

INDUSTRIAL GAS ENGINE NG-4

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INDUSTRIAL GAS ENGINE NG-4

Contents - General Information

Type of engine	NG-4
Base power COP	33 kWm / 1500 rpm
Engine make and type	AGCO
Weight excl. Lub. oil and coolant	± 398 kg
Dimensions (LxWxH)	900 mm x 532 mm x 820 mm
<ul style="list-style-type: none">• Emissions: Non Compliant, TA Luft.• Several options available like gas train, control system, genset, sound proof canopy, parallel operation, PM alternator, cooling water expansion tank, lubrication oil level monitor, stainless steel exhaust silencer, cooling package etc.	

Contents - Engine Technical Data

Engine Data	
Engine speed	1500 rpm
No. Of cylinders/configuration	4 in line
Cycle	4 stroke
Bore and stroke	108 mm x 120 mm
Displacement	4,4 dm ³
Compression ratio	13 : 1
Rotation seen from flywheel end	CCW
Flywheel housing	SAE3
Mech. efficiency/lower heat value	33%

Fuel system	
Mixer type	Heinzmann GM50 with Kronos 10
Governor and actuator	Electronic throttle valve
Knock control	-

Fuel consumption LHV	
100% load	33 kW - 353 Mj/h
Engines are factory set to the following natural gas specifications at 288°K and 101kPA	ISO-FDIS 15403



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Contents - Engine Technical Data

Fuel requirements	
Methane number	> 80, < 80 MN derate
Relative humidity	< 80%

Air intake and ventilation	
Air filter type	Replaceable paper element
Max. combustion air filter restriction	50 mmwc
Permissible vacuum in engine room	20 mmwc
Max. air intake temperature	30°C
Air consumption at full load	195 kg/h

Cooling system	
Coolant volume (without heat exchanger)	10 dm ³
Opening temp. of thermostats	80 - 87 °C
Max. pressure on engine pump inlet	1 bar
Max. coolant temperature engine 'out'	93 °C
Min. coolant temperature engine 'in'	80 °C
Miscellaneous	The design of the cooling system is based on water/glycol mixture of 60%/40% Specific heat content of the mixture is 3,8 kJ/kg.

Lubrication system	
Oil double filter type	Full flow Replaceable element
Oil capacity - With standard oil pan	14 dm ³
Oil type used by the factory	Mobil Pegasus Special
Oil consumption	< 0,3 gr/kWh
Oil changes interval stand (circumstances dep.)	600 h
Oil viscosity	15W40 (temp. -15°C up to 30°C)

Exhaust system	
Max. back pressure without power loss	500 mmwc
Exhaust flow	202 kg/h
Exhaust temperature after turbo	497°C

Electric system	
Control system	ECU
Starter motor electric capacity	4 kW
Start aid relay capacity min.	64 Amp
Cold start ability CCA10 min.	800 Amp



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Contents - Engine Technical Data

Heat rejection	
Base power	33 kWm
HT circuit	36 kW
Exhaust gas (if cooled back to 100°C)	24 kW
Surrounding air	7 kW

Contents - Defintions

Base load rating	Rating is applicable for supplying continuous electrical power for variable load operations. Rating represents the engine performance in accordance with ISO3046/1 at reference conditions equivalent to those specified in ISO3046 based on the use of natural gas having a lower caloric value of 31.65 MJ/m ³ . For continuous operation and unlimited yearly operation at a constant load.
Standard reference conditions	Note: standard reference conditions 27°C air inlet temperature, 152,4m A.S.L. 60% relative humidity. Alle engine performance data based on the abovementioned maximum continuous ratings.

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