

SKC

Flite 3 High Volume Air Sampling Pump

Operating Instructions



This manual covers the following model:

901-3011

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 annual servicing of 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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Specifications

Dimensions.....	178mm W x 115mm H x 206mm D
Weight.....	2.24 kg (without battery)
	3.56 kg (fitted with P901301 3.2Ah battery)
	4.84 kg (fitted with P901302 7Ah battery)
Casing IP rating	IP20
Flow range	2 - 20 litre/min
Back pressure range -	

Flow rate (litre/min)	Maximum back pressure	
	(inches of water)	(kPa)
2	205	51.0
4	175	43.5
8	125	31.1
12	85	21.1
16	50	12.4
20	15	3.7

Battery	12V sealed lead/acid
Storage / operating temperature.....	-5 to +50 °C
Charging temperature.....	-5 to +45 °C
Relative humidity	0 to 95 % RH

Pump Features

Battery capacity options	Choose from two capacities of internal battery - 3.2Ah (Part No. P901301), for applications where a lightweight pump is desirable, or 7Ah (Part No. P901302), where longer run times or multiple samples on a single charge are required.
Intelligent battery charging	The SKC lead/acid battery charger (Part No. 901-310), provides optimum charging in the minimum possible time. The charger automatically detects when the battery is fully charged and switches to a trickle charging rate to prevent over-charging. Typical charging times for a fully discharged battery are 5 hours for 3.2Ah battery and 10 hours for 7Ah battery. Note: The battery charger can only be used to charge the battery when the pump is not running; it cannot be used when the pump is running to extend the pump run time. To achieve extended run times refer to "External power supply options" below.
External power supply options	The pump can be powered by a mains adapter (Part No. 901-311) suitable for 100-240V ~ 50/60Hz mains supplies, or by an external high capacity 12V lead/acid battery (such as Part No. P901107 - 12Ah) using an external battery hookup cable (Part No. 901-212).
Flow fault	Fault shutdown with indication on LCD screen, plus run time display retention, if flow is restricted.
Low battery	Low battery shutdown with indication on LCD screen, plus run time display retention, in the event of a low battery condition.
Timer display	LCD screen indicates sample run time in hours, minutes and seconds.
Programmable run time	Sample run time programmable in hours and minutes, via keypad and LCD screen.
Programmable delayed start time	Sample start delay time programmable in hours and minutes, via keypad and LCD screen. Start delay countdown display on LCD screen in operation.
Programmable repeat runs	Number of sample period repeats programmable via keypad and LCD screen. Indication of sample period repeats on LCD screen in operation.

Typical Pump Run Times			
Filter Type	Flow Rate	Run Time P901301 3.2Ah Battery	Run Time P901302 7Ah Battery
25mm 0.8µm MCE	4 litre/min	8 hours	30 hours
	8 litre/min	2½ hours	13 hours
	12 litre/min	1 hour	4½ hours
25mm 1.2µm MCE	4 litre/min	9 hours	32 hours
	8 litre/min	3½ hours	15 hours
	12 litre/min	1½ hours	8 hours
25mm GFA	8 litre/min	5 hours	16 hours
	12 litre/min	2 hours	8½ hours
	16 litre/min	1 hour	5½ hours

The pump run time tests were carried out with new fully charged batteries under clean factory conditions, therefore the results do not take account of filter loading.

Note - These are **not** suggested flow rates for sampling methods - they are pump performance indicators.

1) Pump Models

901-3011	Standard single port pump
901-3012	Twin port pump for through flow applications

2) Care of the Flite 3 Pump

- The Flite 3 pump is supplied complete with a rubber dust cap for the inlet hosetail and a screw-in dust cap for the charging/power socket. Please ensure that these are fitted at all times when the pump is not in use or being charged.
- Never run the Flite 3 pump without a filter in line to prevent dust from contaminating the pump mechanism.
- Always use the correct SKC batteries and battery charger designated for the Flite 3 pump.
- The Flite 3 pump casing is IP20 rated, it is not rated as water or splashproof and therefore must not be used where it is possible for water to enter the pump casing.

