Cold Compression Strength Test Machine

LT-M0100 | Crushing load determination for iron ore pellets

Automatic feeding • Controlled loading • Statistical evaluation



10 kN

MAXIMUM TEST CAPACITY

8–12 mm

PELLET SIZE

ISO 4700 • ASTM E382 • IS 8625

Loading System and Controls

Column frame, compression platens and touchscreen control unit

Applies a compressive load to individual iron ore pellets and records the peak load at fracture. LT-M0100 supports manual and fully automatic operation.

LOADING AREA

The pellet is compressed between the platens under controlled loading.

COLUMN FRAME

The columns form the supporting structure around the loading area.



FRONT CONTROLS

UP, STOP and DOWN buttons and an emergency stop are on the front panel.

7-inch TFT PLC

The touchscreen control unit displays test settings, load values and graphs.



Compression platens and pellet test area



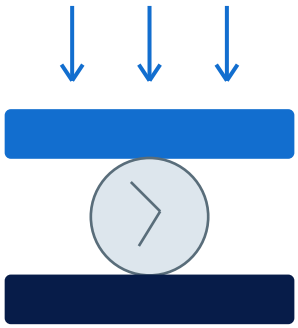
Front controls and emergency stop

LT-M0100

Automatic Test Cycle

Pellet feeding, controlled compression, load recording and automatic cleaning

COMPRESSIVE LOAD



8–12 mm

PELLET SIZE

Maximum Test Capacity

10 kN

Compression Speeds

5 / 10 / 15 / 20

mm/min

Test Batch

60–1000

pellets

Approach and return movements run faster than test compression. The crushing load is recorded separately for each pellet.

Batch Test Workflow

01

Feed Pellet

The vibratory feeder transfers pellets to the test area one at a time.

02

Apply Load

Compression runs at the selected speed to determine the crushing load.

03

Record Result

Each pellet's peak load enters the test batch evaluation.

04

Clear Test Area

An encoder-controlled stepper motor and air jets remove broken fragments.

Control, Software and Statistics

Test management and result evaluation from the panel or a computer



7-inch TFT touchscreen PLC control unit

Panel Control

Monitor test settings, load values and graphs.

Computer Control

Manage the test process and results from a computer.

Data and Output

Archive results, display graphs and print reports.

Statistical Evaluation

Minimum

Lowest crushing load in the test batch.

Maximum

Highest crushing load in the test batch.

Mean

Average crushing load for the test batch.

Standard Deviation

Shows the spread of results around the mean.

Coefficient of Variation

Expresses standard deviation relative to the mean as a percentage.

Manual Mode

The operator moves the compression platen to determine the pellet crushing load.

Fully Automatic Mode

The system completes the test according to the defined load and test settings.

LT-M0100

Technical Specifications

LT-M0100 • Capacity, pellet size, test speed and control system

Technical Specification	Value
Product Code	LT-M0100
Product Name	Cold Compression Strength Test Machine
Maximum Test Capacity	10 kN
Pellet Size	8–12 mm
Compression Speed	5 / 10 / 15 / 20 mm/min
Test Batch	60–1000 pellets
Control Screen	7-inch TFT touchscreen PLC
Operating Modes	Manual / fully automatic
Load Display Range	0.1–1000 kg
Pellet Feeding	Automatic vibratory feeding
Test Area Cleaning	Air jet system
Approximate Weight	300 kg

Standard References

ISO 4700

ASTM E382

IS 8625

Sample Ejection

An encoder-controlled stepper motor removes the tested pellet from the working area.

Electrical Calibration

An electrical calibration system supports periodic checks of the load cell.