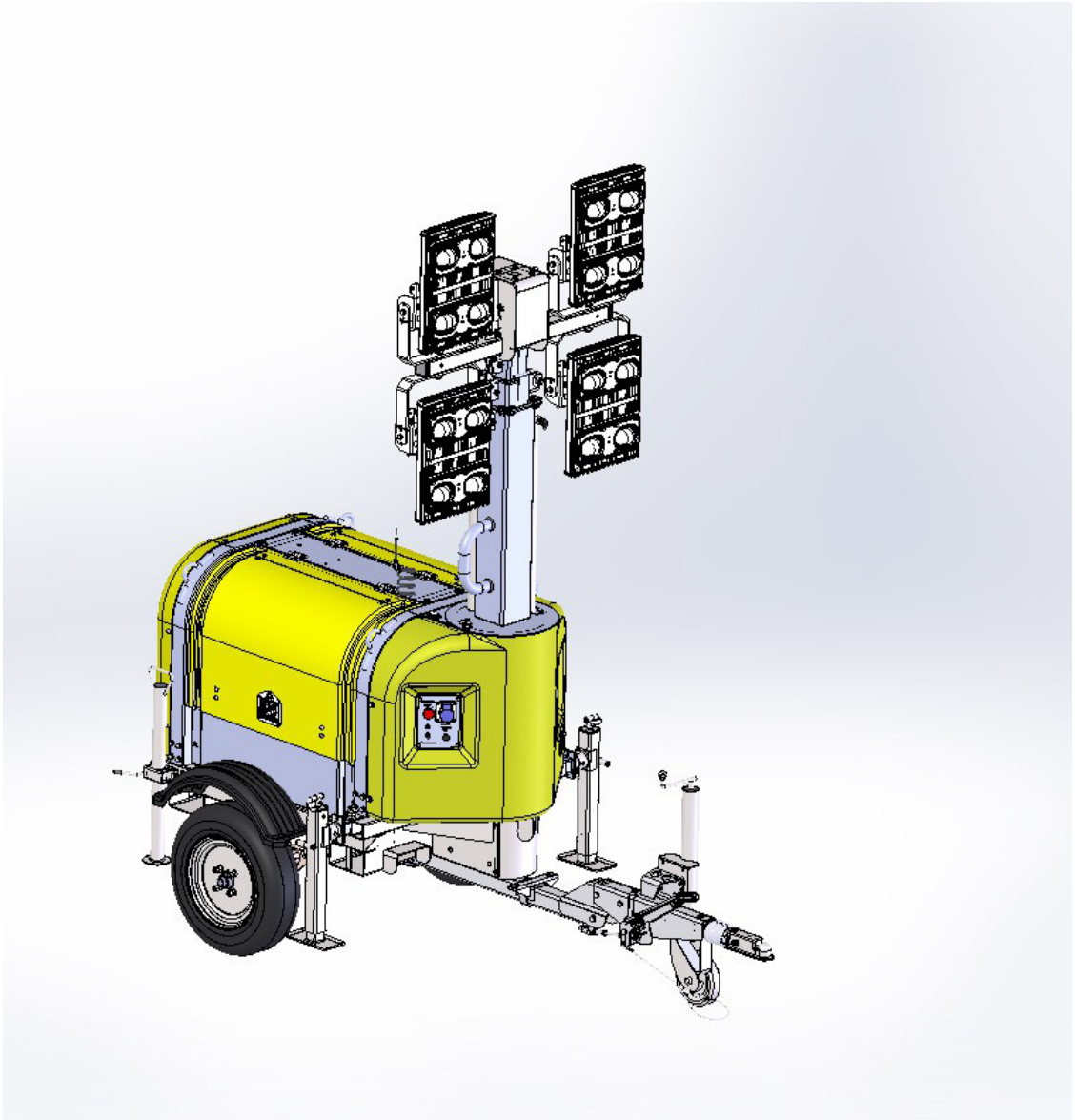
PL2000 H V6



Operator's Manual

LED LIGHT TOWER

INDEX

1.USE& MAINTENANCE

Dear Customer, many thanks for the purchase of our product. In this manual are contained all the necessary information for use and the general maintenance of the lighting tower.

The responsibility of the good operation depends on the sensibility of the operator that needs to be qualified and trained to use this machine.

Before install the machine and however before every operation, read carefully the following manual of instruction and use. If this manual were not perfectly clear or comprehensible, contact the manufacturer directly.

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 another user.

All the specifications and pictures of the present catalogue are subject to modifications without prior notice.

2.GENERAL INFORMATION

The manufacturer declines every responsibility deriving by the modification of the product not explicitly authorized for enrolled.

2.1 EQUIPMENT DOCUMENTATION OF THE LIGHTING TOWER

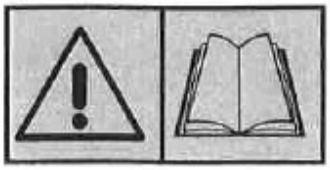
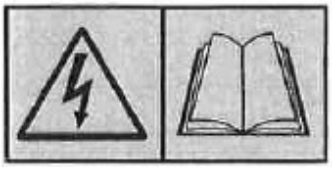
Together at this manual we are supplying the following documents:

- Instruction manual and use for the lighting tower (this manual).
- Engine use and maintenance manual.

3. SAFETY SIGNS

These sings inform the user of any danger which may cause damages to persons.

Read the precautions and meant described in this manual.

Danger signs	Meant
	·Read the instruction handbook before use the machine.
	·Danger of electric discharges. ·Consult the manual.
	·Attention injurious exhaust gases for the health. ·Maintain one sure distance from the emission zone.
	·Danger of burns. ·Don't touch the exhaust collector and the engine when the machine is in motion.
	·Stop the engine before refueling it. ·Use only diesel fuel.

	·Danger possible spillage of corrosive substances

	·Danger of hand crush

Prohibition signs	Meant
	·It is prohibited to clean, to lubricate and to regulate organs in motion.
	·It is prohibited to extinguish fires with water, use only extinguishers.
	·It is prohibited to use free flames.

Information signs	Meant
	·This sign indicates the position of a point of machine raising.

4.SAFETY REGULATIONS TO OBSERVE

The manufacturer is not responsible of any damage at things or person, in consequence at the inobservance of safety norms.

4.1 BEFORETHEUSEOFMACHINE

- It is advised to wear protective clothes, gloves, safety shoes, stoppers for the acoustics protection..
- It is recommended the correct acquaintance of operation for all the commands of the lighting tower.
- It is recommended to the authorized staff to consultation all warnings and dangers described into this manual.
- Predispose the barriers placed to 2 meters of distance around the lighting tower in order to prevent to the staff non-authorized to approach itself the machine.
- Ensure yourself that the lighting tower is not feeded and that there are not any parts in movements.
- It is allowed the use of the lighting tower only at a qualified staff.
- Read the segnaletic plates applied on the machine.
- Connect the unit to the earth through the apposite clamp.
- The unit must be connected to the earth using a copper cable with a minimum cross-sectionof6mm².
- **The manufacturer is not responsible for any damage caused by failure of earthing.**

4.2 DURINGTHEMAINTENANCE

- Turn always off the machine before any maintenance operation.
- Extraordinary maintenance must always be carried out by a qualified operator.
- Before any maintenance operation on the floodlights, disconnect the feeding and wait the cooling of the lamps.
- Use always dispositives of protection adapted to you.
- The fluid of battery contains sulphuric acid which is extremely corrosive and harmful to the skin. Always wear protective gloves and be extremely careful to avoid spillage when pouring the acid.
- Contact with engine oil can damage your skin. Put on gloves when using engine oil. If you come in contact with engine oil, wash it off immediately.

4.3 DURINGTHETRANSPORT

- Use **EXCLUSIVELY** the predisposed point of raising, where present.
- The raising hook, where present, must be exclusively used for the temporary raising and not for suspension in air of the machines for a long time.
- The manufacturer is not responsible for any damage caused by negligence during transport operations.

5.GENERAL DANGER INFORMATION

5.1 DANGER OF BURN

Do not touch with the hands the hot surfaces, like silencers with relatives extension and engine body when it is in function.

- Do not touch the floodlights when are lighted.
- Use always gloves appropriate to you.

5.2 DANGER OF ELECTROCUTION

- Do not touch parts in tension, it may causes mortal shock.
- Do not touch the electric cables when the machine in function.

5.3 DANGER OF ENTANGLE

- Do not remove the protections placed on the rotating parts, on the air intakes and over the belts.
- Do not clean or execute maintenance operation on moving parts.
- Use appropriate clothes during the use of the lighting tower.

