

QUANTUM NEO UPGRADE BENEFITS

INTRODUCTION

This brochure* will introduce you to the benefits you gain when updating your equipment with the latest software and shelves.

As instruments age, what were once leading edge technologies used in design become redundant. With the pace of technological change accelerating, the engineering of your products is becoming increasingly sophisticated with quality data handling and instrument communications being revolutionised. These aspects are driving the need to update our Quantum Neo. Upgrading elevates the capability of your instruments and this ultimately helps you become more competitive.

QUANTUM NEO MEASUREMENT SHELF RANGE

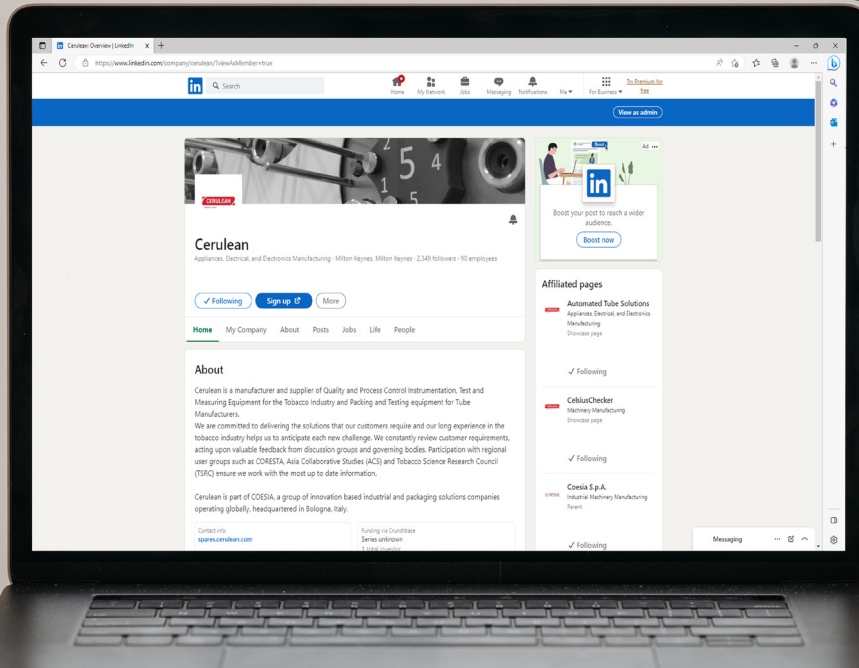
Discover below the full Quantum Neo measurement shelf options available from Cerulean.

Shelf Designation	Measurement	Cigarette	Filter
A	Ventilation and Pressure Drop (Auto-cal)	✓	
B	Pressure Drop (vacuum)		✓
C	Laser Gauge Diameter	✓	✓
D	Pressure Drop (Auto-cal pressure drop; filter - vacuum)		✓
E	Pressure Drop (pressure)		✓
F	Auto Sorter - Fixed (at the bottom of machine in place of waste bin)	✓	✓
G	Non-Contact Length	✓	✓
H	Hardness	✓	✓
J	Ventilation & Pressure Drop (Auto-cal)	✓	
K	Moisture & Density	✓	
M	Moisture		✓
N	Non-contact Length	✓	✓
Q	X-ray	✓	✓
R	Auto-Sorter - Shelf (replaces a measurement shelf)	✓	✓
S+	Multi-position diameter size (Laser)	✓	✓
T	Circumference size (tape)		✓
U	Moisture, Density and Length	✓	✓
V	Ventilation and Pressure Drop	✓	
W	Individual Weight	✓	✓
X	Individual Weight (Auto-cal)	✓	✓
Y	End-Form Analyser	✓	✓
Z	Diameter Size - Laser (extended positional range)	✓	✓

*Current up to October 2023

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As a leading supplier of quality instrumentation, Cerulean must ensure that its products remain compliant to all legal and safety requirements.

Upgrading your instruments is a cost effective way to modernise your install base. Cerulean upgrade kits include the most up to date shelf functionality and the latest software, enabling you to benefit from state of the art metrology solutions, and hence achieve competitive advantage when manufacturing future types of tobacco sticks or filters.

An upgrade is also an opportunity to perform an operational qualification (OQ) of your instrument which gives you peace of mind running your operations.

