Arthroscopy is common in human orthopaedics, and growing in fast in the veterinary field.

We stock a range of products, and we can help you access more. We work with Arthrex - who are very active in human joint arthroscopy - to provide high quality equipment. Training is also available. Whatever help you need with a set-up, please contact us.

From time to time we can also get good deals on ex demo systems.

Dr Fritz is a long-standing supplier of veterinary arthroscopy equipment, in a good range of sizes chosen with veterinary patients in mind. As always, if you have any questions please contact us here at Vi.
Arthroscopic Stifle Surgery in Dogs
Pat Ridge BVSc Cert VR Cert SAS MRCVS, Ridge Referrals, South Devon.

The first report of stifle arthroscopy in dogs was back in 1978 (1) and in the UK in 1981 (2). Since then stifle arthroscopy has struggled to be accepted or practiced widely in the UK although in the USA it is more commonly employed in private referral and academic practice. Without doubt the learning curve is steep and the equipment needed considerable but the benefits in accuracy of joint examination and reduced morbidity have been demonstrated (3, 4).

Positioning is critical to success and we use a moulding vacuum table bag (Olympic Vac Pac) and a custom stiffe brace (Veterinary Instrumentation) with the patient in dorsal recumbency and the table tilted 30 degrees from horizontal. Portals are created medial and lateral to the straight patella tendon with an egress cannula placed in the medial suprapatella pouch (5). A complete examination of the femoropatella and then femoroctobial joint can then be performed and this can include examination of the caudal femorotibial joint where necessary. Arthroscope size varies according to patient size but we usually use a 2.4mm ‘scope although we regularly perform joint examinations in patients as small as cats (6) using a 1.9mm ‘scope and for patients in excess of 60kg we use a 4mm ‘scope.

The fat pad in dogs is considerably larger than that in humans and in order to create a viewing window a motorized shaver (Adapteur Power System, Arthrex) should be used to remove the inflamed fat pad, synovium and torn fibres of cranial cruciate ligament (CCL). The majority of dogs will require a 3mm aggressive style shaver blade (Dissector Range, Arthrex) and this is attached to suction so that the debrided tissue is removed from the viewing areas. In order that the joint is distended a fluid ingress system is required and we use a fluid pump that automatically maintains the pressure as suction is used (Continuous Wave II Pump, Arthrex), which is available on free loan with an annual purchase commitment.

Meniscal injury occurs in around 40% of dogs with CCL damage (7, 8) and isolated medial (9) and lateral (10) meniscal injury have also been reported in the dog. Examination of both menisci can be extremely challenging via an arthrotomy whilst the CCL is intact and recently Hulse and others (11) have suggested that the remaining functional CCL in partial tears may be “saved” by performing a tubal plateau leveling osteotomy. During arthroscopy both menisci may be completely examined, including careful palpation of the caudal horn, with the CCL intact. This is made easier with the use of a stiffe distractor (Veterinary Instrumentation) applied via insertion of 2mm Ellis pins into the medial femoral condyle and proximal tibia. The use of this particular instrument does not “crowd” the joint space with instruments so reduces the risk for cartilage damage and leaves plenty of space for instruments to be inserted to palpate structures or remove torn portions of meniscus, whilst at the same time allowing stiffe flexion and extension.

Meniscal resection is without doubt one of the most challenging arthroscopic procedures but with practice can be accomplished in a matter of minutes. These may be the common “bucket handle” tears, complex horizontal cleavage tears or “parrot beak” tears. We routinely perform meniscal resection with a combination of hook knives (Dr Fritz), fine angled punches (Slender Punch, Arthrex) and shavers (2mm to 3.5mm Dissector, Arthrex). Indeed some studies have shown that this may be all that is required in some patients with CCL tears and concurrent medial meniscal injury (12) and in selected patients this has become our approach to management in combination with rehabilitation (unpublished work).

Elbow arthroscopy has had wider acceptance since the first reports in 1993 (13). Work published by Meyer Linderberg and others (14) suggested that longer term dogs undergoing arthroscopy for coronoid fragmentation had a better outcome with a shorter convalescence than dogs that underwent an arthrotomy. Elbow arthroscopy is certainly easier than stiffe arthroscopy and most dogs will accept a 2.4mm scope safely. The Dr Fritz set of forces and hand burs are well designed and elbow arthroscopy does not require the same level of instrumentation as stiffe arthroscopy, a pressurised cuff provides sufficient fluid ingress. As we develop our understanding of elbow disease and in particular coronoid fragmentation and its progression to medial compartment syndrome arthroscopy plays a more and more important role, cartilage destruction is the key indicator of the extent of disease and arthroscopy remains the gold standard or cartilage assessment.

The understanding of shoulder lameness in dogs is in my view even more exciting and has advanced dramatically in the last few years, the traditional “dustbin diagnosis” of bicapital tenosynovitis has been replaced with a better recognition of other conditions including medial shoulder instability and lameness associated with damage to the lateral glenohumeral ligament. As in human medicine arthroscopy has remained the gold standard for investigation of intra articular shoulder injuries and arthroscopically guided reconstructions are being developed (15, 16, 17). One of the most useful developments has been the notion of using more than one portal and suspended limb shoulder arthroscopy with lateral and cranio-medial portals has allowed us to examine the shoulder in far more detail, a simple ceiling hook, pulley and tilting table make complete examination of the shoulder easy and with minimal morbidity.

Arthroscopy has not been limited to canine examination either with feline shoulder, elbow and stiffe arthroscopy with a 1.9mm scope proving beneficial for both diagnostic purposes and therapeutic interventions, as we do more we will learn more and this exciting field of orthopaedics will continue to advance.

For those who are interested both the ESVOT Arthroscopy Working Group and the Arthrex VA3 group have regular meetings providing an invaluable forum for discussion and practical experience in small animal arthroscopy.

6. Ridge, P. A. (2010) Femoral condyle lesions similar to osteochondritis dissecans: Call for opinions or similar cases. Letters to the Editor - Veterinary and Comparative Orthopaedics and Traumatology 23, 377-378
15.maids of Medical Shoulder Stabilization Technique Lab European Society of Veterinary Orthopaedics and Traumatology Congress. Munich, Germany Sept 10-14 2008.
17. Ridge, P. A., Cook, J. and Cook, C. Arthroscopically assisted treatment to injury of the lateral glenohumeral ligament in ten dogs. Veterinary Surgery (accepted for publication)
Arthroscopes

Synergy features the most advanced technology and provides the highest quality HD image available. In combination with the new high definition optics, the Synergy system provides industry unrivalled depth of vision and focus.