5.4 WARNING OF FIRE OR EXPLOSION DURING OPERATIONS OF REFUELING

- Turn off the engine before refueling operation.
- Do not smoke during the refueling operation.
- The refueling operation must be effected in way that not discharge the fuel from thetank.
- In case of discharging of the fuel from the tank, dry and clean the parts, to prevent pollution of the ground. In the event of the ground contamination you need to use specific absorbent materials.
- Check that there isn't any discharge of fuel and that the tubes are not damaged.

5.5 NOISE

- Use stoppers or caps for the acoustic protection from strong noises.

5.6 EXHAUST GASES

- The exhaust gases are injurious for the health. Maintain a sure distance from Theemission zone.
- In case the generating set of the lighting tower came used in closed places, make surethat the exhaust gases can be disperded without impediments in the atmosphere,through adequate natural ventilation and/or forced ventilation.

6.GENERAL DESCRIPTION OF THE MACHINE

The lighting towerhas been studied taking in consideration 3 fundamental characteristics:

- enough contained dimensions
    - high reliability
    - quality of the constructive materials

The constructive materials in uses guarantee not only an extreme strength of the tower, but they are also synonymous of longevity, in fact these materials are protected against oxidation. The possibility to lowering the tower is the fundamental factors in the field of the movement and the transports. The tower can be installed and used by a single operator in the maximum safety. The floodlights used on tower, complete with lamps, are made from the best producers in the world and carefully checked.

7.PERIOD OF INACTIVITY

If the machine has to be stopped for a long period (more than one year), we suggest to keep the oil, the fuel to the inside of engine, in order to avoid oxidizing effects; we suggest to disconnect also the battery cables. 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.

8.TECHNICAL SPECIFICATION

8.1ENGINE

Make/Type	**HATZ 1B30X-PMG**
Numberofcylinders	**1**
Enginespeed	**MAX 3200rpm**
Cooling	**AIR**
Fuel	**Diesel**
Startingsystem	**Electric**
Oilsumpcapacity	**2,8 L**
Fueltankcapacity	**125 L**
consumption	**263g/kWh**
Battery	**12 V-55Ah**

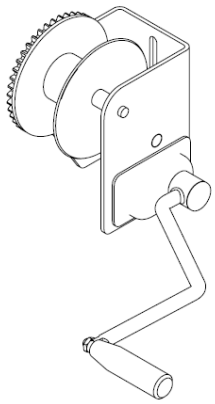
8.2LIGHTING TOWER

Maximumheight	**8mt**
Raising	**Manual /Hydraulic**
Section	6
RotationSection	**340°**
Electricalcoiledcable	**8*1.5mm2+1*2.5 mm2**
Electricalcableoffloodlights	**H07RN-F**
Maximumwindstability	**80km/h**
Minimumdimension (LxWxHmm)	**2500×1300×2460**
Maximumdimension (LxWxHmm)	**2500×2460×8000**
Weightwithdray	**680 kg**

8.3RAISING AND LOWERING ROPE

Ropetype	**AZN625APPCOM**
Ropediameter	**6mm**
Outerwiresdiameter	**0,4mm**
Weightpermeter	**0,15Kg**
Construction	**6x(12+(6)+6+1)KF+PP**
Typeoflay	**Righthandordinarylay**
Tensilestrenght	**2160N/mm²**
Strands	**Compacted**
Preformed	**Yes**
Steelwires	**Carbon**
Protectionofwirerope	**GalvanizedclassB**
Minimumbreakingload	**32,3kN3230Dan3294Kg**

8.4 900 Kg MANUAL WINCH



Treatment	powder coated
Maximum load	900 kg
Traction	Rotate in clockwise direction
Release	Rotate in counterclockwise direction

8.5SPECIFICATION OF THE WINCH

•WARNING!!! The maximum load of the winch is 900 kg. It is important that the entire structure of the lighting tower does not come modified in order not to compromise of the stability and the functionality of the winch.

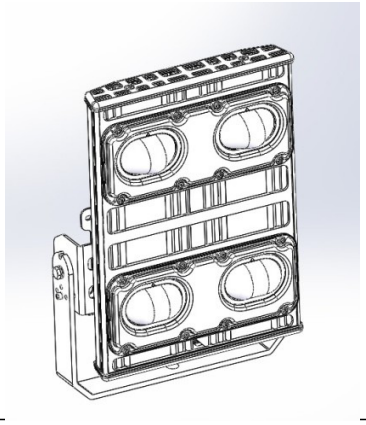
•The winch is provided by an automatic pressure brake with anti-slip mechanism that consents an easy and uniform raising and lowering of the telescopic mast. The reducer is lodge protected from every impurity; the new side cover eliminates the chine and protect it from dust.

•A new procedure of construction with the aid of CNC Machines assures the maximum quality and robustness, thanks also to the use of new valuable materials; the life of the winch is increased thanks to the strengthening of the frame.

•WARNING!!! It is important that, for any problems there were imperfections or damaged parts, the user does not proceed to the raising of the mast until to the resolution of such problems.

•WARNING!!! Verify, at every use, that the steel cable winds correctly up on the drum hub. It is necessary to prevent that the steel cable kinks itself in improper way on the winch, eventually helping itself with the hands, protected by gloves, to "address" the steel cable. Check that the cable is lubricated and that it doesn't generate friction along its way.

8.6 FLOODLIGHT



LAMP	
Type of light	LED
Number & power of light	4×350w
Degree of protection	IP 67
Constructor material of the body	Die-cast aluminium
Constructor material of lampholder	Die-cast aluminium
Cable gland	PLASTIC
Dimensions(L×H×Dmm)	507×387×140

8.7 LAMP

1. Incorporated the latest generation of 140—150 LM/w EPISTAR&CITIZEN chip.

2. The new lens is made from high purity glass (96%).

3. Low absorption (less that 5%) with a divergent asymmetric generating a extent and uniformity light beam.

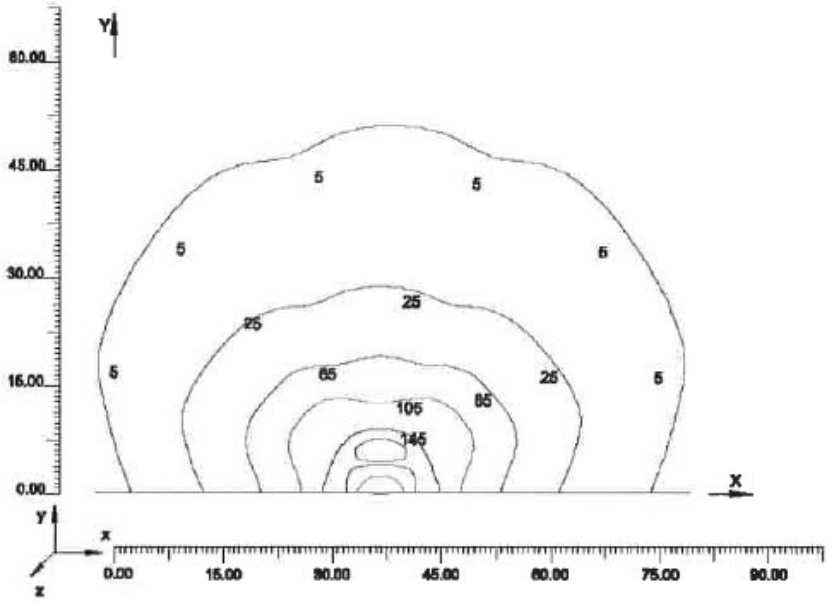
4. Made from high quality aluminium, available in different colours.

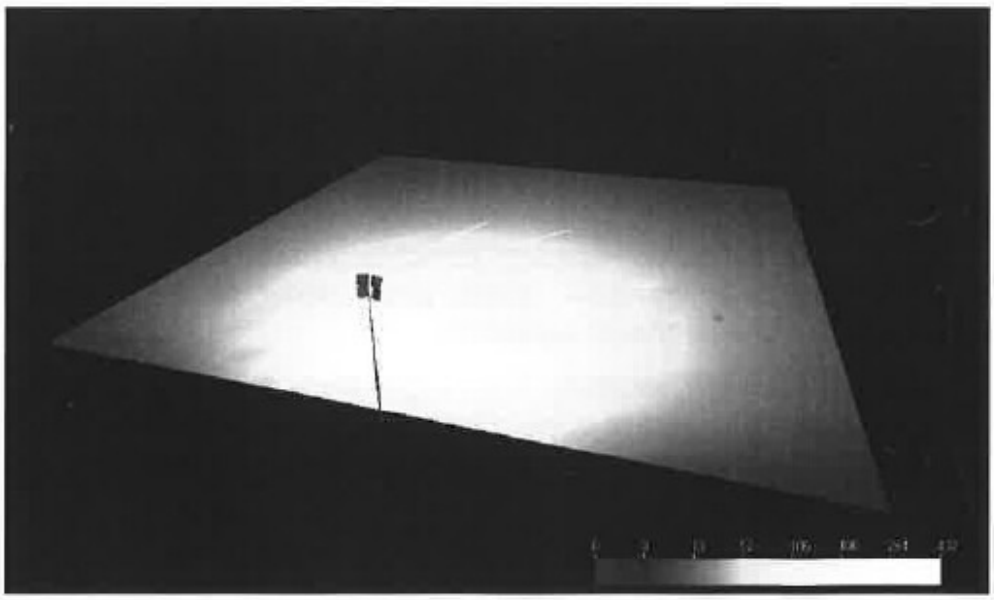
5. High UV resistance and low maintenance costs.

