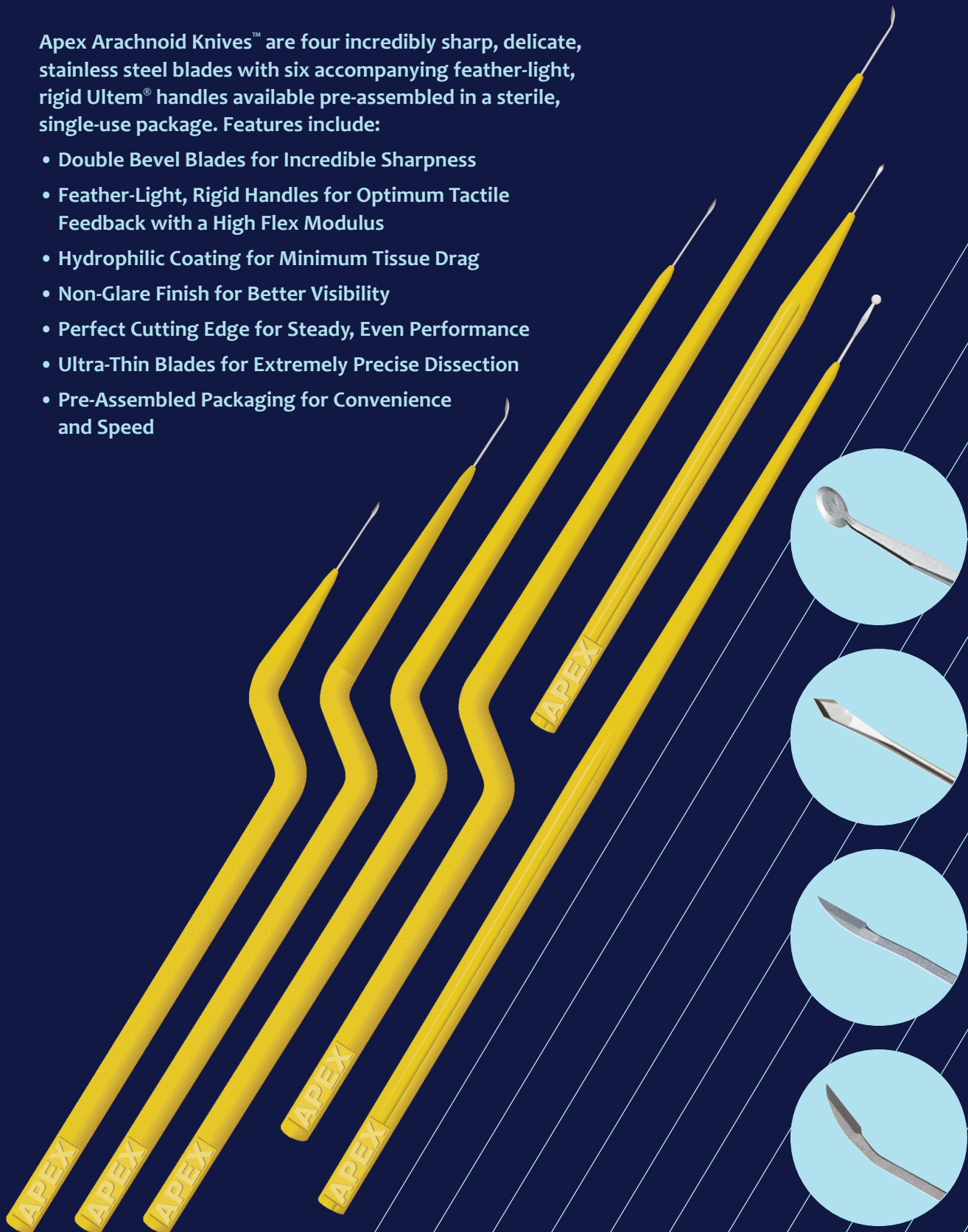


APEX ARACHNOID KNIVES™

Apex Arachnoid Knives™ are four incredibly sharp, delicate, stainless steel blades with six accompanying feather-light, rigid Ultem® handles available pre-assembled in a sterile, single-use package. Features include:

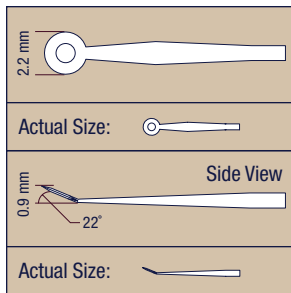
- Double Bevel Blades for Incredible Sharpness
- Feather-Light, Rigid Handles for Optimum Tactile Feedback with a High Flex Modulus
- Hydrophilic Coating for Minimum Tissue Drag
- Non-Glare Finish for Better Visibility
- Perfect Cutting Edge for Steady, Even Performance
- Ultra-Thin Blades for Extremely Precise Dissection
- Pre-Assembled Packaging for Convenience and Speed



Designed in collaboration with leading Surgeons

BLADES

CIRCULAR



CIRCULAR 0°



2.2 mm circular blade with a 0.9 mm tip width and 320° cutting edge

Developing Planes: Facilitates the flow of an operation by permitting the transition from sharp to blunt dissection.

