Laparoscopy and Thoracoscopy in Equine Practice
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Minimally invasive procedures offer several advantages over traditional abdominal and thoracic surgery in the horse: Reduced morbidity, reduced hospitalization, reduced incidence of infections, faster recovery, improved visualization and/or surgical access, and improvement/development of procedures that could not be achieved with open surgery. Indications for laparoscopy in the horse include visual examination, organ biopsy, acute or chronic cholic, cryptorchidectomy, castration, inguinal hernia, ovariectomy, neoplasia, cystic calculi, nephrectomy, ablation of nephrosplenic space, and embryo transfer. Equine thoracoscopy is most commonly indicated in horses with pleuropneumonia or intra-thoracic masses.
Fig. 1: Inguinal hernia
Fig. 2: Cryptorchidectomy
Fig. 3: Cryptorchidectomy
Fig. 4: Hernia repair
Fig. 5: Ovarian pedicle transection
Fig. 6: Biopsy of lung mass
Fig. 7: Retained testicle
Fig. 8: Transection of mesorchium and vas deferens
Laparoscopes

**HOPKINS® Straight Forward Telescope 0°**, diameter 10 mm, length 31 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green

**HOPKINS® Forward-Oblique Telescope 30°**, enlarged view, diameter 10 mm, length 31 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

**HOPKINS® Straight Forward Telescope 0°**, enlarged view, diameter 10 mm, length 57 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green

**HOPKINS® Forward-Oblique Telescope 30°**, enlarged view, diameter 10 mm, length 57 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red
**Trocars**

**Size 11 mm**

62103 MPL  Trocar, size 11 mm
including:
  Trocar only, with pyramidal tip
  Cannula, working length 20 cm
  Multifunctional Valve

62103 MP  Same, working length 10.5 cm

60103 TXR  TERNAMIAN ENDOTIP Cannula,
with thread and rotatable insufflation stopcock,
size 11 mm, working length 20 cm,
color code: green
including:
  Multifunctional Valve
  Seal Set, 60/10
  Mandrel, for opening automatic valves

**Size 6 mm**

62160 MPL  Trocar, size 6 mm
including:
  Trocar only, with pyramidal tip
  Cannula, length 20 cm
  Multifunctional Valve

**Reducer**

62141 DB  Reducer, 11 mm/5 mm
Operating Instruments, size 10 mm
for use with trocars size 11 mm

60531 WSL  **CLICKLINE Scissors**, rotating, robust, serrated, single action jaws, size 10 mm, length 43 cm
including:
Metal Handle, without ratchet
Outer Sheath, insulated
Scissors Insert

60531 SGL  **CLICKLINE BABCOCK Grasping Forceps**, atraumatic, for large organs, double action jaws, jaw length 70 mm, size 10 mm, length 43 cm
including:
Metal Handle, without ratchet
Outer Sheath, insulated
Forceps Insert

60532 FSL  **CLICKLINE Claw Forceps**, rotating, 2 x 3 teeth, single action jaws, size 10 mm, length 43 cm
including:
Metal Handle, with MANHES style ratchet
Outer Sheath, insulated
Forceps Insert

60532 BCL  **CLICKLINE BABCOCK Grasping Forceps**, atraumatic, double action jaws, size 10 mm, length 43 cm
including:
Metal Handle, with MANHES style ratchet
Outer Sheath, insulated
Forceps Insert
Operating Instruments, size 5 mm, for use with trocars size 6 mm or 11 mm with reducer

**60421 DB** CLICKLINE Dissecting and Biopsy Forceps, rotating, dismantling, insulated, with connector pin for unipolar coagulation, with Luer-Lock irrigation connector for cleaning, single action jaws, size 5 mm, length 43 cm including:
- Plastic Handle, without ratchet
- Metal Outer Sheath, insulated
- Forceps Insert

**62178 T** Palpation Probe, with cm-marking, size 5 mm, length 43 cm

**62178 P** Injection Cannula, Luer-Lock, needle diameter 1.2 mm, size 5 mm, length 43 cm

**66083 ET** Embryo Transfer Instrument, diameter 5 mm, working length 40 cm
**Needle Holders**

26178 KPF  **KOH Macro Needle Holder**, with tungsten carbide insert, ergonomic pistol handle with disengageable ratchet, ratchet position left, jaws straight, size 5 mm, length 43 cm

26178 KPL  **Same**, jaws curved to left

26178 KPR  **Same**, jaws curved to right

**Knot Tier**

26596 C  **CROCE Knot Tier**, for extracorporeal knotting, size 5 mm, length 55 cm
CO₂ ENDO-ARTHOFLATOR-VET

Special Features:
- One unit with laparoscopy and arthroscopy mode
- High operating safety
- Continuously adjustable insufflation pressure
- Easy to use
- Fully automatic, electronically controlled gas refill (in case of gas loss when changing instruments)

62 4325 01  CO₂ ENDO-ARTHOFLATOR-VET,
power supply 100-240 VAC, 50/60 Hz
including:
Silicone Tubing Set, sterilizable
Universal Wrench
Gas Filter, sterile, for single use, package of 10

Optional Accessories

20 4001 43  Silicone Tubing Set, sterilizable

03 1122-10  Gas Filter, sterile, for single use, package of 10

NOTE:
The pressure hose and CO₂ bottles must be ordered separately, see catalog:
Veterinary Endoscopy, Large Animals
IMAGE1 S™ HD Imaging System

The IMAGE1 S™ HX camera system is a cost-effective video imaging system which delivers brilliant, true color, FULL HD images (1920 x 1080p, 16:9 aspect ratio). Compatible with both rigid and flexible endoscopes, the IMAGE1 S™ modular platform adapts to individual customer needs and can be expanded as requirements change.

TH 110

IMAGE1 S™ HX One-Chip FULL HD Camera Head, 50/60 Hz, fixed focus, progressive scan, soakable, gas- and plasma-sterilizable, focal length \( f = 16 \) mm, 2 freely programmable camera head buttons, for use with IMAGE1 S™

TC 200EN*

IMAGE1 S CONNECT™, connect module, for use with up to 3 link modules, resolution 1920 x 1080 pixels, with integrated KARL STORZ-SCB and digital Image Processing Module, power supply 100-120 VAC/200-240 VAC, 50/60 Hz including:
- Mains Cord, length 300 cm
- DVI-D Connecting Cable, length 300 cm
- SCB Connecting Cable, length 100 cm
- USB Flash Drive, 32 GB
- USB Silicone Keyboard, with touchpad, US

TC 301

IMAGE1 S™ X-LINK, link module, for use with flexible video endoscopes and one-chip camera heads (up to FULL HD), power supply 100-120 VAC/200-240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT™ TC 200EN including:
- Mains Cord, length 300 cm
- Link Cable, length 20 cm

* Also available in the following languages: DE, ES, FR, IT, PT, RU
Light Source

Special Features:
- Light intensity on the same level as 300 Watt Xenon light sources
- 30,000 h no lamp exchange necessary
- Constant light output over the complete duration of life

TL 300  Cold Light Fountain Power LED 300,
with integrated KARL STORZ-SCB,
high-performance LED module and
one KARL STORZ light outlet

69495 NCS  Fiber Optic Light Cable,
diameter 4.8 mm, length 250 cm