

GENERATING SET

MGTP 6000 SS-Y ECO START ON DEMAND



OWNER'S MANUAL

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1- TECHNICAL SPECIFICATIONS

1.1 GENERATOR

Туре	Linz E1C10M H
Single phase power	6 kVA 230V
Single phase power	6 kVA 115V
Frequency	50 Hz
Cosø	0.8
Insulation class	Н
Mechanical protection	IP23

1.2 ENGINE

Engine type	Yanmar L100 V
N° cylinders	1
Displacement	435cm ³
Power	8.8 HP
Engine speed	3000 r.p.m.
Cooling	Aria / Air
Fuel	Diesel
Oil sump capacity	1.6 L
Starting system	Elettrico/Electric
Specific fuel consumption	224 gr/kwh

1.3 GENERAL FEATURES

Noise level	94Lwa
Battery	12V
Fuel tank capacity	23lt
Dimensions (L. x W. x H.)	1415x832x967 mm
Dry weight	206Kg



Pct.2.1

N°	Description			
1	ALARM signal lamp			
2	Fuel reserve signal lamp			
3	Low oil pressure signal lamp			
4]	Batter	ry charger fail	ure signal lamp
5		N	/Ianual mode s	ignal lamp
6		E	co mode ON s	ignal lamp
7			Fuse	
8			Hour cou	nter
			OFF	Off
9	Key switch	E	CO MODE	Eco mode enabled
		M	AN. START	Manual starting
10	Emergency stop			
11	Volt meter			
12			ELCI	3
13			Main prot	ection
14		115	V 16A CE sock	tet protection
15		115	V 32A CE sock	tet protection
16	230V 16A CE socket protection			tet protection
17	Valtaga galastan		Pos.1 115V	
1/	voltage selector	Pos.2 230V		
18	CE socket 230V 16A			
19	CE socket 230V 32A			
20	CE socket 115V 32A			
21	CE socket 115V 16A			

3- SPARE PARTS 3.1 BASEFRAME SPARE PARTS



N°	Code	Description		N°	Code	Description
1	Z255-020	Fan carter		13	C003-017	Rubber grommet
2	Z255-383	Alternator separator		14	C003-038	Fuel pump
3	Z255-018	Fuel tank		15	C003-014	Fuel pre-filter
4	Z255-026	Floating platen		16	C003-834	Rubber grommet
5	C003-023	Fuel tank cap		17	Z255-025	Battery beam
6	C003-730	Floating		18	C003-836	Battery
7	Z255-013	Carter		19	C003-846	Canopy lockage
8	R255-311	Lifting beam		20	R255-326	Muffler
9	C003-064	Rubber grommet		21	Z255-323	Baseframe
10	Z255-010	Air filter frame		22	Z255-014	Rear beam
11	Z255-324	Engine separator		23	Z255-321	Muffler carter
12	Z255-022	Filter bracket				

3.2 POWER PACK SPARE PARTS



N°	Code	Description
1	Z255-318	Hub
2	C003-895	Fan
3	255-072	Shaft
4	C002-001-2323	Shock absorber
5	C011-156	Alternator Linz E1C10M H
6	Z255-327	Exhaust flexi-pipe
7	C006-271-5EL2L9HAGS	Yanmar L100
8	C002-040	Shock absorber

3.3 CANOPY SPARE PARTS



N°	Code	Description	
1	255-061	Canopy	
2	C003-150	Handle	
3	Z255-310	Flap	
4	255-062	Pocket	

3.4 DASHBOARD SPARE PARTS



N°	Code	Description		N°	Code	Description
1	C001-413	16A 110V CE socket		17	C001-703	Voltmeter
2	C001-567	32A 110V CE socket		18	Z255-302	Alluminium platen
3	C001-543	32A 230V CE socket		19	C003-420	Hour counter
4	C001-414	16A 230V CE socket		20	C003-286-V	Green signal lamp
5	C001-557	Selector		21	С003-286-В	Blue signal lamp
6	Z255-301	Dashboard		22	C001-073	Fuel signal lamp
7	C001-339	Stud terminals board M6x6		23	C001-074	Oil signal lamp
8	C001-1044	Relays		24	C001-076	Fuel signal lamp
9	C007-041	SOD		25	C001-058	Fuse housing
10	Z255-394	SOD cover		26	C003-286-R	Red signal lamp
11	C001-709	Contactor		27	C001-001	Key switch
12	C001-025-30	12V 30A relay		28	C003-940	Emergency stop button
13	C001-063-32	32A 3 poles MCB		29	C001-095-16	Push type circuit breaker 16A
14	C001-594-25	ELCB 25A 30mA		30	C001-095-30	Push type circuit breaker 30A
15	Z255-016	Circuit breaker platen		31	C001-095-16	Push type circuit breaker 16A
16	C003-744	Circuit breaker cover		32	Z255-382	Bracket

3.5 CARRIAGE SPARE PARTS



N°	Code	Description
1	Z255-359-1B	Handle
2	C003-728	Wheel
3	Z255-017	Axle
4	Z255-358_SX	Left handle housing
5	C003-1115	Latch
6	Z255-363	Spacer
7	Z255-358	Right handle housing
8	Z255-364_SX	Left foot
9	Z255-365_DX	Right foot

4- WIRING DIAGRAM



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BATTERY

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BATTERY CHARGER

STARTING MOTOR

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BATTERY CHARGER ALTERNATOR

5- ARTICLE 113

Before install the machine and however before any operation, read carefully following manual of instruction and use. The present manual of instruction is integrating part of the machine and must follow the cycle of life of the machine for 10 years from the putting in service, also in case of transfer of the same one to an other user.