In this brochure, you'll find an up to date list of upgrades for the Quantum Neo range, in particular, the key benefits of each upgrade are emphasised to give you a good perspective of our latest offerings.

WINDOWS 10 SOFTWARE FIELD UPGRADE

The Quantum Neo Windows 10 field upgrade kit consists of hardware and software that is essential to ensure older stacks operating on Windows 7



Windows®

native software, are able to run the latest applications and shelves such as Cerulean Live, End Form Analyser (EFA), X-ray and multi-position size shelves.

This new software also provides the latest Microsoft security features to mitigate against risks to the standalone and networked system information systems.

Customers with early Quantum Neo versions are advised to upgrade to the latest software running on a Windows 10 platform using stock code 93535.

This upgrade was introduced to coincide with Microsoft's end of support for Windows 7. The upgrade kit consists of a replacement PC with built-in Quantum Neo application running and includes all the drivers and updates required for Windows 10 platform. It boasts a new embedded USB shelf communication hub, with much faster software.

When measuring weight, size, pressure drop and ventilation, the new application also enables up to five rods/minute which is 50% faster than the Windows 7 application.

Features and Benefits:

- Enables the capability to use new generation shelves including Multi-position size, end-form analyser and Cerulean Live and future innovations.
- Improved user interface and faster measurement resulting in better user experience.
- Reduced Security risk with Windows 10 OS. Microsoft no longer updates Windows 7 OS.
- Access to the latest Cerulean software releases for the Quantum Neo instrument range.
- Supports measurement of short rods down to 45mm. If required, new guides must be ordered to be installed during upgrade.

S/C 93535	Upgrade kit Neo Software for Windows 10 OS.
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CERULEAN LIVE FIELD UPGRADE

Cerulean Live is the name given to the Quantum Neo upgrade that enables your product quality information to be readily accessible on your network.

Your machine is already a fully featured instrument offering a host of information at the touch of a button including specification management, SPC charts and calibration reports. However, the addition of Cerulean Live elevates your Quantum Neo's reporting capabilities and makes them available to selected users from anywhere on your network.



Features:

- Centralised database with server setup
- Physical Quality Summary Report
- Offline SPC Report (Multi-Parameter)
- Monthly SPC Report (Multi-Parameter)
- Daily Report

Benefits:

- Lower product waste due to timely alarm notifications to operators and QA.
- Efficient quality data analysis as data is readily available in a structured format.
- Rich data for continuous process improvement.
- Customisable quality control plans.

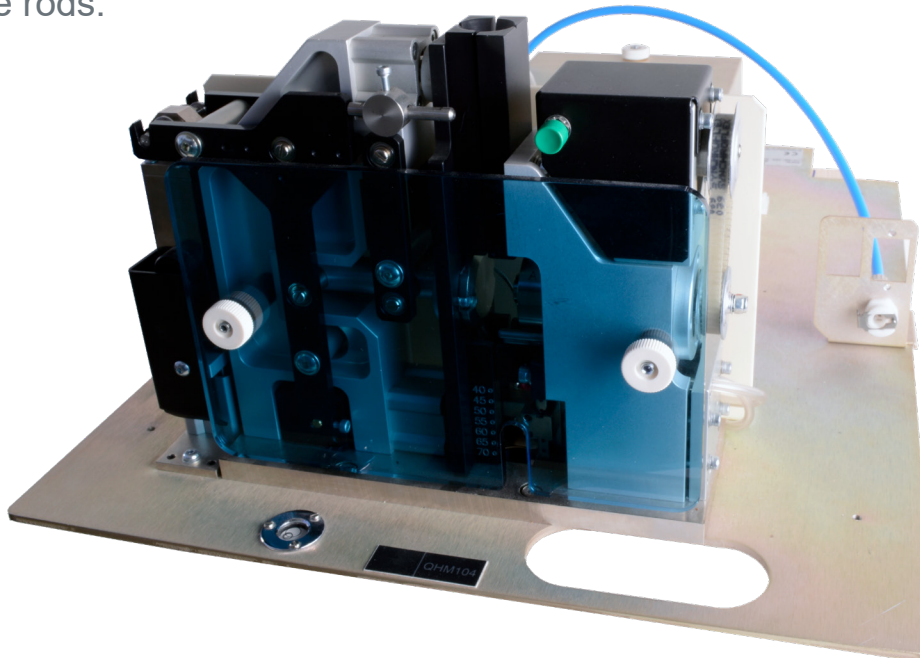


Cerulean Live for Quantum Neo gives you the ability to easily integrate your product quality data into your ERP information system.

