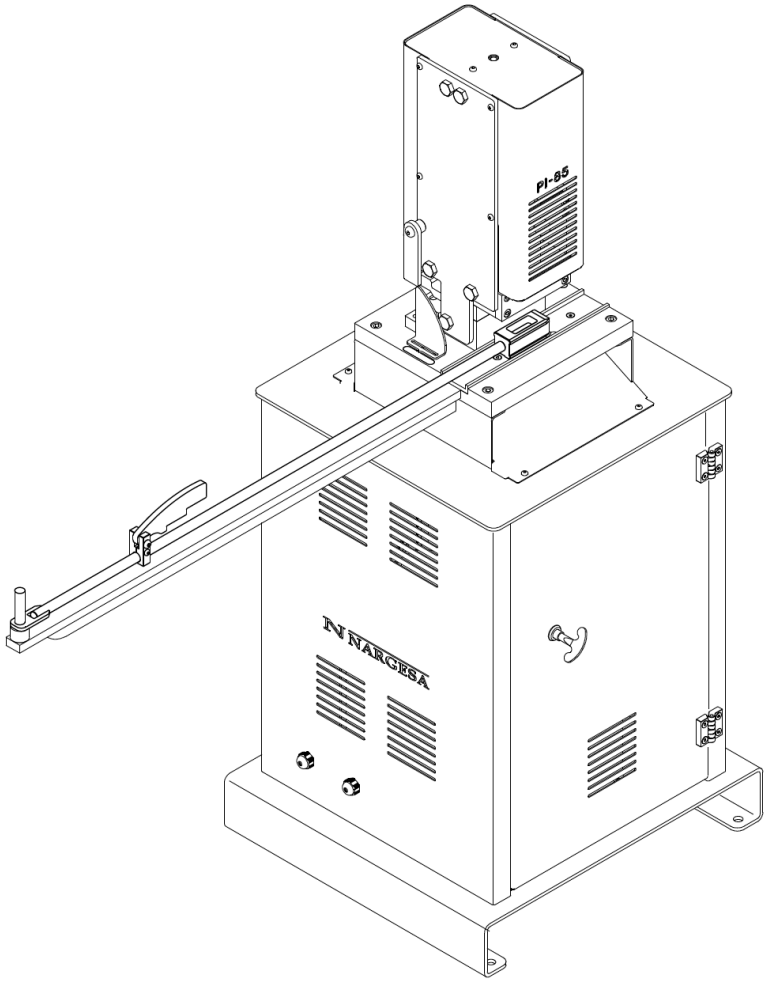
PRESSE FOR LOCKS

PI85



INSTRUCTIONS BOOK

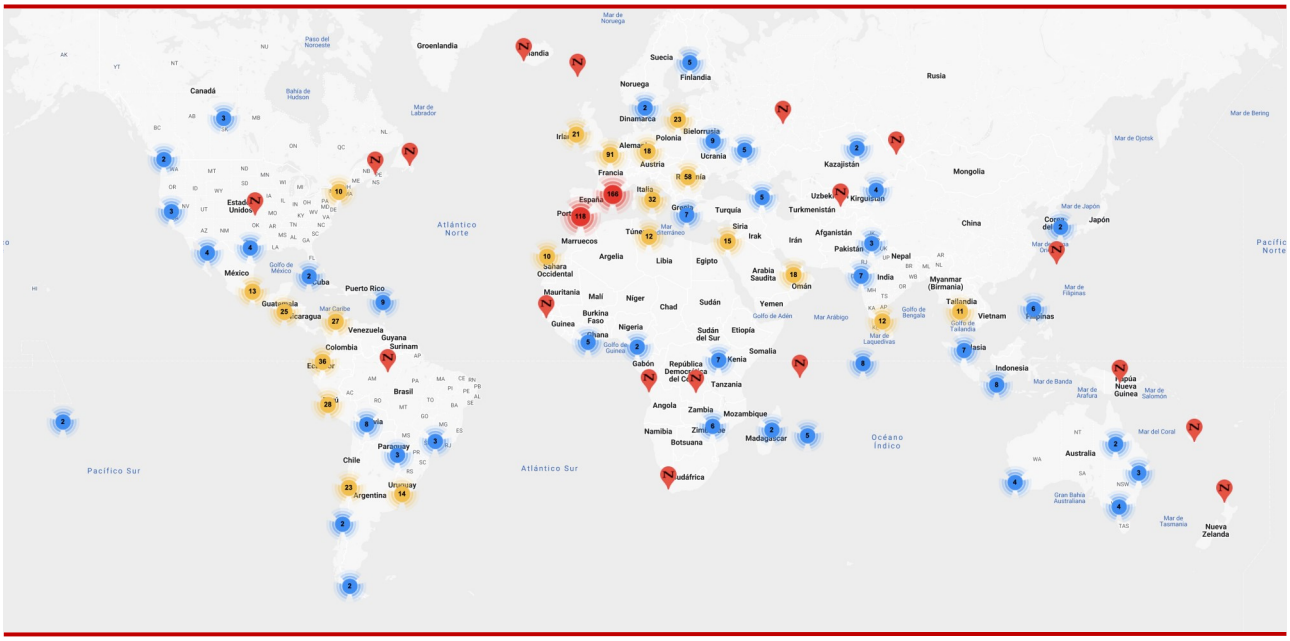
PRADA NARGESA, S.L

Ctra. de Garrigàs a Sant Miquel s/n · 17476 Palau de Santa Eulàlia (Girona) SPAIN

Tel. +34 972568085 · nargesa@nargesa.com · www.nargesa.com

NARGESA CLIENTS

Prada Nargesa has more tan 8.000 customers around the world. Some of our clients, those who offer service to third parties with the Nargesa machinery in their workshops, have been pleased to be part of this network that aims to connect them with posible future clients. In this way, all those people or companies that have a need for any part or tool that can be manufactured by using the Nargesa range of machinery, will be able to find a solution in their área to be able to satisfy their production requirements by hiring their services.



DO YOU WANT TO PARTICIPATE?

Send an email to nargesa@nargesa.com, include the following information and we will add you to this list.

We want to encourage all those who haven't participated yet in this great comercial network!

Company name

CIF/Tax Code

City

Country

Machine or machines

PRADA NARGESA

Prada Nargesa S.L. is a family business fonuded in 1970 located near Barcelona, Spain, with more tan 50 years of experience in the sector of manufacturing of industrial machinery, and more tan 10.000m² of facilities. Nargesa is a symbol of quality, reliability, warranty and innovation.

Our whole range of machines and accessories is manufactured entirely in Nargesa. We have a constant stock of 400 machines, and we have more tan 16.800 machines sold all over the world.

OUR RANGE OF MACHINERY

Ironworker Machines

Ring Roller Bender and Pipe Bender

Non-mandrel Tube and Pipe Bender

Twisting / Scroll Bending Machines

Horizontal Press Brakes

End Wrought Iron Machines

Gas Forges

Iron Embossing Machines

Hydraulic Shear Machines

Hydraulic Press Brakes

Presses for Locks

Broaching Machines

Power Hammers

CERTIFICATES

Prada Nargesa has several certifications that backup both, the design and manufacturing processes, as well as the journey through exporting our products around the world and the quality of the manufacturing components we use for our machines. These facts turn into real advantages for our customers:

AUTHORIZED EXPORTER

- Faster customs procedures
- Reduction of tariff documentation
- Tariff preferences according to geographical location

INNOVATIVE SME

- Development in innovation, design and manufacturing technologies
- Certification and aduit of efficiency in product and service
- Ability to foresee customer needs

R+D+I MANAGEMENT

- Manufacturing based on the R+D+I process
- Technological surveillance system

SUCCESS STORIES

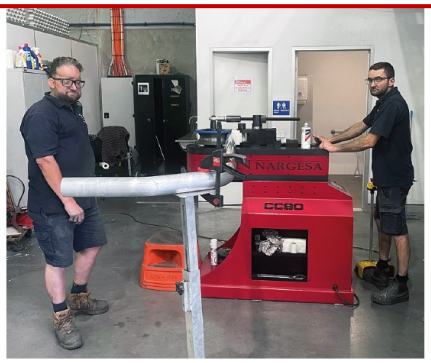
At Prada Nargesa we believe that the testimony of our clients is our best guarantee, and that is why we like to expose some of the success stories that we have witnessed around the world:

PORTUGAL

Capela & Filhos

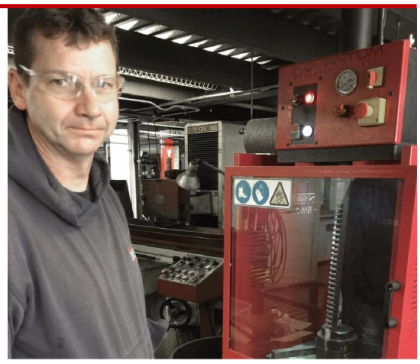
AUSTRALIA

Manufactured Alloy Xtras



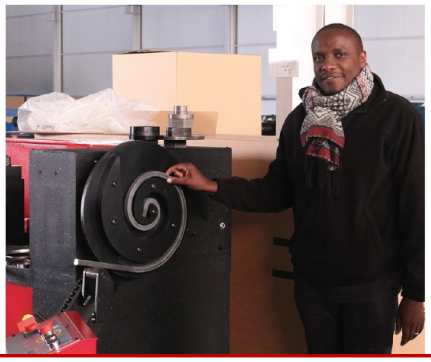
ESTADOS UNIDOS

Madison Environmental Resources



ESPAÑA

CBET Decoración SL



UGANDA

Steel Limited

RUMANIA

Gala Metal & Design SRL

DO YOU WANT TO PARTICIPATE?

Send an email to nargesa@nargesa.com including the following information and we will add you to our website

