



rycobel

Transport simulation

rycobel

Since 1950, Rycobel has been offering solutions to problems that occur in many industrial sectors. Rycobel is made up of 3 departments:

- » Laboratory test equipment for quality control
- » Optimisation of production processes
- » Own service department

Mission: bringing competitive advantage

Rycobel brings competitive advantage by supplying and maintaining equipment to measure and improve product characteristics.

Loyal to its mission, Rycobel strives to close partnerships that offers customers an absolute added value. The goal of Rycobel is to think together with the customer about the business or technical need and propose the adequate solution to bring competitive advantage.

ISO certification

Since its foundation, Rycobel has stood for quality. This quality has been awarded the ISO 9001 and ISO 17025 quality label.

In addition to a professional service with sustainable added value, Rycobel also offers after-sales service. Being ISO certified means: quality in advice and service with fast and accurate interventions.

Values: the heart of our compeny

- » Integrity
 - » Experience
 - » Engagement
 - » Teamwork
 - » Helpful
- 

Shocks and vibrations

Shocks and vibrations during transport can damage the product and its packaging. Especially low frequencies can cause parts of the product to vibrate in resonance and break down. Often, the damage is not immediately visible on the outside of the product. A vibration table can simulate vibrations and test both the product and the packaging.

Package Shaker

APPLICATION

- » Repetitive shocks

MOTION

- » Vertical-Linear
- » Circular-Synchronous
- » Circular 30°

TECHNICAL

- » 2 sizes available:
 - 183 x 157 x 155 cm
 - 213 x 191 x 244 cm
- » Table size 122 cm / 152 cm
- » Total weight 590 kg / 1157 kg
- » Test capacity 181 kg / 909 kg

The Package Shakers are used to check the resistance to repetitive shocks. They conform to standards such as ISTA, ASTM, TAPPI, ISO, MIL-STD and UN. Depending on the model, single packages to large pallets can be tested.

With this package shaker, a lab simulation is made of what can happen during transport. The device shakes small packages and keeps them in place by means of adjustable clamps. The platform on which the package is placed makes a vertical or circular movement with an amplitude of 2.45 cm.

It is thus possible to simulate shocks that repeat themselves over and over again at a frequency of up to 5 Hz. By changing the frequency, it is possible to ensure that the package is released from the base plate after each cycle so that it receives the maximum shock.



Vibration testers

APPLICATION

- » Vibration

MOTION

- » Hydraulic vibrations

TECHNICAL

- » 14 models available
- » Frequency range:
from 1 - 100 Hz up to 1 - 500 Hz
- » Test capacity:
from 34 kg to 3628 kg

The vibration systems can be used for various tests. Both small products and large pallets can be tested. The systems are equipped with robust hydraulic actuators that can generate vibration frequencies of 3 to 300 Hz. Some models can even generate vibration frequencies up to 1000 Hz. The control is done with the 'Touchtest' vibration control system.



Software

APPLICATION

- » Control of vibration testers

POWER SUPPLY

- » 220 V AC

TECHNICAL

- » Simple Windows operation
- » Possible for network integration
- » System station or table top model
- » Integrated Servo Controller
- » One Touch start
- » 8 channels for control response

The Lansmont TouchTest vibration control system is a powerful computer-based data analysis and data logging system and helps to control vibration tables. The main application is the 'SystemStation' which contains the computer, the printer, the interface electronics and the LCD touch screen. The high resolution touch screen combined with the Lansmont TouchTest windows software replaces the old buttons, keys and switches.



