

Endless possibilities...



begin here...

PRODUCT CATALOG



Serving Industry Since 1967



Serving Industry Since 1967

"Constantly challenging the status quo and pushing boundaries leads to transformative growth."

Our Corporation

ANM Alliance

ANM Alliance is a virtual repository of technology and an ideal knowledge partner providing quality solutions from Simulation to Site.

Our domain of expertise spans from the Laboratory to the Process industry as we offer exemplary solutions that encompass the varied needs in the Simulation to Site spectrum.

ANM Alliance comprises of lucrative SBUs derived through Team efforts of more than 100 colleagues working together.

ANM Alliance strategizes host of initiatives which include integrated backup services for the entire Team, warehousing site along with virtual warehousing, ERP and CRM.

We continually leverage technology in order to remain a lean and proactive Organization to endorse enhanced Customer service and satisfaction. Our nationwide network presence ensures prompt services to our Customers.

Many of ANM Alliance's achievements today are a result of foresight, the ability to forecast Customer requirement and being on hand with already technological solution.

ANM Alliance Group owes its development to the visionary Founder, Late **Shri Arvind N. Mehta** – a man of simple living and high thinking, who set the course which the Group is following, to this day.

We continuously strive to become a responsible corporate citizen contributing significantly to the scientific, industrial and economic advancement of the Country.

Amkette Analytics
Limited

ANM Industries

SYNERGY
— TECHNO SUPPORT & SOLUTIONS LLP —

ANM HOUSE

Estb. 1967

FOUNDER LINEAGE



Manish Mehta



Shri. Arvind N Mehta



Sanjay Mehta



Dhwanit Mehta



Abhishek Mehta



Krish Mehta

the virtuous legacy continues...

Amkette Analytics
Limited

AM ANM Industries

SYNERGY
TECHNO SUPPORT & SOLUTIONS LLP

OUR MISSION



The management team will focus on delivering great value to customers by developing high calibre professional skills in core competence and representing world-class instrumentation and automation products.

OUR VISION



To be the finest skills - based total solution provider for turnkey projects, delighting our customers.

OUR VALUES



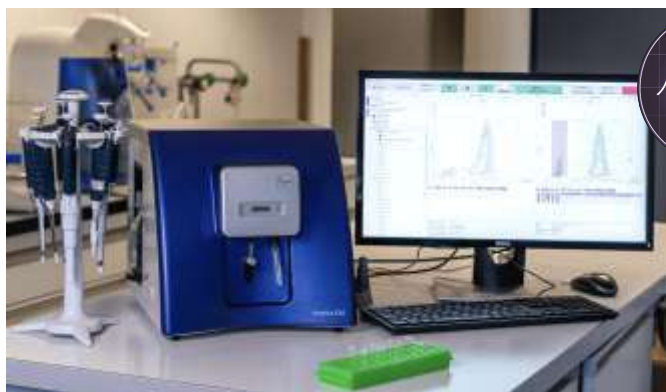
- Integrity and honesty
- Passion for customers, for our partners and technology
- Openness and respectfulness
- Taking on big challenges
- Constructive self-criticism, self- improvement and personal excellence
- Accountability towards customers, partners and employees for commitments, results and quality

OUR CORE COMPETENCIES



- Project management
- System integration and maintenance
- Delivering the best solutions for MEP

Cell Analysis with Ampha X30



The novel Ampha X30 opens a new era of cell analysis: simultaneous measurement of cell count and cell viability, and in addition more information about the status of the cells, like metabolic activity. Based on Impedance Flow Cytometry, no dyes, no markers, and no incubation are required. Results are available after minutes – including sample preparation! With one instrument and four different chip sizes of the microfluidic chip the whole range of cells can be measured: bacteria, human and animal cells, algae, yeast, and others like somatic cells in milk.

With the Ampha X30 all cell types can be analyzed with one instrument, using chips with different channel diameters. The cells are not harmed by the measurement and due to the absence of dyes and markers, the cells can be recovered and reused, e.g., for sorting or tissue culture.

Pollen Cell Analysis with the Ampha Z40



The Ampha Z40 is a new high-end laboratory instrument for pollen analysis. It covers all needs for efficient pollen analysis from plant breeding to seed production. An innovative technological platform ensures accurate analysis of pollen viability and pollen concentration in just one measurement.

Ampha Z40 - Pollen Analyzer for the analysis of pollen quality for:

- Increased yield in seed production
- Increased reliability in seed production
- Lower seed production costs

Knowledge about the performance of your genetics gives you the possibility to identify the best pollinator lines in an early stage, breed for higher heat resistance and optimize female to male ratios.

Air Jet Sieve Machine e200 LS

An air jet with plenty of power



The NEXOPART e200 LS air jet sieve machine supports you reliably when it comes to separating fine powders. The quiet, fast and efficient device helps to prevent the agglomeration of powders and clogging of the test sieve.

The e200 LS air jet sieve machine is ideal for separating, fractionating and particle size analysis of powders in various industries:

- Minerals
- Chemicals production
- Pharmaceuticals – through compliance with 21 CFR Part 11
- Food and nutrition industry
- Cement and construction material applications

Raft tests using LAMY TX700

Texture Analyzer



LAMY TX700 Texture Analyzer are used to determine the strength and durability of alginate raft-forming oral suspensions, providing insights into their efficacy and consistency, especially in accordance with standards like the British Pharmacopoeia.

Pharmaceutical formulations, a raft test evaluates the ability of a gel-forming product, like an alginate suspension, to form a stable, floating raft in an acidic environment, which is meant to mimic the stomach. LAMY TX700 Texture analyzers are used to measure the resistance of the raft to rupture or deformation, providing a quantitative measure of the raft's mechanical properties.



The test helps ensure that the raft formulation is consistent and meets quality standards. For Product Development, the results can be used to optimize the formulation and ensure the product is effective in preventing reflux.

LAMY TX700 Texture analyzers can also be used to assess the texture of other pharmaceutical products like tablets, gels, and creams.

NEW CLIMATE CHAMBERS



Cooling incubators and constant climate chambers featuring modular equipment options and supporting new areas of application.

The KB, KB PRO, KBF, and KBF PRO product lines have been completely overhauled and refined. Covering a wide range of applications, they are ideal for use in microbiology as well as in pharmaceutical quality assurance. The new PRO units add solutions for freeze-thaw stability testing, photostability testing, battery testing, and plant growth to the range of applications.

The modular equipment options are central elements of the new unit series. Taking a series product as a base unit, customers can build their own completely customized climate chamber or refrigerated incubator in accordance with the modular principle.

New! EQ series EQuivalent Long Life D2 Lamps

for HPLC Detectors (VWD/UV, PDA/DAD) such as Agilent, Shimadzu, Thermo-Dionex, Waters.



**RFID chip
Option
Available**

- Optimum performance by unique design
- Higher initial intensity
- Higher S/N
- Superior signal stability and shorter stabilization time after ignition
- Improved package design for safe transportation and storage
- Long-Life deuterium lamps are guaranteed to have a life time greater than 2,000 hours
- For long-lasting, trouble-free chromatographic performance
- Consistent operation and long-term value
- Designed to provide optimal intensity, sensitivity, and stability
- Built to meet highest-quality standards
- Rigorously tested for best lamp-to-lamp consistency
- Robust and long-lasting to lower your cost of ownership

PHOTOSTABILITY TESTING AND PLANT GROWTH



BINDER's latest generation cooling incubators and constant climate chambers can be transformed into photostability test chambers and plant growth chambers in no time at all thanks to the new ICH light modules and LED plant light modules, which can be installed quickly and easily without using tools.

PREMIUM BIOMEDICAL -30° C FREEZERS

B SCIENCE



The PREMIUM Biomedical freezers are designed and manufactured with the latest technology. The body of the freezers is built with thickness of 70mm to maximize the temperature stability in the freezers.

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interscience

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B SCIENCE

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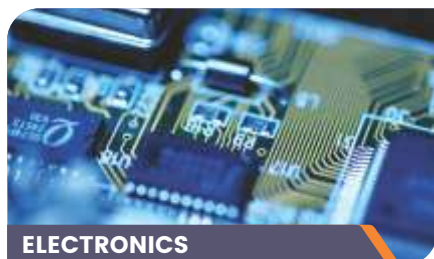


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MARKET SEGMENTS



ELECTRONICS



ENVIRONMENT



HEALTH & BIO-MEDICAL



CHEMICALS



BIOTECH



WATER TREATMENT



LIFE SCIENCE



POLLUTION CONTROL



LABORATORY



RESINS, PAINTS & COATING



PETROLEUM



HYDROCARBONS



AUTOMOBILES



PHARMACEUTICALS



FOOD & BEVERAGES



ENERGY & POWER



ASPHALT

Electronic Balances



SEMI-MICRO & ANALYTICAL BALANCE



AP-WD SERIES

Advanced Performance UniBloc Semi-micro Balances provide High-Speed Response and Stability. Available in super range and dual range.

- 21 CFR Part 11 Compliant with Lab Solutions Software.
- Variety of Accessories suitable for semi-micro measurements.
- Buffer Solution and Sample Preparation modes for HPLC Users(only in APW & APWD Series Model).
- RS232C Interface.
- User ID and Password Management.
- Minimum Measurement Value (only in APW Series Model).
- Periodic Inspection Support Function (only in APW & APWD Series Model).

Model	AP225W	AP135W	AP225WD-AD	AP225WD	AP125WD-AD	AP125WD	AP324X	AP224X
Capacity	220 g	135 g	220 g / 102 g		120 g / 52 g		320 g	220 g
Minimum Display	0.01 mg		0.1 mg / 0.01 mg				0.1 mg	
Door	Manual		Auto	Manual	Auto	Manual	Manual	
Repeatability (at weighing capacity)	0.015 mg (upto 20 g) 0.03 mg (upto 100 g) 0.05 mg (to weighing capacity)	0.05 mg	0.1 mg / 0.05 mg		0.1 mg / 0.02 mg		0.1 mg	
Linearity	±0.1 mg		±0.2 mg / ±0.1 mg		±0.2 mg / ±0.05 mg		±0.3 mg	±0.2 mg
Response Time	8 sec.		2 sec. / 8 sec.				2 sec.	
Sensitivity Stability Against Temperature Range	±2 ppm / °C (10 to 30°C)							
Pan Size	Approx: 91 mm dia							
Weight (Approx)	7.9 kg	7.9 kg	9.7 kg	7.9 kg	9.7 kg	7.9 kg	7.0 kg	



AUW-220D

UniBloc SEMI-MICRO Analytical Balance

AUW-D dual-range semi-micro balance

Excellent Weighing Performance

- Compact UniBloc mechanism and digital processing technology produce fast response and stability at the same time.

For Applications

- Shimadzu's unique WindowsDirect is a standard feature Measurement results can be transmitted to Excel® or other Windows® applications without installing any additional software on your computer. All you have to add is one RS-232C cable.

WindowsDirect works with Windows® 95, 98 NT4.0, 2000, ME and XP. PC must be IBM PC/AT compatible.

If you'd like to use "WindowsDirect" with "Windows 7" "Windows Vista", or a USB port.

- Piece counting, various mass units, below-weigh hook, specific gravity measurement software are all standard features.

Model	Type	Calibration	Display	Capacity	Pan Size	Body Dimension(WxDxH)
AUW220D	Semi Micro	Internal	0.01mg/0.1mg	82g/220g	80mm dia approx.	217 x 356 x 338mm

ELECTRONIC TOP LOADING BALANCE

UP SERIES

Superior Response Significantly Increases Weighing Efficiency.

- Capacity range: 220g to 8.2kg.
- Readability: 0.001g, 0.01g and 0.1g.
- Significantly improved response time of approximately 1 second provides fastest response performance in its class.
- Full Aluminum Die Cast Housing Provides Excellent Chemical Resistance.
- Balance Keys Weighing Data Collection Software.
- Using the highly impact-resistant UniBloc sensor minimizes downtime due to malfunctions.
- UP series balances have been shown to operate with PLCs from major companies.
- Addition of ionizer increases measurement reliability.

“X” Series with Internal Calibration Weights

Model	UP223X	UP423X	UP623X	UP823X	UP1023X	UP2202X	UP4202X	UP6202X	UP422X	UP822X	UP8201X
Capacity	220 g	420 g	620 g	820 g	1020 g	2200 g	4200 g	6200 g	420 g	820 g	8200 g
Minimum Display	0.001 g					0.01 g					0.1 g
Repeatability (at Weighing Capacity)	≤ 0.001 g					≤ 0.01 g			≤ 0.008 g		≤ 0.08 g
Linearity	± 0.002 g			± 0.003 g		± 0.02 g			±0.01 g		±0.1 g
Response Time ^(*)	Approx. 1 sec.								Approx. 0.6 to 1.0 sec.		
Sensitivity Stability Against Temperature Range	± 3 ppm/°C (10 to 30°C)								±5 ppm/°C (10 to 30°C)		
Pan Size	Approx. 108 × 105 mm					Approx. 170 × 180 mm			Approx. 108 x 105 mm		Approx. 170 × 180 mm
Weight	Approx. 3.4 kg					Approx. 4.6 kg			Approx. 3.4 kg		Approx. 4.6 kg

*1 - Indicated response time values are typical

“Y” Series without Internal Calibration Weights

Model	UP223Y	UP423Y	UP623Y	UP823Y	UP1023Y	UP2202Y	UP4202Y	UP6202Y	UP422Y	UP822Y	UP8201Y
Capacity	220 g	420 g	620 g	820 g	1020 g	2200 g	4200 g	6200 g	420 g	820 g	8200 g
Minimum Display	0.001 g					0.01 g					0.1 g
Repeatability (at Weighing Capacity)	≤ 0.001 g					≤ 0.01 g			≤ 0.008 g		≤ 0.08 g
Linearity	± 0.002 g			± 0.003 g		± 0.02 g			±0.01 g		±0.1 g
Response Time ^(*)	Approx. 1 sec.								Approx. 0.6 to 1.0 sec.		
Sensitivity Stability Against Temperature Range	± 3 ppm/°C (10 to 30°C)								±5 ppm/°C (10 to 30°C)		
Pan Size	Approx. 108 × 105 mm					Approx. 170 × 180 mm			Approx. 108 x 105 mm		Approx. 170 × 180 mm
Weight	Approx. 2.7 kg					Approx. 2.9 kg			Approx. 2.7 kg		Approx. 2.9 kg

*1 - Indicated response time values are typical

ELECTRONIC ANALYTICAL & TOP LOADING BALANCE



AT-R SERIES

Basic Model with Improved Convenience.

- Capacity range: 62g to 320g.
- Readability: 0.1mg.
- Easy settings enable responsiveness and stability to be freely changed.
- Basic Analytical balance equipped with 2 interfaces: USB and RS232C.
- Prevent Human error by direct transfer of weight values to the computer.
- AT-R Series balances have been shown to operate with PLCs from major companies.
- Addition of ionizer increases measurement reliability.



TW/TX/TXB SERIES

Extremely capable and easy to operate.

- Capacity range: 220g to 6.2kg.
- Readability: 0.001g, 0.001ct (0.0002g), 0.01g, 0.1g.
- Easy to operate key layout.
- Piece counting function.
- Backlight LCD.
- Carat Balance



BL SERIES

High-resolution balances made affordable.

- Capacity range: 220g to 3.2kg.
- Readability: 0.001g, 0.01g, 0.1g.
- Piece counting function.
- Analog bar graph display.
- Change among many weighing units and functions with a single touch.
- Data Transfer Port.
- Equipped with a Square Pan for Ease of Operation.

MOISTURE BALANCE



MOC63U

Makes moisture content measurements quick and easy.

- Next-Generation Mass Sensor: UniBloc.
- Windows Direct Function.
- Backlit LCD.
- RS232C interface.
- USB Interface.
- In-Built Halogen Heater for moisture measurements.

A Total of Five Modes Makes This Balance Compatible with a Variety of Sample Measurements

- **Ending Modes**
Automatic/Timed Ending Mode.
- **Alternate Drying Modes**
Rapid/Slow/Step Drying Mode.



MOC-120H

Measure the Moisture Ratio of even large or large amounts of samples.

- The moisture ratio is found by heating the sample with the built-in infrared heater.
- The sample pan measures 130 mm in diameter, which is optimal for large amounts of samples.
- Importing results to a PC is easy (equipped with the Balance Keys function).
- Equipped with the UniBloc aluminum block mass sensor.
- Next-Generation Mass Sensor: UniBloc.
- Windows Direct Function.
- Backlit LCD.

ACCESSORIES



Static Remover (Ionizer)

- Static charge on a sample or in the container can cause fluctuations in weight.
- Stablo-AP provides reliable measurement by removing static electricity.
- AC Corona discharge method for fast Ionization (1 Second typically).
- Can be used easily in handheld form, setting up on stand, or being fixed within a balance.
- An excellent solution against static.



Electronic Printers

Enhanced support for ISO/GLP/GMP.

- Enhanced visibility for OLED Display.
- Includes functionality for preventing date alterations.
- Supports GLP/GMP using password protection- based date/time alteration prevention.
- Powered by Rechargeable Batteries.
- Status Display with Enhanced Visibility for OLED Display.

Specific Gravity Analyzer

Measures a variety of gravity values with the Immersion Method.



- Capable of automatically calculating and displaying specific gravity values.
- Liquid density can also be measured by using an optional sinker.

VISCOSITY | RHEOLOGY | TEXTURE



B-ONE PLUS



Intuitive and powerful, the new B-ONE PLUS will surprise you with its extended measuring range in LR version or with its optional temperature sensor.

- 7" Touch Screen Display.
 - Wide Speed Range upto 250rpm.
 - Rotating Spring Less Technology.
 - Robust Ball Bearing Suspension.
 - SS316 Spindles.
 - Bayonet Fitting for Quick & EZ Spindle Connection.
 - Direct measure with Time to Stop.
 - Built-in USER Mode & LOCK Mode.
 - Built-in USB Port for Data Transfer.
 - Torque gage on display
 - Speed or shear rate control
 - Units: cP (Centipoise), mPa.s/Pa.s(Poise)
 - Displays: Viscosity, Speed, Torque(%), Shear Stress, Shear Rate, Time, Temperature (Optional probe required)
 - Auto Range (Min. & Max. Viscosity) (Range depends on speed & spindle selected)
- Two Viscometer Ranges
 - LV & RV in 1 Viscometer (LR)
 - RV, HA - 5HB in 1 Viscometer (HR)
 - Exactly same matching comparing results

Model	VISCOSITY RANGE cP (mPa•s)		SPEEDS			
	Min.	Max.	Accuracy	Repeatability	RPM	No. of Speeds
B-ONE PLUS LR (Low Range LV-RV)	1*	22M	±1% of FSR	+/-0.2%	0.1-250	UNLIMITED
B-ONE PLUS HR (High Range RV, HA-HB)	33*	240M	±1% of FSR	+/-0.2%	0.1-250	UNLIMITED
B-ONE PLUS HR / KU	40KU	140KU	±1% of FSR	+/-0.2%	0.1-250	UNLIMITED

* Can reach 1 mPa•s (LR) & 33 mPa•s (HR/Standard) with MS ULV

FIRST PLUS


With its expanded programming possibilities and increased modularity, the FIRST PLUS will be the ideal tool for your application whether you use it alone or with its software

- 7" Touch Screen Display.
 - Wide Speed Range upto 250rpm.
 - Rotating Spring Less Technology.
 - Robust Ball Bearing Suspension.
 - SS316 Spindles.
 - Bayonet Fitting for Quick & EZ Spindle Connection.
 - Direct measure with Time to Stop.
 - Built-in Temperature Probe.
 - Built-in USER Mode & LOCK Mode.
 - Built-in USB & RS232 Port for PC/Printer Connection.
 - Torque gage on display.
 - Integrated temperature probe.
 - Compatible with RheoTex software (21 CFR).
 - Speed or shear rate control.
 - Units: cP (Centipoise), mPa.s/Pa.s(Poise)
 - Displays: Viscosity, Speed, Torque(%), Shear Stress, Shear Rate, Time, Temperature
 - Auto Range (Min. & Max. Viscosity) (Range depends on speed & spindle selected)
- Two Viscometer Ranges
 - LV & RV in 1 Viscometer (LR)
 - RV, HA - 5HB in 1 Viscometer (HR)
 - Exactly same matching comparing results

Model	VISCOSITY RANGE cP (mPa•s)		SPEEDS			
	Min.	Max.	Accuracy	Repeatability	RPM	No. of Speeds
FIRST PLUS LR (Low Range LV-RV)	1*	22M	±1% of FSR	+/-0.2%	0.1-250	UNLIMITED
FIRST PLUS HR (High Range RV, HA-HB)	33*	240M	±1% of FSR	+/-0.2%	0.1-250	UNLIMITED

* Can reach 1 mPa•s (LR) & 33 mPa•s (HR/Standard) with MS ULV

FIRST PRO PLUS



FIRST PRO has the same enhanced programming capabilities as the most complete instrument to maximize the repeatability of your measurements.

- Inbuilt software for programming.
- Direct measure with time to stop.
- User and locked mode.
- Data recording and USB transfer.
- Torque gage on display.
- Integrated temperature probe.
- Printer connection.
- Compatible with RheoTex software (21 CFR).
- Display of viscosity limits according to mobile and speed.
- Speed or shear rate control.
- Direct control of temperature unit.
- Multistep method.
- LIMS function.

- Two Viscometer Ranges
 - LV & RV in 1 Viscometer (LR)
 - RV, HA - 5HB in 1 Viscometer (HR)
- Exactly same matching comparing results

Model	VISCOSITY RANGE cP (mPa•s)		SPEEDS			
	Min.	Max.	Accuracy	Repeatability	RPM	No. of Speeds
FIRST PRO LR (Low Range LV-RV)	1*	22M	±1% of FSR	+/-0.2%	0.1-250	UNLIMITED
FIRST PRO HR (High Range RV, HA-HB)	33*	240M	±1% of FSR	+/-0.2%	0.1-250	UNLIMITED

* Can reach 1 mPa•s (LR) & 33 mPa•s (HR/Standard) with MS ULV

FIRST PRODIG


The viscometer with a 7 " touch screen allows you to create and save your measurement methods, display results or curves, analyse your data, print reports, manage users and protect data.

- Speed or shear rate control.
- Inbuilt software for programming.
- Constant, Multistep or ramp method.
- Direct curve on display.
- Direct analysis with regression.
- Direct report editing.
- Direct measure with time to stop.
- User and locked mode.
- Data recording and USB transfer.
- Torque gage on display.
- Integrated temperature probe.
- Printer connection.
- Compatible with RheoTex software.
- Display of viscosity limits according to mobile and speed.
- Direct control of temperature unit.
- LIMS function.
- QC limits function.

