

# ISOLAB

*Laborgeräte GmbH*

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one stop shopping  
for labs



**2015 - 2016**





In 1985, feeling a great enthusiasm, we took a deep breath. We were just like a new-born child dreaming to run and to draw ahead.

We knew it was a long way. We made some promises... Whatever happens we will, at each step, keep our enthusiasm fresh.

We will always search for means to go one more step further. We will examine the great picture from a wider and more intelligent perspective.

We will enjoy change. If necessary, we will turn the picture backward to see what others don't see.

The word "trust" should sparkle next to our name. For us there is nothing more important than trust. Whatever we make will be quality.

All people will be our most indispensable assets. Every single person who works for us is as valuable as our customers.

Now, we are twenty years old. Our journey which started in a tiny little office is continuing today in a 19.800 square meter area.

Today we are successfully exporting to 73 countries in the world.

Once you lose interest, you get aged. We guide our trademark with interest. We still follow this great big world with a never-ending interest.

Our young spirit still promotes our enthusiasm. Throughout our journey, we had to corner numerous bends; we had to climb up steep hills. There were times we felt tired but we never slowed down or stopped.

We are aware that life changes with great speed. The world whirls around faster than it used to.

While some watch this change in astonishment, some others try to make this change even faster. Some others spend all their effort to this end and re-write the rules of this game every single day. We are not watchers; we are the rule writers.

The deal is the desire; but not so simply... We mean desiring substantially. Desiring so much that you cannot give up; you cannot avoid.

We wanted to be here so much. And we know very well where we want to be in the future.

We haven't forgotten the promises we made ourselves for one single day.

These promises tie us together to each other, to our job, and to you with an everlasting loop.

We enthusiastically still continue shaping glass, metal, and plastic, for you and for science.

The larger picture becomes different on the basis of from which angle we look.

For us, the only invariable in this picture is quality.

No matter how time may shape us, our product quality, service quality, man-force quality, and management quality will not ever change.



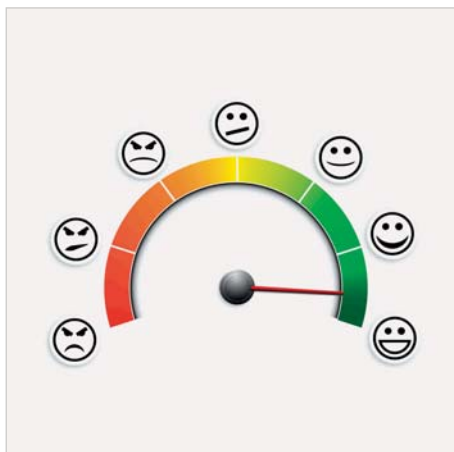
Our compass always directs us to perfection.

German sensibility and perfectionism are two important components of our entire business life.

Our main rule is to deny the word "impossible". We have no place in our vocabulary such as "impossible".

In contrast, we have opportunity, solution, flexibility.

"There is always a way out" for those who want success as much as we do.



We consider our customers as the sole judge in this game that we have been playing with enthusiasm.

Customers' satisfaction is the only criteria that determine our victory.



Beginning with our first step up to today, we wanted the word “trust” to gleam immediately next to our name. And it is actually what happened.

Our belief is that everything starts with trust, and the way something starts, it is bound to go on the same way.

We embrace evolution.  
We escalate our operation capacity in order to advance one step further.

The essential part of this is technology.  
We have never fallen behind in technology required by time.

At our each and every step, we use top level technology.



It is our sincere belief that we were all born from the same mother.

We are always respectful to the nature mother, to the environment and the world we live on.

We know that there isn't a more valuable heritage that we can leave for the future generations.

For 20 years now, we have been working for science extending beyond boundaries.

We have been successfully exporting to 73 countries in the world.



highlights

## blank production



State-of-art, automatic welding machines are used to connect the foot to the cylinder.

ISOLAB is one of the leading producers in the world that manufactures blanks for the complete volumetric glassware.

All blanks are manufactured from the best quality of borosilicate glass tubings.

Volumetric and physical controls are done during each step of the blank production.

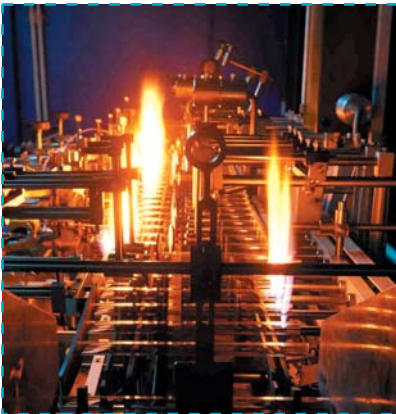
Every single blank is controlled for its volume level, uniform wall thickness, the exact shape and dimensions.



Glass tubes are blown by highly skilled blowers to ensure the excellent quality.

highlights

## joint production



Joints are manufactured by automatic forming machines for consistent quality.

ISOLAB ground joints are manufactured with an accurate taper and smooth finishing for leak-proof performance and interchangeability.

Production of blanks are done by automatic machines.

During the grinding process, only diamond tools are used to obtain the perfect grinding results.

The tightness of ground joints are also tested with vacuum test machine to make sure that any possible leakage is prevented.



Grinding process of all joints performed by diamond reamers for best results.

highlights

## calibrated tube production



ISOLAB burettes are formed by using vacuum technology to maintain the inside diameters of the tubings uniform at every point along their graduations.

Glass tubings are slowly heated up to the required temperature in order to allow the tubes to change their outer shapes exactly fitting to the diameter of a special steel rod.

All of the tubings are calibrated individually with the help of this method. Thus, all ISOLAB burettes guarantee perfect result with exact volume levels even at middle points.



highlights

## printing process

ISOLAB uses the most advanced printing machines which ensure the highest quality of printing. Also the stretchable screen stencils are used in printing process at ISOLAB.

These stencils are easily stretched to match the calibration marks so that volume precision is maintained for all volume levels.

ISOLAB uses blue, white and amber stain enamels which are specially designed and manufactured for the application on laboratory glassware.



*Only highly contrasted and fine printing allows precise reading, especially for scaled products such as measuring cylinders, pipettes and burettes.*

ISOLAB **2000 ml** In 20°C  $\pm 0.600$  BORO 3.3 NS 29/32

According to the **DIN** standards, the following information has to be printed on the bodies of each volumetric glassware.

- Brand name
- Nominal capacity
- Class degree
- Calibration temperature
- Standards
- Possible error limits
- Batch numbers and others

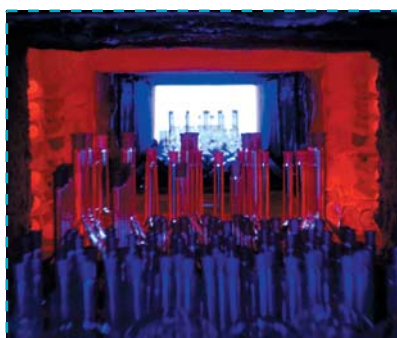
highlights

## furnacing process

Furnacing process is the last step to obtain final products. All heating and annealing processes are carried out in specially designed and temperature controlled tunnel furnaces.

The control of the temperature inside the furnace ensures the long lasting printing quality.

In order to get the highest level of precision, carefully controlled gradual heating and cooling procedures are essential.



*To obtain the best possible results, the furnace has a precise temperature control all over the thermal heating zone.*



*Furnacing process is entirely controlled by a electronic panel which regulates temperature at all steps.*

highlights

## packing process

All glassware after production are washed inside the modern ultrasonic cleaning machines to make sure that all the remaining particles will be left over.

Qualified and experienced packing staff also acts as an additional quality control department.

High quality packing material prevents breakage until the final destinations of the products.



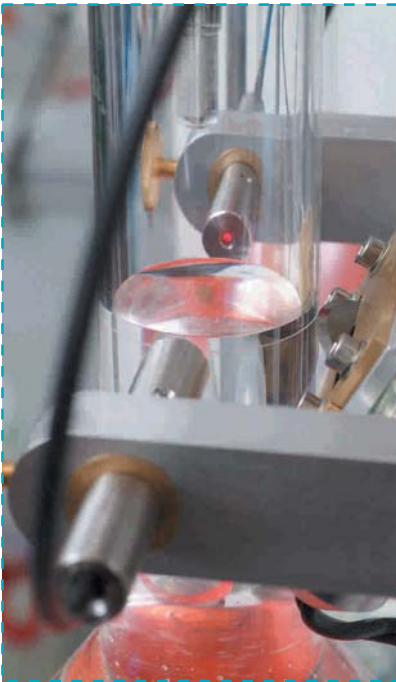
*Modern ultrasonic cleaning machines are used to remove all the remaining particles*



*The final step of packing is also the final step for the quality control process.*

## calibration

process



*Meniscus is determined automatically at the exact lowest level with the help of a laser beam. Application of the calibration mark is done automatically at the same time by a diamond tool.*

At **ISOLAB** all calibration steps are carried out with fully automatic calibration machines which are only used by several well known manufacturers.

Computer controlled step motors and optical laser beams prevent any human fault.

These automatic machines ensure the highest level of precision and accuracy at calibration process.



*Filling the blank products with water is done automatically by the calibration machines. During the entire process, the environment and water temperature are controlled and kept stable at 20°C.*

## calibration

process



*Q.C.R. works with a high resolution CCD camera system and image processing in order to find the meniscus and adjust the filled volume.*

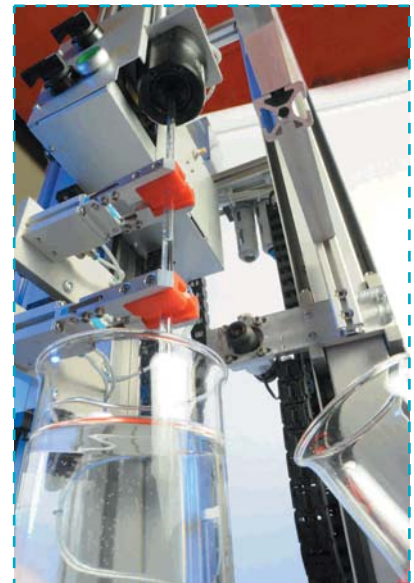
**ISOLAB** products are controlled after production according to **DIN** (Deutsches Institut für Normung) standards.

The manual process of the quality control is very complex and time consuming.

Calibration control done by an operator involves a high risk of mistakes due to the manual process.

Only a well experienced operator is able to make this control, even then the results might have a lack of reliability.

In order to achieve perfect accuracy and to have reliable test results, only fully automatic **quality control robot (Q.C.R)** is used at **ISOLAB** quality control laboratory.



*The operator simply mounts the volumetric glass into the unit of the Quality Control Robot and waits for the perfect outcome.*



highlights

# batch certification

“**Batch certificate**” shows the determined mean value of the controlled batch of products, the standard deviation as well as the volumetric tolerance.

After each batch production, the required quantity is tested and certified according to “**Mess und Eichverordnung**” and all relevant standards are marked with conformity sign “**DE-M**”.

The Batch Certificate contains the date of production and other parameters such as mean value, standard deviation and the permitted tolerance.

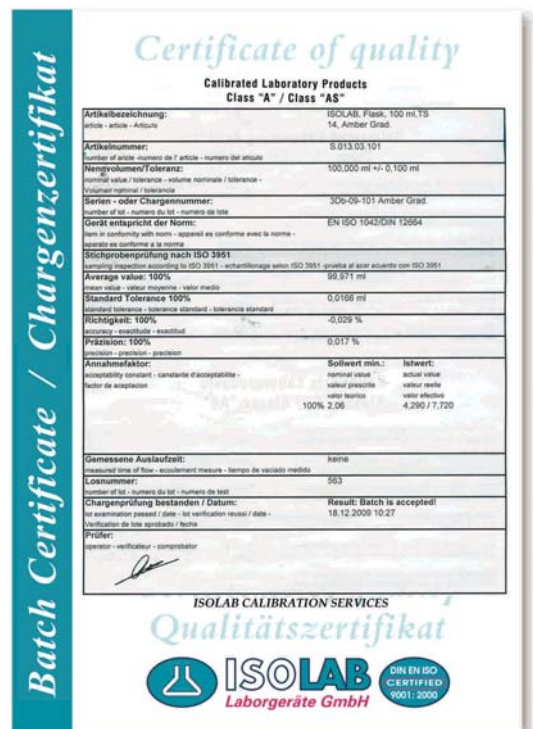
If the batch number is known, the individual results on the date of production can be easily accessed.

how to print

## batch certificate

Users can easily print the “**batch certificate**” online with the following steps:

- Please enter our web site; ([www.isolab.de](http://www.isolab.de))
- Select “**Downloads/Support**” on the menu.
- On “**Obtain Certificates**” section, please select the product code number.
- Select the lot number of the glassware (written on the body).
- Certificate page will be opened automatically.
- For print out select “**Printer Version**” on the left corner.



highlights

# quality certification

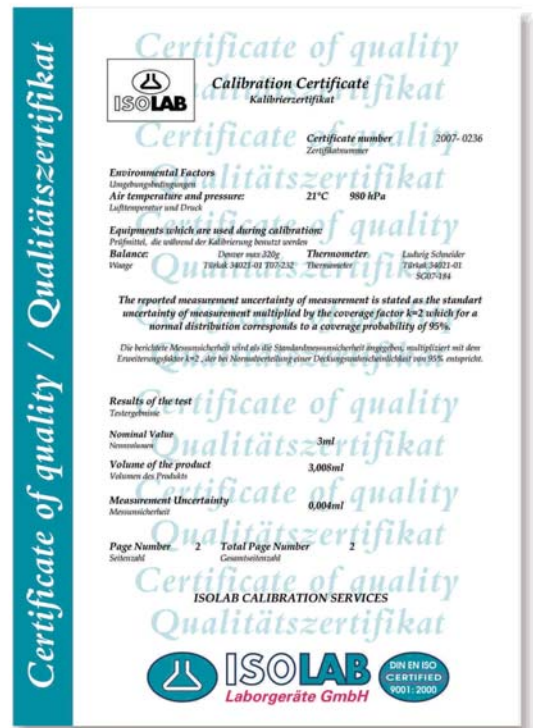
An “**individual quality certificate**” can also be issued for volumetric glasswares.

This certificate is acceptable for all high quality laboratories in Europe and all over the world.

Each volumetric glassware is individually tested according to the German Federal Weights and Measures (**Eichordnung**) rules and regulations.

Every single volumetric product is subject to individual control and supplied with an individual serial number.

This certificate has corresponding number, date of issue and all the relevant test results.



highlights

## plastic injection production



ISOLAB is also a well known plastic labware manufacturer. Latest technologies, approved production techniques and high capacity machinery park are held to serve the best **sterile** and **non sterile** products.

ISOLAB plastic production consists of experienced staff, high capacity injection moulding technology and premium grade raw material. Most of the ISOLAB plastic products are certified with **CE - Invitro Diagnostic Directive**, council directive 98/79/EC, concerning in vitro diagnostic instruments.

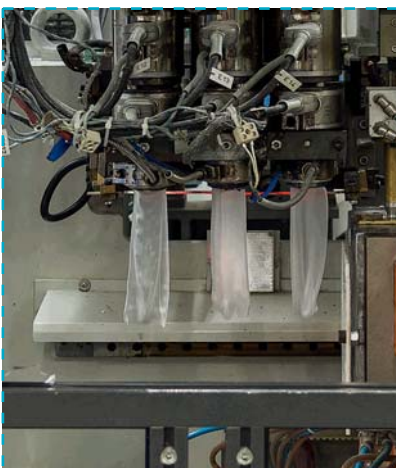
Raw materials are carefully chosen according to their **MFI** (melt flow index) value, **OIT** (oxidative induction time) value, density and humidity.

All plastic injection process is held environmentally friendly machines which use natural sources at a very minimum level.

All European made moulds and auxiliary equipment provide high quality products and fast service for customers.

highlights

## plastic blowing production



Thanks to the latest technology, ISOLAB became one of the best Plastic Blowing Producer in labware industry.

Fully automated blowing machines, European made moulds and auxiliary, Premium grade raw material and experienced staff, provide a stable and seamless labwares, such as; bottles, pipettes, etc.

ISOLAB is using very sensitive control units, such as patented parison controls from 300 different points.

This helps to control the wall thickness in all sections of a product and resulting a continues quality level.

Proposed in a wide range of products, ISOLAB blow molding production covers a variety of labwares from bottles to containers, blown from approved polyolefins.

# plastic sterile production



ISOLAB sterile production plants are well equipped clean rooms with **HEPA filters** and positive pressure areas which are supplied with air locked doors.

Clean rooms are validated according to international **DIN** and **ISO** standards.

In order to avoid any contamination through human contact, the entire process is automated.

Raw material is automatically fed from silos to moulding machines, through vacuum loaders.

The moulding machines are automatically connected to loading machines. The entire machinery is constantly monitored by advanced software.

Clean room staff is equipped with appropriate, protective clothes, in order to diminish the contamination risks.

# quality control & certification



Testing protocols used in **ISOLAB** Quality Assurance  
material specs & pressure test

Tubes are manufactured from virgin Polypropylene; caps are manufactured from virgin high density Polyethylene. Raw materials are heavy metal free (acc. to CONEG reg.) color concentrates and meet USP and Class VI requirements for plastic containers and closures. Product design has successfully passed the 95 kPa (14 psi) pressure test as referenced in the IATA dangerous goods regulation. This product lot has been gamma irradiated and dosimetrically released base on the sterilization of healthcare requirements with sterility assurance level of SAL 10<sup>-5</sup>.

**Endotoxin (Pyrogen)&RNase/DNase testing**

Products have been tested and have met the criteria established in ANSI/AAMI ST 72:02(R) 2010 bacterial Endotoxins – Test methodologies, routine testing and alternative to batch testing with results less than 0.1 EU/ml. Products for this pack have also been tested and are free of any detectable RNase/DNase contamination. This production lot has been sampled and tested in accordance with standard operating procedures and has been released by quality assurance for the following characteristics

**Product sterilization**

Manufactured at a class 10,000 sterile room under germ-free aseptic conditions and then re-sterilized by gamma radiation. This product lot has been gamma irradiated (in a dosage level range between 12-25 kGy) and dosimetrically released base on the sterilization of healthcare requirements with sterility assurance level of SAL 10<sup>-5</sup>.

**Endotoxin (Pyrogen) detection**

Samples are extracted in endotoxin-free water and tested for endotoxins using the kinetic turbidimetric method of the Limulus Amoebocyte Lysate (LAL) test according to the USP standard with minimum detection level 0.05 EU/ml.

**Nuclease detection**

Samples are flushed in 20µl vial containing 1µl of 7.5 kb Poly(A)-tailed RNA with a buffer containing NaCl and MgCl<sub>2</sub>. Reaction later been incubated (1 hour / 37 °C) then visualized in an agarose gel. The final results are then compared to negative and positive controls. The resulting reaction must not show any level of degradation of the DNA and RNA fragments.

**DNA contamination**

Samples are extracted with sterile, DNA-free water. A portion of extract is added to a PCR reaction containing thermostable polymerase, a primer set to amplify a mammalian gene, and dNTPs. Negative control reactions and positive control reactions (containing 1 picogram of Human Genomic DNA) are also created. All reactions are thermocycled for 40 cycles, after which the results are visualized by agarose gel electrophoresis. The absence of PCR signal in the sample reactions indicates the product is free of DNA contamination.

The biotech industry needs certification for the plastics they use. The market trends indicate a need for **DNase, RNase and pyrogen-free products**.

**ISOLAB certified plastics** are a result of an ongoing quality control process.

The process begins with the inspection of raw materials to monitoring the final product and ends with testing each lot after production for contaminants.



CERTIFICATE of COMPLIANCE and "BioClean" QUALITY

Product Name	
Catalog Number	
Product Lot No	
Material Used	
Production Date	
Expiration Date	

This package contains a **gamma irradiated** high quality product manufactured in a PCR-clean and germ-free Class 10,000 clean room (according to U.S. Federal Standard 209D) environment.

This certificate is issued to confirm that this lot of products had been manufactured and tested under a registered and audited ISO 9001 quality system and conforms the below mentioned material specs and passed all tests successfully.

Test Procedure	Results
Leak Test	Pass
Continguge Test	Pass
Visual attributes	Pass
Packaging	Pass
Endotoxin - Pyrogen	Free
Human DNA - Dnase	Free
Rnase - PCR inhibitor	Free



## VOLUMETRIC FLASKS - "glass" - "class A" - "clear"



- Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.
- They meet the highest quality standards according to DIN EN 1042 and DIN 12664-2.
- Individually calibrated through automatic calibration process carried out by robots.
- Permanent quality control through all steps eliminate possible deviations from nominal values.
- Calibrated to contain (In) and all the tolerances are according to DIN/ISO Class "A" standards.
- Conformity ("H", "DE-M") certified, with a batch number printed on the body.
- Batch certificate can be downloaded from our website.
- Inscriptions are printed with special blue enamel.
- Clear flasks have a diamond grinded "blue effect" meniscus ring mark for longer persistence and easy observation of meniscus line.
- All volumetric flasks are supplied with P.P stoppers.

Alternative for polypropylene stoppers a glass stopper can be selected from our catalogue page no 110.



catalogue number	volume	tolerance	approximate height	neck inner diameter	neck size	pack quantity
013.01.005	5 ml	± 0.025 ml	70 mm	10.00 mm	NS 10/19	2 pieces
013.01.010	10 ml	± 0.025 ml	90 mm	10.00 mm	NS 10/19	2 pieces
013.01.020	20 ml	± 0.040 ml	110 mm	10.00 mm	NS 10/19	2 pieces
013.01.025	25 ml	± 0.040 ml	110 mm	10.00 mm	NS 10/19	2 pieces
013.01.026	25 ml	± 0.060 ml	110 mm	12.50 mm	NS 12/21	2 pieces
013.01.050	50 ml	± 0.060 ml	140 mm	12.50 mm	NS 12/21	2 pieces
013.01.051	50 ml	± 0.060 ml	140 mm	14.50 mm	NS 14/23	2 pieces
013.01.100	100 ml	± 0.100 ml	170 mm	12.50 mm	NS 12/21	2 pieces
013.01.101	100 ml	± 0.100 ml	170 mm	14.50 mm	NS 14/23	2 pieces
013.01.150	150 ml	± 0.150 ml	200 mm	14.50 mm	NS 14/23	2 pieces
013.01.200	200 ml	± 0.150 ml	210 mm	14.50 mm	NS 14/23	2 pieces
013.01.250	250 ml	± 0.150 ml	220 mm	14.50 mm	NS 14/23	2 pieces
013.01.300	300 ml	± 0.200 ml	230 mm	14.50 mm	NS 14/23	2 pieces
013.01.400	400 ml	± 0.200 ml	250 mm	18.80 mm	NS 19/26	2 pieces
013.01.500	500 ml	± 0.250 ml	260 mm	18.80 mm	NS 19/26	2 pieces
013.01.901	1000 ml	± 0.400 ml	300 mm	24.00 mm	NS 24/29	2 pieces
013.01.902	2000 ml	± 0.600 ml	370 mm	29.20 mm	NS 29/32	2 pieces
013.01.905	5000 ml	± 1.200 ml	475 mm	34.50 mm	NS 34/35	1 piece
013.01.910	10000 ml	± 2.000 ml	570 mm	45.00 mm	NS 45/40	1 piece

150 ml, 300 ml, 400 ml and 10000 ml volumetric flasks are in addition to DIN range.

## VOLUMETRIC FLASKS - "glass" - "class A" - "amber"

- Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.
- They meet the highest quality standards according to DIN EN 1042 and DIN 12664-2.
- Individually calibrated through automatic calibration process carried out by robots.
- Permanent quality control through all steps eliminate possible deviations from nominal values.
- Calibrated to contain (In) and all the tolerances are according to DIN/ISO Class "A" standards.
- Conformity ("H", "DE-M") certified, with a batch number printed on the body.
- Batch certificate can be downloaded from our website.
- Inscriptions are printed with special white enamel.
- Amber flasks have a diamond grinded "white effect" meniscus ring mark for longer persistence and easy observation of meniscus line.
- All volumetric flasks are supplied with P.P stoppers.



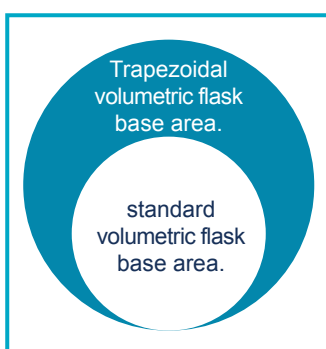
Alternative for polypropylene stoppers a glass stopper can be selected from our catalogue page no 110.

catalogue number	volume	tolerance	approximate height	neck inner diameter	neck size	pack quantity
014.01.005	5 ml	± 0.025 ml	70 mm	10.00 mm	NS 10/19	2 pieces
014.01.010	10 ml	± 0.025 ml	90 mm	10.00 mm	NS 10/19	2 pieces
014.01.020	20 ml	± 0.040 ml	110 mm	10.00 mm	NS 10/19	2 pieces
014.01.025	25 ml	± 0.040 ml	110 mm	10.00 mm	NS 10/19	2 pieces
014.01.026	25 ml	± 0.060 ml	110 mm	12.50 mm	NS 12/21	2 pieces
014.01.050	50 ml	± 0.060 ml	140 mm	12.50 mm	NS 12/21	2 pieces
014.01.051	50 ml	± 0.060 ml	140 mm	14.50 mm	NS 14/23	2 pieces
014.01.100	100 ml	± 0.100 ml	170 mm	12.50 mm	NS 12/21	2 pieces
014.01.101	100 ml	± 0.100 ml	170 mm	14.50 mm	NS 14/23	2 pieces
014.01.200	200 ml	± 0.150 ml	210 mm	14.50 mm	NS 14/23	2 pieces
014.01.250	250 ml	± 0.150 ml	220 mm	14.50 mm	NS 14/23	2 pieces
014.01.500	500 ml	± 0.250 ml	260 mm	18.80 mm	NS 19/26	2 pieces
014.01.901	1000 ml	± 0.400 ml	300 mm	24.00 mm	NS 24/29	2 pieces
014.01.902	2000 ml	± 0.600 ml	370 mm	29.20 mm	NS 29/32	2 pieces

## VOLUMETRIC FLASKS - "glass" - "class A" - "trapezoidal"



- Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.
- They have a trapezoidal body form for much better and higher stability.
- Available 2 types:
  - clear
  - amber
- They meet the highest quality standards according to ISO 1042 and DIN 12664-2.
- Individually calibrated through automatic calibration process carried out by robots.
- Permanent quality control through all steps eliminate possible deviations from nominal values.
- Calibrated to contain (In) and all the tolerances are according to DIN/ISO Class "A" standards.
- Conformity ("H", "DE-M") certified, with a batch number printed on the body.
- Batch certificate can be downloaded from our website.
- Inscriptions are printed either with special blue or white enamel.
- Flasks have a diamond grinded "blue effect" or "white effect" meniscus ring mark for longer persistence and easy observation of meniscus line.
- All volumetric flasks are supplied with P.P stoppers.



Trapezoidal volumetric flask base area.

standard volumetric flask base area.

Small size flasks with standard body shape can fall over more easily due to their smaller center of gravity.

Trapezoidal volumetric flasks have a much larger base area for higher stability.

Compared to standard shape volumetric flasks of the same capacity, trapezoidal flasks have at least twice base area.

Alternative for polypropylene stoppers a glass stopper can be selected from our catalogue page no 110.



clear flasks blue scale	amber flasks white scale	volume	tolerance	approximate height	neck inner diameter	neck size	pack quantity
013.13.001	013.15.001	1 ml	± 0.025 ml	65 mm	7.50 mm	NS 07/16	2 pieces
013.13.002	013.15.002	2 ml	± 0.025 ml	70 mm	7.50 mm	NS 07/16	2 pieces
013.13.003	013.15.003	3 ml	± 0.025 ml	70 mm	7.50 mm	NS 07/16	2 pieces
013.13.004	013.15.004	4 ml	± 0.025 ml	70 mm	7.50 mm	NS 07/16	2 pieces
013.13.005	013.15.005	5 ml	± 0.025 ml	70 mm	7.50 mm	NS 07/16	2 pieces
013.13.010	013.15.010	10 ml	± 0.025 ml	90 mm	10.00 mm	NS 10/19	2 pieces
013.13.020	013.15.020	20 ml	± 0.040 ml	110 mm	10.00 mm	NS 10/19	2 pieces
013.13.025	013.15.025	25 ml	± 0.040 ml	110 mm	10.00 mm	NS 10/19	2 pieces
013.13.050	013.15.050	50 ml	± 0.060 ml	140 mm	12.50 mm	NS 12/21	2 pieces

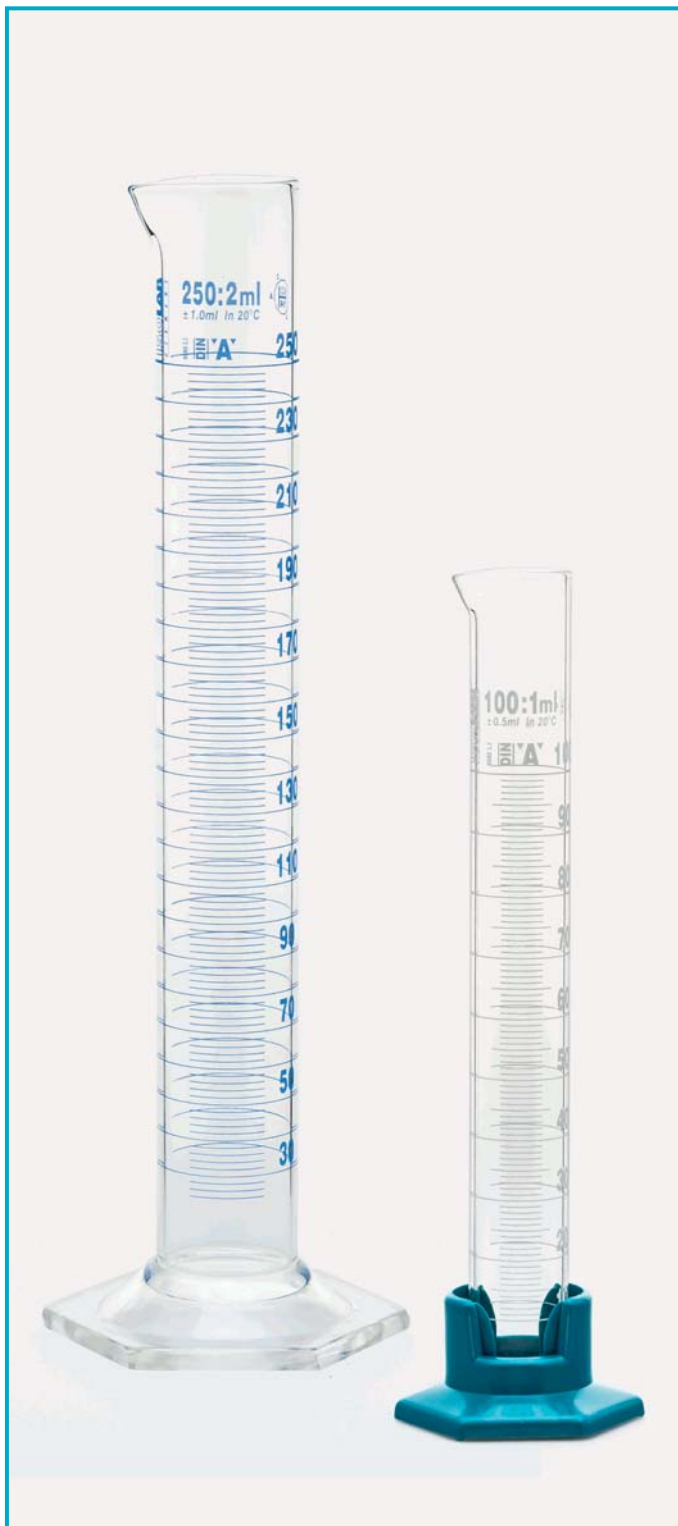
## VOLUMETRIC FLASKS - "polypropylene" - "class B"

- Manufactured from glass-like transparent special grade polypropylene.
- They offer thick walls which eliminates distortion, high transparency, chemical resistance and remarkable heat tolerance.
- Calibrated to contain (In) and the tolerances are according to DIN/ISO Class "B" standards.
- They meet the highest quality standards according to ISO 1042.
- Flasks have inscriptions and meniscus ring mark in blue enamel which is specially designed for plastic and resistant to 60°C.
- For consistent accuracy, P.P volumetric flasks should not be used with liquids over 60°C and or kept under direct sunlight or overheated conditions.



clear flasks blue scale	volume	tolerance	approximate height	neck inner diameter	neck size	pack quantity
014.03.025	25 ml	± 0.080 ml	110 mm	10.00 mm	NS 10/19	1 piece
014.03.050	50 ml	± 0.120 ml	140 mm	12.50 mm	NS 12/21	1 piece
014.03.100	100 ml	± 0.200 ml	170 mm	14.50 mm	NS 14/23	1 piece
014.03.250	250 ml	± 0.300 ml	220 mm	14.50 mm	NS 14/23	1 piece
014.03.500	500 ml	± 0.500 ml	260 mm	18.80 mm	NS 19/26	1 piece
014.03.901	1000 ml	± 0.800 ml	300 mm	24.00 mm	NS 24/29	1 piece

## CYLINDERS - "glass" - "class A" - "high form"



- Manufactured from borosilicate glass 3.3 with either glass hexagonal base with excellent stability or with polypropylene base which eliminates risk of breakage.
- Available 2 types:
  - with solid glass base
  - with dismantable P.P base
- They meet the highest quality standards according to DIN EN ISO 4788.
- Individually calibrated through automatic calibration process carried out by robots.
- Permanent quality control through all steps eliminate possible deviations from nominal values.
- Calibrated to contain (In) and all the tolerances are according to DIN/ISO Class "A" standards.
- Conformity ("H", "DE-M") certified, with a batch number printed on the body.
- Batch certificate can be downloaded from our website.
- Hexagonal cylinder base provides excellent stability.
- Flawless spout design assures pouring without any drips.
- Inscriptions and graduations are printed with special blue or white enamel.

*Thick and durable plastic base of the cylinder does not have the risk of breakage during application.*

*The plastic base fits the cylinder body perfectly well and can be easily removed.*



*Flawless spout design assures pouring without any drips.*



glass base blue scale	P.P base white scale	volume	tolerance	subdivision	approximate height	pack quantity
015.01.005		5 ml	± 0.050 ml	± 0.100 ml	115 mm	2 pieces
015.01.010	015.05.010	10 ml	± 0.100 ml	± 0.200 ml	140 mm	2 pieces
015.01.025	015.05.025	25 ml	± 0.250 ml	± 0.500 ml	170 mm	2 pieces
015.01.050	015.05.050	50 ml	± 0.500 ml	± 1.000 ml	200 mm	2 pieces
015.01.100	015.05.100	100 ml	± 0.500 ml	± 1.000 ml	260 mm	2 pieces
015.01.250	015.05.250	250 ml	± 1.000 ml	± 2.000 ml	335 mm	2 pieces
015.01.500	015.05.500	500 ml	± 2.500 ml	± 5.000 ml	390 mm	2 pieces
015.01.901	015.05.901	1000 ml	± 5.000 ml	± 10.000 ml	470 mm	2 pieces
015.01.902		2000 ml	± 10.000 ml	± 20.000 ml	570 mm	1 piece



## MIXING CYLINDERS - "glass" - "class A"

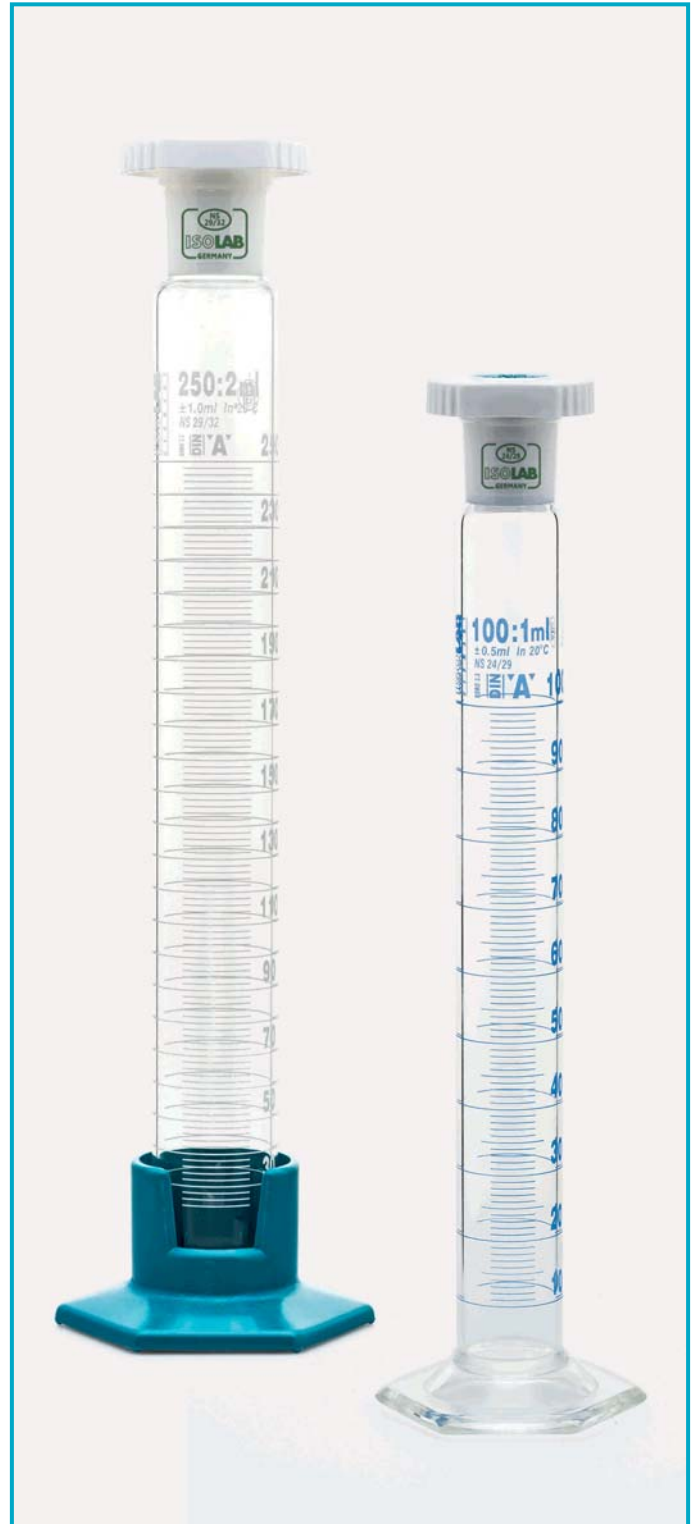
- Manufactured from borosilicate glass 3.3 with either glass hexagonal base with excellent stability or with polypropylene base which eliminates risk of breakage.
- Available 2 types:
  - with solid glass base
  - with dismantable P.P base
- They meet the highest quality standards according to DIN EN ISO 4788.
- Individually calibrated through automatic calibration process carried out by robots.
- Permanent quality control through all steps eliminates possible deviations from nominal values.
- Calibrated to contain (In) and all the tolerances are according to DIN/ISO Class "A" standards. Conformity ("H", "DE-M") certified, with a batch number printed on the body.
- Batch certificate can be downloaded from our website.
- Perfect neck grinding which prevents spillage during mixing process. Hexagonal cylinder base provides excellent stability.
- Inscriptions and graduations are printed with special blue or white enamel.
- Supplied with P.P stopper which ensures perfect closure and prevents spilling during shaking.



Alternative for polypropylene stoppers a glass stopper can be selected from our catalogue page no 110.



Hexagonal cylinder base provides excellent stability.



glass base blue scale	P.P base white scale	volume	tolerance	subdivision	approximate height	neck size	pack quantity
016.01.010	015.06.010	10 ml	± 0.100 ml	0.200 ml	160 mm	NS 10/19	2 pieces
016.01.025	015.06.025	25 ml	± 0.250 ml	0.500 ml	195 mm	NS 14/23	2 pieces
016.01.050	015.06.050	50 ml	± 0.500 ml	1.000 ml	230 mm	NS 19/26	2 pieces
016.01.100	015.06.100	100 ml	± 0.500 ml	1.000 ml	290 mm	NS 24/29	2 pieces
016.01.250	015.06.250	250 ml	± 1.000 ml	2.000 ml	370 mm	NS 29/32	2 pieces
016.01.500	015.06.500	500 ml	± 2.500 ml	5.000 ml	395 mm	NS 34/35	2 pieces
016.01.901	015.06.901	1000 ml	± 5.000 ml	10.000 ml	510 mm	NS 45/40	1 piece

## CYLINDERS - "polypropylene" - "class B" - "high form"



- Manufactured from ultra clear, virgin polypropylene.
- They offer high transparency, chemical resistance and remarkable heat tolerance.
- They meet the highest quality standards according to DIN EN 12681 and ISO 6706.
- Strengthened durable rim increases overall dimensional stability.
- Hexagonal base with strengthened knobs ensures increased stability.
- Individually calibrated through automatic calibration process carried out by robots.
- Permanent quality control through all steps eliminates possible deviations from nominal values.
- Cylinders are calibrated to contain (In) and the tolerances are according to DIN/ISO Class "B" standards.
- Available 2 types:
  - with embossed graduation
  - with blue graduation
- Graduations are either as embossed scale or in blue enamel which is specially designed for plastic and resistant to 60°C.
- For consistent accuracy, polypropylene measuring cylinders should not be used with liquids over 60°C and should not be kept under direct sunlight or overheated conditions.

*Cylinders are manufactured from highly transparent virgin polypropylene enabling excellent visibility of liquid level.*



embossed graduation	blue graduation	volume	tolerance	subdivision	approximate height	pack quantity
016.05.010	016.06.010	10 ml	± 0.200 ml	0.200 ml	135 mm	1 piece
016.05.025	016.06.025	25 ml	± 0.500 ml	0.500 ml	160 mm	1 piece
016.05.050	016.06.050	50 ml	± 1.000 ml	1.000 ml	195 mm	1 piece
016.05.100	016.06.100	100 ml	± 1.000 ml	1.000 ml	240 mm	1 piece
016.05.250	016.06.250	250 ml	± 2.000 ml	2.000 ml	320 mm	1 piece
016.05.500	016.06.500	500 ml	± 5.000 ml	5.000 ml	380 mm	1 piece
016.05.901	016.06.901	1000 ml	± 10.000 ml	10.000 ml	465 mm	1 piece

## DENSITY BOTTLES

**“non calibrated”**

- Manufactured according to ISO 3507 standard.
- The upper and lower ends of the stopper are ground and excellently polished.
- In order to differentiate easily, all density bottles have the same code numbers printed on both the body and the stopper.
- Non calibrated density bottles are made to contain (In) to 0,001 ml, without calibration.

catalogue number	volume	pack quantity
023.01.005	5 ml	1 piece
023.01.010	10 ml	1 piece
023.01.025	25 ml	1 piece
023.01.050	50 ml	1 piece
023.01.100	100 ml	1 piece

**“calibrated”**

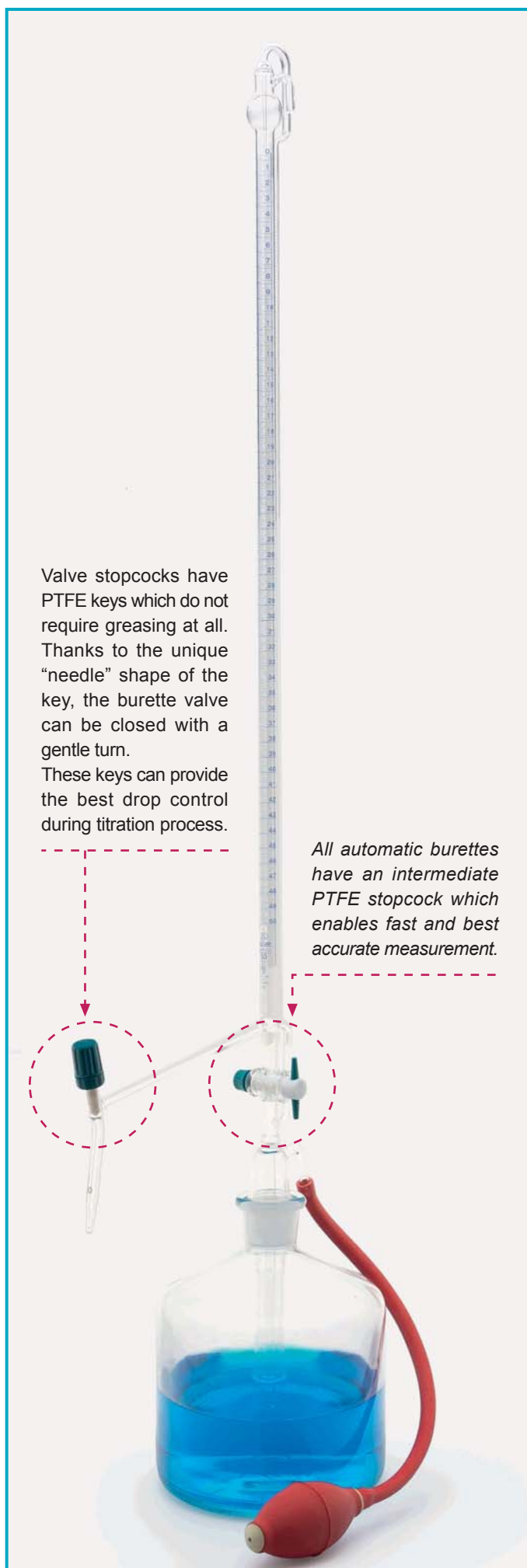
- Manufactured according to ISO 3507 standard.
- The upper and lower ends of the stopper are ground and excellently polished. In order to differentiate easily, all density bottles have the same code numbers printed on both the body and the stopper.
- Calibrated density bottles are made to contain (In) to 0,001 ml. Net volume capacity is engraved on the body. Each bottle is calibrated together with its stopper.

catalogue number	volume	pack quantity
023.02.005	5 ml	1 piece
023.02.010	10 ml	1 piece
023.02.025	25 ml	1 piece
023.02.050	50 ml	1 piece
023.02.100	100 ml	1 piece

**“calibrated with thermometer”**

- Manufactured according to ISO 3507 standard.
- Other technical specifications are similar to other density bottles.
- Calibrated density bottles with thermometer are made to contain (In) to 0,001 ml. Net volume capacity is engraved on the body.
- They are supplied with a connected thermometer. Thermometer has a scale range +10°C / +40°C, with graduations of 0,5°C.

catalogue number	volume	pack quantity
023.03.005	5 ml	1 piece
023.03.010	10 ml	1 piece
023.03.025	25 ml	1 piece
023.03.050	50 ml	1 piece
023.03.100	100 ml	1 piece



## BURETTES - “automatic” - “class AS”

- Manufactured from pre-vacuum calibrated borosilicate glass.
- Available 2 types:
  - clear burette with blue scale
  - amber bureette with white scale
- They meet the highest quality standards according to ISO 385.
- Permanent quality control through all steps eliminates possible deviations from nominal values.
- Calibrated to deliver (Ex) and the tolerances are according to DIN/ISO Class “AS” standards.
- Conformity (“H”, “DE-M”) certified, with a batch number printed on the body.
- Batch certificate can be downloaded from our website.
- Supplied with an automatic zeroing system, VALVE stopcock and also an intermediate PTFE stopcock to recirculate the remaining liquid.
- Clear burettes are manufactured with schellbach stripe. Amber burettes are without schellbach stripe.
- Inscriptions and graduations are printed with special blue or white enamel.
- Supplied without burette bottle and burette bellow.

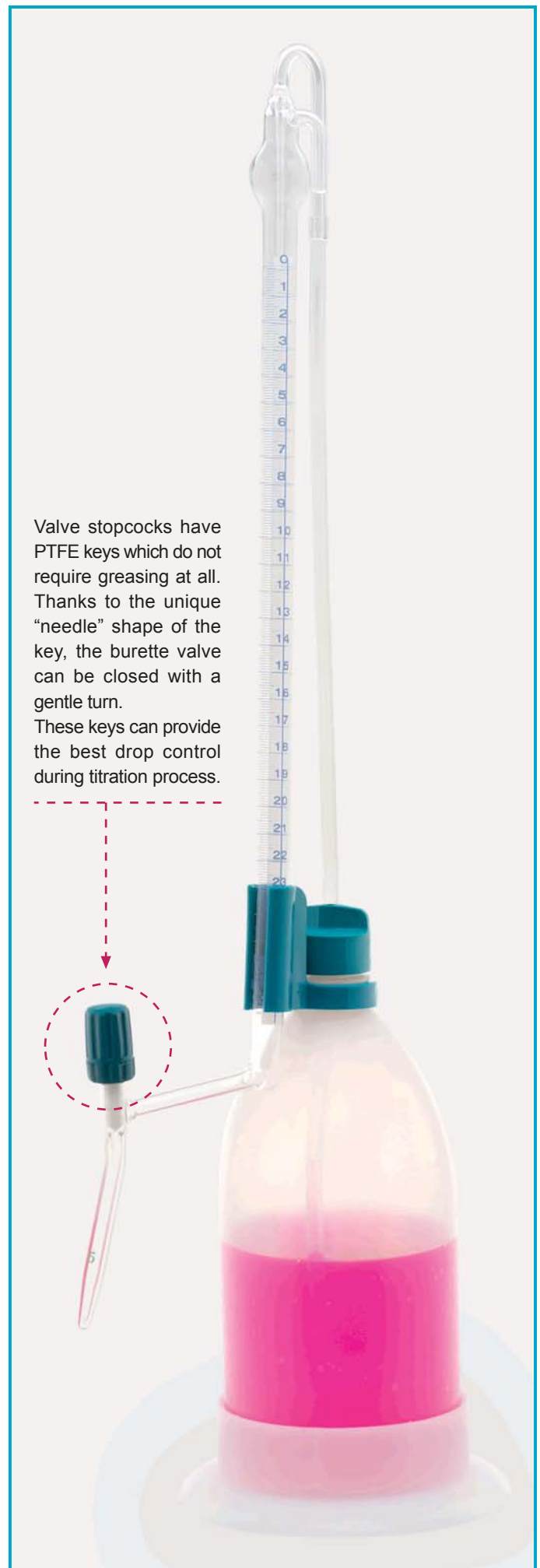
burettes clear blue scale	burettes amber white scale	volume	subdivision	pack quantity
019.01.010	019.05.010	10 ml	0.02 ml	1 piece
019.01.025	019.05.025	25 ml	0.05 ml	1 piece
019.01.050	019.05.050	50 ml	0.10 ml	1 piece



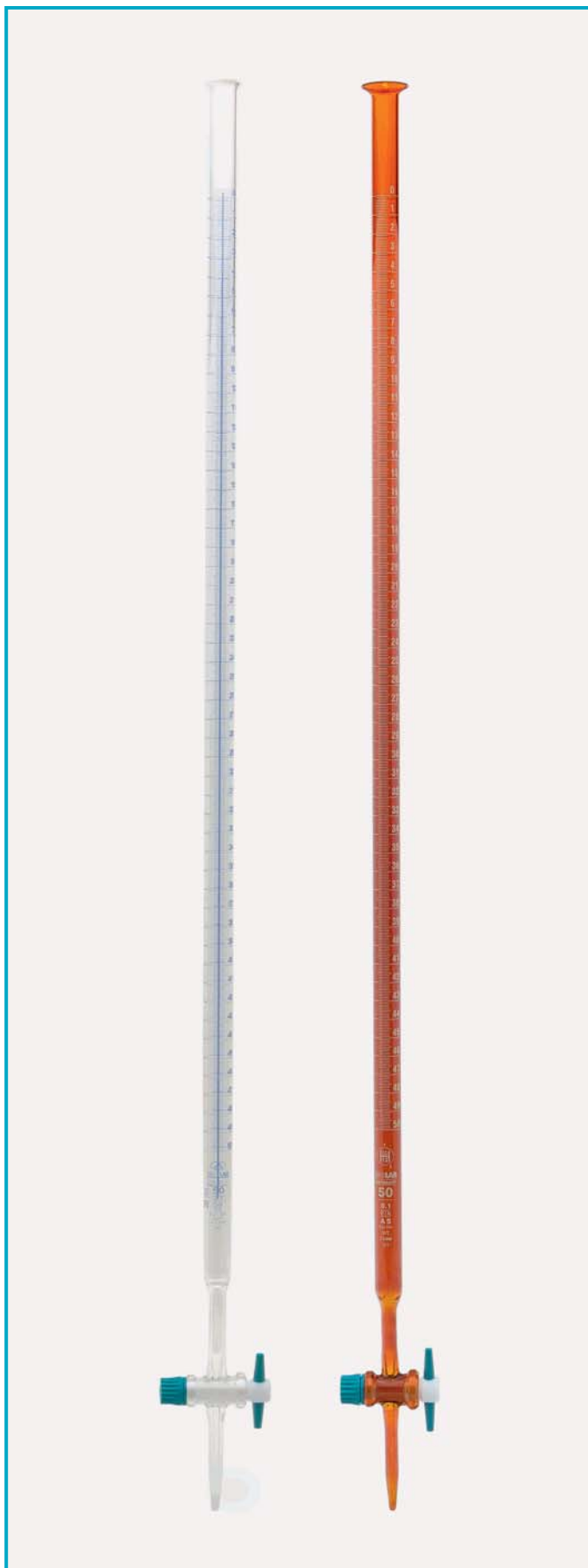
## BURETTES - "schilling" - "class AS"

- Described as automatic burettes with fast titration and practical usage.
- Especially suitable for field analysis where there is a risk of breakage.
- Available 2 types:
  - clear burette with blue scale
  - amber burette with white scale
- Calibrated to deliver (Ex) and the tolerances are according to ISO 385 Class "AS" standards.
- The entire system consists of a burette tubing with automatic zeroing system together with a valve stopcock, a reservoir bottle and a bottle stand.
- Rapid filling by squeezing the bottle and fast titration through valve stopcock.
- Inscriptions and graduations are printed either with blue enamel or with white enamel which is specially designed for glass.
- Clear schilling burettes are manufactured with schellbach stripe. Amber schilling burettes are manufactured without schellbach stripe.
- 10 ml burette has a reservoir bottle of 500 ml where as 25 and 50 ml burettes are used with bottles of 1000 ml.
- Other technical specifications are exactly the same as other types of burettes.

clear with schellbach	amber w/o schellbach	volume	subdivision	pack quantity
020.03.010	020.05.010	10 ml	0.05 ml	1 piece
020.03.025	020.05.025	25 ml	0.10 ml	1 piece
020.03.050	020.05.050	50 ml	0.10 ml	1 piece



Valve stopcocks have PTFE keys which do not require greasing at all. Thanks to the unique "needle" shape of the key, the burette valve can be closed with a gentle turn. These keys can provide the best drop control during titration process.



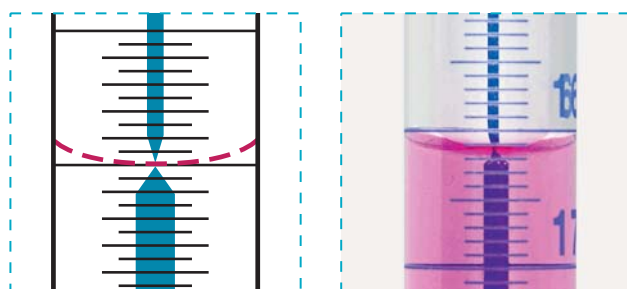
## BURETTES - "straight" - "class AS"

- Manufactured from pre-vacuum calibrated borosilicate 3.3 glass tubes.
- They meet the highest quality standards according to ISO 385.
- Permanent quality control through all steps eliminates possible deviations from nominal values
- Calibrated to deliver (Ex) and the tolerances are according to DIN/ISO Class "AS" standards.
- Conformity ("H", "DE-M") certified, with a batch number printed on the body.
- Batch certificate can be downloaded from our website.
- Supplied with grease free and self lubricating PTFE stopcocks.
- Clear burettes are manufactured either with or without schellbach stripe. Amber burettes are supplied without schellbach stripe.
- Inscriptions are printed with special blue enamel for clear burettes and white enamel for amber burettes.

### schellbach stripe

The schellbach stripe is a narrow blue band which is at the center of the larger white band at the background. For easier reading, the stripe is printed at the back wall of the burettes.

The light fraction creates two arrow head points which appear at the meniscus line. Meniscus reading point is exactly where these two arrow heads meet each other.

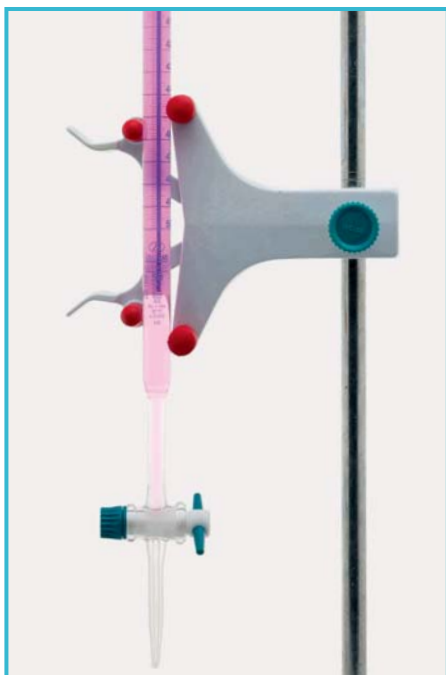


**PTFE stopcocks** have identical keys so that there is no need for "matching the pairs" during cleaning.

Since **PTFE** is self lubricating, keys do not require greasing at all.

**PTFE keys** are interchangeable and replaceable.

clear burettes with schellbach blue graduation	clear burettes w/o schellbach blue graduation	amber burettes w/o schellbach white graduation	volume	tolerance	subdivision	pack quantity
017.01.010	017.02.010	018.01.010	10 ml	± 0.020 ml	0.02 ml	1 piece
017.01.025	017.02.025	018.01.025	25 ml	± 0.030 ml	0.05 ml	1 piece
017.01.050	017.02.050	018.01.050	50 ml	± 0.050 ml	0.10 ml	1 piece



## BURETTE CLAMPS

- **Steel** burette clamps are made out of steel and can hold one burette at a time.
- Can be used on support rods with 8 - 14 mm diameter. Graduations and meniscus line of the burettes are clearly visible.
- **Polypropylene** burette clamps can also hold one burette at a time.
- Polypropylene clamps can be used on support rods with 10 - 12 mm diameter. Graduations and meniscus line of the burettes are clearly visible.

<i>steel clamps</i>	<i>polypropylene clamps</i>	<i>pack quantity</i>
018.05.001	018.06.001	1 piece



## BURETTE BOTTLES

- Clear & amber bottles for automatic burettes are made out of heat resistant glass.
- Total volume capacity of the bottle is 2000 ml.
- Each bottle has a NS 29/32 grinded neck that perfectly fits to the burette.

<i>clear bottles</i>	<i>amber bottles</i>	<i>pack quantity</i>
020.07.010	020.07.025	1 piece



## BURETTE BELLOWS

- Burette bellow for automatic burettes is made from best quality of natural rubber.

<i>catalogue number</i>	<i>bellow type</i>	<i>pack quantity</i>
020.08.001	standard	1 piece
020.08.002	advanced	1 piece



## PIPETTES - "glass" - "class AS"

- They meet the highest quality standards according to ISO 835 - 648, DIN 12687 and DIN 12699.
- Individually calibrated through automatic calibration process carried out by robots.
- Permanent quality control through all steps eliminates possible deviations from nominal values.
- Calibrated to deliver (Ex) and the tolerances are according to DIN/ISO Class "AS" standards.
- Conformity ("H", "DE-M") certified, with a batch number printed on the body.
- Batch certificate can be downloaded from our website. Inscriptions and graduations are printed with special blue enamel.

*Tips are carefully formed and bevelled to ensure proper flow rates.*



*All pipettes have colour coded suction stems to allow fast identification and sorting.*

graduated pipettes blue scale	volume	tolerance	pack quantity
021.01.001	1 ml	± 0.007 ml	10 pieces
021.01.002	2 ml	± 0.010 ml	10 pieces
021.01.005	5 ml	± 0.030 ml	10 pieces
021.01.010	10 ml	± 0.050 ml	10 pieces
021.01.020	20 ml	± 0.100 ml	10 pieces
021.01.025	25 ml	± 0.100 ml	10 pieces
021.01.050	50 ml	± 0.200 ml	10 pieces

volumetric pipettes blue scale	volume	tolerance	pack quantity
021.05.001	1 ml	± 0.008 ml	10 pieces
021.05.002	2 ml	± 0.010 ml	10 pieces
021.05.003	3 ml	± 0.010 ml	10 pieces
021.05.004	4 ml	± 0.015 ml	10 pieces
021.05.005	5 ml	± 0.015 ml	10 pieces
021.05.010	10 ml	± 0.020 ml	10 pieces
021.05.011	11 ml	± 0.020 ml	10 pieces
021.05.015	15 ml	± 0.030 ml	10 pieces
021.05.020	20 ml	± 0.030 ml	10 pieces
021.05.025	25 ml	± 0.030 ml	10 pieces
021.05.050	50 ml	± 0.050 ml	10 pieces





**PIPETTE RACK - "polycarbonate"**

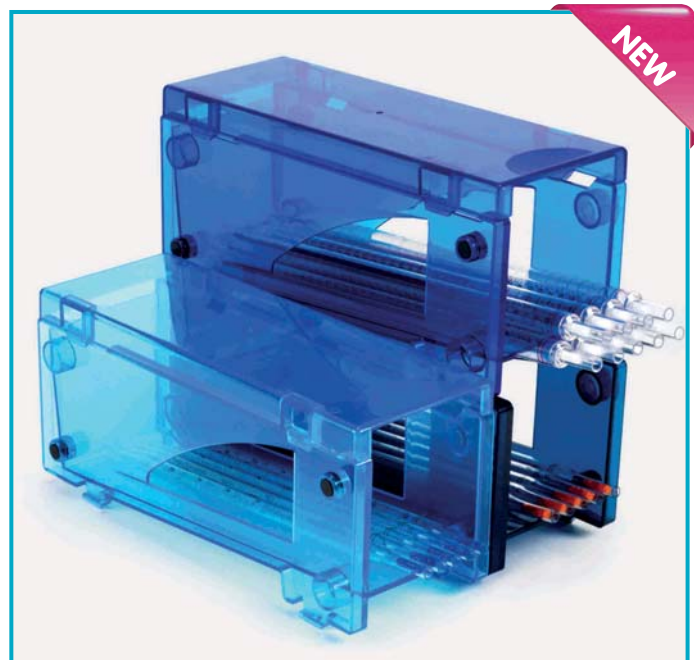
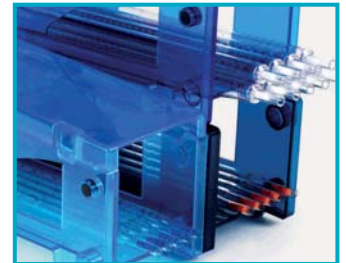
- Manufactured from polycarbonate for easier organising of glass and plastic pipettes.
- Angled shelves store pipettes from 0,1 ml to 50 ml volume within arm's reach for use.
- Can be clicked together horizontally or vertically to build the desired configuration or can be used as individual holders, utilizing the three lid section provided.
- Magnets on both sides of units connect securely and safely to most metal surfaces.
- Protective lid encloses the unit to prevent dust build up and provides additional shelf space.

catalogue number	dimensions	pack quantity
022.05.001	301 x 100 x 127 mm	1 piece

Magnets connect securely to most metal surfaces.



Units securely lock together horizontally or vertically.

**PIPETTE RACK - "ABS"**

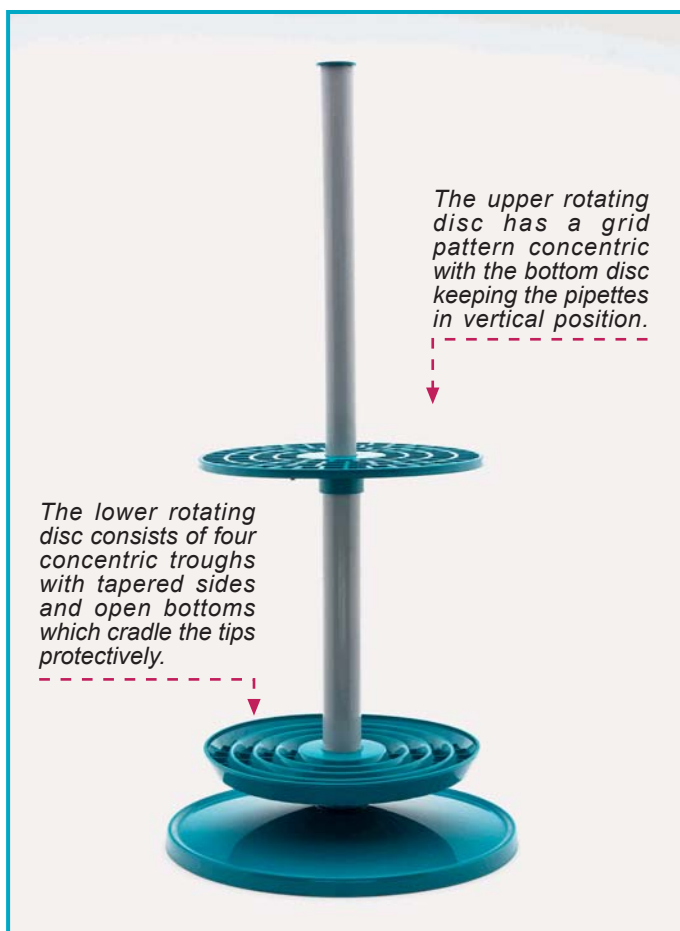
- Manufactured from ABS for easier organising of glass and plastic pipettes with angled four shelves.
- Angled shelves store pipettes from 0,1 ml to 50 ml volume within arm's reach for use.
- Has cut out viewing window and come with two removable attachments that hold pipette bulbs, fillers or pumps.
- Magnets on both sides of units connect securely and safely to most metal surfaces.

catalogue number	dimensions	pack quantity
022.06.001	291 x 88 x 401 mm	1 piece

Magnets on both sides of units connect securely and safely to most metal surfaces.

Has cut out viewing window and come with two removable attachments that hold pipette bulbs, fillers or pumps.





### PIPETTE STAND - "carrousel"

- Manufactured from moulded polypropylene and can hold up to 94 pipettes vertically.
- The round carrousel stand can rotate 360° around stand axis enabling very easy reach of any pipette.
- Upper disc keeps the pipettes in the correct position.
- The lower rotating disc consists of four concentric troughs with tapered sides and open bottoms which cradle the tips protectively.
- The upper rotating disc has a grid pattern concentric with the bottom disc keeping the pipettes in vertical position.
- Liquid draining of the pipette tip is retained on top of the stationary base by the outer rim.
- A low center of gravity stabilizes the 48 cm high stand on the 23 cm base diameter.

catalogue number	diameter	height	pack quantity
022.01.001	230 mm	480 mm	1 piece



### PIPETTE STAND - "linear"

- Manufactured from moulded polypropylene and can hold up to 12 pipettes horizontally.
- Offers ideal storage of pipettes without any pressure on fragile pipette tips.
- Easy clean and easy dismantle for space saving storage.

catalogue number	dimensions	pack quantity
022.02.001	240 x 180 x 290 mm	1 piece



### PIPETTE TRAY

- Made from moulded polypropylene. Can be used in drawers or on the bench top for storing pipettes.
- Scalloped rims can hold 7 large pipette or 16 small pipettes while the center part can hold 12 short pipettes in perpendicular direction.

catalogue number	dimensions	pack quantity
022.03.001	283 x 216 x 40 mm	1 piece

## PIPETTE BOXES - "aluminium"

- Manufactured from aluminium with 60 mm diameter. Ideal for sterilising pipettes of different volume and sizes.
- Consists of two parts which can be inserted into each other.
- Small box has a length of 145 mm and can be elongated up to 235 mm.
- Large box has a length of 280 mm and can be elongated up to 420 mm.

catalogue number	dimensions	pack quantity
022.03.002	60 mm Ø x 145 / 235 mm H	1 piece
022.03.003	60 mm Ø x 280 / 420 mm H	1 piece

## SILICONE PAD

- Manufactured from silicone and fits to the base of the pipette box.
- Prevent damages and brakege of pipettes under most inconvenient conditions.

catalogue number	diameter	pack quantity
022.03.004	60 mm	1 piece



## PIPETTE BOXES - "stainless steel"

- Manufactured from stainless steel. Ideal for sterilising pipettes of different volume and sizes.
- Consists of two parts which can be inserted into each other.
- Small box has a length of 210 mm and large box has a length of 430 mm.

catalogue number	dimensions	pack quantity
022.04.001	70 x 70 x 210 mm	1 piece
022.04.002	70 x 70 x 430 mm	1 piece

## SILICONE PAD

- Manufactured from silicone and fits to the base of the pipette box.
- Prevent damages and brakege of pipettes under most inconvenient conditions.

catalogue number	dimensions	pack quantity
022.04.003	70 x 70 mm	1 piece





### PIPETTE FILLER - "pi-pump"

- ▶ A simple practical pipette filler for liquid handling of graduated and volumetric pipettes from 1 ml to 25. Easily dismantled for easy and practical cleaning.
- ▶ Pipettes fits smoothly into its flexible tapered chuck and are firmly hold in position. Due to the ergonomic design, fits naturally in your hand and offers both left and right handers to operate easily.
- ▶ The handwheel ensures precise suction of liquid into the pipette with one hand and assures an easy operation with the thumb.
- ▶ The handwheel for operating the suction piston is designed for easy operation using your thumb. When you stop the wheel, the piston remains in the desired position without any discharge or leakage of liquid.



#### Drawing the liquid

Rotating the handwheel upward draws the liquid to the desired position. When you stop the wheel, the piston remains in the desired position without any discharge or leakage of liquid.

#### Discharge the liquid

Partial or complete volumes can be dispensed easily by rotating the handwheel downward. Even very small amounts such as from one graduation level to another can be discharged precisely.

#### Blow-out the liquid

With a slight pressure applied to the discharge (fast release) lever opens the valve and lets the liquid flow out freely assuring the complete emptying of the pipette.

catalogue number	for pipette volume	colour code	pack quantity
011.01.002	up to 2 ml	blue	1 piece
011.01.010	up to 10 ml	green	1 piece
011.01.025	up to 25 ml	red	1 piece

### PIPETTE FILLER - "macro"

- ▶ Most common and efficient pipette filler for all types of pipettes. Bulb manufactured from natural rubber. Evacuation is via the automatic valve system which can be controlled by finger pressure.

- ▶ Single hand use, just by pressing the valve the liquid is drawn up, dispensed or blown-out.

