ATLAS TC205
No-Touch Tire Changer

OPERATION MANUAL

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PRINTING CHARACTERS AND SYMBOLS

Throughout this manual, the following symbols and characters are used to alert the reader:

	Indicates the operations which need proper care
	Indicates prohibition
	Indicates a possibility of danger for the operators
BOLD TYPE	Important information

CONTENTS

CHAPTER 1 – INTRODUCTION

1.1 INTRODUCTION

This machine has been manufactured in accordance with the very best quality principles. Follow the instructions provided in this manual carefully to ensure the correct operation and long life of the machine. Read the entire manual thoroughly and make sure you understand it before operating the machine.

1.2 MACHINE IDENTIFICATION DATA

A complete description of the "Tire Changer Model" and the "Serial number" will make it easier for our technical support staff to provide service advice and fast delivery of any required spare parts. For clarity and convenience, we have inserted the data of your machine in the box below. If there is any difference between the data provided in this manual and that shown on the name plate fixed to the machine, the latter should be taken as correct.

LOGO		
Type:		
Volt	Amp	Kw
Ph	Hz	
Year of manufacturing:		

1.3 MANUAL SAFEKEEPING

For a proper use of this manual, the following is recommended:

- Keep the manual near the machine, in an easily accessible place.
- Keep the manual in an area protected from moisture.
- Keep the manual away from moving parts. Do not deface the manual.
- Any use of the machine by operators who are not familiar with the instructions and procedures contained within the manual is forbidden.

This manual is an integral part of the machine: it should be given to the new owner if and when the machine is resold.

	**The illustrations in this manual are based on a demonstration model. It is therefore possible that some parts or components of your machine will differ from those represented in the pictures. We reserve the right to make changes to the design or appearance of the machine without notice.**

TO THE READER

Every effort has been made to ensure that the information contained in this manual is correct, complete and up-to date. The manufacturer is not liable for any mistakes made within this manual and reserves the right to make any changes or improvements to the product at any time.

CHAPTER 2 – GENERAL INFORMATION

2.1 INTENDED USE

- This touch-free tire changer has been designed and manufactured exclusively for removing and mounting the tires from/onto rims from 10" to 30" and a maximum diameter of 1200mm.
- THE MANUFACTURER cannot be held responsible for any damage caused through the use of this tire changer for purposes other than those specified in this manual, and therefore inappropriate, incorrect and unreasonable.

2.2 GENERAL SAFETY PRECAUTIONS

- The machine should only be used by authorized and trained personnel.
- The machine should not be used for purposes other than those described in the instruction manual.
- Under no way should the machine be modified except for those modifications made explicitly by THE MANUFACTURER.
- Never remove the safety devices. Any work on the machine should only be carried out by authorized personnel.
- Any tampering or modification to the equipment carried out without prior authorization will free the manufacturer from all responsibility for damage caused directly or indirectly by the above actions.
- Removing or tampering with safety devices immediately invalidates the warranty.
- The tire changer comes complete with instruction and warning labels which are designed to be long-lasting. If they should for any reason be damaged or destroyed, please ask immediately for replacements from the manufacturer.
- The machine operator should avoid wearing loose clothing. Make sure that unauthorized personnel do not approach the machine while in use.

2.3 SAFETY DEVICES

The tire changer has a number of safety devices designed to guarantee the upmost safety:

- **Pressure relief valve set at 130 bar ± 10%**. This limits the pressure in the hydraulic line and ensures correct operation of the pump.
- **Pump motor overload cut-off** (inside the electric enclosure). This cuts if the motor overheats and protects it from failure.
- **Air relief valve set at 10 bar.** This limits the pneumatic pressure in the air tank.

2.4 TECHNICAL SPECIFICATION

Handles rim from	10” – 30”
Max. tire diameter	1200mm
Max. tire width	75 - 500mm (3’ - 32”)
Rotating speed	6 – 13 rpm
Max spindle torque	1200 NM
Hydraulic pump motor	1.5kw
Gear-box motor	0.8kw/1.1kw (3 ph double speed)
	1.1kw (1 ph double speed with inverter)
Power supply voltage	220V 380V 400V 3 Ph
	110V 220V 230V 1Ph
Max. hydraulic pressure	130 bar
Compressed air pressure	8 – 10 bar
Noise level in working condition	< 70 dB (A)

2.5 PRODUCT DESCRIPTION

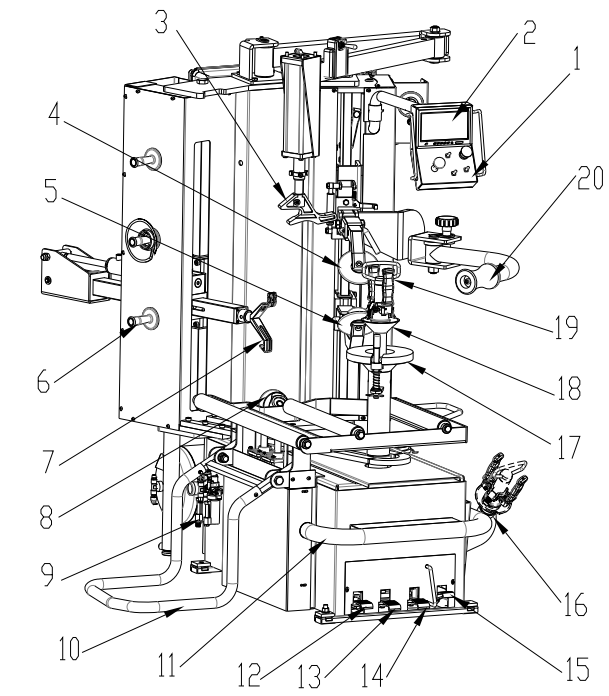


Fig. 1

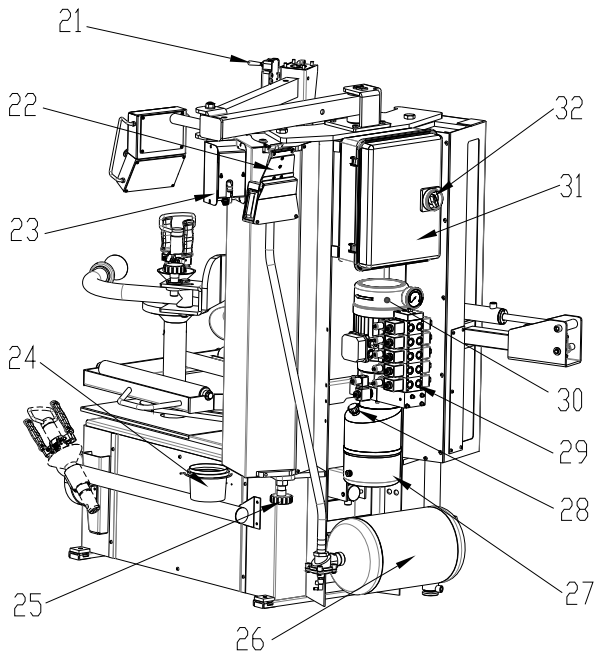


Fig. 2

1. Control panel
2. Video monitor
3. Assist tool
4. Upper bead breaker disk
5. Lower bead breaker disk
6. Cone storage pegs
7. Tool head
8. Camera
9. Lubricator/filter
10. Wheel lift
11. Protection bar
12. Wheel lift control pedal
13. Tool head control pedal
14. Inflation pedal
15. Turntable rotation pedal
16. Central post storage
17. Turntable
18. Central post
19. Quick locking nut
20. Bead press roller
21. Reversible drop centre tool controller
22. Blasting assembly
23. Inflation pressure gauge
24. Grease cup
25. Arm tightening knob
26. Air tank for blasting
27. Hydraulic oil tank
28. Oil fill/level plug
29. Hydraulic valve group
30. Hydraulic unit motor
31. Electric box
32. Power switch

⚠	**During all operations, keep hands and other parts of the body as far as possible from any moving part of the machine. Necklaces, bracelets and loose clothing, can be dangerous for the operator.**

