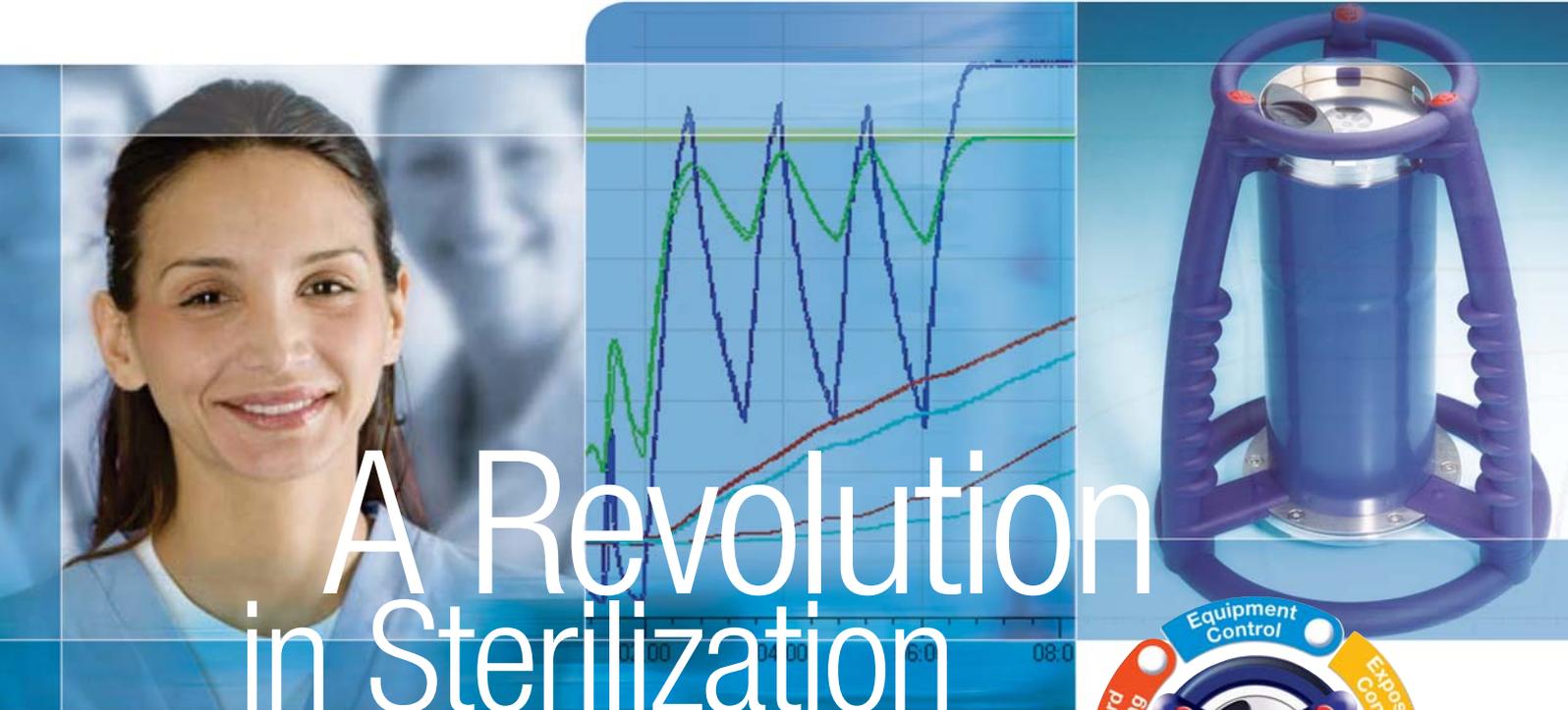


3M™ Electronic Test System (ETS)

For Porous Load Steam (Moist Heat) Sterilizers

The Next
Generation



A Revolution in Sterilization Monitoring



3M™ Electronic Test System (ETS)

3M ETS is a unique and easy to use electronic test device which provides comprehensive, objective, independent information about the critical variables of the steam sterilization process in which it is used, providing an innovative alternative to the traditional Bowie and Dick test pack and its derivatives.

Reproducible Results

Results are reproducible and equivalent in performance to the standard Bowie and Dick test pack (as described in EN 285 and EN ISO 11140-4). Tested to methods described in EN ISO 11140-4, the 3M ETS satisfies the daily steam penetration test requirement prescribed in EN 554 and the new ISO 17665.

Easy to Read

Unlike any other test system, the 3M ETS Sensing Unit functions as a stand-alone Bowie and Dick test device. Clear 'Pass' or 'Fail' results are provided together with an early warning of residual air and an indication of time and temperature e.g. 3 mins at 134°C.