- 1 - Evacuate the air by pressing on the bulb and point "A"
- 2 - Draw the liquid by pressing on point "S"
- 3 - Drain the liquid by pressing on point "E"



catalogue number	for pipette volume	model name	pack quantity
011.02.001	max 10 ml	standard	1 piece
011.02.002	max 50 ml	universal	1 piece

## PIPETTE FILLER - "maxi"

- A simple and easily controllable pipette filler for volumetric and graduated pipettes from 1 ml to 100 ml.
- Offers both left and right handers to operate all normal bulb and graduated pipettes easily and comfortably.
- Safe and easy handling enables even unexperienced users to adjust the meniscus precisely.
- The optimised valve system allows easy draw of liquid without excess pressure.
- Very easy to use: first squeeze the silicone bulb, move the pipetting knob up-ward for filling, down-ward for discharging. For blow-out just push the discharge bellow.
- The discharge bellow is used for blow-out (emptying) of the pipette.
- Silicone stem adaptor offers an easy insert of the pipette stem and hold the pipette in vertical position.
- A replaceable hydrophobic membrane filter in the intake cone secures cross contaminations and prevents the impurities to penetrate into the interior.

catalogue number	for pipette volume	pack quantity
011.02.003	1 ml -100 ml	1 piece



## PIPETTE FILLER - "bulb"

- Bulb pipette filler features a white polypropylene attachment containing a silicone conical adapter that gently seals around pipettes without twisting.
- First squeeze the bulb, press pipette lightly into soft adapter, then relax the bulb to draw liquid.
- Pipette does not contact hard plastic which reduces the risk of cracking and chipping. Supplied with handy elastic band for hanging on reagent bottle or wrist.

catalogue number	for pipette volume	quantity in pack
011.04.001	15 ml	1 piece



## PIPETTE FILLER - "bulb"

- Manufactured from pure rubber. Simple but effective tools to be used for practical filling of pipettes.
- Due to reinforced ribs they can be used with large pipettes.
- Contoured shape and heavy wall enable increased grip for easier usage.

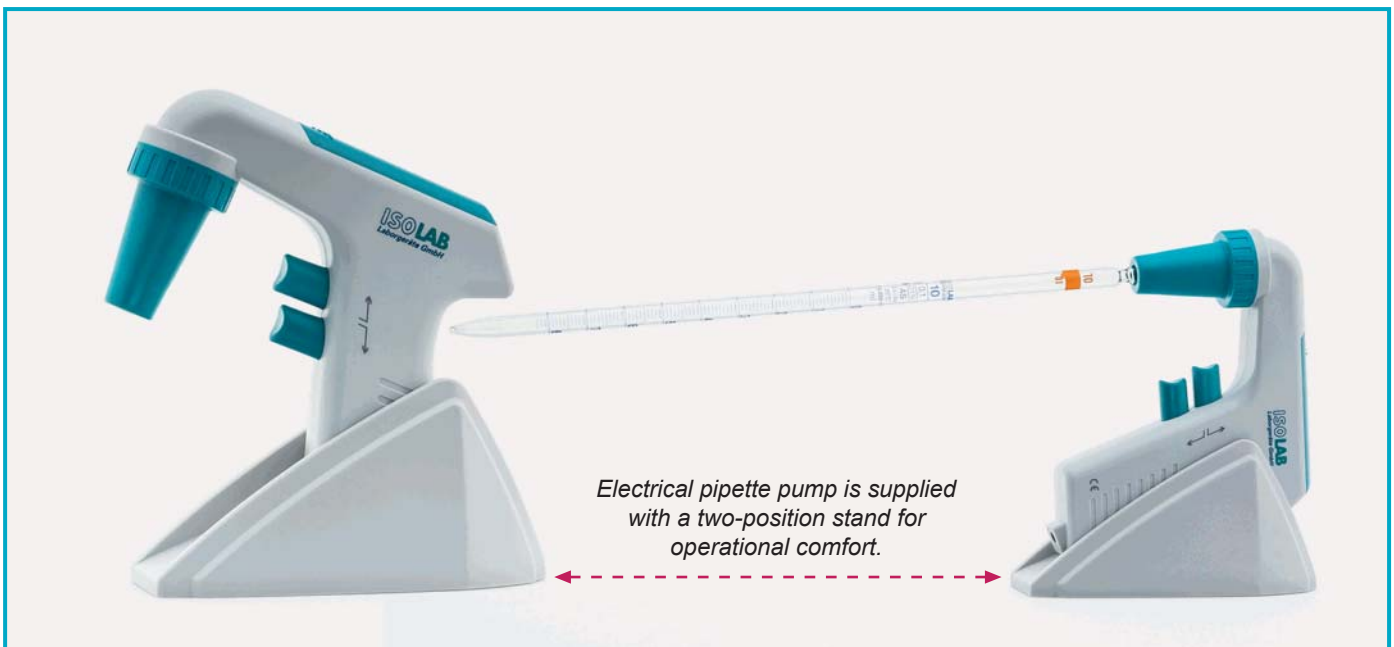
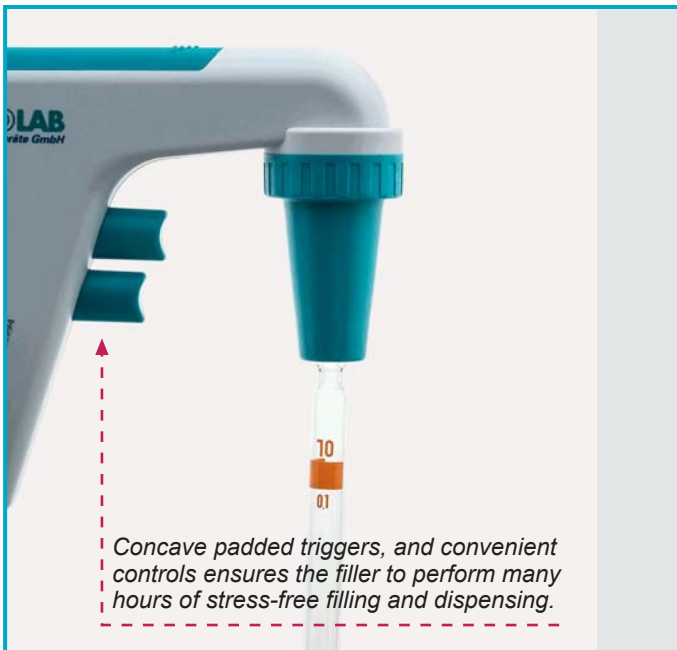
catalogue number	suction volume	pack quantity
011.04.003	max 3 ml	10 pieces
011.04.005	max 5 ml	10 pieces
011.04.010	max 10 ml	10 pieces



### PIPETTE PUMP - "electrical"

- Manufactured from UV resistant resin powered with a long lasting motor for quick but also sensitive aspiration and dispensing of liquids. Can be used with all pipettes from 0,1 ml to 100 ml volume.
- With the help of the powerfull, quiet and vibration-free motor a 25 ml pipette can be filled in less than 5 seconds.
- The ergonomic, light weight and well balanced handle offers comfort and fatigue-free pipetting.
- Hand-neutral design for right and left hand users, concave padded triggers, and convenient controls ensure the filler to perform many hours of stress-free filling and dispensing.
- 8 different level of aspiration and dispensing speed. Speed is easily set with a single switch.
- Large LCD display provides visual confirmation of the selected filling speed.
- Force liquid out of pipettes by setting the unit to low or high speed blow-out mode, or flip to gravity mode for use with "to contain" pipettes and dispense the liquid without motor.
- With the help of fully autoclavable silicone adapter pipettes are firmly hold in position.
- A replaceable 0,45 µl hydrophobic membrane filter in the intake cone secures contaminations and prevents the impurities to penetrate into the interior.
- Efficient lithium-ion battery offers long runtime such as 8-9 hours of continuous use.
- Batteries can be recharged within 2-3 hours while in use, or while resting in the desktop holder. With battery alarm.
- Large LCD display provides visual confirmation of remaining battery power.

catalogue number	for pipettes	aspirate speed	dispense speed	filter	batterie	batterie service life	charging time	pack quantity
010.01.005	0,1 - 100 ml	8 speed	8 speed	0,45 µm	lithium - ion	more than 8 hours	2 - 3 hours	1 piece





## DIGITAL BURETTES - "digitrate"

- Combines high precision with consistent delivery. Reliable measuring results with bubble-free dispensing.
- Visible glass barrel allows inspection of liquid before dispensing.
- Body rotates freely 360° around the bottle for practical use.
- All the wet parts are fully autoclavable at 121°C.
- The large LCD display clearly shows the titration values and eliminates meniscus level errors.
- Continuous display of dispensed volume with zero reset feature for multiple titrations.
- Precision valve ensures easy priming and minimum waste with no leakage back into the reservoir.
- PTFE plunger and borosilicate barrel allow dispensing of aqueous and aggressive solutions.
- Unlike other models, the glass barrel can be disassembled from the pedestal for thorough cleaning.
- It has a battery with a lifetime for 60.000 titrations. Automatic low battery voltage is indicated on the LCD display.
- Supplied with an individual calibration certificate.
- The telescopic extractable intake tube can be adjusted easily and smoothly to the varying heights of the bottles.

catalogue number	volume	accuracy	precision	resolution	pack quantity
007.01.001	50 ml	± 0.2 %	± 0.1 %	0.01 ml	1 piece

## BOTTLES - "with side arm" - "PE"



- Manufactured from high density polyethylene which can resist high pressures before rupture.
- They are ideal products to be used with burettes and dispensers since the side arm allows to fill the bottle without removing the burette or the cap.
- These bottles have GL45 thread screw cap and a P.P pouring ring.

clear bottles	amber bottles	volume	pack quantity
007.02.005	007.02.006	1500 ml	1 piece



## DISPENSER - "repetitive"

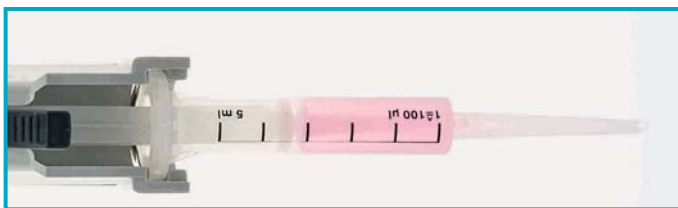
- Repetitive dispenser is an ergonomic hand dispenser for quick and simple repetitive dispensing of liquids.
- Works on the positive displacement principle which enables routine, accurate and precise dispensing even for viscous, high density and high vapor liquids.
- All functions of repetitive dispenser can be used with three control mechanism.
- Ideal to use for applications such as microbiology, immunology and biochemistry where time is valuable.
- With one filling (depending on the size of the tip used) it is possible to dispense between 0.5 ml - 50 ml in multi intervals.

repetitive dispenser	working range	adapter for dispenser	pack quantity
008.06.001	0,5 - 50 ml	008.06.002	1 piece

### For selecting the dispensing volume

- Find the required dispensing volume
- Use the adjusting wheel to set the required volume
- Select and inserting suitable tips
- Confirm the maximum dispensing steps

tips sel.	1	2	3	4	5
0,05 ml	1 $\mu$ l	2 $\mu$ l	3 $\mu$ l	4 $\mu$ l	5 $\mu$ l
0,50 ml	10 $\mu$ l	20 $\mu$ l	30 $\mu$ l	40 $\mu$ l	50 $\mu$ l
1,25 ml	25 $\mu$ l	50 $\mu$ l	75 $\mu$ l	100 $\mu$ l	125 $\mu$ l
2,50 ml	50 $\mu$ l	100 $\mu$ l	150 $\mu$ l	200 $\mu$ l	250 $\mu$ l
5,00 ml	100 $\mu$ l	200 $\mu$ l	300 $\mu$ l	400 $\mu$ l	500 $\mu$ l
12,50 ml	250 $\mu$ l	500 $\mu$ l	750 $\mu$ l	1000 $\mu$ l	1250 $\mu$ l
25,00 ml	500 $\mu$ l	1000 $\mu$ l	1500 $\mu$ l	2000 $\mu$ l	2500 $\mu$ l
50,00 ml	1000 $\mu$ l	2000 $\mu$ l	3000 $\mu$ l	4000 $\mu$ l	5000 $\mu$ l
steps	48	23	15	11	8



## REPETITIVE DISPENSER TIPS

- Dispenser tips are manufactured from clear and high grade polypropylene with graduations on the side of the tube offering visual confirmation of the volume.

dispenser tips	dispenser tip volume	sample volume ( $\mu$ l)					pack quantity
008.06.005	0.50 ml	10	20	30	40	50	10 pieces
008.06.012	1.25 ml	25	50	75	100	125	10 pieces
008.06.025	2.50 ml	50	100	150	200	250	10 pieces
008.06.050	5.00 ml	100	200	300	400	500	10 pieces
008.06.125	12.50 ml	250	500	750	1000	1250	10 pieces
008.06.250	25.00 ml	500	1000	1500	2000	2500	10 pieces
008.06.500	50.00 ml	1000	2000	3000	4000	5000	10 pieces



## DISPENSER



- Provides high precision with consistent delivery. Reliable measuring results with bubble-free dispensing.
- Individually calibrated in accordance with ISO 8655 standards and each unit is supplied with an individual calibration certificate.
- Highest degree of chemical resistance is provided due to the use of high quality materials.
- Springless PTFE valve manifold ensures excellent chemical compatibility and leak proof valve functioning reproducibility.
- Specially designed PTFE piston with silicone O-ring ensures smooth, effortless piston movement.
- Dosing cylinder is protected against breakage by a polypropylene sleeve.
- Fitted with an anti-drip safety valve which allows the fluid path to be turned off manually in order to prevent accidental delivery.
- Nozzle cap reduces contact with air and prevents drying. No drops fall off when the tip cover is attached.
- Each dispenser comes with five adaptors of different sizes in order to fit in most of the laboratory reagent bottles.



After loosening volume adjustment knob the desired volume can be set, then locking screw is fixed.

catalogue number	volume	increment	accuracy ± % ± ml	cv ± %
008.02.002	0.3 - 2.5 ml	0.05 ml	0.6 0.015	0.2
008.02.005	0.5 - 5 ml	0.10 ml	0.5 0.025	0.1
008.02.010	1.0 - 10 ml	0.20 ml	0.5 0.050	0.1
008.02.030	2.5 - 30 ml	0.50 ml	0.5 0.150	0.1
008.02.060	5.0 - 60 ml	1.00 ml	0.5 0.300	0.1
008.02.100	10.0 - 100 ml	2.00 ml	0.5 0.500	0.1



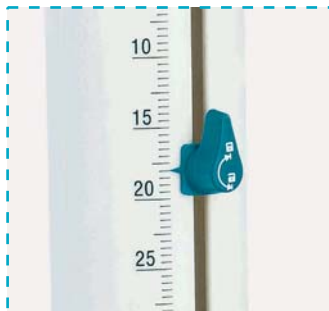
## BOTTLES - "with side arm" - "glass"

- Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.
- They are ideal products to be used with burettes and dispensers since the side arm allows to fill the bottle without removing the burette or the cap.
- Featured with GL45 thread screw cap and a P.P pouring ring. Amber bottles prevent from UV lights to penetrate.

clear glass bottles	amber glass bottles	volume	pack quantity
007.02.001	007.02.002	1000 ml	1 piece
007.02.003	007.02.004	2000 ml	1 piece

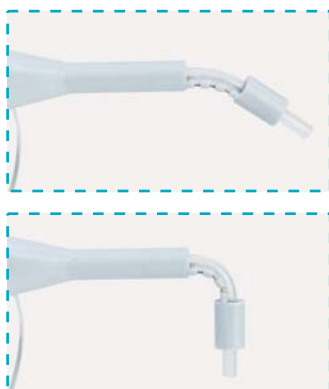
## DISPENSERS - "with circulation valve"

- Provides high precision with consistent delivery. Reliable measuring results with bubble-free dispensing.
- Individually calibrated in accordance with ISO 8655 standards and each unit is supplied with an individual calibration certificate.
- Highest degree of chemical resistance is provided due to the use of high quality materials.
- Springless PTFE valve manifold ensures excellent chemical compatibility and leak proof valve functioning reproducibility.
- Volume adjustment knob needs 180° rotation to lock and unlock ensuring the most convenient volume setting system.
- Re-circulation valve: offers re-circulation of the liquid back into the reservoir bottle during the dispensing cycle.
- Viton "O" ring inside the PTFE piston guarantees superior resistance to the chemicals.
- Reduced piston force enables much smoother movement in the barrel and guarantees least force requirement during dispensing.
- Each dispenser comes with five adaptors of different sizes in order to fit in most of the laboratory reagent bottles.



Volume adjustment knob needs 180° rotation to lock and unlock ensuring the most convenient volume setting system.

catalogue number	volume	increment	accuracy ± % ± ml	cv ± %
008.05.002	0.3 - 2.5 ml	0.05 ml	0.6 0.015	0.2
008.05.005	0.5 - 5 ml	0.10 ml	0.5 0.025	0.1
008.05.010	1.0 - 10 ml	0.20 ml	0.5 0.050	0.1
008.05.030	2.5 - 30 ml	0.50 ml	0.5 0.150	0.1
008.05.060	5.0 - 60 ml	1.00 ml	0.5 0.300	0.1
008.05.100	10.0 - 100 ml	2.00 ml	0.5 0.500	0.1



Flexible delivery nozzle allows easy adjustment of delivery angle.



Reagent loss during ventilation is avoided with the recirculation valve.



Each dispenser comes with five adaptors of different sizes in order to fit in most of the laboratory reagent bottles.



## GROUND JOINTS - "cone & socket"

- Manufactured from borosilicate glass 3.3. They meet the highest quality standards according to DIN 12249.
- Joints have excellent grinding quality to prevent airleaks.

sockets catalogue no	cones catalogue no	length	NS size	pack quantity
063.01.010	063.02.010	120 mm	NS 10/19	1 piece
063.01.012	063.02.012	120 mm	NS 12/21	1 piece
063.01.014	063.02.014	120 mm	NS 14/23	1 piece
063.01.019	063.02.019	120 mm	NS 19/26	1 piece
063.01.024	063.02.024	120 mm	NS 24/29	1 piece
063.01.029	063.02.029	120 mm	NS 29/32	1 piece
063.01.034	063.02.034	120 mm	NS 34/35	1 piece
063.01.045	063.02.045	120 mm	NS 45/40	1 piece



## ADAPTERS - "reduction"



- Adapters with socket sizes smaller than their cone sizes.
- Manufactured from borosilicate glass 3.3 according to DIN 12257.
- Has excellent grinding quality to prevent airleaks.

## ADAPTERS - "expansion"



- Adapters with socket sizes larger than their cone sizes.
- Manufactured from borosilicate glass 3.3 according to DIN 12257.
- Has excellent grinding quality to prevent airleaks.

sockets catalogue no	adapter type	socket NS size	cone NS size	pack quantity
064.12.001	reduction	NS 12/21	NS 14/23	1 piece
064.12.002	reduction	NS 14/23	NS 19/26	1 piece
064.12.003	reduction	NS 14/23	NS 24/29	1 piece
064.12.004	reduction	NS 14/23	NS 29/32	1 piece
064.12.005	reduction	NS 19/26	NS 24/29	1 piece
064.12.006	reduction	NS 19/26	NS 29/32	1 piece
064.12.007	reduction	NS 19/26	NS 34/35	1 piece
064.12.008	reduction	NS 24/29	NS 29/32	1 piece
064.12.009	reduction	NS 24/29	NS 34/35	1 piece
064.12.010	reduction	NS 24/29	NS 45/40	1 piece
064.12.011	reduction	NS 29/32	NS 34/35	1 piece
064.12.012	reduction	NS 29/32	NS 45/40	1 piece

sockets catalogue no	adapter type	socket NS size	cone NS size	pack quantity
064.11.001	expansion	NS 14/23	NS 12/21	1 piece
064.11.002	expansion	NS 19/26	NS 14/23	1 piece
064.11.003	expansion	NS 24/29	NS 14/23	1 piece
064.11.004	expansion	NS 24/29	NS 19/26	1 piece
064.11.005	expansion	NS 29/32	NS 14/23	1 piece
064.11.006	expansion	NS 29/32	NS 19/26	1 piece
064.11.007	expansion	NS 29/32	NS 24/29	1 piece
064.11.008	expansion	NS 34/35	NS 19/26	1 piece
064.11.009	expansion	NS 34/35	NS 24/29	1 piece
064.11.010	expansion	NS 34/35	NS 29/32	1 piece
064.11.011	expansion	NS 45/40	NS 24/29	1 piece
064.11.012	expansion	NS 45/40	NS 29/32	1 piece

**ADAPTERS - "with thread"**

- Manufactured from borosilicate glass 3.3.
- Excellent, smooth grinding of joints prevents airleaks.

**ADAPTERS - "with thread & cap"**

- Made from borosilicate glass 3.3 and they are ideal to be used with thermometers with joint glassware.
- Screw joint provides easy depth adjustment of thermometer.
- Can be used with thermometers with 6 - 8 mm diameter.



adapter straight	cone NS size	neck thread	pack quantity
065.19.141	NS 14/23	GL 14	1 piece
065.19.142	NS 14/23	GL 18	1 piece
065.19.291	NS 29/32	GL 14	1 piece
065.19.292	NS 29/32	GL 18	1 piece
065.19.293	NS 29/32	GL 25	1 piece

catalogue number	form	neck thread	cone NS size	pack quantity
065.21.014	straight	GL 14	NS 14/23	1 piece
065.21.029	straight	GL 14	NS 29/32	1 piece

**ADAPTERS - "receiver"**

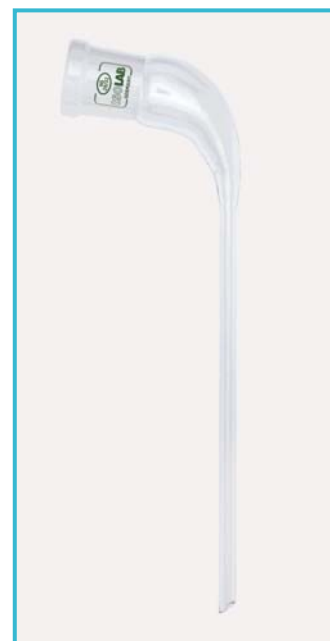
- Made from borosilicate glass 3.3. Suitable for the usage of assembling various reactor systems.
- Available 2 types:
  - bend with angle 75°
  - bend with angle 90°

adapter bend-75°	adapter bend-90°	cone NS size	pack quantity
065.37.014	065.38.014	NS 14/23	1 piece
065.37.029	065.38.029	NS 29/32	1 piece

**ADAPTERS - "distillation"**

- Made from borosilicate glass 3.3. Suitable for feeding distillate from condensers into receiving flasks.
- Socket inclined 105° with an outer tube of 12 mm diameter.
- Available 2 types:
  - short stem - 65 mm.
  - long stem - 200 mm.

adapters 65 mm	adapters 200 mm	form	socket NS size	pack quantity
065.30.014	065.31.014	bend	NS 14/23	1 piece
065.30.029	065.31.029	bend	NS 29/32	1 piece





### ADAPTERS - "with nozzle"

- Manufactured from borosilicate glass 3.3 with two different shapes.
- Tubing adapters are suitable for up to 10 mm tubings. Excellent, smooth grinding of joints prevents airleaks.
- Available 2 types:
  - straight
  - 90° angled

adapter straight	adapter bend	socket NS size	nozzle diameter	pack quantity
065.26.014	065.27.014	NS 14/23	8 mm	1 piece
065.26.029	065.27.029	NS 29/32	10 mm	1 piece



### ADAPTERS - "with nozzle & stopcock"

- Manufactured from borosilicate glass 3.3 with two different shapes.
- Supplied with **PTFE** stopcock which has a 2,5 mm diameter bore key. Tubing adapter is suitable for up to 10 mm tubings.
- Available 2 types:
  - straight
  - 90° angled

adaptor straight	adaptor bend	socket NS size	nozzle diameter	pack quantity
065.28.014	065.29.014	NS 14/23	8 mm	1 piece
065.28.029	065.29.029	NS 29/32	10 mm	1 piece



### ADAPTERS - "with nozzle"

- Manufactured from borosilicate glass 3.3 with two different shapes.
- Tubing adapters is suitable for up to 10 mm tubings. Excellent, smooth grinding of joints prevents airleaks.
- Available 2 types:
  - straight
  - 90° angled

adapter straight	adapter bend	cone NS size	nozzle diameter	pack quantity
065.22.014	065.23.014	NS 14/23	8 mm	1 piece
065.22.029	065.23.029	NS 29/32	10 mm	1 piece



### ADAPTERS - "with nozzle & stopcock"

- Manufactured from borosilicate glass 3.3 with two different shapes.
- Supplied with **PTFE** stopcock which has a 2,5 mm diameter bore key. Tubing adapter is suitable for up to 10 mm tubings.
- Available 2 types:
  - straight
  - 90° angled

adaptor straight	adaptor bend	cone NS size	nozzle diameter	pack quantity
065.24.014	065.25.014	NS 14/23	8 mm	1 piece
065.24.029	065.25.029	NS 29/32	10 mm	1 piece

**ADAPTERS - "distillation"**

➤ Made from borosilicate glass 3.3 according to DIN 12594.

➤ Suitable for distillation assemblies for connecting flasks to condenser.

➤ Upper socket designed to accept thermometer either by screw thread adapter or by thermometer socket.

➤ With side cone at 75° angled to the center socket.

**ADAPTERS - "distillation" - "claisen head"**

➤ Made from borosilicate glass 3.3 according to DIN 12594.

➤ Suitable for distillation assemblies for connecting flasks to condenser.

➤ Upper socket designed to accept thermometer either by screw thread adapter or by thermometer socket.

➤ With side cone at 75° angled to the center socket.

➤ Claisen head offers one more extra socket.



catalogue number	socket NS size	cone NS size	angled cone NS size	pack quantity
065.45.001	NS 14/23	NS 14/23	NS 14/23	1 piece
065.45.002	NS 14/23	NS 19/26	NS 19/26	1 piece
065.45.005	NS 14/23	NS 29/32	NS 29/32	1 piece

catalogue number	socket NS size	cone NS size	angled cone NS size	pack quantity
065.46.001	NS 14/23	NS 14/23	NS 14/23	1 piece
065.46.002	NS 14/23	NS 19/26	NS 19/26	1 piece
065.46.005	NS 14/23	NS 29/32	NS 14/23	1 piece
065.46.006	NS 14/23	NS 29/32	NS 29/32	1 piece

**ADAPTERS - "delivery"**

➤ Made from borosilicate glass 3.3. Suitable for distillation assemblies with vacuum connections.

➤ Available 2 types: ➤ plain, bend with angle 105°  
➤ with vent, bend with angle 105°

adapters plain	adapters with vent	socket NS size	cone NS size	pack quantity
065.32.014	065.33.014	NS 14/23	NS 14/23	1 piece
065.32.029	065.33.029	NS 29/32	NS 29/32	1 piece

**ADAPTERS - "receiver"**

➤ Made from borosilicate glass 3.3. Suitable for distillation assemblies with vacuum connections.

➤ Available 2 types: ➤ straight  
➤ bend with angle 105°

adapters straight	adapters bend	socket NS size	cone NS size	pack quantity
065.39.014	065.40.014	NS 14/23	NS 14/23	1 piece
065.39.029	065.40.029	NS 29/32	NS 29/32	1 piece



## ADAPTERS - "delivery" - "straight"



- ▶ Made from borosilicate glass 3.3.
- ▶ Suitable for distillation assemblies with vacuum connections.

catalogue number	socket NS size	cone NS size	pack quantity
065.34.014	NS 14/23	NS 14/23	1 piece
065.34.029	NS 29/32	NS 29/32	1 piece

## CONNECTORS - "with stopcock"



- ▶ Made from borosilicate glass 3.3. Supplied with PTFE stopcock.

catalogue number	socket NS size	cone NS size	pack quantity
065.41.014	NS 14/23	NS 14/23	1 piece
065.41.019	NS 19/26	NS 19/26	1 piece
065.41.024	NS 24/29	NS 24/29	1 piece
065.41.029	NS 29/32	NS 29/32	1 piece

## ADAPTERS - "2 neck" - "angled"



- ▶ Made from borosilicate glass 3.3. Supplied with angled side neck.

catalogue number	socket NS size	cone NS size	angled socket NS size	pack quantity
065.42.001	NS 14/23	NS 14/23	NS 14/23	1 piece
065.42.002	NS 19/26	NS 19/26	NS 19/26	1 piece
065.42.003	NS 29/32	NS 29/32	NS 14/23	1 piece
065.42.004	NS 29/32	NS 29/32	NS 29/32	1 piece

## ADAPTERS - "2 neck" - "parallel"



- ▶ Made from borosilicate glass 3.3. Supplied with parallel side neck.

catalogue number	socket NS size	cone NS size	parallel socket NS size	pack quantity
065.43.001	NS 14/23	NS 14/23	NS 14/23	1 piece
065.43.002	NS 19/26	NS 19/26	NS 19/26	1 piece
065.43.003	NS 24/29	NS 19/26	NS 19/26	1 piece
065.43.004	NS 24/29	NS 24/29	NS 24/29	1 piece
065.43.005	NS 29/32	NS 14/23	NS 14/23	1 piece
065.43.006	NS 29/32	NS 29/32	NS 29/32	1 piece



**DISTILLING LINK - "plain"**

➤ Made from borosilicate glass 3.3. Suitable to be used in distillation assemblies.

catalogue number	cone NS size	cone NS size	pack quantity
065.52.014	NS 14/23	NS 14/23	1 piece
065.52.029	NS 29/32	NS 29/32	1 piece

catalogue number	cone NS size	cone NS size	socket NS size	pack quantity
065.53.014	NS 14/23	NS 14/23	NS 14/23	1 piece
065.53.029	NS 29/32	NS 29/32	NS 14/23	1 piece

**DISTILLING LINK - "with condenser"**

➤ Made from borosilicate glass 3.3. Suitable to be used in distillation assemblies.

➤ With liebig condenser and NS 14/23 thermometer socket.

catalogue number	cone NS size	socket NS size	condenser length	pack quantity
065.55.001	NS 14/23	NS 14/23	160 mm	1 piece
065.55.002	NS 14/23	NS 14/23	250 mm	1 piece
065.55.003	NS 29/32	NS 14/23	250 mm	1 piece
065.55.004	NS 29/32	NS 14/23	400 mm	1 piece

catalogue number	cone NS size	socket NS size	condenser length	pack quantity
065.56.001	NS 14/23	NS 14/23	160 mm	1 piece
065.56.002	NS 14/23	NS 14/23	250 mm	1 piece
065.56.003	NS 29/32	NS 14/23	250 mm	1 piece
065.56.004	NS 29/32	NS 14/23	400 mm	1 piece

**DISTILLING LINK - "with condenser"**

➤ Made from borosilicate glass 3.3. Suitable to be used in distillation assemblies.

➤ With liebig condenser and NS 14/23 thermometer socket and Claisen head.

catalogue number	cone NS size	socket NS size	condenser length	pack quantity
065.57.001	NS 14/23	NS 14/23	160 mm	1 piece
065.57.002	NS 14/23	NS 14/23	250 mm	1 piece
065.57.003	NS 29/32	NS 14/23	250 mm	1 piece
065.57.004	NS 29/32	NS 14/23	400 mm	1 piece

catalogue number	cone NS size	socket NS size	condenser length	pack quantity
065.58.001	NS 14/23	NS 14/23	160 mm	1 piece
065.58.002	NS 14/23	NS 14/23	250 mm	1 piece
065.58.003	NS 29/32	NS 14/23	250 mm	1 piece
065.58.004	NS 29/32	NS 14/23	400 mm	1 piece





### ADAPTERS - "splash head"

- Made from borosilicate glass 3.3. Suitable to be used in distillation assemblies to prevent raw liquid step over from flask to condenser.
- Available 2 types:
  - straight
  - bend with angle 75°

straight adapters	bend adapters	socket NS size	cone NS size	pack quantity
065.47.001	065.48.001	NS 14/23	NS 14/23	1 piece
065.47.003	065.48.005	NS 29/32	NS 29/32	1 piece



### DRYING TUBES

- Made from borosilicate glass 3.3. In compliance with DIN 12616 standards.
- Available 2 types:
  - bend with angle 90°
  - U form

bend	U form	U form with stopcock	pack quantity
065.60.100	065.62.100	065.63.100	1 piece
065.60.150	065.62.130	065.63.130	1 piece
	065.62.180	065.63.180	1 piece

### WASH BOTTLES - "gas"

- Made from borosilicate glass 3.3.
- Thick base with excellent stability.
- Smooth NS 29/32 neck are in compliance with DIN 12596 standards.



### WASH BOTTLE HEADS

- Made from borosilicate glass 3.3.
- Smooth NS 29/32 neck are in compliance with DIN 12242 standards.
- Supplied with or without sintered glass support (of porosity 1).
- Sintered glass support which enables efficient gas dispensing.



catalogue number	bottle volume	socket NS size	pack quantity
065.66.125	125 ml	NS 29/32	1 piece
065.66.250	250 ml	NS 29/32	1 piece
065.66.500	500 ml	NS 29/32	1 piece
065.66.901	1000 ml	NS 29/32	1 piece

catalogue number	product description	pack quantity
065.67.001	without frit disk - with glass side arm	1 piece
065.67.002	without frit disk - with P.P. side arm	1 piece
065.67.011	with frit disk - with glass side arm	1 piece
065.67.022	with frit disk - with P.P. side arm	1 piece

## CHEMISTRY SET

- Chemistry kit contains 16 pieces of various glassware all with common 14/23 NS sizes.
- Allows many micro experiments to be performed under vacuum or atmospheric pressure.
- Designed for the usage with relatively low quantities of 10 - 25 ml.
- Supplied in a sturdy hard plastic box with foam inserts to protect the parts. Product descriptions of the set are shown as the below list.



catalogue number	pack quantity
067.30.001	1 piece

item photo code	product description	pack quantity
1	filter funnel	1 piece
2	receiver adapter - short stem	1 piece
3	stillhead with screwcap adapter	1 piece
4	receiver adapter - with vent	1 piece
5	pear shape flask with three necks - 25 ml	1 piece
6	erlenmeyer flask - 25 ml	1 piece
7	separating funnel - with PTFE key - 30 ml	1 piece
8	vigreux fractionating column	1 piece

item photo code	product description	pack quantity
9	measuring cylinder - 10 ml	1 piece
10	beaker - low form - 25 ml	1 piece
11	liebigh condenser	1 piece
12	flat bottom flask - 10 ml	1 piece
13	keck clip	1 piece
14	pressure equalising funnel - 10 ml	1 piece
15	hexagonal stoppers	2 pieces
16	microscale chemistry case	1 piece

## ARSENIC ESTIMATOR

- Made from borosilicate glass 3.3. Designed for the estimation of arsenic and antimony.
- System completed with 100 ml (NS 29/32) erlenmeyer flask + absorption tube with (NS 29/32) cone.

catalogue number	pack quantity
065.71.001	1 piece



## WATER ESTIMATOR

- Made from borosilicate glass 3.3 according to DIN 12420.
- Suitable for xylol method.
- System completed with 500 ml (NS 29/32) flask + Liebig condenser with jacket length 400 mm + measuring tube (10:0.1 ml) with PTFE stopcock.

catalogue number	pack quantity
065.70.001	1 piece





### JOINT CLIPS - "POM"

- Manufactured from POM which has excellent chemical resistance as well as a very good mechanical strength.
- Perfect tools to keep two ground joints fastened firmly to each other.

catalogue number	POM colour	NS size	pack quantity
063.04.010	black	NS 10/19	1 piece
063.04.012	purple	NS 12/21	1 piece
063.04.014	yellow	NS 14/23	1 piece
063.04.019	blue	NS 19/26	1 piece
063.04.024	green	NS 24/29	1 piece
063.04.029	red	NS 29/32	1 piece
063.04.034	orange	NS 34/35	1 piece
063.04.045	brown	NS 45/40	1 piece



### JOINT CLIPS - "for spherical joints"

- Manufactured from best stainless steel. Suitable only for KS 29 joints.
- A perfect tool to hold the spherical joints firmly during laboratory applications.
- Adjustable locking screw enables holding the clips at desired position.

catalogue number	material	pack quantity
063.05.001	stainless steel	1 piece



### JOINT GREASE - "for stopcock & joints"

- High vacuum quality joint grease without silicone water washable and water soluble, non solidifying.
- Ideal for sealing and greasing or lubricating ground and spherical joints, plastic and metal connectors, stopcocks etc.
- Solves the most demanding lubricating problems in precision engineering and industry.
- Only a very small amount as very thin layer application is required to achieve the best result.
- Supplied in tubes of 60 gram lubricant weight.

catalogue number	product description	color	working temperature	pack quantity
063.16.001	normal vacuum	clear	-40°C to 300°C	1 piece
063.16.002	high vacuum	brown	-40°C to 320°C	1 piece

## ADAPTERS - "PTFE" - "flexible"

➤ Manufactured from PTFE with excellent chemical resistivity and temperature stability from -200°C to +250°C.

➤ Due to their unique flexible form they are perfect for strainless connection of ground joints and ideal for angular connection of columns, distillation systems, etc.

catalogue number	socket NS size	cone NS size	pack quantity
065.36.014	NS 14/23	NS 14/23	1 piece
065.36.019	NS 19/26	NS 19/26	1 piece
065.36.024	NS 24/29	NS 24/29	1 piece
065.36.029	NS 29/32	NS 29/32	1 piece



## JOINT SLEEVES - "for ground joints"

➤ Joint sleeves are made from PTFE and they are ideal for gas, liquid and vacuum tight standard ground joints.

➤ Joint rings on the outer side of the conical sleeves ensure a high vacuum tight seal (without necessity of grease) and effectively prevent the ground joints from sticking.

➤ They are easy to remove with their thick rims, reusable, practically resistant to all chemicals and have a temperature stability between -200°C and 250°C.

catalogue number	NS size	pack quantity
063.14.014	NS 14/23	1 piece
063.14.019	NS 19/26	1 piece
063.14.024	NS 24/29	1 piece
063.14.029	NS 29/32	1 piece
063.14.034	NS 34/35	1 piece
063.14.045	NS 45/40	1 piece



## SEALING TAPE - "PTFE"

➤ From pure PTFE for all threads made of steel, copper, brass, plastic and others.

➤ The material is resistant against all liquids, even most aggressive media, does not bulge, is not sticking and ageing.

➤ Even after years screw connections come loose without problems.

catalogue number	width	thickness	temperature resistance	roll length	pack quantity
058.06.001	12 mm	0,076 mm	-190°C to +250°C	10 m	1 piece



## BEAKERS - "glass" &amp; "polypropylene"



"glass" - "low form"

- Manufactured from borosilicate glass 3.3. According to ISO 3819 and DIN 12331.
- Have thick walls and heavy bases.
- Reinforced rims and spouts to prevent breakage during washing and transportation.
- Inscriptions are in white enamel.

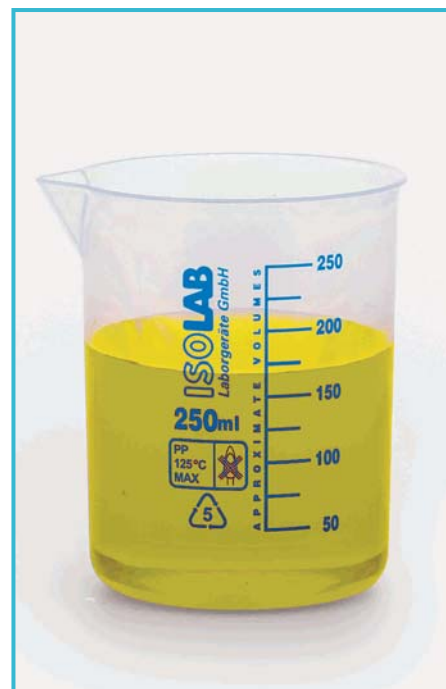
catalogue number	volume	pack quantity
025.01.005	5 ml	10 pieces
025.01.010	10 ml	10 pieces
025.01.025	25 ml	10 pieces
025.01.050	50 ml	10 pieces
025.01.100	100 ml	10 pieces
025.01.150	150 ml	10 pieces
025.01.250	250 ml	10 pieces
025.01.400	400 ml	10 pieces
025.01.600	600 ml	10 pieces
025.01.800	800 ml	10 pieces
025.01.901	1000 ml	10 pieces
025.01.902	2000 ml	6 pieces
025.01.905	5000 ml	1 piece
025.01.910	10000 ml	1 piece



"P.P" - "embossed scale"

- Manufactured from ultra clear virgin polypropylene with superior chemical resistance according to ISO 7056.
- They have specially designed functional spouts in order to minimize possible spills.
- With embossed volume graduations and inscriptions.

embossed scale	volume	pack quantity
026.01.025	25 ml	1 piece
026.01.050	50 ml	1 piece
026.01.100	100 ml	1 piece
026.01.250	250 ml	1 piece
026.01.500	500 ml	1 piece
026.01.901	1000 ml	1 piece
026.01.902	2000 ml	1 piece



"P.P" - "blue printed scale"

- Manufactured from ultra clear virgin polypropylene with superior chemical resistance according to ISO 7056.
- They have specially designed functional spouts in order to minimize possible spills.
- With blue printed volume graduations and inscriptions.

blue printed scale	volume	pack quantity
026.03.025	25 ml	1 piece
026.03.050	50 ml	1 piece
026.03.100	100 ml	1 piece
026.03.250	250 ml	1 piece
026.03.500	500 ml	1 piece
026.03.901	1000 ml	1 piece
026.03.902	2000 ml	1 piece

**BEAKERS - "PTFE" - "stainless steel" & "quartz glass"****"PTFE" - "low form"**

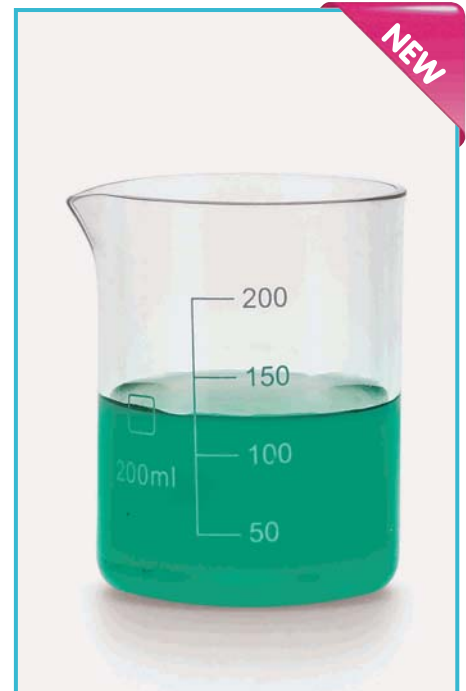
- Manufactured from high quality PTFE with excellent resistance to all chemicals.
- Manufactured from molded, pure PTFE with a smooth internal finish.
- Flat base enables a flat contact to the surface for effective heat transfer.
- PTFE beakers have excellent temperature stability from -200°C to +260°C.

catalogue number	volume	pack quantity
025.03.050	50 ml	1 piece
025.03.100	100 ml	1 piece
025.03.250	250 ml	1 piece
025.03.500	500 ml	1 piece
025.03.901	1000 ml	1 piece

**"st. steel" - "low form"**

- Manufactured from high quality AISI 304 stainless steel for improved corrosion resistance.
- Robust seamless construction for long working life.
- All surfaces are smooth and being highly polished enabling easy cleaning.
- Suitable for pharmaceutical laboratory applications since all surfaces are non-reacting with chemicals.

catalogue number	volume	pack quantity
025.04.100	100 ml	1 piece
025.04.250	250 ml	1 piece
025.04.500	500 ml	1 piece
025.04.901	1000 ml	1 piece

**"quartz glass" - "low form"**

- Manufactured from pure quartz and has a clear appearance like a glass.
- Designed to hold and pour chemical substances even in high temperatures up to 1050°C.
- Reinforced rims and spouts to prevent breakage during washing and transportation.

catalogue number	volume	pack quantity
025.06.010	10 ml	1 piece
025.06.025	25 ml	1 piece
025.06.050	50 ml	1 piece
025.06.100	100 ml	1 piece
025.06.250	250 ml	1 piece

## BEAKERS WITH HANDLE - "polypropylene"

*"embossed scale"**"blue printed scale"*

➤ Manufactured from ultra clear virgin polypropylene which provides thick walls with superior chemical resistance according to ISO 7056.

➤ They have specially designed functional spouts in order to minimize possible spills.

➤ Due to the unique and ergonomic shape of handles these beakers are stackable for space saving purpose.

➤ With embossed volume graduations and inscriptions.

➤ Manufactured from ultra clear virgin polypropylene which provides thick walls with superior chemical resistance according to ISO 7056.

➤ They have specially designed functional spouts in order to minimize possible spills.

➤ Due to the unique and ergonomic shape of handles these beakers are stackable for space saving purpose.

➤ With blue printed volume graduations and inscriptions.

embossed scale	volume	pack quantity
026.02.250	250 ml	1 piece
026.02.500	500 ml	1 piece
026.02.901	1000 ml	1 piece
026.02.902	2000 ml	1 piece
026.02.903	3000 ml	1 piece

blue printed scale	volume	pack quantity
026.04.250	250 ml	1 piece
026.04.500	500 ml	1 piece
026.04.901	1000 ml	1 piece
026.04.902	2000 ml	1 piece
026.04.903	3000 ml	1 piece



*Due to the unique and ergonomic shape of handles these beakers are stackable for space saving purpose.*



*Blue printed volume graduations and inscriptions provides an excellent view.*



**BEAKERS WITH HANDLE - "stainless steel"**

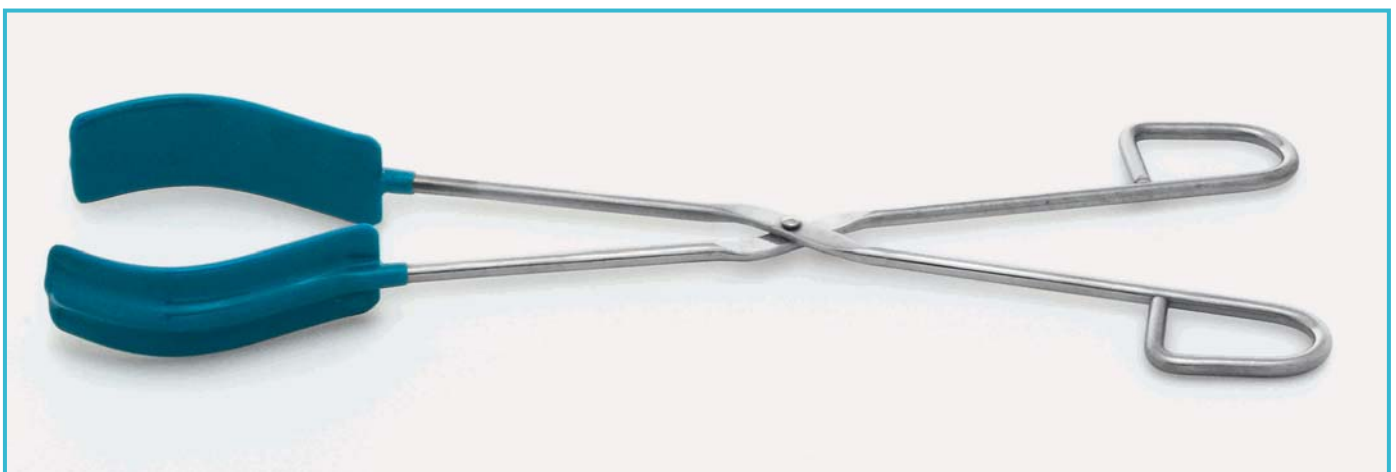
- Manufactured from high quality AISI 304 stainless steel for improved corrosion resistance.
- Robust seamless construction for long working life. Can withstand up to 500°C.
- Suitable for pharmaceutical and laboratory applications since all surfaces are non-reacting and non-absorbing.
- All surfaces are smooth and being highly polished enabling easy cleaning. Functional spout minimize possible spills.
- Moulded graduations on the side walls offers easy volume indication. Flared base provides an additional stability.

catalogue number	volume	diameter	height	pack quantity
025.05.500	500 ml	90 mm	140 mm	1 piece
025.05.901	1000 ml	110 mm	160 mm	1 piece
025.05.902	2000 ml	150 mm	220 mm	1 piece

**BEAKER TONGS - "chromated steel"**

- Manufactured from chromated steel. Insulated jaws are covered with special coating with perfect insulation enabling to hold all types of vessels in most secure way.

catalogue number	total length	holding capacity	pack quantity
026.03.001	260 ± 10 mm	1000 ml	1 piece



- Manufactured from chromated steel. Insulated jaws are covered with special coating with perfect insulation enabling to hold all types of vessels in most secure way.

catalogue number	total length	holding capacity	pack quantity
026.03.002	325 ± 10 mm	1000 ml	1 piece

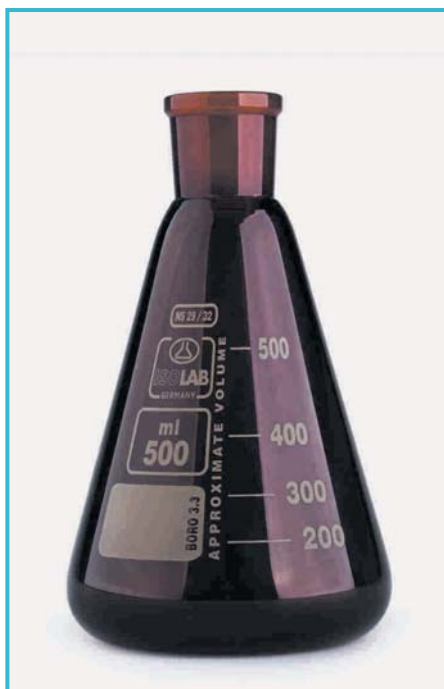
## ERLENMEYERS - "glass" - "narrow neck" &amp; "ground neck"



"clear" - "narrow neck"

- Manufactured from borosilicate glass 3.3. According to ISO 1773.
- Reinforced rims to prevent breaking during washing and transportation.
- Inscriptions are in white enamel.

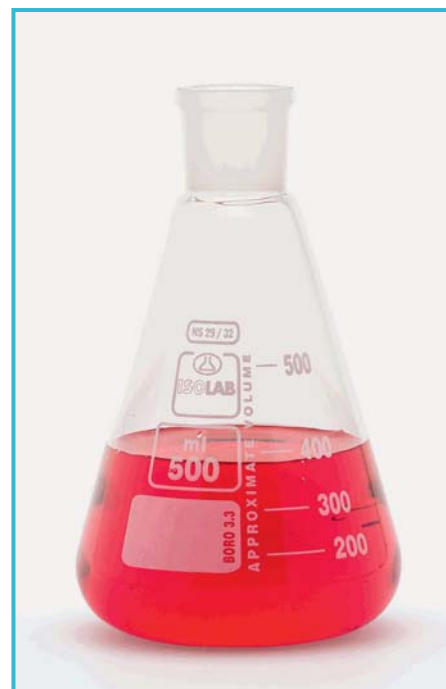
catalogue number	volume	pack quantity
027.01.025	25 ml	10 pieces
027.01.050	50 ml	10 pieces
027.01.100	100 ml	10 pieces
027.01.250	250 ml	10 pieces
027.01.300	300 ml	10 pieces
027.01.500	500 ml	10 pieces
027.01.901	1000 ml	10 pieces
027.01.902	2000 ml	6 pieces
027.01.903	3000 ml	1 piece
027.01.905	5000 ml	1 piece



"amber" - "ground neck"

- Manufactured from borosilicate glass 3.3. According to ISO 1773.
- Reinforced rims to prevent breaking during washing and transportation.
- Inscriptions are in white enamel.

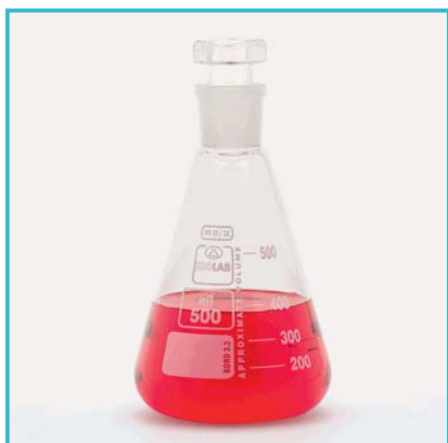
catalogue number	volume	neck NS size	pack quantity
028.11.053	50 ml	NS 29/32	1 piece
028.11.103	100 ml	NS 29/32	1 piece
028.11.252	250 ml	NS 29/32	1 piece
028.11.502	500 ml	NS 29/32	1 piece
028.11.901	1000 ml	NS 29/32	1 piece
028.11.902	2000 ml	NS 29/32	1 piece



"clear" - "ground neck"

- Manufactured from borosilicate glass 3.3. According to ISO 1773.
- They meet the highest quality standards according to DIN EN ISO 4797.
- NS necks are made in compliance with DIN 12242 standards.
- Inscriptions are in white enamel

catalogue number	volume	neck NS size	pack quantity
028.01.050	50 ml	NS 14/23	1 piece
028.01.051	50 ml	NS 19/26	1 piece
028.01.052	50 ml	NS 24/29	1 piece
028.01.053	50 ml	NS 29/32	1 piece
028.01.100	100 ml	NS 14/23	1 piece
028.01.101	100 ml	NS 19/26	1 piece
028.01.102	100 ml	NS 24/29	1 piece
028.01.103	100 ml	NS 29/32	1 piece
028.01.250	250 ml	NS 19/26	1 piece
028.01.251	250 ml	NS 24/29	1 piece
028.01.252	250 ml	NS 29/32	1 piece
028.01.300	300 ml	NS 29/32	1 piece
028.01.500	500 ml	NS 19/26	1 piece
028.01.501	500 ml	NS 24/29	1 piece
028.01.502	500 ml	NS 29/32	1 piece
028.01.901	1000 ml	NS 29/32	1 piece
028.01.902	2000 ml	NS 29/32	1 piece



Glass stoppers for ground neck erlenmeyers can be visited at page 110.

Aluminium covers for erlenmeyers can be visited at page 110.

## ERLENMEYERS - "screw cap" - "glass" &amp; "polypropylene"



## "glass"

- Manufactured from borosilicate glass 3.3.
- Approximate volumes are printed on the body of the erlenmeyer.
- Volume graduations and inscriptions are in white enamel.
- Supplied with leakproof polypropylene screw caps.

catalogue number	neck size	volume	pack quantity
027.03.100	GL 32	100 ml	1 piece
027.03.250	GL 32	250 ml	1 piece
027.03.500	GL 32	500 ml	1 piece
027.03.901	GL 32	1000 ml	1 piece



## "polypropylene"

- Manufactured from ultra clear polypropylene.
- Approximate volumes are printed on the body of the erlenmeyer.
- Volume graduations and inscriptions are in blue enamel.
- Supplied with leakproof polypropylene screw caps.

catalogue number	neck size	volume	pack quantity
028.03.050	GL 40	50 ml	1 piece
028.03.100	GL 40	100 ml	1 piece
028.03.250	GL 52	250 ml	1 piece
028.03.500	GL 52	500 ml	1 piece
028.03.901	GL 52	1000 ml	1 piece

## STABILISING RINGS



## "for erlenmeyers"

- Vinyl coated rings are made from heavy alloy will not scratch the glass surface.
- Ideal product to prevent the erlenmeyer, flasks etc. fall over or floating in the water bath.
- Fit neatly around the neck of all sizes of erlenmeyers, flasks, filter flasks etc.

catalogue number	interior diameter	exterior diameter	pack quantity
027.11.048	48 mm	85 mm	1 piece
027.11.056	56 mm	100 mm	1 piece
027.11.061	61 mm	115 mm	1 piece
027.11.074	74 mm	129 mm	1 piece



Recommendation table for stabilising rings.

catalogue number	recommended for
027.11.048	100 ml - 500 ml
027.11.056	250 ml - 1000 ml
027.11.061	500 ml - 2000 ml
027.11.074	1000 ml - 4000 ml



### FLASKS - "flat & round bottom" - "glass"

- Manufactured from borosilicate glass 3.3. According to ISO 1773 and DIN 12353.
- Reinforced rims are used to prevent breakage during washing and transportation.

flat bottom flasks	round bottom flasks	volume	approx. diameter	pack quantity
029.01.050	029.02.050	50 ml	51 mm	10 pieces
029.01.100	029.02.100	100 ml	64 mm	10 pieces
029.01.250	029.02.250	250 ml	85 mm	10 pieces
029.01.500	029.02.500	500 ml	105 mm	10 pieces
029.01.901	029.02.901	1000 ml	131 mm	10 pieces
029.01.902	029.02.902	2000 ml	166 mm	6 pieces
029.01.904	029.02.904	4000 ml	207 mm	1 piece
029.01.906	029.02.906	6000 ml	236 mm	1 piece
029.01.910	029.02.910	10000 ml	279 mm	1 piece

### FLASKS - "NS neck"

- Made from borosilicate glass 3.3. They meet the highest quality standards according to DIN 12353.
- NS necks are made in compliance with DIN 12242 standards. Inscriptions are in white enamel which is specially designed for glass.

flasks (NS) flat bottom	flasks (NS) round bottom	volume	neck NS size	pack quantity
030.01.050	030.02.050	50 ml	NS 14/23	1 piece
030.01.051	030.02.051	50 ml	NS 19/26	1 piece
030.01.052	030.02.052	50 ml	NS 24/29	1 piece
030.01.053	030.02.053	50 ml	NS 29/32	1 piece
030.01.100	030.02.100	100 ml	NS 14/23	1 piece
030.01.101	030.02.101	100 ml	NS 19/26	1 piece
030.01.102	030.02.102	100 ml	NS 24/29	1 piece
030.01.103	030.02.103	100 ml	NS 29/32	1 piece
030.01.250	030.02.250	250 ml	NS 19/26	1 piece
030.01.251	030.02.251	250 ml	NS 24/29	1 piece
030.01.252	030.02.252	250 ml	NS 29/32	1 piece
030.01.500	030.02.500	500 ml	NS 24/29	1 piece
030.01.501	030.02.501	500 ml	NS 29/32	1 piece
030.01.900	030.02.900	1000 ml	NS 24/29	1 piece
030.01.901	030.02.901	1000 ml	NS 29/32	1 piece
030.01.902	030.02.902	2000 ml	NS 29/32	1 piece
030.01.904	030.02.904	4000 ml	NS 29/32	1 piece



### FLASKS - "round bottom" - "NS neck" - "amber"

- Made from amber colour borosilicate glass 3.3. They meet the highest quality standards according to DIN 12348.
- NS necks are made in compliance with DIN 12242 standards. Inscriptions are in white enamel which is specially designed for glass.

catalogue number	volume	neck NS size	pack quantity
030.12.053	50 ml	NS 29/32	1 piece
030.12.103	100 ml	NS 29/32	1 piece
030.12.252	250 ml	NS 29/32	1 piece
030.12.501	500 ml	NS 29/32	1 piece
030.12.901	1000 ml	NS 29/32	1 piece



### FLASKS - "ground neck" - "2 neck"

➤ Manufactured from borosilicate glass 3.3 according to DIN 12394 with thick walls, heavy bases and reinforced rims which prevent breakage.

➤ Available 2 types: ➤ parallel side neck  
➤ angled side neck

angled side arm	parallel side arm	volume	neck NS size	side NS size
030.24.050	030.30.050	50 ml	NS 14/23	NS 14/23
030.24.100	030.30.100	100 ml	NS 14/23	NS 14/23
030.24.250	030.30.250	250 ml	NS 14/23	NS 14/23
030.25.100	030.31.100	100 ml	NS 24/29	NS 14/23
030.25.250	030.31.250	250 ml	NS 24/29	NS 14/23
030.25.500	030.31.500	500 ml	NS 24/29	NS 14/23
030.25.901	030.31.901	1000 ml	NS 24/29	NS 14/23
030.26.100	030.32.100	100 ml	NS 24/29	NS 19/26
030.26.250	030.32.250	250 ml	NS 24/29	NS 19/26
030.26.500	030.32.500	500 ml	NS 24/29	NS 19/26
030.26.901	030.32.901	1000 ml	NS 24/29	NS 19/26
030.27.100	030.33.100	100 ml	NS 29/32	NS 14/23
030.27.250	030.33.250	250 ml	NS 29/32	NS 14/23
030.27.500	030.33.500	500 ml	NS 29/32	NS 14/23
030.27.901	030.33.901	1000 ml	NS 29/32	NS 14/23
030.27.902	030.33.902	2000 ml	NS 29/32	NS 14/23
030.28.100	030.34.100	100 ml	NS 29/32	NS 19/26
030.28.250	030.34.250	250 ml	NS 29/32	NS 19/26
030.28.500	030.34.500	500 ml	NS 29/32	NS 19/26
030.28.901	030.34.901	1000 ml	NS 29/32	NS 19/26
030.28.902	030.34.902	2000 ml	NS 29/32	NS 19/26
030.29.100	030.35.100	100 ml	NS 29/32	NS 29/32
030.29.250	030.35.250	250 ml	NS 29/32	NS 29/32
030.29.500	030.35.500	500 ml	NS 29/32	NS 29/32
030.29.901	030.35.901	1000 ml	NS 29/32	NS 29/32
030.29.902	030.35.902	2000 ml	NS 29/32	NS 29/32



### FLASKS - "ground neck" - "3 neck"

➤ Manufactured from borosilicate glass 3.3 according to DIN 12394 with thick walls, heavy bases and reinforced rims which prevent breakage.

➤ Available 2 types: ➤ parallel side neck  
➤ angled side neck

angled side arm	parallel side arm	volume	neck NS size	side NS size
030.36.250	030.42.250	250 ml	NS 14/23	NS 14/23
030.37.250	030.43.250	250 ml	NS 24/29	NS 14/23
030.37.500	030.43.500	500 ml	NS 24/29	NS 14/23
030.37.901	030.43.901	1000 ml	NS 24/29	NS 14/23
030.38.250	030.44.250	250 ml	NS 24/29	NS 19/26
030.38.500	030.44.500	500 ml	NS 24/29	NS 19/26
030.38.901	030.44.901	1000 ml	NS 24/29	NS 19/26
030.38.902	030.44.902	2000 ml	NS 24/29	NS 19/26
030.39.250	030.45.250	250 ml	NS 29/32	NS 14/23
030.39.500	030.45.500	500 ml	NS 29/32	NS 14/23
030.39.901	030.45.901	1000 ml	NS 29/32	NS 14/23
030.40.250	030.46.250	250 ml	NS 29/32	NS 19/26
030.40.500	030.46.500	500 ml	NS 29/32	NS 19/26
030.40.901	030.46.901	1000 ml	NS 29/32	NS 19/26
030.41.250	030.47.250	250 ml	NS 29/32	NS 29/32
030.41.500	030.47.500	500 ml	NS 29/32	NS 29/32
030.41.901	030.47.901	1000 ml	NS 29/32	NS 29/32
030.41.902	030.47.902	2000 ml	NS 29/32	NS 29/32

## FLASKS - "pear shape"



➤ Manufactured from borosilicate glass 3.3. According to DIN 12383 standards.

➤ NS necks are in compliance with DIN 12242 standards.

catalogue number	volume	center neck NS size	pack quantity
030.49.010	10 ml	NS 14/23	1 piece
030.49.025	25 ml	NS 14/23	1 piece
030.49.050	50 ml	NS 14/23	1 piece
030.49.100	100 ml	NS 14/23	1 piece
030.49.250	250 ml	NS 14/23	1 piece

catalogue number	volume	center neck NS size	pack quantity
030.52.050	50 ml	NS 29/32	1 piece
030.52.100	100 ml	NS 29/32	1 piece
030.52.250	250 ml	NS 29/32	1 piece

## FLASKS - "pear shape" - "2 neck"



➤ Manufactured from borosilicate glass 3.3. According to DIN 12383 standards.

➤ NS necks are in compliance with DIN 12242 standards and side neck has an angle of 25° with the center neck.

with side neck	volume	center neck NS size	side NS size	pack quantity
030.53.025	25 ml	NS 14/23	NS 14/23	1 piece
030.53.050	50 ml	NS 14/23	NS 14/23	1 piece
030.53.100	100 ml	NS 14/23	NS 14/23	1 piece
030.54.025	25 ml	NS 19/26	NS 14/23	1 piece
030.54.050	50 ml	NS 19/26	NS 14/23	1 piece
030.54.100	100 ml	NS 19/26	NS 14/23	1 piece

## FLASKS - "evaporating"



➤ Manufactured from borosilicate glass 3.3 and meeting quality standards according to DIN 12383 standards.

catalogue number	volume	evaporating NS size	pack quantity
030.55.100	100 ml	NS 29/32	1 piece
030.55.250	250 ml	NS 29/32	1 piece
030.55.500	500 ml	NS 29/32	1 piece
030.55.901	1000 ml	NS 29/32	1 piece

## FLASKS - "receiving"

➤ Manufactured from borosilicate glass 3.3 and meeting quality standards according to DIN 12383 standards.



catalogue number	volume	evaporating NS size	pack quantity
030.56.100	100 ml	KS 35	1 piece
030.56.250	250 ml	KS 35	1 piece
030.56.500	500 ml	KS 35	1 piece
030.56.901	1000 ml	KS 35	1 piece



### FLASKS - "kjeldahl"

➤ Made from borosilicate glass 3.3 and meeting quality standards according to DIN 12360.

catalogue number	neck NS size	volume	pack quantity
030.57.100	NS 19/26	100 ml	1 piece
030.57.250	NS 29/32	250 ml	1 piece
030.57.500	NS 29/32	500 ml	1 piece
030.57.750	NS 29/32	750 ml	1 piece
030.57.901	NS 29/32	1000 ml	1 piece

### FLASKS - "nitrogen"

➤ Manufactured from borosilicate glass 3.3 and meeting quality standards according to DIN and ISO standards.

➤ NS necks are in compliance with DIN 12242 standards. They have angled side arm with PTFE stopcock.

catalogue number	nitrogen volume	neck NS size	pack quantity
030.58.025	25 ml	NS 14/23	1 piece
030.58.050	50 ml	NS 14/23	1 piece
030.58.100	100 ml	NS 14/23	1 piece
030.58.250	250 ml	NS 14/23	1 piece
030.59.050	50 ml	NS 29/32	1 piece
030.59.100	100 ml	NS 29/32	1 piece
030.59.250	250 ml	NS 29/32	1 piece
030.59.500	500 ml	NS 29/32	1 piece
030.59.901	1000 ml	NS 29/32	1 piece



### FLASK TONG



➤ Manufactured from chromated steel. Insulated jaws are covered with special coating with perfect insulation enabling to hold all types of vessels in most secure way.

catalogue number	total length	holding capacity	pack quantity
029.03.001	290 ± 10 mm	1000 ml	1 piece

### FLASK TONG



➤ Manufactured from chromated steel. Insulated jaws are covered with special coating with perfect insulation enabling to hold all types of vessels in most secure way.

catalogue number	total length	holding capacity	pack quantity
029.03.002	280 ± 10 mm	1000 ml	1 piece



### FLASK STANDS - "cork" & "polypropylene"

➤ Cork flask stands are manufactured from the best quality high density cork.

➤ They are ideal tools to be used with all volumes of round bottom flasks.

catalogue number	recommended flask volume
029.04.001	50 - 100 ml
029.04.002	250 - 500 ml
029.04.003	1000 - 2000 ml
029.04.004	3000 ml
029.04.005	4000 ml

➤ Plastic flask stands are made from P.P.

➤ Unique wall design with stepped concentric rings offers an excellent support at every point of contact.

➤ Stands can be stacked together for convenient storage. Supplied 1 piece.

catalogue number	for flasks volume
029.14.902	100 - 2000 ml

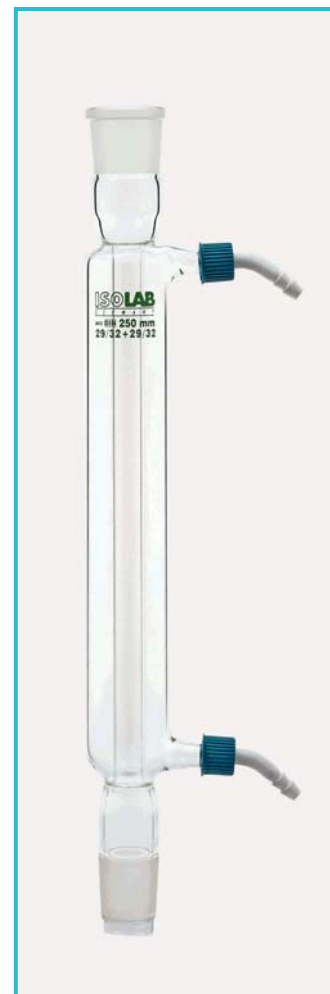




### CONDENSERS - "liebig"

- Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.
- They are carefully produced in order to meet the highest quality standards.
- Supplied with either glass or polypropylene side arm.
- Polypropylene side arm has a screw thread connector for easy and safe fitting of the tubing.
- The side arms accept tubings with 8/9 mm bore size.

with glass side arm	with P.P side arm	effective length	joint NS size	pack quantity
033.11.160	033.12.160	160 mm	NS 14/23	1 piece
033.11.250	033.12.250	250 mm	NS 14/23	1 piece
033.11.252	033.12.252	250 mm	NS 24/29	1 piece
033.11.253	033.12.253	250 mm	NS 29/32	1 piece
033.11.400	033.12.400	400 mm	NS 14/23	1 piece
033.11.402	033.12.402	400 mm	NS 24/29	1 piece
033.11.403	033.12.403	400 mm	NS 29/32	1 piece



### CONDENSERS - "allihn"

- Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.
- They are carefully produced in order to meet the highest quality standards.
- Supplied with either glass or polypropylene side arm.
- Polypropylene side arm has a screw thread connector for easy and safe fitting of the tubing.
- The side arms accept tubings with 8/9 mm bore size.

with glass side arm	with P.P side arm	effective length	joint NS size	pack quantity
033.13.160	033.14.160	160 mm	NS 14/23	1 piece
033.13.250	033.14.250	250 mm	NS 14/23	1 piece
033.13.252	033.14.252	250 mm	NS 24/29	1 piece
033.13.253	033.14.253	250 mm	NS 29/32	1 piece
033.13.400	033.14.400	400 mm	NS 14/23	1 piece
033.13.402	033.14.402	400 mm	NS 24/29	1 piece
033.13.403	033.14.403	400 mm	NS 29/32	1 piece

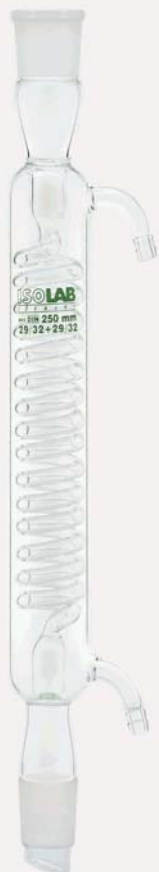




## CONDENSERS - "coiled"

- Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.
- They are carefully produced in order to meet the highest quality standards.
- Supplied with either glass or polypropylene side arm.
- Polypropylene side arm has a screw thread connector for easy and safe fitting of the tubing.
- The side arms accept tubings with 8/9 mm bore size.