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

3) The WEEE Directive

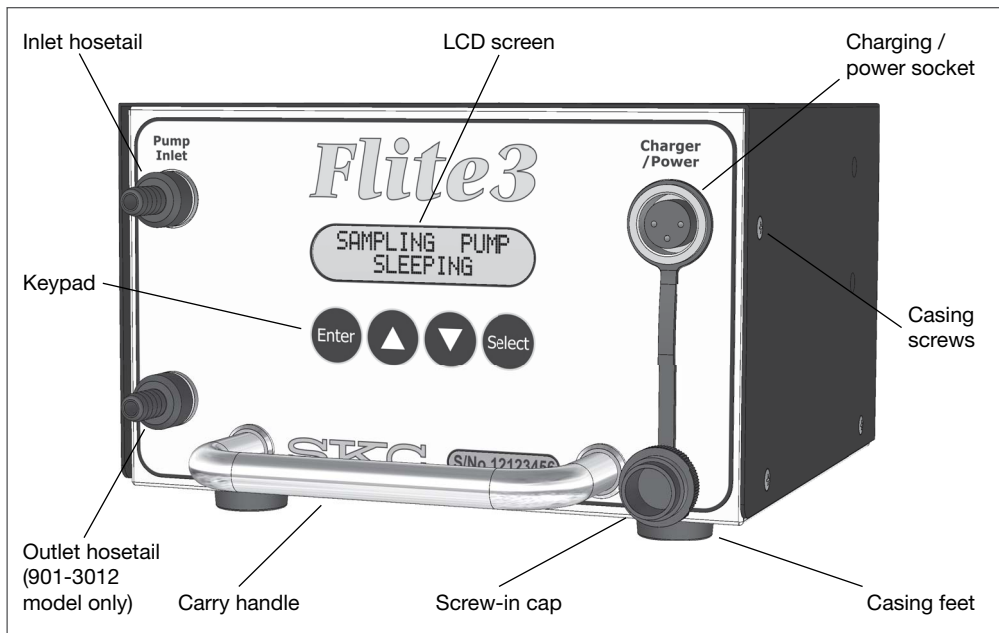


This product is marked with the crossed out wheellie bin symbol, which identifies that it falls within the scope of the EC Directive 2002/96/EC on waste electrical and electronic equipment (WEEE). At the end of its useful life, this product must be disposed of in an environmentally sound way as detailed in the Directive. Note that the battery 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.

4) The Batteries Directive

The lead/acid batteries supplied for use with this pump, fall within the scope of the EC Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators. At the end of a 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.

The Flite 3 Pump



1) Fitting the Battery

The Flite 3 pump is supplied without a battery. Refer to the instructions supplied with each battery for details of how to fit it into the pump casing.

Note - The toolkit (Part No. P901203) supplied with the pump is required to fit the battery.

2) Charging the Battery

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

The Flite 3 pump must only be charged using the correct SKC charger (Part No. 901-310).

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.

Unscrew the dust cap from the charging/power socket on the pump and connect the output connector from the charger to the pump socket. Screw the charging connector into the socket to prevent it from coming loose during charging.

Plug the charger into the electrical mains supply and switch on the power. The LED indicator on the charger will illuminate amber to indicate that the charger is charging at full rate.


Leave the pump to charge fully. For a fully depleted battery this will take approximately 5 hours for the P901301 3.2Ah battery and approximately 10 hours for the P901302 7Ah battery. When the battery is fully charged the LED indicator on the charger will illuminate green to indicate that the charger has switched to trickle charge.

When fully charged, switch off the mains power to the charger and disconnect the charger output connector from the pump. Always fit the screw-in dust cap to the charging/power socket on the pump after charging.

