

# VITOM®

A Unique Visualization System  
for LEEP in the Operating Room



# The VITOM® System for Exoscopy in the Operating Room

Dear Colleagues,

Loop excision should only be performed under 5-10x magnification. This ensures a gentle procedure adapted to precancerosis that ensures complete removal and as little tissue loss as possible.

Thanks to your experience with laparoscopic operations, you are already optimally trained for operating via the monitor. As such, the VITOM® exoscope in combination with HD video technology represents an ideal module for future loop excisions.

You will be able to diagnose the extent and severity of the lesions without any problems, visualize them on the monitor in HD technology, and make digital recordings at the same time. Loop excision is performed under magnification, allowing preservation of tissue and avoiding complications. Further information on the VITOM® procedure is available in the doctor-to-doctor manual that you can access with the QR code displayed below. Multiple clinical studies demonstrate the high clinical value of the VITOM® procedure.

In our courses, (<http://www.mvz-fuerstenberg-karree.de/kurse/>) we would be happy to provide you with information on the theoretical basis of colposcopy as well as the treatment of cervical precanceroses and will assist you by practicing on life-like models. To prepare for your courses and to refresh your knowledge, we also offer a digital textbook that can also be accessed via a further QR code.

Yours,

Achim Schneider, M.D., M.P.H.  
Institute for Cytology and Dysplasia  
Fürstenberg-Karree, Medical Care Center  
Berlin, Germany



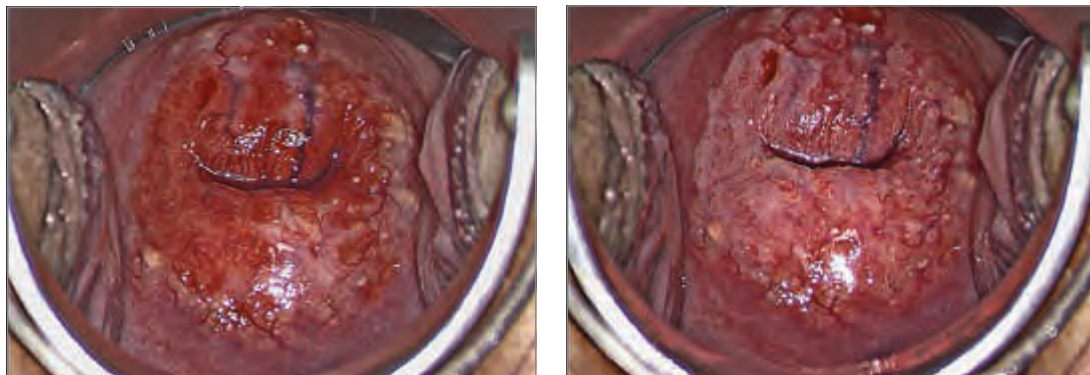
For the digital textbook  
“Secondary Prevention  
of Cervical Cancer”  
please scan this QR code



To retrieve the doctor-to-doctor manual  
“Primary, Secondary and Tertiary Prevention  
of Cervical Cancer”,  
please scan this QR code

## Use of the System

The VITOM® telescope is an exoscope which, unlike an endoscope, is not inserted into the body but placed at a working distance of 25-75 cm above the surgical field. The VITOM® system can be used in the OR for the visualization and documentation of LEEP in FULL HD quality. The colposcope can thus be replaced by the VITOM® system, providing the surgeon with a range of application areas for the individual system components.



Colpophotographs documented with the VITOM® system of a 32-year-old patient with cytologically suspected HSIL (IVa-p) and evidence of RNA of a high-risk (HR) type. On the left in the unenhanced image, a highly vascularized transformation zone is visible colposcopically; after the application of 5% acetic acid (on the right), it is classified as a type 2 atypical transformation zone with major change consistent with a high-grade squamous intraepithelial lesion (HSIL). A biopsy at 7 o'clock near the squamocolumnar junction was classified as CIN 3 (HSIL).

