



User Manual soft air[®] plus wds

Art. No. 110 401-wds

Pressure ulcer prevention and treatment-system
Assembly and Operation instructions



pressure relief products

Health. Safety. Independence.

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Foreword

Dear client!

You are now holding the user manual of the **soft air® plus wds** therapeutic support system of **ADL® GmbH**.

The **soft air® plus wds** system is a system for Pressure Ulcers prevention and treatment, produced by **ADL® GmbH**, Germany.

There is a choice of using the system in the static position or alternating pressure. The **soft air® plus wds** large cell system has been developed for pressure ulcer prevention and treatment up to Very High Risk (Stage 4; EPUAP).

With the writing of this user manual the product management of the **ADL® GmbH** has set itself the goal, to create a good and understandable aid and guidance for the employment of the system. If nevertheless questions remain, please ask your provider for direction and assistance.

Your

The logo for ADL GmbH, featuring the letters 'ADL' in a stylized, bold, sans-serif font. The 'A' and 'D' are connected, and the 'L' is a simple vertical bar. A registered trademark symbol (®) is located at the top right of the 'L'. The text 'GmbH' is positioned to the right of the logo.

1 Safety instructions



The system may not be used in presence of open flames, heaters a.o's. Protect the equipment against humidity. Operate it only in dry areas. No combustible gases or liquids may enter into the system.

EXPLOSION DANGER!

Warning! Note! The compressor is under power, as soon as the power supply plug is put in. Before opening the housing of the compressor please unplug the power plug. Repairs must be performed only by qualified technical personnel. The compressor may only be used for its purpose. In case of damage to the compressor the power supply plug must be unplugged immediately. Damaged power supply cord should be replaced immediately. Only room temperatures of 0 - 35 °C provide assurance to good compressor operation.

Do not remove (except for repairs) any cells from the system.

When applicable, batteries and acumulators should be disposed on a proper way. These materials are not suitable to be disposed with normal (house)garbage!

2 Product overview soft air® plus wds

Quantity	Description	Article-No.
1	Base with 19 cell fixations and 3 fixation straps	110 505-FO
19	Cells, individually removable	110 511-FO
1	5 cm foam mattress insert	500 704-Bantou
1	Elastic, breathable, washable polyurethane cover	110 501-FO
1	soft air® plus wds, power unit	110 411-WDS-FO
1	Service manual	999 190
1	User manual soft air® plus wds	112 004-FO-GB

3 Introduction

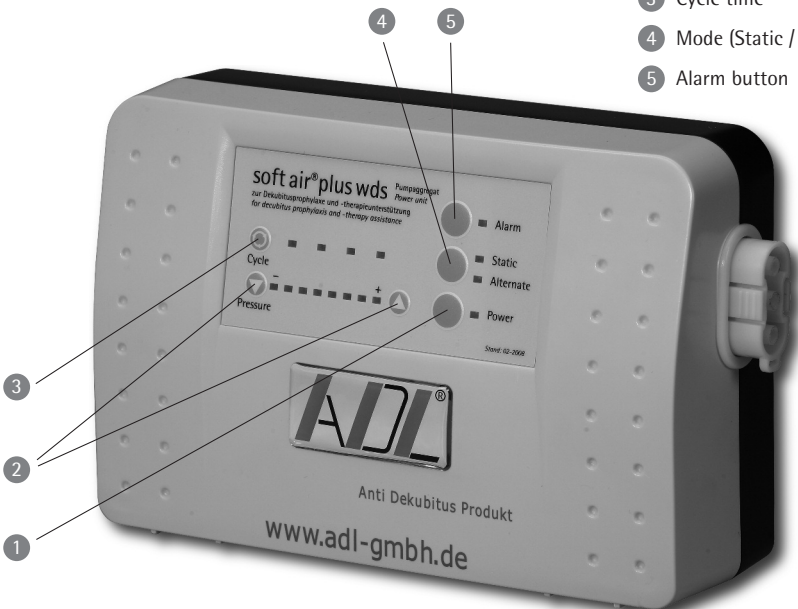
The **soft air® plus wds** is a mattress replacement system, thus there is no need off an additional mattress.

This system is suitable for patients with a body weight of 40 to 130 kg. Please note that these weight indications are applicable for patients in a lying position. Other positions will result in another distribution of weight.

The **soft air® plus wds** is a dynamic three chamber pressure relief system (ABC-System) with a cycle time which can be set between 5 to 20 minutes. Cells for the headposition are integrated in the dynamic cycle.