Company name

Testimonial name

Post in the Company

Country

Descriptive text

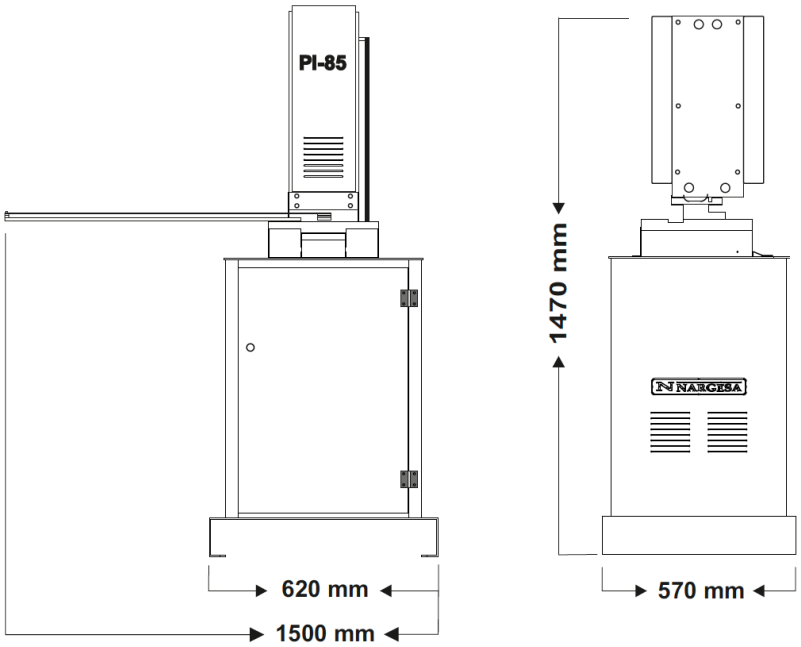
Photography with the machine

INDEX

1. CHARACTERISTICS OF THE MACHINE

Make	Nargesa
Type	Troqueladora de cerraduras
Model	PI85

1.1. General dimensions

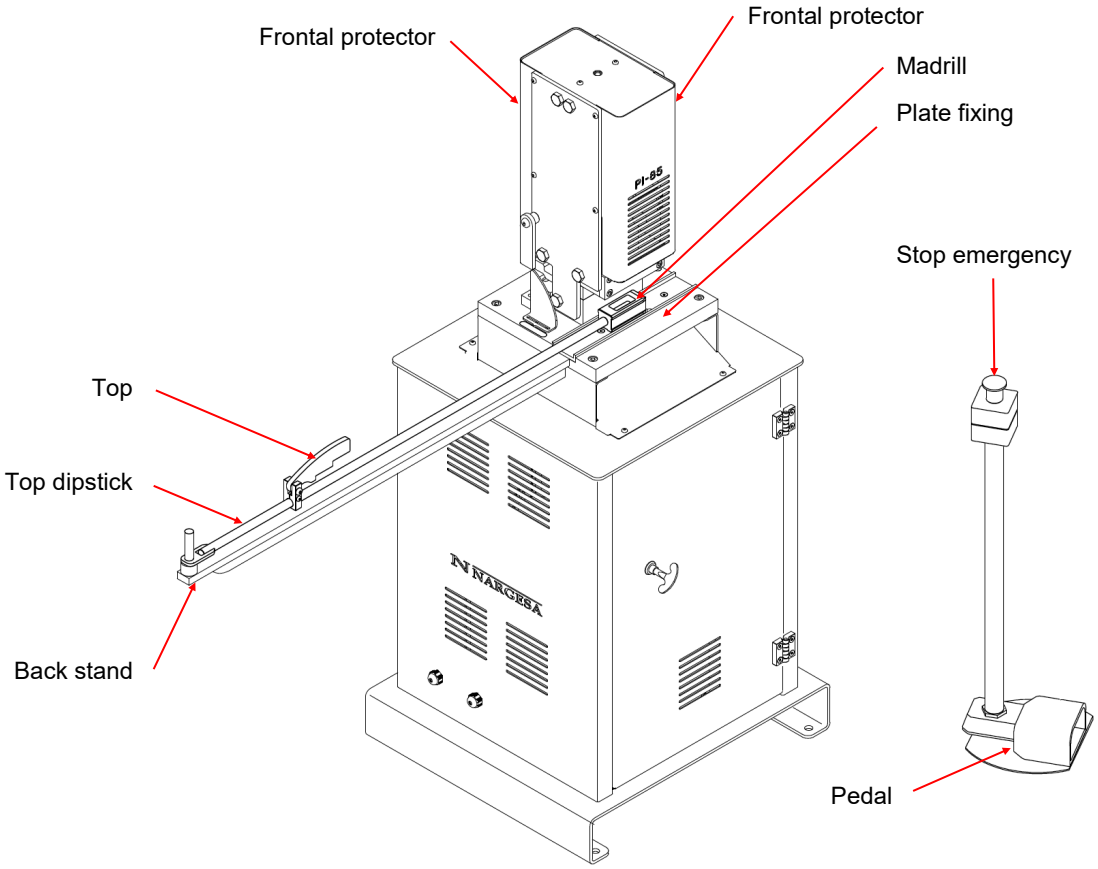


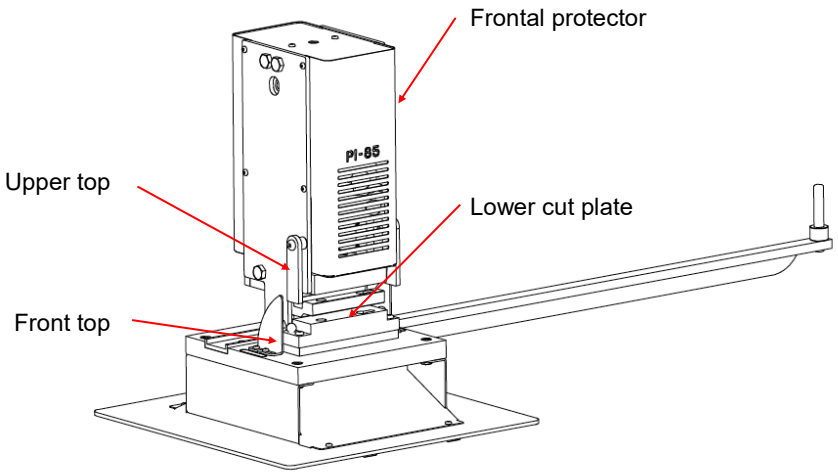
1.2. Description of the machine

Hydraulic press PI85, are specifically designed for the tube perforation of the different bulb shape locks cavities existing in the market, which are more than 80%. It allows the perforation of the mechanism set, the bulb shape cavity and the handle at the same time. Moreover, it is possible to make the independent bulb shape cavity and the handle perforation which permits to vary the distance between them. PI85 have a milimetrical system incorporated in order to allow the regulation of the mechanism box, the bulb shape cavity and the handle; so it can make distances from 18 up to 37 mm.

PI85 is according to the European directives and regulations for machine manufacturing.

1.3. Machine identification





1.4. General features

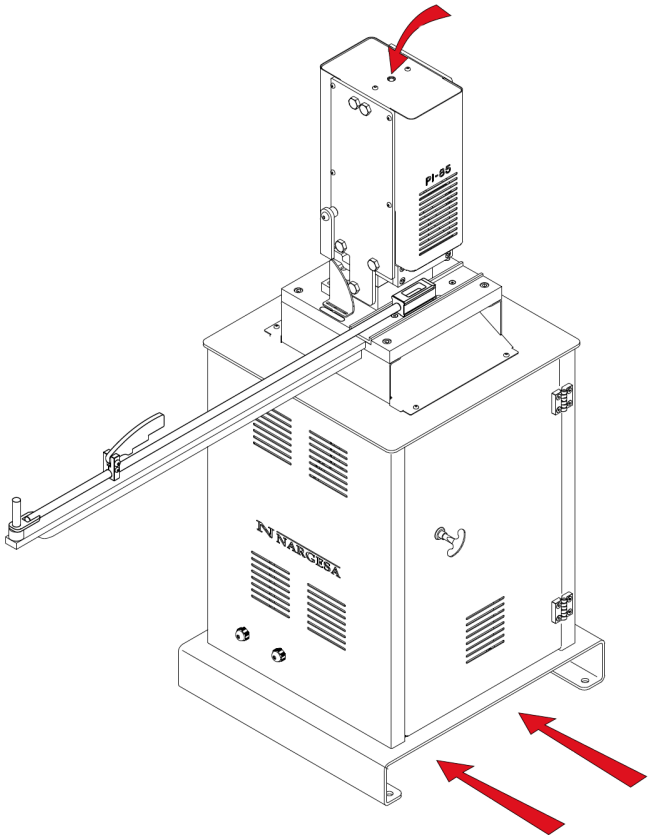
Engine	0,75 KW / 1 CV a 1410 r.p.m.
Power	3,3 A a 230 V / 1,9 A a 400 V
3-phased tension	230 / 400 V
Pump	1,5 l
Maximum pressure	200kg/cm^2 (20 MPa)
Pipe thickness	1,5 y 2mm
Lock entrance	Adjustable from 18 to 37mm
Total time for the operation	58 s.
Dimensions	1500x570x1470mm
Weight	200 Kg

TUBES THAT CAN BE WORKED WITH				
35x35				
40x40	40x50	40x60	40x70	40x80
50x50	50x60	50x70	50x80	

2. TRANSPORT AND STORAGE

2.1. Transport

The machine is equiped with a stand or lower base thought for the transport of the machine by using a lifting truc placing it in the midle of the stand keeping in mind not to lift it more than what's necessary to avoid a possible overturning. In case it has to be lifted it has a clamping spot in the upper part. M12.



2.2. Storage conditions

PI85 is correctly packed and sealed so they must never be stored in places that omit the followig requeriments:

* Humididty between 30% and 95% without condensation.

* Temperature from -25 to 55ºC or 75ºC for a length of time no longer that 24 hours (keep in mind that these temperatures are just for storage conditions).

* It is advisable not to stack machines or heavy objets on them.

* Do not dismantle it for storage.

3. MAINTENANCE

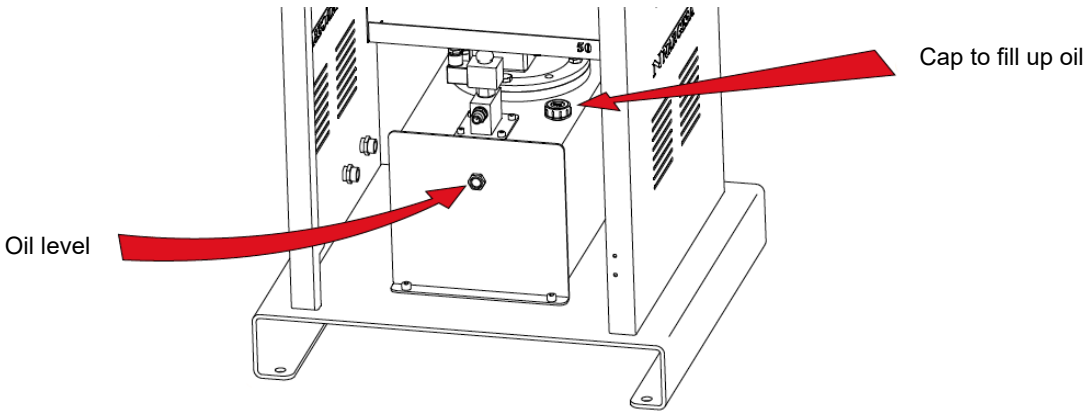
3.1. General maintenance

- Check up the oil levels every 500 hours work.

The oil cap is located at the front part of the deposit. In case of lack of oil fulfil it up until the oil cap indicates 3/4 parts full.

- Replacement of hydraulic oil of the container every 2000 hours of work or every three years.

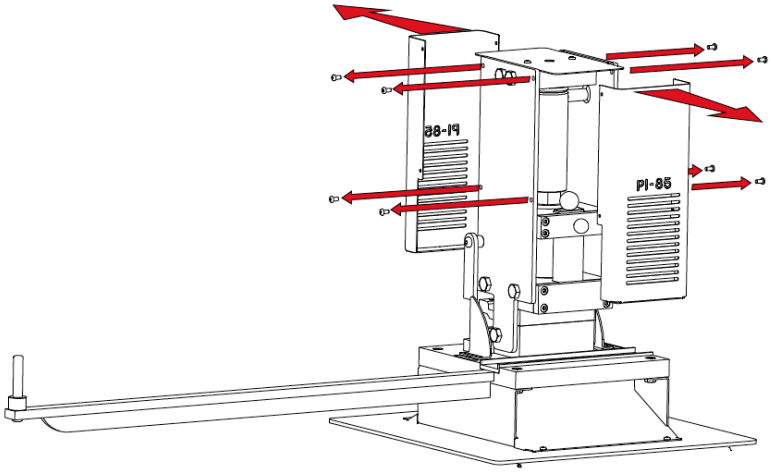
Type: CEPSA HIDRAULICO HM 68



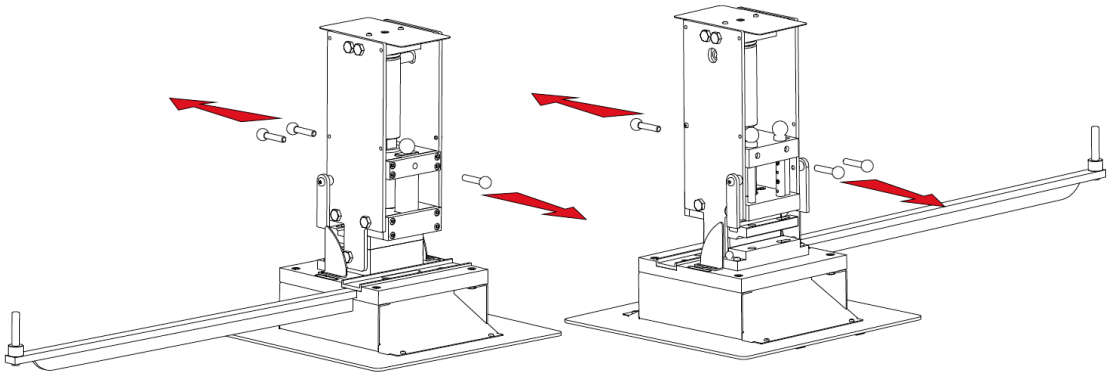
Stop the machine and press emergency stop to make the oil change.
Make sure the mandrill has been removed or it's lying on the stand plaque, off the punch route.
Once oil has been changed , start up the machine and activate the pedal on and off, increasing the pressure time gradually until the circuit is full . You'll notice that the machine will perform normally.
-Lubricate punches regularly as they are used. In case the use is daily and continuous, greas it every day. In case the use is daily but not so continuously, then grease them every week.
In case the use is just sporadic, lubricate punches once a month.

3.2. Greasing of punches

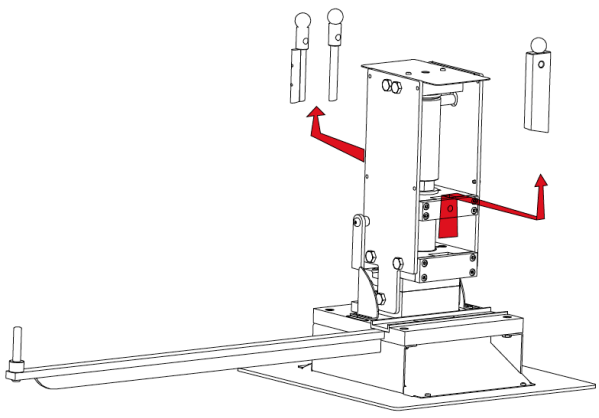
1. Stop the machine
2. Press down the emergency stop button.
3. Remove frontal protectors using one allen key nº 4.



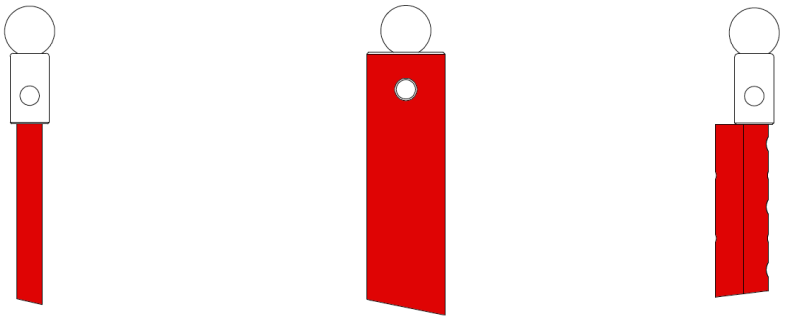
4. Hold up the punch to be greased and remove the pin pulling up outwards.



5. Extract the punch pulling up upwards.



6. Grease the punch as shown in the following picture.



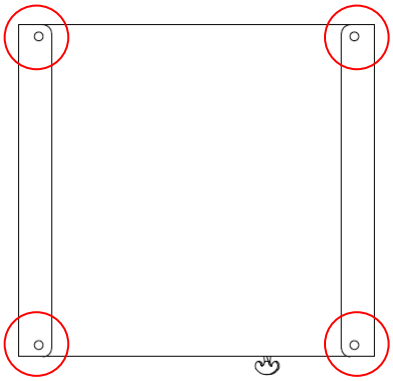
7. Place the punch again as it was at the bigining.
8. Insert the pin.
9. Repeat the process again from point 3 up to 6 for each punch.
10. Put the front protections back to the original position.
11. Cancel emergency stop.
12. Start up the machine
13. Press the pedal some times, continuously so the punch can be slid all along the way.

Check up often the punches wearing and the mandrel for its sharpening and distribution. These will depend the use and the material worked with.Do not work if wearing is too high or the point has been lost.

