

HB100 TABLET COMPACTION SIMULATOR WITH CONTAINMENT

The HB100 is the world leading compaction simulator with containment and is the simulator of choice for many European, American, and Asian pharmaceutical companies. Containment is now routinely specified for improved operator safety levels. Extensive testing options are provided.



HB100 Compaction Simulator (shown with optional RTP Ports and gloves fitted)

Machine Features

The HB100 is a high-speed servo-hydraulic tablet development press. It is used to simulate production presses at up to 1m/s punch speeds (e.g. Korsch XL800 at 100rpm). It can be specified with 50kN or 100kN dynamic capacity and up to 130kN at slower speeds. It accommodates all standard tooling formats.

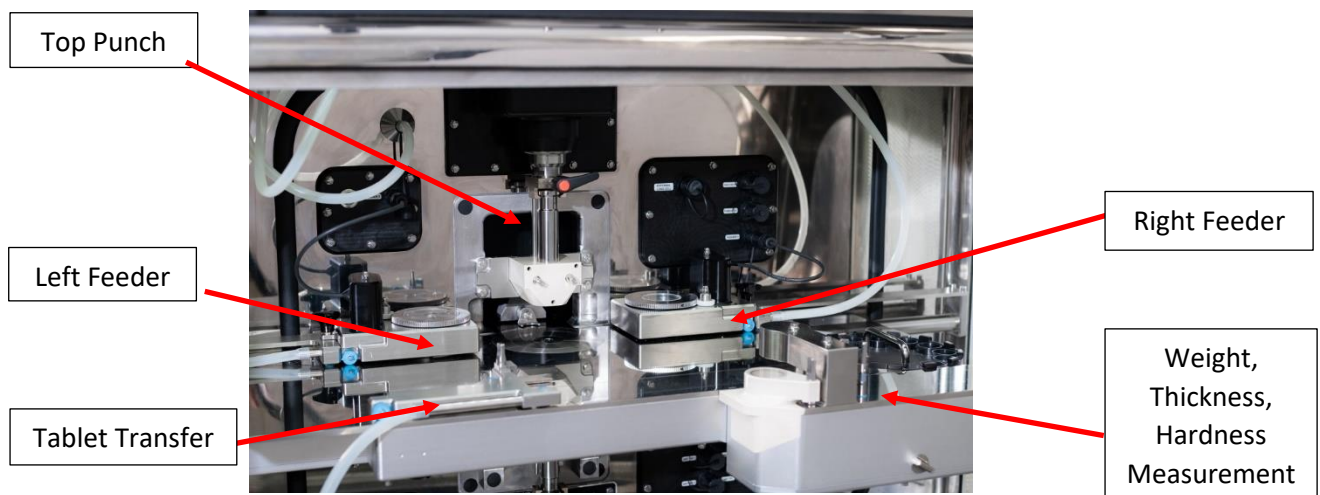
- Fully integrated machine with containment, hydraulic, cooling and control systems
- Flexible tooling system for deep dies, micro-tablets, multi-tips etc
- Up to three programmable feeders may be specified for multi-layer, dry encapsulation or die lubrication options
- On-board tablet weight, thickness and breaking strength measurement options
- Vacuum system with integrated filters and cyclone for powder recovery
- Meets all required European and North American safety and build standards

Containment

Containment to level OEB 5 with fast transfer ports or continuous liners fitted. Containment to OEB 4 with ventilated transfer boxes. Factory tested for performance.

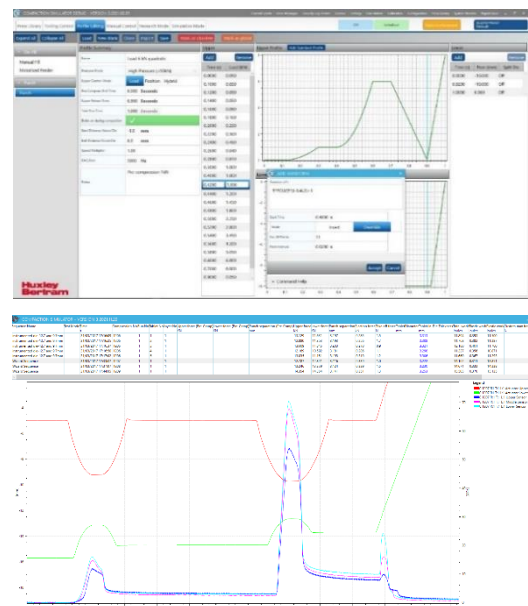
- Separate control system for control, monitoring and test of the containment
- Use with or without gloves depending on the level of containment required. A high air-flow mode allows work with up to OEB 3 compounds with the gloves removed
- Solvent level alarm for cleaning safety with Glove test and leak protection system
- The system is designed to meet the Class 3 requirements of an isolator to ISO 14644-7 and ISO 10648-2
- Convenient “push-push” containment filter change-over

