ENGINEERING and MARKETING S.P.A.

7105-M002-10_B

KENDO.30LIGHT
KENDO.30LIGHTFI
KENDO.30S
KENDO.30SFI

INSTRUCTION MANUAL

GB TRANSLATION FROM THE ORIGINAL INSTRUCTIONS

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

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

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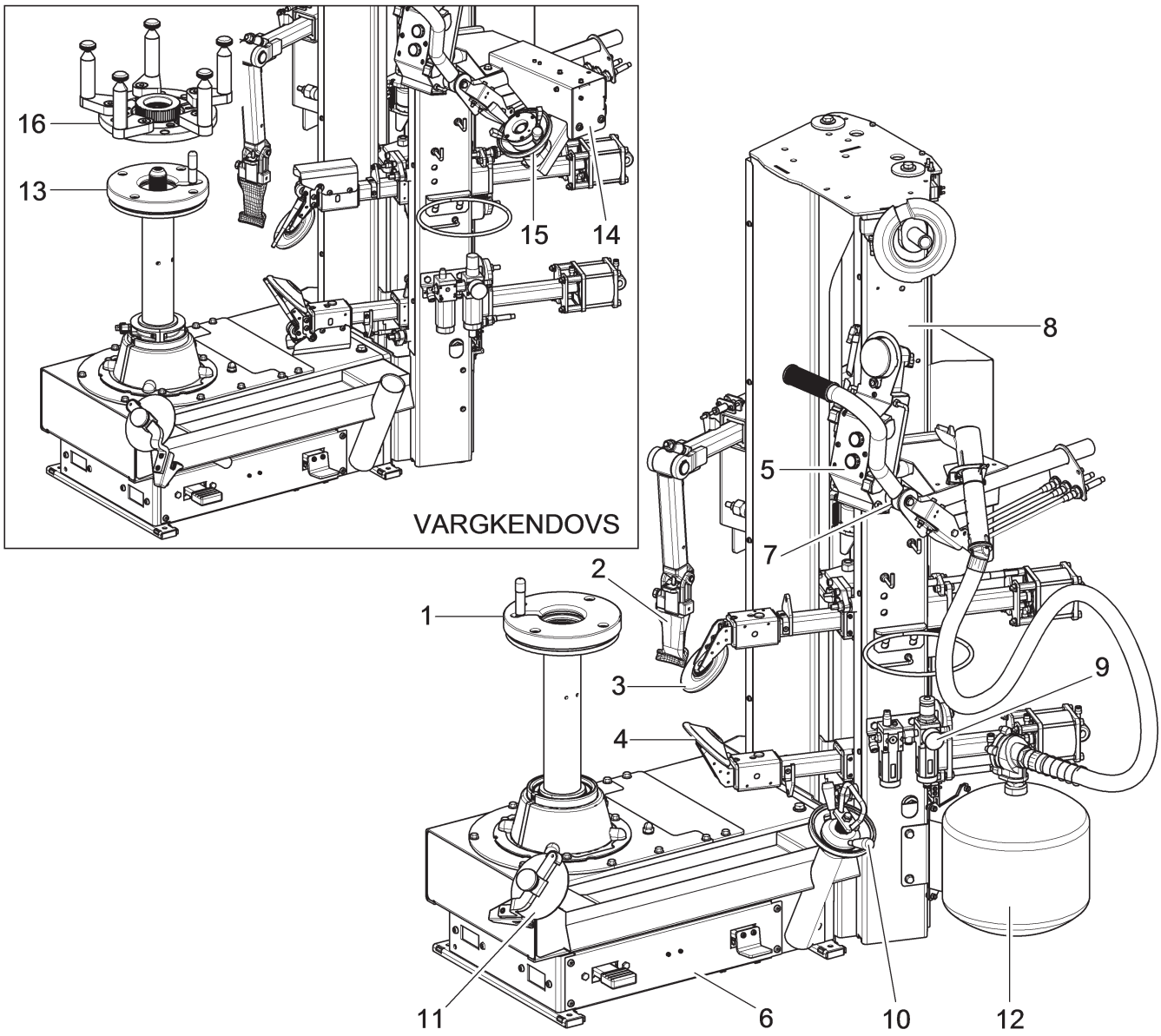
7105-M002-10_B - Rev. n. 10 (05/2019)

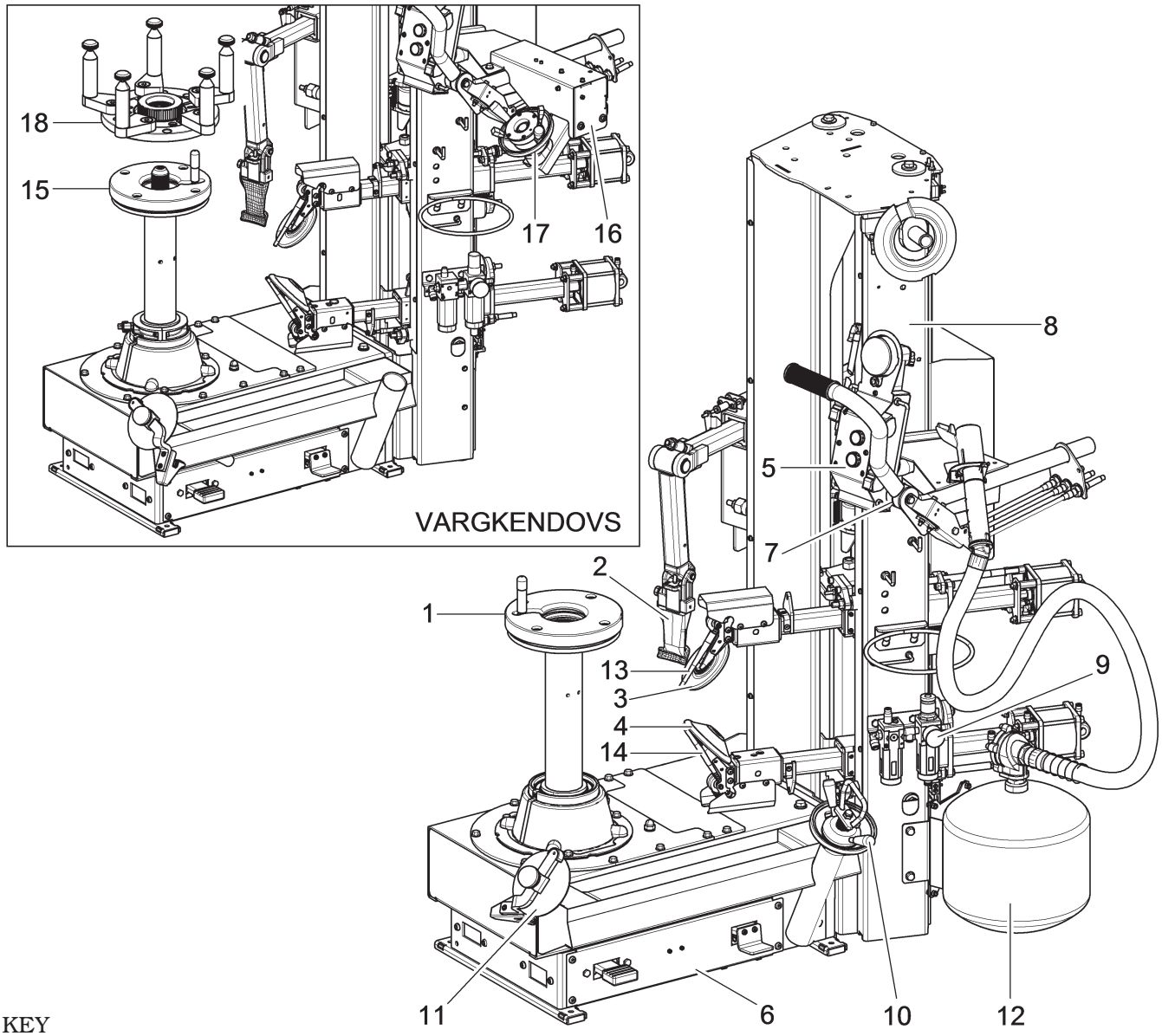
SUMMARY

FIG. 1 - KENDO.30LIGHT - KENDO.30LIGHTFI



KEY
1 –Mandrel
2 –Tool
3 –Upper bead breaker roll
4 –Lower bead breaker roll
5 –Control panel
6 –Pedalboard
7 –Cables handle
8 –Complete column
9 –Filter unit - pressure reducer
10 –Locking device
11 –Entrainer
12 –Tubeless inflation unit (only for KENDO.30LIGHTFI model)
13 –Mandrel (valid only for VARGKENDOVS - version with countersunk screw)
14 –Actuator support (valid only for VARGKENDOVS - version with countersunk screw)
15 –Locking ring nut (valid only for VARGKENDOVS - version with countersunk screw)
16 –G1000A150 - Universal flange for blind wheels (valid only for VARGKENDOVS - version with countersunk screw)

FIG. 2 - KENDO.30S - KENDO.30SFI



KEY

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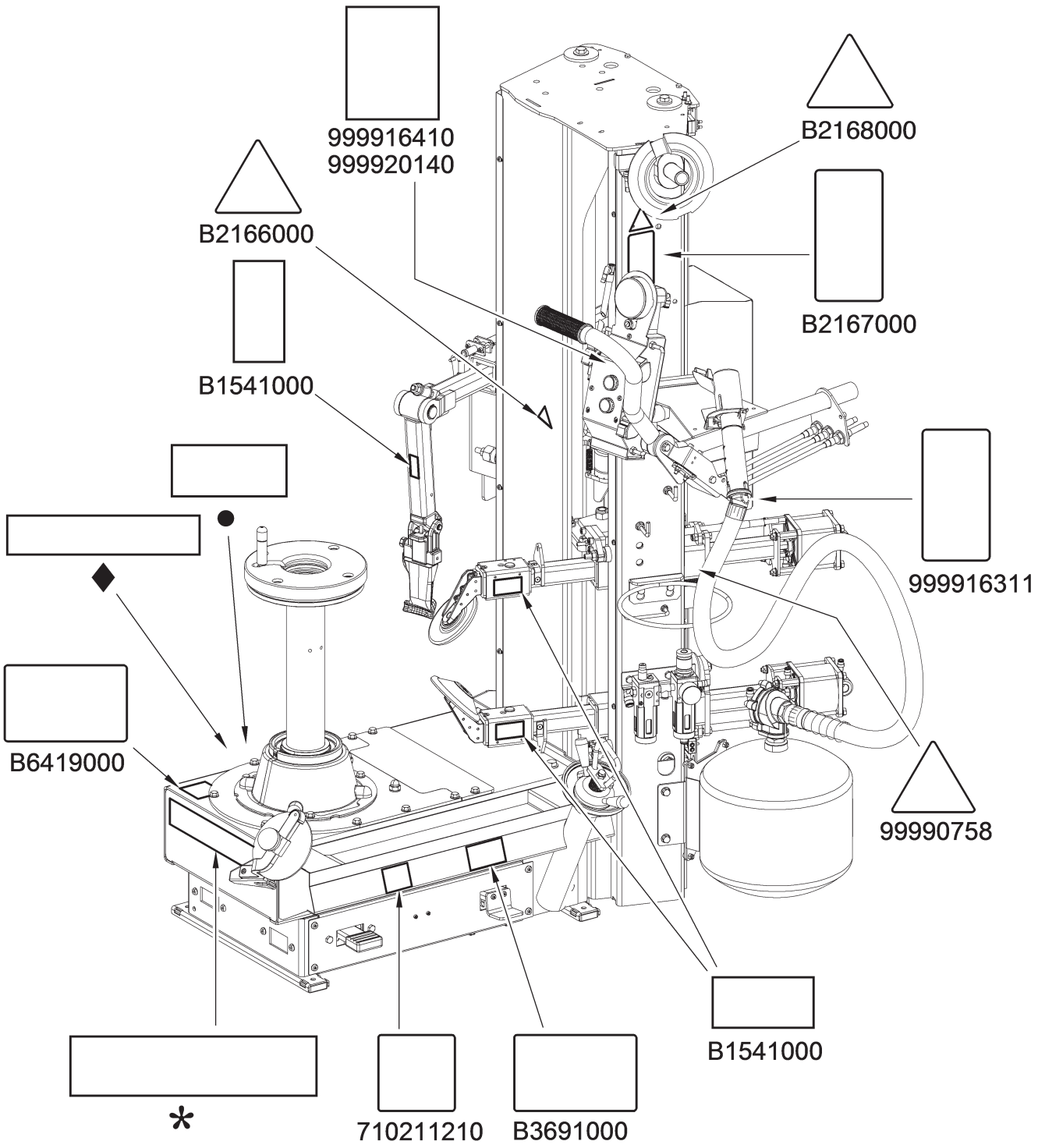
7 –Cables handle
8 –Complete column
9 –Filter unit - pressure reducer
10 –Locking device
11 –Entrainer
12 –Tubeless inflation unit (only for KENDO.30SFI model)
13 –Upper sensor
14 –Lower sensor
15 –Mandrel (valid only for VARGKENDOVS - version with countersunk screw)
16 –Actuator support (valid only for VARGKENDOVS - version with countersunk screw)
17 –Locking ring nut (valid only for VARGKENDOVS - version with countersunk screw)
18 –G1000A150 - Universal flange for blind wheels (valid only for VARGKENDOVS - version with countersunk screw)

SYMBOLS USED IN THE MANUAL

Symbols	Description
	Read instruction manual.
	Wear work gloves.
	Wear work shoes.
	Wear safety goggles.
	Mandatory. Operations or jobs to be performed compulsorily.
	Warning. Be particularly careful (possible material damages).

Symbols	Description
	Danger! Be particularly careful.
	Note. Indication and/or useful information.
	Move with fork lift truck or pallet truck.
	Lift from above.
	Technical assistance necessary. Do not perform any intervention.
	Caution: hanging loads.

INFORMATION PLATE LOCATION TABLE



Code numbers of plates	
B1541000	*Danger plate*
B1594000	*Date indicating plate*
B2166000	*Bead breaker danger plate*
B2167000	*Obligation to wear protective clothing plate*
B2168000	*Burst danger indicating plate*
B2170000	*Maximum inflation pressure rating plate*
B3691000	*Inflation pedal plate*
B4182000	*Electric motor specifications plate*
B4244000	*Rotating parts danger plate*
B6419000	*Mandrel rotation plate*
99990758	*Electricity danger plate*
710211210	*Rotation direction plate*
999916011	*Motoinverter plate*
999916311	*Rubbish skip label*
999916410	*Controls plate (only for KENDO.30LIGHT - KENDO.30LIGHTFI models)*
999920140	*Controls plate (only for KENDO.30S - KENDO.30SFI models)*
•	*Serial number plate*
*	*Machine nameplate*
♦	*Manufacturer name plate*

IF ONE OR MORE PLATES DISAPPEAR FROM THE MACHINE OR BECOMES DIFFICULT TO READ. REPLACE IT AND QUOTE ITS/THEIR CODE NUMBER/S WHEN REORDERING.

SOME OF THE PICTURES PRESENT IN THIS MANUAL HAVE BEEN OBTAINED FROM PICTURES OF PROTOTYPES, THEREFORE THE STANDARD PRODUCTION MACHINES AND ACCESSORIES CAN BE DIFFERENT IN SOME COMPONENTS.

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 ACCESSORY 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.

1.1 Introduction

Thank you for preferring this electro-hydraulic tyre changer. We feel sure you will not regret your decision. This machine has been designed for use in professional workshops and in particular it stands out for its reliability and easy, safe and rapid operation: with just a small degree of maintenance and care, this tyre changer will give you many years of trouble-free service and lots of satisfaction.

2.0 INTENDED USE

The machines described in this manual , and their different versions, are tyre-changers for car tires projected to be used exclusively for the mounting, demounting, and inflation of wheels with dimensions of max. diameter of 45" and max. width of 15".

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.

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 to 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

PERIODICALLY, AT LEAST MONTHLY, CHECK THE INTEGRITY AND THE FUNCTIONALITY OF THE SAFETY AND PROTECTION DEVICES ON THE MACHINE.

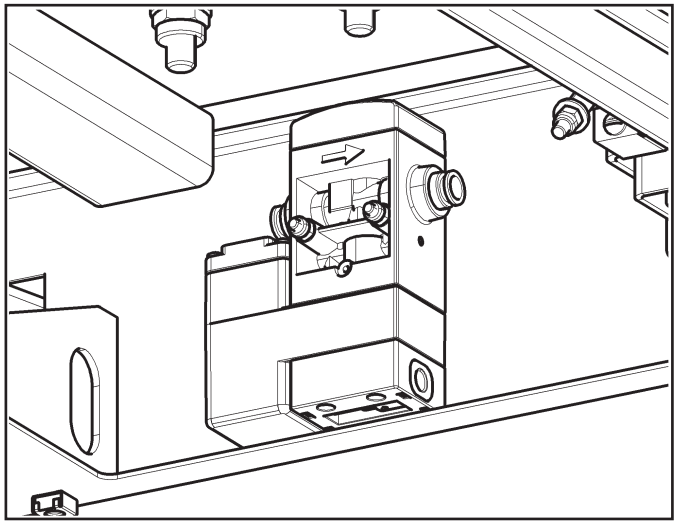
All the machines are equipped with:

- **"man-operated" controls** (immediate stop of operation when the control is released) for all drives:
  - mandrel rotation;
  - tool translation;
  - bead breaking roller translation.
- **Controls logic disposition.**
  Its function is to prevent the operator from dangerous mistakes.
- **Fixed guards and shelters**
  The machine is fitted with a number of fixed guards intended to prevent potential crushing, cutting and compression risks.
  These protections have been realized after risks evaluation and after all machine operative situations have been considered.

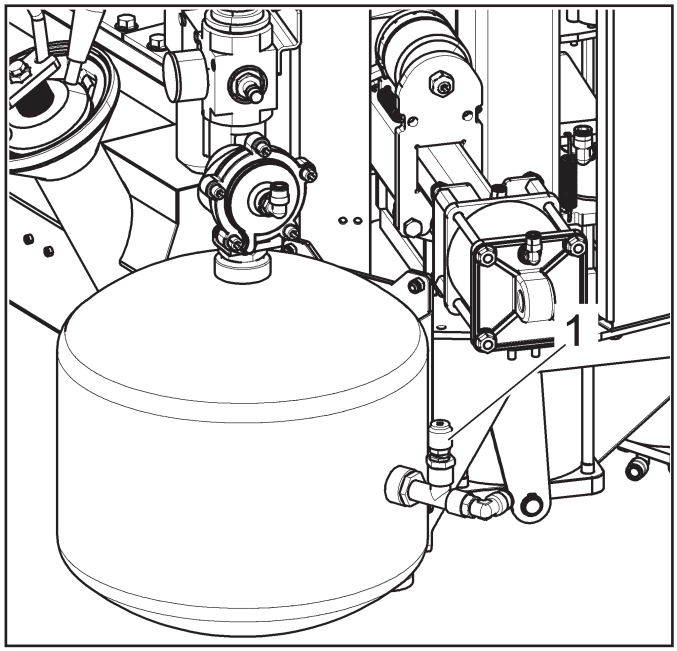
All protections, specially the rubber ones, have to be periodically checked in order to evaluate their wear state.

PERIODICALLY CARRY OUT THE MAINTENANCE OF THE PROTECTIONS, SHELTERS AND SAFETY DEVICES IN GENERAL, AS INDICATED IN CHAPTER 13. ROUTINE MAINTENANCE.

- **Motor protection devices.**
  The new "Invemotor" motor is equipped with electronic protection devices. They stop the motor if working defected conditions appear to avoid that the motor itself can be damaged and that the operator safety can be compromised (overvoltage, overload, overtemperature). For other details, see the chapt. 14 "Fault-Finding".
- **Non-adjustable (balancing valve) pressure relief device.**
  This allows inflation of tyres in reasonable safety. Inflation of tyres to over 4,2 ± 0,2 bar (60 PSI) is not allowed.



- **Safety valve 12bar on tank (only for "FI" versions).**
  The safety valve (see the following figure **ref. 1**) avoids that the inflation tank is under a pressure above 12 bar.



3.1 Residual risks

The machine was subjected to a complete analysis of risks according to reference standard EN ISO 12100. Risks are as reduced as possible in relation with technology and product functionality.
This manual stresses possible residual risks, also highlighted in pictograms on the present manual and adhesive warning signals placed on the machine: their location is represented in "PLATE LOCATION ON MACHINE INFORMATION TABLE" on page 6.

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.
- Use of the machine is only permitted in places free from **explosion** or **fire** hazard and in **dry places under cover**.
- Original spare parts and accessories should be used.
- 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 miss-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.
- The machine electrical supply system must be equipped with an appropriate earthing, to which the yellow-green machine protection wire must be connected.
- 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 tyre. Oil on the floor is also a potential danger for the operator.

THE MANUFACTURER DENIES ANY RESPONSIBILITY IN CASE OF DAMAGES CAUSED BY UNAUTHORIZED MODIFICATIONS OR BY THE USE OF NON ORIGINAL COMPONENTS OR EQUIPMENT.

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 and dry. 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. 5**.
  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 edge.
- 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.
- Never activate the inflation device (only on models with tubeless inflation) if the tyre has not been correctly locked.

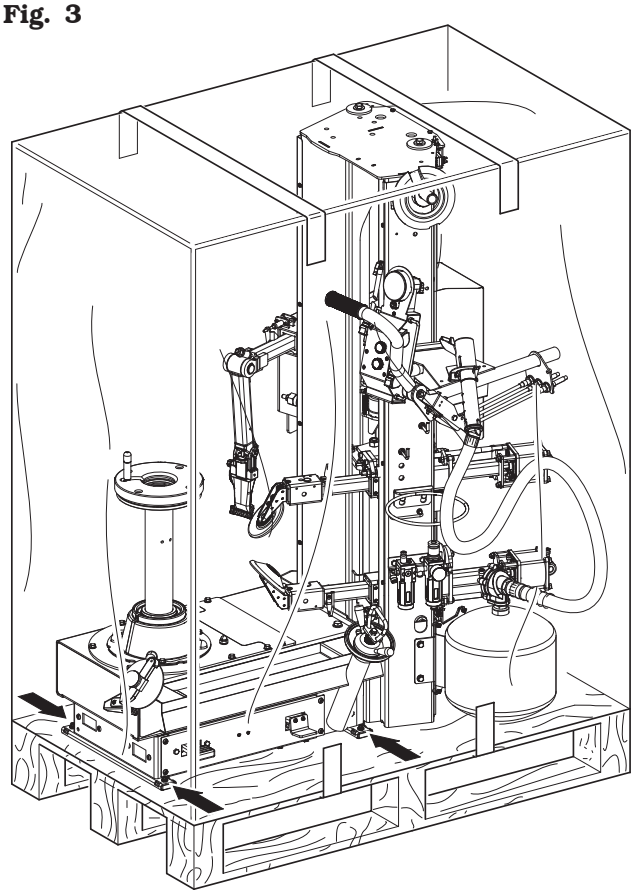
IN CASE OF ACCIDENTAL SUPPLY FAILURE (WHETHER ELECTRICITY OR COMPRESSED AIR), MOVE THE PEDALS TO THE NEUTRAL POSITION.

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 (see paragraph "TECHNICAL SPECIFICATIONS").

The machine is packed partially assembled.
Handling must be by pallet-lift or fork-lift trolley.
The fork lifting points are indicated on the packing.

Fig. 3



6.0 UNPACKING

DURING UNPACKING, ALWAYS WEAR GLOVES TO PREVENT ANY INJURY CAUSED BY CONTACT WITH PACKAGING 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 unnail 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 FIXTURES IS CONTAINED IN THE WRAPPING. DO NOT THROW IT AWAY WITH THE PACKING.

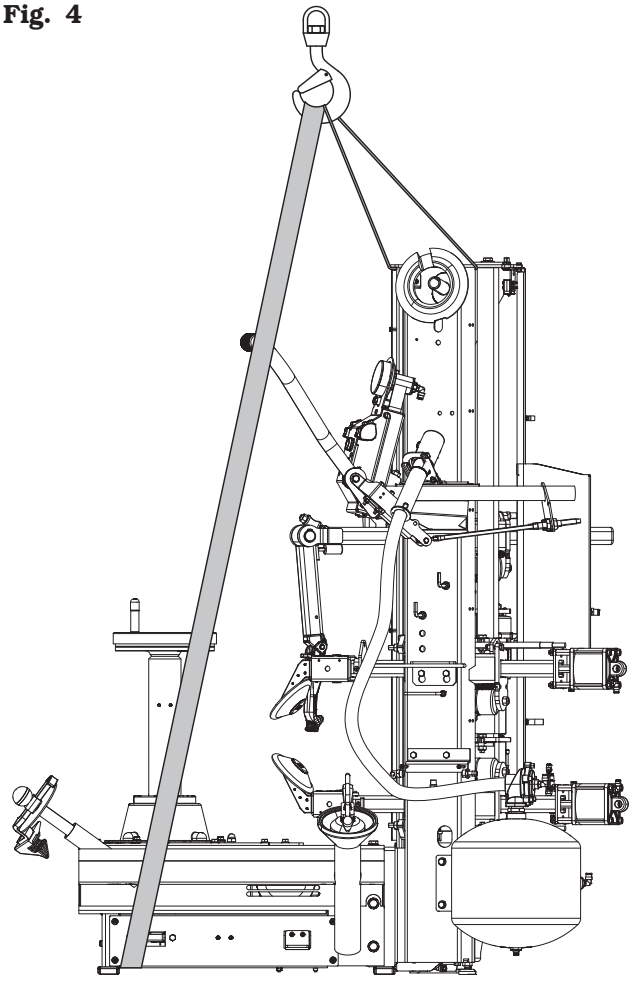
7.0 MOBILIZATION

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.

During the machine handling from the unpacking position to the installation one, follow the instructions listed below.

- Protect the exposed corners with suitable material (Pluribol/cardboard).
- Do not use metallic cables for lifting.
- Make sure that the electricity supply is not connected.
- Sling with belts with capacity load greater than 2500 Kg as indicated in **Fig. 4**.
- Lift and transport with suitable device with adequate dimensions.

Fig. 4



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).

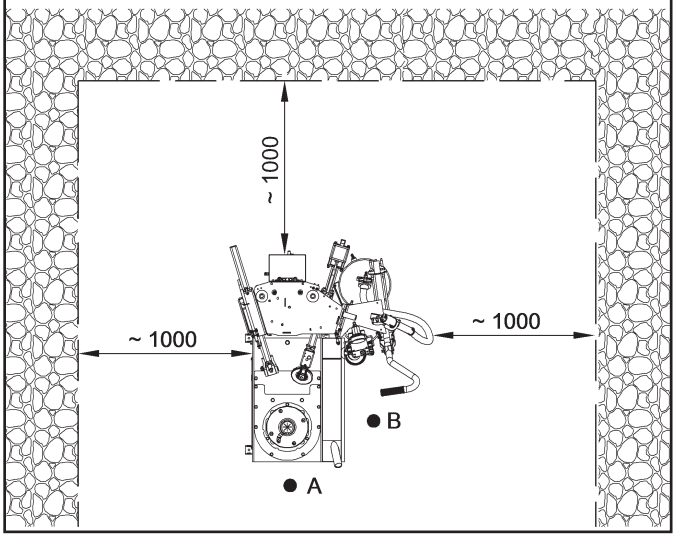
The use of the machine in ambient conditions other than those specified above is only allowed after prior agreement with and approval of the manufacturer.

8.1 Working position

In **Figure 5** it's possible to define work positions **A** and **B** which will be referred to during the description of the machine operating phases.
Position **A** is the main position for wheel fitting and removal with the mandrel, 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 Working area

Fig. 5



USE THE MACHINE IN A DRY AND ADEQUATELY LIT PLACE, POSSIBLY INDOORS OR ANYWAY IN A ROOFED AREA, THIS PLACE MUST BE IN COMPLIANCE WITH APPLICABLE SAFETY REGULATIONS.

The location of the machine requires a usable space as indicated in **Figure 5**. 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 yielding or irregular surfaces. The base floor must be able to support the loads transmitted during operation. This surface must have a capacity load of at least 500 kg/m^2.
The depth of the solid floor must be sufficient to guarantee that the anchoring bolts hold.

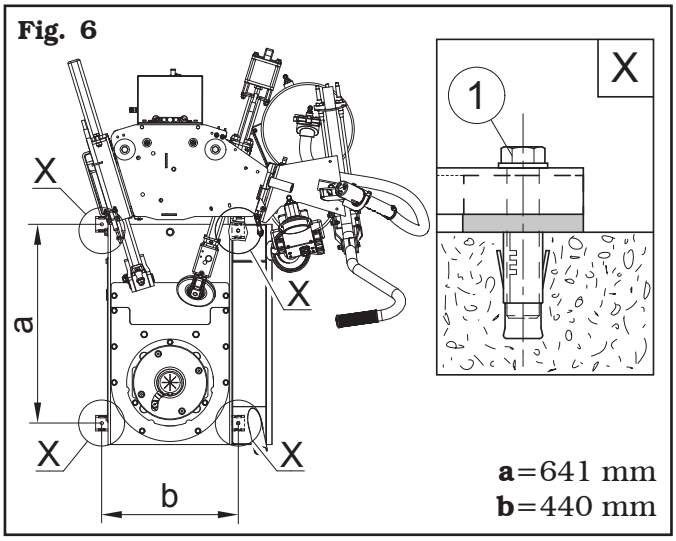
8.3 Lighting

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

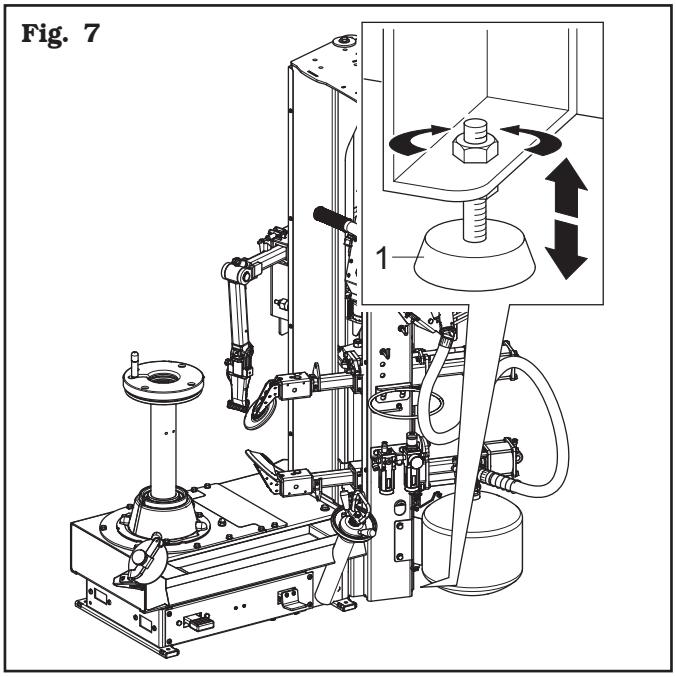
The packed machine is fixed to the support pallet through the holes prearranged on the frame. Such holes can be used also to fix the machine to the ground, through floor anchor small blocks (excluded from supply). Before carrying out the definitive fixing, check that all the anchor points are laid down flat and correctly in contact with the fixing surface itself. If not so, insert shimming profiles between the machine and the fixing lower surface, as indicated in **Fig. 6**.

Fig. 6



- Execute 4 holes with 12 mm diameter on the floor by the holes on the bottom floor;
- insert the small blocks (excluded from supply) into the holes;
- fix the machine to the ground with 4 M12x120 mm screws (excluded from supply) (**Fig. 6 ref. 1**) (or with 4 12x80 mm stud bolts (excluded from supply)). Tighten the screws with an approximate tightening torque of 70 Nm.
- Before clamping completely the machine to the floor, level its rear part rotating the feet (**Fig. 7 ref. 1**).

Fig. 7



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 Fixtures contained in the packing

The packing case contains also the fixtures box. Check that all the parts listed are there.

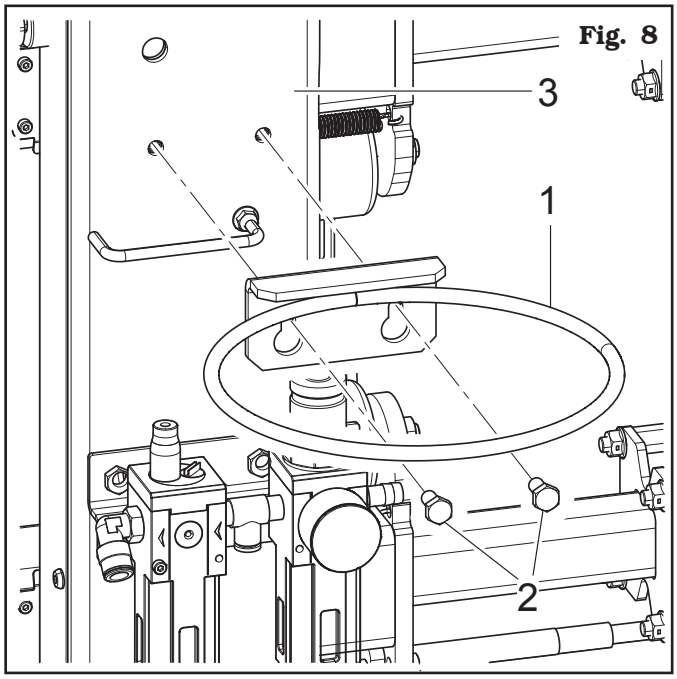
Code	Description	N.
B1157000	*Two-faced cone*	**1**
B0223000	*Grease holding ring*	**1**
710013421	*Reverse wheels protection*	**1**
790011620	*Bead sliding foil*	**1**
790011640	*Instructions for bead sliding foil*	**1**
710090223	*Quick coupling*	**1**
710090730	*Entrainer*	**1**
G1000A152	*D.14 pin light truck flange*	**1**
G1000A150	*Universal flange for blind wheels (valid only for VARGKENDOVS - version with countersunk screw)*	**1**

10.2 Assembly procedures

Remove the packaging and free the machine from the wrapping. Lift the machine and position it on the floor. Proceed with the assembly, as described hereafter.

1. Mount the grease holder ring (**Fig. 8 ref. 1**), contained in the tools set, to the machine body (**Fig. 8 ref. 3**), using the 2 screws provided (**Fig. 8 ref. 2**) .

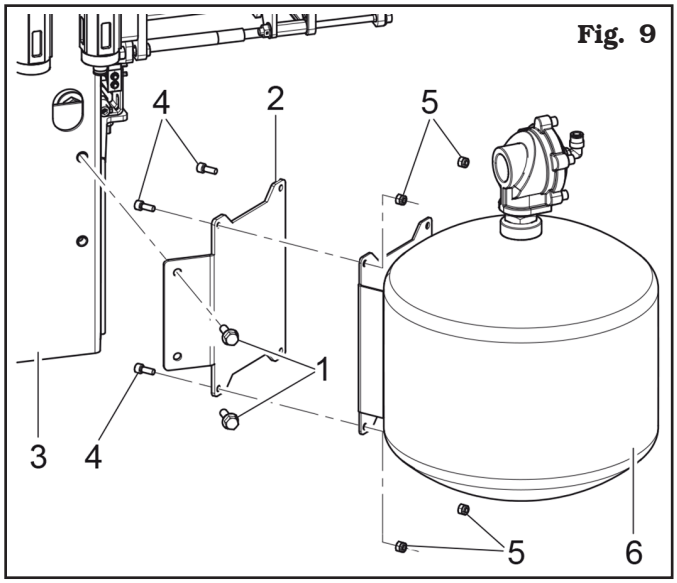
Fig. 8



Only for tubeless inflation models

2. Assemble "Tubeless inflation" unit to the machine keeping to the following instructions:
   - fix the tank (**Fig. 9 ref. 6**) to the support flange (**Fig. 9 ref. 2**) using the screws (**Fig. 9 ref. 4**) and nuts (**Fig. 9 ref. 5**) on issue;
   - fix the flange (**Fig. 9 ref. 2**) to the machine (**Fig. 9 ref. 3**) using the screws (**Fig. 9 ref. 1**);

Fig. 9



3. Connect the black pipe (**Fig. 10 ref. 1**) and the blue pipe (**Fig. 10 ref. 2**) on the provided quick couplings as shown in **Figure 10**.

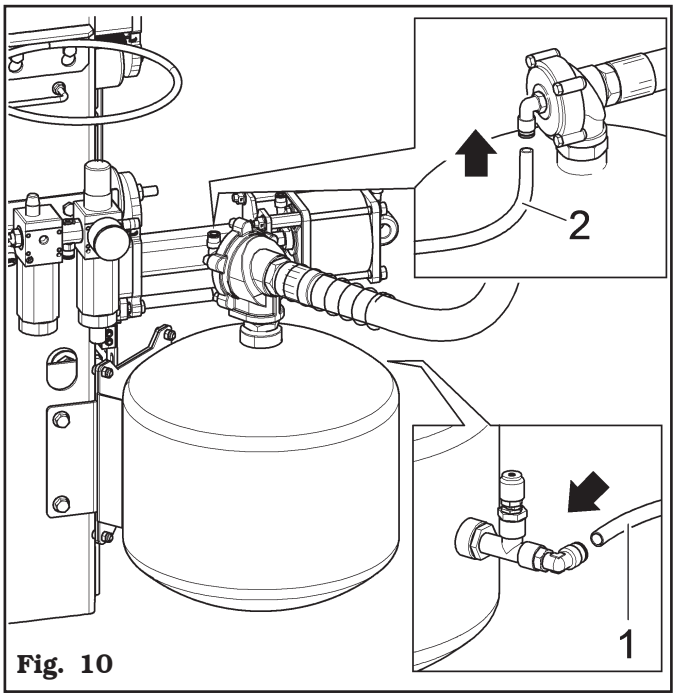


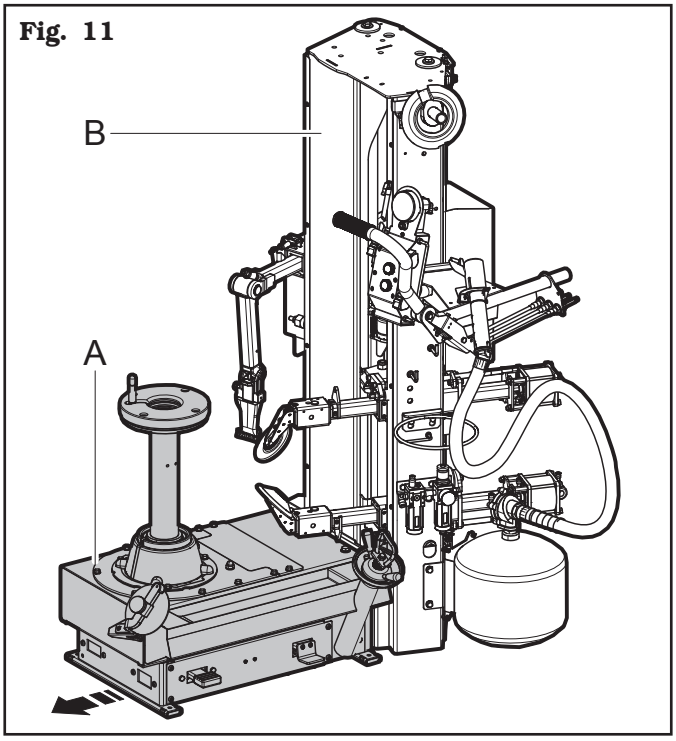
Fig. 10

IN CASE OF A CHANCE SUPPLY FAILURE, AND/OR BEFORE ANY PNEUMATIC CONNECTIONS, MOVE THE CONTROLS TO THE NEUTRAL POSITION.

10.3 Working area modification

After the delivery, the machine is prearranged to operate on wheel of 50" maximum diameter and a rim diameter (10" - 30"). It's also possible to move the tools column to enlarge the working area from 52" (with rim diameter of 12" - 32") and up to 54" (with rim diameter of 14" - 34") (see **Figure 11**).

Fig. 11



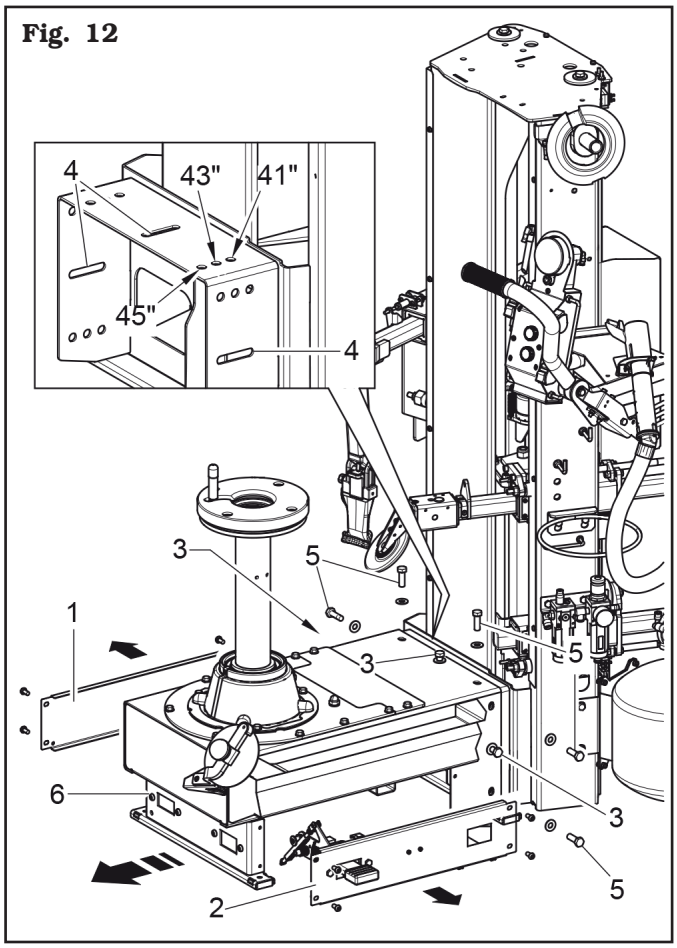
The column is moved by unloosing the fixing screws of the base (**Fig. 11 ref. A**) to the column (**Fig. 11 ref. B**) and by sliding the base (**Fig. 11 ref. A**) itself into the proper slots until the required measure.

MAKE SURE THE TYRE-CHANGER COLUMN IS STABLE: USE A CABLE, HELD BY A HOIST.

1. Remove the lateral guards (**Fig. 12 ref. 1-2**) of the machine.
2. Unscrew the screws (**Fig. 12 ref. 3**) and the nuts near the central slots (**Fig. 12 ref. 4**) paying attention not to remove the nuts from the proper screws.
3. Remove the six remaining screws (**Fig. 12 ref. 5**).
4. Move the base (**Fig. 12 ref. 6**) into the required position (to 43" or 45") and if necessary, use a lifting device.
5. Lock the base three screws (**Fig. 12 ref. 3**) with a couple of 80 Nm.
6. Place six screws (**Fig. 12 ref. 5**) previously removed and lock them on the bases side with a couple of 80 Nm.
7. Assemble again the lateral guards (**Fig. 12 ref. 1-2**) of the machine.

AFTER THE ASSEMBLY, CHECK THE CORRECT POSITION OF THE TOOLS. LOCK THE RIM ON THE MANDREL CENTRE. WITH THE LOWER BEAD BREAKER ARM, CHECK THAT THE DISTANCE BETWEEN THE ROLL AND THE RIM EDGES (UPPER AND LOWER) IS ALMOST THE SAME. REPEAT ALL THE PROCEDURES STARTING FROM POINT 1 IF THE DISTANCE IS NOT THE SAME.

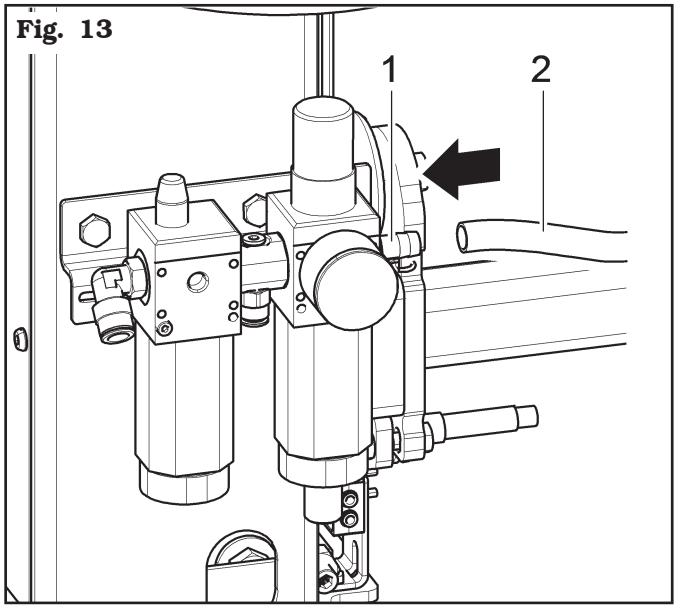
Fig. 12



10.4 Air connection

Connect the tyre changer to the workshop compressed air system by means of plug (**Fig. 13 ref. 1**).

Fig. 13



The pressurized pipe coming from the mains must have a section of 1/4x10 (**Fig. 13 ref. 2**).
The filter unit is already mounted on the machine.

IF OTHER PNEUMATIC CONNECTIONS SHOULD BE EXECUTED, REFER TO THE PNEUMATIC DIAGRAMS ILLUSTRATED IN CHAPTER 19.

