS										
506	405	x			x		x			x
561	449	x			x					x
659	527	x			x		x			
728	582	x			x		x			

Certifications				Perform. class ²⁾	Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type	
ISO 8528	CE/IEC	NFPA 110	VDE-AR-N 4110 (German Grid Code)	ISO 8528-5 - G2	ISO 8528-5 - G3	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container			
x	x			x		x		x		F32 TM 1A	A2A	MTU 4R0080 DS55
x	x			x		x		x		NEF45 SM 1A	A2A	MTU 4R0113 DS63
x	x			x		x		x		NEF45 SM 2A	A2A	MTU 4R0113 DS80
x	x			x		x		x		NEF45 SM 5	A2A	MTU 4R0113 DS94
x	x	x		x	x	x		x		10V 1600 G70F	A2A	MTU 10V1600 DS500
x	x	x		x	x	x		x		10V 1600 G80F	A2A	MTU 10V1600 DS560
x	x	x		x	x	x		x		12V 1600 G70F	A2A	MTU 12V1600 DS660
x	x	x		x	x	x		x		12V 1600 G80F	A2A	MTU 12V1600 DS730

Standby - Diesel Generator Sets

STANDARDIZED BACKUP (3D) -
50 HZ/1500 RPM.

	Power output ¹⁾		Available voltages			Emissions					
	kVA	kWe	380 - 415V (3 Phase)	6300 - 6600 kV (3 Phase)	10000 -11000 V (3 Phase)	Fuel consumption optimized	NOx emission optimized	NEA Singapore for ORDE	US EPA Tier 2 compliant	EU Nonroad Stage II compliant (97/68/EC)	EU Nonroad Stage IIIA compliant (97/68/EC)
MTU 2000 DS-G05	850	680	x			x					
	890	712	x			x					
	1000	800	x			x					
	1050	840	x			x					
	1100	880	x			x					
	1140	912	x			x					
	1250	1000	x			x					
	1270	1016	x			x					
MTU 2000 DS-G06	825	660	x				x	x	x		
	1010	800	x			x					
	1100	880	x				x	x	x		
	1250	1000	x			x					
	1400	1120	x			x					
MTU 4000 DS	1780	1424	x	x		x				x	
	1880	1504	x	x		x				x	
	2080	1664	x	x		x				x	
	2300	1840	x	x		x			x		
	2330	1864	x	x		x			x		
	2610	2088	x	x		x			x		
	2850	2240	x	x		x			x	x	
	2800	2240	x	x		x			x		
	3200	2560	x	x		x			x		
	3410	2728	x	x		x			x		
3730	2984		x ¹⁾	x	x			x	x		
4000	3200		x ¹⁾	x	x			x	x		

	Certifications				Perform. class ²⁾		Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type
	ISO 8528	CE/IEC	NFPA 110	VDE-AR-N 4110 (German Grid Code)	ISO 8528-5 - G2	ISO 8528-5 - G3	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container			
	x	x	x		x	x	x				12V 2000 G65	A2A	MTU 12V2000 DS850
	x	x	x		x	x	x				12V 2000 G65TB	W2A	MTU 12V2000 DS890
	x	x	x		x	x	x				16V 2000 G25	A2A	MTU 16V2000 DS1000
	x	x	x		x	x	x				16V 2000 G25TB	W2A	MTU 16V2000 DS1050
	x	x	x		x	x	x				16V 2000 G65	A2A	MTU 16V2000 DS1100
	x	x	x		x	x	x				16V 2000 G65TB	W2A	MTU 16V2000 DS1140
	x	x	x		x	x	x				18V 2000 G65	A2A	MTU 18V2000 DS1250
	x	x	x		x	x	x				18V 2000 G65TB	W2A	MTU 18V2000 DS1290
	x	x	x	x	x	x	x				12V 2000 G76F	A2A	MTU 12V2000 DS825
	x	x	x	x	x	x	x				12V 2000 G86F	A2A	MTU 12V2000 DS1000
	x	x	x	x	x	x	x				16V 2000 G76F	A2A	MTU 16V2000 DS1100
	x	x	x	x	x	x	x				16V 2000 G86F	A2A	MTU 16V2000 DS1250
	x	x	x	x	x	x	x				18V 2000 G76F	A2A	MTU 18V2000 DS1400
	x	x	x	x	x	x	x				12V 4000 G74F	W2A	MTU 12V4000 DS1650
	x	x	x	x	x	x	x				12V 4000 G74F	W2A	MTU 12V4000 DS1750
	x	x	x	x	x	x	x				12V 4000 G84F	W2A	MTU 12V4000 DS2000
	x	x	x	x ¹⁾	x	x	x				12V 4000 G94F	W2A	MTU 12V4000 DS2250
	x	x	x	x	x	x	x				16V 4000 G74F	W2A	MTU 16V4000 DS2250
	x	x	x	x	x	x	x				16V 4000 G84F	W2A	MTU 16V4000 DS2500
	x	x	x	x ¹⁾	x	x	x				16V 4000 G94F	W2A	MTU 16V4000 DS2750
	x	x	x	x	x	x	x				20V 4000 G64F	W2A	MTU 20V4000 DS2750
	x	x	x	x	x	x	x				20V 4000 G74F	W2A	MTU 20V4000 DS3100
	x	x	x	x	x	x	x				20V 4000 G84F	W2A	MTU 20V4000 DS3300
	x	x	x	x ¹⁾	x	x	x				20V 4000 G94F	W2A	MTU 20V4000 DS3600
	x	x	x		x	x	x				20V 4000 G94LF	W2A	MTU 20V4000 DS4000

Standby - Diesel Generator Sets

STANDARDIZED BACKUP (3D) -
60 HZ/1800 RPM.

	Power output ¹⁾		Available voltages											Certifications			
	kWe	kVA	Dedicated (1 Phase) 240 V	Re-connectable (1 Phase) 240 V	(3 Phase) 208 V	(3 Phase) 240 V	(3 Phase) 380 V	(3 Phase) 440 V	(3 Phase) 480 V	(3 Phase) 600 V	(3 Phase) 4160 V	(3 Phase) 12470 V	(3 Phase) 13200 V	(3 Phase) 13800 V	ISO 8528	UL2200	NFPA 110
MTU 0096/0113 DS	30	37	x	x	x	x			x	x				x	x	x	x
	40	50		x	x	x	x			x	x			x	x	x	x
	50	62	x	x	x	x								x	x	x	x
	60	75	x	x	x	x	x							x	x	x	x
	80	100	x	x	x	x								x	x	x	
	100	125	x	x	x	x								x	x	x	
	125	156	x	x	x	x								x	x	x	
	150	187	x	x	x	x								x	x	x	
	180	225	x	x	x	x								x	x	x	
	200	250	x	x	x	x								x	x	x	
MTU 0120 DS	80	100	x	x	x	x	x							x	x	x	x
	100	125	x	x	x	x	x							x	x	x	x
	125	156	x	x	x	x	x							x	x	x	x
	150	187	x	x	x	x	x							x	x	x	x
	180	225	x	x	x	x	x							x	x	x	x
	200	250	x	x	x	x	x							x	x	x	x
MTU 1600 DS	230	288		x	x	x	x							x	x	x	x
	250	313			x	x	x							x	x	x	x
	275	344			x	x	x							x	x	x	x
	300	375			x	x	x							x	x	x	x
	350	438			x	x	x	x						x	x	x	x
	400	500			x	x	x	x						x	x	x	x
	450	563			x	x	x	x						x	x	x	x
	500	625			x	x	x	x						x	x	x	x
	550	688			x	x	x	x						x	x	x	x
	600	750			x	x	x	x						x	x	x	x

Emissions							Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type
US EPA stat. EMERG Tier 3 (40 CF 60)	US EPA Nonroad Tier 3 compliant	US EPA stat. EMERG Tier 2 (40 CF 60)	US EPA Nonroad Tier 2 compliant	Fuel consumption optimized	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container					
x					x		x		3029 TFG89	TC only	MTU 3R0096 DS30		
x					x		x		4045 TF280	TC only	MTU 4R0113 DS40		
x					x		x		4045 TF280	TC only	MTU 4R0113 DS50		
x					x		x		4045 HF280	A2A	MTU 4R0113 DS60		
x					x		x		4045 HF285	A2A	MTU 4R0113 DS80		
x					x		x		4045 HF285	A2A	MTU 4R0113 DS100		
x					x		x		4045 HF285	A2A	MTU 4R0113 DS125		
x					x		x		6068 HF285	A2A	MTU 6R0113 DS150		
x					x		x		6068 HF485	A2A	MTU 6R0113 DS180		
x					x		x		6068 HF485	A2A	MTU 6R0113 DS200		
					x		x		4R924G60S	A2A	MTU 4R0120 DS80		
					x		x		4R924G70S	A2A	MTU 4R0120 DS100		
					x		x		4R924G80S	A2A	MTU 4R0120 DS125		
					x		x		4R926G60S	A2A	MTU 6R0120 DS150		
					x		x		4R926G70S	A2A	MTU 6R0120 DS180		
					x		x		4R926G80S	A2A	MTU 6R0120 DS200		
					x		x		6090 HF484	A2A	MTU 6R0150 DS230		
					x		x		6090 HF484	A2A	MTU 6R0150 DS250		
					x		x		6090 HF484	A2A	MTU 6R0150 DS275		
					x		x		6090 HFG86	A2A	MTU 6R0150 DS300		
					x		x		6135 HFG84	A2A	MTU 6R0225 DS350		
					x		x		6135 HFG84	A2A	MTU 6R0225 DS400		
	x				x		x		10V 1600 G70S	A2A	MTU 10V1600 DS450		
		x	x		x		x		10V 1600 G80S	A2A	MTU 10V1600 DS500		
		x	x		x		x		12V 1600 G70S	A2A	MTU 12V1600 DS550		
		x	x		x		x		12V 1600 G80S	A2A	MTU 12V1600 DS600		

Standby - Diesel Generator Sets

STANDARDIZED BACKUP (3D) -
60 HZ/1800 RPM.

	Power output ¹⁾		Available voltages											Certifications			
	kWe	kVA	Dedicated (1 Phase) 240 V	Re-connectable (1 Phase) 240 V	(3 Phase) 208 V	(3 Phase) 240 V	(3 Phase) 380 V	(3 Phase) 440 V	(3 Phase) 480 V	(3 Phase) 600 V	(3 Phase) 4160 V	(3 Phase) 12470 V	(3 Phase) 13200 V	(3 Phase) 13800 V	ISO 8528	UL2200	NFPA 110
MTU 2000 DS	750	937		x	x	x			x	x	x			x	x	x	x
	800	1000		x	x	x			x	x	x			x	x	x	x
	1000	1250		x	x	x			x	x	x			x	x	x	x
	1250	1562					x		x	x	x			x	x	x	x
	1250	1562					x		x	x	x			x	x	x	
MTU 4000 DS	1250	1562					x		x	x	x			x	x	x	x
	1500	1875					x		x	x	x			x	x	x	x
	1750	2187					x		x	x	x			x	x	x	x
	2000	2500					x		x	x	x	x	x	x	x	x	x
	2250	2812					x		x	x	x	x	x	x	x	x	x
	2500	3125					x		x	x	x	x	x	x	x	x	x
	2500	3125					x		x	x	x	x	x	x	x	x	x
	2800	3500					x		x	x	x	x	x	x	x	x	x
	3000	3750					x		x	x	x	x	x	x	x	x	x
	3250	4062						x		x	x	x	x	x	x	x	x

Emissions					Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type
US EPA stat. EMERG Tier 3 (40 CF 60)	US EPA Nonroad Tier 3 compliant	US EPA stat. EMERG Tier 2 (40 CF 60)	US EPA Nonroad Tier 2 compliant	Fuel consumption optimized	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container			
	x	x			x				12V 2000 G85	W2A	MTU 12V2000 DS750
	x	x			x				12V 2000 G85	W2A	MTU 12V2000 DS800
	x	x			x				16V 2000 G86S	W2A	MTU 16V2000 DS1000
	x	x			x				16V 2000 G86S	W2A	MTU 16V2000 DS1250
	x	x			x				18V 2000 G76S	A2A	MTU 18V2000 DS1250
	x	x			x				12V 4000 G74S	W2A	MTU 12V4000 DS1250
	x	x			x				12V 4000 G74S	W2A	MTU 12V4000 DS1500
	x	x			x				12V 4000 G84S	W2A	MTU 12V4000 DS1750
	x	x			x				16V 4000 G74S	W2A	MTU 16V4000 DS2000
	x	x			x				16V 4000 G84S	W2A	MTU 16V4000 DS2250
	x	x			x				16V 4000 G94S	W2A	MTU 16V4000 DS2500
	x	x			x				20V 4000 G64S	W2A	MTU 20V4000 DS2500
	x	x			x				20V 4000 G74S	W2A	MTU 20V4000 DS2800
	x	x			x				20V 4000 G94S	W2A	MTU 20V4000 DS3000
	x	x			x				20V 4000 G94S	W2A	MTU 20V4000 DS3250

Standby - Gas Generator Sets

STANDARDIZED BACKUP (3D) -
60 HZ/1800 RPM.

