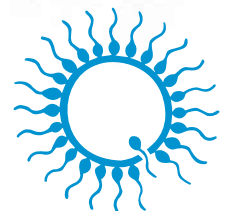




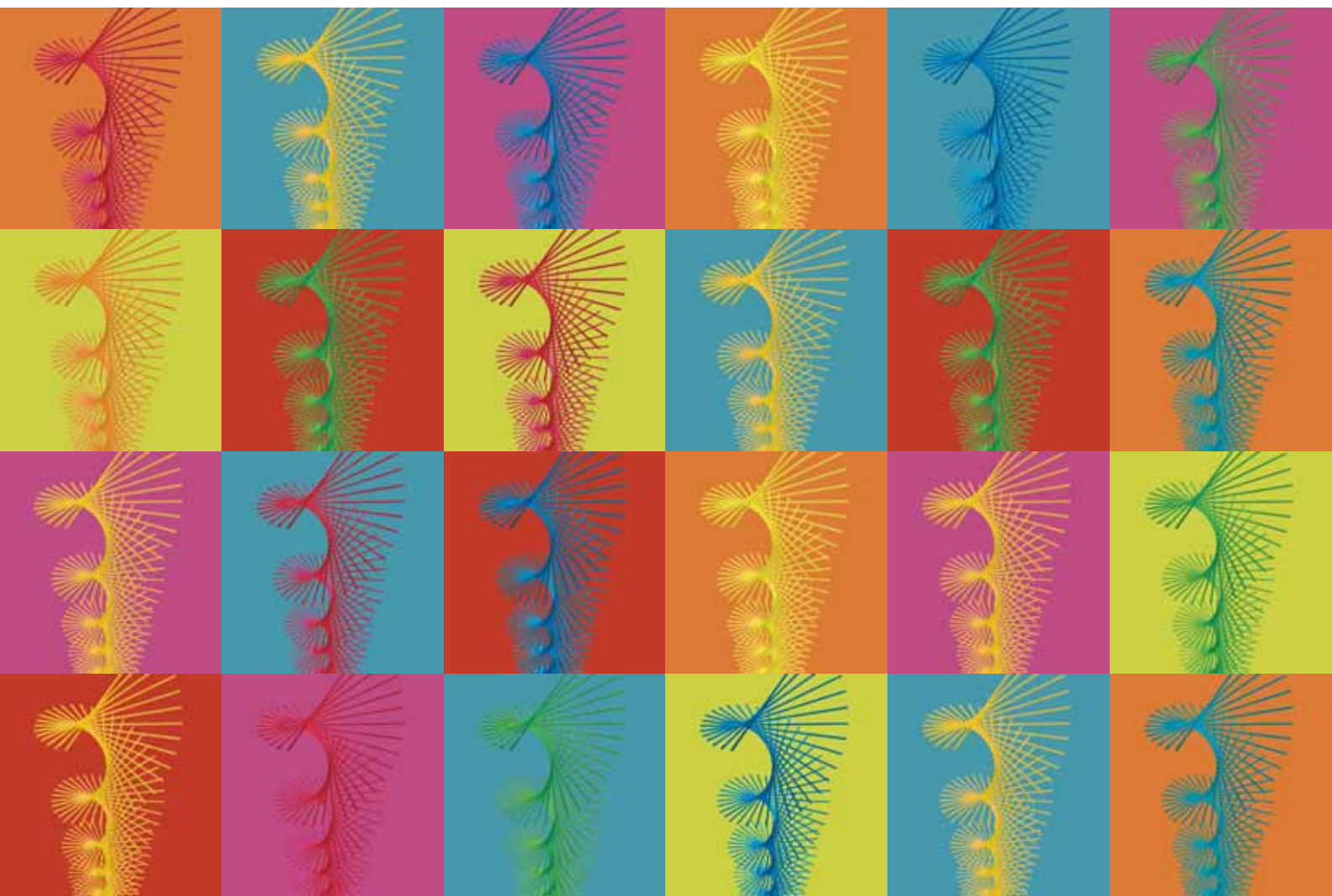
2011



Animal Reproduction Technology
Bovine



minitube



*Innovative ideas, modern production techniques
and a keen appreciation of product quality are the basic
ingredients of our knowledge and your success.*

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WORLD WIDE ACTIVITIES

Minitüb, Germany

Phone: +49 8709 9229 0
Fax: +49 8709 9229 39
E-Mail: minitube@minitube.de

Minitube of America

Phone: +1 800 646 4882
Fax: +1 608 845 1522
E-Mail: usa@minitube.com

Minitub Ibérica

Phone: +34 977 845 397
Fax: +34 977 845 398
E-Mail: info@minitub-iberica.com

Minitube Canada

Phone: +1 800 500 7978
Fax: +1 519 485 0340
E-Mail: canada@minitube.com

Minitube Central Europe

Phone: +421 377 877 915
Fax: +421 377 877 916
E-Mail: mtce@minitube.sk

Minitube de Mexico

Phone: +52 800 216 9282
Fax: +52 442 248 2746
E-Mail: mexico@minitube.com

Minitub Chile

Phone: +56 9 97452036
Fax: +56 2 2014 118
E-Mail: minitub@minitubchile.cl

Minitub do Brasil

Phone: +55 51 3222 7876
Fax: +55 51 3346 4379
E-Mail: minitub@minitube.com.br

Minitube Australia

Phone: +61 3 5342 8688
Fax: +61 3 5342 8788
E-Mail: info@minitube.com.au

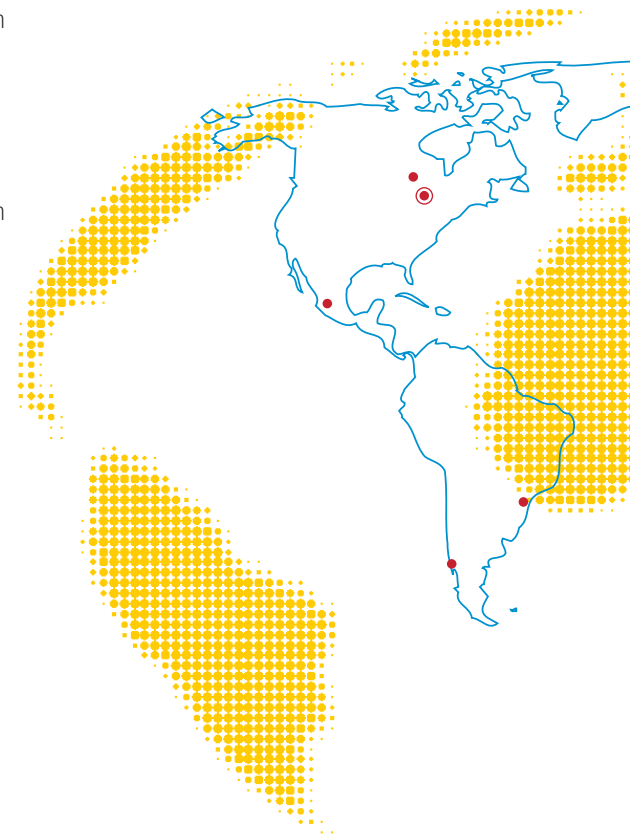
Minitube Indonesia

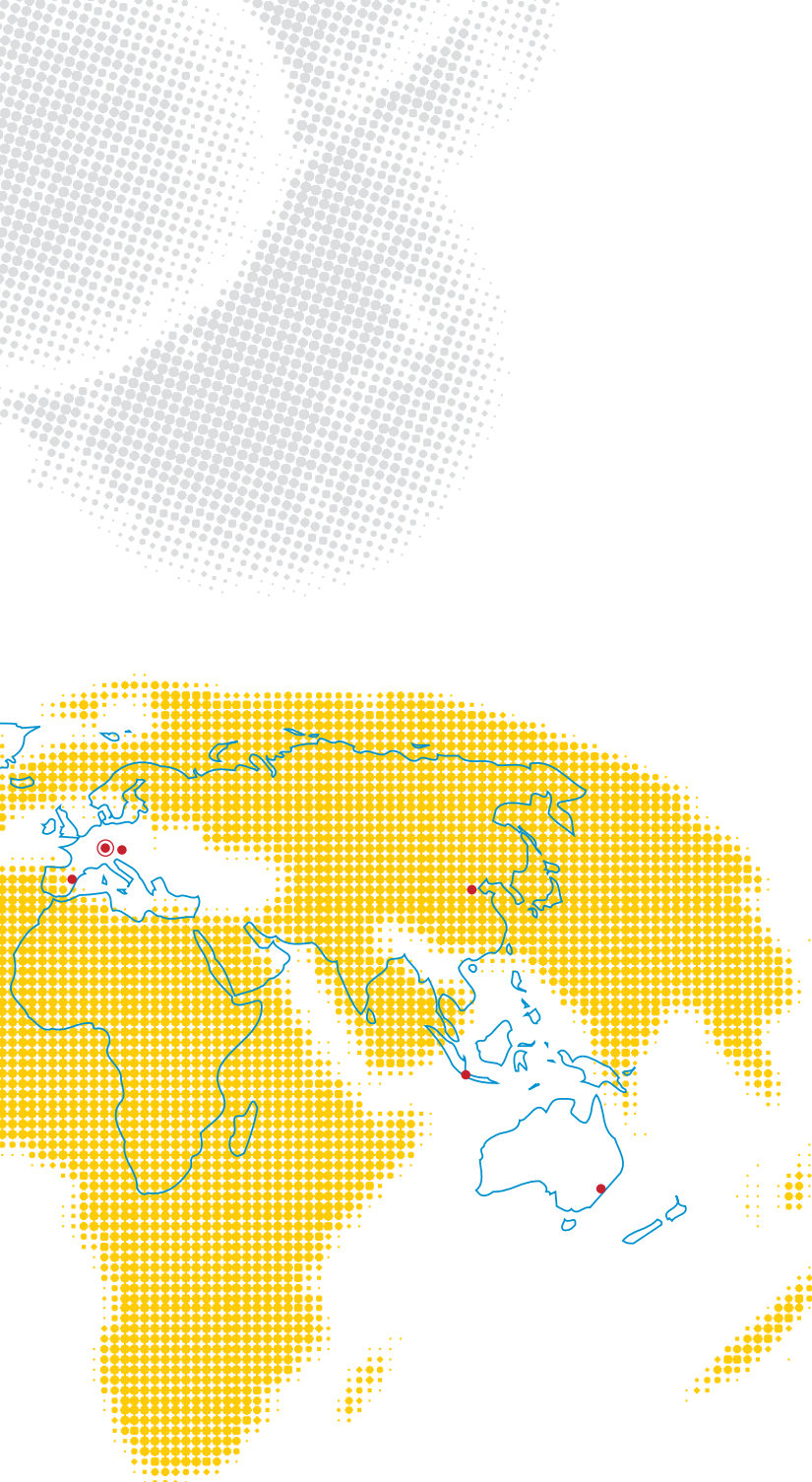
Phone: +62 21 7721 2471
Fax: +62 21 7720 4516
E-Mail: zulkifli@minitube-indonesia.com

Minitube China

Phone: +86 10 8240 3857
Fax: +86 10 8240 3785
E-Mail: minitube_bj@yahoo.com.cn

If Minitube is not represented in your country, please contact Minitüb Germany.