2.6 WARNING SIGNS

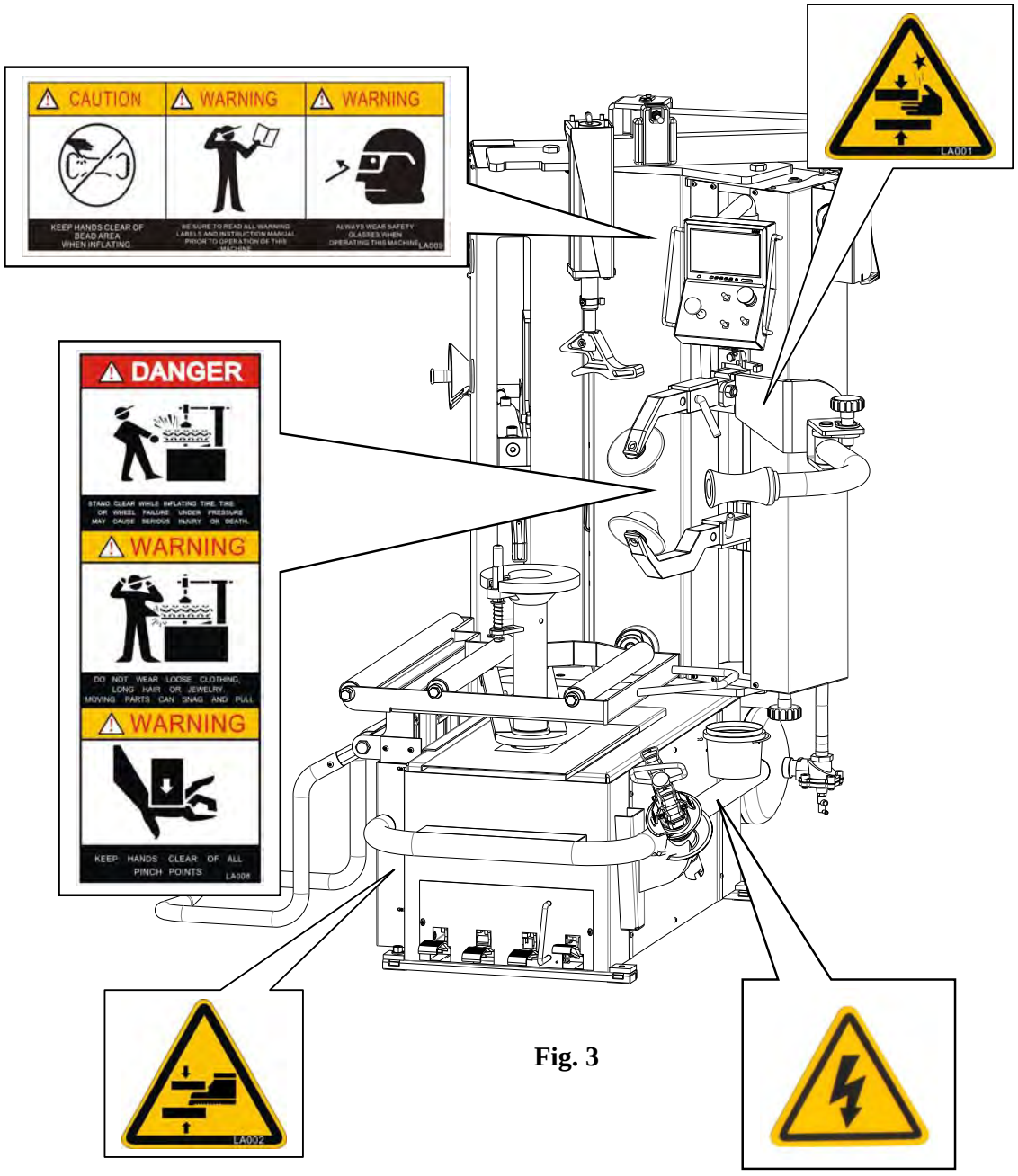


Fig. 3

⚠	**Unreadable and missing warning labels must be replaced immediately. Do not use or add any object that could prevent the operator from seeing the labels.**

CHAPTER 3 – TRANSPORTATION AND UNPACKING

3.1 TRANSPORTATION

- The machine must be transported in its original packaging and kept in the position shown on the package itself.
- The packaged machine may be moved by means of a fork lift truck of suitable capacity. Insert the forks at the points shown in fig. 4.

Standard: 640Kg

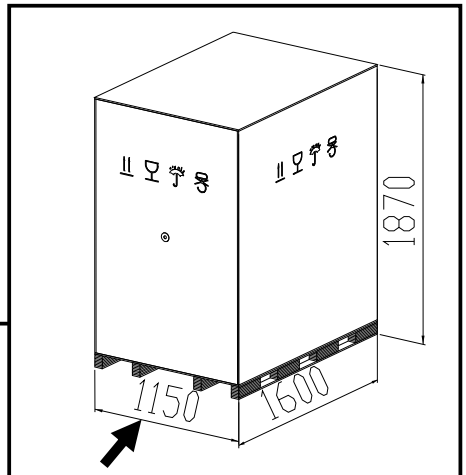


Fig. 4

3.2 UNPACKING

- Carefully remove the crate fasteners and use a lifting device to lift the crate off the machine.
- Carefully remove the plastic wrapping.
- Remove the accessories box from the package.
- Check that the equipment is in perfect condition, making sure that no parts are damaged or missing. If in doubt, do not use the machine and contact your dealer.
- Carefully remove the shipping bolts (ref. fig. 5) to free the machine from the shipping pallet.
- Using adequately rated lifting straps, position the machine by lifting it, using the lifting points indicated in the figure 6.

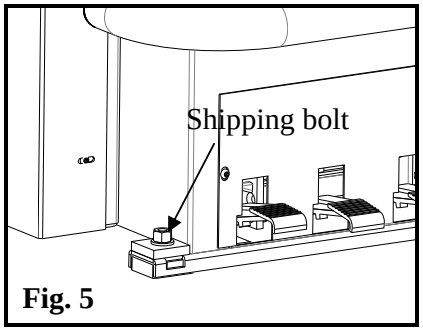


Fig. 5

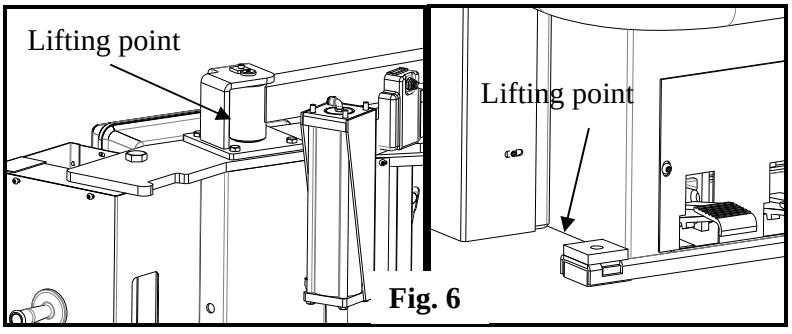


Fig. 6

CHAPTER 4 – INSTALLATION

4.1 WORKING SPACE REQUIRED

	**When choosing the place of installation, make sure that it complies with all local safety regulations.**

- The machine must be located on a flat floor of solid construction, preferably concrete. If the floor is uneven or broken, the machine will be not stable and the platform roller cannot move freely.
- The tire changer must be connected to the main electric power supply and the compressed air system. It is therefore advisable to install the machine near these power sources.
- The place of installation must also provide at least the space shown in pictures 7-7A to allow all parts of the machine to operate correctly and without any restriction.
- The machine must be stored and operated indoors in a climate controlled environment.
- The following work environment conditions are applicable:
  - Relative humidity from 30-95% without condensation;
  - Temperature from 0-55°C.

	**These measurements below represent the tire changer working area in millimeters. Persons that are not specially trained and authorized operators are forbidden to enter this area.**

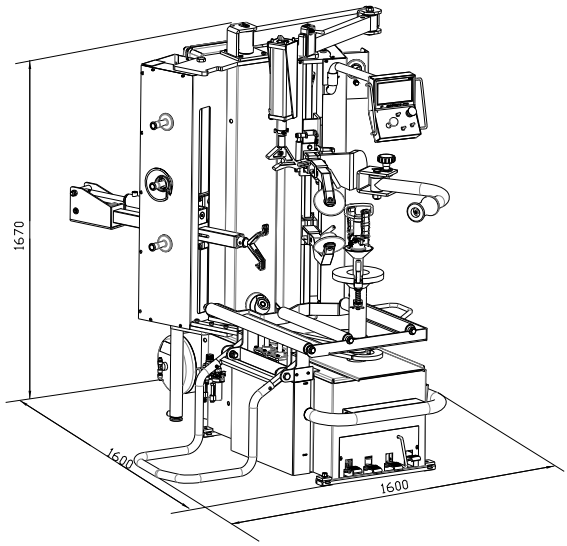


Fig. 7

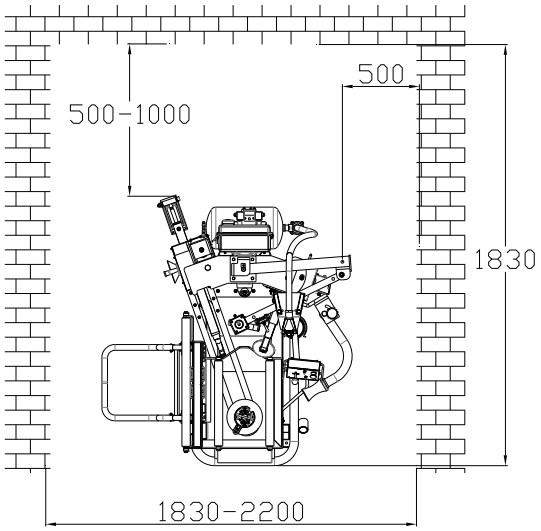


Fig. 7A

4.2 ANCHORING

It is not essential to anchor the machine to the floor, however, the floor must be smooth and level. When anchoring to a concrete floor use the mounting holes that are provided in the machine chassis. Make sure the machine is solid and level and supported evenly on all anchor points. Solid shims may be used if necessary. (ref. fig.8).

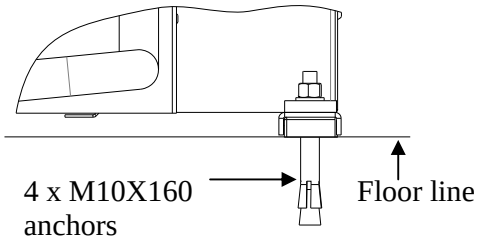


Fig. 8

4.3 PARTS ASSEMBLY

- Bolt the wheel lift cradle (b) to the bracket (a) mounted on the body using the screws M8X45 (d) and nuts M8 (c) supplied with the machine. (ref. fig.9)
- Place the cones onto the storage pins at the left rear of the machine.
- Place the center post into the storage loop on the right front corner of the chassis.

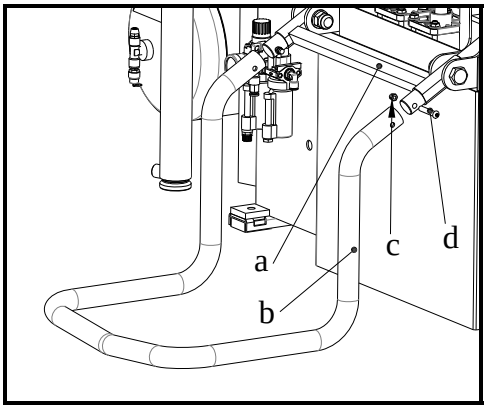


Fig. 9

4.4 COMMISSIONING

⚠	**Any electric connections must be performed by professionally qualified personnel. Make sure that the power supply is adequate for the machine.** **Make sure the connection of the phases is right. Improper electrical hook-up can damage motor and will void the warranty.**

- Check to make sure the characteristics of your electrical service correspond to those required by the machine.
- Connect the machine to the compressed air supply by means of the air connection provided at the rear (on the regulator).

