

HP4000 Head Pressure Tester

quickly and easily measures the load applied by a capping head

Description

The HP4000 is a calibrated device, specifically designed to run as a dummy bottle, to test the 'head pressure' applied by a capping head during the sealing process. It is particularly suited for bottles fitted with pull-off crown or ROPP Stelvin® closures where the filling process supports the bottle from below.

The HP4000 measures peak force in Newtons as standard. Additional 'HPT-Graph' software is available to analyse all points of data obtained during the test, thereby illustrating the overall performance of the capping head.



◀ Height adjusters match the HP4000 to different bottles

Specification

Max. force	4 kN
Range	0 to 4000 N
Resolution	0.2 N
Accuracy	±2% full scale
Power supply	built-in rechargeable NiCd battery
Charging time	~8 hours
Operating time	from fully charged, >8 hours continuous use
Battery charger	230 V AC, 50 Hz, 2 VA, to 9 V DC, 150 mA (charging consumption ~35 mA) Insulation class T40/E; IP20
Device protection class	III (SELV) according to IEC 536/DIN VDE 0106
Sampling rate	500 Hz
Data storage	4500 values (approx. 9 seconds at 12-bit resolution) for export to PC graphical analysis software; max. memory: 100 peak values at 12-bit resolution.
Interface	RS-232C (19200 Baud, 8-bit, 1 stop, no parity)
Housing	anodised aluminium
Dimensions*	diameter: 59 mm, height: 145 mm
Weight	approx. 600 g
Cap adapter	latching, with stainless steel latch
Included	HP4000, user manual, power supply/charger, calibration certificate, case.
Optional	HPT-Graph analysis software Height adjusters Compression adapters

* standard height pressure 'neck' piece; other dimensions available on request

Configuration

The HP4000 standard bottle has 59 mm diameter and 145 mm height, and is fitted with an easy-to-read 4-digit LCD display, powered by a rechargeable NiCd battery. Its robust construction and splash-proof housing ensures its suitability in the bottling line.

A range of compression adapters is available to simulate the type of bottle mouth you wish to test. These compression adapters can have a flat surface or can be made with a screw thread to suit your bottles (e.g. to EN 16287).

Height adjusters are available to bring the HP4000 up to the overall height of your bottle, and PVC sleeve adapters are available to increase the standard 59 mm diameter of the HP4000 to the diameter of your bottle.



Once complete, the HP4000 runs as a dummy bottle through the sealing process, capturing data at 500 times a second, to ensure accurate peak load measurement of the capping head. A maximum of 9 seconds data is accumulated, so that the force profile of the capping process can be analysed on HPT-Graph software to identify specific problem areas of the capper. These include when the sealing cone presses down on the steel band of a crown cap, or when a rolled thread is clearly engaged—data which cannot be determined by a simple peak-load reading.

DISTRIBUTOR STAMP

Mecmesin reserves the right to alter equipment specifications without prior notice.

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