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 Minitüb 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 Minitüb, 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.

With Minitube of America's international centre for biotechnology in Wisconsin, USA, the Minitüb group relies on high capacity facilities for training and research. Here 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. Important elements are furthermore biotechnical services for our customers, as well as training and technology transfer.

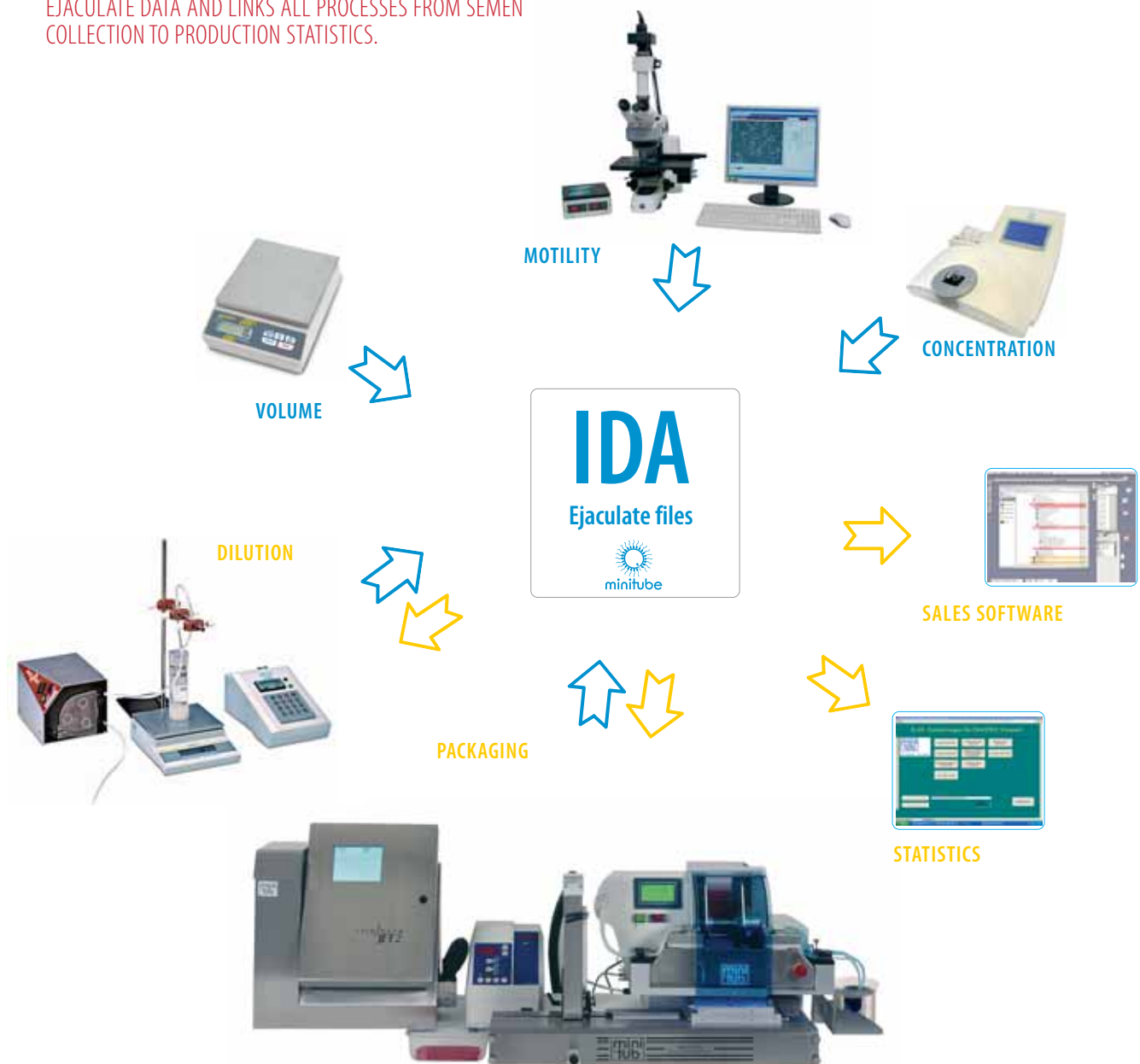
Originating in Tiefenbach, Bavaria, Minitüb has established its competence over many years in more than 100 different countries all over the world. With several companies, highly-trained local representatives, and multilingual professionals handling exports, we keep in contact with the international 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
MANAGING DIRECTOR

IDA AND IDENT: MINITUBE SOFTWARE FOR THE BULL SEMEN LABORATORY

THE IDA LABORATORY SOFTWARE INTEGRATES ALL EJACULATE DATA AND LINKS ALL PROCESSES FROM SEMEN COLLECTION TO PRODUCTION STATISTICS.



Your benefits

- IDA introduces a high security level in your lab
- the whole process is standardized and optimized
- automatic integration of ejaculate parameters through interfaced hardware
- automatic data transmission to and from the straw printing and filling system
- IDA helps to save time and labour
- every step is documented and verifiable
- statistical analysis of all relevant production data
- IDA can easily be connected with other software applications
- IDA is a very user friendly software

IDA AND IDENT: MINITUBE SOFTWARE FOR THE BULL SEMEN LABORATORY

IDA is a flexible, multitasking and modular computer program, based on an Access data base. 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 Sperm Vision™ transfer 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 rationalize laboratory work. Production data is provided in real time for administration and sales. Due to the Access data base the connection is carried out comfortably.

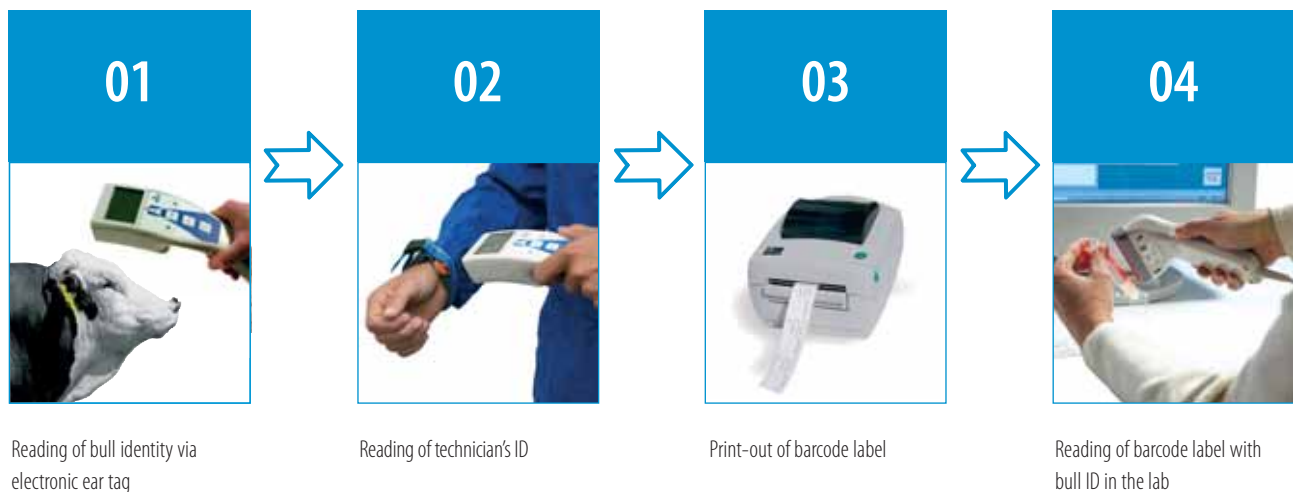
A special menu item provides evaluation and administration of bull and ejaculate data.

IDA is available in multiple languages.



