# ITALPRESSE

**Presents:** 

"The queen of presses"



# -ITALPRESSE mod."XL"





**ITALPRESSE S.p.A.** is proud to introduce its new value-priced line of hot presses.

The new line of hot presses mod. "XL" is the result of several studies and has been designed, manufactured and tested to the specifications of the most common products used in the Woodworking Industry.

To design the "XL" presses, the ITALPRESSE R&D Dept. used all its experience coming from more than 50 years of experience in the manufacturing of pressing and laminating equipment in order to supply this line with the most recent technologies available nowadays on the market.

In an effort to remain competitive, **ITALPRESSE S.p.A.** has implemented an aggressive Cost Reduction Program by following a revolutionary industrial policy, investing on several CNC machining centers and a modern reorganization of the production flow.

Thanks to these steps the new "XL" press is offered at a very competitive price, even if compared with less equipped machines proposed by other suppliers.



One of the most interesting features of the "XL" is the new LCD interface.

On the LCD interface the operator will be able to set and save the parameters such as the pressure, the temperature and the pressing time.

By using the same LCD interface, the operator will be able to set a daily/weekly timer for the activation/deactivation of the heating boiler, activate the lateral cylinder exclusions (depending on the model) and visualize any possible anomaly on the press.

The structure of the press has been designed and manufactured to grant an higher rigidity level compared with all the other presses of its range.

All the components used in the manufacturing of the "XL" are the state-of-the-art available on the market and has been selected for their well known reliability.

#### "XL: the queen of presses"



# XL: hot press used to overlay core panels like:



Plywood



Honey comb



**MDF** 



Particleboard

#### ...with sheets of:



veneer



Laminate (HPL)



Finish Foils or Impregnated foils



# Introduction: pressing a panel

If you want to overlay a panel, you need to pass through 3 main steps:

A) Spreading the glue using a roller glue spreader. The glue is usually applied on the core surface.



B) Lay up of the sandwich to be pressed: back veneer, core panel and face veneer positioning.

C) Pressing of the overlayed panel on the press.



# Introduction: pressing a panel

In order to proceed to press a panel, it's necessary to set on the LDC interface the following **pressing** parameters:

- 1) <u>temperature</u> (depending on the type of glue and material to be pressed)
- 2) <u>pressure</u> (depending on the type of material to be pressed)
- 3) <u>pressing time</u> (depending on the set temperature and on the thickness of the overlay material)
- 4) <u>cylinders exclusions</u> (for cut to size panels that don't "cover" all the cylinders of the press)



All the above mentioned parameters will be easily set through a digital interface as the one shown in the picture.



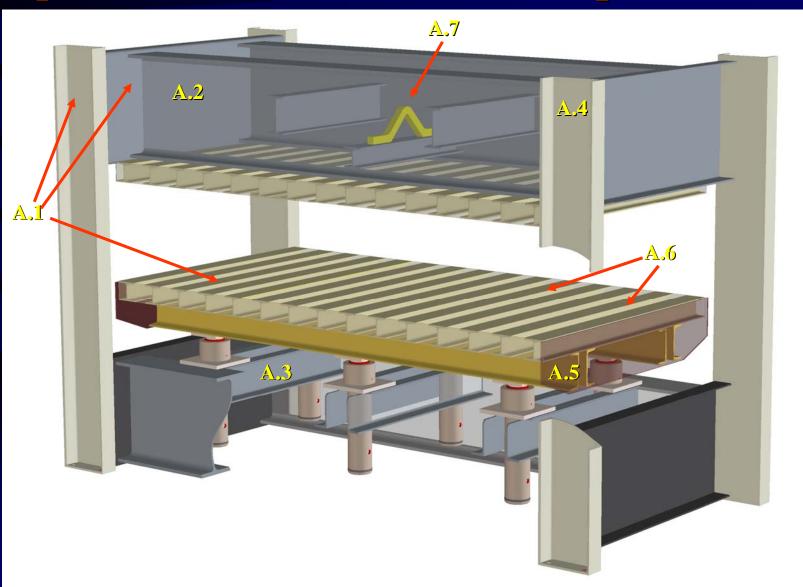
#### **Table of contents**

The reasons that brought our "XL" presses to be recognized worldwide as a state-of-the-art machines, reliables, safe and user friendly could be resumed into the following areas:

- A) Press frame and mechanical aspects
- **B)** Clinders
- C) Hydraulic system
- D) Electrical system
- E) LCD interface and control pushbuttons
- F) Heated platens
- G) Heating system
- H) Features
- I) Safeties
- L) Optionals
- M) Technical documentation
- N) Maintenance
- O) Statistics

Now we can go deeper on each of the above indicated aspects...







