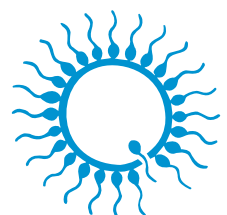




# Animal Reproduction Technology

## Porcine



minitube

# 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 specialized 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.

Minitube International offers you specialized 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, 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, 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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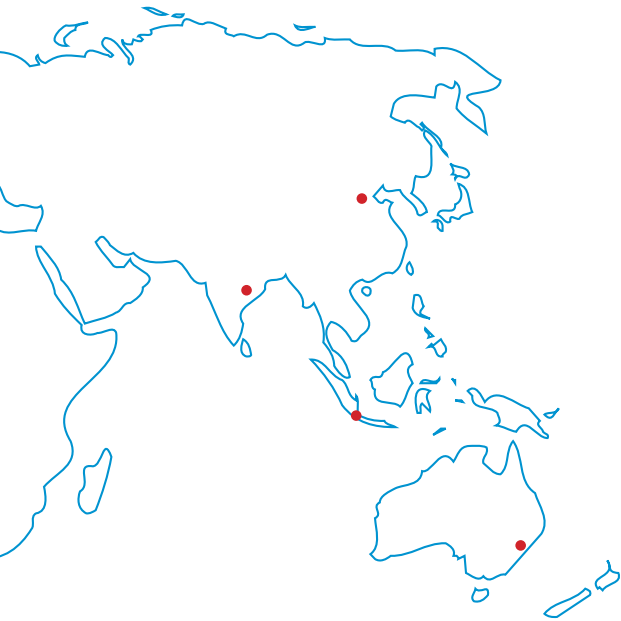
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# CONTENTS



Contents	Page
Laboratory Management Software	02
Semen Collection	05
Semen Analysis	08
Semen Dilution	12
Semen Processing	22
Semen Storage and Insemination	30
Embryo Transfer	39
Freezing of Boar Semen	41

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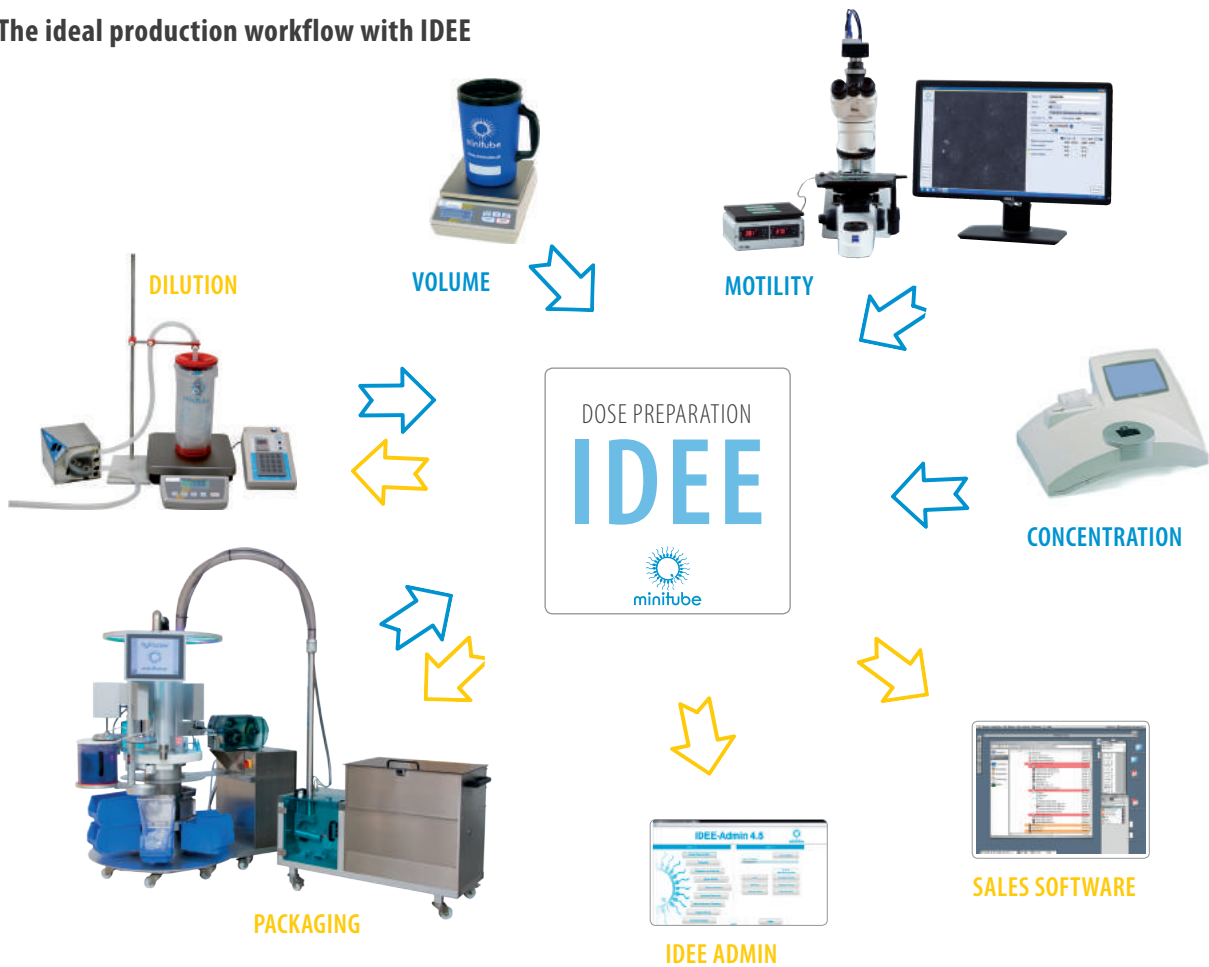
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# Laboratory Management Software

The ideal production workflow with IDEE



# IDEE: SOFTWARE FOR THE BOAR SEMEN LABORATORY

## IDEE

The IDEE software integrates all ejaculate data and links all processes from semen collection to production statistic.

The laboratory management software **IDEE** comprises two program components: **IDEE-Production** and **IDEE-Admin**.

**IDEE-Production** is a flexible and versatile computer program based on an Access database with a modular design that automates and links the entire process from ejaculate capture to documentation of holding samples, and finally steering extender dispensing and semen packaging in tubes. The ejaculates are labelled with a barcode for fast and reliable data management.

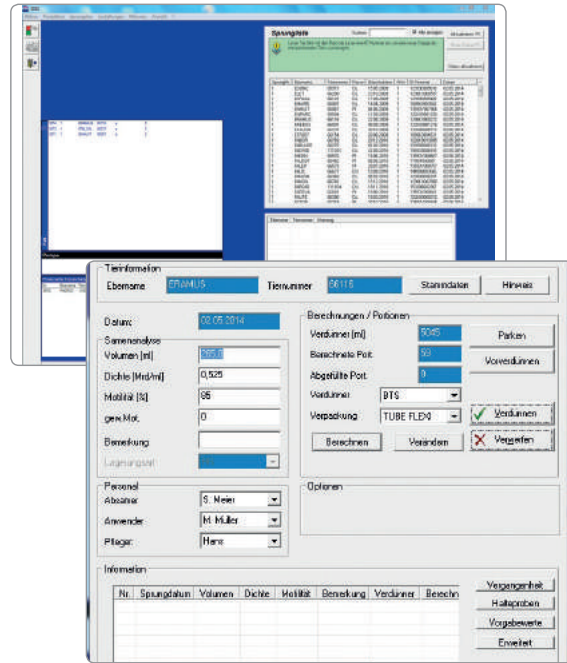
Data collected from connected equipment (e.g. scales, photometer, Androvision®) are quickly and securely registered. The calculation of extender quantities, the dilution of semen with the SmartDispenser, and the transfer of the data to the filling machine is fully automated resulting in an effective and streamlined laboratory operation.

IDEE-Production is available in 7 languages: Chinese, English, German, Italian, Russian, and Spanish.

**IDEE-Admin** directly accesses the IDEE-Production database to create a wide variety of reports. This allows for comprehensive analyses of the production efficiency of the station and that of individual boars. IDEE-Admin is compatible with PICtraq™ allowing data to be easily transferred between the units. IDEE-Admin can also compile customer ordering data for transfer to the station's own electronic invoicing system.

## IDEE

composed of IDEE-Production und IDEE-Admin **REF. : 18000/0000**

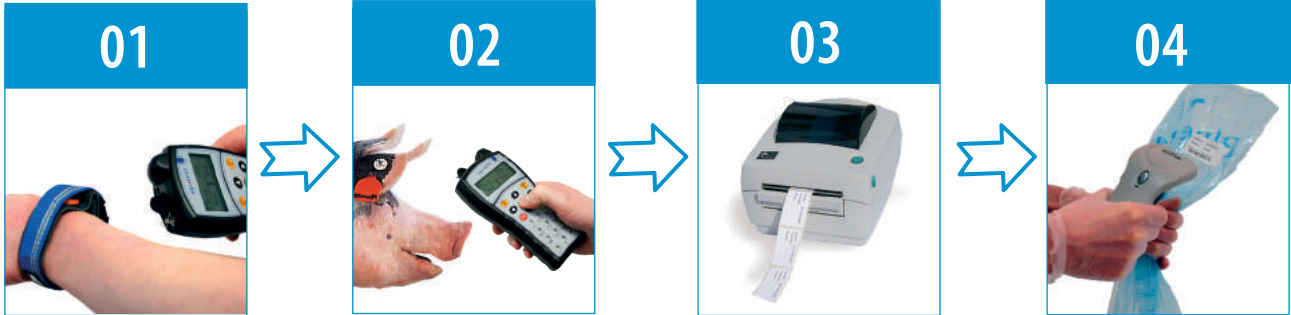


## Your benefits

- Efficiency, safety and traceability
- Input errors are minimised
- IDEE helps to save time and labour
- Every step is documented and verifiable
- Statistical analysis of all relevant production data
- IDEE can easily be connected to other software applications
- IDEE is a very user friendly software

# IDENT AND IMALE: ELECTRONIC BOAR IDENTIFICATION

## Electronic boar identification with IDENT



Reading of technician ID from transponder wristband

Reading of boar identity via electronic ear tag

Print-out of barcode label

Reading of barcode label with boar ID in the lab

**IDENT** is available in addition to IDEE or as an independent program: The software contains collection planning, the identification of boars via electronic ear tags, the electronic identification of semen collection operators and the print-out of labels with boar identity, barcode and further information about the semen collection.

**IDENT software**

REF. : [18000/0015](#)

## Electronic boar identification with iMale

The combination of iMale RFID-Reader and wireless iMale Label Printer allows the reading of animal ear tags and the direct printing of barcode labels. 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 8 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](#)







## Semen Collection

### Collection dummy

The Minitube boar dummy is height adjustable and spring mounted, **easy to use** and offers an **optimal collection comfort** for the boar. It is equipped with a massive bottom plate for secure fixation and wide foot supports. The smooth and easy to clean surface of the firm plastic cover guarantees **maximum hygiene**. Cover and mounting part can easily be replaced. A BoarMatic upgrade is possible.

