MESSMER BÜCHEL

Burst Tester

13–56 Series

INDUSTRIAL PHYSICS

Protecting
Product Integrity

Everything you need to know about our new and improved instrument

Accurate, reliable, and easy to use

Digital Mullen-style burst testers allow you measure the strength and resilience of sheet materials by testing for real life failures such as punctures and rupture. The technique uses hydraulic pressurization of a membrane against a clamped, film, or sheet sample, producing a multi-directional stress on the material to failure – which is the burst strength.

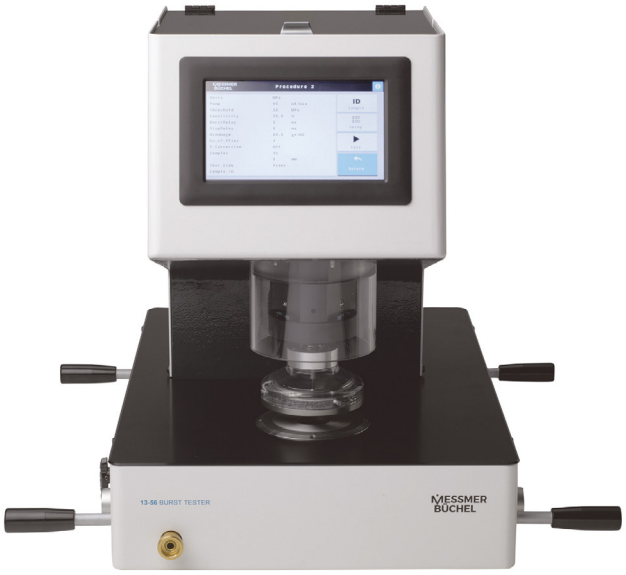
Depending on the type of material being tested, the burst method highlights the planar strength of the sample and is sensitive to quality of fiber bond, interlaminar, or orientational defects of your sheet product.

With improved electronics and a state-of-the-art user interface, our new 13-56 burst tester is easier to use than ever before. Your sample is pneumatically clamped, and the rubber membrane is pushed upwards by digitally controlled hydraulics. The force at burst is displayed and recorded automatically and can be incorporated into on-board batch analysis if desired. All aspects of the test method are easily adjustable – allowing you to create the perfect testing conditions for each unique application.

Perfect for all sheet materials

You can use the instrument to test papers and paperboards, corrugated and laminates, or textiles. We provide different models customised for these applications to suit a range of pressure levels that offer more accurate results. You can use the 13–56 on any suitable sheet or film product within the pressure range of the instrument.

If you're unsure whether the 13–56 can be used on your chosen application, **just get in touch** and we'll be happy to offer you more information.



New and improved technology – created for you

At Messmer Büchel, we are constantly looking for new ways to improve our products. The new and improved 13-56 Burst Tester has been designed to offer you a better user experience than ever before.

So, what changes have we made to the 13–56 Burst Tester?

- State-of-the-art on-board electronics and control software – including a large color LDC touchscreen display
- Improved user interface that allows both standard and customized tests to be easily stored and re-called
- Large and easy-to-understand icon-driven menu screens – easy to configure to the latest international standards
- New optional laser gauge that measures bubble height (required by select textile industry standards)

Touch screen operation

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Adaptable to your technology needs.

The advanced technology used to bring the 13-56 to life makes burst testing easy and accurate. Now, all that's left for you to decide is how to access your results.

We understand that some people like to connect their results to external servers and analyze their findings as part of a larger data set. But for others, having a self-contained instrument is preferable and you might be looking for equipment that lets you run reports and analyze data within the interface.

With the 13-56 Burst Tester, the choice is yours. You'll be able to connect the 13-56 to a Windows10 PC for enhanced data analysis, pressure displacement curves, databasing and data management (including interface to LIMS or other server-based data repositories). Alternatively, you can choose to produce complete reports and analysis outputs without any external PC requirement.

The 13-56 lets you pick the approach that works for you – you'll be choosing an instrument that is truly tailored to your needs.

We're here for you.

The Burst Tester 13-56 comes with a 12-month warranty for parts and labor. If you have any questions about how our new and improved burst tester could fulfil your unique needs, feel free to **get in touch**.

And remember, if you own a previous edition of our burst tester, but you're not quite ready to upgrade, we're still here to support your needs. For any questions regarding the servicing of an existing burst tester, **you can reach out to us today**.