HD Vision - 1080p
- Ergonomic and autoclavable camera head
- Programmable camera head buttons
- High-definition optics
- Progressive scan technology

LED Light Source
- Solid state “Xenon Bright” LED light source comparable to 300 watt Xenon Light Sources
- Cost-effective 30,000 hours bulb life (14 years at 40 hours/week)
- Low heat generation, stable, reliable

Image Management System
- Network based system allows live video streaming to any authorized remote viewer
- HD still capture and video recording
- Export images to the SynergyHD3 Surgeon iPad App:
  - Review / edit still images and video
  - Annotate on stills
  - Create presentations and postoperative reports for patients

The Synergy system is also available with a 3mm Sheathless Arthroscope which eliminates bulky scope sheaths, obturators, switching sticks. The sheathless arthroscope is designed and constructed with additional structural support along its length to stand up to normal stresses without a sheath. Available in 30° and 70°.

Standard Arthroscopes available in 1.9mm, 2.4mm and 2.7mm.

A number of ex-demonstration Synergy systems consisting of the items as listed in the new section. These will have been used in a handful of training courses, and represent extremely good value at £17,753.00 + VAT. Contact Vi for availability.
Arthroscopes

An arthroscope is a rigid endoscope consisting of a system of lenses, which collects and transmits an image from the tip of the instrument along the shaft to an eyepiece or camera. A light post close to the eyepiece allows light to be passed into the shaft and down optic fibres surrounding the lens system to illuminate the subject area at the tip.

The diameter refers to the outside diameter of the unsheathed shaft of the telescope. Three sizes are commonly used in small animal arthroscopy: 2.7mm, 2.4mm and 1.9mm. Arthroscope technology has improved so much that optically the new 2.4mm arthroscope is as good as the older 2.7mm version. The 2.4mm arthroscope is fine for most procedures but can prove a little large in small elbows. As the diameter of the arthroscope becomes smaller, there is less space for optical fibres, which has implications for light transmission and image size. Recent improvements in construction such as the use of rod lens systems as opposed to optic fibres has improved the performance of the smaller arthroscopes. Additionally, the smaller arthroscopes are fragile and care must therefore be exercised to avoid damage in use, cleaning and storage.

The viewing angle is the angle between the lens face and a line drawn at right angles to the long axis of the arthroscope (see above right). A 0˚ scope views straight ahead from the front of the lens, while a 90˚ scope sees an image at right angles to the long axis of the scope.

Most veterinary arthroscopes have a viewing angle of 30˚, which is a compromise between field of view and distortion. The user needs to be aware which way the lens is pointing. The light post is used as a reference point and is positioned opposite the angle of view. Rotating the scope along its long axis will allow the surgeon to view a large area within the joint with minimal repositioning. An oblique viewing angle does offer the surgeon a limited ability to see ‘around corners’.

Each arthroscope will require a dedicated sheath, which protects the arthroscope as well as delivering fluid to the tip. The sheath reduces the effective working length and increases the working diameter of the arthroscope.

**Arthrex Arthroscopes**

Arthrex are leaders in the field of arthroscopy with a deserved reputation for innovation and quality. We are pleased to offer their top of the range arthroscopes and sheaths at a very competitive price. 2.7, 2.4 and 1.9 arthroscopes are offered here but 4.0 are also available. Please e-mail or call our Vet Tech team for a quotation.

2.4 Arthroscope x 10cm, 30˚

2.4 Sheath with Single Stopcock 3.2mm x 85cm

Obturators, Blunt

**ARTHREX ARTHROSCOPES AND SHEATHES**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Diameter/Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR-3350-2730</td>
<td>2.7mm Arthroscope x 18cm 30 Degree</td>
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<tr>
<td>AR-3350-2770</td>
<td>2.7mm Arthroscope x 18cm 70 Degree</td>
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<tr>
<td>AR-3370-2701</td>
<td>Sheath for 2.7mm Arthroscope - Single valve</td>
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<tr>
<td>AR-3370-2702</td>
<td>Sheath for 2.7mm Arthroscope - Double valve</td>
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<tr>
<td>AR-3375-2702</td>
<td>2.7mm Obturator Semi Sharp</td>
<td></td>
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<tr>
<td>AR-3350-2430</td>
<td>2.4mm Arthroscope x 10.0cm, 30 Degree</td>
<td></td>
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<tr>
<td>AR-3370-2401</td>
<td>2.4mm Sheath 3.2mm Dia x 8.5cm Working Length</td>
<td>1 Stopcock</td>
</tr>
<tr>
<td>AR-3370-2402</td>
<td>2.4mm Sheath 3.5mm Dia x 6.5cm Working Length</td>
<td>2 Stopcock</td>
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<tr>
<td>AR-3375-2401</td>
<td>2.4mm Obturator Blunt</td>
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<tr>
<td>AR-3350-1930</td>
<td>1.9mm Arthroscope, 30 Degree</td>
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<td>AR-3370-1901</td>
<td>1.9mm Sheath</td>
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<td>AR-3375-1901</td>
<td>1.9mm Obturator Blunt</td>
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<tr>
<td>AR-3375-1902</td>
<td>1.9mm Obturator Sharp</td>
<td></td>
</tr>
<tr>
<td>BX52506050</td>
<td>Arthroscope Sterilisation/Storage Box</td>
<td></td>
</tr>
</tbody>
</table>

BXS2506050

250 x 60 x 50mm

Arthroscopy Repairs

Most damaged or broken arthroscopes can be repaired. Although never cheap the repair is normally a full refurbishment to new standard and may be considerably cheaper than a new arthroscope. The same applies to hand instruments which by their nature are delicate and vulnerable. Send your repair to our Vet Tech team for a quotation.
Arthroscopic Instrumentation

Irrigation and Working Cannulae, Trochar Changing System designed by VAN BREE

Cannulae and portals: In order to fully examine the joint under investigation it may be necessary to manipulate some intra-articular structures. The instruments used must be small and be introduced either directly through the peri-articular soft tissues or via a dedicated cannula. Where serial insertions and withdrawals or a range of instruments are required, particularly through multiple layers of soft tissue, a cannula is preferable to minimize trauma, (trying to re-find a portal can be frustrating). Sets of cannulae dedicated to the most common joints are now available. Initially a small diameter cannula is inserted using a trochar, the portal may then be enlarged by the use of a ‘switching stick’. The stick is inserted into the joint through the small cannula which is then withdrawn. Larger cannulae may be slid down the changing stick and introduced into the joint. Exchanging a small cannula for a larger one can be surprisingly difficult without such an aid. The system is colour coded for ease of use.

