

# Mecmesin

testing to perfection



Force & Torque  
Test Solutions for

# plastics

Across the globe major manufacturers working with plastics use Mecmesin test equipment to:

#### Maintain consistently high quality manufacturing...

Can you easily run product quality tests on the factory floor every few minutes? Can you provide your customers with clear evidence of best-in-class quality assurance practice?

Manufacture your plastic products to a consistently superior quality with Mecmesin

#### Minimise costs, reduce waste, and improve yields...

Could you reduce the thickness of your PET bottle without compromising its strength? Could you decrease your production cycle time by reducing the coefficient of friction of your product's surface?

Improve efficiency and effectiveness, and achieve your lean manufacturing goals with Mecmesin

#### Optimise design ...

Do you know the precise force required to pop a lid, pull a film, twist a cap or pierce a foil, push a button, flick a switch, turn a dial or tear a seam on your product?

Qualify the usability and fitness-for-purpose of your plastic product with Mecmesin

#### Conform to all relevant standards...

Can you guarantee your products meet all applicable industrial standards, year after year?

Consistently achieve regulatory compliance with Mecmesin

## Quality Testing Solutions for the Plastics Industry

Proven throughout industry, Mecmesin force and torque testing systems offer exceptional quality, design, practicality and versatility at an attractive price.



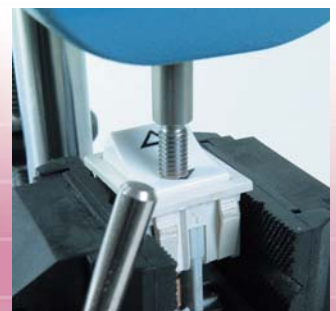
twist



bend



compress



push

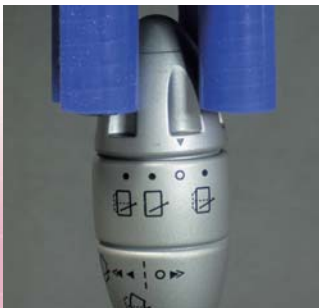
## A complete range

The scope of Mecmesin quality testing solutions is limited only by your imagination, from MultiTest frames powerful enough to apply the force of twenty-five cars piled vertically, to AFG gauges sensitive enough to register a spider's footstep. Or the Orbis, a compact and cost-effective unit so rugged it may be used for torque testing at the very point your products leave the production line.

Whatever your force measurement application there is certain to be a Mecmesin system to fulfil your requirements, be that in the laboratory or on the factory floor, and if not, our in-house design team will be happy to work with you to develop a custom-engineered solution.

## How can we solve your problem?

For over 25 years Mecmesin have provided successful, cost-effective quality testing solutions to manufacturers working with plastics across the automotive, aerospace, electrical and electronics, medical, packaging, textiles and plastics manufacturing industries. Turn over to discover proven Mecmesin solutions in your market sector.



turn



tear



pull



peel

## Packaging

Mecmesin provide successful quality testing solutions to plastics packaging manufacturers across the food and beverage, medical and pharmaceutical, cosmetics, homecare/DIY and automotive industries.

Whether you are testing the top-load resistance of a PET bottle or the release torque of a screw cap, Mecmesin have a solution to help ensure consistently high quality manufacturing of your packaging, guaranteeing the integrity, security and safety of its contents.

### Typical Plastics Packaging Applications Include

- Top-load capacity of PET bottles
- Release and application torques of screw closures
- Opening/closing force of snap-caps and other closures
- Break opening of tamper-evident closures
- Characteristic torques and compressive forces of child-resistant closures
- Peel loading of films, foils, labels and seals
- 'Push-out' force of blister packs
- Surface co-efficient of friction

top-load



friction



pull off



peel



"The Mecmesin MultiTest 1-x enables us to ensure the consistently high manufacturing quality of our PET bottles. The system conveniently allows us to perform top-load testing and confirm free height, and integrates easily with our data collection system, increasing our analytical efficiency. I would have no hesitation in recommending this first rate instrument."

Phil Hipkiss, Esterform Packaging Ltd.

# Automotive

Automotive OEM's, tier one and tier two suppliers utilise Mecmesin equipment globally to test the quality, strength, functionality and the tactile nature of the interior and exterior plastic components of a vehicle. Critical quality testing of airbags, seatbelts and electrical components is also performed to assure passenger safety.

## Typical Automotive Plastics Applications Include

- Quality testing of the following interior elements: Airbags. Carpets. Dashboard, compartments and air distribution system. Electrical Harness. Handles. Laminated trim throughout flooring, headliner, hat-rack, boot compartment and pillars. Mirror. Seats and seatbelts. Steering wheel and hand brake lever. Switches, dials, buttons and stalks.
- Quality testing of the following exterior elements: Bumpers, moulding and trim. Door and window seals. Emblems and number plates. Mirrors. Mud flaps.

# Aerospace

Leading aerospace engineering organisations rely on Mecmesin solutions for quality, safety and ergonomics testing in developing plastic components of commercial and military aircraft.

