



ENGINEERING & MARKETING S.P.A.

**7300-M010-1\_B**

**SL641D.XX - SL641D.XXFI -  
SL641Q.XX - SL641Q.XXFI -  
SL645D.XX - SL645D.XXFI -  
SL645Q.XX - SL645Q.XXFI -  
SL645D.30FIT - SL645Q.30FIT**

**INSTRUCTION MANUAL**

**GB**

TRANSLATION FROM THE  
ORIGINAL INSTRUCTIONS

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*For spare parts drawings refer to the section "LIST OF COMPONENTS" enclosed to this manual.*

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• For any further information please contact your local dealer or call:

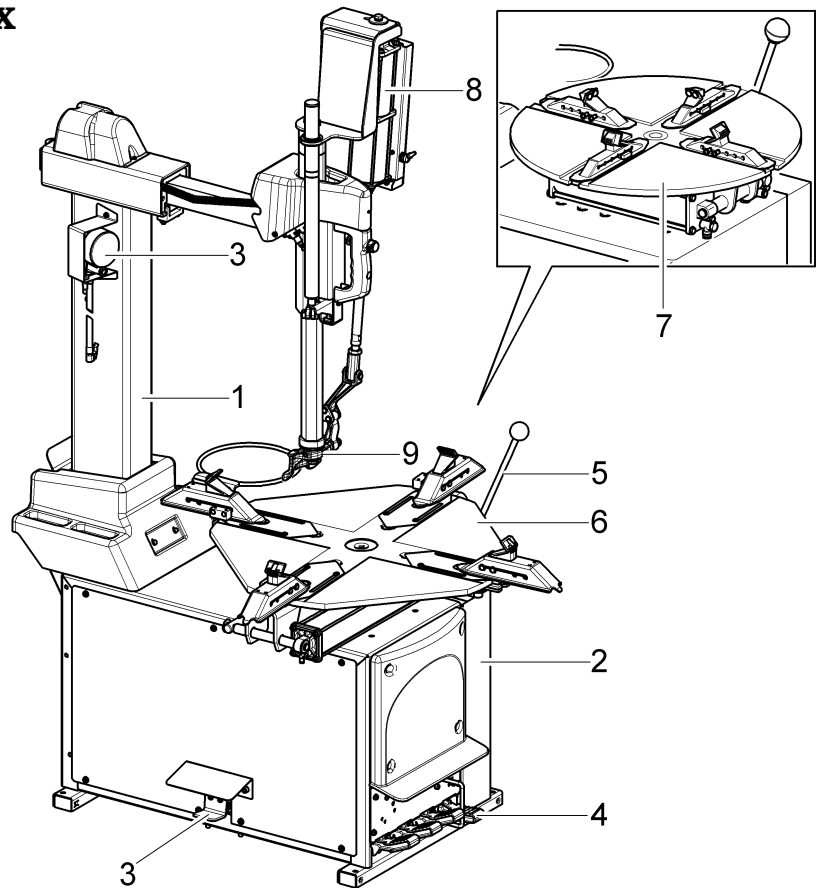
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**7300-M010-1\_B - Rev. n. 1 (07/2011)**

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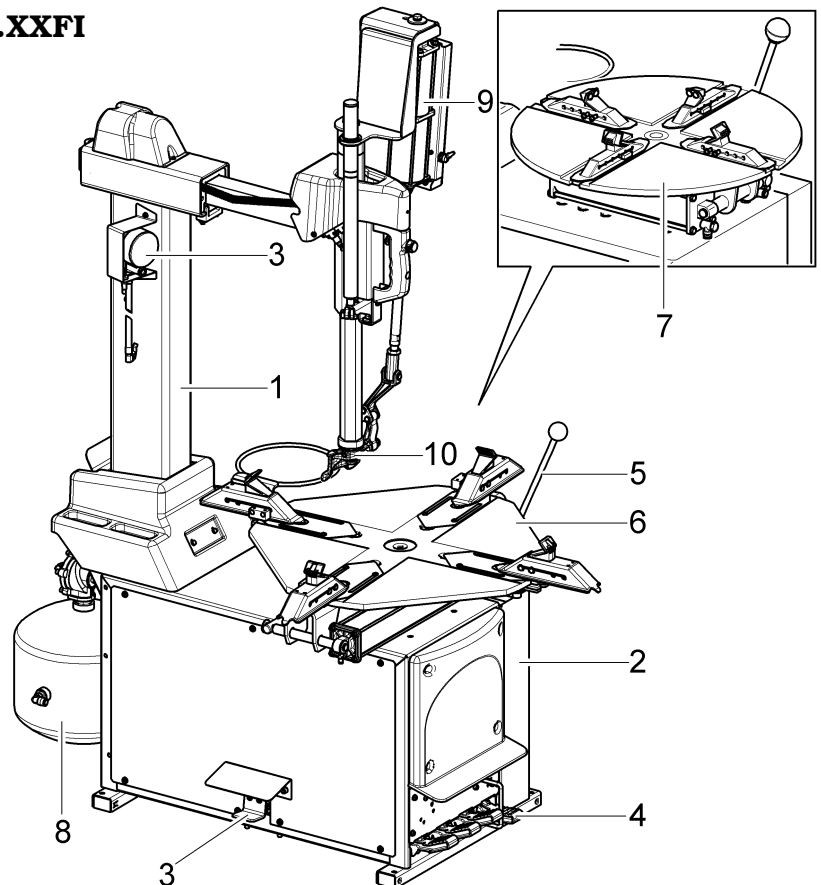
FIG. 1 - SL641D.XX - SL641Q.XX



## KEY

- 1 - Column with pneumatic balancing
- 2 - Machine body
- 3 - Inflation unit (on demand)
- 4 - Pedal control unit
- 5 - Bead breaker unit
- 6 - Complete turntable (10"-18", 10"-24")
- 7 - Complete turntable (10"-20", 11"-22")
- 8 - Lever handling cylinder
- 9 - Mounting/demounting lever

FIG. 2 - SL641D.XXFI - SL641Q.XXFI

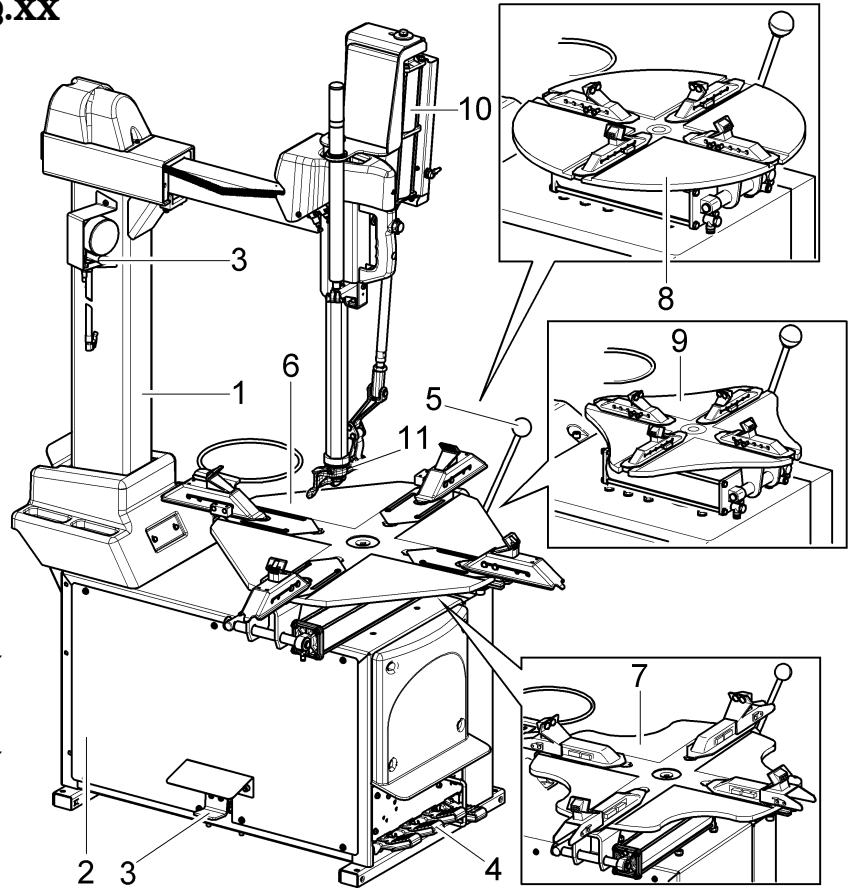


## KEY

- 1 - Column with pneumatic balancing
- 2 - Machine body
- 3 - Inflation unit
- 4 - Pedal control unit
- 5 - Bead breaker unit
- 6 - Complete turntable (10"-24")
- 7 - Complete turntable (10"-20", 11"-22")
- 8 - Tank
- 9 - Lever handling cylinder
- 10 - Mounting/demounting lever

**FIG. 3 - SL645D.XX - SL645Q.XX****KEY**

- 1 - Column with pneumatic balancing
- 2 - Machine body
- 3 - Inflation unit (on demand)
- 4 - Pedal control unit
- 5 - Bead breaker unit
- 6 - Complete turntable (10"-18", 10"-26")
- 7 - Complete turntable (8" - 30")
- 8 - Complete turntable (10"-20", 11"-22")
- 9 - Complete turntable (10"-28")
- 10 - Lever handling cylinder
- 11 - Mounting/demounting lever

**FIG. 4 - SL645D.XXFI - SL645Q.XXFI****KEY**

- 1 - Column with pneumatic balancing
- 2 - Machine body
- 3 - Inflation unit
- 4 - Pedal control unit
- 5 - Bead breaker unit
- 6 - Complete turntable (10"-26")
- 7 - Complete turntable (10"-28")
- 8 - Tank
- 9 - Complete turntable (10"-20", 11"-22")
- 10 - Lever handling cylinder
- 11 - Mounting/demounting lever

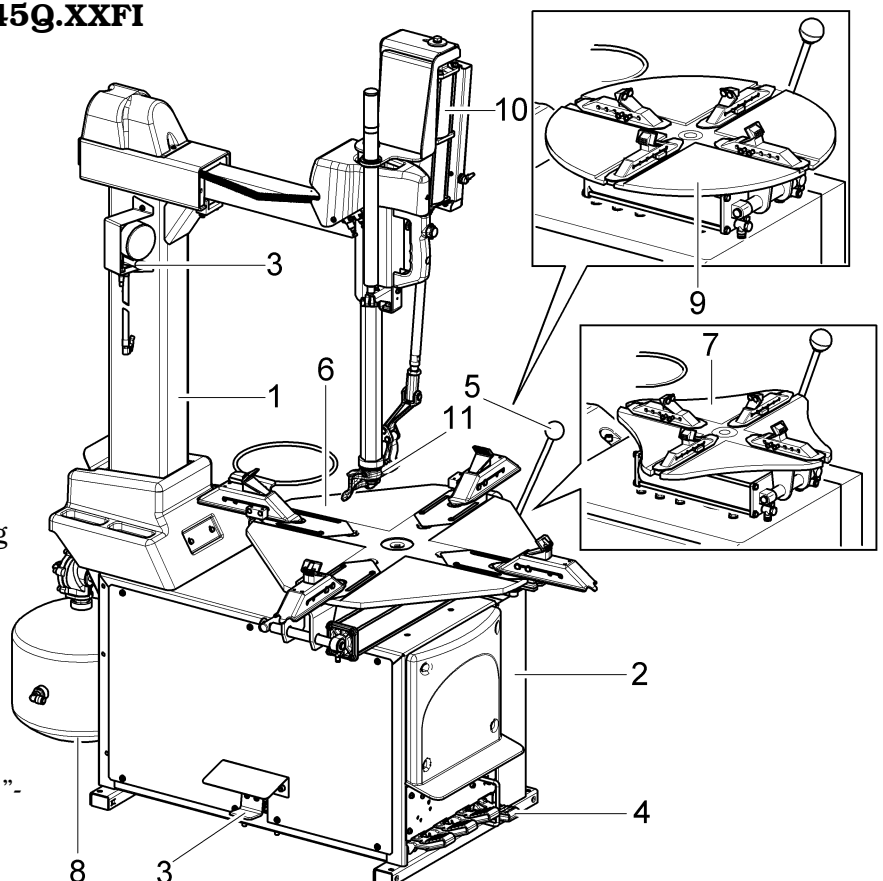
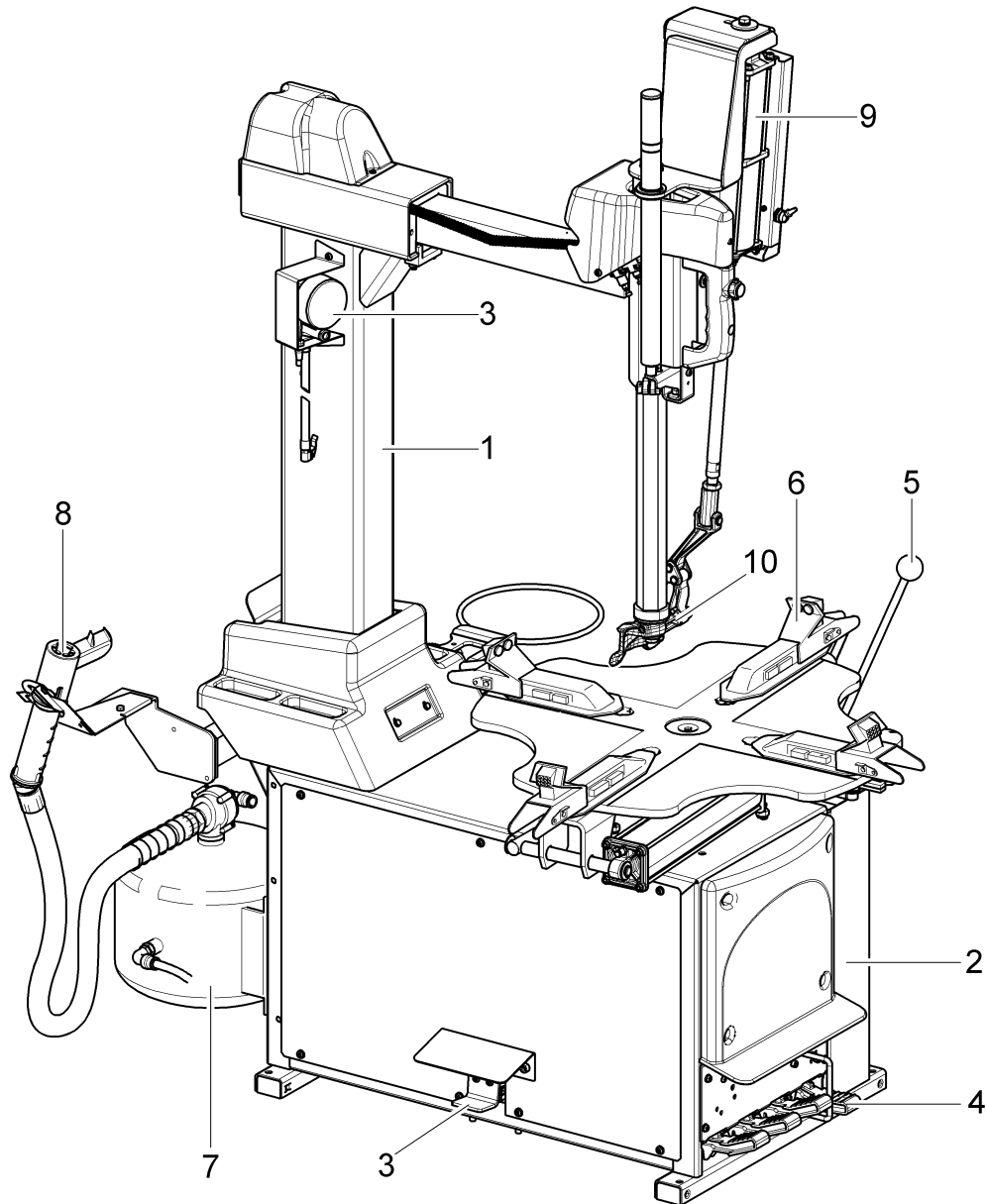


