

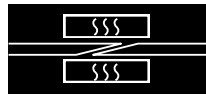
PQ-1303

Hot pressing device with air cooling for Quickmelt Cleandrive™ joining method.



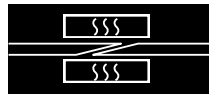
The PQ-1303 is a hot pressing device for joining of Habasis Cleandrive™ series belts.

Use and maintenance manual

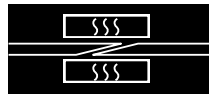


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0 Introduction

This manual contains instructions on how to handle, install, use and maintain the Hot pressing device for Cleandrive™ series belts

PQ-1303

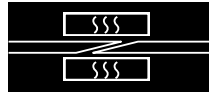
Available spare parts are also indicated.

Habasit thanks you for purchasing the PQ-1303 press.

If you handle your PQ-1303 press with care, it will guarantee joint reliability and quality for many years to come. PQ-1303 identifies the range of heat presses with air cooling to join thermoplastic conveyor belts Cleandrive™ series.



Observing the instructions in this manual lets you work during: handling, installation, use and maintenance phases in safe conditions while guaranteeing good machine working order and economies of scale. HABASIT Italiana S.p.A. is not liable for damages due to negligence or failure to observe these instructions.



1 Machine identification data

Machine	Heat press
Series	PQ-1303
Serial number	See plate on press body
Year of construction	See plate on press body

1.1 PQ-1303 series press designation system

PQ-1303 series presse can be ordered in two combination according to required use.
To correctly order, refer to the following designation table:

<i>P</i>	Hot joining press
<i>Q</i>	Quickmelt welding process
-	Interruption sign
<i>1303</i>	Maximum belt width: 52" (1350mm) – series 03
/	Interruption sign
<i>6 or 8</i>	6: 120V single phase voltage 8: 230V single phase voltage

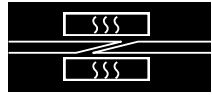
1.1 Identification plate and EC markings

The following identification plate was affixed to the press (FAC SIMILE):



This plate SHOULD NOT BE REMOVED for any reason. If damaged, please request a copy.

If necessary, the plate data must be communicated for service or spare parts.



DICHIARAZIONE DI CONFORMITÀ

DECLARATION OF CONFORMITY

2006/95/CE



Noi We

HABASIT ITALIANA S.p.A.
Via del Lavoro, 50
I - 31016 Cordignano (TV) - ITALY

dichiariamo sotto la nostra esclusiva responsabilità *declare under our sole responsibility*
che l'apparecchiatura tipo: *that the device type:*

Saldatrice manuale "butt end" per Cleandrive™ "butt end" welding machine

Modello: *Series:*

PQ-1303/6 – PQ-1303/8

Matricola: *Serial Number:*

è conforme alle seguenti direttive: *is in conformance with the following directives:*

2006/95/CE

Direttiva Bassa Tensione *Low Voltage Directive*

2004/108/CE

Direttiva Compatibilità Elettromagnetica *Electromagnetic Compatibility Directive*

ed è conforme alle disposizioni delle seguenti norme *and is in conformance with the rules of the*
armonizzate: *following harmonized standard:*

UNI EN ISO 12100/2010

CEI EN 60204-1/2006

Il Fascicolo Tecnico viene conservato presso: *The Technical File is stored at:*

HABASIT ITALIANA S.p.A.
Via del Lavoro, 50
I – 31016 Cordignano (TV) - ITALY

Cordignano,

Il Direttore Generale
General Manager

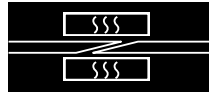
Ugo Passadore

Il Responsabile del Fascicolo Tecnico
Technical File Manager

Matteo Mapelli

.....

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2 General safety and accident prevention regulations

PAY THE UTMOST ATTENTION TO THE HAZARD SIGNALS INCLUDED IN THIS MANUAL.

THERE ARE 3 LEVELS OF HAZARD SIGNALS:



HAZARD!

This symbol warns that, if the described operations are not correctly performed, the operator is subject to risks that could cause damages or injury with even serious health consequences.



WARNING

This symbol warns that, if the described operations are not correctly performed, the operator is subject to potential, albeit limited risks.

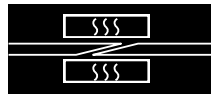


CAUTION!

This symbol warns that, if the described operations are not correctly performed, may cause machine damages.



Before using the machine, carefully read the instructions in this manual



2.1 Signal plates

The following plates are found on the machine with the following meanings:



2.2 Information plates

- Carefully read the instructions in this manual before operating



2.3 Prohibition, mandatory, hazard plates




- Prohibition

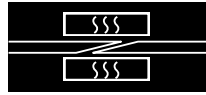
	
Do not remove safety devices	Do not work on moving parts

- Personal safety devices mandatory

				
Gloves	Shoes	Mask	Overalls	Goggles

- Hazard

		
Do not work on live parts	Hand crushing hazard	Burn hazard



3 Conditions of use

3.1 Machine use – intended use

The PQ-1303 heat press has been specifically developed for hot joining of Cleandrive™ series Habasit belts. It was exclusively designed for the applications described hereto. Other or unsuitable applications are prohibited. Habasit shall not be liable for unintended application consequences. The PQ-1303 was professionally manufactured in accordance with EC safety instructions. All assembly, maintenance and repair work, as well as the operation of the equipment, is expected to be carried out by qualified personnel or staff under the supervision of responsible specialists and experts.

For space reasons, these instructions for use cannot cover all possible operating, maintenance and repair aspects. The indications provided concern normal machine use by qualified personnel. In the event of doubt or in need of further information, always contact the manufacturer.

3.2 Machine use – improper use

Improper yet reasonably foreseeable use includes: processing materials other than those foreseen by Habasit, processing straps and/or belts with unforeseen sections, use of non-original accessories, replacement of components or parts other than those specified.



WARNING

The **PQ-1303** heat press series was designed, dimensioned and constructed for the sole previously described use. Any other use is not compliant and does not correspond to that indicated in this manual; it may damage the machine thus invalidating the technical conditions for which the machine was designed and constructed, potentially modifying production and safety features.

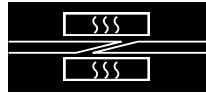
The manufacture is not liable for damages to people and/or property due to unforeseen use.

3.3 Press operating principle

Heating plates are each heated by two tubular electrical resistances. A temperature sensor is installed on each plate (NTC sensor), that measure the current plate temperature transmitting it to the PFR-101 regulator unit.

The rubber pad pressure system evenly distributes pressure along the entire press length.

The press is cooled by heat exchange with a heat-sink, in turn cooled by fans located on the upper part of the heat-sink.



3.4 References and Regulations

3.4.1 Applied EU Directives

- EU Directive 2006/42/EC known as the “Machines directive”.
- EU Directive 2006/95/EC known as “Low tension directive”.
- EU Directive 2004/108/EC for the convergence of Member State laws on electromagnetic compatibility.
- This machine has been constructed in a country that is part of the European Community and therefore meets the safety requirements of EU directive 2006/42/EC.

This conformity is certified and the machine bears the CE mark of compliance.

- EU Directives concerning Workman’s safety
- EU Directive N° 89/391 concerning the improvement of the safety and health of workers during work, in addition to the following particular directives EU N° 89/654 and N° 89/655.
- EU Directives 92/58/CEE concerning safety signs in the workplace.
- EU Directives concerning personal protection
- EU Directives 93/68/CEE, 93/95/CEE e 96/58/CEE concerning the use of personal protection devices.
- EU Directives concerning environmental protection
- EU Directive 91/56/CEE on the disposal of waste.
- EU Directive 91/689/CEE and 94/62/CEE on the disposal of toxic and harmful waste.

3.5 Warranty

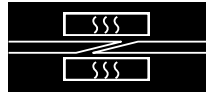


WARNING

The **PQ-1303** series heat press is guaranteed against factory defect for a period of 12 months from the date of purchase.

The warranty is null and void in the event of non compliant use or use other than that foreseen or illustrated in this manual.

POOR USE, NEGLIGENCE, POWER SUPPLY AT DIFFERENT VOLTAGES OR ATTEMPTS TO REPAIR OR ALTER PARTS BY UNAUTHORISED PERSONNEL NULL AND VOID THE WARRANTY.



4 Safety information

4.1 Personnel training

The operator must have a basic education level and must have worked on machine tools previously. Better if operator has worked on machine tools similar to this one.
Habasit Italiana can provide operator training at its facilities.



ATTENTION!

**The machine operator must be a worker with proven ability.
The factory owner and/or manager must provide the operator with all the information and assistance necessary to protect his physical health.
The operator must be provided with a copy of this manual and the user must verify that the operator has read it and understands how to safely run the machine.**

4.2 Safety sticker positions on the machine



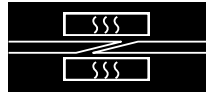
WARNING

Appropriate safety stickers have been affixed to the machine. Each operator must view them and know the meanings of the symbols (see also paragraph "Signal plates").



WARNING

SIGNAL STICKERS MUST NOT BE REMOVED, TAMPERED WITH OR DESTROYED. THE SYSTEM OWNER MUST REPLACE THEM IN THE EVENT THEY ARE DAMAGED OR ILLEGIBLE.



5 Residual risks

Despite the attentive design and measures adopted in construction, this machine has the following residual risks.

5.1 Electrical risk

The press is equipped with an electrical panel and wired electrical components: during assembly, use and maintenance, these devices may present electrocution hazards in the event of electrical part insulation or wiring faults.



HAZARD!

Electrical connections must be performed by specialised personnel.

5.2 Mechanical risk

Operator collision risks during machine transport, installation, maintenance and dismantling due to handled volumes.



HAZARD!

Be careful during transport, installation, maintenance and dismantling and use foreseen Personal Safety Devices (helmet, gloves, shoes).

5.3 Crushing risk

During press installation, use, maintenance and dismantling, there is the risk of operator hand crushing between the upper and lower part of the press or foot crushing due to the press falling.



HAZARD!

Be careful during installation, use, maintenance and dismantling and use foreseen Personal Safety Devices (helmet, gloves, shoes).

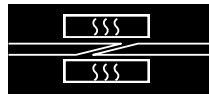
5.4 Burn risk

During use, press surfaces in contact with the heating elements and some external surfaces are hot and can burn the operator running the machine.
This hazard may also occur during maintenance.



HAZARD!

Be careful during installation, use, maintenance and dismantling and use foreseen Personal Safety Devices (gloves).



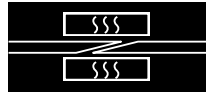
6 General press description

6.1 PQ-1303 series press overall view




FIG. 2 –PQ-1303 SERIES PRESS OVERALL VIEW

Position	Description
1	Upper press beam
2	Lower welding plate
3	Upper plate power connector
4	PFR-101 regulation
5	Belt locking bar
6	Press lock knobs and screws



6.2 Conveyor belts hot joint operating kit configuration

In order to operate, a PFR-101 regulator must be connected to the PQ-1303 press.
The press cannot work alone without this accessory.

	<p>PFR-101/6 1x120V – art No. H080709574</p> <p>PFR-101/8 1x230V – art No. H080709575</p>
<p>PFR-101 REGULATOR UNIT</p>	

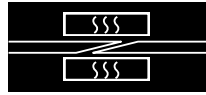
Habasis Italiana Spa only guarantees correct press operations when equipped with original and recommended accessories. A list of available work kits is found in the following paragraph.

