Jenbacher gas engines
Technical Specification

Энерго-Моторы
Энергетическая компания

Представитель GE Jenbacher в России

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JMS 624 GS-N.L

Natural gas 4.034kW el.

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CO-GEN Module data:

Electrical output	kW el.	4.034
Recoverable thermal output (120 °C)	kW	3.683
Energy input	kW	8.884
Fuel Consumption based on a LHV of		
9,5 kWh/Nm³	Nm³/h	935
Electrical efficiency	%	45,4%
Thermal efficiency	%	41,5%
Total efficiency	%	86,9%
Heat to be dissipated (LT-Circuit)	kW	213
Emission values:		
NOx < 500 mg/Nm³ (5% O2)		

Additional information:

Sound pressure level (engine, average value 1m)	dB(A)	103
Sound pressure level exhaust gas (1m, 30° off engine	dB(A)	124
Exhaust gas mass flow rate, wet	kg/h	21.972
Exhaust gas volume, wet	Nm³/h	17.328
Max.admissible exhaust back pressure after engine	mbar	60
Exhaust gas temperature at full load	°C [8]	367
Combustion air mass flow rate	kg/h	21.332
Combustion air volume	Nm³/h	16.502
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	158,2

Engine data:

Engine type		J 624 GS-G01
Configuration		V 60°
No. of cylinders		24
Bore	mm	190
Stroke	mm	220
Piston displacement	lit	149,70
Nominal speed	rpm	1.500
Mean piston speed	m/s	11
Mean effe. press. at stand. power and nom. spe	bar	22,00
Compression ratio	Epsilon	12,0
ISO standard fuel stop power ICFN	kW	4117
Spec. fuel consumption of engine	kWh/kWh	2,16
Specific lube oil consumption	g/kWh	0,30
Weight dry	kg	18.000
Filling capacity lube oil	lit	800
Based on methane number|Min. methane numb	MZ	94|80

Alternator:

Manufacturer		AVK e)
Type		DIG 142 g/4 e)
Type rating	kVA	5.050
Efficiency at p.f. = 1,0	%	98,0%
Efficiency at p.f. = 0,8	%	97,4%
Ratings at p.f. = 1,0	kW	4.034
Ratings at p.f. = 0,8	kW	4.011
Frequency	Hz	50
Voltage	kV	6,3
Protection Class		IP 23
Insulation class		F
Speed	rpm	1.500
Mass	kg	11.950

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: 120 - 200 mbar
(Lower gas pressures upon inquiry)
Prechamber gas pressure: 3,8-6,0 bar

Max. variation in gas pressure: ±10%

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>>> Scope of supply genset - JGS 624 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
Prechamber Gas Train

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

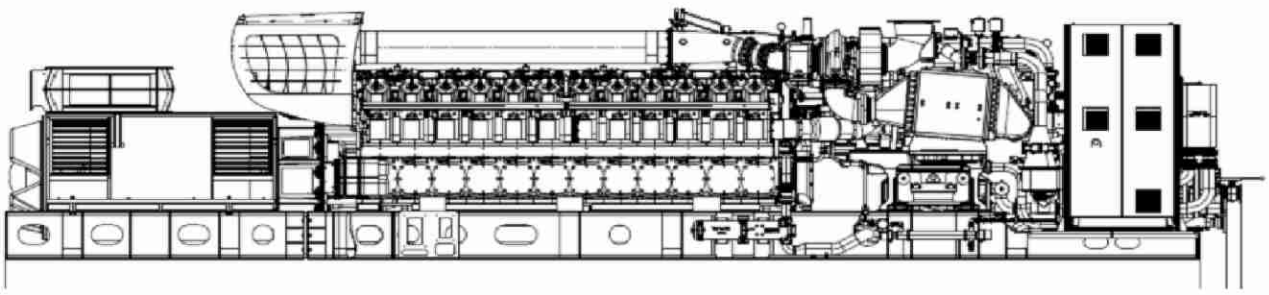
Control equipment:

