

# GAS SYSTEM

## SERIES 4000 NATURAL GAS

10,5 kV / 50 Hz\*



### SYSTEM RATINGS

Natural gas genset without heat extraction (heat recovery unit not included in delivery)

MTU Onsite Energy Type	Former Genset Type AoE	Output			Energy input <sup>4)</sup> kW	Efficiency		Methane Number <sup>5)</sup>	Dimensions (L x W x H) mm
		Elect. <sup>1)</sup>	Therm. <sup>2)</sup>	Low Temp.		Elect. (%)	Total (%)		
		kW <sub>el.</sub>	kW <sub>th.</sub>	kW <sub>th.</sub> (°C)		η <sub>el.</sub> (%)	η <sub>tot.</sub> (%)		
<b>L33 (Methane number 70)</b>									
GB 1165 N5	12V4000L33	1165	(600)	80 (40)	2731	42.7	(64.6)	≥ 70	4700x1800x2400
GB 1554 N5	16V4000L33	1554	(885)	99 (40)	3649	42.6	(66.8)	≥ 70	5500x1800x2400
GB 1948 N5	20V4000L33	1948	(1050)	125 (40)	4560	42.7	(65.7)	≥ 70	6000x1800x2400
<b>L32 (High ambient temperatures)</b>									
GB 1165 N5	12V4000L32	1165	(632)	43 (53)	2747	42.4	(65.4)	≥ 80	4700x1800x2400
GB 1554 N5	16V4000L32	1554	(863)	76 (53)	3651	42.6	(66.2)	≥ 80	5500x1800x2400
GB 1948 N5	20V4000L32	1948	(1035)	78 (53)	4577	42.6	(65.2)	≥ 80	6000x1800x2400
<b>L33 (Highest output)</b>									
GB 1282 N5	12V4000L33	1282	(664)	88 (40)	2974	43.1	(65.4)	≥ 80	4700x1800x2400
GB 1707 N5	16V4000L33	1707	(974)	113 (40)	3991	42.8	(67.2)	≥ 80	5500x1800x2400
GB 2141 N5	20V4000L33	2141	(1158)	142 (40)	4985	42.9	(66.2)	≥ 80	6000x1800x2400

\* NO<sub>x</sub> < 500 mg/m<sup>3</sup> (NO<sub>x</sub> < 250 mg/m<sup>3</sup> available)

1) Rated power at nominal voltage, power factor = 1 and nominal frequency

2) from jacket water, tolerance 8%

3) from jacket water and exhaust gas (120°C), tolerance 8%

4) performance data in accordance with ISO 3046, tolerance 5%

5) referenced methane number

6) dimensions without exhaust gas heat exchanger

All data according to full load, indicated gas mixture cooler water inlet temperature and are subject to technical development.

#### Project specific data on request:

- Other gas types
- Individual data (e.g. flow-/return-temperatures, hot cooling, methane number, assembly space, etc.)
- Container
- Gas Processing

# GAS SYSTEM

## SERIES 4000 NATURAL GAS

10,5 kV / 50 Hz\*



### SYSTEM RATINGS

Natural gas genset with heat extraction from jacket water (heat recovery unit included in delivery)

MTU Onsite Energy Type	Former KWK Type AE	Output			Energy input <sup>4)</sup> kW	Efficiency		Methane Number <sup>5)</sup>	Dimensions (L x W x H) mm
		Elect. <sup>1)</sup>	Therm. <sup>2)</sup>	Low Temp.		Elect.	Total		
		kW <sub>el.</sub>	kW <sub>th.</sub>	kW <sub>th.</sub> (°C)		η <sub>el.</sub> (%)	η <sub>tot.</sub> (%)		
<b>L33 (Methane number 70)</b>									
GR 1165 N5	12V4000L33	1165	600	80 (40)	2731	42.7	64.6	≥ 70	6300x1850x2400
GR 1554 N5	16V4000L33	1554	885	99 (40)	3649	42.6	66.8	≥ 70	7100x1850x2400
GR 1948 N5	20V4000L33	1948	1050	125 (40)	4560	42.7	65.7	≥ 70	7600x1850x2400
<b>L32 (High ambient temperatures)</b>									
GR 1165 N5	12V4000L32	1165	632	43 (53)	2747	42.4	65.4	≥ 80	6300x1850x2400
GR 1554 N5	16V4000L32	1554	863	76 (53)	3651	42.6	66.2	≥ 80	7100x1850x2400
GR 1948 N5	20V4000L32	1948	1035	78 (53)	4577	42.6	65.2	≥ 80	7600x1850x2400
<b>L33 (Highest output)</b>									
GR 1282 N5	12V4000L33	1282	664	88 (40)	2974	43.1	65.4	≥ 80	6300x1850x2400
GR 1707 N5	16V4000L33	1707	974	113 (40)	3991	42.8	67.2	≥ 80	7100x1850x2400
GR 2141 N5	20V4000L33	2141	1158	142 (40)	4985	42.9	66.2	≥ 80	7600x1850x2400

\* NO<sub>x</sub> < 500 mg/m<sup>3</sup> (NO<sub>x</sub> < 250 mg/m<sup>3</sup> available)

1) Rated power at nominal voltage, power factor = 1 and nominal frequency

2) from jacket water, tolerance 8%

3) from jacket water and exhaust gas (120°C), tolerance 8%

4) performance data in accordance with ISO 3046, tolerance 5%

5) referenced methane number

6) dimensions without exhaust gas heat exchanger

All data according to full load, indicated gas mixture cooler water inlet temperature and are subject to technical development.