4. INSTALLMENT AND STARTING UP

4.1. Machine location

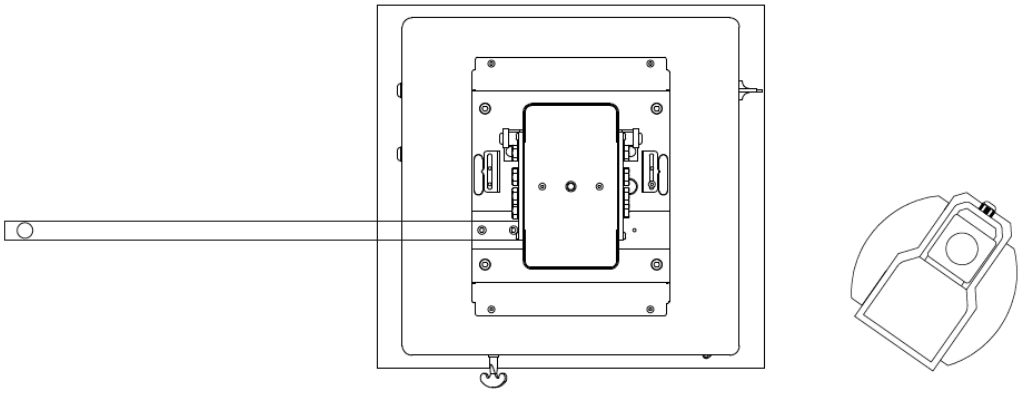
Try to place the machine correctly so it hasn't got to be moved; in case it has to follow the operations described in the transport section (nº3). The machine must be placed in a flat and levelled surface to avoid vibrations and the movement of it while performing. It's possible to fix it by using bolts since it is provided with a lower base or stand with 4 holes as shown in the following picture.



4.2. Dimensions and working place

When locating the machine keep in mind the dimensions of it , theoperative's working place and every possible length of the tube to work with. PI85 have two different working zones, one for the perforation of the mechanism box and the other for the perforation of the bulb shape hole and the handle as shown in the picture.

Zone for the perforation of bulb shape and handle



Zone for the perforation of the mechanism box

4.3. Admisible outer conditions

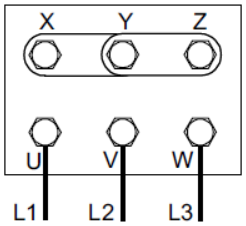
- Temperature between +5ºC and +40ºC without overpassing an average temperature of +35ºC during 24 hours

- Humidity between 30% and 90% without water condensation.

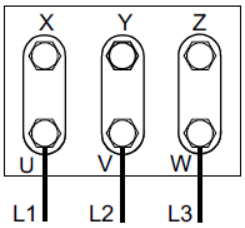
4.4. Connection to power supply

IMPORTANT
This machine must be connected to a power supply with ground connection.

PI85 is equiped with a three phased motor 230v / 400v with 1HP connected star like to be plugged to a power supply of 400v.it must be connected to only one power supply and the one indicated. If the line tension is not the proper one, then there mus be made a change of connections in the bobins of the engine and the transformer as indicated in the pictures below:

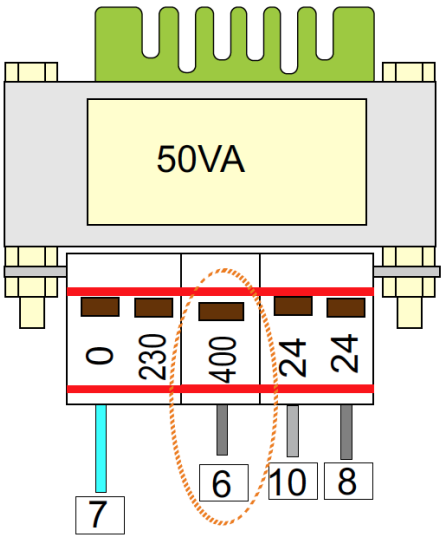


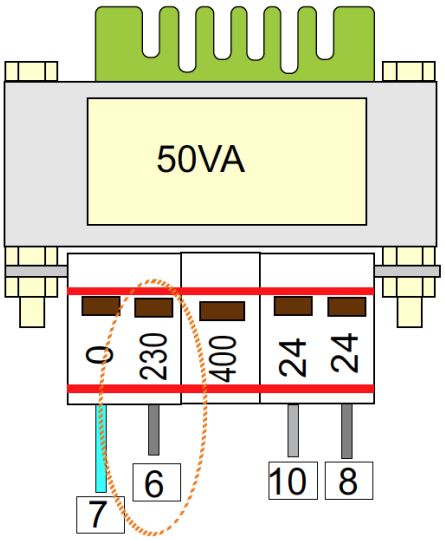
Star Picture
for tension 400V
(preset)



Triangle picture
for tension 230V

In case of change of voltage from 400V to 230V, switch terminal 6 from 400V to 230V.



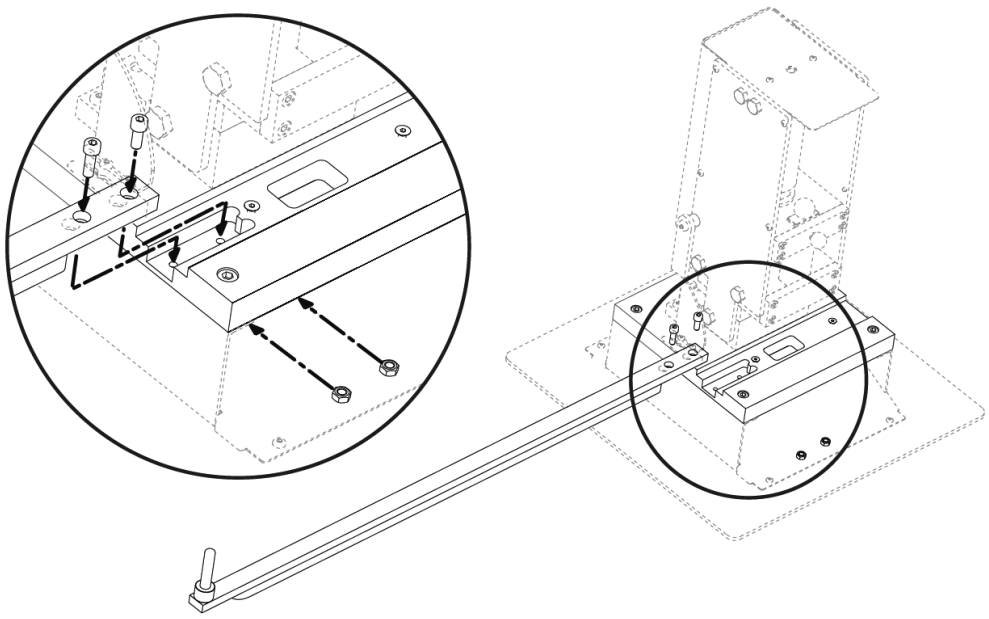


4.5. Assembling the mandrel back support

The machine is provided with the mandrill back stand dismantled and with two screws (allen M8 DIN 912), also there are two nutsM8 DIN 934 to fix the machine. It is important to place and fix the axel well in order to obtain a correct mandrell alignment.

Place the back stand in the plate fixing it by fastening the screws DIN 912 and making sure this ones are tight to the DIN 934.

It isn't necessary to remove any cover or protection to asssemble it.



4.6. Responsibilities

PI85 is according to the European directives and regulations for machine manufacturing.

In case of accident due to a negligent use on the operative's side for not fulfilling the usage and safety rules described on this instructions manual, PRADA NARGESA, SL will no take any responsibility.

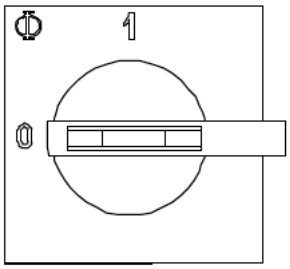
5. OPERATIONS MANUAL

5.1. Mechanism perforation

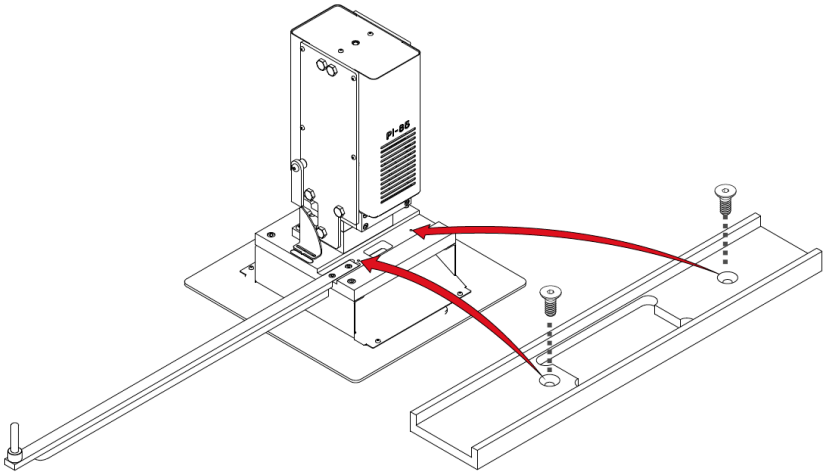
In this section the user will find information on how to perforate the mechanism according to the tube that has been chosen.

The machine is equiped to perforate 80% of the kinds of bulb shape locks in the market. It is necessary to follow the following steps:

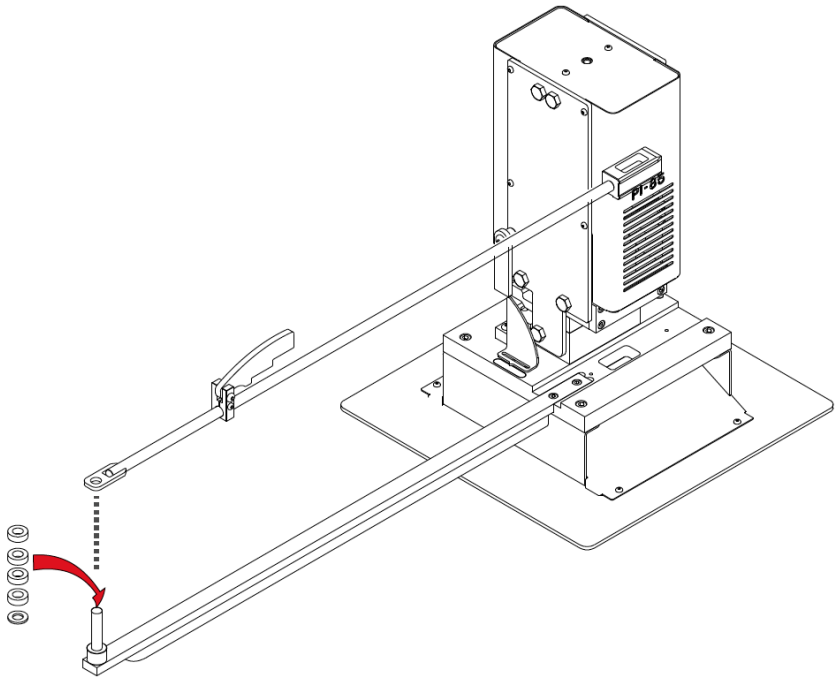
Stop the machine placing the selector to “zero”



Place the tube guide according to the tube to work with.



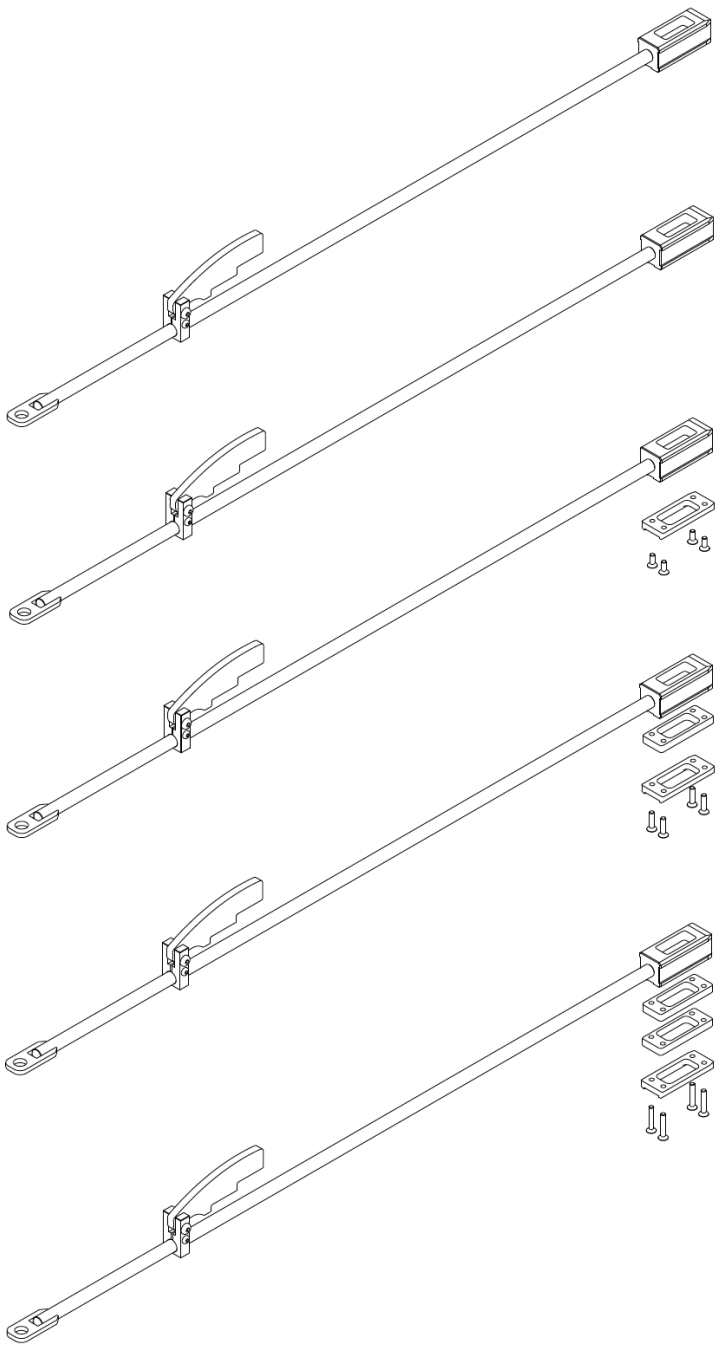
Level up the madrill putting the washers according to the back stand.



