Horse Reproduction Technology
Equine
In June of 2013, Reproduction Provisions became the exclusive distributor for Minitube International AG in the United States and Canada. Minitube International AG products are manufactured in their own state-of-the-art facilities in Tiefenbach, Germany, with support by a team of scientists, researchers and staff engaged in basic and applied research, product development, quality assurance, contract services and customer training courses.

Returns
No merchandise can be returned to Reproduction Provisions without customer requesting and receiving prior approval. All returns are subject to a 10% restocking charge. Return and exchange privileges are granted only upon request, and only on stock merchandise within 90 days of the date of the invoice.

Payment Terms
Cash, check, credit card (VISA, MC, DISC, AMEX), C.O.D. or special arrangement terms. If you wish to open an account with us, please request an account setup form. Upon completion and review of the form by our credit department we can then place you on an open account and bill accordingly. A late charge of 1.5% per month on the unpaid balance will be charged on all accounts 30 days past due. Orders placed by accounts 60 days past due will not be shipped out.

Receipt of Damaged Merchandise
Reproduction Provisions’ orders are filled with merchandise in good condition and carefully packaged in our shipping department. Unfortunately, there are occasions when products are damaged during shipment and arrive in an unacceptable condition. In all such instances, the carrier is responsible for the safe delivery of the merchandise and any claims for damages must be filed with the carrier.* Please inspect all shipments when they are received, and in case of loss or damage, notify the carrier at once and arrange to file a claim as soon as possible. Keep the container the merchandise was sent in, as it must be inspected by the carrier before settlement of any claim. ICC regulations state that all claims of shortage or breakage must be filed within 10 days after the date of shipment or they will not be honored.

*Palletized shipments via freight truck should be inspected upon arrival for damage or missing items. Freight shipment claims are filed by the shipper (Reproduction Provisions), and our offices should be contacted immediately upon discovery of loss or damage. Receivers’ signature on a complete bill of lading indicates shipment received in good order. Please inspect! Any external evidence of loss or damage must be noted on the freight bill and signed by the carrier’s agent. Failure to do this may cause the claim for loss or damage to be disallowed. Advise us promptly of any shortages in a shipment.

Distributor in the US and Canada:
Reproduction Provisions
Walworth, Wisconsin, USA
Tel: 877-487-4872 USA, 262-275-8980 Canada
reproductionprovisions@hotmail.com

Manufacturer:
Minitube International AG
Tiefenbach, Germany
Tel: +49 8709 9229 0
minitube@minitube.de
Innovative ideas, modern production techniques and a keen appreciation of product quality are the basic ingredients of our knowledge and your success.

Contents

Collection of stallion semen ........................................ 02 – 04
Microscopy and volume measurement ......................... 05
AndroVision™ ......................................................... 06
Photometry .................................................................. 07
Minitube stallion semen extenders ................................ 08
Processing of stallion semen ........................................... 09
Transport of chilled semen .............................................. 10
Insemination of mares .................................................. 11 - 14
Filling and sealing of straws ............................................ 15
EasyCoder printer for semen straws ............................... 16
Freezing of stallion semen ............................................. 17 – 19
Liquid nitrogen tanks and LN2 vapor shippers ............... 20
Equine embryo transfer ............................................... 21 - 25
COLLECTION OF STALLION SEMEN

Hannover artificial vagina

Equine artificial vagina Hannover with valve, inner liner (100 cm), 3 rubber rings, leather handle  REF. : 11220/0145

Accessories

Inner liner (1) for model Hannover, rubber, with roll-up ends, sterilizable long version, 100 cm  REF. : 11222/0002
short version, 70 cm  REF. : 11222/0003

Disposable inner liner (2) width approx. 21 cm, roll with approx. 200 m; „sensitive“: smooth and resistant material  REF. : 11222/0120

Warming bag (3) for collection glass, protects the semen from low temperature and UV radiation  REF. : 11225/0026

Rubber band (4) for model Hannover  REF. : 11222/0001

Small valve (5) for model Hannover  REF. : 11222/0005

Disposable inner liner, fits model Hannover/Colorado with built-in filter 10/package (not shown)  REF. : 11232/0420

Semen collection bottle 340 ml, sterilizable plastic  REF. : 635100

Coupling nut for 340 ml semen bottle  REF. : 631023

Leather handle for model Hannover  REF. : 11222/0008

Missouri artificial vagina

Rubber Bladder, Short Version, 40 cm (16”)  REF. : 11245/0005

Rubber Bladder, Normal Version, 55 cm (22”)  REF. : 11245/0001

Accessories

Disposable inner liner “AV-Liner”

Missouri Disposable AV Liner, with bottle and filter, 5/pk  REF. : 631003

With built-in filter and collection pouch, for model Missouri (no collection bottle needed), 10/package  REF. : 11245/0420

without filter, for model Missouri, 25/package (without illustration)  REF. : 11245/0450

without filter, fits models Hannover, Colorado and Missouri, 10/package (without illustration)  REF. : 11232/0440

AV cover - insulated  REF. : 632250

Various bottle adapters available, please inquire!
Colorado artificial vagina

Equine artificial vagina Colorado, complete with 2 inner latex liners (tubular and conical), 2 rubber bands, 2 packages 631020 All-in-one collection kits and protective cone

---

Accessories

Disposable inner liner, plastic, width 30 cm, roll with approx. 200 m; „sensitive“: smooth and resistant material

---

Warming bag

AV bottle protective cone

Rubber inner liner for Colorado artificial vagina, tapered end for connection to the bottle

---

Semen collection glove, disposable, non spermicidal, different sizes (M/L/XL), 100/box

---

www.reproductionprovisions.com
EBS Stallion Breeding Mount

The patented EBS Stallion Breeding Mount is durable, adjustable, and with a trained stallion it can be a one-person operation. The flexible design gives the breeder options for collecting the stallion with either an A.V. built into the mount itself or via side collection. It's a mount that was designed by breeders for breeders. The mount also includes a complete Colorado-style artificial equine vagina assembly with the liners and accessories in 14", 16" 18", 22" or 25" sizes. When used properly, this mount is a highly effective and very safe method of collecting a stallion.

