



HANKISON



FILTER

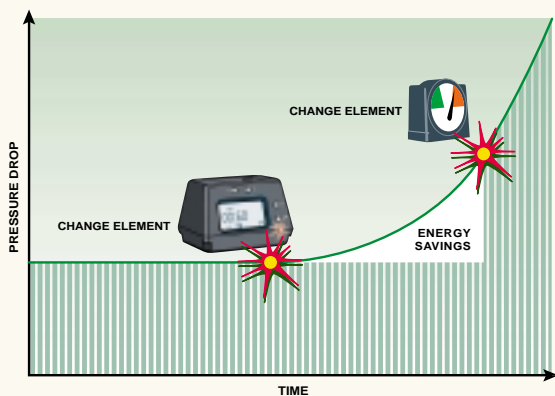
MONITOR

Filter Monitor

Audit Your Compressed Air Filters for Energy Savings 50% ΔP Savings Potential!

The Filter Monitor will allow you to control the exact amount of pressure drop you incur from centralized and point-of-use compressed air filtration. Unlike traditional mechanical gauges which give color indications when pressure drop has already reached 10-12 psig (0.7 to 0.8 bar) the Filter Monitor will prompt you to change out your element when your ΔP is still in the 5 psig (0.3 bar) range by providing a 60 DAY NOTICE that pressure drop is beginning its upward spiral into the 10-12 psig (0.7 to 0.8 bar) range. Timely warning and maintenance represents a ΔP savings of over 50%. The 60 DAY NOTICE gives Maintenance ample time to order and install a replacement filter element.

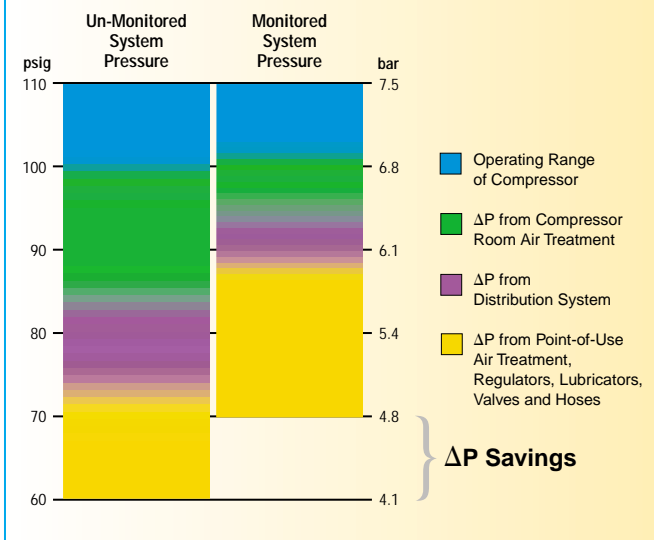
**Table 1 Maximize Filter Performance
Keep Up the Pressure!**



Compressed air audits are recommended practices today due to the tremendous efficiencies generated by reducing system pressure drop in manufacturing facilities. There are three principal sources of pressure drop:

- 1 Centralized compressed air treatment in the compressor room treating general plant air.
- 2 Point-of-use compressed air treatment on the factory floor protecting critical applications.
- 3 Compressed air distribution system design and leakage.

Table 2 System Pressure Profile



Compressor Room and Point-of-Use Applications



The Filter Monitor targets centralized and point-of-use compressed air filters for ΔP savings. Manufacturing operations can have dozens of oil, oil vapor, bulk water, and solid particulate filtration needs in different parts of the facility. The Filter Monitor can be retrofitted on any filters using conventional gauges like the ones pictured above and can start providing ΔP savings throughout your facility.



Microprocessor Monitoring of ΔP Performance

A state-of-the-art microprocessor, designed and developed by Hankison International, is the core technology of the Filter Monitor. The microprocessor technology allows the Filter Monitor to operate in 3 Monitoring Modes.



Time monitoring mode. Oil-free air for critical food processing applications often

requires timed service intervals to guarantee safe air quality.

Just input the number of months until filter change-out. The range is 1-15 months. The factory default setting is 12 months.



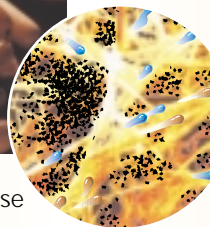
ΔP monitoring mode. Most point-of-use applications specify a minimum required operating pressure.

This mode allows you to input a maximum allowable ΔP across the filter. Just input within the range of 0.1-15 psig (0.01-1.00 bar). The Filter Monitor is programmed to ignore momentary ΔP spikes, avoiding nuisance alarms. The factory default setting is 10 psig (0.7 bar).