WASHERS LEVELLING ACCORDING TO THE TUBE

TUBE	WASHER TO INSERT
35 x 35	Already leveled
40 x 40	3
40 x 50	3 + 10
40 x 60	3 + 10 + 10
40 x 70	3 + 10 + 10 + 10
40 x 80	3 + 10 + 10 + 10 + 10
50 x 50	3 + 5
50 x 60	3 + 5 + 10
50 x 70	3 + 5 + 10 + 10
50 x 80	3 + 5 + 10 + 10 + 10

Selecting the set of mandrill to work with and add the mandrill some thick parts if required. It is important to place always the thick part with the slot in the lower part to save the tube welding.
According to the tube, the fitting-up would be as follows:



Assembly for 35mm tube

Assembly for 40mm tube

Assembly for 40x50mm tube

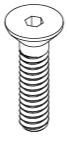
4 Allen screw ref: M.6 x 16

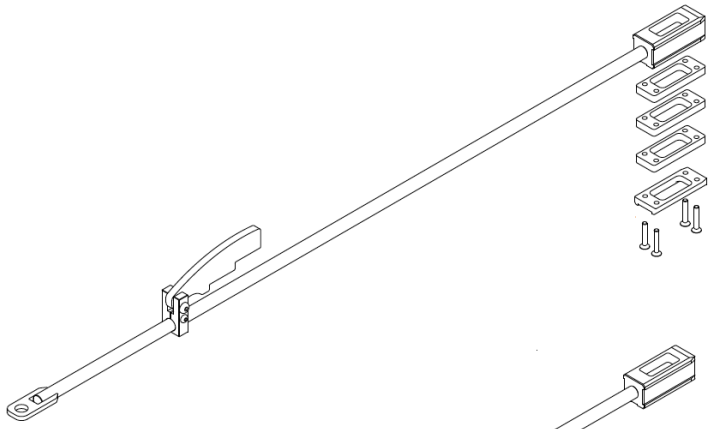
Assembly for 40x60mm tube

4 Allen screw ref: M.6 x 25

Assembly for 40x70mm tube

4 Allen screw ref: M.6 x 35

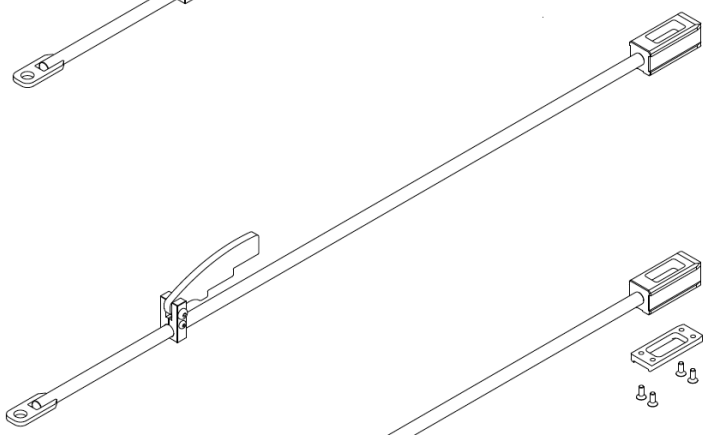




Assembly for 40x80mm tuve

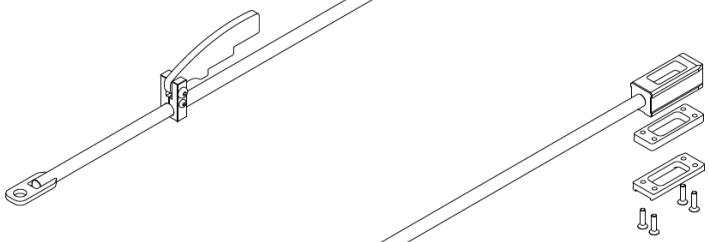
4 Allen screw ref: M.6 x 45

Assembly for 50mm tuve



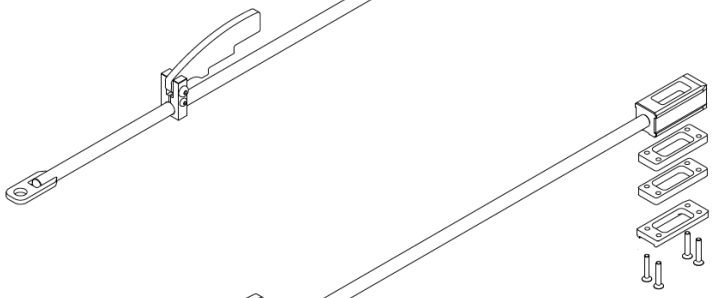
Assembly for 50x60mm tuve

4 Allen screw ref: M.6 x 16



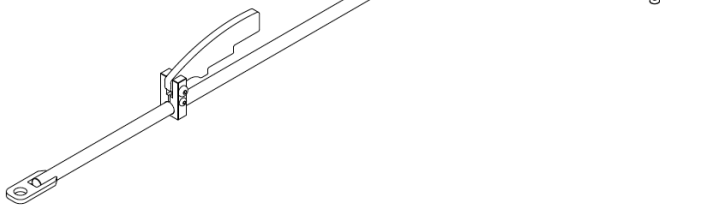
Assembly for 50x70mm tuve

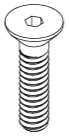
4 Allen screw ref: M.6 x 25



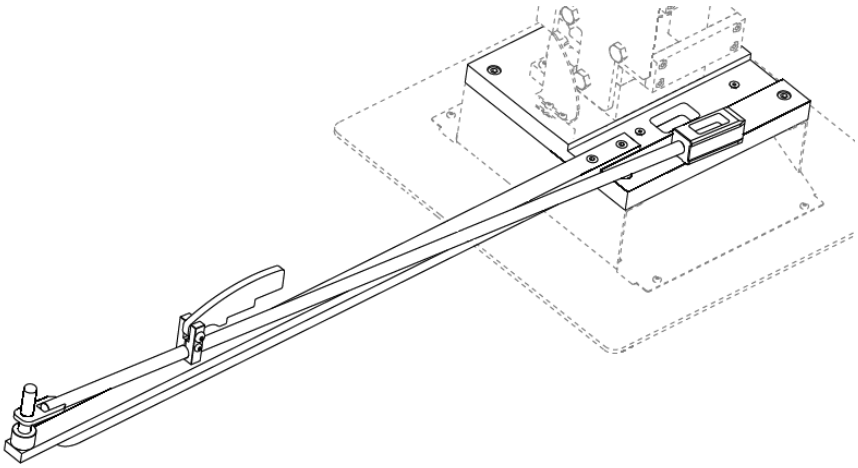
Assembly for 50 x 80mm tuve

4 Allen screw ref: M.6 x 35

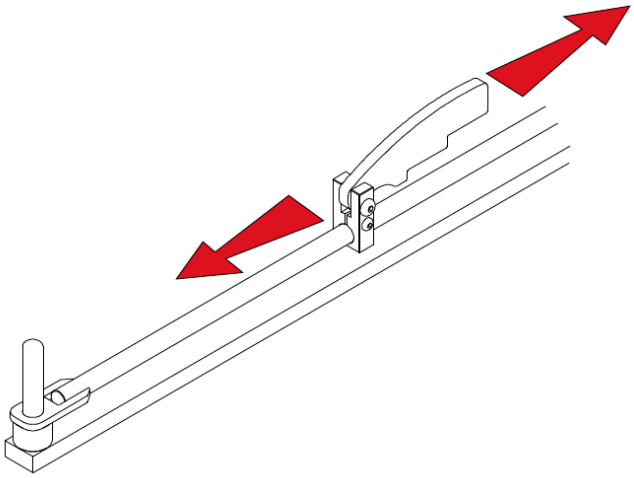




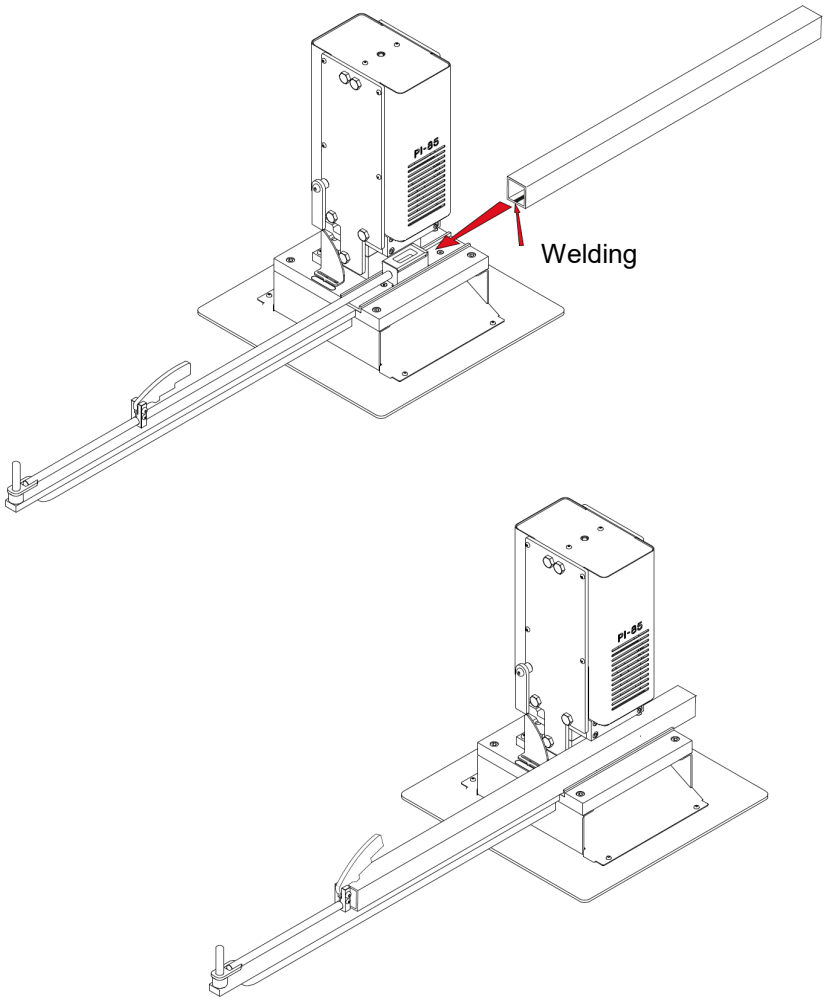
1. Put the set of mandrill in the back stand as shown in the picture. It is important to havethe end where the mandrill is in rest upon the stand plate. Keep in mind to leave always the mandrill in this position whenever it isn't perforated to avoid any crash with the punch.



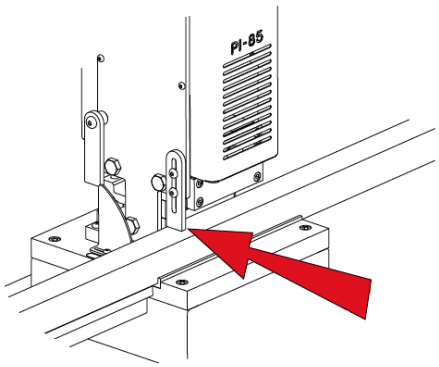
2. Adapt the top to the desired distance and fix it again. The machine incorporates a standard top that perforates an aproximate length of 184mm in 4 phases. In case it is necessary to perforate different lengths, it is possible to change the top. Consult the manufacturer.



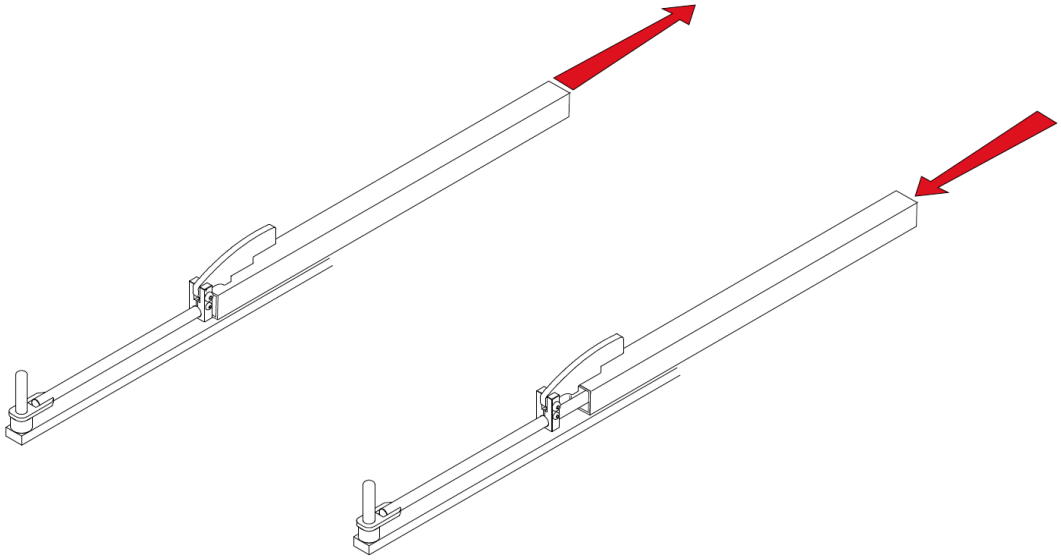
3. Insert the mandrill in the tube putting the welding line in the lower part whenever it is possible, until the first top is reached. The tube must be guided by the perforation side as it is indicated in the pictures below.



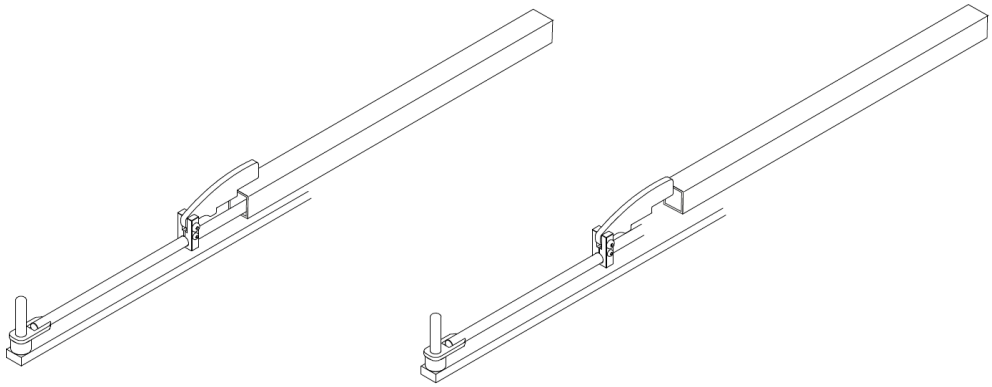
4. Adjust the upper top leaving an aproximate distance of 3mm with the tube to be perforated, as it is shown in the picture 54A.