The support post options for the EBS Mount are manufactured from schedule #80 steel. This heavy-duty assembly is strong enough to support anything from a pony to an aggressive draft horse. The thick steel, strong welds and powdercoated finish will offer you many years of continued use and abuse. The standard covering fabric on the mount body itself is a ballistic rip-stop material that won’t easily puncture or tear.

The interior frame of the mount body is welded steel diamond grill mounted on a welded steel framework.

The dense-cell foam padding between the frame and covering is designed not to crumble or collapse with age. Collect any size stallion with one mount. With both height and angle adjustments you can set this mount up to collect stallions large and small. With our new built-in crank-style jack option, height adjustments are a one-person operation. The three support pipe options (see below) also permit the installation of this mount in either a new or existing facility.

EBS Breeding Mount with 22" Colorado A.V.  REF. :  500501

Side Collection Breeding Mount  REF. :  500525

Please inquire for additional accessories!

Lubricant

Non spermicidal lubricant, water soluble

- Iso-osmotic and sperm friendly, supports the sperm cell viability
- Batches are tested for sperm compatibility
- Ideal viscosity to better coat gloves, AI equipment and instruments

One-N-Done™, 1 oz  REF. :  026661
X-CEED™, 5 oz  REF. :  023006
G.P. Lubricant, gallon  REF. :  022003
Phase contrast microscope CX 31

Technical features

- Infinity optic system: sharp images over the complete field
- Phase achromatic optics with universal condenser
- Binocular
- Heated original microscope stage with temperature control unit HT 200 with additional warming plate and two digital temperature displays
- Temperature freely selectable
- Ergonomic design
- Phase achromatic objectives
- 6 V/30 W halogen light

with objectives 10x, 20x, 40x  
REF. : 12004/0331

with phototube (trinocular), with objectives 10x, 20x, 40x  
REF. : 12004/0631

Phase contrast microscope MBL 2000

Functional microscope for semen analysis with phase achromatic objectives 10x, 40x, 100x. Heating system with temperature control unit HT 50 with digital temperature display and freely selectable temperature adjustment. Camera and monitor not included in REF: 12010/2000.

Binocular  
REF. : 12010/2000

With ocular video camera and monitor  
REF. : 12010/2100

Semen dyes

Spermac semen dye for morphological evaluation, 4 x 50 ml  
REF. : 15405/0000

Farelly stain for morphological evaluation, 3 x 250 ml  
REF. : 15405/0026

Eosin G solution for supravital staining, 50 ml  
REF. : 15405/0025

Nigrosin solution for supravital staining, 50 ml  
REF. : 15405/0029

Laboratory scale

Precision scale for the determination of the ejaculate volume, weighing range max. 2000 g, resolution 0.1 g, weighing pan 130 x 130 mm  
REF. : 14295/0444

www.reproductionprovisions.com
**Integrated sperm functionality analysis**

This highly efficient automated system for computerized semen analysis stands out for the integration of the classic CASA analysis with more advanced assays for sperm functionality. Concentration and motility as well as sperm integrity and viability can be assessed accurately and quickly with up to 1000 cells per field, making AndroVision® the perfect tool for the objective and complete semen evaluation. All images and data are stored for later review. AndroVision® can be seamlessly integrated with the IDEE laboratory processing software. The user interface is straightforward and easy to understand. An analysis report can be generated as a hard copy print or a digitized file. These features and more make AndroVision® the ideal choice for semen assessment in a research and production lab.

---

**AndroVision® software**

with PC and accessories

REF. : 12500/0000

**AndroVision® camera**

high speed colour camera

REF. : 12500/4200

---

**AndroVision® software modules**

**Morphology and morphometry:**

Interactive system for analysis of sperm morphology and morphometry. Identifies sperm of stained and unstained samples and measures length and width of the sperm head, head shape and midpiece asymmetry of each single sperm cell (acc. to Krüger). Results can be classified into a large range of morphologic abnormalities. The classification according to morphological criteria is a self-learning process.

Module Morphology and morphometry

REF. : 12500/1300

**Viability:**

Automated count of the percentage of membrane intact sperm, based on a double stain fluorescence assay.

Module Viability*

REF. : 12500/1400

**Acrosome integrity:**

Automated count of sperm with damaged acrosomes, based on a double stain fluorescence assay.

Module Acrosome integrity*

REF. : 12500/1600

* requires fluorescence microscope
Photometer SDM6

Your benefits

- Touch screen operated, large display
- Programs for the determination of sperm concentration of stallion, bull, boar, ram and buck semen
- Automatic calculation of extender volume and number of doses
- Display of semen concentration in 10⁹ sperm cells/ml
- Optional: integrated printer for printout of production data of ejaculate
- Serial and parallel interfaces for data transfer

Technical features

- Spectral range: 340-578 nm
- Filter: 546 nm
- Halogen lamp
- Use of 10 mm macro cuvettes
- Analysis time: 2 seconds/sample
- Power supply: 230 V/50 Hz or 110 V/60 Hz

Photometer SDM6 for determination of semen concentration and for dose calculation, with integrated printer

Photometer SDM6, without printer

Photometer SDM 1

The SDM 1 is a compact, highly accurate photometer developed for measuring sperm cell concentrations. It can be calibrated for equine, porcine, bovine, canine and small ruminant species. Cleaning is simple, maintenance is minimal. The semen concentration is displayed in million sperm cells/ml. Control cuvette (REF: 12300/0190) included.