- Two Viscometer Ranges
 - LV & RV in 1 Viscometer (LR)
 - RV, HA - 5HB in 1 Viscometer (HR)
- Exactly same matching comparing results

Model	VISCOSITY RANGE cP (mPa•s)		SPEEDS			
	Min.	Max.	Accuracy	Repeatability	RPM	No. of Speeds
FIRST PRODIG LR (Low Range LV-RV)	1*	22M	±1% of FSR	+/-0.2%	0.1-250	UNLIMITED
FIRST PRODIG HR (High Range RV, HA-HB)	33*	240M	±1% of FSR	+/-0.2%	0.1-250	UNLIMITED

* Can reach 1 mPa•s (LR) & 33 mPa•s (HR/Standard) with MS ULV

FIRST PRODIG CP1000



The FIRST PRODIG CP1000 offers unparalleled ease of use and modularity. It incorporates a support for cone-plate measurements. It is perfectly suited to measurements at ambient temperature and offers the possibility to control temperature of the sample when combined with a circulating bath (not included). Its versatility allows it to use other measuring mobiles such as MS-RV, MS KREBS or MS VANE.

- Touch Screen Display.
- Wide Speed Range upto 250rpm.
- Rotating Spring Less Technology.
- Robust Ball Bearing Suspension.
- SS316 Spindles.
- CP-1000 stand for cone-plate measurement.
- Quick attachment with AC265 coupling.
- Manual lift for gap adjustment.
- Speed or shear rate control.
- Inbuilt software for programming.
- Constant, Multistep or ramp method.
- Direct curve on display.
- Direct analysis with regression.
- Direct report editing.
- Direct measure with time to stop.
- User and locked mode.
- Data recording and USB transfer.
- Torque gage on display.
- Integrated temperature probe.
- Printer connection.
- Compatible with RheoTex software(21 CFR).
- Display of viscosity limits according to mobile and speed.
- LIMS function.
- QC limits function.

- Multi Viscometer Range
 - (CP & Rotational Viscometer) in 1 Viscometer CP, RV, VANE, Krebs-KU
- Exactly same matching comparing results

Model	VISCOSITY RANGE cP (mPa•s)		SPEEDS			
	Min.	Max.	Accuracy	Repeatability	RPM	No. of Speeds
FIRST PRODIG CP 1000	3	80M**	±1% of FSR	±0.2%	0.1-250	UNLIMITED

** According to Cone-plate MS CP

RM100 PLUS


The RM100 PLUS is the viscometer with largest speed and torque range available on market. Create your methods and store your results in relation with your application.

- Speed or shear rate control.
- Huge speed and torque range.
- Direct control of temperature unit.
- Inbuilt software for programming.
- Direct measure with time to stop.
- User and locked mode.
- Data recording and USB transfer.
- Torque gage on display.
- Integrated temperature probe.
- Printer connection.
- Compatible with RheoTex software (21 CFR).
- Display of viscosity limits according to mobile and speed.
- Multistep method.
- LIMS function.
- QC limits function.
- Touch screen display.
- Wide speed range 1500 rpm.
- Rotating spring less technology.
- Robust ball bearing suspension.
- SS 316 spindles.

Model	VISCOSITY RANGE cP (mPa•s)		SPEEDS			
	Min.	Max.	Accuracy	Repeatability	RPM	No. of Speeds
RM100 PLUS	1	780M*	±1% of FSR	±0.2%	0.1-1500	UNLIMITED

M for million / * According to measuring system.

RM100 CP-1000 PLUS



Equipped with a fluid circulation for temperature control (bath not included), the RM100 CP1000 PLUS will allow you to perform cone-plate and beaker measurements using the MS RV, MS VANE or MS KREBS mobiles.

- 7" Touch Screen Display.
- Wide Range of CP01 - CP10 Spindles.
- Wide Range of CP40Z - CP52Z Spindles.
- Robust Ball Bearing Suspension.
- CONE/PLATE Springless Technology.
- AC265 coupling system for SS316 Cone Plate.
- SS316 Spindles (CP/RV/VANE).
- Bayonet Fitting for Quick & EZ Spindle Connection.
- Removable Bottom Plate.(w/integrated temp. probe)
- Manual lift for gap adjustment.
- Guaranteed Easy Cleaning.
- Programming and Recording Method.
- CP1000 Stand for C/P measurement.
- Built-in USER Mode & LOCK Mode.
- Built-in USB & RS232 Port for PC/Printer Connection.
- Optional RheoTex software (21 CFR).
- Units: cP (Centipoise), mPa.s/Pa.s(Poise)
- Speed or shear rate control.
- Inbuilt software for programming / Printer connection.
- Direct measure with time to stop.
- Torque gage on display.
- Integrated temperature probe.
- Display of viscosity limits according to mobile and speed.
- Multistep method.
- LIMS function / QC limits function.
- Displays: Viscosity, Speed, Torque(%), Shear Stress, Shear Rate, Time, Temperature
- Auto Range (Min. & Max. Viscosity) (Range depends on speed & spindle selected)

- Multi Viscometer Range
- (CP & Rotational Viscometer) in 1 Viscometer CAP, CP, RV, HA-HB, KU
- Cover High Torque 181,000 dyne cm ICI Specifications method
- Covers Low Torque 7,970 dyne cm (123CAP)
- Wide Shear Range! 1-20,000 sec⁻¹
- Exactly same matching comparing results

Model	VISCOSITY RANGE cP (mPa•s)		SPEEDS			
	Min.	Max.	Accuracy	Repeatability	RPM	No. of Speeds
RM100 CP-1000 PLUS	1	190M**	±1% of FSR	±0.2%	0.1-1500	UNLIMITED

M for million / ** According to MS CP spindle

RM100 CP-2000 PLUS CONE & PLATE VISCOMETER



Cone and Plate measuring systems are adapted for samples in limited quantities and difficult to clean. With maximum shear rate up to $20,000 \text{ s}^{-1}$, the RM100 CP2000 PLUS will fit all your applications.

- 7" Touch Screen Display.
- Wide Range of CP01 - CP10 SS316 Spindles.
- Wide Range of CP40Z - CP52Z SS316 Spindles.
- Robust Ball Bearing Suspension.
- AC265 coupling system for Cone Plate.
- Removable Bottom Plate.(w/integrated temp. probe)
- Guaranteed Easy Cleaning.
- CONE/PLATE Springless Technology.
- Programming and Recording Method.
- Direct report editing.
- Huge speed and torque range.
- Direct control of temperature unit.
- Inbuilt software for programming.
- Printer connection.
- Data recording & USB Transfer
- Built-in USER Mode & LOCK Mode.
- Built-in USB & RS232 Port for PC/Printer Connection.
- Optional RheoTex software (21 CFR).
- Units: cP (Centipoise), mPa.s/Pa.s(Poise)
- Multistep method.
- LIMS function.
- QC limits function.
- Displays: Viscosity, Speed, Torque(%), Shear Stress, Shear Rate, Time, Temperature
- Auto Range (Min. & Max. Viscosity) (Range depends on speed & spindle selected)

- Multi Viscometer Range
 - (CP & Rotational Viscometer) in 1Viscometer CP models & CAP models
- Cover High Torque 181,000 dyne cm ICI Specifications method
- Covers Low Torque 7,970 dyne cm (123CAP)
- Wide Shear Range! $1-20,000 \text{ sec}^{-1}$
- Exactly same matching comparing results

Model	VISCOSITY RANGE cP (mPa•s)		SPEEDS			
	Min.	Max.	Accuracy	Repeatability	RPM	No. of Speeds
RM100 CP-2000 PLUS	1	190M	±1% of FSR	±0.2%	0.1-1500	UNLIMITED

M for million

GT-300 PLUS GEL TIMER



Measure your Gel Time on one click

The GT 300 PLUS is a «Gel Timer» to measure all curing times of your products. Combined with disposable measuring systems and temperature control, it adapts to all your expectations for a very competitive cost per measurement.

- Inbuilt software for programming
- RheoTex software included.
- Direct control of temperature unit.
- Measure with disposable hooks and cups.
- Sample temperature probe (optional).
- Low sample volume.
- Temperature ramp available.
- Display of viscosity limits according to mobile and speed.
- LIMS function.
- QC limits function.

Disposable cup
(aluminium)
(by 100)
Ref. 700011



Disposable hook
(stainless steel)
(Vol. 50-80mL)
(by 100)
Ref. 700010



Disposable hook
(steel)
(Vol. 35-50mL)
(by 100)
Ref. 700040



GT-300 PRODIG GEL TIMER



Measure your Gel Time on one click

The GT300 PRODIG measures your gel time, shows curves, analyses your data and print reports. Autonomy and user-friendly, it benefits to GT300 performances with ergonomic innovations.

- Inbuilt software for programming.
- Direct curve on display.
- Direct Gel time analysis.
- Direct report editing.
- Direct control of temperature unit.
- Measure with disposable hooks and cups.
- Sample temperature probe (option).
- Low sample volume.
- Temperature ramp available.
- Display of viscosity limits according to mobile and speed.
- LIMS function.
- QC limits function.

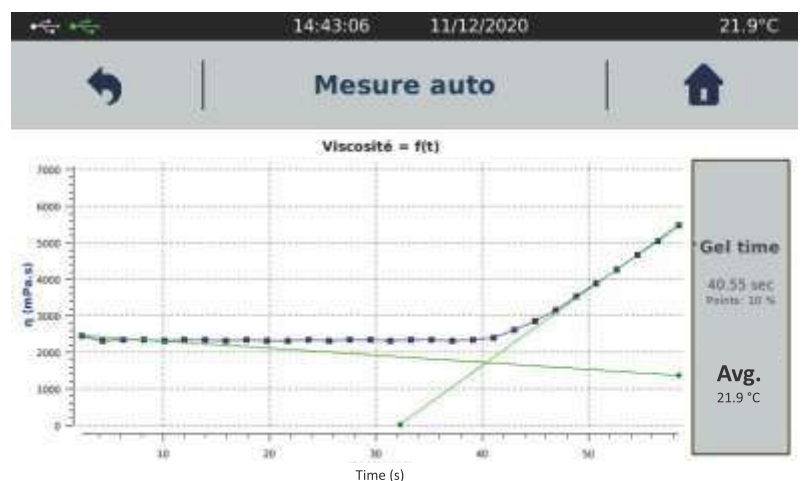
Disposable cup
(aluminium)
(by 100)
Ref. 700011



Disposable hook
(stainless steel)
(Vol. 50-80mL)
(by 100)
Ref. 700010



Disposable hook
(steel)
(Vol. 35-50mL)
(by 100)
Ref. 700040



PORTABLE B-ONE VISCOMETER



The PORTABLE B-ONE is the ideal tool for your viscosity measurements in the workshop, production area, delivery area or outside. With one hour of battery life, it will optimize your control times and flexibility.

- Autonomy more than one hour.
- Charge indicator.
- Direct measure with time to stop.
- Usable with standard or rack stand(option).
- User and locked mode.
- Data recording and USB transfer.
- Torque gage on display.
- Display of viscosity limits according to mobile and speed.
- Speed or shear rate control.

Model	VISCOSITY RANGE cP (mPa•s)		Accuracy	Repeatability	SPEEDS	
	Min.	Max.			RPM	No.of Speeds
B-ONE Portable Viscometer	200 (15**)	240M	±1% of FSR	±0.2%	0.1-250	UNLIMITED

M for million / ** Can reach 15 mPa.s with MS BV.

PORTABLE RM 100 - ON-LINE / PROCESS VISCOMETER



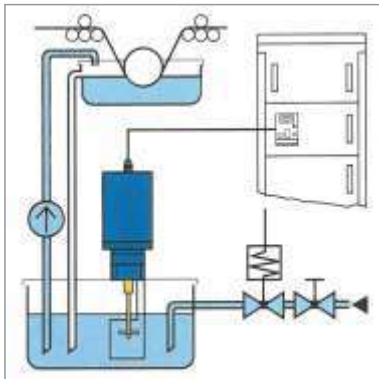
No matter where, the PORTABLE RM 100 allows you to bring your viscosity measurement methods where your lab can not operate. With programming, memorization, temperature measurement and all measurement systems, all your expertise is moving!

- Autonomy more than one hour.
- Charge indicator.
- Huge speed and torque range.
- Usable with standard or rack stand (option).
- Inbuilt software for programming.
- Direct measure with time to stop.
- User and locked mode.
- Data recording and USB transfer.
- Torque gage on display.
- Integrated temperature probe.
- Printer connection.
- Compatible with RheoTex software.
- Display of viscosity limits according to mobile and speed.
- Speed or shear rate control.
- Multistep method.
- LIMS function.
- QC limits function

Model	VISCOSITY RANGE cP (mPa•s)		Accuracy	Repeatability	SPEEDS	
	Min.	Max.			RPM	No.of Speeds
RM-100 Portable Viscometer	200 (1**)	240M	±1% of FSR	±0.2%	0.1-1500	UNLIMITED

M for million / ** Can reach 1 mPa.s with MS DIN19

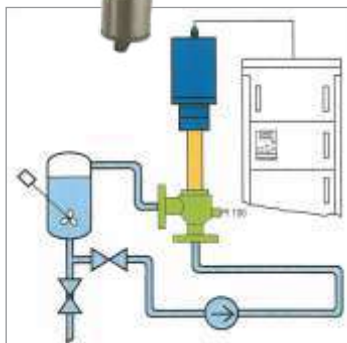
RM100 i – ON-LINE / PROCESS VISCOMETER



The RM100 i is perfectly suited for so-called immersion use, installing it over a tank or on a support for a measurement in a pot. Only the measuring head is above the product, the electronic box can be installed more than 17 meters in a control cabinet with its 4-20mA output

- Industrial measure on large tanker.
- Continuous measurement or with time to stop.
- 4-20 mA output for external control.
- 17m maximum distance between head and box.
- Usable with standard or rack stand.
- Huge viscosity range.
- Inbuilt software for programming.
- External temperature probe (option).
- Printer connection.
- Compatible with RheoTex software.
- Display of viscosity limits according to mobile and speed.
- Speed or shear rate control.
- Multistep method.
- LIMS function.
- QC limits function

RM 100 L – IN-LINE / PROCESS VISCOMETER



The online viscosity measurement of the RM100 L guarantees continuous control for immediate action in production.

Whatever the flow rate, the viscosity or the diameter of your pipe, this viscometer will be able to adapt by guaranteeing you a measurement according to laboratory's norms.

- Industrial on-line measurement.
- Continuous measurement or with time to stop.
- 4-20 mA output for external control.
- Magnetic bearing for sealing.
- 30m maximum distance between head and box.
- Huge viscosity range.
- Inbuilt software for programming.
- External temperature probe (option).
- Printer connection.
- Compatible with RheoTex software.
- Display of viscosity limits according to mobile and speed.
- Speed or shear rate control.
- Multistep method.
- LIMS function.
- QC limits function

RM 200 PLUS RHEOMETER



The Rheology at your fingertips

Thanks to its large storage capacity and its easy programming, the rheometer RM200 PLUS allows you to realize all your measurements of flow curves, yield point, thixotropic, analysis without software.

- Constant, Multistep or ramp method.
- Direct analysis with regressions.
- Direct control of temperature unit.
- Huge viscosity range.
- Speed or shear rate control.
- Inbuilt software for programming.
- Direct measure with time to stop.
- User and locked mode.
- Data recording and USB transfer.
- Torque gage on display.
- Integrated temperature probe.
- Printer connection.
- Compatible with RheoTex software.
- Display of viscosity limits according to mobile and speed.
- LIMS function.
- QC limits function.

RM 200 CP-4000 PLUS RHEOMETER



Optimize your rheological measurements

The motorized lift of the RM200 CP4000 PLUS allows a fast and repeatable installation of cone and plate measuring systems guaranteeing reliable rheological measurements whatever your application.

- Automatic lift for gap.
- Quick attachment with AC265 coupling.
- Constant, Multistep or ramp method.
- Direct analysis with regressions.
- Direct control of temperature unit.
- Huge viscosity range.
- Speed or shear rate control.
- Inbuilt software for programming.
- Direct measure with time to stop.
- User and locked mode.
- Data recording and USB transfer.
- Torque gage on display.
- Integrated temperature probe.
- Printer connection.
- Compatible with RheoTex software.
- Display of viscosity limits according to mobile and speed.
- LIMS function.
- QC limits function.

DSR 500 RHEOMETER



A new vision on your measurements

The rheometer with imposed shear rate, equipped with a 7 " touch screen to display the curves directly. And with direct report editing on a desktop printer, measuring viscosity or yield point has never been so easy!

- Direct curve on display.
- Shear rate and speed control.
- Constant, Multistep or ramp method.
- Direct analysis with regressions.
- Direct control of temperature unit.
- Huge viscosity range.
- Inbuilt software for programming.
- Direct measure with time to stop.
- User and locked mode.
- Data recording and USB transfer.
- Torque gage on display.
- Integrated temperature probe.
- Printer connection.
- Compatible with RheoTex software.
- Display of viscosity limits according to mobile and speed.
- LIMS function.
- QC limits function.

DSR 500 CP-4000 PLUS RHEOMETER



A rheometer to meet your requirements

With its motorized lift, built-in temperature control unit and all the features of the DSR500, this new cone-plate rheometer optimizes your measurements and guarantees high performance even without a computer!

- Automatic lift for gap.
- Quick attachment with AC265 coupling.
- Direct curve on display.
- Shear rate and speed control.
- Constant, Multistep or ramp method.
- Direct analysis with regressions.
- Direct control of temperature unit.
- Huge viscosity range
- Inbuilt software for programming.
- Direct measure with time to stop.
- User and locked mode.
- Data recording and USB transfer.
- Torque gage on display.
- Integrated temperature probe.
- Printer connection.
- Compatible with RheoTex software.
- Display of viscosity limits according to mobile and speed.
- LIMS function.
- QC limits function.

TX700 TEXTURE ANALYZER



With its wide range of probes and fixtures, the TX-700 is the ideal tool for your texture analysis. Thanks to its touch screen directly displaying the curves, its method programming capability, storage and analysis of measurements, the TX-700 will integrate in laboratory and production area.

- Integrated temperature probe.
- Direct curve on display.
- Inbuilt software for programming.
- Data recording and USB transfer.
- Many different probes and fixtures.
- Interchangeable load sensors.
- Height adjustable tray.
- Compatible with RheoTex software.
- LIMS function.



FIXTURE BASE TABLE

Designation

TX-700 TEXTURE ANALYZER - 10N

TX-700 TEXTURE ANALYZER - 20N

TX-700 TEXTURE ANALYZER - 50N

TX-700 TEXTURE ANALYZER - 100N

TX-700 TEXTURE ANALYZER - 250N

TX-700 TEXTURE ANALYZER - 500N

METHODS	PROPERTIES
COMPRESSION	Compressibility, compactability, springiness, relaxation, crush strength, firmness, elastic, work/load/deflection at rupture, maximum load.
PUNCTURE PENETRATION	Firmness, gel strength, dipping consistency, product toughness, fracture force, 'cake' breaking strength, semi-solid consistency, actuation force.
CUTTING SHEARING	Bite force, firmness, toughness, shear force.
FRACTURE BENDING	Brittleness, snapping force, tip strength, flexibility, force to bend, bend modulus, fracture force, flexure modulus.
TENSILE	Tensile strength, tensile 'break point', extensibility, stretchiness, elongation, burst point, tensile modulus, strength and strain to fracture, fracture toughness
ADHESION	Adhesiveness, stickiness, tackiness, peel force, cohesiveness, tailing, stringiness, legging, work of adhesion.
DETERMINATION OF GELATIN BLOOM STRENGTH	Determination of Bloom Strength as a means of monitoring the effects of quality, concentration and processing methods on gelatin.



COMPRESSION



PUNCTURE PENETRATION



CUTTING SHEARING



FRACTURE BENDING



TENSILE



ADHESION



DETERMINATION OF GELATIN BLOOM STRENGTH

THERMOCELL PACKAGE HIGH TEMPERATURE



Electrical heating system for cylindrical measuring systems

- Temperature range from Room T°C to +300°C.
- Economic electric oven.
- Compatible with bayonet coupling device.
- Compatible with norms ASTM D4402 and D3236.



Designation	Reference	Temp. Range	Type	Compatible measuring system	Dimensions (pxlxh) in mm	Weight
RT-1 PLUS	N130110	RoomT°C to +300°C	Electrical	MS SV, MS DIN, MS ULV	610 x 340 x 650	15 kg

HELIPRO for GELS, PASTE, CREAMS etc.



The HELIPRO device makes it possible to measure viscosity of gels, pastes, creams and more generally products that do not flow.

When a measuring mobile turns in this type of product, we can observe appearance of cavities around the rotating spindle which has effect of reducing measured viscosity values. Through its movement vertical, HELIPRO system with its mobile T shape will prevent formation of cavities within product and will ensure reliable and consistent measurement.



T-bar spindles
& holder

ACCESSORIES

MS-SV (Small Volume)

LAMY RHEOLOGY MS-SV Measuring System for Low/Small Volume Viscosity Measurement. This measuring system makes it possible to measure products in small quantities by applying a shear rate. Cylindrical geometry provides calculable shear rates, which allow the user to predict a product's reaction to shear stress.

- For rheological evaluation of materials where sample volume is limited
- Sample chamber easily changed
- Optional disposable chamber also available
- Optional Water jacket allows rapid and precise temperature control of sample
- Simultaneous sample temperature measurement (optional for B-One Plus series)

Small Volume Package



Small Volume Package with Water Jacket

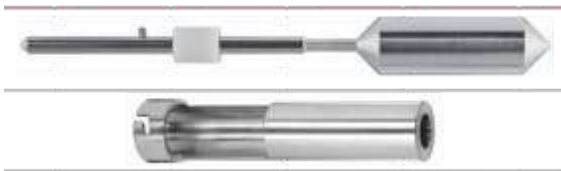


MS-ULV

LAMY RHEOLOGY MS-ULV Measuring System for Ultra Low Viscosity Measurement up to 1cP (centipoise). This measuring system makes it possible to measure low viscosity products in control by applying shear rate.

