

3M Purification Inc.

3M™ 101 Series Integrity Test Device

Portable, Automated Membrane Filter Integrity Tester for the Beverage Industry





The 3M™ 101 Series Integrity Test Device

A hand-held portable integrity tester

The 3M™ 101 series integrity test device is designed to perform a pressure hold integrity test on membrane filter cartridges. This compact, battery powered device can be operated independently of any AC supply for up to 12 hours and should, for any reason the unit remain un-charged, retain all data in its memory for up to 6 months.

The microprocessor-driven 3M 101 series integrity test device can be programmed with up to 19 different test protocols, allowing the user to store commonly used test parameters covering all housing and filter combinations in use. Each of the different protocols can be quickly accessed through a single key stroke, with up to 150 test results being automatically stored ready to be recalled and printed at a later date.

Using your 3M™ 101 Series Integrity Test Device:

One of five standard languages can be selected for use with the 3M 101 series integrity test device (English / French / German / Italian / Spanish). The display allows you to either run a preprogrammed test protocol or access the general menu where you can program a test protocol, review data, or select the Service function menus. In the Main function menu, you can access any of the 19 stored programs, or 150 previously stored test results. Selection of the programming function allows you to modify or store new test protocols, with the unit automatically prompting you to enter all of the test parameters necessary to run a test.

At any time, a permanent record of any of the stored results can be printed out by linking the 3M 101 series integrity test device to a PC with the supplied interface program and cable, or via the Bluetooth™ enabled portable printer, supplied separately.

Select the self-test protocol, and the 3M 101 series integrity test device will run an automatic self-diagnostic program which checks all of its main electronics components. The Service function menu is protected by a code number access to avoid unauthorized data entry. This menu gives access to all of the internal parameters used during calibration and is also where user codes can be changed, the language can be chosen, the data and time can be entered, and the unit reset. Additional operating information is contained in the 3M 101 Series Operation Guide (34-8719-8229).



3M™ 101 Series Integrity Test Device Technical Description

Ambient conditions		
Permitted temperature range	5-40 °C	
Max. Humidity	95% rel., non-condensing	
Protection class	IP 53, splash-proof	
Electrical data		
Battery	4 x 1.2 V NiMH battery pack / 4.8 V battery pack with connector	
Charging time of the battery pack typical	3 h	
Continuous test mode (yellow LED flashing)	6 h	
Normal operation	7-12 h	
Data availability (with full batteries)	4 mon. / 25 °C	
Power supply	100-240 VAC/9 VDC, 1.1Amp Primary adapters for various countries available	
Charging socket	Cylindrical connector 5.5mm x 2.1mm Negative pole outside	
Data connector	USB-mini	
Programming		
Max. number of test programs	19 programs	
Maximum number of stored test logs	150	
Pressure measurement		
Maximum Operating pressure	60 psi (4,100 mbar)	
Measurement range of pressure measurement	0-58 psi (0-4000 mbar)	
Repeat accuracy of pressure measurement	+/- 0.12 psi (+/- 8 mbar)	
Accuracy relative at 68°F (20 °C)	+/- 0.2 %	
Temperature error of pressure measurement	+/- 0.29 psi (+/- 20 mbar) at +/- 15 kelvin	
Differential accuracy (filter test)	+/- 0.02 psi (+/- 1 mbar)	
Compressed air connection	Staubli® RBE03.6150	
Calibration interval	Max. of 12 months recommended	
Housing		
Housing	ABS plastic	
Compatibility of housing	Diesel oil, sea water, weak bases, weak acids, alcohol	
Incompatibility of housing	Benzene, acetone	
Dimensions	8 ½" x 4 1/8" x 1 ¾" (210x105x45 mm)	
Weight	1.1 lbs (500 g)	
Ordering Information		
	Part Number	3M ID
3M™ 101 Series Integrity Tester	7036701	70020334614
Power Supply	7036832	70020334507
Bluetooth printer, UL listed	7036801	70020338953
Bluetooth Printer, CE listed	7036802	70020338961



Automated membrane filter testing made easy and affordable

- **Portable:** Hand-held, easy to use technology with long life battery back up
- **Simple:** Pass/Fail LED test status indicators
- **Advanced:** Microprocessor driven with P.C. interface program allowing data storage and printed record keeping
- **Recall:** Up to 150 previous test results can be recalled and printed
- **Flexible:** 19 commonly used test protocols can be stored in the units memory and accessed with a single key stroke
- **Reliable:** On-board self diagnostics provides system reliability
- **Secure:** All programming is protected by code access



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