Accessories

- Control cuvette set, 4 pieces
- Paper for printer
- Macro cuvette, 4 ml, 100/package
- NaCl solution, 0.9 %, 1 l
- Dispenser 0.5-5 ml for NaCl solution
- Pipette 10-100 μl, with digital display
- Pipette tip yellow, 1000/package
- Automatic diluter-dispenser for precise sample preparation and concentration measurement. Use of disposable syringes for semen sampling. Power supply: 110-220 V

Photometer SDM 1

Accessory

- Multispecies software for reprogramming to other species
- Microcuvette for SDM 1, 100/box
MINITUBE STALLION SEMEN EXTENDERS
CHILLED SEMEN PROCESSING AND CRYOPRESERVATION

EquiPlus
Balanced medium with specific purified caseinates for preservation of sperm activity up to 72 hours.

Powder for 100 ml, with antibiotics  REF.: 13570/0210
Powder for 100 ml, without antibiotics  REF.: 13570/0240
Liquid, 200 ml, with antibiotics  REF.: 13570/0253

AndroColl® Equine
Centrifugation with AndroColl® Equine improves the quality of equine ejaculates by separating the normal, motile sperm population from poor quality spermatozoa and bacteria.

250 ml  REF.: 13580/0005

CushionFluid
for gentle centrifugation of stallion spermatozoa. Assures a higher yield of sperm cells as compared to standard centrifugation.

100 ml  REF.: 13580/0001

Centrifugation medium
Powder for 1 l transparent EDTA glucose solution  REF.: 13565/0001

EquiPlus Freeze
Media for the cryopreservation of stallion semen

Your Benefits
- Ready to use and easy to handle
- Not necessary to add pure water
- Can be transported at ambient temperatures up to +25°C
- Available as 1-step (filling at ambient temperature) or 2-step type (filling at 5°C)

EquiPlus Freeze 1-step without egg yolk
One liquid component: Medium with glycerol. Addition of 2 ml freshly filtered egg yolk by the user  REF.: 13570/0420

EquiPlus Freeze 2-step without egg yolk
consists of two liquid fractions:
2. Component B: EquiPlus Freeze contains glycerol: the operator adds 4 ml of fresh egg yolk before using.  REF.: 13570/0520
PROCESSING OF STALLION SEMEN

**Water bath**

Electronic temperature control, stainless steel, with grid and lid  
Power supply: 115 V/60 Hz or 230 V/50 Hz

- **7 l**, inner dimensions: 240 x 210 x 140 mm (W x H x D)  
  REF. : 14078/0001

- **10 l**, inner dimensions: 350 x 210 x 140 mm (W x H x D)  
  REF. : 14079/0001

**Centrifuge**

Centrifuge with Swing Out Rotor. Dimensions: 275 x 325 x 470 mm. Complete with buckets for vials: 4 x 100 ml / 4 x 50 ml / 8 x 15 ml. Speed adjustable between 500 and 4000 rpm (10 rpm steps). Controller can store up to 10 different programs.

- **Centrifuge, 110V**  
  REF. : 14601/0001

**Centrifuge tubes**

- **15 ml, w/Cap, disposable**, 100/package  
  REF. : 076700

- **15 ml, w/Cap, individually wrapped, disposable**, 50/package  
  REF. : 076725

- **50 ml, w/Cap, sterile, disposable**, 50/package  
  REF. : 076800

- **50 ml, w/Cap, individually wrapped, disposable**, 50/package  
  REF. : 076802

- **50 ml, w/Cap, skirted, sterile, disposable**, 50/package  
  REF. : 076805

- **5 ml, semen vial, w/Cap, disposable**, 25/package  
  REF. : 071525

**Glass ware**

Measuring pipettes, graduated cylinders, beakers, dispensers, test tubes, Erlenmeyer flasks etc.

*Please ask for a detailed list of our lab glass ware!*

**Sterile bags**

With incorporated wire and write-on tag, 10/package

- **2 oz, write-on**  
  REF. : 486303

- **7 oz, plain**  
  REF. : 486308

- **4 oz, write-on**  
  REF. : 486300

- **18 oz, write-on**  
  REF. : 486319

**Disposable syringes**

All plastic, sterilized

- **10 ml**, 100/package  
  REF. : 19801/0010

- **20 ml**, 100/package  
  REF. : 19801/0020

- **30 ml**, 500/package  
  REF. : 19801/0063

- **50 ml**, 300/package  
  REF. : 19801/0060

www.reproductionprovisions.com
**EQUITAINER**

**Your benefits**

- A world-wide proven system for cooling, storage and transport of fresh stallion semen
- The warm semen is automatically and gently cooled down to the ideal storage temperature within 6 to 10 hours
- The desired temperature is reliably maintained for about 70 hours
- Very high level of protection against potential x-ray induced damage of the enclosed semen sample

**EQUITAINER cup style**

Complete with cup-style isothermalizer, sterilized plastic cup with lid, 2 ballast bags and 2 coolant cans

REF. : 631250

**EQUITAINER tube style**

Complete with tube-style isothermalizer, to fit two 50 ml tubes, 6 x 50 ml tubes and 2 coolant cans