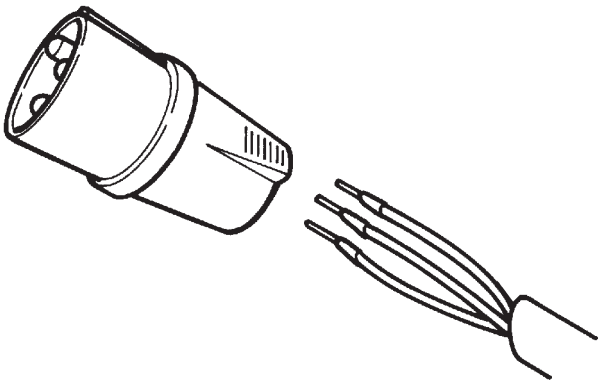
10.5 Electrical connections

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

BEFORE CONNECTING THE MACHINE MAKE SURE THAT:

- **THE MAIN POWER RATING CORRESPONDS TO THE MACHINE RATING AS SHOWN ON THE MACHINE PLATE;**
- **ALL MAIN POWER COMPONENTS ARE IN GOOD CONDITION;**
- **THE ELECTRICAL SYSTEM IS PROPERLY GROUNDED (GROUND WIRE MUST BE THE SAME CROSS-SECTION AREA AS THE LARGEST POWER SUPPLY CABLES OR GREATER);**
- **MAKE SURE THAT THE ELECTRICAL SYSTEM FEATURES A CUTOUT 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**
- **220/240 Volt – 16A**
- **2P + Ground**
- **IP 44**

On delivery, the machine is pre-set to operate at a single-phase voltage of 220/240 V - 50/60 Hz.

For any other type of power supply, ask the manufacturer at the time of purchase: a machine functioning under the required voltage conditions will be prepared.

FIT A TYPE-APPROVED PLUG TO THE MACHINE CABLE (THE GROUND WIRE IS YELLOW/GREEN AND MUST NEVER BE CONNECTED TO ONE OF 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).

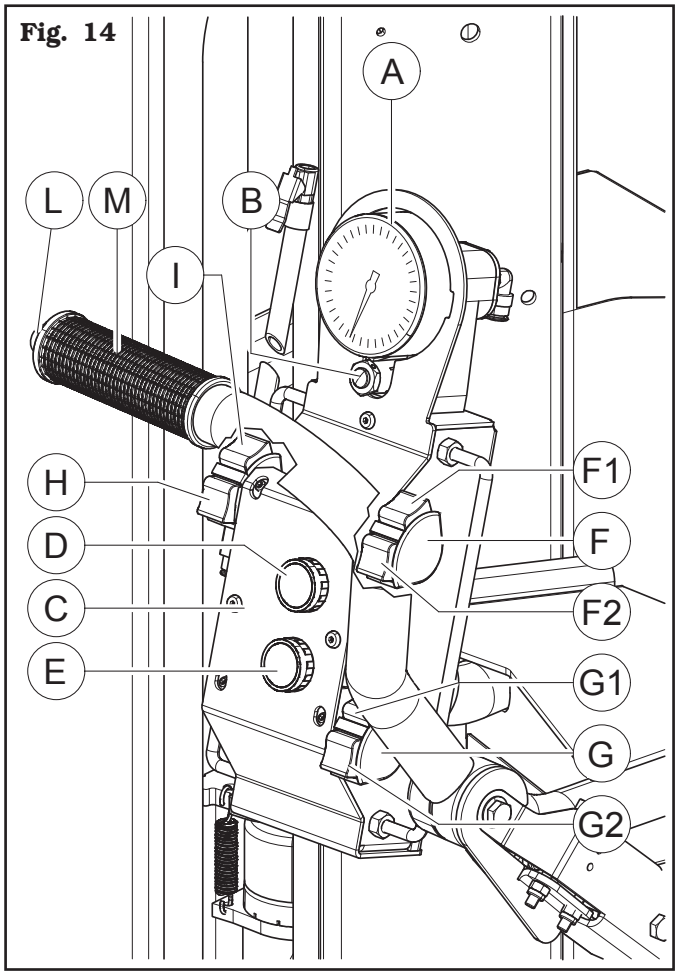
10.6 Electrical checks

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").

CARRY OUT A DAILY CHECK OF MAINTAINED-TYPE CONTROLS CORRECT FUNCTIONING, BEFORE STARTING MACHINE OPERATION.

11.0 CONTROLS

Fig. 14



11.1 Control device

The control device consists of a panel with integrated keys and push buttons.

- The inflation pressure gauge **"A"** for readout of the pressure into the tyre.
- The inflation push button **"B"** when pushed allows to deflate the tyre at the required pressure.
- Lever **M** , through a thrust and return movement, together with **L** unlocking push button, enables tools setting on wheel diameter.
- Unlocking push button **L** must be pushed before operating lever **M** for arms positioning. Releasing the push button, the arms lock into the set position.

ATTENTION: push button **L** must be pressed before operating lever **M** otherwise the lever does not allow any movement.

Panel **C** consists of:

- Push button **"D"** has one maintained action position and once pushed it controls the operation of the cam for the insertion of the upper bead breaking roll into the rim.
- Push button **"E"** has one maintained action position and once pushed it controls the operation of the cam for the insertion of the lower bead breaking roll into the rim.
- Push buttons **"F"** have a maintained action position and they control the vertical translation of the upper bead breaker roll. When pressed in its lower part (F2), it operates downwards translation. When pressed in its upper part (F1), it operates upwards translation. When push button (F1) is pressed, the release of the upper bead breaking roll cam is also controlled, whenever it has been previously inserted with push button (D) (KENDO.30LIGHT-KENDO.30LIGHTFI) or it has been automatically inserted with the upper feeler pin (KENDO.30S-KENDO.30SFI).
- Push buttons "**G**" have a maintained action position and they control the vertical translation of the lower bead breaker roll. When pressed in its lower part (G2), it operates downwards translation. When pressed in its upper part (G1), it operates the upwards translation. When push button (G2) is pressed, the release of the lower bead breaking roll cam is also controlled, whenever it has been previously inserted with push button (E) (KENDO.30LIGHT-KENDO.30LIGHTFI) or it has been automatically inserted with the lower feeler pin (KENDO.30S-KENDO.30SFI).
- Push button **"H"** has a maintained action position. When pressed, it controls the tool vertical downwards translation.
- Push button **"I"** has a maintained action position. When pressed, it controls the tool vertical upwards translation.

11.2 Pedalboard

"Pedal A" has two maintained action operative positions. When it is pushed downwards it controls mandrel motor clockwise rotary movement. When the pedal is lifted upwards it operates the opposite movement.

THE MANDREL UNIT SPEED CAN BE CONTINUOUSLY ADJUSTED UP TO THE MAXIMUM SPEED THROUGH A PROGRESSIVE PRESSURE ON THE PEDAL, ONLY IN CLOCKWISE DIRECTION.

"Pedal B" has a different function according to the version present on the machine.

Version with inflation with pressure gauge

The inflation pedal in this version has only one function. A continuous pressure supplies air at a controlled pressure (max 4 ± 0,2 bar 60 PSI).

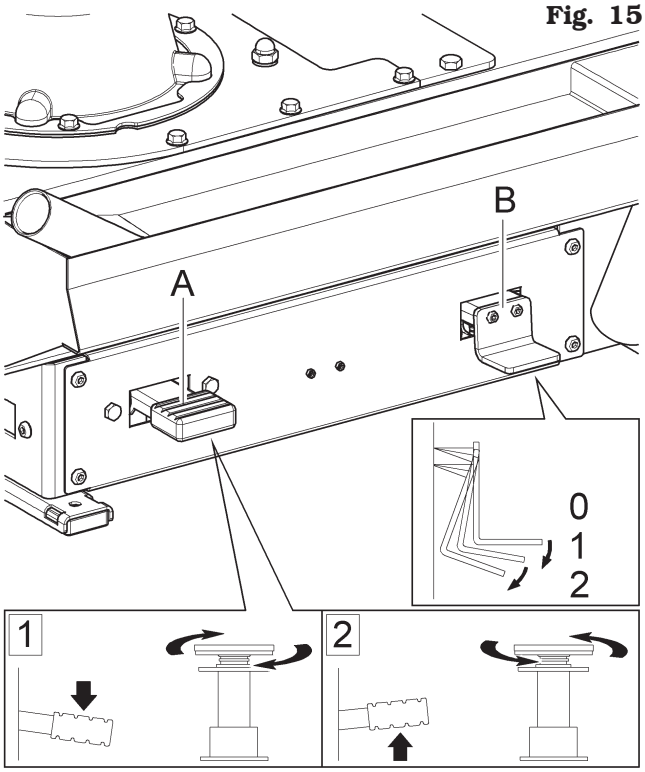
DO NOT CHANGE THE SET OPERATING PRESSURE VALUE BY MEANS OF THE MAXIMUM PRESSURE VALVES. THE MANUFACTURER SHALL NOT BE RESPONSIBLE FOR INJURY OR DAMAGE ARISING FROM UNAUTHORISED CHANGES.

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 UNAUTHORISED CHANGES.

Fig. 15



KEY (pedal **ref. B**)
ref. 1 - Tyre inflation with pressure gauge
ref. 2 - Tyre inflation with pressure gauge + inflation nozzle

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 that:
  - neither the bead nor the tread of the tyre are damaged;
  - the rim does not produce 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, using 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; on the contrary, never fit a tyre unless you are sure it is of 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.

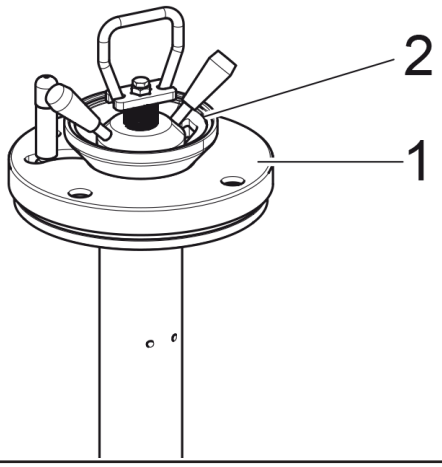
- Establish from which side the tyre should be demounted, checking the position of the groove.
- Find the rim locking type.
- Try to establish the special types of wheels, such as “EH2” and “EH2+”, in order to improve locking, bead breaking, assembly and disassembly performances.

WHEN HANDLING WHEELS WEIGHING MORE THAN 10 KG AND/OR WITH A FREQUENCY OF MORE THAN 20/30 WHEELS PER HOUR, A LIFTING DEVICE SHOULD BE USED.

12.3 Wheel clamping

All wheels must be locked on the rubber plate (**Fig. 16 ref. 1**) through the central hole using the proper locking device (**Fig. 16 ref. 2**).

Fig. 16

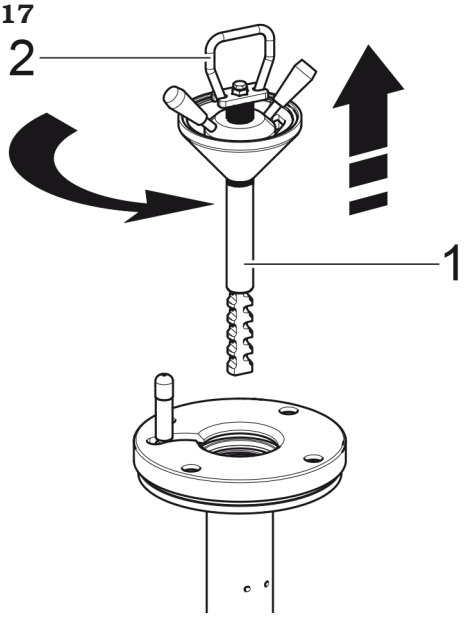


IN CASE OF USE OF RIMS WITHOUT CENTRAL HOLE, IT’S NECESSARY TO USE THE PROPER FIXTURE (AVAILABLE ON DEMAND).

To lock a rim proceed as follows:

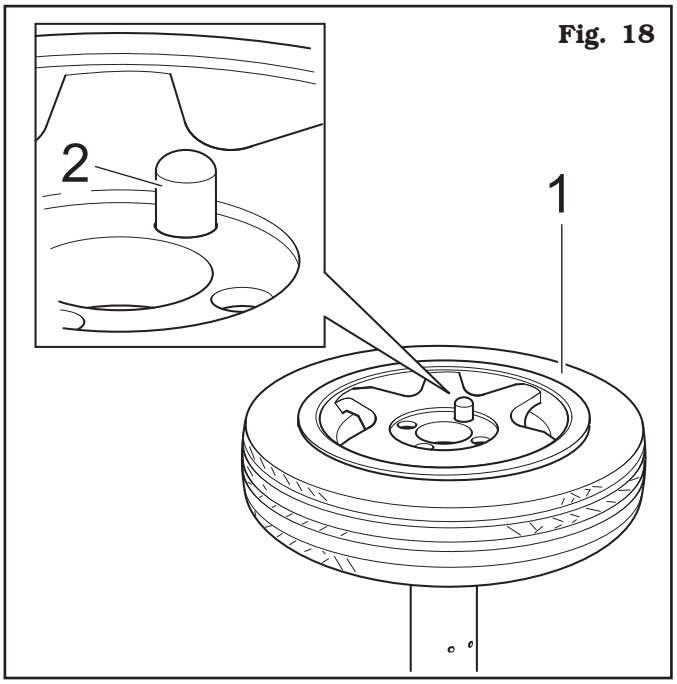
1. Extract the central locking shaft and its cone (**Fig. 17 ref. 1**) through the proper handle (**Fig. 17 ref. 2**) and, if necessary, turn it to facilitate its extraction.

Fig. 17



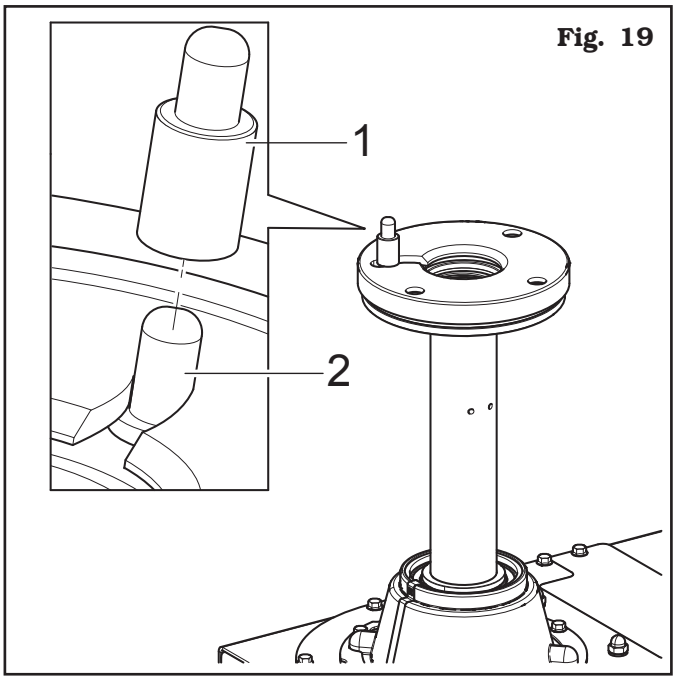
2. Dowel the wheel (**Fig. 18 ref. 1**) on the locking platform and check that the dragging pin (**Fig. 18 ref. 2**) enter in a hole placed on the rim hub.

Fig. 18



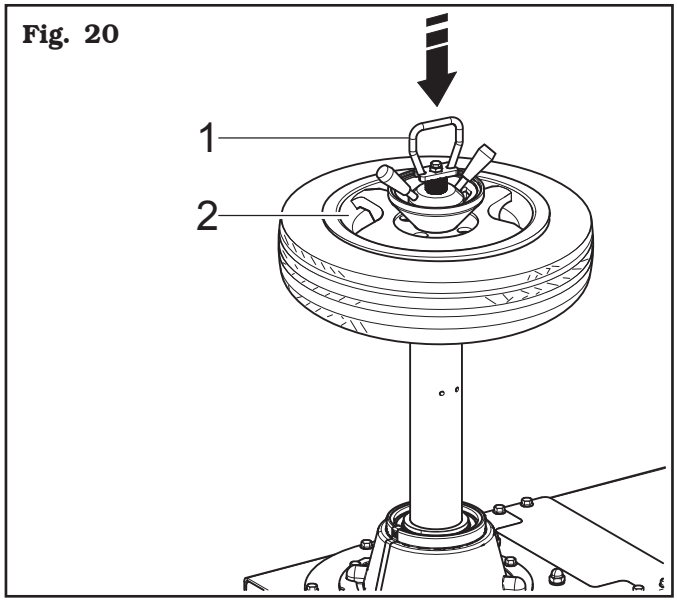
3. If the wheel hub is higher then the dragger (**Fig. 19 ref. 2**), use the extension (**Fig. 19 ref. 1**) supplied on issue.

Fig. 19



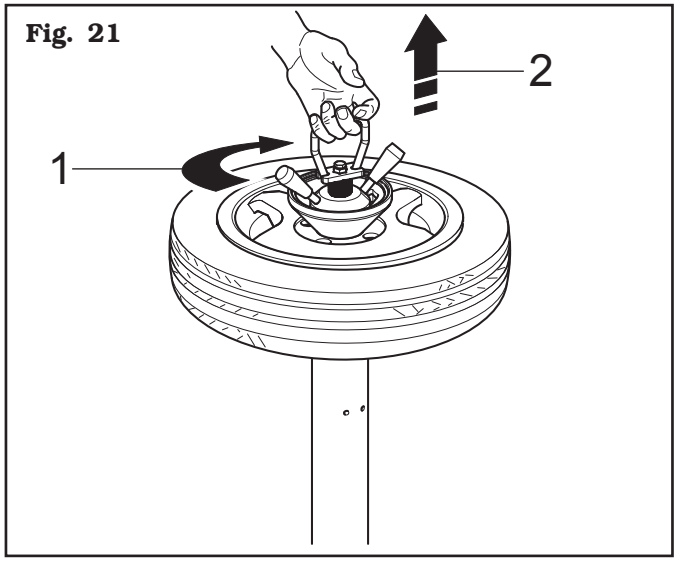
4. Insert the shaft complete with cone (**Fig. 20 ref. 1**) on the rim (**Fig. 20 ref. 2**).

Fig. 20



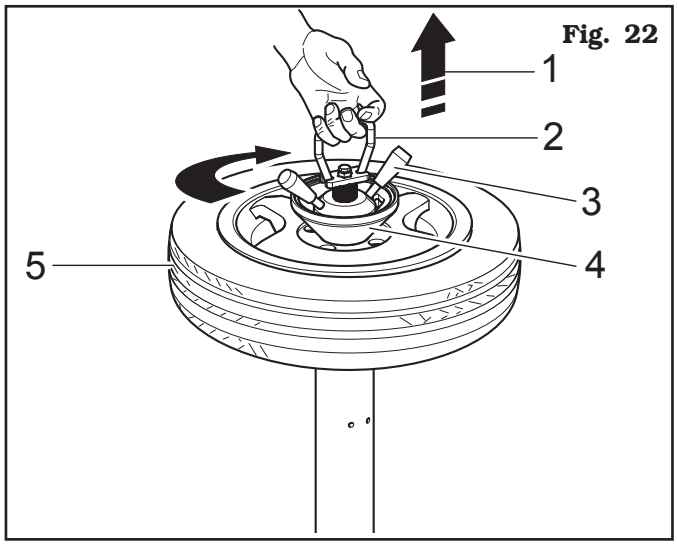
5. Turn through 90° (**Fig. 21 ref. 1**) and lift the shaft (**Fig. 21 ref. 2**) in order to hook it inside the hole.

Fig. 21



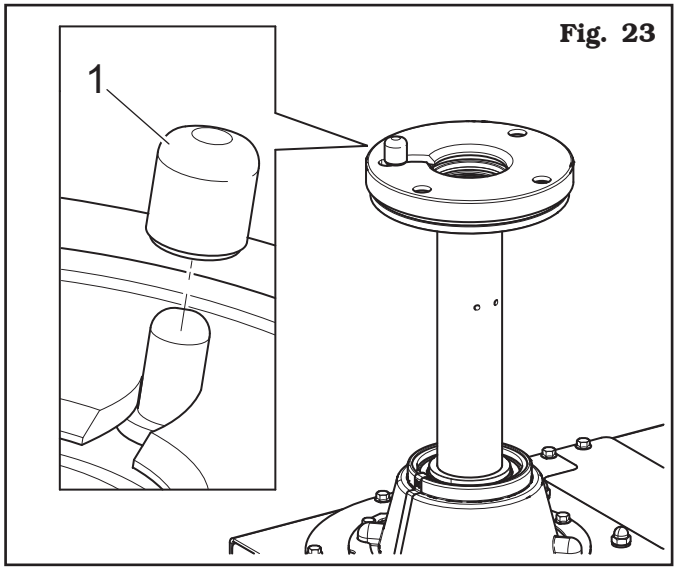
6. Keeping the shaft lifted (**Fig. 22 ref. 1**) through the handle provided (**Fig. 22 ref. 2**), rotate the ring nut (**Fig. 22 ref. 3**) up to the complete tightening of the cone (**Fig. 22 ref. 4**) on the wheel (**Fig. 22 ref. 5**).

Fig. 22



7. For wheels with alloy rims, use the proper plastic guard (**Fig. 23 ref. 1**).

Fig. 23



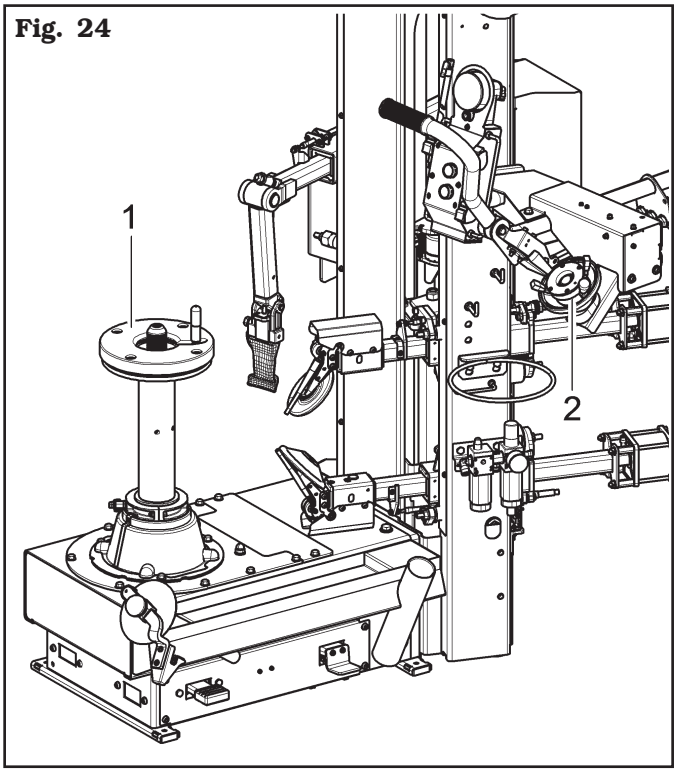
NEVER LEAVE THE WHEEL FITTED ON THE MACHINE FOR A PERIOD LONGER THAN NECESSARY FOR CARRYING WORK AND IN ANY CASE NEVER LEAVE IT UNATTENDED.

To release the wheel, carry out the previously operations on the contrary way.

12.4 Wheel clamping (valid only for VARG-KENDOVS - version with countersunk screw)

All wheels must be locked on the rubber plate (**Fig. 24 ref. 1**) through the central hole using the proper locking ring nut (**Fig. 24 ref. 2**).

Fig. 24

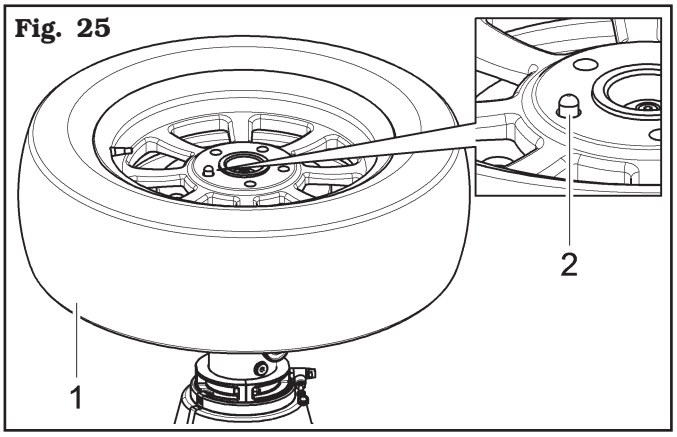


IN CASE OF USE OF RIMS WITHOUT CENTRAL HOLE, IT'S NECESSARY TO USE THE PROPER FIXTURE (AVAILABLE ON DEMAND).

To lock a rim proceed as follows:

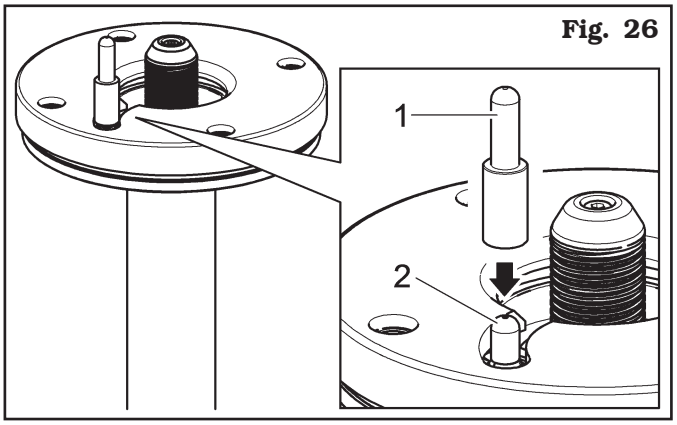
1. Dowel the wheel (**Fig. 25 ref. 1**) on the rubber plate and check that the dragging pin (**Fig. 25 ref. 2**) enter in a hole placed on the rim hub.

Fig. 25



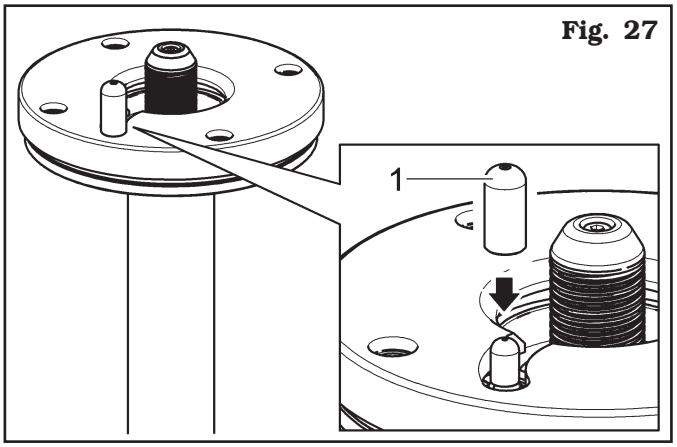
IF THE WHEEL HUB IS HIGHER THEN THE DRAGGING PIN (FIG. 26 REF. 2), USE THE EXTENSION (FIG. 26 REF. 1) SUPPLIED ON ISSUE.

Fig. 26



FOR WHEELS WITH ALLOY RIMS, USE THE PROPER PLASTIC GUARD (FIG. 27 REF. 1).

Fig. 27



2. Remove the locking ring nut (**Fig. 28 ref. 1**) from the activator support (**Fig. 28 ref. 2**).

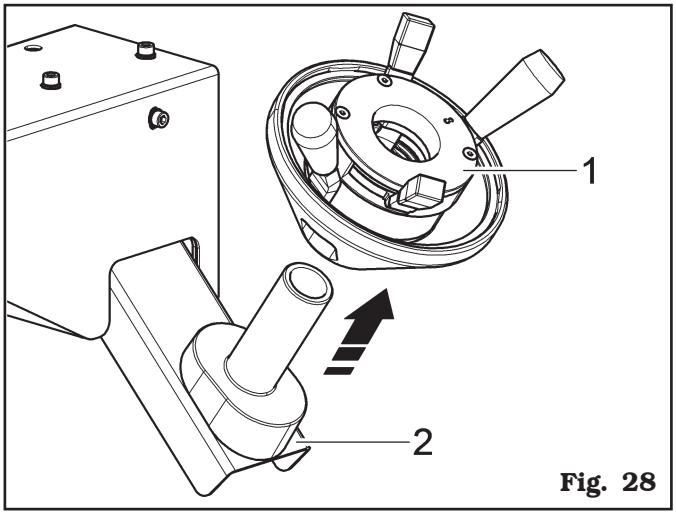


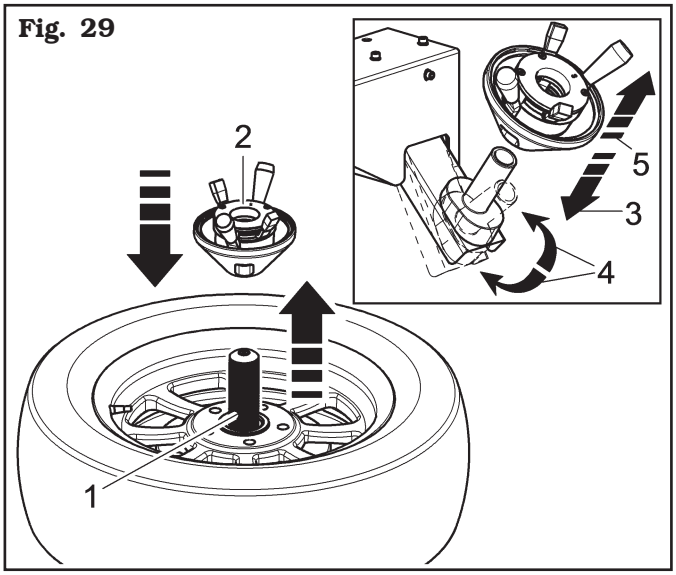
Fig. 28

3. By removing the locking ring-nut (**Fig. 28 ref. 1**) from the activator support (**Fig. 28 ref. 2**), the central threaded shaft (**Fig. 29 ref. 1**) lifts automatically until its maximum height.

AFTER A DEFAULT MANUFACTURING TIME, THE THREADED SHAFT (Fig. 29 ref. 1) RETURNS TO ITS OWN HOUSING. IF THE LOCKING RING-NUT HAS NOT BEEN INSERTED YET, IT IS POSSIBLE TO MAKE IT COME OUT AGAIN, BY ACTIVATING MANUALLY THE ACTIVATOR SUPPORT (Fig. 29 ref. 4) OR BY REPOSITIONING (Fig. 29 ref. 3) AND THEN, GRABBING THE (Fig. 29 ref. 5) LOCKING RING-NUT FROM ITS OWN SUPPORT, AS INDICATED IN FIG. 29.

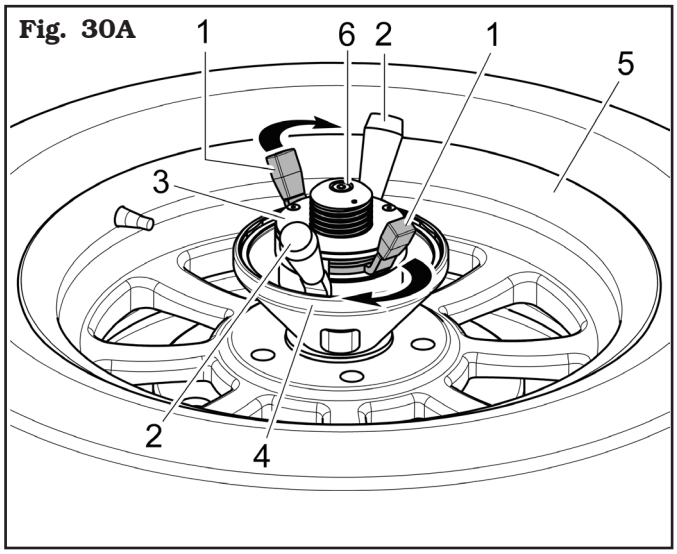
4 - Insert and block the ring-nut (**Fig. 29 ref. 2**) on the threaded shaft (**Fig. 29 ref. 1**) as described hereafter.

Fig. 29



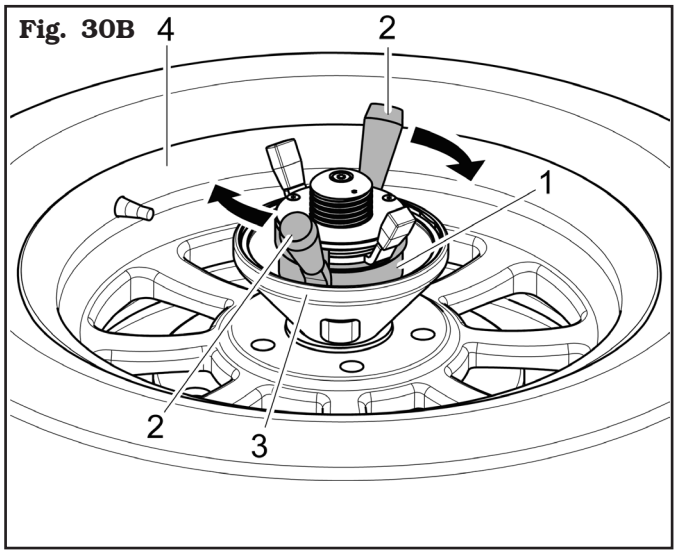
5 - Rotate clockwise the small internal levers (**Fig. 30A ref. 1**), until they reach the outer levers (**Fig. 30A ref. 2**) in order to unlock the ring-nut. Make the ring-nut (**Fig. 30A ref. 3**) and the cone (**Fig. 30A ref. 4**) approach the rim (**Fig. 30A ref. 5**). Release the small inner levers (**Fig. 30A ref. 1**) the ring-nut gets locked on the threaded shaft (**Fig. 30A ref. 6**).

Fig. 30A



6 - Turn the ring nut (**Fig. 30B ref. 1**) clockwise through the external levers (**Fig. 30B ref. 2**) until the cone complete clamping (**Fig. 30B ref. 3**) on the rim (**Fig. 30B ref. 4**).

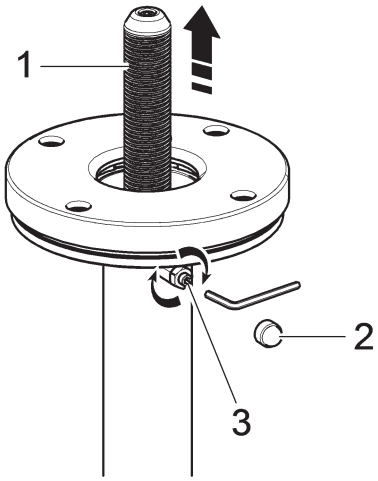
Fig. 30B



7 - At the end of the operations, unlock the ring nut by loosening first the cone with the external levers and then moving the ring nut and the cone away from the rim with the small levers.
Place the locking ring-nut onto its own activator support.

IN CASE THE PNEUMATIC SYSTEM FOR THE LIFTING OF THE THREADED CENTRAL SHAFT DOES NOT WORK (IN ORDER TO CONTINUE WORKING UNTIL THE REPAIR HAS BEEN CARRIED OUT), LIFT MANUALLY THE CENTRAL SHAFT (Fig. 31 ref. 1) UNTIL ITS MAXIMUM HEIGHT, REMOVE THE PROTECTION CAP (Fig. 31 ref. 2) AND TIGHTEN THE DOWEL (Fig. 31 ref. 3) TO LOCK THE SHAFT INTO "COMPLETELY LIFTED" POSITION.
WHEN THE REPAIR HAS BEEN COMPLETED, SLACKEN THE DOWEL TO RESET THE CORRECT FUNCTIONING OF THE PNEUMATIC LIFTING DEVICE FOR THE THREADED SHAFT.

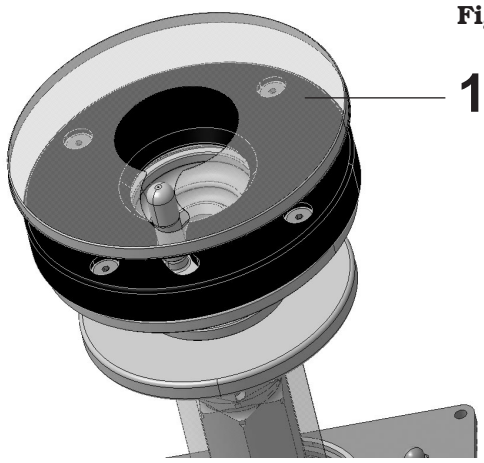
Fig. 31



12.5 Reversed wheels pan protection

In case reversed wheels are used, in order to protect the rim, apply on the rubber platform a protection made of a transparent plastic material available on demand (**Fig. 32 ref. 1**). We suggest a constant replacement of it and in any case if there are visible damages (see **Fig. 32**).

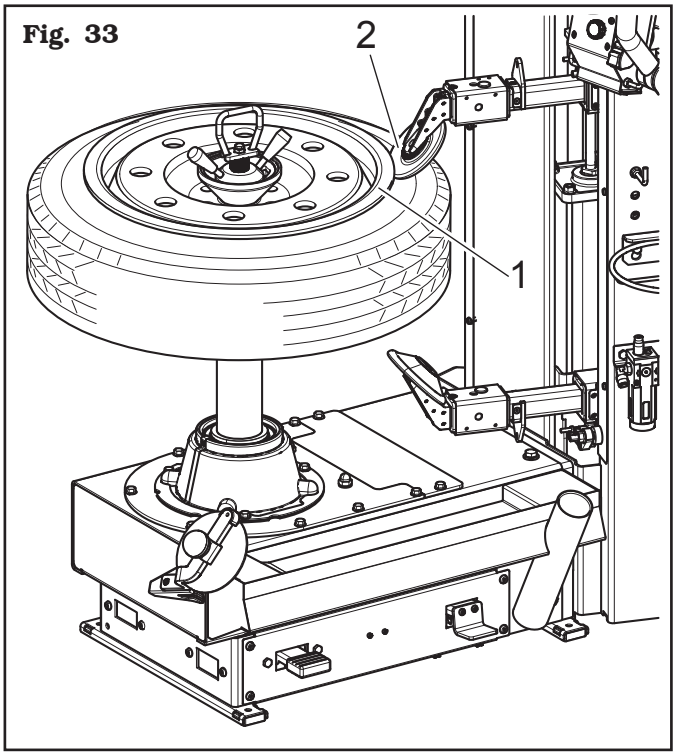
Fig. 32



12.6 Bead breaking through vertical rolls

1. After having clamped the wheel, move the upper bead breaker roll close (**Fig. 33 ref. 2**) to the rim edge (**Fig. 33 ref. 1**), pressing push button (**Fig. 14 ref. F2**).
2. Establish the tools diameter (rolls and tool) with the help of push button **L** and of lever **M**.

Fig. 33



3. Keep on approaching, activating wheel clockwise rotation (see **Fig. 34**) pushing the pedal (**Fig. 15 ref. A**) and at the same time activate the push button (**Fig. 14 ref. F2**), keeping it pressed until there's room enough for the roll to progress with the cam.

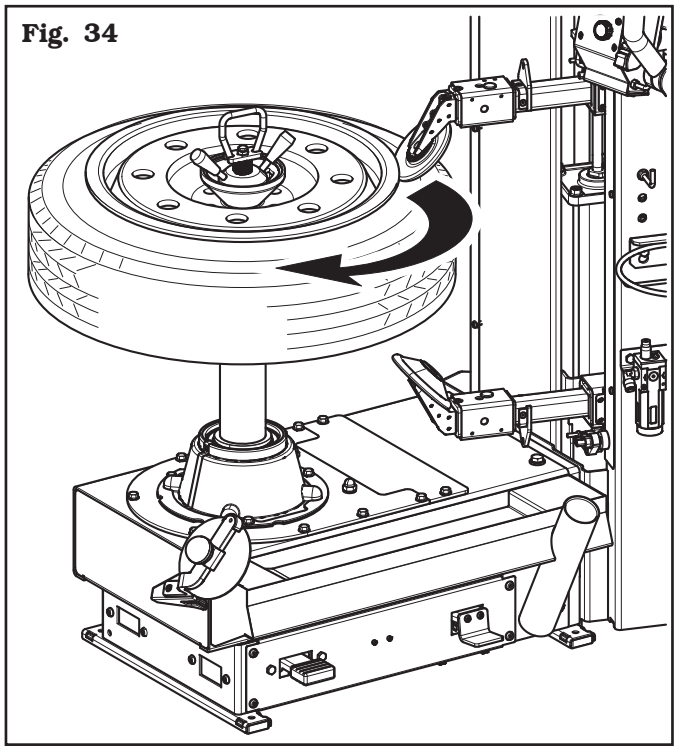
THE BEADING DISC MUST EXERT PRESSURE ON THE TYRE BEAD BUT NEVER ON THE RIM.

USE VERY CAREFULLY THE VERTICAL BEAD BREAKING ROLLERS IN ORDER TO AVOID POSSIBLE HANDS CRUSHING.

12.6.1 Bead breaking operations (only for KENDO.30LIGHT - KENDO.30LIGHTFI models)

1. Activate the upper cam pushing push button (**Fig. 14 ref. D**) and keep on bead breaking until the operation is complete.

Fig. 34



2. Move the lower roll close (**Fig. 35 ref. 1**) with the key (**Fig. 14 ref. G1**).

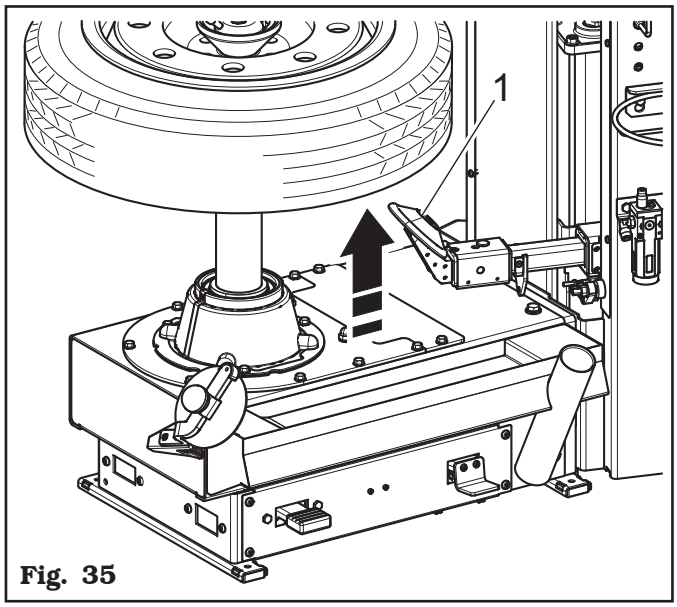


Fig. 35

3. Only now turn the wheel clockwise pressing the pedal (**Fig. 15 ref. A**) and, at the same time, the push button (**Fig. 14 ref. G1**), keeping it pressed until there's room enough for the bead breaking.

WHILE THIS OPERATION IS BEING CARRIED OUT PAY ATTENTION NOT TO DEFORM THE TYRE SIDE. GREASE THE BEAD BEFORE THE ROLL RE-ENTERS.

4. Once bead breaking in the lower part has been completed, move the lower roll to rest position activating push button (**Fig. 14 ref. G2**).

UNTIL BOTH UPPER AND LOWER ROLLS ARE NOT BACK TO REST POSITION IT IS NOT POSSIBLE TO CARRY OUT A NEW DIAMETER ADJUSTMENT, AS DESCRIBED IN PARAGRAPH 12.4 POINT 2.

5. Rotate the rim until the valve is positioned on the immediate right of the roll.

WHILE THIS OPERATION IS BEING CARRIED OUT PAY ATTENTION NOT TO DEFORM THE TYRE SIDE. GREASE THE BEAD BEFORE THE ROLL RE-ENTERS.

12.6.2 Beading operations (only for KENDO.30S - KENDO.30SFI models)

1. The contact between feeler pin and rim edge will automatically activate the progress of the roll (**Fig. 36 ref. 1**), which will be inserted between the rim (**Fig. 36 ref. 2**) and the tyre (**Fig. 36 ref. 3**). The same automatism can be applied to the lower roll as well.

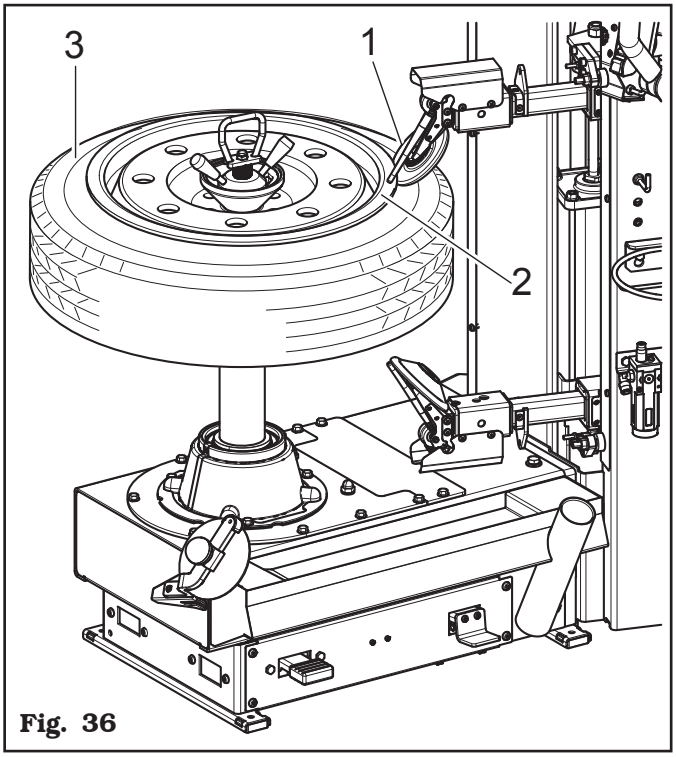


Fig. 36

2. Move the lower roll close (**Fig. 37 ref. 1**) with the key (**Fig. 14 ref. G1**).

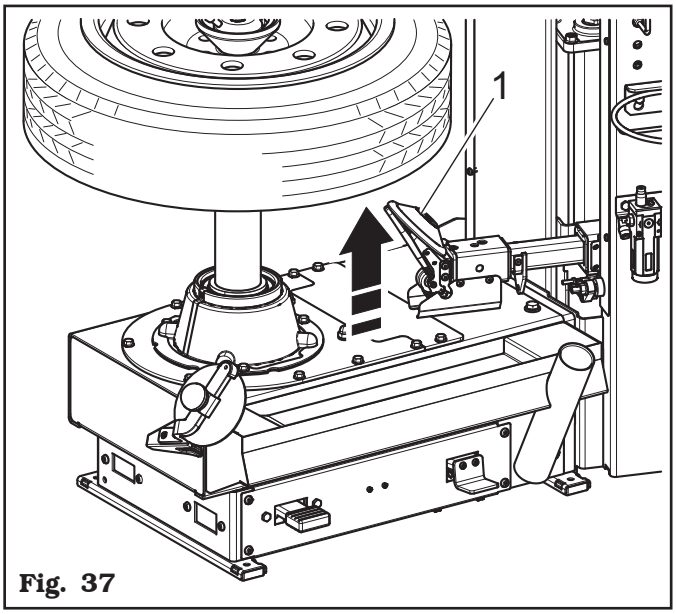


Fig. 37

3. Only now turn the wheel clockwise pressing the pedal (**Fig. 15 ref. A**) and operating the push button at the same time (**Fig. 14 ref. F2**), keeping it pressed until there's room enough for bead breaking.