Collection dummy 11" for mature boars      [REF. : 11100/0207](#)

Collection dummy 9" for younger boars      [REF. : 11100/0107](#)

Mobile support for boar dummies      [REF. : 11100/0110](#)



# BOARMATIC BOAR DUMMY

## BoarMatic

Now with a more comfortable surface and an exchangeable mounting part.

The BoarMatic boar dummy with integrated mechanism for automatic semen collection consists of the following components:

- Boar dummy, height adjustable by pneumatic spring.
- A slide underneath the dummy with a holder for the semen collection cup and a clamp for the AC (artificial cervix). During the whole ejaculation process the boar is free to move forward and backward. After the semen collection the boar is able to leave the dummy without assistance and the slide with the collection cup automatically rolls to a safe position underneath the dummy.
- The single use AC is a true copy of the porcine cervix in texture and surface. Its rubber cushions stimulate the boar and assure a perfect hold for the tip of his penis. A tear away inner pouch to collect the first sperm free jets of the ejaculate and a sheath leading the ejaculate into the semen collection cup are integrated in the AC.

**BoarMatic 11"** for boars [REF. : 11100/0202](#)

**BoarMatic 9"** for younger boars [REF. : 11100/0201](#)

### Accessories

**Semen collection cup complete,**  
for use with artificial cervix [REF. : 11100/0215](#)

**Artificial cervix (AC),** single use [REF. : 11100/0211](#)

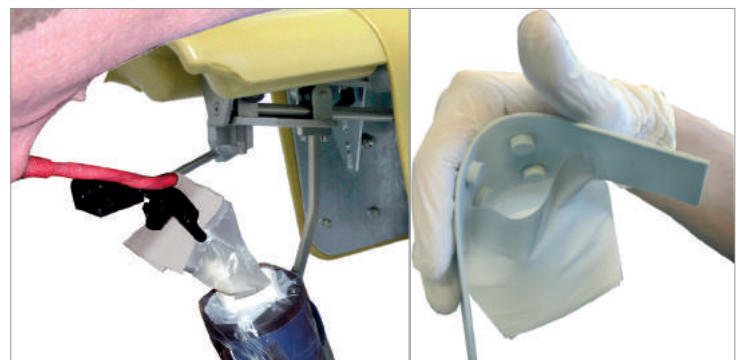
**Rubber mat for boar dummy,**  
150 cm x 100 cm x thickness 23 mm [REF. : 11100/0040](#)

**Plastic cover for boar dummy 11",**  
spare part [REF. : 5011100/0233](#)

**Mounting element for boar dummy 11",**  
spare part [REF. : 5011100/0232](#)

### Your benefits

- Suitable for all boars, easy to handle, adaptable to existing installations
- Simple mechanics, no electric or pneumatic connections necessary, requires low maintenance
- Reduced physical stress for semen collectors, increases motivation and the image of this profession



## Heating cabinet

The heating cabinet is designed to pre-warm semen collection material in the collection area, i.e. collection bags, cups and ACs for the BoarMatic. The cabinet has a pre-set temperature of +37°C. Other temperatures are available upon request. It has a net volume of 156 litres and is equipped with racks to optimise the storage of material.

**Heating cabinet, +37°C, 230 V** [REF. : 14160/0150](#)



# BLUE BAG

## BlueBag

### Your benefits

- The complete one-way solution from semen collection to packaging
- Quick and clean preparation of the semen collection cup: filter and inner surface of the Blue Bag are kept contamination free
- Simple and efficient semen processing, because the ejaculate remains in the Blue Bag for dilution and packaging
- No more time-consuming sterilization
- Essential improvement of lab hygiene

### Technical features

- Semen friendly material
- Integrated non woven filter
- Perforation line for tearing off the filter after use
- 100/package

**Blue Bag**, volume 3.5 l REF. : 11123/0100

**Blue Bag**, volume 5.5 l REF. : 11123/0550

**Blue Bag with spout**, volume 3.5 l REF. : 11123/0200



Semen Collection

### Accessories

**Semen collection cup**, insulated,  
extra wide opening, volume 1 l, blue REF. : 11123/1000  
extra wide opening, volume 1 l, white REF. : 11123/2000

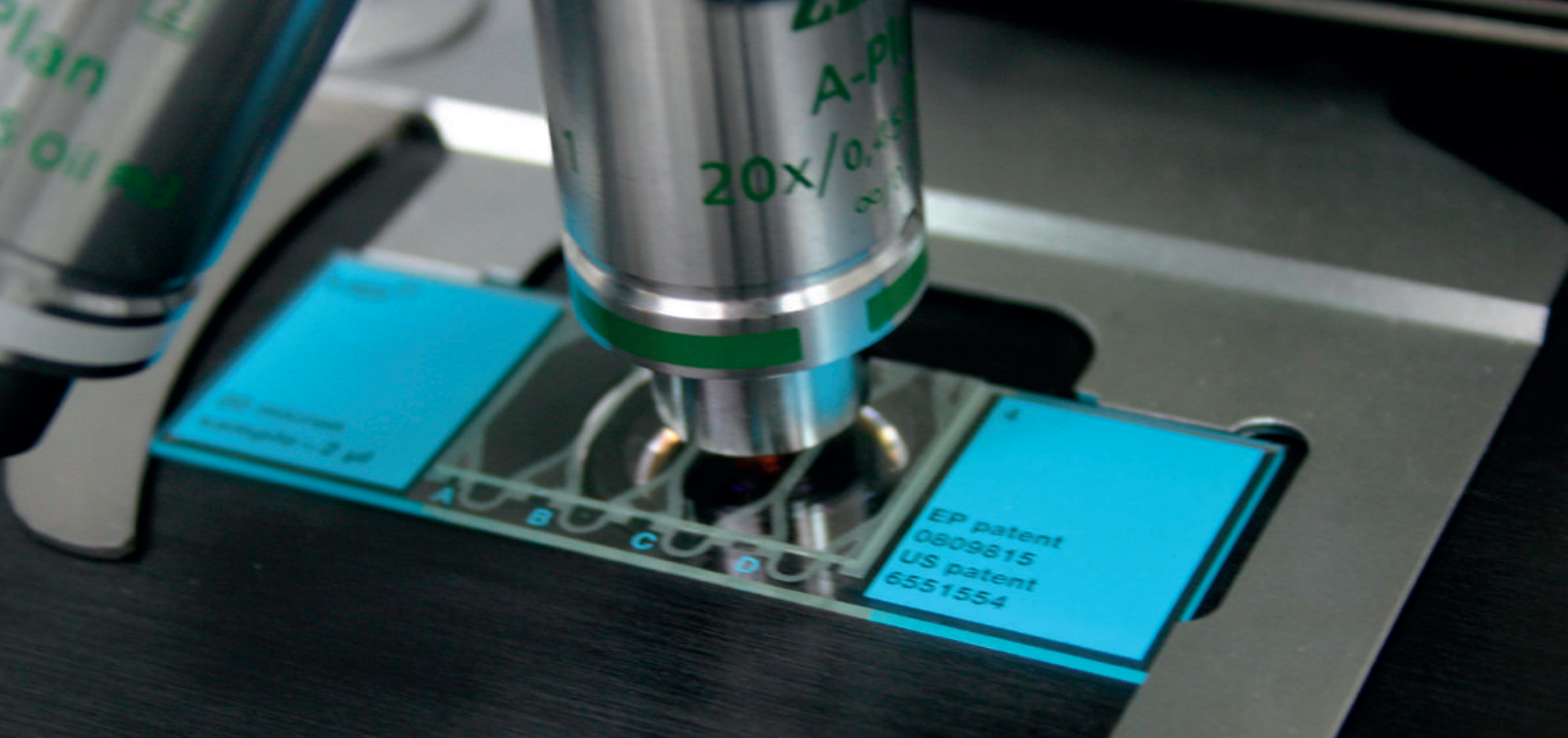
**Semen collection glove**, extra sensitive, sperm safe, 100/box  
Size M REF. : 11128/0055  
Size L REF. : 11128/0060  
Size XL REF. : 11128/0065  
Size XXL REF. : 11128/0070

**Hygienic glove**, for the protection of the collection glove during boar preparation, 100/package REF. : 11128/0100

**Semen collection bag**, 210 x 300 mm, volume 1 l  
100/package REF. : 11123/3010

**Filter for boar semen**, non woven tissue,  
non-absorbing, 240 mm diameter, 200/package REF. : 11123/3020





# Semen Analysis

## 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 as well as acrosome integrity, viability, mitochondria activity and DNA integrity can be assessed accurately and quickly with up to 1000 cells per field, making AndroVision® the perfect tool for the **objective and complete semen evaluation**. All images and data are stored for later review.

AndroVision® can be seamlessly integrated with the IDEE laboratory processing software. The user interface is straightforward and easy to understand. An analysis report can be generated as a hard copy print or a digitised file. These features and more make AndroVision® the ideal choice for semen assessment in a research and production lab.

An optional touch screen interface and barcode scanner enhances the system for even quicker and efficient application.

**AndroVision® software**  
with PC and accessories [REF. : 12500/0000](#)

**AndroVision® software**  
with touchscreen and barcode scanner [REF. : 12500/0001](#)

**AndroVision® camera**  
high speed colour camera [REF. : 12500/4200](#)

## Accessories

### ScanStage

The automated microscope stage has an integrated heating system that can be used with a variety of different microscopes. Analysis points within a counting chamber are automatically approached for ever the same path of the microscope stage.

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

**(2) Controller HT 300W** [REF. : 12055/0302](#)



# ANDROVISION® – MORE THAN CASA

## AndroVision® software modules

### AutoMorph

Module for the automated recognition of proximal and distal plasma droplets which is integrated in the analysis of motility and concentration. Plasma droplets are created by a defective maturation of the sperm which can be attributed to various causes such as stress or illness. Secondary abnormalities of sperm decrease the quality of the semen and in turn, fertility.

**Module AutoMorph** REF. : [12500/1000](#)

### 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 Krüger). 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](#)

### Mitochondrial Activity

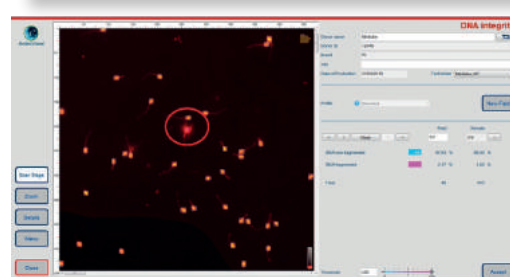
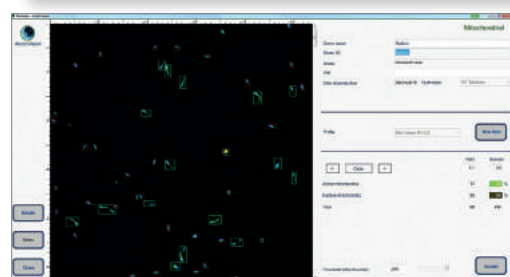
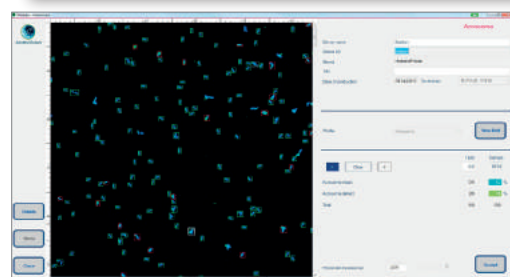
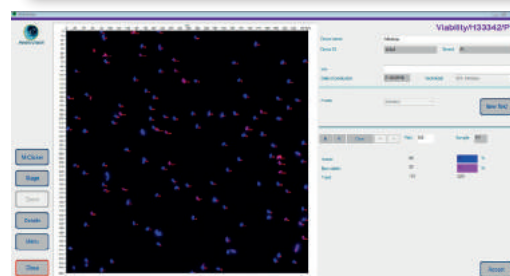
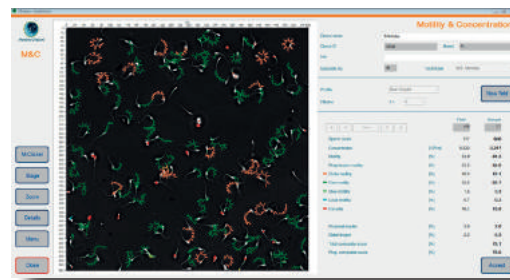
Automated count of percentage of sperm with active Mitochondria, based on a double stain fluorescence assay.