FIG. 5 - SL645D.30FIT - SL645Q.30FIT









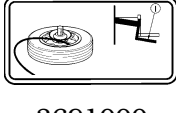



## KEY

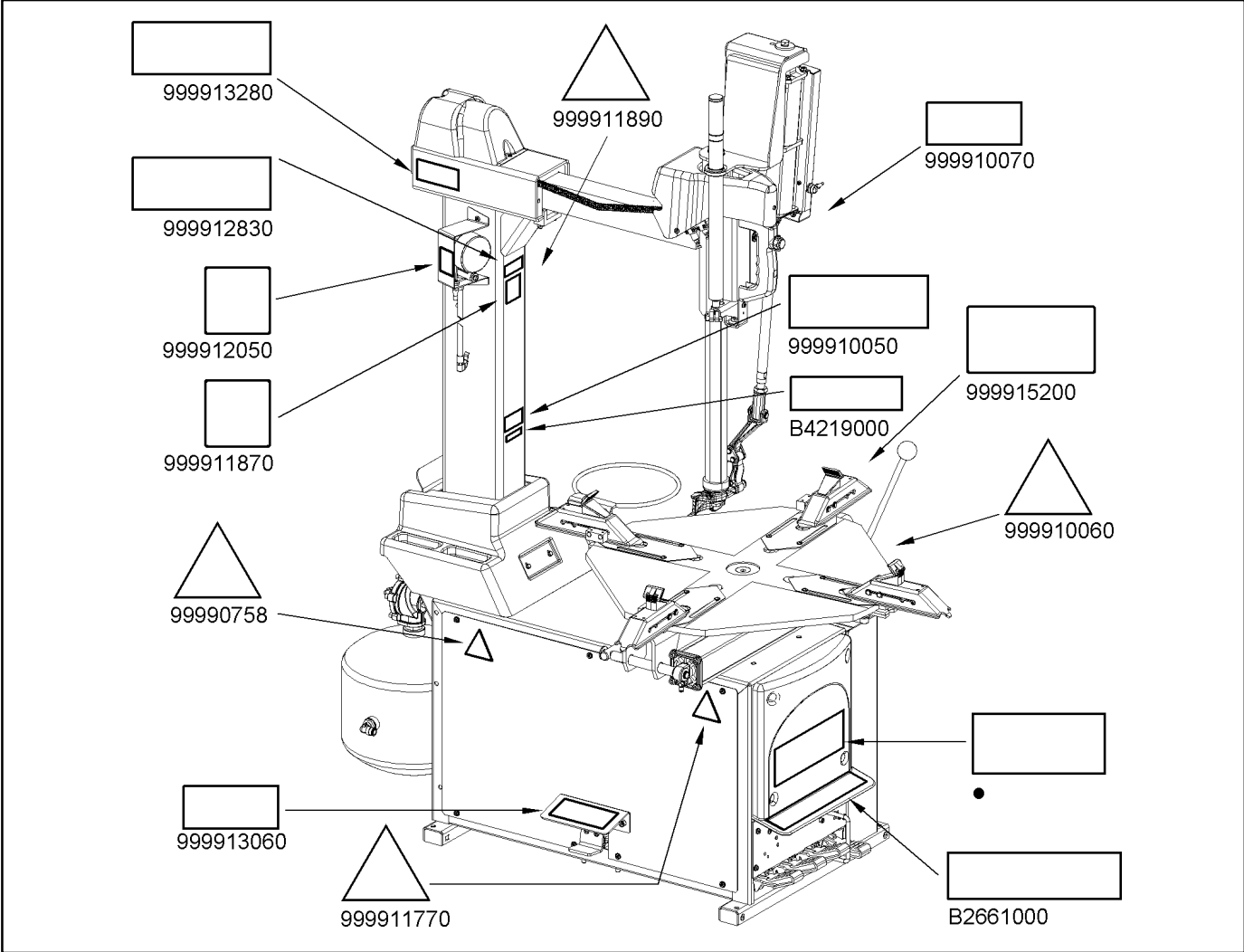
- 1 - Column with pneumatic balancing
- 2 - Machine body
- 3 - Inflation unit
- 4 - Pedal control unit
- 5 - Bead breaker unit
- 6 - Complete turntable (8"-30")
- 7 - Tank
- 8 - Gonfiatubeless gun
- 9 - Lever handling cylinder
- 10 - Mounting/demounting lever

### SYMBOLS USED IN THE MANUAL AND ON THE MACHINE

Symbols	Description
	Read instruction manual.
	FORBIDDEN!
 2167000	Wear work gloves.
	Wear work shoes.
 2167000	Wear safety goggles.
	Wear safety earcaps.
 99990758	Shock hazard.
 4244000	Danger! Moving mechanical parts.
	Caution: hanging loads.
	Mandatory. Operations or jobs to be performed compulsorily

Symbols	Description
	Danger! Be particularly careful.
	Move with fork lift truck or transpallet.
	Lift from above.
 2168000	Burst danger.
 710211210	Mandril rotation direction.
 2166000	Bead breaker hand danger.
 1541000	General danger.
 2170000	Max inflation pressure rating.
 3691000	Inflation pedal.
	Technical assistance necessary. Do not perform any intervention.

**INFORMATION PLATE LOCATION TABLE**



**Code numbers of plates**

<b>B2661000</b>	<i>4-pedal symbols plate</i>
<b>B4219000</b>	<i>Rotation direction indicating plate</i>
<b>99990758</b>	<i>Electricity danger plate</i>
<b>999910050</b>	<i>Protection device use plate</i>
<b>999910060</b>	<i>Bead breaker hazard plate</i>
<b>999910070</b>	<i>Head danger indicating plate</i>
<b>999911770</b>	<i>Unit move indicating plate</i>
<b>999911870</b>	<i>Headphones plate</i>
<b>999911890</b>	<i>Bursting tyre hazard plate</i>
<b>999912050</b>	<i>Inflation instructions indicating plate</i>
<b>999912830</b>	<i>Short instruction indicating plate</i>
<b>999913060</b>	<i>Pedal plate</i>
<b>999913280</b>	<i>Tilting pile plate</i>
<b>999915200</b>	<i>Serial number plate</i>
<b>•</b>	<i>Machine name plate</i>

 **IF ONE OR MORE PLATES ON THE MACHINE ARE LOST OR BECOME ILLEGIBLE, THEY MUST BE REPLACED, STATING THE RELATIVE CODE NUMBER WHEN ORDERING THE REPLACEMENT.**

## 1.0 GENERAL INTRODUCTION

**This manual is an integral part of the product and must be retained for the whole operating life of the machine.**

Carefully study the warnings and instructions contained in this manual. It contains important instructions regarding **FUNCTIONING, SAFE USE and MAINTENANCE.**



**KEEP THE MANUAL IN A KNOWN, EASILY ACCESSIBLE PLACE FOR ALL OPERATORS TO CONSULT IT WHENEVER IN DOUBT.**



**THE MANUFACTURER DISCLAIMS ALL RESPONSIBILITY FOR ANY DAMAGE OCCURRED WHEN THE INDICATIONS GIVEN IN THIS MANUAL ARE NOT RESPECTED: AS A MATTER OF FACT, THE NON-COMPLIANCE WITH SUCH INDICATIONS MIGHT LEAD TO EVEN SERIOUS DANGERS.**

## 2.0 INTENDED USE

“SL641 - SL645” model machines and relevant versions are car tyre changers intended for use solely for mounting, demounting and inflating wheels having max. diameter (41”) 45” and width max 16”.



**THIS ACCESSORY MUST ONLY BE USED FOR THE PURPOSE FOR WHICH IT IS SPECIFICALLY DESIGNED. ANY OTHER USE IS CONSIDERED IMPROPER AND THEREFORE UNACCEPTABLE.**



**THE MANUFACTURER CANNOT BE HELD RESPONSIBLE FOR ANY DAMAGE CAUSED BY IMPROPER, ERRONEOUS, OR UNACCEPTABLE USE.**



**AN INTENSIVE USE OF THE EQUIPMENT IN INDUSTRIAL ENVIRONMENT IS NOT RECOMMENDED.**

## 2.1 Training of personnel

**The machine may be operated only by suitably trained and authorized personnel.**

Given the complexity of the operations necessary to manage the machine and carry out the operations safely and efficiently, the personnel must be trained in such a way that they learn all the information necessary to operate the machine as intended by the manufacturer.

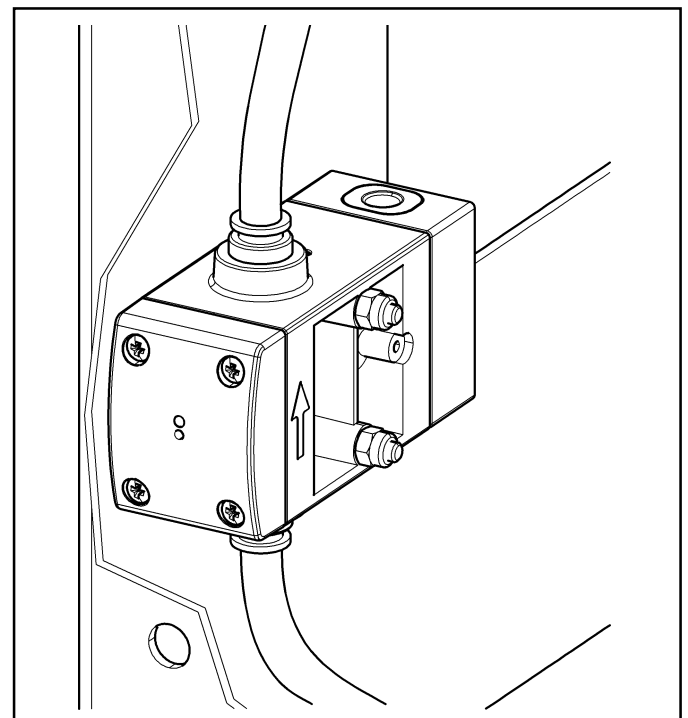


**A CAREFUL READING OF THIS INSTRUCTION MANUAL FOR USE AND MAINTENANCE AND A SHORT PERIOD OF TRAINING WITH SKILLED PERSONNEL CAN BE AN ENOUGH PREVENTIVE PREPARATION.**

## 3.0 SAFETY DEVICES

All the machines are equipped with:

- Fixed guards.  
The machine is fitted with a number of fixed guards intended to prevent potential crushing, cutting and compression risks.
- **Non-adjustable (balancing valve) pressure limiter.**  
This allows inflation of tyres in reasonable safety. Inflation of tyres to over  $4,2 \pm 0,2$  bar (60 PSI) is not allowed.





### 3.1 Residual risks

The machine was subjected to a complete analysis of risks according to reference standard EN 1050.

Risks are as reduced as possible in relation with technology and product functionality.

This manual stresses possible residual risks, also highlighted in pictograms and adhesive warning signals placed on the machine: their location is represented in "PLATE LOCATION ON MACHINE INFORMATION TABLE" on page 7.

### 4.0 GENERAL SAFETY RULES



- Any tampering with or modification to the machine not previously authorized by the manufacturer exempts the latter from all responsibility for damage caused by or derived from said actions.
- Removing of or tampering with the safety devices or with the warning signals placed on the machine leads to serious dangers and represents a transgression of European safety rules.
- The machine may be used only in areas free from the danger of explosion or fire.
- The use of only original accessories and spare parts is advised. Our machine is designed to function only with original accessories.
- Installation must be conducted only by qualified personnel exactly according to the instructions that are given below.
- Ensure that there are no dangerous situations during the machine operating manoeuvres. Immediately stop the machine if it mis-functions and contact the assistance service of an authorized dealer.
- In emergency situations and before carrying out any maintenance or repairs, disconnect all supplies to the machine by using the main switch.
- Ensure that the work area around the machine is free of potentially dangerous objects and that there is no oil since this could damage the tyres. Oil on the floor is also a potential danger for the operator.



**OPERATORS MUST WEAR SUITABLE WORK CLOTHES, PROTECTIVE GLASSES AND GLOVES, AGAINST THE DANGER FROM THE SPRAYING OF DANGEROUS DUST, AND POSSIBLY LOWER BACK SUPPORTS FOR THE LIFTING OF HEAVY PARTS. DANGLING OBJECTS LIKE BRACELETS MUST NOT BE WORN, AND LONG HAIR MUST BE TIED UP. FOOTWEAR SHOULD BE ADEQUATE FOR THE TYPE OF OPERATIONS TO BE CARRIED OUT.**

- The machine handles and operating grips must be kept clean and free from oil.
- The workshop must be kept clean, dry and not exposed to atmospheric agents. Make sure that the working premises are properly lit. The machine can be operated by a single operator. Unauthorised personnel must remain outside the working area, as shown in **Fig. 8**. Avoid any hazardous situations.  
Do not use air-operated or electrical equipment when the shop is damp or the floor slippery and do not expose such tools to atmospheric agents
- During inflation do not lean on the tyre or remain above it. When beading in the tyre, keep hands away from tyre and the rim flange.
- During inflation always stay to the side of the machine and never in front of it.
- When operating and servicing this machine, carefully follow all applicable safety and accident-prevention precautions. The machine must not be operated by professionally unskilled persons.



**IN CASE OF A CHANCE SUPPLY FAILURE MOVE THE CONTROLS TO THE NEUTRAL POSITION.**

## 5.0 PACKING AND MOBILIZATION FOR TRANSPORT

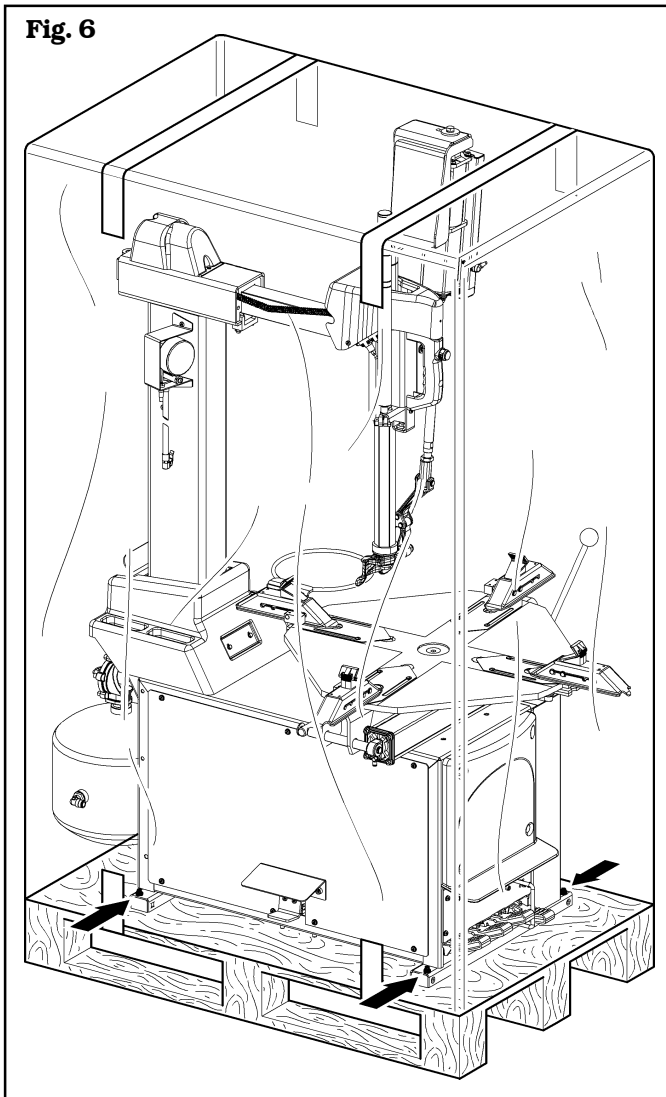


**HAVE THE MACHINE HANDLED BY SKILLED PERSONNEL ONLY. THE LIFTING EQUIPMENT MUST WITHSTAND A MINIMUM RATED LOAD EQUAL TO THE WEIGHT OF THE PACKED MACHINE.**

The machine is packed in a carton box which size is mm 1180x1150x1130.

