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Instrumenting scientific ideas

Precision Surgical Instruments

2016 Catalog

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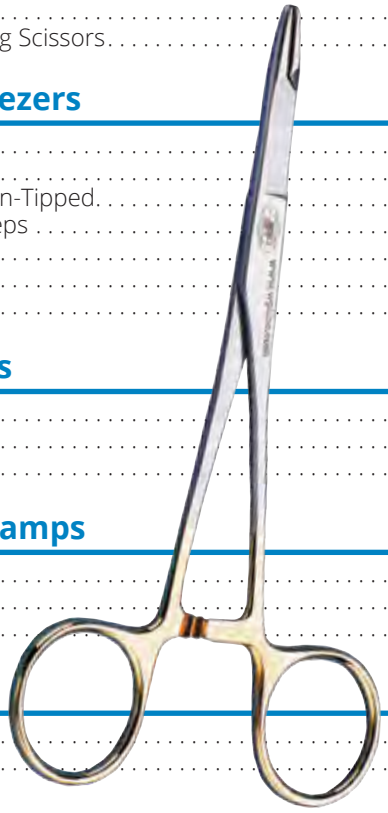

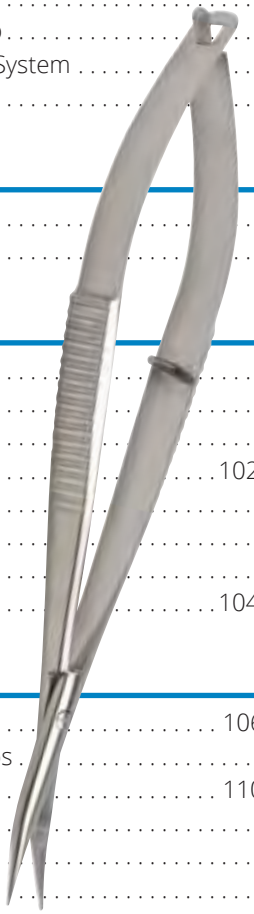

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Spring Scissors

- May be used with either left or right hand
- Designed for neurosurgical, vascular and microsurgical uses
- Cuts by shearing, reduces crushing of tissue
- Fine tips are ideal for use in very restricted spaces
- Curved tips are useful to avoid cutting of underlying tissue
- Thickness blades are helpful when a thick tissue or vessel is to be cut
- Length of the scissor tips can help with the depth of the incision:
  —Shorter tips for near-to-surface incision
  —Longer tips for deep incision

Vannas Scissors, *Super Fine,* Stainless Steel

	501778	**501839**
Length	8 cm	8 cm
Blades	straight 3 mm	curved 3 mm
Tips	0.015 x 0.015 mm	0.015 x 0.015 mm

Tip Profile:

1:1

Vannas Scissors, Stainless Steel

	500086	**501232**
Length	8.5 cm (3.3")	8.5 cm (3.3")
Blades	straight 7 mm	curved 7 mm
Tips	0.025 x 0.015 mm	0.025 x 0.015 mm

Tip Profile:

1:1

Vannas Scissors, Stainless Steel

	Standard	*German*
	14003	**14003-G**
Length	8 cm (3 in.)	8 cm (3 in.)
Blades	straight 5 mm	straight 5 mm
Tips	0.1 mm tips	0.1 mm tips

Tip Profile:

1:1

Standard and German versions may differ slightly in appearance.

Vannas Scissors, Stainless Steel

	Standard	*German*
	14122	14122-G
Length	8 cm (3 in.)	8 cm (3 in.)
Blades	curved, 5 mm	curved, 5 mm
Tips	0.1 mm tips	0.1 mm tips

Tip Profile:

1:1

Standard and German versions may differ slightly in appearance.

Vannas Scissors, Stainless Steel

	501790
Length	8 cm (3 in.)
Blades	angled, 5 mm
Tips	0.1 mm tips

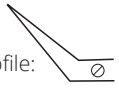
Tip Profile:

1:1

Vannas Scissors, Stainless Steel

	Standard	*German*
	500260	**500260-G**
Length	8 cm (3 in.)	8 cm (3 in.)
Blades	45° angle, 5 mm	45° angle, 5 mm
Tips	0.1 mm tips	0.1 mm tips

Tip Profile:

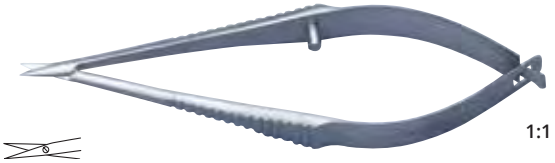


1:1

Standard and German versions may differ slightly in appearance.

McPherson-Vannas Scissors, Stainless Steel

	14177	**501233**
Length	7 cm (2.75 in.)	7 cm (2.75 in.)
Blades	straight 3 mm	curved 3 mm
Tips	0.1 mm	0.1 mm



1:1

Tip Profile:

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Micro Scissors—Diamond Coated Blades

The special diamond coated blades will increase the longevity of the cutting edge and improve the quality of the cut. Used to reduce wear on razor blades and industrial metal cutting tools, this coating is now being used in biomedical applications. Some studies have shown that even after double the normal usage of the cutting implement, no blade wear was detected.

- Hardness of coated surface resists wear and increases life of cutting edge
- Anti-reflective coating resists glare and assists in better view of surgical field
- Coating is corrosion resistant
- Reduced friction at cutting site decreases necrosis of surrounding tissue and bone

Micro Scissors, Stainless Steel

	503365	503364
Length	12 cm (4.75 in.	12 cm (4.75 in.
Blades	straight, 8 mm	curved, 8 mm
Tips	sharp, coated	sharp, coated

Vannas Scissors, Stainless Steel

	503371	503372
Length	9 cm (3.5 in.)	9 cm (3.5 in.)
Blades	straight, 6 mm	curved, 6 mm
Tips	3 mm cutting edge	3 mm cutting edge

McPherson-Vannas Scissors, Stainless Steel

	Standard	*German*	*Standard*	*German*
	14124	**14124-G**	**501234**	**501234-G**
Length	8 cm (3 in.)	8 cm (3 in.)	8 cm (3 in.)	8 cm (3 in.)
Blades	straight 5 mm	straight 5 mm	curved 5 mm	curved 5 mm
Tips	0.1 mm	0.1 mm	0.1 mm	0.1 mm

Tip Profile:

Standard and German versions may differ slightly in appearance.

These scissors have slightly rounded tips for blunt dissection.

McPherson-Vannas Scissors, Stainless Steel

	503215
Length	8 cm (3 in.)
Blades	straight, 3 mm
Tips	0.22 mm rounded tips

Tip Profile:

McPherson-Vannas Scissors, Stainless Steel

	503217
Length	8 cm (3 in.)
Blades	curved, 5 mm
Tips	0.3 mm rounded tips

Tip Profile:

McPherson-Vannas Scissors, Stainless Steel

	503216
Length	8 cm (3 in.)
Blades	angled on flat, 5 mm
Tips	0.5 mm rounded tips

Tip Profile:

McPherson-Vannas Scissors, Stainless Steel

	503214
Length	8 cm (3 in.)
Blades	45 angled to side, 5 mm
Tips	0.22 mm rounded tips

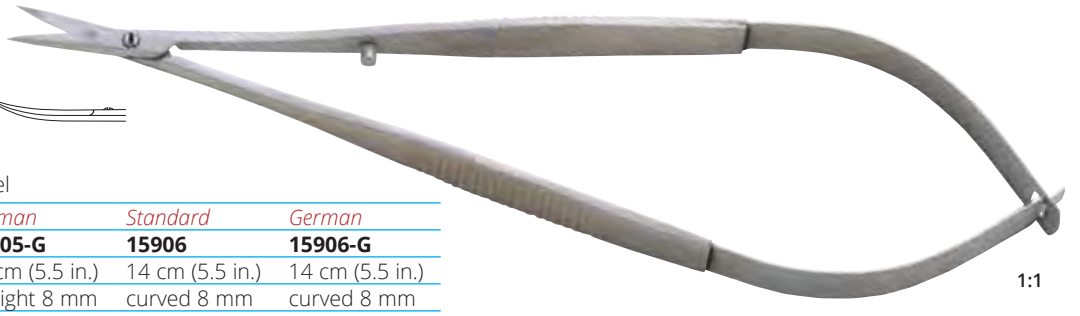
Tip Profile:

Vannas Tubingen Scissors, *German Steel*

	503378	503379
Length	8 cm (3 in.)	8 cm (3 in.)
Blades	straight, 3 mm	curved, 3 mm

1:1

Tip Profile:



1:1

Spring Scissors, Stainless Steel

	Standard	*German*	*Standard*	*German*
	15905	**15905-G**	**15906**	**15906-G**
Length	14 cm (5.5 in.)	14 cm (5.5 in.)	14 cm (5.5 in.)	14 cm (5.5 in.)
Blades	straight 8 mm	straight 8 mm	curved 8 mm	curved 8 mm

Standard and German versions may differ slightly in appearance.

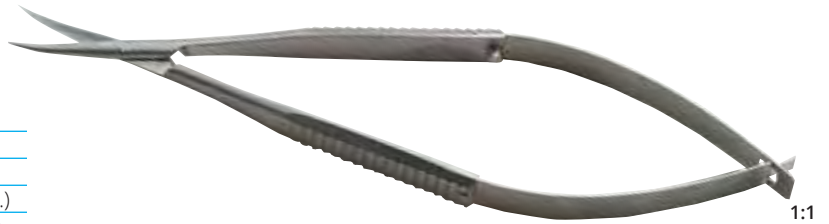
one edge micro serrated, one edge honed to the sharpness of a knife edge

1:1

Spring Scissors, *SuperCut,* Stainless Steel

	501924	501925
Length	12.5 cm (4.9 in.)	12.5 cm (4.9 in.))
Blades	straight 9mm	curved 9mm

Tip Profile:



1:1

Spring Scissors, Stainless Steel

	Standard	*Standard*	*German*
	501235	**14127**	**14127-G**
Length	10.5 cm (4 in.)	10.5 cm (4 in.)	10.5 cm (4 in.)
Blades	straight 8 mm	curved 8 mm	curved 8 mm

Standard and German versions may differ slightly in appearance.

Tip Profile:

1:1

Spring Scissors, Stainless Steel

	Standard	*German*	*Standard*
	14125	**14125-G**	**14126**
Length	12 cm (4.75 in.)	12 cm (4.75 in.)	12 cm (4.75 in.)
Blades	straight 12 mm extra fine and long	straight 12 mm extra fine and long	curved 12 mm extra fine and long

Standard and German versions may differ slightly in appearance.

Noyes Scissors, *sharp/sharp tips*

Standard	
500228	12 cm long, straight 15 mm blades
501236	12 cm long, curved 15 mm blades
501237	14 cm long, straight 20 mm blades
501238	14 cm long, curved 20 mm blades
503305	12 cm long, straight, sharp/blunt
503306	12 cm long, straight, blunt/blunt
German	
500228-G	12 cm long, straight 15 mm blades
501236-G	12 cm long, curved 15 mm blades

1:1

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NEW!

Ceramic Coating

• keeps blades sharp
• resists chemicals
• reduces glare

Vannas Tubingen Scissors, Stainless Steel

	504488	504499
Length	8 cm (3.1 in.)	8 cm (3.1 in.)
Blades	Straight, ceramic coated, 5mm cutting edge, 0.3mm tip	Curved, ceramic coated, 5mm cutting edge, 0.3mm tip

See page 13 for information on ceramic coating.

McPherson-Westcott Conjunctiva Scissors, Stainless Steel

	504023
Length	11 cm (4.3 in.)
Blades	curved, blunt, 9 mm

Katena-Vannas Scissors, Stainless Steel

	504024	504025
Length	11 cm (4.3 in.)	11 cm (4.3 in.)
Blades	straight, thin, 7 mm	curved, thin, 7 mm

Katena-Vannas Scissors, Stainless Steel

	504026	504027
Length	11 cm (4.3 in.)	11 cm (4.3 in.)
Blades	straight, thin, 10mm	curved, thin, 10mm

Tip Profile:

Spring Scissors, round handles, Stainless Steel

	Standard	*German*
	14112	**14112-G**
Length	14 cm (5.5 in.)	14 cm (5.5 in.)
Blades	curved 7 mm	curved 7 mm

Standard and German versions may differ slightly in appearance.

Spring Scissors, round handles, Stainless Steel

	Standard	*German*
	14111	**14111-G**
Length	14 cm (5.5 in.)	14 cm (5.5 in.)
Blades	straight 6.5 mm	straight 6.5 mm

Standard and German versions may differ slightly in appearance.

Biemer Scissors, Stainless Steel

	500381
Length	13 cm (5 in.)
Blades	straight

Tip Profile:

Cuts vessels perpendicularly and without slipping.

Stern-Gills Scissors, Stainless Steel

	504490
Length	10 cm (3.9 in.)
Blades	Sharp Tip, 10mm delicate blade, angled forward

1:1

Noyes Spring Scissors, Stainless Steel

	504491
Length	12 cm (4.75 in.)
Blades	14mm cutting edge, angled up

1:1

Westcott Round Blade Scissors, Stainless Steel

	504492
Length	14.5 cm (5.7 in.)
Blades	10mm cutting edge, angled

1:1

Titanium Scissors

- 100% non-corrosive (great for seawater procedures)
- 100% non-magnetic (MRI compatible)
- 40% lighter than stainless steel (reduces hand fatigue)
- Anodized, non-glare blue finish

Vannas Scissors
Length: 8 cm (3.1 in.)
Tips: straight, 3 mm
Titanium **14364** . . . . . .

Vannas Scissors
Length: 8 cm (3.1 in.)
Tips: angled, 3mm
Titanium **14365** . . . . . .

1:1

Vannas Scissors
Length: 8.2 cm (3.2 in.)
Tips: sharp, 9.5 mm, angled to side
Titanium **555647S** . . . . . .

1:1

Vannas Scissors
Length: 8.2 cm (3.2 in.)
Tips: sharp tips angled, 9.5 mm
Titanium **555641S** . . . . . .

1:1

Vannas Scissors
Length: 8.2 cm (3.2 in.)
Tips: sharp tips straight, 9.5 mm
Titanium **555640S** . . . . . .

1:1

Iris Scissors
Length: 9 cm (3.5 in.)
Tips: sharp, 11 mm curved
Titanium **555561S** . . . . . .

1:1

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Iris Scissors
Length: 9 cm (3.5 in.)
Tips: sharp, 11 mm straight
Titanium **555560S** . . . . . .

1:1

Vannas Scissors
Length: 9.5 cm (3.7 in.)
Tips: angled sharp, 10.5 mm
Titanium **555584S** . . . . . .

1:1

Vannas Capsulotomy Scissors
Length: 9.5 cm (3.7 in.)
Tips: curved, sharp, 12.5 mm
Titanium **555583S** . . . . . .
Length: 10.5 cm (4.1 in.)
Tips: curved, sharp, 12.5 mm
Titanium **555582S** . . . . . .

1:1

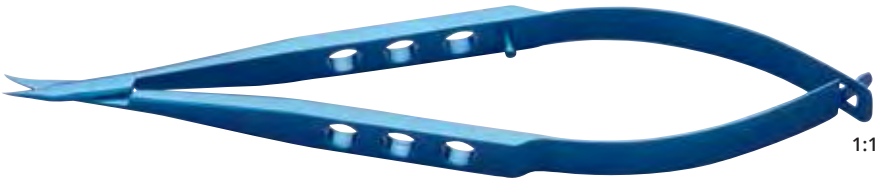
Castroviejo Straight Scissors
Length: 10.5 cm (4.1 in.)
Tips: 11 mm
Titanium **555530S** . . . . . .

1:1

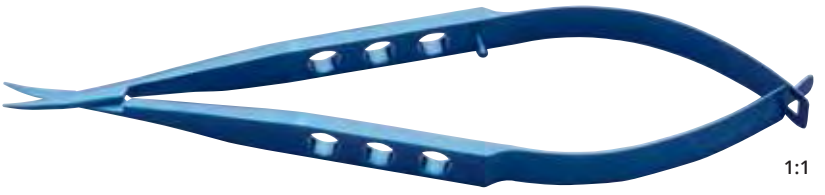
Castroviejo Curved Scissors
Length: 10.5 cm (4.1 in.)
Tips: small
Titanium **555524S** . . . . . .

1:1

Mcpherson-Westcott Stitch Scissors
Length: 11.5 cm (4.5 in.)
Tips: 10.5 mm
Titanium **555540S** . . . . . .


1:1

Mcpherson-Westcott Conjunctiva Scissors
Length: 10.5 cm (4.1 in.)
Tips: curved, blunt
Titanium **555500S** . . . . . .


1:1

Iris Scissors
Length: 10.5 cm (4.1 in.)
Tips: sharp, 11 mm curved
Titanium **555562S** . . . . . .

1:1

Vannas Scissors
Length: 11 cm (4.3 in.)
Tips: extra thin 13 mm straight blades, sharp
Titanium **555600S** . . . . . .

1:1

Vannas Capsulotomy Scissors
Length: 10.8 cm (4.25 in.)
Tips: straight, sharp, 10.5 mm
Titanium **555580S** . . . . . .

1:1

Westcott Curved Scissors
Length: 11 cm (4.3 in.)
Tips: blunt, 19 mm, curved
Titanium **555621S** . . . . . .

1:1

Westcott Stitch Scissors
Length: 11 cm (4.3 in.)
Tips: 19 mm, curved
Titanium **555541S** . . . . . .

1:1

Westcott Curved Scissors
Length: 11.5 cm (4.5 in.)
Tips: blunt, 21 mm, curved
Titanium **555620S** . . . . . .

1:1

Castroviejo Curved Scissors
Length: 12 cm (4.7 in.)
Tips: 11 mm, blunt
Titanium **555526S** . . . . . .

1:1

Castroviejo Curved Scissors
Length: 12 cm (4.7 in.)
Tips: 16 mm, blunt
Titanium **555525S** . . . . . .

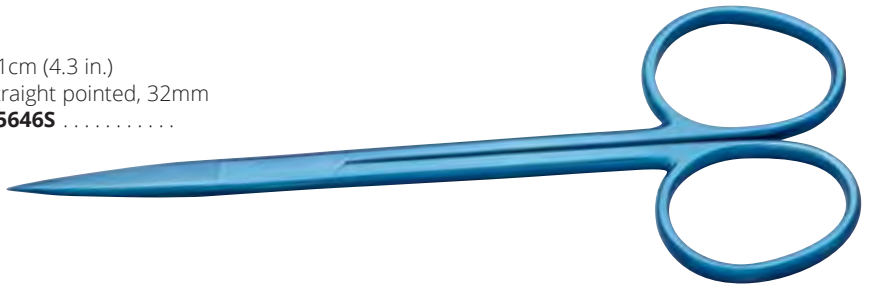
1:1

Castroviejo Curved Scissors
Length: 12 cm (4.7 in.)
Tips: strong curve
Titanium **555523S** . . . . . .

1:1

Iris Scissors

Length: 11cm (4.3 in.)
Tips: straight pointed, 32mm
Titanium **555646S** . . . . . .


1:1

Mayo Harrington Scissors

Titanium
Length: 14.5 cm (5.75 in.)
Tips: straight, 32 mm
555659S . . . . . .

1:1

Mayo Scissors, SuperCut Titanium

	503384	503385
Length	17cm (6.75")	17cm (6.75")
Tips	straight tip	curved tip

1:1

Goldman-Fox Scissors, Stainless Steel

	503256
Length	13 cm (5 in.)
Blades	Curved, serrated tips

1:1

Kilner Scissors, Stainless Steel

	503307
Length	14 cm (5.5 in.)
Blades	Curved, flat tips

1:1

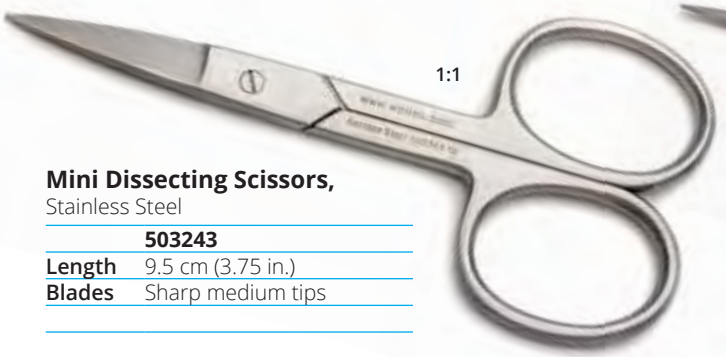
WPI Swiss Scissors, Stainless Steel

	504519	504520	504521	504522
Length	9 cm (3.5 in.)	9 cm (3.5 in.)	9 cm (3.5 in.)	9 cm (3.5 in.)
Blades	extra fine	fine, sharp	heavy duty, rounded	strong, beveled tips

504520 **504521** **504522**

NEW!

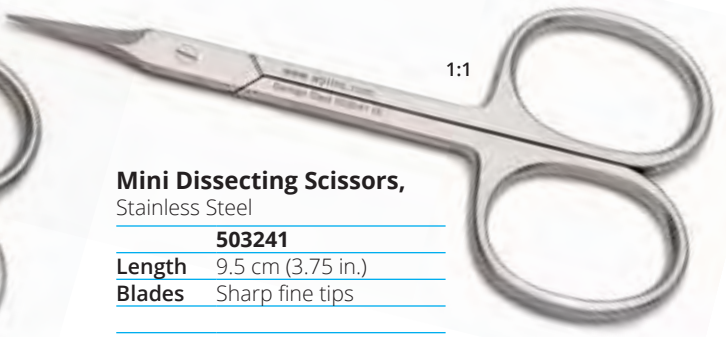
1:1
504519



1:1

Mini Dissecting Scissors,
Stainless Steel

	503243
Length	9.5 cm (3.75 in.)
Blades	Sharp medium tips



1:1

Mini Dissecting Scissors,
Stainless Steel

	503241
Length	9.5 cm (3.75 in.)
Blades	Sharp fine tips

1:1

Mini Dissecting Scissors,
Stainless Steel

	503240
Length	9.5 cm (3.75 in.)
Blades	Regular tips, curved

1:1

Mini Dissecting Scissors,
Stainless Steel

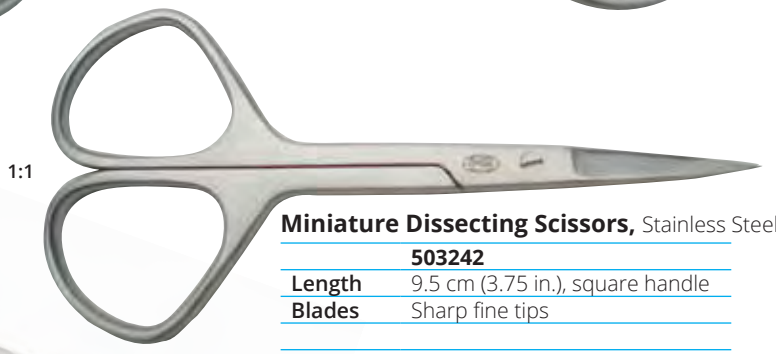
	503245
Length	9.5 cm (3.75 in.)
Blades	Sharp tips

LARGE RINGS

1:1

La Grange Scissors, Stainless Steel

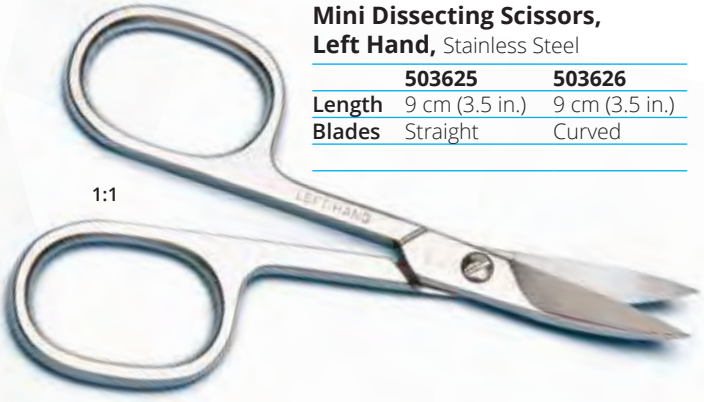
	503246
Length	11 cm (4.3 in.
Blades	S-shaped



1:1

Miniature Dissecting Scissors, Stainless Steel

	503242
Length	9.5 cm (3.75 in.), square handle
Blades	Sharp fine tips



1:1

Mini Dissecting Scissors,
Left Hand, Stainless Steel

	503625	503626
Length	9 cm (3.5 in.)	9 cm (3.5 in.)
Blades	Straight	Curved

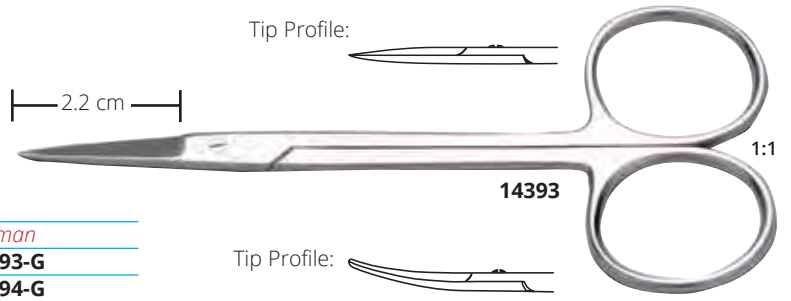
1:1

Mini Dissecting Scissors,
Left Hand, Stainless Steel

	503628	503627
Length	9 cm (3.5 in.)	9 cm (3.5 in.)
Blades	Straight, fine tips	Curved, fine tips

Mini Dissecting Scissors, stainless steel

503666	8.5 cm (3.3 in.) curved, sharp tips
503667	8.5 cm (3.3 in.) straight, sharp tips
503668	8.5 cm (3.3 in.) curved, blunt tips
503669	8.5 cm (3.3 in.) straight, blunt tips

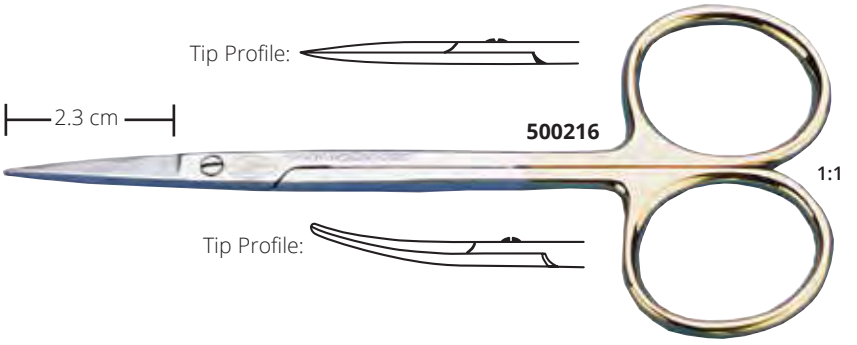


Dissecting Scissors, stainless steel

Standard		*German*
14393	10 cm (4 in.) straight tips	**14393-G**
14394	10 cm (4 in.) curved tips	**14394-G**
15922	12.5 cm (5 in.) straight tips	**15922-G**
15923	12.5 cm (5 in.) curved tips	**15923-G**

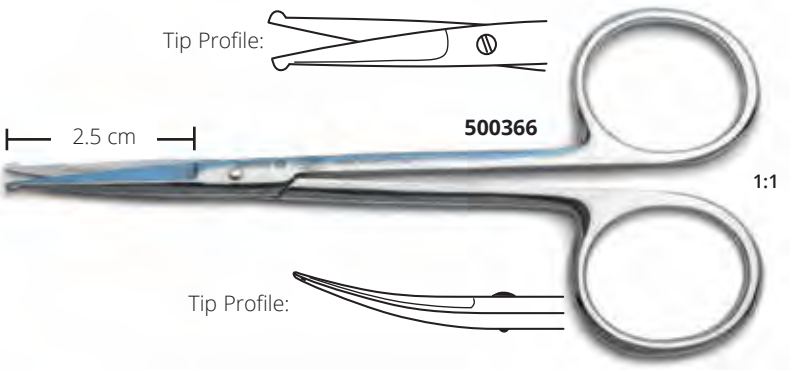
Iris Scissors, Stainless Steel

	Standard	*German*
	500216	**500216-G**
Length	11 cm (4.3 in.)	11 cm (4.3 in.)
Blades	Straight, Tungsten Carbide	Straight, Tungsten Carbide
	500217	**500217-G**
Length	11 cm (4.3 in.)	11 cm (4.3 in.)
Blades	Curved, Tungsten Carbide	Curved, Tungsten Carbide



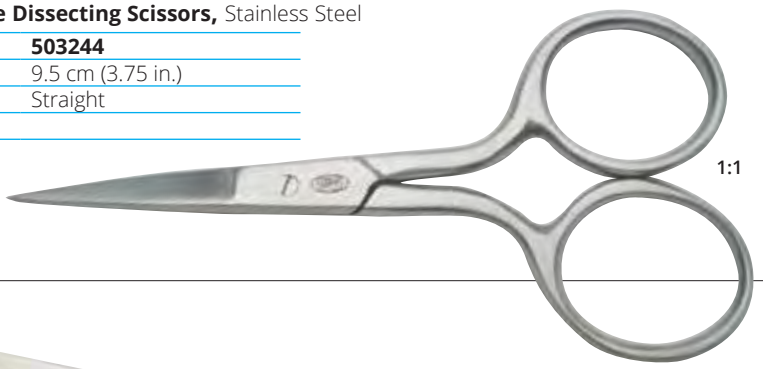
Dissecting Scissors, Stainless Steel

	Standard	*German*
	500366	**500366-G**
Length	10 cm (4 in.)	10 cm (4 in.)
Blades	Straight, Blunt Probe Tips	Straight, Blunt Probe Tips
	500367	**500367-G**
Length	10 cm (4 in.)	10 cm (4 in.)
Blades	Curved, Blunt Probe Tips	Curved, Blunt Probe Tips



Miniature Dissecting Scissors, Stainless Steel

	503244
Length	9.5 cm (3.75 in.)
Blades	Straight



Potts-Smith Scissors, Stainless Steel

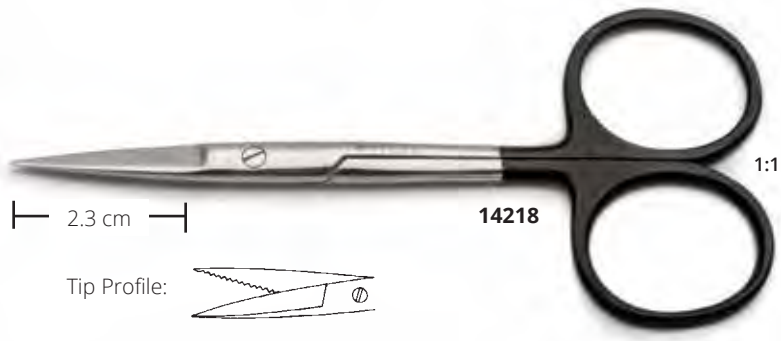
	503251
Length	18 cm (7 in.)
Blades	Angled 60 degrees

Potts-Smith Scissors, Stainless Steel

	503250
Length	18 cm (7 in.)
Blades	Angled 45 degrees

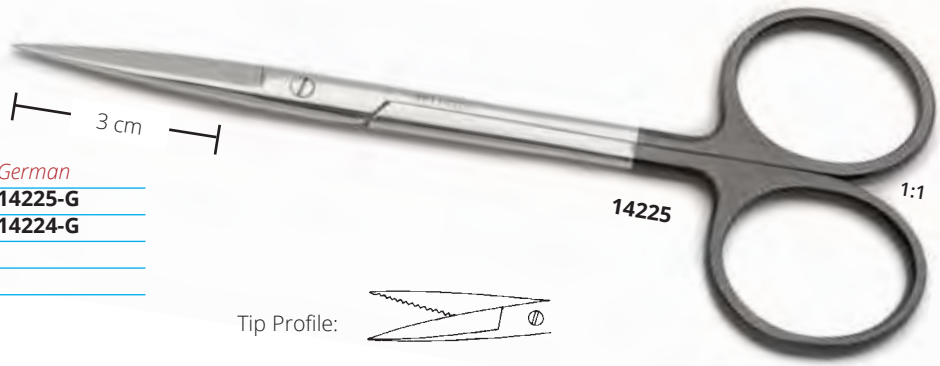
Iris Scissors, SuperCut, Stainless Steel
One edge micro serrated, one edge honed to the sharpness of a knife edge

Standard		*German*
14218	10 cm (4 in.), Straight	**14218-G**
14219	10 cm (4 in.), Curved	**14219-G**
503259	11.5 cm (4.5 in.), Straight	
503260	11.5 cm (4.5 in.), Curved	



Iris Scissors, SuperCut, Stainless Steel
One edge micro serrated, one edge honed to the sharpness of a knife edge

Standard		*German*
14225	12.5 cm (5 in.), Straight	**14225-G**
14224	12.5 cm (5 in.), Curved	**14224-G**
503261	14 cm (5.5 in.), Straight	
503262	14 cm (5.5 in.), Curved	

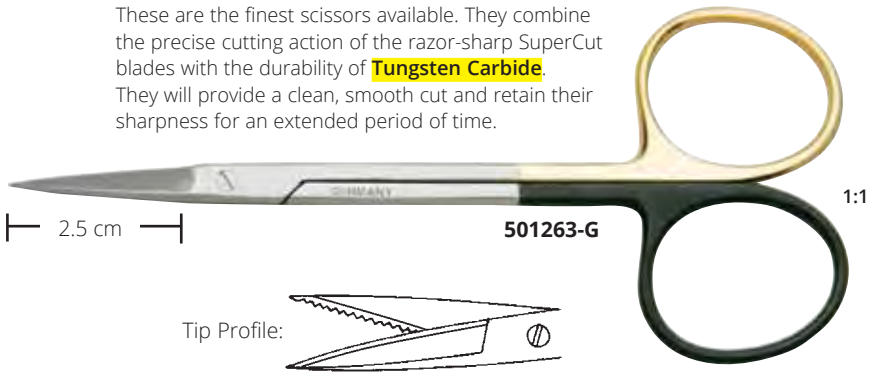


Iris Scissors, SuperCut, Stainless Steel,
Tungsten Carbide Blades

	Standard	*German*
	501263	**501263-G**
Length	11 cm (4.3 in.)	11 cm (4.3 in.)
Blades	Straight	Straight

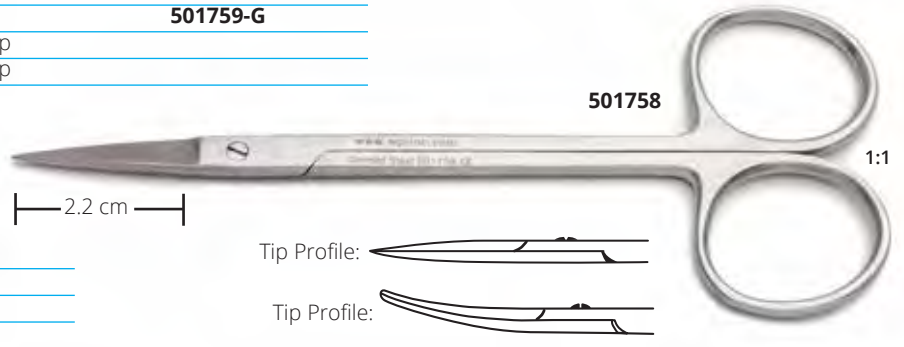
	501264	**501264-G**
Length	11 cm (4.3 in.)	11 cm (4.3 in.)
Blades	Curved	Curved

These are the finest scissors available. They combine the precise cutting action of the razor-sharp SuperCut blades with the durability of **Tungsten Carbide**. They will provide a clean, smooth cut and retain their sharpness for an extended period of time.



Iris Scissors, Stainless Steel

Standard		*German*
501758	11.5 cm (4.5 in.), straight	**501758-G**
501759	11.5 cm (4.5 in.), curved	**501759-G**
503225	11.5 cm (4.5 in.), 45° angled serrated tip	
503224	11.5 cm (4.5 in.), 35° angled serrated tip	



Mini-Iris Scissors, Stainless Steel

503670	8 cm (3.1 in.) straight, sharp tips
503671	8 cm (3.1 in.) curved, sharp tips

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Ceramic Coating

Compounds in ceramic coatings include carbides, borides, nitrides, and silicides that are hard enough to keep the material from accumulating residue and becoming prone to breakage while in use. The sputtering process used to apply the coating deposits a thin and securely bonded film onto the surface. Ceramic coating provides improved strength, hardness, elasticity, and oxidation resistance—the latter being the most important feature, as it protects the instrument from rusting and other effects of oxidation due to exposure to various contaminants.

NEW!

1:1

Ceramic Coating
- *reduces glare*
- *resists chemicals*
- *keeps blades sharp*

Iris Super Cut Scissors, Stainless Steel, Ceramic Coated

	504487	504500
Length	11 cm (4.3 in.)	11 cm (4.3 in.)
Blades	Straight, one serrated	Curved, one serrated

Plastic Surgery Scissors, Stainless Steel

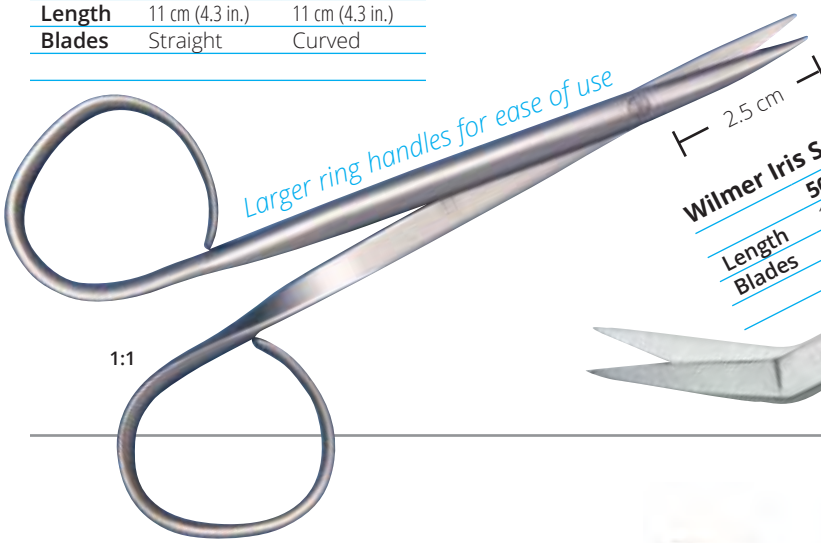
	503247
Length	11cm (4.3 in.)
Blades	Curved
Tips	sharp/sharp

1:1

Ribbon Handle Iris Scissors, Stainless Steel

	501767	501768
Length	11 cm (4.3 in.)	11 cm (4.3 in.)
Blades	Straight	Curved

Larger ring handles for ease of use



1:1

2.5 cm

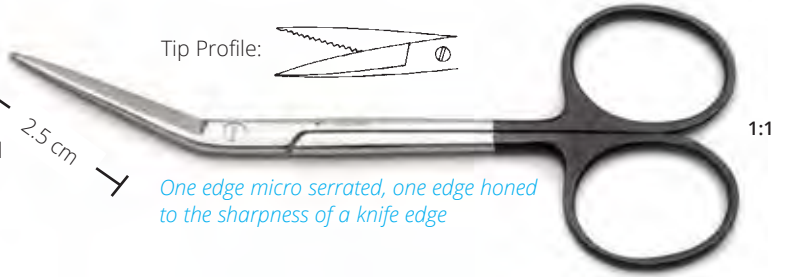
Wilmer Iris Scissors, Stainless Steel

	503248
Length	10.5 cm (4 in.)
Blades	45° Angle

1:1

Tip Profile:

2.5 cm



1:1

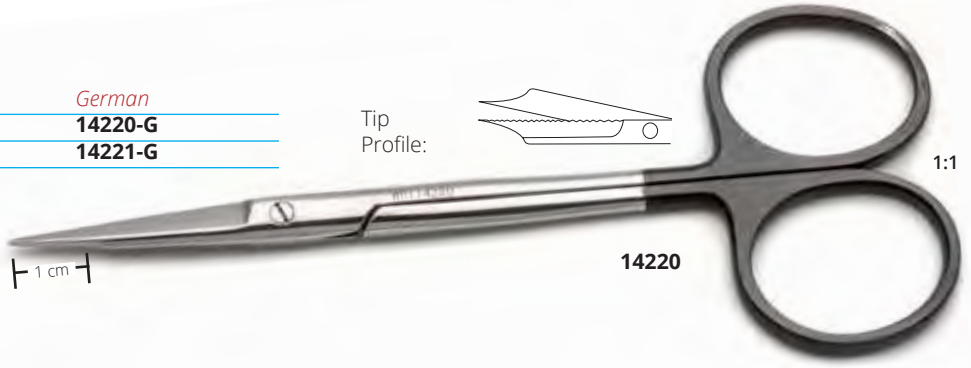
One edge micro serrated, one edge honed to the sharpness of a knife edge

Iris Scissors, *SuperCut Angled,* Stainless Steel

	500046
Length	10cm (3.9 in.)
Blades	30° angled to side

Tenotomy Scissors, Stainless Steel

		Standard	*German*
12.5 cm (5 in.),	Straight	**14220**	**14220-G**
	Curved	**14221**	**14221-G**
14 cm (5.5 in.)	Straight	**503265**	
	Curved	**503266**	
16 cm (6.2 in.)	Straight	**503267**	
	Curved	**503268**	



Tenotomy Scissors, *SuperCut,* Stainless Steel

One edge micro serrated, one edge honed to the sharpness of a knife edge

		Standard	*German*
10 cm (4 in.)	Straight	**14395**	**14395-G**
	Curved	**14396**	**14396-G**
11.5 cm (4.5 in.)	Straight	**503263**	
	Curved	**503264**	

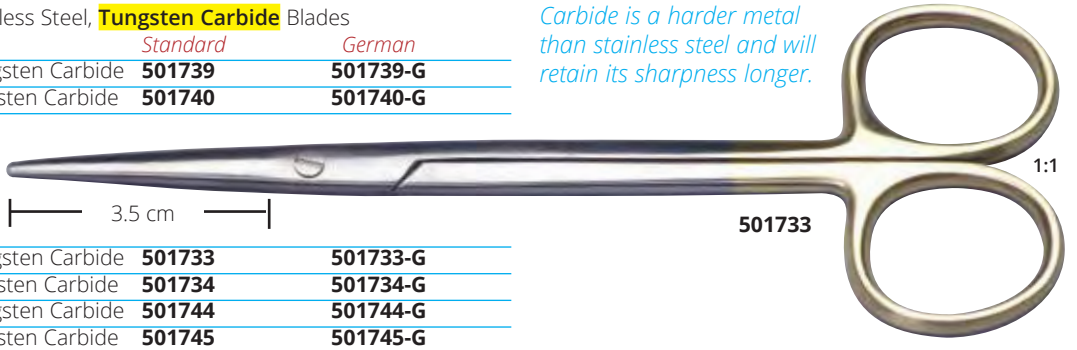
Metzenbaum Scissors, Stainless Steel

		Standard	*German*
11.5 cm (4.5 in.)	Straight	**501747**	**501747-G**
	Curved	**501748**	**501748-G**
14.5 cm (5.75 in.)	Straight	**501252**	**501252-G**
	Curved	**501253**	**501253-G**
17.5 cm (7 in.)	Straight	**501254**	**501254-G**
	Curved	**501255**	**501255-G**

Metzenbaum Scissors, Stainless Steel, **Tungsten Carbide** Blades

Carbide is a harder metal than stainless steel and will retain its sharpness longer.

