

Multiject

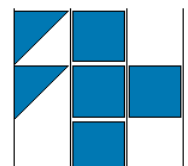
Hygienic Beds



Description

Operating Instructions

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Most valuable Customer,

let us express our special thanks to you for your confidence in our highly innovative product.

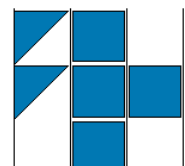
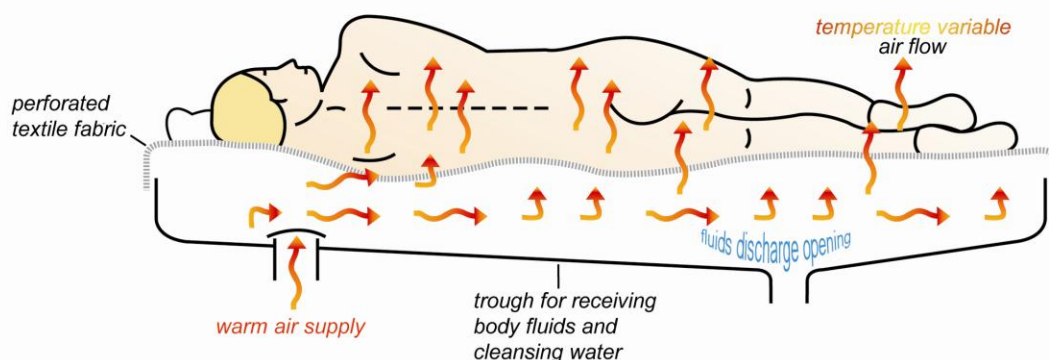
You have purchased a product that meets high medical and qualitative standards. It fulfils the basic requirements according to DIN EN 1970's App. I of 11DD 93/42/EWG, EN 60601-1+A1+A2 and EN 60601-1-2-38.

These Operating Instructions are part of the product and contain important startup and general information. Please read it carefully before commissioning, and contact our technical helpdesk with questions that might arise. In case of sharing this product with third parties, please, make sure that these operating instructions are passed, too. The operating instructions should be stored in a manner that makes them quickly accessible.

Due to the multifunctionality of the product we strongly suggest instructions held by qualified health personnel prior to deployment of certain medical applications.

Technical modifications of the product may not be made. Neglect may affect the product's performance thus resulting in a possible exclusion of product liability by the Multiject GmbH.

Warranty and guarantee will be granted in the context of legal provisions in the particular country of delivery.



3 Product Description

The Multiject system is a mattress-free patient positioning with the patient lying on an elastic fabric, permeable to both air and fluids, and washable in any common household washing machine with temperatures up to 95°C.

The included mobile shower unit makes washing or showering the patient in the bed possible. The waste water flows over a collection basin placed under the lying surface into a mobile tank.

An adjustable airflow temperature assures a comfortable lying climate.

All of the lying surface can be raised progressively from horizontal to nearly vertical position with a handheld electronic control. You can apply safety belts for immobilization of the patient.

The idea behind this lying surface implies no mattress to avoid molds, mites, and germs among others.

3.1 Fields of Application

Wash and shower the patient without moving the patient.

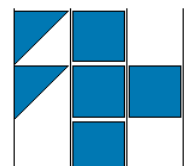
Bring the patient to the required vertical position with only little personnel deployment.

Decubitus prophylaxis, or moist decubitus treatment if necessary, are supported by controlled temperature regulated air supply from underneath the lying surface.

Support treatment options which require regulated heat supply.

Increase hospital's hygienic conditions.

Use the bed with frequently changing users of the bed, as in hostels for the homeless or the like.





In case of damages resulting from non-compliance with these Operating Instructions the warranty is no longer valid! The Multiject GmbH does not take any liability for consequential damages.

The Multiject Nursing Bed is not suitable for persons under the age of 12.

This device may only be supplied with 230 Volts alternating current. The electric circuit supplying the used socket is to be protected with at least 10 Amperes.

The mains plug may never be disconnected by pulling on the cable.

Repairs to the appliance, especially the technical installations, of the nursing bed may only be carried out by qualified personnel!

This product's electrical equipments are splash proof, according to IP44, IPXO resp. Therefore the intended use of the mobile shower unit is not associated with any danger. Nevertheless the electric equipments should not be exposed to the spray of the shower directly.