- Ideal for low viscosity materials
- SS#316 Stainless steel parts are easily cleaned
- Reduces measuring range to as low as 1 cP (LR Model)
- Small sample size: 11 mL
- Cylindrical geometry provides defined shear rates for detailed product analysis

Ultra Low Adapter



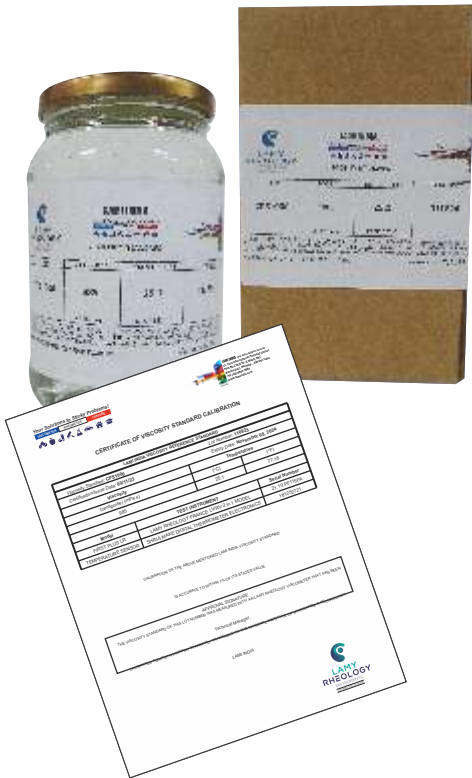
Ultra Low Adapter with Water Jacket



MEASURING SYSTEMS WITH BAYONET COUPLING FOR LR DEVICE

Designation	Sample Volume (ml)	Shear rate range (s-1)	Viscosity range (mPa•s)
MS-ULV	21 ml	1 to 510	1 to 26K (LR) 33 to 750K (HR)

VISCOSITY STANDARD AT 25 °C TEMPERATURE



Lami Silicone Viscosity Standards provide a convenient, reliable means of checking the performance of most Viscometers / Rheometers. These fluids are calibrated at 25°C and available in standard bottle along with Certificate of Viscosity Standard Calibration.

Part No.	Temperature	Viscosity
CPS 5	25 °C	5 cps
CPS 10	25 °C	10 cps
CPS 50	25 °C	50 cps
CPS 100	25 °C	100 cps
CPS 500	25 °C	500 cps
CPS 1000	25 °C	1000 cps
CPS 5000	25 °C	5000 cps
CPS 12500	25 °C	12500 cps
CPS 30000	25 °C	30000 cps
CPS 60000	25 °C	60000 cps
CPS 100000	25 °C	100000 cps

GUARDLEG LV

Allows correct positioning of MS-LV spindles in 600ml beakers for optimized viscosity measurement.



GUARDLEG RV

Allows correct positioning of MS-RV spindles in 600ml beakers for optimized viscosity measurement.



RHEOTEX SOFTWARE



The integrity of results and methods is guaranteed by using a database and by an optimized management of the users with specific rights.

New graphical tools allow custom management of the display of curves, tables and analysis results

- Creation and saving of methods.
- Transfer data from device memory.
- Temperature ramp method.
- Use of mathematical tools for data analysis.
- Creation of free program.
- PDF report editing.
- Compatible with office software or experience creation (automatic measurement and analysis).

Functions / Instrument version	FIRST	FIRST PRO	FIRST PRODIG	RM 100	RM 200	DSR 500	GT300	GT300 PRODIG	TX-700
Instrument connection	USB, RS232								RS232
Method viscosity over time	*	*	*	*	*	*	*	*	
Method step by step	*	*	*	*	*	*			
Method flow curve			*		*	*			
Methods Compression, Relaxation, Tensile, TPA, Penetrometry									*
Methods Free Program	*	*	*	*	*	*	*	*	*
Loop mode	*	*	*	*	*	*	*	*	*
Experiment	*	*	*	*	*	*	*	*	*
Logarithmic ramp			*		*	*			
Control of temperature unit (EVA, RT, CP1, CP2000, CP4000)*	*	*	*	*	*	*	*	*	
Data transfer from device memory	*	*	*	*	*	*	*	*	*
Direct curve while test	*	*	*	*	*	*	*	*	*
Import methods and results	*	*	*	*	*	*	*	*	*
Export/copy data to Office	*	*	*	*	*	*	*	*	*
Export/copy diagram to Office	*	*	*	*	*	*	*	*	*
Editing report pdf	*	*	*	*	*	*	*	*	*
Display multiple curves	*	*	*	*	*	*	*	*	*
Lift control					For CP4000				*
Role/user management	*	*	*	*	*	*	*	*	*
21 CFR Part 11#	*	*	*	*	*	*	*	*	*
Automatic stop on measured value	*	*	*	*	*	*	*	*	*
Mathematic analysis of results	Maximum, minimum, average, curves average, smoothing, interpolation, inflexion								
Analysis as Area, Slope, TPA, relaxation									*
Rheological models	Newton, Ostwald, Bingham, Casson, Casson-Steiner, Chocolat				Newton, Ostwald, Bingham, Casson, Power Law, Herschel-Bulkley, Casson-Steiner, Steiger Ory, Chocolat				

* Only for temperature unit with programmer.

CFR Optional Licence Requires.

Incubators

Hot Air Oven

Climate Chambers

Ultra Low Temperature Freezers

BINDER
Best conditions for your success



Drying & heating



The requirements for a drying chamber in the area of temperature stress testing reach far beyond temperature accuracy, heat distribution, and residue-free drying. A chamber used to dry flammable materials has to meet certain safety standards. BINDER masters these requirements like no other and offers a wide range of drying and heating chambers, material test chambers, and chambers for safety drying or gentle vacuum drying of heat-sensitive samples.



Heat Treatments

Drying and heating chambers
ED | ED-S | E | FD | FED | FD-S | FP | M



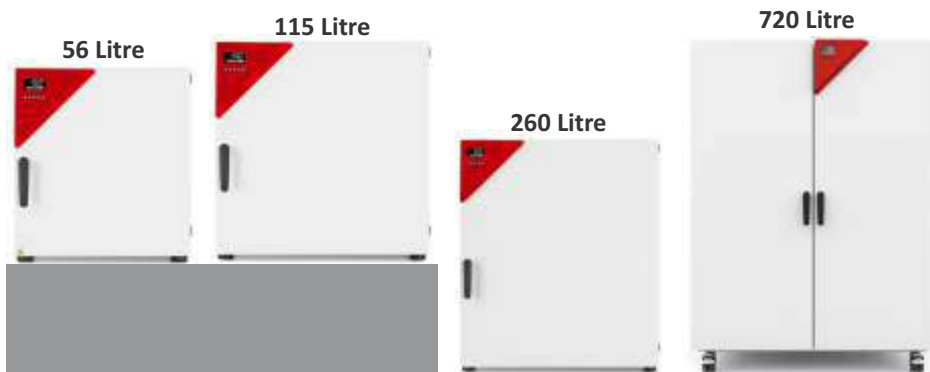
Safety drying

Safety drying chambers FDL



Vacuum drying

Vacuum drying chambers VD | VDL



Controller with LCD and numerous functions



Data recording via the USB port, which comes as standard

ED & FD/FED Avantgarde.Line series



Controller and timer functions

	ED series	FD series	FED series
Ramp function	•	•	•
Time delayed OFF	•	•	•
Time delayed ON	•	•	•
Temperature-dependent delayed OFF	•	•	•
Class 2 independent adjustable temperature safety device	•	•	•
Visual temperature alarm	•	•	•
Adjustable fan speed	—	—	•
Electromechanical control of the exhaust air flap	•	—	—
Advanced timing functions	—	—	•

Features:

- Temperature range: ambient temperature +5°C to +300°C
- Excellent temporal and spatial temperature accuracy thanks to new APT.line™ technology
- Transfer of heat through natural convection (ED series)
- Transfer of heat through forced convection (FD/FED series)
- Up to 30% lower energy consumption compared to conventional units on the market
- Easy and intuitive to use thanks to modern control technology, USB interface
- Class 2 integrated independent adjustable temperature safety device (DIN 12880) with visual alarm
- Ethernet interface (FD/FED only)

Available sizes: ED/FD 23 | ED/FD 56 | ED/FD 115 | ED/FD 260 | ED 400 | ED/FD 720 model

Available sizes: FED 56 | FED 115 | FED 260 | FED 400 | FED 720 model

For detail Specifications, Features refer to model specific datasheet contact sales representative

Drying and heating chambers with forced convection and program functions | FP series

FP series - Drying and heating chambers with forced convection and program functions. Material test chamber with mechanical convection of the FP series provides reliably short drying times and particularly fast heating – even for chambers under full loads.

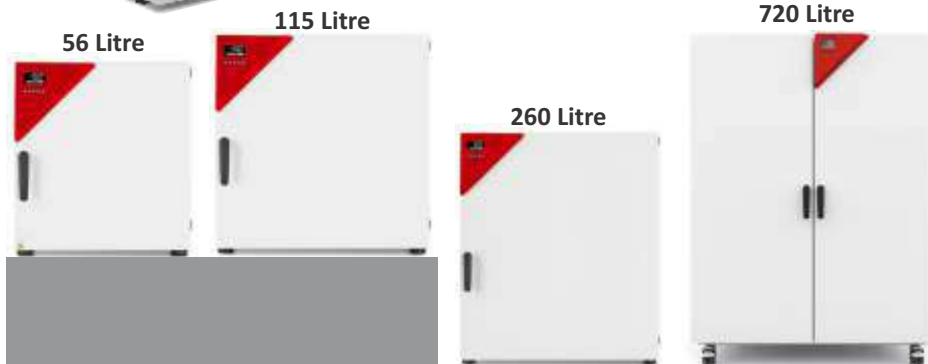


Features:

- Temperature range: +10°C above ambient temperature up to +300°C
- Controller with interval and real-time programming
- Computer interface: Ethernet
- Class 2 independent adjustable temperature safety device (DIN 12880) and class 3.1 independent temperature safety device (DIN 12880) with visual/acoustic alarm available for selection on the controller

Controller and timer functions

	FP series
Programming option	•
Weekly programming option	•
Real-time clock	•
Class 2 temperature limiter	•
Temperature alarm, visual	•
Adjustable fan speed	•
High-performance fan for fast heating up time	•



Controller with LCD and numerous functions



Data recording via the USB port, which comes as standard

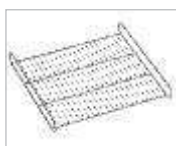
Available sizes: FP 56 | FP 115 | FP 260 | FP 720 model

OVENS WITH ADVANCED PROGRAM FUNCTIONS (M)

These series ovens meet diverse requirement for drying, sterilization and heating. With a maximum of +300 °C and various programming options the M series material test chambers are ideal for material and aging tests. With a high air flow, the powerful fans ensure rapid heating.



- Identical test conditions throughout the chamber interior independent of sample size and quantity
- Outstanding thermal insulation saves operation costs
- Advanced programming options
- Temperature range: +22°C above ambient temperature up to +300°C
- High temperature accuracy thanks to APT.line™ technology with increased heating output
- Reinforced fan with adjustable speed
- Electromechanical control of the exhaust air flap
- Intuitive touchscreen controller with time-segment and real-time programming
- Class 2 independent adjustable temperature safety device (DIN 12880) and class 3.1 independent temperature safety device (DIN 12880) with visual/ acoustic alarm available for selection on the controller
- Failsafe function – backup sensor Pt 100
- Computer interface: Ethernet
- Internal data logger, measured values can be read out in open format via USB



2 chrome-plated racks included with the standard unit



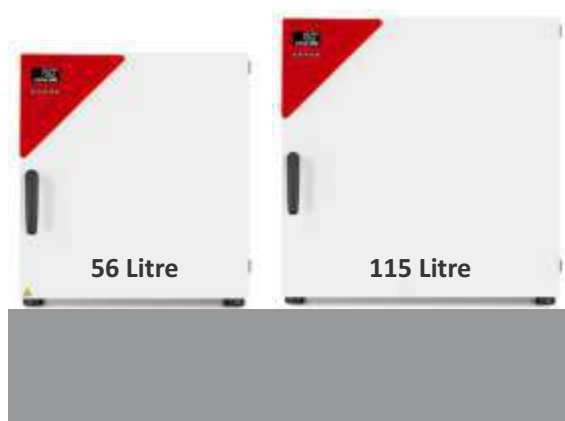
Intuitive Touchscreen controller

Available sizes: M 56 | M 115 | M 260 | M 720 model

ED-S & FD-S Solid.Line series

BINDER
Best conditions for your success

The new products in the Solid.Line impress with their tried-and-tested BINDER quality and reliability. They are suited to drying and heating. The attributes of the Solid.Line are geared towards the application in question and therefore used in research and quality assurance.



Controller with
7-segment display



Manually adjustable
exhaust air flap

Features:

- Temperature range: ambient temperature +7°C to +250°C
- High temperature accuracy thanks to APT.line™ preheating chamber technology
- Transfer of heat through natural convection (ED-S only)
- Transfer of heat through forced convection (FD-S only)
- Controller with timer function
- Class 2 integrated independent adjustable temperature safety device (DIN 12880) with visual alarm

Controller and timer functions

	ED-S series	FD-S series
Ramp function	•	•
Time delayed OFF	•	•
Time delayed ON	–	–
Temperature-dependent delayed OFF	–	–
Class 2 independent adjustable temperature safety device	•	•
Visual temperature alarm	•	•
Adjustable fan speed	–	–
Electromechanical control of the exhaust air flap	–	–

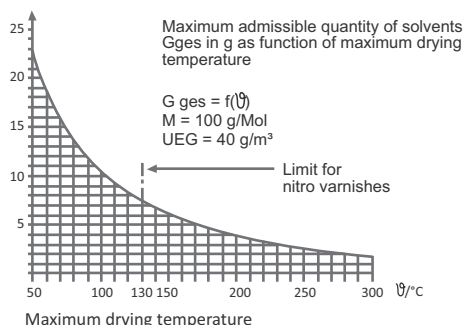
Available sizes: ED-S 56 / FD-S 56 | ED-S 115 / FD-S 115 model

SAFETY DRYING OVEN (FDL)



Solvent diagram

Gges/g



The FDL 115 with silicone and dust-free inner chamber, as well as symmetric airflow dries specimens containing solvents and thus this safety drying oven meets all EN 1539 requirements

- Safety concept meets the DIN EN 1539-2010-08 standard
- Short drying time with high temperature accuracy and defined ventilation
- Silicone free and dust-free inner chamber
- Replaceable fresh air cartridges are easy to change and ensure constant fresh air quality
- APT.line™ preheating chamber technology
- Controller with time-segment and real-time programming
- 2 chrome-plated racks
- Fresh-air monitoring with audible and visual alarm and automatic deactivation of heating
- Replaceable filter cartridge, Class M6
- Class 2 independent adjustable temperature safety device (DIN 12880) with visual alarm
- Computer interface: RS 422
- Standard door gasket made from solvent-resistant FKM for use at up to 200 °C
- Optional door gasket made from silicone with limited solvent resistance for use at up to 300 °C

Available sizes: FDL 115 model

Vacuum Ovens

BINDER vacuum drying chambers for high performance and safety

BINDER vacuum drying chambers live up to the highest of standards when it comes to safety, quality, and performance. Samples can be dried quickly, effectively, and gently, with homogeneous temperature distribution across the usable space and a drying process free from condensation. On top of all this, high levels of safety are guaranteed with the vacuum drying chambers. Adjustment without overshooting provides maximum protection for samples, while a unique, sophisticated safety concept is in place where operation is concerned.

In two series, BINDER has models available for both non-flammable and flammable solvents. The VDL series for flammable solvents also has an explosion-proof interior for added safety.

Vacuum drying chambers for quick and gentle drying

BINDER vacuum drying chambers can be used for extremely quick drying, without posing a risk to the samples in the process. These drying chambers meet even the strict requirements of the laboratory within industry and science applications alike, proving to be extremely durable and robust. The interior is made of highly corrosion-resistant stainless steel which is resilient and easy to clean. Maintenance and care is simplified further by the smooth inner chamber with rounded edges and racks that can be inserted flexibly and removed for cleaning purposes.

BINDER's vacuum drying chambers operate within a temperature range of between 10 °C and 220 °C, and are suitable for a wide range of applications. Fast and gentle sample drying is guaranteed at all times together with high levels of safety and usability.

Vacuum drying chambers for non-flammable solvents | VD series



Features:

- Temperature range: ambient temperature +9°C to +220°C
- Controller with digital display of pressure and temperature
- Program-controlled drying monitoring with automatic ventilation at end of process
- Internal data logger, measured values can be read out in open format via USB
- 1 aluminum expansion rack, can be custom-positioned
- Universal ventilation, can be used for inert gas or ambient air
- Universal access port, DN 16



Optimized thermal transfer through expansion racks



Optional equipment: pump chamber with pump



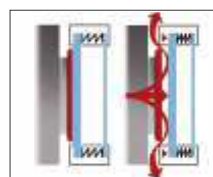
Optional LED strip light

Vacuum drying chambers for flammable solvents | VDL series

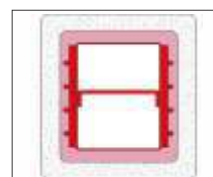


Features:

- Temperature range: ambient temperature +9°C to +110°C
- Unique worldwide: ATEX conformity for units: EX II 2/3/- G IIB T3 Gb/Gc/- X
- Intuitive touchscreen controller with graphical pressure and temperature display
- Program-controlled drying monitoring with automatic ventilation at end of process
- Internal data logger, measured values can be read out in open format via USB



Shatterproof, spring-mounted safety glass plane



Jacket heating with optimized thermal transfer to expansion racks



Explosion-protected interior (VDL only)

Available sizes: VD/VDL 23 | VD/VDL 56 | VD/VDL 115 model

Growth



Precise regulation of temperature, humidity, CO₂ concentration, and O₂ concentration as physical parameters, plus reliable reproducibility of test conditions, are the most important requirements for incubators and climate chambers used in scientific laboratories that work with living organisms. BINDER is aware of these requirements and works continuously to provide you with the perfect CO₂ incubators, microbiological incubators, and plant growth chambers. They deliver innovative technical solutions and comprehensive equipment options as standard.



Cell culture

CO₂ incubators CB-S | CB | CBF



Microbiological incubation

Standard incubators B | BD | BD-S | BF
Cooling incubators KB | KB ECO



Plant biology

Growth chambers KB-PRO | KBF-PRO

Incubators - Micro Biological | BD & BF Avantgarde.Line series

Cooling incubators are used in various sectors and areas of microbiology, such as in pharmaceutical and medical research, in the food industry, and in environmental monitoring. Other applications include battery research and development in which cooling incubators are used as "climate chambers without humidity regulation."

The completely redesigned Avantgarde.Line incubators with natural convection or forced convection are now the perfect solution when it comes to meeting growth and incubation requirements. With their exceptional efficiency and perfect temperature accuracy thanks to the very latest APT.line™ technology, this new generation of incubators has real appeal.

The BINDER incubator of the **BD Avantgarde.Line series** is specially designed for gentle incubation of organisms, as well as conditioning of heat-sensitive media. The new design of the units and the homogeneous temperature distribution ensure the very best results.

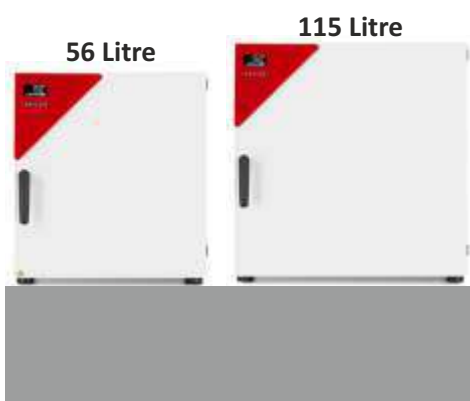
Features:

- Temperature range: ambient temperature plus 5 °C to 100 °C
- Temperature range (model 56 | 260): ambient temperature plus 7 °C to 100 °C (BF series)
- Temperature range (model 115): ambient temperature plus 8 °C to 100 °C (BF series)
- High temperature accuracy thanks to APT.line™ technology
- Natural convection (BD series)
- Forced convection (BF series)
- Controller with LCD display
- Electromechanical control of the exhaust air flap
- Inner door made of tempered safety glass
- 2 chrome-plated racks
- Units up to 115 L are stackable
- Class 3.1 integrated independent temperature safety device (DIN 12880) with visual alarm
- Ergonomic handle design

The BINDER incubator of the **BF Avantgarde.Line series** with forced convection is suitable for all gentle incubation applications, particularly under a full load and large batch throughputs. This incubator is extremely homogeneous and has quick recovery times.

Controller and timer functions

	BD series	BF series
Ramp function	•	•
Time delayed OFF	•	•
Time delayed ON	•	•
Temperature-dependent delayed OFF	•	•
Class 3.1 independent temperature safety device	•	•
Visual temperature alarm	•	•
Natural convection	•	—
Forced convection	—	•
Adjustable fan speed	—	•



Controller with LCD and numerous functions



Data recording via the USB port, which comes as standard



Inner door made of tempered safety glass

Available sizes: BD/BF 56 | BD/BF 115 | BD/BF 260 | BD/BF 720 model

KT Series – Cooled Incubator Peltier

The KT series combines outstanding performance with impressive energy efficiency and environmental friendliness. The cooled incubators of the KT series are state-of-the-art in application and protect the samples.



Features:

- Temperature range: +4 °C to +100 °C
- Electric cooling with Peltier module
- Adjustable fan speed
- Controller with time-segment and real-time programming
- Inner door made of tempered safety glass
- Data recording and USB interface
- APT.line™ preheating chamber technology
- Adjustable fan speed
- Electric cooling with Peltier module
- Display via LCD monitor
- Input via pushbutton/rotary knob
- Inner door made of tempered safety glass
- 2 stainless steel racks
- Units up to 115 liters are stackable
- Class 3.1 independent temperature safety device (DIN 12880) with visual and audible temperature alarm
- Computer interface: Ethernet
- Data recording and USB interface



Controller with time segment and real time programming



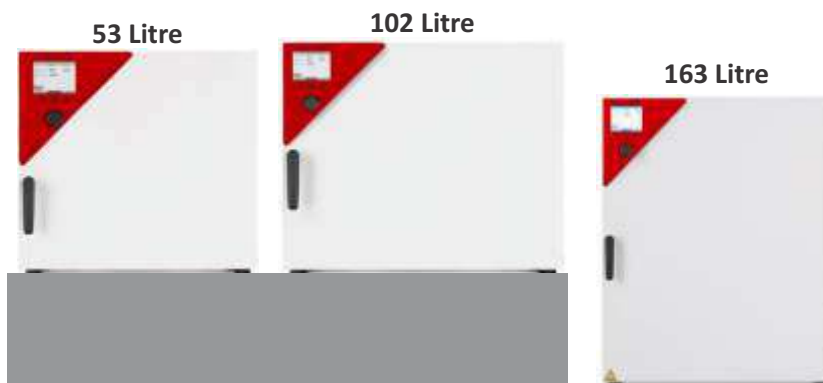
HIT insulation, direct foaming of the chamber with the housing



Inner door made of safety glass with gasket



White light LED modules providing flexible and simple placement (option)



Available sizes: KT 53 | KT 115 | KT 170 model

KB Series – Cooled Incubators with Compressor Technology

The powerful virtuoso in cooling incubators for microorganisms: KB units are able to incubate with exceptional precision even when fully loaded, feature a hot-air disinfection routine, and can be programmed for weekend operation with ease. The new KB unit consumes as much as 40% less energy than the previous model.