Note: The battery charger can only be used to charge the battery when the pump is **not** running; it cannot be used when the pump is running to extend the pump run time.

3) Use of the Keypad and LCD Screen

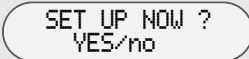
Key functions -

 - Switches between menu options and selects digits to adjust when entering times.


 - Enters the selected menu option or run time.


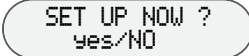
 and  - Used to enter the sample run times and set the pump flow rate.

The available options for each menu item are displayed on the bottom line of the LCD screen. The currently selected option is indicated in capitals, with the remaining options in lower case as shown.





SET UP NOW ?
YES/no


Press the  key to scroll through the available options as shown.


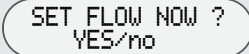
 → 

SET UP NOW ?
yes/NO

 → 

SET UP NOW ?
YES/no

Press the  key to accept the selected menu option. The next menu screen will be shown on the LCD screen as shown.


 → 


SET FLOW NOW ?
YES/no

On number entry menu screens such as the sample run time screen, each digit of the hours and minutes is entered individually. The currently selected digit is identified by being underlined.




ENTER RUN TIME
000:01 (HH:MM)



Press the  key to scroll through the digits as shown.

 → 

ENTER RUN TIME
000:01 (HH:MM)


 → 

ENTER RUN TIME
000:01 (HH:MM)

Use the  and  keys to enter the required value for the selected digit as shown.

 /  → 

ENTER RUN TIME
010:01 (HH:MM)

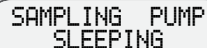
Press the  key to accept the run time. The next menu screen will be shown on the LCD screen as shown.

 → 

DELAYED START ?
YES/no

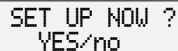
1) Waking the Pump from Sleep Mode

When not in use the pump should be put into 'Sleep' mode to conserve battery power. The LCD display appears as shown when in Sleep mode.



SAMPLING PUMP
SLEEPING

To 'wake' the pump from Sleep mode press the keypad keys in the sequence - , , . The pump will display the 'SET UP NOW ?' screen.



SET UP NOW ?
YES/no

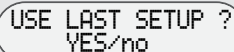
Alternatively, if a sampling setup has previously been programmed into the pump, the 'REVIEW DATA ?' screen will be displayed, or if a pump program has been previously used to take a sample, the 'USE LAST SETUP ?' screen is displayed, when the pump is woken from Sleep mode.



REVIEW DATA ?
yes/NO

Refer to section - 5) Reviewing Sampling Programs, for further details.


OR

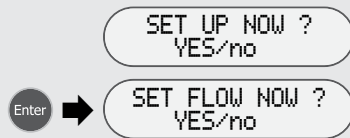



USE LAST SETUP ?
YES/no

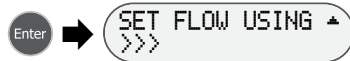
2) Setting the Flow Rate


Fit a new filter into the sampling head and connect the sampling head outlet to the pump inlet hosetail using a length of flexible tubing. Connect the sampling head inlet to the outlet of a flow calibration device, such as a rotameter or electronic flow calibrator.

Select the 'YES' option in the 'SET UP NOW ?' menu screen, and press  to display the next menu screen.




Ensure that the 'YES' option is selected and press  to display the next menu screen.






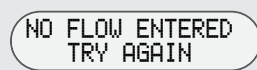
Press  to increase the pump flow rate. More arrow symbols are displayed on the LCD screen to indicate the increased flow rate.



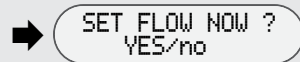
Press  to decrease the pump flow rate. Less arrow symbols are displayed on the LCD screen to indicate the reduced flow rate.



Observing the reading of the flow calibrator, use the  and  keys to set the required flow rate. When the pump is running at the required flow rate press  to save the flow rate setting and display the next menu screen.