Please remove other electrical devices, such as radios, etc., from the closest range of the product before use of the mobile shower unit.

To avoid danger of slipping let no water drip on the floor.

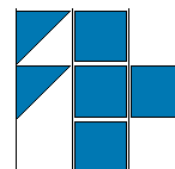
For transport the brakes of the bed may be released. For any other purposes the brakes have to be locked.

The guide rails are intended for securing the patient not for immobilization.

Disconnect the bed from current supply before cleaning or maintaining.

Make sure that electric supply is disconnected from the electric circuit before moving the bed. The power cable or any component of the electric equipments might be damaged when used inappropriately.

Never use the product close to flammable gases or vapours.



You need to activate or deactivate the various functions of the nursing bed as required.

Personal injuries might occur with unlocked wheel brakes in case of lying down or leaving the bed.

Do not expose the nursing bed to extreme climate conditions. Material damages might be encountered. The acceptable temperatures range from -40°C to $+80^{\circ}\text{C}$.

Before moving the bed bring the lying surface to horizontal position and make sure the frequented surface's lateral slope is less than 5° .

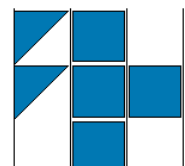
Aggressive detergents, solvents, and washing agents may damage the product.

In no case may the bed be treated with a steam blaster or pressure washer.

Disinfectants or germicides used shall be diluted according to the instructions given by the manufacturer of the product.

The application of mattresses is not intended. Therefore no mattresses shall be applied to the bed.

Any disregard for safety regulations may cause personal or material damage.



5.1 Operation Readiness

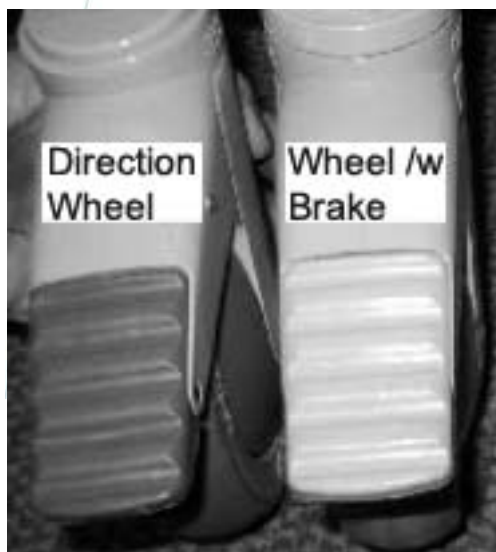


Figure 5-1

The Multiject bed has to be fixed at the place of destination. For Fixation of the nursing bed three of the four wheels have a break which can be fixed by pressing with the foot.

You recognize the wheels with breaks by the light coloured locking levers. (the wheel with the dark locking lever is a directionwheel) (cf. Fig. 5-1).

If needed, the wheels can be released by bringing the locking lever into a horizontal position.

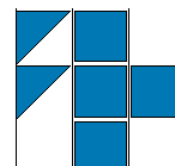
5.2 Moving the Nursing Bed



Figure 5-2

Situated by the head of the bed on the left you find the directionwheel with dark locker level. Fix it pressing with the foot (cf. Fig. 5-2). With the directionwheel fixed the bed can be moved by one person without the risk of drifting out of track.

By bringing the lever into horizontal position you release the fixation in longitudinal direction.



Fabric

Attaching the Fabric

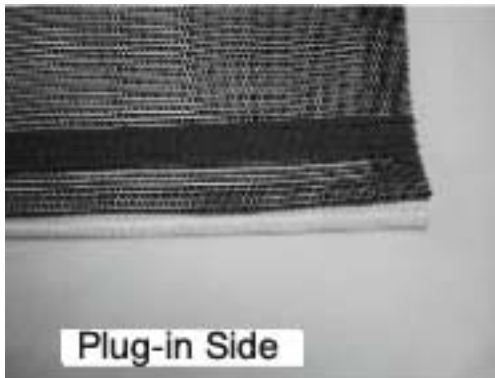


Figure 5-3

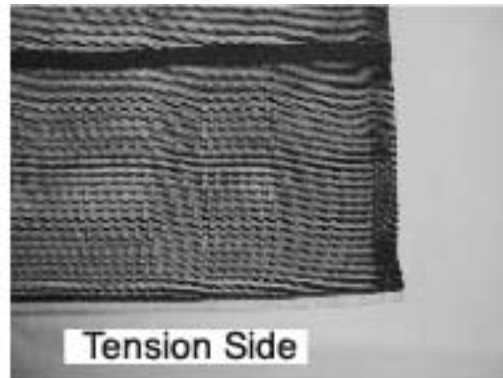


Figure 5-4

The fabric is equipped with a piper by each long side to attach it.

