

This manual covers the following models:

224-50MH, 224-51MTX, 224-52MTX

Purchase Details and Service History

Thank you for choosing an SKC product. Your purchase is covered by our warranty, details of which can be found inside the rear cover of this manual.

Product Model Number	Product Serial Number	Date of Purchase

SKC recommends a minimum service interval of one year for this product. The first service is due one year from the date of purchase, and then at yearly intervals on this date. However, it is the responsibility of the user to perform a risk assessment to determine the necessary frequency of servicing that is required.

Service	Date	Service	Date	Service	Date
1		5		9	
2		6		10	
3		7		11	
4		8		12	

Please note that SKC Ltd are the only authorised service centre in the UK, guaranteeing you access to the full range of genuine SKC replacement parts. For all other areas a full list of SKC approved distributors and service centres can be found at www.skcltd.com

SKC UK service centre - Tel: +44 (0)1258 480188 Fax: +44 (0)1258 480184 Email: info@skcltd.com

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The Sidekick MTX pump range

- Complies with the EU ATEX Directive 2014/34/EU on equipment intended for use in potentially explosive atmospheres, as intrinsically safe to EEx ia IIC T4, for use in Europe.
- The equipment may be used in zones 1 and 2 with flammable gases and vapours with apparatus groups IIA, IIB & IIC and with temperature classes T1,T2,T3,T4.
- The equipment is only certified for use in ambient temperatures in the range -20 to +40°C and should not be used outside this range.
- The battery pack should not be charged in a hazardous area.
- Use only SKC approved chargers designated for the model.
- The equipment has not been assessed as a safety related device (as referred to in Directive 2014/34/EU Annex II, clause 1.5).
- The equipment should not be used if damaged in a way that could invalidate intrinsic safety. Such defects might include cracking of the battery pack enclosure and internal encapsulant such that internal components or cells are exposed. It is the responsibility of the user to ensure that the pump is in an acceptable condition for use in hazardous locations.

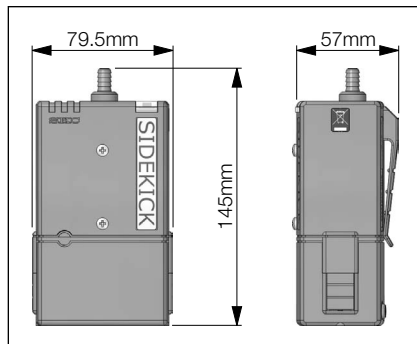
Important note about intrinsic safety

If you are unsure as to whether the Sidekick pump you have purchased is suitable for your environment, check with your site manager or responsible person BEFORE USE that the intrinsic safety rating on the product meets your site requirements. SKC personnel are unable to recommend the appropriate safety rating for your site.

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All models

- Weight: 224-50MH - 465 g
224-51MTX & 224-52MTX - 575 g
- Enclosure rating: IP20
- Flow range:
750 - 3000 ml/min (constant flow operation)
5 - 500 ml/min with adapter (constant pressure operation)
- Flow control: $\pm 5\%$ set point constant flow
- Battery pack: NiMH rechargeable, 2.0 Ah, 4.8 V
- Storage & operating temperature: -20°C to $+40^{\circ}\text{C}$
- Operating humidity: 0 to 95% RH
- Compensation range:



Flow rate (ml/min)	Back Pressure (inches of water)
750	5 - 25
1000	0 - 25
2000	0 - 25
3000	0 - 15

Typical sample media back pressure:
 I.O.M. sampler with GFA filter at 3 l/min =
 approximately 7 inches of water
 I.O.M. sampler with 0.8 μm MCE filter at 2 l/min =
 approximately 15 inches of water

- Typical run time: 8 hours minimum at 3000 ml/min and 15 inches of water back pressure

- Low battery shutdown function

224-52MTX only:

- Flow fault shutdown function in event of high back pressure or pinched hose
- Timer: Run time display 0 to 99,999 minutes
 Accuracy $\pm 0.05\%$
 Timer freeze and run time retention on low battery and flow fault shutdown

Note:

SKC Limited reserve the right to make changes to the specification and design of this product at any time without prior notice to the end user.

Pump Features

All Models

Battery charging options	SKC offer two battery charger options for the Sidekick series pumps, a single charger (Part No. 223-203A) and a five station charger (Part No. 223-103A). Both charger models provide optimum charging of the NiMH battery packs used in the Sidekick series pumps, based on a timed (16 hour) constant current charging phase followed by a switch to a trickle charging rate to prevent overcharging.
Mains power option	The Sidekick series pumps can also be powered from the electrical mains supply using a 'battery eliminator' (Part Nos. 223-300B - Euro 2 pin plug, 223-300C UK 3 pin plug). This accessory comprises a mains adaptor and dummy battery pack which is fitted to the pump in place of the standard battery pack. Please note that the pump's ATEX certification is invalidated when using the battery eliminator, and therefore must not be used in hazardous areas when the battery eliminator is fitted.
Anti-tamper cover	The pump controls are situated beneath a clear anti-tamper cover.
Low battery shutdown	Automatic pump shutdown in the event of a low battery condition. Prevents degradation of battery pack due to over-discharge.
Particulate trap	Built in replaceable filter to trap particles that would otherwise contaminate the pump mechanism.