If the flow rate is not entered within 60 seconds, the following screens are displayed and the flow rate must be set again.




Having set the required pump flow rate disconnect the flow calibrator from the sampling head inlet. Remove the filter from the sampling head and replace it with a fresh new filter. Fit the sealing cap to the sampling head inlet to prevent contamination of the filter prior to sampling.

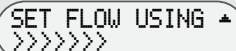
3) Manual Operation

Having set the pump flow rate to the desired level, the 'RUN PARAMETER' menu screen is displayed.

For simple non-timed, manual operation select the 'MANUAL' option, and press  to display the 'REVIEW DATA ?' menu screen. Refer to section - 5) Reviewing Sampling Programs, for further details. Alternatively, select the 'EXIT' option, and press  to cancel the sample program and return to the 'SET UP NOW ?' menu screen.

4) Setting a Timed Run


Having set the pump flow rate to the desired level, from the 'RUN PARAMETER' menu screen select the 'TIME' option, and press  to display the next menu screen.




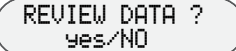
```
SET FLOW USING >
>>>>>>
```

 → 

```
RUN PARAMETER
MANUAL/time/exit
```




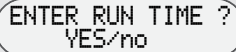
```
RUN PARAMETER
MANUAL/time/exit
```

 → 



```
REVIEW DATA ?
yes/NO
```

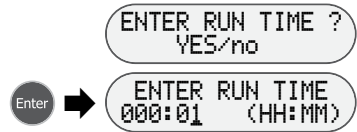





```
RUN PARAMETER
manual/TIME/exit
```

 → 


```
ENTER RUN TIME ?
YES/no
```

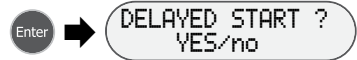
To enter a sample run time select the 'YES' option, and press  to display the next menu screen. Alternatively, select the 'NO' option, and press  to return to the 'RUN PARAMETER' menu screen.





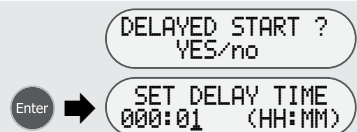
Use the ,  and  keys to enter the required sample run time in hours and minutes.






Press  to save the sample run time and display the next menu screen.




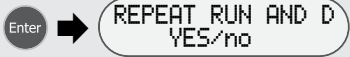
To enter a start delay time select the 'YES' option, and press  to display the next menu screen. Alternatively, select the 'NO' option, and press  to display the 'REVIEW DATA ?' menu screen. Refer to section - 5) Reviewing Sampling Programs, for further details.





Use the ,  and  keys to enter the required start delay time in hours and minutes.






Press  to save the start delay time and display the next menu screen.





To program repeat sample run and delay times select the 'YES' option, and press  to display the next menu screen. Alternatively, select the 'NO' option, and press  to display the 'REVIEW DATA ?' menu screen. Refer to section - Operation 5) Reviewing Sampling Programs, for further details.





Use the  and  keys to enter the required number of sample run and delay time repeats, and press  to save the number of repeats and display the 'REVIEW DATA ?' menu screen. For example entering 2 repeats will give a total of 3 sample runs and delays.

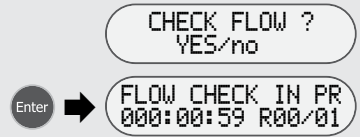



5) Reviewing Sampling Programs

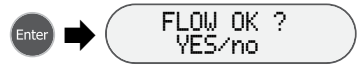
Once a sampling program has been entered the pump displays the 'REVIEW DATA ?' menu screen. This enables the programmed settings to be viewed and amended if required. To review the settings select the 'YES' menu option and press  to display the first review screen. Alternatively, select the 'NO' menu option and press  to display the 'START NOW ?' screen. Refer to section - Operating the Flite 3 Pump for further details.