Because of solidity, strenghtness and reliability our "XL" presses can't be compared with other competitor's presses of the same range. ITALPRESSE S.p.A. decided to build each mechanical component internally, this grants a total high quality control on each production phase.

As you can see from the previous drawing, **ITALPRESSE** S.p.A. pays a serious attention to the contruction's solidity of the press:

A.1 Thickness of the beams / safety factor; higher compared with other presses of the same range.

A.2 The top bolster and the basement of the press structure are built with **longitudinal beams** type "**IPE**". These beams are welded to an high thickness steel frame. All the welded structures are subjected to a heat treatment in order to eliminate all the mechanical tension.

A.3 The cylinders lay on two **beams with C section (UPN)** 

A.4 The vertical beams have a thick **C** section and are thicker compared to any other press in the same range.



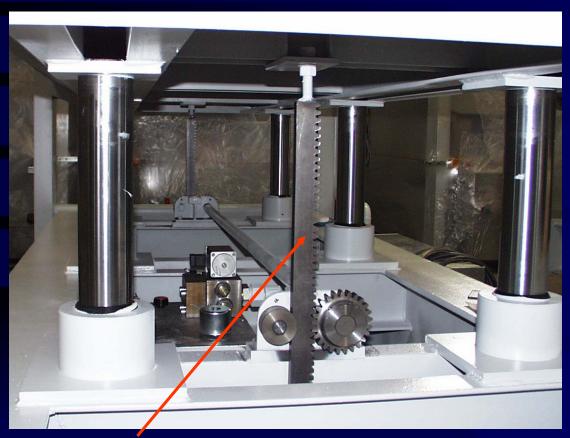
A.5 The **mobile platen** is made by longitudinal beams with **double C section**. A.6 The **mobile platen** and the top bolster of the press have a surface for the positioning of the platens that is made by crosswise H section beams (**HEA**). These beams present an high rexistance to the deflection (modulus of rigidity HEA 100=72,8).

A.7 **Lifting hook** flame cutted from high thickness steel plate and welded to the press' frame.

A.8 CNC working of all the surfaces that are directly in contact with the platens and the cylinders. This grants a constant "parallelism" during the mouvements and the lifting of the various components under different temperatures, the "tollerances" on the sliding guides and the precision of the group "sprocket-toothed rack".

A.9 High thickness **Toothed racks** to control mechanically the parallelism A.10 **Platen's guides** diagonally placed: material + dimensions







A.9

A.10







# B) cylinders

B6 - Oil scraper sealing

B9 - Bleed to eliminate possible air bubbles

B2 - Cylinder's liner realized by a welding robot in a controlled atmosphere



B6 - Sealing gasket made with a special material

B4/B5 - Cylinder's rod made by a solid cilindric drawn.
The drawn is pre-grinded and is chromium plated (70 micron) for a better rexistance to the wearing and a better

sliding.
After the chromium plating, the rod is grinded again.

B1 - Cylinder's liner realized with a high thickness pipe in FE 510 C

B8 - Oil feeding hole

B3 - Heat treatment to reach stress releaving of the cylinder's liner





## B) cylinders

- B.1 Cylinder liner: realized with a high thickness pipe in FE 510 C
- B.2 Welding of the bottom and the flange made by a robot in a controlled atmosphere. All the welding parameters are monitorized with the most accurate precision in order to grant an high constant quality.
- B.3 **Heat treatment** to reach a stress relieving of the cylinder liner
- B.4 **Cylinder's rod** made by a solid cilindric drawn. The drawn is pre-grinded and is **chromium plated** (70 micron) for a better rexistance to the wearing and a better sliding. After the chromium plating, the rod is grinded again.
- B.5 Chromium plating of the rod with 70 micron thickness. Second grinding after the chromium plating. Advantages: longer life of the sealing gaskets and elimination of the oil leakage.
- B.6 Sealing gaskets specifically studied for ITALPRESSE S.p.A.
- B.7 Guidance rings made by reinforced teflon
- B.8 Oil feeding hole
- B.9 Bleed for the possible presence of air
- B.10 The liner lays on a CNC worked and drilled plate. No Weldings!!!



