

Only for reference

Technical data SDMA400N

400 kWel; 400 V, 50 Hz; Natural gas, MN = 70



MWM

Design conditions

Comb. air temperature / rel. Humidity:	[°C] / [%]	25 / 60
Altitude:	[m]	100
Exhaust temp. after heat exchanger:	[°C]	120
NO _x Emission (tolerance - 8%):	[mg/Nm ³ @5%O ₂]	500

Fuel gas data: ²⁾

Methane number:	[-]	70
Lower calorific value:	[kWh/Nm ³]	10,95
Gas density:	[kg/Nm ³]	0,83
Standard gas:	Natural gas, MN = 70	

Genset:

Engine:	CG132-8	
Speed:	[1/min]	1500
Configuration / number of cylinders:	[-]	V / 08
Bore / Stroke / Displacement:	[mm]/[mm]/[dm ³]	132 / 160 / 17,5
Compression ratio:	[-]	12
Mean piston speed:	[m/s]	8
Mean lube oil consumption at full load:	[g/kWh]	0,2
Engine-management-system:	[-]	TEM EVO
Generator:		
Voltage / voltage range / cos Phi:	[V] / [%] / [-]	400 / ±5 / 1
Speed / frequency:	[1/min] / [Hz]	1500 / 50

Energy balance

Load:	[%]	100	75	50
Electrical power COP acc. ISO 8528-1:	[kW]	400	300	200
Engine jacket water heat:	[kW ±8%]	204	154	116
Intercooler LT heat:	[kW ±8%]	25	16	11
Lube oil heat:	[kW ±8%]			
Exhaust heat with temp. after heat exchanger:	[kW ±8%]	224	190	141
Exhaust temperature:	[°C]	455	492	515
Exhaust mass flow, wet:	[kg/h]	2180	1660	1153
Combustion mass air flow:	[kg/h]	2108	1605	1113
Radiation heat engine / generator:	[kW ±8%]	19 / 14	15 / 11	12 / 9
Fuel consumption:	[kW+5%]	946	733	521
Electrical / thermal efficiency:	[%]	42,3 / 45,2	40,9 / 47,0	38,4 / 49,3
Total efficiency:	[%]	87,5	87,9	87,7

System parameters ¹⁾

Ventilation air flow (comb. air incl.) with ΔT = 15K	[kg/h]	12300
Combustion air temperature minimum / design:	[°C]	20 / 25
Exhaust back pressure from / to:	[mbar]	30 / 50
Maximum pressure loss in front of air cleaner:	[mbar]	5
Zero-pressure gas control unit selectable from / to: ²⁾	[mbar]	20 / 200
Pre-pressure gas control unit selectable from / to: ²⁾	[bar]	0,5 / 10
Starter battery 24V, capacity required:	[Ah]	143
Starter motor:	[kW _{el.}] / [VDC]	5,4 / 24
Lube oil content engine / base frame:	[dm ³]	70 / -
Dry weight engine / genset:	[kg]	2080 / 4790

Cooling system

Glycol content engine jacket water / intercooler:	[% Vol.]	0 / 35
Water volume engine jacket / intercooler:	[dm ³]	28 / 5
KVS / Cv value engine jacket water / intercooler:	[m ³ /h]	37 / 10
Jacket water coolant temperature in / out:	[°C]	84 / 92
Intercooler coolant temperature in / out:	[°C]	40 / 43
Engine jacket water flow rate from / to:	[m ³ /h]	19 / 32
Water flow rate engine jacket water / intercooler:	[m ³ /h]	23 / 8
Water pressure loss engine jacket water / intercooler:	[bar]	0,4 / 0,6

Engine noise level	Octave band centre frequency								Sum level(distance 1 meter)
	63	125	250	500	1000	2000	4000	8000	
Exhaust noise[dB(lin)]	108	125	123	116	114	112	107	103	120(±2,5 dB(A))
Air-borne noise[dB(lin)]	85	85	91	93	87	88	92	91	97(±1,0 dB(A))