Cannula Sets

**CANNULA SETS**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-17-755</td>
<td>Working Cannula Set “shoulder and elbow” designed by VAN BREE, consists of 2 Cannulas D:2.9 / 3.5mm, WL:7-8cm. includes 1 Sharp Trochar and 1 Changing Rod (2.8mm)</td>
</tr>
<tr>
<td>I-17-500</td>
<td>Working Cannula Set “elbow” designed by VAN BREE, consists of 3 Cannulas D:2.3 / 2.9 / 3.5mm; WL:3.5-5cm and 7-8 cm, includes Sharp Trochar and Changing Rod</td>
</tr>
<tr>
<td>I-17-700</td>
<td>Working Cannula Set “shoulder” designed by VAN BREE, consists of 2 Cannulas D:2.9 / 3.5mm, WL:7-8cm. includes 1 Sharp Trochar and 1 Changing Rod (2.3mm)</td>
</tr>
</tbody>
</table>

**EGRESS CANNULA**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-18-518</td>
<td>Egress Cannula, with Sharp Trochar Stopcock, ID:3mm, WL:7mm</td>
</tr>
</tbody>
</table>

**EGRESS CANNULA**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-18-518</td>
<td>Egress Cannula, Sharp Trocar, Stopcock ID: 3mm, WL: 7cm</td>
</tr>
<tr>
<td>I-17-755</td>
<td>Working Cannula Set “shoulder &amp; elbow” Designed by van Bree, D: 2.3/2.9/3.5mm; WL: 3.5-5cm</td>
</tr>
<tr>
<td>SI40-2438F</td>
<td>Target Instrument designed Dr.Lehmann for canine arthroscopy; comp. with SI10-1932</td>
</tr>
<tr>
<td>AR-17-09S</td>
<td>Hook Probe, 2.2mm, silicone handle comp. autoclavable, colour code: red</td>
</tr>
<tr>
<td>AR-17-06S</td>
<td>Currette, small 2.7mm, silicone handle yellow, autoclavable, colour code: red</td>
</tr>
<tr>
<td>AR-17-07S</td>
<td>Ring Currette, 2.7mm, silicone handle red, autoclavable, colour code: black</td>
</tr>
<tr>
<td>AR-17-19S</td>
<td>Hook Knife, 2.7mm, silicone handle orange, autoclavable, colour code: blue</td>
</tr>
<tr>
<td>AR-17-11S</td>
<td>Smilie Knife, 2.7mm, silicone handle yellow, autoclavable, colour code: red</td>
</tr>
<tr>
<td>AR-17-05S</td>
<td>Banana Knife, 2.7mm, silicone handle autoclavable, colour code: green</td>
</tr>
<tr>
<td>AR-17-03S</td>
<td>Bayonett Knife, 2.7mm silicone handle yellow, autoclavable, colour code: black</td>
</tr>
<tr>
<td>AR-17-12S</td>
<td>Micro Picking Knife, designed by Brian Beale, 2.7mm, silicone handle, colour code: yellow</td>
</tr>
<tr>
<td>AR-17-13</td>
<td>Special Elevator, 2.7mm, with handle colour code: metal</td>
</tr>
<tr>
<td>I-17-822</td>
<td>Milling Drill for arthroscopy</td>
</tr>
<tr>
<td>AS-17-561</td>
<td>Mini Ronguer - high performance 2.2/2.7mm 11cm colour code: black</td>
</tr>
<tr>
<td>AS-17-662</td>
<td>Alligator Grasping Forceps with Ratchet OD: 2.7mm; WL: 12cm, high quality</td>
</tr>
<tr>
<td>AS-17-762</td>
<td>Universal Rongeur and Grasping Forceps OD: 3.4mm; WL: 12cm without Ratchet</td>
</tr>
<tr>
<td>AS-17-531</td>
<td>Mini Rongeur and Biopsy Forceps OD: 2mm, WL: 11cm</td>
</tr>
<tr>
<td>AS-17-632</td>
<td>Universal Rongeur and Grasping Forceps Fenestrated, OD: 2.7mm; WL: 12cm</td>
</tr>
<tr>
<td>AR-08-100</td>
<td>Pressure Infusion Cuff for 500-1000ml complete with Manometer and Hand Pump</td>
</tr>
<tr>
<td>DE-5-17</td>
<td>Cleaning Brush, small, 17cm</td>
</tr>
<tr>
<td>DE-10-425</td>
<td>Soak Basin for Chemical Solution Disinfection</td>
</tr>
<tr>
<td>DE-10-25</td>
<td>Camera Covers Disposable (30)</td>
</tr>
</tbody>
</table>

For further information about the Arthroscopic Stifle Lever see page 228.

**Arthroscopy Starter Kit**

Instrument choice is determined by personal choice and patient selection. However a Starter Kit is a useful starting point and offers a discounted approach to setting up.

The Arthroscopy Kit described is discounted by 10% compared to buying the individual components.

In addition to arthroscopic hand instrumentation a suitable camera and light source will be required. Several options, including pre-owned units, are available. Please telephone or e-mail to discuss options.

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<td>Target Instrument designed Dr.Lehmann for canine arthroscopy; comp. with SI10-1932</td>
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<tr>
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<tr>
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<td>Special Elevator, 2.7mm, with handle colour code: metal</td>
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<td>Mini Ronguer - high performance 2.2/2.7mm 11cm colour code: black</td>
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</tr>
<tr>
<td>DE-10-25</td>
<td>Camera Covers Disposable (30)</td>
</tr>
</tbody>
</table>
Hand Instruments

Hand instruments for investigation are designed to move or retract intra-articular structures and usually take the form of blunt probes or grasping forceps. Where intra-articular surgery or sampling is involved additional cutting instruments will be required.

- **AR-17-09S** Hook Probe 2.2mm, with silicon handle
- **AR-17-13** Elevator, heavy, 2.7mm, with metal handle
- **AR-17-03S** Bayonet Knife 2.7mm, with silicon handle
- **AR-17-05S** Banana Knife 2.7mm, with silicon handle
- **AR-17-06S** Curette 2.7mm, curved, with silicon handle
- **AR-17-07S** Ring Curette 2.7mm, small, with silicon handle
- **AR-17-11S** Meniscus Knife, 2.7mm, with silicon handle
- **AR-17-12S** Micro Picking Knife, acc to Dr Brian Beale 2.7mm, with silicon handle
- **AR-17-19S** Hook Knife 2.7mm, with silicon handle

Inserts for interchangeable hand instrument (AR-17-00) are available. Please call for details.

Arthroscopy Hand Instrument Set

A useful set of three arthroscopy instruments for examination and intra-articular surgery. The two hand held knives can deal with most meniscal tears, whilst the black shaft of the hook probe minimises reflection.

- **AR-17-19X** Pull Knife
- **AR-17-11X** Push Knife
- **AR-17-10** Hook Probe 2.2mm, with stainless handle Black Shaft
- **AR-17-SET** Arthroscopy Hand Instrument Set

Gordon Coronoid Osteotome

Designed and developed by Ian Holsworth, this narrow osteotome is used for arthroscopic sub-total coronoidectomies.

- **AR-17-30** Gordon Coronoid Osteotome (4mm)
- **AR-17-29** Gordon Coronoid Osteotome (2mm)

Suture Passing Wire

Passing soft suture material through bone tunnels of soft tissues without causing additional trauma can be a challenge to the surgeon. The Arthrex Suture Passing Wire consists of a Nitinol loop attached to a flexible yet stiff wire. The wire may be pushed through bone tunnels of soft tissues and as the tip emerges the Nitinol loop naturally springs open to receive the suture which may then be pulled back through.

- **AR-1255-18** Suture Passing Wire 600mm

Crystal Cannula

Clear cannula has a lip at the tip to minimise 'fall out'.

