drive

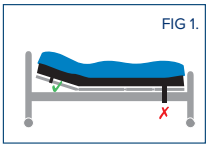
DeVilbiss HEALTHCARE

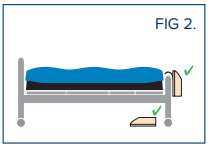
Apollo II, Apollo Junior Mattresses and Apollo II Cushions

Instructions for use

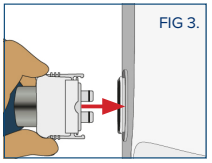
TO BE USED IN CONJUNCTION WITH THE FULL INSTRUCTIONS FOR USE FOR THIS PRODUCT. THIS QUICK GUIDE DOES NOT REPLACE THE FULL DOCUMENT.

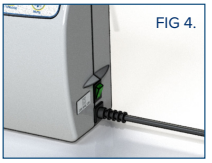
Apollo II Standard Mattress	Apollo Junior Mattress	Apollo II Dynamic Cushion
The mattress is intended to support a single patient who is up to 200kg in weight and 185cm in height. For those patients of a very low weight, typically less than 40kg and a physical size less than 146cm, clinical judgment is to be used to determine suitability. A lower (or upper) age limit is not defined as it depends on the physical size of the patient in relation to the proportions of the mattress and bed frame.	The mattress is intended to support a single patient who is up to 178kg in weight and 155cm in height. For those patients of a very low weight, typically less than 40kg and a physical size less than 125cm, clinical judgment is to be used to determine suitability. A lower (or upper) age limit is not defined as it depends on the physical size of the patient in relation to the proportions of the mattress and bed frame.	The cushion is intended to support a single patient who is up to 115kg in weight. A lower (or upper) age limit is not defined as it depend on the physical size of the patient in relation to the proportions of the cushion and the platform. Clinical judgement is to be used to determine patient suitability.





- **Mattress only** - for profiling beds, it is essential that straps are secured around the movable sections of the bed frame - damage will be incurred when profiled if secured to fixed parts of the frame (FIG 1).
- **Cushion only -** It is the responsibility of the carer to ensure the chair is suitable for product compatibility and the safety of the patient. Position the cushion with the pipes at the rear of the chair
- To avoid any risk of damage to the mattress/ cushion, ensure there are no sharp objects which may come into contact with it.
- Position the control unit by hanging the hooks over the foot board. If there is no foot board or the cushion is in use, place the unit on the floor with the front facing upwards. Ensure the rear of the unit is not obstructed by carpet, rugs etc. It is advisable to place the unit on a firm surface (FIG 2).



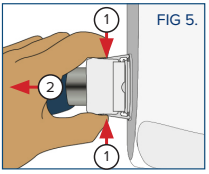


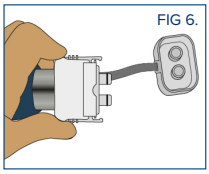
- Connect the mattress/cushion to the control unit (FIG 3).
- Plug in and switch on (FIG 4).
- The mattress/cushion will start to inflate. Inflation can take up to 45mins. Once inflated, ensure the straps attaching the mattress/ cushion to the bed frame/chair are secure and hold the device in place. Secure sheets loosely enough to ensure they do not interfere with cell alternation.

Transport Mode

You can achieve up to 8 hours transport time by carrying out the following procedure:

- Disconnect the umbilical cord from the power unit by squeezing the two tabs and pulling away (FIG 5).
- Seal using the cap marked 'Transport' (FIG 6).
- Switch off the control unit.





CPR - mattress only

- Rapid deflation of the mattress may be required for emergency treatment or system deflation. The CPR dial is located at the foot end of the mattress.
- Rotate the CPR dial to the open position (FIG 7 overleaf), once done the entire system will rapidly deflate.
- To re-inflate, turn the CPR dial to the closed position (FIG 8 overleaf).
- Wait for the mattress system to reach optimal pressure prior to a return to normal use.

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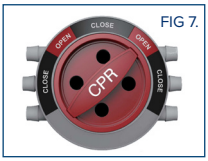


FIG 7.

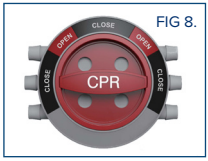


FIG 8.

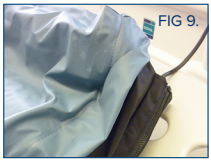


FIG 9.

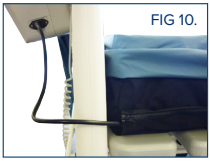
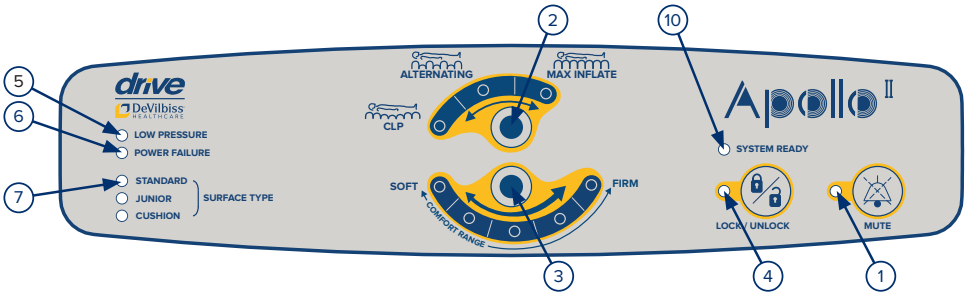


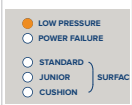
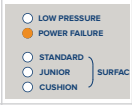
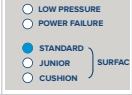
FIG 10.

Mattress Cable Management

- To reduce a risk of trip hazards, route the mains cable down the length of the mattress using the integral routing sheath. Detach the pop studs from the sheath, insert the cable and reattach all studs down the full length of the sheath (FIG 9).
- Always ensure cable is unplugged from mains power before moving the bed. It is advised not to wrap the cable tightly but to leave some slack (FIG 10).



No.	Symbol	Description
1		**Alarm Mute:** Mutes the audible signal for 20 minutes. A orange light indicates the unit is muted.
2		**Therapy mode:** 3 modes are available, PRESS BUTTON 2 to change between CLP (Constant Low Pressure), ALTERNATING AND MAX INFLATE a blue light will indicate the current mode selected.
3		**Comfort Control:** Can be adjusted by manually adjusting the cell pressure up or down. Press button 3 to increase or decrease pressure. A blue LED will illuminate to indicate which comfort setting is selected.
4		**Lock / Unlock:** The control unit will automatically lock after 2 minutes of inactivity. To unlock press the button for 3 seconds. A blue light indicates the unit is locked.

No.	Symbol	Description
5		**Low Pressure Indicator:** An amber indicator illuminates and an audible signal sounds if the pressure becomes unacceptably low.
6		**Power Failure Indicator:** Illuminates if power is lost.
7		**Surface Type Indicator:** Illuminates when surface type is detected.
8		**ON/OFF Switch:** Turns system on and off.
9		**Comfort Controls:** All pressure adjustment controls flash whilst system is calibrating.
10		**System Ready Indicator:** Illuminates when the system is ready.

CONTENTS

1. INTRODUCTION

Thank you for purchasing this product. These instructions for use should be read carefully before operating the dynamic system and kept for future reference. Please ensure that you understand all instructions, if you have any questions concerning the operation or maintenance of the support surface please contact your provider / supplier who will provide you with expert professional advice. These instructions for use are intended for medical professional users only and are not intended for lay users/patients.

Drive DeVilbiss Healthcare Ltd. recommend the system is assembled and maintained by Drive DeVilbiss Healthcare Ltd. service engineers or qualified personnel.

2. CONTACT INFORMATION

For assistance in setting up, using, maintaining your dynamic system, to report unexpected operation or for any service, warranty, sales or customer service information regarding this product please contact your provider or if in doubt contact Drive DeVilbiss Healthcare Ltd. at the following address:

Drive DeVilbiss Healthcare Ltd.

Sidhil Business Park,

Holmfield, Halifax,

West Yorkshire,

HX2 9TN,

United Kingdom

Service & Maintenance	**Spares**	**Sales**
Tel: +44 (0)1422 233136	Tel: +44 (0)1422 233138	Tel: +44 (0) 845 0600 333
Fax: +44 (0)1422 233010	Fax: +44 (0)1422 233010	Fax: +44 (0) 845 0600 334

info@drivedevilbiss.co.uk

www.drivedevilbiss.co.uk

Please quote the relevant serial number on all correspondence. There are three individual serial numbers for the following parts: control unit, top cover and base cover. UDI and serial numbers can be found on the back of the control unit and inside the mattress / cushion.

