

SPOTLIGHT ON THE LELAND LEGACY PUMP



THE LELAND LEGACY PUMP

HISTORY

- SKC received a grant from the Mickey Leland National Urban Air Toxics Research Center (the Leland Center) to develop this sampling pump for studies of particulates in indoor air that may lead to childhood asthma.
- Later, SKC incorporated the Leland Legacy pump into a specialty kit for PM in ambient air for the U.S. Department of Defense. The SKC Deployable Particulate Sampler (DPS) is widely used to measure PM₁₀ exposures of deployed troops from sandstorms in the Persian Gulf along with other PM sampling applications in general industry and research.



DESIGN FEATURES

FOR TARGETED APPLICATIONS

INDOOR AIR/CHILDHOOD ASTHMA STUDIES

- The Leland Legacy provides high flowrates up to 15 L/min in a size that allows for placement in a backpack for personal sampling.
- The powerful battery pack allows for sampling up to 24 hours to collect more contaminant mass for increased sensitivity of measurement.
- The noise level is acceptable for indoor air studies. Levels are 52 db(A) using optional noise reducing pouch. (SKC 224-89)



DESIGN FEATURES

FOR TARGETED APPLICATIONS

AMBIENT PM SAMPLING

- The Leland Legacy provides the flowrates necessary to partner with ambient PM samplers such as the SKC Impact Sampler for use at 10 L/min.
- The battery pack allows for 24 hour sampling.
- The pump is small enough to fit inside a carry case with accessories in the SKC DPS kit. The entire kit is of a size and weight that make it more economical to ship than competitor's models.



LELAND LEGACY

PERFORMANCE PROFILE

Designed for 24+ hours of run time using samplers with low backpressure including:

- SKC Sioutas Cascade Impactor at 9 L/min
- Low volume PUF tube at 5 L/min
- Respirable PPI sampler at 8 L/min



226-92



225-370



225-3841



LELAND LEGACY

MORE SAMPLING OPTIONS

- SKC Impact PM sampler at 10 L/min



225-390/392

- Personal Environmental Monitor (PEM) at 10 L/min



761-series

DPS SYSTEM

WITH THE LELAND LEGACY PUMP



The Leland Legacy pump and the Impact sampler have been incorporated into the Deployable Particulate Sampler System for PM10 or PM2.5.

SKC 100-3901/2



LELAND LEGACY

MORE SAMPLING OPTIONS

- 20+ hours using 37-mm, 0.8 um MCE filters at 8 L/min (approx. 22 inches of water backpressure)



SKC 225-3-01

- Spore trap cassettes including SKC Versatrap at 10 L/min



225-9820/1

NOTE: The Leland Legacy is NOT designed for high backpressure applications such as asbestos clearance sampling.



LELAND LEGACY SPECIFICATIONS



- SIZE: 8 X 4 X 2.6 in (20 X 10 X 7 cm)
- WEIGHT: 36 ounces (1 kg)
- CASE: Thermoplastic with soft rubber over molding
- CE marked

Note that the Leland Legacy is NOT UL approved for intrinsic safety.



FLOW FEATURES

- **PNEUMATIC STACK** is enhanced to provide constant flows from 5 to 15 L/min at $\pm 5\%$ of set-point after calibration to desired flow.
- **FLOW FAULT** occurs if the pump is unable compensate for >15 seconds. Auto restart is attempted every 20 seconds up to 10 times.



DISPLAY OPTIONS



- Pump Serial Number
- Flow Rate
- Air Volume
- Temperature
- Atm. Pressure
- Time of Day
- Run Time



EVERYBODY WANTS A PUMP WITH POWER

- High-power, Removable, Rechargeable Li-Ion battery pack 12-Ah capacity, 88.8 watt hours
- AC operation using charger



PUMP PROGRAMMABILITY

Optional SKC Datatrac[®] software provides the ultimate flexibility in scheduling and record keeping capabilities.