- **AR-6560** Crystal Cannula 5.75mm x 700mm (5 Pack)

Milling Drill designed by VAN RYSSEN & VAN BREE

This hand driven bur allows curetage of both cartilage and bone through the smallest working cannula. Much cheaper and easier than shaver systems.

- **I-17-822** Milling Drill for arthroscopy complete
  - OD: 2.2mm, WL: 12cm
- **I-17-821** Replacement Bur and Shaft

**MILLING DRILL**

**ARTHROSCOPY HAND INSTRUMENT SET**

**GORDON CORONOID OSTEOTOME**

**SUTURE PASSING WIRE**

**CRYSTAL CANNULA**

222
Arthroscopic Punches, Biopsy Forceps, Rongeurs and Grasping Forceps

Arthroscopic forceps and rongeurs should be selected according to patient and portal size. A very small pair of grasping or cutting forceps will fit any portal but will be easily damaged if used on large fragments. Various designs are available for grasping cutting, or nibbling intra-articular structures.

2.7mm Instruments

- made for veterinary use
- overstraining protected

2.7mm Instruments, working length 12cm

AS-17-621 Arthroscopic Hook Scissors, OD: 2.7mm

3.4mm Instruments

AS-17-762 Universal Rongeur and Grasping Forceps, Fenestrated without Ratchet, OD: 3.4mm working length 12cm with overstraining protection

Arthrex Hand Instruments

Useful Additions to the VAR-3000S Arthroscopy Set

Angled Slender Meniscus Punches

In the human knee management of meniscal tears is by arthroscopy punches. Most human arthroscopy punches are too large for the canine stifle even with appropriate distraction. Our External Stifle Distractor (AR-17-01, page 228) offers the best possible access. The Arthrex slender punches are small enough and the best available. The straight one is included in VAR-3000S. If you can afford them the punches angled left and right work best of all.

Slender Pointed Grasping Forceps

Pointed grasping forceps may be used for gentle dissection and grasping of small intra-articular objects.

Small Probe

ARTHREX ADDITIONAL HAND INSTRUMENTS

AR-11000 Slender Punch Straight
AR-11420 Slender Punch Angled Left
AR-11430 Slender Punch Angled Right
VAR-11700NR Slender Pointed Grasping Straight
AR-30000 Small Probe

2.0mm Instruments

- made for veterinary use
- overstraining protected

2.0mm Instruments, working length 11cm

AS-17-531 Mini Rongeur and Biopsy Forceps OD: 2.0mm

AS-17-551 Mini Punch for arthroscopy, OD: 2.0mm

AS-17-521 Mini Scissor for arthroscopy OD: 2.0mm

2.2/ 2.7mm Instruments

AT-19-231 Mini Ronguer - High performance 2.2mm / 2.7mm 11cm

2.7mm Instruments

2.7mm Instruments, working length 12cm

AS-17-662 Alligator Grasping Forceps with Ratchet OD: 2.7mm with overstraining protection

AS-17-632 Universal Rongeur and Grasping Forceps Fenestrated OD: 2.7mm with overstraining protection

AS-17-641 Biopsy and Spoon OD: 2.7mm with overstraining protection

AS-17-672 Arthroscopic Punch OD: 2.7mm with overstraining protection

2.0mm Instruments

- made for veterinary use
- overstraining protected

2.0mm Instruments, working length 11cm

AS-17-531 Mini Rongeur and Biopsy Forceps OD: 2.0mm

AS-17-551 Mini Punch for arthroscopy, OD: 2.0mm

AS-17-521 Mini Scissor for arthroscopy OD: 2.0mm

2.2/ 2.7mm Instruments

AT-19-231 Mini Ronguer - High performance 2.2mm / 2.7mm 11cm

2.7mm Instruments

2.7mm Instruments, working length 12cm

AS-17-662 Alligator Grasping Forceps with Ratchet OD: 2.7mm with overstraining protection

AS-17-632 Universal Rongeur and Grasping Forceps Fenestrated OD: 2.7mm with overstraining protection

AS-17-641 Biopsy and Spoon OD: 2.7mm with overstraining protection

AS-17-672 Arthroscopic Punch OD: 2.7mm with overstraining protection
Grasping and maintaining a grip on fragments can be very challenging for both surgeon and instrument. Once locked on, the surgeon is understandably reluctant to let go, sometimes taking an instrument beyond its working limits. The VAR-11600SR Alligator forcep is toothed for maximum grip and has a self releasing handle. The Alligator grasper is one of a range of canine arthroscopy instruments available as a set from Arthrex Vet Systems through Veterinary Instrumentation. Call or e-mail for a full brochure.

The Canine Arthroscopy Set combined with an Arthrex Camera and Light source would comprise a start up set for arthroscopy of the canine stifle, elbow, shoulder and hock.

**Canine Arthroscopy Set (VAR-3000S)**

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAR-3008</td>
<td>Small Cup Curette, 2.5 mm diameter</td>
<td>£105.29</td>
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<tr>
<td>VAR-3009</td>
<td>Banana Knife, 2.5 mm diameter</td>
<td>£105.29</td>
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<td>AR-5021</td>
<td>Graduated Black Probe, 1.5 mm Tip</td>
<td>£63.53</td>
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<td>AR-5007</td>
<td>Graduated Black Probe, 2.5 mm Tip</td>
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</tr>
<tr>
<td>AR-10020</td>
<td>Probe, Stainless Steel</td>
<td>£63.53</td>
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<tr>
<td>AR-3033</td>
<td>Obturator, Blunt</td>
<td>£63.53</td>
</tr>
</tbody>
</table>

**Forceps Tray**

VAR-11600SR Grasper, Alligator Hook Tip
VAR-11100 Punch, Slender Straight Tip
The forcesp tray secures a Series I Grasper and Slender Punch in an upright position for easy accessibility. The tray has space for two further forcesps.

**Canine Cannula Set (VAR-3002S)**

VAR-3002 Cannulas (2.9, 3.7 & 4.3 mm)
VAR-3003 Cannulated Obturator
VAR-3004-2.9 Switching Stick, 2.9 mm
VAR-3004-3.7 Switching Stick, 3.7 mm
VAR-3005 Dilation Needles, qty. 5
VAR-3006 Stifle Outflow Cannula with Stopcock
VAR-3007 Stifle Outflow Obturator
The Cannula Set is available separately. The stand alone Cannula Set does not include the Outflow Cannula and Obturator.

**Main Instrument Tray**

**Grasper-Alligator Diameter 2.75mm with Hooked Tip Self Release**

Grasping and maintaining a grip on fragments can be very challenging for both surgeon and instrument. Once locked on, the surgeon is understandably reluctant to let go, sometimes taking an instrument beyond its working limits.

The VAR-11600SR Alligator forcep is toothed for maximum grip and has a self releasing handle.

The Alligator grasper is one of a range of canine arthroscopy instruments available as a set from Arthrex Vet Systems through Veterinary Instrumentation. Call or e-mail for a full brochure.