Pump Features**224-50MH & 224-51MTX Only**

LED run indicator

LED run indicator gives clear visual indication that pump is running.

224-52MTX Only

LCD screen

LCD screen indicates elapsed sample run time in minutes up to 999 minutes. Also displays low battery condition and flow fault condition. Elapsed sample time is retained on screen in the event of low battery or flow fault shutdown.

Flow fault function

Indicates flow fault due to obstructed tubing or excessive filter loading. Shuts the pump down if the condition persists for longer than 15 seconds. Automatically attempts four restarts before shutting down completely.

1) Pump Models

224-50MH	Standard pump with simple on/off control. Non-intrinsically safe model.
224-51MTX	Intermediate pump with simple on/off control. Intrinsically safe model.
224-52MTX	Deluxe pump with simple on/off control and elapsed time display. Intrinsically safe model.

2) Care of Sidekick Series Pumps

- Always use the correct SKC batteries and battery chargers designated for the Sidekick series pumps.
- Never run the pump long term without a tube or filter medium in place.
- When carrying out sampling using long term colour change tubes always use a tandem tube holder with trap tube (Part No. 222-3D-2 and cover 224-29T). This will prevent the aggressive fumes generated by these tubes from entering and damaging the pump mechanism.
- When carrying out sampling using impingers always fit a trap between the impinger and pump inlet. This will prevent the possibility of the fluid used in the impinger from entering and damaging the pump mechanism. As a further precaution always ensure that the pump flow rate is set to below 1 litre/min before connecting the trap and impinger to the pump inlet. For stability use the accessory mounting screws (refer to pump diagram on pages 10 and 11) to fix the impinger bracket to the front of the pump.
- The Sidekick series pump cases are IP20 rated, they are not rated as water or splashproof and therefore must not be used where it is possible for water to enter the pump casing.
- Sidekick pumps are fitted with a particulate filter which is easy to replace. This is situated under the hose connector, which has a screw fitting. For general maintenance replace the filter every 2-3 months or if it appears dirty. New filters are white in colour (order Part No. P40370).

Warning - Failure to follow these guidelines will void the product warranty.

3) Non ATEX Certified Variants of the Sidekick Pump

The Sidekick pumps are also produced in a variant range which is UL certified for intrinsic safety and these pumps are therefore not suitable for use in potentially explosive atmospheres in Europe where ATEX approval is mandatory.

Pump components vary between the UL and ATEX certified variants, therefore components must not be interchanged between these pumps. If in any doubt please contact SKC Ltd customer services for advice.

4) Sampling Methods

This instruction manual provides the necessary information to set up and operate the Sidekick series pumps. For more detailed information on specific sampling methods please refer to SKC's Step-By-Step Guide to Air Sampling (Part No. 224-G1). To obtain a free copy please contact SKC Ltd customer services on +44 (0) 1258 480188 or download at www.skcltd.com.

5) The WEEE Directive

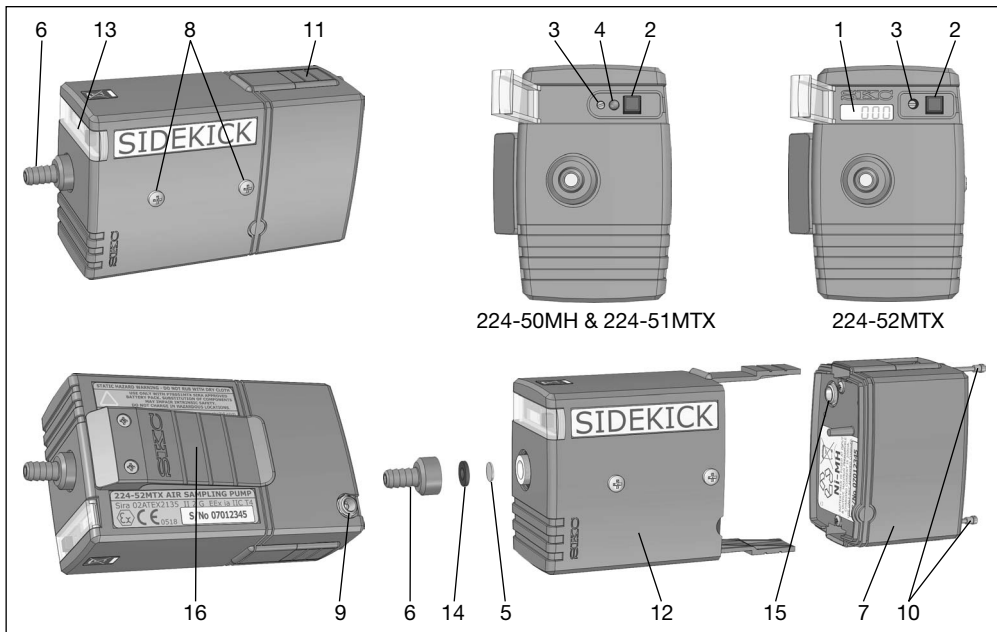


This product is marked with the crossed out wheellie bin symbol, which identifies that it falls within the scope of the EC Directive 2002/96/EC on waste electrical and electronic equipment (WEEE). At the end of its useful life, this product must be disposed of in an environmentally sound way as detailed in the Directive. Note that the battery pack must be separated from the pump and disposed of as detailed in the Batteries Directive (see below). Please contact your local distributor or SKC Ltd for further details on how to comply with the requirements of the WEEE Directive. SKC Ltd's producer registration number is WEE/KH0054TQ.

