

PARK HOUSE HEALTHCARE LTD

Whitehall 26 Business Park
1 Heathfield Lane
Birkenshaw
West Yorkshire
BD11 2HW
U.K

Head office Tel: 0845 0600 333
Head Office Fax: 0845 0600 334
Free phone for hires: 08081 441881
International: +00 44 (0)1274 475000

e-mail: sales@parkhouse-hc.com
e-mail: international@parkhouse-hc.com
Web: <http://www.parkhouse-hc.com>



Park House

H e a l t h c a r e

**Eclipse 5000 Mattress Overlay
System Service & Maintenance
Manual**

For Authorised Personnel Only



TECHNICAL DATA

CYCLE TIME:	9.5 minutes
POWER SUPPLY:	220/240 vac 50 HZ
POWER INPUT:	7 Watts
NOISE LEVEL:	NC30
SAFETY APPROVAL:	BS5724 (IEC 601/1)
COMPRESSOR FLOW RATE:	> 4.5 Litre/minute
COMPRESSOR PRESSURE:	> 90 mmhg
COMFORT PRESSURE RANGE:	30 +/- 10% TO 80 +/- 10% mmhg
MAINS SUPPLY LEAD:	6A
MAINS SUPPLY FUSE:	3A
UNITS INLINE FUSES:	1A (timed)

Part 1: Product Introduction

General Function & Component Details

1. About the Eclipse 5000:

The Eclipse 5000 is an overlay system which is suitable for those who are at medium to high risk of developing pressure ulcers. The Eclipse offers a comfortable support, whose cells gently inflate and deflate in accordance with established alternating principles. It is cost effective for both the prevention and treatment of pressure ulcers.

The Eclipse power unit operates a 9.5-minute alternating cycle, and is both energy efficient and quiet in operation. In the event of cardiac arrest a handle called a CPR can be released allowing the system to be deflated in 20 seconds or less.

2. Technical Descriptions:

The Eclipse 5000 comprises of a pressure regulated pump and an air flotation mattress system with 16 alternating cells.

The Eclipse pump is made from a fire retardant ABS material and meets the UL, CSA, BS5724 (IEC 601/1) safety standards.

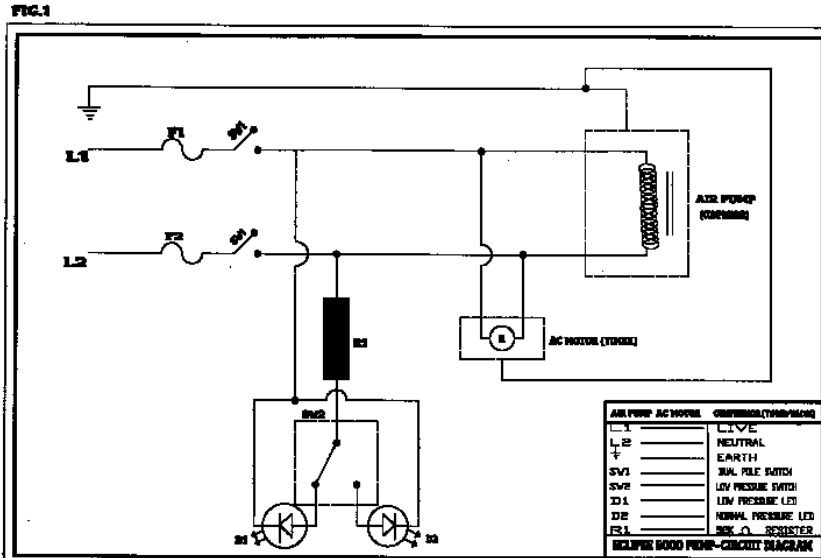
It features: -

1. Low pressure indicator light.
2. Normal Pressure indicator light.
3. On/Off switch indicator light
4. Adjustable comfort control.

3. Comfort Control:

Different ranges adjustable to patients comfort while maintaining low tissue interface pressure. Internal setting for the pump ranges from 30 – 80 mm Hg +/- 10%.

FIG 1 Circuit Diagram.