Before attaching the fibre the guide rails are to be fixed in the upper position. Watch out that the fabric is correctly positioned. Along the pipers by the ends of the long side a velcro with different sizes of spacing toward the edge is attached (cf. Fig. 5-3 and Fig. 5-4).

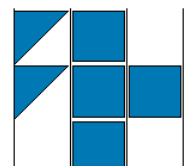


Figure 5-5



Figure 5-6

At the head end of the bed is a round piper (cf. Fig. 5-5), through which the fabric with the plug-in side (here the velcro is close to the rim) and the velcro will be inserted inwards into the guidance provided (cf. Fig. 5-6).



5 Instructions for Use



Figure 5-7



Figure 5-8

After inserting the piper (cf. Fig. 5-7) the fabric will be pushed up to the blue marking (approx. 70 cm before the foot-end of the nursing bed – cf. Fig. 5-8). Then it will be pulled through under the guide rail (cf. Fig. 5-9) to the other side of the nursing bed, where the fabric in turn will be pulled through under the guide rail (cf. Fig. 5-10) and down to the tension spindle. The tension spindle itself shall be positioned by means of the crank by the head end of the nursing bed in that way that the notch for intake of the piper points outward (viewed from the foot-end in 3 o'clock position – cf. Fig. 5-11).



Figure 5-9



Figure 5-10



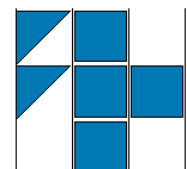
Figure 5-11

At the blue marking the notch is widened to approx. five cm in length to intake the piper here. First insert the lower end and pull it up to the foot-end. Then insert the piper from the upper end and pull down to the head-end.

Now the fabric can easily be tensioned with the crank turned in direction of the arrow “spannen” (“tension”). The fabric should be smoothed down from end to end of the nursing bed now. After the smoothing the fabric will be tensioned firmly for good (you need to apply a force of approx. 20 kg).

After tensioning the handle of the crank can be collapsed.

Now the bed is prepared for the patient.



The fabric consists of a biocompatible material. Should a patient be irritated because of the lack of a mattress the included sheet can provide the used bed feeling (cf. 5.3.3 Sheet with Velcro-Fastener).

Fabric

Removing the Fabric

To remove the fabric first expand the crank's handle, and release the lock of the crank by which the fabric has been tensioned, with the crank turned with a force of approx. 20 kg in arrow direction "lösen" (release). After half a turn in free speed the tension spindle starts spinning thus releasing the fabric. The tension spindle is to be turned that far that the notch with the piper of the fabric inserted points outwards (viewed from the foot-end in 3 o'clock position), and the notch is freely accessible to pull out the piper.

Beginning at the blue marking you pull out the piper starting at the head-end side. With the piper released from the head-end side you pull out the piper beginning at the foot-end side for half the length. You then turn to the head-end on the left side of the bed and pull out halfway the piper of the plug-in side backwards through the notch in the head-end (cf. Fig. 5-7). Now you can release the piper on the tension side fully and then pull out the piper on the plug-in side totally.



Never use the crank for tensioning and releasing the fabric with someone lying in the bed.

Fabric

Sheet with Velcro-Fastener

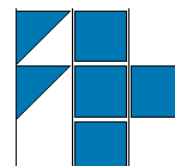


Figure 5-12

The spread fabric has a velcro at both sides of the bed (cf. Fig. 5-12) to attach the included sheet to it.

You will need the sheet only in exceptional cases, f.i. to give the patient the used bed feeling during the phase of settling in, if a mattress is missed.

Firstly the sheet can be spread like on common beds. Afterwards align the velcro-fasteners on the fabric with those on the sheet so that you can attach and stretch the sheet from one side (head- or foot end) to the other.



