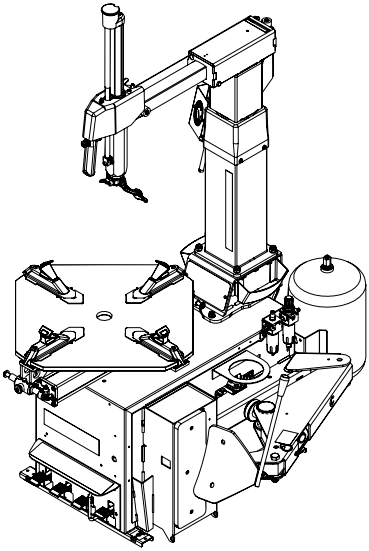
SMONTAGOMME
TYRE CHANGER
DÉMONTE-PNEUS
REIFENMONTIERMASCHINE
DESMONTADORA DE NEUMÁTICOS



The Manufacturer is in no way responsible for the consequences resulting from any incorrect operations carried out by the user.

Thank you for choosing our tyre changer.

Dear Customer,
This tyre changer has been manufactured to provide a safe and reliable service over time. Follow the instructions for use and maintenance provided in this manual.
All those who will use and/or perform maintenance on the tyre changer must be properly trained and must read, understand and follow all warnings and instructions provided in this manual.
This manual should be considered an integral part of the tyre changer and should always remain with it.
However, nothing in this manual, and none of the devices installed on the tyre changer, can replace proper training or ensure its correct operation. A careful risk assessment and preparation of safe working procedures remain necessary.
Always be sure that your Tyre Changer is in excellent working order. In case any malfunction or possible dangerous situation are observed, immediately shut down the Tyre Changer and resolve the situation before you proceed.
For any question related to the correct tyre changer use or maintenance, contact your local official dealer.

USER INFORMATION

User name	
User address	
Model Number	
Serial Number	
Purchasing Date	
Installation Date	
Service and Spare Parts Manager	
Phone Number	
Sales Manager	
Phone Number	

TRAINING CHECK

	Qualified	Rejected
Safety measures		
Warning and precaution stickers	☐	☐
High risk areas and other potential hazards	☐	☐
Operative safety procedures	☐	☐
Maintenance and performance checks		
Head mounting inspection	☐	☐
Adjustment and lubrication	☐	☐
Maintenance, errors and instructions	☐	☐
Clamping		
Steel / alloy rims	☐	☐
Reverse rims	☐	☐
Steel jaw internal/external clamping	☐	☐
Bead breaking		
Standard Wheels	☐	☐
Low profile wheels	☐	☐
Demounting		
Standard wheels with plastic guards for tool head and lever	☐	☐
Proper tool head positioning to avoid damage	☐	☐
Bead lubrication when removing the low profile tyres	☐	☐
Reverse rims	☐	☐
Mounting		
Standard Wheels	☐	☐
Mounting of rigid low profile tyres	☐	☐
Tilted channel wheels	☐	☐
Bead lubrication for a correct mounting	☐	☐

	Qualified	Rejected
Inflating procedure		
Safety measures	☐	☐
Lubrication and valve insert removal	☐	☐
Bead sealing and positioning	☐	☐
Personnel and training dates		

1. INTRODUCTION / PURPOSE OF THE USE AND MAINTENANCE MANUAL

1.1. PURPOSE OF THE DOCUMENT

This Use and Maintenance Manual is the reference document, prepared by the Manufacturer of the machine, addressed to the operators and specialised personnel who will come into contact with it throughout its life cycle.
The purpose of the document is to provide information for the correct use of the machine, from installation to disposal, drawing attention to the dangers that may arise from incorrect use and taking into account the reasonably foreseeable improper behaviour of the operator.

1.2. RECIPIENTS

The manual is intended for **the operators in charge of using and managing the machine in all its technical life phases.** It covers the topics for a correct use of the machine, in order to preserve its functional and qualitative features over time. It also contains all information and warnings for a totally safe and correct use.
The manual, as well as the certificate of conformity, is an integral part of the machine and must remain with it in case it is moved or resold. The user must keep this documentation intact, to allow its consultation throughout the machine life.

1.3. SUPPLY AND STORAGE

The manual is supplied in **paper and electronic format.**
All additional documentation (pneumatic and wiring diagrams, manuals of sub-suppliers) are supplied as attachments to this manual.
Keep this manual together with the machine, so that is can be easily consulted by the operator.
The manual is an integral part of the machine for safety purposes, therefore:

- **Must be kept intact** (in all its parts). If it is lost or damaged, it is necessary to request a copy immediately.
- **It must remain with the machine until scrapping** (even if the machine is moved, sold, rented, hired, etc.).

The attached manuals are an integral part of this documentation, and the same recommendations/provisions apply.

NOTICE
This manual is an integral part of the machine for safety purposes and must always remain with it.

1.4. UPDATES

If the machine in question undergoes changes for which the **Manufacturer** considers it necessary to update the technical documentation, the Manufacturer will inform the Customer of such changes implemented and will provide an updated copy of the sections affected by such changes. The Customer will have the responsibility to eliminate the outdated parts.

1.5. LANGUAGE

The original manual has been written in **Italian language.**
Any translations must be carried out starting from the original instructions.
The Manufacturer is responsible for the information contained in the original instructions. Translations into different languages cannot be fully checked, therefore, if an inconsistency is detected, refer to the text in the original language or contact our Technical Documentation Department.

1.6. SYMBOLS USED IN THIS MANUAL

Symbols are used throughout the manual to highlight very important information. Below are the symbols used:

Symbol	Type	Description
DANGER	DANGER	It indicates an imminent dangerous situation that, if not avoided, could lead to serious injury or death.
WARNING	WARNING	It indicates a potentially dangerous situation that, if not avoided, could lead to serious injury or death.
ATTENTION	CAUTION	It indicates a potentially dangerous situation that, if not avoided, could cause slight or mild injuries.
NOTICE	NOTICE	It indicates a potentially hazardous situation which, if not avoided, may result in material damage.

1.7. GLOSSARY

The manual contains technical terminology or terms with different meaning from the common one. Below is the explanation of the abbreviations and terms used:

Term	Description
Wheel with tyre	A wheel with tyre consists of: tyre, rim, inner tube (only for tube-type tyres), pressurised air. It must: bear the load, ensure transmission of driving power, steer the vehicle, contribute to road holding and braking, contribute to vehicle suspension.
Tyre	It is the main part of the unit that is in contact with the road and is therefore designed to support the internal air pressure and all other stress arising from use.
Tread	Part in contact with the road while the tyre is rolling. It comprises a rubber compound and a "pattern" suitable for ensuring good resistance to abrasion and good grip in dry and wet conditions, as well as quiet operating conditions.
Carcass	This is the resistant structure and comprises one or more layers of rubber plies. The way the plies comprising the casing are arranged give the structure its name. The following structures are possible: ▪ **Conventional:** the plies are inclined and arranged so that the strands comprising a ply overlap with those of the adjacent ply. The tread, which is the part of the tyre in contact with the ground, is part of the sidewalls and so during rolling, sidewall flexure is transmitted to the tread. ▪ **Radial:** the casing consists of one or more plies with the cords in a radial direction. A radial casing in itself is quite unstable. To make it stable and prevent incorrect tread movement in the area of contact with the ground, the casing and the shim under the tread are reinforced with an annular structure, usually called a belt. The tread and sidewall work with different, independent rigidities, so during rolling, sidewall flexure is not transmitted to the tread.
Edge (or bracing)	Metal or textile fabric insert, in the area of the outer bead part. It is used to protect the casing ply from rubbing against the rim.

Term	Description
Side ring	Metal ring with various steel wires. The casing plies are secured to the side ring.
Belt	Non-flexible circumferential structure comprising cross-plies at very low angles, positioned below the tread, to stabilise the casing in the footprint area.
Centring band	Small mark that indicates the circumference of the upper part of the bead and used as a reference to control correct tyre centring on the rim after mounting.
Protective band	Circumferential marking in the area of the sidewall which is more exposed to accidental rubbing.
Sidewall	Area between the shoulder and the centring band. It consists of a more or less thin layer of rubber, which protects the casing plies from lateral impact.
Liner	Vulcanised, compound layer, impermeable to air, inside tubeless tyres.
Filling	Generally triangular rubber profile, above the side ring; it provides rigidity for the bead and gradually offsets the abrupt uneven thickness caused by the side ring.
Flap	This is the part of the casing ply around the side ring and placed against the casing, to secure the ply and prevent it from slipping.
Foot	The innermost layer of the tread in contact with the belt, or if the latter is not present (conventional tyres) with the last casing ply.
Shoulder	The most external part of the tread, located between the corner and the start of the sidewall.
Bead	This is the part that joins the tyre to the rim.
Tube-type tyres	Tyres with inner tube able to contain pressurised air for a long period of time.

Term	Description
Tubeless tyres	Tyres without inner tube. They consist of a tyre with inner sidewall lined with a thin layer of special impermeable rubber, called a liner. This liner helps to maintain air pressure in the casing. This type of tyres must be mounted on specific rims, on which the valve is fixed directly.
Rim (Wheel)	It is the rigid metal part connecting the vehicle hub to the tyre, on a fixed but non-permanent basis.
Rim profile	Shape of the section in contact with the tyre. It is made with different geometric shapes.
Inner tube	Closed ring-like rubber structure with a valve, which contains pressurised air.
Valve	Mechanical device to inflate/deflate the tyre and maintain air pressure inside the air chamber.
Tubeless tyre inflation device	An inflation system which simplifies inflating tubeless tyres.
Bead insertion	Operation which takes place during inflation and ensures perfect centring between the bead and the rim edge.
Bead pressing clamp	Tool intended for use when mounting the top bead. It is positioned so that it engages the shoulder of the rim and maintains the upper tyre bead inside the well. Generally used for mounting low profile tyres
Discharge regulator	Union allowing regulation of the air flow.
Bead breaking	Operation used to detach the bead from the rim edge.

2. IDENTIFICATION OF THE MACHINE

2.1. IDENTIFICATION OF THE MANUFACTURER

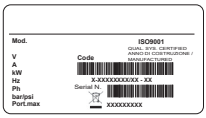
Refer to the data on the last page of this manual.

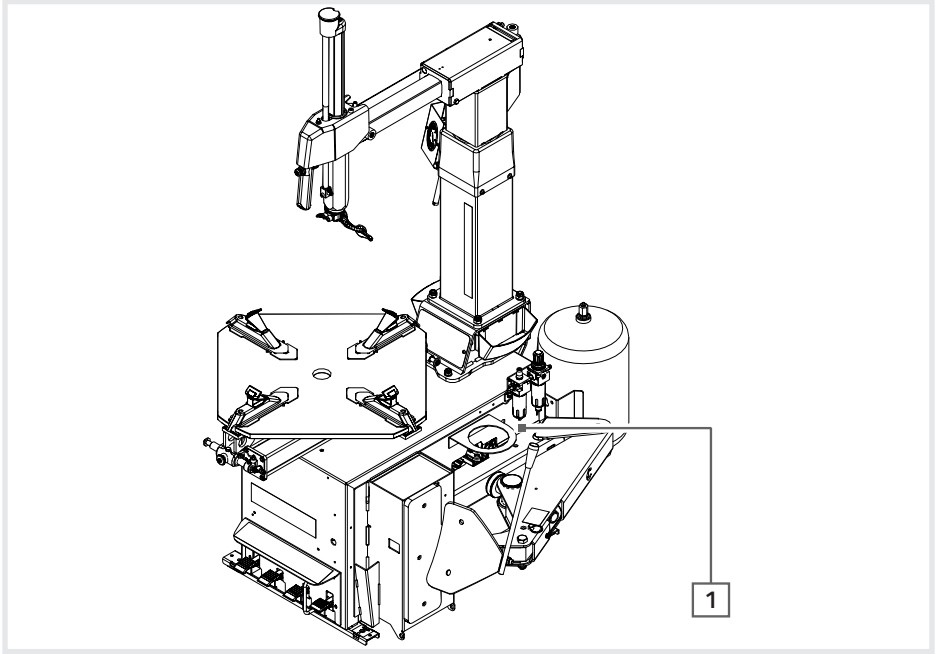
2.2. IDENTIFICATION OF THE MACHINE

Refer to the data on the last page of this manual.

2.3. IDENTIFICATION PLATES / LABELS

The following plates and/or labels are installed on the machine:

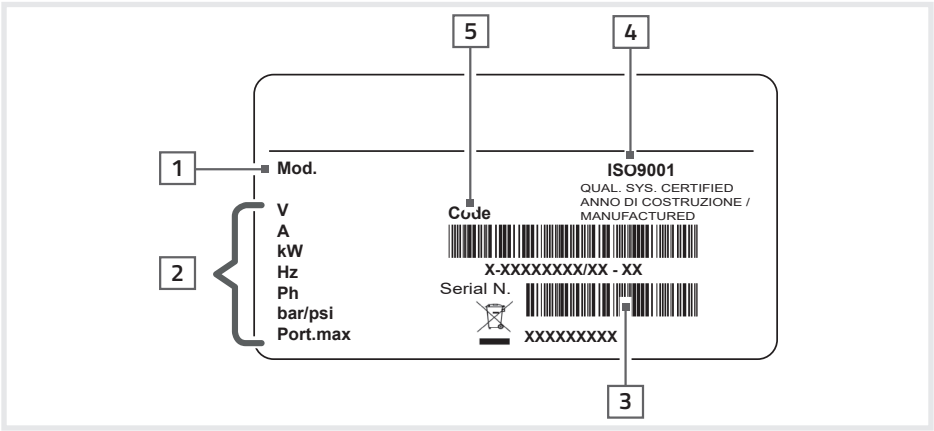
Pos.	Element	Code	Plate / label image
1	Identification plate	-	



2.3.1. IDENTIFICATION PLATE

The **identification plate** contains the machine identification data and some technical data:

Pos.	Code	Element
1	**Mod.**	Machine model
2	**V**	Power supply voltage
	A	Rated absorbed current
	kW	Rated absorbed power
	Hz	Frequency
	Ph	Number of phases
	bar	Operating pressure
	Max. Load capacity	Maximum capacity
3	**Serial Number**	Machine serial number
4	**ISO 9001**	Quality System Certification
5	**Code**	Machine code (barcode)



2.4. WARRANTY

The complete warranty terms are contained in the sales contract.

The warranty is subject to the following general conditions:

- The machine must be used within the limits set out in the contract and specified in the technical documentation.
- Maintenance must be performed according to the times and methods provided for in the manual, using original spare parts of the Manufacturer and entrusting the operations to qualified personnel.

The warranty **is void** in case of:

- Failure to comply with the safety regulations.
- Removal or tampering with the control and safety devices.
- Improper use of the machine.
- Use of the machine by untrained and/or unauthorised personnel, or failure to respect the responsibilities of the various operators, as described in the manual.
- Changes or repairs carried out by the user without written authorisation of the Manufacturer.
- Partial or total failure to comply with the instructions.
- Supply defects.
- Lack of maintenance.
- Use of non-original spare parts.
- Exceptional events such as flooding, fire (if not caused by the machines).

2.5. PERSONNEL TRAINING

1. Employers must evaluate the ability of their employees to carry out these tasks and work on the wheels in absolute safety and must provide additional training as required to make sure that all employees maintain their skills.
2. Employers are responsible for providing a training program for all employees who work on the wheels concerning the hazards deriving from the maintenance operations to be carried out and the safety procedures to be observed. Service or maintenance refer to mounting and demounting wheels and all the correlated activities, such as deflation, installation, removal and handling.
   - Employers are required to make sure that operators work on the wheels exclusively after they have received suitable training regarding the correct maintenance procedures specific for the type of wheel being serviced and the operative safety procedures.
   - Information to be used for the training program includes, as a minimum, the information contained in this manual.
3. Employers are required to make sure that every employee demonstrates to have and maintains the ability to work on the wheels safely, including the performance of the following activities:
   - Demounting of tyres (including deflation).
   - Inspection and identification of the rim wheel components.
   - Tyre mounting.
   - Use of any restraint device, cage, barrier, or other systems.
   - Handling of wheels with rims.
   - Tyre inflation inside inflation cages.
   - Wheel installation and removal.

