



Sales Program Gendrive

Diesel Engines

Edition 2/18
valid from 09/2018



Power. Passion. Partnership.

Legend

Cooling Variants

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

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

Emission Standards:

- ☒ Fuel consumption optimized
- ① Exhaust emission optimized (TA-Luft)
(Explanation see page 85)
- ③ US EPA Stationary EMERG Tier 2 (40 CFR 60)
- ⑦ US EPA Stationary EMERG Tier 3 (40 CFR 60)
- ⑧ EU Nonroad Stage IIIA (97/68/EC)
- ⑰ US EPA Nonroad Tier 2 compliant (40 CFR 89)
- ⑳ US EPA Nonroad Tier 3 compliant (40 CFR 89)
- ㉔ NEA Singapore for ORDE
- ㉕ MoEF India/CPCB Stage II
- ㉑ China NRMM Stage III (GB20891-2014)
- ㉒ US EPA Nonroad Tier 2 compliant

Footnotes:

- (1) The quoted typical kVA/kWe ratings are based on typical generator efficiencies. The kVA figures are calculated with a 0.8 power factor. Typical deductions for fan drive power and generator efficiency is applied for calculation and serves as guideline only.
- (2) With KTA or IEEE qualifications
- (3) With 1200 rpm
- (4) Only for 50 Hz
- (5) Only for 60 Hz
- (6) Available on request
- (7) Available Q4/2018, for details please contact your sales partner

A customer-oriented technology leader.

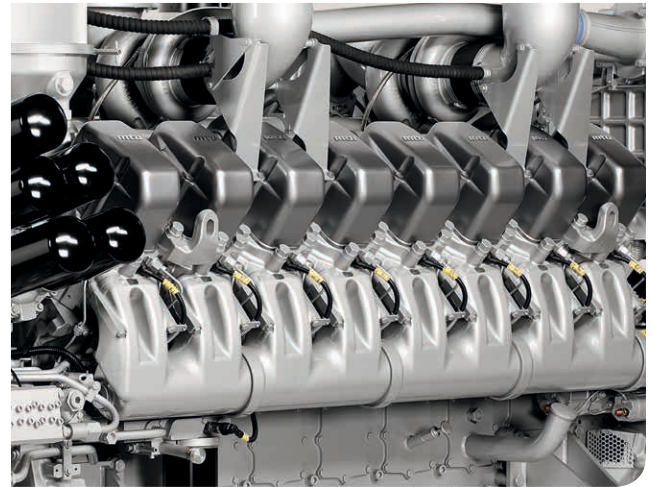
MTU supplies its customers with technologically-advanced products that are proven in the field. MTU's range of products and services for off-highway applications is extensive and includes both standard and customized solutions.

MTU is part of the Rolls-Royce Group and a world-leading provider of high- and medium-speed diesel and gas engines, complete drive systems and distributed energy systems for the most demanding requirements.

The product range of MTU is one of the widest and most modern in the sector. We offer comprehensive, powerful and reliable engine solutions for yachts, commercial ships and naval vessels, construction and industrial vehicles, agricultural machinery, mining, rail and military vehicles as well as for the oil and gas industry. We also provide a full line of service products to help you maximize uptime and performance.

For over 100 years, MTU has been known for cutting-edge innovation and technological leadership. That same spirit of innovation inspires our sustainability efforts. Today and in the future, our focus is on developing and implementing system solutions to maximize efficiency and meet emissions standards.





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- 20** 3E - Diesel engines with Prime Power for Stationary Emergency
- 24** 3F - Diesel engines for Data Center Continuous
- 26** 3C - Diesel engines for NPP Standby Power *Continuous/Prime/Peak*
- 30** 3A - Diesel engines for Continuous
- 32** 3B - Diesel engines for Prime
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Gendrive engines - 60 Hz

Standby

- 40** 3D - Diesel engines for Standardized Backup
- 42** 3E - Diesel engines with Prime Power for Stationary Emergency
- 46** 3F - Diesel engines for Data Center Continuous
- 48** 3C - Diesel engines for NPP Standby Power *Continuous/Prime/Peak*
- 52** 3A - Diesel engines for Continuous
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- 56** 3G - Diesel engines for Peak

Gendrive engines (switchable) - 50/60 Hz

- 60** 3D - Diesel engines for Standardized Backup (switchable)
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MTU Gendrive rating definition

Standby – Gendrive Engines

Standardized Backup (3D)



The application group „Standardized Backup“ (3D) provides classical backup power. This rating applies to installations served by a reliable utility source. The standby ratings are applicable to varying loads for the duration of a power outage.

Typical applications:

industrial and manufacturing plants, residential areas

Standby – Gendrive Engines

Prime Power for Stationary Emergency (3E)



The application group „Prime Power for Stationary Emergency“ (3E) provides classical standby power comparable to the application group 3D („Standardized Backup“). The difference is that this application group offers a 10% overload capability to cover for e.g. voltage variations or peak loads.

Typical applications:

industrial and manufacturing plants, residential areas

MTU Gendrive rating definition

Standby – Gendrive Engines

Data Center Continuous (3F)



The application group „Data Center Continuous“ (3F) is especially for the use in data centers as emergency standby units. „Data Center Continuous“ offers an economic and customer friendly solution to comply to the Uptime Institute* Tier III and Tier IV standards.

Typical applications:

data centers

Standby – Gendrive Engines

NPP Standby Power (3C)



The application group „NPP Standby Power“ (3C) applies to installations in thermal power stations. At constant or varying load, the number of generator set operating hours is unlimited. Products are qualified in accordance with IEEE and/or KTA requirements.

Typical applications:

nuclear thermal power plants or nuclear research facilities

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

MTU Gendrive rating definition

Continuous/Prime/Peak – Gendrive Engines

Continuous (3A)



The application group „Continuous“ (3A) 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 applications:

power stations

Continuous/Prime/Peak – Gendrive Engines

Peak (3G)



The application group „Peak“ (3G) 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.

Typical applications:

peak shaving, grid stability and capacity programs

Continuous/Prime/Peak – Gendrive Engines

Prime (3B)



The application group „Prime“ (3B) applies to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited.

Typical applications:

construction sites, remote areas

Continuous/Prime/Peak – Gendrive Engines

Prime Power Limited (3C)



The application group „Prime Power Limited“ (3C) applies to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is limited to 1000 hours per year.

