



Animal Reproduction Technology

Bovine



MINITUBE INTERNATIONAL

We need detailed knowledge of reproductive physiology in order to ensure that you are successful in the use of artificial insemination. Veterinarians and agro-scientists specialised in this field therefore are responsible at Minitube for product development and for consulting with our clients. The technical demands of semen processing and preservation also require knowledge and expertise in other fields, such as electronics, sensorics, mechanics, chemistry, cryobiology and many others. At Minitube, these demands are met by specially trained engineers and scientists.

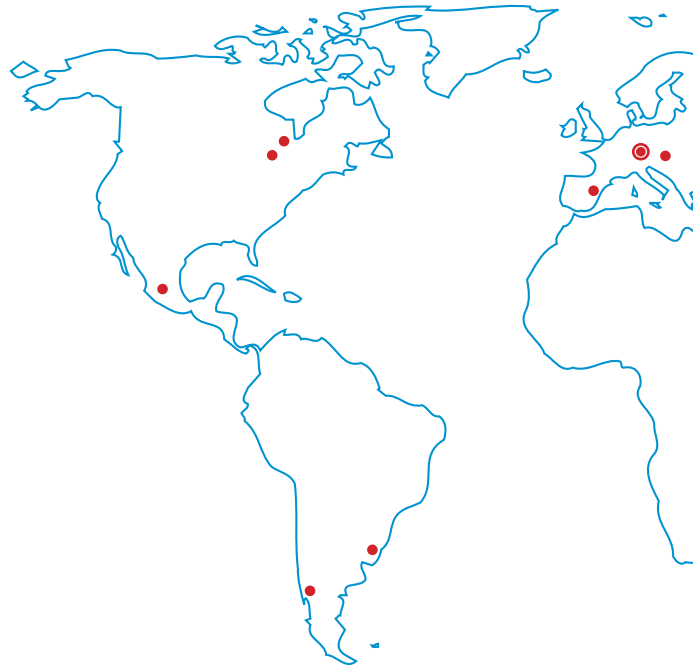
For product development, our teams of veterinarians and engineers cooperate closely. Together, they offer all the knowledge and experience necessary to guarantee the best possible results.

Minitube offers you specialised training programs, courses and technology transfer. In close cooperation with renowned research institutions we conduct fundamental research concerning assisted reproduction technologies as well as applied research that leads to improved techniques in production, evaluation and conservation of semen and embryos.

Originating in Tiefenbach, Bavaria, Minitube has established its competence over many years in more than 100 different countries all over the world. With several companies, highly-trained local representatives, and multilingual professionals, we keep in contact with the international AI industry. Innovative ideas, modern production techniques and a keen appreciation of product quality are the basic ingredients of our knowledge and your success.

We thank you for your interest and your confidence placed in us.

Dr. Christian Simmet
CEO



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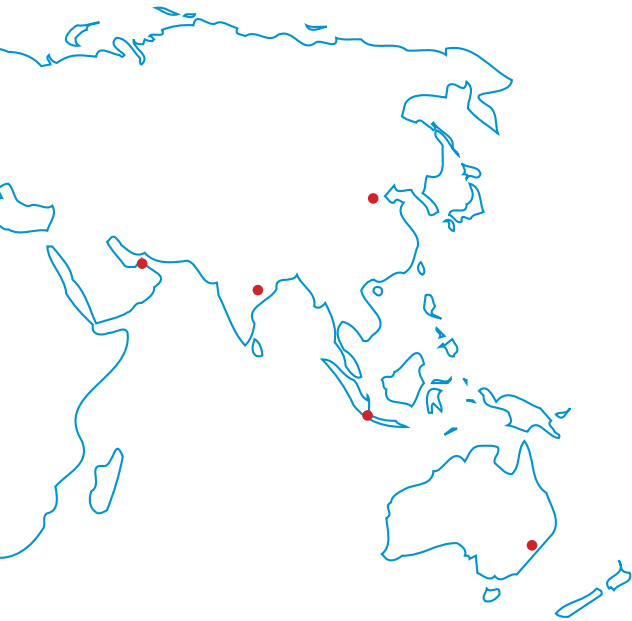
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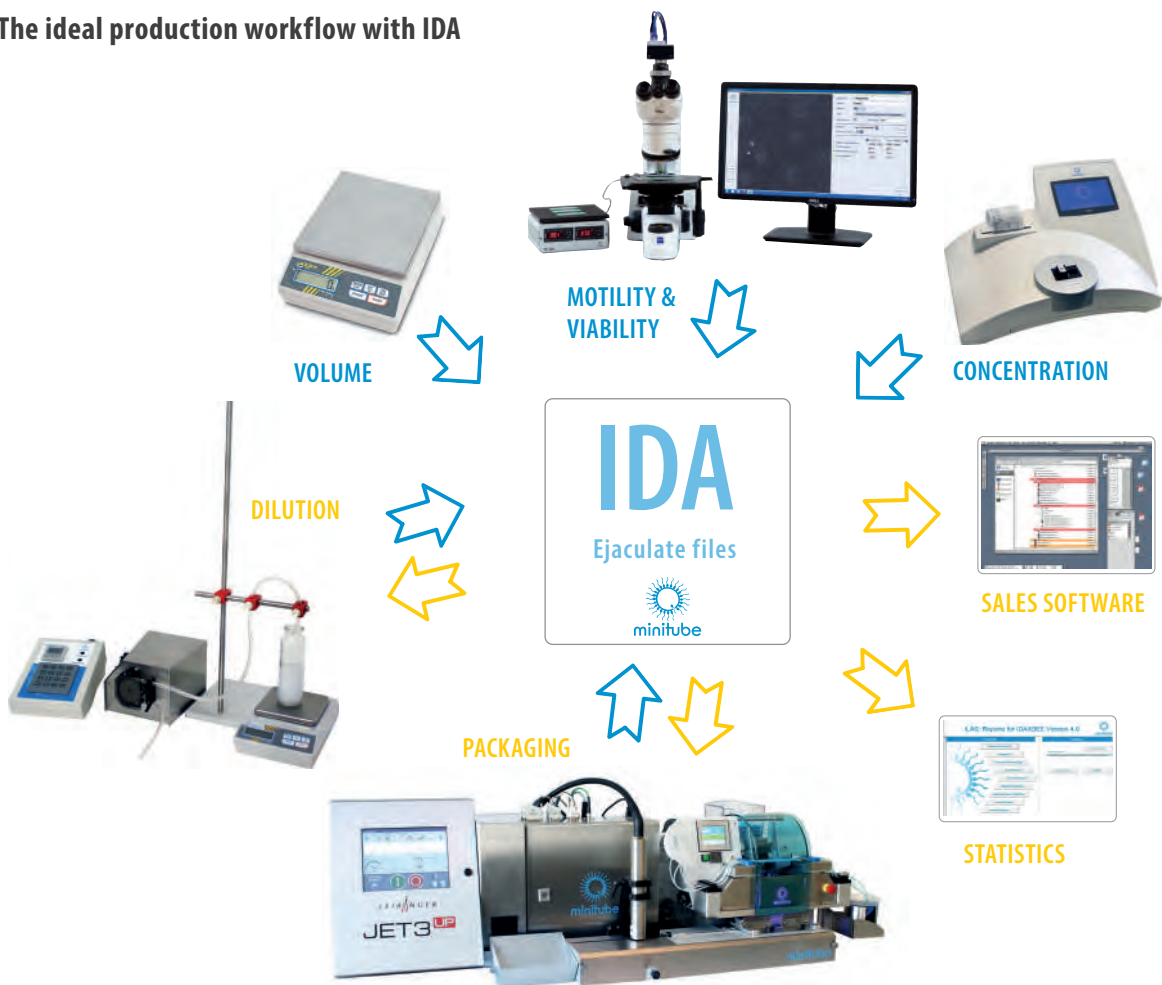
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Laboratory Management Software

The ideal production workflow with IDA



SOFTWARE FOR THE BULL SEMEN LABORATORY

IDA

The IDA laboratory software integrates all ejaculate data and links all processes from semen collection to production statistics.

IDA is a flexible, multitalented and modular computer program, based on an Access database. It automates and links ejaculate analysis including record keeping of thawing controls as well as extender dispensing and semen packaging in straws. The identification of each ejaculate can be entered manually, by barcode label or through a transponder. The ejaculate data file guarantees **quick and precise ejaculate data management**.

The connected lab equipment like scale, photometer or AndroVision® transfers analysis data quickly and securely to the lab computer. Automatic calculation of extender quantities, automatic semen dilution by means of the Smart Dispenser and the data transfer to the filling machine greatly **rationalise laboratory work**. Production data are provided in real time for administration and sales. Due to the Access database, the connection is carried out comfortably. A special menu item provides evaluation and administration of bull and ejaculate data.

IDA is available in multiple languages.

IDA

REF. : 18500/0000

Your benefits

- Efficiency, traceability and high level of security for your lab
- Processes are standardised and optimised, every step is documented and verifiable
- Automatic integration of ejaculate parameters through interfaced hardware
- Automatic data transmission to and from the straw printing and filling system
- Statistical analysis of all relevant production data
- IDA can easily be connected with other software applications
- IDA is a very user friendly software helping to save time and labour

Electronic bull identification with iMale

iMale is available as an independent system or in addition to IDA. The combination of the **iMale RFID reader** and the wireless **iMale label printer** allows the reading of animal ear tags and the direct printing of barcode labels. In addition to the tag number, further animal information like the donor name or a breed code can be printed on the label by loading a table with information on each semen donor to the device. Also a logo and the collector ID can be added to the label.

All HDX and FDX-B transponder ear tags can be read. The iMale RFID reader has a reading distance of 30 cm which adds up to the device length of 65 cm. iMale RFID reader comes with built-in quick-charger and external power supply. The maximum distance for transferring the data wireless from the iMale reader to the label printer is about 10 meters. Once the ear tags are read, barcode labels are immediately printed with the wireless iMale label printer.

iMale RFID reader

REF. : 18001/0000

iMale label printer

REF. : 18001/0200



Reading of barcode label with bull ID in the lab





Semen Collection

Electro ejaculator

Electro ejaculator set, consisting of heavy-duty carrying case, control unit, battery and transformer/charger.

- Digital display and adjustment of the actual value in 0.5 volt steps
- Fully portable with remote control
- Manual adjustable pulse/pause ratio
- Power output with 4 different types of curves enabling balanced setting according to the animal's size and sensitivity
- Power supply: 115 V/60 Hz or 230 V/50 Hz

Semen collection is **made easier**, especially from older bulls that may be difficult to stimulate.

Electro ejaculator - basic unit with case [REF. : 11900/0000](#)

Accessories

Probe 2.5" [REF. : 11900/0025](#)

Probe 2" [REF. : 11900/0022](#)

Semen collection funnel and holder [REF. : 11900/0250](#)



BULL SEMEN COLLECTION

Bovine collection dummy



Product features

- Body made of rigid, zinc-coated steel
- High quality padding
- Cover made of reinforced PVC material
- Inside seat for the collector

Your benefits

- Hydraulic height adjustment for bulls of different sizes
- Comfortable semen collection for the bull
- Forward and backward movements to stimulate the bull
- Separated, smooth hindquarters reduce risk of injury to bull's penis
- Optimal hygiene when used with disposable sanitary covers

Bovine collection dummy, mobile [REF. : 11000/1000](#)

Bovine collection dummy, stationary [REF. : 11000/0500](#)

Accessories

Disposable sanitary cover, 100/package [REF. : 11000/0200](#)

Plastic cover for dummy cow, with leather belt [REF. : 11000/0100](#)



BULL SEMEN COLLECTION

Bovine artificial vagina

Minitube offers bovine artificial vaginas in **4 different lengths** to suit all kinds and sizes of bulls.

Casing with valve

20 cm	REF. : 11021/0020
30 cm	REF. : 11021/0033
35 cm	REF. : 11021/0035
41 cm	REF. : 11021/0041

Inner liner

smooth, 650 mm length	REF. : 11022/0002
rough, 650 mm length	REF. : 11022/0003
rough, 480 mm length	REF. : 11022/0005
disposable, roll 200 m	REF. : 11022/0010

(1) with integrated collection vial (15 ml) and lid, disposable REF. : [11022/0011](#)

Director cone, latex REF. : [11024/0000](#)

(2) **Director cone**, silicone REF. : [11024/0050](#)

Collection vial, plastic, graduated, with lid, 15 ml REF. : [11023/0018](#)

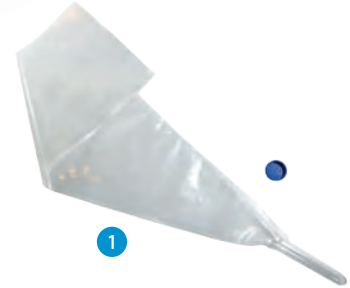
(3) **Warming bag**, neoprene, blue, 58 cm REF. : [11025/0058](#)

(4) **Warming bag**, green
18 cm REF. : [11025/0018](#)

35 cm REF. : [11025/0035](#)

45 cm REF. : [11025/0045](#)

Rubber ring REF. : [11022/0001](#)



Accessories

(5) **Greasing stick** REF. : [11905/0050](#)

(6) **ReproJelly**, non spermicidal lubricant, 3 l REF. : [11907/3000](#)

(7) **Thermometer**,
up to +100°C, graduation 0.1°C, red filling REF. : [11027/0100](#)

Collection vial, glass, graduated, 15 ml REF. : [11023/0015](#)

Rubber plug for 15 ml vial REF. : [11023/1590](#)

(8) **Tulip shape collection glass**, 8 ml REF. : [11023/0016](#)



BULL SEMEN COLLECTION

Sterivar

Low pressure steriliser, specially designed for artificial vaginas and accessories

Made of stainless steel, double wall with insulation. With pressure safety valve, timer, water drain, protection against overheating and insert for artificial vaginas for bulls.

