UNIVERZA V LJUBLJANI | BF Biotehniška fakulteta

TECHNICAL SPECIFICATION

The equipment offered must meet the minimum technical specifications or better.

Automatically Operated Hydraulic Benchtop Laboratory Platen Press

1. General Characteristics and Capacity

Parameter	Specification
Type of Equipment	Automatically operated hydraulic laboratory platen press
Construction	Rigid 2-column frame design with high platen parallelism (less than 0.1 mm).
Closing Force	Maximum closing force of at least 300 kN.
Daylight and Cylinder Stroke	Daylight opening and cylinder stroke of at least 175 mm.
Hydraulic System	Integrated hydraulic unit with a double-acting cylinder, featuring a low-pressure oil supply for closing, a high-pressure supply for pressure increase, and an overload relief valve.
Form	The press can be set up on a custom table or laboratory counter.

2. Press Platens and Heating/Cooling

Parameter	Specification
Platens	2 electrically heated aluminum platens with dimensions of 250 × 250 mm and a precision-machined flat surface.
Temperature Range	Maximum platen temperature of at least 300 °C, equipped with integrated thermocouples (Fe-CuNi).
Cooling	Integrated automatic water cooling of the press platens controlled via electric valves, including a system for removing cooling water from the channels using compressed air, along with all necessary water and air connections.
Additional protection for pressing plates	chromated backing platen

3. Control System and Software

Parameter	Specification
Display and Control	Advanced control system with a color 15-inch touch panel for comprehensive control of temperature, pressure, and process cycles.

Closing Precision	Integrated frequency controller to precisely regulate the speed during the final closing phase.
Control Functions	Temperature and pressure control, heating and cooling ramp functions, pressureless preheating, and graphical representation of the process.
Venting & Degassing	Automatic venting/degassing cycle capability (1 to 99 cycles with intermediate press opening).
Data Management	Storage more than 900 preset programs (recipes), data recording with USB export options, and different user access levels.

4. Safety and Power Supply

Parameter	Specification
Safety Features	Safety cage with a protective shield, an emergency stop system, and an upstroke design with a fixed upper platen.
Electrical Requirements	Mains voltage of 230 VAC, 50 Hz, 16 A.

5. Standards, Certifications, and Scope of Delivery

Parameter	Specification
Compliance & Certificates	The equipment must comply with European Directives (Machinery Directive 2006/42/EC, EMC Directive 2014/30/EU, Low Voltage Directive 2014/35/EU) and hold a CE certification.
Documentation	Included instruction and service manual in accordance with regulatory requirements, as well as relevant test certificates.