Depth of field, contrast, magnification, and excellent color reproduction play a decisive role in colposcopy. The VITOM® visualization system is perfectly suited to fulfilling these requirements.

Exoscopy with the VITOM® system presents a good correlation with the histological findings in high-grade cervical neoplasia (HSIL) and offers an excellent magnification aid when performing LEEP in the operating room. Furthermore, the VITOM® system can facilitate the intervention for the surgeon and reduce OR time.

## Compatibility of the VITOM® System

The VITOM® system, consisting of the VITOM® telescope and a holding system, can be used with a standard KARL STORZ endoscopy tower (cf. p. 9).

The camera components can be used for laparoscopic interventions as well as for LEEP.

## VITOM® 0° and 90° Telescopes

The already established generation of VITOM® 0° telescopes are extremely useful for the visualization and documentation of loop excision and deliver brilliant image quality.

The second generation expands the first-generation VITOM® 0° telescopes with a 90° version for gynecology.

During colposcopy and loop excision, the VITOM® 90° telescope and the camera are arranged vertically. This provides the surgeon with a comfortable working environment and more freedom of movement.

In the 90° version, an illuminator has been fully integrated. This integrated illuminator with two condensor lenses delivers considerably more light and ensures optimal illumination of the surgical site.

The version with the integrated green filter enables a clearer identification of vascular structures and better contrast against their surroundings.



LEEP with the VITOM® 90° telescope and the VERSACRANE™ holding arm

The VITOM® telescope is mounted to a holding system during loop excision, for example, the VERSACRANE™ holding system.

## Positioning of the VITOM® Telescope in the VERSACRANE™ Holder



### Versatile and adaptable

The distal fixture on the holding system enables the telescope and the camera to be mounted in two positions. This further enhances flexibility and user-friendliness.

1. VITOM® 0° telescope is mounted in a horizontal position.
2. VITOM® 90° telescope is mounted in a vertical position.

### VERSACRANE™ Product Characteristics:

- Precise positioning of the VITOM® telescope and camera head with only one hand
- Mobile stand for easy positioning in the OR or examination room
- User comfort thanks to weight compensation
- Locking brakes on each articulated joint allow individual adjustment
- Straightforward cable management
- Proven KSLOCK quick-release coupling for use with original KARL STORZ clamping jaws
- Sterile covers are available for the VERSACRANE™ (optional)
- The VERSACRANE™ holding arm can be fastened to the gynecological examination chair with the help of the adaptor set (cf. p. 12)

## Benefits of the VITOM® System

Due to its slim and compact design, the VITOM® system minimizes space requirements in the OR and simultaneously provides an excellent overview of the surgical field.

The surgeon views the site in high resolution on an HD monitor. This allows the surgeon to work ergonomically and permits simple and comprehensive documentation. Furthermore, the monitor enables the entire OR team to view the procedure on the monitor.

The VITOM® system is also very useful in shadowing and in the training of residents and students as the view of the surgical field is not obstructed by the surgeon or the OR staff.