Technical features

- Capacity: 15 artificial vaginas
- Temperature range: up to +100°C
- Pressure: max. 0.02 bar
- Inside dimensions: 750 x 400 mm
- Power supply: 115 V/60 Hz or 230 V/50 Hz
- Power consumption: 3500 W

Sterivar 230 V

REF. : [11050/0015](#)

Sterivar 115 V

REF. : [11050/0014](#)

Accessories

Roller base for Sterivar

REF. : [11051/0000](#)

Sterivar insert for 15 latex cones

REF. : [11051/1015](#)



Warming cabinet

Product features

- Suitable for artificial vaginas and accessories
- Casing and interior made of stainless steel
- Volume: 449 l
- 2 insert racks
- Dimensions inside: 104 x 72 x 60 cm (W x H x D)
- Dimension outside: 122 x 124 x 78 cm (W x H x D)
- Forced air ventilation

Technical features

- Multifunctional PID microprocessor controller
- 2 Pt-100 sensors with two way control
- Digital timer (adjustable from 1 minute to 99 days)
- Temperature range: +10°C above ambient up to +300°C
- Power supply: 400 V (± 10%) / 50-60 Hz
- Power consumption: approx. 5800 W (in heating function)

Warming cabinet

REF. : [14135/0400](#)

We offer many different models and sizes of warming cabinets, also pass-through models.



Semen Evaluation

AndroVision®

This highly precise automated system for computerised semen analysis stands out for the integration of the classic CASA analysis with more **advanced assays for sperm functionality**.

Concentration and motility, acrosome integrity, viability, mitochondrial activity and DNA integrity can be assessed fast and accurately with up to 1000 cells per field, making AndroVision® the perfect tool for the **objective and complete semen evaluation**.

Its features make AndroVision® the ideal choice for semen assessment in a research and production lab. AndroVision® is intuitive and easy to use: **only 3 clicks from start to result**.

AndroVision® software

with PC and accessories

REF. : 12500/0000

AndroVision® camera

high speed color camera

REF. : 12500/4400

Optional hardware configurations

(1) AndroVision® CASA system

portable, with laptop and accessories

REF. : 12500/0010

(2) AndroVision® CASA system

with touchscreen and barcode scanner

REF. : 12500/0001



1



2

ANDROVISION® – MORE THAN CASA

AndroVision® software modules

Morphology and Morphometry

Interactive system for analysis of sperm morphology and morphometry. Identifies sperm in stained as well as unstained samples and measures length and width of the sperm head, head shape and midpiece asymmetry of each single sperm cell (acc. to Kruger). Results can be classified into a large range of morphologic abnormalities.

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 percentage of sperm with damaged acrosome, based on a double stain fluorescence assay.

Module Acrosome Integrity* [REF. : 12500/1600](#)

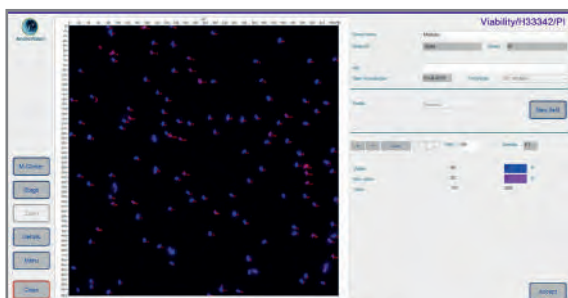
Accessories

ScanStage: The automated microscope stage has an integrated heating system that can be used with a variety of different microscopes. Approach of the points of analysis within the counting chamber is automated and identical always with the ScanStage, ensuring that variability of measurements is reduced to a minimal level.

ScanStage with heating system [REF. : 12048/0000](#)

Controller HT 200 S [REF. : 12055/0203](#)

Warming plate, 245 x 200 mm [REF. : 12055/0041](#)



Mitochondrial Activity

Automated count of percentage of sperm with active mitochondria, based on a double stain fluorescence assay.

Module Mitochondrial Activity* [REF. : 12500/1700](#)

DNA Integrity

Automated reporting of the percentage of sperm with defective DNA based on the halo-technique combined with fluorescent staining.

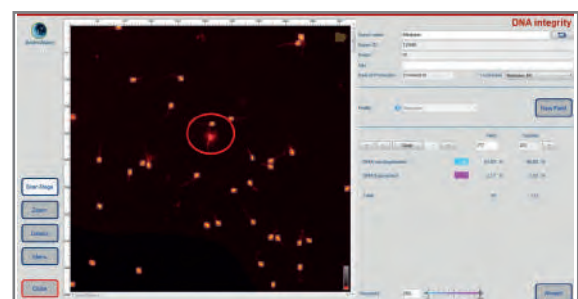
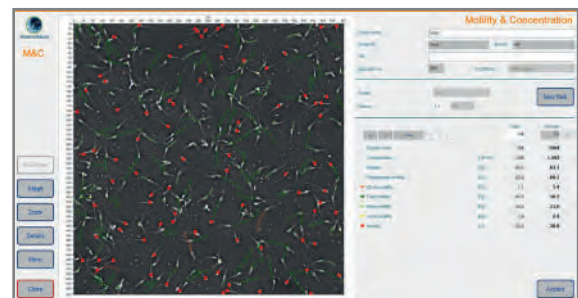
Module DNA Integrity* [REF. : 12500/1800](#)

Further available modules:

Dose Calculation - [Ref.: 12500/1100](#)

Quality Control - [Ref.: 12500/1200](#)

Lab Software Link - [Ref.: 12500/1910](#)



* requires fluorescence microscope

MICROSCOPY

Phase contrast microscope CX 43

- Phase achromat optics with universal condenser
- Heated microscope stage with temperature control unit HT 200 with additional warming plate and two digital temperature displays
- Temperature adjustable
- Ergonomic design
- 6 V/30 W halogen light

Phase contrast microscope CX 43

with phototube (trinocular), objectives 20x, 40x [REF. : 12005/0041](#)



Phase contrast microscope MBL

Functional microscope for semen analysis with objectives 10x, 40x, 100x, heating system with temperature control unit HT 50 with digital temperature display for individual temperature adjustment

Binocular [REF. : 12010/2000](#)

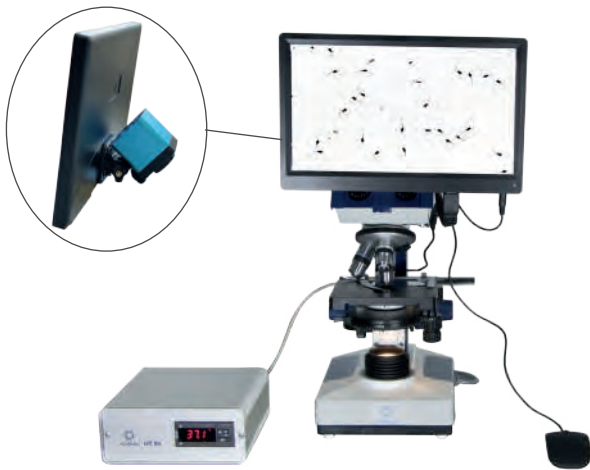
Binocular, with ocular color camera and monitor [REF. : 12010/2100](#)

Trinocular [REF. : 12010/2103](#)

Trinocular, with color camera and monitor [REF. : 12010/2101](#)

Digital color camera for microscopes,
with integrated image display software [REF. : 12110/1600](#)

Monitor 10" with HDMI input,
for direct mounting on microscope [REF. : 12110/1610](#)



Wide range of microscopes and accessories available!

Semen dyes

Spermac for differential staining, also for glycerol containing samples, consisting of 4 components, 50 ml each [REF. : 15405/0000](#)

Farely stain for differential staining, consisting of 3 components, 250 ml each [REF. : 15405/0026](#)

Eosin G solution for one-step viability stain, 50 ml [REF. : 15405/0025](#)

Nigrosin solution for combination with Eosin in viability stain, provides dark background for better visualisation of sperm cells, 50 ml [REF. : 15405/0029](#)



PHOTOMETER SDM6

Photometer SDM 6

Your benefits

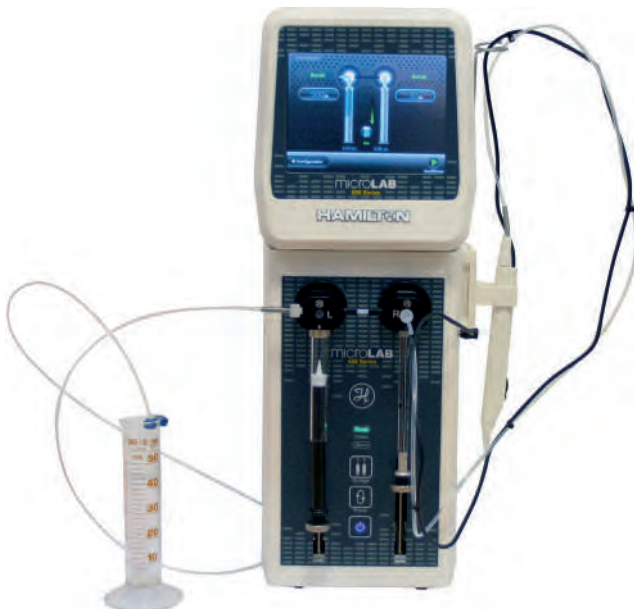
- Determination of sperm concentration and dose calculation of bull, boar, stallion, ram and buck semen
- Automatic calculation of extender volume and number of doses
- Display of semen concentration in 10^9 sperm cells/ml
- Large touch screen, easy handling
- Serial and parallel interfaces for data transfer
- Optional: integrated printer for printout of production data per ejaculate

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 SDM 6, with integrated printer [REF. : 12300/0006](#)

Photometer SDM 6, without printer [REF. : 12300/0008](#)



Accessories

Automatic diluter-dispenser for precise sample preparation. Use of disposable capillaries for semen sampling. With touch screen and memory function. Power supply: 110-220 V

[REF. : 12421/0504](#)

Control cuvette set, 4 pieces

[REF. : 12300/0010](#)

Paper for printer

[REF. : 12300/0311](#)

Macro cuvette, 4 ml, 100/package

[REF. : 12301/0003](#)

NaCl solution, 0.9%, 1 l

[REF. : 12301/4667](#)

Dispenser 0.5-5 ml for NaCl solution

[REF. : 12428/1815](#)

Bottle for dispenser, 500 ml

[REF. : 12428/1905](#)

Varipette 10-100 μ l, with digital display

[REF. : 12425/4810](#)

Pipette tip yellow, 1000/package

[REF. : 12425/9409](#)



Semen Dilution

Semen extenders

BoviFree

- Innovative, entirely egg-free freezing extender for bull semen
- Constant, optimal freezing results with all equilibration protocols
- Enhanced post-thaw semen parameters
- Very easy to prepare
- Brilliant microscopic images due to low viscosity and homogenous particle-free consistence
- Safe product made at Minitube's ISO and GMP certified extender production facility

BoviFree

200 ml concentrate for 1 l ready to use extender [REF. : 13501/0200](#)

BoviFree CSS one step

200 ml concentrate for 1 l ready to use extender [REF. : 13501/1200](#)

BoviFree CSS I two step

100 ml concentrate for 500 ml ready to use extender [REF. : 13501/1250](#)

BoviFree CSS II two step

200 ml concentrate for 500 ml ready to use extender [REF. : 13501/1251](#)

HIGHEST PRODUCT SECURITY

- GMP-certified quality control standards at each production stage
- Guaranteed use of semen friendly components and materials

BULL SEMEN DILUTION

AndroMed®

- Egg yolk free high performance medium for frozen and liquid semen
- Perfect biosecurity: no ingredients of animal origin
- No risk of microbiological contamination
- Reduced labour effort due to simple and fast preparation
- Constant, optimal freezing results and high fertility rates with every dilution ratio and for most bulls
- Increased efficiency of microscopic analysis: extremely clear cell images

AndroMed® 200 ml, for a total of 1000 ml of extender, with antibiotic formula according to EC requirements [REF. : 13503/0200](#)

AndroMed® CSS, One-step
200ml, for a total of 1000 ml of extender [REF. : 13503/1200](#)

Steridyl®

Elaborate, proven buffer formula. Contains sterilised egg yolk - easy to prepare: just add water and save time.

Steridyl® 500 ml concentrate, for a total of 1250 ml of extender, sterilised, requires no addition of egg yolk, with antibiotic formula according to EC requirements [REF. : 13500/0260](#)

Steridyl® CSS, One-step
500 ml, for a total of 1000 ml of extender [REF. : 13500/0280](#)

Steridyl® CSS, Two-step, fraction 1
500 ml, for a total of 1000 ml of extender [REF. : 13500/0290](#)

Steridyl® CSS, Two-step, fraction 2
500 ml, for a total of 1000 ml of extender [REF. : 13500/0295](#)

Bovidyl®

Medium for preservation of liquid semen from ruminants, 270 ml. Needs addition of 30 ml egg yolk. With antibiotic formula according to EC requirements.

[REF. : 13501/0150](#)

Triladyl®

For decades, one of the most successful extenders for bull semen freezing in the world. Used for one-step semen processing at room temperature, Triladyl stands for nonvarying, optimal results of your bull population, even with ejaculates of low concentration.

