

**Movi Comfort C4
Powered Hybrid
User Manual**



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Warnings and Safety Precautions

When using electrical products, especially when children are present, basic safety precautions should always be followed, including the following:

Danger

To reduce the risk of electrocution:

- » Always unplug this product immediately after use.
- » Do not use while bathing.
- » Do not place or store product where it can fall or be pulled into a tub or sink.
- » Do not place in or drop into water or other liquids.
- » Do not reach for a product that has fallen into water. Unplug immediately.

Warning

To reduce the risk of electrocution or injury to persons:

- » The product should never be left unattended when plugged in.
- » Close supervision is necessary when this product is used by, on, or near children or invalids.
- » Use this product only for its intended use as described in this manual.
- » Do not use attachments not recommended by the manufacturer.
- » 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 into water. Return the product to a service center for examination and repair.
- » Keep the cord away from heated surfaces.
- » Never block the air openings of the product or place it on a soft surface, such as a bed or couch, where the air openings may be blocked. Keep the air openings free of lint, hair, and the like.
- » Never drop or insert any object into any opening or hose.
- » Do not use outdoors or operate where aerosol (spray) products are being used.
- » Connect this product to a properly grounded outlet only.
- » Do not disassemble, repair or rebuild the product without permission, otherwise may have risk of fire and danger in life.
- » The maximum recommended patient weight for this system is 230kg. Do not exceed this safe working load or you risk injury to the patient or carer and damage to the product.

Grounding

Before any connection is made, make certain that this product shall be connected to a protective earth conductor via the three-wire power cord; the three-blade plug shall be inserted only into a socket outlet that provides a protective earth contact.

Statements

Note

Indicates some tips or some information users should be aware of.

Caution

Indicate correct operating or maintenance procedures in order to prevent damage to or destruction of the equipment or other property.

Introduction

This manual should be used for the initial set up of the system and for reference purposes.

General

The Movi Comfort C4 Powered Hybrid Mattress is a high quality and affordable air mattress system support suitable for high-risk pressure ulcer treatment. It has been specifically designed for the prevention of bedsores and offers an affordable solution to 24-hour pressure area care.

The Movi Comfort C4 Powered Hybrid Mattress has been tested and certified for the following standards:

- » CE
- » UL

Intended Use

The Movi Comfort C4 Powered Hybrid Mattress is intended to reduce the incidence of pressure ulcers while optimizing patient comfort. It also provides the following:

- » Individual customized setting capability.
- » Pain management as prescribed by a physician.

Contraindication

Patient conditions for which the application of pressure relieving therapy on an alternation system is contraindicated are as follows:

- » Cervical or skeletal traction.
- » Unstable spinal cord injuries.

Package Components

Check inside the package. If any of the following items should be missing or damaged, please contact your local dealer or service center for replacement immediately.

		
<p>Pump Unit</p>	<p>Mattress</p>	<p>Manual Always read this manual before using this product.</p>