REF. : 631255

**Accessories**

- **Coolant can (1)**
  REF. : 500585

- **Thermo bag (2)**
  REF. : 500586

- **Isothermalizer cup style (3) for 240 ml cup**
  REF. : 500583

- **Isothermalizer tube style (4)**
  for two 50 ml tubes
  REF. : 500582

- **Inner plastic cup (5)**, 240 ml, graduated, with lid
  REF. : 500587

- **50 ml tubes (6)**
  REF. : 500589

**VIP SHIPPER**

Impact VIP Shipper, includes the Impact Shipper™, plus three phenolic cooling blocks and two Thermal Shield™ specimen packs. The specimen packs may be loaded with syringes, centrifuge tubes, or similar vessels

REF. : 988675

**NEOPOR TRANSPORT BOX**

Minitube transport box, made of highly insulating Neopor, complete with two ice-packs, two syringes (20 ml) and outer shipping carton, holding optimal temperature for appr. 45 hours

REF. : 17229/0002
Universal pipettes:

Your benefits

- Suitable for liquid and frozen-thawed semen in straws
- Smooth round tip for gentle introduction
- Flexible shaft facilitates handling
- Precision tooled tip with inner cone for 0.5 ml straws to allow direct position of semen into the uterus and to ensure 100% semen delivery
- The reload system: if used with the A.I. stylet for 0.5 ml straws, the same pipette can be reloaded with consecutive straws in situ
- Finger handle with adapter to fit syringe and macrotube straw

Length: 57 cm
5/package  REF. : 17209/0005
1/package, sterilized  REF. : 17209/0001

Long pipette with very flexible shaft for deep intrauterine insemination.

Length: 65 cm
5/package  REF. : 17209/1165
1/package, sterilized  REF. : 17209/1265

Length: 75 cm
5/package  REF. : 17209/1175
1/package, sterilized  REF. : 17209/1275

Deep intrauterine insemination pipette with inner catheter

For deep intrauterine insemination with small volumes of liquid semen, if straws cannot be used. The pipette is provided with an inner catheter to reduce the volume of the channel where the semen has to pass through.

Length: 65 cm
5/package  REF. : 17207/1165
1/package, sterilized  REF. : 17207/1265

Length: 75 cm
5/package  REF. : 17207/1175
1/package, sterilized  REF. : 17207/1275
INSEMINATION OF MARES

Deep intrauterine kit

includes deep intrauterine universal pipette with inner catheter, 5 ml syringe, supersensitive glove, sterilized.

Length: 65 cm  REF. : 17207/2065
Length: 75 cm  REF. : 17207/2075

Stylet for insemination of frozen semen

With Universal Pipette plus stylet, semen in 0.5 ml straws is directly placed into the uterus, ensuring 100% semen delivery. The stylet is made of stainless steel and is provided with 2 knobs to pull out empty straws, thus the same pipette can be reloaded several times.

Stylet for pipettes

Flexible stylet for deep intrauterine or transcervical insemination with 0.5 ml straws and 2 knobs for pulling out empty straws.

Length: 57 cm  REF. : 17209/1057
Length: 65 cm  REF. : 17209/1065
Length: 75 cm  REF. : 17209/1075

Insemination pipettes for liquid semen

(without illustration)

Length: 60 cm, rounded tip, 25/bag, fits luer syringe  REF. : 17209/2000

With tubing, 1/bag, sterilized  REF. : 17209/2210

Length: 65 cm, big diameter, 25/bag, fits luer syringe  REF. : 19290/1105

Hygienic sheath

Disposable sheath to protect ET or AI pipette during uterine passage, length: 62.5 cm (70/roll)  REF. : 17209/5070
**Uterus culture swab**

consists of introduction pipette with pre-perforated cap for sampling without risk of contamination. Predetermined breaking point of the sample-protecting sheath. Includes two closing caps for transport of the swab to the lab. Swab may be inserted directly into AMIES transport medium to avoid dehydration of the sample. Individually packaged and gamma irradiated.

Swab with AMIES transport medium  REF. : 17214/2951

Swab without transport medium  REF. : 17214/2950

**Cytology brush**

for picking up cells of the uterus of mares to perform cytology smears for immediate evaluation.

REF. : 17214/2960

**Disposable speculum for mares**

made of cardboard, inside with reflecting aluminum coating, smooth front edge for gentle introduction, inner diameter: 3 cm, length: approx. 43 cm

REF. : 636000

**LED-light**, battery operated (up to 250 h), with clip for fixing. Length: 96 mm

REF. : 17210/0010

**Polansky speculum**  REF. : 17210/4200

**Cervical forceps** according to Götze

with lamp, 54 cm  REF. : 17212/0055

without lamp  REF. : 17212/0054

**Biopsy forceps**, 66 cm length (not shown)  REF. : 17214/5066
Thawing devices

MT 30/54
- Electronic temperature control
- Central, built-in thawing chamber with lift
- Temperature setting: +38°C, also available with 35°C, 37°C and 50°C
- LEDs for indicating the activation of heating cycle and temperature
- Accuracy: ±0.2°C
- Power supply: 12 V DC (car battery)

Digital thaw unit

Digital warm thaw unit, 12VDC
REF. : 023022
Digital warm thaw unit, 110 Volt
REF. : 023023
Digital warm thaw unit, 220 Volt
REF. : 023024

Tweezer

Straw Tweezers, stainless steel, notched for straws
5.5"
REF. : 706411
12"
REF. : 706412

MiniCutter

MiniCutter for Semen Straws
REF. : 17062/0010

Insemination gloves

Sensitive (1)
green, 5 finger, shoulder length, 100/box
REF. : 17080/0015

Super-sensitive (2)
transparent, 100/box
REF. : 17080/0050

Single packed,
sterile, 50/package
REF. : 17080/0250
FILLING & SEALING OF STRAWS

MPP Uno

Automatic filling and sealing machine for 0.25 and 0.5 ml straws

Your benefits

• Sealing and filling of one straw per cycle
• Capacity of the exchangable hopper: approx. 1300 straws 0.5 ml
• Compact device, low space requirement, integrated vacuum pump and pressure controller; ultrasound generator integrated in external casing, mounting at a distance of up to 2.5 m possible
• Best hygienic and safety conditions due to a closed filling and sealing area
• Also suitable for 0.25 ml straws (very easy exchange)