Triladyl® 250 g, for a total of 1250 g of extender, with antibiotic formula according to EC requirements [REF. : 13500/0250](#)

Triladyl® CSS, 200 g, for a total of 1000 g of extender, without antibiotics [REF. : 13500/1200](#)

Biladyl®

The Two-step extender based on the proven Triladyl® formula, according to the CSS-requirements (Certified Semen Services). Consisting of fractions A, B and antibiotic supplement.

Biladyl®, fraction A, 49 g, for a total of 500 g extender [REF. : 13500/0004](#)

Biladyl®, fraction B, 250 g, for a total of 750 g extender [REF. : 13500/0006](#)

Antibiotic supplement

Antibiotic formula in powder according to CSS protocol

For One-step extender: 550 mg Gentamicin, 110 mg Tylosin, 330 mg Lincomycin, 660 mg Spectinomycin [REF. : 13504/9000](#)

For Two-step extender: 300 mg Gentamicin, 60 mg Tylosin, 180 mg Lincomycin, 360 mg Spectinomycin [REF. : 13500/0005](#)



BULL SEMEN DILUTION

Water baths

With temperature control and water circulation

Stainless steel, capacity: 45 l, insert racks for 20 diluent bottles and 72 semen collection vials, inner dimensions (W x H x D): 590 x 350 x 220 mm, 2800 W

230 V/50-60 Hz [REF. : 14082/0600](#)

With temperature control

Stainless steel, capacity: 10 l, inner dimensions (W x H x D): 350 x 210 x 140 mm

230 V/50-60 Hz [REF. : 14079/0001](#)

115 V/60 Hz [REF. : 14079/0002](#)



Additional sizes available!

Magnetic stirrer

With heater and connection for contact thermometer, 620 W

115 V/60 Hz [REF. : 14235/0731](#)

230 V/50 Hz [REF. : 14235/0732](#)

Without heater

115 V/60 Hz [REF. : 14230/0001](#)

230 V/50 Hz [REF. : 14230/0000](#)

Contact thermometer, electronic [REF. : 14235/7320](#)

Support for thermometer [REF. : 14235/7323](#)

Stirring bars: 25 mm (Ref. 14240/7125), 30 mm (14240/7130), 40 mm (Ref. 14240/7140), 50 mm (14240/7150)



SmartDispenser

- Automatic, electronically controlled dispensing system for bull semen extender that adds security to your process
- Maximum degree of precision in terms of dispensed extender (± 1 g) allows very precise sperm numbers per dose
- Operation as stand-alone unit or interfaced with IDA or other software
- Power supply: 115 V/60 Hz or 230 V/50 Hz

SmartDispenser

control unit with balance and pump [REF. : 13200/0702](#)



Laboratory scale

Precision scale for the determination of ejaculate volume.

Weighing range max. 2000 g, resolution 0.1 g, weighing pan 130 x 130 mm, 100-240 V / 50-60 Hz [REF. : 14295/0444](#)





Straw Processing and Freezing

Mini straw and medium straw

For over 25 years, Minitube straws have been used worldwide as a standard for the freezing of semen. Minitube's quality control process, production techniques, and material selection ensure for a **reliable product** that consistently exceeds industry standards.

Fresh semen straw

Fresh semen straws are designed to process and store fresh/chilled semen at refrigerated temperatures. The wick has a special powder which does not swell and absorbs less semen.

- Yield a larger number of semen straws per ejaculate
- Better use of valuable genetics without adding additional cost
- Available in six different colors

Fresh semen straws and EcoStraws are used in exactly the same way as standard semen straws. Identical processes for:

- filling
- sealing
- printing
- insemination



EcoStraw










































































































EcoStraws feature a wick with a shorter inner wick section that **absorbs 3 to 4% fewer sperm** than the corresponding symmetrical wick of standard semen straws.

- Yield a larger number of semen straws per ejaculate because fewer sperm are lost in the wick
- Better use of valuable genetics without adding additional cost
- Ideal for overnight equilibration



MINITUBE SEMEN STRAWS

Straw Processing and Freezing

Color	Mini straw 0.25 ml	EcoStraw 0.25 ml	Fresh semen straw 0.25ml	Medium straw 0.5 ml	EcoStraw 0.5 ml
Transparent	REF.: 13407/0010 	REF.: 13407/3010 	REF.: 13407/2010 	REF.: 13408/0010 	REF.: 13408/3010 
Transparent - blue-white wick	REF.: 13407/0011 	REF.: ---- 	REF.: ---- 	REF.: ---- 	REF.: ---- 
Red	REF.: 13407/0040 	REF.: 13407/3040 	REF.: ---- 	REF.: ---- 	REF.: ---- 
Red - transparent	REF.: 13407/0044 	REF.: 13407/3044 	REF.: 13407/2044 	REF.: 13408/0044 	REF.: 13408/3044 
Green	REF.: 13407/0050 	REF.: 13407/3050 	REF.: ---- 	REF.: ---- 	REF.: ---- 
Green - transparent	REF.: 13407/0054 	REF.: 13407/3054 	REF.: 13407/2054 	REF.: 13408/0054 	REF.: 13408/3054 
Blue - transparent	REF.: 13407/0064 	REF.: 13407/3064 	REF.: 13407/2064 	REF.: 13408/0064 	REF.: 13408/3064 
Grey	REF.: 13407/0070 	REF.: 13407/3070 	REF.: ---- 	REF.: ---- 	REF.: ---- 
Grey - transparent	REF.: 13407/0074 	REF.: 13407/3074 	REF.: ---- 	REF.: 13408/0074 	REF.: 13408/3074 
Purple	REF.: 13407/0080 	REF.: 13407/3080 	REF.: ---- 	REF.: ---- 	REF.: ---- 
Yellow	REF.: 13407/0090 	REF.: 13407/3090 	REF.: ---- 	REF.: ---- 	REF.: ---- 
Yellow - transparent	REF.: 13407/0094 	REF.: 13407/3094 	REF.: 13407/2094 	REF.: 13408/0094 	REF.: 13408/3094 
Pink	REF.: 13407/0100 	REF.: 13407/3100 	REF.: ---- 	REF.: 13408/0100 	REF.: 13408/3100 
Turquoise	REF.: 13407/0130 	REF.: 13407/3130 	REF.: ---- 	REF.: 13408/0130 	REF.: 13408/3130 
Orange	REF.: 13407/0140 	REF.: 13407/3140 	REF.: ---- 	REF.: 13408/0140 	REF.: 13408/3140 
Orange - transparent	REF.: 13407/0144 	REF.: 13407/3144 	REF.: ---- 	REF.: 13408/0144 	REF.: 13408/3144 
Salmon	REF.: 13407/0160 	REF.: 13407/3160 	REF.: ---- 	REF.: ---- 	REF.: ---- 
Beige	REF.: 13407/0180 	REF.: 13407/3180 	REF.: ---- 	REF.: ---- 	REF.: ---- 
Pistachio green	REF.: 13407/0200 	REF.: 13407/3200 	REF.: ---- 	REF.: 13408/0200 	REF.: 13408/3200 
Pistachio green - transparent	REF.: 13407/0204 	REF.: 13407/3204 	REF.: ---- 	REF.: 13408/0204 	REF.: 13408/3204 
White	REF.: ---- 	REF.: ---- 	REF.: ---- 	REF.: 13408/0210 	REF.: 13408/3210 

COLD HANDLING CABINETS

Cold handling cabinet

Spacious cold handling cabinet made of stainless steel for semen processing at +5°C working temperature.

Available in two sizes (optionally with hydraulic height adjustment):

Approx.	Working area (cm - W x D)	Outside dimensions (cm - W x D x H)	230 V/50 Hz	115 V/60 Hz
Large	200 x 90	216 x 114 x 127	REF. : 14335/0403	REF. : 14335/0400
Large (height adjustable)	200 x 90	216 x 114 x 127	REF. : 14335/0402	
Standard	200 x 67	216 x 91 x 127	REF. : 14335/0401	REF. : 14335/0398
Standard (height adjustable)	200 x 67	216 x 91 x 127	REF. : 14335/0404	

Shorter, custom made versions are available.

Product features

- Height of refrigerated area: 50 cm (34 cm below acrylic cover in the front)
- Inner surfaces all stainless steel, tiltable face-plate, tiltable plexiglass cover
- Digital temperature controller: temperature programmable from 0°C to ambient
- Even temperature distribution due to a special routing of air flow
- Automatic programmable defrosting function
- Electrical condensation water evaporation
- Interior lighting for optimal working conditions
- Two power sockets in the working area
- Two 50 mm side openings (one on each side) for cables
- Storage capacity underneath the cooling surface
- Mounted on heavy duty rolls
- Power supply: 115 V/60 Hz or 230 V/50 Hz
- Power consumption: approx. 450 W



COLD HANDLING CABINETS

CoolingCastle®

The Cooling Castle® is the ergonomic and space-saving solution for processing semen at +5°C.

The inner chamber (1280 x 650 mm, W x D) provides room for a filling and sealing machine MPP Uno or Quattro and for loading freezing racks. It is equipped with power outlets, a network port, bright LED light and a shelf at the rear panel.

The transparent double-wing flap door allows monitoring the processes inside the cooling chamber all the time.

Even if the door is kept open, the Cooling Castle® guarantees +5°C in the chamber (at room temperature). A curtain of cooled air minimizes air transfer into the inner chamber. UV irradiation of the cooled air flow has a **germ reducing effect**.

Furthermore, the CoolingCastle® has an automatic condensation water evaporation function.

Technical features

- Outer dimensions
Including spacers on the back wall: 1420 x 960 x 1752 mm (W x D x H)
Device only, without spacers: 1420 x 890 x 1752 mm (W x D x H)
- Electrical condensation water evaporation
- Network compatibility
- Ports and outlets for MPP Uno or MPP Quattro
- LED light
- Power supply: 230 V/50 Hz or 110 V/60 Hz
- Power consumption: approx. 810 W

Your benefits

- Small footprint (passes ordinary doors) allows use in small labs
- Ergonomic working
- UV irradiation of circulating air for germ reduction
- Easy monitoring of machines due to transparent door
- Separate electronic connection: Even if cooling is switched off, the sockets in the CoolingCastle® can be used

CoolingCastle®

230 V/50 Hz

REF. : [14335/0422](#)

110 V/60 Hz

REF. : [14335/0421](#)

INTELLIGENT DESIGN

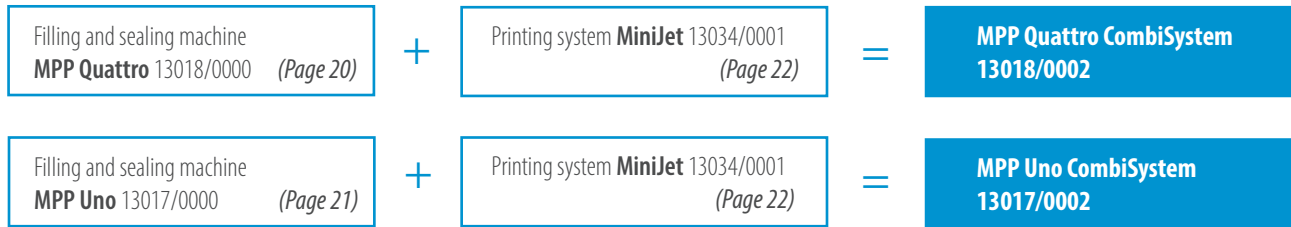
Allows **ergonomic operation** and offers enough space on a **small footprint**.



CombiSystem

For highest efficiency in your bull semen laboratory:

combine your filling and sealing machine MPP Quattro or MPP Uno with the MiniJet printer.



Your benefits

- Perfect automatic integration of semen processing: filling, sealing and printing in one system and one step
- Convert from 0.5 ml to 0.25 ml straws and vice versa, without changing a single part
- Fully electronic control of all components
- Semen level control and automatic stop of straw supply at the end of the ejaculate
- Includes software with bull data files, can be combined with IDA laboratory software (see page 3)
- Requires no extra control unit, only standard PC (included)

CombiSystem - composed of MPP Quattro and MiniJet

Capacity: 15000 straws/hour

110 V/50-60 Hz or 230 V/50-60 Hz

[REF. : 13018/0002](#)

CombiSystem - composed of MPP Uno and MiniJet

Capacity: 4000 straws/hour

110 V/50-60 Hz or 230 V/50-60 Hz

[REF. : 13017/0002](#)



AUTOMATIC FILLING AND SEALING OF STRAWS

MPP Quattro

Fast, robust and easy to operate filling and sealing machine with broad application range.

Your benefits

- Filling of 1 to 4 straws at a time – freely selectable by the operator
- Modern touch-screen monitor for software control and display; easy to operate, with color coded display; continuous display of number of filled straws, machine status, straw size
- Fast conversion between 0.25 and 0.5 ml straws and vice versa (1-2 minutes), touch-screen guided
- Ideal conditions for hygiene and safety due to completely closed filling and sealing area
- Optimal control by the operator: processing of 4 straws at a time can easily be observed
- Quick preparation for a new ejaculate: blocks of 4 filling and suction needles each allow for a very quick reset
- Semen-saving: when ejaculate is almost finished, active filling needles are automatically reduced from 4 to 1 and residual semen from inactive needles runs back into reservoir - **practically no semen is wasted and the ejaculate is used to the very last drop**
- Can be operated in cold room or cabinet or at room temperature as stand-alone or combined with MiniJet printer

Technical features

- Exchangeable compact ultrasound sealing unit with worldwide service network
- Hopper capacity: 2200 mini straws (0.25 ml) or 1300 medium straws (0.5 ml)
- Capacity: 15000 straws/hour
- Latest PLC microprocessor control technology
- Vacuum unit with integrated reservoir and automatic readjustment function; vacuum level is displayed and can be easily modified via buttons
- Power supply: 110 V/60 Hz or 230 V/50-60 Hz

MPP Quattro, complete

REF. : 13018/0000



OPERATION SECURITY

Very quick and easy exchange of the **compact sealing unit** secures operation reliably during service.

