since 1956 matteuzzi

MACCHINE PER PNEUMATICI E PER I PROCESSI DI RICOSTRUZIONE
EQUIPMENT FOR THE TYRE AND RETREADING INDUSTRIES

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MANUALE PER USO E MANUTENZIONE
OPERATION AND MAINTENANCE MANUAL
MANUEL D'UTILISATION ET D'ENTRETIEN
BETRIEBS- UND WARTUNGSANLEITUNG

G100	***TESTING MACHINE*** *FOR TRUCK TYRES COMPLETE WITH BOOTH*

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machine type	**G 100** **TESTING MACHINE FOR TRUCK TYRES** **complete with booth**
year of manufacture	2022
serial no.	MAT – 21216
manufacturer	MATTEUZZI SRL Via Serra, 1/E – 3 40012 CALDERARA DI RENO BOLOGNA - Italy
importer	

Questo manuale è parte integrante della macchina e deve essere disponibile durante l'uso della macchina stessa e per la cessione ad eventuali altri utilizzatori.

This manual is an integral part of the machine. It must be kept close to hand when using the machine and must be available for transfer to other users if necessary.

Cette brochure fait partie intégrante de la machine; elle doit être disponible pendant le fonctionnement de la machine et accompagner la machine en cas de cession à d'autres utilisateurs.

Diese Betriebsanleitung ist ein ergänzender Bestandteil der Maschine. Alle Bediener müssen während des Betriebs direkten Zugang zur Anleitung haben .

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1. INTRODUCTION

1.1. GENERAL SAFETY INSTRUCTIONS

1. This manual provides the user with the instructions needed to ensure safe and correct use of the machine and to perform running maintenance operations on it. All personnel involved in the transportation, installation, commissioning, operation, maintenance and repair of the machine and its accessories must have read and properly understood:
   - the operating instructions,
   - the safety rules,
   - the warnings contained in the individual chapters and paragraphs.

2. It is forbidden for two or more persons to use the machine simultaneously, whether for operating or to carry out maintenance. The operator must be properly trained to use the machine, to evaluate the characteristics and condition of the products to be processed and to perform, when necessary, the adjustments and settings as dictated by the type of job to be done. Persons under the influence of drugs, alcohol or medicines that impair the speed of their reflex reactions must not be allowed to engage in the installation, operation, retooling and maintenance of the machine.

3. Failure to observe the warnings contained in this manual might cause personal injury and even death. The manual must be accompanied by the company's specific rules, including supervisory and reporting duties, regarding work organization, work cycles, personnel appointed to the various tasks and other matters.

4. The user must check that the personnel perform their tasks with full knowledge and awareness of the safety rules and hazards, and that they follow the instructions contained in this manual. The user must also make sure that the machine is always in perfect working order.

5. The machine may only be used in perfect working order and it must be used by a single trained operative, in compliance with the prevailing safety and accident-prevention regulations. This provision includes observance of the operating and maintenance instructions contained in this manual.

6. Warnings and danger signs in the form of plates, stickers and marks fitted to the machine must be scrupulously observed. These plates, stickers and marks must not be removed and must be legible at all times.

7. Do not cover the cooling grilles on the electrical cabinet.

8. It is forbidden to disconnect or modify the safety devices.

9. Cut off the electrical and pneumatic power supply connections and discharge any remaining air before carrying out any cleaning, retooling or maintenance operations.

10. Power up the machine to the voltage specified on the plate and set up an appropriate connection board in accordance with prevailing standards.

11. Cut off the electrical and pneumatic connections and call up the customer service when:
- The electrical and electronic parts of the machine have been exposed to rain or water.
- The machine does not function properly, even though the instructions are followed.
- The machine has been damaged during transportation or handling.
- The machine exhibits a marked deterioration with respect to its normal level of performance.

	**WORK SAFETY WARNING SIGN.** In the following instructions this symbol appears next to warnings describing situations which, when the machine is in operation, pose a serious risk of injury. You must always observe these warnings and work with particular care and attention. Same warnings must be notified to all the persons assigned to do work on the machine. In addition to the specific warnings, you must also take account of the general safety rules.

1.2. LIMITED LIABILITY

The information, data and instructions contained in this manual are current at the time of printing and are based on our most up-to-date technical knowledge.

We shall make good any defects and omissions under the warranty obligations undertaken at the time of the order, but shall not satisfy any further claim. Demands for compensation, on whatever legal grounds they are made, shall not be considered.

The translations from the Italian are made with due care and diligence, but with the usual provisos. The only text forming the basis for interpretation is the original version in Italian which can be obtained on demand.

The manufacturer disclaims all liability for malfunctions or inefficiencies caused by:

improper use, negligence, non-maintenance or incorrect maintenance, incorrect manoeuvres, incorrect electrical or pneumatic power supply, omission of required adjustments, tampering or modifications not authorized in writing to mechanical, pneumatic, electrical, electronic parts or software programs.

Furthermore, the manufacturer accepts no responsibility in the event that wire or electrode welding jobs are carried out on any part of the machine or even on other machines connected to the same mains power supply, unless the manufacturer has been contacted in advance and the appropriate precautions agreed and implemented.

1.3. DEFINITIONS

User. Denotes the party (business/firm) which uses and employs the machine and assigns suitably trained personnel to operate it.

Operator. Denotes the person instructed by the user to perform specific operations connected with the use of the machine, including the necessary cleaning, checks and visual inspections.

Trained personnel. This term denotes an individual who has received instruction and training both on the tasks assigned to him/her and on any dangers occasioned by improper use. The said individual is also well informed and has demonstrated his or her knowledge regarding the necessary safety devices, protective measures, relevant regulations, health and safety rules and work conditions.

Mechanical maintenance technician. This term denotes an individual who is in charge of mechanical adjustments, maintenance and repairing.

Electrical maintenance technician. This term denotes an individual who is in charge of electrical adjustments, maintenance and repairing.

Dangerous area. Any area inside or close to the machine, where the presence of a person implies a risk to the health and safety of that person.

Exposed person. Any person totally or partially inside a dangerous area.

Danger. Any cause of possible health and safety damage.

Risk. The product between the probability that an event could happen and the seriousness of injures or damages to health and safety it can cause.

Protections. Safety measures that protect operators from dangers that cannot be eliminated or mitigated through design only.

Shelter. A protection that consists of a physical barrier.

	**Tyre casings, retreaded tyres and new tyres may generically be described as *tyres* in the descriptions provided in this manual, when no more specific mention is required.**

1.4. WARRANTY

This manual contains all the information, rules and standards to be observed. Therefore, it must be read carefully before starting up the machine.

MATTEUZZI SRL may not be held liable for any damage or operating abnormalities resulting from failure to observe the service instructions.

The machine's wear parts are not covered by the warranty. Any claims under warranty must be reported immediately, as soon as the defect is identified, and the machine's serial number must also be specified.

The warranty lapses in the following cases:

- improper use,
- use of work equipment that is not allowed,
- installation and connection of electrical cables performed incorrectly and not in conformity with prevailing regulations,
- use of non-original spare parts or accessories.
- modifications made without the permission of MATTEUZZI SRL and, in particular, modifications which include electrode or wire welding.

1.5. PERSONNEL SELECTION AND REQUIREMENTS

With respect to the operation or maintenance of the machine to be performed independently, the user may only assign operators who:

- are over 18 years of age;
- have suitable physical and mental abilities;
- have been trained in the use or maintenance of the machine and have then demonstrated their competence. The training must include teaching of the necessary theoretical concepts regarding the machine and the characteristics of tyres, and it must also provide sufficient opportunity for the trainees to carry out practical trials and acquire the ability to identify abnormalities that might threaten work safety;
- can be relied upon to perform competently the operations assigned to them.

The operator must also be given the opportunity to perform a sufficient number of trial runs in order to acquire the ability to identify abnormalities that may threaten safety in the workplace.

The user must clearly define the tasks and duties of the personnel with regard to operation, maintenance and repairs.

2. PRELIMINARY MACHINE INFORMATION

2.1.1. GENERAL DESCRIPTION

The machine is intended to allow testing of inflated tyre casings, retreaded tyres and new tyres for buses, trucks and light transport vehicles.

The process must only be performed on tyre casings, retreaded tyres and new tyres that have already been inspected and cleaned to remove foreign objects.

IMPORTANT WARNING

The machine has been designed to inflate tyres of different sizes to different pressures and to enable them to be checked.

This operation is important for an effective check of the tyre and for enhancing its quality and safety on the road. However, it is dangerous if performed without scrupulously following the general safety rules and the information and instructions contained in all the paragraphs of this manual.

The danger derives from the possible bursting of a defective tyre; however, the alertness and skill of the operator can prevent this happening by deflating the tyre being inspected.

The danger and risk for the operator are virtually non-existent because the machine is supplied with the protective booth integral with the machine frame.

Even though it is a recognised fact that the danger factors and risks are greater when inflating truck tyres because of the greater pressure involved, it is nonetheless essential to observe the general safety rules even when inflating light transport vehicle tyres.

The user must contact Matteuzzi srl for any doubts regarding machine operations.

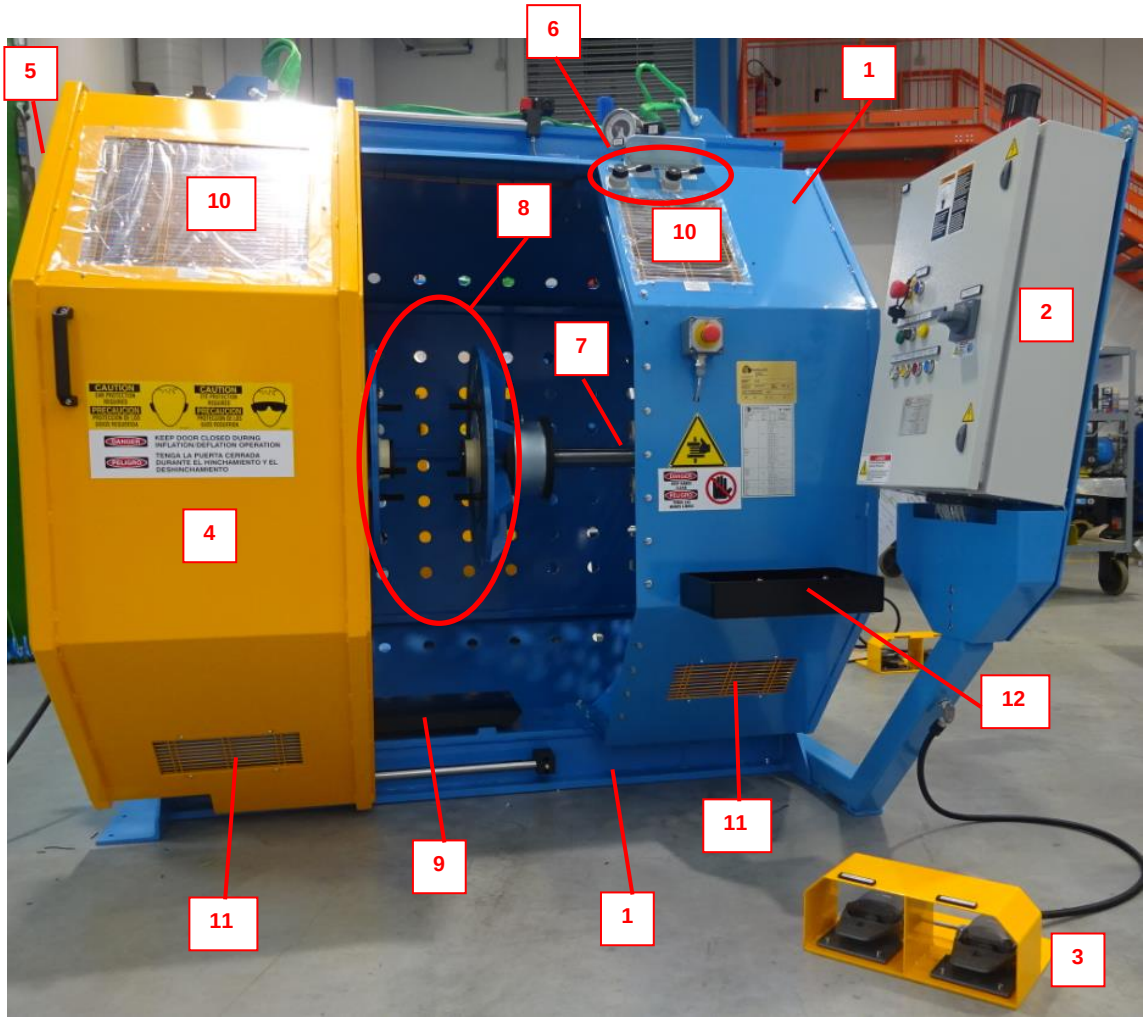


Figure 1: general description

1. Machine with booth
2. Electrical cabinet and control panel
3. Pedal controls
4. Front sliding door
5. Compressed air controls (machine l. h. side)
6. Tyre lift and bead plate pneumatic controls
7. Mobile spacers (inside the booth)
8. Bead plate assembly
9. Tyre lift
10. Inspection windows
11. Air vents in case of a tyre burst
12. Tool tray

2.2. USE

The machine is intended to allow testing of inflated tyre casings, retreaded tyres and new tyres for buses, trucks and light transport vehicles.

During the check, it is the operator's task to:

- equip the machine with the right bead plates for the tyre being inspected,
- choose and operate the various inflation pressure levels suitable for the tyre being checked;
- select and operate one of the two rotation speeds;
- operate the various controls.

The process must only be performed on tyre casings, retreaded tyres and new tyres that have already been inspected and cleaned to remove foreign objects.

2.2.1. PROHIBITED USE

It is forbidden to use the machine for any purpose other than the ones described at paragraph 2.2.

It is expressly forbidden to apply cement (solution) to tyres loaded on this machine.

	**It is also expressly prohibited to use the machine to check tyres or casings:** • **very soiled with earth or other matter,** • **containing water,** • **with obvious mechanical defects (cuts, raised belts, deformed beads and sidewalls, etc.),** • **solid tyres (non-inflatable),** • **exceeding the specified dimensions and weight,** • **that have not been cleaned or visually inspected beforehand,** • **with a rim size that does not match the bead plates fitted on the inflation machine,** • **which do not indicate the maximum inflation pressure on the sidewall.**

2.2.2. CONDITION OF CASINGS

The casings to be inflated must be the product of a meticulous selection process during which the following checks have been performed:

- **spreading of beads,**
- **visual inspection of interior, beads, sidewalls and tread area,**
- **removal of any foreign matter that may have been embedded in the casing during use.**

IT IS FORBIDDEN TO INFLATE A CASING WHICH, BECAUSE OF LARGE HOLES OR ABRASION, EXPOSED STEEL BELTS OR DEFORMATION, MAY NOT BE CONSIDERED SUITABLE FOR THIS OPERATION.

2.2.3. CONDITION OF RETREADED TYRES

The inflation check must only be performed on properly retreaded tyres which, during the retreading process, have not exhibited abnormalities or problems of air tightness when inflated.

It is forbidden to inflate a retreaded tyre that has not previously been inspected and inflated during the acceptance procedure for admission to the retreading cycle

IT IS FORBIDDEN TO INFLATE A TYRE WHICH, BECAUSE OF LARGE HOLES OR ABRASION, EXPOSED STEEL BELTS OR DEFORMATION, MAY NOT BE CONSIDERED SUITABLE FOR THIS OPERATION.

2.2.4. TYRE SIZES

The machine is designed to treat casings of the following sizes:

	MINIMUM	*MAXIMUM*
External diameter	560 mm (22”)	1150 mm (45”)
Cross section	---	600 mm (24”)
weight	---	80 kg

Different limits are possible when requested by the user at the time of the order.

2.2.5. INSTRUCTIONS ON THE TYRE

It is absolutely essential that you scrupulously comply with the specifications stamped on the sidewall of the tyre by the original manufacturer or by a retreader. Particular attention must be paid to the information regarding inflation pressure.

	**IT IS FORBIDDEN TO INFLATE, EVEN TO A MINIMUM PRESSURE, TYRES THAT DO NOT HAVE THE MAXIMUM INFLATION PRESSURE STAMPED ON THE SIDEWALL.**

2.2.6. TYRE/CASING INFLATION PRESSURE

MAXIMUM PRESSURE: 8 bar (116 PSI)

2.3. IDENTIFICATION PLATE

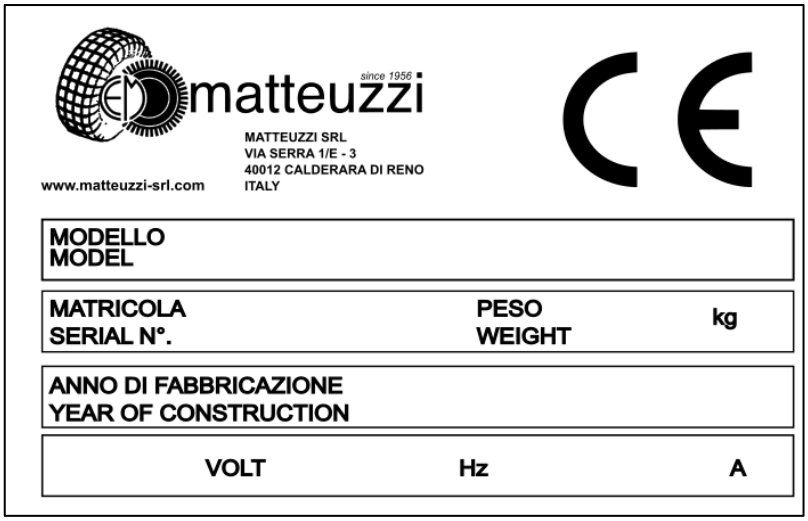


Figure 2: identification plate

The identification plate is fitted on the machine frame.

The following data are reported on the identification plate:

- CE marking (when applicable)
- Manufacturer name and address
- Machine model
- Serial number
- Weight
- Year of manufacture
- Electrical data

When contacting the machine manufacturer, in order to request information or ordering spare parts, the following data must always be specified:

- Machine model
- Serial number
- Year of manufacture

2.4. RESIDUAL RISKS

	**Warning and danger notices in the form of plates, adhesives and marks applied to the machine must be strictly observed. They must not be removed and must be legible and easy to read at all times.**

2.4.1. MACHINE HANDLING

Risks:	
During machine handling, the operator may crush his hands, feet or other body parts.	

Personal protective equipment:	
Gloves	
Protective footwear	
Hard hat	
Work apparel	

Safety procedures:	
Use handling devices with adequate lifting capacity.	--
Operate on flat surfaces.	--
Always check the proper fastening of the parts to be lifted.	--
Strictly follow the instructions reported in the Operation and Maintenance Manual.	--

2.4.2. MACHINE IN OPERATION

Risks:	
POSSIBLE BURSTING OF A DEFECTIVE TYRE.	
MIND YOUR HANDS! The operator must pay attention to machine parts that may pose a risk of crushing, such as the bead plate assembly, the sliding door and the tyre lift.	
Electrocution due to contact with electrical parts.	

	**Crushing risk is present also when the machine is not performing a cycle, due to compressed air in the pneumatic circuit.**

Personal protective equipment:	
The operator must wear gloves to protect his hands from mechanical injury.	
The operator must wear protective footwear.	
Protect ears and eyes.	 
In particular conditions it may be necessary to wear other personal protective equipment suitable for the operation performed.	--

Safety procedures:	
Keep the area surrounding the machine clean, free from obstacles and objects that may make it slippery.	--
Make sure that only authorized personnel is in the working area.	
Do not remove safety devices.	
Strictly follow the instructions reported in the Operation and Maintenance Manual.	--
Do not wear loose long hair.	--
Do not wear jewellery.	--
Do not weld (It is forbidden to carry out electrode or wire welding on any part of the machine, on other machines in the vicinity or on machines connected to the same mains power supply. Permanent damage may be done to the computer and equipment connected to it and your warranty voided. If necessary, contact Matteuzzi srl to establish the required precautions.).	
Do not use water to extinguish fire.	

2.4.3. MACHINE MAINTENANCE

Risks:	
Hands and feet crushing due to sudden falling of machine parts or tools during retooling.	
Electrocution due to contact with electrical parts.	

Personal protective equipment:	
The operator must wear gloves.	
The operator must wear protective footwear.	
Personal protective equipment that may be necessary for the specific maintenance operations.	--

Safety procedures:	
Maintenance operations can be performed only by qualified personnel.	
To perform maintenance operations, follow this general procedure: cut off all machine power supplies, perform the necessary maintenance, reconnect the machine to the power supplies, check the safety conditions of the machine.	
Strictly follow only the maintenance interventions reported in the Operation and Maintenance Manual.	--
Do not grease parts in motion.	

Safety procedures:	
Do not weld (It is forbidden to carry out electrode or wire welding on any part of the machine, on other machines in the vicinity or on machines connected to the same mains power supply. Permanent damage may be done to the computer and equipment connected to it and your warranty voided. If necessary, contact Matteuzzi srl to establish the required precautions.).	
Do not use water to extinguish fire.	

WARNING!

High voltage is available inside the electrical box even after supply cut off. Wait at least 5 minutes before opening the electrical cabinet or touching any other electrical device.

2.4.4. NOTICES ON THE MACHINE

Warning and danger notices in the form of plates, adhesives and marks applied to the machine must be strictly observed. They must not be removed and must be legible and easy to read at all times.

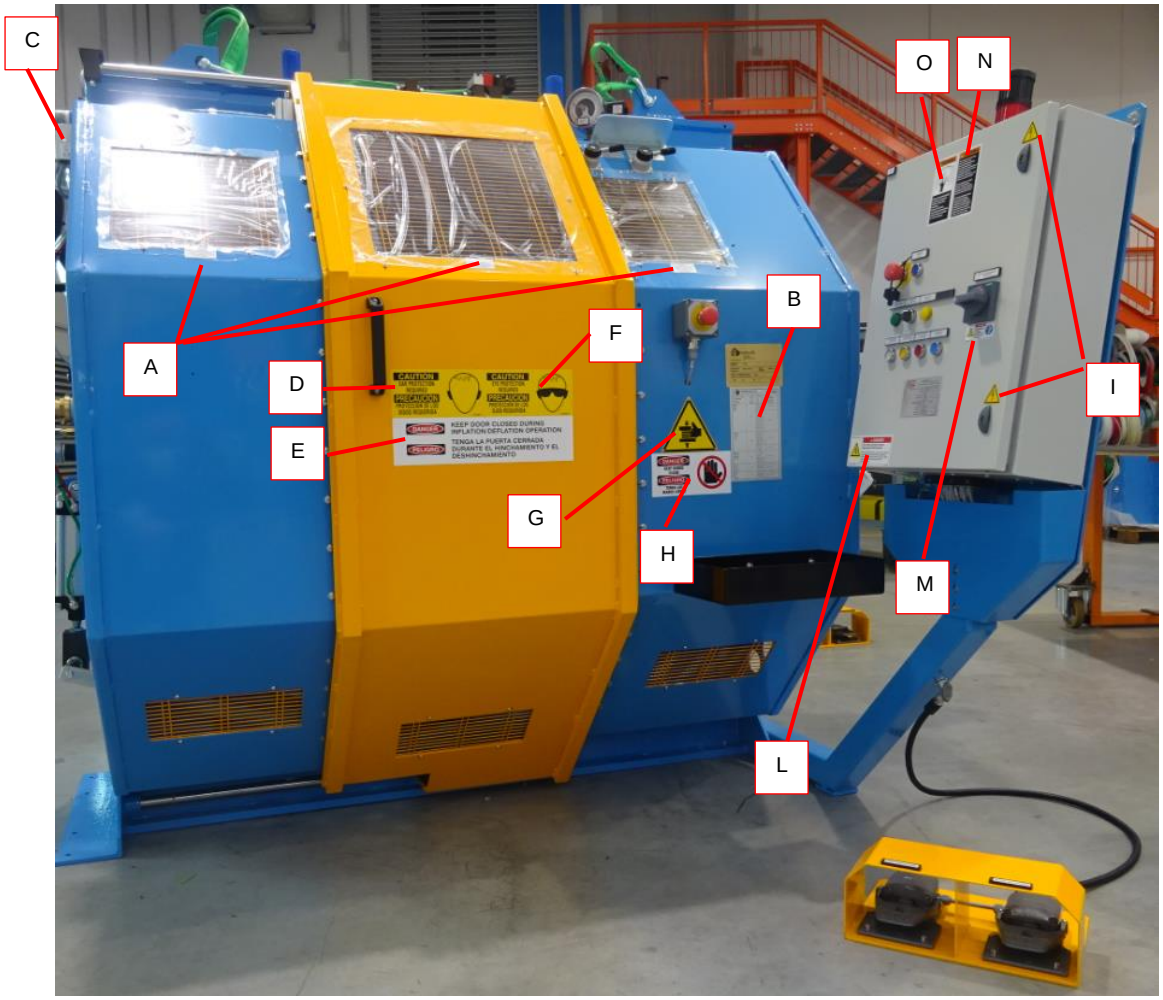
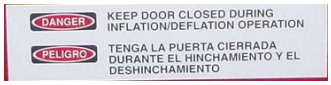
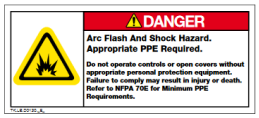
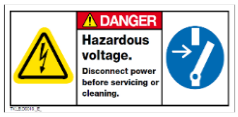
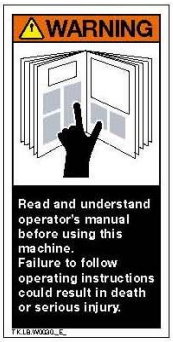
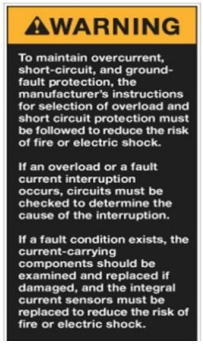


Figure 3: instruction and warning notices

PRELIMINARY MACHINE INFORMATION

REF.	NOTICES ON THE MACHINE	INSTRUCTIONS FOR OPERATOR
A	WARNING PLATE	WARNING!!! If necessary, replace the front door window with a suitable piece of polycarbonate resin thermoplastic. DO NOT USE GLASS.
B	PLATE	Plate giving instructions for correct use of the spacers.
C		To perform maintenance operations, follow this general procedure: cut off all machine power supplies, perform the necessary maintenance, reconnect the machine to the power supplies, check the safety conditions of the machine;
D		CAUTION: EAR PROTECTION REQUIRED The operator must wear a headset to protect the ears against the acoustic pressure during deflation and in the event of accidental tyre burst.
E		Keep door closed during inflation / deflation operation.
F		CAUTION: eye protection required
G		Crushing risk due to moving parts.
H		DANGER: keep hands clear.
I	 **High voltage is available inside the electrical box even after supply cut off. Wait at least 5 minutes before opening the electrical cabinet or touching any other electrical device.**	CAUTION: HIGH VOLTAGE This sign is present on the electrical box. Only trained personnel can carry out manoeuvres or repairs inside.