WHILE THIS OPERATION IS BEING CARRIED OUT PAY ATTENTION NOT TO DEFORM THE TYRE SIDE. GREASE THE BEAD BEFORE THE ROLL RE-ENTERS.

4. Once bead breaking in the lower part has been completed, move the lower roll to rest position activating push button (**Fig. 14 ref. G2**). The roll re-enters automatically nullifying the approaching movement described at point 1). This automatism can be applied on both arms.

UNTIL BOTH UPPER AND LOWER FEELER PINS ARE NOT BACK TO REST POSITION, IT IS NOT POSSIBLE TO CARRY OUT A NEW DIAMETER ADJUSTMENT, AS DESCRIBED IN PARAGRAPH 12.4 POINT 2.

5. Rotate the rim until the valve is positioned on the immediate right of the roll.

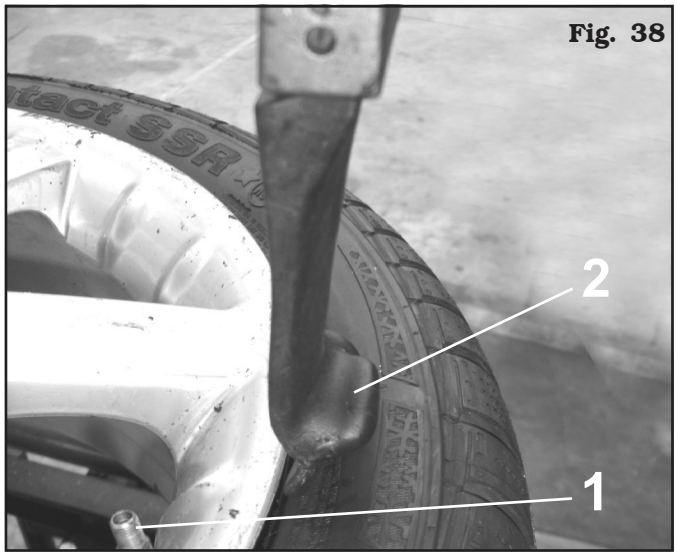
WHILE THIS OPERATION IS BEING CARRIED OUT PAY ATTENTION NOT TO DEFORM THE TYRE SIDE. GREASE THE BEAD BEFORE THE ROLL RE-ENTERS.

12.7 Demounting the tyre

When both beads are broken, the tyre can be demounted.

1. Press the pedal (**Fig. 15 ref. A**) to rotate the wheel clockwise until the valve stem reaches “hour 1” position (**Fig. 38 ref. 1**).

Fig. 38

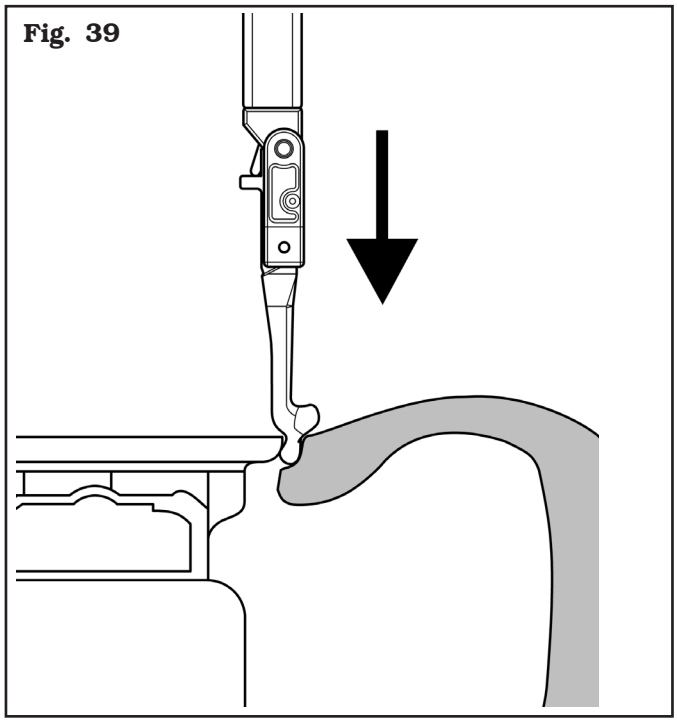


2. Position the upper tool (**Fig. 38 ref. 2**) just next the rim edge using the control provided (**Fig. 14 ref. H**) (tool descent) (see **Fig. 39**). While this phase is being carried out, stay just next to a zone in the tyre where bead breaking has been effectuated.

MOVE VERY CAREFULLY THE TOOLS HOLDER ARM TO WORKING POSITION, IN ORDER TO AVOID POSSIBLE HANDS CRUSHING.

USE ONLY TYRE LUBRICANTS. SUITABLE LUBRICANTS CONTAIN NO WATER, HYDROCARBONS, OR SILICON.

Fig. 39



3. Move forward the tool so that it penetrates between rim and tyre (see **Fig. 40**). While this operation is being effectuated, the tool rotates around the rim edge until it hooks the tyre bead (see **Fig. 41**).

Fig. 40

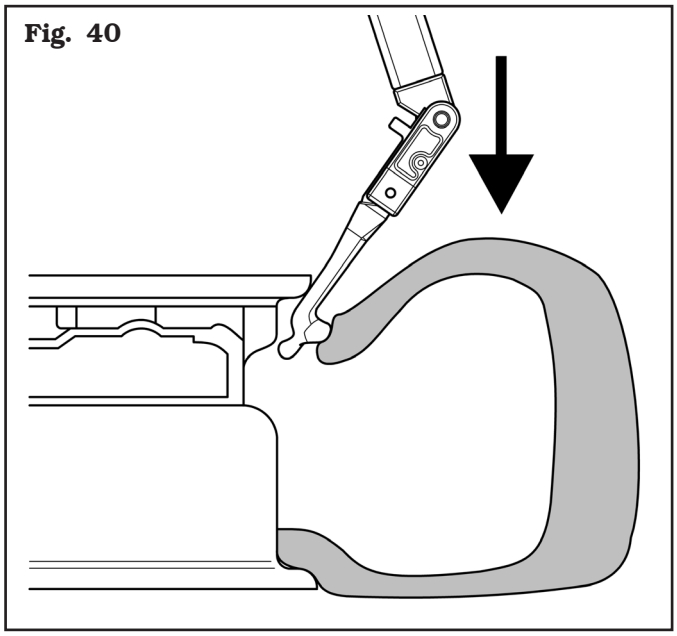
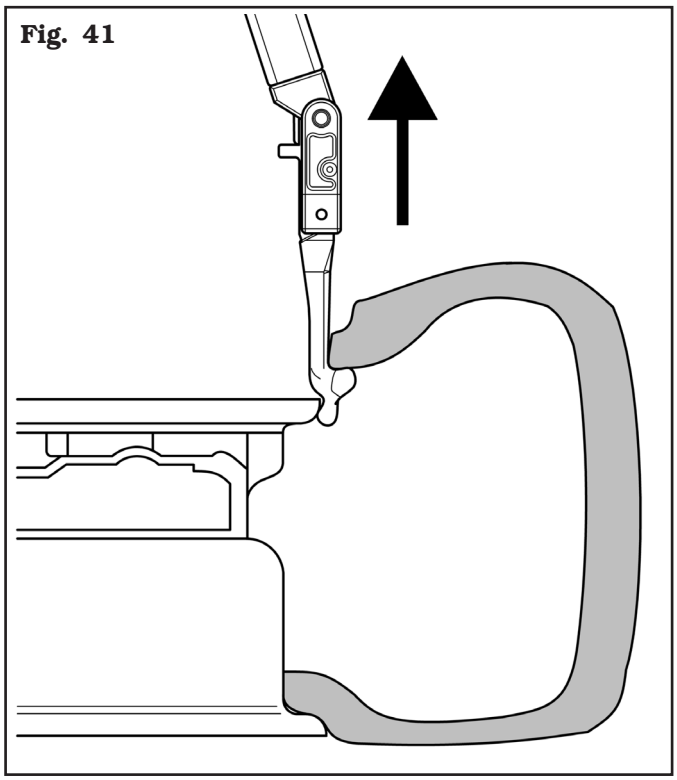


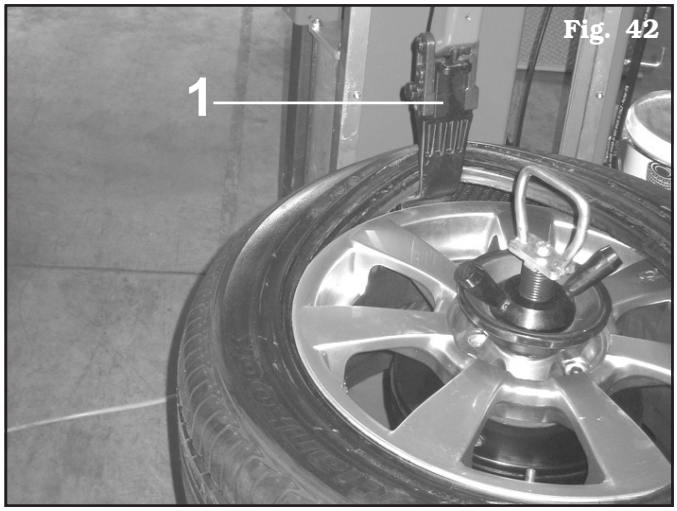
Fig. 41



4. Lift the tool using the control provided (**Fig. 14 ref. I**). When the tool reaches a vertical position related to the rim (**Fig. 42 ref. 1**), rotate the mandrel so that the tyre enters the rim groove. Keep on raising the tool until the bead is on the rim edge (see **Fig. 41**).

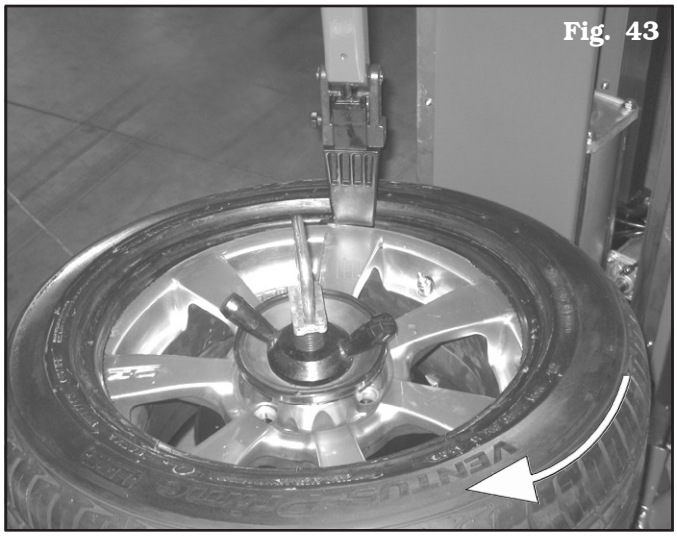
MAKE SURE THAT THE TOOL IS ON DEMOUNTING POSITION (FIG. 41) BEFORE STARTING MANDREL ROTATION.

Fig. 42



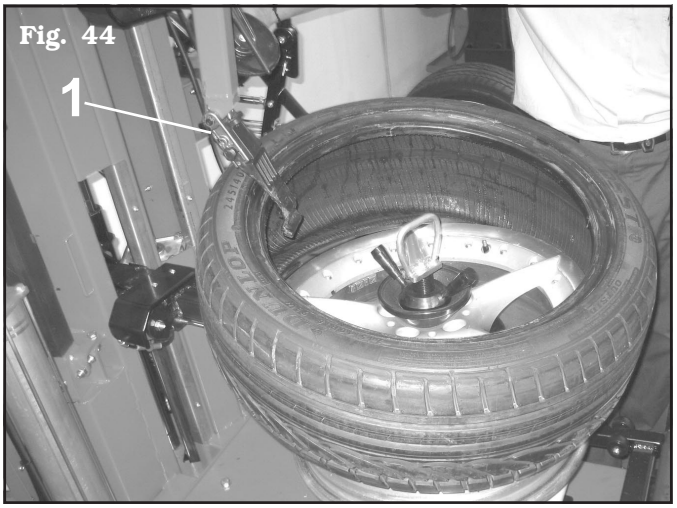
5. Rotate clockwise until the upper bead is completely disassembled (see **Fig. 43**).

Fig. 43



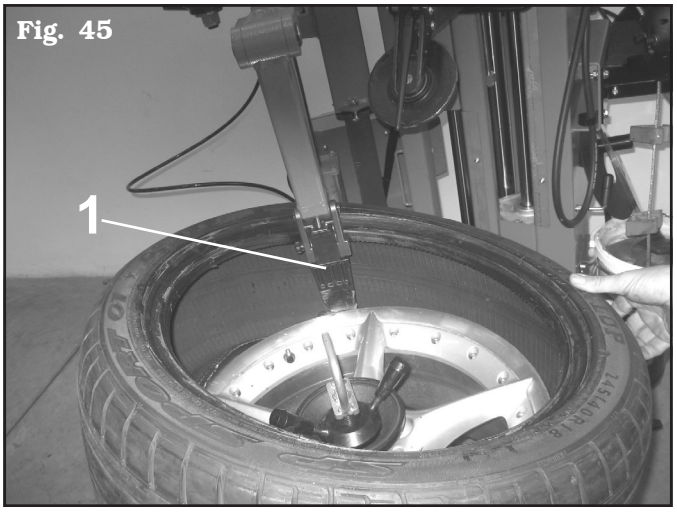
6. Lift the tool (see **Fig. 44 ref. 1**) keeping it coupled to the upper bead of the tyre with the lower bead breaking roll.

Fig. 44



7. Position the tool (see **Fig. 45 ref. 1**) just next to the rim edge. Using the lower bead breaking roller, load the lower bead on the tool in demounting position.

Fig. 45



8. Rotate the mandrel clockwise until the tyre is completely disassembled.

Demounting the lower bead

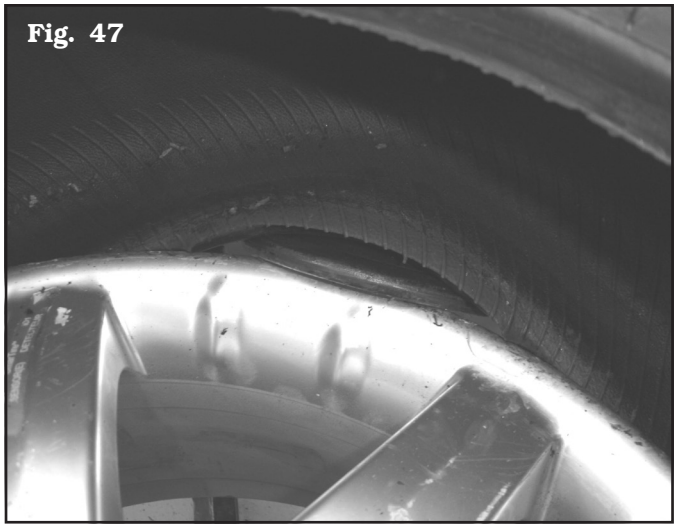
To disassemble the lower tyre the bead breaking roller can be used alternatively. Lift the tool and go away from the working area.

1. Lift the roll and the tyre just next to the rim edge (see **Fig. 46**).

Fig. 46

2. Then, move forward the roll through the provided control (**Fig. 14 ref. E**) so that it is inserted between the rim edge and the lower bead (see **Fig. 47**).

Fig. 47



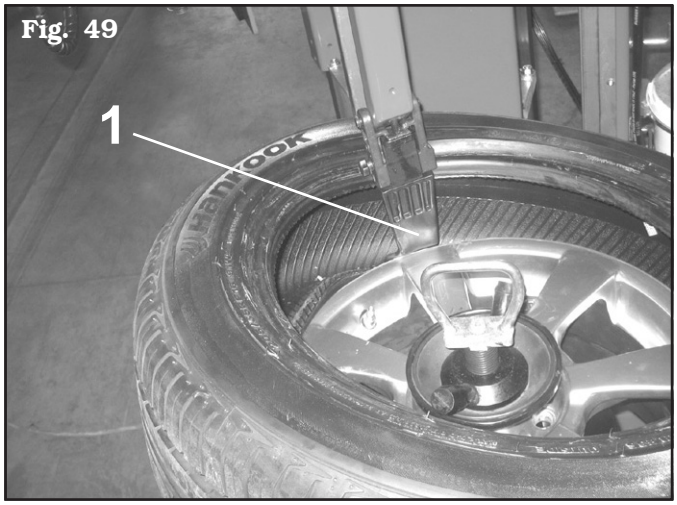
3. Then, rotate and complete bead disassembly (see **Fig. 48**).

Fig. 48

12.8 Mounting the tyre

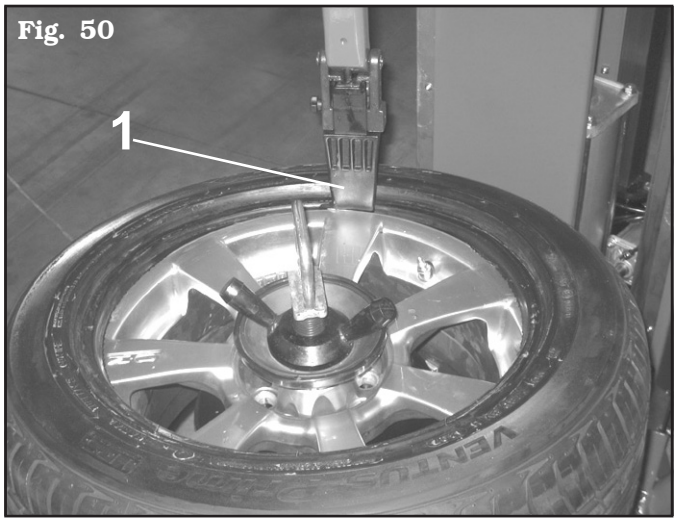
1. Lubricate the tyre's beads.
2. Position the tool (**Fig. 49 ref. 1**) onto the rim edge.

Fig. 49



3. Hook the lower bead on the tool then rotate clockwise until the complete assembly.
4. Then, position the upper bead on the tool assembly area (**Fig. 50 ref. 1**).

Fig. 50



5. Assemble the extension with entrainer near rim's edge (see **Fig. 51**).

Fig. 51

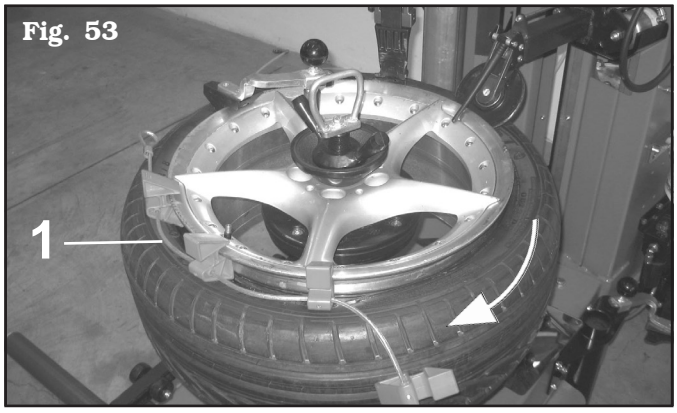
6. Lower the upper bead breaker roll so that the tyre bead is kept at the same height of the rim groove (see **Fig. 52**).

Fig. 52

7. Rotate clockwise until tyre complete assembly.

FOR THE MOUNTING OF VERY DIFFICULT WHEELS, USE THE EXTENSION OF THE BEAD DEPRESSOR (FIG. 53 REF. 1) (OPTIONAL).

Fig. 53



8. When the operations have been completed move all the tools in rest position.

12.9 Tyre inflation with machine without tubeless inflation

Connect the inflation device to the tyre valve and inflate the same tyre using the pedal provided (**Fig. 15 ref. B**).

A SAFETY DEVICE IS PRESENT FOR THE ADJUSTMENT OF THE MAXIMUM PRESSURE OF THE SUPPLIED AIR (4,2 ± 0,2 BAR / 60 PSI).

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

In case the beads are not seated at 4.2 ± 0.2 bar, release all the air from the wheel, remove it from the tyre changer and put it in a safety cage to complete the inflation procedure.

12.10 Tyre inflation with machine with tubeless inflation

Some types of tyres can be difficultly inflated if the beads are not in contact with the rim. The tubeless inflation device supplies a jet of high-pressure air from the nozzle, which encourages the correct positioning of the bead against the rim, and therefore normal inflation.
In order to carry out the inflation of the tyre follow these indications:

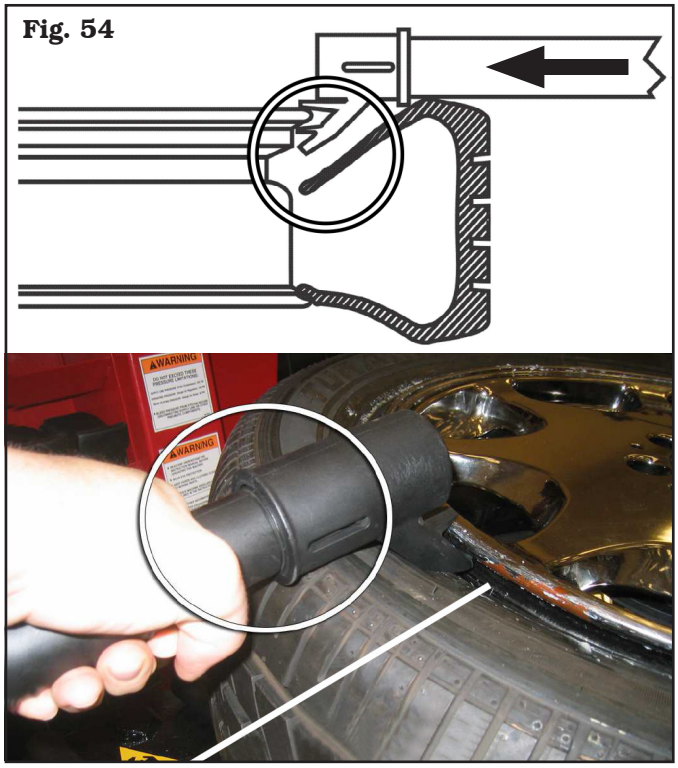
- Remove the valve stem core.
  Removing the valve stem core will allow the tyre to inflate faster and the bead to seat easier.
- Connect the inflation terminal to the valve of the tyre.

TO IMPROVE THE EFFECTIVENESS OF TUBELESS INFLATION SYSTEM, ALWAYS LUBRICATE TYRE BEADS.

- Press the bead blaster hose on the wheel rim as shown in **Fig. 54**. Ensure the hose head is pressed in to activate the additional air jet.

THE NOZZLE SHOULD BE HORIZONTAL FOR OPTIMAL PERFORMANCE (FIG. 54).

Fig. 54



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

- Press completely downwards the inflating pedal, in order to release a high pressure air jet through the tubeless inflation nozzle.
- Keep partially pressed downwards the inflating pedal to inflate the tyre and place the beads in their seats.

DO NOT EXCEED THE PRE-ARRANGED PRESSURE VALUES WHILE SEALING THE BEAD.

- After the beads take place in their own seat, disconnect the inflating terminal and install again the valve gear, that was removed previously.
  Then connect the inflating terminal and inflate the tyre with the required pressure.

IF THE TYRE GETS INFLATED TO MUCH, IT IS POSSIBLE TO EXHAUST THE AIR FROM THE TYRE, BY PUSHING THE MANUAL DEFLATING PUSH BUTTON LOCATED UNDER THE PRESSURE GAUGE.

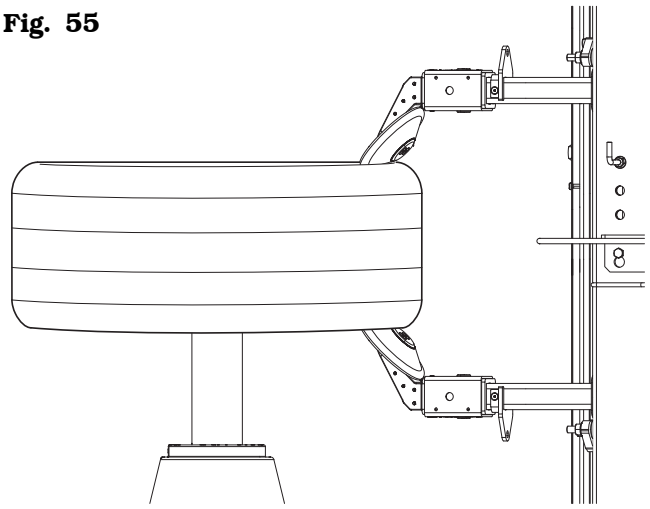
- Disconnect the inflation terminal from the valve.

12.11 Special use of the bead-breaker

In addition to its use during mounting and demounting, the bead-breaker roll can also be used for matching the tyre to the rim. To conduct this operation carry out the following instructions.

- Clamp the tyre between the bead breaker roll.
- Turn the motor clockwise until the reference point on the tyre coincides with the reference point on the rim (usually the valve) (see **Fig. 55**).

Fig. 55



13.0 ROUTINE MAINTENANCE

BEFORE CARRYING OUT ANY ROUTINE MAINTENANCE OR ADJUSTMENT PROCEDURE, POSITION THE MAIN SWITCH "0", DISCONNECT THE MACHINE FROM THE ELECTRICITY SUPPLY USING THE SOCKET/PLUG COMBINATION AND CHECK THAT ALL MOBILE PARTS ARE AT A STANDSTILL.

BEFORE EXECUTING ANY MAINTENANCE OPERATION, MAKE SURE THERE ARE NO WHEELS LOCKED ONTO THE MANDREL.

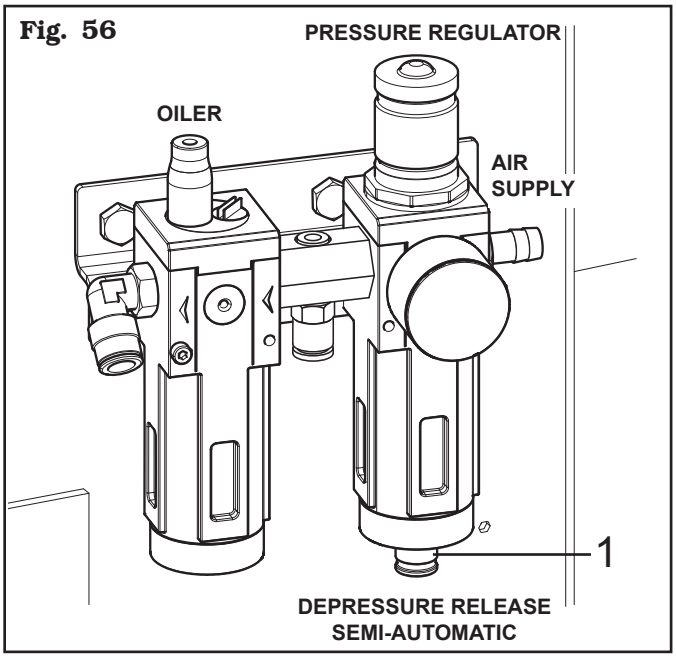
To guarantee the efficiency and correct functioning of the machine, it is essential to carry out daily or weekly cleaning and weekly routine maintenance, as described below.
Cleaning and routine maintenance must be conducted by authorized personnel and according to the instructions given below.

- Remove deposits of tyre powder and other waste materials with a vacuum cleaner.

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. 56**).

Fig. 56



IN ORDER TO ENSURE A GOOD FUNCTIONING AND TO AVOID THE PRESENCE OF CONDENSATION IN THE AIR TREATMENT UNITS WITH SEMI-AUTOMATIC DRAIN, IT'S NECESSARY TO MAKE SURE ABOUT THE CORRECT POSITION OF THE VALVE (FIG. 56 REF. 1), PLACED UNDER THE CAP. TO ACTIVATE A CORRECT DRAIN FUNCTION, THE CAP MUST BE ROTATED IN THE RIGHT WAY.

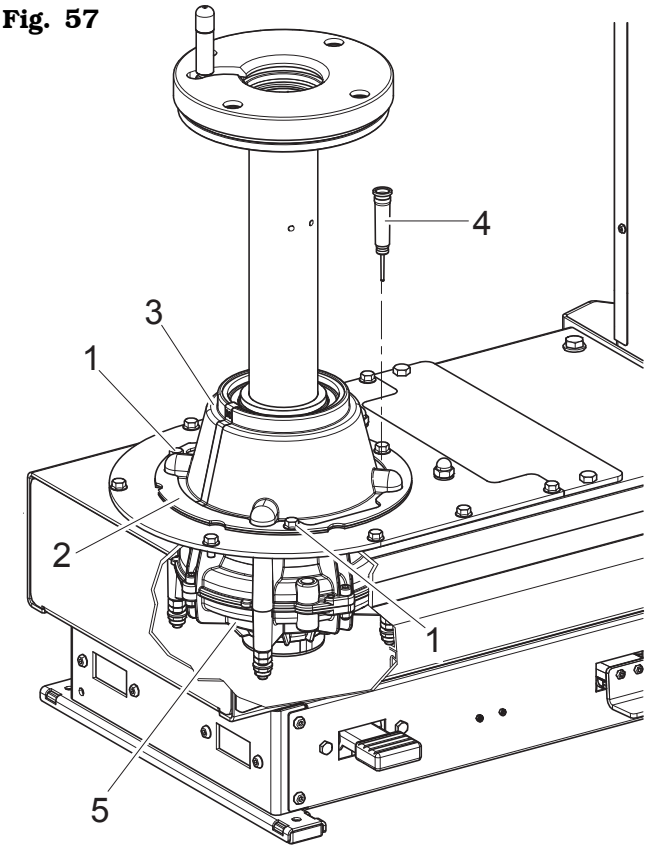
IN ORDER TO ALLOW A LONGER LIFE OF THE FILTER AND OF ALL MOVING PNEUMATIC DEVICES, YOU HAVE TO MAKE SURE THAT THE SUPPLIED AIR IS:
- **EXEMPT FROM THE LUBRICATING OIL OF THE COMPRESSOR;**
- **EXEMPT FROM HUMIDITY;**
- **EXEMPT FROM IMPURITY.**

- Periodically, with a frequency of at least once a month, lubricate the arms of the bead breaking roller and of the tools.
- Immediately replace worn parts, bead breaking roller, assembly tools.
- 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.

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.
- Immediately replace worn parts, bead breaking roller, assembly tool.
- Periodically (at least every 100 working hours) check the oil level in the reduction gear l(**Fig. 57 ref. 5**). Such operation must be effectuated unscrewing the screws (**Fig. 57 ref. 1**), removing the flange (**Fig. 57 ref. 2**), the guard (**Fig. 57 ref. 3**) and the plug (**Fig. 57 ref. 4**) on the reduction gear.

Fig. 57



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!!

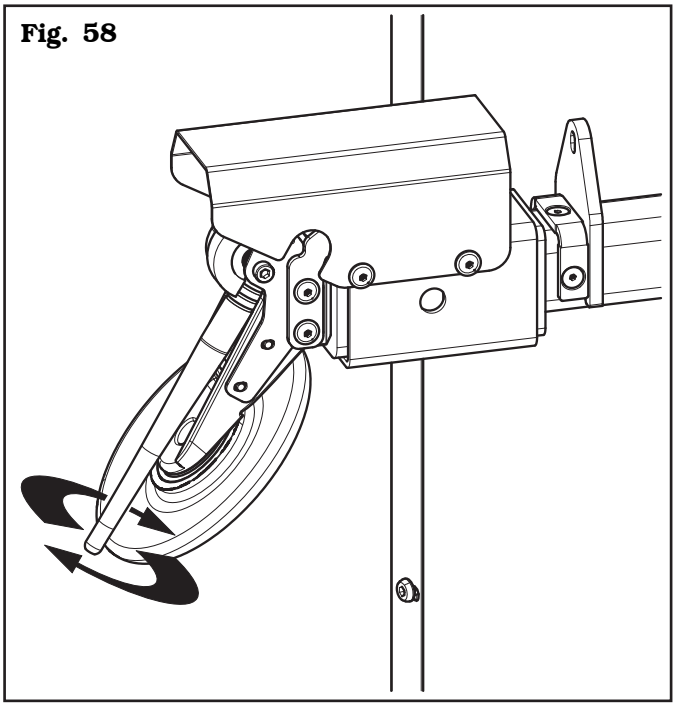
13.1 Replacement of the feeler pin (valid only for KENDO.30S - KENDO.30SFI models)

After a certain number of operations it's possible that the (upper and/or lower) feeler pin deform so that it can't ensure a proper functioning; in this case its replacement can be carried out following these simple operations (**Fig. 58**):

- Unscrew the deformed feeler pin
- Replace it by a new feeler pin, keeping the head of the screw pressed in order to facilitate this operation.

THE FEELER PINS MUST BE ABSOLUTELY ORIGINAL; DON'T REPLACE THEM WITH IMPROVISED FEELER PINS, DON'T MODIFY THE ORIGINAL FEELER PINS.

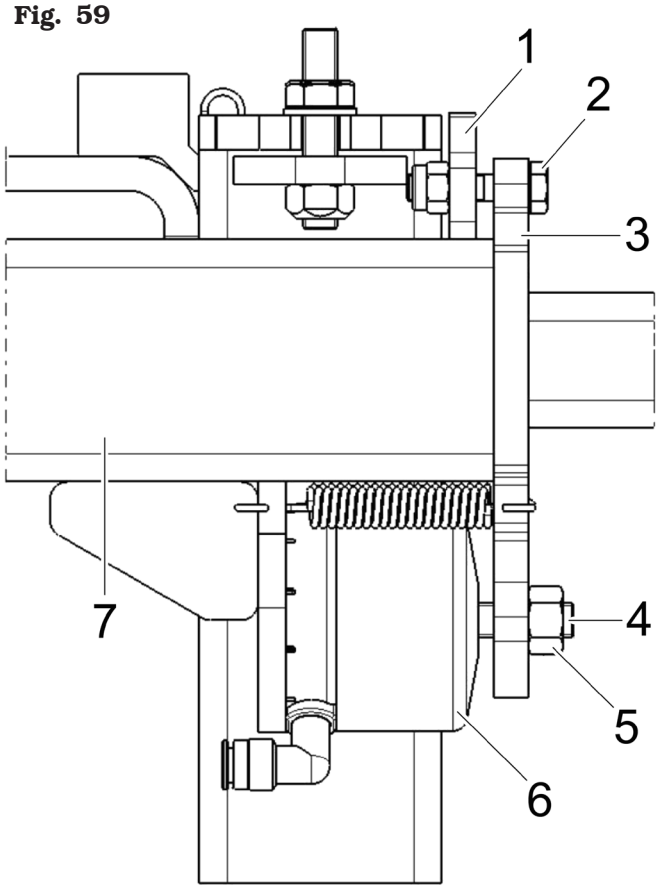
Fig. 58



13.2 Neck adjustment

In case of fulcrum-type screws (**Fig. 59 ref. 2**) with neck (**Fig. 59 ref. 3**) fully beating onto bead breaking arm's guide (**Fig. 59 ref. 7**) (not on the adjusting plate (**Fig. 59 ref. 1**)), carry out neck adjustment procedure as described below.

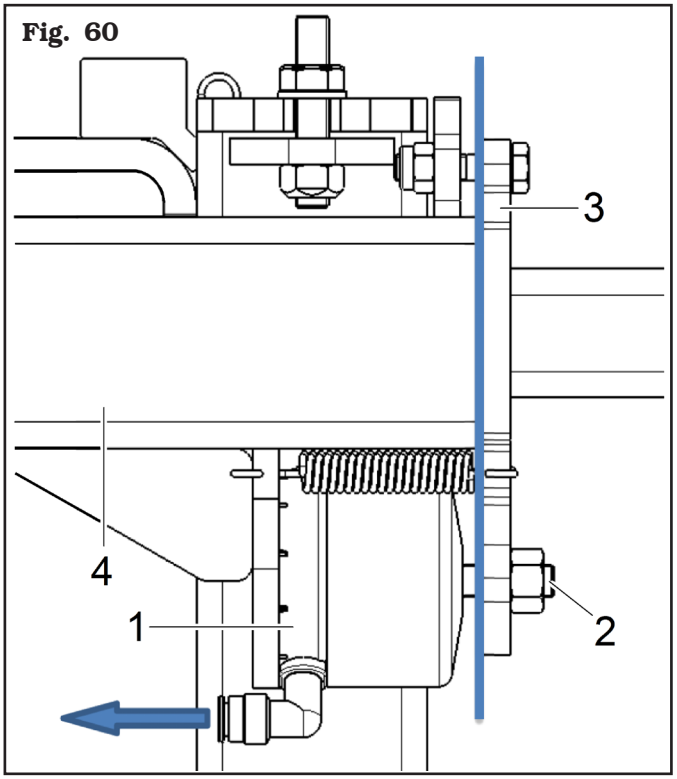
Fig. 59



KEY
1 – Adjusting plate
2 – Fulcrum screws
3 – Neck
4 – Adjusting dowel
5 – Locking nut
6 – Neck operating cylinder
7 – Bead breaking arm guide

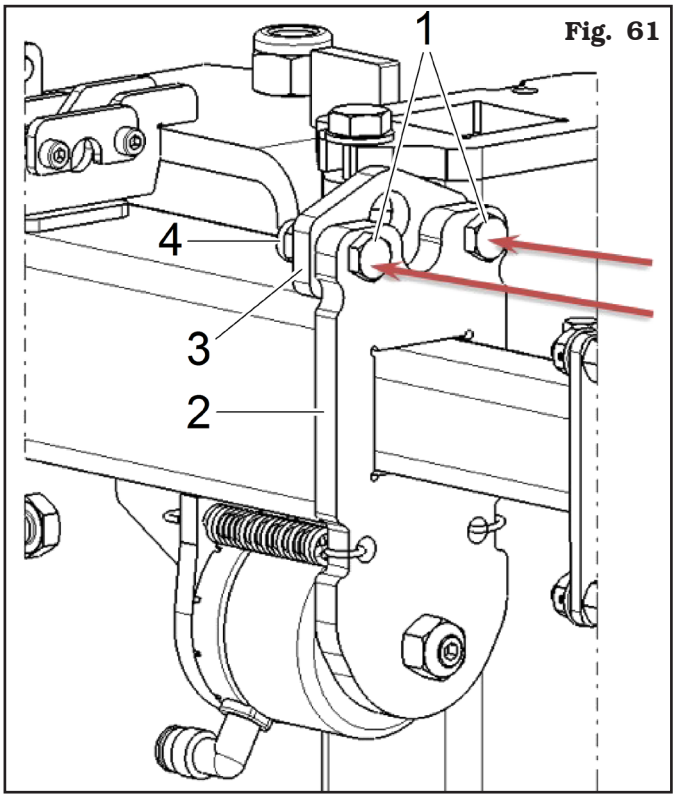
a. Blow off the compressed air from neck's cylinder (**Fig. 60 ref. 1**). Make neck (**Fig. 60 ref. 3**) reach beat position again on the guide support surface (**Fig. 60 ref. 4**), by turning the adjusting dowel (**Fig. 60 ref. 2**).

Fig. 60



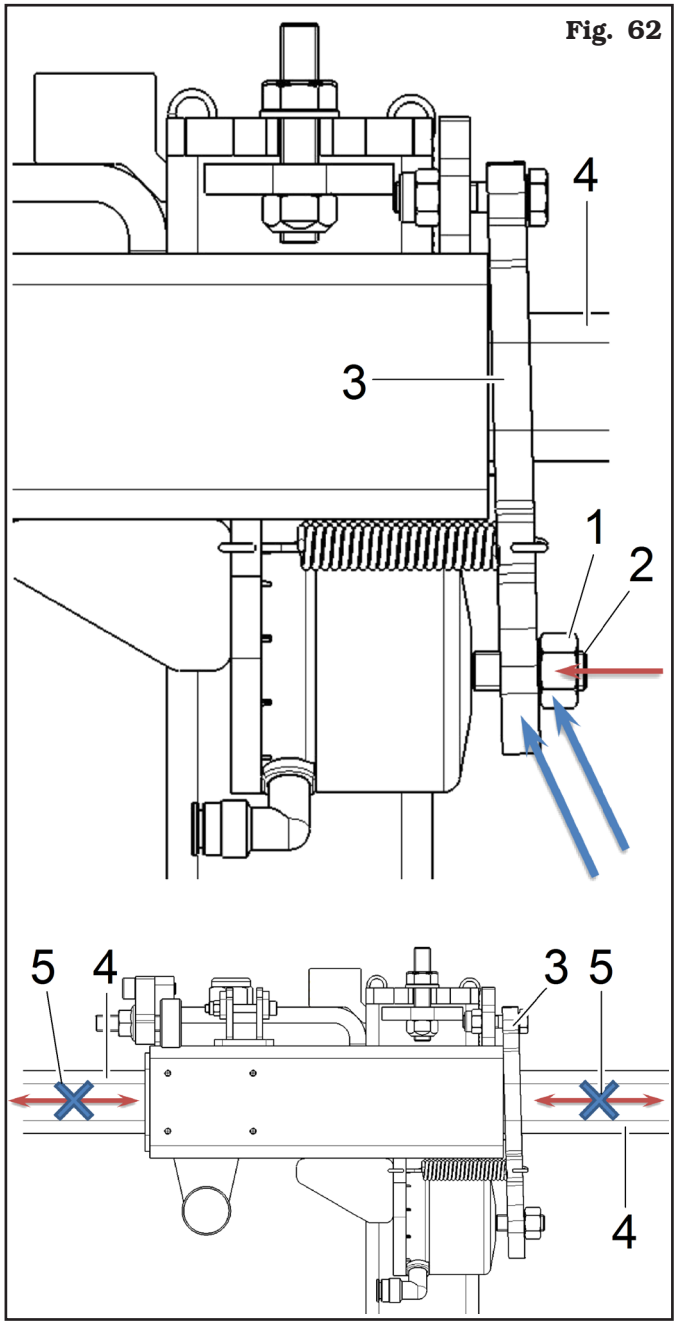
b. Completely screw fulcrum-type screw (or screws) (**Fig. 61 ref. 1**) but without locking them, just making them approach, setting a 0.1 ÷ 0.2 mm play between neck (**Fig. 61 ref. 2**) and adjusting plate (**Fig. 61 ref. 3**), positioning nut (**Fig. 61 ref. 4**) and letting it rest completely onto adjusting plate.

Fig. 61



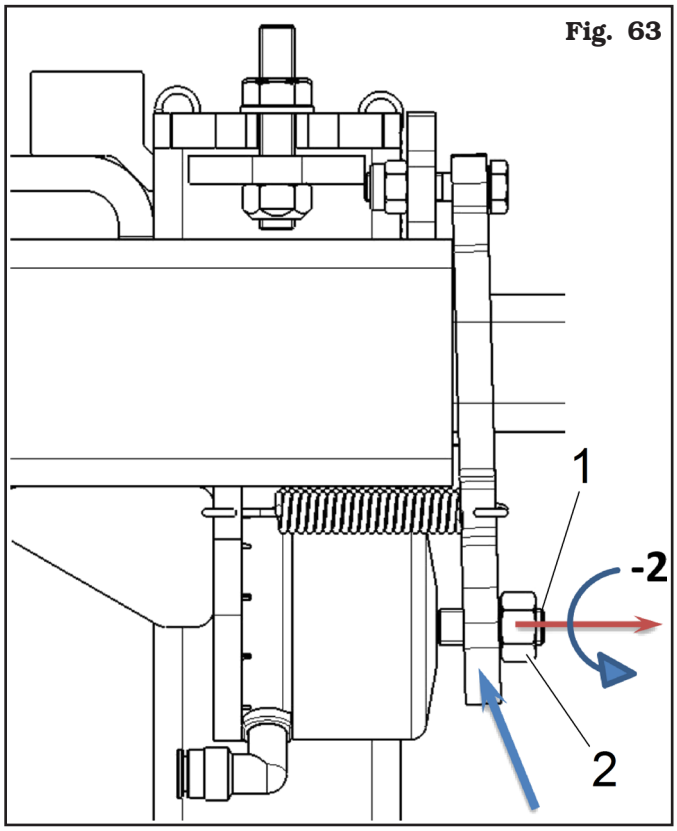
c. Slacken lock nut (**Fig. 62 ref. 1**) of adjusting dowel (**Fig. 62 ref. 2**). Then, screw the dowel (**Fig. 62 ref. 2**) until neck (**Fig. 62 ref. 3**) strikes onto arm (**Fig. 62 ref. 4**), that as a consequence results clamped (**Fig. 62 ref. 5**).

Fig. 62



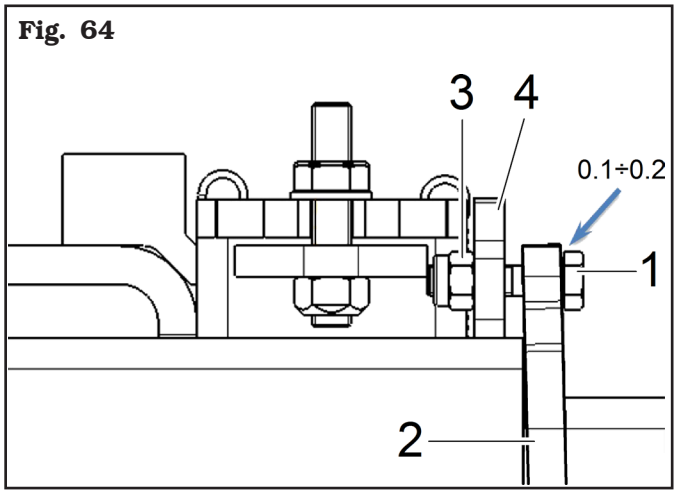
d. Starting from the position reached at point (c), unscrew neck's adjusting dowel counter-clockwise by 2 complete turns (**Fig. 63 ref. 1**) and lock the relevant counter nut (**Fig. 63 ref. 2**).