**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](#)



\* requires fluorescence microscope



# MICROSCOPY AND VOLUME MEASUREMENT

## Phase contrast microscope CX 43

- Phase achromat optics with universal condenser
- 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 achromat objectives
- 6 V/30 W halogen light

**With phototube (trinocular)**

with objectives 20x, 40x

REF. : 12005/0041



## Phase contrast microscope MBL

Functional microscope for semen analysis with phase achromat objectives 10x, 40x, 100x, heating system with temperature control unit HT 50 with digital temperature display and freely selectable temperature adjustment.

**Binocular** REF. : 12010/2000

**Binocular**, with ocular colour camera and monitor REF. : 12010/2100

**Digital colour camera for microscopes**,

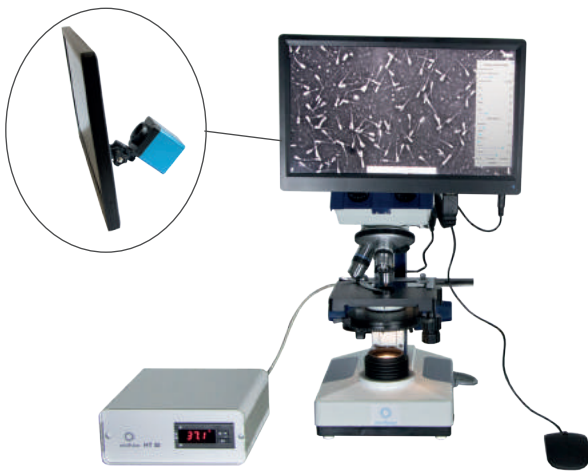
with integrated image display software

REF. : 12110/1600

**Monitor 10" with HDMI input**,

for direct mounting on microscope

REF. : 12110/1610



## Semen stains

**Spermac**, for morphological evaluation

4 x 50 ml

REF. : 15405/0000

**Farely stain**, for morphological evaluation,

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

**SpermBlue**, stain for morphology analysis,

250 ml

REF. : 15405/0027



## Laboratory scales

**Precision scale** for the determination of the ejaculate volume or for weighing out extender, weighing range: 6000 g, resolution 1 g, weighing pan 150 x 170 mm

REF. : 14273/0440

**Precision scale** for accurate weighing of antibiotics or extender powder, weighing range: 2000 g, resolution 0.1 g, weighing pan 130 x 130 mm

REF. : 14295/0444



# PHOTOMETRY

## Photometer SDM6

### Your benefits

- Programmes for the determination of sperm concentration of boar, bull, stallion, ram and buck semen
- Touch screen operated, large display
- Automatic calculation of extender volume and number of doses
- Display of semen concentration in  $10^9$  sperm/ml
- Optional: integrated printer for printout of production data of ejaculate
- Serial and parallel interfaces for data transfer

### Technical features

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

**Photometer SDM6, with integrated printer** REF. : [12300/0006](#)

**Photometer SDM6, without printer** REF. : [12300/0008](#)



### Accessories

**Control cuvette set, 4 pieces** REF. : [12300/0010](#)

**Paper for printer** REF. : [12300/0311](#)

**Macro cuvette, 4 ml, 100/box** REF. : [12301/0003](#)

**NaCl solution, 0.9 %, 1 l** REF. : [12301/4667](#)

**Dispenser, 0.5–5 ml for NaCl solution** REF. : [12428/1815](#)

**Bottle 500 ml for Dispenser, brown glass** REF. : [12428/1905](#)

**Varipette 10–100 µl, with digital display** REF. : [12425/4810](#)

**Pipette tip yellow, 1000/package** REF. : [12425/9409](#)

### Automatic dilutor Microlab 625 DIL

for precise sample preparation with memory function, complete with reagent and sample syringes, touch- screen

REF. : [12421/0505](#)



### Accessories

#### Multispecies software

for reprogramming to other species REF. : [12300/0130](#)

#### Microcuvette for SDM 1

100/box REF. : [12300/1111](#)

## Photometer SDM 1

The SDM 1 is a compact, highly accurate photometer developed for measuring sperm concentration. It can be calibrated for porcine, bovine, equine, canine and small ruminant species. Cleaning is simple, maintenance is minimal. The semen concentration is displayed in million sperm/ml.

- Calibration for boar semen
- No dilution of semen samples necessary
- LED light source provides stable output
- Cuvette is securely fixed in the correct measuring position
- Calibration is performed automatically with each sample measurement
- With 100 – 240 V power supply and batteries

**Photometer SDM 1** REF. : [12300/0100](#)





# Semen Dilution

## The ingredients for your success: Quality, Security, Reliability

### Designed to support sperm

Minitube extenders contain specific combinations of antioxidants, proteins, salts and sugars, buffering agents, antibiotics and proprietary compounds.

**Membrane Protecting Ingredient (MPI)** is a proprietary additive in Minitube Plus extenders which provides unparalleled protection for sperm when exposed to temperature fluctuations from 10°C to 25°C. MPI actively plays a role in membrane stabilization and protects against premature sperm capacitation. Minitube Plus extenders reduce adverse effects resulting from unpredictable environmental or handling conditions.

**Antioxidants** are important molecules that slow down or prevent oxidation, a biochemical process recognized as the major cause of sperm deterioration and death. Antioxidants are found naturally in seminal plasma and some have fertility enhancing properties. Minitube continuously researches the role of specific antioxidants in order to manufacture extenders with the most powerful and effective formulas available.

### Buffers

Minitube long term extenders contain special buffering systems which are able to maintain a physiological pH level over a wide temperature range and long time span.

**Antibiotics** help to control bacterial growth from contamination that occurs during collection through processing. Minitube provides antibiotic formulations that comply with national and international regulations.

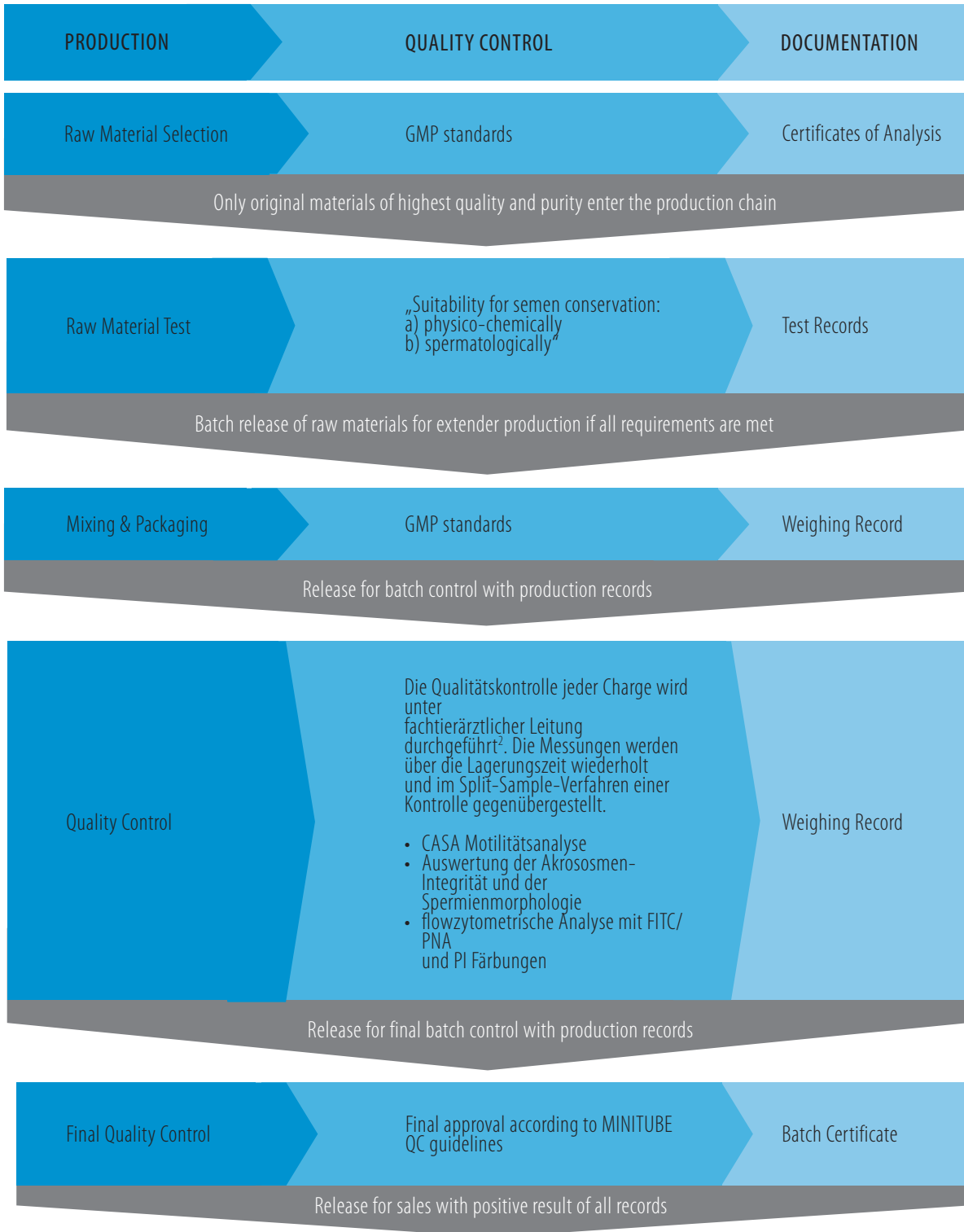
### Your benefits

- Robust and reliable thanks to specific formulation
- Temperature stable during transportation and storage
- Convenient and userfriendly packaging
- Dissolves quickly
- Made in Germany

# MINITUBE BOAR SEMEN EXTENDERS

## Quality control using GMP<sup>1</sup> standards at every production step

The superior quality of Minitube extenders is due to our strict quality control of all raw materials as well as of the end product. Each batch of components and each batch of extender produced is examined for purity and semen conservation properties. Production complies with the rigorous GMP standards. **For safety, quality and reliability.**