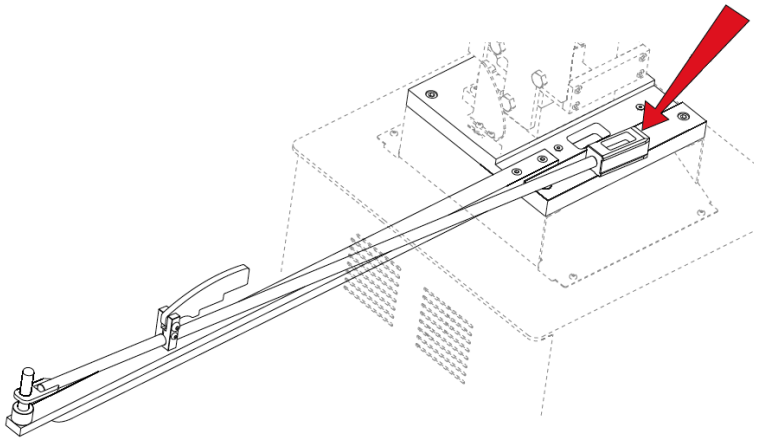
5. Start up the machine putting the selector in position 1and making sure the emergency stop is cancelled.
6. Press the pedal until it punches the tube and then stop pressing the pedal The punch will return to its initial position automatically. It is necessary to keep in mind that when preesing the pedal all punches will descend at the same time and therefore there must be nothing blocking their route.
7. Pull the tube in the direction pointed in the picture until the top descends one position, then press the tube back against the top to get it adjusted.



Repeat steps from nº 6 to 7 descending instead, each time at a position in the top.



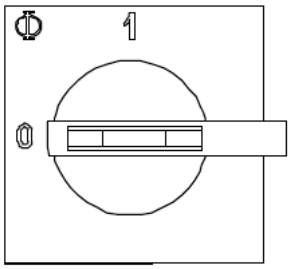
Extract or place the mandrill resting upon the plate stand. Never leave it within the punch path.



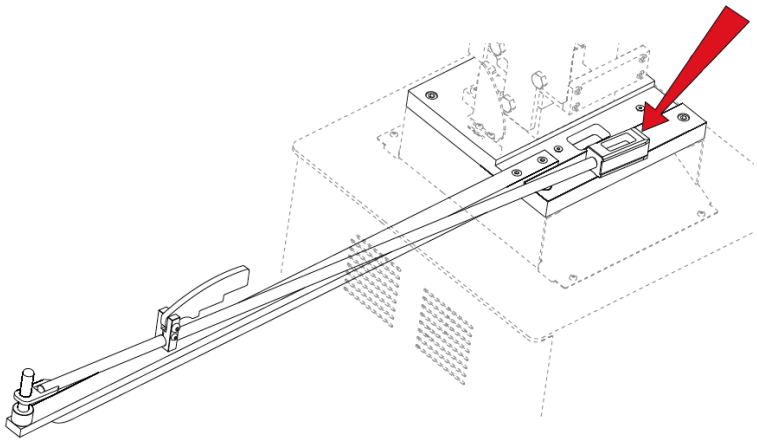
5.2. Simultaneous perforation of the bulb shape cavity and the handle

Consists of punching the bulb shape hole and the handle simultaneously at the distance marked by the machine.

1. Stop the machine placing selector in position 0

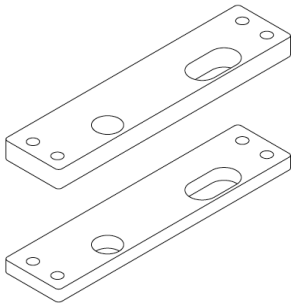


2. Check up the set of mandrill has been removed or it is leaning on the plate stand, off the rectangular punch path.

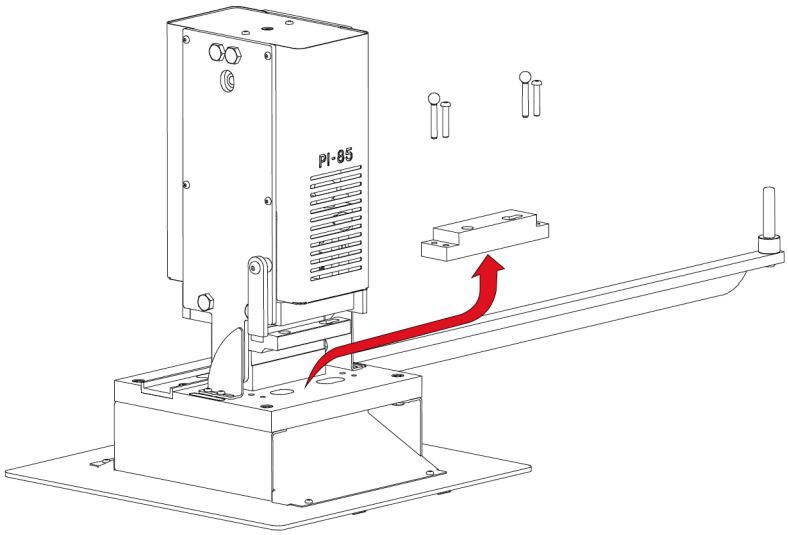


3. Prepare the lower cut plate at the tube height to be worked with.

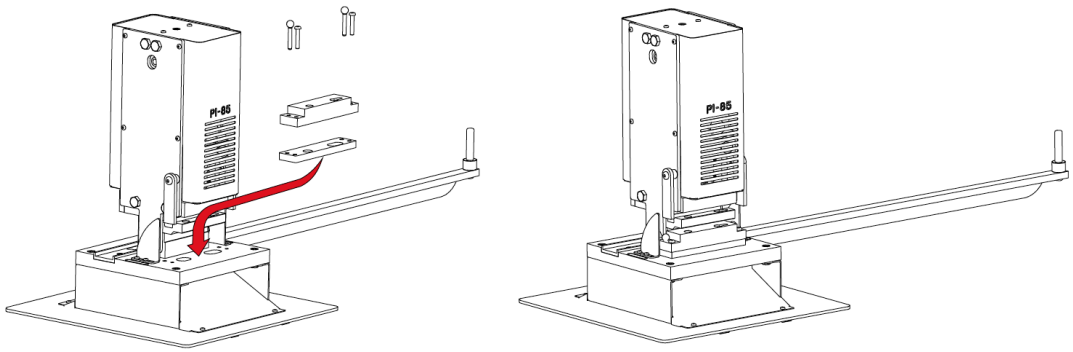
Plates for the preparation	
Tube	**Thickness**
35x35	15 mm
40x40	10 mm
40x50	
40x60	
40x70	
40x80	
50x50	Sin grueso
50x60	
50x57	
50x80	



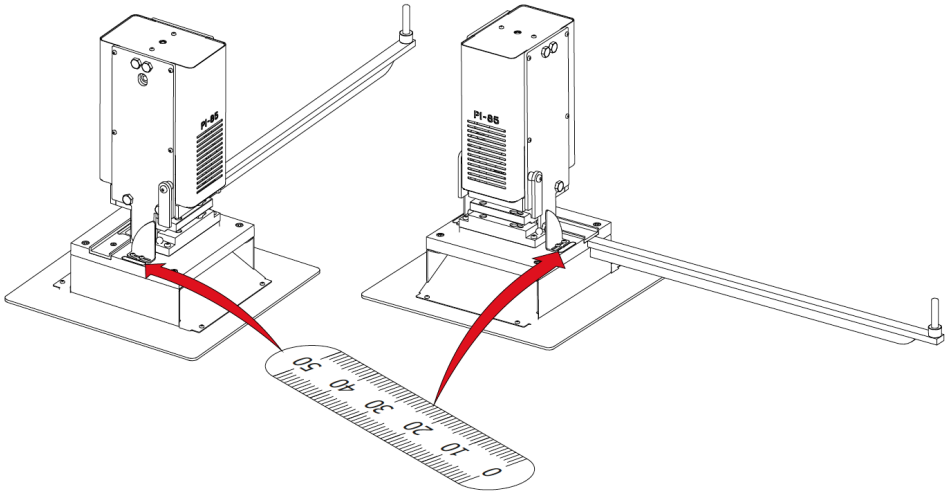
4. In case the height should be changed, remove the lower cut plate by unscrewing both M8 ISO 7380 from the ends and pulling the pin outwards.



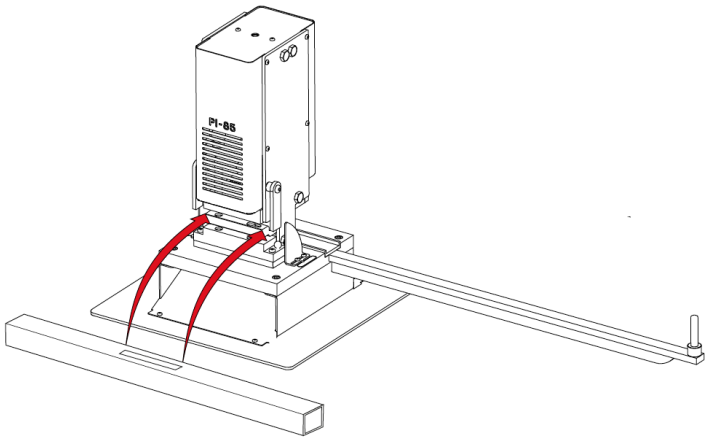
5. Put the proper thick part in the lower part of the cut plate to reach the desired height according to the tube to be punched. Then put the pins back in and fix them again.



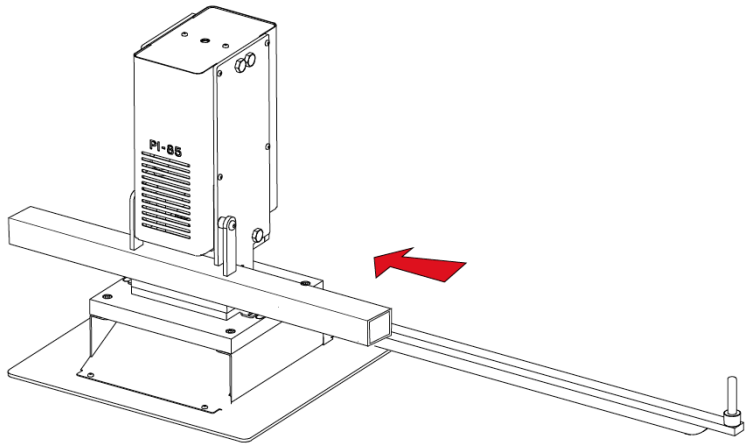
6. Graduate the desired distance to punch the bulb shaped hole and the handle by using the front tops and the milimetre belt. The allowed distance in the machine swings from 18mm up to 37mm approximately.



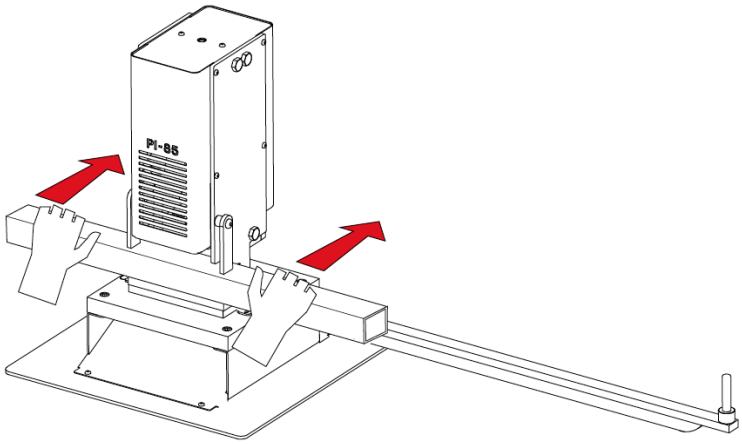
7. Insert the tube in the the mechanism perforation in the upper cut plate, pressing until you reached the frontal tops that were previously adapted to the desired distance. The tube must be resting upon the upper and lower cut plates.



8. Pull the tube towards the upper cut plate until it reaches the top. The tube gets the required play between the mechanism and the bulb shape hole for nearly 80% of this kinds of lock.

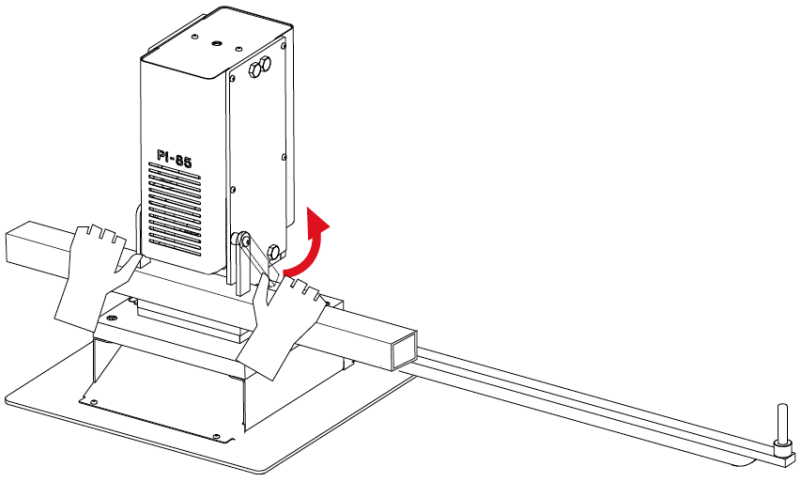


9. Hold up the tube in the position indicated in the picture pushing slowly against the tops.



10. Press up the pedal until punching the tube upper wall. Punches will go back to the start position once the pressure on the pedal stops, and the upper tops will avoid the tube from disengaging causing a distortion in the punching operation. It is not necessary to balance the ascent effect of the tube when punches are getting loose because the upper tops absorb this force.
It is very important not to punch the whole tube at a time since it might get the operative seriously injured and damage the punches.