*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 624 GS-N.L

Identical to Genset except that heat recovery is included.
*jacket water heat exchanger mounted on module frame
*exhaust gas heat exchanger delivered loose
*all heat exchangers with complete pipework
*Heat exchangers and all inherent auxiliaries

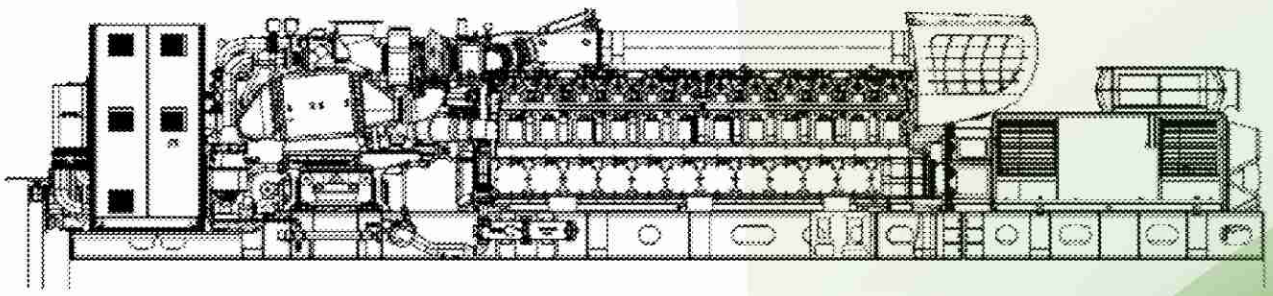
Genset



Main dimensions and weights (approximate value)		
Length L	mm	9.600
Width B	mm	2.200
Height H	mm	2.600
Weight empty	kg	41.400
Weight filled	kg	43.400

Connections (at genset)		
Jacket water inlet and outlet	DN/PN	150/16
Exhaust gas outlet	DN/PN	600/10
Fuel gas (at gas train)	DN/PN	150/16
Intercooler water connection:		
Low Temperature Circuit	DN/PN	100/16

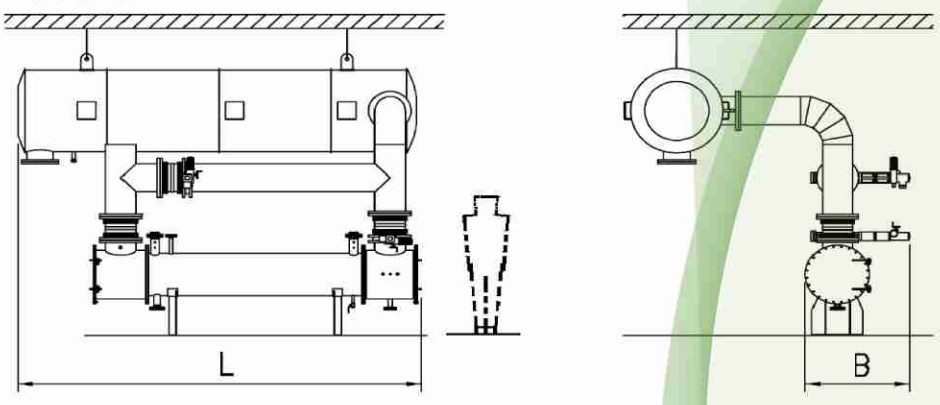
Module



Main dimensions and weights (approximate value)		
Length L	mm	12.100
Width B	mm	2.200
Height H	mm	2.900
Weight empty	kg	42.000
Weight filled	kg	44.000

Connections (at module)		
Hot water inlet and outlet	DN/PN	150/16
Exhaust gas outlet	DN/PN	600/10
Fuel gas (at gas train)	DN/PN	150/16
Intercooler water connection:		
Intercooler water-Inlet/Outlet 2nd stage	DN/PN	100/16

Heat recovery module



Main dimensions and weights (approximate value)		
Width B	mm	> 1962
Height H	mm	> 5800
Length L	mm	> 6750

Connections (on heat recovery module)		
Hot water inlet and outlet	DN/PN	150/16
Exhaust gas outlet	DN/PN	600/10
Condensate drain	DN/PN	50/10
Drain line	½"	½"