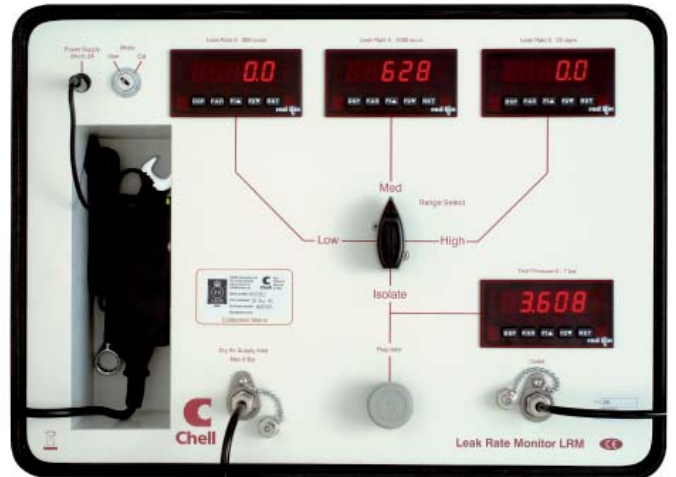


# LRM

## Leak Rate Monitor

Instruments

- *Air Leakage Measurement Precision  $\pm 1.0\%$  of selected range, or better*
- *Pressure Measurement Precision up to 0.1% of FS*
- *Ruggedised, Portable Package*
- *Simple, Intuitive Operation*
- *Battery Pack Capability*
- *Optional Fast-Fill Bypass*
- *Optional RS485 Interface*
- *Optional non-relieving version*
- *Supplied with ISO17025 Calibration Certificates*



The Leak Rate Monitor is a portable, ruggedised, local and integrated leak rate test system built to satisfy ANSI standards for the Power Generation Industry. We were asked to build an instrument to supersede another make of Local Leak Rate Tester, which simplified operation, improved precision and stability, and reduced maintenance issues. Our LRM does exactly that.

It offers large LED displays for unmistakable leak rate and pressure readings, even in dark environments. One display shows the applied leak test pressure and the others show from one to three leak rate ranges. The operator has only to adjust the precision regulator to the required test pressure, and read the resultant leakage rate. The use of thermal mass flow meters means that temperature and pressure corrections are not required, and 50um filters on both the inlet and outlets protect the LRM from particulate contamination to ensure long term stability of their output.

The LRM is now offered in a range of variations, depending upon a customer's specific requirements. We can tailor the number, range and precision of the leak rate ranges, as well as the controlled pressure range and precision. Other variations are available, one includes a bypass to quickly fill larger volumes, while another has on-board vacuum pump to enable convenient negative pressure testing.



The LRM is supplied complete with internationally recognised ISO/IEC17025 calibration certificates.



Over the years we have talked with both leak test operators and individuals responsible for the service and maintenance of fleets of LRMs and LLRT boxes, and these discussions have resulted in improvements to eliminate some of the shortcomings seen in so many of our competitors products.

### Reduced Integration:

You might have noticed that our LRM is slightly bigger than our competitors, and yes, this is something we like to brag about. In a world where things are constantly becoming smaller and more integrated, people tend to forget about future serviceability. We intentionally make the LRM **less** integrated. It is comprised of standard, off-the-shelf, discrete products which are available internationally, so future service, repair, and calibration issues can be addressed locally.



### Reduced Maintenance:

Experience has shown that the single greatest cause of LRM down-time was due to battery related issues. For this reason we eliminated the battery from our design. The LRM requires +24vdc power, and is supplied with a 'universal' mains power adapter with IEC320 receptacle, making it suitable for use on all continents.



For those who require battery power, any external battery pack of suitable specification can be purchased locally and connected to the +24vdc power inlet. With this design battery packs can be exchanged and recharged without having to remove the LRM from service.

### Independence by Design:

We designed the LRM to be intuitive and less integrated to reduce your dependence upon us. We do **not** use proprietary firmware, components or have secret calibration access codes that force you to return your LRM to us when maintenance and calibration issues arise. We refuse to treat our customers that poorly. We design our products to allow our customers to be as independent of us as possible, but at the same time offer full technical support, repair and ISO17025 calibration services, in case you do need us.

## Accessories



The FMS1000-3C is an invaluable tool to support your fleet of LRMs or LLRTs. It allows field verification of the precision of your leakage readings, and doubles as a tool to train and test new LLRT operators, by creating known leaks that you command.

## LRM Specifications

It seems no two customers want their Leak Rate Monitors exactly alike. Call our Applications Engineers to discuss your requirements in detail, and we will be pleased to prepare a detailed specification tailored to your needs.

Specification Table	
Pressure Measurement Range	0-7barG*
Pressure Measurement Precision	+/-0.25% of FS*
Air Leakage Measurement Ranges	200sccm, 2000sccm, and 20slpm*
Air Leakage Measurement Precision	±0.75% of selected range*
Air Leakage Repeatability	±0.1% of FS
Air Leakage Reference Conditions	20°C and 101.325kPa *
Non-relieving regulator	Optional
Fast-Fill Bypass	Optional
Temperature Measurement option	+5°C to +40°C
Mechanical	
Construction	Ruggedised metal construction internals, copolymer case outer, with carry handle *
Dimensions	length 19cm, width, 50cm depth 39cm*
Weight	12Kg (26lbs)*
Power Requirement	
Line Voltage	+24vdc (supplied with 'universal' mains power adapter)
Power Consumption	25 watts approximate
Environmental Conditions	
Operating temperature range:	+5°C to +40°C (40°F to 122°F)
Storage temperature range:	-10°C to +60°C (-40°F to 150°F)
Maximum Relative humidity:	95% at 50°C (non condensing)
	* indicates standard configuration with no options. Ranges, measurement units, precision and STP are tailored to requirement