☞	**Connect the machine to electric service in compliance with all regulations in force. The machine must be connected to an automatic circuit breaker (differential) set at 30 mA.** **Any electrical plug that is used must be rated at 220v 16A minimum and comply with all applicable electric codes.**

- Fill the reservoir (C-fig.10*)* with *about 5 liters* of Esso Nuto H46 or similar hydraulic oil.
- Set the circuit breaker (A-fig.10) in the power box to set it in "On" position.
- Switch the power switch (B–fig.10) to the position "On" and check that the motor rotation corresponds to the indicating arrow (C-fig.10).
- If not, switch two wires in the plug.

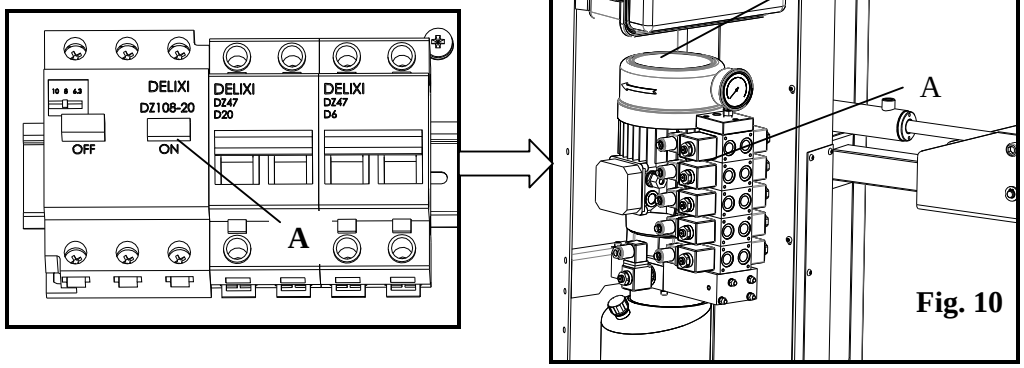


Fig. 10

4.5 CONTROLS

4.5.1 CONTROL PANEL AND PEDALS (ref. fig.11)

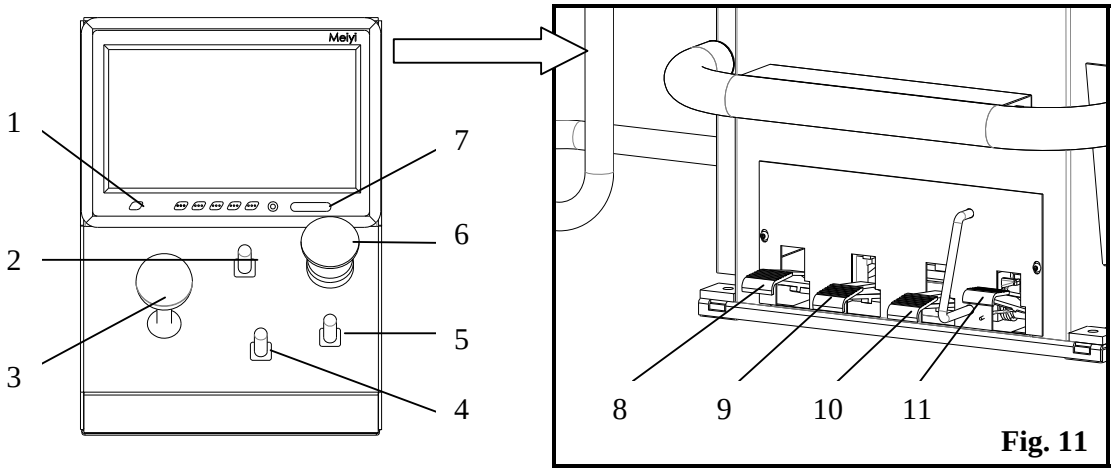


Fig. 11

1. **Pilot lamp**

2. **Upper bead breaker disk controller**
   Move the upper bead breaker disk (4-fig.1) up or down.

3. **Tool head control joystick**
   Move the tool head (7-fig.1) forward/backward and up/down.

4. **Lower bead breaker disk controller**
   Move the lower bead breaker disk (5-fig.1) up or down.

5. **Turntable controller**
   Move the turntable (17-fig.1) forward or backward.

6. **Emergency stop knob**

7. **Video monitor power switch**

8. **Wheel lift control pedal**
   The wheel lift (10-fig.1) can be controlled in three ways:
   - When it is depressed completely at the lowest position, the wheel lift will be raised to the top position.
   - When it is depressed completely at the top position, the wheel lift will descend to the lowest position.
   - By pulse-depressing the pedal, the wheel lift can be lowered slowly so as to get a required position.

9. **Tool head rotation pedal**
   Whenever it is depressed, the tool head (7-fig.1) will rotate at 180 degrees.

10. **Inflation pedal**
    The tire can be inflated by depressing this pedal.

11. **Turntable rotation pedal**
    The turntable (17-fig.1) can be rotated in three ways:
    - When it is depressed completely the turntable will rotate clockwise at the normal speed.
    - When it is depressed at the half way, the turntable will rotate clockwise at the high speed.
    - By lifting up the pedal by food, the turntable will rotate counter clockwise.

	Turntable rotation can be stopped at any time by releasing your foot on the rotation pedal..

4.5.2 BEAD BREAKER DISKS

Both the upper and lower bead breaker disks are adjustable (ref. fig. 12).

- Both the upper and lower bead breaker disks are preset by the manufacturer in the extended position. This position is for wheels ranging from 10” to 18”.
- For wheels ranging from 18”-30”, adjust the bead breaker disks to the retracted position. Be sure to put the lock pins in place after adjustments.
- The upper bead breaker disk will flip up when it reaches the highest position.
- To flip down the upper breaker disk, press it down manually when it is not at the highest position.
- The heights for both upper and lower bead breaker disks are changed using the controllers (2-fig.11, 4-fig.11) on the control panel separately.

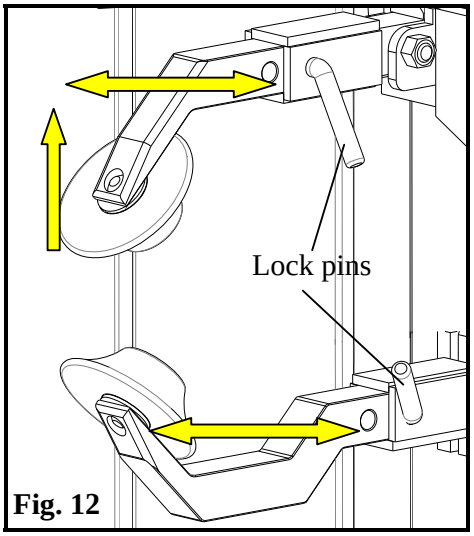


Fig. 12

4.5.3 BEAD PRESS ROLLER

The bead press roller helps press the top bead of the tire into the drop center of the wheel during mounting and demounting:

- The height of the bead press roller can be adjusted by the same controller (2-fig.11) used for the upper bead breaker disk.
- It should be set at the same height as the top bead breaker disk.
- Loosen the lock knob and set the bead press roller arm to the desired position above the tire. (ref.fig.13)
- Secure the lock knob after adjustment.

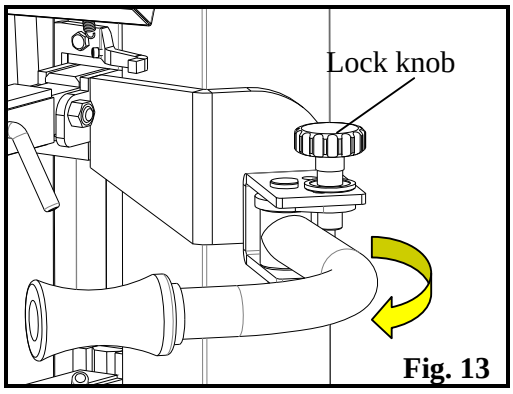


Fig. 13

4.5.4 TOOL HEAD

The tool head has two options: steel and plastic. It can be controlled in two ways.

- By operating the joystick (3-fig.11) on the control panel, the tool head can be raised/lowered and extended/retracted (ref. fig.14).
- By depressing the pedal (9-fig.11), the tool head can be rotated 180 degrees to select either the hook or the tab. (ref. fig.14).

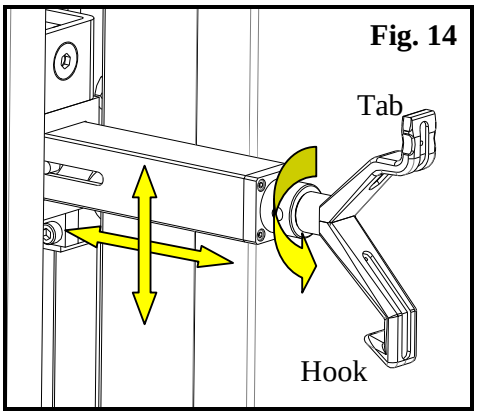


Fig. 14

4.5.5 ASSIST TOOL

- The tool can be controlled pneumatically up and down using its controller (A-fig.15).
- The tool can be adjusted to the desired length manually by removing the lock pin (B-fig.15). Be sure to tighten the screw after adjustment.

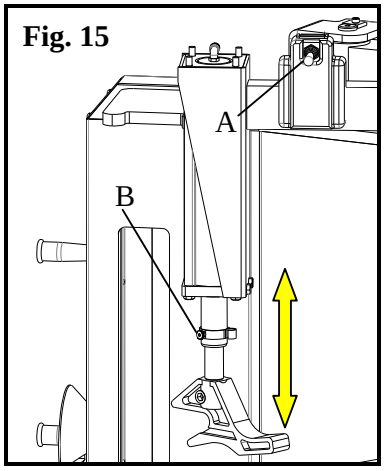


Fig. 15

4.5.6 TURNTABLE ASSEMBLY

The turntable assembly is composed of three components: turntable (A-fig.16), central post (B-fig.16) and quick locking nut (C-fig.16).