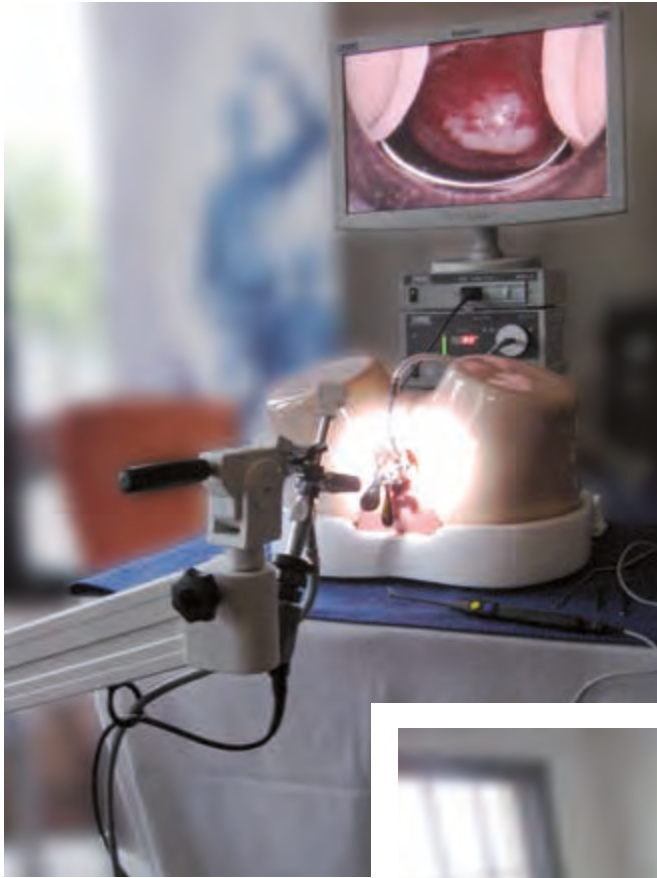


Using the VITOM® system for visualization during surgery



For more information,  
please scan the code.





Workstation with VITOM® 90° telescope and VERSACRANE™ holding system



Using the VITOM® system for visualization during training courses

Training courses offer a good opportunity to practice LEEP on life-like models using the optical magnification of the VITOM® system.

## Product Characteristics of the VITOM® System

- Possibility of using existing video systems e.g., IMAGE1 S™, IMAGE 1 HUB™ HD, IMAGE1 S™ H3-Z camera head, and FULL HD monitor from KARL STORZ
- Documentation of colposcopic intervention possible
- Colposcopic images can thus also be transmitted during training sessions/workshops
- Visualization of site for training and consultation purposes
- Compact, slim design
- Comfortable, ergonomic working via the monitor
- Large working distance

## Technical Data of the VITOM® System

### VITOM® System

<b>Working distance:</b>	<b>25-75 cm</b>	
<b>Depth of field at working depth of:</b>	<b>25 cm</b> approx. 3.5 cm	<b>75 cm</b> approx. 10 cm
<b>Width of image field at working distance of:</b>	<b>25 cm</b>	<b>75 cm</b>
<b>H3-Z camera zoom 1x:</b>	<b>5 cm</b>	<b>15 cm</b>
<b>H3-Z camera zoom 2x:</b>	<b>3.5 cm</b>	<b>10.5 cm</b>
<b>Image scale at working distance of:</b>	<b>25 cm</b>	<b>75 cm</b>
<b>26" monitor:</b>		
<b>H3-Z camera zoom 1x:</b>	<b>approx. 8 x</b>	<b>approx. 3 x</b>
<b>H3-Z camera zoom 2x:</b>	<b>approx. 16 x</b>	<b>approx. 6 x</b>

Technical specifications are subject to change without prior notice.



## For Use with your Existing Endoscopy Tower

The VITOM® system can be used universally with your existing endoscopy tower. If an endoscopy tower is already available, you will only need a VITOM® telescope and a holding system to perform conization. If a documentation system is also required, a camera control unit (with integrated connection) can be used (for example, IMAGE1 S™). Alternatively, you can use a camera control unit with a separate documentation system (for example, KARL STORZ AIDA®).

The following shows an example endoscopy tower with its components.



