



OPERATION INSTRUCTION POSITIONING SYSTEM

Order.-Nr. 10300 + 11300 + 13350





THE PRINCIPLE VAKUFORM

VAKUFORM products incorporate a unique combination of vacuum technology and highly flexible, biocompatible neoprene material making it possible to adjust the support for optimum positioning with smooth, flowing curves, even for extreme postural asymmetry. Initially air is added to support to allow an accurate accommodation of the user's posture. After vacuuming, a strong cushion shape is created, which is a perfect negative image of the body shape. The adjustment of the cushion to the anatomic surface of the human body changes the ratio between weight and surface area and reduces the pressure load. In this way an optimum distribution of pressure is achieved. In the vacuumed state the support creates a strong seat, which can be reshaped to suit postural changes quickly and easily, without drastic alterations.

In case of suspected or existing decubitus and pressure problems, endangered parts of the body can be protected, by pushing the cushion in the respective areas with the fingers. This leads to additional relief or pressure. In contrast to conventional adjustable methods of inflexible materials, the highly flexible **VAKUFORM** products guarantee consistent, fast and problem-free adjustments of support to be altered to suit positional or anatomic changes. The 3,5 mm neoprene skin has the advantage of feeling like upholstery, even when the vacuum is produced, increasing comfort and reducing pressure.

MATERIAL

Each **VAKUFORM** product consists of a filling of extremely fine polystyrene grains, enclosed in a 3,5 mm eudermic nylon-jersey coated neoprene. The product cover and the lining are manufactured from elastic spacer fabric material that provides an optimum microclimate. The entire product can be disinfected.

PRODUCTION

We are manufacturing our products in our own workshop. Especially during the making of special design this enables us to be responsive to the customer's most individual requests. Our main task is to manufacture the ideal aid for you exactly according to your guidelines or detailed discussion of the required supply. Sometimes even new products might arise. We are firmly convinced that in the use of air and vacuum technique in combination with synthetic foil and neoprene lies an enormous potential to solve the challenges in rehabilitation and orthopaedic technique. On this matter we look forward to each new challenge.

Our products have been used in Europe in a variety of formats:

- Complete seating systems
- Partial solutions i.e. back support or cushion systems
- Sleeping/lying positioning systems
- Smaller solutions, such as headrests and arm/leg supports



FIELDS OF APPLICATION

VAKUFORM products have been used successfully in hospitals, institutions for disabled people, therapeutic centres, geriatric institutes and at home, providing the prescriber a new level of flexibility within their provision, whilst ensuring that the requirements of the user are met promptly and without compromise.

- Cerebral Palsy with heavy motor retardation:
As a moulded seat upholstery partial or for complete body protection, for realigning and supportive systems.
- Tetra Spastic with ataxic or athetoid pattern: For abduction positioning.
- Spastic and Slacking Paralysis of different geneses, e.g. transverse spinal cord syndrome or post apoplexy:
Postural support and pressure relieve.
- Tetra Spastics: Postural support and pressure relieve.
- Hemi- and Paraplegia in geriatric fields: Postural support and pressure relieve.
- Degenerative processes of spina column:
Scoliosis and Torsions – for a flexible, body closer support in torso area.
Spina Bifida – pressure relieve in the respective area.
- Muscle Atrophy and Dystrophy: To enable flexible and quick changeable adjustments.
- Osteogenesis Imperfecta (brittle bones): To increase protection.
- Decubitus prophylaxis and therapy: Pressure relieve in case of long term provision.
- Pre & post surgery especially in neurological fields: For stable and safe protection.
- Physical conditions that require anatomical support: For seating made to measure.



(Fig. 11300 VAKUFORM PRO positioning system rectangular)



(Fig. 10300 VAKUFORM BASIC positioning system oval)



(Fig. 13350 VAKUCOON positioning system for the whole body)



Fig. VAKUCOON positioning system, only back with seat area)



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APPLICATION

Vacuum system for the positioning and safe support particularly for severely and multiple handicaps. For general pressure relief of the supporting area while optimal stabilizing the patient.

In particular suitably for

- positioning on one's back
- positioning on one's side
- positioning on one's front
- adaptation to difficult anatomical conditions

ADAPTATION

Supply the system with air that far, that the patient can easily sink into the material. Most suitable is a gel-like consistency. Avoid overexpansion of the system.

Before positioning the patient adjust the supporting system in such a way that the granules inside the cushion cannot slip. This takes place by using the provided pump to supply or evacuate air until a soft ductile consistency is achieved. The sinking into the cushion can be supported by shifting the wadding underneath the patient by hand or "digging it out".