Shock test systems

APPLICATION

- » Shock absorption

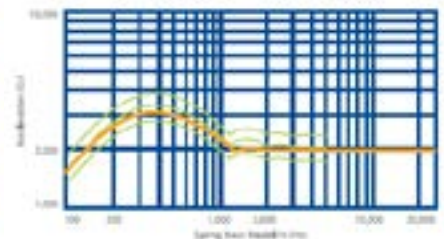
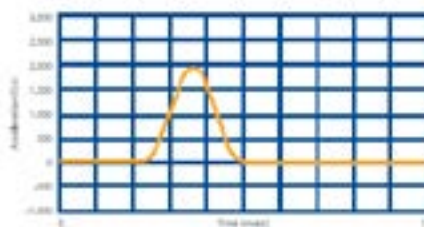
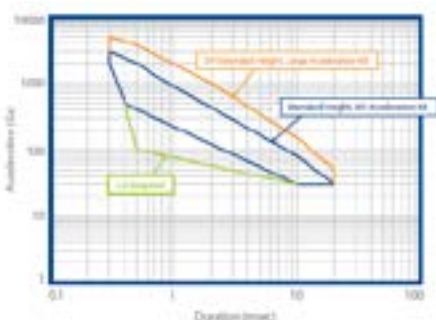
MOTION

- » Shock pulses

TECHNICAL

- » Depends on the model

Shock tests are used to measure the fragility of materials. By imposing half-sinusoidal, trapezoidal shocks, one can simulate the various effects. These devices are also used to determine the quality of packaging materials, the so-called 'Cushioning' curves. The control is done via the Touchtest Shock control system that guarantees full control of all parameters. The software offers various possibilities, such as the 'Shock pulse predictor' and the automatic repetition of shocks.



Drop tests

Dropping packages during transport can cause major damage to the product. By carrying out a drop test, the product itself or the protective function of the packaging is evaluated.

PDT DROP TEST 80 & 80 M

APPLICATION

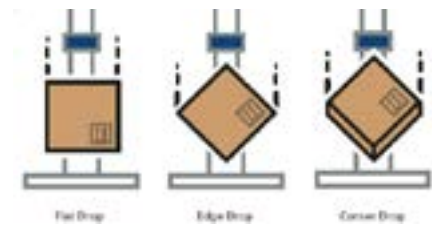
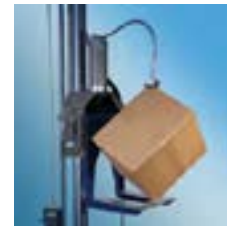
- » Drop and impact

MOTION

- » Gravity

TECHNICAL

- » Test capacity
0 - 68 kg or 0 - 80 kg
- » Maximum item size:
from 61 cm to 91,5 cm
- » Drop heights:
from 2,5 cm to 183 cm
Extended range possible



PDT DROP TEST 300 & 700

APPLICATION

- » Drop and impact

MOTION

- » Gravity

TECHNICAL

- » Test capacity: 700 kg
- » Maximum item size: 202 cm x 202 cm
- » Drop heights: 2,5 tot 122 cm

The PDT 300 drop test is designed to test large packages or palletised products up to 300 kg.

The PDT 700 drop test is designed to test very large products and packages of up to 700 kg. The load platform is raised and lowered by an electric hoist. During the test, the platform makes it possible to subject the products to a free fall. The rebound of this supporting surface is prevented by a hydraulic damper.



QR 3000 Quick Release Drop Tester

APPLICATION

- » Drop and impact

MOTION

- » Gravity
- » Own lifting system

TECHNICAL

- » Test capacity: 11 - 1361 kg
- » Falling heights:
height of the selected lifting system

The QR 3000 is a Quick Release Drop Tester designed to drop larger, bulkier test items than the PDT models. The QR 3000 can accommodate loads weighing up to 3000 lbs. (1361 kg). Drop test height is limited only by the lifting device used by the customer (forklift, winch, etc.). The footswitch activates the QR 3000, opening the "jaws" and releasing the test item for a free fall drop test.