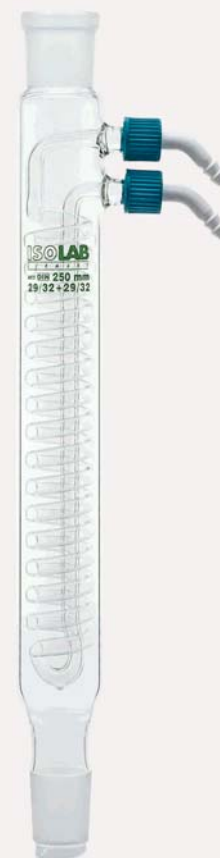
with glass side arm	with P.P side arm	effective length	joint NS size	pack quantity
033.15.160	033.16.160	160 mm	NS 14/23	1 piece
033.15.253	033.16.253	250 mm	NS 29/32	1 piece
033.15.403	033.16.403	400 mm	NS 29/32	1 piece

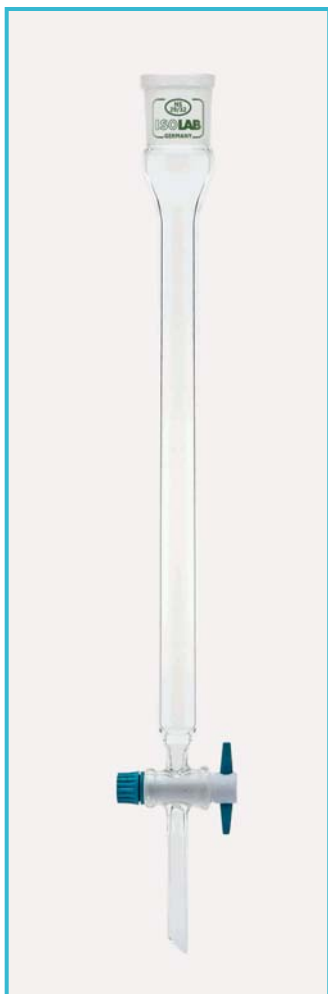


## CONDENSERS - "dimroth"

- Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.
- They are carefully produced in order to meet the highest quality standards.
- Supplied with either glass or polypropylene side arm.
- Polypropylene side arm has a screw thread connector for easy and safe fitting of the tubing.
- The side arms accept tubings with 8/9 mm bore size.

with glass side arm	with P.P side arm	effective length	joint NS size	pack quantity
033.17.160	033.18.160	160 mm	NS 14/23	1 piece
033.17.163	033.18.163	160 mm	NS 29/32	1 piece
033.17.250	033.18.250	250 mm	NS 14/23	1 piece
033.17.253	033.18.253	250 mm	NS 29/32	1 piece
033.17.400	033.18.400	400 mm	NS 14/23	1 piece
033.17.403	033.18.403	400 mm	NS 29/32	1 piece





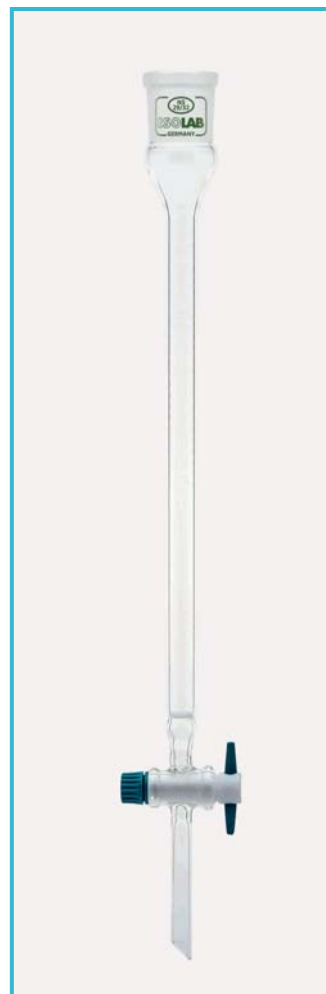
## COLUMNS - "chromatography"

- Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.
- NS necks are in compliance with DIN 12242 standards.
- Available 2 types:
  - without frit
  - with frit

column without frit	column with frit	effective length	inside diameter	socket NS size	pack quantity
066.10.001	066.11.001	200 mm	10 mm	NS 14/23	1 piece
	066.11.003	200 mm	15 mm	NS 14/23	1 piece
	066.11.002	300 mm	10 mm	NS 14/23	1 piece
066.10.003	066.11.004	400 mm	20 mm	NS 29/32	1 piece
066.10.004	066.11.005	600 mm	30 mm	NS 29/32	1 piece



Chromatographic columns with sintered frit, pore size 1.



## SOXHLET CONDENSERS - "allihn"

- Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.
- They are carefully produced in order to meet the highest quality standards.
- Supplied with either glass or polypropylene side arm.
- Polypropylene side arm has a screw thread connector for easy and safe fitting of the tubing.
- The side arms accept tubings with 8/9 mm bore size.

with glass side arm	with P.P side arm	for extractor volume	cone NS size	pack quantity
035.11.030	035.12.030	30 ml	NS 29/32	1 piece
035.11.070	035.12.070	70 ml	NS 34/35	1 piece
035.11.250	035.12.250	100 / 250 ml	NS 45/40	1 piece
035.11.500	035.12.500	500 ml	NS 45/40	1 piece



## SOXHLET CONDENSERS - "dimroth"

- Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.
- They are carefully produced in order to meet the highest quality standards.
- Supplied with either glass or polypropylene side arm.
- Polypropylene side arm has a screw thread connector for easy and safe fitting of the tubing.
- The side arms accept tubings with 8/9 mm bore size.

with glass side arm	with P.P side arm	for extractor volume	cone NS size	pack quantity
035.13.030	035.14.030	30 ml	NS 29/32	1 piece
035.13.070	035.14.070	70 ml	NS 34/35	1 piece
035.13.250	035.14.250	100 / 250 ml	NS 45/40	1 piece
035.13.500	035.14.500	500 ml	NS 45/40	1 piece



## SOXHLET EXTRACTORS - "W/O stopcock"

- Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.
- They meet the highest quality standards according to DIN 12602.

catalogue number	volume	pack quantity
036.01.030	30 ml	1 piece
036.01.070	70 ml	1 piece
036.01.100	100 ml	1 piece
036.01.150	150 ml	1 piece
036.01.250	250 ml	1 piece
036.01.500	500 ml	1 piece

catalogue number	socket NS size
036.01.030	NS 29/32
036.01.070	NS 34/35
036.01.100	NS 45/40
036.01.150	NS 45/40
036.01.250	NS 45/40
036.01.500	NS 45/40



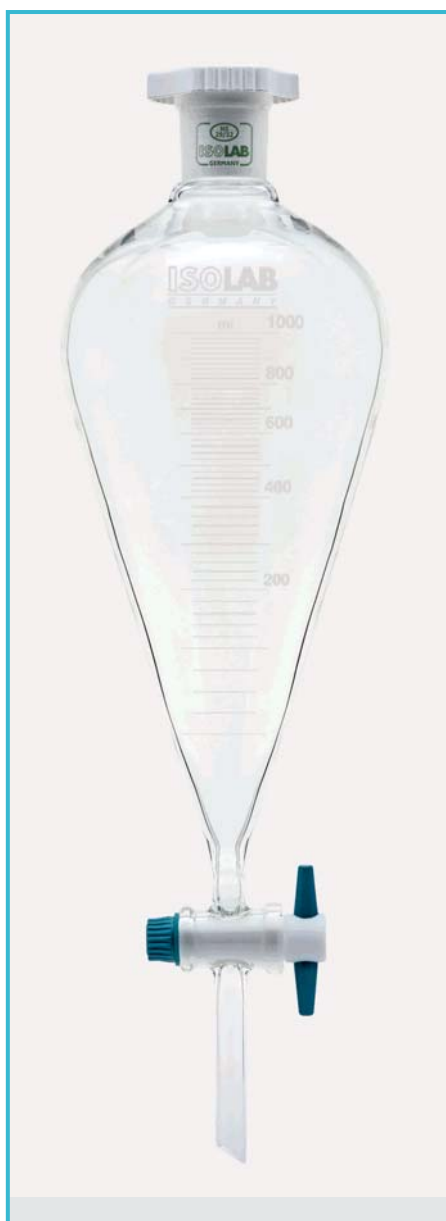
## CELLULOSE THIMBLES

- Manufactured from carefully selected pure cellulose.
- Ideal for soxhlet or other extractions to obtain reproducible results without any harm to the samples.
- They have perfectly controlled dimensional accuracy which provides excellent fitting to the extractor.
- They are also suitable for extracting solid or liquid particles from the air or gasses.



catalogue number	diameter	height	pack quantity
102.28.080	28 mm	80 mm	25 pieces
102.30.080	30 mm	80 mm	25 pieces
102.33.080	33 mm	80 mm	25 pieces
102.33.094	33 mm	94 mm	25 pieces
102.34.120	34 mm	120 mm	25 pieces

## SEPARATING FUNNELS



## FUNNELS - "squibb"

➤ Manufactured from borosilicate glass 3.3.

➤ According to ISO 4800 with totally grease free and self lubricating PTFE stopcock.

➤ Available as: ➤ without graduation  
➤ with graduation

➤ Graduations are in white enamel. Supplied with P.P stoppers.



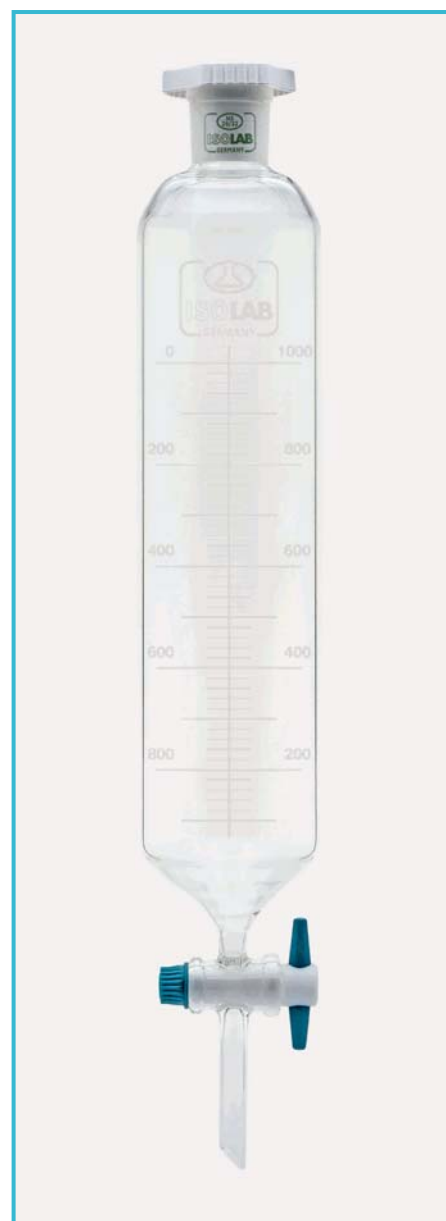
## FUNNELS - "conical"

➤ Manufactured from borosilicate glass 3.3.

➤ According to ISO 4800 with totally grease free and self lubricating PTFE stopcock.

➤ Available as: ➤ without graduation  
➤ with graduation

➤ Graduations are in white enamel. Supplied with P.P stoppers.



## FUNNELS - "cylindrical"

➤ Manufactured from borosilicate glass 3.3.

➤ According to ISO 4800 with totally grease free and self lubricating PTFE stopcock.

➤ Available as: ➤ without graduation  
➤ with graduation

➤ Graduations are in white enamel. Supplied with P.P stoppers.

<i>squibb ungraduated</i>	<i>squibb graduated</i>	<i>conical ungraduated</i>	<i>conical graduated</i>	<i>cylindrical ungraduated</i>	<i>cylindrical graduated</i>	<i>volume</i>	<i>neck NS size</i>	<i>pack quantity</i>
031.01.050	031.02.050	031.03.050	031.04.050	031.05.050	031.06.050	50 ml	NS 19/26	1 piece
031.01.100	031.02.100	031.03.100	031.04.100	031.05.100	031.06.100	100 ml	NS 19/26	1 piece
031.01.250	031.02.250	031.03.250	031.04.250	031.05.250	031.06.250	250 ml	NS 29/32	1 piece
031.01.500	031.02.500	031.03.500	031.04.500	031.05.500	031.06.500	500 ml	NS 29/32	1 piece
031.01.901	031.02.901	031.03.901	031.04.901	031.05.901	031.06.901	1000 ml	NS 29/32	1 piece
031.01.902	031.02.902	031.03.902	031.04.902			2000 ml	NS 29/32	1 piece

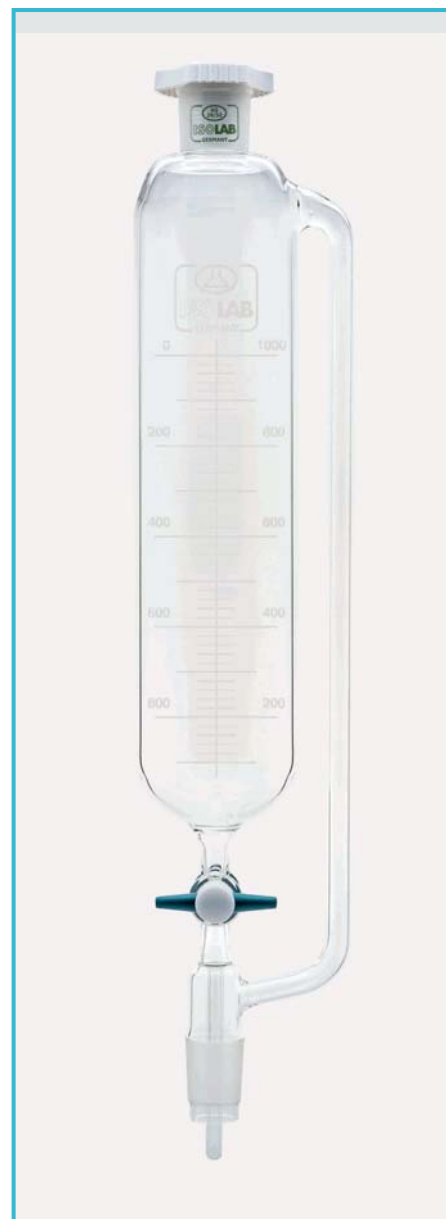
## DROPPING FUNNELS

**“conical”**

- Manufactured from borosilicate glass 3.3. According to ISO 4800.
- With totally grease free and self lubricating PTFE stopcock.
- Graduations are in white enamel.
- Supplied with polypropylene stoppers.

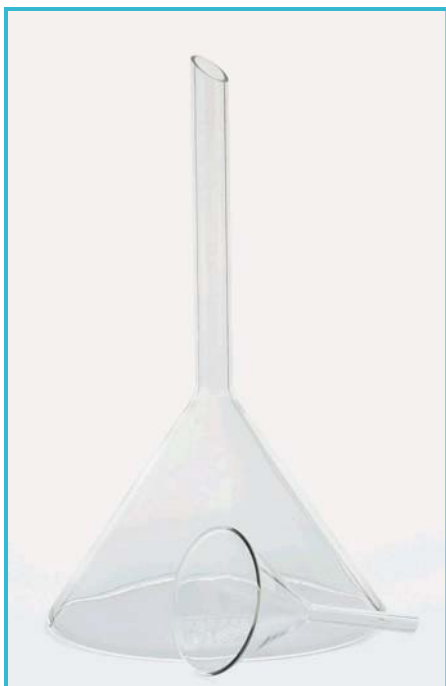
**“cylindrical”**

- Manufactured from borosilicate glass 3.3. According to ISO 4800.
- With totally grease free and self lubricating PTFE stopcock.
- Graduations are in white enamel.
- Supplied with polypropylene stoppers.

**“cylindrical” - “with relief tube”**

- Manufactured from borosilicate glass 3.3. According to ISO 4800.
- With totally grease free and self lubricating PTFE stopcock.
- Graduations are in white enamel.
- Supplied with polypropylene stoppers.

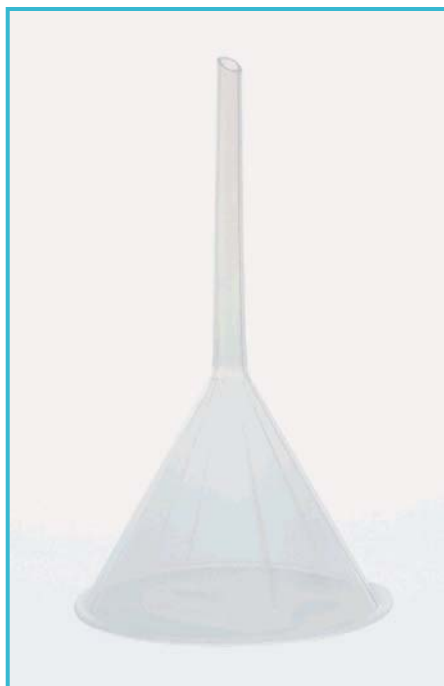
<i>conical graduated</i>	<i>cylindrical graduated</i>	<i>cylindrical with relief tube</i>	<i>volume</i>	<i>neck NS size</i>	<i>cone NS size</i>	<i>pack quantity</i>
032.01.050	032.02.050	032.03.050	50 ml	NS 19/26	NS 29/32	1 piece
032.01.100	032.02.100	032.03.100	100 ml	NS 19/26	NS 29/32	1 piece
032.01.250	032.02.250	032.03.250	250 ml	NS 29/32	NS 29/32	1 piece
032.01.500	032.02.500	032.03.500	500 ml	NS 29/32	NS 29/32	1 piece
032.01.901	032.02.901	032.03.901	1000 ml	NS 29/32	NS 29/32	1 piece



### FUNNELS - "glass" - "plain"

- Manufactured from borosilicate glass 3.3 with short stem and 60° cone angle for excellent adaptation of filter papers.
- These funnels are in accordance with ISO 4798 standards.

catalogue number	funnel diameter	total length	pack quantity
041.01.040	40 mm	70 mm	10 pieces
041.01.060	60 mm	106 mm	10 pieces
041.01.080	80 mm	140 mm	10 pieces
041.01.100	100 mm	180 mm	10 pieces
041.01.120	120 mm	210 mm	6 pieces
041.01.150	150 mm	265 mm	6 pieces



### FUNNELS - "P.P" - "w/o rib"

- Manufactured from translucent, virgin polypropylene.
- Unique funnel design prevents airlock and back pressure.
- 60° cone angle provides excellent adaptation of filter papers to the funnel.

catalogue number	funnel diameter	total length	pack quantity
041.02.040	40 mm	64 mm	1 piece
041.02.060	60 mm	100 mm	1 piece
041.02.080	80 mm	140 mm	1 piece
041.02.100	100 mm	180 mm	1 piece
041.02.120	120 mm	210 mm	1 piece
041.02.150	150 mm	265 mm	1 piece



### FUNNELS - "P.P" - "ribbed"

- Manufactured from translucent, polypropylene. Unique funnel design prevents airlock and back pressure.
- 60° cone angle provides excellent adaptation of filter papers. Internal ribs increases the filtration speed.

catalogue number	funnel diameter	total length	pack quantity
041.05.040	40 mm	64 mm	1 piece
041.05.060	60 mm	100 mm	1 piece
041.05.080	80 mm	140 mm	1 piece
041.05.100	100 mm	180 mm	1 piece
041.05.120	120 mm	210 mm	1 piece
041.05.150	150 mm	265 mm	1 piece



### FUNNELS - "analytical"

- Specially designed for analytical filtration purposes with long stem and 60° cone angle for placing the filter paper precisely according to DIN 12594.
- Available as:
  - made of glass
  - made of P.P
- Polypropylene ribbed funnels have internal helicoid ribs which increase the filtration speed to prevent any air lock, and avoiding filter papers from sticking.

glass funnels	funnel diameter	stem length	pack quantity
041.03.080	80 mm	145 mm	1 piece

P.P funnels	funnel diameter	stem length	pack quantity
041.04.080	80 mm	145 mm	1 piece





### FUNNELS - "stainless steel"

- Manufactured from best quality polished stainless steel.
- Stem is vented to allow undisturbed flow of liquids.

catalogue number	funnel diameter	height	pack quantity
041.06.080	80 ± 5 mm	115 ± 5 mm	1 piece
041.06.100	100 ± 5 mm	125 ± 5 mm	1 piece
041.06.120	120 ± 5 mm	145 ± 5 mm	1 piece
041.06.150	150 ± 5 mm	190 ± 5 mm	1 piece



### FUNNELS - "polyethylene" - "industrial"

- Manufactured from clear, virgin HD-PE.
- They are used to fill in drums, carboys and so on.

catalogue number	funnel diameter	pack quantity
041.02.200	200 mm	1 piece
041.02.250	250 mm	1 piece
041.02.300	300 mm	1 piece



### FUNNELS - "for powder" - "polypropylene"

- Manufactured from clear, polypropylene and specially designed for powders. Can also be used with liquids.
- Large bore and parallel stem avoid bridging of powders during transfer.

catalogue number	funnel diameter	stem diameter	pack quantity
041.07.065	65 mm	15 mm	1 piece
041.07.080	80 mm	21 mm	1 piece
041.07.100	100 mm	22 mm	1 piece
041.07.120	120 mm	26 mm	1 piece



### FUNNELS - "for powder" - "glass"

- Manufactured from borosilicate glass 3.3 with short stem and 60° cone angle.
- These funnels are practical and suitable for filling liquids and powders.

catalogue number	funnel diameter	cone NS size	pack quantity
041.08.060	60 mm	NS 14/23	1 piece
041.08.080	80 mm	NS 19/26	1 piece
041.08.100	100 mm	NS 24/29	1 piece
041.08.120	120 mm	NS 29/32	1 piece



### FUNNEL HOLDERS - "stainless steel"

- Manufactured from best quality stainless steel.
- Unique ring shape with slit offers practical use with separating funnels.
- Suitable to hold all types of funnels with central diameter up to 150 mm.
- Available 2 types:
  - without boss head
  - with boss head

funnel holder W/O boss head	funnel holder with boss head	holder diameter	pack quantity
042.03.040	042.04.040	40 mm	1 piece
042.03.060	042.04.060	60 mm	1 piece
042.03.080	042.04.080	80 mm	1 piece
042.03.100	042.04.100	100 mm	1 piece



### FUNNEL STAND

- Made from stainless steel, and supplied with screw head to adjust the height of the holder.
- Adjustable holding system enables flexible and practical use of the funnel stand.
- Thanks to the adjustable height of holding part which offers practical use almost all sizes of funnels.

catalogue number	pack quantity
042.06.010	1 piece



Funnel holder without slit consists two pieces.



Funnel holder with slit consists single piece.



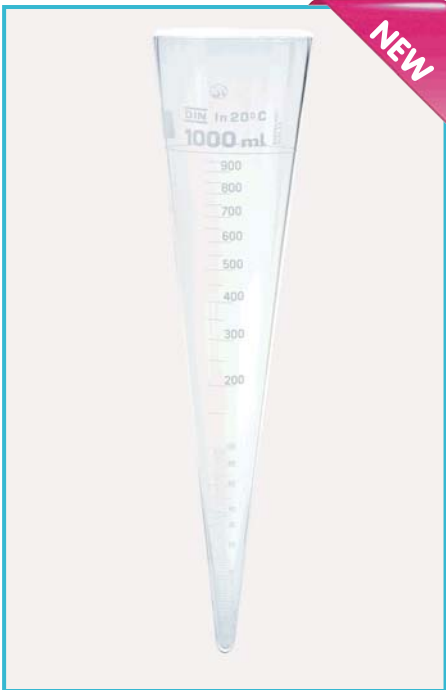
### FUNNEL HOLDERS - "polypropylene"

- Manufactured from polypropylene. Suitable to hold all types of laboratory funnels with diameter from 60 mm up to 150 mm.
- Two tapered wedges are used to ensure firm grip on rods having diameter 10 -13 mm.
- Available 2 types:
  - without slit
  - with slit
- Funnel holder with slit is mostly recommended for use with separating funnel.

funnel holder without slit	funnel holder with slit	pack quantity
042.05.001	042.06.001	1 piece



## IMHOFF CONES - "glass" &amp; "plastic"

**"glass" - "W/O stopcock"**

- Designed for sedimentation tests.
- Manufactured from borosilicate glass 3.3 according to DIN 12672.
- With graduations to 1000 ml. Without stopcock.
- Volume graduations and inscriptions are in white enamel.

catalogue number	graduation range	subdivision	pack quantity
043.20.001	0 - 2 ml	0,1 ml	1 piece
	> 2-10 ml	0,5 ml	
	>10 - 40 ml	1,0 ml	
	>40 - 100 ml	2,0 ml	
	>100 - 1000 ml	50,0 ml	

**"glass" - "with stopcock"**

- Designed for sedimentation tests.
- Manufactured from borosilicate glass 3.3 according to DIN 12672.
- With graduations to 1000 ml. With stopcock.
- Volume graduations and inscriptions are in white enamel.

catalogue number	graduation range	subdivision	pack quantity
043.20.002	0 - 2 ml	0,1 ml	1 piece
	> 2-10 ml	0,5 ml	
	>10 - 40 ml	1,0 ml	
	>40 - 100 ml	2,0 ml	
	>100 - 1000 ml	50,0 ml	

**"plastic" - "SAN"**

- Designed for sedimentation tests.
- Manufactured from crystal clear special polymer SAN.
- With graduations to 1000 ml. Without stopcock.
- Volume graduations and inscriptions are in embossed form.

catalogue number	graduation range	subdivision	pack quantity
043.21.001	0 - 2 ml	0,1 ml	1 piece
	> 2-10 ml	0,5 ml	1 piece
	>10 - 40 ml	1,0 ml	1 piece
	>40 - 100 ml	2,0 ml	1 piece
	>100 - 1000 ml	50,0 ml	1 piece

**IMHOFF CONE RACK**

- Manufactured from PMMA/ stainless steel for holding 2 imhoff sedimentation cones.
- They can carry any type of sedimentation cone as glass or plastic, with or without stopcock.
- Compact design allows easy carry of sedimentation cones even when cones are filled.

catalogue number	pack quantity
043.22.001	1 piece



## FILTER FLASKS - "glass" & "polyethylene"



### "glass" - "glass side arm"

- Manufactured from borosilicate glass 3.3 with thick walls according to ISO 6556 and DIN 12476 standards.
- Side arms are suitable to fit 6-10 mm hose diameter.

catalogue number	volume	pack quantity
040.01.100	100 ml	1 piece
040.01.250	250 ml	1 piece
040.01.500	500 ml	1 piece
040.01.901	1000 ml	1 piece
040.01.902	2000 ml	1 piece



### "glass" - "P.P side arm"

- Manufactured from borosilicate glass 3.3 with thick walls according to ISO 6556 and DIN 12476 standards.
- Polypropylene side arm has a screw thread connector for easy and safe fixing of the tubings. Side arms are suitable to fit 6-10 mm hose diameter.

catalogue number	volume	pack quantity
040.02.100	100 ml	1 piece
040.02.250	250 ml	1 piece
040.02.500	500 ml	1 piece
040.02.901	1000 ml	1 piece
040.02.902	2000 ml	1 piece



### "polyethylene"

- Manufactured from durable thick walled polyethylene.
- Side arms are suitable to fit 6-10 mm hose diameter.

catalogue number	volume	pack quantity
040.03.901	1000 ml	1 piece



### GASKETS - "Guko"

- Manufactured from naturel rubber.
- Conical body form enables perfect fitting of filter funnels and crucibles in to suction flasks.
- The set consists of 7 pieces of gaskets suitable for all sizes of filter funnels.

catalogue number	pack quantity
040.06.001	1 set

## BÜCHNER FUNNELS



"porcelain"

➤ Manufactured from glazed porcelain according to DIN 12905 standards.

➤ Support plate holds the filter paper, prevents closure of the holes and allows maximum filtration speed.

catalogue number	inner diameter	pack quantity
042.01.070	70 mm	1 piece
042.01.090	90 mm	1 piece
042.01.110	110 mm	1 piece



"polypropylene"

➤ Manufactured from clear, virgin polypropylene with the top part having a perforated filter plate.

➤ The top part can be stacked with the lower part to form a vacuum seal.

➤ Upper and lower parts can be separated from each other for easy and efficient cleaning.

catalogue number	inner diameter	pack quantity
042.02.070	70 mm	1 piece
042.02.090	90 mm	1 piece
042.02.110	110 mm	1 piece

## PROTECTIVE COLLARS



"rubber"

➤ Adapters made from rubber with special design that keeps the funnel and filtering flask always in center.

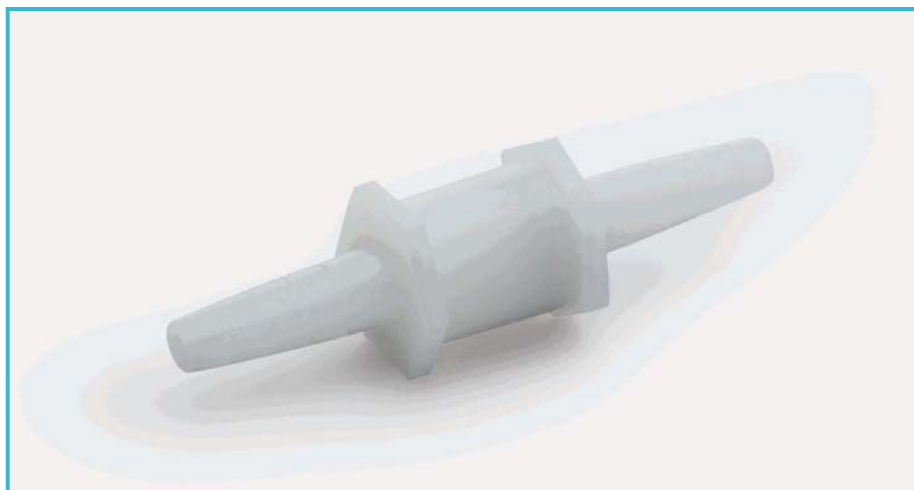
➤ These adapters also provide all-round protection reducing impact damages.

➤ A clean seal is created between the flask rim and the funnel during usage.

catalogue number	suitable for flask volume	pack quantity
040.05.001	100 ml	1 piece
040.05.002	250 - 500 ml	1 piece
040.05.003	1000 ml	1 piece
040.05.004	2000 ml	1 piece

catalogue number	diameter	height
040.05.001	17 mm	10 mm
040.05.002	25 mm	15 mm
040.05.003	32 mm	25 mm
040.05.004	42 mm	25 mm





## NON-RETURN VALVE

- Prevents water back flow when pressure falls down.
- Useful for any tubing system and vacuum line.
- Max. working pressure is 2 bar.
- Minimum working pressure is 0.07 bar at ambient temperature.

non return valve	nominal tube diameter	pack quantity
040.10.005	8 - 11 mm	1 piece



## WATER JET PUMP

- Manufactured from robust and virgin polypropylene in order to yield a continuous filtering process.
- Easily dismantled for cleaning and it is fully autoclavable.
- Jet pump is suitable to work under pressure up to 10 Kg/cm<sup>2</sup>.
- Useful for sucking to waste any split chemicals as well as for filter work.
- A default non-return valve is used to eliminate back flow.

catalogue number	pack quantity
040.10.001	1 piece



*Water jet pump can easily dismantled for cleaning and it is fully autoclavable.*



## VACUUM PUMP

- Light, portable, hand operated vacuum pump is manufactured from high impact polystyrene and it can apply a vacuum of 625 mm Hg (25").
- Pumping rate of this vacuum pump is 15 ml per stroke. Designed together with a default vacuum release valve.
- This vacuum pump can also be used as pressure pump by placing release valve cap to vacuum port.
- Pump nozzle fits standard 6 mm (1/4") inside diameter.

catalogue number	pack quantity
040.10.015	1 piece



*Vacuum level can clearly controlled and observed from the enclosed vacuum gauge.*

## FILTER PAPERS - “quantitative”

- Perfect for quantitative routine analysis which requires high purity.
- They are acid-washed and have an extremely low ash content which is around < 0.01%.
- The total percentage of alpha-cellulose is about 95%.

catalogue number	colour code	filtration speed	diameter	pack quantity
105.01.110	blue	slow	110 mm	100 pieces
105.02.110	white	medium	110 mm	100 pieces
105.03.110	black	fast	110 mm	100 pieces
105.01.125	blue	slow	125 mm	100 pieces
105.02.125	white	medium	125 mm	100 pieces
105.03.125	black	fast	125 mm	100 pieces



## FILTER PAPERS - “qualitative”

- Perfect for qualitative routine analysis and for analytical gravimetric applications.
- Wet strengthened, particularly suited for applications where the residue is removed from the filter e.g. with a spatula.

catalogue number	grade	filtration speed	diameter	pack quantity
106.01.110	No:2	slow	110 mm	100 pieces
106.02.110	No:1	medium	110 mm	100 pieces
106.03.110	No:4	fast	110 mm	100 pieces
106.01.125	No:2	slow	125 mm	100 pieces
106.02.125	No:1	medium	125 mm	100 pieces
106.03.125	No:4	fast	125 mm	100 pieces



## FILTER PAPERS - “sheet”

Manufactured from high quality cellulose fibres to ensure a good resistance to humidity and a high absorption capacity.

- Widely used in general laboratory filtration, labware sterilisation, pharmaceutical product preparation rough sample preparation, also for laboratory bench protection.

catalogue number	paper dimensions	paper specifications	pack quantity
107.40.040	40 x 40 cm	85 gr / m <sup>2</sup>	200 pieces



## FORCEPS - “for filter paper”

- Manufactured from stainless steel and a perfect tool to use for handling papers.

catalogue number	pack quantity
048.04.001	1 piece





### FUNNELS - "Gooch" - "with sintered disc"

- Comprehensive range of Gooch funnels with integrated sintered glass discs enabling easy filtering without any filter paper.
- Made from borosilicate glass 3.3 with sintered discs highly resistant to most of the corrosive reagents including acids. Reinforced rims prevents from breakage.

funnel sintered glass	nominal volume	porosity grade	type	disc diameter	pack quantity
043.01.051	50 ml	1	3 D	35 mm	1 piece
043.01.052	50 ml	2	3 D	35 mm	1 piece
043.01.053	50 ml	3	3 D	35 mm	1 piece
043.01.054	50 ml	4	3 D	35 mm	1 piece
043.01.071	75 ml	1	11 D	45 mm	1 piece
043.01.072	75 ml	2	11 D	45 mm	1 piece
043.01.073	75 ml	3	11 D	45 mm	1 piece
043.01.074	75 ml	4	11 D	45 mm	1 piece
043.01.121	125 ml	1	17 D	60 mm	1 piece
043.01.122	125 ml	2	17 D	60 mm	1 piece
043.01.123	125 ml	3	17 D	60 mm	1 piece
043.01.124	125 ml	4	17 D	60 mm	1 piece
043.01.501	500 ml	1	25 D	95 mm	1 piece
043.01.502	500 ml	2	25 D	95 mm	1 piece
043.01.503	500 ml	3	25 D	95 mm	1 piece
043.01.504	500 ml	4	25 D	95 mm	1 piece



### GOOCH CRUCIBLES - "glass"

- Ideal for filtering and drying precipitates easily since there is no need for any filter papers.
- Made from borosilicate glass 3.3 with sintered discs highly resistant to most of the corrosive reagents including acids.
- Reinforced rims are used to avoid from breakage during washing and transportation.

crucibles sint. glass	porosity grade	type	nominal volume	diameter	pack quantity
043.02.031	1	1 D	30 ml	30 mm	1 piece
043.02.032	2	1 D	30 ml	30 mm	1 piece
043.02.033	3	1 D	30 ml	30 mm	1 piece
043.02.034	4	1 D	30 ml	30 mm	1 piece
043.02.051	1	2 D	50 ml	40 mm	1 piece
043.02.052	2	2 D	50 ml	40 mm	1 piece
043.02.053	3	2 D	50 ml	40 mm	1 piece
043.02.054	4	2 D	50 ml	40 mm	1 piece



### GOOCH CRUCIBLES - "porcelain"

- Made from porcelain with perforated bottoms. They need filter paper for filtering process.

crucibles sint. glass	nominal volume	diameter	height	pack quantity
043.08.015	15 ml	29 mm	33 mm	6 pieces
043.08.030	25 ml	36 mm	45 mm	6 pieces
043.08.050	40 ml	40 mm	50 mm	6 pieces

## VACUUM MANIFOLDS

- Manufactured from highest grade stainless steel to filtrate up to six samples at the same time.
- This system is manufactured to be used with 47/50 mm diameter membranes.
- Supplied complete as a single unit with funnels, stoppers and clamps.
- Individual stainless steel control valves allow filtration through different branches with a single vacuum pump.

catalogue number	manifold model	pack quantity
043.05.001	with 1 funnel	1 piece
043.05.003	with 3 funnel	1 piece
043.05.006	with 6 funnel	1 piece



## FILTER FLASK

➤ Manifold filter flask is manufactured from thick and extra heavy walled erlenmeyer made from borosilicate glass 3.3 according to ISO 6556 and DIN 12476 standards.

➤ Filter flask set has a P.P side arm with a screw thread connector for easy and safe connection of the hoses.

catalogue number	volume	pack quantity
043.06.001	2000 ml	1 piece



## FILTER BOTTLE

➤ Manifold filter bottle is manufactured from thick and extra heavy walled glass bottle made from borosilicate glass 3.3 according to ISO 6556 and DIN 12476 standards.

➤ Filter bottle set has a P.P side arm with a screw thread connector for easy and safe connection of the hoses.

catalogue number	volume	pack quantity
043.06.011	5000 ml	1 piece



## VACUUM FILTRATION UNIT

➤ Manufactured from borosilicate glass, particularly suitable for analysis of microscopic residue, particle control, filtration of alkaline and aggressive solutions.

➤ Suitable to be used with 47/50 mm diameter membranes.

➤ Filtration unit consists of: filter funnel of 300 ml capacity, support base with sintered disc, vacuum connection and metal clip, vacuum flask of 1000 ml.

filtration unit	vacuum flask	support material	pack quantity
043.03.001	1000 ml	sintered	1 piece

## SYRINGE FILTERS - "chromatography"



- Syringe filters are specially designed for HPLC sample operations.
- Excellent pressure stability because filter housing is ultrasonically sealed and not glued. Fully autoclavable.
- High flow rate and filtration in both directions, so the liquid can not go over the filter membrane.
- Extremely tear proven membranes thanks to highest quality of raw materials.
- Very well suited for automation since the housing has been optimized for application in laboratory robots.
- Different color codes are used to differentiate among the membranes. Filters can also be supplied sterilized.

Macherey - Nagel syringe filters	ISOLAB syringe filters	filter membrane material	code name	pore size	diameter	pack quantity
729020.100	094.01.004	polyester	PET	0.45	25 mm	100 pieces
729205.100	094.01.002	polytetrafluoroethylene	PTFE	0.45	25 mm	100 pieces
729027.100	094.01.006	cellulose acetate	CA	0.45	25 mm	100 pieces
729013.100	094.01.007	nylon / polyamide	PA	0.45	25 mm	100 pieces
729241.100	094.01.008	polyethersulfone	PES	0.45	25 mm	100 pieces
729219.100	094.01.003	polyvinylidenedifluoride	PVDF	0.45	25 mm	100 pieces
729031.100	094.01.001	regenerated cellulose	RC	0.45	25 mm	100 pieces
729004.100	094.01.005	cellulosemixedesters	MV	0.45	25 mm	100 pieces

**MV** = cellulose mixed esters, **CA** = cellulose acetate, **RC** = regenerated cellulose, **PA** = polyamide, **PTFE** = polytetrafluoroethylene, **PVDF** = polyvinylidene difluoride, **PES** = polyethersulfone, **PET** = polyester

**PVDF: Hydrophilic membrane**  
For polar solutions, water-soluble oligomers and polymers like proteins, binding capacity for proteins 82 µg per 25 mm filter.

**PES: Hydrophilic membrane**  
For aqueous and slightly organic liquids with higher flow rates, very low adsorption for pharmaceuticals and proteins, good stability against acids and bases.

**PA: Rather hydrophilic membrane**  
For aqueous and organic / aqueous medium polar liquids.

**PTFE: hydrophobic membrane**  
For nonpolar liquids and gases which are resistant to all kinds of solvents flushing with alcohol, followed by water, makes the membrane more hydrophilic.

**CA: Hydrophilic membrane**  
For filtration of water-soluble oligomers and polymers, especially suited for biological macromolecules, extremely low binding capacity for proteins.

**MV: Hydrophilic membrane with very low adsorption**  
For aqueous or polar solutions

**RC: Hydrophilic membrane with very low adsorption**  
For aqueous and organic / aqueous liquids i.e. polar and medium polar sample solutions  
Binding capacity for proteins.

**PET: Hydrophilic multipurpose membrane**  
For polar as well as nonpolar solvents, not cytotoxic, does not block the growth of microorganisms and higher cells.



**CUVETTES - "spectrophotometer" - "P.S"**

- Polystyrene (disposable) cuvettes has clear and clean optical path with indication of optical path orientation, applicable wavelength range from 340 to 900nm.
- New optimised shape and narrow wall thickness provide increased heat transfer resulting in more constant sample temperatures during measurements.
- Eliminates cross-contamination risk associated with washing and re-using such as glass cuvettes.
- Manufactured as aseptical sterilized and delivered grouped by mould cavity to ensure lowest variation of absorption coefficient.

catalogue number	cuvette type	volume	path length	pack quantity
098.02.001	semi micro	1.5 to 3.0 ml	10.0 mm	100 pieces
098.02.002	macro	2.5 to 4.5 ml	10.0 mm	100 pieces

**CUVETTES - "spectrophotometer" - "quartz"**

- Quartz cuvettes have fused bodies with optically polished quartz windows.
- Cuvettes fit all standard spectrophotometer cell holders.
- Operating range of cuvettes are 190 - 2500 with path length of 10 mm.
- Cuvette walls are two polished sides and with a wall thickness of 10 mm with tolerance of less %0,1
- Overall dimensions of 12.5 x 12.5 x 45 mm and supplied with a liquid tight PTFE stopper.
- Cuvettes are supplied as 2 pieces in a dust free box.

catalogue number	cuvette type	volume	pack quantity
098.01.001	Quartz	3.50 ml	2 pieces
098.01.002	Quartz-Micro	1.75 ml	2 pieces

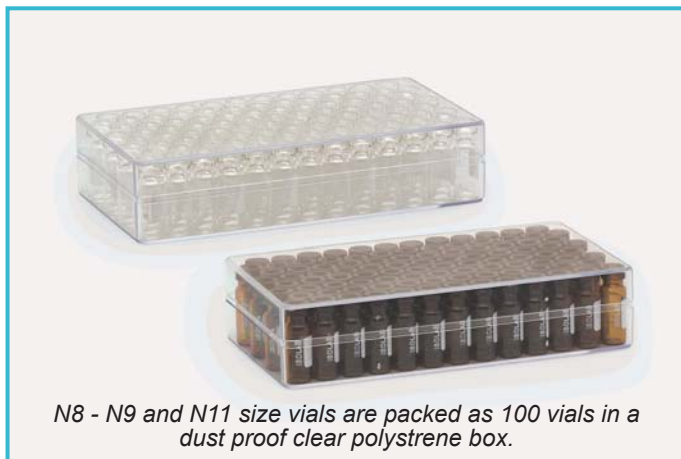
**CUVETTE RACK**

- Manufactured from polypropylene for safe handling and holding up to 12 cuvettes with a 10 mm light path.
- These racks consist of hinged lids with secure clasps and removable inserts for easy cleaning.
- The height of the lid is designed to accommodate all spectrophotometer cells - even those with covers or stoppers.

catalogue number	pack quantity
098.03.001	1 piece



## VIALS & CAPS & SEPTAS



➤ Vials are a critical link to optimal analysis. Each septum is specified to complement the overall system and enhance chemical performance.

➤ ISOLAB vial and caps are specially formulated and constructed to provide optimum system performance with minimal coring and superior chemical inertness.

➤ The softness and hardness (durometer) is matched to the instrument and designed to work excellently well with syringes and samples.

➤ The size of the septum is critical to proper sealing. All ISOLAB septas are specifically sized for proper sealing.

➤ Center hole pad is made from high grade virgin silicone. Vial screw caps are offered either with a slit or without slit. ISOLAB caps perfectly fits to the neck of the vial.

➤ Manufactured from high quality polypropylene to exact manufacturing tolerances and lined in a controlled manufacturing environment, tested by head space GC to ensure proper curing of silicone polymer.

### SCREW NECK VIALS & CAPS - "N8" & "N9"



### CRIMP NECK VIALS & CAPS - "N11"



➤ Screw neck vials are ideal to be used for modern auto samplers.

➤ Volume graduation enables filling the sample into the vial to a desired level. Large marking area enables better sample identification.

➤ Crimp neck vials are ideal to be used for modern auto samplers.

➤ Volume graduation enables filling the sample into the vial to a desired level. Large marking area enables better sample identification.

screw neck vials	volume	neck N size	colour	vial dimensions	pack quantity
095.00.001	2.0 ml	N8	clear	11.6 × 32 mm	100 pieces
095.00.002	2.0 ml	N8	amber	11.6 × 32 mm	100 pieces
095.01.001	2.0 ml	N9	clear	11.6 × 32 mm	100 pieces
095.01.002	2.0 ml	N9	amber	11.6 × 32 mm	100 pieces

crimp neck vials	volume	neck N size	colour	vial dimensions	pack quantity
095.02.001	2.0 ml	N11	clear	11.6 × 32 mm	100 pieces
095.02.002	2.0 ml	N11	amber	11.6 × 32 mm	100 pieces

screw caps for vials	neck N size	septum description	pack quantity
096.00.001	N8	red silicone (w/o slit) / white PTFE	100 pieces
096.00.002	N8	red silicone (with slit) / white PTFE	100 pieces
096.01.001	N9	white silicone (w/o slit) / red PTFE	100 pieces
096.01.002	N9	white silicone (with slit) / blue PTFE	100 pieces

crimp caps for vials	neck N size	septum description	pack quantity
096.02.001	N11	red silicone (w/o slit) / white PTFE	100 pieces

## STORAGE VIALS &amp; CAPS



storage vials	ml	neck N size	colour	vial dimensions	pack quantity
095.03.001	22 ml	N20	clear	23 x 85 mm	100 pieces
095.03.002	22 ml	N20	amber	23 x 85 mm	100 pieces
095.03.011	40 ml	N24	clear	28 x 95 mm	100 pieces
095.03.012	40 ml	N24	amber	28 x 95 mm	100 pieces

screw caps for vials	neck N size	septum description	pack quantity
096.05.001	N20	clear silicone (w/o hole) / white PTFE	100 pieces
096.05.011	N24	clear silicone (w/o hole) / white PTFE	100 pieces

## HEAD SPACE VIALS &amp; CAPS



head space vials	ml	neck N size	colour	vial dimensions	pack quantity
097.03.001	10 ml	N20	clear	22 x 46 mm	100 pieces
097.03.002	10 ml	N20	amber	22 x 46 mm	100 pieces
097.04.001	20 ml	N20	clear	22 x 75 mm	100 pieces
097.04.002	20 ml	N20	amber	22 x 75 mm	100 pieces

crimp caps for vials	neck N size	septum description	pack quantity
096.03.001	N20	silicone (w/o slit) / PTFE	100 pieces

## VIAL INSERTS



► Manufactured from clear glass with flat bottom having a volume of 0,25 ml or 0,30 ml.

► Vials inserts are a practical solution in applications where there is a limited sample volume.

► Also allows maximum sample recovery when used in conjunction with autosampler vials.

catalogue number	for vial size	dimensions (dia. x height)	volume	colour	pack quantity
097.05.108	N 8	5,0 x 31,5 mm	0,25 ml	clear	100 pieces
097.05.109	N 9	5,8 x 31,5 mm	0,30 ml	clear	100 pieces

## CRIMPER



catalogue no: 097.01.011

## DECAPPER



catalogue no: 097.02.011

## ISO BOTTLES - "polypropylene"



➤ These impact resistant, easily recyclable, leak proof and excellently thermal stable bottles are autoclavable at max. 121°C.

➤ Manufactured from glass-like transparent special grade polypropylene.

➤ Angled neck form allows the liquid to flow out without any restrictions.

➤ GL 45 bottle neck provides easy filling and pouring. Unique neck design with moulded pouring ring prevents drops and liquid splash.

➤ Cap is made from polypropylene large ridges for increased grip with self sealing lock and integral security ring.

➤ Unique cap inner design ensures hermetical closure and guarantees an excellent leak and contamination proof bottle.

➤ Embossed volume graduation on side wall enables viewing of liquid level and reproducible filling of the bottle without use of cylinders or beakers.

➤ Sterile bottles are produced under germ-free sterile conditions with extreme protocols or sterility control then sent to gamma irradiation for further sterilisation.

clear bottle non-sterile	clear bottle sterile	bottle volume	pack quantity
061.15.100	061.16.100	100 ml	100 pieces / pack
061.15.250	061.16.250	250 ml	100 pieces / pack
061.15.500	061.16.500	500 ml	100 pieces / pack
061.15.901	061.16.901	1000 ml	50 pieces / pack
061.15.902	061.16.902	2000 ml	50 pieces / pack



Caps are made from robust and thick polypropylene with large ridges for increased grip.



Unique neck design with moulded pouring ring prevents drops and liquid splash.



Unique design of the cap with intended top plate guarantees tight and leakproof closure.



Integral security ring of the cap ensures safe and untouched protection of the bottle content.

## BOTTLES - "neutral glass"



- Manufactured from neutral glass which is relatively resistant to heat and almost all chemicals.
- Autoclavable at 121°C and 1.1 bar for 30 minutes. Caps should not be closed during autoclaving process.
- The angled finishing allows the liquid to flow without any restrictions.
- Cap is made from polypropylene with large ridges for increased grip.
- GL 45 bottle neck provides easy filling and pouring. Pouring ring prevents drops and liquid splash
- Inscriptions are in white enamel which is specially designed for glass.

catalogue number	volume	pack quantity
061.31.100	100 ml	10 pieces
061.31.250	250 ml	10 pieces
061.31.500	500 ml	10 pieces
061.31.901	1000 ml	10 pieces

## ISO BOTTLES - "borosilicate glass"



- Manufactured from borosilicate glass 3.3 which is resistant to heat and almost all chemicals.
- Autoclavable at 121°C and 1.1 bar for 30 minutes. Caps should not be closed during autoclaving process.
- GL 45 bottle neck provides easy filling and pouring. Pouring ring prevents drops and liquid splash.
- Cap is made from polypropylene with large ridges for increased grip.
- The angled finishing allows the liquid to flow without any restrictions.
- Amber bottles prevent from UV lights to penetrate inside the bottle.
- Inscriptions are in white enamel which is specially designed for glass.

volume	clear bottles	pack quantity	amber bottles	pack quantity
100 ml	061.01.100	10 pieces	061.02.100	1 piece
250 ml	061.01.250	10 pieces	061.02.250	1 piece
500 ml	061.01.500	10 pieces	061.02.500	1 piece
1000 ml	061.01.901	10 pieces	061.02.901	1 piece
2000 ml	061.01.902	4 pieces	061.02.902	1 piece
3000 ml	061.01.903	1 piece	061.02.903	1 piece
5000 ml	061.01.905	1 piece	061.02.905	1 piece
10000 ml	061.01.910	1 piece	061.02.910	1 piece
20000 ml	061.01.920	1 piece	061.02.920	1 piece



Cap is made from polypropylene large ridges for increased grip with self sealing lock.



GL 45 bottle neck provides easy filling and pouring. Pouring ring prevents drops and liquid splash



## BOTTLES - "water sampling"

NEW



- Designed for taking, handling, transporting and storing of water samples for microbiological analysis.
- Clear bottles are manufactured from glass-like transparent special grade polypropylene.
- Amber bottles are manufactured from an amber colour clear polypropylene which is highly translucent but still preventing the UV light penetrating inside the bottle.
- Square body form offers easy handling, and optimum space saving solutions during storage period. Wide bottle neck (GL 50) provides easy filling and pouring.
- Supplied either as bulk packed or single individual pack.
- Polypropylene cap with self sealing lock with integral security ring. Unique cap inner design ensures hermetical closure and guarantees an excellent leak and contamination proof bottle.
- Embossed graduation on side wall enables volume verifications.
- Bottles with sodium thiosulfate (20 mg/l - acc to ISO/FDIS 19458:2006 ) are ideal to analyse water where chlorine may modify the composition of the sample.
- Bottles are produced under germ-free sterile conditions with extreme sterility control then sent to gamma irradiation for further steps of sterilisation.

bulk packed bottles	clear bottle without thiosulfate	amber bottle without thiosulfate	clear bottle with thiosulfate	amber bottle with thiosulfate	bottle volume	w x d x h (mm)	packing specifications
	061.21.250	061.22.250	061.23.250	061.24.250	250 ml	60x 60 x 115	108 pcs in box
	061.21.500	061.22.500	061.23.500	061.24.500	500 ml	70 x 70 x 145	84 pcs in box
	061.21.901	061.22.901	061.23.901	061.24.901	1000 ml	90 x 90 x 175	30 pcs in box

single packed bottles	clear bottle without thiosulfate	amber bottle without thiosulfate	clear bottle with thiosulfate	amber bottle with thiosulfate	bottle volume	w x d x h (mm)	packing specifications
	061.25.250	061.26.250	061.27.250	061.28.250	250 ml	60x 60 x 115	72 pcs in box
	061.25.500	061.26.500	061.27.500	061.28.500	500 ml	70 x 70 x 145	42 pcs in box
	061.25.901	061.26.901	061.27.901	061.28.901	1000 ml	90 x 90 x 175	22 pcs in box



Cap is made from high density polypropylene with self sealing lock with integral security ring.

Unique cap inner design ensures hermetical closure and guarantees a contamination proof and excellent leak proof bottle.



Each bottle is labelled specifying sample and source descriptions, code and lot numbers, expiry date and other informations.

## BOTTLES - "polyethylene" - "wide neck"

- Manufactured from polyethylene as impact resistant, easily recyclable, leak proof and excellently thermal stability.
- Wide neck of the bottle enables easy filling and pouring.
- Clear bottles are manufactured from glass-like transparent special grade polyethylene.
- Guarantees perfect closure by an insert plug.
- The space between cap and insert plug can be used for securing private and confidential notes.
- Both at the bottle neck and at the cap there are holes which enable insertion of security seal wire.
- Embossed volume graduation on side wall enables viewing of liquid level and reproducible filling of the bottle without use of cylinders and beakers.

catalogue number	bottle volume	dimensions (w x d x h)	pack quantity
061.07.050	50 ml	37 x 39 x 74 mm	50 pieces
061.07.100	100 ml	45 x 50 x 90 mm	50 pieces
061.07.250	250 ml	62 x 57 x 113 mm	50 pieces
061.07.500	500 ml	83 x 71 x 140 mm	50 pieces
061.07.901	1000 ml	104 x 82 x 171 mm	50 pieces
061.07.902	2000 ml	134 x 107 x 210 mm	50 pieces



## SECURITY SEAL & SEAL CUTTER

- Security seal is used ensure the safety locking and durability of the product inside the bottles.
- 4 different colors are used to identify among the seals with identification numbers printed on the seal plate.



The space between cap and insert plug can be used for private and confidential notes.



Insert the seal wire through the holes of both the cap and bottle itself. Then insert the wire into the hole of the seal as shown.



Last step is to wind the seal key clockwise until the seal wire gets tight enough to provide optimum security lock.



Security seal cutter is a perfect tool to cut security seal wires easily.

catalogue number	pack quantity
061.20.001	1 piece

## BOTTLES - "dropping" - "polyethylene"



➤ Manufactured from low density polyethylene.

➤ Dispensing tip provides regular drops at all times as well as provides continuous flow with the fine jet.

➤ The tip of the delivery tube can be cut in order to increase the drop volume.

➤ Amber bottles prevents UV light to penetrate inside the bottle.

clear bottle	amber bottle	bottle volume	pack quantity
062.04.100	062.04.101	100 ml	1 piece



Dispensing tip provides regular drops at all times as well as provides continuous flow with the fine jet.



➤ Manufactured from a mixture of high and low density polyethylene.

➤ Dispensing tip provides regular drops at all times as well as provides continuous flow with the fine jet.

➤ The tip of the delivery tube can be cut in order to increase the drop volume.

➤ Supplied with a push open seal cap that enables reclosing after using the dropping bottle.

catalogue number	volume	dimensions Ø x height	pack quantity
062.10.010	10 ml	21 x 69 mm	10 pieces
062.10.015	15 ml	23 x 76 mm	10 pieces
062.10.020	20 ml	25 x 82 mm	10 pieces
062.10.030	30 ml	30 x 82 mm	10 pieces



Dispensing tip provides regular drops at all times as well as provides continuous flow with the fine jet.

## BOTTLES - "spray"



➤ Manufactured from PET with a long-life hand pump.

➤ Liquids can be finely vaporised with the pull of the hand pump trigger.

➤ Media contacting parts are polypropylene, polyethylene and stainless steel.

➤ Safety lock at the hand pump trigger prevents accidental use of bottle.

catalogue number	volume	pack quantity
062.11.250	250 ml	1 piece
062.11.500	500 ml	1 piece



Extremely homogeneous vaporisation is guaranteed with the pull of the trigger.



## BOTTLES - "dropping" - "glass"



➤ Dropping bottles with rubber dropper are manufactured from borosilicate glass.

➤ Dropper can be taken out for use while the stopper remains in the bottle neck.

➤ Dispensing tip provides regular drops at all times.

➤ Amber bottles prevents UV light penetrating inside the bottle.

➤ All parts are chemical resistant and can be easily dismantled for cleaning.

clear bottle	amber bottle	bottle volume	pack quantity
062.12.050	062.13.050	50 ml	1 piece
062.12.100	062.13.100	100 ml	1 piece



Dispensing tip always provides regular drops.

6 L, 12 L, and 31 L bottles have a robust handle for easy carry.



➤ Dropping bottles with glass dropper are manufactured from borosilicate glass.

➤ Dispensing tip provides regular drops at all times.

➤ Amber bottles prevents UV light penetrating inside the bottle.

➤ All parts are chemical resistant and can be easily dismantled for cleaning.

clear bottle	amber bottle	bottle volume	pack quantity
062.02.100	062.03.100	100 ml	1 piece



Dispensing tip always provides regular drops.

Caps of aluminium bottles have a lock ring ensuring safe sealing of content.



## BOTTLES - "aluminum"



➤ Manufactured from pure aluminium for storing, transport and delivery of substances and reference samples which have to be stored completely unaltered.

➤ Can be completely emptied without residues, odour-natural, impervious to light, rustproof.

➤ Larger sizes aluminium bottles (6 L, 12 L, and 31 L) have a robust handle enabling easy carry and can be used as a jerrycan.

catalogue number	volume	pack quantity
061.14.025	25 ml	10 pieces
061.14.060	60 ml	10 pieces
061.14.120	120 ml	10 pieces
061.14.300	300 ml	10 pieces
061.14.600	600 ml	10 pieces
061.14.901	1200 ml	10 pieces
061.14.906	6 L	1 piece
061.14.912	12 L	1 piece
061.14.931	31 L	1 piece



Aluminium bottles are supplied with insert plug and cap with lock.

## WASH BOTTLES - "narrow neck" - "wide neck" - "integral"

**"narrow neck"**

- Manufactured from a mixture of high and low density polyethylene as semirigid, translucent and with high clarity.
- Very easy to use by pressing gently. The "swan neck" delivery tip produces a fine, straight flow without lateral spatter.
- The flow rate can be easily controlled by hand pressure.

Bottles can be fully emptied due to the movable outlet tube.

- Dispensing tip provides extra fine stream. The tip of the delivery tube can be cut in order to increase the liquid flow rate.

catalogue number	volume	pack quantity
062.05.100	100 ml	1 piece
062.05.250	250 ml	1 piece
062.05.500	500 ml	1 piece
062.05.901	1000 ml	1 piece

**"wide neck"**

- Manufactured from a mixture of high and low density polyethylene as semi rigid, and with very high clarity.
- Wide neck for easy filling of the liquid. Colour coded caps enable easy identification of the bottle content.
- Ribbed cap design allows easy opening and closing. One piece cap with angled delivery tube guarantees leakproof operation.
- The angled neck and the tip assure a uniform and extra fine stream of liquid.
- Unique dispensing tube design optimise backflow and turbulence free liquid transfer.

catalogue number	volume	cap colour	pack quantity
062.09.05R	500 ml	red	1 piece
062.09.05Y	500 ml	yellow	1 piece
062.09.05G	500 ml	green	1 piece
062.09.05B	500 ml	blue	1 piece

**"integral"**

- Manufactured from a mixture of high and low density polyethylene.
- Semi rigid, translucent and with high clarity with ergonomic shape for easy grip and handling.
- Single piece cap and delivery tube assembly eliminate air or liquid absorption through the cap and ensures a positive leaktight seal.
- Dispensing tip provides extra fine stream. The tip of the delivery tube can be cut in order to increase the liquid flow rate.
- Close the tip by means of the cap attached to the delivery tube.

catalogue number	volume	pack quantity
062.08.250	250 ml	1 piece
062.08.500	500 ml	1 piece



Dispensing tip provides extra fine stream. The tip of the delivery tube can be cut in order to increase the liquid flow rate.



Colour coded caps enables easy identification of the bottle content. Ribbed cap design allows easy opening and closing.



Dispensing tip provides extra fine stream. The tip of the delivery tube can be cut in order to increase the liquid flow rate.



## WASH BOTTLES - “wide neck” - “multi lingual”

- Manufactured from a mixture of high and low density polyethylene as semi rigid, and with very high clarity.
- Wide neck for easy filling of the liquid. Colour coded caps enable easy identification of the bottle content.
- Ribbed cap design allows easy opening and closing.
- One piece cap with angled delivery tube guarantees leakproof operation.
- The angled neck and the tip assure a uniform and extra fine stream of liquid.
- Unique dispensing tube design optimise backflow and turbulence free liquid transfer.
- Displays chemical names and key safety informations in four (English - German - French and Spanish) languages.
- Meets latest European safety registration requirements such as (EC)1272/2008 (GHS).

### Offers multi advantages as

- One piece HDPE cap with angled and precision jet tip for fine control.
- Unique dispensing tube design optimising backflow and turbulence free liquid transfer.
- Colour coded cap and bottle for easy recognition of the bottle content.
- Display of chemical names and formulas and CAS numbers for easy identification of the bottle content.
- Globally harmonised system with new designed pictograms reflects the latest changes in legislations.
- Warning words such as “flamable”, “danger” etc) to identify the severity of the hazardous liquids.



Colour coded cap and bottle for easy recognition of the wash bottle content.

catalogue number	Wash bottle label name	bottle material	bottle volume	cap colour	pack quantity
062.50.500	acetone	P.P	500 ml	red	1 piece
062.51.500	water	P.E	500 ml	blue	1 piece
062.51.501	distilled water	P.E	500 ml	blue	1 piece
062.51.502	deionised water	P.E	500 ml	blue	1 piece
062.52.500	ethanol	P.E	500 ml	green	1 piece
062.53.500	ethyl acetate	P.E	500 ml	white	1 piece
062.54.500	iso-propanol	P.E	500 ml	yellow	1 piece
062.55.500	methanol	P.E	500 ml	orange	1 piece
062.56.500	methylethylketone	P.P	500 ml	brown	1 piece
062.57.500	tetrahydrofuran	P.P	500 ml	black	1 piece
062.58.500	toluene	P.E	500 ml	torquise	1 piece



### BOTTLE BASKET - "ABS"

- Manufactured from ABS for safe and convenient transportation of maximum 6 bottles of 250 or 500 ml volume.
- Specially designed for holding 500 ml wash bottles.
- Strong light weight construction with ergonomic handle offers both comfort and control.
- Unique design of the bottle basket offers stackable solution for space saving.

catalogue number	maximum bottle volume	bottle capacity	pack quantity
062.66.001	500 ml	6 bottles	1 piece



### UTILITY CARRIER - "polypropylene"

- Manufactured from robust polypropylene to hold various flasks and bottles such as laboratory bottles, wash bottles, spray bottles.
- And also other type products that can be placed.
- Offers two undivided compartments with free space enabling flexible insertion of flasks and bottles.
- Unique design of the bottle basket offers stackable solution for space saving.

catalogue number	pack quantity
062.66.002	1 piece



### TRANSPORT BOX - "polypropylene"

- Manufactured from polypropylene with a lid clasp and providing secure closure.
- Ideal for transporting biological and clinical samples, as well as instruments and products that you want to keep clean and dry under testing environment conditions.
- The clarity of the box enables the user to visibly check sample integrity so that it can be opened using the right precautions.
- Carry handle folds neatly into body space allowing the units to be stacked.
- Lid opens a full 180 allowing total. Access to contents and making it easier to clean.
- Use the separators provided to create your own compartment sizes, or use empty to transport larger products and equipment.



catalogue number	dimensions	pack quantity
062.66.004	330 x 180 x 140 mm	1 piece



### CARBOYS - "glass"

- Manufactured from borosilicate glass resistant to all chemicals according to ISO 4796.
- Ideal for safe storage, transportation and dispensing of liquids.
- Practical using thanks to wide GL 45 size mouth for easy filling.
- Supplied with a leak proof stopcock which prevents any vacuum formation when draining liquid out.

catalogue number	volume	quantity in pack
062.27.905	5 L	1 piece
062.27.910	10 L	1 piece
062.27.920	20 L	1 piece



### CARBOYS - "P.P"

- Manufactured from polypropylene with UV stabilized heavy walls with stable carrying handles.
- Ideal for safe storage, transportation and dispensing of liquids.
- Wide neck for easy filling, and emptying. Featured with carrying handle.
- Supplied with a leak proof stopcock which prevents any vacuum formation when draining liquid out.

catalogue number	volume	quantity in pack
062.26.910	10 L	1 piece
062.26.920	20 L	1 piece



### ASPIRATOR BOTTLES

- Manufactured from polyethylene with UV stabilized heavy walls with stable carrying handles.
- Ideal for safe storage, transportation and dispensing of liquids.
- Wide neck for easy filling, and emptying. Featured with carrying handle.
- Supplied with a leak proof stopcock which prevents any vacuum formation when draining liquid out.

catalogue number	volume	quantity in pack
062.28.905	5 L	1 piece
062.28.910	10 L	1 piece
062.28.920	20 L	1 piece



### JERRYCANS - "polyethylene" - "with & W/O stopcock"

- Manufactured from blow molded robust HD-PE with heavy walls and handles. Provides the perfect solution for reliable and secured packaging, storing and distribution during transportation.
- Designed with good stackability features as well as leak-proof airtight which ensure non contamination of content to the users.



Cap with self sealing lock with integral ring.



Leak proof stopcock for draining liquid out.

catalogue number	volume	stopcock	base dimensions	height	pack quantity
062.21.902	2 L	no	150 x 82 mm	235 mm	1 piece
062.21.903	3 L	no	190 x 95 mm	270 mm	1 piece
062.21.905	5 L	no	183 x 138 mm	278 mm	1 piece
062.21.910	10 L	no	226 x 190 mm	325 mm	1 piece
062.21.920	20 L	yes	292 x 245 mm	359 mm	1 piece
062.21.930	30 L	yes	355 x 288 mm	395 mm	1 piece



NEW

### JARS - "wide neck" - "borosilicate glass"

- Manufactured from borosilicate glass with wide neck and volume inscriptions printed on side wall.
- Ideal for storing and transportation of both liquid and powder products. Supplied with polypropylene cap.

catalogue number	jar volume	base dimensions	jar height	pack quantity
061.03.500	500 ml	94 x 94 mm	141 mm	1 piece
061.03.901	1000 ml	105 x 105 mm	187 mm	1 piece
061.03.902	2000 ml	115 x 115 mm	260 mm	1 piece



NEW

### JARS - "wide neck" - "neutral glass"

- Manufactured from neutral glass with wide neck and non corrosive metal cap. Ideal for storing and transportation of both liquid and powder products.

catalogue number	jar volume	neck width	jar height	pack quantity
061.29.040	40 ml	44 mm	50 mm	10 pieces
061.29.105	105 ml	49 mm	84 mm	10 pieces
061.29.370	370 ml	72 mm	121 mm	10 pieces
061.29.720	720 ml	90 mm	141 mm	10 pieces
061.29.901	1000 ml	94 mm	180 mm	10 pieces



NEW

### JARS - "wide neck" - "P.P"

- Manufactured from clear polypropylene with wide neck and polypropylene screw cap with silicone ring.
- Ideal for storing of both liquid and powder products.

catalogue number	jar volume	dimensions Ø x height	pack quantity
061.13.001	250 ml	90 x 62 mm	1 piece
061.13.002	410 ml	90 x 102 mm	1 piece
061.13.004	1270 ml	140 x 110 mm	1 piece
061.13.006	1420 ml	140 x 135 mm	1 piece
061.13.008	1800 ml	140 x 160 mm	1 piece



NEW

### BOTTLES - "wide neck" - "neutral glass"

- Manufactured from neutral glass with round neck according to DIN 168. Non autoclavable. Supplied with cap.
- Ideal for storing and transportation of both liquid and powders. Supplied with polypropylene cap with insert.
- Amber bottles prevent from UV lights to penetrate inside the bottle.