Semen Dilution

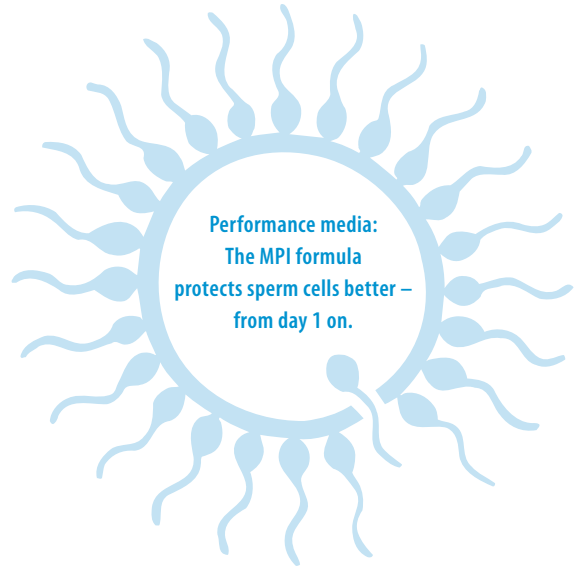
(1) GMP means that the production methods meet the strict regulations of the so-called “Good Manufacturing Practice” guidelines. GMP demands considerably higher standards than the DIN ISO norms. Manufacturing procedures must be exactly described and documented at every level of production. Thus seamless tracing back of all our raw materials is assured.  
 (2) Veterinarian supervision of the University of Hannover and by commercial boar studs over the maximum storage period for each extender

# MINITUBE BOAR SEMEN EXTENDERS

## Long term extenders

### Androstar® Premium\*

Androstar® Premium long-term extender for boar semen is based on an innovative combination of protective molecules. Specialised antioxidants are combined with a variety of highly effective membrane protecting agents. External influences on the sensitive sperm cells are effectively buffered over a wide temperature range from **+5° to +25°C**. Boar semen can therefore be preserved in an optimal state over a long time interval. Boar studs gain freedom of operation by using Androstar® Premium which provides greater latitude in acceptable semen temperature fluctuations and processing schemes.



### Androstar® Plus\*

The economic long term extender contains the factor MPI (=Membrane Protecting Ingredient) for membrane stabilisation. It makes the sperm cells less susceptible to damage due to suboptimal storage conditions: The temperature limit tolerated by the sperm cells, extends to the range of **+10°C to +25°C**.

### Androhep® Plus

The perfect medium for potential suboptimal conditions and for the long distance transport. Formulated with the Bovine Serum Albumin BSA and the Membrane Protecting Ingredient MPI component that specifically protect sensitive sperm cells.



#### Androstar® Premium

1 litre	REF. : 13533/1001
5 litres	REF. : 13533/1005
10 litres	REF. : 13533/1010
100 litres	REF. : 13533/1100

#### Androstar® Plus

1 litre	REF. : 13531/1001
5 litres	REF. : 13531/1005
10 litres	REF. : 13531/1010
100 litres	REF. : 13531/1100

#### Androhep® Plus

1 litre	REF. : 13529/5001
5 litres	REF. : 13529/5005
10 litres	REF. : 13529/5010
100 litres	REF. : 13529/5100

\*These extenders contain no animal components

# MINITUBE BOAR SEMEN EXTENDERS

## Medium and standard extenders

### M III®

The formula contains antioxidants that prevent the damaging effect of metabolites in the conservation medium and thus provides the durability of the semen for a period of approximately 4 days.



### BTS

The classic formula improved by Minitube provides a balanced medium for the storage of up to 3 days.



### M III®

1 litre	REF. : 13515/0001
5 litres	REF. : 13515/0005
10 litres	REF. : 13515/0010
83 litres	REF. : 13515/0083

### BTS

1 litre	REF. : 13525/0001
5 litres	REF. : 13525/0005
10 litres	REF. : 13525/0010
20 litres	REF. : 13525/1020
100 litres	REF. : 13525/1100
100 litres, without antibiotics	REF. : 13525/0100

Minitube extenders are available with different antibiotics. The antibiotics are selected according to very strict criteria and each batch is tested completely. Thus the compatibility for the metabolism and the cell structure of the sperm is guaranteed as well as the stability and the efficiency of the antibiotics for the entire preservation time.

**Extenders without antibiotics and separately compounded antibiotics are available alternatively.**

**Euro Cocktail** for the preservation of boar semen according to the norm 90/429 of the European Community. Contains streptomycin, penicillin, lincomycin, and spectinomycin. The quantity is sufficient for 5 litres extender.

REF. : 13540/5000

### Gentamicin sulphate

12.5 g for 50 litres extender	REF. : 13540/3050
25 g for 100 litres extender	REF. : 13540/3100



# PREPARATION OF BOAR SEMEN EXTENDER

## HyVat Station

### Technical features

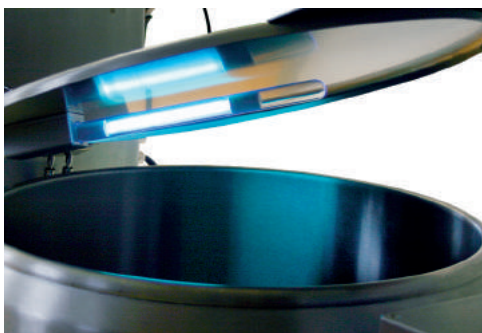
- Double wall and double bottom with heating system
- Temperature control unit with freely adjustable temperature up to +55°C
- UV-C radiation unit to sterilize the inner container
- All stainless steel; container can be rotated for easy cleaning, all covers are splash proof
- Integrated scale and valve control for automated filling
- On wheels
- Easy programming of temperature, water quantity and mixing procedure via touchscreen
- Includes SmartDispenser capability for dilution of semen and mixing of semen

### Your benefits

- The extender temperature in the HyVat station is reliably maintained during the whole production day
- SmartDispenser function allows highest precision during dilution of semen
- HyVat Station can easily be moved in the lab
- Very easy to clean, because container can be tipped over
- UV-disinfection of container prevents bacterial contamination
- Possibility to use with or without plastic liner
- Disinfection, filling and warming of water can be programmed, so that warm water is ready for extender preparation at the beginning of the working day
- Available bar code scanner allows easy batch tracking of extender usage
- Connection possibility to IDEE Software

HyVat Station, capacity: 100 l, 230V

REF. : 13201/3000





# PREPARATION OF BOAR SEMEN EXTENDER

## Heated extender vat, 100 and 200 litres

### Technical features

- Double wall and double bottom with heating system
- Temperature control unit HT 50 with freely adjustable temperature up to +55°C
- All stainless steel, easy to disinfect
- On wheels
- Time switch

### Your benefits

- The selected extender temperature is reliably maintained during the whole production day
- Disposable round bottom plastic bags provide an optimal hygiene standard

### Options

- Temperature controlled vat with a magnetic stirring drive built into the base and a speed controlled stirring rod.
- The base of the temperature controlled vat can also be supplied with an integrated scale on wheels.
- Temperature controlled vat with heated lid and UV-lamp:  
The heated lid prevents the condensation of vapour thereby eliminating a possible source of contamination that arises when drops fall back into the vat. The water can be disinfected with UV-radiation before the extender is added to the vat. This facilitates utmost levels of hygiene during production.

	100 litres	200 litres
Heated extender vat	REF. : 13201/0100	REF. : 13201/0200
with stirring drive	REF. : 13201/0100R	REF.: 13201/0200R
with stirring drive, scale, on wheels	REF.: 13201/0102R	REF.: 13201/0202R
with stirring drive, scale, on wheels, UV lamp, heated lid	REF. : 13201/0104R	REF. : 13201/0220R
Round bottom plastic bag	REF.: 13201/4115	REF.: 13201/4116
Retrofit kit heated lid and UV lamp	REF. : 13201/0400	REF. : 13201/0420

Power supply: 230 V, 110 V also available.



Semen Dilution

## Heated extender vat, 20 litres

### Technical features

- Temperature control unit HT 50 with freely adjustable temperature up to +55°C
- All stainless steel, easy to disinfect
- 2 openings in the lid allow the connection to an automatic pump, or to the SmartDispenser

220 V REF. : 13201/0020  
110 V REF. : 13201/0021

Round bottom plastic bag for 20 l vat REF. : 13201/4112



# PROCESSING OF BOAR SEMEN EXTENDER

## SmartDispenser

### Technical features

- Electronic control unit and balance, interfaced with a pump. The constant feed back between pump and control unit guarantees a measuring precision of  $\pm 5$  g
- Can be combined with a heated extender tank
- The SmartDispenser packages can be combined with the IDEE system
- Very modest space requirements
- Highest level of security and precision for the process of semen dilution
- Splash reduction for less spillage of semen during dilution

The SmartDispenser packages include a stand, tubing/sinker, control unit, scale and a pump.

#### (1) SmartDispenser XL

Scale up to 24 kg with a resolution of  $\pm 2$  g

Pump: up to 13 litres per minute

REF. : 13200/0601

#### (2) SmartDispenser L

Scale up to 12 kg with a resolution of  $\pm 1$  g

Pump: up to 5 litres per minute

REF. : 13200/0602

### Accessories

**Silicone tubing** for SmartDispenser L REF. : 13200/0011

**Silicone tubing** for SmartDispenser XL REF. : 13200/6010

**Sinker**, stainless steel REF.: 5013200/0012

**Semen mixing cylinder**, 3.5 l REF. : 13203/0001

**Semen mixing cylinder**, 5.5 l REF. : 13210/0030



# TEMPERATURE MANAGEMENT & QUALITY CONTROL

## Laboratory Heating Plate

- Preset temperature: 37°C
- Integrated control unit, external power supply
- Heated area: 470 x 260 mm
- For keeping raw ejaculates warm until analysis is completed
- Suitable for 115 V und 230 V
- Power consumption: 70 watt

**Laboratory Heating Plate** REF. : 12055/0010

**Support for Blue Bag** REF. : 11124/1000



## Water bath, stainless steel

For keeping semen and extender warm in dry environment. The water bath is covered by the inserts which protect the ejaculates against spray water.

- Inner dimensions of each of 6 cylinders  $\varnothing$  140 x 296 mm, volume 4.1 l
- Immersion thermostat with circulation pump
- LED temperature display, heating capacity 2 kW
- Operating temperature +20°C to +38°C (for sterilisation short-time operating at up to +100°C possible)

**230 V / 50 Hz** REF. : 14079/0060

**115 V / 60 Hz** REF. : 14079/0061

## Infrared Thermometer

For temperature measurement without contact. With laser for marking the measuring point.

- Measurement range: -50 to +200°C / +200 to +800°C
- Display in °C or °F selectable
- With case and battery

**Infrared Thermometer** REF. : 15120/7000

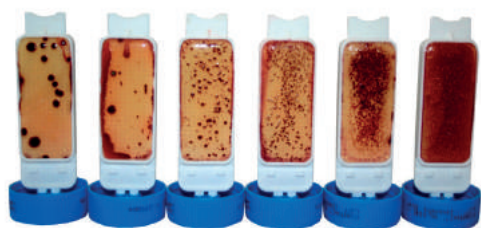


# TEMPERATURE MANAGEMENT & QUALITY CONTROL

## Refractometer

Test for correct extender powder - water ratio in prepared boar semen extender. Important quality control test in the boar semen laboratory.

**Refractometer** REF. : 24400/0160



## EasyCult

Culture medium for bacterial analysis. Includes 2 different culture media for the analysis of aerobic and anaerobic bacteria. For the hygiene control in the semen laboratory.