Features:

- Temperature range: 0°C to +70°C
- Up to 40% lower energy consumption compared to the previous model
- Cooling with climate-neutral R-600a refrigerant
- Door heating to prevent condensation
- Interior made completely of stainless steel
- Simple programming of a second set temperature value
- Proven APT.line™ preheating chamber technology
- Energy-efficient cooling with modern inverter cooling unit
- Housing design with HIT technology
- Inner doors made of metal oxide-coated safety glass
- Two racks made of stainless steel
- Large access port with silicone plug
- Floor-standing units featuring robust twin casters with brakes at the front
- Stackable tabletop units with a volume of up to 130 liters
- Simple programming of a second set temperature value
- Internal data logger, measured values can be read out in open format via USB
- Class 3.3 independent temperature safety device (DIN 12880) with visual and acoustic alarms
- Unit self-test for comprehensive status analysis
- Data interfaces: Ethernet, USB



Inner chamber made of corrosion-resistant stainless steel



Inner door made of tempered safety glass



White light LED modules providing flexible and simple placement (option)



Available sizes: KB 65 | KB 130 | KB 260 | KB 470 | KB 720 | KB 1060 model

KB-ECO Series – Cooled Incubator

Thanks to thermoelectric cooling technology with patented heat dissipation, the new KB ECO cooling incubator is one of the most energy-efficient cooling incubator on the market. The thermoelectric cooling technology means the KB ECO series is also very quiet during operation.

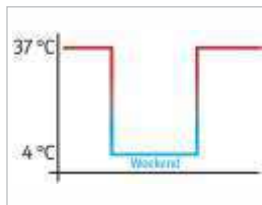


Features:

- Temperature range: 0°C to +70°C (max. 26°C below the ambient temperature)
- Particularly energy-efficient thanks to thermoelectric cooling technology
- Environmentally friendly operation without refrigerants
- APT.line™ preheating chamber technology
- Electric temperature control thanks to thermoelectric cooling module with innovative heat dissipation
- Inner door made of tempered safety glass
- Inner chamber made completely of stainless steel
- 2 stainless steel racks
- Adjustable condensate protection
- Access port with silicone plug Ø 30 mm
- LCD to display temperature along with additional information and alarms
- Internal data logger, measured values can be read out in open format via USB
- Unit self-test for comprehensive status analysis
- Computer interface: Ethernet



Unique condensate and dry-out protection for all operating conditions



Temperatures programmable for intermittent incubation and refrigeration



Fail-safe operation due to intelligent thermoelectric tempering



Energy consumption is minimal thanks to optimized thermoelectric cooling



Available sizes: KB-ECO 240 | KB-ECO 400 | KB-ECO 720 | KB-ECO 1020 model

Series KB PRO | with an extended temperature range

A temperature control cabinet that can do it all, the KB PRO is our most powerful cooling incubator. With a temperature range of -20°C to +100°C and comprehensive programming options, it covers a wide range of applications that extend well beyond incubation. Optional light modules are also available to turn the KB PRO into a chamber for ICH photostability testing or plant growth.



Features:

- Temperature range: -20°C to +100°C
- Cooling with climate-neutral R-290 refrigerant
- Two racks with stainless-steel telescopic rails
- Intuitive touchscreen controller with time-segment and real-time programming
- Signal triangle with light-up status display (for units with a volume of 470 liters and above)
- Proven APT.line™ preheating chamber technology
- Energy-efficient cooling with modern inverter cooling unit
- Door heating to prevent condensation
- Adjustable fan speed
- Housing design with HIT technology
- Stainless-steel inner chamber
- Inner doors made of metal oxide-coated safety glass
- Large access port with silicone plug
- Floor-standing units featuring robust twin casters with brakes at the front
- Stackable tabletop units with a volume of up to 130 liters
- Ergonomically adjustable control terminal (for units with a volume of 470 liters and above)
- Signal triangle with light-up status display (for units with a volume of 470 liters and above)
- Internal data logger, measured values can be read out in open format via USB
- Class 3.3 independent temperature safety device (DIN 12880) with visual and acoustic alarms
- Unit self-test for comprehensive status analysis
- Data interfaces: Ethernet, USB
- BINDER Multi Management Software APT-COM™ basic edition
- Optional light modules for ICH photostability testing (for models 260, 470, 720)
- Optional LED light modules for plant growth (for models from 260)



ICH-Lighting module

Light cassettes and supply module for upgrading a cooling incubator to a photostability test chamber. Can be retrofitted in two versions with or without light sensors for light dose control (LQC). Complies with ICH guideline Q1B.
KB PRO 260, 470, 720



CO2 Gassing module

The free-standing units in the KB PRO series can be retrofitted with a CO2 gassing module. Control ranges 0-1 vol.-% CO2 for plants or 0-20 vol.-% CO2 for cell cultures.
KB PRO 260, 470, 720



Plant Lighting module

LED light strips with supply module and control unit for the three light channels warm white, cool white and dark red. The light strips can be positioned flexibly and are attached to standard slide-in grids.
KB PRO 260, 470, 720 1060, 1600



Available sizes: KB PRO 130 | KB PRO 260 | KB PRO 470 | KB PRO 720 | KB PRO 1060 | KB PRO 1600 model

Environmental testing

Product development and quality assurance are primarily focused on complying with and monitoring performance specifications. Endurance tests and functional tests of materials, products, and systems are essential elements in this. A climate chamber is expected to simulate the effects of temperature, humidity, and light on the test specimen.

With these specific requirements in mind, BINDER offers a range of constant climate chambers that are ideal for performing precise tests with long-term stability. In cases where dynamic climate changes are required, our dynamic climate chambers offer innovative technical solutions and extensive equipment options. They are perfectly aligned with standards or individual requirements, and ensure that either active or passive test specimens can be tested reliably.



Stability tests

KBF | KBF-S ECO | KBF-PRO
KB | KB-S-ECO | KB-PRO

Walk-in-chambers | WIC



Material tests

Dynamic climate chambers
MK | MKT | MKF | MKFT

Constant Climatic Chambers:

(Humidity Chambers, Stability Chambers, Walk-in Chambers)

Constant climate chambers simulate temperature and humidity and are mainly used for environmental simulation tests to determine the service life and durability of products, materials, etc. They are used in different sectors, such as the pharmaceutical industry, the food industry, and the cosmetics industry, as well as in research.

Constant climate chambers play a key role in the execution of ICH stability testing, which is an important prerequisite for approving drugs. For this, the units must maintain the predefined climate parameters exactly and ensure smooth, reliable continuous operation. Important factors when choosing a constant climate chamber are heating and cooling technology, air flow, water management, and light.

BINDER offers a broad range of climate chambers for different types of environmental simulation tests, from long-term stability testing and accelerated shelf-life testing right through to demanding stress tests.

ICH light system

When combined with the new ICH light modules, our latest generation of climate chambers become photostability test chambers.

The light spectra fulfill the requirements of ICH guideline Q1B, Option 2. Modern LED technology is used for visible light. However, the UVA range cannot be covered with the current LED technology in accordance with ICH, which explains the use of fluorescent tubes.

The irradiance levels are designed so that a complete test can be carried out in three days. The light intensities were deliberately limited to this level to avoid thermal effects during the photostability test.

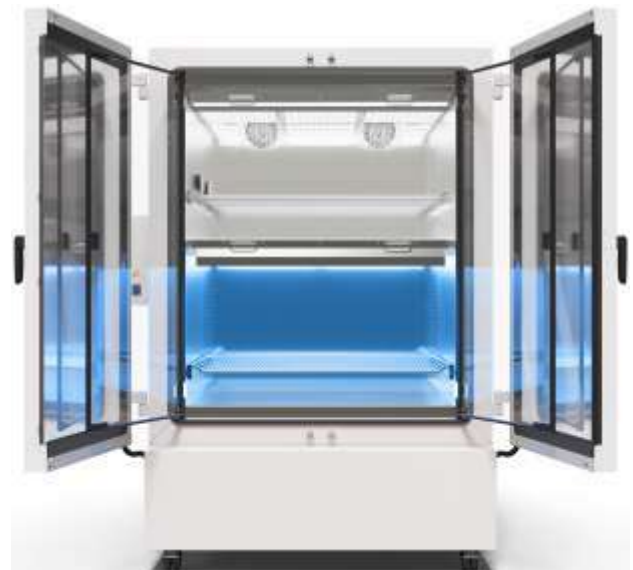
The ICH light modules are available with or without light-dose control (LQC) and in two sizes. They can be combined with climate chambers from the KBF and KBF PRO series in sizes 260, 470, and 720. For ICH photostability tests without humidity, the light modules can be combined with units from the KB PRO series.

Binder KBF & KBF Pro plant growth chamber is an enclosed climate chamber which generates a defined climate (temperature and humidity) and defined light conditions. In addition, a defined CO₂ concentration may be useful or necessary.

In contrast to walk-in plant growth chambers (phytotrons) or greenhouses, isolated experiments can be carried out in plant growth chambers under precisely defined and reproducible conditions.

Providing the basis for BINDER plant growth chambers are climate chambers from the KBF and KBF PRO series with temperature and humidity control as well as refrigerated incubators from the KB PRO series. These basic units are equipped with retrofittable LED plant light modules: The control unit is attached to the exterior using supplied fastening elements and the LED strip lights are secured in the interior of the units as required using metal clips.

Recommended accessories for plant growth upgrade to KBF & KBF Pro requires, Rack sets for holding the LED strips, Optional specimen temperature controller sensor, CO₂ gassing module from 0.05 vol. % to 1 vol. % CO₂



KBF Series – Constant Climatic Chambers

The proven specialist for reliable ICH stability tests in the pharmaceutical industry: the KBF masters all long-term tests, accelerated tests and stress tests. It fulfills all important ICH requirements, from precision to programming and documentation. With flexible water supply options for all installation locations. In addition, the new KBF consumes up to 40 % less energy than its predecessor. With optional light modules, the KBF can be converted into an ICH photostability chamber and a plant growth chamber.



Features:

- Temperature range: 0°C to +70°C
- Humidity range: 10% to 80% RH
- Up to 40% lower energy consumption compared to the previous model
- Cooling with climate-neutral R-600a refrigerant
- Two racks with stainless-steel telescopic rails
- Signal triangle with light-up status display (for units with a volume of 470 liters and above)
- Proven APT.line™ preheating chamber technology
- Energy-efficient cooling with modern inverter cooling unit
- Door heating to prevent condensation
- Adjustable fan speed
- Humidity regulation with capacitive humidity sensor and responsive steam humidification
- Housing design with HIT technology
- Stainless-steel inner chamber
- Inner doors made of metal oxide-coated safety glass
- Large access port with silicone plug
- Floor-standing units featuring robust twin casters with brakes at the front
- Stackable tabletop units with a volume of up to 130 liters
- Intuitive touchscreen controller with time-segment and real-time programming
- Ergonomically adjustable control terminal (for units with a volume of 470 liters and above)
- Internal data logger, measured values can be read out in open format via USB
- Class 3.3 independent temperature safety device (DIN 12880) with visual and acoustic alarms
- Unit self-test for comprehensive status analysis
- Data interfaces: Ethernet, USB
- BINDER Multi Management Software APT-COM™ basic edition
- Optional light modules for ICH photostability testing (for models 260, 470, 720)
- Optional LED light modules for plant growth (for models from 260)



ICH-Lighting module

Light cassettes and supply module for upgrading a cooling incubator to a photostability test chamber. Can be retrofitted in two versions with or without light sensors for light dose control (LQC). Complies with ICH guideline Q1B.
KB PRO 260, 470, 720



CO2 Gassing module

The free-standing units in the KB PRO series can be retrofitted with a CO2 gassing module. Control ranges 0-1 vol.-% CO2 for plants or 0-20 vol.-% CO2 for cell cultures.
KB PRO 260, 470, 720



Plant Lighting module

LED light strips with supply module and control unit for the three light channels warm white, cool white and dark red. The light strips can be positioned flexibly and are attached to standard slide-in grids.
KB PRO 260, 470, 720 1060, 1600



TFT color display with resistive touchscreen



Available sizes: KBF 130 | KBF 260 | KBF 470 | KBF 720 | KBF 1060 | KBF 1600 model

KBF-PRO Series – Constant Climatic Chambers

Stability Chambers, Humidity Chambers, Plant Growth Chambers, Photostability Chambers)

A powerful all-rounder among constant climate chambers: Equipped with all kinds of sophisticated technology, the KBF PRO takes any material test in its stride – whether it takes place at -20°C or under THB conditions at +85°C and 85% relative humidity. It offers flexible water supply options for all installation sites and consumes up to 40% less energy than its predecessor, the KMF model. Optional light modules are also available to turn the KBF PRO into a chamber for ICH photostability testing or plant growth.



Features:

- Temperature range: -20°C to +100°C
- Humidity range: 10% to 98% RH
- Up to 40% lower energy consumption compared to the previous model
- Cooling with climate-neutral R-290 refrigerant
- Two racks with stainless-steel telescopic rails
- Signal triangle with light-up status display (for units with a volume of 470 liters and above)
- Proven APT.line™ preheating chamber technology
- Energy-efficient cooling with modern inverter cooling unit
- Door heating to prevent condensation
- Adjustable fan speed
- Humidity regulation with capacitive humidity sensor and responsive steam humidification
- Housing design with HIT technology
- Stainless-steel inner chamber
- Inner doors made of metal oxide-coated safety glass
- Large access port with silicone plug
- Floor-standing units featuring robust twin casters with brakes at the front
- Stackable tabletop units with a volume of up to 130 liters
- Intuitive touchscreen controller with time-segment and real-time programming
- Ergonomically adjustable control terminal (for units with a volume of 470 liters and above)
- Internal data logger, measured values can be read out in open format via USB
- Class 3.3 independent temperature safety device (DIN 12880) with visual and acoustic alarms
- Unit self-test for comprehensive status analysis
- Data interfaces: Ethernet, USB
- BINDER Multi Management Software APT-COM™ basic edition
- Optional light modules for ICH photostability testing (for models 260, 470, 720)
- Optional LED light modules for plant growth (for models from 260)



ICH-Lighting module

Light cassettes and supply module for upgrading a cooling incubator to a photostability test chamber. Can be retrofitted in two versions with or without light sensors for light dose control (LQC). Complies with ICH guideline Q1B.
KB PRO 260, 470, 720



CO2 Gassing module

The free-standing units in the KB PRO series can be retrofitted with a CO2 gassing module. Control ranges 0-1 vol.-% CO2 for plants or 0-20 vol.-% CO2 for cell cultures.
KB PRO 260, 470, 720



Plant Lighting module

LED light strips with supply module and control unit for the three light channels warm white, cool white and dark red. The light strips can be positioned flexibly and are attached to standard slide-in grids.
KB PRO 260, 470, 720 1060, 1600



Available sizes: KBF PRO 130 | KBF PRO 260 | KBF PRO 470 | KBF PRO 720 | KBF PRO 1060 | KBF PRO 1600 model

KBF-ECO Solid Line Series – Constant Climatic Chambers

Thanks to thermoelectric cooling technology with patented heat dissipation, the new KBF-S ECO climatic chamber is one of the most energy-efficient constant climate chambers on the market.

The thermoelectric cooling technology means the KBF-S ECO series is also very quiet during operation.



Features:

- Temperature range: 0 °C to +70 °C (max. 24 °C under ambient temperature)
- Humidity range: 10% to 80% RH
- Particularly energy-efficient thanks to thermoelectric cooling technology
- Environmentally-friendly operation without refrigerants
- Independent water supply via tank
- APT.line™ preheating chamber technology
- Independent water supply via tank
- LCD to display temperature and humidity along with additional information and alarms
- Internal data logger, measured values can be read out in open format via USB
- Unit self-test for comprehensive status analysis
- Inner chamber made completely of stainless steel
- 2 stainless steel racks, including shelf carrier
- Access port with silicone plug Ø 30 mm, left
- Computer interface: Ethernet



Homogeneous climate conditions thanks to APT.line™ preheating chamber technology



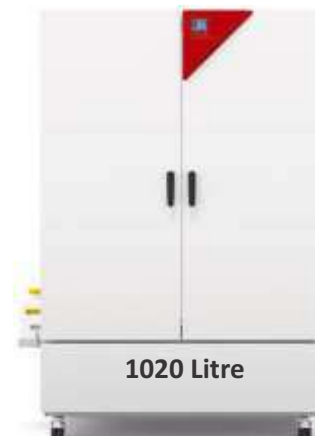
Precise humidification



Inner chamber and all fixtures made of stainless steel



Stable climate even at temperatures up to 28°C below ambient temperature



Available sizes: KBF-S ECO 240 | KBF-S ECO 400 | KBF-S ECO 720 | KBF-S ECO 1020 model

CB Series – CO₂ Incubators

The powerful and versatile CB CO₂ incubator is suitable for cell-based assays in drug and medical research. This BINDER incubator is even suitable for complex cultivation experiments or individual environments with hypoxic conditions thanks to its comprehensive assortment of options and accessories.



Features:

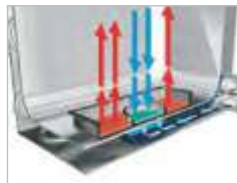
- Seamless inner chamber made of stainless steel with flanges as shelf support system
- Auto-sterilization with hot air at +180°C
- Hot air sterilizable CO₂ sensor with single-beam infrared technology
- Condensation-free humidity control with Perma dry double water pan
- Touchscreen controller with internal data recording via USB interface
- Optimized double-pan humidification system with condensation protection
- Tried-and-tested anti-contamination concept with 180°C hot air sterilization
- Hot-air sterilizable CO₂ sensor with single-beam infrared technology
- Seamless inner chamber made of stainless steel with flanges as shelf support system
- Fanless interior with Venturi CO₂ gas mixing nozzle
- Intuitive touchscreen controller
- Internal data recording, can be read out in open format via USB interface
- Fault diagnosis system with visual and acoustic alarm
- Interfaces: Ethernet, USB, zero-voltage alarm contact
- Fail-safe CO₂ system for protecting the pH of cell cultures

Options:

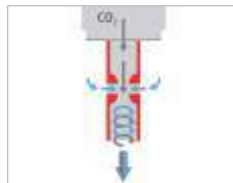
- O₂ control with O₂ control ranges: 0.2 to 20 vol.% O₂ or 10 to 90 vol.% O₂
- Multi-sectional glass doors with special shelves for dividing up the space to accommodate different experiments
- Stacking adapter for secure, space-saving installation
- Gas tank changer for connecting two gas tanks to one or two incubators



Variable positionable and removable illumination cassettes



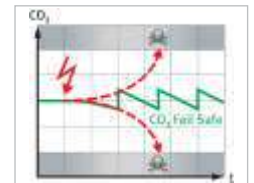
Permadry™ humidification system with double pan



Sterilizable IR CO₂ sensor and Venturi gas-mixing nozzle



DuoDoor™ – outer and inner door open at the same time



CO₂ fail-safe for emergency control in the event of sensor failure



53 Litre



170 Litre



267 Litre

Available sizes: CB 56 | CB 160 | CB 220 model

CBF Series – CO₂ Incubators

The BINDER CBF is the high-end CO₂ incubator with humidity control that is suitable for all sensitive incubation applications in GMP environments. It ensures consistent results including in cell-based assays with multiwell plates. This BINDER incubator is even suitable for complex cultivation experiments or individual environments with hypoxic conditions thanks to its comprehensive assortment of options and accessories.



Features:

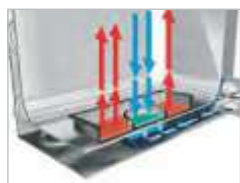
- Seamless stainless steel inner chamber
- Auto-sterilization with hot air at +180°C
- Hot air sterilizable CO₂ sensor with single-beam infrared technology
- Unparalleled moisture control speed and safety thanks to superheated steam humidification
- Touchscreen controller with internal data recording via USB interface
- Contamination-safe humidification system without water pan
- Tried-and-tested anti-contamination concept with 180 °C hot air sterilization
- Hot-air sterilizable CO₂ sensor with single-beam infrared technology
- Seamless inner chamber made of stainless steel with flanges as shelf support system
- Fanless interior with Venturi CO₂ gas mixing nozzle
- Intuitive touchscreen controller
- Internal data logger, measured values can be read out in open format via USB
- Troubleshooting system with visual and acoustic alarms
- Interfaces: Ethernet, USB, zero-voltage alarm contact
- Fail-safe CO₂ system for protecting the pH of cell cultures

Options:

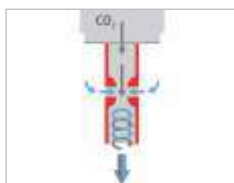
- O₂ control with O₂ control ranges: 0.2 to 20 vol.% O₂ or 10 to 90 vol.% O₂
- Multi-sectional glass doors with special shelves for dividing up the space to accommodate different experiments
- Stacking adapter for secure, space-saving installation
- Gas tank changer for connecting two gas tanks to one or two incubators



Contamination-proof humidification system without water pan



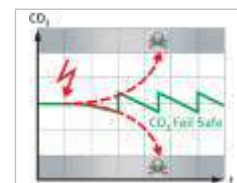
Permadyry™ humidification system with double pan



Sterilizable IR CO₂ sensor and Venturi gas-mixing nozzle



DuoDoor™ – outer and inner door open at the same time



CO₂ fail-safe for emergency control in the event of sensor failure



170 Litre



267 Litre

Available sizes: CBF 170 | CBF 260 model

CB-S Series – CO₂ Incubators

The durable and affordable CB-S series incubators are suitable for routine cell cultivation applications in the field of cell production, particularly in academic settings. They are contamination-proof due to 180°C hot air sterilization and reliably pH-stable thanks to the drift-free infrared CO₂ measurements conducted in real time.