## B) cylinders

- B.11 The rod's head freely lays on a CNC worked plate.
- B.12 The matching tollerance between cylinder's liner and rod is controlled with a special calliper in order to grant the interchangeability and the perfect seal of the gaskets.
- B.13 The **liner** and the rod are free to move accordingly with the thermal expansions.





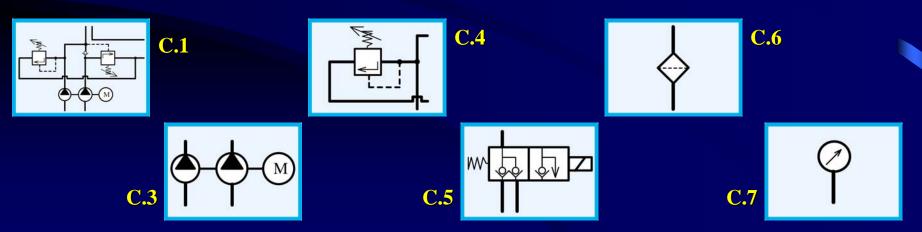
B.11

B.10



# C: Hydraulic system

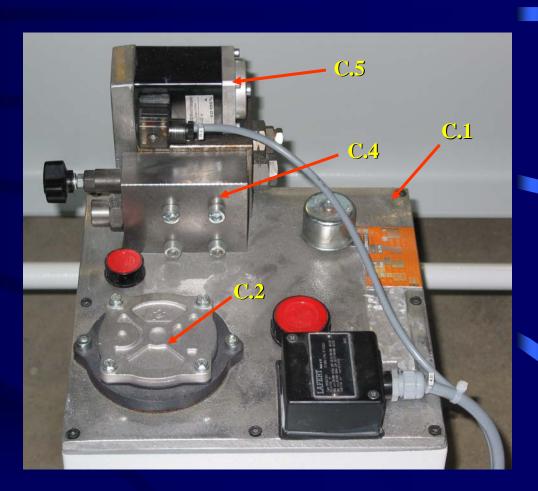
- C.1 Complete hydraulic unit, compacta and with easy access for maintenance
- C.2 **Submersed** selflubricating pump. Grant an optimal cooling, an extremely reduced noise and a total insulating from any dust.
- C.3 Two stage pump for a fast approach and a slow high pressure
- C.4 Max relieve valve
- C.5 Solenoid valve to open the press
- C.6 Oil filter
- C.7 Pressure gauge with electric contact for the pressure regulation
- C.8 Connecting hoses for the cylinders
- C.9 Connections as per ISO rules













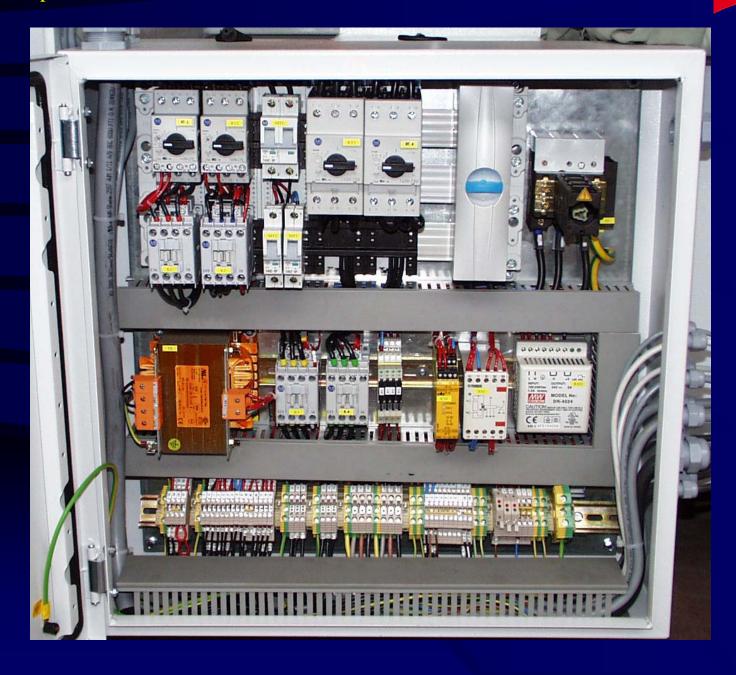
#### D: Electric system

The electric systems of all the **ITALPRESSE S.p.A.** machines are built accordingly with the most severe **rule CE/89/392** and allows an easy interchangeability of each single electric component. Each component can be found worldwide because produced by well known producers (Allen Bradley, Telemecanique; Kloekner & Moeller, etc).