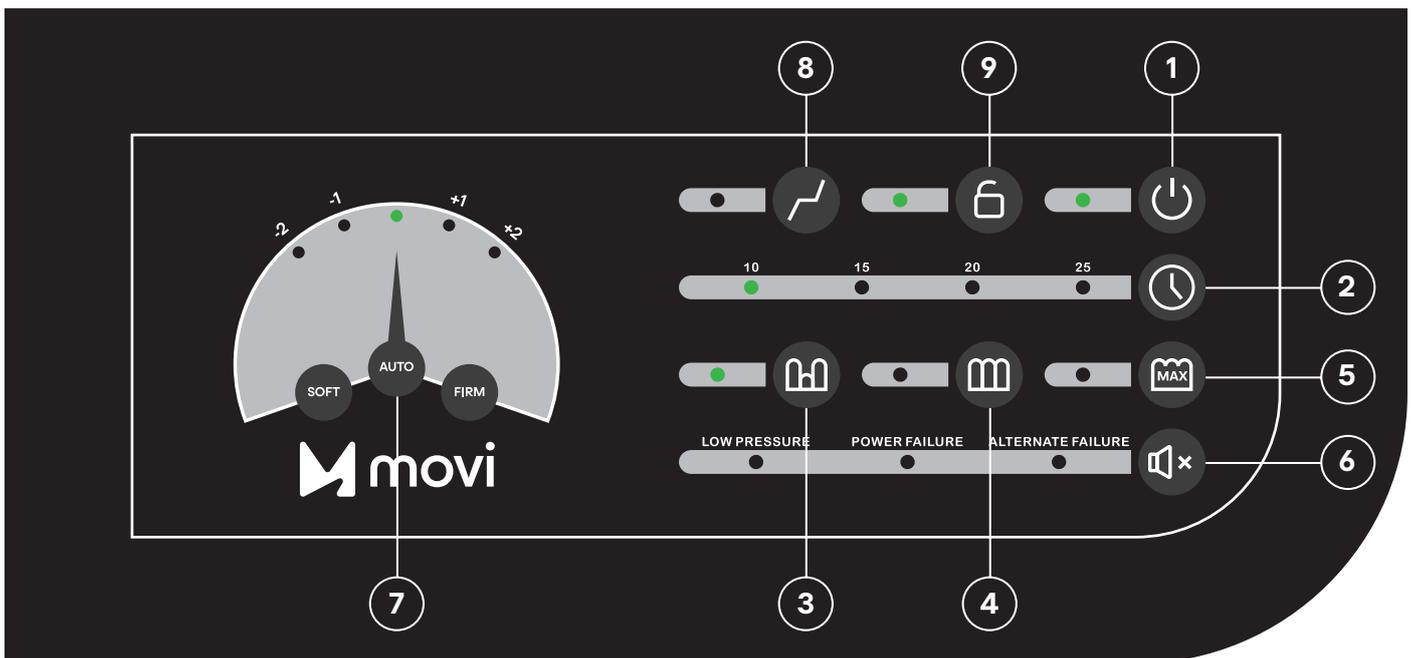
Product Function

Pump Unit

The functions of the pump for Movi T2/T4 Mattress are described below.

		
<p>Power Switch - (1)</p> <ul style="list-style-type: none"> The switch is at the right side of the pump. Turn ON/OFF the power and press Power button on the panel, the pump will start/stop operation. 	<p>Press Cycle Time - (2)</p> <ul style="list-style-type: none"> The cycle time can be selected from the panel. The cycle time value options are: 10, 15, 20, or 25 minutes. 	<p>Gentle Alternate Mode - (3)</p> <ul style="list-style-type: none"> Press to set the air mattress in gentle alternate therapy mode.
		
<p>Static Mode - (4)</p> <ul style="list-style-type: none"> Press to set the air mattress in static therapy mode. 	<p>Max Firm - (5)</p> <ul style="list-style-type: none"> Press to set the air mattress in quick inflation mode, which facilitates nursing and caring. 	<p>Alarm Mute - (6)</p> <ul style="list-style-type: none"> The audible/visible alarm turns on when low pressure, power failure or alternate failure. To mute the audible alarm, press the Alarm Mute button. The visible alarm indicator will flash till problem solved. Re-press the Alarm Mute button to reactivate the alarm.

		
<p>Auto Weight - (7)</p> <ul style="list-style-type: none"> Auto: Press the button, the pump will automatically adjust mattress air pressure to match patient's weight. Manual: Press the button for 2 seconds to select the pressure value manually. 20mmHg-55mmHg is corresponding to eight LED indicators. 	<p>Seat Inflate - (8)</p> <ul style="list-style-type: none"> Press to set the air mattress in seat inflate+alternate or seat inflate+static mode, pressure value will increase by 5mmHg, which facilitates seating. Under max firm mode, keep max pressure of 55mmHg, no more 5mmHg increased. 	<p>Lock Button - (9)</p> <ul style="list-style-type: none"> Auto: it will automatically lock in 5 minutes without operation. Manual: press lock button for 3 seconds to lock the panel, press again for 3 seconds to unlock the panel.



Mattress

The Movii Pump comes with cell type mattress of different materials (Nylon PVC, Nylon TPU or TPU).

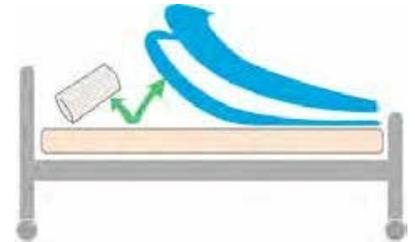
Please refer to the specifications section on page 12 for details.

