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ADJUSTABLE BONE SAW
Useful for many bone procedures, this saw comes complete with five, fine chrome plated blades. Blade length adjustable from 40 mm to 100 mm. Procedures include trochleaplasty, tibial crest transplants, amputations, trochanteric osteotomy and excision arthroplasty.

001000 Adjustable bone saw
001001 Spare fine blades

CURVED BLADE
Useful for rhinotomy, plaster cutting and osteotomies where access is limited, e.g. radius, ulna and ilium during a TPO.

001003 Curved Blade

COARSE STAINLESS BLADE
Very useful for larger patients. This blade does not clog easily. Also useful for trochleaplasty.

001002 Coarse stainless blade

X-ACTO SAW
Although not stainless, this hard backed fine saw is ideal for wedge trochleaplasty. You will get several procedures from it before it needs replacing. Handle is aluminium.

XACTOB Blade
XACTOH Handle
XACTOBH Saw complete
XACTOSTERILE Sterile packed blade

GIGLI SAW
Essentially a bone cutting wire. More useful in large dogs.

001515 Gigli saw handles (Pair)
001516 Gigli saw 30cm
001517 Gigli saw 50cm

EXCISION ARTHROPLASTY RASP
Designed specifically to remove any bone spurs following excision arthroplasty. Failure to remove bone spurs is the most common cause of problems with this procedure.

001010 Excision Arthroplasty Rasp
TROCHLEA RASP
Designed for deepening the trochlea groove, the trochlea rasp has a range of diameters to suit breeds from chihuahuas to bull terriers. For larger breeds perform a wedge trochleaplasty using an x-acto saw. An accurately contoured trochlea is essential for a successful trochleaplasty.

001020 Trochlea Rasp

OCD CURETTE
Loose flaps of cartilage at the OCD lesion must be removed. The OCD curette is designed to perform this task within the limited space available.

001030 OCD Curette
001032 OCD Curette small

HOHMAN RETRACTORS WITH SHORT TIP
A deceptively useful instrument, this style of Hohman is useful in:
1. retraction of facia lata during CCL repair
2. elevation of femoral head and neck
3. muscle retraction during many joint and fracture procedures.
If you intend to buy just one Hohman, the one you need is 001041, 18 mm with a short tip.

001041 Hohman 18 mm with short narrow tip
001042 Hohman 12 mm with short narrow tip

HOHMAN RETRACTORS WITH LONG BROAD TIP
Useful in and around the shoulder joint and other retraction situations when a blunt tip is desirable.

001043 Hohman 24 mm long broad tip
001044 Hohman 18 mm long broad tip

HOHMAN RETRACTOR BROAD WITH SHORT NARROW TIP
The 48 mm Hohman is very useful in the large dog for elevation of the femoral head and neck for excision or toggle. The 24 mm is designed to retract muscles during plating & cerclage procedures.

001045 Hohman 48 mm short narrow tip
001046 Hohman 24 mm short narrow tip
MINI HOHMAN SHORT TIP

Manipulation of small bone fragments during repair requires careful retraction of soft tissues to minimise devascularisation. Exact anatomical repair of the bones will not result in satisfactory healing without adequate blood supply.

Mini Hohmans allow delicate, precise retraction of the vital soft tissues, allowing placement of screws or wires.

An assistant to hold these instruments is an advantage.

001047  Mini Hohman 6 mm short tip
001048  Mini Hohman 8 mm short tip

STRAIGHT GRAFT PASSER

Designed to pass through a 2.7 mm hole, the straight graft passer is useful for pulling graft and nylon through bone tunnels.

001050  Straight graft passer

CURVED GRAFT PASSER

The repair of the cranial cruciate ligament (CCL) by the Over the Top Technique requires a curved graft passer to pull the graft through the stifle joint. This design of graft passer has been developed over many years to: 1. minimise damage to intra-articular structures; 2. to feel right in use. The handle is comfortable; 3. for insertion anterior to posterior or vice versa. This design is used by most recognised orthopaedic surgeons.

001051  Curved graft passer 2 cm
001052  Curved graft passer 3 cm
001053  Curved graft passer 4.5 cm
001054  Curved graft passer 6 cm
001055  Curved graft passer 8 cm
001056  2cm graft passer with small eye
001057  3cm graft passer with small eye
001058  4.5cm graft passer with small eye

The small eyed graft passers are appropriate for placement of lateral suture wire or monofilament nylon as described by M. L. Olmstead.
CRANIAL CRUCIATE LIGAMENT LATERAL SUTURE SYSTEM

The use of monofilament nylon as a lateral suture is rapidly gaining acceptance as a method of repair of the cranial cruciate ligament (CCL). Heavy gauge monofilament nylon (100lb, 80lb and 50lb breaking strain) is difficult to tie without making a large knot, which tends to stretch. In addition, it is difficult to sterilise. Autoclaving reduces the strength and increases the elasticity of the nylon. Veterinary Instrumentation's new Lateral Suture System uses nylon sterilised by Ethylene Oxide together with a crimp tube, a method of joining the nylon already favoured by sea anglers. For procedure details see www.k9ccl.com or request our free CCL CD.

CRIMPING FORCEPS

091135 Crimping Forceps

CCL LATERAL SUTURE KITS

091154 CCL Basic Kit

2 x swaged-on 50lb line needle and crimp
2 x swaged-on 80lb line needle and crimp
2 x swaged-on 100lb line needle and crimp
1 x Crimping forceps
1 x Cdrom

091151 CCL Basic Kit Plus

2 x swaged-on 50lb line needle and crimp
2 x swaged-on 80lb line needle and crimp
2 x swaged-on 100lb line needle and crimp
1 x Crimping forceps
1 x Heavy duty needleholders
1 x Cdrom

These kits are significantly discounted over component price
CHAPTER 1 - JOINT SURGERY

Tensioning
091132  CCL Tensioning Device (pair - gelpis not included)

Crimps
091140  10mm Tube Crimp for 50lb line
091136  12mm Tube Crimp for 80/100lb line (non sterile)
091133  14mm Tube Crimp

Line
091141  500mm x 50lb nylon (sterile pack)
091139  800mm x 80lbs nylon Sterile Pack
091148  800mm x 100lb nylon (sterile pack)
091143  50lb Mono Filament nylon x 50 metre (non sterile)
091138  80lb Mono Filament nylon x 50 metre (non sterile)
091134  100lb Mono Filament nylon x 50 metre (non sterile)

Crimp and Line
091142  10mm Tube Crimp plus 500mm 50lb nylon -sterile
091137  12mm Tube Crimp plus 800mm 80lb nylon -sterile
091147  12mm Tube Crimp + 800mm 100lb nylon - sterile

Crimp, Line and Needle
091155  50lb leader line x 500mm swaged on v.small
fabella needle plus 10mm crimp - Sterile
091156  80lb leader line x 800mm swaged on small
fabella needle plus 12mm crimp - Sterile
091157  100lb leader line x 800mm swaged on medium
fabella needle plus 12mm crimp - Sterile

SIZE GUIDELINES (approx.)

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weight</th>
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<tbody>
<tr>
<td>50lb</td>
<td>10 - 15kg</td>
</tr>
<tr>
<td>80lb</td>
<td>15 - 20kg</td>
</tr>
<tr>
<td>100lb</td>
<td>20+ kg</td>
</tr>
<tr>
<td>100lb x 2</td>
<td>40kg</td>
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</tbody>
</table>

Some CCL deficient patients benefit from the use of double sutures. This is particularly true of very large dogs and 100lb line. Passing a second needle behind the fabella risks damaging the first line and the peri-fabellar structures which ultimately will hold the nylon sutures. Double line, swaged on sutures allow the placement of two lines with one pass of the needle. Available as single sterile packs with or without crimps. The double line is supplied swaged on as a loop and will, therefore, be of interest to those surgeons using the self-locking McKee/Miller knot (VCOT 1999;12:78-80)

Double Line and Needle
091160  50lb Double (500mm x 2)line swaged on very small needle
091161  80lb Double (800mm x 2)line swaged on small needle
091162  100lb Double (800mm x 2)line swaged on medium needle

Double Line, Needle and Crimps(2)
091165  50lb Double (500mm x 2)line swaged on very small needle
plus 2 x 10mm crimp
091166  80lb Double (800mm x 2)line swaged on small needle
plus 2 x 12mm crimp
091167  100lb Double (800mm x 2)line swaged on medium needle
plus 2 x 12mm crimp

Fabella Needles
091144VS  Fabella Needle, Very Small - Pack of 6
091144  Fabella Needle, Small - Pack of 6
091145  Fabella Needle, Medium - Pack of 6
091146  Fabella Needle, Large - Pack of 6

Accessories
001071  2.7mm Bone Tunnel Borer
001075  2.5mm Bone Tunnel Borer with Countersink
091149  Needle/Crimp Box autoclavable
091153  Heavy Duty Needle Driver with Tungsten jaws
TIBIAL PLATEAU LEVELLING OPERATION
BY WEDGE OSTEOTOMY

The tibial plateau levelling operation (TPLO) alters the anatomy of the stifle to moderate the effect of the loss of the cranial cruciate ligament (CCL). The stifle remains unstable to manipulation but is stable as the dog bears weight. It is claimed that following TPLO, degenerative joint disease changes are minimal compared with other CCL procedures. These plates are widely used to repair the tibia following removal of the bone wedge. The shaft holes are compression. The holes in the head are round but large to give a good range of screw angulation. Particularly useful in large dogs and dogs with tibial plateau deformation. See back cover for TPLO plate profiles.

TPLO Plates
TPLO202026  2.0mm DCP 26mm overall length
TPLO272739  2.7mm DCP 39mm overall length
TPLO353555  3.5mm DCP 55mm overall length
TPLO353557  35mm DCP 57mm overall length Heavy Duty
TPLO353577  3.5mm DCP 77mm overall length
TPLO353579  3.5mm DCP 79mm overall length Heavy Duty

Other designs available. Phone for template. Results are similar to the Slocum TPLO technique.

WEDGE ANGLE FINDER OVERLAY
* FREE*

A simple acetate overlay to help you calculate the tibial plateau angle from which you can easily calculate the size of the wedge to remove. Includes lines to indicate the normal tibial plateau angle and a 5 degree line which is regarded as the most appropriate post-op angle. Also included on the acetate are actual size outlines of our range of TPLO plates to help you select the most appropriate plate.

TPLOO Wedge Overlay

WEDGE OSTEOOTOMY WEDGE GAUGE SET
8 DEGREES to 22 DEGREES

The wedge gauges simplify the marking and cutting of the appropriate wedge. The parallel marks on each gauge allow the surgeon to mark and cut a wedge having equal borders proximally and distally. With both borders the same length the resulting closure is better both functionally and cosmetically.

001493 Wedge Gauge Set
CHAPTER 1 - JOINT SURGERY

BONE SCRIBER

A very sharp marking point with an easy to hold handle enables the surgeon to mark bone prior to cutting or rotating (Slocum procedure)

001494 Bone Scriber

SLOCUM ROTATION GAUGES 5 TO 15MM

The rotation gauges simplify the rotation procedure. The correct measurement in millimetres is read from the table and the appropriate gauge selected. The bone is marked using the scriber or an osteotome. No more fiddling around with rulers.

001492 Slocum rotation gauges 5 - 15MM

PLATE BENDING PLIERS

These pliers will contour 2.7mm and 3.5mm narrow plates. Also useful for bending guide pins in the Slocum TPLO technique. Available elsewhere for £1000 or more.

001289 2.7/3.5 plate bending pliers
001289A 2.0/2.7 plate bending pliers

TPLO (Wedge Osteotomy) KIT

Includes;

Multisaw
Stainless converter
Shroud
Blade 70mm x 12mm
Blade 70mm x 24mm
1 x TPLO272739
1 x TPLO353555
1 x TPLO353579
Cdrom on the technique

TPLOKIT TPLO KIT - bought as a kit discounts the package by 10%

Also required;
2.7/3.5mm AO type kit
Bone plate benders

See our website www.k9tplo.com for further info and a step by step guide to the procedure.
Bone tunnels are required in many procedures, e.g. tension wire bending, hip toggling and embrocation techniques. The bone tunnel borer is a simple hand instrument, which causes minimal soft tissue damage and minimal fuss in setting up compared with orthopaedic drills. In order to minimise the stress and abrasion of the nylon as it passes through the bone tunnel, countersinking the hole is advisable. To minimise time and instrumentation, the self-countersinking instrument incorporates a countersink on the shaft.

<table>
<thead>
<tr>
<th>CODE</th>
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<tr>
<td>001071</td>
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<tr>
<td>001072</td>
<td>3.5mm</td>
<td></td>
</tr>
<tr>
<td>001075</td>
<td></td>
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</tr>
</tbody>
</table>

**CCL STAPLES**

The attachment of the facia lata graft to the distal femur is the weakest part of the OTT repair. The small spikes under the head of the staple are designed to engage the graft and firmly fix it to the periosteum. In case of difficulty starting the staple, predrill with 2.0mm pin or drill bit.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>090125</td>
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<tr>
<td>090127</td>
<td>11mm</td>
<td>23mm</td>
</tr>
<tr>
<td>090128</td>
<td>16mm</td>
<td>23mm</td>
</tr>
</tbody>
</table>

**CCL STAPLE INTRODUCER**

This instrument grips the staple for precise placement and insertion with a mallet. Accepts all size of CCL staple.

<table>
<thead>
<tr>
<th>CODE</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>090129</td>
<td>Staple introducer</td>
</tr>
<tr>
<td>091130</td>
<td>CCL Kit in stainless box with 8 staples (2 of each size)</td>
</tr>
</tbody>
</table>

**BONE TUNNEL BORER/SELF-COUNTERSINKING BONE TUNNEL BORER**

Bone tunnels are required in many procedures, e.g. tension wire bending, hip toggling and embrocation techniques. The bone tunnel borer is a simple hand instrument, which causes minimal soft tissue damage and minimal fuss in setting up compared with orthopaedic drills.

In order to minimise the stress and abrasion of the nylon as it passes through the bone tunnel, countersinking the hole is advisable. To minimise time and instrumentation, the self-countersinking instrument incorporates a countersink on the shaft.

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<th>CODE</th>
<th>Description</th>
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<tbody>
<tr>
<td>001070</td>
<td>Bone Tunnel Borer 2.0mm</td>
</tr>
<tr>
<td>001073</td>
<td>Bone Tunnel Borer 2.5mm</td>
</tr>
<tr>
<td>001071</td>
<td>Bone Tunnel Borer 2.8mm</td>
</tr>
<tr>
<td>001072</td>
<td>Bone Tunnel Borer 3.5mm</td>
</tr>
<tr>
<td>001075</td>
<td>Self countersinking bone tunnel borer</td>
</tr>
</tbody>
</table>
CHAPTER 1 - JOINT SURGERY

DISARTICULATOR

Rupture of the round ligament (Teres) can be extremely difficult. The disarticulator is designed to elevate the femoral head ready for excision, the notch at the tip of the instrument engages and ruptures the round ligament. The disarticulator is also particularly useful in manipulation of the humeral head in OCD lesions, investigation of elbow lesions and as a general tissue retractor. If you cannot see the cut end of the round ligament you probably have not resected it.

001090 Small Disarticulator
001091 Large Disarticulator

CONDYLE CLAMP

Fracture of the lateral humeral condyle is a relatively common fracture in young dogs. Reduction and repair is simple using the condyle clamp and damage to periarticular structures is reduced to a minimum. No need to lag screw with this clamp.

001080 Condyle clamp

HIP TOGGLE

3.0mm in diameter with an "eye" to hold the suture. Stainless steel. Use 4.5mm drill to produce the hole through the neck of the femur. Use the adjustable drill guide to accurately place the hole in the femoral neck. (see chapter 7) All sterile packs contain a nylon omrod button for secure fixation of the suture.

HIPTOG Hip Toggle 3.0mm and 80lb nylon. Sterile pack
HIPTOGB Hip Toggle 3.0mm and metric 7 braided nylon. Sterile pack
HIPINT Hip Toggle Introducer and hip toggle with nylon. Sterile pack
TOG Hip Toggle 3.0mm, Toggle only non sterile
HIPTOGKIT Includes introducer, toggle pack, adjustable drill guide, 3.5mm and 4.5mm drill bits
FAT PAD RETRACTOR

Visualisation of the medial meniscus is maximised by retraction of the fat pad. Previously this has been achieved by use of a Senn ("cats paw") retractor. The fat pad retractor has the same clawed foot but has a much more practical means of holding the instrument.

001114 Fat pad retractor

BEAVER TYPE SCALPEL HANDLE

Holds Beaver and Swann Morton fine blades. Ideal for delicate control and maximum visualisation.

06053S Beaver type scalpel handle. 130mm

SWANN MORTON FINE BEAVER TYPE BLADE

The 64 blade cuts around the tip as well as the ventral surface. The 65 blade is essentially a scaled down No. 11 blade. Very useful in restricted areas minimising risk to articular cartilage. Ideal for the meniscal release procedure.

05904 Swann Morton Fine SM64 beaver type blade (box of 25). Best for meniscal release
05905 Swann Morton Fine SM65 beaver type blade (box of 25). Best for trimming flaps

MENISCECTOMY INSTRUMENTS

Damage to the medial meniscus following CCL rupture increases with:
1) time after injury
2) size of the dog

Removal of severely damaged cartilage is assisted by instruments designed for the purpose.

001107 Meniscectomy knife
001110 Meniscectomy clamp

FAT PAD RETRACTOR

Visualisation of the medial meniscus is maximised by retraction of the fat pad. Previously this has been achieved by use of a Senn ("cats paw") retractor. The fat pad retractor has the same clawed foot but has a much more practical means of holding the instrument.

001114 Fat pad retractor
CHAPTER 1 - JOINT SURGERY

STIFLE DISTRCTOR

Damage to the medial meniscus is commonly associated with rupture of the Cranial Cruciate Ligament (C.C.L.). It is most frequently found in larger dogs with a long standing injury. Failure to deal with meniscal damage is a serious omission in C.C.L. repair. Exposure of the medial meniscus for examination and repair is extremely difficult.

The Stifle Distractor is designed to open up the stifle and manipulate the femoral and tibial components of the joint. The spin lock allows the stifle to be locked open to permit insertion of meniscectomy instrumentation.

When the instrument is closed the points overlap making the tips atraumatic as they are inserted into the joint.

The small distractors are also useful as small local muscle and tissue retractors in and around canine joints eg. elbow exploration.

The very small distractor is extremely useful as a small joint retractor during the meniscal release procedure. Use to open small window caudal to medial collateral ligament.

Money-back guarantee. If this instrument is not better than whatever you are using, we will give you a full refund.

001112  Stifle Distractor -15kg and above
001113  Stifle Distractor, small - 5kg to 20kg
001113vs Very Small Joint Distractor - less than 5kg

See our website www.vetinst.com and click on our canine stifle section for further details of management of meniscal injuries.
TRIPLE PELVIC OSTEOTOMY PLATE

By rotation of the acetabular segment in immature dogs with severe H.D., this technique is designed to prevent onset and progression of degenerative joint disease and thereby avoid the need for a total hip replacement. The plates are supplied flat to be twisted prior to surgery or pre-bent by ourselves prior to despatch. Please advise angle and side. Thirty degrees rotation is the most widely applied. The plates accept 3.5mm cortical, 3.5mm cancellous, 4.0 cancellous and 9/64” Sherman self tapping screws.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>090167</td>
<td>Large triple pelvic osteotomy plate</td>
</tr>
<tr>
<td>090167L30</td>
<td>Large TPO plate angled 30 degrees left</td>
</tr>
<tr>
<td>090167R30</td>
<td>Large TPO plate angled 30 degrees right</td>
</tr>
<tr>
<td>090179</td>
<td>Small triple pelvic osteotomy plate</td>
</tr>
<tr>
<td>090179L30</td>
<td>Small TPO plate angled 30 degrees left</td>
</tr>
<tr>
<td>090179R30</td>
<td>Small TPO plate angled 30 degrees right</td>
</tr>
</tbody>
</table>

BONE BITER SUTURE ANCHOR SYSTEM

The Bonebiter Suture Anchor System provides a versatile way for veterinary surgeons to utilize suture in the repair of joint instability. This unique method for quickly and easily anchoring sutures onto bone is based on a patented design in human orthopaedics. By drawing upon previous research and development experience, Androcles Inc. was able to develop a suture anchor system with the needs of the veterinary surgeon in mind. Now available in two sizes the Bonebiter is small, easy to install, and able to resist forces equivalent to the breaking strength of a #2 and a #5 braided suture.

<table>
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<tr>
<th>Code</th>
<th>Description</th>
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<td>100001-10</td>
<td>Bonebiter suture anchor size 2</td>
</tr>
<tr>
<td>100002-10</td>
<td>Bonebiter suture anchor size 5</td>
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<tr>
<td>110001-00</td>
<td>Bonebiter driver set - size 2</td>
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<tr>
<td>110002-00</td>
<td>Bonebiter driver set - size 5</td>
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<tr>
<td>110003-10</td>
<td>Bonebiter driver set - size 2 and size 5, 2 driver shafts, 2 plungers, 2 O-rings</td>
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<tr>
<td>300075-00</td>
<td>4x8 sterilisation tray - with mat</td>
</tr>
<tr>
<td>110003-20</td>
<td>Size 2 and 5 driver sets in stainless steel box, silicone fingered mat plus 5 x size 2 and 5 x size 5 anchors</td>
</tr>
</tbody>
</table>

TRIPLE PELVIC OSTEOTOMY PLATE

The flanges compress for insertion. Insertion hole created by anchor tip or pre-drilling

Anchor Setting

Flanges spring back to “lock” the anchor beneath the cortices.

Drill Data
size 2 - 1.5mm
size 5 - 2.5mm

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<table>
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<th>Code</th>
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<td>100001-10</td>
<td>Bonebiter suture anchor size 2</td>
</tr>
<tr>
<td>100002-10</td>
<td>Bonebiter suture anchor size 5</td>
</tr>
<tr>
<td>110001-00</td>
<td>Bonebiter driver set - size 2</td>
</tr>
<tr>
<td>110002-00</td>
<td>Bonebiter driver set - size 5</td>
</tr>
<tr>
<td>110003-10</td>
<td>Bonebiter driver set - size 2 and size 5, 2 driver shafts, 2 plungers, 2 O-rings</td>
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<tr>
<td>300075-00</td>
<td>4x8 sterilisation tray - with mat</td>
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<th>Description</th>
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<td>100001-10</td>
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<tr>
<td>100002-10</td>
<td>Bonebiter suture anchor size 5</td>
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<td>110001-00</td>
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</tr>
<tr>
<td>110002-00</td>
<td>Bonebiter driver set - size 5</td>
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<tr>
<td>110003-10</td>
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<tr>
<td>300075-00</td>
<td>4x8 sterilisation tray - with mat</td>
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<tr>
<td>110003-20</td>
<td>Size 2 and 5 driver sets in stainless steel box, silicone fingered mat plus 5 x size 2 and 5 x size 5 anchors</td>
</tr>
</tbody>
</table>

TRIPLE PELVIC OSTEOTOMY PLATE

By rotation of the acetabular segment in immature dogs with severe H.D., this technique is designed to prevent onset and progression of degenerative joint disease and thereby avoid the need for a total hip replacement. The plates are supplied flat to be twisted prior to surgery or pre-bent by ourselves prior to despatch. Please advise angle and side. Thirty degrees rotation is the most widely applied. The plates accept 3.5mm cortical, 3.5mm cancellous, 4.0 cancellous and 9/64” Sherman self tapping screws.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>090167</td>
<td>Large triple pelvic osteotomy plate</td>
</tr>
<tr>
<td>090167L30</td>
<td>Large TPO plate angled 30 degrees left</td>
</tr>
<tr>
<td>090167R30</td>
<td>Large TPO plate angled 30 degrees right</td>
</tr>
<tr>
<td>090179</td>
<td>Small triple pelvic osteotomy plate</td>
</tr>
<tr>
<td>090179L30</td>
<td>Small TPO plate angled 30 degrees left</td>
</tr>
<tr>
<td>090179R30</td>
<td>Small TPO plate angled 30 degrees right</td>
</tr>
</tbody>
</table>
Canine arthroscopy is an increasingly common diagnostic tool in veterinary orthopaedics. Many lesions visible by arthroscopy are not imageable by any other means. Until the introduction of the 1.9mm arthroscope and appropriate instrumentation by Dr Fritz it was not possible to effectively examine the canine elbow joint. Today it is possible to visualise an ununited anconeal process (UAP) and treat it via an arthroscopic cannula.

Dr Fritz, a Veterinary Surgeon himself has worked closely with leading authorities in the field of veterinary arthroscopy (e.g. Van Bree, Van Ryssen & Lehman) to develop a range of veterinary arthroscopic instruments which are designed with our patients in mind. Even users of other arthroscopes use Dr. Fritz instrumentation.

In the compromised canine stifle, direct examination of partial cruciate tears and the medial meniscus takes away the guesswork involved in other imaging techniques even MRI.

Expertise will require training and practice. Veterinary Instrumentation runs professionally tutored practical courses in house in our new training facility. All equipment is provided. Please telephone to be advised on up and coming orthopaedic courses or check our web page www.vetinst.com/coreskills.htm

See over page for our full range of Dr Fritz equipment. Some additional items you may need are listed below.

Arthroscopic Sundries

PERASAFE

Perasafe is a rapid, instrument compatible, user and environmentally friendly, chemical sterilant. Supplied as a safe, space-saving powder Perasafe is activated by simply dissolving in luke-warm tap water. Providing rapid sterilisation and re-use of endoscopy instruments, Perasafe gives confidence to users and patients alike. A unique aldehyde-free formulation gives efficacy without harm to instruments, health risks to nursing staff and avoids the need for special fume extraction or waste disposal systems.

PeraSafe is a pale blue/white powder which, when in solution, sterilises within 10 minutes. Suitable for all surgical instruments and fibrescopes. Formulated not to damage surgical instruments. Supplied in the following packs

100102 100 x 16.2gm making 100 x 1 litres
100100 24 x 81gm making 24 x 5 litres
Telescopes for Arthroscopy – 2.7 and 1.9 mm (2.4mm mid 2003)–

- Standard DIN ocular
- autoclavable / fully immersible
- high resolution
- standard light cable adaptors
- large image telescopes

Large image technology means the image virtually fills the monitor screen. Exposure control of endoscopic video cameras is much easier, even with a 1.9 mm diameter telescope!

Standard Arthroscope, 2.7 mm with arthroscopic sheath
for elbow, shoulder and knee joint

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T140-2730</td>
<td>Wide angle telescope, 30°, OD:2.7mm, WL:14cm, large image technology, standard light cable connectors</td>
</tr>
<tr>
<td>T141-2730</td>
<td>Wide angle telescope, 30°, OD:2.7mm, WL:14cm, large image technology, standard light cable connectors, autoclavable</td>
</tr>
<tr>
<td>S140-2731</td>
<td>Sheath for arthroscopy, OD:3.8mm, WL:12cm compatible with T140-2730 and T141-2730, stopcock, includ. blunt &amp; sharp trocar –high flow version–</td>
</tr>
</tbody>
</table>

Needle Arthroscope, 1.9 mm with arthroscopic sheath (2.8 mm)
for small dogs and small joints

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T110-1930</td>
<td>Wide angle telescope, 30°, OD:1.9mm, WL:11cm, large image technology, standard light cable connectors</td>
</tr>
<tr>
<td>T111-1930</td>
<td>Wide angle telescope, 30°, OD:1.9mm, WL:11cm, large image technology, standard light cable connectors –autoclavable–</td>
</tr>
<tr>
<td>S110-1931</td>
<td>Sheath for arthroscopy, OD:2.8mm, WL:8cm compatible with T110-1930 and T111-1930, stopcock, includ. blunt &amp; sharp trocar –high flow version–</td>
</tr>
<tr>
<td>I-17-019</td>
<td>Changing rod for arthoscopy sheaths from 1.9mm up to 2.7mm telescopes with sharp tip</td>
</tr>
</tbody>
</table>

S110-1935 Protection and transportation sheath for small telescopes, 12cm, autoclavable
DE-10-65 Lens polish for telescopes, 5g (without picture)
CHAPTER 2 - ARTHROSCOPY

Hand Instruments

- easy handling
- ergonomic design
- for universal use
- suitable for Dr. Fritz working cannulas

AR-17-00 Handle for arthroscopic hand instruments, interchangeable,

AR-17-09 Hook probe, 2,2mm, handles,
   color code: gold

AR-17-03 Bajonett knife, 2,7mm, compatible to
   handle AR-17-00, color code: metal

AR-17-05 Banana knife, 2,7mm, compatible to
   handle AR-17-00, color code: metal

AR-17-06 Curette, 2,7mm, curved, compatible to handle
   AR-17-00, color code: metal

AR-17-07 Ring curette, 2,7mm, small, compatible to handle
   AR-17-00, color code: metal

AR-17-11 Meniscotome, Smallie, 2,7mm, compatible to handle
   AR-17-00, color code: metal

AR-17-12 Mikro picking knife, acc. to Dr. Bealen, 2,7mm, comp. to
   handle AR-17-00, color code: metal

AR-17-13 Special elevator, 2,7mm, with handle,
   color code: metal

AR-17-19 Hook knife, 2,7mm, comp. to handle AR-17-00,
   color code: metal

Milling Drill acc. to VAN RYSSEN & VAN BREE

- The latest development allows cartilage and bone curretage even
  through the smallest working cannula –

I-17-822 Milling drill for arthroscopy, acc. to van RYSSEN,
   OD:2,2mm; WL:12cm with rotating handpiece
   able to be dismantled, consisting of: I-17-820
   handpiece
   I-17-821 milling drill, color code: gold

Dr. Fritz hand instruments are suitable for all fine working cannulas. Inner diameter and
working lengths of the instruments are specially designed for small animal arthroscopy.
The trocar changing system acc. to VAN BREE allows the specific exchange of different working cannulas. Beginning with the smallest diameter, the surgeon can always change to a bigger diameter by using the changing rods. According to the different joints a so called "elbow set" (working length 3.5-5 cm) and a "shoulder set" (7-7.5 cm) is differentiated. In addition it is possible to change the working portal with the telescope utilising the changing rod. The color code system allows easy size differentiation.

### Complete Set

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-17-755</td>
<td>Working cannula set &quot;shoulder and elbow&quot; acc. to van BREE, D: 2.3 / 2.9 / 3.5 mm; WL: 3.5-5 cm and 7-8 cm, (consisting of: I-17-500 and I-17-700)</td>
<td></td>
</tr>
</tbody>
</table>

### Individual parts

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-17-024</td>
<td>Changing rod for working 2,3 mm cannulas color code: gold</td>
<td></td>
</tr>
<tr>
<td>I-17-028</td>
<td>Changing &amp; puncture rod, for 2,9 mm working cannulas &amp; shoulder puncture system, color code: metal</td>
<td></td>
</tr>
<tr>
<td>I-17-524</td>
<td>Working cannula, ID: 2,3 mm, WL: 5,5 cm, including sharp obturator, color code: gold</td>
<td></td>
</tr>
<tr>
<td>I-17-528</td>
<td>Working cannula only, ID: 2,9 mm, WL: 4,8 mm color code: metal</td>
<td></td>
</tr>
<tr>
<td>I-17-535</td>
<td>Working cannula only, ID: 3,5 mm, WL: 3,5 cm, color code: black</td>
<td></td>
</tr>
<tr>
<td>I-17-728</td>
<td>Working cannula , ID: 2,9 mm, WL: 7,5 cm, including sharp obturator, color code: metal</td>
<td></td>
</tr>
<tr>
<td>I-17-735</td>
<td>Working cannula only, ID: 3,5 mm, WL: 6,8 cm, color code: black</td>
<td></td>
</tr>
<tr>
<td>I-17-002</td>
<td>Sealing caps for working cannulas, opening size 2 mm, pg of 5 pcs</td>
<td></td>
</tr>
<tr>
<td>I-17-500</td>
<td>Working cannula set &quot;elbow&quot; acc. to VAN BREE, consist. of 3 cannulas D: 2,3 / 2,9 and 3,5 mm; WL: 3,5-5 cm, incl.1 sharp trocar a. 1 changing rod (2,3 mm)</td>
<td></td>
</tr>
<tr>
<td>I-17-700</td>
<td>Working cannula set &quot;shoulder&quot; acc. to VAN BREE, consist. of 2 cannulas D: 2,9 / 3,5 mm, WL: 7-8 cm, incl.1 sharp trocar and1 changing rod (2,8 mm)</td>
<td></td>
</tr>
<tr>
<td>I-18-518</td>
<td>Egress cannula, with sharp trocar stopcock, ID: 3 mm, WL: 7 cm</td>
<td></td>
</tr>
</tbody>
</table>

Dr. Fritz hand instruments are suitable for all fine working cannulas. Inner diameter and working lengths of the instruments are specially designed for small animal arthroscopy.
Arthroscopic Punches, Biopsy Forceps, Rongeurs and Grasping Forceps

2 mm Instruments, working length 11 cm

<table>
<thead>
<tr>
<th>Instrument Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS-17-561</td>
<td>Mini grasping forceps, OD: 2.0 mm,</td>
</tr>
<tr>
<td>AS-17-531</td>
<td>Mini rongeur and biopsy forceps, OD: 2.0 mm</td>
</tr>
<tr>
<td>AS-17-551</td>
<td>Mini punch for arthroscopy, OD: 2 mm</td>
</tr>
<tr>
<td>AS-17-521</td>
<td>Mini scissors for arthroscopy, OD: 2 mm</td>
</tr>
</tbody>
</table>

- made for hard veterinary use
- overstraining protected

- long life span and extremely durable
- easy handling
  adapted to veterinary applications

2.7 mm Instruments, working length 12 cm

<table>
<thead>
<tr>
<th>Instrument Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS-17-662</td>
<td>Alligator grasping forceps with ratchet, OD: 2.7 mm – with overstraining protection</td>
</tr>
<tr>
<td>AS-17-632</td>
<td>Universal rongeur and grasping forceps fenestrated OD: 2.7 mm – with overstraining protection</td>
</tr>
<tr>
<td>AS-17-641</td>
<td>Biopsy and spoon forceps, OD: 2.7 mm – with overstraining protection</td>
</tr>
<tr>
<td>AS-17-672</td>
<td>Arthroscopic punch, OD: 2.7 mm – with overstraining protection</td>
</tr>
<tr>
<td>AS-17-621</td>
<td>Arthroscopic hook scissors, OD: 2.7 mm;</td>
</tr>
</tbody>
</table>

- extremely durable
- ergonomic design
- long life span

3.4 mm Instruments, working length 12 cm

<table>
<thead>
<tr>
<th>Instrument Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS-17-762</td>
<td>Universal rongeur and grasping forceps, fenestrated without ratchet, OD: 3.4 mm – with overstraining protection</td>
</tr>
</tbody>
</table>

Dr. Fritz hand instruments are suitable for all fine working cannulas. Inner diameter and working lengths of the instruments are specially designed for small animal arthroscopy.
During recent years, as arthroscopy in small animals has developed, researchers realized the necessity of a specific puncture system to create an instrument portal in the larger joints. Due to the dense muscle mass in shoulder joints, creating a puncture for a working cannula is often quite difficult. If a clean puncture allowing access directly to the joint is not achieved the first time, the risk of a subsynovial oedema increases greatly, thus decreasing the time frame to complete the surgery with each failed puncture. The shoulder puncture system has been specifically designed to help eliminate this risk. The system allows you to align your arthroscope accurately in the joint space. Simply attach the puncture system to the arthroscopic sheaths and maintain your arthroscopic vision in a parallel direction to the shoulder joint rim. At this point you will find the working triangulation portal in an ideal position. After a puncture is created with the desired trocar, simply replace the trocar with a working cannula and start working with your instruments.
### Hand Pressure Infusion Cuffs

One of the cheapest options for fluid supply.

* For high flow fluid supply, please use big infusion tubes.

### Pressure Pump Infusor

Pressure pump infusers infusors eliminate arduous hand pumping via pressure infusion cuffs. The new continuously adjusted pressure setting allows for better regulation. The complete system is very easy to handle and does not experience problems like conventional roller pumps.

