## **Transport simulation**











#### **ABOUT RYCOBEL: 3 DIVISIONS**

Rycobel is a dynamic and growing company located in Deerlijk, Belgium. Rycobel is made up in 3 divisions:







Measure Improve

## OUR MISSION: BRINGING COMPETITIVE ADVANTAGE

Rycobel brings competitive advantage by supplying and maintaining equipment to measure and improve product characteristics. To engage a loyality mission, the company 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

Over the past 40 years Rycobel has built up experience and knowledge in many industrial sectors.

To help reassure clients and deliver the highest levels of service, Rycobel gained the ISO 9001 & 17025 certification. This guarantees that the company has fully submitted its quality control procedures.

# OUR VALUES: THE HEART OF OUR COMPANY CULTURE

- Integrity
- Experience
- Engagement
- Teamwork
- Helpful

#### **SERVICE TEAM**

Our talented team of testing specialists and engineers work together to provide you with the best possible on-going support. Whether you need a :

- Turnkey installation with start-up
- Warranty maintenance & calibration contracts
- Maintenance for the departments 'Measure' and 'Improve'
- Full-service contract
- Calibration for your testing equipment
- Hands-on training on equipment
- Application training
- Telephone support by a product specialist specialist



Rycobel's headquarter in Deerlijk, situated in Belgium, Europe.



Shocks and vibrations can damage the product and its packaging during transport. Specific frequencies can cause vibrations until resonance and destruction of the product. Often the damage is not immediately visible to the naked eye. With a vibration table, we can simulate vibrations and thus analyze the influence on the products and their packaging.

#### **PACKAGE SHAKER**

Mechanical shakers are a low cost testing equipment option for challenging the integrity of your packaging designs. They are used to test repetitive shock resistance, according to standards ISTA, ASTM, TAPPI, ISO, MIL-STD, UN and many other standards. Depending on the model, they allow the test of small packs up to large pallets.





#### **VIBRATION SYSTEMS**

Vibration Systems are widely utilized for product and packaging evaluations in accordance with industry vibration testing specifications. Whether you are testing bare products, individual packages, full pallet loads, or much larger crated systems. The systems are equipped with powerful hydraulics that can generate vibration frequencies adjustable from 3 to 300 Hz. For some models, a frequency of 1000 Hz can be reached. The controls are performed by the 'Touchtest' vibration system.



#### **TOUCHTEST VIBRATION CONTROLLER**

The TouchTest Vibration Controller completely integrates all of the test hardware, operating controls, data analysis and reporting functions. The system can perform random vibration, Field-to-Lab® simulations, resonance search and dwell, sine sweep and repetitive bounce, all under a closed-loop computer control.

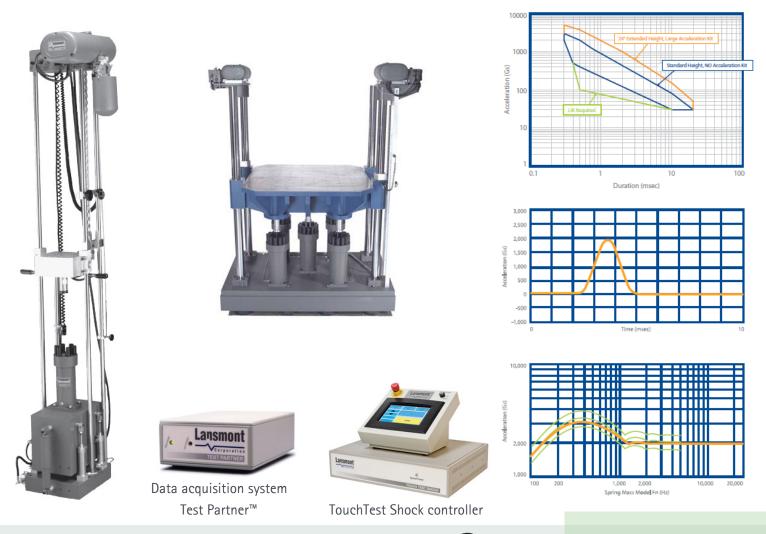




Shock tests accurately measure the fragility of products and evaluate how they respond to specific shock inputs. Small packages up to large pallets can be tested.

#### **SHOCK TESTER**

Shock tests accurately measure the fragility of products. Simulation is performed by applying shock pulse waveforms (half sine or trapezoidal) impact to these products. These devices also determine the quality of packaging materials (the so-called 'Cushioning curves'). The Lansmont TouchTest Shock controller provides total control of the Shock test system during operation. The operator controls all the test parameters. The software performs many simulations such as the shock pulse or the automatic repetition of shocks and offers many other possibilities.

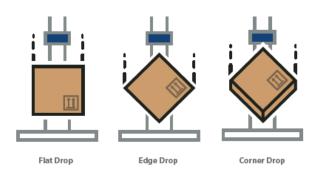




Packaging drop during transport can seriously damage the products. By carrying out drop tests, the protective effect of packaging is evaluated.

### DROP TESTERS PDT 80(M)

The PDT 80M is our low cost Precision Drop Tester model. Like the PDT80, it provides a unique combination of mechanical precision and high-velocity pneumatics for accurate measurement.





The PDT 300 & 700 accommodates drop testing applications for large products and packages such as returnable bulk containers, crated products, or palletized products weighing up to 700 kg. The drop carriage is raised and lowered by an electric hoist. During the drop test, the drop carriage is accelerated downward, allowing the test item to free fall. The rebound of the platform is avoided by a hydraulic damper.