3. SAFETY DEVICES

3.1. GENERAL SAFETY WARNINGS

⚠ WARNING

Carefully read, understand and follow the warnings and instructions given in this manual. This manual is an integral part of the product. For future reference, store it together with the machine in a safe place.

⚠ CAUTION

Do not operate the machine until you have read and understood all the hazard/ warning notices described in this manual.

⚠ WARNING

During transport, installation, use and maintenance operations, always tie back long hair and do not wear loose clothing, ties, necklaces, wristwatches or any other items that may get caught up in the moving parts.

⚠ WARNING

It is forbidden to remove plates and pictograms from the machine. Replace those illegible or missing.

⚠ WARNING

Unauthorised changes or modifications to the machine are forbidden. The Manufacturer shall not be liable for any damage or accident resulting from any unauthorised changes. In particular, tampering with or removing the safety devices is a breach of the regulations relating to Safety at work.

⚠ WARNING

Before carrying out adjustments on the machine:

- Disconnect the plug from the power supply
- Act on the shut-off valve to disconnect the pneumatic supply.

WARNING

Do not remove or modify any parts of the machine.

WARNING

The machine start-up while under the influence of alcohol, medicines and/or drugs is forbidden. If you are taking prescription or non-prescription medicines, contact a physician to be aware of the side effects that they might have on the ability to operate the machine safely.

HAZARD

A bursting tyre can cause projections of its parts in surrounding areas with a force sufficient to cause serious injury or death.
Do not mount the tyre if its dimensions (indicated on the sidewall) do not correspond exactly to the rim dimensions (printed inside the rim) or if the rim or the tyre is defective or damaged. During inflation, keep outside the vertical cylinder area occupied by the wheel.

- While operating the machine, always use OSHA, CE approved and authorised personal protective equipment (PPE) or equipment with equivalent certification. Consult your supervisor for additional instructions.
- Wear non-slip protective footwear while using the machine.

WARNING

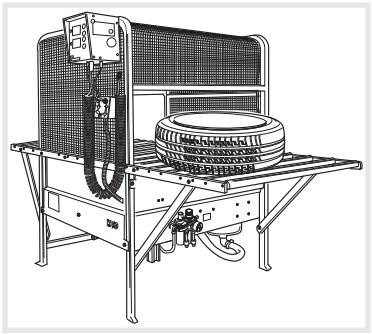
Maintenance and repair operations must be carried out by personnel trained and authorised by the Manufacturer.

WARNING

Do not exceed the inflation pressure for the tyre indicated by the Manufacturer on the side of the tyre itself. Carefully check that the air hose is well inserted in the valve.

HAZARD

If the maximum pressure indicated by the tyre Manufacturer must be exceeded to insert the bead of the tyre, remove the wheel from the tyre changer and position it inside the inflation cage.



3.2. NOISE

The machine is designed to reduce the emission of airborne noise at the source. Below are the measurements carried out:

TWO-DIGIT NOISE EMISSION DECLARED VALUES in compliance with EN ISO 4871 standard	
Machine loaded with wheel and tyre*	
A-weighted measured LpA (ref. 20µPa) of the sound pressure emission level in the operator position, in decibels	75.9 dBA
KpA uncertainty in decibels	2.5 dBA
*** values determined according to the noise test code specified in Annex E of FprEN 17347:2020, referring to the basic standard EN ISO 11201:2010 (level 2).**	

The noise values indicated are emission levels and do not necessarily represent safe operating levels. Although emission levels and exposure levels are connected, this relation cannot be used as a safe parameter to determine whether or not further precautions are necessary. The noise level to which the operator is exposed to depends on a number of factors, such as duration of exposure, characteristics of the workplace, other sources of noise etc. Permissible noise exposure levels may also vary from country to country. In all cases, this information will enable machine users to better assess the danger and risks involved.

3.3. VIBRATIONS

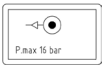
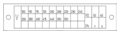
The machine does not transmit vibrations to the ground that may impair the stability or precision of any equipment located in the surrounding areas.

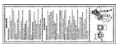
⚠ WARNING

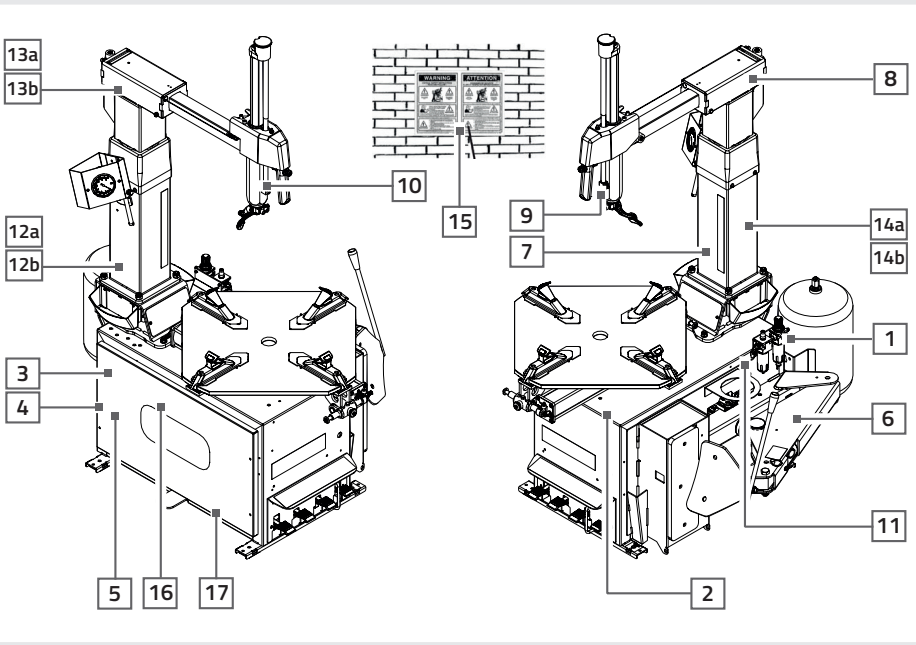
Excessive vibration can only be caused by a mechanical failure, which must be immediately reported and repaired, so as not to affect the safety of the machine and the operators.

3.4. SAFETY PICTOGRAMS APPLIED TO THE MACHINE

The following table shows the safety stickers and plates applied to the machine. For their positioning, refer to the image below.

Pos.	Code	Pictogram	Description
1	446429		Input pressure max. 16 bar
2	418135		Motor rotation direction
3	425211		Electric hazard
4	446388		Power supply nameplate
5	446598		Disconnect the power supply before opening the electric panel
6	446431		Bead breaker risk of crushing
7	446433		Turntable risk of crushing
8	000102900		Pole rotation hazard
9	446435		Tool head risk of crushing
10	462081		Hand crushing hazard
11	446442		Pressurised tank hazard
12a	461931A		Inflation danger warnings
12b	462778		Inflation danger warnings **Note:** for the US market, only

Pos.	Code	Pictogram	Description
13a	432740		Explosion hazard warnings **Note:** for the US market, only
13b	4-141768		Explosion hazard warnings **Note:** for the Canadian market, only
14a	4-113355		Filter maintenance warnings **Note:** for the US market, only
14b	450022		Filter maintenance warnings **Note:** for the Canadian market, only
15	450005		Safety measures **Note:** for the US market, only
16	4-121505A		Explosion hazard warnings **Note:** for the Canadian market, only
17	425083		Grounding **Note:** positioned inside the frame at the bottom



3.5. RESIDUAL RISKS

This machine has been designed so as to ensure the essential safety requirements for the operator. Safety has been integrated as far as possible into the design and manufacturing of the machine, but there are still risks against which the operators must be protected, in particular during:

- Transport and installation
- Normal operation
- Adjustment and fine tuning
- Maintenance and cleaning
- Demounting and disposal

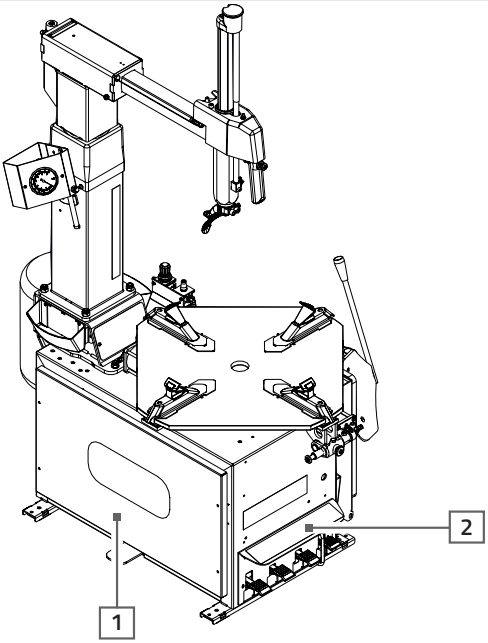
A description of the risk and of the area or machine part posing such residual risk is given for every residual risk (unless the risk applies to the entire machine). Procedural information on how to avoid the risk and on the correct use of personal protective equipment provided by the Manufacturer is also available.

Residual risk	Description and procedural information
Risk of crushing	The risk of crushing due to the presence of moving parts persists. To reduce risk: ▪ Unauthorised people must be kept out of the work area ▪ Keep your hands and other body parts away from moving parts.
Electric hazard	The risk of contact with live parts in case of motor insulation failure or cable sheath breakage persists. To reduce risk: ▪ Use PPE: gloves, safety shoes. ▪ Follow the instructions contained in this manual. **Maintenance operations must be carried out by authorised and trained personnel only.**
Risk of eye injuries	There is still a residual risk of eye injury during bead insertion and inflation. To reduce risk: ▪ Remove any debris from the tyres. ▪ Wear PPE: protective goggles with OSHA or CE approval, or other certified work equipment.

3.6. SAFETY DEVICES

The machine is equipped with devices that ensure the operator's safety.

Pos.	Device	Description
1	**Side panel**	It prevents access to the internal moving parts and to the electric system. It is located on machine side.
2	**Pedal protection casing**	It prevents unintentionally pressing one of the pedals.



4. MACHINE OVERVIEW

4.1. DESCRIPTION OF THE MACHINE

The machine is an electro-pneumatically operated tyre changer. It must be used to demount and mount vehicle and motorcycle tyres from/on rims.

It is available in:

- Standard version
- Version with external air tank

The machine operates with the wheel in a vertical position for bead breaking and in a horizontal position for mounting and demounting tyres. All machine movements are controlled by the operator by means of pedal controls.

4.2. INTENDED USE

The machine described in this manual is intended for professional use for:

Operation	Permitted	Not Permitted
MOUNTING, DEMOUNTING and INFLATION of:	Tyres for vehicles and motorcycles with a maximum external Ø of 40.5" and a maximum width of 14".	Tyres for: ▪ Trucks ▪ Buses ▪ Tractors ▪ Earth-moving vehicles.

For tyre mounting and demounting, use the tools supplied with the machine.

Any other use is improper and may cause accidents.

⚠ WARNING

Any use other than those described in this manual is to be considered improper.

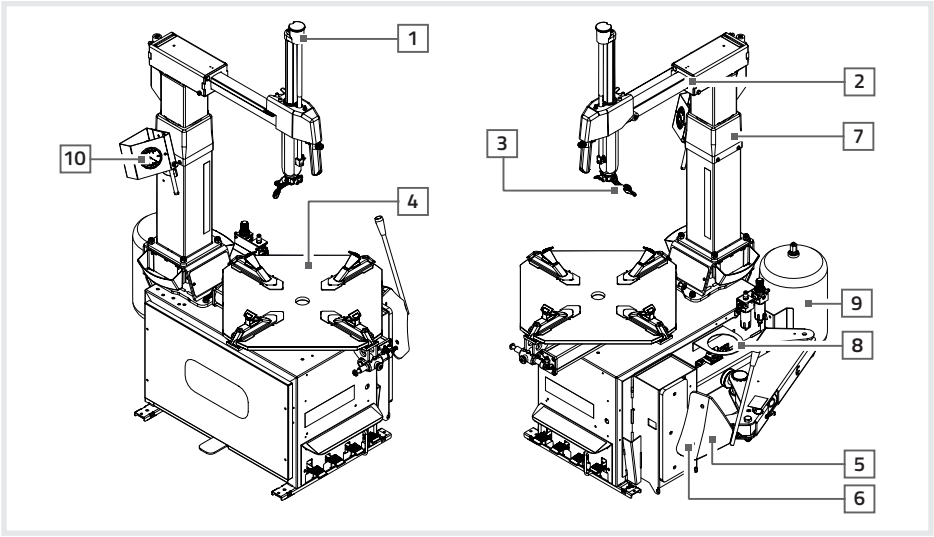
⚠ WARNING

The use of equipment and accessories not manufactured by the Manufacturer is not permitted.

4.3. MAIN COMPONENTS

The machine consists of the following essential parts:

Pos.	Component	Description
1	**Vertical arm**	It allows positioning the mounting/demounting device.
2	**Horizontal arm**	It moves the mounting/demounting device and the vertical arm away from the turntable when removing or replacing tyres or rims.
3	**Mounting/demounting device**	It allows mounting/demounting the tyre on/from rim.
4	**Turntable**	Turntable for wheel clamping.
5	**Bead breaker shoe**	It allows detaching the beads from the rim.
6	**Shoe guard**	It protects the bead breaking shoe against contact with the rim during bead breaking.
7	**Rotary movable pole**	It allows the vertical and horizontal arm to be moved away from or closer to the turntable. **Note:** rotation can be to the right or left depending on the version purchased.
8	**Lubricant container**	
9	**Air tank**	Air storage tank for the operation of the inflation jets. **Note**: only in the version with external air tank
10	**Pressure gauge**	It allows reading the tyre pressure. **Note**: only in the version with external air tank



4.4. SUPPLIED ACCESSORIES

The machine features the accessories envisaged by the relevant configuration.

4.5. OPTIONAL ACCESSORIES

The machine can be equipped with optional accessories. Refer to the accessories catalogue.

