

Aesculap Neurosurgery

Kopitnik AVM Microclip System



For the treatment of arteriovenous malformations.

Kopitnik AVM Microclip System



1968

1st generation of Yasargil Aneurysm Clips made of stainless implant steel.



1970

Advanced clip with alpha coil design and ring lock.



1983

Next generation clip made of non-ferromagnetic Phynox with box lock.



1995

Titanium clips for improved post-operative imaging.



2004

Kopitnik AVM Microclip



Apart from cerebral aneurysms, arteriovenous malformations are among the most common cerebrovascular disorders. The widely renowned Yasargil Aneurysm Clips by Aesculap form an established part of the gold standard in microsurgical aneurysm therapy. They are, also, still used in microsurgical angioma operations. However, the extremely delicate vessels often require the application of finer clips. Therefore I have developed, with Aesculap, a special AVM Microclip System for the microsurgical treatment of angiomas.

The Kopitnik AVM Microclip System comprises straight and, for the first time, curved microclips as well as special applying forceps. All these clips are available in the sizes (length) 2, 3, 4, and 5 mm. The applying forceps, which represents a completely new development, allows the operator an excellent view of the pathology and the clip. The slim shaft offers exceptional flexibility within the craniotomy. The rotatable shaft and the unique active lock ensure that the operator can work comfortably and apply the clips safely.

Another innovation incorporated in this AVM Microclip System is that the AVM microclips can be applied either temporarily or permanently. Depending on the operational situation, the clips can be removed or they can be left in site as permanent implants. Phynox is a well-trying material that has proven its reliability in the production of Yasargil Aneurysm Clips for more than 20 years. It offers excellent biocompatibility and can be safely used in MRI fields of up to 1.5 Tesla.

To facilitate the handling of the clips, we also have developed, for the first time, a packaging format of 4 clips per pack, which are available as an alternative to individually packaged clips. The 4-packs were designed to save time and effort in the operation room, especially in operations on large angiomas. Clips that have not been removed from the package can be steam-sterilized in their packaging after the operation – which is an obvious advantage for every hospital, especially in today's economy-driven situation.

As an additional service, every clip comes with a number of small adhesive labels, which can be attached in the patient file kept at the hospital or on the individual patients' IDs, which are also available from Aesculap. In this way, the implants are well-documented for identification especially with regard to postoperative radiological examinations.

Thomas A. Kopitnik



The AVM Microclip System for the treatment of arteriovenous malformations was developed in co-operation with:

Dr. Thomas A. Kopitnik, Jr.

Professor of Neurological Surgery
Southwestern Medical Center, University of Texas
Dallas, USA

Kopitnik AVM Microclips

The complete product program

For the first time not only straight AVM clips, but also AVM clips with curved blades are now available. Each clip comes in four different blade lengths: 2, 3, 4 or 5 mm.

Unique: temporary or permanent application

Depending on the intraoperative situation, the clips can be applied temporarily and removed again after the operation, or they are simply left on the vessel as permanent implants. The Kopitnik AVM Microclips allow both modes of application.

Phynox ... a well-tried material



All clips are made of Phynox, a special cobalt-based alloy. This material has been used for manufacturing e.g. Yasargil Aneurysm Clips for over 20 years. It is characterized by its excellent biocompatibility and MR-safety. This MR-safe material allows safe postoperative radiological examinations at up to 1.5 Tesla*.

Perfect grip ... guaranteed



All Kopitnik AVM Microclips exert a pre-defined closing force of between 50 to 70 gram. They also feature a special, pyramid-shaped structure stamped on the inner blade surfaces. This surface structure allows the tissue to sink in between the pyramid shapes and thus doubles the contact surface for the tissue, ensuring that the AVM Microclip has always a secure grip of the vessel.

More than just packaging ...



The clips are supplied in ergonomically shaped plastic packaging, which can be autoclaved as a whole. Within this packaging, the clip is bedded in a small silicone sponge in such a way that the clip applicator itself can be used for grasping and taking the clip from the packaging.

*Frank G. Shellock, PhD
Biomedical Implants and Devices: Assessment of Magnetic Field Interactions With a 3.0-Tesla MR System.
Journal of Magnetic Resonance Imaging 16:721-732 (2002)



Documentation for the hospital



The clips are available either individually packed or in 4-packs. Especially when several clips must be applied in major AVM operations, the 4-pack facilitates the intraoperative procedure, most notably by allowing the speedy loading, handing over and application of several clips. Unused clips can be autoclaved, without any problem, in this special, heat-resistant packaging, so that they are ready for use in the next operation.

Several sticker labels showing the article and lot number of each individual clip are enclosed with every package. The labels can be included with patient's file kept by the hospital.

In this way it is ensured that the hospital can trace back every clip ever implanted by its surgeons.

Documentation for the patient



One of the labels can be stuck into the credit-card sized, special patient ID (implant ID for the patient) that is available for the product. Thanks to this ID card, the patient has the necessary information about the implanted clips (especially concerning MR-safety) readily available for possible radiological check-ups using MRI. Please contact your B. Braun Aesculap sales representative with any inquiries regarding the patient IDs.