REF. : 18500/0000

ELECTRONIC BULL IDENTIFICATION WITH IDENT

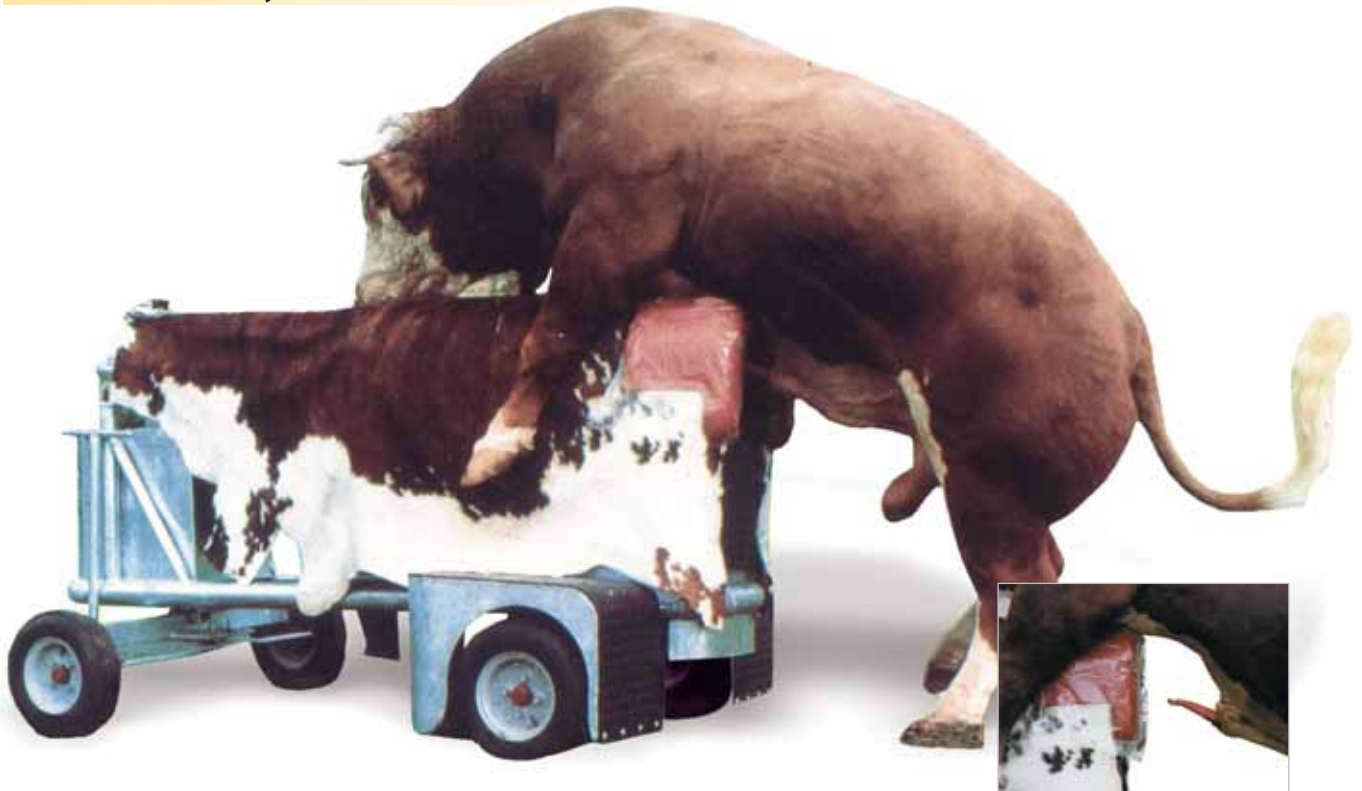


IDENT is available in addition to IDA or as an independent program: The software contains collection planning, the identification of bulls via electronic ear tags, the electronic identification of semen collection staff and the print-out of labels with bull identity, bar code and further information about the semen collection.

REF. : 18000/0015

BULL SEMEN COLLECTION

The Mobile Dummy Cow



Your benefits

- comfortable semen collection for the bull
- safe and easy operation
- optimal stimulation of the bull with controlled forward and backward movements
- minimum risk for the bull due to the separated, smooth hindquarters
- optimal hygiene when used with disposable sanitary covers

Product features

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

Bovine Collection Dummy, mobile REF. : 11000/1000

Bovine Collection Dummy, stationary REF. : 11000/0500

Accessory

Disposable sanitary cover, 100/package REF. : 11000/0200



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 | REF. : 11022/0002 |
| rough | REF. : 11022/0003 |

| | |
|----------------------|-------------------|
| Director cone | REF. : 11024/0000 |
|----------------------|-------------------|

| | |
|--|-------------------|
| Collection vial , glass, graduated, 15 ml | REF. : 11023/0015 |
|--|-------------------|

| | |
|---|-------------------|
| Warming bag , neoprene, long, blue | REF. : 11025/0058 |
|---|-------------------|

| | |
|-----------------------------------|-------------------|
| Warming bag , 18 cm, green | REF. : 11025/0018 |
|-----------------------------------|-------------------|

| | |
|-----------------------------------|-------------------|
| Warming bag , 35 cm, green | REF. : 11025/0035 |
|-----------------------------------|-------------------|

| | |
|--------------------|-------------------|
| Rubber ring | REF. : 11022/0001 |
|--------------------|-------------------|



Additional accessories

| | |
|-----------------------|-------------------|
| Greasing stick | REF. : 11905/0050 |
|-----------------------|-------------------|

| | |
|-------------------------|-------------------|
| MiniLube , 3.8 l | REF. : 17116/7010 |
|-------------------------|-------------------|

| | |
|------------------------|-------------------|
| Vaseline , 1 kg | REF. : 11905/0100 |
|------------------------|-------------------|

| | |
|--------------------|-------------------|
| Thermometer | REF. : 11027/0000 |
|--------------------|-------------------|

| | |
|--------------------------------|-------------------|
| Plastic collection vial | REF. : 11023/0018 |
|--------------------------------|-------------------|

| | |
|--|-------------------|
| Tulip shape collection glass , 8 ml | REF. : 11023/0016 |
|--|-------------------|

| | |
|--------------------------------|-------------------|
| Rubber stopper for vial | REF. : 11023/1590 |
|--------------------------------|-------------------|

Sterilizer Sterivar

Low pressure sterilizer, 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.

| | |
|----------------------------------|-------------------|
| Sterilizer Sterivar 230 V | REF. : 11050/0015 |
|----------------------------------|-------------------|

| | |
|----------------------------------|-------------------|
| Sterilizer Sterivar 115 V | REF. : 11050/0014 |
|----------------------------------|-------------------|

Technical features

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

Accessories

| | |
|---------------------------------|-------------------|
| Roller base for Sterivar | REF. : 11051/0000 |
|---------------------------------|-------------------|

| | |
|---|-------------------|
| Sterivar insert for 15 latex cones | REF. : 11051/1015 |
|---|-------------------|

| | |
|--|-------------------|
| Spreader for inner liner, stainless steel | REF. : 11051/0550 |
|--|-------------------|



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

Power supply: 115 V/ 60 Hz or 230 V/ 50 Hz.

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

Accessories

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

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

Probe 1" REF. : [11900/0020](#)

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



Warming Cabinet 700

Product features

- Suitable for artificial vaginas and accessories
- Casing and interior made of stainless steel
- Electronic control of temperature and air circulation
- Timer with functions for heating time and delay
- Temperature range: +30°C up to +250°C

REF. : [14135/0400](#)

Technical features

- Volume: 416 l
- 2 insert racks
- Dimensions (w x h x d):
 - inside: 1 040 x 800 x 500 mm
 - outside: 1 190 x 1080 x 650 mm
- Power supply: 115 V/ 60 Hz or 230 V/ 50 Hz
- Power consumption: 1 800 W



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

Computerised Motility Analysis

Your benefits

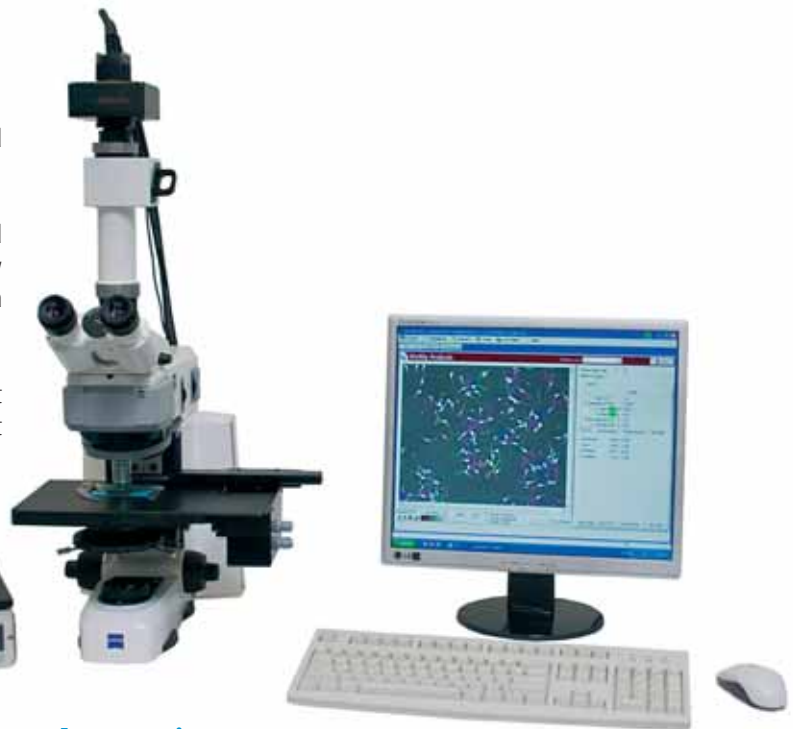
- **Precision:** Sperm Vision® provides excellent sperm cell recognition and a highly precise sperm count.
- **Optimized process:** Sperm Vision® standardizes evaluation and calculation criteria, which significantly improves the accuracy of motility and concentration analysis. The calculated "security margin" for spermatozoa per dose can be lowered considerably.
- **Morphology:** The user has got the possibility of a comfortable, fast morphology evaluation. Morphological criteria can optionally account for the calculation of the extender volume.
- **Extended Motility:** Besides the standard WHO parameters, hyperactivity, linearity and user-defined parameters can be evaluated.
- **Viability:** this tool automatically assesses damaged/not damaged semen cells by using a fluorescence stain. Requires a microscope with fluorescence equipment.
- **Individual settings:** The user can individually define which criteria and ponderation account for the dose calculation.
- **Documentation:** Pictures and complete films, as well as all analyse data are archived. Thus Sperm Vision® allows retrospective monitoring to demonstrate the quality of each frozen or delivered semen dose, through an elaborate report module.