ENHANCED HARDNESS SHELF

The Cerulean hardness shelf has been updated to offer an enhanced measurement range in response to recent developments in the tobacco industry, these include:

- The increase in popularity of short sticks (< 50mm) due to the proliferation of heated tobacco products (HTP)
- The wider use of a new class of long (> 130mm) complex filter rods which may include a recess, dual, triple or quadruple segments, or cavities with charcoal or capsules.
- The availability in certain markets of long (> 120mm) slim and ultra slim cigarette rods.



Benefits:

- Can measure short rods down to 40mm long.
- Can measure long rods up to 150mm. A gain in measurement range up to 45mm over the old hardness shelf.
- Direct shelf swap onto your existing test station (Requires latest Windows 10 software installed).

The Quantum Neo hardness shelf now has the capability to provide metrology solutions across all industry segments.

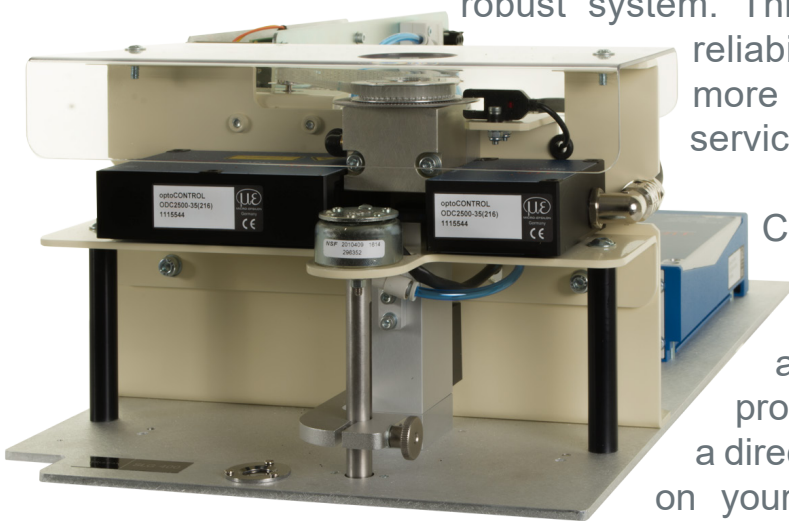
S/C LG0085

H Shelf - Hardness Shelf Assembly (Quantum) Includes Type A Foot and Anvil - Less Weight QHM104

LASER SIZE SHELF FIELD UPGRADE

The Quantum Neo size shelf is used to measure the diameter and circumference of cigarettes and filter rods by using a non-contact laser micrometer compliant with ISO 2971.

The Cerulean Quantum Neo C size measurement shelf has in the past been fitted with a Beta-Lasermike micrometer which is now obsolete. One of the drawbacks of that laser was its mechanism that relied on a moving mirror and a bearing which was prone to wear. The new laser in the C shelf operates differently in the sense that it has no internal moving parts resulting in a more robust system. This has resulted in improved reliability, lower maintenance and more importantly a much longer service life.



Cerulean recommends that you upgrade your size shelf to the new standard to avoid bearing failure during a production cycle. The upgrade is a direct shelf swap that is performed on your site by one of Cerulean's trained engineers.

Features and Benefits:

- Laser Diameter accuracy +/- 0.01mm and 0.01mm resolution.
- Direct shelf swap onto your existing test station.
- Your stack is updated with the latest communication hardware and firmware.
- Highly robust mechanism with no moving parts.
- Reduced maintenance costs.