6. Applications: Stadiums, Parking, Plaza, Mining etc .

9.LIGHTING FOOT PRINT DIAGRAM

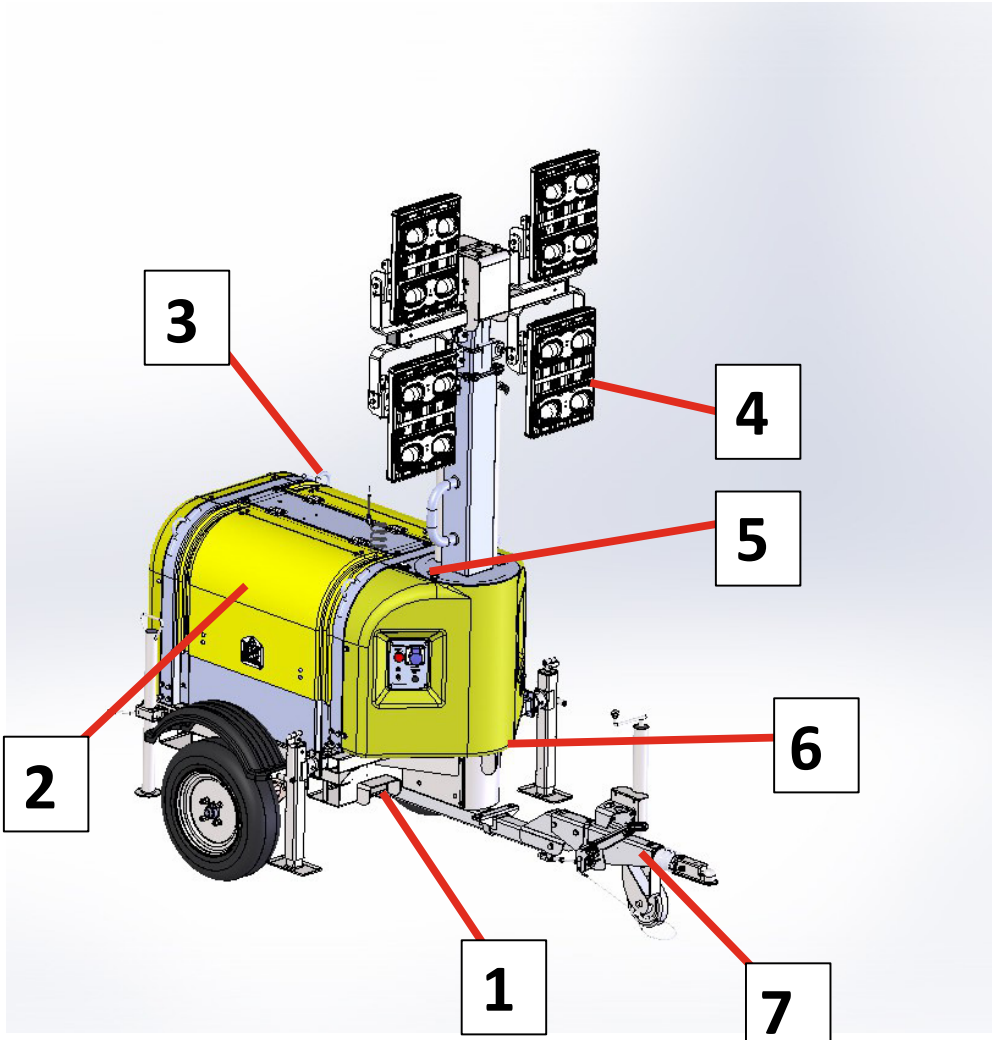
ILLUMINATED AREA
3800 m2





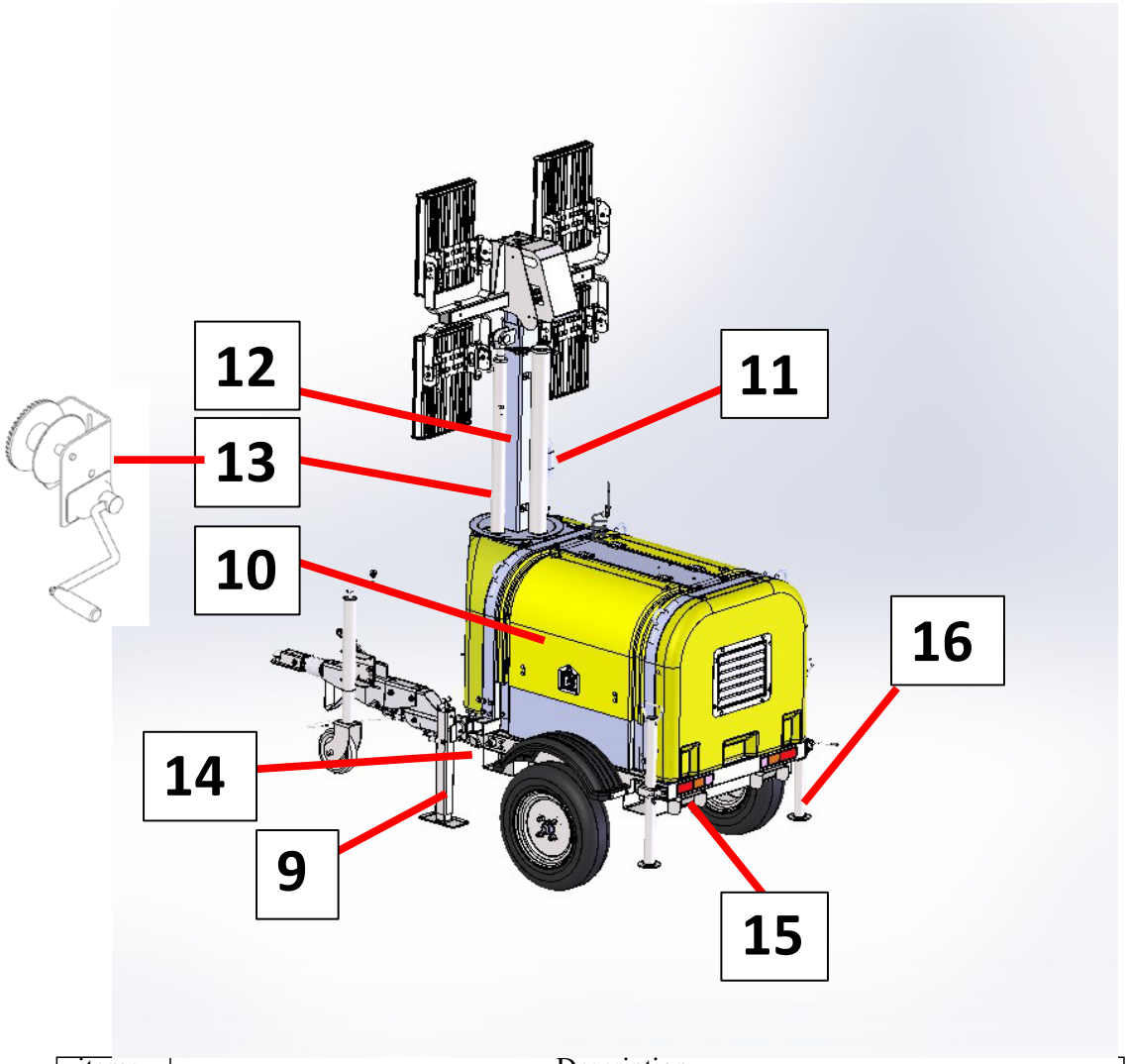
10.IDENTIFICATION OF EXTERNAL COMPONENTS

10.1 LIGHTING TOWER COMPOSITION



Items	Description
1	Lifting points
2	Lightin tower command panel door and inspection motor
3	Lifting hook
4	Floodlights
5	Floodlights blocking rotation pin
6	Air inlet grill
7	Trailer for slow towing