Impact test

APPLICATION

- » Drop and impact

MOTION

- » Gravity

TECHNICAL

- » 2 sizes available
- » Table size 152 cm / 213 cm
- » Maximum size
152 x 152 cm or 213 x 213 cm
- » Speed up to 2,1 m/sec
- » Test capacity 1814 kg / 2721 kg
- » Total weight 5669 kg / 7258 kg

The impact test is one of the most common packaging tests. In this test, parcels are placed on rails with an inclination of 10° and rolled. The impact of the shock against a steel plate, which brings the packets to a standstill, is measured. The set distance on the rails determines the impact speed.



Compression tests

During storage and transport, products, packages and materials are exposed to stacking forces. In order to make efficient and cost-effective use of the available transport and storage space, stacking is carried out as high as possible. The pressure created in this process is high. Therefore, carrying out a compression test is an essential part of packaging design.

Rycolab Compression Tester

RYCOLAB

APPLICATION

- » Compression

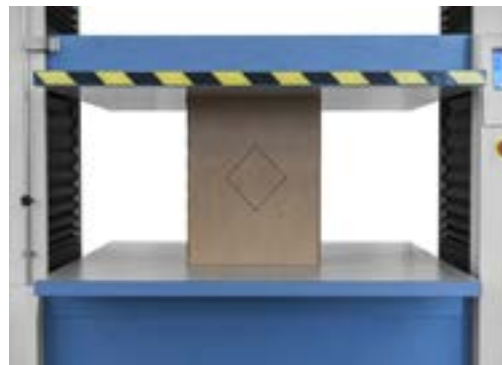
MOTION

- » Mechanical

TECHNICAL

- » Speed up to 400 mm/min
- » Max. load: 30 kN

A compression tester is used to perform compression tests on (corrugated) cardboard boxes. The corrugated cardboard or packaging to be tested is placed on the lower plate. When the test starts, the top plate will push down and a load is applied to the sample. This force is recorded by three force transducers at the bottom of the bottom plate. When the system detects a force breakpoint, the top plate returns to its original position. A constant load can also be applied and maintained for a period of time ("Constant load").



Hydraulic compression tester

APPLICATION

- » Compression

MOTION

- » Hydraulic

TECHNICAL

- » Maximum force: 222 kN
- » Maximum opening: 213 cm
- » Platen size: 152 cm x 152 cm

This series of compression testers was developed for the efficient and precise evaluation of individual packages, pallets and other materials under certain compression forces. With the software package 'Touchtest Compression 3', the compression tests are very user-friendly. The control and hydraulic technology guarantee very high accuracy and reproducibility. The sturdy design and the Lansmont technology guarantee reliable test results for years.



Stability

When transport vehicles accelerate, turn or brake, the resulting accelerations can cause the load to shift. Due to safety issues and potential damage/spillage of products, regulatory bodies require tests that are closer to reality - so that the integrity of the load is safe and stable.

TruMotion acceleration

APPLICATION

- » Acceleration, turning and braking

Our advanced simulation solution TruMotion helps you comply with regulations by bringing real-life test results directly to your laboratory.