REF.	NOTICES ON THE MACHINE	INSTRUCTIONS FOR OPERATOR
L		DANGER: ARC FLAS AND SHOCK HAZARD. APPROPRIATE PPE REQUIRED. Do not operate controls or open covers without appropriate personal protection equipment. Failure to comply may result in injury or death. Refer to NFPA 70E for minimum PPE requirements.
M		HAZARDOUS VOLTAGE Disconnect power before servicing or cleaning.
N		WARNING Read and understand operator's manual before using this machine. Failure to follow operating instructions could result in death or serious injury.
O		WARNING To maintain overcurrent, short-circuit and ground-fault protection, the manufacturer's instructions for selection of overload and short circuit protection must be followed to reduce the risk of fire or electric shock. If an overload or a fault current interruption occurs, circuits must be checked to determine the cause of the interruption. If a fault condition exists, the current-carrying components should be replaced if damaged, and the integral current sensors must be replaced to reduce the risk of fire or electric shock.

2.5. TECHNICAL DATA

2.5.1. WEIGHT AND DIMENSIONS OF THE MACHINE IN SERVICE

DIMENSIONS OF THE MACHINE IN SERVICE	2485 x 2011 x 1960 (h) mm
WEIGHT	2340 kg
MACHINE BASE	0,85 m^2

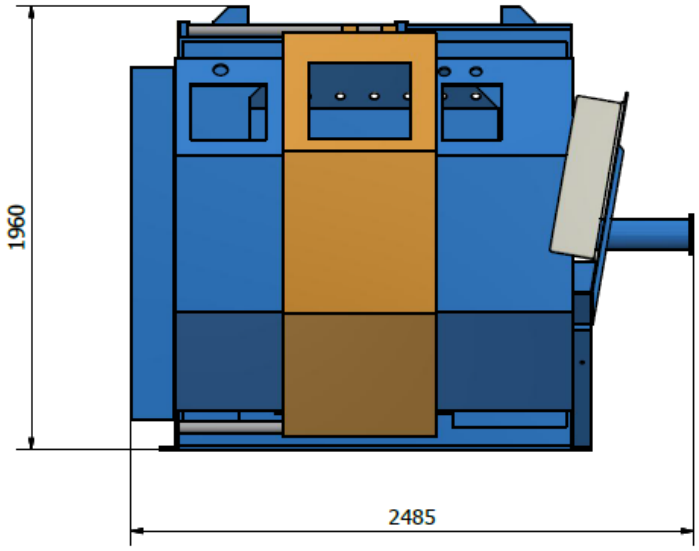


Figure 4: dimensions of the machine in service.

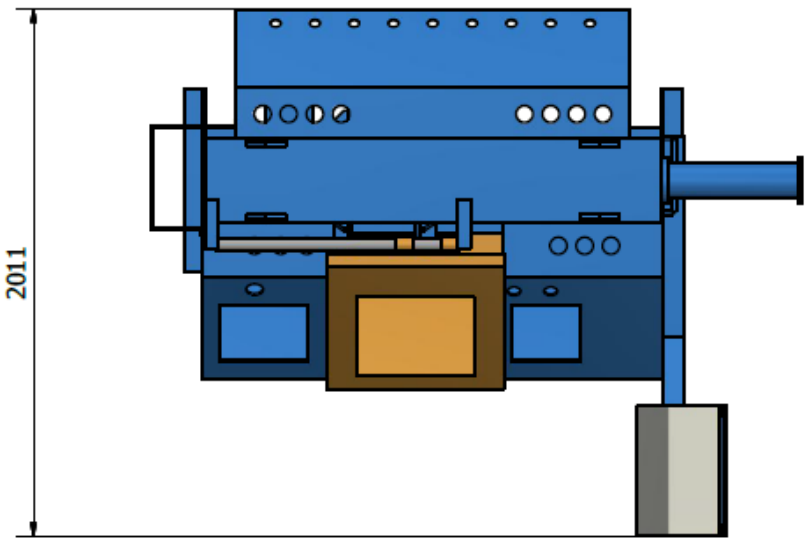


Figure 5: dimensions of the machine in service.

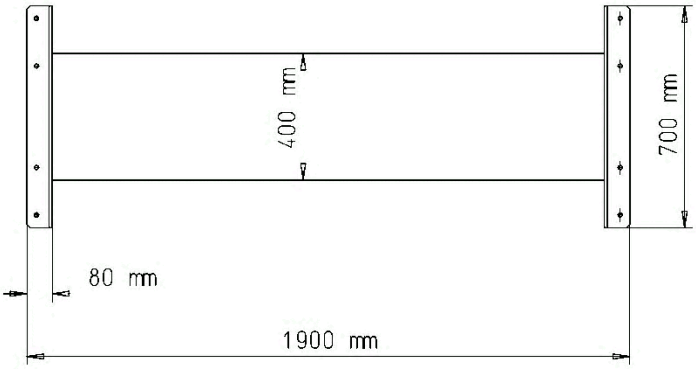


Figure 6: machine base

2.5.2. ELECTRICAL POWER SUPPLY

Total installed power	3,2 kW
Rated current	6,7 Ampere
Voltage	**The machine is designed for connection to the following type of power supply:** **480 Volt, 3-phases, 60 Hz**
The power supply line must be stable and foolproof. The configuration of the system upstream of the machine must contain protection devices suitable to the data reported above.	

The voltage, frequency, system and rated current of the machine are also indicated on the notice applied to the door of the electrical cabinet.

	**ONLY A QUALIFIED ELECTRICAL MAINTENANCE ENGINEER MAY ACCESS THE ELECTRICAL CABINET AND LIVE CIRCUIT.** **CONNECTION TO THE ELECTRICAL MAINS MUST BE MADE BY A QUALIFIED ELECTRICAL MAINTENANCE TECHNICIAN IN ACCORDANCE WITH CURRENT ACCIDENT-PREVENTION REGULATIONS.**

2.5.3. COMPRESSED AIR SUPPLY

Compressed air supply	8 bar (120 psi)
Compressed air absorption	1400 Nl/cycle (49.5 cu ft/cycle)

Compressed air is supplied to the machine circuit through a lockable inlet valve connected to a filter-reducer lubricator unit. The inlet valve provides a quick coupling.

To cut off compressed air supply to the machine, during operations requiring this precaution, the maintenance technician shall close and lock the actuator of the lockable inlet valve. The locking key must be kept by the maintenance technician in a safe place.

The cylinders operating the mobile bead plate and the up/down movement of the tyre loading platform are fitted with regulators that limit their stroke speed. Keep them in efficient working order.

Silencers are installed on the deflation and pneumatic control outlets and they too must be kept in efficient working order.

2.6. AMBIENT AND OPERATING CONDITIONS

2.6.1. OPERATING ENVIRONMENT

	MIN	MAX
Temperature	5° C	40° C
Relative humidity	30%	90%

Lighting	>300 lux required in the operator area. The machine operates in a closed industrial environment in the presence of people at work and the lighting provided in the workplace under prevailing local regulations is deemed sufficient. Upon request the machine can be equipped by on board specific lighting.

2.6.2. AERIAL NOISE EMISSION

Maximum acoustic pressure levels at the operator station during operation of a new and properly serviced machine:

- 78,3 dB(A) during loading and inflation,
- 86,5 dB(A) in the first phase of deflation.

Rapid, and therefore initially noisy, deflation is necessary so as to ensure effective action in the event of emergencies.

3. MACHINE HANDLING, POSITIONING AND INSTALLATION

3.1. PACKED MACHINE HANDLING

The machine and accessories are packed and secured to the pallets with bolts and nails in order to obtain a single rigid body, that is covered by a protective film.

Inspect the package upon receipt, and carefully make sure it has not been damaged or tampered.

ANY DAMAGE NOTICED ON THE MACHINE UPON RECIEPT MUST BE COMMUNICATED TO THE MACHINE MANUFACTURER.

The below reported operations may only be performed by trained personnel and with the use of a forklift truck or a crane with sufficient lifting capacity and fork length commensurate with the weight and dimensions of the package. Any other equipment must be considered unsuitable and dangerous.

Standard machine packing:

NET WEIGHT			
Pallet or case or crate	1 / 1	machine and accessories	2340 kg

Detailed information regarding actual packing is reported at shipment time in the specific packing list.

Figure 7: packed machine and accessories

3.2. MACHINE POSITIONING

The installation site must be selected with care so that the possible burst of a tyre does not pose a threat to the operator and the personnel working nearby.

The machine must be used by a single operator who must not for any reason be distracted during tyre testing operations.

No other person must be allowed to enter the work area which must be marked off and physically barred to other personnel.

In order to prepare the site where to install the machine, adequate space must be left available around the machine for:

- ⇒ **Accessing the rear side of the machine for maintenance reasons**
- ⇒ **Ease and safety of operations.**

Adequate space has to be left for the operator in front of the machine for standing and production activities and for ergonomically consistent control panel and tire lifting operations.

The operation area around the machine must be kept free from obstacles and materials.

1. Check that the floor is level and able to bear the weight of the machine.
2. Use a forklift truck to load/unload the packed machine and accessories, and to transport it to the installation site.
3. Leave the machine and accessories anchored to the shipping pallet and move it to the installation site.
4. Lift the machine 100 mm off the floor so as to remove the pallet after the fastening devices have been removed. For this purpose use the ropes delivered with the machine, already hooked to the parts of the machine with facility for their connection (The upper machine frame features 4 eyebolts, 2 on the R.H. side, 2 on the L.H. side). These ropes must not be used for any other purpose and must be retained for repositioning the machine on a pallet, as and when the need arises.
5. The pallet to which the machine is secured is protected by a waterproof polyethylene sheet which, if thrown away, must be disposed of properly and in accordance with local anti-pollution regulations.

Figure 8: machine lifting

6. Secure the machine to the floor using the holes provided in the base.

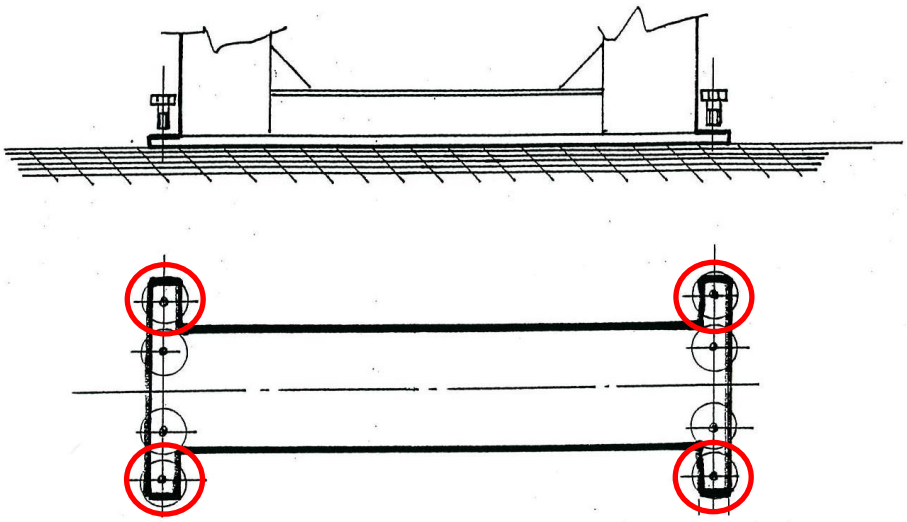
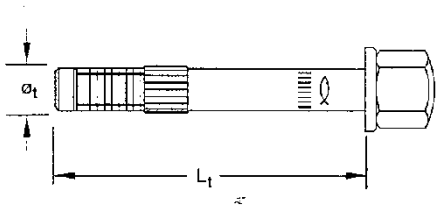
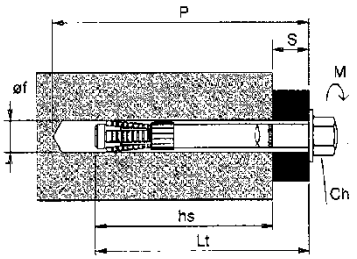


Figure 9: fitment holes in the machine base

We suggest to use steel anchors suitable for fixing into solid materials. The following data refer to fixings in concrete:





anchor ext. dia. - ∅t	12 mm
anchor length - L_t	100/135 mm
anchor placing depth - hs	≥ 70 mm
drilling nominal dia. - ∅f	12 mm
drill hole depth - P	100/135 mm

3.3. INSTALLATION OF PARTS DISMOUNTED FOR TRANSPORTATION

Reassemble the cylinder sleeve ref. A, Figure 10, in its operating position on the machine r. h. side.

Fasten the relevant screws.

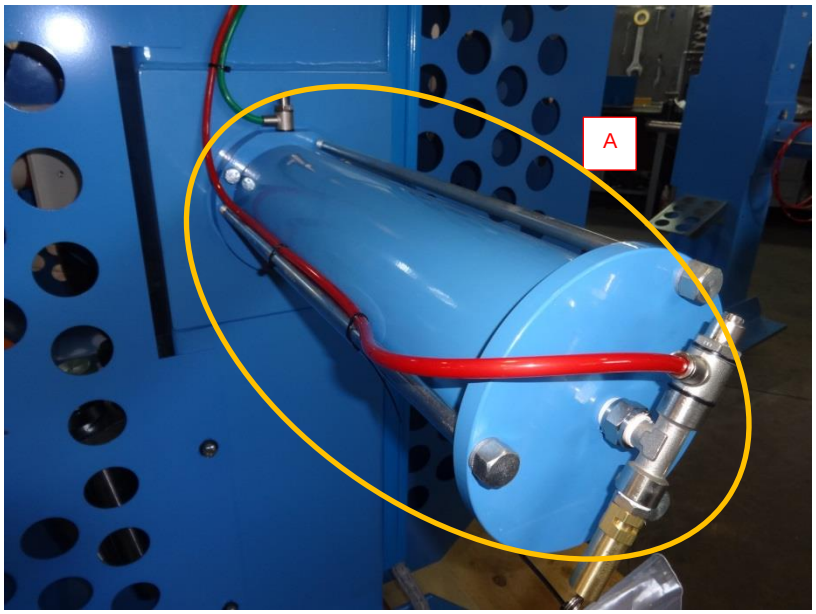


Figure 10: installation of parts dismounted for transportation

4. CONNECTION TO POWER SUPPLIES

4.1. WARNINGS

Installation of the machine must be carried out by skilled personnel. The said personnel may only proceed with the installation after they have studied the contents of the specification charts, figures and the information contained in the *introduction* and in this chapter of the manual.

The machine leaves the factory after undergoing repeated testing and inspection and it will be ready for use when the installation operations described below have been correctly carried out. If you require any further information, please contact your supplier, giving extensive details on the stage of machine installation and any abnormalities you have encountered.

The machine installation site will be determined by the customer according to workplace, production and safety-related requirements.

The installation area must be protected so that only personnel authorized by the user can gain access to it.

4.2. COMPRESSED AIR

	**The operations described below must be carried out by trained personnel.**

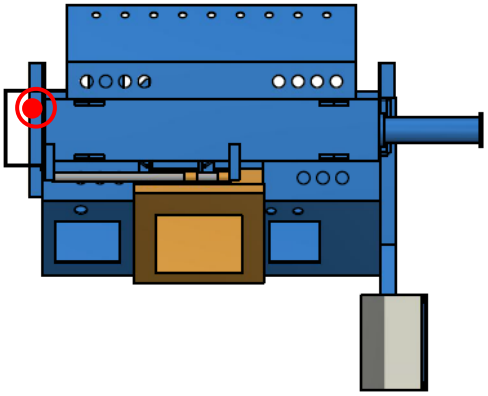


Figure 11: connection to compressed air

Supply the fitting of the filter - reducer - lubricator unit with compressed air at 8 bar. The pressure reducer is factory set to 8 bar and this value must not be exceeded.

Take care when doing this as residual air could briefly activate the pneumatically-operated devices such as the tyre lift or the bead plates.

4.3. ELECTRICAL POWER

	**The operations described below must be carried out by trained personnel.**

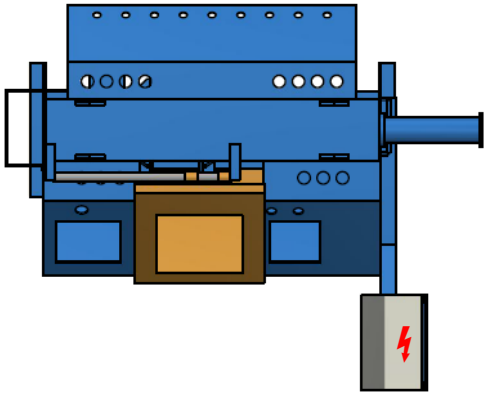


Figure 12: connection to electrical power

The electrical maintenance engineer responsible for making the electrical connection must first check that the voltage indicated on the plate applied to the machine matches the mains supply voltage.

Make sure the machine is correctly connected to compressed air and its pneumatic circuit has been powered up.

1. Open the doors of the electrical cabinet and power up the L1, L2, L3 +earth terminal strip with three-phase electrical current.
2. Turn the MAIN SWITCH TO I/ON.

	**Before proceeding with any other operation, check that the electrical connection has been made in phase, as described below.**

3. Operate the OPEN – CLOSE BEAD PLATE control lever to move the R.H. bead plate close to the L.H. bead plate (the RESET pilot lamp turns on).

4. Set the mobile spacers support in the work position until the support triggers the micro-switch which enables tyre inflation and rotation.
5. Press one of the two foot pedals and check that the left bead plate rotates in the direction indicated by the arrow on its support. If this is not the case, switch off the electrical power, reverse one phase (wire) in the connection and repeat the check.

When the connection has been correctly made and when the MAIN SWITCH is set to I/ON, the POWER ON pilot lamp turns on.

Before starting to use the machine, check that the EMERGENCY push-buttons are not pressed down. In case they are, release them and press the RESET push button.

<u>Important notice for users supplying machine with 60 Hz voltage</u>.

The machine has been factory tested and set using electrical current at the same voltage as the user, but at 50 Hz. A number of settings may have to be changed when the units are powered at 60 Hz. Please take great care when performing the first few cycles and notify the manufacturer of any machine that does not conform to the information contained in this manual.

5. MACHINE USE

5.1. WARNINGS

The machine is built with top quality materials and with electronic, electrical, mechanical and pneumatic devices to ensure safe use.

The tyres to be treated must have been previously inspected, dried and cleaned, and any objects that might have become embedded in the sidewalls or the tread during use and pose a threat to operator safety must have been removed.

The operator must be trained to evaluate the characteristics and condition of the products to be treated, to carry out the adjustments and preliminary operations required by the machine and the tyre, and to perform the various process operations.

5.2. SAFETY DEVICES AND FUNCTIONS

It is forbidden to use the emergency controls for operational reasons. Their activation is independent of the consequences they might have on the process being performed.

5.2.1. EMERGENCY STOPS PUSH-BUTTONS

Located on the machine there are two emergency stop controls locate as follows:

- near the front mobile door,
- on the control panel.

The operator or a technician responsible for specific operations must activate one of the buttons without delay in the following cases:

- if she/he notices the onset of swelling, deformation or distortion on the tyre being inspected,
- if she/he recognizes any other danger threatening personnel safety or damage to the inflation machine.

When one of these two buttons is pressed the tyre on the machine is immediately deflated.

After an emergency stop, the operator may restart the inflation machine only when a maintenance engineer has established that the cause of the emergency has been eliminated.

In order to reset the machine proceed as follows:

- release the EMERGENCY STOP push-button;
- press the RESET push-button.

5.2.2. SAFETY SWITCH ON FRONT SLIDING DOOR

Installed on the top of the mobile front door there is a safety device which locks the door in its closed position during each and every inflation level.

The device releases the door only when the tyre has been fully deflated.

The switch activates immediate tyre deflation if the door is opened.

5.2.3. AUTOMATIC EMERGENCY DEFLATION

In the event of lack of air or power failure or both situations together, the electro-pneumatic circuit activates the immediate deflation of the tyre.

5.2.4. SAFETY PRESSURE VALVE

Installed in series with the double setting of the pressure gauge PR3 (SP3) is a safety valve, maximum setting 8 bar (116 PSI), which releases the inflation level 3 pressure if the pressure settings are accidentally exceeded. The valve is factory set to 6 bar (90 PSI).

5.2.5. AUTOMATIC SAFETY VALVE (P01)

Spring-operated safety valve (maximum setting 8 bar – 116 PSI). It discharges the compressed air if the inflation pressure exceeds the set value. This valve is located on the machine R.H. side (with ref. to operator position). The valve is factory set to 6 bar (90 PSI).

5.2.6. MANUAL SAFETY VALVE (VS2)

This manual safety valve has to be manually operated in case of malfunctioning of the automatic safety valve. This valve is located on the machine L H. side (with ref. to operator position).

Figure 13: manual safety valve VS2

5.3. ELECTRICAL CONTROLS

5.3.1. CONTROL PANEL

Figure 14: control panel

electrical system diagram - ref.	control label	description
20SB1E push button	EMERGENCY STOP	The operator or a technician assigned to specific operations must activate immediately this push-button should he recognise an impending risk of personal injury or damage to the machine.

electrical system diagram - ref.	control label	description
20SB3 push button with pilot lamp	RESET	This push-button must be pressed after machine power ON and after an emergency block to return the machine devices to their starting position. The pilot lamp is not illuminated when the machine has not been properly restarted (Example: when the EMERGENCY STOP push button has been depressed).
20HL1 pilot lamp	VOLTAGE PRESENCE	This lamp is illuminated when the main switch is turned ON.
40SA1 selector	MACHINE LIGHTING OFF/ON	• ON: the lamp located inside the machine turns on. • OFF: the lamp located inside the machine turns off.
30HL6 pilot lamp	END CYCLE	The pilot lamp illuminates at the end of the testing cycle.
5QF1 main switch	I/ON - 0/OFF	Located on the electrical cabinet. When set to 0/OFF, also acts as a lockable block to cut off the power supply.
30SB2 push button	1ST INFLATION	Press this push button to start tyre inflation up to the first inflation stage/level..
30SB3 illuminated push button	2ND INFLATION	Press this push button to start tyre inflation up to the second inflation stage/level. The pilot lamp illuminates.
30SB4 illuminated push button	3RD INFLATION	Press this push button to start tyre inflation up to the third inflation stage/level. The pilot lamp illuminates.
30SB1 push button	DEFLATION	Press this push button to activate tyre deflation.
30HA1 acoustic alarm	-	The acoustic alarm is activated during the third inflation stage.
30HL5 tower lamp		The lamp is activated during the third inflation stage

5.3.2. PEDAL CONTROLS

Figure 15: pedal controls

electrical system diagram - ref.	**control label**	**description**
+BM-25SB1L pedal control	SLOW ROTATION	Press this foot-operated control pedal to start slow tyre rotation. Release the pedal to stop tyre rotation.
+BM-25SB2V pedal control	FAST ROTATION	Press this foot-operated control pedal to start fast tyre rotation. Release the pedal to stop tyre rotation.