MPP Uno, complete  REF. : 13017/0000

Technical features

• Capacity: approx. 4235 straws/hour
• No wearing parts. Very fast and easy cleaning
• Machine dimensions: 460 x 320 x 410 mm (W x H x D) + ultrasound generator
• Power supply: 110 V/60 Hz or 230 V/50 Hz

Accessories

Exchangeable straw hopper  REF. : 13017/0005
Filling nozzle 0.5 ml  REF. : 13017/0017
Suction nozzle 0.5 ml  REF. : 13017/0027
Washer, 5000/bag  REF. : 13021/3001
Filling tubing, 100/bag  REF. : 13021/3800
Semen cone, 200 ml, 100/bag  REF. : 13018/0100

Semiautomatic filling and sealing System SFS 133

for 0.5 ml straws. The straws are filled and sealed 6 by 6. Safe and hygienic sealing system with beads. The air bubble is created automatically.
Output: approx. 2000/hour  REF. : 13133/0133

Vacuum pump with adjustable valve and manometer  REF. : 13133/0267
Loading block with rack and 10 magazines for 36 straws each  REF. : 13133/0005

Accessories

Sealing beads, glass (various colours)  REF. : 13400/0xxx
Sealing beads, metal  REF. : 13400/9900
EasyCoder

Printing of straws without ink

Your benefits

- Unmatched neat and clear printing on 0.5 and 0.25 ml straws
- Up to 3 lines with a total of about 200 characters, even on Ministraws
- Printing of barcode signs, logos and specific characters
- Immediately non-abrasive print
- Control via PC by a clear and user-friendly Minitube software
- Sequential numbers can be printed on straws
- Adjustable character fonts and graduations from micro to macro
- Freely eligible number of lines and of printing positions
- Clean and odourless working without ink and solvents
- Easy handling, little maintenance required
- Easy and quick conversion between different straw sizes

EasyCoder printer, complete

EasyCoder software upgrade

Accessories

Color ribbon for straw printer EasyCoder
black

Technical features

- Thermal transfer printer with automatic straw supply
- Output: 3600 straws per hour
- Windows based Minitube software with data base for storing names and numbers
- Data transfer by serial port or USB adapter (included)
- Individual composition of printing lines possible; different configurations can be stored in memory
- Dimensions (W x H x D): 690 x 370 x 310 mm (PC not included)
- Power supply: 110-230 V AC, 50/60 Hz

www.reproductionprovisions.com
IceCube

IceCube 14S: computer controlled freezer, with comfortable data input and automatic recording of the freezing curve.

Technical features

- Temperature range: +40 to -180°C
- Freezing rates: 0.01 to 60°C/min
- Heating rates: 0.01 to 15°C/min
- Display accuracy: 0.01°C
- Temperature measurement via 2 Pt-100 resistance thermometers
- Capacity: approx. 900 x 0.5 ml straws per freezing cycle

Software for freezing programming and control, unlimited storage of programs and processed files, color graphic display of all temperature curves, wide possibility of parameter settings.

Dimensions: 570 x 500 x 520 mm (W x H x D), weight: 29 kg

IceCube 14S with 12” touch screen monitor and connector kit to be connected to computer and LN₂ pressure container

REF.: 16821/2000

IceCube 14S without monitor, with connector kit to be connected to computer and LN₂ pressure container

REF.: 16821/1000

Accessories

- **Rack** for Icecube 14S (1), for 36 straws  
  REF.: 16821/5036

- **Loading Device**  
  REF.: 16821/5037

- **Handling rack** for Icecube 14S (2)  
  REF.: 16821/5030

- **Spacer** for IceCube (not shown)  
  REF.: 16821/5018

- **Liquid Nitrogen pressure container**  
  REF.: 16820/1900

- **Roller base for LN pressure container**  
  REF.: 16501/0204

Larger alternative:

- **IceCube 14M**  
  Capacity: approx. 2300 x 0.5 ml straws

- **IceCube 14M** without monitor  
  REF.: 16820/6000

- **IceCube 14M** with touch monitor  
  REF.: 16820/7000

Please ask for Embryo Freezing Equipment for the IceCube!
Freezing units

The freezing units are compact and easy to handle. They are made of a styrofoambox of high quality, an inner container out of stainless steel and a floating rack. The stainless steel container is filled with liquid nitrogen. The rack keeps the needed distance between 0.5 ml or 0.25 ml straws during the first down phase, while it floats on liquid nitrogen. After that, the straws get manually immersed into the nitrogen. The freezing units are an easy but robust and effective solution for standard freezing in nitrogen vapour.

