

Gyratory Compactor



CRT-GYR

A high quality research level machine to provide accurate, reliable and repeatable results

Gyratory compaction is considered to be one of the best methods of laboratory compaction for the assessment of compactibility and the manufacture of test specimens. Compaction is achieved by the application of a vertical stress (normally 600KPa) via end platens to a known mass of asphaltic mixture within a 100 or 150mm internal Ø mould. The longitudinal axis of the mould is rotated (gyrated) at a fixed angle to the vertical whilst the platens are kept parallel and horizontal. During compaction the height of the sample is automatically measured and both the mixture density and void content calculated. The compaction data is shown on-screen in a graphical and tabular format as compaction progresses and it is also saved as a Microsoft Excel™ compatible format. The operator can choose whether to compact for a certain number of gyrations or until a target mixture density or void content is achieved.

Standards

- EN 12697 - 31
- ASTM D6925
- AASHTO T312
- TEX 241-F

Key Features

- High precision rigid frame
- Manual angle adjustment
- Transparent door with safety interlock
- Automatic mould lifting
- Integrated specimen extruder
- Shear force measurement
- Temperature measurement
- Automatic mould insertion and retraction on side table which allows cooling time before extraction without loss of compaction time (especially important for rubberized asphalt)
- 150mm and 100mm internal Ø moulds can be tested without changing parts
- Cold mix (emulsion) materials can be compacted and the expelled fluid collected
- Ethernet connection for data acquisition and control system
- User friendly LabVIEW™ software displays results in real time
- ILAC recognised traceable calibration
- Remote support service available

- Proudly made in Britain

Key Uses

- Compaction of asphaltic paving material to a target mixture density or void content
- Assessment of mixture compactibility
- SHRP Superpave asphalt mixture design
- Preparation of cylindrical test specimens

Software

- User friendly, intuitive and reliable Windows™ software developed using LabVIEW™
- Software allows 3 methods of compaction – no. of gyrations, height and target density
- The operator is guided through every step of the compaction
- Real-time display and report of current height, density and void content (percentage)
- Data is recorded to disk at regular intervals for further analysis
- Utilities are included for transducer check, diagnostic routines and calibration

Accessories

Accessories are not included in the price of main device (unless stated otherwise) and may be purchased separately if required.

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|------------------|--|
| CRT-GYR-RUB | Gyro Accessories for rubber Asphalt |
| CRT-GYRMS-100 | 100mm Internal Ø mould & platens, slotted for emulsion mix |
| CRT-GYRMS-150 | 150mm Internal Ø mould & platens, slotted for emulsion mix |
| CRT-GYRCFP-100 | 100mm circle filter papers (pack of 100) |
| CRT-GYRCFP-150 | 150mm circle filter papers (pack of 100) |
| CRT-GYR-LH | Lift Handle for Lightweight Gyro Moulds |
| CRT-GYR-SP100_63 | Spacer 100mm to compact 63mm height on CRT-GYR |
| CRT-GYR-SP150_63 | Spacer 150mm to compact 63mm height on CRT-GYR |
| CRT-GYR-CALANG | Calibration Kit |

Specifications

Technical specifications are subject to change without notice.

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|-----------------------------------|-----------------------------|
| Speed r.p.m | 0 to 30 (adjustable) |
| Number of gyrations | 0 to 999 |
| Actuator stroke mm | 250 |
| Internal Angle of Gyration | 0.2 to 2° |
| Compressed Air | 7-10 bar @ 350 L/min |
| Specimen Ø | 100 mm and 150 mm |
| Max sample height | 300 mm |
| Min sample height | 50 mm |
| Mould height | 340 mm |
| Mixtures | Wet or dry |
| Electrical Supply ¹ | 220-240 Volts 50/60Hz @ 16A |
| Dimension mm (WxDxH) | 780 x 1000 x 1920 |
| Working space required mm (WxDxH) | 2000 x 2000 x 2200 |
| Estimated Weight Kg | 508 |
| PC | Included |

¹ others available upon request

Calibration & Maintenance

Calibration, Annual Service and Maintenance Contracts are available for this device. Please enquire for further details. Note: This device should be checked and calibrated annually.