- **The turntable** can be moved forward or backward by pressing the turntable controller (5-fig.11) left or right. It can rotate clockwise or counter clockwise by depressing or lifting up the turntable rotation pedal (11-fig.11). Press the pedal half way for normal rotation speed. Press completely for high speed.
- **The alignment pin** can be adjusted to align a with a lug hole on the wheel. (ref. fig.16)
- **The center post** is designed to be fixed into the turntable. Insert it to the turntable hole and lock it in the turntable by turning it clockwise at about 50 degrees. (ref. fig.16)
- **The quick locking nut** can be tightened by turning it clockwise.

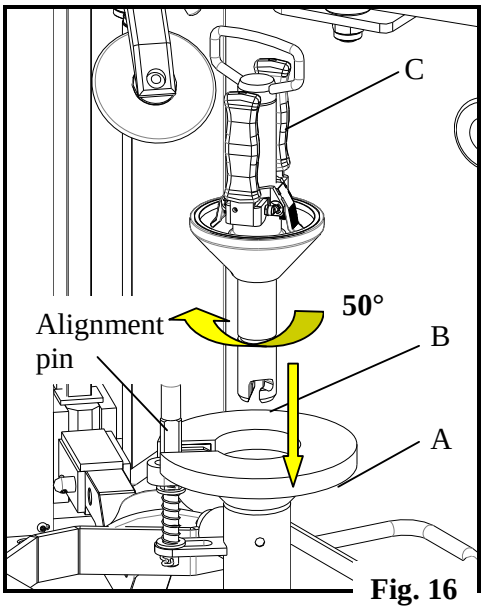


Fig. 16

4.5.7 INFLATION DEVICE

Inflation

- The tire inflation is performed by depressing the inflation pedal (10-fig.11) continuously.
- The pressure gauge (ref. fig.17) will register the air pressure of the tire being inflated.
- If the pressure in the tire being inflated is higher than required, the pressure can be released by pressing the pressure relief button on the gauge. (ref. fig.17)

Blasting

This tire changer is equipped with a blasting device for supplying a powerful jet of air to seat the tire beads. This device can be performed as follows:

- Position the blasting nozzle (A-fig.18) towards to the rim center just under the rim lip.
- Depressing the inflation pedal and pressing the blasting buttons (B-fig.18) at the same time. Make sure to hold the blasting handles firmly during this operation.

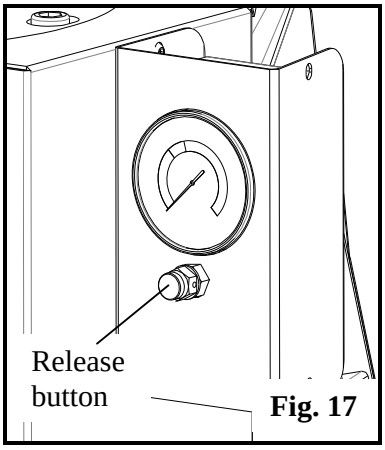


Fig. 17

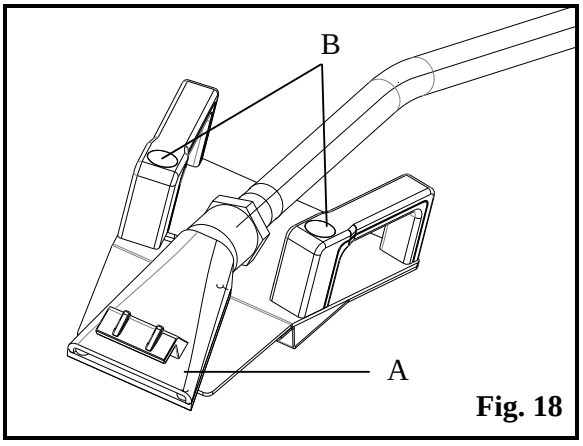


Fig. 18

CHAPTER 5 – OPERATION

⚠	**Do not use the machine until you have read and understood the entire manual and the warnings provided.** **Before carrying out any operation, deflate the tire completely and remove all wheel balancing weights.**

The operation of the tire changer is divided into three parts:

a) BREAKING THE BEAD b) REMOVING THE TIRE c) MOUNTING THE TIRE

5.1 BREAKING THE BEAD

5.1.1 PREPARATION BEFORE BREAKING THE BEAD

- Check that the tire is deflated. If not, deflate it.
- Remove all wheel balancing weights.
- Move the upper bead breaker disk to the highest position.
- Move the lower bead breaker disk to the lowest position.
- Move the bead press roller am out of the way.
- Move the assist tool arm out of the way.
- Retract the tool head and raise it to the highest position.
- Roll the wheel onto the wheel lift.
- Depress the lift pedal to raise the wheel to the maximum height. (ref.fig. 19)

Fig. 19

- Slide the tire to position it above the turntable.
- Depress the pedal to lower the tire onto the turntable slowly, and align a lug hole on the wheel with the alignment pin on the turntable (so that the pin goes into the lug hole).
- Continue to lower the wheel lift to its lowest position.
- Select the cone that best fits the center hole of the wheel. Slide the cone onto the center post with the small end towards the center hole of the wheel.
- Install the center post into the turntable through the center hole of the rim. Lock the post by turning it clockwise at about 50 degrees.
- Install the quick locking nut onto the center post. Tighten it securely. (ref. fig.20)
- Turn on the video monitor.

Fig. 20

5.1.2 BREAKING THE BEAD

⚠	**Bead breaking must be done with the utmost care and attention. When the bead breaker is operated the bead breaker disks move powerfully. Anything within their range of action can be in danger of being crushed.** **During bead breaking operations NEVER touch the side of the tire.**

⊗	**Chains, bracelets, loose clothing or foreign objects in the vicinity of the moving parts can represent a danger for the operator.**

- Lower the upper bead breaker disk about ¾" from the highest position and flip it down into the working position.
- Lower the upper bead breaker disk to within about ¾" above the wheel.
- Bring the upper bead breaker disk to within ¼" to ½" of the rim edge by operating the controllers on the control panel to move turntable and the upper bead breaker arm. (ref.fig.21)
- Raise the lower bead breaker disk, by pressing up its controller on the control panel, to the position where just can begin to break the lower bead. (ref.fig.22).
- Use the video monitor to assist in positioning the lower bead breaker disk. (ref. fig.23)

Fig. 21

Fig. 22

Fig. 23

☞	**The camera angle of view can be adjusted to view the lower bead breaking operation by rotating its bezel.**

- Lubricate the tire beads with tire mounting lube to avoid damaging the tire and to help the breaker disc turn smoothly.
- Depress the turntable rotation pedal to rotate the turntable clockwise.
- Press the upper bead breaker disks controller down and the lower bead breaker disk controller up in small increments as the tire rotates to begin breaking the beads free.
- Keep moving the upper bead breaker disk down until the upper bead goes into the rim's drop center. (ref. fig.24)
- Keep moving the lower bead breaker disk up until the lower bead goes into the rim's drop center. (ref. fig.25)

Fig. 24

Fig. 25

- Rotate the turntable until both the upper and lower beads are freed completely.
- Bring the turntable back ¼" away from the rim by operating the controller.
- Raise the upper bead breaker disk out of way.

5.1.3 BREAKING A TUBE TYPE TIRE

	Warning: Remove the valve stem (if possible) so that it is not an obstacle during bead breaking.

- Follow all the steps described previously for breaking tubeless type tires.
- Stop disk movement as soon as the bead has loosened to avoid damaging the tube.

5.2 REMOVING THE TIRE

	Make sure that the rim is firmly secured by the quick release nut. **Failure to use lubrication could cause serious damage to the tire bead.**

	NEVER keep your hands under the tire.

	Demounting and mounting are always done with clockwise turntable rotation. Counter clockwise rotation is used only to correct operator errors or if the turntable stalls.

5.2.1 REMOVING THE UPPER BEAD

- Set the tool head hook pointing down.
- By operating the joystick, bring the hook of the tool head to within 3/8” above the tire.
- Lubricate the tire beads with tire lubricant to avoid damaging them and to assist demounting.
- Operate the joystick to lower the hook of the tool head down and forward until the bead pops under the hook. (ref. fig.26)
- Operate the joystick to move the tool head backward to pull the bead out 1/8” to ¼” from the rim.
- If necessary, move the lower bead breaker disk up to lift the lower bead about ½” to 2”.
- Operate the joystick to move the tool head up to lift the bead up 3/16” to 5/8” above the rim. (ref. fig.27)

Fig. 26

Fig. 27

- Depress the turntable rotation pedal to rotate the turntable clockwise.
- Keep rotating the tire until the upper bead pulls free from the wheel.