Movement must be by pallet-lift or fork-lift trolley. The fork lifting points are indicated on the packing.

**Fig. 6**



## 6.0 UNPACKING



**WHEN UNPACKING THE MACHINE, ALWAYS WEAR GLOVES TO PREVENT SCRATCHES AND CUTS CAUSED BY CONTACT WITH PACKING MATERIAL (NAILS, ETC...).**

The cardboard box is supported with plastic strapping. Cut the strapping with suitable scissors.

Use a small knife to cut along the lateral axis of the box and open it like a fan.

It is also possible to un-nail the cardboard box from the pallet it is fixed to.

After removing the packing, and in the case of the machine packed fully assembled, check that the machine is complete and that there is no visible damage.

If in doubt **do not use the machine** and refer to professionally qualified personnel (to the seller).

The packing (plastic bags, expanded polystyrene, nails, screws, timber, etc.) should not be left within reach of children since it is potentially dangerous.

These materials should be deposited in the relevant collection points if they are pollutants or non biodegradable.



**THE BOX CONTAINING THE ACCESSORIES IS CONTAINED IN THE WRAPPING. DO NOT THROW IT AWAY WITH THE PACKING.**

## 7.0 MOBILIZATION

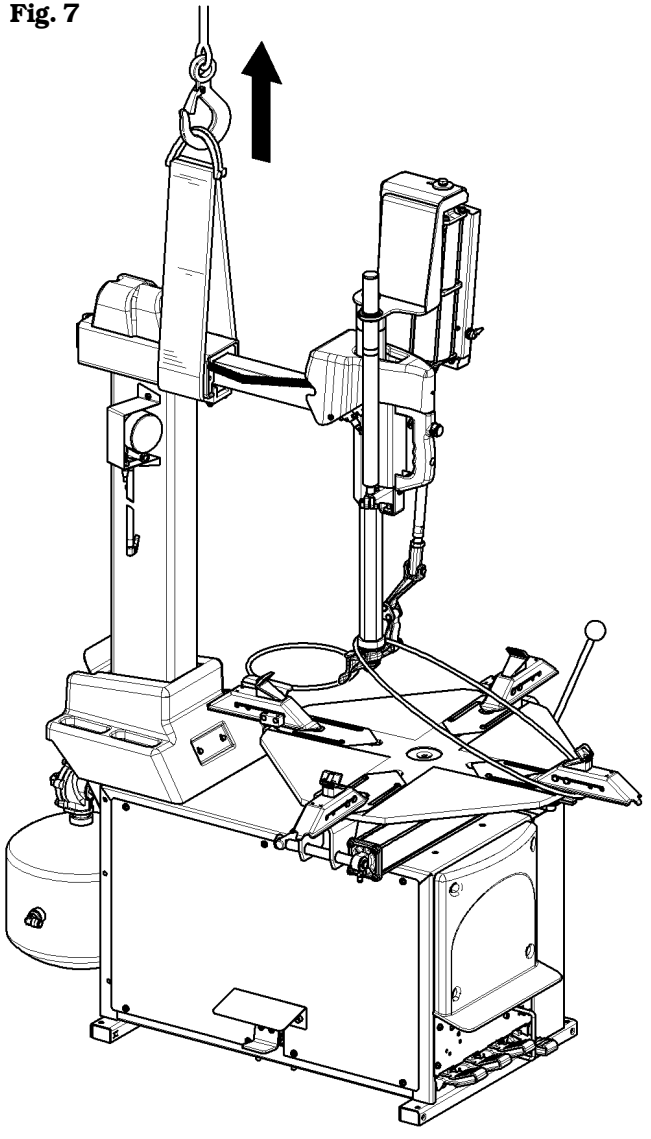


**THE LIFTING EQUIPMENT MUST WITHSTAND A MINIMUM RATED LOAD EQUAL TO THE WEIGHT OF THE MACHINE (SEE PARAGRAPH TECHNICAL SPECIFICATIONS). DO NOT ALLOW THE LIFTED MACHINE TO SWING.**

If the machine has to be moved from its normal work post, the movement must be conducted following the instructions listed below.

- Protect the exposed corners with suitable material (Pluribol/cardboard).
- Do not use metallic cables for lifting.
- Sling with belts long at least 100 cm and with a capacity load greater than 1000 kg (see **Fig. 7**).

**Fig. 7**



## 8.0 WORKING ENVIRONMENT CONDITIONS

The machine must be operated under proper conditions as follows:

- temperature: 0° +55° C
- relative humidity: 30 - 95% (dew-free)
- atmospheric pressure: 860 - 1060 hPa (mbar).

The use of the machine in ambient conditions other than those specified above is only allowed after prior agreement with and approval of the manufacturer.

### 8.1 Work position

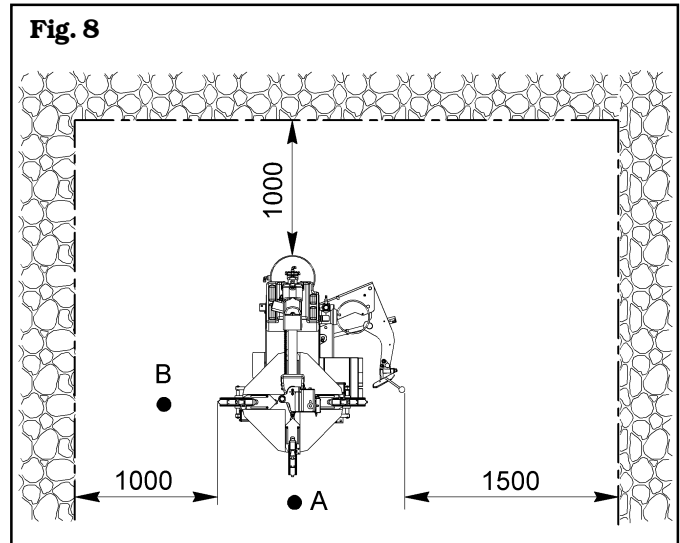
**Fig. 8** show work positions **A** and **B**.

Position **A** is the main positions for wheel fitting and removal with the chucking table, while position **B** is ideal to follow tyre inflation operations.

Working in these positions allows better precision and speed during operating phases as well as greater safety for the operator.

### 8.2 Installation space

**Fig. 8**



**INSTALL THE MACHINE INDOORS OR IN A ROOFED AREA. PLACE OF INSTALLATION MUST BE DRY, ADEQUATELY LIT AND IN COMPLIANCE WITH APPLICABLE SAFETY REGULATIONS.**

The location of the machine requires a usable space of 3450x2500, mm (as indicated in **Fig. 8**).

The positioning of the machine must be according to the distances shown. From the control position the operator is able to observe all the machine and surrounding area. He must prevent unauthorized personnel or objects that could be dangerous from entering the area. The machine must be fixed on a flat floor surface, preferably of cement or tiled.

Avoid un-solid or irregular surfaces.

The base floor must be able to support the loads transmitted during operation.

This surface must have a strength of at least 500 kg/m<sup>2</sup>. The thickness of the solid floor must be sufficient to guarantee that the anchoring bolts hold.

### 8.3 Lighting

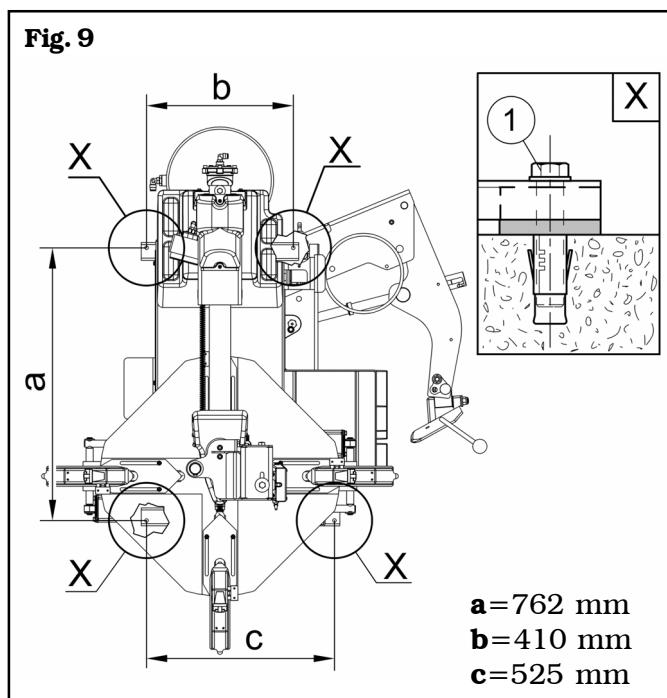
The machine does not require its own lighting for normal working operations.

However, it must be placed in an adequately lit environment.

For correct lighting, use lamps having total power 800/1200 Watt as envisaged by UNI 10380.

## 9.0 ANCHORING SYSTEM

The packed machine is fixed to a pallet by support feet. Such feet also fix the machine to the ground through anchor small blocks as shown in **Fig. 9**.



The holes in the solid floor must be about 10 cm deep with a diameter of 8 mm.

The bolts (**Fig. 9 pos. 1**) must be inserted in the holes and fully tightened.

## 10.0 ASSEMBLY AND PREPARATION FOR USE

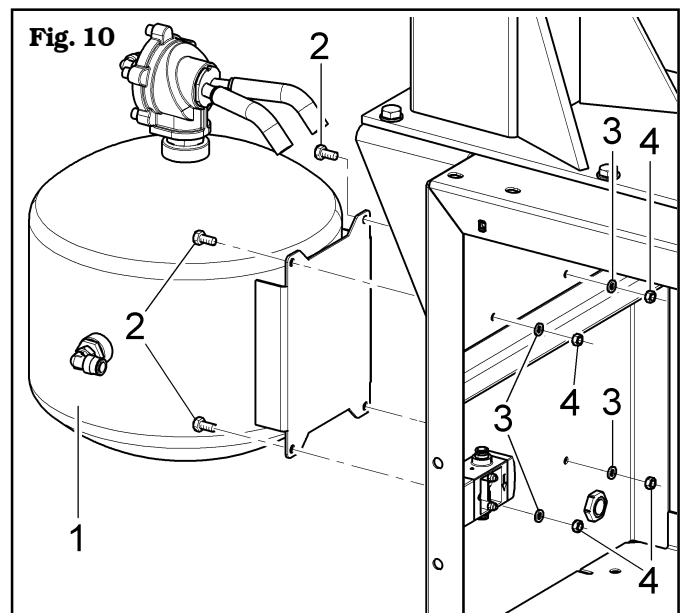
After having freed the various components from the packing check that they are complete, and that there are no anomalies, then comply with the following instructions for the assembly of the components making use of the attached series of illustrations.

### 10.1 Assembly procedure

Remove the packaging and free the machine from the wrapping. Lift the machine and position it on the floor.

#### Only for FI version

1. Mount the tank (**Fig. 10 pos. 1**) on the base lower part, as shown in **picture 10**, using the screws (**Fig. 10 pos. 2**) (tightening torque approx. 8 N·m), the washers (**Fig. 10 pos. 3**) and the nuts (**Fig. 10 pos. 4**).



2. Connect the flexible pipes (**Fig. 11 pos. 1**) preassembled on the mandrel rotary distributor (**Fig. 11 pos. 2**), on the valve (**Fig. 11 pos. 4**) hosesnipple (**Fig. 11 pos. 3**). Fasten the pipes (**Fig. 11 pos. 1**) with the prepared clamps (**Fig. 11 pos. 5**)
3. Connect the pipe (**Fig. 11 pos. 14**) from the greaser reduction gear filter (**Fig. 11 pos. 7**) (air not lubricated) to the compensation balancing valve (**Fig. 11 pos. 15**).
4. Connect the pipe (**Fig. 11 pos. 11**) from the pedal board lower valve (**Fig. 11 pos. 12**) to the blow valve (**Fig. 11 pos. 4**) union (**Fig. 11 pos. 13**).
5. Connect the pipe (**Fig. 11 pos. 6**) to the T coupling (**Fig. 11 pos. 8**) and the coupling (**Fig. 11 pos. 16**) placed on the tank (**Fig. 11 pos. 9**).
6. Connect the pipe (**Fig. 11 pos. 18**) from the blowing unit (**Fig. 11 pos. 17**) to the pedal board (**Fig. 11 pos. 12**) upper union (**Fig. 11 pos. 10**).

Fig. 11

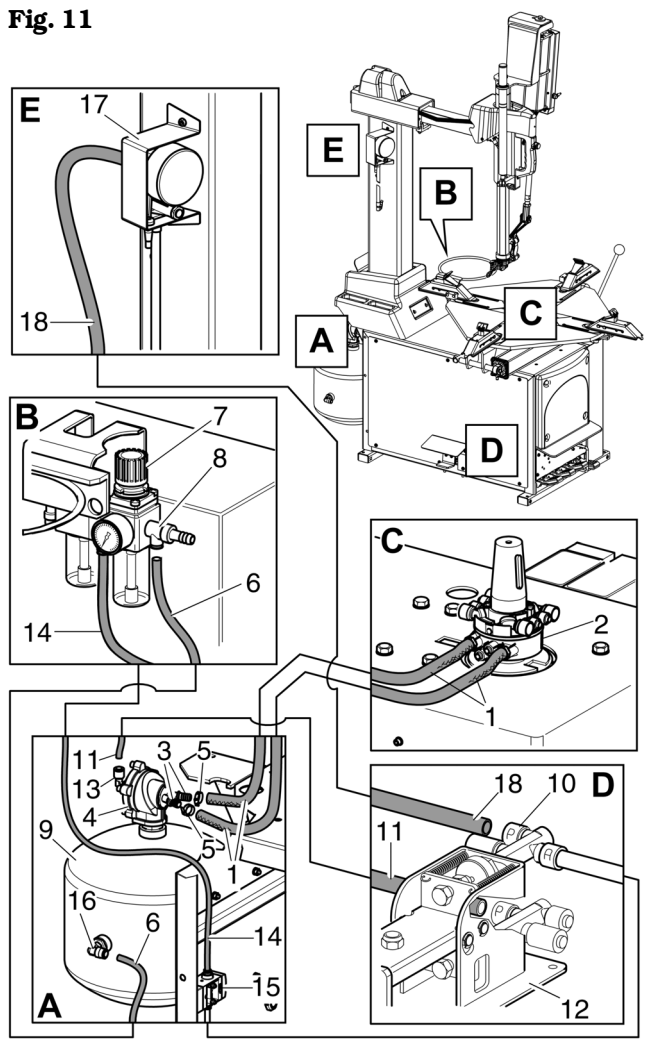
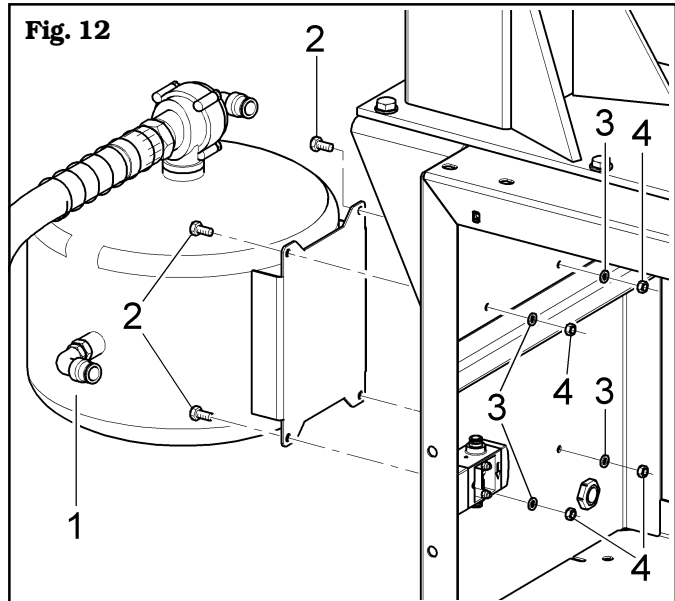