PHSP014
 PHSP014A
 PHSP014B
 PHSP014C
 PHSP015
 PHSP016
 PHSP017
 PHSP018
 PHSP019
 PHSP020

Bedhooks inc plates & screws
 Bedhook (each)
 Bedhook plates
 Bedhook screws
 Side rail (complete) "Eclipse"
 Cell (each) "Eclipse"
 Base sheet "Eclipse"
 Set of male & female connectors "Eclipse"
 Feed pipes inc conduit & connectors "Eclipse"
 Cpr unit "Eclipse"

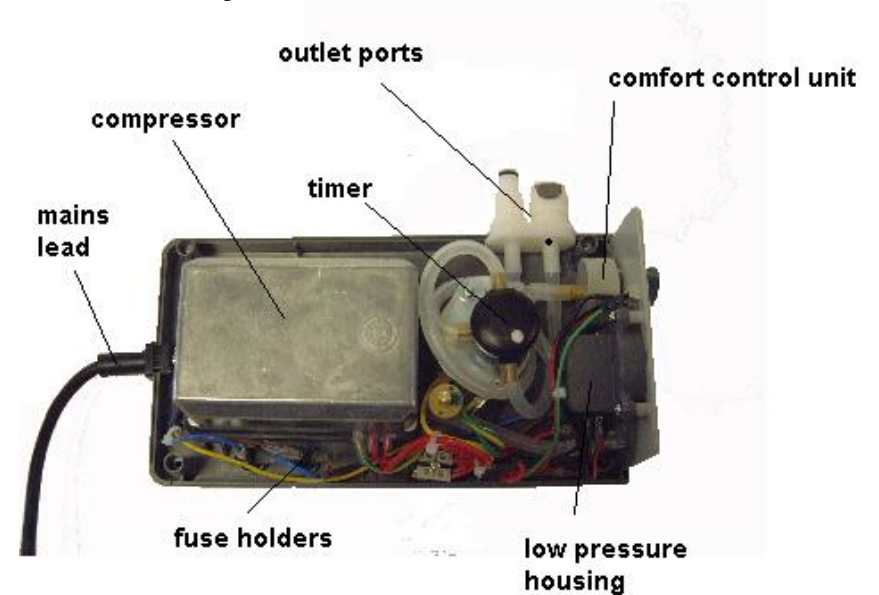
PHSP013A
PHSP013B

Threaded male connector
Threaded female connector

ECLIPSE SPARE PARTS

PHSP001	Compressor unit (full)
PHSP001A	Compressor filter (attenuator)
PHSP002	Compressor attenuator inc seal,filter & feet
PHSP002A	Top hat seals
PHSP002B	Attenuator screws
PHSP003	Compressor inners (bellows & internal housing)
PHSP004	Compressor windings
PHSP005	Compressor housing
PHSP006	Timer unit inc rotating valve
PHSP006A	Timer
PHSP006B	Bottom valve section
PHSP006C	Top valve section
PHSP006D	Cap
PHSP006E	Filter
PHSP006F	Spring
PHSP006G	Pin
PHSP007	Top case
PHSP008	Bottom case inc bed hooks
PHSP008A	Fuse holder
PHSP009	Plug & 5 metre lead
PHSP010	Mains on/off switch
PHSP011	Low pressure unit
PHSP011A	L/p mounting screws
PHSP011B	Spacers x 2
PHSP011C	Low pressure bag
PHSP012	Front panel assembly
PHSP012A	Pressure control Knob
PHSP012B	Bleed valve
PHSP012C	Fixing bracket
PHSP012D	Comfort control housing
PHSP012E	Screws
PHSP012H	Front panel only
PHSP013	Side panel inc connectors & tubes

FIG 2 Main Components



A. Removing Cover:

1. Isolate from mains.
2. Place pump face down (bed hooks facing up).
3. Remove black rubber feet (if fitted) and unscrew four fixing screws.
4. Turn pump back over and remove cover.

Note Fig 2 shows all internal components.

