



**Equipment Supply Company**



# Instruction Manual

YAK 88/55/25/17 Ton Jack

ESCO #92010



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	<b><i>DANGER!</i></b> <b><i>BE PARTICULARLY CAREFUL</i></b>
	<b><i>CRUSHING DANGER</i></b>
	<b><i>MANDATORY. OPERATIONS OR JOBS TO BE PERFORMED COMPULSORILY</i></b>
	<b><i>FORBIDDEN!</i></b>

# FOREWORD

Dear Customer, before using the jack, carefully read these instructions and become acquainted with the safety symbols.

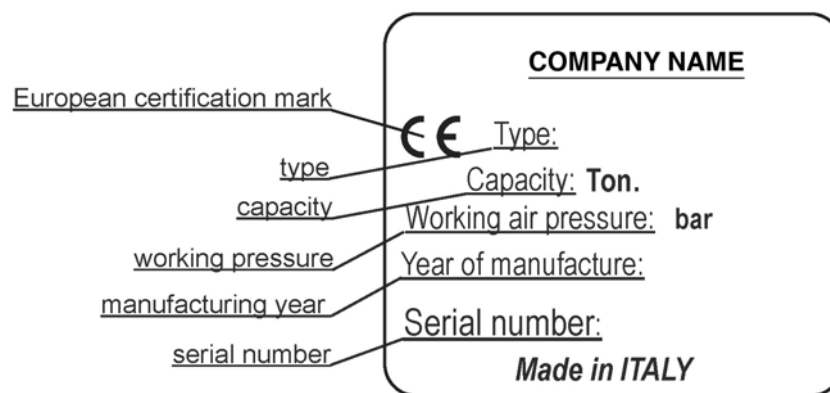
- This handbook is an integral part of the machine which must be kept safely and be handy for the worker to consult whenever needed.

- The contents of this manual comply with Machine Directive 98/37 EEC and the jack is type approved in conformity with the European Norm EN 1494 and following amendments.

- The manufacturing company reserves the right to make modifications without prior notice and without incurring any sanctions whatsoever, without prejudice to the safety and main technical characteristics.

- Failure to observe the instructions may cause personal injury, which in some cases may be mortal.

- The manufacturer is not liable for any damage to things or injury to people caused by an erroneous or incorrect use of its product. The identification plate is on the side of the casing. **DWG. 1**



# SAFETY REGULATIONS

- Only authorised personnel are allowed to use the equipment and they must know the contents of this operating and maintenance handbook.



- The jack is an apparatus for lifting only and not for supporting, it is therefore absolutely forbidden to work in any way under the vehicle being lifted until it is placed on the relative stands. **DWG. 2**

- Before starting to lift a vehicle it has to be blocked with the parking brake and/or by putting wedges under the wheels, as illustrated in figure **DWG. 3**

- If the vehicle is loaded check load stability when lifting.

- Place the jack so that the load is centred over it and where the gripping points are indicated by the vehicle manufacturer. **DWG. 4**

- During lifting and lowering, it is necessary to check there are no persons or animals under the suspended load or in the vicinity.

- Before lowering the load make certain the handle is in the horizontal position. **DWG. 5**



- Never lift loads on sloping, uneven or soft ground. **DWG. 6**

- If extensions are needed use only those supplied by the manufacturer with the jack.

- Do not use extensions without the relevant plate. Never use more than two extensions. **DWG. 7**