		Standard	*German*
11.5 cm (4.5 in.)	Straight, Tungsten Carbide	**501739**	**501739-G**
	Curved, Tungsten Carbide	**501740**	**501740-G**
14.5 cm (5.75 in.)	Straight, Tungsten Carbide	**501733**	**501733-G**
	Curved, Tungsten Carbide	**501734**	**501734-G**
18 cm (7 in.)	Straight, Tungsten Carbide	**501744**	**501744-G**
	Curved, Tungsten Carbide	**501745**	**501745-G**



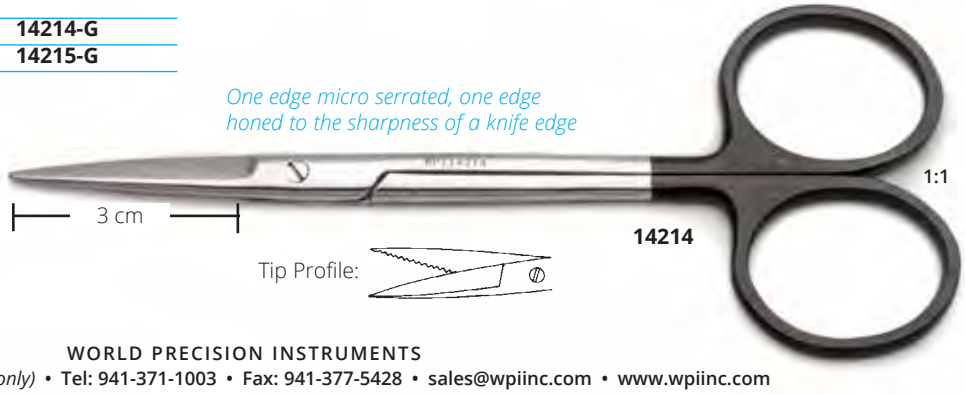
Metzenbaum Scissors, SuperCut, Stainless Steel

		Standard	*German*
11.5 cm (4.5 in.),	Straight	**503269**	
	Curved	**503270**	
12.5 cm (5 in.)	Straight	**14214**	**14214-G**
	Curved	**14215**	**14215-G**
16 cm (6.2 in.)	Straight	**503271**	
	Curved	**503272**	
20 cm (7.75 in.)	Straight	**503273**	
	Curved	**503274**	
25 cm (9.75 in.)	Straight	**503275**	
	Curved	**503276**	

Also in **Titanium**

14cm long (5.5 in.), curved tip	**503383**
14cm long (5.5 in.), straight tip	**503382**

One edge micro serrated, one edge honed to the sharpness of a knife edge



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Metzenbaum Scissors, SuperCut Stainless Steel, **Tungsten Carbide** Blades

NEW!

These are the finest scissors available. They combine the precise cutting action of the razor-sharp SuperCut blades with the durability of Tungsten Carbide. They will provide a clean, smooth cut and retain their sharpness for an extended period of time.

Tip Profile:

		Standard	*German*
15 cm (5.9 in.)	Curved, Tungsten Carbide	**501261**	**501261-G**
	Straight, Tungsten Carbide		**503359-G**
18 cm (7 in.)	Curved, Tungsten Carbide	**501262**	**501262-G**

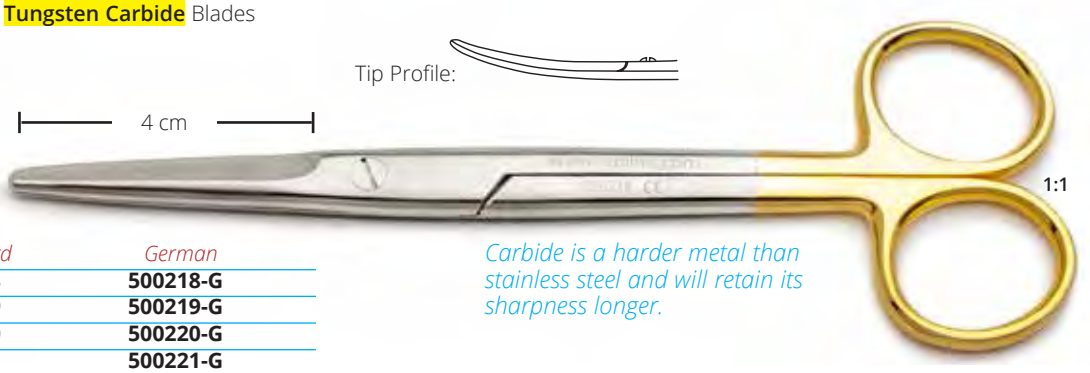
Mayo Scissors, Stainless Steel

		Standard	*German*
14 cm (5.5 in.)	Straight	**501749**	**501749-G**
	Curved	**501750**	**501750-G**

17 cm (6.75 in.)	Straight	**501751**	**501751-G**
	Curved	**501752**	**501752-G**

Mayo Scissors, Stainless Steel, **Tungsten Carbide** Blades

Tip Profile:



		Standard	*German*
14 cm (5.5 in.)	Straight	**500218**	**500218-G**
	Curved	**500219**	**500219-G**
17.5 cm (7 in.)	Straight	**500220**	**500220-G**
	Curved	**500221**	**500221-G**

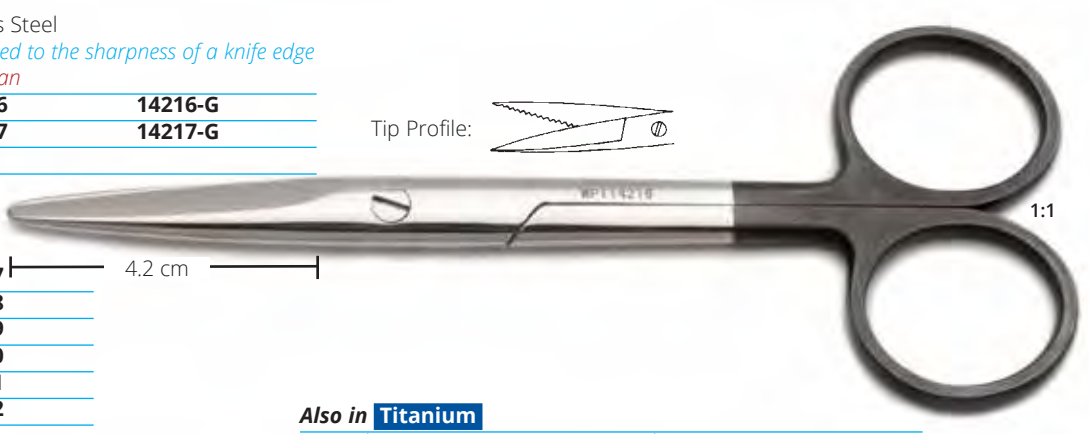
Carbide is a harder metal than stainless steel and will retain its sharpness longer.

Mayo Scissors, SuperCut, Stainless Steel

One edge micro serrated, one edge honed to the sharpness of a knife edge

		Standard	*German*
14 cm (5.5 in.)	Straight	**14216**	**14216-G**
	Curved	**14217**	**14217-G**

Tip Profile:



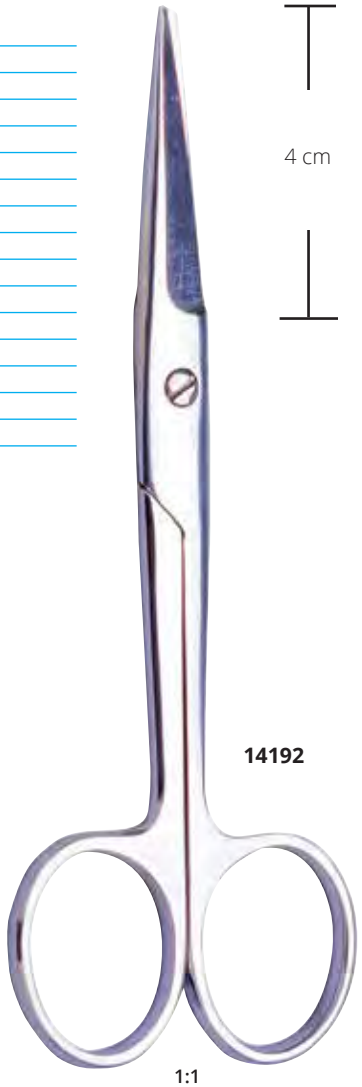
16 cm (6.3 in.)	Straight	**503277**
	Curved	**503278**
20 cm (7.8 in.)	Straight	**503279**
	Curved	**503280**
25 cm (9.8 in.)	Straight	**503281**
	Curved	**503282**

Also in **Titanium**

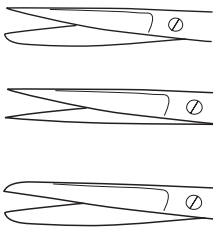
17 cm long (6.75 in.) Supercut, Straight Tip	**503384**
17 cm long (6.75 in.) Supercut, Curved Tip	**503385**

Operating Scissors

		Standard	*German*
11.5 cm (4.5 in.) Straight	Sharp/Blunt	**501753**	**501753-G**
	Sharp/Sharp	**501754**	**501754-G**
	Blunt/Blunt	**501743**	**501743-G**
11.5 cm (4.5 in.) Curved	Sharp/Sharp	**501755**	**501755-G**
	Sharp/Blunt	**501756**	**501756-G**
	Blunt/Blunt	**501757**	**501757-G**
14 cm (5.5 in.) Curved	Sharp/Sharp	**501220**	**501220-G**
	Sharp/Blunt	**501221**	**501221-G**
	Blunt/Blunt	**501222**	**501222-G**
14 cm (5.5 in.) Straight	Sharp/Blunt	**14192**	**14192-G**
	Sharp/Sharp	**501218**	**501218-G**
	Blunt/Blunt	**501219**	**501219-G**



Tip Profiles:



		Standard	*German*
16 cm (6.25 in.) Straight	Sharp/Blunt	**501223**	**501223-G**
	Blunt/Blunt	**501224**	**501224-G**
	Sharp/Sharp	**501225**	**501225-G**
16 cm (6.25 in.) Curved	Sharp/Blunt	**501226**	**501226-G**
	Blunt/Blunt	**501227**	**501227-G**
	Sharp/Sharp	**501228**	**501228-G**
18 cm (7 in.) Straight	Sharp/Sharp	**15924**	**15924-G**
	Sharp/Blunt	**500378**	**500378-G**
	Blunt/Blunt	**500379**	**500379-G**
18 cm (7 in.) Curved	Sharp/Blunt	**501229**	**501229-G**
	Blunt/Blunt	**501230**	**501230-G**
	Sharp/Sharp	**501231**	**501231-G**

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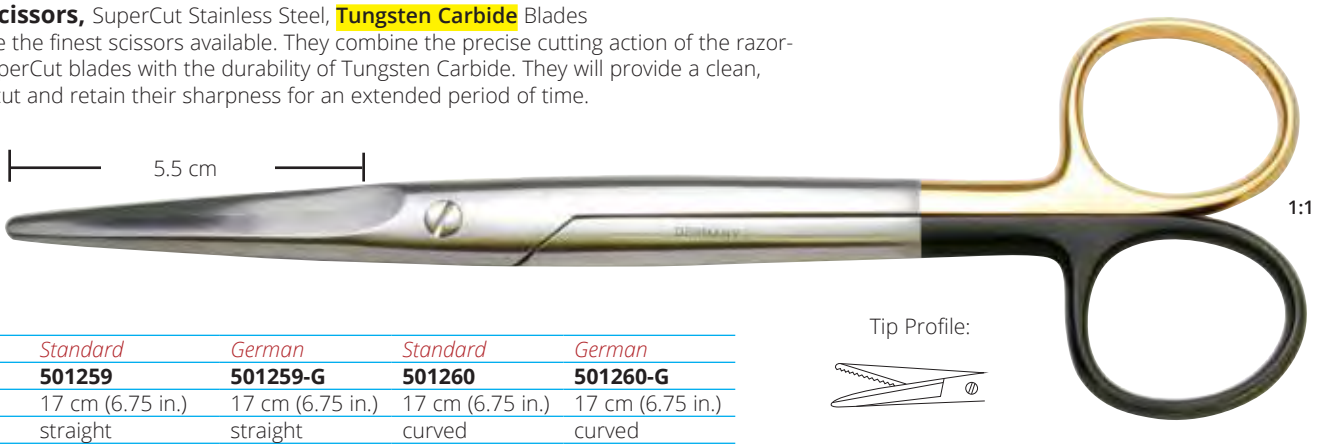
Mayo Scissors, SuperCut Stainless Steel, **Tungsten Carbide** Blades

These are the finest scissors available. They combine the precise cutting action of the razor-sharp SuperCut blades with the durability of Tungsten Carbide. They will provide a clean, smooth cut and retain their sharpness for an extended period of time.

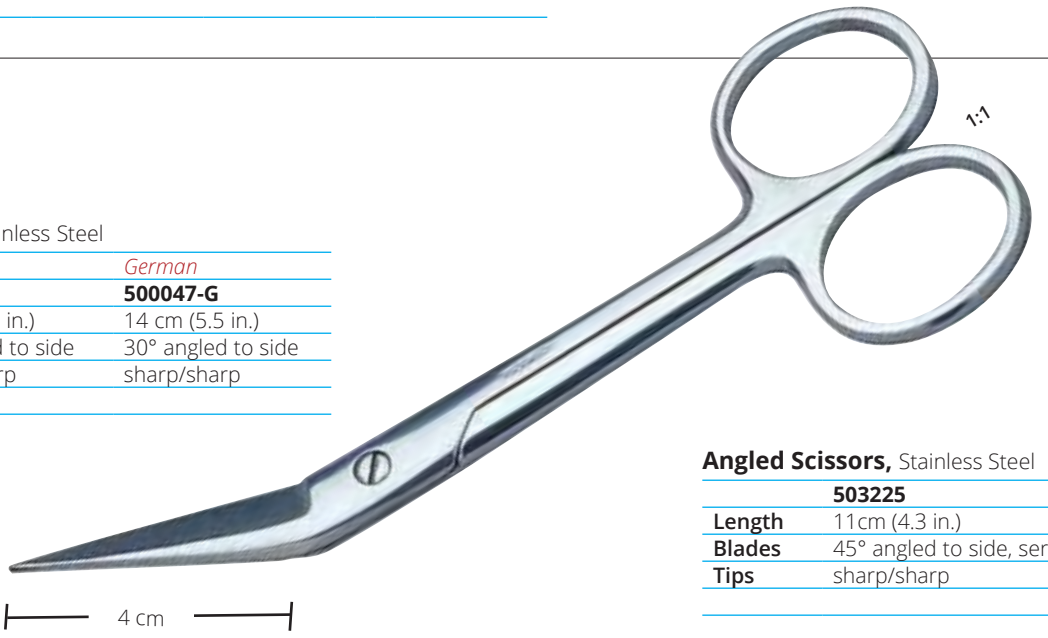


	Standard	*German*	*Standard*	*German*
	501259	**501259-G**	**501260**	**501260-G**
Length	17 cm (6.75 in.)	17 cm (6.75 in.)	17 cm (6.75 in.)	17 cm (6.75 in.)
Blades	straight	straight	curved	curved
Tips	5.5 mm tips	5.5 mm tips	5.5 mm tips	5.5 mm tips

Tip Profile:

Angled Scissors, Stainless Steel

	Standard	*German*
	500047	**500047-G**
Length	14 cm (5.5 in.)	14 cm (5.5 in.)
Blades	30° angled to side	30° angled to side
Tips	sharp/sharp	sharp/sharp



Angled Scissors, Stainless Steel

	503225
Length	11cm (4.3 in.)
Blades	45° angled to side, serrated
Tips	sharp/sharp

Spencer Stitch Scissors, Stainless Steel

Standard		*German*
500380	9 cm (3.5 in.) long	**500380-G**
501703	10.75 cm (4.25 in.) long	**501703-G**
501704	13.25 cm (5.5 in.) long	**501704-G**

Lister Bandage Scissors, Stainless Steel

Standard		*German*
500444	15 cm (6 in.) long, 4cm long blades	**500444-G**
501701	8.75 cm (3.5 in.) long	**501701-G**
501702	10.75 cm (4.25 in.) long	**501702-G**
555656S	15 cm (6 in.) long **Titanium**	

Surgical Scissors, Stainless Steel

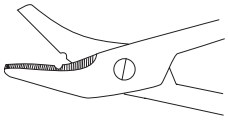
One tip sharp, one tip blunt

		Standard	*German*
16 cm (6.3 in.)	Straight	**501223**	**501223-G**
	Curved	**501226**	**501226-G**

Roger Wirecutting Scissors, Stainless Steel

	Standard	*German*
	501321	**501321-G**
Length	12 cm (4.75 in.)	12 cm (4.75 in.)
Blades	one serrated, both notched	one serrated, both notched

Tip Profile:



1:1

14213

Stainless steel sterilization case with silicone holding pads

500126

Surgical Instrument Lubricant (8 fl oz)

Instrument Care & Cleaning

See pages 99-108

7364-4

Cidex OPA (gallon)

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Microintraocular Scissors, Stainless Steel

		TITANIUM handle
	500372	**500372-T**
Length	14 cm (5.5 in.)	14 cm (5.5 in.)
Blades	30° angled blades	30° angled blades

Tip Profile:

1:1

Microintraocular Scissors, Stainless Steel

	500374
Length	14 cm (5.5 in.)
Blades	35° angled blades

Tip Profile:

1:1

Microintraocular Scissors, Stainless Steel

	500376
Length	14 cm (5.5 in.)
Blades	90° angled blades

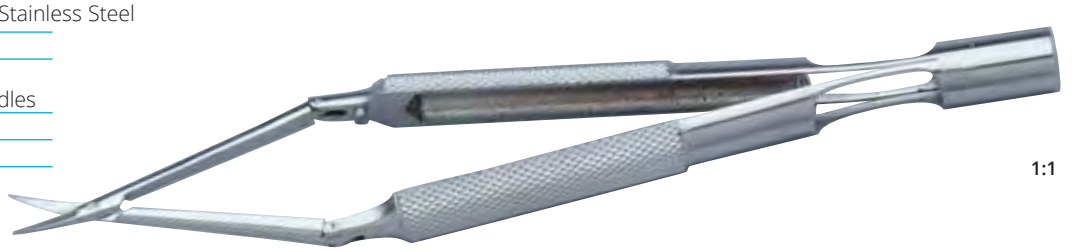
Tip Profile:

1:1

Scissors, Round Handled, Stainless Steel

	14208
Length	14 cm (5.5 in.) Round hollow handles
Blades	Curved

Tip Profile:



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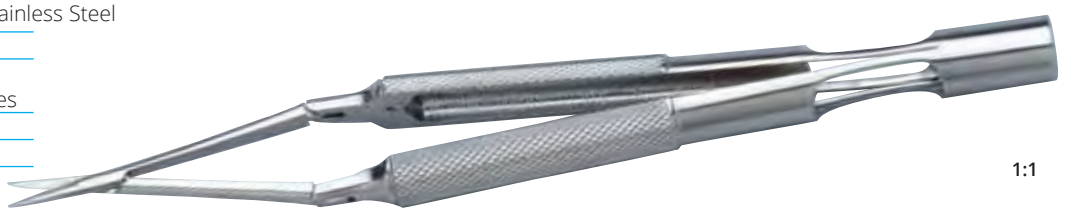
Scissors, Round Handled, Stainless Steel

	14212
Length	14 cm (5.5 in.) Round hollow handles
Blades	Straight



1:1

Made in Switzerland

"To satisfy our customers' needs we'll give them what they want, not what we want to give them." —*Steve James*

When we listen to our customers, we build a bridge of understanding and rapport. In that understanding, we discover the true needs of the customer. We have had numerous requests from you for affordable and good quality instruments and we are listening. World Precision Instruments is proud to introduce our own line of Swiss-made forceps and scissors. We worked diligently with our manufacturer to make sure our products meet your expectations. With over 45 years experience, World Precision Instruments provides innovative instruments to the biomedical research community. We look forward to continuing to expand our product line to better serve your evolving needs.

WPI Swiss Tweezers
stainless steel, 11.5cm (4.5 in.)
504502 . . . . . .
acid-resistant, antimagnetic, 11.5cm (4.5 in.)
504503 . . . . . .

1:1
Tips: 0.18 × 0.2 mm

WPI Swiss Tweezers
stainless steel, 11.5cm (4.5 in.)
504504 . . . . . .
acid-resistant, antimagnetic, 11.5cm (4.5 in.)
504505 . . . . . .

1:1
Tips: 0.18 × 0.2 mm

WPI Swiss Tweezers
stainless steel,11cm (4.3 in.),
0.1 x 0.06mm tips
504506 . . . . . .
acid-resistant, antimagnetic,11cm (4.3 in.)
504507 . . . . . .

1:1
Tips: 0.01 × 0.06 mm

WPI Swiss Tweezers
stainless steel, 11cm (4.3 in.), 45° tips
504512 . . . . . .
acid-resistant, antimagnetic, 11cm (4.3 in.), 45° tips
504513 . . . . . .

1:1
Tips: 0.06 × 0.07 mm

WPI Swiss Tweezers
stainless steel, 11cm (4.3 in.)
504510 . . . . . .
acid-resistant, antimagnetic, 11cm (4.3 in.)
504511 . . . . . .

1:1
Tips: 0.06 × 0.07 mm

WPI Swiss Tweezers
stainless steel,10.5cm (4.1 in.), extra fine 90° tips
504508 . . . . . .
acid-resistant, antimagnetic,10.5cm (4.1 in.), extra fine 90° tips
504509 . . . . . .

1:1
Tips: 0.06 × 0.02 mm

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WPI Swiss Tweezers

Ni-Cr-Mo superalloy
11 cm (4.3 in.)
504524. . . . . .

1:1

WPI Swiss Tweezers

Antimagnetic body, replacebale tips (CF)
13 cm (5.1 in.)
504517 . . . . . .

Replacement CF Tips
504527 . . . . . .

1:1

WPI Swiss Tweezers

Ni-Cr-Mo superalloy, diamond coating
11 cm (4.3 in.)
504516 . . . . . .

1:1

WPI Swiss Tweezers

Antimagnetic, diamond-coated tips
11 cm (4.3 in.)
504515 . . . . . .

1:1

WPI Swiss #55 Forceps

Nonmagnetic, acid resistant, 11cm (4.3 in.)
504774 . . . . . .

1:1

Tweezers

High precision (kit of 5)
504518 . . . . . .

Vacuum Pick-Up

Pick up and handle flat objects, such as microscope slide cover slips; lifts up to 80 g. No batteries — vacuum produced by finger button.

17.5 cm long, 1.5 cm diam handle.

Includes one straight machined metal needle, one angled metal needle, 3 spare rubber cups (Ø 4, 6, 9 mm), and lubricant.

504523 . . . . . .

Forceps by Dumont

Which alloy is best for my tools? For material information and instrument purchase guidance visit **www.wpiinc.com/DumontTweezers**

Mini Dumont #M5S, Stainless Steel

	501764
Length	8.2 cm (3.25 in.)
Tips	0.09 x 0.05 mm

1:1

Dumont #1, Stainless Steel

	500335
Length	12 cm (4.75 in.)
Tips	0.20 x 0.12 mm

Tip Profile:

1:1

Dumont #1, Stainless Steel

	500229
Length	12 cm (4.75 in.)
Tips	0.1 x 0.06 mm

Tip Profile:

1:1

Dumont #2, Stainless Steel

	500336
Length	12 cm (4.75 in.)
Tips	0.34 x 0.14 mm

Tip Profile:

1:1

Dumont #2, Stainless Steel

	500230
Length	12 cm (4.75 in.)
Tips	0.17 x 0.07 mm

Tip Profile:

1:1

Dumont #3C, Dumostar Steel, non-magnetic, non-corrosive

	500064
Length	11 cm (4.3 in.)
Tips	0.08 x 0.04 mm

Tip Profile:

1:1

Dumont #3, Dumostar Steel, non-magnetic, non-corrosive

	500337
Length	12 cm (4.75 in.)
Tips	0.08 x 0.04 mm

Tip Profile:

1:1

Dumont #3, Stainless Steel

	500338
Length	12 cm (4.75 in.)
Tips	0.17 x 0.10 mm

Tip Profile:

1:1

Dumont #3, Stainless Steel

	503235
Length	12 cm (4.75 in.)
Tips	0.20 x 0.12 mm

1:1

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Dumont #4, Dumostar Steel, non-magnetic, non-corrosive

	500339
Length	11 cm (4.3 in.)
Tips	0.06 x 0.02 mm

Tip Profile:

1:1

Dumont #4, Stainless Steel

	500340
Length	11 cm (4.3 in.)
Tips	0.13 x 0.08 mm

Tip Profile:

1:1

Dumont #4, Stainless Steel

	500231
Length	11 cm (4.3 in.)
Tips	0.02 x 0.06 mm

Tip Profile:

1:1

Dumont #5, Dumostar Steel, non-magnetic, non-corrosive

	500085
Length	11 cm (4.3 in.)
Tips	0.025 x 0.015 mm

Tip Profile:

1:1

Dumont #5, Dumostar Steel, non-magnetic, non-corrosive

	500233
Length	11 cm (4.3 in.)
Tips	0.1 x 0.06 mm

Tip Profile:

1:1

Dumont #5, Dumoxel Steel, non-magnetic

	14098
Length	11 cm (4.3 in.)
Tips	0.1 x 0.06 mm

Dumont #5, Stainless Steel

	501985	500341	500342
Length	11 cm (4.3 in.)	0.10 x 0.06 mm	0.10 x 0.06 mm
Tips	0.025 x 0.005 mm	0.05 x 0.01 mm	0.10 x 0.06 mm

Dumont #2, Dumoxel Steel, non-magnetic

	503366
Length	7 cm (2.75 in.)
Tips	10 x 0.17 mm

1:1

Dumont #M3SA, Dumoxel Steel, non-magnetic

	503368
Length	7 cm (2.75 in.)
Tips	0.04 x 0.08 mm

1:1

Dumont #5, Stainless Steel, Biology

	14095
Length	11 cm (4.3 in.)
Tips	0.05 x 0.01 mm

Tip Profile:

1:1

Dumont #6, Stainless Steel

	501204
Length	12 cm (4.75 in.)
Tips	0.17 x 0.1 mm, sharp points

Tip Profile:

1:1

Dumont #5, Dumoxel Steel, self-closing

	501203
Length	11 cm (4.3 in.)
Tips	0.1 x 0.06 mm

Tip Profile:

1:1

Dumont #5, Stainless Steel, self-closing

	501202
Length	11 cm (4.3 in.)
Tips	0.05 x 0.01 mm

Tip Profile:

1:1

Dumont #5, Stainless Steel

	501201
Length	11 cm (4.3 in.)
Tips	0.05 x 0.01 mm, bent 90°

Tip Profile:

1:1

Dumont #5, Stainless Steel

	14101
Length	11 cm (4.3 in.)
Tips	0.05 x 0.01 mm, bent 45°

Tip Profile:

1:1

Dumont #5, Stainless Steel

	500232
Length	11 cm (4.3 in.)
Tips	0.02 x 0.06 mm half curved

Tip Profile:

1:1

Dumont #5, Titanium

	14096
Length	11 cm (4.3 in.)
Tips	0.1 x 0.06 mm

Tip Profile:

1:1

Dumont #55, Dumostar Steel, non-magnetic, non-corrosive

	500235
Length	11 cm (4.3 in.)
Tips	0.05 x 0.01 mm

Tip Profile:

1:1

Dumont #55, Stainless Steel

	14099
Length	11 cm (4.3 in.)
Tips	0.05 x 0.01 mm

Tip Profile:

1:1

Dumont #5B, Stainless Steel, Biology

	500234
Length	11 cm (4.3 in.)
Tips	0.05 x 0.01 mm, bent 45°

Tip Profile:

1:1

Dumont Fine Tip, Dumoxel Steel, non-magnetic

	503290
Length	13.5 cm (5.3 in.)
Tips	0.2 x 0.12 mm, Bent 45°

1:1

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Dumont #7, Dumoxel Steel, non-magnetic

	14188
Length	12 cm (4.75 in.)
Tips	0.17 x 0.1 mm, curved

Tip Profile:

1:1

Dumont #7, Stainless Steel

	14097
Length	12 cm (4.75 in.)
Tips	0.17 x 0.1 mm, curved

Tip Profile:

1:1

Dumont #7, Titanium

	14187
Length	12 cm (4.75 in.)
Tips	0.17 x 0.1 mm, curved

Tip Profile:

1:1

Dumont #7, Stainless Steel

	501302
Length	11 cm (4.3 in.)
Tips	0.17 x 0.1 mm, curved, serrated jaws

Tip Profile:

1:1

Dumont #7, Stainless Steel, self-closing

	501205
Length	12 cm (4.75 in.)
Tips	0.07 x 0.03 mm, curved

Tip Profile:

1:1

Dumont #7, Dumoxel Steel, self-closing

	501206
Length	12 cm (4.75 in.)
Tips	0.08 x 0.04 mm

Tip Profile:

1:1

Dumont #7, Stainless Steel, self-closing

	503234
Length	12 cm (4.75 in.)
Tips	1.50 x 0.20 mm, flat and rounded

1:1

Dumont Forceps, Stainless Steel

	503232
Length	12 cm (4.75 in.)
Tips	0.60 x 0.20 mm, flat and rounded

1:1

Dumont Forceps, Stainless Steel

	503233
Length	12 cm (4.75 in.)
Tips	2.0 x 0.20 mm, wide square tips

1:1

Dumont Tweezers, Stainless Steel

	503369
Length	11.5 cm (5.3 in.)
Tips	Serrated, 0.17 x 0.10 mm

1:1

Dumont Fine Tip, Dumoxel Steel, non-magnetic

	503291
Length	13.5 cm (5.3 in.)
Tips	0.2 x 0.12 mm, Straight

1:1

1:1

Vessel canulation forceps are designed to insert small catheters into vessels. The small hollow jaws of the forceps ensure a secure insertion without damaging the fine tubes.

WPI Swiss Vessel Cannulation Forceps, Stainless Steel

Length	13 cm (5.1 in.)
Cannulation	0.35 mm OD
504765	

Dumont Vessel Cannulation Forceps, Stainless Steel

Length	13 cm (5.1 in.)
Cannulation	1.0 mm OD
503375	

Tissue Forceps, Stainless Steel

1:1

Length	14.5 cm (5.7 in.)
Tips	4 x 5 teeth
503311	

Length	14.5 cm (5.7 in.)
Tips	2 x 3 teeth
503313	

Length	14.5 cm (5.7 in.)
Tips	3 x 4 teeth
503312	

Tissue Forceps, Stainless Steel

Length	12.5 cm (5 in.)
Tips	Straight, 1 x 2 teeth
Standard	**15918**
German	**15918-G**
Length	12.5 cm (5 in.)
Tips	curved, 1 x 2 teeth
Standard	**501216**
German	**501216-G**

1:1

Tissue Forceps, Stainless Steel

Length	15 cm (6 in.)
Tips	straight, 1 x 2 teeth
German	**501742-G**
Length	15 cm (6 in.)
Tips	straight, 2 x 3 teeth
German	**501741-G**

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Ceramic-tipped Forceps

● Ceramic contains no metal, so forceps will leave no trace metal residue on tissue. ● Not electrically conductive ● Corrosion-resistant ● Low heat conductivity, high heat resistance

Dumont #7, Dumoxel Steel, non-magnetic

	501208
Length	12 cm (4.75 in.)
Tips	0.4 x 0.3 mm Ceramic

High abrasion resistance • Low coefficient of friction • High heat resistance • Good electrical and dielectric properties • Low water absorption

Delrin Plastic Tweezers

Length	11.8 cm (4.6 in.)
Tips	curved
503362	

The FDA has approved Delrin for use in the food industry.

Delrin Tips

● Antistatic ● Antimagnetic ● Waterproof ● Heat resistant to 240 °C (464 °F) ● Non-magnetic steel handles ● Swiss-made

Delrin Tips

	504068	504069	504070
Length	35 mm (1.4 in.)	40 mm (1.6 in.)	40 mm (1.6 in.)
Tips	Curved, sharp, 0.8 x 0.7 mm	Straight, blunt, 1.3 x 1.07 mm	Straight, sharp, 0.8 x 0.7 mm

Handles, non-magnetic steel

(includes 4 mounting screws per handle)

	504065	504066	504067
Length	9.2 cm (3.6 in.)	9.3 cm (3.7 in.)	9.9 cm (3.9 in.)

WPI Swiss Tweezers

Antimagnetic body, replacebale tips (CF)
13 cm
504517 . . . . . .

Replacement CF Tips
504527 . . . . . .

Bishop Harmon Forceps, Stainless Steel

	Standard	*German*
	501776	**501776-G**
Length	9 cm (3.5 in.)	9 cm (3.5 in.)
Tips	1x2 teeth	1x2 teeth

1:1

Bishop Harmon Forceps, Stainless Steel

	Standard	*German*
	501775	**501775-G**
Length	9 cm (3.5 in.)	9 cm (3.5 in.)
Tips	serrated	serrated

1:1

Graefe Forceps, Stainless Steel

	Standard	*German*
	14141	**14141-G**
Length	7 cm (2.75 in.)	7 cm (2.75 in.)
Tips	0.7 mm, curved, 1x2 teeth	0.7 mm, curved, 1x2 teeth

Tip Profile:

1:1

Graefe Forceps, Stainless Steel

	Standard	*German*
	14140	**14140-G**
Length	7 cm (2.75 in.)	7 cm (2.75 in.)
Tips	0.7 mm, straight, 1x2 teeth	0.7 mm, straight, 1x2 teeth

Tip Profile:

1:1

Iris Forceps, Stainless Steel

	Standard	*German*
	15916	**15916-G**
Length	10 cm (4 in.)	10 cm (4 in.)
Tips	0.8 mm, straight, 1x2 teeth	0.8 mm, straight, 1x2 teeth

1:1

Tip Profile:

Ring-Tipped Forceps with adjustment screw

	503202
Length	10 cm (3.9 in.)
Rings	4.8mm ID, 6.0mm OD

1:1

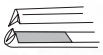
Ring-Tipped Forceps with adjustment screw

	503203
Length	10 cm (3.9 in.)
Rings	2.2mm ID, 3.0mm OD

1:1

Adson Forceps, Stainless Steel

Tip Profile:



Length	12 cm (4.75 in.)
Tips	1 x 2 teeth, **Tungsten Carbide** jaws
Standard	**500178**
German	**500178-G**

1:1

Adson Forceps, Stainless Steel

Tip Profile:

Length	12 cm (4.75 in.)
Tips	1.5 mm wide, 1 x 2 teeth
Standard	**500092**
German	**500092-G**

1:1

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Micro Adson Tissue Forceps, Stainless Steel

Length	12 cm (4.75 in.)
Tips	0.8 mm, 1 x 2 teeth, fine point
Standard	**501244**
German	**501244-G**

Tip Profile:

1:1

Micro Adson Dressing Forceps, Stainless Steel

Tips	Serrated, fine point
Length	12 cm (4.75 in.)
Standard	**501245**
German	**501245-G**

Tip Profile:

1:1

Adson-Brown Forceps, Stainless Steel

Length	12 cm (4.75 in.)
Tips	**Tungsten Carbide** jaws with 7x7 side grasping teeth
Standard	**500177**
German	**500177-G**

Tip Profile:

1:1

Adson Forceps, Stainless Steel

Length	12 cm (4.75 in.)
Tips	Serrated **Tungsten Carbide** jaws
Standard	**500222**
German	**500222-G**

Tip Profile:

1:1

Adson Forceps, Stainless Steel

Length	12 cm (4.75 in.)
Tips	1.5 mm wide, serrated
Standard	**14226**
German	**14226-G**

Tip Profile:

1:1

Bonn Forceps, with Tying Platform, Stainless Steel

	504475
Length	7.2 cm (2.8 in.)
Tips	0.3mm wide

NEW!

1:1

Foerster Forceps, Stainless Steel

	504476
Length	10.2 cm (4 in.)
Tips	Straight, serrated, 0.5mm wide

NEW!

1:1

Foerster Forceps, Stainless Steel

	504477
Length	10.2 cm (4 in.)
Tips	Curved, serrated, 0.5mm wide

NEW!

1:1

Micro Dissecting Iris Forceps, Stainless Steel
Extra Delicate

	504478
Length	10.2 cm (4 in.)
Tips	Full curve, serrated, 0.5mm wide

NEW!

1:1

Micro Dissecting Forceps, Stainless Steel

	504479
Length	10.2 cm (4 in.)
Tips	Angular, serrated, 0.8mm wide

1:1

Micro Dissecting Forceps, Stainless Steel

	504480
Length	8.9 cm (3.5 in.)
Tips	Cross action, fine tips

1:1

Micro Dissecting Forceps, Stainless Steel

	504481
Length	8.9 cm (3.5 in.)
Tips	Smooth, angular jaws. Extra Fine tips.

1:1

Micro Dissecting Forceps, Stainless Steel

	504482
Length	10.2 cm (4 in.)
Tips	Angled; Fine Sharp Tips

1:1

Micro Dissecting Forceps, Stainless Steel

	504483
Length	10.2 cm (4 in.)
Tips	Straight; Fine Sharp Tips

1:1

Suture Tying Forceps, Stainless Steel

	504498
Length	10 cm (3.9 in.)
Tips	0.5 x 0.5 mm
Platform Length	5 mm

1:1

Nugent Utility Forceps, Stainless Steel

	504473
Length	10 cm (4 in.)
Tips	Angled, 1 mm, serrated

	504489
Length	10 cm (4 in.)
Tips	Straight, 1 mm, serrated

504473

1:1

A pin inside the shank limits the applied pressure.

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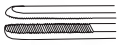
Graefe Forceps, Stainless Steel

Length	7 cm (2.75 in.)	7 cm (2.75 in.)
Tips	0.7 mm, serrated, straight	0.7 mm, serrated, curved
Standard	**14142**	**501215**
German	**14142-G**	**501215-G**

Tip Profile:

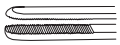


1:1

Iris Forceps, Stainless Steel

Length	10 cm (4 in.)
Tips	0.8 mm, serrated, straight
Standard	**15914**
German	**15914-G**

Tip Profile:

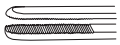


1:1

Iris Forceps, Stainless Steel

Length	10 cm (4 in.)
Tips	0.8 mm, serrated, curved
Standard	**15915**
German	**15915-G**

Tip Profile:



1:1

Iris Forceps, Stainless Steel

Length	10 cm (4 in.)
Tips	0.8 mm, 1x2 teeth, curved
Standard	**15917**
German	**15917-G**

Tip Profile:

1:1

Instrument Tip Protectors

Protect your valuable instruments during cleaning, sterilization, and storage • Steam and gas sterilizable • Radiopaque and latex-free • 50 per pack

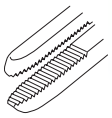
501341	Tip Protectors, 1/16" x 3/4" (1.6 mm x 19 mm), size 1, white
501342	Tip Protectors, 5/64" x 3/4" (2 mm x 19 mm), size 2, blue
501343	Tip Protectors, 7/64" x 3/4" (2.8 mm x 19 mm), size 3, green
501344	Tip Protectors, 1/8" x 1" (3.2 mm x 25.4 mm), size 4, red
501345	Tip Protectors, 3/16" x 1" (4.8 mm x 25.4 mm), size 5, yellow
501346	Tip Protectors, 13/32" x 3/4" (10.3 mm x 19 mm), size 6, maroon
501347	Tip Protectors, 1/16" x 3/8" x 1" (1.6 mm x 9.5 mm x 25.4 mm), size 7, orange
501348	Tip Protectors, 5/64" x 5/8" x 1" (2 mm x 16 mm x 25.4 mm), size 8, brown
501349	Tip Protectors, 1/8" x 1" x 1" (3.2 mm x 25.4 mm x 25.4 mm), size 9, black,
501340	Tip Protectors, Assorted Pack of 50, including at least 5 of each size

Graefe Fixation Forceps, Stainless Steel

Length	11.5cm (4.5 in.)
Tips	4mm wide, 5x5 teeth
501988	

1:1

Tip Profile:



1:1

Dressing Forceps, Stainless Steel

	Standard	*German*	*Standard*	*German*	*Standard*	*German*	*Standard*	*German*
	501217	**501217-G**	**500363**	**500363-G**	**500364**	**500364-G**	**500365**	**500365-G**
Length	12.5 cm (5 in.)		15.5 cm (6 in.)		25.5 cm (10 in.)		30.5 cm (12 in.)	
Tips	Serrated		Serrated		Serrated		Serrated	

Micro Tweezer, Stainless Steel

Length	15 cm (6 in.)
Tips	serrated, angled
German	**501727-G**

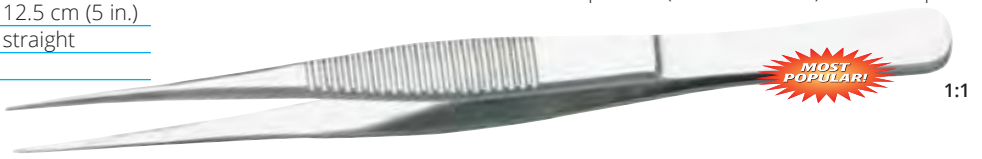
1:1

Dressing Forceps, Stainless Steel

	15908	**503283**	**15919**
Length	12.5 cm (5 in.)	12.5 cm (5 in.)	12.5 cm (5 in.)
Tips	straight, sharp	straight, round	straight

Tip Profile:

15908—SuperFine (0.35 x 0.10mm) serrated tips.



1:1

Gillies Dissecting Forceps, Stainless Steel

Length	15.5 cm (6 in.)	15.5 cm (6 in.)
Tips	1 x 2 teeth	1 x 2 teeth, **Tungsten Carbide** jaws
Standard	**501266**	**501265**
German	**501266-G**	**501265-G**

1:1

McIndoe Dressing Forceps, Stainless Steel

Length	15.5 cm (6 in.)	15.5 cm (6 in.)
Tips	serrated	serrated, **Tungsten Carbide** jaws
Standard	**501268**	**501267**
German		**501267-G**

1:1

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Teflon-Coated Cupped Forceps, Stainless Steel

	501983
Length	15.25 cm (6 in.)
Tips	3.5mm diameter

Special cupped forceps allow atraumatic gripping of organs and other delicate tissue.

1:1

Plastic-Coated Cupped Forceps, Stainless Steel

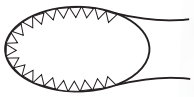
	501984
Length	12.5 cm (5 in.)
Tips	3.5mm diameter

1:1

Teflon-Coated Tweezers, Stainless Steel

	503361
Length	11 cm (4.3 in.)
Tips	Superfine tips, 0.25 x 0.1 mm

1:1



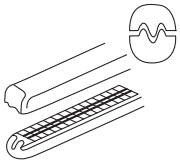
1:1

Russian Forceps, Stainless Steel

	501987
Length	15.25cm (6 in.)
Tips	serrated, oval, 7mm diameter

DeBakey Forceps, Stainless Steel

Length	15 cm (6 in.)
Tips	delicate, jaw width 1.5 mm
Standard	**501239**
German	**501239-G**
Tips	45 degree angled tip
Standard	**501996**



Atraumatic teeth grip tissue, vessels, and organs without damage.

1:1

For rodent handling.

NOT ACTUAL SIZE

Rubber-tipped Forceps, Stainless Steel

Length	21cm (8.25 in.)
503370	

Round-handled Forceps

Hollowing out the handles of long, round-handled instruments, decreases the overall weight. This makes them efficient and non-fatiguing when operating under a microscope. Made from high quality stainless steel, these instruments are an excellent addition to a microsurgical instrument kit.

Round, Hollow Handle Forceps, Stainless Steel

Length: 15 cm (6 in.)
Tips: 0.15 mm tips bent at 45°

14209 . . . . . .

Tip Profile:

1:1

Round, Hollow Handle Forceps, Stainless Steel

Length: 15 cm (6 in.)
Tips: straight 0.15 mm

Standard **14113** . . . . . .
German **14113-G** . . . . . .

Tip Profile:

1:1

Round, Hollow Handle Forceps, Stainless Steel

Length: 15 cm (6 in.)
Tips: curved 0.3 mm tips

Tip Profile:

Standard **14114** . . . . . .
German **14114-G** . . . . . .

1:1

Dilator Forceps, Stainless Steel

Length: 14 cm (5.5 in.)
Tips: straight 0.15 mm tips

15910 . . . . . .

Tip Profile:

1:1

Round, Hollow Handle Forceps, Stainless Steel

Length: 14 cm (5.5 in.)
Tips: straight 0.15 mm

14211 . . . . . .

1:1

Round, Hollow Handle Forceps, Stainless Steel

Length: 14 cm (5.5 in.)
Tips: straight 0.15 mm tips

14079 . . . . . .

1:1

Round, Hollow Handle Forceps, Stainless Steel

Length: 14 cm (5.5 in.)
Tips: straight 0.3 mm with tying platform

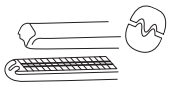
14210 . . . . . .

1:1

DeBakey Forceps, Stainless Steel

16 cm (6.25 in.) long, angled, micro, jaw width 1.2 mm, atraumatic

503213 . . . . . .



1:1

16 cm (6.25 in.) long, micro, jaw width 1.2 mm, straight, atraumatic

503212 . . . . . .

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Microintraocular Forceps, Stainless Steel

Length:14 cm (5.5 in.)
Jaws:2.5 × 0.3 × 0.25mm (lxwxt), 1.5mm maximum opening

500373 . . . . . .
500373-T . . . . . TITANIUM handle

1:1

Length:14 cm (5.5 in.)
Jaws:3 × 0.6 × 0.4mm (lxwxt), 1.4mm maximum opening

501212 . . . . . .

Tip Profile:

Vessel Cannulation Forceps, Stainless Steel

10 cm (4 in.) long; for 0.5mm diameter cannula

500377 . . . . . .

Tip Profile:

1:1

Vessel canulation forceps are designed to insert small catheters into vessels. The small hollow jaws of the forceps ensure a secure insertion without damaging the fine tubes.