System Installation

The following describes the procedures for setting up the system for the first time.

Step 1:

Remove all covers, sheets and mattress from the bed.



Step 2:

On a standard bed, remove your existing mattress and place the Movi Comfort C4 Powered Hybrid Mattress on top of bed, printed top cover facing upwards and air hoses towards the base of the bed. Attach to the bed by securing the adjustable straps under each end of your bed. Ensure buckles are securely fastened and straps are pulled tight. On a profiling bed, secure the side straps around the moveable sections of the bed base.



Step 3:

On a profiling bed, secure the side straps around the moveable sections of the bed base. **DO NOT SECURE TO THE SIDE RAILS - STRAPS WILL TEAR OFF.**

Step 4:

Confirm there are no sharp objects in the immediate area which may risk damage to the mattress.

Important:

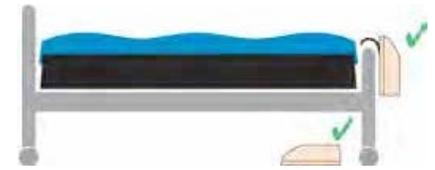
Check that the attachment of the mattress does not interfere with the movement or operation of the bed.



Pump Unit Activation

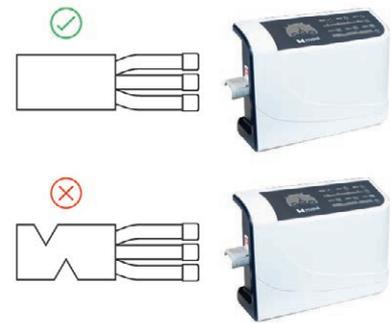
Step 1:

Position Pump Unit by hanging hooks over foot board of the bed or place unit on the floor under the bed.



Step 2:

Attach the air hoses through the use of the quick connector to the Pump Unit. Ensure air hoses do not kink between mattress, bed frame and Pump Unit.

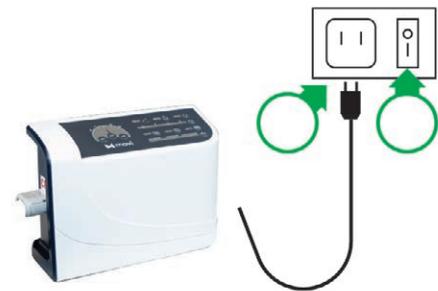


Step 3:

Plug the power cord into an electrical outlet with grounded AC power.

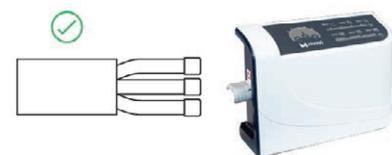
Note:

Before inserting the plug into the outlet, make sure the voltage is compatible. Also make sure this product is well grounded.



Step 4:

Switch the power button on. Allow up to 40 minutes for full inflation.



Step 4:

Lay the patient on the bed and pump will automatically select the appropriate comfort level to match patient's weight.

Perform a "bottom out" test to ensure that patient is properly suspended. Slide your hand under the top cover along a deflated cell in the sacral (bottom) area. Secure sheets loosely enough to ensure they do not interfere with cell alternation.

Operation

NOTE: Always read the operating instructions before use.

General

This product is designed to provide maximum comfort to patients. Ensure that you use this product correctly to maximize its effectiveness and value. Here we provide some general information that you should be aware of.

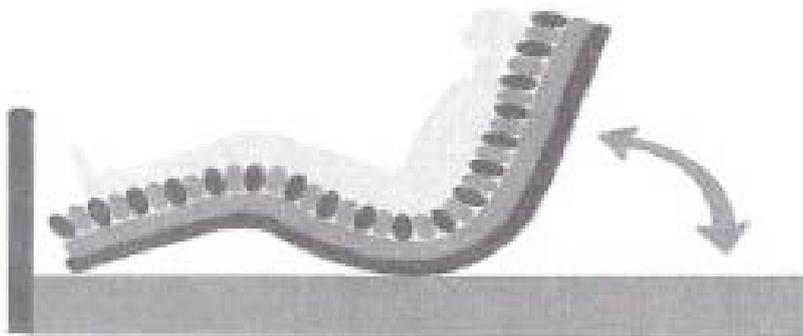
For products:

- » DO NOT use another pump with different specifications unless instructed to do so by your local dealer. It is dangerous to use a pump with pressure capacity greater than 120 mmHg. This may result in cell damage.
- » DO NOT change any component by yourself. If there is need for replacement or repair, always contact your local dealer.