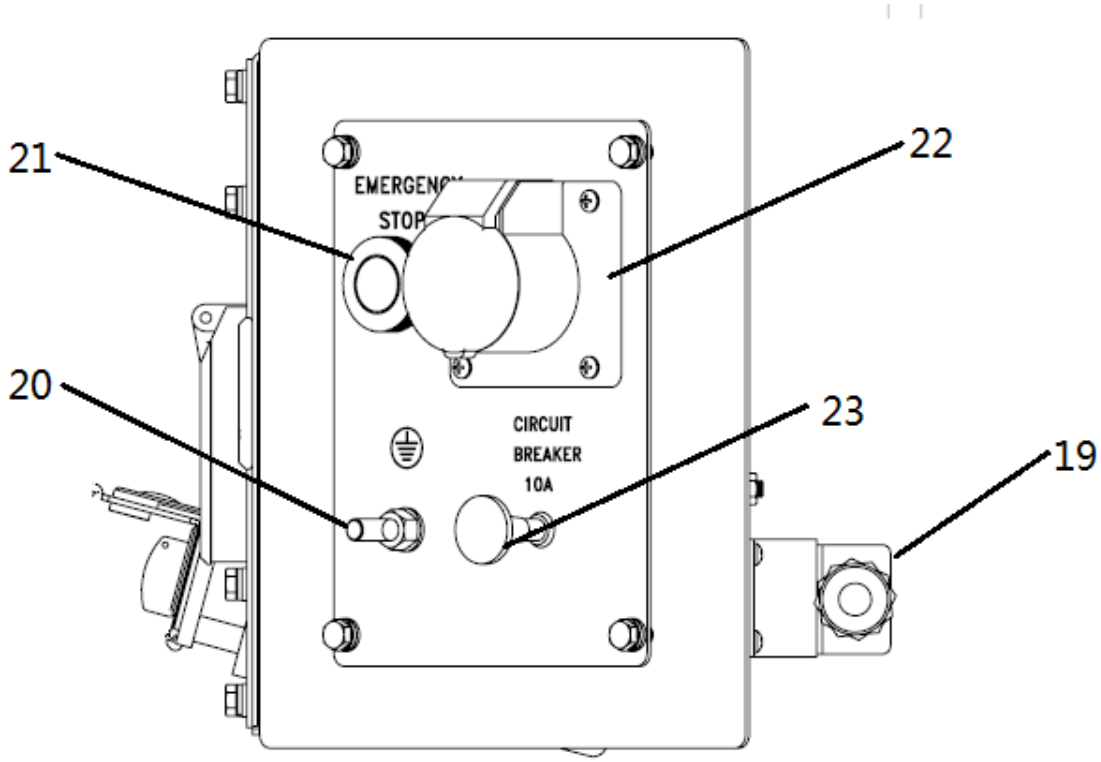
11.IDENTIFICATION OF EXTERNAL COMPONENTS Ⅱ



items	Description
9	Extracable stabilizers
10	Engine inspection door
11	Lights rotation handle
12	Telescopic mast
13	Winch / Hydraulic cylinder lifting （options）
14	Gas exhaust outlet / Air outlet
15	Lifting points
16	Fixed stabilizer

12. CONTROLS DESCRIPTION

12.1 COMMAND PANEL

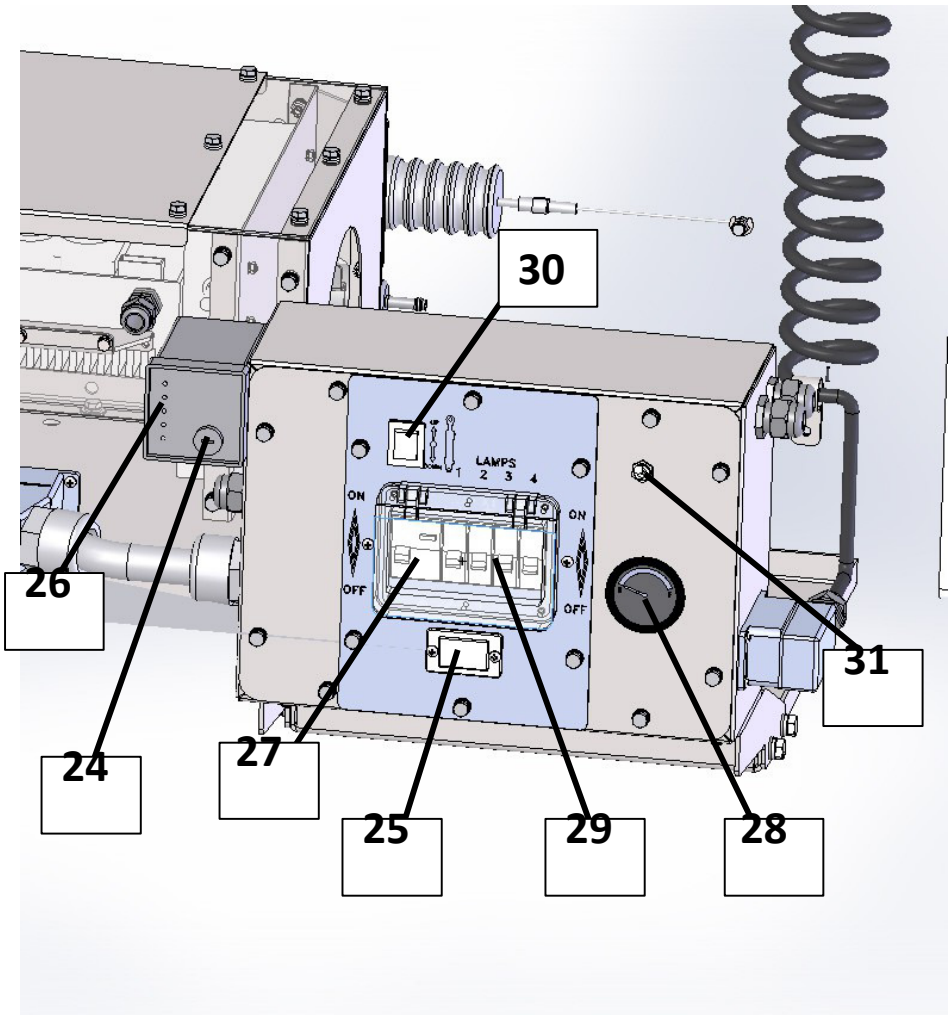


Items	Description
19	Power connector lamps
20	Earth clamp connection
21	Emergency stop button
22	220 V 16 A 2p+T EEC single phase socket（Options）
23	10 A push button circuit breaker control 220 V socket

It is possible, at the same time, to use the lighting tower and to capture current from the single phase socket 220 V 16 A (22). It is recommended not to exceed the platedata.

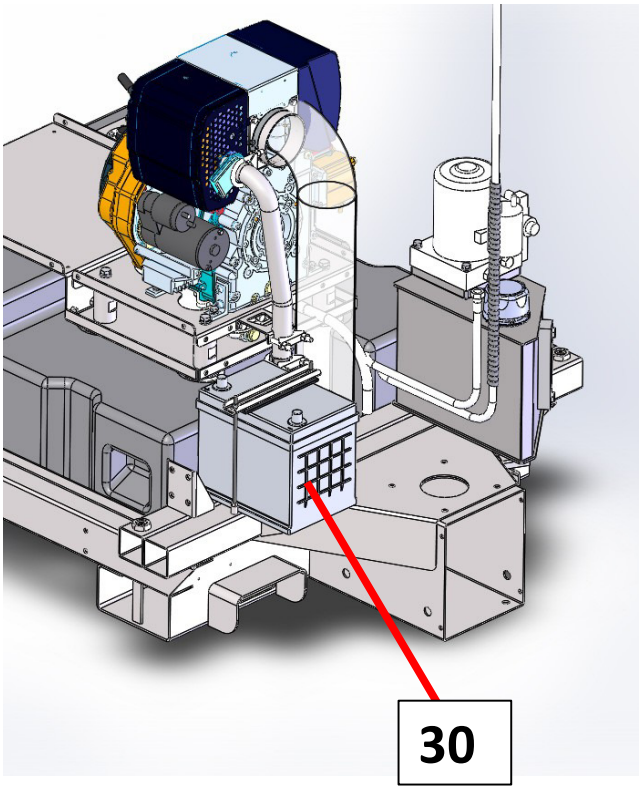
Connect up to the generator using plugs that fit the sockets and cables compliance with the international regulations.

The minimal section of connection cables must be choose in relationship to the voltage, to the installed power and to the distance between source and uses.



