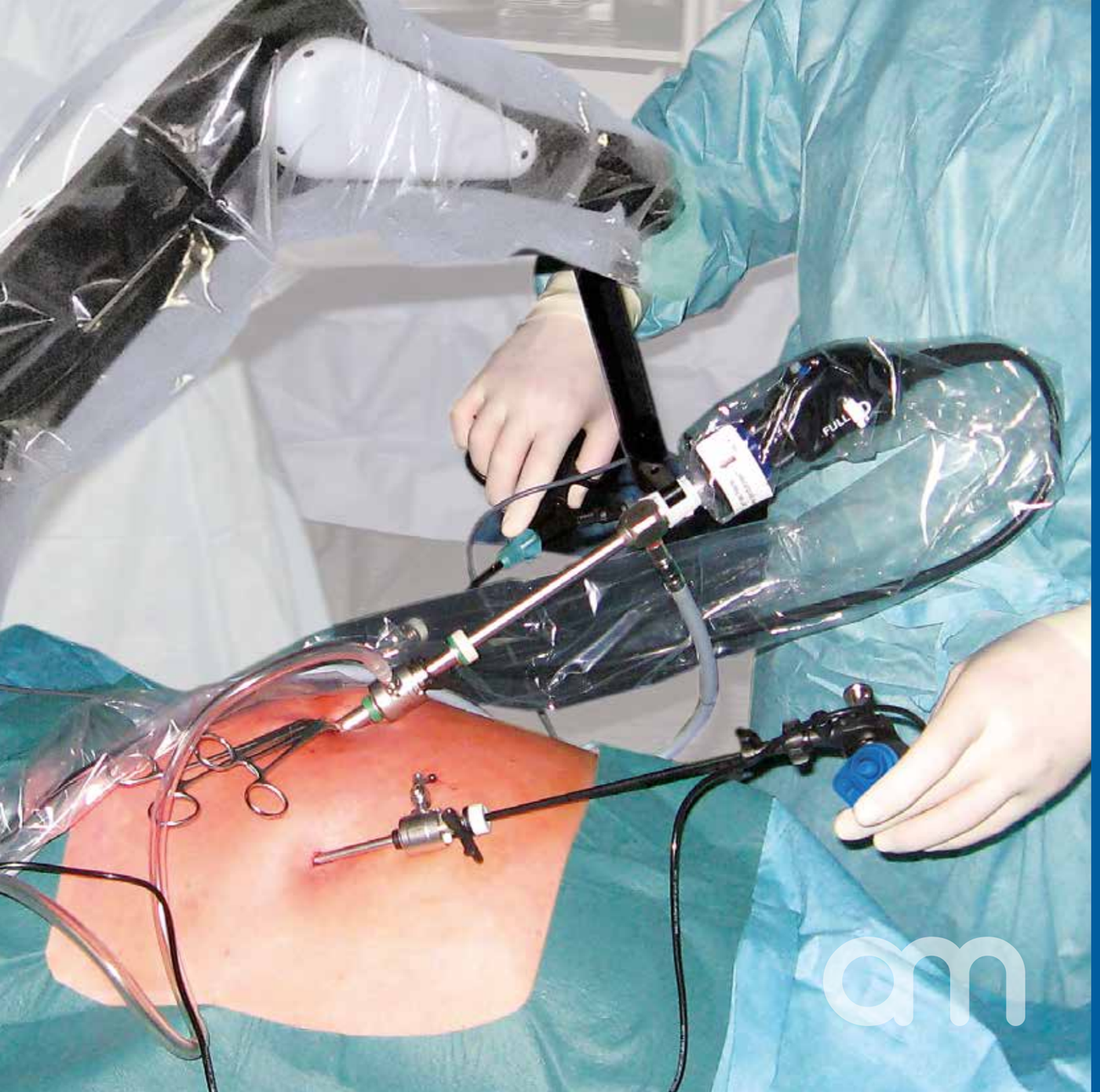
AKTORmed
ROBOTIC SURGERY

SOLOASSIST IIS

ROBOTIC CAMERA CONTROL



THE FLEXIBLE CAMERA GUIDANCE SYSTEM

SOLOASSIST IIS

Steady field of vision
Precise scope guidance
Quick and easy set up

HYBRID LAPAROSCOPY

100% German Engineering

Gynaecology

VOICE CONTROL

ROBOTIC SURGERY

Cardiology

intuitive joystick

20 years of experience

VISCERAL SURGERY

INTELLIGENT CAMERA GUIDANCE SYSTEM

Bariatric Surgery

UROLOGY

FIELDS OF APPLICATION

SOLOASSIST IIS

Visceral Surgery

Cholecystectomy
Hernia Repair
Fundoplication
Gastric Banding

Gynaecology

Tubal Ligation
Hysterectomy
Ovarectomy

Urology

Nephrectomy
Adrenalectomy
Prostatectomy

Thoracic Surgery

Wedge Resection
Esphagectomy
Lobectomy

Cardiology

Mitral Valve Repair
Aortic Valve Repair
Coronary Bypass

This list of possible procedures is not exhaustive. Not all applications are cleared for any country.

BENEFITS FOR THE PATIENT

Fast intervention in emergencies

The support of the SOLOASSIST^{IIS} is always available. As our system can also be used for simple procedures without an assistant, waiting times due to staff shortages in case of emergency operations can be significantly reduced.[1,4]

Less pain - faster recovery

Reduced force on the trocar compared to hand-held camera guidance leads to a reduction in post-operative pain.[3] This can also shorten the hospital stay after surgery.[4]

Shorter operating time

The use of 3D (compared to 2D) technologies enables a shorter operation time.[4,7]

Less postoperative risk

With each 30 minutes operation time the risk of PONV (Postoperative nausea and vomiting) increases by 60 %.[10] The patient will benefit from the reduced operation time enabled by the assistance of the SOLOASSIST^{IIS}.[4,7]

BENEFITS FOR THE CLINIC

Better scheduling efficiency

Thanks to the SOLOASSIST^{IIS} the surgeon guides the scope himself and simple procedures can be performed without further assistance.[4] In case of demanding interventions assistants can be integrated as equal team members since being relieved of the task of holding the scope.

Since the SOLOASSIST^{IIS} is always available, it is the ideal partner in case of emergencies or staff shortages.

More efficiency in the OR

As efficient working is possible, valuable operating time is saved.[4]

Easy transport and storage