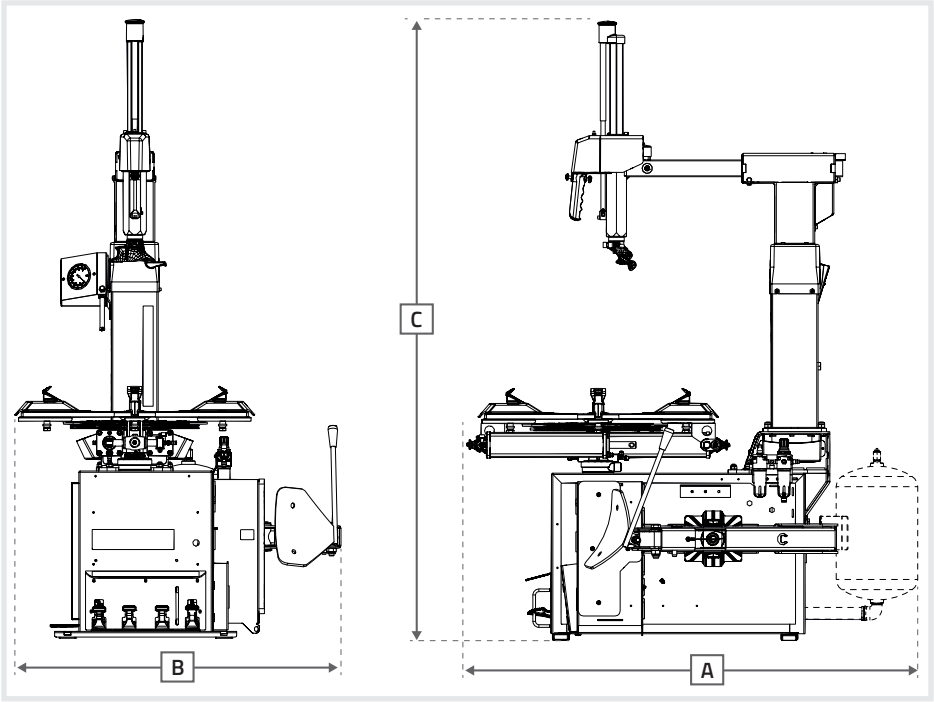
4.6. TECHNICAL DATA

General data	
Turntable clamping capacity	**10" - 24"** Open configuration: ▪ From the inside = 13" - 23" ▪ From the outside = 10" - 20" Closed configuration: ▪ From the inside = min. 17" ▪ From the outside = 14" - 24"
Bead breaking force	15000 N (at 10 bar)
Bead breaker opening	380 mm
Maximum rim width	14"
Max. tyre diameter	1032 mm (40.5")
Operating pressure	10 bar
Weight (Standard version)	275 kg
Weight (Version with external air tank)	290 kg

Power supply values				
Motor rating	**kW**	**Number of rpm**	**Torque Nm**	**Weight of electric part Kg**
400Volt/3ph 50Hz	0.75	8.5	1200	11.5
200/230Volt/3ph 60Hz	0.75	8.5	1200	11.5
200/230Volt/3ph 50Hz	0.75	8.5	1200	11.5
200/230Volt/1ph 50Hz	0.75	8.5	800	11.5
200/230Volt/1ph 60Hz	0.75	8.5	800	11.5
115Volt/1ph 50/60Hz	0.55	11	950	10
115Volt/1ph 60Hz	0.75	8.5	800	11.5
200/230Volt/1ph 50/60Hz DV	0.75	6-15	1200	10.2
115Volt/1ph 50/60Hz DV	0.75	6-15	1200	10.2
Air motor	/	6.5	800	/

4.7. OVERALL DIMENSIONS

Overall dimensions		
A	Length	▪ Standard version: 1200 mm ▪ Version with external air tank: 1500 mm
B	Width	1650 mm
C	Height	▪ 2050 mm ▪ 12V version: 1940 mm

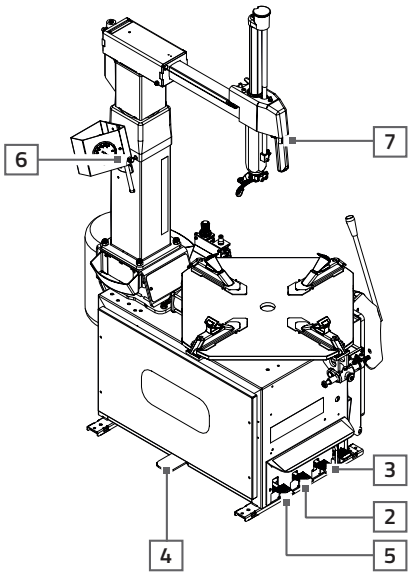


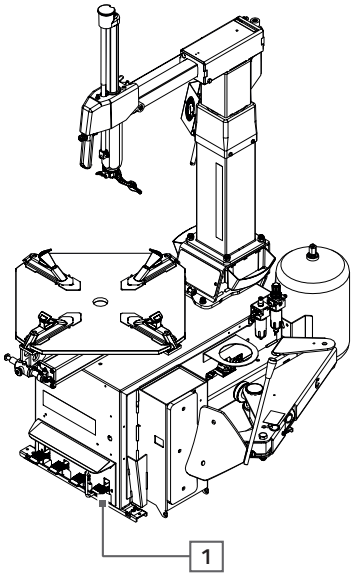
4.8. DESCRIPTION OF CONTROLS

Pos.	Code	Element	Label	Description
1	4-142852	Turntable pedal		It allows the rotation of the turntable plate. It has three positions: ▪ Pedal pressed (and held pressed) = clockwise rotation ▪ Pedal raised (and supported with the foot) = counter-clockwise rotation ▪ 0 (neutral) = rotation disabled
	4-142854			
	4-136182			
2	4-142852	Clamping jaw opening/closing pedal		It allows opening, closing, and moving the clamping jaws closer.
	4-142854			
	4-136182			
3	4-142852	Bead breaker shoe pedal		It allows the bead breaker shoe activation.
	4-142854			
	4-136182			

Pos.	Code	Element	Label	Description
4	435150	Inflation pedal		It allows inflating the tyre. It has two positions: ▪ Position 1 = inflation via Doyfe ▪ Position 2 = only for version with external air tank - air jet from the jaws for bead insertion.
5	4-142852	Rotary movable pole pedal		It allows the rotation of the vertical pole. **Note:** rotation can be to the right or left depending on the model purchased.
	4-142854			
	4-136182			
6	446436	Deflation button		It allows excess air inside the wheel to be discharged. **Note:** only available in the version with external air tank
7	446437	Locking control		▪ Label for automatic arm. Vertical and horizontal arm locking/ unlocking 3-position control. Vertical arm raising is automatic. ▪ Label for spring arm. Vertical and horizontal arm locking/ unlocking 2-position control. **Note:** variable depending on the machine model purchased.
	4-136235			

Note: the label on the control varies according to the machine purchased.


6
7
3
2
4
5


1

5. TRANSPORT, HANDLING AND STORAGE

5.1. TRANSPORT

5.1.1. AMBIENT CONDITIONS FOR TRANSPORT

Ambient conditions for transport	
Temperature	- 25°C ÷ + 55°C

5.1.2. WEIGHT TABLE

Unit	Weight with package
Standard version	286 Kg
Version with external air tank	300 Kg

5.1.3. PACKAGE

5.1.3.1. TRANSPORT CONDITIONS

Transport the tyre changer in its original package and keep it in the position indicated on the package.

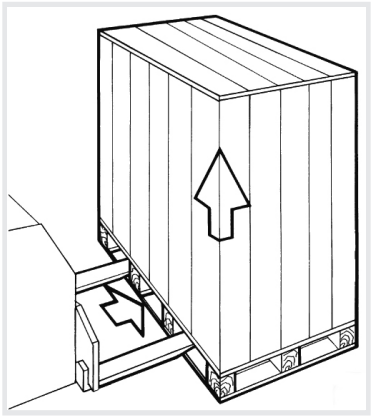
Package dimensions	
Width	1150 mm
Depth	900 mm
Height	980 mm

5.1.3.2. PACKED MACHINE HANDLING

To move the packed machine, insert the forks of a fork-lift truck into the slots on the base of the package (pallet).

WARNING

The packed machine cannot be lifted with a crane or hoist.



NOTICE

Do not stack other goods on top of the package.

5.1.3.3. PACKAGE REMOVAL

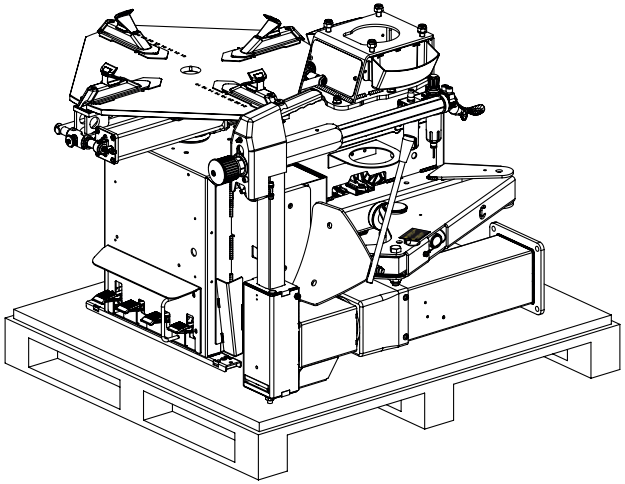
Remove the upper part of the package and make sure the machine has not been damaged during transport.

NOTICE

Keep the packing material intact for possible future transport of the machine.

The machine inside the packaging is disassembled into the following parts:

- Machine body
- Vertical pole and support arm
- Air tank (only in the version with external air tank)
- Pressure gauge (only in the version with external air tank)



NOTICE

Remove the elements fastening the machine parts to the pallet.

After releasing the pole, place it in a horizontal position to prevent it from falling and getting damaged.
Proceed with the assembly of the machine parts.

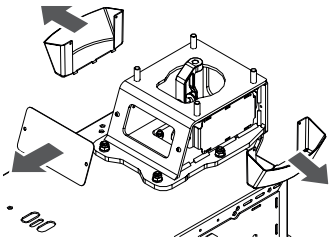
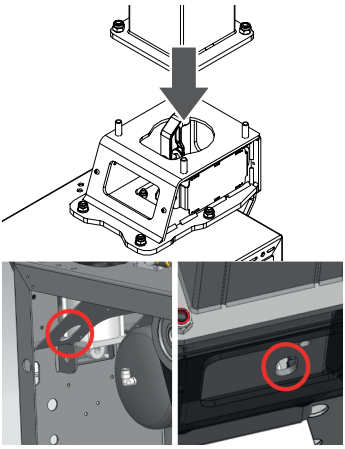
5.2. MOUNTING

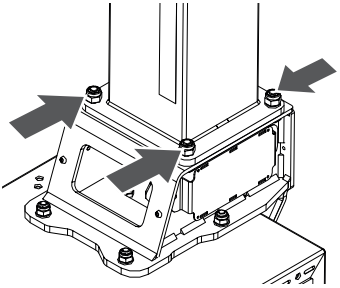
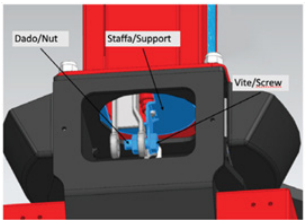
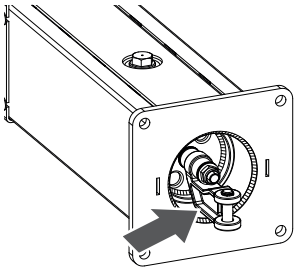
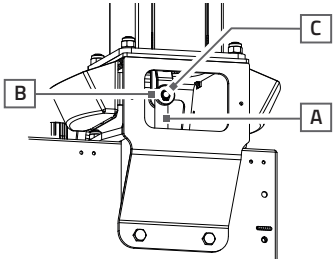
5.2.1. MOUNTING THE POLE

WARNING

The pole must be lifted by at least 2 operators.

To **install the pole:**

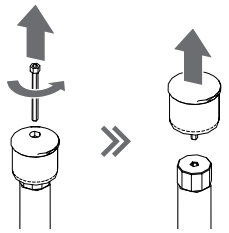
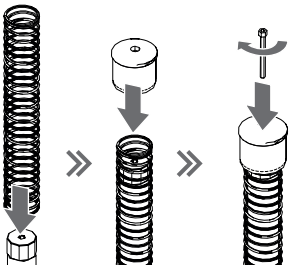
Step	Action	Image
1	Remove the side casing.	
2	Remove the indicated casings, by unscrewing the relevant retaining screws.	
3	Position the pole inside the threaded pins. At the same time, route the pneumatic tube through the appropriate hole on the machine body.	

Step	Action	Image
4	Secure the pole by means of the self-locking nuts. Insert the toothed washer which allows electrical continuity in the machine.	
5	Remove the screw, nut and pole clamp.	
6	Check that the indicated U-bolt is free to move and without play.	
7	Then insert the pole rotation cylinder rod into the U-bolt. Fasten.	
8	Insert the pin and lock it on the other side with the snap ring.	
9	Connect the pneumatic hose to the valve on the pedal base inside the machine body.	

Step	Action	Image
10	Fit the indicated casings and fasten them using the relevant retaining screws.	
11	Install the side casing.	

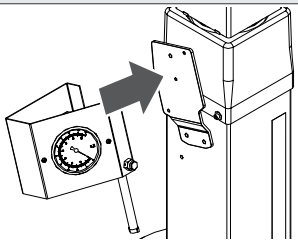
5.2.2. INSTALLING THE SPRING (IF ANY)

To **install the spring:**

Pos.	Action	Image
1	Remove the knob fixing screw to remove it from the vertical arm.	
2	Fit the spring to the vertical arm. Insert the knob. Insert the knob fixing screw.	

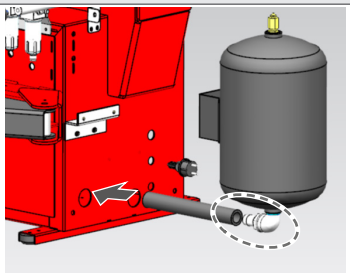
5.2.3. MOUNTING THE PRESSURE GAUGE (ONLY IN THE VERSION WITH EXTERNAL AIR TANK)

To **install the pressure gauge:**

Pos.	Action	Image
1	Position the pressure gauge at the designated point on the vertical pole.	
2	Secure with screws and washers.	

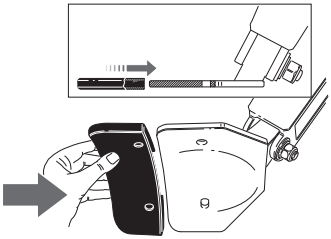
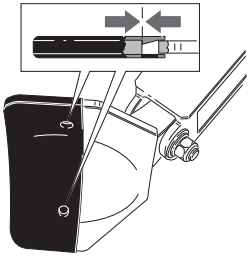
5.2.4. MOUNTING THE AIR TANK (ONLY IN THE VERSION WITH EXTERNAL AIR TANK)

To **install the tank:**

Pos.	Action	Image
1	Insert the union of the tank into the hose.	
2	Secure the tank to the machine with nuts and washers.	
3	Position and tighten the hose clamp.	

5.2.5. INSTALLING THE SHOE GUARD

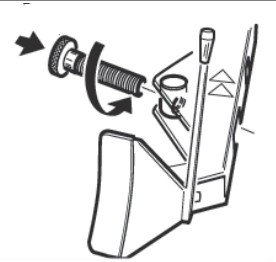
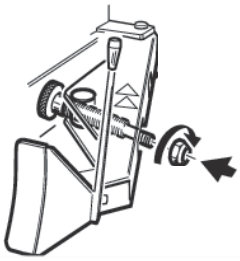
To **install the shoe guard:**

Pos.	Action	Image
1	Fit the guard on the shoe.	
2	Align the holes on the guard with the holes on the shoe. Engage the guard.	

If the shoe guard needs to be removed, use a pry bar to pry into the holes provided.

5.2.6. INSTALLING THE BEAD BREAKING ARM ADJUSTING SCREW

To **install the bead breaking arm adjusting screw:**

Pos.	Action	Image
1	Open the bead breaking arm.	
2	Fit the adjusting screw on the cylinder rod.	
3	Close the bead breaking arm.	
4	Secure the adjusting screw with the nuts on the cylinder rod. **Note:** perform this operation only after installing the machine and performing the pneumatic connection.	

5.3. HANDLING

WARNING

Before handling the machine, compare its centre of gravity and weight with the capacity of the lifter you have chosen.

WARNING

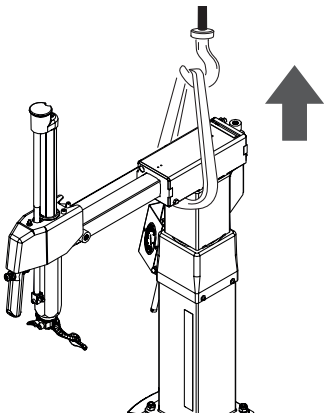
Carry out the handling operations described with care. Failure to observe these recommendations may result in damage to the machine and injury to the operator.

5.3.1. HANDLING PROCEDURE

Once assembly operations are completed, the machine can be lifted to remove it from the pallet.

CAUTION

Using lifting points other than those indicated is strictly forbidden.

Step	Action	Image
1	Hook the lifting straps to the points provided.	
2	Check that the load is properly balanced by slightly lifting it from the ground and checking that it is horizontal.	
3	Slowly lift paying attention to the centre of gravity of the machine.	