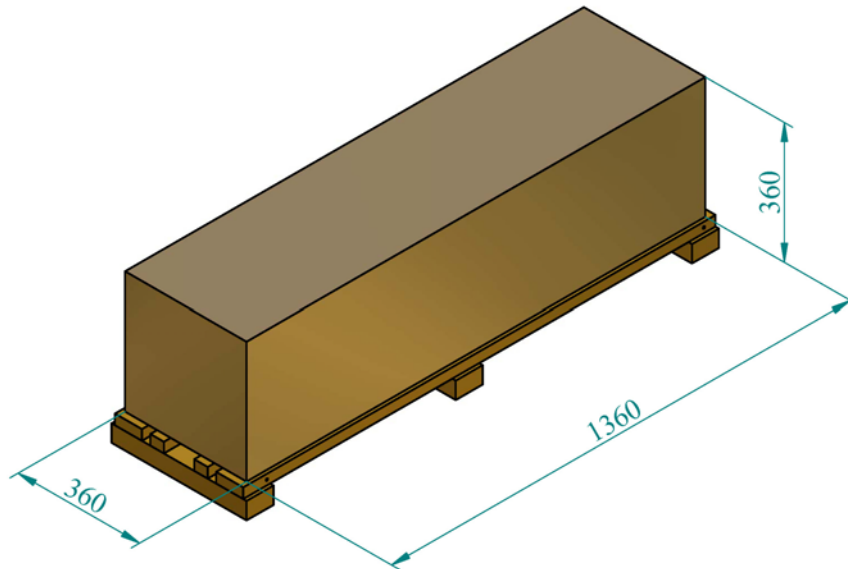
- Do not lift the load in a confined space so as not to run the risk of getting trapped. **DWG. 8**

- It is forbidden to use more than one jack simultaneously on the same load.

- Never tamper with the pressure relief valve that has the guarantee seal. **DWG. 9**

## PACKING

- The body, handle and other parts of the jack are packed in a three-layer corrugated cardboard box with pallet; the operating and maintenance manual plus the warranty certificate in a folder are also inside the box.
- The instruction “Keep upright” is clearly visible on the cardboard box containing the jack.
- Depending on the number of jacks shipped, pallets of different sizes are used.
- Either transpallets or forklift-trucks are used for handling.



## PUTTING INTO OPERATION

### Assembly

1. Take the handle, the jack and the extensions out of the cardboard box.
2. Loosen the two nuts 1296 from inside the chassis. **DWG. 10**
3. Loosen screw 1312 from the chassis and remove parts 2032 and 2056 keeping them assembled.
4. Fit the handle (the air distributor must be facing the pistons) inserting the coupling in the groove, put the parts removed previously into the hole of the handle, tighten screw 1312 and then tighten nut 1296.
5. Connect the two air pipes between the jack and the handle with the quick couplings on the chassis respecting the colour indication as showed on the sticker on the chassis itself. **DWG. 11**

### CONNECTION TO THE COMPRESSED AIR SYSTEM

- Compressed air enters into the jack circuit through the quick coupling on the top of the manual lifting/descending controls; it is therefore necessary to have a connecting pipe with a quick coupling compatible with that of the jack. Check that the air supply pipe has a useful passage of at least 6 mm and it is not pinched or restricted anywhere. **DWG. 12**

**WORKING AIR PRESSURE: 116 - 145 PSI**

- Absolutely never put the following into the compressed air circuit: hydraulic or Vaseline oil, brake liquid, kerosene or

other liquids.

-Install a filter dehumidifier-lubricator unit in the compressed air system.

- If you want to lubricate the compressed air circuit use exclusively:

**AGIP OSO 100; MOBIL DTE 27; ESSO TERESSO 100;  
SHELL TELLUS 100; BP ENERGOL HP 100**

## **ACCESSORIES**

The jack is supplied with two extensions or height adapters (120 mm the long extension, 70 mm the short extension), a circular tooth plate (10 mm plate) and an extension holder.



**NEVER USE MORE THAN TWO EXTENSIONS!**

**THE MANUFACTURER IS NOT LIABLE FOR ANY DAMAGE RESULTING AS A  
CONSEQUENCE OF DISREGARD FOR THE ABOVE INDICATIONS AND THE WARRANTY  
CONDITIONS ARE INVALIDATED THEREOF!**

## **SCRAPPING AND DISPOSAL**

- The lubricants must be disposed of in compliance with the anti-pollution laws in force.

- Scrapping the jack and its component parts must be carried out by the user in accordance with current laws.

## **USE**

- Expressly observe the safety rules already described in this manual.

