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## SAMPLE PREPARATION

### Refrigerated homogenizer for food/feed samples - AstorMixer

AstorMixer is a refrigerated homogenizer with stainless steel blades, designed to prepare food and feed samples prior to nutritional or chemistry analysis without heating them up, so avoiding the consequent loss of humidity that may cause wrong analytical results. The homogenization chamber of AstorMixer can be set at a precise temperature, between ambient value and -24°C, with 1°C steps: this is a unique characteristic that allows the operator to decide and set the best conditions to prepare each kind of sample according to its specific nature. The useful "Wait Temperature" function (WT) prevents the beginning of the homogenization process before the desired temperature is reached.

The homogenization chamber has a capacity of 2 litres and includes a set of stainless steel blades, easy to dismount and wash; the blades can reach a maximum speed of 8.000 rpm or even 12.500 rpm in the advanced Power version.

The display allows the easy setting of all working parameters (*speed, time, temperature....*) and uncountable working programs that can be stored in the provided SD Card of the equipment; every program can be based on different ramps of speed/temperature/time up to 16 steps/program.

Thanks to its flexibility and perfect temperature control, AstorMixer can ensure standardized, accurate and reproducible analytical results.

#### Technical features:

- ❖ Refrigerated homogenizer for shredding, grinding, emulsifying and homogenizing food and feed samples
- ❖ Stainless steel structure
- ❖ Display with intuitive icons for the selection of all working parameters
- ❖ Capacity of the chamber: 2 litres
- ❖ Temperature setting: from room temperature to -24°C, with 1°C steps
- ❖ Speed setting: 26 selectable speeds, from 0 to 8.000 rpm (*from 0 to 12.500 rpm, Power version*)
- ❖ Timer up to 4 working hours
- ❖ Wait Temperature function (WT): the homogenization starts only when the desired temperature is reached
- ❖ Memory for uncountable programs for ramps of speed/time/temperature up to 16 steps/program
- ❖ A SD Memory Card is provided
- ❖ Stainless steel chamber, easy to clean
- ❖ Set of stainless steel blades, easy to dismount and wash
- ❖ Power supply: 220 V, 50/60 Hz, 1.750 W (*basic version*)
- ❖ Dimensions: 32x52x39 cm (*wxdxh*)
- ❖ Weight: 26 Kg.



Exclusive  
distribution

Code no. 67910	AstorMixer, refrigerated homogenizer from room temperature to -24°C, maximum speed 8.000 rpm
Code no. 67950	AstorMixer Power, refrigerated homogenizer from room temperature to -24°C, maximum speed 12.500 rpm

## Refrigerable homogenizer - Deimos

Deimos is the new homogenizer based on microsegmented knives for the preparation of food samples to the analysis of their chemical contents. Reliable and easy to use, it can be accessorized with its useful homogenizing chamber with an integrated water refrigerating system to keep the sample temperature cool, thus avoiding its over-heating and its consequent loss of relative humidity, which would yield to wrong results of the analysis.

### Technical features:

- ⊕ Made in AISI 304 stainless steel
- ⊕ Homogenizing chamber in stainless steel 18/10, with handles
- ⊕ Transparent cover, with an inspection hole
- ⊕ Adjustable speed of the knives from 1,100 to 1,600 rpm
- ⊕ Excellent thermal insulation between the engine and the chamber
- ⊕ Optional chamber with integrated refrigerating system with liquid circulation, connectable to the tap water or to an external independent cooling equipment
- ⊕ Safety devices: NVR, microswitch on the cover, 24-Volt function keys
- ⊕ Chamber capacity: 3.3 liters
- ⊕ Dimensions: 38x32x27 cm (wxhx) – Weight: 10 Kg.
- ⊕ Power supply: 220 V – 50 Hz. Other voltages: available upon request




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Code no. 67545	Refrigerable homogenizer - Deimos
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### Accessories:

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Code no. 67546	Chamber with refrigerating circulation for Deimos
Code no. 67547	External independent cooling equipment for Deimos

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## OSMOMETRY

### **Single-sample osmometer – OsmoSpecial 1**

OsmoSpecial 1 is a single-sample semiautomatic osmometer for the quick and accurate analysis of osmolality in biological and pharmaceutical liquids or any other solutions, based on the cryoscopic point determination. The automatic reading and interpretation of the results occur when the sample temperature plateau is reached, according to all the international references.

#### **Technical features:**

- ❖ Capacity: single sample
- ❖ Visualization of the osmolality value and the freezing point
- ❖ Cooling system with electronically controlled Peltier cells
- ❖ No need of cooling liquid
- ❖ Forced ventilation
- ❖ Working room temperature: from +5°C to +36°C
- ❖ Automatic calibration
- ❖ Lash and agitation width adjustment controlled by software
- ❖ Results in mOsm/Kg units and °C
- ❖ Sample volume: from 50 to 200 µl (*with disposable plastic tubes*)
- ❖ Analysis time: about 3 minutes
- ❖ Instrument warm up time: 5 minutes
- ❖ Measurement range: from 0 to 1,500 mOsm/Kg
- ❖ Resolution: 1 mOsm/Kg
- ❖ Repeatability and reproducibility: ±2 mOsm/Kg (< 600 mOsm/Kg) or ±0.5% (> 600 mOsm/Kg)
- ❖ Dimensions: 285x380x450 mm (wxhxd) with head up
- ❖ Weight: about 10 Kg.
- ❖ Power supply: 110/220 V – 50/60 Hz – 100 W



Code no. 68699

Single-sample osmometer - OsmoSpecial 1

Our own  
production

#### **Accessories:**

Code no. 63225/OSM	Check standard, 323 mOsm, 250 ml
Code no. STD2101	Calibration standard, 100 mOsm, 125 ml
Code no. STD2109	Calibration standard, 900 mOsm, 125 ml
Various codes	Calibration standard, various concentrations
Code no. 2030N500	Disposable sample tubes, volume from 50 µl, 500 pieces
Code no. 563	80-place sample tubes holder, in plastic, for plastic tubes
Code no. 9042401009	Automatic micropipette, 10 – 100 µl adjustable volume
Code no. 9042401322	Automatic micropipette, 100 – 1,000 µl adjustable volume
Code no. 37460	Yellow disposable tips, 1,000 pieces
Code no. 37465	Blue disposable tips, 1,000 pieces

## Single-sample osmometer – OsmoTouch 1

OsmoTouch 1 is a single-sample automatic osmometer for the rapid determination of the cryoscopic point variation (*osmolality*) in biological fluids, pharmaceutical samples and other solutions.

This next generation osmometer includes a lot of useful features that the most recent technology allows: a full colour 7" touchscreen display, real-time visualization of the freezing curve, stable memory for more than 4,000 results, a PC software for data handling, USB ports for downloading all data to a pen drive, updating the firmware and connecting an optional barcode/QR-code reader, and much more. In particular, all OsmoTouch model are designed with characteristics in compliance with FDA norm 21 CFR Part 11, such as the Audit Trail, the set up of two different password levels, results including date, hour and username, without any possibility to modify them.

Compact and sturdy, OsmoTouch 1 can work with room temperatures up to 36°C. It is perfect for pharmaceutical/cosmetic/homeopathic applications and for uses in hospitals and R&D laboratories. Excellent for analysis of semiviscous samples.

### Technical features:

- ❖ Capacity: single sample
- ❖ Full colour 7" touchscreen display
- ❖ Real-time graph of the sample temperature during each analysis
- ❖ A 20-digit alphanumeric ID code can be added to each sample, easily
- ❖ Optional barcode/QR-code USB reader for a quick sample identification
- ❖ Results shown in different colours for a quick identification of anomalies or critical values
- ❖ Features in compliance with the FDA norm 21 CFR Part 11: Audit Trail, set up of two different password levels (*administrator and user*), users' passwords obscured by "\*\*\*\*", results with date, hour and username (*electronic signature*) and unmodifiable results to avoid any fraud
- ❖ Stable memory for 3 different calibration curves based on the favorite analytical ranges
- ❖ Stable memory for up to 4,000 results
- ❖ Easy download of test results to a USB pen drive
- ❖ Easy firmware updates by means of a USB pen drive
- ❖ Real time PC monitoring or quick download of test results to a PC with CryoSoft Touch data handling software
- ❖ Immediate visualization of error messages
- ❖ Bath with Peltier cells controlled by software
- ❖ Operating ambient temperature: +5°C to 36°C
- ❖ Automatic calibration
- ❖ Lash and agitation width controlled by software
- ❖ Sample volume: from 50 to 200 µL
- ❖ Test duration: about 2-3 minutes/sample (*from 0 to 900 mOsm/Kg*)
- ❖ Warm-up time of the equipment: about 5 minutes
- ❖ Analytical range: from 0 to 3,000 mOsm/Kg - Resolution: 1 mOsm/Kg
- ❖ Repeatability and reproducibility: ±2.5 mOsm/Kg (*from 0 to 600 mOsm/Kg*) or ±0.5% of the value (*from 600 to 3,000 mOsm/Kg*)
- ❖ 2 x USB ports for data downloading, updating the firmware and connecting an optional barcode/QR reader
- ❖ 2 x RS232 ports for connecting an optional thermal printer and a PC
- ❖ Dimensions and weight: 285x485x360 mm (*wxdxh, with head down*) - 16.1 Kg
- ❖ Power supply: 110/220 V – 50/60 Hz – max. 150 W



