



NOVI

AUTOMATION SYSTEMS

a  brand

Fast. Dependable. Repeatable.

Automated inhaler testing solutions

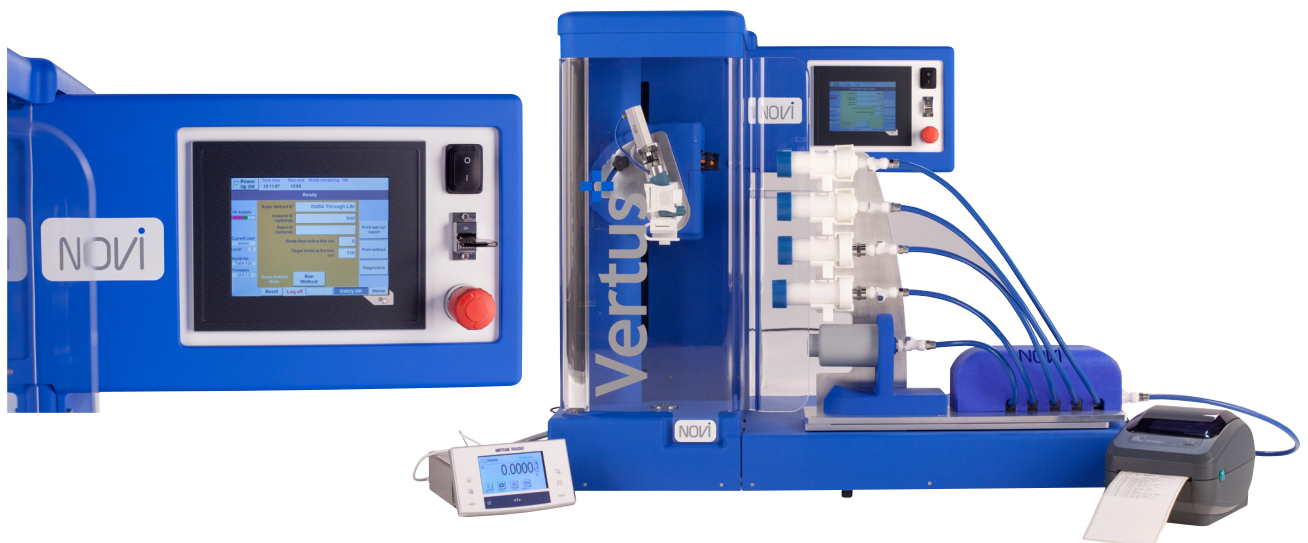
A global increase in asthma and COPD demands a smarter approach to inhaler testing

Asthma and COPD are on the increase. In 2015 COPD killed 3 million people worldwide – about 5% of all deaths that year. Globally there are now 235 million asthma sufferers, causing the World Health Organisation to declare that controlling it is of 'major public health importance.'

It has never been more essential to increase the quantity and the quality of inhalers reaching the market. However, as you know well, increasing throughput isn't simple. Satisfying stringent regulations involves testing and characterising large numbers of inhalers and supplying enormous amounts of evidence. Taking up considerable time and resources.

What's more, testing inhalers consistently is notoriously difficult, with variations in test results sometimes raising more questions than answers.

We have the solution.



All figures World Health Organisation

Welcome to the world of automation

We have been providing fast, dependable and repeatable automatic solutions for inhaler testing for more than 25 years. All of our products are innovative, many of our solutions are unique.

Today our range of products and systems meet all international regulatory standards for testing both Metered Dose and Dry Powder inhalers at the beginning, middle and end of life. This includes FDA and EMA requirements for regulatory filing, production and batch quality control processes.

Increase your quality and throughput. Decrease your workload

Our automated products reduce and simplify the awkward and time-consuming tasks involved in inhaler testing whilst increasing productivity at the same time.

When a run is underway, your analysts are free to go and do other, potentially more valuable work. The details of every run are recorded so any unexpected results can be investigated much more quickly and easily. Long tests can also be run without human intervention. For example, one of our customers uses our Vertus system to simulate an inhaler that is left on the bedside table overnight, making an otherwise difficult experiment simple.