The most robust of the four knives.

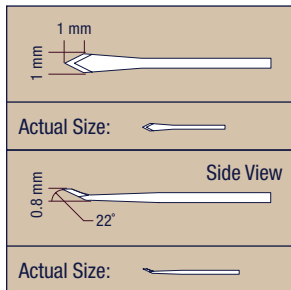
If presented with plane of arachnoid in a very small space the circular knife can be used to make a small hole prior to using the Backcutting Knife to more safely strip away tissue.

Surgeons use a rotating motion to move the leading edge across the surface either in a horizontal or vertical orientation. While using the knives in this manner, a surgeon can part the very top surface of tissue without penetrating deeper than the curved blade edge.

Because the circumference is sharp 320° around, the inside angle on either side can be used to catch and pull tissue.

This knife can also be used for heavier dissection in some of the most delicate spinal applications.

PENETRATOR



PENETRATOR 0°



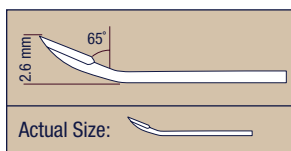
1.0 mm lancet blade with a 0.8 mm tip width

Pinpoint Precision: Permits meticulous pinpoint dissection in areas where no tension is permissible.

The sharpest of the four knives.

The Penetrator permits dissection without tension for operations requiring the utmost delicacy, such as dissecting adhesions from a carotid or an optic nerve or dissecting clot and scar tissue from the base of an aneurysm.

BACKCUTTING



2.6 mm tip width with a 65° blade angle

Safe Dissection Over Critical Areas: Dissect with confidence over the most critical and delicate structures.

The bottom of the blade is dull.

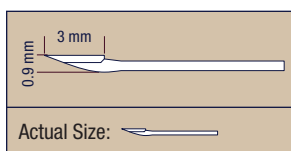
The safest and most popular knife for dissection over critical areas.

Not recommended for operating in an unopened plane of arachnoid, because surgeons would have to push the point down into an unknown area before it would cut.

Surgeons usually use the Circular Knife for making the initial incision in a plane before following the same incision with a backcutting blade.

The AM-23-S knife is often used to perform arteriotomies for cranial bypass operations.

SIDECUTTING



3.0 mm blade length and 0.9 mm tip width

Safe Precise Dissection: Slim profile with safe edge allows for safety and precision in tight areas.

The Sidecutting Knife has the same safe edge as the Backcutting Knife but is not angled.

Because of its slim profile, it fits into areas where the angled distance between the heel and tip of the Backcutting Knife would limit its maneuverability.

Because of its slim profile, the sharp tip of the Sidecutting knife is less visible than that of the Backcutting Knife in deep operations. However, this knife can fit in areas that would otherwise be inaccessible.



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HANDLES

- ① **8.0" Length Straight Knife Handle**
Some surgeons hold the smooth tapered distal portion of the handle and "choke up" on the knife during surgery near the surface of the brain, or operate with wrist rests. The 4.0" length tapered distal shaft permits precise delicate controlled microsurgery for many superficial and deep seated lesions while permitting you to rotate the shaft to change your angle of attack.