For Service & Support outside the UK & Northern Ireland please contact the local distribution company from where this equipment was purchased. Failure to do so may result in the manufacturer's warranty becoming void. If a serious incident occurs in relation to the product, reports should be forwarded to Drive DeVilbiss Healthcare Ltd and the local competent authority.

3. PRODUCT DESCRIPTION

3.1 Environment

Your dynamic system is intended for use in the following environments:

- A hospital where intensive/acute care is provided and medical supervision is required and monitoring provided.
- A long term care area where medical supervision is required and monitoring is provided if necessary (e.g. nursing homes, rehabilitation facilities, geriatric facilities).
- A domestic area.

3.2 Intended User Groups

For all the Apollo dynamic systems, only the professional user is intended to operate the control panel interface.

3.2.1 Apollo II Cushion

The cushion is intended to support a single patient who is up to 115kg in weight. A lower (or upper) age limit is not defined as it depend on the physical size of the patient in relation to the proportions of the cushion and the platform. Clinical judgement is to be used to determine patient suitability.

3.2.2 Apollo II Mattress

The mattress is intended to support a single patient who is up to 200kg in weight and 185cm in height. For those patients of a very low weight, typically less than 40kg and a physical size less than 146cm, clinical judgment is to be used to determine suitability. A lower (or upper) age limit is not defined as it depends on the physical size of the patient in relation to the proportions of the mattress and bed frame.

3.2.3 Apollo Junior Mattress

The mattress is intended to support a single patient who is up to 178kg in weight and 155cm in height. For those patients of a very low weight, typically less than 40kg and a physical size less than 125cm, clinical judgment is to be used to determine suitability. A lower (or upper) age limit is not defined as it depends on the physical size of the patient in relation to the proportions of the mattress and bed frame.

3.3 Intended Use

The intended use of the mattress is to support the weight of the patient, as identified within section 3.2, whilst sleeping or resting and the intended use of the cushion is to support the weight of the patient whilst seated. Both assist the user with pressure redistribution as a part of an overall plan of care.

3.4 Indications

To assist as part of an overall programme of care when active load distribution through mechanical means is required.

3.5 Product Overview

An air filled support surface is kept inflated by a compressor, housed within a control unit, where they are connected together via an umbilical tube.

The control unit is mains powered and it is expected to be permanently plugged into the mains when in use. Via the control unit the mattress can operate in three different modes:

• Alternating: air cells alternately inflate/deflate.

• Constant low pressure: all air cells inflated but kept at a low pressure.

• Max inflate: all air cells inflated to their maximum extent for 20 mins.

After inflation, the control unit automatically sets the cell pressure to a pre-determined value, but the comfort level can be adjusted by manually adjusting the cell pressure up or down. Should a fault occur (such as a power failure or loss of pressure) an audio & visual alert is triggered.

The support surface and control unit are intended to be positioned on compatible support platforms only. Type of use/reuse for the devices is classed as multiple patient multiple uses: Devices can be used multiple times, by multiple patients.

3.6 Features

Apollo II Cushion

- 2 way stretch, vapour permeable and waterproof cover
- High frequency welded top cover
- 360° zip
- Covered feed pipes
- Transport Cap

Apollo II & Junior Mattress

- Cell on cell construction
- Bed platform securing straps
- 2 way stretch, vapour permeable and waterproof cover
- High frequency welded top cover
- 360° zip
- Covered feed pipes
- Cable management routing
- Transport Cap

Apollo II Control Unit

- Provides an air supply to the mattress or cushion
- Rear bed hooks
- Accessible rear filter
- 1 in 2 alternating cycle
- 10 minute cycle time
- 20 minute timed maximum inflate mode
- Constant Low Pressure function (CLP)

- Adjustable comfort control
- Lock out function
- Fault indicators with visual and audible alerts
- Touch panel with integrated visual display

4. SAFETY

4.1 Warnings and Cautions

Warning

Warnings in these instructions for use highlight potential hazards that if disregarded could lead to injury or death.

Caution

Cautions in these instructions for use highlight potential hazards that if disregarded could lead to equipment damage or failure.

4.2 Risk Assessment

Support platforms used with the mattress or cushion can vary greatly depending on the specific healthcare setting (i.e. hospitals, nursing homes, home care etc). It is the responsibility of the carer to carry out the necessary risk assessment to ensure suitable product compatibility and the safety of the patient.

Before a patient uses the dynamic system a risk assessment must be performed on a patient by patient basis. The risk assessment should include, but is not limited to:

- Product combinations (bed frame, mattress, side rails etc.).
- Extent of tissue damage (if any).
- Entrapment.
- Patient falls.
- Compatibility of the patient to the mattress size.
- Patients who have reduced capacity and are agitated and/or restless.
- Patient with burns.
- Unauthorised people with access to the controls.
- Small adults/children excluding Apollo.

4.3 Contraindications

Patient conditions for which the application of pressure relief on an alternating support surface is a contraindication are as follows:

- Cervical or skeletal traction, mattress only.
- Unstable skeletal fractures, mattress only.
- Unstable spinal injury, mattress only.
- Exceeds maximum patient weight of the support surface.
- Gross Oedema (when using alternating mode only)

Other contraindications may be relevant which are specific to the patient or care environment.

4.4 System Loads

Mattress maximum patient weights:
APOLLO II - 200kg (31 stone)
APOLLO JUNIOR - 178kg (28 stone)

Apollo II cushions maximum patient weights:
APOLLO/2/CUSH/18 and /20 - 115kg (18 stone)

4.5 Training

If these instructions for use are not deemed sufficient and the need for training is required please contact your distributer who will be able to define the intention and outcomes of any necessary training, who should attend, its duration and any potential costs involved.

4.6 Patient Briefing

The professional user is to ensure the patient is sufficiently briefed in regards to the performance of the system, actions to take in the event of a change in its performance, safe use of the support surface and environmental considerations that may need to be taken.

4.7 Fire Warning

In order to reduce the risk of fire:

- DO NOT SMOKE - Smoking will contaminate the product and is NOT permitted around or on the support surface. This is a common cause of fatal fires. A cigarette could burn a hole in the support surface and cause damage. Patient clothing, bed sheets and other items, may be combustible and could catch fire. Failure to observe this warning could result in a severe fire, property damage, physical injury or death.

- DO NOT - use candles on or around the system.

- DO - keep hot equipment off and away from the system, e.g. hair dryer, curling tong, etc.
- DO - keep heaters away from the support surface.
- Follow all manufacturers' instructions and warnings.
- It is advised that a full fire risk assessment is carried out prior to using this equipment.
- In case of fire, exit and call the emergency services.
- The use of other materials in combination with the mattress can degrade the fire performance.

4.8 Biocides

Support surface covers contain a anti-fungal agent to control microbial deterioration. The active ingredient is 3-iodo 2-propynyl butylcarbamate. The active ingredient is fully encapsulated within the polymer coating. There are no special handling requirements.

This product does not contain any Nano-materials and all components are latex free.

4.9 General Warnings

Warning

- The system is to be installed and put into service in accordance with the information provided in these instructions for use.
- The Apollo II standard mattress and cushions are typically not suitable for child use, if it is to be used for child occupancy ensure a risk assessment has been undertaken taking into account the proportions of the child and dimensions of the support surface.
- Misused electrical equipment can be hazardous.
- Exposure of the control unit to any liquid while it is plugged in could result in a severe electrical hazard.
- The control unit is a precision electronic product. Use care when handling or transporting it. Dropping or other sudden impacts may result in damage to the unit.
- Do not open the control unit – Risk of electrical shock.
- Repairs and service are to be conducted by suitably trained personnel. If the control unit is not functioning properly, or has been damaged, unplug the unit and take it out of service immediately.
- Modification of the support surface or control box is not allowed without the permission of Drive DeVilbiss Healthcare Ltd. – A hazard could be introduced.