Fig. 63



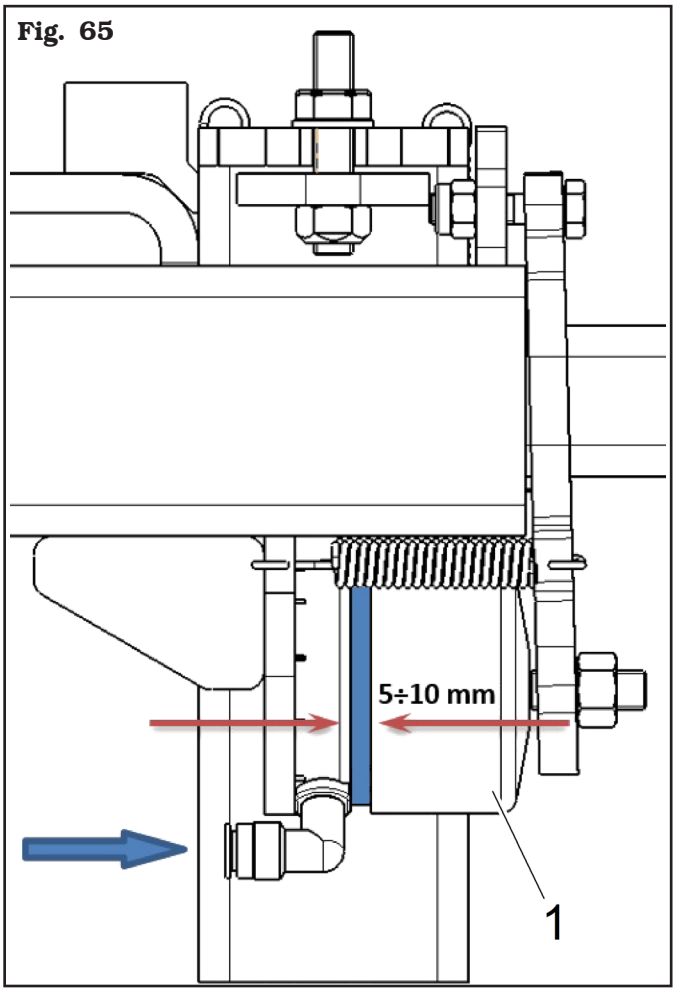
e. Turn fulcrum-type screw (or screws) (**Fig. 64 ref. 1**) in order to reset 0.1 ÷ 0.2 mm play between neck (**Fig. 64 ref. 2**) and fulcrum-type screws head (**Fig. 64 ref. 1**), letting the nut (**Fig. 64 ref. 3**) rest completely onto adjusting plate (**Fig. 64 ref. 4**).

Fig. 64



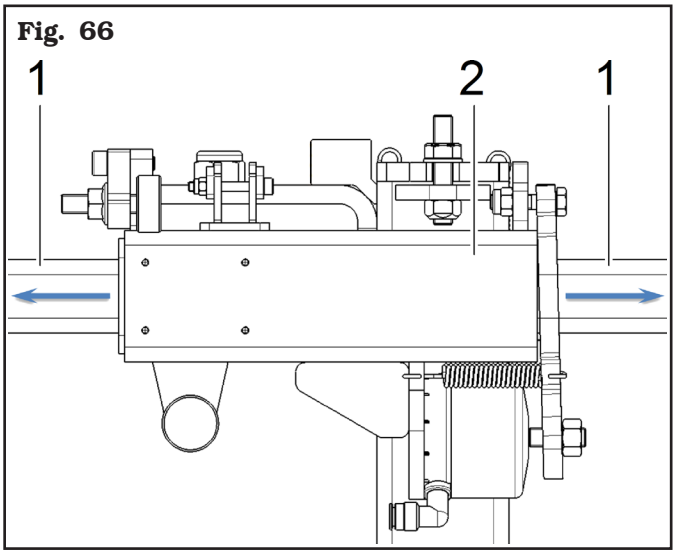
f. Operate cylinder (**Fig. 65 ref. 1**), supplying it with compressed air, and make sure its stroke is included between 5 ÷ 10 mm.

Fig. 65



g. Blow off cylinder and make sure the arm (**Fig. 66 ref. 1**) can slide freely in its guide (**Fig. 66 ref. 2**).

Fig. 66



h. Repeat points (f) and (g) 3 times at least.

14.0 TROUBLESHOOTING TABLE

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 on tyre-changer, set the main switch to "0" and lock it in this position.

CONTACT AUTHORIZED TECHNICAL SERVICE

do not try and service alone

Problem	Possible cause	Remedy
The arm advance cam is not immediately activated (valid for versions KENDO.30LIGHT - KENDO.30LIGHTFI).	1. Supply missed. 2. The control push button is broken.	1. Connect the supply. 2. Call for technical assistance. 
The arm advance cam (in automatic position) is not immediately activated (valid for versions KENDO.30S - KENDO.30SFI).	1. The feeler pin is unscrewed. 2. The connectors are extracted. 3. The feeler pin position is badly adjusted.	1. Screw the feeler pin well. 2. Check the connectors in the rear part of the arm. 3. Set the feeler pin position.
The nozzle doesn't supply air when the inflation pedal is pressed (only for version with tubeless).	The inflation pedal is badly adjusted.	Call for technical assistance. 
The mandrel doesn't rotate.	Inverter overload alarm *Or* Inverter undervoltage alarm *Or* Inverter overvoltage alarm	Shorten the length of a possible machine extension cable or increase the conductors section (disconnect and connect again). Lift the motor pedal and wait for the automatic reset.
	Overtemperature alarm.	Wait until the motor system cools (the machine does not restart if the temperature level does not go below the set safety threshold).
The mandrel does not reach the maximum rotation speed.	The mechanical resistance of the gearmotor system has increased.	Turn the mandrel without wheel for a few minutes so that the system heats, thus reducing frictions. If in the end the mandrel does not accelerate again, call for technical assistance. 
The mandrel does not rotate in counter-clockwise direction.	Pedalboard microswitch breakage.	Replace microswitch.
The mandrel doesn't rotate, but it attempts rotation when the machine is switched on again.	Pedalboard irreversible de-calibration.	Call for technical assistance. 
The mandrel rotates slowly but it does not operate on the motor pedal.	Pedalboard reversible de-calibration.	1. Keep the pedal in rest position. 2. Keep the machine connected to the net. 3. Wait for 30 seconds that the pedalboard recalibration automatic attempt ends.

15.0 TECHNICAL DATA

Recommended air supply pressure ..... **8 - 10 bar**
Invemotor Speed ..... **15 rpm**
Invemotor Power ..... **1,5 kW**
Recommended electric supply ..... **single-phase 220÷240V - 50/60 Hz**
Maximum wheel diameter ..... **41"/43"/45"**
Wheel max. width ..... **15"**
Rim locking diameter ..... **10"-26"÷12"-28"÷14"-30"**
Bead-breaking power per roll (10 bar) ..... **1200 kg**
Vertical bead breaker max. opening ..... **900 mm**
Gear noise ..... **dBA 76**

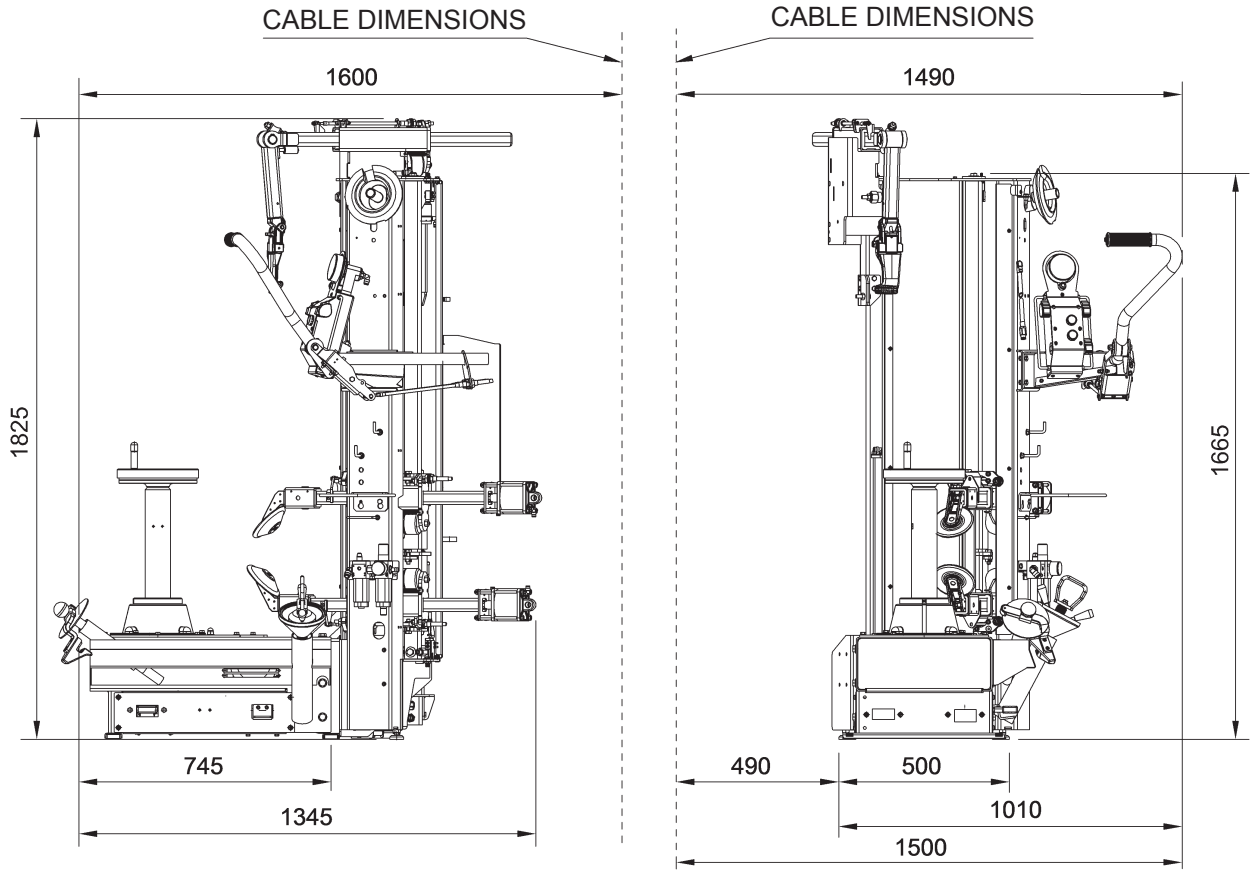
15.1 Weight

Model without tubeless inflation ..... **330 kg**
Model with tubeless inflation ..... **338 kg**

15.2 Dimensions

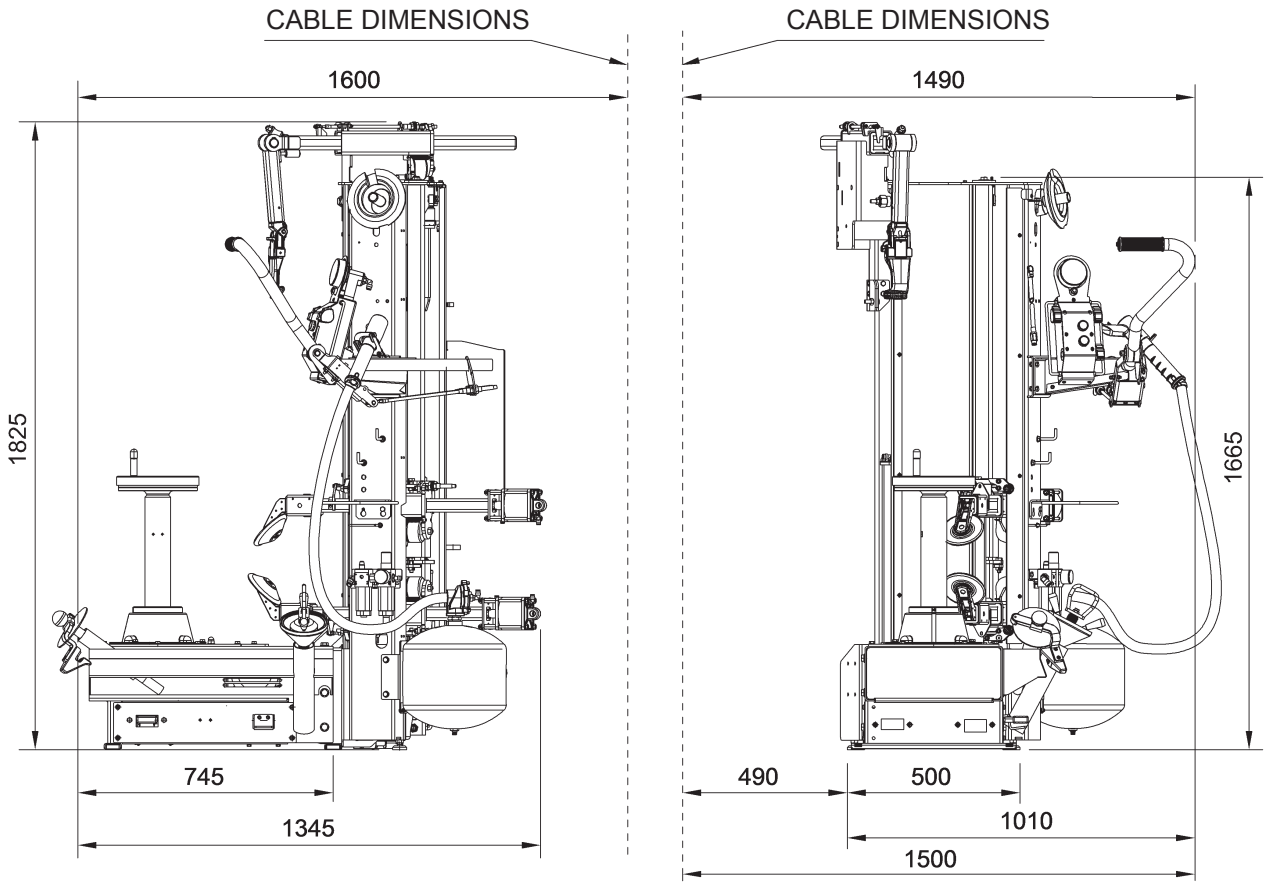
KENDO.30LIGHT

Fig. 67



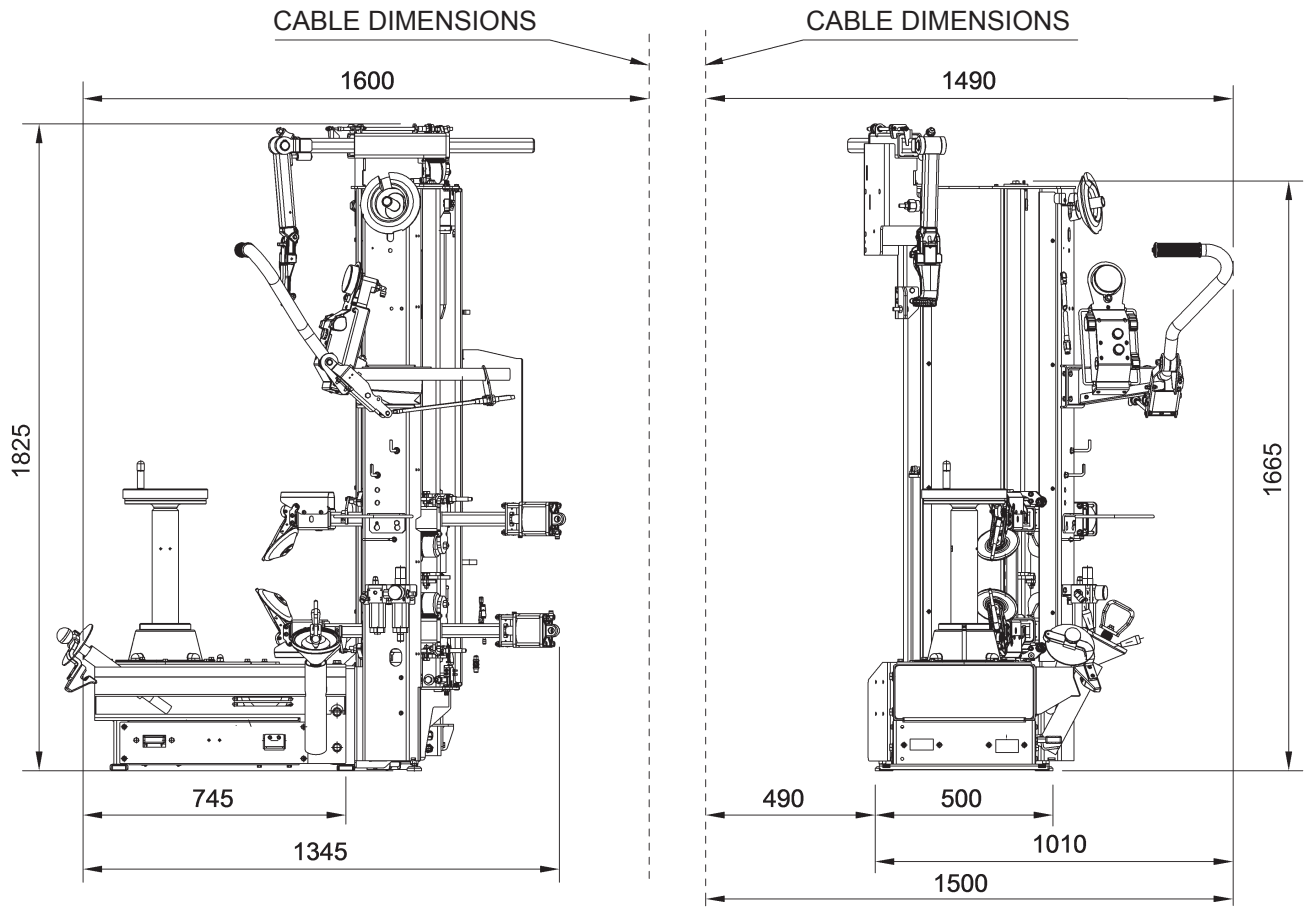
KENDO.30LIGHTFI

Fig. 68



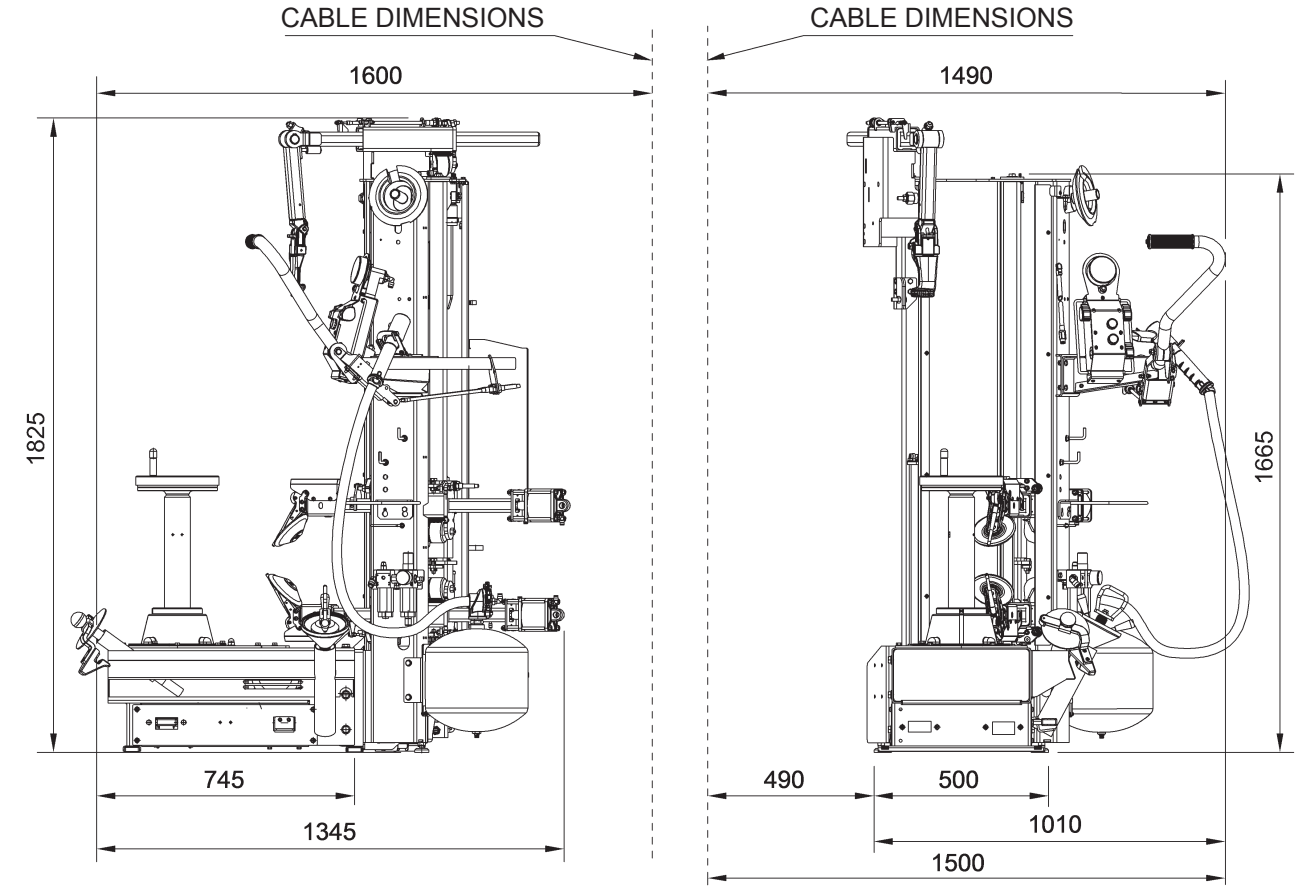
KENDO.30S

Fig. 69



KENDO.30SFI

Fig. 70



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.

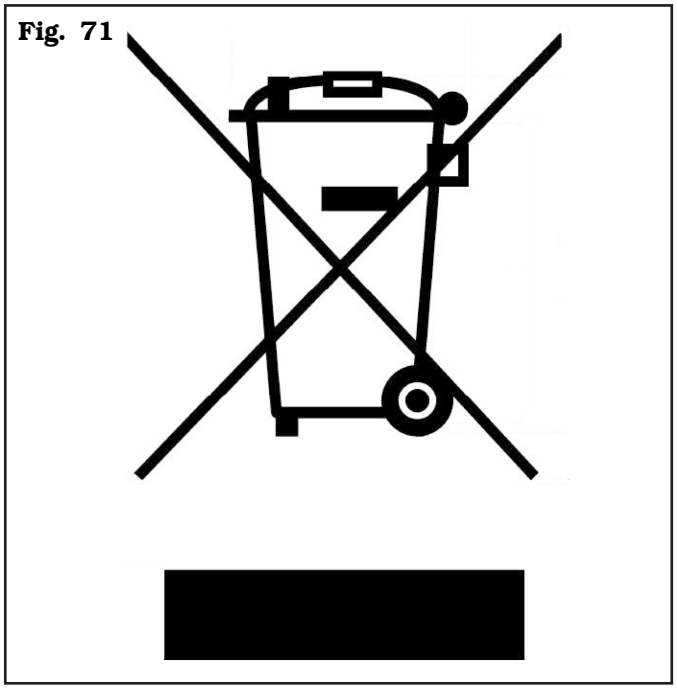
17.0 SCRAPPING

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.

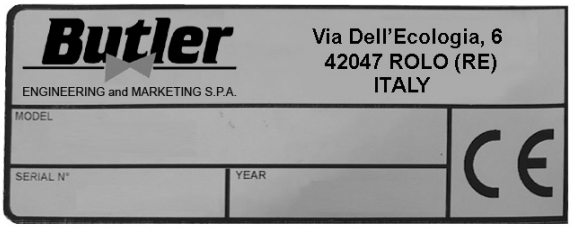
Instructions for the correct management of waste from electric and electronic equipment (WEEE) according to the Italian legislative decree 49/14 and subsequent amendments.

In order to inform the users on the correct way to dispose the product (as required by the article 26, paragraph 1 of the Italian legislative decree 49/14 and subsequent amendments), we communicate what follows: the meaning of the crossed dustbin symbol reported on the equipment indicates that the product must not be thrown among the undifferentiated rubbish (that is to say together with the "mixed urban waste"), but it has to be managed separately, to let the WEEE go through special operations for their reuse or treatment, in order to remove and dispose safely the waste that could be dangerous for the environment and to extract and recycle the raw materials to be reused.

Fig. 71



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.
Said plate must always be kept clean from grease residues or filth generally.

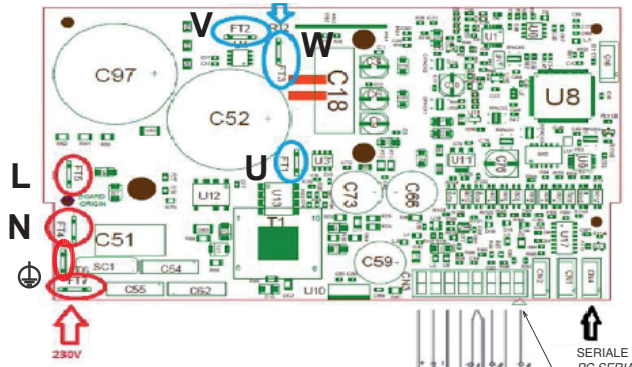
ATTENTION: TAMPERING WITH, CARVING, CHANGING ANYHOW OR EVEN REMOVING MACHINE IDENTIFICATION PLATE IS ABSOLUTELY FORBIDDEN; DO NOT COVER IT WITH TEMPORARY PANELS, ETC., SINCE IT MUST ALWAYS BE VISIBLE.

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.

MOTORE
MOTOR

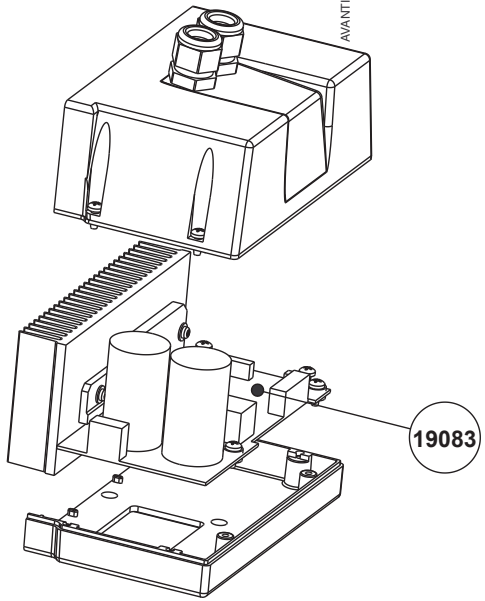


SERIALE PC
PC SERIAL

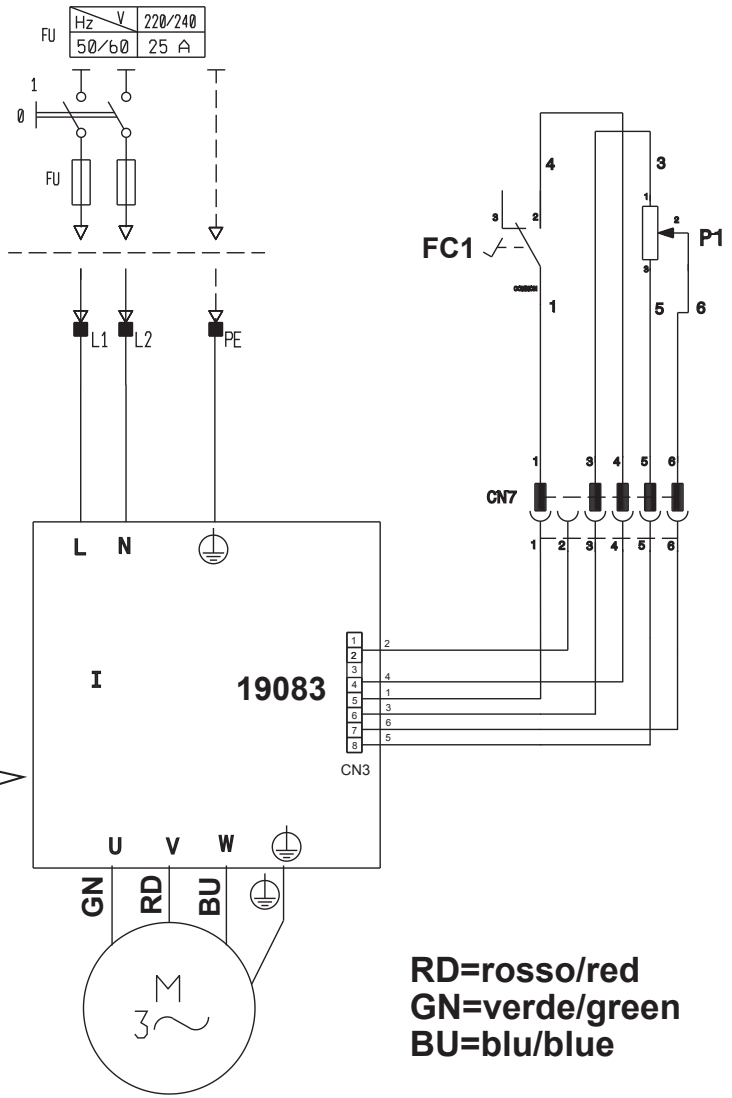
pin n°1

SCHEDA INVERTER 19083
INVERTER CARD 19083

INDIETRO/*REVERSE*
AVANTI/*FORWARD*
AVANTI VELOCE/*FAST FORWARD*

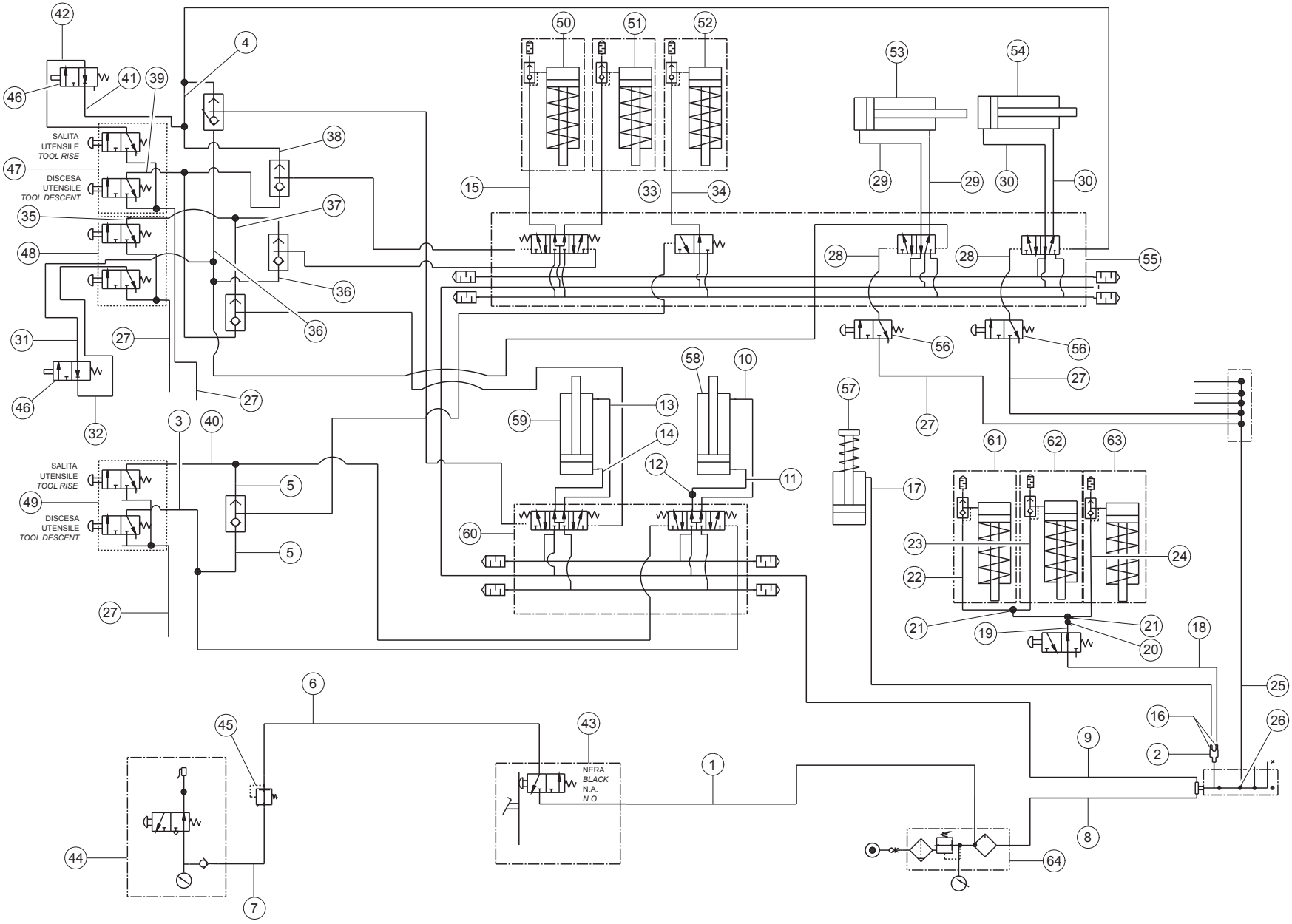


MONOFASE CAVO ALIMENTAZIONE 2P+TERRA x mmq
SUPPLY CABLE MONOPHASE 2P+GROUND x mmq
EINPHASEN KABEL SPEISUNG 2P+ERDE x mmq
UNIPHASÉ CÂBLE ALIMENTATION 2P+TERRE x mmq
MONOFÁSICO CABLE ALIMENTACIÓN 2P+TIERRA x mmq



RD=rosso/red
GN=verde/green
BU=blu/blue

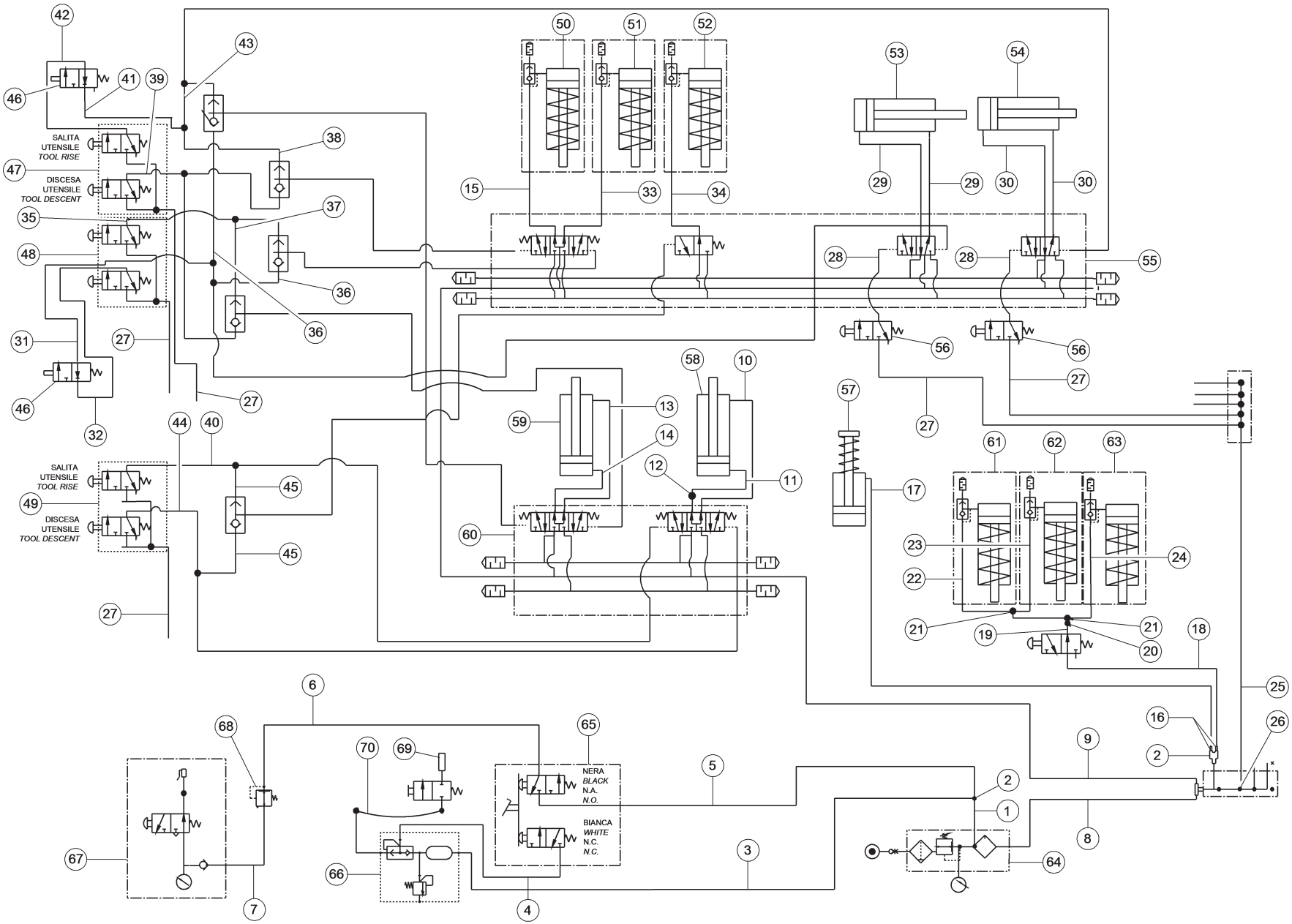
N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
	CN3	*Conn. connessione micro*	*Micro connector*	*Verbinder Mikro*	*Conn. Micro*	*Conec. conex. Micro*
	FC1	*Micro interruttore comando motore*	*Motor control microswitch*	*Mikroregulador Motorbefehl*	*Micro-inter. commande moteur*	*Micro regulador mando motor*
	P1	*Potenziometro reg. velocità motore*	*Moteur speed adj. potentiometer*	*Motorgeschw. Potenziometerreg.*	*Potentiomètre reg. vitesse moteur*	*Potenciómetro reg. velocidad motor*
	I	*Inverter comando motore*	*Motor control inverter*	*Frequenumformerantriebmotor*	*Variateur commande moteur*	*Inversor mando motor*
	M	*Motore asincrono trifase*	*Threephase asynchronous motor*	*Dreiphasen Asynchronmotor*	*Moteur asynchrone triphasé*	*Motor asincrónico trifásico*
	■	*Morsetto*	*Clamp*	*Klemme*	*Borne*	*Abrazadera*



Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**		*SCHEMA PNEUMATICO (KENDO.30LIGHT) PNEUMATIC CIRCUIT DIAGRAM (KENDO.30LIGHT) PNEUMATIKPLAN (KENDO.30LIGHT) SCHEMA PNEUMATIQUE (KENDO.30LIGHT) ESQUEMA NEUMATICO (KENDO.30LIGHT)*	***Pag. 44 di 57***
	Tavola N°B - Rev. 0	**710505030**		**KENDO.30LIGHT - KENDO.30LIGHTFI KENDO.30S - KENDO.30SFI**

N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
1	317009	*Tubo rilsan 8x6 blu L=1200*	*8x6 blue rilsan pipe L= 1200*	*Rilsan Schlauch 8x6 blau L= 1200*	*Tuyau rilsan 8x6 bleu L= 1200*	*Tubo rilsan 8x6 azul L= 1200*
2	325181	*Raccordo a V8*	*V8 union*	*V-Verbindung 8*	*Raccord à V8*	*Enlace a V8*
3	317027	*Tubo rilsan 4x2,7 rosso L=2600*	*4x2,7 red rilsan pipe L= 2600*	*Rilsan Schlauch 4x2,7 röt L= 2600*	*Tuyau rilsan 4x2,7 rouge L= 2600*	*Tubo rilsan 4x2,7 rojo L= 2600*
4	317028	*Tubo rilsan 4x2,7 verde L=230*	*4x2,7 green rilsan pipe L= 230*	*Rilsan Schlauch 4x2,7 grün L= 230*	*Tuyau rilsan 4x2,7 vert L= 230*	*Tubo rilsan 4x2,7 verde L= 230*
5	317027	*Tubo rilsan 4x2,7 rosso L=240*	*4x2,7 red rilsan pipe L= 240*	*Rilsan Schlauch 4x2,7 röt L= 240*	*Tuyau rilsan 4x2,7 rouge L= 240*	*Tubo rilsan 4x2,7 rojo L= 240*
6	317009	*Tubo rilsan 8x6 blu L=440*	*8x6 blue rilsan pipe L= 440*	*Rilsan Schlauch 8x6 blau L= 440*	*Tuyau rilsan 8x6 bleu L= 440*	*Tubo rilsan 8x6 azul L= 440*
7	317008	*Tubo rilsan 8x6 rosso L=2630*	*8x6 red rilsan pipe L= 2630*	*Rilsan Schlauch 8x6 röt L= 2630*	*Tuyau rilsan 8x6 rouge L= 2630*	*Tubo rilsan 8x6 rojo L= 2630*
8	317010	*Tubo rilsan 10x8 ne L=1250*	*10x8 black pipe L= 1250*	*Schlauch 10x8 schwarz L= 1250*	*Tuyau 10x8 noir L= 1250*	*Tubo 10x8 negro L= 1250*
9	317010	*Tubo rilsan 10x8 ne L=550*	*10x8 black pipe L= 550*	*Schlauch 10x8 schwarz L= 550*	*Tuyau 10x8 noir L= 550*	*Tubo 10x8 negro L= 550*
10	317007	*Tubo rilsan 8x6 nero L=1870*	*8x6 black rilsan pipe L= 1870*	*Rilsan Schlauch 8x6 schwarz L= 1870*	*Tuyau rilsan 8x6 noir L= 1870*	*Tubo rilsan 8x6 negro L= 1870*
11	317007	*Tubo rilsan 8x6 nero L=1200*	*8x6 black rilsan pipe L= 1200*	*Rilsan Schlauch 8x6 schwarz L= 1200*	*Tuyau rilsan 8x6 noir L= 1200*	*Tubo rilsan 8x6 negro L= 1200*
12	399284	*Regolatore di flusso*	*Flow regulator*	*Flussregel*	*Regulateur de débit*	*Regulación de flujo*
13	317007	*Tubo rilsan 8x6 nero L=2470*	*8x6 black rilsan pipe L= 2470*	*Rilsan Schlauch 8x6 schwarz L= 2470*	*Tuyau rilsan 8x6 noir L= 2470*	*Tubo rilsan 8x6 negro L= 2470*
14	317007	*Tubo rilsan 8x6 nero L=2570*	*8x6 black rilsan pipe L= 2570*	*Rilsan Schlauch 8x6 schwarz L= 2570*	*Tuyau rilsan 8x6 noir L= 2570*	*Tubo rilsan 8x6 negro L= 2570*
15	317006	*Tubo rilsan 6x4 nero L=2330*	*6x4 black rilsan pipe L= 2330*	*Rilsan Schlauch 6x4 schwarz L= 2330*	*Tuyau rilsan 6x4 noir L= 2330*	*Tubo rilsan 6x4 negro L= 2330*
16	325193	*Raccordo adatt. 4/8*	*4/8 adapter union*	*Adapterverbindung 4/8*	*Raccord adapteur 4/8*	*Enlace adaptador 4/8*
17	317026	*Tubo rilsan 4x2,7 nero L=2300*	*4x2,7 black rilsan pipe L= 2300*	*Rilsan Schlauch 4x2,7 schwarz L= 2300*	*Tuyau rilsan 4x2,7 noir L= 2300*	*Tubo rilsan 4x2,7 negro L= 2300*
18	317026	*Tubo rilsan 4x2,7 nero L=2980*	*4x2,7 black rilsan pipe L= 2980*	*Rilsan Schlauch 4x2,7 schwarz L= 2980*	*Tuyau rilsan 4x2,7 noir L= 2980*	*Tubo rilsan 4x2,7 negro L= 2980*
19	317026	*Tubo rilsan 4x2,7 nero L=3100*	*4x2,7 black rilsan pipe L= 3100*	*Rilsan Schlauch 4x2,7 schwarz L= 3100*	*Tuyau rilsan 4x2,7 noir L= 3100*	*Tubo rilsan 4x2,7 negro L= 3100*
20	B0171000	*Raccordo riduzione fissa 6-4*	*6-4 Fixed reduction union*	*Feststehender Verjüngungsanschluss 6-4*	*Raccord reduction fixe 6-4*	*Conector reducción fijo 6-4*
21	325191	*Raccordo pneumatico Y-6*	*Y-6 pneumatic union*	*Pneumatischer Anschluss Y-6*	*Raccord pneumatique Y-6*	*Enlace neumático Y-6*
22	317006	*Tubo rilsan 6x4 nero L=2000*	*6x4 black rilsan pipe L= 2000*	*Rilsan Schlauch 6x4 schwarz L= 2000*	*Tuyau rilsan 6x4 noir L= 2000*	*Tubo rilsan 6x4 negro L= 2000*
23	317006	*Tubo rilsan 6x4 nero L=2380*	*6x4 black rilsan pipe L= 2380*	*Rilsan Schlauch 6x4 schwarz L= 2380*	*Tuyau rilsan 6x4 noir L= 2380*	*Tubo rilsan 6x4 negro L= 2380*
24	317006	*Tubo rilsan 6x4 nero L=1480*	*6x4 black rilsan pipe L= 1480*	*Rilsan Schlauch 6x4 schwarz L= 1480*	*Tuyau rilsan 6x4 noir L= 1480*	*Tubo rilsan 6x4 negro L= 1480*
25	317006	*Tubo rilsan 6x4 nero L=2760*	*6x4 black rilsan pipe L= 2760*	*Rilsan Schlauch 6x4 schwarz L= 2760*	*Tuyau rilsan 6x4 noir L= 2760*	*Tubo rilsan 6x4 negro L= 2760*
26	325054	*Riduzione 6-8*	*6-8 reduction*	*Reduktion 6-8*	*Reduction 6-8*	*Reducción 6-8*
27	317026	*Tubo rilsan 4x2,7 nero L=250*	*4x2,7 black rilsan pipe L= 250*	*Rilsan Schlauch 4x2,7 schwarz L= 250*	*Tuyau rilsan 4x2,7 noir L= 250*	*Tubo rilsan 4x2,7 negro L= 250*
28	317026	*Tubo rilsan 4x2,7 nero L=2750*	*4x2,7 black rilsan pipe L= 2750*	*Rilsan Schlauch 4x2,7 schwarz L= 2750*	*Tuyau rilsan 4x2,7 noir L= 2750*	*Tubo rilsan 4x2,7 negro L= 2750*
29	317006	*Tubo rilsan 6x4 nero L=2300*	*6x4 black rilsan pipe L= 2300*	*Rilsan Schlauch 6x4 schwarz L= 2300*	*Tuyau rilsan 6x4 noir L= 2300*	*Tubo rilsan 6x4 negro L= 2300*
30	317006	*Tubo rilsan 6x4 nero L=1600*	*6x4 black rilsan pipe L= 1600*	*Rilsan Schlauch 6x4 schwarz L= 1600*	*Tuyau rilsan 6x4 noir L= 1600*	*Tubo rilsan 6x4 negro L= 1600*
31	BMP90000	*Tubo rilsan 4x2,7 giallo L=900*	*4x2,7 yellow rilsan pipe L= 900*	*Rilsan Schlauch 4x2,7 gelb L= 900*	*Tuyau rilsan 4x2,7 jaune L= 900*	*Tubo rilsan 4x2,7 amarillo L= 900*
32	BMP90000	*Tubo rilsan 4x2,7 giallo L=3410*	*4x2,7 yellow rilsan pipe L= 3410*	*Rilsan Schlauch 4x2,7 gelb L= 3410*	*Tuyau rilsan 4x2,7 jaune L= 3410*	*Tubo rilsan 4x2,7 amarillo L= 3410*
33	317006	*Tubo rilsan 6x4 nero L=1815*	*6x4 black rilsan pipe L= 1815*	*Rilsan Schlauch 6x4 schwarz L= 1815*	*Tuyau rilsan 6x4 noir L= 1815*	*Tubo rilsan 6x4 negro L= 1815*
34	317006	*Tubo rilsan 6x4 nero L=1630*	*6x4 black rilsan pipe L= 1630*	*Rilsan Schlauch 6x4 schwarz L= 1630*	*Tuyau rilsan 6x4 noir L= 1630*	*Tubo rilsan 6x4 negro L= 1630*
35	BMP90000	*Tubo rilsan 4x2,7 giallo L=2700*	*4x2,7 yellow rilsan pipe L= 2700*	*Rilsan Schlauch 4x2,7 gelb L= 2700*	*Tuyau rilsan 4x2,7 jaune L= 2700*	*Tubo rilsan 4x2,7 amarillo L= 2700*
36	BMP90000	*Tubo rilsan 4x2,7 giallo L=230*	*4x2,7 yellow rilsan pipe L= 230*	*Rilsan Schlauch 4x2,7 gelb L= 230*	*Tuyau rilsan 4x2,7 jaune L= 230*	*Tubo rilsan 4x2,7 amarillo L= 230*
37	BMP90000	*Tubo rilsan 4x2,7 giallo L=300*	*4x2,7 yellow rilsan pipe L= 300*	*Rilsan Schlauch 4x2,7 gelb L= 300*	*Tuyau rilsan 4x2,7 jaune L= 300*	*Tubo rilsan 4x2,7 amarillo L= 300*
38	317028	*Tubo rilsan 4x2,7 verde L=310*	*4x2,7 green rilsan pipe L= 310*	*Rilsan Schlauch 4x2,7 grün L= 310*	*Tuyau rilsan 4x2,7 vert L= 310*	*Tubo rilsan 4x2,7 verde L= 310*
39	317028	*Tubo rilsan 4x2,7 verde L=2700*	*4x2,7 green rilsan pipe L= 2700*	*Rilsan Schlauch 4x2,7 grün L= 2700*	*Tuyau rilsan 4x2,7 vert L= 2700*	*Tubo rilsan 4x2,7 verde L= 2700*
40	317027	*Tubo rilsan 4x2,7 rosso L=2670*	*4x2,7 red rilsan pipe L= 2670*	*Rilsan Schlauch 4x2,7 röt L= 2670*	*Tuyau rilsan 4x2,7 rouge L= 2670*	*Tubo rilsan 4x2,7 rojo L= 2670*
41	317028	*Tubo rilsan 4x2,7 verde L=800*	*4x2,7 green rilsan pipe L= 800*	*Rilsan Schlauch 4x2,7 grün L= 800*	*Tuyau rilsan 4x2,7 vert L= 800*	*Tubo rilsan 4x2,7 verde L= 800*
42	317028	*Tubo rilsan 4x2,7 verde L=3500*	*4x2,7 green rilsan pipe L= 3500*	*Rilsan Schlauch 4x2,7 grün L= 3500*	*Tuyau rilsan 4x2,7 vert L= 3500*	*Tubo rilsan 4x2,7 verde L= 3500*
43		*Valvole pedale di gonfiaggio*	*Inflation pedal valve*	*Ventile des Aufpumppedals*	*Vannes pédales de direction de gonflage*	*Válvulas pedal de inflado*
44		*Gruppo gonfiaggio con manometro*	*Inflation unit with pressure gauge*	*Aufpumpsatz mit Manometer*	*Groupe gonflage avec manomètre*	*Grupo inflado con manómetro*