#### Project specific data on request:

- Other gas types
- Individual data (e.g. flow-/return-temperatures, hot cooling, methane number, assembly space, etc.)
- Container
- Gas Processing

# GAS SYSTEM

## SERIES 4000 NATURAL GAS

10,5 kV / 50 Hz\*



### SYSTEM RATINGS

Natural gas genset with heat extraction from jacket water (heat recovery unit included in delivery) and exhaust gas (exhaust gas heat exchanger loose supply)

MTU Onsite Energy Type	Former KWK Type AE	Output			Energy input <sup>4)</sup> kW	Efficiency		Methane Number <sup>5)</sup>	Dimensions <sup>6)</sup> (L x W x H) mm
		Elect. <sup>1)</sup>	Therm. <sup>3)</sup>	Low Temp.		Elect.	Total		
		kW <sub>el.</sub>	kW <sub>th.</sub>	kW <sub>th.</sub> (°C)		η <sub>el.</sub> (%)	η <sub>tot.</sub> (%)		
<b>L33 (Methane number 70)</b>									
GC 1165 N5	12V4000L33	1165	1228	80 (40)	2731	42.7	87.6	≥ 70	6300x1850x2400
GC 1554 N5	16V4000L33	1554	1662	99 (40)	3649	42.6	88.1	≥ 70	7100x1850x2400
GC 1948 N5	20V4000L33	1948	2098	125 (40)	4560	42.7	88.7	≥ 70	7600x1850x2400
<b>L32 (High ambient temperatures)</b>									
GC 1165 N5	12V4000L32	1165	1270	43 (53)	2747	42.4	88.6	≥ 80	6300x1850x2400
GC 1554 N5	16V4000L32	1554	1668	76 (53)	3651	42.6	88.2	≥ 80	7100x1850x2400
GC 1948 N5	20V4000L32	1948	2170	78 (53)	4577	42.6	90.0	≥ 80	7600x1850x2400
<b>L33 (Highest output)</b>									
GC 1282 N5	12V4000L33	1282	1323	88 (40)	2974	43.1	87.6	≥ 80	6300x1850x2400
GC 1707 N5	16V4000L33	1707	1795	113 (40)	3991	42.8	87.7	≥ 80	7100x1850x2400
GC 2141 N5	20V4000L33	2141	2268	142 (40)	4985	42.9	88.4	≥ 80	7600x1850x2400

\* NO<sub>x</sub> < 500 mg/m<sup>3</sup> (NO<sub>x</sub> < 250 mg/m<sup>3</sup> available)

1) Rated power at nominal voltage, power factor = 1 and nominal frequency

2) from jacket water, tolerance 8%

3) from jacket water and exhaust gas (120°C), tolerance 8%

4) performance data in accordance with ISO 3046, tolerance 5%

5) referenced methane number

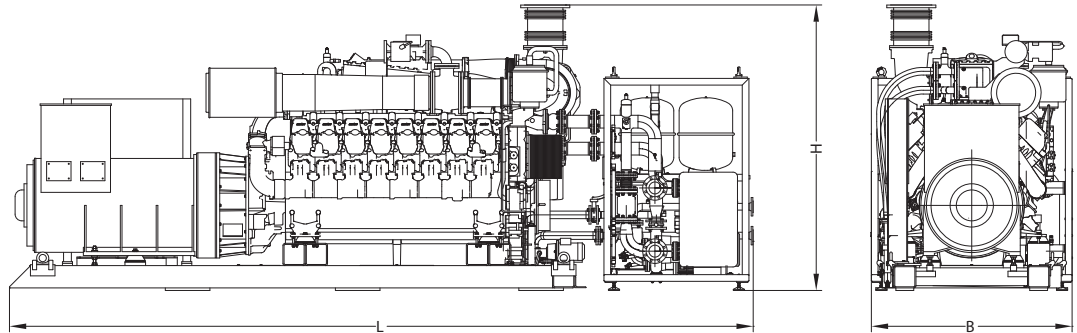
6) dimensions without exhaust gas heat exchanger

All data according to full load, indicated gas mixture cooler water inlet temperature and are subject to technical development.

#### Project specific data on request:

- Other gas types
- Individual data (e.g. flow-/return-temperatures, hot cooling, methane number, assembly space, etc.)
- Container
- Gas Processing

## DRAWINGS AND DIMENSIONS



Note: This drawing is provided for reference only and should not be used for planning installation.

## ENGINE DATA

### 4000

Configuration	90° V
No. of cylinders	12/16/20
Bore/Stroke	170/210 mm
Cyl. displacement	4.77 lit.
Rated speed	1500 rpm

## DESIGN AND EQUIPMENT (EXTRACT)

- // Sliding gear starter 24V, 2 x 9 kW
- // Gas supply through venturi air-gas mixer with electronically controlled gas metering valve
- // Electronic high-voltage capacitor ignition system with one ignition coil per cylinder
- // Electronic speed governor for speed and power output control with automatic knocking control
- // Oil sump, removable without lifting the engine

Version: 11.04.2013, materials and specifications subject to change without notice due to technical advances.