Warning

- Occupants and users of this equipment must never smoke in close proximity to the control unit, mattress, cushion or bedding being used with it - Risk of fire.
- Control unit shall not be used in the presence of flammable gasses or used in oxygen rich environments – Risk of explosion / fire.
- Control unit functions must be locked out when a patient is left unattended.
- If children, adults with reduced capacity or even pets pose a potential risk of intentional or unintentional tampering with the control unit its suitability for use is to be considered during the initial patient / product risk assessment.
- The mattresses and cushions are for single occupancy use. Additional weight could damage the support surface or affect the performance of the system.
- Minimise articles (e.g. bedding) between the support surface and patient, and secure bed sheets loosely so as not to affect mattress functionality.
- Perform regular patient skin checks – Any tissue deterioration may require equipment reallocation and/or a re-assessment of the care being provided.
- External sources of heat and cold, (e.g. sunlight or air conditioning units) can impact the surface temperature of the support surface and/or control unit, ensure the system is appropriately positioned such that surface temperature is not adversely affected.
- Incompatible support platforms (e.g. a bed frame or chair) can create stability hazards.

5. TRANSPORT AND STORAGE

5.1 Storage

- Detach the control unit from the support surface.
- Release CPR or rotate the CPR dial until it is open.
- Lay the mattress or cushion out flat and position upside down.
- Ensure there is no air trapped in the cells.
- Position the control unit on the mattress or cushion.
- All products apart from the Apollo Infant, can be rolled from the head end towards the foot end (ensuring the control unit is fully covered).
- Place into storage bag to protect from dirt, debris, fluids etc.

Warning

- To prevent the risk of cross infection, when removing the system from an end user's residence ensure that all activities in relation to the system are carried out using disposable gloves and that they are then discarded appropriately, unless it can be verified that the cushion, mattress and control unit have been suitably cleaned and disinfected prior to collection.
- On the return of the system from an end users residence, prior to putting into storage ensure it has been cleaned and disinfected in line with the local infection control policy and / or as defined in section 10 of these instructions for use.
- Do not remove the mattress/cushion from the support surface if the patient is still on it - Risk of falling.
- If it is essential that the patient is moved whilst remaining on the mattress/cushion, ensure the system is immediately plugged back in to the mains power supply once relocated - Risk of tissue damage.

Caution

- Do not fold or roll the Apollo , crease or stack mattresses, cushion and/or control units - damage could be incurred.
- Do not store whilst inflated - damage could be incurred.
- Do not store objects such as side rails on top of the mattress or cushion - damage could be incurred.

5.2 Transportation

Where possible, it is recommended the transport of mattresses should be carried out on a flat based trolley or mattress trolley. Do not drag or pull the mattress by its cover or foam core. Please follow local moving and handling policies and guidelines when handling a mattress. It is recommended that two people manoeuvre the mattress.

5.3 Environmental Conditions

The following conditions should be followed when transporting and storing the dynamic mattress system:

Ambient temperature: -25°C to +70°C

Humidity: < 93% max, non-condensing

6. SYMBOL DEFINITION

The following symbols are found on the control unit and support surface:
(See section 9.3 for interface symbols)

Warning
Beware of potential hazard

Refer to instructions for use - Mandatory

Failure to read the instructions for use could introduce a hazard.

Date of manufacture

Foot end

Do not iron

Tumble dry on low heat

Zip location

Conforms to the Medical Devices Regulation 2017/745
(see declaration of conformity)

Mattress

Fuse

Humidity Limit

Temperature limit

Caution
Beware of potential product damage

Manufacturer

Machine wash at 71°C for no less than 3 minutes or 65°C for no less than 10 minutes. For full details see section 10.3.

Do not dry clean

Drip dry

Do not bleach

Keep out of direct sunlight

Medical device

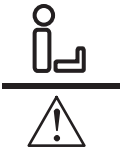
Product Reference

Serial Number

Class II Electrical Device
The user is protected by at least two layers of insulation between the current carrying parts and the metal accessible parts

No Smoking

Max patient weight



Safe working load

CPR Release

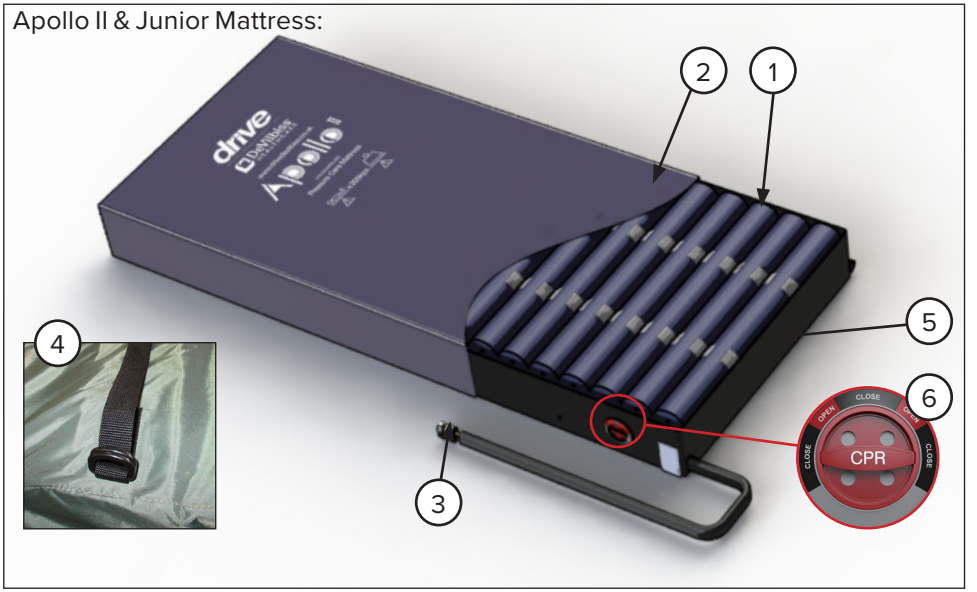
Type BF applied part

Applied Part: The parts of the device that come into contact with the patient in order to carry out its intended function (refer to section 16.2).

Type BF: Applied parts which are electrically isolated from earth and other parts of the medical equipment - Complying with specific requirements for protection against electric shock to IEC 60601-1.

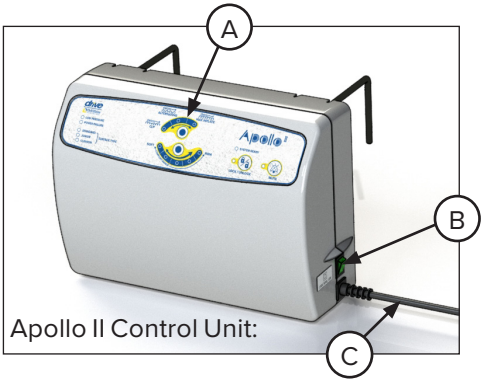
7. PARTS IDENTIFICATION

Apollo II & Junior Mattress:



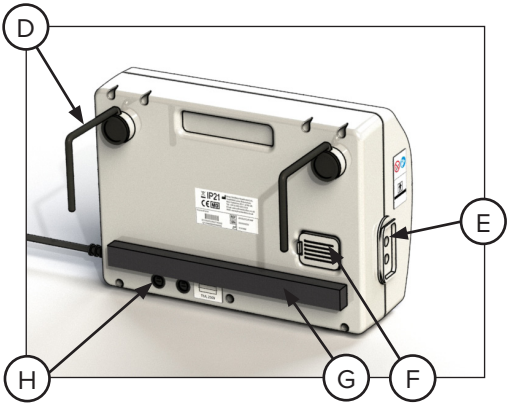
Apollo II & Junior Mattress:

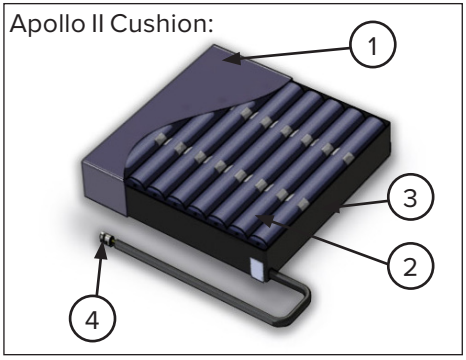
No.	Item Description	Qty.
1	Air Cells	Apollo II - 20 Apollo Junior - 21
2	Top Cover	1
3	Mattress Air Connector	1
4	Mattress Strap	8
5	Base Cover	1
6	CPR Dial	1



Apollo II Control Unit:

No.	Item Description	Qty.
A	Control Interface	1
B	On/Off switch	1
C	Mains Cable	1
D	Hook	2
E	Female Air Connector	1
F	Air Filter	1
G	Pad	1
H	Fuse Holder	2





Apollo II Cushion:

No.	Item Description	Qty.
1	Top Cover	1
2	Air Cells	18” - 9 19” - 10
3	Base Cover	1
4	Cushion Air Connector	1

8. INSTALLATION

When specifying a support surface, chair, bed frame, accessory and/or side rail combination, a clinical assessment of the patient's needs must be carried out in line with local policy.

