Parametric® Research & Control

(An ISO 9001:2015 (QMS) Certified Company)

Registered CCPL

IAS ACCREDITED Management Systems Certification Body ACC NO. MSCB-120

Innovative & Versatile

Air Leakage Testers

Pressure Decay, Differential Pressure & Vacuum Leakage Testing

- Import substitute
- Multi channel test facility
- Highly reliable & dependable
- Strain guage based transducers
- Smart pneumatic & electronic circuits
- Precision measurement & accurate results

Innovative and Versatile Air Leakage Testers

The Leak tester is loaded with advanced features evolved throughout our extensive knowledge and experiences. With a LCD / touch screen HMI, PRC make DP Leakage Testers are unparalleled and well suited to differential pressure test requirements in the automotive, engineering & pharmaceutical sectors. Menu driven HMI touch screen with six tabs & online graph plotting facility (X & Y axis) satisfies various customer requirements.

Applications: Auto parts: cylinder heads, blocks, engine assembly, transmission case, fuel filler, water tanks, fuel pipes, manifolds, cam covers, clutch housing, gearboxes, automotive lights etc. Engineering parts: pumps, valves, hydraulic & air cylinders etc. Medical Devices: syringes, transfusion tubes, drug delivery devices & pumps, IV sets, tubing sets,

Pressure Decay Leak Tester

The original dry-air method is pressure decay, in which the test part is pressurized and then isolated from the pressure source. Because air moves from a high-pressure area to a low-pressure area, any decrease in pressure indicates the presence of a leak. Algorithms then convert pressure changes into an approximation of the leak rate.

Vacuum Leak Tester

Vacuum decay, evacuates air from the test object. For this method, it is the loss of vacuum that indicates a leak, rather than the loss of pressure. However, it does take more time to evacuate the air from an object than to fill it with high-pressure air, although the difference is minimal for the small volumes.

Differential Pressure Leak Tester

With this method, a leak-free reference volume is pressurized along with the test part. A transducer then reads the difference in pressure between the no leaking reference and the test item over time. Algorithms convert this difference into a volumetric measure of the leakage rate. This method is meant for more precision & minor leakage detection than the pressure decay method.

HMI Leak Testers

Online graph plotting facility makes user more comfortable & convenient to view/analysis the results with data storage facility / PC data transfer. It is suitable for Pressure decay, Differential pressure & Vacuum leak measurements.

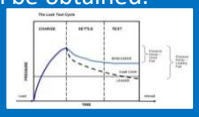
Features:

- Easy-to-navigate & operate
- Phoenix Contact Connectors provided at the rear panel
- Eliminating false rejection
- Easy to calibrate
- Sensor resolution as low as 0.1 Pa
- Self-check facility provided
- Easy maintenance
- USB Port for data storage
- Compensation for environmental changes

Leak Testing Machines

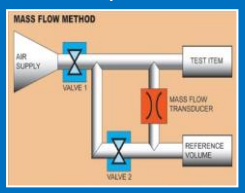
Multi-channel feature

The front-end interface consists of a display and function keypad from which all of the instrument parameters and results can be obtained.



Smart Pneumatic Circuits

An air operated valve provides high flow rate and durability while minimizing the generation of heat. Fast measurement of large volume parts and self diagnostic function prevents incorrect judgments caused by malfunctions.



Mounting fixtures

The fixtures designed exclusively as per the component/part design, through the latest Mechanical design software, allow easy mounting and removal of the test part or components.

Computer Connectivity & Data Storage

An advance software enables the system for data logging. During a test, RS 232C port outputs the test data & results, continuously. System can store 1000 measurements or depends upon system memory.

Leak Calibration

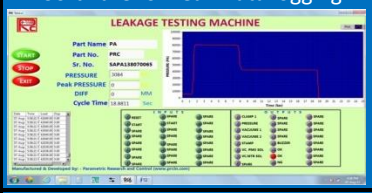
For converting the detected differential pressure to the leak rate, a flow rate coefficient is required which enables by leak calibration. Through easy leak calibration facility, operation becomes so easy.