**ARTHREX HAND INSTRUMENTS**

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>VAR-3000S</td>
<td>Canine Arthroscopy Set Boxed</td>
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<tr>
<td>VAR-11100</td>
<td>Punch Slender Tip</td>
</tr>
<tr>
<td>VAR-11600SR</td>
<td>Grasper-Alligator Ø 2.75mm with Hook Tip</td>
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<tr>
<td>VAR-3002S</td>
<td>Canine Cannula Set</td>
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<tr>
<td>VAR-3006</td>
<td>Outflow Cannula with Stopcock</td>
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<tr>
<td>VAR-3007</td>
<td>Outflow Cannula Obturator</td>
</tr>
<tr>
<td>VAR-3009</td>
<td>Banana Knife</td>
</tr>
<tr>
<td>BRCANARTH</td>
<td>Canine Arthroscopy Literature</td>
</tr>
</tbody>
</table>
BLACK DIAMOND SERIES

The black diamond coating on the working tips serves two purposes. The coating is anti-reflective and provides an extra hard surface for a sharp edge and a long life.

New style grip provides fatigue free control of the working tip.

Hook Probe

Use to gently manipulate intra-articular structures.

Hook Knife

Typically used for release of the meniscus of meniscal lesions.

Meniscus Knife

Sometimes called the ‘Push Knife’, the cutting blade is in the groove behind the two protective tips.

Spoon Curette

This curette has a lower profile than the standard.

Ball Head Bur 2.3mm

Use to debride both cartilage and bone. Very effective and much less expensive than a full shaver.

Improved design of the mushroom handle offers better grip in the gloved hand.

Banana Knife

Elevator

Curette with Hole

MENISCUS KNIFE
LEI165013025 Meniscus Knife or Push Knife 2.5mm

HOOK PROBE
LEI165011010 Hook Probe 1.0mm Tip
LEI165011015 Hook Probe 1.5mm Tip

HOOK KNIFE
LEI165013022 Hook Knife 2.2mm

CURETTE WITH HOLE
LEI165012028 Curette with Hole 2.7mm

SPOON CURETTE
LEI165012015 Spoon Curette 1.5mm
LEI165012030 Spoon Curette 2.7mm

LEI165011023 Ball Head Bur 2.3mm

LEI165013000 Banana Knife 2.5mm x 12mm

LEI165014000 Elevator (Penfield Style) 2.5mm

LEI165012028 Curette with Hole 2.7mm
The shaft of standard arthroscopy forceps is typically offset from the axis of the human hand and wrist. Rotating the standard forceps requires the operator to make adjustments to minimise undesired movement of the forceps tip within the joint. This series of forceps developed in association with Bernadette Van Rysen at the University of Ghent has a number of important advantages. The PRO series handle design allows intensive contact, stable guidance and balanced handling, which results in even greater precision.

The ratchet based locking mechanism allows the surgeon to securely grasp intra-articular objects. Importantly the locking mechanism may be switched off when free cutting and grasping is required.

If a traditional finger ring handle is preferred, select the Standard option. Most arthroscopy forceps fail when corrosion attacks the internal mechanisms. Corrosion develops because during procedures, saline under pressure within the joint is forced up into the forceps. Standard cleaning techniques, even ultrasonics, do not penetrate inside the tube shaft and the operating mechanism. The shaft of each of the van Rysen series forceps incorporates an angled flushing port for rinsing the forceps internals.

### Biopsy Forceps

The Cup Biopsy Forceps pinch off a sample of soft tissue approximately the diameter of the shaft. The forceps have a switchable locking ratchet.

**BIOPSY FORCEPS - PRO SERIES HANDLE**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEI165102010</td>
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<td>£870.35</td>
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<td>LEI165102710</td>
<td>Biopsy Cup Forceps, 2.7 mm, Rotatable, PRO</td>
<td>£849.75</td>
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<tr>
<td>LEI165103510</td>
<td>Biopsy Cup Forceps, 3.5 mm, Rotatable, PRO</td>
<td>£849.75</td>
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**BIOPSY FORCEPS - STANDARD HANDLE**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
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<tr>
<td>LEI165102040</td>
<td>Biopsy Cup Forceps, 2.0 mm, Rotatable, Standard</td>
<td>£849.75</td>
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<tr>
<td>LEI165102740</td>
<td>Biopsy Cup Forceps, 2.7 mm, Rotatable, Standard</td>
<td>£787.95</td>
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<tr>
<td>LEI165103540</td>
<td>Biopsy Cup Forceps, 3.5 mm, Rotatable, Standard</td>
<td>£787.95</td>
</tr>
</tbody>
</table>

### Grasping Forceps

The Grasping Forceps securely grip fragments of bone, cartilage and soft tissue. The Forceps have a switchable locking ratchet.

**GRASPING FORCEPS - PRO SERIES HANDLE**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEI165102020</td>
<td>Grasping Forceps, 2.0 mm, with Ratchet, Rotatable, PRO</td>
<td>£870.35</td>
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<tr>
<td>LEI165102720</td>
<td>Grasping Forceps, 2.7 mm, with Ratchet, Rotatable, PRO</td>
<td>£849.75</td>
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<tr>
<td>LEI165103520</td>
<td>Grasping Forceps, 3.5 mm, with Ratchet, Rotatable, PRO</td>
<td>£849.75</td>
</tr>
</tbody>
</table>

**GRASPING FORCEPS - STANDARD HANDLE**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
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<tr>
<td>LEI165102045</td>
<td>Grasping Forceps, 2.0 mm, Rotatable, Standard</td>
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<tr>
<td>LEI165102745</td>
<td>Grasping Forceps, 2.7 mm, Rotatable, Standard</td>
<td>£767.35</td>
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<tr>
<td>LEI165103545</td>
<td>Grasping Forceps, 3.5 mm, Rotatable, Standard</td>
<td>£767.35</td>
</tr>
</tbody>
</table>
However good your forceps are, if they are stored or autoclaved without adequate protection they will be damaged easily. When investing in forceps, consider getting the purpose designed storage and sterilisation case. This holds the forceps securely while preventing pressure or contact on the tips. The mesh internal tray and perforated container allow good steam access during autoclaving, and is available for both the PRO series and standard handles.

Hook Punch
The ‘hook’ nature of the punch prevents the tissue under investigation from slipping away. As the jaws close the tips contact the tissue first holding it for the punch action.

Hook Scissors
The ‘hook’ nature of the scissors prevents the tissue under investigation from slipping away. As the scissors close the tips contact the tissue first holding it for the scissors action.

Biopsy and Grasping Forceps
The Biopsy and Grasping forceps securely grasp soft tissue before pinching off a sample.

Premium Sterilisation Cases for VAN RYSSEN Signature Series
Premium Sterilisation boxes with internal tray for holding either PRO or standard handles.
Shoulder Aiming Device

Developed and tested at the Veterinary Faculty of Vienna, Austria by Dr Lehman.

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.