Vessel Cannulation forceps, Stainless Steel

10 cm (4 in.) long; for 1.0 mm diameter cannula

500453 . . . . . .

Filter Forceps, Stainless Steel

Polypropylene finger grip, 11 cm (4.3 in.) long, straight flat jaw

500455 . . . . . .

Great for gel handling

1:1

Filter Forceps, Stainless Steel

11 cm (4.3 in.) long, straight flat jaw

Standard **500456** . . . . . *German* **500456-G** . . . . . .

Great for gel handling

1:1

Filter Forceps, Stainless Steel

Length	11 cm (4.3 in.)
Tips	bent flat jaw
500457	

Great for gel handling

1:1

Wafer Handling Forceps, Stainless Steel

Length	11 cm (4.3 in.)
Tips	angled 30° jaw
501303	

Great for gel handling

1:1

1:1

Reverse Action Tweezer, Stainless Steel

Length	16.5 cm (6.5 in.)
Tips	7.5 cm, jaw 0.06 cm
504501	

Titanium Forceps

- 100% non-corrosive (great for seawater procedures)
- 100% non-magnetic (MRI compatible)
- Forcep tips coated with tungsten carbide for increased gripping power
- Anodized, non-glare blue finish
- 40% lighter than stainless steel (reduces hand fatigue)

Straight Forceps

Length: 11.5 cm (4.5 in.)
Tips: 1 x 2, 0.12 mm teeth, 5 mm tying platform

Titanium **555047FT** . . . . . .

Straight Forceps

Length: 11.5 cm (4.5 in.)
Tips: 3 mm, 6 mm tying platform

Titanium **555007FT** . . . . . .

Calibri Tying Forceps

Length: 11.5 cm (4.5 in.)
Tips: 3 mm, 4 mm tying platform

Titanium **555008FT** . . . . . .

Kelman-McPherson Forceps

Length: 8.5 cm (3.3 in.)
Tips: 45°angle, 7.5 mm smooth jaw

Titanium **555190FT** . . . . . .

Kelman-McPherson Forceps

Length: 11.5 cm (4.5 in.)
Tips: 45°angle, 7.5 mm smooth jaw

Titanium **555191FT** . . . . . .

McPherson Forceps

Length: 11.5 cm (4.5 in.)
Tips: 45°angle, 6 mm tying platform

Titanium **555009FT** . . . . . .

McPherson Forceps

Length: 8.5 cm (3.3 in.)
Tips: angled, 4.5 mm tying platforms

Titanium **555005FT** . . . . . .

Forceps

Length: 8.5 cm (3.3 in.)
Tips: 12 mm, straight, 4.5 mm tying platforms

Titanium **555001FT** . . . . . .

Forceps

Length: 8.5 cm (3.3 in.)
Tips: straight, 0.12 mm teeth (1x2), 5 mm tying platform

Tip Profile:

Titanium **555041FT** . . . . . .

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Jewelers #7 Forceps

Length: 11 cm (4.3 in.)
Tips: 0.07 x 0.01 mm

Titanium **555230F** . . . . . .

Jewelers #5 Forceps

Length: 11 cm, 45° bend
Tips: 0.05 x 0.01 mm

Titanium **555229F** . . . . . .

1:1

Jewelers #5 Forceps

Length: 11 cm, 45° straight
Tips: 0.01 x 0.06 mm

Titanium **555227F** . . . . . .

1:1

Bishop Harmon Forceps, *1 x 2 teeth*

9 cm (3.5 in.) long

Standard **501776** . . . . . .

German **501776-G** . . . . . .

Titanium **555053FT** . . . . . .

1:1

Perone Lasik Forceps

10.8 cm (4.25 in.) long
2 mm OD rings

Titanium **555827L** . . . . . .

1:1

Adson Forceps

Length: 12 cm (4.7 in.)
Tips: 1 mm, smooth

Titanium **555243F** . . . . . .

1:1

Dressing Forceps

Length: 10.5 cm (4 in.)

Titanium **503389** . . . . . .

1:1

Fechtner Conjunctiva Forceps

11 cm (4.3 in.) long
Tips: 1 mm rings

Titanium **555173F** . . . . . .

1:1

Hartman Mosquito Hemostatic Forceps

Titanium	**555222F**	9 cm (3.5 in.) long, straight
Titanium	**555223F**	9 cm (3.5 in.) long, curved

Backhaus Towel Clamp, Stainless Steel

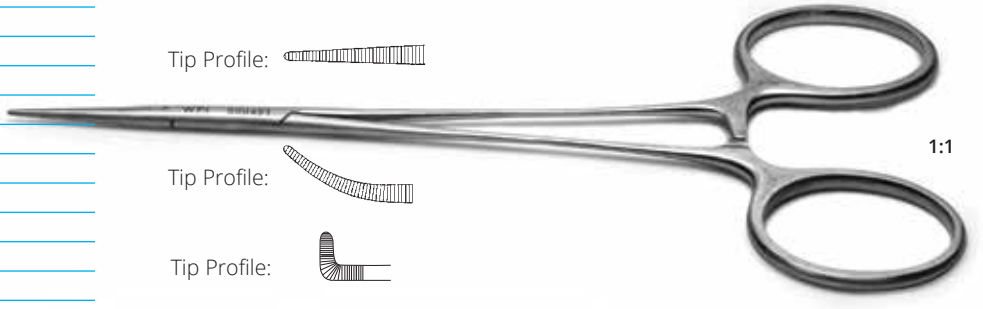
Length	9 cm (3.5 in.), locking handle
Tips	Curved
Standard	**501320**
German	**501320-G**
Length	13 cm (5.25 in.), locking handle
Tips	Curved
Standard	**501700**
German	**501700-G**

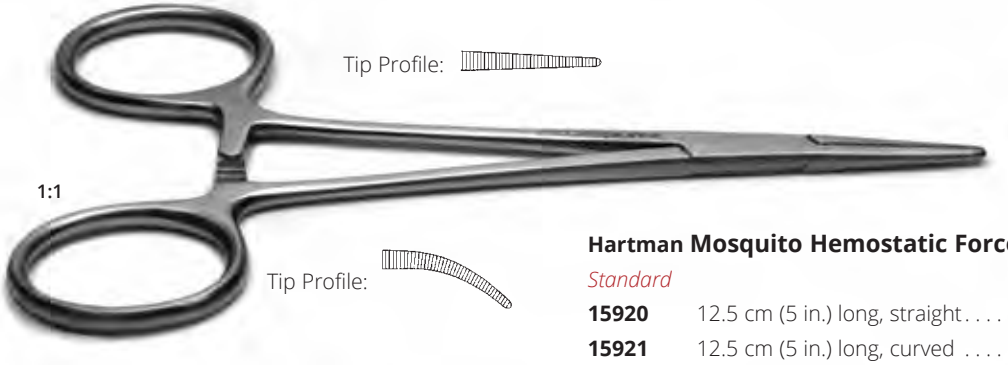
Jones Towel Clamp, Stainless Steel

Length	9 cm (3.5 in.)
Tips	Curved
V503380	

Micro Hemostatic Forceps, Stainless Steel

Length	12.5 cm (5 in.), straight,
Tips	serrated, 0.4 x 0.8 mm
Standard	**500451**
German	**500451-G**
Length	12.5 cm (5 in.), curved
Tips	serrated, 0.4 x 0.8 mm
Standard	**500452**
German	**500452-G**
Length	12.5 cm (5 in.), right-angle
Tips	serrated, 0.4 x 0.8 mm tips
Standard	**503360**





Hartman Mosquito Hemostatic Forceps, Stainless Steel

Standard		*German*
15920	12.5 cm (5 in.) long, straight	**15920-G**
15921	12.5 cm (5 in.) long, curved	**15921-G**
501705	9 cm (3.5 in.) long, straight	**501705-G**
501291	9 cm (3.5 in.) long, curved	**501291-G**

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Allis Tissue Forceps, Stainless Steel

15 cm (6 in.), 4x5 teeth

Standard **501324** . . . . . .

German **501324-G** . . . . .

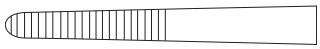
Tip Profile:

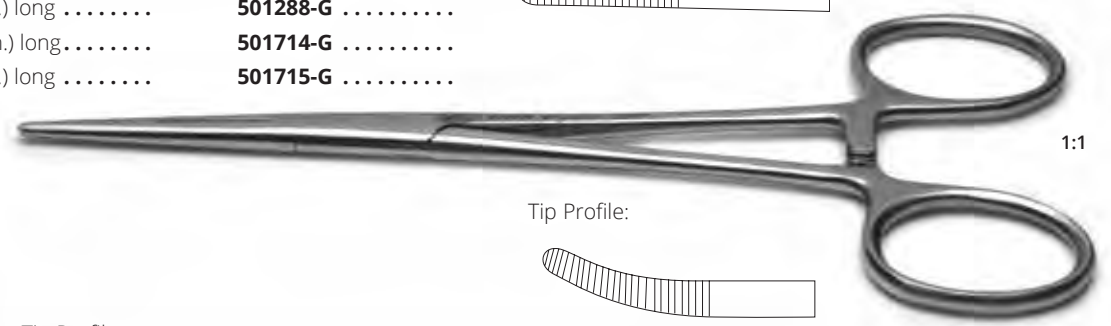
1:1

Kelly Hemostatic Forceps, Stainless Steel

Standard		*German*
501241	Straight, 14 cm (5.5 in.) long	**501241-G** . . . . .
501288	Curved, 14 cm (5.5 in.) long	**501288-G** . . . . .
501714	Straight, 15.5 cm (6 in.) long	**501714-G** . . . . .
501715	Curved, 15.5 cm (6 in.) long	**501715-G** . . . . .

Tip Profile:

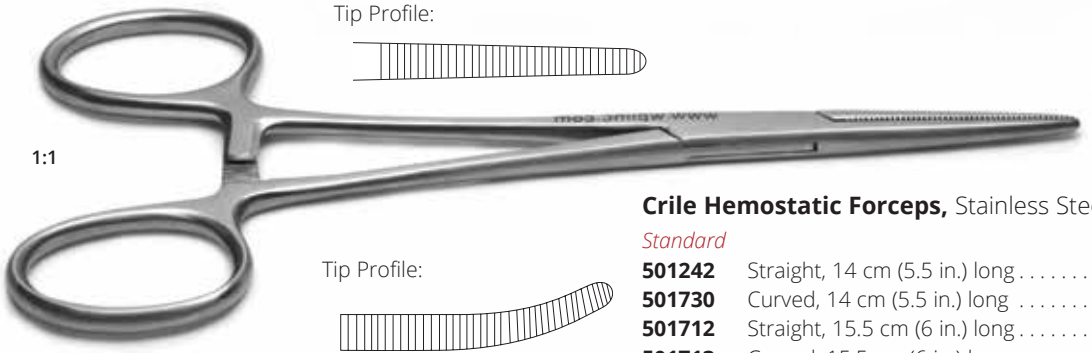




1:1

Tip Profile:

Tip Profile:



1:1

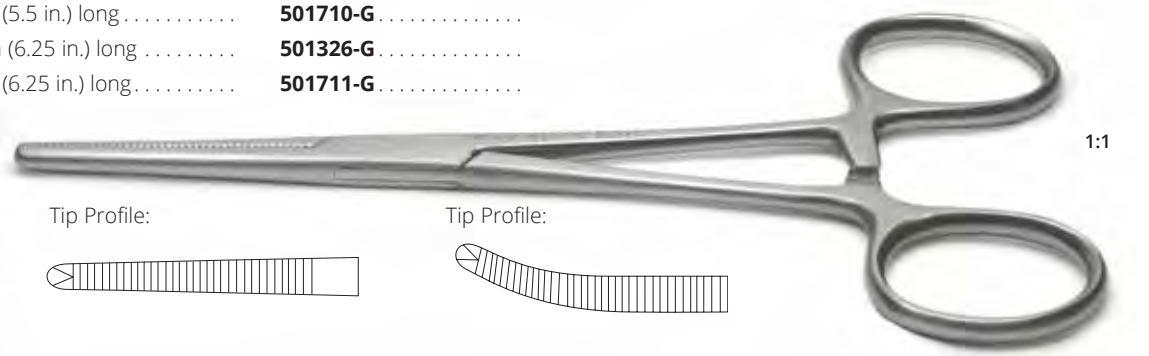
Tip Profile:

Crile Hemostatic Forceps, Stainless Steel

Standard		*German*
501242	Straight, 14 cm (5.5 in.) long	**501242-G** . . . . .
501730	Curved, 14 cm (5.5 in.) long	**501730-G** . . . . .
501712	Straight, 15.5 cm (6 in.) long	**501712-G** . . . . .
501713	Curved, 15.5 cm (6 in.) long	**501713-G** . . . . .
503230	Straight, smooth jaw, 6.25 in. long	
503229	Curved, smooth jaw, 6.25 in. long	
503228	Curved, smooth jaw 14 cm long.	
503227	Straight, smooth jaw 14 cm long	

Rochester-Oschner Hemostatic Forceps, Stainless Steel

Standard		*German*
501709	Straight, 14 cm (5.5 in.) long	**501709-G** . . . . .
501710	Curved, 14 cm (5.5 in.) long	**501710-G** . . . . .
501326	Straight, 16 cm (6.25 in.) long	**501326-G** . . . . .
501711	Curved, 16 cm (6.25 in.) long	**501711-G** . . . . .



1:1

Tip Profile:

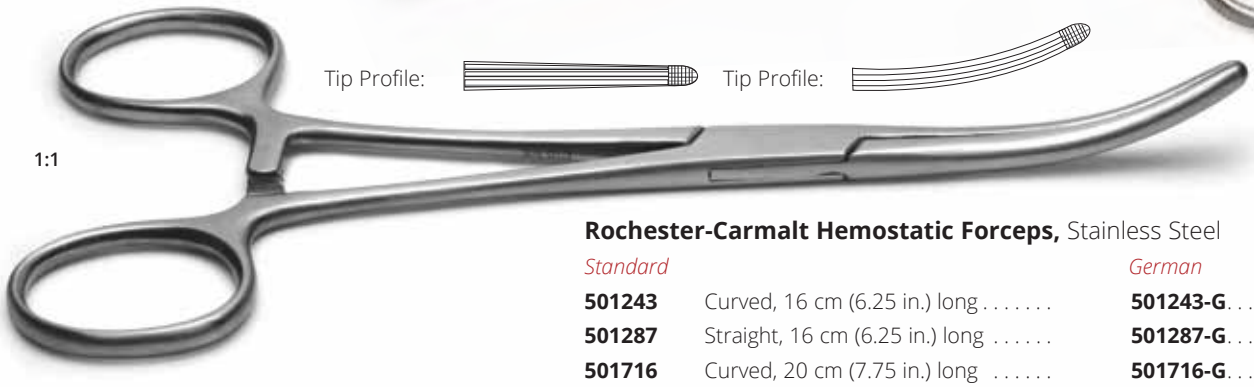
Tip Profile:

NEW!

Radolf Holding Forceps, Stainless Steel
13.5 cm (5.3 in.), curved serrated jaw
503220 . . . . . .

Tip Profile:

Tip Profile:

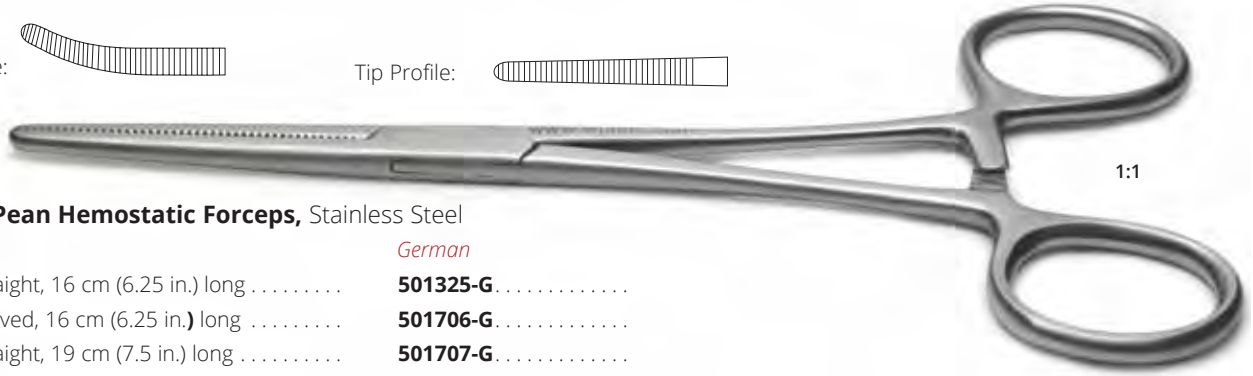


Rochester-Carmalt Hemostatic Forceps, Stainless Steel

Standard		*German*
501243	Curved, 16 cm (6.25 in.) long	**501243-G** . . . . .
501287	Straight, 16 cm (6.25 in.) long	**501287-G** . . . . .
501716	Curved, 20 cm (7.75 in.) long	**501716-G** . . . . .
501717	Straight, 20 cm (7.75 in.) long	**501717-G** . . . . .

Tip Profile:

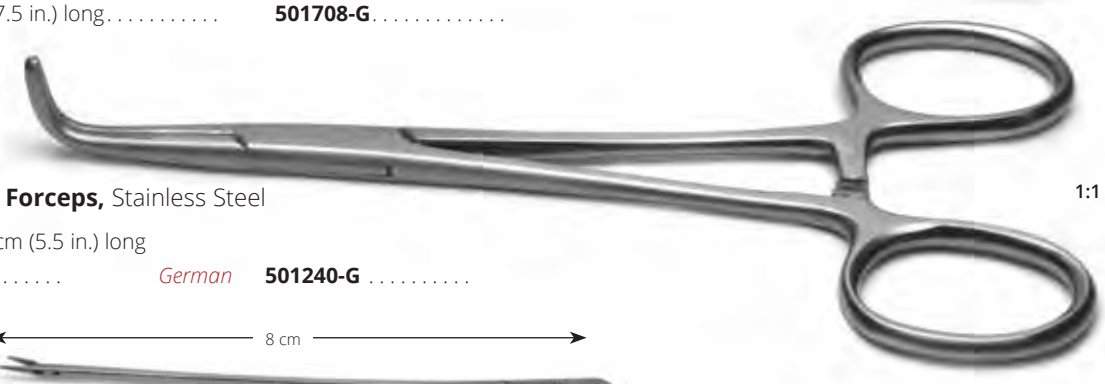
Tip Profile:



Rochester-Pean Hemostatic Forceps, Stainless Steel

Standard		*German*
501325	Straight, 16 cm (6.25 in.) long	**501325-G** . . . . .
501706	Curved, 16 cm (6.25 in.) long	**501706-G** . . . . .
501707	Straight, 19 cm (7.5 in.) long	**501707-G** . . . . .
501708	Curved, 19 cm (7.5 in.) long	**501708-G** . . . . .

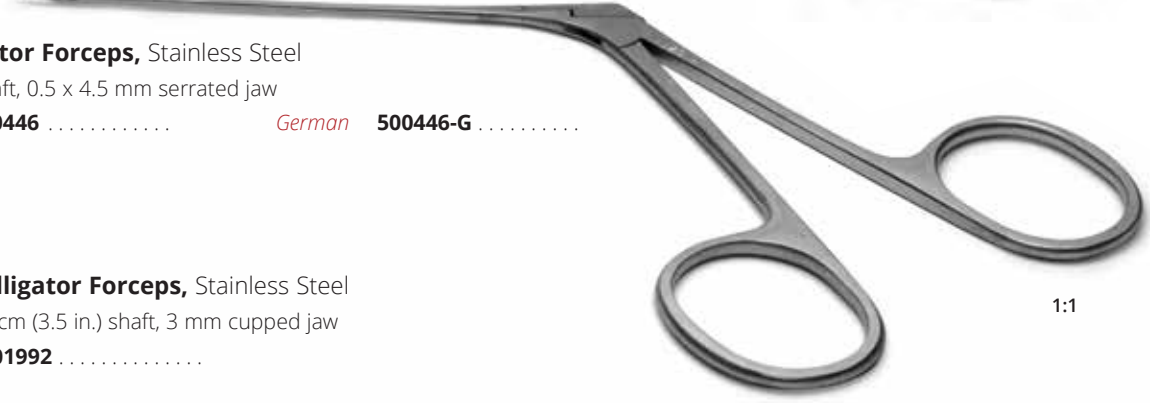
Tip Profile:



Mixter Hemostatic Forceps, Stainless Steel
"Baby", right angle, 14 cm (5.5 in.) long
Standard **501240** . . . . . *German* **501240-G** . . . . . .

Tip Profile:

8 cm



Micro Alligator Forceps, Stainless Steel
8 cm (3 in.) shaft, 0.5 x 4.5 mm serrated jaw
Standard **500446** . . . . . *German* **500446-G** . . . . . .

Alligator Forceps, Stainless Steel
9 cm (3.5 in.) shaft, 3 mm cupped jaw
501992 . . . . . .

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Needle Holders

These squeeze-handle needle holders may be used ambidextrously.

Needle Holder

14 cm (5.5 in.) long, round handles
0.4 mm tips, curved smooth jaws

Standard **14081** . . . . . .
German **14081-G** . . . . . .

0.4 mm tips, straight smooth jaws

503357 . . . . . .

Needle Holder

14 cm (5.5 in.) long, 0.4 mm tips, straight, smooth jaws

503355. . . . . *with lock*

20 cm (7.75 in), 0.4 mm tips, curved, smooth jaws

503354. . . . . *with lock*

Stevens Needle Holder

13 cm (5 in.) long
straight 1 mm wide serrated tips

Standard **14133** . . . . . .
German **14133-G**. . . . . .

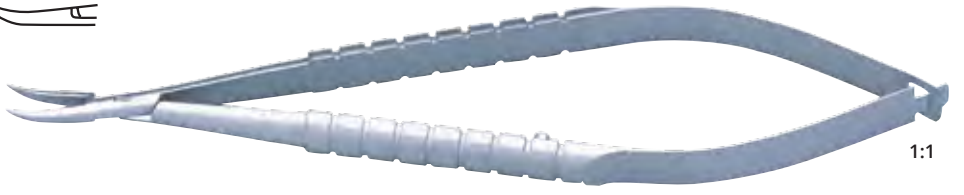
Tip Profile:

Needle Holder

12.5 cm (5 in.) long
round handles
0.4 mm tips
curved smooth jaws

14132 . . . . . .

Tip Profile:



Castroviejo Needle Holder

14 cm (5.5 in.) long, with lock
Straight 1.2-mm wide serrated tips

Standard **14137** . . . . . .
German **14137-G** . . . . . .
Titanium **555419NT**. . . . . .

Serrated Tungsten Carbide jaws
Straight with lock

Standard **500223** . . . . . .
German **500223-G**. . . . . .

Tip Profile:

Smooth tips, 1.2-mm wide

Straight **503257** . . . . . .
Curved **503258** . . . . . .

Micro Castroviejo Needle Holder

9cm long, 0.5cm round tips with diamond dust

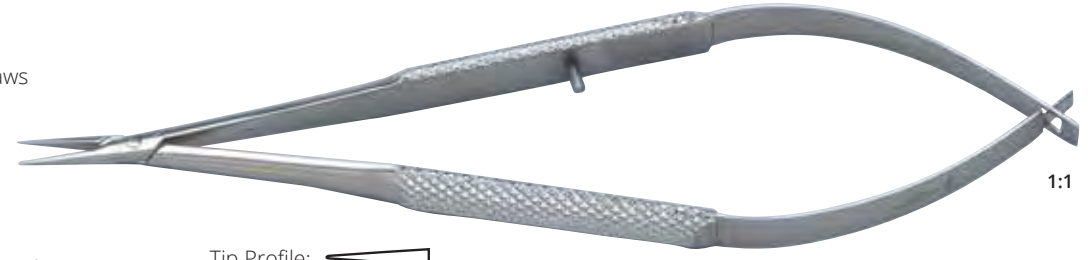
Straight **503376** . . . . . .
Curved **503377** . . . . . .

Tip Profile:

Needle Holder

14 cm (5.5 in.) long
round handles
0.3 mm tips, straight smooth jaws

Standard **14080** . . . . . .
German **14080-G**. . . . . .



1:1

Tip Profile:

Titanium

14 cm (5.5 in.) long, straight smooth jaws
14361 . . . . . .
14 cm (5.5 in.) long, curved smooth jaws
501923 . . . . . .

1:1

Castro Olsen-Hegar Needle Holder

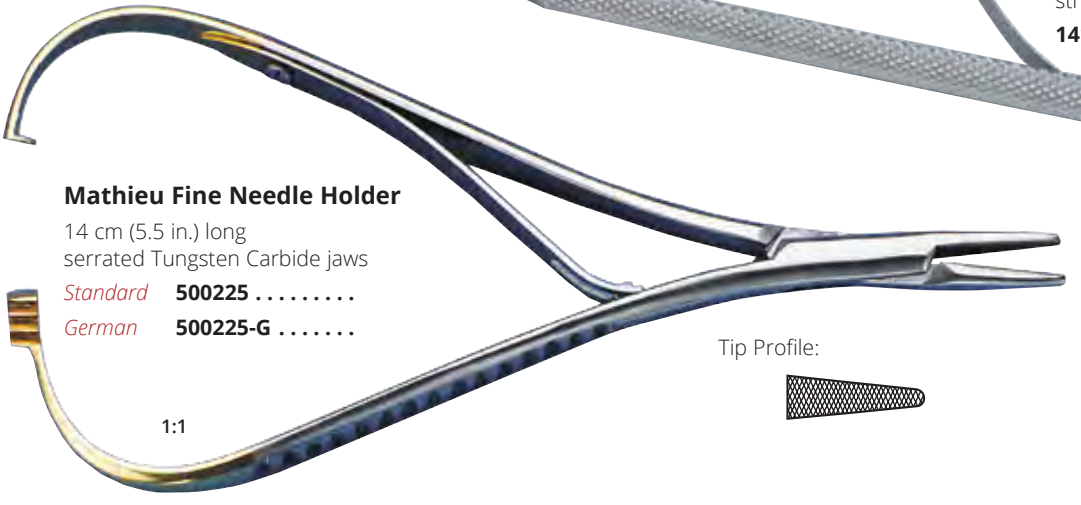
15 cm (6 in.) long
combined with suture scissors
serrated jaws
501998 . . . . . .

Tip Profile:

Needle Holder with scissors

14 cm (5.5 in.) long
round handles
0.3 mm tips
straight smooth jaws
14115 . . . . . .

1:1



Mathieu Fine Needle Holder

14 cm (5.5 in.) long
serrated Tungsten Carbide jaws
Standard **500225** . . . . . .
German **500225-G** . . . . . .

1:1

Tip Profile:

Needle Holder, Round handled

14 cm (5.5 in.) long
round hollow handles
straight smooth jaws
14207 . . . . . .

Tip Profile:

1:1

Needle Holder, Round handled

14 cm (5.5 in.) long
round hollow handles
curved smooth jaws
14206 . . . . . .

Tip Profile:

1:1

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Webster Needle Holder

12.5 cm (5 in.) long
straight serrated jaws
extra delicate

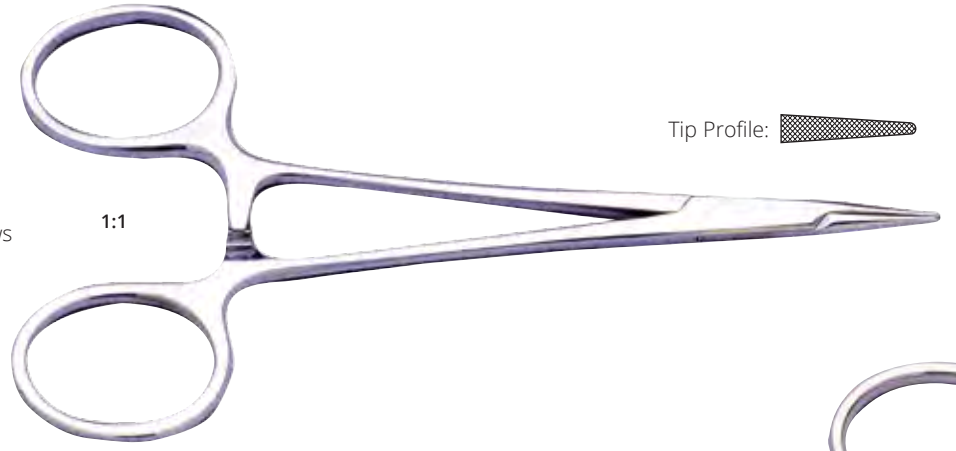
Standard **14109** . . . . . .
German **14109-G** . . . . . .

14 cm (5.5 in.) long
straight, extra delicate serrated jaws
German-made

501929 . . . . . .

12.5 cm (5 in.) long
straight, smooth jaws

501843 . . . . . .**$43**



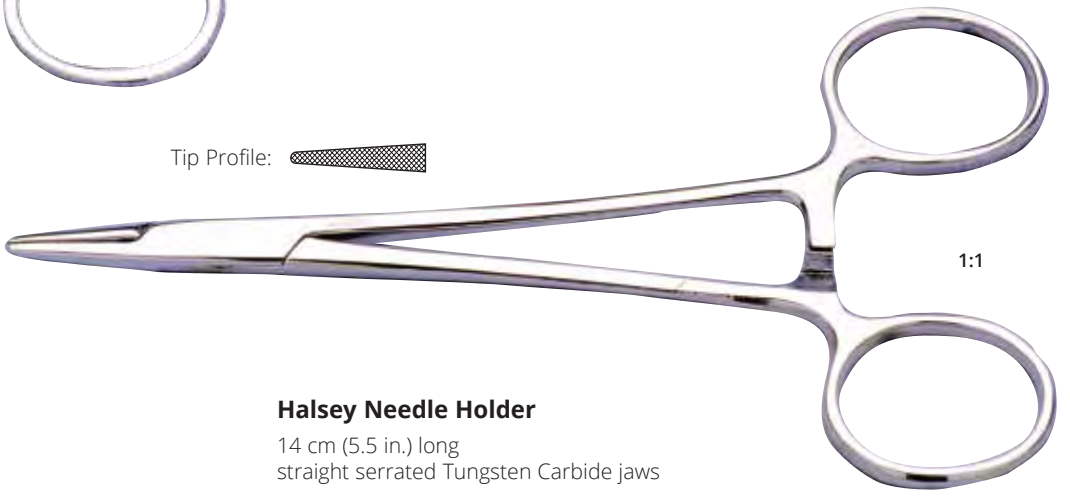
Tip Profile:

Halsey Needle Holder

14 cm (5.5 in.) long
straight serrated jaws

Standard **14110** . . . . . .
German **14110-G** . . . . . .

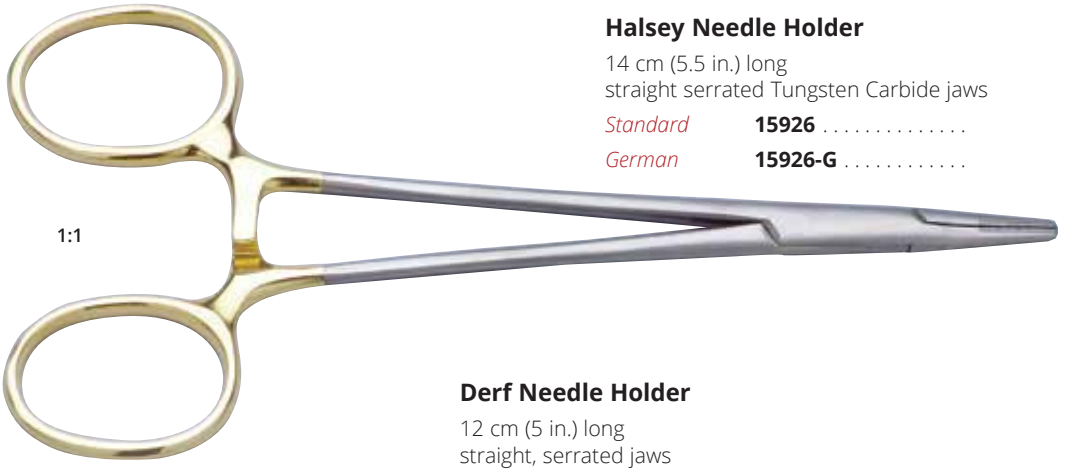
Tip Profile:



Halsey Needle Holder

14 cm (5.5 in.) long
straight serrated Tungsten Carbide jaws

Standard **15926** . . . . . .
German **15926-G** . . . . . .



Tip Profile:

Derf Needle Holder

12 cm (5 in.) long
straight, serrated jaws

Standard **501246** . . . . . .
German **501246-G** . . . . . .

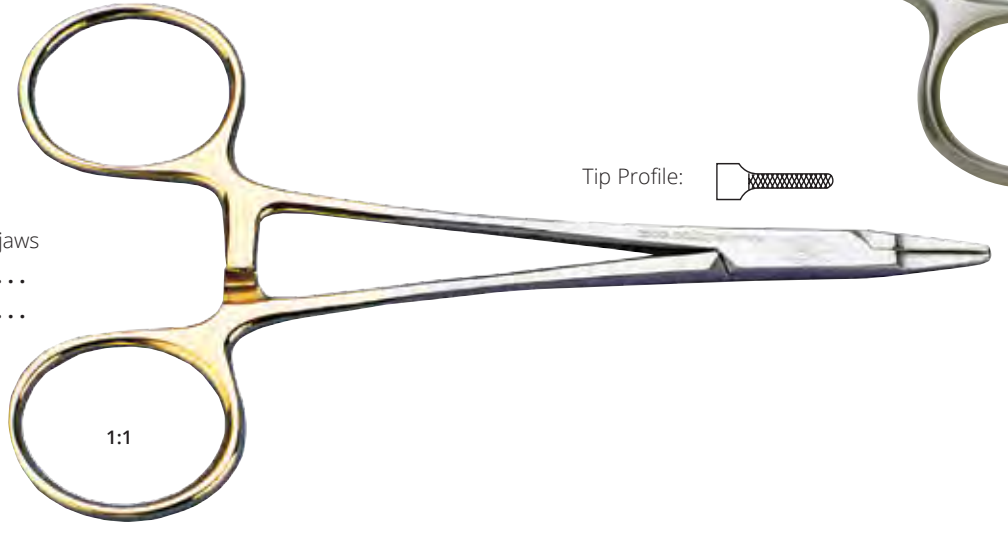
Tip Profile:

Ryder Needle Holder

13 cm (5 in.) long
serrated Tungsten Carbide jaws

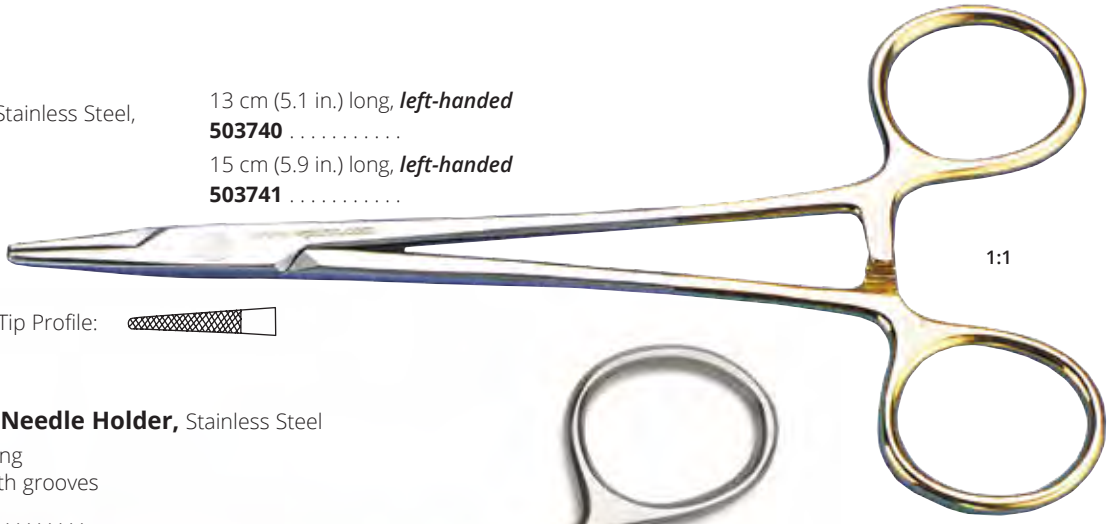
Standard **500226** . . . . . .
German **500226-G** . . . . . .

Tip Profile:



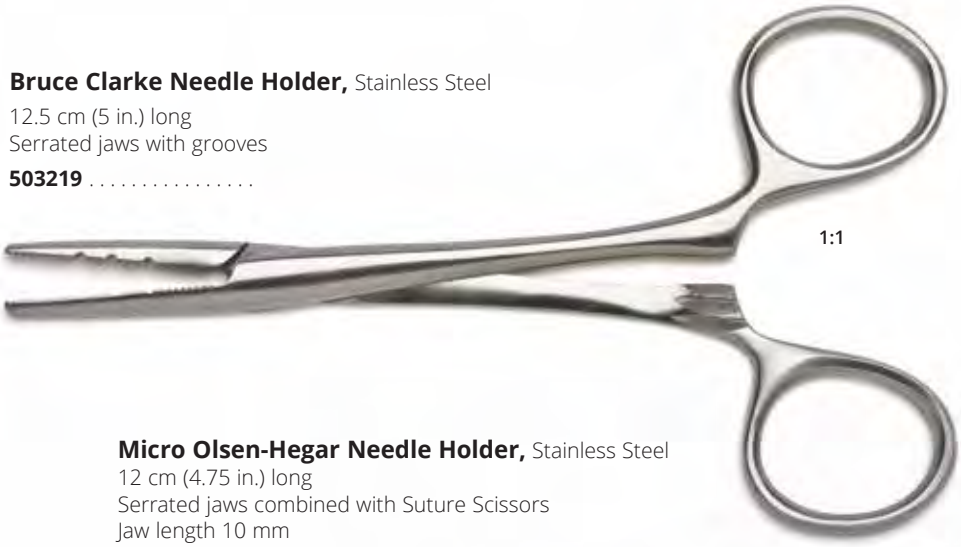
Crile-Wood Needle Holder, Stainless Steel, serrated Tungsten Carbide jaws
14.5 cm (5.75 in.) long
Standard **500224**. . . . . .
German **500224-G**. . . . . .

13 cm (5.1 in.) long, ***left-handed***
503740 . . . . . .
15 cm (5.9 in.) long, ***left-handed***
503741 . . . . . .



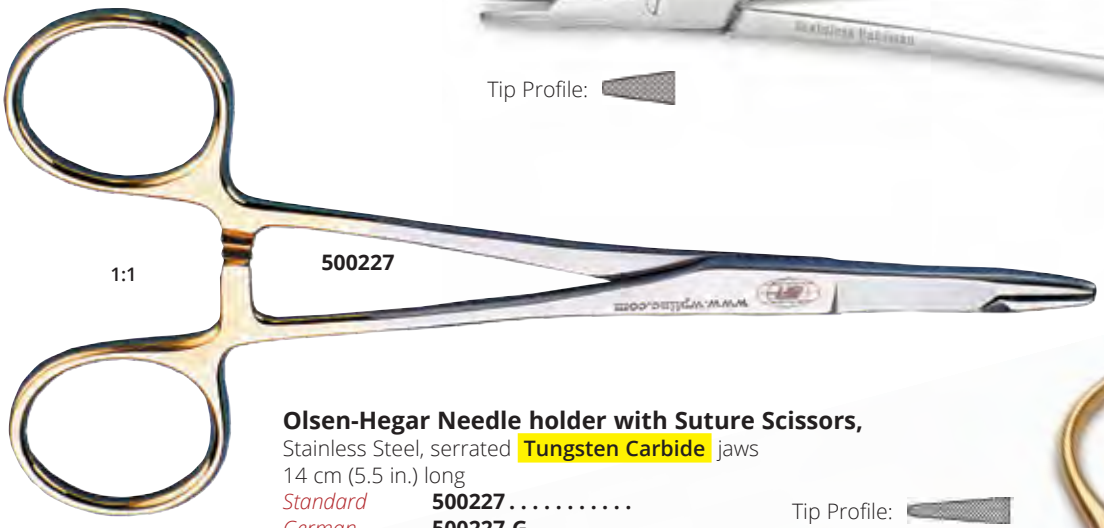
Tip Profile:

Bruce Clarke Needle Holder, Stainless Steel
12.5 cm (5 in.) long
Serrated jaws with grooves
503219 . . . . . .



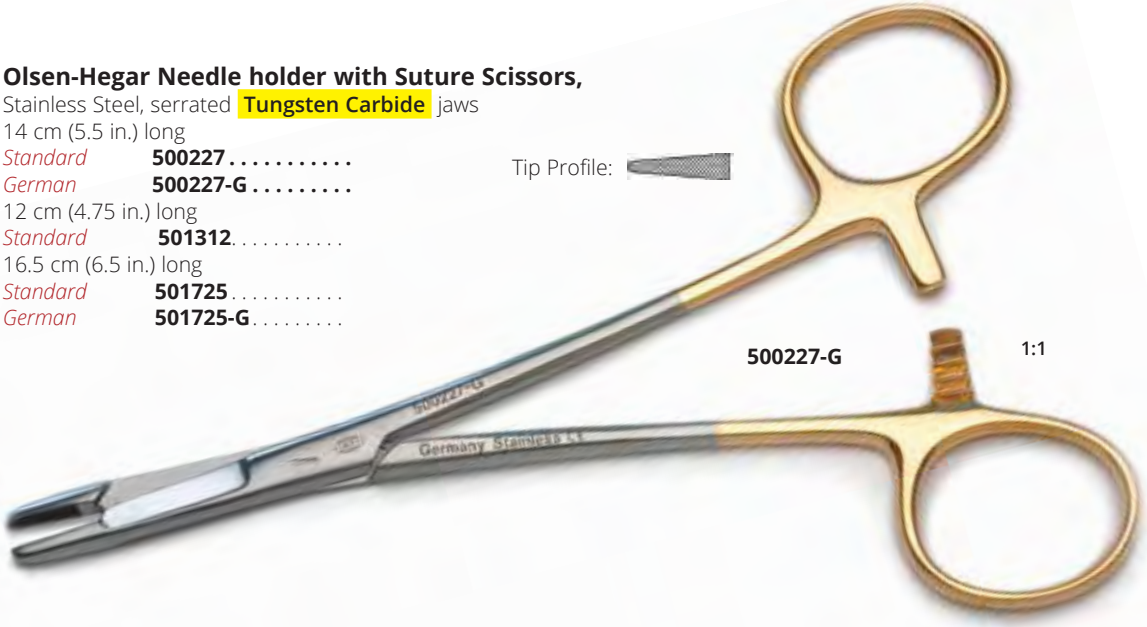
Micro Olsen-Hegar Needle Holder, Stainless Steel
12 cm (4.75 in.) long
Serrated jaws combined with Suture Scissors
Jaw length 10 mm
Tip width 2 mm
501989 . . . . . .

Tip Profile:



Olsen-Hegar Needle holder with Suture Scissors,
Stainless Steel, serrated Tungsten Carbide jaws
14 cm (5.5 in.) long
Standard **500227**. . . . . .
German **500227-G**. . . . . .
12 cm (4.75 in.) long
Standard **501312**. . . . . .
16.5 cm (6.5 in.) long
Standard **501725**. . . . . .
German **501725-G**. . . . . .

Tip Profile:



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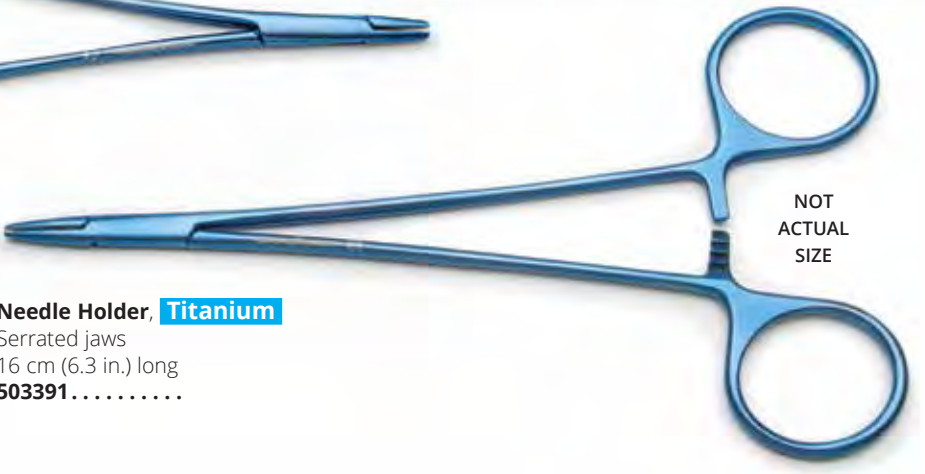
Tip Profile:

Olsen-Hegar Needle Holder, Stainless Steel
14cm (5.5 in.) long
Serrated jaws combined with Suture Scissors
500023 . . . . . .
500023-G . . . . . .