Technical details

- The distance between straws and liquid nitrogen level can be adjusted
- Fits 0.5 ml and 0.25 ml straws
- Low nitrogen consumption
- With high quality styrofoam chest and stainless steel inner box with working tray
- Transportable

For 20 straws  REF.: 15043/0636

For 90 straws  REF.: 15043/0736

Accessories

Loading block for 90 straws floating rack (without illustration)  REF.: 15043/0738

Additional rack
for freezing unit for 20 straws  REF.: 5015043/0600
for freezing unit for 90 straws  REF.: 5015043/0900
**Goblets**

Plastic containers for the storage of straws, available in different sizes and colors:

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Color</th>
<th>REF.</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1 mm</td>
<td>white</td>
<td>16965/6071</td>
</tr>
<tr>
<td>10 mm</td>
<td>white</td>
<td>16912/0133</td>
</tr>
<tr>
<td>13 mm</td>
<td>white</td>
<td>16913/0133</td>
</tr>
<tr>
<td>13 mm</td>
<td>blue</td>
<td>16913/1133</td>
</tr>
<tr>
<td>13 mm</td>
<td>red</td>
<td>16913/3133</td>
</tr>
<tr>
<td>13 mm</td>
<td>pistachio</td>
<td>16913/4133</td>
</tr>
<tr>
<td>13 mm</td>
<td>yellow</td>
<td>16913/5133</td>
</tr>
<tr>
<td>35 mm</td>
<td>white</td>
<td>16935/0135</td>
</tr>
<tr>
<td>65 mm</td>
<td>white</td>
<td>16965/0133</td>
</tr>
</tbody>
</table>

**Canes**

- Cane, for 10 mm Goblets with shelf, 100/pk  
  REF. : 347510
- Cane, for 10 mm Goblet – no shelf, 100/pk  
  REF. : 347512
- Cane, for 7.1 mm Goblet – no shelf, 100/pk  
  REF. : 347513
- Cane, for 13 mm Goblet, 100/pk  
  REF. : 347550
- Cane, holds 1.2 ml – 2.0 ml Cryo-vials, 6 tabs, 100/pk  
  REF. : 347556

**Cane Tabs**

- Cane Tab, Blue, 100/pk  
  REF. : 347515
- Cane Tab, Green, 100/pk  
  REF. : 347516
- Cane Tab, Pink, 100/pk  
  REF. : 347517
- Cane Tab, Red, 100/pk  
  REF. : 347518
- Cane Tab, White, 100/pk  
  REF. : 347519
- Cane Tab, Orange, 100/pk  
  REF. : 347520
- Cane Tab, Yellow, 100/pk  
  REF. : 347521
- Cane Tab, Purple, 100/pk  
  REF. : 347522

**0.25 ml and 0.5 ml semen straws**

In many different colors.

**Macrotubes**

- **Volume: 2.5 ml**, length: 140 mm  
  REF. : 13441/0133
- **Volume: 4 ml**, length: 240 mm  
  REF. : 13441/0240
- **Volume: 5 ml**, length: 280 mm  
  REF. : 13441/0280

Sealing balls for macrotubes: Metal or glass, in many different colors available.

**Custom printed straw information:**

Pre-printed straws with your information on 0.5 ml and 0.25 ml.

Printing options are as follows:

- 0.5 ml straws – 3 lines of text, up to 65 characters each line
- 0.25 ml straws – 1 line of text, up to 65 characters

Available straw colors: red, green, blue, grey, yellow, orange, pistachio and clear

www.reproductionprovisions.com
<table>
<thead>
<tr>
<th>Tank ID</th>
<th>Miln. XC/20</th>
<th>MVE SC20/20</th>
<th>MVE XC34/18</th>
<th>MVE 47/11-6</th>
<th>MVE 47/11-10</th>
<th>MVE SC 4/2V</th>
<th>MVE SC 4/3V</th>
</tr>
</thead>
<tbody>
<tr>
<td>LN2 Capacity (Liters)</td>
<td>20.5</td>
<td>20.5</td>
<td>34</td>
<td>47</td>
<td>47</td>
<td>3.6</td>
<td>4.3</td>
</tr>
<tr>
<td>Static Evaporation Rate (L/day)</td>
<td>0.09</td>
<td>0.09</td>
<td>0.18</td>
<td>0.39</td>
<td>0.39</td>
<td>0.26</td>
<td>0.2</td>
</tr>
<tr>
<td>Norm. Working Duration (days)</td>
<td>140</td>
<td>142</td>
<td>123</td>
<td>76</td>
<td>76</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>Neck Opening: inches</td>
<td>2.18</td>
<td>2</td>
<td>3.5</td>
<td>5</td>
<td>5</td>
<td>2.75</td>
<td>2</td>
</tr>
<tr>
<td>mm</td>
<td>55.4</td>
<td>51</td>
<td>89</td>
<td>127</td>
<td>127</td>
<td>70</td>
<td>51</td>
</tr>
<tr>
<td>Overall Height: inches</td>
<td>25.7</td>
<td>25.7</td>
<td>26.6</td>
<td>26.5</td>
<td>26.5</td>
<td>18.4</td>
<td>19.4</td>
</tr>
<tr>
<td>mm</td>
<td>652</td>
<td>652</td>
<td>675</td>
<td>673</td>
<td>673</td>
<td>468</td>
<td>492</td>
</tr>
<tr>
<td>Outside Diameter: inches</td>
<td>14.5</td>
<td>14.5</td>
<td>18.2</td>
<td>20</td>
<td>20</td>
<td>8.7</td>
<td>8.7</td>
</tr>
<tr>
<td>mm</td>
<td>368</td>
<td>368</td>
<td>464</td>
<td>508</td>
<td>508</td>
<td>222</td>
<td>222</td>
</tr>
<tr>
<td>Weight Empty: Lbs(Kg)</td>
<td>26 (11.8)</td>
<td>26 (11.8)</td>
<td>34 (15.4)</td>
<td>36 (16.4)</td>
<td>36 (16.4)</td>
<td>11 (5)</td>
<td>13 (5.9)</td>
</tr>
<tr>
<td>Weight Full: Lbs(Kg)</td>
<td>62.5 (28.3)</td>
<td>62.5 (28.3)</td>
<td>96 (43.5)</td>
<td>120.4 (54.6)</td>
<td>120.4 (54.6)</td>
<td>18 (8.1)</td>
<td>20.6 (9.3)</td>
</tr>
<tr>
<td>Number of Canisters</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>10</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Canister Height: inches</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>mm</td>
<td>279</td>
<td>279</td>
<td>279</td>
<td>279</td>
<td>279</td>
<td>279</td>
<td>279</td>
</tr>
<tr>
<td>Canist. Inner Diam: inches</td>
<td>1.65</td>
<td>1.5</td>
<td>2.81</td>
<td>4</td>
<td>2.81</td>
<td>2.62</td>
<td>1.81</td>
</tr>
<tr>
<td>mm</td>
<td>41.9</td>
<td>38</td>
<td>71</td>
<td>102</td>
<td>71</td>
<td>67</td>
<td>46</td>
</tr>
<tr>
<td>Capac., 1/2cc straws (10/cane)</td>
<td>780</td>
<td>540</td>
<td>2,100</td>
<td>4,500</td>
<td>3,500</td>
<td>280</td>
<td>120</td>
</tr>
<tr>
<td>Cap., 1/2cc straws (1 level bulk)</td>
<td>1,122</td>
<td>780</td>
<td>3,000</td>
<td>6,216</td>
<td>5,000</td>
<td>440</td>
<td>210</td>
</tr>
<tr>
<td>Cap., 1.2 &amp; 2ml vials (5/cane)</td>
<td>210</td>
<td>150</td>
<td>630</td>
<td>1,320</td>
<td>1,050</td>
<td>95</td>
<td>40</td>
</tr>
</tbody>
</table>