S/C 95102

Upgrade Kit Laser Size Shelf - Quantum Neo QLG201 to QLG 400

S+ LASER MULTI-POSITION SIZE SHELF

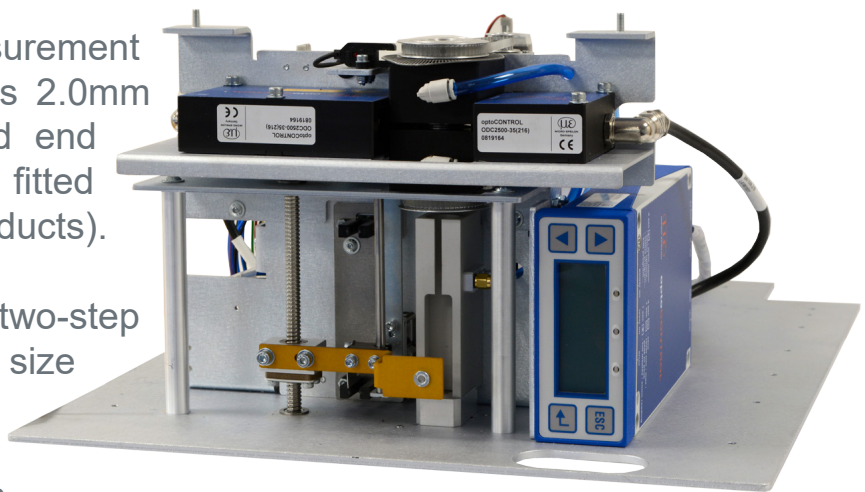
The S+ shelf is an advanced size measuring instrument. It features two holding chucks, allowing measurements in up to five different positions along the product, utilising a highly accurate leadscrew positioning system.

The key advantage of the S+ lies in its capability to measure short Heated Tobacco Products (HTP) sticks, down to 42mm, this was not previously possible.

Another important advantage is the S+ capability to measure diameters along filter rods up to 150mm long.

The combined measurement range of the new shelf is 2.0mm - 130.0mm from the rod end (a foot may need to be fitted for measuring short products).

The S+ uses a clever two-step calibration procedure for size and length in order to enable the leadscrew mechanism to position the product accurately at the required position within the laser measurement plane.



Features and Benefits:

- Laser Diameter accuracy +/- 0.01mm and 0.01mm resolution.
- Up to 5 measurements per rod.
- Measurement range from 2.0mm - 130.0mm from the rod end (a foot needs to be fitted for measuring short products).
- Your stack is updated to the latest communication hardware and firmware.
- Direct shelf swap onto your existing test station (Requires latest Windows 10 software installed).

S/C LG6172

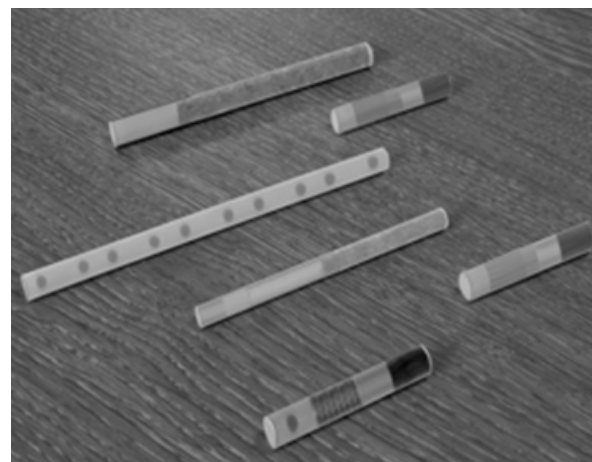
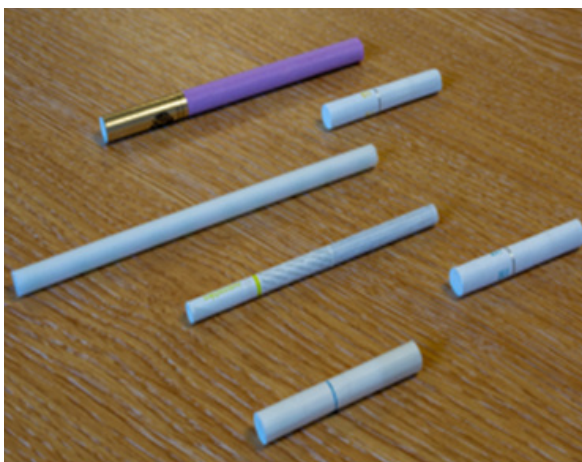
S+ Shelf (Size)

X-RAY FIELD UPGRADE

The Cerulean Q shelf uses X-ray imaging to provide accurate, non-destructive, measurements of the size and relative position of concealed elements. The Q shelf upgrade is therefore recommended for the inspection of complex, multi-featured products, such as heated tobacco sticks (HTP) and filters containing flavour capsules, multiple segments or other special hidden elements.

