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Mechanical Load Tester

Description

Mechanical Load Tester is our most advanced test stand to simulate static and dynamic loads on modules and collectors. Twenty-four pneumatic cylinders with vacuum suction cups exert both compressive and tensile loads on the test sample, while reducing local mechanical stress points. The Mechanical Load Tester is a reliability test stand for quality and product development testing. It offers a high degree of operational ease and flexibility. A high total exertable force allows product development with testing to failure.

Features

- Reduced local mechanical stress on test unit through a high number of 24 suction cups
- Fast and precise configuration of the cylinder array with mechanical coupling of the cylinders
- Practical and ergonomic test setup through crank handles and scissor mechanisms
- Fast adjustment for testing units of different sizes with sliding cross bars and quick release levers
- High precision load measurement using sophisticated design of the force measuring frame
- Static and dynamic load testing according to common international standards
- Testing to failure through applicable forces up to +27 kN / -22 kN
- Highly accurate deflection-measurement of the unit under test by optical distance sensors.
- Electrical continuity measurement for PV modules available

Technical Specifications

Test Area	2.25 m × 1.5 m
Simultaneous Testing Capacity	1
Number of Pneumatic Cylinders	24
Number of Suction Cups at One Piston	1 (optional 4)
Maximum Total Exertable Force with All Cylinders	•Push +27,720 N •Pull -22,200 N
Corresponding Maximum Pressure Load (on 2 m^2)	•Push +13,860 Pa •Pull -11,100 Pa
Load Cycle Frequency	0.1 Hz (optional 1 Hz)
Number of Deflection Sensors	1 (optional 8)
Relevant Standards	IEC 61215, IEC 61646, IEC 62782, UL 1703, ISO 9806, EN 12975