Warning

Refer to the warnings at the end of this section before proceeding with installation.

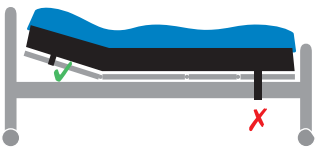
Caution

- If the system has come from a storage / transport temperature environment near to the minimum or maximum values stated allow the cushion/mattress and control unit to adjust to room temperature for a minimum of 2 hours prior to plugging into the mains supply - Risk of electrical system damage if operated outside of the recommended temperatures.

- Open all packaging with care.
- Once removed from the packaging check the product for any signs of damage. If damaged do not put into use and contact your provider or Drive DeVilbiss Healthcare Ltd. (See Section 2).
- Remove all covers, sheets and the existing mattress/cushion from the bed/chair.
- Position the mattress on top of the bed frame, top cover facing upwards and air hose at the foot of the bed for control unit positioning.
- If using a cushion, position the cushion onto a fixed chair which has a padded seat, with the top cover facing upwards and air hose at a rear corner of the seat for control unit positioning.
- If using the mattress attach to the bed frame by securing the adjustable straps to the moving sections of the bed. If using a cushion, loosely secure the cushion to the chair frame by using the attached securing straps.

Caution

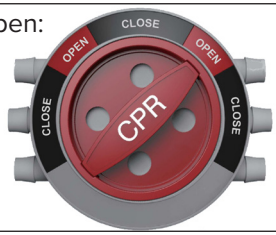
- For profiling beds, it is essential that straps are secured around the movable sections of the bed frame – Damage will be incurred when profiled if secured to fixed parts of the frame.



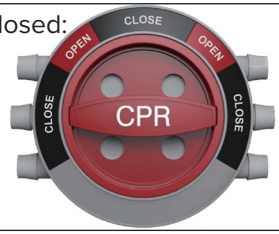
- To avoid any risk of damage to the mattress ensure there are no sharp objects which may come in contact with it.

- If using the a mattress which includes the CPR dial ensure the CPR dial is rotated to a vertical or horizontal, closed position.

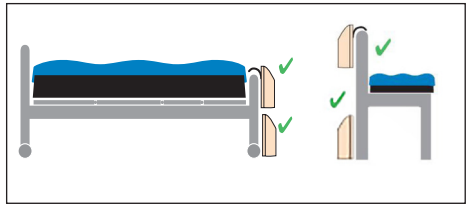
CPR Open:



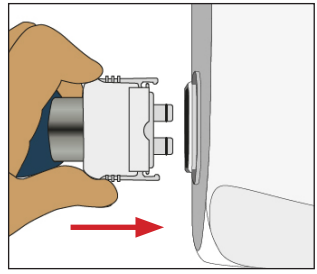
CPR Closed:



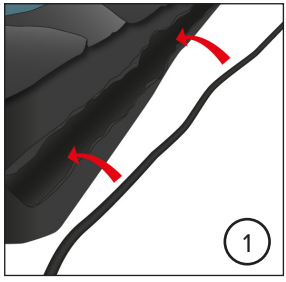
- Position the control unit by hanging the hooks over the foot board. If there is no foot board place the unit on the floor with the front facing upwards. Ensure the rear of the unit is not obstructed by carpet, rugs etc. It is advisable to place the unit on a firm surface.

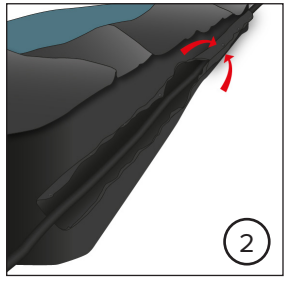


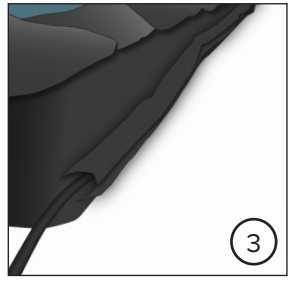
- Attach the male air connector to the control unit, ensuring the air hose does not kink or become trapped between parts of the bed frame/chair.



- If the mattress includes cable routing, route the mains cable down the length of the mattress using the integral routing sheath. Detach the pop studs from the sheath, insert the cable and reattach all the studs down the full length of the sheath. See steps 1 to 3 below.







- Plug the mains cable into a suitable mains supply and switch on the control unit (see section 9).
- The support surface will start to inflate. Inflation can take up to 45mins product dependent.

- Once inflated, ensure the straps attaching the mattress/cushion to the bed frame/chair are secure and hold the mattress/cushion in place.
- Once the mattress is fully inflated, the bedding can be replaced. Secure sheets loosely enough to ensure they do not interfere with cell alternation.

Warning

- After assembly of the device there should be no loose parts remaining, however consideration is to be taken in the event of spare components and small packaging parts (cable ties, plug pin protector) being evident to minimise the risk of them being swallowed by the occupant or any other person; this could pose a choking hazard.
- Ensure the mattress is used with a compatible side rail and bed frame combination – Incorrect combinations can lead to entrapment and/or falls hazards.
- Ensure the cushion is used with a compatibly sized chair – incorrect combinations can lead to entrapments/falls hazards.
- Ensure the support surface is of the correct type for the patient, providing sufficient support – Incorrect surface specification could lead to an injury.
- Incompatible support platforms (e.g. a bed or mattress, or a chair or cushion) can create safety/stability hazards.
- The mains plug is the disconnect device for the means of isolating the control unit from the mains supply, the plug must be accessible at all times.
- Ensure the mains cable is plugged into an appropriate power source at all times.
- Do not route the mains cable through/around mechanical bed assemblies, or in a position that may cause a trip hazard and/or damage to the cable.
- Ensure the mains cable is not in tension, paying particular attention to when the bed/chair travels up/down.
- Precautions are to be taken when routing the mains cable around the bed or chair to ensure that it does not become squeezed, trapped or damaged by the bed frame, chair or other ancillary equipment - Risk of electrocution.
- Any electrical cable that is part of the mattress/cushion system or associated ancillary equipment that is found to be damaged must be replaced immediately - Damaged electrical cables can create a risk of electrocution and / or fire.
- A CE marked extension cable must only be used when it is not possible to reach a wall socket with the equipment mains cable – Contact Drive DeVilbiss Healthcare Ltd. for detail in regards to safe use of extension cables.

Warning

- If an extension cable is used never overload it by plugging in appliances that together will exceed the maximum current rating stated for the extension cable. Block adaptors are not to be used. – Risk of fire.
- Ensure multiple socket outlets are not positioned under the support platform - Liquids that leak onto such a socket could pose an electrical / fire risk.
- Consideration is to be taken in the positioning of the mains cable and air hose to minimise the risk of accidental strangulation resulting from patient, baby or child entanglement – Drive DeVilbiss Healthcare Ltd. recommend the use of the mains cable routing sheath that is incorporated down the length of the mattress.
- Keep away from sources of heat and naked flames (e.g. cigarettes, fireplaces, electric fires, fan heaters, electric blankets etc.) – Risk of damage / fire.
- Do not place any objects or items, such as blankets, on or over the control unit - Risk of fire.
- Avoid placing the mattress system in a moisture rich environment - Prolonged exposure to moisture could damage the electrical system and pose an electrical/fire risk.
- Before use, it is important to ensure the patient can reposition themselves, or will be repositioned on a regular basis; please follow local policies, recognised national or international guidance.
- Ensure the control unit rear and filter cover are kept out of the reach of children – Choking hazard.
- When using the mattress, ensure no excess / sag in the umbilical is present within the normal reach of the child, and within the perimeter of the Cot / Bed – Risk of strangulation.