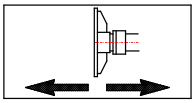
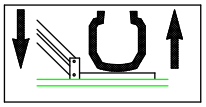
5.3.3. FRONT DOOR

Figure 16: front door

electrical system diagram - ref.	**control label**	**description**
20SB2E push button	EMERGENCY STOP	The operator or a technician assigned to specific operations must activate immediately this push-button should he recognise an impending risk of personal injury or damage to the machine.

More information about the electrical system and control lay-out are contained in the *ANNEX 2* to this manual - see *ELECTRICAL SYSTEM DIAGRAM.*

5.4. PNEUMATIC CONTROLS

plate applied to the machine	description	operation
 CLOSE - OPEN BEAD PLATE	Three-position control lever monostable in centre	Open and close the right bead plate
 DOWN - UP TYRE LIFT	Three-position control lever monostable in centre	Raise/lower tyre loading platform

	**Warning of possible residual air even when the compressed air supply has been cut off. Discharge the residual air by operating one of the pneumatic controls until there is no air left in the circuit.**

5.5. COMPRESSED AIR CONTROL DEVICES

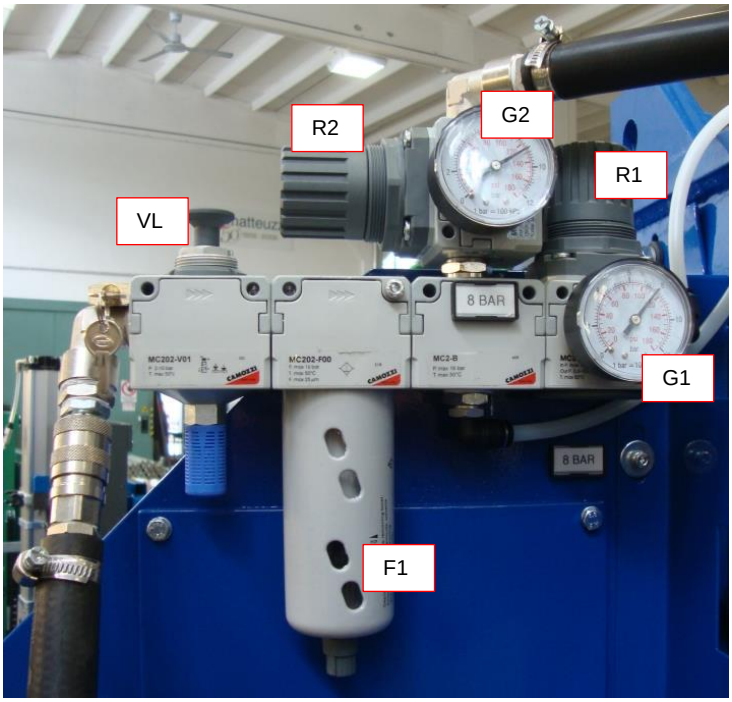


Figure 17: compressed air control devices

ref.	*description*
VL	lockable inlet valve
F1	filter on compressed air supply line
R1	regulator on compressed air supply line
G1	pressure gauge on compressed air supply line
R2	regulator that controls the pressure at which the air is supplied to the solenoid valve EV1
G2	pressure gauge on R2 air regulator

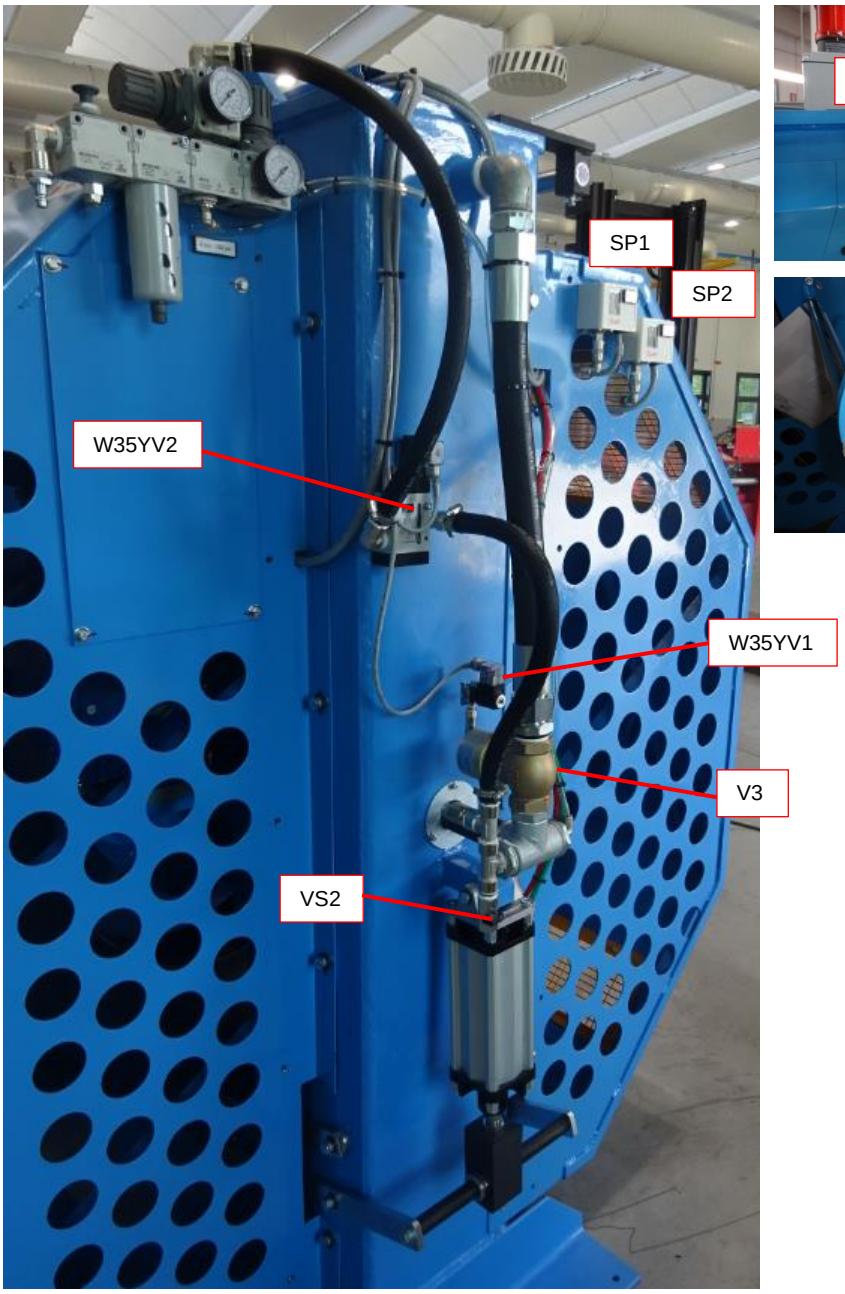


Figure 18: compressed air control devices

ref.	*description*
W35YV2	solenoid valve controlling tyre inflation
V3	valve which enables inflation and activates deflation
W35YV1	solenoid valve controlling the tyre deflation

ref.	*description*
SP1	pressure switch to control the inflation level 1
SP2	pressure switch to control the inflation level 2
G3/SP3	electrical contact pressure gauge to control the inflation level 3 and display the current inflation pressure during the different inflation levels.
P01	spring-operated safety valve. Discharges the compressed air if the inflation level 3 pressure setting is exceeded.
VS2	ball valve to manually deflate the tyre casing.

THE CONTROL DEVICES LISTED ABOVE ARE CONNECTED IN SEQUENCE AND SET SO AS TO GUARANTEE THE INFLATION REQUIRED BY THE MACHINE OPERATION AND TO KEEP THE PRESSURE WITHIN THE SAFETY LIMITS.

THESE SETTINGS MUST NOT BE CHANGED AND THE DEVICES MUST BE MAINTAINED IN PERFECT WORKING ORDER.

Warning of possible residual air even when the compressed air supply has been cut off. Discharge the residual air by operating one of the pneumatic controls until there is no air left in the circuit.

More information about the pneumatic system are contained in the "*ANNEX 2"* to this manual - see *PNEUMATIC CIRCUIT DIAGRAM.*

5.6. ADJUSTMENTS: DEVICES FOR KEYING THE TYRE

5.6.1. BEAD PLATES

The operator has to evaluate the tyre size in order to carry out the necessary BEAD PLATES and MOBILE SPACERS settings. The operator must be trained to evaluate the information stamped on the tyre and to choose correctly the devices described below.

In order to process the various tyre sections safely and in accordance with their original configuration, the operator must be trained to determine:

- the size of the bead plates (ref. 100);
- the correct mobile spacers to be used (ref. 57, 58, 88).

These settings have to be made in such a way to ensure that the distance between the bead plates is equal to the section of the rim on which the manufacturer has specified that the tyre is to be fitted.

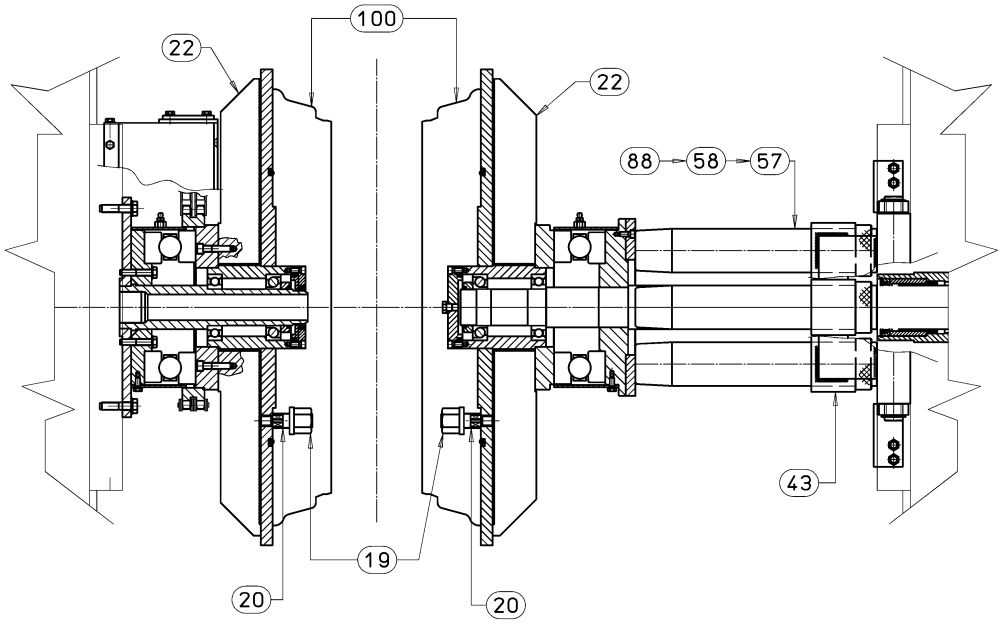


Figure 19: adjustments

Ref.	***Description***
100	Bead plates
22	Backing plates
20	Threaded pins
19	Nuts
57, 58, 88	Spacers
43	Spacer support

The two bead plates - ref. 100 - are installed on their respective steel backing plates - ref. 22 - by means of three threaded pins - ref. 20 - on which the three nuts - ref. 19 - must be firmly tightened.

Tighten the nuts using the elbowed wrench provided and use only the pins, bead plates and nuts supplied with the inflation machine.

Pay careful attention when handling the bead plates. Use the bead plate support, when delivered with the machine, or any suitable means.

Tighten the nuts using the elbowed wrench provided and use only the pins, bead plates and nuts supplied with the machine.

5.6.2. MOBILE SPACERS

Fitted to the machine is the plate reproduced on the following page which gives the operator instructions regarding the spacers - ref. 57 (or 58 or 88) - to be installed on the relevant support - ref. 43 - and used for keying the tyre correctly and inflating it so that it conforms as closely as possible to its original configuration.

	**The frequency with which the bead plates and the mobile spacers have to be changed can be reduced by working in series.**

COLORE DISTANZIALI DISTANZGEBER SPACERS EPAISSEURS			FLANGE DI CALETTAMENTO BEAD PLATES COMBINATION
VERDE GRUEN GREEN VERT	**360**	225/70 R19.5 245/70 R19.5 265/70 R19.5	17.5"/19.5"
		8.25 R20 11 R22.5 12 R22.5 255/70 R22.5 275/80 R22.5 275/70 R22.5 295/80 R22.5 295/75 R22.5 295/60 R22.5 305/75 R22.5 315/80 R22.5	20"/22.5"
NERO SCHWARZ BLACK NOIR	**330**	215/75 R17.5 225/80 R17.5 9.5 R17.5 235/75 R17.5 225/90 R17.5 285/70 R19.5 305/70 R19.5	17.5"/19.5"
		9.00 R20 10.00 R20 13 R22.5	20"/22.5"
ARANCIO ORANGE ORANGE ORANGE	**300**	11.00 R20 12.00 R20 13 R20 355/50 R22.5 385/65 R22.5 385/55 R22.5	20"/22.5"
GIALLO GELB YELLOW JAUNE	**240**	385/55 R19.5	17.5"/19.5"
		365/85 R20 445/65 R22.5	20"/22.5"
ROSSO ROT RED ROUGE	**218**	435/50 R19.5	17.5"/19.5"
		405/70 R20 445/65 R22.5	20"/22.5"

Figure 20: plate giving instructions for the correct use of the mobile spacers.

5.7. LOADING THE TYRE/CASING BETWEEN THE BEAD PLATES

Install on the machine a pair of bead plates and mobile spacers appropriate to the size and characteristics of the tyre to be checked.

Both the bead plates and the mobile spacers have been designed so that they are suitable for groups of tyre sizes.

To facilitate and enhance the keying operation, you may lubricate the beads of the tyre to be checked with a commercially available product specifically designed for this purpose.

HOW TO LOAD A TYRE

1. Operate the OPEN –CLOSE BEAD PLATE control lever to completely open the R.H. bead plate.
2. Place the tyre on the loading platform and, operating the "LIFT" control lever, lift it between the bead plates.
3. Operate the control lever “BEAD PLATE” to open and close the right mobile plate for keying on the tyre.
4. When the casing has been loaded, operate the "LIFT" control lever to lower completely the tyre lift.
5. Set the support complete with the suitable mobile spacers in the work position until the support presses the micro-switch which enables the ensuing inflation operations and the tyre rotation. These operations are allowed only if the micro-switch is activated.
6. Close the door on the tyre: the micro-switch which enables the inflation operations is activated.

	**To facilitate and enhance the tyre keying between the bead plates it is advisable to lubricate the beads of the tyre to be checked with a commercially available product specifically designed for this purpose.**

5.8. OPERATOR WORK STATION

During loading the operator must stand close to the booth sliding door.

During the various levels of inflation the operator must stand in front of the mobile front door, closed on the tyre, and visually monitor the process through the transparent window.

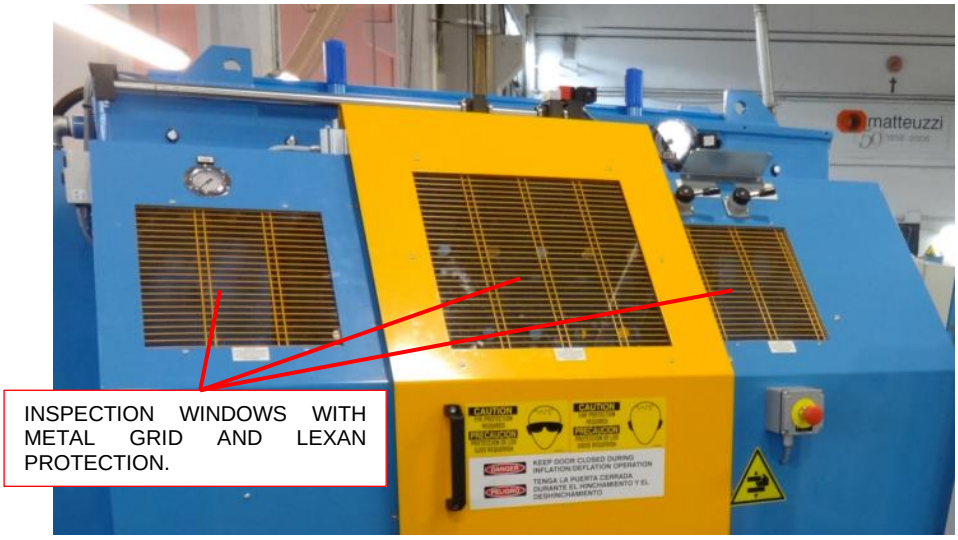


Figure 21: operator work station

The operator work station must be kept clean and clear of slippery substances.

	**Users who have purchased the machine without the booth integral with the base must install the inflation machine in a safe position and provide appropriate guards and barriers to protect both the operator and other authorised personnel working in the vicinity against the dangers associated with possible tyre burst.** **The barriers in question must be consist of masonry walls or other firmly anchored protection structures. They must be designed by a skilled technician who must certify their suitability for the purpose.**

5.9. TYRE INFLATION STAGES

The machine is designed to gradually inflate the tyre, following three inflation stages:

inflation stage	**factory set maximum inflation pressure**	**control pressure switch / pressure gauge**	
		pneumatic diagram ref.	**electric diagram ref.**
1st inflation: 0 to 2 bar (0 to 3 PSI)	2 bar (30 PSI)	SP1	45SP01
2nd inflation: 2 to 4 bar (30 to 60 PSI)	4 bar (60 PSI)	SP2	45SP02
3rd inflation: 2 - 4 bar to 8 bar (30 – 60 to 116 PSI)	6 bar (90 PSI)	SP3	45SP03

The various inflation levels can be activated provided that the micro-switches signalling that the spacer support and the front mobile door are correctly set in their work position have been triggered.

Press the 1ST INFLATION button which will stop automatically when the 1st inflation max. pressure setting, controlled by the pressure switch SP1, has been reached. The start-up of the inflation process activates the mechanical lock which blocks the door in the closed position. This mechanical lock allows the door to be opened only when the tyre has been fully deflated.

To facilitate tyre inspection, the operator may activate one of the two foot-pedal controls - SLOW ROTATION or FAST ROTATION. Rotation stops when the pedal is released.

If the condition and appearance of the tyre allow it, the operator may press the 2ND INFLATION push button which will stop automatically when the 2nd inflation max. pressure setting, controlled by the pressure switch SP2, has been reached.

If the condition and appearance of the tyre allow it, the operator may press the 3rd INFLATION push button which will stop automatically when the 3rd inflation max. pressure setting, controlled by the electrical contact pressure gauge SP3 with dual safety setting, has been reached.

A flashing light installed at the top of the machine and an acoustic alarm on the control box come into operation during this inflation phase. The alarm stops only when tyre is deflated.

Press the DEFLATION push-button to start tyre deflation. Only once the tyre is completely deflated it is possible to open the front door, in order to unload the tyre.

The pressure gauge G3 also displays the pressure to which the tyre has been inflated during the various inflation levels.

Tyre inflation must be performed gradually.

The maximum inflation pressure value for each stage is factory set in order to ensure machine safe use.

The above mentioned pressure settings can be adjusted only by trained personnel who shall bear responsibility for any modifications made.

The said settings must not be increased.

During inflation the operator must carefully inspect tyre appearance to make sure there are no areas of swelling or distortion on the tyre.

If swelling or distortion is found, the tyre must be deflated immediately.

The operator may inflate the tyre up to the next inflation stage only if the condition and appearance of the tyre allow it.

5.9.1. SP1, SP2 PRESSURE SWITCHES

The front side of the pressure switches controlling first and second inflation stages feature two scales that display:

- the factory set maximum pressure setting (on the left hand side);
- the differential pressure setting (on the right hand side).

Both scales are protected by a cover with transparent window.

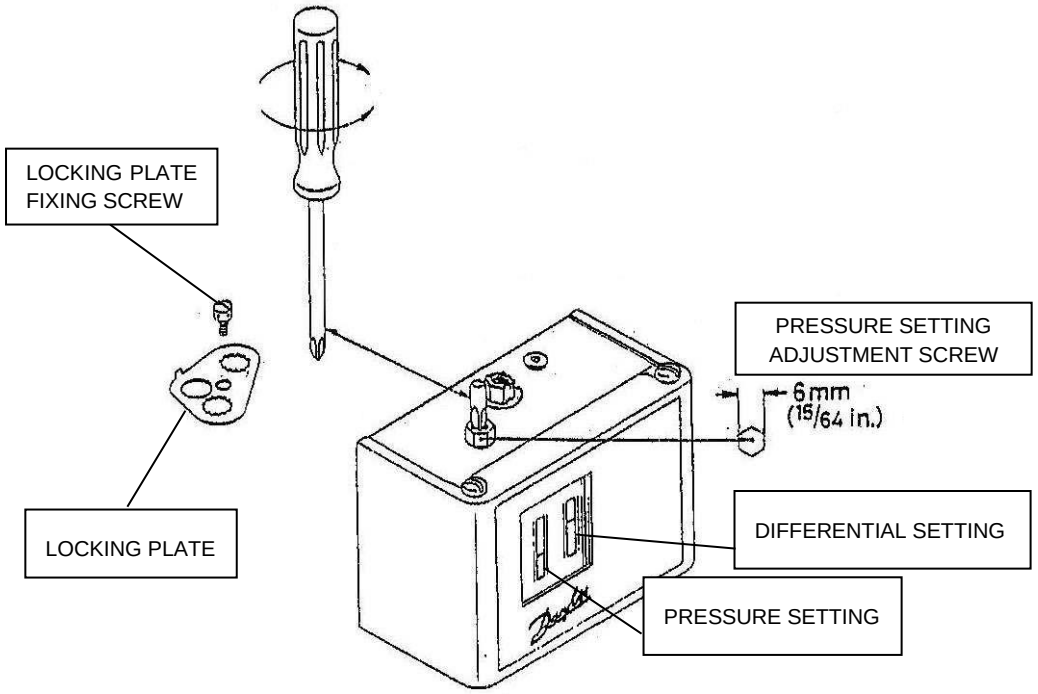


Figure 22: pressure switches SP1, SP2

Located on the pressure switch is a pin, shown in Figure 22, in which a screwdriver should be inserted to change the setting value of the scale located on the front left of the switch.

To prevent unintentional alterations, the pin is covered by a guard and incapacitated by a lock. The setting can only be changed when the lock and guard have intentionally been removed by undoing the screws securing them.

	**The pressure setting can be adjusted only by trained personnel who shall bear responsibility for any modifications made.** **The factory set maximum inflation pressure for each inflation stage must not be increased for any reason.** **The differential pressure must not be adjusted for any reason.**

5.9.2. SP3 PRESSURE GAUGE – SAFETY VALVE P01

Pressure gauge SP3 is assembled on the machine frame, visible to the operator. The pressure switch features 3 pointers:

- pointer ref. A indicates tyre inflation pressure values during all inflation stages;
- pointer ref. B shows the lower limit setting for the 3rd inflation pressure (factory set to 5,8 bar);
- pointer ref. C shows the upper limit setting for the 3rd inflation pressure (factory set to 6 bar).

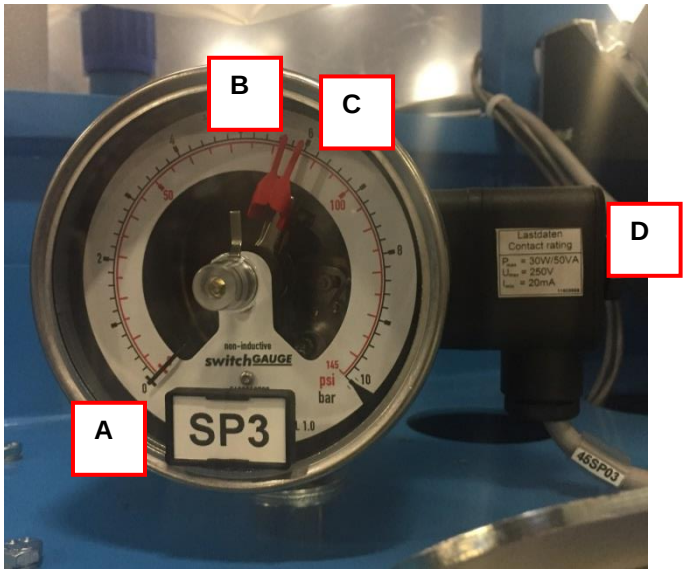


Figure 23: pressure gauge SP3

	**Pressure settings can be adjusted by means of the pin (ref. D) only by trained personnel who shall bear responsibility for any modifications made.** **To prevent unintentional alterations, the maintenance engineer must remove the pressure adjustment pin (ref. D) and keep it in a safe, protected place for any future use, as and when it may be required.**

The safety valve P01 is installed and set in series with these control devices. This safety valve ensures that the pressure value of 6 bar is not exceeded during the 3rd inflation stage.

