SKC AirChek XR5000

Personal air sampling pump with keypad control, 5 to 5000 mL/min

The AirChek XR5000 covers high flows for particulate sampling and low flows for gases and vapours with one pump. Its isothermal flow control holds the set flow against back pressure and corrects it for temperature. Two interchangeable Li-ion battery packs trade run time (high-power) against weight (standard). Three buttons set timed, delayed and continuous runs.



5–5000	50 inH_2O	40 h	±5 %	16 oz
Flow range, mL/min (5–500 with low flow kit)	Back pressure held at 2000 mL/min	Run time at 2 L/min, high-power battery	Flow accuracy after verification	Weight, standard model

Performance

Flow range	1000–5000 mL/min 5–500 mL/min with the optional low flow accessories
Back pressure held	Up to 50 inH_2O at 2000 mL/min; see the compensation range table
Flow control	Isothermal, closed-loop flow sensor; corrects the flow for changes in temperature
Flow accuracy	±5 % of set point after verification of the desired flow rate
Tube sampling	One tube: All-in-One adjustable tube holder Up to four tubes at once, each at its own flow: multiple low flow holders with a CPC
Flow fault	Stops after 15 s without compensation against excessive back pressure; holds the run time and shows the fault icon
Auto-restart	Attempted every 15 s in fault, up to 5 times

Operating conditions

Temperature	Operating: 32–104 °F (0–40 °C) Charging: 32–113 °F (0–45 °C) Storage: −4 to 95 °F (−20 to 35 °C)
Humidity	0–95 %, non-condensing

Mechanical

Case	Anti-static plastic; CE marked for RFI/EMI protection
Inlet	Inlet port with protective filter; secure belt clip
Tubing	Requires 1/4" ID (3/8" OD) tubing
Size and weight	Per model, in the table of high-power and standard models

Electrical and communication

Battery packs	High-power Li-ion, 4 cells, for extended runs Standard Li-ion, 2 cells, for lighter weight Interchangeable; data per model in the model table
On the charger	Extended runs while the pump is attached to the charger
Charging	With SKC-approved chargers; the time varies with battery capacity and level of discharge
Battery charge indicator	LCD icon at full, mid and low charge, imminent low battery fault and low battery fault
Low battery fault	The pump goes to sleep after 15 s
Auto-off	After 5 min of inactivity

Compliance

Intrinsic safety [1]	UL913, CAN/CSA C22.2 cULus listed for use in hazardous locations; listed models carry the cULus logo on the label
Conformity	CE and UKCA marked; RoHS compliant
Battery transport	Li-ion batteries are subject to special shipping regulations Tested to the UN Manual of Tests and Criteria, Part III, subsection 38.3; rated below 100 Wh

Display and timer

Operation	Large three-button keypad; lockable
Display	LCD with elapsed time and accumulated run time; battery status indicator
Status LED	Bright blue pump status LED
Timer	Timed runs and run delays from 1 to 9999 min (6.8 days); continuous run at the touch of a button
Timer rollover	Past 6.8 days the display rolls over to 0
Timing accuracy	1 min per month at 25 °C

Flow range and compensation range

Mode	Flow, mL/min	Back pressure held, in H_2O
High flow	5000	10
High flow	4000	20
High flow	2000	50
Low flow	5–500	–

Low flow needs the optional low flow accessories. Compare the typical back pressure of the sampling media with these values to choose an application.

High-power and standard models

Data	High-power Li-ion	Standard Li-ion
Battery pack	4 cells, 7.2 V, 6.9 Ah, 49.7 Wh	2 cells, 7.2 V, 3.45 Ah, 24.85 Wh
Battery pack for the UL Listed pump	P85004B	P85002B
Typical run time at 2 L/min	40 h	20 h
Typical run time at 5 L/min	22 h	11 h
Recharge time	about 8 h	about 4 h
Size	5.5 × 3 × 2.3 in	4.3 × 3 × 2.3 in
Size in cm	14 × 7.6 × 5.8 cm	10.9 × 7.6 × 5.8 cm
Weight	21 oz (0.6 kg)	16 oz (0.45 kg)

Run times from tests with 37 mm, 0.8 µm MCE filters, new pumps and new batteries; pump and battery performance may vary. Recharge with SKC-approved chargers.

