WARTSILA 220 SG POWER GENSET

Standard Features:

* Rated Output 2800 kW
* 4160 v, 60Hz , 1200 rpm Generator
* Common Base Frame
* Coupling Flywheel
* SteelSpring Set
* Engine Lubicating Oil System
* Turbocharger
* Cooling System
* WECS Software Control System
* Charge Air System

Wartsila 18V220 SG Power Genset

This unit was manufactured by Wartsila in 2001 and originally purchased by Stewart and Stevenson for placement in several California power plants. Walters Power International acquired 2 of these units and sold one for placement into a power project in Canada. This unit is new/unused and is located at the Wartsila facility in Long Beach, California.

The Wartsila 18V220 SG is used in many power projects around the world. It is very common for these reciprocating internal combustion natural gas fired engine to be used in combined heat and power (CHP) installations. The low amount of emissions produced by this engine makes this desireable in many countries.

This genset has been installed in containers for ease of installation and mobility, in addition to being placed in buildings at power plants. Walters Power International works with many engine service companies that can provide full turnkey solutions to your meet your power requirements/

Phone: 405-528-2860
Fax: 405-528-2466

WALTERS POWER INTERNATIONAL

Email: karen@walterspower.com
www.walterspower.com

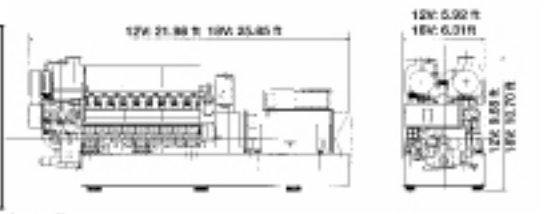
WARTSILA 220 SG POWER GENSET

WÄRTSILÄ 220SG

60 Hz - NOx 500 mg/Nm3

WÄRTSILÄ

General data		Site conditions	
Bore	8,7 in	Altitude	4921 ft
Stroke	9,5 in	Suction air temperature	95 °F
Cylinder configuration	18 V	Charge air coolant temperature	104 °F
Cylinder displacement	9,12 liter	% Glycol	0 %
Rated speed	1200 rpm	Methane number	85
Mean effective Pressure	3 psi	**Service condition**	**COP**
Genset weight with fluids	50026 lb	Derating	0 %



COP : Continuous output without time limitation between the stated maintenance intervals - no overload allowed.

Technical data

Frequency / Rated speed				60 Hz - 1200 rpm			
Cylinder configuration				18 V			
Service condition	according to ISO 8528/1		Units	COP			
Genset Load			%	100	90	75	50
Electrical Power	PF= 0,8 Voltage = 4160 V		kWe	2 822	2 539	2 114	1 397
Electrical efficiency	according to IEC34.1		%	44,7	44,1	42,9	39,6
Thermal efficiency	(including HT, Lube oil circuits and exhaust gas down to 90°C)		%	40,1	39,7	40,2	41,2
Heat balance		**Tolerance**					
Fuel input (LEV), Including engine driven pumps		according to ISO 3046I + 5 %	mBTU/h	22 731	20 733	17 744	12 717
Mechanical Power		± 5 %	kWm	2 825	2 633	2 194	1 463
Water cooling circuit HT		± 5 %	mBTU/h	2 594	2 354	1 846	1 026
Water cooling circuit LT		± 5 %	mBTU/h	1 043	1 004	934	894
Cooling circuit Lube oil		± 5 %	mBTU/h	1 220	1 209	1 211	1 239
Exhaust gas (-> 194°F)		± 5 %	mBTU/h	5 297	4 678	4 074	2 978
Exhaust gas (194°F -> 95°F) + Unburnt		± 5 %	mBTU/h	8 937	8 205	6 925	4 720
Engine radiation		± 15 %	mBTU/h	716	653	559	401
Specific consumption							
Fuel Consumption, Site conditions 5% toleran:	PF= 0,8 Voltage = 4160 V		BTU/kWm.h	7 773	7 877	8 090	8 897
	Natural Gas L.E.V. = 905 BTU/sft3		Sft3/h	25132	22923	19618	14061
Emissions (at 5% O2 dry)							
NOx (as NO_2)			g/Nm³	< 0,5	< 0,5	< 0,5	< 0,5
			ppmv-dry	< 244	< 244	< 244	< 244
			g/kWm.h	< 48,83	< 48,83	< 48,83	< 48,83
HT Cooling circuit							
HT : Water inlet temperature, Engine		indicative value only	°F	198,4	198,6	202,3	206,6
HT : water outlet temperature, Engine		(Maximum temperature)	°F	212	212	212	212
HT : Water flow		± 15 %	gpm	392	392	392	389
LT double Cooling circuit							
LT : Water inlet temperature, Engine		(Maximum temperature)	°F	104	104	104	104
LT : water outlet temperature, Engine		indicative value only	°F	112,6	112,6	112,3	112,3
LT : Water flow		± 15 %	gpm	520	520	520	515
LT triple Cooling circuit							
LO : Lube oil inlet temperature, Engine		(Maximum temperature)	°F	167	167	167	167
LO : Lube oil outlet temperature, Engine		indicative value only	°F	185,0	184,8	184,8	185,4
LO : Flow Lube oil		± 15 %	gpm	313	313	313	310
LT : Water inlet temperature, Engine		(Maximum temperature)	°F	104	104	104	104
LT : water outlet temperature, Engine		indicative value only	°F	109,3	109,1	108,7	108,5
LT : Water flow		± 15 %	gpm	396	396	396	396
Air intake / Exhaust gas							
Suction air flow		± 5 %	lb/h	41 420	39 060	33 345	24 620
Exhaust gas flow		± 5 %	lb/h	42 645	40 265	34 375	25 355
Exhaust gas temp.	reference : Suction air temperature 95°F	± 18 °F	°F	665	635	645	640
Exhaust gas back pressure max.			inWG	20	20	20	20
Miscellaneous							
Min. Gas feed pressure (regulating unit inlet)			psiG	50,8	50,8	50,8	50,8
Lubricating oil consumption	Lubricating oil density = 830 kg/(n)m3		g/kWm.h	< 0,4	< 0,4	< 0,4	< 0,4
			lb/h	2,6	2,4	2	1,3

Engine data subject to change without prior notice and are not contract values

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