Technical specification

HMI Touch Screen type Leak Testers			
Type	Differential pressure (DP) type	Menu options	RESET-to reset the system
System Model	ALT-DP-32		AUTO-to run the system automatic
HMI Model	DP-43-A		MAN-to run the system manually
Display	Menu driven, touch screen HMI		EDIT-to enter test values/parameters
Display sizes	4.3" / 7"		ZERO-to make the reading zero (bar)
Graph plotting	on X & Y axis		READ-to make the reading zero (pas)
Graph resolution	set according to test pressure.	On screen display	Real time & date
Measuring units	Bar / Pascal	Power supply mains	125 to 250 V,AC
Test pressure range	0-10 Bar / 0-5000 Pascal	Power supply internal	24 V DC-4.5 amp,
Built in pneumatics	4 no's solenoid valves		5 V DC-3 amp & 12 V DC-1 amps
Sensors	2 no's pressure sensors	A to D converter	24 bit
System processor	Micro controller	Mother board	2 analog
Inputs	16 digital	Outputs	16 digital

Pressure Decay, Differential Pressure & Vacuum type Leak Testers			
Display:		**Settings& Accuracy**	
Type	LCD 20 x 4 lines back light	Control I/O port	Open collector output
Reading (min)	0.1 Pa	Function mode	Auto / Manual
Reading (max)	5000 Pa	Key pad	8 keys
Sampling time	10 samples/sec	Process Indication	LED for Process, OK & NG
Display unit(s):		Resolution &Accuracy **(Decay Type)**	Resolution - At 0.5 to 1.0 Bar - 2 Pa. 1 to 5 Bar - 5 Pa.5 to 10 Bar -10 Pa, Accuracy – 0.25 to 0.5% Repeatability - 0.5% - 1.0% FSD
For test pressure	Bar		
For leak rate	cc/min		
Inputs / Output		Resolution &Accuracy Test pressure - 50 bar **(Differential type)**	Resolution - 0.1 to 1.0 Pa, or 0.1 to 1.0 cc/m Accuracy – 0.075% Repeatability - 0.05%FSD
Analog inputs	1 channel for Decay type, 2 channel for DP type		
Digital inputs	16 for machine operation	Settable parameters	Air fill time, Stabilizing time, Testing time &Stamping time Air exit time, Low & High Test Pressure, Pressure Drop in Pascal &Leak rate in cc/m.
Digital outputs	16 for machine operation		
Leak rate limits	Settable		
Timer settings	Through key pad		
System hardware	Latest microcontroller based		
Power supply	110-250 V AC, 50/60 Hz	Construction	As per ambient environment User friendly
Pressure source	Clean compressed air		
Pilot pressure	Clean air	Production Counter	To check production Status
Tubing port	For Comp. Test port, In Air port, Reference port & Master port.	Applications	Vacuum / Pressure leakage test
		Optional specification	
Ambient temp.	5-55 deg. C	Accessories	Calibration port
		Data storage	Through RS 232 C port
Ambient humidity	90% RH or less	Graph	On screen
Weight of system	As per system configuration	Analog input	For vacuum / pressure
Serial comm.	RS 232 C	No. of channels	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
Output format	7 bit ASCII	Output format	7 bit ASCII
Process Indication	LED for Process, OK & NG	Serial comm.	RS 232 C

Examples of "PRC" Leak Testing Machines

Automotive Light Leak Tester 	Crank Case Leak Tester 	Cylinder Head Leak Tester 	Flange Leak Tester 
Rear Axle Leak Tester 	Fuel Filler Leak Tester 	Fuel Neck Leak Tester 	Software for Leak Data logging 
Filter Cover Leak Tester 	Motor Leak & perform Tester 	Fuel Pipe Leak Tester 	RG2 Body Leak Tester 

Our Strength

PRC has a team of professionally qualified engineers, having innovative approach in designing the systems and adopting the latest technology. PRC has In house research and development facility of hardware and software, advanced tool room facility & excellent basic infrastructural facilities.

Quality System

"Parametric Research & Control" is awarded an I.S.O. 9001:2008 (QMS) certification.PRC believes in continuous development and research to meet our clients rapidly changing needs. At PRC, it is always tried to build systems for long run, having expandability & flexibility to improve them further. At PRC, quality is not the concept; it is the way of life to cater the needs of our renowned clients. PRC is determined to offer the best quality ever.


Certificate of Registration

PARAMETRIC RESEARCH & CONTROL

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ISO 9001:2008

DESIGN, DEVELOPMENT & MANUFACTURING OF ELECTRONIC TESTING INSTRUMENTS AND CUSTOM BUILT INDUSTRIAL AUTOMATION & CONTROL SYSTEMS

Our Renowned Clients of Leakage Testing Systems /Machines

PRC has a large list of satisfied customers awarding us repeated orders. To name a few,

We also manufacture:

- Microcontroller based measurement systems for Load, Pressure, Torque & Displacement, Multifunction Digital Indicators, Weigh Batching Systems, Data Acquisition Systems, Light Testing System. Computerization of Testing Machines, Timers, Production Counter, Impact Tester, Hardness Tester, Sensors.
- Special Purpose Machines .
- We also undertake Design & Development of Customized projects.

"We build trust everyday by way of manufacturing quality products"

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