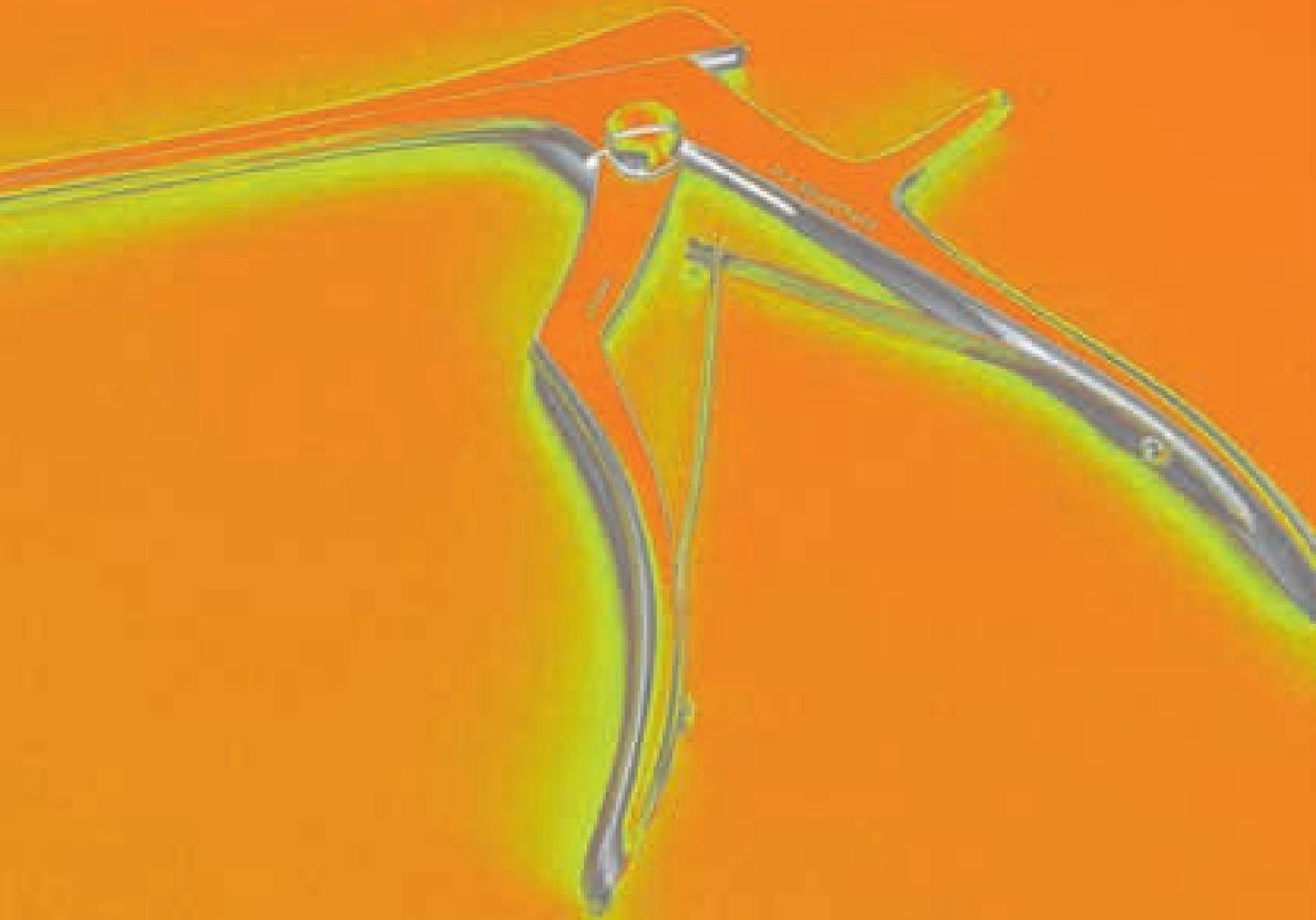


Spinal surgery has its own specific requirements. Appropriate instrumentation helps, but there is no substitute for experience and training. The increasing availability of advanced imaging techniques now play a large part in contributing to successful outcomes.

We stock a range of spinal surgery hand instruments. Air powered bur systems and surgical burs are found in our Surgical Power section (Chapter 7).