5.4. STORAGE

5.4.1. AMBIENT CONDITIONS FOR STORAGE

Ambient conditions for storage	
Temperature	- 25°C ÷ + 55°C

5.4.2. STORAGE OF THE MACHINE

The machine, its accessories and components must be stored indoor, in a dry and clean place, to ensure perfect preservation of its components.
If the machine is not used for long periods, perform the following operations to prepare it for inactivity:

Step	Action
1	Close the bead breaking arm.
2	Disconnect power supply.
3	Disconnect pneumatic supply.
4	Clean the machine.
5	Completely cover the machine with tarpaulins or similar protections.

6. INSTALLATION

WARNING

Install the machine in compliance with all the applicable safety standards, including, but not limited to, those issued by OSHA.

WARNING

Carry out the installation operations described with care. Failure to observe these recommendations may result in damage to the machine and injury to the operator.

HAZARD

RISK OF EXPLOSION OR FIRE. Do not install the machine in areas that could be exposed to flammable vapours (petrol, paint solvents, etc.). Do not install the machine in confined space or position it below floor level.

6.1. PERMITTED AMBIENT CONDITIONS

The machine must be installed and used indoor, protected from the weather, e.g. rain, hail, snow, fog, suspended dust, combustible dust. It cannot be a classified environment and must ensure protection from aggressive agents such as corrosive vapours or sources of excessive heat.

The machine is designed and manufactured to safely operate in the following ambient conditions:

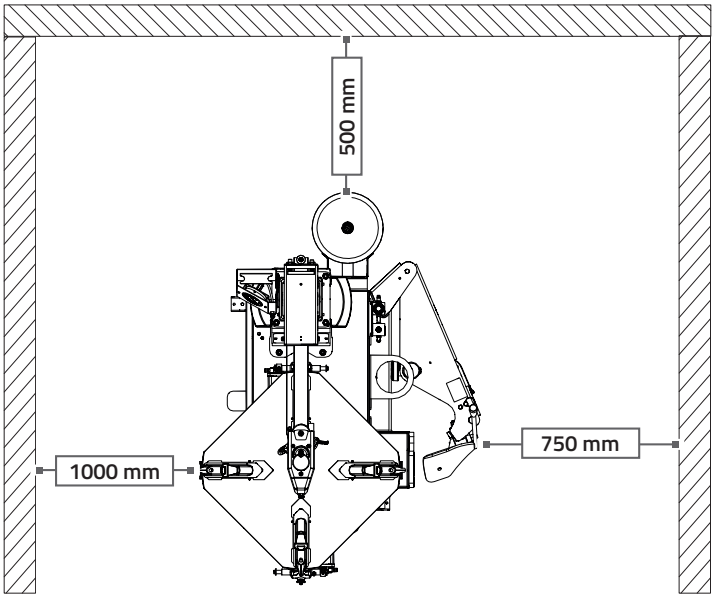
Permitted ambient working conditions	
Temperature	0 °C ÷ + 50°C
Relative humidity	30 % ÷ 95 %
Ambient lighting	minimum 300 lux
Bearing plane	1000 Kg/m^2

6.2. MACHINE POSITIONING

WARNING

When choosing the installation spot it is necessary to respect the current regulations on safety at work.

The machine must be installed on a stable and rigid floor to prevent and avoid any structure deformation.
Position the machine in a manner that guarantees access to all four sides.
Install the machine in the chosen work position, complying with the minimum clearances shown in the figure.



Do not install the machine in confined space or position it below floor level.

6.3. CONNECTIONS

For machine commissioning, prepare proper connections to the local networks:

- Electrical connection.
- Pneumatic connection.

It is the responsibility of the user to ensure connection to a system that meets the required characteristics.

HAZARD

RISK OF IMPACT. If the machine is disconnected from the power and pneumatic supplies for long periods, check that it is in the following configuration before restoring the connections:

- **Clamping jaw opening/closing pedal in fully down position (clamping jaws in closed position)**
- **Tilting movable pole pedal in fully down position (vertical pole not tilted).**

Failure to do so may result in the pole tipping abruptly and accidentally colliding with the operator performing the restoring operation.

6.3.1. ELECTRICAL CONNECTION

WARNING

Only qualified personnel can perform the operations required for the electrical connection of the machine to the power supply network.

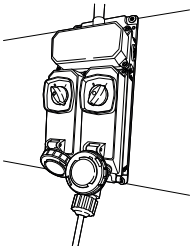
CAUTION

Before connecting the power plug to the power panel make sure that the mains voltage is the same as the one indicated on the machine data plate.

The components required for electrical connection must be properly sized according to:

- To the electrical power absorbed by the machine, as specified on the machine data plate
- To the distance between the operating machine and the power supply connection point, to ensure that the voltage drop under full load does not exceed 4% (10% during start-up) of the rated voltage value specified on the plate.

To perform **the electrical connection**, proceed as described below:

Step	Action	Image
1	Connect the power plug of the machine to the wall socket available in the installation room.	

Moreover, the user must:

- Fit a power plug in compliance with current regulations on the power supply lead
- Check that the electrical system to which the machine will be connected is equipped with a suitable 30mA sensitivity circuit breaker
- Fit the protection fuses on the power supply line, suitably sized according to the specifications indicated on the main wiring diagram contained in this manual
- Ensure that the workshop electrical system includes an efficient earth circuit.

⚠ WARNING

Earth connection is essential for correct machine operation. It is forbidden to connect machine grounding to the gas pipes, water pipes, telephone cables or other unsuitable objects.

If the machine is connected directly to the power supply by means of the main electrical panel and without the use of any plug, it is necessary to install a key-operated switch or padlockable switch.

For the Canadian market, only

The machine power cable must be hard-wired and the electric system must be equipped with a safety circuit-breaker, set at 20A max. with 30 mA residual current. Install a fuse to protect the power supply line, as shown in the general wiring diagram in this manual.

6.3.2. PNEUMATIC CONNECTION

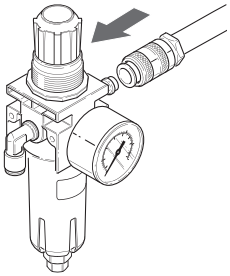
WARNING

For correct equipment operation, the air produced must be suitably treated (not above 5/4/4 according to standard ISO 8573-1).

Make sure that the available pressure and performance of the compressed air system are compatible with what is necessary for correct machine operation (refer to paragraph "**Technical data**").

For the correct operation of the machine, the pneumatic supply line must provide a pressure range from a minimum of 8.5 bar to a maximum of 16 bar.

For machine **pneumatic connection**, proceed as described below:

Step	Action	Image
1	Connect air pipe to the coupling present on reducer filter unit.	

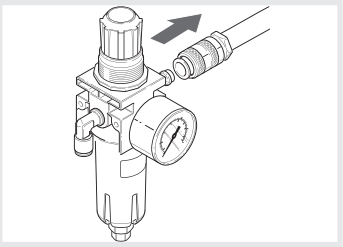
7. OPERATION

NOTICE

Wheels equipped with pressure sensors and special rims or tyres could require particular work procedures. Consult wheels and tyre manufacturer's service manuals.

⚠ WARNING

Before carrying out adjustments on the machine:
- Disconnect the plug from the power supply
- Act on the shut-off valve to disconnect the pneumatic supply.



⚠ WARNING

Stop using the machine in the event of:
- Unusual noises
- Unusual vibrations
- Incorrect operation of a component.

Contact Technical Support.

⚠ WARNING

Only one operator at a time is allowed to work with the machine.
Failure to observe these instructions and warnings can cause serious injuries to operators or any other person present.

⚠ WARNING

Do not allow anyone to stand at less than 6 metres from the machine.

⚠ WARNING

Mount tyres and rims only after checking that they match.

⚠ WARNING

Do not use tools other than those supplied with the tyre changer and always use the manufacturer's original accessories.

WARNING

Do not mount tyres that are cut, damaged, decayed or worn. Do not mount tyres on damaged, bent, rusted, worn, warped or deformed rims.

WARNING

Never leave nuts, bolts, tools or other materials on the machine. They could be entangled in moving parts and cause malfunctions or be ejected.

WARNING

Should the tyre get damaged during the mounting phase, do not try to complete the mounting operation. Remove it, take it away from the service area and mark it as damaged.

NOTICE

Inflate tyres in gradual steps, while continuously monitoring the pressure and observing the tyre itself, the rim and the bead. Never exceed the pressure limits indicated by the manufacturer.

During machine operation, **the operators in charge must comply** with the general safety rules and **use the following personal protective equipment (PPE)**:

Symbol	Requirement	Description
	**Use of protective gloves is mandatory**	Indicates a requirement for personnel to use protective or insulating gloves.
	**Use of safety shoes is mandatory**	Indicates a requirement for personnel to use safety shoes for foot protection.
	**Use of protective goggles is mandatory**	Indicates a requirement for personnel to use protective goggles.
	**Use of ear protections is mandatory**	Indicates a requirement for personnel to use ear muffs or plugs for hearing protection.

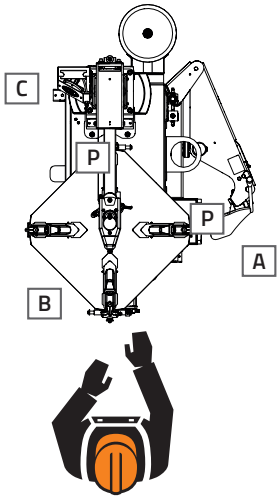
7.1. WORK AREA AND OPERATOR STATIONS

During operation, the machine requires **only one operator.**
The figure shows the operator's positions and the relevant hazardous areas **(P)** during the various work phases:

- Bead breaking **(A)**
- Demounting and mounting **(B)**
- Inflation area **(C)**

WARNING

The operator in charge of the operation must always observe the machine.



7.2. PRELIMINARY CHECKS

Before starting to work, carefully check that all machine components, particularly rubber or plastic parts, are in place, in good condition and operate correctly. If damage or wear are detected during inspection, immediately replace or repair the component regardless of the extent of the damage or wear.
Check that the machine has been adequately connected to the electric mains and the pneumatic supply.
Check that there is a pressure of at least 8 bar on the filter regulator pressure gauge. If the pressure is below the minimum level, some machine operations may be limited or insufficient.

WARNING

Do not operate the machine in the presence of a damaged electrical cable.

7.3. START-UP

After having performed the electrical and pneumatic connections, the machine is ready to operate.

HAZARD

RISK OF IMPACT. If the machine is disconnected from the power and pneumatic supplies for long periods, check that it is in the following configuration before restoring the connections:

- **Clamping jaw opening/closing pedal in fully down position (clamping jaws in closed position)**
- **Tilting movable pole pedal in fully down position (vertical pole not tilted).**

Failure to do so may result in the pole tipping abruptly and accidentally colliding with the operator performing the restoring operation.

7.4. OPERATION

WARNING

During operation, check that there are no unauthorised persons within the work area.

WARNING

Check that the mechanical parts have been correctly mounted and properly secured, so as to avoid accident when using the accessories. When working, firmly grip the manual accessories.

WARNING

If the machine malfunctions, disconnect it from the electric and pneumatic supplies.

WARNING

Check that the rim is correctly and firmly locked on every gripping point of the wheel clamping system spindle and that gripping is safe.

WARNING

Any operation intended to modify the setting value of the relief valves is forbidden. The Manufacturer declines all liability for damage resulting from tampering with such valves.

WARNING

Do not leave the work area when the wheel is on the clamping system and raised from the ground.

WARNING

It is not permitted to use inflation devices (e.g. gun) connected to the tyre changer through power sources outside the machine.

WARNING

During operation, keep hands and fingers away from:

- From the rim shoulder
- From the mounting/demounting device
- From the bead breaker.

HAZARD

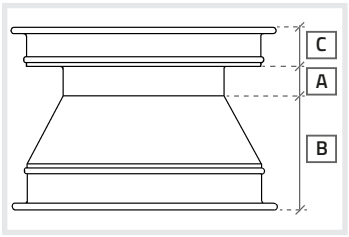
CRUSH HAZARD. During operation, the danger of crushing remains in some parts of the machine (e.g. demounting/ mounting device, bead breaker, turntable). Keep your hands and other body parts away from moving parts of the machine.

HAZARD

RISK OF IMPACT. When tilting the vertical pole, the risk of impact remains. Carry out the tilting operation from the mounting and demounting working position (see section “Work area and operator workstations”).

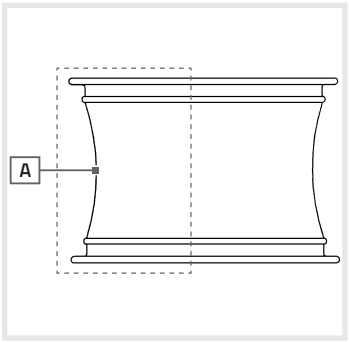
7.4.1. DECIDING FROM WHICH SIDE OF THE WHEEL THE TYRE MUST BE REMOVED

- Find the position of the channel **(A)** on the rim.
- Find the largest width **(B)** and the smallest width **(C)**.
- The tyre must be mounted and demounted with the wheel on the turntable with the smallest width side **(C)** facing upwards.

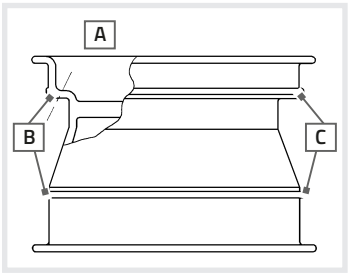


7.4.1.1. SPECIAL WHEELS

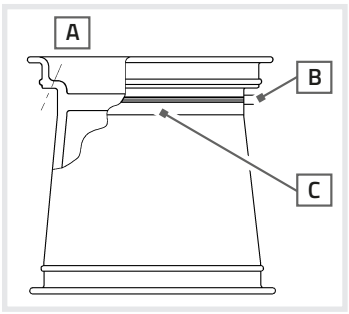
Alloy rim wheels:
Some wheels with alloy rims have a very small rim channel **(A)** or do not have any rim channel. These rims are not approved by DOT standards (Department of Transportation). The DOT initials certify that tyres comply with the safety standards adopted by the United States and Canada (these wheels cannot be sold in these markets).



High performance wheels (asymmetric curvature):
Some European wheels have rims with a very pronounced curvature **(C)**, except in the area of the valve hole **(A)** where the curvature is less pronounced **(B)**. On these wheels the bead must first be broken in the area of the valve hole, on both the top and bottom sides.



Wheels with pressure sensor:
To work correctly on these wheels and avoid damaging the sensor (which is incorporated in the valve, secured to the belt, glued inside the tyre, etc.) suitable mounting/demounting procedures must be observed (refer to the **"Mounting/demounting procedure for approved UHP and RUN FLAT tyres"**).



NOTICE

The TPMS device (option) can only be used to check the proper operation of pressure sensors.

NOTICE

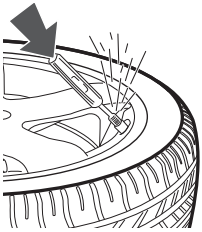
Remove any old counterweights from the rim.

7.4.2. BEAD BREAKING

⚠ WARNING

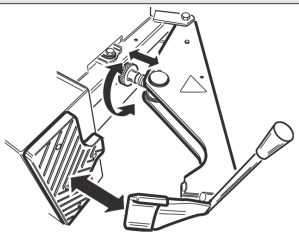
Before bead breaking operation, fully close the turntable plate (clamping jaws towards the centre). Keep hands away from moving parts.

