



Dansensor®
CheckMate 4
HEADSPACE GAS ANALYZER



Proven Accuracy – Maximized Uptime

GET THE MOST OUT OF YOUR PACKAGING

TABLE OF CONTENTS

| | |
|---|-----------|
| Get the most out of your packaging | 3 |
| MAP and headspace | |
| Quality control challenges | |
| The solution to your challenges | 4 |
| 7 vital benefits | |
| Reduce service downtime | 6 |
| The exchangeable sensor module | |
| Measuring Modes | 9 |
| Accessories and Consumables | 10 |

Utilizing headspace in MAP

Headspace, the empty space within a package, can be utilized to prolong the life of your products. Flushing the headspace with a specific mixture of gases allows your product to remain fresh for longer. This concept, called modified atmosphere packaging (MAP), relies on achieving and maintaining the correct gas mixture in each package to maximize shelf life.

Headspace gas analysis is a vital quality control measure for MAP, ensuring the correct gas mixture has been achieved. Headspace analyzers are used to spot test at the packaging line or in a laboratory to avoid waste and product recalls.

QC Challenges

There are numerous challenges when it comes to conducting dependable MAP gas quality control:

- » Reliable measurements day after day, year after year
- » Ensuring product safety during downtime for calibration and service
- » Long test times
- » Escalating costs of instrument ownership
- » Difficulty finding qualified operators for your packaging line



CHECKMATE 4 IS THE SOLUTION TO YOUR CHALLENGES

7 vital benefits for your product and business

Built on a tried and trusted platform, the Dansensor CheckMate 4 combines extreme accuracy and reliability with an intuitive user experience. Its many features provide these seven vital benefits which help protect your product, your customers and your brand.

1

Trust the results

Make decisions based on reliable data:

- » Accurate and precise measurements
- » Reduce errors and save time
- » Save money by avoiding expensive repackaging and recalls

2

Data integrity

Ensure accurate, streamlined data:

- » Be ready for audits with accurate, up-to-date data
- » Define up to 1000 product test settings
- » Automatically log up to 1,000,000 records
- » Transfer data in real time
- » Optional PC software for data collection and analysis

3

Improve security

Reduce risk of human errors:

- » Individual user logins
- » Operators can only access necessary functions
- » No accidental setting changes
- » Automatic data logging
- » Visual and acoustic alarm warns when gas limits are exceeded

7

Maximize uptime

Monitor packages continuously:

- » Enhanced pump and sample systems prevent blockages and ensure smooth operation
- » On-site sensor module replacement

6

Increase efficiency

Save time and money:

- » Fast test times
- » Pre-define test programs
- » Quickly change between products
- » Eliminate manual data entry
- » LAN for faster connection speed
- » Alarm ensures that inconsistencies are addressed quickly to avoid waste

5

Ease of use

Operators require minimal training:

- » Touchscreen with intuitive interface
- » Multilingual settings
- » Reduced learning curve

4

More flexibility

Upgrade when needed:

- » Upgrade to a different configuration of sensors if your requirements or products change



REDUCE SERVICE DOWNTIME TO A MATTER OF MINUTES

Downtime is costly and risky! When important quality control processes at the packaging line are interrupted, every single package is at risk.

That is why we have designed the Dansensor CheckMate 4 for maximum convenience and uptime – you can now update your Dansensor CheckMate 4 with a newly calibrated sensor module, on-site, in minutes. You no longer need to send your instrument in for annual calibration: there is no need to rent a loaner unit, copy data, or clone settings. Besides saving time and money, you ensure that your instrument is always calibrated and performing at its best.

How do we do this? The Dansensor CheckMate 4 is made up of two components – the control unit and an exchangeable sensor module. Simply swap the used module out with a newly calibrated one and send the used module return. No hassle, no worries.

The best part of our service agreement is that you know the annual cost upfront - there are no surprise invoices or additional fees.

MAXIMUM CONVENIENCE AND UPTIME WITH AN EXCHANGEABLE SENSOR MODULE



Control unit

All of your settings, product test definitions and data records are stored here. It never leaves your site, so you can ensure that data security and traceability remain intact.

Sensor module

Your annual calibration and service now takes 2 minutes. When your service interval is up, we send you a newly calibrated sensor module which you simply exchange.

Benefits of our service plan

- » Maximize uptime
- » Ensure peak performance
- » Stable cost of ownership
- » Worry-free calibration and service
- » Data security

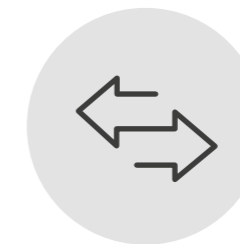


Service as easy as 1 - 2 - 3



1.

Prior to receiving your new, fully calibrated sensor module, you receive a notification about the pending delivery.



2.

When you receive your new module, you simply exchange it with the old one. Your instrument is now calibrated and ready to use.



3.