MTU 0063 - 0265 GS/natural gas

Power output ¹⁾		Available voltages											Emissions	Certifications					
kWe	kVA	Dedicated (1 Phase)	Re-connectable (1 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	EPA Tier 3	ISO 8528	UL2200	NFPA 110	IBC 2012
30	38	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
40	50	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
50	63		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
60	75		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
70	88		x	x	x		x	x		x	x		x	x	x	x	x	x	x
100	125		x	x	x		x	x		x	x		x	x	x	x	x	x	x
125	156		x	x	x		x	x		x	x		x	x	x	x	x	x	x
150	187		x	x	x		x	x		x	x		x	x	x	x	x	x	x
200	250		x	x	x		x	x		x	x		x	x	x	x	x	x	x
260	325			x	x		x	x		x	x		x	x	x	x	x	x	x
350	437			x	x		x	x		x	x		x	x	x	x	x	x	x
400	500			x	x		x	x		x	x		x	x	x	x	x	x	x
500	625			x	x	x	x	x	x	x	x		x	x	x	x	x	x	x
550	688			x	x	x	x	x	x	x	x		x	x	x	x	x	x	x
600	750			x	x	x	x	x	x	x	x		x	x	x	x	x	x	x
650	813			x	x	x	x	x	x	x	x		x	x	x	x	x	x	x

Fuel type		Housing		Engine type	Genset type
Natural gas	Propane gas/ liquid propane	Enclosure	Container		
x		x		2.5L	MTU 4R0063 GS30
x		x		2.5L	MTU 4R0063 GS40
x		x		6.2L	MTU 8V0078 GS50
x		x		6.2L	MTU 8V0078 GS60
x		x		6.8L	MTU 10V0068 GS75
x		x		6.8LT	MTU 10V0068 GS100
x		x		6.8LT CAC	MTU 10V0068 GS125
x		x		8.1L CAC	MTU 6R0135 GS150
x		x		11.1L CAC	MTU 6R0185 GS200
x		x		14.6L CAC	MTU 8V0183 GS260
x		x		18.3L CAC	MTU 10V0183 GS350
x				21.9L CAC	MTU 12V0183 GS400
x				31.8L CAC	MTU 12V0265 GS500
x				31.8L CAC	MTU 12V0265 GS550
x				31.8L CAC	MTU 12V0265 GS600
x				31.8L CAC	MTU 12V0265 GS650

Standby – Gas Generator Sets

STANDARDIZED BACKUP (3D) –
60 HZ/1800 RPM.

MTU 0063 – 0183 GS/propane gas

Power output ¹⁾		Available voltages										Emissions	Certifications			
kWe	kVA	Dedicated (1 Phase)	Re-connectable (1 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	EPA Tier 3	ISO 8528	UL2200	NFPA 110	IBC 2012
		240 V	240 V	208 V	240 V	380 V	480 V	600 V	4160 V	12470 V	13200 V		13800 V			
30	38	x	x	x	x	x	x	x				x	x	x	x	
40	50	x	x	x	x	x	x	x				x	x	x	x	
50	63	x	x	x	x	x	x	x				x	x	x	x	
60	75	x	x	x	x	x	x	x				x	x	x	x	
75	94	x	x	x	x		x	x				x	x	x	x	
100	125	x	x	x	x		x	x				x	x	x	x	
125	156	x	x	x	x		x	x				x	x	x	x	
100	125	x	x	x	x		x	x				x	x	x		
130	162	x	x	x	x		x	x				x	x	x		
160	200		x	x	x		x	x				x	x	x		
245	306		x	x	x		x	x				x	x	x		
295	368		x	x	x		x	x				x	x	x		

Fuel type		Housing		Engine type	Genset type
Natural gas	Propane gas/liquid propane	Enclosure	Container		
x	x	x		2.5L	MTU 4R0063 GS30
x	x	x		2.5L	MTU 4R0063 GS40
x	x	x		6.2L	MTU 8V0078 GS50
x	x	x		6.2L	MTU 8V0078 GS60
x	x	x		6.8L	MTU 10V0068 GS75
x	x	x		6.8LT	MTU 10V0068 GS100
x	x	x		6.8LT CAC	MTU 10V0068 GS125
x	x	x		8.1L CAC	MTU 6R0135 GS150
x	x	x		11.1L CAC	MTU 6R0185 GS200
x	x	x		14.6L CAC	MTU 8V0183 GS260
x	x	x		18.3L CAC	MTU 10V0183 GS350
x	x	x		21.9L CAC	MTU 12V0183 GS400

Standby – Diesel Generator Sets

PRIME POWER FOR STATIONARY EMERGENCY (3E) –
50 HZ/1500 RPM.

	Power output ¹⁾		Available voltages								Emissions					
	kVA	kWe	380 V (3 Phase)	400 V (3 Phase)	415 V (3 Phase)	6300 V (3 Phase)	6600 V (3 Phase)	10000 V (3 Phase)	10500 V (3 Phase)	11000 V (3 Phase)	Fuel consumption optimized	NOx emission optimized	NEA Singapore for ORDE	US EPA Tier 2 compliant	EU Nonroad Stage II compliant (97/68/EC)	EU Nonroad Stage IIIA compliant (97/68/EC)
MTU 1600 DS	459	367	x	x	x						x	x	x			x
	510	408	x	x	x					x	x	x				x
	600	480	x	x	x					x	x	x				
	662	530	x	x	x					x	x	x				
MTU 2000 DS	800	640	x	x	x					x	x	x	x			
	910	730	x	x	x					x	x	x	x			
	1000	800	x	x	x					x	x	x	x			
	1135	900	x	x	x					x	x	x	x			
	1250	1000	x	x	x					x	x	x	x			
MTU 4000 DS	1600	1280	x	x	x			x	x	x	x	x				
	1700	1360	x	x	x			x	x	x	x	x				
	1880	1504	x	x	x			x	x	x	x	x				
	2100	1680	x	x	x			x	x	x	x		x			
	2160	1728	x	x	x			x	x	x	x	x				
	2360	1888	x	x	x			x	x	x	x	x				
	2600	2080	x	x	x			x	x	x	x		x			
	2640	2112	x	x	x			x	x	x	x	x				
	2910	2328	x	x	x			x	x	x	x	x				
	3110	2488	x	x	x			x	x	x	x	x				
	3630	2904						x ¹¹⁾	x	x	x	x		x		x

	Certifications				Perform. class ²⁾		Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type
	ISO 8528	CE/IEC	NFPA 110	VDE-AR-N 4110 (German Grid Code)	ISO 8528-5 - G2	ISO 8528-5 - G3	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container			
	x	x	x	x	x	x	x		x		10V 1600 G10F	A2A	MTU 10V1600 DS500
	x	x	x	x	x	x	x		x		10V 1600 G20F	A2A	MTU 10V1600 DS560
	x	x	x	x	x	x	x		x		12V 1600 G10F	A2A	MTU 12V1600 DS660
	x	x	x	x	x	x	x		x		12V 1600 G20F	A2A	MTU 12V1600 DS730
	x	x	x	x	x	x	x				12V 2000 G26F	A2A	MTU 12V2000 DS1000
	x	x	x	x	x	x	x				16V 2000 G16F	A2A	MTU 16V2000 DS1000
	x	x	x	x	x	x	x				16V 2000 G26F	A2A	MTU 16V2000 DS1100
	x	x	x	x	x	x	x				16V 2000 G36F	A2A	MTU 16V2000 DS1250
	x	x	x	x	x	x	x				18V 2000 G26F	A2A	MTU 18V2000 DS1400
	x	x	x	x	x	x	x				12V 4000 G14F	W2A	MTU 12V4000 DS1650
	x	x	x	x	x	x	x				12V 4000 G14F	W2A	MTU 12V4000 DS1750
	x	x	x	x	x	x	x				12V 4000 G24F	W2A	MTU 12V4000 DS2000
	x	x	x	x ¹¹⁾	x	x	x				12V 4000 G34F	W2A	MTU 12V4000 DS2250
	x	x	x	x	x	x	x				16V 4000 G14F	W2A	MTU 16V4000 DS2250
	x	x	x	x	x	x	x				16V 4000 G24F	W2A	MTU 16V4000 DS2500
	x	x	x	x ¹¹⁾	x	x	x				16V 4000 G34F	W2A	MTU 16V4000 DS2750
	x	x	x	x	x	x	x				20V 4000 G14F	W2A	MTU 20V4000 DS2750
	x	x	x	x	x	x	x				20V 4000 G24F	W2A	MTU 20V4000 DS3100
	x	x	x	x ¹¹⁾	x	x	x				20V 4000 G34F	W2A	MTU 20V4000 DS3300
	x	x	x		x	x	x				20V 4000 G44LF	W2A	MTU 20V4000 DS4000

Standby - Diesel Generator Sets

PRIME POWER FOR STATIONARY EMERGENCY (3E) -
60 HZ/1800 RPM.