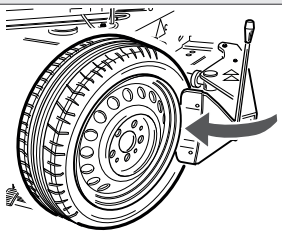
To perform **bead breaking**, proceed as described below:

Step	Action	Command	Image
1	Remove the internal valve to fully deflate the tyre.	-	

⚠ WARNING

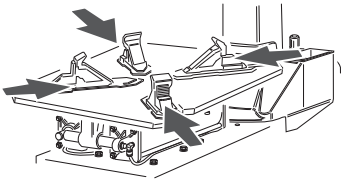
All air pressure inside the tyre must be removed before proceeding. Never attempt to break the bead until all air is removed from the tyre. Failure to remove all air from tyre may result in injury to the operator, or damage to the equipment, the tyre, or the wheel.

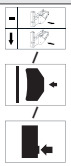
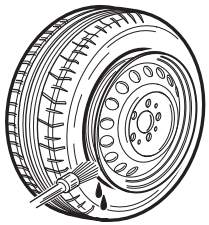
Step	Action	Command	Image
2	Adjust the bead breaking arm screw to the rim width. **Note:** this prevents excessive stress that can damage the tyre.	-	

Step	Action	Command	Image
3	Position the wheel and move the bead breaker shoe close to the rim shoulder.	-	

⚠ CAUTION

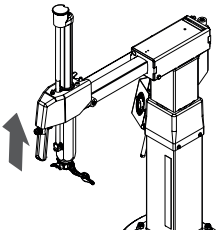
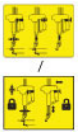
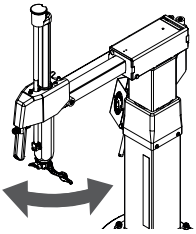
During the bead breaking operation, keep the turntable plate closed (clamping jaws towards the centre).

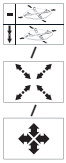
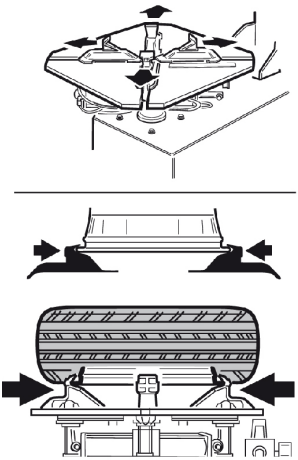
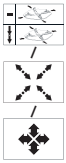
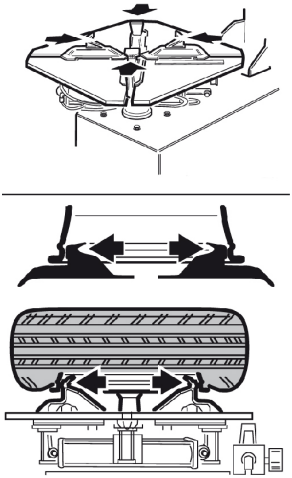
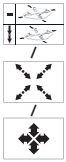
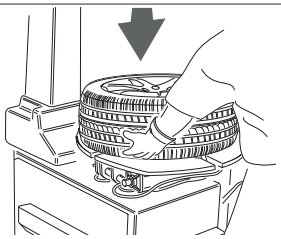


Step	Action	Command	Image
4	Press the pedal to activate bead breaker shoe.		
5	Repeat the operation on different points of the tyre so that bead is released from rim. **Note:** Repeat the same operation on tyre opposite side.	-	
6	Remove any old balancing counterweight from the wheel.	-	
7	Thoroughly lubricate the sidewalls of the tyre around the entire circumference of the lower and upper beads to facilitate demounting and avoid damaging the beads.	-	

7.4.3. WHEEL CLAMPING

To **clamp the wheel** proceed as described below:

Step	Action	Command	Image
1	Position the operating arms in the "non-working" position (tool at the top and horizontal arm completely rotated).	-	
2	Lock the handle with the operating arm in the non-working position.		
3	Press the pedal to move the vertical pole to the non-working position. **Note:** rotation can be to the right or left depending on the model purchased.		
4	Place the wheel on the turntable plate, holding the narrow side of the rim upwards. **Note:** the tyre must be removed and repositioned only from the narrow side.	-	

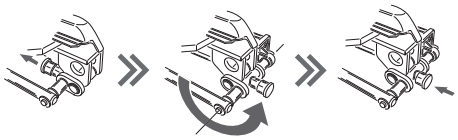
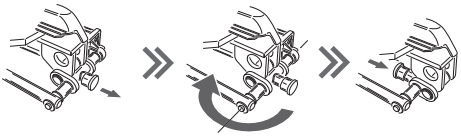
Step	Action	Command	Image
5	**A - Clamping the rim from the outside** Press the pedal to bring the sliding jaws to the outside of the turntable plate. **Note:** if necessary, adjust the clamping capacity of the turntable (see section **"Adjusting the clamping capacity of the turntable"**).		
	B - Clamping the rim from the inside Press the pedal to bring the sliding jaws to the centre of the turntable plate. **Note:** if necessary, adjust the clamping capacity of the turntable (see section **"Adjusting the clamping capacity of the turntable"**).		
6	Push the wheel downwards and operate the pedal to lock the wheel in position.		

7.4.3.1. ADJUSTING THE CLAMPING CAPACITY OF THE TURNTABLE PLATE

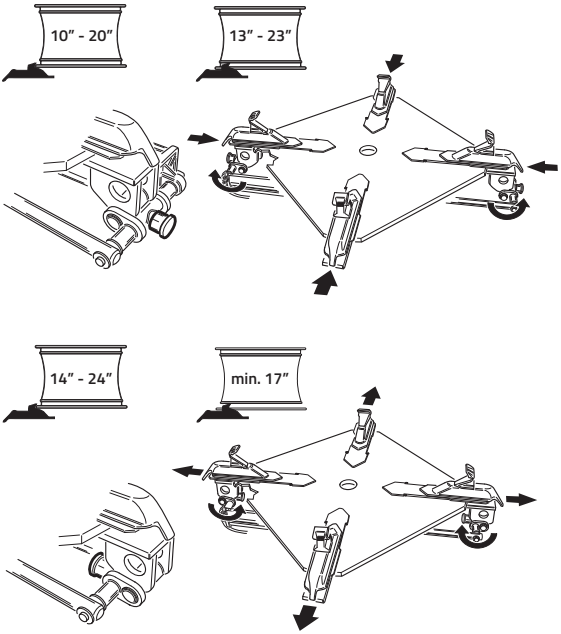
WARNING

CRUSH HAZARD. The clamping capacity of the turntable plate should be adjusted with machine not running. Do not operate the controls.

To adjust the clamping capacity of the turntable plate:

Procedure	Image
Open configuration: ▪ Act on the knob to extract the locking pin ▪ Turn the adjusting device outwards ▪ Engage the adjusting device in the new position using the knob.	
Closed configuration: ▪ Act on the knob to extract the locking pin ▪ Turn the adjusting device inwards ▪ Engage the adjusting device in the new position using the knob.	

10" - 24"

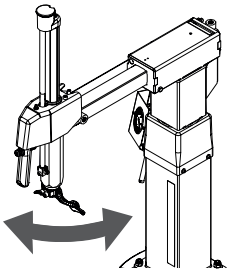
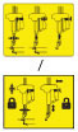


7.4.4. WHEEL DEMOUNTING

NOTICE

To make it easier to mount/demount low profile tyres, it is advised to use the bead pressing clamp (optional accessory supplied on request).

To **demount the wheel** proceed as described below:

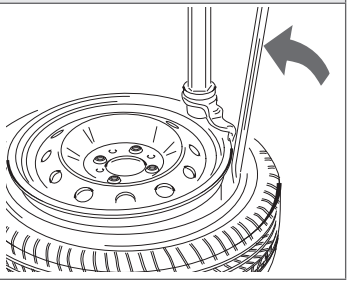
Step	Action	Command	Image
1	Press the pedal to move the vertical pole to the working position.		
2	Work the locking control to unlock the vertical and horizontal arms.		
3	Position the wheel mounting/demounting device so that it is in contact with the rim shoulder.	-	

NOTICE

Work the locking control to lock both the operating arms simultaneously, while the mounting/demounting device moves slightly upwards away from the rim shoulder. The space between rim and mounting/demounting device will be maintained for as long as the control is in the locking position.

NOTICE

The operator can freely tilt the pole without repositioning the mounting/dismounting device.

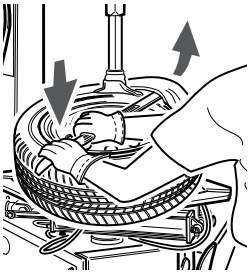
Step	Action	Command	Image
4	Insert and position the bead lifting lever between mounting/demounting device and tyre bead.	-	

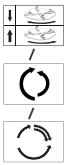
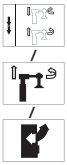
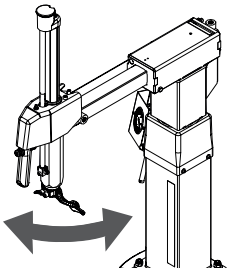
NOTICE

When working with alloy rims or rims with delicate paintwork, you are advised to fit the special plastic protection on lever.

WARNING

Grip the bead lifting tool firmly during use.

Step	Action	Command	Image
5	Lift the upper bead above the rear part of the mounting/demounting device and push one part of the upper bead into the rim channel by pushing the tyre downwards from the side opposite to the tool head.	-	

Step	Action	Command	Image
6	Press turntable plate pedal with light strokes to start the demounting operations. **Note:** the upper bead is automatically moved over the rim shoulder.		
7	Repeat the procedure for the lower bead.	-	
8	Press the pedal to move the vertical pole to the non-working position. **Note:** rotation can be to the right or left depending on the model purchased.		

NOTICE

If the tyre has an inner tube, move the arm outwards to its non-working position, then remove the inner tube.

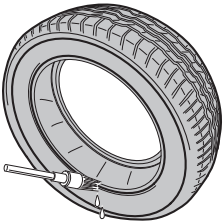
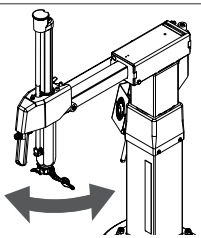
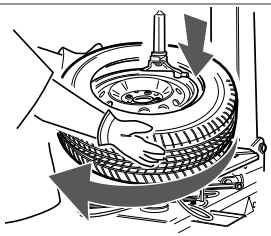
7.4.5. WHEEL MOUNTING

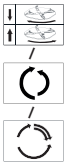
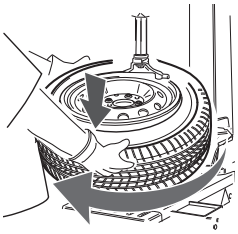
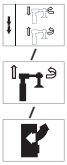
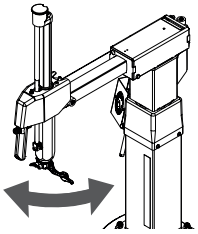
HAZARD

RISK OF EXPLOSION. Always check that the tyre/rim match-mounting is correct in terms of compatibility (tubeless tyre on tubeless rim; tube type tyre on tube type rim) and geometrical size (keying diameter, cross-section width, off-set and shoulder profile) before mounting.
AVOID PERSONAL INJURIES OR DEATH. Also check that rims are not deformed, that their fixing holes have not become oval, that they are not scaled or rusty and that they do not have sharp burrs on the valve holes.
Check that the tyre is in good condition with no signs of damage.

NOTICE
To make it easier to mount/demount low profile tyres, it is advised to use the bead pressing clamp (optional accessory supplied on request).

To **mount the wheel** proceed as described below:

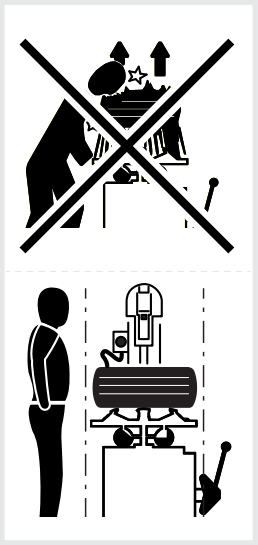
Step	Action	Command	Image
1	Carefully lubricate the sides of the tyre along the entire circumference of the lower and upper bead.	-	
2	Position the tyre on the rim.	-	
3	Press the pedal to move the vertical pole to the working position.		
4	Position the lower bead beneath the front side of the mounting/ demounting device.	-	

Step	Action	Command	Image
5	Press the turntable plate pedal to turn the turntable clockwise and mount the bead. **Note:** push against the right sidewall of the tyre to reduce traction force on the bead as the wheel rotates.		
6	Once you have mounted the first bead, repeat the procedure for the second bead.	-	
7	Press the pedal to move the vertical pole to the non-working position. **Note:** rotation can be to the right or left depending on the model purchased.		

7.4.6. PROCEDURE FOR MOUNTING AND DEMOUNTING APPROVED UHP AND RUN FLAT TYRES

For a detailed description of the UHP and RUN FLAT tyre demounting/mounting procedure, please refer to the instructions in the manual developed by WDK (German Tyre Industry Association).

7.4.7. TYRE INFLATION



HAZARD

RISK OF EXPLOSION!
Do not exceed the pressure value recommended by the tyre Manufacturer. Always match the tyre and rim dimensions. Take care to avoid any damage to the tyre. During inflation, keep outside the vertical cylinder area occupied by the wheel.

HAZARD

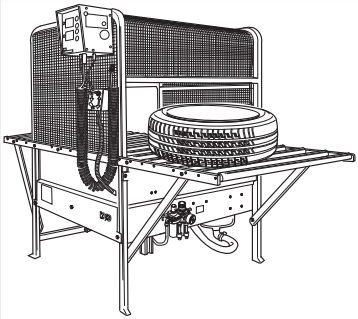
It is not permitted to use inflation devices (e.g. gun) connected to power sources outside the machine.

NOTICE

Always observe national safety regulations, which can be more restrictive than this manual, according to the principle that a higher standard prevails over a lower one.

HAZARD

If the maximum pressure indicated by the tyre Manufacturer must be exceeded to insert the bead of the tyre, remove the wheel from the tyre changer and position it inside the inflation cage.



Check that both the upper and lower beads and the rim bead seat have been suitably lubricated with paste appropriate for mounting.

NOTICE

Safety goggles with plain lenses and safety footwear must be worn.

WARNING

Do not clamp the rim on the turntable during inflation.

WARNING

Proceed with caution to prevent any injuries. Carefully read, understand and observe the following instructions.

HAZARD

- Overinflated tyres can explode, producing hazardous flying debris that may result in an accident.
- Tyres and rims that do not have the same diameter are “mismatched”. Never attempt to mount or inflate any tyre and rim that are mismatched. For example, never mount a 16” tyre on a 16,5” rim (or vice versa). It is very dangerous. Tyres and rims that do not correspond could explode and cause accidents.

CAUTION

Do not exceed the inflation pressure for the tyre indicated by the manufacturer on the side of the tyre itself. Carefully check that the air hose is well inserted in the valve.

WARNING

Never bring your head or other body parts close to a tyre during inflation or bead insertion operations. This machine is not a safety device against the possible risks of explosion of tyres, tubes or rims.

WARNING

Maintain a suitable distance from the tyre changer while inflating. Do not approach it.

WARNING

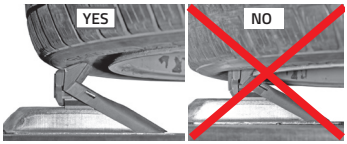
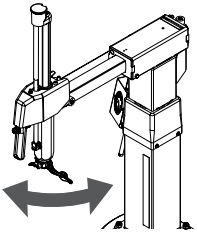
During these operations, the noise level detected on the machine may be higher than 85 dB(A). Wear personal hearing protection equipment.

