

AUTOMATIC AIR LEAK TEST MACHINE

Technology
 [made in Germany]

Final air leak testing of sealed automotive car and truck batteries with best and high technology



prg MK1		4		side vent		prg MK2		4		side vent	
desired value	MK 1	MK 2		actual value	MK 1	MK 2					
test pressure	320	320	mbar	test pressure	310	306	mbar				
tolerance +H	50	50	mbar	leak rate	1.5	1.5	ml/min				
limit	50	50	mbar	pressure circ	2	3	mbar				
parts total MK1	259	OK	102	NOK	159						
parts total MK2	207	OK	26	NOK	183						
test piece OK		2 mbar		test piece OK		3 mbar					
test piece OK		3 mbar		test piece OK		3 mbar					
menu		graph		20.8 °C		15.02.11		17:56		shift 2 Einrichter	

The Advantage:

- Precision testing by high-tech digital electronic test device
- Interface to read out test data
- Three side test stroke, for all sealed cover types
- Fully automatic test process
- Short change-over time
- 100% acid resistance

Basic machine

The basic machine accommodates the individual components and contains the pneumatic and electric control system of the machine. The basic structure accommodates the operating console which is vertically adjustable. The latter serves to accommodate the testing station, the different heights of the batteries are adjusted via the vertical spindle movement.

Leakage test device unit

The leakage tester works according to the absolute pressure process. The leakage testing is carried out by measuring the change of pressure in the test volume. The process of testing is divided into three program phases. Each of these phases requires a specific time which depends on the test parameters (volume, test pressure, geometry of cells, leakage rate etc.). All times can be programmed in the range of 0.1 to max. 999.9 sec.

Test unit

The test unit accommodates the three different test probes with a corresponding test adapter. For testing, the probe is moved onto the vent hole of the battery and while testing a hermetic sealing between cell and test adapter is guaranteed.

Battery positioning unit

The batteries are positioned exactly underneath the testing unit, by a fixed stopper system.

Lateral guide unit

The lateral guide including the battery separation is designed for laterally adjusting the battery below the working station. A clamping mechanism ensures the adjustment to be executed exactly and fast.

Battery conveyor unit

A PP chain transports the batteries through the machine and, at the same time, ensures them to be adjusted smoothly and exactly at the test position.

Description of function

The machine is designed to test the batteries for leakage of the second cover after the heat-sealing machine. This is done by pressurizing the vent holes with overpressure which is then compared with a leak tester at the specified pressure drop rate. The batteries arriving on the conveying system of the machine, enter the automatic testing device separately and are accurately positioned and fixed under the probe. The probe is pressed onto the hole of the battery cover and the battery is pressurized with overpressure. Over a pre-programmed period, the constancy of the pressure is then measured within a pre-programmed tolerance zone. Should the tolerance zone be exceeded a visual or audible signal serves as a warning of the defective battery. The measured values of different types of batteries are pre-stored. Working method and resetting are carried out automatically.

Technical specifications

Battery type	:	automotive car and truck batteries
Capacity	:	up to 8 batteries/min dep. on test time
Weight of batteries	:	20 – 70 kg
Dimension of machine	:	L = 2500 mm W = 1525 mm H = 2200 mm
Construction	:	Full acid proof Material, Stainless steel 316Ti Plastic PP and PVC Pieces not acid resistant with special protection
Electric	:	230/400V, 3-Phase, 50/60 Hz, 4 Wire
Control voltage	:	24 DC
Power consumption	:	3,5 kW
Operating pressure	:	6 bar (90 psi)