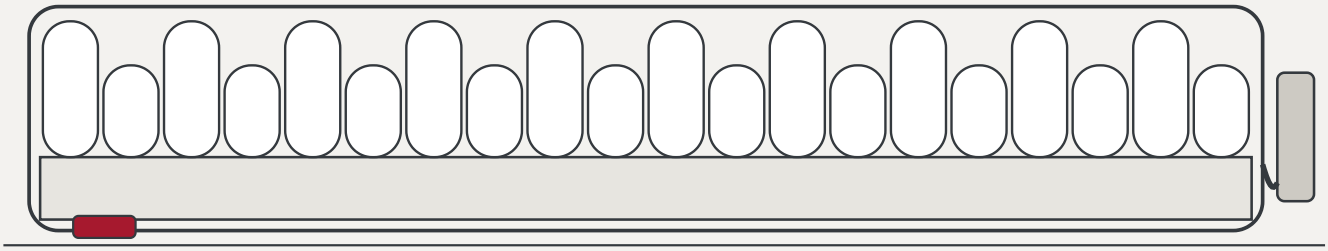
VAN ROON



INSTRUCTIONS FOR USE

VR-A4

Active replacement mattress and pump

VRM-IFU-0A41-EN-GB · Revision E · 16 September 2024

English · United Kingdom and Ireland

ABOUT THIS EDITION

Manufacturer: Van Roon Medische Techniek B.V., Leiden, the Netherlands. UK Responsible Person, importer and distributor: Van Roon Medical UK Ltd, Unit 3, Tarnfield Way, Morley, Leeds LS27 0YT. Service desk 0808 157 0614.

Revision	Date	Changes
D	27 March 2023	Moulded CPR valve label; control from the VR-7 footboard panel.
E	16 September 2024	Pump software 1.9: night setting; low-pressure alarm delay.

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1 Intended use

The VR-A4 is an alternating-pressure replacement mattress intended to prevent and help treat pressure ulcers in adult patients at very high risk, and in patients with existing pressure ulcers up to category 4, in hospitals. It is intended for patients up to 250 kg on VR-series beds and other hospital beds with a platform of 2,000 × 860 to 900 mm.

Users are healthcare professionals trained in its use. Patients must not adjust the pump.

2 Safety information

WARNING

Check the side rail height above the inflated mattress. The VR-A4 is 220 mm deep; on beds other than VR-series beds the side rails may not be high enough.

WARNING

In a cardiac arrest, pull the red CPR valve at the head end. The mattress deflates in under 15 seconds onto its foam base.

WARNING

Do not use the mattress if the cover is torn or if fluid has reached the cells.

CAUTION

Keep sharp objects away from the cover and cells. Do not place the pump on the floor where it can be kicked or run over.

NOTE

Continue to reposition the patient and check the skin as the care plan requires. The mattress does not replace care.

3 Description

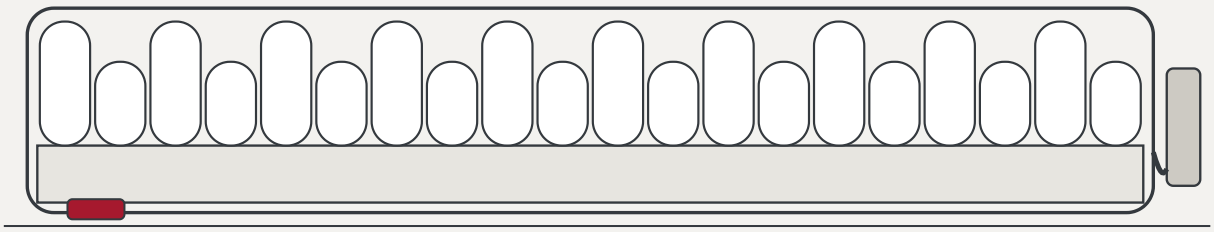


Figure 1. VR-A4 mattress (cells, foam base and cover) with the pump at the foot end

Twenty transverse cells in two sets inflate and deflate in turn. The three head cells stay inflated to support the head. A 50 mm foam base supports the patient if the mattress deflates. The cover is vapour-permeable, two-way stretch, with welded seams.

4 Setting up

1. Remove the existing mattress. Lay the VR-A4 on the platform with the hose at the foot end and fasten the straps to the platform.
2. On a VR-7 or VR-7 XW, connect the hose to the bed's surface connector; the footboard panel shows the surface menu. On other beds, hang the pump on the foot board and connect the hose to the pump.
3. Check the CPR valve is closed: pushed fully in.
4. Switch on. The mattress inflates in about 25 minutes. Do not place the patient on it until the panel or pump shows READY.