6.3 Material that must be included in the work kit

- n° 1 PQ-1303 heat press with user manual
- n° 1 PFR-101 regulator with automatic process management functions
- Nr. 1 manual pump for pressure bag inflation;
- Nr. 1 ruler for custom belt end cutting for welding, with cutter;
- Nr. 1 consumption material kit: paper roll for welding and adhesive Teflon tape roll;
- N°1 travel case.

6.4 PQ-1303 Cleandrive™ toolkit product codes

Habasis code	Kit name	Description	Kit composition
H088000456	PQ-1303/6 1x120V	Mobile Kit PQ-1303 1x120V	PQ-1303/6 press unit PFR-101/6 1x120V regulator unit Manual pump Cutting ruler with cutter Joining kit (paper, Teflon strip) Flight case
H088000457	PQ-1303/8 1x230V	Mobile Kit PQ603 1x230V	PQ-1303/8 press unit PFR-101/8 1x230V regulator unit Manual pump Cutting ruler with cutter Joining kit (paper, Teflon strip) Flight case



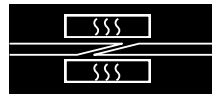
6.5 PQ-1303 press technical specifications

Characteristics	UM	Value
▪ PNEUMATIC		
Maximum working pressure	bar /psi	2.5 ±0.2 / 36.26 ±2.9
Air supply fitting	-	Rapid connector Schrader
▪ PRODUCTION		
Max. working temperature	°C / °F	199 / 390
Temperature interval	°C / °F	+2 -4 / +3.6 -7.2
Maximum temperature deviation from nominal value	°C / °F	±3 / ±3.6
Mean heating time at 180°C	min	3 (230 V) 4 (120 V)
Cooling time from 180°C to 60°C	min	20
Admitted room temperature	°C / °F	15 ÷ 38 / 59 ÷ 100.4
Admitted level of relative humidity	%	45 ÷ 70
▪ NOISE		
- Leq (at 1 m) - empty	dB(A)	< 70

For information and requests, contact:

<p>Habasis Italiana S.p.A. Via del Lavoro, 50. 31016 CORDIGNANO (TV) - ITALY Phone: +39 0438 9113 Fax: + 39 0438 912374 E_mail : info@habasis.it Internet : www.habasis.com</p>

Habasis Italiana Customer Care will also provide you with all the information on available work kits.



6.6 Optional press accessories

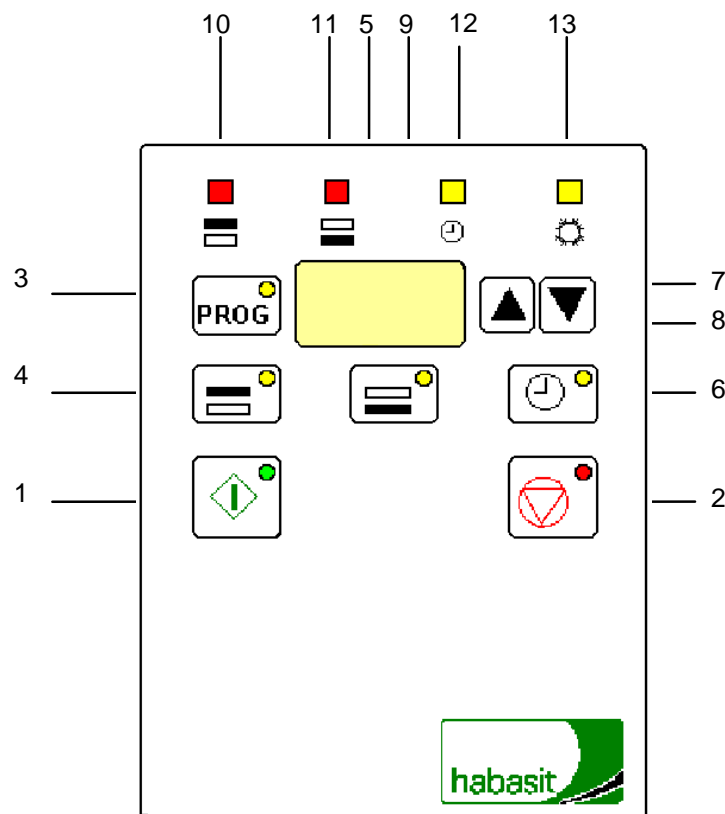
The PQ-1303 press must be connected to a few accessories to be used. In fact, the press cannot operate autonomously but requires connection to a regulator unit and some auxiliary devices.

6.6.1 PFR-101 regulator unit

The PFR-101 regulator unit power the press and guarantee automatic welding cycle operations. For further details, see chapter 6.7 on page 17.

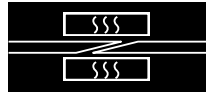
Control power voltage sets press power voltage. The PQ-1303 series press is able to operate at different voltages, 1x120V and 1x230V.

The following pages describe the control functions, operating parameters and belt welding cycle phases automatically controlled by the PFR-101 unit.



6.6.2 Control table with relevant functions

Num.	Name	Function
1	[START]	Starts the welding cycle. Its green indicator is on while the welding cycle runs. Its red indicator blinks while the cycle is interrupted and the regulator is waiting for the operator's decision.
2	[STOP]	Breaks the welding cycle. Its red indicator blinks while the cycle is interrupted and the regulator is waiting for the operator's decision. The indicator is steadily lit in standby mode (cycle completed or regulator waiting for input of data).



3	[PROG]	In Standby mode, switches to programming mode (during which parameters can be input). During the welding cycle, temporarily switches to display of the set value. Its yellow indicator is lit when in programming mode.
4 5 6	[TOP TEMPERATURE] [BOTTOM TEMPERATURE] [PRESSING TIME]	These three mode switches select input or display mode for the respective parameter. The yellow indicator of the active parameter is lit.
7, 8	[UP, DOWN]	In programming or parameterization mode: increase or decrease current parameter. With interrupted welding cycle: select cycle phase to continue with.
9	[DISPLAY]	Multifunction three digit display.
10 11	<TOP HEATER ON> indicator <BOTTOM HEATER ON> indicator	Lit while respective heater receives power (constantly lit during heating up, starts to cycle after reaching temperature, (heater is holding temperature)
12	<PRESSING TIME ON> indicator	Lit as soon as welding time count down has started (as soon as both plates have reached their setting temperatures)
13	<COOLING PHASE> indicator	Lit during the cooling cycle (after welding time has counted down)

6.7 Regulator unit operations

Entering joint parameters

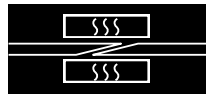
- Make sure the regulation unit is in stand-by mode ([STOP] indicator on).
- Enter the programming mode by pressing [PROG].
 - The yellow [PROG] indicator light turns on.
 - The set values are displayed.
- Select the parameter to be set [TOP TEMPERATURE], [BOTTOM TEMPERATURE] or [PRESSING TIME].
 - The respective yellow indicator light turns on.
- Set the relevant parameters using the [UP] and [DOWN] arrows. Once the parameter is set, press time can be set in seconds (no decimal point on the display) or in minutes (decimal point at the extreme right of the display).
- Exit programming mode by pressing [PROG].
 - The yellow [PROG] indicator light turns off.
 - The actual values are displayed.

Running the welding cycle

- Start the welding cycle by pressing [START]
 - The green [START] indicator light turns on.
 - The red [STOP] indicator light turns off.
 - Indicators <TOP HEATER ON>, <BOTTOM HEATER ON>, <PRESSING TIME ON> and <COOLING PHASE> signal welding cycle progress.

The operating sequence is the following:

- Both <HEATER ON> indicators turn on. The heating plates heat to the set temperature (phases 1 and 2).
- When the temperature is about 75% of the set value, the regulator reduces power for a brief period (the red <HEATER ON> indicator indicates a cycle is running) to control the system response and optimise regulation parameters.



- Once the set temperatures are reached, power reduces (red <HEATER ON> indicator indicates a cycle is running to maintain the set temperature), the yellow <PRESSING TIME ON> indicator turns on and the [PRESSING TIME] count down starts (phase 3).
- At the end of the [PRESSING TIME] count down, the yellow <COOLING PHASE> indicator turns on. The cooling fans start, the hot press cools to a temperature set by a regulation parameter (phase 4).

During the welding cycle, the display will indicate the temperature or time depending on which button is on, indicated by the led. The following operations can be performed without interrupting the cycle:

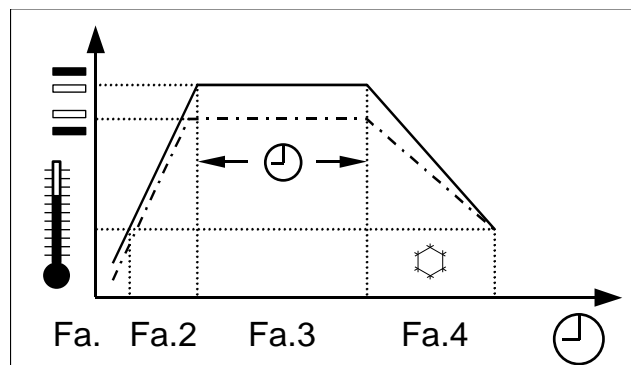
- Turn on parameters by pressing [TOP TEMPERATURE], [BOTTOM TEMPERATURE], [PRESSING TIME] respectively on the display.
- Temporarily switch the set value (opposite effect) on the display by pressing and holding own [PROG].



Once the welding cycle has started, parameters cannot be edited. Interrupt the cycle, edit parameters and restart when required.

6.8 Interrupting the welding cycle

Once the welding cycle is interrupted by pressing the [STOP] button, various measures can be taken. Admitted measures depend on the current welding cycle phase:



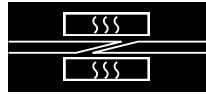
- Press [STOP] to interrupt the welding cycle
 - The red [STOP] and green [START] indicators blink.
 - All power is cut off to hot press parts [no cooling, no heating].
 - The display indicates the welding cycle phase in which the regulation unit will resume [START].
- Select the required phase using the [UP] and [DOWN] arrows.
- Resume the cycle in the selected phase by pressing [START].

Or

- Fully abort the welding cycle by pressing the [STOP] button. In this case the press must cool independently.

At this point, the following exit procedures are possible:

- From phase 1 (heating, under the final cooling temperature) in stand-by.
- From phase 2 (heating, over the final cooling temperature) in phase 4 or in stand-by.
- From phase 3 (press time count down) in phase 4 or in stand-by.
- From phase 4 (cooling) in stand-by.

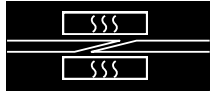


6.9 Operation of the unit

Some of the parameters determining the behaviour of the regulator can be set by the user. The sequence for this is as follows:

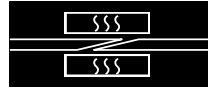
- With the regulator in standby mode, press (and keep pressed) the [PROG] key for 5 seconds.
The display shows: PAS.
- Press the [PROG] key again.
The display shows: "0"
- With the [UP] and [DOWN] arrow keys select the value 55.
- Press [PROG] again.
The display shows the ID of the first parameter: SPR (value set for stop cooling temperature). See table below about parameter IDs and their meanings.
- Press [PROG] again to see the value of this parameter.
Current value of this parameter is displayed: 50 (This is the default, you may see something different).
See table below as to how to interpret these values.
- You can now change the value with the [UP] and [DOWN] arrow keys.
- Scroll down through the list with the [PROG] key. The sequence of display is:
Parameter "ID"
Parameter value
Next Parameter "ID"
Parameter value
- Each time a value is displayed you can set it using the [UP] and [DOWN] arrow keys.
- To exit the setting mode:
 - using the [PROG] key scroll all the way down through the parameter list, or
 - do nothing for 30 s: the regulator falls back to standby mode automatically.