Let's get technical

So, now that you know how our new instrument works, let us delve a little deeper into the nuts and bolts of our 13–56 Burst Tester – take a look at some of our key features:

- Three models available for different pressure range requirements based on application
- Hydraulically pressurized, elastomeric diaphragm burst design meets a wide range of current ASTM, ISO, TAPPI and similar international standards
- Brand new system – completely digital with state-of-the art electronics and user-interface
- Inherently safe measurement stage – integral, interlocked safety shield around the sample stage, 2-hand test activation
- Pneumatic sample clamping pressure is measured and displayed via transducer – a unique clamping profile is used to eliminate slipping on difficult samples like textile and plastic film
- PC-free operation – allows you to export your own reports
- GraphMasterPro™ PC software is available for LAN/LIMS integration and advanced analysis and SQC
- Large, LCD Touch Screen Control Screen
- Intuitive user menus allow pre-programmed and userprogramming – enabling you to meet international standards and customize your methods
- User access control and auditing/calibration data is stored automatically – this includes number of tests performed stored in memory as well as the date and record of last calibration stored in memory (clamp pressure, bursting pressure, and height gauge)

Remember, if you want to get more detail about any aspect of the 13-56 Burst Tester – it's easy to **speak with one of our product experts.**

And just in case that wasn't enough, you can purchase a few additional enhancements...

- OPTIONAL – Compatible with GraphMasterPro™ (PC-based data collection and curve analysis software)
- OPTIONAL – Laser Height Gauge Assembly: new laser option allows you to measure peak deflection during the burst test, per ISO 13938-1 and related international standards

Please note, these add-ons must be purchased with 13-56 unit at time of original order.

Want to know more about the pressure system?

Hydrostatic pressurization of the burst diaphragm is digitally controlled by means of a hydraulic ram coupled to a servocontrolled DC motor. Precise feedback from pressure sensors and a digital optical encoder ensures perfect control of the volumetric flow rate together with the determination of the displaced volume of fluid.

How our sample clamping works

Unique tightening profile gets rid of slippage, even for the most challenging materials. The pneumatic clamping pressure is actively controlled based on real-time feedback to ensure accurate and consistent gripping pressure – increasing precision and reproducibility of the data.

Detail of jack and tightening surface

Choose the right model for you

With three models to choose from – low, medium, and high pressure – you can select the right burst tester for your needs. Each model is designed to provide optimal control, accuracy, and resolution within their respective performance ranges and to the relevant international standards.

You can choose from the following models:

- 13-56-00-0001 with a measuring range up to 2000KPa (290 PSI) for testing the weakest paper-based products up through more standard papers, polymer films, and foil samples – standard configuration for ISO 2758/TAPPI 403 and other conforming standards
- 13-56-00-0002 with a measuring range up to 5000KPa (725 PSI) for testing standard papers, to paperboards, and up through conventional corrugated materials – standard configuration for ISO 2759/TAPPI 807/TAPPI 810/BS 3137 and other conforming standards
- 13-56-00-0003/0004 with a measuring range up to 7000KPa (1015 PSI) for testing heavy paperboards and corrugated materials, and up through textile and non-woven material systems. Available in two testing stage sizes to accommodate varying international textile standards (7.3cm2 and 10cm2) – standard configuration for ISO 13938-1/EDANA NWSP 30.1/30.2 and other conforming standards

Technical Specification:

Models	13-56-00-0001, 13-56-00-0002, 13-56-00-0003, 13-56-00-0004 Low, Medium and High pressure configurations available
Max Measuring Pressure	2,000kPa (290psi), 5000kPa (725psi), 7000kPa (1015psi)
Dimensions	559mm x 375mm x 483mm (22" X 14.75"x 19" H)
Weight	60 kg (132 lbs.)
Electrical	Universal (110-230 VAC, 50/60Hz)
Air	Instrument quality 600kPa (6 bars)
Safety	One button start available when safety hood engaged. Two button operation is required if the safety hood is not engaged.
Options	Laser Height Gauge Assembly available to measure peak deflection, per ISO 13938-1 and related international standards. Must be purchased with 13-56 unit at time of original order. GraphMasterPro™ PC based data collection and curve analysis software. Serial Printer for direct export of data and analysis from 13-56 tester (no PC required).
Note	Model 13-56-00-0004 available with 7.3cm2 diaphragm

Standards

- ISO 2758
- ISO 2759
- ISO 13938-1
- ASTM D 3786
- BS 3137
- EDANA NWSP 30.1
- EDANA NWSP 30.2
- TAPPI T403
- TAPPI T807
- TAPPI T810
- FEFCO 4
- SCAN P24
- SCAN P25

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