Power output ¹⁾		Available voltages											Emissions				
kWe	kVA												US EPA stationary EMERG Tier 3 (40 CF 60)	US EPA Nonroad Tier 3 compliant	US EPA stationary EMERG Tier 2 (40 CF 60)	US EPA Nonroad Tier 2 compliant	Fuel consumption optimized
		Dedicated (1 Phase)	Re-connectable (1 Phase)	208 V (3 Phase)	240 V (3 Phase)	380 V (3 Phase)	480 V (3 Phase)	600 V (3 Phase)	4160 V (3 Phase)	12470 V (3 Phase)	13200 V (3 Phase)	13800 V (3 Phase)					
MTU 1600 DS		450	563	x	x	x	x	x	x	x	x	x					x
500	625	x	x	x	x	x	x	x	x	x	x					x	
550	688	x	x	x	x	x	x	x	x	x						x	
MTU 2000 DS		900	1125			x	x	x	x	x	x					x	
1125	1406							x	x	x	x					x	
1400	1750							x	x	x	x					x	
1600	2000							x	x	x	x					x	
MTU 4000 DS		1800	2250					x	x	x	x	x	x	x		x	
2045	2556							x	x	x	x	x	x	x		x	
2250	2813							x	x	x	x	x	x	x		x	
2500	3125							x	x	x	x	x	x	x		x	
2800	3500							x	x	x	x	x	x	x		x	

Certifications				Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type
ISO 8528	UL2200	NFPA 110	IBC 2012	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container			
x	x	x	x	x		x		10V 1600 G20S	A2A	MTU 10V1600 DS500
x	x	x	x	x		x		12V 1600 G10S	A2A	MTU 12V1600 DS550
x	x	x	x	x		x		12V 1600 G20S	A2A	MTU 12V1600 DS600
x	x	x	x	x				16V 2000 G26S	W2A	MTU 16V2000 DS1000
x	x	x	x	x		x		12V 4000 G14S	W2A	MTU 12V4000 DS1250
x	x	x	x	x		x		12V 4000 G14S	W2A	MTU 12V4000 DS1500
x	x	x	x	x		x		12V 4000 G24S	W2A	MTU 12V4000 DS1750
x	x	x	x	x		x		16V 4000 G14S	W2A	MTU 16V4000 DS2000
x	x	x	x	x				16V 4000 G24S	W2A	MTU 16V4000 DS2250
x	x	x	x	x				20V 4000 G14S	W2A	MTU 20V4000 DS2500
x	x	x	x	x				20V 4000 G24S	W2A	MTU 20V4000 DS2800
x	x	x	x	x				20V 4000 G44S	W2A	MTU 20V4000 DS3000

Standby - Diesel Generator Sets

DATA CENTER CONTINUOUS (3F) -
50 HZ/1500 RPM.

	Power output ¹⁾		Available voltages								Emissions					
	kVA	kWe	380 V (3 Phase)	400 V (3 Phase)	415 V (3 Phase)	6300 V (3 Phase)	6600 V (3 Phase)	10000 V (3 Phase)	10500 V (3 Phase)	11000 V (3 Phase)	Fuel consumption optimized	NOx emission optimized	NEA Singapore for ORDE	US EPA Tier 2 compliant	EU Nonroad Stage II compliant (97/68/EC)	EU Nonroad Stage IIIA compliant (97/68/EC)
MTU 1600 DS	459	367	x	x	x						x	x	x			x
	510	408	x	x	x					x	x	x				x
	600	480	x	x	x					x	x	x				
	662	530	x	x	x					x	x	x				
MTU 2000 DS	1000	800	x	x	x					x	x	x	x			
	1250	1000	x	x	x					x	x	x	x			
	1600	1280	x	x	x			x	x	x	x	x				
MTU 4000 DS	1700	1360	x	x	x			x	x	x	x	x				
	1880	1504	x	x	x			x	x	x	x	x				
	2100	1680	x	x	x			x ⁽¹¹⁾	x ⁽¹³⁾		x	x	x			
	2160	1728	x	x	x			x	x	x	x	x				
	2360	1888	x	x	x			x	x	x	x	x				
	2600	2080	x	x	x			x ⁽¹¹⁾	x ⁽¹³⁾		x		x	x		
	2640	2112	x	x	x			x	x	x	x	x				
	2910	2328	x	x	x			x	x	x	x	x				
	3110	2488	x	x	x			x	x	x	x	x				
	3390	2712						x ⁽¹¹⁾	x ⁽¹³⁾	x ⁽¹¹⁾	x		x	x		
3630	2904						x ⁽¹¹⁾	x ⁽¹¹⁾	x	x		x	x			

Certifications				Perform. class ²⁾		Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type
ISO 8528	CE/IEC	NFPA 110	VDE-AR-N 4110 (German Grid Code)	ISO 8528-5 - G2	ISO 8528-5 - G3	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container			
x	x	x	x	x	x	x	x	x		10V 1600 G10F	A2A	MTU 10V1600 DS500
x	x	x	x	x	x	x	x	x		10V 1600 G20F	A2A	MTU 10V1600 DS560
x	x	x	x	x	x	x	x	x		12V 1600 G10F	A2A	MTU 12V1600 DS660
x	x	x	x	x	x	x	x	x		12V 1600 G20F	A2A	MTU 12V1600 DS730
x	x	x	x	x	x	x	x			16V 2000 G26F	A2A	MTU 16V2000 DS1100
x	x	x	x	x	x	x	x			18V 2000 G26F	A2A	MTU 18V2000 DS1400
x	x	x	x	x	x	x	x			12V 4000 G14F	W2A	MTU 12V4000 DS1650
x	x	x	x	x	x	x	x			12V 4000 G14F	W2A	MTU 12V4000 DS1750
x	x	x	x	x	x	x	x			12V 4000 G24F	W2A	MTU 12V4000 DS2000
x	x	x	x	x	x	x	x			12V 4000 G34F	W2A	MTU 12V4000 DS2250
x	x	x	x	x	x	x	x			16V 4000 G14F	W2A	MTU 16V4000 DS2250
x	x	x	x	x	x	x	x			16V 4000 G24F	W2A	MTU 16V4000 DS2500
x	x	x	x	x	x	x	x			16V 4000 G34F	W2A	MTU 16V4000 DS2750
x	x	x	x	x	x	x	x			20V 4000 G14F	W2A	MTU 20V4000 DS2750
x	x	x	x	x	x	x	x			20V 4000 G24F	W2A	MTU 20V4000 DS3100
x	x	x	x	x	x	x	x			20V 4000 G34F	W2A	MTU 20V4000 DS3300
x	x	x	x	x	x	x	x			20V 4000 G44F	W2A	MTU 20V4000 DS3600
x	x	x	x	x	x	x	x			20V 4000 G44LF	W2A	MTU 20V4000 DS4000

Standby – Diesel Generator Sets

DATA CENTER CONTINUOUS (3F) –
60 HZ/1800 RPM.

	Power output ¹⁾		Available voltages											Emissions				
	kWe	kVA	240 V Dedicated (1 Phase)	240 V Re-connectable (1 Phase)	208 V (3 Phase)	240 V (3 Phase)	380 V (3 Phase)	480 V (3 Phase)	600 V (3 Phase)	4160 V (3 Phase)	12470 V (3 Phase)	13200 V (3 Phase)	13800 V (3 Phase)	US EPA stationary EMERG Tier 3 (40 CF 60)	US EPA Nonroad Tier 3 compliant	US EPA stationary EMERG Tier 2 (40 CF 60)	US EPA Nonroad Tier 2 compliant	Fuel consumption optimized
MTU 1600 DS	400	500					x	x	x	x								x
	450	563					x	x	x	x							x	
	500	625					x	x	x	x							x	
	550	687					x	x	x	x	x	x	x				x	
MTU 2000 DS	900	1125		x	x	x			x	x						x	x	x
	1135	1418					x	x	x	x						x	x	x
	1400	1750					x	x	x	x						x	x	x
	1600	2000					x	x	x	x						x	x	x
MTU 4000 DS	1825	2281					x	x	x	x	x	x				x	x	x
	2045	2556					x	x	x	x	x	x				x	x	x
	2275	2843					x	x	x	x	x	x				x	x	x
	2500	3125					x	x	x	x	x	x				x	x	x
	2800	3500					x	x	x	x	x	x				x	x	x

Certifications				Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type
ISO 8528	UL2200	NFPA 110	IBC 2012	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container			
x	x	x	x	x	x			10V 1600 G10S	A2A	MTU 10V1600 DS450
x	x	x	x	x	x			10V 1600 G20S	A2A	MTU 10V1600 DS500
x	x	x	x	x	x			12V 1600 G10S	A2A	MTU 12V1600 DS550
x	x	x	x	x	x			12V 1600 G20S	A2A	MTU 12V1600 DS600
x	x	x	x	x	x			16V 2000 G26S	W2A	MTU 16V2000 DS1000
x	x	x	x	x	x			12V 4000 G14S	W2A	MTU 12V4000 DS1250
x	x	x	x	x	x			12V 4000 G14S	W2A	MTU 12V4000 DS1500
x	x	x	x	x	x			12V 4000 G24S	W2A	MTU 12V4000 DS1750
x	x	x	x	x	x			16V 4000 G14S	W2A	MTU 16V4000 DS2000
x	x	x	x	x	x			16V 4000 G24S	W2A	MTU 16V4000 DS2250
x	x	x	x	x	x			20V 4000 G14S	W2A	MTU 20V4000 DS2500
x	x	x	x	x	x			20V 4000 G24S	W2A	MTU 20V4000 DS2800
x	x	x	x	x	x			20V 4000 G44S	W2A	MTU 20V4000 DS3000

Continuous/Prime/Peak – Diesel Generator Sets

CONTINUOUS + CHP (3A) –
50 HZ/1500 RPM.

MTU 2000 DS

Power output ¹⁾		Available voltages								Emissions					
kVA	kWe	380 V (3 Phase)	400 V (3 Phase)	415 V (3 Phase)	6300 V (3 Phase)	6600 V (3 Phase)	10000 V (3 Phase)	10500 V (3 Phase)	11000 V (3 Phase)	Fuel consumption optimized	NOx emission optimized	NEA Singapore for ORDE	US EPA Tier 2 compliant	EU Nonroad Stage II compliant (97/68/EC)	EU Nonroad Stage IIIA compliant (97/68/EC)
750	600	x	x	x						x					
800	640	x	x	x						x					
1000	800	x	x	x						x					

Certifications				Perform. class ²⁾		Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type
ISO 8528	CE/IEC	NFPA 110	VDE-AR-N 4110 (German Grid Code)	ISO 8528-5 - G2	ISO 8528-5 - G3	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container			
x	x	x	x	x	x	x	x			12V 2000 B26F	A2A	MTU 12V2000 DS1000
x	x	x	x	x	x	x	x			16V 2000 B26F	A2A	MTU 16V2000 DS1250
x	x	x	x	x	x	x	x			18V 2000 B26F	A2A	MTU 18V2000 DS1400

Continuous/Prime/Peak – Gas Generator Sets

CONTINUOUS + CHP (3A) –
50 HZ (400V/NO_x < 500 MG/NM³).

Fuel type	Output							Energy input ⁹⁾ kW	Efficiency			
	Natural gas	Biogas, sewage gas, landfill gas	Electr. ⁶⁾ kW _{el}	Therm. ⁷⁾ kW _{th}	Exhaust ⁸⁾ kW _{th}	Reference temp. for exhaust gas heat (°C)	Low Temp. kW _{th}		Mixture cooling water temp. (°C)	Electr. n _{el} (%)	Therm. n _{th} (%)	Total n _{tot} (%)
x			182	126	143	120		70	506	36,0	53,2	89,1
x			192	106	149	120	29	50	534	36,0	47,8	83,7
x			202	109	154	120	36	40	560	36,1	47,0	83,0
x			221	120	134	120	17	40	558	39,6	45,5	85,1
x			357	235	256	120		70	952	37,5	51,6	89,1
x			370	194	263	120	52	50	988	37,4	46,3	83,7
x			390	233	241	120	28	40	995	39,2	47,6	86,8
x			420	247	257	120	31	40	1064	39,5	47,4	86,8
x			221	130	132	120	17	40	559	39,5	46,9	86,4
x			370	190	235	120	48	50	943	39,2	45,1	84,3
x			400	245	262	120	29	40	1015	39,4	50,0	89,4
Cogeneration module 100°/80°C heating water circuit												
x			166	114	130	120		80	465	35,7	52,5	88,2
x			323	206	250	120		80	879	36,7	51,9	88,6
x			352	182	267	120	49	50	954	36,9	47,1	84,0
x			420	239	269	120	36	40	1068	39,3	47,6	86,9

MTU 400 GS

Methane number ¹⁰⁾	Options						Engine type	Genset type
	Reference	400V alternator	415V alternator	6300V alternator	10500V alternator	11000V alternator		
70	x					x	L9	MTU 6R400 GS
70	x					x	L9	MTU 6R400 GS
70	x					x	L9	MTU 6R400 GS
80	x					x	Z5	MTU 6R400 GS
70	x					x	L9	MTU 12V400 GS
70	x					x	L9	MTU 12V400 GS
70	x					x	Z6	MTU 12V400 GS
80	x					x	Z6	MTU 12V400 GS
120	x					x	Z8	MTU 6R400 GS
120	x					x	L8	MTU 12V400 GS
120	x					x	Z7	MTU 12V400 GS
70	x					x	LH9	MTU 6R400 GS
70	x					x	LH9	MTU 12V400 GS
70	x					x	LH9	MTU 12V400 GS
80	x					x	ZH6	MTU 12V400 GS

Continuous/Prime/Peak – Gas Generator Sets

CONTINUOUS + CHP (3A) –
50 HZ (400V/NO_x < 500 MG/NM³).