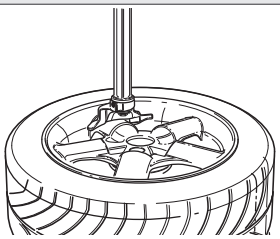
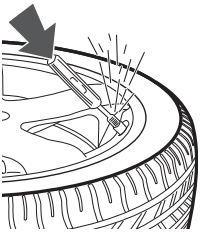
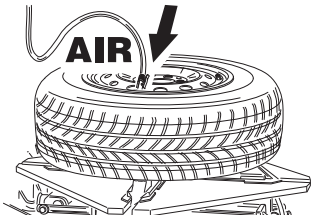
HAZARD

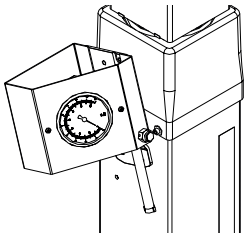
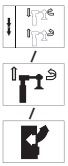
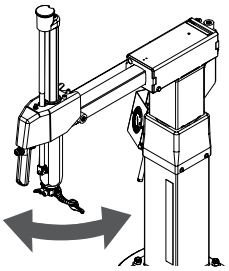
A bursting tyre can cause projections of its parts in surrounding areas with a force sufficient to cause serious injury or death.
Do not mount a tyre if its dimensions (indicated on the side) do not correspond exactly to the rim dimensions (printed inside the rim) or if the rim or the tyre is defective or damaged.
Never exceed the pressure recommended by the tyre manufacturer.
The tyre changer is not a safety device and does not prevent tyres and rims from exploding. Keep all persons not working on the machine out of the working area

7.4.7.1. INFLATION PROCEDURE

To inflate the tyre, proceed as follows:

Step	Action	Command	Image
1	Make sure the wheel is not clamped with the jaws on the turntable plate.	-	
2	Press the pedal to move the vertical pole to the working position.		

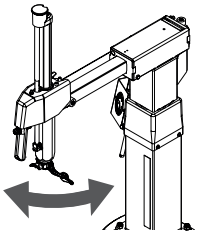
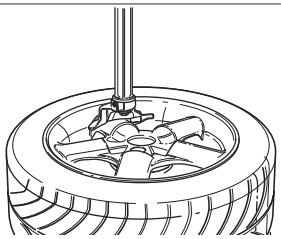
Step	Action	Command	Image
3	Lower the vertical arm until it touches the rim. Lock the arm in this position.	-	
4	Remove the valve core if it has not already been removed.	-	
5	Connect the Doyfe inflator chuck on the air hose to the valve stem.	-	
6	Press the inflation pedal (with brief strokes) to inflate the tyre. **Note:** take care that the pressure indicated on the pressure gauge never exceeds the pressure levels specified by the tyre Manufacturer.		

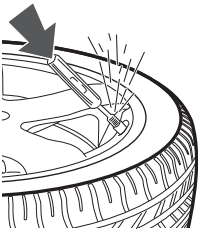
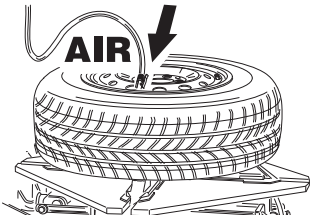
Step	Action	Command	Image
	If necessary		
7	Inflate the tyre to the maximum value of 3.5 bar to correctly position it on the rim. During inflation, constantly check the tyre pressure on the pressure gauge. **Do not overinflate the tyre!** **Note:** inflating tubeless tyres requires a higher air flow rate to allow the beads to pass over the HUMPS rim.	-	
8	Check that the beads are properly inserted on the rim. **Note:** otherwise, perform bead breaking and mounting procedures again.	-	
9	Replace the internal valve mechanism.	-	
10	Press the deflation button to bring the pressure to the operating value.		
11	Press the pedal to move the vertical pole to the non-working position. **Note:** rotation can be to the right or left depending on the model purchased.		

Step	Action	Command	Image
12	Disconnect inflation hose from valve rod.	-	
13	Remove the wheel from the machine.	-	

7.4.7.2. INFLATION PROCEDURE - TUBELESS TYRES

If during inflation the tyre is not positioned correctly on the rim due to excessive space between the tyre and rim, a jet of pressurised air can be used with the jaws in the TI version.
Verify that both upper and lower tyre beads and rim bead seat have been properly lubricated with an approved mounting paste.
Proceed as follows:

Step	Action	Command	Image
1	Check that the wheel is secured to the turntable plate with internal clamping.	-	
2	Press the pedal to move the vertical pole to the working position.		
3	Lower the vertical arm until it touches the rim. Lock the arm in this position.	-	

Step	Action	Command	Image
4	Remove the valve core if it has not already been removed.	-	
5	Connect the Doyfe inflator chuck on the air hose to the valve stem.	-	

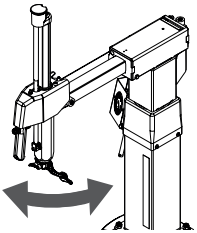
NOTICE

To increase the effectiveness of the inflation jets, plentifully lubricate the beads and raise the lower bead while activating inflation jets.

⚠ WARNING

Lock the rim correctly before operating the jets for inflation.
Do not point jets towards people.

Step	Action	Command	Image
6	Press the pedal down fully and shortly. **Note:** the tyre will expand and the beads will seat.		
7	Check that the beads are properly inserted on the rim. **Note:** otherwise, perform bead breaking and mounting procedures again.	-	

Step	Action	Command	Image
8	Replace the internal valve mechanism.	-	
9	Release the wheel from the jaws.	-	
10	Disconnect inflation hose from valve rod.	-	
11	Press the pedal to move the vertical pole to the non-working position. **Note:** rotation can be to the right or left depending on the model purchased.		

If the tyre is overinflated, press the deflation button to remove excess air.

NOTICE

To improve the operation of the tubeless tyre inflation system, the pressure of the compressed air line must be between 8/10 bar.

HAZARD

RISK OF EXPLOSION. During the bead insertion phase, do not exceed the maximum pressure indicated by the Manufacturer.

HAZARD

RISK OF EXPLOSION. Do not mount a tyre and a rim that do not have the same diameter (e.g.: 16.5" tyre and a 16" rim).

WARNING

Operate the inflation jets only for tyre bead insertion.

Discharge the air from the pneumatic system before disconnecting the power supply or other pneumatic components. The air is accumulated in the tank for operating the bead insertion jets.

7.5. STOP

WARNING

In order to prevent use by unauthorised personnel, disconnect the power supply plug when the machine is not used (switched off) for long periods.

7.5.1. OPERATIONAL STOP

To perform the **operating stop**, disconnect the power and pneumatic supplies.
The machine does not feature stop switches and/or buttons.

7.5.2. EMERGENCY STOP

To perform the **emergency stop**, disconnect the power and pneumatic supplies.

8. MAINTENANCE

8.1. GENERAL WARNINGS FOR MAINTENANCE

WARNING

Before carrying out adjustments on the machine:

- Disconnect the plug from the power supply
- Act on the shut-off valve to disconnect the pneumatic supply.

WARNING

Do not remove or modify any parts of the machine.

WARNING

Pressurised parts hazard. When the machine is disconnected from the pneumatic supply, some parts may remain pressurised. The pictogram on the side has been applied on those parts of the machine where the danger remains.

WARNING

DANGER DUE TO ACCUMULATED ENERGY. The bead breaking cylinder is pressurised even after pneumatic supply has been disconnected. In case of maintenance or storage, discharge the air by operating the control valve.

WARNING

The Manufacturer declines all responsibility in case of use of non-original spare parts or accessories.

8.2. GENERAL INFORMATION FOR MAINTENANCE

Machine maintenance includes the operations (inspection, verification, check, adjustment and replacement) required as a result of normal use.

For proper maintenance:

- Only use original spare parts and tools suitable for the purpose and in good condition.
- Respect the intervals indicated in the manual for scheduled (preventive and periodic) maintenance.
- Proper preventive maintenance requires constant attention and continuous monitoring of the machine. Promptly check the cause of any malfunctions such as excessive noise, overheating, fluid leaks, etc., and remedy them.
- Prompt removal of any causes of failure or malfunction prevents further damage to the equipment and ensures operators' safety.

The personnel in charge of machine maintenance must be suitably trained and have a comprehensive knowledge of accident prevention regulations. Unauthorised personnel must remain outside the work area during the operations.

Perform machine cleaning and adjustment operations only and exclusively during maintenance, with machine stopped and not powered (electric and pneumatic supplies disconnected).

⚠ WARNING

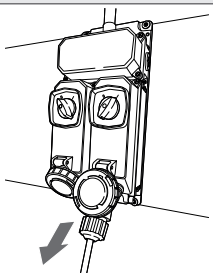
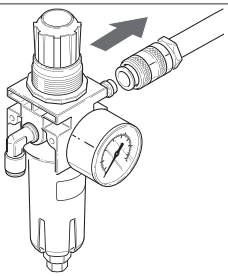
Incorrect performance of maintenance procedures, or failure to comply with the instructions provided, may cause accidents and/or hazardous situations.

From an operational point of view, machine maintenance operations are divided into two main categories:

Type	Description
ORDINARY MAINTENANCE	These are all the operations that the operator must carry out in advance to ensure proper operation of the machine over time. Ordinary maintenance includes inspection, check, adjustment, cleaning and lubrication operations.
EXTRAORDINARY MAINTENANCE	These are all the operations that the operator must carry out when the machine requires them. Extraordinary maintenance includes operations related to overhaul, repair, restore of rated operating conditions or replacement of a faulty, defective or worn unit.

8.3. PREPARING THE MACHINE FOR MAINTENANCE

Before carrying out any maintenance work, prepare the machine for maintenance.

Step	Action	Command	Image
1	Disconnect the power supply.	-	
2	Disconnect the pneumatic supply.	-	

8.4. ORDINARY MAINTENANCE

To ensure proper operation of the machine, carry out checks and periodic and preventive maintenance following the instructions and the maintenance intervals given.

Scheduled ordinary maintenance includes inspections, checks and operations that, to prevent downtime and faults, systematically monitor:

- mechanical conditions of the machine, in particular of drives
- lubrication status of the machine.

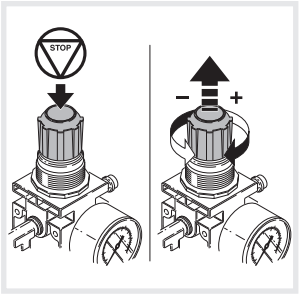
The indicated intervals for ordinary maintenance operations refer to normal operating conditions, i.e. corresponding to the intended conditions of use.

8.4.1. CHECKS AND VERIFICATIONS

Operation	Frequency			
	8h	40h	200h	1000h
Check integrity of safety devices		■		
Check efficiency of control systems			■	
Check status of motors			■	
Check tightening of fasteners				■
Check wear status of electrical connectors and connection cables				■
Check that terminals inside the electric panel are not oxidised			■	
Check the condensate drain of the filter regulator		■		

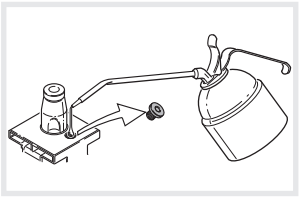
8.4.1.1. ADJUSTING THE OPERATING PRESSURE

To adjust the input pressure of the filter regulator unit, pull out the handle and turn it at the same time (adjustment range: 0.5 to 10 bar). Once adjustment is completed, return the handle to the locked position pushing it downwards.



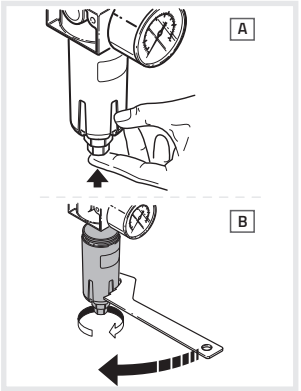
8.4.1.2. CHECKING THE LUBRICANT LEVEL

Periodically check the lubricant level through the specific windows and top up. Top up only with non-detergent SAE20 oil equal to 50cc.



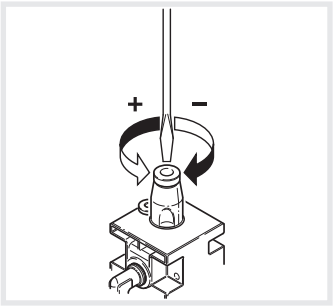
8.4.1.3. CHECKING AND DRAINING THE CONDENSATE FROM THE REGULATOR FILTER WITH LUBRICATOR

The regulator filter "FR" has an automatic condensation drain system, therefore, no special maintenance is required in normal use conditions.
Drain the condensation manually at regular intervals **(A)**.
If necessary, empty the cups with the special wrench supplied **(B)**.
Clean with a dry cloth. Do not use solvents.



8.4.1.4. CHECKING THE LUBRICANT FLOW RATE

The lubricant flow rate adjustment is carried out by turning the screw on the element "L", normally this unit is pre-calibrated to a pressure of 10Bar, with SAE20 viscosity lubricant in order to make a drop of lubricant come out, which can be seen from the specific cover, every 4 times the bead breaker is operated.



8.4.2. LUBRICATION

No lubrication is required on the machine.

8.4.3. CLEANING

Cleaning operations, performed at regular intervals, allow to keep the machine in perfect working order.
Always keep the working area of the machine clean.

⚠ CAUTION

Do not use compressed air or jets of water to remove dirt or debris from the machine.

⚠ CAUTION

Do not clean electric parts with water or high pressure air jets.

Operation	Frequency			
	8h	40h	200h	1000h
Cleaning the turntable plate		■		
Cleaning the filter cartridge				■
General cleaning of the machine with a dry cloth		■		

If possible, during cleaning operations, work in such a way so as to avoid accumulation or raising of dust.

8.5. EXTRAORDINARY MAINTENANCE

NOTICE

If extraordinary maintenance operations are required, contact the Manufacturer.

WARNING

Extraordinary maintenance and repair of the machine must be carried by qualified, trained and authorised technicians, employed by the Manufacturer or the authorised service centre.
These tasks require comprehensive and specialised knowledge of the machines, the operations required, the risks involved and the correct procedures for safe operation.

9. TROUBLESHOOTING

Failure	Cause	Solution
If the rotation control pedal is pressed, the turntable does not turn	Blackout	Check the differential circuit breaker
	Grounded line wire	Check wires
	Short-circuited motor	Replace motor
	Short-circuited inverter	Replace inverter
	Blown fuses	Check and replace
Turntable does not rotate in either direction	Belt broken	Replace belt
	Faulty inverter	Replace inverter
	Gear unit clamped	Replace gear unit
	Blown fuse	Replace the fuse
Gear unit noisy. The turntable makes a 1/3 of a turn and then stops	Gear unit seizing	Replace gear unit
Turntable difficulty in demounting or mounting wheels	Insufficient belt tension	Adjust belt tension or replace it
Turntable fails to clamp rims	Faulty turntable cylinder	Replace turntable cylinder
	Worn jaw tips	Replace the tips of clamping jaws
Bead breaker pedal and turntable pedal do not move back to position	Pedal return spring broken	Replace pedal return spring
Bead breaker cylinder lacks force, fails to break beads and leaks air	Silencer plugged	Replace silencer
	Cylinder seals worn	Replace the seals

Failure	Cause	Solution
The operating arms move to the end of their stroke during vertical pole tilting	Clamping plate not adjusted	Adjust plate
	Faulty clamping plate	Replace plate
	Faulty clamping cylinders	Replace clamping cylinders
	Lack of supply to clamping cylinders	Check the operation of controls and pneumatic circuit
	No air passage through valve	Replace the valve
The vertical clamping does not work	Clamping plate not adjusted	Adjust plate
	Faulty clamping plate	Replace plate
The vertical pole does not tilt	Faulty pole tilting cylinder	Replace pole tilting cylinder
	No air supply to pole tilting cylinder	Replace cock
	Air leak from the valve	Replace valve or pole tilting cylinder
The vertical pole tilts too quickly or too slowly	Release valves not calibrated	Adjust release valves ▪ Hare symbol: speed increase ▪ Turtle symbol: speed reduction
Tyre pressure gauge needle fails to return to 0	Pressure gauge faulty or damaged	Replace pressure gauge
The lubricator does not work	No oil in lubricator	Top up the lubricator with oil SAE20
	Lubricator broken	Replace the lubricator

10. DISMANTLING AND SCRAPPING

10.1. ENVIRONMENTAL INFORMATION

The following disposal procedure must be applied only to the machines on which the machine data plate shows a crossed bin. The barred bin symbol affixed on the product and shown in this page indicates that the product must be disposed of properly at the end of its lifetime.