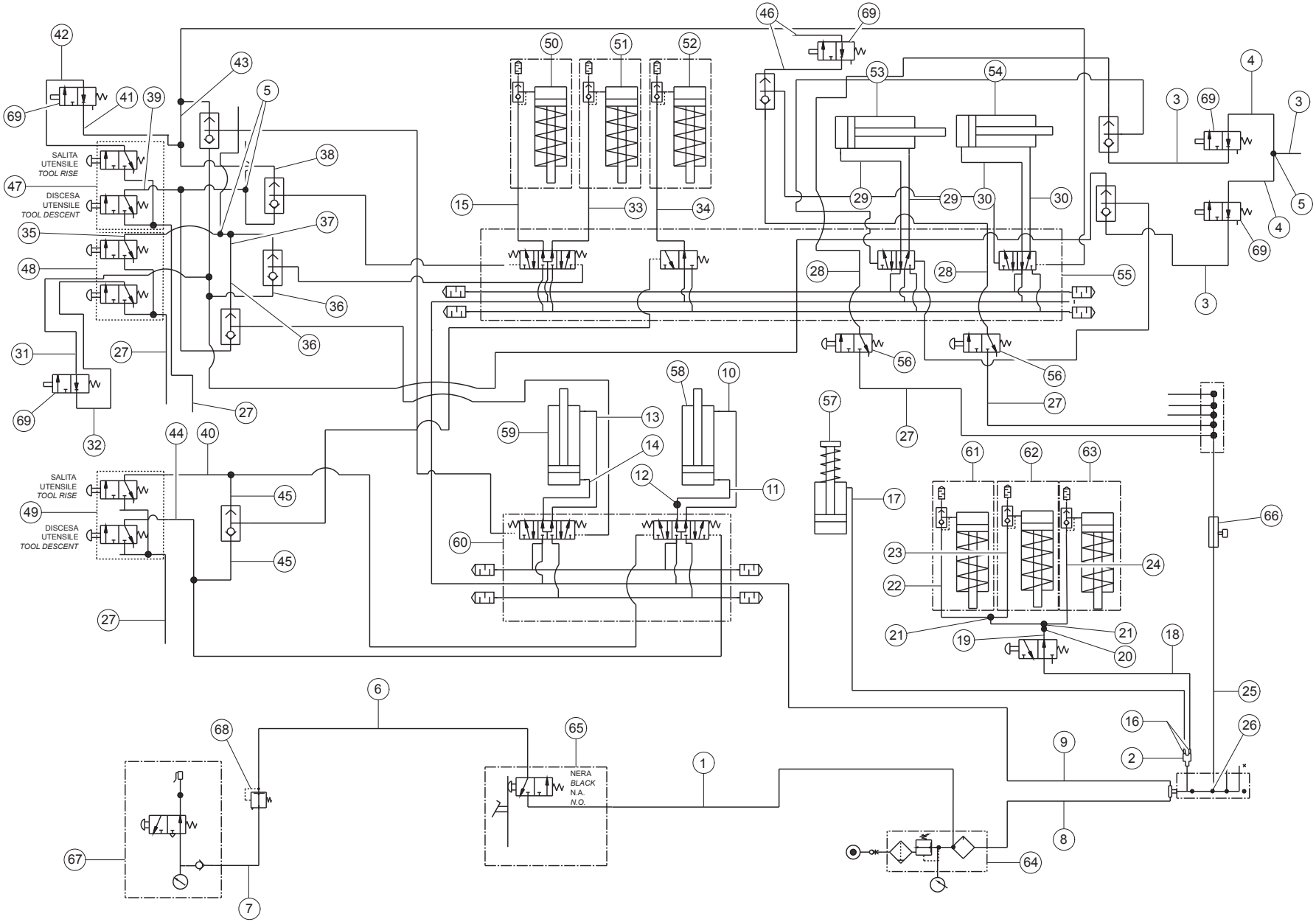
N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
45		*Valvola bilanciatrice*	*Balancing valve*	*Ventil Waage*	*Vanne balancement*	*Válvula balanceo*
46	710590710	*Valvola*	*Valve*	*Ventil*	*Vanne*	*Válvula*
47		*Gruppo braccio stallonatore superiore*	*Upper bead breaker arm unit*	*Oberabdrückarmsatz*	*Groupe bras décolle talons supérieur*	*Grupo brazo destalonador superior*
48		*Gruppo braccio stallonatore inferiore*	*Lower bead breaker arm unit*	*Unterabdrückarmsatz*	*Groupe bras décolle talons inférieur*	*Grupo brazo destalonador inferior*
49		*Unghia superiore*	*Upper tool*	*Oberer Werkzeug*	*Outil supérieur*	*Utensilio superior*
50	710590970	*Cilindro strangolo*	*Neck cylinder*	*Sperrvorrichtungszylinder*	*Cylindre étranglement*	*Cilindro estrangulación*
51		*Cilindro strangolo verticale stallonatore*	*Bead breaker vertical neck cylinder*	*Vertikalsperrvorrichtungszylinder Abdrücker*	*Cylindre étranglement vertical décolle-talons*	*Cilindro estrangulación vertical destalonador*
52		*Cilindro strangolo verticale unghia*	*Tool vertical neck cylinder*	*Vertikalsperrvorrichtungszylinder Werkzeug*	*Cylindre étranglement vertical outil*	*Cilindro estrangulación vertical herramienta*
53		*Cilindro camma stallonatore inferiore*	*Lower bead breaker cam cylinder*	*Unterer Abdrücker Zylindernocke*	*Cylindre came décolle-talons inférieur*	*Cilindro leva destalonador inferior*
54		*Cilindro camma stallonatore superiore*	*Upper bead breaker cam cylinder*	*Oberer Abdrücker Zylindernocke*	*Cylindre came décolle-talons supérieur*	*Cilindro leva destalonador superior*
55	710513300	*Base + valvole*	*Base + valves*	*Sockel + Ventil*	*Embase + vannes*	*Base + válvulas*
56	710590800	*Valvola NA*	*NA valve*	*Ventil NA*	*Vanne NA*	*Válvula NA*
57	710590790	*Pistone strangolo*	*Neck piston*	*Sperrvorrichtungskolben*	*Piston étranglement*	*Pistón estrangulación*
58		*Cilindro braccio unghia*	*Tool arm cylinder*	*Zylinderarm Werkzeug*	*Cylindre bras outil*	*Cilindro brazo utensilio*
59		*Cilindro bracci stallonatore*	*Bead breaking arms cylinder*	*Abdrücker Zylinderarme*	*Cylindre bras décolle-talon*	*Cilindro brazos destalonador*
60	710513290	*Base + valvole*	*Base + valves*	*Sockel + Ventil*	*Embase + vannes*	*Base + válvulas*
61		*Cilindro strangolo stallonatore superiore*	*Upper bead breaker neck cylinder*	*Oberer Abdrücker Sperrvorrichtungszylinder*	*Cylindre étranglement décolle-talon supérieur*	*Cilindro estrangulación destalonador superior*
62		*Cilindro strangolo stallonatore inferiore*	*Lower bead breaker neck cylinder*	*Unterer Abdrücker Sperrvorrichtungszylinder*	*Cylindre étranglement décolle-talons inférieur*	*Cilindro estrangulación destalonador inferior*
63		*Cilindro strangolo braccio unghia*	*Tool arm neck cylinder*	*Arm Werkzeug Sperrvorrichtungszylinder*	*Cylindre étranglement bras outil*	*Cilindro estrangulación brazo utensilio*
64		*Lubrificatore*	*Lubricator*	*Schmierer*	*Graisseur*	*Lubrificador*



Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**		*SCHEMA PNEUMATICO (KENDO.30LIGHTFI) PNEUMATIC CIRCUIT DIAGRAM (KENDO.30LIGHTFI) PNEUMATIKPLAN (KENDO.30LIGHTFI) SCHEMA PNEUMATIQUE (KENDO.30LIGHTFI) ESQUEMA NEUMATICO (KENDO.30LIGHTFI)*	***Pag. 47 di 57***
	Tavola N°C - Rev. 1	**710505040**		**KENDO.30LIGHT - KENDO.30LIGHTFI KENDO.30S - KENDO.30SFI**

N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
1	317009	Tubo rilsan 8x6 blu L=1200	8x6 blue rilsan pipe L= 1200	Rilsan Schlauch 8x6 blau L= 1200	Tuyau rilsan 8x6 bleu L= 1200	Tubo rilsan 8x6 azul L= 1200
2	325181	Raccordo a V8	V8 union	V-Verbindung 8	Raccord à V8	Enlace a V8
3	317009	Tubo rilsan 4x2,7 rosso L=1400	4x2,7 red rilsan pipe L= 1400	Rilsan Schlauch 4x2,7 röt L= 1400	Tuyau rilsan 4x2,7 rouge L= 1400	Tubo rilsan 4x2,7 rojo L= 1400
4	317007	Tubo rilsan 4x2,7 verde L=1600	4x2,7 green rilsan pipe L= 1600	Rilsan Schlauch 4x2,7 grün L= 1600	Tuyau rilsan 4x2,7 vert L= 1600	Tubo rilsan 4x2,7 verde L= 1600
5	317009	Tubo rilsan 4x2,7 rosso L=40	4x2,7 red rilsan pipe L= 40	Rilsan Schlauch 4x2,7 röt L= 40	Tuyau rilsan 4x2,7 rouge L= 40	Tubo rilsan 4x2,7 rojo L= 40
6	317009	Tubo rilsan 8x6 blu L=440	8x6 blue rilsan pipe L= 440	Rilsan Schlauch 8x6 blau L= 440	Tuyau rilsan 8x6 bleu L= 440	Tubo rilsan 8x6 azul L= 440
7	317008	Tubo rilsan 8x6 rosso L=2630	8x6 red rilsan pipe L= 2630	Rilsan Schlauch 8x6 röt L= 2630	Tuyau rilsan 8x6 rouge L= 2630	Tubo rilsan 8x6 rojo L= 2630
8	317010	Tubo rilsan 10x8 ne L=1250	10x8 black pipe L= 1250	Schlauch 10x8 schwarz L= 1250	Tuyau 10x8 noir L= 1250	Tubo 10x8 negro L= 1250
9	317010	Tubo rilsan 10x8 ne L=550	10x8 black pipe L= 550	Schlauch 10x8 schwarz L= 550	Tuyau 10x8 noir L= 550	Tubo 10x8 negro L= 550
10	317007	Tubo rilsan 8x6 nero L=1870	8x6 black rilsan pipe L= 1870	Rilsan Schlauch 8x6 schwarz L= 1870	Tuyau rilsan 8x6 noir L= 1870	Tubo rilsan 8x6 negro L= 1870
11	317007	Tubo rilsan 8x6 nero L=1200	8x6 black rilsan pipe L= 1200	Rilsan Schlauch 8x6 schwarz L= 1200	Tuyau rilsan 8x6 noir L= 1200	Tubo rilsan 8x6 negro L= 1200
12	399284	Regolatore di flusso	Flow regulator	Flussregel	Regulateur de débit	Regulación de flujo
13	317007	Tubo rilsan 8x6 nero L=2470	8x6 black rilsan pipe L= 2470	Rilsan Schlauch 8x6 schwarz L= 2470	Tuyau rilsan 8x6 noir L= 2470	Tubo rilsan 8x6 negro L= 2470
14	317007	Tubo rilsan 8x6 nero L=2570	8x6 black rilsan pipe L= 2570	Rilsan Schlauch 8x6 schwarz L= 2570	Tuyau rilsan 8x6 noir L= 2570	Tubo rilsan 8x6 negro L= 2570
15	317006	Tubo rilsan 6x4 nero L=2330	6x4 black rilsan pipe L= 2330	Rilsan Schlauch 6x4 schwarz L= 2330	Tuyau rilsan 6x4 noir L= 2330	Tubo rilsan 6x4 negro L= 2330
16	325193	Raccordo adatt. 4/8	4/8 adapter union	Adapterverbindung 4/8	Raccord adapteur 4/8	Enlace adaptador 4/8
17	317026	Tubo rilsan 4x2,7 nero L=2300	4x2,7 black rilsan pipe L= 2300	Rilsan Schlauch 4x2,7 schwarz L= 2300	Tuyau rilsan 4x2,7 noir L= 2300	Tubo rilsan 4x2,7 negro L= 2300
18	317026	Tubo rilsan 4x2,7 nero L=2980	4x2,7 black rilsan pipe L= 2980	Rilsan Schlauch 4x2,7 schwarz L= 2980	Tuyau rilsan 4x2,7 noir L= 2980	Tubo rilsan 4x2,7 negro L= 2980
19	317026	Tubo rilsan 4x2,7 nero L=3100	4x2,7 black rilsan pipe L= 3100	Rilsan Schlauch 4x2,7 schwarz L= 3100	Tuyau rilsan 4x2,7 noir L= 3100	Tubo rilsan 4x2,7 negro L= 3100
20	B0171000	Raccordo riduzione fissa 6-4	6-4 Fixed reduction union	Feststehender Verjüngungsanschluss 6-4	Raccord reduction fixe 6-4	Conector reducción fijo 6-4
21	325191	Raccordo pneumatico Y-6	Y-6 pneumatic union	Pneumatischer Anschluss Y-6	Raccord pneumatique Y-6	Enlace neumático Y-6
22	317006	Tubo rilsan 6x4 nero L=2000	6x4 black rilsan pipe L= 2000	Rilsan Schlauch 6x4 schwarz L= 2000	Tuyau rilsan 6x4 noir L= 2000	Tubo rilsan 6x4 negro L= 2000
23	317006	Tubo rilsan 6x4 nero L=2380	6x4 black rilsan pipe L= 2380	Rilsan Schlauch 6x4 schwarz L= 2380	Tuyau rilsan 6x4 noir L= 2380	Tubo rilsan 6x4 negro L= 2380
24	317006	Tubo rilsan 6x4 nero L=1480	6x4 black rilsan pipe L= 1480	Rilsan Schlauch 6x4 schwarz L= 1480	Tuyau rilsan 6x4 noir L= 1480	Tubo rilsan 6x4 negro L= 1480
25	317006	Tubo rilsan 6x4 nero L=2760	6x4 black rilsan pipe L= 2760	Rilsan Schlauch 6x4 schwarz L= 2760	Tuyau rilsan 6x4 noir L= 2760	Tubo rilsan 6x4 negro L= 2760
26	325054	Riduzione 6-8	6-8 reduction	Reduktion 6-8	Reduction 6-8	Reducción 6-8
27	317026	Tubo rilsan 4x2,7 nero L=250	4x2,7 black rilsan pipe L= 250	Rilsan Schlauch 4x2,7 schwarz L= 250	Tuyau rilsan 4x2,7 noir L= 250	Tubo rilsan 4x2,7 negro L= 250
28	317026	Tubo rilsan 4x2,7 nero L=2750	4x2,7 black rilsan pipe L= 2750	Rilsan Schlauch 4x2,7 schwarz L= 2750	Tuyau rilsan 4x2,7 noir L= 2750	Tubo rilsan 4x2,7 negro L= 2750
29	317006	Tubo rilsan 6x4 nero L=2300	6x4 black rilsan pipe L= 2300	Rilsan Schlauch 6x4 schwarz L= 2300	Tuyau rilsan 6x4 noir L= 2300	Tubo rilsan 6x4 negro L= 2300
30	317006	Tubo rilsan 6x4 nero L=1600	6x4 black rilsan pipe L= 1600	Rilsan Schlauch 6x4 schwarz L= 1600	Tuyau rilsan 6x4 noir L= 1600	Tubo rilsan 6x4 negro L= 1600
31	BMP90000	Tubo rilsan 4x2,7 giallo L=900	4x2,7 yellow rilsan pipe L= 900	Rilsan Schlauch 4x2,7 gelb L= 900	Tuyau rilsan 4x2,7 jaune L= 900	Tubo rilsan 4x2,7 amarillo L= 900
32	BMP90000	Tubo rilsan 4x2,7 giallo L=3410	4x2,7 yellow rilsan pipe L= 3410	Rilsan Schlauch 4x2,7 gelb L= 3410	Tuyau rilsan 4x2,7 jaune L= 3410	Tubo rilsan 4x2,7 amarillo L= 3410
33	317006	Tubo rilsan 6x4 nero L=1815	6x4 black rilsan pipe L= 1815	Rilsan Schlauch 6x4 schwarz L= 1815	Tuyau rilsan 6x4 noir L= 1815	Tubo rilsan 6x4 negro L= 1815
34	317006	Tubo rilsan 6x4 nero L=1630	6x4 black rilsan pipe L= 1630	Rilsan Schlauch 6x4 schwarz L= 1630	Tuyau rilsan 6x4 noir L= 1630	Tubo rilsan 6x4 negro L= 1630
35	BMP90000	Tubo rilsan 4x2,7 giallo L=2700	4x2,7 yellow rilsan pipe L= 2700	Rilsan Schlauch 4x2,7 gelb L= 2700	Tuyau rilsan 4x2,7 jaune L= 2700	Tubo rilsan 4x2,7 amarillo L= 2700
36	BMP90000	Tubo rilsan 4x2,7 giallo L=230	4x2,7 yellow rilsan pipe L= 230	Rilsan Schlauch 4x2,7 gelb L= 230	Tuyau rilsan 4x2,7 jaune L= 230	Tubo rilsan 4x2,7 amarillo L= 230
37	BMP90000	Tubo rilsan 4x2,7 giallo L=300	4x2,7 yellow rilsan pipe L= 300	Rilsan Schlauch 4x2,7 gelb L= 300	Tuyau rilsan 4x2,7 jaune L= 300	Tubo rilsan 4x2,7 amarillo L= 300
38	317028	Tubo rilsan 4x2,7 verde L=310	4x2,7 green rilsan pipe L= 310	Rilsan Schlauch 4x2,7 grün L= 310	Tuyau rilsan 4x2,7 vert L= 310	Tubo rilsan 4x2,7 verde L= 310
39	317028	Tubo rilsan 4x2,7 verde L=2700	4x2,7 green rilsan pipe L= 2700	Rilsan Schlauch 4x2,7 grün L= 2700	Tuyau rilsan 4x2,7 vert L= 2700	Tubo rilsan 4x2,7 verde L= 2700
40	317027	Tubo rilsan 4x2,7 rosso L=2670	4x2,7 red rilsan pipe L= 2670	Rilsan Schlauch 4x2,7 röt L= 2670	Tuyau rilsan 4x2,7 rouge L= 2670	Tubo rilsan 4x2,7 rojo L= 2670
41	317028	Tubo rilsan 4x2,7 verde L=800	4x2,7 green rilsan pipe L= 800	Rilsan Schlauch 4x2,7 grün L= 800	Tuyau rilsan 4x2,7 vert L= 800	Tubo rilsan 4x2,7 verde L= 800
42	317028	Tubo rilsan 4x2,7 verde L=3500	4x2,7 green rilsan pipe L= 3500	Rilsan Schlauch 4x2,7 grün L= 3500	Tuyau rilsan 4x2,7 vert L= 3500	Tubo rilsan 4x2,7 verde L= 3500
43	317028	Tubo rilsan 4x2,7 verde L=230	4x2,7 green rilsan pipe L= 230	Rilsan Schlauch 4x2,7 grün L= 230	Tuyau rilsan 4x2,7 vert L= 230	Tubo rilsan 4x2,7 verde L= 230
44	317027	Tubo rilsan 4x2,7 rosso L=2600	4x2,7 red rilsan pipe L= 2600	Rilsan Schlauch 4x2,7 röt L= 2600	Tuyau rilsan 4x2,7 rouge L= 2600	Tubo rilsan 4x2,7 rojo L= 2600

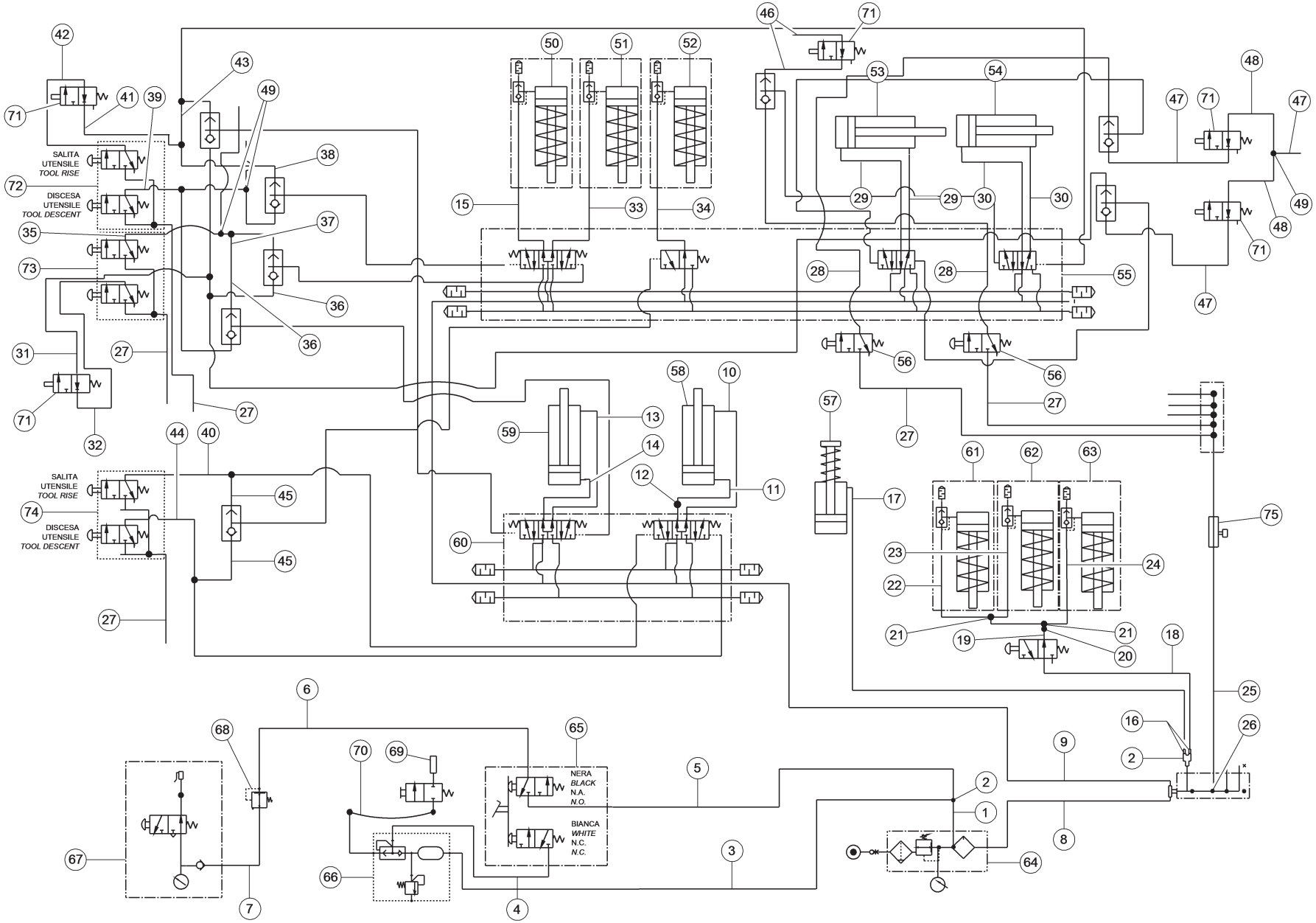
N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
45	317027	*Tubo rilsan 4x2,7 rosso L=240*	*4x2,7 red rilsan pipe L= 240*	*Rilsan Schlauch 4x2,7 röt L= 240*	*Tuyau rilsan 4x2,7 rouge L= 240*	*Tubo rilsan 4x2,7 rojo L= 240*
46	710590710	*Valvola*	*Valve*	*Ventil*	*Vanne*	*Válvula*
47		*Gruppo braccio stallonatore superiore*	*Upper bead breaker arm unit*	*Oberabdrückarmsatz*	*Groupe bras décolle talons supérieur*	*Grupo brazo destalonador superior*
48		*Gruppo braccio stallonatore inferiore*	*Lower bead breaker arm unit*	*Unterabdrückarmsatz*	*Groupe bras décolle talons inférieur*	*Grupo brazo destalonador inferior*
49		*Unghia superiore*	*Upper tool*	*Oberer Werkzeug*	*Outil supérieur*	*Utensilio superior*
50	710590970	*Cilindro strangolo*	*Neck cylinder*	*Sperrvorrichtungszylinder*	*Cylindre étranglement*	*Cilindro estrangulación*
51		*Cilindro strangolo verticale stallonatore*	*Bead breaker vertical neck cylinder*	*Vertikalsperrvorrichtungszylinder Abdrücker*	*Cylindre étranglement vertical décolle-talons*	*Cilindro estrangulación vertical destalonador*
52		*Cilindro strangolo verticale unghia*	*Tool vertical neck cylinder*	*Vertikalsperrvorrichtungszylinder Werkzeug*	*Cylindre étranglement vertical outil*	*Cilindro estrangulación vertical herramienta*
53		*Cilindro camma stallonatore inferiore*	*Lower bead breaker cam cylinder*	*Unterer Abdrücker Zylindernocke*	*Cylindre came décolle-talons inférieur*	*Cilindro leva destalonador inferior*
54		*Cilindro camma stallonatore superiore*	*Upper bead breaker cam cylinder*	*Oberer Abdrücker Zylindernocke*	*Cylindre came décolle-talons supérieur*	*Cilindro leva destalonador superior*
55	710513300	*Base + valvole*	*Base + valves*	*Sockel + Ventil*	*Embase + vannes*	*Base + válvulas*
56	710590800	*Valvola NA*	*NA valve*	*Ventil NA*	*Vanne NA*	*Válvula NA*
57	710590790	*Pistone strangolo*	*Neck piston*	*Sperrvorrichtungskolben*	*Piston étranglement*	*Pistón estrangulación*
58		*Cilindro braccio unghia*	*Tool arm cylinder*	*Zylinderarm Werkzeug*	*Cylindre bras outil*	*Cilindro brazo utensilio*
59		*Cilindro bracci stallonatore*	*Bead breaking arms cylinder*	*Abdrücker Zylinderarme*	*Cylindre bras décolle-talon*	*Cilindro brazos destalonador*
60	710513290	*Base + valvole*	*Base + valves*	*Sockel + Ventil*	*Embase + vannes*	*Base + válvulas*
61		*Cilindro strangolo stallonatore superiore*	*Upper bead breaker neck cylinder*	*Oberer Abdrücker Sperrvorrichtungszylinder*	*Cylindre étranglement décolle-talon supérieur*	*Cilindro estrangulación destalonador superior*
62		*Cilindro strangolo stallonatore inferiore*	*Lower bead breaker neck cylinder*	*Unterer Abdrücker Sperrvorrichtungszylinder*	*Cylindre étranglement décolle-talons inférieur*	*Cilindro estrangulación destalonador inferior*
63		*Cilindro strangolo braccio unghia*	*Tool arm neck cylinder*	*Arm Werkzeug Sperrvorrichtungszylinder*	*Cylindre étranglement bras outil*	*Cilindro estrangulación brazo utensilio*
64		*Lubrificatore*	*Lubricator*	*Schmierer*	*Graisseur*	*Lubrificador*
65		*Valvole pedale di gonfiaggio*	*Inflation pedal valve*	*Ventile des Aufpumppedals*	*Vannes pédales de direction de gonflage*	*Válvulas pedal de inflado*
66		*Gruppo serbatoio*	*Tank unit*	*Tanksatz*	*Groupe réservoir*	*Grupo tanque*
67		*Gruppo gonfiaggio con manometro*	*Inflation unit with pressure gauge*	*Aufpumpsatz mit Manometer*	*Groupe gonflage avec manomètre*	*Grupo inflado con manómetro*
68		*Valvola bilanciatrice 60 PSI*	*60 PSI balancing valve*	*Ventil Waage 60 PSI*	*Vanne balancement 60 PSI*	*Válvula balanceo 60 PSI*
69		*Ugello di gonfiaggio*	*Inflation nozzle*	*Aufpumpedüse*	*Gicleur de gonflage*	*Boquilla de inflado*
70	318011	*Tubo retinato L=700*	*Screened pipe L= 700*	*Netzschlauch L= 700*	*Tuyau retiné L= 700*	*Tuyau retiné L= 700*



Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**		*SCHEMA PNEUMATICO (KENDO.30S)* *PNEUMATIC CIRCUIT DIAGRAM (KENDO.30S)* *PNEUMATIKPLAN (KENDO.30S)* *SCHEMA PNEUMATIQUE (KENDO.30S)* *ESQUEMA NEUMATICO (KENDO.30S)*	***Pag. 50 di 57***
	Tavola N°D - Rev. 0	**710505100**		**KENDO.30LIGHT - KENDO.30LIGHTFI** **KENDO.30S - KENDO.30SFI**

N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
1	317009	Tubo rilsan 8x6 blu L=1200	8x6 blue rilsan pipe L= 1200	Rilsan Schlauch 8x6 blau L= 1200	Tuyau rilsan 8x6 bleu L= 1200	Tubo rilsan 8x6 azul L= 1200
2	325181	Raccordo a V8	V8 union	V-Verbindung 8	Raccord à V8	Enlace a V8
3	317035	Tubo rilsan 4x2,7 rosso L=3100	4x2,7 red rilsan pipe L= 3100	Rilsan Schlauch 4x2,7 röt L= 3100	Tuyau rilsan 4x2,7 rouge L= 3100	Tubo rilsan 4x2,7 rojo L= 3100
4	317035	Tubo rilsan 4x2,7 verde L=50	4x2,7 green rilsan pipe L= 50	Rilsan Schlauch 4x2,7 grün L= 50	Tuyau rilsan 4x2,7 vert L= 50	Tubo rilsan 4x2,7 verde L= 50
5	B5815000	Raccordo V D4	V D4 union	Verbindung V D4	Raccord V D4	Conector V D4
6	317009	Tubo rilsan 8x6 blu L=440	8x6 blue rilsan pipe L= 440	Rilsan Schlauch 8x6 blau L= 440	Tuyau rilsan 8x6 bleu L= 440	Tubo rilsan 8x6 azul L= 440
7	317008	Tubo rilsan 8x6 rosso L=2630	8x6 red rilsan pipe L= 2630	Rilsan Schlauch 8x6 röt L= 2630	Tuyau rilsan 8x6 rouge L= 2630	Tubo rilsan 8x6 rojo L= 2630
8	317010	Tubo rilsan 10x8 ne L=1250	10x8 black pipe L= 1250	Schlauch 10x8 schwarz L= 1250	Tuyau 10x8 noir L= 1250	Tubo 10x8 negro L= 1250
9	317010	Tubo rilsan 10x8 ne L=550	10x8 black pipe L= 550	Schlauch 10x8 schwarz L= 550	Tuyau 10x8 noir L= 550	Tubo 10x8 negro L= 550
10	317007	Tubo rilsan 8x6 nero L=1870	8x6 black rilsan pipe L= 1870	Rilsan Schlauch 8x6 schwarz L= 1870	Tuyau rilsan 8x6 noir L= 1870	Tubo rilsan 8x6 negro L= 1870
11	317007	Tubo rilsan 8x6 nero L=1200	8x6 black rilsan pipe L= 1200	Rilsan Schlauch 8x6 schwarz L= 1200	Tuyau rilsan 8x6 noir L= 1200	Tubo rilsan 8x6 negro L= 1200
12	399284	Regolatore di flusso	Flow regulator	Flussregel	Regulateur de débit	Regulación de flujo
13	317007	Tubo rilsan 8x6 nero L=2470	8x6 black rilsan pipe L= 2470	Rilsan Schlauch 8x6 schwarz L= 2470	Tuyau rilsan 8x6 noir L= 2470	Tubo rilsan 8x6 negro L= 2470
14	317007	Tubo rilsan 8x6 nero L=2570	8x6 black rilsan pipe L= 2570	Rilsan Schlauch 8x6 schwarz L= 2570	Tuyau rilsan 8x6 noir L= 2570	Tubo rilsan 8x6 negro L= 2570
15	317006	Tubo rilsan 6x4 nero L=2330	6x4 black rilsan pipe L= 2330	Rilsan Schlauch 6x4 schwarz L= 2330	Tuyau rilsan 6x4 noir L= 2330	Tubo rilsan 6x4 negro L= 2330
16	325193	Raccordo adatt. 4/8	4/8 adapter union	Adapterverbindung 4/8	Raccord adapteur 4/8	Enlace adaptador 4/8
17	317026	Tubo rilsan 4x2,7 nero L=2300	4x2,7 black rilsan pipe L= 2300	Rilsan Schlauch 4x2,7 schwarz L= 2300	Tuyau rilsan 4x2,7 noir L= 2300	Tubo rilsan 4x2,7 negro L= 2300
18	317026	Tubo rilsan 4x2,7 nero L=2980	4x2,7 black rilsan pipe L= 2980	Rilsan Schlauch 4x2,7 schwarz L= 2980	Tuyau rilsan 4x2,7 noir L= 2980	Tubo rilsan 4x2,7 negro L= 2980
19	317026	Tubo rilsan 4x2,7 nero L=3100	4x2,7 black rilsan pipe L= 3100	Rilsan Schlauch 4x2,7 schwarz L= 3100	Tuyau rilsan 4x2,7 noir L= 3100	Tubo rilsan 4x2,7 negro L= 3100
20	BO171000	Raccordo riduzione fissa 6-4	6-4 Fixed reduction union	Feststehender Verjüngungsanschluss 6-4	Raccord reduction fixe 6-4	Conector reducción fijo 6-4
21	325191	Raccordo pneumatico Y-6	Y-6 pneumatic union	Pneumatischer Anschluss Y-6	Raccord pneumatique Y-6	Enlace neumático Y-6
22	317006	Tubo rilsan 6x4 nero L=2000	6x4 black rilsan pipe L= 2000	Rilsan Schlauch 6x4 schwarz L= 2000	Tuyau rilsan 6x4 noir L= 2000	Tubo rilsan 6x4 negro L= 2000
23	317006	Tubo rilsan 6x4 nero L=2380	6x4 black rilsan pipe L= 2380	Rilsan Schlauch 6x4 schwarz L= 2380	Tuyau rilsan 6x4 noir L= 2380	Tubo rilsan 6x4 negro L= 2380
24	317006	Tubo rilsan 6x4 nero L=1480	6x4 black rilsan pipe L= 1480	Rilsan Schlauch 6x4 schwarz L= 1480	Tuyau rilsan 6x4 noir L= 1480	Tubo rilsan 6x4 negro L= 1480
25	317006	Tubo rilsan 6x4 nero L=2760	6x4 black rilsan pipe L= 2760	Rilsan Schlauch 6x4 schwarz L= 2760	Tuyau rilsan 6x4 noir L= 2760	Tubo rilsan 6x4 negro L= 2760
26	325054	Riduzione 6-8	6-8 reduction	Reduktion 6-8	Reduction 6-8	Reducción 6-8
27	317026	Tubo rilsan 4x2,7 nero L=250	4x2,7 black rilsan pipe L= 250	Rilsan Schlauch 4x2,7 schwarz L= 250	Tuyau rilsan 4x2,7 noir L= 250	Tubo rilsan 4x2,7 negro L= 250
28	317026	Tubo rilsan 4x2,7 nero L=2750	4x2,7 black rilsan pipe L= 2750	Rilsan Schlauch 4x2,7 schwarz L= 2750	Tuyau rilsan 4x2,7 noir L= 2750	Tubo rilsan 4x2,7 negro L= 2750
29	317006	Tubo rilsan 6x4 nero L=2300	6x4 black rilsan pipe L= 2300	Rilsan Schlauch 6x4 schwarz L= 2300	Tuyau rilsan 6x4 noir L= 2300	Tubo rilsan 6x4 negro L= 2300
30	317006	Tubo rilsan 6x4 nero L=1600	6x4 black rilsan pipe L= 1600	Rilsan Schlauch 6x4 schwarz L= 1600	Tuyau rilsan 6x4 noir L= 1600	Tubo rilsan 6x4 negro L= 1600
31	BMP90000	Tubo rilsan 4x2,7 giallo L=900	4x2,7 yellow rilsan pipe L= 900	Rilsan Schlauch 4x2,7 gelb L= 900	Tuyau rilsan 4x2,7 jaune L= 900	Tubo rilsan 4x2,7 amarillo L= 900
32	BMP90000	Tubo rilsan 4x2,7 giallo L=3410	4x2,7 yellow rilsan pipe L= 3410	Rilsan Schlauch 4x2,7 gelb L= 3410	Tuyau rilsan 4x2,7 jaune L= 3410	Tubo rilsan 4x2,7 amarillo L= 3410
33	317006	Tubo rilsan 6x4 nero L=1815	6x4 black rilsan pipe L= 1815	Rilsan Schlauch 6x4 schwarz L= 1815	Tuyau rilsan 6x4 noir L= 1815	Tubo rilsan 6x4 negro L= 1815
34	317006	Tubo rilsan 6x4 nero L=1630	6x4 black rilsan pipe L= 1630	Rilsan Schlauch 6x4 schwarz L= 1630	Tuyau rilsan 6x4 noir L= 1630	Tubo rilsan 6x4 negro L= 1630
35	BMP90000	Tubo rilsan 4x2,7 giallo L=2700	4x2,7 yellow rilsan pipe L= 2700	Rilsan Schlauch 4x2,7 gelb L= 2700	Tuyau rilsan 4x2,7 jaune L= 2700	Tubo rilsan 4x2,7 amarillo L= 2700
36	BMP90000	Tubo rilsan 4x2,7 giallo L=230	4x2,7 yellow rilsan pipe L= 230	Rilsan Schlauch 4x2,7 gelb L= 230	Tuyau rilsan 4x2,7 jaune L= 230	Tubo rilsan 4x2,7 amarillo L= 230
37	BMP90000	Tubo rilsan 4x2,7 giallo L=300	4x2,7 yellow rilsan pipe L= 300	Rilsan Schlauch 4x2,7 gelb L= 300	Tuyau rilsan 4x2,7 jaune L= 300	Tubo rilsan 4x2,7 amarillo L= 300
38	317028	Tubo rilsan 4x2,7 verde L=310	4x2,7 green rilsan pipe L= 310	Rilsan Schlauch 4x2,7 grün L= 310	Tuyau rilsan 4x2,7 vert L= 310	Tubo rilsan 4x2,7 verde L= 310
39	317028	Tubo rilsan 4x2,7 verde L=2700	4x2,7 green rilsan pipe L= 2700	Rilsan Schlauch 4x2,7 grün L= 2700	Tuyau rilsan 4x2,7 vert L= 2700	Tubo rilsan 4x2,7 verde L= 2700
40	317027	Tubo rilsan 4x2,7 rosso L=2670	4x2,7 red rilsan pipe L= 2670	Rilsan Schlauch 4x2,7 röt L= 2670	Tuyau rilsan 4x2,7 rouge L= 2670	Tubo rilsan 4x2,7 rojo L= 2670
41	317028	Tubo rilsan 4x2,7 verde L=800	4x2,7 green rilsan pipe L= 800	Rilsan Schlauch 4x2,7 grün L= 800	Tuyau rilsan 4x2,7 vert L= 800	Tubo rilsan 4x2,7 verde L= 800
42	317028	Tubo rilsan 4x2,7 verde L=3500	4x2,7 green rilsan pipe L= 3500	Rilsan Schlauch 4x2,7 grün L= 3500	Tuyau rilsan 4x2,7 vert L= 3500	Tubo rilsan 4x2,7 verde L= 3500
43	317028	Tubo rilsan 4x2,7 verde L=230	4x2,7 green rilsan pipe L=230	Rilsan Schlauch 4x2,7 grün L=230	Tuyau rilsan 4x2,7 vert L=230	Tubo rilsan 4x2,7 verde L=230
44	317027	Tubo rilsan 4x2,7 rosso L=2600	4x2,7 red rilsan pipe L=2600	Rilsan Schlauch 4x2,7 röt L=2600	Tuyau rilsan 4x2,7 rouge L=2600	Tubo rilsan 4x2,7 rojo L=2600