#### QUICK RELEASE DROP TESTER QR-3000

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 1360 kg. The QR 3000 consists of a quick release mechanism, lifting ring, and foot switch. Straps used to sling the test item are attached to the lifting ring, which is placed in the QR 3000. The QR 3000 and test item are then raised to a predetermined height by a forklift, winch or other lifting device (not included). The footswitch activates the QR 3000, opening the "jaws" and releasing the test item for a free fall drop test. These jaws are automatically blocked during power failure.



#### **INCLINED IMPACT TEST SYSTEMS**

An impact test is one of the most common packaging tests. In this test, packages are placed on a rail with a slope of 10° and set rolling. The impact of the packaging against the steel plate, which brings the packages to a standstill, is measured. By adjusting the distance on the rails, the impact speed is defined.



#### TRUMOTION™ - ACCELERATION TEST SYSTEMS

Vast improvements in the quality and quantity of environmental field data now demand improvements in test methodologies (like EUMOS). Regulatory bodies require testing that's closer to reality – assuring safe and stable unit load integrity. The TruMotion<sup>™</sup> acceleration systems help to deliver regulatory compliance by bringing true-to-life test results directly into your laboratory.





Stacking forces or compression forces generated during warehouse storage and transit can generate severe damage. Box compression tests (BCT) or stacking crush tests are an essential part of the packaging design process. We offer a full range of compression test systems to determine the performance of unit loads, individual packages, components, and materials under compressive loads like boxes, cartons or tanks. This information enables the engineer to minimize damage, costs and liability due to stacking failure.

#### **BOX COMPRESSION TESTER - BCT TESTER**

The box compression tester is designed for testing compressive strength on corrugated boxes/cartons according to international standards. For finished packages, compression tests can be used to measure compressive resistance, deformation and stacking capability.





#### **COMPRESSION TEST SYSTEMS**

This range of compression test systems is specifically designed to efficiently and accurately evaluate the performance of individual packages, pallets, and unit loads under compressive forces.

The test is performed by applying a compressive force using the 'Touchtest Compression 3' software. The hydraulic control guarantees precision and a very high reproducibility. The robust design and Lansmont's technology will provide you with reliable test results for years to come.





#### **SQUEEZER**

The SQUEEZER is an easy to operate entry level compression tester that provides quick laboratory quality results. The automated test routines and the mini Touchscreen make this compression tester easy to walk up and start being productive. This system is specifically designed to quantify box performance so that the effect of various board mediums, closures and interior partitions can be compared. Production line variations can be easily benchmarked against design standards.







#### **COMPRESSION**

The Vantage<sup>NX</sup> universal testing machine is the new development in the field of traction / compression machines. It guarantees extreme accuracy of the force and elongation values. By adapting the force cell and the test tool, many tests can be performed. Specific grips and fixtures can be developed to test your materials according to your procedures.

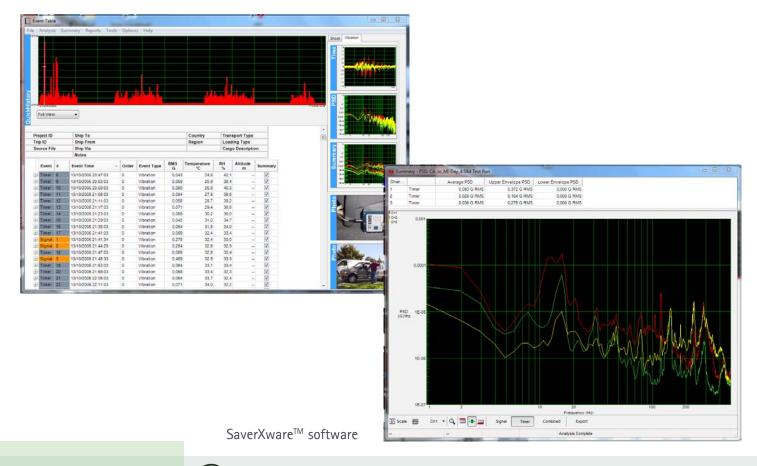




#### TRANSPORT DATA RECORDERS - SAVER™

The Saver™ is part of the latest generation of transport condition recorders. Attached to transported products, it records vibrations and shocks. Its small size allows it to be attached to any place. It is thus possible to precisely locate the place, the moment and the events produced. Some models also feature a temperature sensor, relative humidity, atmospheric pressure and light sensors. All of these parameters allow an accurate analysis of the transport environment. All devices are equipped with an alarm that indicates at a glance, the exceeding of the programmed criteria. A powerful analysis software presents in graphical form, the recorded data. The use of the data provided by the Saver™ on the Lansmont vibration system makes it possible to reproduce the transport simulation conditions in the laboratory.





### Our other divisions





- Static electricity
- Energy efficient drying and blow off
- Surface treatment
- Contactfree cleaning

www.rycobel.com/en/improve

## We help you with the best possible service.



- Installation
- Calibration
- Equipment qualification: IQ, OQ & PQ
- Analysis of your production process: static electricity and compressed air consumption
- Repair and service
- Application and training
- ISO 17025 accredited
- For all your technical or application-related questions, call our technical helpline: +32 (0) 56 78 21 79 or www.rycobel.com/en/service.

## Rycobel academy

We believe that through **training and coaching** everyone can become an expert in his or her profession of field.

Our employees are dedicated professionals who want to pass on their passion and experience to help you grow professionally and to successfully achieve your goals.

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