**EasyCult, 20/box** REF. : 26000/0010

### Mini Incubator for EasyCult

230 V / 50 Hz REF. : 14125/0010  
110 V / 50 Hz REF. : 14125/0011

Semen Dilution

## Semen dyes

	20 ml	100 ml
Red	REF. : 13900/0200	REF. : 13900/0720
Blue	REF. : 13900/0300	REF. : 13900/0730
Green	REF. : 13900/0500	REF. : 13900/0750
Yellow	REF. : 13900/0600	REF. : 13900/0760



# WATER PREPARATION

## Water purification system

### Millipore water treatment plant with tank

#### Your benefits

- High purity degree of the purified water
- High security due to automatic sanitisation, quality tests and warning notices
- Requires low maintenance

#### Technical features

- Latest technology, based on reverse osmosis
- Membrane free of cellulose
- Micro-processor control for the control of water quality
- Alert function in case a filter change is required
- Self-purification function guarantees long operating life of the membrane
- Indication of the purified water quality in conductivity and % deionization
- Sterile filter for tank ventilation
- Connection: 230 V/50 Hz, 115 V/60 Hz, 100V/50 Hz or 100 V/60 Hz

Production capacity approx. 24 l per hour, 200 l tank [REF. : 14040/0024](#)

Production capacity approx. 8 l per hour, 100 l tank [REF. : 14040/0008](#)



Semen Dilution



## Water distillers

### Monodistiller 2008

Stainless steel  
With reservoir  
Connection: 220 V/3 ph or 400 V/3 ph + 0  
Input: 6000 W

Capacity: 8 l/h, reservoir 16 l [REF. : 14054/2008](#)

Capacity: 12 l/h, reservoir 24 l [REF. : 14054/2012](#)

### Bidistiller 2108

Stainless steel  
Capacity: 8 l/h  
Usage of cooling water: 198 l/h  
Connection: 220 V 3 ph or 400 V/3 ph + 0  
Input: 11500 W

[REF. : 14052/2108](#)





# Semen Processing

## QuickTip Flexitube®

QuickTip Flexitube®, very soft wall  
 QuickTip® Superflexitube, extra soft wall

Minitube tubes are available in different colours and sizes:

	PCAI Flexitube® - 60 ml	Flexitube® - 95 ml	Superflexitube - 95 ml
Transparent	REF. : 13451/0350	REF. : 13452/0396	REF. : 13452/07961
Red	REF. : 13451/1350	REF. : 13452/1396	REF. : 13452/1796
Yellow	REF. : 13451/2350	REF. : 13452/2396	REF. : 13452/2796
Green	REF. : 13451/3350	REF. : 13452/3396	REF. : 13452/3796
Blue	REF. : 13451/4350	REF. : 13452/4396	REF. : 13452/4796
Orange	REF. : 13451/5350	REF. : 13452/5396	REF. : 13452/5796

### Tube clamp

to seal e.g. tubes of test samples

REF. : 13452/0005



## For the optimal conservation of boar semen

**60 ml**

50 ml  
40 ml  
30 ml

**95 ml**

90 ml  
80 ml  
70 ml

**Filling level line:**  
easy to read

**Shape:**  
little air passages between the tubes allow for steady cooling of each semen dose in the fridge

**Airstream**

**Material:**  
sperm friendly polyethylene

**Flexible walls:**  
for a complete semen uptake by the sow

**Tube bottom:**  
particularly reinforced, so that the tube stands upright on the catheter

**Ergonomic twist-off tip:**  
no tool necessary with QuickTip® tubes

**Spout:**  
ensures an airtight fit of the tube on all different kinds of catheters

### What characterises an optimal boar semen tube?

- All raw materials are tested for sperm biocompatibility
- Production purity (GAD): absence of critical substances guaranteed
- Maximum hygiene requirements at the production site: access controls, no admittance to personnel with contact to pigs, air filters
- Dedicated production lines produce only boar semen tubes
- Only new granulate is used (no recycled material)
- Minimum dimension tolerances between tubes and lots
- Seamless documentation of all batch tests

# AUTOMATIC PACKAGING MACHINES FOR BOAR SEMEN

## HyPacker, MiniBSP and TwinPacker

### Computerised packaging lines for boar semen:

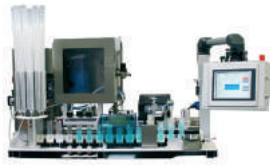
HyPacker, MiniBSP and TwinPacker are synonyms for automated boar semen production. Producing more than 100 million tubes per year worldwide, these Minitube machines prove their worth every day as reliable and efficient cornerstones for the AI industry.

### Technical features

- Machine control via industrial PC with touch screen
- Easy menu navigation
- Sealing of the tubes with ultrasound (MiniBSP and HyPacker)
- Automatic labelling, also possible with barcodes and company logo via thermal transfer printer
- Fully automatic data transfer between laboratory software IDEE and packaging line in real time
- Layout of labels can easily be adjusted and changed by the operator

### Your benefits

- Industrial design and high quality technology ensures consistency of your semen production
- The processing speed of up to 1800 tubes per hour provides your laboratory with efficiency and high performance
- The automation of semen production saves labour time and increases the product quality
- Interfaces to IDEE or other computer programs make the production data available in real time to sales and administration
- Our service team provides full service via hotline, by remote access via tele-service or on the spot
- Profitability is the aim - cost-effective production without wastage due to the use of tubes for semen packaging

			
	<b>HyPacker</b>	<b>MiniBSP</b>	<b>TwinPacker</b>
<b>Maximum capacity in tubes per hour*</b>	1800	950	550
<b>Tube magazine capacity</b>	2100	210	9 magazines for 4 tubes
<b>Required space</b>	200 x 110 cm	180 x 65 cm (table)	72 x 90 x 138 cm (table)
<b>Serial data connection</b>	Yes	Yes	Yes
<b>Operating pressure</b>	6 bar (5 - 10)	6 bar (5 - 10)	-
<b>Compressor capacity</b>	> 440 l/min	> 350 l/min	-
<b>Pressure tank</b>	200 l	100 l	-
<b>Electric connection</b>	230/110 V, 50/60 Hz	230/110 V, 50/60 Hz	230 V, 50 Hz

\* performance data may vary depending on production conditions

# HYPACKER

The HyPacker offers the highest capacity among the Minitube filling machines and is the ideal solution, when large quantities of tubes need to be filled, sealed and labeled in a short time.

Due to its robust industrial design, the HyPacker needs very low maintenance, meets highest hygiene requirements and guarantees ergonomic operation.

## Technical features

- Speed of up to 1800 tubes per hour under production conditions due to double filling station for automated ejaculate exchange
- Third tube filling station with integrated pump for optional extender addition
- Processing of single ejaculates or pools and of different tube lengths
- Filling with electronic weighing cells: enables adjustment of the filling level in every tube via software and ensures a very exact filling volume ( $\pm 1$  ml)
- Ultrasound sealing unit, welding gap easy to adjust
- Hygienic design and easy cleaning: closed surfaces, all elements in protective casings, easy removal of single parts
- Servo-powered tube transport and boxes carousel
- Integrated lot sorting in boxes or bags
- High speed thermal transfer printer (printer configuration via Ethernet)
- 4 standard label formats
- Communicates with IDEE and other laboratory software programs
- Integrated barcode scanner and touchscreen for high user-friendliness
- Detachable modular tube magazine (2100 tubes) for filling outside the lab area
- Baldachin with coloured illumination codes showing the operation status

HyPacker

REF. : 13208/4000



## Accessories

**Dispensing tubing** for HyPacker, sterilisable REF. : 13208/4160

**Label made of special paper**, blank, 2000/roll REF. : 13210/4940

**Semen Mixing Cylinder**, 5,4 l REF. : 13208/4030

**Bag** for semen mixing cylinder, 5,4 l REF. : 13203/4010

**Semen Mixing Cylinder**, 15 l REF. : 13208/4015

**Bag** for semen mixing cylinder, 15 l REF. : 13210/0105

# MINIBSP

The automatic packaging machine for boar semen MiniBSP is a space saving table model and is suitable for the processing of up to 950 tubes per hour.

## Technical features

- Integrated tube magazine for 210 tubes
- Control of filling level by electronic weighing cells: allows the adjustment of the filling level per tube via software with a filling accuracy of  $\pm 1$  ml
- Ultrasonic sealing unit
- Very fast exchange of the label roll
- Second filling station for tubes with automatic ejaculate change: While the machine is processing the ejaculate, the second one can be prepared and the machine automatically switches to the second filling station. Thus the machine can be used without interruption. The speed of theoretical and real production is identical.
- Connection to IDEE and other laboratory software programs possible

MiniBSP

REF. : 13210/0005

## Accessories and options

### Third tube filling station with extender dispenser (standard for HyPacker, option for MiniBSP)

After adding pre-extended ejaculate, this station fills each tube with the remaining volume of extender. The two phase dilution saves time and leads to a faster cooling of the semen, as the second dilution step is performed with extender that is maintained at room temperature.

REF. : 13210/0045

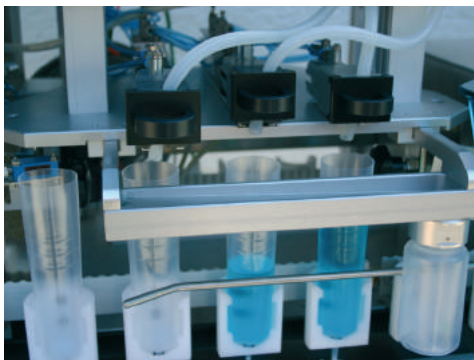
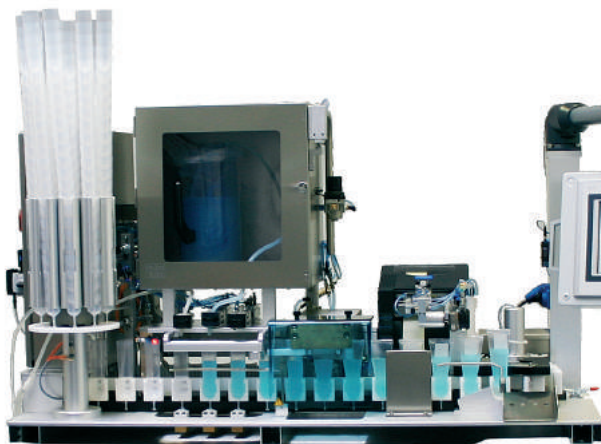
**Mobile MiniBSP table**, with conveyor belt for automatic separation of ejaculates into storage boxes, including 3 storage boxes

REF. : 13210/0091

### Option for PCAI tubes

Device for processing of 60 ml Flexitubes

REF. : 13210/0070





# TWINPACKER

Compact and robust table top machine for filling, sealing and labelling boar semen tubes – the ideal solution for small and medium sized boar studs.