Technical features

- Real time and simultaneous motility and concentration assessment
- Rapid analysis: 7 measuring fields in 7 seconds
- Comparative measurements of up to 16 fields with average value calculation
- Motility parameters DCL, DAP, DSL, VCL, VAP, VSL, LIN, WOB, STR, BCF, AOC, ALH
- User-defined tolerance values and standard deviations
- Morphology tool with automatic sperm recognition
- Viability tool for SYBR 14/PI dye
- Hoechst dye evaluation live/dead
- Compatible with IDA/ILAS; multi purpose evaluations with Sperm Vision® reports; all analysis results can be printed out or exported to other programs (Excel, Word, HTML...)
- Can be combined with a wide variety of microscopes

Sperm Vision® Professional system includes software, digital camera, PC with complete accessories

REF. : 12520/3502



Accessories

Zeiss Axioscope A1

Phase contrast microscope with ergonomic support and base plate, excellent image quality, can be retrofit with a ScanStage or with fluorescence equipment

REF. : 12008/0045

CASA Objective

20x negative phase contrast, Zeiss

REF. : 12006/0231

Zeiss Camera Adapter

0.63x

REF. : 12108/0004

ScanStage

Automated scanning microscope stage, heated, positioning precision: $\pm 5 \mu\text{m}$, suitable for different microscopes

REF. : 12520/3104

HT300

Control unit for 12520/3104

REF. : 12055/0302

Alternative to Sperm Vision® Professional:

Sperm Vision® Production

this CASA system is tailored for the production lab and includes a standard microscope. It provides proven parameter settings for the analysis of one species (can be upgraded). A semen analysis report is integrated.

REF. : 12520/7000

MICROSCOPY

Phase Contrast Microscope CX 31

- 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, 100x 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 HT50 with digital temperature display and freely selectable temperature adjustment

Binocular REF. : 12010/2000

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



Semen Dyes

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

Farely stain, for morphological evaluation,
consisting of 3 components, 250 ml each 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



PHOTOMETER SDM6

Photometer SDM6

Your benefits

- large touch screen, easy handling
- programs for the determination of sperm concentration 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
- optional: integrated printer for printout of production data per 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 the determination of semen concentration and for dose calculation, with integrated printer

REF. : [12300/0006](#)

Photometer SDM6, without printer

REF. : [12300/0008](#)

Accessories

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](#)

Varipette 10 - 100 μ l, with digital display

REF. : [12425/4810](#)

Pipette tip yellow, 1 000/package

REF. : [12425/9409](#)

Automatic diluter-dispenser for precise sample preparation. Use of disposable capillaries for semen sampling

Power supply: 110 - 220 V

REF. : [12421/0503](#)



BULL SEMEN DILUTION

Semen Extenders

Andromed®

- Egg yolk free medium for frozen and liquid bovine semen
- High fertility rates without ingredients of animal origin
- No risk of microbiological contamination
- Easy to prepare, time saving

Andromed® 200 ml, for a total of 1 litre of extender, with antibiotic formula according to EC requirements

REF. : [13503/0200](#)

Andromed® CSS,

one-step, 200 ml, without antibiotics

REF. : [13503/1200](#)

Andromed® CSS,

two-step extender, 100 ml, fraction 1

REF. : [13503/1250](#)

Andromed® CSS,

two-step extender, 100 ml, fraction 2

REF. : [13503/1251](#)

Triladyl® Since decades one of the most successful extenders for bull semen freezing in the world. Used for one-step semen processing at room temperature, it stands for constantly optimal results of your bull population, even when using highly diluted ejaculates.

Triladyl® 250 g, for a total of 1250 g of extender, with antibiotic formula according to EC requirements

REF. : [13500/0250](#)

Triladyl®, CSS, 250 g, without antibiotics

REF. : [13500/1250](#)

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 cocktail AB for the production of a total of 1000 g extender.

Biladyl®, fraction A

REF. : [13500/0004](#)

Biladyl®, fraction B, with glycerol

REF. : [13500/0006](#)

Antibiotic supplement for 2-step extender. Antibiotic formula in powder according to CSS protocol, contains 300 mg Gentamicin, 60 mg Tylosin, 180 mg Lincomycin, 360 mg Spectinomycin.

REF. : [13500/0005](#)

Antibiotic supplement for 1-step extender. Antibiotic formula in powder according to CSS protocol, contains: 550 mg Gentamicin, 110 mg Tylosin, 330 mg Lincomycin and 660 mg Spectinomycin.

REF. : [13504/9000](#)

Steridyl® 500 ml concentrate, for a total of 1250 ml of extender, sterilized, requires no addition of egg yolk, with antibiotic formula according to EC requirements

REF. : [13500/0260](#)



BULL SEMEN DILUTION

Magnetic Stirrer

Magnetic stirrer, without heater, 14 W REF. : [14230/0000](#)

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](#)

Accessories

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

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

Stirring bars

25 mm REF. : [14240/7125](#)

30 mm REF. : [14240/7130](#)

40 mm REF. : [14240/7140](#)

50 mm REF. : [14240/7150](#)



Smart Dispenser

- The automatic, electronically controlled dispensing system for bull semen extender adds security to your process
- Maximum degree of precision in terms of dispensed extender volume (± 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

Smart Dispenser for bull semen production, control unit with balance

REF. : [13200/0700](#)

Pump for Smart Dispenser,

with stand, tubing and sinker

REF. : [13200/0790](#)

Water Baths

Water bath with temperature control and water circulation

stainless steel, capacity: 45 l, with insert racks for 20 diluent bottles and 72 semen collection vials

inner dimensions (l x w x h): 590 x 350 x 220 mm

230 V, 50 Hz, 2 800 W

REF. : [14082/0600](#)

Water bath with temperature control, stainless steel, capacity: 10 l

inner dimensions (l x w x h): 350 x 210 x 140 mm

Power supply: 115 V/ 60 Hz or 230 V/ 50 Hz, 1 200 W

REF. : [14079/0001](#)



COLD HANDLING CABINET

Cold Handling Cabinet

Spacious cold handling cabinet made of stainless steel for semen processing at working temperature +5°C. Timer for automatic defrosting cycle. Cover made of acrylic glass. Installed on heavy duty rolls

available in 2 sizes:

| | working area (cm - W x D) | outside dimensions (cm - W x D x H) | 230 V | 115 V |
|---------------|------------------------------|--|-------------------|-------------------|
| approx. large | 200 x 90 | 221 x 114 x 128 | REF. : 14335/0403 | REF. : 14335/0400 |
| standard | 200 x 67 | 216 x 91 x 127 | REF. : 14335/0401 | REF. : 14335/0398 |

Shorter, custom made versions are available.

Technical features

- Optionally with hydraulic height adjustment
- Height of refrigerated area: 500 mm (340 mm below acrylic cover in the front)
- Digital temperature controller
- 4 electric connectors in the working area
- 50 mm openings on each side for cables
- Power supply: 230 V/ 50 Hz or 115 V/ 60 Hz
- Power consumption: approx. 450 W



COMBISYSTEM

Minitube CombiSystem

for optimal efficiency in the bull semen laboratory: the combination of the 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
- convertible from 0.5 ml to 0.25 ml straws and vice versa, without changing any part
- fully electronic control of all components
- semen level control and automatic stop of straw supply at the end of the ejaculate
- both devices, the filling and sealing machine MPP Quattro and the MiniJet printer may also be separated and operated individually, at any time
- includes software with bull data files, can be combined with IDA laboratory software (see page 5)
- requires no extra control unit, only standard PC (included)

CombiSystem, composed of MPP Quattro and MiniJet, complete set

REF. : [13018/0002](#)

CombiSystem, composed of MPP Uno and MiniJet, complete set

REF. : [13017/0002](#)



CombiSystem, composed of MPP Quattro and MiniJet printer

AUTOMATIC FILLING & SEALING OF STRAWS

MPP Quattro

Fully automatic filling and sealing machine for 0.25 and 0.5 ml semen straws.

Your benefits

- up to 4 straws are filled and sealed per cycle. Number of straws can be freely selected: 1, 2, 3 or 4 straws at a time.
- 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.
- touch screen guided conversion from and to 0.5/0.25 ml straws without exchange or replacement of any parts.
- the filling and sealing area is completely closed, fully hygienic and safety conditions are guaranteed.
- optimal control by the operator: processing of 4 straws at a time can easily be observed.

- very quick exchange of blocks with 4 filling and suction nozzles between ejaculates.
- dual ejaculate control through built-in adjustable balance and sensor at the filling tube: automatic switch from 4 needle filling to 1 needle filling when the built-in balance indicates that the reservoir holding the ejaculate is almost empty.

Practically no semen is wasted and the ejaculate is used up to the very last drop.

Technical features

- Machine can be operated at room temperature and in cold room or cabinet.
- Exchangeable hopper: hopper holds either 2 200 0.25 ml straws or 1 300 0.5 ml straws.
- Capacity: 15 000 straws/hour
- No wearing parts. Very easy and quick cleaning.
- Can be included into the Minitube CombiSystem with the latest MiniJet printer model Leibinger.
- Power supply: 110 V /60 Hz or 230 V /50-60 Hz, as defined according to project needs.

MPP Quattro, complete

REF. : 13018/0000



Accessories

Straw dish, stackable

REF. : 13012/0003

Filling block with 4 nozzles

for 0.25 ml straws

REF. : 13018/0013

for 0.5 ml straws

REF. : 13018/0018

Suction block with 4 nozzles

for 0.25 ml straws

REF. : 13018/0022

for 0.5 ml straws

REF. : 13018/0027

Fixing unit for filling and suction blocks, stackable, stainless steel

REF. : 13017/0050

Washer for 0.25 ml and 0.5 ml nozzles, 5 000/bag

REF. : 13021/3001

Filling/suction tubing, 380 mm, sperm friendly material (silicone), bevelled edge, 100/aluminum foil bag

REF. : 13021/3800

Disposable semen cone, 100/bag

REF. : 13018/0100

AUTOMATIC FILLING & SEALING OF STRAWS

MPP Uno

Automatic filling and sealing machine for 0.25 and 0.5 ml straws

Your benefits

- the MPP Uno seals and fills 1 straw per cycle. Therefore the machine is ideal for handling small volumes of valuable ejaculates. The sealing is performed by ultrasound.
- conversion between 0.25 ml straws and 0.5 ml straws without exchanging any parts within only a few minutes. The exchangeable hoppers hold either 2 200 straws of 0.25 ml or about 1 300 straws of 0.5 ml.
- a very compact device which requires minor space. The vacuum pump and the pressure controller are integrated in the device. The ultrasonic generator is integrated in an external casing that can be mounted at a distance of up to 2.5 m. ON/OFF switch directly on the machine.
- the filling and sealing area is completely closed: Best hygienic and safety conditions are therefore fully guaranteed. Optimal control by the user: the filling process is performed right in front of the user, who can easily observe the procedure.