Mayo-Hegar Needle Holder, Stainless Steel
15 cm long (6 in.)
V503382 . . . . . .

Needle Holder, **Titanium**
Serrated jaws
13 cm (5.1 in.) long
503390 . . . . . .



Needle Holder, **Titanium**
Serrated jaws
16 cm (6.3 in.) long
503391 . . . . . .

Barraquer Needle Holder, Titanium
11.5 cm long (4.5 in.)
Delicate, 9mm gently curved jaws, sharp tips

555402NT	without lock
555403NT	with lock *(pictured)*

Troutman Needle Holder, Curved, Titanium
11.5 cm long (4.5 in.)
10mm gently curved jaws, blunt tips

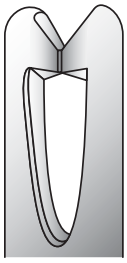
555406NT	without lock *(pictured)*
555407NT	with lock

Curved Needle Holder, Titanium
11 cm long (4.3 in.)
Curved, 6mm delicate jaws

555408NT	without lock

Needle Holder, Titanium
14 cm long (5.5 in.)
Curved, Smooth Jaws
501923

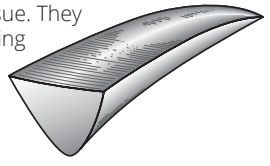
Needles



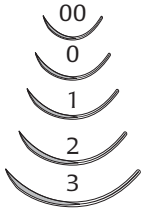
All needles have a Spring Eye which allows the suture to be pressed into the eye instead of threaded.

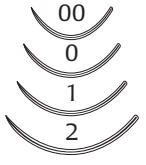
Taper point needles pierce and spread tissue without cutting it. They are ideal for suturing delicate, soft tissue when minimal trauma is desired.

Cutting edge needles have sharp edges that penetrate easily through tough tissue. They are ideal for suturing skin and dense dermal tissue.



Needle measurements taken across needle from eye to tip:



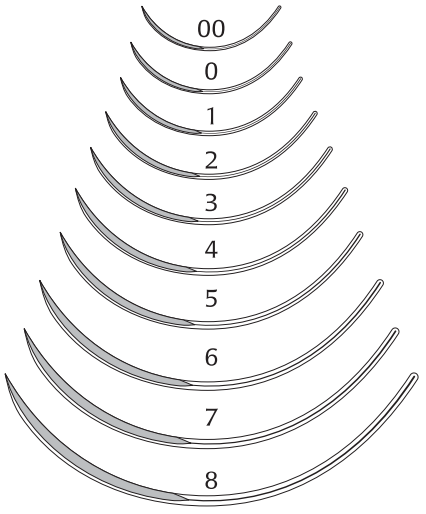


Eye Needles, cutting edge, 5/16 circle
(above left)

501957	Size 00, 11mm, pack of 12
501958	Size 0, 13mm, pack of 12
501959	Size 1, 15mm, pack of 12
501960	Size 2, 18mm, pack of 12
501961	Size 3, 21mm, pack of 12

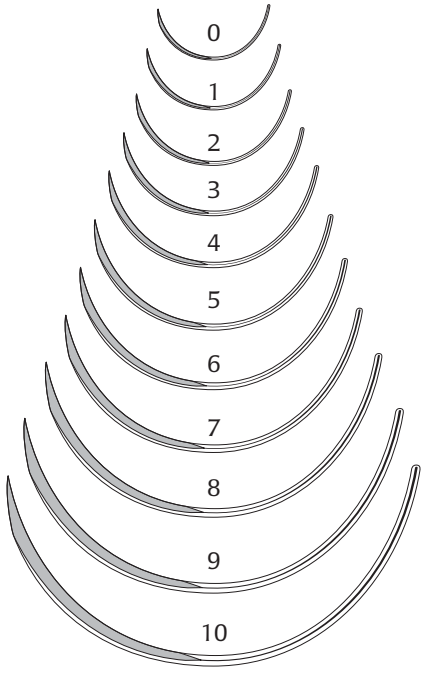
Eye Needles, taper point, 5/16 circle
(above right)

501962	Size 00, 11mm, pack of 12
501963	Size 0, 13mm, pack of 12
501964	Size 1, 15mm, pack of 12
501965	Size 2, 18mm, pack of 12



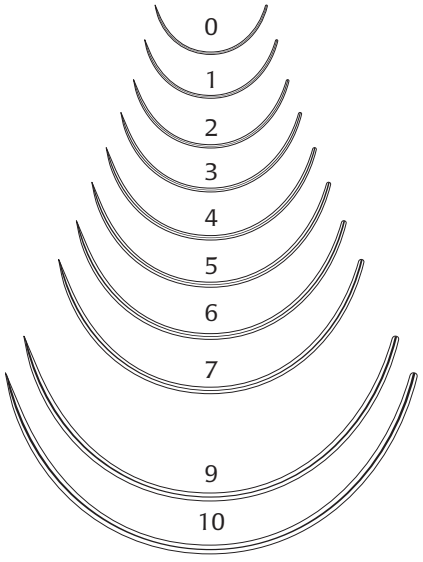
Surgical Needles, cutting edge, 3/8 circle

501802	Size 00, 18mm, pack of 12
501803	Size 0, 21mm, pack of 12
501804	Size 1, 24mm, pack of 12
501805	Size 2, 28mm, pack of 12
501806	Size 3, 32mm, pack of 12
501807	Size 4, 36mm, pack of 12
501808	Size 5, 40mm, pack of 12
501809	Size 6, 45mm, pack of 12
501810	Size 7, 50mm, pack of 12
501935	Size 8, 55mm, pack of 12



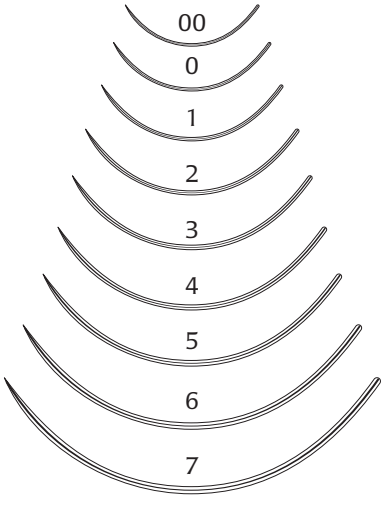
Surgical Needles, cutting edge, 1/2 circle

501791	Size 0, 15mm, pack of 12
501792	Size 1, 18mm, pack of 12
501793	Size 2, 21mm, pack of 12
501794	Size 3, 24mm, pack of 12
501795	Size 4, 28mm, pack of 12
501796	Size 5, 32mm, pack of 12
501797	Size 6, 36mm, pack of 12
501798	Size 7, 40mm, pack of 12
501799	Size 8, 45mm, pack of 12
501800	Size 9, 50mm, pack of 12
501801	Size 10, 55mm, pack of 12



Surgical Needles, taper point, 1/2 circle

501936	Size 0, 15mm, pack of 12
501937	Size 1, 18mm, pack of 12
501938	Size 2, 21mm, pack of 12
501939	Size 3, 24mm, pack of 12
501940	Size 4, 28mm, pack of 12
501941	Size 5, 32mm, pack of 12
501942	Size 6, 36mm, pack of 12
501943	Size 7, 40mm, pack of 12
501945	Size 9, 50mm, pack of 12
501946	Size 10, 55mm, pack of 12



Surgical Needles, taper point, 3/8 circle

501947	Size 00, 18mm, pack of 12
501948	Size 0, 21mm, pack of 12
501949	Size 1, 24mm, pack of 12
501950	Size 2, 28mm, pack of 12
501951	Size 3, 32mm, pack of 12
501952	Size 4, 36mm, pack of 12
501953	Size 5, 40mm, pack of 12
501954	Size 6, 45mm, pack of 12
501955	Size 7, 50mm, pack of 12

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Skin Staplers

This quality German made, sterile, skin stapler contains 35 wide, stainless steel (316L) staples. The **tohamed®** skin stapler saves time and money, and closes wounds gently and securely. Its ergonomic design makes it more comfortable for routine use, exceeding expectations for a disposable (single use), surgical stapler. (Staple size: 6.8 x 3.9mm)

504562 Skin Stapler 35W, sterile

This affordable skin stapler's simple design and quality construction provides consistent and reliable performance. It fits comfortably in your hand to enhance control of skin closure and also reduces surgery time.

- 35 staples pre-loaded.
- Individually sterile

- Lever action staplers are the most popular design on the market
- Distinctive staple shuttling feature greatly reduces track friction, a primary cause of jamming
- Short trigger stroke for ease of use and nonstop feed
- Handle design comfortably fits a wide range of hand sizes
- Angled head allows visibility of incision to ensure precise staple placement during operation
- Arrow indicator assists in accurate staple alignment
- Staple count indicator allows you to view staples remaining to help minimize waste
- Quality construction and simple design assure reliable consistent performance
- Staple lines are more likely to prevent leakage of blood or air
- Regular staples measure 5.7mm x 3.8mm; wide staples measure 6.5mm x 4.7mm

504563 Skin Stapler Sterile with 35 Staples 35W, sterile

The **SurgiClose™ REP** is a reusable device which allows for reloading of sterile multi-feed staples and can be resterilized (by autoclave, gas and chemical means) for approximately 100 procedures.

- Ergonomic design for 5th-95th precentile of female/male veterinarians
- Extensively engineered materials including surgical stainless steel and thermoplastic resins
- Extremely shallow tissue channel and eversion assisting design
- Sterile staple cartridges sold separately.

504564 SurgiClose Skin Stapler, High Temp Autoclavable

The **SurgiClose™ REP Disposable Cartridge**, when used in conjunction with the SurgiClose REP stapler, provides an external skin stapling system equivalent in cost to conventional suture ligature and needle wound closure modalities. Box staple design and shallow tissue channel preclude staple roll and dehiscence. The clear housing provides visibility, so you can see the actual staple count at all times.

- Sterile
- Twenty 316L stainless steel staples per cartridge, 6 cartridges per pack
- Suitable for most veterinary procedures

504565 SurgiClose® REP Disposable Cartridges, pkg of 6

Clips and Clamps

Reflex Clip Applier
11 cm (4.3 in.) long
for 7 mm clips only
500343 . . . . . .

Reflex Clip Applier
11 cm (4.3 in.) long
for 9 mm clips only
500345 . . . . . .

Reflex Clip 7 mm
for use with #500343
100/box, Stainless Steel, non-sterile
500344 . . . . . .

Reflex Clip 9 mm
for use with #500345
100/box, Stainless Steel, non-sterile
500346 . . . . . .

Reflex clip removing forceps
12 cm (4.75 in.) long, for 7 mm and
9 mm clips
500347 . . . . . .

Staple Remover
12 cm (4.5 in.) long, for use with
disposable skin stapler
501830. . . . . .

Applying Forceps for Silver Clips #500087, 18 cm (7 in.) long
500088 . . . . . .

Silver Clips, Micro Vascular
0.5 x 0.8 mm (100/pkg)
500087 . . . . . .

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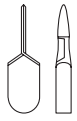
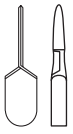
Micro Vessel Clips, serrated jaws

German

501779-G
Straight, 0.75 x 4 mm jaws



501780-G
Straight, 0.8 x 6 mm jaws



Frog Heart Clips

501902 .....
two flat loops
2.5 mm diameter loops
24 mm long
5 per package

501903 .....
two fine loops
0.6 mm diameter tips
17 mm long
5 per package

501904 .....
two flat tips
1 x 3 mm tips
18 mm long
5 per package

Vessel Clips

15911 10 g pressure, jaws 0.8mm wide x 5mm long, 5 per pack. . . . . .
15913 15 g pressure, jaws 1mm wide x 5mm long, 5 per pack . . . . . .
14120 30 g pressure, jaws 1mm wide x 5mm long, 5 per pack . . . . . .
14121 60 g pressure, jaws 1.5mm wide x 8mm long, 5 per pack. . . . . .

Schwartz Vessel Clips

German
501788-G strong angle, 1.7 x 8 mm jaws

Bulldog Clamps

	Standard	*German*	*Standard*	*German*	*Standard*	*German*	*Standard*	*German*
	14119	**14119-G**	**14118**	**14118-G**	**14117**	**14117-G**	**14116**	**14116-G**
Description	Micro Bulldog Clamp, curved 8 x 1.2 mm serrated jaws, 3 cm (1 in.) long	Bulldog Clamp, 3.7 cm (1.5 in.) long, 3mm tip	Small Bulldog Clamp, straight serrated jaws, 6 cm (2.3 in.) long		Dieffenbach Bulldog Clamp, curved serrated jaws, 6.5 cm (2.5 in.) long		Dieffenbach Bulldog Clamp, 6.5 cm (2.5 in.) long, straight serrated jaws	

Micro Vessel Clip Applier with lock

Applying forceps for Micro Vessel Clips 501784-G

503200 14.5 cm long

Clip Applicator Forceps

Applying Forceps for Vessel Clips #501786-G, #501787-G, #501788-G, and #15911. 13.8 cm (5.5 in.) long
501999

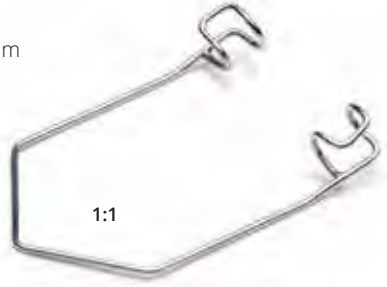
Applying Forceps

Approximator
20 g pressure,
for 0.5 to 1.0 mm vessel
14084 . . . . . .

Applying Forceps for Approximator #14084 & Vessel Clips #14120, #15911, and #14121, 10 cm (4 in.) long
14189 . . . . . .

Retractors

Wire Retractors
4 cm (1.6 in.) long
5 x 5 mm wire blades
5 mm depth
maximum spread 15 mm
501993 . . . . . .

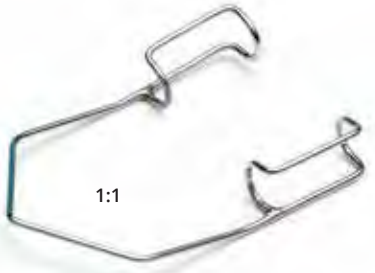


KD Mouse/Rat Eye Speculum

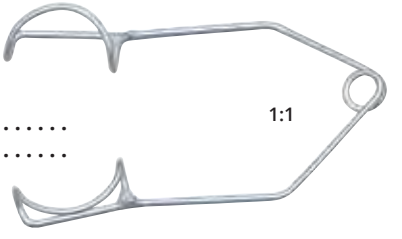
503363	Extra Small, 1cm long, 2mm blades, 1.75mm wide
501897	Small, 2.1cm long, 2.2mm blades, 5mm max. spread
501898	Medium, 2.1cm long, 3.2mm blades, 6mm max. spread
501899	Large, 2.1cm long, 4mm blades, 1cm max. spread

extra small small medium large

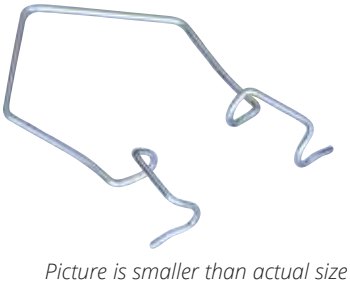
Wire Retractors
4 cm (1.6 in.) long
13 x 5 mm wire blades
7 mm depth
maximum spread 15 mm
501994 . . . . . .



Wire Retractors
5 cm (2 in.) long,
15 x 10 mm wire blades
7 mm depth
maximum spread 25 mm
Standard **500368** . . . . . .
German **500368-G** . . . . . .

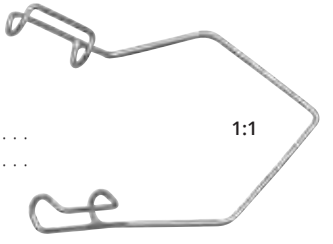


Wire Retractors
5 cm (2 in.) long
10 x 5 mm blades
5 mm depth
maximum spread 13 mm
Standard **14130** . . . . . .
German **14130-G** . . . . . .



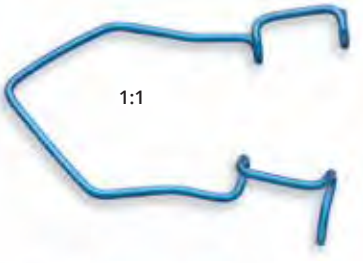
Picture is smaller than actual size

Barraquer Retractor
4 cm (1.5 in.) long,
10 x 4 mm wire blades
7 mm depth
maximum spread 3 cm
Standard **500369** . . . . . .
German **500369-G** . . . . . .



Wire Retractors - non-magnetic
4.5 cm (1.8in.) long
0.8 x 1.5 mm wire blades
maximum spread 35 mm
503210 . . . . . .

Wire Speculum
Titanium
Length: 4.5 cm (1.75 in.)
Blades: 13.5 mm blades
Maximum spread: 20 mm
555801L . . . . . .



1:1

Retractor, Self-Retaining
7.5 cm (3 in.) long. Max spread, 3 cm.
Square blades, 1.2 cm blade length.
504472 . . . . . .

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ALM Self-retaining Retractor

Loop prongs

Length: 7 cm (2.75 in.)

503675. . . . . .

Agricola Retractor

Length: 4 cm (1.6 in.)
Blades: 3 x 3 sharp prongs

Small, self-retaining retractor perfect for small animal surgery and dissection. Maximum spread, 2.5 cm.

501846. . . . . .

1:1

Baby Balfour

Stainless Steel. Maximum spread: 9.5 cm (3.7 in.)
Works well for most small animals, 60 lb or less.

504197. . . . . .

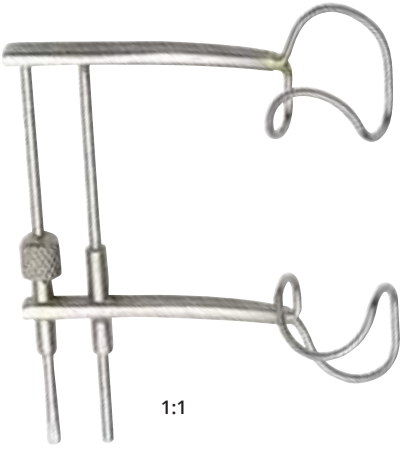
Goldstein Retractor

Small, self-retaining retractor perfect for small animal surgery and dissection.

Length: 2 cm (0.78 in.)
Blades: 3 x 3 sharp prongs
Maximum Spread: 1.0cm
501967 . . . . . .

Length: 3 cm (1.18 in.)
Blades: 3 x 3 sharp prongs
Maximum Spread: 1.8cm
501968 . . . . . .

Length: 4 cm (1.57 in.)
Blades: 3 x 3 sharp prongs
Maximum Spread: 3.5cm
501969 . . . . . .



1:1

Self-retaining Retractor

Length: 5 cm (2 in.)

Blades: 2.5 cm

Maximum spread: 4.5 cm

Small, self-retaining retractor perfect for small animal surgery and dissection.

503209 . . . . . .

Stevenson Retractor, 8 cm (3 in.) long, 3x3 prongs, 3 mm deep

Standard **14131**. . . . . .

German **14131-G . . . . . .**

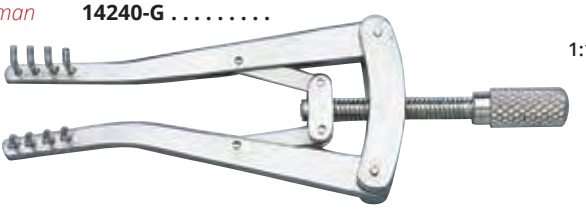
1:1

Maximum spread 15 mm

ALM Self-retaining Retractor, 7 cm (2.75 in.) long, 4x4 prongs. Maximum spread, 6 cm.

Standard **14240 . . . . . .**

German **14240-G . . . . . .**



1:1

Knapp Speculum, 15 x 6 mm blades, 8.3 cm (3.25 in.) long, maximum spread 4.6 cm

Standard **14129 . . . . . .**

German **14129-G . . . . . .**

1:1

Modified ALM Self-retaining Retractor

7 cm (2.75 in.) long, 2x2 prongs . Max spread, 5.5 cm.

Smaller, thinner prongs for use on mouse/rat eyelids

501844. . . . . .

1:1

Jansen retractor

11.5 cm (4.5 in.) long, maximum spread 3cm
3 x 3 prongs, blunt

Standard **501770** . . . . . .
German **501770-G** . . . . . .

1:1

Weitlaner Retractor, self-retaining

Standard *German*

501328 . . . . . **501328-G** . . . . . .
10.2 cm (4 in.), 2x3 prongs, blunt, maximum spread 3cm

501314 . . . . . .
10.2 cm (4 in.), 2x3 prongs, sharp, maximum spread 4cm

501722 . . . . . **501722-G** . . . . . .
14 cm (5.5 in.), 3x4 prongs, blunt, maximum spread 4.5cm

501721 . . . . . **501721-G** . . . . . .
14 cm (5.5 in.), 3x4 prongs, sharp, maximum spread 4cm

501724 . . . . . **501724-G** . . . . . .
16.5 cm (6.5 in.), 3x4 prongs, blunt, maximum spread 6.5cm

501723 . . . . . **501723-G** . . . . . .
16.5 cm (6.5 in.), 3x4 prongs, sharp, maximum spread 7cm

Gelpi Retractor

	Standard	*German*
14 cm (5.5 in.)	**501720**	**501720-G** . . . . .
11.5 cm (4.5 in.)	**501719**	
9 cm (3.5 in.)	**501329**	

1:1

Senn Retractor

17.7 cm (7 in.) long

	Standard	*German*
sharp	**501327**	**501327-G** . . . . .
blunt	**501718**	**501718-G** . . . . .

Snook Oviarectomy Hook

17.7 cm (7 in.) long
501289 . . . . . .

1:1

U.S. Army Retractor

17.7 cm (7 in.) long, Set of 2
501330 . . . . . .

1:1

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Sapphire Knives

Clear blade increases view of tissue

Chemically inert to lymph, blood, and disinfectant solutions

504076
504077

504073

504074

504075

504072
504168

501811

501812

501763 (blade sold separately)

500317 (blade sold separately)

Single crystal sapphire (Al_2O_3), while not as hard as diamond, is still hundreds of times harder than steel razor blades. The durability of the blade guarantees a unique operational life that exceeds one hundred incisions. In addition, the blade and handle can be sterilized using any currently known procedure.

The super sharp cutting edge, mirror surface finish, and low friction coefficient combine to create an accurate, clean cut with minimal tissue trauma. Scarring is thus reduced and incisions heal quickly.

Both the stainless steel and titanium handles feature safety locks to protect the super sharp cutting edge from damage and prevent injuries to medical personnel.

500317	Stainless Handle for Sapphire Blade, 13 cm long, retractable
501811	Titanium Handle for Sapphire Blade, 13 cm long, retractable
501763	Stainless Angled Handle for Sapphire Blade, 13 cm long, retractable
501812	Titanium Angled Handle for Sapphire Blade, 13 cm long, retractable

SAPPHIRE BLADES

504072	Sapphire Blade, Double Edge Lancet, width 0.75 mm, 60 deg angle, 0.20 mm thick
504073	Sapphire Blade, Single Edge Lance, width 1 mm width, 45 deg angle, 0.20 mm thick
504074	Sapphire Blade, Crescent Blades, round-sharp, 1.50 mm width, 0.25 mm thick
504075	Sapphire Blade, Elbow Double Lance, width 0.2.80 mm, 45 deg angle, 0.20 mm thick
504168	Sapphire Blade, Elbow Double Lance, width 0.2.80mm, 60 deg angle, 0.20mm thick
504076	Sapphire Blade, Lance Blade Double Edge, 0.50 mm width, 0.20 mm thick
504077	Sapphire Blade, Lance Blade Double Edge, 1.00 mm width, 0.20 mm thick

HANDLE	BLADE
500317	504072, 504073, 504076, 504077
501811	504074, 504075, 504168
501812 501763	501761, 501762

Scalpel Handle #3
13 cm (5 in.) long, stainless steel
Standard **500236** . . . . . .
German **500236-G** . . . . . .

For Blades #10 ~ #15

Scalpel Handle #4
14 cm (5.5 in.) long, stainless steel
Standard **500237** . . . . . .
German **500237-G** . . . . . .

For Blades #20 ~ #25

Scalpel Handle #7
16 cm (6.25 in.) long, stainless steel
Standard **500238** . . . . . .
German **500238-G**. . . . . .

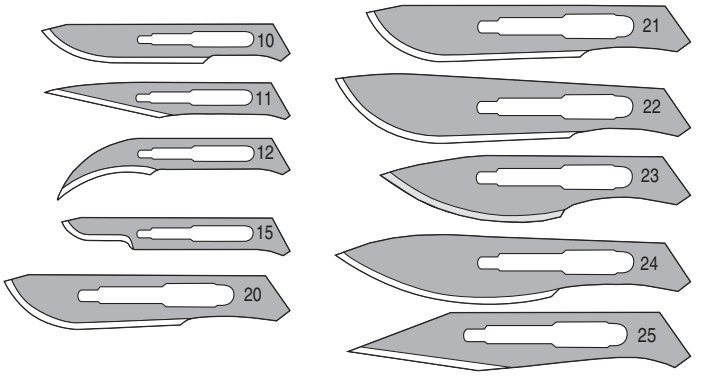
For Blades #10 ~ #15

Sterile Stainless Steel Blades

All stainless steel scalpel blades are made by Feather®, using a precise beveling technique to create the edge's micron sharpness. *They are the finest blades available.* 100 per box.

FEATHER

504169	Scalpel Blades #10
504170	Scalpel Blades #11
504171	Scalpel Blades #12
504172	Scalpel Blades #15
504173	Scalpel Blades #20
504174	Scalpel Blades #21
504175	Scalpel Blades #22
504176	Scalpel Blades #23
504177	Scalpel Blades #24
504178	Scalpel Blades #25

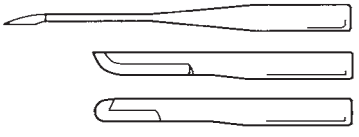


Surgical quality. Exceptionally strong and uniformly sharp. A good alternative to Feather. 100 per box.

STANDARD

500239	Scalpel Blades #10
500240	Scalpel Blades #11
500241	Scalpel Blades #12
500242	Scalpel Blades #15
500243	Scalpel Blades #20
500244	Scalpel Blades #21
500245	Scalpel Blades #22
500246	Scalpel Blades #23
500247	Scalpel Blades #24
500248	Scalpel Blades #25

Blade Safe surgical blade remover
will remove blades easily and safely from any style surgical blade handle
501335 . . . . . .



BLADES

501249	Needle Blades, 6/pk, 4.5 cm
501250	Miniature Edged Blades, curved tip, 12/pk, 3.5 cm
501251	Miniature Edged Blades, round tip, 12/pk, 3.5 cm

1:1

Round Knurled Blade Handle, stainless steel, 10 cm long

Standard	**501247**	Round Knurled Blade Handle
German	**501247-G**	Round Knurled Blade Handle

Hex Blade Handle, stainless steel, 10 cm long

Standard	**501248**	Hex Blade Handle
German	**501248-G**	Hex Blade Handle

1:1

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Animal Lancets

504540	Animal Lancet, 4mm, Mice under 2 mo, 200/box
504550	Animal Lancet, 5mm, Mice 2-6 mo,200/box
504551	Animal Lancet, 5.5mm, Mice over 6 mo, 200/box
504552	Animal Lancet, 5mm, Rats under 3 mo, 200/box
504553	Animal Lancet, 6mm, Rats under 3mo, 200/box
504555	Animal Lancet, 3mm, Primates, 200/box
504556	Tatoo Identification Lancet, 3mm, 200/box

Disposable Scalpels

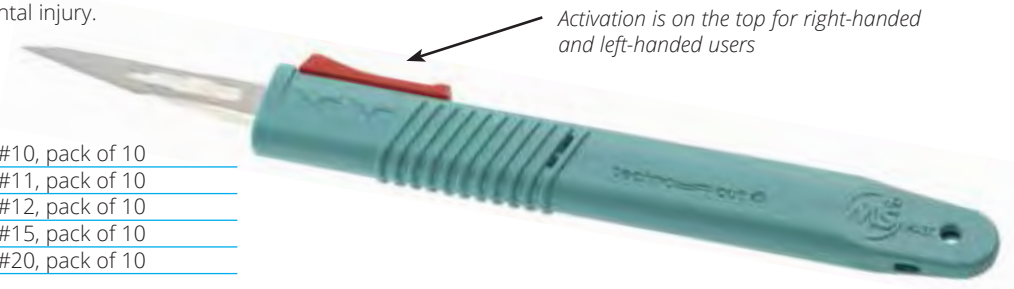
500348	Disposable Scalpel, #10, sterile (10/box)
500349	Disposable Scalpel, #11, sterile (10/box)
500350	Disposable Scalpel, #12, sterile (10/box)
500351	Disposable Scalpel, #15, sterile (10/box)
500352	Disposable Scalpel, #20, sterile (10/box)
500353	Disposable Scalpel, #21, sterile (10/box)
500354	Disposable Scalpel, #22, sterile (10/box)
500355	Disposable Scalpel, #23, sterile (10/box)
500356	Disposable Scalpel, #24, sterile (10/box)

Disposable *Safety* Scalpels

Retractable blade protects from accidental injury.

AMBIDEXTROUS

Activation is on the top for right-handed and left-handed users



501337	Disposable Safety Scalpels #10, pack of 10
501338	Disposable Safety Scalpels #11, pack of 10
504537	Disposable Safety Scalpels #12, pack of 10
501339	Disposable Safety Scalpels #15, pack of 10
504538	Disposable Safety Scalpels #20, pack of 10

Microsurgical Knives

Sterile, disposable

501731	Microsurgical Knife, 15° 3 mm blade, 13.5 cm (5.25 in.) long (package of 6)

500249	Microsurgical Knife, 15° 5 mm blade, 13.5 cm (5.25 in.) long (package of 6)

500250	Roundstock Ophthalmic Knife, 15° 5.7 mm blade, 13.5 cm (5.25 in.) long (package of 6)

Micro Dissecting Knife

13 cm long, 1 mm blade, right angle

14135 . . . . . .

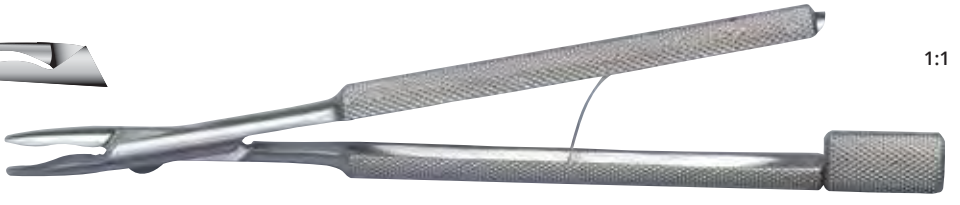
1:1

Razor Blade Holder

12.5 cm (5 in.) long
round tips
S-shape jaws

14139 . . . . . .

Tip Profile:



1:1

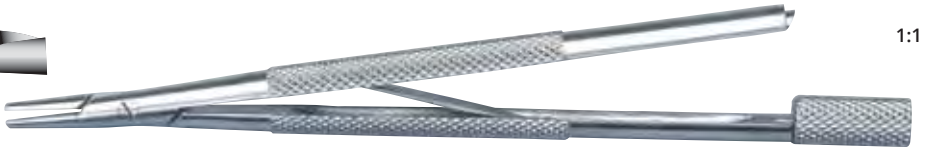
Special jaw shape prevents blades from slipping

Razor Blade Holder

12 cm (4.75 in.) long
round tips
convex/concave jaws

Standard **14134** . . . . . .
German **14134-G** . . . . . .

Tip Profile:



1:1

Ear Punches and Ear Tags

501866	Ear Tags, pack of 100, sequence 000-099
501867	Ear Tags, pack of 100, sequence 100-199
501868	Ear Tags, pack of 100, sequence 200-299
501869	Ear Tags, pack of 100, sequence 300-399
501870	Ear Tags, pack of 100, sequence 400-499
501871	Ear Tags, pack of 100, sequence 500-599
501872	Ear Tags, pack of 100, sequence 600-699
501873	Ear Tags, pack of 100, sequence 700-799
501874	Ear Tags, pack of 100, sequence 800-899
501875	Ear Tags, pack of 100, sequence 900-999
501893	Ear Tags, pack of 1000, sequence 000-999
504062	Ear Tags, pack of 1000, sequence 1000-1999
504063	Ear Tags, pack of 1000, sequence 2000-2999
504064	Ear Tags, pack of 1000, sequence 3000-3999
504071	Ear Tags, pack of 1000, sequence 4000-4999

Ear Tag Applicator

Not actual size.

503292. . . . . .

1:1

Ear Punch

10 cm (4 in.) long

2 mm diameter **500077** . . . . . .

1 mm diameter **500076** . . . . . .

1:1

Ear Punch

5.7 cm (2.25 in.) long, 2 mm diam punch

500075 . . . . . .

1:1

Ear Punch, stainless steel

5.5 cm (2.2 in.) long, 1 mm diam punch

504485 . . . . . .

5.5 cm (2.2 in.) long, 2 mm diam punch

504486 . . . . . .

Disposable Biopsy Punches, package of 50

Individually packaged in color-coded, transparent, sturdy blister pack to protect cutting edge

Seamless stainless steel razor sharp cutting edge

Ribbed handle provides maximum control and comfort

501816	1.5mm diameter
501817	2.0mm diameter
501818	3.0mm diameter

1:1

WPI Biopsy Punches

Individual sterile packs

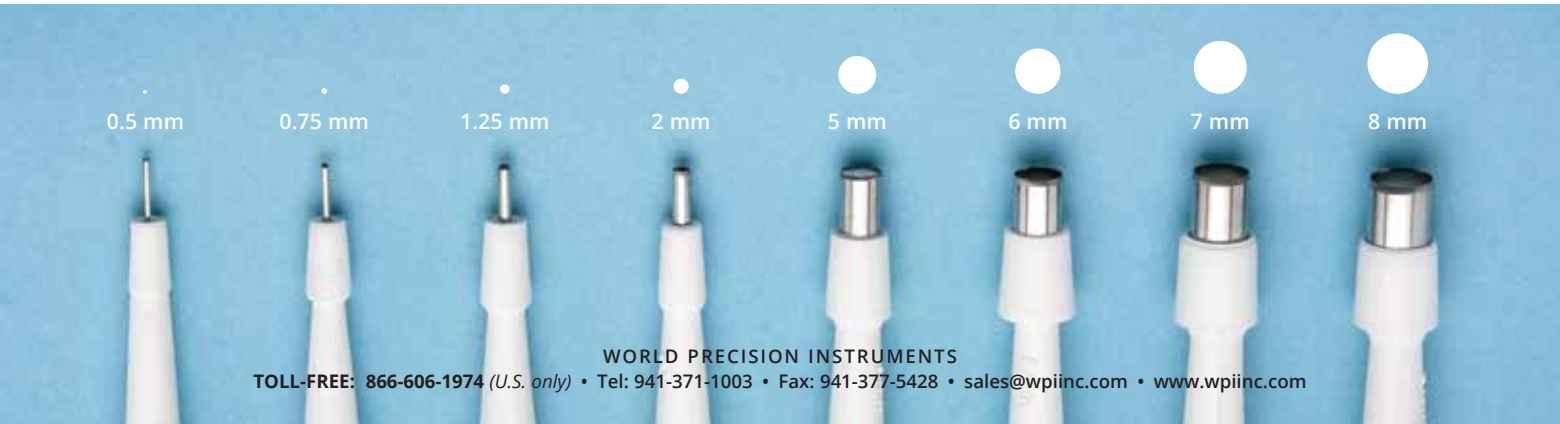
Limited reuse

		I.D.	O.D.
504528	Reusable Biopsy Punch	0.50 mm	0.69 mm
504529	Reusable Biopsy Punch	0.75 mm	0.85 mm
504530	Reusable Biopsy Punch	1.25 mm	1.50 mm
504531	Reusable Biopsy Punch	2.0 mm	2.24 mm
504532	Reusable Biopsy Punch	5.0 mm	5.24 mm
504533	Reusable Biopsy Punch	6.0 mm	6.32 mm
504534	Reusable Biopsy Punch	7.0 mm	7.25 mm
504535	Reusable Biopsy Punch	8.0 mm	8.29 mm

Customer Comment:

I am using the 0.75 mm WPI punch for punching flow inlets in microfluidics chambers molded of PDMS (polydimethylsiloxane). I have made around 75 hole punches with a single unit into PDMS, the blade and the extractor still work perfectly... I find the blade to be noticeably sharper than the Harris equivalent, as well as being more ergonomic, in my opinion, with the feel of a pen or pencil in one's hand.

R.P., UNC



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Rongeurs, Cutters, and Punches

503253 Bone cutter, strong serrated tips, straight, 10.5cm . . . . . .

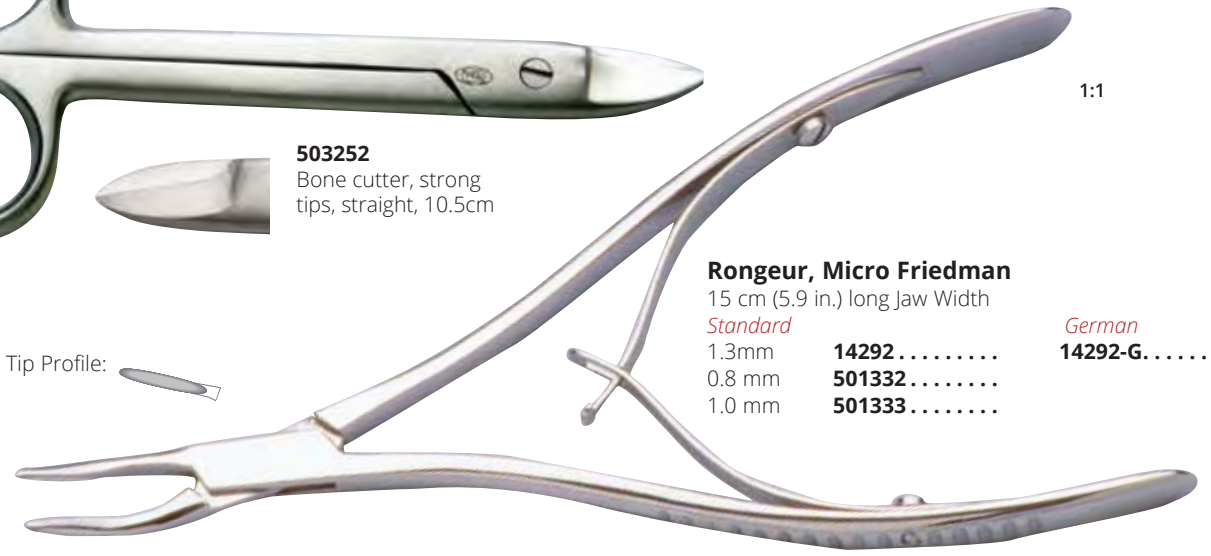
503254 Bone cutter, strong tips, curved, 10.5cm

NEW!

503255
Bone cutter, strong serrated tips, curved, 10.5cm

503252
Bone cutter, strong tips, straight, 10.5cm

1:1



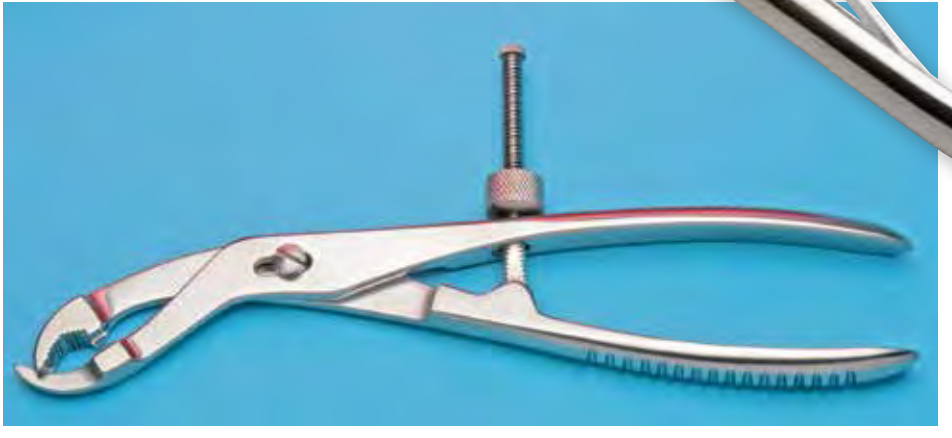
Tip Profile:

Rongeur, Micro Friedman
15 cm (5.9 in.) long Jaw Width

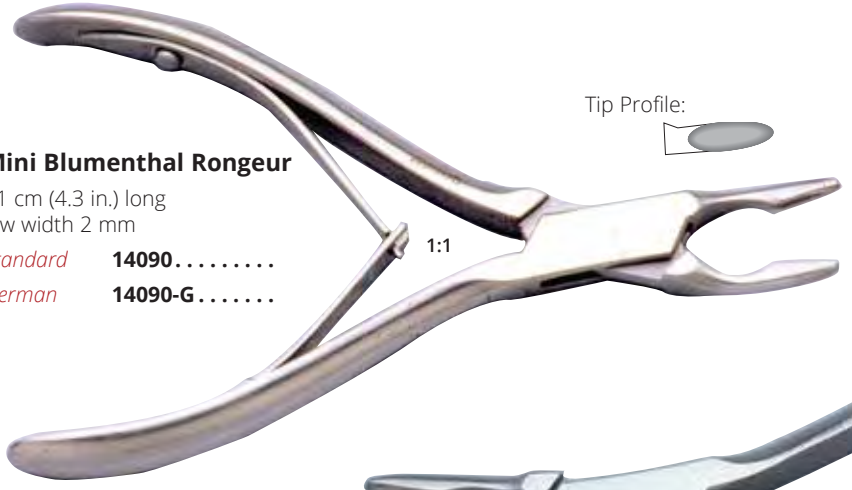
	Standard	*German*
1.3mm	**14292**	**14292-G**. . . . .
0.8 mm	**501332**	
1.0 mm	**501333**	

1:1

Rongeur, Side Cutter
15.5 cm (6.1 in.) long, stainless steel
503226 . . . . . .



Verbrugge Bone Holding Forceps
20 cm, for 3.5 and 4.5 mm plates
503428 . . . . . .



Tip Profile:

Mini Blumenthal Rongeur

11 cm (4.3 in.) long
jaw width 2 mm

Standard **14090**. . . . . .
German **14090-G**. . . . . .

1:1

Tip Profile:

Friedman Rongeur

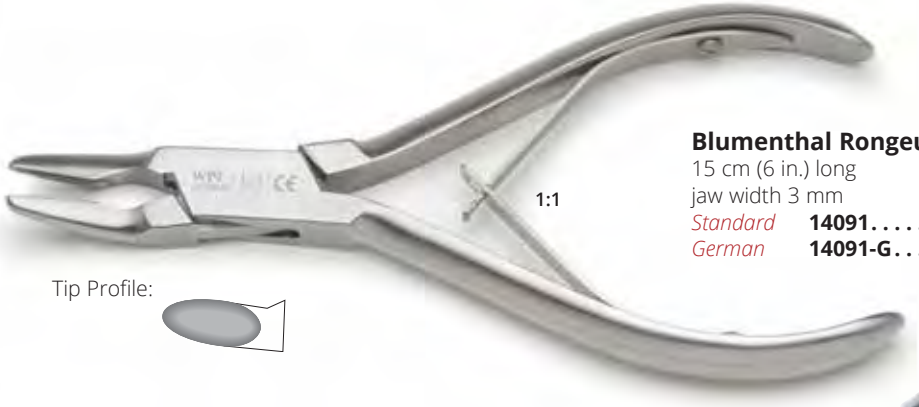
13 cm (5 in.) long
jaw width 2.5 mm

Standard **14089** . . . . . .
German **14089-G** . . . . . .

15 cm long (6 in.)

Standard **503295** . . . . . .