Refitting as above but in reverse

FIG 3 Bed Hook Assembly

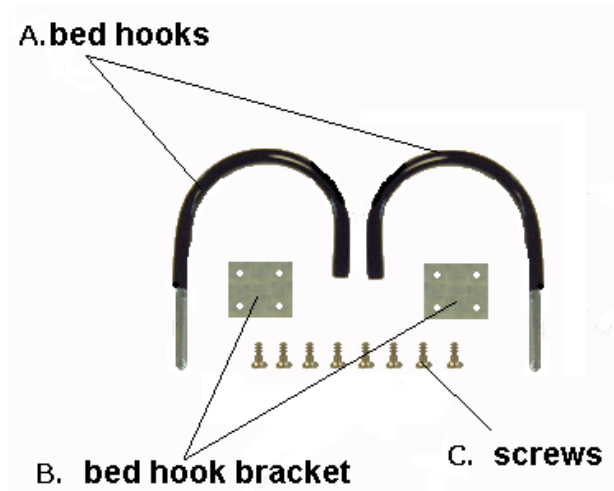
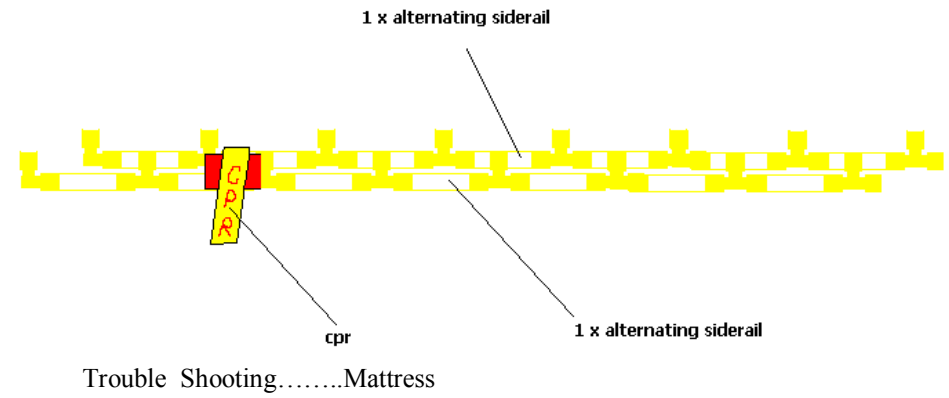


FIG 11



B. Bedhooks Renewal

1. Place the pump face down (bed hooks facing up)
2. Remove the four screws on each hook holder.
3. Lift off hook holders and remove hooks.
4. Refitting as above but in reverse.....see Fig 3

SYMPTOM	CAUSE	RECOMMENDED COURSE OF ACTION
1. Mattress totally flat.	A. CPR Open	A. Close CPR
	B. Feed Tubes off connecting to pump	B. Reconnect
	C. Feed tubes off connecting to mattress	C. Reconnect
	D. Side rail pulled apart	D. Reconnect
2. Only one set of cells inflate	A. CPR part open	A. Close CPR
	B. 1 x Feed Pipe Off	B. Reconnect
	C. Part of side rail pulled apart or cell feed pipe off	C. Reconnect
3. Mattress soft and bottoms	A. CPR Part Open	A. Close CPR
	B. Punctured Cells	B. Replace