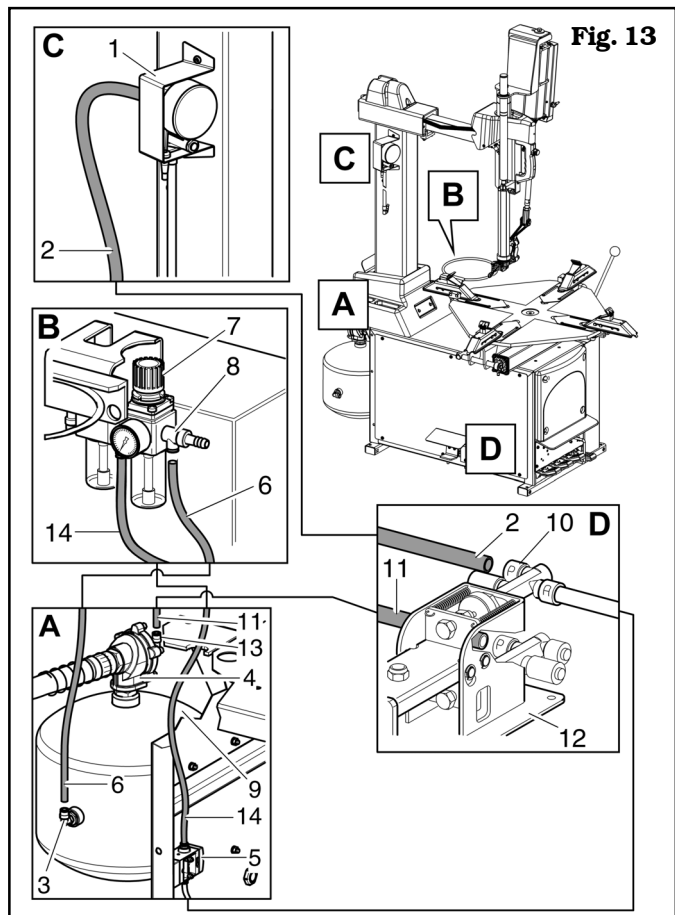
Fig. 12



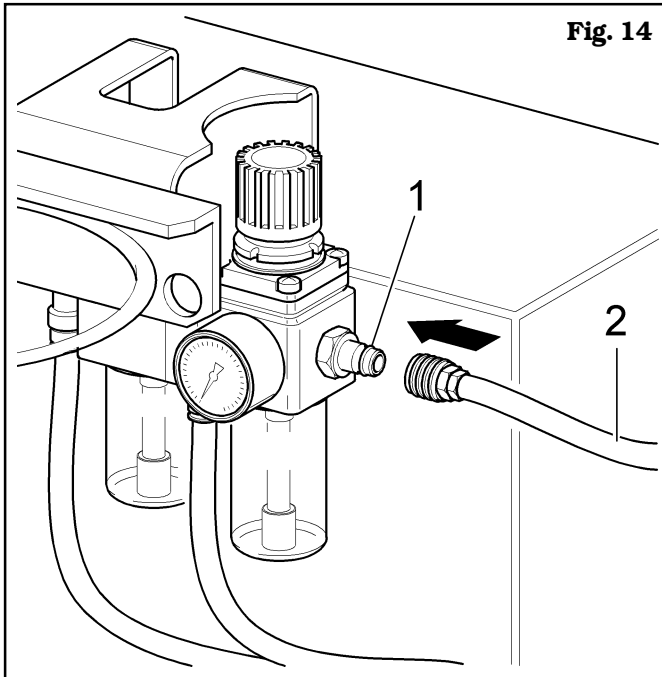
2. Connect the pipe (Fig. 13 pos. 14) from the greaser reduction gear filter (Fig. 13 pos. 7) (air not lubricated) to the compensation balancing valve (Fig. 13 pos. 5).
3. Connect the pipe (Fig. 13 pos. 11) from the pedal board lower valve (Fig. 13 pos. 12) to the blow valve (Fig. 13 pos. 4) union (Fig. 13 pos. 13).
4. Connect the pipe (Fig. 13 pos. 6) to the coupling (Fig. 13 pos. 3) placed on the tank (Fig. 13 pos. 9).
5. Connect the pipe (Fig. 13 pos. 2) from the blowing unit (Fig. 13 pos. 1) to the pedal board (Fig. 13 pos. 12) upper union (Fig. 13 pos. 10).

#### Only for FIT version

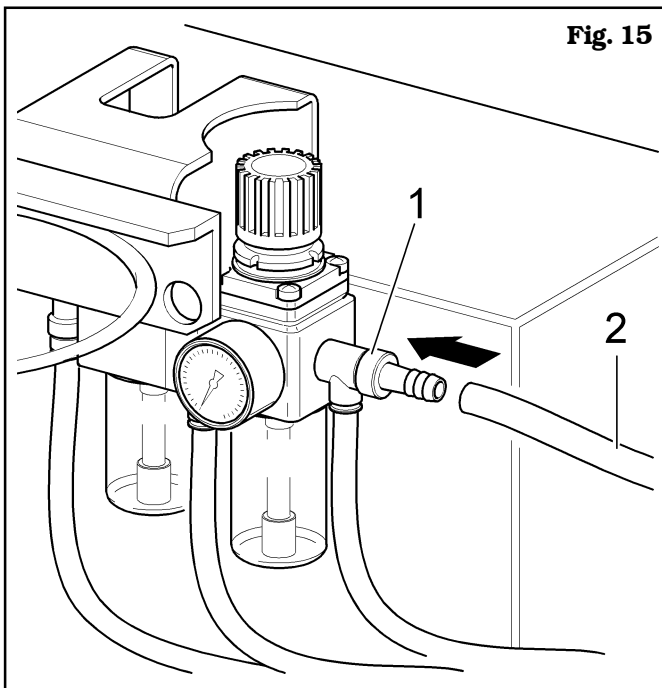
1. Mount the tank (Fig. 12 pos. 1) on the base lower part, as shown in picture 12, using the screws (Fig. 12 pos. 2) (tightening torque approx. 8 N·m), the washers (Fig. 12 pos. 3) and the nuts (Fig. 12 pos. 4).



Connect the net pneumatic supply to the coupling (Fig. 14 pos. 1) placed on the machine filter unit.

**Fig. 14****Only for FI and FIT version**

Connect the net pneumatic supply to the coupling (Fig. 15 pos. 1) placed on the machine filter unit.

**Fig. 15**

The pressure line leading from the compressed air supply system must have gauge 1/4x10 (Fig. 14-15 pos. 2). The filter unit is already mounted on the machine.

**10.2 Electrical connection**

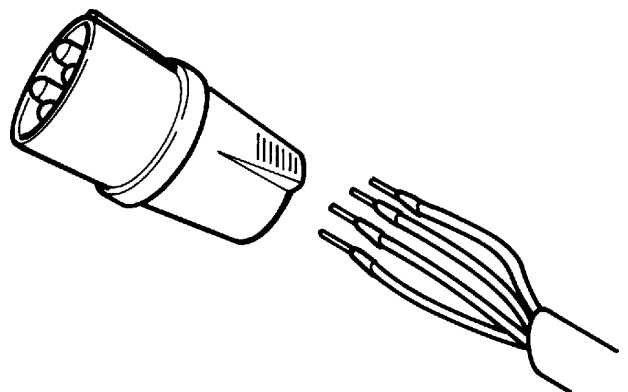
**EVEN THE TINIEST PROCEDURE OF AN ELECTRICAL NATURE MUST BE CARRIED OUT BY PROFESSIONALLY QUALIFIED STAFF.**



**BEFORE CONNECTING THE MACHINE:**

- **MAKE SURE THAT THE POWER MAINS RATING CORRESPONDS TO THE MACHINE RATING AS SHOWN ON THE MACHINE PLATE;**
- **CHECK THAT ALL POWER MAINS COMPONENTS ARE IN GOOD CONDITION;**
- **CHECK THAT THE ELECTRICAL SYSTEM IS PROPERLY GROUNDED (EARTH WIRE MUST BE THE SAME CROSS-SECTION AREA AS THE LARGEST POWER SUPPLY CABLES OR GREATER);**
- **MAKE SURE THAT THE ELECTRICAL SYSTEM FEATURES A CUT-OUT WITH DIFFERENTIAL PROTECTION SET AT 30 MA.**

As envisaged by the regulations in force, the machine is not equipped with a master circuit breaker, but simply has a plug-socket connection to the electrical mains.



The machine is supplied with 3 mt. of free cable. A plug corresponding to the following requirements must be connected to the cable:

- **Conformity to Norm IEC 309**
- **230/400 Volt – 16A**
- **3P + Ground**
- **IP 44**



**FIT A TYPE-APPROVED PLUG TO THE MACHINE CABLE (THE EARTH WIRE IS YELLOW/GREEN AND MUST NEVER BE CONNECTED TO THE PHASE LEADS). MAKE SURE THAT THE ELECTRICAL SYSTEM IS COMPATIBLE WITH THE RATED POWER ABSORPTION SPECIFIED IN THIS MANUAL AND APT TO ENSURE THAT VOLTAGE DROP UNDER FULL LOAD WILL NOT EXCEED 4% OF RATED VOLTAGE (10% UPON START-UP).**

On delivery, the machine is preset to operate at a voltage 230/400 V - 50 Hz three-phase (for version SL641Q and SL645Q) or with a monophasic voltage of 200/265 V - 50/60 Hz (for versions SL641D and SL645D).



**FAILURE TO OBSERVE THE ABOVE INSTRUCTIONS WILL IMMEDIATELY INVALIDATE THE WARRANTY.**

### 10.3 Controls



**BEFORE STARTING UP THE TYRE-CHANGER, BE SURE TO BECOME FAMILIAR WITH THE LOCATION AND OPERATION OF ALL CONTROLS AND CHECK THEIR PROPER OPERATION (SEE PAR. CONTROLS).**

## 11.0 CONTROLS

The pedal control unit comprises 4 (four) pedals.

### 11.1 4 pedal control unit

“**Pedal 1**” on this pedal unit operates the automatic column and has two stable operating positions: the first (pedal up) tilts the column away from the operator; the second (pedal down) returns the column to the working position.

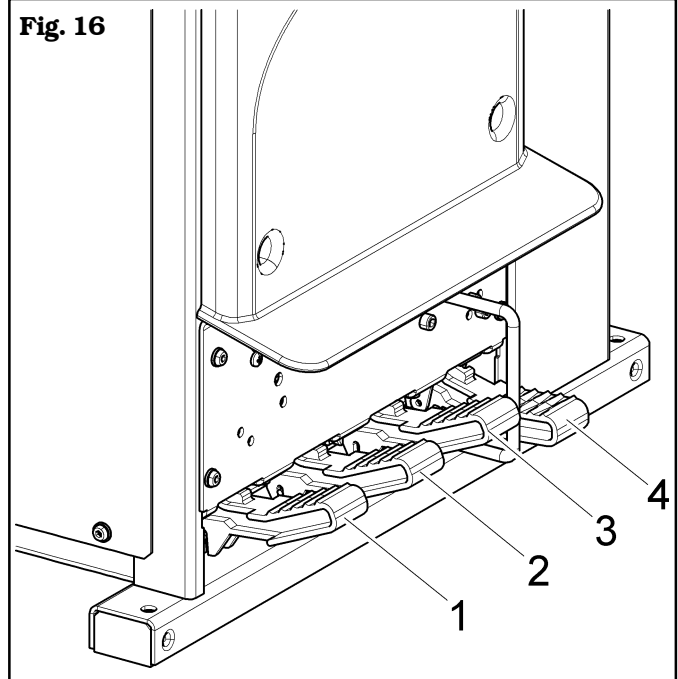
“**Pedal 2**” opens and closes the turntable clamps. It has three stable positions: open – close – approach clamps.

“**Pedal 3**” controls the bead breaker cylinder/shoe and has 2 stable positions.

“**Pedal 4**” controls turntable rotation and has 3 stable positions:

1. 0 position, turntable stopped;
2. Pressed down, the turntable is rotated clockwise;
3. Raised, the turntable is rotated anti-clockwise.

Fig. 16



### ONLY FOR VERSIONS WITH MOTOR 3PH, 230/400V – 50 HZ 2 SPEED

“**Pedal 4**” controls turntable rotation and has 3 stable positions:

1. 0 position, turntable stopped;
2. Position 1 to the bottom – clockwise rotation of the plate;
3. Position 2 to the bottom from position 1 – clockwise rotation of the plate at double speed;
4. Position 1 to the top – anticlockwise rotation of the plate.

### 11.2 Inflation pedal (on demand)

The pressure on the inflation pedal and the keeping it pressed, delivers air at controlled pressure (max 4,2 ± 0,2 bar).



**DO NOT CHANGE THE SET OPERATING PRESSURE VALUE BY MEANS OF THE MAXIMUM PRESSURE VALVES. THE MANUFACTURER SHALL NOT BE RESPONSIBLE FOR INJURY OR DAMAGE ARISING FROM UNAUTHORIZED CHANGES.**

#### Version with tubeless inflation

The inflation pedal has two functions. The supply of air at a controlled pressure as in the previous version, and a second function of a jet of air from the inflation nozzle to assist the beading in of the tyre.



**DO NOT CHANGE THE SET OPERATING PRESSURE VALUE BY MEANS OF THE MAXIMUM PRESSURE VALVES. THE MANUFACTURER SHALL NOT BE RESPONSIBLE FOR INJURY OR DAMAGE ARISING FROM UNAUTHORIZED CHANGES.**

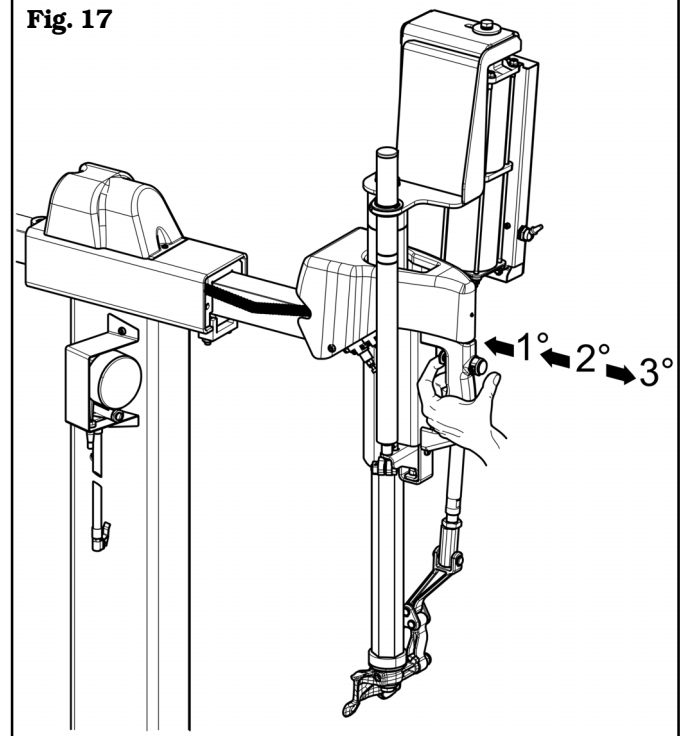
### 11.3 Version with pneumatic balancing

On the automatic column a handle equipped with a pneumatic control is housed to allow the locking/unlocking and the motion of the vertical arm.