Two types of infusors are available. The first, a pneumatic infusor, is connected to the central pressure supply. The second, a carbon dioxide infusor, is connected to a carbon dioxide bottle or a special carbon dioxide supply. By means of a three-way stopcock connection, it is possible to use the carbon dioxide infusor for direct carbon dioxide gas arthroscopy as well as the normal fluid supply. This makes possible the use of carbon dioxide which offers better working conditions when compared to fluid arthroscopy, especially when the joint is experiencing synovitis.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR-08-100</td>
<td>Pressure infusion cuff for 500-1000 ml complete with manometer and hand pump, reusable, high quality manufacturing</td>
</tr>
<tr>
<td>AR-08-110</td>
<td>Pressure infusion cuff for 500-1000 ml without manometer, Luer Lock (fem), reusable, high quality manufacturing</td>
</tr>
<tr>
<td>AR-10-948</td>
<td>Silicon tube, 7x2 mm, 3 m, autoclavable, Luer-Lock (m), needle f. sterile bags/bottles</td>
</tr>
<tr>
<td>X-7-20-10</td>
<td>Spare silicon tube, 1 metre, size: 7x2 mm, color: nature</td>
</tr>
<tr>
<td>LLM-1258</td>
<td>Spare Luer-Lock connector, male, comp. to silicon tubes 7x2 mm</td>
</tr>
<tr>
<td>AR-10-9</td>
<td>Spare needle for infusion bottles/bags, ID: 5,5 mm, comp. to silicon tubes (7x2 mm)</td>
</tr>
<tr>
<td>X-180-26</td>
<td>Silicon tube, ID: 5 mm, 180 cm, LLM both ends, autoclavable</td>
</tr>
<tr>
<td>X-5-15-10</td>
<td>Spare silicon tube, 1 m, autoclavable, size: 5x1,5 mm, color: nature</td>
</tr>
<tr>
<td>LLM-1250</td>
<td>Spare Luer-Lock connector (m), comp. to silicon tubes (5x1,5mm)</td>
</tr>
<tr>
<td>DE-10-181</td>
<td>Infusion set, disposable, WL: 180 cm, large diameter, box w. 50 pcs</td>
</tr>
</tbody>
</table>

- Automatic controlling
- Pressure continuously adjustable
- Max. 300mm Hg pressure
- Easy handling
- No mechanical parts
- For fluid and CO² supply

### How to use

![Diagram of pressure infusion system]

**Pressure infusion cuff with fluid bag**

**Connection to fluid bag**

**Hand pump or Luer-Lock (fem) for infusor**

**Direct CO² supply (only in connection with CO²-Infusor)**

**Fluid supply**

**Infusor**

**Three way stopcock**

### AR-10-100

Pneumatic pressure infusor, for infusion cuffs, for veterinary arthroscopy, complete 4 m tube to central pressure supply, DIN tube connection, front side Luer-Lock (f), universal table fixator, easy pressure setting, automatic regulation (0-300mmHg)

### AR-10-901

CO² Infusor, for large/small animal arthroscopy, DIN connector tube to pressure reducer (DIN type) pressure setting 0-300mmHg tube connection Luer-Lock(f)

### AR-10-903

Pressure reducer for CO²-bottles, DIN-system
**Video Cameras, Recorder, Printer for Documentation on request**

**Camera Covers**

- **DE-10-25** Camera covers, disposable, 30 pcs, polyethylen, 13x50 cm
- **DE-10-01** Camera cover, reusable, waterproof, washable, autoclavable, 12x200 cm, 1 pc.

**Fibre Light Cable**

- **OW-35-231** Fibre light cable, 3,5 mm, 2,3m, unit side comp. to Olympus, endoscope side comp. to Wolf, autoclavable
- **KW-35-231** Fibre light cable, 3,5 mm, 2,3 m; both sides compatible to Wolf, autoclavable
- **KS-35-231** Fibre light cable, 3,5mm, 2,3m, unit side comp. to Storz, endoscope side comp. to Wolf, autoclavable

Adaptors for cold light sources of other manufacturers on request

**Disinfection Soak Basin, Cleaning Brushes, Disinfection Solutions**

- **DE-10-425** Soak basin for chemical solution disinfection, consisting of basin (perforated) tray & cover for basin, size: 42x16x9,5 cm
- **DE-5-17** Cleaning brush for small cannulas with ID: 2-4mm, length 17 cm

Disinfection and cleaning solution for flexible fibrescopes

- **DE-10-402** Disinfection solution, septo DN, concentrated, 5 litres

**Cameras and Monitors**

- **M-70-1310** Monitor and TV unit, incl. VHS recorder PAL, 36 cm screen, 230 VAC, 50/60Hz
- **45-DK-900** TFT monitor/screen, 15", high definition, FBas, SVHS in/out, 12V DC/2A transformer
- **M-70-1321** Monitor profesional. SVHS, VHS, PAL
- **761-113V** 1/2” CCD colour video camera
CHAPTER 3 - GENERAL ORTHOPAEDICS

FRAGMENT FORCEPS (also known as reduction forceps)

Ideal for fragment reduction, these forceps gently hold fragments in position whilst the permanent fixation is being applied. Particularly useful in the repair of fractures of the distal femur, acetabulum and distal tibia.

The small size is useful in the repair of the long bones of the miniature dog and cat as well as the smaller bones of the distal limbs in large patients.

001200 Fragment forceps
001201 Small fragment forceps
001208 Very small fragment forceps with step down tips

VERY LARGE FRAGMENT FORCEPS

For use in situations where a very wide 'gape' is required or where the bulk of the instrument must be well away from the jaw tips.

The spin lock version has been recommended for repositioning of the stifle prior to placement of a lateral suture wire or nylon in CCL repair.

001202 Very large fragment forceps with ratchet
001203 Very large fragment forceps with spin lock

TWIN POINT FRAGMENT FORCEPS

When lag screwing, it is often the case that the exact point where screw placement should be performed is occupied by the point of the reduction forceps. Twin point fragment forceps are designed to give secure fixation of bone fragments while allowing drilling and screwing between the jaw points. Especially useful in repairs of the fractures of the humeral condyles and the small bones distal to the carpus/hock.

001205 Twin point fragment forceps straight
001206 Twin point fragment forceps curved
BONE HOLDING FORCEPS

A general purpose bone holder for use in maintaining fracture reduction in I/M pinning. Also very useful for lag screwing and bone plating in that drills and screws can be passed through the centre of the jaw at the point of maximum compression. A very popular forcep.

001210  Bone holding forceps

SMALL SERRATED BONE HOLDING FORCEPS

Manipulation of the long bones of cats and small dogs is difficult without crushing. The serrated jaws of this forcep are contoured to maximise grip and support. The tips are sharp. They may be used as small fragment forceps.

001218  Small serrated bone holding forceps

SELF CENTERING BONE HOLDING FORCEPS

Some fracture reductions require that the bone forceps jaws be angled from the handles (see photo). Such forceps require:
1. A sophisticated hinge mechanism to allow the jaws to maintain alignment as they open and close.
2. A special locking device which can cope with the laxity at the hinge.
The spin lock and the special jaw make the instrument very nice to use but very expensive.

001209  Very small self centering bone holding forceps 150mm
001211  Small self centering bone holding forceps 190mm
001212  Large self centering bone holding forceps 240mm

The veterinary pattern reflects the special requirements of veterinary anatomy i.e. handles have to stand up from femur compared with the human situation.

001209V Very small self centering bone holding forceps 150mm - Vet pattern
001211V Small self centering bone holding forceps 190mm - Vet pattern
001212V Large self centering bone holding forceps 240mm - Vet pattern
CHAPTER 3 - GENERAL ORTHOPAEDICS

REDUCTION FORCEPS

These reduction forceps have serrated jaws and spin lock which provides secure incremental control.

001217  Reduction forceps with serrated jaws

PLATE HOLDING FORCEPS

These forceps are designed to maintain plate position through a hole in the plate. Without fixation, bone plates tend to slip and slide over the bone surface. The ball, just behind the point of the jaw, locates in the bone plate causing minimal interference elsewhere in the operation site. Also useful as a reduction forcep in soft, young bone.

001215  Plate holding forceps

KERN BONE HOLDING FORCEPS

Kern bone holding forceps give a very firm controllable grip on long bones, facilitating manipulation and reduction of fragments. A quick release ratchet locks the jaws.

Kerns are very useful in general orthopaedics and for surgery around the hip joint, in particular:
* femoral shaft fractures
* triple pelvic osteotomy
* hip toggle
* fractures of the acetabulum

001216  Mini Kern 4.75” (cats and small dogs)
001213  Kern bone holding forceps 6.75”
001214  Kern bone holding forceps 8.75”

DINGMANS FORCEPS (LONG RATCHET)

Useful for manipulation of bone fragments.

001470  Dingmans forceps
DIAMOND FILE

The ends of cut pins tend to be sharp and irritate overlying soft tissues. The diamond file quickly removes sharp edges. Also useful to blunt the sharp ends of cut ESF pins.

001240 Diamond file

IMPLANT CUTTERS SURGICAL FINISH

Cutting orthopaedic implants with a hack saw is hard work and very time consuming. Stainless steel has the unfortunate property of work hardening i.e. the harder you try to cut it, the harder it becomes. The close-cut model is designed to cut pins and wires close to the bone surface. It is particularly useful where the wires are to be left in situ, e.g. repair of fracture of the distal femur and tibial crest transplants. As with all tungsten carbide instruments avoid cutting at the tips of the inserts as this will fracture the hard-wearing but brittle insert.

001229 Safety pin cutters to 4mm see page 67
001230 Stainless cuts to 1.5mm
001231 Stainless construction with T.C inserts 470mm long cuts to 6.0mm
001234 As above 370mm long cuts to 4mm
001236 Close cut stainless with tungsten jaws to 2.5mm maximum diameter
001237 Stainless with tungsten jaws to 2.2mm maximum diameter
001238 Stainless with tungsten jaws to 1.5mm close cut

IMPLANT CUTTER INDUSTRIAL FINISH

The black finish will stain during steam sterilisation but, prior spraying with WD40 or similar, will give years of service. When it looks horrible put it in the tool kit and buy another pair.

Very good value.

001232 Industrial finish. Will autoclave but stains and rusts without care and regular lubrication 450mm long. Will cut 1/4" 6mm
001233 Implant cutter to 5/32" 4mm
001235 Implant cutter to 2.0mm

DIAMOND FILE

The ends of cut pins tend to be sharp and irritate overlying soft tissues. The diamond file quickly removes sharp edges. Also useful to blunt the sharp ends of cut ESF pins.

001240 Diamond file
PIN GRIP

In situations where pins and wires are inserted for temporary fixation, removal can be performed with a minimum of trauma using pin grips. The jaws are especially designed to be inserted through a small skin incision. A groove in the jaw locates the pin and the device can be locked in position for easy withdrawal - especially where threaded pins have been used.

001241  Pin grip stainless steel
001242  Pin grip industrial finish

"K" WIRE/'A' WIRE EXTRACTION FORCEPS

Designed to firmly grip wires 0.9mm to 2.0mm. Tungsten Carbide jaws maximise grip, fine nose minimises trauma to surrounding tissue

001244  "K" wire/'A' wire remover

SMALL PIN VICE

This small pin chuck holds wires and instruments up to a diameter of 2.5mm. Particularly useful for fingertip control over insertion of arthrodesis and "K" wires.

001223  Small pin vice

JACOBS CHUCK

The standard instrument for insertion of intramedullary pins, external fixator pins, arthrodesis and "K" wires. The standard chuck has a 1/4" (6mm) capacity. The small chuck has a capacity of 5/32" (4mm) and is particularly useful placing smaller pins in cats and minature dogs. The standard chuck can be quite unwieldy in small patients.

001220  Small Jacobs chuck 5/32" capacity
001221  Standard Jacobs chuck 1/4" capacity

For spare chucks and keys see Chapter 4 - Power Tools

"SISMEY" WIRE INTRODUCER

A useful kit including wire passing and suture passing needles

001255  Sismey wire introducer
**WIRE PASSER**

This device is used to protect soft tissue and direct orthopaedic cerclage wire around long bones with minimal trauma. Devascularisation of bone fragments is a serious risk, particularly where cerclage wire is being applied. Devitalised bone can turn into a sequestrum.

- **001250**  Wire passer double ended
- **001252**  Wire passer single end with handle.  
  20mm diameter
- **001253**  Wire passer single end with handle.  
  30mm diameter
- **001254**  Wire passer single end with handle.  
  40mm diameter
- **001255**  Set of 20, 30 and 40mm passers

**WIRE TWISTER/SHEAR CUTTER**

"STILL THE BEST BY FAR"

* Jaws lock onto wire to enable easy twisting under tension for kink free cerclage.

* Improved design long life shear action cutter will cut 18 gauge (1.2mm) wire twisted double.

* Serrated jaws grip and turn cut ends. Jaws have fenestration for extra grip

- **001260**  Wire twister/shear cutters
- **001261**  Wire twister/shear cutter with tungsten carbide jaws for extra grip

**WIRE TIGHTENER FOR EYED WIRES**

Used to tension eyed wires very tight. The cerclage is finished by kinking the wire back against the eye. See page 86 for wire loops.

- **001262**  Wire tightener

**TWISTERZ - WIRE TWISTER**

Features “J” slots for quick capture and release. Textured handle for better grip and control. Bell shaped nut provides better leverage for tightening. Reduced threads require less turning of the nut for locking at wire and handle. Made from quality stainless steel.

- **200010-00**  Twisterz - wire twisters
CHAPTER 3 - GENERAL ORTHOPAEDICS

BONE PLATE BENDERS

Bone plates appropriate for the repair of load bearing long bones are very stiff. Accurate contouring of plates is essential for precise fracture reduction. Bone plate benders used in pairs are the most economic method of plate contouring.

001286 1.5/2.0 benders (pair) 130mm - use for small plates

001287 2.7/3.5 benders (pair) 140mm - use for 2.7 and 3.5mm narrow plates

001288 4.5 benders (pair) 200mm - use for 3.5mm broad and 4.5mm plates - appropriate for twisting 3.5 Slocum plates

001283 Plate bending pliers, roller type 15” 380mm - suitable for 3.5mm narrow, 3.5mm broad and 4.5mm narrow plates.
Bone plates suitable for 3.5mm and 4.5mm screws are extremely difficult to contour in a controlled manner. Most human orthopaedic presses, if large enough to contour the plate, are too large to fit in the typical veterinarian surgeon's autoclave.

The bone plate press is designed for all small animal plates and will fit in your autoclave. Will contour 2.7, 3.5, 3.5 broad and 4.5 narrow plates.

001284 Reconstruction plate pliers 285mm in length - suitable for both 2.7mm and 3.5mm reconstruction plates

001284A Reconstruction plate pliers 285mm in length suitable for 2.7mm reconstruction plates

001281 Bone plate press, small 285mm overall length - suitable for 3.5mm, 3.5mm broad and 4.5mm narrow plates

001282 Bone plate press, large 16” 410mm overall length - suitable for all large plates above 3.5mm. Requires a large autoclave. Much cheaper than 001281 above
CHAPTER 3 - GENERAL ORTHOPAEDICS

PLATE BENDING PLIERS

These pliers will contour 2.7mm and 3.5mm narrow plates. Also useful for bending guide pins in the Slocum TPLO technique. Similar instruments are available elsewhere for £1000 plus.

- **001289**  2.7/3.5 plate bending pliers
- **001289A**  2.0/2.7 plate bending pliers

PARALLEL ACTION PLIERS

Useful for bending, holding and cutting small pins and wires, parallel action pliers may also be used in conjunction with bone plate benders for contouring smaller plates. The industrial version will stain and rust with autoclaving. These changes can be minimised by copious lubrication prior to autoclaving together with dry storage. Will cut arthrodesis and ‘k’ wires.

- **001291**  Parallel action pliers (industrial)
- **001290**  Parallel action pliers (stainless)

BONE LEVER/PERIOSTEAL ELEVATOR

One end of this instrument is bent for use as a hook for retrieving and manipulating bone fragments. The other end is a periosteal elevator useful for clearing soft tissue from bone prior to plating, drilling or burring. The Freer elevator is a fine instrument which is particularly useful in spinal work.

- **001270**  Bone lever/periosteal elevator
- **001271**  Curved periosteal elevator 6mm wide, fibre handle
- **001272**  Very fine periosteal elevator 2mm/3mm

SMALL ANGLED RONGEUR

A good general purpose rongeur for small bone nibbling procedures, eg. at excision arthroplasty, arthrodesis, sequestrum removal.

- **001300**  Small angled rongeur
SMALL ANGLED CUTTERS

A very useful small cutter. The jaw is angled to allow cutting where access is restricted, eg. excision arthroplasty in cats and small dogs and tibial crest transplant. Also useful for articular cartilage removal in arthrodesis, digit and tail amputations.

001310  Small angled cutters

GELPI SELF RETAINING RETRACTOR

The Gelpi is an extremely versatile retractor useful in almost any orthopaedic procedure. Short blunt tips give focal retraction for precise exposure of the fracture or lesion. Virtually an extra pair of hands. Veterinary Instrumentation’s retractor has a very fine ratchet for controlled incremental retraction.

- Excision arthroplasty
- OTT repair of CCL
- Meniscal examination
- All OCD arthrotomy procedures
- Fracture repairs
- Wobblers
- Laminectomies

001330  Gelpi standard
001331  Gelpi long reach
001332  Gelpi small
001333  Odd leg Gelpis (pair)
001334  Odd leg, short Gelpis (pair)

See also small joint distractors on page 13

ENGELS PLASTER SAW

A simple cast saw for removal of plaster casts. Quiet and inexpensive.

001510  Engels plaster saw
161405  Plastershears

ORTHOPAEDIC MALLET

For use with osteotomes, chisels, gouges and staples. Two different sizes according to surgeon preference and patient size.

001320  Orthopaedic mallet 300g/11oz
001321  Heavy orthopaedic mallet 600g/22oz
SELF RETAINING RETRACTORS

Where scrubbed surgical assistance is lacking, self retaining retractors are an invaluable aid. Adequate retraction is essential for good visualisation of the fracture site or lesion. In addition retraction will minimise damage to the soft tissues. Both are key elements of successful orthopaedic surgery. Travers (top) retractors have a very wide gape suitable for skin or large exposures. Wests retractors are rather like small Travers but with sharp points and extra curvature.

703050  Travers Self Retaining Retractors 8” 20cm
703050  Travers Self Retaining Retractors 6.5” 16.5cm
702150  Weislanders Self Retaining Retractors 14cm 51/2”
702152  Weislander 14cm 5.5” Blunt
703250  Wests Self Retaining Retractors 14cm 51/2”

OSTEOTOMES, CHISELS & GOUGES

Use an osteotome to make a precise elective cut, eg. trochanteric osteotomy, excision arthroplasty. Use a chisel where heavier bone removal is required, eg. sequestrum removal. Use gouge where bone contouring is essential.

<table>
<thead>
<tr>
<th>Width mm</th>
<th>Osteotome</th>
<th>Chisel</th>
<th>Gouge</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>001340</td>
<td></td>
<td></td>
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<tr>
<td>15</td>
<td>001341</td>
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<td>001342</td>
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<td>001358</td>
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<tr>
<td>4</td>
<td>001346</td>
<td>001354</td>
<td>001359</td>
</tr>
</tbody>
</table>

"K" WIRE/SMALL PIN PUNCH

Cut ends of "K" wires, arthrodesis wires and small pins used for fragment fixation eg. distal femoral fractures, should be buried beneath the bone surface to minimise soft tissue irritation. The tip of the punch is concave to locate onto the pin end. The other end is struck with a mallet.

001360    "K" wire/Small pin punch
**PADDED SPLINTS**

Made from green foam lined plastic, splints provide temporary first aid support until surgery is appropriate, or longer term support where other forms of fixation are inappropriate.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>090120</td>
<td>Small padded splint</td>
</tr>
<tr>
<td>090121</td>
<td>Medium padded splint</td>
</tr>
<tr>
<td>090122</td>
<td>Large padded splint</td>
</tr>
</tbody>
</table>

**"K" WIRE/SMALL PIN BENDER**

Small wires are commonly used to re-attach bone fragments which have been produced either by trauma or electively by osteotomy. To minimise 'backing out', the cut ends of "K" wires and orthodesis wires should either be buried or bent sharply and cut 5-10mm from the bend. The cut ends are then rotated to the most comfortable position (see photo). Bending with fingers or pliers is difficult to control and can damage the repair.

The "K" wire/small pin bender is designed to slip over the wire concentrating all the bending forces at the pin/bone interface. The instrument is double ended, the small end is for 0.9mm & 1.1mm wires and the large end is for 1.6mm & 2.0mm wires.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>001362</td>
<td>&quot;K&quot; Wire/Small pin bender</td>
</tr>
<tr>
<td>001124</td>
<td>A/K Wire stainless steel box - holds wires, bender and punch.</td>
</tr>
</tbody>
</table>

**ORTHOPAEDIC DISTRACTOR**

**Application.**

* Overcoming muscle contraction prior to fracture reduction
* Accurate alignment of bone fragments prior to plating

**Features.**

* Locking wing nuts fix the distractor as a scaffold for the bone fragments to facilitate plating.
* Three joints maximise flexibility
* Use with external fixation pins 3.2mm to 4.0mm

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>001500</td>
<td>Orthopaedic Distractor</td>
</tr>
</tbody>
</table>
CHAPTER 3 - GENERAL ORTHOPAEDICS

ESMARCH BANDAGE

Exsanguination of the distal limbs makes visualisation of the small bones and associated structures very much easier, eg carpal arthrodesis.

090169 Esmarch bandage - 75mm wide

MASON SPLINTS

These are the original lightweight aluminium splints for lower limb injuries. These splints may be used with an extension if a slightly longer splint is needed. These splints are reusable and designed to last.

090651 All splints without extensions. Set of 8
090652 All splints with extensions. Set of 8

ORTHOPAEDIC RULER

Used to measure pin, wire, drill and screw diameter. Supplied in either metric or imperial sizes

001498 Imperial marked ruler for Sherman screws
001497 Metric marked ruler for AO type screws
001496 Screw and drill gauge for AO type screws and drills. Measures all usual drill and screw sizes

BONE SCRIBER

A very sharp marking point with an easy to hold handle enables the surgeon to mark bone prior to cutting or rotating (Slocum procedure). One end is pointed and the other is sharpened as a blade

001494 Bone Scriber
STAINLESS VERNIER GAUGE

Useful for very accurate measurement of screws, drill bits and bone intra-operatively. Supplied with full instructions for use. Accurate to 0.1 mm.

001490  Stainless steel vernier gauge

ADJUSTABLE THOMAS SPLINTS

Used for temporary stabilisation of fractures, particularly of the proximal limb pending internal/external fixation. May also be used as sole means of fracture management where severity of fracture or economics preclude a more sophisticated repair. Stainless steel manufacture. Splint is adjustable for length

Circle diameter

272110  Thomas splint - hind leg, size2, 140mm
272120  Thomas splint - hind leg, size3, 165mm
272130  Thomas splint - hind leg, size4, 170mm
272140  Thomas splint - fore leg, size2, 100mm
272150  Thomas splint - fore leg, size3, 150mm
272160  Thomas splint - fore leg, size4, 170mm
External fixation can offer major advantages over "conventional methods" in the management of many fractures.

1. Easy to apply.
2. Maintains limb use and joint mobility.
3. Well tolerated by patients.
4. Low cost c.f. plating systems & is largely re-useable.
5. Relatively low risk procedure.
6. Particularly useful in the presence of infection.

**SINGLE KE CLAMP**

Used to attach fixation pin to connecting bar. The single clamp is the key element of any external fixation frame. Its size will dictate the size of the fixation pin and the size of the connecting bar. The greater the diameter of the connecting bar and the greater the number of connecting bars, the stronger the apparatus.

As a guide, we would suggest small clamps for up to 5kgs, medium clamps for 5 - 30kgs, and large clamps or multiple medium frames for over 30kgs.

Each clamp will accept a variety of pins. The pin size indicated is the largest possible. Smaller pins will also work although the fixation is not quite as rigid. e.g. the proximal radius may need a slightly smaller pin than the distal radius.

**KE Plus**

KE equipment is a very versatile system which has stood the test of time and remains the industry standard. However, one major limitation is that positive threaded pins cannot be inserted through the standard clamp. Most authorities are recommending the use of at least some positive threaded pins in any construct.

Veterinary Instrumentation has developed KE Plus specifically to increase the range of pins which can be used with each size clamp. For any given size of clamp it is now possible to use both bigger and smaller diameter pins than standard KE systems. KE Plus is fully compatible with your existing KE setup. KE Plus clamps have a matt finish compared with the polished standard KE.

**Single KE Plus**

<table>
<thead>
<tr>
<th></th>
<th>Largest Thread Diameter</th>
<th>Smallest Shank Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>6.5mm</td>
<td>3.0m</td>
</tr>
<tr>
<td>Medium</td>
<td>4.8mm</td>
<td>2.4mm</td>
</tr>
<tr>
<td>Small</td>
<td>3.6mm</td>
<td>0.9mm</td>
</tr>
</tbody>
</table>

**001583** Large single clamp 4mm/5/32" pins
**001591** Medium single clamp 3mm/1/8" pins
**001593** Small single clamp 2mm/5/64" pins

**Medium KE Plus with large positive pin**

**Medium KE Plus with small positive pin**
DOUBLE CLAMPS

Used to attach connecting bar to connecting bar. If possible, the fixation pins in the proximal fragment should be linked to the pins in the distal fragment via single clamps and a single connecting bar. This is not always possible because of the shape of the bones or the angle of placement of the pin.

It may be necessary to connect the pins in the proximal fragment to a short connecting bar. Finally the two short connecting bars are joined by a long connecting bar using double clamps. The frame is not as rigid as the single connecting bar frame. May be used to connect long bars proximally and distally, as in type III frames.

001584 Large double clamp 5/16” bars
001592 Medium double clamp 3/16” bars
001594 Small double clamp 1/8” bars

CONNECTING BARS

Connecting bars are available in 5/16” for large clamps, 3/16” for medium clamps and 1/8” for small clamps. The thicker the bar, the stronger the frame is. The shorter the bar between bone fragments, the stronger the frame is.

Rigidity is important early in fracture healing. When significant callus is present, it is often helpful to introduce some slight axial motion by either removing some pins or moving the clamps further away from the bone.

Bars are available in a variety of lengths, specials to order.

<table>
<thead>
<tr>
<th>Length (mm)</th>
<th>1/8”</th>
<th>3/16”</th>
<th>5/16”</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>001595</td>
<td></td>
<td></td>
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<tr>
<td>50</td>
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<td>340</td>
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<td>001549</td>
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<tr>
<td>450</td>
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<td>phone</td>
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</tbody>
</table>

Specials to order. Allow 7 days
CHAPTER 4 - EXTERNAL FIXATION

EXTRA LARGE CLAMPS AND BARS

Standard KE clamps made very much larger. Bars are 1/2" 12.5mm in diameter. Clamps will accept up to 5/16" 8mm pins. Suitable for foals and calves.

EXL01 Extra large single clamp
EXL02 Extra large double clamp
EXL05 Extra large connecting bar 150mm
EXL06 Extra large connecting bar 200mm
EXL07 Extra large connecting bar 300mm
EXL08 Extra large connecting bar 400mm
EXL10 1/4" Trochar pin
EXL11 5/16" Trochar pin
EXL12 1/4" Pearson Positive Pin - End threaded
EXL13 1/4" Pearson Positive Pin - Mid threaded

SPLIT CLAMP

Occasionally it is necessary to add a pin to a frame to improve stability. If the pin is required in the middle of a frame it will be necessary to dismantle the whole frame. The split clamp enables the surgeon to introduce additional pins without disassembly. When fully loosened the clamp slides over the connecting bar.

001547L Large split clamp
001547M Medium split clamp
001547S Small split clamp

ESF HINGE

Designed specifically to maintain reduction of luxated hips by means of a simple frame on the pelvis, the ESF hinge is also useful in transarticular frames where continued mobility is desirable, e.g. hock and elbow. Comes with instructions for use. Attaches to standard KE equipment. Relatively weak in abduction.

001597 ESF Hinge joint Small
001598 ESF Hinge joint Medium
001599 ESF Hinge joint Large
PIN CHOICE

A wide variety of pins are available for the construction of ESF frames. Correct pin selection is essential if the repair is to be successful. In situations where a fracture is likely to heal rapidly (young animal, good fracture reduction) pins do not need to be complicated. The frame will be removed in approximately five weeks. Generally speaking the more complex the pin design the more expensive it is and the more difficult it is to insert. Base your pin selection on anticipated frame duration; less than 5 weeks use Trochar or Ellis type, more than five weeks use at least some positive threaded pins. The holding power of the pin is related to the area of bone/pin interface. Use as large a pin as possible consistent with bone size, approximately one third bone diameter maximum. Positive threaded pins increase the bone/pin interface for any given pin shank diameter. Proximal radius is tricky!

TROCHAR PINS

Our Trochar pins have a special long point designed to cut bone. Use of pins with short trochar tips generates heat which leads to pin loosening.

The smooth shanks of the pins provide minimal pull out resistance. Trochar pins should, therefore, be placed at converging or diverging angles compared to other pins in the same bone fragment.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>001556</td>
<td>Trochar pin 2mm</td>
</tr>
<tr>
<td>001557</td>
<td>Trochar pin 3mm</td>
</tr>
<tr>
<td>001558</td>
<td>Trochar pin 4mm</td>
</tr>
</tbody>
</table>

CROWE PINS

The tip of this pin is shaped like a mini drill. It cuts bone, reducing heat necrosis. Care must be taken to protect soft tissue.

Pull out resistance is similar to Trochar pins and should, therefore, be placed at diverting or converging angles. There is no need for pre-drilling, even in old bone.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>001553</td>
<td>Small crowe pin 2mm</td>
</tr>
<tr>
<td>001554</td>
<td>Small crowe pin 3mm</td>
</tr>
<tr>
<td>001555</td>
<td>Small crowe pin 4mm</td>
</tr>
</tbody>
</table>

FINE NEGATIVE THREADED PINS (ELLIS TYPE)

The drilling tip of this type of pin is the long Trochar. Immediately behind the Trochar is a short fine thread designed to engage the far cortex. The smooth shank engages the near cortex. The thread/shank junction (the weakest part of the pin) is positioned in the medullary cavity and is therefore protected.

Ellis type pins have improved pull out resistance over Trochar pins and the angle of placement is not as critical.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>001530</td>
<td>Ellis pin 3/32”</td>
</tr>
<tr>
<td>001531</td>
<td>Ellis pin 1/8”</td>
</tr>
<tr>
<td>001550</td>
<td>Ellis pin 2mm</td>
</tr>
<tr>
<td>001551</td>
<td>Ellis pin 3mm</td>
</tr>
<tr>
<td>001552</td>
<td>Ellis pin 4mm</td>
</tr>
</tbody>
</table>
CHAPTER 4 - EXTERNAL FIXATION

COARSE NEGATIVE THREADED PIN

The thread on this pin is similar to a self-tapping cortical screw. The drilling tip is again the long Trochar. In young bone, use without pre-drilling; in older, hardened bone, use smaller pilot hole. The much improved pull out resistance means that these pins can be placed parallel within the same bone fragment; useful when fragment is smaller or when aligning proximal and distal fragments. More prone to pin fracture than Ellis pins. Always use three pins on either side of the fracture if possible.

001567  Coarse threaded pin 2mm
001568  Coarse threaded pin 3mm
001569  Coarse threaded pin 4mm

POSITIVE THREADED PINS

The fine threads of these pins are proud of the shank eliminating the weak point where the thread ends in other pins. This style of pin is useful where a good pull out resistance is required and where it is anticipated that the frames will be left in situ for long periods - 6 weeks plus. Use KE PLus clamps if available.

End Thread/Interface

CET0018* Shank 1.6mm(1/16") Threads 2.0mm(5/64") length 70mm(2.75")
CET0019* Shank 2.0mm(5/64") Threads 2.4mm(3/32") length 85mm(3.5")
CET0020 Shank 2.4mm(3/32") Threads 3.2mm(1/8") length 105mm(4")
CET0021 Shank 3.2mm(1/8") Threads 4.0mm(5/32") length 130mm(4.5")
CET0022 Shank 4.0mm(5/32") Threads 4.8mm(3/16") length 160mm(6.0")

The mid threaded pin provides good pull out resistance in frames where the fixation pins are supported on either side of the limb by connecting bars. i.e. Type II frames

Mid Thread/Centreface

CMT0018* Shank 1.6mm(1/16") Threads 2.0mm(5/64") length 85mm(2.75")
CMT0019* Shank 2.0mm(5/64") Threads 2.4mm(3/32") length 105mm(3.5")
CMT0023 Shank 2.4mm(3/32") Threads 3.2mm(1/8") length 105mm(4")
CMT0024 Shank 3.2mm(1/8") Threads 4.0mm(5/32") length 130mm(4.5")
CMT0025 Shank 4.0mm(5/32") Threads 4.8mm(3/16") length 160mm(6")

*will fit small clamps but have roughened shanks for epoxies and acrylics
POSITIVE THREADED PINS - CANCELLOUS

The coarser threads of these pins are appropriate for use in the proximal tibia and occasionally in the distal radius.

**Interface/End thread**
- CANET0026 2.4mm shank 3.5mm threads 115mm long
- CANET0027 3.2mm shank 4.8mm threads 150mm long

**Centreface/Mid thread**
- CANMT0030 2.4mm shank 3.5mm threads 150mm long
- CANMT0031 3.2mm shank 4.8mm threads 180mm long

PEARSON POSITIVE THREADED PINS

The benefits of positive threaded pins in long term ESF frames are well known. However, there is evidence that impaction of bone debris causes problems at the bone pin interface. The special fluting of the Pearson Pin addresses these problems. The special tip DOES NOT require predrilling thereby reducing time and soft tissue morbidity.

- PP01 1/8” Shank end positive thread for medium clamp
- PP02 5/32” Shank end positive thread for large clamp
- PP03 1/8” Shank mid positive thread for medium clamp
- PP04 5/23” Shank mid positive thread for large clamp

ESF LAG PINS WITH OLIVE

Used almost exclusively in the management of complex humeral fractures involving a variant on the ‘Y’ or ‘T’ fracture. The olive, positioned at the end of the threaded portion of the pin, acts as the screw head in a lag screw. Bone fragments may be compressed and incorporated into the external fixator frame. The bone fragment involved is usually the lateral condyle.

- 001535 Medium ESF lag pin with olive 3.2 mm shank 40mm x 4.0mm thread
- 001534 Small ESF lag pin with olive 2.4 mm shank 25mm x 3.2mm thread

PIN CUTTERS

See Page 20 and 48
SAFETY PIN CUTTER TO 4MM

Most types of bolt cutter;
* cause the cut end to fly off in a potentially dangerous manner
* create a sharp point leading to soft tissue irritation
* deform the cut area which may jam in ESF clamps

The enclosed shearing action of this pin cutter addresses all these problems. The cutting range and type of action makes this cutter ideal for trimming ESF pins.

**Safety pin cutter to 4mm. Stainless steel**

PIN INSERTION

Correct pin insertion requires slow axial rotation under pressure. A Jacobs hand chuck can be used particularly where bone is young and soft. There is a tendency when using a hand chuck to produce a hole which is not circular, this will reduce the pin/bone interface resulting in premature pin loosening. The small Jacobs hand chuck gives better control and is big enough for 2, 3 and 4mm pins.

The ideal instrument in my experience, is the Variable Speed Orthopaedic Drill which offers maximum control and minimal wobble. It is a low speed high torque device and, of course, useful elsewhere in Veterinary Orthopaedics.

**Small Jacobs Chuck 5/32” capacity**
**Standard Jacobs Chuck 1/4” capacity**
**Variable Speed Orthopaedic Drill 1/4” capacity**

For further details about the drill and spare chucks see Chapter 4 Power Tools
ESF TISSUE PROTECTOR

Protection of soft tissue is very important when placing an ESF frame. Tissue protection whilst placing single pins is relatively straightforward. Once a bar is in position, however, passing a pin through a clamp into bone presents a particular difficulty. Standard tissue protectors cannot be removed. The ESF tissue protector splits along its length to allow removal. The tip has small serrations to encourage grip on the bone surface.

001548 ESF Tissue protector

UNILATERAL KIT
(formerly “mini kit”)

Consists of 4 single clamps and a long connecting bar. You need to choose which pins you require based upon cost and the type of fracture. Use at least one threaded pin above and below the fracture. This is the minimum frame to use:

1. Place distal and proximal fixation pins.
2. Loosely attach bar and 4 clamps to first 2 pins.
3. Align fracture and tighten clamps onto first 2 pins.
4. Using middle clamps as guides, insert remaining pins and fully tighten.
5. Cover clamps and cut pin ends to improve cosmetic appearance and protect furniture etc!

001570 Large unilateral kit
001571 Medium unilateral kit
001572 Small unilateral kit

NB No pins or spanners are supplied with these kits

For ideal construction use at least 3 pins in each fragment
CHAPTER 4 - EXTERNAL FIXATION

BILATERAL KIT

Placement of the pins all the way through the bone fragments, attached to long bars on either side of the limb, improves stability enormously. The minimum kit for this type of frame comprises 6 single clamps and 2 long connecting bars. If the frame is likely to be in-situ for 6 weeks or more consider the use of positive threaded pins and more of them (see page 37).

001530 Large bilateral kit
001531 Medium bilateral kit
001532 Small bilateral kit

NB No pins or spanners are supplied with these kits

For ideal construction use at least 3 pins in each fragment

STANDARD KIT

Consists of 8 single clamps, 2 double clamps, 2 long bars, 2 short bars.
Some fractures and some patients require more elaborate frames using either more clamps or more connecting bars.
The standard kit will enable you to deal with most situations.