Normal working duration is adversely affected by frequent opening of the tank.
The duration is based on leaving the tank contents alone and leaving the tank static/undisturbed.
**Embryo flushing catheters for mares**

- **Made of silicone**, CH 28, length approx. 90 cm, autoclavable, 100 ml balloon, sterilized  
  **REF.**: 19009/0027
- **Made of silicone**, CH 32, length approx. 90 cm, autoclavable, 100 ml balloon, sterilized  
  **REF.**: 19009/0032
- **Made of silicone**, CH 36, length approx. 90 cm, autoclavable, 100 ml balloon, sterilized  
  **REF.**: 19009/0036

**Stylet**

- **Stylet** for equine catheter  
  **REF.**: 132437

**Flushing tubing**

Disposable Y-junction tubing with clamps, to be used in combination with any catheter and inline filter, sterilized (gamma irradiated), 1/bag, tubing made of very smooth and flexible material, end for filter connection without extra adapter

- **High flow Y-junction tubing (1)**  
  **REF.**: 19009/0040

- **Standard Y-junction tubing Luer end (2)**  
  **REF.**: 19011/0100

- **Standard Y-junction tubing Foley end (3)**  
  **REF.**: 19011/0200

- **Luer adapter** for CH 28-38 catheters and for foley catheters  
  **REF.**: 19009/1238

**EmSafe filter**

**Your benefits**

- All-in-one filter and search dish
- Angled filter mesh, assuring smooth flow-through
- Filter mesh cannot get dry as it remains in contact with fluid
- Secure fixation of the lid during collection and easy to open after collection
- Air vent of the lid secured by filter
- Integrated search dish facilitates evaluation of the embryo in the EmSafe
- Cup holds a minimum of 60 ml of fluid level
- Transparent cup allows to find bigger embryos without microscope
- Excess fluid is controlled and removed through outlet tubing with attached thumb clamp

- **EmSafe filter** for embryo recovery with integrated petri dish with grid, mesh size 65 μ, sterilized  
  **REF.**: 19010/6000
Media for flushing and holding

EquiFlush
Ready for use, contains buffers, BSA or PVA and antibiotic

With BSA, 2 liters  REF. : 19982/6202
With PVA, 2 liters  REF. : 19982/6212

EquiHold
Applicable for
- holding embryos at room temperature in ambient conditions
- transporting embryos
- washing and rinsing embryos
- loading embryos for transfer to recipient animal

Contains buffers, glucose, pyruvate, BSA, amino acids, growth factors and antibiotic

3 x 5 ml vials  REF. : 19982/6250

Vitrification

Equine VIT-Kit
Vitrification is a proven method for cryopreservation of Equine embryos. The VIT-Kit for equine embryos contains everything needed for vitrification of three equine embryos: Equilibration Medium (3 x VS1, 3 x VS2, 3 x VS3), 3 x Diluent, 1 x Syringe 1 ml, 3 x Pipette tip, 4 x 5-well dish, 10 x 0.25 ml sterile straws, 10 x 0.5 ml sterile straws, 3 x IDSticks, 1 x 10 mm goblet cane, 3 x 10 mm goblets

REF. : 19982/6251

Handling of embryos

Micropipettor, for handling of embryos. Easy and precise pipetting by handling wheel, for all sizes of capillary tubes up to 1 ml

Type A  REF. : 19022/0000
Type B  REF. : 19022/0002

Glass capillary tube, 250/package
10 μl  REF. : 19022/0010
20 μl  REF. : 19022/0020
50 μl  REF. : 19022/0050

Steripette for embryo handling, 55 mm length, sterilized, 50/package  REF. : 19025/0050

Disposable syringe 1 ml luer end, sterilized  REF. : 19025/0000

Embryo culture dish with lid, sterilized, 5 wells, rounded well edges, shallow wells for easy handling, 4/bag (not shown)  REF. : 19021/0001
Stereo microscope

Magnification 10x to 70x, eye-pieces 10x, LED light source, light-/dark-field mirror, transmitted light illumination

REF. : 12014/0000

Accessories

Heating stage for stereo microscope, 180 x 180 mm

REF. : 12055/0003

Control unit HT 50, for heating stage, adjustable temperature, digital display

REF. : 12055/0050

Other heating stages available, please inquire!

