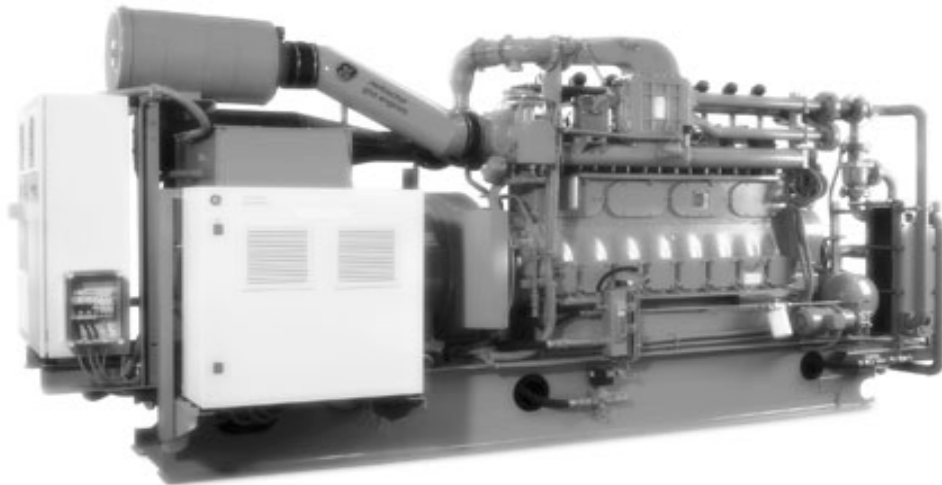




Jenbacher gas engines

Technical Specification



JMS 208 GS-N.L

Natural gas 330kW el.



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CO-GEN Module data:

Electrical output	kW el.	330
Recoverable thermal output (120 °C)	kW	363
Energy input	kW	851
Fuel Consumption based on a LHV of 9,5 kWh/Nm ³	Nm ³ /h	90
Electrical efficiency	%	38,8%
Thermal efficiency	%	42,6%
Total efficiency	%	81,4%
Heat to be dissipated (LT-Circuit)	kW	64

Emission values:

NOx < 500 mg/Nm³ (5% O2)

Additional information:

Sound pressure level (engine, average value 1m)	dB(A)	92
Sound pressure level exhaust gas (1m, 30° off engine)	dB(A)	108
Exhaust gas mass flow rate, wet	kg/h	1.843
Exhaust gas volume, wet	Nm ³ /h	1.457
Max.admissible exhaust back pressure after engine	mbar	60
Exhaust gas temperature at full load	°C [8]	478
Combustion air mass flow rate	kg/h	1.782
Combustion air volume	Nm ³ /h	1.378
Max. inlet cooling water temp. (intercooler)	°C	40
Max. pressure drop in front of intake-air filter	mbar	10
Return temperature	°C	70
Forward temperature	°C	90
Hot water flow rate	m ³ /h	15,6

Engine data:

Engine type		J 208 GS-C05
Configuration		In - Line
No. of cylinders		8
Bore	mm	135
Stroke	mm	145
Piston displacement	lit	16,60
Nominal speed	rpm	1.500
Mean piston speed	m/s	7,25
Mean effe. press. at stand. power and nom. sp	bar	16,50
Compression ratio	Epsilon	12,0
ISO standard fuel stop power ICFN	kW	342
Spec. fuel consumption of engine	kWh/kWh	2,49
Specific lube oil consumption	g/kWh	0,30
Weight dry	kg	1.800
Filling capacity lube oil	lit	133
Based on methane number	MZ	70

Alternator:

Manufacturer	STAMFORD e)	
Type	HCI 534 E2 e)	
Type rating	kVA	600
Efficiency at p.f. = 1,0	%	96,5%
Efficiency at p.f. = 0,8	%	95,5%
Ratings at p.f. = 1,0	kW	330
Ratings at p.f. = 0,8	kW	327
Frequency	Hz	50
Voltage	V	400
Protection Class	IP 23	
Insulation class	H	
Speed	rpm	1.500
Mass	kg	1.535

Technical parameters:

Applicable standards:

Based on DIN-ISO 3046

Based on VDE 0530 REM with specified tolerance

Standard conditions:

Air pressure: 1000 mbar or 100 m above sea level

Air temperature: 25°C or 298 K

Relative Humidity: 30%

Engine output derating:

for plants installed at > 500m above sea level and/or intake temperature > 30°C, the reduction of engine power is determined for each project.

Gas quality:

according to TA 1000-0300

Gas flow pressure: 80 - 200 mbar

(Lower gas pressures upon inquiry)

Max. variation in gas pressure: ±10%



>>> Scope of supply genset - JGS 208 GS-N.L

Basic engine equipment:

- *Exhaust gas turbocharger, Intercooler
- *Motorized carburator for LEANOX control
- *Electronic contactless high performance ignition system
- *Lubricating oil pump (gear driven)
- *Lubricating oil filters in main circuit
- *Lubricating oil sump; Lubricating oil heat exchanger
- *Jacket water pump
- *Fuel-, lubricating oil and jacket water pipe work on engine
- *Flywheel for alternator operation; Exhaust gas manifold
- *Viscous damper
- *Knock sensors

Engine accessories:

- *Electric starter motor
- *Electronic speed governor
- *Electronic speed monitoring device including starting and overspeed control
- *Transducers and switches for oil pressure, jacket water temp., jacket water pressure, charge pressure and mixture temperature

Supplied loose:

Gas train according to DIN-DVGW consisting of:

- *Manual stop valve, fuel gas filter, two solenoid valves, Leakage control device, gas pressure regulator

Documentation:

- *Operating and maintenance manual
- *Spare parts manual
- *Drawings

Assembly, painting, testing in Jenbach/Austria

>>> Scope of supply module - JMS 208 GS-N.L

Identical to Genset except that heat recovery is included.