Thanks to an accurate study of the space available into the electrical cabinet, it's very easy to access to all the componens for maintenance.

- D.1 **PLC**: all the main functions of the press are controlled by a PLC that eliminate the old relais groups.
- D.2 Electrical cabinet IP 55 NEMA 12
- D.3 Indipendently controlled motors
- D.4 Rules CE/UL/CSA/VDE (on request)





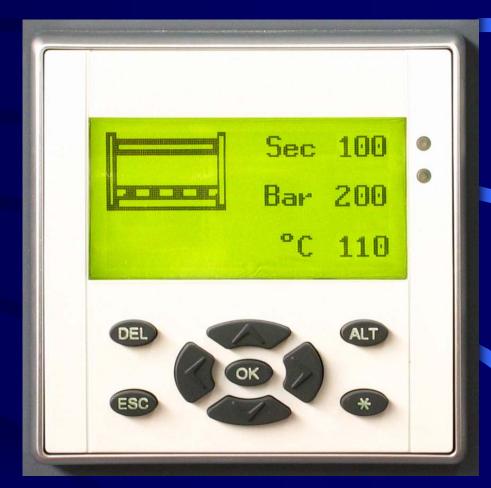


## E: LCD Interface and control pushbuttons

E.1 **Ergonomic** position on the frontal right vertical beam or on the upper frontal beam. The operator can set all the operations without moving from the front side of the press.

E.2 **LCD** interface for the setting of the pressing parameters such as: platens temperature, pressure and cycle time.

Moreover is possible to set the automatic activation of the boiler (by programming the day/time), the self-diagnostic display of faults and the exclusion of lateral row of cylinders (if present)





# E: LCD Interface and control pushbuttons

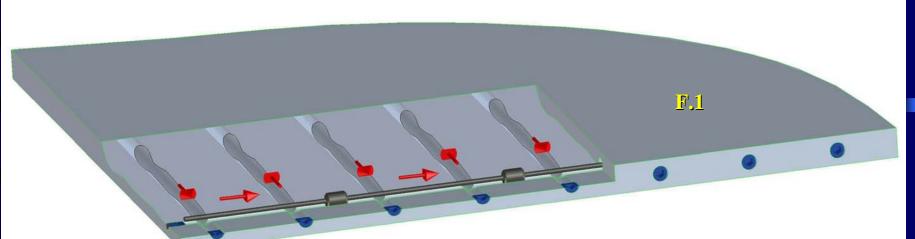
- E.3 Two hands closing button to avoid unsafe operations
- E.4 Emergency buttons complete with reset
- E.5 Working diagram to set the pressure paramenters.
- E.6 Selector to save the energy: allows to use the electric boiler 50% of the power, with a consequent saving of the energy (opt.)



### F: Heated platens

- F.1 Solid steel drilled platens (see next slide)
- F.2 Fabricated steel platens (see next slide)
- F.3 Electrical platens (see next slide)
- F.4 **Insulating boards:** placed between the heated platens and the main structure of the press avoid any thermal dispersion of the heating and focus all the heating capacity on the panels to be pressed.
- F.5 **Fastening of the platens** to the movable bolster through some bolted high precision/rexistance tie rods. Easy change of the platens.
- F.6 Covering of the platens: various overlay materials are available to protect the heating platens (alluminium mylar massive drilled stainless steel)





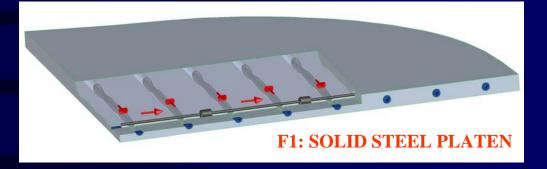
#### F1: SOLID STEEL DRILLED PLATENS

- made by high thickness steel plates Fe 430/B finely milled and smoothed on the surfaces on a CNC heavy milling machine (see following photo)
- high quality finishing on platen's surface
- The heated platens will be properly bored for the heating requirements. **Boring** done by a CNC machine with a constant pitch, with automatic feeding, to ensure a perfect smoothness of the channels for the efficient circulation of the thermal oil. This grants a perfect and uniform distribution of the temperature all over the platens.
- The hole diameter is optimized accordingly to the geometric and thermal characteristics
- Platen covered with mylar or allluminium sheets.