1) Position the jack under the supports as described in the manual of the vehicle



the manufacturing company is not responsible for any break or damage to the lifted vehicle or to persons or property due to an incorrect use of the jack.

2. The handle positioning lever (A) is on the left in relation to the worker; by moving it upwards the stopping system is released so the worker can then choose one of the three possible handle positions. **DWG. 13**

3. When control (B) is in the perfectly central position, the jack is in the idle status.

4. By turning control B, located near the handle, towards the right in relation to the worker, the jack lifts the load.

5. By turning control B, located near the handle, towards the left in relation to the worker, the jack lowers the load.

**DWG. 13**

6. After lifting the load, it is absolutely essential to rest it on the support stands before doing any work under it.



**REMEMBER THAT THE JACK IS A LIFTING DEVICE AND NOT A SUPPORTING  
DEVICE!!!**

- The operator's employer will have to provide the necessary training and furnish the necessary information about the pumping and shifting forces.

- If the distributor breaks during use, work directly on the flow of air, closing the safety cock no. 398, between the quick coupling of the air inlet and the distributor itself. **DWG. 14**

**- Before working with the jack, it is advisable to perform a few operations with no load in order to acquire the sensitivity necessary to work safely with the jack.**

## Improper use

The air-hydraulic jack has been designed and made to lift transport vehicles. Any other use of the jack, such as for instance lifting and/or moving persons, is considered to be definitely improper. All use of the jack not in conformity with the safety rules listed in this manual is considered to be improper use.

## WARRANTY

This jack is covered by a 12-month warranty starting from the date the warranty comes into effect or from the date the jack leaves our factory if it has not already been rendered effective on-line; it covers all manufacturing defects but not transport expenses, defects caused by improper use or damages suffered during transport. For more details please see the card attached to this manual.

## MAINTENANCE JOBS FOR THE END USER

- To ensure your jack a long life it is advisable to clean the pistons externally once a fortnight.
- **Check the level of oil in the tank at least twice a year:** this must be done with the pistons completely lowered. The oil level must be up to the small bolt that is on the side of the cylinder/tank, you can check by loosening it. If you have to top up the oil in the tank make certain the oil you are using is compatible with what is already inside the tank so as not to compromise machine integrity. **DWG. 15**
- If the oil level is higher than it should be, even by only a little, or if the jack has been turned up- side down (as can easily happen during transport), the oil is expelled through the suction pump as mist. This phenomenon disappears on its own when the oil level has been restored. If the oil inside the tank exceeds the level by a lot, it is advisable to remove some until it is back in the norm.

## AIR BLEEDING

Each time the jack is serviced, removing and refitting parts connected to the tank and motorpump, it is advisable to bleed off all air.

1. The piston must be moved out completely.
2. Turn the jack over on the piston, levering with the handle as illustrated in the figure. **DWG. 16**
3. Start the lowering function until the piston moves back in properly.
4. Put the jack back into the working position.
5. Move the piston back in completely and check the oil level.
6. Try to operate the jack without any load and if the piston lowers in jerks repeat the procedure at least 2 or 3 times.

## MAINTENANCE RESERVED TO A PROFESSIONALLY QUALIFIED ENGINEER

Having to carry out maintenance or overhauling, use exclusively genuine spare parts to ensure the utmost reliability for the jack.

### PROBLEMS

Solutions

## THE MOTOR WILL NOT START, OR IT RUNS BADLY.

- Check that the air supply line is not choked. - The seals (1101) are worn, replace them! - The seals (1101) fitted on the piston (1102) have difficulty in sliding: both the cylinder and the ram have to be dismantled and lubricated.

## THE JACK DOES NOT LIFT THE LOAD.

- Check the oil level by means of the screw (1401). - There is dirt underneath the valves : remove the casing, close the tap 843, turn the jack over so the cylinder is horizontal and the motor pump vertical, loosen the cap (518), remove the bearings and springs and blow inside to thoroughly clean it. Next, reassemble and if necessary knock the bearings again (40) and (521), repeat the bleeding operation illustrated on the previous page and put the jack back into its normal position and reopen the tap. - Check the hydraulic block (1152), paying special attention that the pistons (89) and (264), which control opening and closing of the descent valves, have not become rigid, in which case dismantle them and grease them.