11. Get the tube out of the upper cut plate at the same time that the upper tops are being set apart by the thumbs.



12. Remove wastes from the inside inclining the tube to one side.

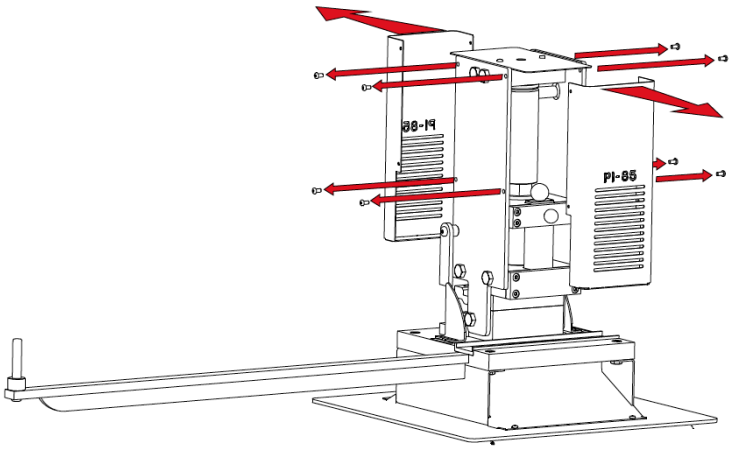
- Insert it back again in the upper cut plate and repeat steps from nº 7up to nº 11, punching the whole tube this time instead. When pressing the pedal, the punches will get in by the perforation made before and will descend until they get to punch the lower part of the tube leaving this casing from the top to the bottom. For this process to be correct it is necessary that the tube reaches the top in the same place.
- Remove the tube and make sure there isn't any remains inside of it.

5.3. Perforation by parts

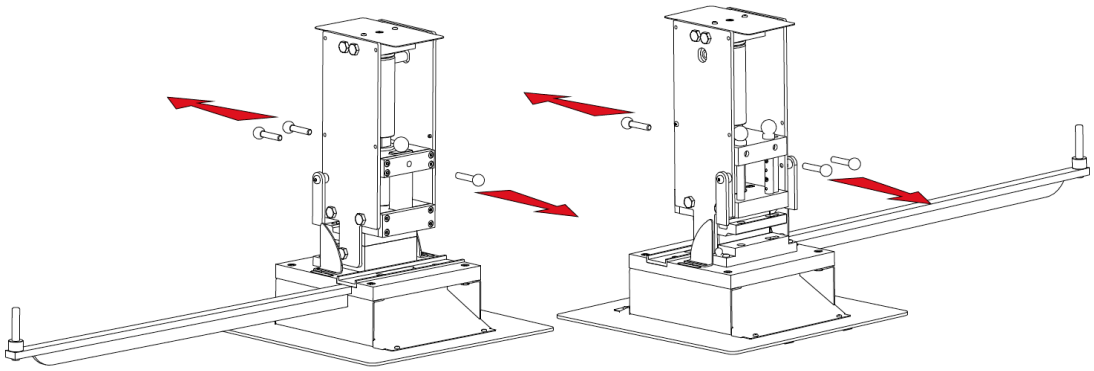
As it has been seen before, the machine has a standard fixed distance between the bulb shape perforation and the handle; however it is possible to change it by cancelling one of the perforations or just perforating one part of the tube. All these combinations can be achieved by removing one of the punches in some or all the operations required to make these perforations.

5.3.1. Punch extraction

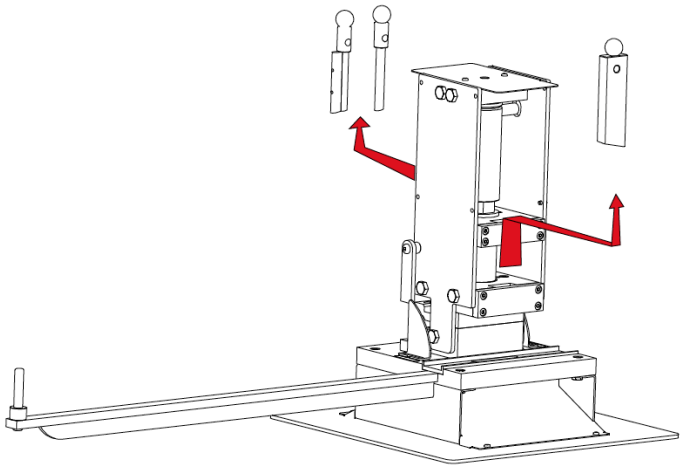
- Stop the machine putting the start selector in position 0.
- Unscrew all 4 M6 ISO7380 from the protection sides of the bulb shape punches and the handle and remove it.



- Hold up the punch to be cancelled and pull out the pin.



- Remove the punch out pulling upwards.

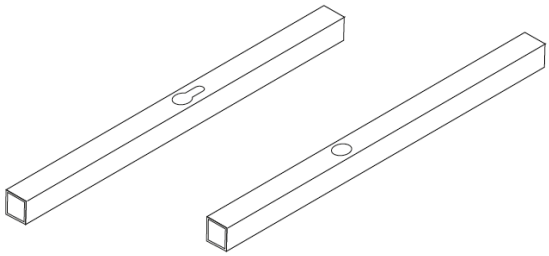


- Get the protector and the pin back again.

Warning! The machine must always perform with the protection device on.

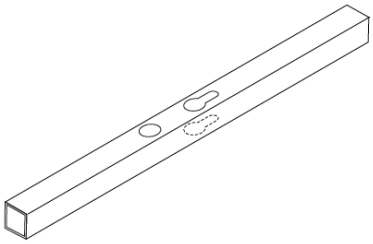
5.3.2. Perforation with just one punch

The process consists of taking out one of the punches and perforate just using this one; with the same pattern as that one for the simultaneous perforation.



5.3.3. Perforation of bulb shape cavity and handle in just one side

Perforate with both punches in the upper side of the tube in the simultaneous perforation and perforate with just one bulb shape punch in the lower side of the tube.

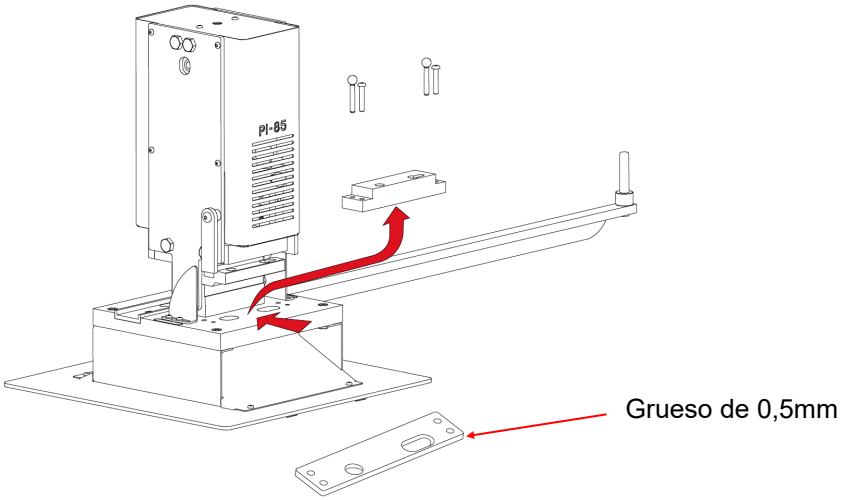


It is advisable to perforate all tube by phases in order to improve the time required for the operations.

5.4. Punching with 2mm thick tubes

In the stamping PI85 can work both tube of 1.5 mm thickness of 2 mm, depending on the tools purchased with the machine.

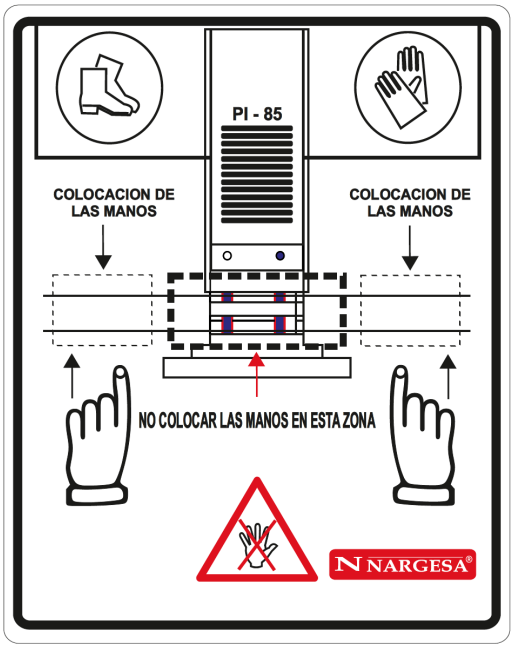
For all two-walled tubes mm plate placed under the plate lower cutoff of 0.5 mm. A contignación follow the same instructions given in paragraph *5.1. Mechanism perforation*

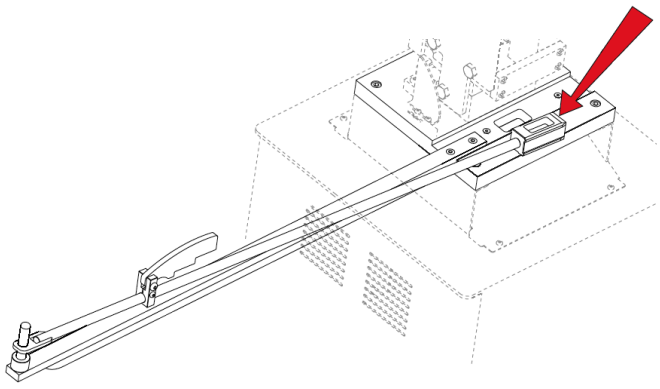


6. WARNINGS

- Do not handle any part of the machine while it is performing.
- Do not use the machine for any other purpose but the ones described in this manual.
- Do not work in both perforation zones at the same time.
- Wear proper protection gloves for handling all machine components and while working with it.
- Wear protection glasses and shoes according to the European protection normative and regulations.
- Hold up the tube by the ends, never hold it by the perforation side.
- Extract the mandrill set or place it in one of the ends of the stand plate after every use.
- Do not work without the protection devices provided with the machine.
- Keep a safety distance between the machine and the operative during the time the machine is performing.

In case an accident occurs due to a negligent use on the operative side, for not following the usage rules exposed on this manual, NARGESA SL will not take any resposibility

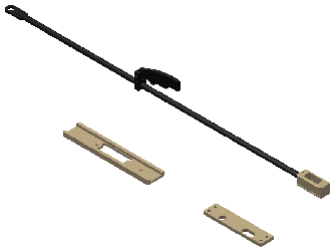




Extract mandrill or leave it leaning on the stand plate, after every operation

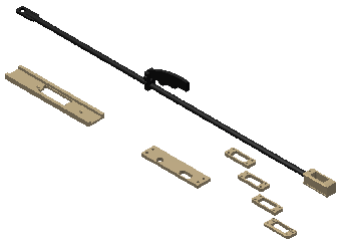
7. TOOLINGS

► Tooling for 35X35. Wall thickness 1,5mm · REF. 140-07-01-00001



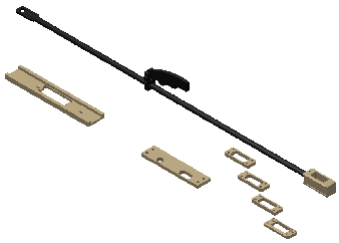
Pipe	35 x 35 mm
Thickness	1,5 mm
Pieces by tooling	3 units
Weight	5 Kg

► Tooling for 35X35. Wall thickness 1,5mm · REF. 140-07-01-00003



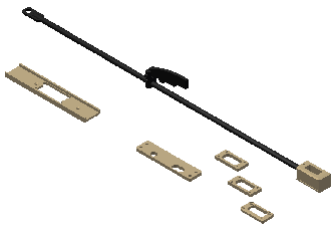
Pipe	40x40 mm, 40x50 mm, 40x60 mm, 40x70 mm, 40x80mm
Thickness	1,5 mm
Pieces by tooling	8 units
Weight	5,3 Kg

► Tooling for 40x40mm up to 40x80mm. Wall 2mm · REF. 140-07-01-00004



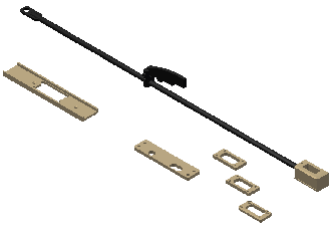
Pipe	40x40 mm, 40x50 mm, 40x60 mm, 40x70 mm, 40x80mm
Thickness	2 mm
Pieces by tooling	8 units
Weight	5,3 Kg

► Tooling for 50x50mm up to 50x80mm. Wall 1,5mm · REF. 140-07-01-00005



Pipe	50x50 mm, 50x60 mm, 50x70 mm, 50x80mm
Thickness	1,5 mm
Pieces by tooling	7 units
Weight	5,5 Kg

► Tooling for 50x50 hasta 50x80mm. Wall 2mm · REF. 140-07-01-00006



Pipe	50x50 mm, 50x60 mm, 50x70 mm, 50x80mm
Thickness	2 mm
Pieces by tooling	7 units
Weight	5,5 Kg