Items	Description
24	Starting key
25	Hour counter display
26	Signals lamp for motors operation
27	Earth leakage circuit breaker
28	Fuel gauge-Monitor fuel level
29	4 - 16 A circuit breaker for lamps switch
30	Hydraulic lifting switch（Options）
31	Engine high and low speed switch（Options）

12.2 BATTERY



Items	Description
30	60 Ah 12 V battery

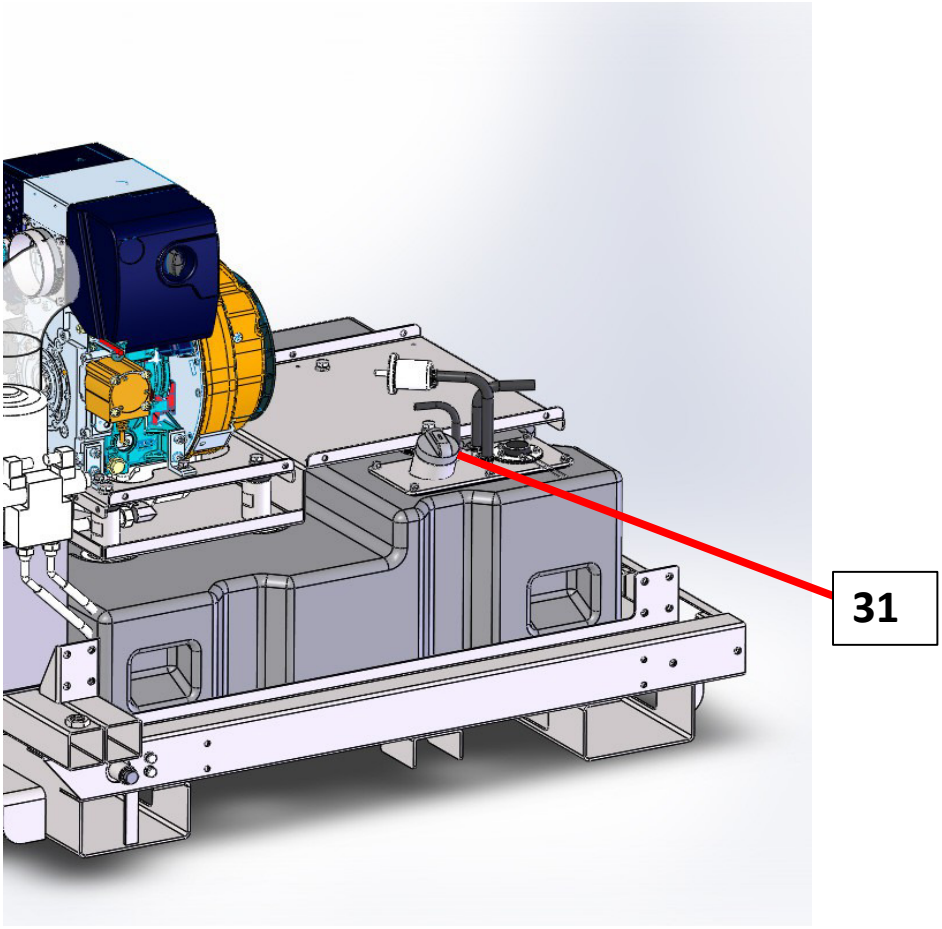
The machine is supplied with the battery not connected.

Connect the battery with cables already predisposed making attention the correct polarity.

The battery fluid contains sulphuric acid which is extremely corrosive and harmful to the skin. Always wear protective gloves and be extremely careful to avoid spillage when pouring the acid.

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

12.3 FUEL TANK



Items	Description
31	Fuel tank cap

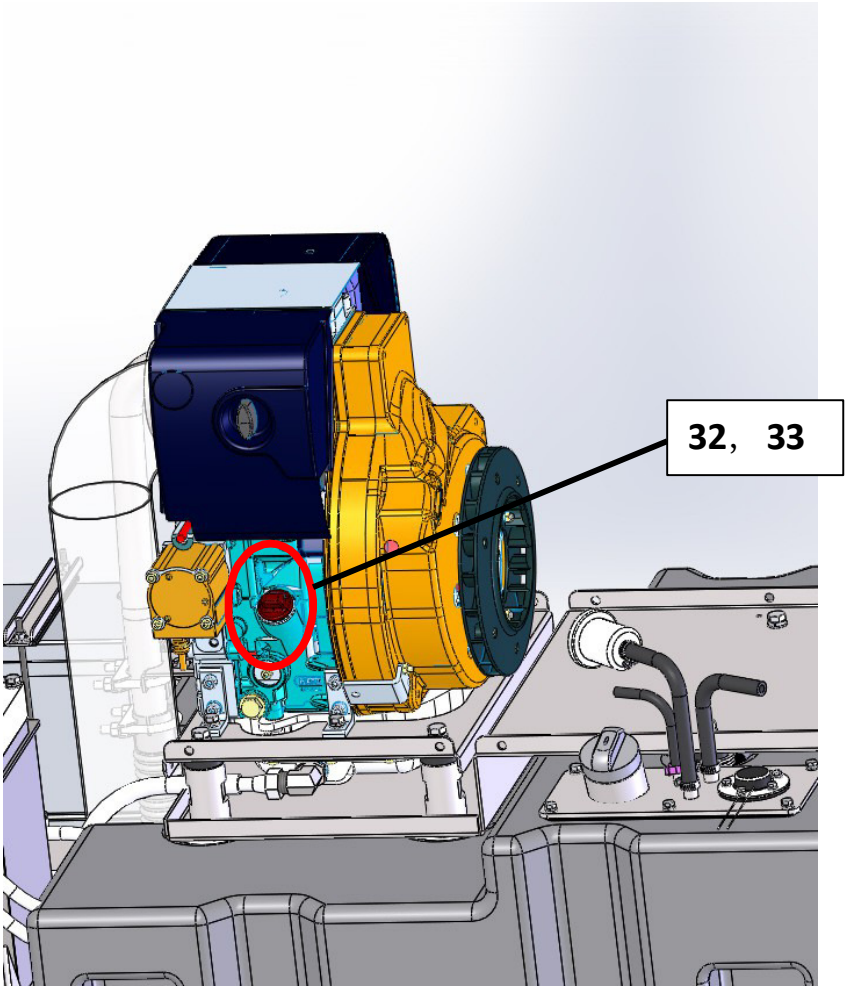
Fill up the tank of diesel fuel respecting the tank capacity (it. 75). The fuel reserve is indicated by the instrument **(28)** placed on the command panel.

Always turn off the engine before any operation of refueling.

The operation of refueling must be done in way that there isn't any discharge of fuel from the tank.

If the machine has to be stopped for a long period (more than one year), we suggest to keep the fuel in the tank, in order to avoid oxidizing effects.

12.4 CHECK ENGINE OIL LEVEL



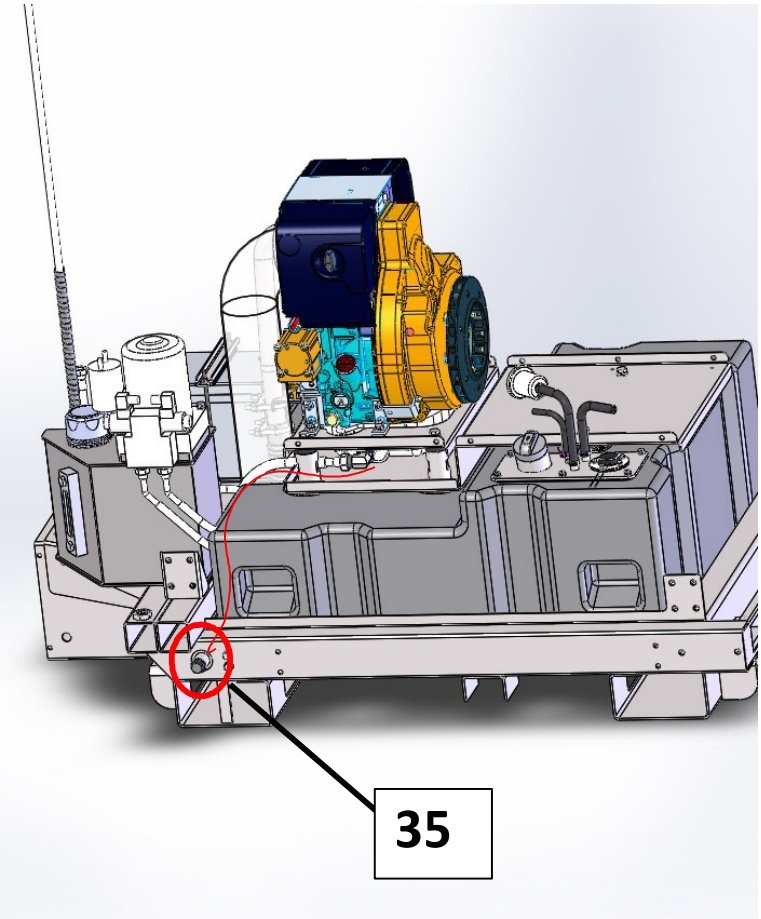
Items	Description
32	Engine oil cap
33	Oil level indicator

Check the engine oil level before starting or more than five minutes after stopping .

