drive

DeVilbiss HEALTHCARE

Simple Air Mattress with Dynabest

Instructions for use

Introduction

Drive DeVilbiss Sidhil manufacture beds, pressure area care equipment and hospital furniture at their UK manufacturing plant in Halifax, West Yorkshire.

This state of the art manufacturing plant uses the latest technology to cater for bespoke and high volume production, to meet the needs of the healthcare environment.

Research and Development is undertaken following strict guidelines to ensure all products are fit for purpose and comply to the relevant product and industry standards.

Drive DeVilbiss Sidhil meet the requirements of EN ISO 9001 and EN ISO 14001.

- BHTA
- Infection Prevention Society

Drive DeVilbiss exists to enhance the quality of life of the people we touch

Contents

1. Contact Information

Thank you for purchasing this product. This user manual should be read carefully before using the mattress. Please ensure that you understand all instructions, if you have any questions concerning the operation or maintenance of the mattress please contact your local distributor or Drive DeVilbiss Healthcare Ltd.

Contact Information

For any service, warranty, sales or customer service information on this product please contact your local distributor or if in doubt contact Drive DeVilbiss Healthcare Ltd at the following address.

Drive DeVilbiss Healthcare Ltd,
Heathfield Lane,
Birkenshaw
West Yorkshire
BD11 2HW
United Kingdom

Service & Maintenance

Tel: +44 (0) 845 0600 333
customer.service@drivedevilbiss.co.uk

www.drivedevilbiss.co.uk
www.sidhil.com

Please quote the product name and serial number on all correspondance.

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.

2. 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 mattress system. This is a common cause of fatal fires. This system uses room air for circulation through the mattress. A cigarette could burn a hole in the mattress surface and cause damage to the mattress system. 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 mattress system

DO NOT - use electric blankets with this mattress system

DO NOT – use in the presence of flammable anaesthetics, explosions could occur

DO - keep hot equipment off and away from the mattress surface, E.g. Hair dryer, curling tong, etc.

DO - keep matches and lighters away from children

DO - keep heaters away from the mattress system

Follow all manufacturers' instructions and warning.

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.

3. Important Safeguards

Read all instructions before use

DANGER - To reduce risk of electrocution:

1. Always unplug this product immediately after using.
2. Do not use while bathing.
3. Do not place or store product where it can fall or be pulled into a tub or sink.
4. Do not place in or drop into water or other liquid.
5. Do not reach for a product that has fallen into water. Unplug immediately.

WARNING – To reduce risk of burns, electrocution, fire or injury to person:

1. This product should never be left unattended when plugged in.
2. Close supervision is necessary when this product is used on or near children.
3. Use this product only for its intended use as described in this manual. Do not use attachments not recommended by the manufacturer.
4. Never operate this product if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped in water, return the product to a service centre for examination and repair.
5. Keep the cord away from heated surfaces.
6. Never block the air opening of this product or place it on a soft surface, such as a bed or couch, where their openings may be blocked. Keep the air opening free of lint, hair, and other similar particles.
7. Never drop or insert any object into any opening or hose.
8. Connect this product to a properly grounded outlet only. See grounding instructions.

Note, Caution and Warning Statements

NOTE	Indicates some tips
CAUTION	Indicates correct operating or maintenance procedures in order to prevent damage to or destruction of the equipment or other property
WARNING	Calls attention to a potential danger that requires correct procedures or practices in order to prevent personal injury

Symbols


Class II electrical device


"BF" symbol indicates this product is according to the degree or protecting against electric shock for type BF equipment.


Attention, instructions should be read

Authorised representative in the European community


Manufacturer


Warning – Potential hazards


Disposal of Electrical & Electronic Equipment (WEEE)


Product conforms to all relevant standards (See Declaration of Conformity)


No smoking on or near the mattress

Passive Radio Frequency Identification (RFID) tags maybe in use throughout the system


Keep dry


Note / Caution

4. Risk Assessment

Bed frames used with the mattress system 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 the safety of the patient.

Before a patient uses the dynamic mattress 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.
- Small adults (and children).
- Patients with learning difficulties.
- Unauthorised people with access to the controls.

General Warnings

- The mattress system is to be installed and put into service in accordance with the information provided in these instructions for use.
- The mattress system is 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 mattress system.
- 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 mattress or control box is not allowed without the permission of Drive DeVilbiss Sidhil– A hazard could be introduced.
- Occupants and users of this equipment must never smoke in close proximity to the control unit, mattress or bedding being used with it - Risk of fire.
- Accessories that have not been approved or designed for use with the mattress system are not be used.
- Control unit shall not be used in the presence of flammable gasses or used in oxygen rich environments – Risk of explosion / fire.
- If children, adults with learning difficulties 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 mattress is for single occupancy use. Additional weight could damage the mattress or affect the performance of the mattress system.
- Minimise articles (e.g. bedding) between the mattress 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.

5. Introduction

Product Description
This dynamic system is a high quality and affordable dynamic support surface. It has been specifically designed for the prevention and treatment of pressure ulcers and offers an effective solution to 24-hour pressure area care. It is suitable for patients who are at very high risk.