Please contact us if you have any questions, or don't see what you're looking for.



Surgery of the Spine

Spinal surgery used to be a common procedure for small animal orthopaedic surgeons in the UK but as time passes and with the availability of more neurologists experienced in spinal surgery with the availability of facilities for on-site advanced imaging, spinal surgery is gradually shifting away from main-stream orthopaedics and into the domain of surgical neurology. Spinal surgery can be very rewarding, and it is still possible to perform it successfully with relatively modest equipment, but there are a number of critical factors to achieving a successful outcome.

Making the correct diagnosis: Patient signalment and neurological examination should lead to gross localisation of the neurological lesion i.e. upper motor neuron vs. lower motor neuron, central vs. peripheral neuropathy, the most likely spinal segment affected i.e. C1-C5, C6-T2, T3-L3 and L4-S3, and left vs. right sided.

Most patients requiring spinal surgery have spinal cord compression caused by intervertebral disc extrusion or protrusion, soft tissue hypertrophy associated with instability, spinal fracture or luxation, or neoplasia. Plain radiographs may indicate the location of a fracture, luxation or neoplasia, but are rarely sufficiently to reliably identify location and lateralisation of intervertebral disc disease.

Myelography can be used for precise lesion localisation and was successfully used for many years, but it comes with a number of drawbacks including risks and side effects associated with cisternal or lumbar puncture, and injection of contrast agents into the subarachnoid space.

Over the last decade, MRI has become established as the technique of choice for imaging the spinal canal and cord, with CT +/-contrast coming a close second. Given the choice, both CT and MRI are preferable to myelography as they are safer, arguably quicker, have far fewer risks or side effects, and are much less likely to result in a false diagnosis. For example, a low volume high velocity (LVHV) disc extrusion or Fibro-Cartilaginous Embolus (FCE) cannot be definitively diagnosed using myelography, but the diagnosis can be made from good quality MR images, particularly a high field unit. This increases diagnostic accuracy, closely guides prognosis, decision making and treatment options, and potentially avoids unnecessary surgery from a misleading myelogram.

Spinal surgery

With experience, some spinal surgeries are relatively straightforward to perform. For example, thoracolumbar hemilaminectomy for spinal decompression caused by intervertebral disc extrusion is not technically difficult. In addition to a standard orthopaedic kit, specific equipment required includes a burr system to remove the bulk of the laminar bone, rongeurs for fine removal of bone as the spinal cord is approached, a set of probes, hooks and curettes for exploring adjacent to the spinal cord and retrieval of extruded disc material.

The critical parts to making spinal surgery a success are:

- comprehensive neurological and orthopaedic assessment of the patient
- accurate lesion localisation, ideally by MRI or CT scan
- training and familiarity with the procedure to be undertaken
- familiarity with the surgical anatomy
- accurate surgical technique with careful dissection at the correct disc space
- in particular, very gentle exploration and probing of the spinal canal; the spinal cord and nerve roots do not tolerate rough handling. This requires very careful technique in order to avoid slippage of the hand that could lead to concussion of the spinal cord with potentially irreversible damage.

Veterinary Instrumentation is pleased to offer a full range of equipment with which to perform routine spinal surgery, including general surgical equipment, Gelpis and Odd-legged Gelpis for retraction and visualisation, Burrs, Rongeurs, Nerve Hooks and Curettes for retrieval of extruded disc material, and Bone wax and Lyostypt for haemostasis.



Sharp and Wheeler's textbook "Small Animal Spinal Disorders" is an excellent read for anybody interested in spinal surgery and neurology, whether you are a beginner, or wanting to increase your knowledge and competence.

BOOK

BK05 Small Animal Spinal Disorders

For more challenging cases such as fractures and luxations, then a full range of implants are also available, including screws, external skeletal fixator pins, locking plates.

Percussion Mallet



Designed for consistent neurological examination. Much better than whatever you are using at the moment!

PERCUSSION Mallet

001322 Percussion Mallet 180mm Long

Rongeurs & Punches

All rongeurs and spine forceps cut with one part of the jaw inserted into the compromised spinal canal. Our spine instruments are designed to minimise the size of the lower jaw. In many cases this will reduce the cutting strength of the instrument which should only be used on appropriate bone thickness. A selection of rongeurs will be required.