Do not discharge polluting liquids in the atmosphere.

In the event of ground's contamination, you need to use specific absorbent material.
If the machine has to be stopped for a long period (more than one year), we suggest to keep the oil into the engine in order to avoid oxidizing effects.
For the characteristics oil read the engine owner manual.

12.5 CHANGE ENGINE OIL



Items	Description
35	Drain out engine oil cap

Place a small basing under the cap (35), unscrew it and discharge the oil.

Drain oil will drain easier when the oil is warm.

WARNING: after using the screw cap.

Contact with engine oil can damage your skin. Put on gloves when engine oil. If you come in contact with engine oil, wash it off immediately.

Do not discharge polluting liquids in the atmosphere.
in the event of ground's contamination, you need to use specific absorbent material.
Change oil every 250 hours (2,8 l oil sump capacity).

For more information refer to the use and maintenance of the engine.

13.OPERATING INSTRUCTIONS

13.1 LIGHTING TOWER POSITIONING

Place the lighting tower on a flat surface, taking care not to exceed 10°of inclination.

Choose an open location and very ventilated taking care that the discharge of the
exhaust gases happens far from the work-zone.

Check that there is a complete change of air and the hot air expelled don't circulate into the group in way that it's caused a dangerous elevation of the temperature.

Predispose the barriers placed to 2 meters of distance around the lighting tower in order to prevent to the staff non-authorized to approach itself the machine.

13.2 CONNECTING OF THE BATTERY

The machine is supplied with the battery not connected. Connect the battery switch (31).

13.3 EARTHING

Connect the unit to the earth, through the clamp (20).

The unit must be connected to earth using a copper cable with a minimum cross-section of6 mm^2.

The manufacturer is not responsible for any damage caused by failure of the earthing.

13.4 PRELIMINAR CHECKS

At the moment of purchase, the machine is supplied of engine oil。

Before every next use, verify the relative levels.

Check that the circuit breakers (**29**) placed into the door are in "OFF" position.

Make sure that the emergency stop button (**21**) is rearmed. If it doesn't, turn the grip handlein clockwise direction.

13.5 ENGINE STARTING

Position the starting key (**24**) on the first step, wait few second and start the engine by moving key completely in clockwise direction.

Note: If the engine falls to start, turn the key to the OFF position and wait 10 seconds before operating the starter again.

Let the engine to run for about 5 minutes to warm it up.

The engine is set, therefore it is not necessary to make any adjustment. For more information refer to the use and maintenance of the engine.

13.6 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.

13.7 USE OF MACHINE

The hour meter exclusively indicates the hours of working of the engine because it only works with the engine in motion. It could be a reference for the periodic ordinary and extraordinary maintenance of the machine.

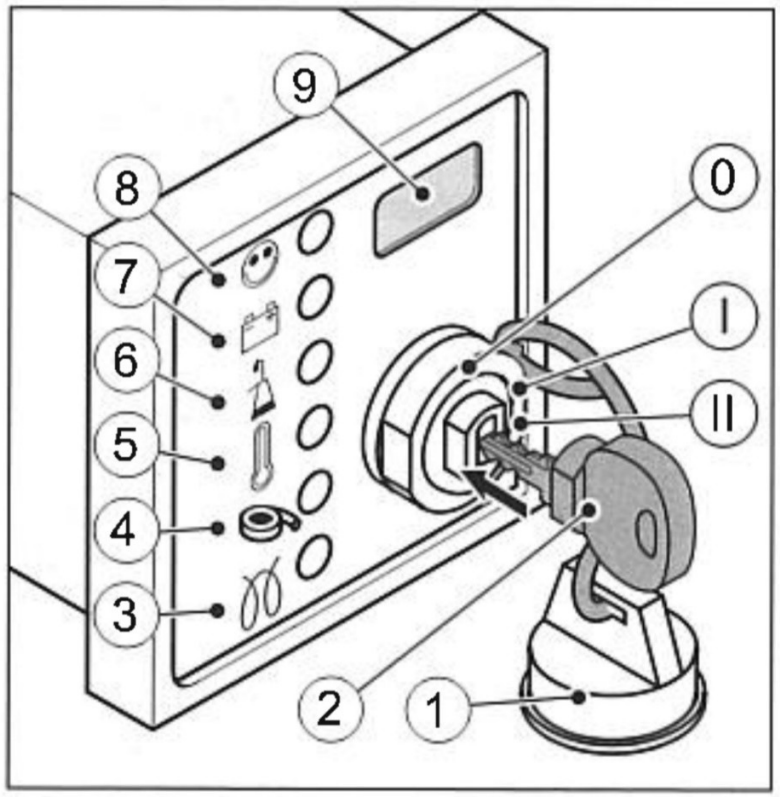
13.8 STOPPING THE ENGINE

Switch off all the lamps through the circuit breakers (**29**).

Wait that the engine works in these conditions for approximately 1 minute, then turn the starting key (**24**) to the stop position.

In emergency case it is possible to stop the generating set by pressing the stop button (**21**).

13.9 INDICATORS DESCRIPTION



1	Protective cap
2	Starting key
3	Pre glow display (option)
4	Air filter maintenance indicator (not activated)
5	Engine temperature display (option)
6	Oil pressure display
7	Charge control
8	Operating display
9	Operating hours counter (option)
Ignition lock	
0	Off
I	Operation
II	Start

Indicator lamps

When the starting key is turned to position "I" various indicator lamps flash or light up (depending on the equipment version). If there is a fault, the applicable indicator does not go out after the engine start or it lights up again during operation.

Explanation of symbols

Symbol	Meaning
	**Operating display** Lights up during operation when there is no engine fault.
	**Charge control** Fault in the alternator or alternator charging circuit. The battery is no longer charged. Eliminate the fault immediately.
	**Oil pressure display** Switch off the engine immediately! Danger of engine damage. Check the oil level (see chapter *7.6 Checking the oil level and adding oil if necessary, page 47*). Contact Hatz service if the oil level is correct.
	**Engine temperature display** Switch off the engine immediately! Danger of engine damage. Engine temperature is impermissibly high. For details of troubleshooting, see chapter *9.1 Troubleshooting, page 86*.
	**Pre glow display** Lights at temperatures below 0°C. Start the engine when the display has gone out.

For more information refer to the use and maintenance of the engine.

13.10 REMARKS

It is important that the operator will be always careful at every eventual disadvantage had at usury or breakdown.

It is necessary that the use of the lighting tower will be effected from expert personnel, careful at eventual structural disadvantage, seen the size of the structure.

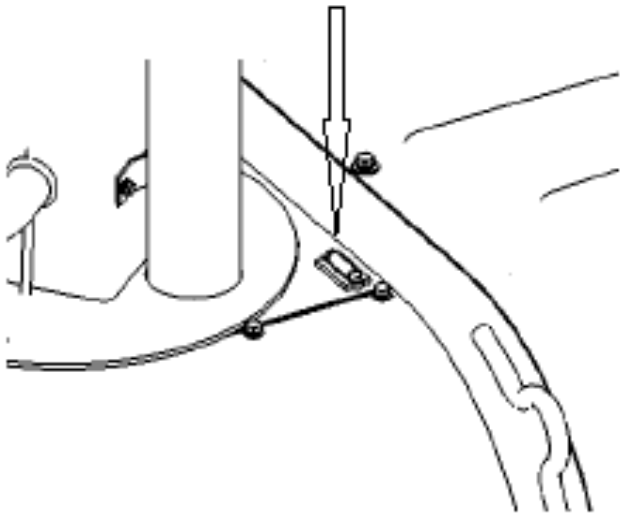
It is advised to do always a visual check and general at every use, above all at those parts always in movement and subjected at usury.

The expert user must not permit to anybody to stay near to the lighting tower, when it is in function.

Let always wide space round to the lighting tower.

It is recommended to place the base the most possible in plan in order to facilitate the regulation of the stabilizers (make reference to the spirit level placed on the frame (Fig. 1).

（Fig. 1）



It is also recommended to place the structure in a stable place, verifying the consistence of the earth to allow a sure support to the stabilizers.