Code no. 68499

Single-sample osmometer - OsmoTouch 1

### Accessories:

Code no. 63225/OSM	Check standard, 323 mOsm, 250 ml
Code no. STD2101	Calibration standard, 100 mOsm, 125 ml
Code no. STD2109	Calibration standard, 900 mOsm, 125 ml
Code no. STD2120	Calibration standard, 2,000 mOsm, 125 ml
Code no. STD2125	Calibration standard, 2,500 mOsm, 125 ml
Code no. STD2130	Calibration standard, 3,000 mOsm, 125 ml



## (following) Single-sample osmometer – OsmoTouch 1

### **Accessories:**

Code no. 67210	Cooling liquid, 1 liter
Code no. 67200	Cooling liquid, 250 ml
Code no. 2030N500	Disposable sample tubes, volume from 50 µl, 500 pieces
Code no. 563	80-place sample tubes holder, in plastic, for plastic tubes
Code no. EP-50	EP-50 thermal printer
Code no. 67219	Thermal paper roll for EP-50 printer
Code no. 9042401009	Automatic micropipette, 10 – 100 µl adjustable volume
Code no. 9042401322	Automatic micropipette, 100 – 1,000 µl adjustable volume
Code no. 37460	Yellow disposable tips, 1,000 pieces
Code no. 37465	Blue disposable tips, 1,000 pieces
Various codes	Calibration standards for specific osmolality values, USB barcode/QR-code reader, plain paper printer, etc.

## 20-sample automatic osmometer – OsmoTouch 20

OsmoTouch 20 is an automatic osmometer with a 20-place carousel-based autosampler for the rapid determination of the cryoscopic point variation (*osmolality*) in biological fluids, pharmaceutical samples and other solutions.

This next generation osmometer includes a lot of useful features that the most recent technology allows: a full colour 7" touchscreen display, real-time visualization of the freezing curve, stable memory for more than 4,000 results, a PC software for data handling, USB ports for downloading all data to a pen drive, updating the firmware and connecting an optional barcode/QR-code reader, and much more. In particular, all OsmoTouch model are designed with characteristics in compliance with FDA norm 21 CFR Part 11, such as the Audit Trail, the set up of two different password levels, results including date, hour and username, without any possibility to modify them.

Compact and sturdy, OsmoTouch 20 can work with room temperatures up to 36°C. It is perfect for pharmaceutical/cosmetic/homeopathic applications and for uses in hospitals and R&D laboratories. Excellent for analysis of semiviscous samples.

### **Technical features:**

- ❖ Capacity: 20-place autosampler carousel
- ❖ Provided with EP-50 thermal printer
- ❖ Weight: 17.4 Kg
- ❖ Other features: as for OsmoTouch 1



Cod. no. 68493      20-sample osmometer - OsmoTouch 20

### **Accessories:**

As for OsmoTouch 1

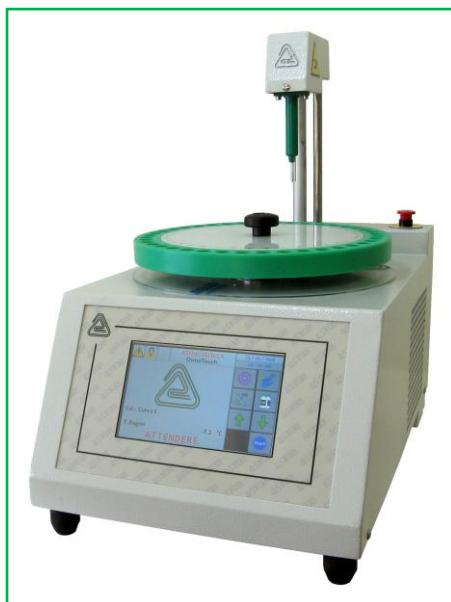


## 40-sample automatic osmometer - OsmoTouch 40

OsmoTouch 40 is an automatic osmometer with a 40-place carousel-based autosampler for the rapid determination of the cryoscopic point variation (*osmolality*) in biological fluids, pharmaceutical samples and other solutions.

This next generation osmometer includes a lot of useful features that the most recent technology allows: a full colour 7" touchscreen display, real-time visualization of the freezing curve, stable memory for more than 4,000 results, a PC software for data handling, USB ports for downloading all data to a pen drive, updating the firmware and connecting an optional barcode/QR-code reader, and much more. In particular, all OsmoTouch model are designed with characteristics in compliance with FDA norm 21 CFR Part 11, such as the Audit Trail, the set up of two different password levels, results including date, hour and username, without any possibility to modify them.

Compact and sturdy, OsmoTouch 40 can work with room temperatures up to 36°C. It is perfect for pharmaceutical/cosmetic/homeopathic applications and for uses in hospitals and R&D laboratories. Excellent for analysis of semiviscous samples.



### Technical features:

- ❖ Capacity: 40-place autosampler carousel
- ❖ Provided with EP-50 thermal printer
- ❖ Dimensions: 330x610x360 cm (wxhxh) with lowered head
- ❖ Weight: 20.5 Kg
- ❖ Other features: as for OsmoTouch 1

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Code no. 68393

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40-sample osmometer – OsmoTouch 40

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### Accessories:

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As for OsmoTouch 1

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## MILK ADULTERATION FOR ADDED WHEY

### Lateral-flow strip test - Stick c-GMP

The Stick c-GMP's are 3 immunochromatographic kits based on the easy-to-use test-strip format for the determination of added whey in milk and powdered milk. It detects the presence of the casein-GlycoMacroPeptide (c-GMP), present in huge amounts in whey due to the casein enzymatic degradation during the cheese manufacturing process. Not adulterated milk does not include this substance, if not in low traces. Stick c-GMP can detect the adulteration with sensitivity of 1%, 2% or 4% in milk samples. The test can be performed in 5 minutes only, after a quick sample pre-treatment. The 3 available kits sizes differ in number and in the package of the strips.



#### Technical features:

- ❖ Easy-to-use lateral-flow immunochromatographic test
- ❖ Based on a specific monoclonal antibody anti-cGMP
- ❖ Applicable on milk and powdered milk samples
- ❖ Sensitivity of 1%, 2% or 4%, at user's choice
- ❖ Results in 5 minutes and swift procedure
- ❖ Interpretation by eye: no need of special equipments to read the results
- ❖ Easy interpretation, thanks to the difference coloured lines (*Control: blue - Positive: red*)
- ❖ The kits can be stored at room temperature (2° - 30°C)
- ❖ 3 different packages for different user's needs

Code no. 903400515 Stick c-GMP, 5 individually sealed strips

Code no. 903405001 Stick c-GMP, tube with 50 strips

Code no. 903405015 Stick c-GMP, 50 individually sealed strips

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## MILK ADULTERATION FOR ADDED NEUTRALIZERS

### Rapid test – Neutralizers Test

The new Neutralizers Test manufactured by Astori Tecnica allows the immediate colorimetric determination of the presence of added neutralizers (such as *NaOH*, *KOH*, carbonates, bicarbonates, ammonia, various alkalis, etc.) in milk, whey or cream. These prohibited substances may be added to unfresh or badly preserved milk with the tricky purpose to correct its pH and acidity values to optimal ones, and so pretend the milk is freshly milked or perfectly preserved.

The test is very easy to perform: it can be done everywhere, without any particular scientific tool: the sample is poured into a supplied sample tube up to its lower mark, then some ethanol is dispensed in it up to the upper mark and 2-3 drops of a specific and ready-to-use reagent are added. A prompt colorimetric reaction shows the test result, clearly and undoubtedly.



#### Technical features:

- ❖ Simple colorimetric and visual interpretation
- ❖ Rapid test: 3 easy steps and results in less than a minute
- ❖ It can be performed everywhere, without any laboratory
- ❖ No need of accessories or particular abilities
- ❖ It detects the additions of all neutralizing agents
- ❖ 50-test kits, with a low cost/test
- ❖ Storage at room temperature
- ❖ Long stability: 12 months from the production date

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Code no. 63099

Neutralizers Test, 50 tests



Our own  
production

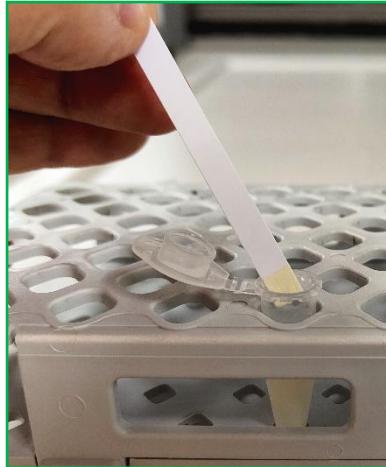
## VERIFICATION OF PASTEURIZATION PROCESSES

### Verification of pasteurization processes in milk and derivates – FosfaMilk Test

FosfaMilk Test is a colorimetric assay based on a chemical reaction which develops between the Alkaline Phosphatase enzyme, naturally present in raw milk but absent after a correct pasteurization or UHT treatment, and a specific chromogenic substrate that allows to determine the presence of the enzyme in the sample.

The European Community commission established a residual Alkaline Phosphatase activity of 350 mU/L as the maximum acceptable level of this enzyme in correctly pasteurized/sterilized milk, according to CE 1664/2006 Regulation.

