

GROUP	GAS	PRODUCT INFORMATION	INDEX
IC		IC-G-B-56-122	C
POWER RATING		DATE	
		17/11/2016	
		DEP.	2

<b>GENSET:</b>	<b>SGE-56HM</b>	<b>SPEED:</b>	<b>1500</b>
JACKET WATER TEMPERATURE (°C):	90	<b>FUEL TYPE:</b>	<b>NATURAL GAS</b>
INTERCOOLER WATER TEMP (°C)	55		

APPLICATION	<b>CONTINUOUS</b>	COMPRESSION RATIO:	<b>11,9:1</b>
COOLING SYSTEM:	<b>TWO CIRCUITS</b>	REGULATION:	<b>Electronic</b>
	<b>TWO STAGE IC</b>	IGNITION TIMING:	<b>18°</b>
EXHAUST MANIFOLD TYPE:	<b>DRY</b>	MAX. BACK PRESSURE:	<b>450 mmH2O</b>
EMISSIONS:		AMBIENT CONDITIONS ISO 3046/1:	
	NOX mg/Nm3(8)	<b>1000</b>	Atmospheric pressure (kPa)= <b>100</b>
	CO mg/Nm3(8)	<b>&lt;1000</b>	Ambient temperature (°C)= <b>25</b>
	NMHC mg/Nm3(8)	<b>&lt;300</b>	Relative humidity (%)= <b>30</b>
	CH4 mg/Nm3(8)	<b>&lt;1600</b>	
	CO2 kg/h (1)	<b>589</b>	

POWER RATING (4)			NOMINAL	PARTIAL LOADS		
LOAD		%	100%	80%	60%	40%
MECHANICAL POWER	(3,4,5)	kWb	1240	992	744	496
BMEP		bar	17,7	14,2	10,6	7,1
ELECTRICAL POWER (cosφ 1)		kWe	1204	963	722	477
ELECTRICAL POWER (cosφ 0,8)		kWe	1190	954	715	474
FUEL CONSUMPTION	(1)	kW	2949	2410	1872	1350
MECHANICAL EFFICIENCY		%	42,0	41,2	39,7	36,7
ELECTRICAL EFFICIENCY (COSφ 1)		%	40,8	40,0	38,6	35,3
HEAT IN MAIN WATER CIRCUIT	(1)	kW	630	497	380	292
HEAT IN SECONDARY WATER CIRCUIT	(1)	kW	215	186	156	138
HEAT IN CHARGE COOLER	(1)	kW	77	56	38	28
HEAT IN OIL COOLER	(1)	kW	138	130	118	110
HEAT IN EXHAUST GASES (25 °C)	(1)	kW	792	672	536	380
HEAT IN EXHAUST GASES (120 °C)	(1)	kW	606	523	423	304
EXHAUST GAS TEMPERATURE	(1)	°C	430	452	475	499
HEAT TO RADIATION	(1)	kW	72	63	56	44

CARBURETION SETTINGS (2)						
O2 TO EXHAUST(DRY)(ONLY A REFERENCE)		%	9,6	9,5	9,2	8,9

MASS FLOWS						
INTAKE AIR FLOW	(1)	kg/h	5900	4750	3590	2410
EXHAUST GAS FLOW (WET)	(1)	kg/h	6110	4920	3720	2510

- NOTES**
- ALL VALUES ASUME LHV OF THE GAS. 100% LOAD TOLERANCES:  
FUEL CONSUMPTION +5%,  
COOLING CIRCUIT AND EXHAUST GASES ± 8%, RADIATION ±25%  
EXHAUST TEMPERATURE ±20°C, MASS FLOWS ± 10% (ALSO FOR CO2 FLOW IN EXHAUST).
  - THE ENGINE PERFORMANCE DATA, TIMING ADVANCE AND CARBURETION SETTINGS ARE VALID FOR A GAS THAT FULFILLS THE REQUIREMENTS DEFINED IN IC-G-D-30-001e AND IC-G-D-30-002e
  - NET POWER, MECHANICAL PUMPS NOT INCLUDED.
  - POWERS ARE VALID FOR AMBIENT TEMP. =25°C AND AN ALTITUDE OF =500 m. SEE OTHER CONDITIONS IN PI IC-G-B-00-005
  - OVERLOAD NOT ALLOWED. IT IS NOT RECOMMENDED TO OPERATE BELOW 40% LOAD DURING LONG TIME.
  - THE SPECIFICATIONS AND MATERIALS ARE SUBJECT TO CHANGE WITHOUT NOTIFICATION
  - A ENGINE WITH INLET OR OUTPUT RESTRICTION OVER PUBLISHED LIMITS, OR WITH INADEQUATE MAINTENANCE OR INSTALLATION CAN MODIFY POWER RATING DATA.
  - EMISSIONS ARE CORRECTED TO 5% OF O2. EMSSIONS ACCORDING TO D1 CYCLE IS 8178-4. (0°C and 1013 mbar)
  - ALTERNATOR VOLTAGE 400 V
  - VALID IN ISLAND OPERATION