The following page lists all PFR-101 regulator unit programming parameters.
Avoid changing these parameters



6.10 List of parameters accessible to the user

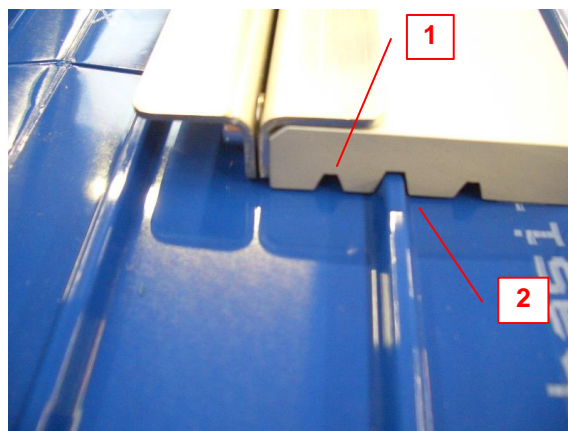
Ord. vis.	Welding data/parameters	PLANNING			CONFIGURATION				
		From	to	Resolution/ Unit of measure	ID code	From	to	Default	Resolution / Unit of measure
	Upper Plate Set-Point temp.	dn1	UP1	1 / °C	-				
	Lower Plate Set-Point temp.	dn2	UP2	1 / °C	-				
	Welding time preset	0	999	1 / sec (Unt=1)	-				
				1 / min (Unt=60)					
Configuration parameter password					PAS	-	-	55	1 / unit
1	Set cooling stop value				SPr	20	70	65	1 / °C
2	Welding time range (sec = 1; minutes = 60)				Unt	1	60	1	
3	Upper plate NTC offset				OF1	-20	20	0	0,5 / °C
4	Lower plate NTC offset				OF2	-20	20	0	0,5 / °C
5	Upper Plate: set upper temp. limit				UP1	100	200	200	1 / °C
6	Upper Plate: set lower temp. limit				dn1	20	50	50	1 / °C
7	Lower Plate: set upper temp. limit				UP2	100	200	200	1 / °C
8	Lower Plate: set lower temp. limit				dn2	20	50	50	1 / °C



6.11 Equipment for use with PQ-1303 press series



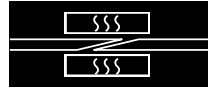
**PRESSURE BAG INFLATION MANUAL PUMP.
IT'S CONNECTED TO THE SCHRADER VALVE ON THE LOWER PRESS BEAM.**



1) 1 inch tooth housing

2) 2 inches tooth housing

RULER FOR CUSTOM BELT END CUTTING FOR WELDING.



7 Handling

This chapter includes specific instructions for machine handling.

7.1 Packaging and transport

The machine is supplied assembled and packaged in a dedicated flight case with rollers for an easy handling. The various parts of press kit are placed inside the flight case.

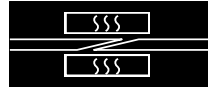
7.2 Handling, lifting points

Lift the press using the two handles (Fig. 2). Before handling the press, close the press and evenly tighten the locking screws on both ends (Fig. 2, particular 3).



ATTENTION!

To lift the lower or the upper part of the press use only the handles provided for this purpose.



8 Commissioning

8.1 Press receipt



ATTENTION!

The movement of the packaging and press should be carried out by authorized operators. Suitable equipment must be used to move the machinery, with adequate strength to deal with the weight and bulk of the press.

When unpacking, check that no small parts remain in the case, and carefully check the general conditions.

In transit, or on being moved, the press must be disconnected from any control or regulating units.

Two handles are included to lift the press (see figure 2-1 detail 8) Before lifting, evenly close and tighten the fastening pins on both ends of the press. Never use lifting points other than the supplied two handles to lift the press. Closing screws must be correctly closed.

Packing materials (wood, nails, plastic, barrier bags, etc.) can be sources of danger and should be placed in specific collection points, especially if polluted or non-biodegradable.

The user must observe the waste disposal legislation in the country of installation or use when disposing of the packaging.



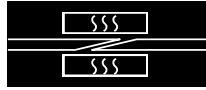
ATTENTION!

ALL HANDLING OPERATIONS OF THE PRESS MUST BE PERFORMED SLOWLY WITHOUT ANY SUDDEN MOVEMENTS, TO AVOID DAMAGING PERSONS AND THINGS.

Be careful during machine handling and dismantling. Avoid situations that could cause the handled machine to swing. Make sure any cords or chains used for lifting are not tangled and properly hooked to the handled load.



During work wear a HELMET, SHOES and GLOVES



8.2 Transport damages



IMPORTANT!

REPORT ANY DAMAGE NOTED ON THE MACHINE AT DELIVERY TO THE CARRIER AND PRESS SUPPLIER.

Habasis presses are shipped in packaging able to resist normal stress caused by transport. Upon receipt, the equipment must be inspected to check for damages that may have occurred during transport due to incorrect handling.

In the event of damages, the carrier that delivered the equipment and the Habasis dealer must be immediately informed.

Photographic damage documentation is always best.

8.3 Installation

8.3.1 Preliminary check

Visually check the press and supplied equipment to ensure there are no signs of damages or breaks that may have occurred during transport.

8.3.2 Positioning



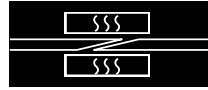
IMPORTANT!

This operation requires the involvement of a **QUALIFIED TECHNICIAN** able to carry out and check correct positioning and installation in observance of current safety regulations:

Make sure there is sufficient operational space for working on the press

Position the press so that it is stable

Check visually to make sure that no rags, work tools, etc remain on the machine.



9 Service connections

In order to operate, the machine requires the following connections:

CONNECTION TYPE
Electrical
Pneumatic with manual pump

9.1.1 Electrical power supply and connection to the regulator unit

- Ensure that the whole system is not supplied by electrical sources.
- Make sure that upstream systems meet equipment specifications.



CAUTION!

- Make sure the PFR-101 regulator is correctly connected to the correct mains voltage.
- The PFR-101/6 version is connected to 120V nominal mains voltage
- The PFR-101/8 version is connected to 230V nominal mains voltage
- Make sure control-press connection wires are correctly connected and correspond to the assigned upper (Fig. 3, detail 2) and lower (Fig. 3, detail 1) plates.
- For regulation equipment connections, consult the PFR-101 regulator instruction manual.

Connect the wires between the PFR-101 regulator and the press and make sure they correspond to the assigned upper and lower plates (Figure 3, detail 1 and 2); this occurs by following the corresponding press colours on PQ-1303 and plugs on PFR-101 wires.

- 1 Upper plate to PFR-101 regulator connection wire connector (black)
- 2 Lower plate to PFR-101 regulator connection wire connector (white)
- 3 Schrader valve connection for presser pad inflation
- 4 Press lock knob
- 5 Belt lock press bar lock knob

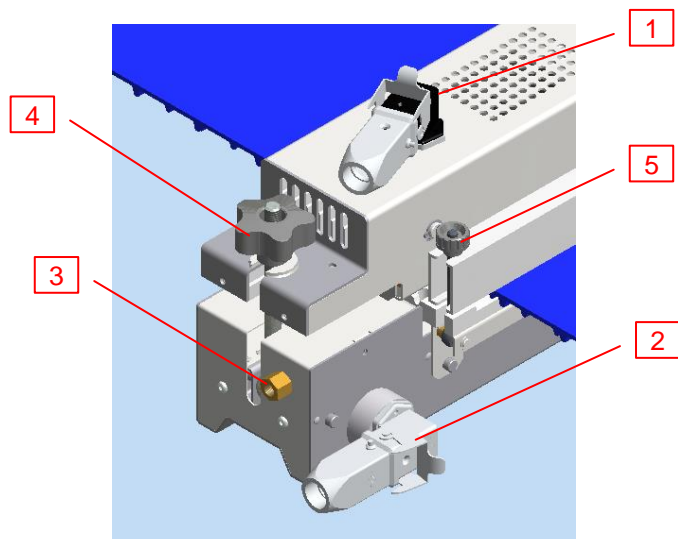
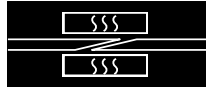


FIGURE 3 – CONNECTOR SIDE VIEW



9.1.2 Manual pump connections for pressure bag inflation

The pressure required on the Cleandrive™ belt surface is generated by an inflatable bag. The supplied manual pump is used to inflate the bag. Referring to fig. 4, perform the following operations:

- Connect the tube (Fig. 4 detail 4) to the Schrader valve installed on the lower press beam (Fig. 4 detail 3)
- Inflate the pressure bag to 2 bar working pressure, checking the value on the gauge.
- Disconnect the pump by removing the fitting adapter (Fig. 4 detail 4).
- To deflate the pressure bag, press the pin in the valve (Fig. 4 detail 1)

Manual pump connection

Pump fitting connection to the pad inflation Schrader valve.

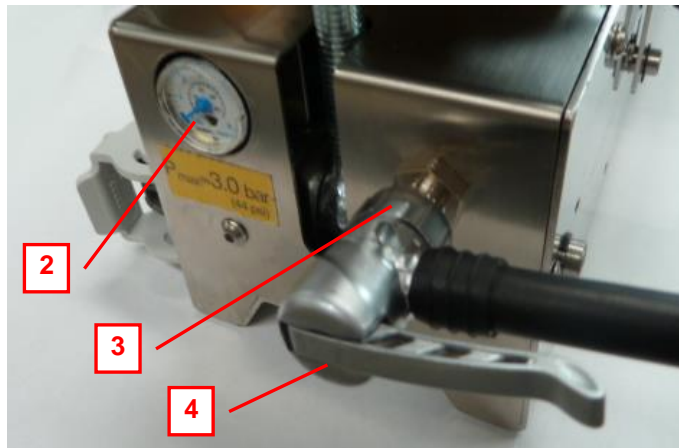
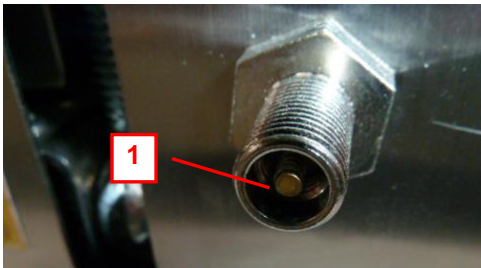
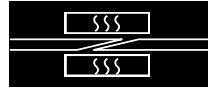


FIGURE 4 – CONNECTOR SIDE VIEW

Position	Description
1	Pin for bag deflating
2	Pressure gauge
3	Schrader valve
4	Pump fitting adapter



Start up

Start up is an extremely important phase in the press working life. It includes a series of preliminary and first start-up phase operations.



HAZARD!

QUALIFIED PERSONNEL WHO THOROUGHLY UNDERSTAND MACHINE OPERATIONS, WHO HAVE READ THIS DOCUMENT AND THUS PERFECTLY UNDERSTAND MACHINE USE AND THE SERIES OF OPERATIONS TO BE PERFORMED TO SAFELY COMMISSION THE MACHINE MUST COMMISSION THE MACHINE.

HABASIT ITALIANA S.p.A. IS NOT LIABLE FOR FAILURE TO OBSERVE THE SAFETY AND ACCIDENT PREVENTION REGULATIONS DESCRIBED IN THE VARIOUS CHAPTERS IN THIS MANUAL.

HABASIT ITALIANA S.p.A. IS NOT LIABLE FOR DAMAGES DUE TO IMPROPER MACHINE USE FOLLOWING MACHINE MODIFICATIONS NOT AUTHORISED IN WRITING BY THE MANUFACTURER.