6) The Batteries Directive

The NiMH battery pack supplied with this pump and any spare battery packs purchased for it, fall within the scope of the EC Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators. At the end of the battery pack's life it must be disposed of in an environmentally sound way as detailed in the Directive. Please contact your local distributor or SKC Ltd for further details on how to comply with the requirements of the Batteries Directive. SKC Ltd's batteries producer registration number is BPRN00454.

Diagram of the Sidekick Pump



224-50MH & 224-51MTX

224-52MTX

1. LCD screen
2. On/Off switch / start button
3. Flow adjust control screw
4. LED run indicator
5. Particulate filter
6. Air inlet hosetail
7. Battery pack
8. Accessory mounting screws
9. Battery pack charging jack socket
10. Battery pack locking screws
11. Battery release buttons
12. Pump unit
13. Snap down clear cover
14. Hosetail seal
15. Battery pack power output jack socket
16. Belt clip

APPLICABLE TO ALL MODELS

1) Charging the Battery Pack

Prior to first use the battery pack should be fully charged, ideally overnight.

The Sidekick series pumps must only be charged using the correct SKC chargers (Part Nos. 223-203A - single charger, 223-103A - five station charger).

The charger is supplied with mains input plugs suitable for use in the UK, Europe, USA and Australia / New Zealand. Select the correct mains input plug and fit it to the charger.

Plug the charger output jack plug into the mating socket at the rear of the battery pack. Plug the charger into the electrical mains supply and switch on the power. The LED indicator on the charger will illuminate to indicate that the charger is charging at full rate.

After 16 hours the charger will automatically switch to trickle charge, identified by the LED indicator on the charger flashing on and off.

When fully charged disconnect the charger jack plug from the battery pack.

2) Accessing the Controls

The controls of the Sidekick series pumps are located under the clear plastic snap-down cover (No 13). This cover is intentionally 'stiff' to open thus preventing accidental operation of the controls.

3) On/Off Switch (No. 2)

Press the on/off switch down to the ON position and the pump will start to run. At the end of the sample period press the on/off switch again to the OFF position to stop the pump.

4) Flow Adjust Screw (No. 3)

Use the small bladed screwdriver attachment of the supplied toolkit to turn the flow adjust screw. To increase the flow rate turn clockwise. The span of the flow adjust screw is 12 turns on 224-50MH & 224-51MTX models, and 15 turns on 224-52MTX models. DO NOT FORCE the flow adjust screw, and make sure the screwdriver end is securely located in the adjuster screw slot.

APPLICABLE TO MODELS 224-50MH & 224-51MTX ONLY

5) LED Run Indicator (No. 4)

When the pump is started using the on/off switch the LED run indicator (No. 4) will flash on and off to indicate that the pump is running.

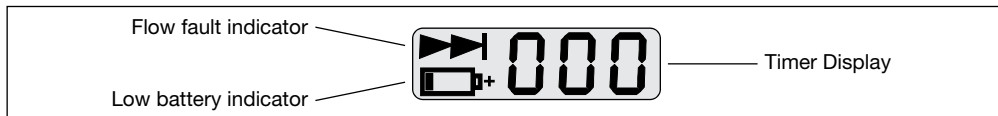
6) Low Battery Shut Down Function

In the event of a low battery condition during a sample run the pump will automatically shut down, and the LED run indicator is disabled. To recover from a low battery shut down condition fully charge the battery, press the on/off switch twice to switch the pump off and then on again and the pump will operate as normal.

APPLICABLE TO MODEL 224-52MTX ONLY

7) LCD Screen (No. 1)

The LCD screen displays the elapsed run time in minutes, a low battery status indicator, and a flow fault indicator.



8) Elapsed Run Time Display

When the pump is started using the on/off switch the elapsed run time display on the LCD screen will reset to '000' and then increment in one minute steps up to '999'. Above '999' the display alternates displaying the first two digits of the elapsed run time and the last three digits. For example, a pump that has run for 1,440 minutes would first display '01' and then '440'. The maximum elapsed run time display is 99,999 minutes, above which the display reverts to '000' and continues to increment.

When the pump is stopped at the end of the sample period using the on/off switch, the elapsed run time is retained on the LCD screen. When the pump is restarted using the on/off switch the elapsed run time will reset to '000' and commence recording the elapsed run time again.

9) Low Battery Shut Down Function

In the event of a low battery condition during a sample run the pump will automatically shut down, the elapsed run time is retained on the LCD screen and the low battery status indicator is displayed. To recover from a low battery shut down condition fully charge the battery and press the on/off switch twice to switch the pump off and then on again. The elapsed run time display will reset to '000' and the pump will operate as normal.

