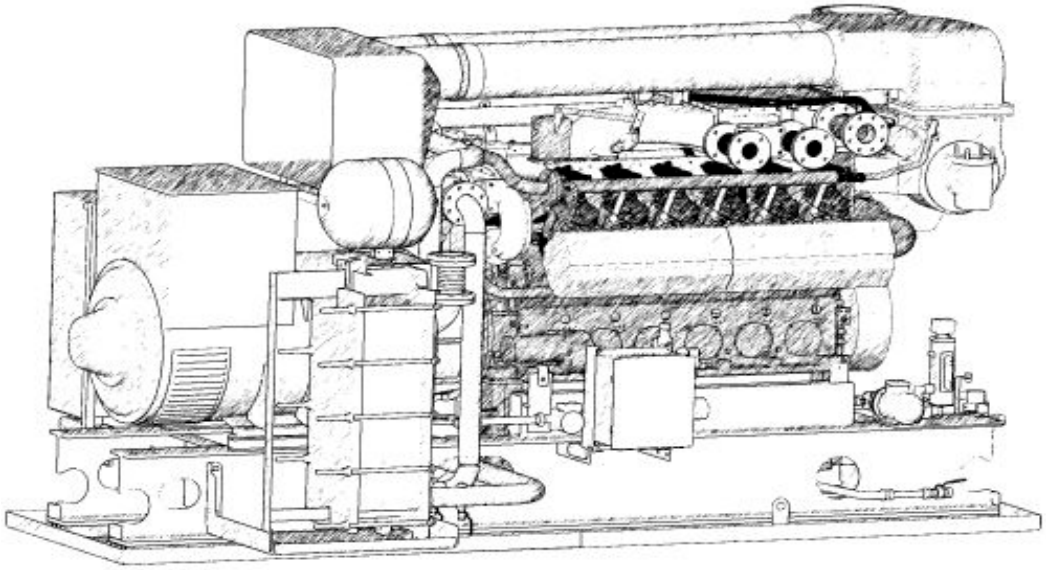
Jenbacher gas engines
Technical Specification



JMS 312 GS-N.L

Natural gas 526kW el.

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JMS 312 GS-N.L
Natural gas 526kW el.

CO-GEN Module data:		
Electrical output	kW el.	526
Recoverable thermal output (120 °C)	kW	635
Energy input	kW	1.333
Fuel Consumption based on a LHV of		
9,5 kWh/Nm³	Nm³/h	140
Electrical efficiency	%	39,4%
Thermal efficiency	%	47,6%
Total efficiency	%	87,1%
Heat to be dissipated (LT-Circuit)	kW	34
Emission values:		
NOx < 500 mg/Nm³ (5% O2)		

Additional information:		
Sound pressure level (engine, average value 1m)	dB(A)	95
Sound pressure level exhaust gas (1m, 30° off engin	dB(A)	115
Exhaust gas mass flow rate, wet	kg/h	2.809
Exhaust gas volume, wet	Nm³/h	2.222
Max.admissible exhaust back pressure after engine	mbar	60
Exhaust gas temperature at full load	°C [8]	500
Combustion air mass flow rate	kg/h	2.713
Combustion air volume	Nm³/h	2.099
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	m³/h	27,3

Engine data:		
Engine type		J 312 GS-C205
Configuration		V 70°
No. of cylinders		12
Bore	mm	135
Stroke	mm	170
Piston displacement	lit	29,20
Nominal speed	rpm	1.500
Mean piston speed	m/s	8,5
Mean effe. press. at stand. power and nom. sp	bar	14,90
Compression ratio	Epsilon	12,5
ISO standard fuel stop power ICFN	kW	544
Spec. fuel consumption of engine	kWh/kWh	2,45
Specific lube oil consumption	g/kWh	0,30
Weight dry	kg	3.500
Filling capacity lube oil	lit	230
Based on methane number	MZ	70

Alternator:		
Manufacturer		STAMFORD
Type		HCI 634 H2
Type rating	kVA	910
Efficiency at p.f. = 1,0	%	96,6%
Efficiency at p.f. = 0,8	%	95,7%
Ratings at p.f. = 1,0	kW	526
Ratings at p.f. = 0,8	kW	521
Frequency	Hz	50
Voltage	V	400
Protection Class		IP 23
Insulation class		H
Speed	rpm	1.500
Mass	kg	2.145

