

Gamlen® R500
RESEARCH

Gamlen® R500 Powder Compaction Analyzer

Tableting research and development system
for scientists in industry and academia

- Quickly compare materials and formulations
- Ideal for teaching labs
- Measures compaction, ejection and fracture profiles for every tablet
- Test small quantities of material down to 10 mg
- Simple to operate
- Study lubrication behaviour and investigate tableting problems
- Produce multi-layer and dry coated tablets
- Compaction data automatically exported to Excel
- Upgradeable to Gamlen® D series



YOUR
USP<1062>
TESTING
PARTNER

Gamlen®
Instruments
Helping you make better tablets™

Laboratory instrument with a wide range of applications

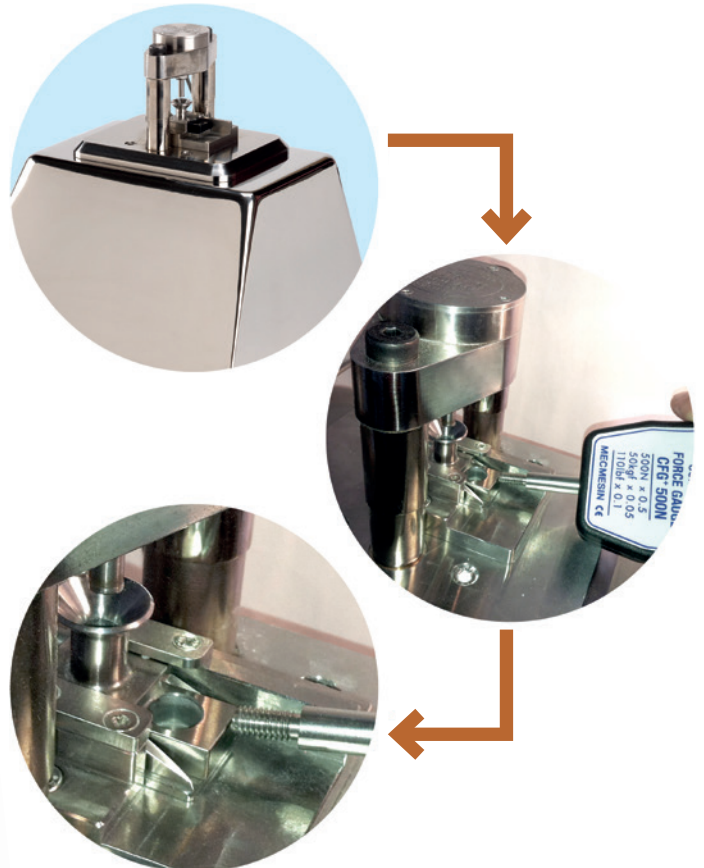
Gamlen® R-500 a major breakthrough in pharmaceuticals research and teaching

Using the Gamlen® R500, the user can quickly see the difference in the compressibility and lubrication properties of different excipients, processes and formulations. This makes it ideal for both teaching and research. Features and benefits include:

- Assesses manufacturability and lubricity of production or clinical trial material before committing it to the tablet press.
- Measures all key parameters of the compaction process.
- Simple to use with unique measurement capabilities.
- Suitable for undergraduate use and postgraduate research as well as industrial research.
- Integrated system for the study of powders and tablets - used for tablet compaction AND fracture.
- The only instrumented laboratory compaction system with data capture suitable for student use.