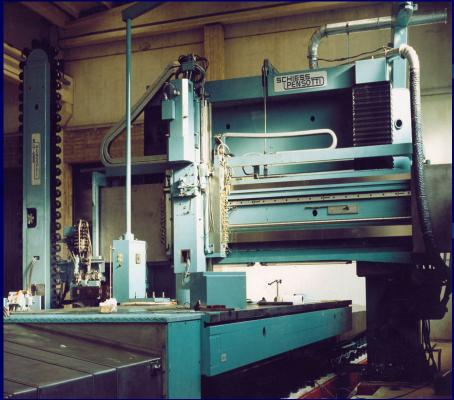


#### "XL: the queen of presses"

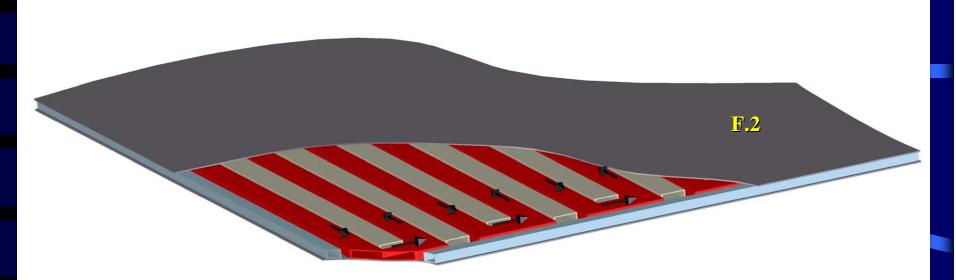








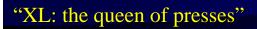




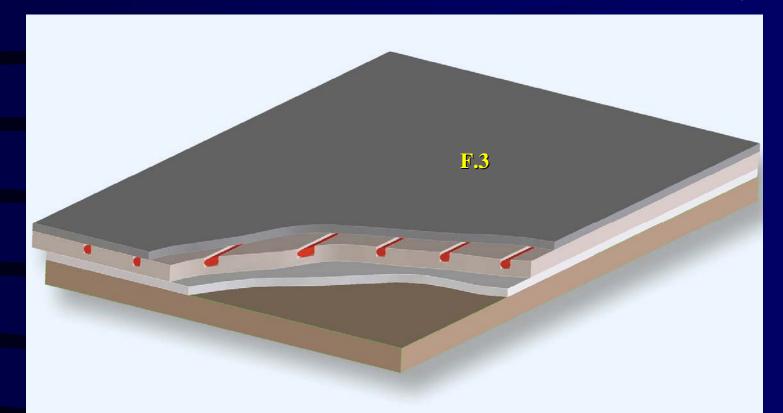
#### **F2:FABRICATED PLATEN**

#### Complete with:

- Heating coil
- Pipe to fill the gaps between the heating coils
- Upper and lower stainless steel foils to contain the coils
- Insulating board
- Platens covered by an alluminium sheets (thickness 9/10)







#### **F3: ELECTRIC PLATENS**

Original "German"

Available surface with eloixidal finishing



## **G:** Heating system

- G.1 Electric boiler with thermal oil: all the system is positioned on the side of the press without any direct contact to the electrical components.
- G.2 Electric boiler: separation between thermal components and the electric control. This respect the strictest safety rules.
- G.3 Electric boiler: fluid circulation pump
- G.4 Electric boiler: handles valves that allows to insulate the heating circuit to run some maintenance without the need to spill out the oil
- G.5 Electric boiler: expansion tank placed at an optimized height complete with a return controlled line.
- G.6 Electric boiler: safety thermostats that detect dangerous temperatures and stop the system in case that the termoregulators don't work properly.
- G.7 Electric boiler: special flexible rubber hoses engineered to rexist to the high temperatures for the connection of the heating platens.
- G.8 Electric Boiler: inlet/outlet pipes and hoses projected to eliminate the interferences during the loading and unloading of the press.
- G.9 Pump + wood (or coal) boiler. As an alternative to the standard oil boiler is available a hot water heating through a wood (or coal) boiler.

