

## Only for reference

### Technical data SDMA600N

600 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 <sub>x</sub> Emission (tolerance - 8%):	[mg/Nm <sup>3</sup> @5%O <sub>2</sub> ]	500

#### Fuel gas data: <sup>2)</sup>

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

#### Genset:

Engine:	<b>CG132-12</b>	
Speed:	[1/min]	1500
Configuration / number of cylinders:	[ - ]	V / 12
Bore / Stroke / Displacement:	[mm]/[mm]/[dm <sup>3</sup> ]	132 / 160 / 26
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]	<b>600</b>	<b>450</b>	<b>300</b>
Engine jacket water heat:	[kW ±8%]	314	248	192
Intercooler LT heat:	[kW ±8%]	40	25	11
Lube oil heat:	[kW ±8%]			
Exhaust heat with temp. after heat exchanger:	[kW ±8%]	340	275	204
Exhaust temperature:	[°C]	457	479	502
Exhaust mass flow, wet:	[kg/h]	3290	2494	1727
Combustion mass air flow:	[kg/h]	3182	2411	1668
Radiation heat engine / generator:	[kW ±8%]	23 / 20	18 / 16	13 / 13
Fuel consumption:	[kW+5%]	1428	1101	781
Electrical / thermal efficiency:	[%]	42,0 / 45,8	40,9 / 47,5	38,4 / 50,7
Total efficiency:	[%]	87,8	88,4	89,1

#### System parameters <sup>1)</sup>

Ventilation air flow (comb. air incl.) with ΔT = 15K	[kg/h]	16800
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: <sup>2)</sup>	[mbar]	20 / 200
Pre-pressure gas control unit selectable from / to: <sup>2)</sup>	[bar]	0,5 / 10
Starter battery 24V, capacity required:	[Ah]	143
Starter motor:	[kWel.] / [VDC]	5,4 / 24
Lube oil content engine / base frame:	[dm <sup>3</sup> ]	100 / -
Dry weight engine / genset:	[kg]	2650 / 6180

#### Cooling system

Glycol content engine jacket water / intercooler:	[% Vol.]	0 / 35
Water volume engine jacket / intercooler:	[dm <sup>3</sup> ]	43 / 5
KVS / Cv value engine jacket water / intercooler:	[m <sup>3</sup> /h]	37 / 10
Jacket water coolant temperature in / out:	[°C]	84 / 90
Intercooler coolant temperature in / out:	[°C]	40 / 44
Engine jacket water flow rate from / to:	[m <sup>3</sup> /h]	32 / 47
Water flow rate engine jacket water / intercooler:	[m <sup>3</sup> /h]	46 / 10
Water pressure loss engine jacket water / intercooler:	[bar]	1,5 / 1,0

Engine noise level	Octave band centre frequency								Sum level(distance 1 meter)
	63	125	250	500	1000	2000	4000	8000	
Exhaust noise[dB(lin)]	106	117	122	117	116	116	111	105	122(±2,5 dB(A))
Air-borne noise[dB(lin)]	87	89	91	93	93	92	89	95	99(±1,0 dB(A))