Typical applications:

peak shaving, grid stability

MTU Gendrive rating definition

Overview of values

	Standardized Backup (3D)	Prime Power for Stat. Emergency (3E)
Load	variable	variable
Load factor	≤ 85 %	≤ 85 %
10 % overload (ICXN)	no	yes
Max. operating hours (per year)	500 h ¹⁾	500 h ¹⁾
Rating definition according DIN ISO 3046	IFN	ICXN
Uptime compliant	Tier I & II	Tier I & II

	Continuous (3A)	Prime (3B)
Load	constant & variable	variable
Load factor	≤ 100 %	≤ 75 %
10 % overload (ICXN)	yes	yes
Max. operating hours (per year)	unlimited	unlimited
Rating definition according DIN ISO 3046	ICXN	ICXN
Uptime compliant	Tier III & IV	Tier I & II

Data Center Continuous (3F)	NPP Standby Power (3C)
constant & variable	variable
≤ 100 %	acc. to KTA&IEEE regul.
yes	yes
unlimited ²⁾	unlimited ³⁾
ICXN	ICXN
Tier III & IV	no

Peak (3G)	Prime Power Limited (3C)
constant & variable	variable
≤ 100 %	≤ 75 %
yes	yes
1000 h ⁴⁾	1000 h
ICXN	ICXN
Tier I & II	Tier I & II

1) or for the duration of an emergency

2) in data center application where a reliable utility is present

3) where a reliable utility is present

4) 500 h with 100 % load without interruption

General specifications

Diesel engines for power generation with constant speed

- > Four-stroke, direct-injection
- > Water- and air cooled
- > V or In-line configuration

Standard conditions for diesel engines:

Barometric pressure:	1000 mbar;
Site altitude above sea level:	100 m
Ambient air temperature:	25°C
Charge-air coolant temp.:	
Series 956	50°C
Series 2000	55°C for fuel consumption or for TA-Luft optimized, 45°C for for emission optimized
Series 4000	55°C for fuel consumption or TA-Luft optimized, 45°C for emission optimized
Series 4000 Ex3	45°C

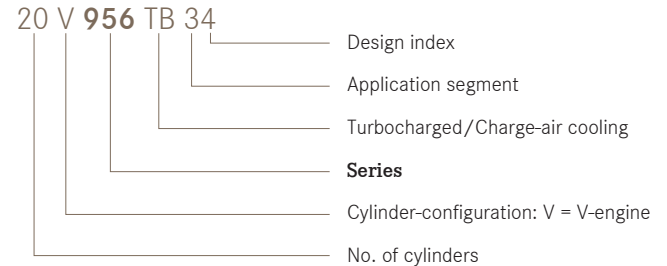
Unless otherwise stated rated power available up to:

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

Explanation of the engine designation

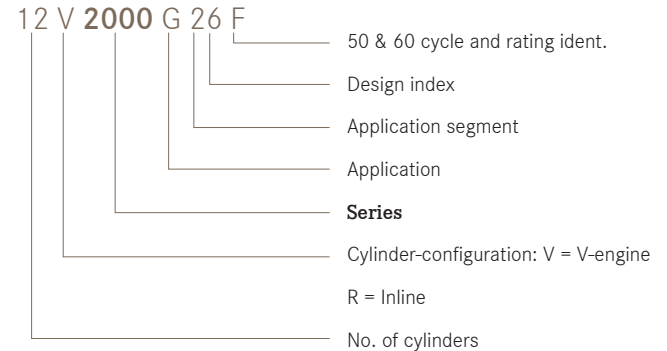
Series 956

Example:



Series 1600 / 2000 / 4000

Example:



MTU applies a policy of continual products and systems improvements. Please note, specifications are subject to change without notice. All dimensions are approximate. Details are subject to options selected. Please contact your MTU distributor for current information and binding data.

Series	1600/2000/4000/956
Cooling variants	
Water-to-air charge air cooling (W2A)	2000/4000/956
Air-to-air charge air cooling (A2A)	1600/2000

For more information about MTU gendrive diesel engines please visit:
www.mtu-online.com

Standby – Gendrive Engines – 50 Hz

Standardized Backup (3D)

Prime Power for Stationary Emergency (3E)



Standby – Gendrive Engines – 50 Hz

Standardized Backup (3D)

50 Hz – 1500 rpm

448 kWm - 3088 kWm

Typical Generator Set output ⁽¹⁾		Rating		Emissions Standards							Cooling		Engine	
kVA	kWe	kWm	bhp	☒	①	⑧	③⑥	②④	②⑤		③①	Variant	Package	Engine model
500	400	448	601	x		x		x	x			A2A	x	10V 1600 G70F
550	440	493	661	x		x						A2A	x	10V 1600 G80F
650	520	576	772	x				x	x ⁽⁷⁾			A2A	x	12V 1600 G70F
715	572	634	850	x				x	x ⁽⁷⁾			A2A	x	12V 1600 G80F
715	572	635	852	x								A2A	x	12V 2000 G25
715	572	635	852	x								W2A		12V 2000 G25
825	660	732	982		x		x	x			x	A2A	x	12V 2000 G76F
860	688	765	1026	x								A2A	x	12V 2000 G65
860	688	765	1026	x								W2A		12V 2000 G65
1000	800	887	1189	x								A2A	x	12V 2000 G86F
1000	800	890	1194	x								A2A	x	16V 2000 G25
1000	800	890	1194	x								W2A		16V 2000 G25
1100	880	975	1307	x								A2A	x	16V 2000 G65
1100	880	975	1307	x								W2A		16V 2000 G65
1110	888	979	1313		x		x	x			x	A2A	x	16V 2000 G76F
1250	1000	1100	1475	x								A2A	x	18V 2000 G65
1250	1000	1100	1475	x								A2A	x	16V 2000 G86F
1250	1000	1100	1475	x								W2A		18V 2000 G65
1400	1120	1235	1656	x								A2A	x	18V 2000 G76F
1800	1440	1575	2112	x				x			x	W2A		12V 4000 G74F
2000	1600	1750	2347	x					x			W2A		12V 4000 G84F
2250	1800	1965	2635	x					x		x	W2A		16V 4000 G74F
2500	2000	2185	2930	x					x		x	W2A		16V 4000 G84F
2800	2240	2420	3245	x					x		x	W2A		20V 4000 G64F
3100	2480	2670	3581	x					x		x	W2A		20V 4000 G74F
3300	2640	2850	3822	x					x		x	W2A		20V 4000 G84F
3600	2880	3088	4141	x			x	x				W2A		20V 4000 G94F

Standby – Gendrive Engines – 50 Hz

Prime Power for Stationary Emergency (3E)