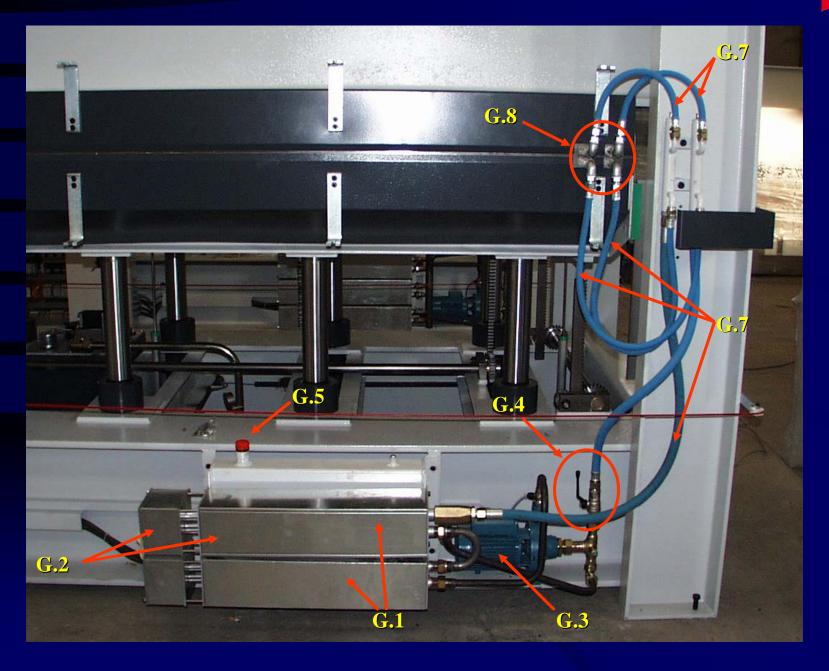


# **G:** Heating system

- G.10 Pump + wood (or coal) boiler: safety kit supplied by **ITALPRESSE**
- S.p.A. upon request in order to grant the safety system
- G.11 Electrical platens: benefit to eliminate the heating fluid
- G.12 Energy consumption: with every kind of heating system, ITALPRESSE
- S.p.A. reduce as much as possible the thermal/energy dispersion using special insulating boards for the most exposed parts.
- The electrical boilers are built in order to heat the platens with the shortest possible time, but they also uses only the strictly necessary quantity of energy to heat the platens.

#### "XL: the queen of presses"







#### H: Features

The "XL" presses also in their basic version are completed with many useful features as:

H.1 **Lifting hook** completely welded to the structure of the press. Created for the easy and safe rigging of the press.

H.2 Levelling feet. Used to level the press in order to reach the perfect operation of the press. Moreover this grants a longer life of the sealings.

H.3 Loading on 4 sides: the single opening presses have accessibility from all the sides.

H.4 Protection covers of the platens: the heated

platens are covered by materials (alluminium; mylar, stainless steel), that protect the platens and are easy changeble

H.5 All the systems (hydraulic / heating; boiler / electric) are placed on the side of the press. They have easy access and are without external connections, but the power line.





#### H: Features

H.6 Opening limit switch: One electrical limit switch stops the descending of the mobile platens during the opening of the press. The limit switch is adjustable in various positions, allowing the reducing of the opening/closing time.

H.7 Lateral protections for the covering of the platens: the perimeter of the heated platens is covered by steel profiles that protect the exposed heated parts..

H.8 Working diagram: pratical, easy operating and easily placed close to the control panel.

H.9 **Mylar tensioned** by springs that mantain the mylar constantly tensioned.



**H.2** 





H.8

**H.6** 

#### "XL: the queen of presses"





#### "XL: the queen of presses"



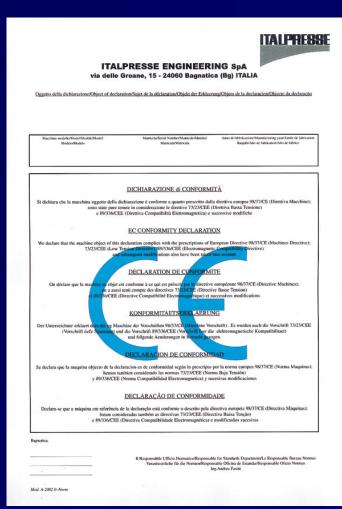


# ITALPRESSE "XL: the queen of presses" **H.9** Pag. 35



#### I: safeties

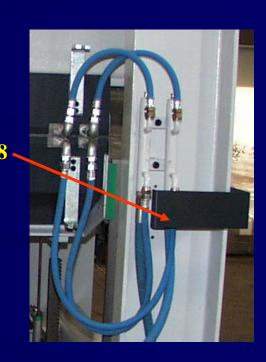
- I.1CE regulations: a specific **Regulation Office** studied every hazard for people working on the presses and found the way to prevent the injuring of the people. The result is the highest safety level guaranteed by the CE conformity declaration.
- I.2 Electrical system as per CE/UL/CSA/VDE regulations (on request)
- I.3 Emergency button control board/reset
- I.4 Safety perimetral rope active both during the closure of the press, than during the opening: double reset switches
- I.5 Steel cover to protect mobile components
  I.6 Safety stickers. All the safety advices are
  clearly indicated through stickers placed on the
  machine.