Duck-Billed Daniel Rongeurs



Designed by Simon Wheeler BVSc PhD, these rongeurs can remove full thickness lamina bone in small dogs. They are, however, best used to remove the layer of deep cortical bone overlying the spinal cord once the superficial cortex and cancellous bone have been removed using power tools; this is particularly true of the medium and large dog.

DUCK-BILLED DANIEL RONGEURS

001400 Duck-Billed Daniel Rongeurs 3mm Bite 177mm Long

Daniel Rongeur



The jaws of this instrument are straight and the bite is small. Also suitable for bulla osteotomy.

DANIEL RONGEUR

001402 Daniel Rongeurs AOF 4mm Bite 130mm Long

Lempert Rongeur



A useful rongeur with a small bite favoured by Simon Wheeler for incremental bone nibbling around the spine. A selection of small rongeurs is desirable when operating on the spine.

LEMPERT RONGEUR

6730/10 Lempert Rongeurs Str 3mm Bite 190mm Long

Laminectomy Rongeurs



These rongeurs have been developed specifically for laminectomy in the dog. Features:

- Sigmoid shaped for maximum visualisation of surgical site and ease of grip.
- Lower jaw is very slim, with no cutting edge to minimise trauma to the spinal cord.
- Available in jaw widths of 2, 3 and 4mm. Length 16cm.
- Stronger than Duck-Billed Daniels.

LAMINECTOMY RONGEURS

- 001432** Laminectomy Rongeurs 2mm 160mm
- 001433** Laminectomy Rongeurs 3mm 160mm
- 001434** Laminectomy Rongeurs 4mm 160mm

Friedman



142501

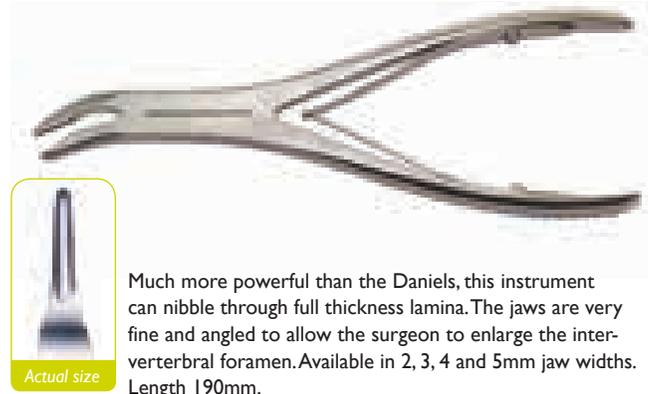
142502

Very fine rongeurs for incremental removal of bone overlying the spine.

FRIEDMAN

- 142501** Mini Friedman Curved 3mm Bite 160mm Long
- 142502** Micro Friedman Curved 2.2mm Bite 155mm Long

Compound Action Spinal Rongeurs



Much more powerful than the Daniels, this instrument can nibble through full thickness lamina. The jaws are very fine and angled to allow the surgeon to enlarge the inter-vertebral foramen. Available in 2, 3, 4 and 5mm jaw widths. Length 190mm.

COMPOUND ACTION SPINAL RONGEURS

- 001429** Compound Action Spinal Rongeurs 2mm 190mm
- 001430** Compound Action Spinal Rongeurs 3mm 190mm
- 001431** Compound Action Spinal Rongeurs 4mm 190mm
- 001440** Compound Action Spinal Rongeurs 5mm 190mm

Micro Spine Rongeur Set



Very fine rongeurs with a 1.75mm (width) bite. Available in three variations, straight, curved and angled. Significant savings when purchased as a set of three.

MICRO SPINE RONGEURS

142600 Micro Spine Rongeurs Set of 3

Stille-Luer Rongeurs

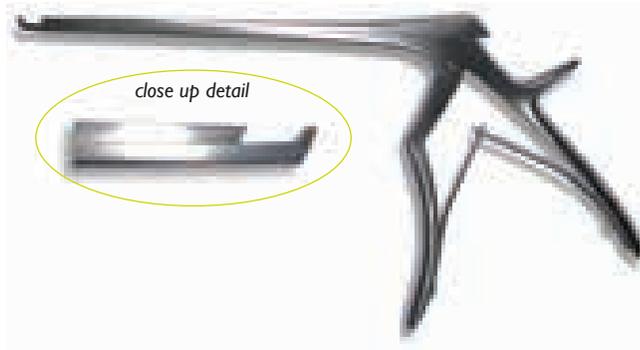


Length 225mm.

