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This manual covers the following model:

375-07550

## 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
375-07550		

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](http://www.skcltd.com)

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

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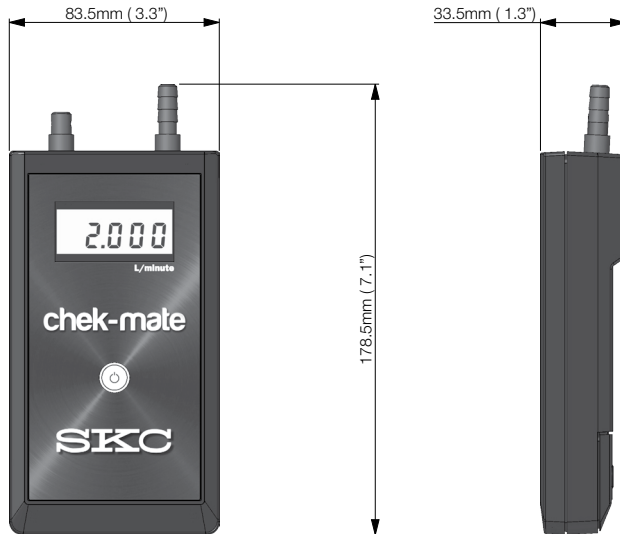


- Air flow range – 0.75 litre/min to 5.0 litre/min volumetric
- Air flow display resolution – 0.001 litre/min
- Air flow accuracy –  $\pm 1$  % of reading
- Operating temperature range – 0 °C to 40 °C (32 °F to 104 °F)
- Operating atmospheric pressure range – 700 mbar to 1090 mbar (20.7 “Hg to 32.2 “Hg)
- Operating altitude – Sea level to approximately 3050 m (10000 ft) above sea level
- Weight - 250 g (8.5 oz)
- Enclosure IP rating – IP40
- Battery –  
9V alkaline primary (disposable) PP3 / 6LR61 / 1604A or equivalent, or  
8.4V NiMH secondary (rechargeable) PP3 / 6HR61 / 8.4H5 or equivalent
- Automatic power off timer – 15 minutes

## **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.

The chek-mate flow meter is manufactured by SKC Limited under a sole license from Graham Blatchford.



### 1) Care of the chek-mate Flow Meter

- Use only the specified disposable or rechargeable battery types.
- Ensure that discharged batteries are not left in the battery compartment for long periods to prevent damage caused by electrolyte leakage.
- Avoid extended use of the flow meter in areas with high levels of airborne particulates.
- Ensure that fluids do not enter the flow meter inlet or outlet ports.
- If the flow meter has been stored in a cold location and is immediately taken to a hot, humid location, do not use the flow meter until it has stabilised to the higher ambient temperature to prevent condensation forming inside the flow meter.
- The flow meter case is IP40 rated, it is not rated as water or splashproof and therefore must not be used where it is possible for water to enter the casing.

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

### 2) The WEEE Directive

This product is marked with the crossed out wheelie bin symbol, which identifies that it falls within the scope of the European 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 must be