AVM Microclip Appliers – XS-Design

Impressive design

The innovative tubular shaft applier offers maximum comfort for the operator.

The slim shaft gives the operator maximum freedom of movement for manipulations in the craniotomy and allows the best possible view of the clip during the entire application process. This is also supported by the slightly angled position of the clip between the applier jaws, which automatically keeps the clip within the surgeon's field of vision.



Compatibility

By their design, the proximal clip spring and the distal jaw part are geometrically matched to each other. In this way, all clip sizes can be applied with any clip applier.

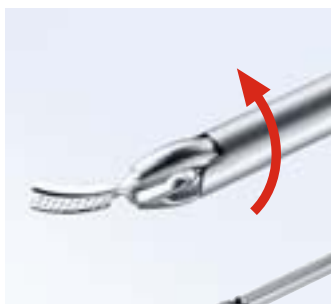


Active locking ... you decide!

The locking mechanism, which can be activated at will, is a complete novelty. You decide whether you want to use the applicator with or without a locking function.

As long as you do not actuate the lock button, the locking function remains inactive and the applicator can be used without the lock ever engaging.

When the lock is activated by pressing the button at the applicator handle, the lock engages and keeps the clip in position between the half-opened jaws. As soon as the handles are compressed, the mechanism unlocks automatically and is only engaged again when the operator decides to press the button again. In this way, the safe and shudder-free application of the clips is ensured. Conventional clip applicators lock automatically whenever they are closed or opened, which can lead to accidental jamming or canting of the lock.



Ergonomics to make work easier

A special ratchet mechanism allows rotating the sheath in 12 steps by a full 360°. In this way, the clip can be freely positioned for application, while the hand posture of the operator remains comfortable and ergonomic during the application process.



Product Program

Kopitnik AVM Microclips







Packaging with
4 Kopitnik AVM Microclips







Packaging with
1 Kopitnik AVM Microclip



Kopitnik AVM Microclips straight, closing force between 50 g and 70 g

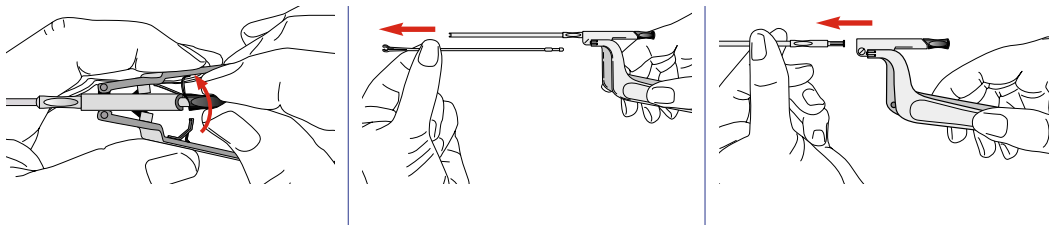
Blade length	Max. opening width	Single pack	4-pack	
2 mm, 1/13"	1.5 mm, 1/17"	FE902K	FE922K	
3 mm, 1/8"	1.7 mm, 1/15"	FE903K	FE923K	
4 mm, 1/6"	2.0 mm, 1/13"	FE904K	FE924K	
5 mm, 1/5"	2.3 mm, 1/11"	FE905K	FE925K	

Kopitnik AVM Microclips curved, closing force between 50 g and 70 g

Blade length	Max. opening width	Single pack	4-pack	
2 mm, 1/13"	1.5 mm, 1/17"	FE912K	FE932K	
3 mm, 1/8"	1.7 mm, 1/15"	FE913K	FE933K	
4 mm, 1/6"	2.0 mm, 1/13"	FE914K	FE934K	
5 mm, 1/5"	2.3 mm, 1/11"	FE915K	FE935K	

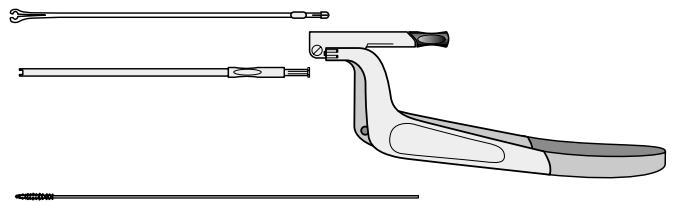
Product Program

AVM Clip Appliers



Dismountability

For through cleaning, the XS-design AVM Applier can be separated into 3 parts. Each applier is supplied with a small cleaning brush, for perfect cleaning results.



AVM Clip Applier – XS-Design

FE906K

Working length 40 mm, 1½"

FE907K

Working length 70 mm, 2¾"

FE908K

Working length 90 mm, 3½"

FE909K

Working length 110 mm, 4⅓"



AVM Clip Applier

FE917K

Working length 70 mm, 2¾"

FE918K

Working length 90 mm, 3½"





AESCULAP®

All it takes to operate.

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SHARING EXPERTISE

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