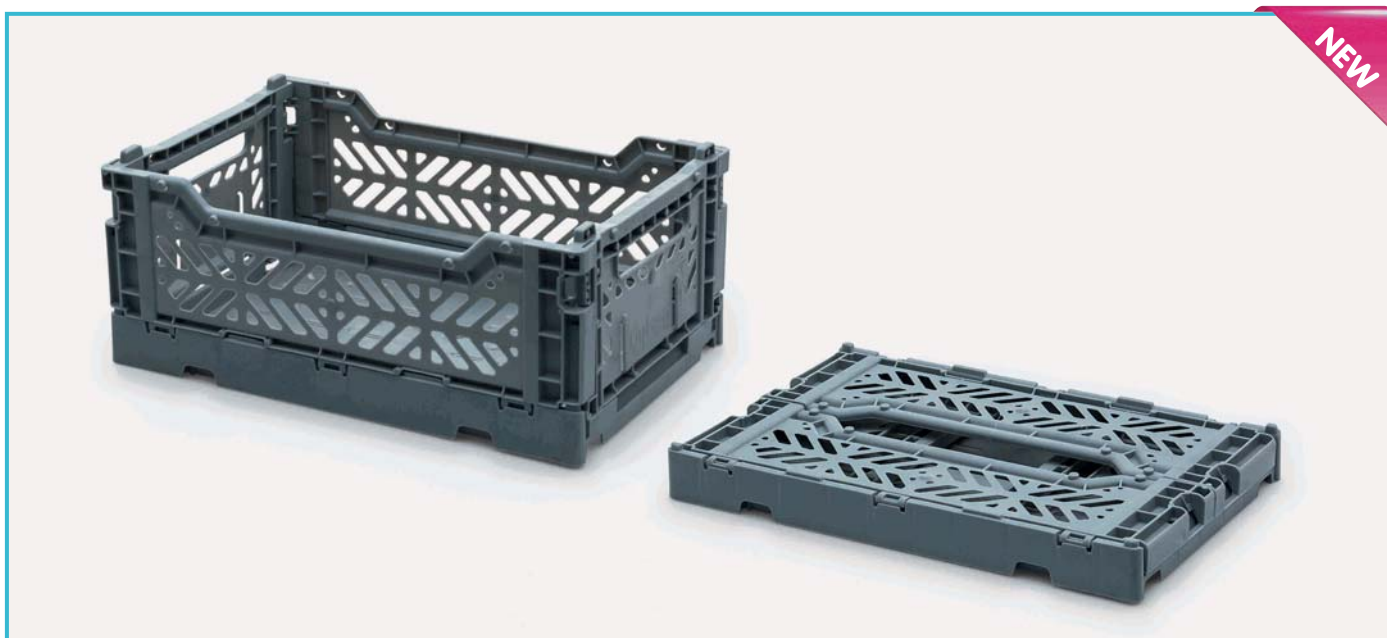
bottles clear	bottles amber	bottle volume	bottle diameter	bottle height	quantity in pack
061.10.050	061.11.050	50 ml	44 mm	75 mm	10 pieces
061.10.100	061.11.100	100 ml	50 mm	93 mm	10 pieces
061.10.250	061.11.250	250 ml	70 mm	113 mm	10 pieces
061.10.500	061.11.500	500 ml	85 mm	154 mm	10 pieces
061.10.901	061.11.901	1000 ml	104 mm	181 mm	10 pieces



### BOXES - "storage" - "click lock"

- Manufactured from polypropylene for easy and safe storage of various products.
- "Click-lock" lid system allows easy closing of the box.
- Boxes are stackable for space saving due to their shape.

storage box click lock	box width	box length	box height	box volume	quantity in pack
062.32.004	108 mm	108 mm	88 mm	0.5 L	1 piece
062.32.010	150 mm	150 mm	86 mm	1.2 L	1 piece
062.32.012	150 mm	150 mm	145 mm	2.0 L	1 piece
062.36.905	300 mm	195 mm	135 mm	5 L	1 piece
062.36.910	385 mm	260 mm	155 mm	10 L	1 piece
062.36.920	460 mm	320 mm	180 mm	20 L	1 piece
062.36.930	510 mm	355 mm	230 mm	30 L	1 piece



### BOXES - "transportation" - "foldable"

- Manufactured from durable polypropylene for storage, organisation and transportation.
- External reinforced ribs allow rough handling. The folded boxes can ensure a space saving by 1/6 in comparison to the open version and they provide space saving in the stores and the transportation vehicles.

catalogue number	box width	box length	box height	box volume	quantity in pack
062.38.904	400 mm	600 mm	220 mm	45 L	1 piece
062.38.915	300 mm	400 mm	145 mm	15 L	1 piece
062.38.945	171 mm	266 mm	105 mm	4 L	1 piece



### TRAYS - "polypropylene"

- Manufactured from polypropylene for multi purpose use. Injection moulded, durable and resist flexing, with strong rounded rim.
- Stackable for space solving solutions, polished surface for easy to clean. Hygienic, resistant to many acids and alkaline solutions, can be used with foods.

catalogue number	base dimensions	height	quantity in pack
062.40.901	183 x 127 mm	50 mm	1 piece
062.40.902	255 x 180 mm	60 mm	1 piece
062.40.905	355 x 245 mm	70 mm	1 piece



### TRAYS - "stainless steel"

- Manufactured from AISI 304 stainless steel with a fine and brilliant finish. Robust seamless construction for long service life.
- Suitable for all laboratory applications due to its smooth corners and non-reacting material used. For sterilization of laboratory instruments, such as syringes, spatulas and more.

catalogue number	base dimensions	height	quantity in pack
062.42.910	400 x 500 mm	50 mm	1 piece
062.42.915	450 x 600 mm	50 mm	1 piece
062.42.920	500 x 700 mm	50 mm	1 piece



### BUCKET - "with lid"

- Manufactured from HD-PE with a uniform wall thickness. Reinforced body prevents distortion when carried and ensures best possible impact strength.

catalogue number	volume	top dia. x height	quantity in pack
062.60.901	1 L	120 x 122 mm	10 pieces
062.60.902	2 L	164 x 138 mm	10 pieces
062.60.903	3 L	190 x 134 mm	10 pieces
062.60.905	5 L	210 x 171 mm	10 pieces
062.60.909	9 L	259 x 226 mm	10 pieces
062.60.918	18 L	313 x 276 mm	10 pieces



### BUCKET - "with spoud"

- Manufactured from polypropylene which stays hard and solid with the use of boiling water.
- Supplied with a carry handle and embossed volume scale inside the bucket

catalogue number	volume	top dia. x height	quantity in pack
062.61.909	9 L	237 x 252 mm	1 piece
062.61.914	14 L	290 x 298 mm	1 piece



### BUCKET - "stainless steel"

- Manufactured from AISI 304 stainless steel with a fine and brilliant finish.
- Perfect choice for applications where durability and long-lasting service are mandatory. Provides high tensile strength, as well as easy cleaning, sanitizing and sterilization.

catalogue number	volume	quantity in pack
062.62.910	10 L	1 piece
062.62.915	15 L	1 piece





## WASTE BINS

➤ Manufactured from thick wall virgin polypropylene. Ideal for easy and safe disposal of various products in laboratories.

**Available 2 types:**

➤ **with press-on lid:** lid opens with the pressure applied on the spring loaded pedal.

➤ **with swing lid:** Unique practical swinging lid can be opened easily with a gentle touch.

waste bin press-on lid	volume	waste bin swing lid	volume
062.71.907	7 L	062.70.905	5 L
062.71.911	11 L	062.70.918	18 L
062.71.918	18 L	062.70.935	35 L
062.71.930	30 L	062.70.950	50 L



## SAFETY BOXES

➤ Shock-proof container, resistant to solvents and perforation. Also puncture resistant with all means. Manufactured from impact copolymer polypropylene in accordance to the UN3291 standard.

➤ Used for safe disposal of contaminated products and sharp objects such as needles, scalpels etc.

➤ Cover provided with a built-in flat opening having a temporary and permanent closing system.

➤ Leakproof when the lid is closed. Built-in needle notch removal system. Labelled according to international standards.

catalogue number	volume	quantity in pack
062.80.903	3 L	1 piece
062.80.905	5 L	1 piece
062.80.912	12 L	1 piece
062.80.925	25 L	1 piece



## TRAY - "medical"

➤ Durable sharps containers that don't puncture, leak or break on impact and has a secure closing mechanism.

➤ Has a special design that prevents hands from entering inside the container.

➤ Visible and recognizable with proper biohazard warning label which also has a fill status line.

➤ 1,3 liter containers are suitable with the medical tray.

➤ Medical tray is a multi-use apparatus which can be used with container or without. Offers practical use during operations

catalogue number	product description	quantity in pack
062.80.901	safety box - 1,3 L	1 piece
062.80.001	tray for safety box	1 piece



### BAGS - "homogenization" - "sterile"

- Extruded from stable polyethylene, ideal for fast and easy crushing of solid samples in liquid.
- Sterilized with gamma irradiation, **free of RNase, DNase, DNA and pyrogene.**
- Can be used also at low temperatures. Maintains the stability of the specimen's microbiological status.
- When working with infectious samples the bag can be sealed by any ordinary bag sealer in order to prevent the escape of aerosols.

➤ bag with no filter



Bag without filter are generally used in laboratories for common practices

➤ bag with side (lateral) filter



Bag with side (lateral) filter is suitable for PCR and small volumes, it can be used with pipettes.

➤ bag with full (page) surface filter



Bag with full (page) surface filter divides the bag in two compartments. Insert the sample to one compartment and after homogenisation process solid particles remains in the original compartment while liquid has filtered into the second compartment.

catalogue number	bag type	volume	width x height	wall thickness	pore size	packing specifications
039.23.003	no filter	400 ml	190 x 300 mm	70 microns	-	50 pcs / pack - 500 pcs / case
039.23.002	side filter	400 ml	190 x 300 mm	70 microns	< 250 microns	50 pcs / pack - 500 pcs / case
039.23.001	full filter	400 ml	190 x 300 mm	70 microns	< 280 microns	50 pcs / pack - 500 pcs / case

## BAGS - "with wire closure" - "sterile"

➤ Made from a special super tough grade of LDPE and are exceptionally transparent, odortight, tearproof and leakproof. Can be frozen to -80°C.

➤ Ideal space saving bags, unbreakable, inexpensive alternative for laboratory bottles and beakers.

➤ Leakproof with unique metal closure system. Write - on white patch offers a practical area for writing notes.

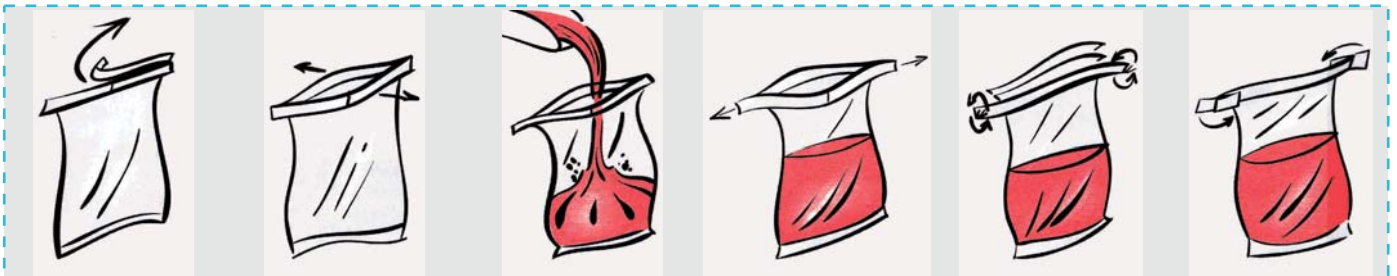
➤ Commonly used with liquid, powder and solid samples for pharmaceutical, chemical, medical, food and biological applications.

➤ Sterilized with gamma irradiation, **free of RNase, DNase, DNA and pyrogene.**



catalogue number	volume	width x height	wall thickness	wire thickness	packing specifications
039.21.001	60 ml	76 x 127 mm	70 microns	0,5 mm	500 pcs / pack - 1000 pcs / case
039.21.002	120 ml	76 x 178 mm	70 microns	0,5 mm	500 pcs / pack - 1000 pcs / case
039.21.003	540 ml	114 x 229 mm	70 microns	0,5 mm	500 pcs / pack - 1000 pcs / case
039.21.004	720 ml	140 x 229 mm	90 microns	0,5 mm	500 pcs / pack - 1000 pcs / case
039.21.005	1650 ml	180 x 300 mm	100 microns	0,5 mm	250 pcs / pack - 1000 pcs / case

### How to use sample bags with wire closure



Tear the upper film strip of the bag along the perforation.

Pull the sample bag open with the loops on the side.

Fill the solid, semisolid or liquid sample.

Close the sample bag by pulling the outer loops apart.

Hold the sample bag on the outer loops and swirl at least 4 times.

Bend wire closures the bag is closed airtight and liquid-tight.

## BAGS - "with zip-lock" - "with write - on - patch"

➤ Made from transparent LDPE with 50 micron wall thickness.

➤ Non-sterile, ideal for dust-free storing, collecting, protecting and shipping of specimens and samples.

➤ With rim channel seal that can be opened and closed repeatedly. 3 write-on white strips offers a practical area for writing specific notes.

catalogue number	width x height	pack quantity
039.08.100	70 x 100 mm	100 pieces
039.08.150	100 x 150 mm	100 pieces
039.08.220	150 x 220 mm	100 pieces
039.08.300	200 x 300 mm	100 pieces



## BAGS - "autoclavable"



- Made from a special grade of polypropylene with high tear and puncture resistance.
- Strong side seams guarantees safe holding of bag content.
- Suitable for autoclaving and can resist pressure differences during autoclaving steps enabling repeatedly autoclaving.
- Bags should be left open during autoclaving.
- Commonly used for safe disposal of contaminated laboratory waste such as used petri dishes, test tubes, sample vials, cultureware, and other biohazardous products.
- Also ideal for shipping, storage and sampling.

**Available 2 types:**

- **plain bags** without printed surface
- **imprinted bags** with blue biohazard labelling and large write-on patch



catalogue number	bag type	width x height	wall thickness	pack quantity
039.30.001	plain	200 x 300 mm	50 microns	100 pcs / pack
039.30.002	plain	300 x 600 mm	50 microns	100 pcs / pack
039.30.003	plain	400 x 700 mm	50 microns	100 pcs / pack
039.30.004	plain	600 x 900 mm	50 microns	100 pcs / pack
039.30.005	plain	700 x 1100 mm	50 microns	100 pcs / pack
039.20.001	imprinted	310 x 660 mm	50 microns	50 pcs / pack
039.20.002	imprinted	415 x 600 mm	50 microns	50 pcs / pack
039.20.003	imprinted	560 x 750 mm	50 microns	50 pcs / pack



## BAGS - "with document wallet"

- Made from a special super tough grade of LDPE and are exceptionally transparent and wear resistant.
- On the back of the bag is an additional document pocket to put in accompanying papers of samples.
- Non-sterile, ideal for safe transportation of specimens and samples.
- With two-coloured imprint with biohazard warning sign.
- Leakproof with press seal closure system.

catalogue number	width x height	pack quantity
039.31.001	150 x 140 mm	100 pcs / pack
039.31.002	150 x 225 mm	100 pcs / pack

## BAG SEALERS



NEW

➤ Bag sealer can easily seal both polypropylene and polyethylene bags and sheets and foils.

➤ Depending on the thickness of the material, welding can be done in max 3 seconds.

catalogue number	operation length	pack quantity
039.32.300	300 mm	1 pc / pack
039.32.500	500 mm	1 pc / pack

## BAG STAND



NEW

➤ Manufactured from polished corrosion steel. Can be used with the polypropylene bag catalogue number 038.30.001.

➤ Extendable height up to 250 mm for to fit various different bag heights.

catalogue number	stand diameter	pack quantity
062.30.002	125 ± 5 mm	1 piece

## BAG BIN



NEW

➤ Manufactured from thick wall virgin polypropylene. Ideal for easy and safe disposal of products in laboratories.

➤ Unique practical swinging lid can be opened easily with a gentle touch.

catalogue number	volume	dimensions WxDxH	pack quantity
062.70.905	5 L	185x142x280 mm	1 piece

## CABLE TIES - "easy lock"



NEW

➤ Bag ties are made from polyamide with raster strips with high tensile strength.

➤ Single used, can not be opened again.

catalogue number	length	width	pack quantity
039.33.098	98 mm	2,5 mm	100 pcs / pack
039.33.160	160 mm	2,5 mm	100 pcs / pack
039.33.140	140 mm	3,5 mm	100 pcs / pack
039.33.290	290 mm	3,5 mm	100 pcs / pack
039.33.250	250 mm	4,8 mm	100 pcs / pack
039.33.300	300 mm	7,8 mm	100 pcs / pack

## BAG LOCKS - "quick lock"



NEW

➤ Bag ties is made from polypropylene.

➤ Perfect tool for very quick closing the bags tightly by pulling the chain body through the key hole.

➤ Multi used, can be re-opened again.

catalogue number	length	with	pack quantity
039.34.105	105 mm	2,50 mm	100 pcs / pack
039.34.150	150 mm	2,50 mm	100 pcs / pack



### DESICCATORS - "glass"

➤ Glass desiccators are manufactured from borosilicate glass 3.3 which is resistant to heat. They meet the highest quality standards according to DIN 12491. Excellent smooth grinded flanges prevent vacuum leaks and do not need any greasing.

➤ Vacuum desiccators designed to be use under vacuum up to 10 Torr and excellent smooth grinded flanges prevent vacuum leaks and do not need any greasing.

desiccator diameter	non vacuum desiccators	vacuum desiccators	pack quantity
200 mm	039.01.200	039.02.200	1 piece
250 mm	039.01.250	039.02.250	1 piece
300 mm	039.01.300	039.02.300	1 piece



### DESICCATORS - "plastic"

➤ Plastic desiccators have a base manufactured from polypropylene.

➤ The top dome moulded in rigid and transparent polycarbonate giving a clear view.

➤ Can hold vacuum up to 740 mm for 24 hours.

➤ Desiccator stopcock has a 3 way acting PTFE plug.

catalogue number	desiccator diameter	desiccator type	pack quantity
039.12.200	200 mm	vacuum	1 piece
039.12.250	250 mm	vacuum	1 piece
039.12.300	300 mm	vacuum	1 piece

### SILICA - GEL - "desiccant" - beads

➤ Silica-Gel beads are self-indicating drying agents specially usable in desiccators to absorb moisture.

➤ Original orange colour (when gel is active) gradually turns to white as the gel adsorbs moisture.

➤ The colour change offers a great advantage since it enables monitoring of the saturation level.

➤ They have a grain size of 1 to 3 mm and free from any heavy metals and therefore environmentally compatible.

➤ Silica-Gel beads can be regenerated when heated at a temperature of maximum 120°C until it turns to its original colour.

catalogue number	packing specification
039.16.001	1 kg in P.P bottle



**DESICCATOR PLATES - "porcelain"**

- Desiccator plates are manufactured from glazed porcelain.
- Circular holes enables perfect heat transfer and they perfectly fit to the desiccator base.

catalogue number	desiccator diameter	pack quantity
039.05.200	190 ± 10 mm	1 piece
039.05.250	230 ± 15 mm	1 piece
039.05.300	285 ± 15 mm	1 piece

**MORTARS - "porcelain" - "with pestle"**

- Manufactured from glazed porcelain with a spout according to DIN 12906 standard. It has a hardness of 5 Mohs providing fairly good resistance during crushing the samples.
- Complete with relevant size a porcelain pestle.

catalogue number	external diameter	pack quantity
038.02.075	75 ± 5 mm	1 piece
038.02.100	100 ± 5 mm	1 piece
038.02.125	125 ± 5 mm	1 piece
038.02.150	150 ± 5 mm	1 piece
038.02.180	180 ± 5 mm	1 piece

**MORTARS - "agate" - "with pestle"**

- Manufactured from agate stone. Recommended for use in laboratories demanding contamination free results.
- It has a hardness of 7 Mohs providing very good resistance during crushing the samples. Complete with relevant size a agate pestle.

catalogue number	internal diameter	pack quantity
038.07.050	50 ± 5 mm	1 piece
038.07.075	75 ± 5 mm	1 piece
038.07.100	100 ± 5 mm	1 piece
038.07.125	125 ± 5 mm	1 piece

**MORTARS - "alumina" - "with pestle"**

- Manufactured from pure aluminium oxide. Highly resistant to chemical attacks.
- It has a hardness of 9 Mohs providing excellent resistance during crushing the samples.
- Complete with relevant size a alumina pestle.

catalogue number	external diameter	pack quantity
038.08.075	75 ± 5 mm	1 piece
038.08.100	100 ± 5 mm	1 piece
038.08.125	125 ± 5 mm	1 piece





### EVAPORATING DISHES - "porcelain" - "flat"

- Manufactured from porcelain as flat bottom according to DIN 12907. Externally and internally manufactured from glazed porcelain except the spout.
- A perfect product for heating and evaporating liquids.
- Not recommended to use with direct flame in order to prevent breakage.

catalogue number	external diameter	height	volume	pack quantity
038.11.060	60 mm	13 mm	20 ml	6 pieces
038.11.080	80 mm	16 mm	60 ml	6 pieces
038.11.100	100 mm	20 mm	125 ml	6 pieces



### EVAPORATING DISHES - "porcelain" - "round"

- Manufactured from porcelain as round bottom according to DIN 12907. Externally and internally manufactured from glazed porcelain except the spout.
- A perfect product for heating and evaporating liquids. Not for use with direct flame in order to prevent breakage.

catalogue number	external diameter	height	volume	pack quantity
038.12.060	60 mm	25 mm	30 ml	6 pieces
038.12.080	80 mm	32 mm	80 ml	6 pieces
038.12.100	100 mm	40 mm	175 ml	6 pieces
038.12.125	125 mm	50 mm	450 ml	6 pieces
038.12.150	150 mm	65 mm	750 ml	6 pieces



### EVAPORATING DISHES - "st. steel" - "round"

- Manufactured from stainless steel as round bottom.
- A perfect product for heating and evaporating liquids.
- Can be used with direct flame in order to prevent breakage.

catalogue number	external diameter	height	volume	pack quantity
038.14.060	60 mm	30 mm	50 ml	1 piece
038.14.080	80 mm	40 mm	130 ml	1 piece
038.14.100	100 mm	50 mm	250 ml	1 piece



### EVAPORATING DISHES - "quartz glass"

- Manufactured from quartz glass as round bottom.
- A perfect product for heating and evaporating liquids.
- Can be used with direct flame in order to prevent breakage.

catalogue number	external diameter	height	volume	pack quantity
038.16.060	60 mm	32 mm	20 ml	1 piece
038.16.080	80 mm	45 mm	49 ml	1 piece
038.16.100	100 mm	55 mm	90 ml	1 piece





### CRYSTALLIZATION DISHES - "glass"

➤ Manufactured from borosilicate glass 3.3 according to DIN 12338.

➤ Used for growing crystals and any other application requiring a dish which is in height between petri dishes and glass beakers.

catalogue number	external diameter	height	pack quantity
049.05.060	60 mm	35 mm	1 piece
049.05.100	70 mm	40 mm	1 piece
049.05.150	80 mm	45 mm	1 piece
049.05.300	95 mm	55 mm	1 piece
049.05.900	140 mm	75 mm	1 piece



### CASSEROLES

➤ Manufactured from glazed porcelain according to DIN 12907.

catalogue number	external diameter	height	pack quantity
038.10.080	80 ± 10 mm	45 mm	1 piece
038.10.100	100 ± 10 mm	65 mm	1 piece



### CRYSTALLIZATION DISHES - "stainless steel"

➤ Alternative to borosilicate glass dishes for similar applications.

➤ Manufactured from seamless and robust stainless steel.

catalogue number	external diameter	height	pack quantity
049.08.070	70 mm	35 mm	1 piece
049.08.085	85 mm	45 mm	1 piece
049.08.110	110 mm	55 mm	1 piece



### COMBUSTION BOATS

➤ Manufactured from porcelain with temperature resistivity till 1050°C.

catalogue number	dimensions	pack quantity
038.17.001	80 x 13 x 8 mm	10 pieces
038.17.002	102 x 20 x 13 mm	10 pieces



### DISH TONG

➤ Manufactured from polished stainless steel.

➤ Due to unique design can hold all size of evaporating dishes.

➤ Curved teeth of the dish tong enables easy and safe handling of the evaporating dishes.

catalogue number	total length	pack quantity
038.05.001	280 ± 10 mm	1 piece



### CRUCIBLES - "porcelain" - "1050°C"

- Manufactured from glazed porcelain both inside and outside according to DIN 12904 and ISO 1772 standards.
- Porcelain crucibles can resist temperatures up to 1050°C.
- Supplied without cover lids.
- Cover lids should be ordered separately.

catalogue number	external diameter	height	volume	pack quantity
038.13.H30	30 mm	38 mm	15 ml	6 pieces
038.13.M35	35 mm	28 mm	13 ml	6 pieces
038.13.H35	35 mm	44 mm	24 ml	6 pieces
038.13.L40	40 mm	25 mm	15 ml	6 pieces
038.13.M40	40 mm	32 mm	20 ml	6 pieces
038.13.H40	40 mm	50 mm	35 ml	6 pieces
038.13.L45	45 mm	28 mm	25 ml	6 pieces
038.13.M45	45 mm	36 mm	30 ml	6 pieces
038.13.H45	45 mm	56 mm	50 ml	6 pieces
038.13.L50	50 mm	32 mm	29 ml	6 pieces
038.13.M50	50 mm	40 mm	39 ml	6 pieces
038.13.H50	50 mm	65 mm	75 ml	6 pieces
038.13.L60	60 mm	38 mm	45 ml	6 pieces
038.13.M60	60 mm	50 mm	85 ml	6 pieces
038.13.M70	70 mm	60 mm	140 ml	6 pieces

### CRUCIBLES - "porcelain" - "1150°C"

- HALDENWANGER crucibles manufactured from glazed porcelain both inside and outside according to DIN 12904 and ISO 1772 standards.
- Due to the inherent physical characteristics crucibles can resist temperatures up to 1150°C. Supplied without cover lids.

catalogue number	manufacturer cat. no.	external diameter	height	volume	pack quantity
038.15.790	79C/0	30 mm	38 mm	15 ml	5 pieces
038.15.791	79C/1	35 mm	44 mm	24 ml	5 pieces
038.15.792	79C/2	40 mm	50 mm	40 ml	5 pieces



### CRUCIBLE LIDS

- Manufactured from glazed porcelain.
- Porcelain crucible lids can resist temperatures up to 1050°C.

catalogue number	internal diameter	pack quantity
038.15.030	30 mm	6 pieces
038.15.035	35 mm	6 pieces
038.15.040	40 mm	6 pieces
038.15.045	45 mm	6 pieces
038.15.050	50 mm	6 pieces
038.15.060	60 mm	6 pieces





### CRUCIBLES - "alumina"

➤ Alumina crucibles can resist to 1700°C.

catalogue number	external dia. x height	pack quantity
038.13.A20	33 x 44 mm	6 pieces
038.13.A50	46 x 53 mm	6 pieces
038.13.A99	64 x 86 mm	6 pieces



### CRUCIBLES - "quartz"

➤ Quartz crucibles can resist to 1050°C.

catalogue number	external dia. x height	pack quantity
038.13.Q15	38 x 30 mm	1 piece
038.13.Q24	44 x 35 mm	1 piece
038.13.Q40	50 x 40 mm	1 piece



### CRUCIBLES - "st. steel"

➤ Stainless steel crucibles can resist to 1200°C.

catalogue number	external dia. x height	pack quantity
038.13.S35	40 x 35 mm	1 piece
038.13.S45	50 x 45 mm	1 piece
038.13.S50	60 x 50 mm	1 piece

### TONG - "crucible"

- Manufactured from stainless steel.
- Curved teeth of the tong provides easy handling.

catalogue number	total length	pack quantity
038.06.250	250 ± 10 mm	1 piece
038.06.300	300 ± 10 mm	1 piece
038.06.400	400 ± 10 mm	1 piece



## BUNSEN BURNERS - "for all gases such as neutral gas, bottle gas, coal gas"



"mini"

- Low form standard Bunsen burner for standard flame.
- Gas flow controlled by a rotatable regulator for easy flame adjustment.
- With built-in flame retainer and adjustable air regulator.
- Mini design allows usage even in short and narrow places.

catalogue number	pack quantity
050.01.005	1 piece



"standard"

- Standard Bunsen burner for standard flame.
- Gas flow controlled by a rotatable regulator for easy flame adjustment.
- With built-in flame retainer and adjustable air regulator.
- The stabilizer top allows gas to emerge at a low velocity in an annular ring acting as a pilot for the regular flame.

catalogue number	pack quantity
050.01.001	1 piece



"tirril"

- Tirril burners allow greater flexibility in the adjustment of the air-gas mixture.
- Easy adjustment in the air&gas mixture even for very slow heating or quick boiling.
- Suitable for high temperatures up to 1500°C and with its compact design, can be used with most of the tripods.

catalogue number	pack quantity
050.01.002	1 piece



"meker"

- Suitable for high temperature work up to 1700°C.
- Has a perforated plate of 25 mm diameter which provides flame stability and ensures high and evenly distributed flame.
- Gas flow controlled by a rotatable regulator for easy flame adjustment.
- Other technical specifications are same as other Bunsen burners.

catalogue number	pack quantity
050.01.003	1 piece



### BUNSEN BURNER HOSE

- Manufactured from thick rubber hose specially designed to be used with Bunsen burners. Reinforced ends fit to Bunsen burner and gas tap securely without any risk of gas leakage.

catalogue number	hose wall thickness	hose length	pack quantity
050.08.075	6 mm	75 cm	1 piece
050.08.100	6 mm	100 cm	1 piece



### BUNSEN BURNER STAND

- Manufactured from spray coated heavy casted metal.
- Perfectly fits to burner base and prevents the burner tilt down due to the torsion and twisting effect of burner hose.

- Perfectly fits to the base shape of Bunsen burners 050.01.002 and 050.01.003.



catalogue number	pack quantity
050.09.001	1 piece

## BUNSEN BURNER



“with gas cartridge”

- High performance multi purpose bunsen burner.
- Portable bunsen burner use disposable gas cartridge. Supplied without gas cartridge.

catalogue number	pack quantity
050.01.004	1 piece

## BLOW LAMP



“with gas cartridge”

- High performance multi purpose blowlamp with a high quality brass burner.
- Use disposable gas cartridge.
- Supplied without gas cartridge.
- Metallic cartridge cover with plastic screw on base for safe and easy cartridge insertion.

catalogue number	pack quantity
050.02.001	1 piece



## GAS CARTRIDGE

- Spare gas cartridge for bunsen burner and blow lamp.

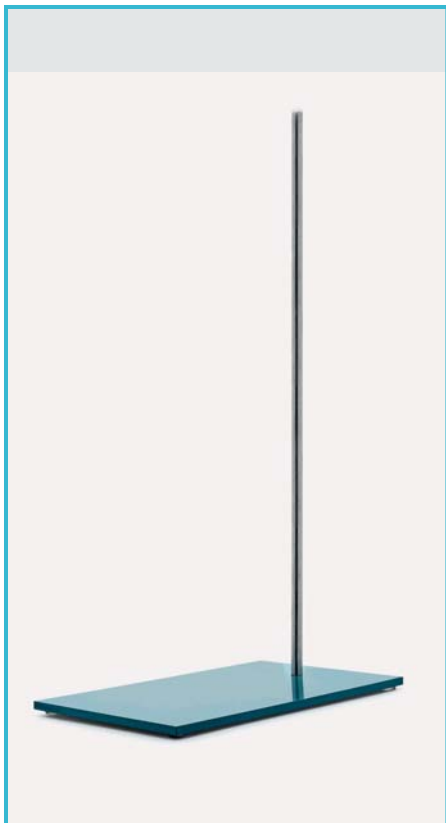
catalogue number	pack quantity
050.03.001	1 piece



## BUNSEN BURNER LIGHTER

- Perfect lighter with flexible gas outlet tube which enables lighting bunsen burners in any desired position and 180° angle.
- Refillable from bottom. Security button adds extra safety during work.

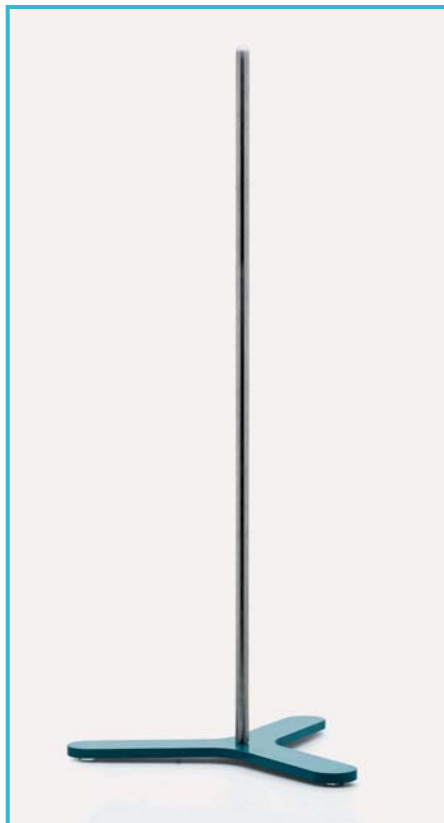
catalogue number	gas tube length	total length	pack quantity
050.10.001	150 mm	300 ml	1 piece



### STANDS - "rectangular"

- Highly stable laboratory stand due to the rectangular base which is stove enamel coated.
- Rubber support feet prevents the stand from sliding.
- Supplied without rods please select the suitable rod from "stand rods".

catalogue number	foot length	base thickness	pack quantity
049.03.115	115 mm	8 mm	1 piece
049.03.150	150 mm	8 mm	1 piece



### STANDS - "triangle"

- Highly stable laboratory stand due to the triangular base which is stove enamel coated.
- Rubber support feet prevents the stand from sliding.
- Supplied without rods please select the suitable rod from "stand rods".

catalogue number	dimensions	pack quantity
049.01.130	130 x 210 mm	1 piece
049.01.150	150 x 300 mm	1 piece
049.01.200	200 x 315 mm	1 piece



### STANDS RODS

- Manufactured either from galvanised steel or from stainless steel 18/10 grade. Supplied with M10 thread.

galvanised steel	rod length	rod diameter	pack quantity
049.06.004	600 mm	12 mm	1 piece
049.06.005	750 mm	12 mm	1 piece
049.06.006	1000 mm	12 mm	1 piece

stainless steel	rod length	rod diameter	pack quantity
049.07.004	600 mm	12 mm	1 piece
049.07.005	750 mm	12 mm	1 piece
049.07.006	1000 mm	12 mm	1 piece

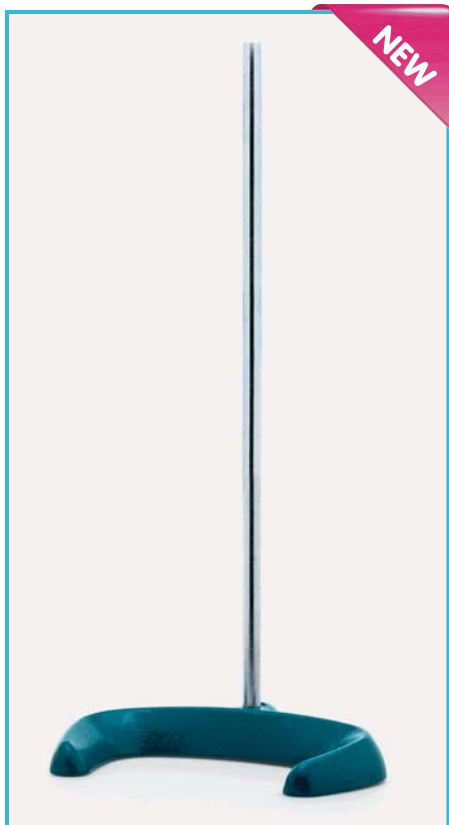


### STANDS - "ABS"

- Base is manufactured from ABS.
- Offers multiple alternatives for the position of the support rod through 2 holes one in the middle and the other one at the rear of the base.
- White base colour gives perfect observation of titration colour changes.
- Delivered complete with screw-in support rod of 600 mm.

catalogue number	base width	base length	pack quantity
049.04.175	175 mm	300 mm	1 piece





### STANDS - "horse shoe"

➤ Manufactured from powder coated cast steel.

➤ Horseshoe base design offers very stable holding of the assembled objects and also possibility of getting close to the stand rod.

➤ 3 different size offers alternatives for different purposes such as titration, fixing mechanical stirrers.

catalogue number	size	rod dia.	rod height	pack quantity
049.09.180	small	12 mm	60 mm	1 piece
049.09.250	medium	14 mm	70 mm	1 piece
049.09.320	large	16 mm	80 mm	1 piece



### CERAMIC TRIANGLES

➤ Manufactured from ceramic cylinders around iron wire.

catalogue number	ceramic cylinder dimension	pack quantity
050.07.050	50 mm	1 piece
050.07.060	60 mm	1 piece



### TRIPOD - "fix height"

➤ Manufactured from chrome plated steel.

➤ The circular ring has a fixed diameter of 125 mm that can hold wire gauzes and ceramic triangles of all common dimensions.

catalogue number	fix height	pack quantity
050.04.001	200 mm	1 piece



### LABORATORY JACKS

➤ Positioners are manufactured from rugged, chemical-resistant anodized aluminium with stainless steel operating screw.

➤ The scissor movement is activated by a large control knob and positioner enables smooth, continuous operation throughout its range.

catalogue number	plate width	plate length	pack quantity
050.05.150	150 mm	150 mm	1 piece
050.05.200	200 mm	200 mm	1 piece



150 mm standard diameter of circular ring can be reduced to 125 mm with the help of supplied reduction ring.

### TRIPOD - "adjustable height"

➤ Manufactured from chrome plated steel with a feature of adjustable height from 200 mm to 300 mm.

➤ 150 mm standard diameter of circular ring can be reduced to 125 mm with the help of supplied reduction ring.

catalogue number	pack quantity
050.04.002	1 piece



### WIRE GAUZES

➤ Manufactured from galvanised iron wire with circular ceramic centre.

catalogue number	wire gauze dimensions	pack quantity
050.06.001	150x150 mm	1 piece

## CLAMPS - "2 prongs"



➤ Manufactured from chrome plated cast steel with two prongs which are PVC coated for holding the objects gently.

➤ Two separately adjustable clamps enables perfect control of holding pressure and precise positioning of the objects.

➤ Clamps can be opened and closed smoothly with a grip width of 0-50 mm.

<i>solid stem clamp</i>	<i>swivel clamp</i>	<i>jaw opening</i>	<i>pack quantity</i>
045.01.001	045.04.001	0 - 50 mm	1 piece

➤ with solid stem of 12 mm rod diameter with the holding angle and distance from the support rod can be adjusted by a separate bosshead.

➤ Available 2 types:

➤ with swivel mechanism which enables the object freely swivel 360° and lockable at any angle. Complete with a integral bosshead usable for rods maximum diameter of 21 mm.

## CLAMPS - "3 prongs"



➤ Manufactured from chrome plated cast steel with two prongs which are PVC coated for gentle hold of the objects.

➤ Two separately adjustable clamps enables perfect control of holding pressure and precise positioning of the objects.

➤ Clamps can be opened and closed smoothly with a grip width of 0-70 mm.

<i>solid stem clamp</i>	<i>swivel clamp</i>	<i>jaw opening</i>	<i>pack quantity</i>
045.03.001	045.06.001	0 - 70 mm	1 piece

➤ with solid stem of 12 mm rod diameter with the holding angle and distance from the support rod can be adjusted by a separate bosshead.

➤ Available 2 types:

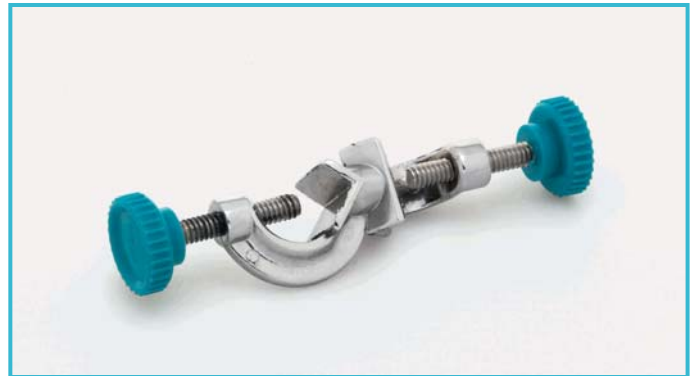
➤ with swivel mechanism which enables the object freely swivel 360° and lockable at any desired angle. Complete with an integral bosshead usable for rods max.



**BOSSHEADS - "standard use"**

- Manufactured from chrome plated cast alloy with smoothly opening distance of 0 - 15 mm.
- With fix stem that holds the objects on fixed position.

catalogue number	suitable for rods	pack quantity
046.01.002	0 - 16 mm	1 piece

**BOSSHEADS - "standard use" - "swivel"**

- Manufactured from chrome plated cast alloy with smoothly opening distance of 0 - 15 mm.
- With swivel mechanism which enables the object freely swivel 360° and lockable at any desired angle.

catalogue number	suitable for rods	pack quantity
046.01.001	0 - 16 mm	1 piece

**BOSSHEADS - "heavy duty"**

- Small size bosshead manufactured from chrome plated cast steel with smoothly opening distance of 0 - 16 mm.
- Due to the sturdy construction specially suitable to hold heavy objects.

catalogue number	size	suitable for rods	pack quantity
046.05.001	small	0 - 16 mm	1 piece

**BOSSHEADS - "heavy duty"**

- Large size bosshead manufactured from powder coated cast steel with smoothly opening distance of 0 - 20 mm.
- Due to the sturdy construction specially suitable to hold heavy objects.

catalogue number	size	suitable for rods	pack quantity
046.05.002	large	0 - 20 mm	1 piece

**BOSSHEADS - "for frame work"**

- Manufactured from chrome plated cast steel and suitable for frame works and fixing perpendiculars.
- Can be moved vertically and horizontally along the rods.

catalogue number	suitable for rods	pack quantity
046.07.001	12 mm	1 piece



## SPATULAS - "macro spoon"



➤ Manufactured from high quality (AISI 304) polished stainless steel. Robust seamless construction guarantees long working life and smooth finish enables easy cleaning.

➤ Most commonly used spatula for general laboratory applications.

➤ One end flat spatula and the other end as macro spoon.

catalogue number	spatula total length	pack quantity
047.01.120	120 ± 5 mm	1 piece
047.01.150	150 ± 5 mm	1 piece
047.01.180	180 ± 5 mm	1 piece
047.01.210	210 ± 5 mm	1 piece
047.01.250	250 ± 10 mm	1 piece
047.01.300	300 ± 10 mm	1 piece

## SPATULAS - "chattaway"



➤ Manufactured from high quality (AISI 304) polished stainless steel. Robust seamless construction guarantees long working life and smooth finish enables easy cleaning.

➤ Specially efficient and practical to hold products from flat and sticky surfaces due to the bent flat end.

➤ One end flat and the other end as bent flat.

catalogue number	spatula total length	pack quantity
047.09.100	100 ± 5 mm	1 piece
047.09.130	130 ± 5 mm	1 piece
047.09.150	150 ± 5 mm	1 piece
047.09.180	180 ± 5 mm	1 piece
047.09.210	210 ± 5 mm	1 piece

## SPATULAS - "poly"



➤ Manufactured from high quality (AISI 304) polished stainless steel. Robust seamless construction guarantees long working life and smooth finish enables easy cleaning.

➤ Specially efficient and practical to hold products from the edges of flasks due to the ellipsoidal grooved end.

➤ One end flat spatula and the other end as grooved.

catalogue number	spatula total length	pack quantity
047.08.150	150 ± 5 mm	1 piece
047.08.180	180 ± 5 mm	1 piece
047.08.210	210 ± 5 mm	1 piece

## SPATULAS - "double end"



➤ Manufactured from high quality (AISI 304) polished stainless steel.

➤ Robust seamless construction guarantees long working life and smooth finish enables easy cleaning.

➤ Specially efficient and practical to hold products from flat and sticky surfaces due to the bent flat end.

catalogue number	spatula total length	pack quantity
047.07.130	130 ± 5 mm	1 piece
047.07.150	155 ± 5 mm	1 piece
047.07.185	180 ± 5 mm	1 piece
047.07.210	210 ± 5 mm	1 piece
047.07.250	255 ± 10 mm	1 piece
047.07.300	300 ± 10 mm	1 piece

## SPATULAS - "round grooved"



➤ Manufactured from high quality (AISI 304) polished stainless steel. Robust seamless construction guarantees long working life and smooth finish enables easy cleaning.

➤ Specially efficient and practical to handle powders due to the round grooved end.

➤ One end flat spatula and the other end as round grooved.

catalogue number	spatula total length	pack quantity
047.02.150	150 ± 5 mm	1 piece
047.02.180	185 ± 5 mm	1 piece
047.02.210	210 ± 5 mm	1 piece

## SPATULAS - "curved"

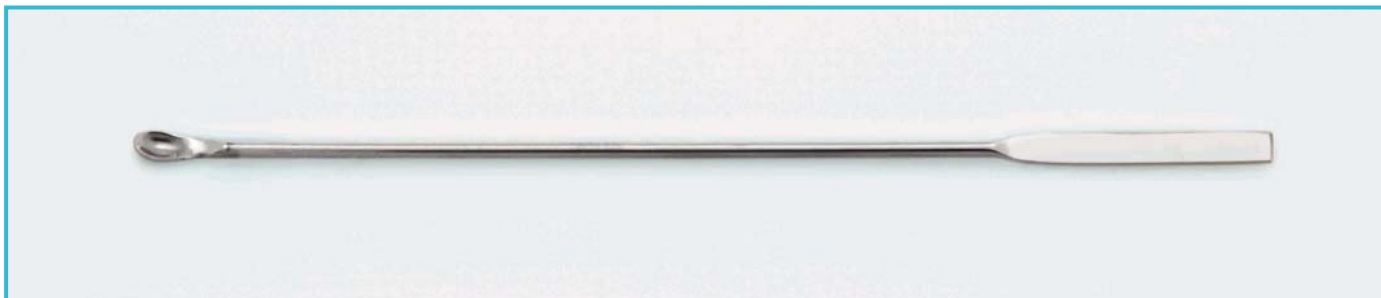


➤ Manufactured from high quality (AISI 304) polished stainless steel.

➤ Robust seamless construction guarantees long working life and smooth finish enables easy cleaning.

catalogue number	spatula total length	pack quantity
047.03.150	150 ± 5 mm	1 piece
047.03.180	180 ± 5 mm	1 piece
047.03.210	210 ± 5 mm	1 piece

## SPATULAS - "micro spoon"



► Manufactured from high quality (AISI 304) polished stainless steel. Robust seamless construction guarantees long working life and smooth finish enables easy cleaning.

► Specially efficient and practical to handle small particles due to the size of micro spoon end.

► One end flat spatula and the other end as micro spoon.

catalogue number	spatula total length	pack quantity
047.06.150	150 ± 5 mm	1 piece
047.06.180	180 ± 5 mm	1 piece
047.06.210	210 ± 5 mm	1 piece

## SPATULAS - "flat knife"



► Manufactured from high quality (AISI 304) polished stainless steel. Robust seamless construction guarantees long working life and smooth finish enables easy cleaning.

► Specially efficient and practical to general use due to the flexible flat knife end.

► One end wooden handle and the other end as flat knife.

catalogue number	spatula blade length	pack quantity
047.10.100	100 ± 5 mm	1 piece
047.10.150	150 ± 5 mm	1 piece
047.10.200	200 ± 5 mm	1 piece
047.10.300	300 ± 10 mm	1 piece



## SPATULA &amp; SCISSOR SET

► All items are manufactured from high quality AISI 304 polished stainless steel.

► Easy to store and carry with the wallet. Empty wallet is suitable for most of the metalwares and ready to assemble personal sets.

catalogue number	set consist of below items	pack quantity
047.05.001	047.02.180	1 piece
	047.03.180	1 piece
	047.06.180	1 piece
	047.09.180	1 piece
	048.07.160	1 piece
	048.24.160	1 piece
047.05.002	empty wallet	1 piece

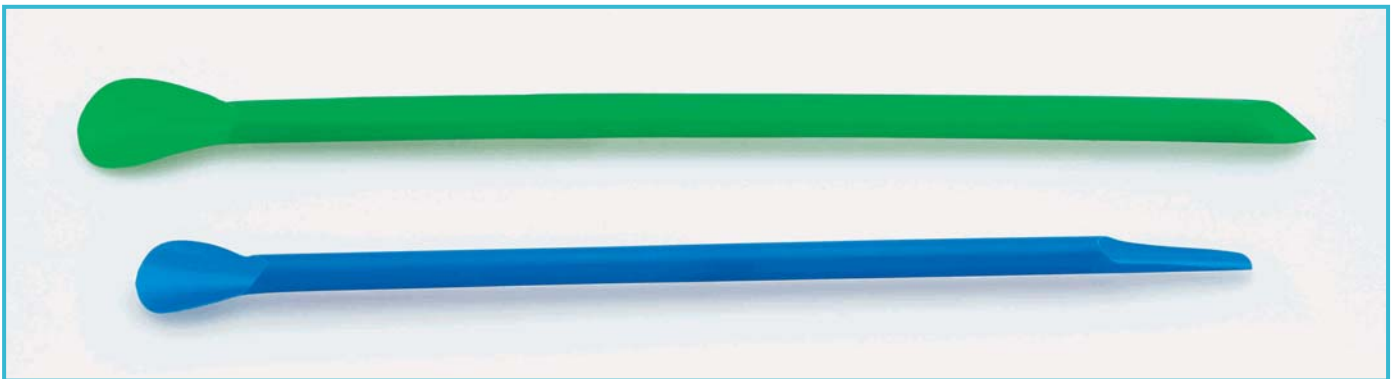
## SPATULAS - "macro spoon" - "polypropylene"



- Manufactured from high grade polypropylene.
- Consists of a spoon on one side which allows easy transfer of sample, while the other end is a flat construction with a knife edge which can be used to draw salt or breaking crystals.

catalogue number	spatula total length	pack quantity
047.30.150	150 mm	1 piece
047.30.180	180 mm	1 piece
047.30.210	210 mm	1 piece

## SPATULAS - "tubular" - "polypropylene"



- Manufactured from polypropylene, ideal tools for dispensing or sample collection of powders or soft solids.
- Autoclavable and complies with FDA standards.
- Size related unique designs enables perfect fit with standard 15 mm and 50 ml centrifuge tubes.

- Shatter resistant in liquid nitrogen and resistant to dilute acids and bases and can be used with hot liquids.

catalogue number	spatula blade length	pack quantity
047.31.015	15 ml	300 pieces
047.31.050	50 ml	150 pieces



### SCOOPS - "P.P" - "set of 3"

- Manufactured from polypropylene. Volume marked.
- Scoops have flat bottom provides to stand horizontally.
- Scoops have rounded corners for easy cleaning.
- Excellent for scooping of small or large volumes anything from powder to ice.
- Packed as 3 scoops as a set with scoop volume of 50, 100 and 250 ml.

catalogue number	pack quantity
037.26.001	1 set



### SCOOPS - "P.E" - "macro"

- Manufactured from HD-PE.
- Scoops have rounded corners for easy cleaning.
- Excellent for scooping of small or large volumes anything from powder to ice.

catalogue number	size	scoop volume	pack quantity
037.27.001	small	500 ml	1 piece
037.27.002	medium	1000 ml	1 piece
037.27.003	large	2000 ml	1 piece

The indicated volumes are an estimated volume and are not meant for taking exact sample volumes.



### SCOOPS - "stainless steel"

- Manufactured from stainless steel.
- Scoops have rounded corners for easy cleaning.
- Excellent for scooping of small or large volumes anything from powder to ice.

catalogue number	scoop diameter	pack quantity
037.08.050	50 ml	1 piece
037.08.075	75 ml	1 piece
037.08.100	100 ml	1 piece
037.08.120	120 ml	1 piece

The indicated volumes are an estimated volume and are not meant for taking exact sample volumes.

**SCOOPS - "aluminium"**

- Manufactured from polished aluminium without any edges and crevices for pharmaceutical use.
- Resists to most of the chemicals and suitable for autoclaves.

catalogue number	scoop total length	pack quantity
047.18.015	85 mm	1 piece
047.18.020	125 mm	1 piece
047.18.025	145 mm	1 piece
047.18.035	185 mm	1 piece
047.18.045	250 mm	1 piece
047.18.055	290 mm	1 piece
047.18.070	350 mm	1 piece

**SCOOP - "stainless steel"**

- Manufactured from polished AISI 304 stainless steel. Suitable for all laboratory purposes and especially recommended for pharmaceutical use due to free of edges and crevices.

catalogue number	scoop total length	pack quantity
047.18.002	200 ± 5 mm	1 piece

**SPOON - "stainless steel"**

- Suitable for all laboratory purposes and especially recommended for pharmaceutical use due to free of edges and crevices.

catalogue number	spoon total length	pack quantity
047.18.001	200 ± 5 mm	1 piece

**SCOOPS - "P.P" - "sterile"**

- Manufactured from high grade polypropylene.
- Individually packed and sterilized.
- Available in two different sizes and ready to use.

catalogue number	scoop total length	pack quantity
037.28.001	115 mm	1 piece
037.29.001	150 mm	1 piece





### FORCEPS - "general use"

- Manufactured from excellent grade polished stainless steel with blunt points and with & without 1:2 tooth.
- Available 2 types:
  - blunt point without tooth.
  - blunt point with 1:2 tooth.

forceps without tooth	forceps with tooth	forceps length	pack quantity
048.01.105		105 ± 5 mm	1 piece
048.01.115	048.02.115	115 ± 5 mm	1 piece
048.01.130	048.02.130	130 ± 5 mm	1 piece
048.01.145	048.02.145	145 ± 5 mm	1 piece
048.01.160	048.02.160	160 ± 5 mm	1 piece
048.01.200		200 ± 5 mm	1 piece
048.01.250		250 ± 10 mm	1 piece
048.01.300		300 ± 10 mm	1 piece



### FORCEPS - "dissecting"

- Manufactured from excellent grade polished stainless steel with fine sharp points and sprung flutes.
- Available 2 types:
  - straight body form
  - curved body form

catalogue number	forceps body form	forceps length	pack quantity
048.07.105	sharp - straight	105 ± 5 mm	1 piece
048.07.115	sharp - straight	115 ± 5 mm	1 piece
048.07.130	sharp - straight	130 ± 5 mm	1 piece
048.07.150	sharp - straight	150 ± 5 mm	1 piece
048.07.160	sharp - straight	160 ± 5 mm	1 piece
048.07.200	sharp - straight	200 ± 5 mm	1 piece
048.08.105	sharp - curved	105 ± 5 mm	1 piece
048.08.115	sharp - curved	115 ± 5 mm	1 piece
048.08.130	sharp - curved	130 ± 5 mm	1 piece



### FORCEPS - "ABS" - "disposable"

- Manufactured from ABS for disposable use with corrugated handles and serrated tips.
- Fine sharp points and straight form offer many advantages.
- Available 2 types:
  - non-sterilized
  - sterilized
- Sterilized forcepsts are **sterilized by gamma radiation and individually packed.**

catalogue number	specification	forceps length	pack quantity
048.10.110	non - sterilized	110 mm	10 pieces
048.11.110	gamma - sterilized	110 mm	1 piece



**SCISSORS - "laboratory use"**

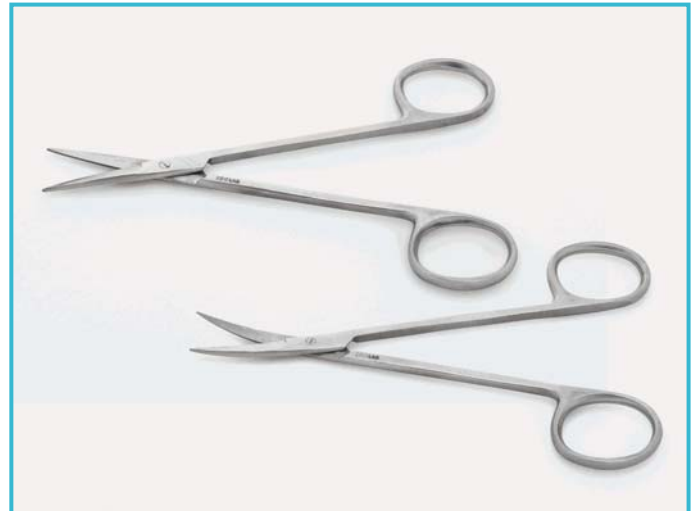
- Manufactured from excellent grade polished stainless steel with straight form and close shanks.
- Available 3 types:
  - sharp / sharp points
  - blunt / blunt points
  - sharp / blunt points

catalogue number	scissor point type	total length	pack quantity
048.22.130	sharp - sharp	130 ± 5 mm	1 piece
048.22.160	sharp - sharp	150 ± 5 mm	1 piece
048.23.130	blunt - blunt	130 ± 5 mm	1 piece
048.23.160	blunt - blunt	160 ± 5 mm	1 piece
048.24.130	blunt - sharp	130 ± 5 mm	1 piece
048.24.160	blunt - sharp	160 ± 5 mm	1 piece

**SCISSORS - "dissecting"**

- Manufactured from excellent grade polished stainless steel with fine sharps points and close shanks.
- Available 2 types:
  - straight body form
  - curved body form

catalogue number	scissor body form	total length	pack quantity
048.25.130	straight	130 ± 5 mm	1 piece
048.26.130	curved	130 ± 5 mm	1 piece

**SCISSORS - "general use"**

- Manufactured from stainless steel (metal part only) with plastic rubber coated handles.
- Ideal to be used for all daily purposes such as cutting papers, hoses, etc.

catalogue number	scissor body form	scissor blade length	scissor total length	pack quantity
048.30.130	straight	55 mm	130 mm	1 piece
048.30.160	straight	75 mm	160 mm	1 piece
048.30.200	curved	90 mm	200 mm	1 piece

**SCISSORS - "heavy duty"**

- Heavy duty scissor for cutting almost all material even also thin layers of steel.
- Cutting blade is manufactured from high quality hardened stainless steel.
- Spring supported ergonomic plastic handle with safety lock offers easy and secure use.

catalogue number	total length	pack quantity
048.31.001	185 mm	1 piece





### TUBINGS - "rubber"

➤ Manufactured from pure, natural, flexible rubber with durometer 45 A with temperature stability -25°C to +70°C.

catalogue number	internal diameter	external diameter	wall thickness	pack quantity
052.10.001	5,0 mm	8,0 mm	1,5 mm	1 meter
052.10.002	5,0 mm	9,0 mm	2,0 mm	1 meter
052.10.003	6,0 mm	9,0 mm	1,5 mm	1 meter
052.10.004	6,0 mm	10,0 mm	2,0 mm	1 meter
052.10.005	7,0 mm	11,0 mm	2,0 mm	1 meter
052.10.006	8,0 mm	12,0 mm	2,0 mm	1 meter
052.10.007	10,0 mm	14,0 mm	2,0 mm	1 meter
052.10.008	12,0 mm	16,0 mm	2,0 mm	1 meter



### TUBINGS - "rubber" - "vacuum"

➤ Manufactured from pure, natural, flexible rubber with durometer 45 A with temperature stability -25°C to +70°C.

➤ Vacuum tubings have same technical specifications of the normal tubings but with much thicker wall thickness.

catalogue number	internal diameter	external diameter	wall thickness	pack quantity
052.11.001	6,0 mm	16,0 mm	5,0 mm	1 meter
052.11.002	7,0 mm	17,0 mm	5,0 mm	1 meter
052.11.003	8,0 mm	18,0 mm	5,0 mm	1 meter
052.11.004	10,0 mm	20,0 mm	5,0 mm	1 meter



### TUBINGS - "silicone"

➤ Manufactured from pure, natural, flexible silicone with durometer 60A with temperature stability -60°C to +170°C.

catalogue number	internal diameter	external diameter	wall thickness	pack quantity
052.12.001	3,0 mm	6,0 mm	1,5 mm	1 meter
052.12.002	4,0 mm	7,0 mm	1,5 mm	1 meter
052.12.003	5,0 mm	8,0 mm	1,5 mm	1 meter
052.12.004	6,0 mm	10,0 mm	2,0 mm	1 meter
052.12.005	7,0 mm	11,0 mm	2,0 mm	1 meter
052.12.006	8,0 mm	12,0 mm	2,0 mm	1 meter
052.12.007	9,0 mm	13,0 mm	2,0 mm	1 meter
052.12.008	10,0 mm	14,0 mm	2,0 mm	1 meter

## TUBINGS - "PTFE"

➤ Manufactured from pure, natural, PTFE with excellent chemical resistivity with temperature stability -200°C to +260°C.

catalogue number	internal diameter	external diameter	wall thickness	pack quantity
052.13.001	0,5 mm	1,0 mm	0,25 mm	1 meter
052.13.002	1,0 mm	1,5 mm	0,25 mm	1 meter
052.13.003	1,0 mm	2,0 mm	1,00 mm	1 meter
052.13.004	1,5 mm	3,5 mm	1,00 mm	1 meter
052.13.005	2,0 mm	4,0 mm	1,00 mm	1 meter
052.13.006	3,0 mm	5,0 mm	1,00 mm	1 meter
052.13.007	4,0 mm	6,0 mm	1,00 mm	1 meter
052.13.008	6,0 mm	8,0 mm	1,00 mm	1 meter
052.13.009	8,0 mm	10,0 mm	1,00 mm	1 meter



## TUBINGS - "reinforced PVC"

➤ Manufactured from PVC with terylene mesh reinforcement with durometer 77A with temperature stability -20°C to +80°C.

catalogue number	internal diameter	external diameter	wall thickness	pack quantity
052.14.001	6,0 mm	12,0 mm	3,0 mm	1 meter
052.14.002	8,0 mm	14,0 mm	3,0 mm	1 meter
052.14.003	10,0 mm	16,0 mm	3,0 mm	1 meter



## HOSE CUTTER

➤ A perfect tool to cut even thick hoses with external diameter from 6,0 mm to 25 mm.

➤ The cut edges of tubings with the tube cutter are always clean and flat.

➤ Offers a clean and sharp cut of tubings in few seconds.

➤ Hose cutter has a two end blade which can be returnable when one gets unsharped.

catalogue number	pack quantity
052.08.002	1 piece



### TUBING CLAMPS - "with easy click closure"



➤ Manufactured from heat and chemical resistant PVDF and steel.

➤ Can be used wherever the flow in hoses with liquids or gases needs to be regulated or stopped.

➤ This clamp can be opened and closed in any position.

➤ The system enables a fine, stepless controlled adjustment of the flow in a hose with the help of micro setting screw.



➤ Completely adjustable pressure plate squeezes the hose against the stable hook.

➤ The hose is compressed over a wide area in order to prevent it from any damages.

➤ The tubing clamp can be mounted even after the hose is connected to the system.

catalogue number	max. hose diameter	pack quantity
052.15.010	up to 10 mm	1 piece
052.15.015	up to 15 mm	1 piece
052.15.020	up to 20 mm	1 piece

### FLOW INDICATOR



➤ Flow indicator made from PMP which gives precise optical indication of the flow from 50 ml / minute in horizontal position and 140 ml / minute in vertical position.

➤ Suitable for hose tubings with inner diameter from 6 to 11 mm. Can resist pressure up to 2 bar.

➤ Flow indicator functions in both directions and in any position.

catalogue number	pack quantity
052.18.001	1 piece

### TUBING CLAMPS - "worm drive screw"



➤ Manufactured from chrome steel according to DIN 3017.

➤ With galvanized worm drive screw.

➤ Ideal for securing hoses on pipes and stopcocks.

catalogue number	for hose diameter	pack quantity
052.16.012	8 - 12 mm	1 piece
052.16.016	10 - 16 mm	1 piece
052.16.020	12 - 20 mm	1 piece
052.16.025	16 - 25 mm	1 piece



### TUBING CLAMPS - "KECK"

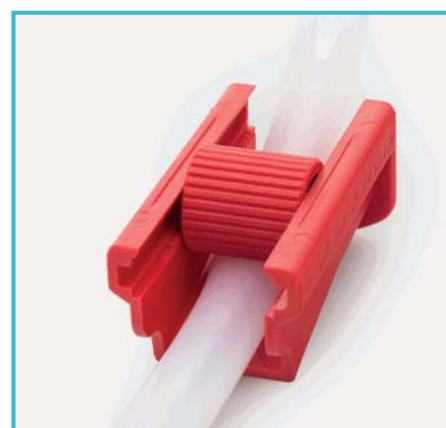


➤ Manufactured from thermoplastic polyester with serrated jaws.

➤ Offers continuous control of flow rate in tubing with just one finger.

➤ Can attach at any point on the tubing without disconnecting tubing.

catalogue number	clamping range	pack quantity
052.06.014	14 mm	1 piece



## STOPCOCKS - "2 & 3 way"

- Manufactured from polypropylene for safe connection.
- 2 way stopcock is ideal for transfer of liquids and gases in order to release and to block the flow.
- 3 way stopcock also changes direction of the flow.

catalogue number	model	pack quantity
055.32.001	2 way	1 piece
055.32.002	3 way	1 piece



## TUBING CONNECTOR - "twin form"

- Manufactured from transparent polypropylene.
- Straight form, ideal to connect tubings with same inside diameter.

catalogue number	for tubing inside dia.	length	pack quantity
052.20.003	3 - 5 mm	47 mm	1 piece
052.20.006	6 - 10 mm	55 mm	1 piece
052.20.009	9 - 13 mm	57 mm	1 piece



## TUBING CONNECTOR - "reducing form"

- Manufactured from transparent polypropylene.
- Straight form, ideal to connect tubings with different inside diameter.

catalogue number	for tubing inside dia.	length	pack quantity
052.21.003	3 - 5 mm / 6 - 10 mm	55 mm	1 piece
052.21.006	6 - 10 mm / 9 - 13 mm	55 mm	1 piece
052.21.009	9 - 13 mm / 9 - 13 mm	59 mm	1 piece



## TUBE CONNECTORS - "L" - "Y" - "T" - "X"

- Manufactured from polypropylene.
- Temperature resistant up to +135°C for connecting tubes of same diameter.
- Four available models of connectors provide excellent leak proof grip to the tube.



ID hose diameters	"L" model catalogue no	"Y" model catalogue no	"T" model catalogue no	"X" model catalogue no	pack quantity
6 ml	052.22.006	052.23.006	052.24.006	052.25.006	1 piece
8 ml	052.22.008	052.23.008	052.24.008	052.25.008	1 piece
10 ml	052.22.010	052.23.010	052.24.010	052.25.010	1 piece



## STOPPERS - "rubber"

► Rubber stoppers are manufactured from silicone free, autoclavable, natural elastic rubber, with temperature stability between  $-25^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ .

► Manufactured according to DIN 12871 with shore-hardness aprx. 40A.

catalogue number	bottom diameter	top diameter	total height	pack quantity
051.20.001	3,5 mm	6,5 mm	15,0 mm	10 pieces
051.20.002	5,0 mm	9,0 mm	20,0 mm	10 pieces
051.20.003	8,0 mm	12,0 mm	20,0 mm	10 pieces
051.20.004	10,5 mm	14,5 mm	20,0 mm	10 pieces
051.20.005	12,5 mm	16,5 mm	20,0 mm	10 pieces
051.20.006	14,0 mm	18,0 mm	20,0 mm	10 pieces
051.20.007	17,0 mm	22,0 mm	25,0 mm	10 pieces
051.20.008	18,0 mm	24,0 mm	30,0 mm	10 pieces
051.20.009	21,0 mm	27,0 mm	30,0 mm	10 pieces
051.20.010	23,0 mm	29,0 mm	30,0 mm	10 pieces
051.20.011	26,0 mm	32,0 mm	30,0 mm	10 pieces
051.20.012	29,0 mm	35,0 mm	30,0 mm	10 pieces
051.20.013	31,0 mm	38,0 mm	35,0 mm	10 pieces
051.20.014	36,0 mm	44,0 mm	40,0 mm	10 pieces
051.20.015	41,0 mm	49,0 mm	40,0 mm	6 pieces
051.20.016	47,0 mm	55,0 mm	40,0 mm	6 pieces
051.20.017	50,5 mm	59,5 mm	45,0 mm	6 pieces
051.20.018	56,0 mm	65,0 mm	45,0 mm	6 pieces
051.20.019	60,0 mm	70,0 mm	50,0 mm	6 pieces
051.20.020	64,5 mm	75,5 mm	55,0 mm	3 pieces
051.20.021	71,0 mm	83,0 mm	60,0 mm	3 pieces
051.20.022	79,0 mm	92,0 mm	65,0 mm	3 pieces



## STOPPERS - "silicone"

► Silicone stoppers are manufactured from biologically inert silicone, autoclavable silicone with temperature stability between  $-60^{\circ}\text{C}$  to  $+170^{\circ}\text{C}$ .

► Manufactured according to DIN 12871 with shore-hardness aprx. 50A.

catalogue number	bottom diameter	top diameter	total height	pack quantity
051.22.001	3,5 mm	6,5 mm	15,0 mm	10 pieces
051.22.002	5,0 mm	9,0 mm	20,0 mm	10 pieces
051.22.003	8,0 mm	12,0 mm	20,0 mm	10 pieces
051.22.004	10,5 mm	14,5 mm	20,0 mm	10 pieces
051.22.005	12,5 mm	16,5 mm	20,0 mm	10 pieces
051.22.006	14,0 mm	18,0 mm	20,0 mm	10 pieces
051.22.007	17,0 mm	22,0 mm	25,0 mm	10 pieces
051.22.008	18,0 mm	24,0 mm	30,0 mm	10 pieces
051.22.009	21,0 mm	27,0 mm	30,0 mm	10 pieces
051.22.010	23,0 mm	29,0 mm	30,0 mm	10 pieces
051.22.011	26,0 mm	32,0 mm	30,0 mm	10 pieces
051.22.012	29,0 mm	35,0 mm	30,0 mm	10 pieces
051.22.013	31,0 mm	38,0 mm	35,0 mm	10 pieces
051.22.014	36,0 mm	44,0 mm	40,0 mm	10 pieces
051.22.015	41,0 mm	49,0 mm	40,0 mm	6 pieces
051.22.016	47,0 mm	55,0 mm	40,0 mm	6 pieces
051.22.017	50,5 mm	59,5 mm	45,0 mm	6 pieces
051.22.018	56,0 mm	65,0 mm	45,0 mm	6 pieces
051.22.019	60,0 mm	70,0 mm	50,0 mm	6 pieces
051.22.020	64,5 mm	75,5 mm	55,0 mm	3 pieces
051.22.021	71,0 mm	83,0 mm	60,0 mm	3 pieces
051.22.022	79,0 mm	92,0 mm	65,0 mm	3 pieces

## STOPPERS - "rubber" - "with 1 hole"

- Same technical specifications as other stoppers but with one hole drilled.

catalogue number	bottom diameter	top diameter	total height	hole diameter	pack quantity
051.21.001	10,5 mm	14,5 mm	20,0 mm	3,0 mm	1 piece
051.21.002	12,5 mm	16,5 mm	20,0 mm	3,0 mm	1 piece
051.21.003	14,0 mm	18,0 mm	20,0 mm	3,0 mm	1 piece
051.21.004	17,0 mm	22,0 mm	25,0 mm	4,0 mm	1 piece
051.21.005	18,0 mm	24,0 mm	30,0 mm	4,0 mm	1 piece
051.21.006	21,0 mm	27,0 mm	30,0 mm	5,0 mm	1 piece
051.21.007	23,0 mm	29,0 mm	30,0 mm	5,0 mm	1 piece
051.21.008	26,0 mm	32,0 mm	30,0 mm	6,0 mm	1 piece
051.21.009	29,0 mm	35,0 mm	30,0 mm	6,0 mm	1 piece
051.21.010	31,0 mm	38,0 mm	35,0 mm	7,0 mm	1 piece



## STOPPERS - "cork"

- Manufactured from non-porous natural cork with excellent quality.
- With pointed conical shape, light weight and robust. Very easy to drill through.

catalogue number	bottom diameter	top diameter	total height	pack quantity
051.23.001	3,5 mm	6,5 mm	15,0 mm	10 pieces
051.23.002	5,0 mm	9,0 mm	20,0 mm	10 pieces
051.23.003	8,0 mm	12,0 mm	20,0 mm	10 pieces
051.23.004	10,5 mm	14,5 mm	20,0 mm	10 pieces
051.23.005	12,5 mm	16,5 mm	20,0 mm	10 pieces
051.23.006	14,0 mm	18,0 mm	20,0 mm	10 pieces
051.23.007	17,0 mm	22,0 mm	25,0 mm	10 pieces
051.23.008	18,0 mm	24,0 mm	30,0 mm	10 pieces
051.23.009	21,0 mm	27,0 mm	30,0 mm	10 pieces
051.23.010	23,0 mm	29,0 mm	30,0 mm	10 pieces
051.23.011	26,0 mm	32,0 mm	30,0 mm	10 pieces
051.23.012	29,0 mm	35,0 mm	30,0 mm	10 pieces
051.23.013	31,0 mm	38,0 mm	35,0 mm	10 pieces
051.23.014	36,0 mm	44,0 mm	40,0 mm	10 pieces
051.23.015	41,0 mm	49,0 mm	40,0 mm	10 pieces
051.23.016	47,0 mm	55,0 mm	40,0 mm	10 pieces
051.23.017	50,5 mm	59,5 mm	45,0 mm	10 pieces
051.23.018	56,0 mm	65,0 mm	45,0 mm	10 pieces
051.23.019	60,0 mm	70,0 mm	50,0 mm	10 pieces
051.23.020	64,5 mm	75,5 mm	55,0 mm	10 pieces
051.23.021	71,0 mm	83,0 mm	60,0 mm	10 pieces
051.23.022	79,0 mm	92,0 mm	65,0 mm	10 pieces



## STOPPER BORER SET & SHARPENER

- Stopper borer set is manufactured from nickel plated brass. Consist of 6 pieces cork borer pipe inserted to each other.

- Complete with cleaning rod having good grip and pipes of thick gauge.

catalogue number	pipe size	set of	pack quantity
051.12.001	4 - 18	6 pieces	1 piece

## STOPPER BORER SHARPENER

- Stopper borer sharpener is manufactured from nickel plated brass.