Typical back pressure of sampling media, inH_2O

Filter, pore size (µm)	1.0 L/min	1.5 L/min	2.0 L/min	2.5 L/min	3.0 L/min	3.5 L/min	4.0 L/min	5.0 L/min
25 mm MCE/0.8	7.2	9.5	12.8	16.1	19.7	22.9	29.9	32.7
25 mm MCE/0.45	13.7	20.7	28.0	35.1	42.7	49.8	57.0	71.5
37 mm MCE/0.8	2.6	3.9	5.5	6.9	8.4	9.9	11.5	14.7
37 mm PVC/5.0	1.0	1.6	2.2	2.9	3.6	4.4	5.1	6.9
37 mm polycarbonate/0.45	3.5	5.3	7.1	8.9	11.0	13.1	14.8	18.9
25 mm MCE/0.45 microvacuum	7.8	11.8	15.8	20.0	24.3	28.7	32.4	40.9
37 mm PTFE/1.0	6.3	9.7	12.8	16.3	19.6	23.2	26.2	34.1

Compare these values with the pump's compensation range to choose an application.



Standard model, front and right side in three-quarter view, with height, width and depth in inches. The model table gives the size of both models in inches and centimetres.

Pumps and kits

Contents	Order code high-power	Order code standard
Pump only, with battery pack and screwdriver set	210-5001	210-5002
Single high flow pump kit	210-5001K	210-5002K
5-pack high flow pump kit	210-5001K5	210-5002K5
Single dust sampling kit	210-5001KP	210-5002KP
5-pack dust sampling kit	210-5001K5P	210-5002K5P
Single vapour sampling kit	210-5001KV	210-5002KV
5-pack vapour sampling kit	210-5001K5V	210-5002K5V
Single combined sampling kit	210-5001KC	210-5002KC
5-pack combined sampling kit	210-5001K5C	210-5002K5C

Order from Analyt-MTC with the order codes. Kits add chargers, tubing, carry case and their sampling accessories. Starter kits and 5-pack high/low flow kits: ask Analyt-MTC.

Charging, cases and replacement parts

Description	Order code
Single charging kit, 100–240 V AC, 50/60 Hz, wall plugs	223-241
Take Charge 5 five-station Li-ion battery charger	223-441
Protective pouch, red, high visibility, high-power model	224-96A
Protective pouch, black, noise reducing, high-power model	224-96C
Protective pouch, black, high-power model	224-88
Protective pouch, black, noise reducing, standard model	224-913
Carry case for 1 pump	224-98
Carry case for 5 pumps	224-97B
Battery pack, 4-cell Li-ion	P85004B
Battery pack, 2-cell Li-ion	P85002B
Belt clip	P20139
Filter/O-ring, pack of 3	P20140
Inlet/filter housing	P20142
Inlet filters, pack of 50	P40011
Battery jack cover	P20419

Use only SKC-approved parts to keep the UL listing for intrinsic safety. Repair by anyone other than SKC or an authorised SKC repair centre voids it.

Flow verification and low flow accessories

chek-mate with CalChek, 0.50–5 L/min, UK or ISO certificate; NIST: ask Analyt-MTC	375-0550, 375-0550S
Low flow kit, 5–500 mL/min, All-in-One holder and Type A cover	210-500
Constant pressure controller (CPC) for multiple tubes	224-26-CPC
Adjustable low flow tube holder, dual	224-26-02
Adjustable low flow tube holder, tri	224-26-03
Adjustable low flow tube holder, quad	224-26-04
Tube cover type A, tubes 6 mm OD × 70 mm L	224-29A
Tube cover type B, tubes 8 mm OD × 110 mm L	224-29B
Tube cover type C, tubes 10 mm OD × 150 mm L	224-29C
Tube cover type D, tubes 10 mm OD × 220 mm L	224-29D

Notes

1. For safe operation in hazardous locations, the pump label must carry the cULus logo and the battery pack label Cat. No. P85004B or P85002B. Any other battery pack or device powering the pump voids the UL listing for intrinsic safety.

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