1:1



Tip Profile:

Blumenthal Rongeur

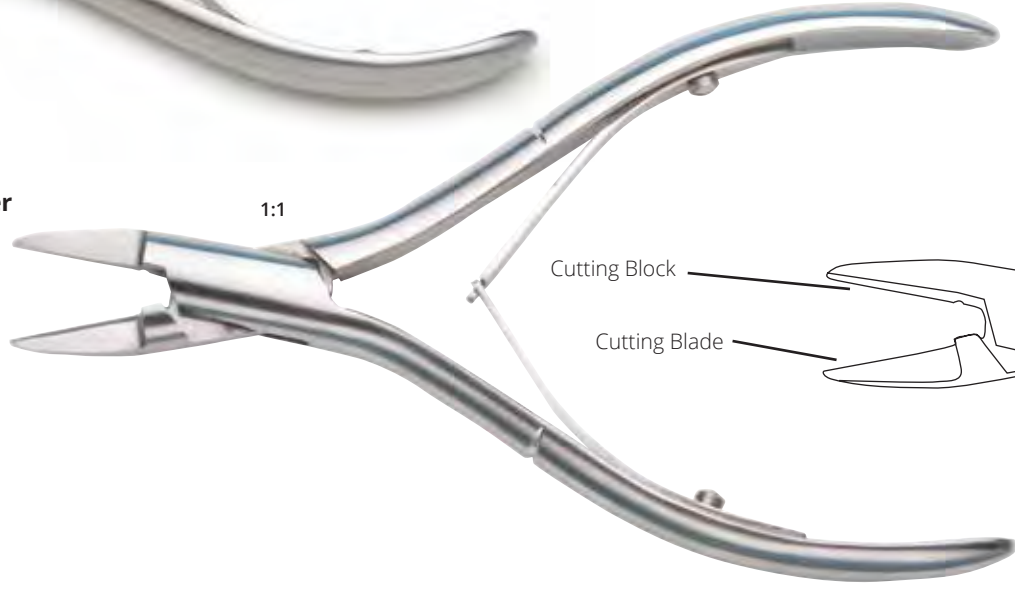
15 cm (6 in.) long
jaw width 3 mm

Standard **14091**. . . . . .
German **14091-G**. . . . . .

1:1

Single Blade Bone Cutter

14 cm (5.5 in.) long
jaw length 23 mm
blade tip width 1 mm
block tip width 2 mm
501990 . . . . . .

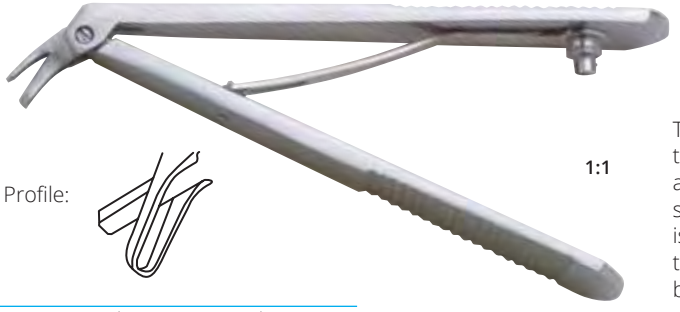


1:1

Cutting Block

Cutting Blade

Corneoscleral Punch



Tip Profile:

1:1

This corneoscleral punch is an excellent tool for opening the skull of a small animal without damaging the brain or spinal cord.The lower jaw of the punch is a flat plate which can be inserted into the skull with much less damage to the brain than a rongeur.

500079	Corneoscleral Punch , 8 cm (3 in.) long, 2 mm wide
500143	Corneoscleral Punch, 8 cm (3 in.) long, 1.5 mm wide

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Bone Cutter

one serrated blade, 11 cm (4.3 in.) long, 9 mm blades

501269 . . . . . .

Tip Profile:

1:1

Ecklin-Duckbill Rongeur

Double-action, 3mm bite.

Length: 21.6 cm (8.5 in.)

503682. . . . . .

Nail nippers

14 cm (5.5 in.) long, concave jaws, double spring

Standard **500362**. . . . . .

German **500362-G**. . . . . .

1:1

Tip Profile:

1:1

Stainless Steel Wire Cutter

15 cm (6 in.) long, **Tungsten Carbide** blades

503674 . . . . . .

Tip Profile:

Liston Bone Cutting Forceps

19 cm (7.5 in.) long, straight **500358** . . . . . .

14 cm (5.5 in.) long, straight **500462** . . . . . .

Tip Profile:

Hooks and Probes

Tungsten Dissection Probes

- *Used for separating cells*
- *Made of pure tungsten, a hard and biocompatible metal*
- *Less than one micron in diameter*
- *Stronger and more durable than glass probes*
- *30 mm long (10 per package)*

Tip Profile A

Tip Profile B

Tip Profile A

500133 Tungsten Dissecting Probe, 0.125mm diameter rod
500134 Tungsten Dissecting Probe, 0.25mm diameter rod
500135 Tungsten Dissecting Probe, 0.5mm diameter rod

Tip Profile B

501316 Tungsten Dissecting Probe, 0.125mm diameter rod
501317 Tungsten Dissecting Probe, 0.25mm diameter rod
501318 Tungsten Dissecting Probe, 0.5mm diameter rod

Handle for Probe, stainless steel

11 cm (4.3 in.) long **500448**. . . . . .
7 cm (2.75 in.) long **501301** . . . . . .

Probe
Stainless steel, 14cm (5.5 in.), 1.0 mm diameter
501313. . . . . .

500458 **Straight Dissecting Needles,** 14 cm (5.5 in.) long, 12/box. . . . . .
500460 **Curved Dissecting Needles,** 14 cm (5.5 in.) long, 12/box. . . . . .

Groove Director
15 cm (6 in.) long
V503381. . . . . .

Wecker Spatula
Stainless steel
14cm (5.5 in.), 3mm wide blade
Standard **501772** . . . . . .
German **501772-G** . . . . . .
(German-made spatula is 2mm wide)

Dura Dissector
Stainless steel, 20 cm (7.9 in.)
503336. . . . . .

Not shown actual size

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Double End Probe and Seeker
Sharp ends, stainless steel, 15 cm (6 in.)
504033. . . . . .

1:1

Graefe Hook
Stainless steel, 15 cm (6 in.)
503221. . . . . .

1:1

Dura Hook
Sharp, 15 cm
503322. . . . . .

1:1

Meyerhoefer Curette
14cm (5.5 in.), 1.5mm diameter
Standard **501773** . . . . . .
German **501773-G** . . . . . .

1:1

Meyerhoefer Curette
Length: 13 cm (5.1 in.)
size 0 (1.5mm spoon diameter)
504772. . . . . .

1:1

Meyerhoefer Curette
Length: 13 cm (5.1 in.)
size 2 (2.25mm spoon diameter)
504769 . . . . . .

1:1

Meyerhoefer Curette
Length: 13 cm (5.1 in.)
size 3 (2.5mm spoon diameter)
504770. . . . . .

1:1

Meyerhoefer Curette
Length 13 cm (5.1 in.)
size 4 (3.5mm spoon diameter)
504771 . . . . . .

1:1

Kimura Spatula
Length 16 cm (6.3 in.)
2.5 width spatula,0.3mm thickness
504773. . . . . .

1:1

Tyrell Hook, sharp, 13 cm (5 in.) long
Standard **14136**. . . . . .
German **14136-G**. . . . . .

1:1

Scleral Depressor
Double-ended with pocket clip, 13 cm (5 in.)
Stainless steel
503353. . . . . .

1:1

Castroviejo Caliper
75 mm (3 in.) long
20 mm scale
501200 . . . . . .

Halveston "Teaser" Hook
Stainless steel
12.4 cm (4.9 in.) long
504061 . . . . . .

Engel Tenotomy Hook
Stainless steel
Double prong, sharp tips
13 cm (5.1 in.) long
504021 . . . . . .

Perforated Spoon
Length: 15 cm (5.9 in.), bowl diameter 20 mm (0.8 in.)
501997 . . . . . .

Halveston Tissue Retractor
Stainless steel, thin curved blade, 7mm
12.5 cm (4.9 in.) long
503759 . . . . . .

Schepens Orbital Retractor
Stainless Steel, 14.5 cm (5.7 in.)
503757 . . . . . .

Knapp Lacrimal Retractor
Stainless steel, Blunt tips, 13.5 cm (5.3 in.)
503758 . . . . . .

Wells Enucliation Spoon
Stainless steel, 14 cm (5.5 in.) long
503762 . . . . . .

Volkman Curette
#3, oval cutting surface, cup width 1 cm; 17 cm (6.7 in.) long
503689 . . . . . .

Paton Spatula and Spoon
Stainless steel, 14 cm (5.5 in.) long
504022 . . . . . .

Volkman Curette
#00, oval cutting surface, cup width 5 mm; 17 cm (6.7 in.) long
503753 . . . . . .

Culler Lens Spoon
Stainless steel, 13 cm (5.1 in.) long
503760 . . . . . .

Volkman Bone Curette
double-ended; 17 cm (6.7 in.) long
503752 . . . . . .

Bunge Evisceration Spoon
Stainless steel, 13.5 cm (5.3 in.) long
503761 . . . . . .

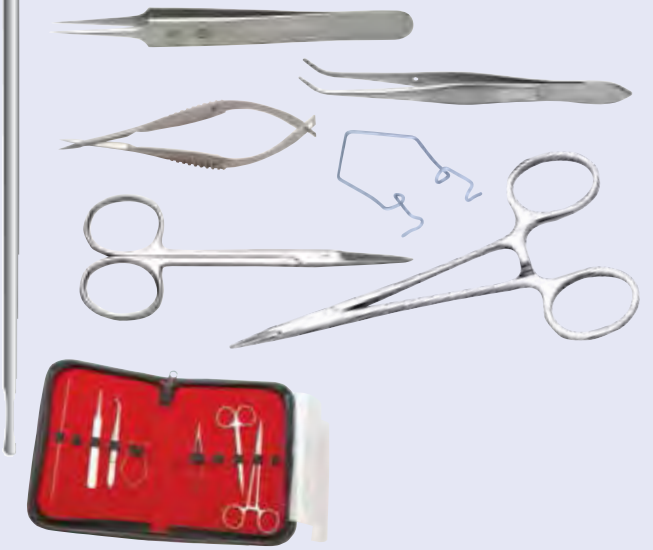
Schroeder Curette
(3 mm x 5 mm), oval cutting surface, cup width 5 mm; 22 cm (8.7 in.) long
503429 . . . . . .

Physiology Kit I

SuperCut Tenotomy Scissors curved *(#14396)*
Rongeur 3mm jaw *(#14091)*
Utility Scissors *(#501322)*
Operating Scissors straight Sharp/Blunt *(#14192)*
Dumont Tweezer #5 *(#14098)*
Flat Jaw Tweezers *(#501303)*
Probe 1.0 mm diameter, blunt *(#501313)*
Order Number: KIT-PHYSIO-I

Mouse Kit

Dumont #5 *(#14098)*
Vannas Scissors *(#14003)*
Iris Forceps, curved, serrated *(#15915)*
Dissecting Scissors, straight 10cm *(#14393)*
Wire Retractor *(#14130)*
Needle Holder *(#14109)*
Blunt Probe, *1.0 mm diameter (#501313)*
Order Number: MOUSEKIT



Now includes storage case!

Physiology Kit II

Vannas Scissors *(#14003)*
SuperCut Iris Scissors *straight (#14218)*
Rongeur 1.3mm jaw *(#14292)*
Utility Scissors *(#501322)*
Probe 1.0 mm diameter, blunt *(#501313)*
Operating Scissors straight Sharp/Blunt *(#14192)*
Dumont Tweezer #5 *(#14098))*
Stevenson Retractor *(#14131)*
Iris Forceps curved *(#15915)*
Adson Forceps 1x2 teeth *(#500092)*
Olsen-Hegar Needle Holder *(#500227)*
Order Number: PHYSIO-II

Now includes intrument folder

Rat Kit

Dumont #5 *(#14098)*
Vannas Scissors *(#14124)*
Iris Forceps, serrated *(#15915)*
SuperCut Iris Scissors, straight 10cm *(#14218)*
Alm Retractor *(#14240)*
Needle Holder *(#14110)*
Blunt Probe, 1.0 mm diameter *(#501313)*
Order Number: RATKIT

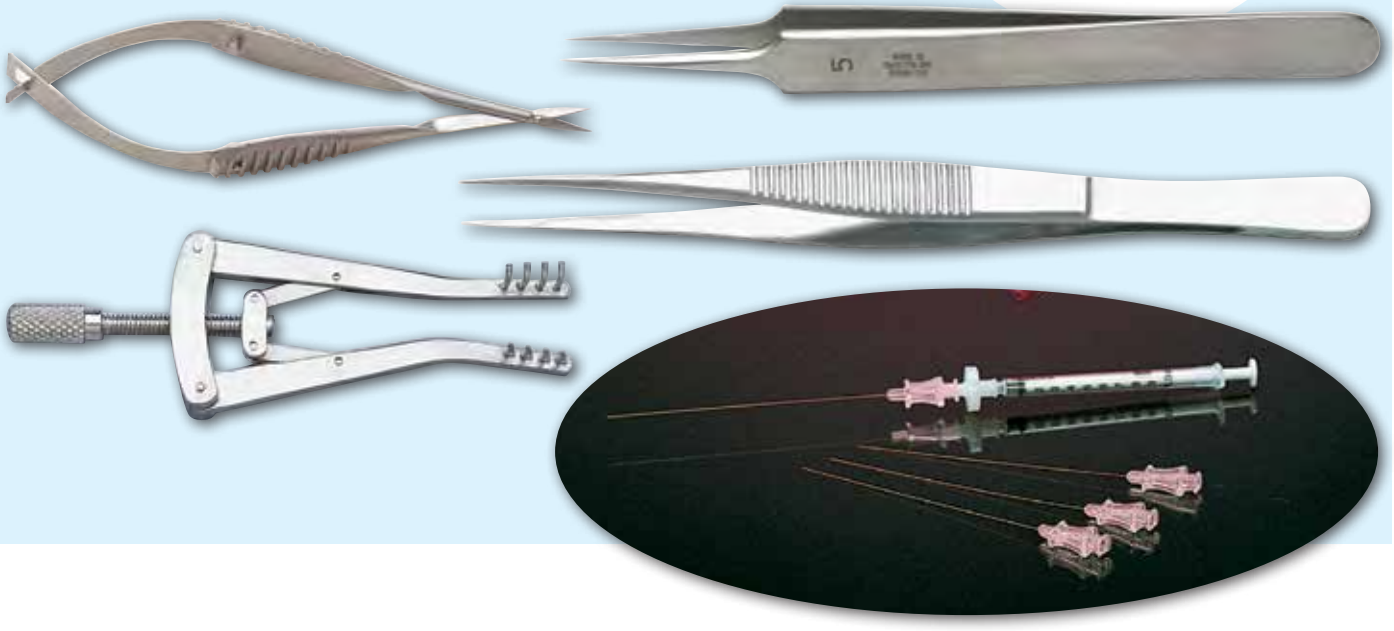
Mouse Vessel Cannulation Kit

Kit includes:

Vessel Cannulation Forceps
Vannas Scissors
Fine Serrated Forceps
Dumont #5 Tweezers
Alm Retractor
MicroFil 28 ga.

Order Number
501895

Vessel Cannulation Forceps
0.5mm diameter



Vessel Cannulation Forceps for 0.5mm diameter cannula, 10 cm (4 in.) long
500377 . . . . . .

Tip Profile:

1:1

Vessel Cannulation forceps for 1.0 mm diameter cannula, 10 cm (4 in.) long
500453 . . . . . .

1:1

Vessel canulation forceps are designed to insert small catheters into vessels. The small hollow jaws of the forceps ensure a secure insertion without damaging the fine tubes.

WPI Swiss Vessel Cannulation Forceps
Length: 13 cm (5.1 in.)
Cannulation: 0.35mm OD
504765 . . . . . .

Dumont Vessel Cannulation Forceps
Length: 13 cm (5.1 in.)
Cannulation: 1.0mm OD
503375 . . . . . .

TurtleSkin® FullCoverage

Entire Hand Protection — Fingertip to Forearm

While no glove is puncture or cut proof, TurtleSkin FullCoverage gloves give you puncture and cut protection covering the entire hand. Surprisingly soft and comfortable, these gloves offer over 35 ounces of needle protection.

501888	TurtleSkin® Gloves, small, pair
501889	TurtleSkin® Gloves, medium, pair
501890	TurtleSkin® Gloves, large, pair
501891	TurtleSkin® Gloves, extra large, pair

Also available:

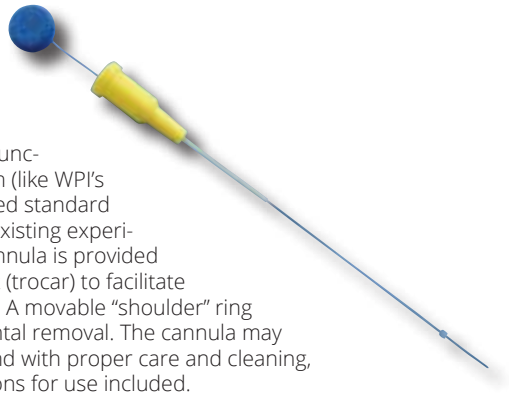
501920	Turtleskin Utility Gloves, M, pair

TurtleSkin is a registered trademark of Warwick Mills, Inc.

Micro Cannula

- ***0.4mm O.D., 0.2mm I.D. tubing***
- ***Autoclavable***
- ***Biocompatible Perfluorocarbon tubing material***

KZ1101	**Micro Cannula, 3"**



This micro cannula is ideal for placement in the carotid or femoral artery of mice, rats, and other small animal blood vessels. It can be used with a pressure transducer (WPI'S **BLPR2**) for blood pressure measurement, or in conjunction with a micro-syringe injection system (like WPI's **UMPIII** or **MMP** pumps). The incorporated standard female luer fitting makes connecting to existing experimental plumbing quick and easy. The cannula is provided with a contoured-tip stainless steel stylet (trocar) to facilitate placement using established techniques. A movable "shoulder" ring provides a tie-in point to prevent accidental removal. The cannula may be left in place for two hours or more, and with proper care and cleaning, may be re-used multiple times. Instructions for use included.

Rodent Guillotine

- ***Large, stable base***
- ***Hardened blades for long service***
- ***Ambidextrous configuration***

The small animal guillotine has been completely redesigned for ease of use and extra added safety features. The blades are drawn together by magnetic force to ensure a clean and precise cut through very strong bones and skin.

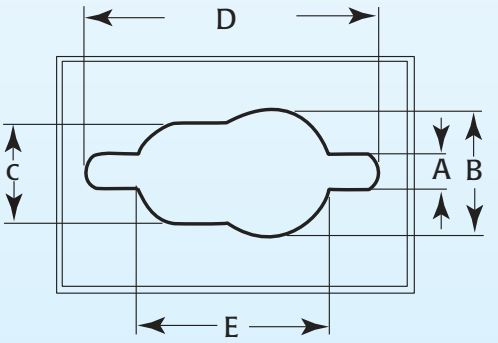
There is a large base for stability, long handle for extra leverage, spring action so the blades can not fall down unexpectedly, hardened stainless blades for endurance, simplified construction for easy maintenance. The fluoropolymer coated surface on the base makes cleaning easy.

The guillotine is considered one of the most humane methods to sacrifice a subject.

DCAP	Guillotine for Rodents and other small animals (opening 1.5 x 1.5 in.)
DCAP-M	Guillotine for large rodents and other medium animals (opening 2.5 x 2.5 in.)
DCAP-L	Guillotine for larger animals (opening 4" x 4")

Rodent Brain Matrices

WPI offers one of the largest selections of brain matrices available. Made of acrylic, or stainless steel, these matrices are sturdy and can be heated, chilled, autoclaved (stainless steel only), scrubbed — and stand up to rigorous daily use. Coronal matrices have the additional feature of a mid-line sagittal cut to facilitate splitting of the left and right hemispheres. Sections can be as fine as 1-mm. The olfactory/spinal/notch is cut into each matrix.



BRAIN MATRICES

Order #	Subject	Material	Section	A	B	C	D	E	Cavity Depth	Weight
RBMA-200S	Adult Mouse, 40-75g	Acrylic	Sagittal	3.18	11.1	8.73	19.1	12.2	7.4	0.5 lb
RBMA-300C	Rat, 175-300g	Acrylic	Coronal	4.7	15.9	12.7	36.6	23.8	7.61	0.5 lb
RBMA-300S	Rat, 175-300g	Acrylic	Sagittal	4.76	15.9	12.7	36.6	23.8	10.91	0.5 lb
RBMA-600C	Rat, 300g-600g	Acrylic	Coronal	4.76	19.8	14.7	36.6	24.7	10.91	0.5 lb
RBMA-600S	Rat, 300g-600g	Acrylic	Sagittal	4.76	19.8	14.7	36.6	24.7	10.91	0.5 lb
RBMS-200C	Adult Mouse	Stainless Steel	Coronal	3.18	11.1	8.73	19.1	12.2	7.4	1.0 lb
RBMS-200S	Adult Mouse	Stainless Steel	Sagittal	3.18	11.1	8.73	19.1	12.2	7.4	1.0 lb
RBMS-300C	Rat, 175-300g	Stainless Steel	Coronal	4.76	15.9	12.7	36.6	23.8	7.61	1.0 lb.
RBMS-300S	Rat, 175-300g	Stainless Steel	Sagittal	4.76	15.9	12.7	36.6	23.8	7.61	1.0 lb
RBMS-600C	Rat, 300g-600g	Stainless Steel	Coronal	4.76	19.8	14.7	36.6	24.7	10.91	1.0 lb
RBMS-600S	Rat, 300g-600g	Stainless Steel	Sagittal	4.76	19.8	14.7	36.6	24.7	10.91	1.0 lb

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Student Dissecting Kit

Includes:
Dissecting Scissors, 4.5″
Dissecting Scissors, 4″
Dressing Forceps, 5.5″
Micro Dressing Forceps, 4″
#4 Knife Handle
Straight Teasing Needle
Angled Teasing Needle
#22 Surgical Blade
Canvas Roll-up

501336 . . . . . .
501838 Canvas Roll-up only. . . . . .

Instrument Portfolio

Store your instruments in style. Elastic bands hold instruments in place against soft velveteen fabric. Portfolio folds in half and zips closed. Large portfolio holds up to 40 instruments, and the small portfolio holds up to 10.

501319 Instrument Portfolio, Large
503294 Instrument Portfolio, Small

Silicone Dissecting Pad Kit

Make your own silicone dissecting pads easily and quickly. Mix the 2-part silicone right in the plastic petri dishes and allow to cure 24 hours at room temperature. Kit includes enough silicone to prepare 20 dishes.

Kit Includes:

2-Part SylGard silicone elastomer
20 plastic petri dishes, 51mm diameter, with lids
Pins

501986 . . . . . .

Surgery Table

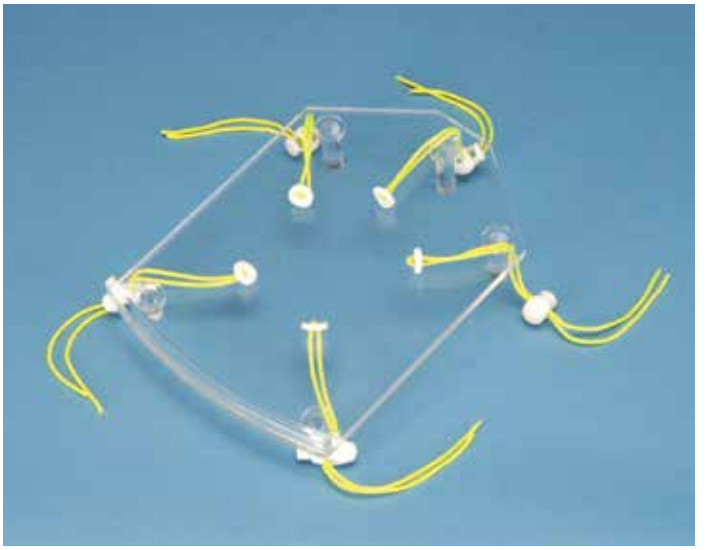
Constructed of clear acrylic, this economical surgery table features adjustable nylon cords for fast animal restraint and a slight incline for easy viewing. The acrylic construction is durable, yet easy to clean. The nylon cords can be adjusted at the point of contact with the animal and also under the table itself.

The surgery table is designed for use in dissecting small animals such as frogs, birds, mice, rats, guinea pigs, etc.

SURGERY TABLE SPECIFICATIONS

Length	20 cm
Width	14.5 cm
Height	4 cm (rear) 2 cm (front)

501892 Surgery Table



Student Surgical Kits

Anatomy Kit

504164 Student Anatomy kit

Kit Contains:

- 1 Plastic Ruler, 6"
- 1 Mall Probe
- 1 Teaser Needle Angled
- 1 Teaser Needle Straight
- 1 Dressing Forceps, 16cm
- 1 Mosquito Forceps, 12.5cm
- 1 Scalpel Handle #3
- 4 Blades for Scalpel Handle #3
- 1 Scalpel Handle #4
- 4 Blades for Scalpel Handle #4
- 1 Dissecting Scissors, 14cm Sharp/Blunt
- 1 Hooks with Chain
- 1 Leather Pouch

Botanical Kit

504165 Student Botanical Kit

Kit Contains:

- 1 Scissors, 14cm
- 1 Dropper
- 1 Scalpel Handle #3
- 4 Scalpel Blades
- 1 Teaser Needle Angled
- 1 Teaser Needle Straight
- 1 Mariam Tweezers Angled
- 1 Tweezers Straight
- 1 Leather Pouch

Entomology Kit

504166 Student Entomology Kit

Kit Contains:

- 2 Teaser Needles Straight
- 2 Teaser Needles Angled
- 1 Iris Scissors, 11.5cm
- 1 Scalpel Handle #3
- 1 Adson Micro Forceps, 12cm
- 1 Dropper
- 2 Micro Dissection Forceps, 12cm Str
- 2 Micro Dissection Forceps, 12cm Cvd
- 2 Entomology Forceps, 10cm
- 1 Tweezers with Magnifying Mirror
- 1 Stainless Steel Scale, 6"
- 10 Blades #10
- 1 Leather Pouch

Student Dissection Kit

504167 Student Dissection Kit

Kit Contains:

- 1 Scalpel Handle #3
- 1 Scalpel Handle #4
- 1 Dressing Forceps 16cm
- 1 Mayo Hager Needle Holder 16cm
- 1 Teaser Needle Angled
- 1 Teaser Needle Straight
- 1 Hooks with Chain
- 1 Tissue Forceps 1:2 16cm
- 1 Dissecting Scissors 16cm Sharp/Blunt
- 1 Kelly Forceps 14cm Straight
- 1 Dropper
- 1 Stainless Steel Scale 06"
- 1 Grooved Director Plain
- 1 Adson Tissue Forceps 12cm
- 4 Blades for Scalpel Handle #4
- 4 Blades for Scalpel Handle #3
- 1 Leather Pouch

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Student Fine Tweezers

Made of quality stainless steel, these tweezers are useful for general dissections where ultrafine tips are not necessary. Economically priced, they are affordable enough for everyone to have their own instruments.

All tweezers on this page are available individually and in packages of 6.

Student Tweezer, Style 1, Stainless Steel

Length	11 cm (4.3 in.)
Tips	0.45 x 0.55 mm
501974-6	
501974	

1:1

Student Tweezer, Style 2, Stainless Steel

Length	11 cm (4.3 in.)
Tips	0.40 x 0.55 mm
501975-6	
501975	

1:1

Student Tweezer, Style 3, Stainless Steel

Length	11 cm (4.3 in.)
Tips	0.20 x 0.40 mm
501976-6	
501976	

1:1

Student Tweezer, Style 3C, Stainless Steel

Length	11 cm (4.3 in.)
Tips	0.40 x 0.45 mm
501977-6	
501977	

1:1

Student Tweezer, Style 4, Stainless Steel

Length	11 cm (4.3 in.)
Tips	0.40 x 0.45 mm
501978-6	
501978	

1:1

Student Tweezer, Style 5, Stainless Steel

Length	11 cm (4.3 in.)
Tips	0.40 x 0.45 mm
501979-6	
501979	

1:1

Student Tweezer, Style 6, Stainless Steel

Length	11 cm (4.3 in.)
Tips	0.40 x 0.50 mm
501980-6	
501980	

1:1

Student Tweezer, Style 7, Stainless Steel

Length	11 cm (4.3 in.)
Tips	0.40 x 0.50 mm
501981-6	
501981	

1:1

Student Spring Scissors

Student Spring Scissors, ***blunt/blunt tips,*** Stainless Steel

	503309	503308
Length	9.5 cm (3.7 in.)	9.5 cm (3.7 in.)
Blades	straight, 6 mm	curved, 6 mm

1:1

Student Spring Scissors, ***sharp/ball tips,*** Stainless Steel

	503310
Length	9.5 cm (3.7 in.)
Blades	straight, 6 mm

1:1

Westcott Student Scissors, Stainless Steel

	503222	503223
Length	11 cm (4.3 in.)	11 cm (4.3 in.)
Blades	blunt tips	sharp tips

1:1

Vannas Student Scissors, Stainless Steel

	501777	501930
Length	9 cm (3.5 in.)	9 cm (3.5 in.)
Blades	8 mm long, straight	8 mm long, curved
Tips	500 microns	500 microns

1:1

McPherson Vannas Student Scissors, Stainless Steel

	503749
Length	8.3 cm (3.25 in.)
Blades	sharp tips, 8 mm long

1:1

Instrument Sterilization Tray

503392. . . . . .

Rubber grips firmly hold 23 instruments

Instrument Care & Cleaning
See pages 101-107

Barrier Milk

Instrument Protection
18-oz. ready-to-use spray

504215. . . . . .

Economy Surgical Instruments

Chrome-finish stainless steel class sets in packs of twelve

503702-12

503702-12	Kelly Forceps, 14 cm, straight (Pack of 12)
503703-12	Kelly Forceps, 14 cm, curved (Pack of 12)

All sales are final on disposable instrument packs.

503701-12

503701-12	Crile Forceps, curved, 14 cm (Pack of 12)
503700-12	Crile Forceps, straight, 14 cm (Pack of 12)

All sales are final on disposable instrument packs.

503719-12

503719-12	Adson Forceps, serrated tips, 12 cm (Pack of 12)
503720-12	Adson Forceps, 1x2 teeth, 12 cm (Pack of 12)

All sales are final on disposable instrument packs.

503710-12	Bozeman Forceps, curved, 25 cm (Pack of 12)

All sales are final on disposable instrument packs.

503722-12

503721-12	Iris Forceps, straight, serrated tips, 10 cm (Pack of 12)
503722-12	Iris Forceps, curved, serrated tips, 10 cm (Pack of 12)

All sales are final on disposable instrument packs.

503731-12	Webster Needle Holder, 5 in., straight, (Pack of 12)

All sales are final on disposable instrument packs.

503723-12

503723-12	Halstead Mosquito Forceps, 12.5 cm, straight (Pack of 12)
503724-12	Halstead Mosquito Forceps, 12.5 cm, curved (Pack of 12)

All sales are final on disposable instrument packs.

503729-12

503728-12	Hartman Mosquito Forceps, 9 cm, straight (Pack of 12)
503729-12	Hartman Mosquito Forceps, 9 cm, curved (Pack of 12)

All sales are final on disposable instrument packs.

503730-12	Derf Needle Holder, 5 in., straight, (Pack of 12)

All sales are final on disposable instrument packs.

503711-12

503711-12	Lister Bandage Scissors, 14 cm (Pack of 12)
503712-12	Lister Bandage Scissors, 9 cm (Pack of 12)

All sales are final on disposable instrument packs.

503708-12

503708-12	Iris Scissors, 11.5 cm, straight (Pack of 12)
503709-12	Iris Scissors, 11.5 cm, curved (Pack of 12)

All sales are final on disposable instrument packs.

503732-12

503732-12	Mayo Hegar Needle Holder, 7 in., straight (Pack of 12)
503733-12	Mayo Hegar Needle Holder, 6 in., straight (Pack of 12)

All sales are final on disposable instrument packs.

503716-12

All sales are final on disposable instrument packs.

503725-12

503725-12	Crile-Wood Needle Holder, 7 in., straight, (Pack of 12)
503726-12	Crile-Wood Needle Holder, 6 in., straight, (Pack of 12)

All sales are final on disposable instrument packs.

Tip Profiles:

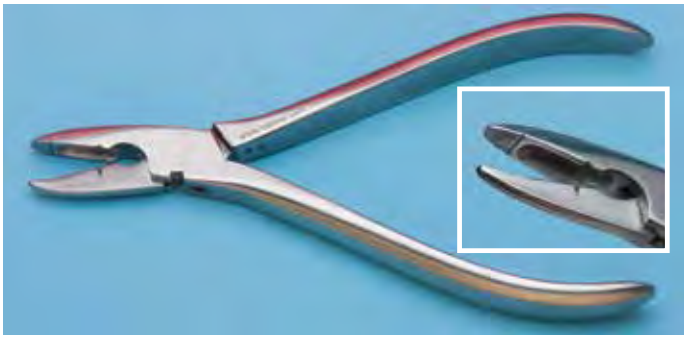
Sharp/**B**lunt

Blunt/**B**lunt

Sharp/**S**harp

503713-12	Operating Scissors, 14 cm, b/b, curved (Pack of 12)
503714-12	Operating Scissors, 14 cm, s/b, straight (Pack of 12)
503715-12	Operating Scissors, 14 cm, s/b, curved (Pack of 12)
503716-12	Operating Scissors, 14 cm, s/s, straight (Pack of 12)
503717-12	Operating Scissors, 14 cm, b/b, straight (Pack of 12)
503718-12	Operating Scissors, 16 cm, s/b, curved (Pack of 12)
503727-12	Operating Scissors, 14 cm, s/s, curved (Pack of 12)

Veterinary Dental Instruments



Universal Plier, Stainless Steel
15 cm (5.9 in.) long
503405 . . . . . .

Extracting Forceps #65, Stainless Steel
19 cm (7.5 in.) long
503398 . . . . . .

Extracting Forceps #76N, Stainless Steel
19 cm (7.5 in.) long
503399 . . . . . .

Extracting Forceps, Stainless Steel
14.5 cm (5.7 in.) long
503397 (small breed) . . . . . .

Extracting Universal Forceps #150 (Cryer Forceps),
Stainless Steel
17.8 cm (7 in.) long
503426 . . . . . .

Root Elevator #27 left, Stainless Steel
15 cm (5.9 in.) long
503400 . . . . . .

Root Elevator #28 right, Stainless Steel
15 cm (5.9 in.) long
503401 . . . . . .

Root Elevator #301, Stainless Steel
15 cm (5.9 in.) long
503402 . . . . . .

Root Tip Elevator, Stainless Steel
14.6 cm (5.75 in.) long
503427 . . . . . .

Crane Elevator - right
15 cm (5.9 in.) long
503404 . . . . . .

Crane Elevator - left
15 cm (5.9 in.) long
503403 . . . . . .

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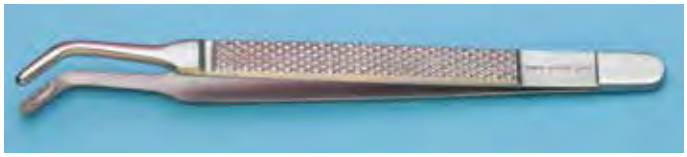


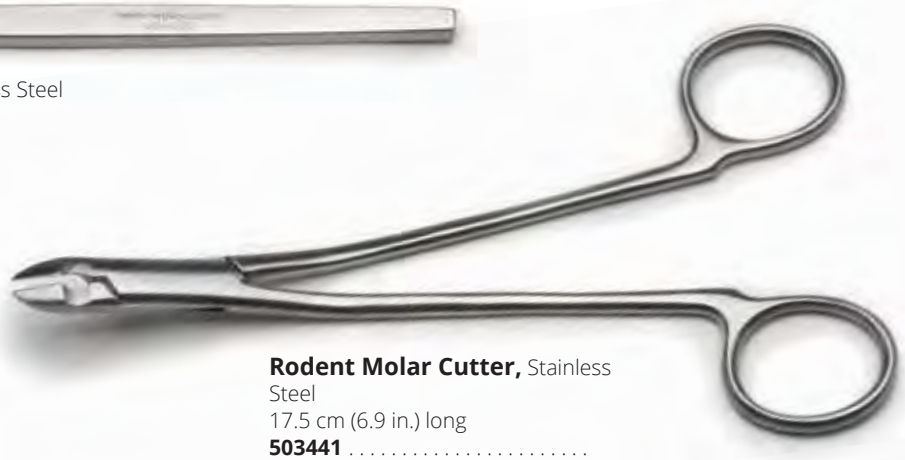
Albright Forceps, Stainless Steel

503395 Round tip (pictured), 16 cm (6.3 in.) long . . . . . .
503396 Sharp tip, 16 cm (6.3 in.) long . . . . . .

Periostal Elevator, Stainless Steel

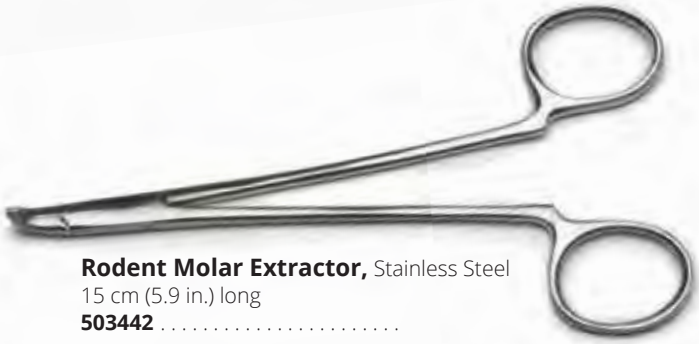
17 cm (6.7 in.) long. Double ended: rounded blade, 5mm wide and slightly curved; spear point, 3mm wide
503406 . . . . . .

Rodent Dental Spatula, Stainless Steel
16.5 cm (6.5 in.) long
503440 . . . . . .



Rodent Molar Cutter, Stainless Steel
17.5 cm (6.9 in.) long
503441 . . . . . .

Rodent Cheek Dilator, large, Stainless Steel
8.5 cm (3.3 in.) long
503438 . . . . . .



Rodent Molar Extractor, Stainless Steel
15 cm (5.9 in.) long
503442 . . . . . .

Rodent Cheek Dilator, small,
Stainless Steel
5.6 cm (2.2 in.) long
503439 . . . . . .

Rodent Mouth Gag, Stainless Steel
11.5 cm (4.5 in.) long
503443 . . . . . .

Rodent Tooth Rasp, Stainless Steel
17.5 cm (6.9 in.) long
503444 . . . . . .

Veterinary Periodontal Surgery

These instruments may also be ordered together as a pack *(see next page)*. Ask your WPI representative about the savings.

Dental Mirror, Stainless Steel
Mirror and handle, 18 cm (7 in.) long
Package of 12 mirrors, one handle with cone socket
503413 . . . . . .

Double End Explorer, Stainless Steel
18 cm (7 in.) long
503414 . . . . . .

Periodontal Probe, Stainless Steel
15 cm (5.9 in.) long
503415 . . . . . .

Ochsenbein 1 Chisel, Stainless Steel
16.5 cm (6.5 in.) long
503417 . . . . . .

Ochsenbein 2 Chisel, Stainless Steel
16.5 cm (6.5 in.) long
503418 . . . . . .

Kirkland Gum Knife, Stainless Steel
17.5 cm (6.9 in.) long
503419 . . . . . .

Orban Scaler, Stainless Steel
18 cm (7 in.) long
503420 . . . . . .

Jacquette Scaler #1SSE, Stainless Steel
18 cm (7 in.) long
503421 . . . . . .

Gracey Curettes #11-12, Stainless Steel
18 cm (7 in.) long
503422 . . . . . .

Scaler, Double-Ended, Stainless Steel
18 cm (7 in.) long
503423 . . . . . .

Gracey Curettes #13-14, Stainless Steel
18 cm (7 in.) long
503424 . . . . . .

Scalpel Handle #3, Stainless Steel
13 cm (5 in.) long
500236
For use with Sterile Stainless Steel Blades (#10-15) — see page 49.

Periosteal Elevator, Stainless Steel
17 cm (6.7 in.) long. Double ended: rounded blade, 5mm wide and slightly curved; spear point, 3mm wide
503406 . . . . . .

Veterinary Periodontal Surgery, Basic Set-up

24 PIECES

Buy the whole pack and SAVE!

503447 Veterinary Periodontal Surgery, Basic Set-up Pack

KIT COMPONENTS ALSO AVAILABLE SEPARATELY

503413	Mirror, Cone Socket *(pkg of 12)*
503414	Double End Explorer
503415	Periodontal Probe
500236	Scalpel Handle #3
503417	1 Ochsenbein Chisel
503418	2 Ochsenbein Chisel
503419	Kirkland Gum Knife
503420	Orban Scaler
503422	Gracey Curettes #11-12
503424	Gracey Curettes #13-14
503406	Periosteal elevator, double-ended
503423	Scaler, double-ended
503421	Jacquette Scaler #1SSE

Veterinary Extraction, Basic Set-up Pack

9 PIECES

Buy the whole pack and SAVE!

503446 Veterinary Extraction, Basic Set-up Pack

KIT COMPONENTS ALSO AVAILABLE SEPARATELY

500236	#3 Scalpel Handle
503406	Molt Peristal Elevator, double-ended
503425	Extracting Universal Forceps, #24
503426	Extracting Universal Forceps #150 (Cryer)
503246	La Grange Scissors
501989	Olsen Hager Needle Holder with Scissors
500177	Brown –Adson, 7x7 teeth
500380	Suture Scissors
503427	Root tip Elevator

Buy the whole pack and SAVE!

503407	General Surgery Basic Pack

KIT COMPONENTS ALSO AVAILABLE SEPARATELY

500236	#3 Scalpel Handle
501700	Backhaus Towel Clamps, 5¼" ***(4 in kit)***
500177	Brown–Adson Forceps, 7x7 teeth
501241	Kelly Hemostatic Forceps, 5.5", straight ***(2 in kit)***
501751	Mayo Scissors, 6¾", straight
501253	Metzenbaum Scissors, curved, 7"
15921	Mosquito Hemostatic Forceps 5", curved ***(3 in kit)***
500023	Olsen Hegar Needle Holder, 5½"
501243	Rochester Carmalt Forceps, 6¼", curved ***(4 in kit)***
501289	Snook Ovariectomy
503392	Sterilization case

Buy the whole pack and SAVE!

503410	Suture Removal Pack

KIT COMPONENTS ALSO AVAILABLE SEPARATELY

500178	Adson Tissue Forceps, 1x2, teeth, 4 ¾"
501320	Backhaus Towel Clamp, 3.5" ***(4 in kit)***
501291	Hartman Forceps, curved, 3.5" ***(2 in kit)***
15921	Halsted Mosquito Forceps, curved, 5" ***(2 in kit)***
501752	Mayo Scissors, 6¾", curved
501745	Metzenbaum Scissors, curved
500227	Olsen Hager Needle Holder, 5.5", straight
500236	Scalpel Handle #3
501704	Stitch Scissors, 5.5"
15918	Tissue Forceps, 1x2 teeth, 5.5"

Deluxe Canine Spay Pack

20 PIECES

Buy the whole pack and SAVE!

503408	Canine Spay Pack

KIT COMPONENTS ALSO AVAILABLE SEPARATELY

500236	#3 Scalpel Handle
14226	Adson Brown Forceps, 4¾"
501324	Aliss Tissue Forceps, 6", 4x5
501217	Dressing Forceps, 5.5"
V503381	Groove Director
V503380	Jones Towel Clamp, 3.5" ***(3 in kit)***
501288	Kelly Forceps, 5.5", curved ***(2 in kit)***
501241	Kelly Forceps, 5.5", straight ***(2 in kit)***
501751	Mayo Scissors, 6¾", straight
V503382	Mayo-Hegar Needle Holder, 6¾"
15921	Mosquito Forceps, 5", curved ***(2 in kit)***
15920	Mosquito Forceps, 5", straight ***(2 in kit)***
501998	Olsen-Hegar Castroviejo Needle Holder, 6.5"
501289	Snook Hook, 8"

Packs may be customized to suit your needs — call for details, or email **carmenr@wpiinc.com**

Deluxe Feline Spay Pack

18 PIECES

Buy the whole pack and SAVE!

503409	Feline Spay Pack

KIT COMPONENTS ALSO AVAILABLE SEPARATELY

500236	Scalpel Handle #3, 13 cm
14226	Adson Brown Forceps, 4¾"
501217	Dressing Forceps, 5.5"
V503380	Jones Towel Clamp, 3.5" ***(3 in kit)***
501288	Kelly Forceps ,5.5", curved ***(2 in kit)***
501241	Kelly Forceps, 5.5", straight ***(2 in kit)***
V503382	Mayo-Hegar Needle Holder, 6¾"
501751	Mayo Scissors, 6¾", straight
15921	Mosquito Forceps, 5", curved ***(2 in kit)***
15920	Mosquito Forceps, 5", straight ***(2 in kit)***
501998	Olsen-Hegar Needle Holder, 6.5"
501289	Snook Hook 8"

Buy the whole pack and SAVE!