001580 Large Kit 4mm
001581 Medium Kit 3mm
001582 Small Kit 2mm

NB No pins or spanners are supplied with these kits

For ideal construction use at least 3 pins in each fragment

FULL KIT

The full kit comprises one of each standard kit plus a compartmentalised stainless steel box in which to sterilise it.
It is convenient to keep all the various elements of external fixation together. Consumables can be topped up as necessary. All the necessary equipment to stabilise a fracture.

001578 Stainless Box
001579 Full kit in stainless box
001579ND As above but with no double clamps - typically double clamps weaken frames and are to be avoided if possible

NB No pins are supplied with this kit but spanners are

For ideal construction use at least 3 pins in each fragment
DYNAMIC FIXATORS

External fixation has an increasingly important place in veterinary orthopaedics including the management of fractures, non unions and growth plate abnormalities in adult dogs. In addition to the standard KE and KEPlus systems, Veterinary Instrumentation also offers a range of dynamic external fixators which are of particular use in the management of growth plate injuries in the growing dog. Please call or write for further details.

DYNAMIC DISTRACTOR

Bone lengthening is occasionally required to substitute bone lost through growth plate abnormalities, e.g. short radius or trauma. The bilateral dynamic fixator is more user friendly than the ring fixator.

Illustrated: short radius frame

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>001900</td>
<td>Radius Assembly Small. 2.0 - 2.4mm / 3/32&quot; pins</td>
</tr>
<tr>
<td>001900P</td>
<td>Radius Assembly Small. 2.0 - 2.4mm / 3/32&quot; pins</td>
</tr>
<tr>
<td>001901</td>
<td>Radius Assembly Medium. 2.7 - 3.2mm / 1/8&quot; pins</td>
</tr>
<tr>
<td>001901P</td>
<td>Radius Assembly Medium. 2.7 - 3.2mm / 1/8&quot; pins</td>
</tr>
<tr>
<td>001902</td>
<td>Radius Assembly Large. 3.5 - 4.0mm / 5/32&quot; pins</td>
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<tr>
<td>001902P</td>
<td>Radius Assembly Large. 3.5 - 4.0mm / 5/32&quot; pins</td>
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<td>Sliding single clamp 3/32&quot; pins</td>
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<td>001910P</td>
<td>Sliding single clamp  pins</td>
</tr>
<tr>
<td>001911</td>
<td>Sliding double clamp 3/32&quot; pins</td>
</tr>
<tr>
<td>001911P</td>
<td>Sliding double clamp  pins</td>
</tr>
<tr>
<td>001912</td>
<td>Sliding single clamp 1/8&quot; pins</td>
</tr>
<tr>
<td>001912P</td>
<td>Sliding single clamp  pins</td>
</tr>
<tr>
<td>001913</td>
<td>Sliding double clamp 1/8&quot; pins</td>
</tr>
<tr>
<td>001913P</td>
<td>Sliding double clamp  pins</td>
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<td>001914</td>
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<td>001920</td>
<td>Threaded rod small 50mm. Pitch .75mm</td>
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<tr>
<td>001921</td>
<td>Threaded rod small 75mm. Pitch .75mm</td>
</tr>
<tr>
<td>001922</td>
<td>Threaded rod small 100mm. Pitch .75mm</td>
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<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>001930</td>
<td>Threaded rod medium 75mm. Pitch 1.00mm</td>
</tr>
<tr>
<td>001931</td>
<td>Threaded rod medium 150mm. Pitch 1.00mm</td>
</tr>
<tr>
<td>001932</td>
<td>Threaded rod medium 200mm. Pitch 1.00mm</td>
</tr>
<tr>
<td>001940</td>
<td>Threaded rod large 100mm. Pitch 1.00mm</td>
</tr>
<tr>
<td>001941</td>
<td>Threaded rod large 200mm. Pitch 1.00mm</td>
</tr>
<tr>
<td>001951</td>
<td>Knurled adjuster - small</td>
</tr>
<tr>
<td>001952</td>
<td>Knurled adjuster - medium</td>
</tr>
<tr>
<td>001953</td>
<td>Knurled adjuster - large</td>
</tr>
<tr>
<td>001960</td>
<td>Locking nut - small</td>
</tr>
<tr>
<td>001961</td>
<td>Locking nut - medium</td>
</tr>
<tr>
<td>001962</td>
<td>Locking nut - large</td>
</tr>
</tbody>
</table>

N.B 1.00mm pitch means that one full turn of the adjuster moves the assembly 1.00mm
RING FIXATOR KIT (001800)  
70, 100, 120, & 160mm rings

Veterinary Instrumentation’s full ring fixator set includes all the instrumentation and implants for virtually all appropriate Veterinary procedures. It is closely based on the well proven original Ilizarov model with some modifications for small animal use. The 70 & 100mm rings are made from a high tensile aluminium, the larger rings are made from stainless steel to withstand the higher wire tensions. Connection plates are used to convert half or 5/8 rings into ellipsoid or ovals.

A range of clamps is included to allow the fixation of wires to the rings in a variety of positions. Half pins (negative or positive profiles) may be added to the frames using the posts and clamps provided. Several spanners are included to enable the surgeon to access clamps in restricted areas and to allow the surgeon to control accurately wire alignment and, to a degree, wire tension.

Conical washers allow rings to change angle relative to the threaded rods for small angular adjustments. Hinges are included for dynamic angular deformity corrections.

A dedicated mechanical tensioner allows more accurate application of tension. Although not critical when using smaller rings, tension is very important using thin wires on large rings.

001800 KIT CONTENTS

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>QTY</th>
</tr>
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<tbody>
<tr>
<td>Full Ring 70mm AL</td>
<td>4</td>
</tr>
<tr>
<td>5/8 Ring 70mm AL</td>
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<td>Full Ring 100mm AL</td>
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<tr>
<td>5/8 ring 100mm AL</td>
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<tr>
<td>Half Rings - 120 mm SS</td>
<td>8</td>
</tr>
<tr>
<td>Half Rings - 160 mm SS</td>
<td>8</td>
</tr>
<tr>
<td>5/8th Rings - 120 mm SS</td>
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</tr>
<tr>
<td>5/8th Ring - 160 mm SS</td>
<td>1</td>
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<tr>
<td>Multiple-pin fixation clamp</td>
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<tr>
<td>Single pin fixation bolt</td>
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<tr>
<td>Cannulated Bolts</td>
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<tr>
<td>Slotted Bolts</td>
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<tr>
<td>Connection Bolts</td>
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<td>Telescopic Rod - 100 mm</td>
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<tr>
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<tr>
<td>Threaded Rod - 200 mm</td>
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<tr>
<td>Nut - 10 mm</td>
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<td>3 Hole connection plate</td>
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<td>4 Hole connection plate</td>
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<tr>
<td>5 Hole connection plate</td>
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<td>6 Hole connection plate</td>
<td>2</td>
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<tr>
<td>7 Hole connection plate</td>
<td>2</td>
</tr>
<tr>
<td>Twisted plate</td>
<td>2</td>
</tr>
<tr>
<td>Male post 2 holes</td>
<td>2</td>
</tr>
<tr>
<td>Male Post - 3 Holes</td>
<td>2</td>
</tr>
<tr>
<td>Male post - 4 holes</td>
<td></td>
</tr>
<tr>
<td>Female post - 2 holes</td>
<td>2</td>
</tr>
<tr>
<td>Female Post - 3 Holes</td>
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<td>Washer</td>
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<td>Hinge female</td>
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<td>Hinge male</td>
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<td>40mm spacers</td>
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<td>Conical washer set</td>
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<td>K. Wire - 1.5 mm</td>
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<td>K. Wire - 1.8mm</td>
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<tr>
<td>Angulated Wrench - Slotted</td>
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<tr>
<td>10mm Spanner</td>
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<td>Mechanical Tensioner</td>
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<tr>
<td>Stainless Steel Container</td>
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</tbody>
</table>
MEYNARD FIXATION CLAMPS

Stainless steel external fixators. Very simple, very inexpensive ESF system widely used with success in France and Spain. The clamps split allowing placement of pins, both positive threaded and negative threaded, mid frame. Not as strong as KE type so you will need more clamps. Bars are available in all sizes. There are now Maynard clamps available which fit standard KE bars. Very useful for mid frame and positive threaded pins. Clamps which work with KE bars carry a KE suffix.

<table>
<thead>
<tr>
<th>Clamps</th>
<th>dia</th>
<th>pin size</th>
<th>bar size</th>
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<tr>
<td>260002</td>
<td>12</td>
<td>1.1</td>
<td>2.0</td>
</tr>
<tr>
<td>260004</td>
<td>12</td>
<td>1.6</td>
<td>2.0</td>
</tr>
<tr>
<td>260005KE</td>
<td>14</td>
<td>1.6</td>
<td>3.0</td>
</tr>
<tr>
<td>260006KE</td>
<td>14</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>2600065KE</td>
<td>16</td>
<td>2.4</td>
<td>3.2</td>
</tr>
<tr>
<td>260007</td>
<td>16</td>
<td>2.0</td>
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</tr>
<tr>
<td>260013</td>
<td>16</td>
<td>2.4</td>
<td>4.0</td>
</tr>
<tr>
<td>260014KE</td>
<td>24</td>
<td>3.2</td>
<td>4.8 (3/16”)</td>
</tr>
<tr>
<td>260008</td>
<td>16</td>
<td>3.0</td>
<td>4.0</td>
</tr>
<tr>
<td>260009</td>
<td>24</td>
<td>4.0</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Spanner required

| 001566 | 7.00mm | Small spanner |

Bars (all are 500mm/20” long, cut to desired length)

| 260060 | 2mm for 12mm clamps |
| 260062 | 3mm for 14mm clamps |
| 260064 | 4mm for 16mm clamps |
| 260068 | 6mm for 24mm clamps |

Pins

<table>
<thead>
<tr>
<th>Smooth</th>
<th>dia</th>
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<tr>
<td>090021</td>
<td>1.1mm</td>
<td>120mm</td>
<td>2</td>
</tr>
<tr>
<td>090022</td>
<td>1.6mm</td>
<td>120mm</td>
<td>2</td>
</tr>
<tr>
<td>090023</td>
<td>2.0mm</td>
<td>120mm</td>
<td>2</td>
</tr>
<tr>
<td>001556</td>
<td>2.0mm</td>
<td>120mm</td>
<td>1</td>
</tr>
<tr>
<td>090002</td>
<td>2.4mm</td>
<td>300mm</td>
<td>2</td>
</tr>
<tr>
<td>001557</td>
<td>3.0mm</td>
<td>120mm</td>
<td>1</td>
</tr>
<tr>
<td>001558</td>
<td>4.0mm</td>
<td>120mm</td>
<td>1</td>
</tr>
<tr>
<td>090006</td>
<td>4.0mm</td>
<td>300mm</td>
<td>2</td>
</tr>
</tbody>
</table>

Negative threads

| 001550 | 2.0mm| 120mm  | 1      |
| 001530 | 2.4mm| 120mm  | 1      |
| 001551 | 3.0mm| 120mm  | 1      |
| 001552 | 4.0mm| 120mm  | 1      |
ACRYLIC PIN EXTERNAL FIXATION SYSTEM

An Acrylic Pin External Fixator (APEF) is created by replacing mechanical connecting clamps and rigid connecting bars with mouldable acrylic columns.

APEF is indicated for any fracture or arthrodesis where a comparable sized bar/column fixator would be appropriate. Research has shown the acrylic columns provide equal or greater strength when compared to the traditional K-E designs in all standard configurations. The illustration shows use of frame alignment kit APFAK422

APEF BASE KIT

The kit includes a carrying case sterilisation tray,
4 x 3mm (1/8”) diameter centrally threaded full pins,
4 x 3mm (1/8”) diameter end threaded half pins,
8 x 3mm (1/8”) diameter medium smooth pins,
8 x 2mm (3/32”) diameter small smooth pins, frame alignment kit,
double acrylic tube pack,
single acrylic tube pack,
half acrylic tube pack
and a procedural video.

APBKUNST APEF base kit

ACRYLIC TUBE PACKS

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>APNSPT150</td>
<td>Triple acrylic tube pack (150ml)</td>
</tr>
<tr>
<td>APNSPD100</td>
<td>Double acrylic tube pack (100ml)</td>
</tr>
<tr>
<td>APNSPS50</td>
<td>Single acrylic tube pack (50ml)</td>
</tr>
<tr>
<td>APNSPH25</td>
<td>Half acrylic tube pack (25ml)</td>
</tr>
<tr>
<td>APNSPQ12</td>
<td>Quarter acrylic tube pack (12.5ml)</td>
</tr>
<tr>
<td>APNSPDM50</td>
<td>Double mini tube pack (50ml)</td>
</tr>
</tbody>
</table>
**PINS**

The pins come in either 3mm (1/8”) diameter or 2mm (3/32”) diameter. The threaded pins have a positive profile thread.

- **APPINETH18** 3mm (1/8”) end threaded
- **APPINCHTH18** 3mm (1/8”) centrally threaded
- **APPINSM18** 3mm (1/8”) non-threaded
- **APPINSM332** 2mm (3/32”) non-threaded

**ACCESSORIES**

The carrying case and the pin sterilisation tray that come with the base kit can be bought separately. The pin sterilisation tray is made from anodised aluminium.

- **G70025-000** Carrying case
- **G70029-000** Pin sterilisation tray
- **APFAK322** Frame alignment kit - 4 universal clamps and 2 connecting bars

**TUBE KITS**

There are three kits available. The first consists of 21mm (1”) diameter by 152cm (60”) length of tubing and 10 end plugs. The second consists of 15mm (5/8”) diameter by 152cm (60”) length of tubing and 10 end plugs, and the third consists of 10mm (3/8”) diameter by 122cm (48”) of tubing with 8 end plugs.

- **APTK21** 21mm diameter tube kit
- **APTK15** 15mm diameter tube kit
- **APTK10** 10mm diameter tube kit

**ACRYLIC BI-PACKS**

These convenient, premeasured, easy mix and dispensing packs contain both powder and liquid separated by a temporary divider.

- **APNSBT150** Triple acrylic bi-pack (150ml)
- **APNSBD100** Double acrylic bi-pack (100ml)
- **APNSBS50** Single acrylic bi-pack (50ml)
- **APNSBH25** Half acrylic bi-pack (25ml)
- **APNSBQ12** Quarter acrylic bi-pack (12.5ml)
EPOXY ESF PUTTY

Epoxy E.S.F. putty is a simple to use, quick and convenient alternative to the standard bar and clamp system. The putty, once mixed, stiffens in 5 minutes and within 1 hour is fully cured. The putty can be applied and then the fracture reduced allowing precise manipulation of the fracture site. The versatility of the system allows the putty to be used in place of clamps, to cover sharp ends of cut pins, and many other applications.

There are two pack sizes in a bar format with the premeasured catalyst in the centre of the bar ready for mixing. The product is clean and has a long shelf life. Only mix the quantity you need, cutting the required amount off the end of the bar. If you find you don't have enough, more can be prepared in a matter of seconds. E.S.F. Putty sticks to itself very well and may be used for repairs and corrections. Particularly useful in fractures in small furries where proximal and distal fragments may be attached together with 'blobs' of putty regardless of fixation pin site.

* Easy to use
* Economical
* Versatile

Typical Applications

* ESF applications requiring multiple pins of various sizes placed at various angles.
* ESF applications in rabbits and guinea pigs
* Fractures of the jaw
* Protecting sharp ends of cut pins
* Joining non-standard pins and bars
* Use to add a pin mid frame

Epoxy1 Epoxy ESF putty 55G
Epoxy2 Epoxy ESF putty 110G
SURGICAL ‘CORE SKILLS’ TRAINING

Throughout the year we will be offering professionally tutored training courses covering key areas of surgical expertise. The courses will all be ‘hands on’ based on our experience of many years running and supporting wet labs both in the UK and overseas. The venue will be our own custom built training facility at Veterinary Instrumentation. Areas to be covered include:

- External Fixation
- Fracture Fixation with Plates and Screws
- Interlocking Nails
- Arthroscopy
- Dentistry

Phone for details or view our web page www.vetinst.com/coreskills.htm

THERA-PAW

Thera-Paw acts as a reusable bandage with a protective base

- The ultra-cushioned sole alleviates pain, reducing lameness and promoting more even weight distribution.
- The use of perforated top-sole material and cut-out design allow the paw to breathe and keep the injured site free from moisture build-up.
- The rubberized, non-skid base and toe-cap are waterproof, protect the site from further injury, and provide better traction.
- The vertical closure design runs parallel to the carpal/tarsal bones, dispersing pressure over a wide area.
- Thera-Paw is easily cleaned by rinsing it under warm water. Mild detergent may be used. It air dries in under 1 hour, and is ready for immediate reapplication.

Thera-Paw is designed to stay in place and to be worn for extended periods

- The inner vertical seams have been removed to reduce rubbing and abrasion.
- The material gives with movement and allows proper blood flow.
- The wide-based closure accommodates a variety of foot sizes and provides a snug fit.
- The front opening and closing mechanism makes it easy to slip Thera-Paw into place.
- The outer safety strap provides additional security, to ensure that Thera-Paw stays on even the most active dogs.
- The dual closing mechanism reduces the risk that a dog can remove the garment.

200002  Thera-paw small
200004  Thera-paw medium
200006  Thera-paw large
5 - POWER TOOLS

VARIABLE SPEED ORTHOPAEDIC DRILL

Our new model now has a removeable battery pack. This feature makes charging easier and a spare battery pack can be maintained on charge. The battery charges more quickly than you can discharge the one in the drill. This remains the best drill we have found.

All the original features remain.
* excellent control over speed 0-600 via trigger
* stainless steel chuck and extension
* autoclavable shroud
* low speed, high torque

001600 Variable Speed Orthopaedic Drill
001605 Spare Chuck Standard 1/4"
001605S Spare Chuck Small 5/32"
001606 Spare Key - Standard
001606S Spare Key - Small
001620 Shroud (waterproof)

SPARE BATTERY PACK

For use as standby or replacement. The quick charge unit supplied with the drill charges the spare battery pack faster than you can discharge the battery pack in the drill. With drills having a permanent integral battery, once the battery fails the drill must be replaced, but with this system you simply replace the battery.

001610 Spare battery pack

DESOUTTER CAST CUTTER

Removal of casts without a proper saw is extremely hard work and very time consuming. This has implications for procedure costs and anaesthetic risk.

The Desoutter saw is extremely reliable and makes short work of all cast materials. (The harder synthetics require the diamond blade).

001700 Desoutter Cast Cutter
001720 Diamond Blade....resin casts etc.
MINOS A200

A dedicated bur system, the Minos A200 drives a large range of burs at up to 100,000 rpm. This is the top line instrument in use at the universities and top referral practices. If you are serious about spinal surgery, this is the one for you. Further details and trials are available on request.

- A200 Air drill 100,000 rpm
- A212 Medium bur guard
- A211 Long bur guard
- A223 Extra-long bur guard
- A201 Hose

Minimum start-up kit includes A200, A201 and A212

MULTI SAW

The Multi saw is a multi-function oscillating saw which may be used as a cast cutter and a surgical oscillating saw. The standard rechargable saw is supplied as a kit including charger, battery & gypsum type saw blade.

Our stainless attachment converts the multi saw into a surgical saw in a similar fashion to our orthopaedic drill. With the converter and shroud in place, all exposed surfaces are sterile. Excellent for total femoral head and neck excision and TPLO (TWO).

- 001701 Multi saw including gypsum blade.
- 001720 Diamond blade for resin casts.
- 001702 Stainless converter & shroud.

Fits most surgical blades including:

- S82-100 Surgical Blade 0.9mm x 12mm x 45mm long (most useful) Sterile
- S82-103 Surgical Blade 1.2mm x 12mm x 70mm long (for large TPLO) Sterile
- SB122470 Surgical Blade 1.2mm x 24mm x 70mm with ‘supercut’ teeth. Non-Sterile. A wider blade preferred by some surgeons for tibial wedge osteotomy. The prismatic blade design of the cutting edge improves efficiency considerably.

3M’s ORTHOPAEDIC EQUIPMENT

3M’s equipment is acknowledged as "simply the best" and is the first choice for top referral practices and university departments. The equipment is very reliable and infinitely repairable.

There is also a place for 3M equipment in general practice for veterinary orthopaedic surgeons who enjoy their surgery and who wish to provide their clients and patients with the best possible care.

Pre-owned units usually available.
CHAPTER 5 - POWER TOOLS

MINI DRIVER

The 3M Mini Driver is a modular system comprising handpiece plus a range of quick fit attachments; drill, "K" wire driver, quick release chuck and sagittal saw. When only the best will do. Further details and trial available on request.

K200 Mini Driver handpiece
A201 Hose
K110 Jacobs Chuck attachment 5/32” capacity
K114A Quick release chuck attachment (Synthes)
K109 Jacobs chuck attachment 1/4” capacity

"K" WIRE DRIVER

Reattachment of osteotomies or small bone fragments is often best achieved using "K" or arthrodesis wires. Driving long wires often results in bending. Driving short wires in a Jacobs chuck requires time consuming and repeated adjustments. The "K" wire driver is designed to drive "K" and arthrodesis wires 0.9mm to 2.0mm accurately with finger tip advancement of the wires.

K111 Automatic "K" wire driver

MINI DRIVER AND SAGITTAL SAW

For osteotomies in confined areas, e.g. excision arthroplasty, radial osteotomy, triple pelvic osteotomy. A large range of saws and blades are available. See overleaf for blades

K220 Sagittal saw
3M INSTRUMENT CARE PRODUCTS

3M's orthopaedic instruments are the best and represent a substantial investment. Regular basic maintenance will ensure continuing excellent performance and minimal repair bills. Follow manufacturer's recommendations exactly.

- M105  Blitz spray cleaner
- M317  Powered instrument lubrication
- M306  Autoclavable box 36cmL, 22cmW, 9cm D

DESOUTTER ORTHOPAEDIC EQUIPMENT

Desoutter is a long established U.K. company providing high quality air driven equipment for orthopaedic surgeons. The modular MPZ system provides a larger range of accessories than the Minidriver at a very competitive price.

- MPZ224884  Multidrive MPZ handpiece
- MZ9510  Small Jacobs Chuck Attachment max 4.0mm
- MZ9510  Large Jacobs Chuck Attachment max 6.3mm
- MPZ9520  AO Attachment
- MPZ9580  Sagittal Saw Attachment
- MPZ9640  Reciprocating Saw Attachment
- MPZ9560  Wire Driver Attachment 0.6 to 1.8mm
- MPZ9600  Pin Driver Attachment 1.8 to 3.2mm
- MPZ10900  3 metre hose MA7 fitting

USED AIR EQUIPMENT

We often have good quality pre-owned items in stock.

Please call for details

3M, DeSoutter and Surgairtome II are registered trade marks

BLADES

All blades are manufactured by Desoutter, whose quality is excellent.

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All surgical burs have a 2.36mm shank (HP fitting) and will fit in all high speed surgical bur machines e.g. 3M's Minos, Halls Surgairtome and Dremel. We have selected Komet burs for their high quality. All are single patch. Non sterile

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Typically surgeons use a large bur, 4-6mm, to debulk and a small bur 2-3mm for precise clearing. Use a bur brush to keep the bur clean. A315
SURGERY OF THE SPINE

Surgery of the spine in the cat and the dog can be readily performed in general practice provided that appropriate skills and instrumentation are available. Diagnostic skills and equipment are of course equally important. Myelography is another procedure which is not particularly difficult and can be very rewarding. However, myelography perhaps should only be performed if the means to correct the problem is available. Spinal surgery is an increasingly common topic at CPD meetings and courses. Equipped with knowledge and some instruments, practice (initially on cadavers) makes perfect.

Many procedures can be performed using hand instruments only, e.g., fenestration of cervical and thoraco/lumbar discs. Even hemilaminectomies and slotting can be done manually provided that the correct instruments and time are available. Access to high speed drills and burs does, however, make life easier. The choice of power tools is very difficult with a wide range of options. Important criteria include drill speed, bur range, ease of sterilising and expense.

Veterinary Instrumentation has assembled a range of hand instruments and surgical power tools which will enable the veterinary surgeon to perform most spinal procedures. The range is such that if you do not know exactly what you require ask for a selection on a sale or return basis. Simon Wheeler’s book is an excellent guide

DREMEL BUR SYSTEM (IMPROVED)

For the occasional spinal surgeon, this budget system performs very well. The burs run at 0 - 22,000 rpm controlled via a foot pedal and the flexidrive is easy to use. Now supplied with removable, autoclavable handpiece. Use sterile autoclavable film to shroud the flexible shaft.

001640 Dremel System complete with foot control, flexible drive, autoclavable handpiece and the following burs:

- 2.3mm carbide bur x 1
- 2.7mm carbide bur x 2
- 6.0mm carbide bur x 1

When you are cutting more than one back per month think about a Minos/Surgairtome. See page 54.
**PERCUSSION MALLET**

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

001322  Percussion mallet

**DUCK-BILLED DANIEL RONGEURS**

Designed by Simon Wheeler BVSc PhD, these rongeurs can remove full thickness laminal 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.

001400  Duck-billed Daniel Rongeurs

**DANIEL RONGEUR**

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

001402  Daniel Rongeurs

**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-verterbral foramen. Available in 2, 3, 4 and 5mm jaw widths.

001429  Compound action spinal rongeurs 2mm
001430  Compound action spinal rongeurs 3mm
001431  Compound action spinal rongeurs 4mm
001440  Compound action spinal rongeurs 5mm

**SMITH KERRISON PUNCH FORCEPS 2MM**

Robust spine forceps. Good quality and excellent value.

001445  Smith Kerrison punch forceps 2mm
CHAPTER 6 - SPINAL SURGERY

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 to minimise trauma to the spinal cord.
* Available in jaw widths of 2, 3 and 4mm.
* Stronger than Duck-billed Daniels.

001432 Laminectomy Rongeurs 2mm
001433 Laminectomy Rongeurs 3mm
001434 Laminectomy Rongeurs 4mm

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.

001435 Spine Punch Forceps 2mm upward cut
001436 Spine Punch Forceps 3mm upward cut
001437 Spine Punch Forceps 3mm upward cut

40 DEGREE BONE PUNCH

From a surgical standpoint the foot should be as small as possible, for strength the foot needs to be as large as possible. The wedge shape is a good compromise. In addition the foot is polished to minimize friction and trauma to the spine.

001438 Spine Punch Forceps 2mm 40 upward cut
001439 Spine Punch Forceps 3mm 40 upward cut
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.

6730/10 Lempert Rongeur 190mm

MINI FRIEDMAN
Very fine rongeurs for incremental removal of bone overlying the spine

142501 Mini friedman

GELPI ODD LEG RETRACTORS
One arm (short) engages the neural spine, the other (long) retracts the longissimus dorsi muscles. Supplied in pairs.

001333 Odd leg gelpi (pair)
001334 Odd leg gelpi - small (pair)

CONE LAMINECTOMY RETRACTORS
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.

001335 Cone Laminectomy Retractor
CHAPTER 6 - SPINAL SURGERY

FREER PERIOSTEAL ELEVATOR

Finer than a standard orthopaedic elevator, this instrument is useful in cats and miniature dogs. Particularly good around the spine.

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.

HOUSE CURETTE

The House Curette is a strong small curette to lift bone from around the spinal cord.

ROSENS 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.

SHEAS CURETTE

Fenestration of discs, particularly cervical discs, can be a useful procedure. The Sheas curette is a very small scoop.

YOUNGER GOOD SCALER, JAQUETTE SCALER

Both instruments are recommended by Simon Wheeler for the removal of wafer thin bone overlying the spinal cord during laminectomy. The scaler is blunt backed and useful for removal of disc material from both disc spaces and neural canal.

7350/05 Freer Elevator
001409 Dandy Nerve Hook
7262/05 House Curette
001272 Very fine periosteal elevator

001420 Rosen mobiliser

001410 Sheas Curette

001422 Younger Good Scaler
001424 Small Jaquette Scaler 34/35

63
WOBBLERS

At the present time distraction fusion techniques 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.

- **090250** Mckee washer 6mm
- **090251** Mckee washer 7.5mm
- **090255** Distractor for 6.0mm washer
- **090256** Distractor for 7.5mm washer
- **090257** Mckee distractor with speedlock - the odd legs of this dedicated distractor engage the intravertebral space proximal to and distal 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. See page 101 - 102

BONE WAX

It will not help you if you hit a venous sinus but will control the seepage of blood from cut cancellous bone which obscures the visual field

- **001460** Bone wax (12 x 2.5g)

SURGICAL ‘CORE SKILLS’ TRAINING

Throughout the year we will be offering professionally tutored training courses covering key areas of surgical expertise. The courses will all be ‘hands on’ based on our experience of many years running and supporting wet labs both in the UK and overseas. The venue will be our own custom built training facility at Veterinary Instrumentation. Areas to be covered include.

- External Fixation
- Fracture Fixation with Plates and Screws
- Interlocking Nails
- Arthroscopy
- Dentistry

Phone for details or view our web page www.vetinst.com/coreskills.htm
7 - IMPLANTS AND SCREWS

STAINLESS EQUIPMENT BOXES

The design of this stainless lidded box is such that steam can circulate freely to ensure complete sterility. The standard size is 250mm x 150mm x 40mm, which fits all typical veterinary autoclaves. A range of boxes has been developed to house plating equipment and implants for each screw size system. Also available to store and sterilise external fixation equipment.

Suffix CS is for AO type cortical screw equipment. Suffix CSST for self-tapping AO type cortical screw equipment. Suffix ST is for self-tapping (sherman) type equipment.

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<td>BX25055</td>
<td>Standard Box Deep 250 x 150 x 55mm</td>
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<td>BX1520CS</td>
<td>Small Box fitted for 1.5 &amp; 2.0 cortical screws &amp; equipment</td>
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<td>Small Box fitted for 2.0 self tapping screws &amp; equipment</td>
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<td>BX27CS</td>
<td>Standard Box fitted for 2.7 cortical screws &amp; equipment</td>
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<tr>
<td>BX27ST</td>
<td>Standard Box fitted for 2.7-7/64 self tapping screws &amp; equipment</td>
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<td>BX2735CS</td>
<td>Standard Box fitted for 2.7 and 3.5 cortical screws &amp; equipment</td>
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INSTRUMENT BOXES

Stainless steel in construction with a bacterial filter in the base. The filter allows steam to enter and water vapour to leave but excludes bacteria. Available in a range of sizes to suit most instrument sets and autoclaves.

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<td>BX402070</td>
<td>Box 400mm x 200mm x 70mm</td>
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**SCREW BOX**

This stainless steel screwbox securely holds both self tapping and cortical screws. Available for all sizes of screws. Marked either metric for cortical screws or for Sherman type self tapping screws. Each box is marked with screw measuring scale.

Suffix CS is for AO type cortical screw equipment, suffix ST is for self-tapping (sherman) type equipment.

- **SH2000CS** Screw box for 2.0mm screws
- **SH2000ST** Screw box for 2.0mm screws
- **SH2700CS** Screw box for 2.7mm screws (6-34mm)
- **SH2700ST** Screw box for 2.7mm screws
- **SH3500CS** Screw box for 3.5mm screws (10-28mm)
- **SH3500ST** Screw box for 3.5mm screws
- **SH2735CS** Screw box for 2.7/3.5mm screws
- **SH2735ST** Screw box for 2.7/3.5mm screws
- **SH202735CS** Screw box for 2.0/2.7/3.5mm screws
- **SH202735ST** Screw box for 2.0/2.7/3.5mm screws
- **SH4500CS** Screw box for 4.5mm screws (14-36mm)
- **SH4565CS** Screw box for 4.5/6.5mm screws (14-60mm)
- **SH3540** Screw box for 3.5 cortical and cancellous screws (10-60mm)

**NEEDLE BOXES (AUTOCLAVABLE)**

Available in polypropylene or stainless steel.

- **NDLBOX** Needle box - stainless steel 70mm x 45mm
- **091149** Needle box - polypropylene 55mm x 40mm

**FINGERED SILICONE INSERT**

Autoclavable silicone insert to protect delicate instruments.

- **BXSil100** Fingered silicone insert for 200x100 box

**Other sizes to order**
CHAPTER 7 - IMPLANTS AND SCREWS

IMPLANTS

For many years, veterinary orthopaedics have been complicated by the use of two incompatible plating systems; AO/ASIF type cortical screws plus compression type plates, and self tapping screws plus Sherman and Venables type plates. The two systems differed both in their metallurgy and their strength. All our implants are now made from stainless steel of the latest human specification, exceeding DIN 17443 and ISO 5832/1 (all are versions of stainless 316LV). This is the same specification material used by other manufacturers. In addition where international standards have been applied to screw threads eg 3.5 cortical (DIN 58812) our implants meet these standards. It is now safe to use implants from a variety of sources provided they meet the above specifications. All implants made in Europe must be compatible with each other. Round hole plates may be used with cortical screws, only corticocancellous screws can be used to achieve compression using compression plates.

Which Screw?

To minimise confusion regarding ordering, we have given our implants codes which accurately describe the item in question. For example: C2706052 is a compression plate for 2.7 screws which has 6 holes and is 52mm long. To further assist in decision making and ordering, templates are printed on the inside of the front cover which show the exact shape of all the plates available. Each outline is described by its own code. Acrylic overlays marking these templates for use during fracture planning with radiographs are available free of charge from Veterinary Instrumentation.

SCREWDRIVERS & SLEEVES FOR SLOTTED SCREWS (SHERMAN TYPE)

Self tapping screws can be somewhat fiddly to start, particularly the smaller ones. Screwdrivers with screwholding sleeves hold the screw until the threads are engaged. Once the self tapping process has started, the sleeve is pulled back, releasing the screw.

- **SDF200** Screwdriver for 2.0mm screws
- **SSF201** Screwholding sleeve for 2.0mm screws
- **SDF270** Screwdriver for 7/64 screws
- **SDF350** Screwdriver for 9/64 sherman screws.
- **SSF2740** Screwholding sleeve for 2.7 and 3.5 screws
CRUCIATE SCREWDRIVER

Designed to fit the 3.5mm cruciate head. Will not fit the 2.7mm self tapping screw. Screw holding sleeves do not work with the cruciate screwdriver.

SDC3500  3.5 cruciate screwdriver

2MM SELF TAPPING SYSTEM (SHERMAN)

The 2mm self tapping system enables the veterinary surgeon to plate effectively the bones of cats and miniature dogs without involving prohibitive costs. The range includes "T" plates, cuttable plates and reconstruction plates.

2MM SELF TAPPING KIT (SHERMAN)

Contains within a dedicated equipment/screw box all of the equipment listed below plus a range of 2mm plated and screws

STAPKIT2.0 2mm Self Tapping Kit

SDF200  2mm flat head screwdriver
SSF201  Screwholding sleeve
090111  Pilot drill 1.6mm
090102  Clearance drill 2.0mm

2mm screws - see subsequent panels
2mm bone plates - see subsequent panels

2MM SELF TAPPING SCREWS (SHERMAN)

Used in conjunction with our 2mm bone plates, 2mm self tapping screws allow the veterinary surgeon to plate the long bones of small patients or the small bones of larger patients. Until now this has been possible only with sophisticated equipment.

ST2006  6mm
ST2008  8mm
ST2010  10mm
ST2012  12mm
ST2014  14mm
ST2016  16mm
ST2018  18mm
ST2020  20mm
2MM BONE PLATES (ROUND HOLES)

Available in a wide range of sizes, the 2mm plates used with either 2mm self-tapping screws or 2mm cortical screws, provides for the secure repair of the small bones of the dog and cat. See template for details.

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</tr>
<tr>
<td>PR200525</td>
<td>5</td>
<td>25mm</td>
</tr>
<tr>
<td>PR200528</td>
<td>5</td>
<td>28mm</td>
</tr>
<tr>
<td>PR200630</td>
<td>6</td>
<td>30mm</td>
</tr>
<tr>
<td>PR200633</td>
<td>6</td>
<td>33mm</td>
</tr>
<tr>
<td>PR200735</td>
<td>7</td>
<td>35mm</td>
</tr>
<tr>
<td>PR200738</td>
<td>7</td>
<td>38mm</td>
</tr>
<tr>
<td>PR200840</td>
<td>8</td>
<td>40mm</td>
</tr>
<tr>
<td>PR200843</td>
<td>8</td>
<td>43mm</td>
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<tr>
<td>CP205150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CM205150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.7MM - 7/64" SELF TABBING SYSTEM (SHERMAN)

This system of screws and plates utilises the familiar 7/64" self tapping screw. The head has a single slot. Until now the available bone plates for this screw were extremely limited, the plates were too weak with too few holes. A wide range of plates are now available, including "T" plates and reconstruction plates.

<table>
<thead>
<tr>
<th>CODE</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDF270</td>
<td>Flat head screwdriver</td>
</tr>
<tr>
<td>SSF271</td>
<td>Screwholding sleeve</td>
</tr>
<tr>
<td>090103</td>
<td>2.4mm pilot hole drill</td>
</tr>
<tr>
<td>090104</td>
<td>2.7mm clearance hole drill</td>
</tr>
</tbody>
</table>

2.7mm/7/64" bone screws - see subsequent panels
2.7mm/7/64" round hole plates - see subsequent panels.
2.7MM - 7/64" SELF TAPPING SCREWS (SHERMAN)

For use with 2.7mm - 7/64" round hole plates in small to medium patients.