Intended Use
This system is intended to reduce the incidence of pressure ulcers while optimising patient comfort. It may also be appropriate for the following:

- Individual home care setting and long-term care facilities
- Pain management as prescribed by a healthcare professional

This mattress system is designed for use on both standard and profiling bed frames. Ideally, patients allocated to this system will have some degree of independent mobility or can be repositioned according to individual needs.

Contraindicators
Users with the following condition could experience contraindications if they use this device:

- Cervical or skeletal traction
- Unstable spinal cord injuries

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

Mattress
- 20 cells: 3 static head cells and 17 alternating cells
- Cell on cell construction (base section remaining static throughout)
- Securing straps
- 2 way stretch vapour permeable and fully welded PU top cover
- CPR tag

Pump
- Provides a constant air supply to the mattress
- Pressures adjustable via the dial on front panel
- 9.5 minute cycle time
- Low pressure alarm and LED

Mattress Load
- Minimum patient weight: 30kg/4.7st
- Maximum patient weight: 200kg/31.5st

6. Installation

Unpacking
When unpacking the mattress system, check for any damage which may have occurred during transit. Please report any damages as soon as practical and remove the system from use.

Setting up
1. Open packaging with care
2. Remove all existing mattress surfaces from the bed frame
3. Place the mattress on top of the bed frame. Ensure the hose is placed at the foot end of the bed. The mattress can be secured firmly by fixing the straps to the moving platforms of the bed.

Cover the mattress with a loosely fitted sheet to avoid direct skin contact.

If used with an electrically profiling bed, ensure the mattress is secured to the bed profile and not the static sections of the bed

4. Hang the pump at the foot end of the bed; adjust the hanger to secure the pump against the foot board. Avoid placing the pump on the floor
5. Connect the air hose from the mattress on to the side of the pump

Ensure the air hose on the mattress is not kinked or tucked under the mattress

Ensure the CPR valve is attached correctly

6. Plug the pump in to the mains electrical outlet

Any extra power cord should be neatly arranged and off the floor to avoid any trips and any damage to the cable

7. Turn on the pump using the main switch, found on the front of the pump
8. The pump will begin to operate
9. When the pump is activated, the pump will begin to inflate the mattress; this can take up to 40 minutes.
10. Once the pump reaches its desired pressure, the ‘Normal Pressure’ LED will illuminate. The patient can be placed on the mattress
11. Adjust the comfort dial on the front of the pump according to the patients comfort
12. Activate the alarm by pressing the square black button on the side of the pump. If the pump alarms, it can be deactivated by pressing this button again

7. Cleaning

The following guidelines are suggested by Drive DeVilbiss Sidhil as being suitable infection control procedures. Further information is available upon request.

Pump Unit

General cleaning may be affected by using a cloth dampened with a mild detergent and water solution. This approach may be followed either by wiping with a sodium hypochlorite solution to a dilution of 1000 ppm or by using an alcoholic wipe.

WARNING: Do not use hyper carbonate or phenol based cleaning solutions

WARNING: Do not use any abrasive compounds or cleaning pads

Mattress

General Cleaning

During general use the mattress and tube set may be cleaned using a neutral detergent solution. Using a single use wipe, clean the mattress cover and/or tube set with a solution of neutral detergent and hand hot water. Rinse thoroughly with clean water and a damp single use wipe.

The top, bottom and all four sides of the cover and tube set, including under the zip flaps MUST be cleaned.

Ensure the cover and tube set are completely dried before refitting the cover.

Disinfecting the mattress

If the cover and/or tube set are heavily soiled or have been exposed to bodily fluids such as blood, it will require a thorough cleaning procedure:

Wipe the cover and/or tube set using a single use wipe and a 0.1% Chlorine Solution (1,000ppm) and cold water. If required a 1% Chlorine Solution (10,000ppm) and cold water can be used. Rinse thoroughly with clean water and a damp single use wipe. Make sure the cover and tube set are completely dried before refitting the cover.

Surfaces must be protected during use and rinsed and thoroughly dried after application of a disinfectant. Frequent or prolonged exposure to higher concentration disinfectant solutions may prematurely age the fabric cover of mattresses.

Laundering

Before laundering the mattress, covers should be completely removed. Where required, mattress covers and tube sets can be laundered as follows:

Pre wash 80°C + 15 minutes

Main wash 80°C + 15 minutes

This should be followed by a cold rinse and extraction.

Drying

Mattress inners and tube sets should be hung from a line or bar and drip dried in a clean indoor environment. Mattress covers can be tumble dried on a low heat setting for 90 minutes. Drying temperature must not exceed 40°C. **Exceeding this temperature can cause significant damage to the mattress cover.** Covers must be completely dried before refitting to the mattress inners.

During cleaning procedures suitable protective clothing should be worn. Ensure that mains power supply to the pump has been disconnected prior to cleaning.

8. Biocides

This product contains a biocide anti-fungal agent to control microbial deterioration. The active ingredient is silver phosphate glass CAS number 308069-39-8 which contains 1.5% – 2.6% silver (CAS number 7440-22-4), glass, oxides, chemicals (CAS number 65997-17-3). The product does not contain any nanomaterials.

