SKC AirChek Essential and Essential+

Personal air sampling pumps with touch control, 5 to 5000 mL/min

The AirChek Essential and Essential+ hold the set flow as back pressure rises and correct it for temperature and atmospheric pressure. The Essential has a touch keypad and a black and white display; the Essential+ has a touch screen and a backlit graphic LCD.



5–5000	50 inH_2O	40+ h	±5 %	24 Wh
Flow range, mL/min	Back pressure held at 2000 mL/min	Run time at 2000 mL/min, 37 mm filter	Flow control around the set point	Battery energy, Li-ion

Performance

Flow range [1]	Constant flow: 1000–5000 mL/min Low flow: 5–500 mL/min with a low flow holder
Flow control	Set point ±5 %; corrects for temperature and atmospheric pressure
Flow fault	Automatic restart after a flow fault
Low flow sampling	Several tubes at once with the low flow accessories
Reading accuracy	Temperature: ±1 °C Atmospheric pressure: ±0.3 inHg

Mechanical

Sound level	51.7 dB average at 3 ft (1 m), with a 37 mm, 0.8 µm MCE filter cassette
Case	Polycarbonate with rubberised anti-static overmoulding
Ingress protection	IP6x, dust-tight enclosure
Inlet	For 1/4" ID tubing
Size and weight	4.1 × 3.7 × 2.8 in (10.4 × 9.4 × 7.1 cm), 19.4 oz (550 g)

Electrical and communication

Battery	Removable Li-ion pack, 7.2 V, 3.3 Ah, 24 Wh; or mains power through the cradle
Run time [2]	2000 mL/min: 40 h or more 5000 mL/min: 15 h or more In the charging cradle: unlimited
Charging cradles	Up to 5 cradles chained on one cable; Lite charging cradle available

Compliance

Intrinsic safety [3]	UL913, CAN/CSA C22.2: Class I, Groups A–D; Class II, Groups E–G; Class III, T4 Class I, Zone 0: AEx ia and Ex ia IIC T4 Ga; −20 °C ≤ Ta ≤ 45 °C ATEX: Ex II 1G Ex ia IIC T4 Ga; DEMKO 19ATEX 2288 IECEx UL 19.0100; UKEX: UL22UKEX2351
Conformity	cULus Listed, E62011; CE 0539; UKCA 0843; RoHS compliant Type P pumps for personal sampling of airborne particles, designed to meet ISO 13137:2022

Display and operation

Display, Essential	Black and white display showing the elapsed sampling time
Display, Essential+	High-contrast backlit LCD showing battery status and elapsed time
Control, Essential	Capacitive touch keypad with locking option
Control, Essential+	Eight-area capacitive touch screen with auto lock option
Both models	Screen lock-out feature and protective cover; bright running and status LEDs

AirChek pump selection guide

AirChek ESSENTIAL	Touch keypad Intrinsically safe; compensates for temperature and atmospheric pressure; flow fault with auto-restart
AirChek ESSENTIAL+	Touch screen Intrinsically safe; compensates for temperature and atmospheric pressure; flow fault with auto-restart
AirChek TOUCH	Colour touch screen; programmable; PC compatible, download history Intrinsically safe; compensates for temperature and atmospheric pressure; flow fault with auto-restart CalChek automatic flow rate verification and calibration
AirChek Connect	Touch screen; programmable; PC compatible, download history Intrinsically safe; compensates for temperature and atmospheric pressure; flow fault with auto-restart Bluetooth connection with PC and mobile; SmartWave mobile app

Pressure drop (back pressure held), Essential and Essential+

Flow rate, mL/min	1000	2000	3000	4000	5000
Back pressure held, inH_2O	60	50	40	30	20

Both models: constant flow 1000–5000 mL/min; low flow 5–500 mL/min with a low flow holder.

Pumps and kits

Order code	Description
220-3000	AirChek Essential, pump only
Ask Analyt-MTC	AirChek Essential, starter pump kit
Ask Analyt-MTC	AirChek Essential, single high flow pump kit
Ask Analyt-MTC	AirChek Essential, 3-pack high/low flow pump kit
Ask Analyt-MTC	AirChek Essential, 5-pack high flow pump kit
220-3100	AirChek Essential+, pump only
220-3100-S	AirChek Essential+, starter pump kit
220-3100-K	AirChek Essential+, single high flow pump kit
220-3100-K3D	AirChek Essential+, 3-pack high/low flow pump kit
220-3100-K5	AirChek Essential+, 5-pack high flow pump kit

Order from Analyt-MTC with the order codes. A pump alone needs a charging cradle and a power supply, such as the Lite charging cradle 220-850 and the power supply 220-600.

Flowmeters and accessories

chek-mate flowmeter, UK standard traceable certificate	375-0550
chek-mate flowmeter, NIST standard traceable certificate	Ask Analyt-MTC
Low flow adapter kit	210-500
Protective pouch	224-911
Lite charging cradle	220-850
Power supply for the charging cradle	220-600

Notes

1. 5–500 mL/min needs a low flow holder.
2. Run times were measured with a 37 mm, 0.8 µm MCE filter, a new pump and a new, fully charged battery; pump and battery performance may vary.
3. Intrinsic safety holds only for a pump operated with SKC battery pack P75718 or P75718A.
4. There is also a chek-mate with an ISO standard traceable certificate; ask Analyt‑MTC.

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