## THE JACK LIFTS, BUT COMES DOWN UNDER THE LOAD.

- Dismantle the assembly (1152) and check that under the valves (40) and (83) there are no impurities, then, after carefully cleaning, readapt the pin (83) in its seat with a light blow with a hammer. If it is not possible to obtain a seal on the pin, replace the valve (KIT0265) complete with the pin (83). If the load still falls even after fitting the jack, carry out the following step. - Completely drain the tank and the cylinder of oil, loosen the cylinder and check the washer (1131); if it is damaged, replace it. Refit everything and tighten the cylinder. Fill the oil tank with oil to the required level; operate the jack a couple of times without the load; bleed and then top up the oil level when the pistons are lowered.

## THE RAMS FAIL TO GO BACK IN COMPLETELY EVEN WITH THE LEVER IN THE DESCENT POSITION.

Check the suction-pump (935) and check that the piston (130) slides well: it is a good idea to grease or lubricate it; unscrew and, if necessary, clean the silencer (267), then screw it back down.

## OIL LEAKS

- If the jack expels oil from the silencer (1109), it means: the pumping element (1104) is scored or damaged and must be replaced; the seal (1106) is worn and must be replaced. - Oil leaks from the suction pump (935): check for the excess oil in tank. If the jack has been turned upside down or damaged the leak will soon stop; - If oil is leaking from the silencer (267) and point B has failed to solve the problem, you must check the integrity of the hydraulic block (1152): replace the seals (90) and (26). If the leak still persists, replace the whole unit (1152).

## OTHER CASES.

- If the pistons lift up very slowly check that the tap 843 between the tank and motor pump is open. - If the jack is malfunctioning when lifting or lowering, check the spring (1046), the rubber ball seal (429) and the smooth sliding of the piston (130).