KIT-EXOTIC Exotic Animal Surgical Pack

KIT COMPONENTS ALSO AVAILABLE SEPARATELY

14192	Scissors, Surgical, 5.5"
14213	Instrument Case, 7.75" x 4.1" x 1.25"
14240	Retractor, ALM Self-Retaining
15908	Forceps, Dressing 12.5 cm straight
500216-G	Scissors, Iris, 11 cm, straight tungsten carbide blades
500227-G	Needle Holder, Olsen Hegar, with suture scissors
500236	Scalpel Handle #3, 13 cm
501244	Forceps, Micro Adson 12 cm
501291	Forceps, Mosquito 3.5" curved ***(2 in kit)***
501705	Forceps, Hartman Mosquito 3.5" ***(2 in kit)***

Packs may be customized to suit your needs — call for details, or email **carmenr@wpiinc.com**

Buy the whole pack and SAVE!

503736 Neuter Pack

KIT COMPONENTS ALSO AVAILABLE SEPARATELY

500023	Olsen Hegar Needle Holder with suture scissors, 5.5"
501751	Mayo Scissors, straight, 6.75"
501752	Mayo Scissors, curved, 6.75"
14226	Adson Brown Forceps, 4.75"
500236	Scalpel
501320	Towel Clamp, 3.5" ***(2 in kit)***
15920	Mosquito Forceps, straight, 5" ***(2 in kit)***
501241	Kelly Forceps, straight, 5.5" ***(2 in kit)***
501289	Snook Hook, 7"
501243	Carmalt Forceps, curved, 6.25" ***(2 in kit)***

501315	Microsurgical Pack

KIT COMPONENTS ALSO AVAILABLE SEPARATELY

14098	Tweezers, Dumont #5, 11cm
14112	Scissors, Spring, 14 cm curved
14137	Needle Holder, Castroviejo 14 cm
14395	Scissors, Tenotomy, 10 cm straight
500253	Instrument Tray, autoclavable
500452	Forceps, Micro Hemostatic, 12.5 cm, curved ***(2 in kit)***
501247	Knife Handle, Round Knurled
501250	Blades, Miniature Edge 12-pack
501313	Probe, 14 cm, stainless steel (not pictured)
501314	Retractor, Weitlaner, 10.8 cm

Research Catheters

Catheters used for sampling or dosing can vary and depend on access or animal size. We carry catheters used for common applications. All catheters are ETO sterilized.

INTRATHECAL CATHETERS

504106	32G,304.8mm,12"PU tubing,356mm PTFE stylet
504107	32G457.2mm, 118mm tip length,18CM
504108	27G luer stub adapter,w/203mm PTFE stylet,178mm catheter

INTRATHECAL CATHETERS FOR USE WITH OSMOTIC PUMPS

504110	32G , 100mm tip length,10cm w/50cm Extension
504111	32G Intrathecal Cth w/PE50,90mm tip length
504112	32G Intrathecal Cth w/Extension,118mm tip length

VASCULAR & ARTERIAL CATHETERS FOR RATS

504117	Jugular Vein Catheter,28mm tip lenght ,3F,163mm (6 Pack)
504118	Femoral Artery Catheter,2F,45mm tip length, 255mm (6 Pack)
504119	Femoral Vein Catheter ,3F,45mm tip length,190mm (6 Pack)
504120	Bile Duct Catheter ,7.5mm tip length,298mm (6 Pack)
504121	Carotid Artery Catheter,2F,35mm tip length, 165mm (6 Pack)

Do you need a custom design? Tubing diameters, material, beads, shapes and lengths of existing products can be modified as necessary. Call us with your requirements.

VASCULAR & ARTERIAL CATHETERS FOR MICE

504143	32G ,82mm,Carotid Artery Catheter
504144	32G,110mm, Femoral Artery Catheter
504145	32G,82mm, Jugular Vein Catheter
504146	28G,60mm Catheter

TAIL VEIN CATHETERS

504147	Tail Vein Cth for Mouse, 29G Cannula
504148	Tail Vein Cth for Rat, 23G Cannula

Veterinarian Catheter Trays & Infusion Systems

ETO sterilized

EPIDURAL & PERINEURAL CATHETER PAIN MANAGEMENT TRAY

EPI-MATE Tray

504102	24G Epidural w/20Gx1.5" Touhy Needle

CATHETER Only

504186	19G, 10" Fenestrated Area w/ hub

Cautery

Cutting — Use lower voltage with a continuous AC current to produce heat rapidly and completely vaporize the tissue at the tip of the probe.

Coagulation — Use higher voltage in a pulsed manner to produce heat more slowly. With this method, tissue damage is more widspread (a few millimeters from the probe) and blood coagulates.

DISPOSABLE Adjustable High Temperature Cautery

FINE Tip (#500394)
1500-2100° F
10/BOX, sterile

500388 . . . . . .

HIGH Temperature Cautery

2 replaceable batteries (AA)
1 interchangeable tip (#500394)
2200° F

500389 . . . . . .

500394 tip

HIGH Temperature Cautery Kit

CONTAINS 1 #500389 handle,
2 #500394 tips
2 #500393 tips

500392 . . . . . .

500389 handle

500394 tip

500393 tip

DISPOSABLE Adjustable Low Temperature Cautery

Fine Tip (#500396)
700-1200° F
10/BOX, sterile

501090 . . . . . .

LOW Temperature Cautery

1 replaceable battery (AA)
1 tip (#500396)

500390 . . . . . .

500396 tip

LOW Temperature Cautery Kit

CONTAINS 1 #500390 handle
2 #500396 tips
2 #500395 tips

500391 . . . . . .

500390 handle

500395 tip

500396 tip

DISPOSABLE High Temp Loop Tips

2000° F, 10/box, sterile, for use in conjunction with #500389 and #500392

500393 . . . . . .

DISPOSABLE High Temp Fine Tips

2200° F, 10/box, sterile, for use in conjunction with #500389 and #500392

500394 . . . . . .

DISPOSABLE Low Temp Elongated Tips

1100° F, 10/box, sterile, for use in conjunction with #500390 and #500391

500395 . . . . . .

DISPOSABLE Low Temp Fine Tips

1300° F, 10/box, sterile, , for use in conjunction with #500390 and #500391

500396 . . . . . .

WORLD PRECISION INSTRUMENTS
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Thermal Cautery Unit

Provides consistent, accurate hemostasis

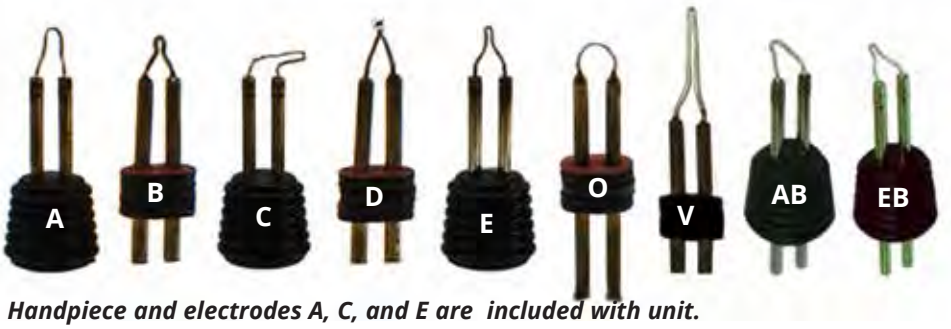
Tradional thermal cautery utilizes heat in the form of direct current to perform coagulation. This method eliminates the possibility of alternate site burns that can occur with electrosurgery. Only the heated wire tip comes in contact with the tissue and current does not enter the patient's body. WPI's Thermal Cautery Unit provides all the cautery power necessary for treating numerous minor surgical conditions and is ideal for applications such as dermatological, ophthalmological, occupational health, ENT, and plastic surgery cases, or any procedure that requires accurate hemostasis.

The Thermal Cautery Unit maintains the desired temperature during tissue contact and does not rapidly diminish like disposable battery powered cauteries. The autoclavable handpiece with six-foot cord accepts an assortment of reusable thermal cautery electrodes, allowing the surgeon to have the flexibility to perform a wide variety of procedures. This unit will outlast battery-powered units and save money on replacement batteries.

Reusable electrodes have solid 1-inch brass shanks; tips are made with 24 gauge platinum wire.

These general purpose electrodes are supplied non-sterile, but may be autoclaved.

- **A** Reusable Loop Tip General Purpose Electrode
- **B** Reusable Fine Tip Flat General Purpose Electrode
- **C** Reusable Loop Tip Angled Gen'l Purpose Electrode
- **D** Reusable Ball Tip General Purpose Electrode
- **E** Reusable Fine Tip General Purpose Electrode
- **O** Reusable Circular Tip General Purpose Electrode
- **V** Reusable Vasectomy Tip Electrode
- **AB** Reusable Loop Tip Bent Perpendicular General Purpose Electrode
- **EB** Reusable Fine Tip Bent Perpendicular General Purpose Electrode



Handpiece and electrodes A, C, and E are included with unit.

CAUTERY UNIT SPECIFICATIONS

LINE VOLTAGE	110V/220V, 60Hz/50Hz
OUTPUT WAVE SHAPE	Clipped Sinusoidal
OUTPUT POWER	0-30 Watts ± 6 Watts (0.2 Ohm Load)
MAXIMUM OUTPUT POWER	36 Watts (0.2 Ohm Load)
DIMENSIONS	13cm x 13cm x 20cm (dxwxh)
SHIPPING WEIGHT	5 lb (2.3kg)

501292	Thermal Cautery Unit, 110V
501293	Thermal Cautery Unit, 220V
501294	Replacement Handpiece for 501292 & 501293
501295	Loop Tip (**A**) included with unit
501296	Fine Tip-Flat (**B**)
501297	Loop Tip-Angled (**C**) included with unit
501298	Ball Point (**D**)
501299	Fine Tip (**E**) included with unit
501300	Wall Bracket for 501292 & 501293
504034	Circular Tip (**O**)
503299	Vasectomy Tip (**V**)
504035	Loop Tip Bent Perpendicular (**AB**)
504036	Fine Tip Bent Perpendicular (**EB**)

High Frequency Dessicator

This High Frequency Dessicator produces radio frequency current which is useful for the removal and destruction of superficial cutaneous and mucosal lesions. It performs dessication and fulguration procedures.The digital power control system allows you to change from low to high power by rotating the power knob or pushing the buttons on the handpiece.

504043	High Frequency Dessicator (110V / 220V)

Dessicator Unit Includes

501085	3-button handpiece, 1 each
501076	Sharp Tip Non-sterile, 100 box
501078	Blunt Tip Non-sterile, 100 box
501084	Wall mount Kit, 1 each

OPTIONAL ACCESSORIES

501075	Footswitch
501083	Forceps Cord

OPTIONAL ACCESSORIES

Reusable Bipolar Forceps Reusable (>20 autoclaving cycles)

501005	Bipolar 71/2" Bayonet Fine (1.0 mm), Smooth, Each
501006	Bipolar 71/2" Bayonet Med. (2.0 mm), Smooth, Each
501007	Bipolar 7" Straight, Fine (1.0 mm), Smooth, Each
501008	Bipolar 7" Curved, Fine (1.0 mm), Smooth, Each
501009	Bipolar 5" Curved, Fine (1.0 mm), Smooth, Each
501010	Bipolar 51/2" Straight, Med. (2.0 mm), Smooth, Each
501011	Bipolar 5" Straight, Fine (1.0 mm), Smooth, Each

Reusable Active Electrodes

501004	Reusable Electrode, Each
501013	Angled, Sharp Electrode, Reusable, Each
501014	Short Angled, Ball, ReusableEach
501015	Short Straight, Ball, Reusable, Each
501016	Short Straight, Needle, Reusable, Each
501017	Angled, Fine Needle, Reusable, Each
501018	Long, Straight Ball, Reusable, Each
501019	Long, Straight Needle, Reusable, Each

Dispersive Electrode

501074	Reusable Dispersive Electrode for 500397

Dermal Tips 3/32" stainless steel shaft

501076	Sharp Dermal Tip, Non-Sterile, 100/box
501077	Sharp Dermal Tip, 3/32" Sterile, 50/box
501079	Blunt Dermal Tip, 3/32" Sterile, 50/box

DESSICATOR SPECIFICATIONS

MAIN VOLTAGE	110/220 VAC
MAIN FREQUENCY	50/60 Hz
MAIN CURRENT	1.00A / 800 mA. max.
POWER CONSUMPTION	80 W
DUTY CYCLE	10S/30S
MAIN FUSES	2 x 1.25A (slow blow) 110 model
	2 x 800 mA (slow blow) 220 model
HF OUTPUT CHARACTERISTICS	
OUTPUT POWER	30W/1000 W
OUTPUT FREQUENCY	550 kHz
PEAK OPEN CIRCUIT VOLTAGE	5000 V
SAFETY	
BASIC CONSTRUCTION	In accordance with EN 60601-1
MODE OF OPERATION	Intermittent Operation
PROTECTION CLASS	Class 1 Equipment
OUTPUT TYPE	Type BF
DIMENSIONS	22 x 15 x 10.5 cm (8.6" x 6" x 4.2")
WEIGHT	2.25 kg (5 lb)

Unit Accessories

501080	Top Tray and Clamp Stand for 501081, Each
501081	Mobile stand for 500397
501082	Table top stainless steel stand for 500397
501083	Forceps Cord for 500397
501084	Wall Mount Kit
501085	3 Button Power Control Pencil for 500397
501075	Footswitch, Each

#501078 — 5.5 cm

#501076 — 5.5 cm

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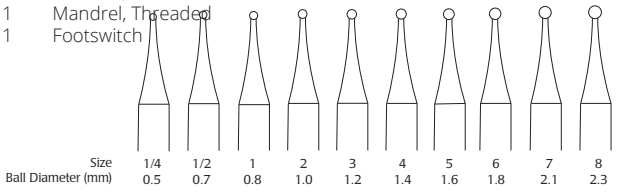
OmniDrill35

This line-powered micro drill will make easy work of grinding, finishing, cutting, and drilling bone, teeth, and other material. The high-torque 35,000 rpm (maximum) motor is quiet and has minimal vibration which reduces wear on the motor and provides greater comfort for the user. It also features a forward and reverse switch, "E Type" handpiece, and handpiece holder. The handpiece has a removable nose cone that can be cleaned and sterilized. It accepts 3/32" and 2.33 mm bur shanks. Unlike battery-powered drills, this unit will maintain consistent power for the duration of use. The wide range of speeds allows the user to control the amount of heat generation.

The following accessories are included with the Micro Drill System:

Qty	Description
4	Abrading Tip, Rubber
1	Abrading Tip, Stone
1	Accessory Stand
1	Ball Mill, Carbide, #1, .031" Diameter
1	Ball Mill, Carbide, #2, .039" Diameter
1	Ball Mill, Carbide, #3, .047" Diameter
1	Ball Mill, Carbide, #4, .055" Diameter
1	Ball Mill, Carbide, #5, .063" Diameter
1	Ball Mill, Carbide, #6, .071" Diameter
1	Ball Mill, Carbide, #7, .083" Diameter
1	Ball Mill, Carbide, #1/4, .019" Diameter
1	Ball Mill, Carbide, #1/2, .027" Diameter
4	Cutoff Disk
1	Mandrel, Screw
1	Mandrel, Threaded
1	Footswitch



OMNIDRILL35 SPECIFICATIONS

INPUT	110V, 50/60 Hz
OUTPUT	0-32 Vdc
FUSE	1 amp
OPERATING SPEED RANGE	0-35,000RPM
DIMENSIONS	178 x 114 x 89mm (7 x 4.5 x 3.5in.)
WEIGHT	1.7kg (3.75lbs)

503598	OmniDrill35 Micro Drill System, 110 V
503599	OmniDrill35 Micro Drill System, 220 V

REPLACEMENT ACCESSORIES

501850	Abrading Tip, Rubber, pack of 20
501851	Abrading Tip, Stone, pack of 5
501852	Accessory Stand
501853	Ball Mill, Carbide, #1, .031" Diameter, pack of 5
501854	Ball Mill, Carbide, #2, .039" Diameter, pack of 5
501855	Ball Mill, Carbide, #3, .047" Diameter, pack of 5
501856	Ball Mill, Carbide, #4, .055" Diameter, pack of 5
501857	Ball Mill, Carbide, #5, .063" Diameter, pack of 5
501858	Ball Mill, Carbide, #6, .071" Diameter, pack of 5
501842	Ball Mill, Carbide, #7, .083" Diameter, pack of 5
501860	Ball Mill, Carbide, #1/4, .019" Diameter, pack of 5
501861	Ball Mill, Carbide, #1/2, .027" Diameter, pack of 5
501862	Cutoff Disk, pack of 20
501863	Mandrel, Screw, pack of 5
501864	Mandrel, Threaded, pack of 5
504459	Footswitch

Economy Electrosurgical Unit

Electrosurgery utilizes alternating current at radio frequencies to cut and coagulate. Using this method, the current enters the patient's body and the patient becomes part of the electrical circuit. This requires the use of a return, or indifference plate.

This economically priced electrosurgical unit has 10 levels of output intensity, three operational modes (cut, coagulate, and cut/coagulate), and various choices of electrodes.

The unit comes complete and ready-to-use with a handpiece, indifference plate, footswitch, and one of each electrodes. All accessories can also be ordered separately.

ELECTROSURGICAL UNIT SPECIFICATIONS

OPERATION FREQUENCY	1.5 MHz
STABLE & FINE POWER SETTING	10 Steps
POWER SUPPLY	115V ± 10% - 50/60Hz 1.8A, 210VA 230V ± 10% - 50/60Hz 0.9A, 210VA
OUTPUT POWER	70 WATTS ± 5%
WORKING FRQUENCY	1.5-1.7 MHZ ± 5%
DIMENSIONS	24cm x 22cm x 8.5cm (lxwxh)
SHIPPING WEIGHT	10 lb (4.5kg)

501274	Electrosurgical Unit, 110V
501285	Electrosurgical Unit, 220V
501273	Handpiece for electrodes, Ø 1.6mm shaft
501275	Indifference Plate
501277	Footswitch
501278	Diamond Shape Loop Electrode, Ø 1.6mm shaft
501279	Small Loop electrode, Ø 1.6mm shaft
501280	Large Loop Electrode, Ø 1.6mm shaft
501281	Fine WIre electrode, Ø 1.6mm shaft
501282	Wire Electrode, Ø 1.6mm shaft
501283	Small Oval Loop Electrode, Ø 1.6mm shaft
501284	Ball Electrode, Ø 1.6mm shaft
501286	Set of 7 Electrodes

SMALL ANIMAL ANESTHESIA

Components may not be as pictured.

EZ-7000 Classic System

Features

- ***Integrated turnkey solution for small animal anesthesia***
- ***Safe for surgical personnel, 90% below OSHA Isoflurane limit***
- ***Designed by veterinarians***
- ***Compact and portable***
- ***Time efficient and cost effective***
- ***Virtually stress-free for the animals***
- ***Easy to setup and use, simplifying the training of new staff and reducing the threat of human error***
- ***Speedy recovery time***

EZ Anesthesia is the system of choice for anesthetizing small animals, and it comes with a variety of choices. Animals to be anesthetized are placed in the acrylic induction chamber and the system delivers a precisely blended mixture of oxygen and isoflurane. An activated charcoal air filter canister at the top of the chamber releases safe, filtered air back into the room. A water-heated cage warmer or warming plate (**ATC2000**) is used to retain the animal body temperature while in the induction chamber. After the initial anesthetizing, the animal can be moved to the heated surgical water bed and positioned properly in the snugly fitted nosecone. A highly sensitive valve regulated by the animal's breathing works with the nosecone to ensure non-rebreathing efficiency, and allow safe anesthesia for up to several hours.

The breathing device also includes an air filter that releases safe, filtered air back into the room.

EZ Systems include all necessary hardware components and connections. Oxygen and liquid Isoflurane are not supplied. These are required to operate the system.

Each system comes with all necessary components and connections for immediate use, including::

- Oxygen regulator
- Vaporizer Unit
- One Induction Chamber (standard **EZ-178**)
- One Breathing Device (standard **EZ-103**)
- Case of charcoal filters

Other available options include:

- Heated Beds and Heating Pump
- Additional Breathing Devices

EZ-FF9000 Fixed Flow System

The Fixed Flow System is our most advanced system and provides preset, fixed flow rates with no need for adjustment. The system offers five gas outlets, each with an individual ON/OFF switch. The system ensures consistent, precise gas flow when connected to any pressurized gas source higher than 7 psi.

- Induction Chamber output is fixed at 1 Lpm
- Four Breathing Circuit outputs are fixed at 0.5 Lpm

This unit features an oxygen flush button that purges the induction chamber with pure oxygen, thereby protecting personnel from exposure to anesthesia gas when opening the chamber. A handle on the vaporizer makes the unit easy to safely transport.

EZ-FF9000 Fixed Flow System

EZ-7000 Classic System

The Classic System is the upgraded version of our original EZ-Anesthesia system. The new version has a reconfigured flow meter that is more user-friendly. The system offers five gas outlets that can supply a single induction chamber and four breather circuits simultaneously.

The upgraded system also features an oxygen flush button that purges the induction chamber with pure oxygen, thereby protecting personnel from exposure to anesthesia gas when opening the chamber. A handle on the vaporizer makes the unit easy to safely transport.

EZ-7000 Classic System

EZ-B800 Basic System

The Basic System is designed for use with a single animal. It utilizes one output directly from the vaporizer into a Y-splitter which creates a dual feed that can be directed to the induction chamber or the breather circuit.

This unit incorporates an oxygen flush system that purges the induction chamber with pure oxygen, thereby eliminating personnel exposure to anesthesia gas when opening the chamber.

EZ-B800 Basic System

Also see Animal Temperature Controller, page 88

EZ-1130 Connection Kit

This kit is used for connecting additional components to the EZ-Anesthesia Systems. It includes 6 ft of clear PVC tubing with a quick-disconnect fitting.

EZ-1130	Connection Kit

EZ-830 Ventilator Connection Kit

This kit is used to connect the SAR-830 ventilators with EZ-Anesthesia Systems. It includes all required components, pre-assembled for simple connection between the ventilator and the anesthesia system.

EZ-830	Ventilator Connection Kit

EZ-177 and EZ-1785 Induction Chambers

These chambers incorporate a positive seal O-ring gasket for containment during use.

EZ-177	Sure-Seal Mouse Chamber (5"L x 4.75"W x 4.38"H)
EZ-178	Sure Seal Mouse/Rat Chamber (9.75"L x 4.75"W x 4.38"H)
EZ-1785	Large Mouse/Rat Induction Chamber (7"W x 11"D x 6"H inside)
EZ-179	Rabbit/Guinea Pig Induction Chamber (18.75"x 12.75" x 12.75")

EZ-320 and EZ-330 Oxygen Regulators

Regulators are preset to 50 psi.

- **EZ-320** utilizes a CGA-540 connection for large "H" tanks.
- **EZ-330** utilizes a CGA-870 connection for small "E" tanks.

EZ-320	Oxygen Regulator for large tanks
EZ-330	Oxygen Regulator for small tanks

EZ-340-XXXX Custom Hose Assemblies

Custom built hose assemblies for wall or ceiling outputs specific to facility needs: Chemetron, Ohmeda, Schrader or DISS.

Euthanex Lids

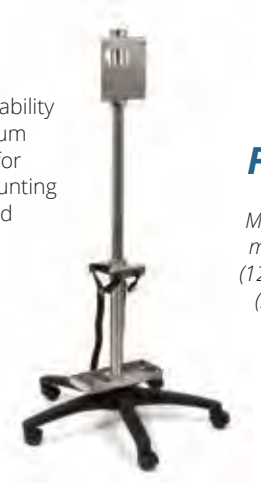
The Euthanex Lid system has become an industry standard. You no longer need to transfer animals. The lids are available in five sizes to accommodate virtually all plastic cage sizes designed for small lab animals. These heavy duty stainless steel lids have a stem fitting for connection to the quick-disconnect fitting on the hose from the gas source. A foam lid gasket ensures a good seal on the cage. Multiple lids may be used to treat several cages at once.

EZ-20027	Small Lid (13" x 9") Fits old-style mouse cages
EZ-20028	Small Lid (16" x 10") Fits new-style mouse cages
EZ-20030	Square Lid (13" x 13") Fits Thorn cages
EZ-20032	Medium Lid (20.5" x 11") Fits rat cages
EZ-20034	Large Lid (23" x 16.5") Fits guinea pig cages
EZ-20029	Lid Storage Bracket (wall-mounted,holds up to four lids)
EZ-20027G	Small Lid Gasket (13"x9")
EZ-20028G	Small Lid Gasket (16"x9")
EZ-20030G	Square Lid Gasket (13"x13")
EZ-20032G	Medium Lid Gasket (20.5"x11)
EZ-20034G	Large Lid Gasket (23"x16.5")

Vaporizer Pole Mount

The **EZ-E28000** is a mounting option for the EZ-Anesthesia system, combining system portability with a small footprint. Constructed of Aluminum and Stainless Steel, it features a five leg base for maximum stability and an oxygen "E" tank mounting bracket. Anesthesia system must be purchased separately.

E-28000	Vaporizer Pole Mount

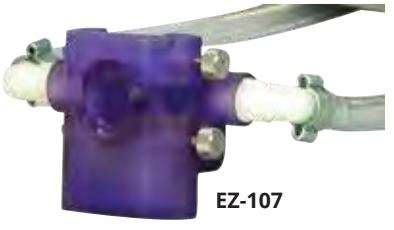


Rodent Isoflurane Facemask Kit

Mouse and rat facemasks, medical grade PVC tubing (12 feet), 1/4-inch adapters (2), 3/8-inch adapters (2).

OC-SFM-KIT	Small Rodent Facemask Kit (one mask, tubing, adapters)
OC-MFM-KIT	Medium Rodent Facemask Kit (one mask, tubing, adapters)
OC-LFM-KIT	Large Rodent Facemask Kit (one mask, tubing, adapters)
OC-XLFM-KIT	XLarge Rodent Facemask Kit (one mask, tubing, adapters)
OC-MOUSE-KIT	Mouse Facemask Kit (sm & med masks, tubing, adapters)
OC-RAT-KIT	Rat Facemask Kit (lg & xlg masks, tubing, adapters)
OC-ALLFM-KIT	Complete Rodent Facemask Kit (sm, med, lg & xlg masks, tubing, adapters)

EZ-103



EZ-107

EZ-104A	Versaflex Non-Rebreathing Unit
EZ-103A	Microflex Non-Rebreathing Unit
EZ-107A	Rat Stereotaxic Non-Rebreathing Unit
EZ-109	Multi-Animal Non-Rebreathing Unit
EZ-211	Mouse/Rat Thin-Line Heated Waterbed
EZ-212	Mouse/Rat Standard Heated Waterbed

Mobile Workstations

Two mobile workstations, constructed of heavy-duty stainless steel with locking casters, integrate all your EZ-Anesthesia components into one portable unit. Open side shelves accommodate 20 lb. cylinders, and convenient 2" port holes allow for easy rigging of gas and electrical lines. Below the work surface of each mobile workstation is an open shelf and a locking cabinet. t provides a 42"x24" work surface and holds up to four cylinders. EZ-E27000 has a 22"x21" work surface and holds up to two cylinders. These systems are easy to set up and provide maximum flexibility and mobility.

EZ-E25000	Mobile Workstation, 42" x 24" Top
EZ-E27000	Mobile Workstation, 22" x 21" Top

Animal Temperature Controller

ATC2000 is a low noise heating system for maintaining animal body temperature during experimental procedures. The DC heater is extremely quiet in terms of electromagnetic radiation. This is essential in electrophysiological recordings which are very sensitive to electromagnetic interference.

The controller uses proportional, integral, and derivative (PID) technology in adjusting the DC voltage output. Compared with switched on/off type controllers, PID controllers provide a much more precise and stable control of temperature. The PID approach is also more immune to the variation of the experimental conditions such as change in animal size and unexpected disturbances.

The controller has three temperature sensing inputs.

- The resistive temperature device (RTD) Probe input can be used to monitor an RTD rectal probe to control the animal temperature or to monitor ambient temperature, induction chamber temperature or any other temperature.
- When using a thermocouple probe, the thermocouple (TC) probe input can be used just like the RTD input. (A T type thermocouple must be used.)

Low Noise DC Heater

Adaptive mode–auto adjust PID regardless of animal size

PID control for maximum temperature stability

Three temperature inputs–RTD, TC, plate

Automatic shutdown if the plate reaches 45°C

- The heater plate also has an internal temperature sensor. The ATC2000 monitors this sensor to prevent the localized hot spots under animal.

The controller has three operational modes:

- Normal mode uses the configured sensor (RTD or TC) or the plate sensor to drive the control loop.
- Adaptive mode uses the temperature of the heated plate and the temperature of the subject to control. This approach is less prone to overshoot, but somewhat slower the normal mode, depending on the sampling rate used.
- Shutdown is a fail safe mode used if the plate temperature ever exceeds 45°C.

The ATC2000 is tuned at the factory. However, the PID parameters may also be set manually. The temperature resolution of the controller is 0.1°C. The rectal temperature probe has a 6-ft ultra-flexible, shielded cable and an RTD sensor.

The metal heating plates (available separately) have built-in temperature sensors. Compatible with stereotaxic systems, the rigid, flat surface fits under the U-frame. Plates are washable with water and detergent.

*An optional silicone pad (WPI #**503573**) is composed of a thermally conductive rubber material that is used to enhance the heat transfer to the animal. Simply place the silicone pad on the ATC2000 warming plate and place the animal on silicone pad.*

ATC2000 SPECIFICATIONS

TEMPERATURE RANGE	up to 45°C
RESOLUTION	0.1°C
ACCURACY	± 0.3°C
RAT SENSOR	RTD, OD 2.0mm tube with 3.5mm ball head (Optional mouse sensor is available)
MAXIMUM DC OUTPUT	10V, 3A
POWER	Universal AC Adapter 90–264V Input, 12V@4.5A maximum output
DIMENSIONS	20.9 x 8.8 x 27.6 cm (8.2 x 3.5 x 10.9 in.)
WEIGHT	5 kg (11 lb)

ATC2000	Animal Temperature Controller

REQUIRED ACCESSORIES ***(select one sensor and one plate)***

61800	Heating Plate with built-in RTD sensor, 15 x 25 cm
61830	Heating Plate with built-in RTD sensor, 15 x 10 cm
61840	Heating Plate with built-in RTD sensor, 15 x 4 cm

REPLACEMENTS

61824	Mouse Rectal Temp Probe, 1.0mm shaft diam., 2.0mm ball tip
RET-2	Rat Rectal Temp Probe, 1.0mm shaft diam., 3.2mm ball tip
RET-3	Mouse Rectal Temp Probe, 1.0mm shaft diam., 1.6mm ball tip
503573	Silicone Pad

NEEDLE MICROPROBES

MT-29/1	29 ga 1 cm Needle Microprobe, 5-ft cable
MT-23/3	23 ga 3 cm Needle Microprobe, 5-ft cable
MT-D	Needle Microprobe, 5-ft cable

FLEXIBLE IMPLANTABLE PROBES

IT-18	0.025-inch diam Flexible Implantable Probe, 3-ft cable
IT-23	0.009-inch diam Flexible Implantable Probe, 3-ft cable
IT-1E	0.025-inch diam Flexible Implantable Probe, 3-ft cable

RECTAL PROBES

RET-2	Rectal Probe for Rats, 5-ft cable

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Blood Pressure Monitor and Transducer

- ***Monitors animal arterial or venous blood pressure***
- ***Displays systolic, diastolic or average blood pressure***

BP1 accepts WPI's BLPR blood pressure transducer (below) as well as other blood pressure transducers.

An audio monitor provides a signal with variable pitch and amplitude, allowing you to hear changes in blood pressure. Digital LCD display provides average or peak signal values from 0 to 1999 mV. With an optional pressure gauge (not provided — see **PM015D**, page 187), the user may calibrate the display to read mm Hg. Recorder output connector allows direct connection to a pen recorder, oscilloscope or computer via a data acquisition system.

SYS-BP1	Pressure Monitor *(transducer & cable not included)*

Specify line voltage

ACCESSORIES

BLPR2	NEW Blood Pressure Transducer & Cable
BPCABLE2	NEW Cable (12 ft) with DIN connector for BLPR2
503067	BLPR2 Transducer without cable
13024	Single Rack Mount Kit
13025	Dual Rack Mount Kit
3491	Extension Cable, 5 ft
500184	BNC-to-BNC Cable, 10 ft
14036-15	4-Way Luer Stopcock, Blue Tint (package of 15)
KZ1101	Micro Cannula, 3 inch

Note: BLPR2 is intended for animal research only and may not be used for human blood pressure measurement.

BP1 SPECIFICATIONS

AMPLIFICATION	x1, x10, x100, variable (x5 to x1000)
BANDWIDTH, SMALL SIGNAL (-3 dB)	300 kHz (x1) 30 kHz (x10) 3 kHz (x100) 0.3 kHz (x1000)
OUTPUT VOLTAGE SWING	± 5 volts
MAXIMUM OUTPUT CURRENT	2 mA
INPUT IMPEDANCE, EACH INPUT	100 kΩ || 0.01 µF
TRANSDUCER APPLIED VOLTS	10 V nominal, varies with load. 25 mA, maximum
DIGITAL PANEL METER	0 to 1999 mV (calibrated in mm of Hg pressure when supplied with pressure gauge). Meter reads average value or ± peak (1 to 20 Hz).
POWER	95-135 V or 220-240 V, 50/60 Hz
DIMENSIONS	8.5 x 5.12 x 10 in. (21.6 x 13 x 25.44 cm)
SHIPPING WEIGHT	11 lb (5 kg)

BLPR2 SPECIFICATIONS

WORKING PRESSURE	-50 to + 300 mm Hg
OVERPRESSURE	-400 to +4000 mm Hg
EXCITATION VOLTAGE	1-10 VDC or RMS to 5 kHz
INPUT IMPEDANCE	350 Ω ±10%
OUTPUT IMPEDANCE	300 Ω ±10%
ISOLATION	< 5 µA leakage at 120 VAC
SENSITIVITY	5 µV/V/mm Hg
DYNAMIC RESPONSE	100 Hz
EIGHT HOUR DRIFT	1 mm Hg after 5 minute warm-up
MAXIMUM ERROR	Total combined effects of Sensitivity, Linearity, Hysteresis (at 25°C and 5 µV/V/mm Hg) do not exceed ±2% or 1 mm Hg, whichever is greater.
ENVIRONMENTAL	
Operating Temp. Range	+15°C to +40°C
Storage Temp. Range	-30°C to +60°C
Light Sensitivity	Not affected by light under 3000 ft/candles (32,000 lux)
SHIPPING WEIGHT	1 lb

BLOOD PRESSURE TRANSDUCER

BLPR2 can be used for the direct arterial and venous pressure measurement in animal blood vessels. Supplied sterile, BLPR2 is accurate, linear and stable with temperature. May be sterilized cold with Cidex or a similar bactericide.

BLPR2 is equipped with a twelve-foot cable and connector compatible with WPI's four-channel signal conditioning unit, **TBM4M** Transbridge, and the single-channel **BP1** blood pressure monitor. Cable has moisture-resistant locking connector. A continuous, uniform lumen eliminates places for bubbles to form and lodge. The clear fluid path is easy to inspect. Easy to mount — slotted transducer body accepts Velcro strap.

To facilitate setup and operation, a four-way stopcock that allows easy filling, flushing, and zeroing of the transducer is included. Typically, the stopcock is located between the transducer and the animal catheter where it can be used to quickly zero, flush, or de-bubble the transducer.

Aladdin

Programmable Syringe Pump

- **Economical**
- **Versatile**
- **More Features**
- **Dual Pumping Action**

ALADDIN SPECIFICATIONS

	AL-1000	AL-1000HP
SYRINGE SIZES	1-60 mL, or 0.5-5 µL micro syringes	Up to 60 mL
NUMBER OF SYRINGES	1	1
MOTOR TYPE	Step Motor, $^1/_8$ to $^1/_2$ step modes	
STEPS PER REVOLUTIONS	400	200
STEPPING (max./min.)	0.21 µm to 0.850 µm	
MOTOR TO DRIVE SCREW RATIO	15/28	15/28
SPEED (max./min.)	5.1 cm/min / 0.0042 cm/hr	18.36964 cm/min / 0.008409 cm/hr
PUMPING RATES	1699 mL/hr with 60 mL syringe, to 0.73 µL/hr with 1 mL syringe	6120 mL/hr with 60 mL syringe, to 1.459 mL/hr with 1 mL syringe
MAXIMUM FORCE	35 lb at min. speed, 18 lb at maximum speed	100 lb at minimum speed, 18 lb at maximum speed
NUMBER OF PROGRAM PHASES	41	41
RS-232 PUMP NETWORK	100 pumps maximum	100 pumps maximum
POWER SUPPLY	Wall adapter 12V DC @ 850 mA	Wall adapter 12V DC @ 1000 mA
DIMENSIONS	22.9 x 14.6 x 11.4 cm (8.75 x 5.75 x 4.5 in.)	22.9 x 14.6 x 11.4 cm (8.75 x 5.75 x 4.5 in.)
WEIGHT	1.6 kg (3.6 lb)	1.6 kg (3.6 lb)

Need a pump for two syringes? Two Aladdin pumps when daisy-chained are more efficient and affordable than any competitor's dual syringe models. Two Aladdins (**AL-2000**) will perform as a dual infusion/withdrawal pump, a double pump for infusing at different rates, a push/pull pump with one infusing and one withdrawing at the same or different rates, two independent pumps, or a master/slave pump. One Aladdin can even control the second for continuous pumping with optional check valve set.

The Aladdin pump series will accept syringes from Becton Dickinson, Monoject, Terumo, and Air-Tite.

AL-1000	Programmable Syringe Pump
AL-1000HP	Programmable Syringe Pump, High Pressure
AL-2000	Two AL1000 Syringe Pumps

INCLUDES GN-TTL Interconnecting Cable for push/pull or continuous pumping. Valves not included.

SPECIFY line voltage

WHEN ordering 220V models, specify UK, Euro or Australian line cord.

OPTIONAL ACCESSORIES

GN-PC7	PC to pump cable, 7 ft
GN-PC25	PC to pump cable, 25 ft
GN-NET7	Pump-to-pump network cable, 7 ft
GN-NET25	Pump-to-pump network cable, 25 ft
GN-TTL	Pump-to-pump reciprocating cable
ADPT2	Footswitch

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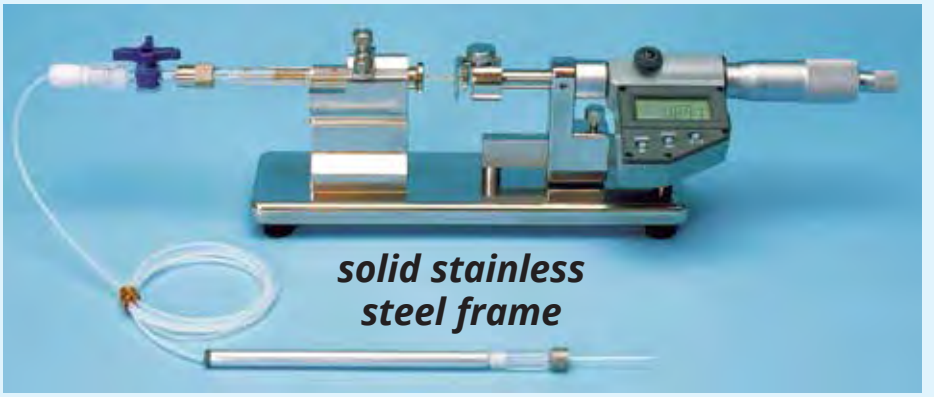
Manual Microsyringe Pump



The **MMP** and **DMP** are convenient tools for precise manual injection of fluid using glass pipettes or similar injection devices. The design allows visual feedback of flow at the pipette tip. They can also be used as a manual micro syringe pump for perfusion or withdrawal of liquids. The resolution of the injection volume can be continuously varied from 10 nanoliters to the microliter range, depending on the syringe used. Either oil or air can be used as the transfer media to assist the injection of fluid. The DMP comes with an exclusive digital micrometer that will allow the reading of piston advancement easily with a 0.001-millimeter resolution. The optional software and cable kit can transmit advancement data directly into computer. Model MMP has the traditional mechanical micrometer head with a resolution of 10 microns per division and advances 500 micrometers per revolution. The entire frame body of the injector is constructed with polished stainless steel for excellent stability and durability. The piston of the micrometer can be slid across the rail to the syringe's plunger position. Small diameter PTFE tubing is used to improve the accuracy and solution compatibility. The unique design of the pipette holder can securely hold any pipette with an outer diameter of between 1.0 mm and 1.5 mm. All necessary accessories for removing air and filling the syringe and tubing with liquid are included. The system comes complete with a 100 µL gas tight syringe and other syringe sizes can be purchased.

DMP & MMP SPECIFICATIONS

Travel Distance	25 mm
Advances Resolution	0.001 mm for DMP and 0.01 mm for MMP
Syringe Size	10 µL to 1 mL gas tight luer tip syringe
Tubing	1.5 m of PTFE tubing with 0.5 mm ID
Pipette Holder	0.24" x 5.2"
Pipette Holder Fits	1.0 to 1.5 mm OD pipette

MMP	Manual Microsyringe Pump
DMP	Manual Microsyringe Pump with Digital Display
ACCESSORIES	
MMP-KIT	Injection Assembly Parts Kit *(except valve)*
14057-10	Stopcock, 4-way, luer lock (pkg of 10)

Mini★Star™

Miniature DC Peristaltic Pump

This compact and lightweight peristaltic pump fits just about anywhere. It can be mounted directly on the bench, in a regular rack or to a post. The MiniStar's speed can be adjusted from 1rpm to 50 rpm. With recommended silicone tubing, the volume can be set from 0.06 mL/min to 14.0 mL/min. The MiniStar also features a hand held remote control that allows users to start and stop the pump, purge or adjust its speed and direction.

MINISTAR SPECIFICATIONS

SPEED	1-50.0 rpm, forward/reverse
FLOW RANGE	0.06~14.0 mL/min
RESOLUTION	1 rpm (0.1 rpm computer control)
SPEED CONTROL	Remote control
DISPLAY	Indicators for status and speed
POWER	12 V DC (110/220 VAC adapter incl.)
WORKING CONDITION	Temperature 0-40°C, humidity < 80%
TUBING	Two-stop Silicone
Wall Thickness	0.8~1.0 mm
Outer Diameter	≤ 4.8mm
DIMENSIONS	135×72×72 mm (L×W×H)
WEIGHT	0.5 Kg (1.1 lb)

MINISTAR	Miniature Peristaltic Pump, 1-channel
504011	MiniStar and Stand *(as pictured)*
503120	TTL Control Module
503121	Silicone Tubing w stops, 2.4mm ID x 0.8mm wall x 1 m (5-pk)
503122	Silicone Tubing w stops, 1mm ID x 1mm wall x 1 m (5-pk)

NanoFil™

Sub-microliter injection system for small animal research

ferrule: ø 8 mm

glass barrel: ø 7 mm

- ***The world's smallest dead volume injection syringe***
- ***Comes with various needle sizes from 26 ga. to 36 ga.***
- ***Versatile research applications — RPE and IO Kits***
- ***Custom needle shapes available — blunt, sharp, beveled***
- ***Compatible with WPI's UMP3 and PV800 series microinjection systems***

NanoFil is a specially designed 10 microliter syringe developed in response to customer requests for improved microinjection in mice and other small animals. It makes quantitative nanoliter injection much easier and more accurate than any other method currently in use.

NanoFil's low dead volume eliminates the need for oil backfilling, a messy process which risks contamination of the injected sample. Injection is now simpler, and less messy, and there is no possibility of oil contamination in critical applications such as ophthalmology research (see the Retinal Pigment Epithelial (RPE) and Intra Ocular (IO) injection kits listed below).

When the inner tip diameter of a conventional syringe is reduced to less than 100 micron, it is very difficult to backfill the solution at a reasonable speed. NanoFil solves this problem by using a tip coupling mechanism that makes it possible to change the syringe tip during the experiment. Simply load the sample using a larger tip, such as the 26 gauge needle provided with the syringe, and then replace it with a micro tip for sample injection. On a conventional 10 microliter syringe, a solid ring or bushing is permanently bonded to the tubing. Replacing the tip in middle of the experiment is not practical. With the NanoFil, tips can be exchanged by a simple twist of the brass lock, gently pulling out the tip, and replacing with the desired new tip. To secure the tip, NanoFil uses an olive shaped silicon gasket that is similar to, but much sturdier than, some of the microelectrode holders used for electro physiology recording. The silicone gasket makes it possible to hold not only metal tips but also glass and quartz tubing. Many types of tubing can be easily connected to the syringe as long as the outer diameter (OD) is close to, but not more than, the inner diameter (ID) of the inside barrel. Flexible quartz capillaries used in Gas Chromotography (GC) and Capillary Electrophoresis (CE) can also be easily coupled to the syringe.

