TG 150 G8V NX 88_850; revision A: 21.5.2014

Imperial

Basic Technical Data

Nominal electrical output	146	kW
Maximum heat output	771,145	BTU/h

Load	50	75	100	%
Heat output	515,234	644,895	771,145	BTU/h
Fuel input	842,800	1,126,008	1,402,391	BTU/h
Heat rate	11,466.6	10,213.2	9,586.5	BTU/kW$_e$
Electrical efficiency	29,5	33,2	35,5	%
Heat efficiency	61,2	57,4	55,1	%
Total efficiency (fuel utilization)	90,7	90,6	90,6	%
Gas consumption	924	1,235	1,537	CFH

The Basic Technical Data are applicable for the standard conditions pursuant to the "Technical instruction" document.
The minimum permanent electrical output must not drop below 50 % of the nominal output.
Gas consumption is expressed under the conditions (59°F, 14.648 psi, Low Heat Value 912.18 BTU/CF)

Observance of Emission Limits

emissions with 5% of O_2 in exhaust gases	NO_x	CO	
standard	95	300	mg/Nm^3
option	50	150	mg/Nm^3

Generator

Type	LSA 46.3 S5	
Producer	LEROY SOMER	
Cos φ	1.0	
Efficiency in the working point	94.7	%
Voltage	480	V
Frequency	60	Hz

Engine

Type	TG150 G8V NX 88	
Producer	TEDOM	
Number of cylinders	6	
Arrangement of cylinders	in series	
Bore × Stroke	130x150	mm
Displacement	729	cui
Compression ratio	12 : 1	
Speed	1800	rpm
Oil consumption, normal / max.	0.3 / 0.5	g/kWh
Max. engine output	154.9	kW

Metric

Basic Technical Data

Nominal electrical output	146	kW
Maximum heat output	226	kW

Load	50	75	100	%
Heat output	151	189	226	kW
Fuel input	247	330	411	kW
Electrical efficiency	29,5	33,2	35,5	%
Heat efficiency	61,2	57,4	55,1	%
Total efficiency (fuel utilization)	90,7	90,6	90,6	%
Gas consumption	26,2	34,9	43,5	m^3/h

The Basic Technical Data are applicable for the standard conditions pursuant to the "Technical instruction" document.
The minimum permanent electrical output must not drop below 50 % of the nominal output.
Gas consumption is expressed under the conditions (15°C, 101.325 kPa, Low Heat Value 34MJ/m^3)

Thermal System

Secondary circuit

Heat carrier	water	
Total system heat recovery	771,145	BTU/h
Nominal water temperature, input / output	158/194	°F
Return water temperature, min / max	104/158	°F
Nominal flow rate	42.9	GPM
Max. working pressure	87	psi
Water volume in CHP unit circuit	7.9	gal
Pressure loss at the nominal flow rate	3.6	psi
Nominal temperature drop	36	°F

Primary circuit[1)]

Total system heat recovery	771,145	BTU/h
Max. working pressure	36.3	psi
Water volume in CHP unit circuit	52.8	gal

1) Parameters are valid if the dry cooler (optional) is part of delivery

Fuel, Gas Inlet

Low heat value	912.18	BTU/CF
Min. methane number	80	
Gas pressure	0.7 – 1.4	psi
Max. pressure change under varying consumption	10	%
Max. gas temperature	95	°F

Combustion and Ventilation Air

Unused heat removed by the ventilation air	75,067	BTU/h
Amount of combustion air	246	CFM
outdoor air temperature, min / max	-68/95	°F

Thermal System

Secondary circuit

Heat carrier	water	
Total system heat recovery	226	kW
Nominal water temperature, input / output	70/90	°C
Return water temperature, min / max	40/70	°C
Nominal flow rate	2,7	kg/s
Max. working pressure	600	kPa
Water volume in CHP unit circuit	30	dm^3
Pressure loss at the nominal flow rate	25	kPa
Nominal temperature drop	20	°C

Primary circuit[1)]

Total system heat recovery	226	kW
Max. working pressure	250	kPa
Water volume in CHP unit circuit	200	dm^3

1) Parameters are valid if the dry cooler (optional) is part of delivery

Fuel, Gas Inlet

Low heat value	34	MJ/m^3
Min. methane number	80	
Gas pressure	5 ÷ 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	22	kW
Amount of combustion air	418	Nm^3/h
outdoor air temperature, min / max	-20/35	°C

Exhaust Gas and Condensate Outlet

Amount of exhaust gases	267.8	CFM
Exhaust gas temperature, nominal / max	248/302	°F
Max. back-pressure of exhaust gases downstream the CHP unit flange	0.14	psi
Speed of exhaust gases at the outlet (DN 125)	14.8	m/s

Oil

Amount of lubrication oil in the engine	14.8	gal
Replenishment oil tank volume	33.1	gal

Unit Dimensions and Weights*

Length total / transport	212.5 / 196.8	in
Width	98.4	in
Height total / transport	267.7 / 104.7	in
Service weight of the entire CHP unit	18,222	lb

** Approximate values*

Exhaust Gas and Condensate Outlet

Amount of exhaust gases	455	Nm^3/h
Exhaust gas temperature, nominal / max	120/150	°C
Max. back-pressure of exhaust gases downstream the CHP unit flange	10	mbar
Speed of exhaust gases at the outlet (DN 125)	14,8	m/s

Oil

Amount of lubrication oil in the engine	56	dm^3
Replenishment oil tank volume	125	dm^3

Unit Dimensions and Weights*

Length total / transport	5400 / 5000	mm
Width	2500	mm
Height total / transport	6800 / 2660	mm
Service weight of the entire CHP unit	8 265	kg

** Approximate values*

Noise Parameters

CHP unit in 10 m from container	62	dB(A)

Electrical Parameters

Nominal voltage	480	V
Nominal frequency	60	Hz
Power factor	0,8C	
Nominal current at cos φ=0.8	220	A
Protection of switchboard's power part closed/open	IP 31/00	
Protection of switchboard's control part closed/open	IP 31/00	

Color Version

engine, generator and internal parts of unit	RAL 5015 (blue)
container	RAL 5013 (blue)

Caution

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