Pushing the pushbutton located on this handle (**Fig. 17**) the following operations can be carried out:

- 1° tripping:** vertical arm descent (carried out manually);
- 2° tripping:** locking of the vertical and horizontal arm in working position;
- 3° tripping:** unlocking of vertical and horizontal arm and rise of vertical arm in rest position (all upward) through the balancing cylinder.

**Fig. 17**





## 12.0 USING THE MACHINE

### 12.1 Precaution measures during tyre removal and fitting



Before fitting a tyre, observe the following safety rules:

- rim and tyre must be clean, dry and in good condition. If necessary, remove the balancing weights and clean the rim. Check:
  - tyre bead and tread for damage.
  - rim for dents and/or deformation (especially for alloy rims, dents can cause internal micro-fractures, that pass unobserved at visual inspection, and can compromise the solidity of the rim and constitute danger even during inflation).
- adequately lubricate the contact surface of rim and tyre bead. Use specific tyre lubricants only.
- replace the inner tube valve with a new valve. If the tyre tube has a metal valve, replace the grommet.
- make sure that the tyre is the right size for the rim. Never fit a tyre unless you are sure it is the right size (the rated size of the rim and tyre is usually printed directly on each of them).
- Do not use compressed air or water jets to clean the wheels on the machine.

### 12.2 Preliminary operations - Preparing the wheel

- Remove the wheel balancing weights from both sides of the wheel.



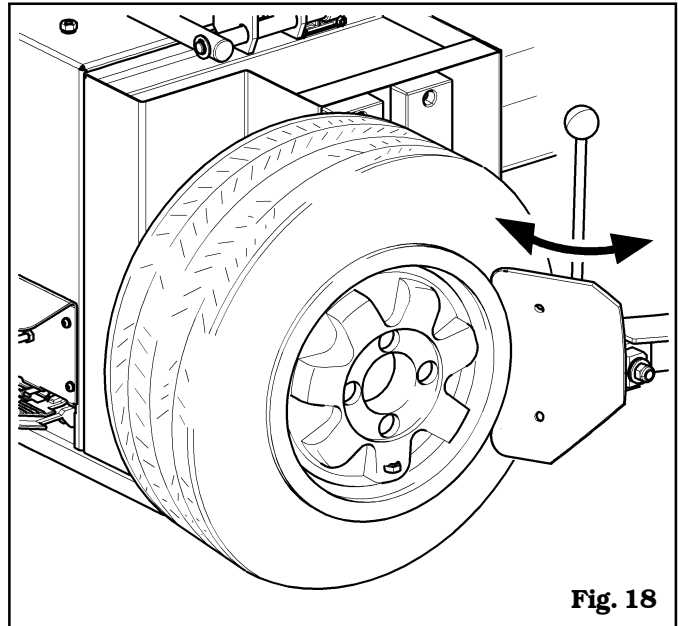
**REMOVE THE VALVE STEM AND ALLOW THE TYRE TO COMPLETELY DEFLATE.**

- Verify from which side the tyre should be demounted, checking the position of the channel.
- Find the rim locking type.
- Try to establish the special types of wheels, such as "TD" and "AH", in order to improve locking, bead breaking, assembly and disassembly performances..

### 12.3 Bead breaking

After preparing the wheel as described in the previous point, follow the instructions given below to carry out the bead breaking procedure.

1. Position the wheel as indicated in **Fig. 18** and move the bead breaker tool toward the edge of the rim.
2. Operate the bead breaker shoe by pressing the relative pedal until the bead has detached. If the bead does not detach the first time, repeat the operation, on different points of the wheel, until it has come completely away.
3. Reverse the position of the wheel and repeat the operation on the other side.
4. Lubricate the tyre carefully along the entire circumference of the bead on both sides. Failure to lubricate might cause friction between the mounting tool and the tyre, and would cause damage to the tyre and/or the bead.



**Fig. 18**



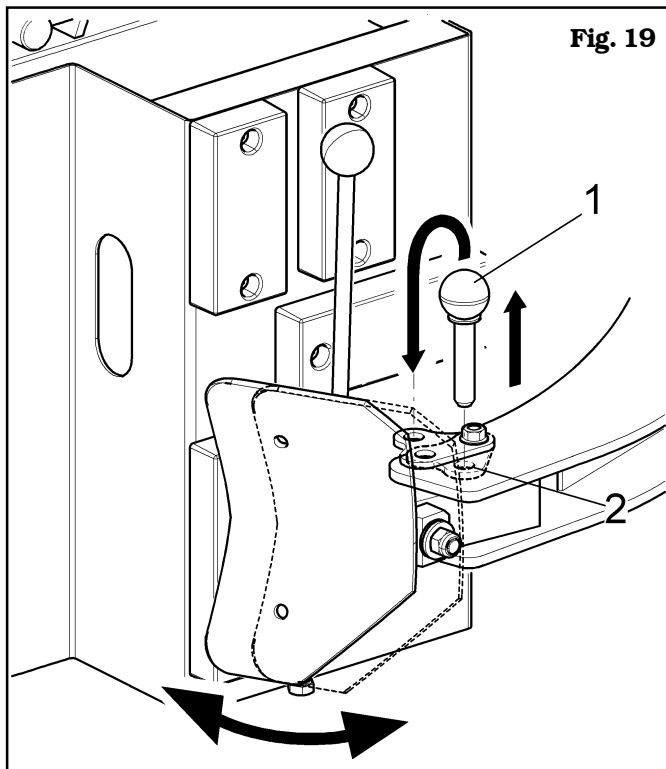
**NEVER INSERT ANY PART OF YOUR BODY BETWEEN THE BEAD BREAKER TOOL AND THE TYRE, OR BETWEEN THE TYRE AND THE WHEEL SUPPORT.**

### 12.3.1 Bead breaking tool with double joint (on demand)

The bead breaking tool is equipped with a double joint (**Fig. 19**) that allows, during the bead breaking phase, to optimize the relative position between the vane and the bead of the tyre inserting the joint between the vane and the edge of the rim.

If the machine is utilized with rims that have protected edges or depressed tyres and/or tyres with heavy thickness, it's recommended to place the vane-joint so that the hole (**Fig. 19 pos. 2**) can be utilized.

To change the position of the vane on the joint extract the pin (**Fig. 19 pos. 1**) from the hole in which it is inserted, turn the vane until the required hole corresponds to the hole placed on the joint, then insert the pin (**Fig. 19 pos. 1**) again into its new seat.

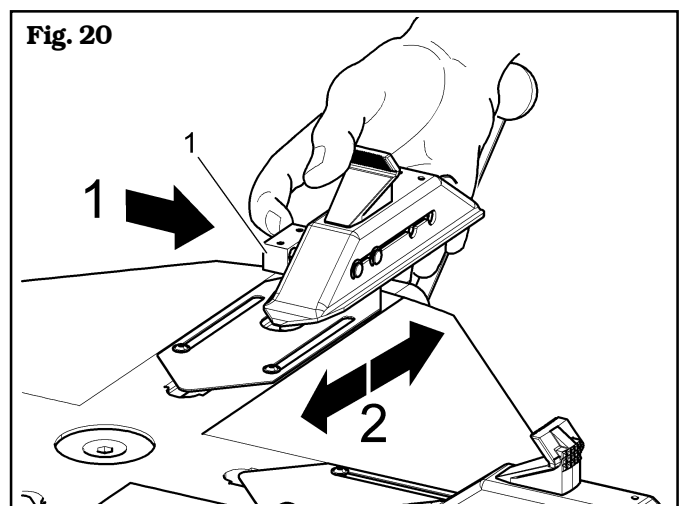
**Fig. 19**

### 12.4 Clamping the wheel on 18" - 20" - 22" - 24" - 26" - 28" chuck

The wheels must be clamped both from the inside and from the outside compared to the edge of the rim.

In order to carry out the clamping of the wheel from the inside: place the 4 self-centering jaws by using the appropriate levers (**Fig. 20 pos. 1**) in correspondence to the required clamping range.

- Close the turntable clamps, if open, by operating the relative pedal.
- Place the wheel on the turntable.
- Press the pedal to open the clamps, until the wheel is completely locked in place.
- Check that the rim is clamped and centred correctly to ensure that the rim will not slip during the operations which follow.

**Fig. 20**

In order to carry out the clamping of the wheel from the outside: place the 4 self-centering jaws by using the appropriate levers (**Fig. 20 pos. 1**) in correspondence to the required clamping range.

Open the self-centering jaws and place them close to the diameter of the rim to be clamped.

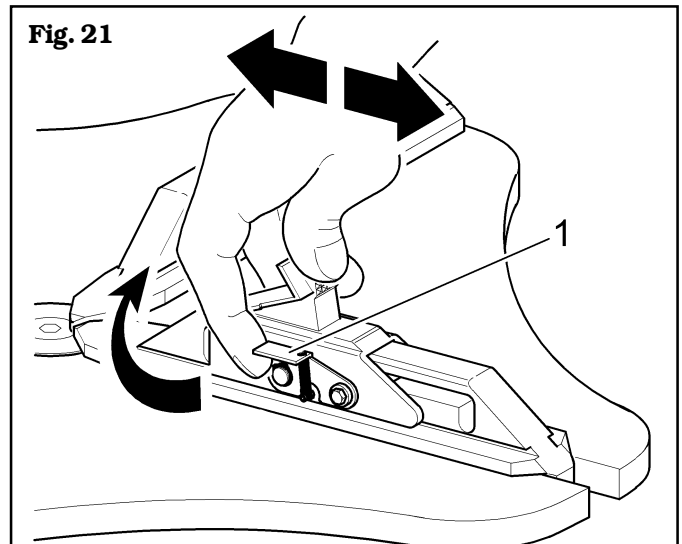
- Place the wheel on the turntable.
- Close the clamps, taking care that they engage the edge of the rim.

### 12.5 Clamping the wheel on 30" chuck

The wheels must be clamped both from the inside and from the outside compared to the edge of the rim.

In order to carry out the clamping of the wheel from the inside: place the 4 self-centering jaws by using the appropriate levers (**Fig. 21 pos. 1**) in correspondence to the required clamping range.

- Close the turntable clamps, if open, by operating the relative pedal.
- Place the wheel on the turntable.
- Press the pedal to open the clamps, until the wheel is completely locked in place.
- Check that the rim is clamped and centred correctly to ensure that the rim will not slip during the operations which follow.

**Fig. 21**

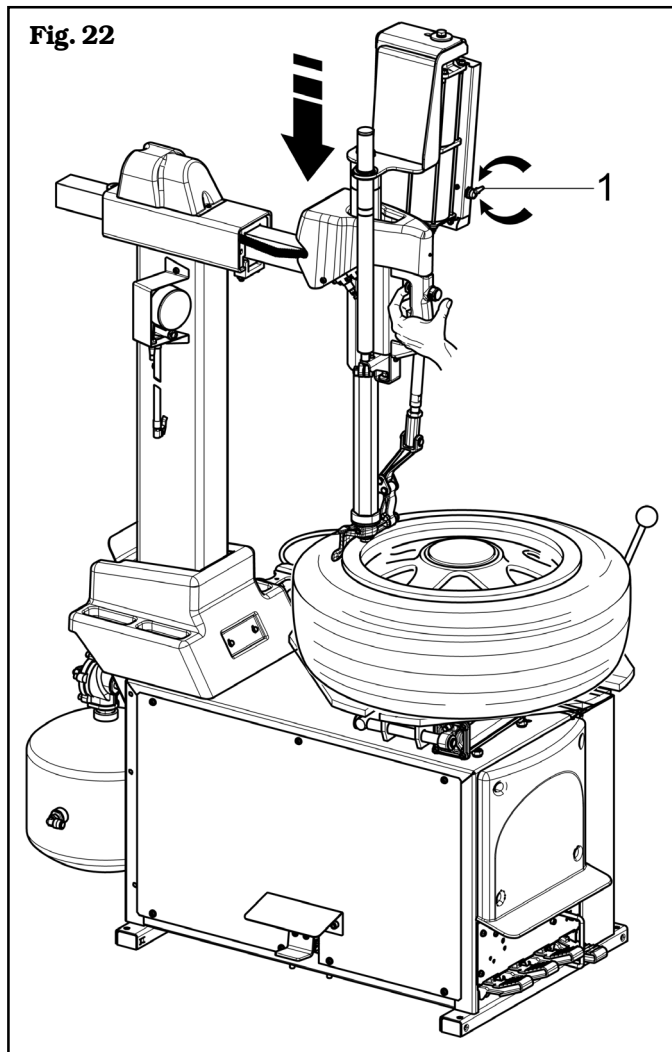
In order to carry out the clamping of the wheel from the outside: place the 4 self-centering jaws by using the appropriate levers (**Fig. 21 pos. 1**) in correspondence to the required clamping range.

Open the self-centering jaws and place them close to the diameter of the rim to be clamped.

- Place the wheel on the turntable.
- Close the clamps, taking care that they engage the edge of the rim.

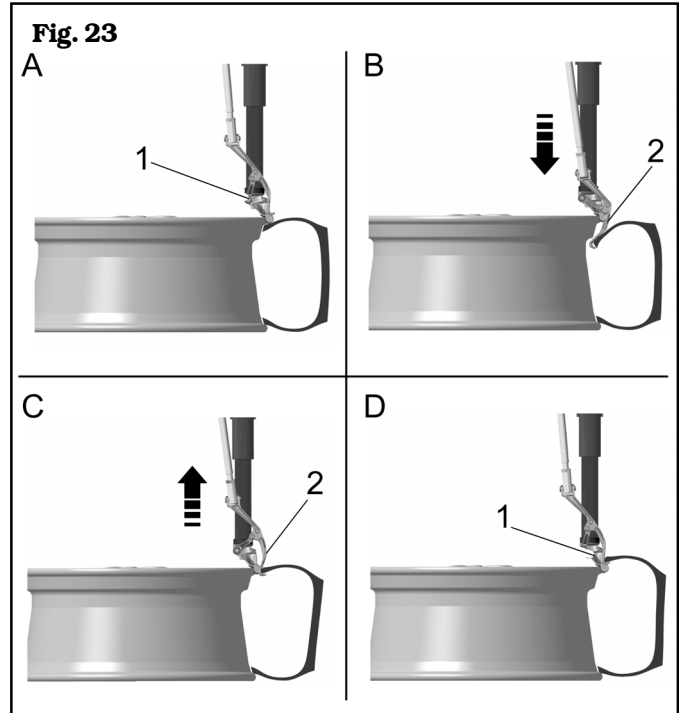
**12.6 Demounting the tyre**

After clamping the wheel, the tyre is demounted following the instructions given below, with reference to **Fig. 22**.



1. Press the rotation pedal to turn the wheel clockwise until the insert of the valve has reached the "1 o'clock" position.
2. Unlock the arm using the push-button located on the rod handle taking it to the 3<sup>rd</sup> tripping (see **Fig. 17**) and releasing the arms.
3. Place the demounting/mounting arm on the external edge of the rim (**Fig. 23A pos. 1**) pushing until the 1<sup>st</sup> "tripping" the push-button (**Fig. 17**).
4. Lock it in position activating again the push-button (**Fig. 17**) until the 2<sup>nd</sup> "tripping".

5. Through the valve lever drive (**Fig. 22 pos. 1**), the pneumatic cylinder activates the hook descent (mobile part) (**Fig. 23B pos. 2**) which thread its way between the edge of the rim and the tyre grabbing the bead of the tyre itself. Then, reversing always through the lever (**Fig. 22 pos. 1**) the cylinder direction, the hook (**Fig. 23C pos. 2**) rises up again and thanks to its movement the tyre steps over the edge of the rim and places itself for the demounting operation on the fixed part of the tool (**Fig. 22D pos. 1**).