The SOLOASSIST^{IIS} TROLLEY allows easy transport between OR and space-saving storage when not in use.

Maintenance-free and compatible

The SOLOASSIST^{IIS} is maintenance-free. It is also compatible with most commercially available operating tables and endoscopes.

Enhancing your clinic's image

A modern and positive image is one of the most important competitive advantages. Show your progressiveness by using robotic surgery.

BENEFITS FOR THE SURGEON

90 % of the surveyed surgeons report a significant relief in the OR thanks to the assistance of SOLOASSIST^{IIS}.[5,8]

Stable positioning, steady image

Thanks to its structure, the SOLOASSIST^{IIS} is stable and vibration-free. It does not shake or tilt the horizon, enabling fatigue-free work.[5,6]

Better vision

The guidance of the scope using the JOYSTICK is very sensitive and precise. This minimizes soiling of the front lens.[4]

Ergonomic and relaxed working

Tensions in the neck and back, eye fatigue and the resulting pain and nausea can be significantly reduced.[9]

The SOLOASSIST^{IIS} supports the endoscope from above, leaving ample room for your instruments. There is no need to alter your workflow.[2,4,5]

Straightforward handling, ready to operate in just a few minutes

Working with the SOLOASSIST^{IIS} is very easy and intuitive. It is quickly attached on the operating table and covered with a STERILE COVER while the patient is being prepared for surgery.[2,6]

Improved coordination of work processes

As the surgeon positions the scope himself, there are no misunderstandings. Assistants can still take over the camera guidance for learning purposes.[4]

Quicker interventions

As the assistant concentrates on more demanding tasks, four-handed operations are made possible, the duration of interventions is shorter.[2,4,5]

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ABOUT OUR SYSTEM

SOLOASSIST IIS

Flexible camera control system for holding and guiding scopes

The SOLOASSIST^{IIS} stabilizes the image quality of 2D, 3D and 4K systems. Our system guarantees a stable surgical field of view even in challenging scope positions.
In addition, the surgeon can finally determine the field of vision him/herself. As the guidance is now independent of the assistant, he or she can actively participate in the procedure for more demanding tasks.