Accessories

Filling block with 4 nozzles

for 0.25 ml straws

REF. : 13018/0012

for 0.5 ml straws

REF. : 13018/0017

Suction block with 4 nozzles

for 0.25 ml straws

REF. : 13018/0022

for 0.5 ml straws

REF. : 13018/0027

Staw hopper for MPP Quattro and MPP Uno,

for 0.25 and 0.5 ml straws

REF. : 13018/0006

Disposable semen cone, 100/bag

REF. : 13018/0100

Fixing unit for filling and suction blocks,

stackable, stainless steel

REF. : 13017/0050

Washer for 0.25 ml and 0.5 ml nozzles,

5000/bag

REF. : 13021/3001

Filling and suction tubing, 380 mm, sperm friendly material (silicone),

bevelled edge, 100/aluminum foil bag

REF. : 13021/3800

Straw seal tester,

for 10 straws per cycle (0.25 ml / 0.5 ml)

REF. : 13019/0210

AUTOMATIC FILLING AND SEALING OF STRAWS

MPP Uno

Automatic filling and sealing machine for 0.25 and 0.5 ml straws.

Your benefits

- Seals and fills 1 straw per cycle (ideal for handling small volumes)
- Sealing performed by ultrasound
- Conversion between 0.25 ml straws and 0.5 ml straws without exchanging any parts and within only a few minutes
- Very compact device which takes up little space
- Vacuum pump and pressure controller integrated into the device
- Ultrasonic generator in an external casing that can be installed at a distance of up to 2.5 m (ON/OFF switch directly on the machine)
- Completely closed filling and sealing area: best hygienic and safety conditions fully guaranteed
- Optimal control by the user: filling process is performed right in front of the user

MPP Uno, complete

REF. : 13017/0000

Technical features

- Capacity: approx. 4000 straws/hour
- Hopper capacity: 2200 straws of 0.25 ml or 1300 straws of 0.5 ml
- Machine dimensions: 460 x 350 x 410 mm (W x H x D) plus ultrasound generator
- Power supply: 110 V/60 Hz or 230 V/50 Hz

Accessories

Straw hopper for MPP Quattro and MPP Uno, for 0.25 and 0.5 ml straws REF. : 13018/0006

Filling nozzle 0.25 ml REF. : 13017/0012

Suction nozzle 0.25 ml REF. : 13017/0022

Filling nozzle 0.5 ml REF. : 13017/0017

Suction nozzle 0.5 ml REF. : 13017/0027

Washer for 0.25 ml and 0.5 ml nozzles, 5000/bag REF. : 13021/3001

Filling and suction tubing, 380 mm, sperm friendly material (silicone), bevelled edge, 100/aluminum foil bag REF. : 13021/3800



PRINTERS FOR SEMEN STRAWS

MiniJet

Professional printing system for 0.25 ml and 0.5 ml straws. Combines excellent print quality with high print speed.

Your benefits

- Immediately non-abrasive print (character size 1.4 mm to 5 mm; bold print option; printing of barcodes and logos)
- Minitube software with clear and user-friendly menu navigation
- Touch screen for direct input of system commands and display for diagnostics
- Easily adjustable print head position
- Change of the transport belt without tools
- Remote maintenance via teleservice possible
- No gear pump is used for generating the pressure in the ink circuit, therefore no abraded particles are ageing the ink
- Ink nozzle is automatically closed when the printer is switched off - no blockage caused by dried ink
- Steady once per day tuning of ink viscosity for optimal start-up conditions
- Low operational cost: ink tank is only refilled instead of replacing it altogether
- Ink run time is not limited by electronic timer
- Microsoft Access Database for easy data conversion to and from customer specific databases
- Interface to IDA laboratory software

Each system consists of

- Inkjet printing unit Leibinger, state of the art computer with accessories and Minitube software (490 x 450 x 290 mm)
- Transport unit with print head for straws with exchangeable hopper (730 x 500 x 260 mm)
- Control unit for electronics and power supply of the transport unit (380 x 400 x 220 mm)

Product features

- Capacity: approx. 20.000 straws per hour
- Adaptable for the CombiSystem
- Power supply: 110 V/60 Hz or 230 V/50-60 Hz

MiniJet with Inkjet System Leibinger

REF. : 13034/0001

Ink, 950 ml

REF. : 13033/0010

Solvent, 950 ml

REF. : 13033/0012

The MiniJet printer can be combined with the filling and sealing machine MPP Quattro or MPP Uno to a CombiSystem.

ONE-OF-A-KIND TECHNOLOGY

Keeps the ink homogeneous and ensures that ink **does not dry out**, even during lengthy breaks in production.



PRINTERS FOR SEMEN STRAWS

EasyCoder

Clean and odourless printing of straws without ink and solvents.

Product features

- Thermal transfer printer with automatic straw supply (output: 3600 straws per hour) for immediately non-abrasive print
- Unparalleled neat and clear printing on 0.5 and 0.25 ml straws; easy and quick conversion between different straw sizes
- Prints up to 3 lines per straw, including barcodes, logos and specific characters
- Control via PC by a clear and user-friendly Minitube software
- Easy handling, little maintenance required
- Dimensions (L x W x H): 660 x 370 x 310 mm (PC not included)
- Power supply: 110 V/50-60 Hz or 230 V/50-60 Hz

EasyCoder printer [REF. : 13038/0000](#)

Color ribbon, black [REF. : 13038/0010](#)



MultiCoder

Professionalize your lab process with quick and easy machine readable labeling of samples.

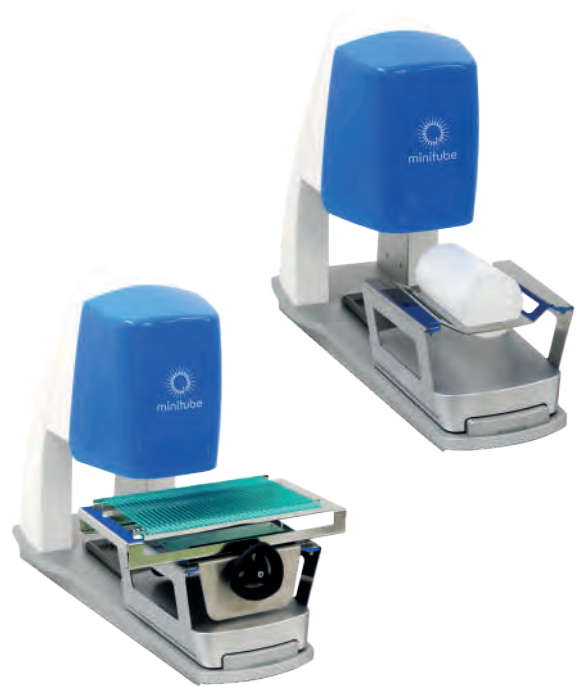
Your benefits

- Very versatile: print system can label most kinds of materials such as plastics, glass or aluminum
- Manually moveable slide and a unique, easy-to-use carrier system allow for a speedy work process
- Easily writeable information on the smallest amount of space, including text, barcode, QR-Code and logo

Product features

- High resolution inkjet printing
- Print head protection system (avoids drying-out of ink)
- Sensor based technique for print activation allows perfect manual workflow
- LED signalling of printer status
- No tools needed for change of product carriers
- Pre-designed print layouts
- Upload of MS Excel based data formats possible
- Automatic creation of content for ready-to-print designs via database

MultiCoder printer [REF. : 13145/0000](#)



UNIQUE, FLEXIBLE & VERSATILE

Quick and easy print on a whole range of items: semen straws, goblets, cassettes, culture dishes, macro tubes, syringes, cryovials and many more

THE MINITUBE SYSTEM

The Minitube straw

Minitube straws can be used in many ways: for frozen semen preservation as well as for the production of fresh semen. During the last years, the use of fresh semen in the bovine AI industry has increased and become more important, especially as a tool to meet the high demand for top bulls. The original Minitube straw with two sealing balls provides fundamental advantages for both preservation methods:

- Gas-tight and hygienic seal of both straw ends with sealing balls
- No waste of semen due to sperm trapped in the cotton plug
- Reduced number of semen cells per dose
- Maximum use and profit of top bulls

Minitube straw, 65 mm/0.3 ml, clear [REF. : 13401/0065](#)



ASP 65R – Filling & sealing machine for Minitubes

Technical features

- Fully automatic packaging of bull semen in Minitubes
- Use of only one sterilisable filling nozzle with hose and sinker per ejaculate
- Capacity: approx. 8000 straws per hour
- Power supply: 230 V/50 Hz

ASP 65R [REF. : 13001/0165](#)

Accessories

Filling nozzle for ASP, with silicone tubing and sinker [REF. : 13001/1010](#)

Suction nozzle for ASP [REF. : 13001/1020](#)

Washer for ASP filling and suction nozzle, 1000/package [REF. : 13001/1000](#)

Nitrogen gas module for liquid semen production. Flushes each Minitube with nitrogen gas immediately before filling, thus ensuring that the bubble within the filled and sealed semen straw contains only nitrogen. Increases longevity of liquid semen providing anaerobic conditions. [REF. : 13001/2000](#)

Silicone hose 2 x 1 mm, 25 m/bag [REF.: 5013001/0180](#)

Sealing ball, glass, light blue, diameter 2.70 mm, 50.000/jar [REF. : 13400/0070](#)



SEMI-AUTOMATIC STRAW PROCESSING

Semiautomatic system SFS 133

Semiautomatic filling and sealing machine SFS 133, with vacuum bottle, filling and suction head

for 0.5 ml straws [REF. : 13133/0133](#)

for 0.25 ml straws [REF. : 13133/0135](#)

Low density vacuum pump, 30-60 Hg, with manometer and valve

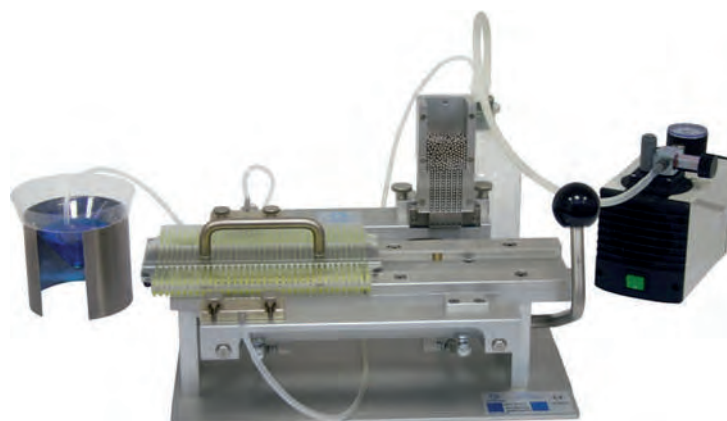
230 V/50 Hz [REF. : 13133/0267](#)

115 V/50 Hz [REF. : 13133/0268](#)

Cartridge loading device with loading block and 10 cartridges for 36 straws

0.5 ml [REF. : 13133/0005](#)

0.25 ml [REF. : 13133/0025](#)



Product features

- Straws are filled and sealed 6 by 6
- Sealing is done securely and hygienically with metal or glass sealing balls (available in different colors)
- An air bubble of 1 cm is automatically produced in each straw
- Capacity: approx. 2000 straws/hour

Accessories

Washer for all filling and suction nozzles, 5000/bag [REF. : 13021/3001](#)

Silicone tubing for SFS

transparent, 3 x 1 mm, length 10 m [REF. : 13133/3550](#)

Filling head with 6 nozzles for 0.5 and 0.25 ml straws

[REF. : 13133/1000](#)

Suction head with 6 nozzles for 0.5 and 0.25 ml straws

[REF. : 13133/2000](#)

Metal sealing ball

for 0.25 ml straws

[REF. : 13400/9970](#)

for 0.5 ml straws

[REF. : 13400/9900](#)

Glass sealing ball for 0.25 ml straws, available in different colors

[REF. : 13400/9971](#)

Straw Processing
and Freezing

AHDR/HDR printers

For 0.5 or 0.25 ml straws and Minitubes, with counter

Capacity: approx. 5000 straws/hour

AHDR, automatic [REF. : 13142/1000](#)

HDR (without motor) [REF. : 13140/0000](#)

Set of alpha-numerical characters

for 0.5 ml straws and Minitubes [REF. : 13052/0000](#)

for 0.25 ml straws [REF. : 13052/0010](#)

Printing ink ER, 40 ml, black

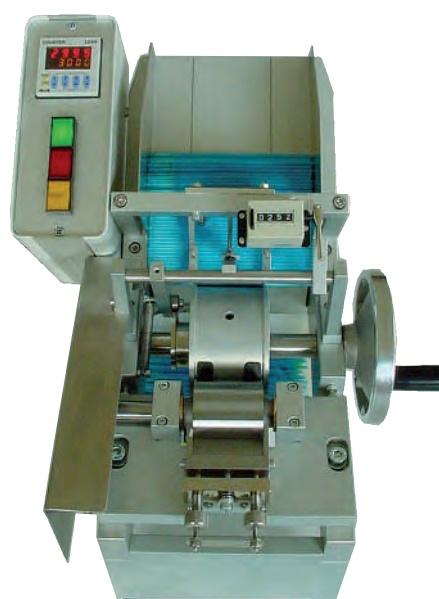
[REF. : 13056/0033](#)

Thinner for ER printing ink, 1000 ml

[REF. : 13056/9000](#)

Doublestick tape

[REF. : 13050/0010](#)



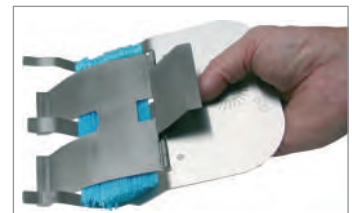
BULL SEMEN FREEZING

TurboFreezer L

The innovation in straw freezing technology: **directed, horizontal nitrogen gas flow for homogeneous and superior freezing results.**

HOMOGENEOUS FREEZING RESULTS

The only freezer with **directed HORIZONTAL nitrogen gas flow** - all straws pass through **identical freezing curves!**



Straw Processing
and Freezing

Your benefits

- Standardized semen freezing curves independent of straw position
- Higher yields through improved, uniform post-thaw quality of ejaculate
- Precise control through user defined freezing programs
- Ergonomic and easy handling of racks and straws in ample freezing chamber
- Outstanding economy due to high throughput
- Option to start with temperature $+5^{\circ}$ from second freezing cycle on, saving time and LN_2

Benefits over traditional freezing machines

- The aerodynamic design and the unidirectional horizontal nitrogen gas flow ensure that all straws pass through identical freezing curves
- The freezing pattern of each single straw is precisely controlled by instant removal of crystallisation energy
- The heat energy produced by each straw during crystallisation is directly removed and does not influence other straws
- A homogenous nitrogen gas flow is provided over the complete height and length of the stacks of straw racks

Semen freezing in conventional freezers suffers from unpredictable cold and warm spots distributed throughout the freezing chamber.

