



ARRI Medical

ARRISCOPE®

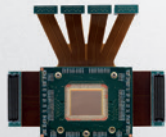
SEE THE DIFFERENCE

Fully Digital 3D Surgical Microscopy

The consistent focus on customer needs in the field of ear, nose and throat surgery, coupled with numerous awards and more than one hundred years of experience on the part of ARRI in the field of professional film, enabled ARRI Medical to create a new technological milestone in surgical visualization.

The integrated digital concept combined with the system-immanent digital 3D imaging is the basic principle of ARRISCOPE and thus offers access to trend-setting innovations in surgical visualization.

Augmenting the live image and merging relevant information, for example preoperative image data, directly in the surgeon's field of vision, make the ARRISCOPE a central visualization system in the OR.



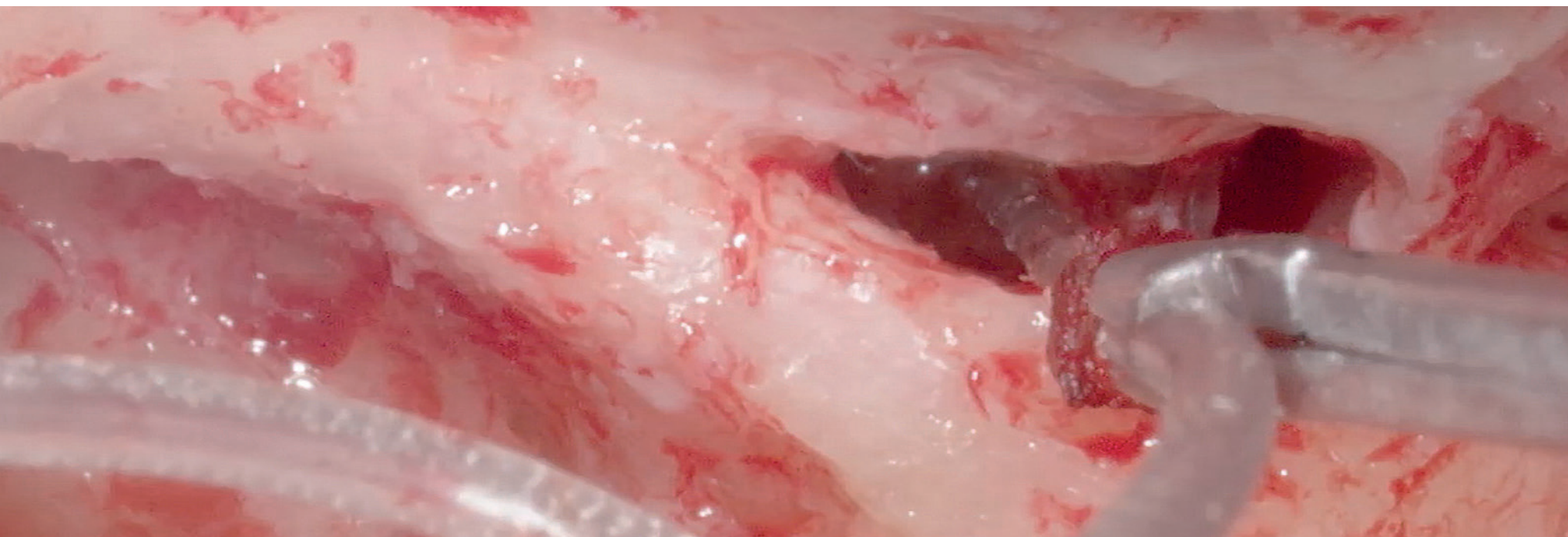
2017 Scientific and Engineering Award

(Scientific and Engineering Award) to ARRI for the forward-looking concept and innovative technology of its Super 35 format ALEXA digital camera system.



“WHEN IT COMES TO THE REQUIREMENTS FOR DIGITAL ENT MICROSURGERY, ARRI MEDICAL HAS A FOCUS LIKE ALMOST NO OTHER MANUFACTURER. WE SEE THIS CLEARLY BOTH IN ROUTINE CLINICAL APPLICATIONS AND IN RESEARCH AND EDUCATION. I FIND ARRI MEDICAL TO BE A RELIABLE PARTNER FOR DEVELOPING NEW APPLICATIONS IN DIGITAL ENT MICROSURGERY.”