50 Hz – 1500 rpm

665 kWm - 2590 kWm

Typical Generator Set output ⁽¹⁾		Rating		Emissions Standards								Cooling		Engine
kVA	kWe	kWm	bhp	☒	①	⑧	③⑥	②④	②⑤		③①	Variant	Package	Engine model
750	600	665	892	x	x		x	x			x	A2A	x	12V 2000 G16F
800	640	709	951	x	x		x	x			x	A2A	x	12V 2000 G26F
910	728	806	1081	x	x		x	x			x	A2A	x	16V 2000 G16F
1000	800	890	1194	x	x		x	x			x	A2A	x	16V 2000 G26F
1135	908	1000	1341	x	x		x	x			x	A2A	x	16V 2000 G36F
1250	1000	1102	1478	x	x		x	x			x	A2A	x	18V 2000 G26F
1600	1280	1420	1904	x	x			x			x	W2A		12V 4000 G14F
1800	1440	1575	2112	x	x			x			x	W2A		12V 4000 G24F
2100	1680	1798	2411	x	x			x			x	W2A		16V 4000 G14F
2250	1800	1965	2635	x	x			x			x	W2A		16V 4000 G24F
2500	2000	2200	2950	x	x			x			x	W2A		20V 4000 G14F
2800	2240	2420	3245	x	x			x			x	W2A		20V 4000 G24F
3000	2400	2590	3473	x	x			x			x	W2A		20V 4000 G34F

Standby – Gendrive Engines – 50 Hz

Data Center Continuous (3F)

NPP Standby Power (3C)



Standby – Gendrive Engines

Data Center Continuous (3F)

50 Hz – 1500 rpm

890 kWm - 2590 kWm

Typical Generator Set output ⁽¹⁾		Rating		Emissions Standards							Cooling		Engine	
kVA	kWe	kWm	bhp	☒	①	⑧	③⑥	②④	②⑤		③①	Variant	Package	Engine model
1000	800	890	1194	x	x		x	x			x	A2A	x	16V 2000 G26F
1250	1000	1102	1478	x	x		x	x			x	A2A	x	18V 2000 G26F
1600	1280	1420	1904	x	x			x			x	W2A		12V 4000 G14F
1800	1440	1575	2112	x	x			x			x	W2A		12V 4000 G24F
2100	1680	1798	2411	x	x			x			x	W2A		16V 4000 G14F
2250	1800	1965	2635	x	x			x			x	W2A		16V 4000 G24F
2500	2000	2200	2950	x	x			x			x	W2A		20V 4000 G14F
2800	2240	2420	3245	x	x			x			x	W2A		20V 4000 G24F
3000	2400	2590	3473	x	x			x			x	W2A		20V 4000 G34F

Standby – Gendrive Engines

NPP Standby Power (3C)

50 Hz – 1500 rpm

1560 kWm – 6500 kWm

Typical Generator Set output ⁽¹⁾	Rating		Emissions Standards								Cooling		Engine	
	kWe	kWm	bhp	☒	①	⑧	③⑥	②④	②⑤		③①	Variant	Package	Engine model
1500	1560	2092	x									W2A		12V 4000 E63 ⁽²⁾
2000	2080	2789	x									W2A		16V 4000 E63 ⁽²⁾
2500	2600	3487	x									W2A		20V 4000 E63 ⁽²⁾
3600	3750	5029	x									W2A		12V 956 TB33
4800	5000	6705	x									W2A		16V 956 TB33
6300	6500	8717	x									W2A		20V 956 TB34

Continuous/Prime/Peak – Gendrive Engines – 50 Hz

Continuous (3A)

Prime (3B)

Peak (3G)

Prime Power Limited (3C)



Continuous/Prime/Peak – Gendrive Engines

Continuous (3A)

50 Hz – 1500 rpm

515 kWm – 2200 kWm

Typical Generator Set output ⁽¹⁾		Rating		Emissions Standards								Cooling		Engine
kVA	kWe	kWm	bhp	☒	①	⑧	③⑥	②④	②⑤		③①	Variant	Package	Engine model
575	460	515	691	x								A2A	x	12V 2000 G65
575	460	515	691	x								W2A		12V 2000 G65
740	592	655	878	x								A2A	x	16V 2000 G65
740	592	655	878	x								W2A		16V 2000 G65
750	600	665	892	x								A2A	x	12V 2000 B26F
800	640	709	951	x								A2A	x	16V 2000 B26F
810	648	720	966	x								A2A	x	18V 2000 G65
810	648	720	966	x								W2A		18V 2000 G65
1000	800	887	1189	x								A2A	x	18V 2000 B26F
1480	1184	1310	1757	x								W2A		12V 4000 B24F
1875	1500	1635	2193	x								W2A		16V 4000 G24F
2275	1820	2000	2682	x								W2A		20V 4000 B24F
2500	2000	2200	2950	x								W2A		20V 4000 B34F

Continuous/Prime/Peak – Gendrive Engines

Prime (3B)

50 Hz – 1500 rpm

407 kWm - 2807 kWm

Typical Generator Set output ⁽¹⁾		Rating		Emissions Standards								Cooling		Engine
kVA	kWe	kWm	bhp	☒	①	⑧	③⑥	②④	②⑤		③①	Variant	Package	Engine model
450	360	407	546	x	x	x		x	x			A2A	x	10V 1600 G10F
500	400	448	601	x	x	x		x	x			A2A	x	10V 1600 G20F
590	472	524	703	x	x			x	x ⁽⁷⁾			A2A	x	12V 1600 G10F
650	520	576	772	x	x			x	x ⁽⁷⁾			A2A	x	12V 1600 G20F
650	520	580	778	x	x						x	A2A	x	12V 2000 G25
650	520	580	778	x								W2A		12V 2000 G25
750	600	665	892	x	x		x	x			x	A2A	x	12V 2000 G16F
780	624	695	932	x	x							A2A	x	12V 2000 G65
780	624	695	932	x								W2A		12V 2000 G65
800	640	709	951	x	x		x	x			x	A2A	x	12V 2000 G26F
910	728	806	1081	x	x		x	x			x	A2A	x	16V 2000 G16F
910	728	810	1086	x	x							A2A	x	16V 2000 G25
910	728	810	1086	x								W2A		16V 2000 G25
1000	800	890	1194	x	x							A2A	x	16V 2000 G65
1000	800	890	1194	x								W2A		16V 2000 G65
1000	800	890	1194	x	x		x	x			x	A2A	x	16V 2000 G26F
1135	908	1000	1341	x	x		x	x			x	A2A	x	16V 2000 G36F
1135	908	1000	1341	x	x							A2A	x	18V 2000 G65
1135	908	1000	1341	x								W2A		18V 2000 G65
1250	1000	1102	1478	x	x		x	x			x	A2A	x	18V 2000 G26F
1365	1092	1205	1616	x	x			x			x	W2A		12V 4000 G14RF
1600	1280	1420	1904	x	x			x			x	W2A		12V 4000 G14F
1800	1440	1575	2112	x	x			x			x	W2A		12V 4000 G24F
2100	1680	1798	2411	x	x			x			x	W2A		16V 4000 G14F
2250	1800	1965	2635	x	x			x			x	W2A		16V 4000 G24F
2500	2000	2200	2950	x	x			x			x	W2A		20V 4000 G14F
2800	2240	2420	3245	x	x			x			x	W2A		20V 4000 G24F
3000	2400	2590	3473	x	x			x			x	W2A		20V 4000 G34F
3250	2600	2807	3764	x			x	x				W2A		20V 4000 G44F