View of HB100 operational area



Powder Compaction Software

- Simulation Mode for easy operation using a library of production presses and roller compactors
- Research Mode for fully flexible test sequence building
- Load or position-controlled tests
- Simulation of GEA load relieving presses
- Compatible with electronic lab notes systems
- Full data security and user action logging
- Data exported in user friendly format
- Comprehensive data analysis functions
- Press Library editing function.
- Set-up data is stored in a secure database
- Easy test set-up screens for most accessories



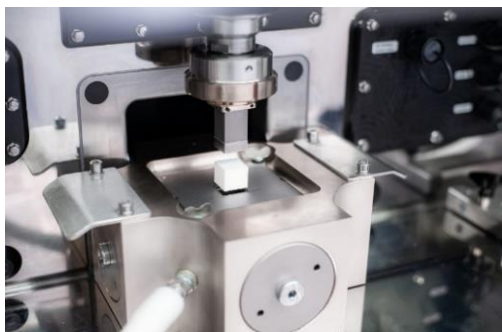
Example options available:

1: Tablet Test Module: To measure weight and tablet stiffness (TTM)



- Easy to remove system for cleaning
- Fully operated from control screen
- Capable of weight, thickness and breaking strength measurement

2: Heistand testing: tri-axial decompression and materials data test fixtures



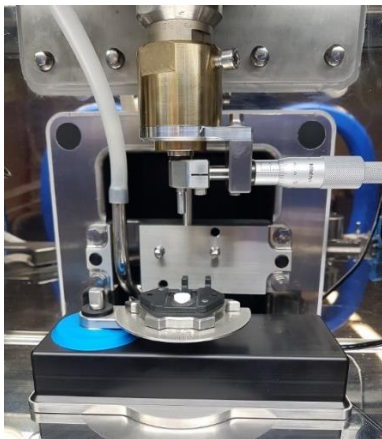
- Specific fixtures to allow the measurement of materials data without the cracking caused by uni-axial decompression and ejection

3: Pressure instrumented dies:



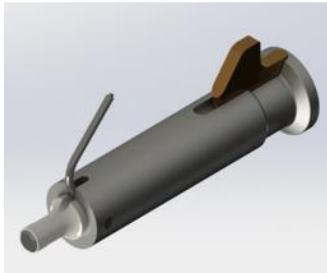
- Pressure sensors on the die wall measure compaction properties and optimise lubricant levels
- Effects of temperature can also be studied – as shown

4: Vickers Indentation Test:



- A specific fixture to allow the Tablet to be tested with a calibrated indentation
- Micrometer to adjust the centre from offset
- Bottom pad to allow for rotation and circumferential indents to the tablet

5: Adhesion Punch



- An instrumented punch to measure the adhesion force between the Upper punch and the tablet
- Removable tip may be weighed for accumulation measurement

Further instrumented tooling and fixtures are available

Information is available on request.

Performance Data

Double Ended Rated Force:	50kN or 130kN
Max Rated Punch Speed:	1000mm/s each actuator
Dwell Time:	< 1ms using V profiles
Data Acquisition:	100kHz per channel simultaneous
Position Resolution:	1 micron
Force Resolution:	< 1N – multi range amplifier
Cycle Rate (single layer):	8 tablets per minute, automatic fill

Services

3phase: Hydraulic pump: 380-480V , 50/60Hz
3phase: Containment: 380-480v , 50/60Hz,
1 phase: Vacuum pump: 240/110v , 1 phase, 50/60Hz
1 phase: Cabinet; control computer: 240/110v, 1 phase, 50/60 Hz
Vacuum provided by: external source.
Hydraulic pump 280 Bar, low heat generation, separate cooling circuit with quiet air cooling.
Hydraulic oil: Mobil: DTE-25 : 75 Litres.
Compressed Air: 6 bar: – minimal flow required.
Extraction thimble to suit installation.

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