This product may contain substances that are potentially harmful to the environment and human health if not disposed of properly.
The information provided below is intended to prevent these substances from being released into the environment, and to improve the use of natural resources.
Electrical and electronic equipment must never be disposed of in the usual municipal waste but must be separately collected for proper treatment.
At the end of product life cycle, contact your dealer for information about disposal procedures.
Upon purchase, purchasers are offered the opportunity to return their end-of-life equipment to dealer free of charge, provided that the equipment is of the same type and served the same purpose as the newly-purchased product.
Anyone disposing of the product otherwise than as described above will be liable to prosecution under the laws of the country where the product is disposed of.
We also recommend to adopt other environmental-friendly measures:

- recycle the internal and external package of the product
- dispose of the used batteries appropriately (only if contained in the product).

10.2. DISPOSAL OF OIL

⚠ WARNING

Never pour waste oil in sewers, storm drains, rivers or streams. Collect and deliver it to companies authorised to collection.

11. GENERAL WIRING DIAGRAM

Code	Element
XS1	Power supply socket
QS1	Inverter
M1	Single-phase motor
M3	Three-phase motor
R1	Resistor
C1	Condenser
FR	Fuse
AP1	Single/two-speed motor circuit board
SQ1	Two-speed microswitch
SQ2	Microswitch (clockwise rotation)
SQ3	Microswitch (anticlockwise rotation)

11.1. SINGLE-PHASE TYRE CHANGER

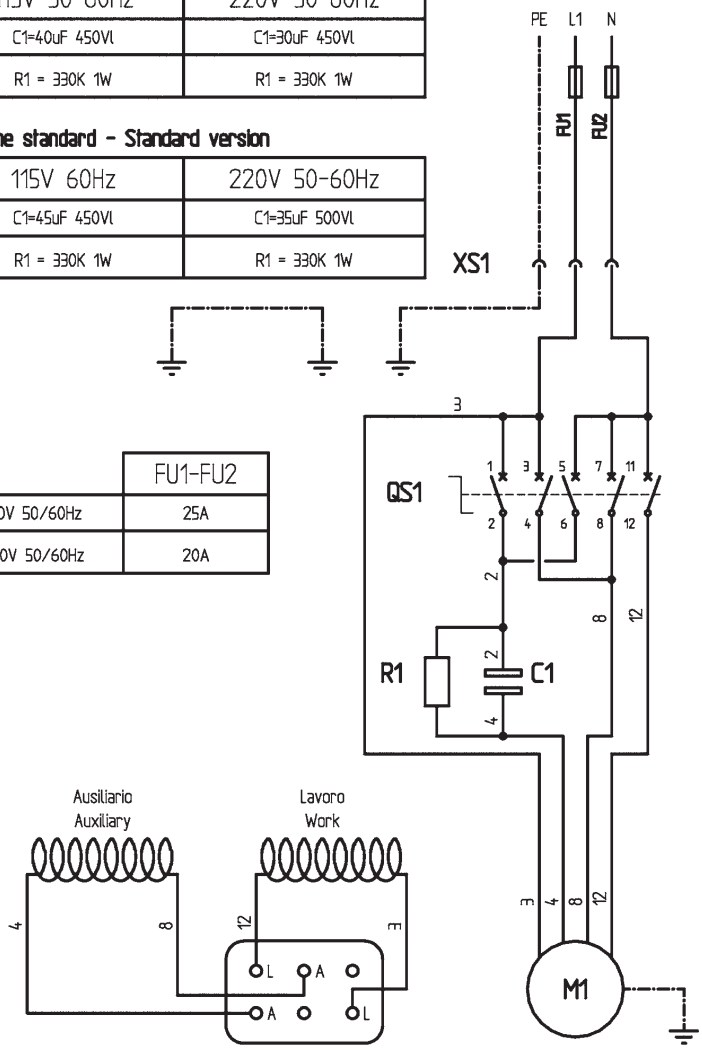
Solo versione CSA - CSA version only

115V 50-60Hz	220V 50-60Hz
C1=40uF 450Vl	C1=30uF 450Vl
R1 = 330K 1W	R1 = 330K 1W

Versione standard - Standard version

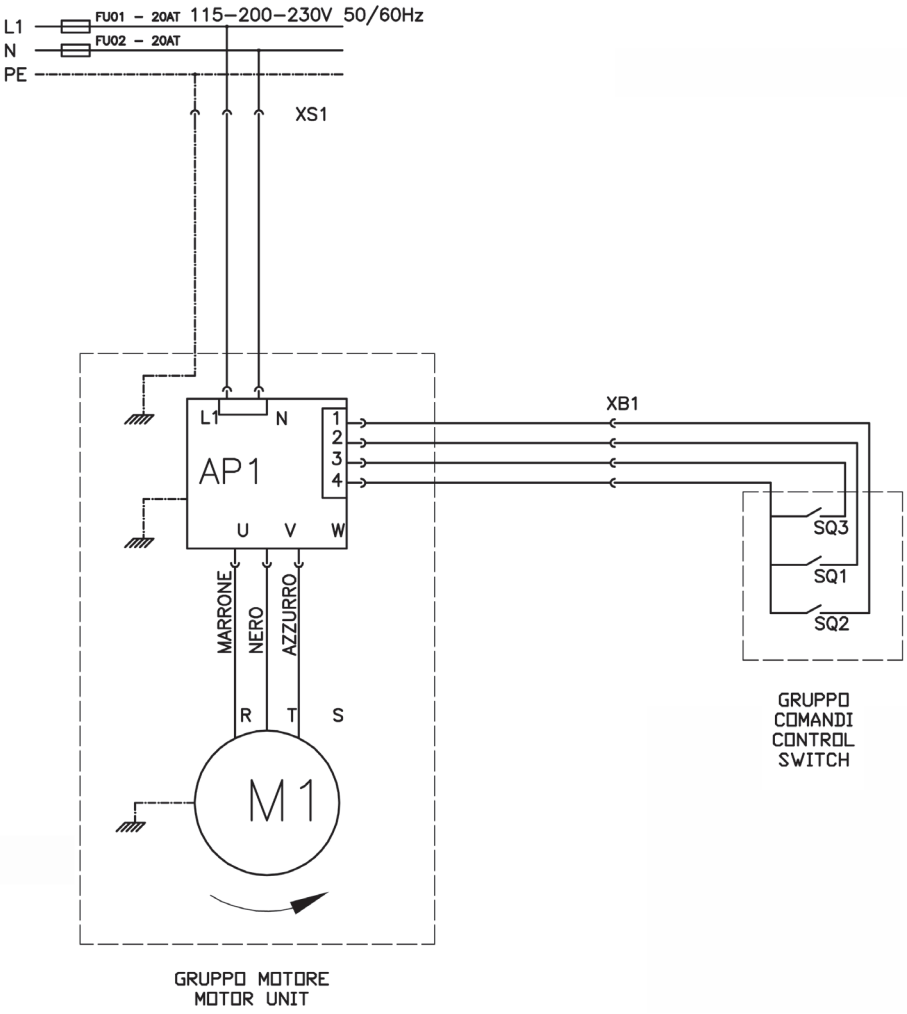
115V 60Hz	220V 50-60Hz
C1=45uF 450Vl	C1=35uF 500Vl
R1 = 330K 1W	R1 = 330K 1W