For patients:

When the pressure has been adjusted to a desired level of firmness, the patient can then lie on the mattress.

A firm surface will make it easier for the patient to transfer or reposition. Make use of the static mode function for this feature. To sit a patient up in bed, press the Seat Button to increase the pressure to have better support on sacrum area.



Hand check:

Check if the pressure is properly adjusted by sliding one hand between the air mattress and bed frame to feel the patient's buttock.

Users should be able to feel the space in between, and the acceptable range is approximately 25 to 40 mm (1" to 1-1/2").

Note:

Please follow instructions below for detailed operating procedure of each type.

Step 1	Turn on the power. A beep sound will begin the operation.
Step 2	<p>The pump will enter into static mode when the power is initially turned on. First it will inflate the mattress to 25mmHg and then start weight calculation automatically. During calculation, the 8 LED indicators will flash until the calculation is finished, then mattress will enter alternate mode.</p> <p>Note: The pump will re-start weight calculation automatically every 12 hours.</p> <p>If 10-15mmHg still cannot be reached within 40 minutes, the alarm will beep and its LED will come on.</p> <p>Press the Alarm Mute button to mute the alarm. The alarm LED will continue flashing. Press the Alarm Mute button again to re-enable the audible alarm.</p>
Step 3	<p>The alternating cycle time is set at 10 min. Select from the touch panel to adjust the cycle time.</p> <p>Note: Press the static mode button from the touch panel to provide a firm surface that makes it easier for the patient to transfer or reposition. The static mode can support the patient by keeping the mattress from bottoming out when the patient is in a sitting position.</p>
Step 4	<p>During normal operation, the unit will monitor pressure. If the mattress pressure is lower than the set pressure, the pump will automatically inflate the mattress to the set level and then stop. The alarm will beep and its LED will come on to alert a low pressure condition.</p> <p>Press the Alarm Mute button to mute the alarm. The alarm LED will continue flashing. Press the Alarm Mute button again to re-enable the audible alarm.</p>
Step 5	<p>Press the Max Firm button to automatically inflate the mattress to the maximum level (55mmHg) for about 20 minutes. The pressure will return to a previously set level after 20 minutes.</p> <p>In case there is a bad connection of tubing or any air leakage from the mattress, this will result in a low pressure condition, and it will activate the alarm within 6 mins.</p> <p>Note: For suitable pressure, please refer to page 7 for the hand check procedure.</p>

CPR function

When there is an emergency requirement to perform CPR on the patient, pull the 2 CPR straps at the head section of the mattress to release the air quickly from the mattress.

The CPR straps are located at the front right-hand side of the mattress.

Pressure set up

The pump unit can automatically set the pressure according to patient's weight. Other functions will not work during weight calculation, except the Max Firm. Users can also adjust the pressure level of the air mattress to a desired firmness manually (press the button for 2 seconds).

Note:

It is recommended to press Max Firm on the panel when the mattress is first inflated. The auto weight calculation will start after Max Firm is finished.

Low pressure warning

When abnormal pressure occurs, the Low-Pressure indicator will come on. For some types of pumps, the alarm will be activated to alert of a low pressure condition. Check if the connections are secure and correctly installed according to the relevant instructions.

Note:

If the pressure is consistently low, open the zipper and confirm that all of the hoses are properly connected. Then check for any noticeable leakage in any of the tubes. If necessary, contact your local dealer to replace any damaged tubes or hoses.

Cleaning

In this section, we describe the procedures to clean and decontaminate the pump. It is important to follow these procedures before using the system again.

The cleaning task is required at least once a week to maintain personal hygiene.