5.10. HOW TO USE THE MACHINE

1. Open the machine front door.
2. Perform the necessary bead plates and mobile spacers settings (see relevant paragraph).
3. Assemble the bead plates according to the size of the tyre to be processed (see paragraph *Bead Plates*).
4. Load the tyre between the bead plates (see paragraph *Loading the Tyre*).
5. Close the front door until when it engages the safety switch which gives consent to tyre inflation. The three inflation levels can be activated provided that the spacers and the front door micro switches are triggered.
6. Set the MACHINE LIGHTING OFF – ON selector to ON.
7. Press the 1st INFLATION push-button. Tyre inflation starts and the tyre is inflated to the 1st inflation max. pressure setting. The 1st INFLATION stage is carried out at low pressure load for safety reasons.
8. If the condition and appearance of the tyre allow it, the operator may press the 2nd INFLATION push-button. Tyre inflation starts and the tyre is inflated to the 2nd inflation max. pressure setting.
9. If the condition and appearance of the tyre allow it, the operator may press the 3rd INFLATION push-button. Tyre inflation starts and the tyre is inflated to the 3rd inflation max. pressure setting. During the 3rd inflation stage an acoustic alarm with flashing light warns the operator.
10. The TYRE INFLATION pressure gauge installed on top the machine, shows the current inflation pressure at any time.
11. To facilitate tyre inspection during each inflation stage the operator may activate one of the two foot – pedal controls, SLOW ROTATION or FAST ROTATION.
12. Deflate the tyre by pressing the DEFLATION push button.
13. Once the tyre is completely deflated it is possible to open the front door, in order to unload the tyre.

6. MAINTENANCE

6.1. SAFETY RULES FOR MAINTENANCE AND REPAIRS

- Maintenance denotes all servicing, inspection and repair work.
- Mechanical and electrical repairs and adjustments may only be performed by qualified personnel. It is forbidden for unauthorized persons to perform any work on the machine.
- The required adjustments, maintenance work and inspections must be performed at the specified intervals and in compliance with the instructions regarding the replacement of components/subassemblies.
- You must not carry out any maintenance operations, apart from visual checks, until you have first cut off the electrical current and the compressed air supplies and discharged any residual air in the machine by operating the pneumatic controls under load less conditions.
- You must comply with environmental protection regulations with regard to the disposal of waste and parts replaced.
- To prevent personal injury during maintenance, adjustments or repairs, you must only use appropriate and correctly calibrated tools and instruments.

6.2. RULES REGARDING WORK ON ELECTRICAL COMPONENTS

- Work on the electronics and the electrical components may only be carried out by qualified electricians.
- Mark off the work area with a chain or red/white tape and appropriate danger signs.
- Use only original fuses with the required amperage. Defective fuses must not be repaired but replaced with fuses of the same kind.
- The electrical equipment and electrical system on board the machine must be inspected and checked at regular intervals. Defects, such as loose connections, damaged power cables and worn protection device contacts, must be eliminated immediately.
- Use only insulated tools.
- Should it be necessary to work on live parts, the electrician must be accompanied by a second person who, in the event of an emergency, should press the BLOCK/EMERGENCY STOP button.
- Cut off the power supply before disconnecting or connecting up plug/socket electrical connectors.

IT IS STRICTLY FORBIDDEN TO CARRY OUT ELECTRODE OR WIRE WELDING ON ANY PART OF THE MACHINE, ON OTHER MACHINES IN THE VICINITY OR ON MACHINES CONNECTED TO THE SAME MAINS POWER SUPPLY. If necessary, contact Matteuzzi srl to establish the required precautions. Permanent damage may be done to the computer and equipment connected to it and your warranty voided.

	**Any work required on the machine must be performed by qualified personnel and only after the electrical and pneumatic power supplies have been cut off.**

6.3. MAINTENANCE OPERATIONS

6.3.1. DAILY MAINTENANCE

description	**personnel**
Check the efficiency of the emergency block/stop buttons and of the safety microswitches located on the front sliding door and on the bead spacers.	operator
Check the integrity of the transparent window installed on the machine front door and keep it clear and transparent at all times.	
Keep the operator work station floor clean and remove rubber dust and any substances or objects that may make the floor slippery. **Do not use an air hose to blow off dust. Instead, please use a vacuum system. Permanent damage may be done to different parts and your warranty voided.**	
Monitor the efficiency of the inflation control devices and immediately report the onset of abnormal operation to the maintenance engineers.	
Check proper movement of the spacers that help keep the inflated tyre in position.	

	**If necessary, replace the front door window with a suitable piece of polycarbonate resin thermoplastic. DO NOT USE GLASS.**

	**IF DURING A TYRE INFLATION TEST THE SAFETY VALVE (P01) IS ACTIVATED BY AN ACCIDENTAL INFLATION PRESSURE OVER ITS SETTING RATE ask for its replacement to the maintenance technician. The safety valve must be replaced after accidental use because it is not repairable.** **IF DURING A TYRE INFLATION TEST THE PRESSURE SWITCH (SP3) IS ACTIVATED BY AN ACCIDENTAL INFLATION PRESSURE OVER ITS SETTING RATE ask for its replacement to the maintenance technician. The pressure switch must be replaced after accidental use because it is not repairable.**

6.3.2. MONTHLY MAINTENANCE

description	**personnel**
Remove the condensate from the compressed air filter bowl.	mechanical maintenance technician
Check the efficiency of the silencers fitted to the compressed air outlets. Keep them clean and replace them when necessary.	
Check the efficiency of the stroke speed controllers installed on the cylinders. Keep them in efficient working order.	
The pneumatic equipment, the pneumatic system and tyre inflation/deflation devices and system on board the machine must be inspected and checked at regular intervals. Defects must be eliminated immediately.	
Check, and, if necessary, replace, the valve – see pneumatic diagram ref. V3 - which controls tyre deflation.	
The electrical equipment and electrical system on board the machine must be inspected and checked at regular intervals. Defects, such as loose connections, damaged power cables and worn protection device contacts, must be eliminated immediately.	electrical maintenance engineer

6.3.3. QUARTERLY MAINTENANCE

description	**personnel**
Perform lubrication of machine parts as described at par. 6.3.3.1. Use a commercially available product specifically designed for the purpose.	mechanical maintenance engineer
Check the state of the air operated machine components and equipment.	
Check and; if necessary; tighten the bolts and nuts of the operating parts.	

6.3.3.1. Lubrication

	**The following operations must be performed by a qualified mechanical maintenance engineer and only after the electrical and pneumatic power supplies have been cut off.** **Use a grease gun filled with a commercially available product that is made specifically for mechanical lubrication.**

ASSEMBLY: BEAD PLATES

Inject grease into the two nipples ref. A and B (see *Figure 24*) located next to the bead plates. Use a commercially available product specifically designed for the purpose

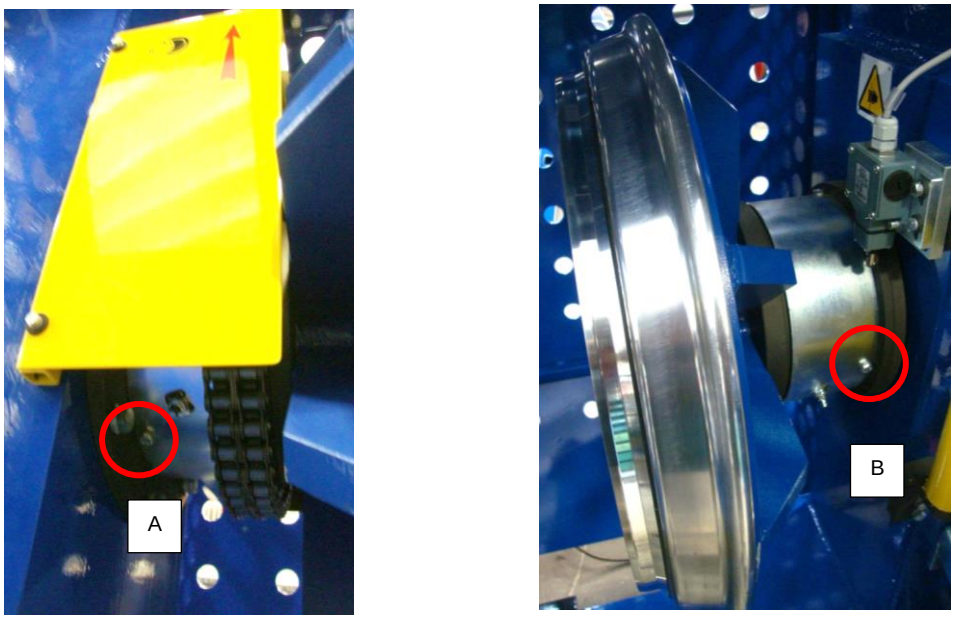


Figure 24:lubrication

6.3.4. SEMIANNUAL MAINTENANCE

description	**personnel**
Check the welding points of the machine frame as described at par. 6.3.4.1.	mechanical maintenance engineer

6.3.4.1. Welding points checks

On the basis of experiences made in the tyre industries (new tyre manufacturers, casing dealers and tyre retreaders), the manufacturer of the machine has estimated that any inflation testing machine has a variable life time, depending on:

- QUANTITY OF ACTUAL INFLATION CYCLES PERFORMED,
- CORRECT USE OF THE MACHINE DURING ITS LIFE,
- USE OF CORRECT/ORIGINAL SPARE PARTS AVOIDING MACHINE TAMPERING,
- FREQUENCY OF ADEQUATE MAINTENANCE CARRIED OUT TO THE MACHINE THROUGH THE YEARS.

THE MANUFACTURER CANNOT MAKE A DIAGNOSIS OF ANY MACHINE WITHOUT INSPECTING IT BUT ITS AGE HAS TO BE A WARNING TO EVERYBODY AND ESPECIALLY IN RELATION TO OPERATOR SAFETY.

The manufacturer strongly recommends the machine user to assign to a specialized technician/engineer the duty of an overall careful preventive inspection of the machine structure to define if the machine can be kept in operation, after the first 20.000 (twenty thousand) inflation cycles or every six month machine use.

The inspection has to particularly focus the machine welding - evidenced in the drawing below - that may suffer from machine age and cause sudden harm to the operator during tyre inflation.

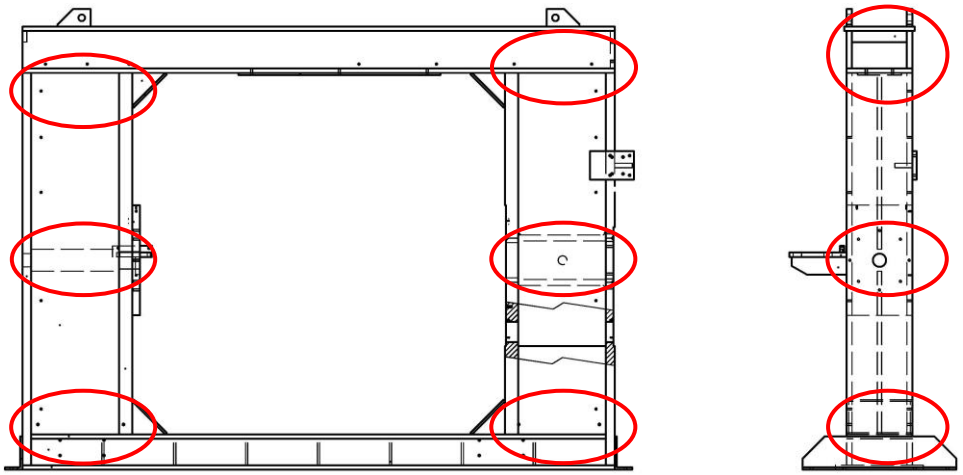


Figure 25: welding points

6.3.5. BIENNIAL MAINTENANCE

description	**personnel**
Replace the valve ref. V3 - pneumatic diagram - which enables inflation and activates tyre deflation.	mechanical maintenance engineer
Replace the transparent window installed on the front mobile door by a suitable piece of polycarbonate resin-thermoplastic. DO NOT use glass.	

6.3.6. GEARBOXES

Visually check the oil level in the gearbox and variator gauges mounted on the machine. Refill them if necessary. The type of oil is indicated on label fitted onto the devices (see for example Figure 26).

Figure 26: gearboxes

6.4. TYRE BURST

Tyre burst is an unexpected event that can happen during inflation test of a defective tyre. The operator must be trained to notice possible tyre anomalies during inflation at different pressure loads and, if necessary, to interrupt the test cycle by pressing one of the tyre DEFLATION push-buttons.

	**An accidental tyre burst may damage different machine components – machine structure included – which integrity is essential for a machine safe use. The user has the task to return all machine parts to their original integrity. The operator can restart the machine only when an engineer has checked that the machine mechanical, pneumatic and electrical parts are in good and safe order.**

Contact the machine manufacturer for any assistance you may need.

6.5. ACCESSORIES PROVIDED

Qty	**description**	**use**
1	30 mm elbowed wrench (29926.0)	Tightening the nuts for bead plates installation.

6.6. ORDERING SPARE PARTS

When ordering spare parts, please specify the following:

- the serial number and year of manufacture of your machine, as indicated on the plate fitted to the machine,
- the reference number of the part as indicated on the drawings illustrating the machine assemblies - see annex 1,
- the part description as given on the parts lists - see annex 1,
- any other details you think may be useful to identify exactly the replacement part you require.

7. DECOMMISSIONING

7.1. STOPPING THE MACHINE

When stopping the machine definitively, before disassembling, proceed with the following:

- Disconnect the machine from the electrical power supplies;
- Disconnect the machine from the compressed air supplies (if present);
- Disconnect the machine from the hydraulic power supplies (if present).

7.2. DISASSEMBLY AND DISPOSING

Once the operations have been carried out, all machine parts can be removed for scrapping.

When disassembling the machine comply meticulously with the handling indications set out in this manual.

In particular:

- Do not use non-compliant or worn ropes or cables with a lifting capacity lower than the machine weight;
- Move the machine carefully and make sure that people are not standing in the operating area of the lifting equipment;
- Do no stand under suspended loads;
- Pay particular attention to suspended parts and relative risks.

7.3. DISPOSING AND SCRAPPING

There are no hazardous components or materials in the machine that could cause problems during decommissioning.

Once the single components have been disassembled, start dividing them by material as follows.

- Ferrous material: frame, guard, fittings, etc.
- Aluminium: flanges, etc.
- Plastic material: gaskets, cables, etc.
- Electric material: motors, panel, equipment.

During scrapping, retrieve any components that can be retrieved and reused.

ALL THE MACHINE COMPONENTS, AFTER HAVING BEEN SEPARATED BY MATERIAL, MUST BE SCRAPPED BY SPECIALISED COMPANIES THAT OPERATE IN COMPLIANCE WITH THE LEGAL REQUIREMENTS IN FORCE IN THE USER'S COUNTRY.

8. LIST OF ANNEXES

Annex No.	**Description of the folder contents**
1	DRAWINGS ILLUSTRATING THE COMPONENT PARTS OF THE MACHINE TOGETHER WITH PART LISTS
2	PNEUMATIC CIRCUIT DIAGRAM
3	ELECTRICAL SYSTEM DIAGRAM

ALLEGATO – ANNEX – ANNEXE – ANHANG – ANEXO 1

disegni e lista dei componenti meccanici

mechanical part list and drawings

description et plans des composants mécaniques

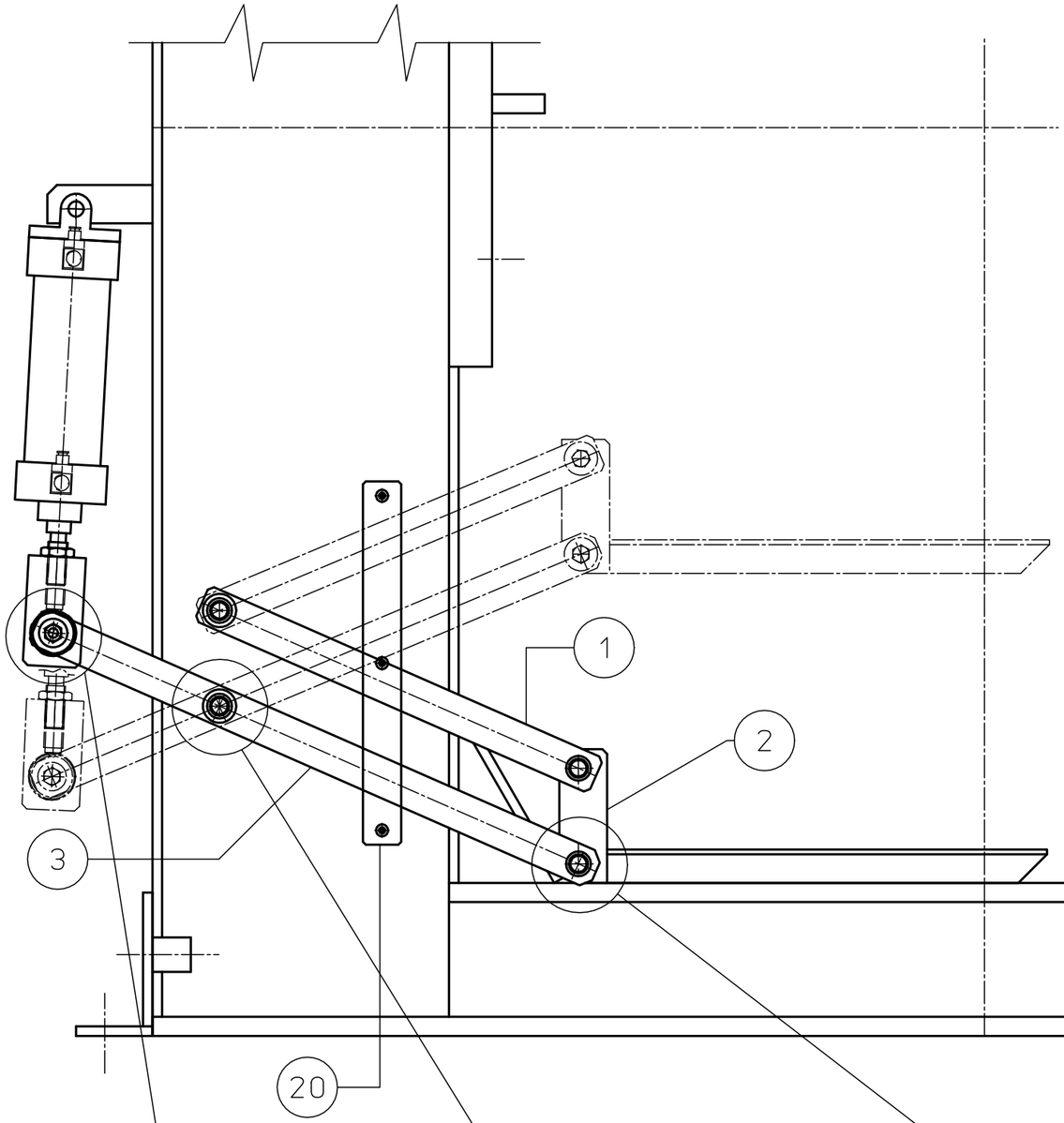
Zeichnungen und Mechanikteile-Liste

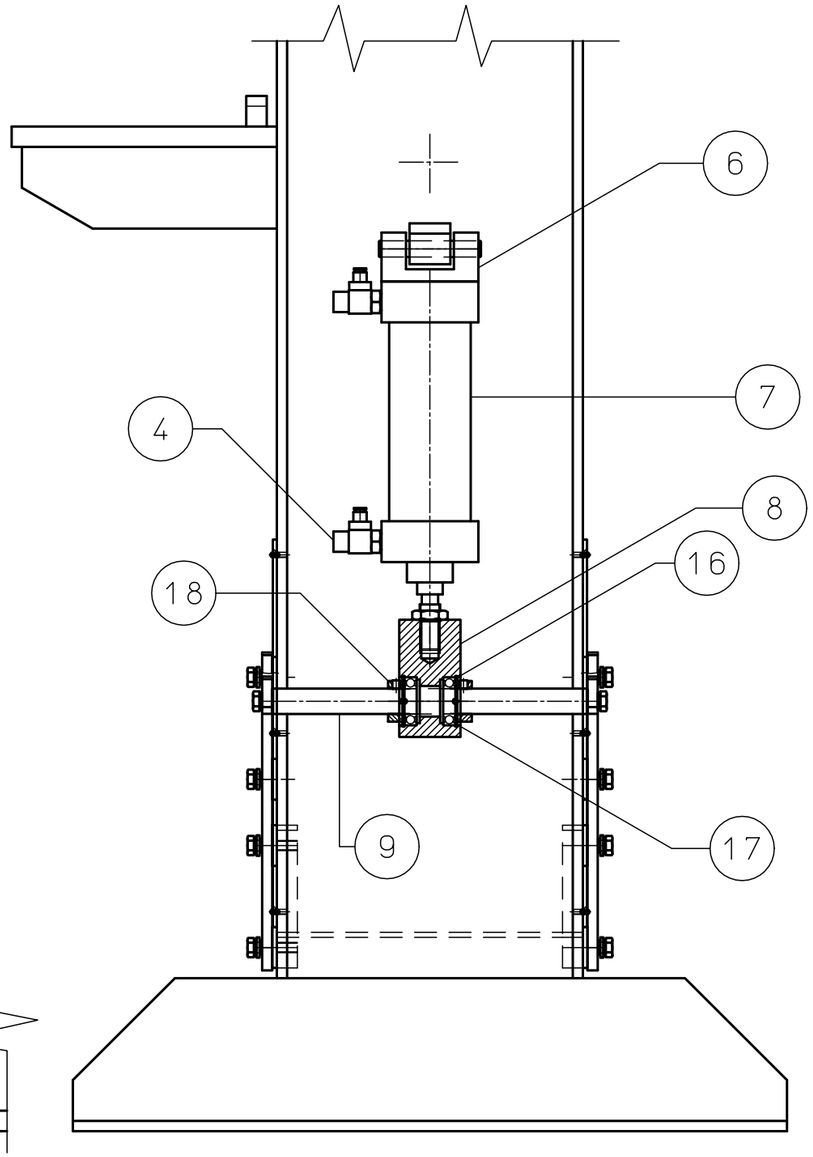
dibujos y lista de los componentes mecánicos

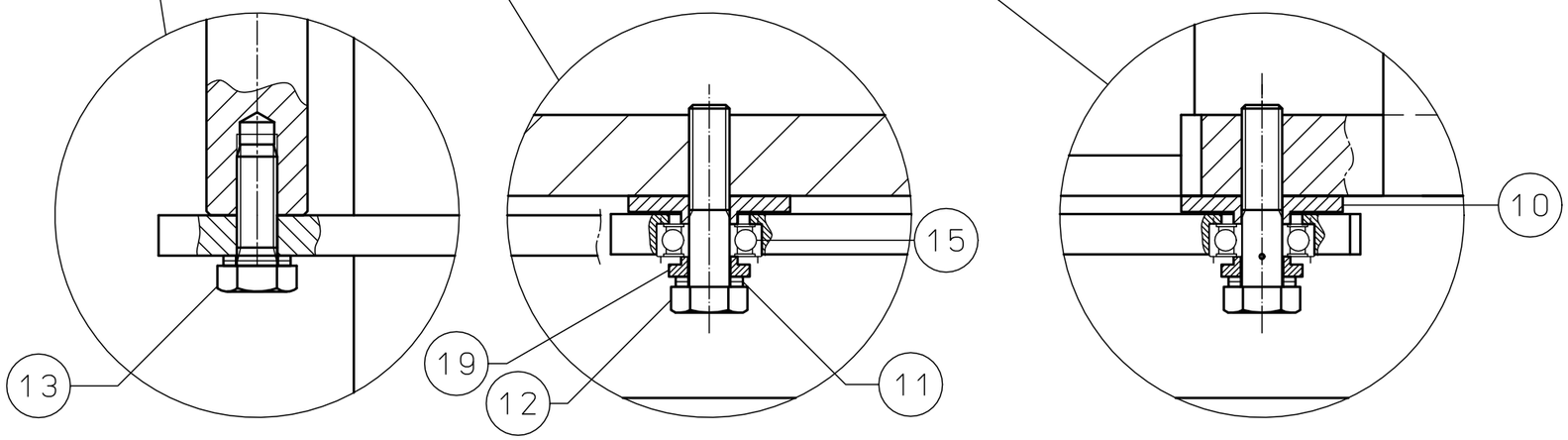
ALLEGATO – ANNEX – ANNEXE – ANHANG – ANEXO 1

Assembly description	**drawing ref.**
TIRE LIFT	**M40027.02**
MACHINE FRAME	**M40030.06**
BEAD PLATES	**M40031.04**
REINFORCED PROTECTIONS	**M42307.01**

rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
1	85346.00	LIFT UPPER ROD	2
2	381-1	LIFT BOARD	1
3	85347.00	LIFT LOWER ROD	2
4	22146-0	FLOW REGULATOR FOR CYLINDER 3/8" T.8 MV380838	2
6	23175-0	HINGE, FEMALE FITMENT ISO D.80 W/PIN	1
7	23461-3	CYLINDER ISO PNEUMAX D.80X150M 1319.80.150	1
8	85345.00	LIFT CYLINDER CLEVIS	1
9	378.01	LIFT PIN	1
10	85348.00	WASHER BUSHING	8
11	25735-0	WASHER NORD LOCK NL10 I	10
12	23481-0	SCREW, HEXAGONAL HEAD, M10X45 UNI5737 ZINC – COATED	8
13	23480-0	SCREW, HEXAGONAL HEAD, M10X30 UNI5739 ZIN – COATED .	2
15	22731-0	BALL BEARING 6000-2RS	8
16	21194-0	SEEGER RING I 47	2
17	20066-0	BALL BEARING 6005-2RS	2
18	25887-0	STOP RING ABU 25 DIN 705	2
19	85349.00	BEARING OUTER SPACER	8
20	85227.00	FRAME	2