The SOLOASSIST^{IIS} is our cost-effective entry level camera control system. Thanks to its disposable components the SOLOASSIST^{IIS} is particulary suitable for unplanned procedures.

MANUAL GUIDANCE

JOYSTICK

REMOTE CONTROL

VOICE CONTROL

4

Options to control *SOLOASSIST IIS*

1. **MANUAL GUIDANCE**
2. **JOYSTICK**
3. **REMOTE CONTROL**
4. **VOICE CONTROL**

MANUAL GUIDANCE

Where flexibility meets precision

The SOLOASSIST[IIS] is designed to fully support the surgeon. Its manual control offers a 360-degree range of movement that is comparable to the capabilities of a human assistant. However, holding the endoscope in an ergonomically unfavorable position over a longer period of time is never too strenuous for the SOLOASSIST[IIS].

The SOLOASSIST[IIS] is equipped with unlockable brakes that allow the arm to be moved quickly and precisely by hand at any time. The weight of the endoscope is largely compensated during manual guidance.

To reposition the arm, hold the arm at the distal end and press the corresponding button on the control panel. The arm becomes freely movable. As soon as you have reached the desired setting, release the button. The arm locks and the image detail is stable.

JOYSTICK

Designed for precise and sensitive scope guidance

The JOYSTICK is attached directly to the surgeon's instrument and enables a very sensitive and ergonomic control of the SOLOASSIST[IIS]. The use of the JOYSTICK is intuitive and adapts to your customary way of working.

The JOYSTICK is available for left and right handed users. It can be connected to most common MIS instruments using magnetically locked MOUNTS. The JOYSTICK, MOUNTS and ADAPTERS are designed to be reprocessed in the STERILISATION TRAY.

You can work simultaneously with JOYSTICK and REMOTE CONTROL or VOICE CONTROL.

STERILISATION TRAY *

* No true-to-scale representation within the parts. Magnification scale differs greatly.