Continuous/Prime/Peak – Gendrive Engines

Peak (3G)

50 Hz – 1500 rpm

890 kWm - 2590 kWm

Typical Generator Set output ⁽¹⁾		Rating		Emissions Standards								Cooling		Engine
kVA	kWe	kWm	bhp	☒	①	⑧	③⑥	②④	②⑤		③①	Variant	Package	Engine model
1000	800	890	1194	x	x		x	x			x	A2A	x	16V 2000 G26F
1250	1000	1102	1478	x	x		x	x			x	A2A	x	18V 2000 G26F
1600	1280	1420	1904	x	x			x			x	W2A		12V 4000 G14F
1800	1440	1575	2112	x	x			x			x	W2A		12V 4000 G24F
2100	1680	1798	2411	x	x			x			x	W2A		16V 4000 G14F
2250	1800	1965	2635	x	x			x			x	W2A		16V 4000 G24F
2500	2000	2200	2950	x	x			x			x	W2A		20V 4000 G14F
2800	2240	2420	3245	x	x			x			x	W2A		20V 4000 G24F
3000	2400	2590	3473	x	x			x			x	W2A		20V 4000 G34F

Continuous/Prime/Peak – Gendrive Engines

Prime Power Limited (3C)

50 Hz – 1500 rpm

407 kWm - 576 kWm

Typical Generator Set output ⁽¹⁾		Rating		Emissions Standards								Cooling		Engine
kVA	kWe	kWm	bhp	☒	①	⑧	③⑥	②④	②⑤		③①	Variant	Package	Engine model
450	360	407	546	x	x	x						A2A	x	10V 1600 G40F
500	400	448	601	x	x	x						A2A	x	10V 1600 G50F
590	472	524	703	x	x							A2A	x	12V 1600 G40F
650	520	576	772	x	x							A2A	x	12V 1600 G50F

Standby – Gendrive Engines – 60 Hz

Standardized Backup (3D)

Prime Power for Stationary Emergency (3E)



Standby – Gendrive Engines

Standardized Backup (3D)

60 Hz – 1800 rpm

511 kWm – 3490 kWm

Typical Generator Set output ⁽¹⁾		Rating		Emissions Standards						Cooling		Engine
kWe	kVA	kWm	bhp	☒	①9	③	⑳	⑦	Variant	Package	Engine model	
450	563	511	685				x	x	A2A	x	10V 1600 G70S	
500	625	561	752		x	x			A2A	x	10V 1600 G80S	
550	688	613	822		x	x			A2A	x	12V 1600 G70S	
600	750	668	896		x	x			A2A	x	12V 1600 G80S	
710	888	780	1046		x	x			A2A	x	12V 2000 G45	
710	888	780	1046		x	x			W2A		12V 2000 G45	
800	1000	890	1194		x	x			A2A	x	12V 2000 G85	
800	1000	890	1194		x	x			W2A		12V 2000 G85	
925	1156	1010	1354		x	x			A2A	x	16V 2000 G45	
925	1156	1010	1354		x	x			W2A		16V 2000 G45	
1000	1250	1097	1471	x	x	x			W2A		16V 2000 G76S	
1000	1250	1115	1495		x	x			A2A	x	16V 2000 G85	
1000	1250	1115	1495		x	x			W2A		16V 2000 G85	
1200	1500	1310	1757		x	x			A2A	x	18V 2000 G85	
1200	1500	1310	1757		x	x			W2A		18V 2000 G85	
1250	1563	1371	1839	x	x	x			W2A		16V 2000 G86S	
1250	1563	1371	1839	x	x	x			A2A	x	18V 2000 G76S	
1600	2000	1736	2328	x	x	x			W2A		12V 4000 G74S	
1750	2188	1910	2561	x	x	x			W2A		12V 4000 G84S	
2100	2625	2280	3058	x	x	x			W2A		16V 4000 G74S	
2300	2875	2500	3353	x	x	x			W2A		16V 4000 G84S	
2550	3188	2740	3674	x	x	x			W2A		16V 4000 G94S	
2550	3188	2740	3674	x	x	x			W2A		20V 4000 G64S	
2800	3500	3010	4036	x	x	x			W2A		20V 4000 G74S	
3250	4063	3490	4680	x	x	x			W2A		20V 4000 G94S	

Standby – Gendrive Engines

Prime Power for Stationary Emergency (3E)

60 Hz – 1800 rpm

511 kWm – 3010 kWm

Typical Generator Set output ⁽¹⁾		Rating		Emissions Standards						Cooling		Engine
kWe	kVA	kWm	bhp	☒	⑰	③	⑳	⑦	Variant	Package	Engine model	
450	563	511	685			x			A2A	x	10V 1600 G20S ⁽⁷⁾	
500	625	561	752			x			A2A	x	12V 1600 G10S ⁽⁷⁾	
550	688	608	815			x			A2A	x	12V 1600 G20S ⁽⁷⁾	
640	800	710	952			x			A2A	x	12V 2000 G45 ⁽⁷⁾	
640	800	710	952			x			W2A		12V 2000 G45 ⁽⁷⁾	
735	919	810	1086			x			A2A	x	12V 2000 G85 ⁽⁷⁾	
735	919	810	1086			x			W2A		12V 2000 G85 ⁽⁷⁾	
830	1038	915	1227			x			A2A	x	16V 2000 G45 ⁽⁷⁾	
830	1038	915	1227			x			W2A		16V 2000 G45 ⁽⁷⁾	
925	1156	1010	1354			x			A2A	x	16V 2000 G85 ⁽⁷⁾	
925	1156	1010	1354			x			W2A		16V 2000 G85 ⁽⁷⁾	
1100	1375	1191	1597			x			A2A	x	18V 2000 G85 ⁽⁷⁾	
1100	1375	1191	1597			x			W2A		18V 2000 G85 ⁽⁷⁾	
1400	1750	1520	2038			x			W2A		12V 4000 G14S ⁽⁷⁾	
1600	2000	1736	2328			x			W2A		12V 4000 G24S ⁽⁷⁾	
1850	2313	2020	2709			x			W2A		16V 4000 G14S ⁽⁷⁾	
2100	2625	2280	3058			x			W2A		16V 4000 G24S ⁽⁷⁾	
2300	2875	2490	3339			x			W2A		20V 4000 G14S ⁽⁷⁾	
2550	3188	2740	3674			x			W2A		20V 4000 G24S ⁽⁷⁾	
2800	3500	3010	4036			x			W2A		20V 4000 G44S ⁽⁷⁾	