9. OPERATION

9.1 Environmental Limits when in Operation

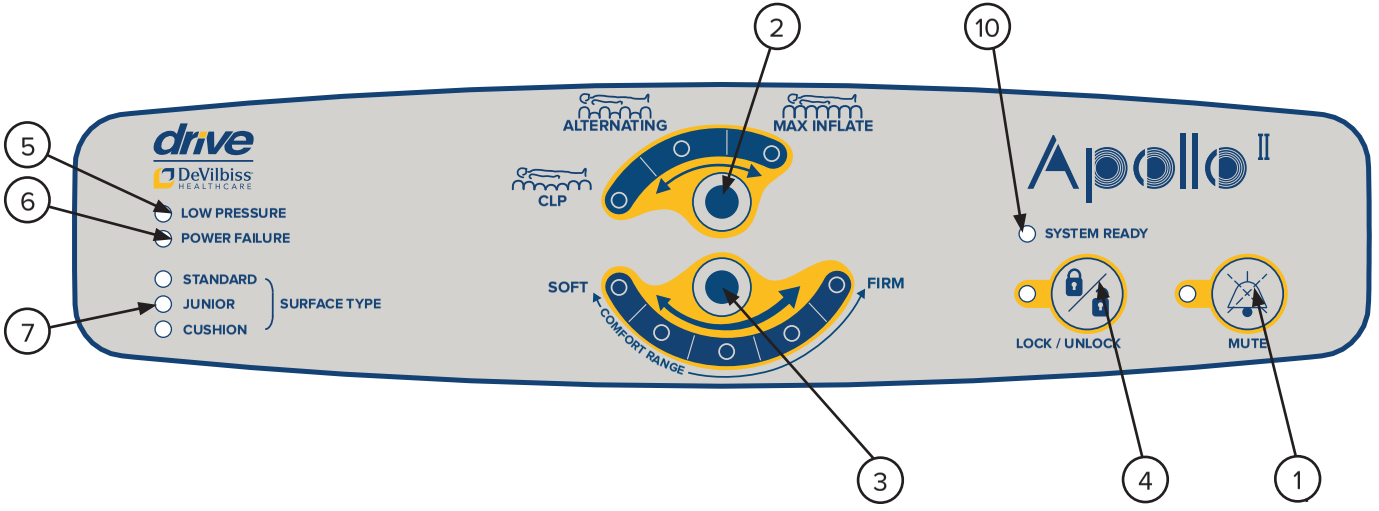
The following conditions should be followed when operating the system:

- Ambient temperature: +5°C to +40°C.
- Humidity: 15-93%, non-condensing.
- Atmospheric pressure: 700 hPa to 1060 hPa

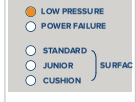
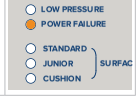
9.2 Preparing for Use

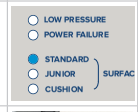
Prior to patient use of the dynamic system the following must be performed:

- Ensure the support platform and support surface are at room temperature.
- Ensure that both have been cleaned and disinfected (see section 10).
- Ensure the support surface cover has been checked for tears, punctures, abrasion marks etc. and that their are no signs of fluid ingress.



No.	Symbol	Description
1		**Alarm Mute:** Mutes the audible signal for 20 minutes. A orange light indicates the unit is muted.
2		**Therapy mode:** 3 modes are available, PRESS BUTTON 2 to change between CLP, ALTERNATING AND MAX INFLATE a blue light will indicate the current mode selected.
3		**Comfort Control:** Can be adjusted by manually adjusting the cell pressure up or down. Press button 3 to increase or decrease pressure. A blue LED will illuminate to indicate which comfort setting is selected.

No.	Symbol	Description
4		**Lock / Unlock:** The control unit will automatically lock after 2 minutes of inactivity. To unlock press the button for 3 seconds. A blue light indicates the unit is locked
5		**Low Pressure Indicator:** An amber indicator illuminates and an audible signal sounds if the pressure becomes unacceptably low.
6		**Power Failure Indicator:** Illuminates if power is lost.

No.	Symbol	Description
7		**Surface Type Indicator:** Illuminates when surface type is detected.
8		**ON/OFF Switch:** Turns system on and off.
9		**Comfort Controls:** All pressure adjustment controls flash whilst system is calibrating.
10		**System Ready Indicator:** Illuminates when the system is ready.

9.4 Control Unit Operation:

9.4.1 Mute

The audio visual signal activates if a fault is detected. To silence the audible signal the 'mute' button is pressed. When the system is muted an amber indicator illuminates. Re-pressing the button reactivates the audible signal.

The mute setting will self-cancel after 20 minutes and the audible signal will re-sound.

Warning

When silencing the 'power failure' indicator the audible signal will not reactivate after 20 minutes and all lights will extinguish – There will be no indication that the system is powered down. Ensure power is returned to the system as soon as possible to resume pressure relief.

9.4.2 Inflation Mode

Selected mode illuminates blue, three different inflation modes can be selected:

CLP (Constant Low Pressure): CLP contours the shape of the cells to the patient which redistributes pressure away from vulnerable areas. To exit this function, unlock the control unit and cycle through to the desired function. CLP will not automatically return to alternating mode

Alternating: The pump is set to alternating mode once the system is ready. This modes operates on a cycle where the cells deflate and inflate over a 10 minute time period.

APOLLO II	PRESSURE RANGE FOR ALTERNATING MODE				
	1	2	3	4	5
Standard	10 mmHg	20 mmHg	30 mmHg	40 mmHg	50 mmHg
Junior	10 mmHg	19 mmHg	28 mmHg	36 mmHg	45 mmHg
Cushion	40 mmHg	53 mmHg	65 mmHg	78 mmHg	90 mmHg

Max Inflate: Max inflate mode will automatically inflate all cells to maximum pressure with the pressure adjustment defaulting to firm. The pressure will return to the default alternating 3 setting after 20mins.

APOLLO II	PRESSURE FOR MAX INFLATE MODE
Standard	50 mmHg
Junior	45 mmHg
Cushion	90 mmHg

Warning

Static inflation modes should only be used as part of a clinical procedure or patient transfer.

9.4.3 Pressure Adjustment, Soft to Firm

Press the pressure adjustment button to increase or decrease the pressure setting, 5 pressure settings from soft to firm (for system pressures see pressure range table in section 9.4.2). A blue LED will illuminate to indicate which of the 5 pressure settings is operational. The default setting is 3.

9.4.4 Function Lock

The control unit will automatically lockout all functionality after 2 minutes of inactivity. To unlock the control unit the 'lock' button is pressed for 3 seconds. Manually locking the control unit is an instantaneous depress.

When the system is locked an blue indicator illuminates.

Warning

When the lock is engaged it does not stop the on/off switch from being pressed. Ensure during use there can be no risk of accidental deactivation of the system. Drive DeVilbiss Healthcare Ltd. recommend that a product risk assessment is done for systems being used in a domestic environment to ensure, amongst other requirements, that access to the on/off switch does not introduce an unacceptable risk.

9.4.5 Low Pressure Indicator

An amber indicator illuminates and an audible signal sounds if the pressure becomes unacceptably low.

9.4.6 Power Failure Indicator

The Power Failure Indicator is maintained via an internal battery that is automatically kept in a continually charged state by the mains supply. When the battery is depleted, the Power Failure Indicator will cease.

9.4.7 Surface Type Indicator

Automatically detects the surface type, surface type illuminates blue.

9.4.8 On/Off Switch

When switched on an audible signal will sound and the switch will illuminate green.

While inflating the 5 pressure adjustment LED indicators will be flash blue until the system is calibrated. During this time a short audible sound will occur and the system ready and max inflate indicators will illuminate for 3 minutes. Once the

pressure adjustment indicators have stopped flashing and have defaulted to pressure setting 3, the system calibration is now complete and the system is ready to use.

If the pressure does not reach maximum pressure after 45 minutes when calibrating, an audible signal will sound and the low pressure indicator light will remain lit. If this occurs refer to section 11 - troubleshooting.

Refer to the warning in 9.4.4 in regards to function lock and on/off function.

9.5 Mattress Use

9.5.1 Establishing Pressure (Supine Patient)

The pressure defaults to the 3rd pressure setting (30mmHg (if required)). To adjust the pressure setting use the pressure adjustment button function to establish the best setting for effective support and comfort, with the patient lying supine (face upwards).

Before changing or lowering the pressure a clinical judgement is required from frequent monitoring and repositioning of the patient.

Once the system has been set for the patient, re-check it after approximately 20-30 minutes to ensure the patient is comfortable and that the system is functioning correctly.

9.5.2 Establishing Pressure (Upright Position)

The mattress design allows for it to be profiled in an upright position. Pressures will be maintained when the patient is sitting in an upright position but depending on patient comfort and clinical judgement the pressure setting may need to be increased.

Warning

When the backrest section of the bed is raised, ensure pressures are increased accordingly to reduce the risk of the mattress bottoming out.