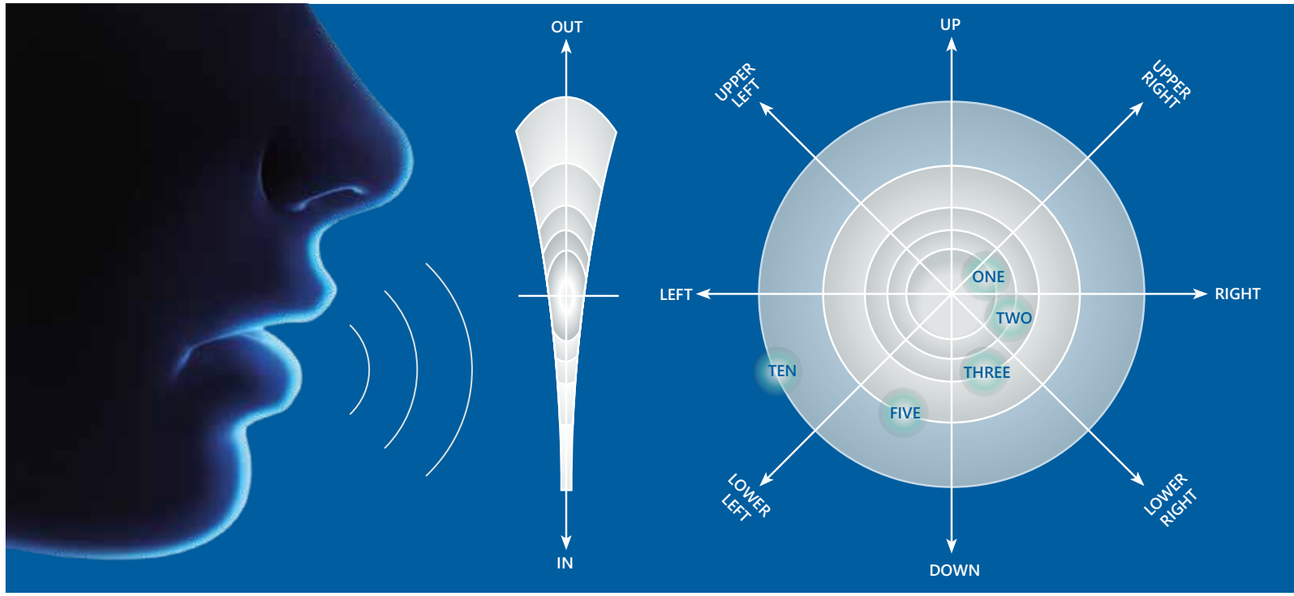
REMOTE CONTROL

The perfect support for educational purposes: Guide the SOLOASSIST[IIS] and instruct your operating team from a distance

The REMOTE CONTROL is an optional input device for the SOLOASSIST[IIS] with a LASER POINTER. It enables the instructing surgeon to control the movement of the SOLOASSIST[IIS] during an intervention and at the same time to show the performing surgeon anatomical structures on the screen with the aid of a LASER POINTER. This makes the REMOTE CONTROL an ideal tool for training purposes.

The REMOTE CONTROL can be used as the sole input device, or in parallel with the preferred input devices of the performing surgeon, such as VOICE CONTROL or JOYSTICK. Covered with the COVER REMOTE, the REMOTE CONTROL can be used in a sterile environment.

VOICE CONTROL



Control the SOLOASSIST[IIS] simply with your voice

The intuitive command set of the VOICE CONTROL allows a precise guidance of the endoscope during operation.

Any command sequence is started with the hotword "SOLO". After recognition of the hotword, commands are accepted for ten seconds. It is possible to save several positions and to adjust to three preset speeds.

The four main directions (UP, DOWN, LEFT, RIGHT) as well as zooming (IN, OUT) can be combined with a distance modifier (ONE, TWO, THREE, FIVE, TEN) to enable an accurate control over the scope. In addition it is possible to use the keywords UPPER and LOWER to move diagonal.

The VOICE CONTROL is provided with English command recognition as standard. Other languages are available on request.

Quick-coupling device for easy mounting to any surgical table with standard rail

DISPOSABLE COMPONENTS

UNIVERSAL JOINT
CLAMP Ø5 mm
CLAMP Ø10 mm

ABOUT THE SOLOASSIST IIS

100 % Compatibility

to all available 5 and 10 mm endoscopes.

SOLOASSIST IIS

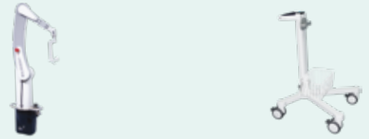
Sterile disposable components allow immediate use without prior reprocessing. This makes the SOLOASSIST IIS particulary suitable for unplanned procedures. A finely tuned system of components allows the adaptation to all commercially available 5 and 10 mm scopes.

Before every intervention the SOLOASSIST IIS is covered with a single-use STERILE COVER.

After the surgical procedure, the SOLOASSIST IIS is hung onto the TROLLEY which is designed for easy and safe transport and storage of our systems.

Single-use STERILE COVER for the SOLOASSIST IIS

BASIC SYSTEM COMPONENTS



SOLOASSIST^{IIS} Robotic Arm / TROLLEY
Thanks to its quick-coupling device for easy mounting to any surgical table with standard rail. The TROLLEY is designed for safe transport and storage of our robotic arms.

ENDOSCOPE HOLDER
Disposable set of UNIVERSAL JOINT and CLAMPS for 5 mm and 10 mm diameter endoscopes

STERILE COVER
Before every intervention the SOLOASSIST^{IIS} is covered with a single-use STERILE COVER.

STERILE SET IIS
Set of single-use ENDOSCOPE HOLDER and STERILE COVER

ACCESSORIES TO CHOOSE

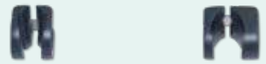
Y-LINE
For a simultaneous use of two input devices (JOYSTICK, REMOTE CONTROL and VOICE CONTROL)

VOICE CONTROL / HEADSET
For controlling and positioning the SOLOASSIST^{IIS} using voice commands

ACCESSORIES

JOYSTICK-RH-IIS / JOYSTICK-LH-IIS *
For controlling and positioning the SOLOASSIST^{IIS}

MOUNT 1A / MOUNT 1B *
For attaching the JOYSTICK to the most commonly used MIS instruments.