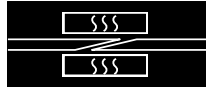
HAZARD!

The machine power cord features and layout must meet safety regulations. In any case, it should not obstruct free man and vehicle transit around the machine.



CAUTION

Before starting the machine, have qualified personnel run some trial work cycles in safety conditions.



10 Use

10.1 General notes

Heating plates are each heated by two tubular electrical resistances. A temperature sensor is installed on each plate (NTC sensor), that measure the current plate temperature transmitting it to the PFR-101 regulator. A special wire with a built in compensation line for precise reading transmission is used between the heat press and the regulator.

The pressure system evenly distributes pressure along the entire press length.

The press is cooled by heat exchange with a heat-sink, in turn cooled by fans located in the upper beam over the radiator element.



CAUTION

Press use includes handling heavy pieces. Prevent press parts from falling.

10.2 Transport

A handle, located on the upper beam, is installed to lift the press. The press can also be lifted by the ends, wearing specific protective gloves, or separated in its two upper and lower parts.

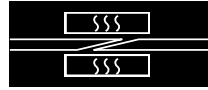
10.3 Operation Handling

To make transportation of the press easier it can be dismantled as indicated:

- If connected, disconnect the various electrical and air connections in order
- Disassemble the upper part of the press (Fig. 2 detail 1) to facilitate the transport of the two upper and lower parts
- Use suitable handling and transport equipment capable of dealing with the object's weight, while taking care during the transportation itself
- Position the lower part of the press according to the belt joint to be completed
- Reassemble the press with the upper beam and make sure the parts are correctly positioned
- Reconnect the power while taking when handling electrical power sources

The press can also be moved as a single unit, in which case the following must be carried out:

- If connected, disconnect the various electrical and air connections in order
- Use transportation equipment of the correct capacity for the weight of the object to be moved
- Verify that the press and all its mechanical parts have not been damaged in transit and that all are working correctly
- Reconnect the power while taking when handling electrical power sources.



ATTENTION!

It is assumed that the various operations are performed by expert personnel, suitably trained.



ATTENTION!

ALL HANDLING OPERATIONS OF THE PRESS MUST BE PERFORMED SLOWLY WITHOUT ANY SUDDEN MOVEMENTS, TO AVOID DAMAGING PERSONS AND THINGS.

11 Work cycle

11.1 Press preparation in belt junction mode or “mechanical lacing” staple application.

The PQ-1303 press can join the belt "Quickmelt" head and apply appendixes with staples for mechanical joining.

To weld the “Mechanical Lacing” staples, need to use the dowel removable with double function present on the bottom plate welding, because it changes the pitch between the tooth and staples.
Manually remove the “double-face” dowel (fig. 4), inserting the face with “ML” mark.

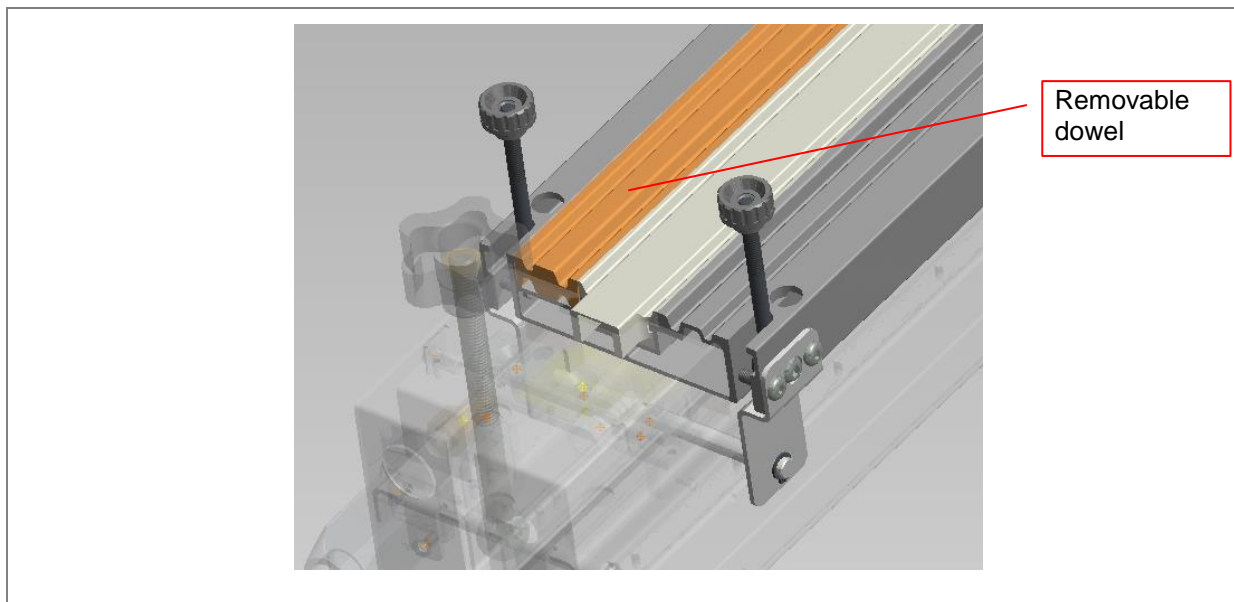
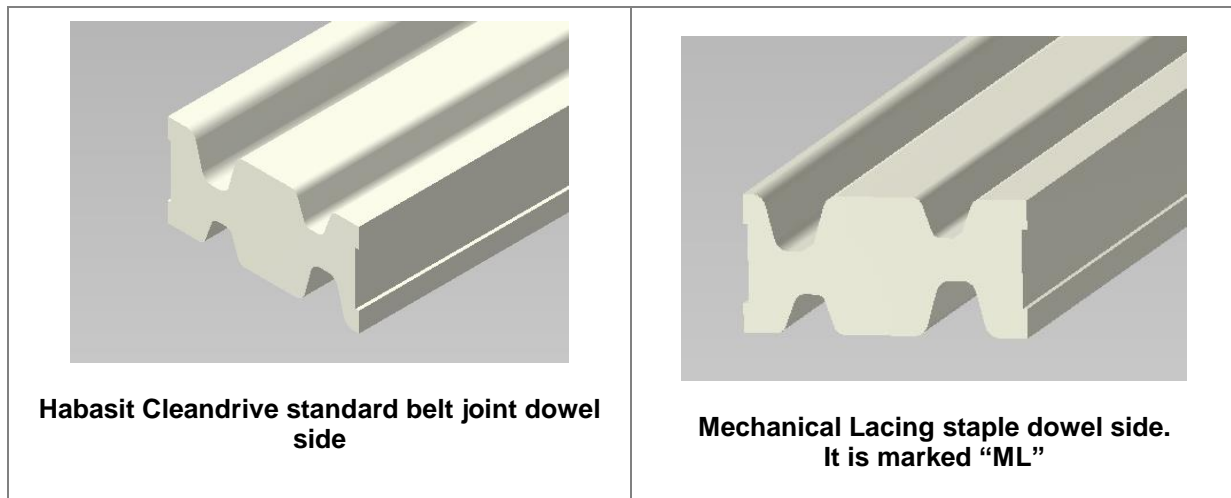
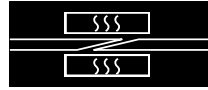


FIGURE 4 – DOWEL REPLACEMENT



The housing for an interchangeable dowel is found in the lower welding plate. One face is designed for std Cleandrive belt with 1" and 2" pitch; the other face is designed to keep in side ML staples:

- Cleandrive belt head joining side
- "Mechanical lacing" staple joining side to belt heads.

The dowel can be easily removed by hand, without the need of tools.

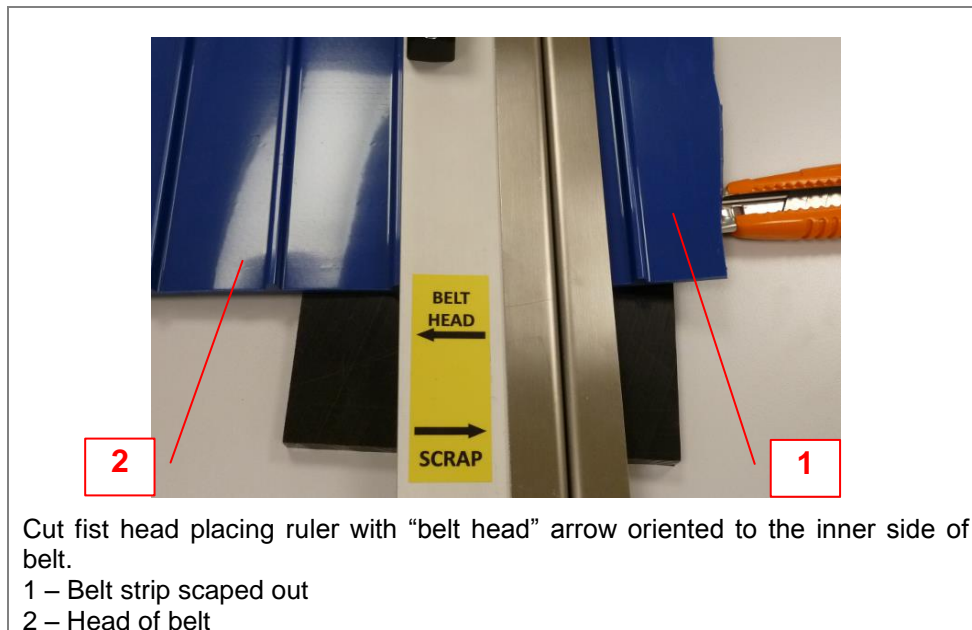
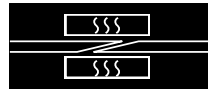
11.2 Endless belt cut to length

Before welding, make sure the Cleandrive™ belt head joining dowel is inserted in the lower welding plate with correct side up.

Next prepare the ends by cutting it so that the cut is exactly midway between the teeth. Use the supplied cutting ruler which has 1inch and 2inch belt teeth housings and a guide for the cutter blade positioned at mid-step for this purpose.

- Place the ruler on the belt, lining up the teeth with the housings; check position of "Belt head" arrow. It must be oriented to the belt head inner side.
- Insert the cutter blade in the housing and cut the belt.
- For easier cutting, pass the cutter several times over the belt, cutting more in depth at each pass.

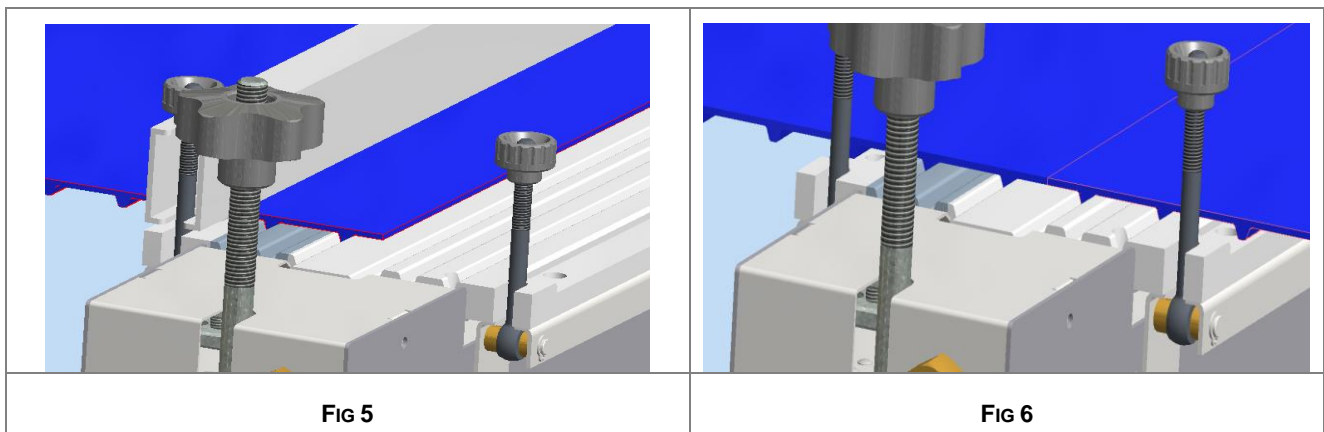
- Prepare the opposite side of belt head: use the same ruler,
- Apply the same concept: "belt head" arrow must be oriented to the inner side of belt.



