

# KALPAK'S MICRO LEAK TESTER

## K TEST series

FOR ACCURATE OBJECTIVE AND FAST DRY AIR LEAK TESTING



Kalpak instruments and Controls offers a complete range of Micro Leak Testers to suit virtually any LEAK TESTING application in Production Testing, Quality Control and R & D applications. KALPAK Leak Tester is a Micro Controller based programmable instrument capable of easy and accurate volume Leak testing down to 1cc / min and measuring test pressures over a wide range from 1 m Bar to 200 Bar using dry air as a source. It can test the products for leakage as per the latest national and international standards like BS / IS.

### Features

Fully Programmable Test Pressure limits, Allowable Leak Rate, Test cycle times.
Ease of Operation yet feature rich to meet any complex leak and flow testing requirements.
Faster, repeatable, more accurate and cleaner choice over the age - old and tedious messy method of water dunking or salt solution spraying. Gentler handling of the test part.
Objective testing enables Accept / Reject decision through Audio - Visual indications.
Suitable to specify part acceptance norms for attributes like material porosity, Seals, Assembly deficiencies, Fit and Function Problems, Fastening / jointing Integrity.
When used as an alternative to water bath, contamination of test part due to water is eliminated.
Ideal for production line QC / SPC Applications. Easy calibration.
Can work as manually operated stand alone test unit for single station testing as well as can be integrated into automated assembly / test systems.
Detailed Test results and Status indicated on 16 X 2 alphanumeric back - lit LCD Display. Provides memory for up to 1000 Test Records.
Inbuilt serial RS 232 C type interface for Data communication PC Parallel Port for Direct print out of stored test data on Dot Matrix Printer.

### Specifications

We offer a choice from 4 proven Models depending on your allowable leak pressure and test pressure specifications.

Model				
<b>Model No.</b>	<b>MELD 1000</b>	<b>MELD 2000</b>	<b>MELD 3000</b>	<b>MELD 4000</b>
<b>Technology</b>	<b>Vacuum based</b>	<b>Pressure Decay</b>	<b>Differential Pressure</b>	<b>Mass Flow based</b>
<b>Test Pressure</b>	<b>Up to 760 mmHg</b>	<b>Up to 200 Bar</b>	<b>Up to - 20 Bar</b>	<b>Up to 100 Bar</b>
<b>Leak Measurements</b>	<b>1 mBar and above</b>	<b>1 mBar and above</b>	<b>0.01 mBar and above</b>	<b>0.1 mm / cc and above</b>
<b>Accuracy</b>	<b>1:4000 parts</b>	<b>1:4000 parts</b>	<b>1:4000 parts</b>	<b>1:10000 parts</b>

### Optional Features

Process Counter and Statistical calculations \* Remote Computer Controlled Programming and Execution \* SPC Software for Use on PC \* Bi-directional Interface to communicate with other devices \* Customized Manual / Pneumatic or Hydraulic Clamping / Sealing Test Fixtures.

### Customization

We can develop complete turnkey leak test solutions for your applications using our engineering expertise in application of leak detection techniques, Design of Electrical and Electronic Control circuitry, Pneumatic and Hydraulic Systems, PLC Programming, Design of Test fixtures, In - house Software development, as also system integration.



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### Operation

Kalpak Leak Tester is based on the principle that any pressure charged component if leaky, will exhibit negative pressure difference with reference to time. It consists of 01. Electronic Controller Unit. 02. Pneumatic Controller Unit. The Pneumatic Controller Unit consists of pre - plumbed assembly of solenoids & related fittings. Micro controller based Electronic Controller unit controls all the operations of the leak tester. There are various time settings that can be programmed through the keypads provided on the front panel of the controller. These are : FILL TIME during which the test pressure is filled in the component, SETTLING TIME during which the test pressure is stabilized evenly over the entire volume of the component, TEST TIME during which the test component is subjected to leak test, EXHAUST TIME used to exhaust the air from test component. In addition operator can program the test pressure and permissible leak with the help of keypads. The results are displayed on alphanumeric LCD display and up to 1000 data fields of individual components can be stored in the memory of the unit. The Leak Tester has optional interface with PC as also printer and has a unique GROUP SETTING FACILITY, which enables the user to program for 5 different component groups and select the group. It is based on the principle that any pressure charged component if leaky, will exhibit negative pressure difference with reference to time. The Leak Tester has optional interface with PC as also printer and has a unique GROUP SETTING FACILITY, which enables the user to program for 5 different component groups and select the group.