Technical features

- Capacity approx. 4 000 straws/hour
- No wearing parts. Very fast and easy cleaning.
- Machine dimensions: 370 x 460 x 320 mm (W x D x H)
+ ultrasound generator
- Power supply: 110 V / 60 Hz or 230 V / 50 Hz

Accessories

| | |
|---------------------------|-------------------|
| Exchangeable straw hopper | REF. : 13017/0005 |
| 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, 5 000/bag | REF. : 13021/3001 |
| Filling tubing, 100/bag | REF. : 13021/3800 |

MPP Uno, complete REF. : 13017/0000



PRINTING MACHINES FOR SEMEN STRAWS

MiniJet

Professional printing system for 0.25 ml and 0.5 ml straws

Your benefits

- combines excellent print quality with high print speed
- suitable for all types of semen straws
- Minitube software with clear and user-friendly menus
- exchangeable hopper fits both straw sizes
- 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
- the ink nozzle is automatically closed when the printer is switched off, thus avoiding its blockage caused by dried ink. Steady once per day tuning of ink viscosity guarantees optimal start-up conditions
- low operational cost: the ink tank is only refilled instead of replacing it altogether
- ink run time is not limited by electronic timer
- the inkjet printer is equipped with a touch screen for direct input of system commands and display for diagnostics
- 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
- Transport unit for straws with exchangeable hopper
- Control unit for electronics and power supply of the transport unit

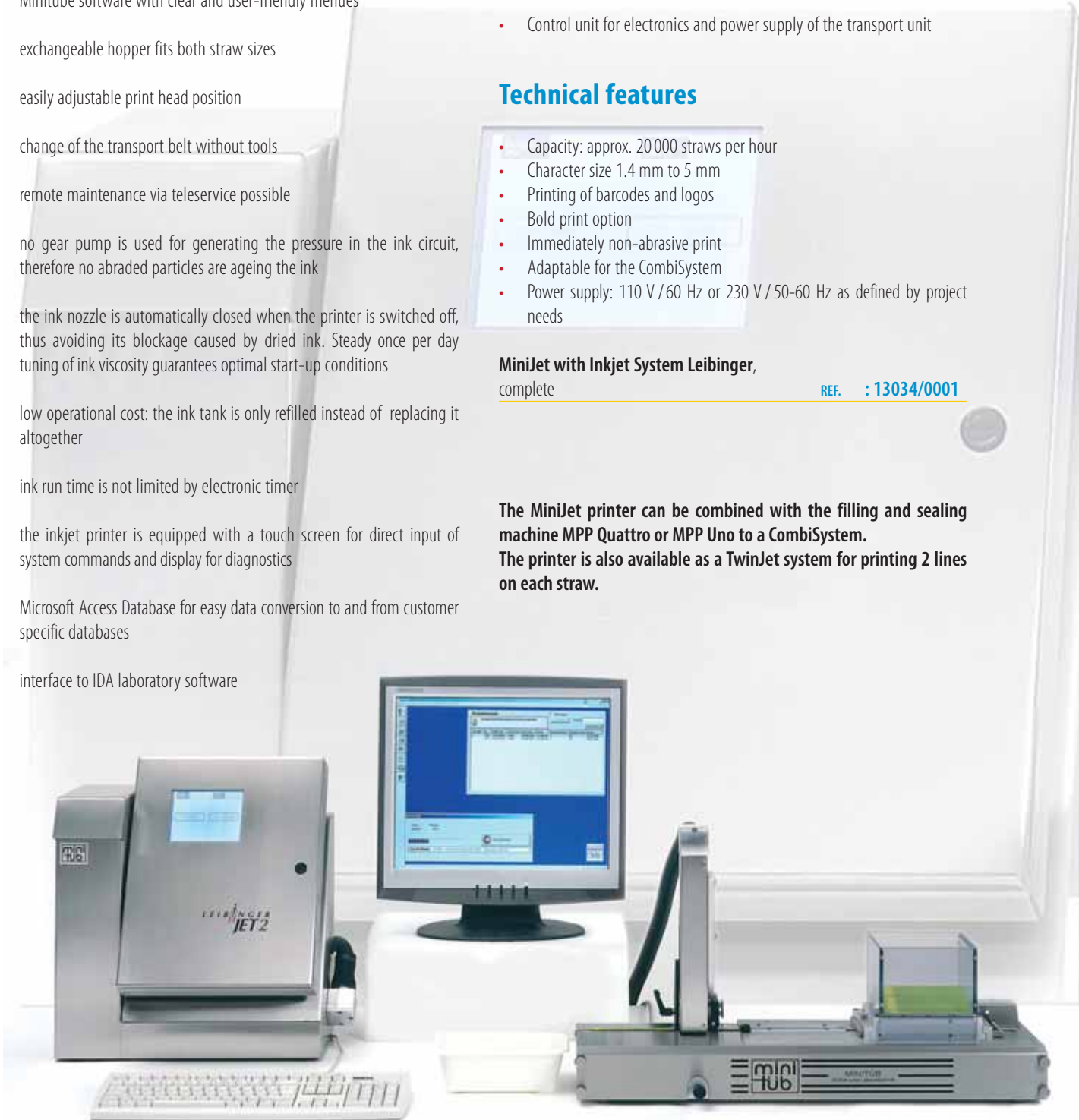
Technical features

- Capacity: approx. 20 000 straws per hour
- Character size 1.4 mm to 5 mm
- Printing of barcodes and logos
- Bold print option
- Immediately non-abrasive print
- Adaptable for the CombiSystem
- Power supply: 110 V / 60 Hz or 230 V / 50-60 Hz as defined by project needs

MiniJet with Inkjet System Leibinger,
complete

REF. : 13034/0001

The MiniJet printer can be combined with the filling and sealing machine MPP Quattro or MPP Uno to a CombiSystem. The printer is also available as a TwinJet system for printing 2 lines on each straw.



PRINTING MACHINES FOR SEMEN STRAWS

EasyCoder 2.0

The innovation in semen laboratories: printing of straws without ink, now with new software

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 without solvents
- easy handling, little maintenance required
- easy and quick conversion between different straw sizes

EasyCoder printer 2.0, complete REF. : [13038/0000](#)

EasyCoder software upgrade to version 2.0 REF. : [18800/0001](#)



Technical features

- Thermal transfer printer with automatic straw supply
- Output: 3 600 straws per hour
- Windows based Minitüb 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 (l x w x h): 690 x 370 x 310 mm (PC not included)
- Power supply: 110-230 V AC, 50/60 Hz

Accessories

Color ribbon for straw printer EasyCoder

| | |
|--------|-----------------------------------|
| black | REF. : 13038/0010 |
| gold | REF. : 13038/0012 |
| red | REF. : 13038/0015 |
| silver | REF. : 13038/0017 |

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 maximum 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 sterilizable filling nozzle with hose and sinker per ejaculate
- Capacity: approx. 8 000 straws per hour
- Power supply: 230 V/ 50 Hz

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, 1 000/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



SEMIAUTOMATIC STRAW PROCESSING

Semiautomatic System SFS 133

For 0.25 ml and 0.5 ml straws

Semiautomatic Filling & Sealing Machine SFS 133, with vacuum bottle, filling and suction head for 0.5 ml straws

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](#)



Technical features

- Straws are filled and sealed 6 by 6
- Sealing is done securely and hygienically with metal or glass sealing balls
- The glass sealing balls are available in different colors
- An air bubble of 1 cm is automatically produced in each straw
- Capacity: approx. 2 000 straws/hour

AHDR/HDR Printers

For 0.5 or 0.25 ml straws and Minitubes, with counter.

Capacity: approx. 7 200 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, 1 000 ml REF. : [13056/9000](#)

Doublestick tape REF. : [13050/0010](#)



MINITUBE SEMEN STRAWS



For over 25 years, the Minitube 0.25 ml and 0.5 ml semen straws have been used worldwide as a standard for the freezing of semen from bulls, stallions, boars, and many other species. Minitube's quality control process, production techniques, and material selection ensure for a reliable product that consistently exceeds industry standards. Minitube straws are available in a variety of transparent colors.

EcoStraws feature a plug with a shorter inner wick section that absorbs 3 to 4 % fewer sperm than the corresponding symmetrical plugs of standard semen straws. They are ideal for overnight equilibration of semen at refrigerated temperatures.

EcoStraws are used in exactly the same way as standard semen straws:

- identical processes for filling,
- identical processes for sealing,
- identical processes for printing,
- identical processes for insemination.