11.3 Press loading and heating

Refer to the displayed photos and drawings.

- a. Loosen the two closure knobs, remove them from their housing and lift the upper part of the press.



- b. Place the first end of the Cleandrive™ belt on the welding surface, inserting the teeth in the corresponding housings (Fig. 5). Secure the belt in place using the lock presser, tightening the two knobs.
- c. Place the second belt end on the welding surface (X), lining up the teeth with the housings on the welding surface. Secure the belt so that it is flat, without excessively tightening the closure knobs (Fig. 3 detail 5) on the two bar pressers.
- d. Make sure the two belt heads are perfectly aligned (Fig. 6). Tighten the closure knobs on the locking bars.

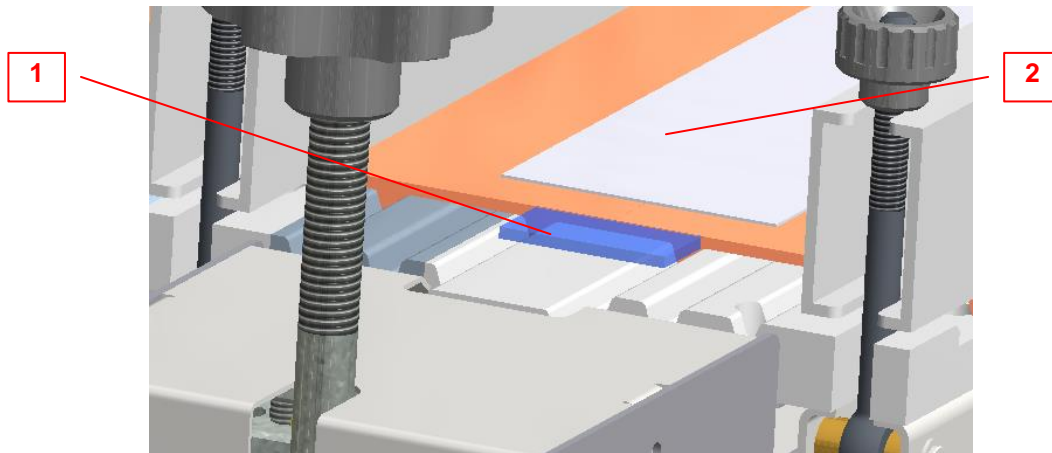
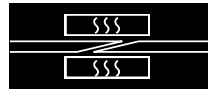
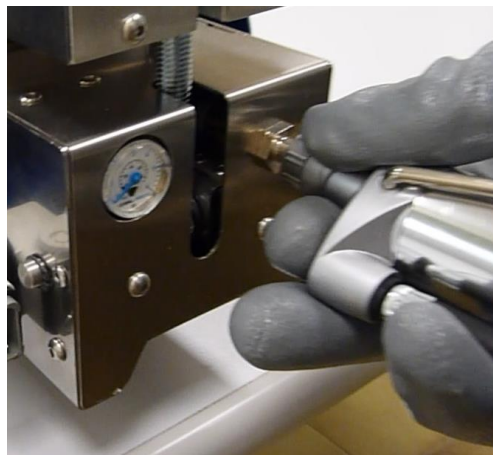


FIG 7 – SIDE LIMIT PIECE (1) AND SILICON LINED PAPER (2)

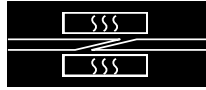
- e. Place two pieces of Cleandrive™ tape on the ends (belt ends) to laterally restrain the melted material (fig. 7 part 1). Place the Silicone paper dull (coated side down) over the welding area (part 2).
- f. Position the upper part of the press (Fig. 3) making sure not to move the belt package and accessories.
- g. Insert the two fastening pins (Fig. 3 detail 4) and evenly tighten at the two ends of the press.
- h. Bring the pressure pad to the required pressure using the supplied manual mini pump: connect the pump to the Schrader valve and inflate to **2 bar / 29 psi** pressure.



ATTENTION!

Never pressurize the presser pad if the press is not correctly closed.
Do not exceed maximum admitted 2.5bar / 36psi pressure.

- i. Turn on the PFR-101 regulator and see the chapter 6.7 how to program welding parameters:



- o Upper and lower press temperature selections as indicated in the belt coupling sheet.
- o Set welding time.
- j. Start the automatic heating, welding and cooling cycles.
- k. Once the stop cooling temperature is reached, release presser pad air using the central valve pin.
- l. When completely cooled, open the press and carefully remove the belt. Let the belt cool at room temperature.

For mass production, let a certain period of time pass between one joint and the next to allow the internal press radiator to cool. Welding plate temperature should drop to 40°C before restarting the welding cycle.



CAUTION

Press parts may be hot. Do not touch surfaces without gloves on.



During work wear GLOVES

11.4 “Mechanical lacing” type staple preparation

Before welding, make sure the dowel with the Mechanical Lacing stable housing is inserted in the lower welding plate. Replace the dowel if necessary.

Prepare the Cleandrive™ belt ends by cutting it so that the head is exactly midway between the teeth. Use the supplied cutting ruler which has 1inch and 2inch belt teeth housings and a guide for the cutter blade positioned at mid-step for this purpose.

- Place the ruler on the belt, lining up the teeth with the housings; check position of “Belt head” arrow. It must be oriented to the belt head inner side.
- Insert the cutter blade in the housing and cut the belt.
- For easier cutting, pass the cutter several times over the belt, cutting more in depth at each pass.

The “Mechanical lacing” staples will be welded to the two belt ends with two distinct operations.

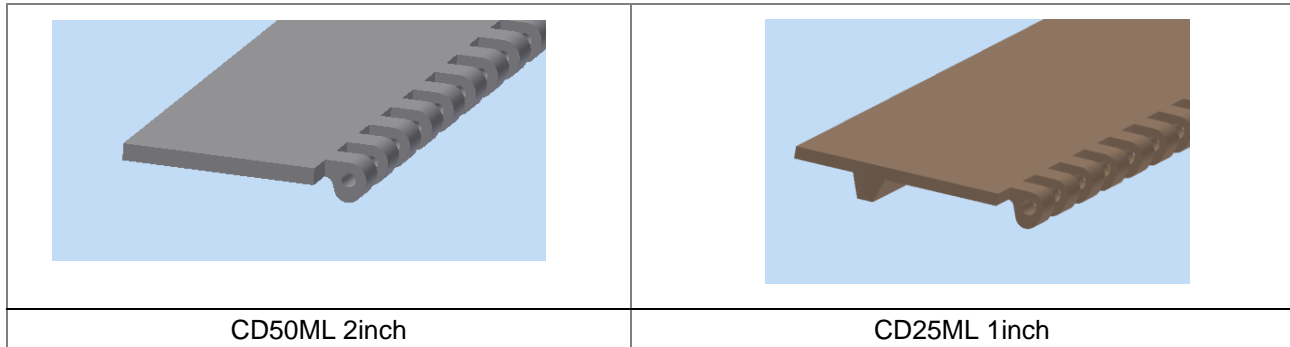
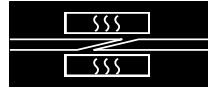
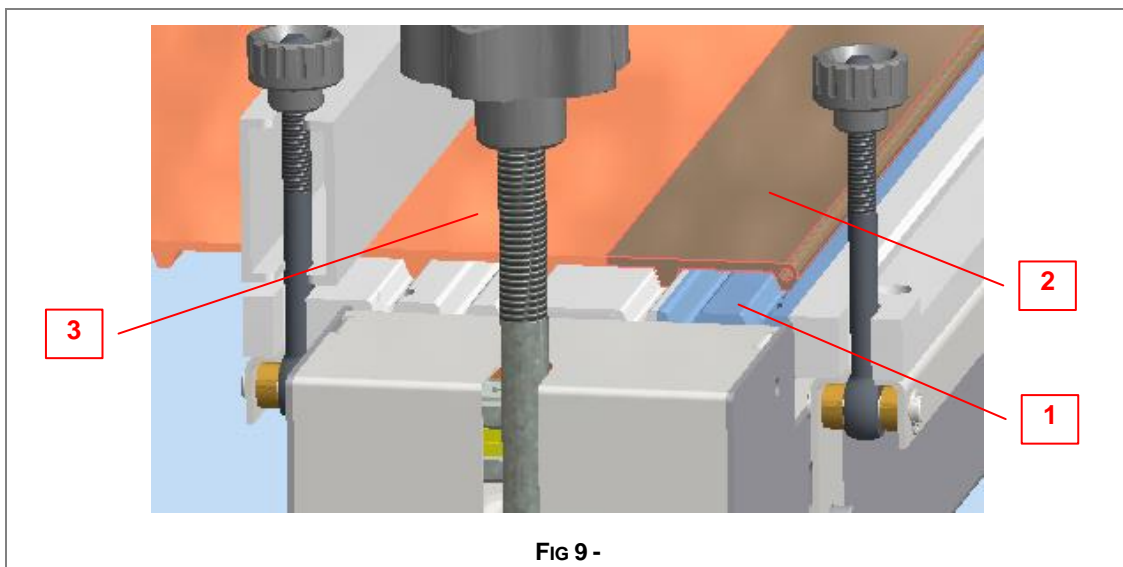


FIG 8 – DIFFERENT MECHANICAL LACING 1INCH AND 2INCH VERSIONS

11.5 Press loading and heating with “Mechanical lacing” staple

Refer to the displayed photos and drawings.

- Loosen the two closure knobs, remove them from their housing and lift the upper part of the press.
- Check if the mechanical lacing staple dowel “ML” (1) is present. Otherwise place it.



- Place the first end of the Cleandrive™ belt on the welding surface, inserting the teeth in the corresponding housings (Fig. 9, detail 3). Secure the belt in place using the lock presser, tightening the two knobs.
- Place the “Mechanical Lacing” staple (2) on the welding surface, lining up the teeth with the housings on the welding surface. Align the external edge with the belt edge.
- Make sure the two belt heads are perfectly aligned (Fig. 9). Tighten the lock rod closure knobs.