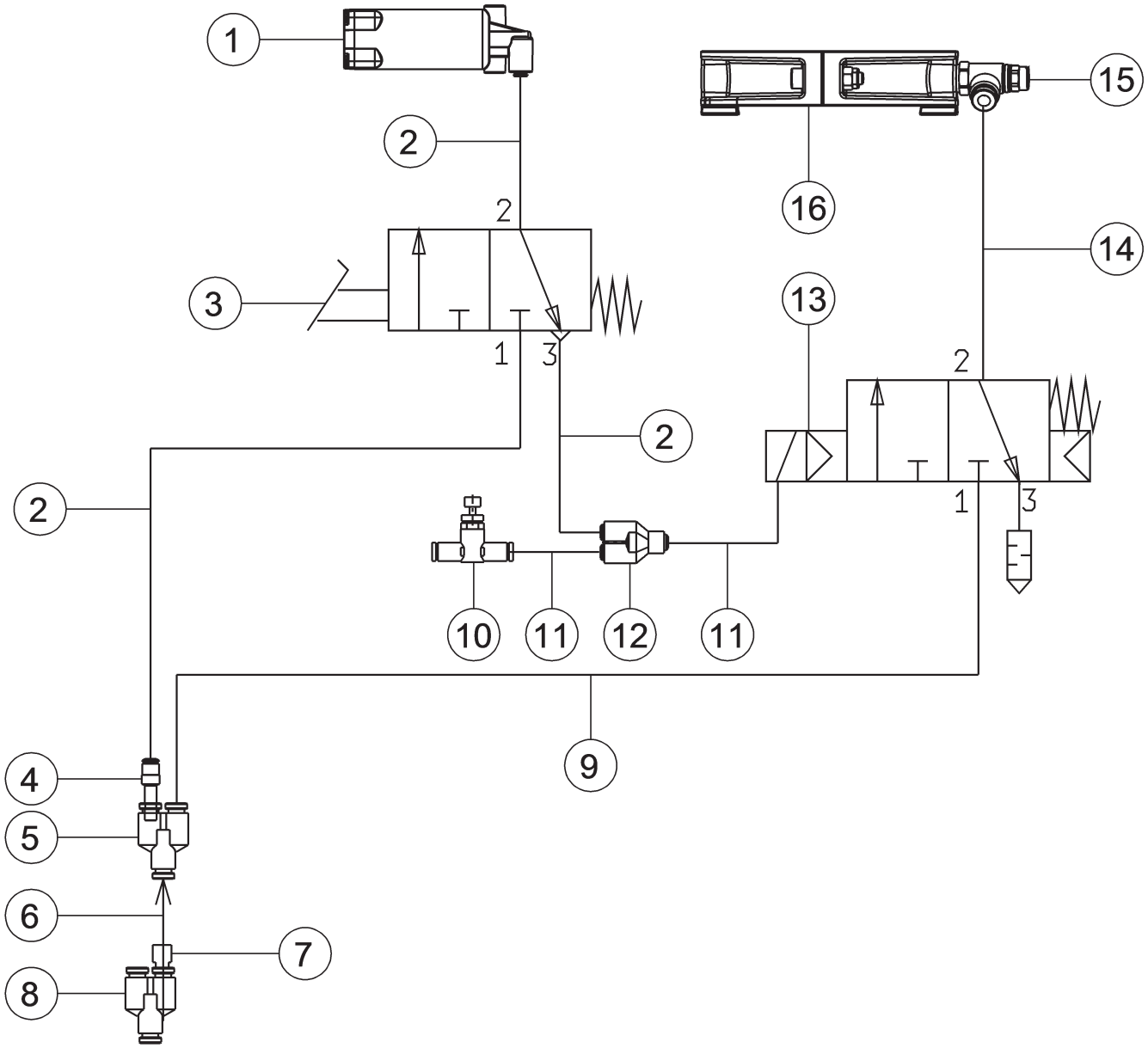
N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
45	317027	*Tubo rilsan 4x2,7 rosso L=240*	*4x2,7 red rilsan pipe L=240*	*Rilsan Schlauch 4x2,7 röt L=240*	*Tuyau rilsan 4x2,7 rouge L=240*	*Tubo rilsan 4x2,7 rojo L=240*
46	317035	*Tubo Elastolan 4x2,5 ne L=2500*	*8x60 black Elastolan pipe L=2500*	*Schlauch Elastolan 8x6 schwarz L=2500*	*Tuyau Elastolan 8x6 noir L=2500*	*Tubo Elastolan 8x6 negro L=2500*
47		*Gruppo braccio stallonatore superiore*	*Upper bead breaker arm unit*	*Oberabdrückarmsatz*	*Groupe bras décolle talons supérieur*	*Grupo brazo destalonador superior*
48		*Gruppo braccio stallonatore inferiore*	*Lower bead breaker arm unit*	*Unterabdrückarmsatz*	*Groupe bras décolle talons inférieur*	*Grupo brazo destalonador inferior*
49		*Unghia superiore*	*Upper tool*	*Oberer Werkzeug*	*Outil supérieur*	*Utensilio superior*
50	710590970	*Cilindro strangolo*	*Neck cylinder*	*Sperrvorrichtungszylinder*	*Cylindre étranglement*	*Cilindro estrangulación*
51		*Cilindro strangolo verticale stallonatore*	*Bead breaker vertical neck cylinder*	*Vertikalsperrvorrichtungszylinder Abdrücker*	*Cylindre étranglement vertical décolle-talons*	*Cilindro estrangulación vertical destalonador*
52		*Cilindro strangolo verticale unghia*	*Tool vertical neck cylinder*	*Vertikalsperrvorrichtungszylinder Werkzeug*	*Cylindre étranglement vertical outil*	*Cilindro estrangulación vertical herramienta*
53		*Cilindro camma stallonatore inferiore*	*Lower bead breaker cam cylinder*	*Unterer Abdrücker Zylindernocke*	*Cylindre came décolle-talons inférieur*	*Cilindro leva destalonador inferior*
54		*Cilindro camma stallonatore superiore*	*Upper bead breaker cam cylinder*	*Oberer Abdrücker Zylindernocke*	*Cylindre came décolle-talons supérieur*	*Cilindro leva destalonador superior*
55	710513300	*Base + valvole*	*Base + valves*	*Sockel + Ventil*	*Embase + vannes*	*Base + válvulas*
56	710590800	*Valvola NA*	*NA valve*	*Ventil NA*	*Vanne NA*	*Válvula NA*
57	710590790	*Pistone strangolo*	*Neck piston*	*Sperrvorrichtungskolben*	*Piston étranglement*	*Pistón estrangulación*
58		*Cilindro braccio unghia*	*Tool arm cylinder*	*Zylinderarm Werkzeug*	*Cylindre bras outil*	*Cilindro brazo utensilio*
59		*Cilindro bracci stallonatore*	*Bead breaking arms cylinder*	*Abdrücker Zylinderarme*	*Cylindre bras décolle-talon*	*Cilindro brazos destalonador*
60	710513290	*Base + valvole*	*Base + valves*	*Sockel + Ventil*	*Embase + vannes*	*Base + válvulas*
61		*Cilindro strangolo stallonatore superiore*	*Upper bead breaker neck cylinder*	*Oberer Abdrücker Sperrvorrichtungszylinder*	*Cylindre étranglement décolle-talon supérieur*	*Cilindro estrangulación destalonador superior*
62		*Cilindro strangolo stallonatore inferiore*	*Lower bead breaker neck cylinder*	*Unterer Abdrücker Sperrvorrichtungszylinder*	*Cylindre étranglement décolle-talons inférieur*	*Cilindro estrangulación destalonador inferior*
63		*Cilindro strangolo braccio unghia*	*Tool arm neck cylinder*	*Arm Werkzeug Sperrvorrichtungszylinder*	*Cylindre étranglement bras outil*	*Cilindro estrangulación brazo utensilio*
64		*Lubrificatore*	*Lubricator*	*Schmierer*	*Graisseur*	*Lubrificador*
65		*Valvole pedale di gonfiaggio*	*Inflation pedal valve*	*Ventile des Aufpumppedals*	*Vannes pédales de direction de gonflage*	*Válvulas pedal de inflado*
66	B1371800	*Riduttore*	*Reduction gear*	*Untersetzer*	*Reducteur*	*Reductor*
67		*Gruppo gonfiaggio con manometro*	*Inflation unit with pressure gauge*	*Aufpumpsatz mit Manometer*	*Groupe gonflage avec manomètre*	*Grupo inflado con manómetro*
68		*Valvola bilanciatrice 60 PSI*	*60 PSI balancing valve*	*Ventil Waage 60 PSI*	*Vanne balancement 60 PSI*	*Válvula balanceo 60 PSI*
69	710590710	*Valvola*	*Valve*	*Ventil*	*Vanne*	*Válvula*



Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**		*SCHEMA PNEUMATICO (KENDO.30SFI) PNEUMATIC CIRCUIT DIAGRAM (KENDO.30SFI) PNEUMATIKPLAN (KENDO.30SFI) SCHEMA PNEUMATIQUE (KENDO.30SFI) ESQUEMA NEUMATICO (KENDO.30SFI)*	***Pag. 53 di 57***
	Tavola N°E - Rev. 1	**710505110**		**KENDO.30LIGHT - KENDO.30LIGHTFI KENDO.30S - KENDO.30SFI**

N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
1	317009	Tubo rilsan 8x6 blu L=1200	8x6 blue rilsan pipe L= 1200	Rilsan Schlauch 8x6 blau L= 1200	Tuyau rilsan 8x6 bleu L= 1200	Tubo rilsan 8x6 azul L= 1200
2	325181	Raccordo a V8	V8 union	V-Verbindung 8	Raccord à V8	Enlace a V8
3	317009	Tubo rilsan 4x2,7 rosso L=1400	4x2,7 red rilsan pipe L= 1400	Rilsan Schlauch 4x2,7 röt L= 1400	Tuyau rilsan 4x2,7 rouge L= 1400	Tubo rilsan 4x2,7 rojo L= 1400
4	317007	Tubo rilsan 4x2,7 verde L=1600	4x2,7 green rilsan pipe L= 1600	Rilsan Schlauch 4x2,7 grün L= 1600	Tuyau rilsan 4x2,7 vert L= 1600	Tubo rilsan 4x2,7 verde L= 1600
5	317009	Tubo rilsan 4x2,7 rosso L=40	4x2,7 red rilsan pipe L= 40	Rilsan Schlauch 4x2,7 röt L= 40	Tuyau rilsan 4x2,7 rouge L= 40	Tubo rilsan 4x2,7 rojo L= 40
6	317009	Tubo rilsan 8x6 blu L=440	8x6 blue rilsan pipe L= 440	Rilsan Schlauch 8x6 blau L= 440	Tuyau rilsan 8x6 bleu L= 440	Tubo rilsan 8x6 azul L= 440
7	317008	Tubo rilsan 8x6 rosso L=2630	8x6 red rilsan pipe L= 2630	Rilsan Schlauch 8x6 röt L= 2630	Tuyau rilsan 8x6 rouge L= 2630	Tubo rilsan 8x6 rojo L= 2630
8	317010	Tubo rilsan 10x8 ne L=1250	10x8 black pipe L= 1250	Schlauch 10x8 schwarz L= 1250	Tuyau 10x8 noir L= 1250	Tubo 10x8 negro L= 1250
9	317010	Tubo rilsan 10x8 ne L=550	10x8 black pipe L= 550	Schlauch 10x8 schwarz L= 550	Tuyau 10x8 noir L= 550	Tubo 10x8 negro L= 550
10	317007	Tubo rilsan 8x6 nero L=1870	8x6 black rilsan pipe L= 1870	Rilsan Schlauch 8x6 schwarz L= 1870	Tuyau rilsan 8x6 noir L= 1870	Tubo rilsan 8x6 negro L= 1870
11	317007	Tubo rilsan 8x6 nero L=1200	8x6 black rilsan pipe L= 1200	Rilsan Schlauch 8x6 schwarz L= 1200	Tuyau rilsan 8x6 noir L= 1200	Tubo rilsan 8x6 negro L= 1200
12	399284	Regolatore di flusso	Flow regulator	Flussregel	Regulateur de débit	Regulación de flujo
13	317007	Tubo rilsan 8x6 nero L=2470	8x6 black rilsan pipe L= 2470	Rilsan Schlauch 8x6 schwarz L= 2470	Tuyau rilsan 8x6 noir L= 2470	Tubo rilsan 8x6 negro L= 2470
14	317007	Tubo rilsan 8x6 nero L=2570	8x6 black rilsan pipe L= 2570	Rilsan Schlauch 8x6 schwarz L= 2570	Tuyau rilsan 8x6 noir L= 2570	Tubo rilsan 8x6 negro L= 2570
15	317006	Tubo rilsan 6x4 nero L=2330	6x4 black rilsan pipe L= 2330	Rilsan Schlauch 6x4 schwarz L= 2330	Tuyau rilsan 6x4 noir L= 2330	Tubo rilsan 6x4 negro L= 2330
16	325193	Raccordo adatt. 4/8	4/8 adapter union	Adapterverbindung 4/8	Raccord adapteur 4/8	Enlace adaptador 4/8
17	317026	Tubo rilsan 4x2,7 nero L=2300	4x2,7 black rilsan pipe L= 2300	Rilsan Schlauch 4x2,7 schwarz L= 2300	Tuyau rilsan 4x2,7 noir L= 2300	Tubo rilsan 4x2,7 negro L= 2300
18	317026	Tubo rilsan 4x2,7 nero L=2980	4x2,7 black rilsan pipe L= 2980	Rilsan Schlauch 4x2,7 schwarz L= 2980	Tuyau rilsan 4x2,7 noir L= 2980	Tubo rilsan 4x2,7 negro L= 2980
19	317026	Tubo rilsan 4x2,7 nero L=3100	4x2,7 black rilsan pipe L= 3100	Rilsan Schlauch 4x2,7 schwarz L= 3100	Tuyau rilsan 4x2,7 noir L= 3100	Tubo rilsan 4x2,7 negro L= 3100
20	BO171000	Raccordo riduzione fissa 6-4	6-4 Fixed reduction union	Feststehender Verjüngungsanschluss 6-4	Raccord reduction fixe 6-4	Conector reducción fijo 6-4
21	325191	Raccordo pneumatico Y-6	Y-6 pneumatic union	Pneumatischer Anschluss Y-6	Raccord pneumatique Y-6	Enlace neumático Y-6
22	317006	Tubo rilsan 6x4 nero L=2000	6x4 black rilsan pipe L= 2000	Rilsan Schlauch 6x4 schwarz L= 2000	Tuyau rilsan 6x4 noir L= 2000	Tubo rilsan 6x4 negro L= 2000
23	317006	Tubo rilsan 6x4 nero L=2380	6x4 black rilsan pipe L= 2380	Rilsan Schlauch 6x4 schwarz L= 2380	Tuyau rilsan 6x4 noir L= 2380	Tubo rilsan 6x4 negro L= 2380
24	317006	Tubo rilsan 6x4 nero L=1480	6x4 black rilsan pipe L= 1480	Rilsan Schlauch 6x4 schwarz L= 1480	Tuyau rilsan 6x4 noir L= 1480	Tubo rilsan 6x4 negro L= 1480
25	317006	Tubo rilsan 6x4 nero L=2760	6x4 black rilsan pipe L= 2760	Rilsan Schlauch 6x4 schwarz L= 2760	Tuyau rilsan 6x4 noir L= 2760	Tubo rilsan 6x4 negro L= 2760
26	325054	Riduzione 6-8	6-8 reduction	Reduktion 6-8	Reduction 6-8	Reducción 6-8
27	317026	Tubo rilsan 4x2,7 nero L=250	4x2,7 black rilsan pipe L= 250	Rilsan Schlauch 4x2,7 schwarz L= 250	Tuyau rilsan 4x2,7 noir L= 250	Tubo rilsan 4x2,7 negro L= 250
28	317026	Tubo rilsan 4x2,7 nero L=2750	4x2,7 black rilsan pipe L= 2750	Rilsan Schlauch 4x2,7 schwarz L= 2750	Tuyau rilsan 4x2,7 noir L= 2750	Tubo rilsan 4x2,7 negro L= 2750
29	317006	Tubo rilsan 6x4 nero L=2300	6x4 black rilsan pipe L= 2300	Rilsan Schlauch 6x4 schwarz L= 2300	Tuyau rilsan 6x4 noir L= 2300	Tubo rilsan 6x4 negro L= 2300
30	317006	Tubo rilsan 6x4 nero L=1600	6x4 black rilsan pipe L= 1600	Rilsan Schlauch 6x4 schwarz L= 1600	Tuyau rilsan 6x4 noir L= 1600	Tubo rilsan 6x4 negro L= 1600
31	BMP90000	Tubo rilsan 4x2,7 giallo L=900	4x2,7 yellow rilsan pipe L= 900	Rilsan Schlauch 4x2,7 gelb L= 900	Tuyau rilsan 4x2,7 jaune L= 900	Tubo rilsan 4x2,7 amarillo L= 900
32	BMP90000	Tubo rilsan 4x2,7 giallo L=3410	4x2,7 yellow rilsan pipe L= 3410	Rilsan Schlauch 4x2,7 gelb L= 3410	Tuyau rilsan 4x2,7 jaune L= 3410	Tubo rilsan 4x2,7 amarillo L= 3410
33	317006	Tubo rilsan 6x4 nero L=1815	6x4 black rilsan pipe L= 1815	Rilsan Schlauch 6x4 schwarz L= 1815	Tuyau rilsan 6x4 noir L= 1815	Tubo rilsan 6x4 negro L= 1815
34	317006	Tubo rilsan 6x4 nero L=1630	6x4 black rilsan pipe L= 1630	Rilsan Schlauch 6x4 schwarz L= 1630	Tuyau rilsan 6x4 noir L= 1630	Tubo rilsan 6x4 negro L= 1630
35	BMP90000	Tubo rilsan 4x2,7 giallo L=2700	4x2,7 yellow rilsan pipe L= 2700	Rilsan Schlauch 4x2,7 gelb L= 2700	Tuyau rilsan 4x2,7 jaune L= 2700	Tubo rilsan 4x2,7 amarillo L= 2700
36	BMP90000	Tubo rilsan 4x2,7 giallo L=230	4x2,7 yellow rilsan pipe L= 230	Rilsan Schlauch 4x2,7 gelb L= 230	Tuyau rilsan 4x2,7 jaune L= 230	Tubo rilsan 4x2,7 amarillo L= 230
37	BMP90000	Tubo rilsan 4x2,7 giallo L=300	4x2,7 yellow rilsan pipe L= 300	Rilsan Schlauch 4x2,7 gelb L= 300	Tuyau rilsan 4x2,7 jaune L= 300	Tubo rilsan 4x2,7 amarillo L= 300
38	317028	Tubo rilsan 4x2,7 verde L=310	4x2,7 green rilsan pipe L= 310	Rilsan Schlauch 4x2,7 grün L= 310	Tuyau rilsan 4x2,7 vert L= 310	Tubo rilsan 4x2,7 verde L= 310
39	317028	Tubo rilsan 4x2,7 verde L=2700	4x2,7 green rilsan pipe L= 2700	Rilsan Schlauch 4x2,7 grün L= 2700	Tuyau rilsan 4x2,7 vert L= 2700	Tubo rilsan 4x2,7 verde L= 2700
40	317027	Tubo rilsan 4x2,7 rosso L=2670	4x2,7 red rilsan pipe L= 2670	Rilsan Schlauch 4x2,7 röt L= 2670	Tuyau rilsan 4x2,7 rouge L= 2670	Tubo rilsan 4x2,7 rojo L= 2670
41	317028	Tubo rilsan 4x2,7 verde L=800	4x2,7 green rilsan pipe L= 800	Rilsan Schlauch 4x2,7 grün L= 800	Tuyau rilsan 4x2,7 vert L= 800	Tubo rilsan 4x2,7 verde L= 800
42	317028	Tubo rilsan 4x2,7 verde L=3500	4x2,7 green rilsan pipe L= 3500	Rilsan Schlauch 4x2,7 grün L= 3500	Tuyau rilsan 4x2,7 vert L= 3500	Tubo rilsan 4x2,7 verde L= 3500
43	317028	Tubo rilsan 4x2,7 verde L=230	4x2,7 green rilsan pipe L= 230	Rilsan Schlauch 4x2,7 grün L= 230	Tuyau rilsan 4x2,7 vert L= 230	Tubo rilsan 4x2,7 verde L= 230
44	317027	Tubo rilsan 4x2,7 rosso L=2600	4x2,7 red rilsan pipe L= 2600	Rilsan Schlauch 4x2,7 röt L= 2600	Tuyau rilsan 4x2,7 rouge L= 2600	Tubo rilsan 4x2,7 rojo L= 2600

N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
45	317027	*Tubo rilsan 4x2,7 rosso L=240*	*4x2,7 red rilsan pipe L= 240*	*Rilsan Schlauch 4x2,7 röt L= 240*	*Tuyau rilsan 4x2,7 rouge L= 240*	*Tubo rilsan 4x2,7 rojo L= 240*
46	317035	*Tubo Elastolan 4x2,5 ne L=2500*	*8x60 black Elastolan pipe L=2500*	*Schlauch Elastolan 8x6 schwarz L=2500*	*Tuyau Elastolan 8x6 noir L=2500*	*Tubo Elastolan 8x6 negro L=2500*
47	317035	*Tubo Elastolan 4x2,5 ne L=3100*	*8x60 black Elastolan pipe L=3100*	*Schlauch Elastolan 8x6 schwarz L=3100*	*Tuyau Elastolan 8x6 noir L=3100*	*Tubo Elastolan 8x6 negro L=3100*
48	317035	*Tubo Elastolan 4x2,5 ne L=50*	*8x60 black Elastolan pipe L=50*	*Schlauch Elastolan 8x6 schwarz L=50*	*Tuyau Elastolan 8x6 noir L=50*	*Tubo Elastolan 8x6 negro L=50*
49	B5815000	*Raccordo V D4*	*V D4 union*	*Verbindung V D4*	*Raccord V D4*	*Conector V D4*
50	710590970	*Cilindro strangolo*	*Neck cylinder*	*Sperrvorrichtungszylinder*	*Cylindre étranglement*	*Cilindro estrangulación*
51		*Cilindro strangolo verticale stallonatore*	*Bead breaker vertical neck cylinder*	*Vertikalsperrvorrichtungszylinder Abdrücker*	*Cylindre étranglement vertical décolle-talons*	*Cilindro estrangulación vertical destalonador*
52		*Cilindro strangolo verticale unghia*	*Tool vertical neck cylinder*	*Vertikalsperrvorrichtungszylinder Werkzeug*	*Cylindre étranglement vertical outil*	*Cilindro estrangulación vertical herramienta*
53		*Cilindro camma stallonatore inferiore*	*Lower bead breaker cam cylinder*	*Unterer Abdrücker Zylindernocke*	*Cylindre came décolle-talons inférieur*	*Cilindro leva destalonador inferior*
54		*Cilindro camma stallonatore superiore*	*Upper bead breaker cam cylinder*	*Oberer Abdrücker Zylindernocke*	*Cylindre came décolle-talons supérieur*	*Cilindro leva destalonador superior*
55	710513300	*Base + valvole*	*Base + valves*	*Sockel + Ventil*	*Embase + vannes*	*Base + válvulas*
56	710590800	*Valvola NA*	*NA valve*	*Ventil NA*	*Vanne NA*	*Válvula NA*
57	710590790	*Pistone strangolo*	*Neck piston*	*Sperrvorrichtungskolben*	*Piston étranglement*	*Pistón estrangulación*
58		*Cilindro braccio unghia*	*Tool arm cylinder*	*Zylinderarm Werkzeug*	*Cylindre bras outil*	*Cilindro brazo utensilio*
59		*Cilindro bracci stallonatore*	*Bead breaking arms cylinder*	*Abdrücker Zylinderarme*	*Cylindre bras décolle-talon*	*Cilindro brazos destalonador*
60	710513290	*Base + valvole*	*Base + valves*	*Sockel + Ventil*	*Embase + vannes*	*Base + válvulas*
61		*Cilindro strangolo stallonatore superiore*	*Upper bead breaker neck cylinder*	*Oberer Abdrücker Sperrvorrichtungszylinder*	*Cylindre étranglement décolle-talon supérieur*	*Cilindro estrangulación destalonador superior*
62		*Cilindro strangolo stallonatore inferiore*	*Lower bead breaker neck cylinder*	*Unterer Abdrücker Sperrvorrichtungszylinder*	*Cylindre étranglement décolle-talons inférieur*	*Cilindro estrangulación destalonador inferior*
63		*Cilindro strangolo braccio unghia*	*Tool arm neck cylinder*	*Arm Werkzeug Sperrvorrichtungszylinder*	*Cylindre étranglement bras outil*	*Cilindro estrangulación brazo utensilio*
64		*Lubrificatore*	*Lubricator*	*Schmierer*	*Graisseur*	*Lubrificador*
65		*Valvole pedale di gonfiaggio*	*Inflation pedal valve*	*Ventile des Aufpumppedals*	*Vannes pédales de direction de gonflage*	*Válvulas pedal de inflado*
66		*Gruppo serbatoio*	*Tank unit*	*Tanksatz*	*Groupe réservoir*	*Grupo tanque*
67		*Gruppo gonfiaggio con manometro*	*Inflation unit with pressure gauge*	*Aufpumpsatz mit Manometer*	*Groupe gonflage avec manomètre*	*Grupo inflado con manómetro*
68		*Valvola bilanciatrice 60 PSI*	*60 PSI balancing valve*	*Ventil Waage 60 PSI*	*Vanne balancement 60 PSI*	*Válvula balanceo 60 PSI*
69		*Ugello di gonfiaggio*	*Inflation nozzle*	*Aufpumpedüse*	*Gicleur de gonflage*	*Boquilla de inflado*
70	318011	*Tubo retinato L=700*	*Screened pipe L= 700*	*Netzschlauch L= 700*	*Tuyau retiné L= 700*	*Tuyau retiné L= 700*
71	710590710	*Valvola*	*Valve*	*Ventil*	*Ventil*	*Ventil*
72		*Gruppo braccio stallonatore superiore*	*Upper bead breaker arm unit*	*Oberabdrückarmsatz*	*Groupe bras décolle talons supérieur*	*Grupo brazo destalonador superior*
73		*Gruppo braccio stallonatore inferiore*	*Lower bead breaker arm unit*	*Unterabdrückarmsatz*	*Groupe bras décolle talons inférieur*	*Grupo brazo destalonador inferior*
74		*Unghia superiore*	*Upper tool*	*Oberer Werkzeug*	*Outil supérieur*	*Utensilio superior*
75	B1371800	*Riduttore*	*Reduction gear*	*Untersetzer*	*Reducteur*	*Reductor*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N°	Cod.	Descrizione	Description	Beschreibung	Description	Descripción
1	710292330	*Gruppo serbatoio*	*Tank unit*	*Tanksatz*	*Groupe réservoir*	*Grupo tanque*
2	317035	*Tubo Elastolan 4x2,5 ne L=200*	*4x2,5 black Elastolan pipe L=200*	*Schlauch Elastolan 4x2,5 schwarz L=200*	*Tuyau Elastolan 4x2,5 noir L=200*	*Tubo Elastolan 4x2,5 negro L=200*
3	710591960	*Gruppo valvola*	*Valve group*	*Ventilsatz*	*Groupe vanne*	*Grupo válvula*
4	B0171000	*Raccordo riduzione fissa 6-4*	*6-4 Fixed reduction union*	*Feststehender Verjüngungsanschluss 6-4*	*Raccord reduction fixe 6-4*	*Conector reducción fijo 6-4*
5	325191	*Raccordo pneumatico Y-6*	*Y-6 pneumatic union*	*Pneumatischer Anschluss Y-6*	*Raccord pneumatique Y-6*	*Enlace neumático Y-6*
6	317006	*Tubo rilsan 6x4 nero L=2600*	*6x4 black rilsan pipe L=2600*	*Rilsan Schlauch 6x4 schwarz L=2600*	*Tuyau rilsan 6x4 noir L=2600*	*Tubo rilsan 6x4 negro L=2600*
7	325054	*Riduzione 6-8*	*6-8 reduction*	*Reduktion 6-8*	*Reduction 6-8*	*Reducción 6-8*
8	325181	*Raccordo a V8*	*V8 union*	*V-Verbindung 8*	*Raccord à V8*	*Enlace a V8*
9	317006	*Tubo rilsan 6x4 nero L=50*	*6x4 black rilsan pipe L=50*	*Rilsan Schlauch 6x4 schwarz L=50*	*Tuyau rilsan 6x4 noir L=50*	*Tubo rilsan 6x4 negro L=50*
10	399286	*Regolatore di flusso*	*Flow regulator*	*Flussregler*	*Regulateur de débit*	*Regulación de flujo*
11	317035	*Tubo Elastolan 4x2,5 ne L=50*	*4x2,5 black Elastolan pipe L=50*	*Schlauch Elastolan 4x2,5 schwarz L=50*	*Tuyau Elastolan 4x2,5 noir L=50*	*Tubo Elastolan 4x2,5 negro L=50*
12	B5815000	*Raccordo V D.4*	*V D.4 union*	*Verbindung V D.4*	*Raccord V D.4*	*Conector V D.4*
13	710591950	*Gruppo valvola vite pneumatica*	*Pneumatic screw valve unit*	*Pneumatische Schraube Ventilsatz*	*Groupe vanne vis pneumatique*	*Grupo válvula tornillo neumática*
14	317006	*Tubo rilsan 6x4 nero L=3700*	*6x4 black rilsan pipe L=3700*	*Rilsan Schlauch 6x4 schwarz L=3700*	*Tuyau rilsan 6x4 noir L=3700*	*Tubo rilsan 6x4 negro L=3700*
15		*Regolatore di flusso*	*Flow regulator*	*Flussregler*	*Regulateur de débit*	*Regulación de flujo*
16	710491550	*Distributore pneumatico*	*Pneumatic distributor*	*Pneumatischer Verteiler*	*Distributeur pneumatique*	*Distribuidor neumático*

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ENGINEERING and MARKETING S.P.A.

7105-R002-12_B

KENDO.30LIGHT
KENDO.30LIGHTFI
KENDO.30S
KENDO.30SFI

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.

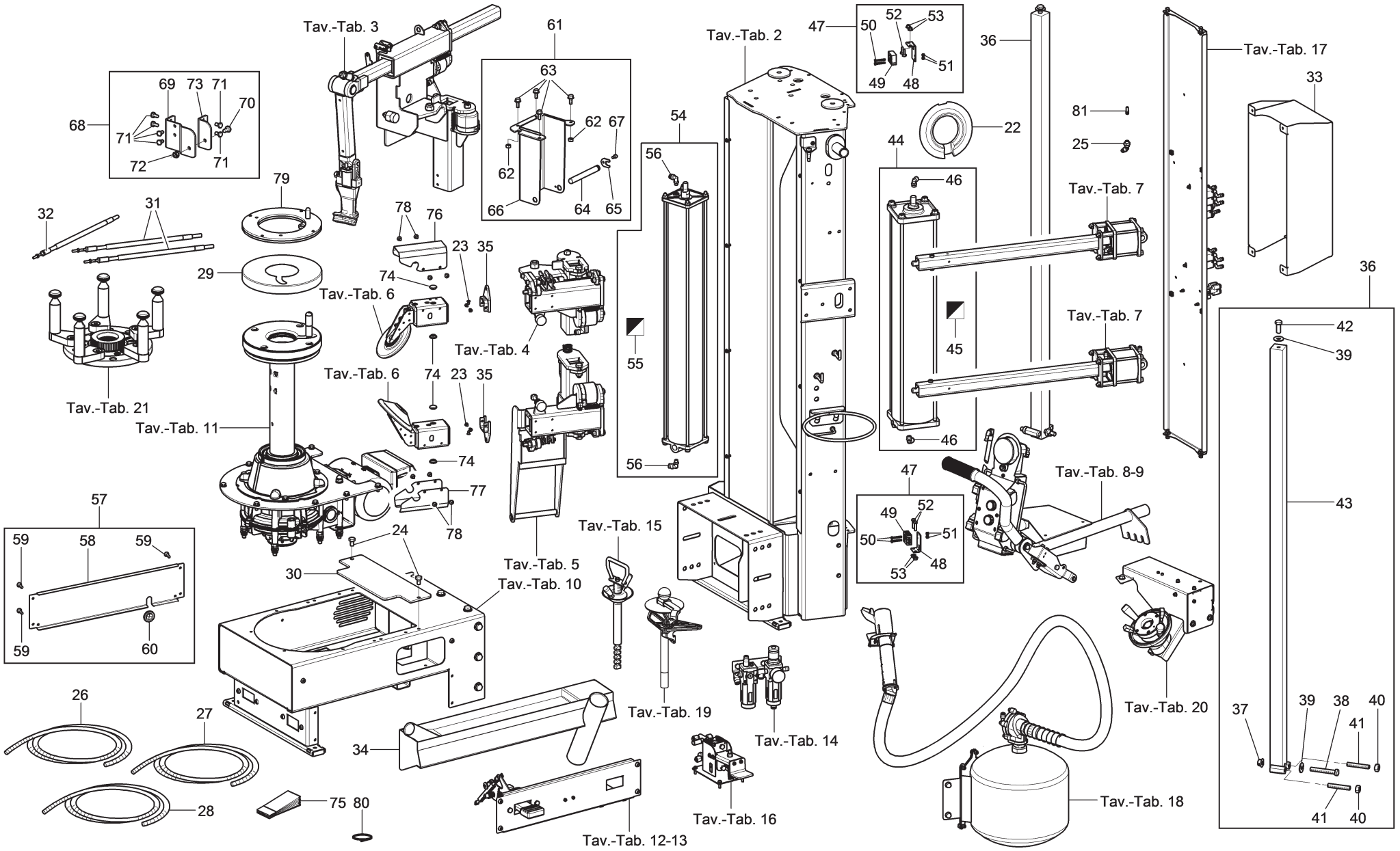
LOS DIBUJOS EN DESPIECE SIRVEN ÚNICAMENTE PARA IDENTIFICAR LAS PIEZAS QUE DEBEN SUSTITUIRSE. LA SUSTITUCIÓN DE PIEZAS DEBE EFECTUARLA EXCLUSIVAMENTE PERSONAL PROFESIONALMENTE CUALIFICADO.

- 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 ober 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 diríjasie directamente a:

BUTLER ENGINEERING and MARKETING S.p.A. a s. u.
Via dell'Ecologia, 6 - 42047 Rolo - (RE) Italy
Phone (+39) 0522 647911 - Fax (+39) 0522 649760 - e-mail: Info@butler.it

7105-R002-12_B - Rev. n. 12 (05/2019)

SOMMARIO - SUMMARY - INHALT
SOMMAIRE - SUMARIO



Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE** **LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**	*ASSIEME GENERALE* *MAIN ASSEMBLY* *GENERALSATZ* *ASSEMBLAGE GENERAL* *JUNTO GENERAL*	***Pag. 4 di 32***
	Tavola N°1 - Rev. 6		

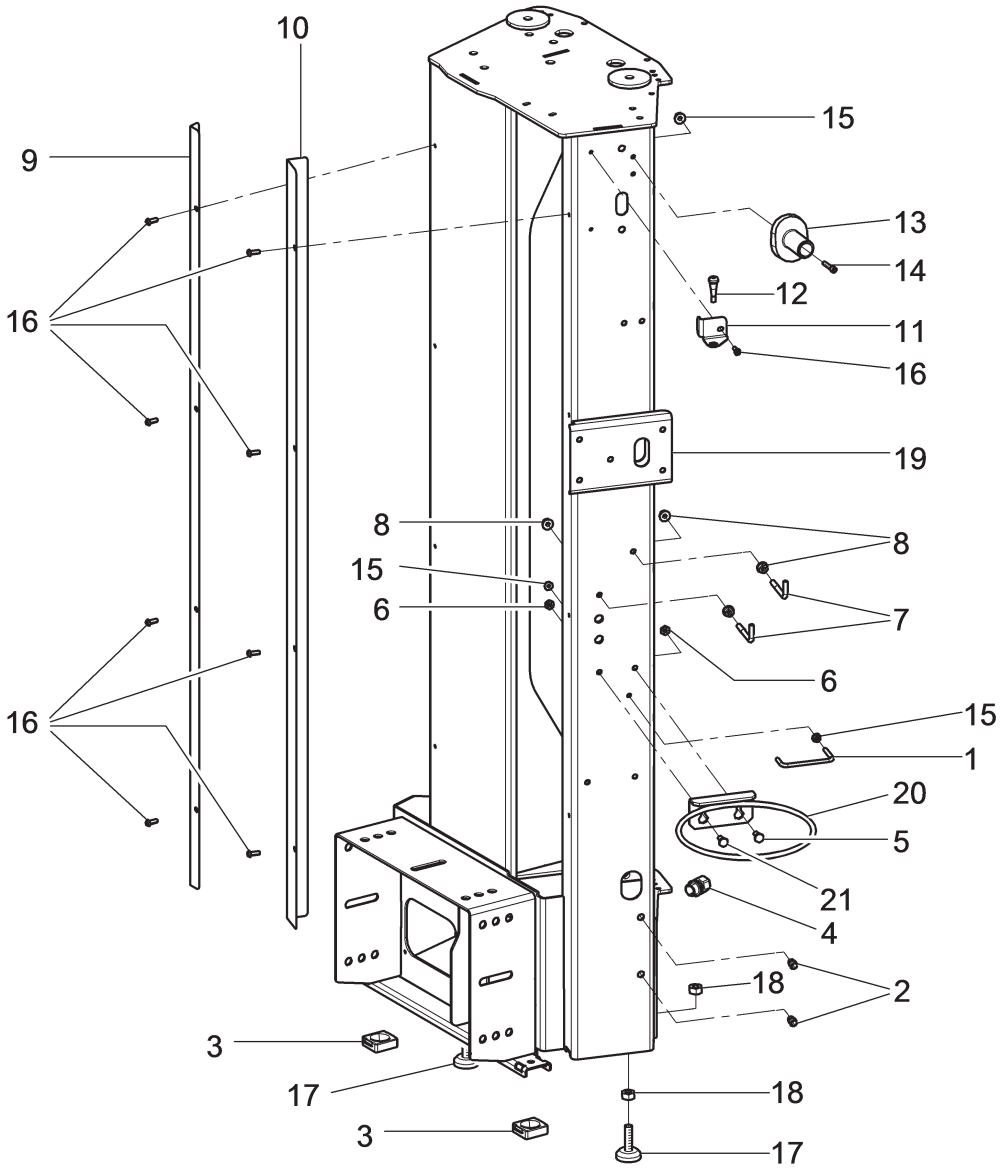
7105-R002-12_B

Tav.	Cod.	Pos.	KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
2	710591620		●	●	●	●
3	710590320		●	●	●	●
4	710591500		●	●	●	●
5	710591510		●	●	●	●
6A	710591660		●	●		
6B	710591581				●	●
6C	710591591				●	●
7	710591520		●	●	●	●
8	710590350		●	●	●	●
9	710590500		●	●	●	●
10	710590020		●	●	●	●
11A	710591451		●	●	●	●
11B	710592040*		●	●	●	●
12	710590061		●	●	●	●
13	710190251		●	●	●	●
14	710090920		●	●	●	●
15	710090223		●	●	●	●
16A	B4127300		●		●	
16B	140990371			●		●
17A	710590620		●	●		
17B	710591790				●	●
18	710590570			●		●
19	710090730		●	●	●	●
20	710591980*		●	●	●	●
21	G1000A150*		●	●	●	●
	B1157000	22	●	●	●	●
	209229	23	●	●	●	●
	272172	24	●	●	●	●
	325186	25	●	●	●	●
	599442	26	●	●	●	●

* Valido per VARGKENDOVS – variante con vite a scomparsa
* Valid for VARGKENDOVS – version with cover screw
* Gültig für VARGKENDOVS – Version mit Senkkopfschraube
* Valide pour VARGKENDOVS – version avec vis cachée
* Válido para VARGKENDOVS – versión con tornillo a ras

Tav.	Cod.	Pos.	KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
	599561	27	●	●	●	●
	599563	28	●	●	●	●
	710013421	29	●	●	●	●
	710413660	30	●	●	●	●
	710510780	31	●	●	●	●
	710510790	32	●	●	●	●
	710512980	33	●	●	●	●
	710513150	34	●	●	●	●
	710515960	35	●	●	●	●
	710590050	36	●	●	●	●
	228503	37	●	●	●	●
	201301	38	●	●	●	●
	237069	39	●	●	●	●
	224015	40	●	●	●	●
	210506	41	●	●	●	●
	203072	42	●	●	●	●
	710510580	43	●	●	●	●
	710590360	44	●	●	●	●
	GU4940	45	●	●	●	●
	325118	46	●	●	●	●
	710590370	47	●	●	●	●
	710511960	48	●	●	●	●
	710590712	49	●	●	●	●
	203356	50	●	●	●	●
	228023	51	●	●	●	●
	203127	52	●	●	●	●
	228500	53	●	●	●	●
	710590400	54	●	●	●	●
	GU5050	55	●	●	●	●
	325159	56	●	●	●	●
	710590530	57	●	●	●	●
	710510380	58	●	●	●	●
	B1367300	59	●	●	●	●
	B1306900	60	●	●	●	●

Tav.	Cod.	Pos.	KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
	710590610	61	●	●	●	●
	224009	62	●	●	●	●
	272035	63	●	●	●	●
	710513260	64	●	●	●	●
	710513270	65	●	●	●	●
	710510650	66	●	●	●	●
	206012	67	●	●	●	●
	710590840	68	●	●	●	●
	710514380	69	●	●	●	●
	203106	70	●	●	●	●
	203129	71	●	●	●	●
	224011	72	●	●	●	●
	710514370	73	●	●	●	●
	710612290	74	●	●	●	●
	790011620	75	●	●	●	●
	710516280	76			●	●
	710516290	77			●	●
	266229	78			●	●
	G1000A152	79	●	●	●	●
	B0178000	80	●	●	●	●
	B0622000	81	●	●	●	●



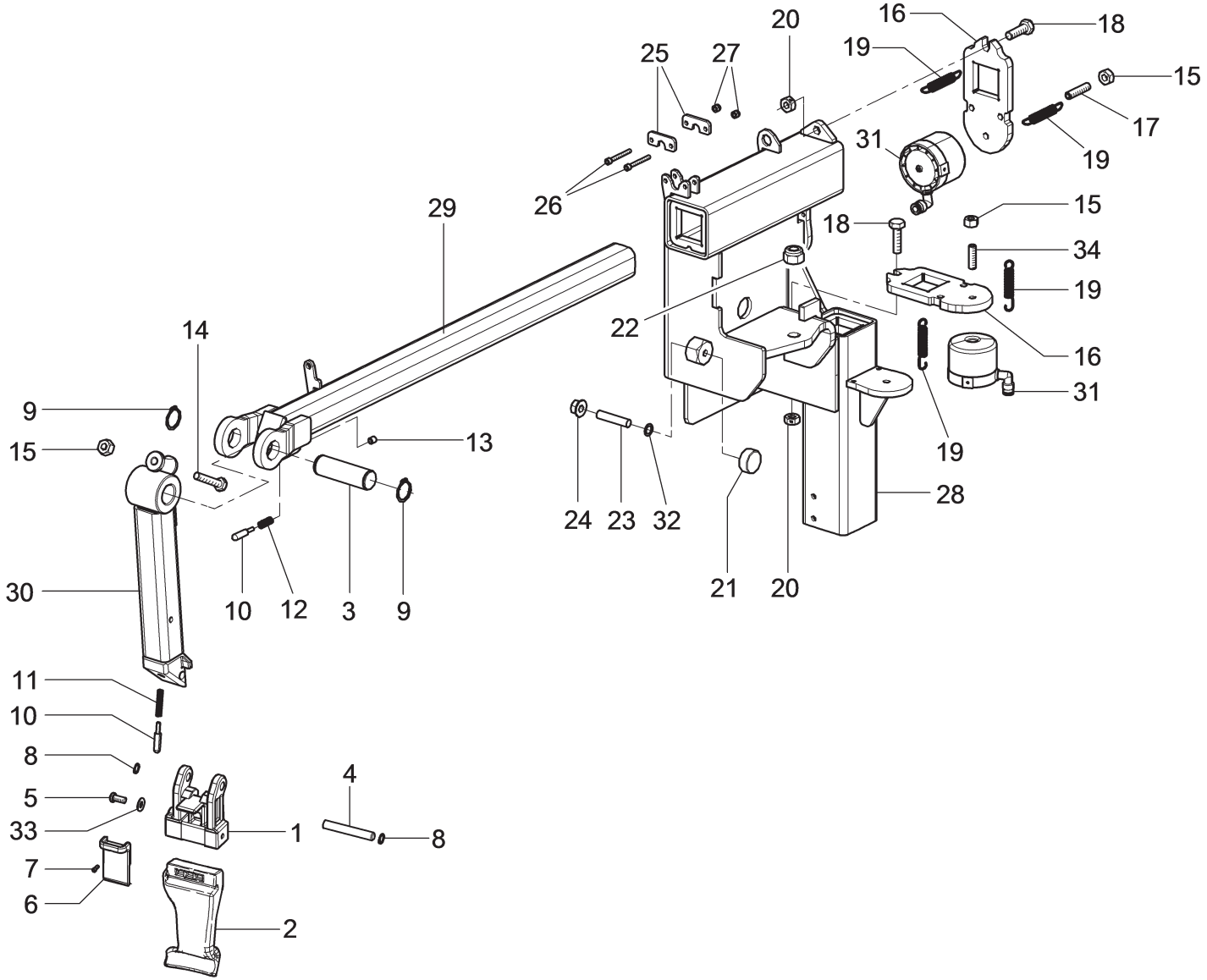
KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•	•	•