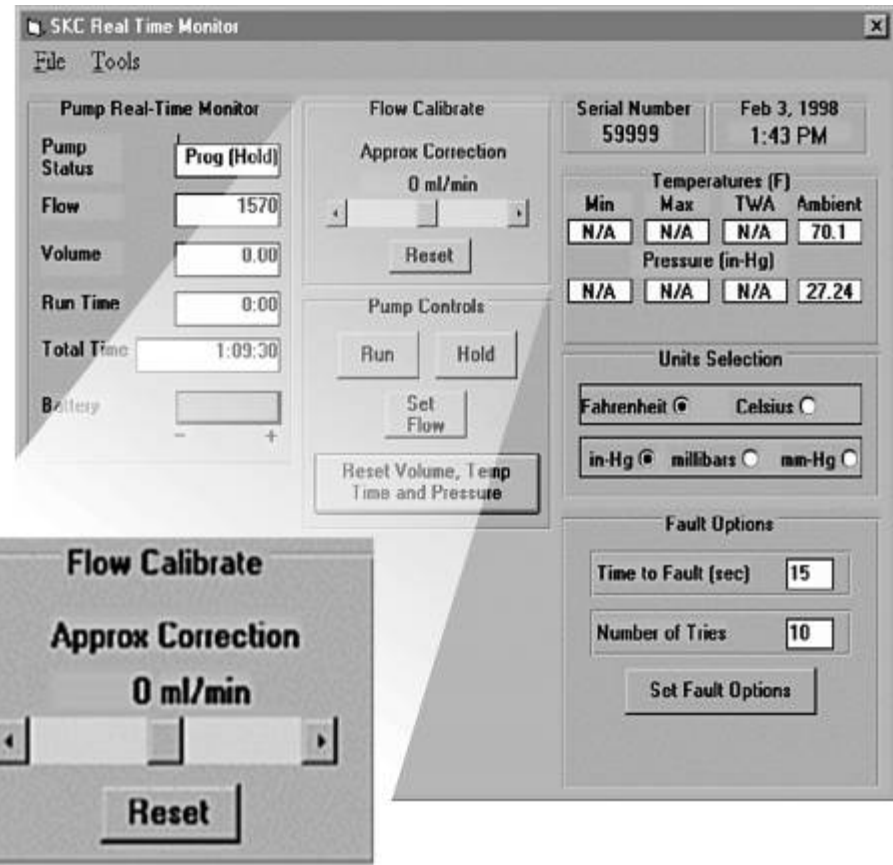


SKC DATATRAC SOFTWARE

REAL-TIME SAMPLE SET-UP

View, set or reset:

- Hold/run status
- Accumulated run time and air volume
- Temperature and atm. pressure
- Flow correction factors based on external calibration



SKC DATATRAC SOFTWARE

SAMPLE SET UP WINDOW

SKC Sample Set-Up C:\AC2000\WORKER.STP

File Options

SKC AirChek 2000 Sample Sheet

Worker (last name) Steele first Alan Worker ID 3063

Sampling Site Building 5

Sample Media PVC Filter Sample ID 2184

Method Followed OSHA ID 142

Chemicals of Interest Portland Cement (Silica)

Job Description Monitor worker exposure

Pre-Sample Calib. SN 24230 Post-Sample Calib. SN 24230

Environmental Conditions

Humidity % 25 Atm. Pressure 26.9

Analysis

Date Sent To Lab 4 Feb 1998 Analyzed By Martin Rogers

Date Returned From Lab 6 Feb 1998 Results 10 mg/m3

Sampled By Gerry Harper Date 4 Feb 1998 Signature

Audited By George Sherman Date 6 Feb 1998 Signature

Comments Blasting AM, Mixing PM

Document:

- Sample identification
- Method/Media
- Calibration Data
- Environmental Conditions
- Analysis Results



SKC DATATRAC SOFTWARE

PUMP SCHEDULER WINDOW

Program:

- Sampling intervals
- Start/stop date, time, flowrates
- Create a sampling schedule