Place the old sensor module in the shipping case, pack it in the bag (included), and return it to the service provider.

"When it comes to accuracy, the Dansensor CheckMate 4 is unmatched. It's precision in measuring headspace gases ensures that packages meet the highest standards of quality and safety.

The CheckMate 4's different measuring modes give great flexibility, whether you will use it to test quality control on the packaging line, conduct shelf life experiments in the laboratory, or monitor the accuracy of your gas mixer."

- Dorte Oldrup, Global Product Manager,
AMETEK MOCON

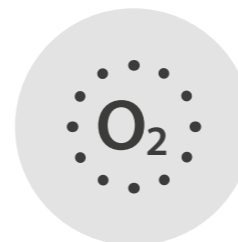
4 MEASURING MODES TO BEST MATCH THE WAY YOU WORK

Depending on the frequency and number of packages you are testing, different modes may be more suitable. The four modes are:



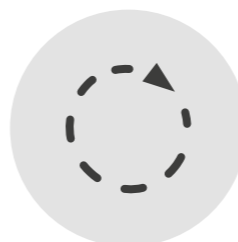
Basic test for single packages

Use the **Manual Spot** mode for standard headspace tests where the operator inserts the needle into the test package and then starts the test with the push of a button. The measurement stops automatically after the specified measuring time.



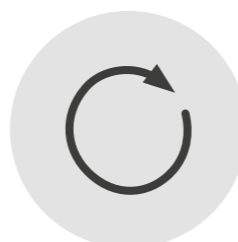
Test multiple packages with ease

Auto Spot mode is a great choice if you are testing numerous packages at once. Place septa on each of the packages and insert the needle in one package after the other. The instrument begins to test each time the sensor detects a change in the ambient oxygen level ($20.9\% \pm 1.5\%$) and stops automatically once the gas measurement is stable.



Shelf life testing

Conduct shelf life tests or monitor the changes in a single package over time with **Interval** mode. Set-up a program which measures the headspace gas at fixed (self-determined) intervals and see how the results vary. The test is stopped manually with the push of a button.



Gas mix testing

Use the **Continuous** mode to ensure your gas mixer is adjusted correctly. This mode can also be used in suitable research experiments. Pre-define a time interval when data should be logged and/or set it to log each time the gas content exceeds a defined limit.

WE HAVE THE **RIGHT** ACCESSORIES FOR YOUR APPLICATION

SmartPen



Improve safety and performance with this smart, ergonomic needle.

The protective sheath automatically retracts when the needle is inserted into a package and is easily released with the convenient button or by placing the SmartPen into the holder on the side of the CheckMate 4.

With the integrated filter, your instrument is protected from dry particulates and dust. Easily replace the filter or needle as needed to keep your measurements accurate.

Barcode scanner



Quickly find the correct product test settings by scanning the product's barcode with the optional barcode scanner. Alternatively, the USB port can also be used to connect a keyboard or printer to assist, respectively, with data input or output.

Can Piercer



Measure the headspace gas of canned milk powder, wine bottles and similar kinds of containers. The Can Piercer connects directly to the CheckMate 4 to give reliable results.

CheckMate 4 PC Software



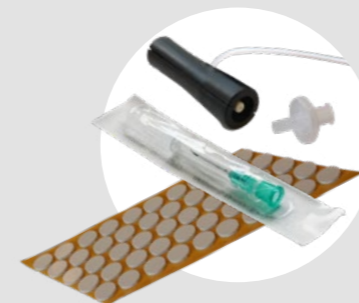
CheckMate 4 PC software helps you monitor, analyze and report on quality control test results. It is easy to monitor data across multiple packaging lines and prepare for audits.

Export all test results to the Dansensor CheckMate 4 PC software via real time data transfer (LAN) or via a USB flashdrive. Here, you can store and evaluate test results from one or more CheckMate 4 units.

Simultaneously monitor product measurement details and manage device settings, create graphs and prepare data for reports and audits.

OUR QUALITY CONSUMABLES GIVE **TRUSTED** RESULTS – EVERY TIME

Consumables



Use original consumables and replace them regularly to ensure that you get precise results with every test. Available consumables include:

- » Septa
- » Filters
- » Needles
- » Sample kit



ABOUT DANSENSOR PRODUCT LINE

Dansensor is a product brand of AMETEK MOCON. The Dansensor package testing products are used for quality assurance and quality control of packages that are protected with a modified atmosphere (MAP).

Our products stand out as the premium performance leaders for 40 years, setting the standard for quality and reliable measurement of MAP gases. Our benchtop, handheld and integrated instruments are used in laboratory R&D, process monitoring and quality control on, at and off the packaging line.

AMETEK MOCON OFFICES

GET IN TOUCH

AMETEK MOCON is a global leader in gas measurement instrumentation and a business unit of AMETEK, Inc. With manufacturing, sales and service offices and more than 40 authorized partners around the world, we are your best choice for the most precise gas measurement technology.

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