



Marshall Stability Test Machine 50kN, Digimatic

Marshall Stability Test Machine is used to measure the resistance of asphalt mixtures to deformation under load which determines the design and evaluation of asphalt pavements. The test to determine Marshall Stability involves compacting a cylindrical sample of asphalt mixture and then subjecting it to a compressive load at a controlled rate and temperature. The maximum load sustained by the sample before failure, along with other parameters such as flow, deformation, and density, are used to assess the quality and suitability of the asphalt mix for its intended application in road construction.

Digimatic Marshall Stability Test Machine automated the procedures of conducting Marshall Stability tests on asphalt samples. Instead of manual operation, where the process required human power to manually operate the machine and record the result from proving ring gauges. Automatic Marshall Stability eliminates all the manual procedures with just a basic setup and directly shows the result after the test is completed. This ensures greater accuracy, repeatability, and efficiency in conducting these tests.

The Digimatic Marshall Stability Test Machine comes with a newly invented bench mounting type machine, with a rigid and compact design compared with the previous model. By using a DC motorized drive system to achieve more reliable and high-accuracy results.

TECHNICAL PARAMETERS

Capacity	50 kN
Testing Speed	50.8 mm/minutes
Cross Head Travel	70 mm
Transducer Sensor	

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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Vertical Clearance	270 mm
Horizontal Clearance	285 mm
Product Dimension	460 (L) x 420 (W) x 800 (H) mm
Approx. Product Weight	75 kg
Power	220 ~ 240 V, 6 Amp, 50 / 60 Hz, 1 ph, 600 W

Test Procedure of Motorized Marshall Stability Compression Tester 50kN

- 1. Material Preparation:** Create the asphalt mix in the laboratory. Mould the mix into cylindrical specimens using Marshall moulds.
- 2. Compaction:** Use a Marshall hammer to compact the specimens (around 75 blows on each side). Ensure even compaction.
- 3. Curing:** Let the compacted specimens cool and cure for about 24 hours.
- 4. Testing:** Place the cured specimen in the Marshall stability test machine. Apply a load until the specimen breaks or reaches maximum load. Record the maximum load sustained (Marshall stability) and the corresponding deformation.
- 5. Data Analysis:** Calculate the flow, which is the horizontal movement at maximum load. Note any other specified parameters
- 6. Quality Check:** Compare results with design criteria and quality control limits. Ensure the asphalt mix meets the required standards.
- 7. Documentation:** Document test details, including specimen information, testing conditions, and results.

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