Technical annex

Press for locks

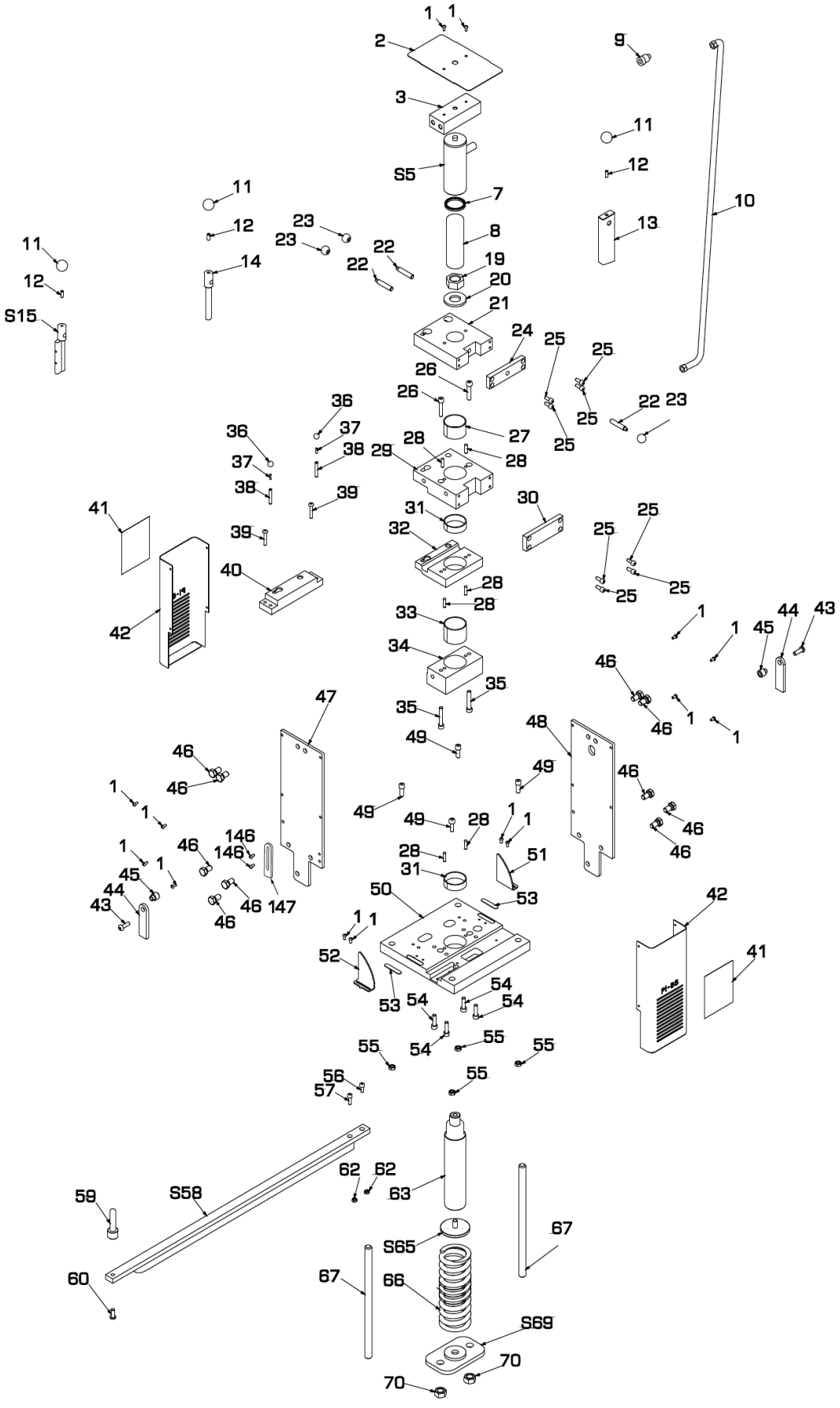
All parts

Tooling kit

Electric maps

Hydraulic map

All parts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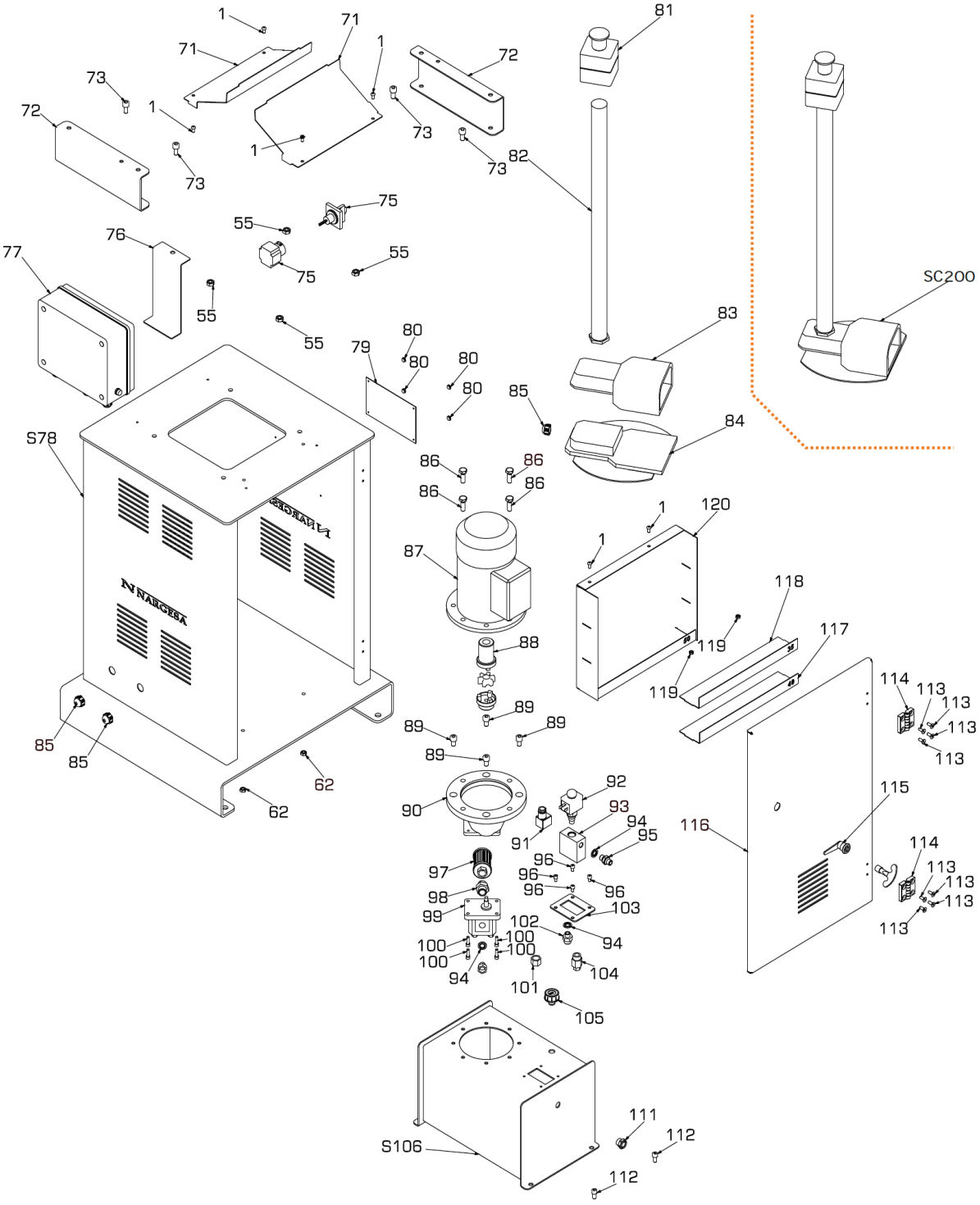
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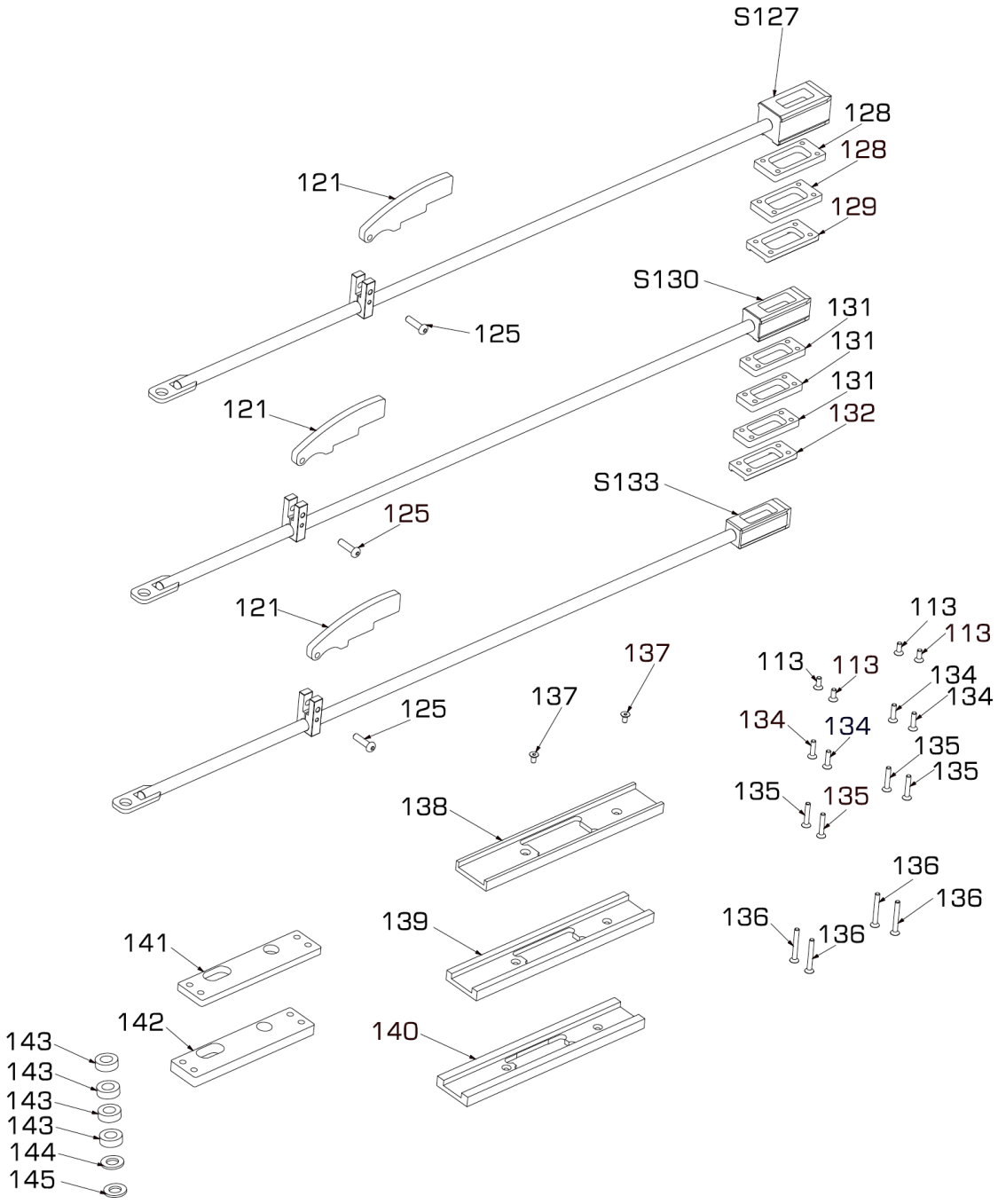
S106
SC200