Features:

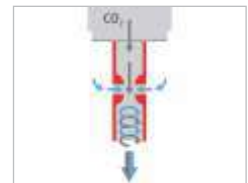
- Seamless stainless steel inner chamber
- Auto-sterilization with hot air at +180°C
- CO₂ sensor with infrared technology
- Condensation-free humidity control with water pan
- Internal data logger, can be read out via USB interface
- Temperature range: +6°C above ambient temperature to +50°C
- Humidity range: 90 to 95% RH
- CO₂ control range: 0 to 20 vol.% CO₂
- Tried-and-tested anti-contamination concept with 180°C hot air sterilization
- Humidification system with condensation protection
- CO₂ gas mixing jet with Venturi effect
- LCD to display temperature and CO₂ along with additional information and alarms
- Internal data logger, measured values can be read out in open format via USB
- Tightly fitted inner door made of safety glass
- Seamless stainless steel inner chamber
- Perforated shelves, stainless steel
- Troubleshooting system with visual and acoustic alarms
- Interfaces: Ethernet, USB, zero-voltage alarm contact
- Units can be stacked with stacking adapters; the CB-S is suitable for stacking with CB and CBF models of the same size

Options:

- Copper interior fittings consisting of copper shelves and copper-plated water pan
- Stacking adapter for secure, space-saving installation
- CO₂ gas tank changer for connecting two gas tanks to one or two incubators
- CO₂ shaker with corrosion-resistant components in a stainless-steel housing
- APT-COM Multi Management Software – for managing, recording, and documenting unit parameters
- Services – wide range of services to ensure that the unit functions correctly



Variable positionable and removable illumination cassettes



Sterilizable IR CO₂ sensor and Venturi gas-mixing nozzle



170 Litre



267 Litre

Available sizes: CB-S 170 | CB-S 260 model

ULTRA LOW TEMPERATURE FREEZERS



Best conditions for your success

Series UF V | Ultra low temperature freezers with climate-neutral refrigerants

The BINDER ultra low temperature freezer ensures the safe storage of samples at -90 °C. It combines outstanding environmental friendliness with low energy consumption, convenient operation and an individual safety concept

- Temperature range: -90 °C to -40 °C
- Lowest energy consumption in its class
- Powerful cascade compressor cooling unit
- Environmentally friendly refrigerants R-290 and R-170
- Thermal insulation with unique long-life VIPs (vacuum insulation panels)
- Innovative door gasket concept reduces buildup of ice
- Ergonomic door handle
- Rust-proof interior made completely of stainless steel
- Detachable inner doors made of stainless steel
- Stainless-steel shelves providing flexible placement
- Water cooling (UFV 500 / UFV 700)
- Zero-voltage alarm contact for in-house alarm system
- Internal data logger, measured values can be read out in open format via USB
- Ethernet interface
- Access ports, Ø 28 mm, rear



Description	UFV 350	UFV 500	UFV 700
Housing Dimensions not incl. fittings and connections (D x H x W) mm	938 x 1966 x 706	938 x 1966 x 826	938 x 1966 x 1110
Internal Dimensions (D x H x W) mm	605 x 1300 x 486	605 x 1300 x 606	605 x 1300 x 890
Measures			
Interior volume [L]	382	477	700
Net weight of the unit (empty) [kg]	226	247	288
Permitted load [kg]	160	200	200
Performance Data Temperature			
Temperature range [°C]	-90...-40	-90...-40	-90...-40
Temperature variation at -80 °C [± K]	3.5	2.5	2.5
Temperature fluctuation at -80 °C [± K]	3.5	1.5	1.5
Warm-up time during power failure from -80 °C to -60 °C [min]	170	230	250
Electrical data			
Nominal power (version 230 V) [kW]	1.6	1.6	1.6
Fixtures			
Number of shelves (std./max.)	3/13	3/13	3/13

APT.COM™ 4 SOFTWARE

BINDER

Best conditions for your success



With features ranging from GLP-compliant recording to convenient program creation and management of up to 100 units, the APT-COM™ 4 can be used in all industries and makes complex work processes much easier.

The new version of Multi Management Software APT-COM™ 4 is available in three different editions.

Depending on your requirements, you can use the BASIC, PROFESSIONAL, or GLP edition. The selection of functions ranges from simple record management and administration for around 100 connected environmental simulation chambers through to the tamper-proof documentation of measured values according to GLP/GMP guidelines, which correspond to the requirements of the FDA Regulation 21 CFR 11.

- Central overview of all units in both graphic and table form
- Record management (creating, deleting, archiving)
- Choice of 5 menu languages: DE, EN, FR, IT, ES
- Graphical/numerical program editor
- Reminders can be set via timer function
- Documentation of measured values
- Export of measured values in CSV & PDF format
- Program execution via APT-COM™
- Central overview of all units in a room plan (PROFESSIONAL, GLP edition)
- User administration for multiple users and authorizations (PROFESSIONAL, GLP edition)
- GLP/GMP-compliant data retention (GLP edition)
- Audit trail (GLP edition)



QUICK AND EASY UNIT SETUP

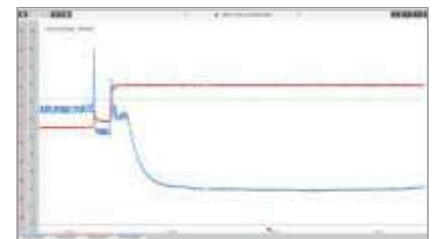
Easy identification of the units to be set up with the aid of the article number. This means the units can be found in a matter of seconds and recording can begin.

Multiple units can easily be set up in just a few clicks.



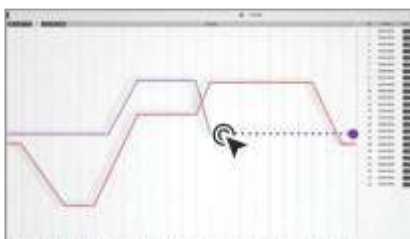
UNIT OVERVIEW AND CONTROL AT A GLANCE

The overview displays the actual values and current measurements, making it easier to access the units and keep track of them. Limit values can also be set in this view. The Rec button can be used to start recordings immediately.



DIVERSE PRESENTATION OF MEASURED DATA

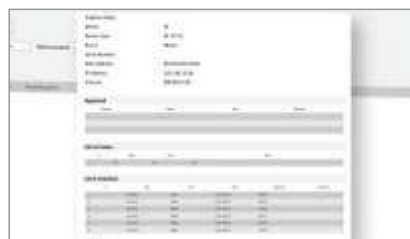
The analysis tool provides access to all records in real time and around the clock. The data can be displayed in table form or as a graphic and the view can be individually adjusted to personal needs. Measurement data from multiple units can be combined and clearly displayed in metadata records.



EASY PROGRAMMING

Programming can be carried out directly in the graphic or by entering values manually in table form.

It is not possible for the set values to exceed limit values as the parameters are already preset in the unit setup.



DATA EXPORT AND GLP-COMPLIANT DATA RETENTION

A comprehensive report can be generated as a PDF or CSV file at the push of a button. The data is retained in a tamper-proof, GLP-compliant manner. All processes are documented in full without any gaps in the system log (audit trail).



RELIABLE UNIT MONITORING

The alarm centre simplifies the management of up to 100 BINDER units and their data. Searches, configuration and monitoring are synchronized and available in the GLP edition.



LABORATORY FURNACE



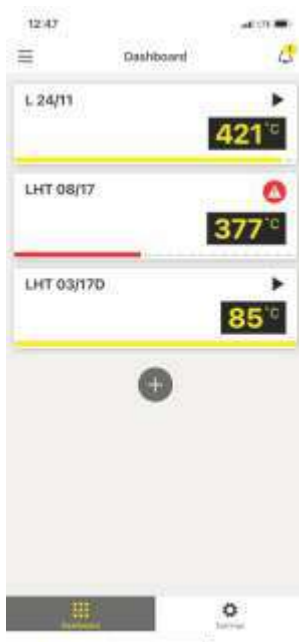
CONTROLLER 500 SERIES

The controller series 500 impresses with its high-contrast, large touch panel, which shows exactly the information that is relevant at the moment. With a combination of the free “MyNabertherm” smartphone app for monitoring of the furnace on-the-go.



Feature	B500/B510	C540/C550	P570/P580
Number of programs	5	10	50
Segments	4	20	40
Extra functions (e. g. fan or automatic flaps) maximum	2	2	2-6
Maximum number of control zones	1	1	3
Charge control/bath control			•
Auto tune	•	•	•
Real-time clock	•	•	•
Status messages in clear text	•	•	•
Entering program names (i.e. “Sintering”)	•	•	•
User levels	•	•	•
Skip-button for segment jump	•	•	•
Program entry in steps of 1 °C or 1 min.	•	•	•
Start time configurable (e. g. to use night power rates)	•	•	•
Set point output	•	•	•

MyNabertherm App



MyNabertherm app – the powerful and free digital accessory for Nabertherm 500 Series Controllers. Use the app for convenient online progress monitoring of your Nabertherm furnaces from wherever you wish.

App Features

- Convenient monitoring of one or multiple Nabertherm furnaces simultaneously with graphical representation of the program progress
- Clear presentation of active and inactive furnace on a dashboard with operating status and current process data
- Push notification on the lock screen in case of malfunction
- Display of malfunctions with an associated description in the individual overview and in a message list
- Display of furnace name, program name, segment information, start time, program run time, remaining run time, fresh-air fan, exhaust air flap, gassing, etc.

SOFTWARE

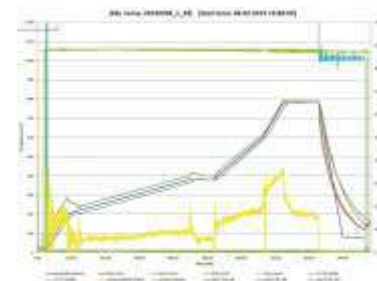


1. NTLog Basic:

- Records process data from Nabertherm Controllers (B500, B510, C540, C550, P570, P580) on a USB stick.
- Data stored on USB stick (up to 130,000 records in CSV format) for later evaluation on PC using NTGraph.
- Generated data records on USB stick have checksums for protection against accidental manipulation.

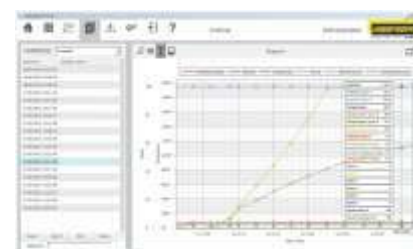
2. NTGraph (Freeware):

- Visualizes process data generated by NTLog.
- Allows data import and presentation as diagrams, tables, or reports with customizable design.



3. NTEdit (Freeware):

- Simplifies input of programs for Nabertherm Controllers (B500, B510, C540, C550, P570, P580) via USB stick from customer's PC
- Display of set curves in tabular or graphical form.

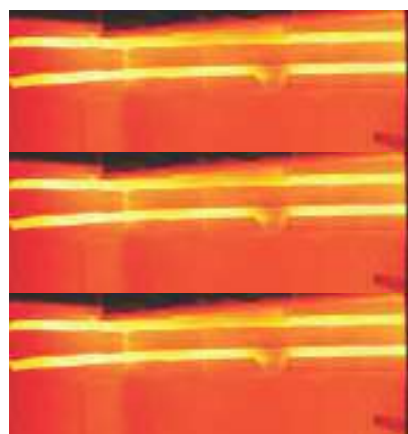


4. VCD-software:

- Ideal for single or multi-furnace systems, providing documentation and reproducibility for quality assurance.
- Allows storage of up to 400 different heat treatment programs.
- Can control Furnace and record data, with process documentation and archiving, with visualization in the form of a diagram data table
- Export to CSV or PDF.
- Compatible with controllers series 500, series 400, Eurotherm 3504, and other Nabertherm controllers.

Features	NTLog Basic	NTGraph	NTEdit	VCD
Data Recording	•			•
Data Visualization		•		•
Program Creation			Yes via USB	Yes via Ethernet
Control				•
Mode of Communication	Internal	USB Stick	USB Stick	Ethernet
Archival of Data	Up to 130,000 Records			Unlimited (as per space in PC)
PC Compatibility		via USB Stick	via USB Stick	via Ethernet

HEATING ELEMENT



Temp. Range	Heating Element (Muffle Furnace)	Series
Upto 1100°C	Ferritic Alloy (AF Wire) integrated in quartz glass tube	LE
	Ferritic Alloy (AF Wire) integrated in Ceramic heating plate	LV/LVT
Upto 1300°C	Ferritic Alloy (AF Wire) integrated in Ceramic heating plate	L/LT
Upto 1600°C	Silicon Carbide (SiC)	LHTC/LHTCT
Upto 1800°C	Molybdenum Disilicide (MoSi2)	LHT/HT

Temp. Range	Heating Element (Tube Furnace)	Series
Upto 1300°C	Ferritic Alloy (AF Wire)	R
	Ferritic Alloy (AF Wire) integrated in quartz glass tube	RSH/RSV
Upto 1500°C	Silicon Carbide (SiC)	RHTC
Upto 1800°C	Molybdenum Disilicide (MoSi2)	RHTH/RHTV

MUFFLE FURNACE



MORE THAN HEAT 30-3000 °C



Lift Door

- Tmax 1100°C to 1800°C
- Heating from two sides up to five sides for an optimal temperature uniformity
- Temperature uniformity of ± 5 K with closed fresh-air inlet in empty work space according to DIN 17052-1 at working temperatures above 800°C
- Fast heating times
- Dual shell housing made of textured stainless steel sheets with additional fan cooling for low surface temperature
- Exclusive use of insulation materials without categorization according to EC Regulation No. 1272/2008 (CLP)
- Adjustable air inlet integrated in door
- Exhaust air outlet in rear wall (select model)
- Compact dimensions and light weight
- Solid state relays provide for low noise operation
- Defined application within the constraints of the operating instructions
- NTLog Basic for Nabertherm controller: recording of process data with USB-flash drive
- Multi-layer insulation with robust lightweight refractory bricks in the furnace chamber
- Optional Flap door which can be used as work platform or Lift door with hot surface facing away from the operator



Flap Door



Manual Gas Supply System



Chimney with Fan

Model	Tmax (°C ¹)	Volume (l)	Inner dimensions w x d x h (mm)	Connected load (kW)	Electrical connection	Heating time in (min ⁴)
LE 1/11	1100	1	90 x 115 x 110	1.6	1-phase	10
L 1/12	1200	1	90 x 115 x 110	1.5	1-phase	25
LHT 01/17 D	1650	1	110 x 120 x 120	2.9	1-phase	35
LHTC 01/16	1550	1.5	110 x 120 x 120	3.5	1-phase	30
LHT 02/16	1600	2	90 x 150 x 150	3.0	1-phase	30
LHT 02/17	1750	2	90 x 150 x 150	3.0	1-phase	35
LHT 02/18	1800	2	90 x 150 x 150	3.6	1-phase	60
L(T) 3/11	1100	3	160 x 140 x 100	1.2	1-phase	40
L(T) 3/12	1200	3	160 x 140 x 100	1.2	1-phase	45
LHTC(T) 03/16	1600	3	120 x 210 x 120	10.0	3-phase	30
LHT 04/16	1600	4	150 x 150 x 150	5.2	3-phase	25
LHT 04/17	1750	4	150 x 150 x 150	5.2	3-phase	30
LHT 04/18	1800	4	150 x 150 x 150	5.2	3-phase	40
L(T) 5/11	1100	5	200 x 170 x 130	2.4	1-phase	50
L(T) 5/12	1200	5	200 x 170 x 130	2.4	1-phase	60
L, LT 5/13	1300	5	200 x 170 x 130	2.4	1-phase	60
L, LT 5/14	1400	5	200 x 170 x 130	2.4	1-phase	50
LE 6/11	1100	6	170 x 200 x 170	2.0	1-phase	30
LHT 08/16	1600	8	150 x 300 x 150	8.0	3-phase	25
LHTC(T) 08/16	1600	8	170 x 290 x 170	15.5	3-phase	25
LHT 08/17	1750	8	150 x 300 x 150	8.0	3-phase	30
LHT 08/18	1800	8	150 x 300 x 150	9.0	3-phase	40
L(T) 9/11	1100	9	230 x 240 x 170	3.0	1-phase	65
L(T) 9/12	1200	9	230 x 240 x 170	3.0	1-phase	75
L, LT 9/13	1300	9	230 x 240 x 170	3.0	1-phase	60
L, LT 9/14	1400	9	250 x 250 x 170	3.2	1-phase	50
LE 14/11	1100	14	220 x 300 x 220	3.2	1-phase	35
L(T) 15/11	1100	15	230 x 340 x 170	3.2	1-phase	75
L(T) 15/12	1200	15	230 x 340 x 170	3.2	1-phase	85
L, LT 15/13	1300	15	230 x 340 x 170	3.2	1-phase	70
L, LT 15/14	1400	15	250 x 350 x 170	3.2	1-phase	70
L(T) 24/11	1100	24	280 x 340 x 250	4.5	3-phase	70
LE 24/11	1100	24	260 x 330 x 280	3.5	1-phase	40
L(T) 24/12	1200	24	280 x 340 x 250	4.5	3-phase	80
L(T) 40/11	1100	40	320 x 490 x 250	6.0	3-phase	75
L(T) 60/11	1100	60	380 x 490 x 330	9.8	3-phase	150
L(T) 60/12	1200	60	380 x 490 x 330	9.8	3-phase	160

¹ Recommended working temperature is 100°C Below Tmax

⁴ Heating time of the empty and closed furnace up to Tmax –100 K



Round Sagger



Rectangular / Square Sagger

ASHING FURNACE



Ashing Furnace



Ceramic Collecting Pan

Hot
Cold



Air Circulation



Air Inlet & Exhaust Flow

- Tmax 1100 °C
- Ceramic heating plates with integral heating element which is safeguarded, and easy to replace
- Air exchange of more than 6 times per minute
- Good temperature uniformity due to preheating of incoming air, temperature uniformity according to DIN 17052-1 to +/- 10°C in the defined empty work area
- Suitable for many standardized ashing processes according to ISO, ASTM, EN, and DIN
- NTLog Basic for Nabertherm controller: recording of process data with USB-flash drive
- Spring-assisted closing of the furnace door (flap door) with mechanical locking against unintentional opening
- Dual shell housing made of textured stainless steel sheets with additional fan cooling for low surface temperature
- Exclusive use of insulation materials without categorization according to EC Regulation No. 1272/2008 (CLP)

Model	Tmax (°C) ¹	Volume (l)	Inner dimensions wxdxdh (mm)	Max. evaporation rate (g/min)	Connected load (kW)	Electrical Connection	Heating time (min) ⁴
LV 3/11	1100	3	160 x 140 x 100	0.1	1.2	1-phase	45
LVT 3/11	1100	3	160 x 140 x 100	0.1	1.2	1-phase	45
LV 5/11	1100	5	200 x 170 x 130	0.2	2.4	1-phase	55
LVT 5/11	1100	5	200 x 170 x 130	0.2	2.4	1-phase	55
LV 9/11	1100	9	230 x 240 x 170	0.3	3.0	1-phase	70
LVT 9/11	1100	9	230 x 240 x 170	0.3	3.0	1-phase	70
L 9/11 BO	1100	9	230 x 240 x 170	1.0	7.0	3-phase	120
LV 15/11	1100	15	230 x 340 x 170	0.3	3.5	1-phase	80
LVT 15/11	1100	15	230 x 340 x 170	0.3	3.5	1-phase	80
L 24/11 BO	1100	24	280 x 340 x 250	2.0	9.0	3-phase	120
L 40/11 BO	1100	40	320 x 490 x 250	2.1	11.5	3-phase	120

¹ Recommended working temperature is 100°C Below Tmax

⁴ Heating time of the empty and closed furnace up to Tmax -100 K

TUBE FURNACE



MORE THAN HEAT 30-3000 °C



Tube Furnace

- Tmax 1200 °C to 1800 °C
- Single-zoned design / three-zoned design
- Dual shell housing made of textured stainless steel sheets with additional fan cooling for low surface temperature
- Exclusive use of insulation materials without categorization according to EC Regulation No. 1272/2008 (CLP)
- Outer tube diameter ranging from 50 mm to 170 mm and heated length ranging from 250 mm to 1000 mm
- Solid state relays provide for low noise operation
- Defined application within the constraints of the operating instructions
- NTLog Basic for Nabertherm controller: recording of process data with USB-flash drive
- Ceramic working tube including two fiber plugs for operation under air
- Active cooling of housing for low surface temperatures (select models)

Model	Tmax (°C)	Outer tube Ø (mm)	Heated Length (mm)	Tube length (mm)	Connected load (kW)	Electrical Connection
R 50/250/12	1200	50	250	450	1.6	1-phase
R 50/500/12	1200	50	500	700	2.3	1-phase
R 120/500/12	1200	120	500	700	6.5	3-phase
R 170/750/12	1200	170	750	1070	10.0	3-phase
R 170/1000/12	1200	170	1000	1400	11.5	3-phase
R 50/250/13	1300	50	250	450	1.6	1-phase
R 50/500/13	1300	50	500	700	2.3	1-phase
R 120/500/13	1300	120	500	700	6.5	3-phase
R 170/750/13	1300	170	750	1070	10.0	3-phase
R 170/1000/13	1300	170	1000	1400	11.5	3-phase
RHTC 80/230/16	1600	80	230	600	7.5	3-phase
RHTC 80/450/16	1600	80	450	830	11.3	3-phase
RHTC 80/710/16	1600	80	710	1080	13.8	3-phase
RHTV 50/150/16	1600	50	150	380	5.4	3-phase
RHTV 80/300/16	1600	80	300	530	10.3	3-phase
RHTV 120/600/16	1600	120	600	830	19.0	3-phase
RHTH 50/150/17	1700	50	150	380	5.4	3-phase
RHTH 80/300/17	1700	80	300	530	9.0	3-phase
RHTH 120/600/17	1700	120	600	830	14.4	3-phase
RHTV 50/150/17	1700	50	150	380	5.4	3-phase
RHTV 80/300/17	1700	80	300	530	10.3	3-phase
RHTV 120/600/17	1700	120	600	830	19.0	3-phase
RHTH 50/150/18	1800	50	150	380	5.4	3-phase
RHTH 80/300/18	1800	80	300	530	9.0	3-phase
RHTH 120/600/18	1800	120	600	830	14.4	3-phase
RHTV 50/150/18	1800	50	150	380	5.4	3-phase
RHTV 80/300/18	1800	80	300	530	10.3	3-phase
RHTV 120/600/18	1800	120	600	830	19.0	3-phase