5.2.2 REMOVING THE LOWER BEAD

- Move the tool head up and retract the tool head in by using the joystick.
- With the tool head retracted fully and the tab side up, move the tool head down to its lowest position.
- Position the assist tool to lift the lower bead. (ref. fig. 28)
- Raise the assist tool by operating the lever until the lower bead is in the drop center of the rim.
- By operating the joystick, extend the tool head to within 3/8” to 5/8” from the rim edge.
- Use the video monitor to assist in positioning the tool head tab under the tire.
- Raise the tool head tab until the lower bead is 3/8” to ¾”above the upper lip of the rim. (ref. fig. 29)
- Depress the turntable rotation pedal to rotate the turntable clockwise until the lower bead free from the wheel. (ref. fig. 30)

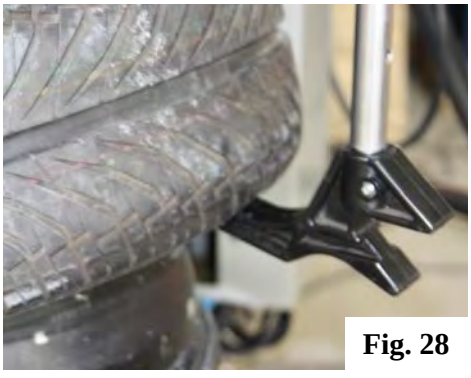


Fig. 28

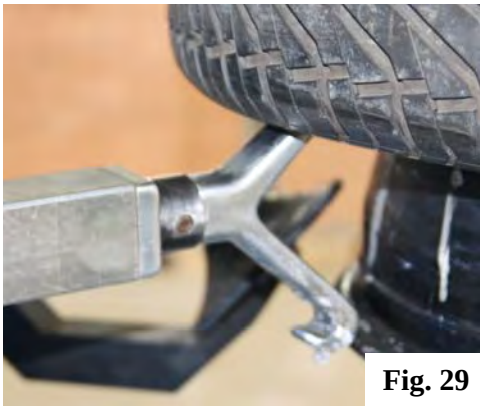


Fig. 29

Fig. 30

5.2.3 REMOVING A TUBE TYPE TIRE

	Rotate the turntable only a short distance at a time, checking frequently, and stop when you suspect the tube could be pinched. **Demount the upper bead and remove the tube before demounting the lower bead.**

- Follow the steps described previously for removing a tubeless type tire.
- After the upper bead is demounted, remove the tube and then demount the lower bead.

5.3 MOUNTING THE TIRE

	It extremely important to inspect the tire and wheel to prevent a tire explosion during inflating. Before beginning mounting operation, make sure that: **-The tire and cord fabric are not damaged. If you note defects DO NOT mount the tire.** **-The rim is without dents and is not warped.** **Pay attention to alloy rims, internal micro-cracks are not visible to naked eye. This can compromise the rim and can also be a source of danger especially during inflation.** **The diameter of the wheel and tire must be exactly the same. NEVER try to mount a tire on a wheel if you cannot identify the diameters of both.**

	Keep your hands clear of the tire while the turntable is rotating.

5.3.1 PREPARATION BEFORE MOUNTING THE TIRE

- Move the upper bead breaker disk to the highest position.
- Move the lower bead breaker disk to the lowest position.
- Move the bead press roller am out of the way.
- Move the assist tool arm out of the way.
- Retract the tool head and raise it to the highest position.
- Make sure the wheel is fastened on the turntable firmly.
- Set the tool head tab pointing down by pressing the tool head pedal.
- Lubricate the tire beads with mounting lube.

5.3.2 SEATING THE LOWER BEAD (ref. fig. 31)

- Place the tire on the wheel.
- Lower the tool head to push the tire until the lower bead is below the top edge of rim.
- Rotate the turntable clockwise until the lower bead drops below the top edge of the rim completely.
- For some tires with a stiff sidewall, it may be necessary to use the upper bead breaker disk to push down the tire.

Fig. 31

5.3.3 SEATING THE UPPER BEAD (ref. fig.32)

- Lower the tool head with the tab side down to bring the upper bead below the top edge of the rim.
- Lower the upper bead breaker disk onto the upper bead.
- For some tires with a stiff sidewall, it will be necessary to position the bead press roller to press the upper bead into the drop center of the rim.
- Lower the assist tool with the “mouth” side facing the wheel and ahead of the bead press roller.

Fig. 32

- Keep lowering the assist tool until the upper bead is below the drop center of the rim.
- Rotate the turntable clockwise until the upper bead drops below the upper rim edge. Pay attention to “feather” the turntable rotation pedal in the last 1/3 circumference of the rim to inspect the operation. Reverse the turntable and adjust the tool head if needed to prevent “pinching” the bead.
- Move the upper bead breaker disk to the highest position.
- Move the lower bead breaker disk to the lowest position.
- Move the bead press roller am out of the way.
- Move the assist tool arm out of the way.

5.3.4 MOUNTING A TUBE TYPE TIRE

- Follow the steps described previously for seating the lower bead of the tubeless type tire.
- Round out the tube with a small amount of air. Lubricate the tube with mounting lube.
- Insert the tube into the tire. Pay attention not to pinch the tube.
- Refer to the steps described previously for seating the upper bead. It is advised to stop the turntable rotation periodically to inspect the operation and to avoid pinching the tube.

CHAPTER 6 – INFLATING

	**The greatest attention is called for when inflating tires. Carefully observe the following instructions since the tire changer is NOT designed and built to protect you (or anyone else in the vicinity of the machine) if the tire bursts accidentally.**

	**A burst tire can cause serious injury or even death to the operator.** **Check carefully that the wheel and the tire are the same size.** **Check the condition of the tire and make certain that it has no defects before beginning inflation.** **Inflate the tire with brief jets of air, checking the pressure after every jet.** **The tire changer is automatically limited to a maximum inflating pressure of 3.5 bar (51 psi). NEVER EXCEEED THE PRESSURE RECOMMENDED BY THE TIRE MANUFACTURER.** **Keep your hands and body as far away as possible from the tire.**

6.1 INFLATING TIRE USING AIRLINE GAUGE

The tire changer is supplied with an airline gauge. To inflate a tire, proceed as follows:

- Connect the airline chuck to the tire valve stem.
- Make a last check to be certain that tire and rim diameter match each other.
- Seat the beads with short jets of air by depressing the inflation pedal.
- Continue to inflate the tire with short jets of air and constantly checking the pressure between until the required pressure has been reached.
- If the pressure in the tire being inflated is higher than required, the pressure can be released by pressing the pressure relief button on the gauge panel.

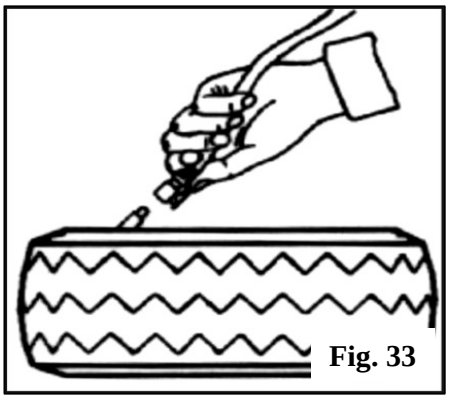


Fig. 33

6.2 INFLATING TIRES WITH BLASTING SYSTEM (optional)

The blasting inflation system provides a powerful jet of air to seat the tire beads.

	During this phase of work the level of noise can reach 85db (A). Hearing protection is highly recommended.

- Make sure that the wheel is fixed on the turntable securely.
- Make a last check to be certain that tire and wheel diameter match each other.
- Check that the rim and beads are sufficiently lubricated. If necessary, add additional lubrication.
- Remove the blasting assembly from its hook.
- Position the blasting nozzle towards the wheel center just under the rim lip. (ref. fig.33)
- Depress the inflation pedal and press the blasting control buttons with both hands. Make sure to hold the blasting handles firmly during this operation.
- Continue to inflate the tire with short jets of air by depressing the inflation pedal and constantly check the pressure between air jets until the required pressure has been reached.

	**EXPLOSION HAZARD!** **Never exceed 3.5 bar (51 psi) when seating beads or inflating tires.** **If a higher inflating pressure is required remove the wheel from turntable and continue the inflating procedure inside a special protection cage (commercially available).** **Never exceed the max. inflation pressure given by the tire manufacturer.** **ALWAYS keep your hands and body away from an inflating tire.** **ONLY special trained personnel are allowed to perform these operations. Do not allow other persons to operate or to stay near the tire changer.**

CHAPTER 7 - ORDINARY MAINTENANCE

7.1 GENERAL WARNINGS

	Unauthorized personnel may not carry out maintenance work. **Before carrying out any maintenance work, make sure to disconnect the electric and pneumatic supplies.**

- Regular maintenance as described in the manual is essential for the correct operation and long service life of the tire changer.
- If maintenance is not carried out regularly, the operation and reliability of the machine may be compromised, placing the operator and anyone else in the vicinity at risk.
- Defective parts must be replaced exclusively by expert personnel using the manufacturer's parts.
- Removing or tampering with safety devices is forbidden.

	The Manufacturer shall not be held responsible for failures deriving from the use of spare parts made by other manufacturers or for damage caused by tampering or removal of safety systems.

7.2 ROURTINE MAINTENANCE

To ensure that this tire changer works reliably, follow the maintenance schedule described below:

- The tire changer must be properly cleaned at least once a month using lint free cloths. Lubricate all pivot pins and the sliders at least once a week.
- Be sure the rods of the hydraulic cylinders are kept clean and undamaged since this may result in leakage from seals and possible malfunctions.
- Check the oil level in the hydraulic power unit weekly. Use the dipstick under the reservoir cap. If necessary, fill with Esso Nuto H46 or equivalent hydraulic oil. Change the hydraulic oil at one year intervals.
- Check the oil level in the lubricator (A-fig.35) at least once a month. If the oil level is below the middle of glass cup, add non-detergent SAE30 oil.
- Check the function of the inflation pressure regulator (B-fig.35) at least once a month. The pressure regulator should never be adjusted to exceed 10 bars (145psi).
- All air silencers should be removed and cleaned properly by a jet of compressed air every three months (ref. C-fig.36), or replaced if they are damaged.