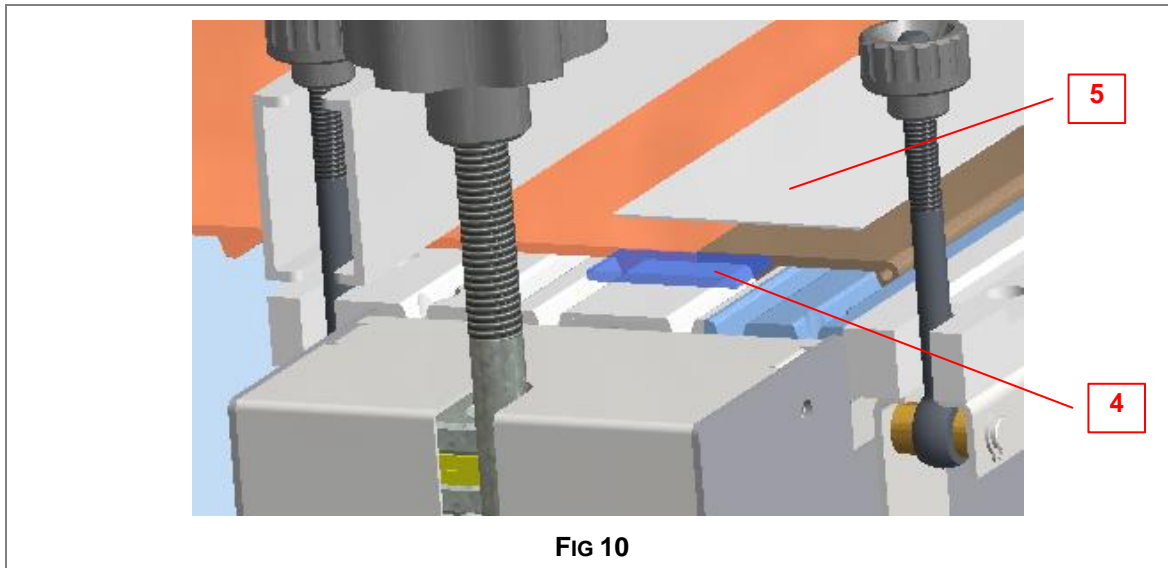
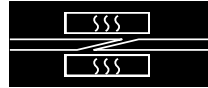
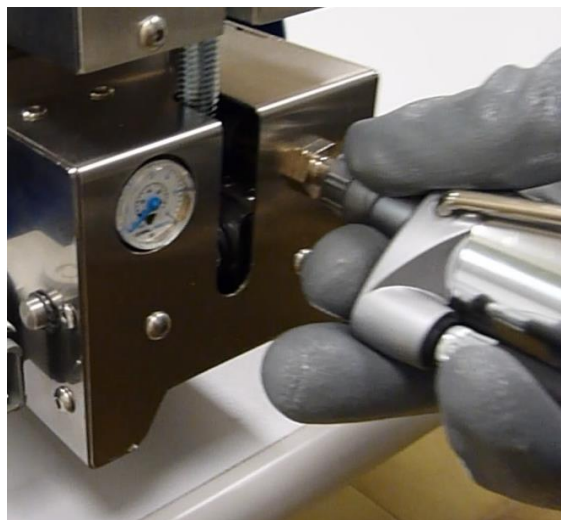


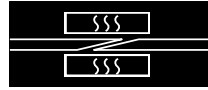
FIG 10

- f. Place two pieces of Cleandrive™ tape (fig. 10) (4) on the ends (belt ends) to laterally restrain the melted material. Place Silicone paper dull (coated side down) (5) over the welding area.
- g. Position the upper part of the press (Fig. 3) making sure not to move the belt package and accessories.
- h. Insert the two fastening pins (Fig. 3 detail 4) and evenly tighten at the two ends of the press.
- i. Bring the pressure bag to the required pressure using the supplied manual mini pump: connect the pump to the Schrader valve and inflate to **2 bar / 29 psi** pressure.



ATTENTION!

Never pressurize the presser pad if the press is not correctly closed.
Do not exceed maximum admitted 2.5bar / 36psi pressure.



- j. Turn on the PFR-101 regulator and see the instructions (chapter 6.6.1 page 16) for the following operations:
 - o Upper and lower press temperature selections as indicated in the belt coupling sheet.
 - o Set welding time.
- k. Start the automatic heating, welding and cooling cycles.
- l. Once the stop cooling temperature is reached, release presser pad air using the central valve pin.
- m. When completely cooled, open the press and carefully remove the belt. Let the belt cool at room temperature.

For mass production, let a certain period of time pass between one joint and the next to allow the internal press radiator to cool. Welding plate temperature should drop to 40°C before restarting the welding cycle.

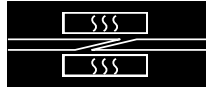


CAUTION

Press parts may be hot. Do not touch surfaces without gloves on.



During work wear GLOVES



12 Maintenance

12.1 Routine maintenance

In addition to prolonging machine working life, routine maintenance provides higher safety conditions.



ATTENTION!

PERSONAL SAFETY DEVICES (DPI)

Before starting regulation, maintenance and repair operations, the operator must make sure that all residual electrical and pneumatic energy is dissipated and must have and use the Personal Safety Devices foreseen by safety regulations such as: overalls, gloves, goggles, protective shoes, mask.



HAZARD!

All regulation, maintenance and repair operations can only be performed if the press is put out of services, cut off from energy supplies and in the machine stopped position.

12.2 Press cleaning

12.2.1 Preliminary operations: cutting off energy supplies



HAZARD!

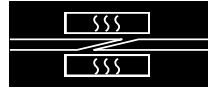
Before starting any work on the machine make sure machine power is cut off. This not only concerns main circuits but also keep in mind auxiliary and supplementary circuits.

The above safety measures must be observed until all maintenance, regulation, registration and cleaning work, etc., is completed.

12.2.2 Cleaning instructions

To keep the machine in good working order, periodically clean it by removing work residue that can accumulate on the work surface with a vacuum.

Use non corrosive detergents to clean metallic surfaces.

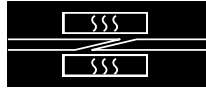


CAUTION!

Personnel assigned to this work must use suitable Personal Safety Devices: gloves and mask.



Operation	Frequency	Personnel	Procedure
Cleaning	Daily	Operator	Clean the press after use removing production residue.
Check compressed air connections	Monthly	Maintenance worker	Check for leaks.
Check press electrical wires	Monthly	Maintenance worker	Check for wire and connector defects.
Check heating plates temperature	Monthly	Maintenance worker	Procedure described in paragraph 12.3.

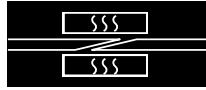


12.3 Measurement of heating plates temperature

Measure heating plate temperature once every three months as follows:

- a. Place heat resistant silicon foam rubber on the lower heating plate
- b. Insert a precision thermometer sensor, better if edge type, between the silicon foam rubber and the LOWER heating plate, in the center of the heating plate, over the Teflon strip.
- c. Rest the upper beam over the silicon pad **WITHOUT TIGHTENING THE CLOSURE KNOBS**. This prevents the welding plate material from ruining.
- d. Turn on the PFR-101 regulator and set nominal value to 160° for both plates. See the PFR-101 unit instruction manual.
- e. 5 minutes after reaching the 160°C set point, read the temperature indicated on the precision thermometer.
- f. Repeat the same process for the upper heating place (inserting the sensor under the silicon foam rubber, at the centre of the heating plate).

The temperature read must be 160°C +/- 3°C (thermometer precision max. +/- 1°C included)



13 Troubleshooting

13.1 Troubleshooting

Malfunction	Possible fault
The temperature of a heating plate indicated on the PFR-101 regulator display differs more than 3°C from the set nominal value.	OFFSET calibration PFR-101 regulator fault Thermocouple wire fault Heating element fault
Troubleshooting	
Invert the connection wires between the PFR-101 regulator and the press. If the display indicates a contradicting value for the same plate, the PFR-101 unit is at fault. If the display indicates a faulty value on the other heating plate, a resistance or thermocouple wire is at fault.	
Solution	
If the defect concerns an offset between the measured temperature and that indicated by the PFR-101, calibrate OFFSET parameters. Refer to chapter 6.7 for these operations. For faults of this or other types, inform the manufacturer. Defective heating plates and PFR-101 regulators can be repaired or replaced by the manufacturer. In the event of PFR-101 regulator faults, always check automatic switches following the procedure indicated in the PFR-101 unit manual. NOTE: In any case take a temperature reading of the heating plate if there is a discrepancy (see paragraph 14.2).	

13.2 Extraordinary maintenance

The correct use and observance of the maintenance instructions in this manual provide prolonged machine use in safety conditions.

However, if worn (such as pads, seals, etc.) or damaged parts require replacement, the user must request HABASIT Italiana S.p.A. technical service applying to:

Habasit Italiana S.p.A.

Via del Lavoro, 50.

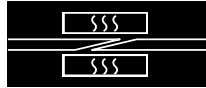
31016 CORDIGNANO (TV) - ITALY

Phone: +39 0438 9113

Fax: + 39 0438 912374

E_mail : info@habasit.it

Internet : www.habasit.com



14 System dismantling and scrapping

The press must be uninstalled by HABASIT Assistance Service technicians or authorized HABASIT technicians with experience in:

- Machine assembly/disassembly
- Assembly/disassembly of the electrical, pneumatic and hydraulic plant, consulting the corresponding diagrams.

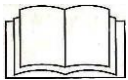
Generally the press is only decommissioned and dismantled when replaced.


This operation may be performed by specialised companies or the owner; in any case, current regulations must be observed.

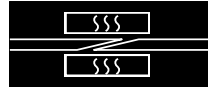
If demolished by the user's personnel, the various parts must be separated by type and specialised (and authorised) companies employed for the disposal of the various products.

We would like to remind you that the most important materials used in machine construction are:

- Steel
- Aluminium
- Electrical wires
- Plastic materials
- Rubber

	<p>Habasis Italiana Spa has adopted suitable measures to reduce the disposal of RAEE generated by the use of AEE incorporated in its machines in order to reduce RAEE as mixed solid waste to a minimum, to ensure the correct processing and high level of RAEE separate waste collection.</p> <p>Habasis collects the RAEE generated by its production, maintenance and customer service activities as per Directive 2012/19/EU article 13.</p> <p>In order to reduce the presence of hazardous substances when recycling new AEE, Habasis requests suppliers comply with Directive 2012/19/EU and accompany AEE with an explicit declaration of conformity to Directive 2002/95/EC (RoHS).</p>
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	<p>This machine was designed and constructed with recyclable materials and components.</p> <p>If demolished by the customer's staff, the various components must be separated by type.</p> <p>RAEE must be collected separately (art. 3-h) and discarded according to art. 6 in directive 2012/19/EU.</p>
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ATTENTION!

Before carrying out any kind of work on the machine it is essential to ensure that the plant (electrical, pneumatic and water) is disconnected from energy supplies, that the pneumatic and water plant is properly depressurized and that there is no remaining potential energy in the moving parts.



ATTENTION!

Follow the following disconnection procedure:

- Disconnect the electrical circuit
- Carry out mechanical disassembly.

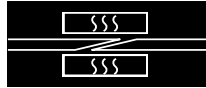
If the press is stored for a certain period of time, prepare it as indicated in the following section. If it must be immediately move, refer to the specific section.

If not immediately demolished when dismantled, store the machine and its parts in an area protected against the elements to avoid lubricants from being washed away.

Be careful during machine handling and dismantling. Avoid situations that could cause the handled machine to swing. Make sure any cords or chains used for lifting are not tangled and properly hooked to the handled load.



During work wear a HELMET, SHOES and GLOVES



14.1 Storage



IMPORTANT!

Store in a dry place, free of dust. Use the supplied flight case to store the press.



NOTE!

Do not store outdoors for any reason!
The following environmental conditions should be observed.

14.2 Storage conditions

Min/Max ambient temperature for storage	Between +5°C and +40°C
Relative humidity	Between 50% and 70%

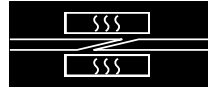
If the press, its accessories and spares have to remain in storage for a prolonged period, they must be protected from dust and damp. We recommend the following:

- Clean the machine in general
- Cover the machine with a sheet to protect it from dust



CAUTION!

Please remember that polluting the environment with oil, grease and other products used on the machine is strictly prohibited.