This kit has been designed for the accurate and specific determination of Alkaline Phosphatase in all kinds of milk and whey samples with a test sensitivity of 200 mU/L, without the need of micropipettes, spoons or additional chemicals or consumables, but only needing an incubator or waterbath at 37°C. FosfaMilk can also analyze cream and butter samples after a very easy pretreatment.



#### Technical features:

- ❖ Easy-to-use kit based on test strips in a smart 50-test box
- ❖ Results within 60 minutes on milk and whey samples from every species
- ❖ Applicable on cream and butter samples after a quick defatting process
- ❖ No need of chemical reagents, micropipettes or dedicated consumables
- ❖ Incubation: 1 hour at 37°C in every kind of thermostat or waterbath
- ❖ Easy and clear interpretation of results by eye: no reading device is required
- ❖ Semiquantitative interpretation based on the color intensity of the test strip
- ❖ High sensitivity: 200 mU/L of Alkaline Phosphatase
- ❖ Long shelf life: 12 months after the production date



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Code no. 63095

FosfaMilk Test, 50 tests

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## CRIOSCOPY

### "Entry-level" single-sample cryoscope – CryoSpecial 1

New "entry-level" cryoscope for the quick determination of the freezing point variation in milk and cream samples due to the presence of added water, based on plateau reading. Analytical performances according to the recent IDF-ISO 5764:2009 and AFNOR international regulations. This equipment has a reading head with manual movement and the automatic beginning/end of the analysis: it is the perfect solution for all dairies and milk laboratories with a limited budget or a small number of test/day.

#### Technical features:

- ❖ Capacity: single sample
- ❖ Visualization of the freezing point and the added water percentage
- ❖ Cooling system with electronically controlled Peltier cells
- ❖ No need of cooling liquid
- ❖ Forced ventilation
- ❖ Working room temperature: from +5°C to +36°C
- ❖ Automatic calibration
- ❖ Software-piloted agitation and whip stroke
- ❖ Results in °C, °Hortvet and water% units, selectable by the user
- ❖ Sample volume: 2 – 2.5 ml
- ❖ Analysis time: about 3 minutes
- ❖ Instrument pre-heating time: 5 minutes
- ❖ Resolution: ±0.0005°C
- ❖ Reproducibility (*on bovine milk*): ±0.0025°C
- ❖ Dimensions: 285x380x450 mm (wxhxd) with head up - Weight: about 10 Kg.
- ❖ Power supply: 110/220 V – 50/60 Hz – 90 W



Code no. 67699

Single-sample cryoscope - CryoSpecial 1

### Single-sample cryoscope with "lactose-free" function – CryoTouch 1

CryoTouch 1 is a single-sample automatic equipment for the rapid determination of the milk cryoscopic point variation caused by added water, in full compliance with the IDF-ISO 5764:2009 international reference standard. This next generation cryoscope includes a lot of useful features that the most recent technology allows: a full colour 7" touchscreen display, real-time visualization of the freezing curve, stable memory for more than 4,000 results, a PC software for data handling, USB ports for downloading all data to a pen drive, updating the firmware and connecting an optional barcode/QR-code reader, and much more.

CryoTouch 1 allows milk laboratories and dairy industries to perform official analysis based on ISO reference method. The new "lactose-free" function helps milk and dairy industries monitor the process of removal of lactose in milk and cream.

#### Technical features:

- ❖ Sample capacity: single sample
- ❖ Full colour 7" touchscreen display
- ❖ Bath with Peltier cells controlled by software
- ❖ Operating ambient temperature: +5°C to 36°C
- ❖ Automatic calibration
- ❖ Lash and agitation width controlled by software



## (following) Single-sample cryoscope with "lactose-free" function – CryoTouch 1

- ⊕ Selectable °C, °Hortvet and water% units
- ⊕ Sample volume: 2 or 2.5 mL
- ⊕ Analysis duration: about 2 minutes/test - Warm up time: about 5 minutes
- ⊕ Choice among 6 values for setting the reference value and between 2 different formula to calculate the added water %
- ⊕ Choice between 2 reading modes: plateau mode according to ISO method or fixed-time mode
- ⊕ Real-time graph of the sample temperature during each analysis
- ⊕ A 20-digit alphanumeric ID code can be added to each sample, easily
- ⊕ Optional USB barcode/QR-code reader for a quick sample identification
- ⊕ Results shown in different colours for a quick check of anomalies or critical values
- ⊕ "Lactose-free milk" function to control the removal of lactose in milk/cream
- ⊕ Stable memory for 2 different calibration curves: the typical one in compliance with ISO requirements and a second one to be set according to the user's needs (i.e.: Lactose-free curve)
- ⊕ Stable memory for up to 4,000 results
- ⊕ Easy download of test results to a USB pen drive - Easy firmware updates
- ⊕ Real time PC monitoring or quick download of test results to a PC thanks to CryoSoft Touch data software
- ⊕ Resolution: ±0.0005°C - Reproducibility (on bovine milk): ±0.0025°C
- ⊕ Immediate visualization of error messages
- ⊕ 2 x USB ports for data downloading to a pen drive, updating the firmware and connecting and optional barcode/QR-code reader
- ⊕ 2 x RS232 ports for connecting an optional thermal printer and a PC
- ⊕ Power absorption: max. 150 W
- ⊕ Dimensions: 285x485x360 mm (wxhx, with head down) - Net weight: 16.1 Kg.



Code no. 67799      Single-sample cryoscope - CryoTouch 1



### Accessories:

Code no. EP-50	EP-50 thermal printer
Code no. 67219	Thermal paper roll for EP-50 printer
Various codes	Connection cable for PC, USB barcode/QR-code reader, etc.

## 20-sample automatic cryoscope with "lactose-free" function – CryoTouch 20

CryoTouch 20 is a 20-sample carousel-based automatic equipment for the rapid determination of the milk cryoscopic point variation caused by added water, in full compliance with the IDF-ISO 5764:2009 international reference standard. This next generation cryoscope includes a lot of useful features that the most recent technology allows: a full colour 7" touchscreen display, real-time visualization of the freezing curve, stable memory for more than 4,000 results, a PC software for data handling, USB ports for downloading all data to a pen drive, updating the firmware and connecting an optional barcode/QR-code reader, and much more. CryoTouch 20 allows milk labs and dairy industries to perform official analysis based on ISO reference method. The new "lactose-free" function helps milk and dairy industries monitor the process of removal of lactose in milk and cream.



### Technical features:

- ⊕ Capacity: 20-place, with carousel-based autosampler
- ⊕ Provided with EP-50 thermal printer
- ⊕ Net weight: 17.4 Kg.
- ⊕ Other features: as for CryoTouch 1



Code no. 67899      20-sample cryoscope - CryoTouch 20

## 40-sample automatic cryoscope with "lactose-free" function – CryoTouch 40

CryoTouch 40 is a 40-sample carousel-based automatic equipment for the rapid determination of the milk cryoscopic point variation caused by added water, in full compliance with the IDF-ISO 5764:2009 international reference standard. This next generation cryoscope includes a lot of useful features that the most recent technology allows: a full colour 7" touchscreen display, real-time visualization of the freezing curve, stable memory for more than 4,000 results, a PC software for data handling, USB ports for downloading all data to a pen drive, updating the firmware and connecting an optional barcode/QR-code reader, and much more. CryoTouch 40 allows milk labs and dairy industries to perform official analysis based on ISO reference method. The new "lactose-free" function helps milk and dairy industries monitor the process of removal of lactose in milk and cream.

### Technical features:

- ❖ Capacity: 40-place, with carousel-based autosampler
- ❖ Provided with EP-50 thermal printer
- ❖ Dimensions: 33x61x36 cm (wxhx, with head down)
- ❖ Net weight: 20.5 Kg.
- ❖ Other features: as for CryoTouch 1



Code no. 67863

40-sample cryoscope - CryoTouch 40

## Standards and accessories for cryoscopes

This cryoscopy accessories and standards range has a high quality level and extremely competitive prices.

All standards are lot-specific certified and have a long-term ensured shelf life.

The calibrated sample tubes are manufactured in full agreement with the recent IDF-ISO cryoscopy international regulation.

All this product range can be used on any cryoscope.



Exclusive  
distribution

Code no. 67205	Calibrated cryoscopy glass tubes, 12 pieces
Code no. 67241	50-place tube holder, in stainless steel
Code no. 63220	Check standard for cryoscopy -0.512°C, 250 ml
Code no. 63215	Calibration standard for cryoscopy -0.408°C, 250 ml
Code no. 63225	Calibration standard for cryoscopy -0.600°C, 250 ml
Code no. STD2105	Certified Calibration Standard, -0.929°C, 125 ml (to be used with the "lactose-free milk" function)
Code no. 67210	Cooling liquid, 1,000 ml
Code no. 67200	Cooling liquid, 250 ml
Code no. 67226	Precision micropipette, 2/2.5 ml volume
Code no. 37470	Plastic disposable tips, 2/2.5 ml volume, 1,000 pieces

## FAT

### Gerber centrifuge - Astor 8 Digit

The new Astor 8 Digit centrifuge, with 8-butyrometer capacity, is completely digital and built in full compliance with all advanced safety rules and with the Gerber method for the quantitative determination of fat in milk and dairy samples. The concept of this equipment is simple, easy-to-use and very safe for the operator. All the structure and the butyrometer-adapters are made in an anti-acid material.