10) Flow Fault Function

In the event of a flow fault condition, caused by obstructed tubing or excessive filter loading for example, that persists for longer than 15 seconds, the pump will automatically shut down. The pump will then automatically restart to check if the fault has been cleared. The pump will attempt a total of four restarts before shutting down completely if the flow fault condition persists. The elapsed run time is retained on the LCD screen and the flow fault status indicator is displayed. To recover from a flow fault condition investigate and correct the cause of the flow fault. Press the on/off switch twice to switch the pump off and then on again. The elapsed run time display will reset to '000' and the pump will operate as normal.

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The standard compensated flow range of the Sidekick series pumps is 750 to 3000 ml/min. To operate at flows in the range 5 to 500 ml/min an optional low flow adapter / tube holder and a constant pressure controller (CPC) are required.

Low flow adapters are available for simultaneous sampling using one, two, three or four sample tubes (refer to the sampling accessories guide on pages 24 and 25 for details). The low flow adapters incorporate throttle valve(s) to set the low flow rate.

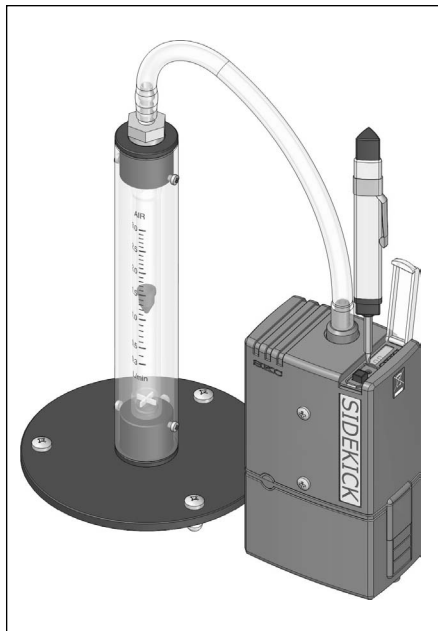
The CPC is a device that when connected to the pump inlet hosetail provides a constant suction at the outlet of the low flow adaptor, ensuring stable airflow through the sample tube(s) once the flow has been set using the throttle valve(s).

To Set Up For Low Flow Sampling -

First ensure that the CPC and low flow adapter are not connected to the pump inlet hosetail at this point.

Connect the pump inlet hosetail to a suitable flow calibrator (such as a rotameter or Defender primary calibrator). Turn on the pump and set the pump flow rate to approximately 1.5 l/min.

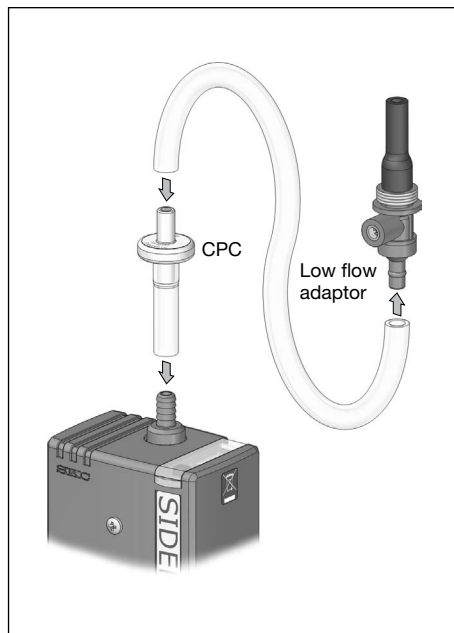
Turn off the pump and disconnect the flow calibrator. No further adjustment of the pump flow rate is required.



Connect the CPC to the pump inlet hosetail - the short length of tubing supplied connected to the CPC is connected to the pump hosetail. Ensure that the CPC is connected correctly, the side of the CPC with the label should be pointing away from the pump.

The low flow adapter can now be connected to the CPC inlet hosetail. Set the low flow rate with the throttle valve on the low flow adjuster, using a suitable flow calibrator (such as a Defender primary calibrator).

Note: If carrying out high flow sampling subsequent to low flow sampling with the same pump, ensure that the CPC is disconnected.



Possible Fault	Corrective Action
Battery pack will not charge	<ul style="list-style-type: none"> • Check the battery charger by trying it with a different battery pack. Replace the battery charger if required. • Check the battery pack by connecting it to a known good battery charger. If the battery pack still will not charge replace the battery pack.
Pump will not operate	<ul style="list-style-type: none"> • Check for faulty battery pack by trying a known good battery pack. Replace the battery pack if required.
Pump flow faults continuously (224-52MTX model only)	<ul style="list-style-type: none"> • Filter media back pressure too high. Try a lower flow rate and/or a less restrictive filter media if the sampling method being used allows this. • More than one filter accidentally fitted into sampling head. Ensure that only one filter is fitted into the sampling head. • Filter backing paper fitted in addition to / in place of filter media. Ensure that only the filter is fitted into the sampling head. • Pump particulate filter is blocked (appears black). Replace the particulate filter. • Tubing blocked or crimped. Replace tubing.
Pump cannot achieve required flow rate	<ul style="list-style-type: none"> • Battery pack voltage low. Fully charge the battery pack. • Filter media back pressure too high. Try a lower flow rate and/or a less restrictive filter media if the sampling method being used allows this. • Pump valves leaking. Replace valve plate assemblies.