6. Press the rotation pedal to turn the wheel clockwise until the whole bead has been lifted from the rim.
7. Lift the tyre and repeat the operation on the other bead.

If the motor slows down or stops during tyre demounting and mounting, make the following checks:

- Check that the bead has been lubricated.
- Check that the bead has been pushed into the well.
- Check that the right side of the rim has been chosen for demounting or mounting the tyre.
- Check that the rim well is not off-centre.

### 12.7 Hexagonal arm adjustment instructions

In order to adjust the descent speed, please follow the instructions listed below.

a) Regulators (**Fig. 24 pos. A and pos. D**) are pre-calibrated at the warehouse.

b) Unscrew nut (**Fig. 24 pos. C**).

Press and release the pushbutton (**Fig. 24 pos. 1**) placed on the handle repeatedly in order to move the hexagonal shaft downward and upward and set the speed through nut (**Fig. 24 pos. D**) so that the descent of the hexagon is slower than the rising or equal.

To slow the descent, rotate nut (**Fig. 24 pos. D**) anti-clockwise.

To speed the descent, rotate nut (**Fig. 24 pos. D**) clockwise.

c) When regulation is done, lock the arm in an intermediate position acting the button (**Fig. 24 pos. 1**), then unlock the arm to the rest position. Start the arm descent pressing the button (**Fig. 24 pos. 1**) and check if the speed descent is the same as previously scheduled.

d) Screw nut (**Fig. 24 pos. C**).

e) To vary the tool arm rising speed, please follow the instructions listed below:

Unscrew nut (**Fig. 24 pos. B**).

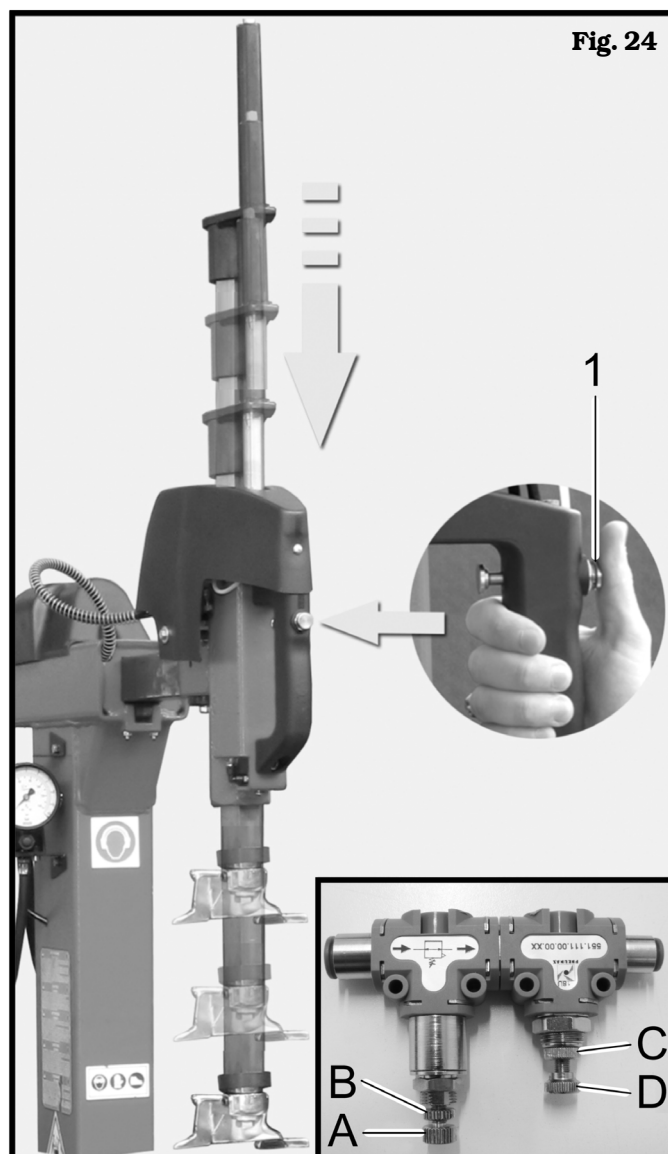
Press and release the pushbutton (**Fig. 24 pos. 1**) placed on the handle repeatedly in order to move the hexagonal shaft downward and upward and set the speed through nut (**Fig. 24 pos. A**).

To slow the rising, rotate nut (**Fig. 24 pos. A**) anti-clockwise.

To speed the rising, rotate nut (**Fig. 24 pos. A**) clockwise.

f) Check if the speed descent is the same as previously set. If not, please repeat operations **b)**, **c)** and **d)**.

g) Screw nut (**Fig. 24 pos. B**).

**Fig. 24**

### 12.8 Mounting the tyre

To mount the tyre, proceed as follows:

1. Lubricate the tyre beads.
2. Place the tyre on the rim and place the mounting tool on the outer edge of the rim.
3. Place the edge of the lower bead on the left-hand part of the mounting tool and turn the turntable clockwise.
4. Repeat the operation on the upper bead, taking care first to position the valve insert at "5-6 o'clock".

### 12.9 Tyre inflation with pressure gauge (on demand)

Connect the inflation device to the tyre valve and inflate the tyre using the left pedal.

Well lubricated beads and rims make the beading in and inflation much safer and easier.



**A LIMITATION DEVICE IS PRESENT IN THE AIR SUPPLY LINE FOR THE TYRE INFLATION ( $4,2 \pm 0,2$  BAR/ 60 PSI).**

**In the case the beads are not seated at  $4,2 \pm 0,2$  bar, release all the air from the wheel, remove it from the tyre changer and put it in a safety case to complete the inflation procedure.**

### 12.10 Tubeless tyre inflation device

Some types of tyres can be difficultly inflated if the beads are not in contact with the rim.

The tubeless inflating device, assembled only on some models, supplies air at high pressure to the selfcentering chuck nozzles (**Fig. 25 pos. 1**) and therefore facilitates the positioning of the beads against the rim starting the normal inflation of the tyre.

In order to carry out the inflation of the tyre on these models follow these indications:

- Connect the inflation terminal to the valve of the tyre
- Lift the lower bead while the pedal, placed on the left side of the machine, is pushed at its second stage, supplying that way the required air jet
- Go on inflating the tyre until the required pressure is reached with the lateral pedal pushed on its first stage.



**IN ORDER TO ALLOW THE AIR JET TO BREAK BOTH THE BEADS, DO NOT KEEP THE BEAD LIFTED FORCING IT.**

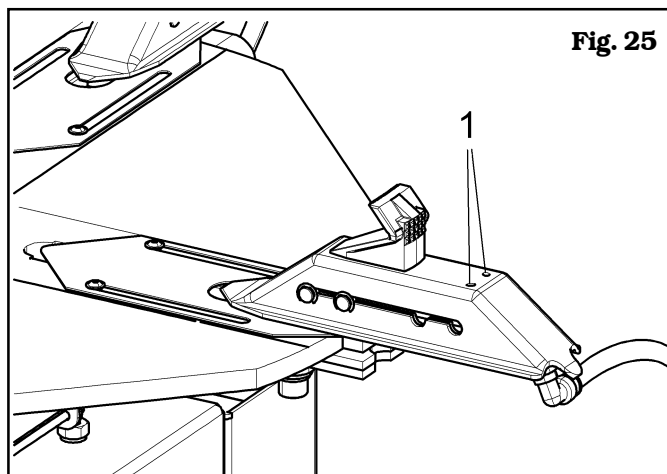


Fig. 25

### 13.0 ROUTINE MAINTENANCE



**BEFORE CARRYING OUT ANY ROUTINE MAINTENANCE PROCEDURE, DISCONNECT THE MACHINE FROM ITS POWER SUPPLY SOURCES, TAKING SPECIAL CARE OF THE ELECTRICAL PLUG/SOCKET CONNECTION.**

To guarantee the efficiency and correct functioning of the machine, it is essential to carry out daily or weekly cleaning and weekly routine maintenance, as described below.

Cleaning and routine maintenance must be conducted by authorized personnel and according to the instructions given below.

- Disconnect the mains power supply before starting any cleaning or routine maintenance operations.
- Periodically check the calibration of lubricator in pressure/oiler gauge unit: one oil drop every four complete strokes of self-centering chuck jaws.
- Remove deposits of tyre powder and other waste materials with a vacuum cleaner.



**BEFORE CARRYING OUT ANY MAINTENANCE OPERATIONS, MAKE SURE THERE ARE NO WHEELS CLAMPED ON THE CHUCKING TABLE AND THAT ALL SUPPLIES TO THE MACHINE HAVE BEEN DISCONNECTED.**

#### DO NOT BLOW IT WITH COMPRESSED AIR.

- Do not use solvents to clean the pressure regulator.
- The conditioning unit is equipped with an automatic vacuum-operated drain therefore it requires no manual intervention by the operator (see **Fig. 26**).

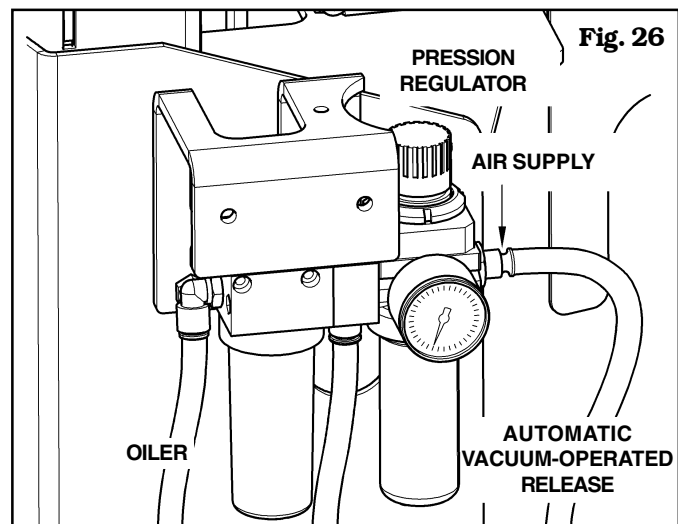


Fig. 26



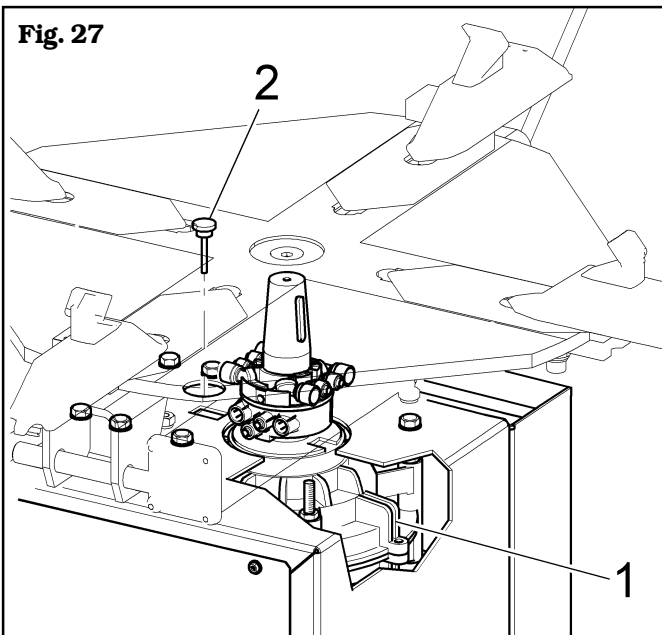
**IN ORDER TO ALLOW A LONGER LIFE OF THE FILTER AND OF ALL MOVING PNEUMATIC DEVICES, YOU HAVE TO MAKE SURE THAT THE SUPPLIED AIR IS:**

- **EXEMPT FROM THE LUBRICATING OIL OF THE COMPRESSOR;**
- **EXEMPT FROM HUMIDITY;**
- **EXEMPT FROM IMPURITY.**

- Every **week** and/or when necessary, top up the oil tank using the filler hole provided closed by a cap or screw on the lubricator filter.

**N.B: This operation should not be carried out by unscrewing the cup of the lubricator filter.**

- The use of synthetic oil might damage the pressure regulator filter.
- Replace worn pieces (tool supports, rubber pads, lever guard, mounting tool) immediately.
- Periodically (preferably once a month) make a complete check on the controls, ensuring that they provide the specified actions.
- **Every week** check operation of the safety device.
- **Periodically** (at least each 100 working hours) check the lubricant level into the reduction unit (**Fig. 27 pos. 1**) removing the plug (**Fig. 27 pos. 2**) through the spy hole prearranged on the frame.

**Fig. 27**

**THE MANUFACTURER DOES NOT ACCEPT ANY DAMAGE RESULTING FROM THE FAILURE TO OBSERVE THE ABOVE INSTRUCTION, AND SUCH FAILURE COULD INVALIDATE THE WARRANTY!!**

### 13.1 Lubricants

Special lubricant for spindle movement control gearbox. Use **ESSO GEAR OIL GX140** (for SL641Q and SL645Q version) and **ESSO GEAR OIL GX90** (for SL641D and SL645D version).

Lubricate slides, screws/nut screws or racks and pinion with a soft brush using lubricant of **ESSO GP** type.



**ANY DAMAGE TO THE MACHINE DEVICES RESULTING FROM THE USE OF LUBRICANTS OTHER THAN THOSE RECOMMENDED IN THIS MANUAL WILL RELEASE THE MANUFACTURER FROM ANY LIABILITY.**





**14.0 TROUBLESHOOTING**

Possible troubles which might occur to the tyre-changer are listed below. The manufacturer disclaims all responsibility for damages to people, animals or objects due to improper operation by non-unauthorised personnel. In case of trouble, call Technical Service Department for instructions on how to service and/or adjust the machine in full safety to avoid any risk of damage to people, animals or objects.

In an emergency and before maintenance, set the main switch to "0" and lock it in this position.



**CONTACT AUTHORISED TECHNICAL SERVICE  
 Do not try and service alone.**

Problem	Possible cause	Remedy
Turntable does not hold/clamp the wheel.	1. Compressed air supply pressure below 6 Bar. 2. A turntable component has broken. 3. Worn clamps.	1. Check air supply pressure. 2. Call the after-sales service. 3. Call the after-sales service. 
No movements take place when the pedals are pressed.	1. Power supply failure. 2. Pedal unit not set correctly.	1. Check power supply. 2. Call the after-sales service. 
Nozzles do not deliver air when the inflation pedal is pressed. (Only for FI version)	Inflation pedal unit not set correctly.	Call the after-sales service. 
Arms do not lock when column handle button is pressed.	1. Handle valve not set correctly. 2. Air leaking from clamping cylinders.	1. Call the after-sales service. 2. Call the after-sales service. 