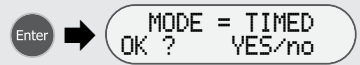
To check the pump flow rate select the 'YES' menu option and press . The pump will run for 1 minute allowing the flow rate to be checked with a flow calibrator. Alternatively, select the 'NO' menu option and press  to display the 'TIMER MODE' screen.




When the flow rate has been checked press  to display the next screen.




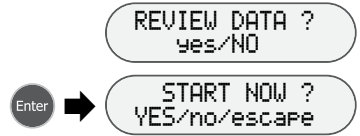
If the flow rate was correct select the 'YES' menu option and press  to display the 'TIMER MODE' screen.




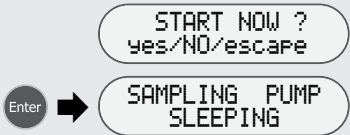
If the flow rate was incorrect, select the 'NO' menu option and press  to set the correct flow rate as detailed in section - Programming 2) Setting the Flow Rate. When the correct flow rate has been entered, the 'CHECK FLOW ?' menu screen is again displayed.


The remaining review data screens allow the timer settings to be checked and amended if required. When all of the timer settings have been checked, the 'REVIEW DATA ?' menu screen is again displayed.

If all of the sample program settings are correct select the 'NO' menu option and press , the 'START NOW ?' menu screen is displayed.



If the sample is to be carried out at a later time, put the pump into Sleep mode by selecting the 'NO' option and pressing .





When 'MANUAL' mode is selected, the 'START NOW ?' menu screen includes the menu option 'ESCAPE'. Selecting the 'ESCAPE' menu option and pressing  displays the 'RUN PARAMETER' menu screen.





1) Manual Run


Having programmed the desired flow rate and fitted a new filter into the sampling head, place the pump at the sampling location, and ensure that the sealing cap is removed from the sampling head inlet.


If the pump is in Sleep mode, wake it and either the 'REVIEW DATA ?', or if the pump program has already been used to take a sample, the 'USE LAST SETUP ?' screen is displayed. From the 'USE LAST SETUP ?' screen select the 'YES' option and press  to display the 'REVIEW DATA' screen.


 → USE LAST SETUP ?
YES/no


 → REVIEW DATA ?
yes/NO


Select the 'NO' option and press  to display the 'START NOW ?' screen.



 → REVIEW DATA ?
yes/NO

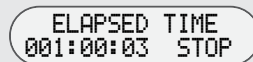
 → START NOW ?
YES/no/escape




Select the 'YES' option and press . The pump will start and display the 'ELAPSED TIME' screen. This screen displays the elapsed run time in hours, minutes and seconds.

 → START NOW ?
YES/no/escape


 → ELAPSED TIME
000:00:16

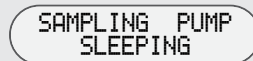
To stop the pump at the end of the required sample period, press the  and  keys simultaneously. The LCD screen will appear as shown.



Press the keys in the sequence , ,  and the 'CHECK FLOW ?' screen is displayed.



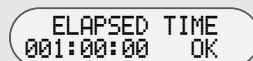
If required the flow rate can be checked to verify that it has remained within the required tolerance during the sample run. Alternatively, select the 'NO' option and press  and the pump will go into Sleep mode.



2) Simple Timed Run

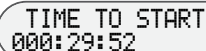
Having previously programmed a simple timed run without delayed start and repeat runs, start the pump as detailed for manual run. On accepting the 'YES' option in the 'START NOW ?' screen the pump will display the 'ELAPSED TIME' screen and the elapsed time will count up until the end of the programmed run time is reached.

At the end of the timed run the pump will automatically stop and retain the elapsed run time on the LCD screen.



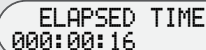
3) Timed Run with Delayed Start

Having previously programmed a timed run with delayed start, start the pump as detailed for manual run. On accepting the 'YES' option in the 'START NOW ?' screen the 'TIME TO START' screen is displayed. This screen displays the start delay time in hours, minutes and seconds, and counts down to '000:00:00'.