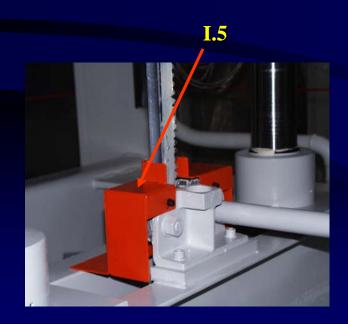




# I: safeties

- I.8 **Protection of the heated parts,** made by covers, profiles and metallic nets
- I.9 Protection for the intermediate platens pin stops. Placed to avoid any healty risk for working people.
- I.10 Safety mechanical lock for the press maintenance



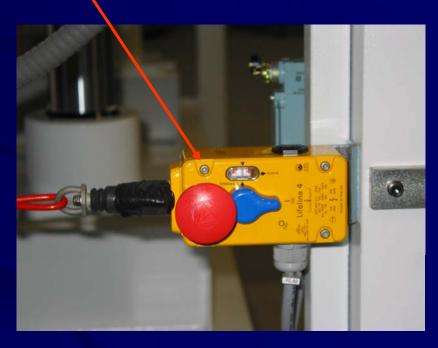








**I.4** 



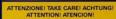


#### **MWARNING**

Keep hands clear. Pinch points.



# . C.



NON EFFETTUARE LAVORI SOTTO IL PIANO MOBILE SENZA AVERE INSERITO I DISPOSITIVI DI BLOCCAGGIO

BEFORE CARRYING OUT ANY KIND OF WORK UNDER THE MOBILE PLATEN, MAKE SURE YOU HAVE CONNOCETO THE LOCKING DEVICES VERRIEGELUNGSVORRICHTUNG EINSETZEN VOR DER ARBEIT UNTER DER BEWEGLICHEN PLATTE

NE PAS EFFECTUER TRAVAUX SOUS LE PLATEAU MOBILE. SANS AVOIR INSERE LES TIGES DE BLOCAGE ANTES DE EFECTUAR TRABAJOS DEBAJO DEL LATO MOVIL INTRODUCIR LOS DISPOSITIVOS DE BLOQUES







#### **MARNING**

Read and understand operator's manual before using this machine. Failure to follow operating instructions could result in death or serious injury.



#### **MWARNING**

The machine is intended to be used by one operator only.

Before initiating a cycle make sure that no other person is near the press.

## I.1 e I.6



#### **▲** DANGER

Moving parts can crush and cut.
Do not operate with guard removed.
Follow lockout procedure before servicing.



#### **A** DANGER

Hazardous voltage.

Disconnect all power before working on this equipment.

Failure to observe this instruction will result in death or serious injury.



## **⚠ CAUTION**

Wear protective gloves.



### **⚠ CAUTION**

Burn hazard.

Do not touch hot surfaces inside.
Allow time to cool before servicing.

## ITALPRESSE

# SAFETY INSTRUCTIONS

#### SUGGESTED LOCKOUT PROCEDURE

- 1. Announce lockout to other personnel.
- 2. Turn power OFF at main panel.
- 3. Lockout power in OFF position.
- 4. Put key in pocket.
- Clear machine of all personnel.
- 6. Test lockout by hitting RUN button.
- 7. Block, chain or release stored energy sources.
- Clear machine of personnel before restarting machine.
- Take key from pocket.
- Unlock the lockout device.
- 11. Turn power on at main panel.
- 12. Announce machine is ON to other personnel.





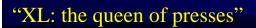




# L: optionals

The basic version of an **ITALPRESSE S.p.A.** "**XL**" is already complete with many useful features that could be completed with the following optionals under specific request:

- L.1 **Intermediate platens:** by adding intermediate platens, you may reach an higher production. You can add up to 5 intermediate platens.
- L.2 **Increased opening**: useful when you have intermediate platens or when you want to use the press as a cold press.
- L.3 Electronic Flatness Control of the platens. It protects the platens also when the loading is not correct.
- L.4 Double safety rope
- L.5 Touchscreen control mod "TS691"
- L.6 Electronic exclusions of the cilinders directly controlled by the LCD interface
- L.7 Power saving selector













**L.6** 







# M: technical documentation

"XL" presses are complete with **technical manuals** (available in 10 different languages) for the use and the maintenance of the presses.