Our automated solutions will transform the way your inhalers are approved for release:

- Deliver 100% consistency - variation inherent in set-up and implementation of manual methods are eliminated
- Uncouple variation in test results from variation in the technique of the analyst conducting the test
- Transfer methods between sites around the world with less training and higher conformance
- Reduce the time setting-up and calibrating test equipment

- Reduce the time committed to training and conducting tests
- Diagnose the root cause of unexpected results more easily
- Scale-up the number of tests conducted
- Easily carry out through-life testing
- Eliminate air leaks
- Reduce your lab equipment - no pump requirement as our systems use your pressurised air supply to generate airflow
- Improve Health and Safety - automation removes the risk of an employee suffering Repetitive Strain Injury (RSI)

This brochure contains a selection of the products in our range. All our automated solutions can be found at copleyscientific.com

Vertus

All-purpose shake and fire

Cuts labour, improves results.

Vertus is an off-the-shelf, flexible shake, fire and flow control system for individual pMDI testing with ACI, NGI, DUSA, waste shot collectors and other devices.

The benefits of Vertus:

Control all your test parameters - Using Vertus you can precisely control the test technique, including shaking profile, angle of fire, pauses between shaking and firing, resting position of inhaler, airflow control and leak test validation.

Conduct all your tests on one device - Vertus is compatible with most inhalers and all standard dose collection devices (including NGI, ACI, DUSA, Twin Glass Impinger and waste shot collectors). You can rely on Vertus to be compatible with the next test method you have to implement and also offer consistency in your methodology to enable direct comparisons between products.

Capture shot weight - With Vertus Plus you can automatically record shot weight using the integrated balance

Replicate test methods across different sites - Using Vertus ensures that test methods are replicated precisely with minimal training or oversight.

Vertus Plus

Automated beginning, middle and end of life DUSA testing with Waste collection at the press of a button

Integrated balance for automatic shot weight


Complete, automatic, through life testing



“ The Vertus has allowed us to accurately simulate patient shaking and actuation procedures, freeing up staff time and increasing our data output. ”

David Lewis, Head of Laboratory, Chiesi, UK





“ The ability to use the same method on Vertus and DecaVertus gives us a great pathway from development to high-throughput in laboratory testing of pMDI products. ”

Abhay Singh, Team leader (IPTC Respiratory R&D), Presspart UK

NOVI

DecaVertus

10 way shake & fire

Setting the new standard in pMDI wasting.

Launched in 2015 and based on our proven Vertus technology, DecaVertus is a high throughput 10-way shake and fire to waste system for pMDIs.

The benefits of DecaVertus:

In-actuator and can-only wasting - The entire inhaler is tested exactly as it would be used by a patient (although cans can also be tested on their own).

Control all your test parameters - Precisely controls the test technique, including shaking profile, angle of fire, pauses between shaking and firing, resting position of inhaler and airflow control. Each parameter has a large range, which means you can fully characterise your inhaler and find the optimum method settings.

Assurance - Each inhaler experiences the correct shaking, firing and airflow parameters set in the method.

Greatly reduced cleaning requirement and improved health and safety - Novel design maximises the airflow experienced by each inhaler, which ensures that drug is removed efficiently and remains securely in the waste channels without clogging them during a run.

Replicate test methods across different sites - Guarantees that test methods are replicated precisely.

Reduce the hassle and increase productivity - Simplifies and automates the awkward and time-consuming tasks involved in conducting inhaler waste shots.



Support services

Our products are designed for speed, ease of use, reliability and longevity and are all backed by a comprehensive 1 Year Warranty.

We have an excellent reputation for service and support and a growing network of engineering and technician partners to provide you with local support wherever you are in the world. Should you experience any problems we'll always get you up and running again in the shortest possible time.

To further extend the life expectancy of your Novi system and reduce the risk of downtime we also offer a range of 1 and 3 year extendable Support and Maintenance packages providing preventive and predictive maintenance. These cost-effective packages give you unlimited access to technical experts by phone, email, VOIP or remote access.