Embryo transfer with 0.5 ml straws

Sheath for equine embryo transfer, front end opening, individually packaged, 10/package, sterilized

REF. : 19290/1050

Sheath for equine embryo transfer, side openings, individually packaged, 10/package, sterilized

REF. : 19290/1060

Finger support and ring, for use with sheath for equine ET and AI stylet 17209/1065

REF. : 19290/1048

Equine embryo transfer pipette, metal tip with side opening, flexible, 1/package, disposable, sterilized, use with AI stylet 17209/1065

REF. : 19290/1065

Inner catheter for equine embryo transfer pipette, to flush embryo into the uterus with approx. 2 ml volume, no need to load it into a straw (not shown)

REF. : 19290/1066

Stainless steel ET instrument

Sterilisable transfer instrument for 0.5 ml straws, 1 side outlet, length 55 cm, screw-off tip

REF. : 19290/0000
**EQUINE EMBRYO TRANSFER**

---

**Embryo transfer with 0.25 ml straws**

- Deep intrauterine ET/AI set with finger support, stylet, fixation rings [Ref.: 17015/0100]
- Sheath for equine ET/AI, 0.25 ml straws, side opening, for usage with stylet 17015/0100, sterile, individually packaged, 10/bag [Ref.: 17015/0660]
- Blue E.T. Sheath with side openings, 5/package [Ref.: 704330]
- Blue E.T. Sheath with side openings, individually wrapped, 5/package [Ref.: 704331]

---

**Embryo transfer > day 8**

- ET/AI Pipette, rounded ends, use with syringe, sterilized, 1/bag [Ref.: 19290/1101]

---

**Straws**

- 0.5 ml straw, clear, gamma irradiated
  - with ID rod seal, 10/package [Ref.: 19043/00XX]
  - without seal, 10/package [Ref.: 19043/1010]
  - length 90 mm, 10/package [Ref.: 19044/9110]

- 0.25 ml straw, clear, gamma irradiated
  - with ID rod seal in many bright colors, 10/package [Ref.: 19040/00XX]
  - without seal, 10/package [Ref.: 19042/0010]

---

**Hygienic sheath**

- Disposable sheath to protect ET or AI pipette during uterine passage, length: 62.5 cm (70/roll) [Ref.: 17209/5070]

---

You are interested in freezing of embryos, OPU, micro-manipulation and ICSI? Please ask our specialists!
## MISCELLANEOUS SUPPLIES

### Disposable straw guns, sterilized

<table>
<thead>
<tr>
<th>Volume</th>
<th>Length</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 ml</td>
<td>25 inches</td>
<td>363750</td>
</tr>
<tr>
<td>0.5 ml</td>
<td>21 inches</td>
<td>363650</td>
</tr>
<tr>
<td>0.25 ml</td>
<td>21 inches</td>
<td>363265</td>
</tr>
</tbody>
</table>

### Infusins™ Tubes with adapter

<table>
<thead>
<tr>
<th>Length</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>18&quot;</td>
<td>Individually wrapped, sterilized, 25/pack</td>
<td>386101</td>
</tr>
<tr>
<td>18&quot;</td>
<td>Bulk, 25/pack</td>
<td>386125</td>
</tr>
<tr>
<td>21&quot;</td>
<td>Individually wrapped, sterilized, 25/pack</td>
<td>386201</td>
</tr>
<tr>
<td>21&quot;</td>
<td>Bulk, 25/pack</td>
<td>386225</td>
</tr>
<tr>
<td>22&quot;</td>
<td>Individually wrapped, sterilized, 25/pack</td>
<td>386315</td>
</tr>
<tr>
<td>22&quot;</td>
<td>Bulk, 25/pack</td>
<td>386310</td>
</tr>
<tr>
<td>25&quot;</td>
<td>Individually wrapped, sterilized, 25/pack</td>
<td>386415</td>
</tr>
<tr>
<td>25&quot;</td>
<td>Bulk, 25/pack</td>
<td>386410</td>
</tr>
<tr>
<td>30&quot;</td>
<td>Individually wrapped, sterilized, 25/pack</td>
<td>386715</td>
</tr>
<tr>
<td>30&quot;</td>
<td>Bulk, 25/pack</td>
<td>386710</td>
</tr>
</tbody>
</table>

### Microscope slides

<table>
<thead>
<tr>
<th>Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plain</td>
<td>72/box</td>
</tr>
<tr>
<td>Caffeine</td>
<td>72/box</td>
</tr>
</tbody>
</table>

### Microscope slides coverslips

<table>
<thead>
<tr>
<th>Size</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 mm</td>
<td>200/box</td>
</tr>
<tr>
<td>22 mm</td>
<td>200/box</td>
</tr>
</tbody>
</table>

### Lab cleaners

<table>
<thead>
<tr>
<th>Type</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alconox detergent</td>
<td>125010</td>
</tr>
<tr>
<td>Liquinox detergent</td>
<td>125020</td>
</tr>
</tbody>
</table>

### Cohesive flexible bandages, 4” x 5 feet

<table>
<thead>
<tr>
<th>Color</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>996900</td>
</tr>
<tr>
<td>Yellow</td>
<td>996904</td>
</tr>
<tr>
<td>Neon pink</td>
<td>996906</td>
</tr>
<tr>
<td>Blue</td>
<td>996908</td>
</tr>
<tr>
<td>White</td>
<td>996910</td>
</tr>
<tr>
<td>Neon green</td>
<td>996912</td>
</tr>
<tr>
<td>Natural</td>
<td>996914</td>
</tr>
<tr>
<td>Cotton roll, 1lb</td>
<td>636030</td>
</tr>
</tbody>
</table>