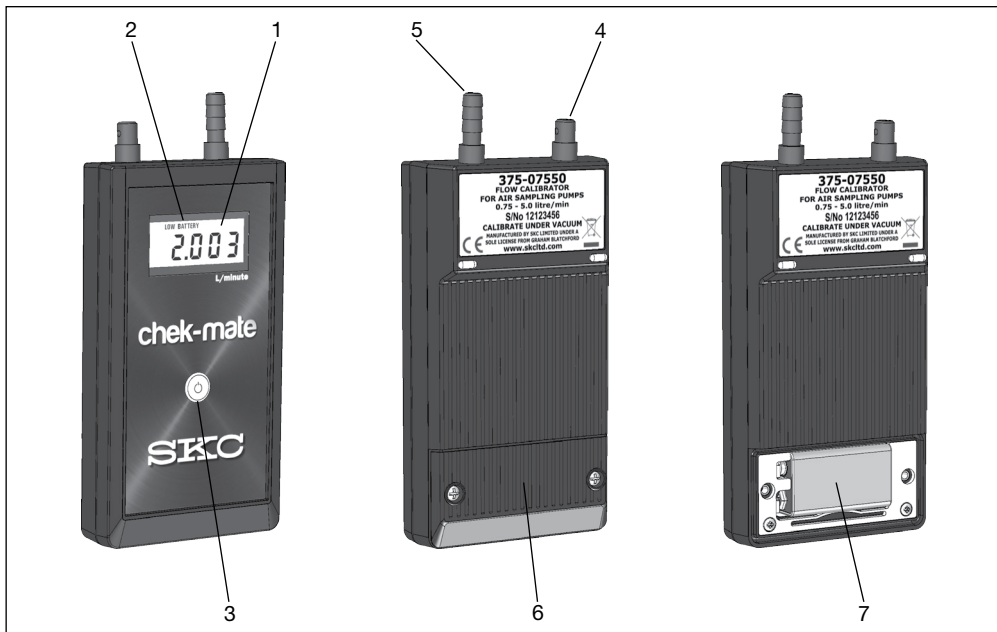
separated from the product and disposed of as detailed in the Batteries Directive (see below). Please contact your local distributor or SKC Ltd for further details on how to comply with the requirements of the WEEE Directive. SKC Ltd's producer registration number is WEE/KH0054TQ.

### 3) The Batteries Directive



The alkaline disposable battery supplied with this pump and any spare batteries purchased for it, fall within the scope of the European Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators. At the end of the battery'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 chek-mate Flow Meter





1. LCD screen
2. Low battery indicator
3. On/Off button
4. Inlet port
5. Outlet port
6. Battery compartment cover
7. Battery

## 1) Setting an Air Sample Train Flow Rate

Ensure that the flow meter has been in the location where it is to be used for enough time for its temperature to stabilise to the ambient temperature. A minimum of 10 minutes is recommended. Shield the unit from exposure to direct sunlight to prevent heating of the case by the sunlight.

Switch on the unit by pressing the on/off button on the front. The LCD screen will cycle through the startup messages 'On' followed by the flow meter range '5.0 L', and will then indicate the current flow rate.

**Note:** The chek-mate flow meter does not perform a zero of the flow reading at startup therefore it is also possible to switch on the flow meter with the air sample train already connected and air flow passing through the flow meter without affecting the accuracy of the flow reading.

Connect the chek-mate outlet hoesetail to the inlet of the air sample train using a length of flexible tubing (1/4" or 6.5mm bore tubing is recommended) and calibration adapter as required.

Start the air sample pump and observe the reading of the flow meter until it achieves a steady value. The reading may vary by up to  $\pm 0.005$  litre/min around the steady value. Adjust the air sampling pump to give the desired sample air flow rate.

**Note:** It is recommended to allow the pump to run for a minimum of 5 minutes to stabilise before adjusting the flow rate.

Disconnect the tubing from the flow meter outlet hosetail taking care to pull the tubing in line with the axis of the hosetail, and not to twist the tubing. Switch off the flow meter using the on/off button.

## **2) Automatic Power Off Timer**

The chek-mate flow meter will remain on indefinitely provided an air flow rate above 0.5 litre/min is indicated. With an air flow rate below 0.5 litre/min or no air flow the flow meter will automatically switch off after 15 minutes to preserve battery power.