Specially designed tips as small as 36 gauge (110 micron OD) are offered in both blunt and beveled styles. Our studies have shown that these tips will cause less trauma to the tissue than any other form of micro syringe currently in use. NanoFil has a unique coupling mechanism that allows many different forms of small tubing and tips to be coupled with the syringe barrel.

NANOFIL	NanoFil Syringe, 10 microliter
NANOFIL-100	NanoFil Syringe, 100 microliter

NanoFil syringe does not contain any injection tips, those must be purchased separately. It does include a 26 gauge beveled needle for backfilling.

REPLACEMENT BACKFILL NEEDLES	
NF26BV-2	26G Beveled Needle, 460 µm nominal diameter (package of 2)

Using NanoFil in different configurations

Direct injection by hand: This is the simplest and most economical way to inject. Any of our tips can be inserted directly into the NanoFil syringe. Even the SilFlex tubing can be inserted to switch from hand injection to the other methods listed below. The limitation of this method is the difficulty achieving sub microliter resolution.

Installed on WPI's UMP-III microsyringe pump: This will allow the user to achieve nanoliter resolution and reproducibility. For neural system injection, mount the UMPII on a stereotaxic frame.

SilFlex tubing and holder: The needle is mounted on a small plastic holder that is connected to the NanoFil by a 35 cm length of flexible tubing. The NanoFil is mounted on the UMP II pump. This configuration allows the user to hold the animal in one hand and insert the needle with the other. When the needle reaches the desired location, activate the pump using the footswitch and the pre-programmed injection volume will be delivered. This configuration gives a nanoliter level of accuracy and reproducibility. It is best suited for applications such as the RPE and IO injection.

Selecting the correct tip for your application

The replaceable needles used with the NanoFil are available with either blunt or beveled tips. The blunt tip is used for injection into soft tissue and when a uniform solution distribution is needed. The beveled style is used for applications that involve the penetration of a tough tissue.

One of the main factors that limit the resolution and accuracy of conventional micro syringes to the upper tens of nanoliters range is diffusion in the large tip ID. When the tip ID is equal or larger than 100 micron, the error caused by tip diffusion is in the nanoliter range level ((100 micron)^3 = 1 nanoliter). With a 36-gauge needle installed on the NanoFil, the error caused by diffusion will be reduced to the sub-nanoliter level, making accurate injection of a nanoliter possible.

All of WPI's beveled tips have a unique 25-degree tri-surface bevel that is optimized for microinjection. A 10-degree single-surface beveled tip penetrates better than one with a 25-degree angle, however the distance between the upper opening to the tip (see section "F" in the figure above right) is longer. As a result, it requires a deeper penetration of the tip to achieve the same level of liquid delivery.

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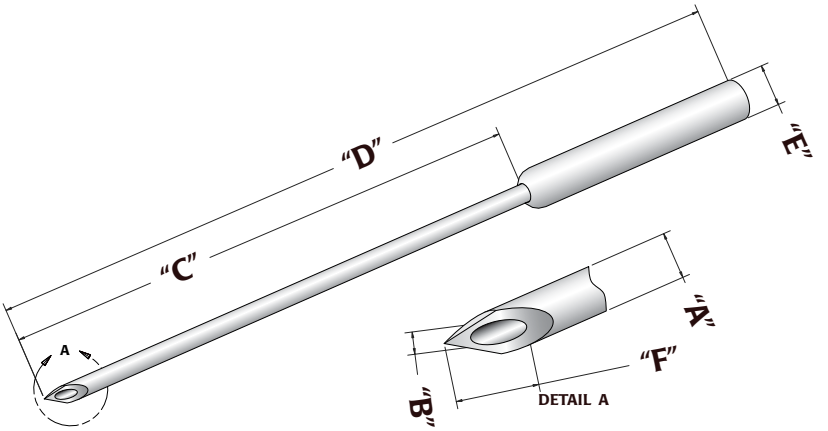

Deeper penetration means more tissue damage. WPI's unique 25-degree beveled tip solves this problem with two extra beveled surfaces. The tip of a single surface beveled tip is actually a blade instead of a point. It dulls very quickly. In contrast, the tri-surfaced tip has a real point. It not only penetrates much better but is also much more durable. Our tests show that our 33 gauge, 25 degree beveled tip penetrates easier and lasts longer than other manufacturer's 33 gauge, 10 degree single beveled tips. With a 35 gauge tri-surface beveled tip, the resistance to the penetration becomes even less. Each of our tips undergo a penetration test before leaving the factory to guarantee the best results for our customers.

Tip Order Number	Tip O.D. "A"	Tip I.D. "B"	Tip Length "C"	Total Length "D"	Shank O.D. "E"	Bevel Length "F"	Total Dead Volume	Tip Material
NF33BV-2	210 µm	115 µm	10.0 mm	40.0 mm	460 µm	≈348 µm	1.47 nL	Stainless Steel
NF34BV-2	185 µm	85 µm	5.0 mm	35.0 mm	460 µm	≈290 µm	1.39 nL	Stainless Steel
NF35BV-2	135 µm	55 µm	5.0 mm	35.0 mm	460 µm	≈204 µm	1.38 nL	Stainless Steel
NF36BV-2	110 µm	35 µm	3.0 mm	33.0 mm	460 µm	≈156 µm	1.37 nL	Stainless Steel
NFQ34-5	160 µm	100 µm	55.0 mm	75.0 mm	460 µm	≈280 µm	0.59 nL	Quartz
NF33BL-2	210 µm	115 µm	10.0 mm	34.0 mm	460 µm	≈348 µm	1.47 nL	Stainless Steel
NF34BL-2	185 µm	85 µm	5.0 mm	29.0 mm	460 µm	≈290 µm	1.39 nL	Stainless Steel
NF35BL-2	135 µm	55 µm	5.0 mm	29.0 mm	460 µm	≈204 µm	1.38 nL	Stainless Steel
NF36BL-2	110 µm	35 µm	3.0 mm	27.0 mm	460 µm	≈156 µm	1.37 nL	Stainless Steel

Above dimensions apply to blunt tips also.

Available Tips

33 gauge: This tip is similar to Hamilton's 7762 and 7803 series removable needles in both tip length and outer diameter. However, our beveled tip version is shorter, more durable, and penetrates better due to the special tri-surface grinding technique. In the past, 33-gauge tips were the smallest size sold by other manufacturers and were frequently cited in literature. However, our new 35-gauge tip is much better for injections involving small animals, especially mice. Compared with Hamilton' 33-gauge 10-degree beveled tip, our 35-gauge 25-degree beveled tip can reduce the depth of penetration by almost 80%. The distance between the tip and the upper rim of the opening (section F in the figure above) is 348 microns for the 33-gauge tip. The distance for our 35-gauge tip is only 230 microns. In addition, the smaller tip size significantly reduces the required penetration force. In nearly all applications, a 33-gauge tip can be replaced with our 35-gauge tip and produce better results.

34 gauge: This is a transitional size between the 33 gauge and 35 gauge. If the 35 gauge is too weak and the 33 gauge is too large, this makes a good alternative.

35 gauge: This was the most popular and preferred tip of most scientists during our field trial. The combination of its strength, length, durability, and clogging resistance creates a balance with very little compromising of the individual properties. It is much smaller than the 33-gauge tip offered by other manufacturers. It is only slightly larger than the 36-gauge tip but is much stronger and less likely to be clogged. Samples can be directly loaded with this tip. Its 5 mm length is sufficient for almost all injection applications in mice.

36 gauge: This is the smallest tip that is commercially available. The tip is so small that it can be inserted into the opening of the 33-gauge needle tip. Because this is pushing the limits of what current technology can produce, there are some limitations to consider before use. Its thin diameter makes it necessary to limit its length to 2.5 to 3.0 mm and still maintain a usable strength. Since the tip ID is in the 25 to 50 micron range, it is very easily clogged. Therefore, only well filtered solutions can be used. Depending on the viscosity of the sample, the user might also need to pre-load the syringe with a regular tip before switching to this tip for injection. We recommend using the 35-gauge tip instead of the 36 gauge unless it is absolutely necessary.

Flexible Quartz Tubing : The flexible quartz tubing tip is made of 160 micron OD polyimide coated quartz tubing with a special adapter sleeve mounted at the end. It is designed for filling glass capillary electrodes or pipettes, just like WPI's traditional MF34G Microfil. However, unlike the traditional MicroFil, which has about 50 microliters of dead volume in its luer hub, the dead volume of this tip is less than 0.6 microliters. It is useful for loading electrodes with solutions that have a limited volume or are too expensive to waste.

NANOFIL NEEDLES	
NF33BL-2	33 G blunt NanoFil needle (pkg of 2)
NF34BL-2	34 G blunt NanoFil needle (pkg of 2)
NF35BL-2	35 G blunt NanoFil needle (pkg of 2)
NF36BL-2	36 G blunt NanoFil needle (pkg of 2)
NF33BV-2	33 G beveled NanoFil needle (pkg of 2)
NF34BV-2	34 G beveled NanoFil needle (pkg of 2)
NF35BV-2	35 G beveled NanoFil needle (pkg of 2)
NF36BV-2	36 G beveled NanoFil needle (pkg of 2)
NF33-36BL	Assortment of 4 blunt NanoFil needles
NF33-36BV	Assortment of 4 beveled NanoFil needles
REPLACEMENT PARTS & ACCESSORIES	
NFINHLD	NanoFil Injection Holder
SILFLEX-2	SilFlex tubing 35 cm long (pkg of 2) (dead volume = 2.74 µL)
NFGSK-5	Spare Silicone Gasket for NanoFil & Holder (pkg of 5)
NFQ34-5	34 Gauge Flexible Quartz Tubing for filling (pkg 5)

NanoFil
Application Kits

These kits are specially designed for eye research for injecting retinal pigment epithelium (RPE) and intraocular (IO) in addition to brain injection in mice. They need to be used with a **NanoFil** syringe and **UMP3** to achieve accurate, repetitive, and oil free injection in the submicroliter range. Each kit includes two pieces of Silflex tubing (one for a spare), a holder assembly, spare gaskets, and an assortment of four tips — blunt for the RPE kit and beveled tips for the IO kit. Each kit comes with one each of 33, 34, 35 and 36 gauge tips so that first time users can find the best size for their application.

The Silflex tubing is the most critical component of the kit. This 35 cm long, flexible tubing has a very precise outer diameter for airtight fitting with the syringe. It also has a small inner diameter for minimum dead volume, and is very durable when handled correctly. The SilFlex is coupled to the injection tip with a mechanism similar to that of the NanoFil. The dead volume of the entire kit (including the tubing) is less than 3 microliters. All of the components in the kit are constructed of inert, solvent resistant, and autoclavable materials for easy cleaning after viral injection.

RECOMMENDED ACCESSORIES

RPE-KIT	Retinal Pigment Epithelium (RPE) injection kit (SilFlex tubing, gasket, holder, and blunt tip mix)
IO-KIT	Intraocular (IO) injection kit (SilFlex tubing, holder, gasket, and beveled tipmix)
503207	Stand & Clamps

*The optional **UMP3** stand in the photo includes the small base (**503084**), open-side clamp (**14073-4**) and 25cm rod (**503070**).*

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Ultra Micro Pump III

This versatile injector uses microsyringes to deliver picoliter volumes

Perfect for a wide range of applications including intracellular injection, micro delivery of biochemical agents or dyes, cell separation, and *in vitro* fertilization.

Micro syringes are easily installed — just snap the barrel into the clamps. UMP3 accepts a range of syringes from 0.5 µL to 1 mL.

Manipulator not included.

With its digital controller, **UltraMicroPump III** can dispense as little as 600 picoliters per incremental advance of the syringe piston (using a 5 µL syringe). Syringes may be filled externally and then inserted into the pump or filled while mounted in the pump. Fluids injected or withdrawn are held entirely within the micro syringe to maintain a low fluid dead volume.

For positioning, the **UltraMicroPump III** may be attached to any of several WPI micropositioners such as the **M3301** (manual), **DC3001** (motorized), or any manual stereotaxic manipulator.

Smart Controller

An Integral component in the **UMP3** system is a microprocessor-based controller, **Micro4**, which provides an "intelligent" and easy-to-use interface to up to four syringe pumps. Operating parameters are set with the membrane keypad and LCD display. From the keypad the user can select the following functions: set pump to infusion or withdrawal mode, enter the volume to be infused or withdrawn, rate of delivery, and syringe type as well as synchronize the starting and stopping of any combination of syringe pumps.

User parameters can be stored in the device's "non-volatile" memory for instant recall when the unit is powered on.

An optional footswitch can be plugged into a connector on the rear of the controller for "hands free" start-/-stop operation.

Computer Control—An RS-232 port on the rear of the controller can be used to connect it to a computer for use with computer control programs.

ULTRAMICROPUMP SPECIFICATIONS

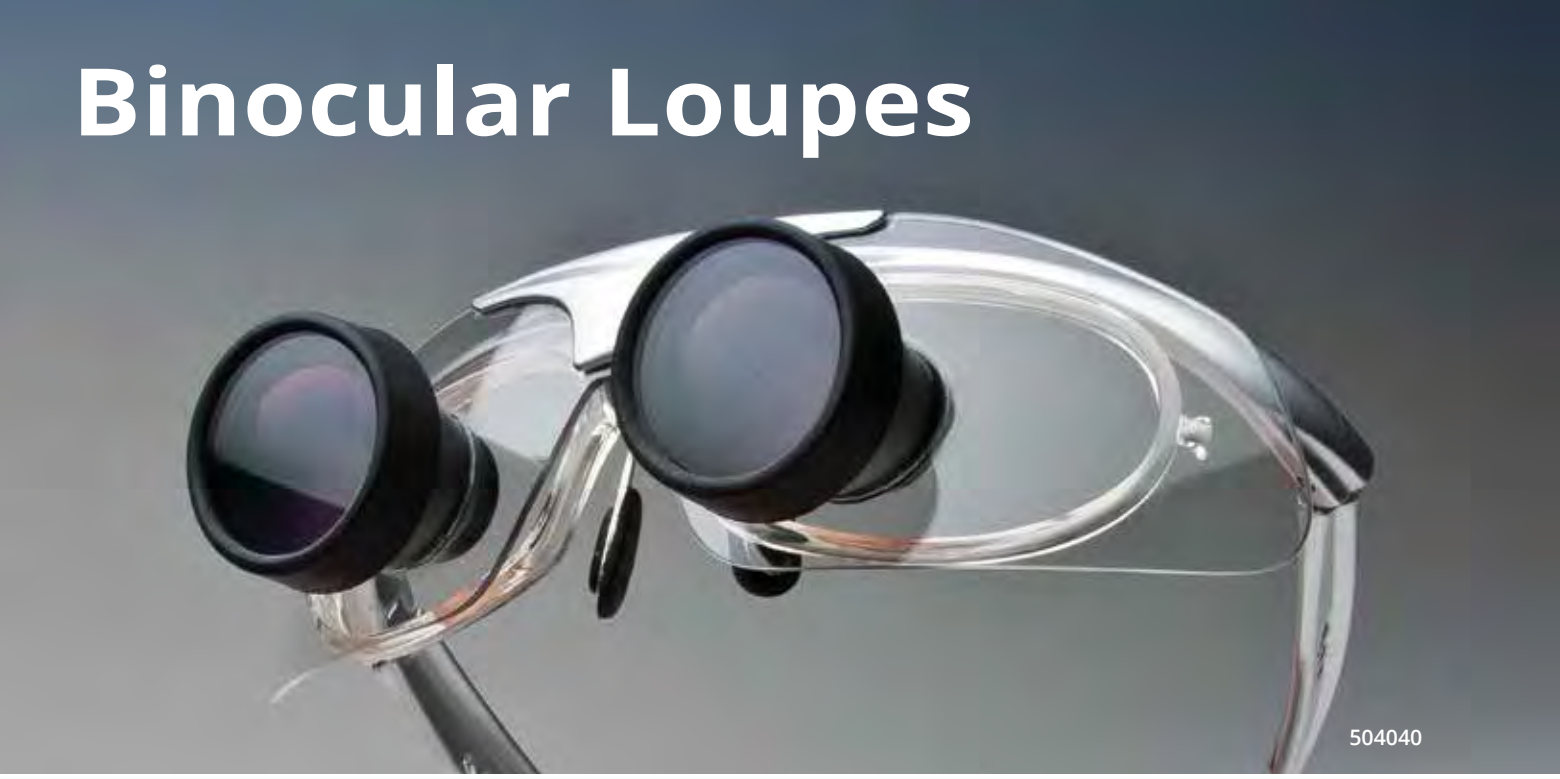
(based on 10 µL syringe)

NORMAL MODE	
TRAVEL	62 mm
MINIMUM DISPENSING VOLUME	0.58 nL / step (10 µL syringe)
LINEAR MOTION PER STEP	3.175 microns
WEIGHT	325 g (11.5 oz)
MOUNTING ROD DIAMETERS	7.9 mm (0.31 in.)
MAINS POWER SUPPLY	90-264VAC @ 47-63Hz
DIMENSIONS	Ø 32 mm x 190 mm (Ø 1.3 in. x 7.5 in.)
MICROSTEPPING MODE	
Precision is increased eight-fold	

UMP3 accepts glass syringes with barrel diameters from 5.5 to 9 mm.

UMP3-1	UltraMicroPump III (one) and Micro4 Controller
UMP3-2	UltraMicroPump III (two) and Micro4 Controller
UMP3-3	UltraMicroPump III (three) and Micro4 Controller
UMP3-4	UltraMicroPump III (four) and Micro4 Controller
UMP3	UltraMicroPump III (without controller)
SYS-MICRO4	Micro4 Controller, Four-Channel
OPTIONS AND ACCESSORIES	
15867	Footswitch for Micro4
40500	RS-232 Cable, 9-pin "D" connector
502201	V-clamp for Stereotaxic Frame
503301	Extension Cable, miniDIN (male-female) 10 ft
503207	Small Base Stand and Clamps

Binocular Loupes



Surgical loupes help to alleviate eye strain by enlarging the image when you are working on tiny subjects or conducting precision operations. They are portable and easier to use than a surgical microscope. However, they are not created equal, and choosing the pair that's right for you is important to your satisfaction.

Choosing Loupes

Choosing the correct surgical loupes for your application involves several factors, including resolution, working distance, field of view, depth of field, magnification, weight and interpupillary distance. These terms are defined below.

Ideally, you want the lowest magnification that is suitable for your application. As a general rule, the lower the magnification, the greater the depth of field and field of vision. Likewise, the longer the working distance, the greater the field of view. The larger your field of view, the less you need to turn your head. This reduces eye strain and fatigue. It is also important to consider the weight and fit of your loupes. Lightweight loupes are more comfortable for longer periods of use, and they are less likely to slide down your nose as you work. WPI loupes have adjustable interpupillary distance for a correct fit every time.

Three styles of loupes are available today. The first is a single lens loupe for simple, low-magnification applications. A photographer or jeweler might use this style. The second style is the Galilean loupe designed by the 17th-century astronomer Galileo Galilei. **Galilean loupes** use multiple lenses and offer magnification between 2.0x and 3.0x. These are easy to use, lightweight and affordable. For greater magnification up to about 8.0x, **prismatic loupes** are available. Prismatic loupes use a series of lenses and prisms to magnify the subject, according to design principles of Johannes Kepler, a contemporary of Galileo. They offer greater magnification, sharp resolution and a greater depth of field.

Your Height	Working Distance (when sitting)	Working Distance (when standing)
< 170cm (5'7")	34cm (14 in.)	42cm (16 in.)
170-193cm (5'7"-6'4")	42cm (16 in.)	50cm (20 in.)
> 193cm (6'4")	50cm (20 in.)	55cm (22 in.)

504039 — 2.5x Binocular Loupe, Through-the-Lens design

Things to Consider

Resolution

Resolution determines the amount of fine details that can be distinguished. The type of glass used in the lenses and coatings applied to it can affect the resolution of your loupe. To test a set of loupes, look through them at a piece of graph paper. Notice color distortions or curvature of the lines. A high resolution loupe will have crisp, straight lines. The lines, seen through lower quality lenses, will be slightly blurred and curved.

Working Distance

The working distance is distance at which a loupe will focus. The working distance must be equal to the distance from the loupe lens to the top of your subject. Each loupe has a defined working distance, but the working distance you require will depend upon your

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height, posture and table height. It is best to determine your desired working distance, and then choose a set of loupes that will meet your criteria.

You can measure your actual working distance or use the table below to get a rough idea. To measure your working distance, sit or stand in a comfortable position with your back straight. Do not lean forward too much. Measure the distance from your eyes to the top of your subject. Usually, your working distance will be close to what is shown in the table below.

Field of View

The area that is in focus when viewed through the loupes is the field of view. The longer the working distance of a loupe, the greater its field of view will be. Likewise, the lower the magnification factor, the larger the field of view.This tradeoff must be considered carefully when choosing loupes. When using a Galilean loupe the center of the image is clear, but the outer rim of the image is blurred. The prism loupe image is sharp to the very edge of the field of view.

Depth of Field

Like the field of view, the depth of field is directly related to the working distance and magnification factor. The depth of field is the amount of depth that is in focus when viewing the subject through the loupe. Greater depth of field is preferred, because you can see deeper into the subject without repositioning. For greater depth of field, choose a loupe with a longer working distance or a lower magnification factor.

Magnification

The size of the image viewed through the loupe is determined by the amount of magnification, which is a personal preference. Higher magnification provides a larger image, but it also means a reduced field of view and depth of field. Generally speaking, for simple surgical cases or for beginners in training, 2.5x or 3.0x magnification is sufficient. When a more delicate or complicated procedure is required, choose a magnification factor of 3.5x to 4.5x. If you are working on a tiny area or are conducting a microsurgery, chose a magnification factor of 5.0x to 6.0x. Higher magnification loupes can be used in place of a surgical microscope, if desired.

Interpupillary Distance

The distance between the pupils of your two eyes is your interpupillary distance. For the sake of comfort when focusing, your loupes must fit your eyes. You optometrist can give you an exact measurement. WPI loupes are adjustable so that you can set your loupes to an inter-pupillary distance that suits you.

504053 — 4.5x Binocular Loupe

504040 — 3x loupes flip up to allow use of prescription lenses (installed by user's ophthalmologist).

504037 — 2.5x loupes clip onto the user's glasses.

BINOCULAR LOUPES

PART NUMBER	STYLE	POWER	WORKING DISTANCE	PRICE
504037	Clip-On	2.5x	34cm	
504039	TTL	2.5x	34cm	
504040	Flip-Up: For prescription lenses	3.0x	39cm	
504050	Prism	3.5x	34cm	
504051	Prism	3.5x	50cm	
504052	Prism	4.5x	50cm	
504053	Prism	4.5x	34cm	
504054	Prism	4.0x	50cm	
504055	Prism	4.0x	34cm	
504497	Prism	5.0x	50cm	
504038	Galilean*	2.5x	34cm	
504056	Galilean**	2.5x	50cm	
504057	Galilean	3.0x	34cm	
504058	Galilean	3.0x	50cm	
504059	Galilean	3.5x	34cm	
504060	Galilean	3.5x	50cm	
504496	Galilean	2.5x	34cm	

** Lenses are individually adjustable*
*** Both lenses are adjusted simultaneously*

FEATURES:

- Motorized focusing system, allows hands-free operation
- Light weight, compact and easy to maneuver—weighs only 70 lb.
- Dual bulbs prevent illumination failure during surgery
- Optional video adapter
- Improved optics 119 lp/mm
- Convenient handles
- New head tilting mechanism
- ***Five*** magnification steps

Precision SurgioScope

Ideal for small animal surgery

WPI's precision SurgioScope (with five magnification steps) is a portable high quality surgical microscope offering outstanding image quality and value. Incorporating an agile extension arm and excellent working distance objectives, the SurgioScope provides convenient movement and maneuverability necessary for accurate positioning. These important features, together with a high quality optical system, provide sharp image contrast and enhanced large field of vision. The SurgioScope comes fully equipped with a foot-controlled motorized focusing system, normally only found in more expensive surgical microscopes. A unique dual lamp housing enables safe and rapid changing of the lamp during an operation, without the need to power down. The optional video port on the "T" version permits operational procedures to be monitored or recorded simultaneously using video or still cameras (not included).

PSMB5N	Binocular SurgioScope, F200 objective (Specify post height.)
PSMT5N	Trinocular SurgioScope, beam splitter, std video adapter, F200 objective (Specify post height.)

Specify 89 cm or 103 cm post
Specify line voltage

OPTIONS AND ACCESSORIES

501636	$^1/_2$" CS-mount Adaptor (requires Beam Splitter 501637)
501637	Beam splitter
504285	F250 Objective
500162	Replacement lamp, 12V, 100 W

SURGIOSCOPE SPECIFICATIONS

TOTAL MAGNIFICATION (F200)..... 3.2× — 25×
ADJUSTABLE DIOPTER..... ± 6 Diopter
ADJUSTABLE INTERPUPILLARY DISTANCE ..... min. 50 mm — max. 70 mm
EYEPIECE 12.5x

Objective	Working Distance	Magnification step	Visual Field of view (mm)	Camera field 1/2" CCD (mm)	Camera field 1/3" CCD (mm)
F200 (included)	190mm	3.2, 5, 8, 13, 20x	50, 31, 20, 12, 8	50, 31, 20, 12, 8	35, 23, 14, 9, 5.5
F250 #504285	240mm	2.6, 4, 6.4, 10.4, 16x	65, 40, 25, 16, 10	63, 40, 25, 16, 10	45, 28, 18, 11, 7

For additional objectives and specifications, please go to WPI website—**www.wpiinc.com**

FINE FOCUS ADJUSTMENT RANGE..... 30 mm

WORKING HEIGHT (Arm Movement Range Above Floor)
89 cm Post..... Focus on specimens 34.5" (88 cm) to 51" (130 cm) above floor *
103 cm Post ..... Focus on specimens 40.5" (103 cm) to 57" (146 cm) above floor *

** Subtract Working Distance for height above specimen, 103 cm post recommended for F350 objective.*

RANGE OF MOTION
Maximum Stretch Radius of Arm ..... 870 mm
Vertical Movement Range ..... 700-1100 mm
ILLUMINATION
Spot = 42 mm
Dual lamp housing with quick-change spare and internal ..... coaxial fiber optic cable.
HALOGEN-TUNGSTEN LAMP ..12V, 100W, with cold reflection
OPTIONAL CAMERA ..... COLCAM, USBCAM50 (½" CCD)
USBCAM33 (⅓" CCD)
POWER..... 110V, 50-60 Hz, or 220V, 50-60 Hz
SHIPPING WEIGHT..... 94 lb (43 kg)

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BioClave Mini

Research Autoclave

- ***Fully automatic–just press START***
- ***Rapid, complete sterilization***
- ***Extremely compact***
- ***Built in water tank does not require connection to an external water supply***
- ***Benchtop model***

504187	BioClave Mini (115 V)
504188	BioClave Mini (230 V)

BIOCLAVE MINI SPECIFICATIONS

Chamber Volume	8L
Max. Pressure	29 PSI/2 Bar
Chamber Dimensions	6.7 x 12.5"/17 x 31cm
Tray Dimensions	4.75 x 9.75"/12 x 24.8cm
Exterior Dimensions	20 x 13.5 x 12.9"/51 x 24 x 33cm
Weight	74 Lb. (33kg)
Electrical	115 or 230V, 50–60Hz, 950W

The 8L BioClave Mini comes pre-programmed for basic sterilization. Choose either the 120ºC or 134ºC temperature mode, and the cycle time is fixed. This is the perfect autoclave for small spaces.

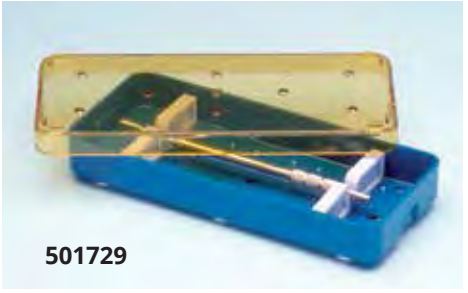
The stainless steel sterilization chamber accommodates a variety of liquids, media, instruments, glassware and plasticware. A mechanical and electrical safety interlock prevents the door from being opened until the pressure is released (0 PSI).

Simply press the Start button, and the entire sequence runs–fill, sterilize, exhaust and dry.

Sterilizing Trays

Fine surgical instruments are too valuable not to protect. WPI's sterilizing trays help reduce damage from everyday use. With top quality structural Integrity, these trays are ideal for the handling and storage of all standard microdissection and surgical instruments.

- GE's ULTEM® resin ensures product strength, structural integrity and extended life cycle.
- See-through lids make it easy to locate the right instrument.
- Suitable for all methods of sterilization (autoclave, steam, dry heat and chemical).
- Unique "grid" design in base makes it easy to install the silicone finger mat required to protect the delicate instruments.



501729

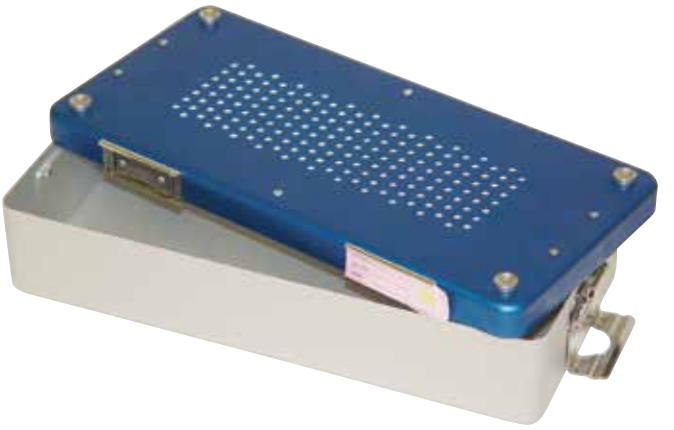
500252	Sterilizer tray, 15 x 6 x 2 cm (6 x 2.5 x 0.75 in.), base, silicone mat, lid
500253	Sterilizer tray, 19 x 10 x 2 cm (7.5 x 4 x 0.75 in.), base, silicone mat, lid
500254	Sterilizer tray, 25.5 x 15 x 2 cm (10 x 6 x 0.75 in.), base, silicone mat, lid
501728	Sterilizer Tray, 25.5 x 15 x 4 cm (10 x 6 x 1.5 in.), base, insert tray, lid, 2 mats
501729	Sterilizer Tray for Knife 15 x 6 x 2 cm (6 x 2.5 x 0.75 in.), base, lid, 2 bars
500255	Silicone mat, 38 x 25.5 cm (15 x 10 in.)

Combination Sterilization Tray & Storage Case

Stainless steel sterilization case with silicone holding pads

14213	Sterilization & Storage Case, 197 x 107 x 32 mm
501934	Sterilization & Storage Case, 230 x 150 x 50 mm

Aluminum Sterilizing Trays



These sterilization containers are made of hard anodized aluminum and can withstand autoclaving and ethylene oxide sterilizing. The non-perforated base has two locking clasps that secure the lid in place. The perforated lid with disposable filter allows steam and gas to move freely in and out of the container during sterilization. A silicone mat may be purchased separately and cut to fit the base of the tray.

501913	Small Aluminum Tray, 300 x 140 x 40 mm
501914	Large Aluminum Tray, 300 x 140 x 70 mm
501915	Single-use Filters, 100 per package
500255	Silicone Mat, 38 x 25.5 cm

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Who can join?

Researchers starting a new lab

Researchers moving into a new space

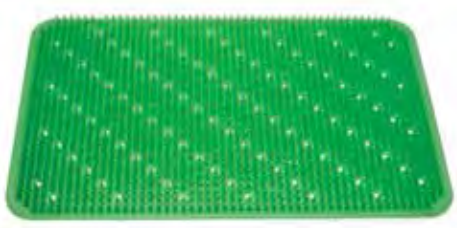
Researchers who have received their first research grant

Sign up here

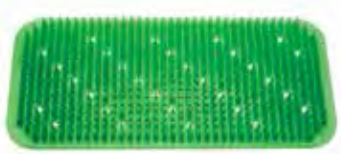
Inserts for Guardian Barrier Containers

504206 Wire Basket 460 x 125 x 50 mm

504205 Wire Basket 265 x 125 x 30 mm



504204 Silicone Mat, 380 x 230 mm



504203 Silicone Mat, 270 x 125 mm

SweepZone®
Ultrasonic Cleaning System

SweepZone operates with a special cleaning wave of ±2KHz energy that literally sweeps back and forth throughout the ultrasonic tank. Pulse Width Modulation (PWM) enables the device to sense cleaning loads, solution levels and voltage fluctuations.

It automatically adjusts to different conditions in order to create more uniform cleaning power by eliminating hot spots and weak areas in the tank. This results in unsurpassed cleaning performance with every application.

User-friendly digital touch pad controls make it easy and convenient to set any of the five preset timer settings from a range of six to sixty minutes. Durable stainless steel housing and tank are corrosion resistant and long lasting. Includes timer, drain and stainless steel cover

Dimensions: 32.2 x 1.75 x 22.2 cm (12.68 x 6.88 x 8.75 in.)
Shipping Weight: 5.4 kg (12 lb)
Tank Capacity: 4.0 L (1.06 gal.)
Tank Internal Dimensions: 29.8 x 15.2 x 10.2 cm (11.75 x 6 x 4 in.)

504217	SweepZone Ultrasonic Cleaning System

Quantrex®
Ultrasonic Cleaning Systems

Provides super-strength cleaning every time. Versatile enough for a variety of cleaning applications. When used with L&R's specialty formulated solutions, the self-contained, compact unit offers efficient trouble-free cleaning. Each Quantrex machine comes standard with increased power—strength you can see as soon as you turn the unit on.

60 Minute Timer.

Constructed with vinyl-clad steel and stainless steel.

Fourteen quality inspection steps for strength and durability.

Stainless steel drain with multi-positional outlet for easy removal of solution.

Dimensions: 26.0 x 16.5 x 21.0 cm (10.25 x 6.5 x 8.25 in.)
Shipping Weight: 4.5 kg (10 lb)
Tank Capacity: 3.2 L (0.85 gal.)
Internal Dimensions: 23.8 x 13.7 x 10.2 cm (9.38 x 5.38 x 4.0 in.)

Includes Timer, Drain and Cover. Heater Optional.

504216	Quantrex Ultrasonic Cleaning System

Ultrasonic Cleaner

Half liter stainless steel tank. Durable and compact, robust all-metal construction allows for continuous duty. Includes lid.

504766
504767
504768

14342

503737

UBATH SPECIFICATIONS

INPUT POWER	22W
PEAK OUTPUT	70W, 55 kHz
TANK CAPACITY	0.53L (18 oz.)
TANK I.D. (4 3/4 x 3 3/8 x 2 5/8 in.)	12.1 x 8.6 x 6.6 cm
TANK O.D.	13.7 x 10.5 x 12.1 cm (5 3/8 x 4 1/8 x 4 3/4 in.)
SHIPPING WEIGHT	1.8 kg (4 lb.)

UBATH-Y	Ultrasonic Cleaner (110 V)
UBATH-Z	Ultrasonic Cleaner (220 V, Euro plug)
UBATH-B	Ultrasonic Cleaner (220 V, UK plug)
	Specify line voltage
13740	Ultrasonic Detergent *(4 lb)*
14342	Ultrasonic Detergent *(1 gal)*
503737	Mesh Draining Basket
503738	Bur Sterilizing Tray
503739	Positioning Cover
504766	Sterilization mesh casette 40x40x20mm
504767	Sterilization mesh casette.80x80x34mm
504768	Sterilization mesh casette.105x70x25mm

MicroSterilizer

Complete sterilization in 5-7 seconds
Safe, convenient, non-spatter
Ideal for platinum loops, needles and tube mouths

The asbestos-free core element of the microsterilizer uses infrared heating to produce 815°C (1500°F), almost instantly sterilizing platinum innoculating loops, needles, glass tube/pipette mouths and various metal and borosilicate glass instruments. It also has a lower temperature setting (500°C) that can be used as a "standby" and extends usable life.

The ceramic heating element is safely enclosed in a perforated stainless steel guard chamber, protecting users from accidental contact with the extreme temperatures of the core area. It is extremely compact, convenient, and can be used in anaerobic and aerobic chambers.

MICROSTERILIZER SPECIFICATIONS

High Temperature Setting	815°C / 1500°F
Low Temperature Setting	500°C / 950°F
Sterilization Time	5 - 7 seconds
Chamber Diameter	0.55 in. (14 mm)
Chamber Length	6.2 in. (157 mm)
External Dimensions	4 x 6 x 6.5 in. (10.2 x 15.2 x 16.5 cm)
Weight	2.9 lb (1.3 kg)
Power	115 V or 230 V, 50-60 Hz, 170 W

504189	Infrared Microsterilizer, 115 V
504190	Infrared Microsterilizer, 230 V

OPTIONS & ACCESSORIES

504191	Loop Holder Attachment
504192	Slide Dryer Attachment for 3 slides
504193	Heating Element, 115 V
504194	Heating Element, 230 V

Dry Sterilizer

Sterilize your microdissecting and tissue culture instruments thoroughly and conveniently, in seconds. No chemicals. No flames. No risk of burns. No disinfectant fluids. Glass beads heated to 260°C kills all viruses, aerobic and anaerobic bacteria, yeasts and spores. (1.5 mm lead-free glass beads included.)

Size: 17.1 x 13.3 x 12.9 cm ($6^{3}/_{4}$ x $5^{1}/_{4}$ x $5^{1}/_{16}$ in.)

Chamber Dimensions: 5.1 x 10.2 cm (2 x 4 in.)

Weight: 2.3 kg (5 lb)

14404	Dry Sterilizer (110 V)
500121	Dry Sterilizer (220 V)
14405	Extra Glass Beads, 300 g (11 oz)

Sterilization Trays

503392	Instrument Sterilization Tray

Crosstex ConFirm

Mail-In Monitoring Service

The ConFirm strips contain both *bacillus stearothermophilus* and *bacillus subtilis* spores and therefore may be used to test all sterilization processes—steam, chemical vapor, dry heat and ethylene oxide. Mail-in sterilizer monitoring service provides: test results in 24 hours, the ability to check results online, a free reminder program, peace of mind and sterility assurance.

Easy to use: 1 sterilize, **2** mail, **3** get results, **4** get proof.

Economical: one of the most cost-effective methods of biological monitoring.

504609	ConFirm 3 Test Strips and Mailers, 6 per box
504610	ConFirm 3 Test Strips and Mailers, 12 per box

Absorbent Paper Points

504181

504182

504179

504180

504179	Absorbent Paper Points, sterile, C
504180	Absorbent Paper Points, sterile, extra fine
504181	Absorbent Paper Points, sterile, #15
504182	Absorbent Paper Points, sterile, M

Rapicide® OPA/28 High-Level Disinfectant

The superior way to reprocess heat-sensitive semi-critical devices that are unsuitable for sterilization.

The superior way to reprocess heat-sensitive semi-critical devices that are unsuitable for sterilization. Rapicide OPA/28 features:

- A 10-minute high-level disinfection time that's faster than all other OPA high-level disinfectants in the healthcare market today.
- Up to twice the reuse life of existing OPA's, lasts 28 days in comparison to 14 day use products.
- Because of the low vapor pressure, irritation to the eyes nose and throat are reduced when compared to glutaraldehyde. OPA/28 also effectively inactivates: TB, HIV2, MRSA, VRE, Hepatitis Viruses

504611	Rapicide OPA/28, 1 gallon

Instrument Demagnetizer

Instantly magnetize or demagnetize small surgical instruments and small steel parts that are over 1.3" in length and 1/8" in diameter. No batteries or electricity required. Box is high quality molded ABS plastic, impact resistant, and cadmium free. Dimensions are 2" x 2" x1"

501900	Instrument Magnetizer/Demagnetizer

The innovative step design lets you control the level of magnetism imposed on your tools.

To magnetize a tool — Insert tool into the **+** opening and slide back and forth. Continue this procedure until the desired level of magnetism is reached.

To demagnetize a tool — Insert tool at the lowest **–** opening. Slide back and forth. Continue the procedure, moving up the next step until the tool is completely demagnetized.

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Cidex OPA

Excellent biocide for WPI's nitric oxide sensors and other sensitive instruments which cannot be subjected to alcohol or autoclave

CIDEX OPA Solution, a 0.55% orthophthalaldehyde solution, is glutaraldehyde-free and effective at room tempterature (68°F). Test strips are available to test the MEC of the solutions. Non-corrosive to instruments.

7364-4 Cidex OPA (gallon)

Alconox

Powdered Precision Cleaner

- leaves no interfering residues on reusable labware
- use with manual cleaning or ultrasonic
- free rinsing
- corrosion inhibited

Alconox can be used as a paste, a soak, and ultrasonically. It can be used on glass, metal, stainless steel, porcelain, ceramic, plastic, rubber, and fiberglass. It can also be used on soft metals such as copper aluminum, zinc, and magnesium if rinsed promptly.

Used to remove: soil, grit, grime, buffing compound, slime, grease, oils, blood, tissue, salts, deposits, particulates, solvents, chemicals, radioisotopes, radioactive contaminants, silicone oils, mold release agents

13740 Alconox Cleaner (4 lbs)

ENZOL

Enzymatic Detergent

ENZOL Detergent is a mild pH, enzyme-based, pre-soak-plus-cleaner for removing tough, dried-on or hard-to-reach organic matter from instruments before they are disinfected in CIDEX Solution. Effective at room temperature (no need for hot water). Safe for instruments, including delicate endoscopes; mild pH reduces likelihood of corrosion. Easy to rinse, so it won't clog scopes or leave a residue on instruments. Low foaming, making it effective for use in automated equipment.

7363-4 ENZOL (U.S. gallon)

Barrier Milk

Instrument Protector/Lubricant

Barrier Milk Ready to Use Spray helps prevent corrosion of instruments when used prior to sterilization. Protects and extends the life of instruments during autoclaving. Simply spray the instrument directly before autoclaving with the unique water-based blend of lubricants and corrosion inhibitors. The fine mist works its way into hinges and box locks as well as covering all instruments with protection.

·Nitrate-free ·Chromate-free ·Phenolic-free ·Non-Irritating ·Neutral pH ·Mild, pleasant odor

504215 Barrier Milk™ Ready to Use Spray, 8 oz.

Surgical Instrument Lubricant

Protect your surgical and dissecting instruments with this specially formulated lubricant.

500126 Surgical Instrument Lubricant (8 fl oz)

Micro Cleaning Brushes

503231 Micro Cleaning Brushes, vial of 100

Medium Pointed Wrapped Swab

Durable wrapped foam swabs designed for precise applications. Our wrapped foam swabs provide good particle entrapment and work well as solvent applicators. The small tips on many of the styles allow use in very tight tolerance areas. With the most durable head of any foam swabs, wrapped foam delivers superior abrasion resistance for removal of tough contaminants. Wicking action pulls solvent from surfaces. The small tip allows use in very tight tolerance areas, while the pointed end works especially as pick.

Handle: nylon Head: polyurethane foam

Swab length: 7.1 cm (2.8 in.); handle width: 2.5 mm (0.10 in.); head length: 27.5 mm (1.08 in.); head thickness: 3.6 mm (0.14 in.); head width: 3.6 mm (0.14 in.)

504525 Medium Pointed Wrapped Swab (pack of 125)

Small Pointed Sealed Foam Swab

Economical general purpose swabs. Best solvent retention. The most cost-effective swabs for general purpose applications.100 ppi reticulated medical grade foam provides excellent particle entrapment. The open cell structure gives the best solvent holding ability of any style of swab. These swabs are free of adhesives or binders that could contaminate your aplication. Fiberless construction does not generate particles.

Handle: polypropylene Head: polyurethane foam

Swab length: 8.0 cm (3. 2 in.); handle width: 2.4 mm (0.10 in.); head length: 9.9 mm (0.39 in.); head thickness: 2.7 mm (0.11 in.); head width: 3.3 mm (0.13 in.)