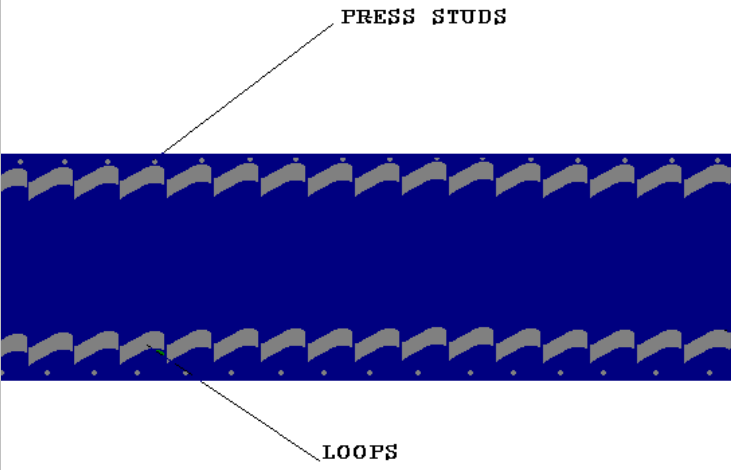


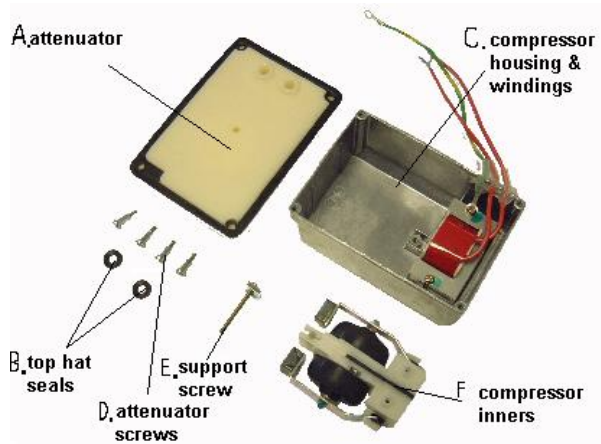
FIG 10

A. Replacing Base Sheet

1. As above, except all 16 Cells

NOTE: Always test after

FIG 4 Compressor Breakdown



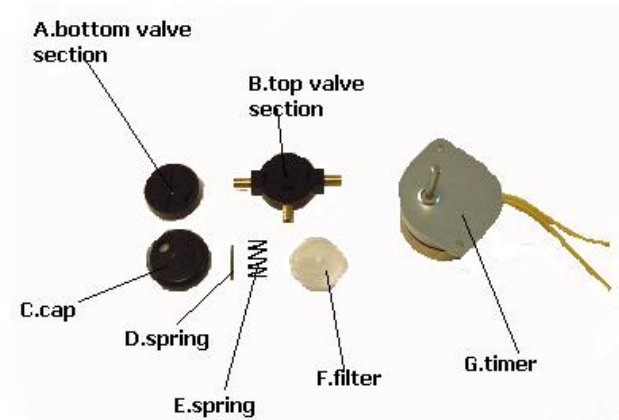
C. Compressor Removal and Refit

1. Remove cover as in section A.
2. Disconnect the live and neutral wires on the connector block situated at the side of the compressor see Fig 2.
3. Disconnect the earth wire. This is mounted on the fixing plate of the Air Valve Assembly.
4. Gently remove the Air Feed Pipe at the head of the compressor.
5. The compressor can now be removed from the pump.
6. Refitting as above but in reverse.

D. Compressor Breakdown

1. Once the compressor is removed, turn over so faced down. See Fig 4
2. Remove the 4 attenuator screws and gently remove the attenuator.
3. The attenuator/internal housing seals can then be removed from the compressor bellow/internal housing.
4. Then remove the internal housing mounting screw. Now the compressor Bellow/Internal housing can gently be lifted out.
5. Refitting as above but in reverse.

FIG 5 Air Valve Assembly



E.

Air Valve Assembly

1. See Fig 5.
2. Gently pull off the three air pipes
3. Remove filter cap and remove filter.
4. Remove fixture pin.
5. Slide off rotary calve (upper) .
6. Slide off rotary valve (lower) .
7. Now you can remove the spring and underneath the fixing plate, the 240V AC 50 HZ timer can be found
8. Refitting as above but in reverse.

F.

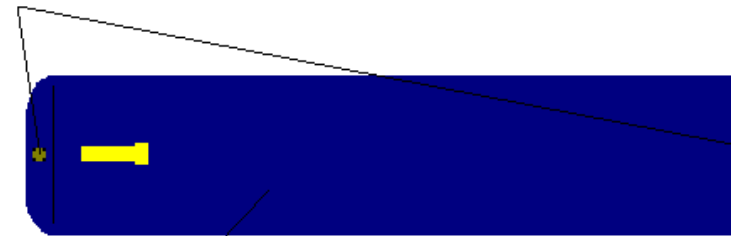
Timer

1. Remove air valve assembly as in above section (E)
2. Remove the 2 fixing screws
3. Disconnect the live and neutral wires on the connector block situated at the side of the compressor, see Fig 2
4. The timer can now be removed from the pump casing
5. Refitting as above but in reverse

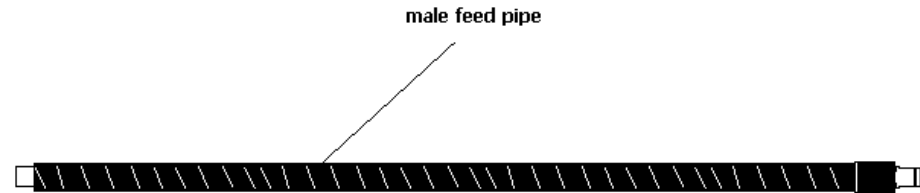
FIG 9

FIG 8

press studs



cell



female feed pipe

B. NOTE: Always test after. Replacing Cells

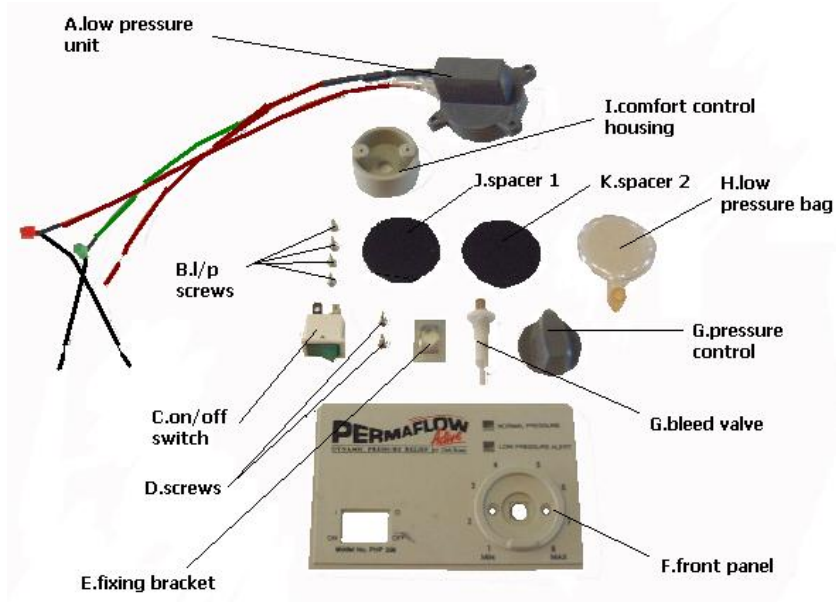
1. Unzip the mattress cover.
2. Fold back the cover.
3. Disconnect the cell from the base sheet via the two press-studs, one either end of cell – see FIG 8.
4. Disconnect feed connector on cell.
5. Slide out cell
6. Removal as above but in reverse.