4 Explanation of indications and functions

- 1 On / off switch
- 2 Pressure setting
 - ▲ higher
 - ▼ lower
- 3 Cycle time
- 4 Mode (Static / Alternating)
- 5 Alarm button

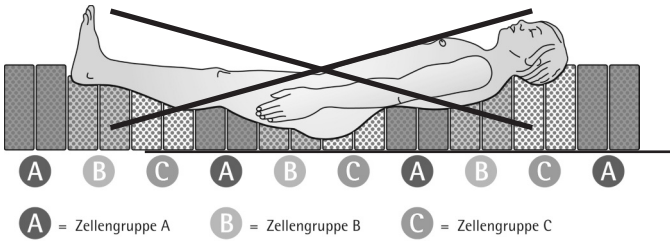


5 System installation

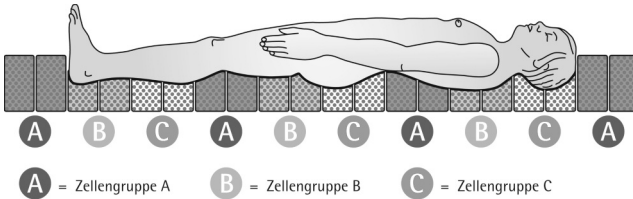
- ①. Remove the existing nursing mattress.
- ②. Put the **large cell mattress** on the bed base frame and fix the fixation straps to the bed. **Note!** to the "up and down" moving parts of the bed!
- ③. Place the mattress in such a way that the tubing's are located at the foot end of the bed.
- ④. Verify the **CPR valve is closed (Cardio Pulmonary Resuscitation)**.
- ⑤. Before hanging the power unit at the foot end of the bed you have to mount the brackets at the back of the power unit. Slide the brackets from below up into the fixation slot.
- ⑥. Connect the tubes to the power unit by connecting the tube connectors. Check with a short pull at the tube if the connector is rightly adjusted.
- ⑦. Check if the tubes are not bent or clamped between other parts.

6 Setting up soft air® plus wds

- ① Hang the power unit at the foot end of the bed or put it under the bed.
Please note that the power unit should not be covered in any way, as thermal damage can occur!
- ② Connect the tubes to the power unit by connecting the tube connectors.
Check with a short pull at the tube if the connector is rightly adjusted.
Please check rubber O-rings on regular intervals!
- ③ Check if the tubes are not bent or clamped between other parts.
- ④ Put the power supply plug in.
Switch on the power unit with on / off switch ①.
- ⑤ The alarm light ⑤ is blinking and the system will start to be filled with air.
The alarm light is put out of circuit when inflation of the mattress is completed.
Depending on if it is switched on, an acoustic signal sounds. This can be switched off and on with the alarm button ⑤.
In 40-45 minutes the filling cycle for soft air® plus wds will be completed.
The alarm light should be put out of circuit when the patient is laying on the mattress. Below a beforehand set pressure level, the alarm light is blinking again.
- ⑥ The most effective pressure level can be set with the pressure setting button.
The scale is divided into 8 parts. After switching on the power unit, the pressure is set in the middle part of the scale, around 40 mbar. Pressure can be lowered by repeated pressing on the button down to around 10 mbar. By repeated pressing on the right button a maximum pressure of 80 mbar can be set.
It is imperative to check the pre-adjustment with a "hand check". Try to move your hand under the knee-joint, the lumbar and neck lordosis in order to check if supporting material is present. When the patient sinks to far in the mattress the so called Hammock-effect occurs. This should be prevented at all times.
- ⑦ When pressure is too high there will be a lack of supporting material underneath the lordosis area's of the body. The situation can be improved by deflating the mattress by (repeatedly) pressing the left button. When pressure is too low (hammock effect), (repeatedly) press the right button.
Each time when changing pressure level you have to wait minimal 5 to maximum 20 minutes before checking the contact area again.



„Hammock effect“
(is to avoid)
High extended
pressure in the
sacral area



Optimum surface
(Supporting material
under the knee-
and lordosis of neck
and lumbar)

7 wds-function

In case of a contra indication for alternating pressure according to the indications overview, the large cell mattress can be switched from alternating pressure to static pressure with the wds switch at the power unit. Adjustment to maximum comfort in this mode can be achieved the same way as before.

As in static mode all cells are active, it is necessary to reduce the set pressure with about 10 – 20 mbar (1 – 2 steps on the scale).