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 trochar, simply replace the trochar with a working cannula and start working with your instruments. Useful for both cranial and caudal approaches. View at www.vetinst.com/videos

See VCOT 2004; 17:1-56 for review

SHOULDER AIMING DEVICE

S140-2438F  Aiming Device by Dr Lehman for the canine shoulder for 2.4 Scope T140-2432 and Changing Rod I-17-028
S140-1938F  Aiming Device by Dr Lehman for the canine shoulder for 1.9 Scope T110-1930 and Changing Puncture Rod I-17-028
I-17-028  Changing & Puncture Rod
DVDOLEHMAN  DVD on use of Aiming Device.

Extra Articular Joint Distraction

External Stifle Distractor

Developed original for arthroscopic use but also useful in open surgery on very tight osteoarthritic stifles. Improves visibility in the joint by reducing clutter. Pins (2.5mm) placed above and below the stifle in line with the medial collateral ligament. Turn the thumbscrew to distract the joint and expose the medial meniscus. The pins may be twisted relative to one another to bring the tibial plateau forward.

Version with 3.2mm pins is suitable for use with TPLO jig pins – the proximal pin can then be re-used.

EXTRA ARTICULAR STIFLE DISTRACTOR

AR-17-01  Extra Articular Stifle Distractor 2.5mm Pins 80mm
AR-17-01/TPLO  Extra Articular Stifle Distractor 3.2mm Pins 80mm

Arthroscopic Stifle Lever VSTL

The arthroscopic stifle is finer and longer than the standard version, making it more suitable for arthroscopic surgery. The good sized white Teflon handle has a useful notch which aligns with the tip orientation of the lever. Not just for arthroscopy – useful in open arthrotomies as well.

Developed for stifle surgery by Ian Holsworth.

ARTHROSCOPIC STIFLE LEVER VSTL

AR-17-02  Arthroscopic Stifle Lever VSTL 280mm
**Light Sources & Cables**

Halogen light sources are inexpensive but not as good as the Xenon based systems, which are, unfortunately, significantly more expensive to purchase and maintain. Xenon light sources have a higher intensity and are essential if the unit is to be used for laparoscopic work. Thus Xenon is preferable but halogen can be used successfully in most joint investigations. Both Xenon and Halogen bulbs have a limited life (Xenon typically 500 hours, Halogen typically 2000 hours) and bulb failure is at best embarrassing so always carry a spare. The light cable carries light from the source to the arthroscope by fibre optics. Each cable has dedicated connectors to couple with the light source and the arthroscope. Connections on both light source and arthroscope vary from manufacturer to manufacturer. Convertors are available for both light source and arthroscope but it is wise, if possible, to purchase the appropriate cable for the system.

**Fibre Light Cable**

**KW-48-231** Fibre Light Cable 4.8mm 2.3m both sides compatible to Wolf Autoclavable

**KS-48-231** Fibre Light Cable 4.8mm 2.3m unit side compatible to Storz endoscope side compatible to Wolf Autoclavable

**KS-48-300** Fibre Light Cable 4.8mm 3.0m Storz/Storz

**Cameras & Monitors**

Direct viewing of the joint through the eyepiece is possible. However, practicality and the issue of contamination dictate that a camera system is an essential part of the equipment. Arthroscopic cameras work in a very similar fashion to video cameras in common usage. The image at the eyepiece of the arthroscope is focussed on a light responsive electronic chip(s). The signal created is transferred to a camera controller, which processes the image into a signal recognized by the monitor and/or recording system.

Most veterinary cameras have a single chip, which is sufficient for most users.

The connection of the camera head to the eyepiece of the arthroscope is also variable. To maximise the choice and longevity of the instrumentation it is advised that a clip on camera head compatible with DIN standard eyepieces be selected. The camera heads are fully immersible.

**Camera Covers**

**CAMERA COVERS**

**DE-10-25** Camera Covers Disposable Polyethylene
13 x 235cm Sterile Pack of 30

**CAMPT** Camera Cover with Perforated Tip
250cm x 12.5cm Sterile Pack of 60

**CAME** Camera cover with Elasticed Tip
250cm x 12.5cm Sterile Pack of 60

**DE-10-25-SINGLE** Single Camera Cover Disp 13 x 235cm Sterile

**DE-10-01** Camera Cover Reusable Waterproof Washable Autoclavable 12 x 200cm Single

**Image Capture**

Good practice dictates that a record is made of any arthroscopic procedure. Subsequent investigations can be compared to earlier ones and images can be shared and compared with colleagues or tutors as part of a training programme. Domestic video recorders will create a permanent record of a procedure. However the data is relatively crude and difficult to manipulate. Still video printers capture an image from a video stream which can then be printed onto photographic paper.

Digital video and data storage technology now allows the surgeon to record and store very large amounts of data in a digital format. The digital information can subsequently be manipulated by appropriate computer software to create both still and moving images in a variety of formats for storage or display. If clinical presentations are anticipated then a digital system is very desirable. Domestic DVD or combined DVD/Hard drive recorders offer huge storage capacities at reasonable prices.

The data is stored as Digital Video (DV) which can be converted into many other formats. The major arthroscopy companies offer sophisticated data storage systems which are able to capture and store still and movie files via sterile touch screens or camera finger controls. Permanent records are maintained on DVD discs or computer hard drives.

**USB Based Image Capture System**

The latest version of the image capture device captures both still images and mpegs directly onto a USB stick ready for transfer to permanent storage.

Capture is activated by pressing a button on the front panel or if the surgeon prefers to keep control there is an optional foot control.

**USB BASED IMAGE CAPTURE SYSTEM**

**46-USB-200** USB Image Capture Jpeg and Mpeg

**46-USB-15-1** Footswitch for USB Capture System
Hand Pressure Infusion Cuffs

Arthrex Continuous Wave III Arthroscopy Pump

Free Loan Offer

Provided the surgeon is prepared to commit to the purchase of 100 patient infusion sets per year, Arthrex is prepared to offer its Continuous Wave Arthroscopy Pump (AR-6475), (value over £4,068.50) on free loan, with an initial purchase of 2 boxes of tubing.

This pump has been in use in the human sector for some 15 years and is very reliable. Line pressure and flow rate are user-defined. This means that the fluid pressure does not have to be continually monitored and adjusted by nursing staff. In addition, if the tube pressure is correct, any problems with fluid flow can be immediately localised to the arthroscope. This is not the case with inflated cuffs where only the pressure within the bag is known.

Setup of the unit is very straightforward. The machine tubing (or combination tubing) is simply looped around the rollers as shown in the picture. A clip-down transparent cover provides additional security. A new patient tubing set must be used for each patient. If you are running more than 3 procedures a day, it may be worth considering separate machine & patient tubing sets to keep costs down.

Two modes of operation are available – Normal and Flush, which increases the flow rate to 100% and the pressure by 50% to a maximum of 120mmHg. The maximum flow rate available is 1500ml/minute, which is measured in percent with a range of 10-100%. Pressure range is 0-120mmHg, measured in increments of 1mmHg. On start-up, default flow rate is 100%, pressure set at 0mmHg. Settings are changed on the easy-clean front touch panel.