TIME TO START
000:29:52

At the end of the start delay time the pump will automatically start and the 'ELAPSED TIME' screen is displayed.



ELAPSED TIME
000:00:16

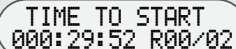
At the end of the timed run the pump will automatically stop and retain the elapsed run time on the LCD screen.



ELAPSED TIME
001:00:00 OK

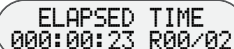
4) Timed Run with Repeat Runs

Having previously programmed a timed run with repeat runs, start the pump as detailed for manual run. On accepting the 'YES' option in the 'START NOW ?' screen the 'TIME TO START' screen is displayed. This screen displays the start delay time in hours, minutes and seconds, and counts down to '000:00:00'. It also displays the sample repeat number and the total number of repeats. The first sample period is repeat zero.



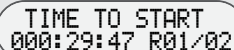
TIME TO START
000:29:52 R00/02

At the end of the first start delay time the pump will automatically start and the 'ELAPSED TIME' screen is displayed. Again the screen also displays the sample repeat number and the total number of repeats.



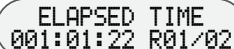
ELAPSED TIME
000:00:23 R00/02

At the end of the first run period the pump will automatically stop and the 'TIME TO START' screen is again displayed. Note that the sample repeat number has incremented.



TIME TO START
000:29:47 R01/02

At the end of the second delay time the pump will automatically start and the 'ELAPSED TIME' screen is again displayed. Note that the elapsed time is the total time for all run periods.






ELAPSED TIME
001:01:22 R01/02

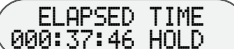
This cycle will repeat until the end of the final run period. The pump will automatically stop and the total accumulated run time is displayed on the LCD screen.






ACCUM RUN TIME
003:00:00 R02/02

5) Manually Stopping the Pump During a Run

Holding a Run - In any operating mode the pump can be put into 'Hold' at any time by pressing the keys in the sequence , , . The pump will stop and the elapsed run time is retained on the LCD screen.





ELAPSED TIME
000:37:46 HOLD

To restart the pump from Hold, press the keys in the sequence , , . The pump will restart and the elapsed time will continue to increment.



ELAPSED TIME
000:37:48

Cancelling a Run - In any operating mode the run can be cancelled at any by point pressing the  and  keys simultaneously. The pump will stop and the elapsed run time is retained on the LCD screen.



ELAPSED TIME
000:45:19 STOP

Should the Flite 3 pump detect that the battery is at a low charge state a low battery message will be displayed on the LCD screen. Charge the battery fully using the correct SKC charger before use.

** BATTERY **
** TOO LOW **

OR

ELAPSED TIME
003:24:17LOW BAT

The Flite 3 pump will display a general fault message on the LCD screen in the event of any error, as shown.

ELAPSED TIME
000:16:53 FAULT

Possible Fault	Corrective Action
Sample media fault	<ol style="list-style-type: none"> 1. Check media for heavy loading or damage. 2. Rectify problem. 3. Try restarting programming.
Sample train fault	<ol style="list-style-type: none"> 1. Check tubing for blockage or crimping. 2. Rectify problem. 3. Try restarting programming.
Software error (frozen keypad)	<ol style="list-style-type: none"> 1. Disconnect battery for one minute, reconnect. 2. Try restarting programming.

For further assistance contact your supplier or SKC customer care - +44 (0) 1258 480188.

The Flite 3 pump utilises sealed, valve regulated, lead/acid batteries. This type of battery requires no maintenance and when used in accordance with manufacturer's instructions should give a life of approximately 400 charge/discharge cycles (based on 50% depth of discharge). Battery life is affected by a number of factors, but the most significant of these are overcharging and the depth of discharge in use.