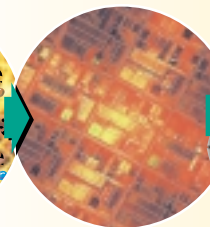


Filter performance monitoring mode.

Upon start-up or element replacement, a learning period of 146 hours familiarizes the Filter Monitor with the installation. The first 24 hours are not measured as the filter element is "wetted" and stabilizes. During the following 7 day period, the Filter Monitor will measure instantaneous ΔP over 1,800 times per hour to develop a unique Application ΔP Profile. The Application ΔP Profile is then used to forecast the optimal time for element replacement and trigger a warning 60 days before the optimal element replacement moment. From then on, a countdown on remaining days until element replacement will flash on the Filter Monitor LCD every six (6) seconds.



Loaded Element



Microprocessor



Monitor at ALERT Status

Remote Monitoring

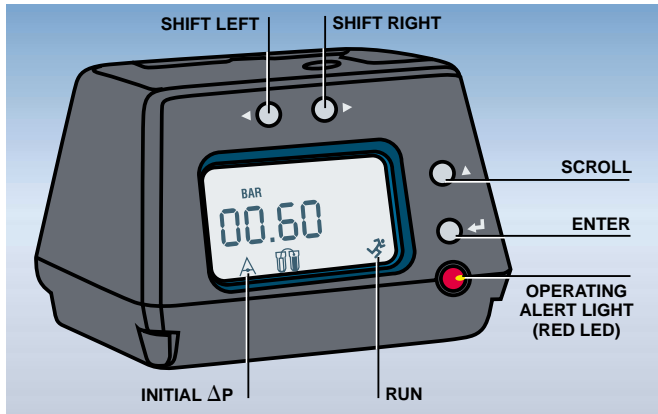
The RJ11 communications port enables the Filter Monitor to interface with an optional interface box which can help Plant Maintenance monitor filter performance by sending alarm signals to remote computer terminals.

User friendly operation

- Everything needed to program and operate the Filter Monitor is included.
- On-board manual programming buttons – no expensive external programming instruments needed.
- Program from a menu of international units of measure for pressure (psig, bar, kg/cm²).
- Runs on three (3) off-the-shelf and economical standard AA batteries.
- The LCD display automatically cycles readings on instantaneous ΔP , average ΔP , and remaining days until element replacement every six seconds.
- Operator alert light signals the need for element replacement or a low battery power condition.



7 Easy Steps to Programming Your Filter Monitor



- 1 Press and hold **ENTER** button for 3 seconds
- 2 Press and hold **SCROLL** button to input the maximum service interval (1 to 15 months) - Press **ENTER**
- 3 Press and hold **SCROLL** button to select pressure unit of measure (kg/cm², psig, or bar) - Press **ENTER**
- 4 Press and hold **SCROLL** button to input maximum pressure drop (0.1 to 15 psig; 0.01 to 1.00 kg/cm² or bar) Use the left **SHIFT** and right **SHIFT** buttons to select advance rate - Press **ENTER**
- 5 Press and hold **SCROLL** button to select the element type; B Grade 9 - D Grade 7 - E Grade 5 - F Grade 3 - G Grade 1
- 6 Select **INITIAL** or **RUN** mode
INITIALIZE - **SCROLL** until **INITIAL** pressure drop and **RUN** icons are displayed (SELECT during initial installation and element replacement)
RUN - **SCROLL** until **RUN** icon only is displayed (SELECT during Monitor reprogramming, without changing the element)
- 7 Press **ENTER** to start monitoring

Specifications

Power: three (3) standard AA batteries included with delivery

Battery life: typically 15 months operating the LCD display only with 7 days of LED illumination thereafter. Program settings and cumulative information is retained in memory during battery expiration and change-out.

Maximum operating pressure: 250 psig (17 bar)

Maximum compressed air temperature: 180°F (82°C)

Min/Max ambient temperature: 10/130°F (-12/54°C)

Table 3

HF Series Compressed Air Filters

Element Grade	Filtration	ΔP at Rated Conditions psig (bar)	
		Dry ΔP	Wetted ΔP
11	99% bulk liquid	1 (0.07)	1 (0.07)
9	Particulates to 3 micron 99% of bulk liquids	1 (0.07)	1.5 (0.11)
7	Particulates to 1 micron	1 (0.07)	2 (0.14)
5	Oil removal to 0.008 ppm (0.01 mg/m ³). Particulates to 0.01 micron.	1 (0.07)	3 (0.21)
3	Oil removal to 0.001 ppm (0.001 mg/m ³).	2 (0.14)	6 (0.42)
1	Oil vapor removal	1 (0.07)	n/a



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