#### Technical features:

- ❖ External structure in anti-acid painted metal
- ❖ Lid with a rounded window for the inspection of the chamber during the centrifugation time
- ❖ Safety block of the lid if the rotor is moving
- ❖ Electronic brake of the motor to cut the stopping time
- ❖ Digital display showing the active heating, open/close lid, set time, countdown, brake on, end of the cycle
- ❖ Digital set of the centrifugation time: from 0 to 60 minutes or continuous cycle
- ❖ Backlit on/off switch and separate keys to open the lid and to switch the heating on/off
- ❖ Coloured LED lights showing the reaching of the right temperature (*violet*) and the unblocked lid (*green*)
- ❖ Capacity: max. 8 butyrometers
- ❖ Supplied with 8 anti-acid, easy-to-dismount/clean adapters for butyrometers
- ❖ Pre-selected temperature at 65°C, according to Gerber method
- ❖ Pre-heating time: max. 20 minutes
- ❖ Perfect temperature homogeneity in the tubes
- ❖ Centrifugal force: 350 g ± 50 g, according to Gerber method
- ❖ Dimensions/weight: 49x41x26 (H) cm, 18 Kg.
- ❖ Power supply: 230 V or 115 V, 50 or 60 Hz
- ❖ Power consumption: max. 840 W



Our own  
production

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Code no. 60356      8-place digital Gerber centrifuge - Astor 8 Digit

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#### Accessories:

Code no. 66536	28-place stainless steel holder for butyrometers
Various codes	Gerber glass butyrometers, caps and accessories ( <i>upon request</i> )

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## Multi-method centrifuge – Astor Multi

Astor Multi is a centrifuge for different dairy/food analyses, such as Gerber, Babcock, Mojonnier, dissolution/sedimentation test and normal separations. This new equipment includes a digital regulator with wide display that allows the user to set the desired temperature of the internal chamber, to adjust the centrifugal speed and establish a duration time; pre-set values according to the official Gerber, Mojonnier and Babcock methods are stored in unchangeable memories, so that the operator can easily recall them. Astor Multi has been studied to ensure the highest safety standards for the operator. Accessory rotors and specific tube holders are available, so that the centrifuge can be properly configurated.

### Technical features:

- ❖ Digital display with 2 alphanumeric rows
- ❖ 4 pre-set methods: Gerber, Babcock, Mojonnier and Sedimentation Test
- ❖ 1 free memory for any customized application
- ❖ Different values of temperature, time and speed can be set
- ❖ Range of adjustable temperature: from room value to 75°C
- ❖ Range of adjustable speed: from 500 to 1,300 rpm, with 1-rpm steps
- ❖ Range of adjustable time: from 1 to 9,999 min., with 1-minute steps
- ❖ 2 accessory rotors and 2 different accessory tube/bottle holders
- ❖ Dimensions: 70x60x37 cm (wxhx) - Weight: 44 Kg., without rotors
- ❖ Weight of the accessory rotors: Rotor G/B/S = 7.5 Kg.; Rotor M = 1.7 Kg.
- ❖ Power consumption: 1,500 W




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Code no. 60350	Multi-method centrifuge – Astor Multi
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### Accessories:

Code no. RT60350GBS	Rotor G/B/S for Gerber, Babcock, Sedimentation test and centrifugal tubes, 24 places ( <i>holders/adapters are not included</i> )
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Code no. RT60350M	Rotor M for Mojonnier, 8 places
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Code no. PP6035002	G/S holder, for one Gerber or Sedimentation Tube (max. 24 holders/Rotor G/B/S)
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Code no. PB6035002	B holder, for one Babcock bottle (max 24 holders/Rotor G/B/S)
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Various codes	Babcock/Gerber/Mojonnier/Sedimentation glass tubes and accessories (upon request)
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Our own production

## Gerber method – Waterbath Astor 900/D

Waterbath with insulated stainless steel tank and sloping lid to avoid the water condensation. The thermostatic unit allows to adjust and keep temperatures up to 95°C with a high precision level. The equipment is supplied with a safety device to avoid the over-temperature inconvenients due to the lack of water in the tank or to a system failure.

### Technical features:

- ❖ Temperature range: from 5°C over the room temperature up to 100°C
- ❖ Temperature control: by means of a digital thermal regulator
- ❖ Resolution: 0.1°C - Precision: ±0.2°C
- ❖ External dimensions: 54x34x32 cm (wxhx)
- ❖ Internal dimensions of the tank: 35x19x25 cm (wxhx)
- ❖ Power supply: 220 V – 50 Hz. - 1.000 W. Other voltages: upon request




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Code no. 67110	Waterbath Astor 900/d
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### Accessories:

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Code no. 66536	28-place stainless steel holder for butyrometers
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## Gerber method – Universal waterbath AstorBath

AstorBath waterbath can be used in many different applications thanks to its very high tank in stainless steel. Its digital thermal regulator ensures that the selected temperature value is accurately kept, up to 100°C. AstorBath is the ideal solution for the Gerber method, as butyrometers can be kept below the water level up to their scale. Other applications cover the reductase test, melting and thermostating of culture media, samples, bottles and other containers, etc.

### Technical features:

- ❖ Structure in fiberglass and tank in stainless steel
- ❖ Digital thermal regulator - Resolution: 0.1°C
- ❖ Safety device to prevent over-temperatures due to the water lack
- ❖ Temperature range: from room temperature to 100°C
- ❖ Precision: better than ±1°C
- ❖ Internal size and volume of the tank: 29x23x20 (h) cm - 13 liters
- ❖ External dimensions: 34x32x28 (h) cm
- ❖ Weight, without accessories: 6.3 Kg.
- ❖ Power supply: 220 V - 50 Hz. - 1,100 W. Other voltages: upon request




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Code no. 67116

Universal waterbath AstorBath

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### Accessories:

Code no. COP67116	Lid in stainless steel
Code no. COP67116A02	Stainless steel lid, high shape, only to be used with holder PB67116
Code no. COP67116AUNIO2	Stainless steel lid, high shape for generic purposes ( <i>not to be used with PB67116</i> )
Code no. PB67116	24-place stainless steel holder for butyrometers

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## Gerber method – Universal waterbath AstorBath XL

AstorBath XL waterbath can be used in many different applications thanks to its large and very high tank in stainless steel. Its digital thermal regulator ensures that the selected temperature value is accurately kept, up to 100°C. AstorBath XL is the ideal solution for the Gerber method, as butyrometers can be kept below the water level up to their scale. Other applications cover the reductase test, melting and thermostating of culture media, samples, bottles and other containers, etc.

### Technical features:

- ❖ Stove painted metallic structure and tank in stainless steel
- ❖ Digital thermal regulator - Resolution: 0.1°C
- ❖ Safety device to prevent over-temperatures due to the water lack
- ❖ Temperature range: from room temperature to 100°C
- ❖ Precision: better than ±1°C
- ❖ Internal size and volume of the tank: 50x30x20 (h) cm - 26 liters
- ❖ External dimensions: 546x400x280 (h) mm
- ❖ Weight, without accessories: 14.5 Kg.
- ❖ Power supply: 220 V - 50 Hz. - 2,200 W. Other voltages: upon request




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Code no. 67116XL

Universal waterbath AstorBath XL

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### Accessories:

Code no. COP67116	Flat lid in polycarbonate
Code no. COPA67116XL	Stainless steel lid, high shape
Code no. 66536	28-place stainless steel holder for butyrometers

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## Gerber method – Digital shaking waterbath AstorShake

AstorShake shaking waterbath can keep up to 24 butyrometers under constant agitation at the most suitable temperature value to dissolve the hardest cheeses, quickly and accurately. It is a "must-have" equipment for the application of Gerber method to aged cheeses and hard samples in general. AstorShake has a very high stainless steel tank, so that butyrometers can be kept below the water level up to their scale.

Its stainless steel lid with high shape reduces the evaporation of hot water and, as a consequence, the increase of the humidity level in the laboratory.

### Technical features:

- ❖ Structure in fiberglass
- ❖ Tank in stainless steel
- ❖ Digital thermal regulator
- ❖ Resolution: 0,1°C
- ❖ Safety device to prevent over-temperatures due to the water lack
- ❖ Temperature range: from +5°C upon room temperature, up to 100°C
- ❖ Temperature precision: ±2°C
- ❖ Temperature uniformity: ±1°C
- ❖ Stainless steel 24-place butyrometer holder, unremovable
- ❖ Agitation speed: 178 shakes/minute, 20 mm width
- ❖ Agitation time: from 5" to 19'59"
- ❖ Agitation pause: from 5" to 19'59"
- ❖ External tap for water draining
- ❖ Optional high-shape stainless steel lid
- ❖ Volume: 13 liters
- ❖ Internal size of the tank: 290x230x200 (h) mm
- ❖ External dimensions: 385x430x280 (h) mm
- ❖ Weight, without accessories: 11 Kg.
- ❖ Power supply: 230 V, 50 Hz, 1,150 W




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Code no. 67117

Digital shaking waterbath for Gerber method - AstorShake

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### Accessories:

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Code no. COP67116A02

High-shape stainless steel lid for AstorShake

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## AUTOMATIC DAIRY ANALYZER

### Quick analyzer for fat, proteins, lactose, density and SNF – Speedy Lab

Automatic instrument for the quick determination of the traditional contents in milk, cream and whey samples. Based on a special application of the ultrasonic technique, Speedy Lab requires no sample preparation, homogenization or heating, consumables or chemicals. Its high flexibility and reliability, along with a very competitive price, put Speedy Lab on the top of the user's choices for the laboratory routinary dairy analyses. Excellent to cover the small and medium daily routines.