Possible Fault	Corrective Action
<p>Pump stops due to low battery before the end of the required sample period</p>	<ul style="list-style-type: none"> • Battery pack not fully charged before starting sample run. Ensure battery pack is fully charged before starting a sample run. • Battery pack has reduced capacity as it nears end of life. Replace the battery pack. • Filter media back pressure too high. Try a lower flow rate and/or a less restrictive filter media if the sampling method being used allows this.

Battery Charging

- Charge battery pack fully before first use to ensure optimum performance.
- Full battery capacity will be achieved after 2 to 3 full charge / discharge cycles.
- Use only SKC approved charger designated for this battery pack. Use of a non-SKC approved charger may impair battery performance or even cause irreparable damage, and will invalidate the battery pack warranty.

Battery Performance

- Charging temperature - For optimum performance charge NiMH batteries between 0 and +40°C.
- Do not overcharge - For optimum performance disconnect battery pack from charger after 24 hours.
- Discharge temperature - For optimum performance discharge NiMH batteries between -10 and +45°C (refer also to pump specifications on page 4 for other limitations on operating temperature for intrinsically safe applications).

Battery Maintenance

- Battery cycling during regular use - To maintain optimum capacity during regular battery use, cycle battery once a month. Run pump until low battery shutdown occurs, then fully charge battery.
- Long term storage and highly infrequent use -
 1. Charge battery fully prior to long term storage.
 2. Store in a cool, dry place at temperature between 0 and 30°C.
 3. Recharge battery at least once a year (or more frequently if stored at temperature above 30°C).
 4. Cycle battery 2 to 3 times after long term storage to restore optimum capacity.

Battery Testing

1. Connect SKC approved charger to battery pack. If charger indicator LED illuminates, battery pack charger input is ok. If charger LED does not illuminate, battery pack input fuse is blown - Replace battery pack.
2. Leave battery pack connected to charger to fully charge.
3. If pump does not function at all after full charge of battery pack, battery pack output fuse has blown, or battery cells have failed or are at end of life - Replace battery pack.
4. If pump functions after full charge of battery pack but gives significantly reduced run times before low battery shutdown, battery cells are failing or are at end of life - Replace battery pack.

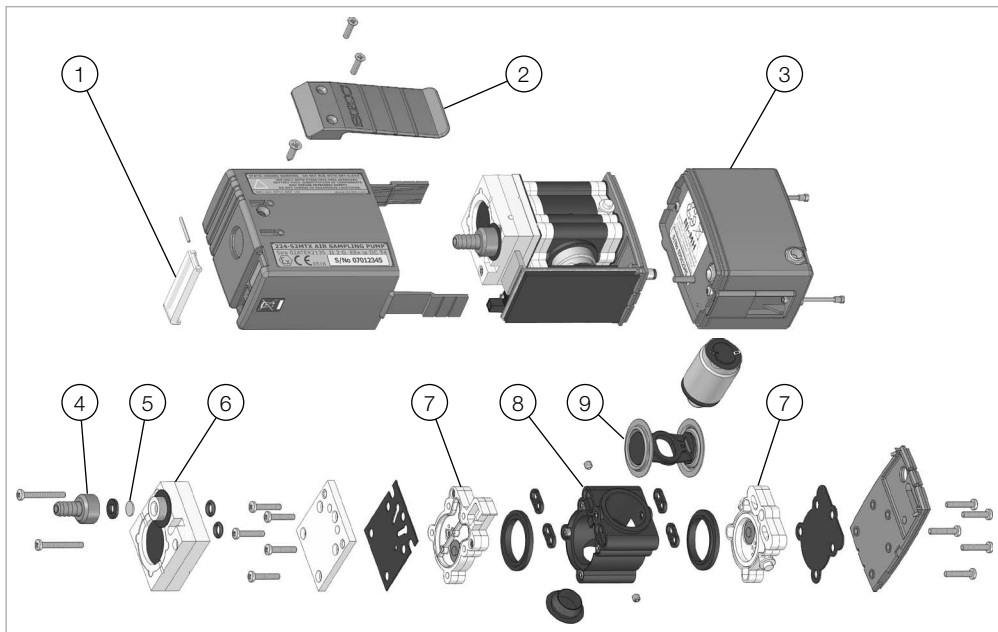
Battery Replacement

Refer to pump diagram on page 10. To remove the battery pack unscrew and withdraw the two locking screws (No. 10). Ensure that the screws are fully withdrawn, to a point where they are hanging freely below the case by approximately 25 mm. The screws are designed to be retained to prevent loss.

Press both of the release buttons (No. 11) inwards and pull the battery pack (No. 7) away from the pump unit (No. 12). To fit the replacement battery pack, engage the ends of the pump unit battery release buttons into the holes in the top of the battery pack and push home, making sure both release buttons are fully engaged. Refasten the two locking screws. Do not apply excessive force when tightening the screws. Charge the new battery pack fully before use.

Battery Disposal

- The EC Battery Directive and equivalent legislation in other countries requires that all batteries and battery packs are disposed of correctly at the end of their working life. This means that they must be collected and treated separately from other waste.
- Please ensure that any end-of-life SKC battery packs are collected and recycled or disposed of correctly.