- Consist of plated metal cone with hinged cutter blade set in slot, with wooden handel.

catalogue number	pack quantity
051.13.001	1 piece





## STOPPERS - "cellulose"

- Manufactured from high grade cellulose which can be sterilized up to 200°C.
- These stoppers are economical, labour and time saving and perfectly tight fitting. They are air permeable and actively breathing.
- Excellent sealing for microbiological samples and tissue cultures in test tubes and flasks.

cellulose stoppers	bottom diameter	top diameter	height	pack quantity
051.24.001	7,5 mm	12,5 mm	30,0 mm	10 pieces
051.24.002	9,0 mm	12,5 mm	30,0 mm	10 pieces
051.24.003	11,0 mm	15,5 mm	32,0 mm	10 pieces
051.24.004	11,5 mm	16,5 mm	40,0 mm	10 pieces
051.24.005	12,5 mm	17,0 mm	40,0 mm	10 pieces
051.24.006	15,5 mm	20,0 mm	40,0 mm	10 pieces
051.24.007	15,5 mm	25,0 mm	45,0 mm	10 pieces
051.24.008	20,0 mm	26,5 mm	50,0 mm	10 pieces
051.24.009	24,0 mm	35,0 mm	55,0 mm	10 pieces



## STOPPERS - "turn - over flange" - "rubber"

- Manufactured from rubber or silicone with same technical specifications of other stoppers.
- These stoppers guarantee perfect sealing even with poorly finished rims on glass or plastic bottles.
- The top of the stopper has a septum which can be punctured by a hypodermic needle.
- Very secure fit prevents accidental opening of the flask.

rubber stoppers	silicone stoppers	diameter	pack quantity
051.25.001	051.26.001	7,1 mm	10 pieces
051.25.002	051.26.002	10,2 mm	10 pieces
051.25.003	051.26.003	12,7 mm	10 pieces
051.25.004	051.26.004	14,9 mm	10 pieces
051.25.005	051.26.005	15,9 mm	10 pieces
051.25.006	051.26.006	19,4 mm	10 pieces
051.25.007	051.26.007	23,7 mm	10 pieces
051.25.008	051.26.008	30,7 mm	10 pieces



## STOPPERS - "polypropylene"

- Manufactured from polypropylene according to NS joints dimensions for secure closure of ground jointed all kinds of laboratory glassware.

clear stoppers	NS size	height	pack quantity
051.08.010	NS 10/19	23 mm	10 pieces
051.08.012	NS 12/21	26 mm	10 pieces
051.08.014	NS 14/23	30 mm	10 pieces
051.08.019	NS 19/26	31 mm	10 pieces
051.08.024	NS 24/29	37 mm	10 pieces
051.08.029	NS 29/32	42 mm	10 pieces



**STOPPERS - "hallow glass" - "hexagonal"**

- Manufactured from borosilicate glass 3.3, according to the highest quality standards DIN 12252.
- Lower closed end of stopper features a "drip-tip" to ensure adhered liquid is returned to the flask.
- Hexagonal flat head prevents the stopper from rolling and allows stopper to be stood on end preventing contamination of the ground surface.

NS size	clear stoppers	pack quantity	amber stoppers	pack quantity
NS 10/19	051.03.001	10 pieces	051.04.001	1 piece
NS 12/21	051.03.002	10 pieces	051.04.002	1 piece
NS 14/23	051.03.003	10 pieces	051.04.003	1 piece
NS 19/26	051.03.004	10 pieces	051.04.004	1 piece
NS 24/29	051.03.005	10 pieces	051.04.005	1 piece
NS 29/32	051.03.006	10 pieces	051.04.006	1 piece
NS 34/35	051.03.007	10 pieces	051.04.007	1 piece

**STOPPERS - "flange" - "polyethylene"**

- Manufactured from polyethylene. Very effective due to their "flange" shape and grooved body. Due to large size flanges, they prevent leakage excellently.
- Available on request in different colors (red, green, yellow and blue).

catalogue number	for tubes diameter	colour	pack quantity
051.10.010	12/13 mm	neutral	100 pieces
051.11.010	15/16 mm	neutral	100 pieces



Very effective due to their "flange" shape and grooved body. Due to large size flanges, they prevent leakage excellently.



supplied as different colours

**FOIL DISCS - "aluminium"**

- Economical and disposable covers manufactured from aluminium foil for dust-free sealing, coverage and storage of various labware such as beakers, erlenmeyers, flasks and boxes.
- Does not stick to each other since they are interleaved with tissue paper.

catalogue number	diameter	foil thickness	pack quantity
058.05.080	80 mm	0,03 mm	1000 pieces / pack
058.05.100	100 mm	0,03 mm	1000 pieces / pack
058.05.125	125 mm	0,03 mm	1000 pieces / pack
058.05.150	150 mm	0,03 mm	1000 pieces / pack





### WATCH GLASSES - "glass"

➤ Manufactured from borosilicate glass according to DIN 12341. Fire polished edges reduces chipping and breakage.

catalogue number	diameter	pack quantity
037.01.050	50 mm	10 pieces
037.01.060	60 mm	10 pieces
037.01.070	70 mm	10 pieces
037.01.080	80 mm	10 pieces
037.01.100	100 mm	10 pieces
037.01.125	125 mm	10 pieces
037.01.150	150 mm	10 pieces
037.01.200	200 mm	10 pieces



### WATCH GLASSES - "polypropylene"

➤ Manufactured from light-weight, translucent, polypropylene with high resistance to chemicals.

➤ Moulded base offers more stability and stiffness.

catalogue number	diameter	pack quantity
037.22.060	60 mm	10 pieces
037.22.080	80 mm	10 pieces
037.22.100	100 mm	10 pieces
037.22.120	120 mm	10 pieces



### WEIGHING BOTTLES - "glass"

➤ Manufactured from borosilicate glass 3.3 with interchangeable lids which fits the bodies perfectly.

➤ The white labelling area is suitable for writing notes.

catalogue number	diameter	height	pack quantity
037.02.254	25 mm	40 mm	1 piece
037.02.353	35 mm	30 mm	1 piece
037.02.402	40 mm	25 mm	1 piece
037.02.305	30 mm	50 mm	1 piece
037.02.503	50 mm	30 mm	1 piece
037.02.357	35 mm	70 mm	1 piece
037.02.603	60 mm	30 mm	1 piece
037.02.408	40 mm	80 mm	1 piece
037.02.803	80 mm	30 mm	1 piece
037.02.508	50 mm	80 mm	1 piece



### WEIGHING BOTTLES - "polypropylene"

➤ Manufactured from polypropylene with light weight construction. Push on lids ensure an airtight seal.

catalogue number	diameter	height	pack quantity
037.31.305	30 mm	50 mm	1 piece
037.31.403	40 mm	30 mm	1 piece
037.31.407	40 mm	70 mm	1 piece
037.31.503	50 mm	30 mm	1 piece
037.31.603	60 mm	35 mm	1 piece
037.31.609	60 mm	90 mm	1 piece
037.31.701	70 mm	120 mm	1 piece



### WEIGHING DISHES (BOATS) - "polystyrene" - "diamond form" & "square form"

- Economical containers for weighing both liquid or powder samples in a laboratory.
- Flat bottom ensures perfect stability on counters while smooth and non-porous inner surface provides accurate pour-outs with minimal sample loss.
- They are biologically inert, contamination-free, stackable and suitable for microwave moisture analysis.
- Will stand temperature between  $-10^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ .
- Ideal for many applications such as weighing, dispensing and storing since they are resistant to diluted acids, alkalis, alcohols, and aqueous solutions.
- Can be used also as quick freeze trays for sample material, as discard trays for broken ampoules and as mixing trays.
- Manufactured from antistatic polystyrene specially usable for weighing of static affected samples. They eliminate the problems caused by static built-up when weighing fine powders.



Polystyrene weighing dishes can easily be bent into pouring spouts. This function enables easy and non-spill transfer of powder and liquid samples.

diamond shape non-sterile	dish volume	dish dimensions	dish colour	non-sterile pack quantity
037.05.005	5 ml	55 x 35 mm	white	100 pieces
037.05.030	30 ml	85 x 65 mm	white	100 pieces
037.05.100	100 ml	125 x 100 mm	white	100 pieces
037.06.005	5 ml	55 x 35 mm	black	100 pieces
037.06.030	30 ml	85 x 65 mm	black	100 pieces
037.06.100	100 ml	125 x 100 mm	black	100 pieces

diamond shape sterile	dish volume	dish dimensions	dish colour	sterile pack quantity
037.15.005	5 ml	55 x 35 mm	white	10 pieces
037.15.030	30 ml	85 x 65 mm	white	10 pieces
037.15.100	100 ml	125 x 100 mm	white	10 pieces
037.16.005	5 ml	55 x 35 mm	black	10 pieces
037.16.030	30 ml	85 x 65 mm	black	10 pieces
037.16.100	100 ml	125 x 100 mm	black	10 pieces

square shape non-sterile	dish volume	dish dimensions	dish colour	non-sterile pack quantity
037.09.007	7 ml	44 x 44 mm	white	100 pieces
037.09.100	100 ml	80 x 80 mm	white	100 pieces
037.09.250	250 ml	140 x 140 mm	white	100 pieces
037.11.007	7 ml	44 x 44 mm	black	100 pieces
037.11.100	100 ml	80 x 80 mm	black	100 pieces
037.11.250	250 ml	140 x 140 mm	black	100 pieces

square shape sterile	dish volume	dish dimensions	dish colour	sterile pack quantity
037.19.007	7 ml	44 x 44 mm	white	10 pieces
037.19.100	100 ml	80 x 80 mm	white	10 pieces
037.19.250	250 ml	140 x 140 mm	white	10 pieces
037.21.007	7 ml	44 x 44 mm	black	10 pieces
037.21.100	100 ml	80 x 80 mm	black	10 pieces
037.21.250	250 ml	140 x 140 mm	black	10 pieces

## WEIGHING DISHES - "aluminium"



## "for moisture determination"

- Manufactured from special grade, oil free, durable, light gauge aluminium with special design for moisture determination balances.
- Aluminium weighing dishes are with slightly tapered walls for stacking.
- Can also be used for a weighing pan and for a mixing pan enabling mixing various substances.

catalogue number	diameter	height	pack quantity
037.25.100	100 mm	8 mm	50 pieces



## "with handle"

- Manufactured from special grade, oil free, durable, light gauge aluminium.
- Compressed walls for extra stability. Handles ideal for labelling or holding.
- Aluminium weighing dishes are with slightly tapered walls for stacking.
- Can also be used also as drying dish and also as mixing pan.

catalogue number	diameter	height	pack quantity
037.24.045	45 mm	12 mm	100 pieces
037.24.055	55 mm	14 mm	100 pieces
037.24.065	65 mm	16 mm	100 pieces



## "general purpose"

- Manufactured from special grade, oil free, durable, light gauge aluminium
- Aluminium weighing dishes are with slightly tapered walls for stacking.
- Can also be used for a weighing pan and for a mixing pan enabling mixing various substances.

catalogue number	diameter	height	pack quantity
037.23.070	70 mm	20 mm	100 pieces
037.23.085	85 mm	37 mm	100 pieces
037.23.110	110 mm	35 mm	100 pieces

## WEIGHING SCOOPS - "glass" - "stainless steel"

*"borosilicate glass"*

➤ Glass weighing scoops are manufactured from borosilicate glass 3.3 with flat base ensures stability on the balance pans.

➤ Hollow stem enables very easy powder transfer into narrow neck flasks.

catalogue number	max. volume	pack quantity
037.07.001	3 ml	1 piece
037.07.002	6 ml	1 piece
037.07.003	10 ml	1 piece

*"stainless steel"*

➤ Stainless steel weighing scoops are manufactured from polished stainless steel free of cavities.

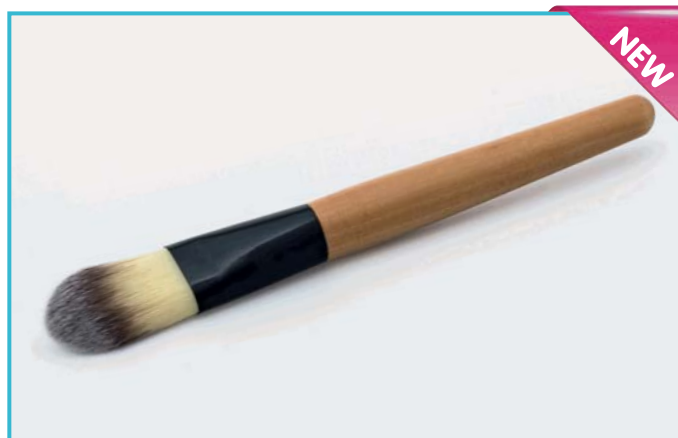
catalogue number	length	pack quantity
037.04.001	95 mm	1 piece
037.04.002	117 mm	1 piece
037.04.003	128 mm	1 piece

*"weighing paper"*

➤ Manufactured from impervious, and transparent glassline with smooth surface specially usable for weighing purposes.

➤ Leaves no residues after use. Supplied as booklet of 250 sheets.

catalogue number	width	length	pack quantity
037.33.001	100 mm	100 mm	1 booklet

*"weighing brush"*

➤ Fine hair weighing brush with pointed tips and wooden handle.

➤ Excellent tool for cleaning of weighing boats, weighing dishes and analytical balances.

catalogue number	pack quantity
037.32.001	1 piece



## SEALING FILM - "parafilm"

- Most common sealing film used in the laboratories.
- Conforms to FDA provisions when used below 55°C and GMP. Can be easily used at temperatures between -45°C to + 50°C.
- Vapour pressure of some volatile substances may cause the product to lift off the surface it clings.
- Resistant to salt solutions, inorganic acid and alkaline solutions up to 48 hours.



*Can cling on any surface, even the most irregular surface, elongates and widens up to 200%. Prevents leakage and split of liquid in a container in case of an accidental fall.*

catalogue number	width	length	quantity in pack	quantity in box
058.01.001	50 mm	75 meter	1 piece	24 pieces
058.01.002	100 mm	38 meter	1 piece	12 pieces

## PARAFILM DISPENSER

- Parafilm Dispenser is a convenient tool for easy dispensing, cutting and clean storage of Parafilm.
- Suitable for 50 mm and 100 mm wide rolls, supplied with spare cutting blade.

catalogue number	outer dimensions	pack quantity
058.02.001	120 x 172 x 159 mm	1 piece



*Parafilm roll is easily placed in the container.*



*The amount needed is taken out of the reservoir by turning the wheels at both sides.*



*Parafilm is cut with one movement of the blade.*



*Remaining roll in the reservoir is protected from dust.*

## STRETCH FILM - "cling film"

- Manufactured from strong PVC based special plastic resin with a very good adhesion character.
- Suitable for a wide range of laboratory applications such as sealing, wrapping of various labware such as beakers, flasks, tubes, petri dishes and similar others.
- This particularly strong film is easy to use, easy to roll, easy to dispense, easy to unravel.

catalogue number	roll width	roll length	foil thickness	pack quantity
058.03.001	300 mm	90 m	0,011 mm	1 piece



## FOIL ROLL - "aluminium"

- Manufactured from polished finish pure aluminium sheet.
- Suitable for a wide range of laboratory applications such as sealing, wrapping and forming temporary containers.
- Ideal for autoclaving, freezing, incubating, protecting various labware such as beakers, flasks, tubes, petri dishes and similar others.

catalogue number	roll width	roll length	foil thickness	pack quantity
058.04.001	300 mm	45 m	0,018 mm	1 piece



## FOIL DISPENSER

- Perfect and practical dispenser for aluminium folios and cling films without any waste.
- Practical, easy and safe to use: just load the roll, press the cover to activate and start cutting.
- Easy to cut due to very sharp cutting teeth. Compact design requires limited working space area.
- Light weight ensures easy handling with one hand.

catalogue number	max. roll width	pack quantity
058.02.002	300 mm	1 piece



## FOIL DISCS - "aluminium"

- Economical and disposable covers manufactured from aluminium foil for dust-free sealing, coverage and storage of various labware such as beakers, erlenmeyers, flasks and boxes.
- Does not stick to each other since they are interleaved with tissue paper.

catalogue number	diameter	foil thickness	pack quantity
058.05.080	80 mm	0,03 mm	1000 pieces / pack
058.05.100	100 mm	0,03 mm	1000 pieces / pack
058.05.125	125 mm	0,03 mm	1000 pieces / pack
058.05.150	150 mm	0,03 mm	1000 pieces / pack





### MAGNETIC STIRRING BARS - "cylindrical"



catalogue number	length	diameter	pack quantity
057.01.010	10 mm	6 mm	10 pieces
057.01.015	15 mm	6 mm	10 pieces
057.01.020	20 mm	6 mm	10 pieces
057.01.025	25 mm	6 mm	10 pieces
057.01.030	30 mm	6 mm	10 pieces
057.01.035	35 mm	6 mm	10 pieces
057.01.040	40 mm	8 mm	10 pieces
057.01.045	45 mm	8 mm	10 pieces
057.01.050	50 mm	8 mm	6 pieces
057.01.060	60 mm	9 mm	6 pieces
057.01.070	70 mm	9 mm	6 pieces
057.01.080	80 mm	9 mm	6 pieces

➤ Cylindrical magnetic stirring bars have high magnetic strength and long life due to magnetic cores.

➤ Fully encapsulated with a specially high grade pure PTFE with thick coating.

➤ Magnetic bars can stand up to maximum operation temperature 270°C.



### MAGNETIC STIRRING BARS - "oval"

➤ Egg-shaped oval stirring bars provide their own pivot point without abrupt change in contour.

➤ Designed specially for use in round bottom flasks. They spin unrestricted by the flask bottom contour.

➤ All other technical specifications are exactly similar to cylindrical magnetic stirring bars.

catalogue number	length	diameter	pack quantity
057.05.020	20 mm	8 mm	1 piece
057.05.025	25 mm	10 mm	1 piece
057.05.030	30 mm	11 mm	1 piece
057.05.035	35 mm	12 mm	1 piece
057.05.040	40 mm	15 mm	1 piece



### MAGNETIC STIRRING BARS - "cross"

➤ Cross (star shape) stirring bars provide a deep vortex and guarantee stable and quiet operation.

➤ All other technical specifications are exactly similar to cylindrical magnetic stirring bars.

catalogue number	dimensions	pack quantity
057.06.037	37 x 37 mm	1 piece



### UTILITY BOX - "with divisions"

➤ Designed for storing and carrying for small labwares such as magnetic stirring bars.

➤ Manufactured from clear material for easy observation of the contents.

➤ Different size of compartments for different size of materials.

catalogue number	dimensions	pack quantity
057.02.100	97 x 182 x 33 mm	1 piece





## BAR RETRIEVERS

- Magnetic bar retrievers are an essential tool to pick up the magnetic stirring bars.
- Constructed with a powerful magnet sealed in one end and a long stem on the other end.
- Available 2 models: retriever with solid stem and retriever with flexible stem.
- Flexible magnetic bar retriever is specially helpful to reach the flask corners.

catalogue number	retriever type	stem length	pack quantity
057.02.001	solid stem	268 mm	1 piece
057.02.002	flexible stem	330 mm	1 piece



## STIRRING RODS

- Stirring rods are very useful while stirring and mixing various solutions at laboratories.
- Available 2 types: stirring rods made of glass and stirring rods made of P.P.



### “glass rods”

- Glass stirring rods are manufactured from heat resistant neutral glass.
- Stirring rods are designed with flame polished ends for preventing accidental breakage.

catalogue number	length	diameter	pack quantity
057.03.200	200 mm	5 mm	10 pieces
057.03.250	250 mm	6 mm	10 pieces
057.03.300	300 mm	6 mm	10 pieces



### “polypropylene rods”

- P.P stirring rods are manufactured from durable polypropylene.
- Unique design of the stirring rod with one end flattened like a spatula enables effective stirring with maximum efficiency.

catalogue number	length	diameter	pack quantity
057.04.250	250 mm	6 mm	10 pieces



### PEN - "engraving" - "battery powered"

- Battery powered engraving pen offers unlimited applications for writing, marking and engraving of all kinds of material used in industry, science and technology.
- Enables deep writing, marking and engraving of glass, metal, wood, stone and plastic products without pressure.
- Easy to operate; hold the pen, press the power button, the tip rotates at high speed and provides a permanent inscription.
- The marks will not be exposed to chemicals and sunlight.
- Operates with 2x"AA" batteries which are not included.
- Cordless battery power makes it portable for use anywhere indoors and out in the field.

catalogue number	length	diameter	pack quantity
099.01.001	150 mm	20 mm	1 piece



### PEN - "permanent - ink" - "two tip"

- All purpose pens with two ends of round fibre-tip ideal for labelling, painting, writing on virtually all materials including glass, metal and plastics.
- Odorless, smudge-proof, water-resistant and quick drying. The tips do not dry even left uncapped for 24 hours.
- One end of the pen has a fine tip with 0,6 mm stroke and the other end has a medium tip with 1,5 mm stroke.
- Supplied as 3 pens (red, blue and black colour).

catalogue number	pen colours	pack quantity
099.01.002	red, blue and black	set of 3



### PEN - "marker" - "two tip"

- All purpose pens ideal for marking texts on paper.
- With two ends: fine round tip with 0,9 mm stroke at one end and a medium flat tip with 2,7 mm stroke at the other end.
- Airtight pen cap prevents air flow and enables extended operation life cycle.
- Supplied as 5 pens (purple, blue, green, pink and yellow colour).

catalogue number	pen colours	pack quantity
099.01.006	purple, blue, green, pink and yellow	set of 5

## TAPE - "for labelling"

- Adheres to any clean surface and peels off without leaving any sticky residue.
- Pencil, ball point pen or solvent ink marker remain legible under the most demanding laboratory conditions.
- Consists of colored paper with rubber resin adhesive that resists moisture and most solvents.
- The tape will withstand a maximum temperature of 150°C for 30 minutes or 80°C for 24 hours.
- Can be used down to -80°C also with stands a steam autoclaving cycle and gamma irradiation.
- Supplied as pack of 6 types that correspond with familiar hazard color codes.



catalogue number	length	width	pack quantity
099.02.001	36,4 meters	19,0 mm	6 pieces

## TAPE DISPENSER

- Convenient dispenser holds and releases tape cut to your specification.
- Writing platform accommodates both left and right handed users for labeling tape prior to dispensing.
- The epoxy-coated steel platform has finger holes for releasing the tape and a cut off edge for one hand use.
- A weighted base with non-skid pads prevents sliding or lifting.



catalogue number	base dimensions	platform dimensions	pack quantity
099.02.002	21,3 x 8,7 x 9,5 cm	10,2 x 15,2 cm	1 piece

## TAGS - "general purposes"

- Manufactured from flexible polypropylene label material with acrylic adhesive.
- This unique combination guarantees perfect resistance from scuffing, chemicals, moisture and wide temperature fluctuations.
- Chemically inert, resist most organic solvents and caustic agents. Unique solvent - resistant, acrylic based adhesive provides excellent cold temperature performance.
- They adhere to most plastics, glass and metals without cracking, peeling or degrading and does not leave any residue once removed.



catalogue number	tag size length x width	roll quantity	pack quantity
099.03.050	50 x 30 mm	1000 tags	1 piece
099.03.072	72 x 40 mm	1000 tags	1 piece
099.03.090	90 x 50 mm	1000 tags	1 piece



### STOPWATCH - "mechanical"

- Winding stopwatch is a sturdy, chrome plated 2-scale stopwatch.
- Case diameter is 50 mm and has a weight of 110 grams.
- Consists of stainless steel, single metallic balance, nickel based alloy hairspring, and 13 jewels fixed in the structure.
- Working temperature is between -10°C to + 40°C.
- Operation duration is 30 minutes and resolution is 0.2 seconds.

catalogue number	dimensions	pack quantity
055.01.001	55 mm dia.	1 piece



### STOPWATCH - "electronical"

- Digital stopwatch is a light weighed and easy to use stopwatch which has a water resistant plastic body.
- Offers many functions, such as;
  - Date, time and calendar
  - Stopwatch functions
  - Alarm functions
- Run time is up to 23 hour / 59 minutes / 59 seconds.
- Operation range is 59 minutes / 59 seconds with a resolution of 1/100 seconds.

catalogue number	dimensions	pack quantity
055.02.001	63 x 76 x 20 mm	1 piece



### TIMER - "mechanical"

- Designed for professional use at laboratories.
- Range is 0-60 minutes with a resolution of 1 minute.
- A clear bell ring signals at the end of the preset time. Can be reset any time.

catalogue number	dimensions	pack quantity
056.01.001	60 x 60 x 34 mm	1 piece

**TIMER - "mechanical"**

- Designed for professional use at laboratories.
- Possible to use both on the desk and also on the wall. Can be reset any time.
- Range is 0-60 minutes with a resolution of 1 minute.
- A clear bell ring signals at the end of the preset time. Can be reset any time.

catalogue number	dimensions	pack quantity
055.03.001	93 x 75 x 68 mm	1 piece

**TIMER - "electronical"**

- Offers count down and count up functions for a short period of time.
- Large LCD screen, which has dimensions of 50 x 26 mm with 1 line, enables easy readings even from long distances.
- Comes with a stand for desktop, a magnetic fixture for metal surfaces and a clip for hanging on the wall.
- Has a display range up to 99 minutes, 59 seconds.
- A clear alarm ring signals at the end of the preset time.

catalogue number	dimensions	pack quantity
056.02.001	69 x 69 x 26 mm	1 piece

**TIMER - "electronical"**

- Offers count down and count up functions for long period of time.
- Comes with a stand for desktop, a magnetic for metal surfaces and a clip for hanging.
- Has a display range up to 19 hours, 59 minutes.
- A clear alarm ring signals at the end of the preset time.
- LCD display dimensions are 32x12 mm with 1 line and 4 digits.

catalogue number	dimensions	pack quantity
056.03.001	53 x 62 x 23 mm	1 piece



## THERMOMETERS - "solid stem"

➤ Solid stem glass thermometers are calibrated for partial immersion depth of 76 (+/- 5 mm) mm.

➤ Thermometer has red alcohol column and the body is reflecting white colour which provides easier reading.

catalogue number	operation range °C	subdivion	pack quantity
059.02.001	-20/+ 50	0.5 °C	10 pieces
059.02.002	-20/+110	0.5 °C	10 pieces
059.02.003	-10/+150	1 °C	10 pieces
059.02.004	-10/+200	1 °C	10 pieces



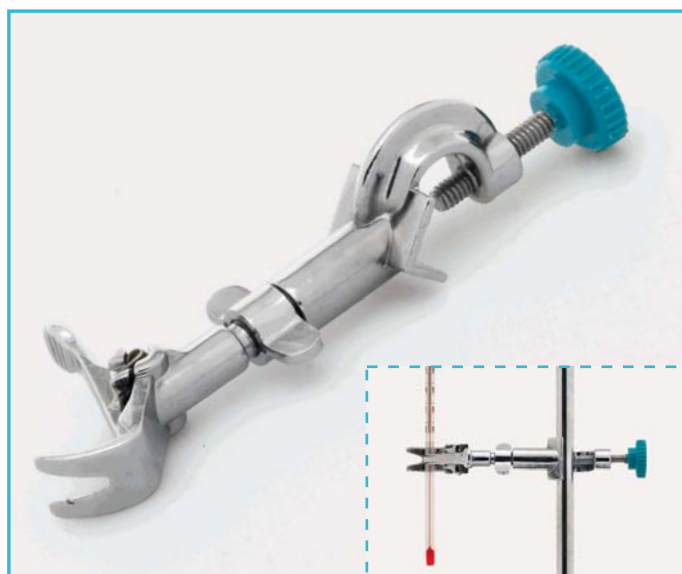
## THERMOMETER CLAMP - "with bosshead"

➤ Thermometer Clamp & Holder with boss is manufactured from special alloy. The screw head has an opening of 0-30 mm.

➤ Steel spring arm holds the thermometer firmly and keeps the thermometer at the center.

➤ With swivel mechanism which enables the object to swivel 360° and is lockable at any desired angle.

catalogue number	pack quantity
060.04.001	1 piece



## ELECTRONIC THERMOMETER - "insertion"

➤ Perfect for temperature measurements in liquids, powders and food products.

➤ Hygienic stainless steel integral insertion probe is protected by a plastic sleeve.

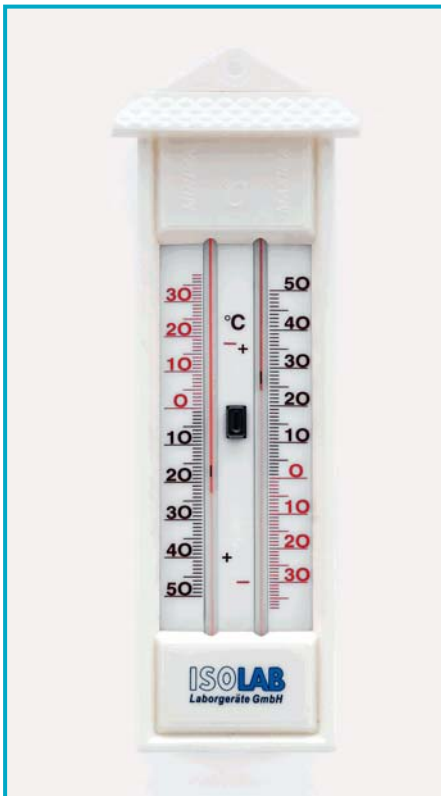
➤ Temperature can be read by digital display 19 x 8 mm.

➤ Operational temperature range in degree centigrade is between -50°C and +300°C, with divisions of 0.1°C.

catalogue number	probe length	pack quantity
060.01.001	127 mm	1 piece



## MAXIMUM & MINIMUM THERMOMETERS - "mechanical" - "electronical"



➤ **Mechanical** max & min thermometer with a push button for automatic resetting.

➤ Suitable for both outdoor and indoor operations. Has a weather resistant robust polypropylene housing with inclined shelter.

➤ The temperature measuring range is between  $-30^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$ , with subdivisions of  $1^{\circ}\text{C}$ .

➤ **Digital** max & min thermometer is suitable for both outdoor and indoor operations.

➤ Triple display simultaneously shows minimum, maximum and current temperature.

➤ The temperature measuring range is between  $-50^{\circ}\text{C}$  and  $+70^{\circ}\text{C}$ , with subdivisions of  $0.1^{\circ}\text{C}$ .

mechanical thermometer	digital thermometer	pack quantity
059.03.001	059.03.002	1 piece



### THERMOMETERS - "electronical"

➤ With two probes, these thermometers enable indoor/outdoor temperature measurement both in ( $^{\circ}\text{C}$ ) and ( $^{\circ}\text{F}$ ).

➤ With memory function for min/max temperature. Also includes functional date and time display. LCD display size is  $51 \times 41$  mm and housing dimensions of  $135 \times 75 \times 19$  mm.

catalogue number	operation range / div. $^{\circ}\text{C}$	operation range / div. $^{\circ}\text{F}$	quantity in pack
060.02.001	$-20$ & $+50/0.1^{\circ}\text{C}$	$-4$ & $+122/0.2^{\circ}\text{F}$	1 piece



### THERMOHYGROMETER - "electronical"

➤ Ideal for desktops or hanging for temperature measurement both in degree centigrade ( $^{\circ}\text{C}$ ) and degree fahrenheit ( $^{\circ}\text{F}$ ).

➤ Has max/min value monitoring with the alarm function. Also includes date and time display with 12/24 hour format.  $109 \times 70 \times 19$  mm size with  $40 \times 30$  mm LCD display.

catalogue number	operation range / div. $^{\circ}\text{C}$	operation range / div. $^{\circ}\text{F}$	moisture range	quantity in pack
060.03.001	$-50$ & $+70/0.1^{\circ}\text{C}$	$-58$ & $+158/0.2^{\circ}\text{F}$	10%-99%	1 piece



## LITHMUS PAPERS

➤ Litmus paper is a simple and easy way to use where no precise pH value is required.

➤ They are useful in determining whether a solution is acid or alkaline and can also be used to indicate a colour change over a very narrow range.

➤ The **red** litmus paper ( pH range 5,0 -8,0 ) changes colour from **red** to **blue**.

➤ The **blue** litmus paper ( pH range 8,0 -5,0 ) changes colour from **blue** to **red**.

catalogue number	type	booklet quantity	pack quantity
101.01.001	red	20 pieces	200 pieces
101.01.002	blue	20 pieces	200 pieces



## PH INDICATOR STRIPS



➤ pH test strips provide precise pH values as the different colours do not mix at the point of testing.

➤ Even small pH changes down to 0.2 pH can be observed in a clear colour change.

➤ pH indicator is chemically bounded to the cellulose fiber and provides a non-bleed system which ensures precise pH values.

➤ Strips protects the user's finger from the test solution as the test pads are at the extreme end of the strip.

➤ Brilliant colour chart at the box backside has 4 different colour chart.

➤ Colour chart match for each pH value ensures fast and reliable pH readings at all times.

catalogue number	brand	pH - range	strip width	strip length	pack quantity
101.02.001	ISOLAB	0 - 14 pH	6 mm	80 mm	100 pieces
MN.92110	M&Nagel	0 - 14 pH	6 mm	80 mm	100 pieces

## UNIVERSAL PH PAPER



➤ Most popular pH test papers worldwide and suitable for many applications.

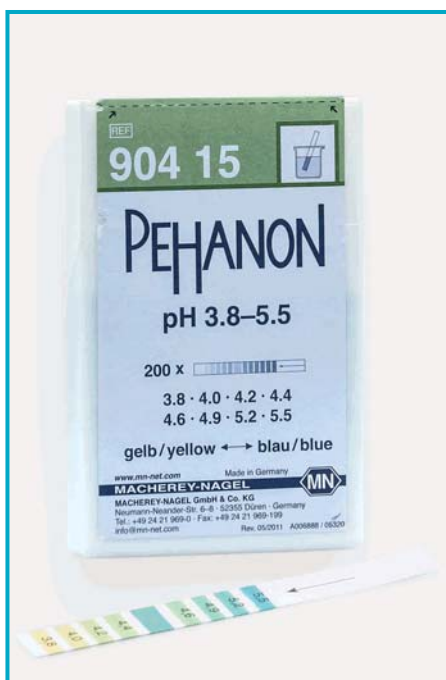
➤ They provide a quick and easy method of indicating the pH of a solution by using a single colour change.

➤ After the test pH value can be found by matching the paper colour with the colour chart (at intervals of 1 pH) at back side of the box.

➤ Supplied as 5 meters reel, packed in a clear plastic dispenser box.

catalogue number	pH - range	strip width	pack quantity
101.02.002	1 - 14 pH	6 mm	5 meters





### PEHANON STRIPS

- Very special pH test strip which unifies the pH indicator and the reference colors on one strip.
- pH values can be determined without a separate color chart.
- Any sample color has the same effect on both the reference colors and reactive pad.
- An invisible hydrophobic barrier just above the top color field prevents capillary action of the test solution beyond.
- Strip has 6 mm width and 85 mm length.

catalogue number	pH - range	pack quantity
MN.90415	3.8 - 5.5 pH	200 pieces



### PEROXIDE STRIPS

- Peroxide strips meet the most important requirements expected from a modern quick test.
- It is a ready-to-use kit. Peroxide strips are calibrated and contains all necessary equipment and reagents.
- The user will surely receive accurate readings since the graduations are; 0 - 1 - 3 - 10 - 30 - 100.
- The color charts are adjusted using certified standard solutions which are directly tracable to primary NIST standards.
- In order to get the maximum use from the product, close the tube immediately after removing the strip.

catalogue number	strip width	strip length	pack quantity
MN.91312	6 mm	95 mm	100 pieces



### AQUADUR STRIPS

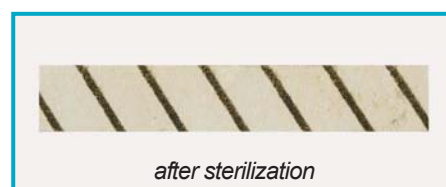
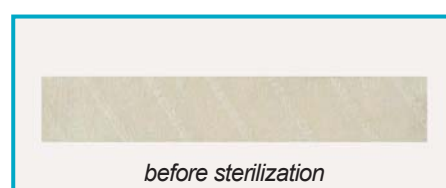
- Best strip for the determination of water hardness.
- Clear color changes from green to red ensures an accurate reading. Due to the clear design of the green/red indication, a color chart is not necessary.
- The hardness of the water depends on its calcium and magnesium content.
- The total assay of these salts determines the hardness of the water.
  - < 50 ppm : very soft water
  - 50 - 120 ppm : soft water
  - 120 - 240 ppm : medium water
  - 240 - 360 ppm : hard water
  - > 360 ppm : very hard water

catalogue number	strip width	strip length	pack quantity
MN.91201	6 mm	95 mm	100 pieces

### INDICATOR ROLLS - "for hot air indication"

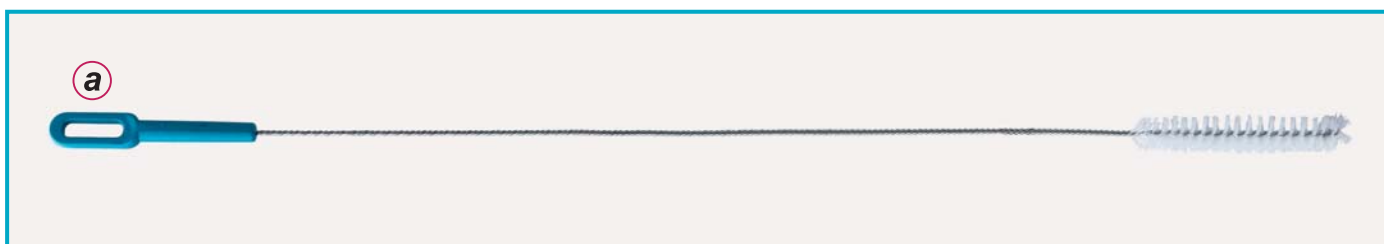
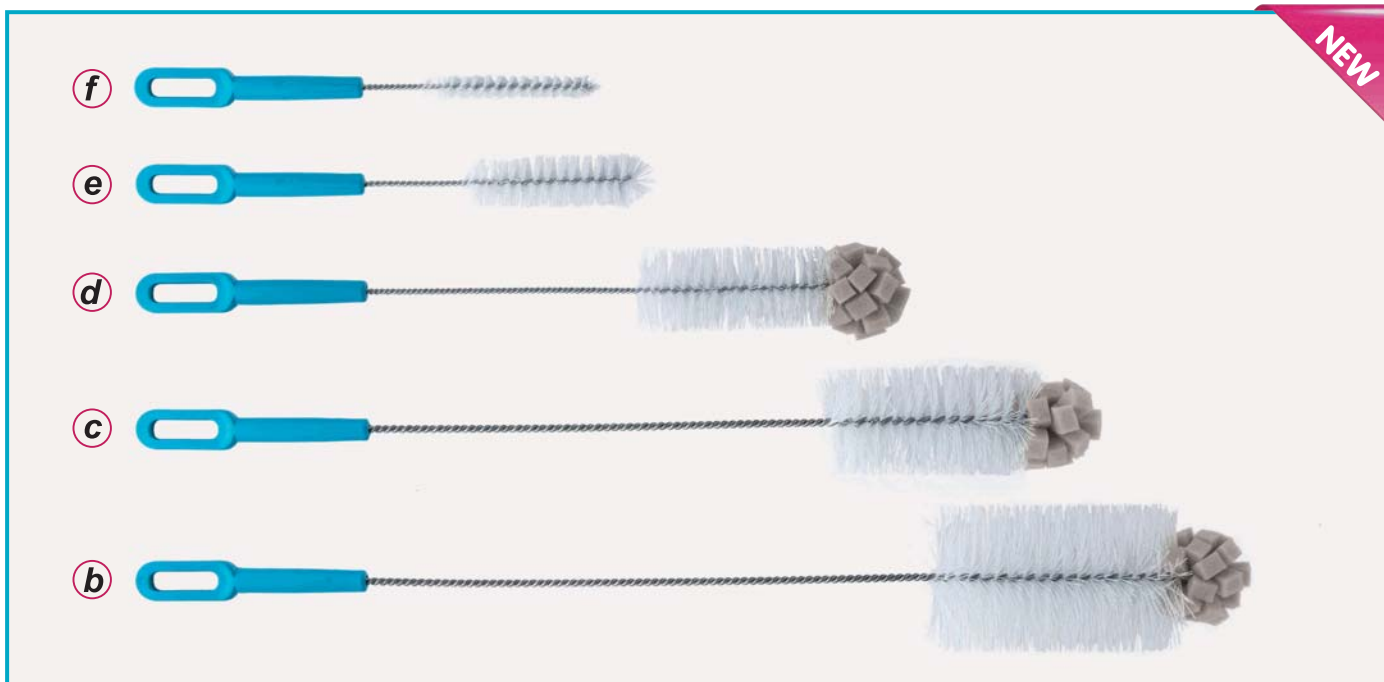
- Perfect indicator for hot air and steam sterilisation.
- Changes color of stripe once reaches sterilisation temperature.
- Self adhesive back ensures easy and safe adhesion to almost all surfaces and textile products.

catalogue number	roll width	roll length	pack quantity
101.03.001	19 mm	50 m	1 piece



## LABORATORY BRUSH - "naturel fibre / perlon"

NEW



- Excellent tools for washing and cleaning of all type of laboratory bottles, flasks, tubes, condensers, burettes, etc.
- Brush handle is manufactured from polypropylene and offers extreme easy handling and use of the brush.
- Brush material is manufactured from highest quality of fibre/perlon for long life cycle.
- Unique handle design ebanles hanging of the brush to a convenient place for easy reach.
- Brush stem is manufactured from corrosion proof twisted steel wire.
- Spherical sponge top part enables access to every corner of the labware and guarantees perfect cleaning results.

catalogue number	brush code	product name & description	stem length	brush diameter	brush length	pack quantity
071.02.001	<b>a</b>	Burette and tubings cleaning brush	845 mm	20 mm	125 mm	1 piece
071.02.002	<b>b</b>	Large size bottle cleaning brush	460 mm	70 mm	130 mm	1 piece
071.02.003	<b>c</b>	Medium size bottle cleaning brush	460 mm	50 mm	110 mm	1 piece
071.02.004	<b>d</b>	Small size bottle cleaning brush	380 mm	40 mm	110 mm	1 piece
071.02.005	<b>e</b>	Common test tubes cleaning brush	295 mm	25 mm	100 mm	1 piece
071.02.006	<b>f</b>	Narrow test tubes cleaning brush	235 mm	12 mm	80 mm	1 piece

## LABORATORY BRUSHES - "non - absorbant foam"

Manufactured from non-absorbant reinforced foam which will not absorb water and not become soogy even after multiple use.

Essentially much longer lasting than other common brushes. Cleans laboratory glassware with minimum effort and maximum efficiency.

Will not chip, break or scratch laboratory glassware, can also be safely used on plastic labware. Ergonomically designed wide handles enables easy rotating of brush.

### LABORATORY BRUSHES - "flexible"

- Specially recommended for labware with narrow neck and wider base such as erlenmeyers, bottles, etc.
- Perfectly adapts to the shape of the vessel to be cleaning.

catalogue number	brush diameter	total length	pack quantity
071.05.001	20 mm	370 mm	1 piece



### LABORATORY BRUSHES - "round head"

- Specially recommended for all labware with cylindrical form such as cylinders, beakers, vertical tanks and other similar flasks.
- Available 2 types:
  - short
  - long

catalogue number	brush size	brush diameter	total length	pack quantity
071.05.002	short	60 mm	150 mm	1 piece
071.05.003	long	70 mm	400 mm	1 piece



### LABORATORY BRUSHES - "for tubes"

- Specially recommended for tubes due to the unique design which fits to all tube sizes from the smallest to the largest diameter.
- Perfectly adapts to the diameter of the tube since brush can spread apart. So every rounding can be cleaned effectively.

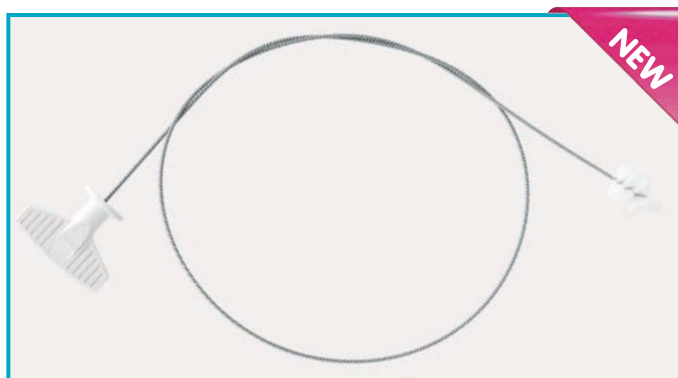
catalogue number	brush diameter	total length	pack quantity
071.05.004	20 mm	180 mm	1 piece



### LABORATORY BRUSHES - "for burettes"

- Specially recommended for hoses, tubings and burettes with diameter from 12 mm to 25 mm.
- Perfectly adapts to the rounding of the tube and flexible long handle enables even the round labware can be cleaned effectively.

catalogue number	brush diameter	total length	pack quantity
071.05.005	20 mm	1200 mm	1 piece





NEW

### LABORATORY BRUSH - "hinged & swivel head"

- Specially recommended for curved and cornered shaped labware such as round bottom flasks.
- Uniquely designed convex swiveling brush head gets contact with all surface of the flask including difficult curves and corners and enables thorough cleaning.
- The brush head has a slightly convex shape for fast and effective cleaning even also at heavy soiled flasks.
- Strong yet flexible bristles provide long lasting trouble free life cycle. Good grip due to the solid and long wooden handle.
- The swivel brush part fits through NS 29/32 or larger or any non tapered neck with a diameter 24 mm or larger.

catalogue number	swivel head size	handle length	pack quantity
071.03.001	21x44x24 mm	360 mm	1 piece

### BRUSH - "for intensive cleaning"

- Specially recommended for all applications for intensive cleaning and even for dish washing.
- Brush part consists of soft nylon bristles providing long lasting trouble free life cycle.

catalogue number	pack quantity
071.06.001	1 piece



NEW

### CLEANWARE ORGANISER

- Ensures comfort at your lab with its bin at the back which is large enough sponge, wire wool or cleaning wipes.
- Stops the mess at your lab table providing more and convenient space for use.
- The soap dispenser ensures hygienic and practical consumption of liquid detergent.
- Cleanware organizer is supplied without the brushes shown at photo.

catalogue number	pack quantity
071.07.002	1 piece



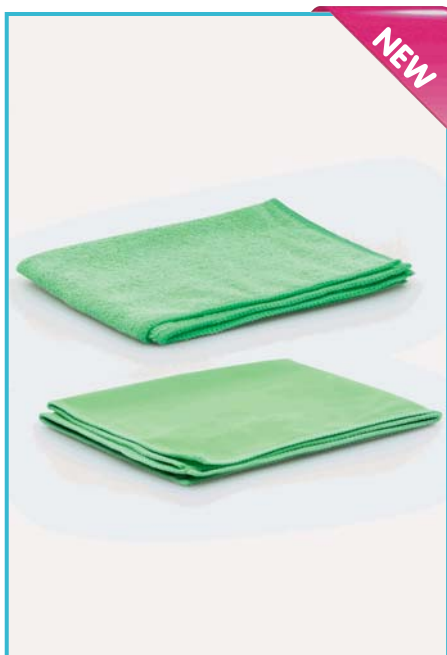
NEW



### BRUSH - "hygenical cleaning"

- Specially recommended for all applications where hygenical cleaning is required.
- Brush part consists of soft bristles for long lasting trouble free life cycle.
- Detergent dispenser at the handle of the brush guarantees an undisturbed continuous use of the brush.
- Pressing the brush head opens dispenser and releases detergent into the brush.

catalogue number	pack quantity
071.06.003	1 piece



### WIPES - "microfibre"

- Manufactured from microfibre textile with high tensile strenght.
- Specially recommended for lifting and trapping dirt from surfaces for fast and efficient cleaning. No chemicals are required during cleaning.
- Can be washable hundreds of times without getting tired. Absorbs and retains up to 8 times its weight.
- Supplied as two wipes: one for glass surfaces, the other for general use.

catalogue number	wipe dimensions	pack quantity
071.07.003	30 x 40 cm	set of 2



### TISSUES - "general"

- Manufactured from non-chlorine bleached cellulose as two-ply sheets.
- Ultra soft, chemically inert, highly absorbent and low lint.
- Specially recommended for wiping and cleaning of labware and also for other use such as wiping small amounts of liquids etc.
- Supplied in a handy dispenser box for hygenic storage and easy removal.

catalogue number	tissue dimensions	pack quantity
080.65.002	195 x 195 mm	1 piece

### CLEANING TOWEL

- Highly absorbent and durable folded hand towels, suitable for towel dispenser. Effective and economical option for a variety of cleaning duty.

catalogue number	towel dimensions	pack quantity
080.65.004	230 x 220 mm	200 pieces



### TOWEL DISPENSER

- Ensures comfort at your lab with its bin at the back which is large enough for sponge, wire wool or cleaning wipes.

catalogue number	dimensions	pack quantity
080.67.001	266 x 287 x 107 mm	1 piece



## DRAINING RACK

- A professional draining rack with interchangeable pegs made out of ABS.
- These push in pegs are easily removable for cleaning or to hold different shape of glassware. The peg sockets have closed ends which eliminate leakage.
  - Large size pegs are in triangular shape which can hold flasks wider than 15 mm diameter.
- 2 type of pegs:
  - Small size pegs are in round shape which can hold flasks wider than 6 mm diameter.
- The drip channel collects waste water which drains through existing drain tubes.
- Comes complete with mounting kit, draining hose and fixing template.

catalogue number	rack width	rack height	peg quantity	pack quantity
071.01.002	500 mm	610 mm	72	1 piece



NEW

## PIPETTE WASHING SET

- Washing system is ideal for gentle cleaning of pipettes based on pipetting principle. Solves the problem of washing pipettes quickly and safely.
- The polyethylene rinser fills via the spray nozzle situated on the top rim. This eliminates backsiphoning.
- Contaminated waters will syphon out totally, once the syphon point at the top of the rinser has been reached.
- Supplied as a complete system consists of a washing unit and a pipette basket.

catalogue number	quantity in pack
071.10.001	1 piece



## PIPETTE WASHING SET

- Washing system is ideal for gentle cleaning of pipettes based on pipetting principle. Solves the problem of washing pipettes quickly and safely.
- The polyethylene rinser fills via the spray nozzle situated on the top rim. This eliminates backsiphoning.
- Contaminated waters will syphon out totally, once the syphon point at the top of the rinser has been reached.
- Consists of a washing unit and cleaning vessel and a pipette basket.

catalogue number	quantity in pack
071.10.002	1 piece

**MAGNIFIER - "table top"**

- Multifunctional table-top magnifier with magnification power of 2X and 4X depending of the view location.
- Can be operated by one hand, smooth and easy use with distant and near vision glasses.
- Super bright powerfull illumination by 4 LED bulbs with on/off control.
- Two seperate flexible gooseneck system enables both magnifying lens position and illumination angle direction adjustable in multiangular axes.
- Shadow free and flicker free illumination without heat development with optimal concentration of light
- Aspherical lens provide spherical aberration and distortion free images with edge-to-edge sharpness.

catalogue number	pack quantity
065.10.001	1 piece

**MAGNIFIER - "handheld" - "illuminated"**

- A unique hand held magnifier with magnification power of 3X and 5X depending of the view location.
- Ergonomic handle design that fits to hand shape with comfortable grip.
- Aspherical lens provide spherical aberration and distortion free images with edge-to-edge sharpness.
- Super bright powerfull illumination by single hightech LED bulb with on/off control.
- Adjustable angle of illumination by rotatable joystick type ball switch in 4 dimentions.

catalogue number	exterior dimensions	lens dimensions	pack quantity
065.10.006	220 x 100 mm	100 mm	1 piece

**MAGNIFIER - "pocket" - "illuminated"**

- Perfect magnifier for reading small prints with magnification power of 2X.
- Super bright powerfull illumination by 3 LED bulbs with on/off control.
- Ergonomic design enables intuitive movement on the reading material. Delivered with a soft protective bag.

catalogue number	exterior dimensions	lens dimensions	pack quantity
065.10.004	60 x 140 mm	60 x 100 mm	1 piece



**SPECTACLE - "basic"**

- Manufactured from very clear, impact resistant polycarbonate with ergonomically designed temples which ensure an excellent fit.
- Multi purpose safety spectacle, with large panorama lens offering an extremely broad field of vision.
- Ideal for factory visits, assembly lines, laboratory routine work. Suitable for wearing over normal eye-glasses.
- Provides modern styling in combination with eyebrow and side protection.
- Slots in the templates enables optimal indirect ventilation ensuring mist free usage everytime.

catalogue number	pack quantity
080.40.003	1 piece

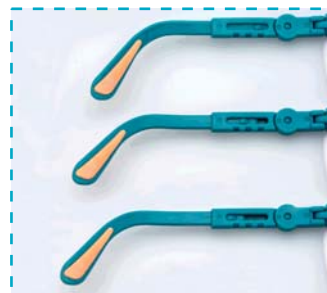


*Slots in the templates enables optimal indirect ventilation ensuring mist free usage everytime.*

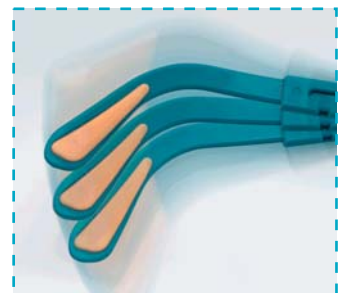
**SPECTACLE - "adjustable lens & side arm"**

- Manufactured from ultra clear, polycarbonate with integrated side protectors.
- Excellent multi purpose spectacle providing modern styling with sporty design. With extremely large field of vision for an absolute visibility.
- Soft pads at the end of side arms reduce pressure behind the ears and offers improved comfort.
- Supreme wearing comfort due to very light body (only 32 grams) with wide supporting surface.
- Very high mechanical stability, clear scratch-proof and anti-fog visor. Enables %99,99 UV protection.

catalogue number	pack quantity
080.40.004	1 piece



*Side - arms can be adjusted as length in 3 positions with integrated stop lock. Back and forward adjustment of the length enables a correct fit to any head shape.*



*Lens can be adjusted as inclination in 3 positions for proper and exact fit. Up and down adjustment of the lens angle enables a correct fit to any head shape.*



**SPECTACLE - "adjustable side arm"**

- Manufactured from very clear, impact resistant polycarbonate with ergonomically designed temples which ensure an excellent fit.
- Multi purpose safety spectacle, with large panorama lens offering an extremely broad field of vision.
- Designed to perfectly fit the face with adjustable side arm for maximum comfort.
- Dark coloured lenses provide high UV protection and distortion-free view.
- High impact resistant and scratch resistant.
  - with clear lens
- Available 2 types:
  - with dark lens
- Side - arms can be adjusted as length in 3 positions with integrated stop lock.
- Back and forward adjustment of the length enables a correct fit to any head shape.

<i>spectacle with clear lens</i>	<i>spectacle with dark lens</i>	<i>pack quantity</i>
080.40.001	080.40.002	1 piece

**LED LIGHT - "for spectacles"**

- Offers perfect illumination at dark working areas.
- Can be easily fixed to most spectacles with the side clamp.
- Illumination angled is adjustable for optimum angle.
- Supplied with easily replaceable batteries with long life cycle.

<i>catalogue number</i>	<i>pack quantity</i>
069.03.005	1 piece

**CLEANING TISSUES - "for lens"**

- Specially recommended for various optical lens such as objectives, binocular, spectacles etc.

- Manufactured from very thin best quality paper made exclusively %100 manila fibre.

- Guarantees non-abrasive cleaning.

- Never scratches and damages the surface. Never leaves any fibres or dust on the lenses.

- Supplied in a handy booklet for hygienic storage and easy removal.



<i>catalogue number</i>	<i>tissue dimensions</i>	<i>pack quantity</i>
080.65.003	100 x 150 mm	booklet of 100 sheets



## GOGGLE

- Multi purpose safety goggle with large panorama lens and extremely broad field of vision.
- Provides modern styling in combination with comfortable and soft eyebrow and side protection and also suitable for wearing over normal eye glasses.
- Can be adjusted quickly providing reliable all-round protection due to the excellent fit. Supreme wearing comfort due to pleasantly light body.
- Additional ventilation via integrated air channels enables optimal indirect ventilation ensuring mist free usage everytime.
- Very high mechanical stability, clear scratch-proof and anti-fog visor.

catalogue number	pack quantity
080.40.007	1 piece



## SAFETY SHIELD

- Ultra light face shield also suitable for work with UV light.
- Fold - up visor of thickness 1,5 mm protects the face against chemical splashes and flying objects.
- Can be also worn on masks and spectacles.
- Rotating fastener for easy adjustment to individual head size and variable lift-up mechanism with locking at any position.
- Soft vinyl sweat band offers comfortable use.

catalogue number	pack quantity
080.40.010	1 piece



Rotating fastener for easy and fast adjustment to individual head size



Variable lift-up mechanism with locking at any position. Soft vinyl band offers comfortable use.



### EAR PLUGS

- Manufactured from smooth and skin friendly PU foam which is antiallergic, very soft and extremely comfortable to wear.
- With high wearing comfort due to the anatomical shape for simple insertion and to prevent slipping out.
- Optimised bell shape for comfortable fit into ears with smaller auditory canals.
- Provides an excellent sound insulation of 33 DB level.

catalogue  
number

069.04.001

pack  
quantity

1 piece



### EAR MUFF

- Two part headband to with well ventilated interior and soft sealing cushions.
- Can be folded to protect the ear pieces against dust and dampness.
- Quick click adjustment enables headband to adapt quickly to all head shapes and sizes.
- Provides an excellent sound insulation of 25 DB level.

catalogue  
number

069.04.002

pack  
quantity

1 piece



### EYE WASH SET

- Easy one-handed inversion provides steady rinsing.
- Nozzles are contoured to fit eye socket comfortably and diffuser ensures even flow.
- English, Spanish, French and German labels and instruction cards are included.
- Each station includes a wall-mountable frame with top and bottom holes for easy mounting on any surface, attached mirror, instruction cards and 1 liter bottle.

catalogue  
number

069.03.001

pack  
quantity

1 piece



### EYE WASH BOTTLES

- Easy one-handed inversion provides steady rinsing.
- Nozzles are contoured to fit eye socket comfortably and diffuser ensures even flow.
- This portable eye wash bottle contains a special eye bath irrigator and has no moving parts.

Multiple water nozzles allows safe and quick emergency response.



empty bottles	volume	fillet bottles	volume	pack quantity
069.03.320	320 ml	069.03.321	320 ml	1 piece
069.03.660	660 ml	069.03.661	660 ml	1 piece



## GLOVES - "nitrile"

- Manufactured from raw material free from phthalates softeners and allergic latex proteins with approximate length of 240 mm.
- CE category 1 for minimal risks for usage where both wearing comfort and product/process safety have priority. Tested in accordance with EN Norms EN420:2003.
- AQL 1,5 offers the highest level for EN374-2:2003 protection against penetration by micro organisms.
- Very good mechanical strength with excellent fit and excellent good grip through textured fingers.
- %40 stronger and %60 leaner than latex gloves.
- with standard thickness of minimum 0,06 mm.
- Available 2 types:
  - with extra thickness of minimum 0,12 mm.
- Extra thick gloves are specially designed for life sciences, biomedical research, forensic science, R&D and non-sterile drug manufacturing.
- Provides protection against wide range of chemicals including cytotoxic drugs.
- Easy to wear and particularly skin friendly through special finishing process.

standard gloves	glove size	colour code	AQL	glove length	pack quantity
080.15.001	Small	blue	1.50	240 mm	100 pieces
080.15.002	Medium	blue	1.50	240 mm	100 pieces
080.15.003	Large	blue	1.50	240 mm	100 pieces
080.15.004	X Large	blue	1.50	240 mm	100 pieces

extra thick gloves	glove size	colour code	AQL	glove length	pack quantity
080.16.001	Small	blue	1.50	240 mm	100 pieces
080.16.002	Medium	blue	1.50	240 mm	100 pieces
080.16.003	Large	blue	1.50	240 mm	100 pieces
080.16.004	X Large	blue	1.50	240 mm	100 pieces

**GLOVES - "cold resistant"**

- Excellent gloves to work in cold treatment plants, with coolants and as well as for handling dry ice and similar applications.
- Offers protection against the danger when working with ultra low temperatures down to -140°C.
- Even after working with extreme temperatures they still stay flexible.

catalogue number	glove size	pack quantity
080.10.001	universal	1 pair

**GLOVES - "chemical resistant"**

- Made from polychloroprene which is resistant to many chemical substances such as acids, bases and organic oils and fats as well as bacteriological contamination.
- Anatomical shape with good gropeability with cotton flocked.
- These gloves have safety category 3 and can be used in laboratories, trade and industry.

catalogue number	glove size	glove length	pack quantity
080.12.001	Small	310 mm	1 pair
080.12.002	Medium	310 mm	1 pair
080.12.003	Large	310 mm	1 pair
080.12.004	X-Large	310 mm	1 pair

**GLOVES - "cotton"**

- Made from lightweight 100% cotton knit.
- Can be worn alone or pair and suitable for both men and women.
- Provides a comfortable and soft usage and fits either hand.

catalogue number	glove size	pack quantity
080.13.001	universal	1 pair

**GLOVES - "heat resistant"**

- Made from soft, pliant terry cotton which is machine washable.
- Provides excellent heat protection up to 250°C during autoclaving and furnacing processes.
- Very flexible and easy to wear and offers comfort in applications.

catalogue number	glove size	pack quantity
080.11.001	universal	1 pair





## GLOVES - "silicone"

- Manufactured from silicone rubber which is highly resistant to both heat and cold.
- Protects fingers and hands when working with flasks which has high temperatures .
- Due to the very elastic and slip-proof characteristic all shape of vessels can be securely gripped.
- Can be used with temperature 200°C - 250°C, so hot glass flasks or even boiling apparatus can be safely handled and positioned.

catalogue number	glove type	pack quantity
080.18.001	5 fingers	1 piece
080.18.002	full hand	1 piece



## HOT HAND PROTECTORS

- Manufactured from silicone rubber which is highly resistant to both heat and cold.
- Protects fingers and hands when working with flasks which has high temperatures.
- Due to the very elastic and slip-proof characteristic all shape of vessels can be securely gripped.
- Can be used with temperature 200°C - 250°C, so hot glass flasks or even boiling apparatus can be safely handled and positioned.

catalogue number	glove type	pack quantity
080.17.001	for 2 fingers	1 piece
080.17.002	for 5 fingers	1 piece



**DESK PROTECTOR - "paper"**

- A practical protector that is essential at each laboratory.
- Offers protection against aggressive chemicals. Suitable recovery of spilled solutions and reduce risk of glass breaking.
- Provides a total protection thanks to its two layers.
  - Elastic, slip-resistant polyethylene, water-proof bottom layer prevents soaking of many solutions.
  - The highly absorbant paper surface soak up water, staining liquids, coorive chemicals and also radioactive solutions.
- Consists of 2 layers:



catalogue number	dimensions	quantity in pack
080.66.001	46 cm x 50 m	1 piece

**SURFACE PROTECTOR - "cork"**

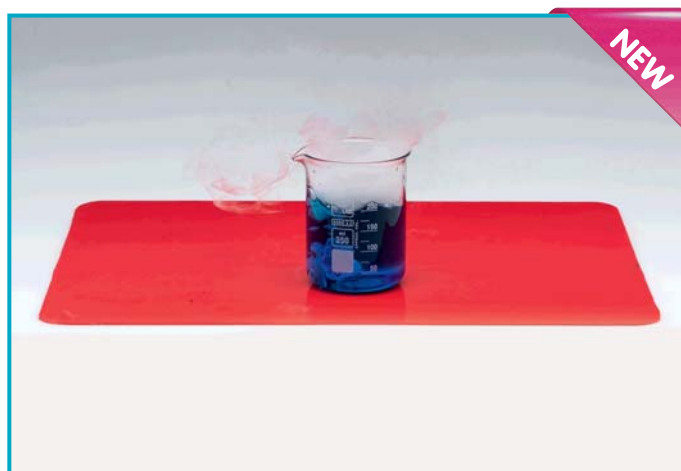
- Made from natural and agglomerated cork which can be easily cleaned.
- Non-allergenic, anti-fungal, anti-bacterial and anti-static material.
- Heat and erosion resistant and also reduces noise and vibration.

catalogue number	dimensions	thickness	quantity in pack
080.66.002	200 x 200 mm	10 mm	1 piece
080.66.003	300 x 300 mm	10 mm	1 piece

**SURFACE PROTECTOR - "silicone"**

- Manufactured from silicone which is resistfull to 260°C.
- Features a high adherence and anti-skid surface.
- For use over the benchtop and over laboratory stirrers to prevent beakers from slipping.

catalogue number	dimensions	thickness	quantity in pack
080.66.004	290 x 410 mm	1,5 mm	1 piece





## MASK - "dust"

- Perfect respirator masks or protection against fine dust, liquid particles, inert particles, toxic substances, harmful particles etc.
- Concave shape, aluminium nose-piece, and adjustable straps to provide an excellent fit on different face shapes and reducing the strain and fatigue.
- Exhalation valve minimize warm and humid airflow away from the face and help reduce fogging on eye wear.
- Inner and external P.P material to reduce the filter drops and increase the wearing comfort.

catalogue number	technical specifications	pack quantity
080.41.001	FFP1 respirator	10 pieces
080.41.002	FFP2 valved respirator	10 pieces
080.41.003	FFP3 valved premium respirator	10 pieces

## Technical informations

- **FFP 1:** for protection against non-toxic harmful solid and liquid in concentrations up to 4 x OEL or 4 x APF, such as calcium carbonate, china clay, cement, cellulose, sulfur, cotton, flour, carbon, ferrous metals, vegetable oils and soft food.
- **FFP 2:** for protection against low-to-average toxicity harmful solid, liquid and smoke containing the following materials in concentration up to 12 x OEL or 10 x APF, such as calcium carbonate, china clay, cement, cellulose, sulfur, cotton, flour, ferrous metals, vegetable oils, hardwood, glass fibers, carbon, mineral oils, quartz, aluminum, bacteria, fungi and mycobacterium tuberculosis.
- **FFP 3:** for protection from high toxicity harmful solid and liquid aerosols containing the following materials in concentration up to 50 x OEL or 20 x APF, such as calcium carbonate, china clay, cement, cellulose, sulfur, cotton, flour, carbon, ferrous metals, vegetable oils, hardwood, glass fibers, carbon, mineral oils, quartz, copper, aluminium, bacteria, fungi and mycobacterium tuberculosis, chromium, manganese, nickel platinum, strychnine, metal dust and smoke, viruses and enzymes.

Hazard type	FFP 1	FFP 2	FFP 3
dust	✓	✓	✓
metal fume	✓	✓	✓
weld fume	✗	✓	✓
odour	✗	✗	✓
oil based particles	✗	✓	✓
toxic particles	✗	✓	✓
viruses	✗	✓	✓
bacteria	✗	✓	✓
protection factor	4 x O.E.L.	10 x O.E.L.	20 x O.E.L.



**MASK - "half face"**

- Manufactured according to DIN EN 140 and EN 14387 standard from silicone components with broad and supple inner sealing lips for close fitting.
- Cool flow valve ensures extremely low expiration resistance and prevents built-up heat in the mask.
- Easy to adjust, drop-down strap system enables masks to be put on and taken off quickly and easily.
- Wide flange seals provides security even when walking.
- Soft and durable facepiece designed for comfort. Fits contours of the face without pressure points.
- Extremely robust and comfortable canister filter system with exchangeable cartridge filter ensures low breathing resistance.
- Supplied with multiple gas cartridge for protection from organic vapours and gases with boiling point 65°C or above and dust and mist.

catalogue number	product description	pack quantity
080.44.001	half face mask	1 piece
080.44.101	spare gas cartridge	1 piece

**MASK - "full face"**

- Manufactured according to EN 136:1998 standard from silicone components with broad and supple inner sealing lips for close fitting.
- With anti-scratch, anti-fogging, non-reflecting and distortion-free polycarbonate window shield with very large field of vision.
- Offers ultimate level of comfort by ergonomic construction and design.
- Cool flow valves ensures extremely low expiration resistance and prevents built-up heat in the mask.
- Easy to adjust, drop-down strap system enables masks to be put on and taken off quickly and easily. Extra wide flange seals provides security even when walking.
- Robust and comfortable canister filter system with exchangeable cartridge filter ensures low breathing resistance.
- Supplied with multiple gas cartridge for organic vapours, inorganic vapours (excluding carbon dioxide and monoxide), sulphur dioxide, acidic vapours, ammonia, ammonia derivative vapours and dust.

catalogue number	product description	pack quantity
080.45.001	full face mask	1 piece
080.45.101	spare gas cartridge	1 piece



## STAINING JARS - "Hellendahl" - "Schiffedercker &amp; Papanicolau"

**"Hellendahl"**

- Hellendahl staining jar is suitable for holding 76x26 mm slides vertically.
- Hellendahl staining jar has 9 grooves which can accommodate 18 slides one after the other.
- Staining jar supplied with glass lid.

catalogue number	pack quantity
073.01.001	1 piece

**"Schiffedercker"**

- Schiffedercker staining jar is suitable for holding 76x26 mm slides horizontally.
- Schiffedercker staining jar has 10 grooves which can accommodate 20 slides one after the other.
- Staining jar supplied with glass lid.

catalogue number	pack quantity
073.03.001	1 piece

**"macro"**

- Macro staining jar is manufactured from thick moulded glass.
- Stainless steel staining rack with 20 grooves which can accommodate 20 single slides.
- Staining jar supplied with glass lid.

catalogue number		pack quantity
073.05.001	jar	1 piece
073.06.001	rack	1 piece

**NEW****"staining jars" - "PMP"**

- Made from polymethylpentene (PMP) and included lid.
- Hellendahl staining jar is suitable for holding slides vertically and Schiffedercker staining jar is suitable for holding slides horizontally.
- Remark: Xylene can cause etching to PMP after two days at room temperature.

catalogue number	model	pack quantity
073.01.011	Hellendahl	4 pieces
073.03.011	Schiffedercker	4 pieces

**NEW**

**EMBEDDING CASSETTES - "without lid"**

- Disposable plastic tissue cassettes are suitable for holding and identifying tissue samples in processing, embedding and sectioning procedures and fit securely in microtome chuck adapters.
- Moulded from a high density polymer which is totally resistant to the chemical action of histological solvents.
- The slanted writing surface accepts markings easily, permitting sample identification.

catalogue number	colour	quantity in pack	quantity in box
074.01.001	white	500 pieces	5000 pieces

**CASSETTE LID - "stainless steel"**

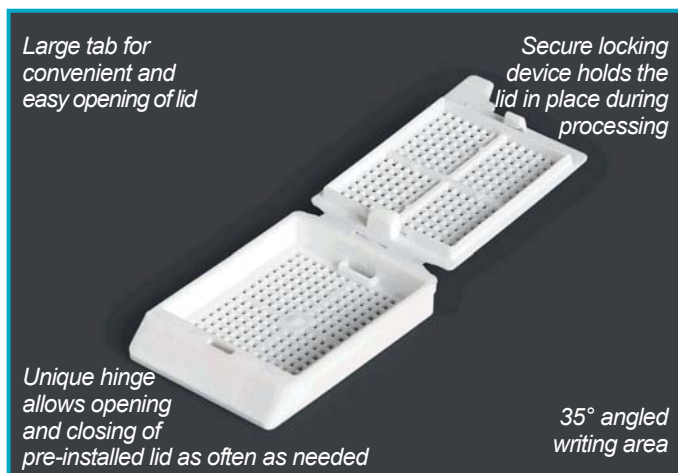
- Manufactured from high grade stainless steel with perforated surface for optimal liquid diffusion.

catalogue number	pack quantity
074.02.001	5 pieces

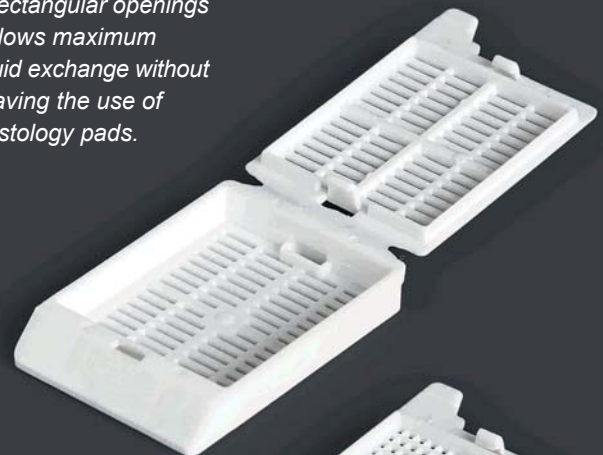
**EMBEDDING CASSETTES - "with lid"**

- Have same technical specifications as cassettes without lid. The efficient flow-through slots maximize fluid exchange and ensure proper drainage.
- Lids can be opened and closed as often as necessary and always relock securely without any risk of specimen loss.
- Large labelling areas are located on both sides of the cassettes. Exterior writing area with 45° angle.