SPLIT-TYPE TUBE FURNACE



MORE THAN HEAT 30-3000 °C



Split-Type Tube Furnace

- Tmax 1100°C or 1300°C
- Single-zoned design
- Dual shell housing made of textured stainless steel sheets with additional fan cooling for low surface temperature
- Exclusive use of insulation materials without categorization according to EC Regulation No. 1272/2008 (CLP)
- RSV models with frame for vertical operation
- Split-type design for simple insertion of the working tube (opening temperature < 180°C)
- Ceramic working tube C 530 including two fiber plugs for operation under air
- Thermocouple type N (1100°C) or type S (1300°C)
- Solid state relays provide for low noise operation
- Heating elements on support tubes provide for free radiation
- RSH: switchgear and control unit integrated in furnace housing
- RSV: switchgear and control unit separate from furnace in own wall or standing cabinet
- Defined application within the constraints of the operating instructions
- NTLog Basic for Nabertherm controller: recording of process data with USB-flash drive
- Controller B510

Model	Tmax (°C)	Outer tube Ø (mm)	Heated Length (mm)	Tube length (mm)	Connected load ⁴ (kW)		Electrical Connection
					1100°C	1300°C	
RSH 50/250/11	1100	50	250	650	1.9	1.9	1-phase
RSH 50/500/11	1100	50	500	850	3.4	3.4	1-phase
RSH 80/500/11	1100	80	500	850	6.6	6.6	3-phase
RSH 80/750/11	1100	80	750	1100	10.6	12.0	3-phase
RSH 120/500/11	1100	120	500	850	6.6	6.6	3-phase
RSH 120/750/11	1100	120	750	1100	10.6	12.0	3-phase
RSH 120/1000/11	1100	120	1000	1350	13.7	13.7	3-phase
RSH 170/750/11	1100	170	750	1100	10.6	12.0	3-phase
RSH 170/1000/11	1100	170	1000	1350	13.7	13.7	3-phase
RSV 50/250/11	1100	50	250	650	1.9	1.9	1-phase
RSV 50/500/11	1100	50	500	850	3.4	3.4	3-phase
RSV 80/500/11	1100	80	500	850	6.6	6.6	3-phase
RSV 80/750/11	1100	80	750	1100	10.6	12.0	3-phase
RSV 120/500/11	1100	120	500	850	6.6	6.6	3-phase
RSV 120/750/11	1100	120	750	1100	10.6	12.0	3-phase
RSV 120/1000/11	1100	120	1000	1350	13.7	13.7	3-phase
RSV 170/750/11	1100	170	750	1100	10.6	12.0	3-phase
RSV 170/1000/11	1100	170	1000	1350	13.7	13.7	3-phase
RSH 50/250/13	1300	50	250	650	1.9	1.9	1-phase
RSH 50/500/13	1300	50	500	850	3.4	3.4	1-phase
RSH 80/500/13	1300	80	500	850	6.6	6.6	3-phase
RSH 80/750/13	1300	80	750	1100	10.6	12.0	3-phase
RSH 120/500/13	1300	120	500	850	6.6	6.6	3-phase
RSH 120/750/13	1300	120	750	1100	10.6	12.0	3-phase
RSH 120/1000/13	1300	120	1000	1350	13.7	13.7	3-phase
RSH 170/750/13	1300	170	750	1100	10.6	12.0	3-phase
RSH 170/1000/13	1300	170	1000	1350	13.7	13.7	3-phase
RSV 50/250/13	1300	50	250	650	1.9	1.9	1-phase
RSV 50/500/13	1300	50	500	850	3.4	3.4	3-phase
RSV 80/500/13	1300	80	500	850	6.6	6.6	3-phase
RSV 80/750/13	1300	80	750	1100	10.6	12.0	3-phase
RSV 120/500/13	1300	120	500	850	6.6	6.6	3-phase
RSV 120/750/13	1300	120	750	1100	10.6	12.0	3-phase
RSV 120/1000/13	1300	120	1000	1350	13.7	13.7	3-phase
RSV 170/750/13	1300	170	750	1100	10.6	12.0	3-phase
RSV 170/1000/13	1300	170	1000	1350	13.7	13.7	3-phase

TUBES SELECTION



MORE THAN HEAT 30-3000 °C

Material	Tube outside \varnothing in mm	Max. heat-up ramp in K/h	Tmax in air in °C	Tmax in vacuum operation in °C	Gas tight
C 530 (Sillimantín)	< 120	unlimited	1300	not possible	
	from 120	200			
C 610 (Pythagoras)	< 120	300	1400	1200	•
	from 120	200			
C 799 (Alsint 99.7 %)	< 120	300	1800	1400	•
	from 120	200			
Quartz glass	all	unlimited	1100	950	•
FeCrAl-Alloy (APM)	all	unlimited	1300	1100	•

GAS SUPPLY SYSTEM



Stainless Steel Flange

- Supports non-flammable protective or reactive gas (N_2 , Ar, He, CO_2 , air, forming gas*) and Hydrogen gas
- Two vacuum-tight stainless steel flanges with KF flange on the outlet side
- Mounting system on furnace for the flanges
- Shut-off valve and flow meter with manual valve
- Check valve in the gas outlet to prevent air entering
- Additional safety controls to monitor hydrogen

Vacuum Package

- It consists of a ball valve, a pressure gauge and a manually operated vacuum pump that is connected to the gas outlet by a corrugated stainless steel hose
- The maximum ultimate pressure in the working tube depends on the type of pump.
 - Single-stage rotary vane pump for an achievable ultimate pressure of approx. 20 mbar
 - Two-stage rotary vane pump for an achievable ultimate pressure of approx. 5×10^{-2} mbar
 - Turbomolecular pump system for an achievable ultimate pressure of up to approx. 5×10^{-5} mbar

Model	Gas supply system			
	1	15	2	4
R	•	•	•	•
RHTC	•		•	•
RHTH			•	•
RHTV			•	•
RSH	•	•	•	•
RSV	•	•	•	•



Vacuum Pump



Manual Gas Supply System



Gas Supply System 15



Gas Supply System 2

FORCED CONVECTION CHAMBER FURNACE



MORE THAN HEAT 30-3000 °C



Forced Convection Chamber Furnace - Table Top



Forced Convection Chamber Furnace

- Tmax 450 °C, 650 °C, or 850 °C
- Horizontal air circulation with optimum distribution through stainless steel baffles
- Dual shell housing made of textured stainless steel sheets with additional fan cooling for low surface temperature
- Swing door hinged on the right side
- Temperature uniformity up to $\pm 4^{\circ}\text{C}$ according to DIN17052-1 (model specific)
- Exclusive use of insulation materials without categorization according to EC Regulation No 1272/2008 (CLP). This explicitly means that alumino silicate wool, also known as "refractory ceramic fiber" (RCF), which is classified and possibly carcinogenic, is not used.
- Defined application within the constraints of the operating instructions
- Controller with touch operation B500/B510 (5 programs with 4 segments each)
- NTLog Basic for Nabertherm controller: recording of process data with USB-flash drive freeware
- NTEdit for convenient program input via Excel™ for Windows™ on the PC freeware
- NTGraph for evaluation and documentation of firings using Excel™ for Windows™ on the PC
- My Nabertherm App for online monitoring of the firing on mobile devices for free download

Model	Tmax (°C)	Volume (l)	Inner dimensions wxdxh (mm)	Heating Power (kW)	Electrical Connection	Heat-up time to Tmax (min)
NAT 15/65	650	15	295 x 340 x 170	2.8	1-phase	40
NAT 15/85	850	15	320 x 320 x 150	3	1-phase	190
NAT 30/65	650	30	320 x 320 x 300	3	1-phase	80
NAT 30/85	850	30	320 x 320 x 300	3	1-phase	230
NAT 50/85	850	50	400 x 320 x 400	4.5	3-phase	230
NA 60/65	650	60	350 x 500 x 350	9.0	3-phase	120
NAT 60/65	650	60	400 x 400 x 400	3	1-phase	100
NA 60/85	850	60	350 x 500 x 350	9.0	3-phase	150
NA 120/45	450	120	450 x 600 x 450	9.0	3-phase	60
NA 120/65	650	120	450 x 600 x 450	12.0	3-phase	60
NA 120/85	850	120	450 x 600 x 450	12.0	3-phase	150
NA 250/45	450	250	600 x 750 x 600	12.0	3-phase	60
NA 250/65	650	250	600 x 750 x 600	20.0	3-phase	90
NA 250/85	850	250	600 x 750 x 600	20.0	3-phase	180
NA 500/45	450	500	750 x 1000 x 750	18.0	3-phase	60
NA 500/65	650	500	750 x 1000 x 750	27.0	3-phase	60
NA 500/85	850	500	750 x 1000 x 750	30.0	3-phase	180
NA 675/85	850	675	750 x 1200 x 750	30.0	3-phase	210

LABORATORY INSTRUMENTS



GETINGE

LANCER | ULTIMA

FEATURES



Designed for optimal cleaning

The hydraulic design maximizes flow and pressure through a single, direct fluid path. Each individual rack is connected to the hydraulic circuit without any intermediate accessories. This design ensures efficient and balanced high-pressure water distribution to remove soil for optimal cleaning.



Interchangeable means flexibility

The Lancer Ultima Rack System is interchangeable among models. The most common racks fit on any of the wash levels without the need for adjustments. This allows for great flexibility and limits the need for additional accessories, reducing costs of ownership.

HYDRAULIC DESIGN

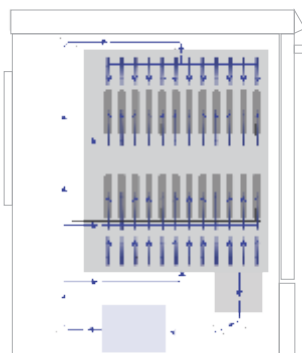
The Getinge Lancer Ultima hydraulic design optimizes pressure and flow for efficient performance at all wash levels.

The combination of a high performance recirculation pump, straight-line fluid path and center-mounted rack interface assures maximum water flow through spray arms and injectors.

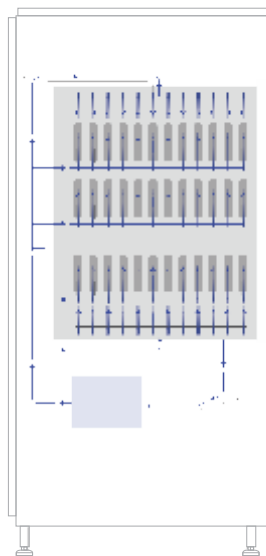
Washer pump is protected from debris by a stainless steel sump screen. The screen lifts out without tools for easy cleaning.



Ensure consistent pressure and flow



Undercounter Models



Freestanding Models

High performance in a compact footprint

The washer/dryers are designed for optimal cleaning performance. The hydraulic systems deliver a direct fluid path to each individual rack, maximizing water flow and pressure.

Ensure consistent pressure and flow

A tight connection to the hydraulic circuit ensures consistent water pressure and flow on each wash level. Lancer Ultima injector rack connections are strategically located in the rear of the chamber. The door pushes the racks against the circuit to form a secure connection.

Minimize environmental impact

Maximize cleaning performance while minimizing costs and environmental impact. Peristaltic pumps deliver accurate dosing of detergent and acid. Optional conductivity measurement ensures consistent processing with no chemical residues on processed goods.

Complete water coverage for comprehensive cleaning

Get complete coverage of both the exterior and interior of your glassware. Pressurized top and bottom stainless steel spray arms combine with injector washing on two levels for a comprehensive clean.

LANCER ULTIMA 815LX

Undercounter Glassware Washer-Dryer



GETINGE 
LANCER | ULTIMA

- Capacity: 2 Racks interchangeable between upper and lower level
- Internal Dimension (mm)(wxhxd): 535x498x520
- Possible to wash and dry upto 200 glasswares in one cycle
- Hot Forced Air Drying upto 95°C
- 5 standard, 35 customizable programs
- Supports Multi-function racks
- Standard USB Port and Optional Printer Connection
- Optional: HEPA filtered hot air through chamber and injectors
- Optional: Water Softener for purified water input
- Optional: View-In-Process Window (Glass Door)*



LANCER ULTIMA 1300LX

Freestanding Glassware Washer-Dryer



- Capacity: 3 Racks interchangeable between upper and lower level
- Internal Dimension (mm)(wxhxd): 535x644x520
- Possible to wash and dry upto 300 glasswares in one cycle
- Injector Drying + Hot Forced Air Drying upto 95degC
- Injector Drying ensures 100% drying in reduced time
- 5 standard, 35 customizable programs
- Supports Multi-function racks
- Standard USB Port and Optional Printer Connection
- Optional: Water Softener for purified water input
- Optional: View-In-Process Window (Glass Door)*

**Forced Air Drying
+ Injector Drying**



Forced air through the chamber as well as through the injectors provides complete drying coverage of the processed glassware.



LANCER ULTIMA 1600LXP

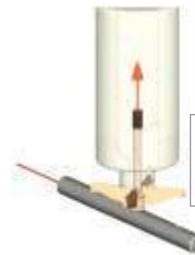
Freestanding Glassware Washer-Dryer



GETINGE 
LANCER | ULTIMA

- Capacity: 4 Racks interchangeable between upper and lower level
- Internal Dimension (mm)(wxhxd): 703x858x678
- Possible to wash and dry upto 576 glasswares in one cycle
- Injector Drying + Hot Forced Air Drying upto 95degC
- Injector Drying ensures 100% drying in reduced time
- 5 standard, 35 customizable programs
- Standard USB Port and Optional Printer Connection
- Optional: Water Softener for purified water input
- Optional: View-In-Process Window (Glass Door)*

**Forced Air Drying
+ Injector Drying**



Forced air through the chamber as well as through the injectors provides complete drying coverage of the processed glassware.

***Optional**



LANCER Ultima 1600LXP/HE

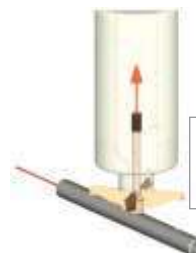
Freestanding Glassware Washer-Dryer with Height Extension



NEW

- Capacity: 4 Racks interchangeable between upper and lower level
- Internal Dimension (mm)(wxhxd): 703x1048x678
- Include door jacks for safe loading and unloading
- Possible to wash and dry upto 576 glasswares in one cycle
- Injector Drying + Hot Forced Air Drying upto 95degC
- Injector Drying ensures 100% drying in reduced time
- 5 standard, 35 customizable programs
- Supports Multi-function racks
- Standard USB Port and Optional Printer Connection
- Optional: Water Softener for purified water input
- High throughput for diverse load like large flasks, carboys and measuring cylinders

**Forced Air Drying
+ Injector Drying**



Forced air through the chamber as well as through the injectors provides complete drying coverage of the processed glassware.

ACCESSORIES



PST Basket Rack



PS/21XLC/25PIP Multi Function Rack



Injector Rack



LTCXL Test-Tubes Basket



Getinge LLL Detergent & NLL Neutralizer

For an efficient and consistent washing process

LLL and NLL assure high-performance washing by a contamination-free process with compatibility between equipment material and chemicals used.

ACCESSORIES



Vial Rack for Ultima Laboratory Washers

The vial basket has 4 grids exchangeable of different sizes to position the vials according to their dimensions.

The vial basket must be placed on a PST or PSBT, and the grids must be removed from these baskets to ensure correct washing.

NEW



Bioreactor Rack: Multi-Use Bioreactor Washing & Sterilization

The reproducibility of your work relies on a properly cleaned and sterilized bioreactor.

A solution to prevent cross-contamination, minimize any research downtime and ensure validated outcome through optimal processes and procedures.

The relationship between the bioreactor design and laboratory washer assures predictable outcomes. The defined connection points on the wash rack and bioreactor head plate ensure a clean bioreactor prepared for sterilization.

Empty rack



NEW

Baskets

Small bioreactor assembly parts are placed in the baskets to ensure that these are in place throughout the cleaning cycle.

Multiple injector tubes

Reassure best possible cleaning performance for each entry connection on the bioreactor head plate.

Bioreactors in place*



Spray headers

High flow of process water through the spray headers clean the inside of the bioreactor vessel.

Head plate fixation

The head plate is fixed in the wash rack. The spray wings within the washer will clean the outside of the head plate.

Angled head plate

Minimum water retention on the head plate surface will speed up the drying phase which shorten the overall process cycle.



Getinge Lancer Ultima model 815 LX undercounter labware washer.

*Multi-use, volume 1-3 liter

POWERSONIC 600 SERIES

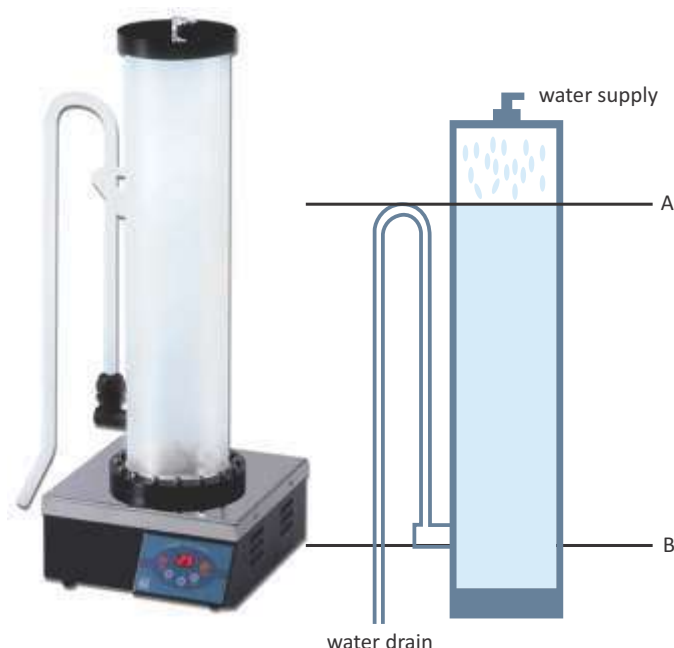


HWASHIN TECHNOLOGY

- Degassing function to eliminate dissolved gas in water or solutions
- Sweep function to optimize the cleaning power by modulating the frequency (Model 605/610/620)
- Housing material of SUS 304 + PP (Polypropylene) for stronger durability (Model 605/610/620)
- Built in microprocessor controller
- High-performance industrial BLT transducer
- Selectable use of ultrasonic power (3 steps - Low, Medium, High)
- Built-in alarm function for operation stop

Model	Powersonic 603	Powersonic 605	Powersonic 610	Powersonic 620
Transducer	Industrial BLT Type			
Time Range	1-99min (Digital)			
Temp Range	Ambient-60°C (Digital)	Ambient-70°C		
Frequency	40KHz			
Housing Material	SUS 304 + ABS	SUS 304 + PP	SUS 304 + PP	SUS 304 + PP
Bath Capacity	3.3 L	5.7 L	10.7 L	20.7 L
Bath Dimensions	W240 x D140 x H100 mm	W300 x D155 x H150 mm	W300 x D240 x H150 mm	W500 x D300 x H150 mm
Overall Dimensions	W325 x D225 x H255 mm	W385 x D255 x H270 mm	W385 x D345 x H270 mm	W590 x D405 x H275 mm
Tray Dimensions	W240 x D135 x H105 mm	W240 x D120 x H100 mm	W250 x D200 x H100 mm	W440 x D250 x H100 mm
Required Power	200 Watt	350 Watt	400 Watt	700 Watt
Net Weight	4.5 kg	6.1 kg	7.3 kg	11.8 kg
Accessories	LID, Drain Hose (1m), Power Cable, Instruction Manual			
Voltage	Option: 100V, 110V, 220V or 240V(50/60 Hz)			

POWERSONIC 212



Siphon Shower Effect

When the solution is filled to the point A, it is automatically drained through the point B.

Ultrasonic pipette cleaner POWERSONIC 212 is an instrument to take off dirt or contaminants on materials for cleaning by ultrasonic sound from the transducers through the liquid in the bath. No need to change water when cleaning by siphon shower method

- Automatic water supply and drain by Siphon principle
- Strong cleaning power industrial BLT transducer
- No need to change water when cleaning (short cleaning time)
- Easy to adjust the cleaning time with built-in digital timer
- Convenient operation plate
- Available to clean multiple pipettes with safety by a basket tray
- Stainless steel drain pipe for stronger durability

Model	POWERSONIC 212
Transducer	Industrial BLT Type
Time Range	1-99 min (Digital)
Frequency	28KHz
Cabinet Material	Stainless Steel SUS 304
Bath Material	Transparent Acryl Resin
Bath Capacity	12L
Bath Dimensions	Ø160 x H685 mm
Overall Dimensions	W320 x D320 x H850 mm
Tray Dimensions	Ø140 x H505 mm
Required Power	150watt
Net Weight	15 kg
Voltage	Available from 100 to 240V, 50/60Hz
Accessory	Tray, Water Supply Hose (3m)

MELTING POINT APPARATUS – AUTOMATED



OptiMelt provides a fast and accurate means of automatically determining the melting points and melting ranges of chemical substances.

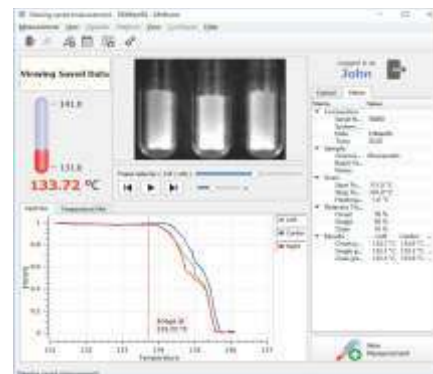
The Meltview 2 Pro software licence FDA 21CFR Part 11 is ready. It enables users to integrate the MPA100 into a compliance based lab environment. Both stand alone and client / server modes are available.

- Completely automated operation.
- PID-controlled temperature ramping.
- Digital movie of each melt.
- Stand-alone operation and computer control (USB).
- Conforms to Pharmacopoeia and GLP.
- Printer output.
- Live images during melts.
- Single-click data acquisition with auto-saving to a central database.
- View data from any computer on the network.
- Permission-based operations. User login required on all applications.
- Electronic signatures on collected data.
- Audit trail recording of all user activities with messages to discern invalid or altered records.
- Measurement report in PDF. Audit logs export to PDF or CSV.
- Easy user management from any computer on the network.
- Data backup/restore with schedule and recurring option.
- Stored files can be recalled for frame-by-frame playback.