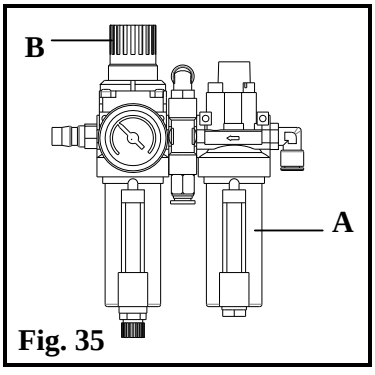


Fig. 35

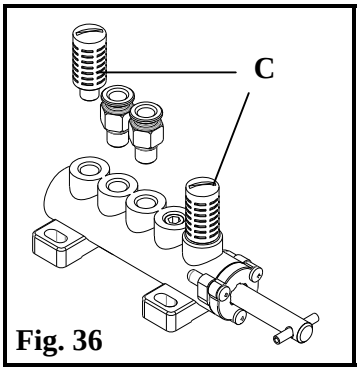


Fig. 36

7.3 ADJUSTMENT OPERATIONS

Carry out the following operations if necessary:

Motor drive belt
In the event of a loss of power, check that the drive belt is tight as follows:

- Remove the side cover from the chassis.
- Check the drive belt for cracking and wear. Replace if necessary.
- Adjust the drive belt tension by loosening or tightening the screw (D-fig.37), then secure the locking nut (E-fig.37).

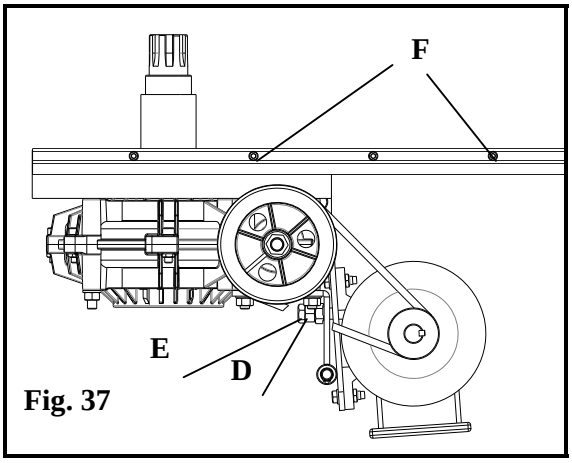


Fig. 37

Turntable slide
If the turntable does not move smoothly or vibrates during movement, do as follows:

- Remove the side cover from the chassis.
- Adjust the screws (F-fig.37) along the slide as needed to make the turntable movement smooth, bind free, and with minimal free-play.

Bead breaker disk slides
If a bead breaker disk does not move smoothly or vibrates during movement, do as follows:

- Remove the cover from the arm.
- Loosen the lock nuts (H-fig.38).
- Adjust the screws (G-fig.38) as needed to make the arm movement smooth and with minimal free-play.
- Secure the lock nuts (H-fig.38) after the adjustment.
- Both bead beaker disk slides have the same adjustment procedure.

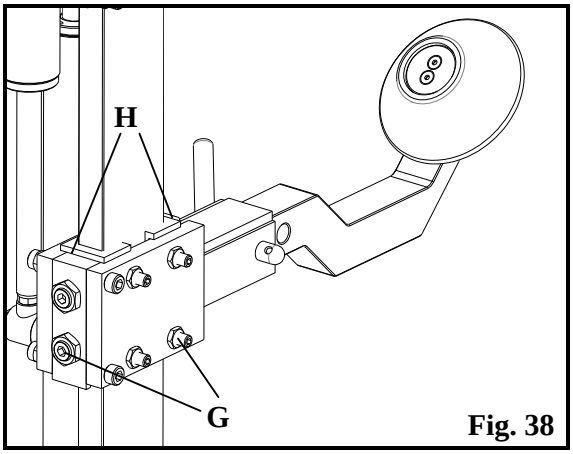
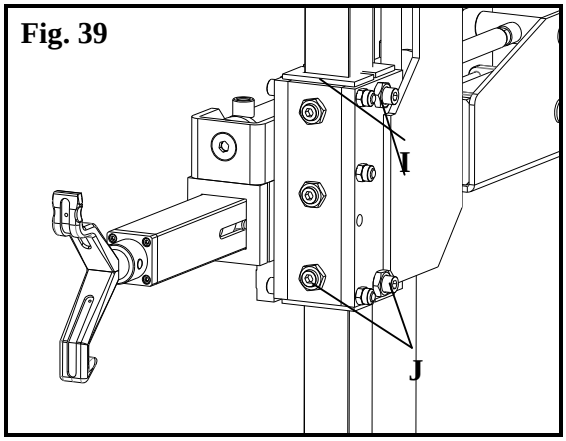


Fig. 38

Tool head slide
If the tool head does not move smoothly up/down or vibrates during movement, do as follows:

- Remove the cover from the arm.
- Loosen the lock nuts (I-fig.39).
- Adjust the screws (J-fig.39) as needed to make the arm movement smooth and with minimal free-play.
- Secure the lock nuts (I-fig.39) after the adjustments are finished.

Fig. 39



Tool head limit switch

When the tool head is changed from steel to plastic or vice versa, the tool head position must be adjusted as follows:

- Mount an empty wheel onto the turntable.
- Lower the upper bead breaker disk to within about ¾" above the rim.
- Use the controllers on the control panel to move turntable and the upper bead breaker arm, bringing the upper bead breaker disk to within 1/8" to ¼" of the rim edge.
- Rotate the tool head to make the tab point up.
- Operate the tool head controller to check if the distance of the tab side of the tool head is within 1/8" to ¼" of the rim edge. If not, adjustment of the limit switch in needed.

	Make sure to switch off the power while performing the limit switch adjustment.

- Turn off the power switch.
- Loosen the screws (L-fig.40) and move the limit switch (K-fig.40) forward or backward as required.
- Tighten the screws (L-fig.40) after adjustment.
- Turn on the power switch.
- Operate the tool head to see if the tap side of the tool head is within 1/8" to ¼" of the rim edge. If necessary, repeat the above adjustment procedure until the desired distance is obtained.

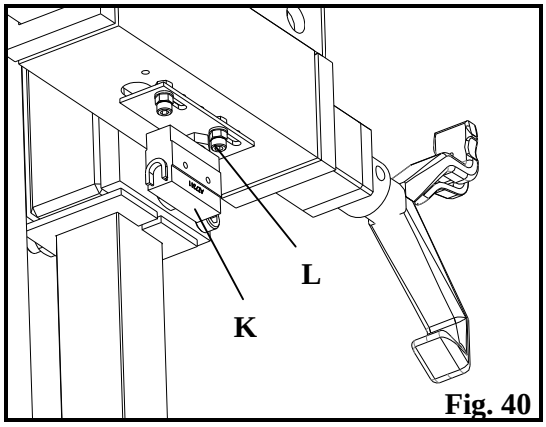


Fig. 40

CHAPTER 8 - TROUBLE SHOOTING

A list of possible troubles and solutions is given below:

TROUBLE:	POSSIBLE CAUSE:	SOLUTION:
After having switched on the power switch, the pilot lamp does not illuminate and the controls do not function.	The power plug is not connected.	Insert the plug correctly in its socket.
	No power from the main electric supply.	Reset the main electric supply breaker.
After having switched on the power switch, the pilot lamp illuminates, but the motor on the hydraulic power unit does not function.	The circuit breaker is not switched on.	Switch on the circuit breaker.
	The magneto-thermic switch for motor protection is working.	Call for technical assistance.

If, despite of the above mentioned solutions, the tire changer does not work properly, stop use immediately and call for technical assistance.

CHAPTER 9 –STORING AND SCRAPPING

9.1 STORING

If the machine has to be stored for a long time (3-4 months) you have to:

- Lower all tool holding arms.
- Disconnect the machine from all power and air sources.
- Grease all parts that could become rusty, including the tool holding arm slides and tools.
- Empty oil/hydraulic fluid reservoirs.
- Wrap the machine in a layer of protective plastic to prevent dust from reaching the internal working parts.

9.2 SCRAPPING A MACHINE

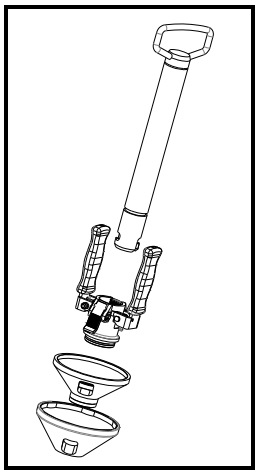
When your machine's working life is over and it can no longer be used, it must be made inoperative by removing any connection to power sources.
These units are considered as special waste material, and should be broken down into uniform parts, delivered to an appropriate handling station, and disposed of in compliance with current laws and regulations.

If this machine ever catches fire, use a dry powder or CO2 fire extinguisher.

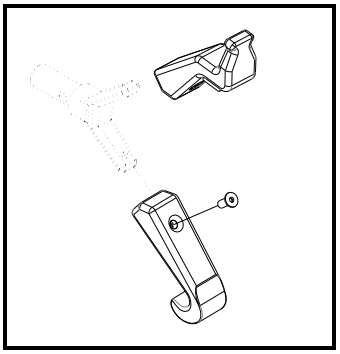
CHAPTER 10 – ACCESSORIES

10.1 STANDARD ACCESSORIES

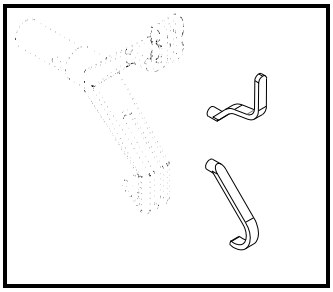
The following standard accessories are supplied with the tire changer in the accessory box:



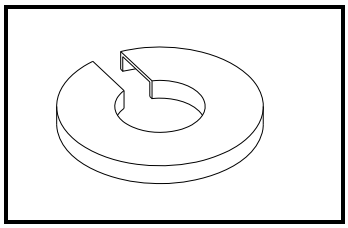
C107010001 Central post
C107010100 Quick locking nut
C107010003 Cone
C107010004 Cone protection



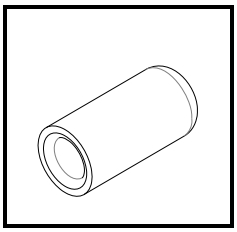
C103000013 Plastic demounting head
C103000014 Plastic mounting head
0207023 Screw M8X20 (Nr.2)