9.5.3 CPR Function

Rapid deflation of the mattress may be required for emergency treatment or system deflation. The CPR dial is located at the foot end of the mattress. If CPR dial is not present disconnect the umbilical from the pump.

Rotate the CPR dial to the open position, once done the entire system will rapidly deflate.

The low pressure failure will sound and the indicator will illuminate as a result of using the mattress CPR.

To re-inflate turn the CPR dial to the closed position or reattach the air connector. Wait for the mattress system to reach optimal pressure prior to a return to normal use.

To allow the system to inflate correctly and effectively, it may be necessary to restart the control unit by switching off and then on, and allowing the mattress to re-calibrate without the patient on the mattress.

CPR Open:

CPR Closed:

9.6 Cushion Use

The Apollo II cushion system comprises of a pressure relieving alternating cell system and can be used on standard hospital and domestic chairs. Apollo II cushions can be operated with the Apollo II pump. The pump will automatically recognise the cushion has been connected and will default to pressure setting 3. When the control unit is connected to the cushion, the control units operation is identical to that explained in section 9.4 of this manual, with the inflation process taking 90 seconds.

Do deflate the cushion, disconnect the umbilical from the control unit allowing the air to escape.

9.7 Automatic Pressure Control

During normal operation the control unit monitors the mattress pressure and maintains it at the set level. If the pressure falls below the set pressure level the control unit will automatically speed up the inflation of the mattress until the pressure is achieved.

If the control unit is unable to maintain the set pressure in the mattress an audible signal will sound and the low pressure indicator light will illuminate. If this occurs refer to section 11.

9.8 CLP (Constant Low Pressure) Mode

When CLP is selected all cells inflate at the pressure to which the control unit is set, thereby offering a non-moving surface. The control unit will not return to alternating mode unless manually selected by the user.

Warning

CLP mode will not automatically default back to alternating mode. Alternating mode must be reselected manually by the user.

9.9 Use of Incontinence Products

Incontinence products such as sheets or pads can be used with the system, however product performance is likely to reduce due to the reduced effectiveness of the alternating pressure distribution. If incontinence products are to be used it is recommended that regular patient skin checks are performed to ensure skin integrity is maintained.

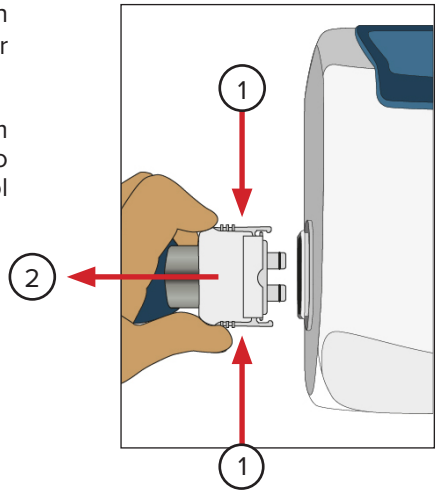
Warning

Alternating cushions will have an impact on the seating height of the individual and may be unsuitable for patients with poor posture or pelvic deformity, advice from a seating specialist should be sought.

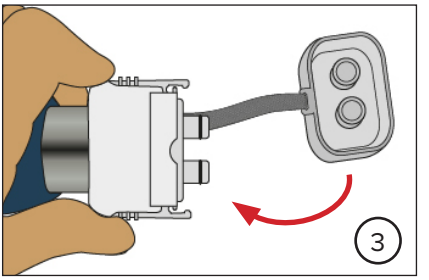
9.10 System Disconnection and Power Cuts

If the support surface is to be disconnected from the power supply for an extended period of time and the surface is to remain inflated or in the event of a mains power failure, carry out the following procedure:

- Disconnect the male connector from the power unit by squeezing the two tabs and pulling away from the control unit.
- Seal using the cap marked “Transport”.
- Complete the action quickly to limit air loss.



- Switch off the control unit.
- Disconnect from the power supply.
- The mattress / bed can now be moved.



Warning

- The mattress will remain inflated for a maximum of 8 hours only – Return the system to the mains supply as soon as is practical.
- Whilst unplugged the alternating mode will not be operational – Pressure relief will not be provided.
- Please do not position the device so that it is difficult to operate, disconnect or power off.

10. DECONTAMINATION / CLEANING

Infection control and routine cleaning must be carried out in accordance with your local infection control policy or regulatory body.

Warning

- Always disconnect the support surface and bed frame from the main power supply prior to cleaning.
- The control unit is rated to IP21 and provides protection from condensation only, do not immerse or soak the control unit – Risk of electric shock.
- Regular cleaning and disinfection of the support surface will help to prevent the risk of infection to the occupant and/or carer.
- Prior to transferring the mattress system to another user ensure it has been cleaned and disinfected using the method as detailed below to help prevent the risk of cross infection.
- Deviations from the specified cleaning and disinfection instructions can cause serious hazards, and adversely affect the life and efficacy of the system.

Caution

- If any of the below washing instructions are not followed the product warranty will be invalidated.
- Do not use solvents, neat bleach, phenolic based cleaning solutions or abrasive products to clean the casing or mattress.

10.1 Control Unit

- Check for external damage – If damaged take the control unit out of use.
- All surfaces to be wiped down with a disposable soft cloth moistened with a mild detergent and diluted in warm water (40°C).
- The control unit is be cleaned by starting with the cleanest parts of it and systematically moving to the dirtiest parts. Extra care should be taken around areas where excess dirt or dust may gather.
- The cloth should be changed during the cleaning process if it becomes soiled.
- Wipe down with a clean cloth moistened with clean water to remove detergent residue.
- If there are blood spillages or bodily fluids present wipe surfaces down with 0.1% Chlorine solution (1,000 ppm).
- Wipe down with a clean cloth moistened with clean water.
- Dry off with a paper towel - Always ensure the cleaned surfaces are allowed to fully dry before putting back into use.

10.2 Mattress and Cushion

Before attempting to clean, the top cover is to be checked for physical signs of damage that may lead to strike-through (ingress of fluid through cover). This is achieved by unzipping the top cover and looking for signs of staining to the white underside. Any evidence of strike-through (and / or cover damage) will require a new cover to be fitted to the system.

Warning

The cover must not be used if strike-through is evident – Risk of cross infection.

Caution

Frequent or prolonged exposure to higher concentration disinfectant solutions may prematurely age the fabric cover of the mattress.

General Cleaning:

- Wipe down with a clean cloth moistened with a mild detergent and diluted in warm water (40˚C).
- Rinse with cold clean water and a clean cloth and allow to fully dry before use.
- Ensure the internal foam and air cells are orientated correctly to the mattress covers when reassembling.

Decontamination:

- Mop up any fluid with paper towels.
- Wipe cover down using cold clean water.
- Wipe down with a 0.1% Chlorine solution (1,000ppm) in cold water, where necessary a 1% Chlorine solution (10,000ppm) is to be used instead.
- Rinse down with cold clean water using a clean cloth.
- Dry off with paper towels - Always ensure the cleaned surfaces are allowed to fully dry before putting back into use.

10.3 Alternative Cover Cleaning Instructions

Alternatively disinfection of the cover may be achieved by laundering as follows:

- Remove mattress cover.
- Machine wash at 71°C for no less than 3 minutes or 65°C for no less than 10 minutes. Heavily soiled items should also have a pre-wash/sluice cycle.
- Allow covers to fully dry before use.

(Refer to the Department of Health document HTM 01-04 for further details).

11. TROUBLESHOOTING

- The control unit is not to be opened – risk of electrocution.