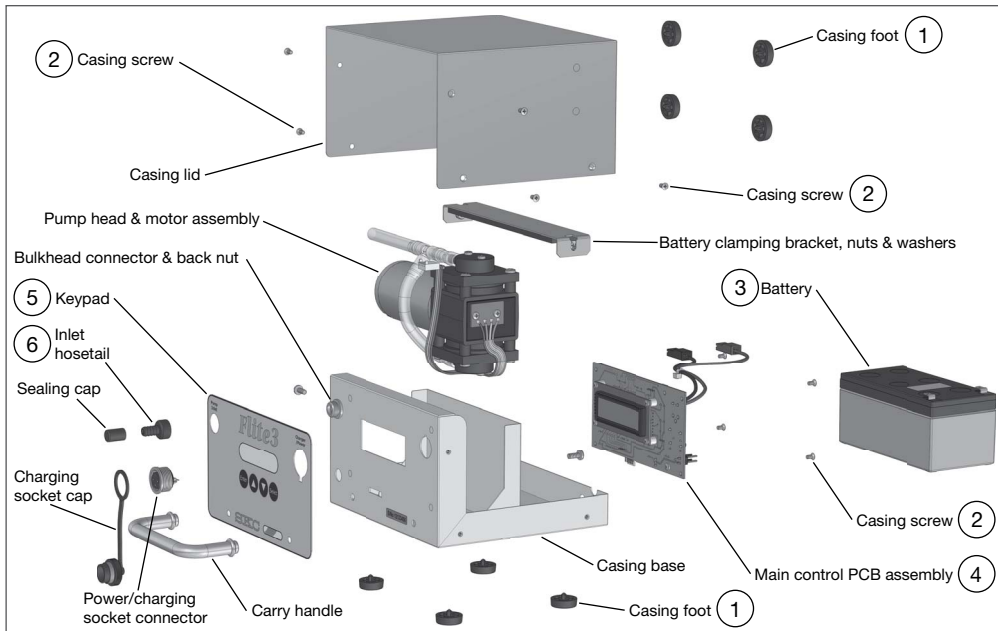
Overcharging of the battery causes overheating and off-gassing of the battery electrolyte which will lead to loss of capacity and reduced service life. The Flite 3 charger (part no. 901-310) is an intelligent charger which automatically detects when the battery is fully charged and switches to a trickle charging rate to prevent overcharging. Always use the correct charger.

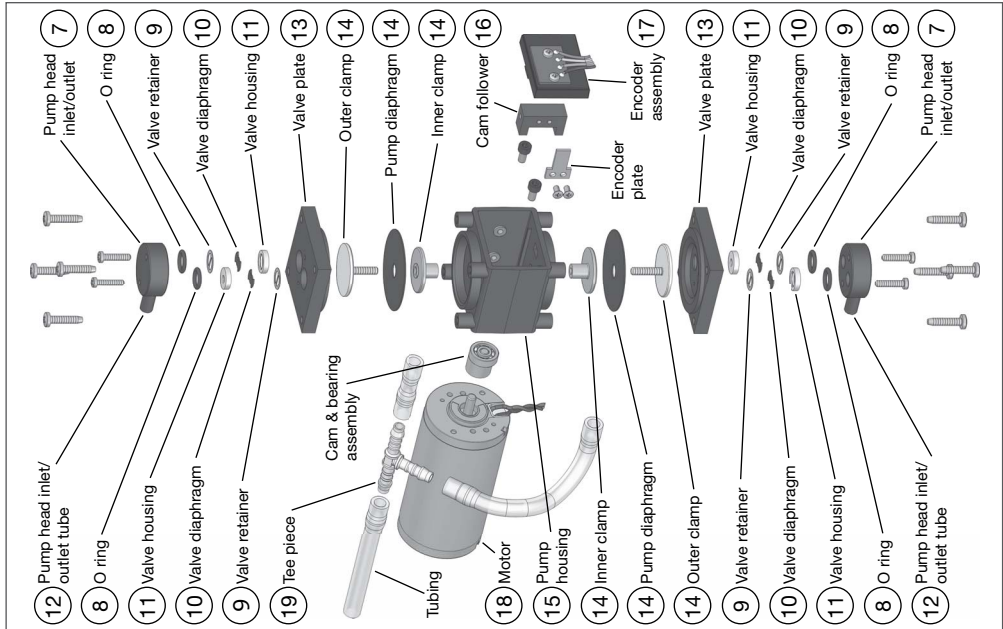
A deeper discharge of the battery prior to charging will result in a shorter battery life. This can be as low as 200 charge/discharge cycles if the battery is fully discharged every time prior to charging. If the intended pump usage pattern would fully discharge a P901301 3.2Ah battery between charges, it may be advisable to select the larger P901302 7Ah battery, which for the same usage pattern could have a life of up to 500 charge/discharge cycles.