STILLE-LUER RONGEURS

142305 Stille-Luer Heavy Compound Action Rongeurs Curved 8 mm 225mm Long

Smith-Kerrison Punch Forceps



This is a traditional design with a 40 degree upward cutting jaw. Robust spine forceps. Good quality and excellent value. 185mm shaft.

SMITH-KERRISON PUNCH FORCEPS

- 001445 Smith-Kerrison Punch Forceps 2mm
- 001446 Smith-Kerrison Punch Forceps 3mm

40° Bone Punch Forceps (Low Profile)



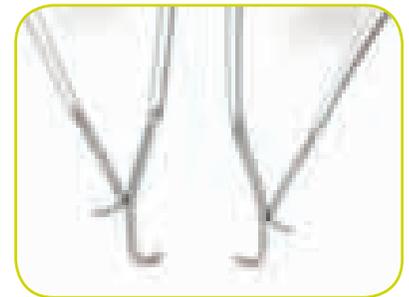
This instrument is designed for use with high speed bur systems. The bur is used to remove the outer cortical layer and the underlying cancellous layer, leaving only the inner cortical bone (approximately egg shell thickness). Access to the neural canal is achieved using the bur or a small mobiliser (001420). The powerful nibbling action allows the final layer of bone to be removed in a very controlled manner.

From a surgical standpoint the foot should be as small as possible, for strength the foot needs to be as large as possible. This wedge shape is a good compromise. In addition the foot is polished to minimise friction and trauma to the spine. Overall length 21 cm.

40° BONE PUNCH FORCEPS

- 001438 Spine Punch Forceps 2mm 40° Upward Cut
- 001439 Spine Punch Forceps 3mm 40° Upward Cut
- 001441 Spine Punch Forceps 4mm 40° Upward Cut

Gelpi Odd Leg Retractor



These are long established, but frequently overlooked instruments that have proven very popular amongst surgeons who have discovered them. This asymmetric pattern is most typically used for a dorsal approach to the spine where the long arm extends deep to retract the longissimus dorsi muscle as the short arm engages with axial structures. They are supplied in matched, opposite pairs to create a rectangular window of exposure.

GELPI ODD LEG RETRACTORS

- 001333 Gelpi Odd Legs 205mm Long - Pair
- 001334 Gelpi Short Odd Legs 130mm Long - Pair

Spike & Shield Odd Leg Retractor

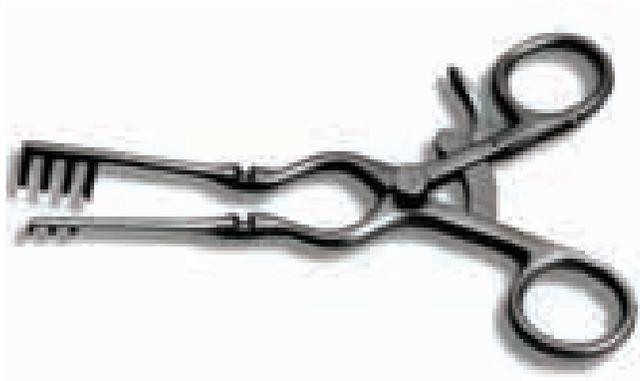


Operates in a similar fashion to the odd leg Gelpis but the muscle retaining shield creates a wider field of view. Supplied in pairs left and right.

SPIKE & SHIELD ODD LEG RETRACTOR

- 001480 Large 25 x 25mm Shield 180mm Long - Pair
- 001482 Small 12 x 12mm Shield 125mm Long - Pair