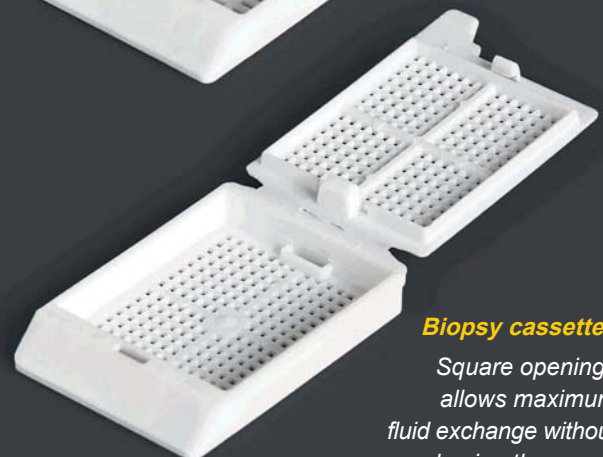
cassette histology	cassette biopsy	colour	quantity in pack	quantity in box
074.03.001	074.04.001	white	500 pieces	5000 pieces

**Histology cassettes**

Rectangular openings allows maximum fluid exchange without having the use of histology pads.

**Biopsy cassettes**

Square openings allows maximum fluid exchange without having the use of biopsy pads.





*Sterile urine containers are originally manufactured under germ-free aseptic (sterile) conditions of class 10.000 sterile area with extreme sterility control.*

### CONTAINER URINE - "with lid"

- Manufactured from absolutely clear, high grade polypropylene with embossed volume graduations on the container body.
- Used for collection, transportation and storage of urine and also a wide variety of specimens.
- Maximum volume capacity is 120 ml and the effective volume is 100 ml.
- Screw cap (manufactured from HDPE) perfectly fits to the body and avoids any leakage.
  - Non-sterile containers (supplied with unasssembled cap - bulk packed)
- Available 2 types:
  - Clean room produced containers (supplied with assembled cap - individually packed)

catalogue number	product name	pack quantity
087.01.001	urine container / non-sterilized	500 pieces
087.01.002	urine container / clean room manufactured	250 pieces



### CONTAINER - "medicine"

- Manufactured from absolutely clear, high grade polypropylene with embossed volume graduations on the cup body.
- Pliable and also unbreakable maximum effective volume is 30 ml.
- Press on cap (manufactured from HDPE) perfectly fits to the body and avoids any leakage.

catalogue number	product name	pack quantity
087.05.001	medicine cup	5000 pieces
087.05.002	lid for medicine cup	1000 pieces

## CONTAINER - "feaces"

- Manufactured from absolutely clear high grade P.S.
- With an approximate volume of 20 ml and approximate volumetric graduations are printed on the body.
- The spoon cap perfectly fits over the body and avoids any leakage.
- Non sterile feaces containers are packed with caps unattached.
  - Non-sterile containers (supplied with unassambled cap - bulk packed)
- Available 2 types:
  - Clean room produced containers (supplied with assambled cap - individually packed)

catalogue number	product type	pack quantity
087.03.001	non-sterilized	400 pieces
087.03.002	clean room manufactured	400 pieces



## CONTAINER - "specimen"

- Manufactured from absolutely clear high grade polypropylene.
- With a volume of 40 ml and the approximate volumetric graduations are moulded on the body.
- The press-on cap perfectly fits over the body and avoids any leakage.
- Non sterile specimen containers are packed with caps unattached.
  - Non-sterile containers (supplied with unassambled cap - bulk packed)
- Available 2 types:
  - Clean room produced containers (supplied with assambled cap - individually packed)

catalogue number	product type	pack quantity
087.02.001	non-sterilized	1000 pieces
087.02.002	clean room manufactured	500 pieces

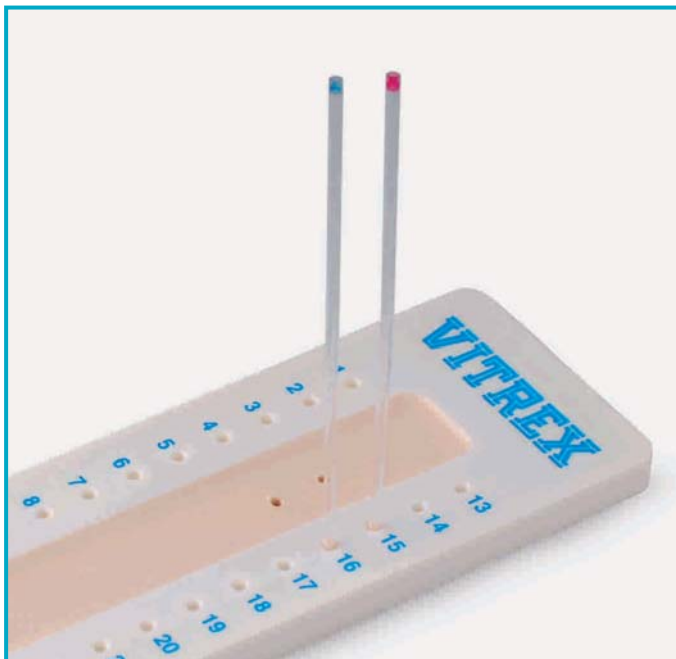




### HAEMATOCRIT - "micro"

- Manufactured by fully automated systems according to ISO 12772 and BS4316-68.
- Tube length is 75 mm (+/- 1 mm) and the wall thickness is 0,2 mm.
- Heparinized tubes are heparinized with sodium heparinate over internal surface.
  - Non-heparinized tubes have blue color code at the end of the micro haematocrit tube.
- Available 2 types:
  - Heparinized tubes have red color code at the end of the micro haematocrit tube.

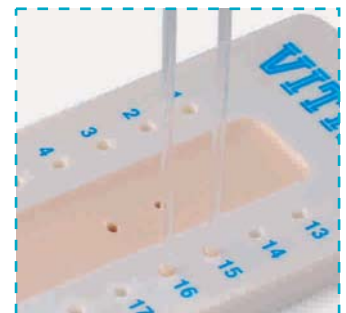
tubes heparinized	tubes non-heparinized	colour code	tube length	quantity in vial	quantity in box
088.02.001		red	75 mm	100 pieces	10 vials
	088.02.002	blue	75 mm	100 pieces	10 vials



### TUBE WAX - "for haematocrit tubes"

- Micro haematocrit tube wax is non-drying, sealing compound placed on a plastic tray.
- Can be used for fast and safe sealing of the ends of microhaematocrit tubes.
- Can be safely stored up to 3 years at room temperature.

Up to 48 tubes (24 on each side) can be stored vertically in numbered positions along the sides of the wax tray.



catalogue number	tube, capacity	pack quantity
088.03.001	48 tubes	10 pieces

## BLOOD LANCETS - "manual"

- Manufactured from medical grade stainless steel.
- The gamma-sterilized lancets are individually packed.

Lancets are very incisive and have very sharp edges which penetrates into the skin very easily.



catalogue number	quantity in pack	quantity in box
088.01.001	200 pieces	50 pack

## BLOOD LANCETS - "automatic"

- These lancets are user safe since the needle is fully shielded before and after use.
- They have a pre-loaded, button operated design.
- These lancets are for single-use only, sterilized by gamma irradiation.
- Patient comfort due to high quality, ultra sharp tri-bevel needle, high speed penetration of 1.8 mm penetration depth.



catalogue number	quantity in pack	quantity in box
088.02.003	100 pieces	50 pack



Twist off the protective cap/safety cover



Hold the lancet firmly against selected finger site.



Press the release button to activate the device.



Gently massage the finger to obtain the required blood.



## BLOOD COUNTING CHAMBERS

- Manufactured from special optical glass according to DIN 12847 standard. They are supplied in a polystyrene box together with two haemocytometer cover glasses.
- With the help of these chambers, it is possible to count leucocytes, erythrocytes, bacteria, thrombocytes, etc. with simple methods under microscope.

catalogue number	specification	pack quantity
075.03.001	Neubauer Improved	1 piece
075.03.002	Thoma	1 piece
075.03.003	Nageotte	1 piece



## COVER GLASSES - "for counting chambers"

- Manufactured from very flat, borosilicate glass with plain ground and polished surfaces.

catalogue number	pack quantity
075.04.001	10 pieces



## TALLY COUNTER - "handy"

- Effective and practical counter with a sturdy, chrome finished housing.
- Ideal for counting blood cells, bacterial colonies, drops of liquid or any other repetitive step with a tally level up to 9999.
- Features a quick-reset knob, lens window for easy reading, and a finger ring for a secure grip.

catalogue number	pack quantity
081.14.001	1 piece



## MICROSCOPE COVER GLASSES

- Manufactured from high optical grade, hydrolytic class no:1 borosilicate glass with an excellent chemical resistance.
- Their fully automatical production ensures clean, dust free cover glasses with accurate cut edges free of flaws and blisters.
- Thickness of the glass used for production is no:1 grade (0,13 -0,17 mm) with refractive index of n=1,52
- Available 2 types:
  - economical quality
  - superior quality

economic quality	superior quality	dimensions	quantity in pack	quantity in box
075.00.001	075.01.001	18 x18 mm	100 pieces	10 pack
075.00.002	075.01.002	20 x 20 mm	100 pieces	10 pack
075.00.003	075.01.003	22 x 22 mm	100 pieces	10 pack
075.00.004	075.01.004	24 x 24 mm	100 pieces	10 pack
075.00.005	075.01.005	24 x 32 mm	100 pieces	10 pack
075.00.006	075.01.006	24 x 50 mm	100 pieces	10 pack
075.00.007	075.01.007	24 x 60 mm	100 pieces	10 pack



## MICROSCOPE SLIDES

- Microscope slides are manufactured from high optical grade soda lime glass with hydrolytic class 3.
- Their fully automatic production ensures clean, dust and grease free slides.
- They have extremely flat surface with 1 mm thickness and 26 mm x 76 mm size.
- Available 2 types:
  - economical quality
  - superior quality



Superior quality colour coded slides have ground edges, with 45° edge angle, with 5 different colours for easy identification.



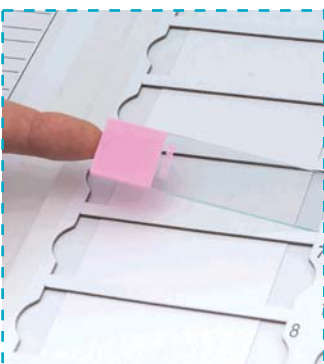
economic quality	superior quality	specification	edge angle	colour code	quantity in pack	quantity in box
075.05.001		Cut edges, Plain	90° Degree	-----	50 pieces	50 pack
075.05.002		Cut edges, Frosted one end one side	90° Degree	-----	50 pieces	50 pack
075.05.003		Ground edges, Plain	90° Degree	-----	50 pieces	50 pack
075.05.004		Ground edges, Frosted one end two side	90° Degree	-----	50 pieces	50 pack
	075.02.005	Ground edges, Colour Frosted	45° Degree	white	50 pieces	50 pack
	075.02.006	Ground edges, Colour Frosted	45° Degree	yellow	50 pieces	50 pack
	075.02.007	Ground edges, Colour Frosted	45° Degree	green	50 pieces	50 pack
	075.02.008	Ground edges, Colour Frosted	45° Degree	pink	50 pieces	50 pack
	075.02.009	Ground edges, Colour Frosted	45° Degree	blue	50 pieces	50 pack



### SLIDE WALLET - "cardboard" - "with cover"

- Manufactured from sturdy thick cardboard for holding 20 pieces standard microscope slides.
  - a base with horizontal compartments for holding the slides horizontally
- Consists of 2 parts:
  - two folding covers for protection of the slides from environmental effects
- Compartments have finger slots for easy removal of the slides.
- They are recessed to protect the specimens when the cover is closed and offers indexed spaces for easy identification of slide positions.

catalogue number	dimensions	pack quantity
076.01.001	205x340x10 mm	1 piece



Compartments have finger slots for easy removal of the slides.



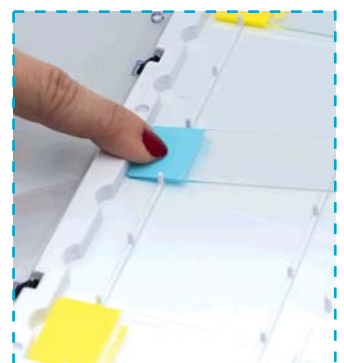
### SLIDE WALLET - "polystyrene" - "with cover"

- Manufactured from polystyrene for holding 20 pieces standard microscope slides.
  - a base with horizontal compartments for holding the slides horizontally
- Consists of 2 parts:
  - two folding transparent covers for protection of the slides from environmental effects
- Two transparent hinged covers offer a full view of each slide without having to remove it from its position.
- Covers can either cover the slides or be rotate behind the wallet base for space saving purposes.
- Compartments are recessed to protect the specimens when the cover is closed and offers indexed spaces for easy identification of slide positions.
- Removal of slides is done easily by pressing on one end, which will automatically lift the other end.

catalogue number	dimensions	pack quantity
076.01.002	194 x 292 x 12,5 mm	1 piece



Clear hinged covers protects the slides from environmental effects such as dust, dirt, moisture etc.



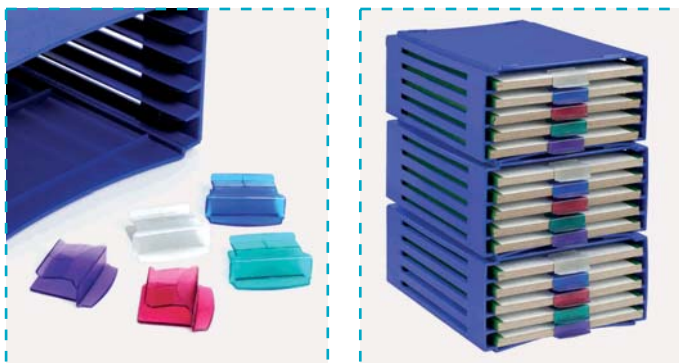
Removal of slides is done easily by pressing on one end, which will automatically lift the other end.



### SLIDE WALLET RACK

- Manufactured from ABS for holding and storing 5 slide wallet for easy retrieval.
- Stackable for space saving purposes. Supplied with 5 clasps. Matching clasps provide area of identification labels and doubles as a handle.

catalogue number	dimensions	pack quantity
076.01.003	205 x 340 x 100 mm	1 piece



Each wallet rack is supplied with 5 clasps.

Stackable for space saving purposes.



### SLIDE DISPENSER

- Can dispense individually 90 slides of 26 x 76 mm.
- By turning the knob from either side one slide is dispensed.
- Only dry slides should be inserted into the storage magazine.
- With transparent, removable upper section for easy viewing of remaining slides and also for clean storage of slides.

catalogue number	dimensions	pack quantity
076.04.001	112 x 121 x 162 mm	1 piece



### FORCEPS - "for cover glass"

- Manufactured from stainless steel for holding 20 pieces standard microscope slides.
- Available 2 types:
  - curved
  - straight

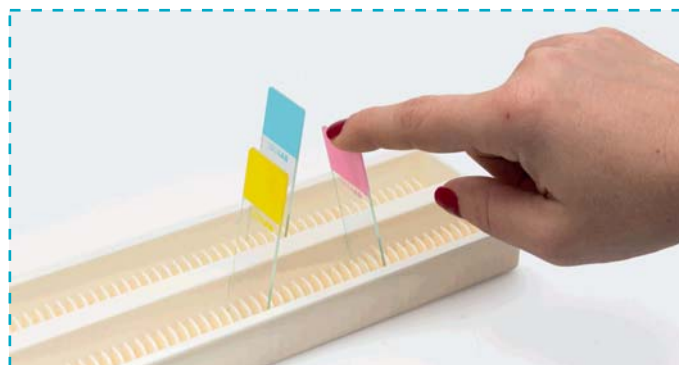
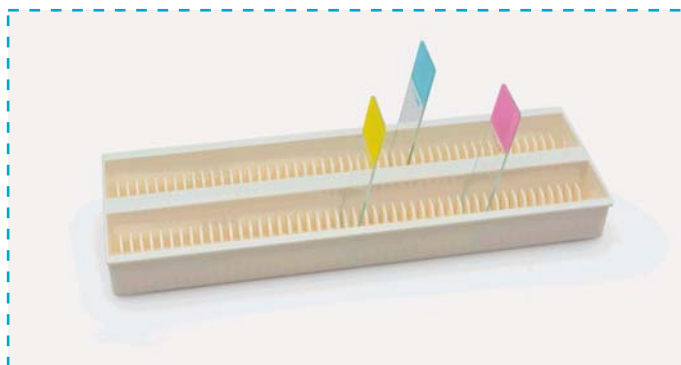
catalogue number	forceps form	forceps length	pack quantity
048.03.001	curved	105 mm	1 piece
048.03.002	straight	105 mm	1 piece



## SLIDE MAGAZINE

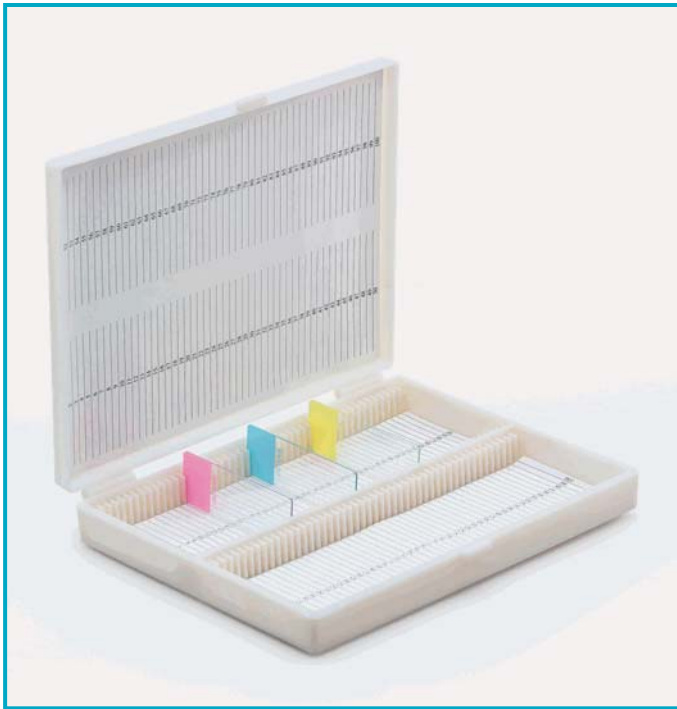
- Most convenient, organised and versatile way of storing standard microscope slides.
- System consists of a slide box and a removable tray manufactured from polystyrene.
- A tinted hinged cover makes the contents of the box easy to see at a glance.
- Can hold 200 slides and stackable for space saving and efficient storage. Can also hold 400 slides by simply placing two slides per lot.
- All slides are stored in an upright position for easier insertion and removal. Simply tilt them forward and backward with one finger in order to easily pick up the slide you need.
- A unique feature of this enables easy and fast reading of the barcodes without having to remove the slides from the box.

catalogue number	dimensions	pack quantity
076.03.001	82 x 245 x 86 mm	1 piece



The slide magazine has a removable tray inside the storage box, having a hundred individual numbered slots.

All slides are stored in an upright position for easier insertion and removal. Simply tilt them forward and backward with one finger in order to easily pick up the slide you need.



### SLIDE BOXES - "with plastic latch"

- Manufactured from ABS for perfect storage or transportation of standard size slides.
- Moulded, rigid boxes securely hold slides in grooved slots. These boxes have a safe closing and easy opening lids.
- Hinged lids are held securely closed by latch lock. The stacking feet maximize stability.
- Both the lining and the slots are numbered to correspond to the slide inventory sheet on the inside cover.

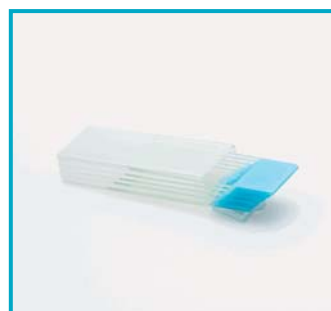
slide boxes	slide capacity	pack quantity
076.02.000	25 slides	1 piece
076.02.001	50 slides	1 piece
076.02.002	100 slides	1 piece



### SLIDE BOXES - "with steel latch"

- Manufactured from ABS for perfect storage or transportation of standard size slides. Moulded, rigid boxes securely hold slides in grooved slots.
- These boxes have a safe closing and easy opening lids. Steel latch provides more secure locking and safety during transportation.
- Hinged lids are held securely closed by latch lock. The stacking feet maximize stability. Soft cork lining ensures that slides will not slip.
- Both the lining and the slots are numbered to correspond to the slide inventory sheet on the inside cover.

catalogue number	dimensions	pack quantity
076.02.012	168 x 210 x 35 mm	1 piece



### SLIDE MAILERS

- Manufactured from high density polypropylene for shipping, storing or staining slides.
- Flat mailers can hold one, two or three standard (75 x 25 mm and 3 x 1") slides securely with large, easy-to-secure snaps.
- Box type mailer is able to hold five slides. Slotted channels keep slides separated and enables easy removal.

slide mailers	slide capacity	quantity in pack	quantity in box
076.05.001	1 slide	1 piece	100 pieces
076.05.002	2 slides	1 piece	100 pieces
076.05.003	3 slides	1 piece	100 pieces
076.05.004	5 slides	1 piece	100 pieces



### TEST TUBES - "glass"

- Manufactured with fully automated machines from either neutral glass or heat resistant borosilicate 3.3 glass.
- Especially boro 3.3 tubes show excellent stability under temperature changes.
- Available 2 types:
  - manufactured from neutral glass
  - manufactured from borosilicate glass

tube dimensions	tubes neutral glass	wall thickness	tubes boro 3.3	wall thickness	pack quantity
10x75 mm	077.01.001	0,8/0,9 mm	077.02.001	0,9/1,0 mm	100 pieces
12x100 mm	077.01.002	0,8/0,9 mm	077.02.002	0,9/1,0 mm	100 pieces
13x100 mm	077.01.003	0,8/0,9 mm	077.02.003	0,9/1,0 mm	100 pieces
16x100 mm	077.01.004	0,9/1,0 mm	077.02.004	1,0/1,1 mm	100 pieces
16x160 mm	077.01.005	0,9/1,0 mm	077.02.005	1,0/1,1 mm	100 pieces
18x180 mm	077.01.006	0,9/1,0 mm	077.02.006	1,0/1,1 mm	100 pieces
4 x 40 mm	077.01.000	0,8/0,9 mm			100 pieces



### TEST TUBES - "glass" - "screw cap"

- Manufactured from thick walled neutral tubings. They are especially useful in culture studies.
- They have flat screw caps with hermetic closure which provide absolute leak proof.

tubes screw cap	tube dimensions	wall thickness	pack quantity
077.03.001	16x100 mm	1,0/1,1 mm	100 pieces
077.03.002	16x160 mm	1,0/1,1 mm	100 pieces



### TEST TUBES - "disposable"

Disposable tubes, manufactured from either polystyrene or crystal clear polypropylene for single use.

- Available 2 types:
  - round bottom
  - conical bottom

tube dimensions	tube plastic	tube material	bottom type	pack quantity
12x75 mm	077.04.001	polystyrene	round	1000 pieces
12x75 mm	077.04.002	polypropylene	round	1000 pieces
16x100 mm	077.04.003	polystyrene	round	500 pieces
16x100 mm	077.04.004	polypropylene	round	500 pieces
16x100 mm	077.04.005	polystyrene	conical	500 pieces
16x100 mm	077.04.006	polypropylene	conical	500 pieces

## CENTRIFUGE TUBES - "glass"

- Manufactured from neutral tubes with a wall thickness between 1,0 - 1,1 mm.
- Nominal capacity is approximately 15ml and can stand up to 3.500 RCF.
- These graduated tubes have white inscriptions on them.

tube centrifuge	tube dimensions	wall thickness	specification	pack quantity
078.01.001	16/17x100 mm	1,0/1,1 mm	non-graduated	100 pieces
078.01.002	16/17x160 mm	1,0/1,1 mm	graduated	10 pieces



## TUBE CLAMP - "wood"

- Ideal for handling hot tubes or to heat test tubes up to 25 mm diameter.
- Manufactured from hardened wood with steel spring. With a long arm for better handling and to avoid close contact between fingers and the flame.
- High resistance to heat up to 70°C.

catalogue number	total length	pack quantity
080.04.001	180 mm	1 piece



## TUBE CLAMP - "st. steel"

- Ideal for handling hot tubes or to heat test tubes up to 30 mm diameter.
- Manufactured from stainless steel with a finger grip. With a long arm for better handling and to avoid close contact between fingers and the flame.
- High resistance to heat up to 100°C.

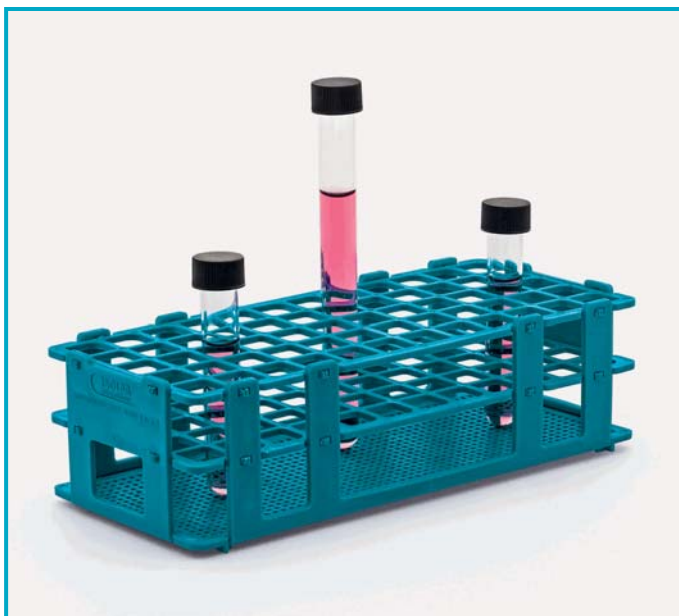
catalogue number	total length	pack quantity
080.04.002	150 mm	1 piece



## TUBE STOPPERS - "flange"

- Very effective due to their "flange" shape and grooved body.
- Available on request in different colors (red, green, yellow and blue).
- For details please refer to catalogue page 110.





### TEST TUBE RACKS - "P.P" - "dismantled"

- Made of "modified" polypropylene which enables the rack to be used in water baths without the risk of floating.
- Alpha numeric grid reference on top tier of the rack ensures an easy sample location.
- Racks are delivered dismantled in a bag with assembling instruction included.
- Supplied dismantled and can be assembled in less than a minute.

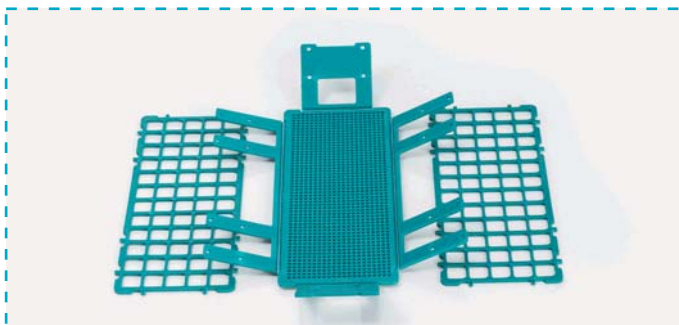
catalogue number	tube diameter	tube quantity	tube array	pack quantity
079.01.001	13 mm	90 pcs	6 x 15	1 piece
079.01.002	16 mm	60 pcs	5 x 12	1 piece
079.01.003	20 mm	40 pcs	4 x 10	1 piece
079.01.004	25 mm	24 pcs	3 x 8	1 piece
079.01.005	30 mm	21 pcs	3 x 7	1 piece



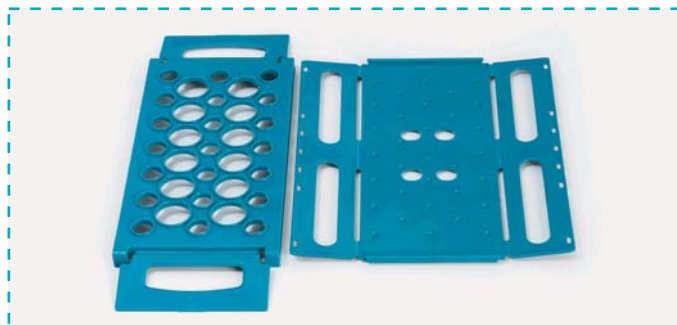
### TEST TUBE RACKS - "P.P" - "monoblock"

- Made of "modified" polypropylene which enables the rack to be used in water baths without the risk of floating.
- Round hole tube sockets hold the tubes firmly at exact position.
- Alpha numeric grid reference on top tier of the rack ensures an easy sample location of the tubes.
- Supplied assembled and can be dismantled in less than a minute.

catalogue number	tube diameter	tube quantity	tube array	pack quantity
079.03.001	12-13 mm	50 pieces	5 x 10	1 piece
079.03.002	15 - 16 mm	50 pieces	5 x 10	1 piece
079.03.003	17 - 18 mm	50 pieces	5 x 10	1 piece
079.03.004	18 - 20 mm	45 pieces	5 x 9	1 piece
079.03.005	28 - 30 mm	26 pieces	4 x 6 / 7	1 piece



Supplied dismantled and can be assembled in less than minute.



Supplied assembled and can be dismantled in less than minute.





### TEST TUBE RACKS - "stainless steel"

- Manufactured from highest grade stainless steel.
- Excellent for autoclaving due to the material used.

st. steel tube racks	tube diameter	tube quantity	tube array	pack quantity
079.02.001	13 mm	50	5x10	1 piece
079.02.002	16 mm	50	5x10	1 piece
079.02.003	18 mm	40	4x10	1 piece



Perfect design of the tube supports holds the tubes firmly in their place.



### TEST TUBE RACKS - "with silicone grips"

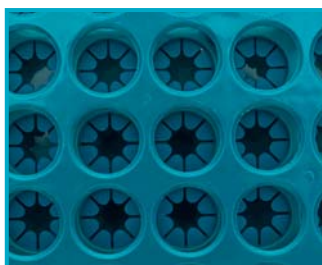
- Manufactured from high density ABS which is not recommended for autoclaving.
- Rack comes as "ready" unit and no assembly required. Suitable to be used up to 16 mm diameter tubes.
- Bottom of each tube compartment has a silicone gripping finger that holds the tube at centralised position.
- Tubes can be inserted and extracted with a gentle push or pull to the tube.

catalogue number	tube diameter	tube quantity	tube array	pack quantity
079.11.016	15- 16 mm	50	5 x 10	1 piece



#### PUSH & EJECT

Just simply press the bottom layer of the tube rack by two hands. The eject mechanism automatically releases the tubes from their positions immediately and also simultaneously.



Bottom of each tube compartment has a silicone gripping finger that holds the tube at centralised position.



## CENTRIFUGE TUBES - "screw cap" - "P.P"

- ▶ Manufactured from **FDA approved** ultra clear, high grade polypropylene. Can resist centrifugation up to 6.000 RCF.
- ▶ Autoclavable at 121°C for 20 minutes with the caps not totally closed.
- ▶ **"DNase", "RNase" and "pyrogen-free" sterilized tubes are manufactured under germ-free aseptic (sterile) conditions with extreme sterility control and then sterilized by gamma radiation.**
- ▶ Their conical bottoms make them suitable for centrifugation tests in immunology, microbiology, cell culture and other related applications.
- ▶ They have flat caps for easy top labelling and with hermetic closure which are absolutely leak proof.
- ▶ The caps have large ridges for increased grip when wearing gloves. A  $\frac{3}{4}$  turn of the cap will be sufficient to close the tube tightly. Suitable for one hand operation.
- ▶ Graduated in 0,5 ml increments for 15 ml, 2,5 ml for 50 ml volume verifications. 15 ml and 50 ml tubes have also precise volume marks at conical bottom part.
- ▶ All centrifuge tubes have a large and impact resistant labelling area.

catalogue number	volume	tube dimensions	product specifications	packing specifications	pack quantity	case quantity
078.02.001	15 ml	17 x 120 mm	non sterilized	pack in bag	50 pieces	500 pieces
078.02.003	50 ml	30 x 120 mm	non sterilized	pack in bag	50 pieces	500 pieces
078.02.007	15 ml	17 x 120 mm	sterilized - DNA & RNA free	pack in bag	50 pieces	500 pieces
078.02.008	50 ml	30 x 120 mm	sterilized - DNA & RNA free	pack in bag	50 pieces	500 pieces
078.02.002	15 ml	17 x 120 mm	sterilized - DNA & RNA free	single flow pack	50 pieces	500 pieces
078.02.004	50 ml	30 x 120 mm	sterilized - DNA & RNA free	single flow pack	50 pieces	500 pieces



**ISOLAB** Sterilized tubes are manufactured under germ-free aseptic (sterile) conditions with extreme sterility control and then **sterilized by gamma radiation.**

All **ISOLAB** Sterilized tubes are single packed with lot number, production date and expiry date clearly printed on the package.



**ISOLAB** Laborgeräte GmbH DNase RNase PYROGEN SAFE CERTIFIED

CERTIFICATE of COMPLIANCE and "BioClean" QUALITY

Product Name	
Catalog Number	
Product Lot No	
Material Used	
Production Date	
Expiration Date	

This package contains a **gamma irradiated** high quality product manufactured in a PCR-clean and germ-free Class 10.000 clean room (according to U.S. Federal Standard 209D) environment.

This certificate is issued to confirm that this lot of products had been manufactured and tested under a registered and audited ISO 9001 quality system and conforms the below mentioned material specs and passed all tests successfully.

Test Procedure	Results
Leak Test	Pass
Centrifuge Test	Pass
Visual Attributes	Pass
Packaging	Pass
Endotoxin - Pyrogen	Free
Human DNA - Dnase	Free
RNase - PCR inhibitor	Free

**ISOLAB** Laborgeräte GmbH

**DNase, RNase and Pyrogen-free certificate shows the result criterias and guarantees the documentation of the quality.**

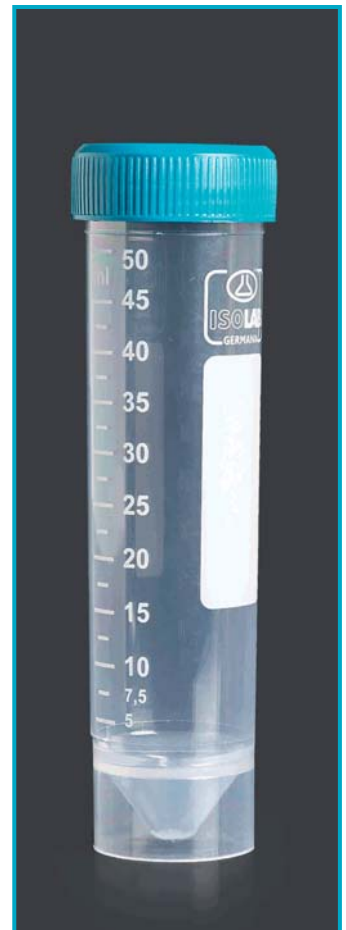
**The process begins with the inspection of raw materials to monitoring the final product and ends with testing each lot after production for contaminants.**

**ISOLAB** sterilized tubes are certified as **"DNase, RNase and pyrogen-free"** products. **ISOLAB** certified tubes are a result of continuous quality control process.

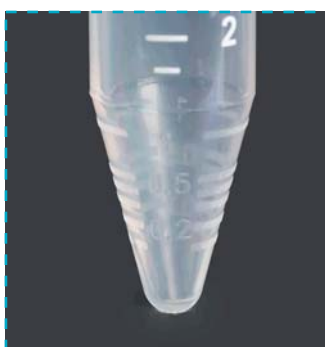
## CENTRIFUGE TUBES - "screw cap" - "P.P" - "self standing"

- Manufactured from **FDA approved** ultra clear, high grade polypropylene. Can resist centrifugation up to 6.000 RCF.
- Autoclavable at 121°C for 20 minutes with the caps not totally closed.
- **"DNase", "RNase" and "pyrogen-free" sterilized tubes are manufactured under germ-free aseptic (sterile) conditions with extreme sterility control and then sterilized by gamma radiation.**
- They have flat caps for easy top labelling and with hermetic closure which are absolutely leak proof.
- The caps have large ridges for increased grip when wearing gloves. A  $\frac{3}{4}$  turn of the cap will be sufficient to close the tube tightly. Suitable for one hand operation.
- Graduated in 2,5 ml pore 50 ml volume verifications.
- All centrifuge tubes have a large and impact resistant labelling area.
- Unique self standing body form does not require any tube stand and enables practical and easy use of the centrifuge tube.

catalogue number	tube dimensions	product specifications	packing specifications	pack quantity	case quantity
078.02.005	30 x 120 mm	non sterilized	pack in bag	50 pieces	500 pieces
078.02.009	30 x 120 mm	sterilized - DNA & RNA free	pack in bag	50 pieces	500 pieces
078.02.006	30 x 120 mm	sterilized - DNA & RNA free	single flow pack	50 pieces	500 pieces



Due to the unique cap design a  $\frac{3}{4}$  turn of the cap will be sufficient to close the tube tightly. Unique cap design enables single hand operation.



15 ml and 50 ml tubes have also precise volume marks at conical bottom part.



Tubes provide large white writing area for easy marking and clear graduations for easy volume reference.



## TAGS - "for centrifuge tube caps"

- Manufactured from flexible polyofiber label material with acrylic adhesive. Withstand from -196°C to + 80°C
- This unique combination expands and contracts together with temperature fluctuations resulting in a strong adhesive bond.
- Chemically inert, resists most organic solvents and caustic agents.
- They adhere to centrifuge tube caps without cracking, peeling or degrading.

catalogue number	for tube	tag diameter	roll quantity	pack quantity
099.05.019	15 ml	19 mm	500 tags	1 piece
099.05.025	50 ml	25 mm	500 tags	1 piece



### TUBE RACK - "polypropylene" - "flexible"

- Manufactured from polypropylene offering a flexible solution for holding tubes.
- Capable of holding 15 ml and 50 ml tubes in each available slot.
- Literally adapts to each tube size to hold the tube firmly upright position.
- Unique design allows full viewing of the tube label.
- Racks can be linked together for offering additional holding capacity.

catalogue number	tube volume	tube quantity	tube array	pack quantity
078.09.001	15 & 50 ml	4	1 x 4	1 piece



Racks can be linked together for offering additional holding capacity.



Literally adapts to each tube size to hold the tube firmly upright position.



### TUBE RACK - "polypropylene" - "push & hold"

- Manufactured from high grade, virgin polypropylene offering a tight hold of centrifuge tubes in position.
- Suitable to hold 15 ml and 50 ml centrifuge tubes with conical bottom.
- Just push the tubes into the cavities and leave them.
- Unique design has an angular end to provide easy stacking for space saving purpose.
- Moulded in alpha numeric grid reference on the rack allows easy sample identification.

catalogue number	tube diameter	tube quantity	tube array	pack quantity
078.06.015	15 mm	25	5 x 5	1 piece
078.06.050	50 mm	25	5 x 5	1 piece



Unique design has an angular end to provide easy stacking for space saving purpose.



Suitable to hold 15 ml and 50 ml centrifuge tubes with conical bottom.



**TUBE BOX - "P.P" - "press - on - lid"**

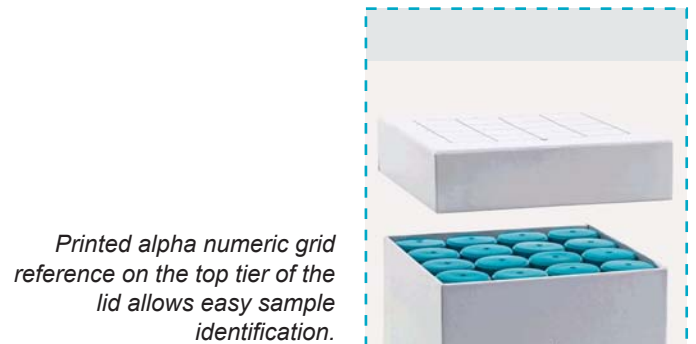
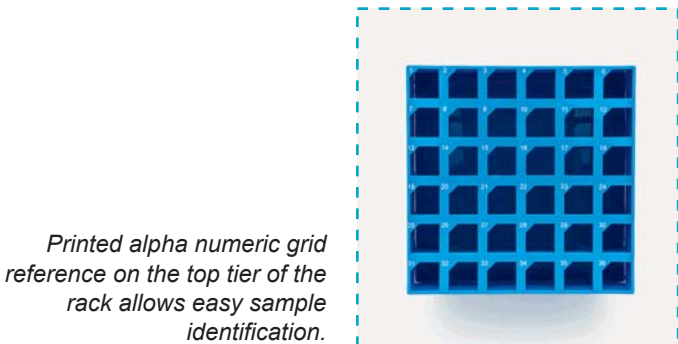
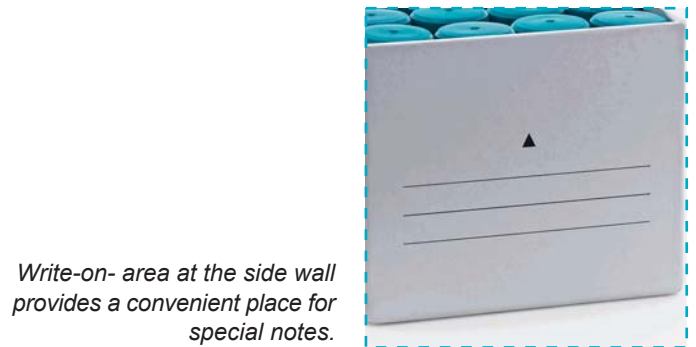
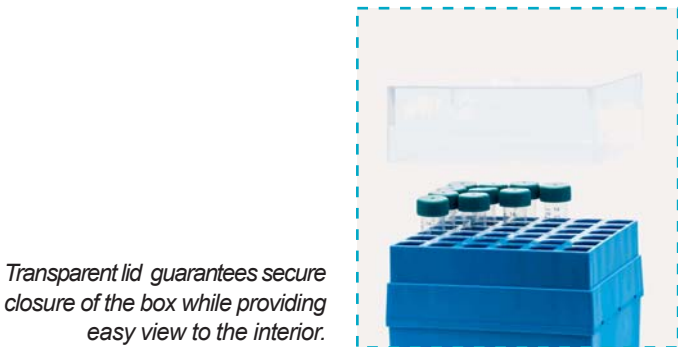
**TUBE BOX - "cardboard" - "press - on - lid"**

- Manufactured from polypropylene for a very practical alternative for storage of 15 ml and 50 ml screw cap centrifuge tubes.
- Chemically resistant to alcohols and mild organic solvents can resist temperature from -196°C to 121°C.
- Printed alpha numeric grid reference on the top tier of the rack allows easy sample identification.

- Manufactured from freeze resistant, water repellent, durable cardboard with superior white coating.
- Chemically resistant to alcohols and mild organic solvents can resist temperature from -196°C to 121°C.
- Printed alpha numeric grid reference on the top tier of the rack allows easy sample identification.

catalogue number	tube volume	tube quantity	tube array	pack quantity
078.07.015	15 ml	36	6 x 6	1 piece
078.07.050	50 ml	16	4 x 4	1 piece

with press on lid	with hinged lid	tube volume	tube quantity	tube array	pack quantity
078.20.015	078.21.015	15 ml	36	6 x 6	1 piece
078.20.050	078.21.050	50 ml	16	4 x 4	1 piece





### TUBE RACK - "ABS" - "peg design"

- Made of "modified" high density ABS which enables the rack to be used in water baths. Racks can be linked together to form a multiple racks system.
- Rod type spacious tube compartments are ideal for screw cap tubes of 15 ml and 50 ml.
- Unique rack design enables perfect adaptance of the tubes and allows easy viewing of the tube contents.
- Pegs hold the tubes firmly in place and remain straight even after repeated autoclaving.

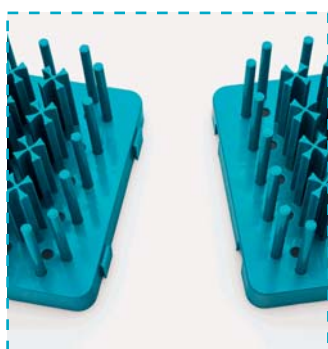
catalogue number	tube volume	tube quantity	tube array	pack quantity
079.08.015	15 ml	50	5 x 10	1 piece
079.08.050	50 ml	25	5 x 5	1 piece



### TUBE RACK - "polypropylene" - "monoblock"

- Manufactured from polypropylene. Designed for stable use in water baths.
- Can be dismantled easily for space saving solution when not in use. Simple and easy action to open and close.
- Moulded-in alpha numeric grid reference on the top tier of the rack allows easy sample identification.
- Raised rims of inserts holds the tubes firmly in place.

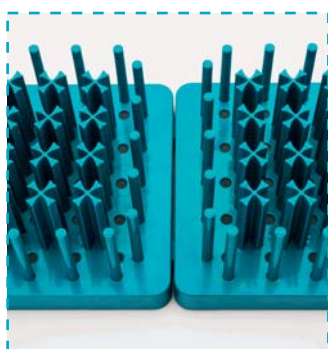
catalogue number	tube volume	tube quantity	tube array	pack quantity
079.03.003	15 ml	50	5 x 10	1 piece
079.03.005	50 ml	26	4 x 6 / 7	1 piece
079.03.006	15 & 50 ml	21 & 12	assorted	1 piece



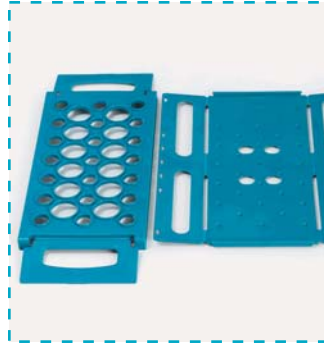
Interlocking system for linking the racks in multiple rows.



Raised tube supports strongly holds the tubes in their position.



Racks can be linked together to form a multiple rack system.



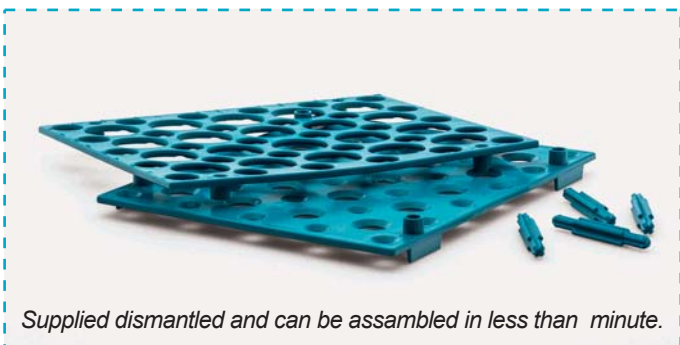
Monoblock tube rack can be folded for space saving solution.



### TUBE RACK - "polypropylene" - "snapable"

- Manufactured from polypropylene. Designed for stable use in water baths.
- Very easy to assemble, system snaps together securely.
- Each tube row is alphanumericly matrixed for quick identification of tubes.
- Rack can hold 30 pieces of 15 ml tubes and 20 pieces of 50 ml tubes.

catalogue number	tube volume	tube quantity	tube array	pack quantity
079.04.001	15 & 50 ml	30 & 20	assorted	1 piece



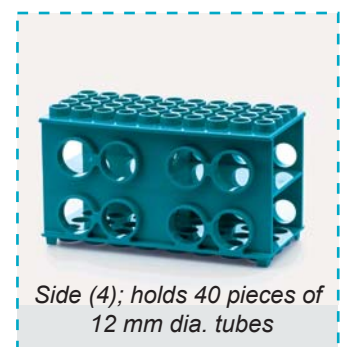
Holes at the bottom plate guarantees firm hold of tubes in their position.



### TUBE RACK - "polypropylene" - "4 side"

- Manufactured from polypropylene, offering a unique system of tabs and slots.
- Four sides offers to holding 4 different tube combinations:
  - Side (1); holds 8 pieces of 30 mm dia. tubes
  - Side (2); holds 20 pieces of 20 mm dia. tubes
  - Side (3); holds 24 pieces of 17 mm dia. tubes
  - Side (4); holds 40 pieces of 12 mm dia. tubes
- Racks can be linked together to form a multiple rack system.

catalogue number	tube diameter	tube volume	tube quantity	tube array	pack quantity
080.01.001	30 mm	50 ml	8	2 x 4	1 piece
	20 mm		20	4 x 5	
	17 mm	15 ml	24	3 x 8	
	12 mm		40	4 x 10	





### CENTRIFUGE TUBES - "micro" - "with flat cap"

- Manufactured from USFDA approved polypropylene with very high transparency in fully automatic, human touch-free, clean room facility as DNase, RNase, Human DNA, Pyrogen & PCR inhibitor free.
- Ultra rugged wall of the tube guarantees withstanding high centrifugal forces up to 20.000 RCF. The bottom of the tube is reinforced for added protection against leakage.
- Improved lid design ensures smooth opening and closing with one hand. Can be pierced easily with a syringe needle.
- Graduation marks on the tubes helps visual control of the sample volume.
- Frosted marking area on side of the tube for easy marking and labelling.
- High polished interior ensures low liquid retention.
- Excellent tube design offers micro pestle compatible and fitting to all standard and high capacity centrifuge rotors.

non sterilized	sterilized	volume	skirt	pack quantity	case quantity
078.03.001	078.03.021	0.5 ml	non	500 pieces	5000 pieces
078.03.002	078.03.022	1.5 ml	non	500 pieces	5000 pieces
078.03.003	078.03.023	2.0 ml	non	500 pieces	5000 pieces
078.03.004	078.03.024	2.0 ml	yes	500 pieces	5000 pieces



### CENTRIFUGE TUBES - "micro" - "with safe lock"

- Manufactured from USFDA approved polypropylene with very high transparency in fully automatic, human touch-free, clean room facility as DNase, RNase, Human DNA, Pyrogen & PCR inhibitor free.
- Same technical properties as flat cap tubes but with "safe lock" lid mechanism.
- Unique "safe lock" lid ensures sample outstanding stability during centrifugation and perfect sealing.
- "Safe lock" prevents accidental lid opening during incubation and guarantees evaporation protection making the tube ideal for boiling applications.

non sterilized	sterilized	volume	pack quantity	case quantity
078.05.002	078.05.022	1.5 ml	500 pieces	5000 pieces



ISOLAB sterilized tubes are certified as "DNase, RNase, and pyrogen & PCR inhibitor free" products.

Sterilized micro tubes are manufactured in germ-free clean room facility with extreme sterility control and then re-sterilized by gamma radiation.



**PESTLES - "micro tube" - "disposable"**

- Manufactured from polypropylene with two rounded tip pestle ends.
- One pestle end fits perfectly to 1,5 ml micro centrifuge tube bottom and the other pestle end fits to 0,5 ml microcentrifuge tube bottom.
- Provides excellent results for resuspending bacterial cells, precipitates of nucleic acids or proteins and homogenizing samples in a microcentrifuge tube.

**PESTLES - "micro tube" - "reusable"**

- Consists of a stainless steel shaft of 150 mm with PTFE rounded tip pestles on two ends made of PTFE.
- One pestle end fits perfectly to 1,5 ml micro centrifuge tube bottom and the other pestle end fits to 0,5 ml microcentrifuge tube bottom.
- Provides excellent results for resuspending bacterial cells, precipitates of nucleic acids or proteins and homogenizing samples in a microcentrifuge tube.



catalogue number	length	usable for	pack quantity
078.08.120	100 mm	0,5 & 1,5 ml tubes	10 pieces

catalogue number	length	usable for	pack quantity
078.18.001	150 mm	0,5 & 1,5 ml tubes	1 piece

**TISSUE GRINDER - "for microtubes"**

- Excellent tool for sample preparations, for resuspending bacterial cells, precipitates of nucleic acids or proteins and homogenizing samples in a microcentrifuge tube.
- Also ideal for stirring and mixing liquid samples in small size tubes.
- Easy to operate with it's long lasting high performance motor.
- Operates with 3,7V lithium battery with a speed of 1.200 RPM.
- Works together with polypropylene stirring rods of 75 mm length and 3,0 mm diameter.

catalogue number	product description	pack quantity
078.19.001	tissue grinder	1 piece
078.17.001	stirring rods	50 pieces
078.17.002	sterile stirring rods	50 pieces

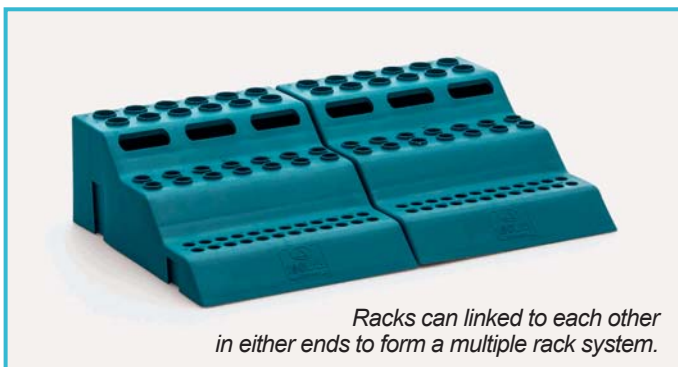




### RACK - "for micro tubes" - "3 tier"

- 3 tier rack system enables easy transfer and loading of all sizes of micro centrifuge tubes.
- Manufactured from polypropylene for increased storage of micro tubes.
- Designed to store three different sizes of microcentrifuge tubes on each tier.
  - Lowest level holds 24 pieces 0,2 ml tubes.
  - Middle tier holds 14 pieces 0,5 ml tubes.
  - Top tier holds 12 pieces 1,5 ml tubes.
- Finger slots are moulded into the rack making them easy to pick up and move.
- Alphanumerical index on tube rows enables easy identification of tubes.
- Racks can connect to each other in either ends to form a longer rack system.

catalogue number	tube volume	tube quantity	tube array	pack quantity
080.01.003	1,5 ml	12	2 x 6	1 piece
	0,5 ml	14	2 x 7	
	0,2 ml	24	2 x 12	



### RACK - "for micro tubes" - "monoblock"

- Manufactured from polypropylene for alternative storage of micro tubes even at water baths or freezers.
- Can hold 100 pieces of 1,5 ml and 2,0 ml microcentrifuge tube. These racks are stackable even when loaded and has a convenient space on either sides for labelling.
- Alphanumerical index on tube rows enables easy identification of tubes.

catalogue number	tube volume	tube quantity	tube array	pack quantity
080.01.004	1,5 & 2,0 ml	96	8 x 12	1 piece



### TAGS - "for micro centrifuge tube caps"

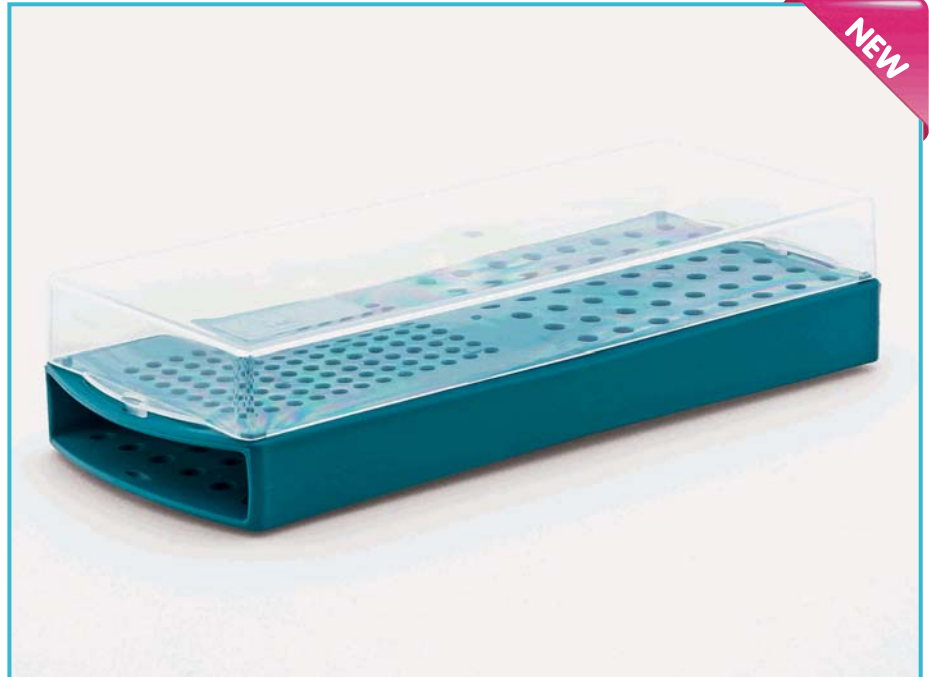
- Manufactured from flexible polyfiber label material with acrylic adhesive. Chemically inert, resists most organic solvents and caustic agents.
- This unique combination expands and contracts together with temperature fluctuations resulting in a strong adhesive bond.
- They adhere to centrifuge tube caps without cracking, peeling or degrading. Can resist from -196°C to +150°C.

catalogue number	for tube	tag diameter	roll quantity	pack quantity
099.05.009	0,5 ml	9,5 mm	1000 tags	1 piece
099.05.013	1,5 ml	13 mm	1000 tags	1 piece

## RACK - "for micro tubes" - "double side"

- Manufactured from polypropylene for alternative storage of micro tubes.
- Stand has two sides and each side accommodates different size and combination of microcentrifuge tubes.
- First side can hold 96 pieces of 1,5 ml tubes, and the other side holds 48 pieces of 0,5 ml tubes and also 96 pieces of 0,2 ml tubes.
- Supplied with a clear polypropylene lid which covers the rack and protects the tubes from dust and other effects.
- Alphanumerical index on tube rows enables easy identification of tubes.

catalogue number	tube volume	tube qty.	tube array	pack quantity
080.06.002	1,5 ml	96	6 x 16	1 piece
	0,5 ml	48	6 x 8	
	0,2 ml	96	8 x 12	



First side can hold 96 pieces of 1,5 ml tubes, and the other side holds 48 pieces of 0,5 ml tubes and also 96 pieces of 0,2 ml tubes.



## LABELS - "for micro tubes & cryo vials"

- Manufactured from flexible polyofiber label material with acrylic adhesive. This unique combination expands and contracts together with temperature fluctuations resulting in a strong adhesive bond.
- Chemically inert, resists most organic solvents and caustic agents. They adhere to most plastics, glass and metals without cracking, peeling or degrading.
- Pre-cut, peel-off labels which accept writing from most lab markers including all solvent resistant pens.
- Perfectly sized to fit cryo vials and cryo tubes. Withstand from -96°C to +150°C

catalogue number	tag size length x width	reccomended to be used for	roll quantity	pack quantity
099.05.033	33 x 13 mm	1,5 - 2,0 ml tubes	1000 tags	1 piece



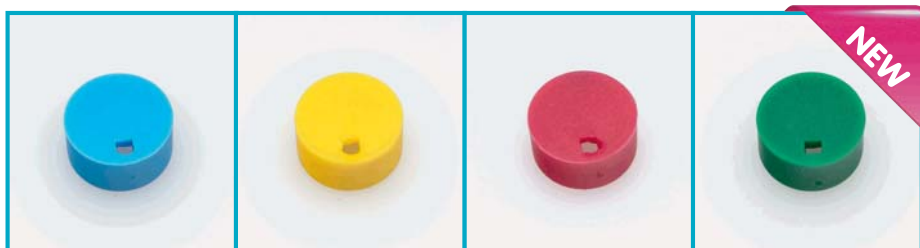
## CRYO TUBES - "external thread" - "sterile"



- Made of specially formulated medical grade polypropylene.
- Designed for the optimised storage and conservation of biological material, human and animal cells at very low temperatures in the gas phase of liquid nitrogen or in cryogenic freezers.
- Since both cap and tube are made of same material with same coefficient of expansion secure seal at all temperatures is guaranteed.
- External threaded design allows easy one hand opening and closing of the cap.
- Silicone washer inside the cap ensures positive sealing at any temperature and prevents leakage.
- Tubes are provided for a white marking area for sample identification.
- Printed graduations for accurate measurement.
- Sterilized with gamma irradiation, **free of RNase, DNase, DNA and pyrogene.**



catalogue number	tube volume	tube height	tube diameter	tube base	tube thread	packing specifications
091.11.102	2.0 ml	48,6 mm	12,4 mm	self standing	external	100 pcs / bag - 10 bag / ctn
091.11.105	5.0 ml	90,4 mm	12,4 mm	self standing	external	100 pcs / bag - 10 bag / ctn



## CAP INSERTS

- Cap inserts different colours to be used with cryo tubes for enabling easy identification of tubes from each other.
- Inserts easily fits to the screw caps and can be dismantled quickly.

catalogue number	cap inserts disc colour	pack quantity
091.15.001	white	100 pieces
091.15.002	blue	100 pieces
091.15.003	yellow	100 pieces
091.15.004	red	100 pieces
091.15.005	green	100 pieces

**WORKSTATION - "for cryo tubes & vials"**

- Manufactured from polycarbonate which can stand both cryogenic freezing and autoclaving.
- Permits one handed operation and secure closure of cryo tubes.
- Embossed index number provide easy orientation.
- Ribbed grips make handling with gloves easier.

catalogue number	tube volume	tube quantity	tube array	pack quantity
092.01.001	2 & 5 ml	50	5 x 10	1 piece

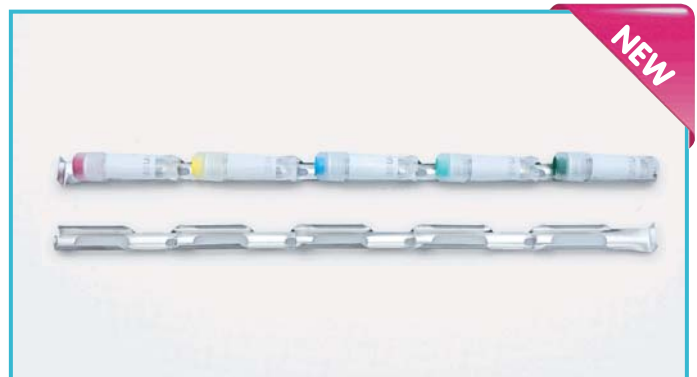


NEW

**CANES - "for cryo tubes & vials"**

- Made from aluminium for holding cryo tubes of 2,0 ml and 5,0 ml.
- Ideal tool for freezer storage and immersion into dewar flasks. Total cane length of 290 mm.
- Cryo tube cane can hold 5 tubes with 2,0 ml volume.

catalogue number	pack quantity
092.35.001	12 pieces
092.35.002	12 pieces



NEW

**LABELS - "for micro tubes & cryo vials"**

- Manufactured from flexible polyofiber label material with acrylic adhesive. This unique combination expands and contracts together with temperature fluctuations resulting in a strong adhesive bond.
- Chemically inert, resists most organic solvents and caustic agents. They adhere to most plastics, glass and metals without cracking, peeling or degrading.
- Pre-cut, peel-off labels which accept writing from most lab markers including all solvent resistant pens.
- Perfectly sized to fit cryo vials and cryo tubes. Withstand from -96°C to +150°C

catalogue number	tag size length x width	reccomended to be used for	roll quantity	pack quantity
099.05.033	33 x 13 mm	1,5 - 2,0 ml tubes	1000 tags	1 piece



NEW



### CRYO TUBE BOX - "P.C." - "hinged lid"

- Manufactured from polycarbonate for safe storage of cryotubes from -196°C to +121°C.
- Unique design with vent and drainage holes, stackable and autoclavable.
- Hinged lid with built-in stop allows easy one-handed access to tubes.
- Alphanumerical index on the tube rows enables easy identification of tubes.
- Forward slope base and high contrast indexing on the transparent lid ensure quick visual orientation.
- A disposable forceps - supplied with box - with fine end helps easy removal of tubes from the box.

catalogue number	tube volume	tube quantity	tube array	pack quantity
093.01.001	2.0 ml	81	9 x 9	1 piece
093.01.002	5.0 ml	81	9 x 9	1 piece



### CRYO TUBE BOX - "P.C." - "press on lid"

- Manufactured from polycarbonate for safe storage of cryotubes from -196°C to +121°C.
- Unique design of the box offers easy stacking on top of each other.
- Alpha numerical index both on the tube rows and also on the lid enables easy identification of tubes inserted.
- Press-on-lid guarantees perfect sealing of the box contents and ensures excellent closure avoiding the risks of contamination.
- Demontable box base and the tube holding plate offers easy cleaning of the box inside.

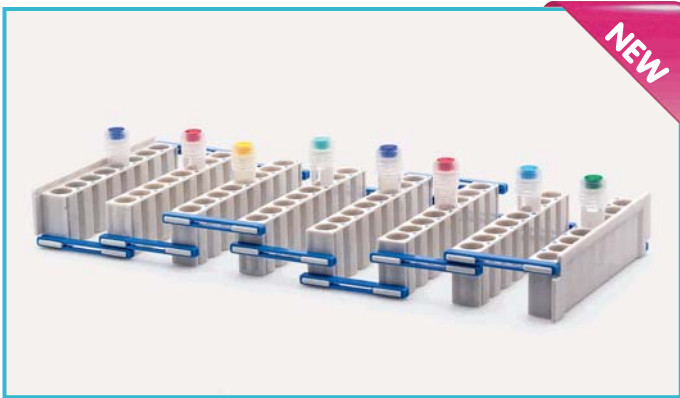
catalogue number	tube volume	tube quantity	tube array	pack quantity
093.02.001	2.0 ml	81	9 x 9	1 piece
093.02.002	5.0 ml	81	9 x 9	1 piece



### BOX - "for micro tubes" - "hinged lid"

- Manufactured from polypropylene for alternative storage of micro tubes at a closed system.
- Can hold 100 pieces of 1,5 ml and 2,0 ml microcentrifuge tube. Supplied with a clear polypropylene lid which covers the box interior and protects the tubes from dust and other environmental effects.
- Alphanumerical index on tube rows and imprinted and raised coordinates at each well enables easy identification of tubes.

catalogue number	dimensions	pack quantity
080.01.002	141x151x53 mm	1 piece



### RACK - "for cryo tubes" - "expanding"

- Manufactured from polypropylene for flexible storage of micro tubes at temperature range from -80 to 121°C.
- Reduce sample handling time by creating more working space and also the need for several racks when working with samples for cold temperature storage.
- Patent pending opening and closing mechanism allows the racks to expand creating needed room for sample manipulation.
- Simply collapse the rack back to its compact form and it is ready for freezer or storage.
- Wells have a center depression to stabilize micro tubes.
- A low profile clear lid fits for protecting the tubes from dust and other effects.
- Alphanumerical index on the tube rows enables easy identification of tubes. Racks are stackable and can fit to freezer racks.

catalogue number	tube volume	tube quantity	tube array	pack quantity
092.20.001	1,5 & 2,0 ml	64	8 x 8	1 piece



A low profile clear lid fits for protecting the tubes from dust and other effects.



Patent pending opening and closing mechanism allows the racks to expand creating needed room for sample manipulation.



### CRYO BOX - "cardboard"

- Ideal for loading, storing and transfer of cryo tubes and vials.
- Manufactured from freeze resistant, water repellent, durable cardboard with superior white coating.
- Chemically resistant to alcohols and mild organic solvents can resist temperature from -196°C to 121°C.
- Printed alpha numeric grid reference on the top tier of the rack allows easy sample identification.
- Available 2 types:
  - with press on lid
  - with hinged lid

with press on lid	with hinged lid	tube volume	tube quantity	tube array	pack quantity
092.22.101	092.23.101	2.0 ml	81	9 x 9	1 piece
092.22.102	092.23.102	5.0 ml	81	9 x 9	1 piece



Press-on-lid provides excellent fit to the box exterior and provides a safe and tight closure.



Due to the hinged design the lid is always safely attached to the box without the risk of loss.



### FREEZER RACK - "stainless steel"

- Manufactured from corrosion resistant stainless steel.
- Ideal for storage of standard cryo tube boxes in deep freezers. Can carry 16 boxes of size 133 x 133 x 53 mm with 4 drawers placed in 4 shelf row.
- Drawer handles provide a safe and user friendly grip.

catalogue number	box capacity	for box dimensions	shelf row	pack quantity
092.21.016	16	133x133x53 mm	4	1 piece



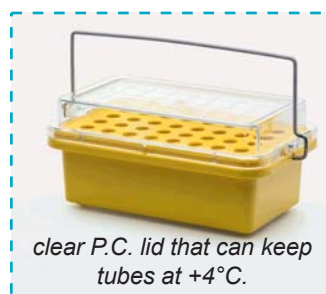
Drawer handles provide a safe and user friendly grip.



### FREEZING BOXES - "mini coolers"

- Ideal for keeping PCR reagents, enzymes, and other biochemical reagents cool while working on the bench.
- The polycarbonate cooler body is filled with a non-toxic gel which cannot contact with the tubes.
- A clear polycarbonate lid shows positions of tubes.
  - clear polycarbonate lid that can keep tubes at +4°C.
  - gel filled lid that can keep tubes at -15°C.
- Available 2 types:
- Handles allow secure grip for transfer. Rubber feet prevents sliding on the lab bench.
- Should be freezed at -20°C for 24 hours before use.
- Can keep tubes and cryo vials up to 2,0 ml at a temperature below -15°C for approximately 1 hour.

catalogue number	lid type	tube volume	tube quantity	tube array	pack quantity
092.18.001	clear lid	0,5 to 2,0 ml	24	3 x 8	1 piece
092.18.003	gel filled lid	0,5 to 2,0 ml	24	3 x 8	1 piece



clear P.C. lid that can keep tubes at +4°C.



gel filled lid that can keep tubes at -15°C.



Supplied with tube adapters for different tube sizes.





### ICE BUCKETS - "with lid"

- Made from rigid, single-moulded polyurethane with excellent insulation properties for the ultra cold.
- Ideal for ice, dry ice, dry ice alcohol slurries, ice-salt slurries and liquid nitrogen.
- Provides durability needed for chilling temperature sensitive samples.
- The close fit lid keeps evaporation to a minimum level.
- The lid features with a comfortable recessed knob.
- Taper design for easy stacking. The lid and the bottom bucked - pen are keyed to fit together.

catalogue number	volume	dimensions	pack quantity
092.19.001	1 L	265 x 195 x 115	1 piece
092.19.004	4 L	380 x 260 x 140	1 piece
092.19.009	9 L	520 x 290 x 160	1 piece

### GLOVES - "cold resistant"

- Excellent gloves to work in cold treatment plants, with coolants and as well as for handling dry ice and similar applications.
- Offers protection against the danger when working with ultra low temperatures down to  $-140^{\circ}\text{C}$ .
- Even after working with extreme temperatures they still stay flexible.

catalogue number	glove length	pack quantity
080.10.001	355 mm	1 pair



### BOX - "ice cube"

- Manufactured from food grade polypropylene.
- Suitable up to  $-25^{\circ}\text{C}$  and has a compact design even for small freezers.
- Cover prevents contamination to ice and holds the ice cubes fallen down.
- With the ICE BOX ice-cube tray the supply of ice cubes never runs out sinc

catalogue number	pack quantity
092.16.001	1 box





The ergonomical finger support ensure comfortability and correct pipetting angled.