Tooling kit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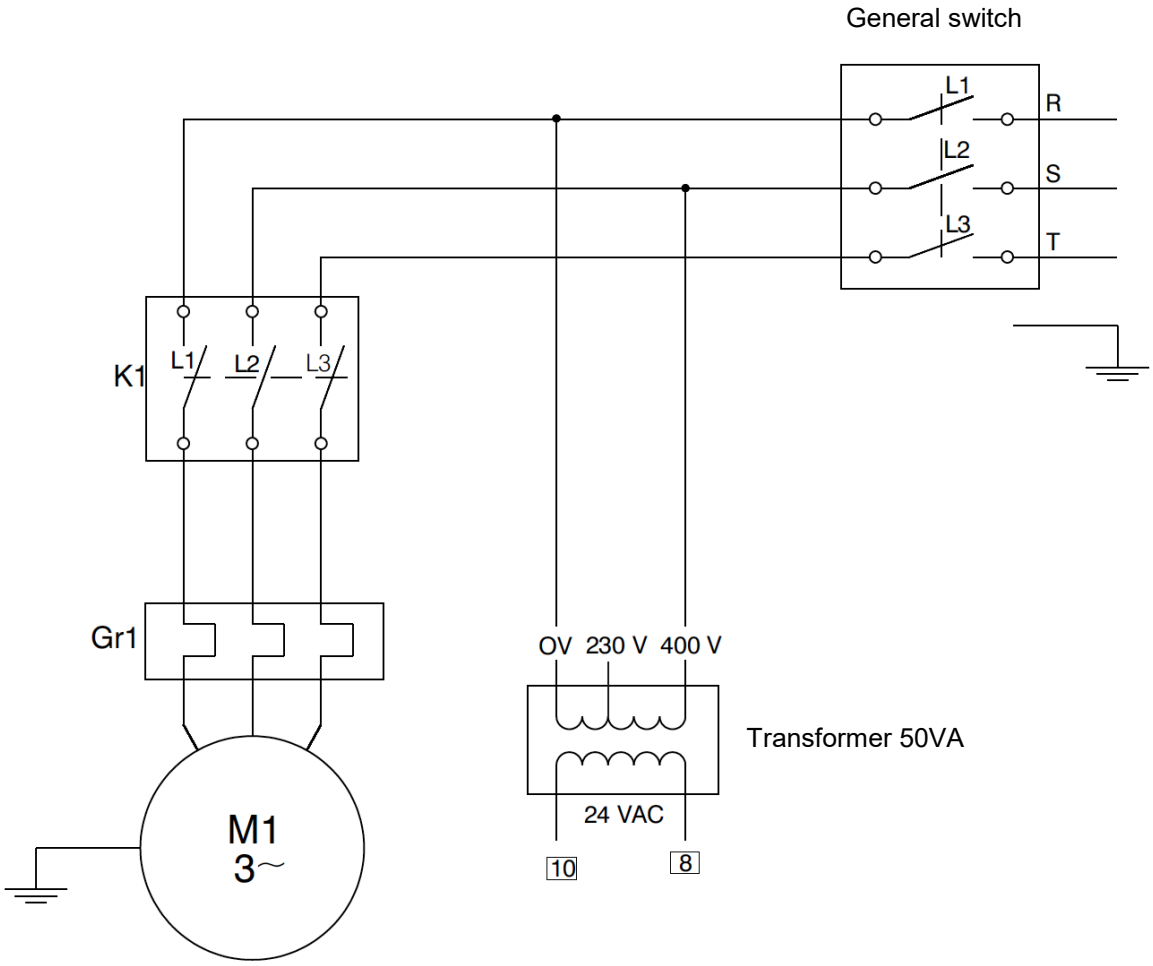
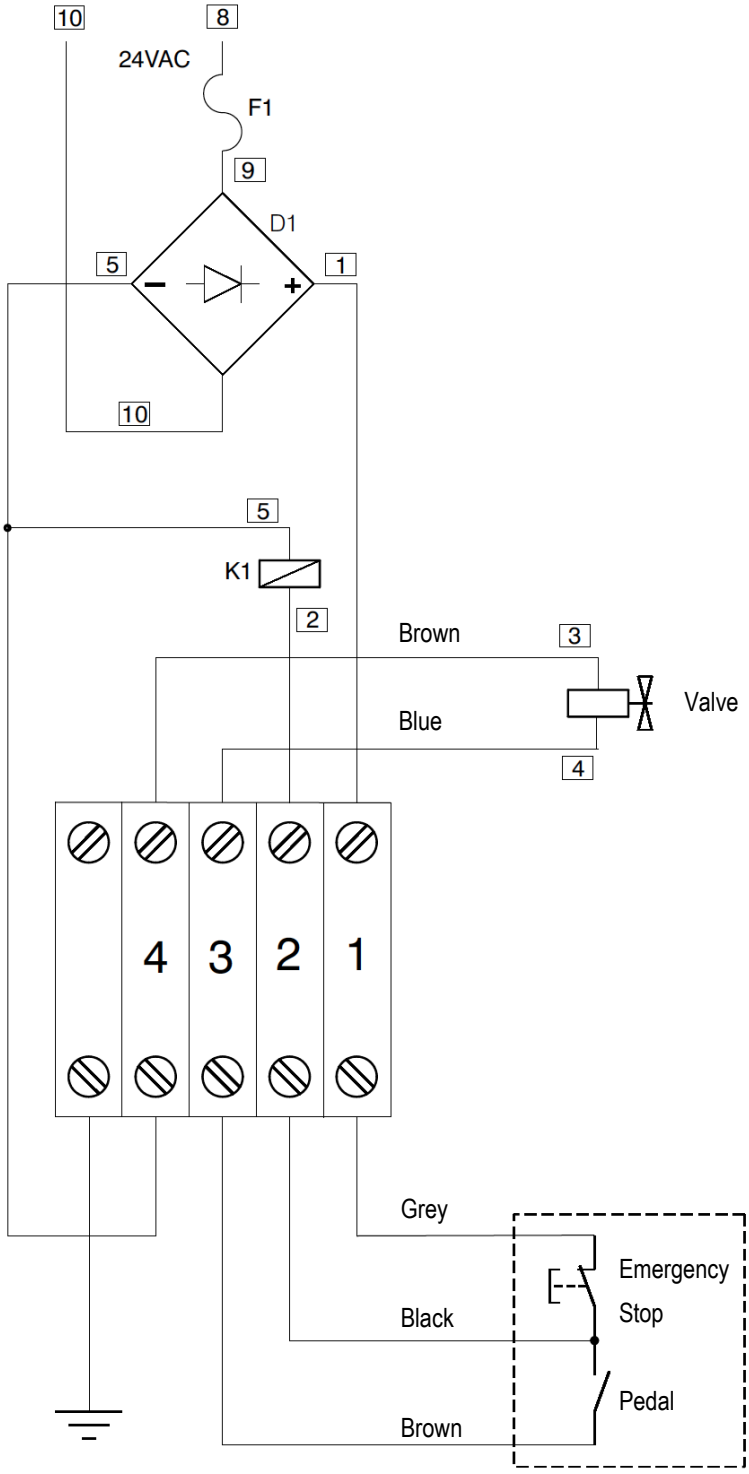
NUMBER	DESCRIPTION
13	RECTANGULAR PUNCH
14	PUNCH Ø 16
S15	SET OF BULB SHAPE PUNCH
32	UPPER CUT PLATE
40	LOWER CUT PLATE
113	ALLEN SCREWS REF.- DIN 7991 - M6 x 16
121	TOP
122	CLAMP
123	MANDRILL BAR CLAMPING
125	ROUND HEAD SCREW ISO 7380 - M8 x 30
S127	MANDRILL OF 50
128	THICKNESS 10 MANDRILL 50
129	THICK LOWER THAN 10 MANDRILL OF 50
S130	MANDRILL OF 40
131	THICKNESS OF 10 MANDRILL OF 40
132	THICKNESS LOWER THAN 10 MANDRILL OF 40
S133	MANDRILL OF 35
134	ALLEN SCREW REF. -DIN 7991 - M6 x 25
135	ALLEN SCREW REF.- DIN 7991 - M6 x 35
136	ALLEN SCREW REF.-DIN 7991 - M6 x 45
137	ALLEN SCREW REF.-DIN 7991 - M6 x 12
138	INTERCHANGEABLE GUIDE FOR 50
139	INTERCHANGEABLE GUIDE FOR 40
140	INTERCHANGEABLE GUIDE FOR 35
141	THICKNESS OF 10MM LOWER CUT PLATE
142	THICKNESS OF 15 MM LOWER CUT PLATE
143	WASHER OF 30 X 16 X 10
144	WASHER OF 30 X 16 X 3
145	WASHER OF 30 X 16 X 5
SC200	PEDAL SET

Electric maps

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24VAC
F1
9
D1
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K1
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Emergency
Stop
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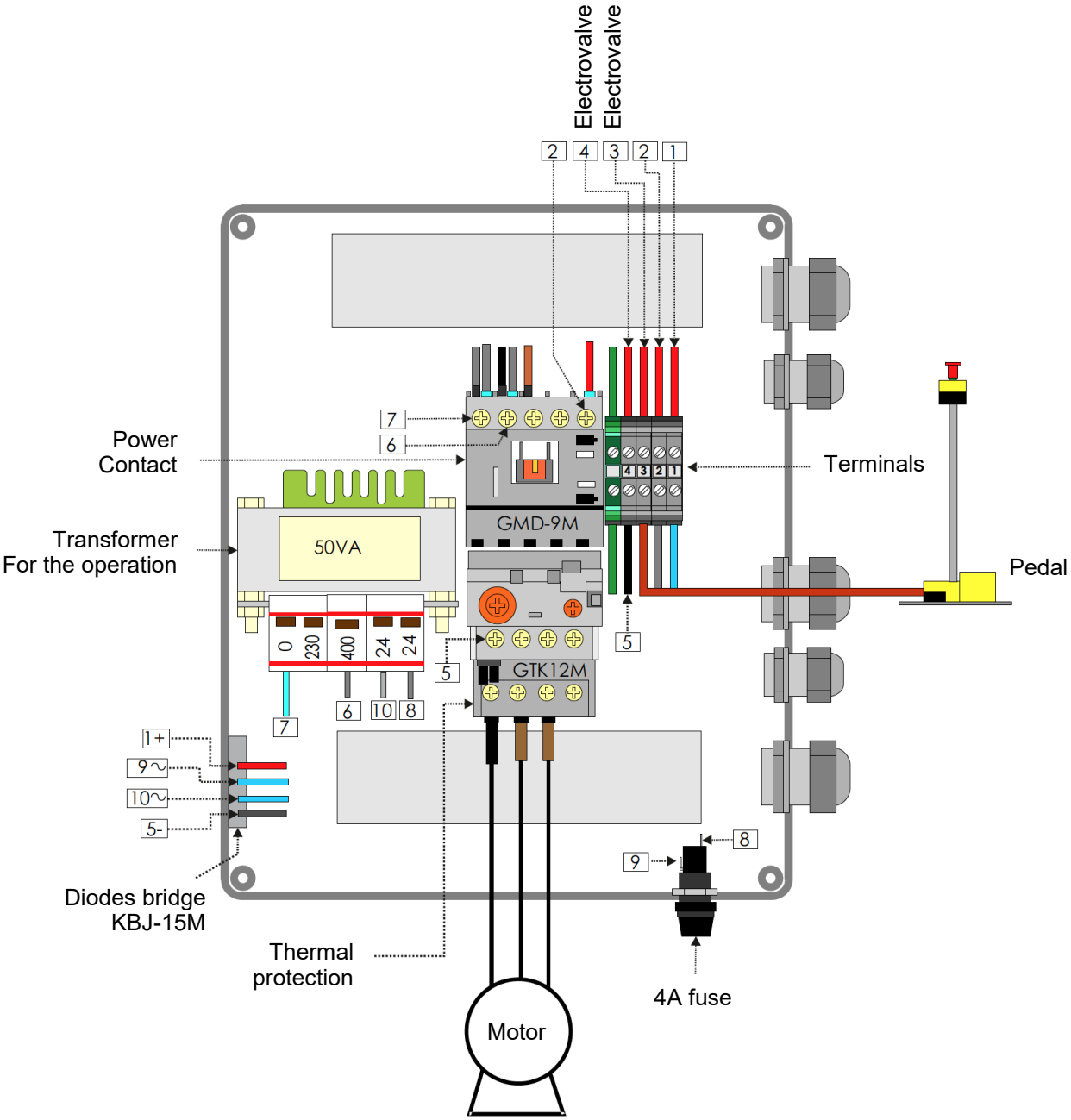
Pedal
Brown


Electrovalve
Electrovalve
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Power
Contact
Terminals
GMD-9M
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Transformer
For the operation
50VA
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Pedal
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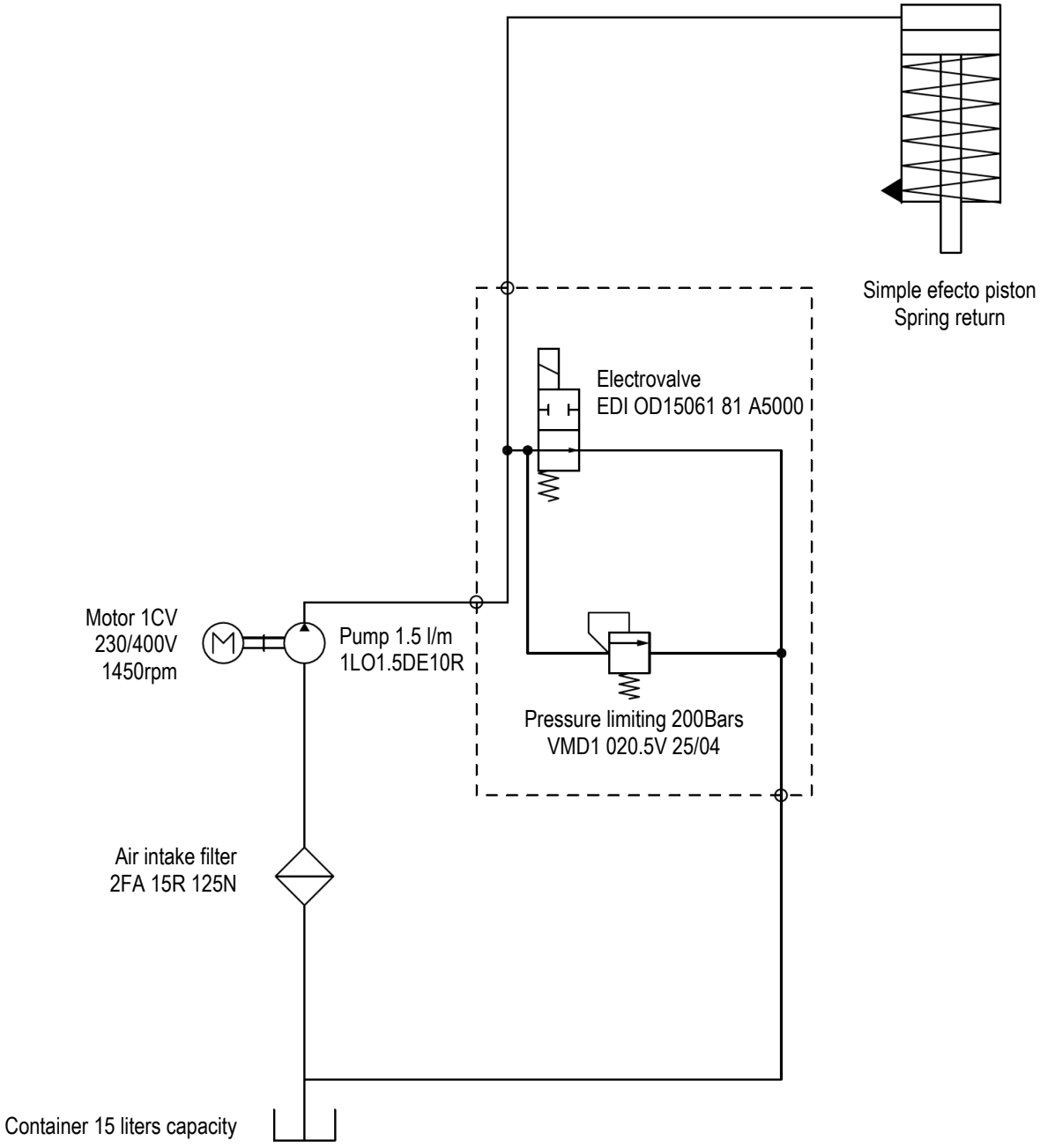
6 10 8
7
1+
9~
10~
5-
Diodes bridge
KBJ-15M
Thermal
protection
8
9
4A fuse
Motor

Hydraulic map



OUR RANGE OF MACHINERY

IRON WORKERS

SECTION BENDING MACHINES

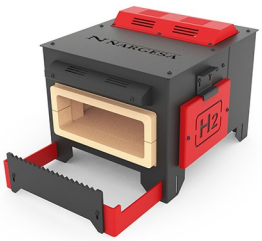
NON-MANDREL PIPE BENDER

HORIZONTAL PRESS BRAKE

TWISTING/SCROLL BENDING MACHINES

HYDRAULIC PRESS BRAKES

HYDRAULIC SHEAR MACHINES



GAS FORGES

IRON EMBOSSING MACHINES

END WROUGHT IRON MACHINES

BROACHING MACHINES

POWER HAMMERS

PRESSES FOR LOCKS