Item	Part No.	Description	Item	Part No.	Description
1	P20105	Clear cover and hinge pin	5	P40370	Inlet filter (pack of 10)
2	P20104GY	Belt clip	6	P2010802	Pulsation dampener
3	P78050MH	Battery pack 4.8V 2.0Ah NiMH for 224-50MH pump	7	P213201	Valve plate assembly (set of 2)
3	P78051MTX	Battery pack 4.8V 2.0Ah NiMH for 224-51MTX & 224-52MTX pumps	8	P22417G	Pump body
4	P20106GY	Inlet hosetail and seal	9	P2129B	Yoke / diaphragm assembly

SKC recommend that our air sampling pumps are regularly serviced by one of our Authorised Service Centres.

Due to the safety implications associated with the incorrect repair of ATEX certified intrinsically safe products for use in potentially explosive atmospheres, it is our policy to only supply the complete range of replacement parts to our Authorised Service Centres who are trained in the service and repair of these products.

Care must be taken when dis-assembling and re-assembling the pump to replace the above listed internal parts to ensure that no components are damaged or incorrectly assembled as this could affect pump performance and/or invalidate the ATEX certification of the pump. Do not apply excessive force when tightening the screws. If in any doubt contact your local distributor or SKC on +44 (0) 1258 480188.

The range of replacement parts listed above is available to all customers. If the required part is not listed, contact SKC customer care on +44 (0) 1258 480188.

Note: Table item numbers correspond to the ringed numbers shown in the figures on page 22 of this manual.

Part No.	Description
Key Accessories	
223-203A	Single battery charger 100-240V ~ 50/60Hz supply with UK/EU/US/AUS mains plugs
223-103A	Five station battery charger 100-240V ~ 50/60Hz supply with UK/EU/US/AUS mains plugs
223-300B	Battery eliminator 230V ~ 50Hz supply with EU 2 pin mains plug
223-300C	Battery eliminator 230V ~ 50Hz supply with UK 3 pin mains plug
393-0334	Rotameter 0.3 - 3.4 litre/min accuracy $\pm 2.5\%$ VDI/VDE 3513-2:2008
717-510LA	Defender primary calibrator 5 - 500 ml/min accuracy $\pm 1\%$ of reading
717-510MA	Defender primary calibrator 50 - 5000 ml/min accuracy $\pm 1\%$ of reading
Dust Sampling Accessories	
225-70A	I.O.M. sampler in plastic complete with two part plastic filter cassette and clip
225-76A	I.O.M. sampler in stainless steel complete with two part stainless steel filter cassette and clip
225-79A	I.O.M. sampler in plastic complete with two part stainless steel filter cassette and clip
225-71A	I.O.M. two part plastic filter cassette with cap and clip
225-75A	I.O.M. two part stainless steel filter cassette with cap and clip
391-01	'Calidaptor' flow calibration adapter for I.O.M. sampler
225-772	I.O.M. foam plug for respirable and multi-dust sampling (pack of 10)
225-69	Cyclone sampler in plastic with plastic cassette for 25mm diameter filters
225-69-37	Cyclone sampler in plastic with plastic cassette for 37mm diameter filters
225-62	Cyclone plastic cassette for 25mm diameter filters with clip

Part No.	Description
225-62-37	Cyclone plastic cassette for 37mm diameter filters with clip
225-67	Filter transport cassette for 25mm diameter filters
225-58F	Glass fibre binder free (GFA) filter 25mm diameter 1.6µm pore size (pack of 100)
225-19	Mixed cellulose ester (MCE) filter 25mm diameter 0.8µm pore size with support pad (pack of 100)
225-8-01	PVC GLA-5000 filter 37mm diameter 5.0µm pore size with support pad (pack of 50)
Gas / Vapour Sampling Accessories	
224-26-CPC	Constant pressure controller (CPC) 20 inches of water
224-26-01	Single adjustable low flow adapter / tube holder
224-26-02	Double adjustable low flow adapter / tube holder
224-26-03	Treble adjustable low flow adapter / tube holder
224-26-04	Quadruple adjustable low flow adapter / tube holder
224-29A	Protective cover type A 6mm diameter x 70mm
224-29B	Protective cover type B 8mm diameter x 110mm
800-01200	Tube tip breaker
226-01	Anasorb CSC coconut charcoal tube 2 part 6mm diameter x 70mm GS (pack of 50)
226-119	Silica gel tube 2 part 6mm diameter x 110mm GS (pack of 100)

If the required item is not listed, contact your supplier or SKC sales on +44 (0) 1258 480188.

SKC provide an extensive range of sampling media, including filters, sorbent tubes and impingers. A full selection can be found in the current SKC catalogue and at www.skcltd.com



EC TYPE-EXAMINATION CERTIFICATE

- 1
- 2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC
- 3 Certificate Number: **Sira 02ATEX2135** Issue: **4**
- 4 Equipment: **Sidekick 224-51TX, Sidekick 224-52TX, Sidekick 224-51MTX and Sidekick 224-52MTX Air Sampling Pumps**

- 5 Applicant: **SKC Limited**
- 6 Address: **Unit 11
Sunrise Park
Higher, Shaftsbury Road
Blairford Forum
Dorset DT11 8ST
UK**

- 7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- 8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- 9 The examination and test results are recorded in the confidential reports listed in Section 14.2.
- 10 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:
EN 50014:1997 plus amendments A1 and A2 EN 50020:1994
- 11 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- 12 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.