Cone Laminectomy Retractor

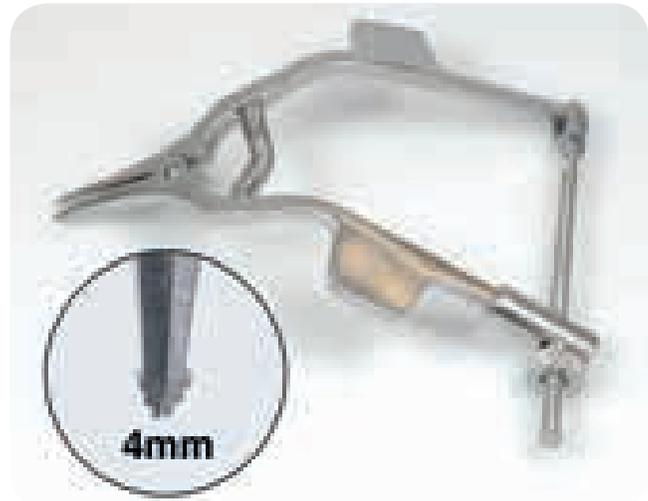


Similar in size to a Travers retractor but with articulated arms, the cone retractor allows a very flexible field of retraction, with the additional benefit that it can be folded away from the operation site. Maximum retraction, minimum interference.

CONE LAMINECTOMY RETRACTOR

001335 Cone Laminectomy Retractor 160mm Long

Small Spine Distractor



The tips of the small distractor are designed to fit into inter-vertebral spaces. The surfaces pushing against the end plates are serrated for maximum grip. Tips when closed 4mm. Overall length 140mm. Tips are staggered for easy introduction.

SMALL SPINE DISTRACTOR

001491 Small Spine Distractor

Caspar Modular Self Retaining Retractor



The Caspar self retaining retractor is a modular retractor which utilises a ratchet rack mechanism to distract a variety of blades and other inserts. Although designed as a spinal retractor the Caspar has many other applications.

'Not just a one trick pony' Andrew Wills.

Uniquely veterinary inserts include the cervical distraction pins (2.5mm dia).

CASPAR MODULAR SELF RETAINING RETRACTOR

- 001485** Caspar Retractor with Standard Blades x 6 170mm Long
- 001486** Caspar Cervical Distractor Pins x 2
- 001489** Set Extended Length Blades 8, 10, 12 & 15cm

Wobblers



At the present time, distraction fusion techniques seem to offer the best chances of success. The rapid improvement following surgery encourages the owners to persevere to long term stabilisation. The McKee Washer has been shown to give a relatively high success rate for this most difficult condition. Each size washer has its own distractor to facilitate insertion. The Washer is maintained in situ by a 3.5mm position screw.

WOBLERS

- 090250** 6.0 McKee Wobbler Washer No 2
- 090251** 7.5 McKee Wobbler Washer No 1
- 090255** 6.0 Wobbler Washer Distractor 200mm
- 090256** 7.5 Wobbler Washer Distractor 200mm

Burley Disc Scoop



The Burley Disc Scoop is designed to remove material without repeated insertions into the disc space. As the scoop is moved around, the nuclear material travels along the channel and out.

BURLEY DISC SCOOP

001501 Burley Disc Scoop 155mm

McKee Distractor with Speedlock



The odd legs of this dedicated distractor engage the intra vertebral space cranial to and caudal to the space involved. The speedlock opens the disc space leaving it uncluttered by instrumentation. An alternative to washers is fusion using bone cement with or without screws.

MCKEE DISTRACTOR WITH SPEEDLOCK

090257 McKee Distractor with Speedlock 240mm

Hand Instruments

Freer Periosteal Elevator

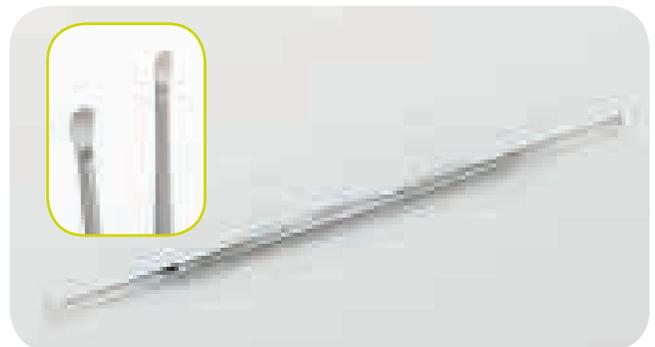


The Freer Elevator is a fine instrument which is particularly useful in spinal work.