<table>
<thead>
<tr>
<th>CODE</th>
<th>HOLES</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
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<td>ST2722</td>
<td>22mm</td>
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<td>ST2731 31mm</td>
</tr>
<tr>
<td>ST2734</td>
<td>34mm</td>
<td>ST2738 38mm</td>
</tr>
<tr>
<td>ST2741</td>
<td>41mm</td>
<td>ST2744 44mm</td>
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<tr>
<td>ST2757</td>
<td>57mm</td>
<td></td>
</tr>
</tbody>
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2.7MM ROUND HOLE PLATE 6mm wide 2mm thick

Bone plates for 2.7mm or 7/64" screws usually have too few holes in the wrong places! The 2.7mm round hole plate has holes at 6mm intervals in a range of lengths. These plates are stronger than Sherman plates. See template for details.

<table>
<thead>
<tr>
<th>CODE</th>
<th>HOLES</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
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<td>15mm</td>
</tr>
<tr>
<td>PR270424</td>
<td>4</td>
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<td>PR270427</td>
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<td>27mm</td>
</tr>
<tr>
<td>PR270530</td>
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<td>30mm</td>
</tr>
<tr>
<td>PR270533</td>
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<td>33mm</td>
</tr>
<tr>
<td>PR270636</td>
<td>6</td>
<td>36mm</td>
</tr>
<tr>
<td>PR270639</td>
<td>6</td>
<td>39mm</td>
</tr>
<tr>
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<td>PR270745</td>
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<td>45mm</td>
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<tr>
<td>PR270851</td>
<td>8</td>
<td>51mm</td>
</tr>
<tr>
<td>CP276150</td>
<td>2.7/7/64&quot; Cuttable plate 24 holes 150mm</td>
<td></td>
</tr>
<tr>
<td>CM276150</td>
<td>2.7/7/64&quot; Cuttable malleable plate 24 holes x 150mm</td>
<td></td>
</tr>
</tbody>
</table>
2.7MM HEAVY DUTY ROUND HOLE PLATE

Slightly wider than the standard 2.7 round hole plate and available in longer sections, this plate is suitable for applications where extra strength is required, e.g. neutralisation of buttress fixation of long bones.

<table>
<thead>
<tr>
<th>Holes</th>
<th>Length mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPR270744</td>
<td>7</td>
</tr>
<tr>
<td>HPR270750</td>
<td>7</td>
</tr>
<tr>
<td>HPR270850</td>
<td>8</td>
</tr>
<tr>
<td>HPR270856</td>
<td>8</td>
</tr>
<tr>
<td>HPR270956</td>
<td>9</td>
</tr>
<tr>
<td>HPR270962</td>
<td>9</td>
</tr>
<tr>
<td>HPR271062</td>
<td>10</td>
</tr>
<tr>
<td>HPR271068</td>
<td>10</td>
</tr>
<tr>
<td>HPR201168</td>
<td>11</td>
</tr>
<tr>
<td>HPR271174</td>
<td>11</td>
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<tr>
<td>HPR271274</td>
<td>12</td>
</tr>
<tr>
<td>HPR271280</td>
<td>12</td>
</tr>
</tbody>
</table>

3.5MM 9/64" SELF TAPPING SCREWS (SHERMAN)

Although looked down upon by some orthopaedic surgeons, the 9/64" Sherman bone screw has a very similar pull out resistance to 3.5mm cortical screws. The main problem with this screw has been the lack of suitable bone plates. Our new range of 3.5mm round hole bone plates widens the scope of these self tapping screws considerably. Use flat screwdriver SDF350 or cruciate screwdriver SDC3500.

<table>
<thead>
<tr>
<th>Length mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST3510</td>
</tr>
<tr>
<td>ST3516</td>
</tr>
<tr>
<td>ST3522</td>
</tr>
<tr>
<td>ST3528</td>
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<tr>
<td>ST3534</td>
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<tr>
<td>ST3541</td>
</tr>
<tr>
<td>ST3548</td>
</tr>
<tr>
<td>ST3557</td>
</tr>
</tbody>
</table>
3.5MM STANDARD ROUND HOLE PLATES

Stronger and cheaper alternative to 3.5 compression plates. Material compatible with cortical and Sherman screws. If compression is unnecessary or undesirable use a round hole plate.

<table>
<thead>
<tr>
<th>CODE</th>
<th>HOLES</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3502022</td>
<td>2</td>
<td>22mm</td>
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<tr>
<td>P3504046</td>
<td>4</td>
<td>46mm</td>
</tr>
<tr>
<td>P3504052</td>
<td>4</td>
<td>52mm</td>
</tr>
<tr>
<td>P3505058</td>
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<td>58mm</td>
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<tr>
<td>P3505064</td>
<td>5</td>
<td>64mm</td>
</tr>
<tr>
<td>P3506070</td>
<td>6</td>
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<td>P3506076</td>
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<td>P3507082</td>
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<td>P3507088</td>
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<td>P3508094</td>
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<td>118mm</td>
</tr>
<tr>
<td>P3510130</td>
<td>10</td>
<td>130mm</td>
</tr>
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</table>

3.5MM HEAVY DUTY PLATE ROUND

HOLES 12mm wide 4mm thick

The heavy duty plate is stronger than either 3.5mm compression plate or our 3.5mm standard round hole plate. Use of this plate makes 3.5mm cortical or 9/64” Sherman screws appropriate in even the largest canine breed.

<table>
<thead>
<tr>
<th>CODE</th>
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<tbody>
<tr>
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<td>H3509117</td>
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<td>117mm</td>
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<tr>
<td>H3510130</td>
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<tr>
<td>H3511143</td>
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<td>143mm</td>
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<td>H3512156</td>
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<td>156mm</td>
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<tr>
<td>H3513169</td>
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<td>H3514180</td>
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<tr>
<td>H3515195</td>
<td>15</td>
<td>195mm</td>
</tr>
</tbody>
</table>
CHAPTER 7 - IMPLANTS AND SCREWS

VENABLES PLATE

Stronger than the Sherman plate, the Venables range is smaller. Veterinary Instrumentation has added three plates with odd numbers of holes which can be useful where the fracture is in the distal 1/3 of the bone.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SIZE</th>
<th>HOLES</th>
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<td>114</td>
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<td>89</td>
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<td>76</td>
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<td>64</td>
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<td>45</td>
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<tr>
<td>090191</td>
<td>2</td>
<td>1.25</td>
<td>32</td>
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</tr>
</tbody>
</table>

SHERMAN PLATES

Widely used but lack strength when stressed. Use in a non-load bearing situation. Use with any appropriately sized bone screws.

<table>
<thead>
<tr>
<th>CODE</th>
<th>SIZE</th>
<th>HOLES</th>
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<td>140</td>
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<td>4.5/8</td>
<td>117</td>
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<td>6</td>
<td>4.5/8</td>
<td>117</td>
</tr>
<tr>
<td>090044</td>
<td>3</td>
<td>6</td>
<td>4.5/8</td>
<td>117</td>
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<td>090045</td>
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<td>6</td>
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<td>3</td>
<td>1.3/8</td>
<td>35</td>
</tr>
<tr>
<td>090053</td>
<td>12</td>
<td>2</td>
<td>1.1/4</td>
<td>32</td>
</tr>
</tbody>
</table>
COMPRESSION PLATES AND CORTICAL SCREWS (AO TYPE)

By carefully positioning screws within the special holes of compression plates, compression can be exerted at the reduced fracture site as the screw is tightened. As the head of the screw strikes the edge of the hole in the plate, the screw (and the associated bone) are forced away from the edge of the hole and towards the fracture site.

The object of compression is to provide for primary bone union. A special guide must be used to position accurately the screw hole within the plate. Holes for cortical screws must be pre-tapped prior to screw placement.

- **Basic cortical kit 1.5/2.0mm**
- **Basic cortical kit 2.0mm**
- **Basic cortical kit 2.7/3.5mm**
- **Basic cortical kit 4.5mm**
- **Full kit 1.5/2.0mm**
- **Full kit 2.0mm**
- **Full kit for self tapping 2.0 screws**
- **Full kit 2.7/3.5mm**
- **Full kit for self tapping 2.7/3.5 screws and plates**
- **Full kit 4.5mm**

TAPS

- **TD0015** 1.5mm cortical tap (dental fit)
- **TD0020** 2.0mm cortical tap (dental fit)
- **TS00027** 2.7mm cortical tap
- **TS12535** 3.5mm (1.25 pitch) cortical tap
- **TS17535** 3.5mm (1.75 pitch) cancellous tap
- **TS00040** 4.0mm cancellous tap
- **TS00045** 4.5mm cortical tap

All above require a handle (see below)

- **TT0015** T bar 1.5mm cortical
- **TT0020** T bar 2.0mm cortical
- **TT0027** T bar 2.7mm cortical
- **TT12535** T bar 3.5mm (125 pitch) cortical
- **TT17535** T bar 3.5mm (175 pitch) small cancellous
- **TT0045** T bar 4.5mm cortical

QUICK RELEASE TAP HANDLE SYNTHES FIT

Fits all taps, 2.7, 3.5, 4.0 and 4.5mm. For 1.5 & 2.0mm use dental quick release chuck or 001223 Pin vice.

- **QRCS01** Handle for 2.7, 3.5, 4.0 and 4.5 mm taps
QUICK RELEASE TAP HANDLE DENTAL FIT

Fits dental fit taps and screwdriver.

- DC20 Dental tap handle
- SDD1500 2.0/1.5mm screwdriver insert
- DCCOU1520 1.5/2.0mm countersink insert

NB Small pin vice (see page 21) will also accept the above inserts but does not work quite so well.

DRILL GUIDES AND INSERTS

Use of an appropriate sized drill guide enables the surgeon to control exactly the entry and exit points of drills. This ability is extremely important in lag screwing.

Various insert sleeves are available for each drill size, with an accurate guidance system, and provide exact positioning of holes for lag screwing. (e.g. for a 3.5mm cortical screw, drill 3.5 lag hole in proximal cortex, insert SL3525 and drill through it into the trans cortex. Finally tap and insert screw.)

Our Adjustable Drill Guide allows accurate placement of drill holes by predetermination of drill entry and exit points. Locks onto bone to minimise errors. Use insert sleeves for drills less than the maximum diameter. The scale on the back of the instrument indicates screw length required.

- CEG2735 Small drill guide i/d 3.5mm
- SL2720 Insert sleeve 2.7mm o/d 2.0mm i/d
- SL3520 Insert sleeve 3.5mm o/d 2.0mm i/d
- SL3525 Insert sleeve 3.5mm o/d 2.5mm i/d
- SL2015 Insert sleeve 2.0mm o/d 1.5mm i/d
- CEG4565 Large drill guide i/d 6.5mm
- SL6545 Insert sleeve 6.5mm o/d 4.5mm i/d
- SL4532 Insert sleeve 4.5mm o/d 3.2mm i/d
- ADJDG35 Adjustable drill guide - max drill 3.5mm
- ADJDG45 Adjustable drill guide - max drill 4.5mm
- ADJSL55 Slider for use with 5.5 cortical screws - use with ADJDG45

TRIPLE DRILL GUIDES

- SLG1115 Position guide 1.1/1.5mm drills/wires
- SLG0020 Position guide 2.0mm drills/wires
- SLG0025 Position guide 2.5mm drills
HEX SCREWDRIVERS & SCREWHOLDING SLEEVES

Screwdrivers with screw holding sleeves hold the screw until it has engaged in the threaded hole.

The sleeve is slid back up the shaft to release the screw without disengaging it.

- SDD1520  1.5mm Dental fit attachment 1.5/2mm screw
- SDH1520  1.5 hex screwdriver for 1.5 & 2.0mm screws
- SSH2000  Screw sleeve for 2.0mm screws
- SDH2535  2.5 hex screwdriver for 2.7/3.5/4.0mm screws
- SSH2740  Screw sleeve for 2.7/3.5/4.0mm screws
- SDH3500  3.5 hex screwdriver for 4.5/6.5mm screws
- SSH4500  Screw sleeve for 4.5/6.5mm screws

TISSUE PROTECTION SLEEVES

Rotating pins, drills and taps will "pick up" soft tissues, skin, muscle, nerve and blood vessels, causing serious damage. Use of tissue protection sleeves minimises such damage. The teeth at the top of the guide locate on the bone whilst the stainless tube provides a barrier between soft tissue and implant equipment.

- TP2020  Sleeve for drills/taps to 2.0mm
- TP0027  Sleeve for drills/taps to 2.7mm
- TP0035  Sleeve for drills/taps to 3.5mm
- TP0045  Sleeve for drills/taps to 4.5mm

DEPTH GAUGE

Accurate measurement of hole depth is essential in order to select the appropriate screw size. A range of gauges is available for various screw sizes. Hole depth is read from the instrument. The gauge assumes the presence of a plate when advising screw length. Use in self-tapping or cortical systems

- DG2027  Depth gauge for 2mm and 2.7mm screws
- DG2735  Depth gauge for 2.7mm and 3.5mm screws
- DG4565  Depth gauge for 4.5mm and 6.5mm screws
LOAD NEUTRAL DRILL GUIDES

To exert compression at the fracture site, the cortical screw must be positioned precisely within the slot in the compression plate. The load/neutral drill guide has two tips, one for compression (load) and one where no compression is exerted (neutral). There is one combination for each screw/plate size. Each guide is marked with the drill size to be used.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNDG20</td>
<td>load/neutral drill guide for 2mm plates</td>
</tr>
<tr>
<td>LNDG27</td>
<td>load/neutral drill guide for 2.7mm plates</td>
</tr>
<tr>
<td>LNDG35</td>
<td>load/neutral drill guide for 3.5mm plates</td>
</tr>
<tr>
<td>LNDG45</td>
<td>load/neutral drill guide for 4.5mm plates</td>
</tr>
</tbody>
</table>

COUNTERSINKS

If the screw is destined to screw down onto the surface of the bone without a plate, it is helpful to contour the top of the screw hole to fit the screw head. This procedure is especially important when lag screwing relatively small fragments. Failure to countersink may lead to fracture of the bone fragment.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>COU2535</td>
<td>Small countersink 2.7/3.5/4.0mm</td>
</tr>
<tr>
<td>COU4565</td>
<td>Large countersink 4.5/6.5mm</td>
</tr>
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<td>COUDEN</td>
<td>Countersink dental fit for 2.0/1.5mm screws</td>
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</tbody>
</table>

2MM CORTICAL SCREWS AND EQUIPMENT

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDH1500</td>
<td>1.5mm hex screwdriver for 2mm screws</td>
</tr>
<tr>
<td>SSH2000</td>
<td>2mm screw holding sleeve</td>
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<tr>
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<td>090102</td>
<td>Clearance hole drill 2.0mm</td>
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<tr>
<td>S090101</td>
<td>Synthes fit pilot hole drill 1.5mm</td>
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<td>S090102</td>
<td>Synthes fit clearance hole drill 2.0mm</td>
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<tr>
<td>DG2027</td>
<td>Depth gauge for 2.0mm and 2.7mm screws</td>
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1.5MM CORTICAL SCREWS

Available 6mm to 34mm length.

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<tr>
<td>CS1534</td>
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2MM CORTICAL SCREWS

Available 6mm to 34mm length, the spherical head of these screws provides for compression when used in association with 2mm compression plates.

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<td>CS2034</td>
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2MM SELF TAPPING CORTICAL SCREWS

This type of screw is becoming increasingly popular in both human and veterinary orthopaedics. Self tapping flutes at the tip obviate the need for pre-tapping which saves time and reduces time related complications. Pull out strength is not affected. Drill data; pilot drill 1.5mm, clearance drill 2.0mm

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2.2MM CANCELLOUS SCREWS

Available 6mm to 24mm length. Self tapping.

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1.5/2MM COMPRESSION PLATES

Use with 2mm cortical screws if compression is required.

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<td>CP201052</td>
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<td>CP201262</td>
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MINI BONE PLATES

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<td>MP20635</td>
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2.7MM CORTICAL SCREWS AND EQUIPMENT

SDH2540  2.5mm hex screwdriver
SSH2740  2.7mm screw holding sleeve
TS00027  2.7mm tap
QRCS01   Tap holder Synthes fit
090102   2.0mm pilot drill round shaft
090103   2.7 clearance drill round shaft
S090102  2.0mm pilot drill Synthes fit
S090103  2.7mm clearance drill Synthes fit
TS00027  Load/neutral guide
DG2735   Depth gauge for 2.7/3.5mm screws

2.7MM CORTICAL SCREWS

Use with 2.7mm compression and 2.7mm reconstruction plates to obtain compression at fracture site.

CS2706  6mm  CS2708  8mm
CS2710  10mm CS2712  12mm
CS2714  14mm CS2716  16mm
CS2718  18mm CS2720  20mm
CS2722  22mm CS2724  24mm
CS2726  26mm CS2728  28mm
CS2730  30mm CS2732  32mm
CS2734  34mm CS2736  36mm
CS2738  38mm CS2740  40mm

2.7MM SELF TAPPING CORTICAL SCREWS

This type of screw is becoming increasingly popular in both human and veterinary orthopaedics. Self tapping flutes at the tip obviate the need for pre-tapping which saves time and reduces time related complications. Pull out strength is not affected.

CSST2706 6mm  CSST2708 8mm
CSST2710 10mm CSST2712 12mm
CSST2714 14mm CSST2716 16mm
CSST2718 18mm CSST2720 20mm
CSST2722 22mm CSST2724 24mm
CSST2726 26mm CSST2728 28mm
CSST2730 30mm CSST2732 32mm
CSST2734 34mm CSST2736 36mm
CSST2738 38mm CSST2740 40mm
2.7MM COMPRESSION PLATES

Use with 2.7mm cortical screws to produce fracture site compression.

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<tr>
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3.0MM CANCELLOUS SCREWS

Available 12mm to 36mm length. Self-tapping

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2.7MM QUARTER TUBULAR PLATE

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<td>T2705039</td>
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<tr>
<td>T2708063</td>
<td>8</td>
<td>63mm</td>
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</table>
3.5MM CORTICAL SCREWS AND
EQUIPMENT

SDH2540  2.5mm hex screwdriver for 2.7/3.5mm screws
SSH2740  Screw holding sleeve for 2.7/3.5/4mm screws
TS12535  3.5mm cortical tap
TS17535  3.5mm cancellous tap
QRCS01   Tap holder Synthes fit
090103   2.5mm pilot hole drill round
090102   2.0mm pilot hole drill round
090104   3.5mm clearance drill round
S090103  2.5mm pilot hole drill Synthes fit
S090102  2mm pilot hole drill Synthes fit
S090104  2.5mm clearance drill Synthes fit
LNDG35   Load/neutral guide
DG2735   Depth gauge 2.7mm/3.5mm

3.5MM CORTICAL SCREWS (1.25 PITCH)
DIN58812

Use with 3.5mm compression and 3.5 mm reconstruction plates to obtain fracture site compression.

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3.5MM SELF TAPPING CORTICAL SCREWS

This type of screw is becoming increasingly popular in both human and veterinary orthopaedics. Self tapping flutes at the tip obviate the need for pre-tapping which saves time and reduces time related complications. Pull out strength is not affected.

<table>
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3.5MM COMPRESSION PLATE

Use with 3.5mm cortical or 3.5mm cancellous screws to produce fracture compression.

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BROAD 3.5MM COMPRESSION PLATE

This plate is made from the same plate profile as the standard 4.5 compression plate but drilled for 3.5 screws. These plates are usually impossible to contour without a bone plate press or roller type pliers, see p.29

<table>
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CHAPTER 7 - IMPLANTS AND SCREWS

4MM CANCELLOUS SCREWS FULL THREADED

Use as cancellous screws where greater screw bone interface is desirable.

CNF4010 10mm CNF4012 12mm
CNF4014 14mm CNF4016 16mm
CNF4018 18mm CNF4020 20mm
CNF4022 22mm CNF4024 24mm
CNF4026 26mm CNF4028 28mm
CNF4030 30mm CNF4035 35mm
CNF4040 40mm CNF4045 45mm

4MM CANCELLOUS (PART THREADED)

CNP4010 10mm CNP4012 12mm
CNP4014 14mm CNP4016 16mm
CNP4018 18mm CNP4020 20mm
CNP4022 22mm CNP4024 24mm
CNP4026 26mm CNP4028 28mm
CNP4030 30mm CNP4035 35mm
CNP4040 40mm CNP4045 45mm

3.5MM CANCELLOUS SCREWS (1.75 PITCH)

The much coarser thread gives a much bigger "bite" to bone. Use on metaphysis or other cancellous bone. The screw needs its own tap.

CAN3510 10mm CAN3512 12mm
CAN3514 14mm CAN3516 16mm
CAN3518 18mm CAN3520 20mm
CAN3522 22mm CAN3524 24mm
CAN3526 26mm CAN3528 28mm
CAN3530 30mm CAN3532 32mm
CAN3534 34mm CAN3536 36mm
CAN3538 38mm CAN3540 40mm
CAN3545 45mm CAN3550 50mm
CAN3555 55mm CAN3560 60mm

HOLES LENGTH mm

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</tr>
<tr>
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<td>14mm</td>
</tr>
<tr>
<td>CAN3516</td>
<td>16mm</td>
</tr>
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<td>18mm</td>
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<td>CAN3520</td>
<td>20mm</td>
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<td>CAN3522</td>
<td>22mm</td>
</tr>
<tr>
<td>CAN3524</td>
<td>24mm</td>
</tr>
<tr>
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<td>26mm</td>
</tr>
<tr>
<td>CAN3528</td>
<td>28mm</td>
</tr>
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<td>30mm</td>
</tr>
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<td>32mm</td>
</tr>
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<td>CAN3534</td>
<td>34mm</td>
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<td>CAN3536</td>
<td>36mm</td>
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</tr>
<tr>
<td>CAN3550</td>
<td>50mm</td>
</tr>
<tr>
<td>CAN3555</td>
<td>55mm</td>
</tr>
<tr>
<td>CAN3560</td>
<td>60mm</td>
</tr>
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</table>
4.5MM CORTICAL SCREWS

The standard human cortical screw is suitable for very large dogs and equines. Because it is a human product made in large numbers, 4.5mm screws are relatively cheap.

<table>
<thead>
<tr>
<th>Code</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS4514</td>
<td>14mm</td>
</tr>
<tr>
<td>CS4518</td>
<td>18mm</td>
</tr>
<tr>
<td>CS4522</td>
<td>22mm</td>
</tr>
<tr>
<td>CS4526</td>
<td>26mm</td>
</tr>
<tr>
<td>CS4530</td>
<td>30mm</td>
</tr>
<tr>
<td>CS4534</td>
<td>34mm</td>
</tr>
<tr>
<td>CS4538</td>
<td>38mm</td>
</tr>
<tr>
<td>CS4542</td>
<td>42mm</td>
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<tr>
<td>CS4546</td>
<td>46mm</td>
</tr>
<tr>
<td>CS4550</td>
<td>50mm</td>
</tr>
<tr>
<td>CS4554</td>
<td>54mm</td>
</tr>
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<td>58mm</td>
</tr>
<tr>
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<td>64mm</td>
</tr>
<tr>
<td>CS4570</td>
<td>70mm</td>
</tr>
<tr>
<td>CS4580</td>
<td>80mm</td>
</tr>
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</table>

4.5MM CORTICAL SCREWS AND EQUIPMENT

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDH3500</td>
<td>3.5mm hex screwdriver for 4.5mm screws</td>
</tr>
<tr>
<td>SSH4500</td>
<td>Screwholding sleeve for 4.5mm screws</td>
</tr>
<tr>
<td>TS00045</td>
<td>4.5mm cortical tap</td>
</tr>
<tr>
<td>QCRC01</td>
<td>Tap holder Synthes fit</td>
</tr>
<tr>
<td>090106</td>
<td>3.2mm pilot hole drill round</td>
</tr>
<tr>
<td>090108</td>
<td>4.5mm clearance hole drill round</td>
</tr>
<tr>
<td>S090106</td>
<td>3.2mm pilot hole drill Synthes fit</td>
</tr>
<tr>
<td>S090108</td>
<td>4.5mm pilot hole drill Synthes fit</td>
</tr>
<tr>
<td>LNDG45</td>
<td>4.5mm load/neutral drill guide</td>
</tr>
<tr>
<td>DG4565</td>
<td>Depth gauge for 4.5mm screws</td>
</tr>
</tbody>
</table>

4.5MM NARROW COMPRESSION PLATE

Use with 4.5mm cortical screws to produce fracture site compression.

<table>
<thead>
<tr>
<th>CODE</th>
<th>Holes</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>C45239</td>
<td>2</td>
<td>39mm</td>
</tr>
<tr>
<td>C45355</td>
<td>3</td>
<td>55mm</td>
</tr>
<tr>
<td>C45471</td>
<td>4</td>
<td>71mm</td>
</tr>
<tr>
<td>C45587</td>
<td>5</td>
<td>87mm</td>
</tr>
<tr>
<td>C456103</td>
<td>6</td>
<td>103mm</td>
</tr>
<tr>
<td>C457119</td>
<td>7</td>
<td>119mm</td>
</tr>
<tr>
<td>C4508135</td>
<td>8</td>
<td>135mm</td>
</tr>
<tr>
<td>C4509151</td>
<td>9</td>
<td>151mm</td>
</tr>
<tr>
<td>C4510167</td>
<td>10</td>
<td>167mm</td>
</tr>
<tr>
<td>C4511183</td>
<td>11</td>
<td>183mm</td>
</tr>
<tr>
<td>C4512199</td>
<td>12</td>
<td>199mm</td>
</tr>
<tr>
<td>C4513211</td>
<td>13</td>
<td>211mm</td>
</tr>
<tr>
<td>C4514230</td>
<td>14</td>
<td>230mm</td>
</tr>
<tr>
<td>C4515246</td>
<td>15</td>
<td>246mm</td>
</tr>
<tr>
<td>C4516265</td>
<td>16</td>
<td>265mm</td>
</tr>
</tbody>
</table>

RECOMMENDED SCREWS 4.5mm dia CORTICAL
CHAPTER 7 - IMPLANTS AND SCREWS

BROAD 4.5MM COMPRESSION PLATE

<table>
<thead>
<tr>
<th>CODE</th>
<th>HOLES</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>B4505087</td>
<td>5</td>
<td>87mm</td>
</tr>
<tr>
<td>B4506103</td>
<td>6</td>
<td>103mm</td>
</tr>
<tr>
<td>B4507119</td>
<td>7</td>
<td>119mm</td>
</tr>
<tr>
<td>B4508135</td>
<td>8</td>
<td>135mm</td>
</tr>
<tr>
<td>B4509151</td>
<td>9</td>
<td>151mm</td>
</tr>
<tr>
<td>B4510167</td>
<td>10</td>
<td>167mm</td>
</tr>
<tr>
<td>B4511183</td>
<td>11</td>
<td>183mm</td>
</tr>
<tr>
<td>B4512199</td>
<td>12</td>
<td>199mm</td>
</tr>
<tr>
<td>B4513215</td>
<td>13</td>
<td>215mm</td>
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<tr>
<td>B4514231</td>
<td>14</td>
<td>231mm</td>
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<tr>
<td>B4515247</td>
<td>15</td>
<td>247mm</td>
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<tr>
<td>B4516263</td>
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<td>263mm</td>
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<tr>
<td>B4517279</td>
<td>17</td>
<td>279mm</td>
</tr>
<tr>
<td>B4518295</td>
<td>18</td>
<td>295mm</td>
</tr>
</tbody>
</table>

5.5MM CORTICAL SCREWS

This cortical screw is suitable for equines. Nearly twice as strong as 4.5mm cortical screws. Use with 4.5mm plates

<table>
<thead>
<tr>
<th>CODE</th>
<th>HOLES</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS5524</td>
<td>24</td>
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<td>CS5528</td>
<td>28</td>
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<td>CS5536</td>
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<td>CS5540</td>
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<td>CS5544</td>
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<td>CS5552</td>
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<td>56mm</td>
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<td>CS5560</td>
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<td>70</td>
<td>80mm</td>
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<tr>
<td>CS5590</td>
<td>90</td>
<td>100mm</td>
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</table>

5.5MM CORTICAL SCREWS

Drill Data pilot 4.0, clearance 5.5

RECONSTRUCTION PLATES

Reconstruction plates are designed for easy contouring. Notching between holes facilitates multiplanar bending. Useful for reconstruction of non-load bearing bone. Especially useful in the pelvis. The round hole 2.7mm and 2.0mm plates are particularly good value.

<table>
<thead>
<tr>
<th>CODE</th>
<th>HOLES</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM205150</td>
<td>30</td>
<td>150mm</td>
</tr>
<tr>
<td>RC270648</td>
<td>6</td>
<td>48mm</td>
</tr>
<tr>
<td>RC270864</td>
<td>8</td>
<td>64mm</td>
</tr>
<tr>
<td>RC271080</td>
<td>10</td>
<td>80mm</td>
</tr>
<tr>
<td>RC271596</td>
<td>12</td>
<td>96mm</td>
</tr>
<tr>
<td>CM267150</td>
<td>24</td>
<td>150mm</td>
</tr>
<tr>
<td>RC350558</td>
<td>5</td>
<td>58mm</td>
</tr>
<tr>
<td>RC350670</td>
<td>6</td>
<td>70mm</td>
</tr>
<tr>
<td>RC350782</td>
<td>7</td>
<td>82mm</td>
</tr>
<tr>
<td>RC350894</td>
<td>8</td>
<td>94mm</td>
</tr>
<tr>
<td>RC3510118</td>
<td>10</td>
<td>118mm</td>
</tr>
<tr>
<td>RC3512142</td>
<td>12</td>
<td>142mm</td>
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</table>
WASHERS

<table>
<thead>
<tr>
<th>Code</th>
<th>Diameter</th>
<th>Length</th>
<th>Eye diameter</th>
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<tbody>
<tr>
<td>SS2006</td>
<td>2.0mm</td>
<td>6mm</td>
<td>1.0mm</td>
</tr>
<tr>
<td>SS2010</td>
<td>2.0mm</td>
<td>10mm</td>
<td>1.0mm</td>
</tr>
<tr>
<td>SS2708</td>
<td>2.7mm</td>
<td>8mm</td>
<td>1.5mm</td>
</tr>
<tr>
<td>SS2714</td>
<td>2.7mm</td>
<td>4mm</td>
<td>1.5mm</td>
</tr>
<tr>
<td>SS3512</td>
<td>3.5mm</td>
<td>12mm</td>
<td>2.0mm</td>
</tr>
<tr>
<td>SS3520</td>
<td>3.5mm</td>
<td>20mm</td>
<td>2.0mm</td>
</tr>
<tr>
<td>SS4016</td>
<td>4.0mm</td>
<td>16mm</td>
<td>2.0mm canc</td>
</tr>
<tr>
<td>SS4024</td>
<td>4.0mm</td>
<td>24mm</td>
<td>2.0mm canc</td>
</tr>
</tbody>
</table>

Pilot Drill for 2.0 diameter screw 1.5mm
Pilot Drill for 2.7 diameter screw 2.0mm
Pilot Drill for 3.5 diameter screw 2.5mm
Pilot Drill for 4.0 diameter cancellous screw 2.0mm

also required;

SSIT20  2mm Insertion Tool
SSIT27  2.7mm Insertion Tool
SSIT3540 3.5/4.0 Insertion Tool

SUTURE SCREWS

Presentation is self-tapping screw with an eyed head. Use where a suture anchor would seem appropriate. Thread forms same as equivalent AO type

Coxo femoral luxations
Shearing injuries
Collateral ligament repairs
Anchor for CCL lateral sutures.
"T" PLATES

Available for 4.0, 3.5, 2.7 and 2.0mm screws, either cortical or self tapping. "T" plates are used almost exclusively for the repair of fractures of the distal radius. In addition they may also be used in a partial carpal arthrodesis.

TC204018 2.0mm "T" 4 hole 18mm
TC205024 2.0mm "T" 5 hole 24mm
TPLO202026 2.0mm DCP 26mm overall length
TL204018 2.0mm "T" 4 hole angle L 18mm
TR204018 2.0mm "T" 4 hole angle R 18mm
OL204018 2.0mm "T" 4 hole oblique L 18mm
OR204018 2.0mm "T" 4 hole oblique R 18mm
TC270532 2.7mm "T" 5 hole 32mm
TL270532 2.7mm "T" 5 hole angle L 32mm
TR270532 2.7mm "T" 5 hole angle R 32mm
OL270532 2.7mm "T" 5 hole oblique L 32mm
OR270532 2.7mm "T" 5 hole oblique R 32mm
TC270639 2.7mm "T" 6 hole 39mm
stronger than TC270532
TC270639C 2.7mm "T" plate with compression
TC350655 3.5mm "T" 6 hole 55mm
TC350777 3.5mm "T" 7 hole

See also TPLO plates (back cover)

BIOLOGICAL HEALING PLATES

These plates are designed to bridge a section of shattered long bone. No attempt is made to reconstruct. The fracture site is minimally disturbed to minimise de-vitalisation and contamination. The plate maintains length and permits weight bearing. Use of these plates avoids leaving empty screw holes over the fracture site which significantly weakens the construct.

<table>
<thead>
<tr>
<th>Codes</th>
<th>Screws</th>
<th>Holes</th>
<th>Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHP2008065**</td>
<td>2.0</td>
<td>8</td>
<td>65</td>
</tr>
<tr>
<td>BHP2707067</td>
<td>2.7</td>
<td>7</td>
<td>67</td>
</tr>
<tr>
<td>BHP2708075</td>
<td>2.7</td>
<td>8</td>
<td>75</td>
</tr>
<tr>
<td>BHP3507120</td>
<td>3.5/4.0</td>
<td>7</td>
<td>120</td>
</tr>
<tr>
<td>BHP3508130</td>
<td>3.5/4.0</td>
<td>8</td>
<td>130</td>
</tr>
<tr>
<td>BHP4507138</td>
<td>4.5</td>
<td>7</td>
<td>138</td>
</tr>
<tr>
<td>BHP4508150</td>
<td>4.5</td>
<td>8</td>
<td>150</td>
</tr>
</tbody>
</table>

**This plate is contoured for the average cat femur. Use when proximal and distal sections intact and the body of the femur is un-reconstructable.
ACETABULAR PLATES

Accurate repair of fractures of the acetabulum is essential if full function is to be restored and long term arthritic changes are to be avoided. Six sizes are available, singly or as a set. The plates are precontoured three dimensionally to ensure a good fit. Holes are round.

<table>
<thead>
<tr>
<th>CODE</th>
<th>NO.</th>
<th>DIAMETER</th>
<th>SCREW SIZE</th>
</tr>
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<tbody>
<tr>
<td>AP200400</td>
<td>0</td>
<td>2mm</td>
<td>4 holes</td>
</tr>
<tr>
<td>AP200401</td>
<td>1</td>
<td>2mm</td>
<td>4 holes</td>
</tr>
<tr>
<td>AP270602</td>
<td>2</td>
<td>2.7mm</td>
<td>6 holes</td>
</tr>
<tr>
<td>AP270603</td>
<td>3</td>
<td>2.7mm</td>
<td>6 holes</td>
</tr>
<tr>
<td>AP350604</td>
<td>4</td>
<td>3.5mm</td>
<td>6 holes</td>
</tr>
<tr>
<td>AP350605</td>
<td>5</td>
<td>3.5mm</td>
<td>6 holes</td>
</tr>
<tr>
<td>APSET</td>
<td></td>
<td></td>
<td>Complete set of six plates</td>
</tr>
</tbody>
</table>

2.0MM DISTAL FEMUR PLATE

Holes are 2.0mm compression. Plate tapers distally from 1.5mm to 1.0mm

- 152700 2.0mm distal femur plate R. length 50mm
- 152710 2.0mm distal femur plate L. length 50mm

PANTARSAL ARTHRODESI S PLATE

This plate is custom made and placed on the medial aspect of the joint. Draw your desired plate indicating plate size, position and size of holes and fax it to us with a scale. Alternatively trace the radiograph with a felt-tip and fax to us and we will design the plate for you. The angle will be 135 degrees unless otherwise specified. If faxing drawing please draw a line 100mm long on the sketch prior to transmission.

BONE PLATE CLIPS

- BPC2 Bone plate clip 2.0mm
- BPC27 Bone plate clip 2.7mm
- BPC35 Bone plate clip 3.5mm
CHAPTER 7 - IMPLANTS AND SCREWS

CARPAL ARTHRODESI S PLATE

Carpal arthrodesis is a regular procedure in veterinary orthopaedics. Standard plates tend to be either too big for the metacarpal or too small for the radius. Our range of carpal arthrodesis plates tries to give you the best of both worlds.

The taper on the distal part of the plate makes closure easier and automatically produces an angle of around 5 degrees.

Some surgeons prefer greater coverage of the metacarpals than is offered by our standard plates. We now offer an extra long plate which is 15mm longer entirely in the metacarpal segment.