Fuel type	Output							Energy input ⁹⁾	Efficiency			
	Natural gas	Biogas, sewage gas, landfill gas	Electr. ⁶⁾ kW _{el}	Therm. ⁷⁾ kW _{th}	Exhaust ⁸⁾ kW _{th}	Reference temp. for exhaust gas heat (°C)	Low Temp. kW _{th}		Mixture cooling water temp. (°C)	kW	Electr. n _{el} (%)	Therm. n _{th} (%)
MTU 4000 GS	x		776	414	422	120	47	40	1832	42,4	45,6	88,0
	x		999	495	482	120	67	43	2275	43,9	42,9	86,9
	x		999	522	490	120	59	43	2258	44,2	44,8	89,1
	x		1013	483	503	120	68	43	2304	44,0	42,1	86,9
	x		1013	530	494	120	59	43	2287	44,3	44,8	89,1
	x		1287	685	659	120	88	40	2974	43,3	45,2	88,5
	x		1521	734	691	120	104	43	3438	44,2	41,4	85,7
	x		1714	1005	821	120	113	40	3991	42,9	45,8	88,7
	x		2028	996	936	120	127	43	4573	44,3	42,2	86,6
	x		2028	1060	995	120	145	43	4583	44,3	44,8	89,1
	x		2145	1196	1078	120	142	40	4985	43,0	45,6	88,6
	x		2538	1241	1212	120	176	43	5751	44,1	42,7	86,8
	x		2538	1355	1236	120	211	43	5781	43,9	44,8	88,7
	x		776	379	396	120	74	40	1806	43,0	42,9	85,9
	x		800	392	326	180	78	40	1861	43,0	38,6	81,6
	x		1169	571	602	120	103	40	2716	43,0	43,2	86,2
	x*		1560	652	180	180	313	40	3616	43,1	44,5	87,7
x*		1950	734	873	180	97	40	4493	43,4	41,7	85,1	

* with HT-extraction

Methane number ¹⁰⁾	Options							Engine type	Genset type
Reference	400V alternator	415V alternator	6300V alternator	10500V alternator	11000V alternator	120s FAST Start	Heat recovery unit		
70	x						x	L33	MTU 8V4000 GS
70	x			x			x	L64	MTU 8V4000 GS
72	x	x					x	L64FNER	MTU 8V4000 GS
80	x						x	L64	MTU 8V4000 GS
72	x	x					x	L64FNER	MTU 8V4000 GS
80	x		x	x	x		x	L33	MTU 12V4000 GS
80	x	x	x	x	x		x	L64	MTU 12V4000 GS
80	x		x	x	x		x	L33	MTU 16V4000 GS
80	x	x	x	x	x		x	L64	MTU 16V4000 GS
72	x	x	x	x	x	x	x	L64FNER	MTU 16V4000 GS
80	x		x		x		x	L33	MTU 20V4000 GS
80	x	x	x	x	x		x	L64	MTU 20V4000 GS
72	x	x	x	x	x	x	x	L64FNER	MTU 20V4000 GS
120	x						x	L32	MTU 8V4000 GS
120	x							L32	MTU 8V4000 GS
120	x		x	x	x		x	L32	MTU 12V4000 GS
120	x		x	x	x		x	L32	MTU 16V4000 GS
120	x		x	x	x			L32	MTU 20V4000 GS

Continuous/Prime/Peak – Gas Generator Sets

CONTINUOUS + CHP (3A) –
50 HZ (400V/NO_x < 500 MG/NM³).

MTU 4000 GS

Fuel type		Output						Energy input ⁹⁾	Efficiency		
Natural gas	Biogas, sewage gas, landfill gas	Electr. ⁶⁾ kW _{el}	Therm. ⁷⁾ kW _{th}	Exhaust ⁸⁾ kW _{th}	Reference temp. for exhaust gas heat (°C)	Low Temp. kW _{th}	Mixture cooling water temp. (°C)	kW	Electr. n _{el} (%)	Therm. n _{th} (%)	Total n _{tot} (%)
Hot ambient conditions											
x		776	460	420	120	32	53	1853	41,9	47,	89,4
x		1169	652	638	120	43	53	2747	42,6	47,0	89,6
x		1560	890	805	120	76	53	3651	42,7	46,4	89,2
x		1948	1068	1101	120	78	53	4577	42,6	47,4	89,9
x		1521	849	747	120	79	58	3428	44,4	45,7	90,1
x		2028	1173	974	120	93	58	4672	43,9	46,5	90,3
x		2538	1441	1243	120	150	58	5781	43,9	46,4	90,3
x		776	418	424	120	67	53	1854	41,9	45,4	87,3
x		1169	619	631	120	90	53	2755	42,4	45,4	87,8
x*		1560	666	671	180	330	53	3652	42,7	45,6	88,4
x*		1950	764	1044	120	425	53	4576	42,6	48,8	91,4
Low methane number											
x		1560	951	937	120	99	53	3848	40,5	49,1	89,6
x		1948	1180	1181	120	99	53	4812	40,5	48,1	89,6

* with HT-extraction

Methane number ¹⁰⁾	Options						Engine type	Genset type
Reference	400V alternator	415V alternator	6300V alternator	10500V alternator	11000V alternator	Heat recovery unit		
80	x			x	x	x	L32	MTU 8V4000 GS
80	x	x	x	x	x	x	L32	MTU 12V4000 GS
80	x	x	x	x	x	x	L32	MTU 16V4000 GS
80	x		x	x	x	x	L32	MTU 20V4000 GS
80	x	x	x	x	x	x	L64FNER	MTU 12V4000 GS
80	x	x	x	x	x		L64FNER	MTU 16V4000 GS
80	x	x	x	x	x		L64FNER	MTU 20V4000 GS
120	x					x	L32	MTU 8V4000 GS
120	x		x	x	x	x	L32	MTU 12V4000 GS
120	x		x	x	x		L32	MTU 16V4000 GS
120	x			x	x		L32	MTU 20V4000 GS
60	x	x	x	x	x		L32ER	MTU 16V4000 GS
60	x	x	x	x	x		L32ER	MTU 20V4000 GS

Continuous/Prime/Peak – Gas Generator Sets

CONTINUOUS + CHP (3A) –
50 HZ (400V / NO_x < 250 MG/NM³)

	Fuel type		Output					Energy input ⁹⁾	Efficiency			
	Natural gas	Biogas, sewage gas, landfill gas	Electr. ⁶⁾ kW _{el}	Therm. ⁷⁾ kW _{th}	Exhaust ⁸⁾ kW _{th}	Reference temp. for exhaust gas heat (°C)	Low Temp. kW _{th}	Mixture cooling water temp. (°C)	kW	Electr. n _{el} (%)	Therm. n _{th} (%)	Total n _{tot} (%)
MTU 400 GS	x		132	116	78				362	36,5	56,1	92,5
	x		173	125	150	120		70	503	34,4	54,7	89,1
	x		245	230	154	100			675	36,3	56,9	93,2
	x		366	189	276	120	64	40	1008	36,3	46,1	82,4
Cogeneration module 100°/80°C heating water circuit												
x		166	119	141	120		80	484	34,3	53,7	88,0	
x		240	221	156	110			666	36,0	56,6	92,6	
MTU 4000 GS	x		776	429	443	120	48	40	1853	41,2	46,3	87,5
	x		854	476	469	120	51	43	2053	41,6	46,0	87,6
	x		999	535	516	120	73	43	2326	42,9	45,2	88,1
	x		1013	542	521	120	74	43	2356	43,0	45,1	88,1
	x		1169	642	652	120	82	40	2795	41,8	46,3	88,1
	x		1521	766	713	120	111	43	3551	42,8	41,7	84,5
	x		1714	1047	863	120	121	40	4100	41,8	46,6	88,4
	x		2028	1010	969	120	136	43	4748	42,7	41,7	84,4
	x		2028	1092	1054	120	151	43	4751	42,7	45,2	87,9
	x		2145	1253	1123	120	154	43	5126	41,8	46,4	88,2
	x		2538	1334	1220	120	190	43	5965	42,5	42,8	85,4
	x		2538	1411	1290	120	217	43	5955	42,6	45,3	87,9
	Hot ambient conditions											
	x		776	479	442	120	34	53	1906	40,7	48,3	89,0
x		1169	666	663	120	48	53	2823	41,4	47,1	88,5	
x		1521	881	745	120	86	58	3535	43,0	46,0	89,0	
x		1560	921	841	120	84	53	3774	41,3	46,7	88,0	
x		1948	1109	1150	120	88	53	4701	41,4	48,0	89,4	
x		2028	1230	1024	120	103	58	4784	42,4	47,1	89,5	
x		2538	1512	13106	120	169	58	5986	42,4	47,1	89,5	

Methane number ¹⁰⁾	Options							Engine type	Genset type		
	Reference	400V alternator	415V alternator	6300V alternator	10500V alternator	11000V alternator	120s FAST Start			Heat recovery unit	
68	x							x	D4	MTU 6R400 GS	
70	x								x	L9	MTU 6R400 GS
80	x								x	D4	MTU 12V400 GS
70	x								x	L9	MTU 12V400 GS
70	x									LH9	MTU 6R400 GS
70	x								x	DH4	MTU 12V400 GS
70	x									L33	MTU 8V4000 GS
80	x								x	L64FNER	MTU 8V4000 GS
70	x									L64FNER	MTU 8V4000 GS
70	x	x							x	L64FNER	MTU 8V4000 GS
70	x		x	x	x					L33	MTU 20V4000 GS
80	x	x	x	x	x					L64	MTU 8V4000 GS
80	x		x	x	x					L33	MTU 12V4000 GS
80	x		x	x	x					L64	MTU 16V4000 GS
70	x	x	x	x	x					L64FNER	MTU 16V4000 GS
80	x		x	x	x					L33	MTU 20V4000 GS
80	x		x	x	x					L64	MTU 20V4000 GS
70	x	x	x	x	x					L64FNER	MTU 20V4000 GS
80	x									L32	MTU 8V4000 GS
80	x									L32	MTU 12V4000 GS
80	x	x	x	x	x					L64FNER	MTU 12V4000 GS
80	x									L32	MTU 16V4000 GS
80	x									L32	MTU 20V4000 GS
80	x	x	x	x	x					L64FNER	MTU 16V4000 GS
80	x		x	x	x					L64FNER	MTU 20V4000 GS

Continuous/Prime/Peak – Gas Generator Sets

CONTINUOUS + CHP (3A) –
60 HZ (480V / NO_x < 1 G/BHP-HR)