15 Spare parts manual and machine diagrams

15.1 Dimensions

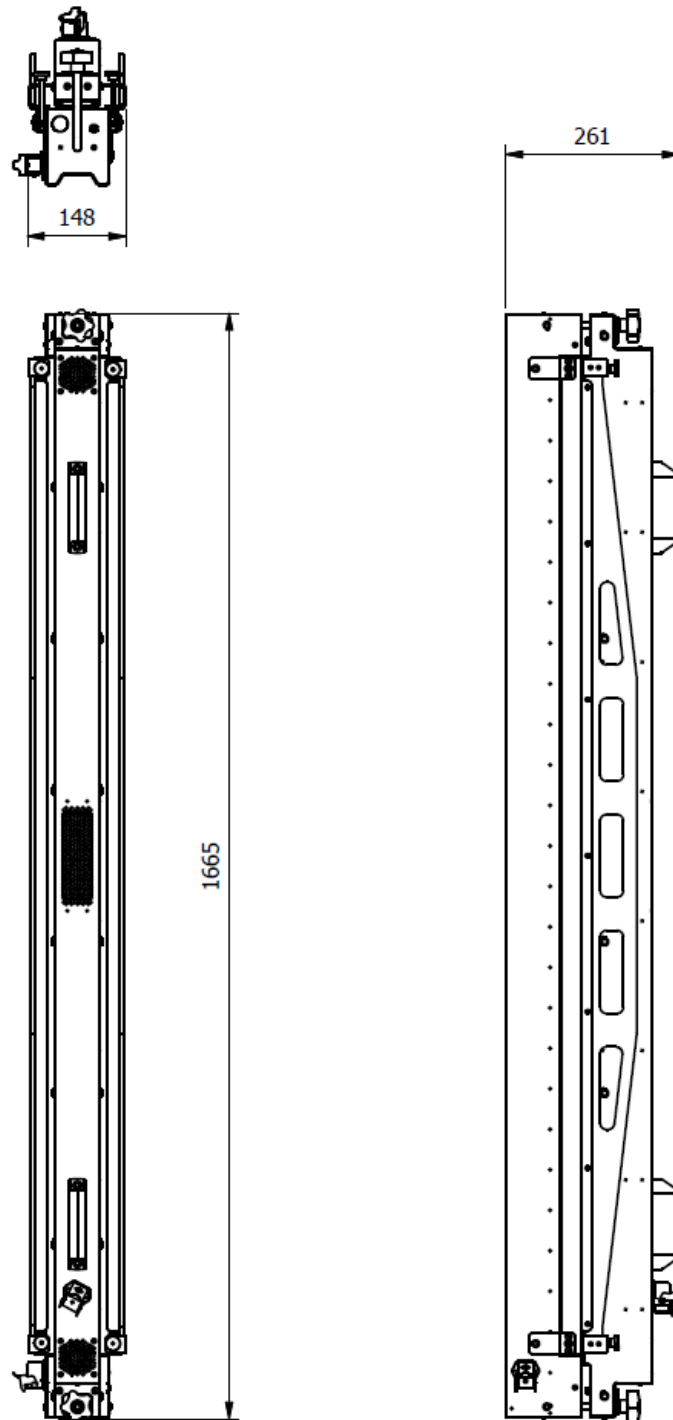
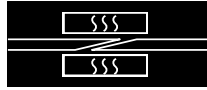
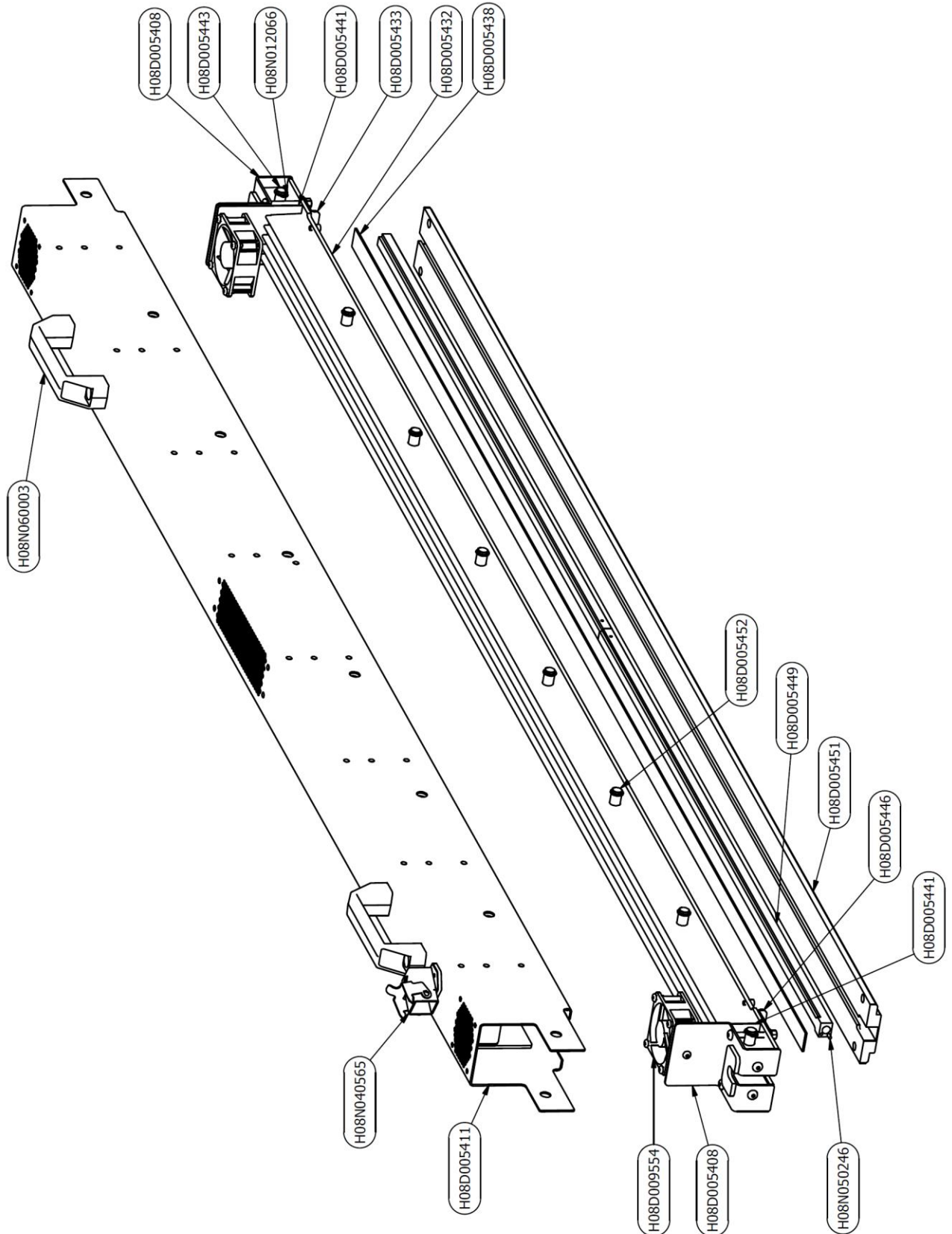
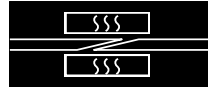