152903 2.7/3.5mm Compression arthrodesis plate
152903XL 2.7/3.5mm Compression arthrodesis plate. Extended length for extra coverage of metacarpals
152904 2.7/3.5mm Round hole arthrodesis plate
152904XL 2.7/3.5mm Round hole arthrodesis plate. Extended length for extra coverage of metacarpals
152905 2.0/2.7mm Compression arthrodesis plate
152906 2.0/2.7mm Round hole arthrodesis plate
152907 3.5/3.5mm Compression arthrodesis plate
152908 3.5/3.5mm Round hole arthrodesis plate
152910 Carpal arthrodesis technique video by Hamish Denny.


For partial carpal arthrodesis try our TPLO plates (see back cover)

ORTHOPAEDIC WIRE

Cerclage wire is an extremely useful method of fragment fixation. Use as thick a wire as seems possible. Twist evenly under tension. The best instrument is our wire twister/cutter 001260 see p22..

Minimise wire movement on periosteum. Tension wire banding should be performed where muscular forces must be transferred beyond a fracture or osteotomy, eg Tibial crest avulsion or trochanteric osteotomy.

1.0mm wire is the most useful. All are supplied in 10 metre rolls.

<table>
<thead>
<tr>
<th>CODE</th>
<th>DIAMETER mm</th>
<th>GAUGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>OW0210</td>
<td>0.2mm</td>
<td>27</td>
</tr>
<tr>
<td>OW0410</td>
<td>0.4mm</td>
<td>26</td>
</tr>
<tr>
<td>OW0510</td>
<td>0.5mm</td>
<td>24</td>
</tr>
<tr>
<td>OW0610</td>
<td>0.6mm</td>
<td>22</td>
</tr>
<tr>
<td>OW0710</td>
<td>0.7mm</td>
<td></td>
</tr>
<tr>
<td>OW0810</td>
<td>0.8mm</td>
<td></td>
</tr>
<tr>
<td>OW0910</td>
<td>0.9mm</td>
<td></td>
</tr>
<tr>
<td>OW1010</td>
<td>1.0mm</td>
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<td>OW1012</td>
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<td>18</td>
</tr>
<tr>
<td>OW1015</td>
<td>1.5mm</td>
<td></td>
</tr>
</tbody>
</table>
CORTICAL NUTS

Occasionally tapped threads strip and a larger screw is appropriate. Lag screws are particularly vulnerable as only one cortex is available. A cortical nut manufactured from implant grade nylon, gives the screw purchase allowing normal tightening. The thread form is designed to grip the screw to minimise 'backing out'. Available in 2.7mm, 3.5mm and 4.5mm cortical thread forms. The 4.5 nut is also available in stainless steel.

CN27 2.7mm Cortical nut
CN35 3.5mm Cortical nut
CN45 4.5mm Cortical nut
above supplied single packed EO sterile
N45 4.5mm Cortical Nut S/S

WIRES WITH EYELET

The free end of the wire is threaded through the eye. The cerclage is tightened using the special tightener.

CWWE18 18 gauge x 12" - pack of six
CWWE20 20 gauge x 12" - pack of six
CWWE22 22 gauge x 12" - pack of six

requires 001262 wire tightener
For wire twisting instruments see page 22

ORMROD BUTTONS

Use to prevent sutures from “cheese wiring” through bone, eg at hip toggle. Made from surgical nylon.

090166 Ormrod button 8mm diameter

WEBB BOLT

Use where lag screw strips out. Supplied as a threaded rod, two nuts and two washers. Cut to length after tightening

092000A Webb bolt 5mm - use 5mm drill
092000 Webb bolt 4mm - use 4mm drill
092001 Webb bolt 3mm - use 3mm drill
092002 Webb bolt 2mm - use 2mm drill
ORTHOPAEDIC RULER

Used to measure pin, wire, drill and screw diameter. Supplied in either metric or imperial sizes.

001498  Imperial marked ruler for Sherman screws
001497  Metric marked ruler for AO type screws

001496  Screw and drill gauge for AO type screws and drills

DRILL BITS

Made from DIN 58812 stainless steel (the same as implants). The drill bits are compatible with all current plating systems. Replace drill every ten holes. Blunt drills cause heat necrosis. Cheap but do not last long.

ROUND SHANK
CODEDIA
090111  1.6mm
090101  1.5mm
090102  2.0mm
090103  2.4mm
090104  2.7mm
090105  3.2mm
090106  3.5mm
090107  4.0mm
090108  4.5mm
090118  4.8mm
090109  6.35mm
090112  2.5mm
090113  3.6mm
090115  Drill box stainless steel empty
090116  Drill box stainless steel complete with drills
DRILL BITS - HARD

Expensive but last a long time. All Synthes fit drills, and those round shank drills with a diameter of 3.2mm or more, come in short and long length.

**JACOBS CHUCK FIT**

<table>
<thead>
<tr>
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<td>95mm</td>
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<tr>
<td>HG09112</td>
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<td>Gold finish</td>
</tr>
<tr>
<td>H090104</td>
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<td>85mm</td>
</tr>
<tr>
<td>H090105S</td>
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<td>H090105L</td>
<td>3.2mm</td>
<td>180mm</td>
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<td>H090106S</td>
<td>3.5mm</td>
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<td>H090106L</td>
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</tr>
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<td>H090108S</td>
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**SYNTHES FIT**

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</tr>
<tr>
<td>S090108S</td>
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</tr>
<tr>
<td>S090108L</td>
<td>4.5mm</td>
<td>195mm</td>
</tr>
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**MINI DRILL BITS**

In stainless steel - hard.

**DENTAL FIT**

<table>
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<tr>
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<tbody>
<tr>
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</tr>
<tr>
<td>D090102</td>
<td>2.0mm</td>
</tr>
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</table>
CHAPTER 7 - IMPLANTS AND SCREWS

STEINMAN INTRAMEDULLARY PINS

Simple, cheap and often the best technique for the repair of long bones. The weakest part of pinning is that it has poor resistance to rotation. It may be helpful to add an external fixator for two weeks if in any doubt. Smooth pins are most likely to migrate. Our Trochar tips are designed to cut bone but care must be exercised to avoid heat necrosis during insertion. Can be cut in half to produce cheap ESF pins. Most pins chucks will only take 1/4" pins.

Trochar tips (12", 300mm length)

<table>
<thead>
<tr>
<th>CODESIZE</th>
<th>In.</th>
<th>SIZE mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>090000</td>
<td>1/16&quot;</td>
<td>1.6mm</td>
</tr>
<tr>
<td>090001</td>
<td>5/64&quot;</td>
<td>2.0mm</td>
</tr>
<tr>
<td>090002</td>
<td>3/32&quot;</td>
<td>2.4mm</td>
</tr>
<tr>
<td>090003</td>
<td>7/64&quot;</td>
<td>2.8mm</td>
</tr>
<tr>
<td>090004</td>
<td>1/8&quot;</td>
<td>3.2mm</td>
</tr>
<tr>
<td>090005</td>
<td>9/64&quot;</td>
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</tr>
<tr>
<td>090006</td>
<td>5/32&quot;</td>
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<tr>
<td>090007</td>
<td>3/16</td>
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</tr>
<tr>
<td>090008</td>
<td>1/4&quot;</td>
<td>6.35mm</td>
</tr>
<tr>
<td>090009</td>
<td>5/16&quot;</td>
<td>8.0mm</td>
</tr>
<tr>
<td>090153</td>
<td>15/64</td>
<td>6.0mm</td>
</tr>
</tbody>
</table>

Screw point / Trochar tip

<table>
<thead>
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<th>In.</th>
<th>SIZE mm</th>
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</thead>
<tbody>
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<td>1/16&quot;</td>
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</tr>
<tr>
<td>090011</td>
<td>5/64&quot;</td>
<td>2.0mm</td>
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<tr>
<td>090012</td>
<td>3/32&quot;</td>
<td>2.4mm</td>
</tr>
<tr>
<td>090013</td>
<td>7/64&quot;</td>
<td>2.8mm</td>
</tr>
<tr>
<td>090014</td>
<td>1/8&quot;</td>
<td>3.2mm</td>
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<tr>
<td>090015</td>
<td>9/64&quot;</td>
<td>3.6mm</td>
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<tr>
<td>090018</td>
<td>1/4&quot;</td>
<td>6.35mm</td>
</tr>
<tr>
<td>090019</td>
<td>5/16&quot;</td>
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</tr>
<tr>
<td>090153</td>
<td>15/64</td>
<td>6.0mm</td>
</tr>
</tbody>
</table>

DRILL CASE

Folding box to fit all the standard sizes of drill. Ideal for autoclaves. Imperial case is marked for soft implant drills. Metric case is designed for hard non-implant drills.

090116 Drill case - soft drills
090117 Drill case - hard drills
**BONE PIN ROLL**

Bone pin storage and sterilisation is difficult. Pins are long and sharp. The bone pin roll stores at least one of each pin. The bone pin roll will degrade with wear.

090038 Bone pin roll - reinforced cloth

**ARTHRODESIS WIRE**

Rather like small intramedullary pins, arthrodesis wires have trochar points at each end. They are used for the fixation of small bone fragments, produced either electively or as a result of trauma, e.g. distal femoral fractures, tibial crest transplants and femoral neck fractures.

5”/120mm wires (Packs of ten)

<table>
<thead>
<tr>
<th>CODE</th>
<th>SIZE mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>090020</td>
<td>0.9mm</td>
</tr>
<tr>
<td>090021</td>
<td>1.1mm</td>
</tr>
<tr>
<td>090022</td>
<td>1.6mm</td>
</tr>
<tr>
<td>090023</td>
<td>2.0mm</td>
</tr>
</tbody>
</table>

**“KIRSCHNER” WIRES**

One tip bayonet the other blunt, these pins are supplied in packs of ten. (5”, 120mm)

<table>
<thead>
<tr>
<th>CODE</th>
<th>SIZE In.</th>
<th>SIZE mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>090020</td>
<td>0.035”</td>
<td>0.9mm</td>
</tr>
<tr>
<td>090021</td>
<td>0.045”</td>
<td>1.1mm</td>
</tr>
<tr>
<td>090022</td>
<td>0.062”</td>
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<tr>
<td>090023</td>
<td>0.080”</td>
<td>2.0mm</td>
</tr>
</tbody>
</table>

**THREADED SMALL FRAGMENT PINS**

Use threaded pins where you might use a 2mm fixation screw or “K” wire, e.g. Tibial crest transplant. Drive in with slow speed drill. Also available is a small fragment pin washer which converts the pin to a screw like implant.

090026 Threaded small fragment pins 5mm thread
090027 Threaded small fragment pins 10mm thread
090028 Threaded small fragment pins 15mm thread
090029 Threaded small fragment pins 20mm thread
090058 Small fragment washer
CHAPTER 7 - IMPLANTS AND SCREWS

**ARTHRODESIS WIRE BOX**

This box will store all diameters of arthrodesis and "K" wire. In addition there is a space for a "K" wire bender and a "K" wire punch.

- **001124** Stainless box for Arthrodesis & "K" wires
- **0900200** Polypropylene arthrodesis and "K" wire organiser

**'K' WIRE/'A' WIRE EXTRACTION FORCEPS**

Designed to firmly grip wires 0.9mm to 2.0mm. Tungsten Carbide jaws maximise grip, fine nose minimises trauma to surrounding tissue.

- **001244** 'K' wire/'A' wire remover

**INTERLOCKING NAIL SYSTEM**

Interlocking nails are a refinement of the original Kuntscher Nail. An interlocking nail is basically an intramedullary pin secured in position by proximal and distal transfixing screws which engage the bone to the nail to provide axial, bending and torsional stability.

In comminuted long bone fractures, the Interlocking Nail System is useful due to the mechanical advantage of medullary implantation (i.e. mechanical axis) and prevention of collapse of the fracture by the interlocking effect. Ancillary cerclage wires reduce periosteal stripping and minimise disturbance to blood supply compared to plating.
MODEL 11 - 4.0/4.7MM WITH INTERLOCKING NAILS

Hole spacing is 11.0mm. This option is indicated for fracture cases in smaller animals. The nail diameter is either 4.0mm or 4.7mm and the hole diameter 2.0mm. The instrumentation set includes:
- 4.7mm Jig
- Attachment Screw
- Trochar
- Insertion Tool
- Hex Driver
- Guide Sleeve
- Depth Gauge
- 4.0mm Femur Extension
- 4.0mm Tibia Extension
- 4.7mm Femur Extension
- 4.7mm Tibia Extension

IN114047SET  Model 11-4.0/4.7 set

If certain components are already owned (e.g. tap handle) kit costs may be reduced
ACCESSORIES

The sterilisation trays stores components for both instrumentation sets, accessories and all interlocking nails

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN1122POWER</td>
<td>Power adaptor</td>
</tr>
<tr>
<td>INTTH</td>
<td>Tap handle</td>
</tr>
<tr>
<td>IN47R</td>
<td>4.7mm reamer</td>
</tr>
<tr>
<td>IN6R</td>
<td>6mm reamer</td>
</tr>
<tr>
<td>IN8R</td>
<td>8mm reamer</td>
</tr>
<tr>
<td>INDG11</td>
<td>Model 11 depth gauge</td>
</tr>
<tr>
<td>INELT20</td>
<td>Extra long tap 2.0</td>
</tr>
<tr>
<td>INELT27</td>
<td>Extra long tap 2.7</td>
</tr>
<tr>
<td>INELT35</td>
<td>Extra long tap 3.5</td>
</tr>
<tr>
<td>IN68INST</td>
<td>6/8 instrument tray</td>
</tr>
<tr>
<td>IN6IMP</td>
<td>6mm implant tray</td>
</tr>
<tr>
<td>IN8IMP</td>
<td>8mm implant tray</td>
</tr>
<tr>
<td>IN4047INST</td>
<td>4.0/4.7 instrument tray</td>
</tr>
<tr>
<td>IN4047IMP</td>
<td>4.0/4.7 implant tray</td>
</tr>
<tr>
<td>IN4047BOX</td>
<td>Stainless container 220 x 120 x 50mm with silicone insert and drape</td>
</tr>
<tr>
<td>IN6080BOX</td>
<td>Stainless container 400 x 200 x 70mm with silicone insert and drape</td>
</tr>
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</table>

4 HOLE NAILS MODEL 11-4.7MM W/2MM HOLE

<table>
<thead>
<tr>
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<th>Description</th>
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<tbody>
<tr>
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<tr>
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4 HOLE NAILS MODEL 11-4.0MM W/2MM HOLE

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4 HOLE NAILS MODEL 11- 8MM WITH 3.5MM HOLE

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<td>IN1108230020235</td>
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4 HOLE NAILS MODEL 11-6MM WITH 2.7MM HOLE

<table>
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<th>Part Number</th>
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<tbody>
<tr>
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<tr>
<td>IN1106160020227</td>
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<td>IN1106205020227</td>
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<tr>
<td>IN1106230020227</td>
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</table>

11-06-140-01-02-2.7

model number  length of nail (mm)  number of holes distally
diameter of nail (mm)  diameter of hole (mm)  number of holes proximally
TRILAM NAIL

Traditional intramedullary pins and nails have poor resistance to rotational forces. The tri-finned TRILAM NAIL is very effective in dealing with this problem. Available in a range of sizes, requires dedicated instrumentation. There is a set available including nails, drivers and cutters in a box.

<table>
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<tbody>
<tr>
<td>1840311</td>
<td>3mm x 110mm nail</td>
<td></td>
</tr>
<tr>
<td>1840413</td>
<td>4mm x 130mm nail</td>
<td></td>
</tr>
<tr>
<td>1840514</td>
<td>5mm x 140mm nail</td>
<td></td>
</tr>
<tr>
<td>1840615</td>
<td>6mm x 150mm nail</td>
<td></td>
</tr>
<tr>
<td>TRISET</td>
<td>Boxed set</td>
<td></td>
</tr>
</tbody>
</table>

INTERLOCKING NAIL BOLTS

Unicortical and self tapping. Use of these bolts shortens operative time considerably. Bolts come as a standard length and are cut to size (recommended IN Bolt Cutter)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>INB20</td>
<td>2.0mm Interlocking nail bolt 20mm</td>
<td>2.0</td>
<td>20</td>
</tr>
<tr>
<td>INB27</td>
<td>2.7mm Interlocking nail bolt 36mm</td>
<td>2.7</td>
<td>36</td>
</tr>
<tr>
<td>INB35</td>
<td>3.5mm Interlocking nail bolt 40mm</td>
<td>3.5</td>
<td>40</td>
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</tbody>
</table>

INTERLOCKING NAIL BOLT CUTTER TO 4MM

Most types of bolt cutter deform the pin as they cut. In addition the cut end can fly off in a dangerous manner. Veterinary Instrumentation's new cutter cuts cleanly, without deformation and prevents fly off. Also very useful for ESF pins to 4mm.

<table>
<thead>
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<th>Description</th>
<th>Material</th>
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</thead>
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<tr>
<td>001229</td>
<td>Interlocking nail bolt cutter to 4mm</td>
<td>Stainless steel</td>
</tr>
</tbody>
</table>

Standard Cutters Bolt Cutter
FEMORAL PROSTHESIS

The modular format gives four different combinations. Two stem sizes are available. The taper neck is the same on both. Two ball options are available, the ball diameter is 15mm in both cases. The “short neck” ball when fitted to the standard taper neck gives a short necked prosthesis and the “long neck” ball gives a long necked prosthesis. When combined with the two acetabular cups a total of 8 combinations are possible.

150200  Large stem
150201  Small stem
150300  “Long” neck ball
150301  “Short” neck ball

<table>
<thead>
<tr>
<th>Combination Number</th>
<th>Stem size</th>
<th>Ball length</th>
<th>Acetabular cup size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Small Stem</td>
<td>Short</td>
<td>Small</td>
</tr>
<tr>
<td>2</td>
<td>Small Stem</td>
<td>Long</td>
<td>Small</td>
</tr>
<tr>
<td>3</td>
<td>Small Stem</td>
<td>Short</td>
<td>Medium</td>
</tr>
<tr>
<td>4</td>
<td>Small Stem</td>
<td>Long</td>
<td>Medium</td>
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<tr>
<td>5</td>
<td>Large Stem</td>
<td>Short</td>
<td>Small</td>
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<tr>
<td>6</td>
<td>Large Stem</td>
<td>Long</td>
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<tr>
<td>7</td>
<td>Large Stem</td>
<td>Short</td>
<td>Medium</td>
</tr>
<tr>
<td>8</td>
<td>Large Stem</td>
<td>Long</td>
<td>Medium</td>
</tr>
</tbody>
</table>

ACETABULAR CUPS

Two sizes are available. The internal diameter is the same, as all the heads of the femoral components are 15mm. The only difference between the cups is the wall thickness and therefore the outside diameter. All cups are marked with stainless rings to establish cup position on radiographs. Cups have very deep grooves on the external diameter to provide good cement keying.

150402  Medium acetabular cup
150401  Small acetabular cup
FEMORAL RASP

The aim of the femoral rasp is to produce a hole the same shape as the stem of the femoral prosthesis plus a margin for the bone cement.

150005 Femoral rasp

ACETABULAR REAMERS

Each reamer is designed to produce a prepared bed for each cup. The reamer shaft fits air or electric rechargeable drills. The reamer head can be re-sharpened.

150010 Acetabular reamer for medium cup
150012 Acetabular reamer for small cup

ACETABULAR SKID

A double-ended instrument useful in the dislocation of the femoral head prior to excision. Also useful in “helping” the head of the femoral prosthesis into the acetabular cup.

6200/05 Acetabular skid

ACETABULAR PUSHER/PROSTHESIS PUSHER

A dual purpose instrument; one end provides for precise positioning of the acetabular cup, whilst the other end fits the medium and large femoral prosthesis.

161602 Acetabular pusher/prosthesis pusher

MEYERDING RETRACTOR

A heavy duty retractor for use around the hip. Much favoured by Martin Olmstead

150019 Meyerding retractor
HEYGROVES FEMUR GRASPING FORCEPS

Powerful clamps to lock onto the femoral shaft. Used to rotate the femoral head outwards for excision.

150017  Heygroves grasping forceps 10” 250mm

LEWIN FEMUR GRASPING FORCEPS

The curvature of and multiple teeth of these forceps match almost exactly the profile of the large dog femur. Another Marvin Olmstead favourite.

150018  Lewin femur grasping forceps 17” 175mm

BONE CEMENT

Designed for total hip replacement. CMW is the industry standard. Various options are available. Also useful in stabilisation of vertebral fractures/luxations.

CMW1G is a medium/high viscosity cement. CMW2 is a rapid set cement suitable for the acetabular cup. CMW3G is a more fluid cement which is more appropriate for the femoral component. CMW1G and CMW3G cement comes impregnated with Gentamycin which minimises post operative infection, the worst complication of the procedure.

CMW Cement

160505  CMW1 20g pack
160506  CMW1 40g pack (radiopaque)
160500  CMW1G with gentamycin 20g pack
160501  CMW2 20g pack
160503  CMW3G with gentamycin 20g pack
160504  CMW3G with gentamycin 40g pack

see over for more cement
VETERINARY INSTRUMENTATION BONE CEMENT

EC approved bone cement at a reasonable price.

**BC1** Standard viscosity 40g
**BC1G** Standard viscosity (with Gentamycin) 40g
**BC3** Low viscosity 40g
**BC3G** Low viscosity (with Gentamycin) 40g

ANTIBIOTIC IMPREGNATED POLYMETHACRYLATE BEADS (AIPMMA)

Management of chronic local infections may benefit from the insertion of antibiotic impregnated polymethacrylate (AIPMMA) beads. The beads are manufactured from sterile bone cement with the addition of appropriate antibiotic.

Indications include osteomyelitis and abcessation in the rabbit.

Veterinary Instrumentation offers two kits for the preparation of AIPMMA beads. Both kits contain sufficient material for approximately 100 beads. Full instructions are included.

**BC3K** 40 gram low viscosity cement plus 50ml catheter mount syringe. This cement contains no antibiotic. Choice of antibiotic will depend on bacteriology and sensitivity.

**BC3GK** 40 gram low viscosity cement containing 1 gram of Gentamycin plus 50ml catheter mount syringe. Gentamycin is the preferred choice of antibiotic for many infections but is toxic when administered parenterally.
CHAPTER 9 - ABDOMINAL AND THORACIC SURGERY

OESOPHAGEAL FOREIGN BODY FORCEPS

Extra-long forceps (730mm) enables foreign bodies to be manipulated back through the mouth or into the stomach. Backward facing teeth maximise grip and minimise iatrogenic damage to the oesophagus. Very strong yet small enough to allow simultaneous insertion of an endoscope. As seen on T.V. (Animal E.R. @ the R.V.C.)

014097 Oesophageal foreign body forceps

THORACIC SURGERY KIT - as used by the Cambridge Vet School

Working inside the chest of medium and large dogs will require extended length instrumentation. The instruments listed below represent a reasonable kit

106205 45 degree curved forceps 245mm
105415 90 degree curved forceps 245mm
746130 Metzenbaum scissors str 235mm T.C.
746230 Metzenbaum scissors Cvd 235mm T.C.
342020 DeBakey thumb forceps 205mm
347665 Rat tooth thumb forceps 205mm
602010 DeBakey needleholders T.C. 20mm
347655 Dressing Forceps 205mm
2685/05 Satinsky clamp 30mm jaw

When purchased as a kit there is a considerable saving. In addition a pair of rib retractors will be required.

704000 Finochetto rib retractor 94mm gape
704005 Finochetto rib retractor 130mm gape
701550 Gosset small 80mm gape
701600 Gosset large 130mm gape

Other Useful Instruments
754095 Extra long Metzenbaum scissors 350mm 14cm Cof Hard Edge

Right Angled Forceps
014051 Lane cholecystectomy clamp 195mm
014052 Small right angled forceps with longitudinal grooves 160mm
VACUUM DRAINS

Appropriate drainage will make the difference between success and failure, particularly with thoracic surgery. Vacuum systems can be strapped to the patient.

- **014059** Vacuum drainage kit 200ml 4.8mm dia drain
- **014058** Vacuum drainage kit 100ml 3.2mm dia drain
- **014062** Vacuum drainage kit 50ml 2.7mm dia drain
- **014063** Vacuum drainage kit 20ml 2.0mm dia drain

OVAROHYSTERECTOMY

SPAY HOOKS

Use to atraumatically lift uterine horns.

- **014320** Small spay hook 125mm cats and <15kg dogs
- **014325** Large spay hook 175mm (15kg+)

SPAY FORCEPS

'Surdy' type. Atraumatic spay forceps tips have fine toothed Debakey type form.

- **014211** Spay forceps 125mm
- **342005** Atraumatic spay forceps

SPAY CLAMS

Angiotribes. The jaws of this instrument are designed for maximum crushing by serrated longitudinal grooves.

- **014304** Angiotribe 16cm 6.5" Str
- **014305** Angiotribe 16cm 6.5" Cof

HYSTERECTOMY CLAMS

These clamps are curved with longitudinal grooves in the jaws to minimise tissue slippage. More reasonably priced than angiotribes.

- **014304** Hysterectomy clamp (carmault) large 240mm
- **014305** Hysterectomy clamp (carmault) small 160mm
10 - HEAD AND NECK

SOFT PALATE CLAMP

An overlong palate is a common cause of dyspnea in the brachiocephalic dog. Shortening the soft palate in an atraumatic manner provides almost immediate relief. The Soft Palate Clamp was designed by Geoff Lane F.R.C.V.S.
The jaws have a special atraumatic grip to hold the very slippery soft palate.

014040 Soft palate clamp - large
014050 Soft palate clamp - small

SATINSKY CLAMP

Useful for intra thoracic surgery, trimming soft palates and even ears. Atraumatic design maximises haemostasis and minimises trauma

2685/03 Satinsky clamp - 160mm long 20mm wide jaw
2685/05 Satinsky clamp - 200mm long 30mm wide jaw

TRACHEOSTOMY TUBE

Where temporary or permanent upper airway obstruction occurs placement of a tracheostomy tube is a life saving procedure. Our tubes are silver plated with a removable lining for easier cleaning. Metal tubes have a much thinner wall than plastic tubes. This becomes particularly critical in smaller patients.

014071 Tracheostomy tube 6mm
014072 Tracheostomy tube 8mm
014073 Tracheostomy tube 11mm
014074 Tracheostomy tube 13mm

BULLA OSTEOTOMY

Bulla osteotomy is greatly facilitated by specialised instruments. In addition a Penrose Drain may be necessary. * Our personal choice.

142500 Friedman rongeurs
001300 Gelpi self retaining retractors*
782215 Volkmans scoop 3mm
782200 Volkmans scoop 4mm*
782210 Volkmans scoop 5mm
6730/10 Lempert rongeurs 190mm* (illus.)
090168 1/4” Penrose drain
090168 1/2” penrose drain
CROCODILE FORCEPS

Examination of the external ear is an essential part of any investigation of otitis. Heine equipment is unrivalled for quality of manufacture and optics. See chapter 21 Diagnostics
Removal of foreign bodies, particularly grass seeds is achieved using long crocodile forceps. Available in traditional designs or as a fine tubular shaft design.

- 001491 Crocodile forceps fine size 3
- 001492 Crocodile forceps fine size 5
- 001493 Crocodile forceps fine size 7
- 001489 Crocodile forceps fine size 9
- 014094 Crocodile forceps 3” shaft
- 014095 Crocodile forceps 5” shaft
- 014096 Crocodile forceps 7” shaft
- G02 21301 Otoscope head

CANINE EAR LOOP

Removal of hard wax and other debris from the canine horizontal canal without causing trauma is a common problem in veterinary surgery.
It is now accepted that the use of ear loops is more effective than cotton tipped products. Most human ear loops are too large and too short for use with the much longer veterinary speculae.
Veterinary Instrumentation's Canine Ear Loop is slimmer and longer to facilitate debris removal without obscuring the visual field. The flexible ear curette is very fine and flexible for added safety. It is not cheap but should last a lifetime.
Also illustrated is the Canine Ear Model, a valuable aid when explaining aural problems and procedures.

- 012526 Canine ear loop
- 012528 Flexible ear curette small (cat/small dog)
- 012529 Flexible ear curette large (medium/large dog)
- AMJ772 Canine ear model
11 - OPHTHALMIC

OPHTHALMIC KIT

The kit contains 10 instruments as illustrated. All are contained in a stainless steel case with a protective silicone lining which minimises damage to the delicate instruments. As recommended by David Williams

Suitable for the following procedures:-
- Hotz-Celsius Entropion Surgery
- Stades Procedure for Entropion with trichiasis
- Lid Wedge Resection
- Khunt-Szymanowski Entropion Surgery
- Wyman Lateral Canthoplasty for Diamond Eye
- Lateral Canthoplasty
- Parotid Duct Transposition
- Conjunctival Flaps, Pedicle, Fornix Based
- Nictitating Membrane Flap
- Replacement of Proptosed Nictitans Gland
- Correction of Scrolled Nictitans Cartilage
- Superficial Lamellar Keratectomy
- Primary Reconstruction of Corneal Penetrating Wound
- Corneoscleral Transpositon Flap

Beaver type handle (Swann Morton ‘fine’ series) see page 111 for blades.

Castroviejo needleholders with catch straight

Steven’s tenotomy scissors straight

Colibri tissue forceps

Graefe fixation forceps 3.5mm jaws

Roberts tying forceps

Castroviejo corneal scissors straight

Halstead mosquito forceps curved and straight

Barraquer wire eyelid speculum
Choosing ophthalmic instruments is very difficult, every surgeon seems to have their own preference. Follow the advice of a surgeon you respect. We will always exchange items if you make the wrong choice.

SPECULAE

LISTER SPECULUM

This speculum is adjustable and has a locking facility. The shape is contoured for minimum interference with sutures and instruments.

014115 Lister

BARRAQUER SPECULUM

Spring action, cheap, speculum with a minimum of protruberences to foul sutures.

014110 Barraquer speculum large
014112 Barraquer speculum small

CORNEAL FORCEPS

ST. MARTIN'S CORNEAL FORCEPS

The best value corneal forceps.

014160 St. Martin's corneal forceps

CASTROVIEJOS CORNEAL FORCEPS

014190 Castroviejos corneal forceps

COLIBRI (BARRAQUERS) FORCEPS

014191 Colibri (barraquers) corneal forceps

BARRAQUERS FIXATION FORCEPS

014201 Barraquers fixation forceps
IRIS FORCEPS

GRAEFE IRIS FORCEPS

014195  Graefe iris, serrated straight
014196  Graefe iris, 1/2 teeth straight

CAPSULE FORCEPS

ARRUGA CAPSULE FORCEPS

014150  Arruga capsule forceps

CASTROVIEJOS CROSS ACTION

014155  Castroviejos cross action capsule forceps

EPILATION FORCEPS

342450  Epilation forceps

NEEDLEHOLDERS

CASTROVIEJO

The standard ophthalmic needleholder. The squeeze through action is awkward at first.

014175  Castroviejo with catch
014177  Castroviejo without catch

FOSTER GILLIES

This needleholder is a scaled-down version of Gillies and may, therefore suit those familiar with this commonly used scissors/needleholder.

602700  Foster Gilles T.C.

RYDER NEEDLEHOLDER

A small scale locking needleholder with tungsten carbide inserts. Ryders offer the occasional ophthalmic surgeon an alternative to Castroviejos.

606340  Ryder needleholder T.C.
SCISSORS

POOLEY’S CONJUNCTIVAL SCISSORS

746350  Pooley’s conjunctival scissors

CASTROVIEJO’S CORNEAL SCISSORS

Squeeze action, very delicate scissor used to extend the stab corneal incision. Easily damaged.

014210  Castroviejos corneal scissors curved
014210S Castroviejos corneal scissors straight

STRABISMUS SCISSORS

Stronger than corneal and conjunctival scissors, strabismus scissors are suitable for cutting muscles and skin.

746910  Strabismus scissors 9cm str.
747010  Strabismus scissors 9cm cof
746910  Strabismus scissors 11cm str
747020  Strabismus scissors 11cm cof

IRIS SCISSORS

Lightweight, ‘standard’ action scissor for conjunctiva and, less satisfactorily, the cornea. Very rarely used on the iris in veterinary ophthalmology.

744110  Iris scissors 11cm str
744130  Iris scissors 11cm cof
744100  Iris scissors 9cm str
744120  Iris scissors 9cm cof

MISCELLANEOUS

SNELLEN’S VECTIS

Use to apply pressure to globe to extrude lens.

014101  Snellen’s vectis

110
CHAPTER 11 - OPHTHALMIC

IRRIGATION VECTIS

Small holes on the loop allow the anterior chamber to be flushed. Fits onto normal disposable syringe.

014100 Irrigation Vectis

DESMARRES EYlid RETRACTOR

014215 Desmarres eyelid retractor

CHALAZION FORCEPS (DESMARRES)

014216 Chalazion forceps (Desmarres)

SWANN MORTON FINE SURGICAL BLADES

05901 61 blade (pack 25)
05902 62 blade (pack 25)
05904 64 blade (pack 25)
05905 65 blade (pack 25)
05909 69 blade (pack 25)
06051 Fine stainless handle 130mm
06052 Fine stainless handle 100mm
06053 Fine stainless handle 80mm
66054 Fine stainless handle VI pattern 130mm

HALSTEAD MOSQUITO FORCEPS

103175 Halstead mosquito forceps str
103225 Halstead mosquito forceps cof
ELLIO T SCLEROTOMY TREPHINE

014109   Elliot sclerotomy trephine

HARRISON BUTLER LACHRYMAL CANNULA

014221   Harrison Butler lachrymal cannula

LACHRYMAL CANNULA STRAIGHT

014224   Lachrymal cannula straight (stainless steel)

SCHIOTZ Tonometer with weights

Used to measure intra-ocular pressure. Surprisingly well tolerated by patients. Contains full instructions for use.

581500   Schiotz tonometer with weights
HEINE BETA 200 OPHTHALMOSCOPE

Available with battery handle, rechargeable or wall mounted units.

G0030100 Heine Beta 200 ophthalmoscope

SLIT LAMP (NOT ILLUSTRATED)

The specialist's instrument of choice. Turns the eye into a work of art. Very expensive so phone for brochures and prices.

560300 Slit lamp

MAGNIFYING PEN TORCH (10 X)

Good for seeing and treating distichiasis.

014212 Magnifying pen torch (10 X)

LIGHT SOURCES

DUAL ZOOM HEAD TORCH

Supplied with AA battery pack (batteries not included). Switchable choice of Halogen - main beam (up to 3.5 hours) or Krypton (up to 2.5 hours). Focus adjustable.

014202 Dual Zoom Head torch

014202XD Dual Zoom Headtorch with rechargable waist battery pack giving extended duration of up to 13 hours.

LED HEAD TORCH

Very bright LED light source powered by 3 AAA batteries (supplied) which lasts 80 hours. In the "forehead" position the LED torch is used as the dual zoom. In the "between the eyes" position the LED torch is particularly useful for deep dark recesses e.g. the horse's mouth during dental procedures and indirect ophthalmascopes.

0142031 LED Head Torch (single LED for indirect ophthalmoscopes)

0142033 LED Head Torch where maximum light is required
OPERATING LENSES

Each eyepiece contains a number of lenses which means that a high magnification of the operating field is possible while maintaining normal position of the head relative to the patient. Magnification is 2.5X at a focal distance of 16”. These lenses are very reasonably priced compared to similar products available elsewhere. Lenses can be swung upwards when an overview of the surgical field is required.

014208 Operating lenses

MAGNIFYING LOUPE 2.5X

Cheap simple loupe. The lack of a complex lens means that as the magnification gets higher the focussing distance becomes shorter. This 2.5X loupe is as great a magnification as you can get without being too close to the patient.

014200 Magnifying loupe 2.5X

VOROSCOPE MXL

The Voroscope combines a focal rechargeable light source with a range of magnifying lenses which fit to a spectacle frame. If necessary the light and lenses will fit to your own spectacacle frame. The battery lasts for 2 hours on a single charge. The light is powerful (12,000 lux) and cool. Lenses and light are adjustable. Includes 1.5, 1.75, 2.25, 2.75 and 3.5 X lenses. As with the simple loupe the focal distance of the higher magnification lens is very short.

014204 Voroscope MXL

014200 Magnifying loupe 2.5X
12 - DENTAL MACHINES

iM3 ULTRA

The only dental unit you will ever need to buy. The iM3 Ultra is designed and built to last a lifetime. Recognised by leading veterinary dentists as the best unit available it is designed to meet your growing requirements. All the options can be fitted from the outset or can be added as your expertise or experience demands.

* High speed handpiece with or without fibre optics
* Low speed handpiece to drive the HP and RA burs
* Sonic scaler - separate
* Water outlet for ultrasonic scaler
* Waste air filtration
* Suction
* CLS flushing system to prevent transfer of FeLV
* Silent Hurricane compressor for quiet power

Attention to detail is everywhere, even the routine maintenance instructions are printed on the unit for easy reference. Phone for further details and a free, no obligation, 2 week trial. Consider leasing. This unit will more than pay for itself. Our own service department performs everything from routine maintenance to full upgrades. We have 10 year old machines which we have upgraded to current specifications.