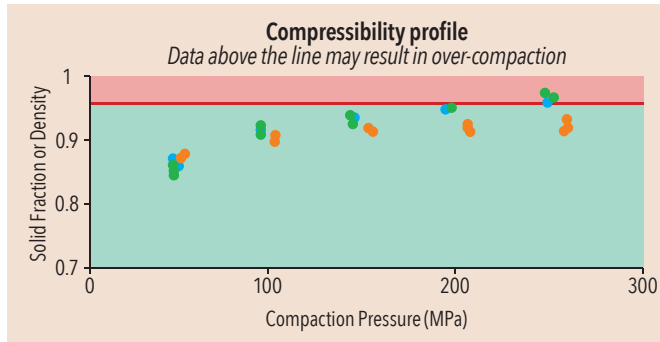


Take-off force measurement on the **Gamlen® R500 (Research)**

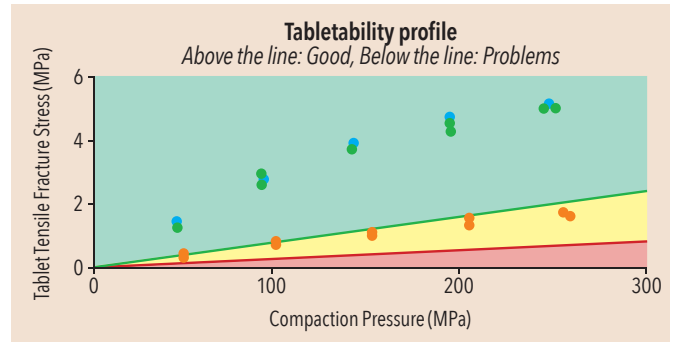


Supplied with the Gamlen® Dashboard Software

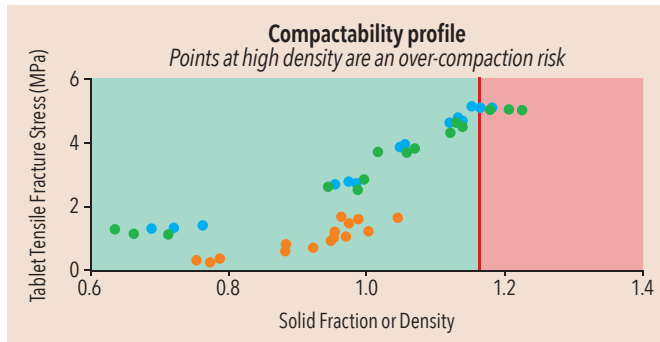
The Gamlen® Dashboard offers a complete analytical system for measuring all tablet Critical Quality Attributes including the tests set out in USP<1062> Tablet Compaction Characterization. The system also reports other important parameters for compaction including elastic recovery, and the ejection stress/tablet strength profile.



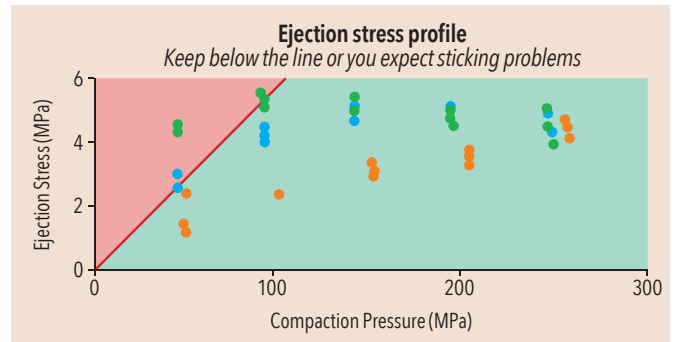
Compressibility describes how tablet solid fraction changes with compaction pressure. High solid fraction values hinder water penetration reducing dissolution rate.



Tabletability is the dependence of tablet strength on compaction pressure. We maximise tabletability to produce a robust tablet which will withstand handling.



Compactability is the effect of solid fraction on tablet strength. We have to balance these properties to have strong tablets without over-compaction.



Ejection stress is a measure of how well lubricated the formulation is. Poor lubrication results in tablet defects picking, sticking and capping.

KEY • Batch A • Batch B • Batch C Good Borderline Bad

Computer controlled for detailed analysis

The revolutionary Gamlen® R series provides precise data that is automatically captured and recorded in excel.



We recommend using the Gampette™ to dispense accurate quantities (better than 2%) of powder into the die reproducibly.

The Gampette™ is a hand held powder pipette that accurately dispenses solids, comprising a dispensing handle and a controller unit. Tip sizes are available to accommodate a wide range of powder volumes. Powder is drawn into the pipette tip in the handle under vacuum and then expelled under light positive pressure.



What pharmaceutical scientists are saying about the Gamlen® R500

"One of the problems in creating the course is designing an experiment that will deliver reproducible results so that the students can generate models from the data.

During trialling, we quickly found that the Gamlen® R series generated consistent results and allowed control of variables which made the Gamlen® R series an ideal tool to teach the important course principles.

Experiments were conducted repeatedly over the two consecutive days of the course and were found to generate the same data. To get our course objectives across, it was imperative that we could rely on the experiment to work and the Gamlen® Tablet Press gave us that reproducibility. If errors occurred, something had gone wrong in the experiment itself i.e. errors were errors - not random noise in the data. This was important as it supported the material we were teaching." **Professor Patrick Steel, Durham University.**

"We were impressed with the way the Gamlen® R series could simulate a number of conditions that real tablet production involves, without requiring high volumes. For a teaching environment, we need to be able to manufacture small batches, at high frequency and by various different users and this machine has been able to meet these needs." **Dr Daryl Williams, Imperial College London.**

"The Gamlen® R series allows you to understand the relationship between the properties of substances, the composition of a formulation and the manufacturing process. Another useful Gamlen® R series feature is that it allows determination of tablet hardness across a range of sizes. With this information, the production process can be optimised easily and faster whilst using only small amounts of material." **Professor Sznitowska, The Department of Applied Pharmacy, Medical University of Gdansk, Poland.**



GAMLEN® R500 SPECIFICATION

Maximum load: 50 or 500 kg

Load resolution: 0.01 kg or 0.1 kg

Minimum detectable fracture load: 3 kg (adjustable)

Width between pillars: 60 mm

Load Cell travel: 30 mm

Test Height: Depends on pillar extension length

Load indication: Maximum extension of 300 mm

Inputs & Outputs: Via PC software

Test Speed Range: USB interface Load cell

High down and return speed: 0.1 - 60 mm/min

Calibration: 60 mm/min

Power requirements: Dead weights in kg or proving ring. 110/120 VAC 1.6 A or 220/240 VAC, 3.15 A (External selection via fuse holder)

Machine dimensions: 310 x 270 x 375 mm

Machine weight (without accessories): 16 kg

Shipping size: 390 x 350 x 390 or 460 x 430 x 480 mm

Shipping weight approx: 20 kg

Have a question? Like a quotation? Want to see a demonstration?
Then email michael.gamlen@gamlentableting.com or call us now on **+44 115 912 4271**

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