

DATA SHEET

TMI-Orion

NanoVACQ Deformation



Measurement of the deformation and dimensional variations of containers during thermal processes.

NanoVACQ Deformation is a data logger equipped with one movement sensor.

The NanoVACQ Deformation is used with a positioning kit available for static or rotating autoclaves.

METROLOGY

	Operating range	Measurement range	Resolution	Uncertainties
Movement	From -15 to +13 mm	from -10 mm to +10 mm from 0°C to +140°C	0.01 mm	± 0.28 mm
Temperature	from -30°C to 140°C			

FUNCTIONS

- Start set up: immediate or delayed
- Memory set up: stop at maximum capacity or loop writing
- Time stamped measurement data
- Battery level alert with Qlever software



TECHNICAL SPECIFICATIONS

Material	316L Stainless steel, PEEK and APX
Dimensions	Logger body: diameter 31 mm + height 39 mm Movement sensor: - core : diameter 4 mm, height 35 mm - core protection : height 23 mm
Movement sensor	1 inductive
Memory capacity	24 000 acquisitions
Acquisition rate	Programmable: minimum 1 second, maximum 59 minutes and 59 seconds
Program duration	Programmable: days, hours, minutes
Recording	Programmable start: by date, hour, minute
Power	User replaceable battery pack
Connectivity	USB wired interface to the PC
Watertightness	Watertight up to 10 bar absolute (not immersed)



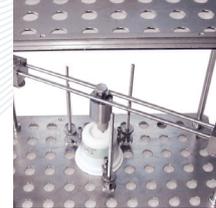
**NanoVACQ Deformation
with positioning kit for
static autoclave**



**NanoVACQ Deformation
with positioning kit for
rotating autoclave**



NanoVACQ Deformation



AUTONOMY

The NanoVACQ Deformation is powered by a battery pack; its autonomy depends on environment and operational conditions of the application (extreme temperatures of the mentioned temperature range, data acquisition rate).

As a result of the variety of environments and operational conditions, TMI-Orion does not guaranty the battery lifetime and recommends that the user determine the battery lifetime according to his own process conditions and experience.

SOFTWARE AND RELATED PRODUCTS

NanoVACQ Deformation is used with Qlever software.

Qlever software: Configuration of TMI-Orion data loggers, and acquisition, visualization and treatment of measured data. Qlever is installed on a PC and operates under Windows® 7/8/10/11. Data transmission and visualization are done after the industrial process.

Positioning kits for NanoVACQ Deformation: positioning kits for static or rotary autoclaves are available to maintain the NanoVACQ Deformation inside the process.

DELIVERABLES

The NanoVACQ Deformation solution usually includes the following items:

- The NanoVACQ Deformation data logger with a battery pack,
- The NanoVACQ Deformation configuration file,
- Qlever software (to be ordered separately),
- A positioning kit (optional - to be ordered separately)
- A USB wired interface to the PC (to be ordered separately),
- A transport case (optional – to be ordered separately),
- An opening key for the logger (optional - to be ordered separately).

SERVICES

Maintenance: TMI-Orion recommends annual preventative maintenance service for the replacement of o-rings, functional checking.

Accessories: The battery packs, engineered by TMI-Orion, are replaceable by the user and are referenced in the documents available on our website.

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