C. Replacing Feed Tubes

1. Unzip the mattress cover.
2. Fold back cover
3. Pull off 2 feed tubes at base of mattress – see FIG 8
4. Replace with new feed tubes:- remember 1 tube is longer
5. Fold back cover and zip up.

NOTE: Always test after.

FIG 6 Front Panel Inc Low Pressure Unit



G. Low Pressure System

1. See Fig 6
2. Remove the four housing mounting screws, which are on all four corners of the housing.
3. Disconnect the air pipe on the low pressure bag.
4. The unit can now be removed with the micro switch wires still connected, enough for any work to be done.
5. Refitting as above but in reverse.

Modification

1. On occasions a small modification can be made to the low-pressure system on this pump. If the low-pressure micro switch does not seem to be sensitive enough the unit can be stripped down as in the above section, thus removing the front spacer. Refitting the unit, the pump will now run with a more sensitive low pressure system.

H. Mains, on/off switch

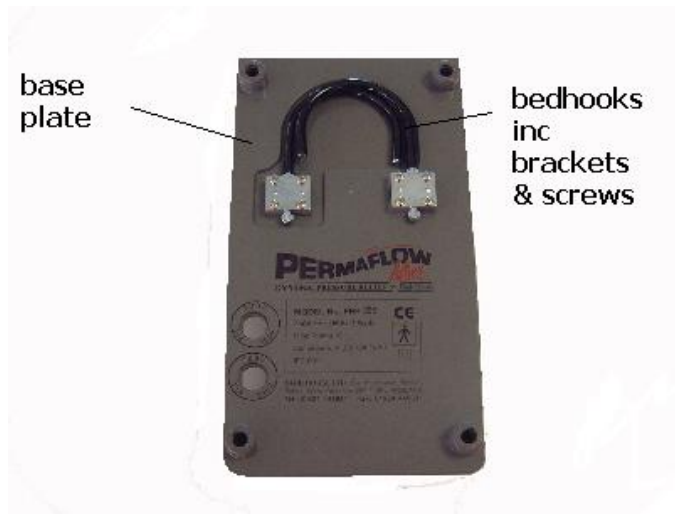
1. Remove pump cover as in section A
2. Firmly push the on/off switch out of the front panel
3. Disconnect the neutral and live wires on the switch
4. Refitting new switch as above but in reverse

SYMPTOM	CAUSE	RECOMMENDED COURSE OF ACTION
1. Pump Dead	A. Fuse in plug	A. Replace Fuse
	B. Loose terminals in plug	B. Tighten Screws
	C. Live/Neutral fuse on pump	C. Replace Fuses
	D. Loose wire/connector inside pump	D. Reconnect
2. Pump functioning but no air output or very low	A. Split pipe inside pump	A. Replace
	B. Internal pipe off in pump	B. Reconnect
	C. Low pressure bag burst	C. Replace
	D. Cracked Attenuator	D. Replace and internal housing
	E. Faulty internal housing	E. Replace and attenuator
3. Pump noisy and vibrates	A. Casing loose	A. Retighten
	B. Loose internal components	B. Refix
	C. Faulty diaphragm	C. Replace internal housing and attenuator
4. Pump works OK but on/off light not on	A. Neon in switch blown	A. Replace switch
5. Pump not alternating	A. Pipe off inside pump	A. Reconnect
	B. Timer wires not connected	B. Reconnect
	C. Timer sticking	C. Replace
6. Low pressure/normal pressure lights not changing	A. Sticking on normal pressure	A. See modification on low pressure system
	B. Sticking on low pressure	B. See Symptom number 2

I. Pressure Regulator/Comfort Control

1. Remove Pump cover as in section A
2. Pull off the comfort control knob
3. Disconnect the air pipe at the rear of the unit
4. Remove the 2 small screws fixing the unit to the front panel
5. The unit can now be removed
6. Refitting as above but in reverse

FIG 7 Base Plate



Trouble Shooting.....Pump