C103000015 Plastic insert
C103000016 Plastic insert



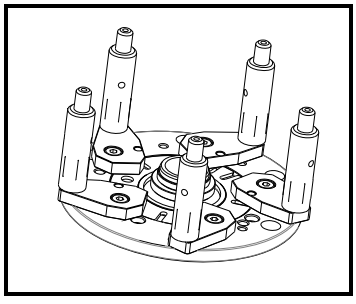
C107000005
Turntable protection



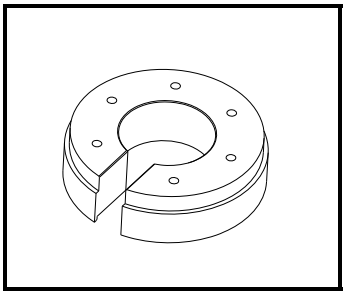
C107000006
Alignment pin protection

10.2 OPTIONAL ACCESSORIES

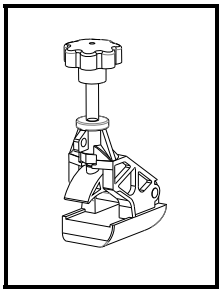
If requested, the manufacturer can supply the following optional accessories:



C107030000
Universal flange



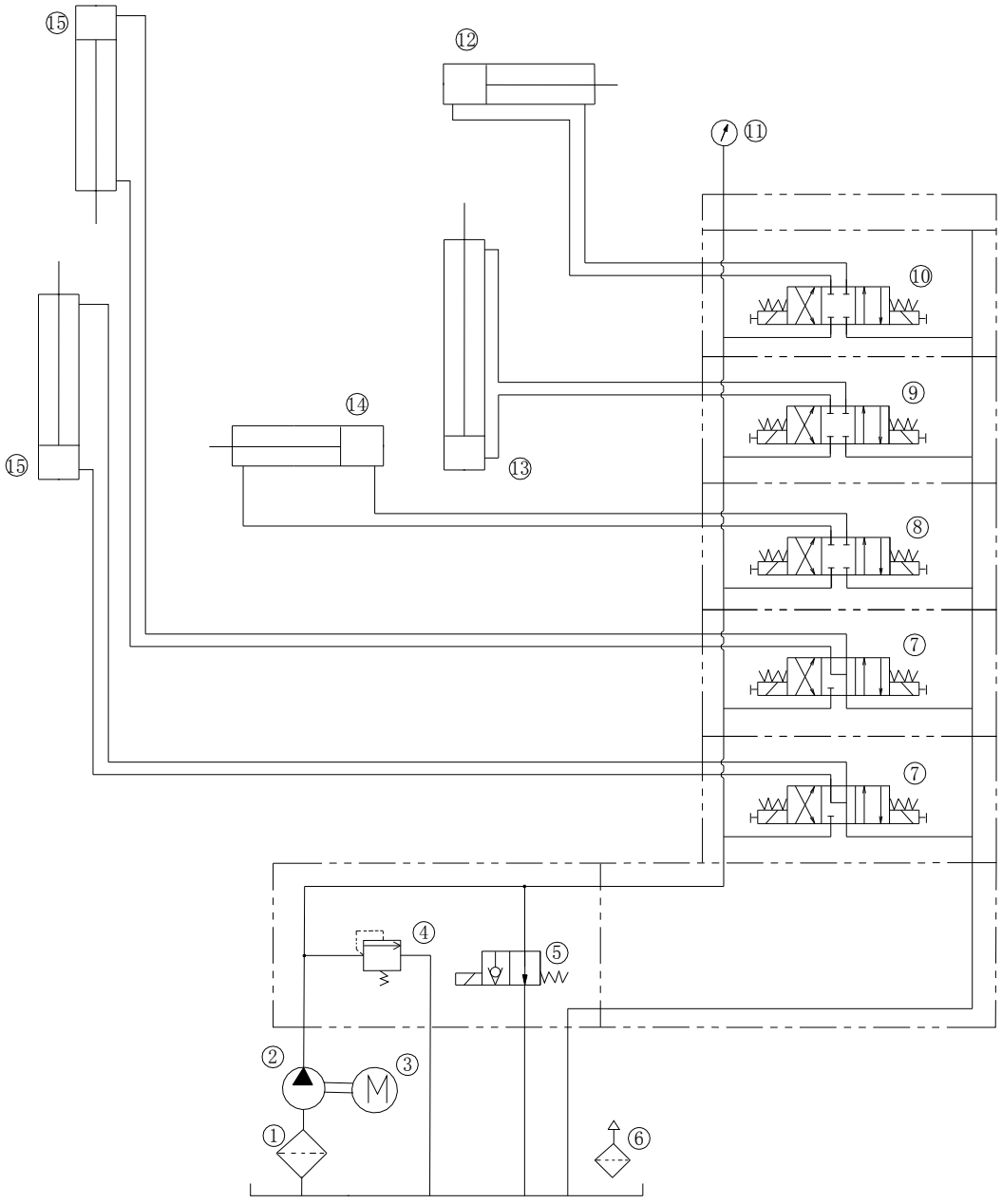
C107000008
Turntable height extension



C107040000
Special assist tool

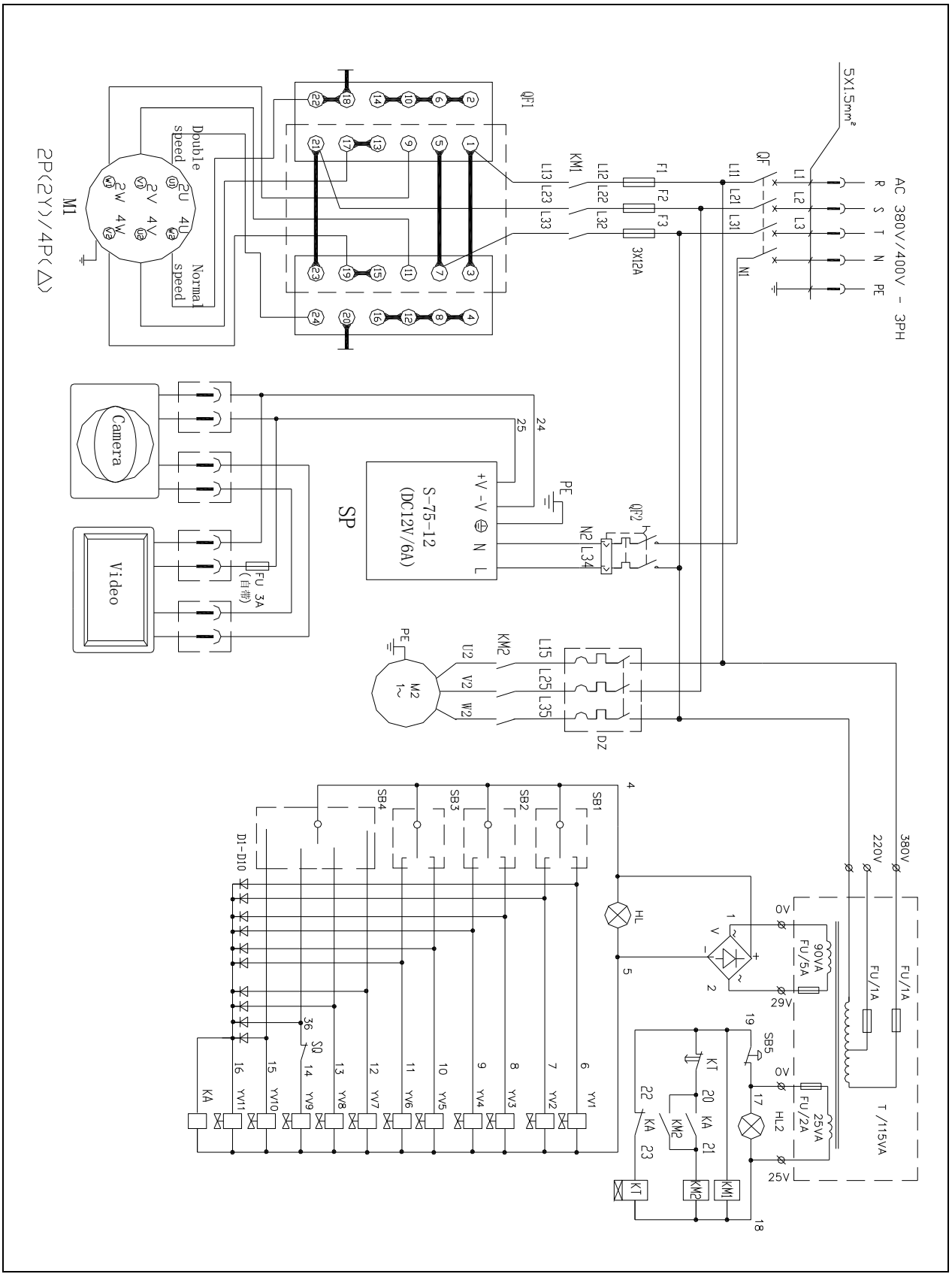
CHAPTER 11 – HYDRAULIC, ELECTRIC AND PNEUMATIC SCHEMES

HYDRAULIC SCHEME



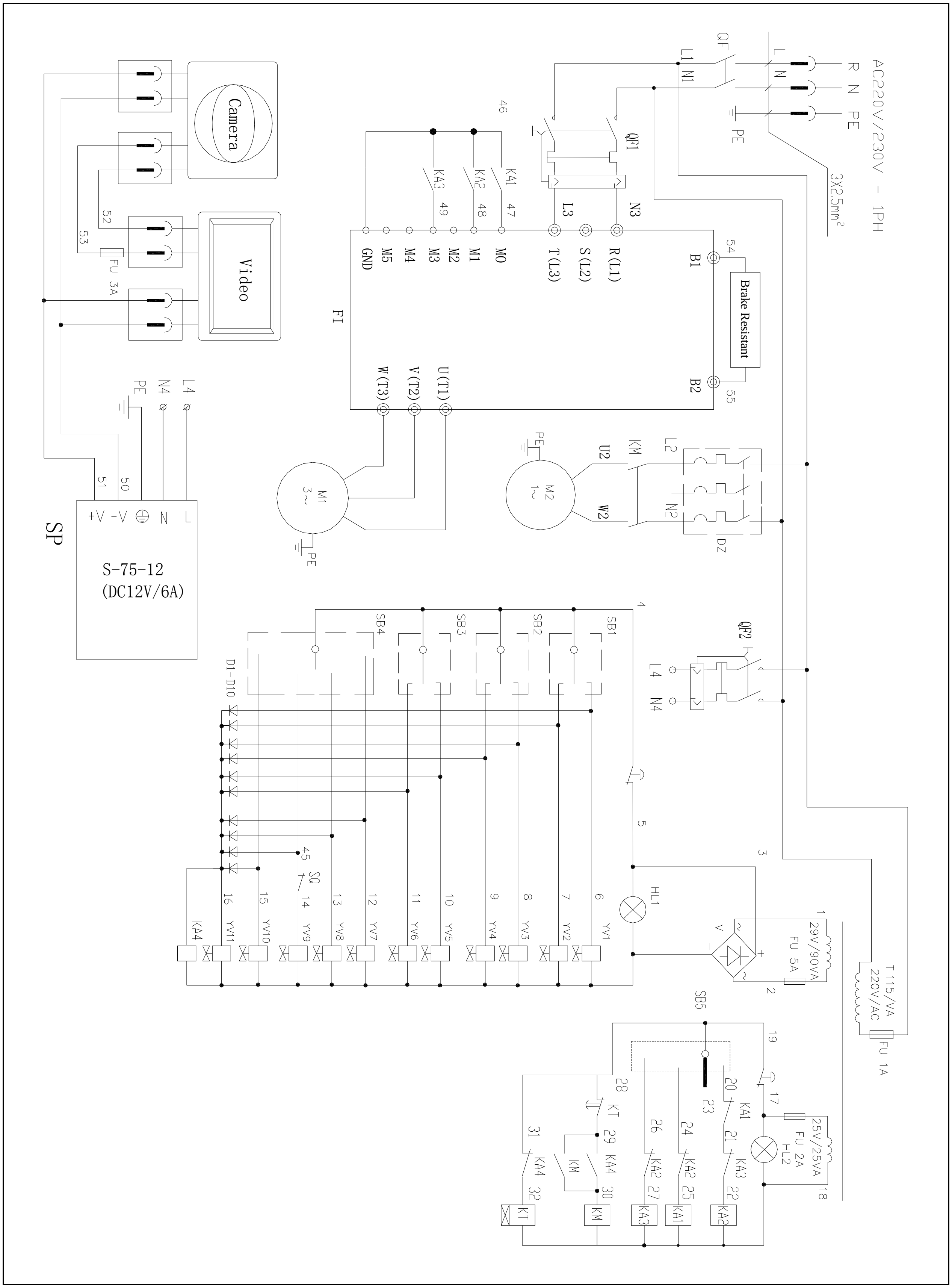
1	Oil filter	9	Solenoid valves-tool head up/down cylinder
2	Gear pump	10	Solenoid valves-tool head forward/backward cylinder
3	Hydraulic pump motor	11	Pressure gauge
4	Pressure relief valve	12	Tool head forward/backward cylinder
5	Circuit exhaust solenoid valve	13	Tool head up/down cylinder
6	Air filter	14	Turntable cylinder
7	Solenoid valves-bead breaker cylinders	15	Bead breaker cylinders
8	Solenoid valves-turntable cylinder		

ELECTRIC SCHEME - 380V/400V-3PH (double speed)



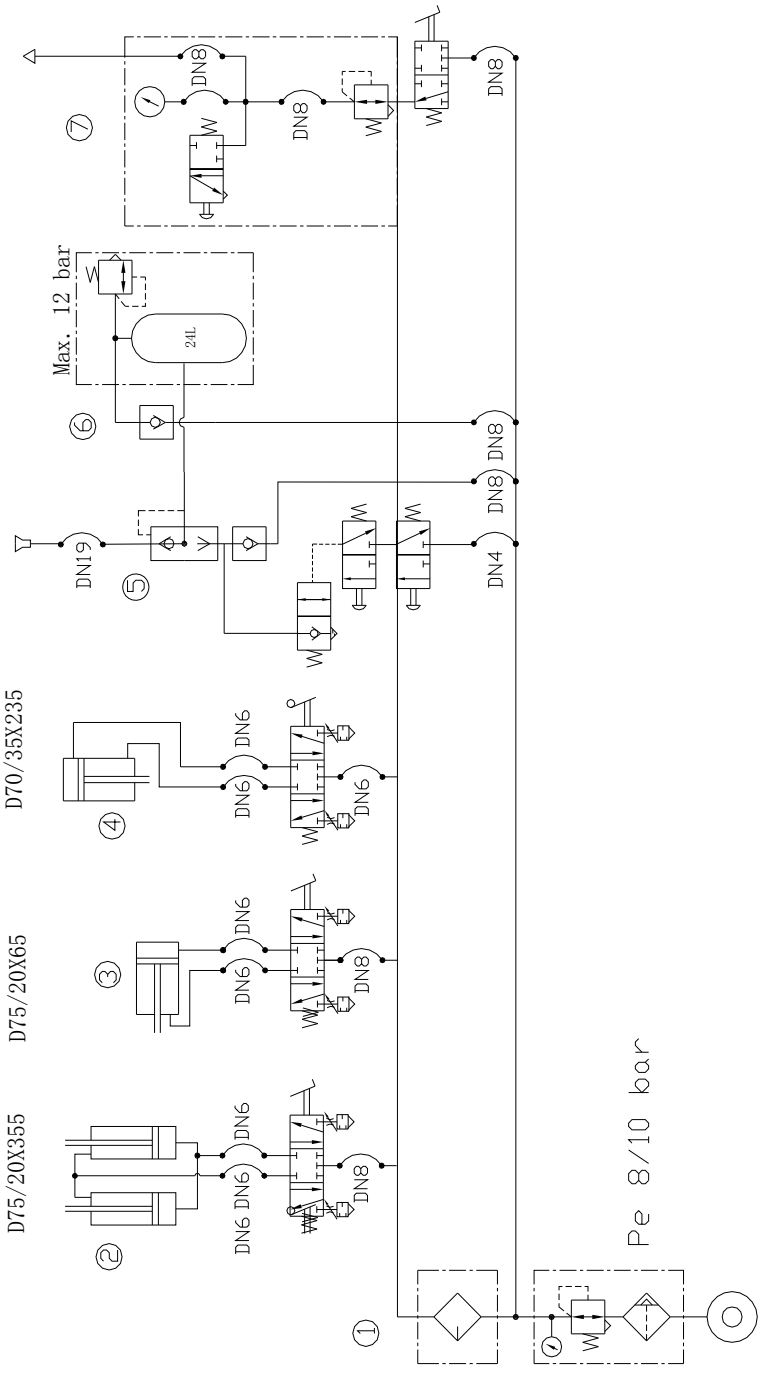
QF	Power on/off switch
QF1	Pole change switch
QF2	Video monitor on/off switch
SP	Switch power supply
DZ	Circuit breaker
M1	Gear box motor
M2	Hydraulic pump motor
T	Transformer
KM1 – KM2	Contactor AC
KT	Timer
V	Rectifier
SB1	Upper bead breaker controller
SB2	Lower bead breaker controller
SB3	Turntable controller
SB4	Tool head controller
SB5	Micro switch
Y1	Solenoid valve – upper bead breaker up
Y2	Solenoid valve – upper bead breaker down
Y3	Solenoid valve – lower bead breaker up
Y4	Solenoid valve – lower bead breaker down
Y5	Solenoid valve – turntable forward