Pump Unit

- » DO NOT immerse or soak the pump in any water or fluids.
- » Check for external damage and move the pump to the cleaning area.
- » Place the pump on a work surface and spray or wipe the outside of the case with quaternary ammonium solution.
- » DO NOT spray any cleaning solution directly on the surface of the pump.
- » DO NOT use a Hypocarbonate or Phenolic based cleaning solution as this may cause damage to the case. Allow the solution to incubate for 10 minutes or accordingly as stated by the cleaning product instructions.
- » Wipe case with a clean cloth. Make sure all areas are clean (top and bottom, both sides).
- » Spray cloth with cleaning solution and clean faceplate. DO NOT allow excess cleaning solution on faceplate or control panel. (If solution gets inside, damage will occur.) Allow surface to thoroughly dry after cleaning.
- » After the pump is thoroughly cleaned and dried, proceed to plug in the pump and test to see if it runs normally.
- » Unplug the pump and store with proper identification tag.
- » Avoid long exposure to sunlight.

Mattress

- » Brush off or wipe down all surfaces of the cover sheet with soap and water before wetting with any liquid disinfectant.
- » Any obvious blood spots should be wet thoroughly with 1:9 Hypochlorite solution (1 part bleach to 9 parts water) and allow drying for at least 10 minutes. Then blot with a clean, damp cloth.
- » Unzip the top cover from the mattress.
- » Brush or wipe down all surfaces with soap and water before applying any liquid.
- » Covers are immersed and soaked in disinfectant for the required incubation time.
- » After pre-soaking, the cover is rinsed through a regular cycle in a washer with no soap then laundered with mild detergent (wash temperature 93°F/34°C, rinse temperature 78°F/26°C or on the coldest setting).
- » Covers are aerated until they are fully dry. (Drying temperature range 90-120°F/32-49°C or on the coldest setting.)
- » The air cells are unsnapped from one side and are sprayed on all sides with a disinfectant. Let it sit for the required incubation time and wipe down with a clean cloth. (Make sure to disconnect all the air cells, one by one, and spray the disinfectant on all sides, including all the connecting tubes and hoses. Let it sit for least 10 minutes.)
- » If there is a base after you remove all the air cells, the base has to be sprayed down with the disinfectant, inside and outside. Let it sit for the required incubation time and wipe down with a cloth.
- » Repeat the process with the tubing set: spray, incubate, and then wipe clean.
- » The carrying bag should be turned inside out and completely wiped down using the disinfectant solution. Allow it to thoroughly air dry. Once the inside is dry, turn it back: wipe down the outside of the bag with disinfectant.
- » Dry the mattress on a flat surface area after cleaning, away from exposure to the sun.
- » Avoid long exposure to sunlight.

Environment Requirements

Operating Conditions

- » Ambient temperature: 5°C-40°C
- » Relative humidity: 15%-90%, non-condensing
- » Atmospheric pressure: 700hPa to 1060hPa

Storage and Shipping Conditions

- » Ambient temperature: -25°C-70°C
- » Relative humidity: 10%-90%, non-condensing
- » Atmospheric pressure: 700hPa to 1060hPa

Handling and Storage

- » Lay the mattress out flat and upside down.
- » Roll from the head end towards the foot end; the foot-end strap can then be stretched around the rolled mattress to prevent unrolling.
- » Do not fold, crease or stack the mattress.

Maintenance

General

- » Check the power cord and plug to see if there are abrasions or excessive wear.
- » Check the mattress cover for signs of wear or damage. Ensure the mattress cover and tubes are connected together correctly.
- » Plug in the pump unit and check the airflow from the hose connection port. The airflow should alternate between ports every half-cycle time.
- » Check the air hoses to see if there are any kinks or breaks. For replacement, please contact your local agent or dealer.
- » Make sure the mattress tube is well connected.
- » Check the pump unit and make sure both power indicators are off when the switch is turned off.

Low pressure

Examine if there is any air leakage between the pump and the mattress connections or from the air mattress tubes:

- » Check connectors between the air mattress and pump. If there is any disconnection, please reconnect it.
- » Check the CPR Valves. Ensure their outlets are sealed.
- » Check the air-connecting tubes. Ensure each single cell is not broken.
- » Set the pressure at Max firm. Keep the tubes fully inflated and inspect for air leakage.
- » Check if there is any air leakage from cells. Ensure no leakage occurs. If any leakage occurs, please contact your local agent or dealer.