EcoStraw



Your benefits

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

MINITUBE SEMEN STRAWS

| Color | Mini straw 0.25 ml | EcoStraw 0.25 ml | Medium straw 0.5 ml | EcoStraw 0.5 ml |
|-----------------------------|-----------------------|---------------------|------------------------|--------------------|
| transparent | REF. : 13407/0010 | REF. : 13407/3010 | REF. : 13408/0010 | REF. : 13408/3010 |
| red | REF. : 13407/0040 | REF. : 13407/3040 | REF. : --- | REF. : --- |
| red - transparent | REF. : 13407/0044 | REF. : 13407/3044 | REF. : 13408/0044 | REF. : 13408/3044 |
| green | REF. : 13407/0050 | REF. : 13407/3050 | REF. : --- | REF. : --- |
| green - transparent | REF. : 13407/0054 | REF. : 13407/3054 | REF. : 13408/0054 | REF. : 13408/3054 |
| blue - transparent | REF. : 13407/0064 | REF. : 13407/3064 | REF. : 13408/0064 | REF. : 13408/3064 |
| grey | REF. : 13407/0070 | REF. : 13407/3070 | REF. : --- | REF. : --- |
| grey - transparent | REF. : 13407/0074 | REF. : 13407/3074 | REF. : 13408/0074 | REF. : 13408/3074 |
| purple | REF. : 13407/0080 | REF. : 13407/3080 | REF. : --- | REF. : --- |
| yellow | REF. : 13407/0090 | REF. : 13407/3090 | REF. : --- | REF. : --- |
| yellow - transparent | REF. : 13407/0094 | REF. : 13407/3094 | REF. : 13408/0094 | REF. : 13408/3094 |
| pink | REF. : 13407/0100 | REF. : 13407/3100 | REF. : 13408/0100 | REF. : 13408/3100 |
| turquoise | REF. : 13407/0130 | REF. : 13407/3130 | REF. : 13408/0130 | REF. : 13408/3130 |
| orange | REF. : 13407/0140 | REF. : 13407/3140 | REF. : 13408/0140 | REF. : 13408/3140 |
| orange - transparent | REF. : 13407/0144 | REF. : 13407/3144 | REF. : --- | REF. : --- |
| salmon | REF. : 13407/0160 | REF. : 13407/3160 | REF. : --- | REF. : --- |
| beige | REF. : 13407/0180 | REF. : 13407/3180 | REF. : --- | REF. : --- |
| pistachio green | REF. : 13407/0200 | REF. : 13407/3200 | REF. : 13408/0200 | REF. : --- |
| pistachio green transparent | REF. : 13407/0204 | REF. : 13407/3204 | REF. : --- | REF. : 13408/3204 |
| white | REF. : --- | REF. : --- | REF. : 13408/0210 | REF. : 13408/3210 |

BULL SEMEN FREEZING

TurboFreezer™

comes with goblet holding device for 4 goblets, straw pliers and holding box for straw pliers.

Your benefits

- standardized semen freezing curves independent of straw position
- uniform post-thaw quality of the semen
- user defined freezing programs
- ergonomic and easy handling of racks and straws in ample freezing chamber
- high throughput provides outstanding economy

REF. : 16811/0000

Benefits over traditional freezing machines for semen:

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

- The TurboFreezer™ provides a uniform chamber temperature due to its aerodynamic design and the unidirectional horizontal gas flow.
- The freezing pattern of each single straw is precisely controlled by instant removal of crystallization energy.
- A homogenous gas flow is provided over the complete height and length of the stacks of straw racks.

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
- Ample space available to unload racks and transfer straws into goblets inside the freezing chamber
- Electric connection: 220 V
- Outer dimension: 190 x 108 x 86 cm (W x H x D)
- Chamber size: 145 x 41 x 32 cm (W x H x D)
- LN₂ consumption: approx. 18 liters of LN₂/cycle
- Required LN₂ pressure: 1.3 - 1.5 bar
- Capacity: 30 racks of 175 0.25 ml straws
or 30 racks of 100 0.5 ml straws

Product features

- The low nitrogen consumption per freezing cycle combined with high through-put of straws per cycle provides an outstanding economic freezing performance in labour and LN₂ consumption.
- Dual operation lid: inserted sliding covers for low impact loading and unloading of racks. Complete cover opens supported by air pressure cylinder.
- Ample space available to unload racks and transfer straws into goblets inside the freezing chamber.



BULL SEMEN FREEZING



Accessories

Freezing racks with new design, streamlined for optimal vapor flow rate:

| | |
|---|-----------------------------------|
| New style freezing rack for 175 mini straws 0.25 | REF. : 15040/0175 |
| Loading block for mini straw rack | REF. : 15041/0175 |
| New style freezing rack for 100 medium straws 0.5 | REF. : 15040/0100 |
| Loading block for medium straw rack | REF. : 15041/0100 |

Straw pliers for TurboFreezer™ REF. : [16811/0100](#)

Pressure container, 120 litre REF. : [16150/0120](#)

BULL SEMEN FREEZING

Storage Systems for Straws

Goblets

| diameter | color | REF. |
|-----------|-------------------|-------------------|
| 10 mm | white | REF. : 16912/0133 |
| 13 mm | white | REF. : 16913/0133 |
| 13 mm | blue | REF. : 16913/1133 |
| 13 mm | red | REF. : 16913/3133 |
| 13 mm | pistachio - green | REF. : 16913/4133 |
| 13 mm | yellow | REF. : 16913/5133 |
| 35 mm (1) | white | REF. : 16935/0135 |
| 65 mm (2) | white | REF. : 16965/0133 |

Goblet canes, (3)

| | |
|-----------------------|-------------------|
| for 2 x 10 mm Goblets | REF. : 16965/6000 |
| for 2 x 13 mm Goblets | REF. : 16965/6013 |

Marker sticks for goblet canes, different colors

REF. : 13422/00xx

Divider for goblets, 100/bag (4)

| | |
|-------|-------------------|
| 12 cm | REF. : 16967/0065 |
| 24 cm | REF. : 16967/0066 |

Identification rod

| | |
|---------|-------------------|
| 0.25 ml | REF. : 16903/0210 |
| 0.50 ml | REF. : 16903/1210 |

Funnel for filling large goblets (5)

REF. : 15004/0402

Cassettes

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

Short and long flat cassettes (7) 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. : 16981/0135 | REF. : 16981/0120 | REF. : 16980/1201 | REF. : 16980/0601 |
| blue | REF. : 16981/0136 | REF. : 16981/0121 | REF. : 16980/1202 | REF. : 16980/0602 |
| yellow | REF. : 16981/0137 | REF. : 16981/0122 | REF. : 16980/1203 | REF. : 16980/0603 |
| red | REF. : 16981/0138 | REF. : 16981/0123 | REF. : 16980/1204 | REF. : 16980/0604 |
| white | REF. : 16981/0139 | REF. : 16981/0124 | REF. : 16980/1205 | REF. : 16980/0605 |
| beige | REF. : 16981/0140 | REF. : 16981/0125 | REF. : 16980/1206 | REF. : 16980/0606 |

BOVINE ARTIFICIAL INSEMINATION

QuickLock 2000

- All instrument with best available length: only 1 cm of the sheath length is required for fixation
- Universally suitable for all kinds of straws and sheaths. The straw is automatically guided into the optimal position in the QuickLock 2000 tube
- Comfortable working through ergonomic design: also suitable for smaller hands due to smaller distance between the thumb plate and the fingertip
- Simple cleaning: the handle is made of only one piece. Sterilization in the autoclave (up to 120°C) is possible
- No loose parts, the plunger is secured against sliding out
- Suitable for all types of straws and sheaths

QuickLock Classic

- Small handle with very easy sheath fixation and release
- Universal for all types of straws and sheaths
- All parts made of sterilisable plastic or stainless steel
- No loose parts, plunger can not slide out



Universal Sheaths

- Suitable for all types of semen straws
- Absolutely tight fit with all types of straw
- Gentle insemination due to a soft shape of the tip
- 50/bag, 1 000 box
- transparent adapters for better visual control of straw position

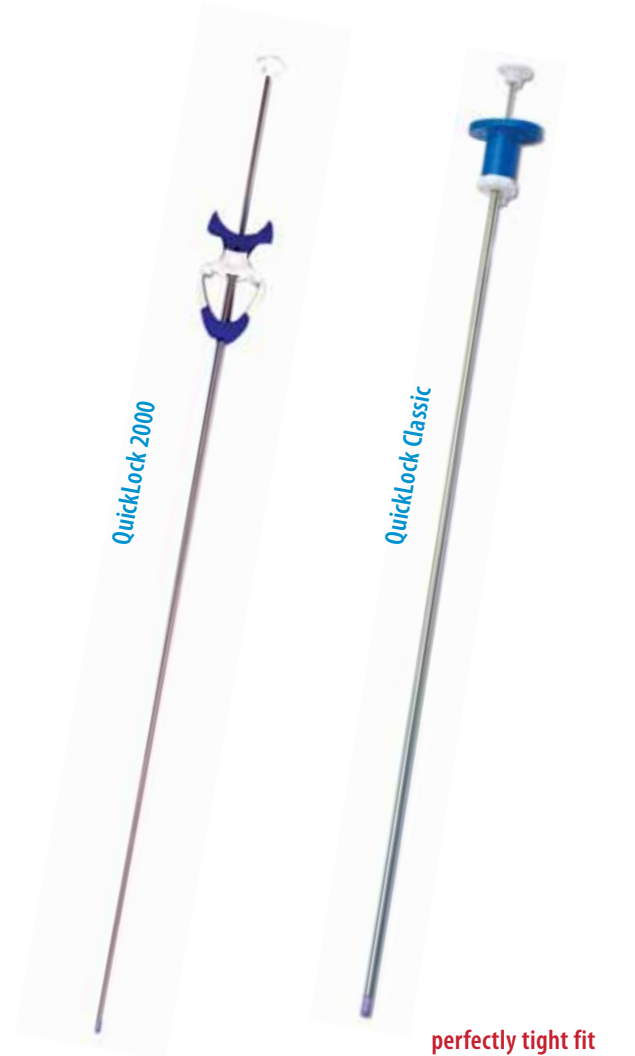
QuickLock 2000 REF. : 17026/0000

QuickLock Classic REF. : 17025/0000

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

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

Hygienic sheaths, 100/roll REF. : 17028/0100



perfectly tight fit



BOVINE ARTIFICIAL INSEMINATION

Thawing Unit MT 30/54

- Electronic temperature control
- Central, built-in thawing chamber with lift
- Accuracy: $\pm 0.2^{\circ}\text{C}$
- 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 device 12V/220V REF. : 17165/1395

Thermometer for thawing devices REF. : 17049/0000

Insemination Kit

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

REF. : 17050/0060

Components also available individually

Insemination case REF. : 17050/0001

Insemination glove, 100/box REF. : 17080/0005

Varikon speculum REF. : 17064/0380

Straw tweezers, angular shape REF. : 17060/0000

MiniLube, 90 ml REF. : 17116/7000

MiniCutter REF. : 17062/0010

Clamp REF. : 17063/0000

Not included in kit:

Transformer for thawing unit REF. : 17165/1395

Hygienic cover for Varikon REF. : 17064/1600



BOVINE ARTIFICIAL INSEMINATION

MiniCutter

Your benefits

- Ergonomic shape
- Precise cut of 0.25 and 0.5 ml straws
- Easy to keep clean

MiniCutter for straws

REF. : 17062/0010



Deep I.U. Insemination

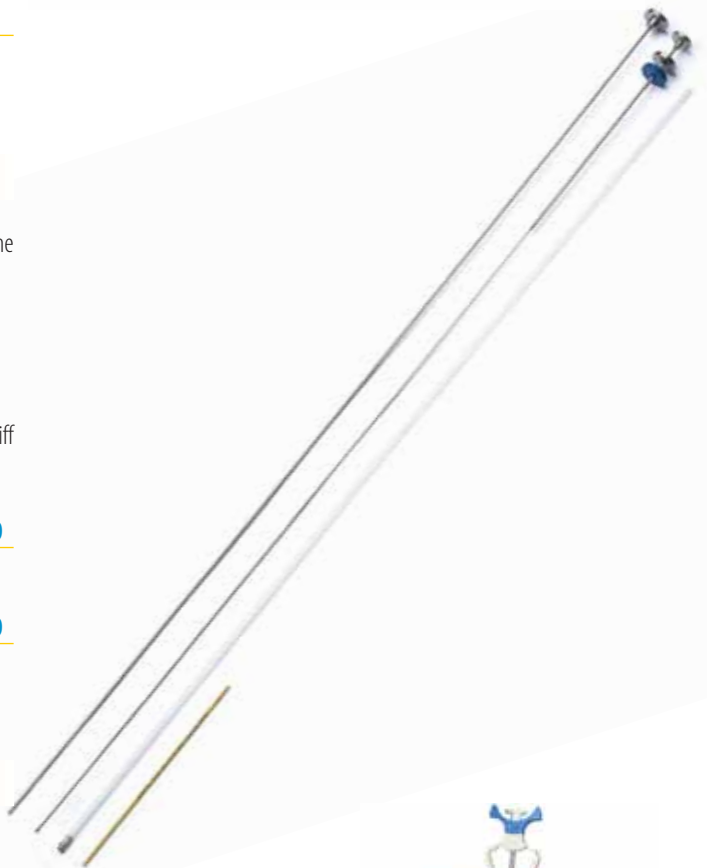
- Long, flexible sheath and mandrin for insemination deep inside the uterine horn
- Metal tip of the sheath for easy palpation and exact fit with the straw
- Extra introduction mandrin for penetrating the cervix
- Also suitable for embryo transfer

DIUI bovine inseminator set, consisting of flexible A.I. mandrin, stiff introduction mandrin, finger support and fixation rings

REF. : 17015/0000

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

REF. : 17015/0650



QuickLock Heater

Battery operated, with charger and carrying strap

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
- Battery charger can be connected in the car (12 V DC) or to the wall socket (220 V AC)
- Temperature setting: +35°C, other values optional

QuickLock Heater, complete

REF. : 17028/0200

Accessory

Disposable plastic bag

to protect the inside, 100/bag

REF. : 17028/0201



SUPEROVULATION AND BOVIPRO™ EMBRYO MEDIA

BoviPRO™ – Media for Bovine Embryo Transfer

- Formulated and manufactured by Minitube of America
- Dedicated clean room manufacturing
- Quality control of every media batch in our own lab with bovine IVP embryos
- Gas-tight packaging for longer shelf life
- Convenient package sizes

Recovery Media

Media for Bovine Embryo Recovery

A complete formulation containing Zwitterionic buffer solution, BSA or PVA, Kanamycin and Gentamycin.

- Process-Patented purified and enriched BSA
- No additives required
- Gas-tight package – prevents oxidation and change in pH
- 3-way port configuration

| | |
|--------------------|-------------------|
| With BSA, 1 litre | REF. : 19982/1100 |
| With BSA, 2 litres | REF. : 19982/1102 |
| With PVA, 1 litre | REF. : 19982/1106 |
| With PVA, 2 litres | REF. : 19982/1108 |

BoviPRO™ Filter Rinse

Without protein or surfactant. Contains Zwitterionic buffer with Kanamycin and Gentamycin. Used to rinse embryos from embryo filters.

| | |
|---------|-------------------|
| 85 ml | REF. : 19982/1150 |
| 1 litre | REF. : 19982/1151 |

Holding Medium

A multiple application medium for:

- Holding in vivo or in vitro derived embryos at room temperature in atmospheric air
- Washing and rinsing embryos
- Loading embryos for transfer to recipients

BoviPRO™ Holding Medium

Zwitterion-buffered solution containing D-glucose, Napyruvate, 0.4 % BSA, amino acids, growth factors, vitamins, Kanamycin and Gentamycin. 3-Tube pack, 10 ml/tube

REF. : 19982/1250

PLUSET®

FSH for superovulation in bovine, for 1 treatment. Each box contains vials of freeze dried product with: 500 IU FSH and 500 IU LH each, and 20 ml diluent q.s.

REF. : 19600/0010



EMBRYO MEDIA: BOVIPRO™

Cryopreservation Media

Media for conventional slow-rate freezing of embryos. BoviPRO™ cryopreservation solutions contain a Zwitterion-buffered solution with 0.1 M sucrose, D-glucose, Na-pyruvate, 0.4% BSA, amino acids, growth factors, vitamins and antibiotics (Kanamycin and Gentamycin).

BoviPRO™ Ethylene Glycol with Sucrose

For direct transfer after thawing. Includes 1.5 M ethylene glycol. 3-Tube pack, 10 ml/tube

REF. : [19982/1302](#)

BoviPRO™ Glycerol with Sucrose

For conventional freezing and rehydration post-thaw. Includes 10% glycerol. 3-Tube pack, 10 ml/tube

REF. : [19982/1303](#)



Thaw / Rehydration Media

Media for thawing, rehydration, and warming cryopreserved embryos.

BoviPRO™ Embryo Rehydration Kit

Solutions A, B and C each contain a Zwitterion-buffered solution with D-glucose, Na-pyruvate, 0.4% BSA, amino acids, growth factors, vitamins, Kanamycin and Gentamycin.

- A: 5% Glycerol + 0.5 M sucrose
- B: 2.5% Glycerol + 0.5 M sucrose
- C: 0.0% Glycerol + 0.5 M sucrose

Kit includes 10 ml tube of each

REF. : [19982/1404](#)



BoviPRO™ Sucrose Solution

1M sucrose in Zwitterion-buffered solution with D-glucose, Na-pyruvate, 0.4% BSA, amino acids, growth factors, vitamins, Kanamycin and Gentamycin.

3-Tube pack, 10 ml/tube

REF. : [19982/1405](#)



EMBRYO COLLECTION

Flushing Catheters

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

2 way, Luer Lock

| | |
|-------|-------------------|
| CH 12 | REF. : 19982/0100 |
| CH 14 | REF. : 19982/0101 |
| CH 16 | REF. : 19982/0102 |
| CH 18 | REF. : 19982/0103 |
| CH 20 | REF. : 19982/0104 |

2 way, Foley end

| | |
|-------|-------------------|
| CH 12 | REF. : 19982/0110 |
| CH 16 | REF. : 19982/0113 |
| CH 18 | REF. : 19982/0111 |
| CH 20 | REF. : 19982/0112 |

3 way, Foley end

| | |
|-------|-------------------|
| CH 16 | REF. : 19982/0120 |
| CH 18 | REF. : 19982/0121 |
| CH 20 | REF. : 19982/0122 |

Lampeter stainless steel tip catheter with 8 ports, Luer activated valve, 1/bag

| | |
|-------|-------------------|
| 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 | 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

Miniflush™ Filter

The patented Minitube embryo recovery system

Your benefits

- Embryo filter and grided search dish in one unit
- Chances of losing an embryo are greatly reduced as they are recovered directly into the Miniflush™ dish
- Large filter area for high flow rates
- Automatic maintenance of a minimum fluid level of 20 ml in the filter. Embryos are never outside of the medium
- Suitable for closed flushing systems and syringe collection method
- Vertical filtering surface minimizes the chance of a plugged filter
- Molded from transparent Polystyrene for maximum optical clarity

Product features

- effective filter size: diameter 73 mm
- mesh size/open area 44 µl/ 33%
- sterilized (gamma irradiated)
- disposable

REF. : [19222/2000](#)



Accessories

Bag for Miniflush™ filter, insulated

REF. : [19010/1100](#)

Flushing Tubings

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, flexible material. End for filter connection requires no extra adapter

Luer end

REF. : [19011/0000](#)

Foley end

REF. : [19011/0001](#)



EMBRYO EVALUATION

Stereo Microscopes

Zoom stereo microscope, 20x eye pieces. Total magnification from 13.4x to 90x. Working distance 92 mm approx. With incident and transmitted light source. 110 – 240 V / 50 – 60 Hz

REF. : [12025/0033](#)

Stereo zoom microscope MSZ 5600, total magnification from 7x to 45x, eye-pieces 10x, transmitted light source

REF. : [12011/0000](#)



Temperature Control

Heated stage for stereo microscope

REF. : [12055/0003](#)

Control unit HT 50 for heated stage

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 control unit HT 50 S, HT 300 or HT 400 W

Bead bath

REF. : [12055/5000](#)

Controller HT 50 S

REF. : [12055/0205](#)



Laboratory Heating Plate

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

REF. : [12055/0010](#)



EMBRYO EVALUATION AND GENDER DETERMINATION

Gender Determination of Bovine Embryos

SEX-Y™ kit with components to identify 10 bovine embryos by fluorescent dye. No need for PCR

New procedure for sexing bovine embryos

SEX-Y™ kit contains a molecular probe, known as Bov-Y that recognizes a specific site found only on the DNA of the Y chromosome. To identify the embryo's sex, a biopsy is taken from the embryo. This group of cells is then treated with the Bov-Y probe. If the embryo is a male, the Bov-Y probe attaches directly to the DNA of the Y chromosome and produces a fluorescent signal seen as a bright "dot" under a fluorescent microscope. If the embryo is female, there is no Y chromosome present, so there is no attachment of the Bov-Y probe, and no fluorescent signal is observed.