The Next Generation ETS

In addition to the Bowie and Dick test results, the ETS also provides a number of diagnostic features.

- Sterilization Parameter Indication (SPI)
 - time at temperature
- Leak Rate Test (LRT)
- Superheated Steam Detection (support)
- Engineering Tests and Help Files (which are important in assuring the safe operation of sterilizers)
- Master Overlay
- Dilution Factor
- F₀ Calculation
- Multiple chart overlay
- Searchable database of results

Precise data archives

To maintain precise record keeping and eliminate all possible transcription errors, the 3M ETS will create an electronic, easily searchable database using dedicated PC software (4110).

The data logging mode allows individual interpretation of the sampled data for steam sterilization cycles operating at temperatures other than 134°C for 3 minutes.

Compliance to the rigid FDA, CFR 21 Part 11 requirement for digital archiving and digital signature assures secure state of the art record handling.



The Next Generation Electronic Test System



The 3M™ Electronic Test System (ETS) is an unrivalled world's first, now with additional features

What this means to you:

- Unambiguous 'Pass' or 'Fail' indication removes subjective interpretation of results
- Daily Bowie and Dick test, compliant to standards
- Reduced procurement costs and storage space due to 400 tests in one unit
- Precise electronic analysis, archiving and filing through computer software, eliminating the need for handwritten record keeping
- One purchase order raised every eighteen months reduces administrative costs through the elimination of monthly purchase orders.*
- Diagnostic functions allow planned maintenance
- Precise, accurate and independent measurement of sterilizer performance
- Compliance to software validation regulations
- Environmentally friendly due to low shipping costs and end of life recycling

*Statistic assuming a once a day use, six times a week

Peace of mind
Security
Innovation



The Future of Sterilization Monitoring

Daily Bowie and Dick Test

Receive a clear 'Pass'/'Fail' answer, requiring no interpretation for your daily air removal and steam penetration test (as required in EN 554, EN ISO 17665 and EN 285)

The Leak Rate Test (LRT)

Conduct a meaningful LRT to determine chamber seal integrity for sterilizers with low resolution pressure gauges or no pressure gauge.

Sterilization Parameter Indication (SPI)

Plan corrective maintenance to avoid production downtime: The ETS measures the minimum requirements of a steam sterilization process, 134°C for 3 minutes. A fail is shown if the sterilizer does not achieve this. The time/temperature relationship can be adapted to individual needs.

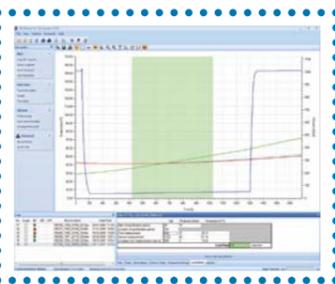
Superheated Steam Determination

The ETS compares theoretical and measured temperature according to steam tables, giving an indication of the presence of superheated steam in the sterilization chamber.

Calibration Check

The ETS is a calibrated test instrument and can be used to check the calibration of sterilizer instruments.

Calibration checks can now be carried out on-site during normal equipment control procedures, thereby saving down time.



Dilution Factor Calculation

The ETS monitors changes or deterioration of the dilution factor for air removal by a calculation based on the standard method described in DIN 58946-2.

Data Logging

The ETS can be used as a data logger to monitor and record precise temperature, time and pressure data in electronic or hard copy format for non-standard processes.



Versatile Data Handling and Archiving

Share files and records with the easy to use ETS Software features and database allowing:

- On screen data analysis
- Intelligent data archiving (search, sort, filter)
- Summary report writing
- Superimpose multiple charts to visualize process variability

Electronic Lethality Calculation (F₀)

Monitor cycle-to-cycle variability as a single function. The ETS integrates the energy input of the process and expresses it as a function of microbial lethality – F₀, an application especially for industrial environments.

Master and Multiple Overlay

- Process variability can be visualised by graphically comparing a user defined master record with the daily process charts.



A Revolution in Sterilization Monitoring

The Chain of Total Assurance 3M Sterilization Assurance Programme

The 3M Sterilization Assurance Programme is a comprehensive and prudent approach to sterilization monitoring procedures and methods that you can count on to reduce the risk of unnoticed sterilization failure.

The programme consists of five separate, but interrelated processes, which monitor every aspect of the sterilization cycle and help you establish, manage and maintain a consistent protocol for sterilization in your facility.



Ordering Information

Cat No	Product	Items/Box	Boxes/Case
4108	ETS Sensing Unit	1	1
4109	ETS USB Data Reader	1	1
4110	ETS Software	1	1



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