The active ingredient is fully encapsulated within the polymer coating. There are no special handling requirements.

This product is latex free.

Transport

- Detach the control unit from the mattress
- Pull the CPR tag
- Lay the mattress out flat and position upside down
- Ensure there is no air trapped in the cells
- Position the control unit on the mattress
- Roll 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.

Ensure the system is decontaminated before storing to avoid risk of cross contamination.

Do not remove the mattress from the bed frame if the occupant is still on the mattress – Risk of falling.

Maintenance

The following chart is a guide on how often the pump's filters should be serviced:

	Every 12 months	Every 6 months	Every 3 months
Low particle density	✓		
Medium particle density		✓	
High particle density			✓

- Ensure that all hoses inside and outside the pump and mattress are kink and split free. If any splits are found, replace the pipe
- Ensure the filter in the rear of the pump is clear from dirt.
- Ensure all indicators are working. If faulty, these should be replaced by a Drive DeVilbiss Sidhil approved technician
- Ensure the main power cord and plug is free from abrasions and/or excessive wear. Replace if damaged
- Ensure all electrical functions operate correctly
- Check the mattress cover for signs of wear and damage. Replace if there are any signs of fluid ingress

Replacement parts can be purchased from Drive DeVilbiss Sidhil.

9. Troubleshooting and Technical Description

Troubleshooting

Problem	Solution
No power to the unit	• Check the plug is connected to the mains power supply • Check for blown fuses
Alarm is on (audible and visual)	• Check that the connection between the air tube connector and the pump unit are tightly secured • Check all tubing connections along the mattress are secure. • Ensure the CPR valve is engaged • Check if there are any leaks from the air cells and/or tubing • Check that the correct comfort setting has been selected • Ensure all pipe work is in good order and not kinked
Patient is bottoming out	• Pressure setting may be inadequate, adjust comfort setting
No air is being produced from some of the air outlets of the tube connectors	• This is normal in alternating mode. Air outlets take turns to produce air during their pre-set cycle time

Technical Description

Pump		Specification	
Power Supply		230V 50Hz 0.17A	
Fuse Rating		T1AL / 250v (230V) 23w	
Cycle time		9.5 minutes	
Dimensions		30 x 10.5 x 22.5 (cm)	
Weight		3.4kg	
Modes		Alternating	
Air output		5.5 litres per minute (80mmHg)	
Pressures		30±7mmHg to 80±8mmHg Max output	
Operation		Continuous use	
Environment	Temperature	Operation:	10°C to 40°C (50°F to 104°F)
		Storage:	-15°C to 50°C (5°F to 122°F)
		Shipping:	-15°C to 70°C (5°F to 158°F)
	Humidity	Operation:	20% to 90% (non-condensing)
		Storage:	10% to 90% (non-condensing)
		Shipping:	10% to 90% (non-condensing)
Classification		• Class II electrical device, Type BF, IP21 • Applied part: Simple Air Mattress • Not suitable for use in presence of a flammable anaesthetic mixture (No AP or APG protection)	
Mattress		**Specification**	
Dimensions		200 x 88 x 20 cm	
Weight		7kg	
Pressure range		20-80 mmHg ±10%	
Maximum patient weight		200kg (31.5st)	
Minimum patient weight		30kg (4.7st)	
Top cover material		bi-elastic PU with zipper	
Base material		Nylon / PVC	
Cell material		Nylon / TPU	
Cell configuration		20 cell on cells (12.7cm Upper Layer Alternating and 7.6cm Lower Layer Static)	

10. Electromagnetic Interference and Disposal

Electromagnetic Interference

- This device has been tested to withstand electromagnetic interference (EMI) from commonly found electrical equipment.
- EMI can affect some types of electronic medical devices (such as pacemakers, defibrillators, ECG monitors and infusion pumps). If in any doubt before use, a risk assessment should be carried out before using this or any other electrical device around sensitive devices.
- Electrical equipment may be susceptible to EMI from sources such as mobile phones, walkie-talkies, TV broadcast and emergency services' radio. A risk assessment should also be carried out before using electronic medical devices in areas close to these sources.
- The addition of components or accessories may affect the EMI susceptibility of the device. Do not fit accessories other than Drive DeVilbiss Sidhil authorised accessories.
- Please contact Drive DeVilbiss Sidhil if further information is required

Disposal

- When the electrical system has come to the end of its useful life, contact Drive DeVilbiss Sidhil to arrange for collection, alternatively follow local recycling and W.E.E.E. (Waste Electrical and Electronic Equipment) policies.
- The control unit used with the mattress system is not to be disposed of in general municipal waste. Some of the electrical components could be harmful to the environment and where viable the components can be recovered and reused/ recycled.
- The metal and plastic components used in both the mattress and control unit are also to be separated and disposed of following local recycling policy as these can also be recovered and reused/recycled.

Warranty

6 months.

Notes

Notes

ORIGINAL INSTRUCTIONS

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West Yorkshire BD11 2HW

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Certificate No. FM14550

Drive DeVilbiss exists to enhance the quality of life of the people we touch