Prof. Prof. h. c. Dr. med. Thomas Lenarz,
Clinical Director, Ear Nose and Throat Clinic, Hannover Medical School





ARRISCOPE – The next step in all digital 3D surgical microscopy

Fully digital 3D imaging

- Display in 4K and natural 3D
- LED illumination for natural colors
- A single source for premium video technology

See what really matters

- Digital 3D binoculars
- Picture-in-Picture mode – key information always in view

Assist Mode

- Viewing and telestrating on the surgical field, highlighting e.g. crucial anatomical structures
- All information becomes visible right in front of the surgeon's eyes
- The surgeon remains focused on the procedure without turning away from the binoculars

Ease of use in every detail

- With the ARRISCOPE, surgeons can choose to operate by viewing directly through the binoculars, or by looking at a dedicated 3D monitor
- Simplicity in daily handling due to well thought-out design
- Ease and precision of movement

Sharing the surgeon's experience

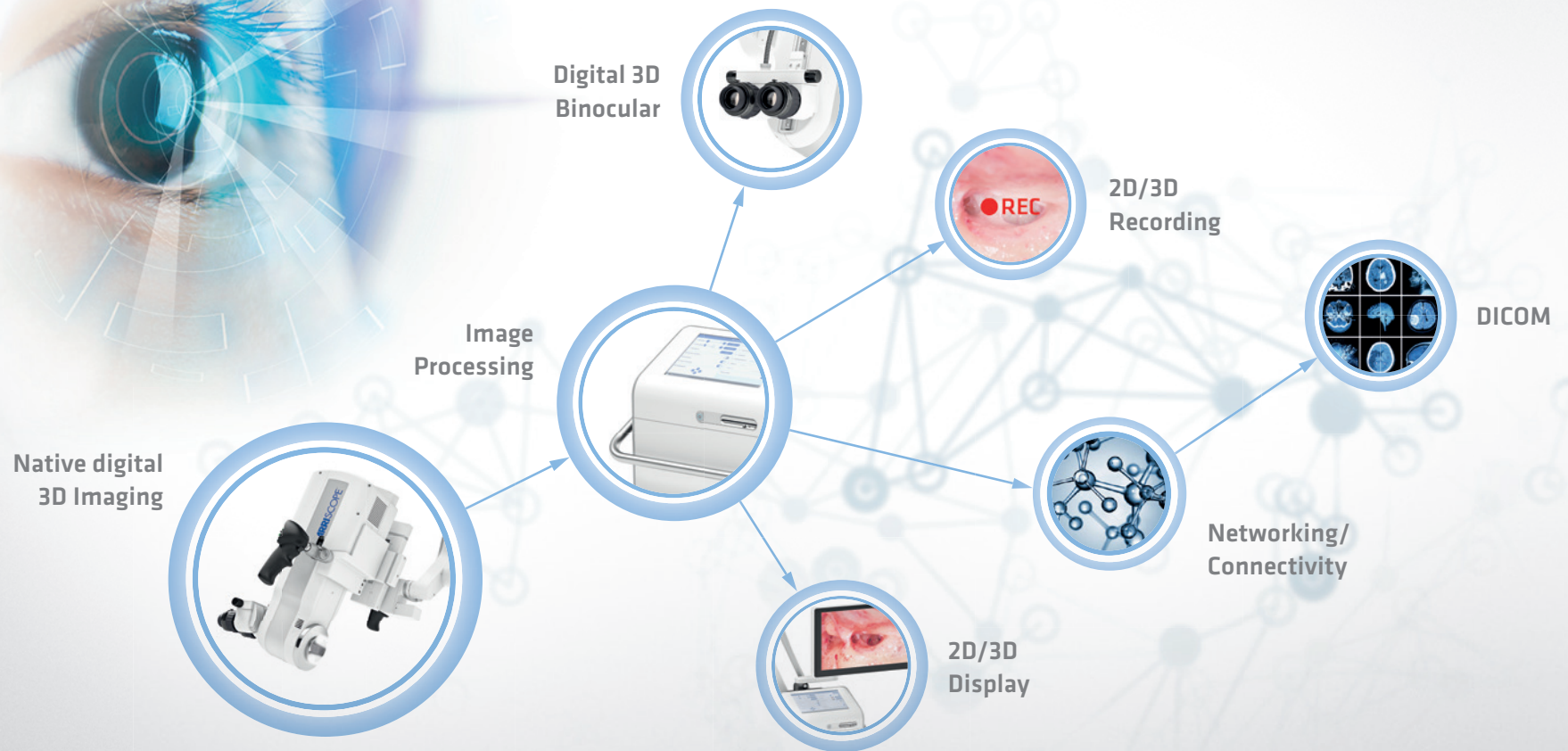
- See with the surgeon's eyes
- Identical view for operator as well as co-observers
- Reach everyone in the OR wirelessly