Description		MPA100
Temperature display		Melting point and melting point range
Start temp. range		(Ambient + 10 °C) to 396 °C, 0 °C min. set point
Stop temp. range		(Start temperature + 4 °C) to 400 °C
Temperature resolution		0.1 °C
Ramp rate		0.1 °C to 20 °C per minute (0.1 °C increments)
Heat-up time		~10 minutes (50 °C to 350 °C)
Cool-down time		~10 minutes (350 °C to 50 °C)
Temperature accuracy		±0.3 °C (up to 100 °C) ±0.5 °C (up to 250 °C) ±0.8 °C (up to 400 °C)
Reproducibility		0.2 °C
Temperature sensor		Pt RTD (built-in)
Oven control		Closed-loop PID
Display		Back-lit, touchscreen LCD (5.8")
Printer interface RS-232		Supports Epson compatible dot-matrix printers.
Capillaries	Dimensions	1.4 mm to 2.0 mm outside dia., 100 mm length
	Capacity	Up to 3 tubes simultaneously
	Fill height	2 mm to 3 mm



Meniscus Point Software



Measurement and Recall

AUTOCLAVES with Colour Touch Panel



LIQUID mode

Heating

Sterilization

Variable exhaust

- Main applications: Sterilization of liquid, which can withstand high temperature and high pressure steam such as water, culture medium, reagent, reagent solution, liquid medicine, etc.

SOLID mode

Heating

Sterilization

Forced exhaust

- Main applications: Sterilization of instruments made of glass, ceramic, metal or rubber that can withstand high temperature, high pressure steam and rapid pressure decrease during the exhaust stage.

WASTE mode

Heating

Sterilization

Forced exhaust

- Main applications: Sterilization of waste using a sterilization bag and the like.

AGAR mode

Heating

Sterilization

Variable exhaust

Warming

- Main applications: Sterilization of agar medium (It is warmed at constant temperature to prevent clotting after sterilization.)

DISSOLUTION mode

Heating

Warming

- Main applications: Dissolution of agar medium (It is warmed at constant temperature to prevent clotting after heating.)



■ Operation cycle of each mode (Up to 8 patterns for each mode can be registered.)

HV-II SERIES



These Autoclaves are user friendly, Easy-to-Read and Easy-to-operate

- Sterilization Temperature: 126°C or 135°C.
- Capacity from 25-110 liters.
- Easy-to-operate Color-touch Panel.
- 5 selectable modes: Agar, Solid, Dissolution, Liquid, Waste.
- Electromechanical Lid Lock System.
- 3 exhaust levels: Without, Fine, Small
- Optional devices: Printer, Recorder, Floating Sensor, Forced Cooling Unit, Automatic water supply system, USB interface port.

Description		HV-25 II	HV-50 II	HV-85 II	HV-110 II
Effective capacity		25 L	50 L	85 L	110 L
Chamber size (φ x H mm)		240 x 550	300 x 710	420 x 615	420 x 795
Temperature setting range	Sterilization	105°C - 126°C Variable	105°C - 135°C Variable		
	Dissolution	60°C - 100°C Variable			
	Warming	45°C - 60°C Variable			
	Lid lock	LIQUID, AGAR, DISSOL modes: 60°C - 95°C Variable / SOLID, WASTE modes: 60°C - 97°C Variable			
Exhaust setting		3 levels (Without exhaust, Fine exhaust, Small amount of exhaust)			
Maximum working pressure		0.186MPa	0.255MPa		
Thermometer		Digital display 5.0°C- 128.9°C	Digital display 5.0°C - 137.9°C		
Required power supply facility		1.5kW	2.0kW	3.0kW	4.0kW
Power supply		AC110V / 120V / 220V / 230V / 240V, 50Hz / 60Hz (Please specify when ordering.)		AC220V / 230V / 240V, 50Hz / 60Hz (Please specify when ordering.)	
Weight (Approximately)		44 kg	60 kg	83 kg	89 kg
Safety devices and alarms		Safety pressure valve, Earth leakage breaker with O.C.protection, Low water cut off device, Alarms: Low water heating, Temperature sensor wire disconnection, Over-temperature, Over-cool, Over-pressure, Abnormality in lid, Abnormality in the lock of lid opening/closing lever			
Supplied accessories		Wire basket, Exhaust bottle, Bottom plate, Drainage hose (50 cm), Exhaust hose (50 cm), Drainage collecting bottle, Cable tie, Caster stopper, Operation manual, User inspection procedure, Small sized pressure vessel specifications (excluding HV-25II and HV-25I LB)			

HV HICLAVE SERIES



The best-selling autoclave series that has many functions with excellent operability.



- Dual sensing interlock mechanism
- Programmable auto-start function
- Auto-exhaust mechanism
- Electro mechanical lock system
- Memory back-up
- Double-sensing system for air exhaust

Model	HV-25	HV-50	HV-85	HV-110
Outside dimension (W x D x H mm)	485 × 470 × 956	547 × 532 × 1046	667 × 652 × 1011	667 × 652 × 1191
Inside dimension (Φx D mm) Effective capacity	240 × 550 (25L)	300 × 710 (50L)	420 × 615 (85L)	420 × 795 (110L)
Nominal Volume	28 L	54.2 L	98.8 L	123.7 L
Net weight (approx.)	41kg	57kg	71kg	81kg
Power supply	230 / 240 VAC, 50 Hz / 60 Hz			
Pressure vessel category	Small sized pressure vessel			
Chamber material	Stainless steel (SUS 304)			
Sterilization temperature range	105-126°C variable	105-135°C variable		
Dissolution temperature range	60 - 100°C, variable			
Warming temperature range	45 - 60°C, variable			
Maximum working pressure	0.186MPa	0.26 MPa		
Thermometer	5 - 128°C	5 ~ 137°C		
Pressure gauge	0 ~ 0.4MPa			
Safety devices	Pressure safety valve, Over-current & Earth leakage breaker, Low water cut off device			
Alarms, Error display	Low water heating, Temperature sensor wire disconnection, Over-temperature, Over-cool,Over-pressure, Abnormality in lid open/closing lever lock			
Supplied accessories	Wire mesh baskets (2), Bottom plate, Drainage hose, Exhaust bottle, Exhaust hose, Drain bottle, Caster stoppers			

HVE ECONOMICAL HICLAVE SERIES



An economical model which is recommended when renewing an old model.

- Pulse exhaust function
- Warming function that does not coagulate the agar media
- Electro-mechanical lid lock system
- Dual interlock mechanism
- Memory function

Model	HVE-50
Outside dimension (W x D x H mm)	547 × 532 × 1046
Inside dimension (Φx D mm) Effective capacity	300 × 710 (50L)
Nominal Volume	54.2 L
Net weight (approx.)	57kg
Power supply	230 / 240 VAC, 50 Hz / 60 Hz
Pressure vessel category	Small sized pressure vessel
Chamber material	Stainless steel (SUS 304)
Sterilization temperature range	105-135°C variable
Warming temperature range	45 - 80°C, variable
Maximum working pressure	0.255MPa
Thermometer	Digital display 5 ~ 137°C
Pressure gauge	Analog display 0 ~ 0.4MPa
Safety devices	Pressure safety valve, Over-current and Earth leakage breaker, Low water cut off device
Alarms, Error display	Low water heating, Temperature sensor wire disconnection, Over-temperature, Over-cool, Over-pressure, Abnormality in lid open/close lever lock
Supplied accessories	Stainless steel wire basket, Bottom plate, Drainage hose, Exhaust bottle, Exhaust hose, Drain bottle, Caster stoppers

HVA HICLAVE SERIES



Economical HICLAVE with forced cooling device

A forced cooling system is equipped. This model has a capacity of 85 L or 110 L and has excellent cost performance.

- Excellent cost performance
- Forced cooling unit is standard
- Warming function does not coagulate the agar media
- Electro-mechanical lid lock system
- Memory function
- Dual interlock mechanism



Model	HVA-85	HVA-110
Outside dimension (W x D x H mm)	667 × 652 × 1011	667 × 652 × 1191
Inside dimension (Φ x H mm) Effective capacity	420 × 615 (85L)	420 × 795 (110L)
Nominal Volume	98.8 L	123.2 L
Net weight (approx.)	78kg	85kg
Power supply	230 / 240 VAC, 50 Hz / 60 Hz	
Pressure vessel category	Small sized pressure vessel	
Chamber material	Stainless steel (SUS 304)	
Sterilization temperature range	105-135°C variable	
Warming temperature range	45 - 80°C, variable	
Maximum working pressure	0.255MPa	
Thermometer	Digital display	5 ~ 137°C
Pressure gauge	Analog Display	0 ~ 0.4MPa
Safety devices	Pressure safety valve, Over-current and Earth leakage breaker, Low water cut off device	
Alarms, Error display	Low water heating, Temperature sensor wire disconnection, Over-temperature, Over-cool, Over-pressure, Abnormality in lid open/close lever lock	
Supplied accessories	Stainless steel wire basket, Bottom plate, Drainage hose, Exhaust bottle, Exhaust hose, Drain bottle, Caster stoppers	

HVN & HVP HICLAVE SERIES

HVN Series

HVP Series
HVN Series
Exhaust steam-free autoclave with deodorizing

New Idea !! An autoclave equipped with the deodorizing function that can suppress an unpleasant smell and steam.

- Deodorizing function
- Comfortable working environment

HVP Series
HICLAVE with full automatic drying function

Full-automatic sterilization to drying by high-efficiency vacuum pump.

- Drying efficiency is increased
- Dressing drums can be loaded
- Clean drying without contamination
- Pre-vacuum air removal using a vacuum pump
- Dual interlock mechanism

Model	HVN-50	HVN-85	HVP-50
Outside dimension (W x D x H mm)	547 x 552 x 1050	669 x 680 x 1011	540 x 630 x 1040
Inside dimension (Φx D mm) Effective capacity	300 x 710 (50L)	420 x 615 (85L)	300 x 710 (50L)
Power supply	AC220V, 50/60Hz, Single-phase		230 / 240 VAC, 50 Hz / 60 Hz
Net weight (approx.)	73kg	88kg	80kg
Chamber material	Stainless steel (SUS 304)		
Sterilization temperature range	105-135°C variable		
Maximum allowable pressure (gauge pressure)	0.255MPa		
Pressure vessel category	Small sized pressure vessel		
Temperature display range	5 ~ 137°C		
Sterilization timer	1 ~ 250 minutes		-
Deodorizing timer	1 ~ 90 minutes		-
Exhaust bottle (filled)	3.4 liter, built-in		-
Pressure gauge	Analog display, 0 ~ 0.4MPa		
Safety devices / Warning alarms	Pressure safety valve, Circuit breaker, Lack of water prevention switch, Error indication (Exhaust clogging, Lack-of-water, Temperature sensor wire breakage, Over temperature, Over cooling, Open/close lever locking failure)		Pressure safety valve, Low water cut-off device, Earth leakage breaker for vacuum pump, Low water heating, Temperature sensor wire disconnection, Over-temperature, Over cool, Over-pressure, Abnormality in lid open/close lever lock, Lack of water for vacuum pump bottle
Accessories	SS Wire basket(2pcs), Heater cover, Drain hose, Castor stopper (2pcs) Exhaust hose, Drain bottle,		Bottom plate, Flexible drainage hose, Castor stopper (2pcs) Drainage hose, Water supply hose
Time setting range	Sterilization: 1 min - 250 min Deodorizing: 1 min to 90 min		Sterilization: 1 min - 250 min, Remaining time is displayed Drying: 1 min to 90 min, Remaining time is displayed

Pollen

Bioprocessing



We believe that cells hold the key to a sustainable future by revolutionizing the way we live.

Why Pollen Quality Matters

Quality in Breeding and Seed Production

Plant Breeding

The transfer of genetic information of plants occurs through pollen. Especially in expensive hybrid breeding but also in line breeding, the health and quality of pollen is of highest interest. Abiotic factors like temperature, humidity, radiation, and other genetic factors like inbreeding depression have a direct and increasing – negative – impact on pollen viability, quantity and quality.

In times of climate change and increasing demand for food, the knowledge about the quality and health of pollen is indispensable for efficient plant breeding and seed production. Having a fast, easy-to-use, and highly accurate tool to determine the quality of pollen enables researchers and breeders to:

- Improve and speed-up the DH production process
- Improve efficiency in line selection by early removal of bad pollinators
- Breed for heat tolerant lines with high pollen quality
- Improve precision phenotyping and gene mapping

Seed Production

The transfer of genetic information of plants occurs through pollen. Especially in expensive hybrid breeding but also in line breeding, the health and quality of pollen is of highest interest. Abiotic factors like temperature, humidity, radiation, and other genetic factors like inbreeding depression have a direct and increasing – negative – impact on pollen viability, quantity and quality. A high quality of pollen is indispensable for achieving an efficient pollination and to obtain a high seed set.

For the optimization of production factors like crop placement or the female-to-male ratio the knowledge about pollen quality and characteristics is needed. To improve commercial seed production and to obtain the highest seed set in a reliable way, a high pollen quality is needed. Using a fast, easy-to-use and highly accurate tool to determine the quality of pollen enables production research and seed producers to:

- Get the right information for crop placement
- Determine the pollen viability threshold for full seed set
- Optimize production pattern for low performing pollinators
- Set-up the right protocols for pollen (storage) management

Bio-Processing

We believe that cells hold the key to a sustainable future by revolutionizing the way we live

Cell Analysis in Bacteria

The small size of bacteria cells makes an analysis in comparison to other cell types more difficult. Image-based methods fail in the measurement of bacterial cell concentrations and the simultaneous determination of cell counting and viability determination is rare.

The two main variables indicating the changes in bacteria are cell number and cell viability. In addition to providing these results, the high sensitivity of Impedance Flow Cytometry can be used to analyze a wide range of bacterial species, including both gram-negative and gram-positive bacteria. It can also be used to monitor bacterial growth, detect bacterial contamination, and measure bacterial viability.

Milk: Somatic Cells

For the milk industry the quality of raw milk is a major concern. The presence of somatic cells (white blood cells, leukocytes) are mainly caused by bacterial infections and bacterial contamination. The presence of high concentrations of somatic cells, measured as Somatic Cell Count SCC, has an adverse impact on the quality of milk products.

Analysis of Human and Animal Cells

Animal and human cells, especially mammalian cells, play a great role in research, clinical and pharmaceutical applications. Cells are used for studying and finding treatments for diseases, to produce antibodies, proteins, and vaccines, for regenerative medicine, and recently in cellular agriculture to replace animal products.

Cell Analysis in Yeast

Fermentation with yeast is one of the oldest biotechnological processes used by mankind. Methods to control and analyze cell growth and development are standard but still more information can be unlocked. To control and improve fermentation processes, yeast viability and cell density are crucial variables.



AMPHA P20 POLLEN ANALYZER

The Ampha P20 is the world's first fully portable pollen analyzer. It enables faster measurements due to simplified operation and automatic data analysis. Furthermore, the portability and ease of use increase the efficiency of pollen analysis in plant breeding, production research and seed production. The Ampha P20 is an ideal instrument for the measurement of a large number of samples and for routine measurements wherever they are needed. With its new crop-specific microfluidic chips, the Ampha P20 offers fully automated solutions from the start of the measurement to data analysis.



PLANT BREEDING

- Phenotyping of lines directly in the field
- Characterization of short lived pollen species
- Immediate results for data driven decision-making

PRODUCTION RESEARCH

- Data collection on site: in the field or in the greenhouse
- Data-based decision making for crop placement
- No training in data analysis required

SEED PRODUCTION

- Routine check of pollen quality anywhere
- Location independent, standardized results
- User friendly operation

PORTABLE AND EASY TO USE

- Embedded PC
- Pollen viability wherever it is needed and for species with an extremely short pollen lifetime like wheat, rice and corn. Optimization of processes at all stages where the viability of pollen is a success factor.
- Integrated touchscreen with intuitive menu
- Simplified handling supported by operation wizards
- Minimal setup time
- Crop-specific chips with pre-installed settings
- The crop-specific microfluidic chips for the Ampha P20 are programmed with all the settings for fully automated analysis.

AUTOMATED DATA ANALYSIS

- Immediate results for data-driven decision making
- Systematic screening and routine measurements
- No experience in data analysis needed
- The measurement results are displayed immediately at the end of the measurement.

AMPHA X30 CELL ANALYZER

The novel Ampha X30 opens a new era of cell analysis: simultaneous measurement of cell count and cell viability, and in addition crucial information about the status of the cells, like metabolic activity. Based on Impedance Flow Cytometry, no dyes, no markers, and no incubation are required. Results are available after minutes – including sample preparation! With one instrument and four different chip sizes of the microfluidic chip the whole range of cells can be measured: bacteria, human and animal cells, algae, yeast, and others like somatic cells in milk.



BENEFITS:

- No labeling, no staining, no incubation
- No calibration
- Short sample preparation, short measuring times, immediate results
- Highly sophisticated software for operation and data analysis
- Simultaneous analysis of cell viability, counting and other cell properties like cell health
- Cell sizes between 1 μm and 50 μm
- Low operational costs
- Online measurements via bypass approach possible

UNIQUE

- All cell types like bacteria, human and animal, algae, yeast, somatic cells
- Reuse of cells for sorting, tissue culture
- One instrument, four chips, all cells
- With the Ampha X30 all cell types can be analyzed with one instrument, using chips with different channel diameters. The cells are not harmed by the measurement and due to the absence of dyes and markers, the cells can be recovered and reused, e.g., for sorting or tissue culture.
- No staining, no molecular markers, no incubation needed
- Fast and simple sample preparation and measurement: results immediately available
- No markers or dyes are required
- Reduced operational cost
- No incubation time
- Shorten the whole measurement to few minutes

Water activity – aW

Reliable solutions for accurate
measurement of water activity

Water activity is measured around the world in many industries from food and pharmaceuticals, to oil and chemicals. The water activity instruments can be used in water activity measurement for process and quality control, on the production line, or for laboratory analysis and product development.



Scope of application:



Lab – Water activity from A-Z

When it comes to the quality of food, pharmaceutical products or cosmetics, bacterial infestation, mold, discoloration, changes in texture and taste are not acceptable. Water activity has a great influence on all the mentioned effects.

Water activity can be used to make a microbiological risk assessment or to optimize production processes and storage conditions.

Water activity is a measure of the availability of the energy of “free” water and must not be mixed up with water content (g water / g substrate). The water activity is indicated with the so-called aW value and ranges between 0 (absolute dryness) and 1 (condensing moisture). Only this part actively participates in the exchange with the ambient moisture and is of great importance with regard to the microbiological durability or the biological functions of the microorganisms. The “free” water in products is partly responsible for the growth of undesirable organisms such as bacteria or fungi, which produce “toxin” or other harmful substances and has also a significant influence on the chemical behaviour of food, cosmetic, pharma and other products.



Which model is right?

It depends on what your needs are and whether you need to follow norms and standards in your industry. Here are a few questions you can ask yourself:

- What type of products do I want to measure?
- In what range of 0.01-1.0aw do I expect the water activity value?
- Are volatile substances as f.e. acids or strong aromas in the samples?
- What are the room conditions where the device will be located?
- What are my requirements regarding accuracy, norms, standards (e.g. ISO, USP, IQ/OQ etc.)?

Novasina LABMaster-Neo

Determination of water activity in QA laboratories of food and pharmaceutical companies. This measuring instrument also provides support in the investigation of the causes of product spoilage, texture changes or rancidity.



THE talented all-rounder

Outstanding measuring instrument for effortless and worry-free water activity measurement and documentation, including:

- 21CFR11 compliant audit trail and user management
- Automatic verification or adjustment
- Contactless salt standard identification by RFID
- Fast mode that guarantees results within 10 minutes

Additional features:

- Full thermostatisation in the range of 0-60°C
- Measuring range from 0.0300-1.000aw
- A simple protective filter handling by magnet fixing

Of course also conformable with AOAC, ISO, USP and other standards.

aW METER



LABTOUCH



LABSWIFT



LABSTART

Novasina LabTouch-aW

Flexible and fast water activity meter with large touchscreen. Easy to use, very well suited for AT-Line measurements in production or for the exact determination of AW-values in the QC-Lab.

Ideal for laboratory and production

aW measuring instrument for:

- Many samples, regardless of whether liquid, gel-like or solid
- Partial temperature regulation as well as integrated sample surface temperature measurement enable accurate and reproducible measurements
- Different measuring modes offer the user the possibility to carry out either a fast measurement on the production line or an exact AW determination for quality assurance of the products
- Ergonomic design and touch screen, it makes water activity measurement easier than ever before

Novasina LabSwift-aW

One measurement in the lab, then again on the line, the LabSwift-aW with rechargeable battery offers this possibility. The device is designed for daily use and for samples in the low to medium aw range.

Looking for a water activity instrument with local flexibility? Then the LabSwift-aW is exactly what you need:

- Due to rechargeable battery, the device can be placed anywhere
- Suitable for products such as powder or dried fruits with low to medium aW-values (the measuring device does not have a temperature stabilisation of the measuring chamber)
- Reliable and accurate measurement results as the proven resistive electrolytic measuring technology of Novasina is also implemented here

Novasina LabStart-aW

Inexpensive AW meter for measurements in the low to medium AW range, without already having high demands on accuracy and reproducibility.

Ideal for the first step:

- Designed as a „starter“, proven Novasina technology can be found inside, especially the resistive electrolytic sensor
- covers a lower demand on accuracy and reproducibility

SAL-T SALT STANDARDS



Moisture standards based on saturated salt solutions in plastic tablets, with a moisture permeable membrane. Each salt is delivered in well closable container.

Humidity values	P/N	Name	LabStart-aw Calibration	LabSwift-aw Calibration	LabTouch-aw Calibration	LabMaster-aw neo Calibration	Verification
4%	111 7440	SAL-T 4				X	X
6%	111 6453	SAL-T 6				X	X
11%	111 0930	SAL-T 11		X	X	X	X
23%	260 0960	SAL-T 23					X
33%	111 0932	SAL-T 33	X	X	X	X	X
43%	260 0961	SAL-T 43					X
53%	111 0934	SAL-T 53		X	X	X	X
58%	260 0189	SAL-T 58		X	X	X	X
75%	111 0936	SAL-T 75	X	X	X	X	X
84%	111 9886	SAL-T 84		X	X	X	X
90%	111 0938	SAL-T 90		X	X	X	X
97%	111 9887	SAL-T 97			X	X	X
100%	260 1619	SAL-T 100				X	X

FILTER SELECTION

These specially designed filters shall be mounted in front of the sensor and used to provide protection against chemical contamination and degradation of the resistive electrolytic sensor element.