Phone for further details and a free, no obligation, 2 week trial. Consider leasing. This unit will more than pay for itself. Our own service department performs everything from routine maintenance to full upgrades. We have 10 year old machines which we have upgraded to current specifications.
A complete state of the art solution

iM3 dental systems are used by many veterinary dental specialists and most veterinary teaching universities around the world.

Options such as Fiber Optic Lighting, Suction, Highspeed CLS Flush and our Silent Hurricane Air Compressor make the iM3 Professional 2000 totally unique in the world of veterinary dentistry. iM3’s exclusive “functional form design” concept also means every option available for the Professional 2000 can be added now or later depending on your changing equipment needs with minimal down time or loss of income.

The iM3 Professional 2000 is built to last. The air and water supply valves used on the iM3 Professional 2000 will keep on working well beyond the life of an ordinary valve. The filtration systems are so good and our engineering is so functional, you will be impressed by the minimal amount of maintenance required to keep your system in top working order. The iM3 Professional 2000 is a complete state of the art solution.

Fiber Optic Lighting
Add Fiber Optic lighting with our long life bulbs to your Professional 2000 and turn night into day. Ideal for illuminating oral cavities, iM3 Fiber Optics direct light where you need it most, making any dental procedure a lot easier to perform.

A Fiber Optic examination light is also available for the Professional 2000. This portable device comes complete with autoclavable tongue depressors for entubating patients, or use it for examining the oral cavity for hairline fractures etc...its applications are endless.

Suction
The Professional 2000 can be equipped with iM3’s powerful suction unit and bacterial filter. We designed our own suction unit as the others failed to meet iM3’s standards for ease of cleaning and reliability. Ideal for everything from dental procedures to abdominal surgery, the whole system pulls apart for easy cleaning. Another industry first. Even the evacuator tips can be autoclaved for sterile procedures.

iM3’s Unique Highspeed Flush
Each high-speed outlet on the Professional 2000 can be fitted with CLS Autoflush to clean and flush highspeed turbines. In a matter of seconds, CLS flushes out the air in the turbine to help minimize cross contamination and preserve the turbine, which will save you valuable time and money. Another industry first.

Silent Hurricane Compressor
We designed and built an air compressor to meet your needs. The air compressor is perhaps the most crucial part of any dental system as it supplies the valuable air needed to run handpieces, pressurize water and cooling systems. The Silent Hurricane can handle large work loads (including suction) and thanks to some smart engineering, makes less noise than most conventional air compressors. The Silent Hurricane compressor is in a class of its own providing high volume air capacity and a high degree of trouble free service, and is CE Certified.
The difference is in the design

The Professional 2000 is designed for easy cleaning, long life and improved sanitization. The work area is manufactured from Corian®, a revolutionary “hi-tech” non-porous material that can be sanitized and wiped down in seconds. Even dried blood wipes straight off. Try that with other conventional surfaces.

The space age Corian® top opens to reveal a storage compartment to hold all your dental accessories right where you want them…. beside you when you’re working. The easy to clean Corian® top also incorporates a magnetic bur holder to keep your burs from falling onto the floor during procedures. It’s these little things that make the difference.

The control box is made from powder coated aluminum that won’t warp or deteriorate with age, and the stand is made from high quality stainless steel to prevent rusting. All designed to provide you with a robust dental system that will give you many years of service. The iM3 Professional 2000 comes standard with our unique “auto” handpiece holders which eliminates the need to flip switches or juggle handpieces.

3 Way Air Water Syringe
Your choice of air, water, or fine mist spray. Ideal for flushing away debris during prophys or drying areas for endodontic procedures. Switch to CLS and your 3 Way Syringe will help sanitize an animal’s mouth prior to any procedure, leaving a pleasant fresh mint smell and no more unpleasant odors. Another iM3 first.

Ultrasonic Water Outlet
Would you like to use an Ultrasonic scaler? Simply plug in the power cord and connect your Ultrasonic’s water line to the special outlet available on your iM3. Now you’re ready to go with your choice of water or CLS and it’s built right into the Professional 2000.

Color Coded System
All the supply lines on the Professional 2000 are color coded so we can diagnose service requirements in seconds. Our color-coded system means minimal down time for you as well as further reducing servicing costs. It also simplifies upgrading at a later stage by making instructions easy to follow.

Maintenance instructions where everyone can see them.
Conveniently printed on your Professional 2000, you will find all the instructions you need to maintain your system in perfect working order long after the instruction manual has disappeared.

Power Board
A four-socket power board can also be fitted to the side of the iM3 Professional 2000. No more tangled cords to trip over. Simply plug them into the power board outlet.
<table>
<thead>
<tr>
<th>ULTRA OPTION DESCRIPTION</th>
<th>OPTION CODE</th>
<th>Included?</th>
<th>Value of Option</th>
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</thead>
<tbody>
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<td>High Speed 1 (HS1) with Water Flow Control</td>
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<td>Low Speed (LS)</td>
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<td>Automatic Handpiece Activators</td>
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<td>Storage Compartment</td>
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<td>Water Supply, Filter, Regulator, On/Off Switch</td>
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<td>Suction Unit - Variable Suction &amp; Bacterial Filter</td>
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<td>4 Socket Power Board</td>
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<td>Pressurized Water Outlet for Ultrasonic Tooth Scalers</td>
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<td>Fiber Optic Light System for High Speed Handpiece</td>
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<td>Low Speed 30,000 rpm Motor for Polishing</td>
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<td>001793</td>
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<td>Diamond Disc (fits st nose cone )</td>
<td>001789</td>
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<td>001791</td>
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<td>High Speed Fibre Optic MTI Griplock</td>
<td>D120</td>
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<td>L501</td>
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<td>IM3 42-12 Ultrasonic Scaler</td>
<td>IM34212</td>
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<td>Peizo Scaler</td>
<td>LIA101</td>
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<td>Sonic Scaler</td>
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<td>Right angle attachment</td>
<td>L689</td>
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<td>Low Speed 1:1 attachment for RA</td>
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<td>Right angle bur kit</td>
<td>D752</td>
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</tbody>
</table>
iM3 GS

Build up a dental unit to meet your requirements from our option sheet overleaf. An air driven unit at an affordable price. If you don’t require suction this unit has all you need. Being less demanding in its air requirements the GS can be run from a cheap, noisy compressor or a mid-priced quiet compressor. Available with a choice of mount, wall, clamp and table stand or directly on to the compressor. Floor stand with instrument storage options available.

GS with instrument tray

GS with 42-12 scaler

see over page for options
<table>
<thead>
<tr>
<th>GS OPTION DESCRIPTION</th>
<th>OPTION CODE</th>
<th>Included?</th>
<th>Value of Option</th>
<th>Basic set up</th>
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<td>Head Unit (includes the options marked ‘Yes’)</td>
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<td>High Speed 1 (HS1) with Water Flow Control</td>
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<tr>
<td>Low Speed (LS)</td>
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<td>3 Way Air/Water Syringe</td>
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<td>Water Supply, Filter, Regulator, On/Off Switch</td>
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<td>Corian Top</td>
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<td>One Year Warranty</td>
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<td>Suction Unit - Variable Suction &amp; Bacterial Filter</td>
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<td>Pressurized Water Outlet for Ultrasonic Tooth Scalers</td>
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<td>High Speed Midwest Lever Lock ( Full price)</td>
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<td>High Speed (friction grip F.G.) Bur Kit for Dogs</td>
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<tr>
<td>High Speed (friction grip F.G.) Bur Kit for Cats</td>
<td>D753</td>
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<td>CLS Chlorhex &amp; Flush System with Bacterial Filters - 2 Handpiece</td>
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<td>Silent Compressor with Large Tank &amp; Stainless Steel Floor Stand</td>
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<td>Midrange Silent Compressor</td>
<td>OPT1</td>
<td>optional</td>
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<td>Noisy Compressor (sited remotely)</td>
<td>OPT2</td>
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<tr>
<td>IM3 42-12 Ultrasonic Scaler</td>
<td>IM3 42-12</td>
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<td>Piezotronic Scaler</td>
<td>LIA101</td>
<td>optional</td>
<td>453.75</td>
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<tr>
<td>Sonic Scaler</td>
<td>L672</td>
<td>optional</td>
<td>356.84</td>
<td></td>
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</tbody>
</table>
CHAPTER 12 - DENTAL MACHINES

HIGH SPEED HANDPIECE

Running with high speed and low torque this handpiece is designed to remove tooth material as part of extraction or repair techniques. Use of roto pro burs (see later) allows the high speed to be used as an ultrasonic scaler for tartar removal. Only Friction Grip burs fit the high speed. Fine water jets cool the bur. The fibre optic version illuminates the operative area with a brilliant cold light. Leverlock action of Midwest is very reliable. Makes bur tightening virtually fool proof.

- **L885** High speed handpiece grip lock
- **V345** Fibre optic high speed grip lock
- **H201** Midwest leverlock
- **L501** Midest leverlock with fibre optics

LOW SPEED MOTOR

Running with low speed and high torque this motor is used to drive several dental accessories e.g. straight nose cone, prophy heads and the latch head. The motor has forward and reverse controlled by a collar near the motor base.

- **L698** Low speed motor

STRAIGHT NOSE CONE

This accessory pushes onto the low speed motor and drives a range of handpiece (HP) burs. This combination is used to cut rabbit teeth and drill holes in bone. In addition HP burs may be used in the straight nose in spinal procedures. If it is desirable to reduce the speed of the bur or prophy head use 4:1 reduction straight nose cone. Maximum speed 6,000rpm

- **L686** 1:1 Straight nose cone
- **L686A** 4:1 Straight nose cone - used with oscillating prophy heads
1:1 AND CONTRA ANGLE HEAD ATTACHMENTS

The 1:1 attachment transmits actual motor speed to the head. The contra angle head offers a higher torque than the high speed. A range of contra burs is available as bur kit D753. It has a blue band.

$L687$  ISO fitting 1:1 attachment
$L689$  Latch or contra angle head

4:1 REDUCTION AND PROPHY HEADS

The 4:1 attachment gears down the low speed to around 6000rpm with very high torque which is the best speed for polishing teeth. We recommend the screw-on type. It has a green band.

$L688$  ISO fitting 4:1 reduction attachment
$L670$  Prophy head screw-on
$P261$  Prophy head snap-on

DISPOSABLE OSCILLATING PROPHY HEAD

Developed by human dentists to combat the risk of HIV the disposable prophy head is surprisingly cheap and minimises the risk of FeLV and FIV transmission. The oscillating action means there is no heat build-up on the tooth surface and 'snagging' on muzzle hair is minimal. Available in packs of 25. The oscillating disposable prophy fits onto the straight nose cone to achieve the correct running speed. Use 4:1 with air equipment and 1:1 with electrical micromotors.

$IM3L7465$  Oscillating disp. prophy angle (for 4:1 reduction)
$L067$  Oscillating prophy head (25)
$L058$  4:1 Straight nose cone
$P262$  Prophy cups screw-on (144)
$P464$  Prophy cups snap-on (144)
$P466$  Prophy paste
CHAPTER 12 - DENTAL MACHINES

BUR KITS

Each bur kit contains a range of useful burs for each application. Each bur kit comes with a simple to follow guide for bur usage.

D751  Bur kit friction grip (FG) dog
D752  Right angled bur kit (RA)
D753  Bur kit friction grip (FG) cat
D754  Bur kit handpiece (HP)

ROTO-PRO BURS

When run in a high speed handpiece roto-pro burs produce vibrations at 20,000 cycles per second. These burs are very effective for removing calculus. The action is quite aggressive so care must be exercised.

R353  Regular - for supragingival work
R351  Perio - for subgingival work
R352  Round - for occlusal surfaces
R350  Flame - general purpose

USEFUL BURS

Each dental bur has its own unique code which is made up of the shaft type followed by the head number followed by the material it is made of.

e.g. FG 702 D is a Friction Grip Bur(for the high speed hand piece), the 702 head is a taper fissure cross cut and is made of Diamond.

Shaft Types - (actual size)

HL  RA
HP  FG

Head Types

Round and Taper fissure burs are the most commonly used in Veterinary dentistry

The following table describes the various burs which have been shown to be useful in veterinary dentistry. When ordering please identify the bur you need and use the unique VI code.
# VI/US Order Codes

<table>
<thead>
<tr>
<th>Carbide</th>
<th>Diamond</th>
<th>iM3 Pattern</th>
<th>Description</th>
<th>Primary Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>FG1/4</td>
<td>D791</td>
<td>D791</td>
<td>Plain cut round 0.5mm</td>
<td>Drill mechanical retention holes before glass ionomer restorations</td>
</tr>
<tr>
<td>FG4</td>
<td>FG4D</td>
<td>D792</td>
<td>Plain cut round 1.4mm</td>
<td>Atomisation of tooth/crestal bone in ORL affected teeth</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D796</td>
<td>Ex fine grit diamond</td>
<td>Smoothing shallow cervical line lesion before treatment</td>
</tr>
<tr>
<td>FG8</td>
<td>D793</td>
<td>D793</td>
<td>Plain cut round 2.1mm</td>
<td>Atomising maxillary &amp; mandibular bone in stomatitis cats post extraction</td>
</tr>
<tr>
<td>FG702</td>
<td>FG702D</td>
<td>D795</td>
<td>Taper fiss. Cross cut 1.6mm</td>
<td>For sectioning bone</td>
</tr>
<tr>
<td>FG331/2</td>
<td>D794</td>
<td>D794</td>
<td>Inverted cone plain cut 0.6mm</td>
<td>Undercut access openings after root canal or before restoration</td>
</tr>
</tbody>
</table>

# Dog FG Burs (High Speed) KIT D751

<table>
<thead>
<tr>
<th>Carbide</th>
<th>Diamond</th>
<th>iM3 Pattern</th>
<th>Description</th>
<th>Primary Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>FG4</td>
<td>FG4D</td>
<td>C911</td>
<td>Plain cut round 1.4mm</td>
<td>Create access openings &amp; remove dentin at pulpotomy sites, atomise roots</td>
</tr>
<tr>
<td>FG6</td>
<td>FG6D</td>
<td>C914</td>
<td>Plain cut round 1.8mm</td>
<td>Crown reduction in teeth with neck lesions</td>
</tr>
<tr>
<td>FG702L</td>
<td>D781</td>
<td>D781</td>
<td>Long cross cut taper fiss. 1.6mm</td>
<td>Ideal for sectioning large teeth</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D782</td>
<td>Safe end flame diamond</td>
<td>For subgingival curettage (removes necrotic sulcus lining) can remove subgingival calculus for initial root planning CAUTION – powerful bur!</td>
</tr>
<tr>
<td>FG35</td>
<td>FG35D</td>
<td>C923</td>
<td>Inverted cone plain cut 1.0mm</td>
<td>Undercut access openings for root canals or restorations</td>
</tr>
<tr>
<td>FG1558</td>
<td>FG1558D</td>
<td>D780</td>
<td>Domed fiss. Cross cut 1.2mm</td>
<td>A 'finesse' bur for bone flaps &amp; sectioning small teeth or odontoplasties</td>
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</table>

# Hand-piece Burs (Straight Nose Cone) KIT D754

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<th>iM3 Pattern</th>
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<th>Primary Uses</th>
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<tbody>
<tr>
<td>HP332</td>
<td>D786</td>
<td>D786</td>
<td>Round pear plain cut</td>
<td>Beginning holes for IM pins, smoothing bone &amp; crown reduction</td>
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<tr>
<td>HP703</td>
<td>C445</td>
<td>C445</td>
<td>Taper fiss. Cross cut 2.1mm</td>
<td>Cortical buccal bone flaps, cutting IM pins or other sterile surgical bone procedures. Correction of beak abnormalities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D797</td>
<td>Bud shaped acrylic bur</td>
<td>Largest inverted cone – use to undercut thick dentin or some surgical procedures</td>
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<tr>
<td>HP39</td>
<td>D787</td>
<td>D787</td>
<td>Inverted cone 1.8mm</td>
<td>Acrylic cutting bur – sectioning acrylic splints</td>
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<tr>
<td>HP8</td>
<td>C918</td>
<td>C918</td>
<td>Round plain cut</td>
<td>Undercut access openings for surgical endodontics</td>
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<tr>
<td>HP557L</td>
<td>D611</td>
<td>D611</td>
<td>Flat fiss. Cross cut long 1.0mm</td>
<td>Largest, longest but of it’s type – sectioning very large teeth &amp; boney surgical procedures</td>
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</table>

# Right Angle Burs (Latch Head) KIT D752

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<th>iM3 Pattern</th>
<th>Description</th>
<th>Primary Uses</th>
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<tbody>
<tr>
<td>RA4</td>
<td>RA4D</td>
<td>C910</td>
<td>Round plain cut 1.4mm</td>
<td>Access openings for root canal/pulpotomies</td>
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<td>RA37</td>
<td>RA37D</td>
<td>D783</td>
<td>Inverted cone 1.4mm</td>
<td>Undercutting for restoration/access openings</td>
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<td></td>
<td></td>
<td>D785</td>
<td>Flame white ark. stone</td>
<td>Smoothing shallow ORLs &amp; sharp enamel edges</td>
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<tr>
<td>RA557L</td>
<td>C929</td>
<td>D784</td>
<td>Flat fiss. long head 1.0mm</td>
<td>Sectioning teeth</td>
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<tr>
<td>RA170L</td>
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<td>D784</td>
<td>Taper fiss. long head 1.0mm</td>
<td>Odontoplasty of crowded teeth</td>
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<td>RA8</td>
<td>RA8D</td>
<td>D562</td>
<td>Round plain cut 2.3mm</td>
<td>Gross reduction of tooth structure, smoothing bony tissue. Also can be used to cut IM pins</td>
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# Rabbit Carbide Burs (Straight nose cone)

<table>
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<th>Carbide</th>
<th>Diamond</th>
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<td>HL563</td>
<td>HL563D</td>
<td>N/A</td>
<td>Very long flat fiss. cross cut 2.3mm</td>
<td>Removing spurs reducing height of dental arcade.</td>
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<td>HP704</td>
<td>HP704D</td>
<td>N/A</td>
<td>Taper fiss. cross cut 2.3mm</td>
<td>Reducing individual molars, cutting incisors</td>
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<tr>
<td>HP8</td>
<td>N/A</td>
<td>Round 2.3mm</td>
<td>Trimming individual molars-</td>
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<tr>
<td>FG702L</td>
<td>D781</td>
<td>D781</td>
<td>Cross cut taper fissure long 1.6mm</td>
<td>Cutting incisors</td>
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</tbody>
</table>

Diamonds create less heat and last longer
SONIC AND ULTRASONIC SCALERS

All scalers have the capacity to damage enamel and should be used with care. Roto-pro burs and ultrasonic scalers are much more powerful (and need more care) than the sonic scaler. The latter is much more gentle in its action but is more time consuming in use.

SONIC SCALER (IM3 ACCESSORY)

The tip of the air driven scaler vibrates at a slower speed than the more common ultrasonic scalers. The action is less powerful but very appropriate for subgingival areas. In addition less heat is produced which means that less water is required to cool the tip, meaning that sonic scaling is less messy than ultrasonic scaling.

As ever, our no obligation trial allows you to make your own decision.

L672 Sonic scaler (IM3 accessory)

CLS CONCENTRATE

Used in the water system of high speed handpieces to improve cutting efficiency and mask odours. It prevents transfer of FeLV and it can also be flushed through the air turbines to sterilise and lubricate them. The unique composition of CLS allows use of chlorhexidine in all dental equipment. Standard chlorhexidine crystallises out from solution and will damage your equipment. Do not use regular chlorhexidine in dental units.

CLS1 CLS concentrate 250ml
CLS6 CLS six pack
NM300 MICROMOTOR

This powerful, reliable motor performs all the functions of a low speed handpiece without the requirement for compressed air.

* Speed variable between 2,000 and 30,000 rpm
* Variable footswitch for speed control within preselected range.

Use to drive a variety of handpiece combinations including:

L688 4:1 attachment with the P262 Prophy head screw fitting. This combination is used for post-scaling polishing.

L687 1:1 attachment with the L689 latch head. This combination will drive a range of right angle burs including the taper fissure burs for cutting teeth.

L686 1:1 straight nose cone. Handpiece burs (HP) fit this attachment. Our bur kit (001792) includes 6 HP burs appropriate for rabbit dental procedures including unique extra long burs. (for this and micro saw and rasp see p.136)

1007 Micromotor NM300 (motor only)
1007A Micromotor Polishing Kit

ULTRASONIC SCALERS

Piezo action creates less heat than magnetorestrictive systems and therefore requires less water

LIA101 Piezo Scaler
LIA109 Magnetorestrictive (cavitron type) scaler
1009 Cavitron insert 30k
CHAPTER 12 - DENTAL MACHINES

PUMP-UP WATER BOTTLE

Both piezo and cavitron type (magnetorestrictive) scalers require a water source. If not used in conjunction with the integral iM3 water outlet a pump-up bottle will be required.

1010 Pump-up bottle

SCALER AND MICROMOTOR

A standard scaler/polisher combination

LIA107 Magnetorestrictive Scaler and Micromotor (requires iM3 or pump up bottle)

PIEZO SCALER AND MICROMOTOR

A very useful combination scaler/polisher. The piezo scaler creates less heat and therefore uses less water than the cavitron type scaler. The Micromotor accepts all the following low speed attachments.

L687 ISO fitting 1:1 Attachment
L688 ISO fitting 4:1 reduction attachment
L686 Straight nose cone for oscillating prophy heads rabbit burs diamond disc

LIA115 Piezo Scaler and Micromotor - twin pump version
LIA762 Irrigation Kit

Integral pump eliminates the need for pump-up water bottles. This dual pump allows the administration of both water and CLS (chlorhexidine) as illustrated.

LIA14 Piezo scaler and micromotor (regular water supply)
SURGICAL ‘CORE SKILLS’ TRAINING

Throughout the year we will be offering professionally tutored training courses covering key areas of surgical expertise. The courses will all be ‘hands on’ based on our experience of many years running and supporting wet labs both in the UK and overseas. The venue will be our own custom built training facility at Veterinary Instrumentation. Areas to be covered include:

- External Fixation
- Fracture Fixation with Plates and Screws
- Interlocking Nails
- Arthroscopy
- Dentistry

Phone for details or view our web page www.vetinst.com/coreskills.htm
CHAPTER 13 - DENTAL HAND INSTRUMENTS

EXPLORER / MEASURING PROBE

A detailed examination of the patient's mouth is the starting point of any dental care programme. This double-ended instrument is all you need. The shepherd's crook explorer is used to test tooth stability and the condition of the gum margins. Tartar and gum disease cause detachment of the gingivae exposing the tooth root. The depth of these sulci are measured using the measuring probe. Details are recorded for subsequent treatment and comparisons.

012100 Explorer / measuring probe

SUBGINGIVAL CURETTE

This scaler is used to remove subgingival tartar and to plane tooth roots. Unless the root is clean the gum will not re-attach. The back surface of the scaler is blunt to minimise damage to the sensitive gingivae. The instrument is double-ended and has a balanced grip for extra comfort in use.

012130 Subgingival curette

JAQUETTE SUPRAGINGIVAL SCALER

This scaler is used to remove tartar from above the gum margin. The tip and back of the instrument is sharp to scrape between teeth. Do not use below the gum margin. Double-ended in a balanced grip handle for ease of use and comfort.

012120 Jaquette supragingival scaler

DOUBLE-ENDED SCRAPER

The tips of this instrument are of familiar design mounted in a comfortable handle. One end is a fine hook to remove tartar from between teeth, the other is a shallow scoop to break tartar from flatter surfaces. A simple general purpose instrument for tartar removal.

012020 Double-ended scraper
SHARPENING ACCESSORIES

To work effectively both scalers and elevators need to be sharp. Regular sharpening will keep your instruments working correctly.

- **012142** Flat sharpening stone (illustrated)
- **012145** Sharpening oil
- **012150** IM3 sharpening stone - a large flat stone with 2 curved and a flat surface for both elevators and scalers - illustrated

DIAMOND CARD - FINE

This credit card sized, diamond covered plate is ideal for sharpening dental elevators and luxators. To work efficiently these instruments must be sharp. The diamond is virtually indestructable. An additional advantage is that the lubricant used is water rather than the oil used with sharpening stones.

- **012144** Diamond card - fine

DIAMOND CONE

Sub gingival curettes must be kept sharp to work efficiently. They should be checked and sharpened at least weekly. The diamond cone is indestructable compared with stones which break very easily and uses water rather than oil as a lubricant.

- **012148** Diamond cone
CHAPTER 13 - DENTAL HAND INSTRUMENTS

CARNIVORE ELEVATOR

Removal of the teeth of dogs and cats requires rupture of the periodontal ligament. In relatively healthy roots rupture is very difficult, requiring great force. Rupture (and therefore extraction) is best achieved by forcing an elevator or luxator into the periodontal space. In the dog and cat the space is very narrow, quite different to the human situation. Our carnivore elevators are thin and very sharp.

012001  Carnivore elevator small (cat)
012002  Carnivore elevator medium
012003  Carnivore elevator large

WEDGE ELEVATOR

Designed to remove the Upper Premolar IV (the carnassial) without the need to split the tooth. The tooth roots are elevated in the usual manner using carnivore elevators or luxators. The tip of the wedge is drilled through between rostral and posterior roots. The blade of the instrument is then worked under the tooth. As the width of the blade increases the tooth is forced from the alveolus. The triangular cross section of the blade supports the structure of the tooth during extraction.

012010  Wedge elevator

LUXATORS

Luxators, which are in essence very slim elevators, are favoured by many veterinary dentists for the rupture of the periodontal ligament. They are, in fact, designed for the human tooth but are very good for veterinary use. The kit contains 3mm straight, 3mm curved, 5mm straight, 5mm curved and a sharpening stone. Swedish made, these Luxators are very thin and very sharp.

012190  Luxator 2mm straight
012191  Luxator 3mm straight
012192  Luxator 3mm curved
012193  Luxator 5mm curved
012194  Luxator 5mm straight
012196  Kit incl. sharpening stone (NB. does not include 2mm straight)
WINGED LUXATORS

Veterinary elevators designed by Dr Robert Wiggs. They have short winged blades with lateral edges which curve upwards further than traditional elevators, improving conformation to the root structure as well as instrument control. The narrow neck enhances visibility of the root and the shorter shaft improves handling and control, especially if the operators hands are not large. The design incorporates the best parts of an elevator and a luxator. Aluminium knurled handles are very comfortable in use.

**Regular Tips**
- 012389 Winged luxator, violet handle 1.0mm
- 012390 Winged luxator, gold handle 2.0mm
- 012391 Winged luxator, blue handle 3.0mm
- 012392 Winged luxator, black handle 4.0mm
- 012393 Winged luxators, set of 4

APICAL ELEVATOR

Used to remove tooth root fragments.

- 012006 Apical elevator

COUPLANDS ELEVATORS

- 012015 Couplands chisel No.1 3mm
- 012016 Couplands chisel No.2 4mm
- 012017 Couplands chisel No.3 5mm

PERIOSTEAL ELEVATOR

Used to raise gingival flaps. The fine instrument is particularly useful in cats.

- 001270 Periosteal elevator
- 7350/05 Freer elevator
- 001272 Very fine periosteal elevator

TARTAR FORCEPS

Our spring loaded tartar forceps are designed to sit comfortably in the hand to enable the veterinary dentist to remove quickly bulky deposits from teeth.

- 012050 Tartar forceps spring loaded
- 012051 Tartar forceps cat size
CHAPTER 13 - DENTAL HAND INSTRUMENTS

TARTAR FORCEPS (NEW PATTERN)

The new pattern tartar forceps are designed specifically for the removal of bulky tartar prior to scaling and polishing. One jaw is cup shaped to locate onto the tooth tip and act as a fulcrum for the other jaw. The other jaw is a sharp hook to engage the tartar at the gum margin. The jaws are designed to remove tartar from both flat surfaces and between teeth.

012052 Tartar forceps (new pattern)

HAWKBILL FORCEPS

The multi-rooted teeth of the dog and cat should be loose before extraction by forceps. The loosening may be due to dental disease or careful elevation. As well as firmly gripping the tooth to be extracted appropriate dental forceps should support the tooth structure. None of the several hundred human forceps available suit the teeth of our patients. The Hawksbill forceps are designed specifically for the extraction of multi-rooted teeth in the dog and cat.

012030 Large Hawksbill forceps
012040 Small Hawksbill forceps

SMALL INCISOR FORCEPS

The tips of these forceps are ideal for the removal of single rooted, usually incisor teeth. Cross-hatched thumb area for extra control.

012070 Small incisor forceps

DENTAL MODELS

Demonstrates many typical dental problems to clients with greater ease than in an un-cooperative patient. Once the client understands the problem they will be much more likely to accept the necessity of any particular procedure.

AMJ770 Canine teeth
AMJ770C Feline teeth
AMJ770S Set of both
AMJ771 Canine teeth plus pathology
AMJ771C Feline teeth plus pathology
AMJ771S Set of both
DENTAL CHART STICK-ON LABELS

An essential part of any dental programme is accurate recording. These stick-on labels make dental recording a simple process.

- 012200 Stick-on labels (50) - dog
- 012201 Stick-on labels (50) - cat

TARTAR SCRAPPERS - VARIOUS

- 012021 Tartar scraper no. 11 - single end
- 012022 Tartar scraper no. 12 - single end
- 012023 Tartar scraper no. 15 - single end
- 012024 Tartar scraper no. 16 - single end

LIP RETRACTOR

The lip retractor solves the problem of retracting the lip for clear access to the teeth. It has a new modified shape to prevent pinching the lip and the tips of the instrument are plastic coated to minimise trauma. It can be adjusted by lightly bending. 6.5” long and autoclavable.

- 010147 Lip retractor

MOUTH GAG

Simple action allows spring to gently open the jaws but does not allow the patient to close its' mouth.

- 012160 Small mouth gag
- 012170 Medium mouth gag
- 012180 Large mouth gag

- 012154 Spring gags (set)
- 012155 Spring gag - large
- 012156 Spring gag - medium
- 012157 Spring gag - small
CHAPTER 14 - RODENT DENTISTRY

TABLE TOP RODENT GAG

Allows mouth to be held open in an appropriate position without assistance. The platform tips allowing best positioning for surgeon and available lighting. It works even if incisors have been removed.

012204 Table top gag

RODENT MOUTH GAG

Without this gag examination and treatment of rabbit molars is virtually impossible.

012185 Rodent mouth gag

CHEEK DILATORS

The small dilator is also useful as a small gag for guinea pigs and chinchillas.

012188 Cheek dilator small
012189 Cheek dilator large
012189A Cheek dilator large - long reach (illustrated)

LIGHTWEIGHT RODENT MOUTH GAG

Less bulky and less powerful than the standard rodent gag. Cheaper too.

012185LW Lightweight rodent mouth gag

SPATULA

Use to deflect tongue and cheek to examine and treat molars

012184 Spatula

MOLAR CUTTERS

Use to debulk or for trimming spurs and hooks.

012186 Molar cutters
MOLAR RASP

Unsuitable for debulking but good for tidying.

012187  Molar rasp (rabbits)
012181  Molar rasp (guinea pigs & chinchillas)
012181a Diamond rasp - this is the best rasp there is. Contoured to stay on top of the molars

MOTORISED DIAMOND RASP

This autoclavable motor attachment fits all micromotors (air or electric drive). The reciprocating action makes it ideal as a motor rasp in rabbits using the diamond blade or as a micro-surgical saw using the small blades.

1050  Reciprocating motor
1052  Diamond rodent rasp attachment
1054  Tungsten carbide rasp attachment
1041  Micro blade 10mm x 3mm (6 pack)
1044  Micro blade 21mm x 4mm (6 pack)

DIAMOND DISC

For trimming incisors (shown with straight nose cone, not included). Hand piece fitting.

001789  Diamond disc
001791  Diamond disc safety shield

RABBIT BUR KIT

Consists of three pairs of burs in a stainless steel block. HP kit.

001792  Rabbit bur kit
001793  Soft tissue protector (fits straight nose cone - not included)
HP704  Taper side cut bur
HL563  Extra long cross cut bur
HP8   Round carbide bur
CHAPTER 14 - RODENT DENTISTRY

CROSSLEY INCISOR LUXATOR

Designed by David Crossley to extract the very large rabbit incisors. Removal avoids the requirement for repeated cutting of overgrown mal-occluded incisors.

CROSSLEY MOLAR LUXATOR

Designed to facilitate extraction of molars with a minimum of damage to the alveolus and surrounding soft tissue. One cutting blade is for insertion down buccal or lingual surface. The other end of the instrument is set at right angles to penetrate between molars.

MOLAR EXTRACTION FORCEPS

There is very little space inside a rabbit mouth. These forceps are very slim and angled to fit in the mouth without totally obscuring the teeth.
ANTIBIOTIC IMPREGNATED POLYMETHACRYLATE BEADS (AIPMMA)

Management of chronic local infections may benefit from the insertion of antibiotic impregnated polymethacrylate (AIPMMA) beads. The beads are manufactured from sterile bone cement with the addition of appropriate antibiotic.

Indications include osteomyelitis and abcessation in the rabbit.

Veterinary Instrumentation offers two kits for the preparation of AIPMMA beads. Both kits contain sufficient material for approximately 100 beads. Full instructions are included.

**BC3K** 40 gram low viscosity cement plus 50ml catheter mount syringe. This cement contains no antibiotic. Choice of antibiotic will depend on bacteriology and sensitivity.

**BC3GK** 40 gram low viscosity cement containing 1 gram of Gentamycin plus 50ml catheter mount syringe. Gentamycin is the preferred choice of antibiotic for many infections but is toxic when administered parenterally.
15 - NEEDLES

BIOPSY NEEDLES
BONE MARROW BIOPSY-JAMSHIDI TYPE

In the Jamshidi type the integral stylet is locked into the lumen of the needle preventing obstruction by debris. When the needle tip is in the desired location the stylet is removed and the sample aspirated. The 11 gauge needle with the stylet removed may be used to take a 1.5mm approx. core of bone from tumors for typing. (see also bone trephines). A very good web page on the harvesting of bone marrow can be found at:

www.vetmed.wsu.edu/courses_samdx/bm.htm

DISPOSABLE

Designed as a throw away item this needle can in fact be used several times provided the autoclave does not exceed 124 degrees celcius. Do not use the drying cycle or use chemical cold sterilants, see page 164.

These are the original Baxter Jamshidi needles

BAXTER

012504 Jamshidi 18 gauge
DIN1515X Jamshidi 15 gauge
DJ4013 Jamshidi 13 gauge
DJ4011 Jamshidi 11 gauge
DJ4008 Jamshidi 8 gauge

VETERINARY INSTRUMENTATION

BMBJV18 VI, Jamshidi type disposable 18g
BMBJV16 VI, Jamshidi type disposable 16g
BMBJV13 VI, Jamshidi type disposable 13g
BMBJV11 VI, Jamshidi type disposable 11g
BMBJV8 VI, Jamshidi type disposable 8g

Drive into a suitable site, wing of ilium, tuber ischium, proximal femur. Pull back a little, withdraw stylet and aspirate. If there is no aspirate, replace stylet, push in further and repeat.

RE-USABLE

Made entirely from stainless steel these needles are fully autoclavable and can be re-sharpened as necessary.

012506 Jamshidi type 18 gauge
012505 Jamshidi type 13 gauge
012519 Jamshidi type 11 gauge
012518 Jamshidi type 8 gauge
**BONE MARROW BIOPSY-KLIMA TYPE**

The Klima is stainless and re-usable representing good value. The stylet is retained in position by hand. Practically the use of the needle is not as easy as the Jamshidi type.

- 012507  Klima 16 gauge 25mm
- 012508  Klima 18 gauge 25mm
- 012503  Klima 16 gauge 37mm

**BONE MARROW BIOPSY-ROSENTHAL**

Similar to Klima. Stylet does not lock into position.

- 012509  Rosenthal 16 gauge 35mm

**CORTICAL BONE TREPHINE**

Stainless steel and re-usable. Used to take a core of bone for tumour typing. Stylet locates point of sample and then pushes out sample.

- 001425  Trephine 8mm O:D 6mm core
- 001426  Trephine 6mm O:D 4mm core
- 001427  Trephine 5mm O:D 3mm core

**SOFT TISSUE BIOPSY**

**TRU-CUT STYLE.**

Used to sample liver, kidney and other soft tissues with minimal trauma. Takes just a small sliver of tissue. Disposable but will withstand boiling.

- 012521  Trucut soft tissue biopsy needle 14g
- STB14  VI Trucut type Super Core biopsy needle 14g
CHAPTER 15 - SPECIAL NEEDLES

EAR FLUSHING NEEDLES
Flushing needles have a bead or olive soldered onto the tip to minimise trauma to friable soft tissues. The standard ear flushing needle.