ARthropy INFUSION PUMP AND TUBING

AR-6475 Arthroscopy Pump
AR-6415 Combination Machine and Patient Tube (10)
AR-6420 Machine Tube Set (10)
AR-6425 Patient Only Tube Set (20)

Hand Pressure Infusion Cuffs

Arthrex Continuous Wave III Arthroscopy Pump

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Pressure Pump Infusor

Pressure Pump Infusor

Features:
- Automatic control
- Pressure continuously adjustable
- Max. 300mmHg pressure
- Easy handling
- No mechanical parts
- For fluid and CO2 supply

Pressure Pump Infusor

Features:
- Automatic control
- Pressure continuously adjustable
- Max. 300mmHg pressure
- Easy handling
- No mechanical parts
- For fluid and CO2 supply

Hand Pressure Infusion Cuffs

Hand Pressure Infusion Cuffs

Pressure Pump Infusor

Pressure Pump Infusor

Pressure Infusion Cuff for 500-1000ml complete with Pressure Gauge and Hand Pump Reusable
Pressure Infusion Cuff for 3000-5000ml complete with Pressure Gauge and Hand Pump Reusable
Pressure Infusion Cuff for 500-1000ml without Pressure Gauge Luer Lock (fem) Reusable
Silicon Tube 7x2mm 3m Autoclavable
Luer-Lock (m) Needle (f) Sterile Bags/ Bottles
Spare Silicon Tube 1m Size: 7 x 2mm Colour: Natural
Spare Needle for Infusion Bottles/ Bags ID: 5.5mm comp. to Silicon Tubes 7 x 2mm
Spare Silicon Tube ID: 5mm 180cm Llm both ends Autoclavable
Spare Silicon Tube 1m Autoclavable size: 5 x 1.5mm Colour: Nature
Spare Luer-Lock Connector (m) comp. to Silicon Tubes 5 x 1.5mm

Pressure Pump Infusor

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Features:
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Features:
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- Max. 300mmHg pressure
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- No mechanical parts
- For fluid and CO2 supply

Hand Pressure Infusion Cuffs

Hand Pressure Infusion Cuffs

Pressure Pump Infusor

Pressure Pump Infusor

Pressure Infusion Cuff for 500-1000ml complete with Pressure Gauge and Hand Pump Reusable
Pressure Infusion Cuff for 3000-5000ml complete with Pressure Gauge and Hand Pump Reusable
Pressure Infusion Cuff for 500-1000ml without Pressure Gauge Luer Lock (fem) Reusable
Silicon Tube 7x2mm 3m Autoclavable
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Pressure Pump Infusor

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Features:
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Pressure Pump Infusor

Features:
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- Max. 300mmHg pressure
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Hand Pressure Infusion Cuffs

Hand Pressure Infusion Cuffs

Pressure Pump Infusor

Pressure Pump Infusor

Pressure Infusion Cuff for 500-1000ml complete with Pressure Gauge and Hand Pump Reusable
Pressure Infusion Cuff for 3000-5000ml complete with Pressure Gauge and Hand Pump Reusable
Pressure Infusion Cuff for 500-1000ml without Pressure Gauge Luer Lock (fem) Reusable
Silicon Tube 7x2mm 3m Autoclavable
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Spare Silicon Tube 1m Size: 7 x 2mm Colour: Natural
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Spare Silicon Tube ID: 5mm 180cm Llm both ends Autoclavable
Spare Silicon Tube 1m Autoclavable size: 5 x 1.5mm Colour: Nature
Spare Luer-Lock Connector (m) comp. to Silicon Tubes 5 x 1.5mm
Arthrex – Shaver System

Free Loan Offer

Virtually the only powered instrument in use in veterinary arthroscopy is the shaver. The shaver is essentially a motorized bur. It may be used to debride cartilage, bone or soft tissues. A range of tips of different designs and sizes are available to manage the different tissues. Tips designed for soft tissues are typically larger and more aggressively toothed. Suction may be applied to the cutting tip via the hand piece to remove debris. The hand piece is driven by a control box operated by finger or foot controls. The speed and direction of cut are selectable. The tips (known as blades) are disposable. Resist the urge to try cleaning and re-using – they are extremely difficult to clean effectively, and if any distortion occurs during cleaning and sterilising they will not function safely.

Arthrex Adapteur APS II Console

The Arthrex Adapteur II shaver is a current shaver with a value of over £11,450. It takes a range of blades down to 2.0mm, and has the capability to accept 2 handpieces if necessary. Arthrex offer the APS shaver on FREE loan to Veterinary Instrumentation customers provided that the surgeon is prepared to purchase up front two boxes of blades (total of 10 blades). The unit is supplied as standard with one foot controlled hand-piece. This unit is also available with an alternative hand control. Please specify which you prefer when ordering.

Shaver Blades and Burs

Unless you have used these before, selecting shaver blades can seem difficult. The following types cover the most useful applications. Other types are available - full list available on request. All supplied in boxes of 5.

**Sabre**
Aggressive general soft tissue resection applications, while leaving smooth tissue edges.

**Dissector**
Aggressive resection of meniscus, synovium & cartilage.

**Oval Burs**
For rapid, aggressive bone resection.

**Round Burs, 8 flute**
Ideal for soft tissue, osteochondral and osteophyte resection, or bony site preparation.

<table>
<thead>
<tr>
<th>Action</th>
<th>Minimum Speed RPM</th>
<th>Maximum Speed RPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward/reverse</td>
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<td>8000</td>
</tr>
<tr>
<td>Oscillation</td>
<td>500</td>
<td>6000</td>
</tr>
</tbody>
</table>

Linvatec Shaver Blades

We can still source blades for Linvatec shaver systems, although we rarely now find consoles or handpieces.

**LINVATEC SHAVER SYSTEM AND BURS**

<table>
<thead>
<tr>
<th>Blade Code</th>
<th>Blade Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBC9960</td>
<td>2mm Linvatec Micro Gator Shaver Blade</td>
</tr>
<tr>
<td>SBC9950</td>
<td>2mm Linvatec Micro Cuda Shaver Blade</td>
</tr>
<tr>
<td>SBC9911</td>
<td>2.9mm Linvatec Micro Spherical Shaver Blade</td>
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<tr>
<td>SBC9961</td>
<td>2.9mm Linvatec Micro Gator Shaver Blade</td>
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<tr>
<td>SBC9962</td>
<td>3.5mm Linvatec Micro Gator Shaver Blade</td>
</tr>
<tr>
<td>SBC9264</td>
<td>3.5mm Linvatec Gator Shaver Blade</td>
</tr>
<tr>
<td>SBC9253</td>
<td>3.5mm Linvatec Cuda Shaver Blade</td>
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<tr>
<td>SBC9111</td>
<td>4.5mm Linvatec Spherical Shaver Blade</td>
</tr>
<tr>
<td>SBH9110</td>
<td>Shaver Blade Linvatec H9110 3.5mm Spherical</td>
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</table>

Arthroscopic Procedure Electrosurgical System (OPES)

**ARTHROSCOPIC PROCEDURE ELECTROSURGICAL SYSTEM (OPES)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>AR-9610</td>
<td>Monopolar Handpiece Disposable Box of 5</td>
</tr>
<tr>
<td>VAR-1005-01</td>
<td>Ground Pad</td>
</tr>
<tr>
<td>VAR-1005-06</td>
<td>Cable</td>
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<tr>
<td>BROPES</td>
<td>Ablation Wands and Electrodes from</td>
</tr>
<tr>
<td></td>
<td>Opes Literature</td>
</tr>
</tbody>
</table>
Fluid Management
Sterile Incise drape with Fluid Collection Pouch.