Long term storage - If the pump is to remain unused for a long period of time, SKC recommends that the battery be fully charged prior to storage, and a top up charge be carried out at 6 monthly intervals, or if stored at a temperature in excess of 30°C, at 3 monthly intervals. Failure to do so could lead to significant reduction in battery capacity and service life, and in extreme cases can prevent the battery from accepting a charge entirely. Note that the pump should either be put into 'Sleep' mode during long term storage, or ideally the battery wires disconnected from the battery terminals (these would need to be reconnected during top up charging).

Battery Disposal - The EC Battery Directive requires that all lead/acid 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 to ensure that the harmful lead they contain does not enter the environment via landfill sites. Please ensure that any end-of-life SKC batteries are collected and treated correctly.

Flite 3 Pump Components





Item	Part No.	Description	Item	Part No.	Description
1	P901111	Casing feet (pack of 4)	11	P901116	Valve housing (pack of 4)
2	P901110	Casing screws (pack of 10)	12	P901208	Pump head inlet tube (pack of 2)
3	P901301	Battery 12V 3.2Ah lead/acid	13	P901125	Valve plate
3	P901302	Battery 12V 7Ah lead/acid	14	P901130	Clamp & diaphragm assembly
4	P901304	Main control PCB assembly	15	P901122	Pump housing
5	P901305	Keypad	16	P901121	Cam follower
6	P901108	Inlet / outlet hosetail	17	P901115	Encoder assembly
7	P901206	Pump head inlet / outlet	18	P901113	Motor
8	P901126	'O' ring (pack of 4)	19	P901118	Tubing tee
9	P901207	Valve retainer (pack of 4)	20	P901203	Tool kit
10	P901129	Valve diaphragm (pack of 4)			

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 pages 24 and 25 of this manual.

Part No.	Description
901-310	Battery charger 100-240V ~ 50/60Hz - 12Vdc 1A with UK/EU/US/AUS mains plugs
901-311	Mains adapter 100-240V ~ 50/60Hz - 12Vdc 2A with UK/EU/US/AUS mains plugs
P901107	12V 12Ah high capacity lead/acid battery (requires 901-212 cable)
901-212	External battery hookup cable with crocodile clip connectors
901-213	Rigid aluminium sampling mast - two piece 1 metre high
901-214	Rigid aluminium sampling mast - four piece 1 metre high
225-54A	'Asbestos' cowled sampling head aluminium
225-1913	Gridded MCE filters 25mm diameter 0.8 micron pore size (pack of 100)
393-1130	Rotameter 1.0 - 13.0 litre/min accuracy 2.5% to VDI/VDE 3513-2:2008
393-2260	Rotameter 2.0 - 26.0 litre/min accuracy 2.5% to VDI/VDE 3513-2:2008
391-05	Flow calibration adapter for cowled asbestos heads

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

SKC provide a wide 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

Limited One Year Warranty

1. SKC warrants that this instrument, and each of its component parts, provided for occupational health and safety and environmental 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