Butler ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

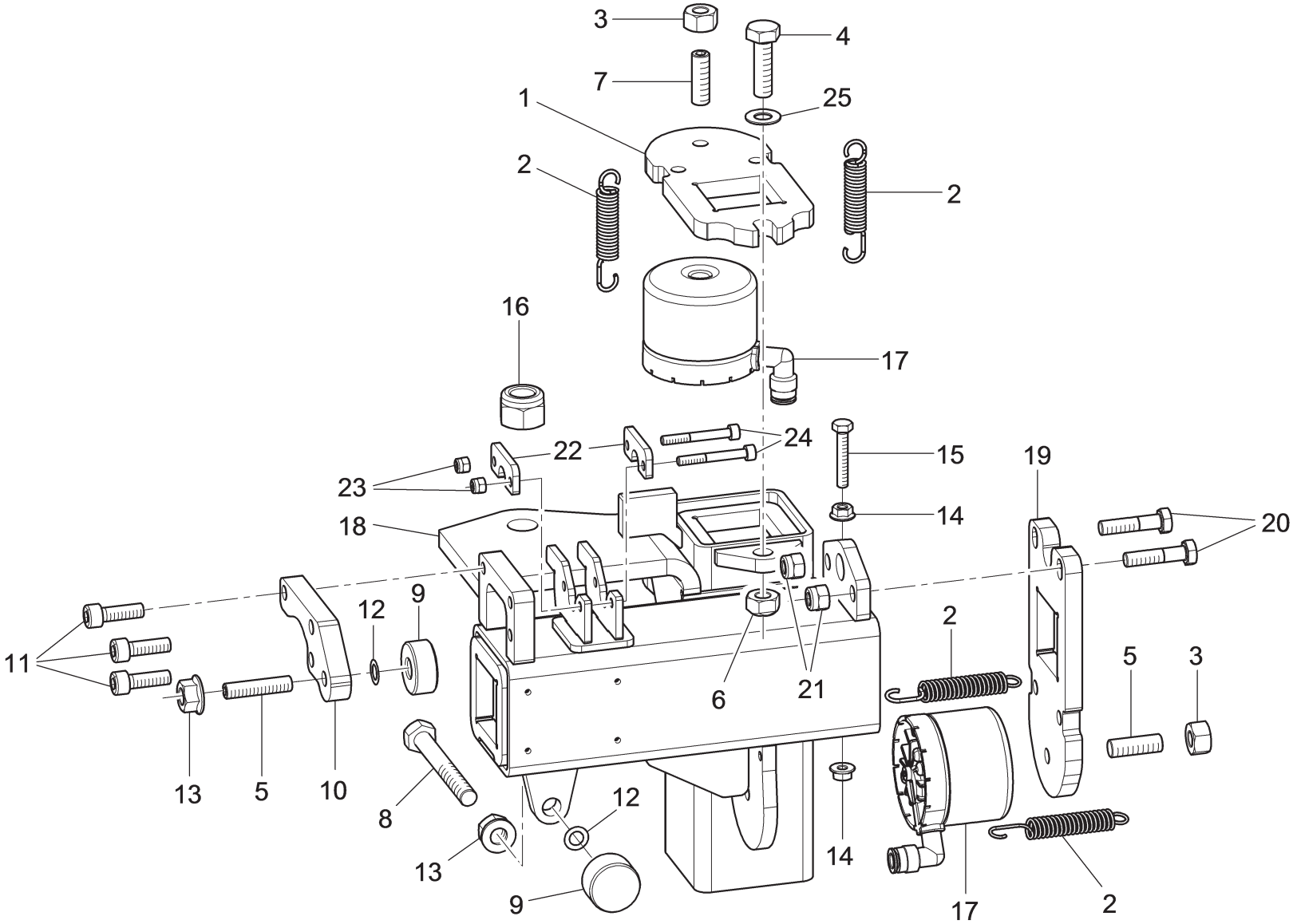
Tavola N°2 - Rev. 2 | **710591620**

COLONNA CON INSERTI
COLUMN WITH INSERTIONS
SÄULE MIT WENDEPLATTEN
COLONNE AVEC INSERTS
COLUMNA CON INSERCIÓNES



KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•	•	•

Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**	*GRUPPO DOPPIA GUIDA DOUBLE GUIDE UNIT DOPPELTE FÜHRUNGSATZ GROUPE DOUBLE GUIDE GRUPO DOBLE GUÍA*	***Pag. 9 di 32***
	Tavola N°3 - Rev. 4 / **710590320**		



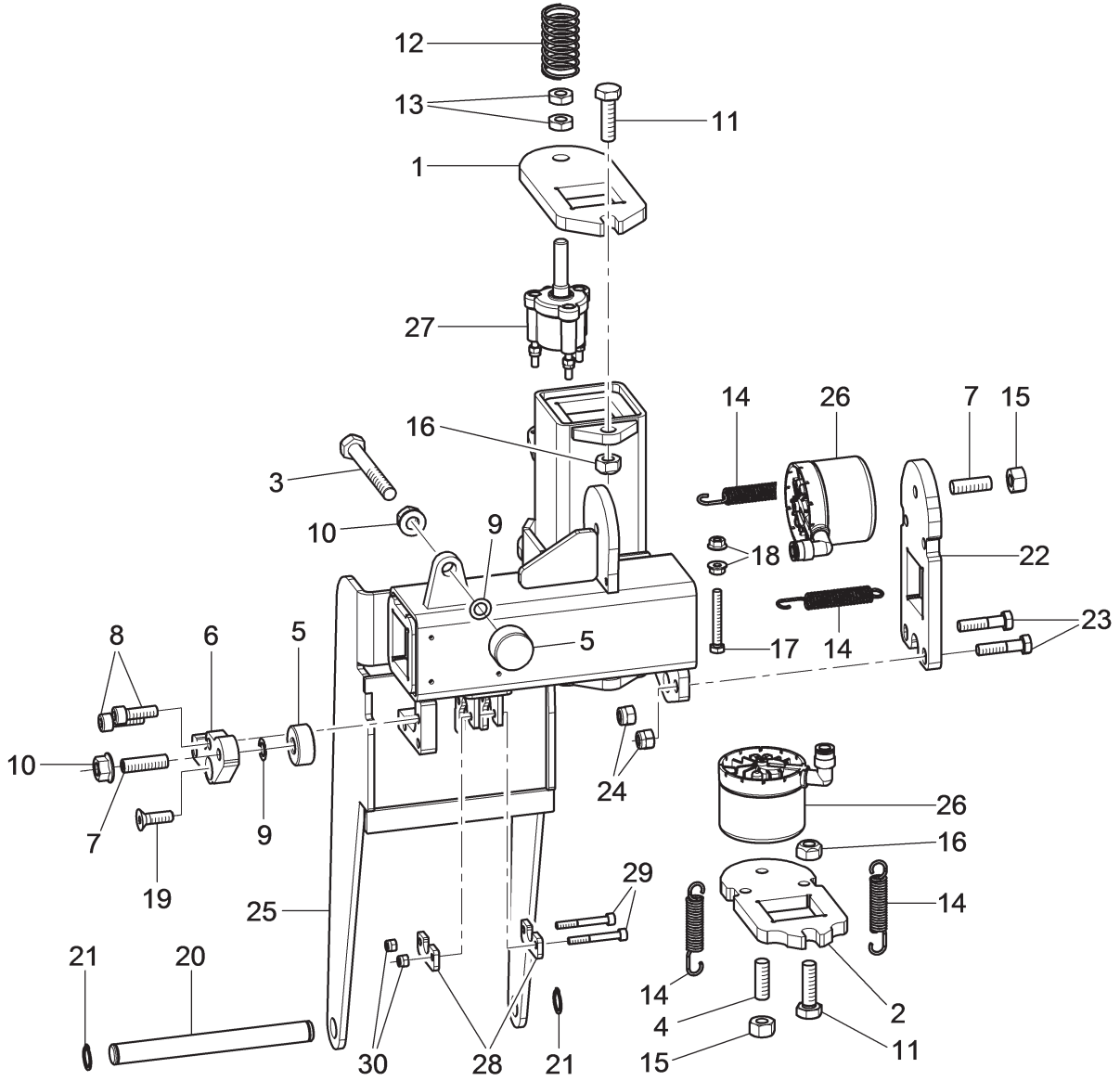
KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•	•	•

Butler ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

Tavola N°4 - Rev. 3 | **710591500**

GRUPPO SUPPORTO BRACCIO SUPERIORE
UPPER ARM SUPPORT UNIT
OBERER ARMTRÄGERSATZ
GROUPE SUPPORT BRAS SUPÉRIEUR
GRUPO SOPORTE BRAZO SUPERIOR



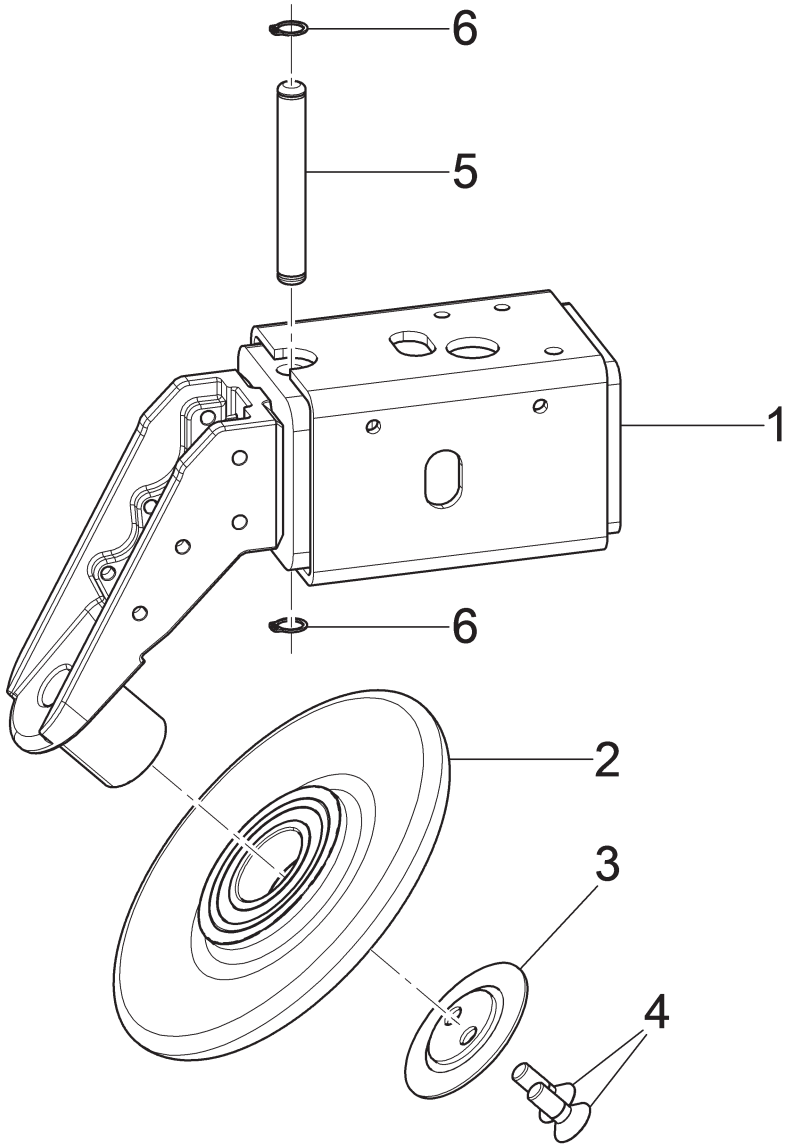
KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•	•	•

Butler ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

Tavola N°5 - Rev. 3 | **710591510**

GRUPPO SUPPORTO BRACCIO INFERIORE
LOWER ARM SUPPORT UNIT
UNTERER ARMTRÄGERSATZ
GROUPE SUPPORT BRAS INFÉRIEUR
GRUPO SOPORTE BRAZO INFERIOR



KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•		

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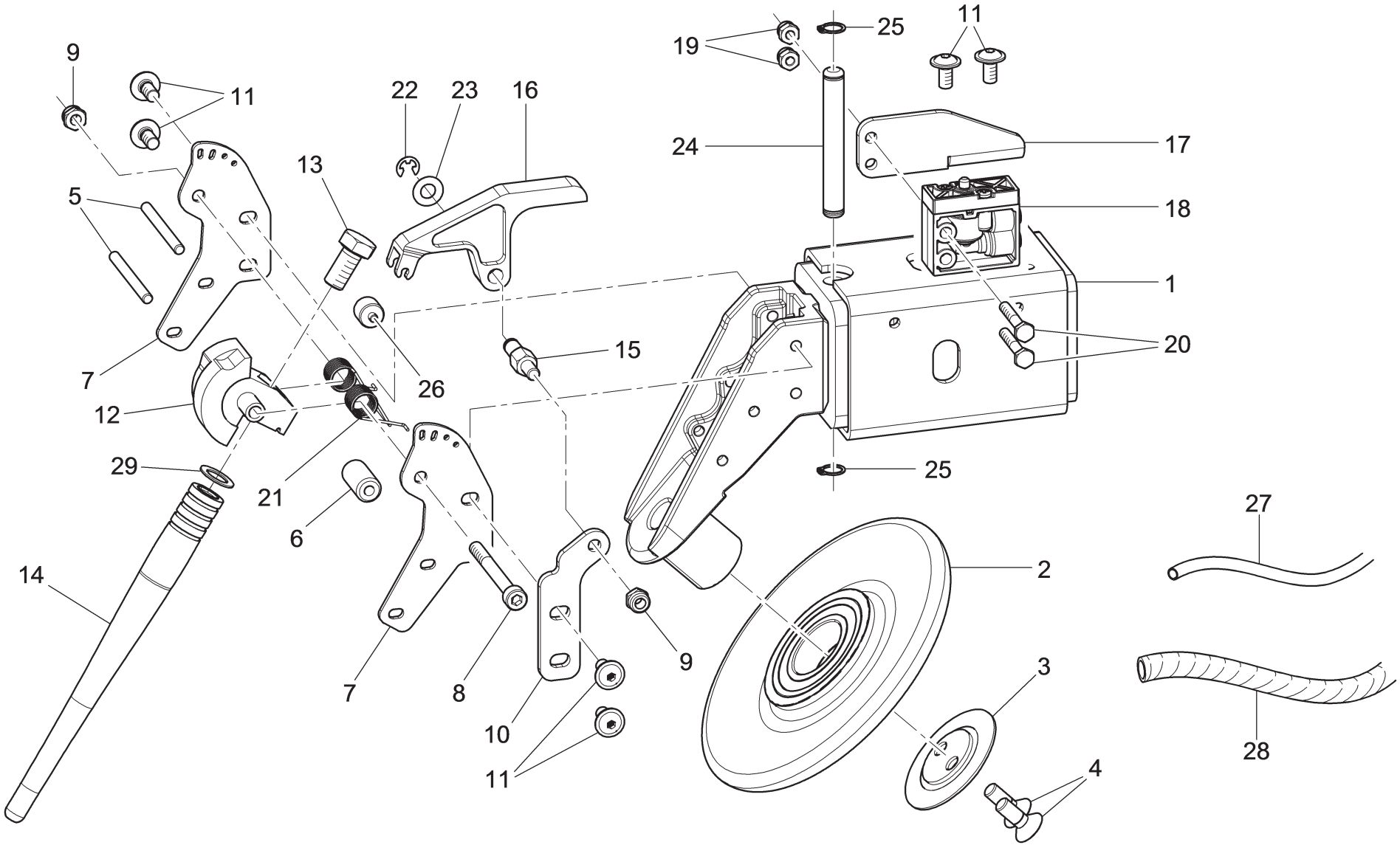
ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

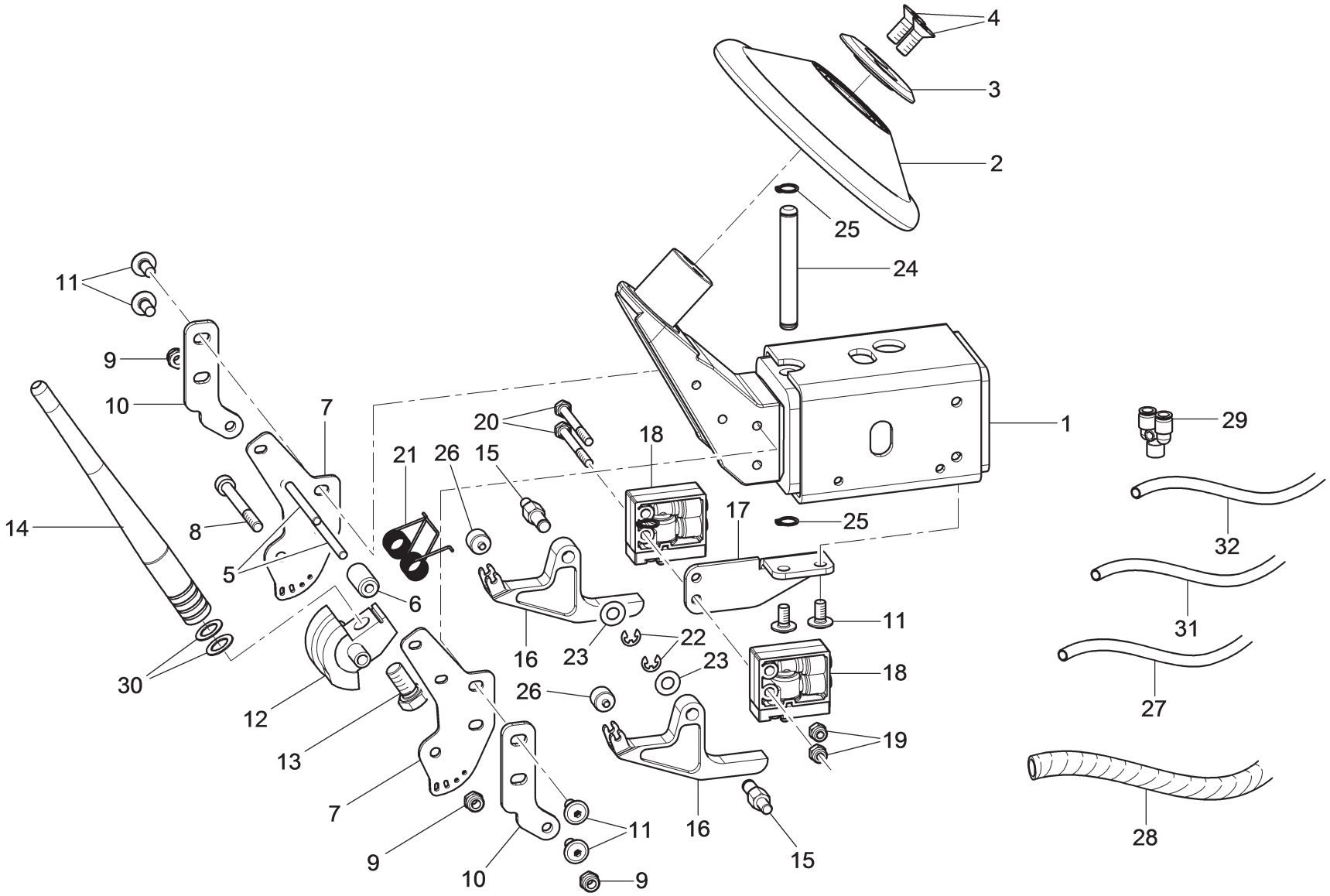
Tavola N°6A - Rev. 2 | **710591660**

GRUPPO GUIDA CON RULLO
GUIDE UNIT WITH ROLLER
FÜHRUGSATZ MIT ROLLEN
GROUPE GUIDE AVEC ROULEAU
GRUPO GUÍA CON RODILLOS



KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
		•	•

Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**	*GRUPPO GUIDA TASTATORE SUPERIORE UPPER FEELER PIN GUIDE UNIT FÜHRUNGSATZ OBEREN ABTASTERS GROUPE GUIDE TÂTEUR SUPÉRIEUR GRUPO GUÍA PALPADOR SUPERIOR*	***Pag. 13 di 32***
	Tavola N°6B - Rev. 2 / **710591581**		



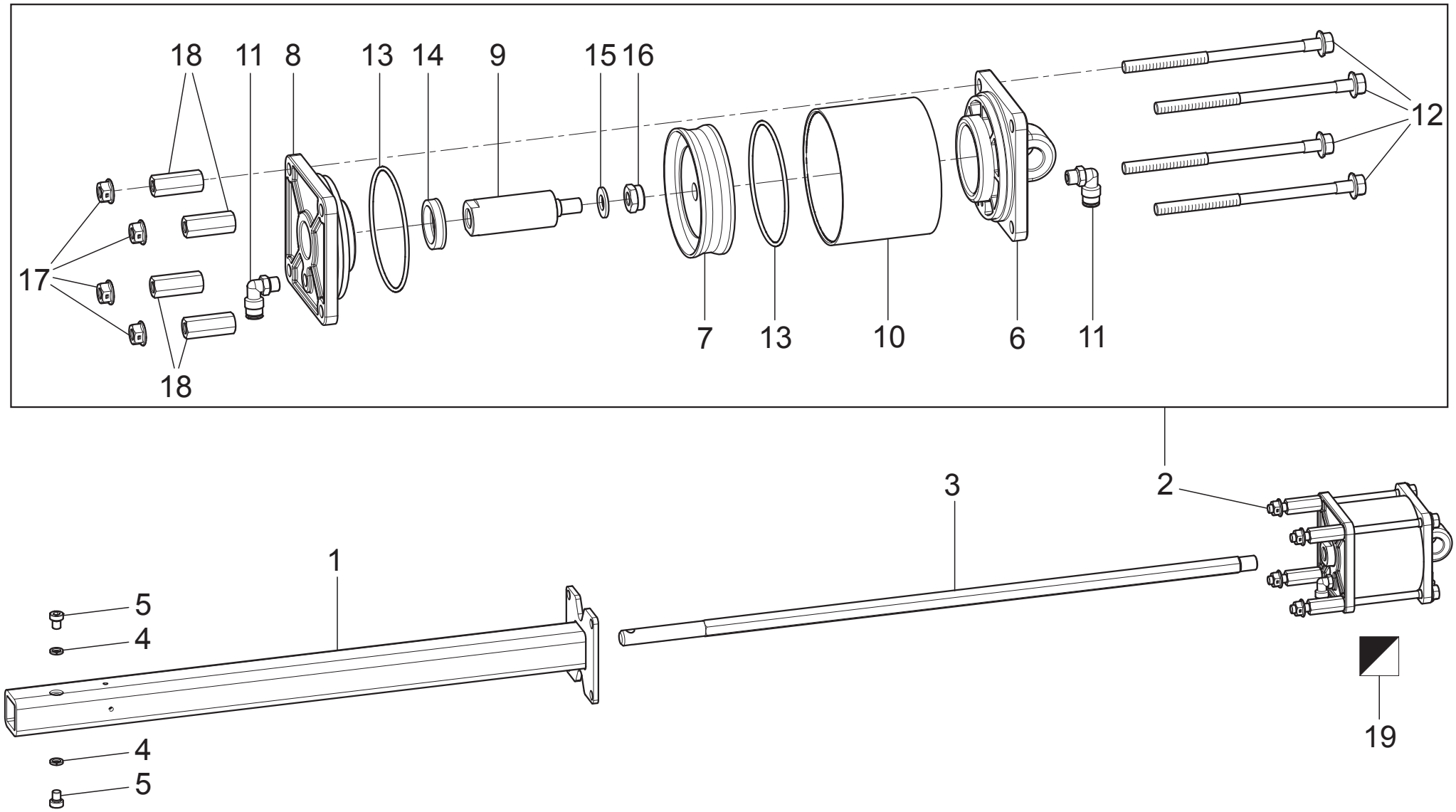
KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
		•	•

Butler ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

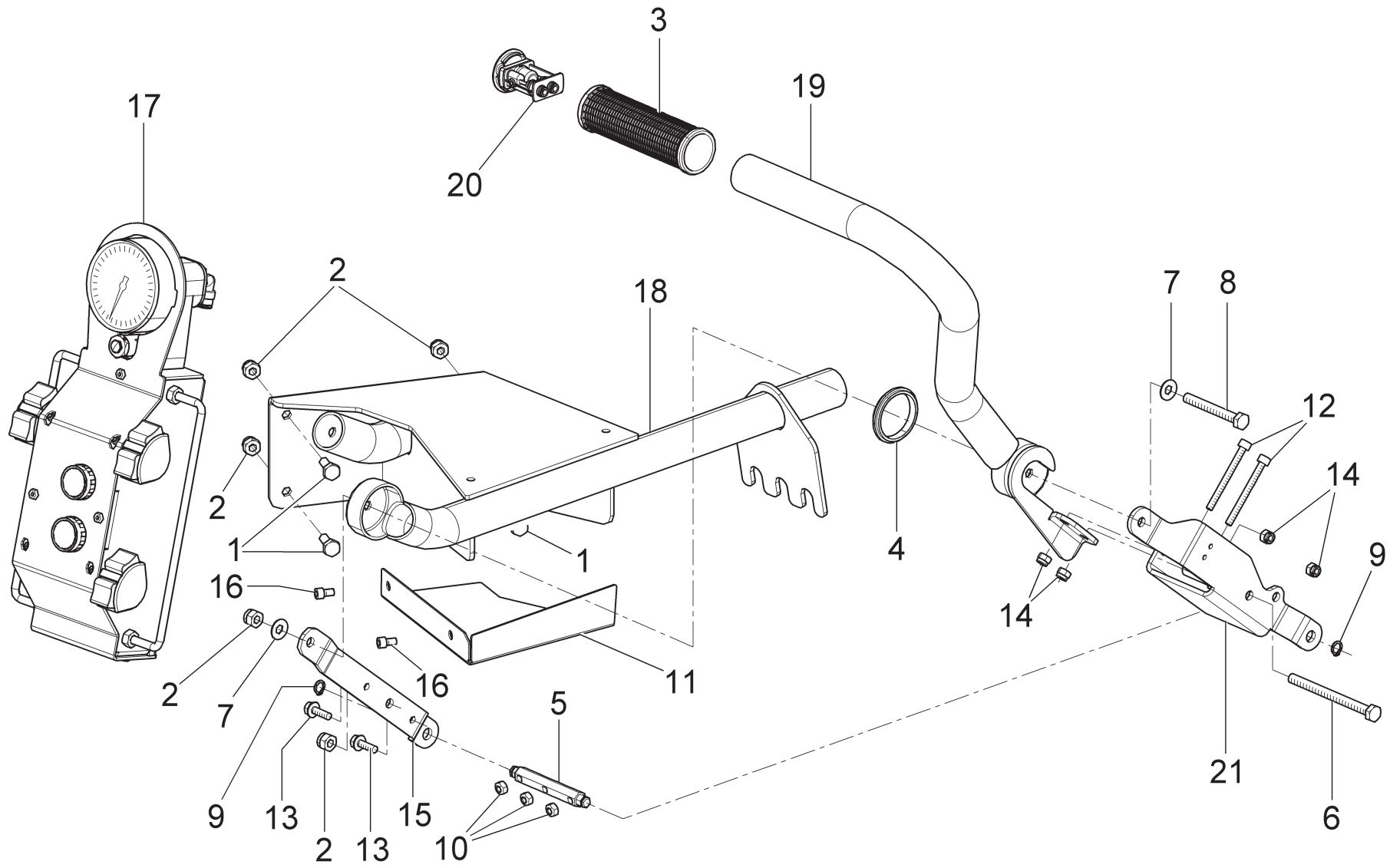
Tavola N°6C - Rev. 2 | **710591591**

GRUPPO GUIDA TASTATORE INFERIORE
LOWER FEELER PIN GUIDE UNIT
FÜHRUNGSATZ UNTEREN ABTASTERS
GROUPE GUIDE TÂTEUR INFÉRIEUR
GRUPO GUÍA PALPADOR INFERIOR



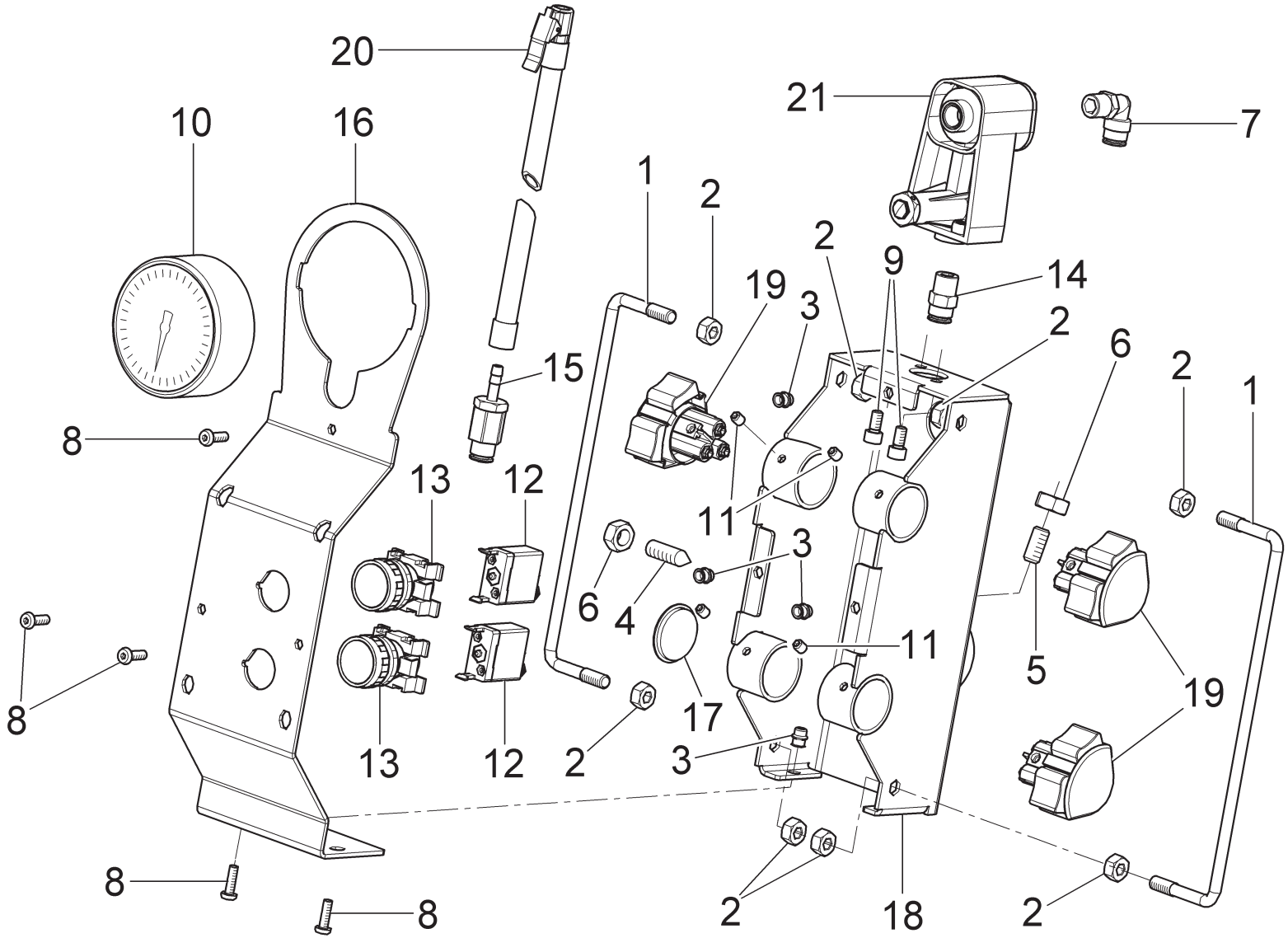
KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•	•	•

Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**	*GRUPPO BRACCIO CON CILINDRO ARM UNIT WITH CYLINDER ARMSATZ MIT ZYLINDER GROUPE BRAS AVEC CYLINDRE GRUPO BRAZO CON CILINDRO*	***Pag. 15 di 32***
	Tavola N°7 - Rev. 3 / **710591520**		



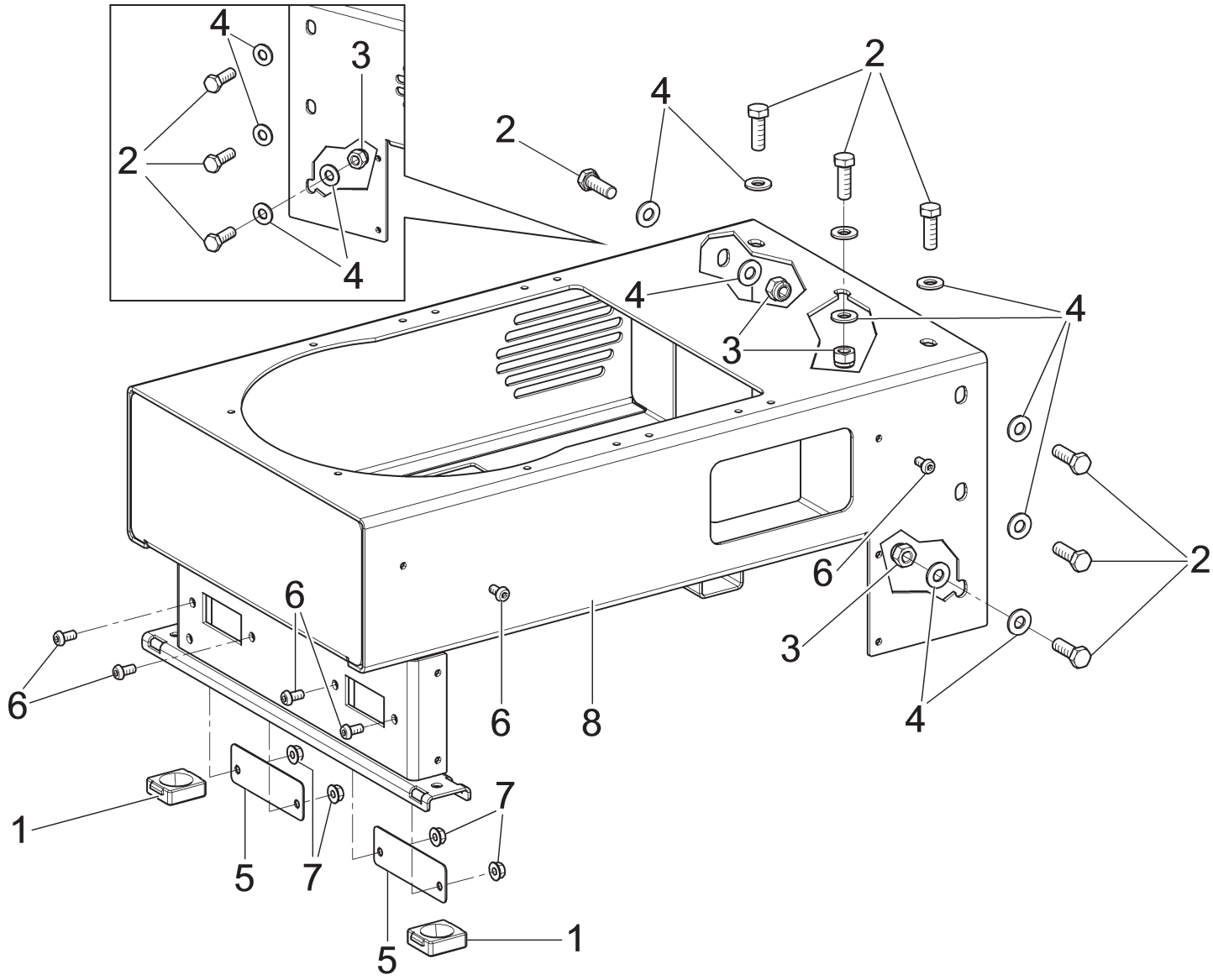
KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•	•	•

Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**	*GRUPPO COMANDO 3 CAVI 3 CABLES CONTROL UNIT BEFEHLUNGSATZ MIT 3 KABELN GROUPE COMMANDE 3 CÂBLES GRUPO MANDO 3 CABLES*	***Pag. 16 di 32***
	Tavola N°8 - Rev. 2 / **710590350**		



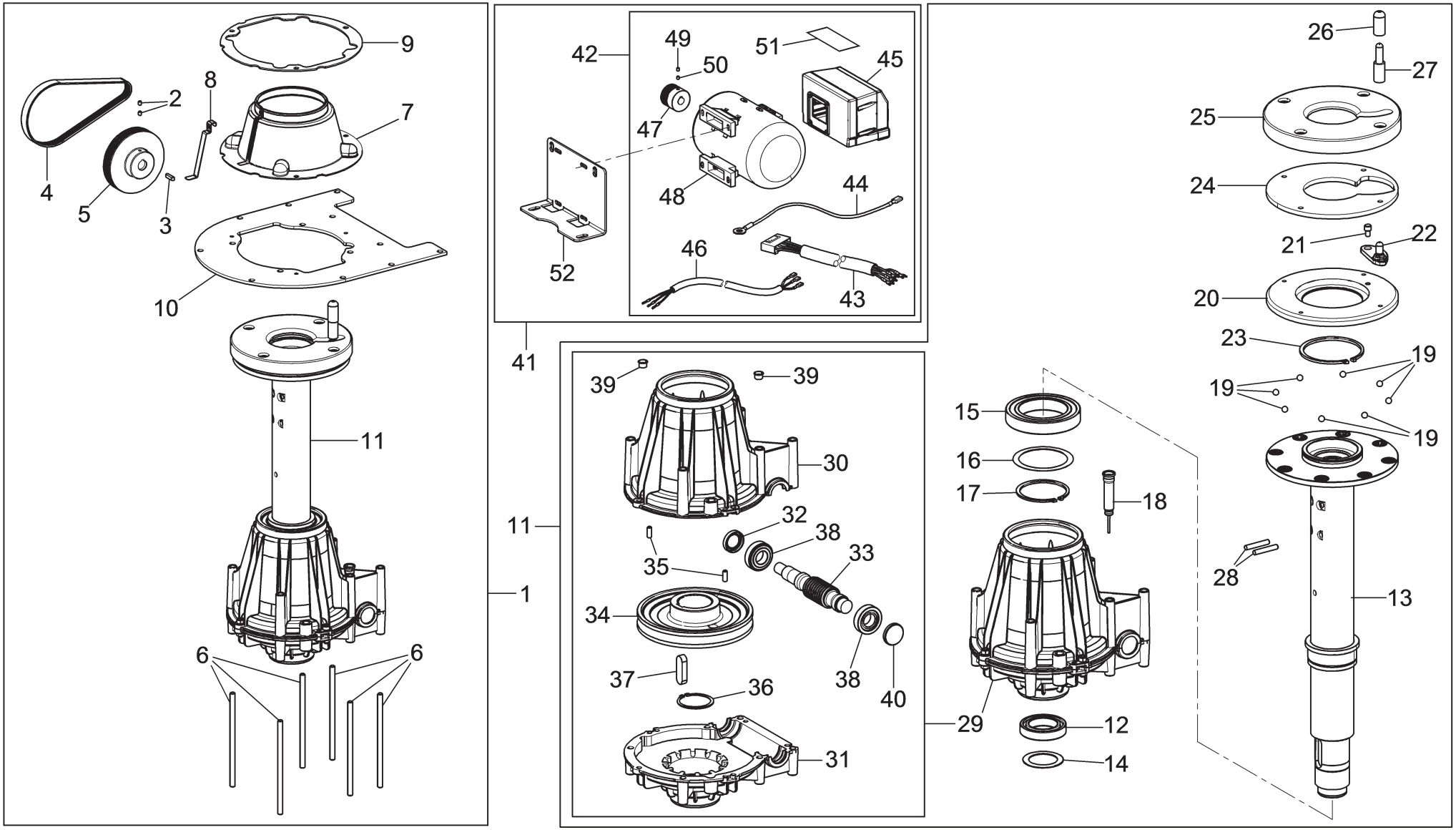
KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•	•	•

Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**	*GRUPPO FRONTALE DI COMANDO CONTROL FRON UNIT FRONT BEDIENUNGENSATZ GROUPE FRONTAL DE COMMANDE GRUPO FRONTAL DE MANDO*	***Pag. 17 di 32***
	Tavola N°9 - Rev. 1 / **710590500**		



KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•	•	•

Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**	*GRUPPO BASAMENTO BASE UNIT GRUNDPLATTESATZ GROUPE BATI GRUPO BASAMIENTO*	***Pag. 18 di 32***
	Tavola N°10 - Rev. 2 / **710590020**		



KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•	•	•

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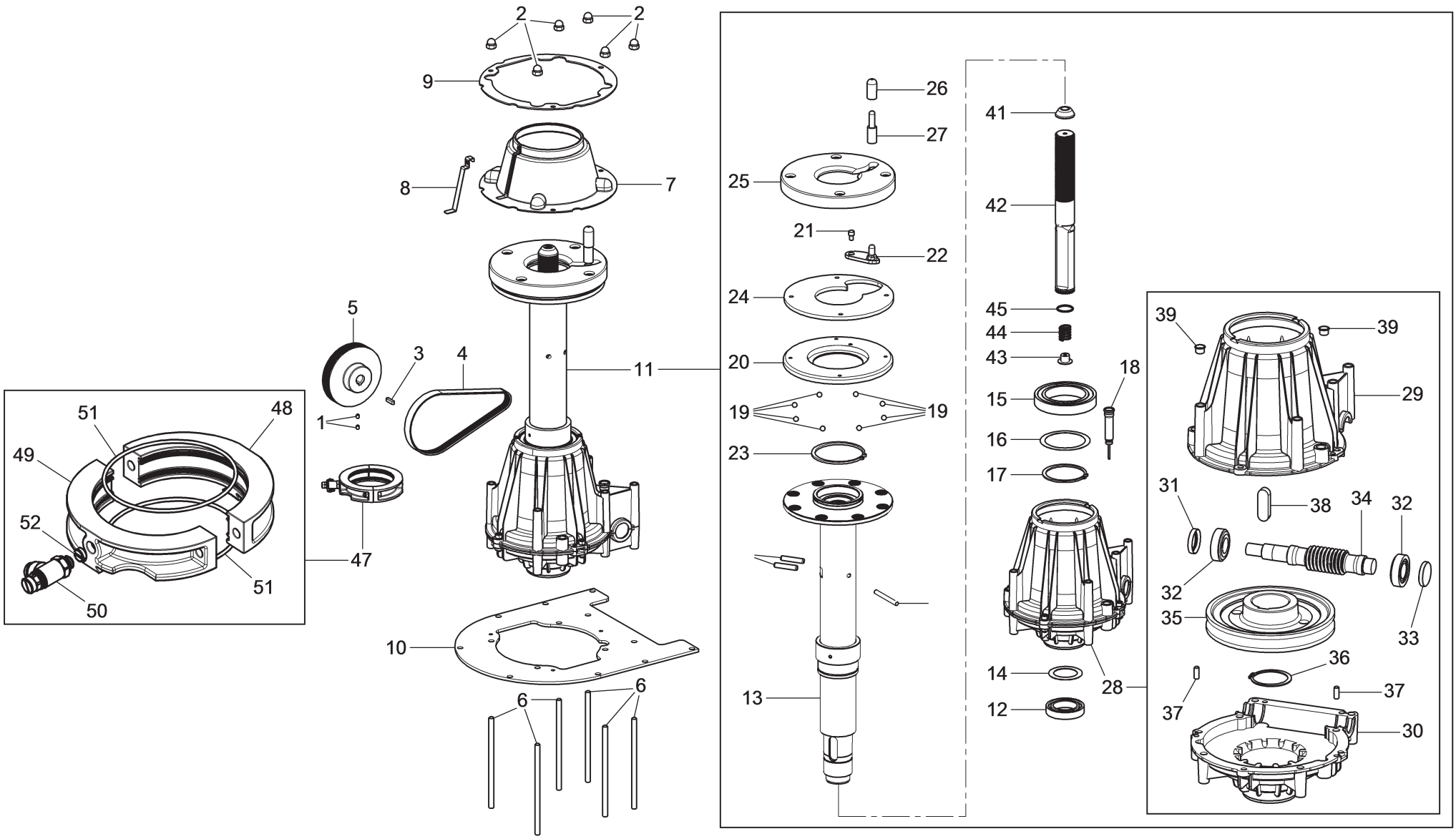
LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

Tavola N°11A - Rev. 3 | **710591451**

GRUPPO AUTOCENTRANTE + INVERTER
SELFCENTERING CHUCK UNIT + INVERTER
AUTOZENTRIERESATZ + FREQUENUMFORMER
GROUPE AUTOCENTREUR + VARIATEUR
GRUPO AUTOCENTRANTE + INVERSOR