## TECHNICAL DATA SHEET

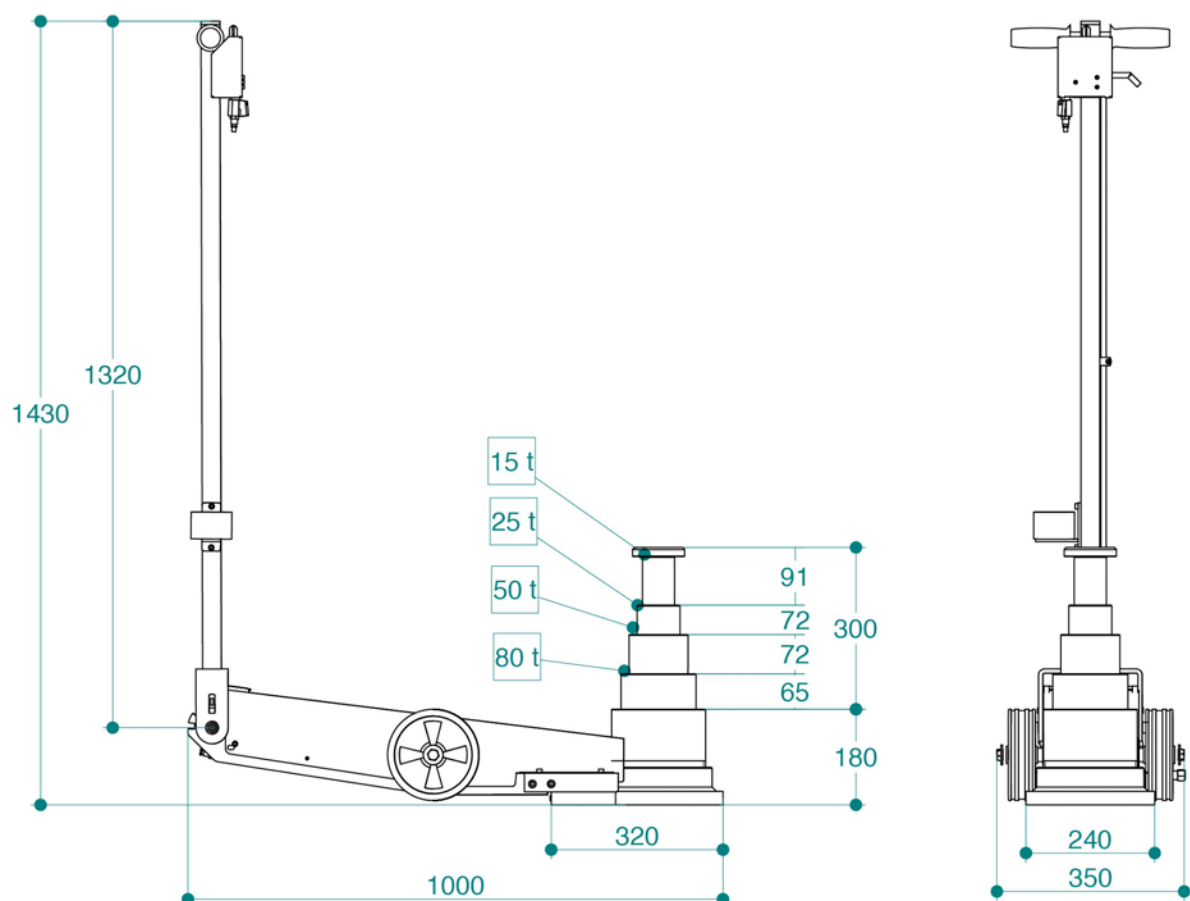
working air pressure	from 8 to 12 bar	weight	77Kg
working temperature	da -20°C a +50°C	max stroke	300mm
air consumption	600 nl/min	1st stage capacity	80 ton.
compatible OILS	ATF DEXRON IID	2st stage capacity	50 ton.
		3st stage capacity	25 ton.
		4st stage capacity	15 ton.
pneumatic system pipes	rilsan Di. ø 6 ie. ø 4		