II 2G
EEx Ia IIC T4

C Ellaby
Certification Officer

Project Number 22817

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service

Rake Lane, Eccleston, Chester, CH1 9UN, England
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Email: info@siracertification.com
Web: www.siracertification.com

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Form 9400 Issue 1



sira
CERTIFICATION

SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 02ATEX2135
Issue 5

13

DESCRIPTION OF EQUIPMENT

The air sampling pump provides a mechanism by which an amount of pollutant can be determined for a given volume of air. The equipment comprises a battery-operated motor with pump and filter attachment, a detachable encapsulated Ni-Cad battery pack (containing current-limiting components and a charging socket) and an encapsulated electronic circuit. The circuitry is mounted within a plastic enclosure. The equipment uses the pump to draw air through the filter mechanism, the pump rotation being calibrated to provide a controlled flow rate. The duration of the sample period is also monitored. The charging socket is the only external connection, but charging is not permitted in the hazardous area.

Variation 1 - This variation introduced the following changes:

- i. The use of GP GP200SCX, 2.0 Ah nominal, nickel cadmium (NiCd) batteries was recognised as replacements for the original, Energiser Ultramas, 1.8 Ah nominal, NiCd cells, this is a retrospective modification and applies to all NiCd Battery Packs.
 - ii. The introduction of new versions of the Sidekick 224-51TX and Sidekick 224-52TX, respectively. Pumps, these are designated the Sidekick 224-51IMTX and Sidekick 224-52IMTX, respectively.
 - iii. The nickel cadmium (NiCd) batteries used in Battery Pack Part Number P78011MX may be replaced by nickel metal-hydride (NiMH) ones. The new battery packs are designated as either Part Number P78011IMTX or Part Number P78051IMTX. The P78011IMTX Battery Pack can be used in all versions of the Sidekick 224-51TX and Sidekick 224-52TX Air Sampling Pumps and the P78051IMTX Battery Pack can be used in all versions of the Sidekick 224-51IMTX and Sidekick 224-52IMTX Air Sampling Pumps.
 - iv. The introduction of Robnor Resin RX/HX700K in place of the original PX/HX700K.
 - v. The pump assembly drawings were re-drawn.
 - vi. The label drawings were rationalised in line with the above changes.
- Variation 2 - This variation introduced the following change:**
- i. To permit the use of an alternative Main PCB Assembly for the Sidekick 224-52TX and Sidekick 224-52IMTX Air Sampling Pumps.
- Variation 3 - This variation introduced the following change:**
- i. The use of an alternative, plastic case material (Staroy NH-1000T) was recognised.
- Variation 4 - This variation introduced the following change:**
- i. The use of of Robnor PX804C as an alternative encapsulation material was endorsed.

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Sira Certification Service

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 02ATEX2135
Issue 5

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexes.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report No.	Comment
0	14 August 2002	R52A7997A	The release of the prime certificate.
1	30 June 2004	52V12067	Re-issued to amend the product description
2	8 January 2009	R52A16924B	This Issue covers the following changes: <ul style="list-style-type: none"> All previously issued certification was rationalised into a single certificate. Issue 2, Issues 0 and 1 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format. The introduction of Variation 1.
3	7 April 2009	R52A17311B	The introduction of Variation 2.
4	18 August 2009	R52A19582A	The introduction of Variation 3.
5	24 February 2011	R22817A/00	The introduction of Variation 4.

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

None

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF CERTIFICATION

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 Faulty/micromotors covered by SKC drawing Sira-13, shall have the dc resistance of their winding checked before assembly into the pump stack. The dc resistance of the winding shall be in excess of 5 Ω.

17.4 The battery pack charging circuit shall not be supplied from, nor contain, a source of potential greater than 250 Vac.

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Certificate Annexe

Certificate Number: Sira 02ATEX2135
Equipment: Sidekick 224-51TX and Sidekick 224-52TX
 Air Sampling Pumps
Applicant: SKC Limited



Issues 0 and 1

Drawing	Sheet	Rev.	Date	Title
Sira 2	1 of 1	4	05 Mar 02	Rechargeable 224-51TX & 52TX Battery Pack Sub-Assembly
Sira 5	1 of 1	2	03 Jun 02	Schematic 224-52TX Sub Assembly
Sira 13	1 of 1	2	03 Oct 01	Micro Motor for Aircheck & Universal Pumps
Sira 17	1 of 1	3	24 Jun 02	Labels for Sidekick Pumps 224-51TX & 224-52TX
0202C012	1 of 1	2	03 Jul 93	Aircheck 50 Circuit Diagram
0202P012	1 of 1	2	03 Jul 93	Aircheck 50 pcb Layout
Sira 6	1 of 1	2	03 Oct 01	Sub Assembly Schematic
AC-50	1 to 2	1	18 Sep 96	Certification Parts List
0204C037	1 of 1	Iss 7	13 May 94	Aircheck-52 Certification Circuit Diagram
ACS2JKPL	1 to 2	7	10 Jun 94	Certification Parts List
SKC 7952	1 of 1	4	03 Oct 01	Aircheck 52TX Certification PCB Layout