- *jacket water heat exchanger mounted on module frame
- *exhaust gas heat exchanger mounted on module frame;
- *all heat exchangers with complete pipework
- *Heat exchangers and all inherent auxiliaries

>>> Scope of supply container - JG(M)C 208 GS-N.L

- *Identical to module/genset but installed in 40' ISO container (65 dB(A) @ 10m); complete with all pipework and fittings
- *Twin circuit radiation cooler for dissipation of intercooler jacket water and lube oil thermal output; ventilation equipment
- *Gas & smoke detectors; exhaust silencer; lube oil equipment; starting system; flexible connections
- *Separate control room complete with generator switchgear and all internal power and monitoring cables

Module equipment:

- *Base frame for gas engine, alternator and heat exchangers
- *Internal pole alternator with excitation alternator and with automatic voltage regulator; p.f. 0,8 lagging to 1,0
- *Flexible coupling, bell housing
- *Anti-vibration mounts
- *Air filter
- *Automatic lube oil replenishing with level control
- *Wiring of components to module control panel
- *Crankcase breather
- *Jacket water electric preheating

Module control panel:

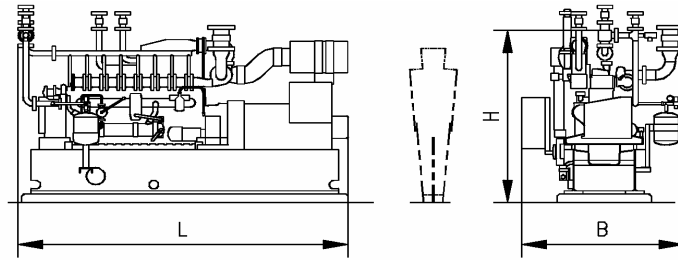
- *Totally enclosed, single door cubicle, mounted on module, fully interconnected and completed

Control equipment:

- *COMPACT CONTROLLER with the following functions:
LEANOX control, knock control, power and speed control, automatic synchronizing, loss of mains protection, Operating hour counter, start counter, Operation mode selector switch: "OFF", "MANUAL", "AUTOMATIC"
- *Generator switchgear (generator circuit breaker)



Genset



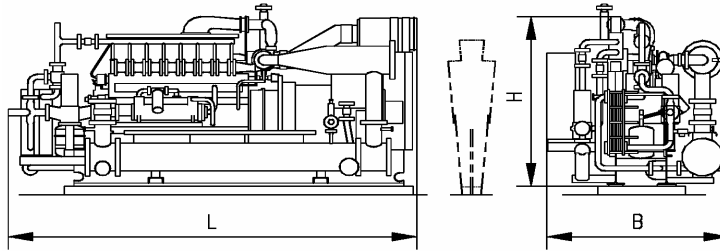
Main dimensions and weights (approximate value)

Length L	mm	4.900
Width B	mm	1.700
Height H	mm	2.000
Weight empty	kg	5.100
Weight filled	kg	5.300

Connections (at genset)

Jacket water inlet and outlet	DN/PN	50/10
Exhaust gas outlet	DN/PN	200/10
Fuel gas (at gas train)	DN/PN	50/16
Intercooler water connection:		
Low Temperature Circuit	DN/PN	50/10

Module



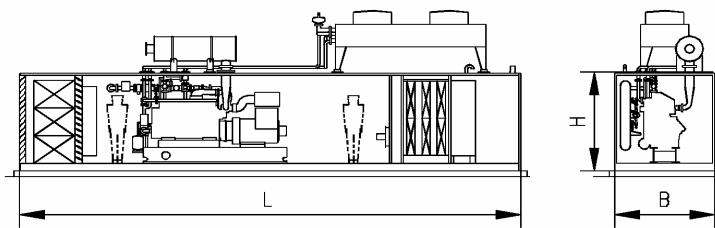
Main dimensions and weights (approximate value)

Length L	mm	4.900
Width B	mm	1.700
Height H	mm	2.000
Weight empty	kg	5.800
Weight filled	kg	6.000

Connections (at module)

Hot water inlet and outlet	DN/PN	50/10
Exhaust gas outlet	DN/PN	200/10
Fuel gas (at gas train)	DN/PN	50/16
Intercooler water connection:		
Intercooler water-Inlet/Outlet 2nd stage	DN/PN	50/10

Container



Main dimensions and weights (approximate value)

Length L	mm	12.200
Width B	mm	2.500
Height H	mm	2.600
Container weight (dry)	kg	17.200
Container weight (filled)	kg	18.000

Connections (container)

Jacket water inlet and outlet	DN/PN	50/10
Exhaust gas outlet	DN/PN	200/10
Fuel gas connection (container)	mm	80/16
Fresh oil connection	G	28x2"