**15.0 TECHNICAL DATA****15.1 SL641Q technical data**

Recommended

electric supply: ..... three-phase **230/400V (50 Hz)**  
 Maximum wheel diameter ..... **1050 mm / 41"**  
 Wheel max. width ..... **356 mm / 14"**  
 Exercised pressure ..... **8-10 bar**  
 Bead-breaker force (10bar) ..... **30000N**  
 Gear noise ..... **< 80 dB (A)**

**15.2 SL641D technical data**

Recommended

electric supply: ..... monophase **200/265V (50 - 60 Hz)**  
 Maximum wheel diameter ..... **1050 mm / 41"**  
 Wheel max. width ..... **356 mm / 14"**  
 Exercised pressure ..... **8-10 bar**  
 Bead-breaker force (10bar) ..... **30000N**  
 Gear noise ..... **< 80 dB (A)**

**15.3 SL645Q technical data**

Recommended

electric supply: ..... three-phase **230/400V (50 Hz)**  
 Maximum wheel diameter ..... **1143 mm / 45"**  
 Wheel max. width ..... **407 mm / 16"**  
 Exercised pressure ..... **8-10 bar**  
 Bead-breaker force (10bar) ..... **30000N**  
 Gear noise ..... **< 80 dB (A)**

**15.4 SL645D technical data**

Recommended

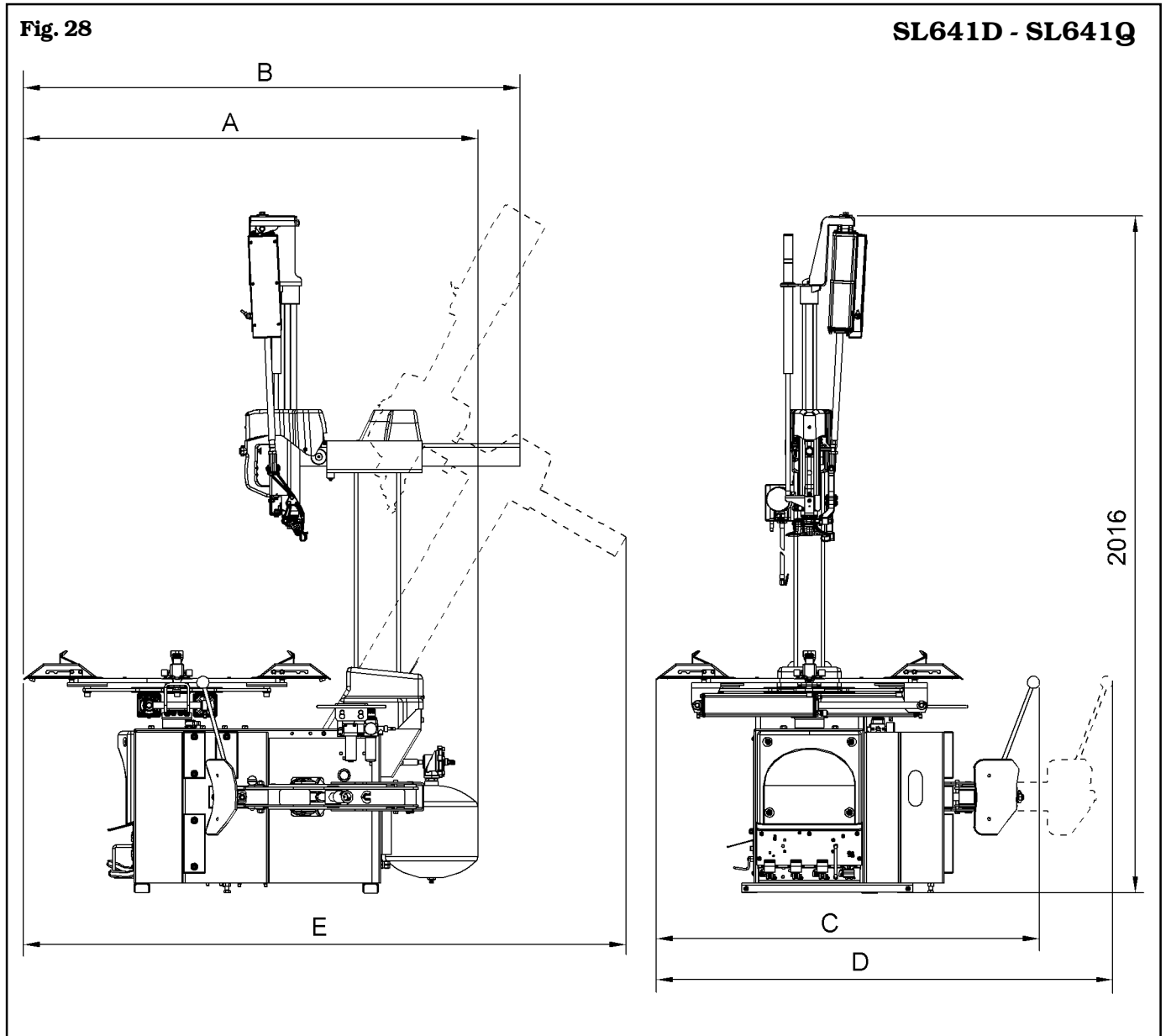
electric supply: ..... monophase **200/265V (50 - 60 Hz)**  
 Maximum wheel diameter ..... **1143 mm / 45"**  
 Wheel max. width ..... **407 mm / 16"**  
 Exercised pressure ..... **8-10 bar**  
 Bead-breaker force (10bar) ..... **30000N**  
 Gear noise ..... **< 80 dB (A)**

<b>Model</b>	<b>Internal clamping</b>	<b>External clamping</b>	<b>Motor power</b>	<b>Mandrel rotation max. speed</b>	<b>Net weight</b>
SL641Q.18	12" - 20,5"	10" - 18"	0,8/1,1 kW	6,5/13 rpm	232
SL641Q.20	12" - 22,5"	10" - 20"	0,8/1,1 kW	6,5/13 rpm	234
SL641Q.22	13" - 24,5"	11" - 22"	0,8/1,1 kW	6,5/13 rpm	246
SL641Q.24	12" - 26,5"	10" - 24"	0,8/1,1 kW	6,5/13 rpm	252
SL641Q.20FI	12" - 22,5"	10" - 20"	0,8/1,1 kW	6,5/13 rpm	254
SL641Q.22FI	13" - 24,5"	11" - 22"	0,8/1,1 kW	6,5/13 rpm	266
SL641Q.24FI	12" - 26,5"	10" - 24"	0,8/1,1 kW	6,5/13 rpm	272
SL641D.18	12" - 20,5"	10" - 18"	0,75 kW	15 rpm	232
SL641D.20	12" - 22,5"	10" - 20"	0,75 kW	15 rpm	234
SL641D.22	13" - 24,5"	11" - 22"	0,75 kW	15 rpm	246
SL641D.24	12" - 26,5"	10" - 24"	0,75 kW	15 rpm	252
SL641D.20FI	12" - 22,5"	10" - 20"	0,75 kW	15 rpm	254
SL641D.22FI	13" - 24,5"	11" - 22"	0,75 kW	15 rpm	266
SL641D.24FI	12" - 26,5"	10" - 24"	0,75 kW	15 rpm	272



<b>Model</b>	<b>Internal clamping</b>	<b>External clamping</b>	<b>Motor power</b>	<b>Mandrel rotation max. speed</b>	<b>Net weight</b>
SL645D.18	12" - 20,5"	10" - 18"	0,75 kW	15 rpm	286
SL645D.20	12" - 22,5"	10" - 20"	0,75 kW	15 rpm	288
SL645D.22	13" - 24,5"	11" - 22"	0,75 kW	15 rpm	286
SL645D.26	12" - 28,5"	10" - 26"	0,75 kW	15 rpm	293
SL645D.28	12" - 30,5"	10" - 28"	0,75 kW	15 rpm	288
SL645D.30	10" - 34"	8" - 30"	0,75 kW	15 rpm	293
SL645D.20FI	12" - 22,5"	10" - 20"	0,75 kW	15 rpm	298
SL645D.22FI	13" - 24,5"	11" - 22"	0,75 kW	15 rpm	296
SL645D.26FI	12" - 28,5"	10" - 26"	0,75 kW	15 rpm	303
SL645D.28FI	12" - 30,5"	10" - 28"	0,75 kW	15 rpm	298
SL645D.30FIT	10" - 34"	8" - 30"	0,75 kW	15 rpm	303
SL645Q.18	12" - 20,5"	10" - 18"	0,8/1,1 kW	6,5/13 rpm	263
SL645Q.20	12" - 22,5"	10" - 20"	0,8/1,1 kW	6,5/13 rpm	273
SL645Q.22	13" - 24,5"	11" - 22"	0,8/1,1 kW	6,5/13 rpm	288
SL645Q.26	12" - 28,5"	10" - 26"	0,8/1,1 kW	6,5/13 rpm	288
SL645Q.28	12" - 30,5"	10" - 28"	0,8/1,1 kW	6,5/13 rpm	288
SL645Q.30	10" - 34"	8" - 30"	0,8/1,1 kW	6,5/13 rpm	293
SL645Q.20FI	12" - 22,5"	10" - 20"	0,8/1,1 kW	6,5/13 rpm	283
SL645Q.22FI	13" - 24,5"	11" - 22"	0,8/1,1 kW	6,5/13 rpm	298
SL645Q.26FI	12" - 28,5"	10" - 26"	0,8/1,1 kW	6,5/13 rpm	298
SL645Q.28FI	12" - 30,5"	10" - 28"	0,8/1,1 kW	6,5/13 rpm	298
SL645Q.30FIT	10" - 34"	8" - 30"	0,8/1,1 kW	6,5/13 rpm	303

### 15.5 Dimensions

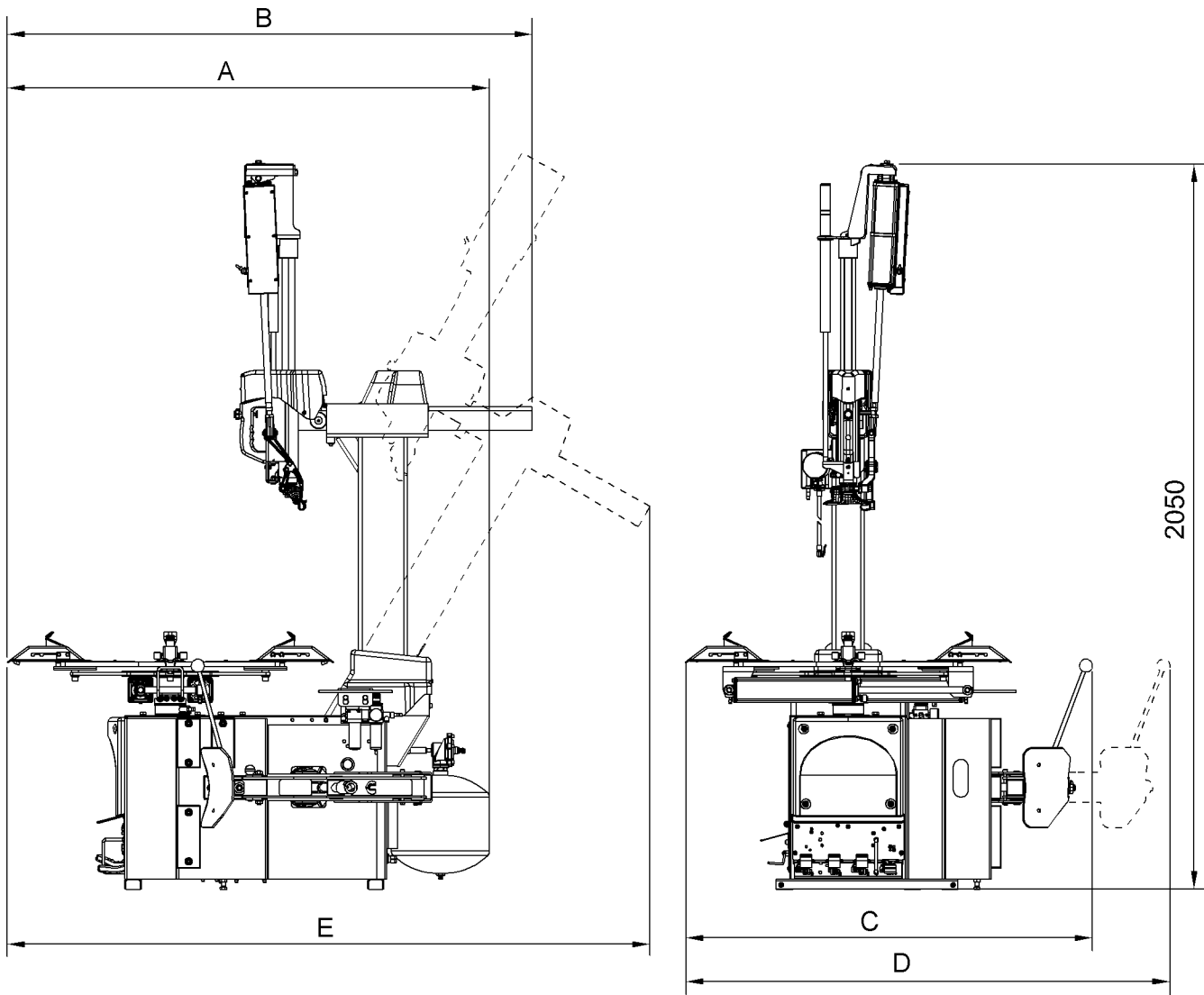


Model	SL641D.18 SL641Q.18	SL641D.20 SL641Q.20 SL641D.20FI SL641Q.20FI	SL641D.22 SL641Q.22 SL641D.22FI SL641Q.22FI	SL641D.24 SL641Q.24 SL641D.24FI SL641Q.24FI
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<b>A (mm)</b> (only for FI version)	-	1395	1420	1450
<b>B (mm)</b>	1408	1433	1458	1476
<b>C (mm)</b>	1135	1160	1185	1215
<b>D (mm)</b>	1560	1585	1610	1640
<b>E (mm)</b>	1773,5	1798,5	1823,5	1885

Fig. 29

SL645D - SL645Q



Model	SL645D.18 SL645Q.18	SL645D.20 SL645Q.20 SL645D.20FI SL645Q.20FI	SL645D.22 SL645Q.22 SL645D.22FI SL645Q.22FI	SL645D.26 SL645Q.26 SL645D.26FI SL645Q.26FI	SL645D.28 SL645Q.28 SL645D.28FI SL645Q.28FI	SL645D.30 SL645Q.30 SL645D.30FI SL645Q.30FI
-------	------------------------	--	--	--	--	--

<b>A (mm)</b> (only for FI version)	-	1395	1420	1480	1540	1540
<b>B (mm)</b>	1499	1523,5	1549	1610	1670	1670
<b>C (mm)</b>	1135	1160	1185	1245	1305	1305
<b>D (mm)</b>	1560	1585	1610	1670	1730	1730
<b>E (mm)</b>	1879,5	1904,5	1928,5	1989,5	2050	2050

## 16.0 STORING

If storing for long periods (6 months or longer) disconnect the main power supply and take measures to protect the machine from dust build-up. Lubricate parts that could be damaged from drying out. When putting the machine back into operation replace the rubber pads and the mounting tool. Moreover, carry out a verification of machine perfect functioning.

## 17.0 SCRAPPING

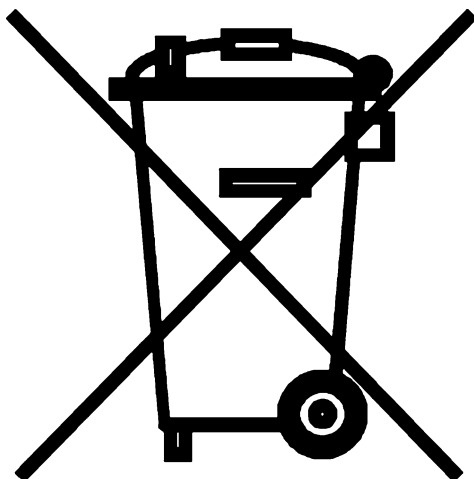
When the decision is taken not to make further use of the machine, it is advisable to make it inoperative by removing the connection pressure hoses.

The machine is to be considered as special waste and should be dismantled into homogeneous parts.

Dispose of it in accordance with current legislation.

### 17.1 *Instructions for the correct management of waste from electric and electronic equipment (in italian RAEE) according to legislative decree 151/05*

- RAEE may not be disposed of as urban waste.
- These kinds of waste must be collected separately and taken to dedicated collection and recycling centres, according to OEM instructions and abiding by national laws.
- The above symbol on the product means that anyone wishing to dispose of the waste must follow the above-mentioned instructions.
- Any incorrect management of the waste or its parts or its abandonment outside dedicated areas could contaminate the environment, owing to the dangerous substances contained in it, and cause damage to human health, flora and fauna.
- National laws provide for sanctions against those responsible for illegal disposal or abandonment of waste from electric and electronic equipment.