### Typical Applications

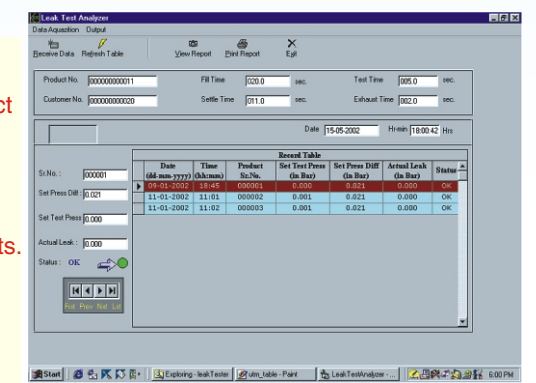
Automotive	Air Brake circuit, Ball valve casing, Bellows seal, Brake accumulator, Brake caliper, Brake circuit, Brake fluid reservoir, Brake master cylinder, Camshaft cover, Camshaft follower, Casting, Clutch master, slave cylinder, Clutch housing, Cylinder block, Cylinder head, Differential, Engine block, Engine combustion chamber, Engine cover, Exhaust manifold, Exhaust pipe, Fuel float, Fuel injector, Fuel nozzle, Gear box housing, Heater core, High pressure fuel circuit, Injection fuel circuit, Injection manifold, Intake manifold Intake valve, Low pressure fuel circuit, Manual transmission, Muffler Oil circuit, Oil heater, Oil manifold, Piston, Power steering reservoir, Pneumatic shock, Pneumatic transmission, Pump housing, Silencer, Shock absorber hydraulic, Spiral wound gaskets for camshaft, Crankshaft, Cylinder head, Engine, Steering box (hydraulic), Supercharger, Tank fuel circuit, Throttle body, Transfer case, Transmission oil cooler line, Turbo compressor, Washer fluid reservoir.
Components	Air Filter, Battery, Carburetor, Catalytic converter, Diesel filter, Diesel injector, Flow control valve, Fuel cap, Fuel filter, Fuel gauge, Fuel pump, Fuel tank, Gas tank, Gear box, Heat exchanger, Horn, Hydraulic pump, Oil cooler, Oil filter, Oil gauge, Oil pressure switch, Oil pump, Power steering pump, Pressure relief valve, Pneumatic spring, Radiator, Rubber hose, Shock absorber, Spark plug, Tank, Fuse box, fuel circuit, Thermostat, Vacuum solenoid valve, Washer fluid pump, Water pump
Engineering	Valves, Sealed Assemblies, Pumps, Hydraulic Systems, Refrigerant Systems, Castings, Heat Exchangers, Radiators, Aerosol Cans
Food & Pharmaceuticals	Packing Tins, Bottles, Plastic Jars, Cookers, Boilers, Vacuum Flasks, Aerosol Cans, Containers
Medical	Containers, Catheters, Anesthetic & IV Systems, Filters
Defense & Aerospace	Fuel Tanks, Valve Assemblies, Wave Guides

### Kalpak Leak Test Software

Kalpak Leak Test Software is a powerful Windows™ based user friendly software specially designed for the user of Kalpak Leak Tester. The test data is acquired through the serial PC Port and logged on to provide tabular display. The table indicates Product Details like Product and Customer Code number as also Test Parameters like Fill Time, Settle Time, Test Time, Exhaust Time, Delay Set and Group Set. The Data Table Provides details such as Test Date & Time, Set Test Pressure, Set Pressure Difference, Actual leak and Accept / Reject Status.

### Features

User friendly screen with complete evaluation & presentation of test results in Tabular formats. Easy to load, Easy to operate, No special training required. Online or Receive mode options. Report screen is used to make data entry and to generate reports, Layout design of parameters, results can be pre-programmed as per user requirements. Easy access to results of past test data.



## KALPAK INSTRUMENTS & CONTROLS

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In view of Technological developments and our policy of continuous improvements in our products, Kalpak Instruments and Controls reserves the right to change Specifications, Dimensions and Features without notice.