ADAPTER 1 / ADAPTER 2 *
Inlay for MOUNT 1A / MOUNT 1B for attaching to specially formed instruments.

MOUNT 2A / MOUNT 2B *
For attaching the JOYSTICK to strongly rounded MIS instruments.

STERILISATION TRAY *
Developed for simultaneous autoclaving of all reprocessable components

REMOTE CONTROL
For controlling the SOLOASSIST^{IIS} and instructing thanks to a LASER POINTER.

COVER REMOTE
Before every intervention the REMOTE CONTROL is covered with a single-use COVER REMOTE.

* autoclavable part

ORDERING THE SOLOASSIST^{IIS} SYSTEM

Article number	Designation	Content / Description
182221	SOLOASSIST^{IIS} SET	• 1 SOLOASSIST^{IIS} • 1 TROLLEY
192289/ 242704 *	STERILE SET IIS PU/ 10 ea.	• 1 ENDOSCOPE HOLDER PU/ 10 ea. • 1 STERILE COVER PU/ 10 ea.
242695	JOYSTICK-LH-IIS	• 1 JOYSTICK LH IIS (Left Hand)
242696	JOYSTICK-RH-IIS	• 1 JOYSTICK RH IIS (Right Hand)
172099	STERILISATION TRAY	for all autoclavable accessories of SOLOASSIST
171914	VOICE CONTROL SET	• 1 VOICE CONTROL • 1 CONNECTION CABLE (SOLOASSIST^{IIS} - VOICE CONTROL) • 1 HEADSET • 1 CHARGER HEADSET
212510	REMOTE CONTROL	for SOLOASSIST^{IIS}, with LASER POINTER
242687	COVER REMOTE PU/ 10 ea.	Packing unit of 10 individually packed COVER REMOTE for REMOTE CONTROL

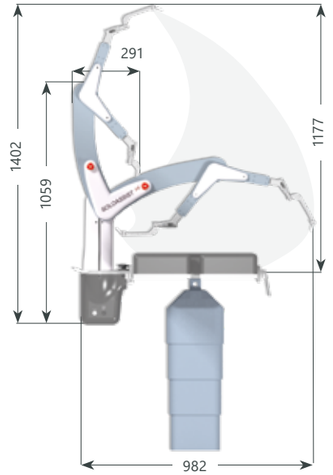
* STERILE COVER available from two manufacturers; Due to country-specific approvals, only one of them may be available.

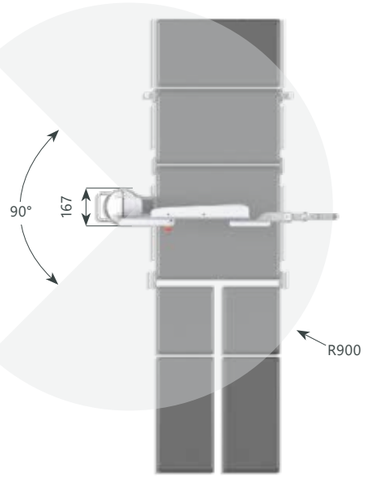
TECHNICAL SPECIFICATION

In respect to the endoscope

Rotation: 360° multi turn
Tilt: 0° up to 90° in respect to the vertical axis
Zoom: > 300 mm

All dimensions ± 5 mm





Feature	SOLOASSIST^{IIS}
Approval	CE (class I)
Supply voltage	100 - 240 Volt, 50 - 60 Hz
Maximum power consumption	60 VA
Size	291 x 167 x 1059 mm
Weight	12.5 kg
Safe working load	1.0 kg
Driven axis	3
UNIVERSAL JOINT & CLAMPS	Disposable
Endoscope size	5 and 10 mm
OR table adaption	Quick fastener, suitable for OR tables with European and US size rails, UK rails with additional adapters
Manual axis at distal end	Selectable, 8 x 45°

Developed & Manufactured by

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0103-247287 Rev 03