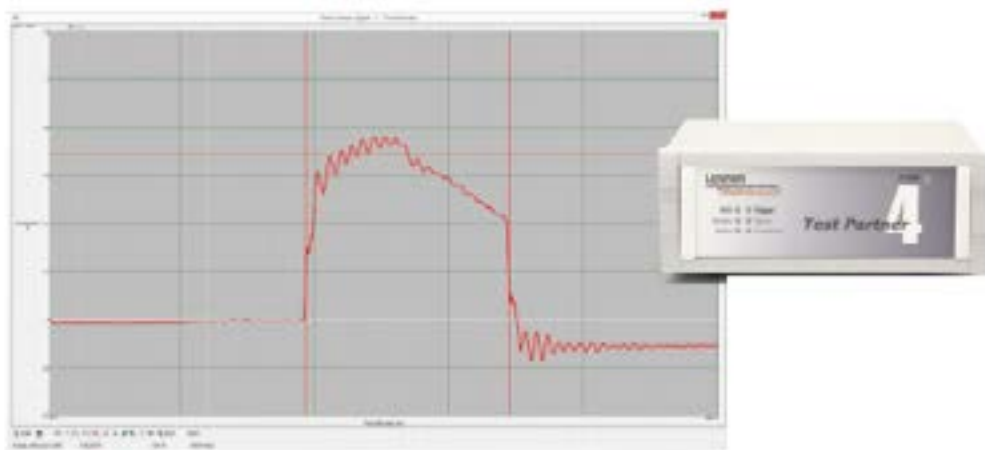
MOTION

- » Mechanical

- » Simulation of long-term, input forces (not impact) associated with vehicle acceleration, rotation and braking.
- » Question the stability and integrity of unit loads to determine if they remain stable during transport.
- » Quantify the peak displacement that occurs during the test, as well as the permanent displacement that remains after the test.
- » Meets EUMOS 40509 requirements

TECHNICAL

- » Max Payload: 1500 kg
- » Carriage Size: 1500 mm x 1500 mm
- » Max Velocity, bare carriage (m/s): 5.49 m/s
- » Max Velocity, w/ 1500 Kg payload: 2.92 m/s
- » Overall Machine Dimensions: 5790 x 1500 x 346 mm (L x B x H)

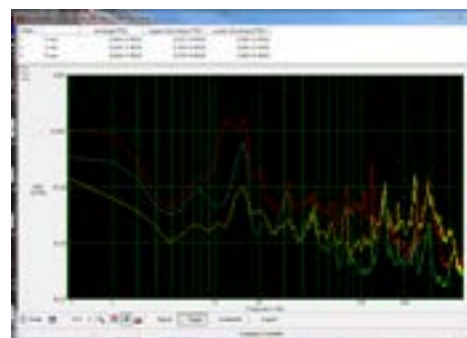
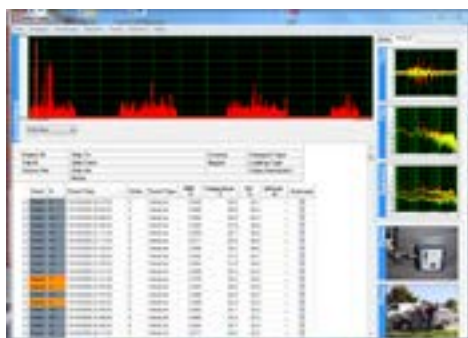


Monitoring

Of course, all devices are very nice, but what does your product have to endure in reality? You can use recorders to measure vibrations during transport motions. Or you can use a Data Acquisition system to measure (heavy) shocks, motions or impact.

Transportrecorders

The Saver™ belongs to the new generation of transport recorders. These devices are transported together with the products in order to store vibration and shock pulses. Thanks to their limited dimensions, they can be attached anywhere. By entering the date and time in advance, it is possible to locate perfectly where the product was subjected to shock or damage. Some models also have a temperature, air pressure, inclination orientation, GPS, light and humidity sensor. The included software can display and edit the data of the stored events. By reading the memory of the Saver™ directly on a Lansmont vibration system, transport in a laboratory can be simulated.



Test Partner™ 4 Shock Data Acquisition

Test Partner 4 (TP4) is Lansmont's latest generation shock data acquisition system designed to capture and analyze dynamic events. TP4 incorporates a processing engine to capture substantial amounts of dynamic data and an intuitive interface to quickly analyze data parameters. TP4 provides data acquisition via analogue and/or bridge input channels supporting a variety of voltage and Wheatstone bridge-type sensors.



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www.rycobel.com/service

Rycobel academy

We believe that through training and coaching, anyone can become an expert in his or her field of expertise. Our employees are driven professionals who want to pass on their passion and experience so that you can grow professionally and successfully achieve your goals.

We put together an experienced team of technicians and experts, each with their own field of expertise. With their strong product and market knowledge and years of experience in the industry, they are always ready with expert advice to provide you with the right equipment.



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