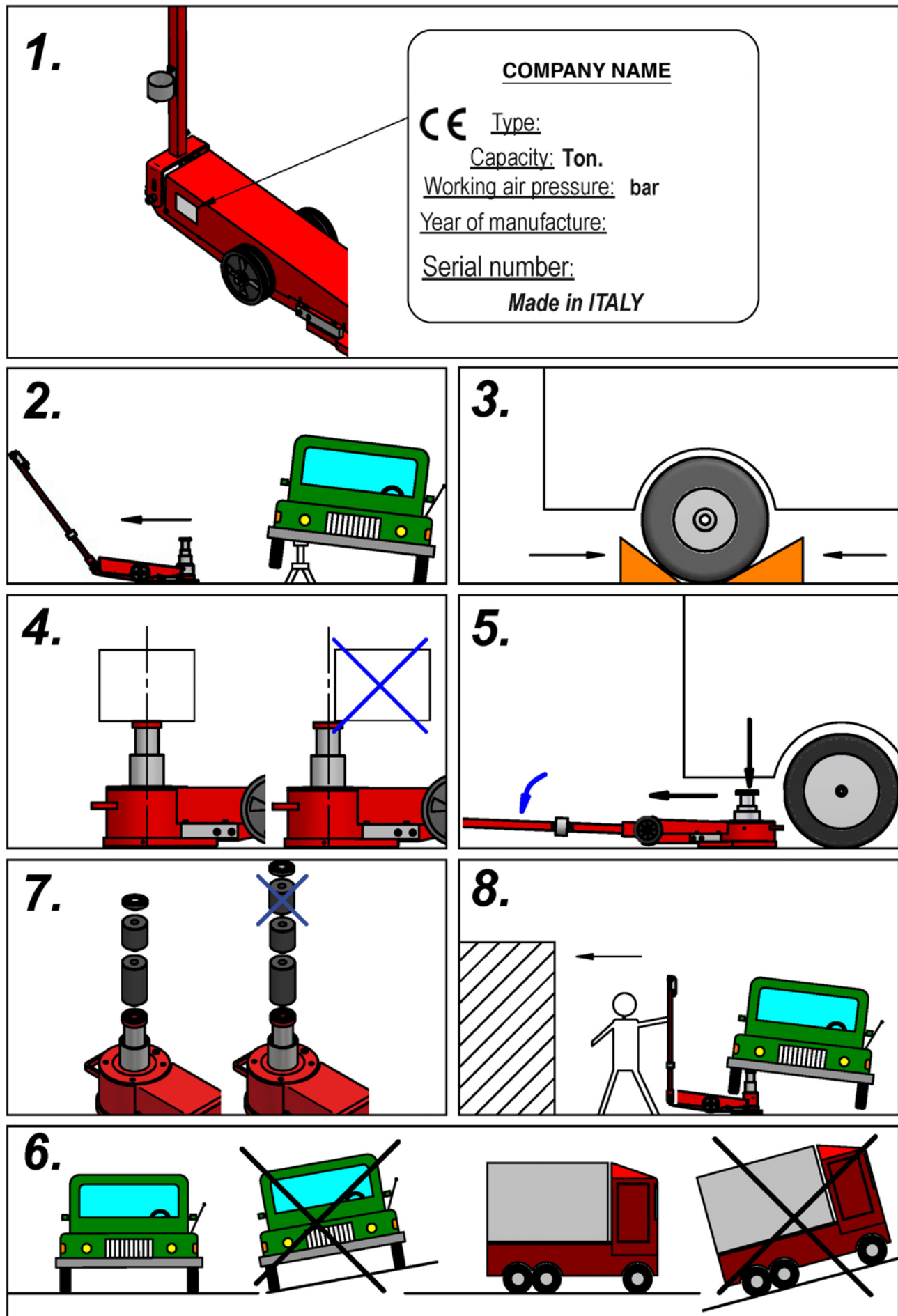
### AERIAL NOISE

Tests carried out in conformity with the standards ISO/R 1680 - 1970.

Instrument: LARSON DAVIS 800 B PRECISION ANALYSER PHONOMETER in conformity with the standards IEC 804 E 651 class 1 set with a Larson Davis Ca 250 114/b 250 Hz calibrator before and at the end of the measurements. Acoustic radiation pressure measured 60 dBA.

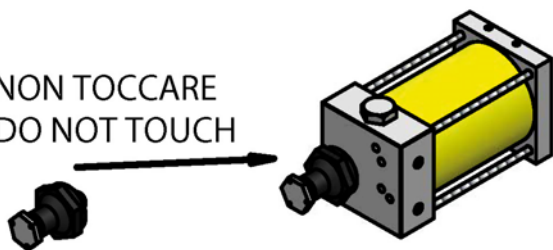
### MEASUREMENTS AND DIMENSIONS



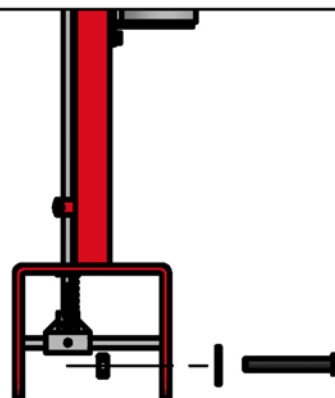


**9.**

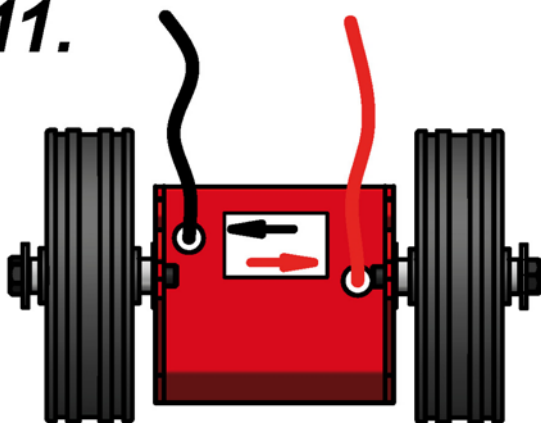
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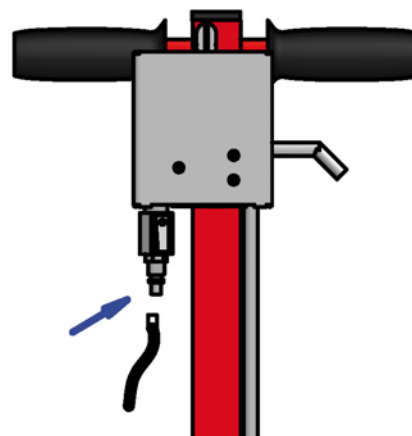
**10.**