5 Using the mattress

Mode	What it does
Alternating	Ten-minute cycle. The normal mode.
Static	All cells at the same pressure, for comfort or procedures.
Firm	Maximum pressure for 30 minutes, for transfers and nursing care. Returns to the previous mode by itself.
Night	Quieter pump operation from 22:00 to 06:00.
Lateral rotation	From the VR-7 footboard panel only. Turns the patient up to 20° each way on a programmed schedule.
Transport	Disconnect the hose and fit the cap: the mattress holds its pressure for up to 12 hours.

Set the comfort level from 1 to 5 to suit the patient. Check that you cannot feel the platform through the mattress under the patient's sacrum (hand check), and increase the level if you can.

6 Alarms

Alarm	Cause	What to do
POWER FAIL	Mains lost	Restore power. The mattress holds pressure for 12 hours.
LOW PRESSURE	Pressure low for 90 seconds; CPR valve open; hose disconnected	Close the CPR valve; check the hose has clicked home.
SERVICE DUE	Planned maintenance date passed	Book planned maintenance.
PUMP FAULT	Internal fault	Use static mode or replace the pump; call the service desk.

7 Cleaning

Clean the cover between patients and when soiled, as described in VRM-DG-0005-UK. Wipe the pump with a damp cloth; do not let liquid enter it. Inspect the inside of the cover at every cleaning.

8 Maintenance

The pump needs planned maintenance every 12 months, including an electrical safety test, a pressure and cycle check, an alarm check and a filter change. Covers and cells should be inspected at the same interval.

9 Technical data

Mattress

Dimensions	2,000 × 880 × 220 mm
Cells	20 transverse cells, 200 mm, in two sets; head cells static
Foam base	50 mm
Cover	Vapour-permeable, two-way stretch, welded seams
Maximum patient weight	250 kg

Pump

Supply	230 V AC, 50 Hz; 32 VA
Cycle	10 minutes
Noise	Under 28 dB(A) in night mode
Alarms	Power failure, low pressure, service due

Regulatory and service

Classification	Medical device, Class I; CE and UKCA marked
Manufacturer	Van Roon Medische Techniek B.V., Leiden, the Netherlands
Planned maintenance	Pump every 12 months; cover inspected at each cleaning

10 Electromagnetic compatibility

Electromagnetic emissions

Emissions test	Compliance	Guidance
RF emissions, CISPR 11	Group 1	The pump uses RF energy only for its internal function. Its RF emissions are very low and are not likely to cause interference in nearby electronic equipment.
RF emissions, CISPR 11	Class A	Suitable for use in hospitals. It may not offer adequate protection to radio-frequency communication services in a residential environment.
Harmonic emissions, IEC 61000-3-2	Class A	Suitable for connection to the public low-voltage supply in buildings used for healthcare.
Voltage fluctuations and flicker, IEC 61000-3-3	Complies	

Electromagnetic immunity

Immunity test	Test level	Compliance level
Electrostatic discharge, IEC 61000-4-2	±8 kV contact; ±2, ±4, ±8, ±15 kV air	As test level
Electrical fast transients, IEC 61000-4-4	±2 kV power lines; ±1 kV signal lines, 100 kHz	As test level
Surge, IEC 61000-4-5	±0.5, ±1 kV line to line; ±0.5, ±1, ±2 kV line to earth	As test level
Voltage dips, IEC 61000-4-11	0% U_T for 0.5 cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°; 0% U_T for 1 cycle; 70% U_T for 25 cycles	As test level. The pump continues on battery during dips.
Voltage interruptions, IEC 61000-4-11	0% U_T for 250 cycles	As test level
Power frequency magnetic field, IEC 61000-4-8	30 A/m, 50 Hz	As test level
Conducted RF, IEC 61000-4-6	3 V, 0.15 to 80 MHz; 6 V in ISM and amateur bands	As test level
Radiated RF, IEC 61000-4-3	3 V/m, 80 MHz to 2.7 GHz, 80% AM at 1 kHz	As test level
Proximity fields from RF wireless equipment, IEC 61000-4-3	9 to 28 V/m at the frequencies listed in the standard	As test level

WARNING

Portable RF communications equipment, including antennas and mobile phones, should be used no closer than 30 cm to any part of the pump, including cables. Otherwise its performance could be degraded.

WARNING

Do not use the pump next to or stacked with other equipment. If this cannot be avoided, observe both to check that they work normally.

11 Disposal and contact

Dispose of the pump as waste electrical and electronic equipment; Van Roon Medical UK will collect it. The mattress can be disposed of as clinical or general waste after decontamination, as local rules require.

Van Roon Medical UK Ltd, Unit 3, Tarnfield Way, Morley, Leeds LS27 0YT. Service desk 0808 157 0614; from Ireland +44 113 496 0391; service@vanroon.uk.

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