Standby – Gendrive Engines – 60 Hz

Data Center Continuous (3F)

NPP Standby Power (3C)



Standby – Gendrive Engines

Data Center Continuous (3F)

60 Hz – 1800 rpm

998 kWm - 3010 kWm

Typical Generator Set output ⁽¹⁾		Rating		Emissions Standards						Cooling		Engine
kWe	kVA	kWm	bhp	☒	①9	③	⑳	⑦		Variant	Package	Engine model
910	1138	998	1338	x	x	x				W2A		16V 2000 G26S
1400	1750	1520	2038	x	x	x				W2A		12V 4000 G14S
1600	2000	1736	2328	x	x	x				W2A		12V 4000 G24S
1850	2313	2020	2709	x	x	x				W2A		16V 4000 G14S
2100	2625	2280	3058	x	x	x				W2A		16V 4000 G24S
2300	2875	2490	3339	x	x	x				W2A		20V 4000 G14S
2550	3188	2740	3674	x	x	x				W2A		20V 4000 G24S
2800	3500	3010	4036	x	x	x				W2A		20V 4000 G44S

Standby – Gendrive Engines

NPP Standby Power (3C)

60 Hz – 1800 rpm

1680 kWm – 2800 kWm

Typical Generator Set output ⁽¹⁾	Rating		Emissions Standards					Cooling		Engine	
	kWe	kWm	bhp	☒	⑰	③	⑳	⑦	Variant	Package	Engine model
1500	1680	2253	x						W2A		12V 4000 E83 ⁽²⁾
2000	2240	3004	x						W2A		16V 4000 E83 ⁽²⁾
2500	2800	3755	x						W2A		20V 4000 E83 ⁽²⁾

Continuous/Prime/Peak – Gendrive Engines – 60 Hz

Continuous (3A)

Prime (3B)

Peak (3G)



Continuous/Prime/Peak – Gendrive Engines

Continuous (3A)

60 Hz – 1800 rpm

870 kWm - 2490 kWm

Typical Generator Set output ⁽¹⁾		Rating		Emissions Standards						Cooling		Engine
kWe	kVA	kWm	bhp	☒	①9	③	⑳	⑦	Variant	Package	Engine model	
790	988	870	1167		x				W2A		12V 4000 G73 ⁽³⁾	
1040	1300	1140	1529		x				W2A		16V 4000 G73 ⁽³⁾	
1100	1375	1190	1596	x					W2A		12V 4000 B14S	
1300	1625	1420	1904	x					W2A		12V 4000 B24S	
1500	1875	1680	2253	x					W2A		16V 4000 B14S	
1775	2219	1950	2615	x					W2A		16V 4000 B24S	
2030	2538	2230	2990	x					W2A		20V 4000 B24S	
2300	2875	2490	3339	x					W2A		20V 4000 B44S	

Continuous/Prime/Peak – Gendrive Engines

Prime (3B)

60 Hz – 1800 rpm

465 kWm - 3010 kWm

Typical Generator Set output ⁽¹⁾		Rating		Emissions Standards						Cooling		Engine
kWe	kVA	kWm	bhp	☒	①⑨	③	⑳	⑦	Variant	Package	Engine model	
415	519	465	624	x					A2A	x	10V 1600 G10S	
450	563	511	685		x				A2A	x	10V 1600 G20S	
500	625	561	752		x				A2A	x	12V 1600 G10S	
550	688	608	815		x				A2A	x	12V 1600 G20S	
640	800	710	952		x				A2A	x	12V 2000 G45	
640	800	710	952		x				W2A		12V 2000 G45	
735	919	810	1086		x				A2A	x	12V 2000 G85	
735	919	810	1086		x				W2A		12V 2000 G85	
830	1038	915	1227		x				A2A	x	16V 2000 G45	
830	1038	915	1227		x				W2A		16V 2000 G45	
910	1138	998	1338	x	x				W2A		16V 2000 G26S	
925	1156	1010	1354		x				A2A	x	16V 2000 G85	
925	1156	1010	1354		x				W2A		16V 2000 G85	
1100	1375	1191	1597		x				A2A	x	18V 2000 G85	
1100	1375	1191	1597		x				W2A		18V 2000 G85	
1000	1250	1105	1482		x				W2A		12V 4000 G73 ⁽³⁾	
1260	1575	1390	1864		x				W2A		16V 4000 G73 ⁽³⁾	
1400	1750	1520	2038	x	x				W2A		12V 4000 G14S	
1600	2000	1736	2328	x	x				W2A		12V 4000 G24S	
1850	2313	2020	2709	x	x				W2A		16V 4000 G14S	
2100	2625	2280	3058	x	x				W2A		16V 4000 G24S	
2300	2875	2490	3339	x	x				W2A		20V 4000 G14S	
2550	3188	2740	3674	x	x				W2A		20V 4000 G24S	
2800	3500	3010	4036	x	x				W2A		20V 4000 G44S	

Continuous/Prime/Peak – Gendrive Engines

Peak (3G)

60 Hz – 1800 rpm

998 kWm - 3010 kWm

Typical Generator Set output ⁽¹⁾		Rating		Emissions Standards						Cooling		Engine
kWe	kVA	kWm	bhp	☒	①9	③	⑳	⑦		Variant	Package	Engine model
910	1138	998	1338	x	x					W2A		16V 2000 G26S
1400	1750	1520	2038	x	x					W2A		12V 4000 G14S
1600	2000	1736	2328	x	x					W2A		12V 4000 G24S
1850	2313	2020	2709	x	x					W2A		16V 4000 G14S
2100	2625	2280	3058	x	x					W2A		16V 4000 G24S
2300	2875	2490	3339	x	x					W2A		20V 4000 G14S
2550	3188	2740	3674	x	x					W2A		20V 4000 G24S
2800	3500	3010	4036	x	x					W2A		20V 4000 G44S



Standby – Gendrive Engines (Switchable)

Standardized Backup (3D)

50/60 Hz - 1500/1800 rpm

1575 kWm - 2500 kWm

Typical Generator Set output ⁽¹⁾				Rating				Emissions		Standards		Cooling		Engine
50 Hz		60 Hz		50 Hz		60 Hz		☒	①	③⑥	②④	Variant	Package	Engine model
kVA	kWe	kWe	kVA	kWm	bhp	kWm	bhp							
1800	1440	1600	2000	1575	2112	1736	2328	x				W2A		12V 4000 G74X ⁽⁶⁾
2000	1600	1750	2188	1750	2347	1910	2561	x				W2A		12V 4000 G84X ⁽⁶⁾
2250	1800	2100	2625	1965	2635	2280	3058	x				W2A		16V 4000 G74X ⁽⁶⁾
2500	2000	2300	2875	2185	2930	2500	3353	x				W2A		16V 4000 G84X ⁽⁶⁾