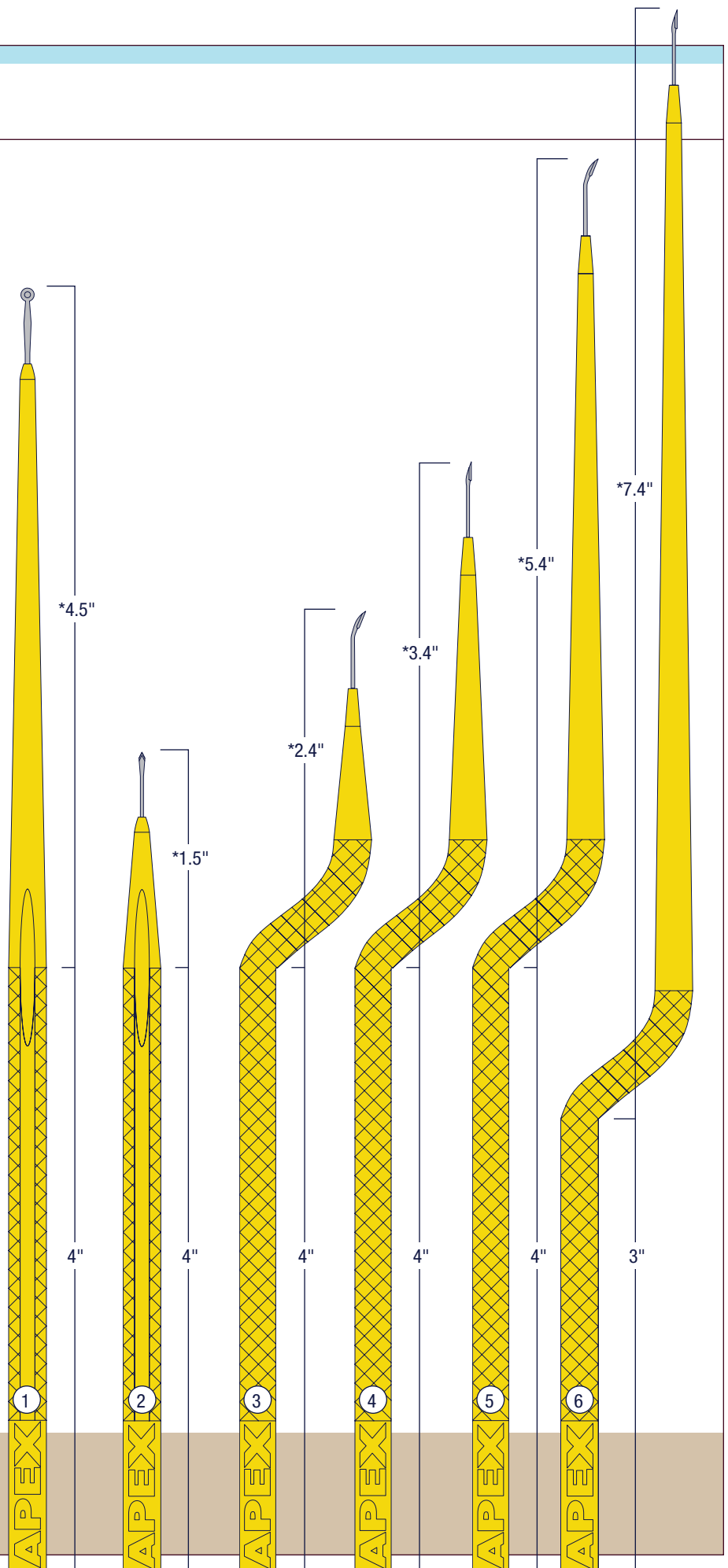
- ② **5.0" Length Straight Knife Handle**
The shorter handle length enables meticulous control at superficial depths. This length is effective for opening the Sylvian or interhemispheric fissure.

- ③ **Extra Short Bayonet Knife Handle**
2.4" Distal Working Length
The extra short bayonet handle provides an instrument designed for the most superficial depths. The 1.0" distal shaft length permits precise control for superficial lesions, particularly for translabrynthine approaches and other neurotological lesions.

- ④ **Short Bayonet Knife Handle**
3.4" Distal Working Length
The short bayonet handle provide an instrument suitable for operating at some depth. The 2.0" distal shaft length is suited to subtemporal, eyelid or any other open approach.

- ⑤ **Bayonet Knife Handle**
5.4" Distal Working Length
This bayonet handle provides visibility and control for deep seated lesions, including EEA, transorbital and intramedullary tumors.

- ⑥ **Extended Bayonet Knife Handle**
7.4" Distal Working Length
The extended bayonet handle, with its 6.0" tapered distal shaft, permits precise surgery in relatively inaccessible regions of the brain, where the standard bayonet would not be usable. The 0.25" diameter proximal handle is shortened from 4.0" to 3.0", to keep the overall length usable in the field.



All Handle Drawings
Are Shown Actual Size

*Working Length

WHY USE APEX ARACHNOID KNIVES™?