	FU1-FU2
110V 50/60Hz	25A
220V 50/60Hz	20A

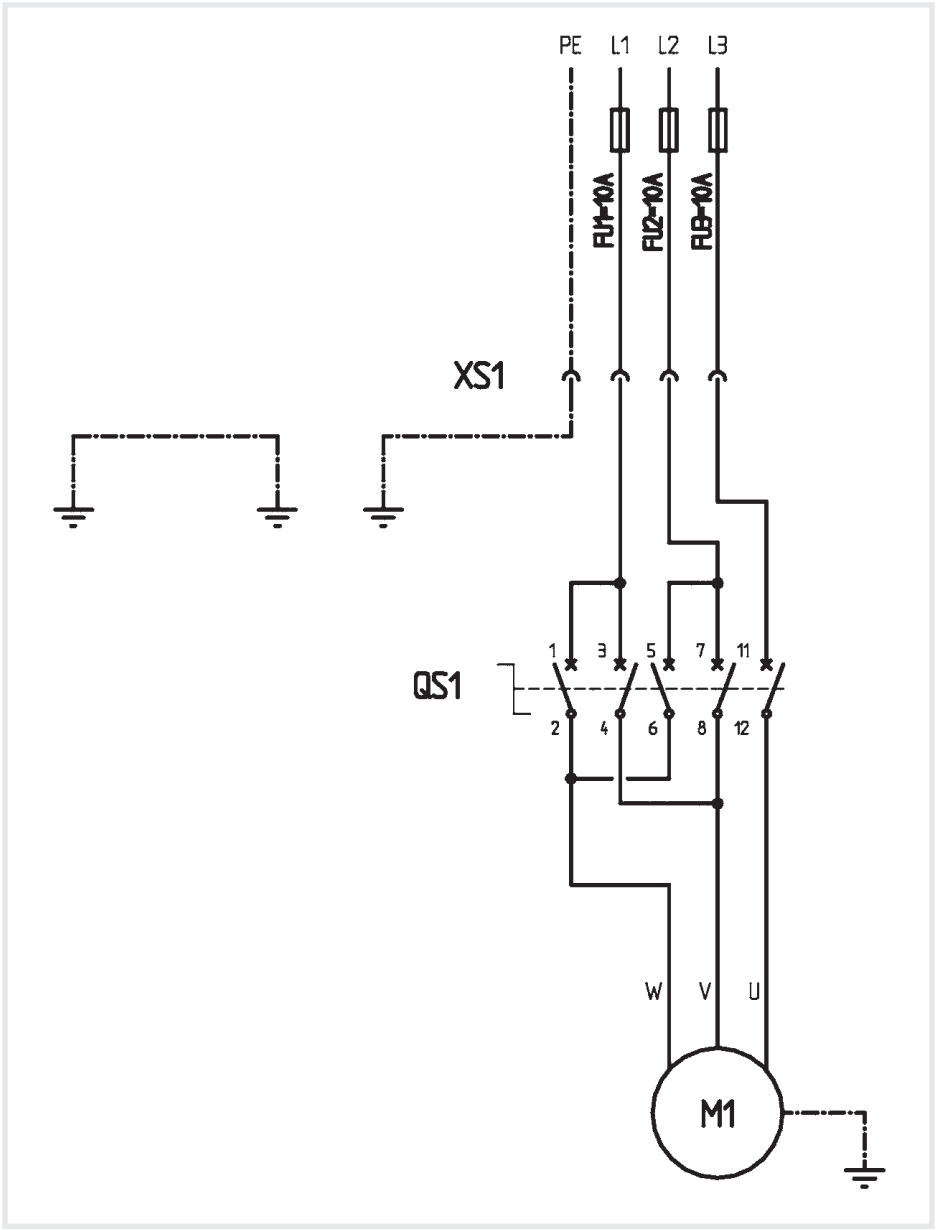


Schema cablaggio morsettiera
Wiring diagram terminal-blok

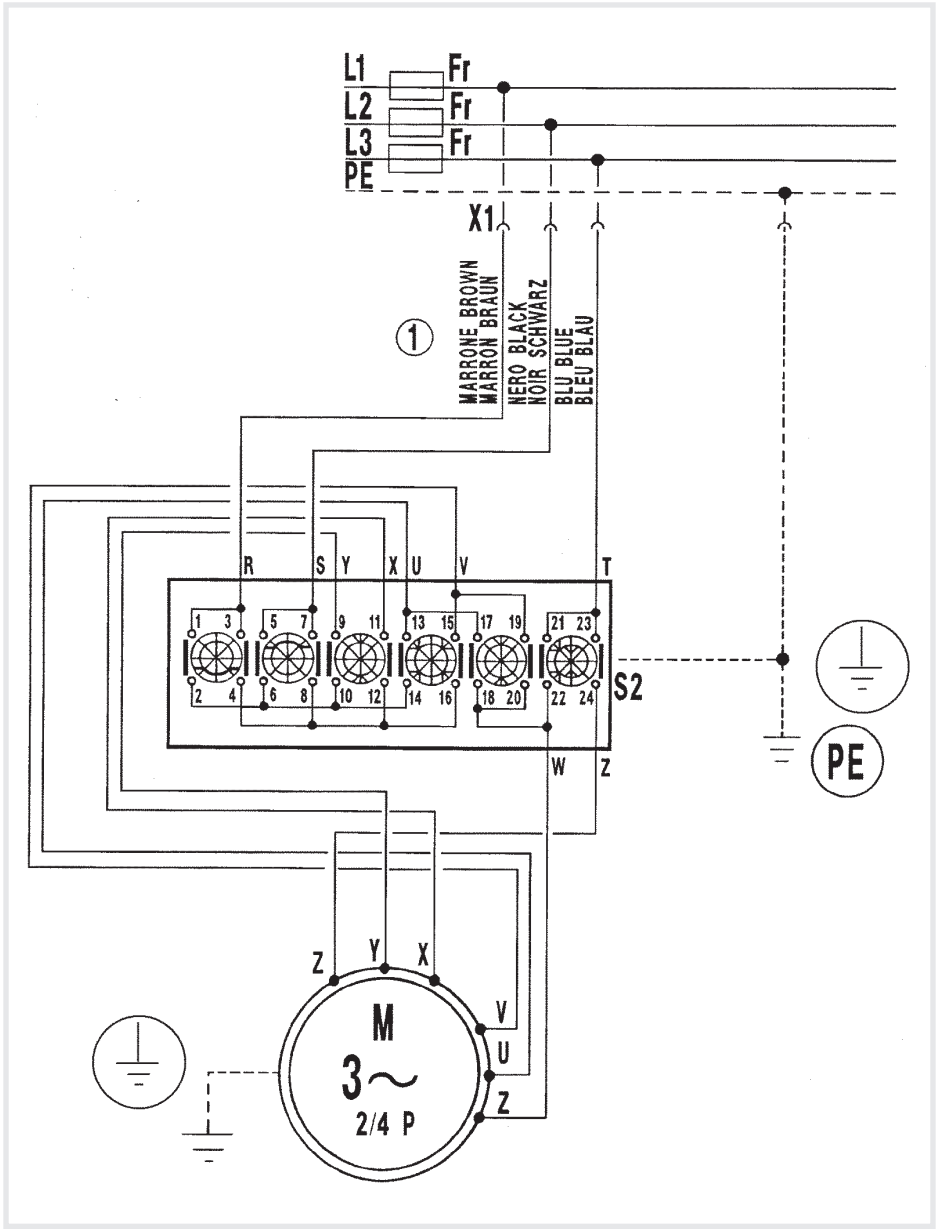
11.2. 100-115-200-230V DV TYRE CHANGER



11.3. THREE-PHASE TYRE CHANGER

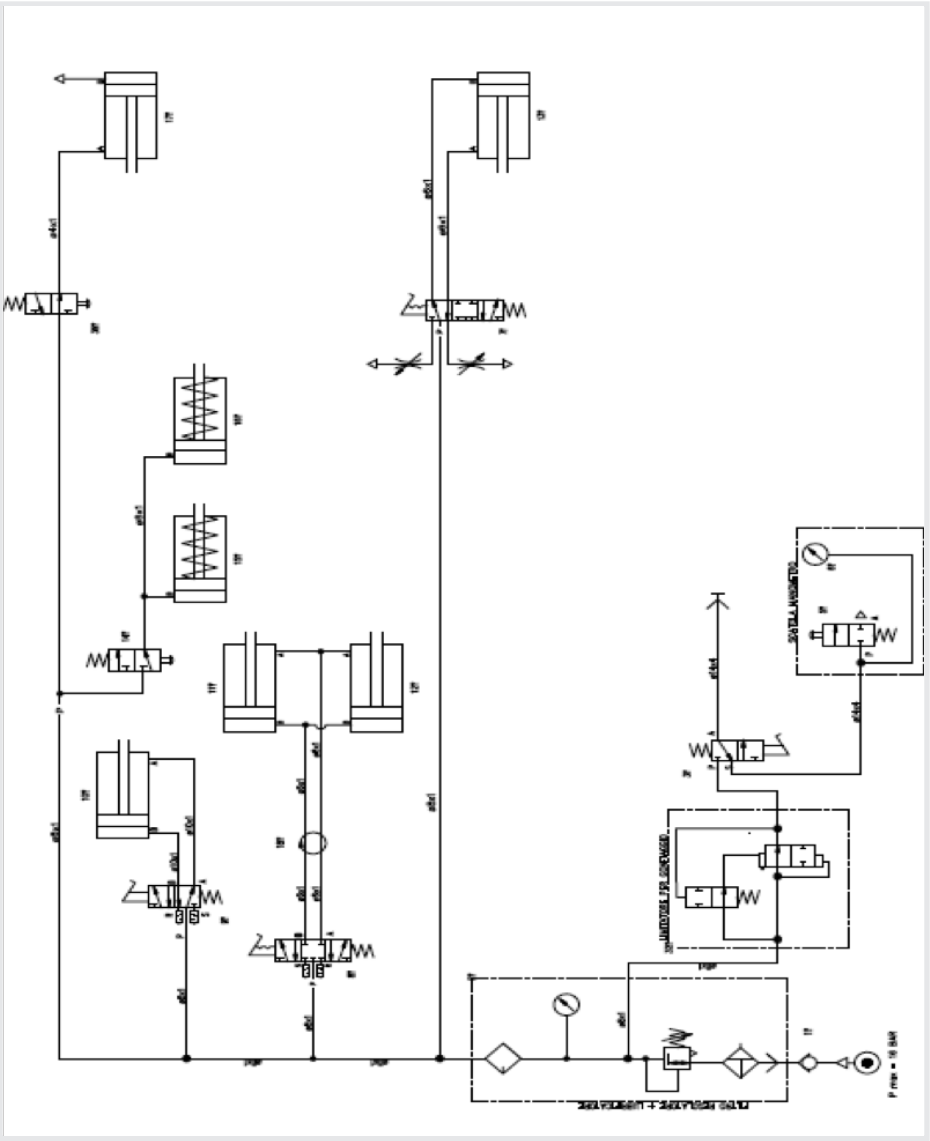


11.4. THREE-PHASE 2-SPEED TYRE CHANGER

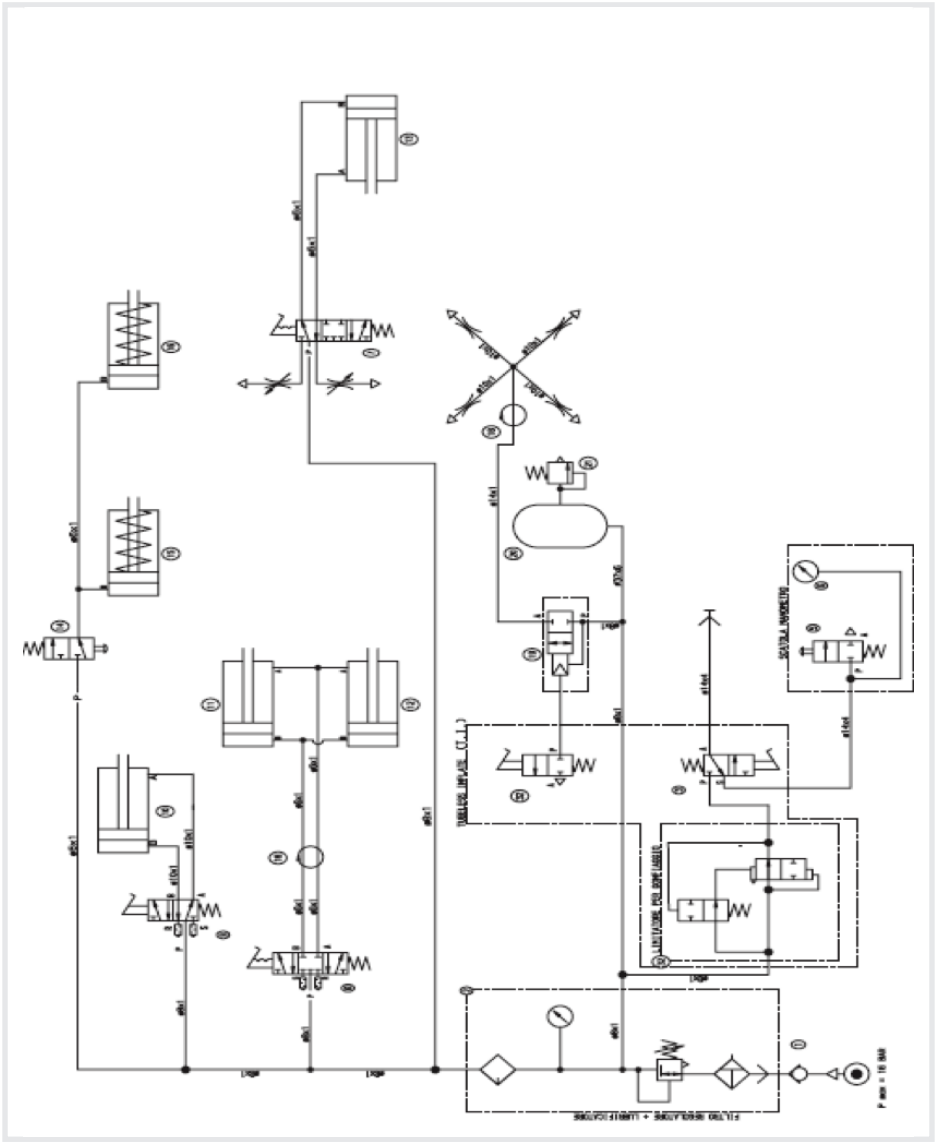


12. GENERAL PNEUMATIC SYSTEM

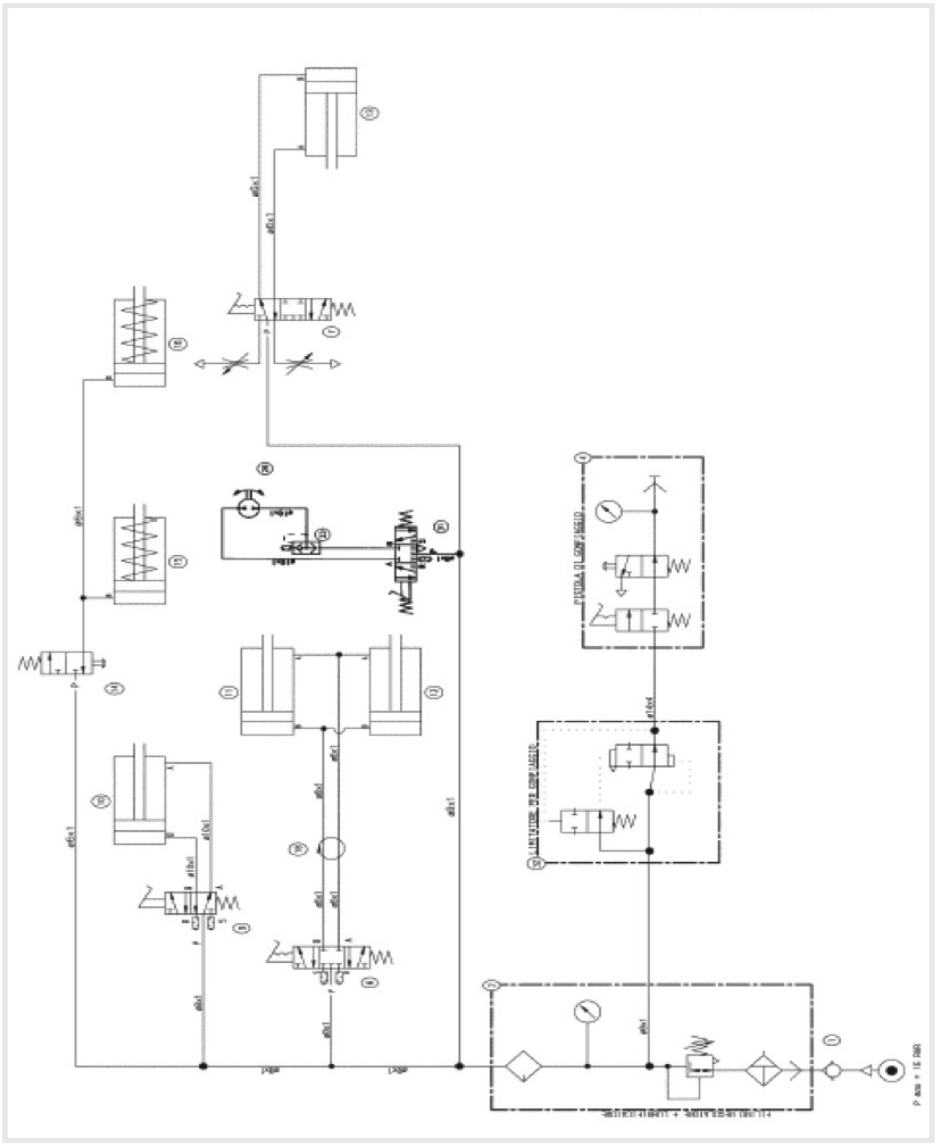
Ref.	Element
1	Quick coupling
2	Filter regulator unit
3	Inflation pedal
4	Inflation gun
5	Deflation button
6	Pressure gauge
7	Pole transfer valve
8	Turntable valve
9	Bead breaker valve
10	Bead breaker cylinder
11	Right turntable cylinder
12	Left turntable cylinder
13	Pole tilting cylinder
14	Clamping handle valve
15	Front clamping cylinder
16	Rear clamping cylinder
17	Pole transfer cylinder
18	Swivel union
19	Delivery valve
20	Tank
21	Relief valve
22	5/2 NO Valve
23	Tool actuator cylinder
26	Air motor pump
31	Air motor pump valve
32	Inflation limiter unit



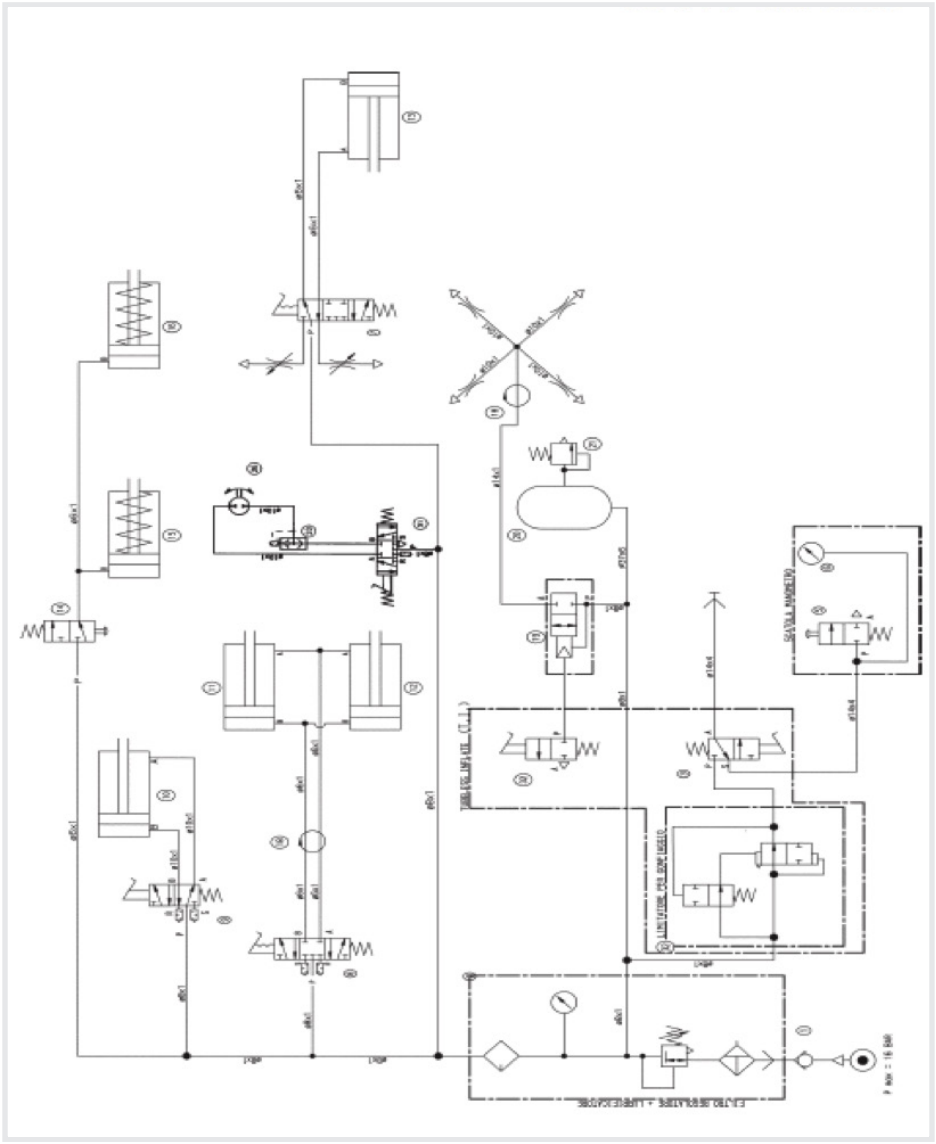
12.1. VERSION WITH EXTERNAL AIR TANK



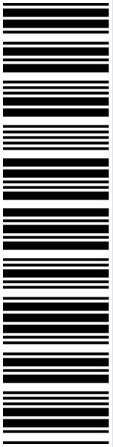
12.2. WITH AIR MOTOR



12.3. VERSION WITH EXTERNAL AIR TANK AND AIR MOTOR



IT - Dichiarazione CE di conformità - Dichiarazione di conformità UE*
EN - EC Declaration of conformity - EU Declaration of conformity*
FR - Déclaration EC de conformité - Déclaration UE de conformité*
DE - EG – Konformitätserklärung - EU-Konformitätserklärung*
ES - Declaración EC de conformidad - Declaración UE de conformidad*



Cod. 4-145262A Release date 07/2023

IT In qualità di fabbricante, dichiara che il prodotto:
al quale questa dichiarazione si riferisce e di cui abbiamo costituito e deteniamo il relativo fascicolo tecnico è conforme alle seguenti normative e Direttive:
*: Valida solo per macchine marcate CE

EN As producer declare that the product:
to which this statement refers, manufactured by us and for which we hold the relative technical dossier, is compliant with the following standards and Directives:
*: Valid only for EC-marked machines

FR Déclarons que le materiel:
objet de cette déclaration, dont nous avons élaboré le livret technique, restant en notre possession, est conforme aux normes et Directives suivantes :
*: Valable uniquement pour les machines avec marquage CE

DE Erklärt hiermit dass das product:
Worauf sich die vorliegende Erklärung bezieht und dessen technische Akte diese Firma entwickelt hat und innehält, den anforderungen folgender normen und Richtlinien entspricht:
*: Gilt nur für EG-gekennzeichnete Maschinen

ES Declara que el producto:
al cuel se refiere la presente declaración y del que hemos redactado y poseemos el correspondiente expediente técnico, se conforma a las siguientes normas y Directivas:
*: Válida sólo para máquinas con marcado CE