Y6	Solenoid valve – turntable backward
Y7	Solenoid valve – tool head up
Y8	Solenoid valve – tool head down
Y9	Solenoid valve – tool head forward
Y10	Solenoid valve – tool head backward
Y11	Circuit exhaust solenoid valve
SQ	Limit switch – tool head
D1 - D10	Diodes
HL1	Pilot lamp – power box
HL2	Pilot lamp – control panel

ELECTRIC SCHEME - 220V/230V-1PH (with motor inverter)


AC220V/230V - 1PH
3X2.5mm²
Camera
Video
Brake Resistant
FI
SP
S-75-12
(DC12V/6A)

QF	Power on/off switch
QF1	Inverter on/off switch
QF2	Video monitor on/off switch
SP	Switch power supply
KA1	Intermediate relay – turntable clockwise rotation
KA2	Intermediate relay – turntable counter clockwise rotation
KA3	Intermediate relay – turntable clockwise rotation at the higher speed
KA4	Intermediate relay - timer
F1	Motor inverter
DZ	Circuit breaker
M1	Gear box motor
M2	Hydraulic pump motor
T	Transformer
KM	Contactor AC
KT	Timer
V	Rectifier
SB1	Upper bead breaker controller
SB2	Lower bead breaker controller
SB3	Turntable controller
SB4	Tool head controller
SB5	Micro switch
Y1	Solenoid valve – upper bead breaker up
Y2	Solenoid valve – upper bead breaker down
Y3	Solenoid valve – lower bead breaker up
Y4	Solenoid valve – lower bead breaker down
Y5	Solenoid valve – turntable forward
Y6	Solenoid valve – turntable backward
Y7	Solenoid valve – tool head up
Y8	Solenoid valve – tool head down
Y9	Solenoid valve – tool head forward
Y10	Solenoid valve – tool head backward
Y11	Circuit exhaust solenoid valve
SQ	Limit switch – tool head
D1 - D10	Diodes
HL1	Pilot lamp – power box
HL2	Pilot lamp – control panel

PNEUMATIC SCHEME



1	Air power supply
2	Wheel lift
3	Too head rotation
4	Assist tool
5	Blasting inflation system
6	Air tank
7	Inflation