The Quantum Q shelf can be added to your existing stack by an engineer in the field. The upgrade kit includes a new enclosure and all the necessary control and safety systems to unlock the benefits of X-ray imaging on your stack.

Safety is a top priority for Cerulean and as such, the Q shelf has a fully-shielded design and is compliant with all UK radiological protection standards and is therefore suitable for automated routine product analysis on the factory floor.



Features & Benefits:

- New enclosure as part of the upgrade.
- X-ray measurement shelf for 95mm or 150mm sticks.
- Measures segment length, width, capsule position with 50µm accuracy
- Non-destructive
- Fast: Full rod image in less than 6 seconds
- Advantages over microwave systems: Can detect capsules radially and longitudinally
- Safe X-ray imaging (Fully enclosed and interlocked system)
- No product waste - Great for the environment.

If your application requires measurement of hidden features, please ask for:

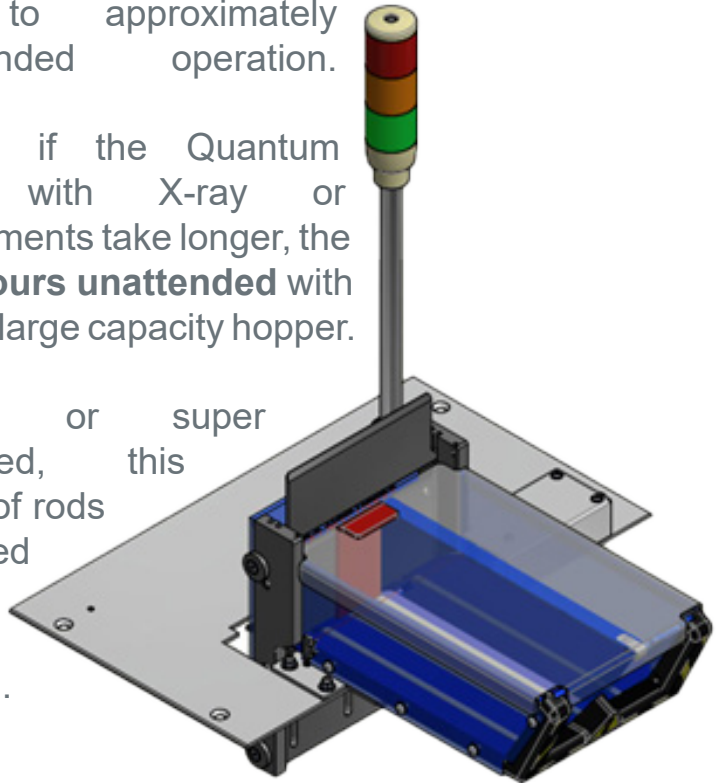
S/C 94218	95mm	Upgrade Kit 5 Shelf Stack for X-Ray Including Q Shelf (Single Shelf + Rotation)
S/C 94219	150mm	Upgrade Kit 5 Shelf Stack (Extended) for X-Ray Including Q Shelf (Extended Shelf + Rotation)

LARGE CAPACITY HOPPER

The large capacity hopper upgrade kit (S/C ML0241) is an automated feeding system designed specifically for the Quantum Neo. It works seamlessly with the instrument electrical and software elements to handle up to 300 king size rods under normal production conditions. This equates to approximately one hour of unattended operation.

It is important to note that if the Quantum Neo stack is equipped with X-ray or hardness shelves, where measurements take longer, the stack can operate for **up to two hours unattended** with the same number of rods using the large capacity hopper.

In addition, where slim or super slim rods are measured, this hopper can hold a larger number of rods and therefore enable uninterrupted operations that are even longer resulting in more savings of operator time.



Features and Benefits:

The Quantum Neo large capacity hopper is designed to provide time and labour savings across many of the industry's segments giving you the following benefits:

- Handles up to 300 king size rods (or more slims).
- Defined batch sizes and sampling intervals.
- Consistent sampling technique.
- Unattended operation (1 hour for conventional cigarettes, longer for X-ray, hardness and slim products).
- Operator has more time for other tasks.

