

Casella Apex Lite Personal Sampling Pumps

Introduction

The Casella Apex Lite is a modified version of the original Apex Personal Sampling Pump. Recently re-engineered following extensive customer feedback, the new Apex Lite features a ruggedized black plastic molded body that resists fingerprints and marking in heavy usage. It also features a thicker window to minimize accidental damage to the display. The Apex Lite is supplied with a one time alkaline battery pack for infrequent use. This can be easily upgraded to accept the regular NiMH battery pack to use with the drop in charger base for more extensive field use.



Apex Lite Non-IS Sampling Pump

Key benefits

- ❑ Low cost starter pump
- ❑ Features flow rates from 800 to 5000 ml/m high flow
- ❑ Can be used with low flow adaptors from 5 to 750 ml/m
- ❑ Can be updated to have NiMH battery pack for more frequent usage
- ❑ Up to 45 hr run time at 2 l/m with 25 mm GFA filter
- ❑ Available in both Standard and Programmable versions
- ❑ Fixed duration run measurements in both versions
- ❑ Delayed start and stop in Pro model
- ❑ Storage of last 100 events for IR download from Pro model to Pump Manager software

Applications

- ❑ Personal sampling for particulates in the breathing zone
- ❑ Designed to comply with EN1232, MDHS 14/3, NIOSH 0600 requirements
- ❑ Available in single or 5 pack kits
- ❑ Available in comprehensive multiple 5 pack kits with all the necessary accessories
- ❑ Just three control buttons on the pump and a customized LCD make the user interface very simple to operate



Apex IS and Apex Lite Personal Sampling Pumps

The Apex Lite range will appeal to those performing infrequent pump sampling as it offers a low cost entry point with the possibility of upgrading to the enhanced Casella NiMH battery pack. The customer can use both throw away alkaline batteries or their own NiMH rechargeable cells and an external charger system and still get up to 45 hours of real running time per pack. This represents a full week of full day sampling from the same set of batteries.

Using the Apex Lite Pump

The Apex Lite is an ideal instrument for the Industrial Hygiene and Health & Safety Professionals.

Traditional personal air sampling pumps usually operate from rechargeable battery packs. These require a pre-sampling

charge time with an undesirable cost impact when only used infrequently.

The Apex Lite is ideally suited to occasional or emergency standby sampling applications. Considerably longer run times may be achieved due to the

higher capacities offered by some of the newer designs of popular AA size Alkaline cells.

Note that the Apex Standard and Pro Lite pumps are not certified for use in hazardous areas that may require UL approval. Use the Apex IS models instead.

Technical Information					
Flow range	0.8 to 5.0 liters/minute standard flow range (5 to 750 milliliters/minute with suitable Low Flow adaptor)				
Flow control accuracy	<±3.0% for selected flow				
Flow performance (Flow, max vacuum pressure)	1.0 liters/minute @ 31.5 in H ₂ O 2.0 liters/minute @ 31.5 in H ₂ O 3.5 liters/minute @ 12.6 in H ₂ O 4.0 liters/minute @ 7.1 in H ₂ O 5.0 liters/minute @ open flow				
Battery voltage and capacity	6.0 V Alkaline 4 x AA cells 2.6 Ah (4.8 V NiMH battery pack / 2.7 Ah)				
Inlet pulsation ratio	<10% using cyclone @ 2.0 liters/minute approx. 3.0 in H ₂ O				
Displayed values	Satisfies NIOSH 0600 and EN 1232 Real time flow rate, volume sampled, elapsed sample time, temperature, operating mode, program details				
Pump MTBF (service interval)	Typically >2500 hours				
Operating temperature	41 to 104 °F (5 to 45 °C)				
Storage temperature	14 to 122 °F (-10 to 50 °C)				
Charging technique	Drop in intelligent fast charger				
Typical charge time	<3.5 hrs from flat (<1 hr gives 8 hr run time)				
External Power Supply Unit (for drop in charger)	dT/dt fast charge termination with safety time out Standby trickle charge mode keeps pump ready for use				
Memory storage of data	100 events saved (in Pro version)				
Memory protection time (with main battery removed)	Approximately 20 minutes				
Communications	Infra red (via RS232 IR transducer)				
Recorded values	Start and stop times, flow rate, average sample temperature, total volume sampled (in l or m ³)				
Physical characteristics Size	5.8 x 3.4 x 1.8 in (145 x 85 x 46 mm)				
Weight (inc alkaline battery pack)	14.7 oz (411 gm)				
Pump Performance					
	Typical filter pressure load in inches of H₂O, typical battery life in hours				
Filter type	<i>1.0 liters/min</i>	<i>2.0 liters/min</i>	<i>2.2 liters/min</i>	<i>3.5 liters/min</i>	<i>4.0 liters/min</i>
25 mm GFA	2.0 in, 100 hrs	3.0 in, 45 hrs	4.0 in, 24 hrs	5.0 in, 21 hrs	5.3 in, 16 hrs
25 mm 0.8 µm	6.5 in, 72 hrs	11.0 in, 24 hrs	15.0 in, 16 hrs	17.0 in, 11 hrs	19.0 in, N/A
25 mm 1.2 µm	4.5 in, 100 hrs	11.0 in, 34 hrs	10.0 in, 17 hrs	11.8 in, 16 hrs	12.5 in, 11
37 mm GFA	0.5 in, 100 hrs	1.5 in, 65 hrs	2.0 in, 31 hrs	2.5 in, 23 hrs	2.6 in, 19 hrs
5" backpressure	>33 hrs	>20 hrs	>13 hrs	>11 hrs	>3 hrs
Ordering information					
182170B	Apex Lite Standard pump with alkaline battery pack				
182180B	Apex Lite Pro pump with alkaline battery pack				
P10417S	Single Apex pump kit case with space for charger and accessories				
P104107	Tool box kit case for up to 5 pumps and charger and accessories				
182170B/K5	5 pack of Apex Lite Standard pumps in tool box kit case				
182180B/K5	5 pack of Apex Lite Pro pumps in tool box kit case with IR interface to Pump Manager software for computer download and archiving				
182073B	Rechargeable NiMH battery pack for Apex Lite pumps				
182052B	Single pump drop in charger for Apex pumps fitted with NiMH pack				
182091A	Pump Manager database software with IR link and cable				
182094A	Emergency 4 x AA dry cell batt. pack for non-IS Apex Std/Pro pumps				