6- USING MANUAL

6.1 EARTH CONNECTION

Connect the unit to the earth, means the suitable clamp.

Earth Leakage Circuit Breaker.

The product is equipped with an Earth Leakage Circuit Breaker (ELCB) which guarantees user protection against electric shocks due to unwanted connect with live parts of the circuit or insulation fault.

Warning!

In order to guarantee ELCB proper operation, the product must be earthed. Earth connection have to be conform to IEC 364 standard.

Warning!

Check weekly the ELCB functioning by the suitable TEST push button on the ELCB.

6.2 STARTING

After filling up with oil and fuel, proceed as follow:

ECO MODE

Check all the loads are disconnected

Bring the key switch ($n^{\circ}8$ pct.2.1) in ECO MODE, the ECO MODE ON signal lamp ($n^{\circ}6$ pct.2.1) switch on. Now the machine is ready, the generator will start automatically when any load is connected. The generator will automatically stop when no loads are connected for 10 seconds.

MANUAL MODE

Check all the loads are disconnected

Bring the key switch ($n^{\circ}8$ pct.2.1) in MAN. START position and allow the key to return in ECO MODE, the engine will be started.

Before to connect any load, check the voltage selector (n°11 pct.2.1) is in the needed position.

Connect the loads using only plug and cable in perfect conditions.

6.3 STOPPING THE ENGINE

To stop the engine bring the key switch in OFF position.

6.4 WARNING

If the machine has to be stopped for a long period we suggest disconnect the battery.

In order to preserve the engine performance we strongly suggests to follow the maintenance operations and the maintenance schedule reported in the engine manufacturer "Use and maintenance" user manual. Poor maintenance could result in a shorter period of operation and in performance decrease.

6.5 CAUSES OF ENGINE POOR PERFORMANCE

ENGINE OIL

- **CAUTION:** To avoid personal injury, be sure to stop the engine before checking the oil level, changing the oil and the oil filter cartridge.
- NOTE: Be sure to inspect the engine, locating it on a horizontal place. If placed on gradients, accurately, oil

quantity may not be measured.

CHECKING LEVEL AND ADDING ENGINE OIL

Operations

- Check the engine oil level before starting or more than five minutes after stopping.
- Detach the oil level gauge, wipe it clean and reinstall it.
- Take the oil level gauge out again, and check the oil level.
- If the oil level is too low, remove the oil filter plug and add new oil to the prescribed level.
- After adding oil, wait more than 5 minutes and check the oil level again. It takes same time for the oil to come down to the oil pan.

CHANGING ENGINE OIL

Change oil after the initial 50 hours of operation and every 100 hours thereafter.

Operations :

- Operate the engine until it is warm.
- Stop the engine, open the inspection door .
- Move the flexible oil discharge pipe out of the machine, dismount the wrapper and the cap, leave the oil discharge itself in to an other recipient.
- Re-assembly cap end wrapper.
- Fill the sump to the mark on the dipstick with new and clean lubrication oil(1.5L) of an approved grade.

REPLACING THE OIL FILTER CARTRIDGE

• **CAUTION :** To avoid personal injury be sure to stop the engine before changing the oil filter cartridge and allow engine to cool down sufficiently; oil can be hot and can burn.

Operations :

- Replace the oil filter cartridge every 500 hours of operation.
- Detach the old oil filter cartridge with a filter wrench.
- Apply a film of oil to the gasket for the new cartridge.
- After the new cartridge has been replaced, the engine oil level normally decreases a little. Thus, run the engine for a while and check oil leaks through the seal before checking the engine oil level. Add oil if necessary.
- NOTE : Wipe off any oil sticking to the machine completely.

AIR CLEANER

The element of the air cleaner employed on this engine is a dry type, so never apply oil to it.

Operations:

- Open air filter
- Unscrew the wing nut and remove the filter element
- When dry dust adheres to the element, blow compressed air from the inside turning the element. Pressure of compressed air must be under 686kPa (7kg/cm², 99psi).
- Check the rubber seal is undamaged, is always necessary to replace this rubber when replacing the filter mass, this is why is included in the spare box.
- Replace the element every year or every six cleanings.

7- GENERAL USE INSTRUCTION

7.1 TRANSPORTATION

The machine must be fixed carefully to the motor vehicle if it has to be moved to the place of use. Raise the machine using the lifting eye if the model foresees it; otherwise, lift it using a forklift, taking care that the weight is well balanced on the two forks. It is advised not to stay in the range of action during these operations; furthermore we suggest not to keep the machine hung up for long.