The most recent version of Speedy Lab allows direct cream and whey analysis, with improved analytical ranges and accuracy levels.

#### Technical features:

- ❖ 3 calibration channels for 3 different kinds of samples
- ❖ New and user-friendly menu
- ❖ Enhanced and easy calibration procedures, by means of the keyboard
- ❖ Results in about 60 seconds, without the user's presence
- ❖ Aspiration of the sample by means of a precision pump from any kind of container (*bottle, tube, etc.*)
- ❖ Extendable sampling hose, up to 40 cm total length
- ❖ Separation of the inlet hose from the outlet one
- ❖ No carry-over among samples is possible
- ❖ Measurement ranges (w/w): fat 0.01% - 45.00%; proteins 2.00% - 7.00%; lactose 0.01% - 6.00%; SNF 3.00% - 40.00%; density 1,015 - 1,160 Kg/m<sup>3</sup>
- ❖ Accuracy: fat ±0.06%; proteins and SNF ±0.15%; lactose ±0.20%; density ±0.3 Kg/m<sup>3</sup>
- ❖ Free calibration and data handling software for PC
- ❖ RS232 data exit for the printer connection (*optional printer*)
- ❖ USB port for PC connection
- ❖ Sample volume: 5 mL (*milk and whey*); 7 mL (*cream*)
- ❖ Working temperature and humidity: 10°C - 35°C; 30% - 80%
- ❖ Dimensions: 230x230x205 mm (wxhxh) - Weight: 3.8 Kg.
- ❖ Power supply: 12 VDC for 110/240 VAC voltage – 50/60 Hz – 30 W
- ❖ Car plug: upon request



Our own production

Code no. 67600      Speedy Lab

#### Accessories:

Code no. EP-50	EP-50 thermal printer
Code no. 67219	Thermal paper roll for EP-50 printer
Code no. 340290ACD	Liquid acid washing solution, 43-ml vial, concentrated for 10 liters
Code no. 340290ALC	Liquid alkaline washing solution, 43-ml vial, concentrated for 10 liters

## MICROBIOLOGY AND HYGIENE

### **High-capacity refrigerated thermostats, incubators, refrigerators and freezers**

This Astori's new line of high-volume laboratory equipments with an excellent temperature accuracy and uniformity level is the ideal solution to any laboratory purpose and to special and delicate applications, such as bacteriological, shelf-life and germination studies, as well as the storage of pharmaceutical products and drugs. Their useful volume ranges from about 600 up to 1,400 liters.

#### **Technical features:**

- ❖ Digital thermal regulator, fully adjustable
- ❖ Building material: AISI 304 stainless steel
- ❖ Very thick thermal insulation
- ❖ CFC-free refrigerating gas
- ❖ Special versions with glass doors, upon request
- ❖ Side supports for trays at different heights
- ❖ Provided with stainless steel grilled trays
- ❖ Reversible doors with key lock
- ❖ Adjustable legs in stainless steel
- ❖ Internal light
- ❖ Heating unit with tangential laminar flow (*when applicable*), and refrigeration with central fan (*when applicable*)
- ❖ Internal chamber with rounded corners, radial-based, to allow the best cleaning/sanification
- ❖ Temperature ranges: 0° - 37°C (refrigerated thermostats); Amb. - 60°C (incubators); 0°C - 8°C or -2° - 8°C (refrigerators); -18°C - -22°C (freezers)
- ❖ Resolution: ±0.1°C



Various codes

Refrigerated thermostats, incubators, refrigerators and freezers, 600 – 1,400 lts. volume

#### **Accessories:**

Code no. 1032

Additional tray

Various codes

Temperature recorder, glass door, safety device with alarms

## Colony counter – Astor 20

Astor 20 is a modern colony counter: its transparent, back-lit, Petri dish holder is sensitive to pressure, so that Astor 20 progressively enumerates the grown colonies each time the plate on the holder is hit by a common marker pen. Simply, there is no need of a special, dedicated and wired marker pen anymore: any common one can be used. The holder is back-lit by LEDs, which offer a better light diffusion, a higher reliability and a ridiculous power consumption (2 W). Astor 20 can hold Petri dishes up to 110 mm diameter.

### Technical features:

- ⊕ Clear 5-figure display with automatic enumeration and Reset key
- ⊕ Acoustic signal for each count confirmation
- ⊕ Back-lit transparent Petri dish holder
- ⊕ Enumeration by pressure: no wired dedicated marker pen is needed
- ⊕ Diameter of the Petri dish holder: 110 mm
- ⊕ LED technology: 2-Watt total power consumption
- ⊕ Power voltage: 110 or 220 V




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Code no. 67175

Colony counter - Astor 20

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### Accessories:

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Code no. 66131

Lamp with pantograph hinged arm and magnifying lens

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## Thermostatic unit - Astor 800/D

Astor 800/D is a precision thermostatic unit, with digital thermal regulator, suitable to be mounted on tanks for the creation of customized waterbaths. Its use is excellent for thermostating and heating up culture media, ELISA microplates, samples or any other laboratory product.

### Technical features:

- ⊕ External structure made in stove enamelled and painted metal
- ⊕ Temperature control by means of a digital thermal regulator
- ⊕ Digital display with 0,1°C resolution
- ⊕ Water agitating and mixing fan
- ⊕ Suitable to different tanks (*available as accessories, only*)
- ⊕ Safety device against the over-temperatures caused by lack of water
- ⊕ Adjustable temperature range: from room temperature +5°C up to 100°C
- ⊕ Precision: better than 0.2°C
- ⊕ Power supply: 220 V – 50 Hz. – 1,000 W. Other voltages: upon request




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Code no. 67118

Thermostatic unit - Astor 800 D

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### Accessories:

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Code no. H150024

8-liter polycarbonate tank, 26x32x15 (h) cm

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Code no. 4113

15-liter polycarbonate tank, 49x29x15 (h) cm

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Various codes

Stainless steel holder for tubes, flasks, beakers, etc., different sizes (*please, specify*)

## Universal waterbath - AstorBath

AstorBath waterbath can be used in many different applications thanks to its very high tank in stainless steel. Its digital thermal regulator ensures that the selected temperature value is accurately kept, up to 100°C. AstorBath is the ideal solution for all microbiological and laboratory uses, as even high tubes and bottles can be easily placed under the water level. Other applications cover the reductase test, melting culture media, thermostating samples, bottles and other containers, etc.

### Technical features:

- ❖ Structure in fiberglass and tank in stainless steel
- ❖ Digital thermal regulator - Resolution: 0.1°C
- ❖ Safety device to prevent over-temperatures due to the water lack
- ❖ Temperature range: from room temperature to 100°C
- ❖ Precision: better than ±1°C
- ❖ Internal size and volume of the tank: 29x23x20 (h) cm - 13 liters
- ❖ External dimensions: 34x32x28 (h) cm
- ❖ Weight, without accessories: 6.3 Kg.
- ❖ Power supply: 220 V - 50 Hz. - 1,100 W. Other voltages: upon request



Code no. 67116

Universal waterbath AstorBath

Our own production

### Accessories:

Code no. COP67116	Lid in stainless steel
Code no. COP67116A02	Stainless steel lid, high shape, only to be used with holder PB67116
Code no. COP67116AUNI02	Stainless steel lid, high shape for generic purposes ( <i>not to be used with PB67116</i> )
Code no. PB67116	24-place stainless steel holder for butyrometers

## Gerber method – Universal waterbath AstorBath XL

AstorBath XL waterbath can be used in many different applications thanks to its large and very high tank in stainless steel. Its digital thermal regulator ensures that the selected temperature value is accurately kept, up to 100°C. AstorBath XL is the ideal solution for the Gerber method, as butyrometers can be kept below the water level up to their scale. Other applications cover the reductase test, melting and thermostating of culture media, samples, bottles and other containers, etc.



### Technical features:

- ❖ Stove painted metallic structure and tank in stainless steel
- ❖ Digital thermal regulator - Resolution: 0.1°C
- ❖ Safety device to prevent over-temperatures due to the water lack
- ❖ Temperature range: from room temperature to 100°C
- ❖ Precision: better than ±1°C
- ❖ Internal size and volume of the tank: 50x30x20 (h) cm - 26 liters
- ❖ External dimensions: 546x400x280 (h) mm
- ❖ Weight, without accessories: 14.5 Kg.
- ❖ Power supply: 220 V - 50 Hz. - 2,200 W. Other voltages: upon request

Code no. 67116XL

Universal waterbath AstorBath XL

Our own  
production

### Accessories:

Code no. COP67116	Flat lid in polycarbonate
Code no. COPA67116XL	Stainless steel lid, high shape
Code no. 66536	28-place stainless steel holder for butyrometers

## Waterbath - Astor 900/D

Waterbath with insulated stainless steel tank and sloping lid to avoid the water condensation. The thermostatic unit allows to adjust and keep temperatures up to 95°C with a high precision level. The equipment is supplied with a safety device to avoid the over-temperature inconveniences due to the lack of water in the tank or to a system failure.

