



ELECTROMECHANICAL LARGE SHEAR SYSTEM

Standard : ASTM D3080, ASTM D6243, EN ISO 12957

Shear Testing Machines

The NL Electromechanical Large Shear System is an advanced electromechanical frame designed specifically for performing direct and residual shear tests. It is engineered to accommodate large-sized samples, making it ideal for testing coarse or medium-grained soils such as gravel. The machine features a 300x300 mm stainless steel shear box designed to capture the shear strength of the sample rather than just individual particles.

The machine integrates seamlessly with dedicated computer software to manage the test sequence and automatically obtain results. To improve laboratory ergonomics, it features an innovative upper plate lifting system with a locking joint to maintain load axiality and facilitate easy specimen handling.

Features:-

1. Fully automatic test management & data recording from consolidation to failure.
2. Load application is driven by precision electromechanical actuators for both vertical and horizontal axes.
3. Provides high load capacity for a maximum vertical and horizontal load of 100 kN.
4. Flexible software-driven control with test sequences easily configured and controlled via computer software, which also handles data acquisition and result processing.
5. Enhanced safety and access that features an upper tilting plate and lifting device to facilitate safe specimen insertion and removal.
6. Stresses are monitored by two 100 kN electronic load cells to ensure accurate data for both horizontal force and vertical pressure.
7. High rigid frame built with a robust, heavy-duty structure to ensure maximum stability and consistent test results by minimizing frame deflection under high loads.

Technical Specifications :

Model Number	NL 5052 X / 008
Sample Size	300 x 300 x 150 mm
Max. Vertical Load	100 kN
Max. Horizontal Load	100 kN
Speed Range	0.00001 - 9.99999 mm/min
Horizontal Travel	75 mm
Dimensions	1450 (L) x 1650 (W) x 780 (H) mm
Approx. Weight	745 kg
Power Supply	220~240 V, 2 kW, 1 Ph, 50/60 Hz

Unit Consists Of :

Model Number	Parts Description	Qty
NL 5052 X / 008 – P001	300mm Square Complete Shearbox Assembly for 150mm Thick Sample	1 set
NL 5052 X / 008 – P002	100kN Load Cells (2 units) for Vertical & Horizontal Load Measurement	2 unit
NL 5052 X / 008 – P003	Digital Gauges 25 x 0.001mm (2 units) for Vertical & Horizontal Displacement Measurement c/w COM Cable	2 unit
TT 6ST – PC1	Desktop Computer Unit c/w Shear Test Software	1 set

*1 Copy of Manual Instruction



Desktop Computer Unit