MTU 400 GS

Fuel type		Output						Energy input ⁹⁾	Efficiency		
Natural gas	Biogas, sewage gas, landfill gas	Electr. ⁶⁾ kW _{el}	Therm. ⁷⁾ kW _{th}	Exhaust ⁸⁾ kW _{th}	Reference temp. for exhaust gas heat (°C)	Low Temp. kW _{th}	Mixture cooling water temp. (°C)	kW	Electr. n _{el} (%)	Therm. n _{th} (%)	Total n _{tot} (%)
x		358	257	268	120			981	36,5	53,5	90,0
on request		420	248	297	120			1110	37,8	49,1	86,9
	x	349	239	233	180			951	36,7	49,6	86,3
on request		421	262	263	180			1123	37,5	46,7	84,2

Methane number ¹⁰⁾	Options					Engine type	Genset type
Reference	480V alternator	4160V alternator	13200V alternator	13800V alternator	Heat recovery unit		
70	x				x	Z6	MTU 12V400 GS
80	x				x	Z6	MTU 12V400 GS
120	x				x	Z7	MTU 12V400 GS
120	x				x	Z7	MTU 12V400 GS

Continuous/Prime/Peak – Gas Generator Sets

CONTINUOUS + CHP (3A) –
60 HZ (480V / NO_x < 1 G/BHP-HR)

Fuel type	Output							Energy input ⁹⁾	Efficiency			
	Natural gas	Biogas, sewage gas, landfill gas	Electr. ⁶⁾ kW _{el}	Therm. ⁷⁾ kW _{th}	Exhaust ⁸⁾ kW _{th}	Reference temp. for exhaust gas heat (°C)	Low Temp. kW _{th}		Mixture cooling water temp. (°C)	kW	Electr. n _{el} (%)	Therm. n _{th} (%)
x			762	416	427	120	48	40	1859	41,0	45,3	86,3
x			840	457	451	120	49	40	2010	41,8	45,2	87,0
x			1151	621	633	120	81	40	2773	41,5	45,2	86,7
x			1268	681	662	120	89	40	2997	42,3	44,8	87,1
x			1538	896	777	120	99	40	3649	42,1	45,8	88,0
x			1693	993	825	120	115	40	4024	42,1	45,2	87,3
x			1926	1077	1026	120	127	40	4622	41,7	45,5	87,2
x			2129	1218	1082	120	144	40	5022	42,4	45,8	88,2
x			762	391	323	180	75	40	1823	41,8	39,2	81,0
x			1151	586	490	180	105	40	2741	42,0	39,3	81,2
x*			1550	656	656	180	313	40	3653	42,4	44,5	86,9
x*			1936	766	879	180	373	40	4535	42,7	44,5	87,2
Hot ambient conditions												
x			762	458	423	120	32	53	1868	40,8	47,2	88,0
x**			1152	642	638	120	43	53	2747	41,9	46,6	88,5
x**			1509	862	728	120	80	58	3451	43,7	46,1	89,8
x**			1538	873	805	120	76	53	3680	42,1	46,0	88,1
x**			1926	1046	1101	120	78	53	4577	42,1	46,9	89,0
x**			2012	1174	995	120	97	58	4646	43,3	46,7	90,0
x			2516	1466	1252	120	154	58	5808	43,3	46,8	90,1
x			762	431	353	180	69	53	1877	40,6	41,8	82,4
x			1151	636	523	180	92	53	2787	41,3	41,6	82,9
x*			1550	677	662	180	330	53	3698	41,9	45,1	87,0
x*			1936	797	864	180	425	53	4633	41,8	45,0	86,8
Low methane number												
x			1550	939	942	120	85	53	3877	40,0	48,5	88,5
x			1936	1164	1188	120	100	53	4848	39,9	48,5	88,4

* with HT-extraction ** NO_x 0.5g/bhph version available on request

Methane number ¹⁰⁾	Options					Engine type	Genset type
	Reference	480V alternator	4160V alternator	13200V alternator	13800V alternator		
70	x					L33	MTU 8V4000 GS
80	x					L33	MTU 8V4000 GS
70	x	x	x			L33	MTU 12V4000 GS
80	x	x	x			L33	MTU 12V4000 GS
70	x	x	x	x		L33	MTU 16V4000 GS
80	x	x	x	x		L33	MTU 16V4000 GS
70	x	x	x	x		L33	MTU 20V4000 GS
80	x	x	x	x		L33	MTU 20V4000 GS
120	x					L32	MTU 8V4000 GS
120	x	x				L32	MTU 12V4000 GS
120	x	x	x			L32	MTU 16V4000 GS
120	x	x	x			L32	MTU 20V4000 GS
80	x					L32	MTU 8V4000 GS
80	x	x	x			L32	MTU 12V4000 GS
80	x	x	x	x		L64FNER	MTU 12V4000 GS
80	x	x	x	x		L32	MTU 16V4000 GS
80	x	x	x	x		L32	MTU 20V4000 GS
80	x	x	x	x		L64FNER	MTU 16V4000 GS
80	x	x	x	x		L64FNER	MTU 20V4000 GS
120	x					L32	MTU 8V4000 GS
120	x	x				L32	MTU 12V4000 GS
120	x	x	x			L32	MTU 16V4000 GS
120	x	x	x			L32	MTU 20V4000 GS
60	x	x	x	x		L32ER	MTU 16V4000 GS
60	x	x	x	x		L32ER	MTU 20V4000 GS

Continuous/Prime/Peak – Gas Generator Sets

CONTINUOUS + CHP (3A) –
60 HZ (480V / NO_x < 500 MG)

MTU 400 GS

Fuel type		Output						Energy input ⁹⁾	Efficiency		
Natural gas	Biogas, sewage gas, landfill gas	Electr. ⁶⁾ kW _{el}	Therm. ⁷⁾ kW _{th}	Exhaust ⁸⁾ kW _{th}	Reference temp. for exhaust gas heat (°C)	Low Temp. kW _{th}	Mixture cooling water temp. (°C)	kW	Electr. n _{el} (%)	Therm. n _{th} (%)	Total n _{tot} (%)
x		358	257	268	120			981	36,5	53,5	90,0
on request		420	248	297	120			1110	37,8	49,1	86,9
	x	349	239	233	180			951	36,8	49,6	86,4
on request		421	262	263	180			1123	37,5	46,7	84,2

Methane number ¹⁰⁾	Options							Engine type	Genset type
Reference	480V alternator	440V alternator	600V alternator	4160V alternator	13200V alternator	13800V alternator	Heat recovery unit		
70			x				x	Z6	MTU 12V400 GS
80	x	x					x	Z6	MTU 12V400 GS
120			x				x	Z7	MTU 12V400 GS
120	x	x					x	Z7	MTU 12V400 GS

Continuous/Prime/Peak – Gas Generator Sets

CONTINUOUS + CHP (3A) –
60 HZ (480V / NO_x < 500 MG)

Fuel type	Output							Energy input ⁹⁾	Efficiency			
	Natural gas	Biogas, sewage gas, landfill gas	Electr. ⁶⁾ kW _{el}	Therm. ⁷⁾ kW _{th}	Exhaust ⁸⁾ kW _{th}	Reference temp. for exhaust gas heat (°C)	Low Temp. kW _{th}		Mixture cooling water temp. (°C)	kW	Electr. n _{el} (%)	Therm. n _{th} (%)
x		764	409	422	120	47	40	1832	41,7	45,4	87,1	
x		841	452	448	120	49	40	1993	42,2	45,2	87,4	
x		1152	610	628	120	80	40	2731	42,2	45,3	87,5	
x		1272	675	659	120	88	40	2974	42,8	44,9	87,6	
x		1538	896	777	120	99	40	3649	42,1	45,9	88,0	
x		1705	984	821	120	113	40	3991	42,7	45,2	87,9	
x		2012	1072	995	120	145	43	4583	43,9	45,1	89,0	
x		1934	1061	1017	120	125	40	4560	42,4	45,6	88,0	
x		2129	1208	1077	120	142	40	4985	42,7	45,8	88,5	
	x	764	388	321	180	74	40	1806	42,3	39,3	81,6	
	x	1152	581	488	180	103	40	2716	42,4	39,4	81,8	
	x*	1549	638	652	180	313	40	3616	42,8	35,7	78,5	
	x*	1936	766	873	180	373	40	4493	43,1	36,5	79,6	
Hot ambient conditions												
x		764	454	420	120	32	53	1853	41,2	47,2	88,4	
x		1155	642	638	120	43	53	2747	42,0	46,6	88,6	
x		1506	861	717	120	79	58	3428	43,9	46,1	90,0	
x		1549	901	805	120	76	53	3651	42,4	46,7	89,2	
x		1934	1046	1101	120	78	53	4577	42,3	46,9	89,2	
x		2012	1185	974	120	93	58	4622	43,5	46,7	90,2	
x		2521	1454	1243	120	150	58	5781	43,6	46,7	90,3	
	x	764	427	349	180	67	53	1854	41,2	41,9	83,1	
	x	1152	629	519	180	90	53	2755	41,8	41,7	83,5	
	x*	1549	659	671	180	330	53	3652	42,4	36,4	78,8	
	x*	1936	797	856	180	425	53	4576	42,3	36,1	78,4	
Low methane number												
x		1538	932	937	120	84	53	3848	40,0	48,6	88,5	
x		1936	1154	1181	120	99	53	4812	40,2	48,5	88,8	

* with HT-extraction

Methane number ¹⁰⁾	Options							Engine type	Genset type
	Reference	480V alternator	440V alternator	600V alternator	4160V alternator	13200V alternator	13800V alternator		
70	x	x						L33	MTU 8V4000 GS
80	x	x						L33	MTU 8V4000 GS
70	x	x	x					L33	MTU 12V4000 GS
80	x	x	x					L33	MTU 12V4000 GS
70	x	x	x	x				L33	MTU 16V4000 GS
80	x	x	x	x				L33	MTU 16V4000 GS
72	x	x	x	x	x			L64FNER	MTU 16V4000 GS
70	x	x	x	x	x			L33	MTU 20V4000 GS
80	x	x	x	x	x			L33	MTU 20V4000 GS
120	x	x						L32	MTU 8V4000 GS
120	x	x	x					L32	MTU 12V4000 GS
120	x	x	x					L32	MTU 16V4000 GS
120	x	x	x	x				L32	MTU 20V4000 GS
80	x	x	x	x	x			L32	MTU 8V4000 GS
80	x	x						L32	MTU 12V4000 GS
80	x	x	x	x	x			L64FNER	MTU 16V4000 GS
80	x	x	x					L32	MTU 16V4000 GS
80	x	x	x	x	x			L32	MTU 20V4000 GS
80	x	x	x	x	x			L64FNER	MTU 16V4000 GS
80	x	x	x	x	x			L64FNER	MTU 20V4000 GS
120	x	x						L32	MTU 8V4000 GS
120	x	x	x					L32	MTU 12V4000 GS
120	x	x	x	x	x		x	L32	MTU 16V4000 GS
120	x	x	x	x	x			L32	MTU 20V4000 GS
60			x	x	x			L32ER	MTU 16V4000 GS
60	x	x	x	x	x			L32ER	MTU 20V4000 GS

Continuous/Prime/Peak – Diesel Generator Sets

PRIME (3B) –
50 HZ/1500 RPM.

