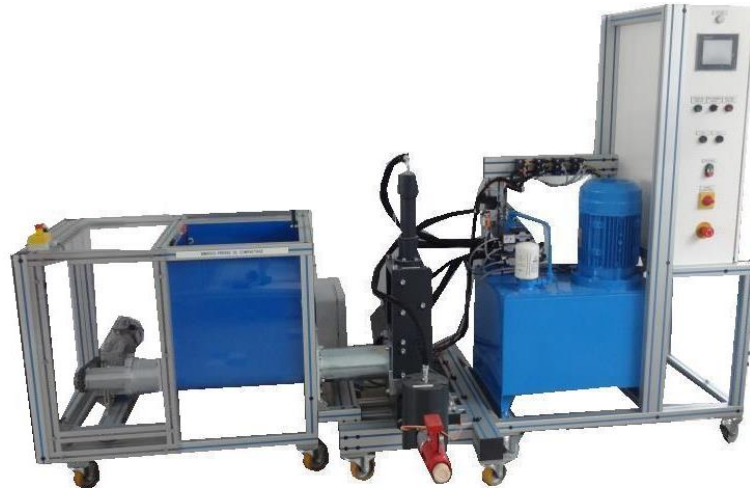


## PLURITECHNOLOGICAL BRIQUETTE HYDRAULIC PRESS



### Experimental capabilities

- Parameterization of the production (size of briquettes, quantity of parts to produce, continuous production control)
- Automation, Bus ASI, speed variator, ...
- Change of mechanical transmission technology (belt -> chain)
- Preventive maintenance: seals, guidance, lubrication, control, mechanical (torque limiter, ..) and hydraulics (level, temperature,..) settings
- Corrective maintenance: hydraulic distributor, pressure limiter, detector, switch ... (faulty equipment supplied)
- Integration of various hydraulic pressure management solutions (pressure limiter / proportional pressure limitation)
- Mechanical assembly / disassembly: Archimedes screw with bearing housing, mechanical transmission ...
- Possibility in subsystems option to multiply the student activities (mechanical: kit bearing housing, motor 400/600V to study coupling ...)
- Teaching concerned: Bac Pro MEI, pilot production line, BTS...

## Operating principle

The MMH 104 pluritechnological compacting press is a machine for the production of wood briquettes and of compacted paper. This machine is a perfect platform in the teaching of automated control system, the maintenance and adjustment of mechanical and hydraulic machine.

This automated machine incorporates a color touch screen, a communication bus ASI type, as well as many sensors (capacitive, inductive, pressure ...).

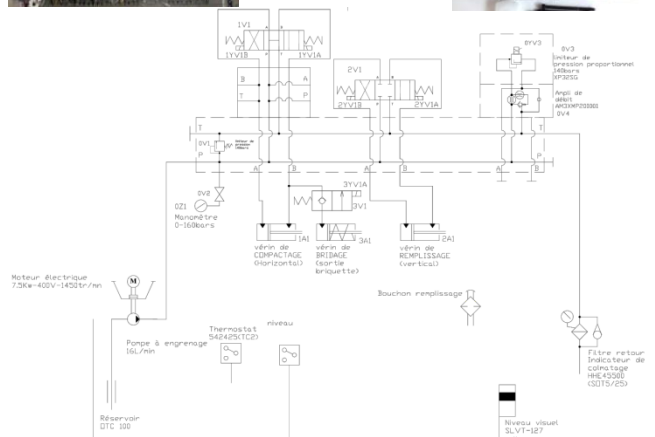
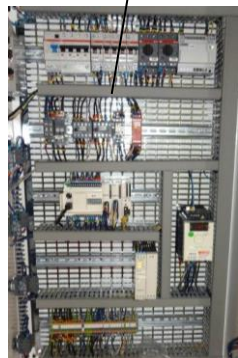
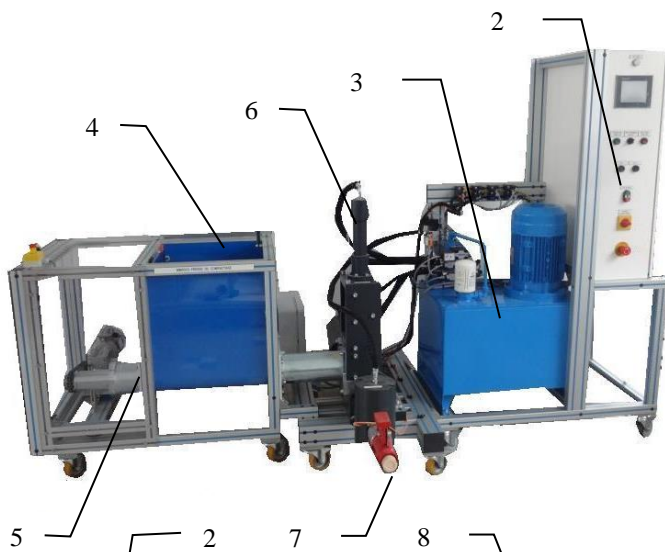
It also enables intervention on assembly / disassembly operations, mechanical adjustments, transmission change, and the interventions on the bearings (parts made of steel for high robustness).

Finally, the hydraulic circuits operate in conventional technology but also proportional, with configurable PID type pressure control.

The included accessories allow the implementation of research operations of breakdowns and repairs.

## Illustrations

## Technical details



1. Metallic chassis on braked swivel wheels
2. Electrical box making steering console office (pushbuttons, HMI color touchscreen type MAGELIS for parameterization of the production, control of actuators, visualization of sensors status and PLC inputs/outputs ...) Twido PLC, master module BUS ASI, base deported for connection of distributors and sensors, frequency inverter, contactors ...
3. Hydraulic plant 7.5kW - geared pump 16L/min-tank 75L mini, level indicator, thermostat, return filter drilled block 2 distributor 4/3 Cetop, 1 controlled check valve 2/2 online, pressure limiter machine 140 bar, high pressure limiter, proportional high pressure limiter, analog pressure transmitter
4. Large capacity hopper in steel, motorized steel scraper in the lower part, trough for supplying of the Archimedes screw, transparent cowling, filler hatch controlled by safety sensor
5. Archimedes screw of supply of the press, incremental encoder, bearing housing, chain or belt transmission, torque limiter, gear motor wheel and screws
6. Compacting press RB30S (briquettes of diameter 50mm). Composed of 1 double acting cylinder diameter 32mm mini, 1 cylinder of compaction diameter around 100mm and 1 restraint cylinder of briquettes of single effect - 4 inductive sensors of limit switch
7. Briquettes output equipped with length strength meter
8. Included accessories: Spare parts supplied (1 belt, 1 chain, 1 set of bearings) and faulty equipment provided (for diagnostic and corrective maintenance: 1 hydraulic distributor, 1 pressure limiter, 1 hopper level sensor), 1 ASI bus parameterization pocket

# MMH104



## Services required

- Electrical supply : 400 Vac – 50 Hz – 25 A
- Electrical network : 3 phase(s) + Neutral + Earth.
- Dimensions: (LxWxH mm): 2880 x 1650 x 1805
- weight (Kg): 700

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine

## Documentation

- User's manual
- Pedagogical manual
- Technical documentation of the components
- Lab exercises
- Configuration files (PLC, controller)
- Certificate of conformity CE