BULL SEMEN FREEZING

Technical features

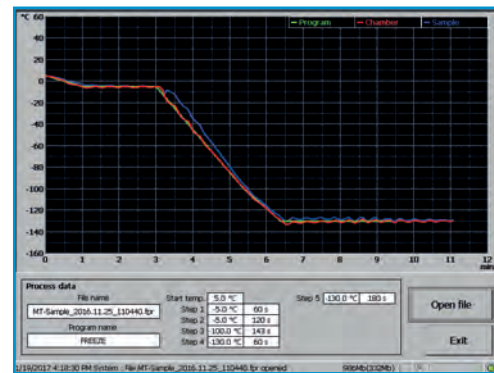
- Highly insulated body with stainless steel cover
- Quadruple LN₂ injection ports
- Conditioning plenum separated from the freezing chamber
- 2 fan blocks with 4 fans each for homogenous LN₂ dispersion and precision air flow throughout the chamber
- Programmable controller
- 2 temperature sensors (1 chamber sensor, 1 sample sensor)
- Electric connection: 220 V/50 Hz (220 V/60 Hz optional)
- Outer dimensions: 222 x 132 x 86 cm (W x H x D)
- Chamber size: 145 x 41 x 32 cm (W x H x D)
- Required LN₂ pressure: 2.5 bar
- Capacity: 30 racks
 - 175 x 0.25 ml straws (total: 5250 straws)
 - 100 x 0.5 ml straws (total: 3000 straws)

TurboFreezer L – with 4 goblets, goblet holding device, stainless steel funnel, straw pliers and holding box [REF. : 16811/0000](#)

Pressure container, 189 liters [REF. : 16150/0185](#)

Product features

- Dual operation lid: inserted sliding covers for low impact in terms of cold loss when handling straws and racks after freezing. Complete cover opens supported by gas pressure springs
- Ample space available to unload racks and transfer straws into goblets inside the freezing chamber
- Subsequent freezing cycles can start immediately after the previous freezing
- Temperature curves and data of each freezing cycle can be stored, displayed and transferred into Excel for further analysis



TurboFreezer M

The smaller version of Minitube's TurboFreezer also provides directional, continuous nitrogen gas flow throughout the whole chamber and therefore uniquely uniform freezing patterns.

Technical features

- Straw capacity: 15 racks
 - 175 x 0.25 ml straws (total: 2625 straws)
 - 100 x 0.5 ml straws (total: 1500 straws)
- Outer dimensions (without monitor and controller): 102 x 103 x 86 cm (W x H x D)
- Chamber - inner dimensions: 78 x 41 x 32 cm (W x H x D)
- Electric connection: 220 V/50 Hz

TurboFreezer M [REF. : 16810/0000](#)



BULL SEMEN FREEZING

MT Freezer 2.0

Automatic freezer for bull semen made of stainless steel

Technical features

- Capacity: 12 racks
 - 175 x 0.25 ml straws (total: 2100 straws)
 - 100 x 0.5 ml straws (total: 1200 straws)
- Outer dimensions 112 x 88 x 105 cm (W x H x D)
- Chamber dimensions: 76 x 64 x 30 cm (W x H x D)
- Electronic temperature control, digital temperature display, programmable start and end temperature
- Forced gas circulation by fans
- Temperature range: +5°C to -140°C
- Freezing time: 8 min (10 min for 0.5 ml straws)
- Power supply: 230 V/50 Hz (110 V/60 Hz upon demand)

MT Freezer 2.0

for 0.5 bar liquid nitrogen containers [REF. : 16813/0000](#)

for 1.5 bar liquid nitrogen containers [REF. : 16813/0015](#)

Liquid nitrogen container

pressurized to 0.5 bar, capacity 60 L [REF. : 16820/1900](#)

pressurized to 1.5 bar, capacity 120 L [REF. : 16150/0120](#)

Your benefits

- Economic: low LN₂ consumption and subsequent freezing cycles can start immediately after the previous freezing cycle
- Superior insulation
- Break- and scratch-resistant lid



Accessories for all freezers

Liquid nitrogen connecting hose

Length 2.0 m [REF. : 16812/0200](#)

Length 1.5 m [REF. : 16812/0150](#)

Freezing rack Turbo

for 175 x 0.25 ml straws [REF. : 15040/0175](#)

for 100 x 0.5 ml straws [REF. : 15040/0100](#)

Loading and counting block for freezing rack Turbo

for 175 x 0.25 ml straws [REF. : 15041/0175](#)

for 100 x 0.5 ml straws [REF. : 15041/0100](#)

Straw pliers for removal of frozen straws [REF. : 16811/0100](#)

Stainless steel funnel for 65 mm goblets [REF. : 15004/0402](#)

(use of straw pliers 16811/0100 is highly recommended)



BULL SEMEN FREEZING

Storage systems for straws

Goblets

Diameter	Color	REF. :
7.1 mm	White	16907/0071
10 mm	White	16910/0010
13 mm	White	16913/0133
13 mm	Blue	16913/1133
13 mm	Red	16913/3133
13 mm	Pistachio-green	16913/4133
13 mm	Yellow	16913/5133
35 mm (1)	White	16935/0135
65 mm (2)	White	16965/0133

(3) Goblet canes, for 2 x 10 mm goblets	REF. : 16965/6000
for 2 x 13 mm goblets	REF. : 16965/6013

Marking label for goblet canes, different colors REF. : 13422/00xx

(4) Divider for goblets, 100/bag, 12 cm REF. : 16967/0065

Identification rod, 140 mm length
for 0.25 ml straw REF. : 16903/0210
for 0.5 ml straw REF. : 16903/1210

(5) Stainless steel funnel for 65 mm goblets REF. : 15004/0402

(6) Short and long triangular cassettes
for 20/40 Minitubes or 10/20 straws 0.5 ml or 28/56 straws 0.25 ml

(7) Short and long flat cassettes
for 6/12 Minitubes or 3/6 straws 0.5 ml or 6/12 straws 0.25 ml

	Triangular cassette		Flat cassette	
	Long	Short	Long	Short
Green	REF. : 16981/01351	REF. : 16981/01201	REF. : 16980/1201	REF. : 16980/0601
Blue	REF. : 16981/01361	REF. : 16981/01211	REF. : 16980/1202	REF. : 16980/0602
Yellow	REF. : ---	REF. : 16981/01221	REF. : 16980/1203	REF. : 16980/0603
Red	REF. : 16981/01381	REF. : 16981/01231	REF. : 16980/1204	REF. : 16980/0604
White	REF. : 16981/01391	REF. : 16981/01241	REF. : 16980/1205	REF. : 16980/0605
Beige	REF. : 16981/01401	REF. : 16981/01251	REF. : 16980/1206	REF. : 16980/0606

We offer a variety of liquid nitrogen containers, please ask for further information!





Artificial Insemination and Diagnostics

Insemination kit

Contains: heavy duty ABS case, electronic thawing unit MT 30/54, QuickLock 2000, 100 Universal sheaths, ReptoJelly lubricant, Varikon speculum, 1 box AI gloves, MiniCutter, tweezers and clamp

Insemination kit REF. : 17050/0060

Components also available individually:

Insemination case REF. : 17050/0001

Insemination glove, 100/box REF. : 17080/0015

Varikon speculum REF. : 17064/0380

Straw tweezers, angular shape REF. : 17060/0000

ReptoJelly, 100 ml REF. : 11907/0100

MiniCutter REF. : 17062/0010

Clamp REF. : 17063/0000

Not included in kit:

Transformer for thawing unit
12 V/ 110 V/ 220 V REF. : 17165/1395



BOVINE ARTIFICIAL INSEMINATION

QuickLock AI guns

THE AI gun for AI success. Security and accuracy during AI.

- All-purpose gun for all types of straws and sheaths, split or non-split
- Unique design for safe and centered straw alignment - no waste of straws
- Stainless steel and sterilisable parts only
- One hand only sheath fixation and release
- No loose parts - safety catch prevents the plunger from sliding out
- Identification with different colored stylets
- Separate straw release for control of information after AI

QuickLock Classic

Easy sheath fixation and release by just pressing a knob

white	REF. : 17025/0000
red	REF. : 17025/0003
blue	REF. : 17025/0005
yellow	REF. : 17025/0008
green	REF. : 17025/0009

QuickLock 2000

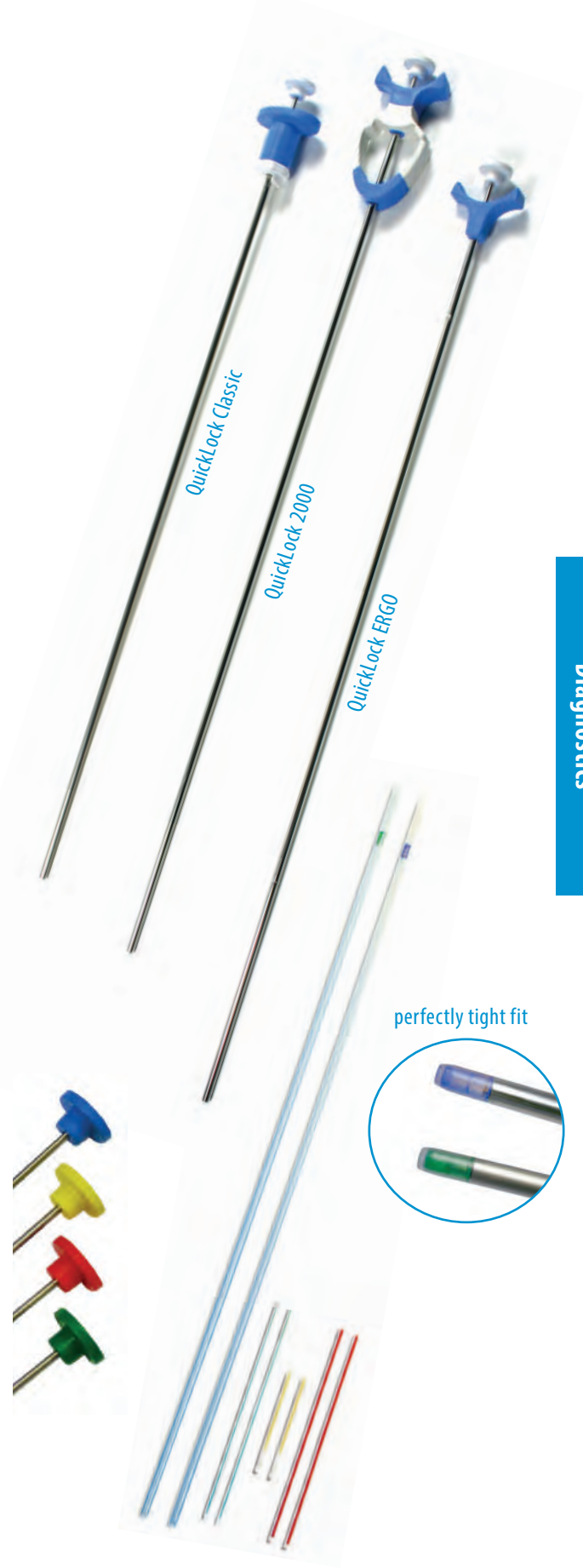
- Ergonomic design
- Only 1 cm of the sheath length is required for fixation

white	REF. : 17026/0000
red	REF. : 17026/0003
blue	REF. : 17026/0005
yellow	REF. : 17026/0008
green	REF. : 17026/0009

QuickLock ERGO

- Ideal for older cows due to greater usable length
- Smallest ergonomic handle available
- Easiest gun as far as cleaning is concerned

white	REF. : 17024/0000
red	REF. : 17024/0003
blue	REF. : 17024/0005
yellow	REF. : 17024/0008
green	REF. : 17024/0009



Insemination and
Diagnostics

BOVINE ARTIFICIAL INSEMINATION

Universal sheaths

- Suitable for all types of semen straws
- Absolutely tight fit with all types of straws
- Gentle insemination due to a soft shape of the tip
- Transparent adapters for better visual control of straw position
- 50/bag, 1000/box

Universal sheath split (transparent-green) [REF. : 17007/0001](#)

Universal sheath non-split (transparent-blue) [REF. : 17007/0000](#)

Hygienic sheaths, roll with 80 units [REF. : 17028/0100](#)



Transfer instrument and Transfit sheaths (p. 46)

Good option for AI beginners because passage through cervix is easier. Use with 0.25ml straws only.