Pull the hand brake if the tower is supplied of undercarriage for towing. It is allowed the use of the lighting tower only at a qualified staff.
Before to use the lighting tower it is recommended to the authorised staff to consultate all warnings and dangers described into this manual.

The manufacturer is not responsible of any damage at things or person, in consequence at the inobservance of safety norms.

Before any operation on the machine ensure yourself that the lighting tower is not feeded and that there are not any parts in movement.

For the electrical connection between the floodlights and the command panel of the lighting tower it has been used a turn cable 9G2,5mmq placed to the inside of a cylinder that allows a comfortable sliding.

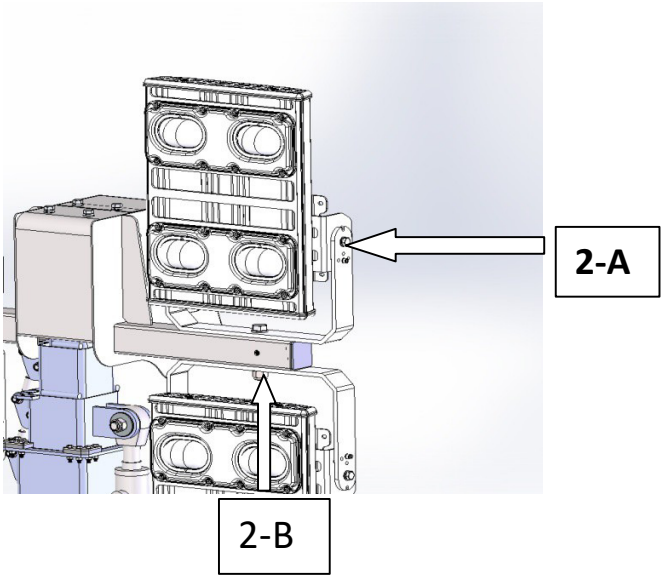
The electrical connections are simplified so as to concur the uncoupling of the command panel for a check and an eventual maintenance or substitution of damages pieces. It is also possible to remove and to replace the cruise of the lighting tower. For the electrical connection of the floodlights we are previewed plastic boxes with degree of protection IP56.

In case of use of the lighting tower in adverse acclimatizes situations, with too much low temperatures or high, take care to the turn cable and its normal sliding to the inside of the cylinder because the cable is subject to momentary structural deformation.

13.11 USE OF THE LIGHTING TOWER

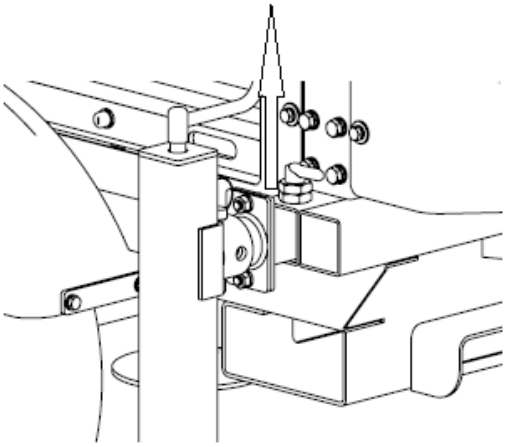
Tilt manually the floodlights unscrewing the lever (Fig. 2-A) placed on the support of the floodlight.
Rotate the floodlights in the position you prefer, in function of the type of lighting you want to obtain, unscrewing the stop nut of the floodlight support (Fig. 2-B).

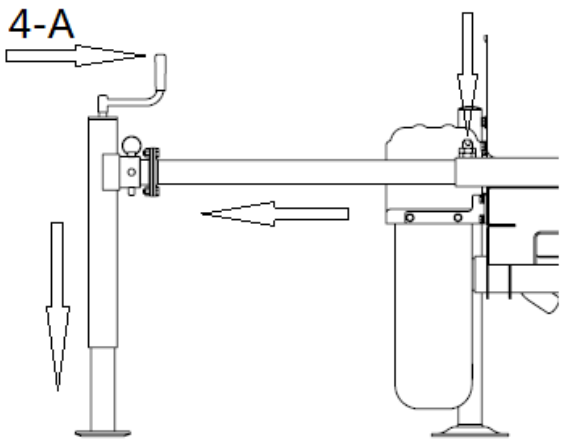
(Fig.2)



Release the pins from their hole (Fig. 3) and then proceed manually to the extraction of stabilizers until the pins lock the exit of the tubular (Fig. 4); check that the pins go into the respective seats of blocking of the tubular.
Lower the stabilizers through the handle (Fig. 4-A).

(Fig.3) (Fig.4)



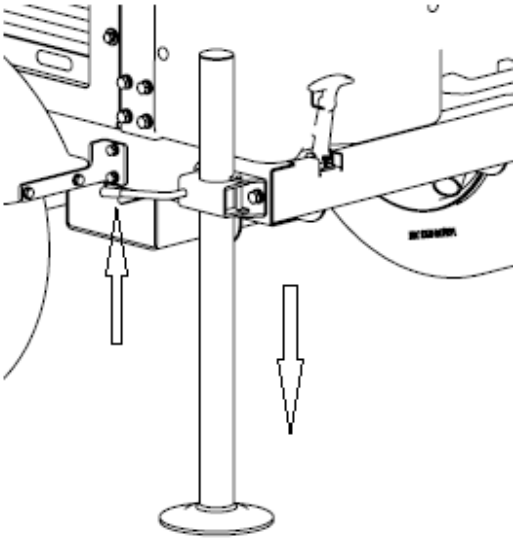


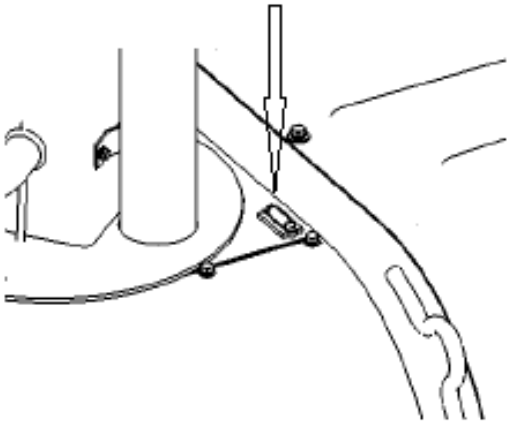
Lower rear stabilizer by loosening the blocking lever (Fig. 5).

Make reference to the spirit level for the correct stability of the structure (Fig. 6).

Warning!!! It is not possible to raise the tower if all stabilizers are not correctly extracted.

(Fig. 5) (Fig. 6)





Before use the machine it's recommended the correct acquaintance on operation for all the commands of the lighting tower.

Start the engine like described at the chapter "**13.5 ENGINE STARTING**".

13.12 USE OF THE LIGHTING TOWER

Pull the locking pin of the mast (Fig. 7-B) in way to concur the rotation of it. For simplify the rotation they are predisposed two handle (Fig. 7-C). The blocking happens re-inserting the pin.

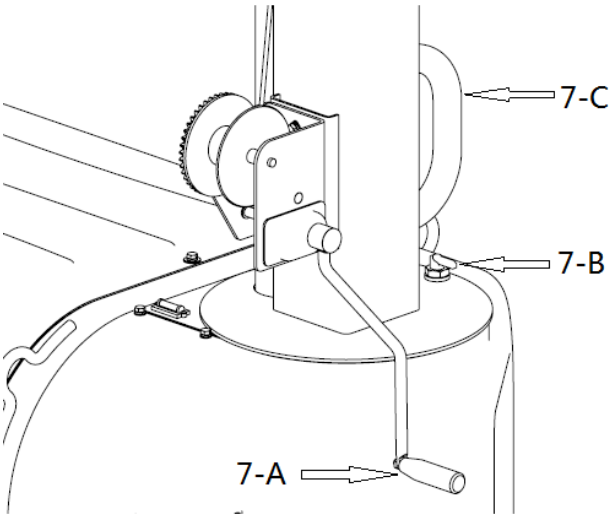
Raise the tower to the best solution used the manual winch (Fig. 7-A) rotating the crank in clockwise direction. Arrived to the maximum height sections stop to raise and will result impossible continue to operate on the winch. The attainment of the maximum height is evidenced by a red wrap placed on the base of the mast.