- 012510  Spreulls 60mm long
- 012511  Spreulls 100mm long

FLUSHING NEEDLE 21 GAUGE
Suitable for tear ducts of large and medium sized dogs. Also suitable for anal gland ducts of small dogs. Ideal for flushing the urethra in the male cat prior to placement of catheter. Start with the 30mm needle and switch if necessary to the long version.

- 012512  Flushing needle 21 gauge 30 mm
- 012512L Flushing needle 21 gauge 50mm

ORAL DOSING NEEDLES
Suitable for oral dosing and feeding of birds and reptiles. Available in a range of gauges from 12 to 23.

- 012513  12g Oral dosing needle - cvd 200mm
- 012514  14g Oral dosing needle - cvd 125mm
- 012515  16g Oral dosing needle - str 75mm
- 012515C 16g Oral dosing needle - cvd 75mm
- 012515STR 16g Oral dosing needle - str 100mm
- 012516  18g Oral dosing needle - str 50mm
- 012516C 18g Oral dosing needle - cvd 50mm
- 012517  20g Oral dosing needle - str 38mm
- 012517C 20g Oral dosing needle - cvd 38mm
- 012522  23g Oral dosing needle - str 25mm

SPINAL NEEDLES
We now strongly recommend the use of disposable needles for these procedures. The transluscent hub allows good visualisation of the CSF.

- 405078  25g x 2”  (box 25)
- 405171  22g x 3”  (box 25)
- 405172  20g x 3”  (box 25)
- 405184  18g x 3.5”  (box 25)
- 405074  22g x 2.5”  (box 25)
RABBIT LACHRYMAL DUCT CANNULAE

Treatment of chronic eye infections in the rabbit can be very unrewarding with topical ophthalmic preparations alone. It is now accepted that flushing the large nasolachrymal duct punctum to remove accumulations of pus is an essential adjunct to the topical therapy. This procedure is usually well tolerated by the rabbit under sedation and local anaesthetic eye drops. The angle and lengths of standard ophthalmic cannula are incorrect for this procedure. Veterinary Instrumentation’s Rabbit Lachrymal Duct Cannula is designed especially for this procedure and is available in two sizes, 19 gauge and 21 gauge.

012523 Nasolachrymal duct 19 gauge
012524 Nasolachrymal duct 21 gauge
012525 2 pack - one of each size

BLADDER CATHETERS

Stainless steel bladder catheter for cats and bitches. Blunt tip with two lateral eyes. Luer Lock hubs.

307126 Straight (cat) - 170mm long
307120 Curved (bitch) - 180mm long
307122 Curved (bitch) - 250mm long
CHAPTER 15 - SPECIAL NEEDLES

The needles are manufactured from high grade stainless steel and undergo a rigorous quality control procedure to ensure a high standard of sharpness, rigidity, durability and presentation. The needles are hand honed for added sharpness to ensure a smooth, less traumatic passage through the tissue. All needles supplied non-sterile in packs of 12. Order code NRC followed by needle size e.g NRC1 is regular curved needle 80mm.

Order code is NRHC followed by needle size.

NEEDLE BOXES (AUTOCLAVABLE)

Available in polypropylene or stainless steel.

NDLBOX Needle box - stainless steel
091149 Needle box - polypropylene
Order code NRS followed by needle size.

Order code NRHC followed by needle size.

**BONE WAX**

It will not help you if you hit a venous sinus but will control the seepage of blood from cut cancellous bone which obscures the visual field.

*001460 Bone wax (12 x 2.5g)*
16 - GENERAL SURGERY

Veterinary Instrumentation's no quibble lifetime guarantee means that you can purchase instruments in the full confidence that they will not let you down.

The instruments will be replaced free of charge in the event of breaking due to faulty workmanship. Wear, e.g. in needleholders, is not covered.

INSTRUMENT REPAIR SERVICE

Veterinary Instrumentation has a network of specialists who can repair any surgical instrument. Send the damaged item to us and we will advise if it is worth repairing.
Routine sharpening of scissors is performed quickly and professionally, in house, by our own technicians.

Terminology
Str = Straight
Cof = Curved
Aof = Angled

ARTERY FORCEPS

CRILE

Jaw is somewhat lighter than the more popular Spencer Wells artery forceps.

101750  Crile 14cm 5.5" Str
101755  Crile Atrumatic Jaws 5.5" Str
101765  Crile 16cm 6.5" Str
101775  Crile 18cm 7" Str
101780  Crile 14cm 5.5" Cof
101785  Crile Atrumatic Jaws 5.5" Cof
101795  Crile 16cm 6.5" Cof
101800  Crile 18cm 7" Cof

HALSTEAD MOSQUITO

Very light but adequate for routine haemostasis in all but the largest blood vessels.

103175  Halstead Mosquito 12.5cm 5" Str
103225  Halstead Mosquito 12.5cm 5" Cof
ROCHESTER PEAN

The long jaw of this forcep makes it useful as a hysterectomy clamp in small and medium breeds.

- 106225  Rochester Pean 14cm 5.5” Str
- 106230  Rochester Pean 16cm 6.5” Str
- 106235  Rochester Pean 18cm 7” Str
- 106270  Rochester Pean 14cm 5.5” Cof
- 106275  Rochester Pean 16cm 6.5” Cof
- 106280  Rochester Pean 18cm 7” Cof

SPENCER WELLS

The standard veterinary artery forcep.

- 106600  Spencer Wells 12.5cm 5” Str
- 106605  Spencer Wells 15cm 6” Str
- 106610  Spencer Wells 18cm 7” Str
- 106615  Spencer Wells 20cm 8” Str
- 106620  Spencer Wells 23cm 9” Str
- 106625  Spencer Wells 12.5cm 5” Cof
- 106630  Spencer Wells 15cm 6” Cof
- 106635  Spencer Wells 18cm 7” Cof
- 106640  Spencer Wells 20cm 8” Cof
- 106645  Spencer Wells 23cm 9” Cof

MAYO SAFETY PIN

Use to organise artery forceps and other similar instruments

- 106699  Mayo safety pin

BONE CUTTING FORCEPS

VETERINARY INSTRUMENT RANGE

- 001310  Small angled cutters 17cm 6.5” see page 22
LISTON

General purpose bone cutters. A little clumsy for many veterinary procedures.

141700 Liston 15cm 6" Str
141705 Liston 15cm 6" Cof
141710 Liston 15cm 6" Aof
141730 Liston 18cm 7" Str
141735 Liston 18cm 7" Cof
141740 Liston 18cm 7" Aof
141755 Liston 20cm 8" Str
141760 Liston 20cm 8" Cof
141765 Liston 20cm 8" Aof

McINDOE

Very powerful but relatively small bite.

141900 McIndoe 17cm 6.75" Aof

RUSKIN

Similar in design to McIndoe but larger.

141940 Ruskin 19cm 7.5" Str
141960 Ruskin 19cm 7.5" Aof
141970 Ruskin 26cm 10.5"

HORSLEY BONE CUTTERS

Heavy duty compound action cutters

141660 10.5” Horsley aof bone cutters
BONE GOUGE FORCEPS (RONGEURS)

VETERINARY INSTRUMENTATION RANGE

001300  Small angled rongeurs 17cm 6.5"
001400  Duck billed Daniels rongeurs
001430  Compound action spinal rongeurs
001432  Laminectomy rongeurs
6730/10  Lempert rongeurs 190mm

JANSEN

Compound action, powerful but small bite.

142200  Jansen 19cm 7.5"

RUSKIN

A heavy duty rongeur.

142270  Ruskin 23cm 9"

BONE HOLDING FORCEPS

VETERINARY INSTRUMENTATION RANGE

See chapter 3

001200  Fragment forceps
001210  Bone holding forceps
001215  Bone plate holding forceps
001470  Dingmans (long ratchet)
CHAPTER 16 - GENERAL SURGERY

CHISELS

VETERINARY INSTRUMENTATION RANGE

Small and light.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>001350</td>
<td>Chisel 12mm</td>
</tr>
<tr>
<td>001351</td>
<td>Chisel 10mm</td>
</tr>
<tr>
<td>001352</td>
<td>Chisel 8mm</td>
</tr>
<tr>
<td>001353</td>
<td>Chisel 6mm</td>
</tr>
<tr>
<td>001354</td>
<td>Chisel 4mm</td>
</tr>
</tbody>
</table>

SWEDISH PATTERN

A good general purpose chisel for heavy work.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>162350</td>
<td>Swedish 15mm</td>
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<tr>
<td>162360</td>
<td>Swedish 20mm</td>
</tr>
<tr>
<td>162370</td>
<td>Swedish 25mm</td>
</tr>
</tbody>
</table>

CLAMPS

DOYEN

Rather large for small animal surgery but cheaper than the small atraumatic bowel clamp (see below)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>201950</td>
<td>Doyen 24cm 9.5” Str</td>
</tr>
<tr>
<td>201955</td>
<td>Doyen 24cm 9.5” Cof</td>
</tr>
</tbody>
</table>

ATRAUMATIC SMALL BOWEL CLAMP

Jaw design gently holds and seals the bowel with a minimum of pressure and trauma. The fine ratchet facilitates gentle yet secure application.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>222165</td>
<td>Atraumatic bowel clamp 17cm 6.75” Str</td>
</tr>
<tr>
<td>222170</td>
<td>Atraumatic bowel clamp 17cm 6.75” Cof</td>
</tr>
</tbody>
</table>
DISSECTING FORCEPS

SERRATED-BLOCK END

A cheap, general purpose dressing forcep.

341070  Block end serrated 12.5cm 5"
341075  Block end serrated 15cm 6"
341080  Block end serrated 18cm 7"
341085  Block end serrated 20cm 8"

DISSECTING FORCEPS 1/2 TEETH

341145  Dissecting forceps 15cm 6"
341160  Dissecting forceps 18cm 7"

ADSON

Ideal for fine surgical procedures. Very useful.

341200  Adson, serrated 12.5cm 5"
341201  Adson, serrated, extra fine 12.5cm 5"
341210  Adson, 1/2 teeth 12.5cm 5"
341212  Adson Brown 12.5cm 5"

DEBAKEY - ATRAUMATIC

The forceps in this range grip as firmly as rat teeth but cause minimal damage to delicate tissues. Particularly useful in surgery of the ear, bowel or urogenital system.

342005  Debakey 2mm jaws 15cm 6"
342010  Debakey 2mm jaws 18cm 7"
342015  Debakey 2mm jaws 19.5cm 8"
342030  Debakey 2mm jaws 15cm 6” angled

EPILATION

342450  Epilation, square jaws, plain 9cm 3.5”
CHAPTER 16 - GENERAL SURGERY

TREVES, RAT TOOTH FORCEPS

A cheap general purpose rat tooth dissecting forcep.

346850  Treves, 1/2 teeth 12.5cm 5"
346855  Treves, 1/2 teeth 15cm 6"
346860  Treves, 1/2 teeth 18cm 7"

BITCH SPECULUM

546455  Killian, blade length 5cm 2.5"

NEEDLEHOLDERS

Tungsten inserts (T.C. jaws) give a better grip, so important with small needles. The jaws also wear much more slowly.

CASTROVIEJO

The classic ophthalmic needleholders with a catch. Occasional ophthalmic surgeons should consider Miniature Fosters or Ryders. The squeeze action of the Castroviejos can be awkward at first.

601650  Castroviejo, tungsten carbide jaw 14cm 5.5” with catch
601655  Castroviejo, tungsten carbide jaw 18cm 7” with catch

FOSTER GILLIES

Smaller than the standard Gillies this instrument is ideal for finer surgery or smaller hands.

582650  Foster Gillies 12.5cm 5” RH
582660  Foster Gillies 12.5cm 5” LH
602700  Foster Gillies T.C. jaws 12.5cm 5” RH
602705  Foster Gillies T.C. jaws 12.5cm 5” LH
GILLIES

Combined scissor/needleholder.

- Gillies 16cm 6.25” RH
  - 582950
- Gillies 16cm 6.25” LH
  - 582960
- Gillies T.C. jaws 16cm 6.25” RH
  - 602950
- Gillies T.C. jaws 16cm 6.25” LH
  - 602955

OLSEN HEGAR SCISSOR/NEEDLEHOLDER

Olsen Hegar’s combine the best features of Gillies and needleholders. They cut stitches but also lock. Highly recommended. Combined scissor/needleholder

- Olsen Hegar 14cm 5.5”
  - 585400
- Olsen Hegar 16.5cm 6.5”
  - 585410
- Olsen Hegar 19cm 7.5”
  - 585420
- Olsen Hegar T.C. jaws 14cm 5.5”
  - 605350
- Olsen Hegar T.C. jaws 16.5cm 6.5”
  - 605355
- Olsen Hegar T.C. jaws 19cm 7.5”
  - 605360

MAYO

A good general purpose needleholder.

- Mayo, serrated 12.5cm 5”
  - 584750
- Mayo, serrated 15cm 6”
  - 584770
- Mayo, serrated 18cm 7”
  - 584790
- Mayo, serrated 20cm 8”
  - 584820
- Mayo Hegar T.C. 12.5cm 5”
  - 604700
- Mayo Hegar T.C. 14cm 5.5”
  - 604705
- Mayo Hegar T.C. 15cm 6”
  - 604710
- Mayo Hegar T.C. 16.5cm 6.5”
  - 604715
- Mayo Hegar T.C. 18cm 7”
  - 604720
- Mayo Hegar T.C. 19cm 7.5”
  - 604730
- Mayo Hegar T.C. 20cm 8”
  - 604735
- Mayo Hegar T.C. 23cm 9”
  - 604740
DEBAKEY

Much lighter in construction than the Mayo Hegar. These needleholders are very useful for deep surgical procedures where there is limited space e.g. chest surgery.

602005  DeBakey T.C. jaws 18cm 7”
602010  DeBakey T.C. jaws 20cm 8”
602015  DeBakey T.C. jaws 23cm 9”
602020  DeBakey T.C. jaws 25cm 10”
602025  DeBakey T.C. jaws 30.5cm 12”

RYDER

Ideal for small needles. The smaller sizes are an alternative for ophthalmic needleholders.

606340  Ryder T.C. jaws 12.5cm 5”
606345  Ryder T.C. jaws 15cm 6”
606350  Ryder T.C. jaws 18cm 7”

OSTEOTOMES

VETERINARY INSTRUMENTATION RANGE

Small and light.

001342  Osteotome 12mm
001343  Osteotome 10mm
001344  Osteotome 8mm
001345  Osteotome 6mm
001346  Osteotome 4mm

SWEDISH PATTERN

623850  Swedish 15mm
623860  Swedish 20mm
623870  Swedish 25mm
623880  Swedish 30mm
RETRACTORS

LANGENBECK

Good retraction is the key to success in many procedures, especially surgery on deep structures e.g. the pelvis or the larynx.

- 684375 Langenbeck width 6mm
- 684380 Langenbeck width 13mm
- 684385 Langenbeck width 25mm
- 684390 Langenbeck width 20mm
- 684395 Langenbeck width 6mm, extra long for tie-backs and TECA's

MORRIS

Much wider than the above, good for fat abdomens.

- 684750 Morris width 40mm
- 684755 Morris width 50mm
- 684760 Morris width 65mm

WALTON, COPPER MALLEABLE

These soft plates of copper can be moulded to contain particularly mobile soft tissue e.g. lungs and bowel.

- 687613 Walton 305mm x 13mm
- 687625 Walton 305mm x 25mm
- 687651 Walton 305mm x 50mm

SENN

- 833305 Senn retractor (cats paw)

FAT PAD RETRACTOR

Visualisation of the medial meniscus is maximised by retraction of the fat pad. Previously this has been achieved by use of a Senn ("cats paw") retractor. The fat pad retractor has the same clawed foot but has a much more practical means of holding the instrument.

- 001114 Fat pad retractor
CHAPTER 16 - GENERAL SURGERY

RETRACTORS - SELF RETAINING

GELPI - MODIFIED BLUNT TIPS

This self retaining retractor is extremely versatile as well as being the cheapest of the range. Manufactured to an extremely high standard to perform in a range of procedures. See also Veterinary Instrumentation's range on page 32

Excision arthroplasty  
Hip toggle  
O.C.D. of shoulder, elbow and hock  
Examination of stifle meniscae  
Disc fenestration  
Thoracotomy

001330 Gelpi 16.5cm 6.5"

GOSET

Good as a rib retractor, laparotomy retractor and for retraction of ventral cervical structures during cervical fenestration.

701550 Gosset large 4" 10cm spread  
701600 Gosset small 3" 7.5cm spread

TRIVERS

Four teeth on each side give a wider area of spread than Gelpis. Expensive.

703050 Travers 20cm 8"  
703051 Travers 16.5cm 6.5"

WEISLANDER

702150 Weislander 14cm 5.5" Sharp  
702152 Weislander 14cm 5.5" Blunt

WEST

Widely used but sharp points tend to snag tissues.

703250 West 14cm 5.5"
**BALFOUR**

Abdominal retractor. This is a human retractor and the central blade is of limited value in the dog. The external blade is detachable.

- **25-2375** Balfour retractor - maximum spread 180mm 7”
- **25-2376** Balfour retractor baby - maximum spread 90mm 3.5”

**COLLINS**

The two blades swivel as retraction takes place.

- **703260** Collins retractor - maximum spread 110mm 4.5”

**RIB RETRACTOR**

- **704000** Rib retractor - small (blades 20mm x 20mm, gape 95mm)
- **704005** Rib retractor - large (blades 28mm x 32mm, gape 130mm)
CHAPTER 16 - GENERAL SURGERY

DRESSING

Pointed blades.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>742600</td>
<td>Dressing B/B 10cm 4” Str</td>
</tr>
<tr>
<td>742610</td>
<td>Dressing B/B 12.5cm 5” Str</td>
</tr>
<tr>
<td>742620</td>
<td>Dressing B/B 14cm 5.5” Str</td>
</tr>
<tr>
<td>742630</td>
<td>Dressing B/B 15cm 6” Str</td>
</tr>
<tr>
<td>742640</td>
<td>Dressing B/B 18cm 7” Str</td>
</tr>
<tr>
<td>742650</td>
<td>Dressing B/B 20cm 8” Str</td>
</tr>
<tr>
<td>742700</td>
<td>Dressing S/S 10cm 4” Str</td>
</tr>
<tr>
<td>742710</td>
<td>Dressing S/S 12.5cm 5” Str</td>
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<tr>
<td>742720</td>
<td>Dressing S/S 14cm 5.5” Str</td>
</tr>
<tr>
<td>742730</td>
<td>Dressing S/S 15cm 6” Str</td>
</tr>
<tr>
<td>742740</td>
<td>Dressing S/S 18cm 7” Str</td>
</tr>
<tr>
<td>742750</td>
<td>Dressing S/S 20cm 8” Str</td>
</tr>
<tr>
<td>742900</td>
<td>Dressing B/B 12.5cm 5” Cof</td>
</tr>
<tr>
<td>742910</td>
<td>Dressing B/B 14cm 5.5” Cof</td>
</tr>
<tr>
<td>742920</td>
<td>Dressing B/B 15cm 6” Cof</td>
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<td>Dressing B/B 18cm 7” Cof</td>
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<td>Dressing B/B 20cm 8” Cof</td>
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<td>742800</td>
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</tr>
<tr>
<td>742820</td>
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</tr>
<tr>
<td>742830</td>
<td>Dressing S/B 12.5cm 5” Cof</td>
</tr>
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<td>742840</td>
<td>Dressing S/B 14cm 5.5” Cof</td>
</tr>
<tr>
<td>742850</td>
<td>Dressing S/B 15cm 6” Cof</td>
</tr>
</tbody>
</table>

HEATH STITCH

General purpose stitch cutter.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>743800</td>
<td>Heath Stitch, serrated blade cvd lat 15cm 6”</td>
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</table>

IRIS

A useful general purpose ophthalmic scissors.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>744100</td>
<td>Iris lightweight S.P. 9cm 3.5” Str</td>
</tr>
<tr>
<td>744110</td>
<td>Iris lightweight S.P. 11cm 4.5” Str</td>
</tr>
<tr>
<td>744120</td>
<td>Iris lightweight S.P. 9cm 3.5” Cof</td>
</tr>
<tr>
<td>744130</td>
<td>Iris lightweight S.P. 11cm 4.5” Cof</td>
</tr>
</tbody>
</table>
METZENBAUM

More elegant and lighter than Mayos, these scissors are preferred by many surgeons. Veterinary Instrumentation's metzenbaums have finer tips than standard.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>746100</td>
<td>Metzenbaum B/B 14.5cm 5.75” Str</td>
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<td>Metzenbaum B/B 18cm 7” Str</td>
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<td>746120</td>
<td>Metzenbaum B/B 21.5cm 8.5” Str</td>
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<td>746130</td>
<td>Metzenbaum B/B 24cm 9.5” Str</td>
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<tr>
<td>746200</td>
<td>Metzenbaum B/B 14.5cm 5.75” Cof</td>
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<tr>
<td>746210</td>
<td>Metzenbaum B/B 18cm 7” Cof</td>
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<td>746220</td>
<td>Metzenbaum B/B 21.5cm 8.5” Cof</td>
</tr>
<tr>
<td>746230</td>
<td>Metzenbaum B/B 24cm 9.5” Cof</td>
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</table>

LITTAUER STITCH

Very nice for removal of small awkward sutures.

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<tr>
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<tr>
<td>745095</td>
<td>Littauer stitch (Spencer) 8cm 3.5” Str</td>
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<td>745100</td>
<td>Littauer stitch 11cm 4.5” Str</td>
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<tr>
<td>745110</td>
<td>Littauer stitch 12.5cm 5” Str</td>
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</tbody>
</table>

MAYO

General purpose surgical scissor. Veterinary Instrumentation's mayo scissors have finer tips than standard. More appropriate for veterinary surgery.

<table>
<thead>
<tr>
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<tr>
<td>745300</td>
<td>Mayo, chamfered blades 14cm 5.5” Str</td>
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<tr>
<td>745310</td>
<td>Mayo, chamfered blades 16.5cm 6.5” Str</td>
</tr>
<tr>
<td>745320</td>
<td>Mayo, chamfered blades 19cm 7.5” Str</td>
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<tr>
<td>745330</td>
<td>Mayo, chamfered blades 21.5cm 8.5” Str</td>
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<tr>
<td>745400</td>
<td>Mayo, chamfered blades 14cm 5.5” Cof</td>
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<tr>
<td>745410</td>
<td>Mayo, chamfered blades 16.5cm 6.5” Cof</td>
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<tr>
<td>745420</td>
<td>Mayo, chamfered blades 19cm 7.5” Cof</td>
</tr>
<tr>
<td>745430</td>
<td>Mayo, chamfered blades 21.5cm 8.5” Cof</td>
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</table>

LISTER BANDAGE

<table>
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<tr>
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<tr>
<td>744800</td>
<td>Lister Bandage ATS 14cm 5.5”</td>
</tr>
<tr>
<td>744810</td>
<td>Lister Bandage ATS 18cm 7”</td>
</tr>
</tbody>
</table>
CHAPTER 16 - GENERAL SURGERY

POOLEY’S

746350 Pooley’s, conjunctival B/B 9cm 3.5”

STRABISMUS

746900 Strabismus, lightweight B/B 9cm 3.5” Str
746910 Strabismus, lightweight B/B 11cm 4.5” Str
747010 Strabismus, lightweight B/B 9cm 3.5” Cof
747020 Strabismus, lightweight B/B 11cm 4.5” Str

HARD EDGE SCISSORS
Stay sharper, longer. Gold handles to distinguish from general surgical items.

752250 Mayo 15cm 6” Str.
752260 Mayo 15cm 6” Cof.
754020 Metzenbaum 14.5cm 5 3/4” Str.
754030 Metzenbaum 18cm 7” Str.
754060 Metzenbaum 23.5cm 9.5” Str.
754080 Metzenbaum 14.5cm 5 3/4” Cof.
754090 Metzenbaum 18cm 7” Cof.
754120 Metzenbaum 23.5cm 9.5” Cof.
754095 Metzenbaum 35cm 14” Cof.

SUPERCUT SCISSORS
Greatly improved cutting characteristics made by blade modifications.

760000 Mayo 5.5” Str
760002 Mayo 5.5” Cof.
760010 Metzenbaum 7” Str.
760012 Metzenbaum 7” Cof.

SCOOPS

VOLKMAN
Useful for heavy curettage and collection of cancellous bone grafts.

782200 Volkman width 4mm S/E
782210 Volkman width 5mm S/E
782220 Volkman width 6mm S/E
782600 Volkman, size A small D/E
782610 Volkman, size B medium D/E
782620 Volkman, size C large D/E
STERILISER FORCEPS

CHEATLE

For manipulation of instruments during setting up.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>787650</td>
<td>Cheatle steriliser forceps 26.5cm 10.5” B/J</td>
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<tr>
<td>787655</td>
<td>Cheatle steriliser forceps 26.5cm 10.5” B/J</td>
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</table>

TISSUE FORCEPS

ALLIS

General purpose tissue forceps.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>801150</td>
<td>Allis 2/3 th 15cm 6” B/J</td>
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<tr>
<td>801155</td>
<td>Allis 3/4 th 15cm 6” B/J</td>
</tr>
<tr>
<td>801160</td>
<td>Allis 4/5 th 15cm 6” B/J</td>
</tr>
<tr>
<td>801165</td>
<td>Allis 5/6 th 15cm 6” B/J</td>
</tr>
<tr>
<td>801170</td>
<td>Allis 6/7 th 15cm 6” B/J</td>
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</table>

BABCOCK

An alternative to Allis’s. Less traumatic but less grip.

<table>
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<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>801350</td>
<td>Babcock 16cm 6.5” B/J</td>
</tr>
<tr>
<td>801354</td>
<td>Babcock 17.5cm 7”</td>
</tr>
<tr>
<td>801355</td>
<td>Babcock 20cm 8” B/J</td>
</tr>
<tr>
<td>801360</td>
<td>Babcock 23cm 9”</td>
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</table>

TOWEL CLIPS

BACKHAUS

General purpose towel clip.

<table>
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<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>841350</td>
<td>Backhaus 9cm 3.5” B/J</td>
</tr>
<tr>
<td>841355</td>
<td>Backhaus 10cm 4” B/J</td>
</tr>
<tr>
<td>841360</td>
<td>Backhaus 12.5cm 5” B/J</td>
</tr>
<tr>
<td>841352</td>
<td>Atrumatic towel clamp</td>
</tr>
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</table>

CROSS ACTION

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>846550</td>
<td>Cross action 9cm 3.5”</td>
</tr>
</tbody>
</table>
SWANN MORTON BLADES AND HANDLES

Veterinary Instrumentation's No.3 scalpel handle is a standard handle but has a centimetre/millimetre scale along its length. In addition the back and edge are sharp enough to act as a periosteal elevator for stripping periosteum and muscle from bone.

0803V  No. 3 handle with millimeter scale

Sterile Swann Morton blades are made in Sheffield from the finest steel. These blades are the result of experience plus modern production methods.

Sterile Disposable Scalpels
0501  10 scalpels individually packed size 10
0504  10 scalpels individually packed size 12
0505  10 scalpels individually packed size 15
0507  10 scalpels individually packed size 21
0508  10 scalpels individually packed size 22
0511  10 scalpels individually packed size 24
3901  25 scalpels retractable blade size 10
3991  25 scalpels retractable blade size 11
3905  25 scalpels retractable blade size 15

Carbon Steel Sterile Blades
0201  100 blades individually packed size 10
0203  100 blades individually packed size 11
0204  100 blades individually packed size 12
0205  100 blades individually packed size 15
0207  100 blades individually packed size 21
0208  100 blades individually packed size 22

Fine Stainless Steel Sterile Surgical Blades
05901  25 Blades individually packed SM61
05902  25 Blades individually packed SM62
05904  25 Blades individually packed SM64
05905  25 Blades individually packed SM65
05909  25 Blades individually packed SM69
06051  Fine stainless handle 130mm
06052  Fine stainless handle 100mm
06053  Fine stainless handle 80mm
06054  Fine stainless handle VI pattern 130mm

Swann Morton Surgical Handles
0803  No. 3 (fits 10, 11, 12 and 15)
0804  No. 4 (fits 21 and 22)
0814  No. 4L (fits 21 & 22)
0807  No. 7 (fits 10, 11, 12 & 15)
0909  No. 9 (fits 10, 11, 12 & 15)
0923  No. B3 (fits 10, 11, 12 & 15)

Post Mortem Blades and Handle
02551 PM40 Standard blade (box of 10)
02652 PM40 Standard handle
INSTRUMENT BOXES

Stainless steel in construction with a bacterial filter in the base. The filter allows steam to enter and water vapour to leave but excludes bacteria. Available in a range of sizes to suit most instrument sets and autoclaves.

<table>
<thead>
<tr>
<th>Code</th>
<th>Dimensions</th>
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<tbody>
<tr>
<td>BX201040</td>
<td>Box 200mm x 100mm x 40mm</td>
</tr>
<tr>
<td>BX221250</td>
<td>Box 220mm x 120mm x 50mm</td>
</tr>
<tr>
<td>BX221550</td>
<td>Box 220mm x 150mm x 50mm</td>
</tr>
<tr>
<td>BX281450</td>
<td>Box 280mm x 140mm x 50mm</td>
</tr>
<tr>
<td>BX341650</td>
<td>Box 340mm x 165mm x 50mm</td>
</tr>
<tr>
<td>BX341670</td>
<td>Box 340mm x 165mm x 70mm</td>
</tr>
<tr>
<td>BX402070</td>
<td>Box 400mm x 200mm x 70mm</td>
</tr>
</tbody>
</table>

FINGERED SILICONE INSERT

Autoclavable silicone insert to protect delicate instruments

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BXSIL100</td>
<td>Fingered silicone insert for 200x100x40 box</td>
</tr>
</tbody>
</table>

Other sized silicone inserts to order.

insert shown in use with castroviejo scissors (not included)

STERILE SURGICAL SKIN MARKER

Supplied in a sterile peel pouch the surgical marker allows the surgeon to demarcate selected sites prior to or during surgery. The marker is scrub resistant, non toxic and highly visible. Especially useful around the eyes and ears where accurate reconstruction is vital. Also useful for large skin reconstruction procedures. Includes sterile flexible rule

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>001487</td>
<td>Surgical skin marker, sterile (single)</td>
</tr>
<tr>
<td>001488</td>
<td>Surgical skin marker, sterile (six pack)</td>
</tr>
</tbody>
</table>
17 - INSTRUMENT CARE

With appropriate care your surgical instruments will last a lifetime. The key elements are cleaning, lubrication and storage. Our recommended programme of surgical instrument care is available at the following website address: www.vetinst.com/instrumentcare.htm. Veterinary Instrumentation has a network of specialists who can repair any surgical instrument. Send the damaged item to us and we will advise if it is worth repairing. Routine sharpening of scissors is performed quickly and professionally in house.

INSTRUMENT CLEANING AGENTS

RAPIDEX CLEANER

An effective degreaser and general instrument cleaner. Ideal for use in ultrasonic cleaners.

RAPIDEX Rapidex cleaner (box of 30)
**MICRO 90 CONCENTRATE**

General purpose instrument cleaner (dilute 1:100) for ultrasonics.

100300  Micro 90. 1 litre

**ZYMIT 5 LITRE CONCENTRATE (DILUTE 1:100)**

Enzyme cleaner ideal for removal of biological residue.

100310  Zymit 5 litre concentrate

**RINSE AID**

Helps remove detergents in hard water areas

100320  Rinse aid. 1 litre

**PERASAFE**

Perasafe is a rapid, instrument compatible, user and environmentally friendly, chemical sterilant. Supplied as a safe, space-saving powder Perasafe is activated by simply dissolving in luke-warm tap water. Providing rapid sterilisation and re-use of endoscopy instruments, Perasfe gives confidence to users and patients alike. A unique aldehyde-free formulation gives efficacy without harm to instruments, health risks to nursing staff and avoids the need for special fume extraction or waste disposal systems. PeraSafe is a pale blue/white powder which, when in solution, sterilises within 10 minutes. Suitable for all surgical instruments and fibrescopes. Formulated not to damage surgical instruments. Supplied in the following packs

100102  100 x 16.2gm making 100 x 1 litres
100100  24 x 81gm making 24 x 5 litres
CHAPTER 17 - INSTRUMENT CARE

AUTOMATIC INSTRUMENT WASHER

‘No more manual cleaning’

Simply load the soiled instruments into the stackable stainless steel basket, add the especially formulated detergent and switch on cleaning cycle. A full heavily contaminated load takes around 45 minutes. Alternatively kits may be added incrementally and rinsed (5 minutes) pending a full wash at the end of the session. Instruments emerge after the final rinse ready for lubrication and autoclaving.

Requirements
Mains electricity
Cold water supply
A drain close by

Washer supplied complete with
Detergent
Large stainless basket 340mm x 250mm x 70mm
Small stainless basket 250mm x 170mm x 70mm

100200 Automatic instrument washer - complete
100210 Detergent 1kg
100215 Large basket
100217 Small basket

INSTRUMENT MARKING TAPE

Allows rogue instruments to be returned to their kits. Also useful when going on practical courses.

100001 Marking tape mixed pack
100001BLK Single colour - Black
100001BLU Single colour - Blue
100001BR Single colour - Brown
100001G Single colour - Green
100001OR Single colour - Orange
100001R Single colour - Red
100001W Single colour - White
100001Y Single colour - Yellow
100001DHW High heat tape, single colour
- White
100001DHY High heat tape, single colour
- Yellow
COLOUR CODED IDENTITY RINGS

Strong tear-resistant silicone instrument coding rings.

100012 Colour coded I.D. rings small kit
120 rings in assorted colours

PROTECTIVE AUTOCLAVABLE TIPS

For Steinman, ESF pins and delicate or sharp instruments. Protect tips and staff.

Pins and Sharp Instruments (pack of 20)
100011W White - 1.6mm to 2.0mm (1/16” to 9/64”)
100011BL Blue - 2.5mm/2.8mm (3/32” to 7/64”)
100011G Green - 3.2mm/3.6mm/4.0mm (1/8” to 5/32”)
100011R Red - 4.8mm (3/16”)
100011Y Yellow - 6.0mm/6.35mm (15/16” to 1/4”)

Chisels and Osteotomes (pack of 20)
100011O Orange - flattened 10mm max
100011BR Brown - 16mm max
100011BLK Black - 25mm max

100011 Mix pack of about 100 pieces
CHAPTER 18 - THEATRE WEAR

OPERATING GOWN

Green with cuffs, the standard operating gown. State either medium, large or extra large

TW0001  Operating gown
TW0001M  Operating gown - medium
TW0001XL  Operating gown - extra large

WATERPROOF GOWN

As above but with waterproof front and sleeves for very messy procedures

TW0002  Waterproof gown

SCRUB TUNIC AND TROUSERS

Increasingly veterinary operating room procedures are coming into line with their human counterparts. Everyday clothing should not enter the clean areas.

TW0003  Scrub tunic - small, jade
TW0004  Scrub trousers - small jade
TW0005  Scrub tunic - medium, blue
TW0006  Scrub trousers - medium, blue
TW0007  Scrub tunic - large, blue
TW0008  Scrub trousers - large, blue
TW0009  Scrub tunic - extra large, jade
TW0010  Scrub trousers - extra large, jade

Other designs and patterns available, phone 0845 130 9596 for a colour brochure

DG9515  Disposable gown (large)
DG9545  Disposable gown (extra large)

Useful for emergencies only or as a standard gown

DM1000  Disposable face mask
DH1000  Disposable hat
SC100  Surgical clogs - state size
SWL100  Surgical wellies - state size
### PLAIN SURGICAL DRAPES
Green balloon cloth single thickness.

<table>
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<tr>
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<th>Size</th>
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<tbody>
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<td>BDS2148</td>
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<td>BDS2424</td>
<td>24&quot; x 24&quot;</td>
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<td>BDS3636</td>
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<tr>
<td>BDS7248</td>
<td>72&quot; x 48&quot;</td>
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Green balloon cloth double thickness.

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<tr>
<td>BDS7248DBL</td>
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Calico - single

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<td>24&quot; x 24&quot;</td>
</tr>
<tr>
<td>CDS3624</td>
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<tr>
<td>CDS3636</td>
<td>36&quot; x 36&quot;</td>
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<tr>
<td>CDS4848</td>
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</tr>
<tr>
<td>CDS7248</td>
<td>72&quot; x 48&quot;</td>
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</table>

### FENESTRATED SURGICAL DRAPES
Fenestrated drapes with reinforced central hole.

#### Balloon Cloth - Single Thickness

<table>
<thead>
<tr>
<th>Code</th>
<th>Size</th>
<th>Fenestration</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDSF1818</td>
<td>18&quot; x 18&quot;</td>
<td>2&quot; x 1&quot;</td>
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<tr>
<td>BDSF2424</td>
<td>24&quot; x 24&quot;</td>
<td>4&quot; x 1.5&quot;</td>
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<tr>
<td>BDSF3636</td>
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<td>5&quot; x 2&quot;</td>
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#### Balloon Cloth - Double Thickness

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<th>Code</th>
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<th>Fenestration</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDSF1818 DBL</td>
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<td>2&quot; x 1&quot;</td>
</tr>
<tr>
<td>BDSF2424 DBL</td>
<td>24&quot; x 24&quot;</td>
<td>4&quot; x 1.5&quot;</td>
</tr>
<tr>
<td>BDSF3636 DBL</td>
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<td>5&quot; x 2&quot;</td>
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Calico - single

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<th>Fenestration</th>
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</thead>
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<tr>
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<td>2&quot; x 1&quot;</td>
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<tr>
<td>CDSF2424</td>
<td>24&quot; x 24&quot;</td>
<td>4&quot; x 1.5&quot;</td>
</tr>
<tr>
<td>CDSF3636</td>
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<td>5&quot; x 2&quot;</td>
</tr>
</tbody>
</table>

### DISPOSABLE DRAPES
Most veterinary autoclaves sterilise cloth drapes unreliably. Packs containing materials should be autoclaved using a vacuum autoclave. Disposables provide an alternative requiring no cleaning, laundering, folding, packing and autoclaving. The cost is no longer prohibitive.