### Units and Accessories:

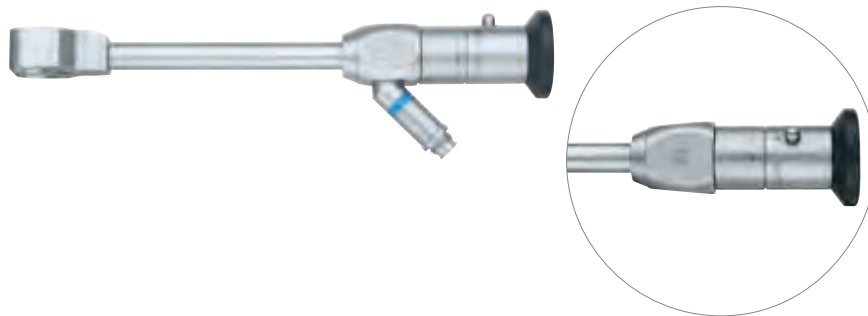
TM 330	<b>32" 3D Monitor</b>	UI 500	<b>ENDOFLATOR® 50</b>
20090621	<b>21.5" KARL STORZ Touch Screen</b>	UP 501	<b>S-PILOT®</b> , pinch valve
TC 200EN	<b>IMAGE1 S CONNECT™</b> , connect module	UH 400	<b>AUTOCON® III 400 High-End</b>
TC 300	<b>IMAGE1 S™ H3-LINK</b> , link module	UF 902	<b>Two-Pedal Footswitch</b> , with button for switchover function, for use with HF generators
TH 100	<b>IMAGE1 S™ H3-Z Three- Chip FULL HD Camera Head</b> , S-Technologies available	UG 220	<b>Equipment Cart</b> , wide, high, rides on 4 antistatic dual wheels
TC 302	<b>IMAGE1 S D3-LINK™</b>	UG 500	<b>Monitor Holder</b>
TL 300	<b>Cold Light Fountain POWER LED 300</b>	UG 540	<b>Monitor Swivel Arm</b> , height and side adjustable
WD 200	<b>AIDA™ Documentation System</b> , for recording still images and videos	UG 310	<b>Isolation Transformer</b>
		UG 410	<b>Earth Leakage Monitor</b>
		UP 210	<b>ENDOMAT® SELECT</b> , suction or irrigation pump
		UP 601	<b>SURGERY Software</b> , license, allows selection of the procedures "LAP", "THOR" and "PROCTO", for use with ENDOMAT® SELECT
		UP 602	<b>HYSTEROSCOPY Software</b> , license, allows selection of the procedure "HYS", for use with ENDOMAT® SELECT
		UP 603	<b>IBS® Shaver, Software</b> , license, allows selection of the procedure "IBS® Shaver", for use with ENDOMAT® SELECT

## VITOM® Telescope 90° 26003 VDA



26003 VDA **VITOM® Telescope 90° with Integrated Illuminator,**  
VITOM® HOPKINS® Telescope 90°, working distance 25-75 cm,  
length 11 cm, **autoclavable**, with fiber optic light transmission  
incorporated and condensor lenses,  
color code: blue

## Alternative to VITOM® Telescope 90° 26003 VDA



26013 VDA **VITOM® Telescope 90° with Integrated Illuminator,**  
VITOM® HOPKINS® telescope 90°, working distance 25-75 cm,  
length 11 cm, **autoclavable, with green filter** for colposcopy,  
fiber optic light transmission incorporated and condensor lenses,  
color code: blue

## Alternative to VITOM® Telescope 90° 26003 VDA

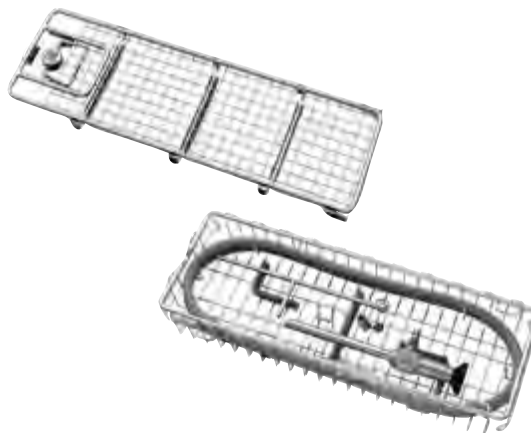


26003 VAA **VITOM® HOPKINS® Straight Forward Telescope 0°**, working distance 25-75 cm, diameter 10 mm, length 11 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green