Continuous digital system for volume setting. The volume display is clearly visible at all times.

## MICROPIPETTES - "single channel"

- High quality precision micro pipettes for cell and culture science and all laboratories of life sciences.
- Completely autoclavable at 121°C and 1.1 bar for 30 minutes for sensitive laboratory applications.
- Individually calibrated according to ISO 8655 standards and the quality certificate for accuracy and precision is provided with each pipette.
- Continuous digital system for volume setting. The volume display is clearly visible at all times during operation.
- It is constructed of high quality plastic and combined with stainless steel piston, thus the item is robust yet lightweight.
- The ergonomical, rounded hand grip and finger handle ensure comfortability and stability as well as a correct pipetting angle.
- The unique design allows quick and easy volume setting with only one hand.
- Built-in streamlined tip ejector enables easy tip ejection and allows access to narrow neck volumetric flasks and to the bottom of the tubes.

autoclavable pipettes	volume range	test volume	max. % inaccuracy	pack quantity
011.05.002	0.1 - 2.5 µl	2.5 µl	2.50 %	1 piece
		1.25 µl	3.00 %	
		0.25 µl	12.0 %	
011.05.010	0.5 - 10 µl	10 µl	1.00 %	1 piece
		5 µl	1.50 %	
		1 µl	2.50 %	
011.05.020	2 - 20 µl	20 µl	0.90 %	1 piece
		10 µl	1.20 %	
		2 µl	3.00 %	
011.05.050	5 - 50 µl	50 µl	0.60 %	1 piece
		25 µl	0.90 %	
		5 µl	2.00 %	
011.05.100	10 - 100 µl	100 µl	0.80 %	1 piece
		50 µl	1.00 %	
		10 µl	3.00 %	
011.05.200	20 - 200 µl	200 µl	0.60 %	1 piece
		100 µl	0.80 %	
		20 µl	3.00 %	
011.05.901	100 - 1000 µl	1000 µl	0.60 %	1 piece
		500 µl	0.70 %	
		100 µl	2.00 %	
011.05.905	1000 - 5000 µl	5000 µl	0.50 %	1 piece
		2500 µl	0.60 %	
		1000 µl	0.70 %	
011.05.910	2000 - 10000 µl	10 ml	0.70 %	1 piece
		5 ml	1.20 %	
		2 ml	3.00 %	



## MICROPIPETTES - "multi channel"

- High quality precision micro pipettes for cell and culture science and all laboratories of life sciences.
- Completely autoclavable at 121°C and 1.1 bar for 30 minutes for sensitive laboratory applications.
- Individually calibrated according to ISO 8655 standards and the quality certificate for accuracy and precision is provided with each pipette. Other technical specifications are similar to single channel pipettes.

catalogue number	channel number	volume range	test volume	max. % inaccuracy	pack quantity
011.08.010	8	0.5 - 10 µl	1 µl	1.50 %	1 piece
			5 µl	2.50 %	
			10 µl	4.00 %	
011.08.050	8	5 - 50 µl	5 µl	1.00 %	1 piece
			25 µl	1.50 %	
			50 µl	3.00 %	
011.08.300	8	50 - 300 µl	20 µl	0.70 %	1 piece
			100 µl	1.00 %	
			200 µl	1.50 %	
011.12.010	12	0.5 - 10 µl	1 µl	1.50 %	1 piece
			5 µl	2.50 %	
			10 µl	4.00 %	
011.12.050	12	5 - 50 µl	5 µl	1.00 %	1 piece
			25 µl	1.50 %	
			50 µl	3.00 %	
011.12.300	12	50 - 300 µl	20 µl	0.70 %	1 piece
			100 µl	1.00 %	
			200 µl	1.50 %	



## RESERVOIRS - "reagent" - "disposable"



➤ Manufactured from polystyrene with thick walls and crush-resistant corners with clearly visible volume markings.

➤ Pour-back spouts in the corners allow pouring back the liquid into the original container without spills.

➤ Due to the special body form these reservoirs are stackable for space solving storage and does not stick to each other when stacked.

➤ Reservoir bottoms have a sloping "V" shape and tapered into a narrow trough to enable maximum recovery of reagent without any loss.

catalogue number	volume	specification	pack quantity
006.03.030	30 ml	non-sterilized	100 pieces
006.13.030	30 ml	gamma sterilized	10 pieces
006.03.055	55 ml	non-sterilized	100 pieces
006.13.055	55 ml	gamma sterilized	10 pieces
006.03.110	110 ml	non-sterilized	100 pieces
006.13.110	110 ml	gamma sterilized	10 pieces



### MICROPIPETTE STANDS - "carrousel"

- Unique pipette stand that offers the option of using on the bench top or as a hanging under shelf holder to help maximize your working space.
- Can hold up to 12 single channel pipette or a combination of 3 single and 3 multi channel pipette. Holds all popular brands of pipettes.
- Rubber grips firmly holds the pipettes in right position.
- The round carrousel stand can rotate 360° around the axis enabling easy reach of any desired pipette.

*Unique pipette stand that offers the option of using on the bench top or as a hanging under shelf holder to help maximize your working space.*



catalogue number	base diameter	total height	pack quantity
006.11.003	159 mm	335 mm	1 piece



### MICROPIPETTE STANDS - "carrousel"

- Manufactured from robust and virgin polypropylene, can be used with most common pipette brands.
- This space saving micropipette stand can hold up to 6 pipettes comfortably.
- The round carrousel stand can rotate 360° around stand axis enabling easy reach of any pipette.

*Space saving micropipette stand can hold up to 6 pipettes comfortably.*



catalogue number	base diameter	total height	pack quantity
006.11.005	159 mm	330 mm	1 piece

### MICROPIPETTE STANDS - "linear"

- Manufactured from robust and virgin polypropylene.
- Offers very easy direct access to the micropipettes. Can be used with most common all pipette brands.
- Can hold up to 6 single or multi channel pipettes in a linear form.

catalogue number	base dimensions	total height	pack quantity
006.11.006	143 x 290 mm	290 mm	1 piece



### MICROPIPETTE STANDS - "adjustable"

- Manufactured from white acrylic with ergonomic angled body form and adjustable pipette holding design.
- Modern and ergonomic design enables extremely easy holding and handling of 6 single channel micropipettes.

catalogue number	base dimensions	total height	pack quantity
006.12.004	126 x 260 mm	240 mm	1 piece
006.12.006	126 x 380 mm	240 mm	1 piece



With the help of adjustable pipette holding design long and short height pipettes can be easily stored.



### MICROPIPETTE STANDS - "with bin"

- Manufactured from white acrylic with clear front panel for easy identifications of bin content.
- The top shelf can hold 4 single channel micropipette.
- Self closing sliding lid guarantees dust-free storage.

catalogue number	base dimensions	total height	pack quantity
006.05.001	200 x 178 mm	173 mm	1 piece



Sliding cover with generous openings make filling and dispensing easy. This storage cabin is also ideal for dust-free storage of various types of products.



## PIPETTE TIPS - "precision" - "with & without filter"



➤ Manufactured from U.S. FDA approved polypropylene with very high transparency in fully automatic, human touch-free, clean room facility as DNase, RNase, Human DNA, Pyrogen & PCR inhibitor free.

➤ Utilising a unique manufacturing process all ISOLAB, pipette tips that feature ultra smooth surfaces.

➤ Exclusive molding technology reduce sample loss, save costly reagents maximise accuracy and precision.

➤ Graduation marks on the tips acts as visual checks to minimize any risk of errors during sample aspiration.

➤ Optimised shape fits to all common pipettes to give perfect seal between the pipette and pipette shaft.

➤ Specially developed filter prevents cross contamination from sample to sample by creating a physical barrier in the tip to inhibit and block aerosols.

➤ Low retention is achieved by the special developed resin which offers minimum retention and maximum accuracy allowing complete retrieval of precious samples.

➤ Due to this fact these tips are recommended for applications requiring highest accuracy and reproducibility.

➤ Maximum sample recovery by low retention tips eliminates sample hold-up, providing the most accurate sample delivery possible.

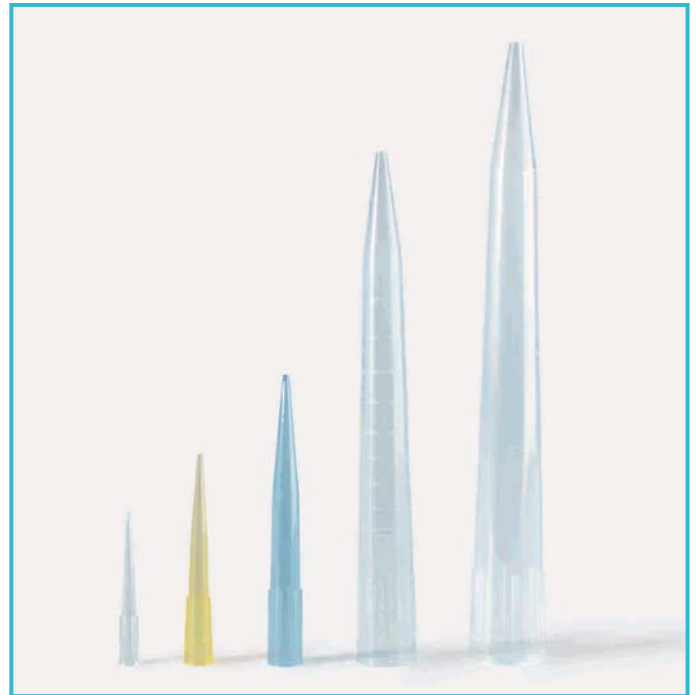


catalogue number	product specifications	packing specifications
T-B-010	pipette tip - ISOLAB - clear - 10 µl - bag	1000 pieces / bag
T-R-010	pipette tip - ISOLAB - clear - 10 µl - box	96 pieces / box
T-R-S-010	pipette tip - ISOLAB - clear - 10 µl - box - sterile	96 pieces / box
TF-010	pipette tip - filter - ISOLAB - clear - low retention - 10 µl - bag	1000 pieces / bag
TF-R-S-010	pipette tip - filter - ISOLAB - clear - low retention - 10 µl - box - sterile	96 pieces / box
T-B-011	pipette tip - ISOLAB - clear - long - 10 µl - bag	1000 pieces / bag
T-R-011	pipette tip - ISOLAB - clear - long - 10 µl - box	96 pieces / box
T-R-S-011	pipette tip - ISOLAB - clear - long - 10 µl - box - sterile	96 pieces / box
TF-011	pipette tip - filter - ISOLAB - clear - low retention - long - 10 µl - bag	1000 pieces / bag
TF-R-S-011	pipette tip - filter - ISOLAB - clear - low retention - long - 10 µl - box - sterile	96 pieces / box
T-B-020	pipette tip - ISOLAB - clear - 20 µl - bag	1000 pieces / bag
T-R-020	pipette tip - ISOLAB - clear - 20 µl - box	96 pieces / box
T-R-S-020	pipette tip - ISOLAB - clear - 20 µl - box - sterile	96 pieces / box
TF-020	pipette tip - filter - ISOLAB - clear - low retention - 20 µl - bag	1000 pieces / bag
TF-R-S-020	pipette tip - filter - ISOLAB - clear - low retention - 20 µl - box - sterile	96 pieces / box
TF-100	pipette tip - filter - ISOLAB - clear - low retention - 100 µl - bag	1000 pieces / bag
TF-R-S-100	pipette tip - filter - ISOLAB - clear - low retention - 100 µl - box - sterile	96 pieces / box
T-B-200	pipette tip - ISOLAB - clear - 200 µl - bag	1000 pieces / bag
T-R-200	pipette tip - ISOLAB - clear - 200 µl - box	96 pieces / box
T-R-S-200	pipette tip - ISOLAB - clear - 200 µl - box - sterile	96 pieces / box
TF-200	pipette tip - filter - ISOLAB - clear - low retention - 200 µl - bag	1000 pieces / bag
TF-R-S-200	pipette tip - filter - ISOLAB - clear - low retention - 200 µl - box - sterile	96 pieces / box
T-B-1000	pipette tip - ISOLAB - clear - 1000 µl - bag	1000 pieces / bag
T-R-1000	pipette tip - ISOLAB - clear - 1000 µl - box	96 pieces / box
T-R-S-1000	pipette tip - ISOLAB - clear - 1000 µl - box - sterile	96 pieces / box
TF-1000	pipette tip - filter - ISOLAB - clear - low retention - 1000 µl - bag	1000 pieces / bag
TF-R-S-1000	pipette tip - filter - ISOLAB - clear - low retention - 1000 µl - box - sterile	96 pieces / box

## PIPETTE TIPS - "economy"

- Manufactured from high quality pure polypropylene which is highly resistant to chemicals and thermal effects.
- Produced to match wide variety of pipettors for secure sealing and easy tip ejecting.
- Uniformity in size and shape allows perfect fitting with almost all micropipettes. Flashfree and uniform delivery orifice for consistent accuracy and reproducible sample delivery.
- Thin wall and small surface area at the tip minimize the possible tip retaining samples droplets.

catalogue number	capacity	colour	pack quantity
005.01.001	10 $\mu$ l	clear	1000 pcs
005.01.002	200 $\mu$ l	yellow	1000 pcs
005.01.003	1000 $\mu$ l	blue	500 pcs
005.01.004	5 ml	clear	250 pcs
005.01.005	10 ml	clear	100 pcs



## RESERVOIR - "2 in 1 - non sterile"

- Reservoir has a standard 50 ml basin on one side and 12 individual 5 ml basins on the other side.
- Wells are angled both downward and outward, guiding multichannel pipettor tips toward a centered position, which help to avoid contamination.
- Imprinted indices identify samples and loose-fitting lids prevent evaporation and contamination.

catalogue number	pack quantity
006.07.001	1 piece



## RESERVOIR - "3 in 1 - non sterile"

- Manufactured from polypropylene as a single reservoir with 3 layouts as 2 sides with 3 compartments.
- Ideal for use when filling multi tube blocks, microwell plates etc since this two side reservoir is actually three reservoirs in one.
- One side has a single channel reservoir of 50 ml with clearly visible volume markings at 10, 25 and 40 ml levels.
- The other side has two separate compartments such as: 8 separate channels with 5 ml volume each division, 12 separate channels with 5 ml volume each division.

catalogue number	pack quantity
006.08.001	1 piece

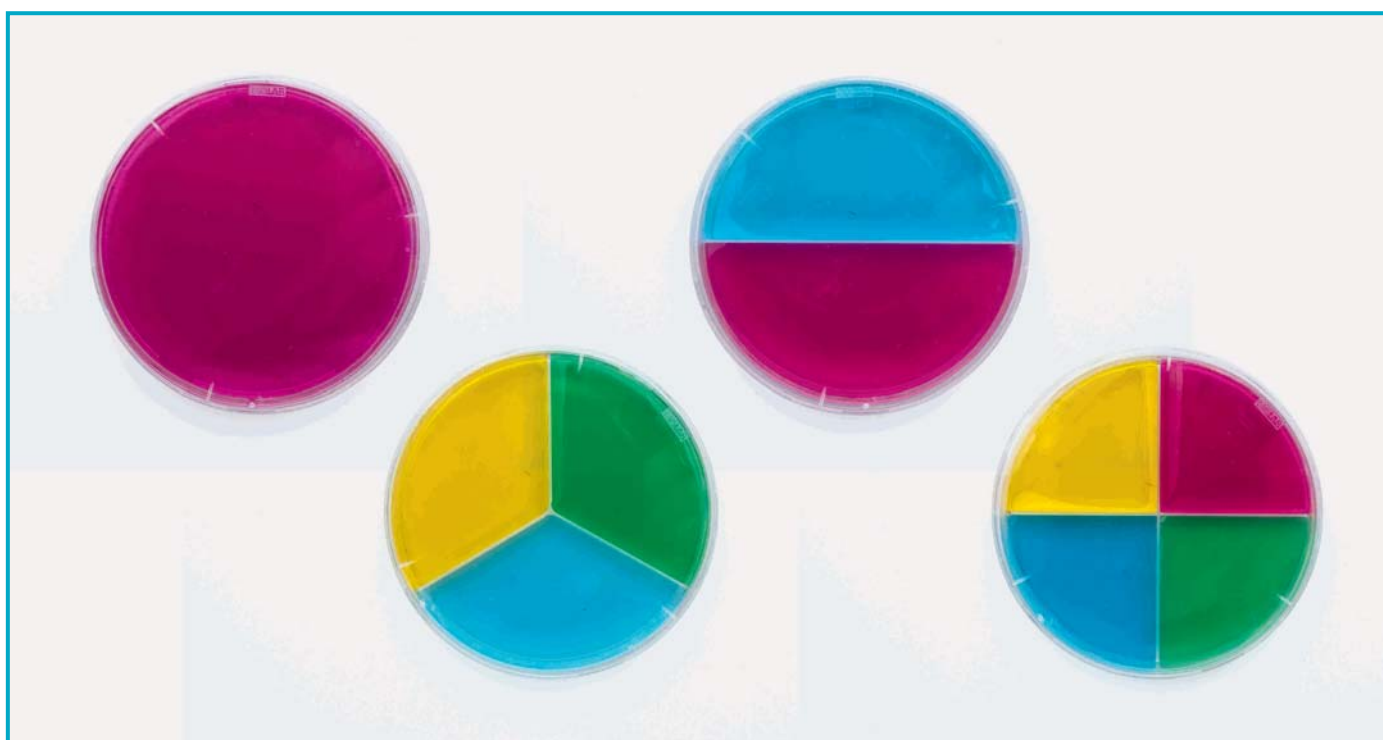


### PETRI DISHES - "glass"

- Manufactured from heat resistant glass by using counter sinking process.
- The dish and the lid are free of bubbles and the edges are fire polished.

catalogue number	diameter	height	pack quantity
081.01.060	60 mm	15 mm	18 pieces
081.01.080	80 mm	15 mm	18 pieces
081.01.100	100 mm	20 mm	18 pieces
081.01.120	120 mm	20 mm	18 pieces
081.01.150	150 mm	25 mm	18 pieces

### PETRI DISHES - "polystyrene" - "sterile"



➤ Manufactured from optically clear, transparent polystyrene for multiple use in microbiology and bacteriology field.

➤ All petri dishes are manufactured under germ-free, sterile conditions of class 10.000 sterile area with extreme sterility control.

➤ Available 2 types: ➤ sterile - clean room production  
➤ sterile - gamma irradiated

➤ With vented lids for consistent and effective practice. Ideal body form is suitable for automatic filling machines.

➤ 60 mm petri dishes are supplied in groups of 10 units packed in heat sealed bags.

➤ Other sizes are supplied in groups of 20 units per pack.

clean room petri dishes	diameter	height	section	pack quantity
081.02.061	60 mm	15 mm	1 section	500 pieces
081.02.091	90 mm	17 mm	1 section	500 pieces
081.02.092	90 mm	17 mm	2 section	500 pieces
081.02.093	90 mm	17 mm	3 section	500 pieces
081.02.094	90 mm	17 mm	4 section	500 pieces
081.02.121	120 mm	17 mm	1 section	500 pieces

gamma irradiated petri dishes	diameter	height	section	pack quantity
081.02.161	60 mm	15 mm	1 section	500 pieces
081.02.191	90 mm	17 mm	1 section	360 pieces
081.02.192	90 mm	17 mm	2 section	360 pieces
081.02.193	90 mm	17 mm	3 section	360 pieces
081.02.194	90 mm	17 mm	4 section	360 pieces
081.02.221	120 mm	17 mm	1 section	400 pieces

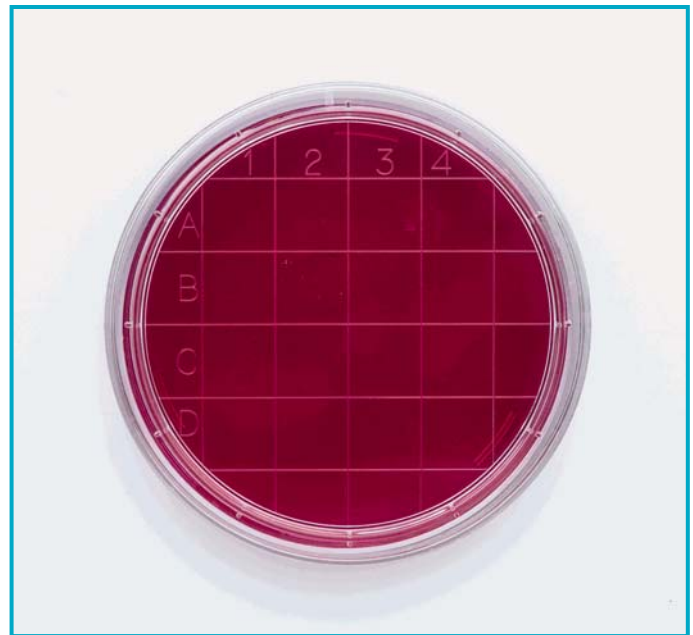


## PETRI DISHES - "contact plate" - "rodac"

- Used in the pharmaceutical or food processing industry, hospitals for determining bacterial contamination of surfaces such as the skin, operating tables, work surfaces. Also facilitates the counting of colonies.
- Similar technical specifications as other petri dishes but with a moulded grid at the bottom which enables the identification of the detected contamination / cm<sup>2</sup>.
- Available 2 types:
  - sterile - clean room production
  - sterile - gamma irradiated

clean room petri dishes	diameter	height	section	pack quantity
081.04.060	60 mm	15 mm	1 section	500 pieces

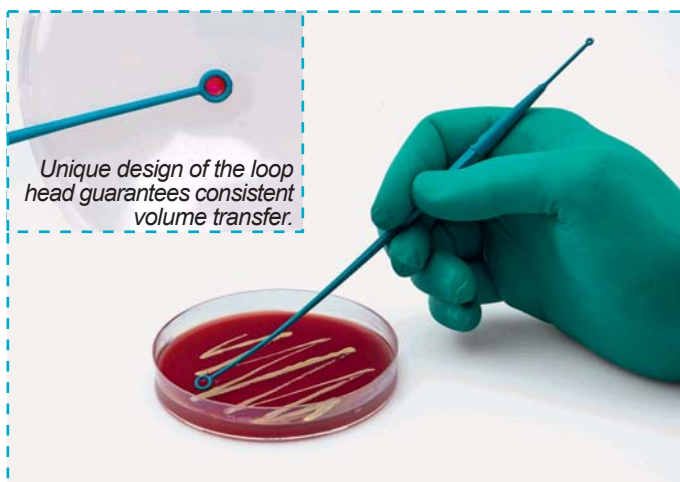
gamma irradiated petri dishes	diameter	height	section	pack quantity
081.04.160	60 mm	15 mm	1 section	500 pieces



## INOCULATION LOOPS - "HIPS" - "sterile"



- Ultra smooth loops made from flexible HIPS offer problem free planting and streaking of cultures.
- Originally manufactured under germ-free aseptic (sterile) conditions of class 10.000 sterile area with extreme sterility control.
- Free of lubricants, oils and electrostatic charges, enabling consistent wetting and flawless liquid transfer.
- Loops do not cut or gouge the agar surface during streaking.
- Ergonomical design of the loop handle improves grip due to the large handle and assists orientation.
- When viewed in cross section, the shafts of the loops have hexagonal shapes which create handles with six flat surfaces.
- This design facilitates maximum grip and easy orientation of the loop head.
- The needle end for colony counting is also a suitable tool for picking off individually isolated colonies.
- They are also suitable for making stab inoculations into agar slants or tubes of solid culture medium.



Loops do not cut or gouge the agar surface during streaking. Ergonomical design of the loop handle improves grip and easy orientation of the loop head due to the large handle.

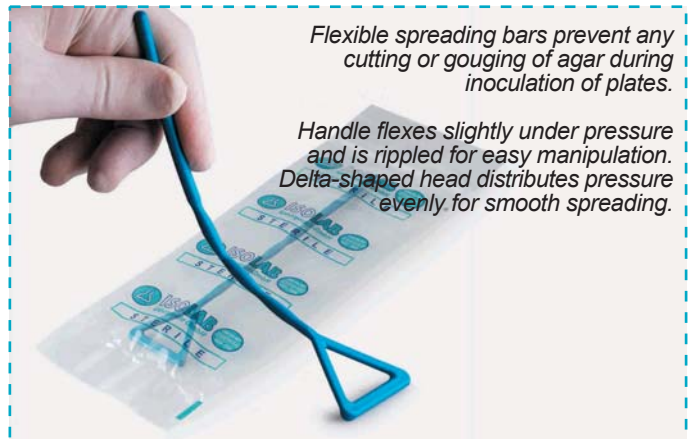
catalogue number	loops specification	quantity in pack	quantity in box
082.01.001	one end needle / one end 1 µl	10 pieces	1000 pieces
082.01.002	one end needle / one end 10 µl	10 pieces	1000 pieces
082.01.003	one end 1 µl / one end 10 µl	10 pieces	1000 pieces



### CELL SPREADERS - "HIPS" - "sterile"

- HIPS cell spreaders are originally manufactured under germ-free aseptic (sterile) conditions of class 10.000 sterile area with extreme sterility control.
- They have uniquely shaped spreading bars of edgeless design which prevent any cutting or gouging of agar during inoculation of plates.
- The unique delta-shaped head distributes pressure evenly for smooth spreading. Handle flexes slightly under pressure and is rippled for easy manipulation.

catalogue number	packing specification	quantity in pack	quantity in box
082.03.001	sterile - single pack	1 piece	100 pieces



### CELL SPREADERS - "stainless steel"

- Stainless steel cell spreader has a smooth triangular end. Can be autoclavable and also be flame sterilized.

catalogue number	triangular bar width	handle length	pack quantity
082.03.003	33 mm	200 mm	1 piece



### INOCULATION LOOPS & LOOP HANDLE

- Loop Handles have nickel plated brass stem. The shafts of the loop handles are either insulated with PVC layer or pure steel for secure autoclaving.
- Inoculation Loops are made from steel wire with perfect flexibility and are stable up to 1200°C. These stainless steel ensures that the loops are durable and rapid cooling.

catalogue number	product description	length	pack quantity
082.02.001	loop - circular end	50 mm	10 pieces
082.02.003	loop handle - with PVC handle	200 mm	1 piece

**SEALING TAPE - "for petri dishes"**

- An ideal sealing tape for petri dishes. Waterproof.
- Chemically inert, resists most organic solvents and caustic agents.
- Remains flexible in moderate freezer temperatures and withstands intermittent exposure to 100°C.
- Stretches, conforms and seals the irregular perimeter of petri dishes.

catalogue number	tape width	pack quantity
058.07.001	13 mm	1 piece

**PETRI DISH STAND - "acrylic"**

- Petri dish stand is very useful during inoculation, incubation and storage.
- Visibility from all sides enable the culture to be observed during incubation.
- Safely transports, incubates and stores petri dishes. Also helps streamline benchtop sample processing.
- Center divider provides space for labelling and incorporates built in finger grip for easy transport.

catalogue number	for petri dishes	dish capacity	quantity in pack
081.03.060	60 mm diameter	56 pieces	1 piece
081.03.090	90 mm diameter	60 pieces	1 piece

**PETRI DISH BASKET - "st. steel"**

- Petri dish basket is manufactured from stainless steel.
- A very useful and practical holder for transportation, autoclaving process of petri dishes upto 100 mm diameter.

catalogue number	dimensions	pack quantity
081.20.001	114 x 102 x 245 mm	1 piece





Colony counter is supplied with weighted stand to hold the counter.

## COLONY COUNTING PEN

- Colony counter pen with light, ergonomic body is balanced for easy manipulation is ideal for rapid, accurate counts.
- Combines a multi-function electronic counter with a pen for marking petri dishes to prevent missing or double-counting colonies.
- Touch controls for multiple counts, sums, counting up or down and automatically beeps with each count - or select the LED flash mode for a visual alert of each count.
- Pen provides highly visible marks on both plastic and glass dishes. Press the lock key to write with pen without counting.
- Suitable for count up/count down functions with counting capacity upto 32 plates.

catalogue number	pack quantity
081.13.001	1 piece



## INFRARED STERILIZER

- Most practical and suitable for sterilisation of inoculation loops, needles etc.
- Ideal for laboratories, clean rooms and safety cabinets where the use of gases and open flames is not permitted.
- The heating element is made from wear resistant ceramic core element which quickly reaches it's optimal temperature of 850°C without any splatter across the work surface area.
- Complete sterilisation ends within 5 to 7 seconds at optimum sterilizing temperature of 816°C.
- The small footprint makes the sterilizer an ideal instrument for anaerobic and aerobic chambers.



A stainless steel holder provides a stable hold of the objects that will be sterilised.

Catalogue No: 081.15.101

catalogue number	dimensions	steriliser length	max. diameter of sterilised object	power	weight	pack quantity
081.15.001	185 x 100 x 190 mm	150 mm	14 mm	170 W	1,30 kg	1 piece

## INOCULATING TURNTABLE

- Manufactured from rugged and easy to clean polypropylene.
- Allows even distribution of bacterial cells in petri dishes from 60 mm to 100 mm diameter.
- Ball bearings ensure smooth and effortless spinning with one hand for faster and more accurate inoculation.
- The recesses, non-skid, neoprene turntable top keeps the petri dishes in place and is removable for cleaning.

catalogue number	diameter	height	pack quantity
081.10.001	127 mm	50 mm	1 piece



## MINI MAGNIFIER

- Perfect tool for hands-free viewing of hard to see items.
- This free standing magnifier allows enhanced viewing of petri dishes, multi-well plates, x-ray films, stained gels, slides of text with a precision moulded lens offering 1,75x magnification.
- The unique stand with an adjustable angle magnifier can be placed over a variety of objects including the mini light box.

catalogue number	magnifier dimensions	height	pack quantity
081.11.001	105 x 143 mm	172 mm	1 piece



## LIGHT BOX

- Saves bench space and can be stored in a drawer.
- Powered with four AA batteries which are supplied.
- Viewing area is perfect for quick screening of petri dishes, well plates, electrophoresis gels, slides, etc.

catalogue number	light box dimensions	height	pack quantity
081.12.001	161 x 135 mm	44 mm	1 piece

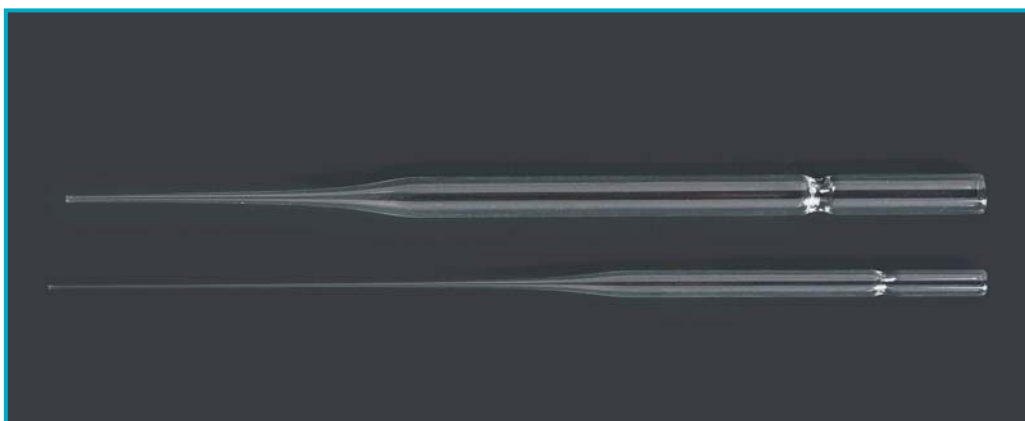
## PIPETTES - "pasteur" - "polyethylene"



- Manufactured from low density polyethylene as a good alternative for glass pasteur pipettes.
- Ideal for transferring and dispensing liquids safely.
- Available 2 types:
  - non-sterilized
  - gamma irradiated
- Eliminates the risk of cross contamination since no need of attaching rubber bulbs to glass pipettes.
- They have reproducible drop sizes which are not different from each other significantly.
- Long flexible stem can be bent to draw liquid from narrow and small volume tubes. Excellent uniform wall thickness guarantees uniform suction force.
- The pasteur pipetting bulb can be depressed easily. They can be sealed and frozen at very low temperatures such as in liquid nitrogen.

catalogue number	volume	product description	packing type	pack quantity
084.02.001	3 ml	non-sterilized	in box	500 pieces
084.22.001	3 ml	sterilized	single pack	100 pieces
084.02.003	1 ml	non-sterilized	in box	500 pieces
084.22.003	1 ml	sterilized	single pack	100 pieces

## PIPETTES - "pasteur" - "glass"



- Manufactured from clear neutral glass, hydrolic class 3 according to ISO 7712 standards.
- For single use in serological and bacteriological labs. Their thick walls provide extra strength that avoids loss due to breakage.
- They have a long drawn capillary tip and the suction head is suitable for placing a cotton plug.
- Their shapes are uniform due to the automated production by computer assisted machines. Offers reproducible drop sizes which are not different from each other significantly.

catalogue number	length	pack quantity	box quantity
084.01.001	145 mm	250 pieces	4 packs
084.01.002	225 mm	250 pieces	4 packs

## PASTEUR PIPETTE BULB



- Pasteur pipette bulb is manufactured from transparent rubber. Perfect tool for pipetting glass pasteur pipettes.

catalogue number	height	pack quantity
084.03.001	44 mm	100 pieces

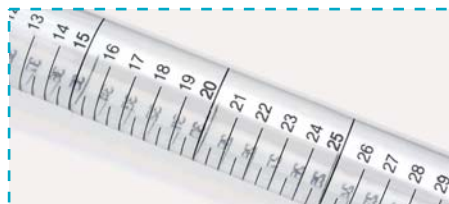
## PIPETTES - "sterile" - "disposable" - "for cell culture"

- Manufactured from optically clear polystyrene with excellent optical transparency. Unique design offers a smooth interior which prevents cell hang-up or clumping inside.
- Sterilized with gamma irradiation, **free of RNase, DNase, DNA and pyrogene.**
- The reservoir of 25 ml and 50 ml pipette increases the volume significantly without extending the length of the pipette.
- Stable, break-resistant pipette tip offers constant and stable flow in each time. Optimised form of the mouthpiece perfectly fits to all types of pipette pump or pipette ball. Filter plug at the mouthpiece of the pipette prevents exterior effects and minimize contamination.
- Volume identification by color coding on pipette enables easy volume identification during working.
- Accurate volume identification by highly visible bidirectional graduation printed on pipette side body.



Volume identification by color coding on pipette enables easy volume identification during working.

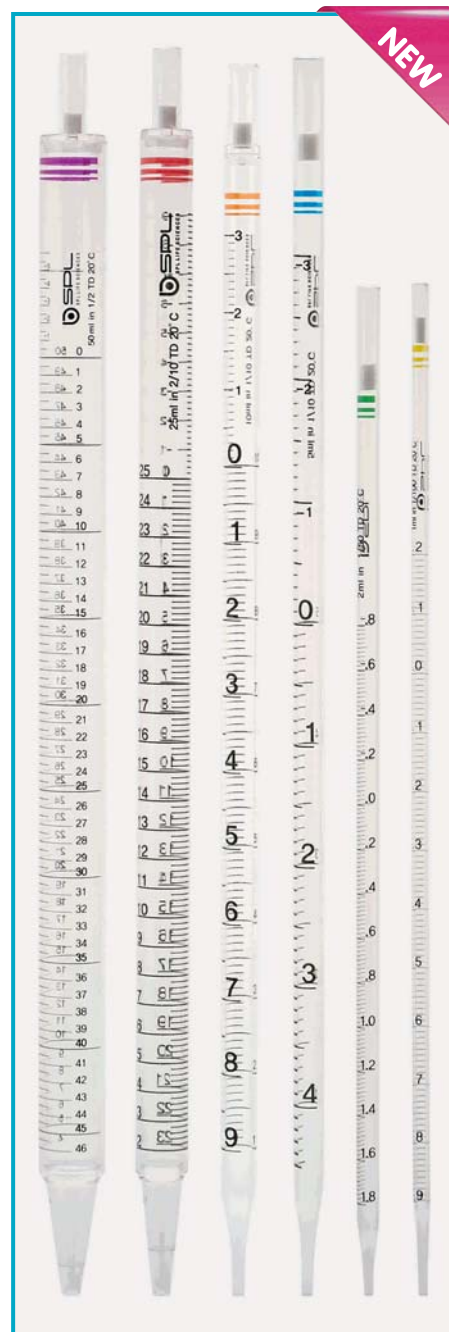
Filter plug at the mouthpiece of the pipette prevents exterior effects and minimize contamination.



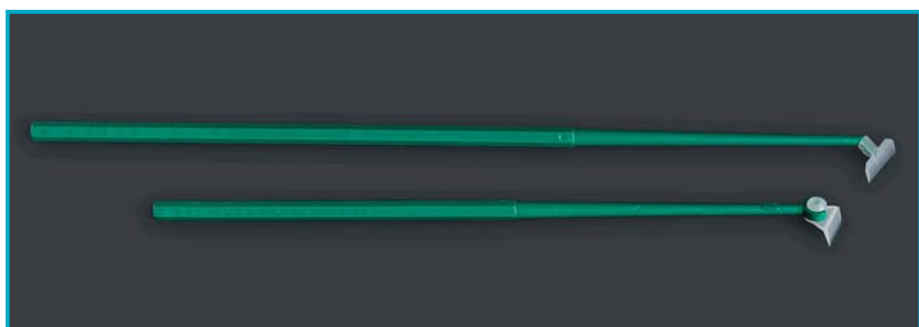
Accurate volume identification by highly visible bidirectional graduation printed on pipette side body.

Ascending and descending scales facilitate reading both dispensing and remaining volume.

catalogue number	working volume	line colour	quantity in pack	quantity in box
083.03.001	1 ml	yellow	200 pieces	800 pieces
083.03.002	2 ml	green	150 pieces	600 pieces
083.03.005	5 ml	blue	100 pieces	400 pieces
083.03.010	10 ml	orange	100 pieces	400 pieces
083.03.025	25 ml	red	50 pieces	200 pieces
083.03.050	50 ml	purple	40 pieces	160 pieces



## CELL SCRAPERS - "sterile" - "for cell culture"



➤ Cell scrapers are specially designed to facilitate collection of attached cells on culture dishes. Handle is manufactured from polypropylene, scraper heads are manufactured from flexible polyethylene.

- Sterilized with gamma irradiation, **free of RNase, DNase, DNA and pyrogene.**
- Raised knobs on the handle guarantees secure grip. Rotating scraper blade offers easy applications and enables the collection of cells from any angle.



Rotating scraper blade offers easy and flexible applications and enables the collection of cells from any angle.

➤ Individual packing eliminates the possible risks of contaminations.

catalogue number	total length	blade width	quantity in box
121.01.013	237 mm	13 mm	100 pieces
121.02.020	600 mm	20 mm	100 pieces

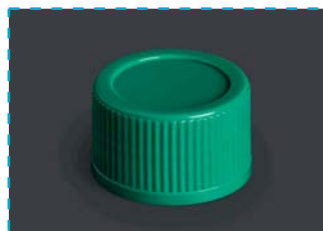


## FLASKS - "polystyrene" - "for cell culture"

- Manufactured from optically clear polystyrene with excellent optical transparency.
- Sterilized with gamma irradiation, **free of RNase, DNase, DNA and pyrogene.**
- Ergonomic design offers minimized contamination risk and easy handling with slip-free stacking possibility.
- Angled design of the flask neck allows easy access to each corner without leaving any dead corners.
- With surface treated uniform flat growth surface. Graduations at the side wall for optical control of the filling volume.
- Available 2 caps:
  - Plug cap for airtight culture
  - Vent cap for open culture
- Optimised design of the neck thread guarantees complete closure by 2/3 turn. Individual packing eliminates the possible risks of contaminations.



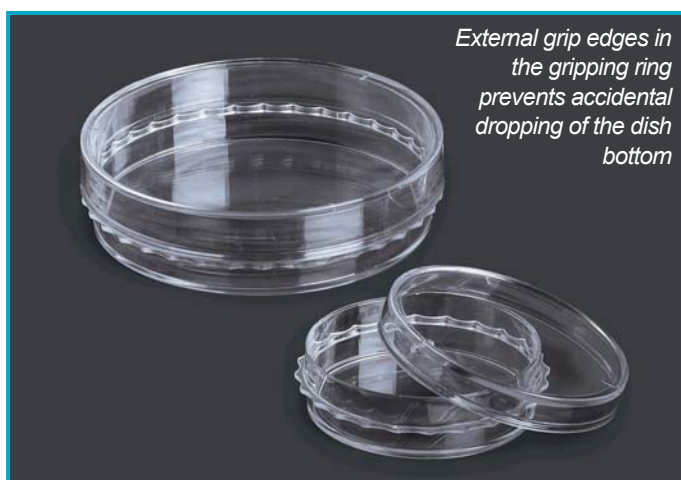
vent cap is designed for open culture applications. Includes a contamination preventing hydrophobic membrane 0,2 µm.



plug seal cap usually used for airtight culture applications. Can be used also for open culture when the cap is unscrewed.

catalogue number	growth area	working volume	cap type	surface treatment	quantity in pack	quantity in box
120.01.025	25 cm <sup>2</sup>	7 ml	vent cap with filter	yes	5 pieces	200 pieces
120.01.075	75 cm <sup>2</sup>	25 ml	vent cap with filter	yes	5 pieces	100 pieces
120.01.175	175 cm <sup>2</sup>	50 ml	vent cap with filter	yes	5 pieces	40 pieces
120.02.025	25 cm <sup>2</sup>	7 ml	plug seal cap	yes	5 pieces	200 pieces
120.02.075	75 cm <sup>2</sup>	25 ml	plug seal cap	yes	5 pieces	100 pieces
120.02.175	175 cm <sup>2</sup>	50 ml	plug seal cap	yes	5 pieces	40 pieces

## PETRI DISHES - "polystyrene" - "for cell culture"

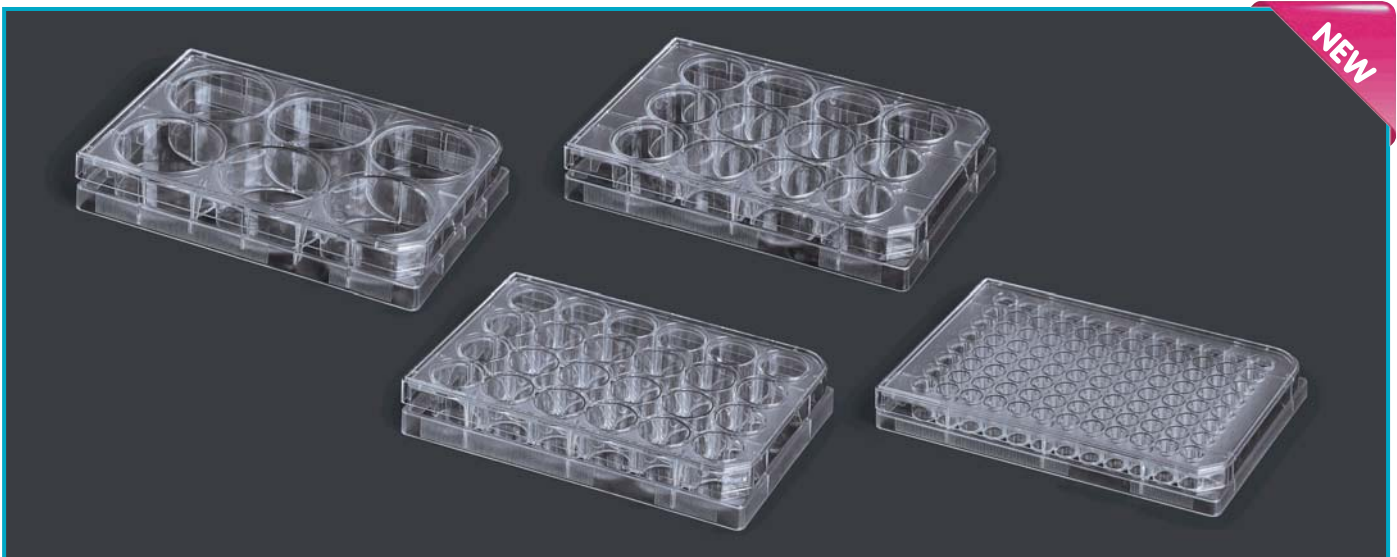


External grip edges in the gripping ring prevents accidental dropping of the dish bottom

- Manufactured from optically clear polystyrene with excellent optical transparency.
- Sterilized with gamma irradiation, **free of RNase, DNase, DNA and pyrogene.**
- Ergonomic design for large growth area and easy handling with slip-free stacking possibility.
- External grip edges in the gripping ring prevents accidental dropping of the dish bottom.
- Stacking ring on the lid and the corresponding base part guarantees secure stacking option.
- With surface treated uniform flat growth surface for suspension culture.

catalogue number	diameter	height	growth area	working volume	surface treatment	external grip	quantity in pack	quantity in box
120.03.035	35 mm	10 mm	9.4 cm <sup>2</sup>	3 ml	yes	yes	10 pieces	500 pieces
120.03.060	60 mm	15 mm	21.5 cm <sup>2</sup>	5 ml	yes	yes	10 pieces	500 pieces
120.03.090	90 mm	20 mm	57.0 cm <sup>2</sup>	12.5 ml	yes	yes	10 pieces	200 pieces





### MULTIWELL PLATES - "polystyrene" - "for cell culture"

- Manufactured from optically clear polystyrene with excellent optical transparency with compliance with USP guideline and ANSI guide line.
- Sterilized with gamma irradiation, **free of RNase, DNase, DNA and pyrogene.**
- Ergonomic design offers minimized contamination risk and easy handling with slip-free stacking possibility.
- Widely used plates for handling multiple samples in a single experiment during culture.
- Lid with air-venting system for controlled gas exchange with low evaporation.
- Vented base for air flow between stacked dishes to prevent condensation.
- Sloped edge allows placement of the lid in one single position.
- With absolutely flat growth surface with surface activated growth area.
- Individual packing eliminates the possible risks of contaminations.



Ergonomic design offers minimized contamination risk and easy handling with slip-free stacking possibility.



Individual packing eliminates the possible risks of contaminations. Designed to prevent cross contamination.

catalogue number	external dimensions	well dimension	growth area	working volume	surface treatment	quantity in pack	quantity in box
122.01.006	85.4 x 127.6 mm	35.0 mm	9.6 cm <sup>2</sup>	3 ml	yes	1 piece	50 pieces
122.01.012	85.4 x 127.6 mm	22.1 mm	3.8 cm <sup>2</sup>	2 ml	yes	1 piece	50 pieces
122.01.024	85.4 x 127.6 mm	15.6 mm	1.9 cm <sup>2</sup>	1 ml	yes	1 piece	50 pieces
122.01.096	85.4 x 127.6 mm	6.4 mm	0.32 cm <sup>2</sup>	0.2 ml	yes	1 piece	50 pieces

### CENTRIFUGE TUBES - "polypropylene" - "for cell culture"

- Manufactured from **FDA approved** ultra clear, high grade polypropylene. Can resist centrifugation up to 6.000 RCF.
- Sterilized with gamma irradiation, **free of RNase, DNase, DNA and pyrogene.**
- Individual packing eliminates the possible risks of contaminations.
- Their conical bottoms make them suitable for centrifugation tests in immunology, microbiology, etc.
- For other specs refer to catalogue page 159.



## PCR RACK



➤ Manufactured from high density polypropylene which is fully autoclavable. Excellent rack for “before” and “after” PCR sampling.

➤ This rack can be used alone or inserted in the workstation.

➤ This working/storage rack is designed to accommodate 96 pieces 250 µl PCR tubes or strips of 8 and 12 tubes.

➤ Tube wells are easily identified with alphanumeric embossed numbers and letters.

➤ Translucent clear cover protects the tubes from dust and has a non-slip surface to allow safe storage of multiple racks.

catalogue number	for PCR tubes	tube quantity (wells)	rack dimensions	pack quantity
089.03.012	0.2 ml	96 pcs	125 x 88 x 31 mm	1 piece

## PCR WORKSTATION



➤ Manufactured from high density polypropylene which is fully autoclavable.

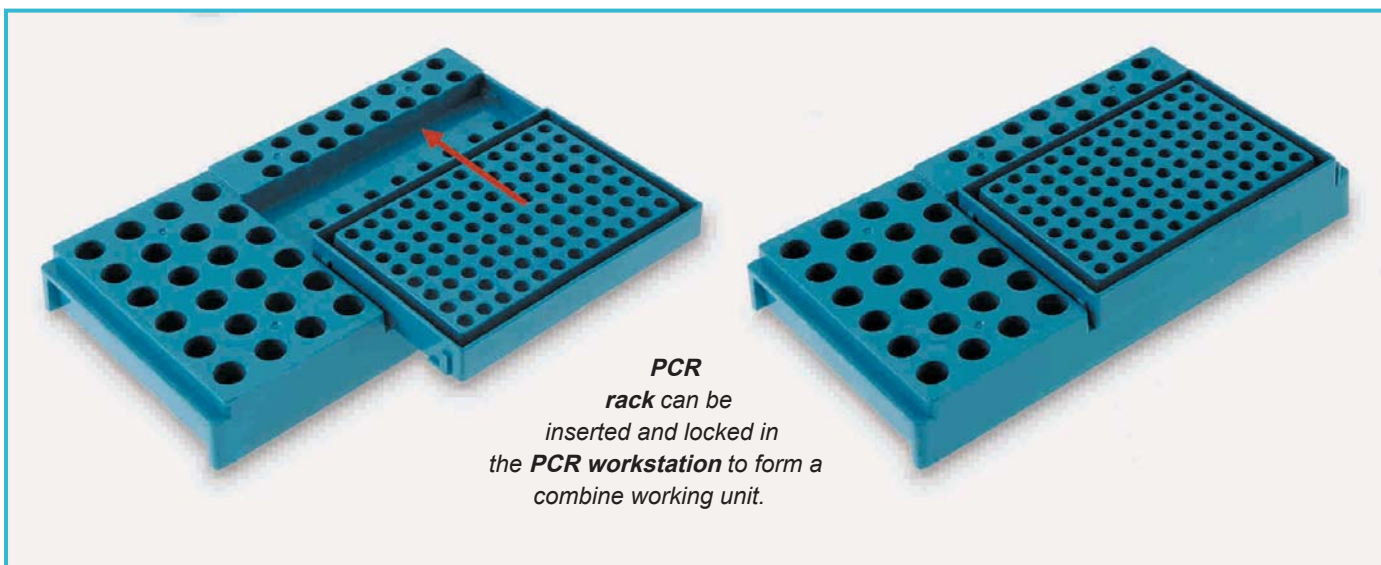
➤ This storage/working rack, with lid, is designed to work with different PCR volumes at the same time.

➤ It can accommodate up to 32 individual 0.2 ml PCR tubes, 24 pieces of 1.5 / 2.0 ml and 16 pieces of 0.5 ml microtubes.

➤ Tube wells are alpha-numerically matrixed with raised bold type for accurate sample identification.

➤ The rack also has a transparent lid for easy viewing of samples. Frosted writing panels on four sides allow labelling or writing.

catalogue number	rack dimensions	pack quantity
089.03.013	215 x 118 x 50 mm	1 piece



**PCR**  
rack can be  
inserted and locked in  
the **PCR workstation** to form a  
combine working unit.

## PCR TUBES

- Manufactured from FDA approved, ultra clear, virgin polypropylene. Specially designed for thermal transfer and realtime PCR applications.
- The standard and uniform thin walls of the tubes provides maximum heat transfer.
- Special caps perfectly prevents liquid leakages.
- The sterilisation certificates are available on website.

catalogue number	product description	pack quantity
123.01.002	0,2 ml PCR tube - sterile	500 pieces
123.01.005	0,5 ml PCR tube - sterile	500 pieces
123.01.028	0,2 ml PCR tube - strip of 8 - sterile	12 pieces



## PCR PLATES & SEALING FILM

- Manufactured from FDA approved, ultra clear, virgin polypropylene. Specially designed for thermal transfer and realtime PCR applications.
- The standard and uniform thin walls of the tubes provides maximum heat transfer.
- The sterilisation certificates are available on website.

catalogue number	specifications	pack quantity
123.01.096	0,2 ml - 96 well non skirted plate - sterile	10 pieces
123.02.096	0,2 ml - 96 well semi skirted plate - sterile	10 pieces
124.01.001	sealing film for thermal sealing	10 pieces



## FREEZER BOX - "for PCR tubes"

- Ideal for keeping PCR tubes, strips, plates cool at +4°C temperature while working on the bench. Should be frozen at -20°C for 24 hours before use.
- The polycarbonate cooler body is filled with a non-toxic gel which cannot contact with the tubes. A clear polycarbonate lid shows positions of tubes.
- Handles allow secure grip for transfer. Rubber feet prevents sliding on the lab bench.

catalogue number	rack dimensions	pack quantity
092.18.008	164 x 224 x 149 mm	1 piece



## PCR TRANSFER TRAY

- Manufactured from high density polypropylene which is fully autoclavable. These trays are thin and easy to carry and designed to rest perfectly over a 96-well tube rack.
- A time saver for anyone working with individual 0,2 ml tubes or strips of 8 and 12 tubes. With the handles to lift and carry moving the tubes/strips to thermal cyclers is very simple and easy.

catalogue number	tray dimensions	pack quantity
089.08.001	114 x 74 x 11 mm	1 piece



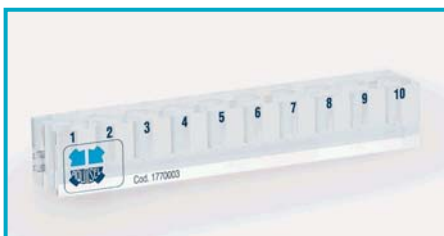


### SEDI-RATE - "tubes"

- SEDI-RATE system offers an easy and very reliable performance of erythrocyte sedimentation rate test according to Westergreen method.
- The totally closed sterile production cycle guarantees the maximum hygiene safety and the set complies with all essential requirements of IVD.
- The set consists of;
  - A special design P.P tube containing 0,25 ml Sodium Citrate (necessary for 1 ml blood).
  - P.S pipette with graduations from 0 to 180 which has a rubber cap allowing the filling by pressure.
  - Fibre cap which allows the blood to reach "0" level
- The tube is filled with blood up to the mark and mixed by turning over.
- Sedi-rate tubes and pipettes are packed as 600 pieces in a box.

catalogue  
number  
085.01.001

pack  
quantity  
1 box



### K3 EDTA - "tubes"

- K3 EDTA TUBES are made of clear polypropylene supplied with a cap which assures comfortable and reliable closure.
- It allows a mixture with the blood immediate since the anticoagulant is pulverised.
- The quantity of additive is very small so there are no dilution risks.
- No risk of anticoagulant loss when uncapping because it is adhered to the tube wall.
- They have a blood capacity of 2,5 ml.
- Packed as 1500 tubes in a box.

catalogue  
number  
085.03.001

pack  
quantity  
1 box



### CYTOLOGY BRUSH

- Cytology brush is used for cervical specimen collection.
- It is designed for taking cell samples without any damage.
- They have a soft tip that provides more comfort for patients.
- The total length is 200 mm. Individually wrapped and gamma sterilized. Packed as 100 pieces in a box.

catalogue  
number  
086.05.001

pack  
quantity  
1 box

### SEDI-RATE RACK

- The SEDI-RATE Rack system can hold 10 tubes.
- Manufactured from methacrylate.

catalogue  
number  
085.02.001

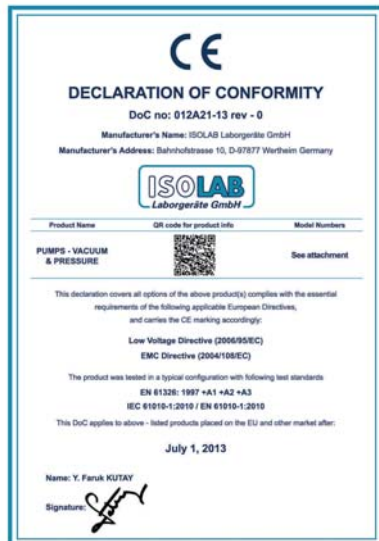
pack  
quantity  
1 piece



20 years  
*of*  
*experience*

We have been working for you for 20 years now. Our senses are all alert in order to present the best services to you. That's why we are more aware of what your needs are than others.

We had the opportunity to observe the problems you have lived through until today. On the basis of our observations and dynamic formation, we believe that it is time to present to you our services in a new field.



We have decided to expand to new horizons by integrating laboratory instruments with the CE certificate and the European quality and guarantee.

We are happy to present to you some of our laboratory instruments holding ISOLAB excellence and quality.



Our instruments are always been produced in conformity with the European quality norms. They conform to the European CE Declaration of Conformity.

Our compass always directs us to perfection. Sensibility and perfectionism are two essential directions of our entire laboratory instruments line.





## MAGNETIC STIRRER - "with hot plate"

- Explosion proof, maintenance free brushless DC motor with low noise level offers a stirring volume up to 20 L with a smooth start and quick stop.
- Ceramic top plate guarantees perfect chemical resistance specially against strong acids. Also provides impact resistant, easily cleanable, scratch proof surface with excellent heat distribution.
- Integrated design of the heater and the top plate provides excellent heat transfer rate and quick heat up capability.
- Hermetically sealed aluminum alloy housing protects all mechanical and electronic components from aggressive effects and guarantees safety with a long life time.
- Electronic speed control from 100 to 1500 rpm provides a gentle revolution and precise stirring speed even at high temperatures.
- PID temperature technology enables excellent heating control from ambient temperature to 550°C.
- Offers integrated temperature control (+/- 0,2°C accuracy) with external PT1000 temperature sensor and support rod.
- Overheat protection circuit turns off the heater if the top plate temperature reaches 580°C for any reason.
- Hot surface warning display indicates any residual heat even if switched off. LCD display will show "HOT" if hotplate temperature is over 50°C. Large LCD panel displays set or actual temperature and speed.
- Special software enables control and documentation of all values via RS232 interface.



Explosion proof, maintenance free brushless DC motor with low noise level offers a stirring volume up to 20 L with a smooth start and quick stop.

Electronic speed control from 100 to 1500 rpm provides a gentle revolution and precise stirring speed even at high temperatures.



Large LCD panel displays set or actual temperature and speed.

Hot surface warning display indicates any residual heat even if switched off. LCD display will show "HOT" if hotplate temperature is over 50°C.

catalogue no	613.06.001
dimensions / weight (mm / kg)	215 x 360 x 112 / 5,3
top plate dimensions (mm)	184 x 184
top plate material	glass ceramic
motor type	brushless DC motor
power (W)	1050
voltage (V)	220
frequency (Hz)	50
max. stirring capacity (L)	20
speed range (rpm)	100 - 1500
speed & temp. display	LCD
heating output (W)	1000
heating range (°C)	room temp. - 550
heating accuracy (°C)	±1 < 100; ±1 % > 100
safety temperature (°C)	580
heating warning (°C)	50
permissible ambient temperature (°C)	5 - 40
permissible relative humidity (%)	80
remote cont. (RS232) interface	yes
standard accessories	external temp. sensor PT 1000
time control (minute)	N/A

## MAGNETIC STIRRER - "with hot plate"

- Explosion proof, maintenance free brushless DC motor with low noise level offers a stirring volume up to 20 L with a smooth start and quick stop.
- Ceramic coated stainless steel top plate guarantees perfect chemical resistance specially against strong acids. Also provides impact resistant, easily cleanable, scratch proof surface with excellent heat distribution.
- Integrated design of the heater and the top plate provides excellent heat transfer rate and quick heat up capability.
- Hermetically sealed aluminium alloy housing protects all mechanical and electronic components from aggressive effects and guarantees safety with a long life time.
- Electronic speed control from 100 to 1500 rpm provides a gentle revolution and precise stirring speed even at high temperatures.
- PID temperature technology enables excellent heating control from ambient temperature to 340°C.
- Offers integrated temperature control (+/- 0,2°C accuracy) with external PT1000 temperature sensor and support rod.
- Overheat protection circuit turns off the heater if the top plate temperature reaches 360°C for any reason.
- Hot surface warning display indicates any residual heat even if switched off. LCD display will show "HOT" if hotplate temperature is over 50°C. Large LCD panel displays set or actual temperature and speed.
- Special software enables control and documentation of all values via RS232 interface.



613.02.002 magnetic stirrer has an automatic timer function which enables time control from 1 minute to 99 hour and 59 min.

catalogue no	613.02.001	613.02.002
dimensions / weight (mm / kg)	160 x 280 x 85 / 2,8	
top plate dimensions (mm)	Ø135	
top plate material	ceramic coated stainless steel	
motor type	brushless DC motor	
power (W)	550	
voltage (V)	220	
frequency (Hz)	50	
max. stirring capacity (L)	20	
speed range (rpm)	100 - 1500	
speed & temp. display	LCD	
heating output (W)	500	
heating range (°C)	room temp. - 340	
heating accuracy (°C)	±1 < 100; ±1 % > 100	
safety temperature (°C)	360	
heating warning (°C)	50	
permissible ambient temperature (°C)	5 - 40	
permissible relative humidity (%)	80	
remote cont. (RS232) interface	yes	
standard accessories	external temp. sensor PT 1000	
time control	N/A	1 min to 99 hr - 59 min

## heating blocks - "for magnetic stirrers"



Manufactured from aluminium alloy with perfect heat transfer. Suitable for round bottom flasks.

The hole existing on the block enables insertion of the PT1000 external temperature sensor for precise control of the block temperature.



catalogue number	flask volume	block material	pack quantity
613.02.050	50 ml	aluminium	1 piece
613.02.100	100 ml	aluminium	1 piece
613.02.250	250 ml	aluminium	1 piece
613.02.500	500 ml	aluminium	1 piece



## MAGNETIC STIRRER - "with hot plate"

- Maintenance free DC motor with low noise level offers a stirring volume up to 3 L with a smooth start and quick stop.
- Ceramic coated stainless steel top plate guarantees perfect chemical resistance specially against strong acids. Also provides impact resistant, easily cleanable, scratch proof surface with excellent heat distribution.
- Integrated design of the heater and the top plate provides excellent heat transfer rate and quick heat up capability.
- ABS housing protects all mechanical and electronic components from aggressive effects and guarantees safety with a long life time.
- Electronic speed control from 100 to 1500 rpm provides a gentle revolution and precise stirring speed even at high temperatures.
- PID temperature technology enables excellent heating control from ambient temperature to 280°C.
- Offers integrated temperature control (+/- 0,5°C accuracy) with external PT1000 temperature sensor and support rod.
- Overheat protection circuit turns off the heater if the top plate temperature reaches 320°C for any reason.
- Hot surface warning display indicates any residual heat even if switched off. LED display will show "HOT" if hotplate temperature is over 50°C.
- Large LED panel for simultaneous display for set & actual temperature and set & actual speed.



Maintenance free DC motor with low noise level offers a stirring volume up to 3 L with a smooth start and quick stop.



Hot surface warning display indicates any residual heat even if switched off. LED display will show "HOT" if hotplate temperature is over 50°C.

catalogue no	613.01.001
dimensions / weight (mm / kg)	150 x 260 x 80 / 1,8
top plate dimensions (mm)	Ø135
top plate material	ceramic coated stainless steel
motor type	DC motor
power (W)	515
voltage (V)	220
frequency (Hz)	50
max. stirring capacity (L)	3
speed range (rpm)	100 - 1500
speed & temp. display	LED
heating output (W)	500
heating range (°C)	room temp. - 280
heating accuracy (°C)	±1 < 100; ±1 % > 100
safety temperature (°C)	320
heating warning (°C)	50
permissible ambient temperature (°C)	5 - 40
permissible relative humidity (%)	80
remote cont. (RS232) interface	N/A
standard accesories	external temp. sensor PT 1000
time control (minute)	N/A





ABS housing protects all mechanical and electronic components from aggressive effects and guarantees safety with a long life time.

Keypad with large LED panel displays set or actual speed.

### MAGNETIC STIRRER - "without hot plate"

- Maintenance free DC motor with low noise level offers a stirring volume upto 3 L with a smooth start and quick stop.
- ABS housing protects all components from aggressive effects and guarantees safety with a long life time.
- Large LED panel offers display for set or actual speed.
- Electronic speed control from 100 to 1500 rpm provides a gentle revolution and precise stirring speed.

catalogue no	613.03.001
dimensions / weight (mm / kg)	150 x 260 x 80 / 1,8
top plate dimensions (mm)	Ø135
top plate material	special plastic resin
motor type	DC motor
power (W)	15
voltage (V)	220
frequency (Hz)	50
max. stirring capacity (L)	3
speed range (rpm)	100 - 1500
speed & temp. display	LED



### MAGNETIC STIRRER - "without hot plate"

- Light weight and compact magnetic stirrer with adjustable speed control from 0 to 2000 rpm. Suitable for mixing liquids up to 1000 ml. Specially recommended for titration applications.
- Manufactured from ABS which is highly resistant to chemicals. Stirring plate is made from stainless steel.
- Supplied with an adjustable clamp suitable to hold electrodes and probes.

catalogue no	613.04.001
dimensions / weight (mm / kg)	150 x 135 x 53 / 0,71
top plate dimensions (mm)	Ø120
top plate material	steel
motor type	DC motor
power (W)	15
voltage (V)	220
frequency (Hz)	50
max. stirring capacity (L)	1
speed range (rpm)	0 - 2000
speed & temp. display	N/A



catalogue no	615.01.001
dimensions / weight (mm / kg)	83 x 220 x 186 / 2,6
motor type	brushless DC motor
power (W)	70
voltage (V)	220
motor rating output (W)	50
frequency (Hz)	50
max. stirring capacity (L)	20
speed range (rpm)	0 - 2200
speed display	LED
speed display resolution (rpm)	± 1
max. torque (Ncm)	40
max. viscosity (mPas)	10000
overload protection	yes
motor protection	yes
chuck range diameter (mm)	0,5 - 10
permissible ambient Temperature (°C)	5 - 40
permissible relative humidity (%)	80
remote Cont. (RS232) interface	N/A
optional accesories	stirrers & stand & bosshead

## MECHANICAL STIRRER - "light duty"

- Highly reliable design for stirring low to medium viscous media with a vibration free and silent operation.
- Maintenance free, silent and explosion proof DC motor offers a stirring volume up to 20 L with a smooth start without sample overflow and a quick stop.
- Sturdy aluminium main body efficiently absorbs and emits the heat generated by the motor.
- Electronic speed control from 0 to 2200 rpm provides a gentle revolution and precise stirring speed.
- Large LED panel for displaying for set or actual speed.
- Overload safety feature automatically stops the operation and protects all mechanical and electronic components.
- Stirring shafts can be easily inserted to their position by "push through" system.
- Stirring shaft, stand and fixing clamp are not supplied. These should be ordered separately.

### acesories for mechanical stirrer - "stand & bosshead"



Bosshead manufactured from steel with opening distance of 0 - 20 mm.

Sturdy construction specially enables holding heavy objects such as stirrers. Catalogue No: 615.01.012

Stirrer stand is made from powder coated cast steel.

Unique base design offers very stable holding of the assembled stirrer and also possibility of getting close to the stand rod.

Supplied complete with 18 mm diameter stainless steel support rod. Catalogue No: 049.09.250

## MECHANICAL STIRRER - "heavy duty"

- Highly reliable design for stirring low to relatively viscous media with a vibration free and silent operation.
- Maintenance free, silent and explosion proof DC motor offers a stirring volume up to 40 L with a smooth start without sample overflow and a quick stop.
- Sturdy aluminium main body efficiently absorbs and emits the heat generated by the motor.
- Electronic speed control with an accuracy +/- 3 rpm from 50 to 2200 rpm provides a gentle revolution and precise stirring speed.
- Large LCD panel for displaying for set or actual speed.
- Overload safety feature automatically stops the operation and protects all mechanical and electronic components.
- Stirring shafts can be easily inserted to their position by "push through" system.
- Stirring shaft, stand and fixing clamp are not supplied as a standard accessory. These should be ordered separately.



Large LCD display panel for indication of actual speed.



