# 12 Microtomy and Histology

Standard boat and holder





Old style boat and holder





Dry Cryo Knife

Trade-in Prices

Exchanges

Upgrades

Wet Cryo Knife

### DDK Diamond Knives (Delaware Diamond Knives Inc)

DDK have a long history with electron microscopy and the roots go back to the DuPont knives of the 1960's. DDK was formed in March 1986 when the DuPont diamond knife business was purchased by the manager of the DuPont EM business and operated as DDK. The Company has a vast knowledge of the applications of their products.

All knives are made from gem quality diamonds and the holder is anodised aluminium or stainless steel (cryo). The epoxy sealing the diamond into the boat is impervious to all solvents and is hydrophilic so that edge wetting is not a problem. The clearance angle is factory set for 4°.

The standard included knife angle is 45° but other angles such as 55° or 35° are available on request as a no cost option. Custom knives and angles can also be specified.

All knives may be resharpened an infinite number of times.

The quality of new and resharpened knives is second to none

## **DDK Knives for Ultramicrotomy**

We will normally supply a 45° diamond blade sealed in the standard, black anodised holder with a large oval reservoir which will fit all standard ultramicrotomes. Please contact us if you require other included angles. The old boat style is still available. Please indicate this on your order should you prefer it.

### Edge Lengths mm

K113/10 1.0-1.4	K113/15 1.5-1.9	K113/20 2.0-2.4	K113/25 2.5-2.9
K113/30 3.0-3.4	K113/35 3.3-3.9	K0113/40 4.0-4.4	K113/45 4.5-4.9
K113/50 5.0-5.4	K113/55 5.5-5.9		

Cryo knives are available in the same sizes with holders in *stainless steel*. For Dry Cryo Knives please add the suffix /C and for cryo knives with boats please add the suffix /CW

Example: the Cat. No. for a 3mm Dry Cryo knife is K113/30/C for a 3mm Wet Cryo knife is K113/30/CW



Please ask about:

## DDK "Histoknives" for Histology

The DDK diamond histo knives are made from natural diamond and will cut thin sections of plastic embedded tissue/material. Suitable for Biological or Materials work they are a cost-effective solution for cutting semi-thin or hard materials. As with the Ultra knives they may be resharpened an infinite number of times.

### Edge Lengths in mm

K114/20 2.0-2.9	K114/30 3.0-3.9	K114/40 4.0-4.9	K114/50 5.0-5.9
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## Microtomy and Histology

### **DDK Triangular Tungsten Carbide Knives**

A disposable knife made to fit glass knife holders on ultramicrotomes or specialised rotary microtomes for cutting location sections 2—15µm or trimming plastic blocks or hard specimens. Example applications are:

Serial sectioning of the cornea, mouse brains, fish embryos, Spinal cords, Section scanning, Polyester film and hard materials, Trimming / block facing, Ovaries / Fish eggs, Skin biopsies, Bone marrow biopsies and mineralized bone, Lymph nodes, Decalcified bone.

### Specifications:

Cutting edge length	9.6mm (0.38")
Blade height	25.4mm (1")
Cutting angle	40°
Material	100% high grade, solid Tungsten Carbide

K119 DDK triangular tungsten carbide knife pack of 3

## DDK Disposable Tungsten Carbide Knives

These blades give improved productivity and versatility when sectioning plastic. They feature a low angle (35°) for best quality sections of soft samples. Try them for your toughest cryostat sectioning problems, too! Other applications are:

- Fibres in GMA Cartilage in paraffin Renal biopsies in GMA Paint samples in GMA Neurotox studies in GMA
- 3µm 5µm 1.5µm 3µm 1µm

Animal tissues in cryostat	3µm
Decalcified bone in paraffin	5µm
Skin in cryostat	7µm
Eucalyptus root in GMA	1µm
Tumours in GMA	2µm

KXXX Disposable tungsten carbide blades

### Sapphire Knife Synthetic Single Crystal Sapphire

These cost effective knives offer outstanding section quality, easily cutting through a variety of densities with consistency and are unconditionally guaranteed. With a sapphire knife, thinner sections are possible with vibrating microtomes. Made from synthetic single-crystal sapphire, the more-perfect edge of this knife gives distortion-free sections under 10 microns thick. Makes the vibrating microtome an attractive alternative to the cryostat when you need thin sections of fresh or lightly fixed tissue for fluorescent label-ling, autoradiography, immunohistochemistry, etc.

With cleaner sections and smoother surfaces the sapphire knife provides significantly improved section quality over traditional razor blades, particularly in electrophysiology applications. By making a cleaner cut, the surface cells remain alive and intact, so the researcher can more easily explore the live and responsive interior cells. The clean cut produced by the sapphire knife results in vibratomed sections for histology that have smoother surfaces, making it easier to follow small labelled elements.

Avoid the hassles of frequent changing of disposable blades! Take care to avoid contact of the edge with anything other than your sample and your sapphire knife edge will last for thousands of sections. The knife is easily cleaned of glue and tissue and fits tightly in knife holders of most vibrating microtomes.

### Specifications

Height 12mm (0.5") Length 40mm (1<sup>1</sup>/<sub>2</sub>") Width 0.9mm (0.035")

B581 Sapphire blade (each)