## Accessories



495 TIP **Fiber Optic Light Cable**, highly heat resistant, diameter 4.8 mm, length 300 cm



39501 A2 **Wire Tray for Cleaning, Sterilization and Storage** of two rigid endoscopes and one light guide cable, including holder for light post adaptors, silicone telescope holders and lid, external dimensions (w x d x h): 352 x 125 x 54 mm, for rigid endoscopes up to diameter 10 mm and working length 20 cm



533 TVB **Adaptor**, with ergonomic swivel, **autoclavable**, permits telescope changing under sterile conditions



28272 GS

**VERSACRANE™ Holding Arm**, low, for use in the lithotomy position, spring-supported, with quick release coupling KSLOCK, for use with Mobile Stand 28272 GM and KARL STORZ clamping jaws. The VERSACRANE™ holding arm is intended for use with VITOM® scopes/exoscopes.

WARNING: The VERSACRANE™ holding arm cannot be used with rigid endoscopes!

28272 GM

**Mobile Stand**, for use with VERSACRANE™ Holding Arm 28272 GS

28272 UGN

**Clamping Jaw**, metal, clamping range 16.5 up to 23 mm, with quick release coupling KSLOCK (male), for use with all square-headed KARL STORZ HOPKINS® telescopes

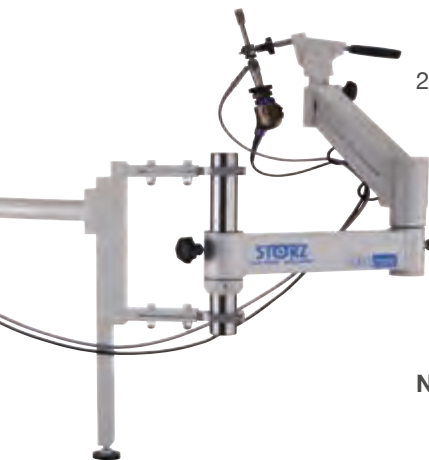
28272 CN

**Clamping Cylinder**, folding, for flexible mounting of 10 mm telescopes to telescope sheath, **autoclavable**. The clamping cylinder allows vertical movement and rotation of the telescope. For use with Clamping Jaw 28272 UGN, 28272 UGK and POINT SETTER universal adaptor 10-15 mm.

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**Cover**, elasticated, package of 20

## VERSACRANE™ adaptor set for examination chairs from Schmitz u. Söhne (alternative to Mobile Stand 28272 GM)



28272 GA

**Adaptor Set**, for mounting the VERSACRANE™ holding arm to examination chairs from Schmitz u. Söhne, with 2 adaptors for colposcope bracket, 1 mounting rod and mounting material, for use with VERSACRANE™ Holding Arm 28272 GS and colposcope bracket for examination chairs from Schmitz u. Söhne

**Note:**

A colposcope bracket compatible with the examination chair model must be ordered directly from Schmitz u. Söhne.

It is possible to mount the VERSACRANE™ holding arm to gynecological examination chairs from other manufacturers. Please contact us for further information.

## Alternative to VERSACRANE™ Holding System: Mechanical Holding System



- 28172 HR **Rotation Socket**, to clamp to the operating table, with one mounted Butterfly Nut 28172 HRS, for European and US standard rails, with lateral clamp for height and angle adjustment of the articulated stand
- 28272 HD **Articulated Stand**, reinforced version, U-shaped, with one mechanical central clamp for all five joint functions, with quick release coupling KSLOCK (female)
- 28272 UGK **Clamping Jaw, with ball joint**, large, clamping range 16.5-23 mm, with quick release coupling KSLOCK (male), for use with all square-headed KARL STORZ HOPKINS® telescopes
- 28272 CN **Clamping Cylinder**, folding, for flexible mounting of 10 mm telescopes to telescope sheath, **autoclavable**.  
The clamping cylinder allows vertical movement and rotation of the telescope. For use with Clamping Jaw 28272 UGN, 28272 UGK and POINT SETTER universal adaptor 10-15 mm.
- Note:** For a fully functional system, an order must be placed for all four components.