## Typical Aerospace Plastics Applications Include

- Strength and ergonomic assessment of interior compartments, fixtures, fittings and seating.
- Quality testing for plastic elements of electronic controls, sensors, lighting, communication, navigation and entertainment systems.
- Quality and ergonomic assessment of cockpit controls, levers, switches, buttons and dials.



push



turn



safety



control

"To survive in the automotive business today, we need partners that fully understand Total Cost Performance when supplying to this industry. Mecmesin was able to respond to our needs by supporting our standardization initiatives, lowering costs, supplying direct, and providing initial excellent technical support to enable our factories to be self-sufficient."

Fernando Cadilhe Yazaki Europe Ltd

## Medical

Ensuring the quality of medical devices is critical, particularly if a patient's wellbeing is at stake. Mecmesin precision force and torque testing equipment is widely used to give medical device manufacturers complete quality control, ensuring regulatory conformance and guaranteeing the mechanical properties of their products in this safety-critical industry.

### Typical Medical Plastics Applications Include

- Tensile loading of dressings, bandages, syringes, catheters, gloves, tubing, connectors & valves, filters and infusion bags
- Sterile packaging quality testing
- Quality testing of electronic delivery devices
- Peel testing of adhesive dressings

## Electrical and Electronics

From assessing the effort to push a TV remote control button, to PCB/component joint strength testing, Mecmesin offer a broad range of quality assurance solutions for plastics applications within the electrical and electronics sectors.

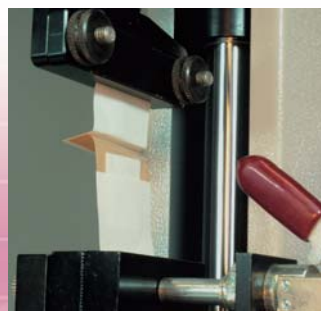
### Typical Electrical & Electronics Plastics Applications Include

- Tactile feedback of buttons and keypads
- Actuation force profile of rocker switches
- Adjustment torque of controls, rotary switches and sliders
- Connector insertion/withdrawal force

actuate



peel



compress



peel



"We purchase Mecmesin products because of their versatility, and the excellent local support we always receive in Mexico. This particular system works extremely well on our [infusion bag tensile strength] application."

Ernesto Romero, Fresenius Kabi

## Synthetic Textiles

Companies manufacturing products as diverse as clothing to scaffold safety-nets rely on Mecmesin equipment to ensure their synthetic woven products suit their customers' needs and meet international test-to-failure durability and safety standards.

### Typical Synthetic Textile Applications Include

- Disassembly strength of stitching, buttons, press-studs, poppers, zips, hook-and-loop fasteners and decorations on clothing and soft toys
- Strength testing of woven polymer safety netting, webbing and rope
- Furniture seam testing
- Automotive seating and interior textiles strength testing

## Materials Testing

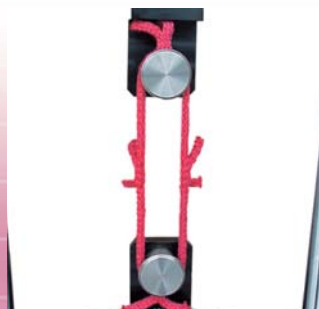
Applying a load in tension, compression or torsion to a test sample of a polymer is a cost-effective way to assess its physical properties, and hence control quality. Companies producing, supplying or utilising plastics, rubbers and elastomers employ Mecmesin equipment for this very purpose across the globe.

### Typical Plastics Materials Testing Applications Include

- Tensile loading of plastics to assess tensile strength at break, elongation, and modulus of elasticity
- Tensile, tearing and frictional properties of plastic films and sheets
- Compression/return characteristics of foams
- Elongation/return characteristics of elastomers
- Three point testing to identify flexural properties of plastics



detach



pull



compress



tensile

"Mecmesin provided our suppliers with test-to-failure equipment for testing the security of attachments for children's wear. They were professional and supported our quality assurance and safety processes at our manufacturers by supplying simple to use, low-cost, total test-to-failure solutions, which fully met the requirements of Marks and Spencer specifications. Mecmesin are now our approved and accredited supplier for general force measurement, for garments, fabrics and accessories products."

Thava Thevaratnam, Marks and Spencer plc

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Over 30 years experience in force & torque technology

Formed in 1977, Mecmesin Ltd is today widely regarded as a leader in force and torque technology for quality control testing in design and production. The Mecmesin brand stands for excellent levels of performance and reliability, guaranteeing high quality results. Quality control managers, designers and engineers working on production lines and in research laboratories worldwide rely upon Mecmesin force & torque measurement systems for a range of quality control testing applications, which is almost limitless.

Visit us on the web at  
[www.mecmesin.com](http://www.mecmesin.com)



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Wherever you are in the world Mecmesin can help you through its global distribution network.

covering a number of sectors including



safety



aerospace



electrical



automotive



plastics



medical



packaging



textiles



pharmaceutical



ISO 9001 CERTIFICATE NUMBER  
FS 58553

DISTRIBUTOR STAMP

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