504526 Small Pointed Sealed Foam Swab (pack of 125)

Adhesives Application Guide

Part No.	Description	Curing time	Useful Applications and Characteristics
Epoxies	Form strong bonding. Used in wire bonding applications.		
4898	Silver filled conductive Epoxy	12 hrs@50C; 5 min @150C	Connecting conductors that can't be soldered. Constructing or connecting Ag/AgCl pellets.
7335	Carbon filled conductive Epoxy	48 hrs@25C; 5 min @150C	Constructing carbon electrode.
4886	High performance Structural Epoxy	12 hrs@25C.	Forms a strong and slightly flexible bond on plastic, metal, and glass. Bonds some low surface .
Hot melt (EVA)	Easy to use for bonding, needs large gap filling		
13316	Mini Glue Gun with glue sticks	As soon as it cools down	Bonds wood, glass, metals, and many plastics.
Silicone Adhesives/Sealants/Primers		Good moisture resistant and elastic. Low toxic.	
1571	Room temperature vulcanizing (RTV) adhesive. Acyloxy/moisture cure system. Acetic acid is cure by-product.	24hrs@25C	Has the best adhesion property in this silicone family. Will bond to many materials.
7128	RTV sealant. Alkoxy/Moisture cure system. Methanol as cure by-product.	72hrs@25C	Good for bonding or sealing electronics circuits (metal).
SYLG184	Sylgard, Two parts, vinyl/platinum cure sealant. Hydrogen as cure by-products. Very low toxic	24hrs@25C, 15 min.@150C	Coating Patch Clamp electrodes, Cell culture dish, making dissection pads.
Kwik-Sil	Two part, adhesive. Vinyl/platinum system, Hydrogen as cure by-products. Very low toxic.	< 5 min@25C	Live tissue and nerve studies. Medium strength adhesion.
Kwik-Cast	Two part sealant. Vinyl/platinum cure system. Hydrogen as cure by-products. Very low toxic.	< 5 min@25C	Sealant for live tissues. Embedding peripheral nerves with electrodes.
6820	Primer for silicone	N/A	Enhances adhesion of silicone adhesives for difficult to bond plastic surfaces
Cyanoacrylate	Forms an instantaneous bonding.		
7341	Ethyl Cyanoacrylate, low viscosity 90-120 cps	<10 seconds	Mounting rat/mouse brain slices. Ideal for relatively small gaps and smooth surfaces.Bonds plastic, metals and rubber. Package of 10 vials, each approximately 1.5 mL.
7342	Ethyl Cyanoacrylate, high viscosity 1100-1600 cps	<30 seconds	Use on brain slice exp. Ideal for larger gaps, allows slightly longer bonding time. Bonds plastic, metals and rubber. Package of 10 vials, each approximately 1.5 mL.
Vetbond	Butyl Cyanoacrylate, Low toxic	<10 seconds	Bonds tissues, alternative to suture, helps small wound healing. Antimicrobial effect. Used in forensic science.
503763	Octyl Cyanoacrylate, Low toxic	<15 seconds	Suitable for surface wound bonding, protection, holding a sensor or other device on the tissue.

Kwik-Gard™

Kwik-Gard is specially packaged **Sylgard 184** silicone for quicker and easier application, eliminating the messy procedure of preparing the mixture before application. Its special cartridge controls the precise mixing ratio to ensure proper curing. The disposable tip mixes resin and hardener as they are dispensed. Since no air is introduced during mixing, the resin does not need degassing for most applications. The mixed silicone is applied directly to the site, reducing preparation time and material waste.

Each Kwik-Gard cartridge contains 37 mL of resin and hardener. The dispensing tip has a dead volume of 0.75 mL.

KWIKGARD	Kwik-Gard Start-up Kit *(incl. dispenser, 1 cartridge, 5 tips)*
KWIKGLUE	Kwik-Gard Refill *(2 cartridges, 10 dispensing tips)*
KWIKMIX	Dispensing Tips *(pkg of 10)*
KWIKGUN	Kwik-Gard Dispenser

Scotch-Weld 2216 Structural Epoxy

Probably still the best epoxy for bonding plastic, often used as the benchmark for testing the binding strength of other adhesives. The slightly rubbery texture also makes it less easy to break off. *It is the only epoxy known that can bond PEEK.* Color: gray. Cures at room temperature.

Shipping weight: 1 lb. (0.5 kg)

4886	Scotch-Weld 2216 (2 oz.)

Electrically Conductive Silver Epoxy

Two-component silver-filled epoxy for electrical connections which cannot be soldered, such as Ag/AgCl pellets. This widely used silver-filled epoxy features low viscosity and smooth flowing character. Pure silver is dispersed in both resin and hardener. Cures in 15 minutes at 120 °C. Mix ratio 1:1. May be premixed and frozen for later use. *Shipping weight: 1 lb. (0.5 kg)*

4898	Silver Epoxy (1 oz.)

Electrically Conductive Carbon Epoxy

Two-component carbon-epoxy, curable at room and elevated temperatures. Ideal for electrostatic discharge protection and EMI/RFI shielding. 1:1 mix ratio. May be premixed and frozen for later use.

Shipping weight: 1 lb. (0.5 kg)

7335	Carbon Epoxy (2 oz.)

Silicone RTV adhesive (non-acidic)

Because it is non-corrosive, this material is ideal for use on metal, for encapsulating small circuits on connectors. After cure, will withstand -55° to 200 °C. No mixing required.

Shipping weight: 1 lb. (0.5 kg)

7128	RTV Coating (3 oz.)

RTV Prime Coat

Enhances adhesion of silicone adhesives to many difficult-to-bond plastic surfaces.

Shipping weight: 1 lb. (0.5 kg)

6820	RTV Prime Coat, 400 ml (13.5 oz.)

Silicone RTV adhesive

Clear silicone sealant provides good bonding to plastic. After cure, will withstand -55 to 200 °C. No mixing required. A handy, general purpose laboratory sealant. (Releases acetic acid during curing.)

Shipping weight: 1 lb. (0.5 kg)

1571	RTV Sealant (4.7 oz.)

Mini Glue Gun

Comes with three sticks of special formula hot melt glue. UL approved. 110V 60Hz only.

Shipping weight: 1 lb. (0.5 kg)

13316	Mini Glue Gun

Low toxicity 5-minute adhesives for live tissues!

- ***Specially formulated for WPI***
- ***Extremely low toxicity***
- ***Excellent moisture resistance***
- ***Cures at room temperature***

The properties of this adhesive make it exceptionally useful for neuroscience applications, peripheral nerve studies and similar biomedical applications. These new silicone elastomers also eliminate the mess and time involved in pre-mixing other commonly used formulations (such as Wacker SilGel® and Sylgard®). Each silicone elastomer is packaged in a double barrel syringe and is automatically mixed when pressed out of the mixer tip provided. It can then be applied directly to the tissue without further mixing. The curing time of these silicones is short, reliable and reproducible thus eliminating potential costly guesswork when using other tissue adhesives. Furthermore, the curing process does not produce heat, which can otherwise cause tissue damage. WPI's silicone elastomers are much less toxic than dental silicone because they contain no surfactant additives.

WPI's silicone elastomers are based on recently developed vinyl terminated siloxane and platinum complex catalysts. They exhibit exceptional low toxicity before, during and after curing. The traditional RTV silicone systems produce either acetic acid or alcohol during condensation; these compounds are toxic to living cells. In contrast, the only by-product of condensation from WPI's elastomers is a small amount of hydrogen gas, which was shown not to cause any effect on nerve activity in highly sensitive peripheral nerves. Both elastomers cure on contact with the tissue. Currently, WPI provides rapid-curing silicone elastomers in two different formulas:

Kwik-Sil™ is a translucent silicone elastomer adhesive with medium viscosity. It has good adhesion and mechanical property (tear strength and elongation). The very short curing time (approx. 1 minute) make it especially useful for moving preparations.

Kwik-Cast™ is a very low viscosity silicone elastomer sealant. It is able to fill small spaces around nerves and creates a continuous mass ensuring long-term recording stability. Kwik-Cast is color-coded so mixing is foolproof. It can be applied and cured underneath mineral oil. The slight longer curing time (approx. 3 minutes) makes it more suitable for stationary preparations and *in vitro* tissue studies.

KWIK-CAST & KWIK-SIL SPECIFICATIONS

Unmixed	Kwik-Sil	Kwik-Cast
Mix Ratio	1:1	1:1
Working Time, typically	2-10 minutes	2-3 minutes
Viscosity, cps	15,000	10,000
After Curing 24 hours:		
Tear Strength	90 ppi	44 ppi
Elongation	650%	60%
Durometer (shore A-2)	30	36
Color	translucent	green
Volume Resistivity, Ω/cm	$1x10^{15}$	$1x10^{15}$
Shipping Weight	0.5 lb	0.5 lb

References

Sivitz, *et al.,* "Effect of acute and antecedent hypoglycemia on sympathetic neural activity and catecholamine responsiveness in normal rats." *Diabetes.* 50:1119-1125, 2001.

Andrews and Kunze. "Voltage-gated K+ channels in chemoreceptor sensory neurons of rat petrosal ganglion." *Brain Research,* 897:199-203. April 2001.

KWIK-SIL	Silicone Adhesive Compound (two 5-mL syringes)
600022	Replacement Mixing Tips for KWIK-SIL (pkg of 10)
KWIK-CAST	Silicone Casting Compound (two 5-mL syringes)
600009	Replacement Mixing Tips for KWIK-CAST (pkg of 10)

PRICE BREAK

	1-5 pkg	6-9 pkg	10 or more
KWIK-CAST			
KWIK-SIL			

"Super" Adhesives for Life Science Research

Cyanoacrylate adhesives have been on the market since 1958. Most industrial or household grade cyanoacrylate is made of shorter alkyl chain derivatives such as methyl or ethyl cyanoacrylate (WPI's **#7341** and **#7342**). They are very useful for temporarily holding tissues such as mounting specimens for microtome sectioning. However, they are not suitable for bonding wounds on live animals. The difficulties of using cyanoacrylate for bonding live animals are: (**1**) a strong, irritating odor; (**2**) quick loss of bonding strength due to breakdown of the bonding by hydration; (**3**) the breakdown products, cyanoacetate and formaldehyde, are toxic and can cause inflammatory reactions; and (**4**) they have low flexibility and tend to be brittle.

To overcome these problems, several longer alkyl chain cyanoacrylates have been developed especially for veterinary and human use. The first longer alkyl chain product is butyl cyanoacrylate. This product has been used for animal and human applications outside the USA since 1970. It is much less toxic and has a lower odor than the methyl or ethyl cyanoacrylate. The butyl cyanoacrylate offered by WPI is **Vetbond**™.

A family of adhesives containing *octyl cyanoacrylate*, a plasticizer and stabilizer, was developed In the 1990's (one of them approved by FDA for human use). When bonding to tissue, these new adhesives are four times stronger and less toxic than butyl cyanoacrylate. Compared with the traditional suture, the new super adhesive has several advantages. On average, it takes ***only one-tenth of the time*** to close an incision. The ***bonding strength*** is equal to 5-0 monofilament suture. It also has a mysterious ***antimicrobial effect*** that can decrease infection rates in contaminated wounds. Bonding will slough off naturally in 5 to 7 days. Cosmetic appearance of the healed incision is also better.

Gluture Topical Tissue Adhesive **#503763** forms a strong and flexible film and is thus more suitable for surface wound bonding, protection, and holding a sensor or other device on the tissue. Setting time is about 10 seconds, which gives ample time for application. It can also be used for temporarily holding a live tissue. For example, there is a report of using it to hold nematodes on a glass slide for patch-clamp neurons recording.

All of the products offered by WPI are veterinary grade (not suitable for human application). Though very similar to the grade for human use, they are not sterile and do not have FDA approval.

503763	Gluture Topical Tissue Adhesive (10 tips), 1.5 mL
7341	Cyanoacrylate Adhesive, low viscosity—90-120 cps (package of 10 vials, each approx 1.5mL)
7342	Cyanoacrylate Adhesive, high viscosity—1100-1600 cps (pkg of 10 vials, each approx 1.5mL)
VETBOND	3M Vetbond™ Adhesive (3 mL)

Sylgard

A two-part silicone elastomer, ideal for potting and encapsulating applications. Very low dielectric constant sealing compound used in patch clamping and many other lab applications. After cure, will withstand -55° to 200 °C.

Shipping weight: 2 lb. (1 kg)

SYLG184	Sylgard (1.1 lb)

Silicone Dissecting Pad Kit

Make your own silicone dissecting pads easily and quickly. Mix the 2-part silicone right in the plastic petri dishes and allow to cure 24 hours at room temperature. Kit includes enough silicone to prepare 20 dishes.

Kit Includes:

2-Part Sylgard silicone elastomer
20 plastic petri dishes with lids, 65mm
Pins

501986	Silicone Dissecting Pad Kit

LiquiVet Rapid Tissue Adhesive

Veterinary use only. **LiquiVet** monomeric formulation forms a thin, waterproof adhesion to bond tissue in a variety of vet procedures. Comes in 3g dispensing bottles with five applicators.

- Fast-acting cyanoacrylate-based tissue adhesive for wound care.
- Polymerizes in 8 seconds · Ideal for skin closure.
- Excellent for quick repair of minor lacerations, abrasions, and other minor wounds.
- Superior performance in the time necessary to close a wound.
- For external lacerations—not to be used internally

504561	LiquiVet Rapid Tissue Adhesive 3g bottle

FrameWorks

Non-Magnetic Bases, Stainless Steel Rods, & Clamps

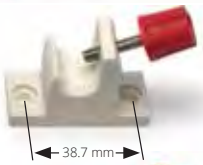
These high quality components are made of stainless steel and polymer that resist organic solvents and corrosion. They can be easily assembled to make a stand-alone setup for student labs or to make a complicated frame for research labs.

503085	Large 10-in. V-base with M8 Thread Mount
503084	Small 6-in. V-base with M8 Thread Mount
503081-4	Vertical Surface Mount, M8 Threaded (including three 10-32 mounting screws) (pkg of 4)

502190	Heavy Rectangular Base (with M8 thread mount and thumbscrew mount), 23×15.6 cm, 4 lb
503083	Light Rectangular Base (with M8 thread mount and thumbscrew mount), 23×15.6 cm, 0.5 lb

14073-4
Open-sided Frame Clamp (pkg of 4)

502193-4
Parallel Frame Clamp (pkg of 4



503080-4
Frame Clamp with Parallel Surface Mount (including two 10-32 mounting screws) (pkg of 4)

503041	Large Clamp with Rod (157 mm), opens up to 85 mm
503042	Medium Clamp with rod (157 mm), opens up to 45 mm
503086	Small Clamp with rod (157 mm), opens up to 16 mm

503082-4
Board Frame Clamp, opens up to 8.5 mm (pkg of 4)

503088-10
Thumbscrew, M5×20 mm (pkg of 10)

503078-4
T-joint Frame Clamp (pkg of 4)

503079-4
In-line Frame Clamp (pkg of 4)

503070	Polished Stainless Steel Post, 12mm OD, 25cm long, no thread
503071	Polished Stainless Steel Post, 12mm OD, 50cm long, no thread
503072	Polished Stainless Steel Post, 12mm OD, 75cm long, no thread
503073	Polished Stainless Steel Post, 12mm OD, 25cm long, M8 thread
502191	Polished Stainless Steel Post, 12mm OD, 50cm long, M8 thread
503075	Polished Stainless Steel Post, 12mm OD, 60cm long, M8 thread
503076	Polished Stainless Steel Post, 12mm OD, 75cm long, M8 thread
503077	Polished Stainless Steel Post, 12mm OD, 80cm long, M8 thread

We are your new glassware source!

Consistently high-quality glassware at extremely competitive s! Check other lab supply sources — and you'll come back to us.

GRIFFIN BEAKERS, WITH SPOUT

ASTM E960 Type I

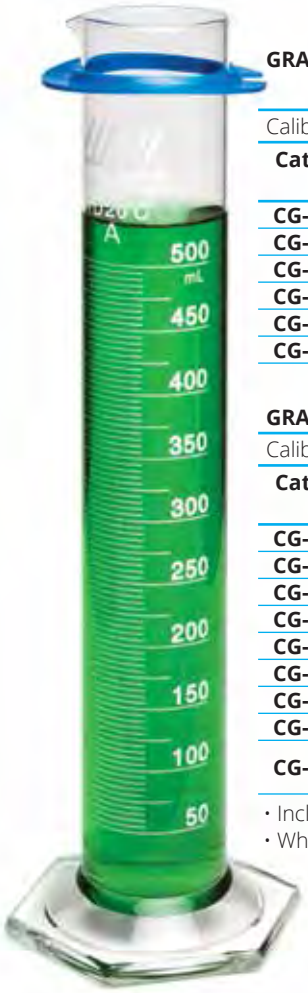
Catalog #	Capacity	Pack of	Case of
CG-0001	10 mL	12	48
CG-0002	20 mL	12	48
CG-0003	30 mL	12	48
CG-0004	50 mL	12	48
CG-0005	100 mL	12	48
CG-0006	150 mL	12	48
CG-0007	250 mL	12	48
CG-0008	400 mL	12	48
CG-0009	600 mL	6	18
CG-0010	1000 mL	6	18
CG-0011	Starter Set	5	—

GRIFFIN BEAKERS, HEAVY-DUTY*, WITH SPOUT

ASTM E960 Type II

Catalog #	Capacity	Pack of	Case of
CG-0015	150 mL	12	48
CG-0016	250 mL	12	48
CG-0017	400 mL	12	48
CG-0018	600 mL	6	18
CG-0019	1 L	6	18
CG-0020	2 L	4	8
CG-0021	4 L	1	4

***25-30% heavier than standard weight beakers.**



GRADUATED CYLINDER

CLASS A, ASTM E1272, E542

Calibrated "To Deliver"

Catalog #	Capacity	Case of 10
CG-0150	10 mL	
CG-0151	25 mL	
CG-0152	50 mL	
CG-0153	100 mL	
CG-0154	250 mL	
CG-0155	500 mL	

GRADUATED CYLINDER **Class B**

Calibrated "To Deliver"

Catalog #	Capacity	Case of 10
CG-0160	5 mL	
CG-0161	10 mL	
CG-0162	25 mL	
CG-0163	50 mL	
CG-0164	100 mL	
CG-0165	250 mL	
CG-0166	500 mL	
CG-0167	1000 mL	
CG-0168	Starter Set	

- Includes plastic bumper guards
- White enamel graduations

MIXING CYLINDER **Class A , ASTM E542, E1272**

Calibrated "To Deliver"

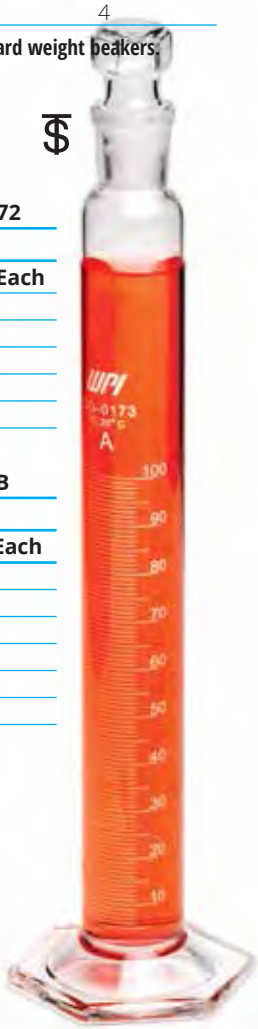
Catalog #	Capacity	Subdiv.	Tolerance	Each
CG-0171	25 mL	0.2 mL	±0.17 mL	
CG-0173	100 mL	1 mL	±0.50 mL	
CG-0174	250 mL	2 mL	±1.0 mL	
CG-0176	1000 mL	10 mL	±5.0 mL	
CG-0177	2000 mL	20 mL	±6.0 mL	

MIXING CYLINDER **Class B**

Calibrated "To Deliver"

Catalog #	Capacity	Subdiv.	Tolerance	Each
CG-0180	10 mL	0.2 mL	±0.20 mL	
CG-0181	25 mL	0.2 mL	±0.30 mL	
CG-0182	50 mL	1 mL	±0.50 mL	
CG-0183	100 mL	1 mL	±1.0 mL	
CG-0186	1000 mL	10 mL	±6.0 mL	
CG-0187	2000 mL	20 mL	±12.0 mL	

- White enamel graduations
- Single metric scale
- ⚕ stoppers included



All WPI glassware meets or exceeds current ASTM standards

WORLD PRECISION INSTRUMENTS
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BURET WITH PTFE #2 STOPCOCK

ASTM E694, E542, E287, Class A

Catalog #	Capacity	Subdivision	Tolerance	Case of 12
CG-0050	10 mL	0.05 mL	±0.02 mL	
CG-0051	25 mL	0.10 mL	±0.03 mL	
CG-0052	50 mL	0.10 mL	±0.05 mL	
CG-0053	100 mL	0.20 mL	±0.10 mL	

BURET WITH PTFE #2 STOPCOCK

Laboratory Grade, Class B

Catalog #	Capacity	Subdivision	Tolerance	Case of 12
CG-0055	25 mL	0.10 mL	±0.06 mL	

• *Durable colored scale*

Case of 12 Glass Funnels ***CG-0319*** *included with purchase of class sets.*

VOLUMETRIC FLASK WITH ⅋ STOPPERS

Class A , ASTM E694, E542, and E288

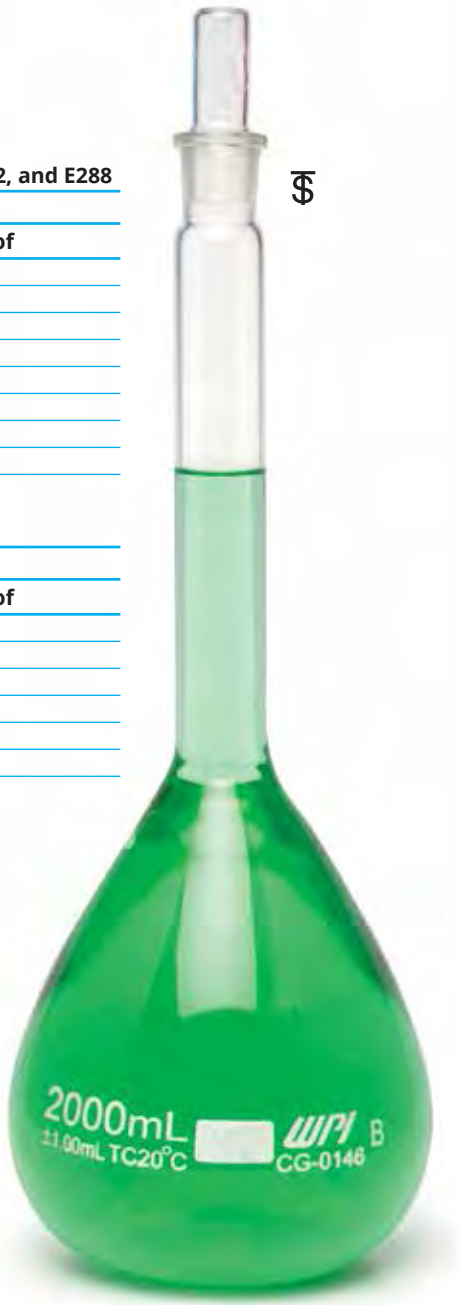
Calibrated "To Contain"

Catalog #	Capacity	Tolerance	⅋ Stopper #	Pack of
CG-0130	10 mL	±0.02 mL	9	12
CG-0131	25 mL	±0.03 mL	9	6
CG-0132	50 mL	±0.05 mL	9	6
CG-0133	100 mL	±0.08 mL	13	6
CG-0134	250 mL	±0.12 mL	16	6
CG-0135	500 mL	±0.20 mL	19	6
CG-0136	1000 mL	±0.30 mL	22	1
CG-0137	2000 mL	±0.50 mL	27	1

VOLUMETRIC FLASK WITH ⅋ STOPPERS **Class B**

Calibrated "To Contain"

Catalog #	Capacity	Tolerance	⅋ Stopper #	Pack of
CG-0139	10 mL	±0.04 mL	9	12
CG-0140	25 mL	±0.06 mL	9	6
CG-0141	50 mL	±0.10 mL	9	6
CG-0144	500 mL	±0.40 mL	19	6
CG-0145	1000 mL	±0.60 mL	22	1
CG-0146	2000 mL	±1.00 mL	27	1



ERLENMEYER FLASKS WITH ⅋ TAPER-GROUND NECK

ASTM E1404, E123, Type II, Class 1

Catalog #	Capacity	⅋ Joint	Pack of
CG-0110	50mL	19/38	1
CG-0111	125mL	24/40	6
CG-0112	250mL	24/40	6
CG-0113	500mL	24/40	6
CG-0114	1000mL	24/40	1

• *Stoppers not included*
• *Graduated*

For easy connections to filter pumps. Necks are finished to give excellent fitting for rubber stoppers (not included).

FILTER FLASKS WITH TUBULATION — **ASTM E1406 Type II, Class 1**

Catalog #	Capacity	Stopper	Tubulation O.D.	Pack of
CG-0081	**50 mL**	**#4**	**8 mm**	**6**
CG-0082	**125 mL**	**#5**	**10 mm**	**6**
CG-0085	**1000 mL**	**#8**	**10 mm**	**6**

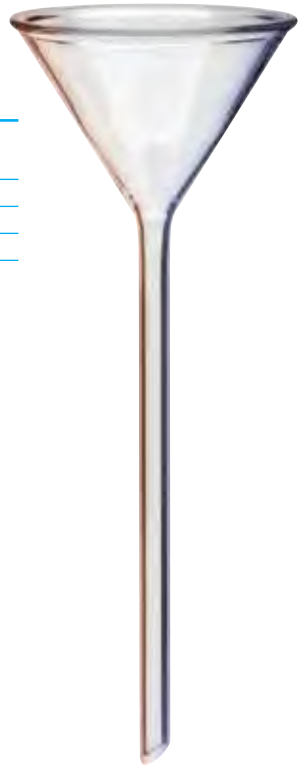
ERLENMEYER FLASKS WITH NARROW MOUTH

ASTM E1404, Type I, Class 1

Catalog #	Capacity	Stopper	Pack of		Case of	
CG-0100	25 mL	#0	12	**$29**	48	
CG-0101	50 mL	#1	12	**$29**	48	
CG-0102	125 mL	#5½	12	**$25**	48	
CG-0103	250 mL	#6	12	**$28**	48	
CG-0104	500 mL	#7	6	**$18**	18	
CG-0105	1000 mL	#8	6	**$35**	18	
CG-0106	Starter Set		5	**$38**	—	—

BÜCHNER TYPE FUNNELS

Catalog #	Capacity	Disc Diameter	Pack of
Fine Fritted Discs			
CG-0330	15 mL	20 mm	3
CG-0332	60 mL	40 mm	1
CG-0333	350 mL	80 mm	1
Medium Fritted Discs			
CG-0341	15 mL	20 mm	1
CG-0342	30 mL	30 mm	1
CG-0345	350 mL	80 mm	1
Coarse Fritted Discs			
CG-0351	30 mL	30 mm	1



GLASS FUNNELS WITH 60° ANGLE BOWLS AND 150MM STEMS

Catalog #	Top Diameter	Stem Length	Pack of
CG-0311	65 mm	150 mm	12
CG-0312	75 mm	150 mm	12
CG-0313	100 mm	150 mm	6

GLASS FUNNELS WITH 60° ANGLE BOWLS AND SHORT STEMS

Catalog #	Top Diameter	Stem Length	Pack of
CG-0319	35 mm	30 mm	12
CG-0321	75 mm	75 mm	12
CG-0322	100 mm	97 mm	6

ROUND BOTTOM BOILING FLASKS, TOOLED MOUTH

ASTM E1403 Type II, Class 2

Catalog #	Capacity	Stopper #	Pack of
CG-0250	250 mL	5	1
CG-0251	500 mL	5½	1

FLORENCE BOILING FLASKS, FLAT BOTTOM, TOOLED MOUTH

ASTM E1403 Type I, Class 1

Catalog #	Capacity	Stopper #	Pack of
CG-0260	50 mL	1	Each
CG-0261	125 mL	2	24
CG-0264	1000 mL	8	6

FLAT BOTTOM BOILING FLASKS

ASTM E1403 Type I, Class 4

Catalog #	Capacity	Ⓢ JOINT	Pack of
CG-0281	125 mL	24/40	1
CG-0283	500 mL	24/40	6

ROUND BOTTOM BOILING FLASKS

ASTM E1403 Type II, Class 3

Catalog #	Capacity	Ⓢ JOINT	Pack of
CG-0275	1000 mL	24/40	1

Keck Clips

Made of plastic for use on glass joints, clips for holding cone and socket joints together. Color-coded for easy size identification. Won't corrode. Will not scratch glass.

504402	Keck Standard Taper Clips, size 10 (black), pkg of 10
504403	Keck Standard Taper Clips, size 12 (purple), pkg of 10
504404	Keck Standard Taper Clips, size 14 (yellow), pkg of 10
504405	Keck Standard Taper Clips, size 19 (blue), pkg of 10
504406	Keck Standard Taper Clips, size 24 (green), pkg of 10
504407	Keck Standard Taper Clips, size 29 (red), pkg of 10
504408	Keck Standard Taper Clips, size 34 (orange), pkg of 10
504409	Keck Standard Taper Clips, size 40 (yellow), pkg of 10
504410	Keck Standard Taper Clips, size 45 (brown), pkg of 10

VOLUMETRIC PIPETS, REUSABLE CLASS A ASTM E969 Type I

Catalog #	Capacity	Tolerance	Color Code	Pack of 12
CG-0400	1 mL	±0.006 mL	Blue	
CG-0401	2 mL	±0.006 mL	Orange	
CG-0402	3 mL	±0.01 mL	Black	
CG-0403	4 mL	±0.01 mL	Red	
CG-0404	5 mL	±0.01 mL	White	
CG-0405	10 mL	±0.02 mL	Red	
CG-0408	25 mL	±0.03 mL	Blue	
CG-0410	100 mL	±0.08 mL	—	

VOLUMETRIC PIPETS, REUSABLE CLASS B

Catalog #	Capacity	Accuracy	Color Code	Pack of 12
CG-0422	3 mL	±0.02 mL	Black	
CG-0426	15 mL	±0.06 mL	Green	
CG-0427	20 mL	±0.06 mL	Yellow	
CG-0429	50 mL	±0.16 mL	Red	

CENTRIFUGE TUBES, CONICAL-BOTTOM, GLASS, WITH $ STOPPER

Catalog #	Capacity	O. D. × Length	Graduated	$ Stopper #	Pack of
CG-0511	15 mL	17 × 164 mm	NO	13	12

CENTRIFUGE TUBES, CONICAL-BOTTOM, GLASS

Catalog #	Capacity	O. D. × Length	Graduated	Pack of
CG-0532	12 mL	17 × 120 mm	NO	12

MORTAR & PESTLE, GLASS

Catalog #	Capacity	O.D.
CG-0601	4 oz. (118mL)	10cm

VACUUM FILTRATION APPARATUS

Cat No.	Filter Capacity	Flask Capacity
CG-0700	300 mL	1 L

Borosilicate glass parts with ground glass sealing surfaces

Recommended for HPLC solvents

WORLD PRECISION INSTRUMENTS
TOLL-FREE: 866-606-1974 *(U.S. only)* • Tel: 941-371-1003 • Fax: 941-377-5428 • sales@wpiinc.com • www.wpiinc.com

LABWARE SAMPLE SET

CG-9998 Labware Sample Set

MagicStir™

Low Profile Magnetic Stirrer

- Automatically reverses direction of rotation every 30 seconds for efficient mixing
- Safe, slip-free stand
- No moving parts/no wearing
- Chemically resistant materials
- Cost effective
- Stir bar included

MAGICSTIR Low Profile Magnetic Stirrer

MAGICSTIR SPECIFICATIONS

RATED VOLTAGE	115VAC, 50/60Hz, 5W
OUTPUT POWER	≥3W
SPEED RANGE	15–1500rpm
STIRRED VOLUME	≤800mL
STIRRING SURFACE AREA	3.5" (9cm)
STIRRING BAR LENGTH	≤25mm
AMBIENT WORKING HUMIDITY (RELATIVE)	≤ 80%
AMBIENT WORKING TEMPERATURE	5–40°C
WEIGHT	300g
DIMENSIONS (WxDxH)	120x160x11mm

REGAL pipetters

- ***Lightweight and conformable ergonomic design***
- ***Easy calibration using provided tool***
- ***Made from biologically inactive and chemical inert polymers***
- ***Easy for cleaning and parts replacement***
- ***CE and ISO13485 Certified***

Model	Volume Range µL	Increment µL	Nominal Volume µL	Tolerance %	Repeatability %
REG2	0.2 ~ 2	0.01	0.2 0.5 2	±12.0 ±5.0 ±2.0	≤6.00 ≤2.50 ≤0.70
REG10	1 ~ 10	0.1	1 5 10	±3.0 ±1.5 ±1.0	≤1.50 ≤0.60 ≤0.40
REG20	2 ~ 20	0.1	2 10 20	±3.0 ±1.0 ±1.0	≤1.50 ≤0.50 ≤0.30
REG50	5 ~ 50	0.5	5 20 50	±2.0 ±1.2 ±1.0	≤1.50 ≤0.40 ≤0.20
REG100	10 ~ 100	1	10 50 100	±2.0 ±0.8 ±0.8	≤0.50 ≤0.30 ≤0.15
REG200	20 ~ 200	1	20 100 200	±2.0 ±0.8 ±0.8	≤0.50 ≤0.30 ≤0.15
REG1000	100 ~ 1000	5	100 500 1000	±1.5 ±0.8 ±0.8	≤0.30 ≤0.30 ≤0.15
REG5K	1000 ~ 5000	50	1000 2000 5000	±1.0 ±0.7 ±0.7	≤0.50 ≤0.25 ≤0.15
REG10K	1000 ~ 10000	100	1 mL 5 mL 10 mL	±3.0 ±0.7 ±0.7	≤0.30 ≤0.20 ≤0.15

GERS5	Regal Pipetters (set of any 5) & stand
GERS6	Regal Pipetters (set of any 6) & stand
GERS7	Regal Pipetters (set of any 7) & stand
504591	Stand for Regal Pipetters (holds 8)

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Universal Pipette Tips

Ultra-clear and certified RNase/DNase-free

Universal Filter Tips (sterile)

Tip Volume	For Pipetter	Rack	Part No.
0.1 - 10 µL	REG2 REG10 REG20	960 (10 racks of 96)	**500199**
10 - 200 µL	REG20 REG50 REG100 REG200	960 (10 racks of 96)	**500200**
1000 - 10,000 µL	REG10K	250 (10 racks of 25)	**504590**

Universal Tips

Tip Volume	For Pipetter	Bulk	Part No.	Rack	Part No.
0.1 - 10 µL	REG2 REG10 REG20	Bag of 1000	**500191**	960 (10 racks of 96)	**500192**
5 - 200 µL	REG20 REG50 REG100 REG200	Bag of 1000	**500193**	960 (10 racks of 96)	**500194**
100-1000 µL	REG1K	Bag of 1000	**500195**	1000 (10 racks of 100)	**500196**
500 - 5000 µL	REG5K	Bag of 250	**500197 ***	500 (10 racks of 50)	**500198 ***
1000 - 10,000 µL	REG10K	Bag of 1000	**504588**	250 (10 racks of 25)	**504589**

WPI's Universal Pipette Tips are for use with Regal and most other pipetters, including Gilson, Oxford Benchmate, Socorex, and SealPette.

** Tips 500197 and 500198 fit Regal, Eppendorf, and BioHit pipetters.*

Same as leading brands—
at about half the !

Analytical and Precision Balances

16+ Weighing units (including one custom unit) • Selectable digital filtering for animal / dynamic weighing • Adjustable filters • Simple user-friendly operation • Full range tare • Zero tracking • Date and time • Multilingual display • Large backlit display with dual text prompts • Capacity tracker • Large stainless steel pan • Force restoration mechanism • Solid metal housing • Non-slip adjustable levelling feet • Lock down mounting slot for Kensington™ type lock and cable • Dual tare keys • Color-coded, sealed keypad • Splashproof to protect from accidental spills • RS-232 bi-directional interface • GLP printouts • Internal calibration • External calibration • AC Adapter

WITH INTERNAL MOTORIZED CALIBRATION AND 16 WEIGHING UNITS

ORDER	CAPACITY	READABILITY	PLATFORM	WEIGHT
504439	120 g	0.0001 g	3.5" diameter	28 lb
504440	250 g	0.0001 g	3.5" diameter	28 lb

WITH EXTERNAL CALIBRATION AND 18 WEIGHING UNITS

ORDER	CAPACITY	READABILITY	PLATFORM	WEIGHT
504441	250 g	0.001 g	5.5" x 5.5"	28 lb
504442	450 g	0.001 g	5.5" x 5.5"	28 lb
504371	2500 g	0.01 g	7.6" x 7.6"	28 lb
504372	4500 g	0.01 g	7.6" x 7.6"	28 lb

Compact Portable Scales

• 9 weighing units • Full range tare • Zero tracking • Simple 4-button operation • Backlit LCD display • Stainless steel pan • ShockProtect™ overload three-point protection • Can be stacked for storage (120mm pan size only) • Lock-down mounting slot for Kensington™ type lock and cable • Dual tare keys • Lightweight and portable • Modern low profile design • Color coded, sealed keypad • Low cost and simple to use • External calibration • Battery power (6 x AA Batteries) • Auto sleep / power down function to save battery life • AC Adapter

ORDER	CAPACITY	READABILITY	PLATFORM	WEIGHT
504236	200 g	0.01 g	4.8" diameter	1.9 lb
504237	250 g	0.1 g	4.8" diameter	1.9 lb
504238	600 g	0.1 g	4.8" diameter	1.9 lb
504438	1500 g	0.1 g	4.8" diameter	1.9 lb
504240	2600 g	0.1 g	5.7" diameter	1.9 lb
504241	2000 g	1 g	5.7" diameter	1.9 lb
504242	5000 g	1 g	5.7" diameter	1.9 lb

Portable Precision Scales

15 weighing units • Zero tracking • Backlit LCD display • Capacity tracker • ShockProtect™ overload three-point protection • Can be stacked for storage (120mm pan size only) • Lock-down mounting slot for Kensington™ type lock • Removable draft shield (120mm pan size only) • Stainless steel pan • Non-slip adjustable levelling feet • Below balance weighing with hanger • Easy access to the rechargeable battery • Color-coded, sealed keypad • Dual tare keys • RS-232 and USB interface • Handical™ manual internal calibration with built-in mass • External calibration • Auto power off • Full range tare • Low battery indication • AC Adapter

ORDER	CAPACITY	READABILITY	PLATFORM	WEIGHT
504418	120 g	0.001 g	4.8" diameter	3.6 lb
504419	150 g	0.005 g	4.8" diameter	3.6 lb
504420	300 g	0.01 g	4.8" diameter	3.6 lb
504421	600 g	0.01 g	4.8" diameter	3.6 lb
504422	600 g	0.02 g	4.8" diameter	3.6 lb
504423	1000 g	0.01 g	4.8" diameter	3.6 lb
504424	1500 g	0.05 g	4.8" diameter	3.6 lb
504425	3000 g	0.1 g	4.8" diameter	3.6 lb

504295

LabAide™ Vortex Mixer

- *Multi-Head*
- *Powerful motor–instant vortexing*
- *Dynamic balancing system*
- *Variable speed (200 – 3200 rpm)*
- *Continuous touch operation*

This mixer offers smooth, instant vortexing of samples as large as 50mL. A unique counter-balance system ensures maximum vortex action with minimal noise or vibration. It also has "no walk" suction feet, cold room/incubator compatibility and spill-proof electronic controls.

504456

Available with the standard cup head (504295) or the multi-head (504456).

Unique Multi-Head allows for standard vortexing and also holds up to 8 microtubes.

Available Accessories

VORTEX MIXER SPECIFICATIONS

SPEED RANGE	200–3200 rpm
OPERATING MODES	Touch or continuous
ORBIT	3 mm
OPERATING TEMPERATURE RANGe	+4ºC to +65ºC
DIMENSIONS	5 x 6.3 x 6.7″ (13 x 16 x 17cm)
WEIGHT	8.4 lb (3.8 kg)
ELECTRICAL	115 V, 60 Hz or 230 V, 60 Hz, 180 W
WARRANTY	2 years

504334	Vortex Mixer (with Multi-Head) 115v
504335	Vortex Mixer (with Multi-Head) 230v
504295	Vortex Mixer (with standard cup Head) 115v
504296	Vortex Mixer (with standard cup Head) 230v
OPTIONS & ACCESSORIES	
504297	Flat head for Vortex Mixer
504298	Combination head for tubes and microplates
504299	Horizontal head for 12x1.5/2.0 mL
504300	Horizontal head for 4x15 mL tubes
504301	Horizontal head for 2x50 mL tubes

Orbital Shaker

Available with a flat mat platform or with a universal platform for flasks and tubes. Adjustable spring bar platform for unusual vessel types also available.

- *Digital control up to 300 rpm*
- *Horizontally circular 19 mm orbit for aeration and mixing*
- *Compact design*
- *Universal platform for flasks and tubes is available for quick changes*

The LabAide Orbital Shaker's horizontal circular 19 mm orbit provides aeration and mixing. Its compact size makes it ideal for small jobs. Platform: 9.5x8 in.

An optional universal platform is available for use with Erlenmeyer flasks and test tube racks. The unique magnetic attachment method is the easiest way to instantly change between flask clamps of different sizes.

Optional universal platform

504302	LabAide Orbital Shaker, rubber mat platform, US plug
504303	LabAide Orbital Shaker, rubber mat platform, EU plug
OPTIONS & ACCESSORIES	
504304	Universal Platform for Flasks and Tubes
504305	Magnetic Clamp for 1000 mL Erlenmeyer (max. 4)
504306	Magnetic Clamp for 500 mL Erlenmeyer (max. 6)
504307	Magnetic Clamp for 250 mL Erlenmeyer (max. 8)
504308	Magnetic Clamp for 125 mL Erlenmeyer (max. 12)
504309	Magnetic Clamp for 50 mL Erlenmeyer (max. 20)

Hotplate, Magnetic Stirrers

- *Ceramic work surface, 7.5 x 7.5 in.*
- *Stir speed from 60–1500 rpm*
- *Temperature control up to 380°C*

This hotplate and hotplate with a magnetic stirrer feature a durable, chemical resistant, white, ceramic work surface. These units easily fit inside a bio-hood or on a crowded counter top. Precise speed and temperature controls offer quick adjustments. 8 x 9" footprint. The magnetic stirrer (top) and the hotplate stirrer (bottom) both feature a ceramic work surface.

HOTPLATE SPECIFICATIONS

TEMPERATURE RANGE	50 to 380°C
PLATFORM	7.5 x 7.5 in. (19 x 19 cm)
CONTROL	Quick Adjustment Knob
DIMENSIONS	8 x 9 x 4.5 in. (20 x 23 x 11.5 cm)
ELECTRICAL	115V or 230V, 50–60 Hz, 300W
WARRANTY	2 years

MAGNETIC STIRRER SPECIFICATIONS

SPEED RANGE	60–1500RPM
PLATFORM SIZE	7.5 x 7.5˝ (19 x 19cm)
CONTROL	Quick Adjustment Knob
DIMENSIONS	8 x 9 x 4.5 in. (20 x 23 x 11.5 cm)
ELECTRICAL	115V or 230V, 50–60 Hz, 300W
WARRANTY	2 years

HOTPLATE/MAGNETIC STIRRER SPECIFICATIONS

SPEED RANGE	60–1500RPM
TEMPERATURE RANGE	50–380°C
PLATFORM SIZE	7.5 x 7.5 in. (19 x 19 cm)
CONTROL	Quick Adjustment Knob
DIMENSIONS	8 x 9 x 4.5 in. (20 x 23 x 11.5 cm)
ELECTRICAL	115V or 230V, 50–60 Hz, 500W
WARRANTY	2 years

504312	Hotplate, 115 V
504313	Hotplate, 230 V
504314	Magnetic Stirrer, 115 V
504315	Magnetic Stirrer, 230 V
504310	Hotplate Stirrer, 115 V
504311	Hotplate Stirrer, 230 V
OPTIONS & ACCESSORIES	
504316	Rod for Hotplate Stirrer

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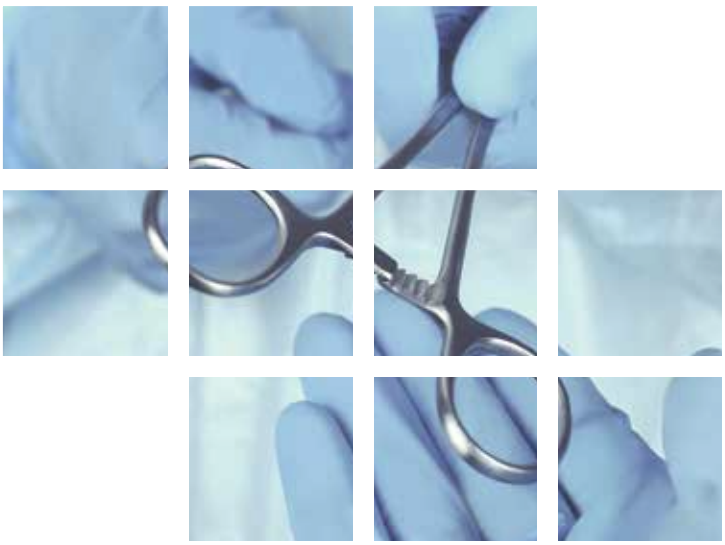

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