Thawing unit MT 30/54

- Electronic temperature control
- Central, built-in thawing chamber with lift
- Accuracy: 0.2°C
- Power supply: 12 V DC (car battery)

35°C [REF. : 17044/0035](#)

37°C [REF. : 17044/0037](#)

38°C [REF. : 17044/0038](#)

50°C [REF. : 17044/0050](#)

Accessories

Transformer for thawing unit 12 V / 220 V [REF. : 17165/1395](#)

Thermometer for thawing unit [REF. : 17049/0000](#)



MiniCutter

- Precise cut of 0.25 and 0.5 ml straws
- Facilitates straight cut at exactly the right length, which helps to avoid semen loss
- Ergonomic shape
- Easy to keep clean

MiniCutter for straws [REF. : 17062/0010](#)



BOVINE ARTIFICIAL INSEMINATION

Deep IU insemination

- Long, flexible sheath and mandrin for insemination deep inside the uterine horn
- Metal tip of the sheath for easy palpation and exact fit with the straw
- Extra introduction mandrin for penetrating the cervix
- Also suitable for embryo transfer

DIUI Set for AI and ET in Bovine (using 0.25 ml straws):

flexible AI/ET introduction stylet, finger support and two fixation rings

REF. : 17015/0000

DIUI bovine sheath, split, for 0.25 ml straws, 10/package

REF. : 17015/0650



XtremiA and XtremET

XtremiA and XtremET allow depositing semen or embryos up to **25 cm deep into the uterine horn** of cows and heifers. The spermatozoa are brought the closest to the place of fertilisation.

Both, XtremiA and XtremET sheaths, are used with the transfer device "XtremGun".

Your benefits

- Extremely smooth and stable tip for an easy passage of the cervix even in very young animals
- Flexible inner cannula adapts to the female anatomy
- Direct use of 0.25 ml straw content in the device: no risk of losing sperm cells or embryos
- Less manipulation of the genital tract: more welfare for the animal and more comfort for the operator
- Safe and hygienic equipment

XtremBox

Carry case for transport and storage of XtremiA and XtremET equipment; contains the XtremGun, 2 stylets, 20 XtremiA sheaths and a MiniCutter

REF. : 17016/1000

XtremiA

Bovine deep intrauterine insemination sheath

REF. : 17016/1500

XtremET

Bovine deep intrauterine embryo transfer sheath

REF. : 17016/2500

We highly recommend to get trained on the devices with our specialists. Please contact us for a 2-day training session in France or get a quote for training on site.



BOVINE ARTIFICIAL INSEMINATION

QuickLock heater 2.0

Your benefits

- AI guns are transported at a constant temperature
- Thawed semen will not lose temperature in pre-warmed QuickLock AI gun
- Very robust material, easy to clean bag can be washed in a washing machine
- Strap allows different ways of carrying the bag
- Rechargeable battery, works for approx. 8 hours
- Temperature setting: +35°C, other values optional

QuickLock heater 2.0 (+35°C)

battery operated, with carrying strap

REF. : [17028/0210](#)

Accessories

Charger for recharging of battery set

Charger for wall socket 100-240 VAC, 50/60 Hz

REF. : [17028/0220](#)

Charger for car, 12 V/24 V

REF. : [17028/0221](#)

Disposable plastic bag

to protect the inside, 100/bag

REF. : [17028/0201](#)

Option

Additional rechargeable battery set

REF. : [17028/0219](#)

QuickLock heater 2.0, set to 25°C for ET

REF. : [17028/0225](#)

Not available in the US!



MiniReader

The MiniReader is an accurate, reliable and affordable device to read and determine the results of Minitube's **ELISA** (= Enzyme Linked Immunosorbent Assay) based progesterone test. It is used with the ELISA test kit.

MiniReader

REF. : [21900/0000](#)

Application

- Verify if cow is in or near heat
- Evaluate signs of false heat or silent heat
- Determine pregnancy status
- General monitoring of cow cycle, e.g. success of synchronisation programs
- Evaluation of post partum ovarian status and detection of pathological signs (e.g. ovarian cysts and persisting corpus luteum)

Your benefits

- Very little material is needed (0.02 ml of blood serum or milk)
- Fast and accurate results in just over half an hour for immediate evaluation of the cow
- Easy handling and maintenance
- Accurate reading as absolute progesterone concentration is shown in ng/ml (not only relative readings of 'high' or 'low' progesterone)

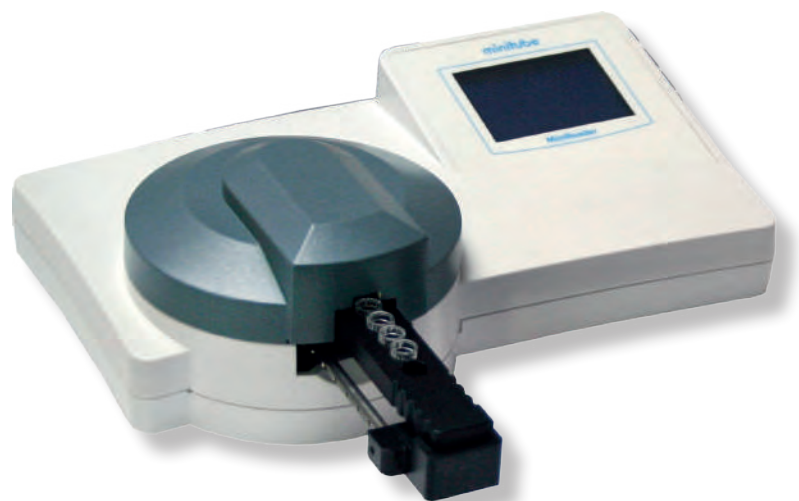
Test kits

Test kit for measuring progesterone in bovine **serum**,
for 24-60 samples [REF. : 21900/1310](#)

Test kit for measuring progesterone in bovine **milk**,
for 24-60 samples [REF. : 21900/1320](#)

EASY APPLICATION, ACCURATE RESULTS

Progesterone test for **fast and reliable** determination of ideal insemination time, heat, cycle activity, pregnancy and more



Ultrasound device Minitube 2.0

Portable ultrasound scanning unit for gynaecological examination including transrectal pregnancy

With rechargeable battery, power supply, carry strap, couplant and heavy duty case. Connection of main device to different probes allows examination of different species.

Your benefits

- Compact and light weight
- Portable, very robust, battery operated
- Examination of various species with only one device by using different probes

Technical details

- Monitor size: 7" TFT-LCD
- Display modes: B, B+B, B+M, M, 4B
- Image gray scale: 256 levels
- Battery capacity: 3000 mAh/ 7.4 V
- Weight: 900 g
- Overall size: 216 x 147 x 27 mm (L x W x H)

Ultrasound device Minitube 2.0, 100-240 V [REF. : 23500/1005](#)

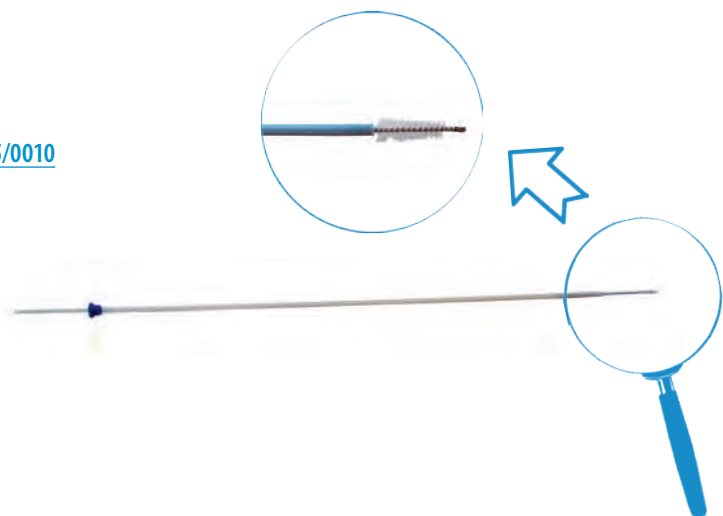
Linear Probe 6.5 MHz
for rectal pregnancy detection in cattle [REF. : 23500/1106](#)



Cytology brush

Disposable set for collecting endometrial cells for cytology. Single packed and single use, sterile, delivered with sanitary sheet.

CytoBrush for bovine [REF. : 17075/0010](#)





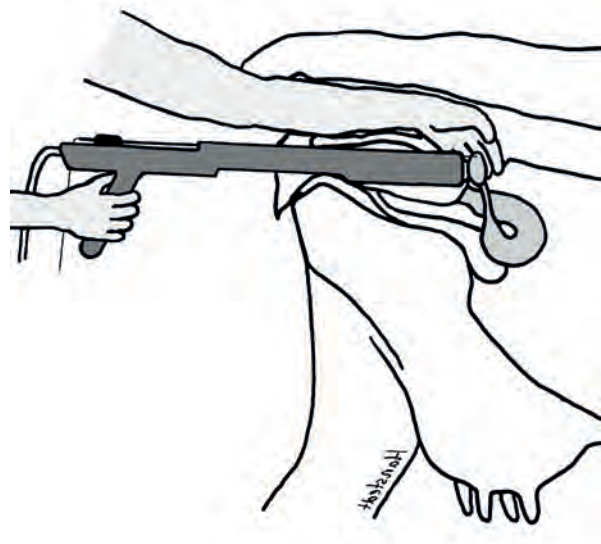
Embryo Transfer and OPU / IVP

Minitube has been involved in the development of embryo transfer procedures and products since the technology was first introduced. In 1980, Minitube launched a full line of embryo transfer products for bovine.

Continuous research and development ensures that the product offering is comprised of the latest, most advanced products for embryo transfer.

Media for bovine embryo production

- Manufactured under GMP conditions in dedicated clean room
- Gas-tight packaging for longer shelf life
- Convenient package sizes
- Quality control of each batch performed under veterinarian supervision
- Batch certificate available



EMBRYO COLLECTION

Recovery media

BoviFlush is available in plastic bottles and infusion bags. A scale on the bottle/bag simplifies dosage. Easy suspension with hook due to fold-out lug at bottom of bottle and round opening in the bag. Infusion bags with 3-way port configuration and sealed ports for hygienic fluid removal.

Complete formulation containing buffer solution, BSA or PVA and antibiotics. Ready for use, no additives required.

With BSA, 1 l, bag [REF. : 19982/6001](#)

With BSA, 2 l, bag [REF. : 19982/6002](#)

With BSA, 1 l, bottle [REF. : 19982/6003](#)

With PVA, 1 l, bag [REF. : 19982/6011](#)

With PVA, 2 l, bag [REF. : 19982/6012](#)



Holding medium

BoviHold is a dilution medium for direct transfer of cryopreserved embryos. It is a multiple application medium for:

- Holding embryos at room temperature in ambient conditions
- Transporting embryos
- Washing and rinsing embryos
- Loading embryos for transfer to recipient animal

Solution containing glucose, pyruvate, BSA, amino acids, growth factors and antibiotic.

BoviHold, 3 bottles of 10 ml each [REF. : 19982/6047](#)



Cryopreservation medium

BoviFreeze is an Ethylen-glycol medium for conventional, slow freezing of embryos and direct transfer after thawing. Contains a solution with D-glucose, Na-pyruvate, BSA and antibiotic.

BoviFreeze, 3 bottles of 10 ml each [REF. : 19982/6052](#)



Trypsin medium

BoviPlus 0,25% Trypsin wash is an pre-freeze enzyme washing medium, satisfying IETS protocol requirements to qualify bovine embryos for export.

BoviPlus 0,25% Trypsin wash, 10 ml [REF. : 19982/1300](#)

EMBRYO COLLECTION

Flushing catheters

Silicone catheters, 650 mm length (26"), 20-30 ml inflation cuff, high volume recovery ports, Luer activated valve, sterilized, 1/bag

- Silicone is characterized by a great chemical and thermal stability and, due to its excellent properties, is very widespread in medical applications
- High transparency and good visibility allow monitoring the flow during flushing and an easy control of the cleaning
- Silicone catheters are reusable
- Very good price / performance ratio

2 way, Luer Lock

CH 12	REF. : 19005/0100
CH 16	REF. : 19005/0102
CH 18	REF. : 19005/0103
CH 20	REF. : 19005/0104

2 way, Foley end

CH 12	REF. : 19005/0220
CH 16	REF. : 19005/0221
CH 18	REF. : 19005/0222
CH 20	REF. : 19005/0223

3 way, Foley end

CH 16	REF. : 19005/0230
CH 18	REF. : 19005/0231
CH 20	REF. : 19005/0232

Lampeter stainless steel tip catheter with 8 ports,

Luer activated valve, 1/bag

CH 12	REF. : 19006/0012
CH 15	REF. : 19006/0015
CH 18	REF. : 19006/0017

Neustadt Aisch/Rüsch catheter with 4 ports,

air pressure control bulb, 2/bag

CH 15	REF. : 19004/0015
CH 18	REF. : 19004/0018

Mandrin for flushing catheter

CH 12/16 (3-way)	REF. : 19007/0011
CH 14	REF. : 19007/0012
CH 15/16	REF. : 19007/0016
CH 18/20	REF. : 19007/0018

Cervix dilator

All stainless steel, fully autoclavable, facilitates introduction of embryo collection catheter

REF. : 19001/1000



EMBRYO COLLECTION

Filters for embryo collection

- **All-in-one** dual purpose filters and search dishes: embryos are recovered directly from the filter dish
- **Secure fixation** of the lid during collection and **easy to open** after collection (no screw cap)
- Integrated search dish engraved with a grid makes it **easy to search and find embryos** (mesh size is ideal for all bovine and equine embryo sizes)
- Filter mesh cannot get dry as it remains in contact with fluid
- Excess fluid is controlled and removed through outlet tubing with attached thumb clamp (entry hole is big enough to **ensure the necessary flow speed** of the flushing medium)
- Connection to all types of Y-tubing (bovine and equine) is possible
- **Absolute tightness**
- Sterilized

EmSafe

The EmSafe is ideal for both large and small embryos. The filter system automatically holds a minimum level of 60 ml flushing fluid in the dish. The angled filter mesh provides an optimal flow-through rate and the air vent in the lid is secured by a filter. The air outlet is also provided with a filter to securely hold embryos in the system.