Gendrive Engines (Switchable) – 50/60 Hz
Continuous (3A)
Prime (3B)



Continuous/Prime/Peak – Gendrive Engines (Switchable)

Continuous (3A)

50/60 Hz - 1500/1800 rpm

1310 kWm - 1950 kWm

Typical Generator Set output ⁽¹⁾				Rating				Emissions		Standards		Cooling		Engine
50 Hz		60 Hz		50 Hz		60 Hz		☒	①	③⑥	②④	Variant	Package	Engine model
kVA	kWe	kWe	kVA	kWm	bhp	kWm	bhp							
1485	1188	1300	1625	1310	1757	1420	1904	x				W2A		12V 4000 B24X ⁽⁶⁾
1865	1492	1775	2219	1635	2193	1950	2615	x				W2A		16V 4000 B24X ⁽⁶⁾

Continuous/Prime/Peak – Gendrive Engines (Switchable)

Prime (3B)

50/60 Hz - 1500/1800 rpm

448 kWm - 2280 kWm

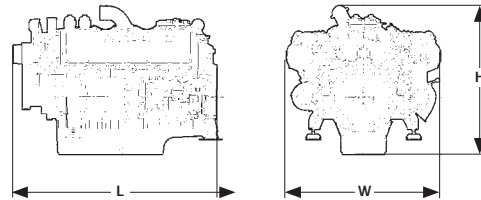
Typical Generator Set output ⁽¹⁾				Rating				Emissions				Standards		Cooling		Engine
50 Hz		60 Hz		50 Hz		60 Hz		☒	①			③⑥	②④	Variant	Package	Engine model
kVA	kWe	kWe	kVA	kWm	bhp	kWm	bhp									
500	400	450	563	448	601	511	685	x						A2A	x	10V 1600 B40S
590	472	500	625	524	703	561	752	x						A2A	x	12V 1600 B30S
650	520	550	688	576	772	608	815	x						A2A	x	12V 1600 B40S
800	640	650	813	709	951	716	960	x ⁽⁵⁾	x ⁽⁴⁾			x ⁽⁴⁾		A2A	x	12V 2000 B76
1000	800	910	1138	890	1194	998	1338	x ⁽⁵⁾	x ⁽⁴⁾			x ⁽⁴⁾		A2A	x	16V 2000 B76
1250	1000	1000	1250	1102	1478	1097	1471	x ⁽⁵⁾	x ⁽⁴⁾			x ⁽⁴⁾		A2A	x	18V 2000 B76
1600	1280	1400	1750	1420	1904	1520	2038	x ⁽⁵⁾	x ⁽⁴⁾					W2A		12V 4000 G14X ⁽⁶⁾
1800	1440	1600	2000	1575	2112	1736	2328	x ⁽⁶⁾	x ⁽⁴⁾					W2A		12V 4000 G24X ⁽⁶⁾
2100	1680	1850	2313	1798	2411	2020	2709	x ⁽⁵⁾	x ⁽⁴⁾					W2A		16V 4000 G14X ⁽⁶⁾
2250	1800	2100	2625	1965	2635	2280	3058	x ⁽⁵⁾	x ⁽⁴⁾					W2A		16V 4000 G24X ⁽⁶⁾

Prime (3B) - 50/60 Hz (switchable)



Technical engine data

Series 1600 Gx0



Emissions Standards:

Fuel consumption optimized, Exhaust emission optimized (TA-Luft), US EPA Stationary EMERG Tier 2, US EPA Stationary EMERG Tier 3, EU Nonroad Stage IIIA, US EPA Nonroad Tier 2 compliant, US EPA Nonroad Tier 3 compliant, NEA Singapore for ORDE, MoEF India/CPCB Stage II

Diesel engines for power generation

Engine	Cylinder data		
	Bore/Stroke mm (in)	Cyl. displac. l (cu in)	Total displac. l (cu in)
10V 1600 Gx0 - A2A 10 Cyl./90°V	122/150 (4.8/5.9)	1.75 (107)	17.5 (1068)
12V 1600 Gx0 - A2A 12 Cyl./90°V	122/150 (4.8/5.9)	1.75 (107)	21.0 (1282)

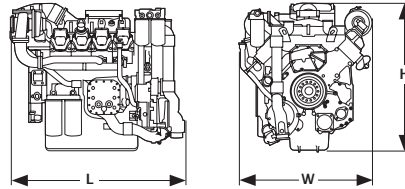
Dimensions, max	Mass, max
L x W x H mm (in)	(dry) kg (lbs.)
1598 x 1318 x 1327 (63 x 52 x 52)	1694 ¹⁾ (3735)
1763 x 1318 x 1327 (69 x 52 x 52)	1855 ¹⁾ (4090)

Specifications are subject to change without notice. All dimensions are approximate, for complete information refer to installation drawing. For further information consult your MTU distributor/dealer.

1) Guideline value

Technical engine data

Series 2000 Gx5



Emissions Standards:

Fuel consumption optimized, Exhaust emission optimized (TA-Luft),
US EPA Stationary EMERG Tier 2, US EPA Nonroad Tier 2 compliant

Diesel engines for power generation

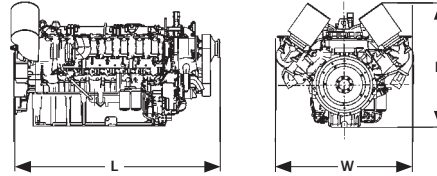
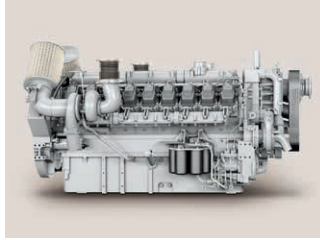
Engine	Cylinder data		
	Bore/Stroke mm (in)	Cyl. displac. l (cu in)	Total displac. l (cu in)
12V 2000 Gx5 - A2A	130/150	1.99	23.9
12 Cyl./90°V	(5.1/5.9)	(121)	(1458)
12V 2000 Gx5 - W2A	130/150	1.99	23.9
12 Cyl./90°V	(5.1/5.9)	(121)	(1458)
16V 2000 Gx5 - A2A	130/150	1.99	31.8
16 Cyl./90°V	(5.1/5.9)	(121)	(1947)
16V 2000 Gx5 - W2A	130/150	1.99	31.8
16 Cyl./90°V	(5.1/5.9)	(121)	(1947)
18V 2000 Gx5 - A2A	130/150	1.99	35.8
18 Cyl./90°V	(5.1/5.9)	(121)	(2185)
18V 2000 Gx5 - W2A	130/150	1.99	35.8
18 Cyl./90°V	(5.1/5.9)	(121)	(2185)

Dimensions, max L x W x H mm (in)	Mass, max (dry) kg (lbs.)
1836 x 1580 x 1585 (72 x 62 x 62)	2570 (5665)
2226 x 1580 x 1572 (88 x 62 x 62)	3100 (6834)
2180 x 1580 x 1585 (86 x 62 x 62)	3180 (7011)
2398 x 1580 x 1603 (94 x 62 x 63)	3500 (7716)
2352 x 1580 x 1619 (93 x 62 x 64)	3580 (7893)

Specifications are subject to change without notice. All dimensions are approximate, for complete information refer to installation drawing.
For further information consult your MTU distributor/dealer.