To switch over to static function, press button ④. The light will change from blue to green (static).

Don't forget to increase the pressure when switching over to alternating pressure.

8 CPR-function (Cardio Pulmonary Resuscitation)

The CPR strap is located at the top right site of the mattress indicated with a red tag.

In an emergency situation the mattress is quickly deflated by pulling the CPR tag. Within 30 – 60 seconds the patient will sink to the stable part of the mattress.

9 Fehlersuche

Problem	Cause	Solution
Mattress does not inflate or inflates insufficiently.	Connectors are not accurately locked. Tubes are twisted or kinked.	Check connection and position of the tubes.
The power unit does not operate (blue light at on-switch is not illuminated).	No power available. Plug defect, power cord defect, safety fuse defect.	Check plug and power cord partition socket. Check the safety fuse at the location where the power cord enters the power unit.
Red alarm light is illuminated an acoustic signal sounds.	Connectors are not accurately locked. Air cell defect. Tubing defect. CPR valve open.	Check cells and tubes. Check CPR valve.
The patient sinks too deep into the mattress.	Air cell defect. Tubing defect. Pressure not correctly set.	Check cells and tubing connections. Check pressure setting.

10 Cleaning instructions · Service

- During use the mattress and tubes should be cleaned weekly using a damp soft cloth and mild detergent or non-phenol germicidal solution.

Never use any detergents containing aldehyde!

- After changing to another patient the mattress should be disinfected by an accredited company approved by the **Robert-Koch-Institute**. Please ensure conformity to the European guideline for medical devices, directions for preparation of medicine products and directions for hospital hygiene and prevention of infections from the **Robert-Koch-Institute** or other guidelines they rule.
- The PU cover can be washed to a maximum temperature of **95 °C** and be re-used after a thermal process (e.g. Ottalin - Peracet - process).
Also a steam sterilisation process can be applied.
The power unit of the **soft air® plus wds** system, should be cleaned with a damp cloth and soap detergent or a mild non-aldehyde cleaning detergent.
- Disinfection with cleaning on location is also possible, when instructions for use and process time are properly kept.
- **ADL® GmbH** prescribes safety-related revisals of all electric powered parts after at least 2 years.
The rules for accident prevention BGV A2 will remain unaffected.
The revisals may only be conducted by especially trained personal.

Disinfectant recommendations:

BACILLOCID RASANT (BODE), BACILLOL AF (BODE), BACILLOCID SPEZIAL (BODE), KOHRSOLIN FF (BODE), KOHRSOLIN (BODE), MICROBAC FORTE (BODE), DISMOZON PUR (BODE), INCIDIN FOAM (ECOLAB), INDUR DES (ECOLAB).

Check with your supplier the disinfectant does not damage plastic surfaces (PUR, PA, ABS, PVC).

Prevent contact on electrical components with damp or moisture.

Cleaning cloths should be damp, not wet.

Carefully check no **moisture** remains in the system.

Execute a **functions control** procedure before using the system again.

Check your cleaning process on **effectiveness** on a regular basis.

11 Indications · Contra indications

	Indications	Contra indikations
Alternating pressure	Pressure ulcers up to Very High Risk (Stage 4 (EPUAP). Large surface wounds. Plastic surgery.	Spastiken, Spastics e.g. situation according to Apoplex. Pain patients, e.g. patients with osteoporosis, bone cancer, instable fractures. Neurological problems.
Static pressure	Pressure ulcers up to Very High Risk (Stage 4 (EPUAP). Large surface wounds. Plastic surgery. Spastics, e.g. condition after Apoplex, Pain patients, e.g. patients with osteoporosis, neurological patients.	Instable fractures. Neurological problems.

12 Technical data

	Mattress	Power unit	Mattress insert
Material		ABS	PU foam
Dimensions (cm)	200 x 90 x 21,5	23 x 15 x 8,5	200 x 90 x 5
Weight (kg)	8,1	1,5	~ 2,0
Warranty	2 years	2 years	2 years
Electr. Connections	-	230 V/7 W	-
Fuse	-	230 V/500 mA (slow)	-
Cover	Polyurethane, washable to 95 °C, can be used in dryer		
Application	Pressure Ulcer prevention and treatment up to Very High Risk (Stage 4; EPUAP), patient weights between 40 kg-130 kg		

In case of technical problems please contact your appointed dealer or direct ADL® GmbH.

(Dealer stamp)

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