TYRE LIFT			
M40027	02	03/06/19	matteuzzi srl Calderara di Reno (BO) ITALY

rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
-	20508.0	EXTENSION 1/4" MF ART.3520	1
-	20806-0	QUICK COUPLING 3/8" ART.5180	1
-	25208-0	MALE CAP 1/2" ART.3615	1
-	22814-0	EXTENSION 1/8" MF H22 ART.3525	1
-	20409-0	FITTING, ROTATING, 1/8" T8 MB180818	1
-	20445-0	STRAIGHT FITTING 1/8" T8 MB120818	1
-	23072-0	DISTRIBUTOR ART.1034 2-3/8" 4-1/4"	1
-	20563-0	ELBOW MF 1/8" BRASS/NICKEL ART.5020	1
-	21211-0	MALE CAP 1/8" ART.3615	1
-	22441-0	FITTING,"T" T.8 ART.MB150800	3
-	21886-0	FITTING,"T" FMF 1/4" ART.5060	1
-	20510-0	FITTING, 1/2"M-3/8"F ART.3530	3
-	29961-0	NIPPLES 1 1/4"	2
-	30607-0	HOSE SAE 100 R1T 1 1/4" L.570mm.	1
-	20140-0	CLAMP SERFLEX 18-28	4
-	20645-0	SAFETY VALVE 1/2" 6-12 BAR Cod. STIMA 030679	1
-	31347-0	FITTING 90° T.8-8	1
-	20507-0	FITTING, REDUCTION 3/8"M-1/4"F ART.3530	1
1	9957.0	LOADING BOARD	1
	22248.0	FITTING, Y, T.8 ART. MB290808	3
2	9945.0	TRAY	1
3	20181.0	HANDLE, M.443/200	1
11	359f4-05	BASE (UPON REQUEST)	1
	359f1-03	BASE (STANDARD)	1
	359f2-02	BASE (FLAME CUT)	1
	351-1	L. H. PLATE	1
	1803-0	R. H. INNER PLATE	1
	1804-0	R. H. OUTER PLATE\	1

rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
12	20035-2	SHAFT D=30	2
13	21492.0	PRESSURE GAUGE, D63	1
14	85768.0	PIN	1
15	33992-0	COMPACT CYLINDER ARTEC D.40x20 FSR 040.020.GS.F	1
17	20620.1	PRESSURE SWITCH MGS 18/A + MN14/01D	1
19	20539-0	CONTROL VALVE 1/4” 4002I	2
27	21053-0	FITTING M 1/2” – T23	4
28	23226.0	PRESSURE GAUGE, D.50 1/8" POST.0-12BAR	2
29	22691.1	AIR FILTER REDUCER 1/2"	1
30	21078-0	FITTING, ELBOW MF 1/2”	4
31	20553.0	FITTING, MALE/MALE 1/2" ADAPTER	2
32	20529-0	BALL VALVE MINI 1/2”	1
36	20429-0	FITTING, ROTATING ELBOW, M 3/8”	2
37	9954.1	COVER	1
41	20621-0	VALVE, VESTA E32W1S6M2	1
42	20644-0	GLOBE VALVE 1” 1/4	1
43	22240-0	FITTING, T-SHAPED MFF 1/2”	1
44	20556.0	FITTING, M/M 1” 1/4 ADAPTER	1
45	22177-0	FITTING, T-SHAPED FMF 1/2”	1
46	434.0	DISC	1
47	22297-0	FITTING, T-SHAPED, 1” 1/4	1
48	20512-0	FITTING, REDUCTION M 1” 1/4 – F 1/2”	2
50	20816-0	FITTING, ELBOW M 1/4” T8	1
51	20549.0	NIPPLE M1/8”	1
52	20622-0	SOLENOID VALVE AA0184 AA0450	1
55	20564-0	FITTING, ELBOW MF 1” 1/4 GS	1
56	21565-0	SILENCER 1”	2

rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
59	9949.0	SUPPORT	2
60	9950.1	SUPPORT	2
63	22582.0	PRESSURE SWITCH, DANFOSS KP1	2
64	21262.0	FITTING, STRAIGHT CONNECTOR FF 1/4”	2
65	20408-0	FITTING, ROTATING ELBOW, M 1/4” T8 204080	10
70	21971.0	REDUCING FITTING, F1/4”-F1/2”	1
71	20426.0	FITTING, STRAIGHT CONN. M 1/4” T8 104080	1
74	9947.0	PROTECTION	1
77	21841-0	SILENCER 1/4”	3
78	9952.0	SUPPORT	1
79	9951.1	SUPPORT	2
82	22675-0	SNAP RING UNI 7535 E47	8
83	20037-0	BALL BUSHING KB 3068 PP	4
84	9946.0	SUPPORT	1
88	22681-0	LIMIT SWITCH PIZZATO TYPE FX 690	1
93	419.1	SPACER SUPPORT	1
94	20898-0	LIMIT SWITCH PIZZATO FL 515	1
95	1744.0	PLATE	1
96	1743.0	SPACER	1
97	365.0	THREADED HOSE	1
105	84744.00	ELECTRICAL CABINET SUPPORT	1
106	84771.01	CABLE PROTECTION	1

FOR MACHINES WITH THE ELECTRICAL CABINET ON THE MACHINE FRAME

rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
18	9948.0	SUPPORT PROTECTION	1

FOR MACHINES WITH THE ERGONOMIC ELECTRICAL CABINET

rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
105	87292.00	ELECTRICAL CABINET SUPPORT	1
106	87293.00	CABLE PROTECTION	1
100	83168.00	FOOT PEDAL PROTECTION	1
113	80259.00	CABLE CHANNEL	1
-	33487-0	CHANNEL LEGRAND P31 50X50 BLU 3MT. ART.31C3B050G	1
-	33488-0	CABLE CHANNEL COVER LEGRAND 50BLU 3MT. ART. 31L39050G	1
-	25662-0	ELECTRICAL BOX ELETTRICA APV14	1

FOR MACHINES WITH 110 V COILS

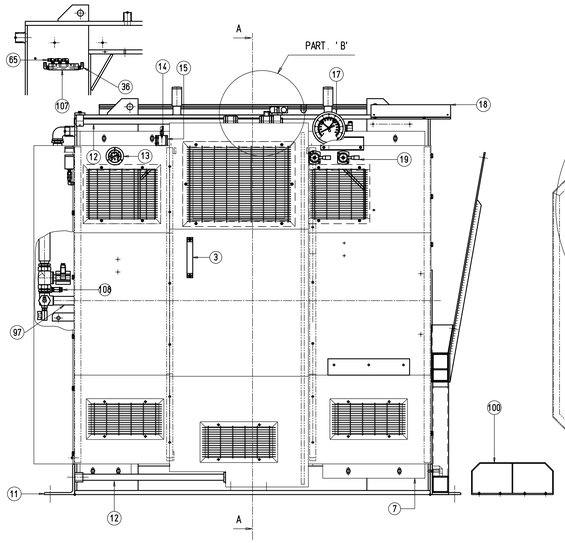
rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
39	20618-0	COIL UNIVER DA 0108 110V 50/60HZ	1
40	23493-0	LED CONNECTOR 513.222.731 (S02209TC424)115V	2
98	23438-0	COIL VESTA MS 11050	1

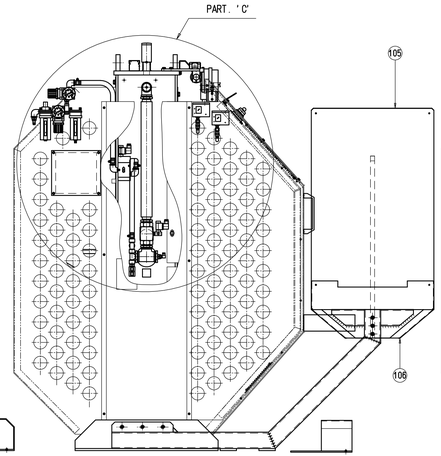
FOR MACHINES WITH 24 V COILS

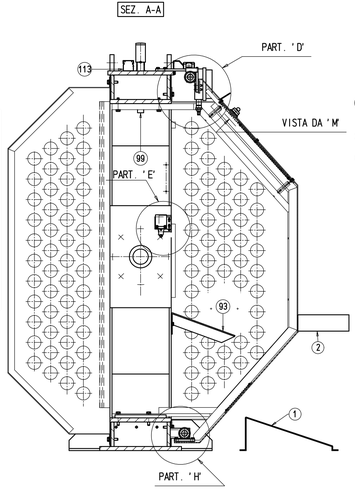
rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
39	20618-2	COIL UNIVER DA 0051 24VCC	1
40	21567-0	LED CONNECTOR 10/50V. ART.S02209TC421	2
98	23473-0	COIL VESTA MS 02400	1

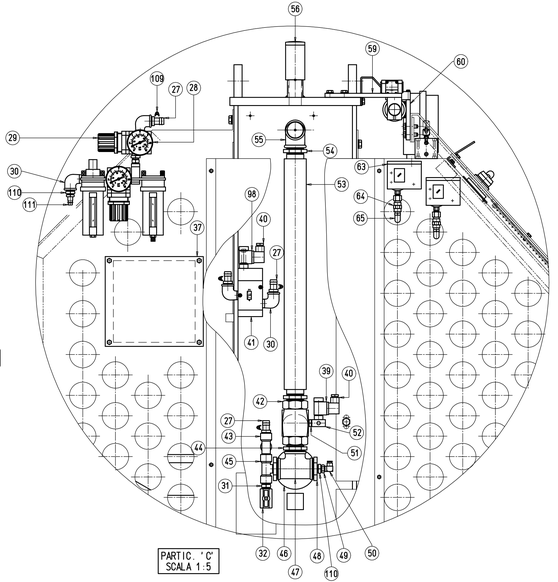
OPTIONAL UPON REQUEST

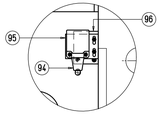
rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
99	32232-0	LED BAR DTS-LED EKOS B 500MM. 3470110500-M12 7W.24VDC 1 W/CABLE	1
	32232-1	LED BAR DTS-LED EKOS B 500MM. 3470110501-M12-M12 7W.24VDC 2 W/CABLE	1
	32269-0	CABLE FOR LED BAR MT.10 79-3430-447-04	1
	32777-0	POWER SUPPLY, BALLUFF BAE PS-XA-1W-24-007-001	1

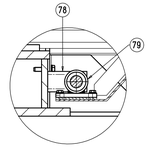


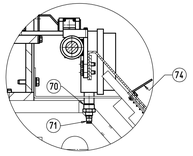


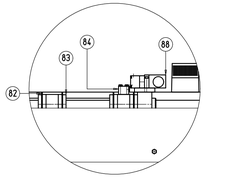












N.B. *VALE DALLA MATR.21033

MACHINE FRAME			
M40030	06	21/04/21	matteuzzi srl Calderara di Reno (BO) ITALY

rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
2	1807.0	COVER, L.H. FITMENT	1
5	20080.0	BALL BEARING, 51324 MP	2
6	1805.0	SHAFT WITH FLANGE	1
10	417.0	CHAIN CASE	1
17	1809.1	CHAIN GEAR	1
18	1806.0	HOUSING FOR L.H. BALL BEARING	1
19	22690.0	NUT, DIA. 20	6
20	362.2	PIN (SHORT VERSION)	6
20	1829.1	PIN (LONG VERSION)	6
21	20048.0	BALL BEARING, 6210 2RS	2
22	9939.1	STEEL BACKING PLATE (UPON REQUEST)	2
22	1810.2	STEEL BACKING PLATE (STANDARD)	2
24	1808.0	PROTECTION, R.H. FITMENT	1
25	1815.0	RING FOR SPACER	1
27	386.1	UPPER HINGE	1
29	22146.0	FLOW REGULATOR 3/8” T. 8 MV380838	2
29	21066.0	CHAIN LINK, 3/4, DOUBLE	1
30	8059.0	FRONT SPACER	1
31	8058.0	SPACER	1
32	1821.0	CYLINDER SLEEVE	1
33	20017.0	GASKET, OR 4487	2
34	1822.0	END CAP FOR CYLINDER	1
35	20521.0	FITTING, ELBOW CONNECTOR 3/8”	1
36	1823.0	TIE ROD FOR CYLINDER	3
38	22532.0	GASKET, TDUOP 125/49	1
41	1826.1	FLANGE	1
41	9960.0	BEAD PLATE SUPPORT	1

rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
42	83631.00	PIN	1
43	440.2	SPACER HOLDER	1
44	1819.1	PISTON ROD	1
45	86362.00	HINGE, LOWER FITMENT	1
46	1814.0	RING	1
49	1813.0	RING	1
50	21991.0	MOTOR, MA112, 2/8P, 4/1, 22HP, B5	1
58	383.0	BLACK SPACER L=330 mm.	3
62	20475.0	SHAFT FOR RMI85 GEARBOX	1
64	418.0	COVER FOR CHAIN	1
65	1824.0	GEAR, Z14	1
66	20090.0	CHAIN, P3/4 DOUBLE m.	1.24
67	20001.0	GASKET, OR 4325	2
69	20004.0	GASKET, DPSM 4560.8	1
70	1811.0	L.H. SHAFT FLANGE	1
71	1812.0	R.H. SHAFT FLANGE	1
72	20562.0	SCREW CAP, 1/4" MALE	1
74	20150.0	STOP NUT, BPA 10	2
75	20059.0	BALL BEARING, 7210 BEM	2
76	859.0	REAR BUSH C/W BUSH HOLDER	1
77	20025.0	GASKET, H9 60X70	1
78	20210.0	SNAP RING, J78	1
79	22020.0	SNAP RING, J82	1
80	20162.0	GASKET, DI 237	1
80	20208.0	CHAIN CONNECTION, 3/4, DOUBLE	1
81	20005.0	GASKET, OR 171	1
82	861.0	FRONT BUSH C/WITH BUSH HOLDER	1

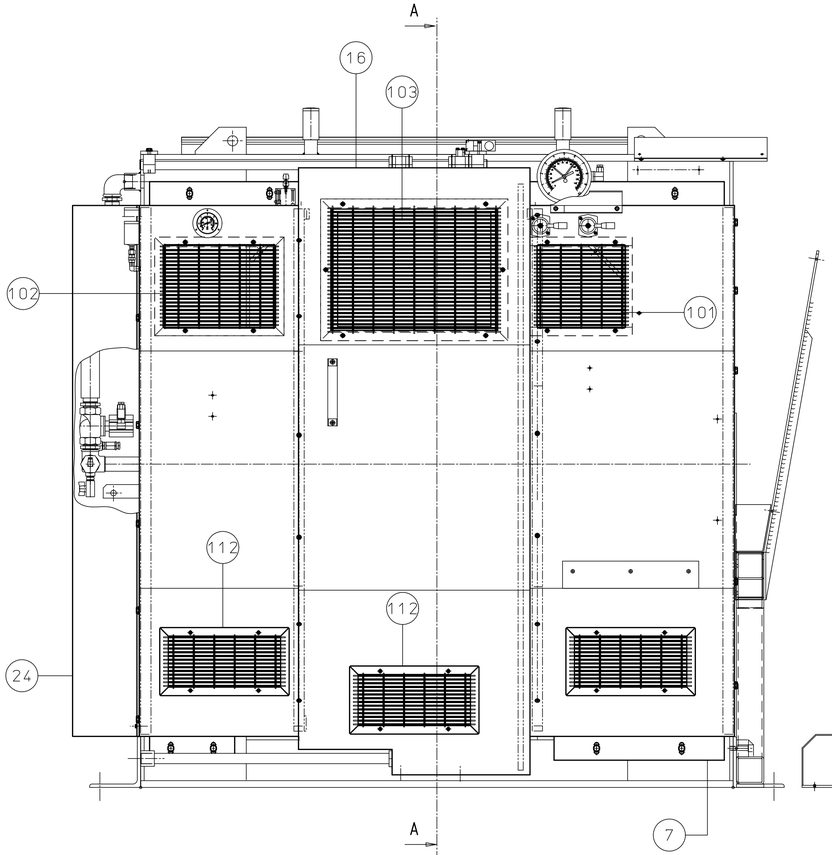
rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
83	22745.0	GEAR BOX, CB85 1/110.4 PAM90 B5	1
84	9958.1	PLATE	1
85	21995.0	SNAP RING, E25	2
85	25755.0	CAP EST. N.10 ART.50717	1
85	21063.0	ROPE GACO DIA.7 (Mt. 2.5)	1
86	860.0	SUPPORT	1
87	862.0	SUPPORT	1
89	26644.0	SAFETY VALVE 1/4” SET TO 8 bar	1
90	20509.0	EXTENSION 3/8” M/F ART. 350	1
91	20507.0	FITTING, CONICAL REDUCTION M 3/8” – F 1/4” ART. 3530	1
92	20206.0	BALL BEARING 51105 (25X42X11)	1
93	23480.0	SCREW, HEXAGON HEAD M10X30 UNI 5739 ZINC PLATED	1
94	25735.0	NORDLOCK WASHER NL 10 I	1
95	33857.0	NUT M10X40 ZINC PLATED, EXTENDED THICKNESS	1
96	23862.0	HEXAGONAL NUT M10 UNI 5588 ZINC PLATED	2
97	28455.0	VIBRATION DAMPER ART. P50-20 10ma, MALE FITMENT	1
-	382.0	SPACER, L=300, ORANGE	3
-	384.0	SPACER, L=360, GREEN	3

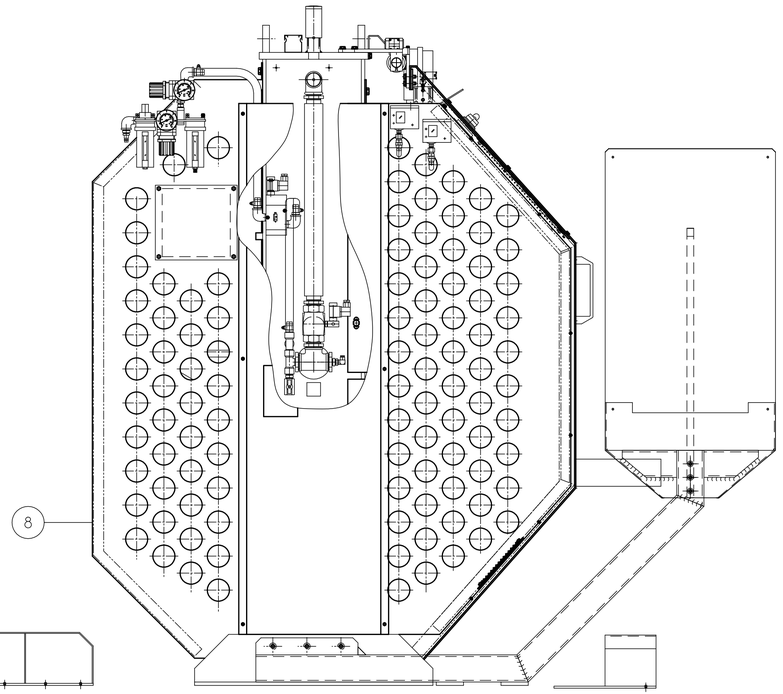
OPIONAL UPON REQUEST

rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
-	400.0	SPACER, L=210, BLUE	3
-	401.0	SPACER, L=150, GRAY	3
-	409.0	SPACER, L=218, RED	3
-	410.0	SPACER, L=240, YELLOW	3

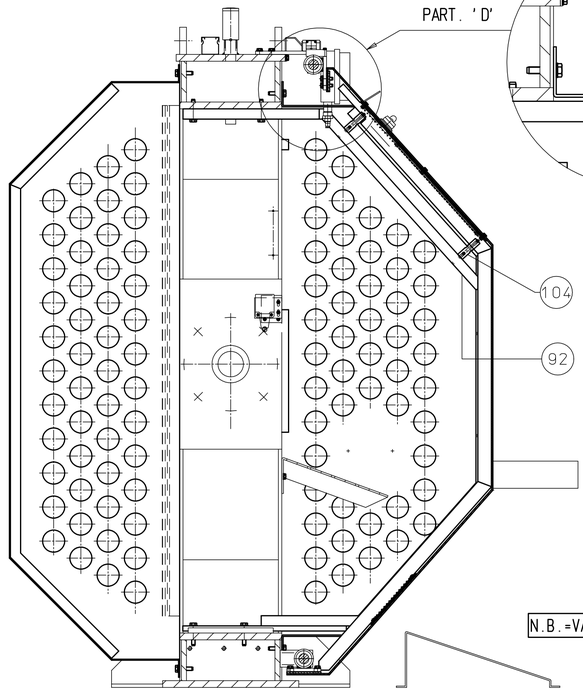

PARTIC. 'A'
PARTIC. 'B'
PARTIC. 'D'
PARTIC. 'C'
A
A
SEZ A-A
PARTIC. 'A' - Scala 1:2
PARTIC. 'B' - Scala 1:2
PARTIC. 'C' - Scala 1:2
PARTIC. 'D' - Scala 1:2
N.B.=VALE DALLA MATR.MAT-20175
BEAD PLATES
M40031
04
10/12/20
matteuzzi srl
Calderara di Reno
ITALY

rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
-	86816.00	ADDITIONAL GRID	3
7	86813.01	FRONT PROTECTION	1
8	86814.01	REAR PROTECTION	1
16	86812.00	MOBILE DOOR PROTECTION	1
24	86817.00	VALVE PROTECTION	1
73	9942-0	LEXAN WINDOW	1
92	86815.01	FRONT PROTECTION	1
101	83176.00	R. H. GRID	1
102	83177.00	L. H. GRID	1
103	71209.00	GRID	1
104	87198.00	SPACER	2

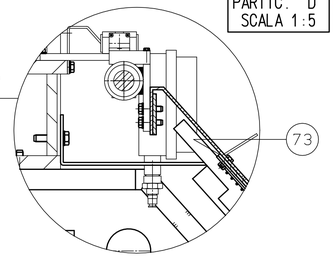




SEZ. A-A



PARTIC. 'D'
SCALA 1:5



N.B.=VALE DALLA MATR.21033

REINFORCED PROTECTIONS			
M42307	01	21/04/21	matteuzzi srl Calderara di Reno (BO) ITALY

ALLEGATO – ANNEX – ANNEXE – ANHANG – ANEXO 2

lista dei componenti e schema pneumatico

pneumatic part list and diagram

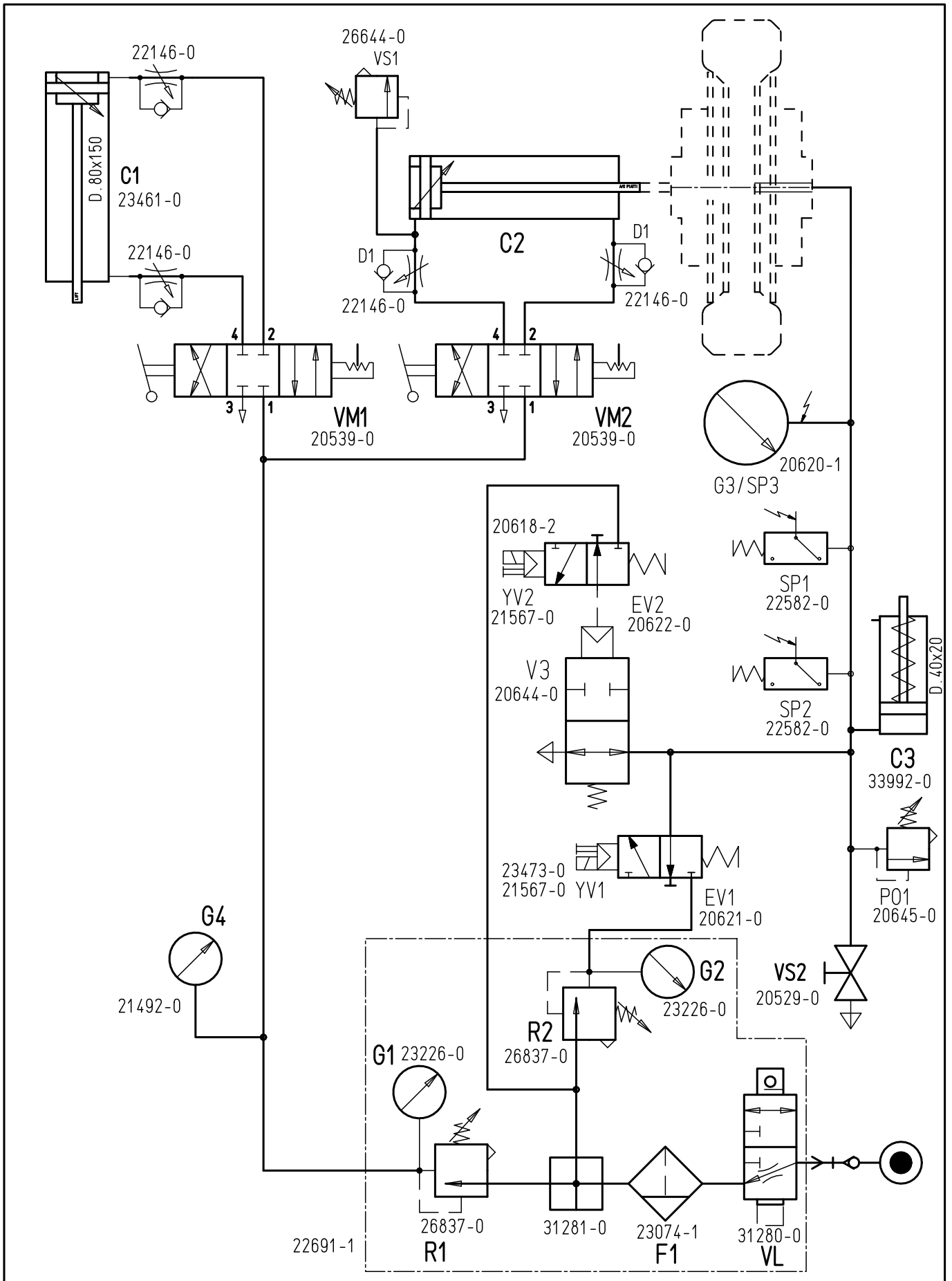
description des composants et schéma pneumatique