EmSafe filter [REF. : 19010/6000](#)



EmGuard & MiniFlush

Vertical all-in-one embryo recovery systems with a large filter surface area. The vertical design provides higher flow rates and reduces plugging of the embryo filter. Due to their shallow design, the filters are perfectly suited for use with all microscopes even when the working distance is limited. Embryos are easily found with the aid of the highly visible grid.

With the MiniFlush and EmGuard the entire flushing procedure can be completed without the need to monitor fluid levels as the filter automatically maintains a constant 20 ml volume.

EmGuard filter [REF. : 19010/1000](#)

MiniFlush filter [REF. : 19010/2000](#)



Flushing tubings

Disposable Y-junction tubing with clamps, to be used in combination with any catheter. Tubing made of very smooth, flexible material. End for filter connection requires no extra adapter. Sterilised, 1/bag.

Y-tubing for embryo collection with the **EmSafe** filter

Luer end [REF. : 19011/0100](#)

Foley end [REF. : 19011/0200](#)

Y-tubing for embryo collection with the **EmGuard and MiniFlush** filter

Luer end [REF. : 19011/0300](#)

Foley end [REF. : 19011/0400](#)



LAB EQUIPMENT FOR EMBRYO TRANSFER

Stereo microscopes

Stereo zoom microscope, binocular, mirror for improved visualisation of zona pellucida, total magnification from 10x to 70x, eye-pieces 10x, 115-230V/ 50 - 60Hz

REF. : [12014/0000](#)

Stereo zoom microscope, binocular, with LED illumination, mirror for optimised visualisation of zona pellucida, magnification 7.5x to 50x, 2 eye-pieces 10x, 115-230V/50 - 60Hz

REF. : [12007/2000](#)

More models and options available, also trinocular. Please contact us for further information.



Temperature control

Heated stage, 180 x 180 x 10 mm

REF. : [12055/0003](#)

Control unit HT 50 for heated stage
110 V / 60 Hz or 230 V / 50 Hz

REF. : [12055/0050](#)

Bead bath

Temperature controlled incubator for sample tubes or straws of different sizes (up to 15 mm diameter), with steel balls inside for secure fixation. Temperature range between ambient and +55°C. Requires a separate control unit. Usable height: 135 mm

Bead bath

REF. : [12055/5000](#)

Controller HT 50 S for bead bath

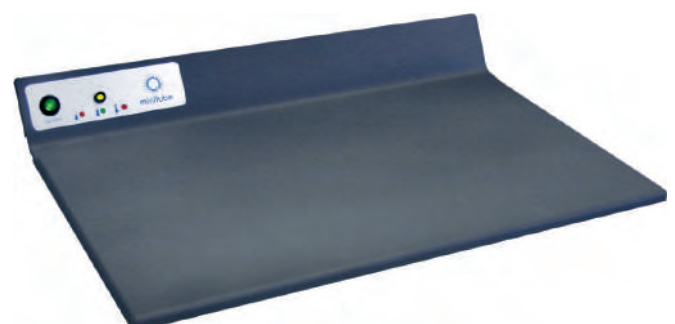
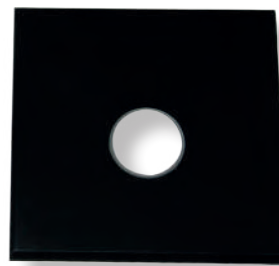
110 V/60 Hz or 230 V/50 Hz

REF. : [12055/0056](#)

Laboratory heating plate

Heated area: 470 x 260 mm, preset temperature (37°C), with integrated control unit and external power supply

REF. : [12055/0010](#)



LAB EQUIPMENT FOR EMBRYO TRANSFER

Freeze Control® embryo freezer

Freeze Control® embryo freezing systems are designed for practitioners. They use liquid nitrogen as cooling medium, and heat control for regulating temperature. Each system consists of a cryobath, a controller and a carry case.

Capacity: 23 x 0.5 ml or 46 x 0.25 ml straws

With controller CL 2200, 8 preinstalled programs, 1.5 l cryobath, external power supply

REF. : [19406/2200](#)

With controller CL 5500, 16 preinstalled programs, 1.5 l cryobath, inbuilt battery power pack

REF. : [19406/5500](#)

With controller CL 8800, 16 preinstalled programs, 3.8 l cryobath, external power supply

REF. : [19406/8800](#)

External power pack for CL 2200/CL 8800

REF. : [19407/0000](#)



Vitrification unit

Set for vitrifying embryos or oocytes in OPS (=open pulled straws) or conventional straws.

Unit consists of:

- Styrofoam box with stainless steel vitrification bath
- Material for vitrification
- DVD with instructions for working with OPS
- Manual with detailed description of media preparation

Vitrification unit

REF. : [19500/2000](#)

EMBRYO HANDLING

Embryo Handling

Micropipettor: easy and precise pipetting by handling wheel, for all sizes of capillary tubes up to 1 ml

Model A [REF. : 19022/0000](#)

Model B [REF. : 19022/0002](#)

(1) Steripette for embryo handling, 55 mm, individually packed, sterilized, 50/package, for use with 1 ml insulin syringe

[REF. : 19025/0050](#)

(2) Glass pipette for embryo handling, silicone treated (240°C), 100/package

[REF. : 19026/0100](#)

(3) Adapter for glass pipette for connection with 1 ml Luer syringe (Ref.: 19801/0001), sterilized

[REF. : 19026/1100](#)

(4) Embryo culture dish with lid, sterilized, 5 wells, rounded well edges, mouse embryo batch tested

[REF. : 19021/0005](#)

(5) Petri dish, plastic

diameter 35 mm [REF. : 19020/0035](#)

diameter 94 mm [REF. : 19020/0094](#)

diameter 145 mm [REF. : 19020/0145](#)

Petri dish, plastic, with grid

diameter 65 mm [REF. : 19020/2065](#)

diameter 94 mm [REF. : 19020/2094](#)

(6) Embryo transport vial, 5 ml, with snap cap and round bottom, sterilized, single packed, 500/package

[REF. : 19180/5006](#)

(7) 0.25 ml straw, crystal clear, sterilized, 5/package

[REF. : 19039/0005](#)

(8) 0.25 ml straw, clear, sterilized, 10/package, without seal

clear [REF. : 19042/0010](#)

yellow (direct transfer) [REF. : 19042/1010](#)

clear with sealing ball [REF. : 19041/0010](#)



Embryo Transfer and
OPU / IVP

EMBRYO HANDLING

0.25 ml straw, clear, sterilized, 10/package, with ID rod seal

White	REF. : 19040/0010
Beige	REF. : 19040/0011
Light yellow	REF. : 19040/0012
Light blue	REF. : 19040/0013
Red	REF. : 19040/0014
Pink	REF. : 19040/0015
Grey	REF. : 19040/0016
Light green	REF. : 19040/0018
Dark yellow	REF. : 19040/0020



Also available: 0.25 ml straw, transparent, 133mm, with sealing ball (Ref. [19041/0010](#))

0.25 ml straw 90 mm, clear, sterilized, 10/package

white, with ID rod, many colors available	REF. : 19040/90xx
with sealing ball	REF. : 19041/9010



ET ID rod, for sealing and identification of 0.25 ml straws, 100/package

White	REF. : 19046/0010
Beige	REF. : 19046/0015
Light yellow	REF. : 19046/0020
Light blue	REF. : 19046/0025
Red	REF. : 19046/0030
Pink	REF. : 19046/0035
Grey	REF. : 19046/0040
Light green	REF. : 19046/0050
Dark yellow	REF. : 19046/0060

Pen for marking, very fine, alcohol permanent

Black	REF. : 19045/0100
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Lab equipment

Manual sealer for straws, securely seals all kinds of straws by applying heat at the end of the straws (also in liquid nitrogen vapour). Consists of a plier welding head adapted for straws and a control unit for varying heat level. REF. : [13135/2500](#)



Straw label printer, prints labels suitable for 0.25/0.5 ml straws and for ID rods. Battery operated and with optional 110/220V connection. Thermo transfer print, resolution 300 dpi. All-in-one cassette with 140 pcs LN₂-resistant labels for 0.5 straws or ET ID rod included. REF. : [13138/0000](#)



Accessories

Cassette with 140 labels for 0.25 ml straws REF. : [13138/0125](#)

Cassette with 140 labels for 0.5 ml straws REF. : [13138/0150](#)

EMBRYO AND OOCYTE TRANSPORT

CryoSealer

Manual sealer using ultrasound technology.

Can be used for 0.25, 0.5 ml straws and 0.3 ml CBS™ crybiostraws. Ultrasound welding facilitates a perfect and uniform seal of each straw. Power supply: 100V-240V/60Hz

CryoSealer

REF. : 13135/0000



Portable incubators

Product features

- Constant temperature distribution due to the use of metal balls in the device
- Easy and secure fixation of vials and straws
- Absolutely dry and hygienic environment
- Customised temperature setting
- Electronic temperature control
- Temperature precision: +/- 0.5°C
- Power supply: 12 V DC (car battery) or rechargeable dry battery

Portable ET incubator

with electronic temperature control, set to 37°C **REF. : 19180/0001**

Portable incubator for transport of embryos/oocytes with digital temperature display, temperature range freely selectable between ambient and 55°C

REF. : 19180/0002

Accessories

Rechargeable dry battery, 12 V/7.5 Ah, capacity at +25°C: approx. 12 h

REF. : 19180/1210

Charger for battery

REF. : 19180/1200

Power supply unit for ET transport unit, 230 V

REF. : 17165/1395

Plastic vial 5 ml with snap cap

REF. : 19180/5006



Embryo Transfer and
OPU / IVP

Embryo transport kit

- Heavy duty box – impact and water resistant
- Holds temperature for 20 hours during transport (capacity of battery: 20 h)
- Pressure relief valve adjusts for rapid altitude changes during flights
- Electrical components isolated in metal enclosure
- Outer dimensions: 43 x 24 x 34 cm
- Weight of kit: approx. 10 kg

Transport box with dry battery and battery charger **REF. : 19180/2101**



EMBRYO TRANSFER

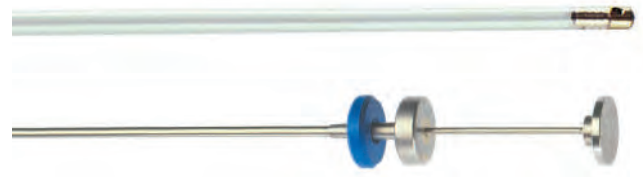
Transfit sheaths and stylets

Transfit Lateral, sheath with metal tip and side opening, to be used with 0.25 ml straws, sterilized, 5/package

REF. : 19240/1005

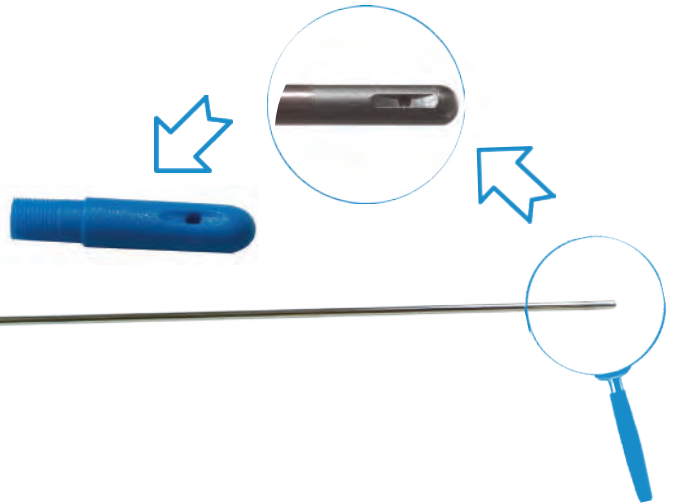
Transfer stylet to be used with disposable Transfit Lateral sheath

REF. : 19240/1000



Stainless steel ET instrument MT

- Best choice for heifers where cervix is hard to pass
- Sterilisable transfer instrument to be used without sheaths, with removable tip made of stainless steel, 1 side outlet, ring for marking opening position
- Disposable tip for transfer instrument MT made of plastic, sterilised, individually wrapped, 100/box



Transfer instrument

to be used with 0.25 ml straws

REF. : 19250/0000

Stainless steel tip

REF. : 19250/0989

Disposable tip

REF. : 19250/0991

ET devices heater

ET devices heater V2.0 (+25°C)

REF. : 17028/0225

Please refer to page 35 for detailed information.