### accessories for mechanical stirrer - "stirring shafts"



catalogue number	shaft type	shaft dia. & length	shaft material	recommended for
615.01.101	cross	9,0 x 400 mm	st. steel	medium & high speed
615.01.102	blade	6,8 x 400 mm	st. steel	low & medium speed
615.01.103	cross	8,5 x 350 mm	PTFE	medium & high speed
615.01.104	blade	6,8 x 350 mm	PTFE	low & medium speed

catalogue no	615.02.001
dimensions / weight (mm / kg)	83 x 220 x 186 / 2,8
motor type	brushless DC motor
power (W)	130
voltage (V)	220
motor rating output (W)	100
frequency (Hz)	50
max. stirring capacity (L)	40
speed range (rpm)	50 - 2200
speed display	LCD
speed display resolution (rpm)	± 1
max. torque (Ncm)	60
max. viscosity (mPas)	50000
overload protection	yes
motor protection	yes
chuck range diameter (mm)	0,5 - 10
permissible ambient Temperature (°C)	5 - 40
permissible relative humidity (%)	80
remote Cont. (RS232) interface	yes
optional accessories	stirrers & stand & bosshead



**CE**  
certified

**NEW**

**Light duty homogenizer is supplied without bosshead, clamp, stand and rotor/stator set.**

*Bosshead manufactured from steel with opening distance of 0 - 20 mm.*  
**cat. no: 615.01.012**

*Stirrer stand is made from powder coated cast steel.*

*Unique base design offers very stable holding of the assembled stirrer and also possibility of getting close to the stand rod.*

*Supplied complete with 18 mm diameter st. steel support rod.*  
**cat. no: 049.09.180**

*Bosshead clamp is specially suitable to hold light duty homogenizer.*  
**cat. no: 621.11.103**

## HOMOGENIZER - "light duty"

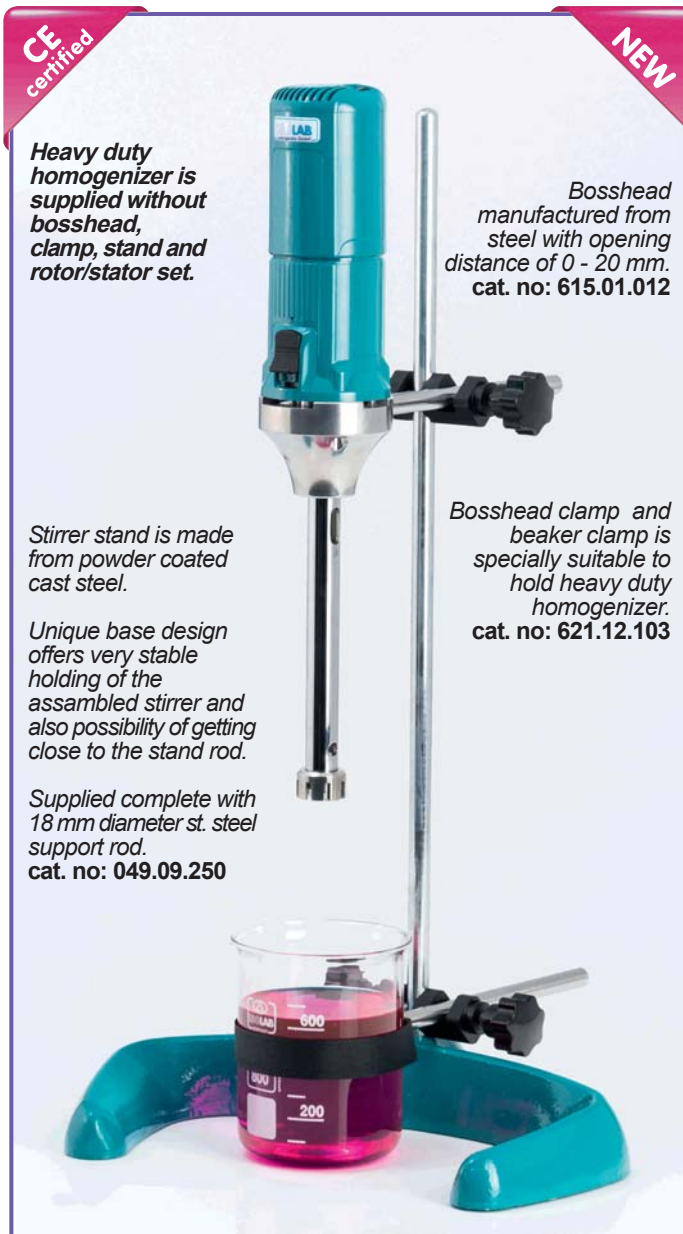
- Practical solution if mixing, emulsification, shredding or chopping is required for small samples.
- Easy to hold due to the light weight for one hand operation. Can be used both hand-held or post mounted.
- High torque motor with a variable speed adjustment enables rapid and effective disruption of a wide range of samples.
- Flexible configuration of different rotors and stators enables the homogeniser adaptive to most applications.
- Can rapidly homogenize samples in the range 0,1 ml to 50 ml or 1 ml - 250 ml of liquid depending on the rotor/stator type.
- During operation, the sample is drawn into the core of the homogenizer. The material is repeatedly cycled through narrow slits in the probe where it is rapidly disintegrated by high shear.
- Maximum speed of 30.000 rpm rate reduces processing time significantly.
- Complete homogenization of samples is usually achieved in a few seconds. Reliable results are assured with extremely high precision.
- Smooth motor drive makes working very safe and comfortable. Smooth acceleration also prevents unnecessary spills.
- Shafts, rotors and stators are constructed of quality 316 stainless steel which is inert to aggressive solutions.
- Assembly and disassembly of rotors can be done without requirement of special tools.
- Shafts, rotors, stators are not supplied as a standard accessory. These should be ordered separately.

catalogue no	621.11.001
dimensions / weight (mm / kg)	46 x 55 x 230 / 0,6
motor type	carbon brush motor
power (W)	160
voltage (V)	220
frequency (Hz)	50
working volume (ml)	0,1 - 50 with shaft 621.11.050
working volume (ml)	1 - 250 with shaft 621.11.250
speed range (rpm)	8000 - 30000
speed control	6 stage
max. circum. speed (m/sec)	6,3 - 14
max. viscosity (mPas)	5000
overload protection	no
protection class	IP 20
permissible ambient Temperature (°C)	0 - 40
permissible relative humidity (%)	85
noise level (dB)	< 54
optional accesories	stand & bosshead & various shafts



## HOMOGENIZER - "heavy duty"

- Offers right solution for dispensing, homogenizing and mixing of samples in larger volumes.
- High torque motor with a variable speed adjustment enables rapid and effective disruption of a wide range of samples.
- Flexible configuration of different rotors and stators enables the homogenizer adaptive to most applications.
- Can rapidly homogenize samples in 10 ml to 8.000 ml of liquid depending on the rotor/stator type.
- During operation, the sample is drawn into the core of the homogenizer. The material is repeatedly cycled through narrow slits in the probe where it is rapidly disintegrated by high shear power.
- Maximum speed of 30.000 rpm rate reduces processing time significantly.
- Complete homogenization of samples is usually achieved in a few seconds. Reliable results are assured with extremely high precision.
- Smooth motor drive makes working very safe and comfortable. Smooth acceleration also prevents unnecessary spills.
- An overload protection feature significantly increases the life span of the motor.
- Shafts, rotors and stators are constructed of quality 316 stainless steel which is inert to aggressive solutions.
- Assembly and disassembly of rotors can be done without requirement of special tools.
- Shafts, rotors, stators are not supplied as a standard accessory. These should be ordered separately.



**CE**  
certified

**NEW**

**Heavy duty homogenizer is supplied without bosshead, clamp, stand and rotor/stator set.**

Bosshead manufactured from steel with opening distance of 0 - 20 mm.  
cat. no: 615.01.012

Stirrer stand is made from powder coated cast steel.

Bosshead clamp and beaker clamp is specially suitable to hold heavy duty homogenizer.  
cat. no: 621.12.103

Unique base design offers very stable holding of the assembled stirrer and also possibility of getting close to the stand rod.

Supplied complete with 18 mm diameter st. steel support rod.  
cat. no: 049.09.250



For suspension / emulsion  
working volume: 10 - 5000 ml  
**621.12.905**



For stringy / fibrous working  
volume: 100 - 8000 ml  
**621.12.908**

catalogue no	621.12.001
dimensions / weight (mm / kg)	70 x 70 x 255 / 1,3
motor type	carbon brush motor
power (W)	500
voltage (V)	220
frequency (Hz)	50
working volume (ml)	10 - 5000 with shaft 621.12.905
working volume (ml)	100 - 8000 with shaft 621.12.908
speed range (rpm)	10000 - 30000
speed control	6 stage
max. circum. speed (m/sec)	22,7 - 36
max. viscosity (mPas)	10000
overload protection	yes
protection class	IP 20
permissible ambient Temperature (°C)	0 - 40
permissible relative humidity (%)	85
noise level (dB)	< 72
optional accessories	stand & bosshead & various shafts

## HOMOGENIZER - "paddle blender"



- Designed for homogenisation of samples while isolating them from any possible contamination.
- Widely used in food, feed, cosmetics and pharmaceutical laboratories for homogenization processes during microbiological or toxicological testing.
- The two stainless steel paddles gently, but thoroughly homogenize the sample with the diluent and microorganisms are forced to join the liquid phase.
- High quality enduring motors ensure a safe and efficient homogenization with minimum sound level.
- Samples are prepared in disposable sterile bags so that the cross contamination is avoided. The UV light source in the homogenization chamber also reduces the risk of cross contamination.
- Heater control enables a temperature operating range from ambient to 60°C.
- Windowed door ensures permanent control over blending process for perfect results.
- Featured with a LCD control panel with programmable settings of all parameters.
- Supplied with a stainless steel bag stand for 4 bags with colour differentiated bag clamps and two paddle protector.



catalogue no	608.01.001
dimensions / weight (mm / kg)	420 x 245 x 340 / 18,5
voltage (V)	220
frequency (Hz)	50
power (W)	500
capacity (ml)	3 - 400
time control (min.)	0,1 - 99
rap speed (times/sec)	3 - 12
UV sterilisation	yes
door with window	yes
permissible ambient temperature (°C)	0 - 50
permissible relative humidity (%)	80



*Supplied complete with homogenizer bag holding stand that carries for bags with colour differentiated bag clamps. Also two plastic paddle protectors are supplied.*

## LABORATORY BLENDER SET



Easily cleanable stainless steel cutting blade.

## blender set parts

- 400 W powerfull motor ensuring perfect blending.
- 1500 ml capacity stainless steel jar with handle and lid.
- 1500 ml capacity heat resistant glass jar with handle and lid.
- 300 ml capacity plastic grinder jar with lid.



catalogue no	602.21.001
voltage (V)	220
frequency (Hz)	50
power (W)	400
glass jar - capacity (ml)	1500
steel jar - capacity (ml)	1500
grinder jar - capacity (ml)	300
volume graduation	at only for glass jar
pulse function	Yes
speed function	2
Permissible Ambient Temperature (°C)	0 - 50
Permissible Relative Humidity (%)	80

- Blender set is ideal for grinding, mixing, and dispersion of large variety of products including ice.
- Powerfull blender motor ensures fast, perfect and homogenous blending.
- Two step speed control and pulse function provides excellent results during blending and mixing.
- Stainless steel unique formed cutting blade guarantees also perfect dry blending and is easy to clean after use.
- Provides highest standing stability due to the stable engine housing.
- Non-slipping rubber feet prevents the blender from "walking" during operation.
- Supplied as a set of housing and 3 blender jars.

## LABORATORY KETTLE



Monoblock seamless stainless steel boiling vessel. Insulated heating elements and perforated pouring filter.

- Kettle with 1500 ml volume and 1500 W heating.
- Featured with automatic stop after heating, on/off switch with indication lamp, fully insulated heating element and cord storage.
- Monoblock seamless stainless steel vessel with insulated heating element and perforated pouring filter.

catalogue no: 611.01.001



## MIXER - "vortex"

CE  
certified

- Offers touch and continuous orbital mixing for variety of applications from gentle mixing to resuspending pellets.
- Infinitely adjustable speed control from 0 to 2500 rpm provides efficient mixing.
- Unique counter-balance system creates maximum vortexing while minimizing the noise and excessive vibration.
- Anti-slip silicone feet pads avoids unnecessary "walking" and minimizes vibration enabling an excellent stable operation.
- Reliable and extremely quiet motor guarantees an even distributed efficient mixing for all speeds ranges.
- Head is easily removable and replaceable with optional adapters that can hold different tube sizes.

catalogue no	622.01.001
dimensions / weight (mm / kg)	127 x 130 x 160 / 3,5
power (W)	60
voltage (V)	220
frequency (Hz)	50
mixing motion	orbital
orbital diameter (mm)	4
speed range (rpm)	0 - 2500
speed display	scale
run time	continuous / touch operation
protection class	IP 21



Unique counter-balance system creates maximum vortexing while minimizing the noise and excessive vibration.



Various tube holders and adapters can be supplied as optional accessories.



Top plate with 100 mm diameter to be used with various test tube adapters.  
catalogue no: 622.01.101



Universal platform pad for test tubes (<math>\lt; \text{Ø } 99 \text{ mm}</math>) and for various small vessels.  
catalogue no: 622.01.108

## optional tube holders and adapters

Tube adapter for 48 holes for tubes  $\text{Ø } 6 \text{ mm}$  to be used with top plate.  
catalogue no: 622.01.102

Tube adapter for 18 holes for tubes  $\text{Ø } 10 \text{ mm}$  to be used with top plate.  
catalogue no: 622.01.103

Tube adapter for 12 holes for tubes  $\text{Ø } 12 \text{ mm}$  to be used with top plate.  
catalogue no: 622.01.104

Tube adapter for 8 holes for tubes  $\text{Ø } 16 \text{ mm}$  to be used with top plate.  
catalogue no: 622.01.105

Tube adapter for 8 holes for tubes  $\text{Ø } 20 \text{ mm}$  to be used with top plate.  
catalogue no: 622.01.106



## MIXER - "microplate"

CE  
certified

- Offers continuous orbital mixing of microplates for variety of applications in life science.
- Maintenance free brushless DC motor with low noise level enables a smooth start and quick stop.
- Infinitely adjustable speed control for single microplate from 0 to 1500 rpm provides a gentle revolution and optimal mixing.
- Counter-balance system creates maximum vortexing while minimizing the noise and excessive vibration.
- Aluminium cast base avoids unnecessary "walking" and slip resistant silicone feet pads minimizes the vibration enabling an excellent stable operation by a tight hold to the work bench.
- Top plate is easily removable and replaceable with optional adapters that can hold different tube sizes.

<i>catalogue no</i>	<b>613.11.001</b>
<i>dimensions / weight (mm / kg)</i>	260 x 150 x 80 / 3,0
<i>power (W)</i>	20
<i>voltage (V)</i>	220
<i>frequency (Hz)</i>	50
<i>shaking movement</i>	orbital
<i>orbital diameter (mm)</i>	4,5
<i>speed range (rpm)</i>	0 - 1500 (single plate)
<i>speed display</i>	scale
<i>run time</i>	continuous operation
<i>permissible ambient temperature (°C)</i>	5 - 40
<i>permissible relative humidity (%)</i>	80
<i>protection class</i>	IP21
<i>optional accesories</i>	various attachments

## ROTATOR - "horizontal" - "LCD display"

CE  
certified



Supplied without rotisserie tube holders. Please select the required rotisserie tube holder from enclosed options.

► Continuous or time controlled vertical rotational mixing for variety of applications such as general mixing, hybridization and hematology applications.

► Adjustable speed control from 10 to 70 rpm provides a regulated gentle revolution and precise stirring speed.

► LCD panel for simultaneous display for time & speed. Infinitely adjustable time control from 1 to 1199 minutes.

► Reliable and extremely quiet motor guarantees an even distributed efficient mixing for all speeds ranges.

► Rotisserie is easily removable and replaceable with optional adapters that can hold different tube sizes.

► Supplied without tube holders. Please select the required test tube holder from enclosed options.

catalogue no	618.01.001
dimensions / weight (mm / kg)	220 x 510 x 260 / 8,0
motor type	DC motor
power (W)	40
voltage (V)	220
frequency (Hz)	50
speed range (rpm)	10 - 70
speed & temp. display	LCD
tilt angle (°)	0 - 90
time control range (min)	1 - 1199
run time	timer & continuous operation
permissible ambient temperature (°C)	5 - 40
permissible relative humidity (%)	80
protection class	IP 21
optional accesories	various rotisseries



Rotisserie accesory for 1,5 ml centrifuge tubes hold horizontally.



Rotisserie accesory for 15 ml centrifuge tubes hold horizontally.



Rotisserie accesory for 50 ml centrifuge tubes hold horizontally.

catalogue number	tube size	tube quantity
618.01.101	1,5 ml	32 tubes

catalogue number	tube size	tube quantity
618.01.102	15 ml	16 tubes

catalogue number	tube size	tube quantity
618.01.103	50 ml	16 tubes

## ROTATOR - "horizontal & circular" - "W/O display"

CE  
certified



618.11.001



618.12.001

- Economical solution for continuous horizontal mixing of biological samples.
- Compact and space saving design offers multiple advantages.
- Adjustable speed control from 0 to 80 rpm provides a regulated gentle revolution and precise stirring speed.
- Reliable and extremely quiet motor guarantees an even distributed efficient mixing for all speed ranges.
- Supplied complete with the rotisserie attachments.

catalogue no	618.11.001	618.12.001
dimensions / weight (mm / kg)	150 x 530 x 190 / 1,7	300 x 220 x 310 / 2,0
motor type	DC motor	DC motor
power (W)	20	20
voltage (V)	220	220
frequency (Hz)	50	50
speed range (rpm)	0 - 80	0 - 80
tilt angle (°)	90	90
run time	continuous	continuous
protection class	IP21	IP21

## ROTATOR - "tube" - "W/O display"

CE  
certified

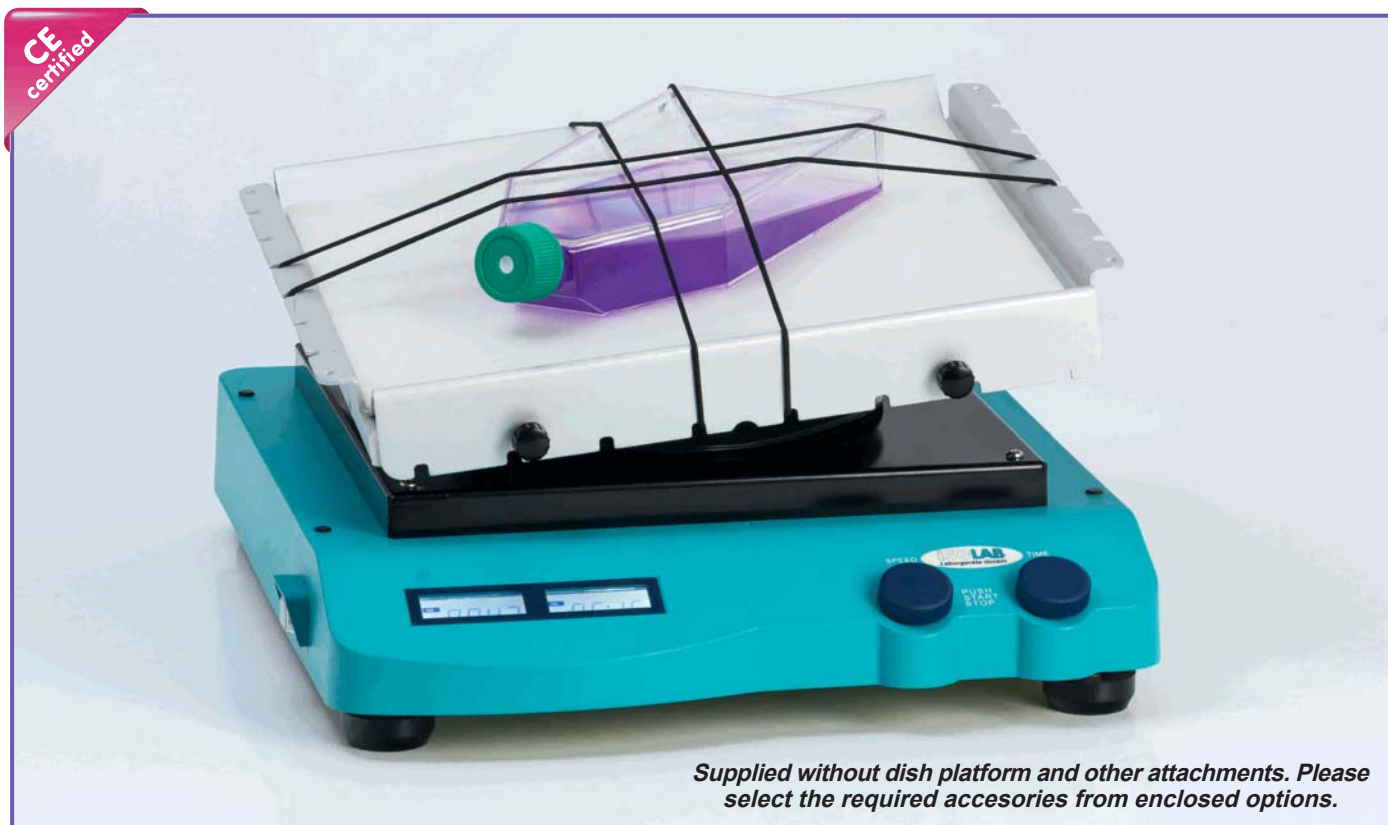


Siliconize rubber rollers ensures perfect holding of tube and guaranties effective rolling.

- Ideal for mixing blood samples, viscous samples, liquid/solid suspensions with continuous operation.
- Provides a gentle but highly efficient rocking and rolling mixing up to 4 kg total weight.
- As the roller mechanism rotates through each complete revolution, the right side of each roller is gently elevated about 24 mm and return back to the original horizontal position. This gentle up/down motion provides a "wave effect" and guarantees a homogeneous mixing.
- Maintenance free DC motor with low noise level enables a smooth start and quick stop.
- Infinitely adjustable speed control from 0 to 70 rpm provides a gentle revolution and optimal mixing.
- Can be used both in cold rooms, incubators and anaerobic and aerobic chambers due to the small foot print and extremely compact design.

catalogue number	operation mode	max. load	speed range	dimensions
620.01.001	continous	4 kg	0 - 70 rpm	450x260x120

## SHAKER - "3D" - "orbital" - "LCD display"



- ▶ Provides a continuous or time controlled 3 dimensional mixing up to 5 kg weight with a 9 degree fixed tilt angle.
- ▶ Maintenance free DC motor with low noise level enables a smooth start and quick stop.
- ▶ Infinitely adjustable speed control from 10 to 70 rpm provides a gentle revolution and optimal mixing.
- ▶ Provides and adjustable time control from 1 to 1199 min.
- ▶ Unique counter-balance system creates maximum shaking while minimizing the noise and excessive vibration.
- ▶ Large LCD panel provides display for set or actual time and speed.
- ▶ Top plate is easily removable and replaceable with optional adapters and accessories.

catalogue no	619.01.001
dimensions / weight (mm / kg)	430 x 360 x 106 / 9,0
motor type	DC motor
power (W)	40
voltage (V)	220
frequency (Hz)	50
max. load capacity (kg)	5
rocking motion	3D orbital
speed range (rpm)	10 - 70
speed & time display	LCD
tilt angle (°)	9
time control range (min)	1 - 1199
run time	timer & continuous operation
permissible ambient temperature (°C)	5 - 40
permissible relative humidity (%)	80
protection class	IP21



*Stainless steel fixing clip adapters for various flasks to be used with clip attachment plate.*

catalogue number	flask volume
619.01.050	50 ml
619.01.100	100 ml
619.01.250	250 ml
619.01.500	500 ml

## accessories for "3D" shaker



## SHAKER - "3D" - "orbital" - "W/O display"



- Provides a continuous 3D mixing up to 3 kg with a 7 degree fixed tilt angle.
- Maintenance free DC motor with low noise level enables a smooth start and quick stop.
- Unique counter-balance system creates maximum shaking while minimizing the noise and excessive vibration.
- Infinitely adjustable speed control from 0 to 80 rpm provides a gentle revolution and optimal mixing.
- Supplied complete with dish attachment plate featured with a non slip mat.

catalogue no	619.02.001
dimensions / weight (mm / kg)	330 x 270 x 130 / 2,7
motor type	DC motor
power (W)	20
voltage (V)	220
frequency (Hz)	50
max. load capacity (kg)	3
rocking motion	3D orbital
speed range (rpm)	0-80
tilt angle (°)	7
run time	continuous operation
protection class	IP21



## METERS - "portable"

- Offers a lightweight and ergonomical solution for testing pH and many other values.
- Waterproof (which can even float on water) housing enables perfect outdoor practice.
- Microprocessor based large LCD display enables fast and accurate measurements.
- Simple to calibrate by one keyboard. Easy replacement of electrode and the type of the electrode would be recognised automatically and shown on the display during insertion.
- Can measure and display (depending on model) pH & mV & temperature & conductivity & TDS & salt in seconds.
- Stores maximum and minimum measured values in memory.
- Offers a switchable temperature selection of °C or °F.
- Featured with a low battery and energy consumption indicator. Automatic switch-off function close the circuit after 10 minutes of non use.



Meters are supplied in a sturdy carry case complete with hand held stripe, pH buffer solutions, cleaning solution, instruction manual and other standard accessories.

### catalogue no: 616.01.001

	pH	mV	Temp
range	-2.00 / 16.00 pH	-1000 / 1000	0 / 90°C
accuracy	± 0.01+1 digit	± 2 + 1 digit	±1 + 1 digit
resolution	0.01 pH	1 mv	0.1°C
compensation	0 / 90°C		

### catalogue no: 616.02.001

	pH	mV	Temp	Conductivity	TDS	Salt
range	-2.00 / 16.00 pH	-1000 / 1000	0 / 90°C	0 / 2000 µs 2.00 / 20.00 ms	0 / 1300 ppm 1.30 / 13.00 ppt	0 / 1000 ppm 1.00 / 12.00 ppt
accuracy	± 0.01+1 digit	± 2 + 1 digit	±1 + 1 digit	± 2 % FS		
resolution	0.01 pH	1 mv	0.1°C	0.1 µS / 0.01 mS	1 ppm / 0.01 ppt	
compensation	0 / 90°C				0 / 50°C	

## METERS - "table top"

- Featured with microprocessor based design and rugged housing with splash proof keyboard.
- Microprocessor based large LCD display enables fast and accurate measurements.
- Easy replacement of electrode and the type of the electrode would be recognised automatically and shown on the display during insertion.
- Can measure and display ( depending on model ) pH & mV & temperature & conductivity & TDS & salt & dissolved oxygen in seconds.
- The large backlight LCD displays pH or mV or conductivity or TDS or salt or dissolved oxygen and temperature simultaneously.
- Offers a switchable temperature selection of °C or °F. Featured with an automatic temperature compensation (ATC).
- Stores maximum and minimum measured values in memory. Memory function can keep up to 150 data.
- Offers output data logging to PC directly via USB.



### catalogue no: 616.11.001

	pH	ORP	Temp
range	-2.00 / 16.00 pH	-1999 / -200 mV -199.9 / 499.9 mV 500 / 2000 mV	0 / 110°C
accuracy	± 0.01+1 digit	± 2 + 1 digit	±1+1 digit
resolution	0.01 pH	0.1 / 1 mv	0.1°C
compensation	ATC: 0 / 100°C	N/A	



Table top meters have a special platform with a magnetic stirrer which enables fast and accurate measurements and results.

Membrane keypad with large backlight LCD displays pH or mV or conductivity or TDS or salt or dissolved oxygen and temperature simultaneously.

### catalogue no: 616.12.001

	pH	ORP	Temp	Conductivity	TDS	Salt	DO	O <sub>2</sub>
range	-2.00 / 16.00 pH	-1999 / -200 mV -199.9 / 499.9 mV 500 / 2000 mV	0 / 110°C	0.0 / 199.9 μS 200 / 1999 μS 2.00 / 19.99 mS 20.0 / 100.0 mS	0.0 / 131.9 ppm 132 / 1319 ppm 1.32 / 13.19 ppt 13.2 / 66.7 ppt	0.0 / 99.9 ppm 100 / 999 ppm 1.00 / 9.99 ppt 10.0 / 50.0 ppt	0 / 20.00 mg/L 0 / 20.00 ppm	0 / 200.0 %
accuracy	± 0.01+1 digit	± 2 + 1 digit	±1+1 digit	± 2 % FS			± 0.2 + 1 digit	± 2 % FS
resolution	0.01 pH	0.1 / 1 mv	0.1°C	0.1 μS / 0.1 mS	0.1 ppm / 0.1 ppt	0.1 ppm / 0.1 ppt	0.01 mg/L	0.10%
compensation	ATC: 0 / 100°C	N/A		ATC: 0 / 60°C			ATC: 0 / 60°C MSC: 0 / 50 ppt MAC: 0 / 20000 ft	

## ACCESORIES - "for pH meters"



Soaking solution - 50 ml  
Catalog No: 616.01.101



Conductivity solution - 50 ml  
Catalog No: 616.01.102



pH electrode  
Catalog No: 616.01.103



ORP electrode  
Catalog No: 616.01.104



Conductivity electrode  
Catalog No: 616.01.105



Conductivity solution - 120 ml  
Catalog No: 616.11.101



Conductivity solution - 120 ml  
Catalog No: 616.11.102



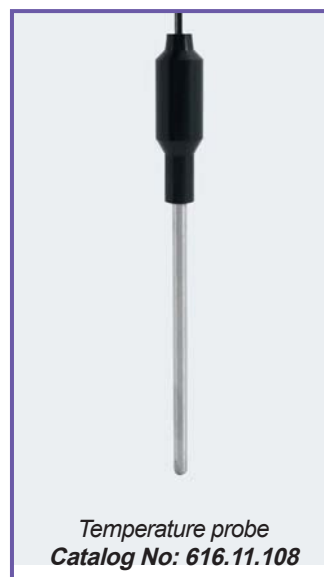
pH electrode  
Catalog No: 616.11.103



Conductivity electrode  
Catalog No: 616.11.104



DO probe  
Catalog No: 616.11.105



Temperature probe  
Catalog No: 616.11.108



DO solution - 50 ml  
Catalog No: 616.11.107



## PH BUFFER SOLUTIONS

- Ready to use pH buffer solutions with colour coding, accuracy +/- 0,01 pH at 20°C.
- Traceable to NIST in unique designed, practical twin-neck dosing bottles !

**Unique and innovative design of the “twin neck” dosing bottles offers multiple advantages:**

- No need for a separate measuring container during calibration.
- No waste of buffer since exact and correct quantity of buffer is dispensed into the calibrating chamber at all times.
- Ideally suited for field work and easy to carry.

**Operation is simple, fast and easy;**

- Open safety lock of the integrated calibration chamber.
- Fill calibration chamber from buffer reservoir by pressing the bottle gently.
- Calibrate pH electrode then discard used buffer solution. Bottle is now ready for the following use.



catalogue number	pH range	colour	volume	quantity in pack
502.04.250	pH 4.00	red	250 ml	1 piece
502.04.500	pH 4.00	red	500 ml	1 piece
502.04.901	pH 4.00	red	1000 ml	1 piece
502.07.250	pH 7.00	yellow	250 ml	1 piece
502.07.500	pH 7.00	yellow	500 ml	1 piece
502.07.901	pH 7.00	yellow	1000 ml	1 piece
502.10.250	pH 10.00	blue	250 ml	1 piece
502.10.500	pH 10.00	blue	500 ml	1 piece
502.10.901	pH 10.00	blue	1000 ml	1 piece



## HEATING MANTLES - "without stirrer"

CE  
certified

NEW



- Designed heating and boiling liquids in various size of round bottom flasks from 100 ml to 10.000 ml.
- Proportional heater control with excellent repeatability enables a temperature operating range from ambient +10°C to 450°C.
- Heating element is made of flexible heat-resistant glass yarn which performs a maximum temperature of 450°C.
- Flexible heating element absorbs chocks, minimizing the risk of flask breakage and guarantees uniform heat distribution.
- Outer casing is manufactured from easy to clean powder coated steel.
- Glass fibre outer insulation with excellent ventilation slots keeps the outer casing cool at all times.
- Featured with non-skid rubber feet enabling perfect stability during operation.
- Control panel has separate indicator lamps for power and heat functions.



*Heating element is made of highly flexible heat-resistant glass yarn which performs at maximum 450°C.*

catalogue no	608.11.100	608.11.250	608.11.500	608.11.901	608.11.902	608.11.904	608.11.906	608.11.910
Voltage (V)	220							
Frequency (Hz)	50							
Power (W)	100	150	250	350	450	700	900	1200
Max. Heating (°C)	450							
Capacity (ml)	100	250	500	1000	2000	4000	6000	10000
Permissible Ambient Temperature (°C)	5 - 40							
Permissible Relative Humidity (%)	80							

## HEATING MANTLES - "with stirrer"

- Same technical specification as non-stirring heating mantles. Designed to control both temperature and stirring speed independently.
- Offers a temperature operating range of ambient +10°C to 450°C and a stirring speed up to 1.400 rpm.
- Stirring operation is simply achieved by placing the correct style and size magnetic stirring bar in to the flask and then ramping the stirring speed slowly starting from minimum level.
- The control panel has a separate indicator lights for heater and stirrer functions.



*Provides a powerful stirring. Stirring operation is simply achieved by placing the correct style and size magnetic stirring bar in to the flask and then ramping the stirring speed slowly starting from minimum level.*



catalogue no	product description
608.14.101	support and clamp set for 4 row mantle
608.16.102	support and clamp set for 6 row mantle

catalogue no	608.12.250	608.12.500	608.12.901
voltage (V)	220		
frequency (Hz)	50		
power (W)	150	250	350
max. heating (°C)	450		
capacity (ml)	250	500	1000
stirring range (rpm)	0 - 1400		
permissible ambient temperature (°C)	5 - 40		
permissible relative humidity (%)	80		

## HEATING MANTLES - "multi row"

- Offers a practical solution where more than one mantle is required. Same technical specifications as heating mantles without stirring.
- Support rods and clamps should be ordered separately.

catalogue no	capacity	row number	power
608.14.250	250 ml	4 row	4 x 150 W
608.14.500	500 ml	4 row	4 x 250 W
608.14.901	1000 ml	4 row	4 x 350 W
608.16.250	250 ml	6 row	6 x 150 W
608.16.500	500 ml	6 row	6 x 250 W
608.16.901	1000 ml	6 row	6 x 350 W



## CENTRIFUGE - "mini"

- Compact and easy to use personal centrifuge for quick spin downs, micro-filter cell separations, and HPLC samples.
- Durable transparent and UV resistant polycarbonate lid and ABS resin body.
- Starts and reaches a max speed of 7.000 rpm with max 2680 x g RCF in seconds with a quiet operation less than 45 dB noise level.
- Dual door interlock system for twice safety factor.
- Electronic brake for immediate stop when lid opens for user safety.
- Stable running and high accuracy of speed.
- Rotor is seated on a tapered shaft which enables tool-free, fast and easy exchange.
- Supplied with two rotors and adapters to accommodate 0,5 ml and 1,5 ml and 2 ml tubes and also PCR tubes.



8 cavity rotor designed for 1,5 & 2.0 ml tubes directly.



16 cavity rotor designed for 0,2 ml PCR tubes which can also hold 2 x 8 PCR strips



tube adapters of 0,2 ml & 0,5 ml tubes to be used with 8 cavity rotor.

**Easy to start:** Close the lid, the rotor starts and instantly reaches 7.000 rpm.



**Easy to stop:** Open the lid, the electronic brake immediately stops the rotor.



catalogue no	603.01.001
dimensions / weight (mm / kg)	150 x 150 x 117 / 0,5
voltage (V)	220
frequency (Hz)	50
maximum speed (rpm)	7000
maximum RCF (xg)	2680
noise level (dB)	< 45
run time	continuous operation
rotor capacity	0,2 / 0,5 / 1,5 / 2,0 ml x 8 0,2 ml x 16 PCR strips 0,2 ml x 2 PCR 8 strips
standard accesories	16 cavity & 8 cavity rotors & adapters

## CENTRIFUGE - "high speed"

- Ideal centrifuge for fast spins for higher RCF requirement, for PCR protocols, for microfilter cell separations, clinical applications and HPLC protocols.
- Explosion proof and marked as CE, cTUVus, and FCC. MCA test according to IEC/EN61010-2-20.
- Brushless DC motor accelerates the rotor to the set speed with low vibration and also with a quiet operation less than 54 dB noise level.
- User friendly large LCD display enables easy setting and reading of the functional parameters.
- Both RPM and RCF can be set and displayed. The parameters can be modified after the set speed is reached.
- Starts and reaches a maximum speed of 15.000 rpm with max 15.100 x g RCF in seconds. Speed can be set with an accuracy of +/- 20 rpm.
- Metal casing with low gravity, provides stable and reliable running at maximum speed.
- Timer can be set from 30 seconds to 99 minutes or continuous running. Timer starts once the target speed is reached for more accurate operation time.
- Short spin function is used for quick spins by pressing and holding the "pulse" key.
- The unique design guarantees stable running and high accuracy of speed.
- Featured with door interlock system for safety.
- Electronic brake immediately stops when lid opens for user safety. Lid is released automatically when the rotor stops.
- Rotor is sealed on a tapered shaft which enables tool-free, fast and easy change. Supplied with a 12 cavity rotor designed for 0,2 & 0,5 & 1,5 & 2.0 ml tubes directly.



User friendly large LCD display enables easy setting and reading of the functional parameters. Both RPM and RCF can be set and displayed.



High strength plastic rotor with excellent balance offers a stable operation. 12 cavity rotor designed for 0,2 & 0,5 & 1,5 & 2.0 ml tubes directly.

catalogue no	603.02.001
dimensions / weight (mm / kg)	255 x 245 x 140 / 6,0
voltage (V)	220
frequency (Hz)	50
maximum speed (rpm)	15000
maximum RCF (xg)	15100
speed accuracy (rpm)	± 20
noise level (dB)	< 54
run time	timer & continuous operation
rotor capacity	0,2 / 0,5 / 1,5 / 2,0 ml x 12
standard accesories	12 cavity rotors
safety devices	door interlock over speed detection over temperature detection automatic internal diagnosis

## CENTRIFUGE - "micro" - "high speed" - "without &amp; with refrigeration"

CE  
certified

NEW



➤ Ideal centrifuge for fast spins for higher RCF requirement, for PCR protocols, for microfilter cell separations, clinical applications and HPLC protocols.

➤ Brushless DC motor accelerates the rotor to the set speed with low vibration and also with a quiet operation less than 58 dB noise level.

➤ User friendly large LCD display enables easy setting and reading of the functional parameters.

➤ Both RPM and RCF can be set and displayed. The parameters can be modified after the set speed is reached.

➤ Starts and reaches a maximum speed of 15.000 rpm with max 21.380 x g RCF in seconds. Speed can be set with an accuracy of +/- 20 rpm.

➤ Metal casing with low gravity, provides stable running at maximum speed. A powerful and efficient cooling system based on multi-flow air cooling principle minimizes rotor heating with a ratio of 10°C per one hour working period.

➤ Timer can be set from 30 seconds to 99 minutes or continuous running. Timer starts once the target speed is reached for more accurate operation time.

➤ Short spin function is used for quick spins by pressing and holding the "pulse" key.

➤ Featured with a dual door interlock system for twice safety. Electronic brake immediately stops when lid opens for user safety. Lid is released automatically when the rotor stops (excluding refrigerated model).

➤ The unique design guarantees stable running and high accuracy of speed.

**Centrifuges are supplied without rotors.  
Rotors should be ordered separately.**

*Rotors are manufactured from military grade aluminum alloy with high mechanical strength for precise running and highest level of safety.*

*Rotors can be fully autoclaved with unlimited service time*

*Unique biosafe rotor/anti-sample overflow system stops sample leakage during centrifugation and prevents microbial contamination.*

*Rubber seals fitted to the rotor guarantee bio-seal condition. The rotor is bio-safe once the tubes are inserted and the lid is closed.*



24 cavity rotor for 1,5 / 2,0 ml  
for 0,2 ml for 0,5 ml  
catalogue no: 603.03.101



4 cavity rotor for 0,2 ml / PCR 8  
catalogue no: 603.03.102

## CENTRIFUGE - "micro" - "high speed" - "with refrigeration"



Dual door interlock system for twice safety. Electronic brake for immediate stops when lid opens for user safety.

The lid remains closed after run time in order to keep the chamber temperature stable (refrigerated model).

Automatic release of the lid when the rotor stops to save processing time.



Unique pre-cooling system provides cool-down prior to operation and keeps the chamber at the pre-set temperature.

Just after 7 minutes the powerful cooling system quickly cools down chamber to 2°C and keeps the samples temperature under 2°C even at maximum speed. Sound alert adds additional safety factor to the precise temperature stability in the chamber.



User friendly large LCD display shows all informations including accumulated running time and last running parameters. Offers full-digit display and easy identification of parameters.

Unique temperature display protects sensitive samples. RPM or G-force can be set and displayed. Parameters can be modified after the set speed is achieved.

catalogue no	603.03.001 (W/O refrigeration)	603.04.001 (with refrigeration)
dimensions / weight (mm / kg)	280x364x266 / 12	338x580x324 / 30
voltage (V)	220	220
frequency (Hz)	50	50
maximum speed (rpm)	15000	15000
maximum RCF (xg)	21380	21380
speed accuracy (rpm)	± 20	± 20
noise level (dB)	< 58	< 56
run time	30 sec. - 99 min. or continuous	30 sec. - 99 min. or continuous
acceleration / braking time (sec)	25 s ↑ 25 s ↓	25 s ↑ 25 s ↓
temperature range	N/A	(-20°C) to (+40°C)
safety devices	dual door interlock over - speed detection over temperature detection automatic internal diagnostic	dual door interlock over - speed detection over temperature detection automatic internal diagnostic
additional features	speed / RCF switch short time run function sound alert function	speed / RCF switch short time run function sound alert function

## CENTRIFUGE - "clinical"



catalogue no	603.05.001
dimensions / weight (mm / kg)	255 x 245 x 140 / 6,0
voltage (V)	220
frequency (Hz)	50
maximum speed (rpm)	4500
speed control (rpm)	increment of 100
maximum RCF (xg)	2490
RCF control (xg)	increment of 100
speed accuracy (rpm)	± 20
noise level (dB)	< 56
run time	30 sec. - 99 min. or continuous
acceleration / braking time (sec)	20 s ↑ 20 s ↓
safety devices	door interlock over - speed detection automatic internal diagnosis
additional features	sound alert function speed / RCF swich short time run function



Door interlock system for extra safety. Electronic brake for immediate stops when lid opens for user safety. Automatic release of the lid when the rotor stops to save processing time.

- Ideal centrifuge for fast separation of serum, plasma, urea, blood samples and other routine applications in medical, research and chemical laboratories.
- Explosion proof and marked as CE, cTUVus, and FCC. MCA test according to IEC/EN61010-2-20.
- Brushless DC motor accelerates the rotor to the set speed with low vibration and also with a quiet operation less than 56 dB noise level.
- User friendly large LCD display enables easy setting and reading of the functional parameters.
- Both RPM and RCF can be set and displayed. The parameters can be modified after the set speed is reached.
- Starts and reaches a maximum speed of 4.500 rpm with max 2.490 x g RCF in seconds. Speed can be set with an accuracy of +/- 20 rpm.
- Metal casing with low gravity, provides stable and reliable running at maximum speed.
- Timer can be set from 30 seconds to 99 minutes or continuous running. Timer starts once the target speed is reached for more accurate operation time.
- Short spin function is used for quick spins by pressing and holding the "pulse" key.
- Featured with a door interlock system for safety. Electronic brake immediately stops when lid opens for user safety. Lid is released automatically when the rotor stops.
- The unique design guarantees stable running and high accuracy of speed. High strength plastic rotor and excellent balance technology to guarantee a quiet and stable operation.
- Delivered complete with a 12 cavity angled rotor and suitable adaptors to be used with 15 ml conical tubes and all kinds of blood collection tubes.



High strength plastic rotor and excellent balance technology to guarantee a quiet and stable operation. Delivered complete with a 12 cavity angled rotor and suitable adaptors to be used with 15 ml conical tubes and all kinds of blood collection tubes.



User friendly large LCD display shows all informations including accumulated running time and last running parameters. Both RPM and RCF can be set and displayed. The parameters can be modified after the set speed is reached.



## CENTRIFUGE - "hematocrit"

➤ Offers ideal solutions for determination of erythrocytes, determination of the bilirubin content and extraction of DNA and RNA.

➤ Explosion proof and marked as CE, cTUVus, and FCC. MCA test according to IEC/EN61010-2-20.

➤ Passed EN61010-2-101:2002 particular requirements for in vitro diagnostic (IVD) medical equipment.

➤ Brushless DC motor accelerates the rotor to the set speed with low vibration and with a quiet operation less than 60 dB noise level.

➤ User friendly large LCD display shows all informations including accumulated running time and last running parameters.

➤ Also offers full-digit display and easy identification of parameters RPM or G-force can be set and displayed.

➤ Starts and reaches a max speed of 14.000 rpm with max 18.620 x g RCF in seconds. Speed can be set with an accuracy of +/- 30 rpm.

➤ Metal casing with low gravity, provides stable and reliable running at maximum speed.

➤ Timer can be set from 30 seconds to 99 minutes or continuous running. Timer starts once the target speed is reached for more accurate operation time.

➤ Short spin function is used for quick spins by pressing and holding the "pulse" key.

➤ The unique design with stable running and high accuracy of speed.

➤ Door interlock system for extra safety. Electronic brake for immediate stops when lid opens for user safety.

➤ Automatic release of the lid when the rotor stops. Supplied without rotors. Rotors should be ordered separately.

**High strength plastic rotor and excellent balance technology to guarantee a quiet and stable operation.**

24 cavity rotor for capillary tubes.

catalogue no: 603.06.101

24 cavity rotor for 2 ml/ 1,5 ml, 0,2 ml and 0,5 ml tubes and related tube inserts.

catalogue no: 603.06.102



catalogue no	603.06.001
dimensions / weight (mm / kg)	280x364x266 / 10
voltage (V)	220
frequency (Hz)	50
maximum speed (rpm)	14000
maximum RCF (xg)	18620
speed accuracy (rpm)	± 30
noise level (dB)	< 60
run time	30 sec. - 99 min. or continuous
acceleration / braking time (sec)	20 s ↑ 20 s ↓
safety devices	door interlock over - speed detection over - temperature detection automatic internal diagnosis automatic rotor identification
additional features	sound alert function speed / RCF swich short time run function



User friendly large LCD display shows all informations including accumulated running time and last running parameters.

Offers full-digit display and easy identification of parameters RPM or G-force can be set and displayed.

Parameters can be modified after the set speed is achieved. Quick spins are possible by pressing and holding PULSE key.

## PUMPS - "vacuum &amp; pressure"

CE  
certified

➤ Ideal pumps for all kinds of filtration applications and also for air sampling, suspended solid tests, vacuum distillation, gel drying, chromatography applications etc.

➤ Can be used simultaneously both as a vacuum pump and as a pressure pump for pressure supply.

➤ Piston driven, belt free motor does not need any oil or lubricant and offers continuous oil free pumping.

➤ Unique design of the pump guarantees maintenance free and long life cycle with minimum noise level less than 50dB.

➤ Filter barrier in the air exchange compartment of the pump enables clean air cycling at all times.

➤ Vacuum and pressure indicator at model 622.12.001 shows operational vacuum and pressure values at all times.

➤ Thermal protection system for overheating guarantees automatic stop in case of over heat during process.



*Vacuum and pressure indicator at model 622.12.001 shows operational vacuum and pressure values.*



*Siliconized rubber feet strongly hold the bench surface avoiding shaking and "walking" during operation.*

catalogue number	maximum flow rate	maximum vacuum	maximum pressure	tube thread	motor power	total weight	vacuum & pressure indicator	dimensions
622.11.001	15 L / min.	250 mbar	30 Psi	6 mm	75 watt	4 kg	non	195x100x156
622.12.001	30 L / min.	200 mbar	30 Psi	6 mm	160 watt	8 kg	yes	210x170x250



## ROTARY EVAPORATOR - "vertical"

- Featured with motorised quick-action lift that automatically raises the evaporation flask from the bath in case of any power failure.
- Chemical-resistant double PTFE system and patented pressure spring guarantees an excellent sealing during operation.
- Easy to read large digital LCD screen displays heating temperature, rotation speed, time and other parameters.
- Patented condenser design with 1.500 cm<sup>2</sup> effective cooling capacity guarantees excellent cooling effect.
- Unique motor action enabling selective rotation of the evaporation flask as clockwise or anti-clockwise movement guarantees effective results.
- Featured with a adjustable final position recognition system for protection of the glass parts from breakage.
- Timer function with time setting range 1 - 999 minute enables precise control of the operation.
- Featured with a operation control panel that allows remote control of the system and also transfer of all parameters via USB.
- Supplied with a large, stainless steel 5 L water-oil bath with precise temperature control from ambient to 180°C.
- An automatic over-heat protection system automatically stops heating if the bath temperature exceeds 220°C.



Integrated operating panel for convenient control of the main unit and heating bath.

Unique design of the detachable operating panel enables remote control option and easy use of the panel outside the fume hood.



Supplied with a large, stainless steel 5 L water-oil bath with precise temperature control from ambient to 180°C.

An automatic over-heat protection system automatically stops heating if the bath temperature exceeds 220°C.

catalogue no	605.01.001
dimensions / weight (mm / kg)	465 x 457 x 563 / 15,0
power (W)	1400
voltage (V)	220
frequency (Hz)	50
heating range (°C)	ambient +5 to 180
heating accuracy (°C)	± 1,0
speed range (rpm)	20 - 280
speed & temp. & time display	LCD
time setting range (min)	1 - 999
rotation direction	reversible
protection class	IP 20
USB interface	yes



Unique push-off device to release the flask and protect it from breaking.

Optimal interval operation offers dual action in clockwise and counter clockwise for the drying process.



## BATHS - "water"

- Water tank is manufactured from cavitation-proof, seamless and corrosion resistant stainless steel.
- Alarm and timer functions can be automatically controlled by membrane keypad with digital LED panel.
- Integrated heater design provides homogenous heat distribution rate and enables rapid heating up.
- Integrated PID temperature technology enables excellent heating control from ambient +5°C to 99°C with accuracy of +/- 0,1°C.
- Integrated overheat protection with alarm circuit automatically turns off heating in case of overheating.
- Automatic timer with audial and visual alarm functions enables selective operation as "continuous" mode or 99 minutes and 99 hours.
- Perforated bottom tray protects heating element and temperature sensor.
- Delivered complete with flat type stainless steel lid.



Seamless, robust cavitation-proof, stainless steel water tank. Perforated bottom tray protects heating element and temperature sensor. Baths are supplied with stainless steel flat lid.

catalogue no	602.01.001	602.02.001
outer dimensions (mm)	327 x 265 x 280	537 x 327 x 280
tank dimensions (mm)	300 x 240 x 150	500 x 295 x 150
tank volume (L)	11	22
heating output (W)	700	1400
heating range (°C)	ambient + 5 to 99	ambient + 5 to 99
heating control	PID technology	PID technology
heating accuracy (°C)	± 0,1	± 0,1
tank temp. uniformity	± 1	± 1
voltage (V)	220	220
frequency (Hz)	50	50
time & temp. display	LED	LED
time control	99 min. - 99 hour	99 min. - 99 hour
over heat protection	yes	yes
Standard Accesories	st. steel lid	st. steel lid



Membrane keypad with digital LED panel with timer, alarm and auto-tuning functions. Timer with delayed on/off function can be set selectively either to 99 min. 59 sec. or 99 hour 59 min.

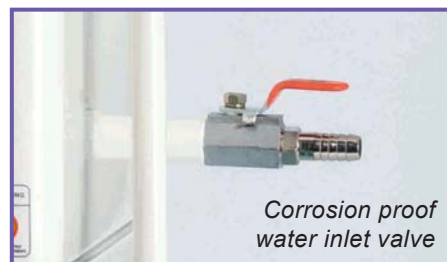


## WATER STILLS - "basic"

- Offers space saving, and practical design with economical energy and water consumption.
- Supplies laboratory grade, high purity water free off pyrogen.
- Double walled interior chamber is manufactured from cavitation-proof, seamless, corrosion resistant stainless steel.
- Interior chamber should always be kept clean for consistent supply of pure water.
- Easily removable condenser unit enables fast and efficient cleaning of the chamber.
- Integrated low water protection system turns off heating in case lack of water.
- Integrated over temperature protection system turns off heating in case of a sudden increase of heat.
- Automatic circuit breakers ensure user safety in case of over temperature and over current problems.



Stainless steel double walled chamber. Easily removable condenser unit for fast and efficient cleaning of the chamber.



Corrosion proof water inlet valve

catalogue no	623.01.004	623.01.008
dimensions (mm)	380 x 290 x 580	380 x 365 x 640
voltage (V)	220	220
frequency (Hz)	50	50
heating power (W)	3000	6000
output capacity (L/hr)	3,5	7,5
cooling water usage (L/hr)	30 - 50	60 - 80
controler	hydraulic thermostat	
safety devices	over temperature breaker water level switch	

## WATER STILLS - "automatic"

- Offers many advantages with fully automatic operation, with space saving unique design with economical energy and water consumption.
- Supplies laboratory grade, high purity water free off pyrogen.
- Double walled interior chamber is manufactured from cavitation-proof, corrosion resistant stainless steel.
- Interior chamber should always be kept clean for consistent output.
- Easily removable condenser unit enables fast and efficient cleaning of the chamber.
- Pre-filter system prevents undesired impurities and built-in large storage tank stores the produced water.
- Low water protection system turns off heating in case of low water inlet or lack of water supplied.
- Integrated over temperature protection system turns off heating in case of a sudden increase of heat.



### fully automatic operation system

- Sensing water level in boiling chamber to prevent from over heating.
- Sensing water supply to control distillation process.
- Sensing water level in reservoir to start and stop distillation .

## PRE - FILTER

- Pre-filter system prevents undesired impurities and built-in large storage tank stores the produced water.
- Filter part in the prefilter system should be controlled often and should be immediately replaced in case of dirt.

catalogue number	pack quantity
623.11.110	1 piece

catalogue no	623.02.004	623.02.008
dimensions (mm)	680 x 340 x 530	760 x 340 x 610
voltage (V)	220	220
frequency (Hz)	50	50
heating power (W)	3000	6000
output capacity (L/hr)	4	8
cooling water usage (L/hr)	30 - 50	60 - 80
controller	hydraulic thermostat	
safety devices	over temperature breaker water level switch water float level sensor	



## DRYING OVENS

- Offers ideal conditions for drying, and sterilization for all laboratory applications.
- Integrated heater design provides homogenous heat distribution rate and enables rapid heating up.
- Gravity flow natural convection guarantees homogenous and smooth heating.
- Fully insulated chamber and door interior are manufactured from seamless stainless steel.
- Heating and timer, functions can be automatically controlled by membrane keypad with digital LED panel.
- PID temperature technology enables excellent heating control from ambient +5°C to 250°C with accuracy of 1°C.
- Over heat protection device automatically turns off heating in case of over heating.
- Automatic timer with aural and visual alarm functions enables selective operation as "continuous" mode or 99 minutes and 99 hours.
- Automatic circuit breakers ensure user safety in case of over current problems.
- Delivered complete with adjustable shelves.

catalogue no	615.11.056	615.11.100
external dimensions (mm)	545 x 500 x 770	645 x 550 x 870
internal dimensions (mm)	400 x 350 x 400	500 x 400 x 500
working volume (L)	56	100
voltage (V)	220	220
frequency (Hz)	50	50
heating (kW)	1,5	2,0
temperature range (°C)	ambient + 15 to 250	ambient + 15 to 250
temperature set accuracy (°C)	± 1,0	± 1,0
temperature uniformity (°C)	± 3,0 at 120°C	± 3,0 at 120°C
convection	natural convection	
controler	PID multi functional, alarm, auto tuning	
timer	0 - 99 minute, 99 hour - continuous	
interior material	stainless steel	
exterior material	epoxy powder coated steel	
shelves	adjustable, 2 or 3 shelves	
insulation	glass wool	
safety devices	over heat protection over current protection leakage breaker	





## INCUBATORS

- Offers ideal conditions for incubation for all general laboratory applications.
- Air circulation by a silent motor forced convection guarantees more accurate and uniform temperature control.
- Tempered safety glass inner door enables easy sample viewing without chamber been effected by external factors.
- Integrated heater design provides homogenous heat distribution rate and enables rapid heating up.
- Insulated chamber and door interior are manufactured from seamless stainless steel.
- Heating and timer, functions can be automatically controlled by membrane keypad with digital LED panel.
- Integrated PID temperature technology enables excellent heating control from ambient +5°C to 70°C with set accuracy 0.1°C.
- Integrated overheat protection with alarm circuit automatically turns off heating in case of overheating.
- Automatic timer with audial and visual alarm functions enables selective operation as "continuous" mode or 99 hours 59 minutes.
- Automatic circuit breakers ensure user safety in case of over current problems.
- Delivered complete with adjustable shelves.



catalogue no	609.01.056	609.01.100
external dimensions (mm)	520 x 470 x 680	580 x 540 x 975
internal dimensions (mm)	400 x 350 x 400	400 x 400 x 600
working volume (L)	56	100
voltage (V)	220	220
frequency (Hz)	50	50
heating (W)	150	250
temperature range (°C)	ambient + 5 to 70	ambient + 5 to 70
temperature set accuracy (°C)	± 0,1	± 0,1
temperature uniformity (°C)	± 0,5 at 37°C	± 0,5 at 37°C
convection	forced convection, air circulation	
controler	PID multi functional, alarm, auto tuning	
timer	99 hour, 59 minute - continuous	
interior material	stainless steel	
exterior material	epoxy powder coated steel	
shelves	adjustable, 2 or 3 shelves	
door (inner - outer)	tempered safety glass - silicone packing double door	
safety devices	over heat protection over current breaker	



## MUFFLE FURNACE

- Offers ideal conditions for ashing, heat treatment, preheating, melting and quality control.
- Integrated heater design and efficient insulation provides homogenous heat distribution and enables rapid heating up.
- Heating elements are protected by quartz tubes for higher life span.
- Chamber and door interior plated with refractory bricks of highest quality. Maximized insulation to ensure minimum energy consumption.
- Excellent insulation also eliminates heat transfer and guarantees risk free "safe touch" during and after run cycle.
- Heating parameters and other functions can be automatically controlled and observed by membrane keypad with digital LCD panel.
- Ergonomic and reliable PID control unit is conveniently placed above the body for better reach and inspection.
- Integrated PID control unit offers a user friendly menu and interface with 4-line wide screen display.
- Featured with evacuation chimney powered by a fan.
- Safety features such as sound warning in case of errors and automatic cut off system in case of overheat.

catalogue no	606.01.005	606.01.007	606.01.010
external dimensions (mm)	430 x 600 x 610	530 x 580 x 600	550 x 620 x 610
furnace dimensions (mm)	150 x 230 x 150	200 x 230 x 160	250 x 230 x 180
furnace volume (L)	5	7	10
voltage (V)	220	220	220
frequency (Hz)	50	50	50
heating (kW)	2,0	2,5	2,8
temperature range (°C)	90 to 1100	90 to 1100	90 to 1100
temperature set accuracy (°C)	1	1	1
temperature uniformity (°C)	± 5	± 5	± 5
controler	PID multi functional, alarm, auto tuning		
interior material	refractory bricks		
exterior material	epoxy powder coated steel		
insulation	glass wool		
safety devices	over heat protection over current protection sound alert function		



### PID control unit offers many advantages

- User friendly menu with 4 line wide display.
- 2 programme memories and direct or 2 step heating programme
- Control option of heating rate 3 - 20°C / minute with +/- 1°C temperature accuracy.
- Digital total heating time counter and average working temperature indicator.
- Opportunity of keeping programmes in memory.

## AUTOCLAVE

- Offers ideal conditions for sterilization and autoclaving at all laboratories.
- Featured with 3 step vacuum technology providing up to -0,9 Bar vacuum which guarantees less than 0,2% residual humidity after run cycle.
- Complete and excellent sterilization is guaranteed by fully automatical run.
- Unique jet-type steam generator and an independent vacuum generator ensures excellent sterilization.
- Featured with advanced auto-test system and steam penetration test system.
- Sterilization chamber is manufactured from single piece stainless steel of 2,5 mm thickness.
- Sterilization parameters and other functions can be automatically controlled and observed by membrane keypad with digital LCD panel.
- Double lock door system ensures highest safety level during operation run cycle.
- Alarm function for waste water tank avoiding waste water to enter into the sterilization chamber.
- Featured with an integrated mini printer for recording and printing sterilization informations.

*Double lock door system ensures highest safety level during operation run cycle.*

*Sterilization chamber is manufactured from stainless steel of 2,5 mm thickness.*



*Sterilization parameters and all other functions can be automatically controlled and observed by membrane keypad with digital LCD panel.*



*Featured with an integrated mini printer for recording and printing all sterilization informations.*

catalogue no	601.01.023
external dimensions (mm)	740 x 550 x 500
chamber dimensions (mm)	245 Ø x 465
chamber volume (L)	23
voltage (V)	220
frequency (Hz)	50
power (kW)	2,0
sterilizing (pressure / temp.)	100 - 120 KPa / 121°C 200 - 220 KPa / 134°C
water tank capacity (lt)	1,5
water consumption / cycle (lt)	0,4
interior material	stainless steel
exterior material	epoxy powder coated steel
safety devices	over heat protection over pressure protection leakage breaker safety valve double lock door system waste water alarm



### REFRACTOMETER - "digital"

- ▶ With a wide measuring range offers a precise measurement of refractive index and % Brix values.
- ▶ Portable, light weight, compact design guarantees fast and easy measurements also eliminates the reading errors.
- ▶ Operation is extremely simple: only with a few drops of sample guarantees fast and reliable measurements.
- ▶ Zero point check and calibration can be done easily with distilled water.
- ▶ LED light source around the prism warns the user during the calibration or measurement process.
- ▶ Simple and easy to change measuring from % Brix to refractive index.

catalogue number	measuring range % Brix	measuring range refractive index	division Brix / RI	ATC
618.32.001	0 - 95	1,3330 - 1,5400	0,1 / 0,0001	yes



### REFRACTOMETER - "hand"

- ▶ A practical and quick alternative for measurement of concentrations of liquids.
- ▶ Portable and hand-held design enables both laboratory and field applications.
- ▶ With focussing eyepiece with soft rubber eyecups for reducing straylight ingress and also avoiding scratches at spectacle lenses.
- ▶ Calibration is easily done by turning the adjustment screw. Supplied with a plastic box and with a calibration screwdriver.

catalogue number	measuring range % Brix	division %	ATC
618.21.001	0 - 10	0,1	yes
618.22.001	0 - 18	0,1	yes
618.23.001	0 - 32	0,2	yes
618.24.001	0 - 80	0,5	no
618.25.001	0 - 90	0,5	no

### REFRACTOMETER - "ABBE"

- ▶ Large optical prism enables excellent boundary line brightness and contrast during measurements.
- ▶ Adjustable wide field eyepiece with 10X magnification, enables bright and clear images. Super contrast, optical system with 30X magnification guarantees sharp images.
- ▶ Equipped with movable, hinged covers to keep light out. Offers connection possibility to a thermostatic circulator.
- ▶ Featured with a digital thermometer with a large LCD display. Temperature reading is selectable as °C or °F with a precision of 0,1°C or 0,1°F.

catalogue no	618.41.001
external dimensions (mm)	270 x 180 x 370
refractive index (nD)	1,3000 - 1,7000
dissolved solid Brix (%)	0 - 95
accuracy	± 0,0002
water inlet / outlet Ø (mm)	10
digital thermometer	LCD display - 34 x 14 mm
temperature range (°C)	0 - 70
temperature uniformity (°C)	± 0,1



- ▶ Ideal for precise measurement and determination of refractive index and % Brix values of liquid, solid, semi-solid and powder samples. Simple handling and easy to use. Calibration can be done easily with supplied calibration prism.



### MICROSCOPE - "binocular"

- ▶ Ideal for academic, research and clinical use in biology, pathology, genetics and other related applications.
- ▶ Wide field eyepiece with 10X magnification power, 20 mm lens diameter enables bright and clear images.
- ▶ Super contrast, 4X, 10X, 40X and 100X semi-plan achromatic objectives guarantees net and sharp images. NA 1,25 abbe condenser with iris diaphragm and filter holder guarantees ideal contrast.
- ▶ 140 x 140 mm square mechanical stage with 75 mm left-right and 50 mm back-forward movement.
- ▶ Coarse and fine adjustment with 20 mm upper limit safety. Enables 37,7 mm coarse stroke and 0,2 mm fine stroke per each rotation.
- ▶ Supplied with dust cover, immersion oil and green filter. Power supply 220 V.

catalogue no

613.21.001



Binocular head inclined at 30° interpupillary distance adjustable 55 mm - 75 mm.

55 - 75 mm.

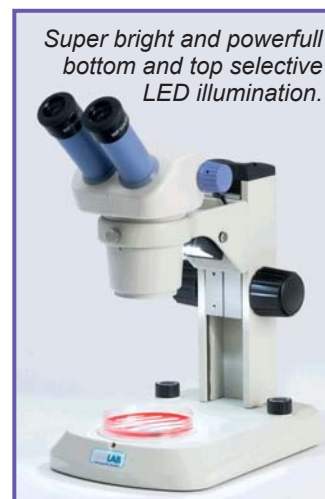


### MICROSCOPE - "stereo"

- ▶ Offers ergonomic design, sharp image quality, high resolution and wide field of viewing for academic, industrial and clinical applications.
- ▶ Binocular head inclined at 45° with interpupillary distance adjustable 55 mm - 75 mm.
- ▶ Diopter adjustable wide field eyepiece with 10X magnification power, 20 mm lens diameter enables bright and clear images.
- ▶ Adjustable objective with 1X to 4,5X magnification power provides a wide and clear viewing field of 20 mm diameter with zoom ratio of 1:4,5.
- ▶ Easily replacable, super bright, powerfull bottom and top selective LED illumination with power supply 220 V.
- ▶ Supplied with dust cover, and circular examination plate with one side black and other side white.

catalogue no

613.22.001



Binocular head inclined at 45° interpupillary distance adjustable 55 mm - 75 mm.

55 - 75 mm.



<b>ADAPTERS</b>		<b>BOSSHEADS</b>		<b>BURETTES</b>	
2 neck - angled	29	for frame work	94	automatic	9
2 neck - parallel	29	heavy duty	94	bellow	12
connectors - with stopcock	29	standard use	94	bottles	12
delivery	28			brushes for burettes	128
delivery - straight	29	<b>BOTTLES</b>		clamps	12
distillation	26	aluminium	70	digital burettes	21
distillation	28	aspirator bottle - PP	74	schilling	10
distillation - claisen head	28	bottle basket - ABS	73	straight - class AS	11
expansion	25	burette bottles	12		
PTFE - flexible	34	dropping bottles - glass	70	<b>CABLE TIES &amp; BAG LOCKS</b>	82
receiver	26	dropping bottles - polyethylene	69		
receiver	28	eye wash	136	<b>CARBOYS</b>	74
reduction	25	filter bottle	60	<b>CASSEROLS</b>	86
splash head	31	gas wash bottle	31	<b>CELL SCRAPERS</b>	188
with nozzle	27	gas wash bottle heads	31		
with nozzle & stopcock	27	iso bottles - glass	66	<b>CELL SPREADERS</b>	
with thread	26	iso bottles - P.P	65	cell spreaders - polystrene	183
with thread & cap	26	neutral glass	66	cell spreaders - stainless steel	183
		security seal & seal cutter	68		
<b>APPARATUS</b>		spray	69	<b>CELLULOSE THIMBLES</b>	48
arsenic estimator	32	utility carrier	73		
water estimator	32	wash bottles - integral	71	<b>CENTRIFUGE TUBES</b>	
		wash bottles - narrow neck	71	glass	156
<b>AUTOCLAVE</b>	232	wash bottles - wide neck	71	microcentrifuge tubes	165
		wash bottles - wide neck - multi lingual	72	screw cap - pp	159
<b>AUTOMATIC BURETTES</b>	9	wash bottles - wide neck - multi lingual	72	screw cap - pp - self standing	160
		water sampling	67		
<b>BAGS</b>		wide neck - neutral glass	75	<b>CENTRIFUGES</b>	
autoclavable	81	wide neck - polyethylene	68	clinical	221
bag bin	82	with side arm - glass	23	hematocrit	222
bag locks	82	with side arm - PE	21	high Speed	218
bag sealer	82	<b>BOXES</b>		micro - high speed	219
bag stand	82	ice cube	174	micro - high speed - with refrigeration	220
cable ties	82	safety boxes	78	mini	217
homogenization	79	storage - click lock	76		
with document wallet	81	transport	73	<b>CHEMISTRY SET</b>	32
with wire closure	80	transportation - foldable	76		
zip-lock	80			<b>CHROMATOGRAPHY COLUMNS</b>	47
		<b>BUCHNER FUNNELS</b>	56		
<b>BATHS</b>		<b>BUCKETS</b>		<b>CLAMPS</b>	
ultrasonic	225	ice buckets	174	2 prongs	93
ultrasonic cleaner detergent	225	stainless steel	77	3 prongs	93
water	226	with lid - polypropylene	77	burette clamps	12
		with spout	77	thermometer clamp	123
<b>BEAKERS</b>				test tube clamps	156
beaker tongs	38	<b>BUNSEN BURNERS</b>		tubing clamps - easy click closure	105
glass	35	blowlamp - with gas cartridge	90	tubing clamps - keck	105
polypropylene	35	bunsen burner - with gas cartridge	90	tubing clamp - worm drive screw	105
polypropylene - with handle	37	bunsen burner stand	89		
PTFE	36	gas cartridge	90	<b>CLIPS</b>	
quartz glass	36	hose	89	for spherical joints	33
stainless steel	36	lighter	90	joint clips	33
stainless steel - with handle	38	meker	89		
		mini	89	<b>CONDENSERS</b>	
<b>BLENDER</b>	204	standard	89	allihn	45
		tirril	89	allihn - for soxhlet	47
<b>BLOOD COUNTING CHAMBERS</b>		tripods	92	coiled	46
blood counting chamber	149	wire gauzes	92	dimroth	46
cover glasses	149	ceramic triangles	92	dimroth - for soxhlet	48
tally counter	149			liebig	45
		<b>BLOOD LANCETS</b>			
automatic	148			<b>CONNECTORS WITH STOPCOCK</b>	29
manuel	148				

<b>CONTAINERS</b>		<b>DISTILLING LINKS</b>		<b>FLASKS</b>	
faeces	146	plain	30	cell culture flask	189
medicine	145	with condenser	30	clips - spherical joints	33
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urine	145			flat bottom - glass	41
<b>CRUCIBLES</b>		<b>DRAINING RACK</b>	131	flat bottom - NS neck	41
alumina	88	<b>DROPPING FUNNELS</b>		ground neck - 2 neck	42
crucible lids	87	conical	50	ground neck - 3 neck	42
crucible tong	88	cylindrical	50	kjeldahl	44
gooch - glass	59	cylindrical - with relief tube	50	manifold filter flask	60
gooch - porcelain	59			nitrogen	44
haldenwanger	87	<b>DRYING OVEN</b>	229	pear shape	43
porcelain	87			pear shape - 2 neck	43
quartz	88	<b>DRYING TUBES</b>	31	polystyrene - for cell culture	189
stainless steel	88			receiving	43
<b>CRYO TUBES</b>		<b>EAR PLUG &amp; MUFF</b>	136	round bottom - glass	41
box - cardboard	172	<b>EMBEDDING CASSETTES</b>		round bottom - NS neck - amber	41
box - hinged lid	171	cassette lid	144	round bottom - NS neck - clear	41
box - polycarbonate - hinged lid	171	with lid	144	stand - cork	44
box - polycarbonate - press on lid	171	without lid	144	stand - polypropylene	44
cap inserts	169	<b>ERLENMEYERS</b>		tongs	44
cryo tubes	169	foil discs - aluminium	110	volumetric - glass	1
cryo tube canes	170	ground neck - amber	39	volumetric - glass - amber	2
labels	170	ground neck - clear	39	volumetric - glass - trapezoidal	3
rack - expanding	172	narrow neck - glass	39	volumetric - polypropylene	4
work station	170	screw cap - glass	40	<b>FLOW INDICATOR</b>	105
<b>CRYSTALLISATION DISHES</b>		screw cap -PP	40	<b>FOILS &amp; STRECH FILM</b>	
glass	86	stabilising rings	40	foil discs - aluminium	110
stainless steel	86	<b>EVAPORATING DISHES</b>		foil dispenser	116
<b>COMBUSTION BOAT</b>	86	dish tong	86	foil roll - aluminium	116
<b>CUVETTES</b>		porcelain - flat bottom	85	strech film	116
PS	62	porcelain - round bottom	85	<b>FORCEPS</b>	
quartz	62	quartz glass	85	ABS - disposable	101
rack	62	stainless steel	85	dissecting	101
<b>CYLINDERS</b>		<b>EXTRACTORS</b>		filter papers	58
glass	5	cellulose thimbles	48	for cover glasses	152
glass - PP base	5	soxhlet extractors	48	general use	101
mixing cylinders	6	<b>EYE WASH BOTTLES</b>		<b>FREEZING</b>	
polypropylene	7	eye wash bottle	136	freezer box - for pcr tubes	191
<b>CYTOLOGY BRUSH</b>	193	eye wash set	136	freezing boxes	173
<b>DENSITY BOTTLES</b>		<b>FILTER BOTTLE</b>	60	freezing rack	173
calibrated	8	<b>FILTER FLASKS</b>		gloves - cold resistant	174
calibrated with thermometer	8	gaskets	55	ice bucket	174
non calibrated	8	glass - glass side arm	55	ice cube box	174
<b>DESSICATORS</b>		glass - P.P. side arm	55	<b>FUNNELS</b>	
dessicator plates	84	manifold filter flask	60	analytical	51
glass	83	polypropylene	55	büchner - porcelain	56
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silica gel	83	<b>FILTER PAPERS</b>		for powder - glass	52
<b>DIGITAL BURETTE</b>	21	forceps	58	for powder - PP	52
<b>DISPENSER</b>		qualitative	58	glass - plain	51
dispenser	23	quantitative	58	gooch	59
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