

ALC 7000



The fast Leak Test Instrument

The ALC 7000 provides fast and precise leakage measurements in accordance with the ISO 2281 standard. The main application is therefore the quality control in the production process. Reliable measurements based on the differential measuring method are irrespective of the hardness or nature of the watch case material. The numerical test results are displayed in μg air per minute.

Owing to the high precision the equipment has its range of application also in the laboratory. The test chambers are automatically locked and opened. The test chambers and positioning plates, matched to the size of the watch, are easy replaceable without tools.

Witschi Electronic Ltd

Bahnhofstrasse 26 – CH-3294 Büren a.A. – Tel. +41 (0)32 352 05 00
 Fax +41 (0)32 351 32 92 – welcome@witschi.com – www.witschi.com



Technical Data

Measuring principle

The leak test instrument ALC 7000 is based on the differential pressure method, giving fast and precise leakage measurements with numerical results.

The instrument has two identical test chambers and positioning plates; into each a watch is inserted. The exchangeable test chambers and positioning plates are matched to the size of the watch. In the event of a leak, air flows from the chamber into the watch under, thereby reducing the pressure in that chamber. The instrument analyses the variation of the pressure difference between the two chambers and calculates the relevant leak rate in μg of air per minute.

A large leak, producing an instantaneous pressure equalisation, is detected by an additional volume measurement of the watch.

Thanks to the symmetrical configuration of the test set up, all disturbing effects are largely compensated. Only a very short stabilisation time is needed for a measurement with utmost precision.

Measurement programs

10 test programs with individual parameters such as pressure, tolerances and test sequences with one or two test pressures can be programmed and stored.

Test sequence

The ALC 7000 can perform a test sequence with one or two test pressure, resp. vacuum and pressure. With this double test any type of leakage is positively detected. The relevant test parameters, such as test pressure and leakage limits can be individually programmed by the user.

From the specified test parameters, the instrument automatically calculates the adequate stabilisation and measuring times for a accurate measurement.

The reliability of the measurements is further improved by a continuous analysis of the process and by filtering out any irregularities.

Vacuum and pressure range

Vacuum selectable from -0.3 to -0.08 bar.

Pressure selectable from 0.3 to 10 bar.

Measurement time

Automatic definition based on the programmed measuring parameters.

Tightness limit

Selectable tolerance value from 10 to 300 $\mu\text{g}/\text{min}$.

Measurement range

From 2 to 999 $\mu\text{g}/\text{min}$. Beyond indication "Large Leak".

Limit of watch size

Diameter: 58 mm.

Thickness: 20 mm.

Precision

$\pm 25\%$ of the programmed tolerance value.

Language choice

Messages and instructions in a choice of 5 languages.

Compressed air connection

Pressure at least 1 bar higher than the required test pressure, 5 bar min. Built-in vacuum generator.

Interface

RS232 to attach the Witschi thermo printer.

Details

Alphanumeric LCD display with 2 x 20 characters, rear-lit.

Housing: aluminium, anodised in black and clear.

Front panel: aluminium, anodised in clear.

Replaceable test chamber pair: aluminium.

Replaceable positioning plate pair: plastic.

Dimensions: 220x315x120 mm (w x h x d).

Weight: 8.0 kg.

Mains connection: commutable 230 V~ / 120 V~, 15 VA.

Accessories

Compressor JunAir 6-10, 11 bar with safety outlet, water separator and rustproof reservoir 10 l.	Item 97.91.101
--	----------------

Witschi Thermo printer with graphic mode, universal mains adapter 90 V~ - 260 V~, cable and 1 paper roll.	Item JB01-MCP7810
---	-------------------

Thermo paper, roll.	Item JB01-MM58-DPU20-N
---------------------	------------------------

Autoprint: PC software to capture and print out the measuring results.	Item 64.55.901PK1
--	-------------------