If the machine is delivered without the wheels on, mount them before switching the machine on.

During the normal use of the machine mounted on wheels (in a building yard or anywhere), the operator must ascertain that the machine is weel placed in order to avoid unforeseen displacement.

7.2 CAUTION

Be careful: the generating set or the welder is furnished WITHOUT lube oil. Provide the machine with "10 W 40" multigrade oil indicated for temperatures from - 20° C to 40° C in the quantity indicated in the engine SPECIFICATION section.

Be careful: if the machine is fitted with a water cooled engine fill the radiator circuit with a solution made up by 50% water and 50% antifreeze liquid inthe quantity indicated i the engine SPECIFICATION section.

Be careful: the generating set is furnished with flat battery and without acid. Fill it using sulphuric acid in a 30% - 40% concentrated solution up to the complete covering of the elements. During this operation, we suggest the operator to use the gloves; the accidental contact with the sulphuric acid solution must be washed up immediately with cold water and, if necessari, a doctor must be consulted.

Be carefull: don't disconnect battery cables when the engine runs. This coud result in serious damages to the machine.

Be carefull: BEFORE OPERATING THE MACHINE the neutral, or the equivalen winding point, MUST be connected effectively to the earth (without any switch or other device that may interrupt the electric connection) from the earth clamp available on the machine, and identified by the symbol:

Be carefull: for normal transportation, follow the instructions as specified in the TRASPORTATION section. Make sure that the machine doesn't overturn in order to avoid spill of acids from the battery.

7.3 RUNNING IN

For the first 50 hours of operation of the machine do not employ more than 70% of the maximum power indicated in the technical specifications. In this way, a proper engine running in is guaranteed.

7.4 STARTING AND WORKING

Make the earth connection (see the USE INSTRUCTIONS).

If the machine model IS NOT equipped with a earth leakege circuit breaker the available socket is intended ONLY for connecting the machine to a switch board equipped with all protection devices imposed by current law regulations.

Check the perfect state and efficiecy of the cables.

Make sure that all the switches, electric connections and regulations are in the right position for the starting (see USE INSTRUCTIONS and CONTROL PANELS DESCRIPTIONS).

While welding, eyes and body must be protected by gloves, maskes Use the machine in well ventilated places, taking care that the exhaust gas and the welding smokes eventually produced (where welders are used) do not stagnate. Keep the machine away from walls or other kind of obstacles i order to avoid air or gas recycling. If the machine is employed in closed places, use aspirators in order to guarantee a proper air recycling.

The fuel refill must not be made while smoking or close to flames. This operation must be done when the engine is switched off.

Do not fill the tank at its maximum level and clean up the fuel eventually overflowed.

Check daily if there is loss of fuel or lubrificating oil on the ducts or on the engine. For machines provided zith liftable canopy insert the foreseen security sistems in order to avoid injures caused by an unexpected closure.

7.5 FORBIDDEN USE

Do not connect the machine to the commercial electric network.

Do not work close to inflammable materials or where there are explosive gas and vapours.

Do not work in narrow and badly ventilated places.

Do not work without using the protections placed in their proper positions and in perfect conditions.

Do not touch the exhaust muffler and the parts of the engine next to it.

Do not make service operations while the engine is running.

Any service made on the electric parts must be done when the engine is stopped and by specialized technicians.

Keep away from the moving parts of the engine while working and do not approach the machine with free and too long clothes.

7.6 SERVICE AND CLEANING

We suggest a frequent cleaning of the machine since the presence of dirt can compromise the efficiency of the machine. The frequency of this operation tightly depends on the place where the machine is used. We advise, anyway, to pay special care to the service of:

OIL LEVEL, OIL FILTER, AIR FILTER, COOLING LIQUID LEVEL, COOLING LIQUID LEVEL, HEAT EXCHANGER, VENTILATION DUCTS AND INTAKES, BATTERY

7.7 TEMPORARY STANDSTILL

If the machine has to be stopped for a long period (more than one year), we suggest to leave the motor oil and the fuel in and the water in the radiator in order to avoid oxydizing effects.

When the machine turns to work again, the liquids must be replaced, the battery must be charged; the belts and their statem the pipes, the rubber hoses and their resistance must be checked and a visual inspections of the electric connections must be done.

7.8 SCRAPPING

In order to preserve the environnement, it is advised to dispose of the oil, the fuel and the bettery that will be destroyed in proper places and ccording to the current laws. For the complete range of the materialsm see the list below:

FERROUS MATERIALS: steel, cast iron, aluminium, copper, brass are udes in the bearing structure of engine, alternator, transformers, etc.

PLASTIC MATERIALS: rubber, bakelite, epovit, lexan are used for the instruments, engine pipes, junction boxes and connectors, fuel tank, fuel cap, wheels, antivibration damper, condenser housing, fans, belts, filters and hoses.

ELECTRONIC MATERIALS: various components, diodes, resistances, electronic panels.

VARIOUS MATERIALS: rock woll, sound proofing materials.

LIQUIDS: fuel, gasoline, cooling liquids, battery acid.