MTU 0080/0113 DS

Power output ¹⁾		Available voltages			Emissions					
25°C kVA	25°C kWe	380 - 415V (3 Phase)	6300 - 6600 kV (3 Phase)	10000 - 11000 V (3 Phase)	Fuel consumption optimized	NOx emission optimized	NEA Singapore for ORDE	US EPA Tier 2 compliant	EU Nonroad Stage II compliant (97/68/EC)	EU Nonroad Stage IIIA compliant (97/68/EC)
50	40	x							x	
60	48	x							x	
75	60	x							x	
84	67	x			x					
459	367	x			x	x	x			x
510	408	x			x	x	x			x
600	480	x			x	x	x			
662	530	x			x	x	x			

MTU 1600 DS

Certifications				Perform. class ²⁾	Uptime compl.	Housing	Engine type	Cooling variant ³⁾	Genset type	
ISO 8528	CE/IEC	NFPA 110	VDE-AR-N 4110 (German Grid Code)	ISO 8528-5 - G2	ISO 8528-5 - G3	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container	
x	x			x		x		F32 TM 1A	A2A	MTU 4R0080 DS55
x	x			x		x		NEF45 SM 1A	A2A	MTU 4R0113 DS63
x	x			x		x		NEF45 SM 2A	A2A	MTU 4R0113 DS80
x	x			x		x		NEF45 SM 5	A2A	MTU 4R0113 DS94
x	x	x		x	x	x	x	10V 1600 G10F	A2A	MTU 10V1600 DS500
x	x	x		x	x	x	x	10V 1600 G20F	A2A	MTU 10V1600 DS560
x	x	x		x	x	x	x	12V 1600 G10F	A2A	MTU 12V1600 DS660
x	x	x		x	x	x	x	12V 1600 G20F	A2A	MTU 12V1600 DS730

Continuous/Prime/Peak – Diesel Generator Sets

PRIME (3B) –
50 HZ/1500 RPM.

	Power output ¹⁾		Available voltages			Emissions						
	kVA	kWe	380 - 415V (3 Phase)	6300 - 6600 kV (3 Phase)	10000 - 11000 V (3 Phase)	Fuel consumption optimized	NOx emission optimized	NEA Singapore for ORDE	US EPA Tier 2 compliant	EU Nonroad Stage II compliant (97/68/EC)	EU Nonroad Stage IIIA compliant (97/68/EC)	
MTU 2000 DS-G05	770	616	x			x	x					
	820	656	x			x						
	900	720	x			x	x					
	910	728	x			x						
	1000	800	x			x	x					
	1030	824	x			x						
	1130	904	x			x	x					
	1160	928	x			x						
	MTU 2000 DS-G06	800	640	x			x	x	x	x		
		910	730	x			x	x	x	x		
1000		800	x			x	x	x	x			
1135		900	x			x	x	x	x			
1250		1000	x			x	x	x	x			
MTU 4000 DS		1600	1280	x		x	x	x	x			
	1700	1360	x		x	x	x	x				
	1880	1504	x		x	x	x	x				
	2160	1728	x		x	x	x	x				
	2360	1888	x		x	x	x	x				
	2640	2112	x		x	x	x	x				
	2910	2328	x		x	x	x	x				
	3110	2488	x		x	x	x	x				
	3390	2712		x ¹⁾	x	x	x	x				

Certifications				Perform. class ²⁾		Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type
ISO 8528	CE/IEC	NFPA 110	VDE-AR-N 4110 (German Grid Code)	ISO 8528-5 - G2	ISO 8528-5 - G3	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container			
x	x	x		x	x	x				12V 2000 G65	A2A	MTU 12V2000 DS850
x	x	x		x	x	x				12V 2000 G65TB	W2A	MTU 12V2000 DS890
x	x	x		x	x	x				16V 2000 G25	A2A	MTU 16V2000 DS1000
x	x	x		x	x	x				16V 2000 G25TB	W2A	MTU 16V2000 DS1050
x	x	x		x	x	x				16V 2000 G65	A2A	MTU 16V2000 DS1100
x	x	x		x	x	x				16V 2000 G65TB	W2A	MTU 16V2000 DS1140
x	x	x		x	x	x				18V 2000 G65	A2A	MTU 18V2000 DS1250
x	x	x		x	x	x				18V 2000 G65TB	W2A	MTU 18V2000 DS1290
x	x	x	x	x	x	x				12V 2000 G26F	A2A	MTU 12V2000 DS1000
x	x	x	x	x	x	x				16V 2000 G16F	A2A	MTU 16V2000 DS1000
x	x	x	x	x	x	x				16V 2000 G26F	A2A	MTU 16V2000 DS1100
x	x	x	x	x	x	x				16V 2000 G36F	A2A	MTU 16V2000 DS1250
x	x	x	x	x	x	x				18V 2000 G26F	A2A	MTU 18V2000 DS1400
x	x	x	x	x	x	x				12V 4000 G14F	W2A	MTU 12V4000 DS1650
x	x	x	x	x	x	x				12V 4000 G14F	W2A	MTU 12V4000 DS1750
x	x	x	x	x	x	x				12V 4000 G24F	W2A	MTU 12V4000 DS2000
x	x	x	x	x	x	x				16V 4000 G14F	W2A	MTU 16V4000 DS2250
x	x	x	x	x	x	x				16V 4000 G24F	W2A	MTU 16V4000 DS2500
x	x	x	x	x	x	x				20V 4000 G14F	W2A	MTU 20V4000 DS2750
x	x	x	x	x	x	x				20V 4000 G24F	W2A	MTU 20V4000 DS3100
x	x	x	x	x	x	x				20V 4000 G34F	W2A	MTU 20V4000 DS3300
x	x	x	x ¹⁾	x	x	x				20V 4000 G44F	W2A	MTU 20V4000 DS3600

Continuous/Prime/Peak – Diesel Generator Sets

PRIME (3B) – 50 HZ/1500 RPM –
NORTH AND LATIN AMERICA

Power output ¹⁾		Available voltages								Emissions						
kVA	kWe	220 V (1 Phase)	220 V (3 Phase)	380 V (3 Phase)	400 V (3 Phase)	415 V (3 Phase)	3300 V (3 Phase)	10000 V (3 Phase)	10500 V (3 Phase)	11000 V (3 Phase)	Fuel consumption optimized	NOx emission optimized	NEA Singapore for ORDE	US EPA Tier 2 compliant	EU Nonroad Stage II compliant (97/68/EC)	EU Nonroad Stage IIIA compliant (97/68/EC)
34	27	x	x	x	x	x					x					
44	35	x	x	x	x	x					x					
55	44	x	x	x	x	x					x					
MTU 0096 DS																
450	360		x	x	x						x	x				
500	400		x	x	x						x	x				
590	472		x	x	x						x	x				
650	520		x	x	x						x	x				
MTU 1600 DS																
1250	1000		x	x	x	x					x					
MTU 2000 DS																

Certifications				Perform. class ²⁾		Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type
ISO 8528	CE/IEC	NFPA 110	VDE-AR-N 4110 (German Grid Code)	ISO 8528-5 - G2	ISO 8528-5 - G3	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container			
x	x			x		x				3029 TFG89	TC only	MTU 3R0096 DS34
x	x			x		x				4045 TF280	TC only	MTU 3R0096 DS44
x	x			x		x				4045 HF280	TC only	MTU 3R0096 DS55
MTU 3R0096 DS												
x	x			x		x				10V 1600 G10F	A2A	MTU 10V1600 DS500
x	x			x		x				10V 1600 G20F	A2A	MTU 10V1600 DS550
x	x			x		x				12V 1600 G10F	A2A	MTU 12V1600 DS650
x	x			x		x				12V 1600 G20F	A2A	MTU 12V1600 DS715
MTU 12V1600 DS												
x	x			x	x	x				18V 2000 G26F	A2A	MTU 18V2000 DS1400
MTU 18V2000 DS												

Continuous/Prime/Peak – Diesel Generator Sets

PRIME (3B) –
60 HZ/1800 RPM.

Power output ¹⁾		Available voltages											Emissions				
kWe	kVA												US EPA stationary EMERG Tier 3 (40 CF 60)	US EPA Nonroad Tier 3 compliant	US EPA stationary EMERG Tier 2 (40 CF 60)	US EPA Nonroad Tier 2 compliant	Fuel consumption optimized
		Dedicated (1 Phase)	Re-connectable (1 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)	(3 Phase)					
27	33	x	x	x	x	x	x	x	x	x	x	x	x	x			
40	50		x	x	x	x	x	x	x	x	x	x	x	x			
45	56	x	x	x	x	x	x	x	x	x	x	x	x	x			
55	68	x	x	x	x	x	x	x	x	x	x	x	x	x			
80	100	x	x	x	x									x			
90	113	x	x	x	x									x			
111	139	x	x	x	x									x			
135	169	x	x	x	x									x			
180	225	C/F	C/F	x	x									x			
210	263		x	x	x									x			
230	288			x	x									x			
250	313			x	x									x			
MTU 0096/0113 DS																	
72	90	x	x	x	x	x	x	x	x	x	x	x	x	x			
90	113	x	x	x	x	x	x	x	x	x	x	x	x	x			
111	139	x	x	x	x	x	x	x	x	x	x	x	x	x			
135	169	x	x	x	x	x	x	x	x	x	x	x	x	x			
163	204	x	x	x	x	x	x	x	x	x	x	x	x	x			
180	225	x	x	x	x	x	x	x	x	x	x	x	x	x			
MTU 0120 DS																	

Certifications				Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type
ISO 8528	UL2200	NFPA 110	IBC 2012	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container			
x	x	x	x	x		x		3029 TFG89	TC only	MTU 3R0096 DS30
x	x	x	x	x		x		4045 TF280	TC only	MTU 4R0113 DS40
x	x	x	x	x		x		4045 TF280	TC only	MTU 4R0113 DS50
x	x	x	x	x		x		4045 HF280	A2A	MTU 4R0113 DS60
x	x	x		x		x		4045 HF285	A2A	MTU 4R0113 DS80
x	x	x		x		x		4045 HF285	A2A	MTU 4R0113 DS100
x	x	x		x		x		4045 HF285	A2A	MTU 4R0113 DS125
x	x	x		x		x		6068 HF285	A2A	MTU 6R0113 DS150
x	x	x		x		x		6068 HFG85	A2A	MTU 6R0113 DS180
x	x	x		x		x		6090 HF484	A2A	MTU 6R0150 DS230
x	x	x		x		x		6090 HF484	A2A	MTU 6R0150 DS250
x	x	x		x		x		6090 HF484	A2A	MTU 6R0150 DS275
MTU 4R0120 DS										
x	x	x	x	x		x		4R 924 G10S	A2A	MTU 4R0120 DS80
x	x	x	x	x		x		4R 924 G20S	A2A	MTU 4R0120 DS100
x	x	x	x	x		x		4R 924 G20S	A2A	MTU 4R0120 DS125
x	x	x	x	x		x		6R 926 G10S	A2A	MTU 6R0120 DS150
x	x	x	x	x		x		6R 926 G20S	A2A	MTU 6R0120 DS180
x	x	x	x	x		x		6R 926 G30S	A2A	MTU 6R0120 DS200

Continuous/Prime/Peak – Diesel Generator Sets

PRIME (3B) –
60 HZ/1800 RPM.