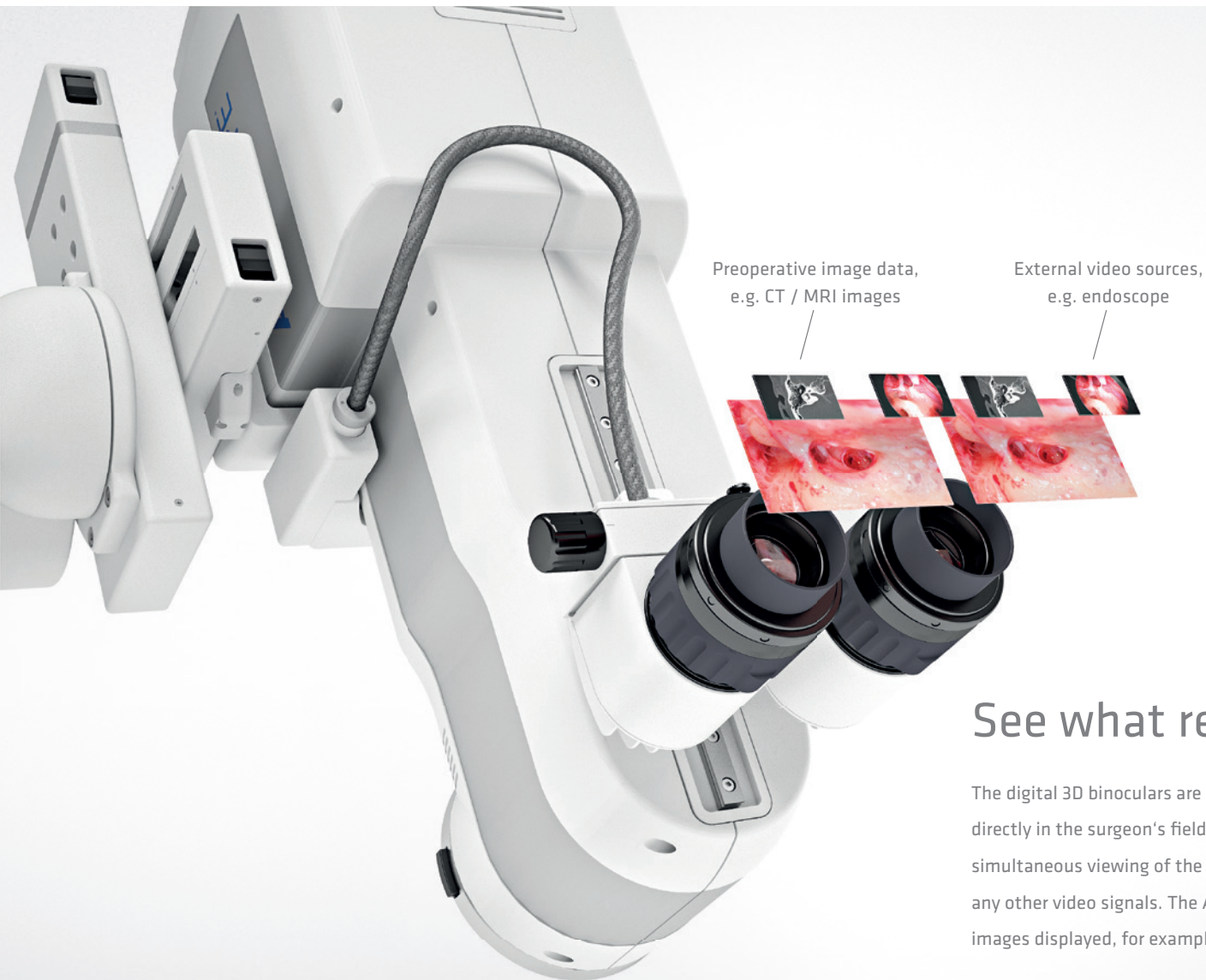
ARRISCOPE – A platform for clinical research

The image of the surgical field is available as a digital signal in full HD quality combined with a powerful image processing chain. A wide range of options are available for enhancing the image signal or enriching it with additional data. For example, highlighting delicate anatomical structures can optimize the surgical workflow. The added clinical benefits of the ARRISCOPE technologies are currently being demonstrated in close collaboration with hospitals and users.