Air-Conditioning



Figure 5-13

The bed is equipped with a fan heater (Type CZ 502 E, cf. Fig. 5-13). The fan heater can be used as ventilation, or together with the heating, which can be adjusted in 1° steps between 20°C to 50°C.

The fan heater may be used in following situations:

- △ create a comfortable bed-climate
- △ dry the patient after the shower in bed
- △ use in therapeutic measures which require a determined temperature or temperature range.



Figure 5-14

The fan heater CZ 502 E is placed so that an accidental splash of water during or after showering the patient is prevented. A sophisticated pipe system at the air outlet (cf. Fig. 5-14) prevents shower water from getting into the fan heater. However, the shower should never be held directly over the fan heater situated underneath the bed.

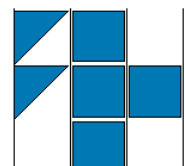
Turning on the fan heater and setting the temperature is controlled with a control unit. Pressing the button "ON" turns on the fan heater, the button "OFF" turns it off.

With the fan heater turned on the temperature of the air flow can be regulated with the push buttons "+" and "-" in 1° steps between 20°C and 50°C. The chosen temperature is displayed in a two-digit display. The display will show "0" when only the fan is running and supplying an air-flow at room temperature.

The fan heater CZ 502 E comes with a protection circuit to prevent overheating. Should this occur the fan heater shall be turned off to let it cool down. Some ten to 15 minutes later the device can be turned on again.



Figure 5-15



Raising the Lying Surface



Figure 5-16

Using the pivot hinge the control motor can raise the lying surface up to an inclination of approx. 80° into a nearly vertical position.

Before raising the lying surface clear the tray at the foot-end. The tray serves mainly to provide a secure stand of the lying surface in upright position.

The control motor is handled by a manual control (cf. Fig. 5-16) with integrated blocking function (protection class IP 66) and a control unit (protection class IP 44).

With drawing the magnet key in arrow direction you can lock or unlock the raising function (cf. Fig. 5-16). In unlocked mode a green control lamp lights aside the lock symbol up to 45° inclination, after repeated release (45° to approx. 80°) a yellow lamp.

Moved into nearly vertical position the patient can leave the bed without bending or twisting of the spine with only little help from the personnel using the foot-end as standing board.

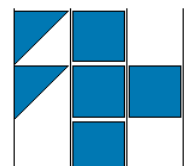
The motor for the adjustable inclination is maintenance-free.



When lowering the lying surface make sure that you do not get into the area of the supports. Danger of violent pressure within reach!

It is important to notify that a safety belt or a control cable will not reach into the area of supports where it could be clamped between support and lowering lying surface.

Children or infirm persons shall not use the adjustment device.



Protecting the Patient

Mounting for Safety Belts



Figure 5-17

You can fix a patient with a safety belt (which is not included as safety belts need to be patient-oriented suited). With it you gain stability even in upright position. All over the lying surface may be used several safety belts. Therefore a fixing slot is attached underneath the outer frame in the bed's entire length (cf. Fig. 5-17). Additional fastening devices (star knobs) can be ordered as accessory.

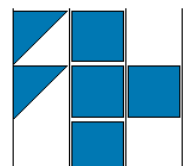
Protecting the Patient

Safety Grating



Figure 5-18

The safety grating left and right to the lying surface can be brought into safety position using the permanently mounted guide rails. You can release the grating with the unlocking (cf. Fig. 5-18) positioned in the middle of the lower grating.



Mobile Shower Multiselect-SK



The mobile shower unit Multiselect-SK (cf. Fig. 5-19) comes with the Multiselect nursing bed.

The service case of the mobile shower unit carries the shower hose with shower head and cable connection 24 V.

Fill the fresh water tank with tempered water and close the rotary lock of the fresh water tank tightly, use the cover key if necessary.

Now you can roll the mobile shower unit to the Multiselect nursing bed.

Take the shower hose with the shower head and the 24 Volts plug connection out of the service case (cf. Fig. 5-20).

The shower is ready for use after connecting the plug connection to the 24 Volts plug on the left side of the Multiselect nursing bed.

You may not point the water spray of the mobile shower unit Multiselect-SK at the fan heater directly.

While using the shower no electric apparatus shall be in reach of the nursing bed.

Make sure that the drain pipe of the collection basin of the Multiselect nursing bed points directly into the opening of the mobile tank with the lid of it open.