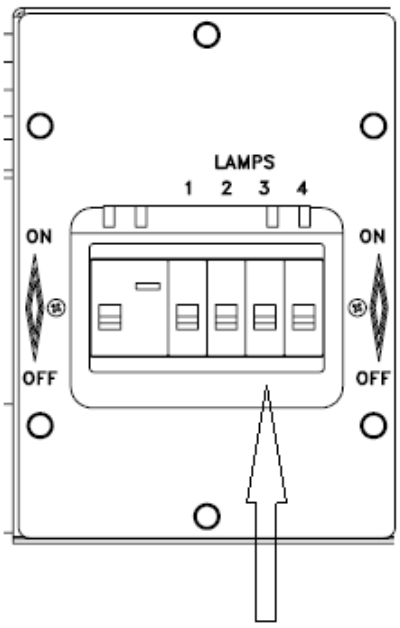
Light the first lamp (Fig. 8) and allow 2 minutes for it to warm up, then light the next lamps, remembering to allow each lamp to warm up for 2 minutes.

Rotate the mast on the opportune way to place the lighting beam in the desiderate position. For simplify the rotation there is predisposed one handle (Fig. 7-C)

Pull the locking pin of the mast (Fig. 7-B) in way to concur the rotation of it. The blocking happens re-inserting the pin in one of the many centers predisposed along the sping ring. The mechanical block concurs to stop the spin to 340°.

(Fig. 7) (Fig. 8)





In case of accidental putting out it is necessary to wait the cooling of the lamp (about15 minutes} before a new lighting, because of the high tension that would be necessary for a hot ignition.

WARNING: it is strictly prohibited to close the stabilizers when the lighting tower is in vertical position at the maximum height.

WARNING: the lighting tower is prearranged to withstand 80 km/h wind at the maximum height. In case of using in windly places, be careful and lower timely the telescopic mast.

At the end of use lower the telescopic mast through manual winch rotating the crank in anticlockwise direction until all the telescopic section are contained into the first one.

Turn off the lamps carrying the relatives circuit breaker (**29**) in "OFF" position.

Wait that the engine works in these conditions for approximately 1 minute, then turn the starting key (**24)** to the 0 position.

In emergency case it is possible to stop the generating set by pressing the stop button (**21**).

14.ENGINE MAINTENANCE

For the engine maintenance look at the attached specific manual.

15.LIGHTING TOWER MAINTENANCE

We suggest a frequent cleaning of the machine in order to avoid the presence of dirt which can compromise the efficiency of the machine. The frequency of this operation tightly depends on the place where the machine is used.
The extraordinary service operations not mentioned here above require the aid of specialized technicians.

15.1 LUBRICATION OF THE ROLLERS

For the lubrication of the rollers, use a low temperatures and extremely high speed bearing grease. We recommend to use SKF LGLT 2 grease, a premium quality fully synthetic oil based grease using lithium soap. In case of use of an other product, the grease will must have a base oil viscosity equal to 18 mm2/s at 40°C and to 4,5 mm2/s at 100°C.

15.2 LUBRICATION OF MAST SECTIONS

For the lubrication of the mast sections, we recommend to use a light lubricating oil like WD40. Spray it on the metal parts of the mast, in order to avoid squeaking and scrapping noises during the raising and the lowering operations. In case of frequent use, lubricate every three months.

15.3 LUBRICATION OF STABILIZERS

Grease periodically the stabilizer using a dense grease adapted to sliding system sto apply through the apposite tool to insert in the valves placed on the stabilizer (if previewed). Verify if the movement of the stabilizer is correctly.

15.4 LUBRICATION OF THE WINCH

The winch has already been lubricated in the works. It is recommended however that the drive shaft bearing bushers and the drum hub be oiled regularly.Grease the toothed wheel rim regularly. Ensure that the crank gear is always lubricated.
WARNING!!! Do not oil or grease the brake mechanism.

15.5 CHECK OF STEEL CABLES

The steel cables are 6mm diameter composed of Carbon wires with Class B Galvanised protection and a Polymer core with a minimum breaking load of 3294 kgs. They enable the raising and lowering of the telescopic mast. It is periodically necessary to verify their conditions and their perfect dragging inside the pulleys It is recommended to periodically to verify their condition and ensure their correct position inside the pulleys. It is the Manufactures recommendation that all cables and pulleys are replaced as required. If the steel cable shows unusual signs of wear or damage, do not use the lighting tower and contact directly house manufacturer.

16.TROUBLESHOOTING GUIDE

Listed below are the most common troubles that may occur during use of the lighting tower and possible remedies In the event that you will not solve the problems that you have had with our tower, please contact immediately the builder.

If the engine did not have to work correctly, we suggest to follow the maintenance operations and the maintenance schedules reported in the engine "Operator's manual" at chapter "MAINTENANCE", in order to find and to eliminate the cause of the trouble.

16.1 MAIN TROUBLES ANOMALY

ANOMALY

•Turning the starting key in ON position, no signal lamps ignites and the Startingmotor does not work.

CAUSE

The battery switch is disconnected

REMEDY

Connect the battery switch

CAUSE

The battery is disconnected.

REMEDY

Open the door and connect the battery.

CAUSE

The battery is discharge.

REMEDY

Recharge the battery.

CAUSE

The battery is defective.

REMEDY

Replace the battery.

CAUSE

Steerg lock is failure.

REMEDY

Replace the steerg lock.

CAUSE

The starting motor does not work.

REMEDY

Contact a HATZ assistance centre for a check.

CAUSE

The emergency stop button is pressed.

REMEDY

Check that the stop button is reamed. It if doesn't, turn the grip handle in clockwise direction.

CAUSE

There are many disconnected cables in the electrical system.

REMEDY

Check visually the electrical system to find the disconnected cables (make reference to the wiring diagram), eventually contact directly the manufacturer.

ANOMALY

- The starting motor works but the engine does not start.

CAUSE

Possible lack of fuel in the tank.

REMEDY

Refuel the machine.

CAUSE

Fuel filter dirty.

REMEDY

Replace the filter.

CAUSE

The fuel pump does not work.

REMEDY

Check the electrical connection of the pump and eventually contact a HATZ assistance centre for a check.

ANOMALY

- The starting of the engine is difficult and there is an insufficient rendering.

CAUSE

The element air cleaner is dirty.

REMEDY

Clean up the element and eventually replace it.

CAUSE

Injection pump wear.

REMEDY

Do not use poor quality fuel as it will cause wear of the pump. Check the fuel injection pump element and replace it if necessary.

CAUSE

Overheating of moving parts.

REMEDY

Check lubricating oil system.

Check to see if lubricating oil filter is working properly or replace it.

ANOMALY

- Output voltage unstable.

CAUSE

The alternator is defective.

REMEDY

Replace the alternator and eventually contact directly the manufacturer.

ANOMALY

- The machine stops with the oil low pressure signal lamp ignited.

CAUSE

The oil level is low.

REMEDY

Verify the level and add oil if necessary.

CAUSE

The pressure switch is defective.

REMEDY

Replace the pressure switch.

ANOMALY

- The machine stops with the battery charge signal lamp ignited.

CAUSE

The battery is defective.

REMEDY

Replace the battery.

CAUSE

The engine's alternator is failure.

REMEDY

Check it and eventually contact a HATZ assistance centre.

ANOMALY

- After refueling, the fuel level monitor does not move.

CAUSE

The fuel level monitor does not work.

REMEDY

Check the fuel level monitor and its relative electrical connection.

CAUSE

The floating does not work.

REMEDY

Check the floating and its relative electrical connection. If the sensor is blocked, eventually replace it.

ANOMALY

- The machine stops with the high temperature signal lamp ignited.

CAUSE

Air intake fillter clogged with dust.

REMEDY

Clean fillter carefully.

CAUSE

Fan does not work.

REMEDY

Check the fan.

ANOMALY

- With the engine in motion the hour meter does not work.

CAUSE

The hour meter does not work.

REMEDY

Check the hour meter and its relatives electrical connection.

ANOMALY

- One or more lamps does not light.

CAUSE

Defective or failure lamps.

REMEDY

Before replace the lamp, it is advisable to make a test, installing the lamp that it is presumed failure in a floodlight with lamp previously working.

ANOMALY

- Winch load is not held.

CAUSE

Cable wound up incorrectly, direction of rotation when lifting incorrect.

REMEDY

Lay cable in place correctly.

CAUSE

Brake torn or faulty.

REMEDY

Check brake parts and renew torn parts.

CAUSE

Brake disk damp or oily.

REMEDY

Clean or replace the brake-disks.

ANOMALY

- Friction disk brake does not open.
- Lowering is difficult.

CAUSE

Brake disk mechanism or brake disks distorted -or crank is stud.

REMEDY

Slacken brake hitting the crank hand lightly using the palm of the hand in anticlockwise direction (to do this block the gearwheels if necessary, until the crank becomes loose, grease crank thread).

ANOMALY

- Friction disk brake does not close (load is not held).

CAUSE

Crank not quite wound up during and thus distorted by the hexagonal screw.

REMEDY

Reassemble the crank in correct way.

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