Pneumatikteile-Liste und pneumatischer Schaltplan

lista de los componentes y esquema neumático

rif. ref. rep.	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
-	22691.1	LOCKABLE INLET VALVE ASSEMBLY FRR 1/2" CAMOZZI	1
VL	*31280.0*	*LOCKABLE VALVE 1/2" CAMOZZI MC202-V01*	*1*
F1	*23074.1*	*AIR FILTER, CAMOZZI MC202 FOD,*	*1*
-	*31281.0*	*BRANCHING MODULE 1/2" CAMOZZI MC2-B*	*1*
R1	*26837.0*	*AIR REGULATOR, CAMOZZI MC 202 – R00*	*1*
R2	*26837.0*	*AIR REGULATOR, CAMOZZI MC 202 – R00,*	*1*
G1	*23226.0*	*PRESSURE GAUGE, D.50 1/8" POST.0-12BAR,*	*1*
G2	*23226.0*	*PRESSURE GAUGE, D.50 1/8" POST.0-12BAR,*	*1*
EV1	20621.0	ELECTROVALVE VESTA E32W1S6M2	1
-	23473.0	COIL VESTA MS 02400	1
YV1	21567.0	CONNECTOR FX0309	1
V3	20644.0	GLOBE VALVE 1 1/4" N.A. VALVAUT Z200402E	1
EV2	20622.0	ELECTROVALVE UNIVER AA0184+AA0450	1
YV2	21567.0	CONNECTOR FX0309	1
-	20618-2	COIL MF-0051 24VCC	1
VS2	20529.0	BALL VALVE, 1/2" FF	1
P01	20645.0	VALVE, SAFETY ½”	1
SP1	22582.0	PRESSURE SWITCH, DANFOSS KP35	1
SP2	22582.0	PRESSURE SWITCH, DANFOSS KP35	1
G3 SP3	20620.1	PRESSURE GAUGE WIKA PGS21.100 10 BAR/PSI R-1/2G 821.21 art.57301210	1
C3	33992.0	COMPACT CYLINDER ARTEC D.40x20 FSR 040.020.GS.F	1
G4	21492.0	PRESSURE GAUGE D63 1/4"	1
VM1	20539.0	PNEUMATIC CONTROL, 1/4" 4002 I	1
-	22146.0	FLOW REGULATOR FOR CYLINDER 3/8" T.8 MV380838	2
C1	23461.0	CYLINDER ISO UNIVER D.80X150 K2000800150	1

rif. **ref.** **rep.**	**Descrizione – Description – Beschreibung – Descripción**		Q.tà Q.ty Q.tè Menge Cant.
VM2	20539.0	PNEUMATIC CONTROL, 1/4" 4002 I	1
-	22146.0	FLOW REGULATOR FOR CYLINDER 3/8" T.8 MV380838	2
C2	-	ASSEMBLY OF MECHNAICAL PARTS - SEE MECHANICAL DRAWINGS	1
VS1	26644.0	SAFETY VALVE 1/4" SET TO 8 BAR	1



G100 UL 508A

PNEUMATIC DIAGRAM

6859	00	21/04/21	matteuzzi srl Calderara di Reno (BO) ITALY

ALLEGATO – ANNEX – ANNEXE – ANHANG – ANEXO 3

lista dei componenti e schema elettrico

electrical part list and diagram

description des composants et schéma électrique

Elektroteile-Liste und elektrischer Schaltplan

lista de los componentes y esquema eléctrico

matteuzzi srl

VIA SERRA 1/E
40012 CALDERARA DI RENO
BOLOGNA, ITALY

TEL. ++39 051 726351
FAX ++39 051 726283
www.matteuzzi-srl.com
matteuzzi@matteuzzi-srl.com

Drawing Number Numero Progetto	: 5705_0_MAT-21216_v1.00
Machine Type Macchina	: G100 UL
Customer Cliente	: Central Marketing
Serial nr. Matricola	: MAT-21216
Destination country Paese di destinazione	: U.S.A.

MEC5705_0 - G100 MACHINE CONFIGURATION

		Left	Right
Electrical cabinet color	Standard (Ral.7035)		X
	Yellow (Ral.1028)		
	...		
Options			**Installed**
Base			X
3rd INFLATION			X
Small tire			X
Traduzioni schema e targhe	ITA - ENG		X
	ITA - FRA		
	...		

1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer	Description	Sales order 80915 / Location +
				Drawer	S.A.			
				Revised by	S.A.		Machine optional list	Electrical diagram code **5705_0_MAT-21216_v1.00** / Page 1A
!!!!	Description	Date	Signature	Responsible	X.X.			

MAIN ELECTRICAL PANEL DATA PLATE

INDUSTRIAL CONTROL PANEL FOR INDUSTRIAL MACHINERY

INFORMATION SUBJECT TO CHANGE

MAIN SUPPLY VOLTAGE / MAIN SUPPLY FREQUENCY	480Y / 277 VAC	60HZ
MAIN SUPPLY LINE	3 + GND	
TOTAL FLA	6,7 A	
LARGEST MOTOR (FLA)	6,2 A	
TOTAL INSTALLED POWER	3,2 kW	
S.C.C.R.	10 kA	
MAX AMP. AND S.C.C.R. OF MAIN OVERCURRENT PROTECTION DEVICE	15 A	35 kA
ENCLOSURE TYPE	12	
ELECTRICAL DRAWING	MEC 5705_0	
AUXILIARY VOLTAGE	24 Vdc	
MACHINE SERIAL NUMBER	MAT-21216	
MANUFACTURING YEAR	06 / 2022	

TO BE PLACED
NEAR MAIN SWITCH HANDLE

1A 2A

				Create Date	15/06/2022	Customer		Description	Sales order 80915 / Location +
				Drawer	S.A.			Data plate	Electrical diagram code **5705_0_MAT-21216_v1.00** / Page 2
				Revised by	S.A.				
!!!!	Description	Date	Signature	Responsible	X.X.				

1	2	3	4	5	6	7	8

COLOR ABBREVIATIONS TABLE

OG	=	ORANGE	PK	=	PINK
WH	=	BIANCO	RD	=	RED
BU	=	BLUE	GN	=	GREEN
BUWH	=	BLUE/WHITE	VT	=	VIOLET
YE	=	YELLOW			
GY	=	GRAY	GNYE	=	GREEN/YELLOW
BN	=	BROWN			
BK	=	BLACK			

COLOR CODE FOR INTERNAL WIRING:

POWER CIRCUITS:

BLACK	ALL UNGROUNDED POWER CIRCUIT CONDUCTORS REGARDLESS OF VOLTAGE
WHITE (or grey)	GROUNDED AC CURRENT-CARRYING CIRCUIT CONDUCTOR REGARDLESS OF VOLTAGE

CONTROL CIRCUITS:

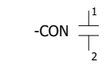
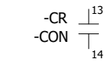
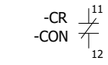
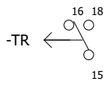
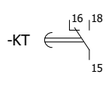
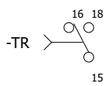
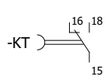
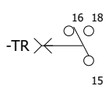
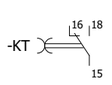
YELLOW/GREEN	GROUNDING AND DROUNDED CIRCUIT CONDUCTORS
BLACK	UNGROUNDED CONTROL CIRCUITS CONDUCTORS OPERATING AT SUPPLY VOLTAGE
RED	UNGROUNDED AC CONTROL CIRCUITS AT A VOLTAGE LESS THAN SUPPLY VOLTAGE
WHITE (or grey)	GROUNDED AC CURRENT-CARRYING CONTROL CIRCUIT CONDUCTOR REGARDLESS OF VOLTAGE
BLUE	UNGROUNDED DC CONTROL CIRCUITS
BLUE WITH WHITE STRIPE	GROUNDED DC CURRENT-CARRYING CONTROL CIRCUIT CONDUCTOR
ORANGE (or yellow)	UNGROUNDED CONTROL CIRCUITS OR OTHER WIRINGS THAT REMAIN ENERGIZED WHEN THE MAIN DISCONNECT IS IN THE "OFF" POSITION
WHITE WITH WHITE STRIPE	GROUNDED AC CONTROL CIRCUIT CONDUCTOR THAT REMAINS ENERGIZED HEN THE MAIN DISCONNECT SWITCH IS IN THE "OFF" POSITION

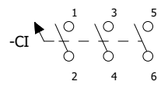
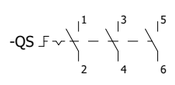
WIRE TYPE FOR INTERNAL WIRING:

USE COPPER CONDUCTOR ONLY - AT LEAST 75° RATED

IF NOT SPECIFIED USE AWG18 / 1mmq

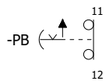
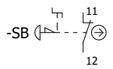
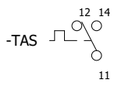
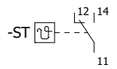
1	2	3	4	5	6	7	8

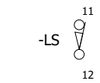
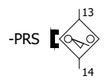
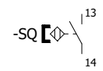
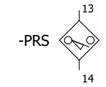
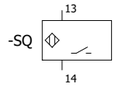
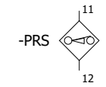
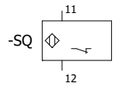
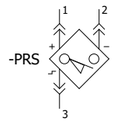
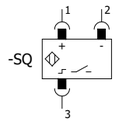
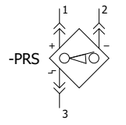
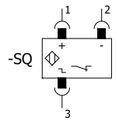
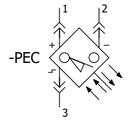
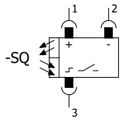
Simbolo ANSI ANSI symbol	Simbolo IEC IEC symbol	Descrizione Description
		Contatto di potenza n.a. Power contact n.o.
		Contatto n.a. Contact n.o.
		Contatto n.c. Contact n.c.
		Contatto di commutazione Switching contact
		Contatto ad attivazione ritardata Contact with delayed activation
		Contatto ad interruzione ritardata Contact with delayed interruption
		Contatto ad attivazione e interruzione ritardata Contact with delayed activation and interruption

Simbolo ANSI ANSI symbol	Simbolo IEC IEC symbol	Descrizione Description
		Selettore a rotazione, contatto n.a. Rotation selector, Contact n.o.
		Selettore a rotazione, contatto n.c. Rotation selector, Contact n.c.
		Sezionatore Disconnect switch
		Selettore a chiave, contatto n.a. Key selector, Contact n.o.
		Selettore a chiave, contatto n.c. Key selector, Contact n.c.
		Pulsante, contatto n.a. Button, Contact n.o.
		Pulsante, contatto n.c. Button, Contact n.c.

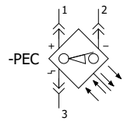
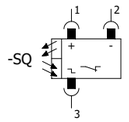
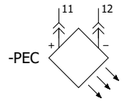
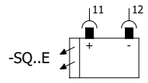
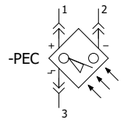
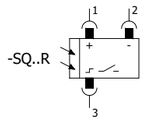
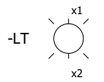
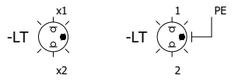
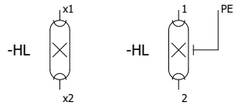
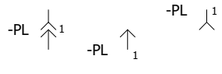
1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer		Description	Sales order 80915	Location +
				Drawer	S.A.					
				Revised by	S.A.					
!!!!	Description	Date	Signature	Responsible	X.X.			Symbol legend	Electrical diagram code **5705_0_MAT-21216_v1.00**	Page 4A

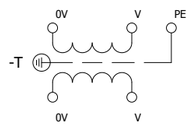
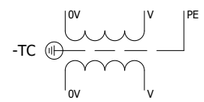
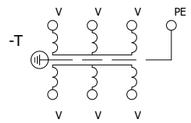
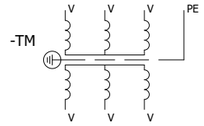
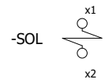
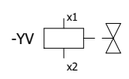
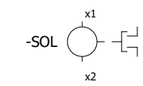
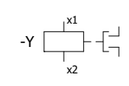
1	2	3	4	5	6	7	8

Simbolo ANSI ANSI symbol	Simbolo IEC IEC symbol	Descrizione Description
		Pulsante arresto di emergenza contatto n.c., ruotare per sbloccare Emergency stop button, Contact n.c., Turn to unlock
		Pressostato, contatto n.a. Pressure switch, Contact n.o.
		Pressostato, contatto n.c. Pressure switch, Contact n.c.
		Termostato Thermostat
		Sensore di livello, contatto n.a. Level sensor, Contact n.o.
		Sensore di livello, contatto n.c. Level sensor, Contact n.c.
		Finecorsa meccanico, contatto n.a. Mechanical end-stop, Contact n.o.

Simbolo ANSI ANSI symbol	Simbolo IEC IEC symbol	Descrizione Description
		Finecorsa meccanico, contatto n.c. Mechanical end-stop, Contact n.c.
		Sensore di prossimità magnetico, contatto n.a. Magnetic proximity sensor, Contact n.o.
		Sensore di prossimità, contatto n.a. Proximity sensor, Contact n.o.
		Sensore di prossimità, contatto n.c. Proximity sensor, Contact n.c.
		Sensore di prossimità, contatto n.a. Proximity sensor, Contact n.o.
		Sensore di prossimità, contatto n.c. Proximity sensor, Contact n.c.
		Fotocellula, contatto n.a. Photocell, Contact n.o.

1	2	3	4	5	6	7	8

Simbolo ANSI ANSI symbol	Simbolo IEC IEC symbol	Descrizione Description
		Fotocellula, contatto n.c. Photocell, Contact n.c.
		Fotocellula, emettitore Photocell, Emitter
		Fotocellula, ricevitore Photocell, Receiver
		Lampada segnalazione Indicator light
		Lampada fluorescente Fluorescent light
		Diodo luminoso LED LED
		Spinotto e presa Plug and socket

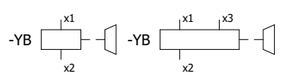
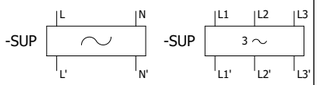
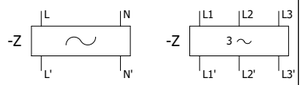
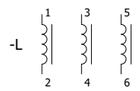
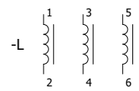
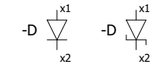
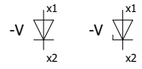
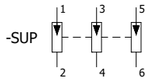
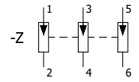
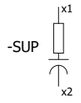
Simbolo ANSI ANSI symbol	Simbolo IEC IEC symbol	Descrizione Description
		Bobina contattore o relè Contactor reel or relay
		Bobina, ritardata alla caduta Coil, Fall delayed
		Bobina di sgancio interruttore generale Release coil, Main switch
		Trasformatore monofase Single-phase transformer
		Trasformatore trifase Three-phase transformer
		Elettrovalvola Solenoid valve
		Frizione elettromagnetica Electromagnetic clutch

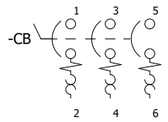
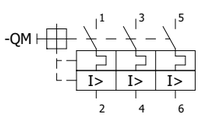
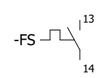
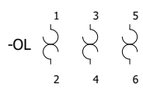
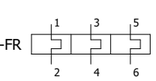
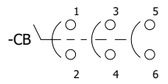
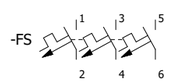
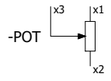
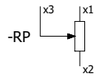
4B

4D

1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer	Description	Sales order 80915 / Location +
				Drawer	S.A.		Symbol legend	
				Revised by	S.A.			Electrical diagram code **5705_0_MAT-21216_v1.00** / Page 4C
!!!!	Description	Date	Signature	Responsible	X.X.			

1	2	3	4	5	6	7	8

Simbolo ANSI ANSI symbol	Simbolo IEC IEC symbol	Descrizione Description
		Freno elettromagnetico Electromagnetic brake
		Filtro antidisturbi EMC Filter
		Induttanza Choke
		Varistore Varistor
		Diodo - Diodo Zener Diode - Zener diode
		Scaricatore di sovratensione Surge voltage protection
		Filtro RC RC filter

Simbolo ANSI ANSI symbol	Simbolo IEC IEC symbol	Descrizione Description
		Interruttore magnetotermico Circuit breaker
		Contatto n.a. con azionamento termico automatico Contact n.o. with automatic overload cutout
		Relè termico Overload relay
		Interruttore automatico Circuit breaker
		Resistenza Resistor
		Potenziometro Potentiometer
		Resistenza, termistore PTC Heating element, PTC thermistor

1	2	3	4	5	6	7	8

Simbolo ANSI ANSI symbol	Simbolo IEC IEC symbol	Descrizione Description
-T/C	-BT	Termocoppia Thermocouple
-HTR -HTR	-EH -EH	Elemento riscaldante Heating element
-TB	-XT	Morsetto Terminal
PE PE	PE PE	Terra Ground
-FU	-FU	Fusibile Fuse
-SSR	-KM..S	Relè statico Solid state relay
-MTR	-M	Motore in corrente continua DC motor

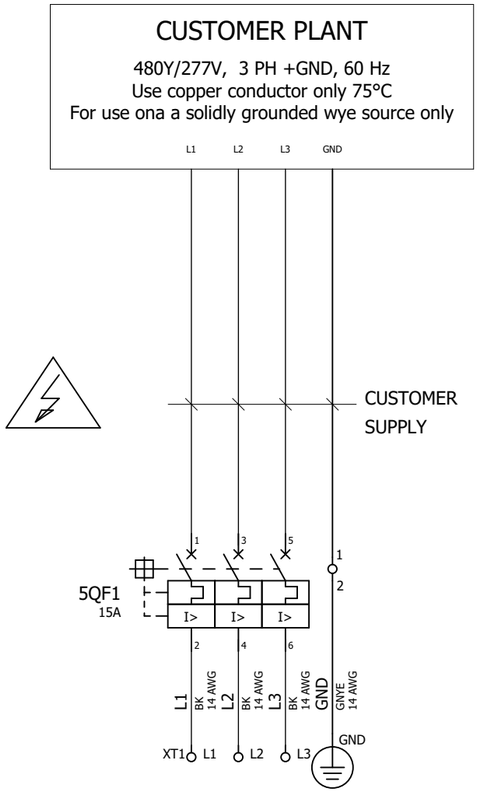
Simbolo ANSI ANSI symbol	Simbolo IEC IEC symbol	Descrizione Description
-MTR	-M	Motore asincrono trifase Three-phase asynchronous motor
-MTR	-M	Motore asincrono trifase Three-phase asynchronous motor
-AH	-HA	Avvisatore acustico Audible alarm
-ABE	-HA	Campana Bell housing
-T -T	-TS -TS	Alimentatore Power supply
-RECP	-XS	Presa ad innesto con PE Insertion outlet with PE

4D

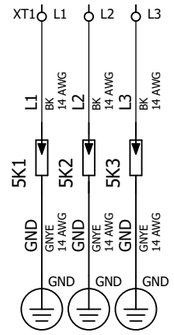
+QE/5

1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer	Description
				Drawer	S.A.		Symbol legend
				Revised by	S.A.		
!!!!	Description	Date	Signature	Responsible	X.X.		

Sales order 80915	Location +
Electrical diagram code **5705_0_MAT-21216_v1.00**	Page 4E

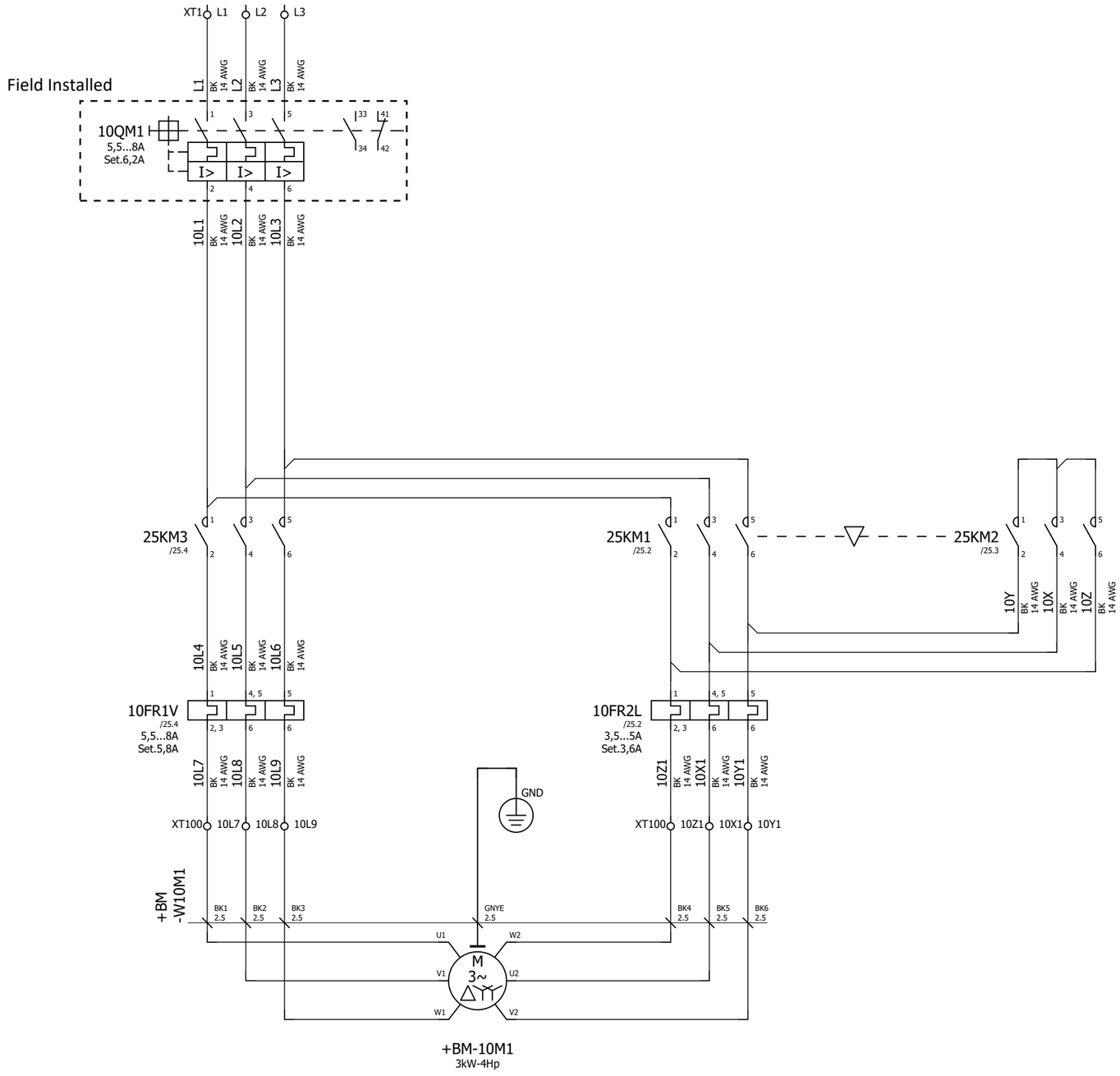


POWER SUPPLY



SPD

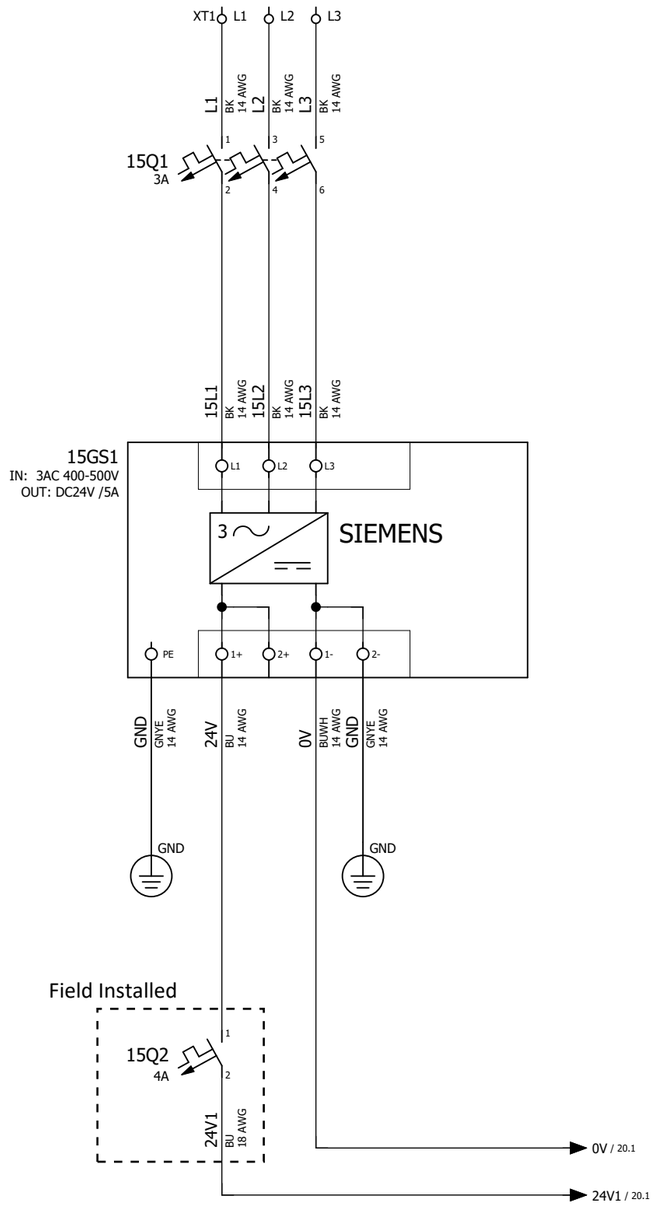
1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer	Description	Sales order 80915 / Location + QE
				Drawer	S.A.		POWER SUPPLY LINE	
				Revised by	S.A.			Electrical diagram code **5705_0_MAT-21216_v1.00** / Page 5
!!!!	Description	Date	Signature	Responsible	X.X.			