### Technical features:

- ❖ Temperature range: from 5°C over the room temperature up to 100°C
- ❖ Temperature control: by means of a digital thermal regulator
- ❖ Resolution: 0.1°C - Precision: ±0.2°C
- ❖ External dimensions: 54x34x32 cm (wxdxh)
- ❖ Internal dimensions of the tank: 35x19x25 cm (wxdxh)
- ❖ Power supply: 220 V – 50 Hz. – 1,000 W. Other voltages: upon request



Our own production

Code no. 67110

Waterbath - Astor 900/d

### Accessories:

Various codes

Stainless steel holder for tubes, flasks, beakers, etc. (please, specify sizes)

## Lab blender – BL Smart

The new BL Smart time-programmable Lab Blender is particularly suitable to homogenise food and feed samples prior to microbiological analyses. It reduces the risk of the membrane cells breakage meanwhile ensuring an excellent mixing result. Suitable to any kind of culture and any kind of sample.

### Technical features:

- ❖ External structure made in stove painted steel
- ❖ Mixing action by means of 2 flat hammers, pressing the sample bag with an alternative movement - Constant speed: 205 hits/minute
- ❖ Water proof lid closure
- ❖ Digital timer to set the homogenization time from 1 to 9,999 seconds, with 1-second steps
- ❖ Continuous homogenization can be set
- ❖ 3 different homogenization times can be set and stored in memory
- ❖ Visualization of the remaining time until the end of the process
- ❖ Traditional sample sterile bags, 18x30 cm, can be used
- ❖ Sample volume in the bag: from 80 to 400 ml
- ❖ Dimensions: 240x445x365 mm (wxdxh) – Weight: 32.5 Kg.
- ❖ Power supply: 220 V - 50 Hz - 150 W. Other voltages upon request.



Our own production

Code no. 65550

Lab blender – BL Smart

### Accessories:

Code no. 66495 Lab blender sterile bags, 18x30 cm, 500 pieces

Code no. 66398 Lab blender pre-printed sterile bags, 18x30 cm, 2,500 pieces

Code no. 50028 Lab blender re-closable sterile bags, 18x30 cm, 1,500 pieces

Code no. 9101401001 Lab blender resistant sterile bags with total filter, 18x30 cm, 500 pieces

Code no. 66410 Lab blender sterile bags with lateral filter, 18x30 cm, 500 pieces

Code no. 66396 10-place bags hanging holder, with sticks to hang

## Fully programmable Lab blender – BL Style

The new BL Style Lab Blender, fully programmable for homogenisation speed and time, is the ideal equipment for the treatment of food and feed samples prior to microbiological analyses, as it strongly reduces the risk of the membrane cells breakage meanwhile ensuring an excellent homogenisation of all kinds of sample.

### Technical features:

- ⊕ 3 different times can be programmed and stored in memory, independently
- ⊕ 3 different homogenisation speeds can be selected: low (*about 3 hits/second*), middle (*about 3.5 hits/second*) and high (*about 4 hits/second*)
- ⊕ Weight: 33.5 Kg.
- ⊕ Other features: as for BL Smart Lab Blender.



Code no. 65560

Fully programmable Lab blender – BL Style

### Accessories:

As for BL Smart Lab Blender

## 23-liter semiautomatic benchtop autoclave – AstorClave 23

The AstorClave 23 vapour autoclave is an excellent solution for every laboratory, as it simplifies all sterilization processes of small sized objects and materials such as culture media, glassware, contaminated samples, etc. Its internal chamber in stainless steel has a 23-liter capacity and it can be equipped with its optional stainless steel basket with handle for a quick vertical charging, and an optional printer. A sensor for the lack of water and an automatic valve ensure the maximum safety of the equipment even in case of failures of the control system. The automatic steam release at the end of the cycle reduces the cooling time. AstorClave 23 is suitable for sterilization cycles at 121°C and 1 atm, according to 97/23/CE Directive.

### Technical features:

- ⊕ External anti-acid painted structure, made in steel
- ⊕ Backlit LCD display for controlling and handling the sterilization cycle
- ⊕ Vertical sterilization chamber in stainless steel, 23-liter capacity
- ⊕ Stainless steel lid with a safety and easy-to-use mechanical closure
- ⊕ Manometer for controlling the working pressure in the chamber
- ⊕ Automatic safety valve – Automatic steam release at the end of the cycle
- ⊕ External cock for emptying the residual water from the chamber
- ⊕ Safety adhesive on the lid to warn about high temperatures during the cycle
- ⊕ Safety water lack sensor in the chamber, with manual reset
- ⊕ Sterilization time can be set and customized
- ⊕ Back-lit ON/OFF switch and warning LEDs for heating resistor and water lack
- ⊕ Perforated stainless steel basket (optional) with handle, 30x24 cm (dxh)
- ⊕ Data exit for the optional thermal printer
- ⊕ Dimensions: ext. 365x630x470 (h) mm, int. 320x320 mm (dxh) - Weight: 24 Kg.
- ⊕ Power supply: 220 V – 50/60 Hz - 2,100 W



Code no. 67523

AstorClave 23, 23-liter semiautomatic autoclave, without basket

### Accessories:

Code no. CES67523      Stainless steel perforated basket with handle, 30x24 cm (dxh)

Code no. EP-50      EP-50 thermal printer

Various codes      Thermal paper roll for EP-50, data-loggers, sterilization adhesive tape, bags, etc.

## OENOLOGY DISTILLERS

### Alcoholic content - OH Glasschem stills

The determination of the alcoholic content in wine samples is a routinary analysis in the beverage labs and in the wine industries. The new OH stills at 1, 2, 3 or 6 places enable the operator to perform one or more distillations at the same time with greater advantages than with a traditional distillation apparatus.

#### Technical features:

- ⊕ 1, 2, 3 or 6-place versions, to satisfy different analytical needs
- ⊕ All kinds of wine and liquor samples can be distilled
- ⊕ Automatic cutout of the distillation when the receiver flask is 95% full
- ⊕ A longer distillation head ensures only water and alcohol are distilled over
- ⊕ No glassware to be detached during normal use: no leakage error
- ⊕ The high-efficiency electrical heating avoids useless dispersions of heat
- ⊕ Constant heat input from distillation to distillation
- ⊕ Distillation time: 7 minutes for 50 ml and 24 minutes for 250 ml
- ⊕ Dimensions and weight: 60x20x70 (wxhxh) cm - About 15 Kg.
- ⊕ Power supply: 220/250 V - 50 Hz - 630 W/distillation head



Exclusive distribution

Code no. 500001	1-place OH Glasschem still
Code no. 500002	2-place OH Glasschem still
Code no. 500003	3-place OH Glasschem still
Code no. 500006	6-place OH Glasschem still

### Sulfur dioxide content – SO<sub>2</sub> Glasschem stills

The determination of sulfur dioxide in wine and grape juices is one of the most frequent analysis in oenology. If a single-sample still is available, the productivity is limited and quite poor. The new SO<sub>2</sub> Glasschem stills at 2, 4, 6 or 8 places allow simultaneous and very efficient distillations, with an extremely affordable price. The new design, the flow-rate control system of the air stream, the high efficiency of the wine heating and the absence of sulfur leaks in the environment get these new instruments really unique.

#### Technical features:

- ⊕ 2, 4, 6 or 8-place versions, for simultaneous analyses of more samples
- ⊕ All kinds of wine and grape juice samples can be distilled
- ⊕ Constant flow-rate of the air stream due to a precision control system
- ⊕ No more SO<sub>2</sub> leaks in the environment, thanks to vacuum aspiration
- ⊕ High-efficiency electrical heating avoids useless dispersions of heat
- ⊕ Space ergonomical design: very compact dimensions
- ⊕ Distillation time: 10 minutes, either for free SO<sub>2</sub> or for bound SO<sub>2</sub>
- ⊕ Power supply: 220/250 V - 50 Hz - 100 W/head



Exclusive distribution

Code no. 500022	2-place SO <sub>2</sub> Glasschem still
Code no. 500024	4-place SO <sub>2</sub> Glasschem still
Code no. 500026	6-place SO <sub>2</sub> Glasschem still
Code no. 500028	8-place SO <sub>2</sub> Glasschem still

## Volatile acidity content – VA Glasschem stills

The new VA Glasschem stills at 1, 3, 4 or 6 places allow simultaneous and very efficient distillations, with an extremely affordable price. The new design, the auto-draining system for eliminating the old wine at the end of the distillation, the high efficiency of the wine heating and the absence of gas leakages in the environment get these new instruments really unique.