Warranty

2 years for pump and mattress

Troubleshooting

Problem	Reasons	Maintenance
<p>Mattress fail to inflate or do not inflate completely:</p> <ol style="list-style-type: none"> 1. Pump issue 2. Mattress issue 	<p>Pump issue</p> <ol style="list-style-type: none"> 1. Pump does not work. 	<p>After powered on, check if visible LED light turns on. If not, please check the below issues:</p> <ul style="list-style-type: none"> » Check if power cord is plugged into appropriate voltage AC outlet. » Check if fuse is loose or burned out, make sure it's connected well or replace with new one. » Open the pump and see if wires inside are connected well, make sure they are not loose. » Change lower PCB.
	<ol style="list-style-type: none"> 2. Air pressure from pump is too low. 	<ul style="list-style-type: none"> » Check if air pressure and air flow (100mmHg, 8.0L) are high enough from the compressor, if not then replace with new compressor. » Check if there is air leakage from the exchanger, if yes then replace with new exchanger. » Check if silicone tube inside the pump is connected well.
	<p>Mattress Issue</p> <ol style="list-style-type: none"> 1. Quick connector on mattress does not connect well with pump. 2. Air tube connected to T/L connector and air valve is loose, CPR connector is not capped. 3. One way valve is broken. 4. Air cell is leaking. 	<ol style="list-style-type: none"> 1. Make sure quick connector on mattress is connected well with pump. 2. Make sure T/L connector and air valve is connected well, CPR connector is capped well. 3. Change one way valve. 4. Change air cell.
<p>Mattress has pillow function, but air cell fail to inflate.</p>	<ol style="list-style-type: none"> 1. One way valve is assembled reversely. 	<ol style="list-style-type: none"> 1. Assemble the one way valve in correct direction.
<p>Pump is working but synchronous motor does not work; thus mattress does not alternate, and alternate failure alarm is activated.</p>	<ol style="list-style-type: none"> 1. Synchronous motor is out of order. 2. Wires inside synchronous motor not connect well. 3. Lower PCB is out of order. 	<ol style="list-style-type: none"> 1. Change synchronous motor 2. Make sure wires are connected well. 3. Change the lower PCB.
<p>Pump and motor keep working, but cycle time is incorrect. The alternate failure alarm is activated.</p>	<ol style="list-style-type: none"> 1. Micro switch on the exchanger is out of order. 2. Lower PCB is out of order. 	<ol style="list-style-type: none"> 1. Change the micro switch. 2. Change the lower PCB.

Problem	Reasons	Maintenance
When powered on, compressor stop after working some time; but the exchanger keep rotary.	1. Pressure detector is out of order.	1. Change the lower PCB.
Mattress pressure is low but alarm is not activated.	1. Pressure detector is out of order.	1. Change the lower PCB.
Push button on panel is not operated well, and LED indicator does not light up.	1. Push button is not operated well. 2. LED is out of order.	1. Change the lower PCB.
Mattress pressure is too high or too low.	1. Pressure detector is out of order.	1. Change the lower PCB.
Power failure alarm can't be activated after power failure.	1. Battery is out of order.	1. Change the lower PCB.

Specifications

Technical Specifications

Pump for Hybrid Mattress

Item	Movi Pump
Power supply	220V/50Hz, 1A
Air output	9 liter/min.
Pressure range	10 mmHg - 24 mmHg
Cycle time	10/15/20/25 min.
Case Material	Flame Retardant ABS
Alarm	Low pressure/Power failure/Alternate failure
Size	31cm(L) x 12.5cm(W) x 21cm(H)
Weight	2.5 kg
Max firm mode	Yes
Alternate/Static/Seat inflate/Auto weight mode	Yes

Hybrid Mattress

Item	Movi Comfort c4 Powered Hybrid MattressSingle, King Single
Size	198 (L) x 88 or 105 (W) x 18 (H) (cm)
Top cover	Four-way stretch PU welded cover with zipper
Air cells	TPU, inserted with foam
Base	Dacron with PU coating
Max User Weight	230kg
Quick connector (2 ports)	Yes

Note: The above specifications are also applicable to those areas operating with the same power supply range.

Find the Right Fit for Your Facility

MOVI® surfaces provide a complete solution for pressure care, allowing facilities to match the right surface to the right resident—while preparing for future changes in care needs.

For clinical evaluations, demonstrations or to speak with a specialist

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**MOVI® Comfort in every move.
Support at every stage.**