



DRESSER RAND

Bringing energy and the environment into harmony.*

GAS ENGINES AND GENSETS **1200 RPM**


Guascor

Speed	1200 rpm	
Generator frequency	60 Hz	
Gas Type	Natural Gas	
NOx emissions	≤ 2 g/bHPH	
Minimum methane number	75	1)

Engine type			SFGLD 180	SFGLD 240	SFGLD 360	SFGLD 480	SFGLD 560	HGM 560
Engine power 2)		kW	252	335	503	670	788	1040
Speed		min ⁻¹	1200	1200	1200	1200	1200	1200
Mean effective pressure		bar	14	14	14	14	14	18,5
Exhaust temperature	approx.	°C	350	395	353	393	364	409
Exhaust mass flow wet	approx.	kg/h	1321	1649	2514	3419	3895	5178
Combustion air mass flow 2)	approx.	kg/h	1276	1586	2422	3293	3753	5001
Combustion air temperature design		°C	25	25	25	25	25	25
Ventilation air flow 3)	approx.	m ³ /h	17640	23450	35210	46900	55160	72800
Exhaust manifold type			Wet	Wet	Wet	Wet	Wet	Dry
InterCooler Stages			Single	Single	Double	Double	Double	Double
Engine parameters								
Bore		mm	152	152	152	152	160	160
Stroke		mm	165	165	165	165	175	175
Displacement		dm ³	18,0	24,0	35,9	47,9	56,3	56,3
Number of cylinders			6	8	12	16	16	16
Compression ratio			11,8 : 1	11,8 : 1	11,8 : 1	11,8 : 1	11,7 : 1	12 : 1
Mean piston speed		m/s	6,6	6,6	6,6	6,6	7,0	7,0
Lube oil content 4)		dm ³	70	95	150	195	232	400
Typical mean lube oil consumption 5)		g/kWh	0,35	0,35	0,35	0,35	0,20	0,20
Generator								
Efficiency 6)		%	96,1	96,2	96,7	96,8	96,7	96,8
Energy balance								
Electrical power 6)		kW	242	322	486	649	762	1007
HT water heat	± 8 %	kW	145	224	368	519	570	505
LT water heat	± 8 %	kW	72,0	86,0	91,0	109,0	125,0	172,0
Exhaust cooled to 120 °C	± 8 %	kW	97	145	188	298	304	479
Engine radiation heat		kW	11	15	17	20	32	64
Generator radiation heat		kW	10	13	17	21	26	33
Fuel consumption 7)	+ 5 %	kW	617	855	1243	1720	1937	2417
Mechanical efficiency		%	40,8	39,2	40,5	39,0	40,7	43,0
Electrical efficiency		%	39,2	37,7	39,1	37,7	39,3	41,7
Thermal efficiency		%	50,9	53,2	52,1	53,8	51,6	47,8
Total efficiency		%	90,1	90,9	91,2	91,5	90,9	89,5
System parameters								
HT water flow rate min.		m ³ /h	20	25	40	50	60	55
HT water K value			4,5 x 10 ⁻⁴	3,3 x 10 ⁻⁴	1 x 10 ⁻⁴	1,1 x 10 ⁻⁴	1,1 x 10 ⁻⁴	1,78 x 10 ⁻⁴
LT coolant flow rate min./max.		m ³ /h	15/30	15/30	15/30	18/30	17/30	12/30
LT K value			1,86 x 10 ⁻³	1,89 x 10 ⁻³	2,06 x 10 ⁻³	2,06 x 10 ⁻³	2,06 x 10 ⁻³	1,9 x 10 ⁻³
HT water heat		dm ³	50	60	180	200	200	260
HT water temperature max.		°C	90	90	90	90	90	90
LT coolant temperature		°C	55,0	55,0	55,0	55,0	55,0	55,0
Exhaust backpressure max.		mbar	45	45	45	45	45	45
Maximum pressure loss in front of air cleaner		mbar	5	5	5	5	5	5
Gas flow pressure, fixed between (pressure variation +/- 10 %)		mbar	50 ... 240	50 ... 240	50 ... 240	50 ... 240	50 ... 240	50 ... 240
Starter battery 2 x 12 V, capacity required		Ah	280	280	280	280	280	280

- 1) For other MN consult Dresser-Rand
- 2) Engine power ratings and combustion air volume flows acc. to ISO 3046/1
- 3) Intake air flow at delta T = 5° including combustion air
- 4) Not including pipes and heat exchangers
- 5) These values are the mean lube oil consumption between maintenance steps

- 6) At 60 Hz, U = 0.48 kV, power factor = 1
- 7) With a tolerance of + 5 %
- 8) More flow depending on the external circuit installed
- 9) Maximum fixed on 30m³/h not to exceed the 3m³/s

Speed	1200 rpm	
Generator frequency	60 Hz	
Gas Type	Sewage Gas	
NOx emissions	≤ 2 g/bHPH	
Standard gas composition	CH4 62.5%, CO2 36%, N2 1.5%	1)