In case of strong Scoliosis for example you might already push the granules inside the system to the required spots. For positioning on one's front before inserting the patient the first third of the system should be compressed to mould a wedge-shaped form. As soon as the desired sinking depth is achieved, you can start with the correction work.

The object of the efforts is to achieve a position as symmetrical as possible in context of the clinical picture. Therefore it is necessary to build up a wide lateral guiding by modelling the wadding from the outside to the patient in the way described above. For a stable lateral guide you require a supporting area with large volume. The required material should be brought forward from the borders of the system.

When the desired correction is achieved, use the pump to evacuate the system that far that the reached strength does no longer permit a deformation. If you want to change the shaped position again afterwards, just use the pump to supply as much air as necessary until a deformation becomes possible again. Thereafter the system again is maximally evacuated.

If the positioning obtained in this way is to remain durably it is absolutely necessary to interrupt the hose connector between pump and system as otherwise through the valve small quantities of air might penetrate into the system.

Only if the tube is removed from the quick-coupling, the valve closes airtight!

We recommend to finally take the patient out of the system again and examine the neoprene covering for folding. If this should occur in rare cases, it is possible to smooth the folds by simply pulling the neoprene covering.

ATTENTION

Because of the very high processing standard the negative pressure in our upholsteries lasts for long. Nevertheless during time a low quantum of air soaks in every cushion.

To keep the form of the adjustment constant it is very important to control firmness of the positioning system regular and if necessary to exhaust the air. We propose this kind of control several times a week.



DISCHARGING THE GRANULES

1. Hold the system that way that the white filling transfer pipe is positioned in the highest place of the system.
2. Add so much air to the system till the granules slip downward and the pipe lies free.
3. The catch is in a 3 cm round and 8 mm thick rubber washer. If you grasp the edge of the filler pipe closely with both thumbs, you will be able to squeeze the catch with your fingertips from the bottom through the neoprene hole about 2 mm out of the washer.

When removing the catch please make sure that the granules do not escape out of the system together with the air



(Fig. 1) Removing the filling transfer pipe



(Fig. 2) Discharging the granules with opened turning valve (blue)

4. Put the valve of the transfer bag deeply into the rubber washer so it cannot slip out by mistake during the transfer.
5. Now give plenty of air to the system (the valve of the transfer bag still remains closed).
6. Only if you put pressure on the system (with your hands or even better with the arm) you open the transfer valve. The transfer bag then should be placed beneath the cushion to be discharged.
7. With the air flow the granules now are pressed into the transfer bag. Make sure that this flow runs strongly and continuously. If the air flow slows down or is interrupted the flow of the granules might come to a hold and the valve might block. In this case you must briefly press air back from the transfer bag into the neoprene cushion. Thereby the blockage should be quickly repaired.
If most of the air is flown from the neoprene cushion into the transfer bag and the procedure is not yet terminated you can transfer air back into the cushion by putting pressure on the transfer bag. Afterwards you can continue the transfer procedure as described before.
8. After completing the transfer, take the valve carefully out of the rubber band.
9. Put in the catch again. Take care that there are no granules in the opening any more as otherwise the tightness of the system might be impaired.

The refill of the granules takes place similarly to the procedure described above in reverse handling.



CARE INSTRUCTIONS FOR VAKUFORM PRODUCTS

Concerning the maintenance of our products we recommend the following:

1. The products can be washed by hand up to 60°C.
2. The products can be disinfected with standard business disinfectants.
3. After laundry let the products dry by air.

NOTE:

The surface material of our Vakuform products can be damaged by fire or pointed articles which will cause loss in the tightness of the material. For such damage we will not take over liability.

Please do not expose the products to the load of machine laundry, spin-drying or extensive heat.

We point out that – due to its physical nature - the influence of extensive heat might cause softening of the bucket seat inlet (e.g. in high summer by storage in the closed car for some time or direct long lasting exposure to the sun). In extreme cases this might cause the loss of inherent stability. Such a loss of form does not refer to fatigue or damage of the material. A strong increase of temperature causes the wadding as well as the air remaining in the system to expand. Thereby softening of material might happen. As soon as the temperature drops down again however the system pulls together to the original consistency.

To avoid an undesirable change in form we recommend not to expose the system to extreme heat during a longer period of time. Nevertheless, if changes in the pressure ratios of the system happen as described above, these can easily be readjusted by using the pump to evacuate air.

Do not blow air unattended into an upholstery by an electronic pump. The continuing air feed can inflate the upholstery so much, that the glued seams tear.

Made in Germany

We manufacture our products for you in our workshop by hand.

For this process we only use high quality materials, mostly from German suppliers.

So we guarantee a constant manufacturing quality on the highest level.

Yours **VAKUFORM**® Team



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