FREER PERIOSTEAL ELEVATOR

7350/05 Freer Periosteal Elevator 5mm 180mm Long

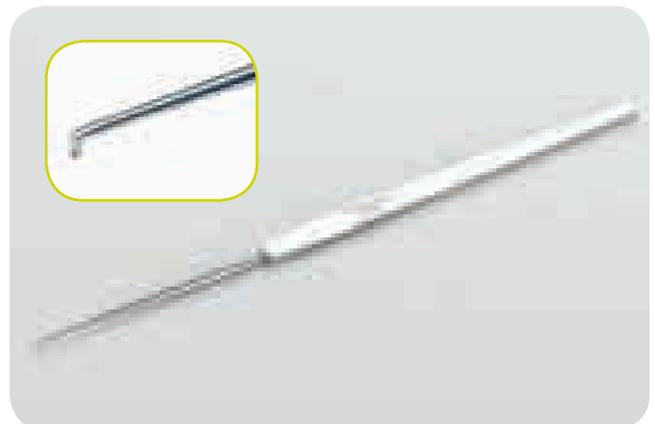
Very Fine Periosteal Elevator



VERY FINE PERIOSTEAL ELEVATOR

001272 Very Fine 2mm/ 3mm Periosteal Elevator 180mm Long

Dandy Nerve Hook



The Dandy Nerve Hook is useful for manipulation of nerves and nerve roots. Also useful for manipulation of the medial meniscus during CCL procedures.

DANDY NERVE HOOK

001408 Dandy Nerve Hook 1mm 190mm

001409 Dandy Nerve Hook 2mm 220mm

Chase Spinal Hook



Based on a suggestion from Damian Chase of Pride Veterinary Centre This probe is useful for manipulation of the spinal cord and nerve roots during certain surgeries.

CHASE SPINAL HOOK

001451 Chase Spinal Hook 8mm 90° Offset 145mm

Rosen Mobiliser



With care, intraneural canal structures can be manipulated. Removal of disc debris is essential to achieve decompression of the cord. The curved tip of this instrument is very useful.

ROSEN MOBILISER

001420 Rosen Mobiliser 160mm

Bone Curette



Following requests for a House Curette with smaller scoops, this set of two bone curettes have been designed with 1mm and 2mm scoops. This is the smallest scoop we can provide whilst still being strong enough to elevate bone.

BONE CURETTE

001411 Bone Curette 1.0mm Scoop 145mm
001412 Bone Curette 2.0mm Scoop 145mm

Sheas Curette



Fenestration of discs, particularly cervical discs, can be a useful procedure. The Sheas Curette is a very small scoop. 2.5mm in diameter.

SHEAS CURETTE

001410 Sheas Disc Curette 2.5mm Diameter 170mm

Bone Tamper



Bone Tamper - also can be used as a bone filling instrument.

BONE TAMPER

001413 Bone Tamper 1.0mm Scoop 150mm
001414 Bone Tamper 2.0mm Scoop 150mm

Younger Good Scaler Jaquette Scaler



Younger Scaler



Jaquette Scaler

Both instruments are recommended by Simon Wheeler for the removal of wafer thin bone overlying the spinal cord during laminectomy. The Younger Good scaler is blunt backed and useful for removal of disc material from both disc spaces and neural canal. This is not a standard scaler in that all the sharp surfaces are softened to minimise spinal trauma. The Jaquette scaler is sharp and best suited to hooking out the final lamina.

YOUNGER GOOD SCALER JAQUETTE SCALER

001422 Younger Good Scaler 175mm
001424 Small Jaquette Scaler 165mm

House Curette

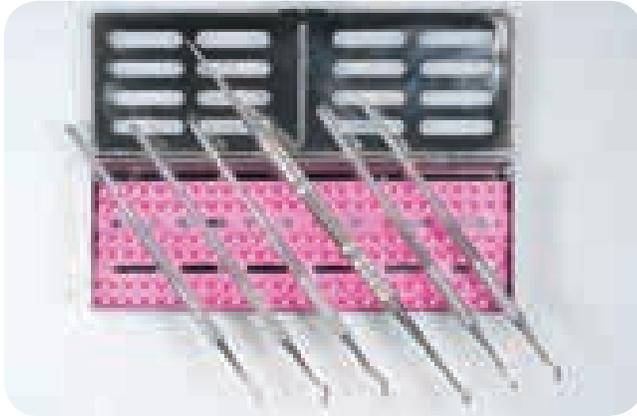


The House Curette is a strong small curette to lift bone from around the spinal cord. Double ended 2.5 and 3.0mm scoops.