Warning

Symptoms	Actions
Power Failure	If mains plug, cable or outer casing is visibly damaged turn off at the mains and contact your approved service engineer. 1. Turn off the control unit to silence the audible alert and turn off the mains supply (Note, the mute button does not silence the power failure indication). 2. Check the mains cable is plugged into a wall socket. 3. Switch on at the wall (to ensure the socket is working, plug in a fused device that is known to work). 4. Turn on the control unit. If control unit still fails to operate: 5. Turn off the control unit at the wall. 6. Replace fuses – See section 13 for fuse types. 7. Turn on the control unit. If control unit still fails to operate, turn off at the mains and contact your approved service provider.
Incomplete inflation / Low pressure	1. Ensure the mattress or cushion air connector is correctly connected to the control unit. 2. Ensure the CPR dial is closed and there is no air leakage. 3. Turn the unit off and then on again to clear the indicator. If a 'low pressure' indicator continues to illuminate: 4. Open the mattress or cushion and ensure there is no air leakage within cells, tubing and connectors. 5. Turn the unit off and then on again to clear the indicator. If a low pressure indicator is still evident turn off at the mains and contact your approved service provider.
Alternating mode failure	1. Turn off the control unit. 2. Disconnect the male air connector to reduce cell pressure. 3. Reconnect air connector. 4. Turn on the control unit. 5. If alternating mode is still inoperable turn off at the mains and contact your approved service provider.
Patient is bottoming out.	1. Ensure the patient is suited to the maximum rating of the support surface. 2. Ensure the patient is positioned centrally. 3. Increase the pressure setting – Refer to section 9.4.3

12. MAINTENANCE

Warning

- Always disconnect the control unit from the main power supply prior to performing any maintenance procedures (when viable).
- No modification of this equipment is allowed.
- The dynamic system should be vacated by the patient before any maintenance or inspection takes place. If this is not possible due to the patient's mobility, care should be taken for the service engineer not to make contact with the patient when working on electrical items.
- Only Drive DeVilbiss Healthcare Ltd. approved components specified for the Apollo dynamic system are to be used - if in doubt contact Drive DeVilbiss Healthcare Ltd.

Only authorised service personnel or Drive DeVilbiss Healthcare Ltd. service engineers should carry out repairs or service activities. For Service & Support outside of the UK & Northern Ireland please contact the local distribution company from where this equipment was purchased. Failure to do so may result in the product warranty becoming void. **The dynamic system must be serviced once yearly, as a minimum.** Drive DeVilbiss Healthcare Ltd. also recommends that the carer performs frequent visual and operational inspections. If there are any signs of damage or the system is not performing as it should withdraw it from service until the system has been repaired and is fit for use again.

Drive DeVilbiss Healthcare Ltd. recommends that the following maintenance procedure is performed every 12 months:

- Check that the air filter is in good condition and replace or clean as required.
- Check that all electrical functions operate correctly on the control unit.
- Check that all audible and visual indicators work appropriately (when plugged in and unplugged from mains supply).
- Check that the battery is still functional and operates in the event of a power loss.
- Check that the mattress reaches the required pressures.
- Check the CPR connection on the mattress.
- Check the cover for tears, punctures, abrasion marks and split seams.
- Check for signs of fluid ingress/staining to the underside of the cover.
- Check that all piping and cells within the mattress are in good condition and that there is no kinking evident.
- Check the control unit housing is not cracked or damaged, if damaged the control unit must be removed from operation immediately.

- Check that the mains cable and plug are in good condition. The power supply cord is non-detachable, if either is damaged it must be replaced with a complete assembly by authorised service personnel, the plug must never be re-wired.
- Check that all markings are legible and in sufficiently good condition – if not replace parts and / or adhesive labels as required.
- Check the zip for any signs of damage, and ensure it is fully closed.
- Check between air cells for signs of fluid ingress.
- Ensure the screen print is in a good condition and readable.

Warning

When servicing or repairing a system, ensure that all activities are carried out using disposable gloves and any other personal protective equipment deemed necessary.

For more detailed service information, spare parts, circuit diagrams etc. please refer to the service manual. Copies are available from Drive DeVilbiss Healthcare Ltd. Contact details can be found in section 2.

12.1 Disposal of Parts

When the electrical system has come to the end of its useful life, contact your provider or Drive DeVilbiss Healthcare Ltd. to arrange for collection, alternatively follow local recycling and disposal policies.

The control unit used with your system is not to be disposed of in general municipal waste as it is to be considered as Waste Electrical and Electronic Equipment (WEEE). Some of the electrical components could be harmful to the environment and where viable the components and materials can be recovered and recycled. The control unit is to be disposed of following local WEEE policy or using an approved WEEE recycling service.

The mattress or cushion is unable to be recycled and as such this is to be disposed of in general municipal waste. Mattress foam (Apollo only) can be recycled at recycling centres that offer suitable PU foam recycling programs.

The cardboard packaging that the mattress system was originally supplied in is widely recyclable and is to be disposed of following local card recycling policy.

The polythene bag that the mattress was supplied in is recommended to be retained as this can be used to store the mattress in when it is not in use.

Warning

The mattress system is to be decontaminated before disposal to avoid risk of cross contamination.

13.1 APOLLO II MATTRESS SPECIFICATION

Classification:	Electrical shock protection: Class II, Type BF
	Applied Part: Mattress
Ingress protection:	IP21***
	Not AP or APG equipment*
Supply Rating:	230V, 50 Hz, 12W
Fuse Rating:	Mains Plug – 5A
	Control Unit - T1AL, 250VAC
Mains plug:	Type G/BS1363
Battery Type:	NiMH (Nickel Metal Hydride)
Mattress Dimensions:	(L) 2000mm x (W) 880mm x (D) 200mm
Mattress Weight:	10kg
Maximum Patient Weight:	200kg (31 stone)
No. of Cells:	20 cells which include:
	3 static head cells
	17 alternating cells
Alternating Therapy:	AB pattern
Cycle Time:	10 minutes
Pressure Range:	10mmHg to 50mmHg, ±2mmHg
Control Unit Dimensions:	(L) 205mm x (W) 280mm x (D) 115mm
Control Unit Weight:	2.3kg
Cover Material:	Dartex®
Cell Material:	TPU
Base Material:	Nylon/PU
Transport and Storage Conditions:	Ambient Temp: -25°C to +70°C
	Humidity: < 93%, non-condensing
Operational Conditions:	Ambient Temp: +5°C to +40°C
	Humidity 15% - 93%, non-condensing
Atmospheric Pressure:	700hPa to 1060hPa
Operating Altitude:	≤ 2000m
Pollution:	Degree 2
UV:	Intended for indoor use only
Noise level:	<40dB(A)
Safety Standards:	IEC/EN 60601-1
	IEC/EN 60601-1-11
	IEC/EN 60601-1-2
	Cover complies with BS7175:1989 - Medium Hazard
Expected Service Life:	3 Years**

13.2 APOLLO II CUSHION SPECIFICATION

Classification:	Electrical shock protection: Class II, Type BF
	Applied Part: Cushion
Ingress protection:	IP21***
	Not AP or APG equipment*
Supply Rating:	230V, 50 Hz, 12W
Fuse Rating:	Mains Plug – 5A
	Control Unit - T1AL, 250VAC
Mains plug:	Type G/BS1363
Battery Type:	NiMH (Nickel Metal Hydride)
Cushion Dimensions:	CUSH/18 = (L) 458mm x (W) 458mm x (D) 60mm CUSH/20 = (L) 508mm x (W) 508mm x (D) 60mm
Cushion Weight:	1kg
Maximum Patient Weight:	115kg (18 stone)
No. of Cells:	CUSH/18 = 9 cells CUSH/20 = 10 cells
Alternating Therapy:	AB pattern
Cycle Time:	10 minutes
Pressure Range:	40mmHg to 90mmHg, ±2mmHg
Control Unit Dimensions:	(L) 205mm x (W) 280mm x (D) 115mm
Control Unit Weight:	2.3kg
Cover Material:	Dartex®
Cell Material:	TPU
Base Material:	Nylon/PU
Transport and Storage Conditions:	Ambient Temp: -25°C to +70°C
	Humidity: < 93%, non-condensing
Operational Conditions:	Ambient Temp: +5°C to +40°C
	Humidity 15% - 93%, non-condensing
Atmospheric Pressure:	700hPa to 1060hPa
Operating Altitude:	≤ 2000m
Pollution:	Degree 2
UV:	Intended for indoor use only
Noise level:	<40dB(A)
Safety Standards:	IEC/EN 60601-1
	IEC/EN 60601-1-11
	IEC/EN 60601-1-2
	Cover complies with BS7175:1989 - Medium Hazard
Expected Service Life:	3 Years**

