

Basic Technical Data

nominal electrical output	124	kW
maximum heat output ¹⁾	182	kW

load	50	75	100	%
maximum heat output	119	151	182	kW
fuel input	200	270	339	kW
electrical efficiency	31,0	34,4	36,6	%
heat efficiency	59,3	55,8	53,6	%
total efficiency (fuel utilization)	90,3	90,2	90,2	%
gas consumption	21,2	28,6	35,8	m ³ /h

Technical data for additional exhaust gas exchanger²⁾

electric output	124	kW
maximum heat output	187	kW
fuel input	339	kW
electrical efficiency	36,6	%
heat efficiency	55,2	%
total efficiency (fuel utilization)	91,8	%
gas consumption at 100% output	35,8	m ³ /h
gas consumption at 75% output	28,6	m ³ /h
gas consumption at 50% output	21,2	m ³ /h

The basic technical data are valid for gas with minimum methane number 90 and standard conditions pursuant to the "Technical instructions" document.

The minimum permanent electrical output must not drop below 50 % of the nominal output.

Gas consumption is expressed under the invoicing conditions (15°C, 101.325 kPa)

Gas consumption tolerance, or fuel input tolerance, at 100% load is +5%.

Tolerances of other parameters are mentioned in "Technical Instructions-Validity of Technical Data" document.

1) Maximum heat output is a heat output of secondary circuit with exhaust gas cooled to 120°C

2) Heat output indicated is based on inlet water temperature 70°C into additional exhaust gas exchanger and exhaust gas cooled to 85°C.

Observance of Emission Limits

emissions with 5% of O ₂ in exhaust gas	NO _x	CO	
standard	95	300	mg/Nm ³
option ¹⁾	50	150	mg/Nm ³

1) In the factory, the NO_x emission values are set below 20 mg/Nm³

Generator

used type	LSA 46.3 S5
producer	LEROY SOMER
cos φ	1,0
efficiency in the working point	94,8 %
voltage	400 V
frequency	50 Hz

Engine

type	TG 130 G5V NX 88
producer	TEDOM
combustion	stoichiometric
number of cylinders	6
arrangement of cylinders	in series
bore × stroke	130/150 mm
displacement	11946 cm ³
compression ratio	12 : 1
speed	1500 rpm
oil consumption, normal / max.	0,3 / 0,5 g/kWh
max. engine output	130,5 kW

TG 130 G5V NX 88_850; revision B: 1.11.2016

Thermal System

Secondary circuit

heat carrier	water
circuit's heat output	182 kW
nominal water temperature, input / output	70/90 °C
nominal temperature drop	20 °C
return water temperature, min / max	40/70 °C
nominal flow rate	2,2 kg/s
max. working pressure	600 kPa
water volume in CHP unit circuit	10 dm ³
pressure loss at the nominal flow rate	15 kPa

Utilization of exhaust gas output for other purposes

heat output of exhaust gases (cooling to 120°C)	76 kW
exhaust gas temperature	630 °C

Primary circuit

circuit's heat output	182 kW
max. working pressure	250 kPa
water volume in CHP unit circuit	110 dm ³



Fuel, Gas Inlet

low heat value	34	MJ/m ³
min. methane number	80	
gas pressure	2 ÷ 10	kPa
max. pressure change under varying consumption	10	%
max. gas temperature	35	°C

Combustion and Ventilation Air

unused heat removed by the ventilation air	19	kW
aspirated air temperature, min / max	10/35	°C
amount of combustion air	340	Nm ³ /h

Exhaust Gas and Condensate Outlet

amount of exhaust gases	372	Nm ³ /h
exhaust gas temperature, nominal / max	120/150	°C
max. back-pressure of exhaust gases downstream the CHP unit flange ¹⁾	20	mbar
pressure loss of the freely delivered silencer	10	mbar
permissible pressure loss of the interconnecting exhaust piping	10	mbar
speed of exhaust gases at the outlet (DN 125)	12,1	m/s

1) Valid for standard version (without economizer)

Lubricant Charges

amount of lubrication oil in the engine	56	dm ³
replenishment oil tank volume	125	dm ³

Noise Parameters

CHP unit at 1m	93	dB(A)
exhaust gas outlet at 1m from the silencer flange ¹⁾	65	dB(A)

1) The noise parameter can be reduced by optimizing the exhaust silencer to the required acoustic pressure level or by applying the exhaust silencer beyond the standard range designed for 60 dB(A) at 1 m.

Electrical Parameters

nominal voltage	230/400	V
nominal frequency	50	Hz
power factor ¹⁾	0,8	
nominal current at cos φ=0.8	225	A
generator circuit breaker	NSX250B3P	
short-circuit resistance of switchboard	20	kA
contribution of the actual source to the short-circuit current	< 2,5	kA
protection of switchboard's power part closed/open	IP 31/00	
protection of switchboard's control part closed/open	IP 31/00	
recommended superior protection	250	A
[recommended connection cable ²⁾ (length < 50m, at t < 35°C)	NY-Y-J 3×120 +70	

1) Power factor adjustable from 0,8C ÷ 1 ÷ 0,8L (range from 0.8C ÷ 1 must be verified according to the various types of generators).

L = inductive load - overexcited

C = capacitive load - underexcited

Operation of the generator with a power factor of less than 0.95 causes a power limitation sets the following table:

power factor [-]	1	0,95	0,8
output [% P _{nom}]	100	100	98

2) The stated cables are for information only. A check calculation for temperature rise and voltage drop must be made according to the actual length, placement and type of the cable (maximum allowed voltage drop is 10 V).

Colour Version

base frame, engine, and generator	RAL 5015 (blue)
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Unit Dimensions and Weight¹⁾

length, total	4 000	mm
width	1 500	mm
total height	2 200	mm
service weight of the entire CHP unit	4 100	kg

1) Approximate values

Caution

Manufacturer reserves the right to alter this document and the linked source materials.