### Technical features:

- ⊕ 1, 3, 4 or 6-place versions, to satisfy different analytical needs
- ⊕ All kinds of wine samples can be distilled
- ⊕ Automatic separation and draining of old wine samples at the end of the procedure
- ⊕ Several distillations can be run in a row, without completely draining the boiler
- ⊕ 25% faster distillation time - Low water consumption
- ⊕ High-efficiency electrical heating avoids useless dispersions of heat
- ⊕ Constant heat input from distillation to distillation Schermo LCD
- ⊕ Distillation time: 12 minutes
- ⊕ Dimensions and weight: VA1 = 30x20x75 (wxdxh) cm, 7 Kg. - VA3 = 45x40x75 cm, 12 Kg. - VA6 = 75x40x75 cm, 20 Kg.
- ⊕ Power supply: 220/250 V – 50 Hz



Exclusive distribution

Code no. 5000VA1	1-place VA Glasschem still
Code no. 5000VA3	3-place VA Glasschem still
Code no. 5000VA4	4-place VA Glasschem still
Code no. 5000VA6	6-place VA Glasschem still

## Sulfur, volatile acidity and alcohol content – VA/SO<sub>2</sub> Kombo Glasschem stills

VA/SO<sub>2</sub> Kombo Glasschem stills consist of a distillation unit for volatile acidity, combined with 2 or 4 units to determine the sulfur. These instruments are certainly the ideal solution for wine industries and third-parties laboratories which must perform distillations of more parameters, simultaneously: VA/SO<sub>2</sub> Kombo Glasschem stills allow the additional analysis of the alcoholic content, with an accuracy better than 0,2%, thanks to the optional Alcohol Determination Kit. The new design, the auto-draining system for eliminating the old wine sample at the end of the distillation for volatile acidity, the flow-rate control system of the air stream for SO<sub>2</sub>, the high efficiency of the wine heating and the absence of gas leaks in the environment get these new equipments really unique.



Exclusive distribution

### Technical features:

- ⊕ "All-in-one" instruments, for volatile acidity, SO<sub>2</sub> and alcoholic content analyses
- ⊕ 25% faster distillation time for volatile acidity - Applicable at all wine samples
- ⊕ Automatic separation and draining of old samples at the end of the procedure
- ⊕ Several volatile acidity distillations can be run in a row, without adding cold water
- ⊕ Alcoholic content analysis thanks to the optional kit (*accuracy <0.2%*)
- ⊕ High-efficiency electrical heating avoids useless dispersions of the heat
- ⊕ Constant heat input from distillation to distillation
- ⊕ 2 available versions: VA/SO<sub>2</sub> Kombo 1+2 (1 VA + 2 SO<sub>2</sub> units), VA/SO<sub>2</sub> Kombo 1+4 (1 VA + 4 SO<sub>2</sub> units)
- ⊕ Distillation time: 12 min/sample for volatile acidity, 10 minutes for free SO<sub>2</sub> and 10 minutes for bound SO<sub>2</sub>. 5 minutes for alcohol distillation and 5 minutes for the boiling point determination
- ⊕ Sizes and weight: 45x30x75 (wxdxh) cm, 15 Kg. - 52x30x75 cm, 17 Kg.
- ⊕ Power supply: 220/250 V – 50 Hz

Code no. 5022VA1	VA/SO <sub>2</sub> Kombo Glasschem still, 1+2 heads
Code no. 5024VA1	VA/SO <sub>2</sub> Kombo Glasschem still, 1+4 heads

## Sulfer, volatile acidity and alcoholic content – VA/SO<sub>2</sub>/OH Kombo stills

VA/SO<sub>2</sub>/OH Kombo Glasschem stills consist of a distillation unit for the alcoholic content combined with a head for volatile acidity and 2 or 4 units to determine the sulfur. VA/SO<sub>2</sub>/OH Kombo Glasschem stills are certainly the ideal solution for wine industries and third-parties laboratories which must perform distillations of more parameters, simultaneously. Their "all-in-one" ability, their new design, the auto-draining system for eliminating the old wine sample at the end of the distillation for volatile acidity, the automatic stop at the end of the alcoholic distillation process, the flow-rate control system of the air stream for SO<sub>2</sub>, the high efficiency of the wine heating and the absence of gas leaks in the environment get these new equipments really unique.

### Technical features:

- ❖ "All-in-one" instruments, for volatile acidity, SO<sub>2</sub> and alcoholic content analyses
- ❖ 2 or 4 independent distillation heads for sulfer
- ❖ 25% faster distillation time for volatile acidity - Applicable at all wine samples
- ❖ Automatic separation and draining of old samples at the end of the VA distillation
- ❖ Several volatile acidity distillations can be run in a row, without adding cold water
- ❖ Automatic stop at the end of the alcoholic distillation process
- ❖ High-efficiency electrical heating avoids useless dispersions of the heat
- ❖ Constant heat input from distillation to distillation
- ❖ 2 available versions: VA/SO<sub>2</sub> Kombo 1+2+1 (1 VA + 2 SO<sub>2</sub> + 1 OH units), VA/SO<sub>2</sub> Kombo 1+4+1 (1 VA + 4 SO<sub>2</sub> + 1 OH units)
- ❖ Distillation time: 12 min/sample for volatile acidity, 10 minutes for free SO<sub>2</sub> and 10 minutes for bound SO<sub>2</sub>, 12 minutes for the alcoholic content distillation



Exclusive  
distribution

Code no. 5022VA1/OH1	VA/SO <sub>2</sub> /OH Kombo Glasschem still, 1+2+1 heads
Code no. 5024VA1/OH1	VA/SO <sub>2</sub> /OH Kombo Glasschem still, 1+4+1 heads

## AFLATOXINS/MYCOTOXINS KITS

### Quick Afla M1 Strip Test – Rapid kit for Aflatoxin M1 determination in milk

The new Quick Afla M1 Strip Test kit allows the rapid and visual qualitative/semiquantitative determination (*10 minutes*) of Aflatoxin M1 in milk samples according to European limits (*50 ppt*). The assay can be realized in 2 easy steps: the milk sample is added to a reaction well which contains a lyophilized reagent, mixed and incubated at room temperature for 5 minutes. Then a test strip is inserted in the reaction well and incubated for another 5-minute step. The test requires no incubator! All that is needed for the analysis comes with the kit, including a reusable 200 µL micropipette and the disposable tips: therefore the test can be performed everywhere. The Quick Afla M1 Strip Test kit can be stored at 2°-8°C for 12 months from date of production.



#### Technical features:

- ⊕ 10'-rapid test: it can be performed everywhere in 2 easy steps
- ⊕ No need of any incubator at all
- ⊕ It can be performed on every bench regardless of the room temperature
- ⊕ Very simple interpretation of results, either visual or with RDS-2500 Reader
- ⊕ Qualitative/semiquantitative results with cutoff at 50 ppt (*European limit*)
- ⊕ Quantitative results with RDS-2500 Strip Reader, from 10 to 350 ppt approx.
- ⊕ Suitable to every kind of milk, even if preservatives are present
- ⊕ Reusable 200 µL micropipette always included in the kit
- ⊕ Low cost/test and long shelf life



Code no. ASTM1/96      Quick Afla M1 Strip Test, rapid kit for Aflatoxin M1 in milk samples, 96 test

### Quantitative reader for Quick Afla M1 Strip Test – RDS-2500 Strip Reader

All results of the Quick Afla M1 Strip Test kit become quantitative and are interpreted objectively and accurately by the handheld RDS-2500 Strip Reader. Its easiness of use, its 4.3" touch-screen and high-resolution display, reduced dimensions and light weight allow its use everywhere. RDS-2500 includes a pre-programmed interpretation software for the Quick Afla M1 Strip Test, with a lot of useful functions that can be swiftly selected. All test results can be quickly downloaded to a PC via WiFi.



#### Technical features:

- ⊕ Immediate reading and interpretation
- ⊕ Small dimensions, light weight and easy to use
- ⊕ 4,3" LCD touch-screen display
- ⊕ Pre-programmed software for the Quick Afla M1 Strip Test interpretation
- ⊕ Quantitative results in the range 10 - 350 ppt (*not suitable to US/FDA limit of 500 ppt*)
- ⊕ Stable memory of hundreds of results and data on its removable SD storage card
- ⊕ Software update and data transfer to PC are possible via WiFi
- ⊕ Test results sync to PC via WiFi network
- ⊕ Supplied with the user-friendly Data Manager Desktop Suite Software for easy viewing, printing, archiving, and exporting of test results
- ⊕ Long lithium-ion battery life, rechargeable by means of the supplied charger

Code no. AST2500      RDS-2500 Strip Reader

## Aflatoxins/Mycotoxins ELISA kits

The Aflatoxins/Mycotoxins ELISA kits proposed by Astori Tecnica allow either qualitative or quantitative determinations of these toxins. All of them are based on cutting edge technology, with excellent analytical performances such as high specificity and exquisite sensitivity. Their reliability is impressive with a wide range of possible commodities, from grains and flours to complex food, feed and beverage samples. Their individually breakable wells avoid wasting test material and money.