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 see 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 312 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
*One thermocouple per cylinder

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

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 interface panel
*Crankcase breather
*Jacket water electric preheating

Module control panel:

*Totally enclosed , single door cubicle, wired to terminals and ready to operate, protection IP 41 outside, IP 10 inside, according to VDE-standards

Control equipment:

*Engine-Management-System dia.ne (Dialog Network)
**Visualisation (industry PC-10" color graphics display): Operation data, controller display,Exh. gas temp.,Generator electr. connection,etc.
**Central engine- and module control: Speed-, Power output-, LEANOX-Control and knock control, etc.
*Multi-transducer
*Lockable operation mode selector switch Positions: "OFF", "MANUAL", "AUTOMATIC"
*Demand switch

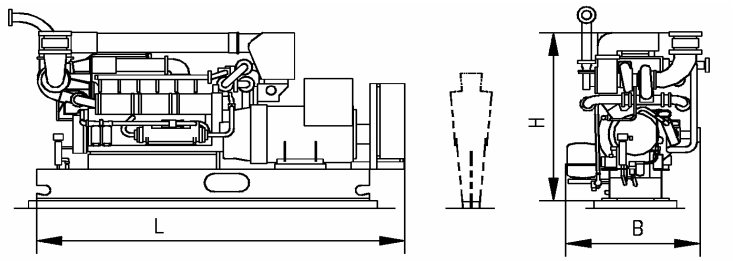
>>> Scope of supply module - JMS 312 GS-N.L

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 312 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 radation 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
*Seperate control room complete with generator switchgear and all internal power and monitoring cables

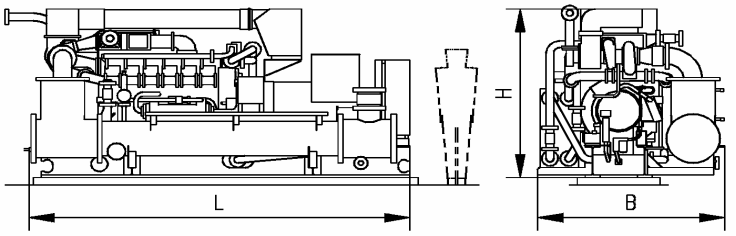
Genset



Main dimensions and weights (approximate value)		
Length L	mm	4.700
Width B	mm	1.800
Height H	mm	2.300
Weight empty	kg	8.000
Weight filled	kg	8.500

Connections (at genset)		
Jacket water inlet and outlet	DN/PN	80/10
Exhaust gas outlet	DN/PN	250/10
Fuel gas (at gas train)	DN/PN	65/16
Intercooler water connection:		
Low Temperature Circuit	DN/PN	65/10

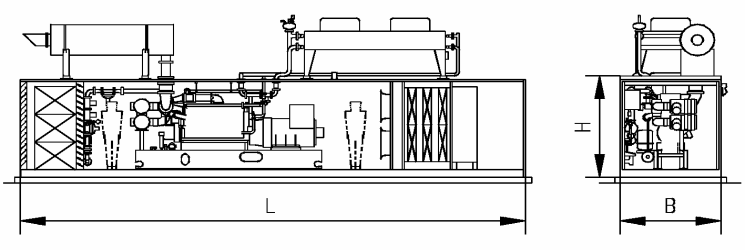
Module



Main dimensions and weights (approximate value)		
Length L	mm	4.700
Width B	mm	2.300
Height H	mm	2.300
Weight empty	kg	9.400
Weight filled	kg	9.900

Connections (at module)		
Hot water inlet and outlet	DN/PN	80/10
Exhaust gas outlet	DN/PN	250/10
Fuel gas (at gas train)	DN/PN	65/16
Intercooler water connection:		
Intercooler water-Inlet/Outlet 2nd stage	DN/PN	65/10

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	20.800
Container weight (filled)	kg	21.900

Connections (container)		
Jacket water inlet and outlet	DN/PN	80/10
Exhaust gas outlet	DN/PN	250/10
Fuel gas connection (container)	mm	80/16
Fresh oil connection	G	28x2''

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