Arthroscopy is messy. Collection of fluid run off will minimise what falls to the floor. This opaque plastic film drape has a 100mm x 100mm incise area and a 200mm x 300mm fluid collection pouch. Free sample on request.

INCI SE DRAPE WITH FLUID COLLECTION POUCH STERILE
DD198961 Incise Drape with Pouch Box of 40
FCP2527 Fluid Collection Pouch 25cm x 27cm 200 Sterile

Clear Adhesive Antibacterial Surgical Drapes with Povidine

The majority of human surgeries use clear adhesive drapes over the incision site. Benefits include fluid and pathogen resistance, antibacterial, transparent and permeable. 4 sizes available.

CLEAR ADHESIVE SURGICAL DRAPES WITH Povidine
AD1420 14cm x 20cm 20 Pieces/ Box
AD2030 20cm x 30cm 20 Pieces/ Box
AD3045 30cm x 45cm 20 Pieces/ Box
AD4560 45cm x 60cm 10 Pieces/ Box
ID6650 Ioban™ Drape 56 x 45cm Single

Sterility
Arthroscope s
Distilled water and an enzymatic cleaner are used to remove gross contamination from arthroscopes, sheaths and trochars. Arthroscopes are available which can be autoclaved. However, repeated autoclaving of even these arthroscopes will significantly reduce their working life. Sterility is more commonly achieved by soaking in an anti-microbial solution. Historically glutaraldehyde based solutions were the norm but health and safety concerns have led to the use of safer chemicals based on oxidation.

Camera systems
Most cameras used for veterinary arthroscopy cannot be autoclaved but the head and cable can usually be soaked in the same solution as the arthroscope. Care should be exercised to avoid contact of the sterilizing fluid with the electrical contacts at the end of the cable. An alternative is the use of a sterile disposable camera sleeve to separate the camera head and cable from the sterile arthroscope eyepiece.

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 lake-warm tap water. Provides rapid sterilisation and re-use of endoscopy instruments. 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.

PERSAFE
100100 Perasafe Cold Sterilant 24 x 81g (5 litres)
100101 Perasafe Cold Sterilant 6 x 81g (5 litres)
DE-10-425 Soak Basin for Chemical Solution Disinfection consisting of Basin (perforated) Tray & Cover for Basin size: 42 x 16 x 9.5cm
DE-S-17 Cleaning Brush for Small Cannulae with ID: 2-4mm Length 17cm

Rapizyme

• Three new enzymes • Easy to use measured bottle
• 2ml per litre dilution • Removes all organic material
• Ideal for endoscopes • Low foam for ultrasonics
• Complete rinsibility • Biodegradable
• Tested by The Royal Institute of Public Health

RAPIZYME
RAPIZYME1 Bottle 1 Litre
Positioning Aids
Manipulation of arthroscopes and instrumentation inside a joint via an image on a monitor screen can be very demanding. Careful positioning of the patient and the surgeon is essential.
An operating table, fully adjustable for height and tilt is a prerequisite for good arthroscopy. Once fully draped, orientation around a canine limb can be difficult. Full use should be made of channels, ties and sand bags to fix the overall position of the dog. Sandbags may also be necessary to act as a fulcrum to open a joint maximally for investigation, e.g. elbow.

Multi-arm Positioning Device

To provide multiple fixed positioning during an investigation a Multi-arm Positioning Device is available which when attached between the distal limb and the table may be locked into an infinite range of positions. An optional accessory allows the stifle to be accurately positioned for an investigation.

MULTI-ARM

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>026000</td>
<td>Multi-arm Positioning Device</td>
<td>£293.55</td>
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<tr>
<td>020062</td>
<td>Double Limb Support for Multi-arm</td>
<td>£169.95</td>
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<tr>
<td>020065</td>
<td>Stifle Brace Attachment for Multi-arm</td>
<td>£169.95</td>
</tr>
<tr>
<td>020065</td>
<td>(designed by Schulz and Ian Holsworth)</td>
<td></td>
</tr>
<tr>
<td>MULTIARMSET</td>
<td>Multi-arm Set includes all of above</td>
<td>£509.85</td>
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</table>

Table Top Stand for Hanging Limb Preparation

Suspension of a limb can provide significant benefits in both arthroscopy and other orthopaedic procedures. The shoulder joint is distracted and 360 degree access becomes available.
Height 1.2m (48”)
In 2012 our limb suspension stand was re-designed to give greater tabletop stability. A cleat for tying off limb suspension ropes has also been added and the shaft can be dismantled for storage.

TABLETOP STAND FOR HANGING LIMB PREPARATION

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>R463</td>
<td>Tabletop Stand for Hanging Limb Preparation</td>
<td>£185.00</td>
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</tbody>
</table>
Vac Pac Vacuum Positioning Device.

Simply mould the bead filled bag around or under the patient and hook up to any vacuum source, as the air is removed the bag solidifies in the set position. Especially useful for arthroscopy or any surgery requiring secure accurate positioning.

The Vac Pac is:
- Re-useable
- Repairable
- Radiolucent
- Warm

**VAC-PAC**

<table>
<thead>
<tr>
<th>Code</th>
<th>Size</th>
<th>Dimensions</th>
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</thead>
<tbody>
<tr>
<td>VP23</td>
<td>Vac-Pac 23</td>
<td>45 x 50cm</td>
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<tr>
<td>VP30</td>
<td>Vac-Pac 30</td>
<td>72 x 90cm</td>
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<tr>
<td>VP31</td>
<td>Vac-Pac 31</td>
<td>98 x 90cm</td>
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<tr>
<td>VP32</td>
<td>Vac-Pac 32</td>
<td>118 x 90cm</td>
</tr>
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</table>

Thanks to Pat Ridge for the photographs

Redmark Cradles

Available individually or as a Set of 3, these cradles are the best available.

**REDMARK CRADLES**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>026022</td>
<td>Redmark Cradles - Set of 3 (S, M, L)</td>
<td>£225.00</td>
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<tr>
<td>026022L</td>
<td>Redmark Cradle - Large over 32kg</td>
<td>£100.00</td>
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<tr>
<td>026022M</td>
<td>Redmark Cradle - Medium 13kg - 32kg</td>
<td>£95.00</td>
</tr>
<tr>
<td>026022S</td>
<td>Redmark Cradle - Small up to 13kg</td>
<td>£90.00</td>
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