## Technical features

- Dual working cycle that processes 2 semen tubes at a time
- Capacity: up to 550 tubes per hour
- Filling with peristaltic pumping system: produces a precise volume from the first tube on ( $\pm 3$  ml)
- No semen loss during the startup of the filling hose
- Secure sealing of tubes by means of thermal pulse- welding technique
- Print of individually designed labels and barcodes
- Connection with IDEE and other laboratory software programmes possible
- Easy maintenance and service

## Accessories

**Filling tube with stainless steel sinker** REF. : [13214/0010](#)

**Tube magazine for 4 tubes** REF. : [13214/0020](#)

**Label roll with 2500 labels** REF. : [13214/3049](#)

**Adapter for magazines for filling 60 ml tubes**  
(4 needed for each magazine) REF. : [13214/0024](#)

**TwinPacker**

REF. : [13214/0000](#)



# SEMI-AUTOMATIC PACKAGING SYSTEM FOR BOAR SEMEN

## Technical features semen dispensing unit

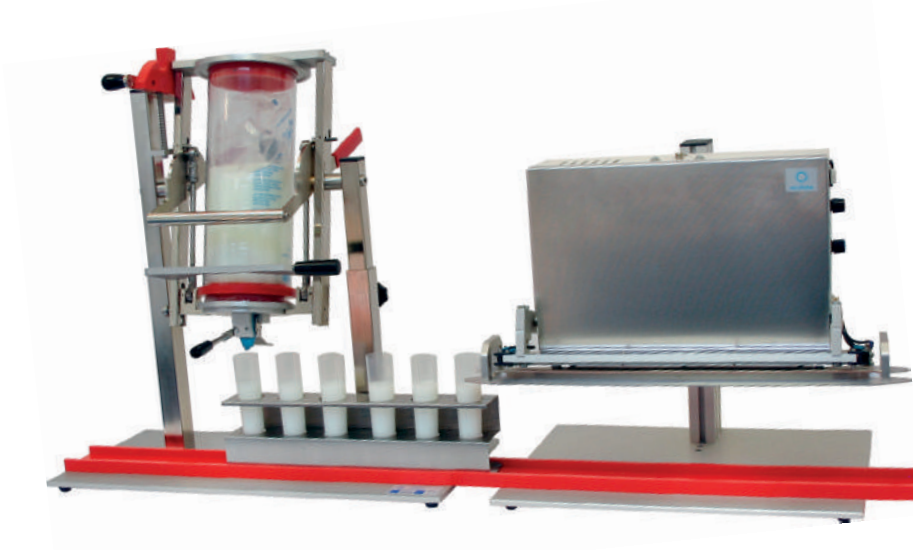
- Rugged, solid frame
- With track for tube magazine or bottle magazine
- For mixing cylinders with disposable plastic bags in 2 sizes: 3.5 and 5.5 l

REF. : [13203/0000](#)

## Technical features sealing unit

- Simultaneous sealing of 6 tubes
- With magazine track and pedal switch
- Both jaws with 4 mm heating wires
- Individual adjustment of heating and cooling cycles
- Output: 600 tubes/hour approx.

REF. : [13225/0000](#)



## Accessories

### Semen mixing cylinder

3.5 l [REF. : 13203/0001](#)  
5.5 l [REF. : 13210/0030](#)

### Insert ring for semen mixing cylinder

3.5 l [REF. : 13203/0005](#)  
5.5 l [REF. : 13210/0035](#)

**Dispensing nozzle** made of sperm friendly plastic material, to be sterilised in hot water or vapour

[REF. : 13203/0012](#)

### Magazine

6 tubes [REF. : 13204/9006](#)  
24 bottles [REF. : 13204/0024](#)

**Adapter rack for filling of 60 ml tubes** (two needed for semi-automatic packaging system)

[REF. : 13225/0060](#)

**Semen dispensing bag**, disposable, non-toxic material, 100/roll

3.5 l [REF. : 13203/4001](#)  
5.5 l [REF. : 13203/4010](#)

**Anti-adhesive tape for sealing jaw** [REF. : 13225/0201](#)

**Heating wire, 4 mm wide**, length 620 mm, pair [REF. : 13225/0100](#)



# MANUAL PACKAGING SYSTEM FOR BOAR SEMEN

## Label printer

Label printer with software for label creation and label dispenser, max. label size 104 mm width x 279 mm length. Interface RS 232, USB and parallel, can be connected with IDEE.

REF. : 18800/0002

Adhesive label 30 x 50 mm, 1000/roll

REF. : 13210/4829



## 6-tube manual sealer

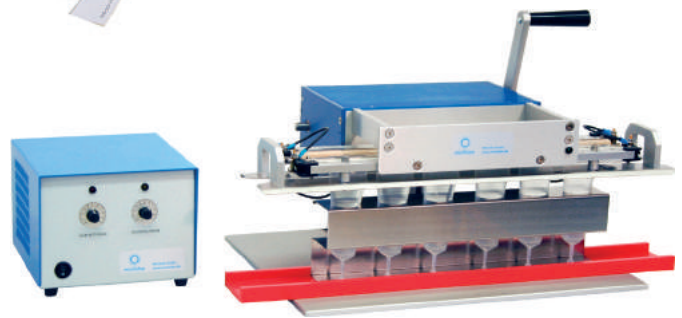
- Simultaneous sealing of 6 boar semen tubes
- Manual closing of sealing jaws with lever
- Both jaws with 4 mm heating wires
- Individual adjustment of heating and cooling cycles
- Output: 400 tubes/hour approx.

230 V

REF. : 13225/6000

115 V

REF. : 13225/6001



## 3-tube manual sealer

- Simultaneous sealing of 3 boar semen tubes
- Sealing clamp with 2 mm heating wire
- Individual adjustment of heating time
- Output: 200 tubes/hour approx.

REF. : 13225/0013



## Boar semen bottles

- Easy to close
- 500/box
- 100 ml

REF. : 13450/0100

Caps are available in different colours:

Blue	REF. : 13450/10001
Green	REF. : 13450/20001
Red	REF. : 13450/30001
Yellow	REF. : 13450/40001
Orange	REF. : 13450/45001
Black	REF. : 13450/50001
Violet	REF. : 13450/60001
White	REF. : 13450/70001
Pink	REF. : 13450/80001





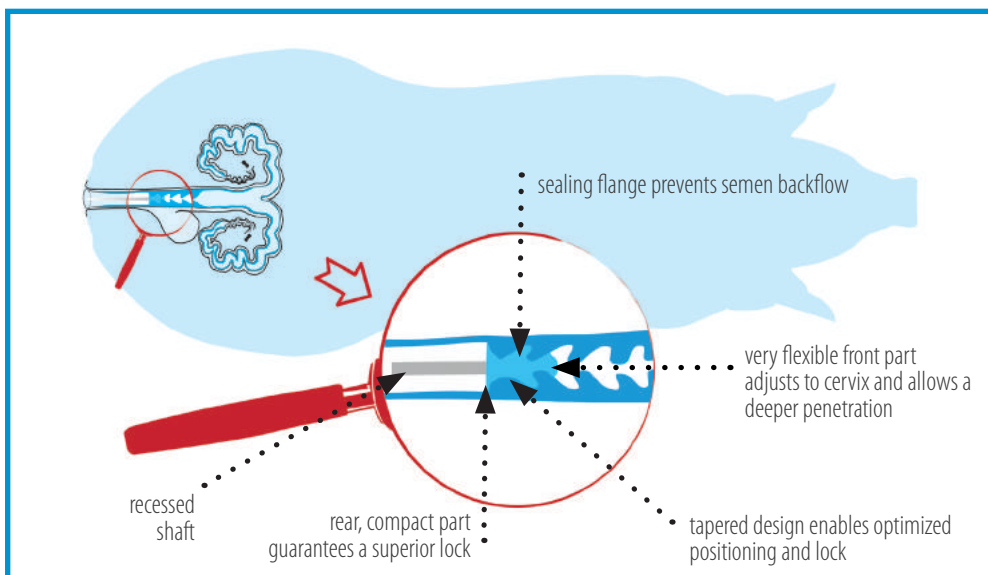
# Semen Storage and Insemination

## ClearGlide®

### New generation insemination catheter with „Poly Gel“ tip

With ClearGlide®, Minitube has developed a revolutionary new catheter for artificial insemination of sows. Its unique poly gel tip has an excellent gliding property, adjusts perfectly to the cervix and offers superior locking of the catheter during insemination.

- New material with unique molecular structure
- Poly gel tip has different hardness zones
- Non-absorbent tip
- High elasticity of the material: soft tip, compact shaft
- Available in two designs: handle with lock or Safelock screw-thread at the end of the shaft for a firm hold of the tube spout





# INSEMINATION CATHETERS

## Your benefits

- Excellent gliding capacity
- Flexible poly gel tip adjusts perfectly to the cervix – offering superior locking
- The sealing flange reduces semen backflow during insemination
- The recessed shaft avoids injuries



## Spirette®

- The tip – a true copy of nature
- For a perfect sealing and stimulation of the cervix
- A strong lock in the cervix for successful insemination



## Foamtip and SoftGilt

- Tapered foam end for gentle insertion and removal
- Firm foam for better lock, increased stimulation and prevention of semen backflow
- Non absorbing foam to prevent loss of semen
- Available in two designs: handle with lock or Safelock screw-thread at the end of the shaft for a firm hold of the tube spout



ClearGlide®, with sealing flange	handle with lock	25/bag, 300/box	REF. : 17106/4026
ClearGlide®, with sealing flange	Safelock screw-thread	25/bag, 500/box	REF. : 17106/3026
ClearGlide®, traditional form	handle with lock	25/bag, 500/box	REF. : 17106/4025
Spirette®	handle with lock	5/bag, 600/box	REF. : 17102/9067
Foamtip	Safelock screw-thread	25/bag, 500/box	REF. : 17106/5077
Foamtip	handle with lock	25/bag, 500/box	REF. : 17106/5376
SoftGilt	Safelock screw-thread	25/bag, 500/box	REF. : 17109/9000
SoftGilt	handle with lock	25/bag, 300/box	REF. : 17109/9002





# INSEMINATION CATHETERS

## PCAI catheter

### Your benefits

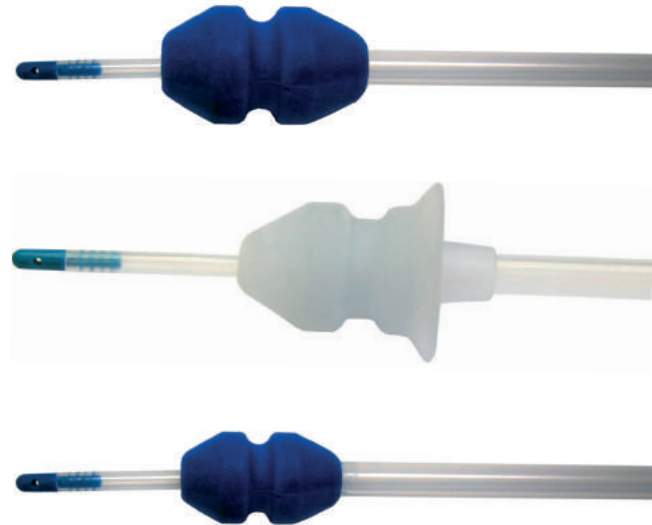
- Ideal for the post-cervical insemination of sows: all semen cells reach the uterus and can therefore easier be transported into the fallopian tube by uterine contractions
- The fertility of the inseminated sow can thus be improved, or can be maintained with a reduced amount of sperm per dose
- The Foamtip or ClearGlide® head of the outer catheter is already lubricated; the whole catheter is individually packed in the hygienic SafeBlue sheath
- Inner catheter with very small diameter: nearly no semen remains in the catheter
- SafeBlue concept guarantees high hygiene status