- SKC recommend the use of quality alkaline primary (disposable) batteries to ensure long battery life and prevent damage due to leaking battery electrolyte. A quality battery such as the Duracell Industrial model supplied with the flow meter should provide as much as 30 hours of operation.
- When the battery voltage drops below 8V as it nears the end of its life the flow meter LCD indicates 'LOW BATTERY'. It is recommended to replace the battery at this point to ensure uninterrupted use of the flow meter. When the battery voltage drops further to below 7V the LCD 'LOW BATTERY' indication will flash on/off and the flow meter will automatically switch off. If the flow meter is switched on again with the battery in this condition the LCD will indicate 'bAtt' 'LO' ten times and then automatically switch off.
- To replace the battery unfasten the two captive screws securing the battery compartment cover using a Pozi-drive size 1 screwdriver, and remove the battery compartment cover. Lift the old battery straight up out of the battery compartment. Fit the replacement battery ensuring the correct orientation of the terminals as detailed on the label at the bottom of the battery compartment. Fit the battery compartment cover and secure with the two captive screws taking care not to over-tighten the screws.
- SKC replacement primary (disposable) battery part number - P37500.
- NiMH secondary (rechargeable) batteries may also be used (not SKC supply), but it must be ensured that the battery used is an 8.4V nominal type, and not a 7.2V nominal type which are also manufactured.

- The European Battery Directive and equivalent legislation in other countries requires that all batteries are disposed of correctly at the end of their working life. This means that they must be collected and treated separately from other waste.
- It is recommended to remove the battery from the battery compartment if the flow meter is not to be used for an extended period of time. Deep discharge of alkaline batteries can result in the eventual leakage of battery electrolyte even from quality batteries and can cause corrosion of the battery compartment terminals and potentially the flow meter printed circuit board.

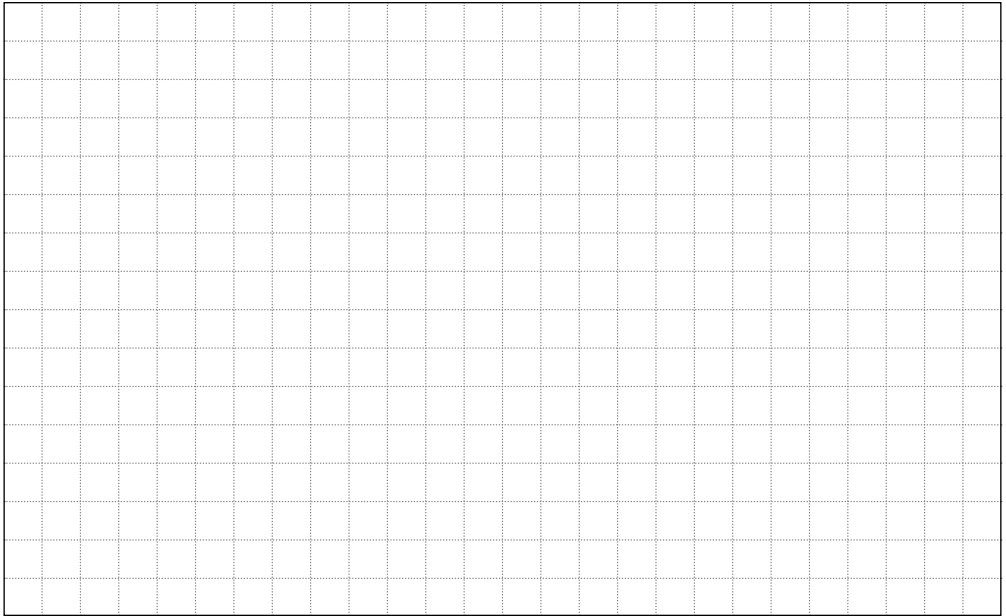
SKC recommend a minimum calibration interval of 1 year for this product. However it is the responsibility of the user to determine the most suitable interval in order to meet their quality assurance system requirements. Consideration should also be given to the frequency of use and operating environment when determining the calibration interval.

**Important** - Calibrate the chek-mate flow meter under vacuum.

The chek-mate flow meter is designed specifically for use with air sampling pumps, which operate under vacuum, and so the flow meter is factory calibrated under vacuum, connecting the vacuum flow source alternately to the chek-mate flow meter and reference flow meter, to ensure its accuracy for this application.

If a calibration is to be performed other than as specified above, e.g. with series connection of the chek-mate flow meter and reference flowmeter and/or using a positive pressure flow source, please contact SKC technical support for advice on calibration methodology.









## 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. 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