HOUSE CURETTE

7262/05 House Curette 2.5 and 3.0mm Scoops 150mm

FitzExcavator Set



Designed and developed by Noel Fitzpatrick this excavator set includes all the necessary hand instruments for surgical management of canine intervertebral disc disease.

The set consists of 5 cutting instruments: one left ,one right, plus 3 straight instruments 2.00mm, 1.00mm and 0.5mm.

Set also includes 001275 Molt Periosteal Elevator (4mm/6mm).

The six instruments are supplied in a stainless autoclavable case.

FITZEXCAVATOR SET

001428 FitzExcavator Set

Bone Wax



It will not help you if you hit a venous sinus but will control the blood from cut cancellous bone which obscures the visual field. The wax physically blocks the blood vessels.

BONE WAX

001460 Bone Wax 12 x 2.5g

Lyostypt®



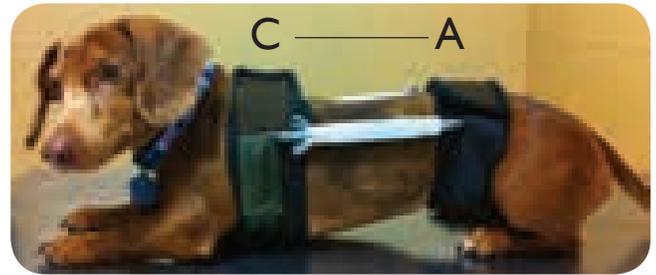
Lyostypt® is a wet-stable collagen haemostat. Collagen leads to thrombocyte adhesion and to activation of coagulation factor XII. Replacement for Gelfoam. Size 30 x 50mm. 12 units per pack.

- Achieves haemostatis very swiftly.
- Is completely absorbable.
- Can be applied endoscopically.
- Can be removed easily.
- Can be combined with fibrin glue and antibiotics.

LYOSTYPT®

1069128 Lyostypt® (12 units)

MB Spinal Brace



Many cases of disc disease, spinal fractures or instabilities are not amenable to surgical treatment for a variety of reasons, from the right patient signalment (i.e. age, underlying diseases) to economic considerations. The "MB Spinal Brace" (MBSB) developed by Mark Besancon DVM is designed to help support cases of thoracic and lumbar IVDD, vertebral fractures or instabilities. The durable and comfortable neoprene harnesses encircle the patient at the desired locations and are connected by two parallel adjustable metal rods that lay on the lateral aspects of the chest and abdomen. The MBSB supports and restricts the range of motion of the patient in several planes giving the body a better chance of healing. The expandable metal connection rods can be placed in a neutral position strictly for support, or extended to apply minimal to moderate decompressive forces on the spine. These back braces are commonly used in the human medical field and now they are available for veterinary use.



Several indications for use include:

- Medical IVDD treatment
- Medical spinal fracture treatment.
- Pre and post-surgical spine support.

For further information and to view an application guide visit www.vetinst.com

To order the correct size please measure:

1. The circumference of the chest in cm (C)
2. The circumference of the abdomen (A)
3. The length of the back (Distance from C to A)

Available as Kits in a range of sizes. The Kits come with a range of Harnesses plus one set of Connecting Rods.

Small Kit - suitable for toy breed/ Chihuahuas includes:

- 4 x Neoprene Harnesses - 12"-18"
- 1 x pair of Connecting Rods - 5/16"

Medium Kit - suitable for Dachshunds/ Pugs/ Shih Tzus and Terriers includes:

- 5 x Neoprene Harnesses - 18"-30"
- 1 x pair of Connecting Rods - 3/8"

Large Kit - suitable for Boxers/ Labs/ G.S.Ds/ Huskies and Bassett Hounds includes:

- 6 x Neoprene Harnesses - 28"-38"
- 1 x pair of Connecting Rods - 1/2"

MB SPINAL BRACE

- MBSSJ1243A** MB Spinal Brace Small Kit
- MBSMJ1243B** MB Spinal Brace Medium Kit
- MBSLJ1243C** MB Spinal Brace Large Kit