- Apex Arachnoid Knives™ are four, precise, ultra-thin, knives available on six accompanying handles for use in cerebrovascular, tumor, spinal, and epilepsy procedures.
- Each blade is manufactured from extremely hard 400 series stainless steel. This material enables Apex to etch an extremely acute edge on the blade. The feather-light handle is manufactured from an extremely stiff Ultem® plastic for better tactile feedback and no whiplash.
- Apex blades are chemically etched to provide a perfect cutting edge. The proprietary hydrophilic blade coating ensures minimum tissue drag and the feather-light yet stiff handle provides optimum tactile feedback. The combination of these three important factors enhances a surgeon's ability to perform elegant microsurgery.
- Apex Arachnoid Knives™ permit delicate, safe, sharp microdissection in situations where it is simply impossible to safely use a less elegant instrument. Even for relatively simple superficial dissections, Apex Arachnoid Knives™ help to preserve delicate tissue and improve patient outcomes. Apex Arachnoid Knives™ are the superior instrument for delicate dissections as well as for instances where pulling on delicate structures is not permissible.
- Apex Arachnoid Knives™ are superior to scissors and reusable knives. Although the arachnoid can be dissected with scissors, often the angle of attack is poor and a reusable knife is used instead.

However, a reusable knife will subject delicate structures to much greater stress and risk of damage. Dissections with a sharp, appropriately angled knife, such as Apex Arachnoid Knives™, is much safer and faster, and greatly increases the speed of dissection. A few minutes of OR time saved more than pays for these knives — this time savings has been the justification for bioplate, craniotomy closure, staples for skin closure, or paper drapes.

How are Apex Arachnoid Knives™ sold?

- Apex Arachnoid Knives™ are sold individually, preassembled in a sterile peel pack.
- Apex Medical recommends that Apex Arachnoid Knives™ be used only once. The fine razor thin edge is precisely what makes these knives unique. It is impossible to maintain the sharpness of a fine delicate edge with extended use. These knives are so sharp, that even when dulled through use, they remain much sharper than any instrument previously used in surgery. With such sharpness, a surgeon may not realize that the performance of the knife has deteriorated significantly.
- Please contact Apex Medical Inc. by phone at 610-240-4905 or by e-mail at information@apexmed.com and we will direct you to the appropriate distributor for Apex Arachnoid Knives™.
- For more information, call Apex Medical at 610-240-4905, e-mail Apex Medical at information@apexmed.com, or visit Apex Medical on the web at www.apexmed.com.

WHO USES APEX ARACHNOID KNIVES™?

"Apex knives are the sharpest and most reliable on the market. They deliver the critical precision necessary for microsurgical procedures on the brain and cranial base."

- James J. Evans, MD Thomas Jefferson University Hospital

"I won't do a bypass without Apex knives."

- David Langer, M.D., Albert Einstein College of Medicine

"The Apex knives are versatile tools for sharp dissection of arachnoid planes in both open and endoscopic skull base surgery."

- James K. Liu, M.D., Rutgers

"The Apex knife is the best too for opening the arachnoid of the Sylvian fissure and for separating cranial nerves from a tumor surface microscopically."

- Harry R. Van Loveren, M.D., University of South Florida

"Apex knives are ergonomically designed to facilitate precision microsurgery. They are an extension of the surgeons hands."

- Howard A. Rina, MD, NYU Grossman School of Medicine

"I use the Apex knife for dissecting the cranial nerves and vessels off tumor capsule. It also allows me to sharply identify the dorsal nerve root entry zone in tethered and retethered spinal cord cases."

- Peter P. Sun, M.D., Children's Hospital of Oakland

"There is no replacement for Apex knife for arteriotomy. Why would one even attempt a bypass without it?"

- Amir R. Dehdashti, MD, North Shore University Hospital

"What I like about the Apex arachnoid knife is that they're lightweight, have extremely sharp cutting edges and the fact that they are disposable. So every time I use a knife it is of the same sharpness. The variable lengths, straight and bayonet handle shapes, is also a nice feature depending on the depth from the surface of the brain where we're operating."

- Michael McDermott, M.D., Miami Neuroscience Institute

CATALOG NUMBERS

Blade	8" Length Straight Handle	5" Length "S" Superficial Straight Handle	2.4" Distal Length "XS" Extra Short Bayonet Handle	3.4" Distal Length "SB" Superficial Bayonet Handle	5.4" Distal Length "B" Bayonet Handle	7.4" Distal Length "X" Extended Bayonet Handle
Circular	AM-21	AM-21-S	AM-21-XSB	AM-21-SB	AM-21-B	AM-21-X
Circular 0°	AM-21-0					
Penetrator	AM-22	AM-22-S	AM-22-XSB	AM-22-SB	AM-22-B	AM-22-X
Penetrator 0°		AM-22-S-0				
BackCutting	AM-23	AM-23-S	AM-23-XSB	AM-23-SB	AM-23-B	AM-23-X
SideCutting	AM-24	AM-24-S	AM-24-XSB	AM-24-SB	AM-24-B	AM-24-X



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