Technical engine data

Series 2000 Gx6



Emissions Standards:

Fuel consumption optimized, Exhaust emission optimized (TA-Luft),
NEA Singapore for ORDE, US EPA Stationary EMERG Tier 2,
US EPA Nonroad Tier 2 compliant, China NRRM Stage III

Diesel engines for power generation

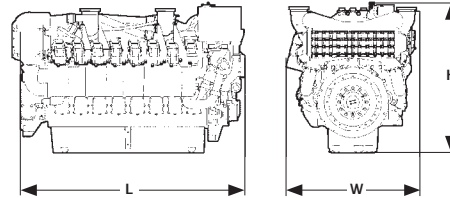
Engine	Cylinder data		
	Bore/Stroke mm (in)	Cyl. displac. l (cu in)	Total displac. l (cu in)
12V 2000 Gx6 - A2A 12 Cyl./90°V	135/156 (5.3/6.15)	2.23 (136)	26.76 (1633)
16V 2000 Gx6 - A2A 16 Cyl./90°V	135/156 (5.3/6.15)	2.23 (136)	35.68 (2177)
16V 2000 Gx6 - W2A 16 Cyl./90°V	135/156 (5.3/6.15)	2.23 (136)	35.68 (2177)
18V 2000 Gx6 - A2A 18 Cyl./90°V	135/156 (5.3/6.15)	2.23 (136)	40.14 (2450)

Dimensions, max L x W x H mm (in)	Mass, max (dry) kg (lbs.)
2436 x 1570 x 1420 (96 x 62 x 56)	3100 (6834)
2278 x 1568 x 1420 (90 x 62 x 56)	3140 (6923)
2611 x 1572 x 1420 (103 x 62 x 56)	3320 (7319)

Specifications are subject to change without notice. All dimensions are approximate, for complete information refer to installation drawing. For further information consult your MTU distributor/dealer.

Technical engine data

Series 4000 Gx4



Emissions Standards:

Fuel consumption optimized, Exhaust emission optimized (TA-Luft),
US EPA Stationary EMERG Tier 2, US EPA Nonroad Tier 2 compliant,
NEA Singapore for ORDE, China NRMM Stage III

Diesel engines for power generation

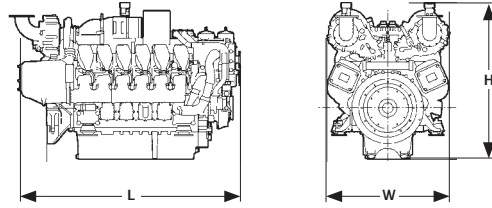
Engine	Cylinder data		
	Bore/Stroke mm (in)	Cyl. displac. l (cu in)	Total displac. l (cu in)
12V 4000 Gx4 - W2A	170/210	4.77	57.2
12 Cyl./90° V	(6.7/8.3)	(291)	(3491)
16V 4000 Gx4 - W2A	170/210	4.77	76.3
16 Cyl./90° V	(6.7/8.3)	(291)	(4655)
20V 4000 Gx4 - W2A	170/210	4.77	95.4
20 Cyl./90° V	(6.7/8.3)	(291)	(5822)

Dimensions, max L x W x H mm (in)	Mass, max (dry) kg (lbs.)
2981 x 1661 x 2182 (117 x 65 x 86)	7700 (16976)
3486 x 1701 x 2172 (137 x 67 x 86)	9290 (20481)

Specifications are subject to change without notice. All dimensions are approximate, for complete information refer to installation drawing.
For further information consult your MTU distributor/dealer.

Technical engine data

Series 4000 Ex3



Emissions Standards:

Fuel consumption optimized

Diesel engines for power generation

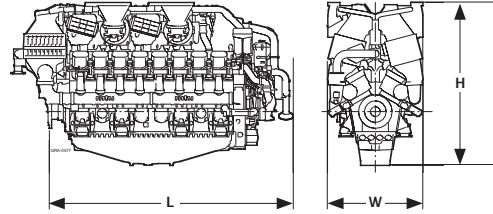
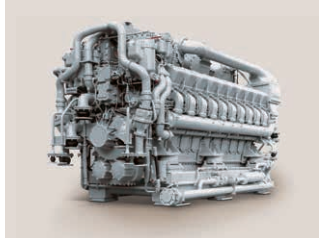
Engine	Cylinder data		
	Bore/Stroke mm (in)	Cyl. displac. l (cu in)	Total displac. l (cu in)
12V 4000 Ex3 - W2A	170/210	4.77	57.2
12 Cyl./90° V	(6.7/8.3)	(291)	(3491)
16V 4000 Ex3 - W2A	170/210	4.77	76.3
16 Cyl./90° V	(6.7/8.3)	(291)	(4655)
20V 4000 Ex3 - W2A	170/210	4.77	95.4
20 Cyl./90° V	(6.7/8.3)	(291)	(5822)

Dimensions, max L x W x H mm (in)	Mass, max (dry) kg (lbs.)
3000 x 1580 x 2065 (122 x 62 x 81)	8800 (19400)
3470 x 1510 x 2050 (137 x 60 x 81)	10680 (23545)

Specifications are subject to change without notice. All dimensions are approximate, for complete information refer to installation drawing. For further information consult your MTU distributor/dealer.

Technical engine data

Series 956 TB33/34



Emissions Standards:

Fuel consumption optimized

Diesel engines for power generation

Engine	Cylinder data		
	Bore/Stroke mm (in)	Cyl. displac. l (cu in)	Total displac. l (cu in)
12V 956 TB33 - W2A	230/230	9.56	114.7
12 Cyl./60° V	(9.1/9.1)	(583)	(7000)
16V 956 TB33 - W2A	230/230	9.56	152.9
16 Cyl./60° V	(9.1/9.1)	(583)	(9331)
20V 956 TB34 - W2A	230/230	9.56	191.2
20 Cyl./60° V	(9.1/9.1)	(583)	(11688)

Dimensions, max L x W x H mm (in)	Mass, max (dry) kg (lbs.)
4400 x 1660 x 2850 (173 x 65.0 x 112)	17350 (44313)
5100 x 1660 x 2940 (201 x 65 x 116)	23560 (51941)

Specifications are subject to change without notice. All dimensions are approximate, for complete information refer to installation drawing. For further information consult your MTU distributor/dealer.