**Single Drapes Packed Sterile**
- BDS1826 460mm x 660mm (18" x 26")
- BDS182650 460mm x 660mm (18” x 26”) pack of 50
- BDS3939 990mm x 990mm (39” x 39”)
- BDS4458 1110mm x 1470mm (44” x 58”)
- BDS4472 1110mm x 1820mm (44” x 72”)
- BDS777 1440mm x 1950mm (57” x 77”)

**Buster ‘Op Cover’ Sterile Plastic Drape**
- BDS577 1200mm x 1200mm Box of 25

### PROCEDURE PACKS
Phone for details of contents. Each pack includes drapes, swabs, blades etc.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDP10</td>
<td>Spine pack</td>
</tr>
<tr>
<td>DDP12</td>
<td>Arthroscopy pack</td>
</tr>
<tr>
<td>DDP14</td>
<td>Total hip pack</td>
</tr>
<tr>
<td>DDP16</td>
<td>Standard small animal pack</td>
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### SURGICAL GLOVES
Latex free gloves. Elastrex gloves have a latex feel but are latex free for those surgeons with reactions to latex.

<table>
<thead>
<tr>
<th>LFGsize</th>
<th>Description</th>
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<tbody>
<tr>
<td>LFGx75</td>
<td>Latex free, latex feel gloves - order code is LFG followed by glove size.</td>
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</tbody>
</table>
19 - ANAESTHESIA

The Stephens Anaesthetic Machine

The Stephens is a closed circuit anaesthetic machine with the advantages of simplicity of operation and very low running costs. Relatively expensive, new anaesthetic agents such as ISOFLURANE may be used economically with this system. The Stephens is supplied as illustrated as a complete self contained unit requiring only a supply of oxygen. We are confident you will be impressed by the simplicity and versatility of the system and offer a free demonstration and trial.

Although based on a circle system, the internal resistance to breathing of this circuit is very low. This is due to the extremely lightweight valves used in the uni-directional assembly. These valves are not spring loaded as is the case with many circle systems. Any animal which can be intubated may be safely anaesthetised using the Stephens system.

Circuit dead space is also very low. Fresh gas is available at the "Y" mount. Rebreathing is minimal.

The anaesthetic circuit is of the circle type, with the vaporiser placed within the circuit on the inspiratory side. Most anaesthetic systems in use in the UK today have the vaporiser out of circuit. A video illustrating the use of the Stephens with various species and Isoflurane is available on free loan.

In an apparatus of this type the animal inhales gas from the reservoir bag. Some or all of the inhaled gas can be caused to flow over the volatile liquid anaesthetic agent contained within the vapouriser. After leaving the vaporiser, the gas mixture passes along the inspiratory side of the circle to a mask or endotracheal tube and then to the animal's lungs. On exhalation the gas is directed along the expiratory side of the circle, through the two soda lime canisters and then into the reservoir bag by means of a set of unidirectional valves.
Stephens Universal Vaporiser

Designed to be versatile, the Stephens vaporiser is readily used with any volatile anaesthetic agent eg Halothane and Isoflurane.

The main control on the vaporiser provides a smooth increase in concentration between "Off" and "On". In contrast to most vaporisers, a wide and constant bore is maintained throughout the mechanism, regardless of the setting on the main control. This unique property is achieved by the use of special port design in the vaporiser head. The bore is always equivalent to 22mm (7/8") the same diameter as standard circuit tubing. Back pressure and turbulence are reduced to an absolute minimum.

As the anaesthetic vaporiser is located within the circuit, the mass of anaesthetic agent delivered to the animal at a particular setting of the vaporiser changes with the variations in the minute volume of the respiration. If the depth of anaesthesia increases, the decrease in minute volume which results is followed by a decrease in the rate of vaporisation of the anaesthetic. Conversely, the rate of vaporisation of the anaesthetic increases as the depth of anaesthesia decreases. Because the changes in the depth of anaesthesia are automatically followed by compensating changes in the mass of anaesthetic delivered to the animal, the system is partially self regulating. Once the animal is stable at a surgical plane of anaesthesia it is very rare for any further adjustments to be necessary. The system is very simple to use.

KEY FEATURES
Oxygen consumption is very low. In a closed circuit system the only oxygen fed into the circuit is to replace that metabolised by the patient (approximately 5ml/kg/minute).
Volatile consumption is very low. In normal use there is no loss of volatile to the scavange circuit.
Pollution is very low which is good for staff and very easy to deal with. Passive systems or absorbers are sufficient.
The Stephens has the lowest running costs of any gaseous anaesthetic system.
All patients which can be intubated, including those less than 1 kg may be safely anaesthetised using the Stephens.

VERY SIMPLE, VERY SAFE, VERY ECONMICAL

025400 Stephens anaesthetic machine
OXREDF Regulator bullnose cylinder
OXREDE Regulator ‘E’ cylinder
Refurbished Stephens Machines are also available.
STEPHENS VAPORISER
The STEPHENS Vaporiser may be added to your existing circle thereby increasing the versatility and economy of your equipment. In particular it gives you the option of using ISOFLURANE for appropriate cases keeping HALOTHANE for routine procedures. With the STEPHENS in use the 'Tec' vaporiser is switched off and the oxygen flow adjusted to the metabolic requirements of the patient (roughly 5ml/kg/minute). The STEPHENS vaporiser is used as described in the previous section.

025500 Stephens Vaporiser

STEPHENS WALL STAND
Where floor space is at a premium the STEPHENS may be mounted on a folding wall stand. When not in use the machine may be stored against the wall. In use the arm will extend up to 24" or 600mm.

025420 Stephens wall stand

STEPHENS FLOOR STAND
Fitted with 3 wheels and provision for a single oxygen cylinder. Stainless steel construction. Coupled with an FLUOSORBER 025510 the STEPHENS becomes a mobile pollution free anaesthetic system. Please advise if you require the stand to be fitted for 'E' cylinders.

025410 Stephens floor stand
ANAESTHETIC JAR
To switch between anaesthetic agents the simplest way is to switch jars containing the different agents. To minimise theatre pollution the jar not in use should be sealed.

025541 Anaesthetic jar
025542 Anaesthetic jar lid

FLUOSORBER
The Fluosorber absorbs all organic volatiles including Halothane and Isoflurane. The absorbed volatile is discarded with the exhausted Fluosorber after an increase in weight of 200g. The Fluosorber is ideal for situations where there is no convenient outside wall. The STEPHENS wastes so little volatile that the combination is ideal. Like most things Fluosorbers are cheaper in bulk.

025510 Fluosorber
025515 Fluosorber six pack

SERVICING & UPGRADES
Should your machine need more than routine maintenance our workshop can undertake any repair or a full refurbishment including any recent upgrades. We will supply a service unit until your unit is ready. Phone for details

005421 Stephens mobile platform

STEPHENS MOBILE PLATFORM
The STEPHENS stands free on top of this platform which is fitted for two 'F' type oxygen cylinders. Under the platform there is shelving and a drawer for storage of anaesthetic sundries. The STEPHENS has a quick fit coupling to the oxygen enabling it to be moved easily with the patient eg for radiography. A 2/3 full rebreathing bag contains sufficient oxygen for several minutes anaesthesia.
**IM3 MASKS**

IM3 masks are designed for rapid induction of anaesthesia with a minimum of fuss and minimum pollution. They all have the following features.

* Very low dead space, important when masking down using circle systems.
* Removeable rubber diaphragm which minimises gas leaks and permits cleaning.
* Made from virtually indestructable pvc which will not degrade like the latex rubber type.
* Clear plastic allows visualisation of patients muzzle.

- 025538CVS  Mask very small (rabbits)
- 025538C    Mask small (cats, small dogs)
- 025539C    Mask large
- 025547C    Mask long

**STEPHENS SCAVENGE VALVE (EXCHANGE)**

The STEPHENS is virtually pollution free in use. Should it be necessary to vent the system either during or after a procedure the scavenge valve releases waste gas into the scavenge tube. The scavenge tube then vents outside or to an absorber.

If your machine does not have a scavenge valve as illustrated it may be converted very simply. Phone 0845 130 9596 and describe your existing valve. We will send you a new assembly. You send your old assembly back to us.

- 025517  Stephens scavenge valve

**STEPHENS SERVICING AND SPARE PARTS**

Although the STEPHENS requires very little in the way of service, some maintenance is essential to keep it in perfect working order.

There is a gasket kit which contains all seals for canisters and vaporizer, and an ‘O’ ring kit which contains 3 ‘O’ rings for the canisters and scavenge valve assembly.

- 025545  Clear hose set
- 025543  Gasket set
- 025549  ‘O’ Ring set
CONVENTIONAL "TEC" VAPORISER SYSTEMS

Anaesthetic machines using calibrated "TEC" type vapours deliver into the circuit a gas mixture containing a specified percentage of volatile. In non-rebreathing circuits the patient will breathe the exact mixture. In circuits where some rebreathing occurs, the gas mix will not be the same as dialled on the vaporiser. Veterinary Instrumentation's vaporisers are serviced and re-calibrated prior to sale.

Vapourisers

HALTEC  Mark III Halothane vaporiser
ISOTEC  Mark III Isoflurane vaporiser
Anaesthetic Machines (without vaporiser)
1GAS1VAP  Single gas, single vaporiser machine - please specify vaporiser
2GAS1VAP  Two gas machine includes pipework and flowmeter for nitrous oxide - please specify vaporiser
2GAS2VAP  Two gas, two vapouriser machine fitted for O₂, N₂O, Halothane and Isoflurane.
1CIRC  In large patients, to reduce the cost and pollution of the volatile agent, a circle absorber is used.
SODL  Soda Lime for above 4.5kg
SODL2  Soda Lime 2 x 4.5kg Pink to white twin pack

TWIN GAS/ TWIN VAPORISER ANAESTHETIC MACHINES

Changes in the way the NHS funds hospitals has led to a large number of very good anaesthetic units becoming available. We have selected the best. All the machines are thoroughly checked by trained technicians and have brand new gas lines fitted. All will work with piped gas or bottled gas. All will take up to two vaporisers via a quick release Selectetec fitting. Some have ventilators and circle absorbers already fitted. All are much better than new so called Veterinary units.

View our website www.vetinst.com for photos and specifications of machines currently available or phone 0845 130 9596 and speak to John.
**MINI BAIN CIRCUIT**
The mini Bain is a very low dead space (less than standard 'T' piece), low resistance circuit designed for patients weighing from 200g to 10kg.
*Very low dead space. The fresh gas is introduced inside the endotracheal connector.*
*No valves
*use as an open circuit

025050    Mini bain circuit

**MODIFIED AYRES 'T' PIECE**
The standard circuit for patients weighing less than 10kg
*low resistance   *no valves   *an open circuit

Complete with scavenging connector

025105    Modified Ayres 'T' piece
025105B    500ml roll neck bag with open end

**'T' PIECE SCAVENGE CONNECTOR**
Pollution is a problem with all open circuits. This connector fits into the tail of the rebreathing bag and connects to standard scavenging systems. Also fits mini bain.

025534    Scavenge connector for 'T' piece and Mini bain

**LACK CO-AXIAL CIRCUIT**
This is a safer system than the Bain in that there is no inner to be unobservedly disconnected.

LACK1    Lack circuit
LACK4    Replacement parallel tubes
STETHOSCOPE BASIC
Simple cheap stethoscope. Cheap enough to have one in every room.

025102 Stethoscope basic

STETHOSCOPE PROFESSIONAL

025107 Stethoscope professional standard
025108 Stethoscope professional paediatric (small head)

'F' CIRCUIT

025070 'F' circuit paediatric <2kg
025071 'F' circuit standard

BAIN CIRCUIT
Fresh gas passes down the inner tube. Exhaust gas returns via the central tube. Good heat and moisture exchange.

025080 Bain adapter
025081 Bain circuit latex free (box 20)

ANAESTHETIC CHAMBER
Most very small patients may be induced using a chamber. The kit contains the chromed inlet and outlet fittings.
*Relatively stress free
*Patient remains visible
*Standard 15mm inlet, standard scavenge outlet
*300mm x 300mm x 180mm (1' x 1' x 7”)

025540C Anaesthetic chamber complete
025540 Anaesthetic chamber kit
CHAPTER 19 - ANAESTHESIA

LARYNGOSCOPEC

Intubation of certain breeds of certain species can be very difficult without the appropriate laryngoscope. Deflection of soft tissues and a light source makes life very much easier. In a crisis eg. a blue brachycephalic, the appropriate laryngoscope will be a life saver. Veterinary Instrumentation recommends Miller blades.

- **025118** Laryngoscope Set Incl 0,1,2,3 & 4 blades in case Non FO
- **025118FO** Laryngoscope Set Incl 0,1,2,3 & 4 blades in case Fibre Optic
- **025127** Stainless Wall Bracket for above.
- **025115** Laryngoscope Handle Non FO
- **025123** Miller 0 blade 50mm blade length
  - Miniatures, cats, rabbits
- **025121** Miller 1 blade 75mm blade length
- **025122** Miller 2 blade 125mm blade length
- **025117** Miller 3 blade 160mm blade length
- **025119** Miller 4 blade 180mm blade length
- **025128** Miller blade 250mm length
- **025129** Miller blade 300mm length
- **025113** Miller blade 350mm length
- **025125** Laryngoscope bulb non FO
- **025125FO** Laryngoscope bulb Fibre Optic

OESOPHAGEAL STETHOSCOPE

Very simple yet very effective. The anaesthetist can monitor heart and lungs yet still have hands and eyes free for other signs.

- **025101** Oesophageal stethoscope set
- **025101A** 4mm probe (12FG)
- **025101B** 6mm probe (18FG)
- **025104C** 8mm probe (24FG)

RESUSCITATION BAG

For emergency artificial respiration. The device is ideal for administering either pure oxygen or room air to oxygen deprived patients. A special valve allows lung inflation on compression of the bag and passive exhalation of CO₂ whilst fresh air refills the bag. Can be used with a standard endotracheal tube or and airtight mask.

- **025557** Small resuscitation bag - 1 litre
- **025558** Large resuscitation bag - 2 litre
NON INVASIVE BLOOD PRESSURE MONITOR

Blood pressure monitoring gives important information re. patient status compared with ECG based systems. All leading authorities recommend blood pressure monitoring. The SEINEX SE700 is a UK built digital unit comes as a complete kit with the following features:

* Full range of cuffs
* Built-in printer
* High/Low alarms for blood pressure and heart rate

NIBP700 Seinex SE700

BREATHE SAFE MONITOR

This tiny monitor makes a simple apnea alert monitor. The microprocessor beeps with every breath. Highly sensitive.

* easy to use - just connect between the endotracheal tube and anaesthesia circuit.
* No adjustments. A sophisticated algorithm will recognise and indicate with a beep every breath from a Kitten to St Bernard.
* Apnea Alert. If your patient fails to breathe for 45 seconds a distinctive apnea alert will sound.
* Auto shut off.
* High density long-life lithium battery will last for years.

025010 Breathe safe monitor

APALERT RESPIRATION MONITOR

Respiratory arrest almost always precedes cardiac arrest in an anaesthetic emergency. Prompt action at the point of respiration failure will usually save the patient. The APALERT is

* Reliable. It goes beep at each breath and the display shows the interval since the last breath.
* Rechargeable approx 70hrs use. You can still use it as it recharges.
* Adjustable by beep volume and sensitivity
* Alarming. The alarm gets louder if you ignore it. The alarm can be reset by the surgeon using magic eye facility without compromising sterility.
* Available on free trial.

This unit saves lives with a minimum of fuss.

025005 Apalert respiration monitor complete
025007 Apalert probe
025100 Mains adapter
DOPPLER ULTRASONIC BLOOD FLOW MONITOR

Non-invasive blood pressure monitoring. Hypertension is often overlooked during diagnosis, treatment and routine physical examinations in small animals. In addition many hypotensive patients, such as those suffering from shock, benefit greatly from Doppler measurement of blood pressure when knowing the pressure can mean effective and timely treatment. Combining Doppler with an appropriate sized 'cuff' for small animals, provides the veterinarian with the same non-invasive method for testing blood pressure as is available in human medicine. A small probe is placed over a peripheral artery (e.g. digital or coccygeal). An ultrasonic crystal in the probe transmits pulse wave sound back to the amplifier. The pressure cuff is inflated until the pulse sound is no longer audible. The cuff is slowly deflated, using the manometer, until pulse sounds are audible once more, at which point the manometer displays a numeric value of the animal's systolic pressure. Lightweight hand-held unit; high quality, vet spec sphygmomanometer. Comes complete with 2 cuffs (2.5cm and 5.0cm). Runs on 9 volt battery. Complete with headset and carrying case. All consumables are available.

025850 Complete unit - with small flat probe

ANAESTHETIC GAS MONITORS

In all anaesthetic systems involving rebreathing (i.e. most) it is not possible to predict the exact gas mixture the patient is breathing without sophisticated monitors.

DATEX CAPNOMAC

Monitors the following
* Volatile agent isoflurane and halothane (both inspired and exhaled)
* O2
* N2O
* CO2
* Respiration rate

Alarms are options on all of the above. All our units are in excellent condition, ex-hospital and recalibrated.

AGM1 Datex Capnomac
**INFUSION PUMPS**

Only rarely do we get full co-operation from our patients during fluid therapy. Constant supervision is often required to maintain a continuous flow. Using an infusion pump it is possible to reliably deliver a specified volume of fluid over a specified period. Our infusion pumps are ex-hospital units which are fully refurbished carrying a one year warranty. In addition they are modified for veterinary use by increasing the occlusion pressure. Beware standard human units are set at a low pressure which will not overcome the resistance to flow created by veterinary patients flexing their elbows. Refurbishment is extensive including replacement of rechargable batteries.

**BAXTER 6200**

Industry standard works with all giving sets

![INFUSION PUMPS](https://via.placeholder.com/150)

**BAXTER 6300**

Essentially a double unit of the above for 2 different infusion lines

![INFUSION PUMPS](https://via.placeholder.com/150)

**IV FLUID WARMER**

The use of room temperature IV fluids on patients either in shock or susceptible to hypothermia should be avoided. Ideally IV fluids should be administered at as close to body temperature as possible to all patients for better therapeutic results. The IV fluid warmer is placed over a short 200mm segment of a standard IV line. It warms passing fluid to 38 degrees Celcius. It should be placed within 450mm of the patient. No adjustments or calibration needed.

* adjustable hanging strap supports weight of unit on whatever the IV fluid bag is supported by.
* separate cartridge or tube extensions are not needed
* inexpensive
* flow rate up to 12ml/min

![IV FLUID WARMER](https://via.placeholder.com/150)
GOWLANDS RANGE

These units represent very good value for money. The sets are self contained and require batteries, either standard dry cells or re-chargeable equivalents.

01400 Otoscope – with three speculae 4, 5, and 7mm diameter

01402 Diagnostic Set - includes both otoscope with speculae and ophthalmoscope

BUSTER STARLIGHT DIAGNOSTIC SET

A simple torch based set for easy intubation.

270500 Buster starlight diagnostic set
HEINE DIAGNOSTIC

To create a diagnostic set you will need to combine the diagnostic head of your choice together with a power source.

DIAGNOSTIC HEADS AND ACCESSORIES

- **G0221301** Otoscope head
- **G0021330** Polished Stainless steel Speculum 4mm dia
- **G0021331** Polished Stainless steel Speculum 6mm dia
- **G0021332** Polished Stainless steel Speculum 7mm dia

- **C0230100** Beta Ophthalmoscope head 3.5v. Well made and reliable

POWER SOURCE

- **X-01.99.118** Standard battery handle. Cheap but requires regular source of new batteries. Often flat when most needed.

- **X-02.99.422** NT200 Charger plus one handle. Reliable (provided it goes back into the charger) and fully mobile.

- **X-02.99.411** Spare rechargeable NT handle 3.5v.

- **X-95.12.110** EN100 Wall Set (2 bays). Wall mounted and very reliable. Always there when you need it. Suits consulting rooms.

- **X-95.12.135** Extra bay for EN100 wall set
CHAPTER 20 - DIAGNOSTICS

The Veterinary Video Compact System

- universal endoscopic video equipment for every small animal practice -

The Video Compact System is a new generation of endoscopic video camera system. Both video camera and cold light source are combined in one unit. Similarly, both cold light cable and camera cable are integrated into one. The camera head is fitted with the so-called TWIN Lock connection allowing the use of the new generation of endoscopes, like the new otoscope, or video vaginoscope, or using standard types of fibre gastroscopes and rigid endoscopes.

Examination of the ears of dogs and cats is part of the daily routine in small animal practice. This is why a new generation of otoscope is combined with the basic version of this video compact system. Owner and surgeon can watch the same monitor screen, the explanation of clinical findings is much easier. At any time it is possible to introduce a biopsy or a grasping forceps through the straight working channel. Mutual, real-time observation (with freeze frame option) of the ear canal can attract the attention of the owner to a serious problem not normally visible. Poor owner compliance is recognised as a common reason for treatment failure. Viewing the problem together leads to much more commitment by the owner.

The use of the electronic holder of the camera head allows quick and easy handling. Cleaning and disinfection is much more convenient and faster, compared with conventional otoscopes.

Naturally, this system is compatible with all other endoscopic procedures such as arthroscopy, laparoscopy, and cystoscopy. Further, there is a new dental scope and a revolutionary video microscope with a magnification of 120 times to adapt to this system, which is more than any standard video camera system.

- easy to use and uncomplicated handling
- use of biopsy and grasping forceps under visual video control
- single cable technology (cold light and video cable), TWIN Lock connection – quick release system
- compatible to latest vaginoscope and skin microscope
- compatible to standard telescopes and fibrescopes
- straight working channel
- one otoscope size for cats and dogs

981-VK-10 Video Compact System - Otoscope Set, complete

Unit, 1/3"CCD camera, 150W light source camera head with integrated cold light cable, 2 m, TWIN connector, second light outlet for rigid endoscopes and flexible gastro/colonoscopes.

- camera head holder
- automatic exposure control,
- resolution 752(H)x582(V) pixel,
- colour system: PAL
- video outlet: FBas VHS; Y/C, S-VHS
- light outlet: comp. to R. Wolf
- 230 VAC, 50/60 Hz.

consisting of:

981-VK-1 Video Compact System, Basic
981-VK-008 90° Otoscope attachment, 0°, 3,5/4 mm
981-VK-18 Otoscope examination sheath, LL(f)
981-VK-48 Otoscope working sheath, with channel
DE-10-60 Disinfection wipes

Accessories (optional)

B20-135

981-VK-19

B20-135 Biopsy and grasping forceps, small, high performance, OD: 2 mm, WL 11 cm
981-VK-19 Otoscope examination sheath, pointed, LL(f) bayonet lock, for dental work in pets

Adapters for light cables of other manufactures on request.
Accessories - attachments

By the use of different attachments compatible with the camera-light head additional endoscopic procedures are possible such as arthroscopy, laparoscopy, video vaginoscopy and skin microscopy etc.

Accessories

all attachments are connected with a special system locking (TWIN connection) to the camera-light head.

981-VK-026 DIN ocular lens, 22mm, for video compact system, comp. to rigid & flex. telescopes

981-VK-2 C-mount-adaptor for video compact system

T301-4030 Wide angle telescope, 30°, OD: 4 mm, 30 cm, TWIN connector, – for gynaecology or bronchoscopy – see special brochures

The Video-Skin-Microscope – the revolution in dermatology –

The microscope attachment is connected to the camera-light head like all the other attachments, the video image is transmitted directly to the monitor.

981-VK-05 Skin microscope for the video compact system, parafocal zoom (20-60 times), quick release system – TWIN connection

The latest development in this section

981-VK-512 Working barrel for skin microscope

981-VK-514 Magnification ancillary lens, 2 x, 40-120 for skin microscope comp. to video compact system

Lenses barrels are simply clicked on to skin microscope

981-VK-519 Scale ancillary lens for skin microscope comp. to video compact system
Accessories, Disinfection, Cleaning

DE-10-60  Disinfection wipes for endoscopes and instruments, box with 120 pcs.

DE-5-17  Cleaning brush for small cannulas with ID: 2-4 mm, length 17 cm

E-22-71  Antifog fluid for endoscopes and mirrors, bottle with 10 ml

Set-Recommendation

981-VK-108  Video Compact System, Otoscope Set

M-70-1310  Monitor and TV unit, incl. VHS recorder PAL, 36 cm screen, 230 VAC, 50/60Hz

B20-135  Biopsy and grasping forceps, small, high performance, OD: 2 mm, WL 11 cm

– optional–

WV-53022  Video cart, size: 62x63 cm, h: 110 cm completely mounted, basic version, colour: grey, partly blue,
• drawer inbuilt
• specially rust protected

45-DK-900  TFT-monitor/screen, 15”, high definition, FBas, S-VHS in/out, 12 DC/2A transformer

Documentation

– Connections to PC, Printer, Recorder and Monitor –

Video Compact System

Computer

Printer

Digital Printer

Still Video Recorder

DVD Recorder

Monitor

Video Recorder

Video Printer
CHAPTER 21 - CLINICAL FURNITURE

'PREP' ROOM TABLE
*Dentistry, wound flushing, abcess drainage, ears etc
*Patient trolley
*Drainage area for wet or dirty procedures
*Removable stainless drainage tray
*2 trays for swabs, instruments etc.
*4 locking wheels
*Very versatile
*Made from 316 stainless not the cheaper 304 which rusts

028010  'Prep' room table
028009  Tray and bowl accessory

STAINLESS EXAMINATION TABLE
*Lifetime guarantee
*Easy to sterilise between patients
*Noise dampened to maximise patient confidence
*Includes rubber mat
*24" x 48" standard, different sizes are available at no extra cost. Please 'phone for details
*Excellent value
*Standard 34" high, other heights to order
*Made from 316 stainless not the cheaper 304 which rusts

028020  Stainless examination table

XRAY TABLE
*Lead lined
*4 locking wheels enables easy movement of big dogs
*2 shelves for storage of cradles, sandbags and gloves etc.
*Meets Health and Safety regulations
*Tilt option for Myelography
*Doubles as a consulting table or patient trolley

028024  Xray table (stainless steel)
028025  Xray table tilting

CUSTOM FURNITURE

Stainless steel furniture can be fabricated to your design in our Sheffield workshop. Phone or fax a sketch for a quote.
VETSINK
Major vetsink features include -
- Fully welded internal joints precluding matter ingress and the retention of infectious organisms.
- All round accessibility in standing and seated positions
- Sloping sink base draining all fluids automatically away from the subject
- Integral mixer taps and umbilical shower unit
- Easily cleaned and maintained, thus popular with veterinary nurses
- Radiused corners
- Can be combined with the latest air driven dental units and mobile seating
- Four button hooks are located on the sides for hanging the taps during cleaning

VETSINK12 Vet sink 1200mm tub, table complete
VETSINK15 Vet sink 1500mm tub, table complete
VETSINK20 Vet sink 2000mm tub, table complete
VETSINKTOP Solid top converts above into examination table

HYDRAULIC OPERATING TABLE

HYDTABLE15 Operating table hydraulic 1500mm tilting
HYDTABLE18 Operating table hydraulic 1800mm tilting

ELECTROLIFT SURGICAL/EXAMINATION TABLE
- Electrically operated
- Thin flexible cable hand control
- Top size 120cm x 60cm
- Lift range 47cm
- Safe working load 150kgs static

028031 Electrolift table - static
028032 Electrolift table - mobile
Optional Battery pack
SMALL PLATFORM SCALES
Dosage calculation for very small patients is critical. Guesswork can result in serious overdosage or underdosage. Our small scales weigh in gram increments to 4kg. There is also a tare facility so that you can weigh things in boxes and bags. Stainless platform 250mm x 200mm

WALK-ON LARGE PLATFORM SCALES
0 to 100Kg digital display

THORACIC POSITIONER
* Single size for all patients, foam wedges hold smaller individuals
* Minimal storage problem
* Radiolucent
* Warm
* Very reasonably priced
MULTI ARM
Safety need not be compromised to obtain accurately positioned radiographs. The multi arm can replace the human hand in the positioning and holding of limbs for both radiography and surgery.
* ‘Velcro’ straps will securely hold the limbs of patients of various sizes from cats to Great Danes.
* Three joints allow positioning at any angle.
* A single lever locks all three joints rigid.
* Clamp fixes device to any operating or Xray table

026000 Multi arm

DRIP STAND, CAGE DOOR MOUNT
* Clips onto all mesh or bar fronted cages
* Stainless steel
* Adjustable for height
* Occupies no floor space
* Moves with cage door causing no obstruction when examining patient

028035 Drip stand, cage door mount
028036 Drip stand, (3 pack)

I/V SPLINTS
* Maintains foreleg in extension for long term IV therapy
* Different sizes to suit all patients
* Stainless steel, will autoclave
* Well tolerated even by cats
* Supplied with full instructions

028037 I/V Splint small
028038 I/V Splint medium
028039 I/V Splint large
028040 I/V Splint extra large
028040S I/V Splints set
SUCTION DEVICE
This simple suction unit is sensibly priced to make it suitable for general practice as well as more specialised centres. The suction tube will fit all standard tips. The bottle capacity is 1 litre which is adequate for virtually all small animal procedures. The in-line filtration system minimises biohazards. Most Veterinary Dentists now regard suction as being essential. Suction is controllable and there is a vacuum indicator.
CE marked for peace of mind and quality.

185000  ASKIR 20 Suction device
1850004  Spare bottle
1850003  Spare lid
185003  Spare filter
185001  Autoclavable silicone suction tube by the metre.

SUCTION TIPS
Yankauer. General purpose suction tip for removal of large volumes e.g. from abdomen.
Poole. As Yankauer but more holes for greater volume uptake.
Adson. Focal suction tip removes fluid from specific locations e.g. in spinal procedures. Very controllable at the handpiece by single finger over air bypass hole.
Disposable. Pack of ten, especially useful for dentistry.

1854327  Yankauer
1854330  Poole
1852121  Adson 2.7mm
185DISP  Disposable (Pack of 10)
ELECTROSURGERY

**HFS45** is suitable for routine procedures not requiring Bipolar electrocautery. Four different operating functions: Pure cut, cut/coag 1, cut/coag 2 and coagulation. The **HFS95** is Bipolar and also has four different operating functions. Bipolar coagulation is essential close to neurological structures. Incorporates safety control system with auto cut-outs to ensure safety even under difficult conditions. Requires Bipolar forceps and cable for bipolar coagulation. The **HFS100** (illustrated) is as the HFS95 but is digital with a clean flat membrane panel.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>HFS45</td>
<td>50W Monopolar electrosurgery unit.</td>
</tr>
<tr>
<td>HFS95</td>
<td>100W Bipolar electrosurgery unit.</td>
</tr>
<tr>
<td>HFS100</td>
<td>100W Bipolar digital electrosurgery unit</td>
</tr>
<tr>
<td>HFS700</td>
<td>Bipolar cable</td>
</tr>
<tr>
<td>HFS710</td>
<td>Sterile (reusable) Bipolar forceps (Beepo)</td>
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<td></td>
<td>10 pack.</td>
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HFS100
CLIPPERS

OSTER "POWER PRO" CORDLESS

* Uses standard A5 blades.
* Equal power to A5
* 30 minute run time
* 20 minute charge time
* Optional battery pack offers continuous use facility.
* No more trip hazards, no more clippers dragged onto floor.

028092 Oster "Power Pro" cordless

OSTER CLIPPERS A5 'GOLDEN'

The latest version of the industry standard clipper with a blade locking device to prevent the blade unclipping in use.

028080 Oster clippers A5 'Golden'
028081 Oster blade No. 40 (surgical)
028082 Oster blade No. 15
028083 Oster blade No. 50
028081e Elite blade No. 40
028083e Elite blade no. 50

WAHL KM1 CLIPPERS

The combination of robust construction and competitive price make this a very popular clipper

028095 Wahl KM1 clipper inc. no. 40 blade
028096 No. 40 blade, Wahl.
NAIL CLIPPERS

028088  Nail cutters, stainless with plastic handles
028086  Nail cutters compound action
028085  Nail cutters
028085S  Small nail cutters (cats nails, rats teeth)
028087  Nail cutters guillotine

BIRD RING CUTTER
 Aluminium and plastic rings frequently prevent venous return from the distal limb of small birds. Oedema and necrosis quickly follow unless the ring is removed. Removal of the ring without fracturing the leg is not easy without this special cutting tool.

028090  Bird ring cutter

RABBIT RING CUTTERS
 Identification rings placed on show rabbits can occlude the venous return from the distal hind limb with disastrous results. Removal of the ring without causing additional damage and pain to the limb is very difficult without these purpose designed cutters. Once the notched jaws are engaged on the ring firm pressure may be applied to cut the ring without fear of the ring "flipping over". Also functions as a general purpose canine nail cutter.

028091  Rabbit ring cutters

SURGICAL ‘CORE SKILLS’ TRAINING

Throughout the year we will be offering professionally tutored training courses covering key areas of surgical expertise. The courses will all be ‘hands on’ based on our experience of many years running and supporting wet labs both in the UK and overseas. The venue will be our own custom built training facility at Veterinary Instrumentation. Areas to be covered include:

- External Fixation
- Fracture Fixation with Plates and Screws
- Interlocking Nails
- Arthroscopy
- Dentistry

Phone for details or view our web page www.vetinst.com/coreskills.htm
CHAPTER 23 - TRAINING AIDS

SKELETON

A very useful aid to explain a procedure to a client and as a model for orthopaedic reconstructions. An idea of how it should look when you have finished is essential.

090123 Complete disarticulated dog skeleton
090124 Complete articulated skeleton mounted on base
090130 Hind limb mounted on base
090131 Fore limb mounted on base
090132 Cat skeleton mounted on base
090132D Cat skeleton disarticulated

PLASTIC TRAINING BONES

2121-20 Femur, right with block
2117-20 Tibia, right with block
2117-21 Tibia/Fibula no block
2003-20 Humerus, right foam cortex
2002-22 Radius, solid with canal - transverse fracture
2003-21 Humerus, foam cortex - oblique fracture
2003-22 Humerus, foam cortex - distal condylar fracture
2003-23 Humerus, foam cortex - long oblique and condylar fracture
2003-24 Humerus, foam cortex with proximal growth plate- midshaft oblique and distal Y fracture
2003-25 Humerus, foam cortex - high Y and humeral head fracture
2003-26 Humerus, foam cortex - long 3-part spiral fracture
2103-22 Femur, foam cortex - trochanter major and condylar fracture

ANATOMICAL MODELS

AMJ770 Canine teeth
AMJ770C Feline teeth
AMJ770S Set of both
AMJ771 Canine teeth plus pathology
AMJ771C Feline teeth plus pathology
AMJ771S Set of both
AMJ772 Cross section of canine ear
AMJ779 Canine lumbar vertebrae with pathology
AMJ776 Canine stifle
AMJ775 Canine hip and lower vertebrae
AMJ780 Canine elbow
AMJ781 Canine hock
VIDEOS / CD ROM

This video shows in detail the following procedures:

- **HDF** - Hamish Denny - fracture fixation - surgical approaches, lag screw fixation, plate fixation and tension band wiring
- **HTPO** - Hamish Denny - triple pelvic osteotomy
- **HDTHP** - Hamish Denny - total hip replacement
- **HDCA** - Hamish Denny - carpal arthrodesis
- **CDCCL** - Surgical management of cranial cruciate disease

BOOKS

- **BK01** - A Guide to Canine and Feline Orthopaedic Surgery by Hamish Denny and Steve Butterworth
- **BK02** - An Atlas of Surgical Approaches to the Bones and Joints of the Dog and Cat. 3rd Edition by Donald L Piermattei
- **BK03** - Handbook of Small Animal Orthopaedics and Fracture Repair. 3rd Edition by Donald L Piermattei and Gretchen L. Flo
- **BK04** - Small Animal Spinal Disorders - Diagnosis and Surgery by Simon J Wheeler and Nicholas J H Sharp

A combination of BK01 and BK02 just about covers all the options you are likely to face.

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Phone for details or view our web page www.vetinst.com/coreskills.htm
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