**PC Clear**, PCAI cannula with **SafeBlue ClearGlide®**  
individually packed, sterilised, 10/bag **REF. : 17112/3000**

**PC Blue**, PCAI cannula with **SafeBlue Foamtip®**  
individually packed, sterilised, 10/bag **REF. : 17112/2000**

**PC Gilt**, PCAI cannula with **SafeBlue SoftGilt**  
individually packed, lubricated, 25/bag **REF. : 17112/4000**

**PC Cannula** for post-cervical insemination  
5/bag **REF. : 17112/1010**

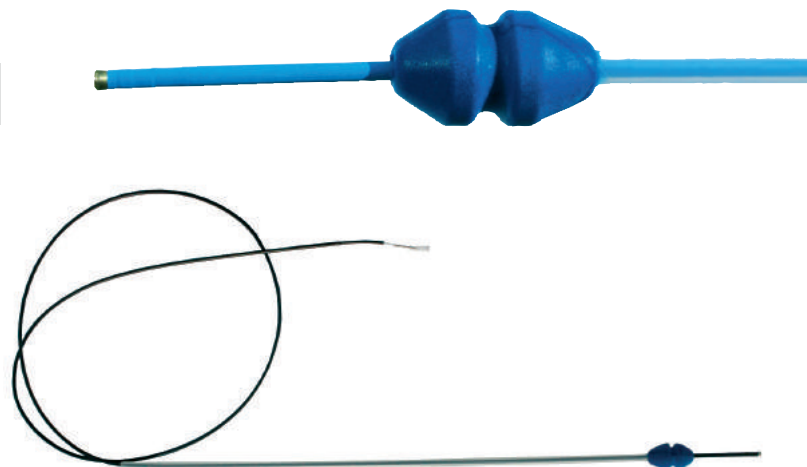


## DeepBlue AI catheter

### Your benefits

- For the deep intrauterine insemination of special semen doses: ideal for very low numbers of sperm, i.e. in frozen-thawed or sexed semen
- Flexible and at the same time firm and soft inner catheter, with a length of more than 1.5 m, can be inserted over the complete distance of an uterus horn up to its tip
- A small metal tip facilitates the entry into the cervix
- Patented (University of Murcia, Spain)

**DeepBlue AI catheter**, individually packaged,  
sterilised **REF. : 17113/0100**



# INSEMINATION CATHETERS

## SafeBlue

### The SafeBlue hygiene concept – proven increase of reproductive performance

A clean catheter and a clean insemination process maintain the uterus free from bacterial contamination, and thus are of great importance for the insemination success.

The sterilised, hygienically packed catheter, the use of the sheath as protection foil during the passage through the vulva and especially the fact that extra lubricant, which is often a source for bacterial contamination, is no longer needed, make of the SafeBlue a unique hygiene concept for the insemination.

A number of scientific publications and practice reports emphasise the positive effect of the SafeBlue concept: in field trials 30 to 100 piglets more per 100 inseminated sows could consistently be achieved.

#### Your benefits

- The sterilised catheter remains clean and free of contamination during storage and until insemination.
- Every catheter is sterilised and individually packed in a sanitary sheath: the catheter tip is equipped with a sperm-friendly lubricant.
- Due to the protective sanitary sheath, the catheter remains clean during the insertion in the vulva. Only in the clean area the catheter tip is pushed through the sheath.
- No more need for time consuming preparations: dry cleaning of the vulva is sufficient.
- No more fumbling with lubricants.
- Improved pregnancy rates and litter numbers.



SafeBlue Foamtip®



SafeBlue Spirette®



SafeBlue SoftGilt



SafeBlue ClearGlide®

SafeBlue ClearGlide® traditional form	Safelock screw-thread	100/dispenser box, 500/box	REF. : 17106/3001
SafeBlue ClearGlide® with sealing flange	Safelock screw-thread	100/dispenser box, 400/box	REF. : 17106/3006
SafeBlue ClearGlide® traditional form	handle with lock	100/bag, 500/box	REF. : 17106/4001
SafeBlue ClearGlide® with sealing flange	handle with lock	100/bag, 300/box	REF. : 17106/4005
SafeBlue Spirette®	handle with lock	100/dispenser box, 400/box	REF. : 17102/9560
SafeBlue Spirette®	handle with lock	100/bag, 600/box	REF. : 17102/9561
SafeBlue Foamtip®	Safelock screw-thread	100/bag, 500/box	REF. : 17106/9076
SafeBlue Foamtip®	Safelock screw-thread	100/dispenser box, 400/box	REF. : 17106/9176
SafeBlue Foamtip®	handle with lock	100/bag, 500/box	REF. : 17106/9376
SafeBlue SoftGilt	Safelock screw-thread	100/dispenser box, 400/box	REF. : 17109/9001
SafeBlue SoftGilt	Safelock screw-thread	100/bag, 300/box	REF. : 17109/9003

# INSEMINATION CATHETERS

## Extension for insemination catheters

Minitube provides extensions for insemination catheters for hanging up semen tubes on a wire, providing a hygienic connection between semen dose and catheter.

### Flexible extension

- Suitable for all catheters
- Applicable for all insemination techniques: the tube can be fixed in almost every position
- Available either packed individually or in units of 100 pieces



**Flexible extension, 1/bag** REF. : [17108/1001](#)

**Flexible extension, 100/bag** REF. : [17108/1100](#)

**Foamtip Safelock® with extension, 1/bag, 400/box** REF. : [17107/0001](#)

**SafeBlue Foamtip® with extension, 100/bag, 500/box** REF. : [17107/0133](#)



# ACCESSORIES FOR PORCINE INSEMINATION

## Breeding clamp

- Very easy handling: the clamp is just clipped on the back of the sow
- Elastic compressing arms stimulate the sow through pressure to the flanks
- Made of stainless steel, easy to clean, rounded edges for maximum safety in the barn
- Effective attachment of any catheter, no need for an elongation tubing between catheter and semen tube
- Flexible rubber holder fits all sows and allows movement during the insemination
- Easily speeds up to 30 inseminations per technician per hour

**For sows** [REF. : 17114/4000](#)

**For gilts** [REF. : 17114/4001](#)



## EasyClamp breeding aid

EasyClamp breeding aid made of plastic, includes stainless steel bar.

- Lightweight and robust plastic breeding clamp for stimulation of the sow's flanks
- Can easily be put on the sows flanks with one hand
- Includes metal rod with hook to hold AI-catheter and semen dose
- After inserting the catheter and connecting the tube, the catheter can be fixed by the hook and the sow can finish the insemination by herself
- With this AI-aid, one AI-technician can inseminate 5-8 sows at the same time

**EasyClamp** [REF. : 17114/3000](#)



## Breeding belt

Practical with broad ribbon, velcro fastening, clamp and cord for the attachment of the tube or bottle, individually adjustable to the size of the animal.

**Breeding belt** [REF. : 17114/2100](#)



# ACCESSORIES FOR PORCINE INSEMINATION

## BoarScent

BoarScent is a boar pheromone and aids in the identification of oestrus in sows and gilts. It also helps to stimulate the sow during AI. The spray is applied to the sow's snout.

**BoarScent**, 35 ml, approx. 88 applications [REF. : 17115/9051](#)

## StimuBoar

StimuBoar is a boar training aid and assists with the training of boars on a phantom. The spray is applied to the boar's snout and directly to the dummy when training a young boar. The spray can also help to stimulate old boars to mount the dummy quicker.

**StimuBoar**, 35 ml, approx. 88 applications [REF. : 17115/9005](#)



## Backfat measuring device

- The backfat measuring device allows a very easy determination of the backfat thickness, i.e. at the P2 point
- Measuring can be done with one hand
- Robust device in metallic design
- Display informs about total fat thickness in mm and additionally about thickness of each of the three fat layers
- Long operation: up to 11 hours with one battery charge

### Backfat measuring device

incl. charger [REF. : 23330/0100](#)



## Lubricant Reprojelly

Non spermicidal lubricant, water soluble

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

**Tube with 100 ml**, resealable [REF. : 11907/0100](#)

**3.0 l canister**, without dispenser [REF. : 11907/3000](#)

**Dispenser** for canister [REF. : 11907/3100](#)





# AIR CONDITIONED BOXES AND SEMEN STORAGE UNITS

## Air conditioned boxes

### Your benefits

- Air conditioned boxes can heat and cool to provide the desired temperature independent from the outside temperature
- Internal ventilation system for an even temperature distribution within the box
- Exact, electronic control
- Minitube air conditioned boxes have a 12 V DC connection for mobile use



	Preset temperature (+17°C)	Variable temperature setting
<b>8 l</b> Capacity: 24 tubes or bottles	<a href="#">REF. 17161/0008</a>	<a href="#">REF. 17161/0009</a>
<b>25 l</b> Capacity: 85 tubes or bottles	<a href="#">REF. 17161/0028</a>	<a href="#">REF. 17161/0029</a>
<b>40 l</b> Capacity: 100 tubes or bottles	<a href="#">REF. 17161/1032</a>	<a href="#">REF. 17161/0032</a>



### For all air conditioned boxes:

**Transformer** 230V / 12V, output 5 A [REF. : 17165/1395](#)



Semen Storage and Insemination

## Temperature controlled semen storage units

With variable temperature setting for double purpose: For semen storage at 17°C or for pre-warming the semen collection items to +40°C. Digital temperature display clearly legible from the outside. Power supply: 230 V

for 300 tubes / bottles [REF. : 14160/0300](#)

for 700 tubes / bottles, with glass door [REF. : 14160/0352](#)

with temperature preset to +17°C,  
for 300 tubes / bottles [REF. : 14160/0200](#)

**Klima Kit:** Electronic controller for keeping +17°C in any refrigerator. No installation required. Target value adjustable.

**230 V** [REF. : 14160/9001](#)

**110 V** [REF. : 14160/9002](#)



# PREGNANCY DETECTION

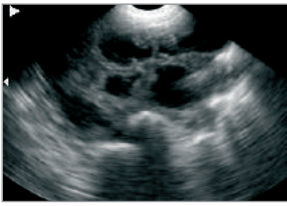
## Ultrasound scanner

Portable ultrasound scanner for pregnancy detection. Very robust, battery operated, easy to clean.

Stable carrying case, electronic 3.5 MHz convex sensor (70° forward), freeze-function, carrying strap, two rechargeable batteries, battery charger, USB cable to transmit photos.

Ultrasound scanner [REF. : 23500/1000](#)

Spare battery set (2 pc.) [REF. : 5023500/1010](#)



Day 22



Day 25



## Doppler pregjector

Portable doppler ultrasonic device with inclined scanning area for pregnancy detection in sows.

Positive diagnosis with the Doppler audio signal from day 25 after AI onwards. Battery operated, complete with headset, instruction CD, and carry case.