Exhaust emissions



Exhaust regulation

Many countries have implemented environmental legislation to protect people from consequences of polluted air. For this reason an increasing number of countries regulate emissions from specific mobile and stationary sources.

Emission standards may apply internationally, nationally and/or for specific areas. The enforcement of an emission legislation may depend for example on the area where the equipment is used and the way it is operated.

The emission legislations may be categorized by power range and/or cylinder capacity. Emission legislations generally require a certificate which states compliance. Stationary applications may require on-site approvals (on-site emission test) depending on the particular emission legislation.

Please find as follows examples of emission standards which apply to the PowerGen applications. For details please consult the applicable legislation and/or permitting authority.

PowerGen emission legislation may differentiate between stationary, mobile, constant and variable speed applications.

Mobile applications are often subject to nonroad mobile machinery emission limits.

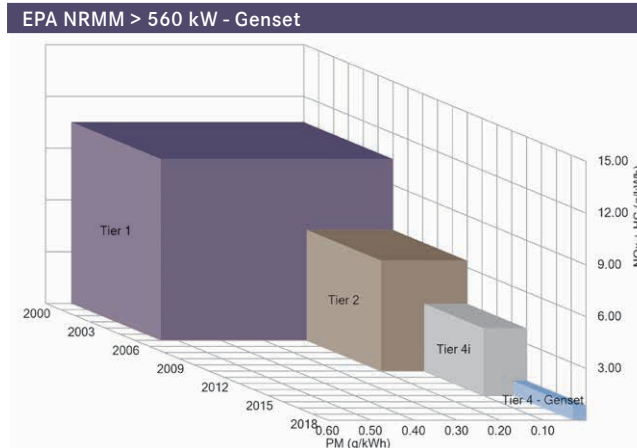
Stationary emission legislation differentiates between emergency standby and non-emergency applications. Usually non-emergency applications have more stringent emission limits. Engines for emergency standby applications are often limited by operating hours per year. The operating hour limitation may be defined differently from country to country.

Especially PowerGen applications may be subject to more stringent regional or municipal emission limits (e.g. Non-Attainment Areas).

Emission legislation for PowerGen applications is highly fragmented, e.g. US EPA, EU NRMM, TA-Luft, NEA Singapore, MoEF India/CPCB, China NRMM.

Exhaust regulation

Sample for emission stages in PowerGen industry: EPA



Examples for emission level description:

- US EPA Nonroad Tier 4 (40CFR1039)
-> certified
- US EPA Nonroad Tier 2 Comp (40CFR89)
-> compliant with emission legislation - not certified
- US EPA Nonroad Tier 2 Comp
-> compliant and corresponding to emission limit values - not certified

Please note that the engines and systems (only) comply with the country or region specific emission requirements and have appropriate emission certification(s) which are explicitly stated in respective RRPS/MTU defined technical specifications. Any Export/Import/Operation of the engine in countries or regions with different applicable emission law requirements is at the customers responsibility.

Explanation emission optimization (TA-Luft)

Series 1600

TA-Luft optimized NOx < 1500 mg/Nm³

Series 2000

TA-Luft optimized NOx < 1000 mg/Nm³

TA-Luft optimized NOx < 1500 mg /Nm³

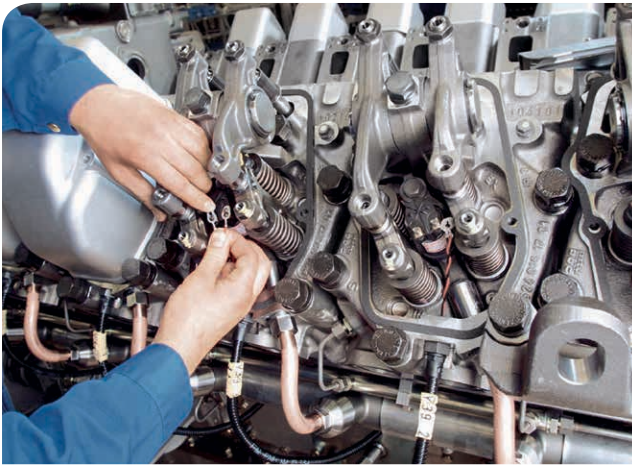
TA-Luft optimized NOx < 2000 mg/Nm³ /7% O₂

Series 4000

TA-Luft optimized NOx < 1700 mg/Nm³

MTU ValueCare

We have a strong commitment to our gendrive customers. With MTU **ValueCare**, this focus extends beyond the sale of our engines. From spare parts and technical documentation to customized maintenance and repair solutions, MTU offers a full range of support to help keep your MTU equipment running smoothly.



ValueService

Extensive global service and support to help maximize performance and uptime.

Reliable, expert assistance is essential to achieving and maintaining high levels of performance and unconditional reliability throughout an MTU engine's lifecycle. **ValueService** is a full line of maintenance, repair and service solutions designed to help maximize the performance and uptime of MTU engines. From scheduled and unscheduled maintenance and repair to technical documentation to product training, MTU provides comprehensive support, customized to meet your unique needs.

ValueSpares

Genuine spare parts and top-quality consumables designed specifically for MTU engines.

To keep your MTU engines running at optimum efficiency, choose from a full line of genuine **ValueSpares** parts and consumables. They're designed, tested and approved specifically for MTU engines. Whether it's spare parts or filters, oils and coolants, only MTU can guarantee genuine quality, with parts and consumables that are designed to work seamlessly with your MTU product. **ValueSpares** products help you get maximum performance and value from your equipment. And for your convenience, putting our parts and consumables to work is easy. **ValueSpares** products are available worldwide from a single source through our MTU service network.

ValueExchange

Remanufactured parts and engines engineered with the same high quality standards as new products.

Whether replacing a single component or an entire engine, quality is essential. When you choose **ValueExchange** products, you get genuine MTU quality, speed and peace of mind while lowering costs. **ValueExchange** provides a full range of genuine remanufactured MTU parts and engines – all engineered to ensure robust, reliable performance. A rigorous reconditioning process ensures the same high standards of performance, service life and quality as new products – including design and model-related updates. As a result, genuine **ValueExchange** products feature similar technological advancements as new products. And for added confidence, we back our products with a full manufacturer's warranty.

Whenever and wherever you need expert support, MTU specialists are available. This continuous and long-term care ensures high availability, dependability and efficiency throughout the lifecycle of your MTU product.

Customer Assistance Center

Agents are available 24/7 for fast response to your inquiries and any service needs.

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Asia/Pacific

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North and Latin America

+1 248 560 8888

We ensure that you receive individualized support from our global network of more than 1,200 service centers – anywhere, anytime.

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- Regional Headquarters
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