Native Digital 3D Imaging

The ARRISCOPE takes microsurgical imaging to the next technological level. Its all-digital 3D imaging chain provides crystal clear high resolution images and videos. Both LED illumination and the entire imaging chain are manufactured by ARRI and are therefore optimally coordinated.





See what really matters

The digital 3D binoculars are the core element for visualizing key information directly in the surgeon's field of view. The Picture-in-Picture Mode allows for simultaneous viewing of the live image, as well as pre-operative image data and any other video signals. The ARRISCOPE's handgrips provide control over the images displayed, for example magnification and selection of CT and MRI images.

The surgeon can remain immersed completely in the procedure and retrieve exactly the information he needs at any time.

Share the experience instead of just watching

See with the surgeon's eyes

- The treating physician, residents and other observers inside and outside the OR view exactly the same image – the same field of view at the same magnification and focus, in 3D and 4K
- Video recordings are always as brilliant as the surgeon's view

Reach everyone in the OR wirelessly

- ARRI Medical wireless video transmission can display the 3D surgical image on up to four screens at once
- Wireless video transmission reduces the number of tripping hazards in the OR

“ALONG WITH ROUTINE USE, THE MAJOR ADVANTAGE OF THE ARRISCOPE FOR ME IS THAT TRAINEE PHYSICIANS AND CLINICAL STAFF CAN SHARE EXACTLY THE SAME VIEW AS THE SURGEON, IN 3D AND THE HIGHEST IMAGE QUALITY.”

Prof. Dr. med. Robert Mlynski,
Clinical Director of the Ear, Nose & Throat and Head & Neck Surgery Clinic and Polyclinic
at the Otto Koerner Clinic, Rostock University Hospital



A New Benchmark in Clinical Education – Assist Mode



Live support via telestration

Supporting the surgeon with useful information has never been as easy. The touchscreen user interface allows for viewing and telestrating on the surgical field, highlighting e.g. crucial anatomical structures.



Synchronized surgeon's view

All information becomes visible right in front of the surgeon's eyes in the digital binocular. The surgeon remains focused on the procedure without the need to turn away from the binoculars.



Ease of use in every detail

With the ARRISCOPE, the surgeon can choose to view the surgical field directly through the binoculars, or by looking at the monitor

- Looking through the binoculars enables focused intervention with almost no distractions from the surroundings
- Operating using the freely positionable 31" or 55" 4K 3D monitor supports an ergonomic upright posture throughout the procedure

Ease and precision of movement

- Due to its mechanical design, the microscope can be positioned with almost no effort and only one hand
- The stand provides a steady image for stress-free work
- The ARRISCOPE is easy to move and can be positioned wherever needed at the operating table
- The ARRISCOPE's long arm allows the system to be freely positioned and provides the surgeon and all operating room staff optimal access to the patient

Simplicity through sophisticated design

- Accessories can be stored in dedicated compartments on the ARRISCOPE to prevent long search times before and during procedures
- All device functionalities can be intuitively operated from the large touchscreen interface
- An audio interface enables verbal commentary to accompany the recorded videos

ARRI Medical – A partner you can trust

ARRI Medical always focuses on the needs of its customers. This is evident not only in the generation of technical innovations and in the field of surgical visualization. Rather, ARRI Medical is convinced that high-quality technology also deserves high-quality technical service.

ARRI Medical Service always strives to maintain the availability and flawless functioning of the ARRISCOPE so that both the surgeon and the entire OR team can concentrate on what really matters – the patient.

Tailored to the budgets and needs of customers, ARRI Medical Service offers different service concepts. These range from simple maintenance to complete coverage of all service needs including remote support.