Doppler pregjector [REF. : 23350/2050](#)

## Pregnancy tester

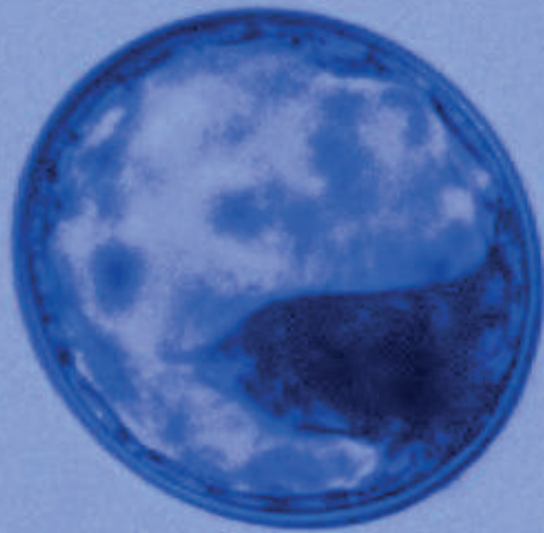
For pregnancy detection after 30 days by ultrasonic waves.

Operated with rechargeable or normal battery. Very handy, robust and easy to operate. Good freedom of movement due to a probe connected to a spiral cable. Complete with carry case, test body, wrist band, contact gel bottle and standard battery.

Pregnancy tester [REF. : 23350/2835](#)

Charger for 100-240 V, with rechargeable battery [REF. : 23350/2840](#)





# Embryo Transfer

## Embryo transport kit

### Your benefits

- Heavy duty box – impact resistant
- Water resistant surfaces
- Release valve eases height changes during flights
- 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 incubator, dry battery and battery charger for portable incubator, holds temperature for 30 hours during transport.

[REF. : 19180/2101](#)

**Transport vial with secure snap cap,**  
round bottom, 5 ml, single packed, sterilised

[REF. : 19180/5006](#)

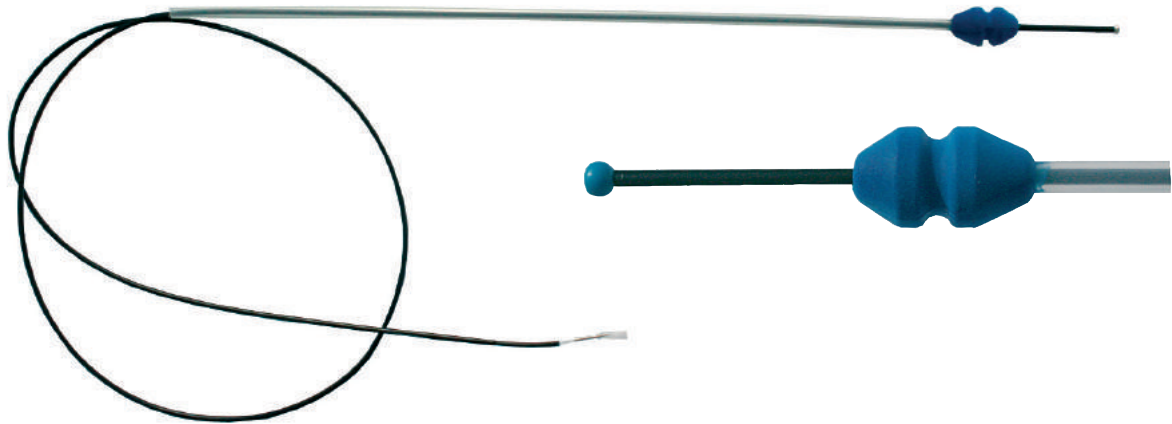


# EMBRYO TRANSFER IN SWINE

## DeepBlue ET

### Catheter for the non-surgical transfer of embryos in swine.

In cooperation with the University of Murcia in Spain, Minitube has developed a deep intrauterine catheter: the DeepBlue ET. This catheter is especially designed for the non surgical embryo transfer in swine.



#### Your benefits

- Transfer of the embryos in the barn is possible without sedation of the sow.
- High level of hygiene: the hygienic sanitary sheath of the SafeBlue system protects the tip of the catheter during the canalisation through the outer genital tract and thus avoids contamination of the uterus.
- High farrowing rate: several field trials prove the efficiency of the DeepBlue catheter. By a transfer of a mean of 24-30 embryos per sow, results of 70% conception rate and an average litter size of 7.5 have been recorded.

#### Technical features

- Outer catheter SafeBlue: disposable insemination catheter, with lubricant coated catheter head, individually packaged and sterilised.
- Inner catheter: flexible probe, 180 cm long, 4 mm external diameter, 0.5 mm internal diameter.
- Non-traumatic tip of the inner probe considers the special sensitivity of the uterus wall during the progesterone phase.
- Special design of the internal probe allows to reach the middle or the anterior third of the uterine horn.

DeepBlue ET Catheter

REF. : [19295/0200](#)





# Freezing of Boar Semen

## Freezing extenders for boar semen

The freezing of boar semen is of great importance for the storage of genetic material in order to preserve and protect genetic variety. Furthermore, freezing facilitates the exchange of genetic material between geographically distanced breeding populations.

However, boar sperm are more sensitive to the processes of freezing than sperm of other species. The Minitube group provides a number of extender media, devices and procedures to reduce stress for boar sperm cells during the freezing process and to ensure insemination success with frozen semen.

**Androstar® Premium with Gentamicin**, thawing and fresh semen extender, for 1 litre of extender

REF. : 13533/1001

**Androstar® CryoPlus** freezing extender for boar semen, for 770 ml of extender

REF. : 13531/3001



Minitube offers training in boar semen freezing.

Please contact our specialists!





# FREEZING OF BOAR SEMEN

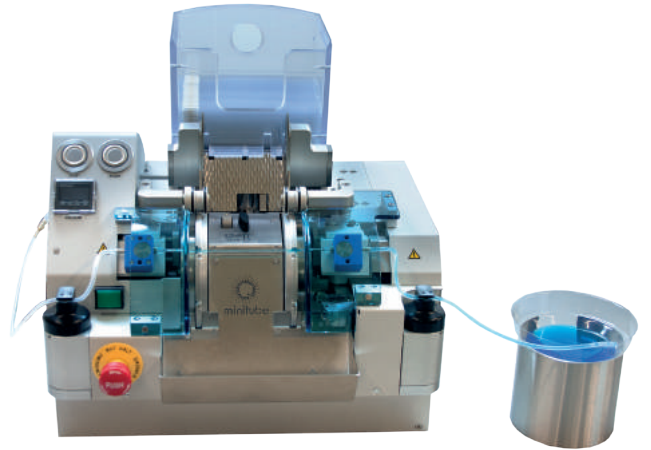
## MPP Uno

Automatic filling and sealing machine for straws.

- Capacity: approx. 4000 straws/hour
- No wearing parts, very fast and easy cleaning
- Machine dimensions: 370 x 460 x 320 mm (L x W x H) plus control box
- Power supply: 110 V/60 Hz or 230 V/50 Hz

MPP Uno, complete

REF. : 13017/0000



## EasyCoder

Thermo transfer printer for semen straws with automatic straw feeder.

Unmatched clean and clear, non-abrasive print. Prints up to 3 lines per straw, even with barcodes, logos and specific characters. Very simple handling, minimal maintenance required.

Power supply: 110/230 V / 50-60 Hz

EasyCoder

REF. : 13038/0000

Ink ribbon for straw printer EasyCoder,  
roll with 200 m, black colour

REF. : 13038/0010



## Cooling cabinet

- Cold handling box on rolls
- Temperature preset to 5°C
- Dimensions: 150 x 100 x 116 cm (W x D x H)
- 220 V

REF. : 14335/3000



# FREEZING OF BOAR SEMEN

## Refrigerated centrifuge

With swing out rotor, 4 buckets and 4 x 600 ml polypropylene bottles with caps. All parameters programmable, incl. precooling. Speed selection in a range of 100 to 15 000 min<sup>-1</sup>. Memory for 10 programmes.

Dimensions: 65 x 68.5 x height 40.5 cm

Power supply: 230 V/50 Hz

**Refrigerated centrifuge**

REF. : [14602/0400](#)



## Cryogenic containers

A full range of cryogenic containers for storage and transport of frozen semen is available.



## Thawing device MT

- Electronic temperature control
- Central thawing chamber with lift
- Accuracy  $\pm 0.2^{\circ}\text{C}$
- Power supply: 12 V DC (car battery)

**MT 30/54:** set to  $+38^{\circ}\text{C}$

REF. : [17044/0038](#)

**MT 30/54:** set to  $+50^{\circ}\text{C}$

REF. : [17044/0050](#)

*Other temperature settings upon request.*



## Accessories

**Transformer** for thawing devices for 12 V/220 V

REF. : [17165/1395](#)

**Thermometer** for thawing devices

REF. : [17049/0000](#)

# FREEZING OF BOAR SEMEN

## IceCube

Computer controlled freezer with user-friendly data input on the monitor and automatic recording of the freezing curve. Temperature range: down to  $-180^{\circ}\text{C}$ , cooling rates: 0.01 to  $60^{\circ}\text{C}/\text{min}$ .

**IceCube 14S**, capacity: approx. 900 0.5 ml straws, with touch screen monitor, can be connected to an external PC

REF. : [16821/2000](#)

**IceCube 14S**, without monitor REF. : [16821/1000](#)

**IceCube 14S**, with 10" tablet REF. : [16821/3000](#)



*IceCube 14S with touch screen monitor*

### Accessories

**Container for nitrogen**, pressurized, 60 l, with manometer, security valves, liquid and gas phase withdrawal

REF. : [16820/1900](#)

**(1) Rack** for IceCube 14S, for 36 straws  
0.25 ml or 0.5 ml

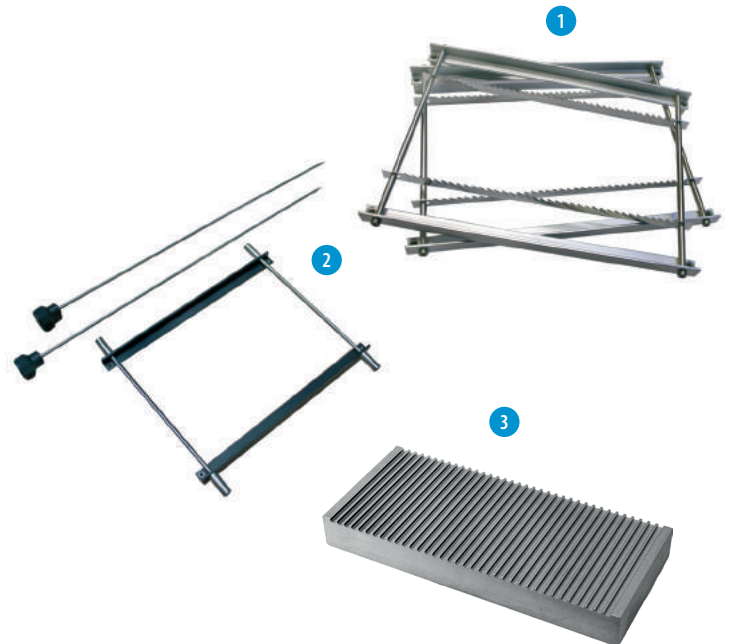
REF. : [16821/5036](#)

**(2) Handling rack** with 2 thread bars  
for IceCube 14S

REF. : [16821/5030](#)

**(3) Loading device** for rack, for 36 straws  
0.25 ml or 0.5 ml

REF. : [16821/5037](#)



## Straws

**0.5 ml straws**  
in many different colours









Minitüb is an ISO 9001:2015 certified company.