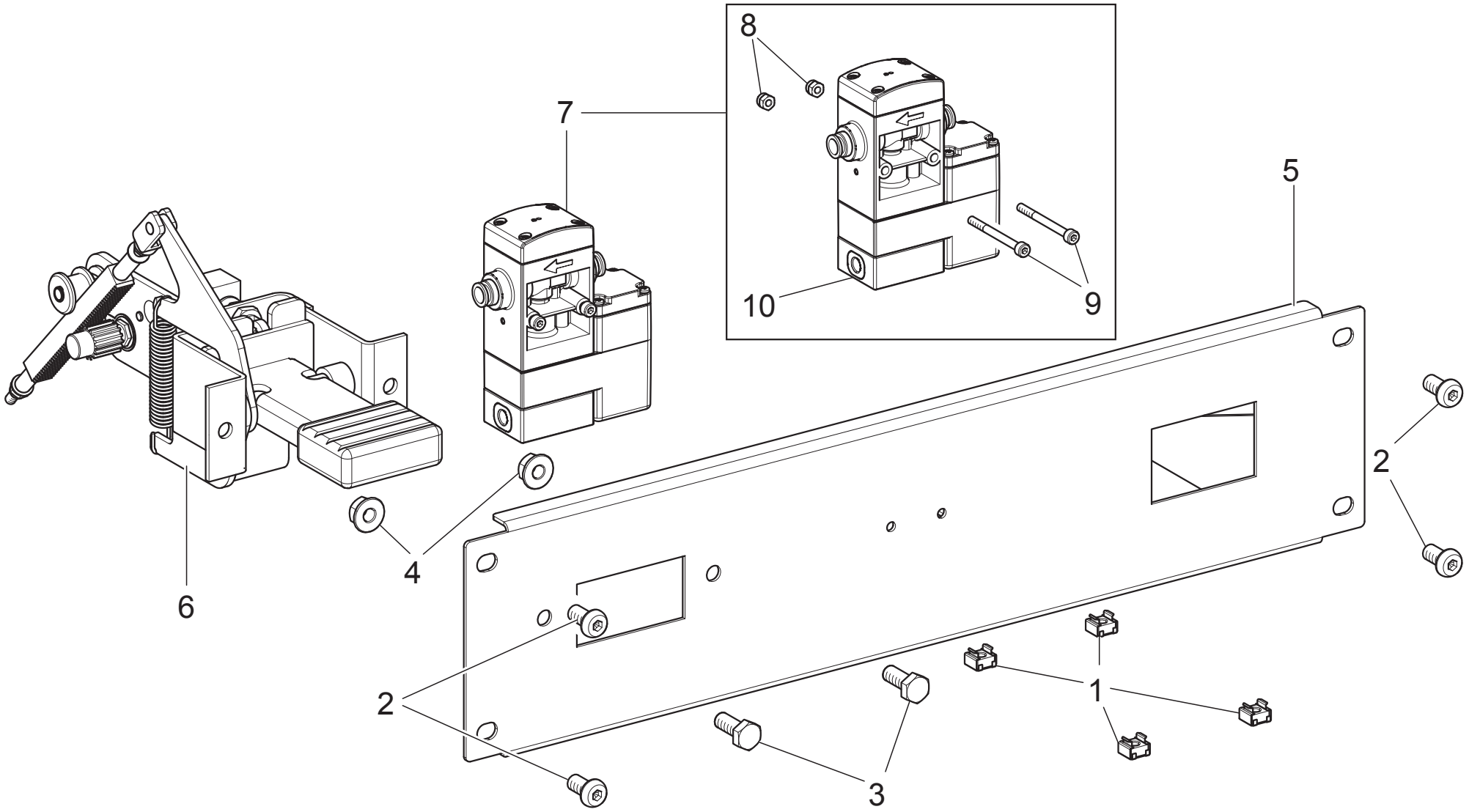
KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•	•	•

Butler
ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

Tavola N°11B - Rev. 0 | **710592040**

GRUPPO AUTOCENTRANTE
SELFCENTERING CHUCK UNIT
AUTOZENTRIERESATZ
GROUPE AUTOCENTREUR
GRUPO AUTOCENTRANTE



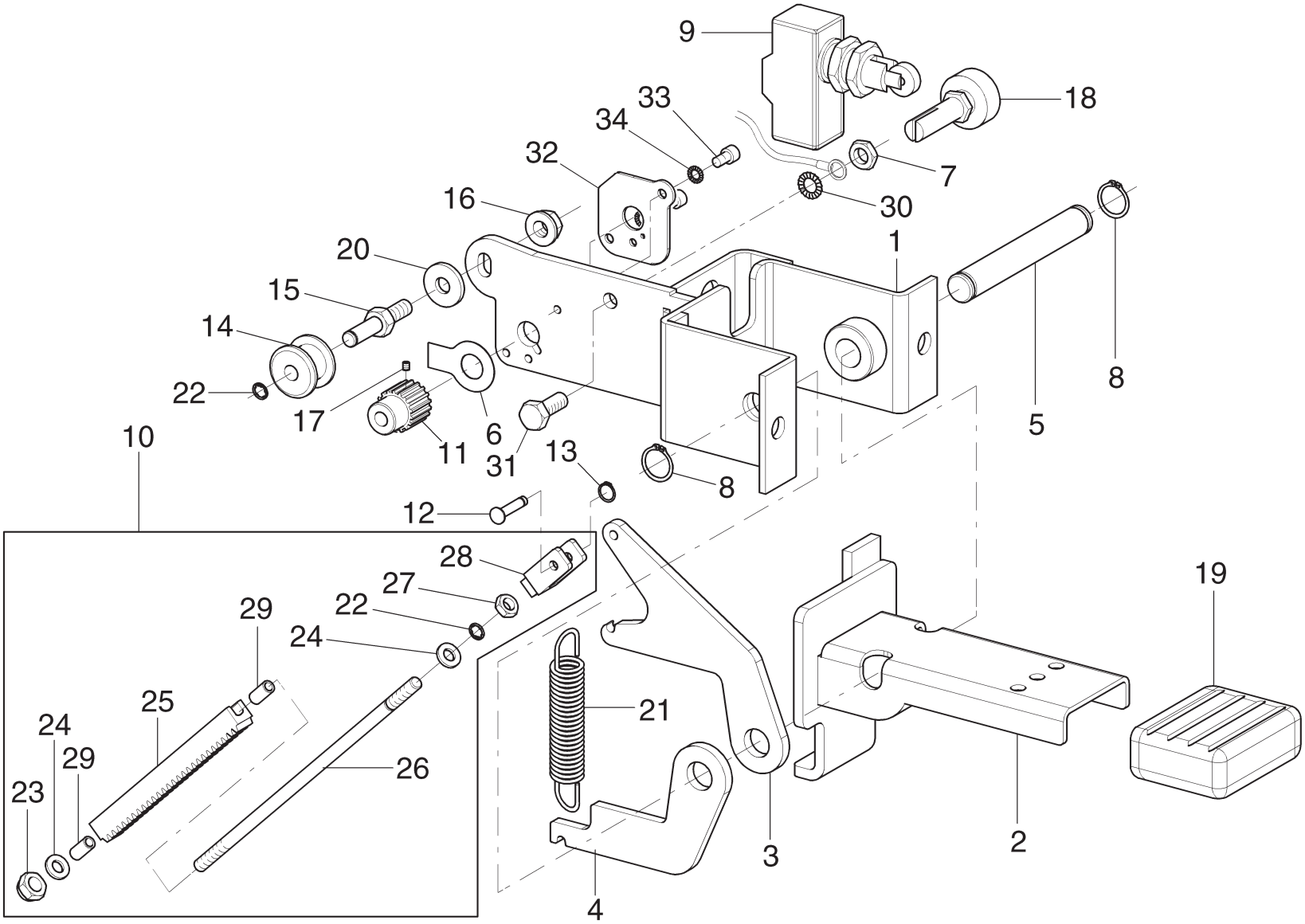
KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•	•	•

Butler
ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

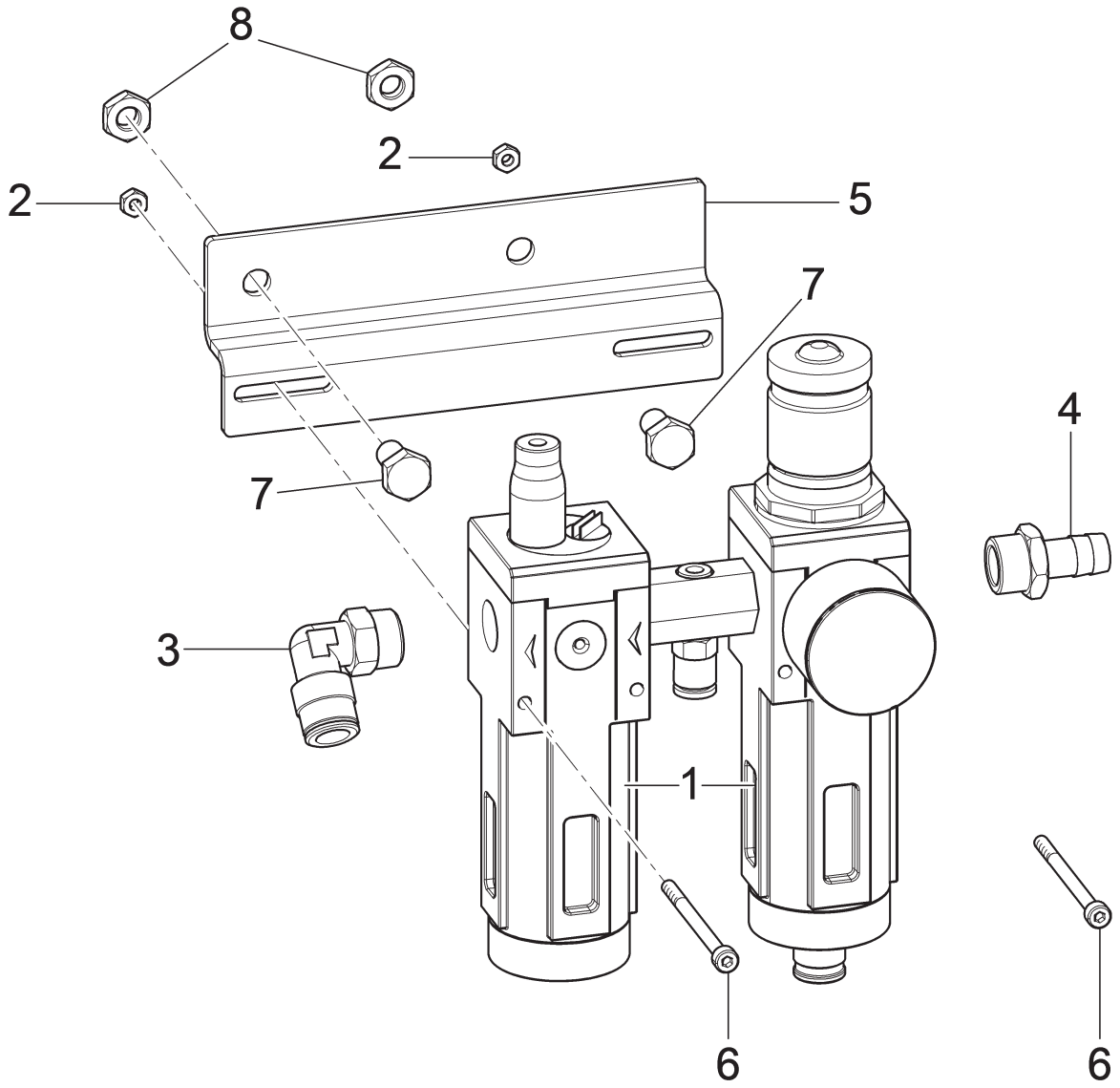
Tavola N°12 - Rev. 2 | **710590061**

GRUPPO CARTER + PEDALIERA
GUARD UNIT + PEDALBOARD
GEHÄUSESATZ + PEDALLEISTE
GROUPE CARTER + PÉDALES DE DIRECTION
GRUPO CÁRTER + PEDALERA



KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•	•	•

Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**	*PEDALIERA MOTORE MOTOR PEDAL BOARD MOTORPEDALERIE PÉDALES DE DIRECTION MOTEUR PEDALERA MOTOR*	***Pag. 22 di 32***
	Tavola N°13 - Rev. 2 / **710190251**		



KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
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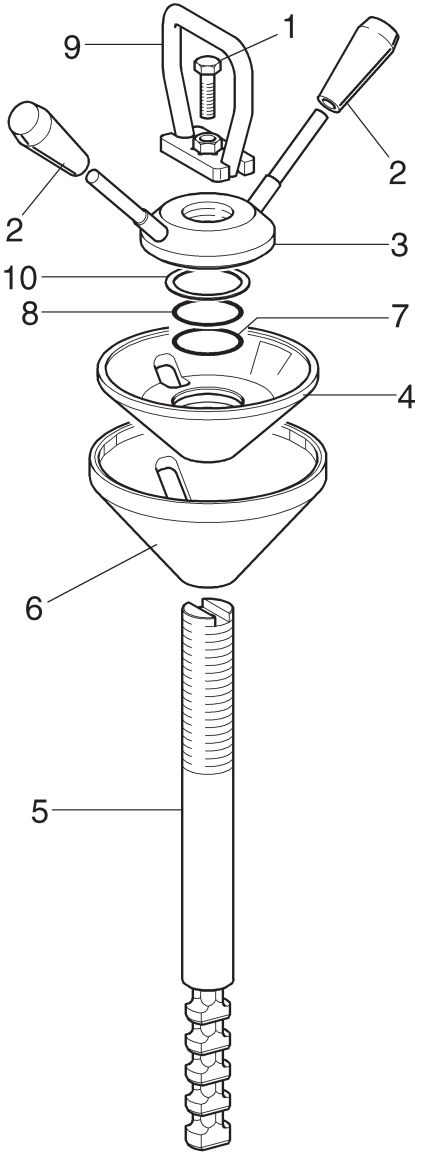
Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**	*GRUPPO TRATTAMENTO ARIA AIR TREATMENT UNIT AUFBEREITUNGLUFTSATZ GROUPE TRAITEMENT AIR GRUPO TRATAMIENTO AIRE*	***Pag. 23 di 32***
	Tavola N°14 - Rev. 3 / **710090920**		



KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
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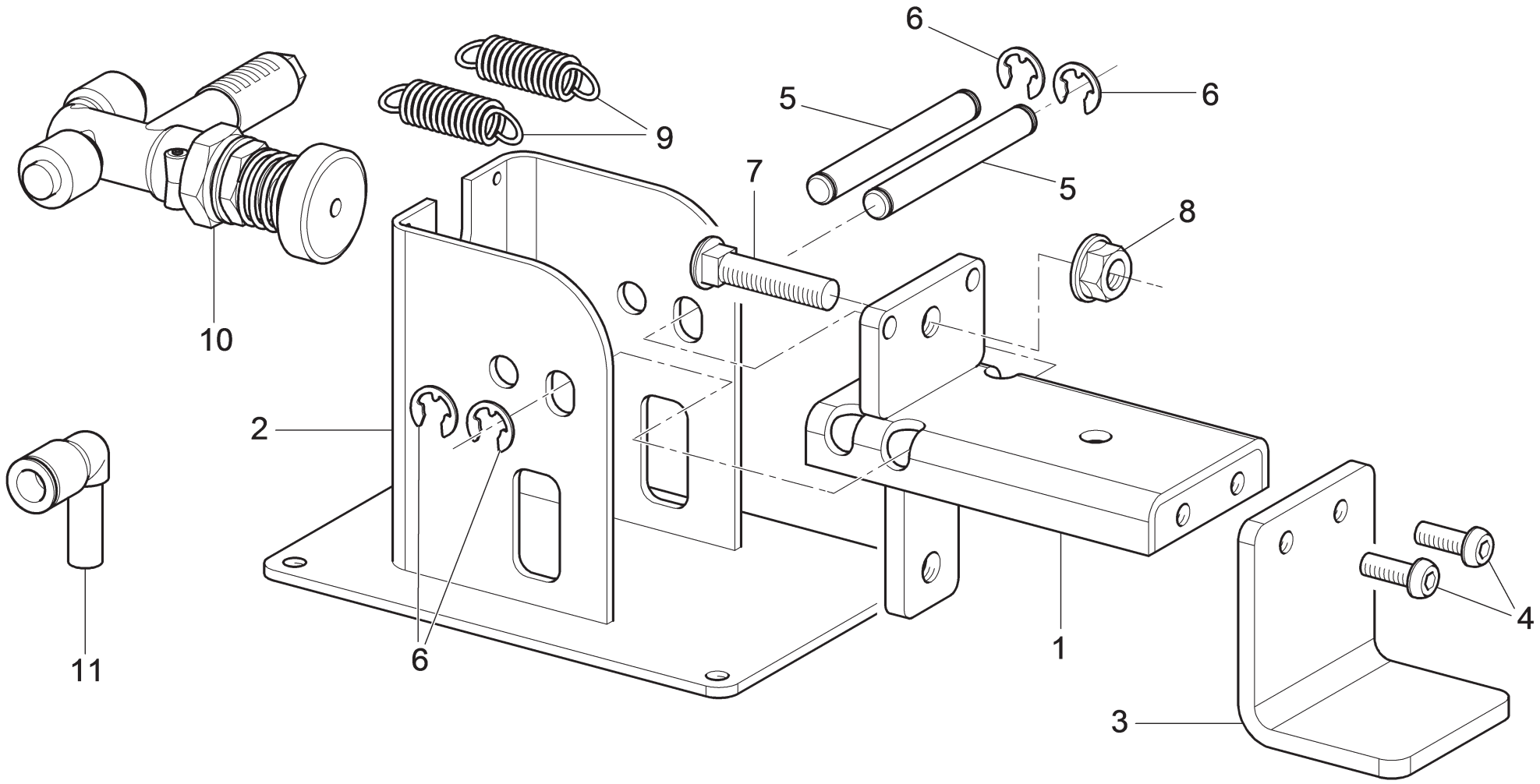
Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**	*ATTACCO RAPIDO QUICK COUPLING SCHNELLANSCHLUSS BRANCHEMENT RAPID CONNEXIÓN RÁPIDA*	***Pag. 24 di 32***
	Tavola N°15 - Rev. 1 / **710090223**		



KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
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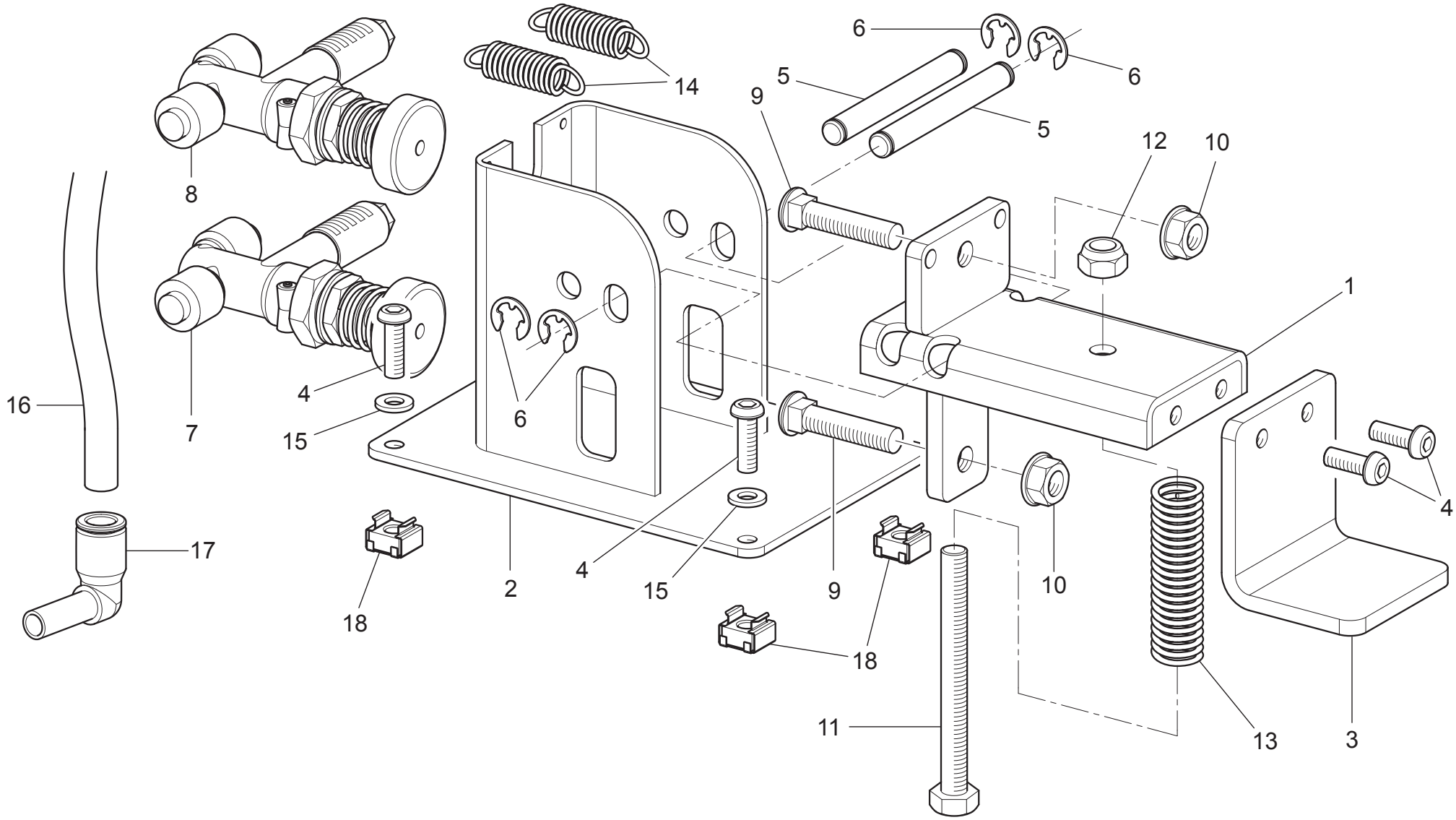
Butler ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

Tavola N°16A - Rev. 2 | **B4127300**

PEDALIERA DI GONFIAGGIO
INFLATION PEDALBOARD
AUFPUMPENPEDALLEISTE
PÉDALES DE DIRECTION DE GONFLAGE
PEDALERA DE INFLADO



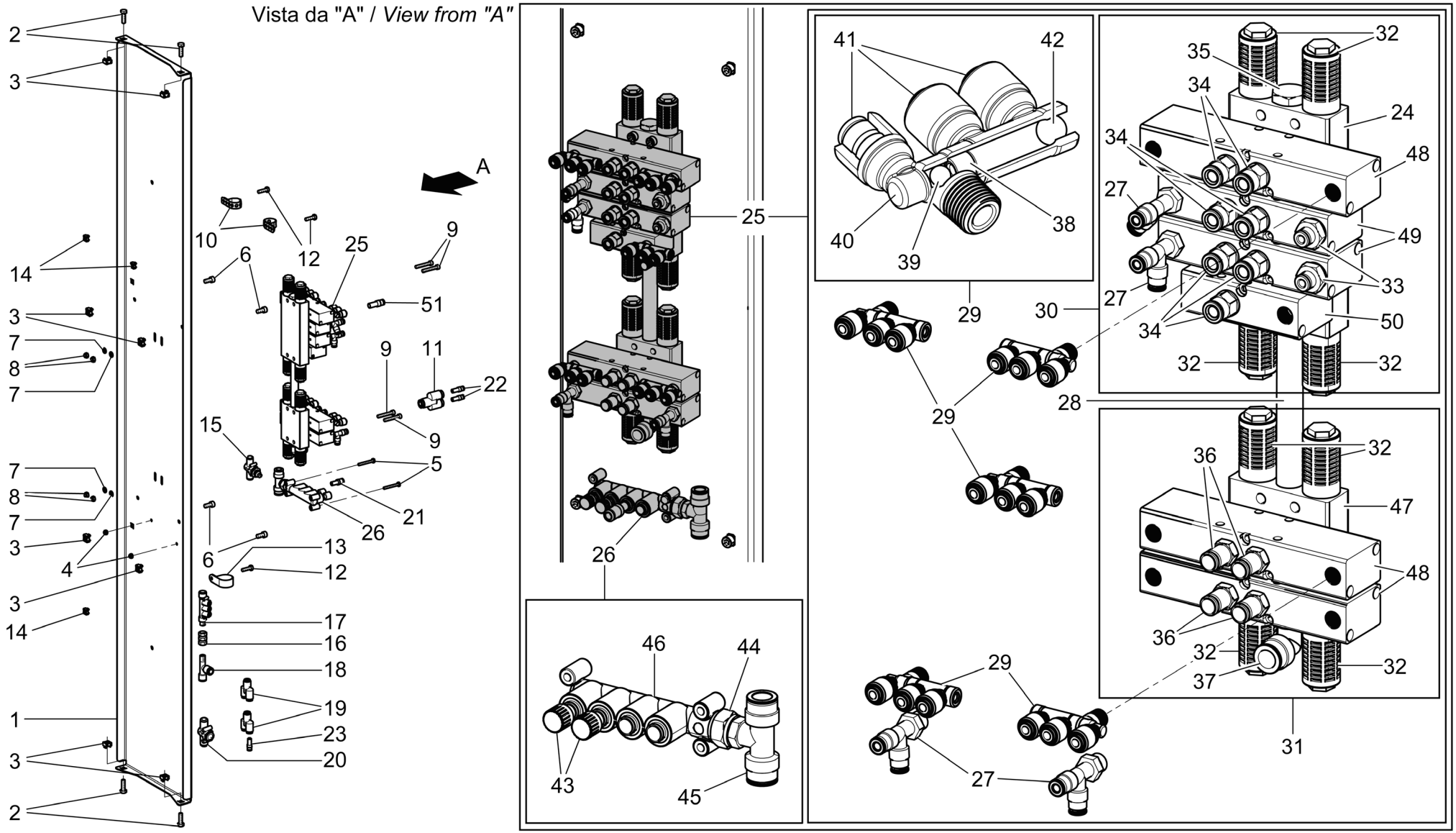
KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
	•		•

Butler ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

Tavola N°16B - Rev. 2 | **140990371**

GRUPPO PEDALIERA GONFIATUBELESS
TUBELESS INFLATION PEDALBOARD
PEDALERIE TUBELESS
PÉDALES DE DIRECTION DE GONFLAGE TUBELESS
PEDALERA DE INFLADO TUBELESS



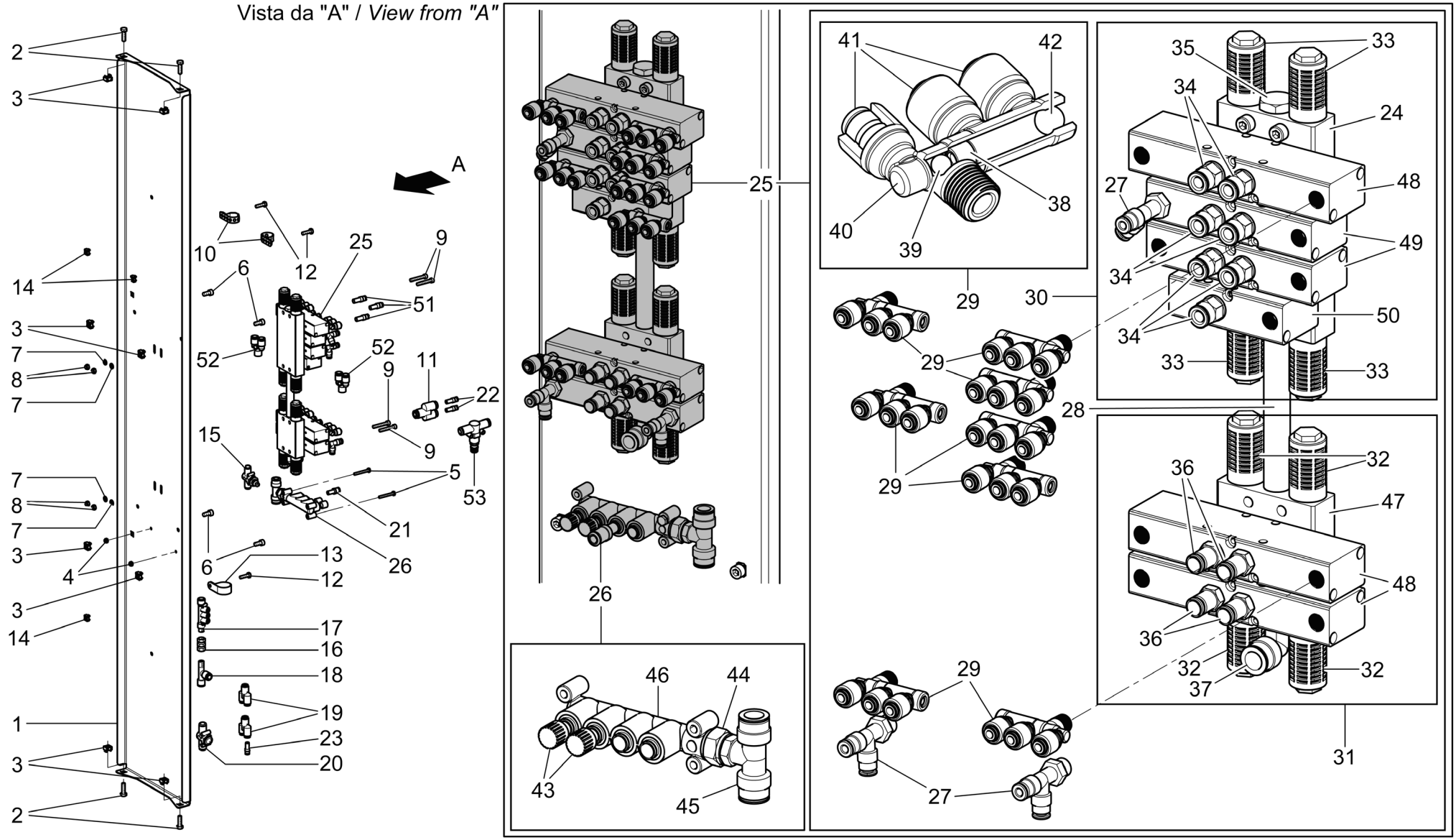
KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
•	•		

Butler
ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

Tavola N°17A - Rev. 3 | **710590620**

GRUPPO CARTER + IMPIANTO PNEUMATICO
GUARD UNIT + PNEUMATIC SYSTEM
GEHÄUSESATZ + PNEUMATISCHERINSTALLATION
GROUPE CARTER + SYSTÈME PNEUMATIQUE
GRUPO CÁRTER + INSTALLACIÓN NEUMÁTICA



KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
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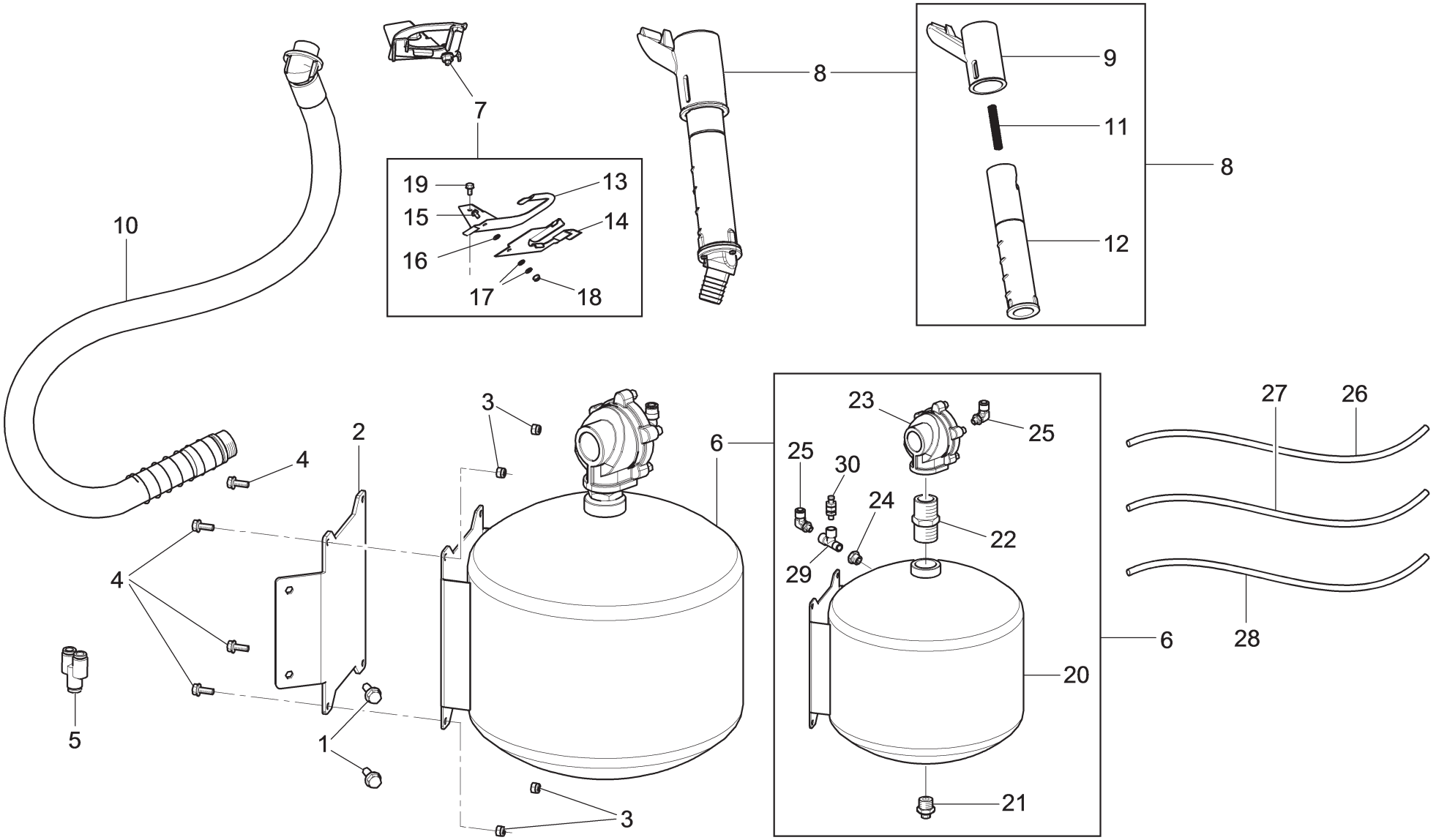
Butler ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

Tavola N°17B - Rev. 1 | **710591790**

GRUPPO CARTER + IMPIANTO PNEUMATICO
GUARD UNIT + PNEUMATIC SYSTEM
GEHÄUSESATZ + PNEUMATISCHERINSTALLATION
GROUPE CARTER + SYSTÈME PNEUMATIQUE
GRUPO CÁRTER + INSTALLACIÓN NEUMÁTICA



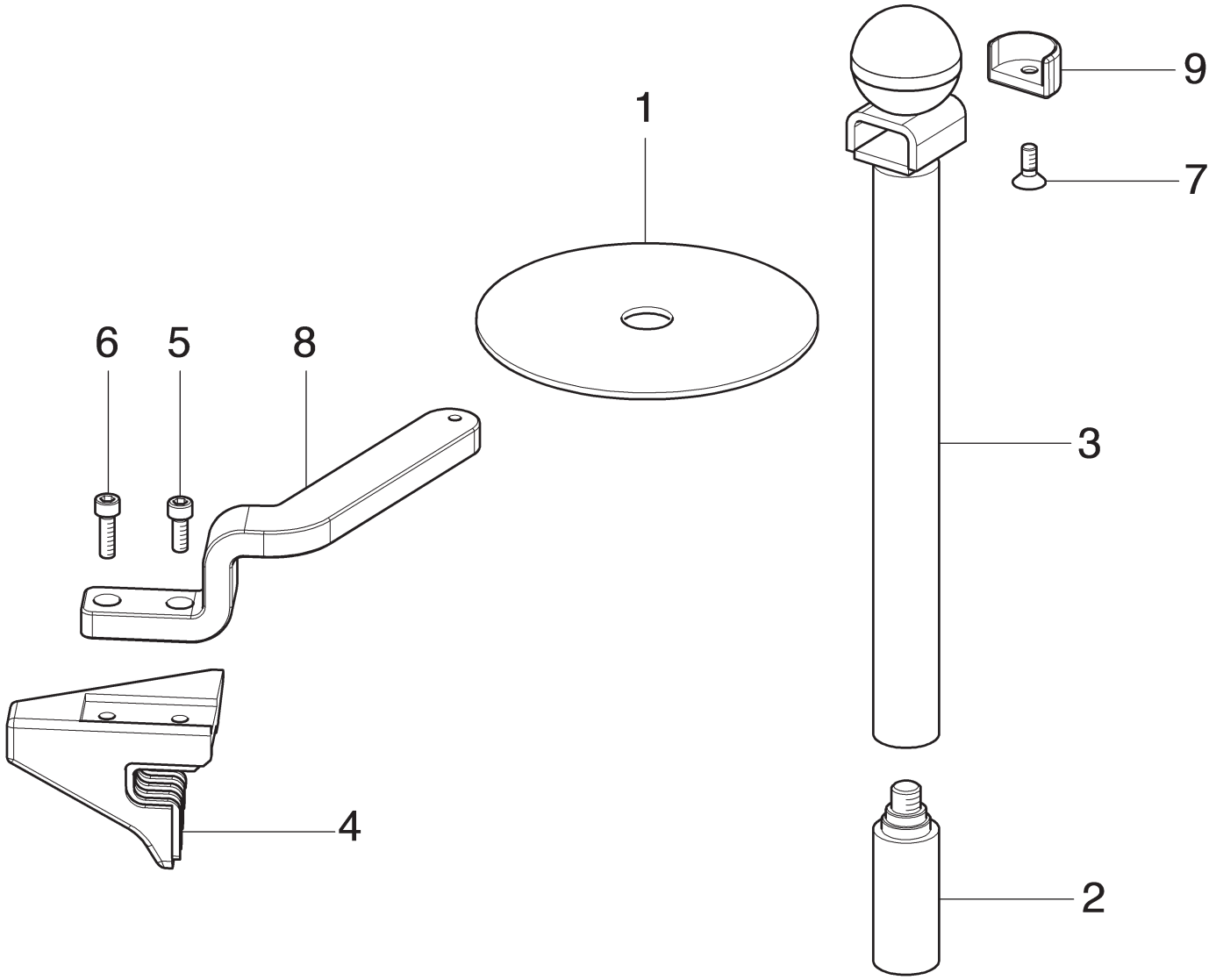
KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
	•		•

Butler ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

Tavola N°18 - Rev. 3 | **710590570**

GRUPPO FI EU KENDO
FI EU KENDO GROUP
SATZ FI EU KENDO
GROUPE FI EU KENDO
GRUPO FI EU KENDO



KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
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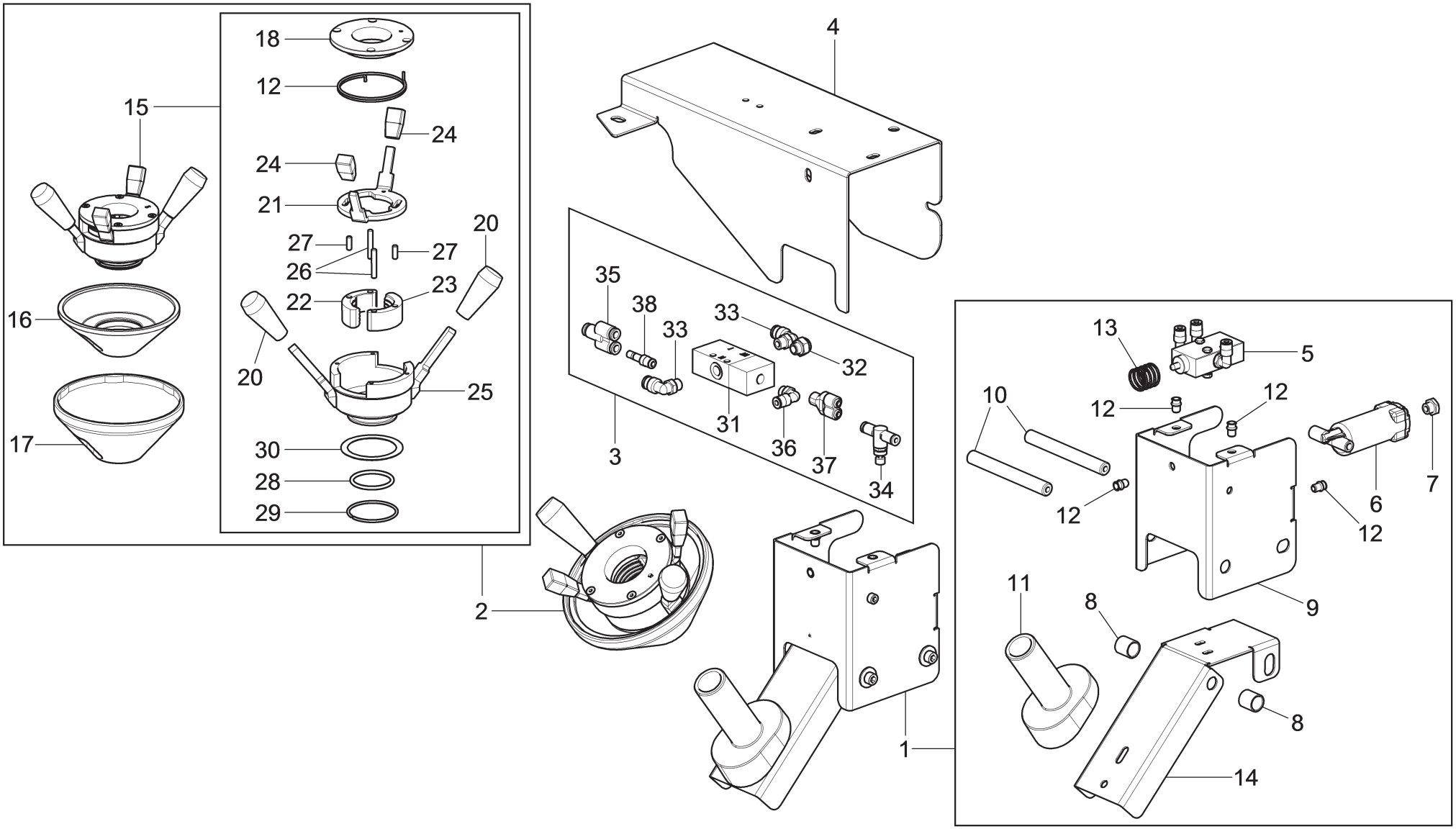
Butler ENGINEERING and MARKETING S.P.A.	**LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE LISTE DES PIECES DETACHEES - LISTA DE PIEZAS**	*TRASCINATORE TRACTION TOOL MITNEHMER ENTRAÎNEMENT JALADOR*	***Pag. 30 di 32***
	Tavola N°19 - Rev. 1 / **710090730**		



KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
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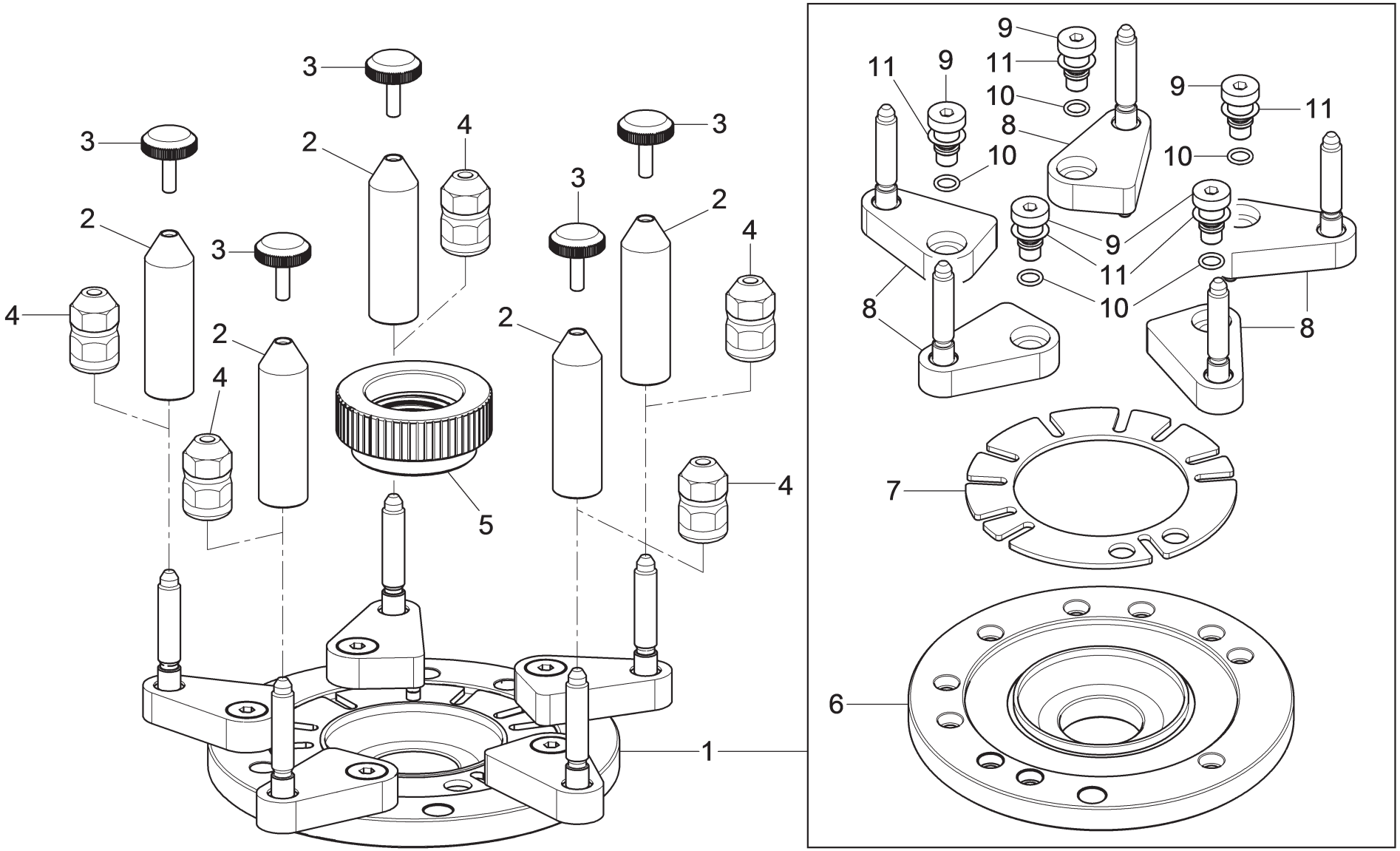
Butler ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

Tavola N°20 - Rev. 0 | **710591980**

GRUPPO ATTIVATORE
ACTIVATOR UNIT
AKTIVATORSATZ
GROUPE ACTIVATEUR
GRUPO ACTIVADOR



KENDO.30LIGHT	KENDO.30LIGHTFI	KENDO.30S	KENDO.30SFI
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Butler ENGINEERING and MARKETING S.P.A.

LISTA DEI COMPONENTI - LIST OF COMPONENTS - TEILELISTE
LISTE DES PIECES DETACHEES - LISTA DE PIEZAS

Tavola N°21 - Rev. 0 | **G1000A150**

FLANGIA UNIVERSALE RUOTE CIECHE
BLIND WHEEL UNIVERSAL FLANGE
BLINDRAD UNIVERSELLER FLANSCH
BRIDE UNIVERSELLE ROUES ORBES
BRIDA UNIVERSAL RUEDAS CIEGAS