S/C ML0241

Large Capacity Hopper Upgrade Kit Assembly

EVERYTHING YOU NEED

Products

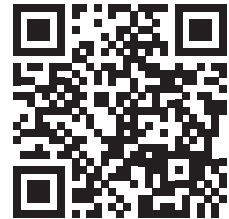
A wide range of products, built for meeting our customer's needs.

Visit our spares website which includes more than 2000 Cerulean approved items and allows users to view our portfolio without the need to register or login, but logging in gives you so much more!

By creating an account and logging in you can:

- Add items to your quotation basket
- Request for a customised quotation based on your shopping cart
- Receive frequent newsletters with special offers and product launches

Access the spares site using the QR code or using spares.cerulean.com



AFTERSALES

Cerulean has been leading the way in innovative solutions for more than 75 years, developing a diverse range of products for the modern market.

With Technical Service capabilities in the Americas, Africa, Europe and Asia, we offer a comprehensive service package to continuously support our growing global customer network.

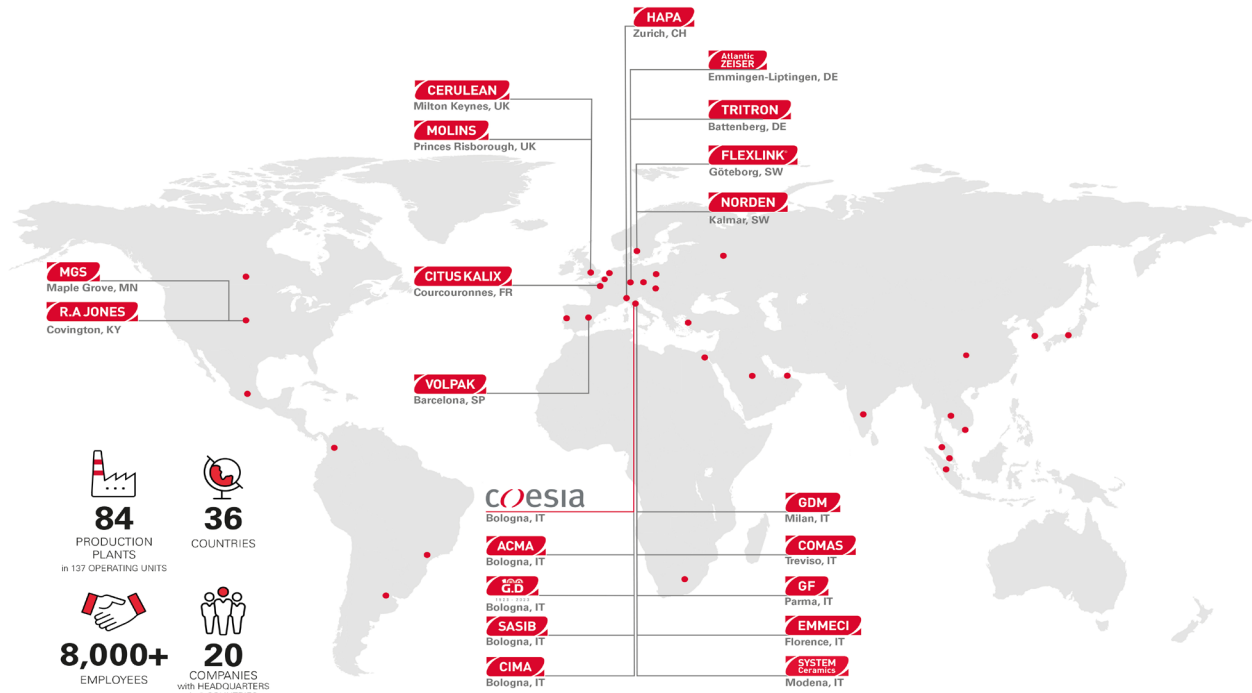
In addition to the UK-based head office, Cerulean has five regional offices and a further nine locations world-wide to support our growing customer base and their requirements.

From routine service work through to regional spares stock, Cerulean are committed to offering a high-level of aftersales support to meet customers every need.

We can also offer training through a global network of expert engineers.

Technical Support operates from the UK and regional support is available at local hours if required.

CERULEAN: PART OF THE COESIA GROUP



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