Fig. 1 – Overall PQ-1303 press dimensions

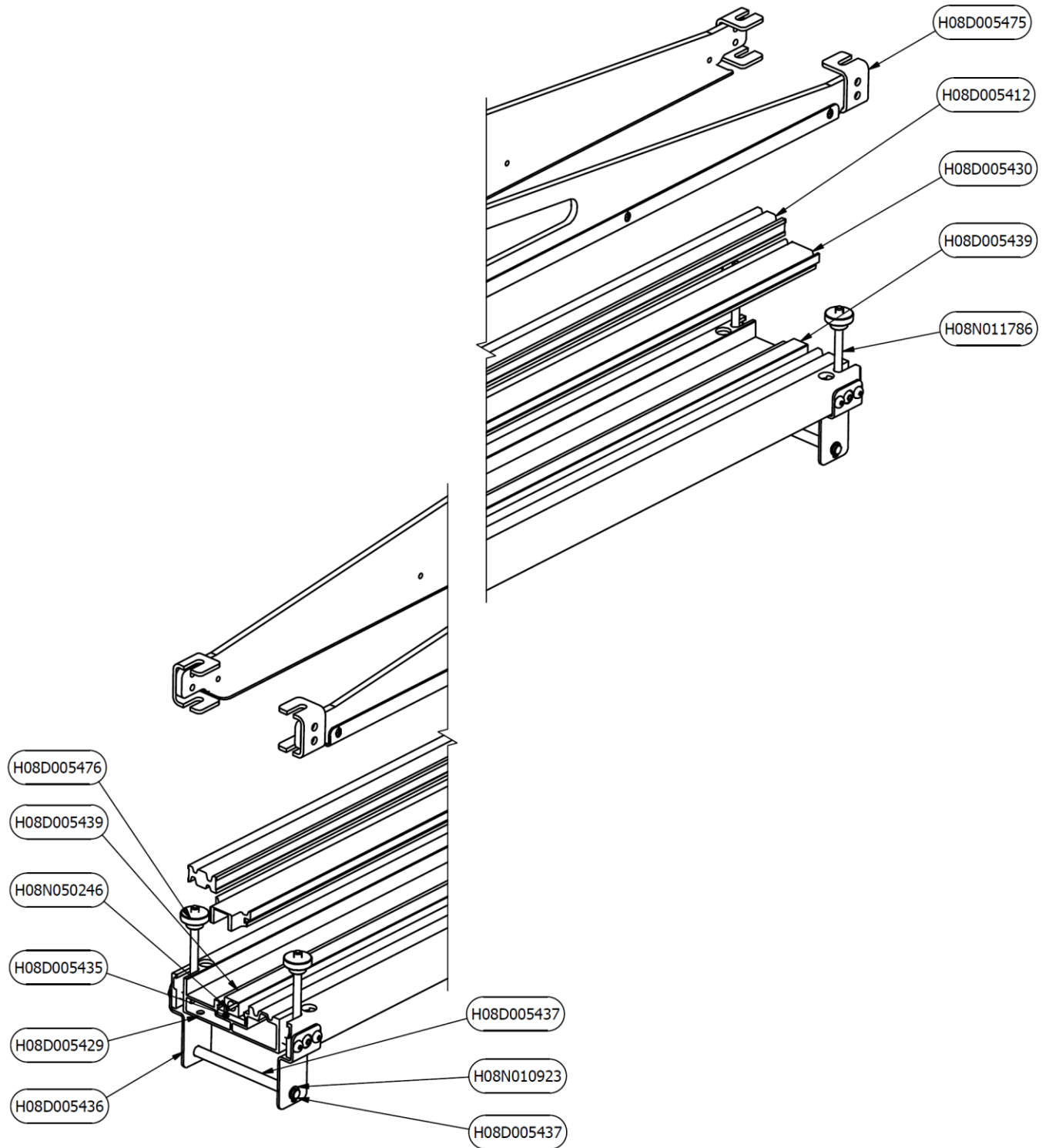


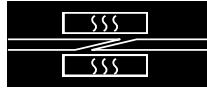
15.2 H08D005406 – Upper press beam unit



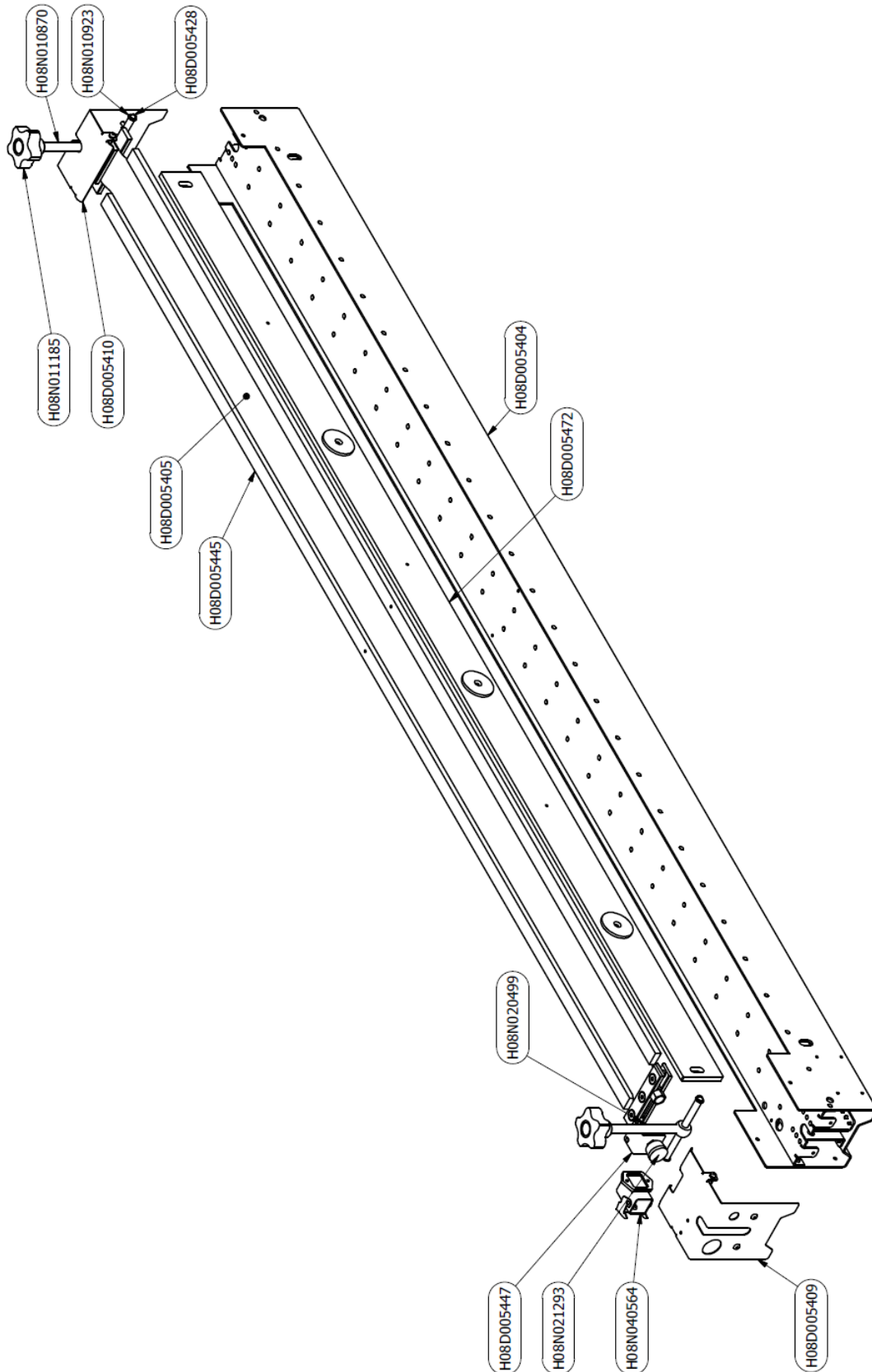


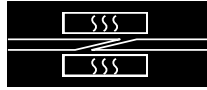
15.3 H08D005406 – Lower welding plate unit



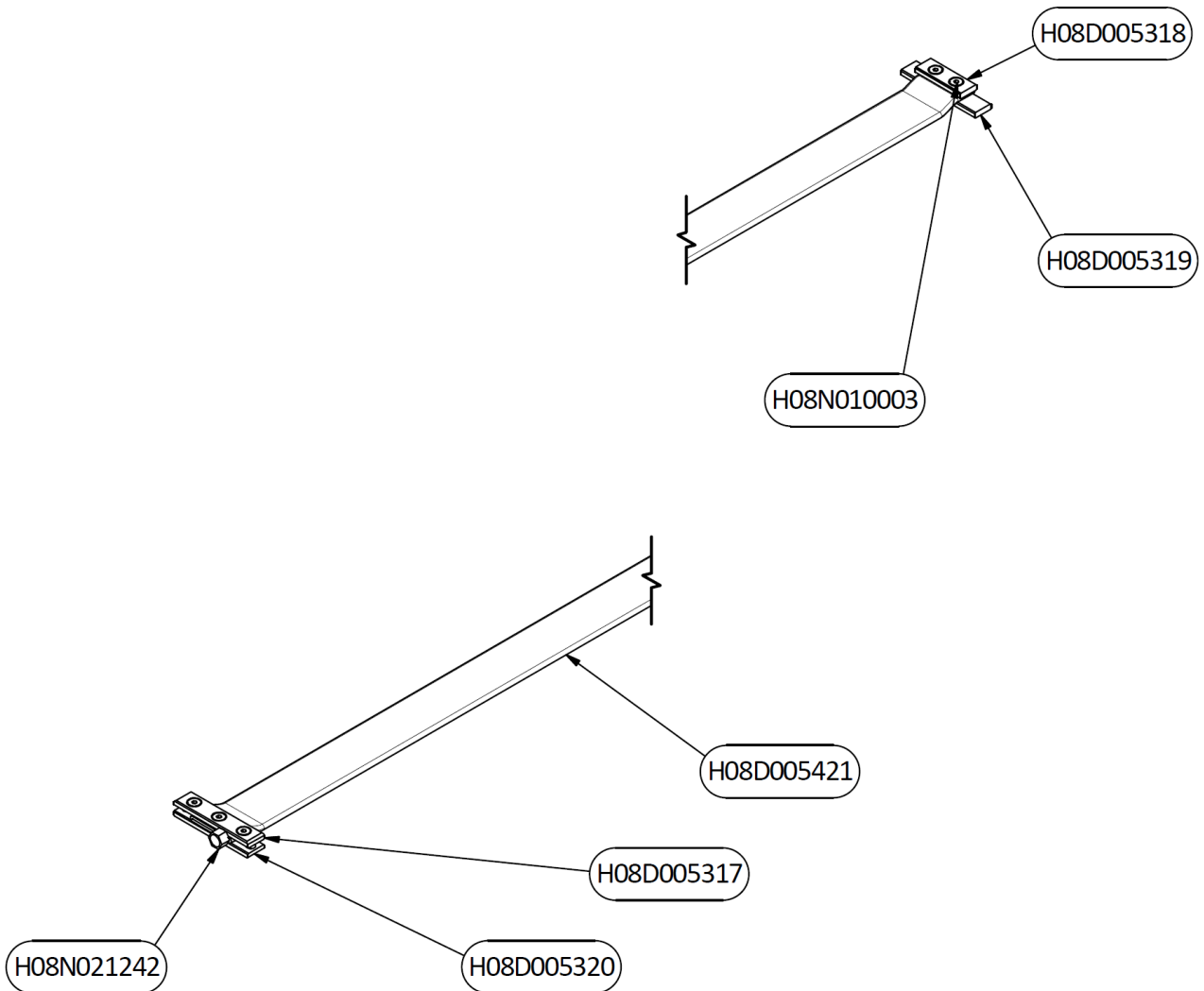


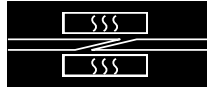
15.4 H08D005402 – Lower press beam unit



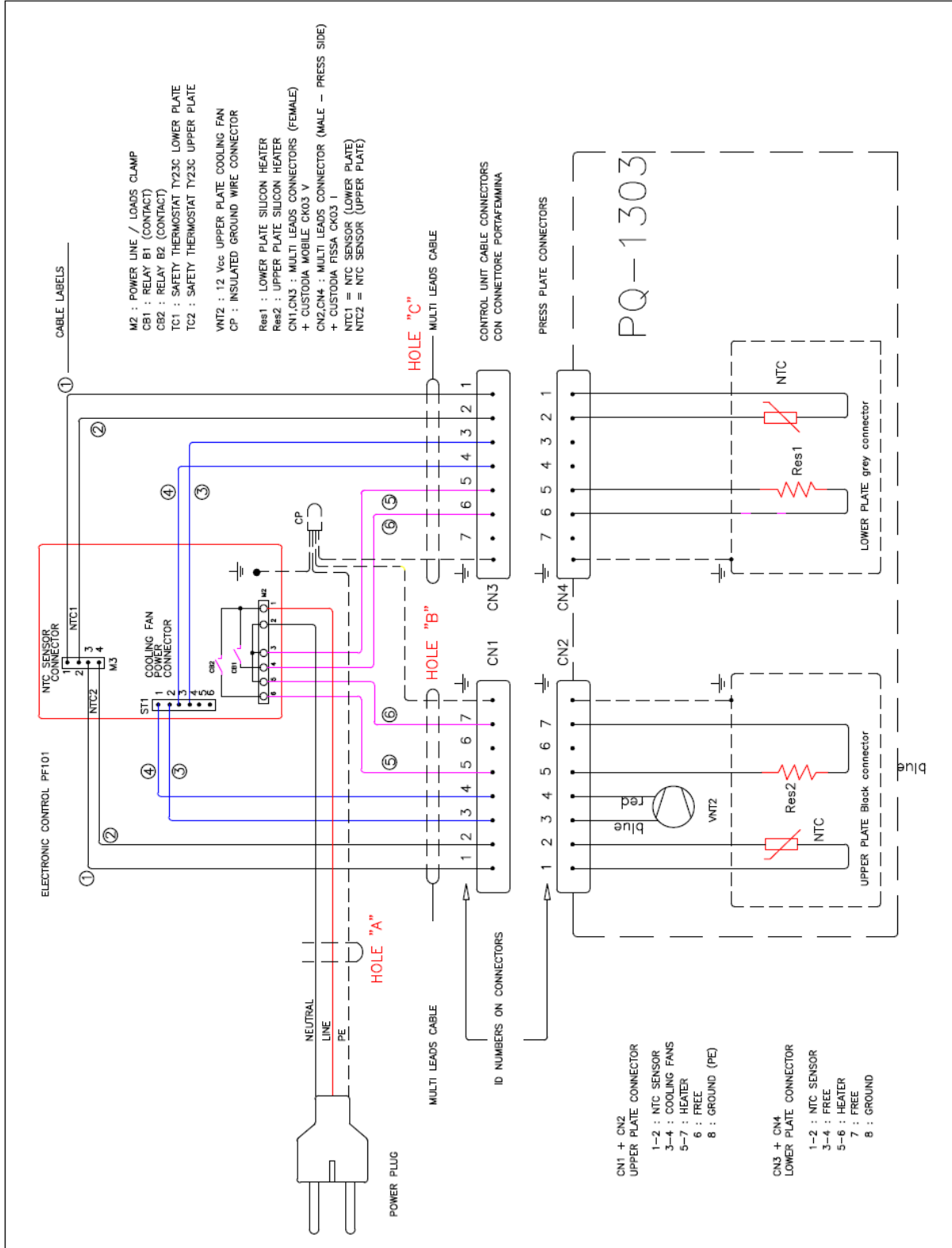


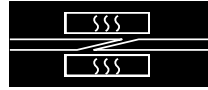
15.5 H08D005406 – Pressure pad unit





16 Wiring diagram





Heaters and temperature sensor

ID	Part number	Description
Res1	H08N040585	Tubular heater diam 8mm L=1500mm 120V 800W
Res2	H08N040586	Tubular heater diam 8mm L=1500mm 230V 1400W
NTC	H08N050246	NTC temperature sensor

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