Your benefits

- Simple: the procedure is different, and much easier to carry out than other available methods for sexing:
 - six easy steps to get the result
 - no PCR amplification (incl. electrophoresis)
 - no gel or color reactions
- Fast: results in less than one hour!
- Convenient: only little laboratory equipment is necessary. All you need is:
 - a micromanipulation set up for taking the biopsy
 - a normal or inverted microscope with fluorescent set up
 - 2 incubators (small incubator or heating plate, respectively)
- Reliable: as the probe binds only to male bovine DNA, an exact result is available within a short period of time



SEX-Y™ kit, for 10 bovine embryos

REF. : [19982/5010](#)

Inverted microscope Zeiss Axiovert 40CFL, with incident light fluorescence module, filters DAPI and CY3, phase contrast objectives PH 10x, PH 40x, HPX 120 illumination

REF. : [12040/0041](#)

Micromanipulation unit, includes 2 joystick-micromanipulators, 1 micro-injector and 1 pneumatic injector

REF. : [19386/0000](#)

Consumables for embryo biopsy available

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



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

REF. : 19025/0055



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

REF. : 19026/0100



Adapter for glass pipette, for connecting with Luer syringe, sterilized

REF. : 19026/1100

Adapter for glass pipette, with tubing and mouth piece

REF. : 19026/2100

Embryo Culture Dish, with lid, sterilized, 5 wells, rounded well edges, mouse embryo batch tested

REF. : 19021/0001



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

0.25 ml straw, clear, gamma irradiated, 10/package, without seal

clear REF. : 19042/0010

yellow (direct transfer) REF. : 19042/1010



0.25 ml straw, clear, gamma irradiated, 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



EMBRYO HANDLING

0.25 ml straw 133 mm, yellow transparent, gamma irradiated,
10/package, with ID rod in different colors

beige REF. : [19040/0111](#)

light yellow REF. : [19040/0112](#)

0.25 ml straw 133 mm, clear, gamma irradiated,
10/package, with sealing ball

REF. : [19041/0010](#)

0.25 ml straw 90 mm, clear, gamma irradiated, 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](#)

Manual sealer for straws, securely seals all kinds of straws by applying heat at the end of the straws. Also seals in liquid nitrogen vapour. Consists of a plier welding head adapted for straws and a control unit for varying heat level

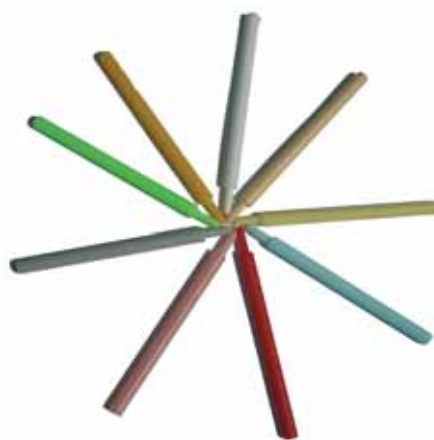
REF. : [13135/2500](#)

Ultraseal 21™, manual straw sealer with ultrasonic sealing technology. Suitable for 0.25/0.5 ml and all other straws. User selected sealing times. Sealing without exposing straw content to heat. 115/230 V, 50 - 60 Hz

REF. : [13135/1110](#)

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, up to 3 line print

REF. : [13138/0000](#)



EMBRYO AND OOCYTE TRANSPORT

Portable Incubators

for a safe transport of embryos and oocytes at a constant temperature

Your benefits

- 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

Product features

- Customized 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 (1)

REF. : 19180/0000

Accessories

Rechargeable dry battery, 12V / 7.5 Ah,
capacity at +25°C: approx. 20 h. (2)

REF. : 19180/1210

Charger for battery

REF. : 19180/1200

Power supply unit for ET transport unit, 230V

REF. : 17165/1395

Plastic vial 2 ml with screw cap

REF. : 19180/5002

Plastic vial 5 ml with screw cap

REF. : 19180/5006

Portable incubator for transport of embryos/oocytes with digital temperature display, temperature range freely selectable between ambient and 40°C (3)

REF. : 19180/0002



Embryo Transport Kit

Your benefits

- Heavy duty box – impact resistant
- Water resistant surfaces
- Airline approved – due to pressure relief valve that adjusts for rapid altitude changes during flight
- Electrical components isolated in metal enclosure

Technical specifications

- Outer dimensions: 43 x 24 x 34 cm
- Capacity of battery: 30 h
- Weight of kit: approx. 10 kg

Transport box with dry battery and battery charger for portable incubator holds temperature for 30 hours during transport. Incubator to be ordered separately. (19180/0000 see above)

REF. : 19180/2101

EMBRYO FREEZING

Freeze Control Embryo Freezer

Freeze Control embryo freezing systems are designed for practitioners. They use liquid nitrogen as the 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, 4 preinstalled programs, 1.5 litre cryobath, external power supply

REF. : 19406/2200

With controller CL 5500, 8 preinstalled programs, 1.5 litre cryobath, inbuilt battery power pack

REF. : 19406/5500

With controller CL 8800, 16 preinstalled programmes, 3.8 litre cryobath, external power supply

REF. : 19406/8800

External power pack for CL 2200/CL 8800 REF. : 19407/0000



Vitrification Kit and VitSet

BoviPRO Vit-Kit™, contains all required materials for vitrification of up to 40 embryos

REF. : 19500/1000

VitSet, Set for vitrifying embryos or oocytes in straws

REF. : 19500/2000



Herd Vision™

Fully integrated embryo transfer record system

- Animal database
- User-defined superovulation protocols & donor scheduling
- Embryo inventory management
- Pregnancy check-list generation
- Automatic IETS A, B, C, & D form certificate printing
- General statistics, conception rates & superovulation data

Herd Vision™ REF. : 19982/0030



EMBRYO TRANSFER

Transfit Sheaths and Stylets

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

REF. : 19240/1005

Transfer stylet to be used with disposable Transfit Lateral sheath

REF. : 19240/1000

Transfit Standard, sheath with round plastic tip, front opening, sterilized, 5/package

REF. : 19240/0005

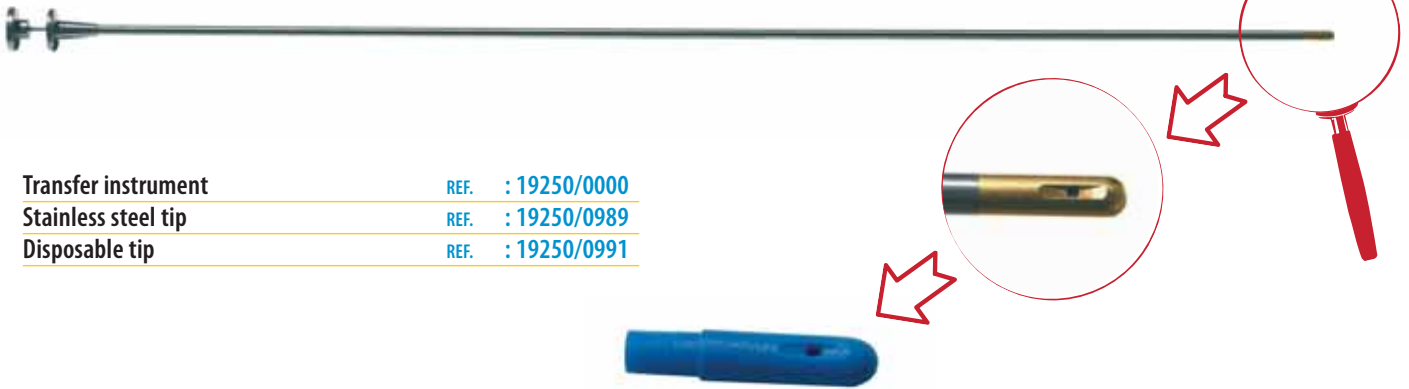
QuickLock ET, to be used with disposable Transfit standard sheaths, quick and secure fixation

REF. : 19240/0000



Stainless Steel ET Instrument MT

- Sterilizable transfer instrument to be used without sheaths, with removable tip made of gold plated stainless steel, 1 side outlet, ring for marking opening position
- Disposable tip for transfer instrument MT made of plastic, sterilized, individually wrapped, 100/box



| | |
|---------------------|-------------------|
| Transfer instrument | REF. : 19250/0000 |
| Stainless steel tip | REF. : 19250/0989 |
| Disposable tip | REF. : 19250/0991 |

Sanitary Sheaths

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

Hygenic sheath, 80/roll

REF. : 19271/0080

Sanisheath, 25/package

REF. : 19270/0025



DIAGNOSTICS

eProCheck® 2.0

Automated Progesterone Test for Effective Bovine Reproduction Management

Your benefits

- Analysis of the progesterone level in milk or blood serum samples
- Automatic analysis and evaluation of samples takes approx. 20 minutes
- It is not necessary to supervise the analyzing process
- Stored data can be transferred to a PC via Bluetooth and managed with the software eProManager, which is provided with the equipment.
- Reading of animal ID via Barcode Scanner

eProCheck® 2.0 - 800

up to 7 samples at a time

REF. : 21700/0000

eProCheck® 2.0 - 2400

up to 23 samples at a time

REF. : 21700/2400



Technical details

- Dimensions 36 x 23 x 27 cm
- Power supply 110 V to 220 V
- Weight 12 kg

Accessories

Testkits include sample vials, reagents and wells

for 84 milk sample, display bar diagram REF. : 21700/0096

for 72 milk samples, display ng/ml REF. : 21700/0048

for 72 serum samples, display ng/ml REF. : 21700/0196

Barcode Scanner REF. : 21700/0011



Cytology Brush

Disposable set for collecting endometrial cells for cytology.

CytoBrush for bovine, single packed, sterile, single use

REF. : 17075/0010



EndoControl Sampler

Effective and early detection of endometritis by evaluation of vaginal mucus.

EndoControl Sampler, single packed, sterile, single use

REF. : 17075/0020



Minitüb is an ISO 9001:2008 certified company.