Issue 2

Drawing	Sheet	Rev.	Date (Sira stamp)	Title
Sira-2	1 of 1	5	24 Nov 08	NGC Battery Pack Assembly – Aircheck 51/52 & Sidekick Series Pumps
Sira 5	1 of 1	3	24 Nov 08	Pump Assembly Aircheck 52 & Sidekick 52 Series Pump
Sira 6	1 of 1	3	24 Nov 08	Pump Assembly Aircheck 51 & Sidekick 51 Series Pump
Sira 17	1 of 1	4	24 Nov 08	Labels for Sidekick Approved Pumps
SKC-15-0001	1 of 1	1	24 Nov 08	NIMH Battery Pack Assembly – Aircheck 51/52 & Sidekick Series Pumps
SKC-15-0004	1 of 1	1	24 Nov 08	Main PCB Assembly Aircheck 52 & Sidekick 52 Series Pumps
SKC-15-0005	1 of 1	1	24 Nov 08	Main PCB Assembly Aircheck 51 & Sidekick 51 Series Pumps

Issue 3

Drawing	Sheet	Rev.	Date (Sira stamp)	Title
SKC-15-0008	1 of 1	1	17 Mar 09	Circuit Schematic – Main PCB Assembly 224-52 Series Pumps
SKC-15-0009	1 of 1	1	17 Mar 09	PCB Layout - Main PCB Assembly 224-52 Series Pumps
SKC-15-0010	1 to 2	1	17 Mar 09	Parts List - Main PCB Assembly 224-52 Series Pumps
SKC-15-0011	1 of 1	1	17 Mar 09	Main PCB Assembly 224-52 Series Pumps

Issue 4

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
SKC-15-0001	1 of 1	2	10 Aug 09	NIMH Bat Pack Assy – Aircheck 51/52 & Sidekick Series Pumps
Sira-2	1 of 1	6	10 Aug 09	NGC Bat Pack Assy – Aircheck 51/52 & Sidekick Series Pumps
Sira-5	1 of 1	4	10 Aug 09	Pump Assy – Aircheck 52 & Sidekick 52 Series Pumps
Sira-6	1 of 1	4	10 Aug 09	Pump Assy – Aircheck 51 & Sidekick 51 Series Pumps

Issue 5

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
SKC-15-0001	1 of 1	4	17 Jan 11	Sidekick Series Pumps
SKC-15-0005	1 of 1	3	17 Jan 11	Main PCB Assembly 224-51 Series Pumps
SKC-15-0006	1 of 1	3	17 Jan 11	Main PCB Assembly Universal 44EX-TX-MTX Pumps
SKC-15-0011	1 of 1	3	17 Jan 11	Main PCB Assembly 224-52 Series Pumps – 7952 Iss 6

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Limited One Year Warranty

1. SKC warrants that this instrument, and each of its component parts, provided for occupational health and safety applications is free from defects in workmanship and materials under normal use for a period of one (1) year. This warranty DOES NOT cover any claims due to abuse, misuse, neglect, alteration, or accident, or use in application for which the instrument was either not designed or not approved by SKC, or, due to the buyer's failure to maintain normal maintenance, improper selection or misapplication. The warranty also DOES NOT cover any claims due to the use of a non-SKC approved charger to charge the battery pack. This warranty shall further be void if changes or adjustments to the instrument are made by a person other than an employee of the seller or, if the operating instructions furnished at the time of installation are not complied with.

2. SKC hereby expressly disclaims all warranties either expressed or implied, including any implied warranties of merchantability or fitness for a particular purpose and neither assumes nor authorises any person to assume for it any liability in connection with the sale of these instruments. No description of the goods being sold has been made a part of the basis of the bargain or has created or amounted to an express warranty that the goods will conform to any such description. Buyer shall not be entitled to recover from SKC any consequential damages; damages to property, damages for loss of use, loss of time, loss of profits or income or any other incidental damages. Nor shall the Buyer be entitled to recover from SKC any consequential damages resulting from defect of the instrument.

3. This warranty extends only to the original purchaser of the warranted instrument during the term of the warranty, the buyer may be required to present proof of purchase in the form of a paid receipt for the instrument.

4. In the event of a defect, malfunction, or other failure of the instrument not caused by any misuse or damage to the instrument while in the possession of the Buyer, SKC will remedy the failure or defect without charge

to the buyer. The remedy will consist of service or replacement of the instrument, or refund of the purchase price, at the option of SKC. However, SKC will not elect refund unless it is unable to provide replacement and repair is not commercially practicable.

5. The terms of this warranty begin on the date the instrument is delivered to the Buyer and continue for a period of one (1) year.

6(a) To obtain performance of any obligation under this warranty, the buyer shall return the instrument, freight prepaid to SKC at the following address:-

SKC Limited
11 Sunrise Park
Higher Shaftesbury Road
Blandford Forum
Dorset DT11 8ST
t: 44 (0) 1258 480188
f: 44 (0) 1258 480184

6(b) To obtain further information on the warranty performance contact SKC.

7. This warranty is provided under English law.

8. No other warranty is given by SKC in conjunction with this sale.

The disclaimers and limitations shall not affect the statutory rights of a consumer.







A member of the SKC global group of companies