13.3 APOLLO JUNIOR SPECIFICATION

Classification:	Electrical shock protection: Class II, Type BF
	Applied Part: Mattress
Ingress protection:	IP21***
	Not AP or APG equipment*
Supply Rating:	230V, 50 Hz, 12W
Fuse Rating:	Mains Plug – 5A
	Control Unit - T1AL, 250VAC
Mains plug:	Type G/BS1363
Battery Type:	NiMH (Nickel Metal Hydride)
Mattress Dimensions:	(L) 1930mm x (W) 785mm x (D) 178mm
Mattress Weight:	7kg
Maximum Patient Weight:	178kg (28 stone)
No. of Cells:	21 cells which include:
	3 static head cells
	18 alternating cells
Alternating Therapy:	AB pattern
Cycle Time:	10 minutes
Pressure Range:	10mmHg to 45mmHg, ±2mmHg
Control Unit Dimensions:	(L) 205mm x (W) 280mm x (D) 115mm
Control Unit Weight:	2.3kg
Cover Material:	Dartex®
Cell Material:	TPU
Base Material:	Nylon/PU
Transport and Storage Conditions:	Ambient Temp: -25°C to +70°C
	Humidity: < 93%, non-condensing
Operational Conditions:	Ambient Temp: +5°C to +40°C
	Humidity 15% - 93%, non-condensing
Atmospheric Pressure:	700hPa to 1060hPa
Operating Altitude:	≤ 2000m
Pollution:	Degree 2
UV:	Intended for indoor use only
Noise level:	<40dB(A)
Safety Standards:	IEC/EN 60601-1
	IEC/EN 60601-1-11
	IEC/EN 60601-1-2
	Cover complies with BS7175:1989 - Medium Hazard
Expected Service Life:	3 Years**

*Not suitable for use in the presence of flammable anaesthetic mixtures with air, oxygen or nitrous oxide (Not AP or APG equipment)

**If the system and its components are serviced and maintained in accordance with the information detailed in section 12 of these instructions for use then the system can be expected to provide in excess of the 3 years of service.

*** IP21 = water ingress protection from condensation only.

14. ELECTROMAGNETIC COMPATIBILITY (EMC)

The control unit has been designed to meet the EMC requirements of EN 60601-1-2 however it may still be affected by or emit harmful radio frequency (RF) energy. The RF emissions from the control unit are very low and are not likely to cause any interference to nearby electronic equipment, however interference to sensitive equipment is still possible. Likewise if the immunity limits of the control unit are exceeded the system may be seen to operate abnormally.

If the control unit or any alternative equipment is found to be operating abnormally turn off the piece of equipment that is believed to be causing the interference (if possible) to identify the source of the RF energy. Once identified mitigation measures are to be taken, such as the separation distances being increased and/or the device(s) being re-orientated.

The dynamic system is to be installed and put into service according to the information provided within this section to ensure of reliable operation, however if the control unit continues to operate abnormally turn off at the mains supply and contact Drive DeVilbiss Healthcare Ltd. or your local distributor (see section 2).

Warning

- Portable RF communications equipment (e.g. mobile/cordless phones) should be used no closer than 30 cm (12”) to the control unit or its mains cable, otherwise degradation of the performance of this equipment could result.
- Use of accessories other than those specified or provided by Drive DeVilbiss Healthcare could result in increased electromagnetic emissions or decreased electromagnetic immunity of the control unit and result in improper operation.
- The control unit should not be used adjacent to or stacked with other equipment where possible, if adjacent or stacked use is necessary the control unit should be observed to verify normal operation in the configuration in which it is to be used.

14.1 Emissions & Immunity Compliance

The system is to be installed and put into service according to the information provided within this section to ensure of reliable operation, however if the control unit continues to operate abnormally turn off at the mains supply and contact Drive DeVilbiss Healthcare Ltd. or your local distributor.

Emission test	Compliance
RF emission CISPR 11	Group 1
RF emission CISPR 11	Class B
Harmonic emissions IEC 61000-3-2	Class A
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies

Immunity test	IEC 60601 test level	Compliance level
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±15 kV air	±8 kV contact ±15 kV air
Electrical fast transient/ burst IEC 61000-4-4	±2 kV for power supply lines	±2kV for power supply lines

Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	±1 kV line(s) to line(s) ±2 kV line(s) to earth
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	Voltage dips: 0 % UT; 0,5 cycle 0 % UT; 1 cycle 70 % UT; 25/30 cycles Voltage interruptions: 0 % UT; 250/300 cycle	Voltage dips: 0 % UT; 0,5 cycle 0 % UT; 1 cycle 70 % UT; 25/30 cycles Voltage interruptions: 0 % UT; 250/300 cycle
Power frequency (50/60Hz) magnetic field IEC 61000-4-8	30A/m	30A/m
NOTE U_T is the a.c. mains voltage prior to application of the test level.		

Immunity test	IEC 60601 test level	Compliance level
Conducted RF IEC 61000- 4-6	3 Vrms: 0,15 MHz – 80 MHz 6 Vrms: in ISM and amateur radio bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz	3 Vrms: 0,15 MHz – 80 MHz 6 Vrms: in ISM and amateur radio bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz
Radiated RF IEC 61000- 4-3	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz

15. COMPATIBILITY & ACCESSORIES

Refer to Drive DeVilbiss Healthcare Ltd. bed instructions for use to ascertain suitable mattress compatibility.

The Apollo II control unit is suitable for use with:

- Apollo II Dynamic Mattress (sold as system only) – DYN/DIG/APOLLO/2
- Apollo II Dynamic Cushions – APOLLO/2/CUSH/18 and APOLLO/2/CUSH/20
- Apollo Junior Mattress (sold as system only) - DYN/DIG/JUNIOR

Warning

Ensure the mattress/cushion is used with a compatible side rail, bed frame, or chair, combination – incorrect combinations can lead to entrapment and/or falls hazards.

15.1 Apollo Junior Mattress

The Apollo Junior mattress is intended for bed frames which have a platform of approximately 1880mm x 775mm, however the choice of side rail used can determine suitable compatibility or not.

15.2 Apollo II Cushions

The Apollo II 18” and 20” cushions are intended for chairs which have a platform of approximately 18” x 18”, or 20” x 20” respectively.

15.3 Apollo II Mattress

The Apollo II mattress is intended for bed frames which have a platform of approximately 2000mm x 900mm, however the choice of side rail used can determine suitable compatibility or not.

Drive DeVilbiss Healthcare bedframes reference suitable mattress compatibility in their instructions for use along with side rail compatibility. These instructions are to be consulted prior to using a mattress with a specific bed and side rail combination. Alternatively contact Drive DeVilbiss Healthcare or the local distributor for compatibility advise. If in doubt always seek advice.

16. WARRANTY

Drive DeVilbiss Healthcare Ltd. warrants that this product will perform in accordance with its specification and will remain free from defects in material and workmanship when used under normal conditions for a period of 2 years (full parts and labour) from the date of purchase from Drive DeVilbiss Healthcare Ltd. and its subsidiary companies. If purchased from an authorised dealer or international distributor, the product is warranted for 2 year parts only. DRIVE DEVILBISS LTD. MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. IN NO EVENT WILL DRIVE DEVILBISS LTD. BE LIABLE FOR PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES, OR FOR AN AMOUNT IN EXCESS OF THE PURCHASE PRICE OF THE DEFECTIVE DRIVE DEVILBISS LTD. PRODUCT OR PRODUCTS.

Proof of purchase must be presented with any claim. Except as provided herein, this warranty will not apply to any Drive DeVilbiss Healthcare Ltd. products that have been (a) damaged by lightning, water, or power surges, (b) neglected, altered, abused, or used for a purpose other than the purpose for which they were designed, (c) repaired by you or any other party without Drive DeVilbiss Healthcare Ltd. prior written authorisation, (d) used in conjunction with a third party product or products not approved in advance by Drive DeVilbiss Healthcare Ltd., (e) damaged or failed by or attributes to acts of God, (f) damaged, caused by failure to follow instructions,or (g) otherwise used in a manner inconsistent with any instructions provided by Drive DeVilbiss Healthcare Ltd. The warranty explicitly exempts consumable items.

This warranty contains the entire agreement between you and Drive DeVilbiss Healthcare Ltd. with respect to any warranty matters, and supersedes any and all other written or oral statements, representations or agreements relating to the subject matter of this warranty.

In the event of a product defect during the warranty period you should contact your supplier, whether it be Drive DeVilbiss Healthcare Ltd., its subsidiary companies, authorised dealers or international distributors who will at their option unless otherwise provided by law; a) correct the defect by product repair within the terms of the warranty b) replace the product with one of the same or similar design or c) refund the purchase price. All replaced parts and products on which a refund is made become the property of DeVilbiss Healthcare Ltd. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This limited 2 year warranty gives you specific legal rights and you may also have other rights.

Drive DeVilbiss Healthcare Ltd. has a policy of continual product improvement and reserves the right to amend specifications covered in this document.

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