Imperial

Basic Technical Data

Nominal electrical output	192	kW
Maximum heat output [1)]	873,059	BTU/h

1) maximum heat output is a sum of heat outputs of secondary and aftercooler circuit at their full utilization

Load	50	75	100	%
Heat power	540,688	701,189	873,059	BTU/h
Fuel input	981,674	1,349,844	1,729,773	BTU/h
Heat rate	10,226	9,374	9,009	BTU/kW$_e$
Electrical efficiency	33,3	36,4	37,8	%
Heat efficiency	55,1	51,9	50,5	%
Total efficiency (fuel utilization)	88,4	88,3	88,3	%
Gas consumption	1,076	1,479	1,895	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	CO	NOx	VOC	
At 15% of O_2 in exhaust gas	1.7	1.1	0.7	g/HP-hr

Generator

Type	LSA 46.2 VL12	
Producer	LEROY SOMER	
Cos φ	1,0	
Efficiency in the working point	95,2	%
Voltage	480	V
Frequency	60	Hz

Metric

Basic Technical Data

Nominal electrical output	192	kW
Maximum heat output [1)]	255	kW

1) maximum heat output is a sum of heat outputs of secondary and aftercooler circuit at their full utilization

Load	50	75	100	%
Heat power	158	205	255	kW
Fuel input	288	396	507	kW
Electrical efficiency	33,3	36,4	37,8	%
Heat efficiency	55,1	51,9	50,5	%
Total efficiency (fuel utilization)	88,4	88,3	88,3	%
Gas consumption	30,5	41,9	53,7	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)

Engine

Type	TG 200 G8V TW 86	
Producer	TEDOM	
Number of cylinders	6	
Arrangement of cylinders	in series	
Bore × stroke	130/150	mm
Displacement	729	cui
Compression ratio	12 : 1	
Speed	1800	rpm
Oil consumption, normal / max.	0.3 / 0.5	g/kWh
Max. engine power	202.1	kW

TG 200 G8V TW 86_850; revision B: 10.1.2013

Thermal System

Secondary circuit

Heat carrier	water	
Total system heat recovery	825,047	BTU/h
Nominal water temperature, input / output	158/194	°F
Return water temperature, min / max	104/158	°F
Nominal flow rate	45.9	GPM
Max. working pressure	87	psi
Water volume in CHP unit circuit	7.9	gal
Pressure loss at the nominal flow rate	4.4	psi
Nominal temperature drop	36	°F

Primary circuit [1)]

Total system heat recovery	825,047	BTU/h
Max. working pressure	36.3	psi
Water volume in CHP unit circuit	61.6	gal

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

Aftercooler circuit [1)]

Heat carrier	water + ethylene glycol	
Ethylene glycol's concentration	35	%
Total system heat recovery	48,011	BTU/h
Max coolant temperature at the input	95	°F
Nominal flow rate	23	GPM
Max. working pressure	43.5	psi
Water volume in CHP unit circuit	13.2	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

Thermal System

Secondary circuit

Heat carrier	water	
Total system heat recovery	241	kW
Nominal water temperature, input / output	70/90	°C
Return water temperature, min / max	40/70	°C
Nominal flow rate	2,9	kg/s
Max. working pressure	600	kPa
Water volume in CHP unit circuit	30	dm^3
Pressure loss at the nominal flow rate	30	kPa
Nominal temperature drop	20	°C

Primary circuit [1)]

Total system heat recovery	241	kW
Max. working pressure	250	kPa
Water volume in CHP unit circuit	280	dm^3

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

Aftercooler circuit [1)]

Heat carrier	water + ethylene glycol	
Ethylene glycol's concentration	35	%
Total system heat recovery	14	kW
Max coolant temperature at the input	35	°C
Nominal flow rate	1,5	kg/s
Max. working pressure	300	kPa
Water volume in CHP unit circuit	50	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	87,626	BTU/h
Amount of combustion air	512	CFM
outdoor air temperature, min / max	-20/35	°C

1) Valid for standard noise parameters

Exhaust Gas and Condensate Outlet

Amount of exhaust gases	539	CFM
Exhaust gas temperature, nominal / max	302/356	°F
Max. back-pressure of exhaust gases downstream the CHP unit flange	0.14	psi
Speed of exhaust gases at the outlet (DN 150)	20.7	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	218.5/196.9	in
Width total / transport	118.1/98.4	in
Height total / transport	255.9/104.7	in
Service weight of the entire CHP unit	20,472	lb

** approximate values*

Combustion and Ventilation Air

Unused heat removed by the ventilation air	26	kW
Amount of combustion air	869	Nm^3/h
outdoor air temperature, min / max	-20/35	°C

1) Valid for standard noise parameters

Exhaust Gas and Condensate Outlet

Amount of exhaust gases	915	Nm^3/h
Exhaust gas temperature, nominal / max	150/180	°C
Max. back-pressure of exhaust gases downstream the CHP unit flange	10	mbar
Speed of exhaust gases at the outlet (DN 150)	20,7	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	5550/5000	mm
Width total / transport	3000/2500	mm
Height total / transport	6500/2660	mm
Service weight of the entire CHP unit	9285	kg

** approximate values*

Noise Parameters

CHP unit in 10 m from container	63	dB(A)

Electrical Parameters

Nominal voltage	480	V
Nominal frequency	60	Hz
Power factor	0,8C	
Nominal current at cos φ=0.8	288	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.