



# Kronos

## HZA3-5M

Powered by:

**HATZ 1B 30**

4 kW at 50 Hz

Sound pressure level at 7m: 77dBA

Generating Set Performance		50 Hz
SERVICE		Electric power
Active power output	kW	4,0
Rated speed	r.p.m.	3.000
Standard voltage	V	230

Performance data refers to Standard Reference Conditions of DIN ISO 3046: + 25 °C , 100 m ALT, relative humidity 30 %  
 During running-in period the output increases by approx. 5 % which is taken into consideration at delivery.  
 Power reduction acc. to DIN ISO 3046.  
 Standard values: Above 100 m ALT approx. 1 % per 100 m. Above 25 °C (77 °F) approx. 4 % per 10 °C (50 °F).

Prime Mover Performance		S*	B*
Rated output	kW	4,1	4,6
	CV	5,6	6,3
Manufacturer		HATZ	
Engine model		1B 30	
4 Stroke Diesel Engine - Injection type		Direct	
Aspiration type		Axial blower fan	
Cylinders, number and arrangement		1	
Bore x stroke	mm - in	80 x 69 - 3,15 x 2,72	
Total displacement	L - in <sup>3</sup>	0,347 - 21,16	
Cooling system		Air	
Lube oil specifications		15 W 40	
Compression ratio		22 : 1	
Specific fuel consumption	g/kWh	275	
Specific oil consumption		Approx 1 % of fuel consumption	
Lube oil maximum capacity	L - US qts	1,1 - 1,16	
Lube oil minimum capacity	L - US qts	0,6 - 0,63	
Speed governor	Type	Mechanical	
Air filter		Dry	

S\* : ISO-STANDARD POWER (ICXN) (10% overload permissible) and ISO-STANDARD FUEL STOP POWER (no overload permissible) according to DIN ISO 3046.  
 For constant speed and constant load (ICFN).

B\* : ISO BRAKE FUEL STOP NET POWER (IFN) for intermittent load acc. to DIN ISO 3046..

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 Power reduction acc. to DIN ISO 3046.  
 Standard values: Above 100 m ALT approx. 1 % per 100 m. Above 25 °C (77 °F) approx. 4 % per 10 °C (50 °F).

### Synchronous Generator\*

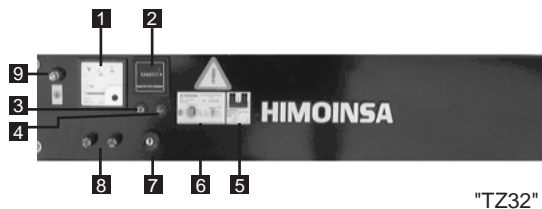
Poles	N°	2
Winding connections (Standard)		Serie
Frame mounting		B9/B23
Windings treatment	Type	For humid and saline climates
Insulation	Class	H
Damper windings		Yes
Enclosure (according to IEC-34-5)		IP 20
Waveform distortion		No more than 6%
Exciter system		Condenser
Voltage regulator		Brushless autoexciter
Steady voltage precision		± 6%

\* Alternators used by HIMOINSA Gensets meet the requirements of following Standard: IEC 34-1; CEI 2-3; BS 4999-5000; VDE 0530; NF 51-100,111

Generating Set Installation Data		3.000 r.p.m.
<b>EXHAUST SYSTEM</b>		
Max. exhaust temperature at full load	C°	485
	F°	905
Exhaust gas flow	Q(m³/h)	71
Heat rejected to exhaust	(kW-IFN)	4,6
Maximum allowed back pressure	mm/WS	270
<b>AIR REQUIREMENT</b>		
Air requirement for combustion at 100% load / rated speed	m³/min	0,52
	ft³/min	19
<b>ELECTRIC STARTING SYSTEM</b>		
Starting motor output	kW	0,8
	CV	1,09
Minimum recommended battery capacity	Ah	14V aprox. 14A
Auxiliary voltage	Vcc.	12V
<b>LIQUID CAPACITY</b>		
Lube oil system including sump, filters, etc.	L	1,1 max. / 0,6 min.
	qts	1,16 max. / 0,63 min.
Fuel tank capacity	L	5
<b>WEIGHT AND DIMENSIONS</b>		
Length	m - in	0,83 - 2,72
Width	m - in	0,62 - 2,03
Height	m - in	0,6 - 1,97
Shipping volume seaworthy packing (standard supplier)	m³ - ft³	0,31 - 10,9
Dry weight (with standard accessories)	kg - lb	82 - 180

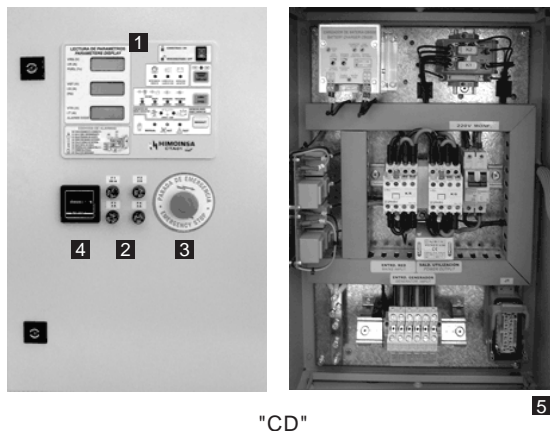
## CONTROL PANEL

Key start control panel



- 1.- Voltmeter.
- 2.- Hour meter 230V.
- 3.- Battery charger led.
- 4.- Oil pressure led.
- 5.- 2 poles thermal magnetic protection.
- 6.- Earth leakage (differential) protectionl.
- 7.- Start key.
- 8.- Protection fuses.
- 9.- Earth connection.

Automatic control panel



- 1- AUTOMATIC switchboard model CTA01

#### READINGS:

Amps per phase, Frequency meter, Voltage mains and genset, Mains detector.

#### ACOUSTIC ALARMS THROUGH CODE FOR:

Low oil pressure, Alternator battery charger failure, High temperature, Start failure.

- 2- Protection fuses.

- 3- Emergency stop button.

- 4- Hour meter

- 5- INTERNAL COMPOSITION:

Change over contactor mains-genset, Battery charger, Current transformers, Plate voltmeter transformers for mains (voltage measure), Plate voltmeter transformers for genset (voltage measure), Electronical and mechanical interlocking for contactors, Terminal rail for output / input, Plate relay switch off /on, Engine wiring connection, Strip earth connection, 2 poles thermal magnetic protection, 6 mt control cables manoeuvre.