**Fig. 30**

## 18.0 REGISTRATION PLATE DATA



**The validity of the Conformity Declaration enclosed to this manual is also extended to products and/or devices the machine model object of the Conformity Declaration can be equipped with.**



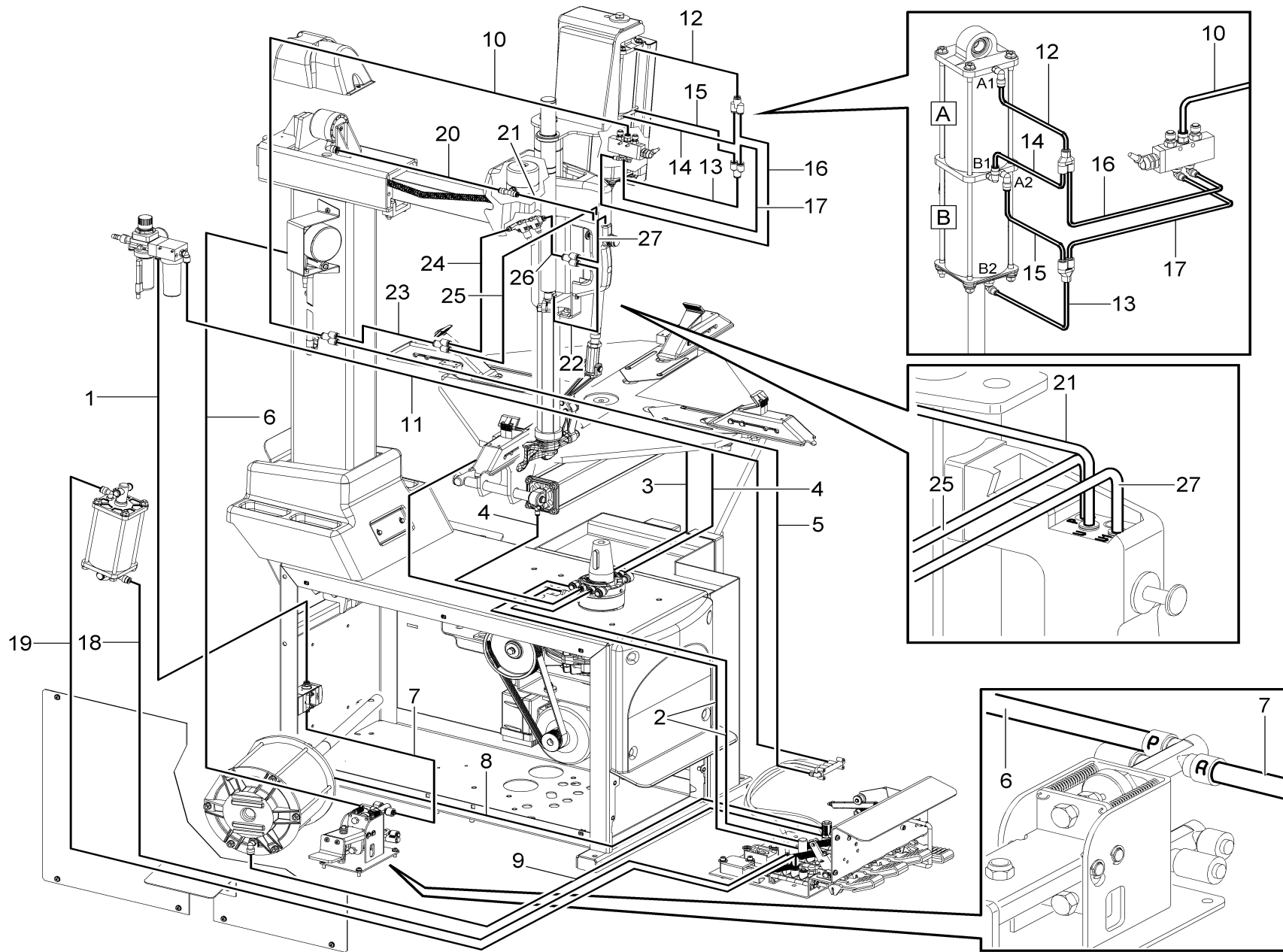
**CAUTION: DO NOT TAMPER WITH, CARVE, CHANGE OR REMOVE THE IDENTIFICATION PLATE; DO NOT COVER IT WITH PANELS, ETC., SINCE IT MUST ALWAYS BE VISIBLE.**

**Said plate must always be kept clean.**

*WARNING: Should the plate be accidentally damaged (removed from the machine, damaged or even partially illegible) inform immediately the manufacturer.*

## 19.0 FUNCTIONAL DIAGRAMS

Here follows a list of the machine functional diagrams.



**Butler**

ENGINEERING & MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE  
 LISTE DES PIÈCES DÉTACHÉES - LISTA DE PIEZAS

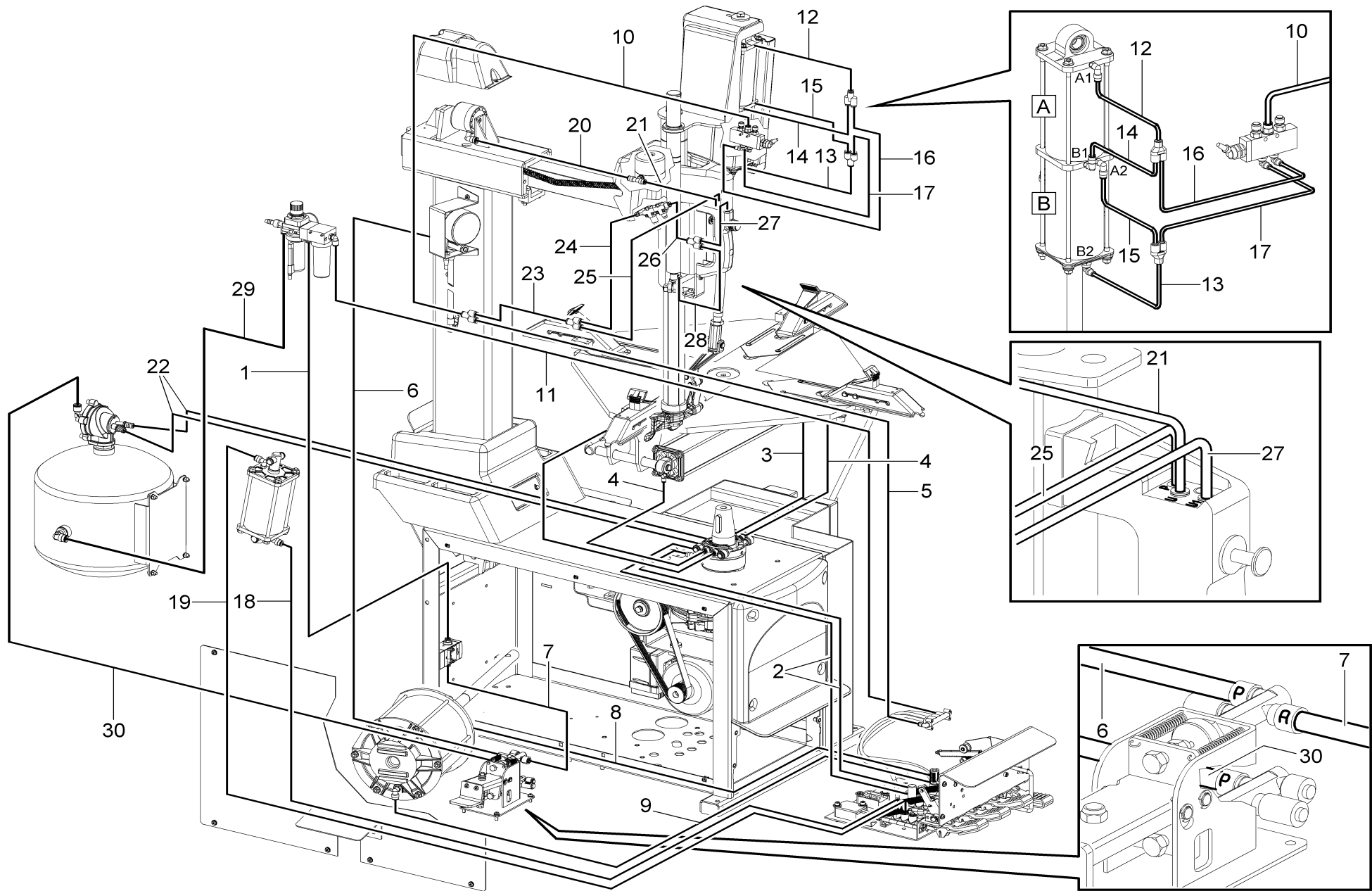
**Tavola A - Rev. 1**

CIRCUITO PNEUMATICO MACCHINA AUTOMATICA  
 PNEUMATIC CIRCUIT OF AUTOMATIC MACHINE  
 PNEUMATISCHER KREISLAUF AUTOMATISCHE MASCHINE  
 CIRCUIT PNEUMATIQUE MACHINE AUTOMATIQUE  
 CIRCUITO NEUMATICO MAQUINA AUTOMATICA

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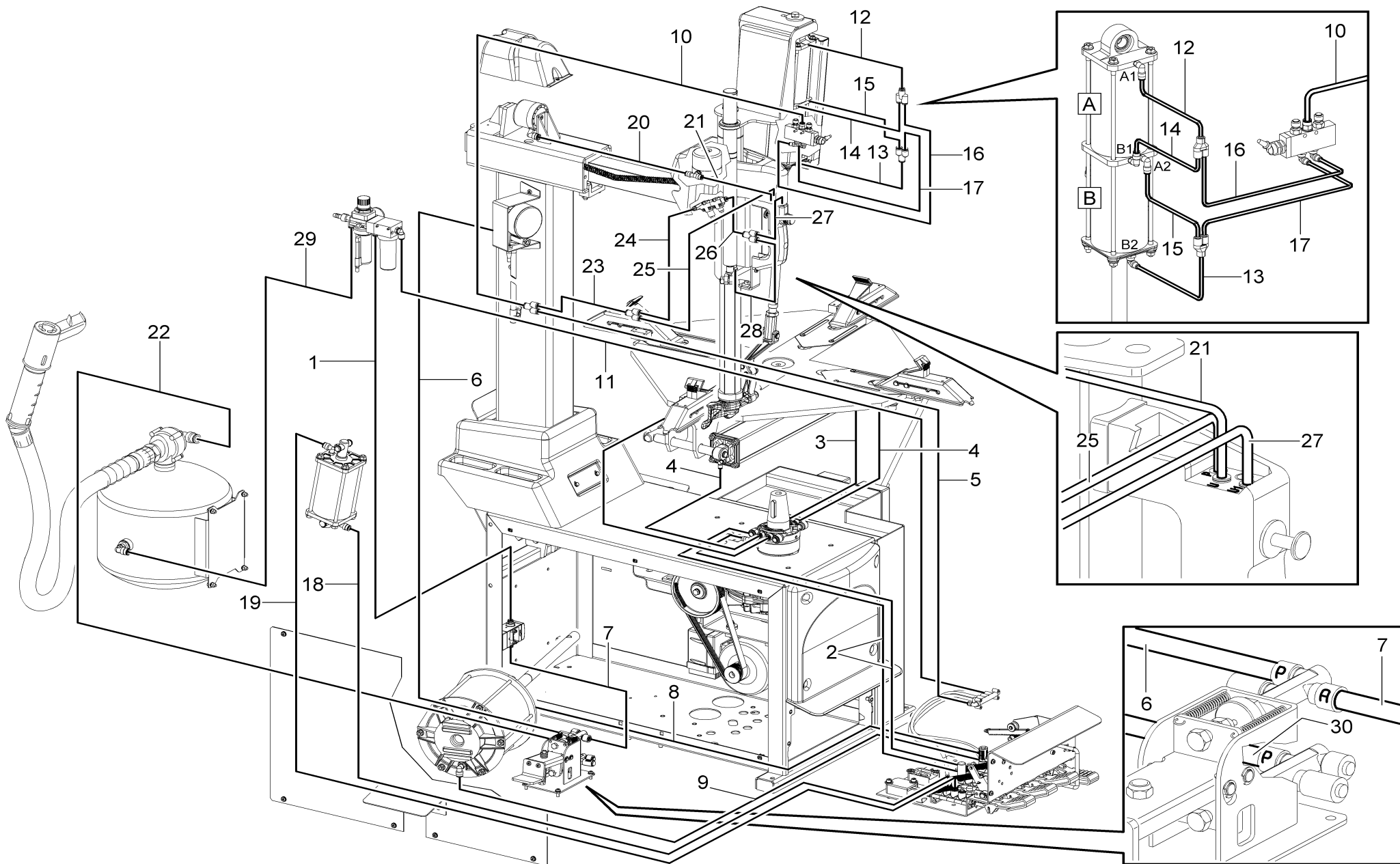
SL641 - SL645













## 7300-R010-1\_B

SL641D.XX - SL641D.XXFI -  
SL641Q.XX - SL641Q.XXFI -  
SL645D.XX - SL645D.XXFI -  
SL645Q.XX - SL645Q.XXFI -  
SL645D.30FIT - SL645Q.30FIT

**I** 20.0 LISTA DEI COMPONENTI

**GB** 20.0 LIST OF COMPONENTS

**D** 20.0 TEILELISTE

**F** 20.0 LISTE DES PIECES DETACHEES

**E** 20.0 LISTA DE PIEZAS



**GLI ESPLOSI SERVONO SOLO PER L'IDENTIFICAZIONE DELLE PARTI DA SOSTITUIRE. LA SOSTITUZIONE DEVE ESSERE EFFETTUATA DA PERSONALE PROFESSIONALMENTE QUALIFICATO.**



**THE DIAGRAMS SERVE ONLY FOR THE IDENTIFICATION OF PARTS TO BE REPLACED. THE REPLACEMENT MUST BE CARRIED OUT PROFESSIONALLY QUALIFIED PERSONNEL.**



**DIE ZEICHNUNGEN DIENEN NUR ZUR IDENTIFIZIERUNG DER ERSATZTEILE. DIE ERSETZUNG MUß DURCH QUALIFIZIERTES PERSONAL ERFOLGEN.**



**LES DESSINS NE SERVENT QU'À L'IDENTIFICATION DES PIÈCES À REMPLACER. LE REMPLACEMENT DOIT ÊTRE EFFECTUÉ PAR UN PERSONNE PROFESSIONNELLEMENT QUALIFIÉ.**



**LOS DIBUJOS EN DESPIECE SIRVEN ÚNICAMENTE PARA IDENTIFICAR LAS PIEZAS QUE DEBEN SUSTITUIRSE. LA SUSTITUCIÓN DE PIEZAS DEBE EFECTUARLA EXCLUSIVAMENTE PERSONAL PROFESIONALMENTE CUALIFICADO.**

- Per eventuali chiarimenti interpellare il più vicino rivenditore oppure rivolgersi direttamente a:
- For any further information please contact your local dealer or call:
- Im Zweifelsfall oder bei Rückfragen wenden Sie sich bitte an den nächsten Wiederverkäufer oder direkt an:
- Pour tout renseignement complémentaire s'adresser au revendeur le Plus proche ou directement à:
- En caso de dudas, para eventuales aclaraciones, póngase en contacto con el distribudor más próximo ó diríjase directamente a:

**BUTLER ENGINEERING & MARKETING S.p.A.** - Via Balduina, 5/7 - 42010 Rio Saliceto - (RE) Italy  
Phone (+39) 0522 647911 - Fax (+39) 0522 649760 - e-mail: Info@butler.it

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SOMMAIRE-SUMARIO**

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