	Power output ¹⁾		Available voltages										Emissions						
	kWe	kVA	240 V Dedicated (1 Phase)	240 V Re-connectable (1 Phase)	208 V (3 Phase)	240 V (3 Phase)	380 V (3 Phase)	440 V (3 Phase)	480 V (3 Phase)	600 V (3 Phase)	4160 V (3 Phase)	12470 V (3 Phase)	13200 V (3 Phase)	13800 V (3 Phase)	US EPA stationary EMERG Tier 3 (40 CF 60)	US EPA Nonroad Tier 3 compliant	US EPA stationary EMERG Tier 2 (40 CF 60)	US EPA Nonroad Tier 2 compliant	Fuel consumption optimized
MTU 1600 DS	400	500			x	x	x	x	x	x				x					
	450	563			x	x	x	x	x	x								x	
	500	625			x	x	x	x	x	x								x	
	550	687			x	x	x	x	x	x								x	
MTU 2000 DS	680	850			x	x	x		x	x	x						x		
	725	906			x	x	x		x	x	x						x		
	900	1125			x	x	x		x	x	x						x	x	
	1000	1250						x	x	x	x								x
MTU 4000 DS	1125	1406					x		x	x	x						x		
	1400	1750					x		x	x	x						x		
	1600	2000					x		x	x	x						x		
	1800	2250					x		x	x	x	x	x				x		
	2045	2556					x		x	x	x	x	x				x		
	2250	2812					x		x	x	x	x	x				x		
	2500	3125					x		x	x	x	x	x				x		
	2800	3500					x		x	x	x	x	x				x		

Certifications				Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type
ISO 8528	UL2200	NFPA 110	IBC 2012	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container			
x	x	x	x	x		x		10V 1600 G10S	A2A	MTU 10V1600 DS450
x	x	x	x	x		x		10V 1600 G20S	A2A	MTU 10V1600 DS500
x	x	x	x	x		x		12V 1600 G10S	A2A	MTU 12V1600 DS550
x	x	x	x	x		x		12V 1600 G20S	A2A	MTU 12V1600 DS600
x	x	x	x	x				12V 2000 G85	W2A	MTU 12V2000 DS750
x	x	x	x	x				12V 2000 G85	W2A	MTU 12V2000 DS800
x	x	x	x	x				16V 2000 G26S	W2A	MTU 16V2000 DS1000
x	x	x	x	x				18V 2000 B76	A2A	MTU 18V2000 DS1250
x	x	x	x	x		x		12V 4000 G14S	W2A	MTU 12V4000 DS1250
x	x	x	x	x		x		12V 4000 G14S	W2A	MTU 12V4000 DS1500
x	x	x	x	x		x		12V 4000 G24S	W2A	MTU 12V4000 DS1750
x	x	x	x	x		x		16V 4000 G14S	W2A	MTU 16V4000 DS2000
x	x	x	x	x				16V 4000 G24S	W2A	MTU 16V4000 DS2250
x	x	x	x	x				20V 4000 G14S	W2A	MTU 20V4000 DS2500
x	x	x	x	x				20V 4000 G24S	W2A	MTU 20V4000 DS2800
x	x	x	x	x				20V 4000 G44S	W2A	MTU 20V4000 DS3000

Continuous/Prime/Peak – Gas Generator Sets

PRIME (3B) –
60 HZ/1800 RPM.

MTU 0135 - 0185 GS

Power output ¹⁾		Available voltages									Emissions				
kW _e	kVA	Dedicated (1 Phase)		Re-connectable (1 Phase)		(3 Phase)		(3 Phase)		EPA certified					
		240 V	240 V	208 V	240 V	380 V	480 V	600 V	4160 V		12470 V	13200 V	13800 V		
130	162	x	x	x	x			x	x						x
175	218	x	x	x	x			x	x						x
235	293		x	x	x			x	x						x
300	375		x	x	x			x	x						x
355	443		x	x	x			x	x						x

Certifications				Fuel type		Housing		Engine type	Genset type
ISO 8528	UL2200	NFPA 110	IBC 2012	Natural gas	Propane gas	Enclosure	Container		
x	x	x		x		x		8.1L CAC	MTU 6R0135 GS150
x	x	x		x		x		11.1L CAC	MTU 6R0185 GS200
x	x	x		x		x		14.6L CAC	MTU 8V0183 GS260
x	x	x		x		x		18.3L CAC	MTU 10V0183 GS350
x	x	x		x		x		21.9L CAC	MTU 12V0183 GS400

Continuous/Prime/Peak – Diesel Generator Sets

PEAK (3G) –
50 HZ/1500 RPM.

Power output ¹⁾		Available voltages								Emissions					
		380 V (3 Phase)	400 V (3 Phase)	415 V (3 Phase)	6300 V (3 Phase)	6600 V (3 Phase)	10000 V (3 Phase)	10500 V (3 Phase)	11000 V (3 Phase)	Fuel consumption optimized	NOx emission optimized	NEA Singapore for ORDE	US EPA Tier 2 compliant	EU Nonroad Stage II compliant (97/68/EC)	EU Nonroad Stage IIIA compliant (97/68/EC)
MTU 2000 DS	kVA														
	kWe														
	1000	800	x	x	x					x	x	x	x		
	1250	1000	x	x	x					x	x	x	x		
MTU 4000 DS	1600	1280	x	x	x					x	x	x			
	1700	1360	x	x	x					x	x	x			
	1880	1504	x	x	x					x	x	x			
	2160	1728	x	x	x					x	x	x			
	2360	1888	x	x	x					x	x	x			
	2640	2112	x	x	x					x	x	x			
	2910	2328	x	x	x					x	x	x			
	3110	2488	x	x	x					x	x	x			

Certifications				Perform. class ²⁾		Uptime compl.		Housing		Engine type	Cooling variant ³⁾	Genset type
ISO 8528	CE/IEC	NFPA 110	VDE-AR-N 4110 (German Grid Code)	ISO 8528-5 - G2	ISO 8528-5 - G3	Tier I & Tier II	Tier III & Tier IV	Enclosure	Container			
x	x	x	x	x	x	x	x			16V 2000 G26F	A2A	MTU 16V2000 DS1100
x	x	x	x	x	x	x	x			18V 2000 G26F	A2A	MTU 18V2000 DS1400
x	x	x	x	x	x	x				12V 4000 G14F	W2A	MTU 12V4000 DS1650
x	x	x	x	x	x	x				12V 4000 G14F	W2A	MTU 12V4000 DS1750
x	x	x	x	x	x	x				12V 4000 G24F	W2A	MTU 12V4000 DS2000
x	x	x	x	x	x	x				16V 4000 G14F	W2A	MTU 16V4000 DS2250
x	x	x	x	x	x	x				16V 4000 G24F	W2A	MTU 16V4000 DS2500
x	x	x	x	x	x	x				20V 4000 G14F	W2A	MTU 20V4000 DS2750
x	x	x	x	x	x	x				20V 4000 G24F	W2A	MTU 20V4000 DS3100
x	x	x	x	x	x	x				20V 4000 G34F	W2A	MTU 20V4000 DS3300

Diesel Generator Sets

ENCLOSURES –
50 HZ/1500 RPM.

	Dimensions			Noise level ⁴⁾ Standard	Fuel tank (option)	Genset type
	Length (mm)	Width (mm)	Height (mm)	dBA @ 7m	Capacity (l)	
MTU 0080/0113 DS	2100	957	1349	60,0	100	MTU 4R0080 DS45
	2300	1050	1458	59,3	130	MTU 4R0080 DS55
	2750	1100	1760	61,2	288	MTU 4R0113 DS63
	2750	1100	1760	61,3	288	MTU 4R0113 DS80
	2750	1100	1760	61,5	288	MTU 4R0113 DS94
MTU 0120 DS	2750	1100	1760	C/F	288	MTU 4R0120 DS90
	2750	1100	1760	C/F	288	MTU 4R0120 DS110
	2750	1100	1760	C/F	288	MTU 4R0120 DS140
	C/F	C/F	C/F	C/F	C/F	MTU 6R0120 DS175
	C/F	C/F	C/F	C/F	C/F	MTU 6R0120 DS200
	C/F	C/F	C/F	C/F	C/F	MTU 6R0120 DS235
	C/F	C/F	C/F	C/F	C/F	MTU 6R0120 DS250
MTU 1600 DS	5400	2140	2120	70,0	850	MTU 10V1600 DS500
	5400	2140	2120	70,0	850	MTU 10V1600 DS560
	5400	2140	2120	70,0	850	MTU 12V1600 DS660
	5400	2140	2120	70,0	850	MTU 12V1600 DS730

Diesel Generator Sets

ENCLOSURES –
60 HZ/1800 RPM.

	Prime power			Standby power			Certifications				
	Level 1 (dBA @ 7m)	Level 2 (dBA @ 7m)	Level 3 (dBA @ 7m)	Level 1 (dBA @ 7m)	Level 2 (dBA @ 7m)	Level 3 (dBA @ 7m)	UL 2200	CSA	ISO 9001:2008	IBC 2012/OSHPPD	
MTU 0060/0113 DS	79,2	72,4	69,6	79,2	72,4	69,6	x	x	x	x	
	84,2	76,7	70,8	84,2	76,7	70,8	x	x	x	x	
	84,3	77,0	71,0	84,3	77,0	71,0	x	x	x	x	
	84,6	76,7	71,5	84,6	76,7	71,5	x	x	x	x	
	83,9	77,2	73,4	83,9	77,2	73,4	x	x	x	x	
	78,9	75,2	70,9	78,9	75,2	70,9	x	x	x	x	
	79,0	74,9	70,9	78,9	75,2	70,9	x	x	x	x	
	82,5	81,8	71,9	82,8	81,7	72,0	x	x	x	x	
	84,3	82,9	73,1	84,5	83,0	73,4	x	x	x	x	
	85,1	83,0	73,9	85,1	83,0	73,9	x	x	x	x	
	N/A	N/A	N/A	85,1	83,0	73,7	x	x	x	x	
	MTU 0120 DS	82,0	81,7	73,6	82,2	77,3	73,7	x	x	x	x
		82,1	81,8	74,1	82,2	77,7	74,4	x	x	x	x
82,7		81,8	74,4	82,2	81,8	74,5	x	x	x	x	
91,1		88,7	72,5	91,2	88,4	72,8	x	x	x	x	
91,1		88,7	72,7	89,7	88,7	73,0	x	x	x	x	
91,1		88,7	73,0	91,2	88,7	73,1	x	x	x	x	

Genset type
MTU 4R0060 DS30
MTU 4R0113 DS35
MTU 4R0113 DS40
MTU 4R0113 DS50
MTU 4R0113 DS60
MTU 4R0113 DS80
MTU 4R0113 DS100
MTU 4R0113 DS125
MTU 6R0113 DS150
MTU 6R0113 DS180
MTU 6R0113 DS200
MTU 4R0120 DS80
MTU 4R0120 DS100
MTU 4R0120 DS125
MTU 6R0120 DS150
MTU 6R0120 DS180
MTU 6R0120 DS200

Diesel Generator Sets

ENCLOSURES –
60 HZ/1800 RPM.

