

# Medinorm® HVS™ - High Vacuum Wound Drainage System

**your partner in wound drainage**

## Specifications



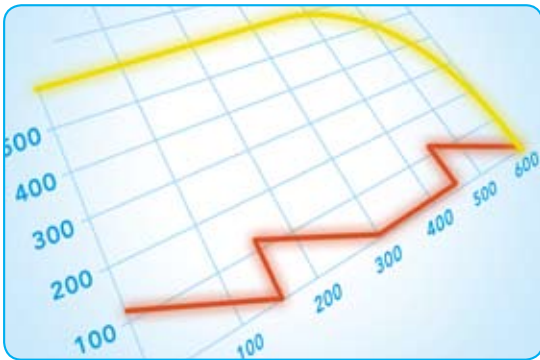
High Vacuum Wound  
Drainage System

Instructions for Use

# Introduction

Postoperative constant suction drainage in combination with a high suction force is an ideal drainage method <sup>(1,2,3)</sup>:

- to encourage active adhesion formation between healing surfaces,
- to open drain occlusions or to move large volumes of fluid quickly,
- to improve flap apposition



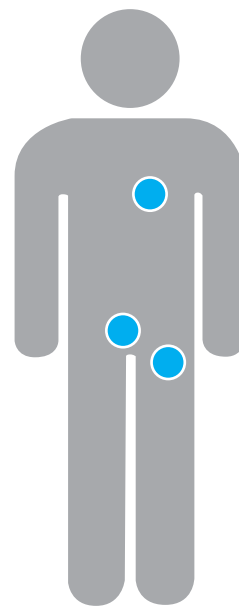
— Constant High Vacuum (Medinorm® wound drainage)  
 — Bellow type (Intermittent suction)



## History in High Vacuum Wound Drainage

Medinorm® HVST™ is a postoperative wound drainage system and its unique feature is the use of a constant high suction force. The constant suction in combination with a high suction force provides active adhesion formation between healing surfaces, removes large volumes of fluid quickly and improves proper flap apposition.

Medinorm® HVST™ has an approximate pressure of -600 mmHg and is indicated for surgical procedures where postoperative drainage of blood from wounds and body cavities is required.



The system is used (though not limited) to the following procedures<sup>(9)</sup>:

- Orthopaedics
- Breast surgery: Mastectomy
- Plastic surgery
- Urology

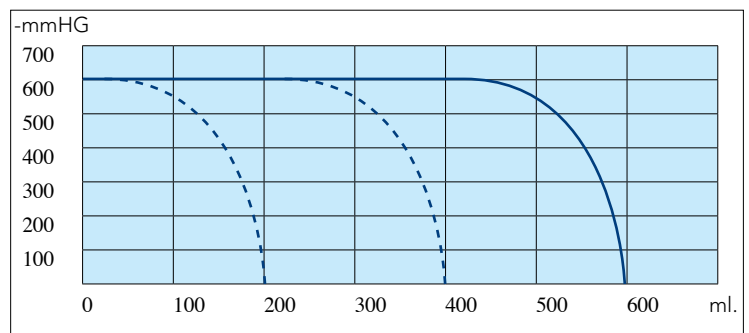
### Data on file:

1. Berman AT, et al., "Comparison between intermittent (spring-loaded) and continuous closed suction drainage of orthopedic wounds: a controlled clinical trial," *Orthopedics*, vol. 13, pp. 309-314, 1990.
2. Rudberg C and Tera H, "How does the increasing filling of the vacuum source diminish the suction in modern portable drainage systems?," *Acta Chir Scand*, vol. 154, pp. 1-8, 1988
3. Scientific Review: Surgical Recommendations for the Use of Postoperative Wound Drainage Systems, B. Pater, Msc (University of Twente, The Netherlands; Biomechanical Engineering).



Medinorm® HVST™:

- completely sterile, single use, all-in-one system,
- 600 ml, 400 ml or 200 ml,
- single or Y-drain connecting tube,
- anti-reflux valve
- PUR wound drain - lengths of 500 or 1100 mm and Ø 8, 10, 12, 14 or 16 CH/FG,
- Medifix sc ew connection (drain/trocar),
- trocar,
- replacement bottles 600 ml, 400 ml or 200 ml.



The pre-evacuated system provides constant suction.

# Specifications



## 1. Luer Lock connection



Enabling safe connection of the system to patient's connecting tube.

## 2. Vacuum indicator



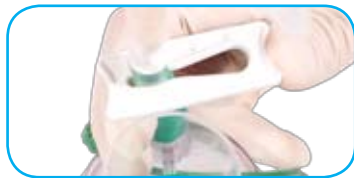
To easily visualise the vacuum level inside the system.

## 3. Bottle



All systems are pre-evacuated for constant suction. The writing strip allows for consistent recording (only 600 ml).

## 4. Sliding clamp



The system is ready to use. Open sliding clamp and collection starts automatically.

## 5. Hanging strap



To connect bottle to bed rail.

## 6. Polyurethane (PUR) drain



PUR exceeds PVC in material characteristics. PUR drains are more flexible and lead to smoother insertion and easier removal.

## 7. Single cut trocar



Requires 1,3 kg less force to penetrate skin compared to a standard bayonet type trocar.

## 8. Medifix connection



A screw mechanism for easy (dis)connection and smooth transition of drain and trocar, minimizing perforation of the skin.

## 9. Y or single drain connector



For insertion of either 1 or 2 drains. Available for different diameters drain sizes.