+BM-10M1
3kW-4Hp

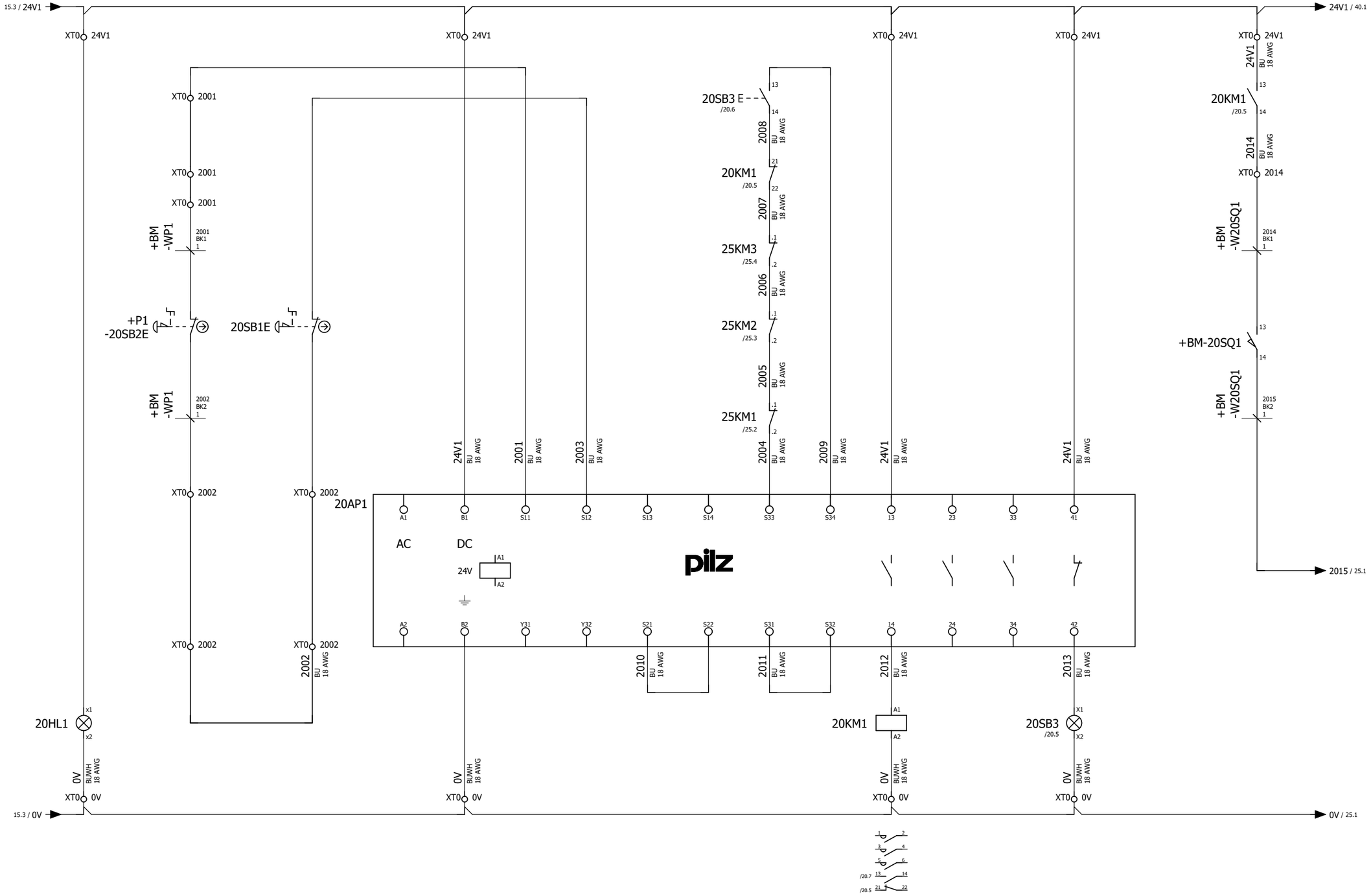
TIRE ROTATION

1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer		Description	Sales order 80915 / Location + QE
				Drawer	S.A.			TIRE ROTATION	
				Revised by	S.A.				Electrical diagram code **5705_0_MAT-21216_v1.00** / Page 10
!!!!	Description	Date	Signature	Responsible	X.X.				



24VDC POWER SUPPLY

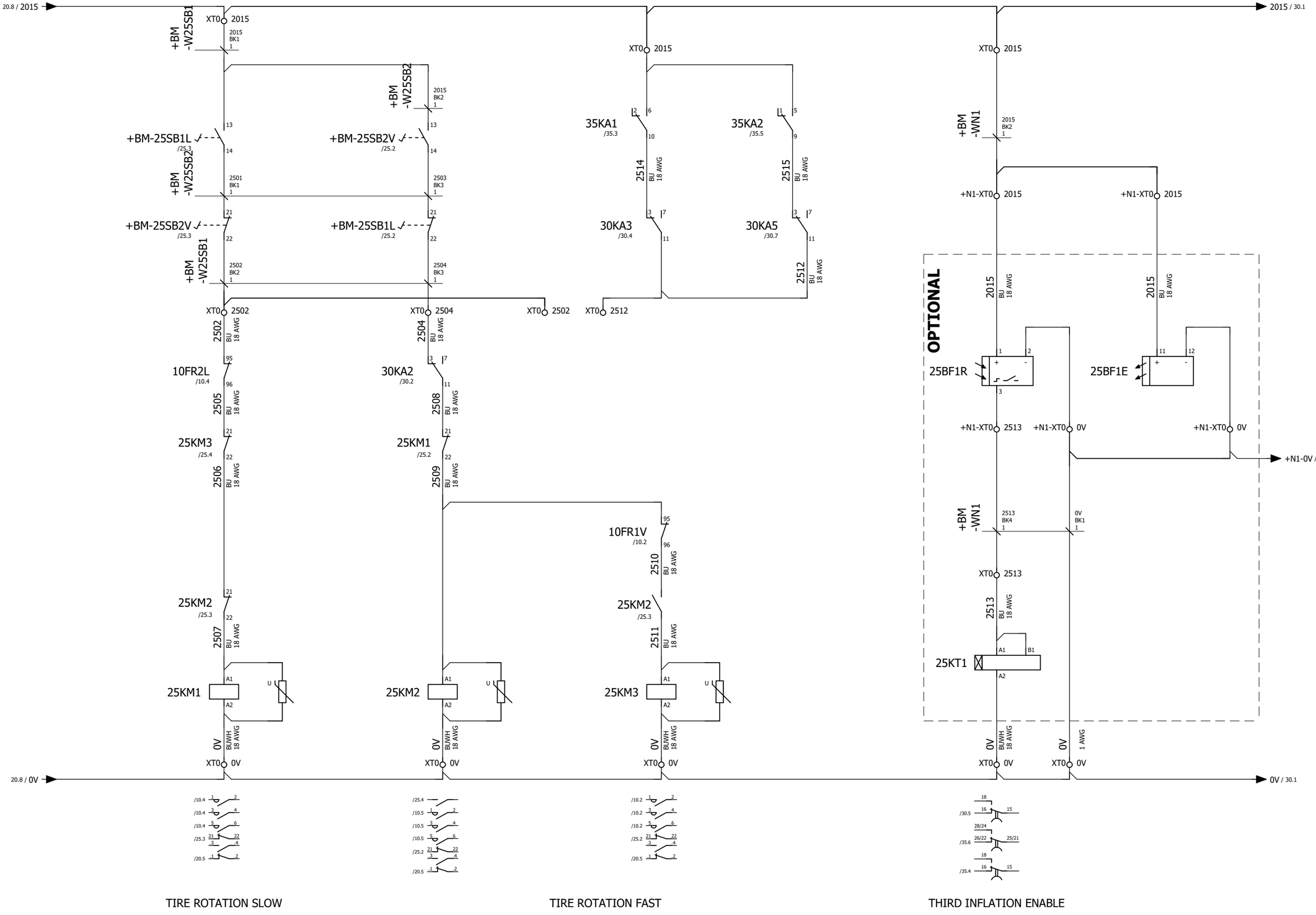
1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer		Description	Sales order 80915 / Location + QE
				Drawer	S.A.			24VDC POWER SUPPLY	
				Revised by	S.A.				Electrical diagram code **5705_0_MAT-21216_v1.00** / Page 15
!!!!	Description	Date	Signature	Responsible	X.X.				



VOLTAGE PRESENCE EMERGENCY STOP RESET

15 25

1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer	Description	Sales order 80915 / Location + QE
				Drawer	S.A.		SAFETIES	
				Revised by	S.A.			Electrical diagram code **5705_0_MAT-21216_v1.00** / Page 20
!!!!	Description	Date	Signature	Responsible	X.X.			

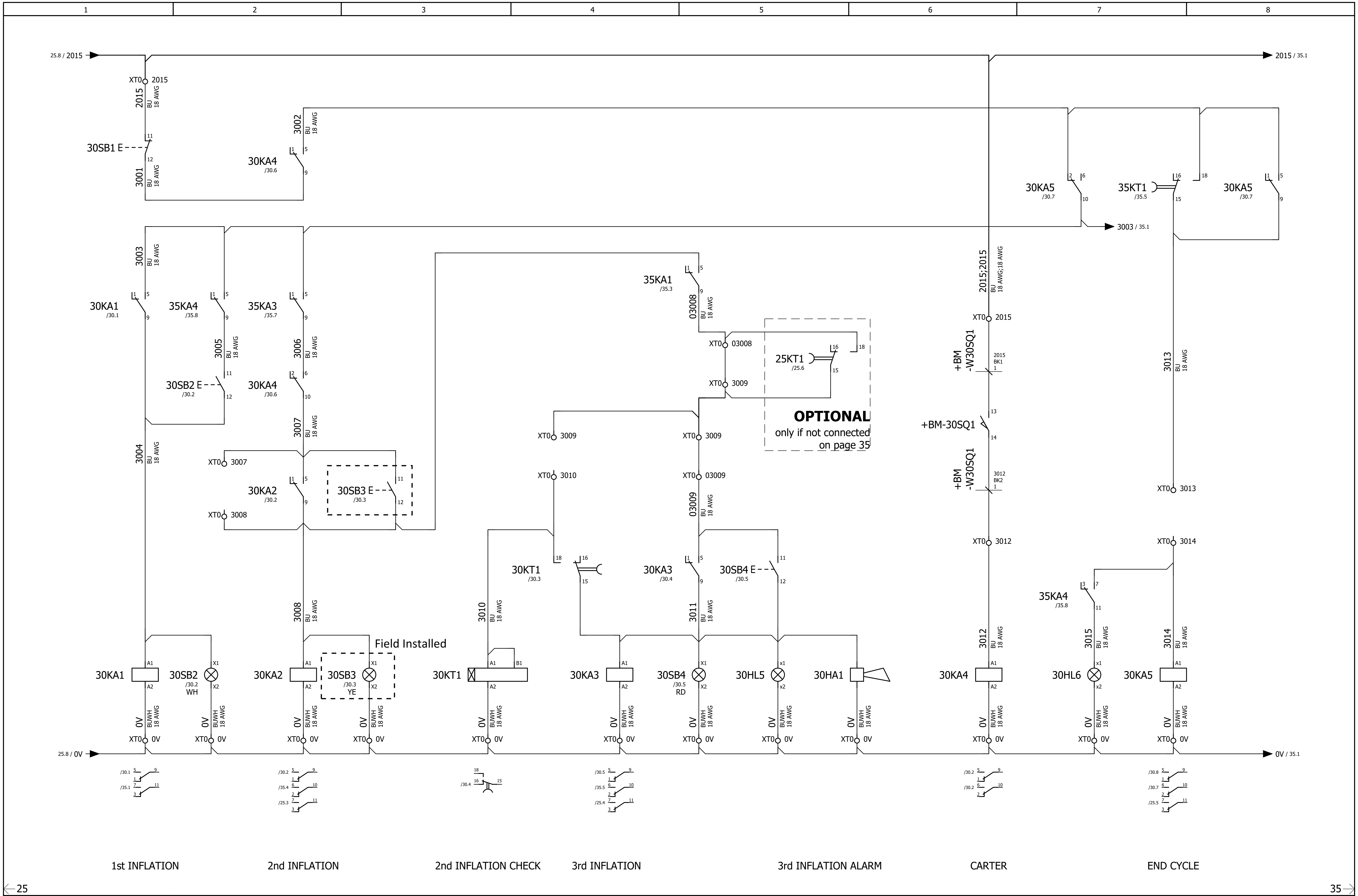


TIRE ROTATION SLOW

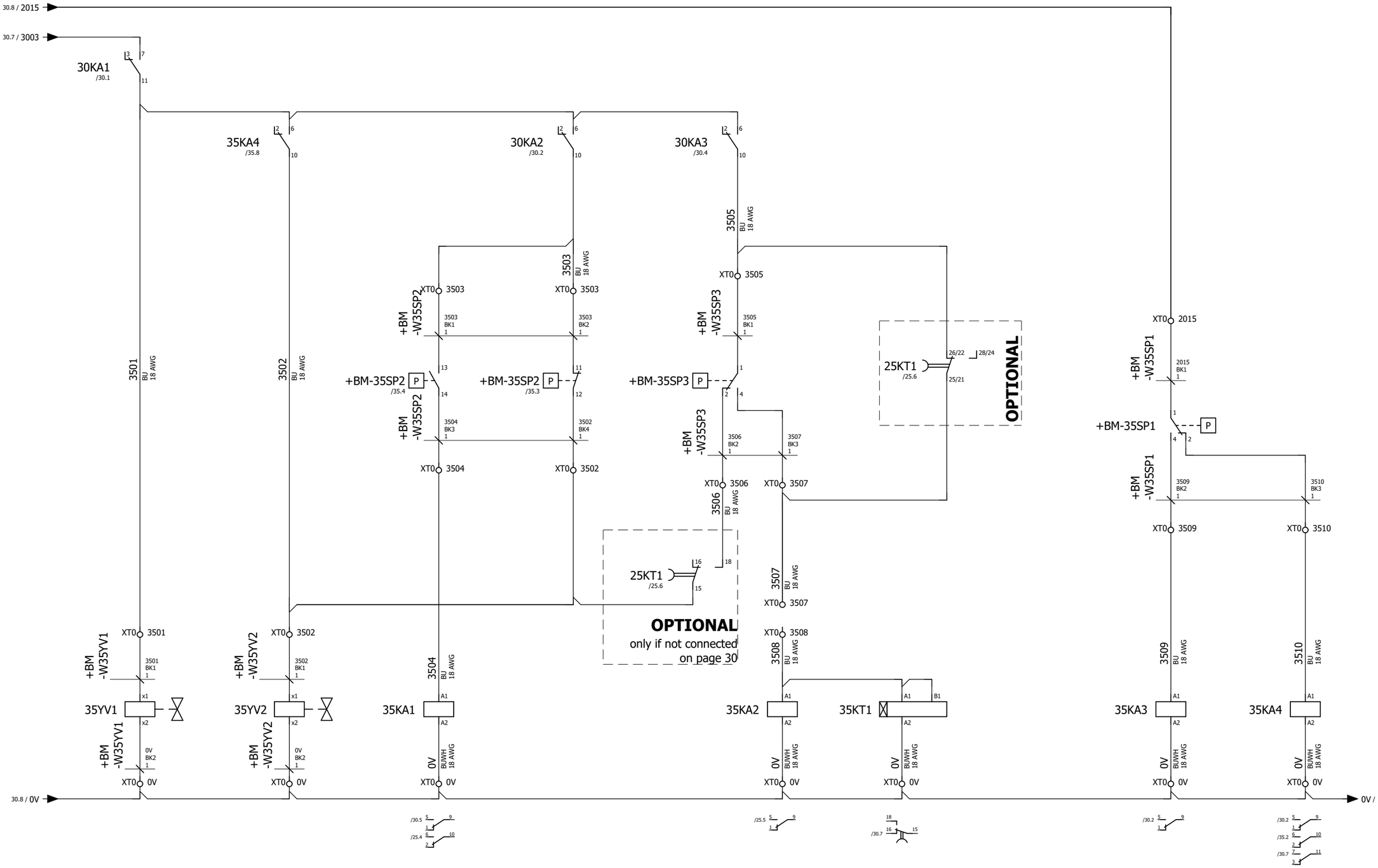
TIRE ROTATION FAST

THIRD INFLATION ENABLE

1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer	Description	Sales order 80915 / Location + QE
				Drawer	S.A.		TIRE ROTATION	
				Revised by	S.A.			
!!!!	Description	Date	Signature	Responsible	X.X.			Electrical diagram code **5705_0_MAT-21216_v1.00** / Page 25

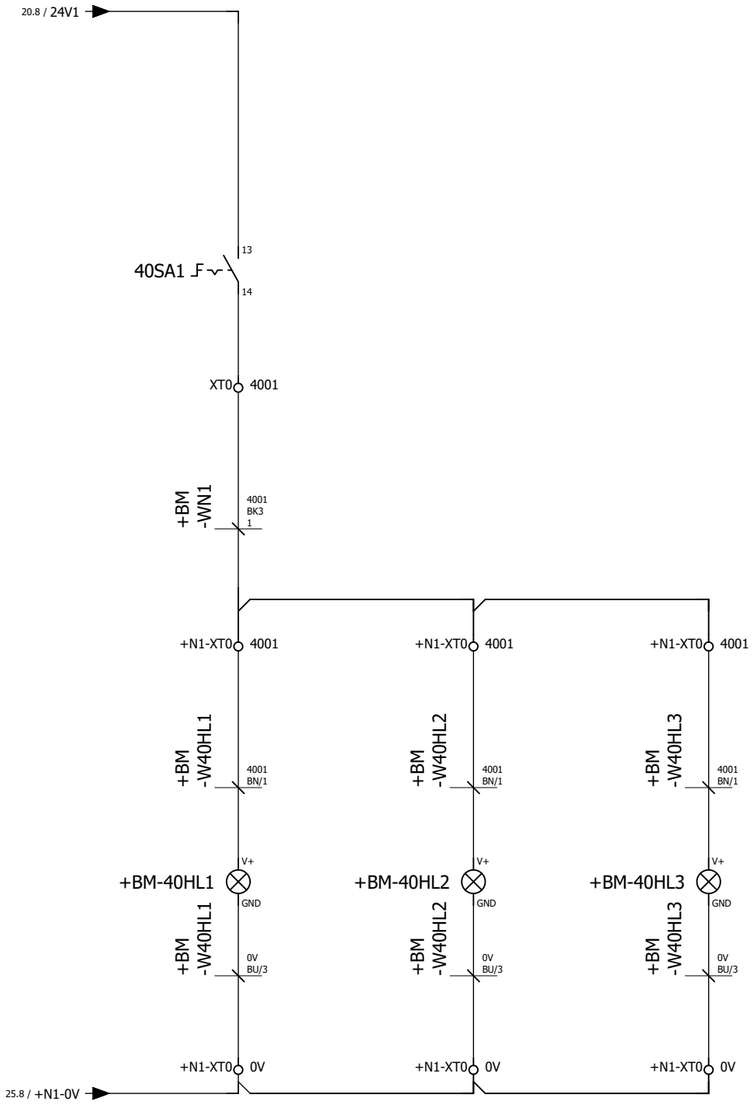


1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer	AEPI	Description	Sales order 80915	Location + QE
				Drawer	S.A.					
				Revised by	S.A.			INFLATION	Electrical diagram code **5705_0_MAT-21216_v1.00**	Page 30
!!!!	Description	Date	Signature	Responsible	X.X.					



TYRE DEFLATION | TYRE INFLATION | 2nd INFLATION READY | 3rd INFLATION READY | 3rd INFLATION READY CHECK | 1st INFLATION RUNNING | 1st INFLATION READY

1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer		Description	Sales order 80915	Location + QE
				Drawer	S.A.			INFLATION		
				Revised by	S.A.				Electrical diagram code **5705_0_MAT-21216_v1.00**	Page 35
!!!!	Description	Date	Signature	Responsible	X.X.					



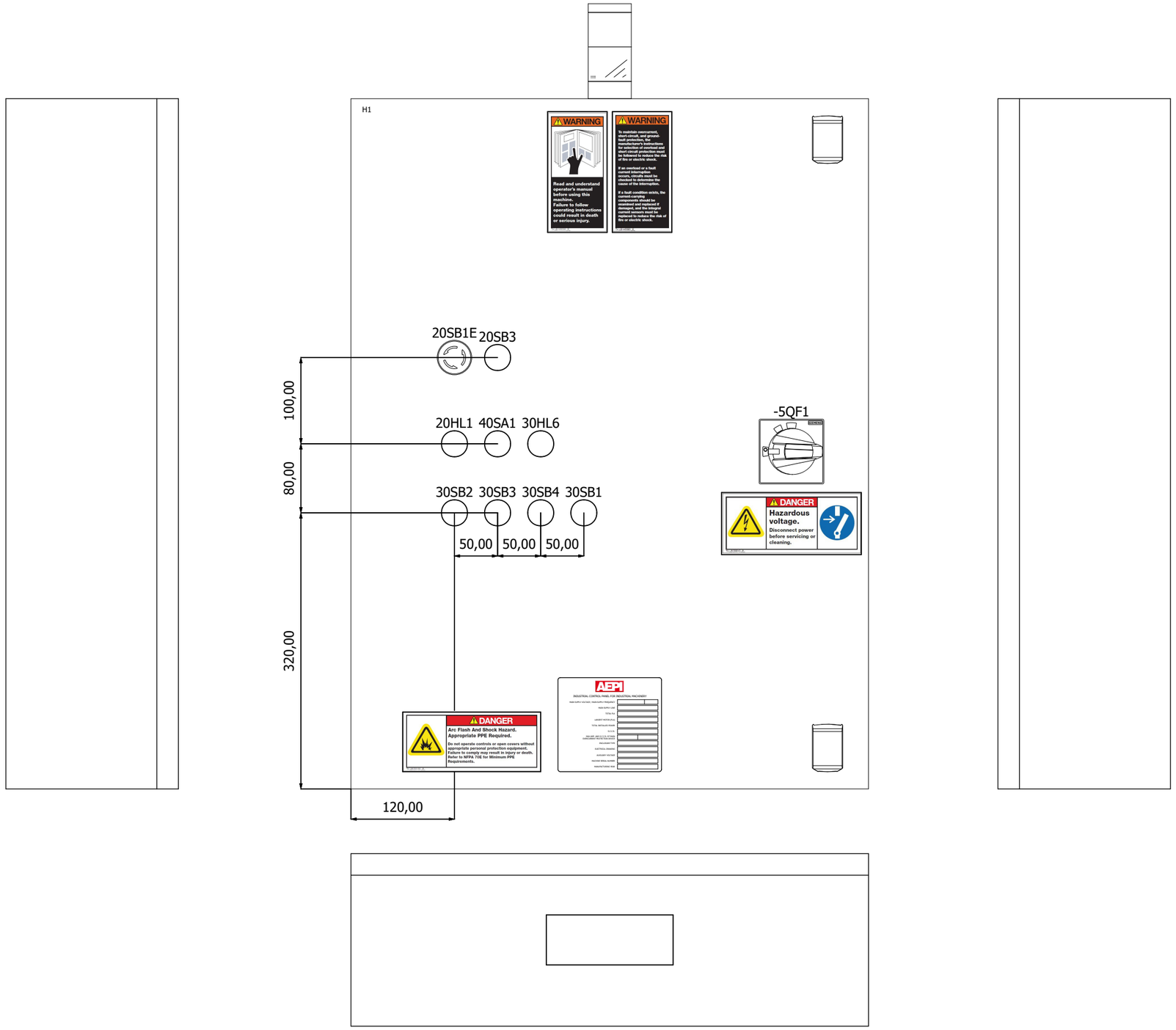
LEFT SIDE MACHINE LIGHTING

RIGHT SIDE MACHINE LIGHTING

MACHINE CENTER LIGHTING

1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer	Description	Sales order 80915 / Location + QE
				Drawer	S.A.		MACHINE LIGHTS	
				Revised by	S.A.			Electrical diagram code **5705_0_MAT-21216_v1.00** / Page 40
!!!!	Description	Date	Signature	Responsible	X.X.			