	Prime power			Standby power			Certifications			
	Level 1 (dBA @ 7m)	Level 2 (dBA @ 7m)	Level 3 (dBA @ 7m)	Level 1 (dBA @ 7m)	Level 2 (dBA @ 7m)	Level 3 (dBA @ 7m)	UL 2200	CSA	ISO 9001:2008	IBC 2012/OSHPD
MTU 1600 DS	88,0	79,7	73,9	88,5	80,5	74,1	x	x	x	x
	88,5	80,5	74,1	88,6	80,1	74,6	x	x	x	x
	88,6	80,1	74,6	88,3	80,6	74,3	x	x	x	x
	N/A	N/A	N/A	90,3	81,9	75,1	x	x	x	x
	N/A	N/A	N/A	89,5	80,9	75,6	x	x	x	x
	N/A	N/A	N/A	90,1	81,1	76,2	x	x	x	x
	N/A	N/A	N/A	89,9	81,6	76,5	x	x	x	x
	N/A	N/A	N/A	91,0	82,1	75,5	x	x	x	x
	90,7	86,0	74,0	91,0	86,5	74,5	x	x	x	x
	91,0	86,5	74,5	91,0	86,6	74,9	x	x	x	x
	92,8	88,0	81,0	92,9	88,0	84,7	x	x	x	x
	92,9	88,0	81,2	92,8	89,0	84,2	x	x	x	x
	C/F	C/F	C/F	C/F	C/F	C/F	x	x	x	x
	MTU 2000 DS	89,0	86,4	71,9	89,0	86,4	71,9	x	x	x
86,0		82,1	C/F	86,1	82,0	76,0	x	x	x	x
92,0		86,0	74,4	92,0	86,4	74,7	x	x	x	x
N/A		N/A	N/A	93,0	86,0	75,0	x	x	x	x

Genset type
MTU 6R0150 DS230
MTU 6R0150 DS250
MTU 6R0150 DS275
MTU 6R0150 DS300
MTU 6R0225 DS350 ¹²⁾
MTU 6R0225 DS350 ¹²⁾
MTU 6R0225 DS350
MTU 6R0225 DS400
MTU 10V1600 DS450
MTU 10V1600 DS500
MTU 12V1600 DS550
MTU 12V1600 DS600
MTU 12V1600 DS650
MTU 12V2000 DS750
MTU 12V2000 DS800
MTU 16V2000 DS1000
MTU 16V2000 DS1250

Diesel Generator Sets

POWER MODULES¹⁴⁾ - 50/60HZ -
EUROPE, AFRICA, ASIA AND AUSTRALIA

	Power output ¹⁾		Available voltages				Emissions		Noise level	Dimensions			
	kWe	kVA	280 V	400 V	480 V	600 V	Fuel consumption optimized	US EPA Nonroad Tier 2 compliant	dBA @ 1m	Size	Length (mm)	Width (mm)	Height (mm)
MTU 4000 DS	1531	1914	x				x		99	40ft HC	12192	2438	2896
	1807	2259		x			x		103	40ft HC	12192	2438	2896
	1836	2295	x				x		99	40ft HC	12192	2438	2896
	2109	2636			x		x		103	40ft HC	12192	2438	2896
	2048	2560	x				x		99	40ft HC	12192	2438	2896
	2321	2901			x		x		105	40ft HC	12192	2438	2896
	1888	2360			x		x		¹¹⁾	40ft HC	12192	2438	2896
	1440	1800			x		x		¹¹⁾	40ft HC	12192	2438	2896

Frequency		Application			Certifications			Engine type	Cooling variant ³⁾	Genset type
Hz	50/60Hz switchable	Continuous power	Prime power	Standby power	ISO 8528	NFPA 110	CSC certification			
50	x	x			x		x	16V 4000 B24F	W2A	MTU 16V4000 DS2560
60	x	x			x		x	16V 4000 B24S	W2A	MTU 16V4000 DS2560
50	x		x		x		x	16V 4000 G24F	W2A	MTU 16V4000 DS2560
60	x		x		x		x	16V 4000 G24S	W2A	MTU 16V4000 DS2560
50	x			x	x		x	16V 4000 G84F	W2A	MTU 16V4000 DS2560
60	x			x	x		x	16V 4000 G84S	W2A	MTU 16V4000 DS2560
60			x		x		x	16V 4000 G24S	Tabletop radiator	Caribic configuration
60		x			x		x	16V 4000 B24S	Tabletop radiator	Caribic configuration

Gas Generator Sets – Continuous/Prime/Peak

POWER MODULES -
50/60HZ.

Power output ¹⁾ kWe	Available voltages		Emissions NOx<500 mg/Nm ³ NOx<250 mg/Nm ³	Dimensions				Frequency	
	400 V	480 V		Size	Length (mm)	Width (mm)	Height (mm)	50 Hz	60 Hz
Power application									
762 - 1013	x		x	40ft HC	12203	2438	2896	x	
1151 - 1523	x	x	x	40ft HC	12203	2438	2896	x	x
1537 - 2030	x		x	40ft HC	12203	2438	2896	x	
1948 - 2535	x		x	40ft HC	12203	2438	2896	x	
CHP application									
180 - 220	x	x	x	30+	12203	2438	2896	x	x
				40ft HC	9000	3000	3000		
245 - 420	x	x	x	31+	12203	2438	2896	x	x
				40ft HC	9000	3000	3000		
762 - 1013	x		x	40+	12203	3200	3200	x	
1151 - 1523	x		x	40+	12203	3200	3200	x	
1537 - 2030	x		x	47+	14200	3200	3200	x	
1948 - 2535	x		x	47+	14200	3200	3200	x	

Application	Engine type	Fuel type	Genset type
Continuous power		NG = Natural gas NNG = Non-natural Gas (biogas/sewage/landfill)	
x	L32/L33/L64/L64FNER	NG/NNG	MTU 8V4000 GS
x	L32/L33/L64/L64FNER	NG/NNG	MTU 12V4000 GS
x	L32/L33/L64/L64FNER	NG/NNG	MTU 16V4000 GS
x	L32/L33/L64/L64FNER	NG/NNG	MTU 20V4000 GS
x	L/Z	NG/NNG	MTU 6R400 GS
x	L/Z	NG/NNG	MTU 12V400 GS
x	L32/L33/L64/L64FNER	NG/NNG	MTU 8V4000 GS
x	L32/L33/L64/L64FNER	NG/NNG	MTU 12V4000 GS
x	L32/L33/L64/L64FNER	NG/NNG	MTU 16V4000 GS
x	L32/L33/L64/L64FNER	NG/NNG	MTU 20V4000 GS

EnergyPack

BATTERY STORAGE.

Nominal capacity	Nominal apparent power	C-Rates ¹⁵⁾	Nominal power factor	Frequency
kWh_{nom}	kVA_{nom}	C	λ_{nom}	Hz
up to 600	40 - 400	0.5 / 1 / 2	-1 to 1	50/60
300 - 800	300 - 800	0.5 / 1 / 2	-1 to 1	50/60
500 - 2,600	300 - 2,000	0.5 / 1 / 2	-1 to 1	50/60

Overall dimensions ¹⁶⁾				Certifications		Battery storage type
Size	Length (mm)	Width (mm)	Height (mm)	UL	CE	
Enclosure	3.000	2.230	2.400	on request	x	MTU EnergyPack Compact
20ft. HC	6.096	2.438	2.896	on request	x	MTU EnergyPack 20ft.
40ft. HC	12.192	2.438	2.896	on request	x	MTU EnergyPack 40ft.

Classification for Data Center Continuous Power

ACCORDING TO THE UPTIME INSTITUTE.

Tier I

Tier I is composed of a single path for power and cooling distribution, without redundant components.

Tier II

Tier II is composed of a single path for power and cooling distribution, with redundant components.

Tier III

Tier III is composed of multiple active power and cooling distribution paths, but only one active path has redundant components and is concurrently maintainable.

Tier IV

Tier IV is composed of multiple active power and cooling distribution paths, has redundant components and is fault tolerant.

	Tier I	Tier II	Tier III	Tier IV
Delivery paths	One	One	One active + one passive	Two active
Redundant components	No	Yes	Yes (for active path)	Yes (for two active path)
Simultaneously maintainable	No	No	Yes	Yes
Fault tolerance (single event)	No	No	No	Yes
Compartmentalisation	No	No	No	Yes
Suitable MTU Power Generation application	Standardized backup (3D) Prime power for stationary emergency (3E) Prime (3B) Peak (3G)		Data center continuous (3F) Continuous (3A)	

For complete definition see <http://uptimeinstitute.com/>

Conversion table

NUMBERS TO BACK YOU UP.

1 kW	= 1.360 PS	g	= 9.80665 m/s ²
1 kW	= 1.341 bhp	л	= 3.14159
1 bhp	= 1.014 PS	e	= 2.71828
1 oz	= 28.35 g		
1 lb	= 453.59 g	1 lb	= 16 oz
1 short ton	= 907.18 kg	1 short ton	= 2000 lbs
1 lb/bhp	= 447.3 g/PSh	1 ft lb	= 1.356 Nm
1 lb/bhp	= 608.3 g/kWh	1 ft/min	= 0.00508 m/s
1 gal/bhp (US)	= 4264 g/kWh	pDiesel	= 0.83 kg/l
1 kWh	= 860 kcal	1 lb/sqin	= 0.069 bar (1 psi)
1 cal	= 4.187 J	1 mm Hg	= 1.333 mbar (133.3 Pa)
1 BTU	= 1.055 kJ	1 mm H ₂ O	= 0.0981 mbar (9.81 Pa)
1 inch	= 2.540 cm	T (K)	= t (°C) + 273.15
1 sq. inch	= 6.542 cm ²	t (°C)	= 5/9 x (t (°F) -32)
1 cu. inch	= 16.387 cm ³	t (°C)	= 5/4 x t (°R)
1 foot	= 3.048 dm	1 foot	= 12 inches
1 sq. foot	= 9.290 dm ²	1 yard	= 3 feet
1 mile	= 1.609 km	1 mile	= 5280 feet
1 naut. mile	= 1.853 km	1 naut. mile	= 6080 feet
1 UK Gallon	= 4.546 l	1 US Barrel	= 0.159 m ³
1 US Gallon	= 3.785 l		= 42 US Gallons
Energy:	1 J = 1 Ws = 1 VAs = 1 Nm		
Power:	1 W = 1 VA = 1 Nm/s		
Force:	1 N = 1 kgm/s ²		
Pressure:	1 Pa = 1 N/m ² (1 bar = 10 ⁵ Pa)		
MEP (bar)	$= \frac{P_{cyl}(kW) \times 1200}{n(l/min) \times V_{cyl}(l)}$		
Torque (Nm)	$= \frac{P_{ges}(kW) \times 30000}{n(l/min) \times \pi}$		

FOOTNOTES.

- A Only available for 50Hz markets
 B Unlimited hours in data center application where a reliable grid/utility is present.

Application descriptions, e.g. load factor, applies to MTU powered equipment.

- | | |
|---|--|
| (1) Power output based on 400V, fuel consumption opt. emission level and standard or optional generator. For arrangements with other emissions, voltages and/or optional generators, ratings may vary. Series 4000 without cooling package. | (8) Heat output from exhaust with tolerance of $\pm 8\%$ |
| (2) Ambient conditions and load application acc. to ISO 8528 | (9) Performance data in accordance with ISO 3046/I-2002 with tolerance of 5% |
| (3) Cooling variants:
A2A: air-to-air charge air cooling (TD)
W2A: water-to-air charge air cooling (TB) | (10) Referenced methane number |
| (4) Sound levels in accordance with European Noise Directive (2000/14/EC), for further information on acoustic data see datasheets | (11) Availability on request |
| (5) Power available up to 25°C intake air temperature / 100m site altitude above sea level | (12) Single-phase units only |
| (6) Rated power at nominal voltage, power factor = 1,0 and nominal frequency | (13) Availability on request only for VDE-AR-N 4110 |
| (7) Heat output from engine cooling with tolerance of $\pm 8\%$ | (14) Datacenter configuration available level |
| | (15) C-Rate availability dependend on requested capacity-power combination |
| | (16) Transformer can be within shown dimensions or additional, dependend on requested capacity-power combination. For details please submit request. |

50Hz – Power available up to:

Standard:

Site altitude above sea level: 400 m
 Intake air temperature: 40°C

TA-Luft:

Site altitude above sea level: 100 m
 Intake air temperature: 25°C

NEA Singapore:

Site altitude above sea level: 100 m
 Intake air temperature: 40°C

60Hz – Power available up to:

Standard:

Site altitude above sea level: 400 m
 Intake air temperature: 25° C

Available power for battery storage solutions:

Standard:

Site altitude above sea level: 2000 m
 Ambient temperature: -20°C to 40°C

C/F: Consult factory

D: Lambda = 1 with 2-way-catalyst

L: Leanburn with single stage intercooling

Z: Leanburn with two stage intercooling

Cooling variants:

A2A: air-to-air charge air cooling (TD)

W2A: water-to-air charge air cooling (TB)