Engine type			SFGLD 180	SFGLD 240	SFGLD 360	SFGLD 480	SFGLD 560	HGM 560
Engine power 2)		kW	252	335	503	670	788	1040
Speed		min ⁻¹	1200	1200	1200	1200	1200	1200
Mean effective pressure		bar	14	14	14	14	14	18,5
Exhaust temperature	approx.	°C	352	398	355	395	365	418
Exhaust mass flow wet	approx.	kg/h	1330	1686	2589	3474	3938	5279
Combustion air mass flow 2)	approx.	kg/h	1216	1528	2359	3157	3578	4833
Combustion air temperature design		°C	25	25	25	25	25	25
Ventilation air flow 3)	approx.	m ³ /h	17640	23450	35210	46900	55160	72800
Exhaust manifold type			Wet	Wet	Wet	Wet	Wet	Dry
InterCooler Stages			Single	Single	Double	Double	Double	Double
Engine parameters								
Bore		mm	152	152	152	152	160	160
Stroke		mm	165	165	165	165	175	175
Displacement		dm ³	18,0	24,0	35,9	47,9	56,3	56,3
Number of cylinders			6	8	12	16	16	16
Compression ratio			11,8 : 1	11,8 : 1	11,8 : 1	11,8 : 1	11,7 : 1	12: 1
Mean piston speed		m/s	6,6	6,6	6,6	6,6	7,0	7,0
Lube oil content 4)		dm ³	70	95	150	195	232	400
Typical mean lube oil consumption 5)		g/kWh	0,35	0,35	0,35	0,35	0,20	0,20
Generator								
Efficiency 6)		%	96,1	96,2	96,7	96,8	96,7	96,8
Energy balance								
Electrical power 6)		kW	242	322	486	649	762	1007
HT water heat	± 8 %	kW	141,0	217,0	366,0	517,0	586,0	483,0
LT water heat	± 8 %	kW	74,0	91,0	92,0	111,0	125,0	176,0
Exhaust cooled to 120 °C	± 8 %	kW	99	150	194	305	308	503
Engine radiation heat		kW	12	16	18	21	34	64
Generator radiation heat		kW	10	13	17	21	26	33
Fuel consumption 7)	+ 5 %	kW	618	860	1252	1730	1961	2427
Mechanical efficiency		%	40,8	39,0	40,2	38,7	40,2	42,9
Electrical efficiency		%	39,2	37,5	38,8	37,5	38,9	41,5
Thermal efficiency		%	50,8	53,3	52,1	53,9	52,0	47,9
Total efficiency		%	90,0	90,7	90,9	91,4	90,8	89,4
System parameters								
HT water flow rate min.		m ³ /h	20	25	40	50	60	55
HT water K value			4,5 x 10 ⁻⁴	3,3 x 10 ⁻⁴	1 x 10 ⁻⁴	1,1 x 10 ⁻⁴	1,1 x 10 ⁻⁴	1,78 x 10 ⁻⁴
LT coolant flow rate min./max.		m ³ /h	15/30	15/30	15/30	18/30	17/30	12/30
LT K value			1,86 x 10 ⁻³	1,89 x 10 ⁻³	2,06 x 10 ⁻³	2,06 x 10 ⁻³	2,06 x 10 ⁻³	1,9 x 10 ⁻³
HT water heat		dm ³	50,0	60,0	180,0	200,0	200,0	260,0
HT water temperature max.		°C	90,0	90,0	90,0	90,0	90,0	90,0
LT coolant temperature		°C	55,0	55,0	55,0	55,0	55,0	55,0
Exhaust backpressure max.		mbar	45	45	45	45	45	45
Maximum pressure loss in front of air cleaner		mbar	5	5	5	5	5	5
Gas flow pressure, fixed between (pressure variation +/- 10 %)		mbar	50 ... 240	50 ... 240	50 ... 240	50 ... 240	50 ... 240	50 ... 240
Starter battery 2 x 12 V, capacity required		Ah	280	280	280	280	280	280

- 1) For other MN consult Dresser-Rand
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- 3) Intake air flow at delta T = 5° including combustion air
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- 6) At 60 Hz, U = 0.48 kV, power factor = 1
- 7) With a tolerance of + 5 %
- 8) More flow depending on the external circuit installed.
- 9) Maximum fixed on 30m³/h not to exceed the 3m/s

Dimensions and other data

Engine Dimensions		SFGLD 180	SFGLD 240	SFGLD 360	SFGLD 480	SFGLD 560	HGM 560
Width	mm	945	945	1368	1368	1550	1787
Length	mm	2020	2612	2637	3143	3000	3409
Height	mm	1459	1459	1738	1738	2200	2165
Dry weight genset	kg	2700	3500	4200	5450	5800	7500

Genset Dimensions (60 Hz)		SFGLD 180	SFGLD 240	SFGLD 360	SFGLD 480	SFGLD 560	HGM 560
Width	mm	1200	1270	1664	1664	1669	1848
Length	mm	3024	3658	3830	4396	4669	5648
Height	mm	1846	1914	2132	2184	2176	2319
Dry weight genset	kg	4000	4940	7230	9225	10000	11735

Noise emissions* 60 Hz (1200 rpm)

Engine noise dB(A)	HZ (Frec. Band)	SFGLD 180	SFGLD 240	SFGLD 360	SFGLD 480	SFGM 560	HGM 560
	125	--	59	--	66	71	71
	250	70	73	69	70	79	77
	500	82	79	76	76	81	79
	1000	84	85	82	81	83	81
	2000	81	83	83	80	84	88
	4000	76	77	79	73	79	83
	LpA, \hat{a} dB(A)	88	88	87	85	89	90

Exhaust noise dB(A)	HZ	SFGLD 180	SFGLD 240	SFGLD 360	SFGLD 480	SFGM 560	HGM 560
	63	94	96	96	94	98	99
	125	106	109	109	111	109	109
	250	106	113	113	112	112	115
	500	112	115	115	119	117	116
	1000	108	111	112	116	113	114
	2000	109	113	113	117	113	114
	4000	109	112	114	116	114	116
	LpA, \hat{a} dB(A)	117	120	121	124	121	122

Notes — Data obtained according to ISO 9614-2. Data obtained @ 1 m from engine according UNE-EN ISO-11203:1996. Maximum data Standard Deviation $s = \pm 4$ dB(A).

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