## Optional Accessories

### Loop Electrodes for Conization



**265200 43 Electrode Handle**, with 2 buttons for activating the unipolar generator, yellow button: unipolar cutting, blue button: unipolar coagulation, High Frequency Cord **265200 45** required

**265200 45 High Frequency Cord**, for Electrode Handle **265200 43**, length 400 cm, for use with AUTOCON® II 400 SCB **205352 20-111** and AUTOCON® III 400 UH 400



**26165 UG Loop Electrode**, with insulated sheath, **autoclavable**, size 22 x 17 mm, working length 11 cm



**26165 UM Loop Electrode**, with insulated sheath, **autoclavable**, size 15 x 13 mm, working length 10 cm



**26165 UK Loop Electrode**, with insulated sheath, **autoclavable**, size 10 x 8 mm, working length 9 cm

### Ring Curette for Endocervical Curettage



**26165 RK Ring Curette**, bayonet-shaped, 45° curved upwards, very sharp, diameter 5 mm, with round handle, working length 16 cm



## Bibliography

- Vercellino GF, Erdemoglu E, Kyeyamwa S, Drechsler I, Vasiljeva J, Cichon G, Schneider A. Evaluation of the VITOM® in digital high-definition video exocolposcopy. *J Low Genit Tract Dis.* 2011;15:292-5
- Vercellino GF, Chiantera V, Gaßmann J, Erdemoglu E, Drechsler I, Frangini S, Schneider A, Böhmer G. Prospective Comparison of Loop Excision under Colposcopic Guidance versus Vitom Guidance. *Geburtshilfe Frauenheilkd.* 2012;72:945-948
- Vercellino GF, Erdemoglu E, Chiantera V, Vasiljeva K, Drechsler I, Cichon G, Schneider A, Böhmer G. Validity of the colposcopic criteria inner border sign, ridge sign, and rag sign for detection of high-grade cervical intraepithelial neoplasia. *Obstet Gynecol.* 2013;12:624-31.
- Vercellino GF, Erdemoglu E, Chiantera V, Malak AH, Vasiljeva K, Drechsler I, Dückelmann AM, Richter J, Schneider A, Böhmer G. A multicentric randomized study comparing two techniques of magnification assisted loop excision of high-grade cervical intraepithelial neoplasia: video exoscopy and colposcopy. *Arch Gynecol Obstet.* 2014;289:1301-7.
- Schneider A, Rakozy C, Stolte C, Bothur-Schäfer P, Rothe H, Welcker T, Choly N, Roesgen A, Böhmer G. Correlation between VITOM® videocolposcopy and histopathology for pathognomonic grading criteria. *Arch Gynecol Obstet.* 2015;292:1361-6.
- Schneider A, Wagner K, Rakozy C, Stolte C, Bothur-Schäfer P, Welcker T, Choly N, Roesgen A, Rothe H, Böhmer G. Cervical Strip Biopsy for High-Grade Cervical Intraepithelial Lesions: a Valid Alternative to Conventional Punch Technique. *Geburtshilfe Frauenheilkd.* 2015;75: 1063-1068

**It is recommended to check the suitability of the product for the intended procedure prior to use.**



THE DIAMOND STANDARD

KARL STORZ SE & Co. KG  
Dr.-Karl-Storz-Straße 34, 78532 Tuttlingen/Germany  
Postbox 230, 78503 Tuttlingen/Germany  
Phone: +49 (0)7461 708-0  
Fax: +49 (0)7461 708-105  
E-Mail: [info@karlstorz.com](mailto:info@karlstorz.com)  
[www.karlstorz.com](http://www.karlstorz.com)