### Technical features:

- ❖ Wide range of quantitative ELISA kits, with excellent sensitivity and specificity
- ❖ Ready-to-use reagents
- ❖ Quick extraction times and swift test protocols
- ❖ Suitable to different kinds of grains, flours, food, feed, dairy and beverage samples
- ❖ Availability of "Sensitive" kits for difficult matrices and for specific kinds of samples
- ❖ Individually breakable wells
- ❖ Long shelf-life



Exclusive distribution

Code no. GEB24003	Total Aflatoxins ( <i>Rapid, 20 minutes</i> ) ELISA kit, 96 wells
Code no. GEB24004	Total Aflatoxins ( <i>Sensitive</i> ) ELISA kit, 96 wells
Code no. GEB24010	Total Aflatoxins Watsol ELISA kit, water-based method, 96 wells
Code no. GEB24001	Aflatoxin B1 ( <i>Rapid, 20 minutes</i> ) ELISA kit, 96 wells
Code no. GEB24002	Aflatoxin B1 ( <i>Sensitive</i> ) ELISA kit, 96 wells
Code no. GEB24006	Aflatoxin M1 ( <i>Sensitive</i> ) ELISA kit, 96 wells
Code no. GEB24007	Aflatoxin M1 ( <i>Rapid, 60 minutes</i> ) ELISA kit, wide range 5-500 ppt, 96 wells
Code no. 941DON01M96	Deoxynivalenol (DON) ( <i>Rapid, 20 minutes</i> ) ELISA kit, 96 wells
Code no. GEB24012	Ochratoxin A ( <i>Sensitive</i> ) ELISA kit, 96 wells, for easy and difficult samples such as coffee, spices, grains and cereals, wine, alcoholic beverages, animal feed
Code no. GEB24011	Fumonisin Watsol ELISA kit, water-based method, 96 wells
Code no. 981ZEA01LM96	Zearalenone ( <i>LOW MATRIX</i> ) ELISA kit, 96 wells
Code no. 951T201GF96	Toxin T-2 ( <i>Rapid, 30 minutes</i> ) ELISA kit, 96 wells

## HYALURONIC ACID KITS

### Hyaluronic Acid kits – Quantitative tests in pharma/cosmetic/water samples

The Hyaluronic Acid kits allow the colorimetric quantitative determination of sodium hyaluronate by means of a simple spectrophotometer. These kits are perfectly applicable to pharmaceutical and cosmetic samples but also to medical devices and functional natural waters or dietetic beverages, where the hyaluronic acid has been deliberately added.

The determination of reticulated hyaluronic acid can be obtained successfully by means of the optional Cross-Linked HA Supplement, without any change to the test protocol. Liquid, solid and gel samples can be analyzed easily: only if strictly necessary, they might require a water dilution step prior to their analysis.



#### Technical features:

- ⊕ Quantitative determination in solid, liquid and gel samples with no pretreatment
- ⊕ A water dilution step might be required only in a few cases
- ⊕ Reading of the test results by means of a simple visible spectrophotometer (680 nm)
- ⊕ Long shelf life: 12 months from date of production
- ⊕ Long stability of the reagents after opening their bottles
- ⊕ No need of any calibration curve
- ⊕ Results in about 20 minutes
- ⊕ Analytical range (*without sample dilution*): from 0.001% to 0.01%
- ⊕ Excellent accuracy and repeatability levels
- ⊕ A spreadsheet for a quick calculation of the test results is available upon request
- ⊕ 2 kit formats: 40 and 80 tests
- ⊕ Storage conditions: at room temperature (*HRPL40* and *HRPL80*); at 3°-5°C (*other references*)



Code no. HRPL140	Hyaluronic Acid Kit ( <i>Sodium Hyaluronate</i> ), spectrophotometric quantitative kit, 40 tests
Code no. HRPL280	Hyaluronic Acid Kit ( <i>Sodium Hyaluronate</i> ), spectrophotometric quantitative kit, 80 tests

#### Accessories:

Code HRPL1640	Cross-Linked HA Supplement for the analysis of cross-linked hyaluronic acid, to be used with the Hyaluronic Acid Kit ( <i>Sodium Hyaluronate</i> ), 40 test
Code HRPL1780	Cross-Linked HA Supplement for the analysis of cross-linked hyaluronic acid, to be used with the Hyaluronic Acid Kit ( <i>Sodium Hyaluronate</i> ), 80 test

## PRODUCTION/R&D OF ARTISANAL BEER

### Only Beer – Equipment for the production and R&D of artisanal beer

Only Beer is a modular equipment for the production of small/medium quantity of artisanal beer, either for Home Brewing or for R&D and the realization of pilot lots in craft breweries.

Only Beer allows you to realize perfect cooking and fermentations in a short time, with unbelievable yields and optimized parameters to obtain a fully monitored, reproducible and successful beer production. It is based on the same technical-applicative principle of large industrial plants; its particular modular structure in sturdy and easy-to-clean stainless steel ensures the best hygienic level and it is designed to be used everywhere, as it can be carried easily. Furthermore, its power consumption is compatible with the typical domestic electric systems, so it is easy to use this equipment for Home Brewing.

The control unit monitors and displays all the production parameters, by showing the undergoing activity, all temperature values, the preset and the missing time to complete the current step.

#### Technical features:

- ❖ Capacity: 10 liters, that is up to 20 liters of final beer
- ❖ Yield (as sugar extraction): >95%
- ❖ Short-time cooking: < 5 h
- ❖ Display with indication of the current step, temperature, preset and missing time
- ❖ Excellent temperature precision ( $\pm 0,5^{\circ}\text{C}$ ) improving your lot standardization
- ❖ Temperature probe at the heart of the most, included
- ❖ Low power consumption, compatible with domestic electric systems
- ❖ Easy to transport: it can be used practically everywhere
- ❖ Easy to clean: achieve the maximum hygienic level!
- ❖ Small footprint: 130x65x80 cm
- ❖ Weight: about 32 Kg.
- ❖ Power consumption: 2,560 W



Code no. 89000

Only Beer, equipment for production and R&D of artisanal beer

## TECHNICAL SERVICE

### Technical service – Repairs and training courses

Our technical service includes the ability to repair all the instruments we manufacture and distribute, both during the warranty period or and after its expiry date. Our technical engineers are able to perform quick and efficient service and modifications upon request. All our foreign distributors can schedule a training course at our facilities to learn how to handle and solve any technical inconvenient by their own, in order to improve their local ability and their service quality.

#### Features of the service:

- ❖ Quick and reliable interventions
- ❖ Emergency technical consulences, even on the phone
- ❖ Warranty upon every repair
- ❖ Availability of spare parts
- ❖ Extremely competitive prices
- ❖ Training courses to our foreign distributors can be scheduled any time, upon request



### Technical service – Calibrations and application studies

Astori's technical engineers can perform accurate calibration procedures on almost any kind of equipments for temperature measurements (*for example.: thermometers, thermal regulators on ovens, thermostats, refrigerators, freezers, waterbaths, etc.*), on all balances and all the instruments from our own production, by providing the customer with an Astori's official calibration certificate. Moreover, special application studies on our manufactured instruments can be achieved, upon request.

#### Features of the service:

- ❖ Quick and reliable interventions
- ❖ All procedures are performed by using officially certified standards
- ❖ A calibration report or certificate is supplied upon request
- ❖ Extremely competitive prices



## SALES CONDITIONS

### HOW TO ORDER

All orders must be exclusively addressed to: ASTORI TECNICA S.r.l. – Via Stelle, 11 – 25020 Poncarale (BS) - Italy. All order transmissions must be done in writing, by means of ordinary e-mail ([info@astorioscar.com](mailto:info@astorioscar.com)). In case of orders by phone, they are subdued to their next written confirmation. Proforma Invoices, whether including the transportation costs or not, can be required to Astori Tecnica prior to each order.

### PAYMENTS

Payments must be done in advance, by confirmed bank transfers. Our invoices, if no complaint occurs from our Customer within 8 days from their receipt, are to be regarded as definitively accepted. Special payment terms for exceptional orders must be agreed in writing and prior to the delivery of the goods; in these cases, if the terms are expired and the payments are not honoured, a fee percentage will be applied according to the current bank rate at that particular time. The sale is considered done once the payment has been confirmed and received by Astori Tecnica; our Customers must not re-sell or borrow or deal with the received goods in case of a skipped or missed or delayed payment, as these actions will hurt our property rights.

### DELIVERIES

The agreed delivery terms must be considered approximate and without any obligation from Astori Tecnica's side. A possible delivery delay caused by problems not generated from our responsibility, willingness or negligence cannot be used as a reason to cancel the order, to postpone an agreed special payment term or to sue Astori Tecnica for damages of any sort.

### SHIPMENTS

All goods are sold under ex-works (our offices and stock, located in Poncarale (BS) – Italy) conditions. If required, Astori Tecnica can take care of the shipments whose costs will be invoiced to the purchaser. We decline all responsibilities about the shipments: the goods will be forwarded at the purchaser's risk and danger, according to Italian laws and regulations. If the Customer asks Astori Tecnica to take care of the shipment, we will choose the most correct and proper delivery way according to our experience, but without having or acquiring any responsibility upon it.

### WARRANTY

The warranty period covers 12 months from date of invoice. The warranty only covers the factory defects/failures: any inconvenient due to normal use or wear of the equipment and of any part is excluded. All shipment costs to return the parts or the defective units under warranty conditions are at purchaser's charge. All shipment costs for replacing parts and/or equipments under warranty conditions are also at purchaser's charge.

### RETURNS

Any return of the goods must be authorized by Astori Tecnica in advance, independently from the reason. When agreed, the return procedure must be performed by stating the original transportation document data in writing.

### COMPLAINTS

Any complaint about our supplies must reach Astori Tecnica within 8 days from the receipt of the goods. Delayed complaints will not be accepted.

### COMPETENT FORUM

In case of legal actions, the Forum in Brescia is competent.

### NOTES

**When placing an order, the purchaser automatically and fully accepts all Astori Tecnica's sales conditions, as described here and without restrictions or changes.**

Our company keeps the right to introduce, whenever is needed and without any warning, proper and reasonable modifications and innovations upon the items included in this catalogue.

Since the print techniques and the constant technological improvements on our products can lead to differences in the colours, shapes, design and technical features of the articles showed in this catalogue, Astori Tecnica will communicate and describe any possible variation to the Customers at the time of a Proforma Invoice creation or at the time of an order receipt.