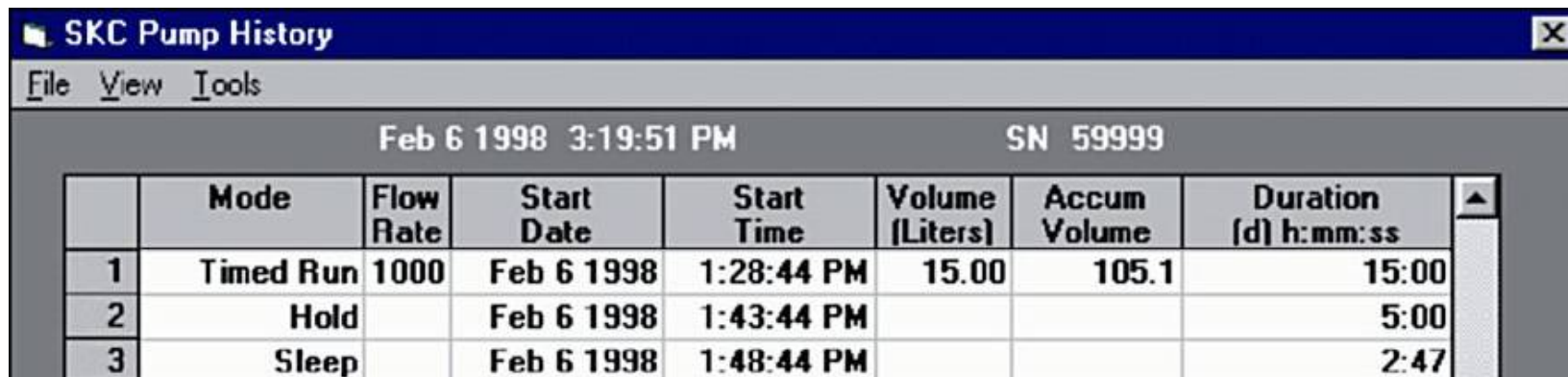
The screenshot shows the SKC DataTrac Pump Manager software interface. The main window is titled "SKC Pump Scheduler" and contains the following elements:

- Table:** A table with columns: Flow Rate, Start Date, Start Time, Stop Date, Stop Time, and Duration (d) h:mm:ss. The first row shows: 1, 1000, Thu Oct 5 2000, 1:40:00 PM, Oct 5, 1:55 PM, 15:00.
- Time Bump Control:** A panel on the right with "Time Bump all Dates" and buttons for "-", "+", and radio buttons for Minute, 10 Min, Hour, Day, Week, and 4 Weeks.
- Summary Row:** A row with columns: Rate (1000), Start Date / Time (Oct 6 2000 4:00 PM), Stop Date/Time (Oct 6 4:15 PM), and Duration ((d) h:mm:ss) (15:00).
- Calendar:** A calendar showing September and October. The date October 6 is highlighted.
- Flow Control:** A section with "Comm Checking" (On/Off), "Flow" (1000), "From Pump", and "To Pump" buttons.
- Clock:** A large analog clock showing the time 4:15 PM.



SKC DATATRAC SOFTWARE

SAMPLE HISTORY WINDOW



The screenshot shows a software window titled "SKC Pump History" with a menu bar containing "File", "View", and "Tools". The window displays the date and time "Feb 6 1998 3:19:51 PM" and the serial number "SN 59999". Below this is a table with the following columns: Mode, Flow Rate, Start Date, Start Time, Volume (Liters), Accum Volume, and Duration (d) h:mm:ss. The table contains three rows of data.

| | Mode | Flow Rate | Start Date | Start Time | Volume (Liters) | Accum Volume | Duration (d) h:mm:ss |
|---|-----------|-----------|------------|------------|-----------------|--------------|----------------------|
| 1 | Timed Run | 1000 | Feb 6 1998 | 1:28:44 PM | 15.00 | 105.1 | 15:00 |
| 2 | Hold | | Feb 6 1998 | 1:43:44 PM | | | 5:00 |
| 3 | Sleep | | Feb 6 1998 | 1:48:44 PM | | | 2:47 |

Record, view, save, or print:

- Run Time
- Flow Rate
- Air Volume
- Changes in operational status



LELAND LEGACY WITH SKC CALCHEK®



- This SKC patented feature allows the Leland Legacy pump and Defender primary flow calibrator to communicate directly.
- When connected, the pump adjusts the flow until the displayed values of both agree.
- Fast, easy, accurate with no manual adjustments.

THANK YOU FOR YOUR INTEREST!
CONTACT YOUR LOCAL SKC
REPRESENTATIVE
FOR THE LELAND LEGACY PUMP.