Experts in automation

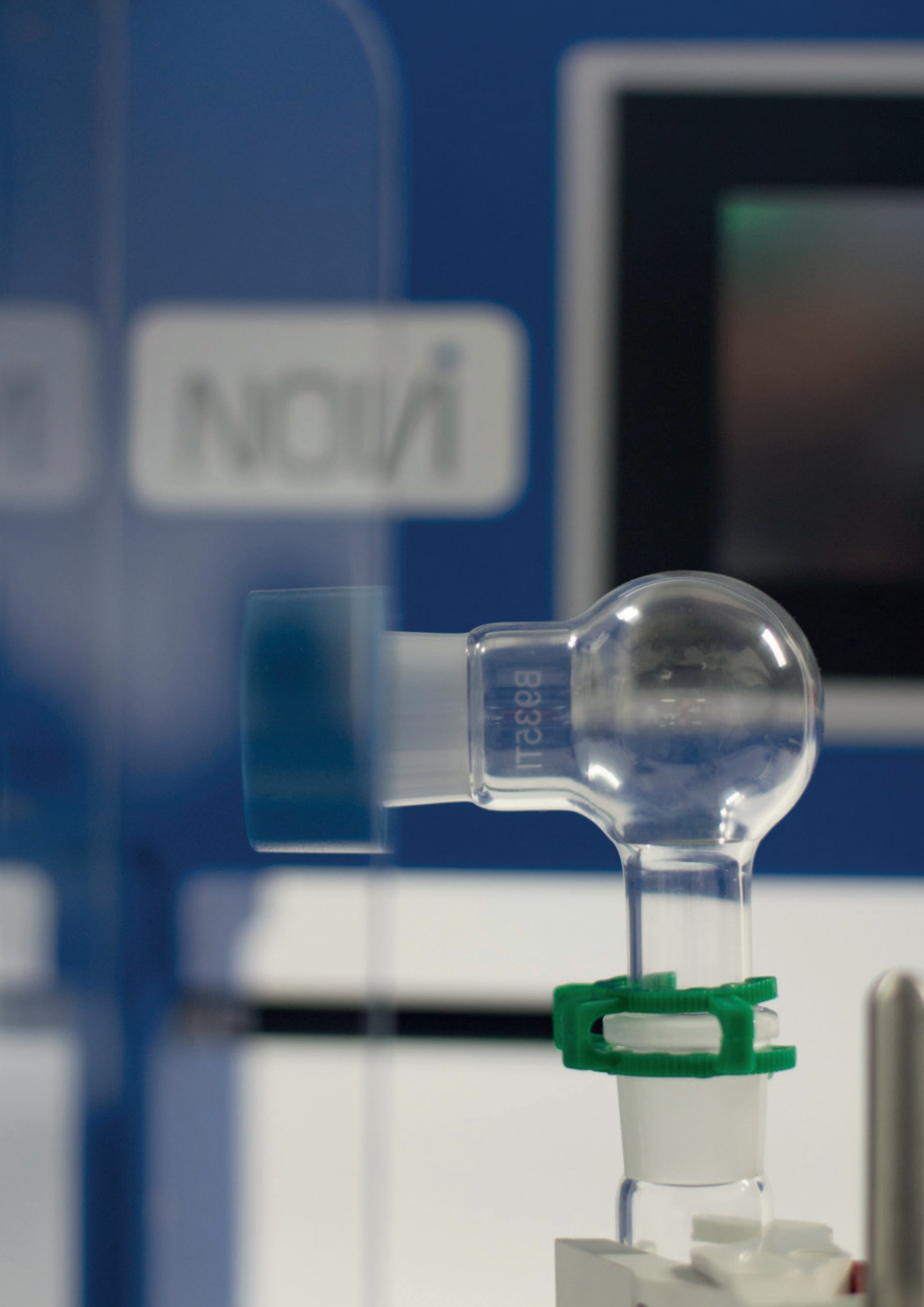
Since 1993 Novi Systems has undertaken turnkey robotic projects, principally for the automation of inhaler testing. Our engineering led solutions have given us a reputation for innovation and dependability, minimising the risk in our clients' R&D processes.

To this day, we continue to innovate and offer a growing range of modularised platforms to meet your exact needs.

Our underlying ethos is, and always will be, idea generation with a relentless determination to solve problems. All our systems meet or exceed regulatory standards and we make every effort to ensure all functions are self-monitoring – so you can be confident that when a result is unexpected, it is the test subject and not the test itself that is the root cause.

In April 2019, Novi was acquired by Copley Scientific, the world's leading manufacturer and supplier of inhaler testing equipment. Being part of the Copley family strengthens Novi's global support network and secures a broader platform for the development of new inhaler testing solutions for our customers.

We look forward to working with you.



A smarter way to test your inhalers begins here

To discover how our automated
solutions will help you meet
the global demand for inhalers
visit copleyscientific.com or call
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