## 10. Anti-reflux valve (ARV)



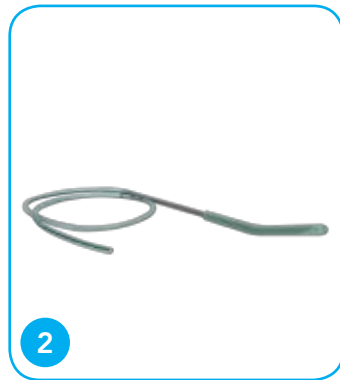
Located closely to the drain connector to prevent backflow from bottle and connecting tube.



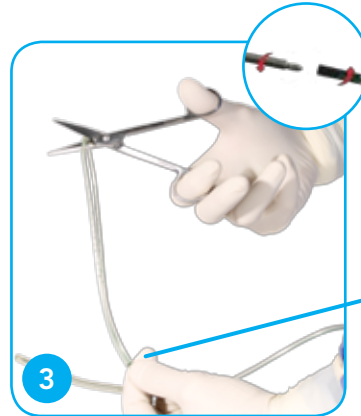
# Instructions for Use



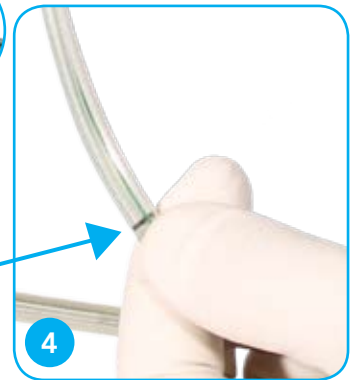
1 Ensure that package is undamaged and vacuum indicator is in "max" position. Remove system from peel-pouch using aseptic techniques.



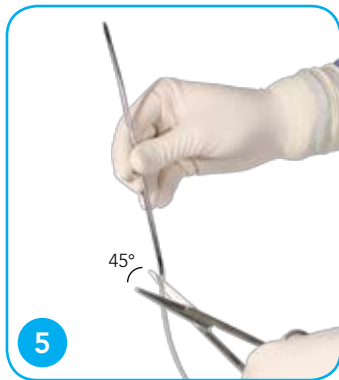
2 Use end perforated (500 mm length) to place 1 drain in wound site.



3 Use middle perforated drain (1100 mm length) to place 2 drains in wound site. Cut drain in 2 equal lengths to facilitate 2 separate drains. The Medifix connector facilitates easy connection and disconnection of drain and trocar.



4 Insert and pass trocar/ wound drain into desired location until black line indicator appears just outside skin surface. Ensure air tight sealing of the perforated area of the drain.



5 With sterile scissors, cut wound drain at 45-degree angle for easier insertion into single or Y-drain connector.



6 Cut Y- or single drain connector to appropriate size for wound tubing and insert wound tubing firmly into drain connector.



7 Connect the patient connecting tube via Luer-Lock.



8 Open sliding clamp on the bottle in order to start the wound drainage.



9 During wound drainage process, monitor the volume of drained wound fluid and check if the vacuum indicator is in "max" position.



10 When drainage has stopped and/or if vacuum indicator is in "min" position, then close the sliding clamp on patient connecting tube.



11 Close sliding clamp on the bottle.

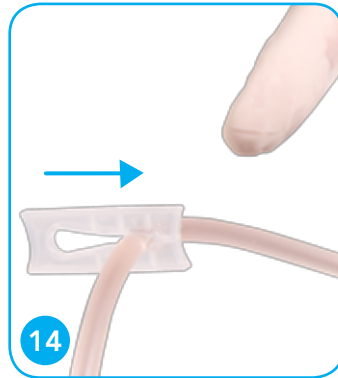


12 Disconnect patient connecting tube from the bottle using the Luer-Lock.



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In case a replacement system is required use either a 600 ml, 400 ml or 200 ml bottle to continue the wound drainage.



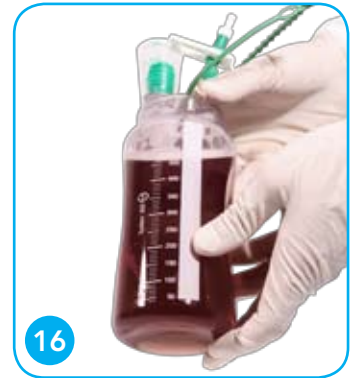
14

Open sliding clamp on the connecting tube.



15

Open sliding clamp on the bottle.



16

Dispose the bottle according to local hospital guidelines.



17

If wound drainage is no longer required, close all sliding clamps. Remove bottle, drain and tubing from patient according to your protocol\* and dispose in line with local hospital guidelines.

\* In consultation with the specialist surgeon, you may ensure that the pressure difference inside and outside the patient will be eliminated by letting the wound relax for 10 to 20 minutes before removing the drain from the patient's side.

This is not the official IFU, please consult the official IFU, contact us or your local distributor

# Medinorm® HVS™ – High Vacuum Wound Drainage System

## Includes:

- Bottle in size 600 ml, 400 ml or 200 ml
- Single or Y drain connector and anti-reflux valv
- PUR drain in lengths of 500 or 1100 mm and Ø 8, 10, 12, 14 or 16 CH/FG
- Trocar
- Replacement bottle in sizes 600 ml, 400 ml or 200 ml

Product descriptions and article codes are available in our catalogue or online on [www.vanstratenmedical.com](http://www.vanstratenmedical.com)



## Company information

Van Straten Medical is a family owned company, founded in 1975, and active in the development, sales, repair, modification and fixation of medical devices. Van Straten Medical has several divisions, including Export, and is founder & shareholder of the production facility Medinorm Medizintechnik GmbH in Germany.

Our export division offers surgical products and services to the international market through distributors and medical industry. Van Straten Medical is an ISO 9001 and ISO 13485 certified company.

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