Each manual contains:

M.1 Instructions for the use / maintenance / rigging of the press complete with drawings and descriptions M.2 Hydraulic schematics complete with the spare parts list

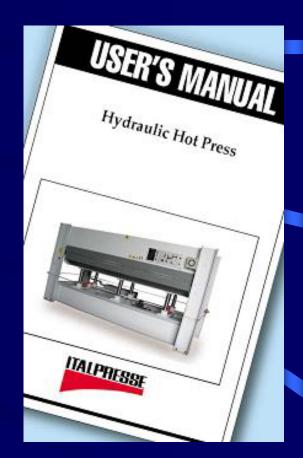
M.3 Heating schematics complete with the spare parts list

M.4 Electric schematics complete with the spare parts list

M.5 Components list

M.6 Safeties reccomendations - CE declaration

M.7 File for the preventive maintenance



**M.1** 



# N: maintenance

The hot press mod. "XL" is characterized by an easy use and by a limited necessity of maintenance.

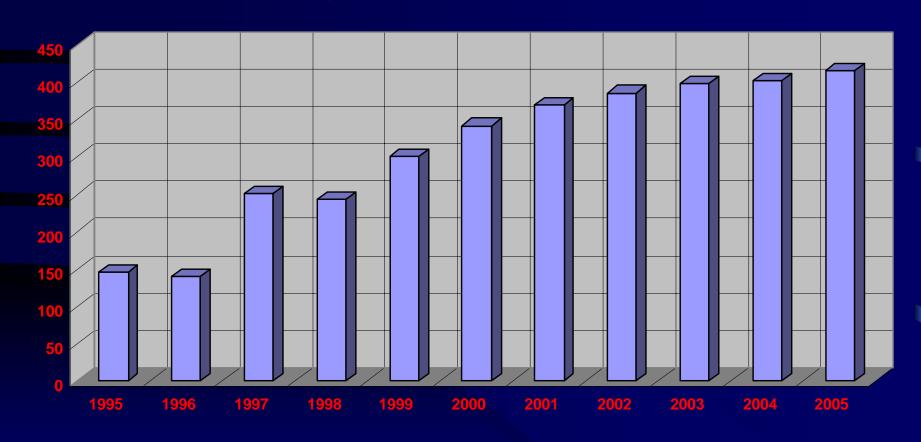
OIL: the heating oil needs to be substituted accordingly to the quantity of the hours worked by the press. Of course the periodical substitution of the oil grants a constant uniformity of temperature on all the platens

CLEANING: The periodical cleaning of the press, grants a longer working life, allowing to reach incredible life levels.



# P: statistics

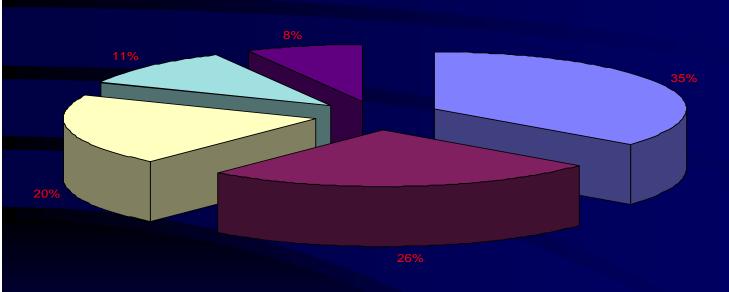






# P: statistics





- Italia
- Resto d'Europa
- □ Asia
- Americhe
- Africa e Oceania



# **Company structure**

**ITALPRESSE** S.p.A., was established in 1969 by Carlo and Fausto Sala, who formed their first press and woodworking company, "F.LLI SALA" in 1954. Over the years, **ITALPRESSE** S.p.A. earned its reputation of being one of the press industry's global leaders.





The company has 7 plants located in the hearth of Italy's industrial region and dedicates a major portion of its facilities to ongoing research and development, keeping the ITALPRESSE S.p.A. name in the forefront of the press technology. ITALPRESSE S.p.A.'s manufacturing capabilities rank among the best in the industry, utilizing state of technology CNC machine tools, CAD system design, and the latest production and quality control standards, all aimed at providing our customers with durable, reliable and efficient high value products.





We mantain extensive worldwide technical, sales, and administrative staffs to fully support you, our customer with engineered solutions for even your most challeging press applications. Replacement parts and factory-direct field service are always available to assure your satisfaction and help you maintain a profitable operation.