	Basic Support	Preventive Support	Premium Support
Guaranteed Response time < 180 minutes (Phone/Mail)	●	●	●
Guaranteed Response time < 3 working days (on-site)	-	-	●
Remote Support	-	○	●
Maintenance incl. labor and expenses	-	●	●
Wear Parts	-	●	●
Repair incl. labor and expenses	-	-	●
Spare Parts	-	-	●
Safety Updates soft- & hardware	●	●	●
Performance Updates soft- & hardware	-	-	●
Additional application training	-	○	●
Event Support e.g. 3D surgery broadcast	○	○	○

● = standard
○ = optional
- = not available

Additional Services



Film in the OR

With its 100 years of experience in the film industry, and its Oscar®-winning camera technology, ARRI guarantees professional documentation of your surgery, conference or seminar.



Post-production

Digital material can be processed according to your wishes. Digital image post-processing, including targeted color adjustment, and sound processing, such as subtitles, audio commentary and dubbing, are possible.



Conference technology

Professional transmission of live surgeries in large format and 3D at conferences and seminars. Viewers experience an excellent image with the highest quality equipment.



Watch a brief overview of the operations in a 3D or 2D video!



www.arrimedical.com/videos



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Visit our YouTube Channel



ARRI Medical - YouTube

ARRISCOPE – Technical data

Standard			
Imaging system	Type	Native digital 3D imaging system	
	Display	Digital 3D binoculars (2 full HD 1920x1080 pixel OLED displays) Monitor with 4K Display (3D – 2 x Full HD right/left)	
	Image sensor	CMOS	
	Dynamic range	14+ f-stops	
	Frame rate	60 Hz	
	Digital video outputs	Fiber optic (HDMI)	
Optics	Zoom	Optical	
	Zoom factor	6x	
Illumination	Working distances	210 mm; 250 mm; 430 mm with variable motorized adjustment range	
	LED	Multispectral high performance LED (cold light source (without IR/UV))	
	Illumination channels	2 (second channel can be switched on/off on demand)	
Stand	Reach	1900 mm	
	Brakes	Electromagnetic brakes on all axes	
	Footprint	750 mm x 750 mm	
	Transport position (l x w x h)	1400 mm x 800 mm x 1900 mm	
	Total system weight	~ 320 kg	
	Operation	User interface	Application-oriented graphic design
Technical data	Hand grips	Multifunctional	
	Power consumption	1200 W	
	Supply voltage	~ 220 V - 240 V	
	Maximum current consumption at 230 V	5 A	
	Supply frequency	50 Hz	
	Electrical standards / norms	EN 60601-1:2006; Cor.:2010 + A1:2013 Safety class I, IP20	IEC 60601-1:2005 + Cor.:2006 + Cor.:2007 + A1:2012 Medical device class I per Directive 93/42/EEC Annex IX
Environmental conditions for operation	Temperature	10°C – 30°C	
	Humidity	30% – 75%	Non condensing humidity
	Air pressure	795 hPa – 1060 hPa	
Options			
Imaging system	Storage medium	USB 3.0 / CFAST 2.0	
	Recording formats	Video (2D, 3D): ProRes 4:2:2 HQ / H.264 (MPEG4)	Still images (2D, 3D): TIFF 16 bit
Video	Integrated monitor	4K 3D 31" (on adjustable support arm)	
	External monitor	4K 3D 31"; 4K 3D 55" (stand-alone or on monitor cart)	
	Wireless video transmission (Full HD)	ARRISCOPE to external monitor	Expandable to up to a total of four monitors
	Video connections	HD-SDI video in / video out	2nd fiber optic video out (HDMI)
Audio	Microphone	Bluetooth headset for recording video commentary	
Data management	DICOM	DICOM Worklist for mapping the patient list from the surgical planning system to the ARRISCOPE DICOM Viewer for displaying preoperative image data in the binoculars and on the monitors of the ARRISCOPE DICOM Query/Retrieve for retrieving and searching preoperative image data from the archive system Reading the DICOM data via network connection	
	Video-in	Picture-in-picture display of external video signals	
Accessories	Laser micromanipulator	Interface for Lumenis AcuSpot 712-Z	



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 ARRI Medical GmbH, Tuerkenstrasse 89, 80799 Munich, Phone: +49 (0)89 9974274-10, info@arrimedical.com, www.arrimedical.com

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ARRISCOPE®

SEE THE DIFFERENCE