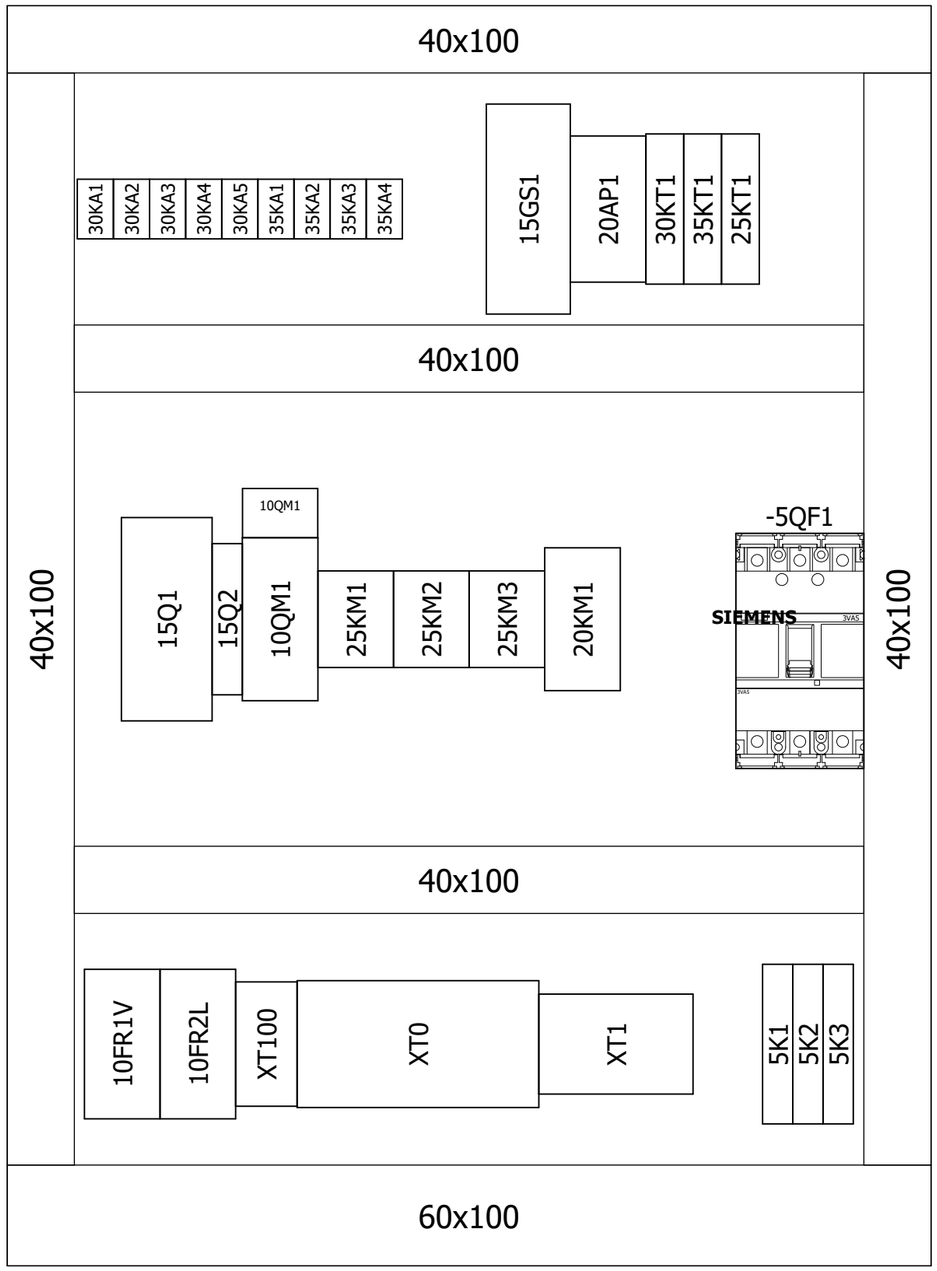
LAYOUT H1



40 505

1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer	Description	Sales order	Location
				Drawer	S.A.			80915	+ QE
				Revised by	S.A.		LAYOUT H1	Electrical diagram code	Page
!!!!	Description	Date	Signature	Responsible	X.X.			**5705_0_MAT-21216_v1.00**	500

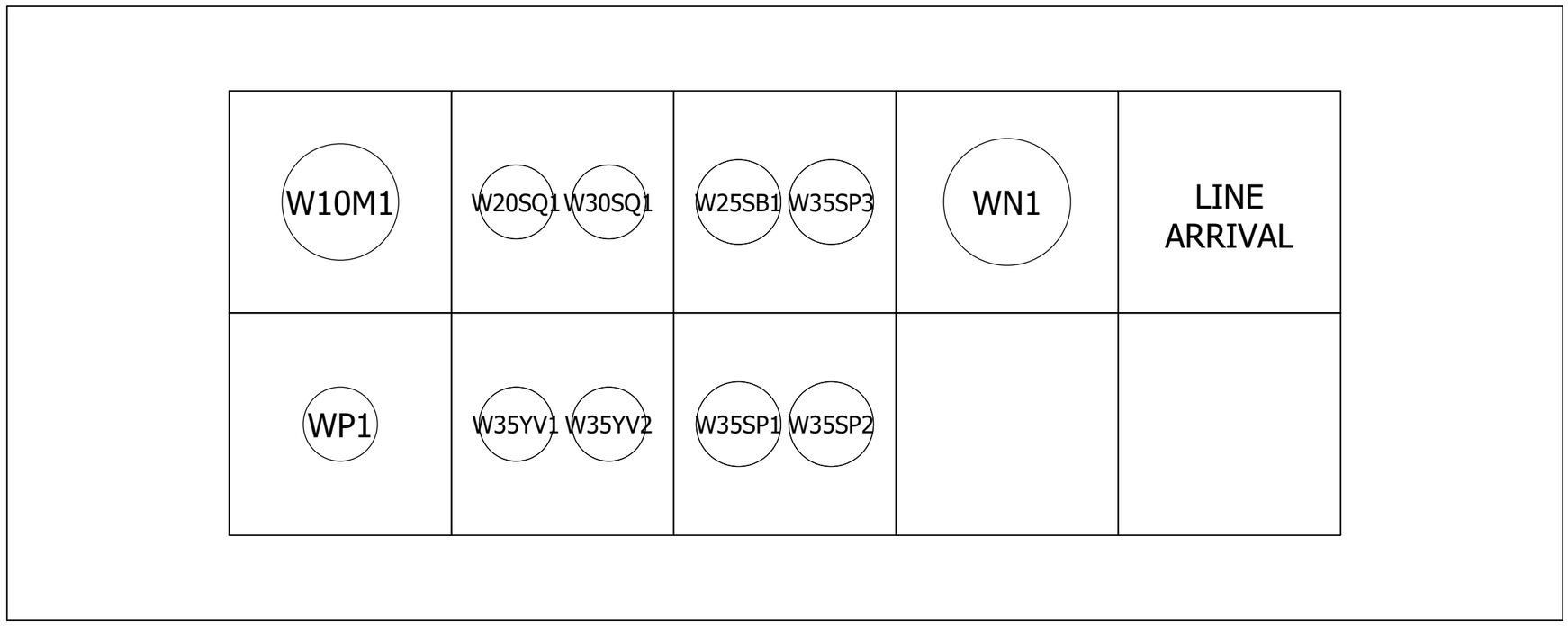
LAYOUT H1



500 506

1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer	Description	Sales order 80915	Location + QE
				Drawer	S.A.		LAYOUT H1		
				Revised by	S.A.			Electrical diagram code **5705_0_MAT-21216_v1.00**	Page 505
!!!!	Description	Date	Signature	Responsible	X.X.				

CABLE EXIT LAYOUT



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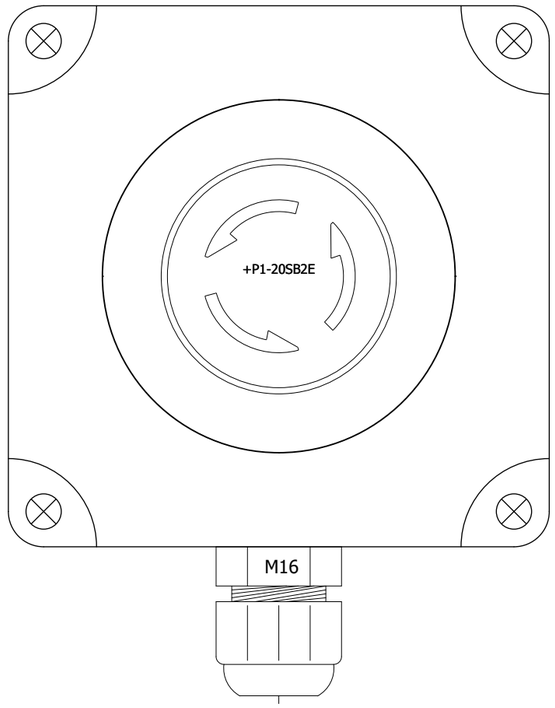
				Revised by	S.A.			Electrical diagram code **5705_0_MAT-21216_v1.00** / Page 506
!!!!	Description	Date	Signature	Responsible	X.X.			

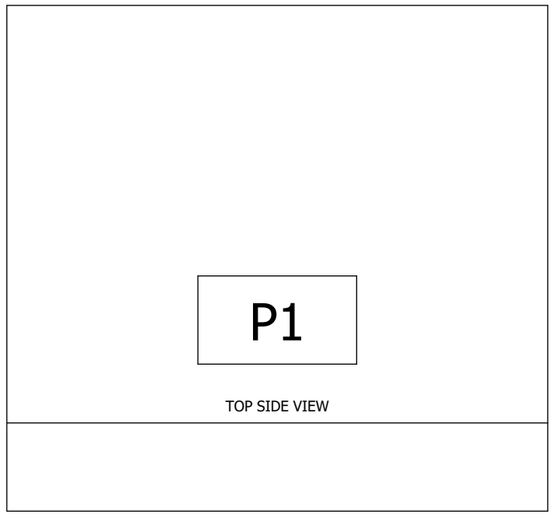
1	2	3	4	5	6	7	8

ELECTRICAL BOX P1 LAYOUT

FRONT SIDE VIEW



WP1



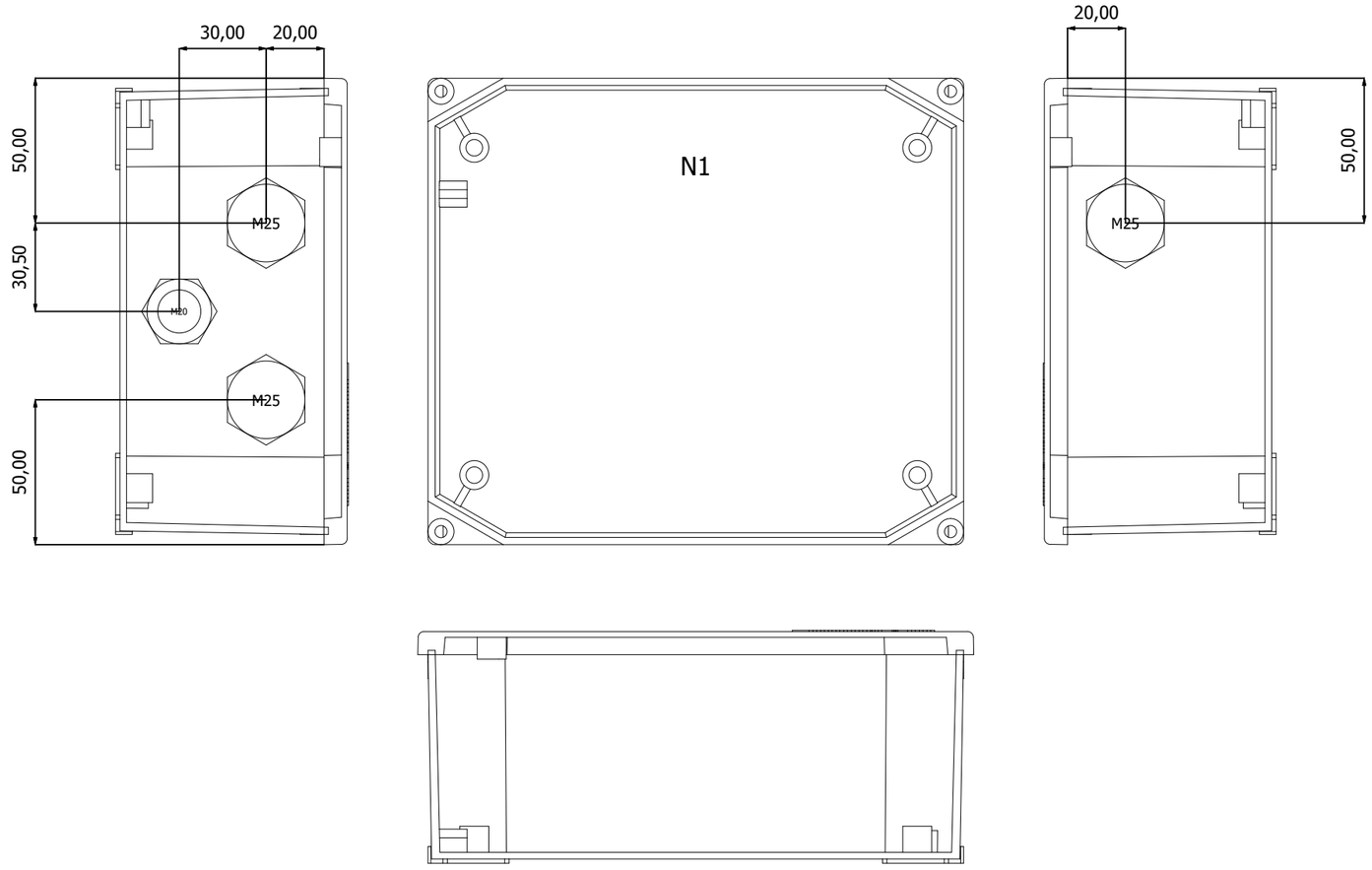
TOP SIDE VIEW

506 520

1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer	Description	Sales order	Location
				Drawer	S.A.		ELECTRICAL BOX P1 LAYOUT	80915	+ QE
				Revised by	S.A.			Electrical diagram code	Page 510
!!!!	Description	Date	Signature	Responsible	X.X.			**5705_0_MAT-21216_v1.00**	

1	2	3	4	5	6	7	8

ELECTRICAL BOX N1 LAYOUT



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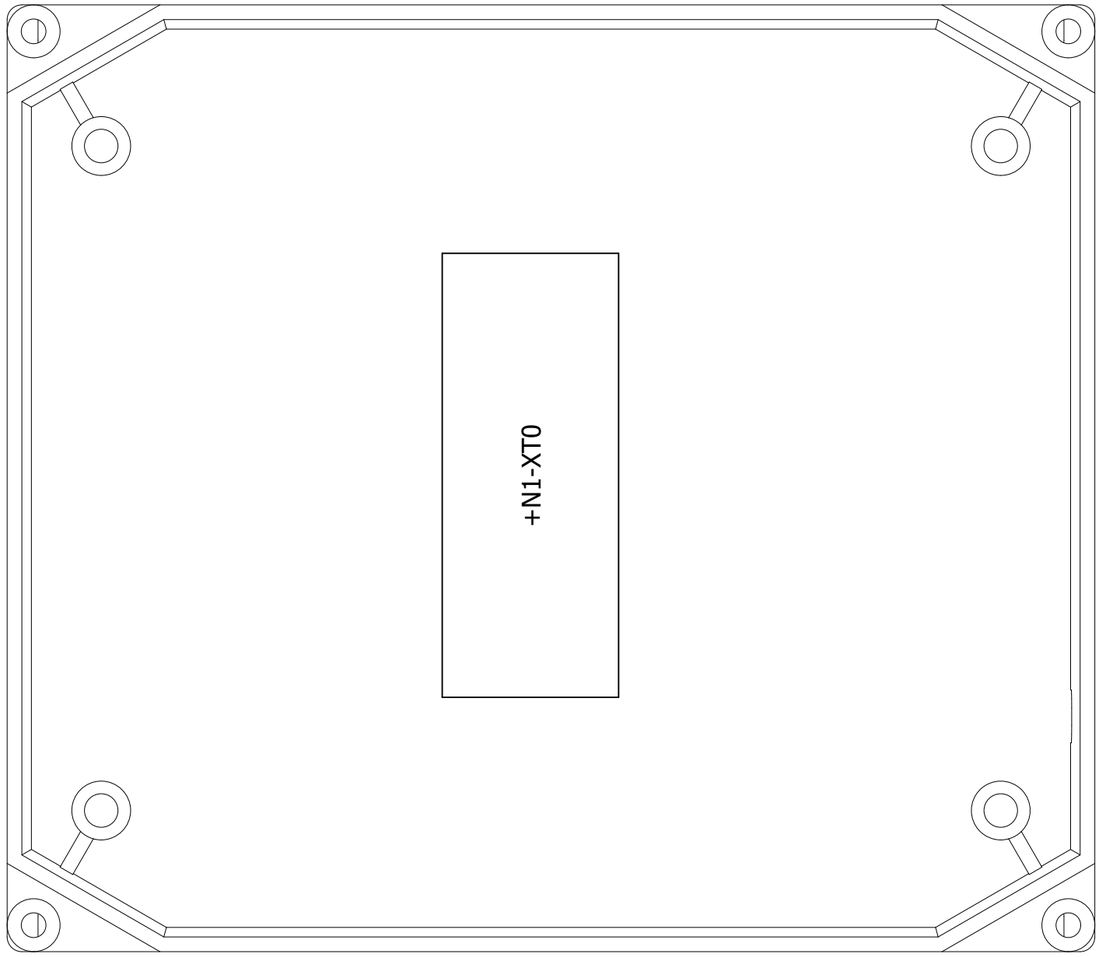
1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer		Description	Sales order 80915 / Location + QE
				Drawer	S.A.			N1 LAYOUT	
				Revised by	S.A.				Electrical diagram code **5705_0_MAT-21216_v1.00** / Page 520
!!!!	Description	Date	Signature	Responsible	X.X.				

ELECTRICAL BOX N1 LAYOUT



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1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer	Description	Sales order	Location
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				Revised by	S.A.		N1 LAYOUT	Electrical diagram code	Page 525
!!!!	Description	Date	Signature	Responsible	X.X.			**5705_0_MAT-21216_v1.00**	

1	2	3	4	5	6	7	8

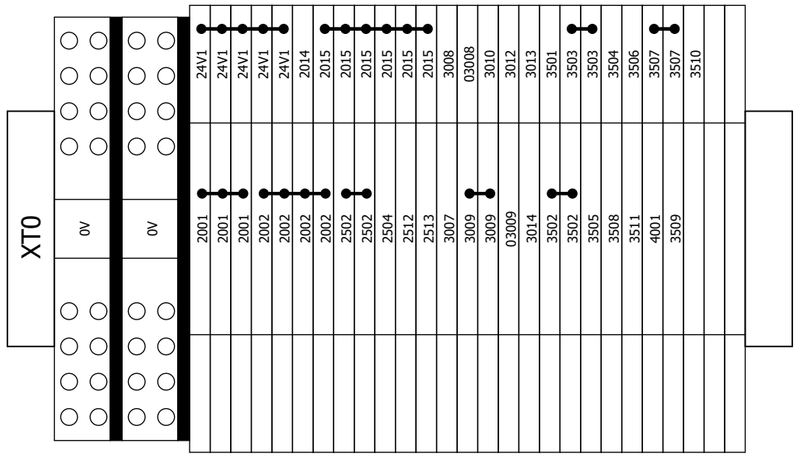
H1	RIPRISTINO RESET	INTERRUTTORE GENERALE MAIN SWITCH
P1	PRESENZA TENSIONE VOLTAGE PRESENCE	
N1	ILLUMINAZIONE MACCHINA MACHINE LIGHTING	
	FINE CICLO END CYCLE	
	1° GONFIAGGIO 1st INFLATION	
	2° GONFIAGGIO 2nd INFLATION	
	3° GONFIAGGIO 3rd INFLATION	
	SGONFIAGGIO DEFLATION	
	ALLARME 3° GONFIAGGIO 3rd INFLATION ALARM	

525 600

1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer		Description	Sales order 80915 / Location + QE
				Drawer	S.A.			PLATES LAYOUT	
				Revised by	S.A.				Electrical diagram code **5705_0_MAT-21216_v1.00** / Page 550
!!!!	Description	Date	Signature	Responsible	X.X.				

1	2	3	4	5	6	7	8

XT0 TERMINAL BOARD



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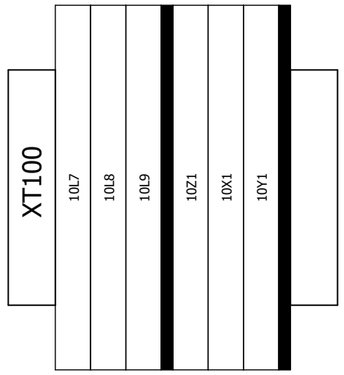
				Revised by	S.A.				Electrical diagram code **5705_0_MAT-21216_v1.00**	Page 600
!!!!	Description	Date	Signature	Responsible	X.X.					

1	2	3	4	5	6	7	8

XT100 TERMINAL BOARD



600

602

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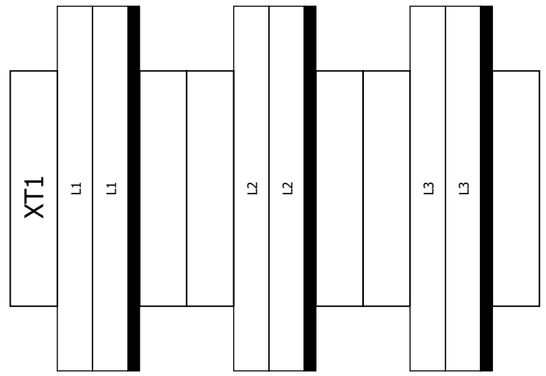
				Revised by	S.A.			XT00 TERMINAL BOARD	Electrical diagram code **5705_0_MAT-21216_v1.00**	Page 601
!!!!	Description	Date	Signature	Responsible	X.X.					

XT1 TERMINAL BOARD



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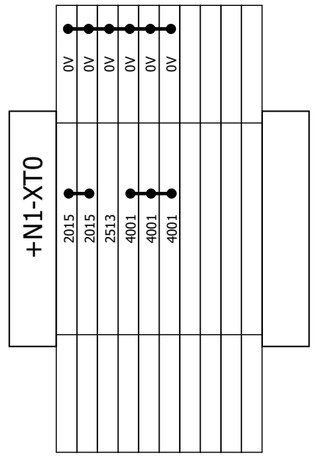
				Drawer	S.A.		XT1 TERMINAL BOARD	80915	+ QE
				Revised by	S.A.			Electrical diagram code	Page
!!!!	Description	Date	Signature	Responsible	X.X.			**5705_0_MAT-21216_v1.00**	602

1	2	3	4	5	6	7	8

N1 TERMINAL BOARD



602

+DOC_PROD/1000

1.00	Emissione	24/04/20	M.F.	Create Date	15/06/2022	Customer		Description	Sales order 80915 / Location + QE
				Drawer	S.A.			N1 TERMINAL BOARD	
				Revised by	S.A.				Electrical diagram code **5705_0_MAT-21216_v1.00** / Page 615
!!!!	Description	Date	Signature	Responsible	X.X.				

G 100

TESTING MACHINE FOR TRUCK TYRES

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