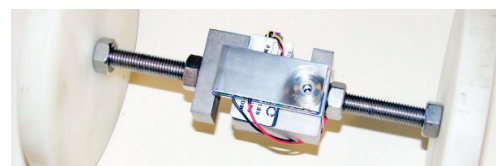
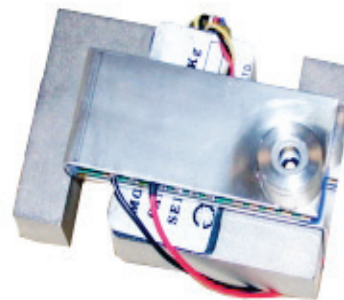


DATA SHEET

TMI-Orion

NanoVACQ Force



Measure the changes in weight or force on cans during your processes, transportation and storage.

NanoVACQ Force is a data logger used for the measurement of variations in weight and force, measured in newtons.

It is possible to add one or two temperature sensors.

The end caps can be customized according to the user's needs.

METROLOGY

Operating range	Resolution	Uncertainty*
5 kN From -15°C to +65°C	- Force: 0.5 N - Temperature: 0.05°C**	- Force: $\pm 0.4\%$ full scale - Temperature**: $\pm 0.5^\circ\text{C}$

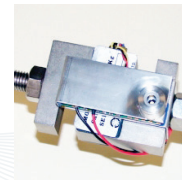
Each logger can be calibrated and adjusted at the temperature points corresponding to the user's needs.

**The specified uncertainties correspond to two standard deviations. The uncertainties are calculated taking into account the various significant error sources, including the calibration probes, the equipment, the environmental conditions, the influence of the logger, repeatability, etc...*

*(**) If the data logger is equipped with temperature sensors.*

FUNCTIONS

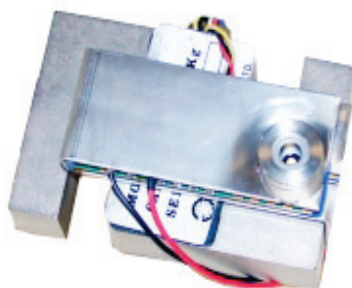
- Start set up: immediate or delayed
- Memory set up: stop at maximum capacity or loop writing
- Time stamped measurement data
- Battery level alert with Qlever software



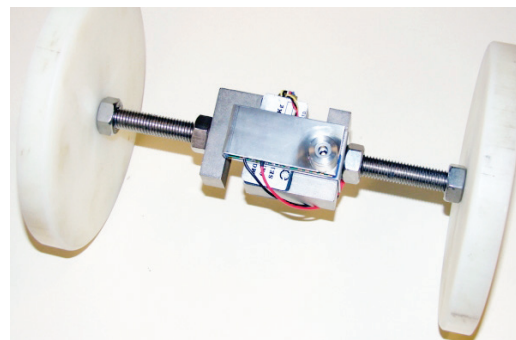
TECHNICAL SPECIFICATIONS

Material	Logger body: Aluminum and Stainless steel
Force sensor	Constraint gauge sensor
Temperature sensor**	Pt1000
Memory capacity	48 000 divided by number of measurement channels
Acquisition rate	Programmable: minimum 1 second, maximum 59 minutes and 59 seconds
Program duration	Programmable: days, hours, minutes
Recording	Programmable start: by date or on temperature threshold**
Power	User replaceable 9V battery
Connectivity	USB wired interface to the PC

(**) If the data logger is equipped with temperature sensors.



NanoVACQ Force



Example of NanoVACQ Force with custom end caps

AUTONOMY

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

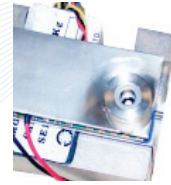
As a result of the variety of environments and operational conditions, TMI-Orion does not guaranty the battery lifetime and recommends that the user determine the battery lifetime according to his own process conditions and experience.

SOFTWARE AND RELATED PRODUCTS

NanoVACQ Force is used with Qlever software platform.

Qlever software platform: data acquisition, management and visualization of data from TMI-Orion data loggers.

Qlever is installed on a PC and operates under Windows® Vista/7/8/10. Data transmission and visualization are done after the industrial process.



DELIVERABLES

The NanoVACQ Force solution usually includes the following items:

- The NanoVACQ Force data logger with a battery pack
- NanoVACQ Force calibration certificate
- NanoVACQ Force configuration and calibration file
- Qlever software platform (to be ordered separately)
- A USB wired interface to the PC (to be ordered separately)
- A transport case (optional – to be ordered separately)

SERVICES

Maintenance: TMI-Orion recommends an annual preventative maintenance service for functional checking, calibration and adjustment.

Accessories: TMI-Orion can design custom end caps for your particular application. The NanoVACQ Force logger uses a standard off the shelf 9V battery.

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