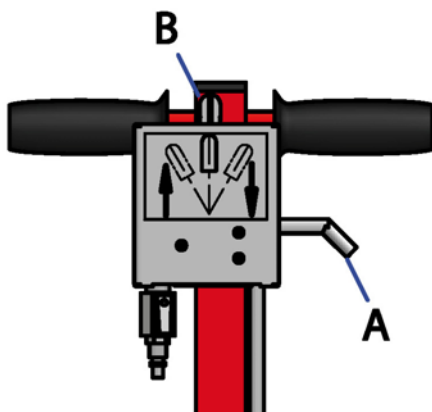
**11.**



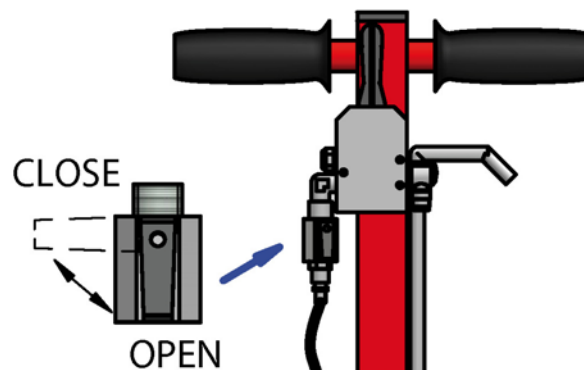
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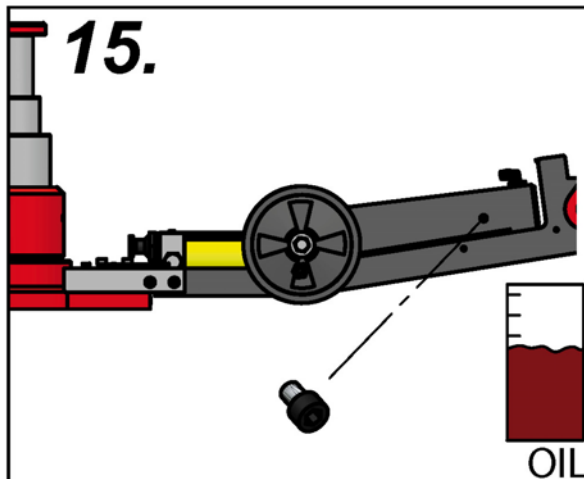
**13.**



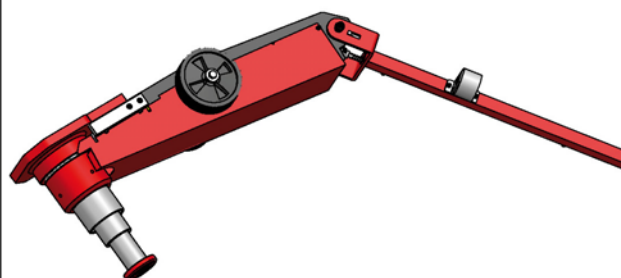
**14.**



**15.**



**16.**



## **REQUESTING SPARE PARTS**

WHEN ORDERING SPARE PARTS, THE FOLLOWING MUST BE SPECIFIED:

- 1) LIFT MODEL
- 2) SERIAL NUMBER
- 3) PART NUMBER
- 4) PART DESCRIPTION
- 5) QUANTITY DESIRED

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