Empty the mobile tank before showering to avoid an overflow of showering water.

Figure 5-19

Spray only over the lying surface so that the water can flow through the fabric into the collection basin.

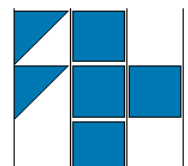


To avoid danger of slipping let no water drip on the floor.

Disconnect the 24 V plug after showering so that no free speed can damage the water pump.



Figure 5-20



Water Collection and Drainage

You can wash or shower the patient in the Multiject nursing bed without any problems as often as the patient likes. Water as well as body fluids pour through the fabric into the basin and through the drain into the mobile tank.

The mobile tank is placed on a fixed drawer and suited with an opening and two outlets.

Regularly empty the mobile tank, especially after each showering. Pull out the drawer on which the mobile tank is positioned at the foot-end of the bed to take it out. Close the lid and roll the tank to empty it in your shower for example.

To unscrew the caps of the two outlets bring the tank into a horizontal position (lie flat on the floor). You can put down the caps on the cap holders. To drain lift the tank at the carrying handle into an upright position. Close both outlets after draining.

After you brought the tank back to the drawer unscrew the lid of the opening before you push the tank until stop into the final position under the bed.

Maintenance and Cleaning

You can wash the fabric in a washing machine with temperatures up to 95°C.

The fabric can be treated with every standard cleaning and disinfecting agent.

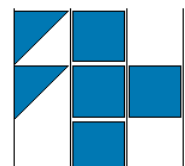
With the fabric removed the basin and the framework can be cleaned with standard cleaning or disinfecting agent.

You may not use a steam blaster or pressure washer.

Clean the mobile tank regularly to prevent impurities, odours, and bacterial development. You can pour an additive into the waste water. We recommend among others the product Micropur-Classic, skin compatible and tasteless (available on the market).

The use of additives is dependant on the recommendations of its facturers.

The fan heater CZ 502 E shall only be cleaned with a dry cloth - **do not use water** and make sure that the fan heater is turned off.



Nursing / Hospital bed	: Cl. I
Type	: Multiselect
Serial Number	:
Date of Manufacture	: } refer to the type plate
Production Number	:
Safe Workload	: 135 kg
Lying Surface	: 200 x 90 cm
Outer Dimensions	: 220 x 96 cm
Lying Height	: 77 cm
Lying Surface	: from the horizontal to the vertical motorized adjustable

Control Motor

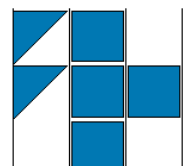
Type of Drive	: individual drive
Protection Class	: 1
Degree of Protection	: IP 44
Motor Voltage	: 24 V DC
Operating Mode	: intermittent duty <u>2/18 min.</u>
Load Type	: compression/tension
Lift	: up to 425 mm
Adjustment Load	: 6,000 N max.
Emergency Adjustment	: by rechargeable battery
Adjustment Speed	: up to 8 mm/sec
Maintenance	: maintenance-free

Fan Heater CZ 502 E (CE-proof)

Control Degree of Protection : IP 44 / 12 V

Mobile Shower Unit Multiselect-SK

Max. Filling Quantity	: 24 litres
Submersible Pump Installed	: 24 V / 25 - 30 W
Output	: 18 l/min
Pressure	: 1 bar
Length of shower hose	: approx. 1,65 m
Length of 24 V Spiral Cable	: approx. 3 m



Multiject Fabric

Multiject Fitted Sheet

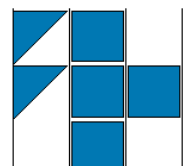
Fan Heater CZ 502 E

Mobile Shower Unit Multiject SK

Safety Grating (pair) Multiject BE

Star Knob (pair) for Attachment of Safety Belts and Tools

Micro-pur-Classic (cleaning agent)



Produced by Multilect GmbH
Kortenkamp 5
D-48291 Telgte
Fon: +49-25 04-98 03 73
Fax: +49-25 04-98 03 50
E-Mail: info@multilect.de

Distributed by FEH GmbH
Medical Technical Products
D-48462 Rheine
Am Stadtwalde 15
Fon: +49-59 71-98 56 63
Fax: +49-59 71-87 000
E-Mail: Zentrale@feh-med.de

Multiject

Hygienic Beds