Sanitary sheaths

- Hygienic sheath: thin plastic sheath
- Sanisheath: rigid hygienic sheath with perforable cap

Hygienic sheath, roll with 80 units

REF. : 19271/0080

Sanisheath, 25/package

REF. : 19270/0025



Laminar flow cabinet

- Appropriate for biotechnology and microbiology
- Equal air distribution due to laminator technology
- Digital controlled triple blower system
- High ease of use and maximum safety
- 2 sockets (1 on each side)
- Outside dimensions: 1016 x 679 x 1253 mm (W x D x H)
- Inside dimensions: 950 x 530 x 646 mm (W x D x H)

Laminar flow cabinet (vertical)

without stand and accessories, 230 V/50 Hz

REF. : 19390/1200

Ultrasonic device LOGIQ® V2

- Portable, easy to use ultrasound system for linear and convex sector ultrasound providing excellent image quality
- High quality documentation and data transfer system
- Various operating modes, standard features and system options
- High-resolution LCD monitor with high angle of sight
- Keyboard equipped with trackball and illuminated buttons
- Dimensions: 12 x 40 x 37 cm (H x L x W)
- Weight: 6kg with battery
- 100-240 VAC / 50/60 Hz

Ultrasonic device LOGIQ® V2

REF. : 23360/0000

Convex sector probe for LOGIQ® V2,

6.0 - 10.0 MHz

REF. : 23360/0002

Ultrasound probe holder

- Very light weight and smooth probe holder provides easy handling
- Material warms up to body temperature very quickly
- Slim design enables oocyte aspiration in young animals when combined with small probe
- Optimized needle outlets for recommended needles (23360/1200 and 23360/1250)

Needle unit is included. The probe holder is available to suit GE, SonoSite, Aloka, BCF or ECM probe.

GE REF. : 23400/0120

SonoSite REF. : 23400/0040

Aloka REF. : 23360/0600

BCF REF. : 23400/0115

ECM REF. : 23400/0413

Upon request we offer the device also adapted to other probes.



Support stand has to be ordered separately



Tubing set

- Tube made of firm material with low adhesion properties
- Cumulus-oocyte complexes will not stick to the walls
- With luer-lock fitting for a leak proof connection to the stopper assembly
- Sterilised and individually packaged

Tubing set

REF. : 23360/1000



Disposable oocyte aspiration needle

- Easy and inexpensive to replace
- New needle for each OPU session
- Short and easy to manipulate
- Suited for collecting follicular fluid from individual follicles
- 100 needles/pack

For cows (1.2 x 75 mm)

REF. : 23360/1200

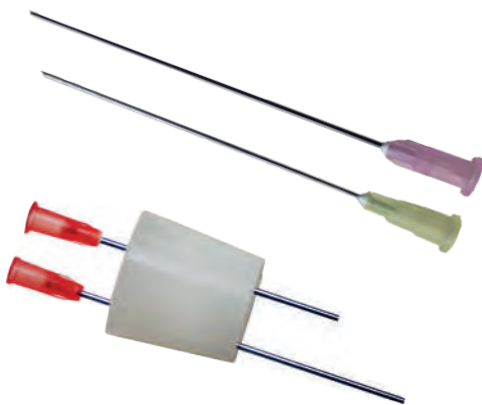
For heifers (0.9 x 70 mm)

REF. : 23360/1250

Stopper assembly

Snuggly connects to 50 ml tubes, 1/package

REF. : 23360/1100



Aspiration pump for OPU

- With media warming block
- Aspiration volume adjustable up to -375 mm Hg
- Warming temperature adjustable up to +50°C
- Available in 120 V or 240 V

Aspiration pump

REF. : 23362/0000



BoviPlus OPU recovery medium

Complete solution, containing Heparin to avoid blood coagulation during the OPU procedure.

BoviPlus OPU recovery medium, 500 ml

REF. : 19982/1281

Minitube IVP Media

Minitube media for in vitro production of bovine embryos are stock solutions which are produced freshly upon demand. Media are prepared with purest water under hygienic conditions using laminar air flow and sterile filtration.

- Minitube IVP media are produced according to standard formulas which provide reliable embryo development success rates, proven in a high number of peer reviewed publications
- Constant high quality of media provides optimal conditions for the in vitro production of bovine embryos in your lab
- Each batch of IVP media is certified for in vitro production of bovine embryos based on third party embryo development and toxicity tests
- The stock solutions can be stored unopened at +4 to +8°C for up to 6 months
- Working solutions are prepared individually depending on requirements and last a few days

Oocyte holding medium, TL HEPES stock solution, 20 ml

For preparation of holding medium for cumulus-oocyte complexes at ambient conditions (pH-stable under room air).

REF. : 19990/0050

TCM 199 stock solution for oocyte maturation, 20 ml

For preparation of maturation medium.

REF. : 19990/0010

Sperm preparation medium, TL stock solution for swim-up, 20 ml

For preparation of capacitation medium for sperm cells prior to use in fertilization.

REF. : 19990/0020

Fertilization medium, TL stock solution, 20 ml

For preparation of fertilization medium for coincubation of oocytes and sperm cells.

REF. : 19990/0030

Culture medium, SOF stock solution, 20 ml

For preparation of culture medium for embryos.

Without sodium pyruvate REF. : 19990/0040

With sodium pyruvate REF. : 19990/0041



According to medium used, different supplements need to be added for final preparation:

Stock Media	OCCS / FCS	FSH	LH	BSA	Sodium pyruvate	Gentamicin	Heparin	Essential amino acids	Non-essential amino acids
TL HEPES				+					
TCM 199	+	+	+						
TL capacitation medium				+	+	+			
TL fertilization medium				+	+		+		
SOF culture medium				+	(+)			+	+



Training and Education

Minitube regularly holds seminars in artificial insemination, embryo transfer, semen analysis and processing. All seminars blend theoretical knowledge and practical experience and are instructed by well-respected experts in the area of assisted animal reproduction.

Minitube is committed to accommodating the customers' needs and can provide education and training at Minitube facilities, partner facilities or at the customer site.

Minitube cooperates with leading international bovine centres, universities and research centres. The main training focus is to optimise the work flow during semen processing in the laboratory. Veterinarians and semen technicians gain the necessary know-how for a successful pregnancy after semen and embryo transfer.

Besides the standard seminars mentioned below, Minitube also offers individual seminars upon request.

Semen processing in the laboratory

- Lab equipment
- Semen collection
- Correct handling of ejaculates
- Semen analysis (incl. computer assisted analysis)
- Correct preparation of extender for fresh and deep frozen semen
- Semen processing
- Semen freezing
- Data management

Embryology / IVF

- Embryo analysis and handling
- Vitrification and cryopreservation
- In vitro production of embryos

AI and ET

- Heat detection
- Gynaecological examination
- Hormone treatment
- Thawing procedure
- Insemination technique
- Embryo transfer technique
- Liquid nitrogen handling
- Pregnancy detection
- Herd management

Please refer to our website for a review of our current training program:
www.minitube.com/Products/Training-and-Education/Bovine

Training model cow "Henryetta"

With "Henryetta", AI training advances to a new level.

This revolutionary training model cow offers new, unique training opportunities and provides more flexibility around the timing and location of your AI courses. Expenditures around providing live animals and slaughterhouse organs can be greatly reduced.

Trainers have more opportunities to improve the trainees' learning success by viewing and guiding them through the large windows. The reproductive organs are life-like and removable and can be used for initial demonstrations of anatomy and AI techniques.

Additionally, a difficult or easy cervix can be used among many more options for training variations. Training units can be repeated as often as necessary. All these benefits help to provide optimal training and ultimately an improved performance of AI technicians.

Artificial cow "Henryetta"

Model Holstein Friesian, 230 V	REF. : 22400/1040
Model Simmental, 230 V	REF. : 22400/1050
Model Holstein Friesian, 115 V	REF. : 22400/1041
Model Simmental, 115 V	REF. : 22400/1051

Technical data

- Footprint: 1320 x 680 mm
- Height: 1400 mm
- Weight: 53 kg
- Power supply: 230 V/50 Hz or 115 V/60 Hz

MOST REALISTIC AI TRAINING MODEL

Benefit from the **proven advantages** for AI training and enhancement of **animal welfare!**

Anatomically Correct

including full reproductive tract and rectum

Life Like Tail

for learning techniques on how to handle the tail

Removable Rump and Tail

for easy cleaning

Padded Pelvis

for realistic feeling of bone structure and pelvic fat



Barreling Pump

for imitation of pneumorectum

Viewing Windows

for control of trainees' actions

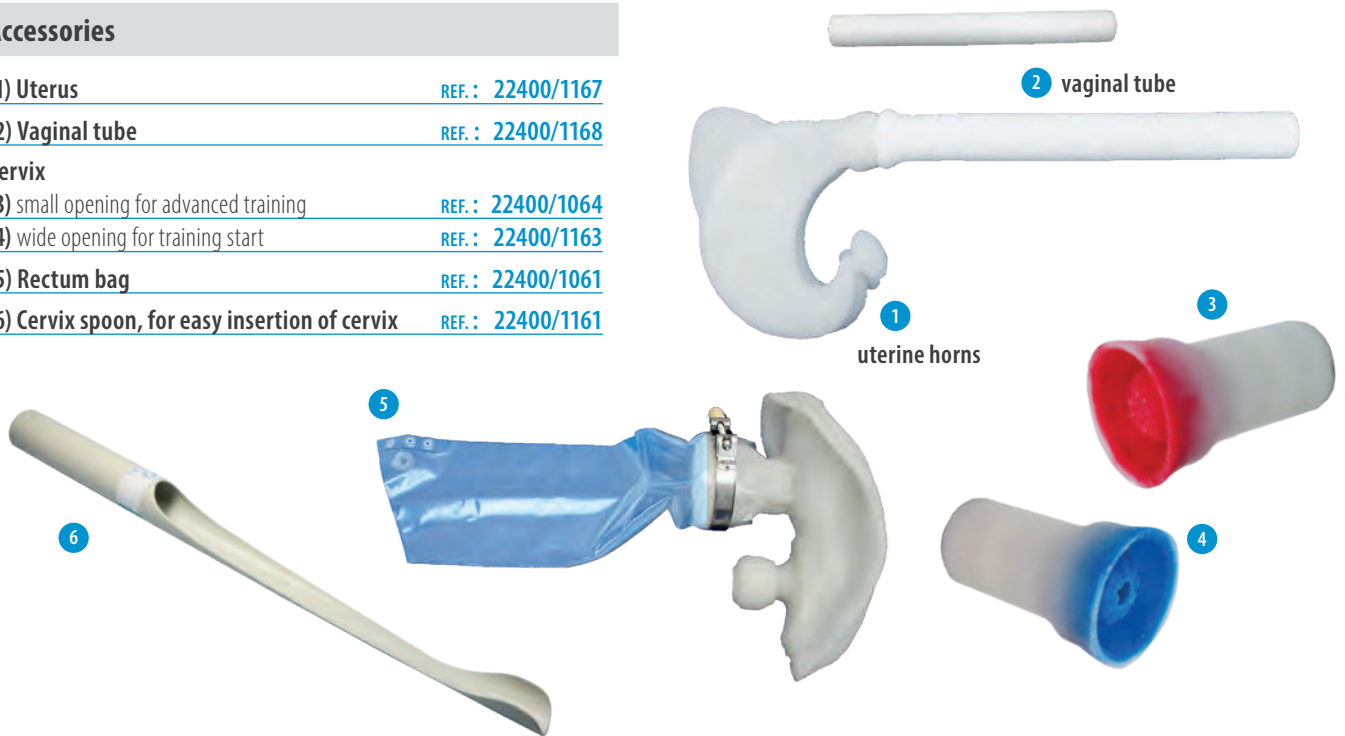
Temperature Controlled

for realistic body temperature

TRAINING AND EDUCATION

Accessories

(1) Uterus	REF.: 22400/1167
(2) Vaginal tube	REF.: 22400/1168
Cervix	
(3) small opening for advanced training	REF.: 22400/1064
(4) wide opening for training start	REF.: 22400/1163
(5) Rectum bag	REF.: 22400/1061
(6) Cervix spoon, for easy insertion of cervix	REF.: 22400/1161



Pregnancy and palpation model "Henryetta AI PLUS"

The new pregnancy and palpation model "AI PLUS" is a real evolution from our well-established Henryetta AI training cow! Students are now able to train the most important steps of manual pregnancy check and ovarian diagnostics.

A unique system of placing the uterus inside the cow body on an intestine cushion allows for a realistic feeling and palpation of the entire tract, including cervix, uterine horns and different variations of ovaries.

Students can check the most important signs of an early pregnancy (enlarged, fluid filled horn and membrane slip). Additionally, the trainer can set up different cycle stages by exchanging ovaries which feature different functional bodies (small follicles, large follicle, Corpus luteum, cyst).

- Pregnant cow uterus (approx. day 42) for training of manual pregnancy detection
- Foetus contained
- Pregnant horn enlarged and fluid filled to imitate amniotic fluids
- Two membranes to enable training of manual membrane slip for pregnancy diagnostics
- Interchangeable ovaries for ovarian palpation
- Intestine cushion for optimal palpation experience

(1) Pregnancy tract, pregnancy signs approx. day 42	REF.: 22400/1171
(2) Intestine cushion	REF.: 22400/1179
Ovary	
(3) small follicles	REF.: 22400/1181
(4) large follicle	REF.: 22400/1182
(5) Corpus luteum	REF.: 22400/1185
(6) cystic	REF.: 22400/1189





Minitüb is an ISO 9001:2015 certified company.