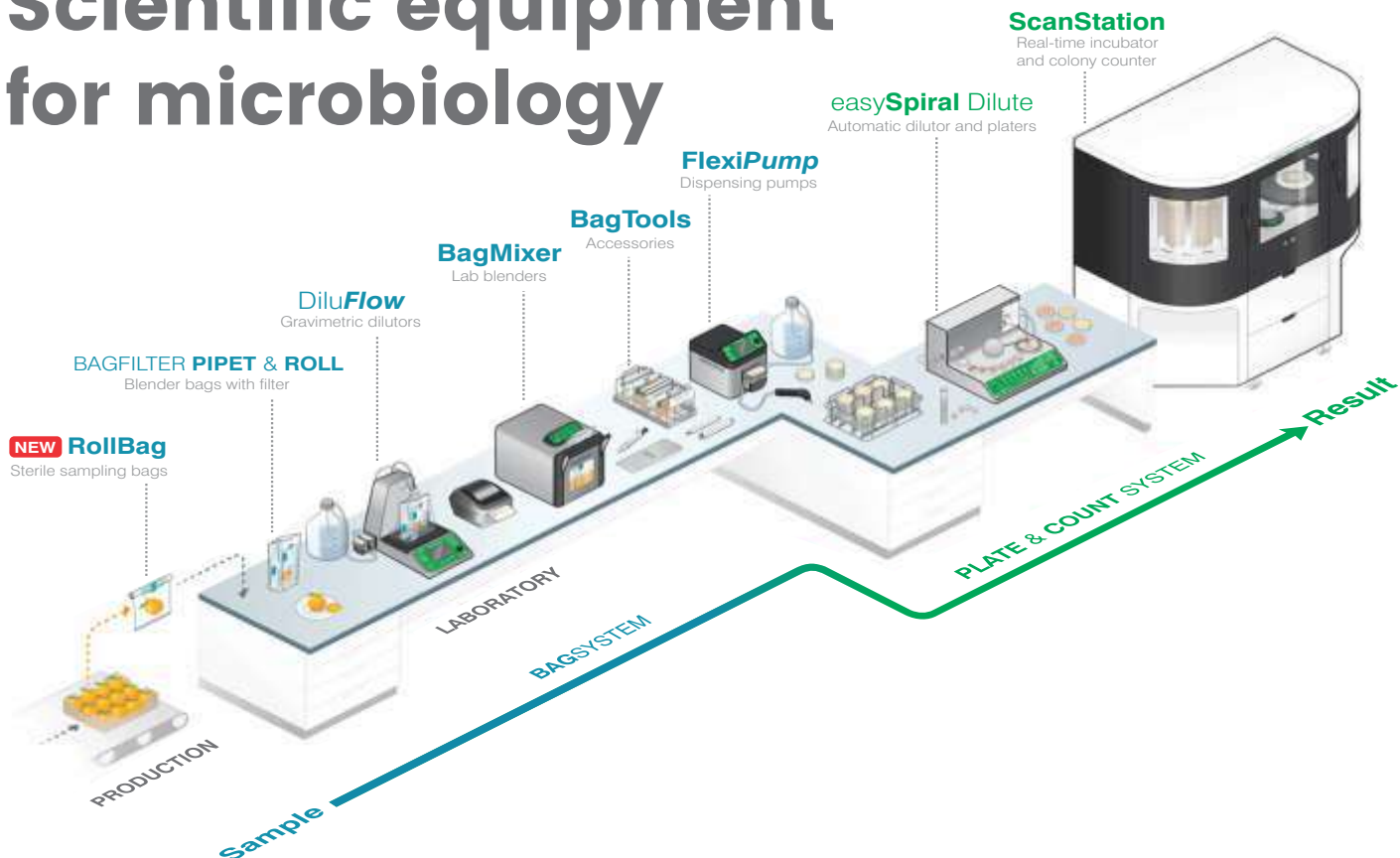
As the inner part of the sensor consists of a liquid, volatiles which dissolve and dissociate are extremely dangerous and harm the sensor in a very short time.



Some of the known Volatiles

- Acetic acid (e.g. vinegar, mustard etc)
- Alcohols, secondary (e.g. 2-Propanol, 2-Butanol)
- Amines (e.g. urea, ammonia)
- Aroma, light (fruit, yeast, hop, herbs, vanilla, orange)
- Aroma, strong (like spices, herbs)
- Butyric acid
- Cannabis
- Essential oil (only pure menthol, etc)
- Ethanol (ethyl alcohol)
- Formic acid
- Furanes (bread aroma)
- Glycerin (e.g. in PET Food, protein bar)
- Hydrocarbons, aromatic
- Hydrogen halides
- Hydrogen peroxide
- Hydrogen sulfide
- Ketones (e.g. acetone or MEK)
- Nicotine, Snus
- Perfumes, fragrances
- Phenol
- Polyethylen-glycol, propylen-glycol
- Sulfur dioxide
- Sulphuric acid

Scientific equipment for microbiology



Variety of Blender Bags to suit your needs



- 1 RollBag 7.5 x 20 cms
- 2 RollBag 11 x 20 cms
- 3 RollBag 11 x 25 cms
- 4 RollBag 14 x 23 cms
- 5 RollBag 11 x 30 cms
- 6 RollBag 14 x 33 cms
- 7 RollBag 17.5 x 30 cms
- 8 RollBag 17.5 x 40 cms
- 9 RollBag 25 x 38 cms
- 10 RollBag 25 x 50 cms
- 11 RollBag 38 x 56 cms



LAB BLENDER



BagMixer® is a highly efficient lab blender for solid sample preparation. With a blender bag, it guarantees optimal microbiological extraction in less than 60 seconds and eliminates all risks of cross contamination.

- Optimal bacterial extraction.
- Adjustable blending power.
- Click & Clean (model specific).
- Q-Tight closing.
- User-friendly.

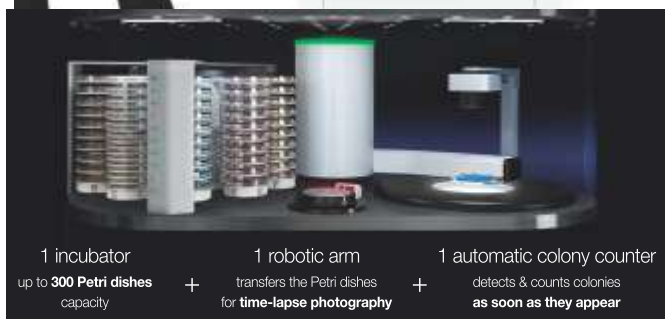


For Pharma
Tablet application

Description	MiniMix 100 P CC	BagMixer 400 P	BagMixer 400 W	BagMixer 400 CC	BagMixer 400 SW	JumboMix 3500 P CC
Optimal blending volume	5 - 80 mL	50 - 400 mL	50 - 400 mL	50 - 400 mL	50 - 400 mL	200 - 3750 mL
Net weight	11.7 kg	16.8 kg	16.6 kg	16.1 kg	24.7 kg	55.8 kg
Dimensions (w x d x h) cm	20x36.9x20.2	26.8x39.5x28.3	26.8x39.5x28.3	27x42.1 x26.6	27.6x45.9x35.7	51.2x52.3x46.8
Fuses	T3.15A L 250V / T1.25A L 250V 5x20 mm			T3,15A L 250V 5x20 mm		T4A L250V/ T2A L250A 5x20 mm
Power	110 W	135 W	135 W	55 W	55 W	400 W
International protection marking	11	21	21	21	31	21
In compliance with	ISO 7218, ISO 6887 and FDA BAM (Bacteriological Analytical Manual)					

SCANSTATION

interscience



Real-time incubator and colony counter

ScanStation® is a real-time incubator and colony counting station centralizing incubation, detection and counting of up to 300 Petri dishes simultaneously. Petri dishes are counted every 30 min* throughout the process. Colonies are detected as soon as they appear.

- **Rotating Petri carousel** - Record-breaking capacity of 300 Petri dishes
- **Insulated panoramic window** - Easy process monitoring
- **Thermoregulated incubator** - Peltier module ± 1 °C refrigerated incubator
No compressor
- **Storage unit** - For computer, UPS, accessories
- **Easy installation** - Simply plug in the 100-240V~power cord.
- **High speed robotic arm** - Automated plate handling from incubation to counting
- **Real-time bacterial growth** - Touch screen with real-time video of the process 24/7 operation
- **Ultra-HD camera** - Reflection free LED lighting 5 megapixel sensor
- **Pressure-sensitive gripper** - Automatically adapts to right-side up or upside down Petri dishes
No settings
- **Bar-code reading** - Automatically retrieves sample data
Connectable with LIMS, dataLink™

	ScanStation® 100	ScanStation® 200	ScanStation® 300
Reference	439 100	439 200	439 300
Capacity	100 Petri dishes	200 Petri dishes	300 Petri dishes
Reading time in between each dish	30 minutes or 1 hour		1 hour
Petri dish size	\varnothing 90 mm right-side up or upside down and \varnothing 55-65 mm (with adaptor)		
Type of plating accepted	Pour plate, surface, Spiral®, filtration membrane		
Loading	single or multi-batch		
Camera resolution	5 megapixels		
Interface	23 inches touch screen		
Software	ScanStation® software		
Video player	Play, zoom, pause, replay, during and after incubation		
Included computer system	PC Windows 10 LTSC desktop with Intel i7 processor		
Incubation temperature	From 20 °C to 45 °C		
Accuracy of incubation temp.	± 1 °C (checked by a 9-point mapping system)		
Recording of the temperature	Every minute		
Heating and cooling temp.	Peltier modules, compressor free		
Terms of use	In a ventilated room, under normal temperature conditions between 18 °C and 25 °C		
Max external humidity temp.	70%		
Max incubation time	10 days		
Voltage - frequency	100-240 V~ 50-60 Hz		
In compliance with	21 CFR Part 11		

interscience

SEMI-AUTOMATIC COLONY COUNTER



Scan® Series is a semi-automatic colony counter series with the essential features to start the colony counting and is specifically designed for environments of food microbiology (PCA, VRBG, MRS).

- Counting on pour, surface, Spiral, circle mode plated dishes.
- Accuracy and repeatability.
- 21CFR Part 11 included.
- Traceability.
- Print of the results.
- Dark Field lighting technology.
- Ideal with dataLink full traceability system.

Description	Scan 300	Scan 500	Scan 1200	Scan 4000
Type of colony counter	Semi automatic	Semi automatic	Semi automatic	Semi automatic with manual control
Counting time	Up to 1000 colonies per second			
Minimal size of colony	0.1 mm	0.1 mm	0.05 mm	0.05 mm
Camera	CMOS color camera	CMOS color camera	HD CCD color camera	Ultra HD color camera
Lens	M12 lens	M12 lens	HD Japanese lens	Ultra HD Japanese lens
Zoom	x 28	x 28	x 28	x 69
Resolution	1 megapixel	1 megapixel	1.2 megapixel	5 megapixel
Screen	1280 X 1024 pixels or superior			1280 X 1024 pixels and more
Dimensions (w x d x h)	28.5 x 26.5 x 29 cm	28.5 x 26.5 x 28.5 cm	28.5 x 26.5 x 37.5 cm	47 x 47 x 64 cm
Net weight	8.4 kg	8.4 kg	9.4 kg	25 kg

MANUAL COLONY COUNTER



Scan 50 is a manual colony counter with multiple ergonomic supports.

The Dark Field 2 technology offers an indirect and precise LED lighting of the colonies.

The export of the counting result, via USB link to a computer, ensures the data traceability, without preliminary software processing.

- Inclined and padded counting surface
- Dark Field 2 technology for high contrast colony lighting
- Adjustable white LED intensity
- USB port: counting data transfer to computer

Description	Scan 50
Type of colony counter	Manual (from 0 to 1999 CFU)
Counting tone	Touch surface with adjustable sensitivity
Lighting technology	Dark Field 2 : Indirect lighting with White LED
Lighting system	LED lighting with 5 intensity levels
Petri dish dimensions	From Ø 55 to Ø 90 mm
In compliance with	ISO 7218 and FDA BAM

Contrasting colony lighting: Dark Field 2

Dark Field 2 is an indirect lighting system with adjustable intensity. Light reflectors diffuse the light at all points without any reflections or shadows. It makes all colonies stand out on the surface, in the mass and around the edge of the dish.

Flashes of light are eliminated and the operator's eyes are protected.

REFRIGERATORS and FREEZERS CONTROLLED BIOSTORAGE



BIOPLUS & BIOMIDI



The **BioPlus** range is designed for the storage of the most delicate biomaterials, in situations where even tiny fluctuations in conditions inside the storage cabinet can have a serious effect on the contents.

BioPlus refrigerators reduce internal relative humidity, thus cutting down on any likelihood of undesirable contaminants getting near delicate biomaterials.

The **BioMidi** cabinet is designed to meet the majority of biomaterial refrigeration and freezer requirements, with very few limitations.

The functional design ensures easy, ergonomically correct access to the storage space.

- Access port
- Self-closing door with key lock
- Voltage-free contact
- Acoustic and visual door alarm
- E-sensor
- Acoustic and visual temperature alarms
- Alarm recording

Exterior: White lacquered steel or stainless steel

Interior: BioPlus - Stainless steel

BioMidi - **Aluminium/stainless steel or stainless steel

*** White version comes with internal sides in aluminium and bottom and backside of door in stainless steel. Stainless versions comes as all stainless*

Model	ER 930	ER 1400	RR 425	RF 425	RR 625	RF 625	EF 425
Temp Range	-2°C/+20°C	-2°C/+20°C	+2°C/+20°C	-25°C/-5°C	+2°C/+20°C	-25°C/-5°C	-40°C/-5°C
Control Unit	Gram Control Unit with Voltage Free Contact, acoustic and visual alarms, E-sensor						
Material Interior	Stainless Steel		Stainless Steel / Aluminium or Stainless Steel				
Material Exterior	White lacquered steel or Stainless Steel						
Dimensions (W x D) mm	780 x 1045	1390 x 876	600 x 731		815 x 731		622 x 731
Height mm	2025/2275	2025/2275	1980/2000		1980/2000		1980/2000
Volume	930 liters	1400 liters	425 liters		625 liters		425 liters
Net weight	165 kg	283 kg	112 kg		152 kg		112 kg
Insulation	60 mm polyurethane with HFC-free cyclopentane propellant						
Refrigerant	R290						
Energy (kWh/24h)	2.1	2.56	1.27	3.61	1.3	4.03	8.93
Sound Level	48.5dB(A)	47.5dB(A)	47.2dB(A)	46.3db(A)	46.6dB(A)	48.4db(A)	57.8dB(A)
Connection	230V, 50Hz						
Air System	Gram BioLine Ventilated Air Distribution System						
Defrost System	Automatic Smart Defrost with re-evaporation of defrost water						
Racks Options	Wire Shelves, Perforated Shelves, Drawers						

BIOCOMPACT II



This is a compact refrigerator or freezer cabinet for a wide range of biostorage purposes where the prime focus is on dependability.

The BioCompact II provides you with significantly better performance than any other cabinets in this segment for storing ordinary biomaterial under stable conditions. The small footprint of this design also makes it the perfect biostorage unit for use in confined spaces.

The BioCompact II combination models, are stacked cabinets consisting of one Refrigerator and one Freezer cabinet mounted together. The combination offers a very high degree of flexibility and versatility on the same small footprint.

- Access port
- Self-closing door with key lock
- Voltage-free contact
- Acoustic and visual door alarm
- E-sensor
- Acoustic and visual temperature alarms

Exterior: White lacquered steel or stainless steel finish

Interior: PS lining

Model	RR210	RF210	RR410	RF410	RR210/RF210	RR310/RF210
Temp Range	+2°C/+20°C	-25°C/-5°C	+2°C/+20°C	-25°C/-5°C	+2°C/+20°C and -25°C/-5°C	+2°C/+20°C and -25°C/-5°C
Control Unit	Gram Control Unit with Voltage Free Contact, acoustic and visual alarms, E-sensor					
Material Interior	PS Lining					
Material Exterior	White lacquered steel or Stainless Steel					
Dimensions (W x D x H) mm	595 x 640 x 801/1001		595 x 640 x 1776/1976		595 x 640 x 1602/1802	595 x 640 x 1991/2191
Volume	125 liters		346 liters		125 / 125 litres	218 / 125 litres
Net Weight (Unpacked)	46 Kg		78 Kg		92 kg	101 kg
Insulation	50mm polyurethane with HFC-free cyclopentane propellant					
Refrigerant	R600a					
Energy (kWh/24h)	0.61	1.53	0.59	2.06	2.07	1.98
Sound Level	36.5dB(A)	39.7db(A)	33.2dB(A)	36.6db(A)	39dB(A)	39.3dB(A)
Connection	230V, 50Hz					
Air System	Gram Bioline Ventilated Air Distribution System					
Defrost System	Automatic Smart Defrost with re-evaporation of defrost water					
Racks Options	Wire Shelves, Perforated Shelves, Drawers					

BIOBASIC



The BIOBASIC range offers cost-effective biostorage solutions for a host of applications. With temperature alarms, internal and external ATEX, no cold walls and a user friendly interface, the BIOBASIC range provides an exceptional selection of features in a very small package. With four sizes to choose from, the BIOBASIC range is well suited for use in confined spaces where performance, features and value are paramount.

- Access port
- Self-closing door with keylock
- Voltage-free contact
- Acoustic and visual temperature alarms
- Acoustic and visual door alarm
- Full ATEX compliance
 - Both internal and external
- RR 210/310/410 also available with glass door

Exterior: White lacquered steel

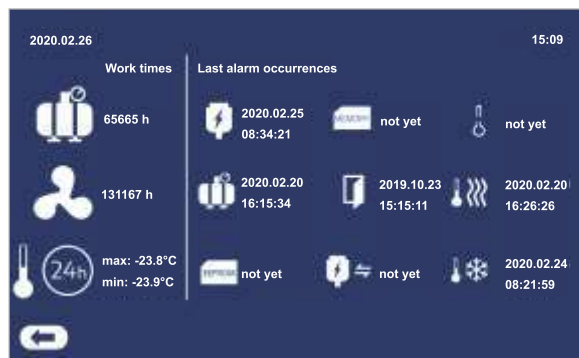
Interior: White/PS lining, Model 600 stainless steel

Model	RR210	RF210	RR310	RF310	RR410	RF410	RR600	RF600
Temp Range	+2°C/+15°C	-25°C/-5°C	+2°C/+15°C	-25°C/-5°C	+2°C/+15°C	-25°C/-5°C	+2°C/+15°C	-25°C/-5°C
Control Unit	BioBasic Control Unit with Voltage Free Contact, acoustic and visual alarms, E-sensor							
Material Interior	PS Lining						Stainless Steel	
Material Exterior	White lacquered steel							
Dimensions (W x D x H) mm	595 x 640 x 831		595 x 640 x 1220		595 x 640 x 1876		700 x 895 x 2125	
Volume	125 liters		218 liters		346 liters		610 liters	
Refrigerant	R600a						R290	
Energy Consumption (kWh/24h)	0.43	1.47	0.51	1.56	0.59	2.06	1.44	3.77
Sound Level	33.3dB(A)	37.7db(A)	34.1dB(A)	37.8db(A)	33.2dB(A)	36.6db(A)	44.4dB(A)	44.4dB(A)
Connection	230V, 50Hz							
Air System	Forced Air Distribution System							
Defrost System	Automatic Smart Defrost with re-evaporation of defrost water							
Access Port	1						2	
Plastic Coated Wire shelves	3		4		6		4	

REFRIGERATORS AND FREEZERS



- Touch Screen Display



- Alarms for every malfunction



- Temperature Graph



PREMIUM BIOMEDICAL -30° C FREEZERS



The PREMIUM Biomedical freezers are designed and manufactured with the latest technology. The body of the freezers is built with thickness of 70mm to maximize the temperature stability in the freezers.

- Large colorful touch screen
- Integrated datalogger with minimum 15 years memory
- Integrated Test mode validation program
- Password protected display
- Multiple temperature graph on screen
- Upload & Download through USB
- Door key lock
- Self closing door
- Magnetic silicone gaskets
- Temperature mapping
- Auto defrost system
- Multiple alarms available

Model	BMF628	BMF1398
Capacity (liter)	628	1398
Temperature range	-30°C / -10°C	-30°C / -10°C
External dimension (W x D x H) mm	740 x 830 x 2035	1480 x 830 x 2035
Solid door	1	2

LAB +1° / +10° C REFRIGERATORS



The LAB Requirement Basic Lines +1° / +10° C is the perfect solution for cold storage in laboratories, universities, hospitals. This line meets the common requirement for basic storage without compromising on the performance

BASIC line Refrigerators are **also available with high-end dual glass door**. When there is a need for **an overview without opening the door**, this is the perfect solution for you. BASIC line is a perfect fit if you do not want to compromise the temperature stability.

- Door lock
- Open door alarm
- Self-closing door
- Solid or glass door
- Automatic defrost
- Air forced cooling
- Magnetic door gasket
- Monoblock refrigeration
- Low energy consumption
- Multiple alarms available

Model	LABREF100	LABREF100G	LABREF628	LABREF628G	LABREF1398	LABREF1398G
Capacity (liter)	100	100	628	628	1398	1398
Temperature range	+1°C / +10°C	+1°C / +10°C	+1°C / +10°C	+1°C / +10°C	+1°C / +10°C	+1°C / +10°C
External dimension (W x D x H) mm	650 x 620 x 860	650 x 620 x 860	740 x 830 x 2035	740 x 830 x 2035	1480 x 830 x 2035	1480 x 830 x 2035
Solid door	yes, 1 solid door	no	yes, 1 solid door	no	yes, 2 solid doors	no
Glass door	no	yes, 1 glass door	no	yes, 1 glass door	no	yes, 2 glass door



-60°C

Freezer Collection





-86°C UPRIGHT FREEZERS



Supreme stability, reliability, user-friendliness and small dimensions make these freezers the perfect choice for use inside the lab.

Low power consumption, natural refrigerant, cyclopentane insulation combined with recyclable materials, makes these freezers environmentally friendly. All Nordic Lab freezers have a unique single stage compressor technology which has been proven for more than 20 years.

- Eco friendly, HCFC free Nature R Refrigerant.
- Easy installation, limited maintenance and low power consumption.
- Ideal for Testing Labs, Research Labs & Hospitals.
- Audible and visual alarms are integrated.
- 48 hours battery backup.
- Automatic door release.
- ISO 9001, 14001, 45001 certified.

MODEL	ULT U35	ULT U100	ULT U250
Temp Range	-86°C / -60°C		
Material Interior	Stainless Steel		
Material Exterior	Painted Steel	Galvanized, pre-coated Steel	
External Dimensions (W x D x H) mm	630 x 675 x 650	595 x 690 x 825	600 x 690 x 2055
Volume (Litres)	37	93	256
Refrigerant	Nature R		
Energy Consumption (kWh/24h)	3.2	6.7	10.3
Sound Level	46 db	57 db	64 db
Power Supply	230V, 50Hz		
Defrost System	Manual		
Access Port	Ø 20 mm	Ø 15 mm	
Shelves (Stainless Steel)	1	2	5
Compressor Type	Single Stage		Dual Cooling, Single Stage
Net Weight	59 kg	60 kg	140 kg

w.styler

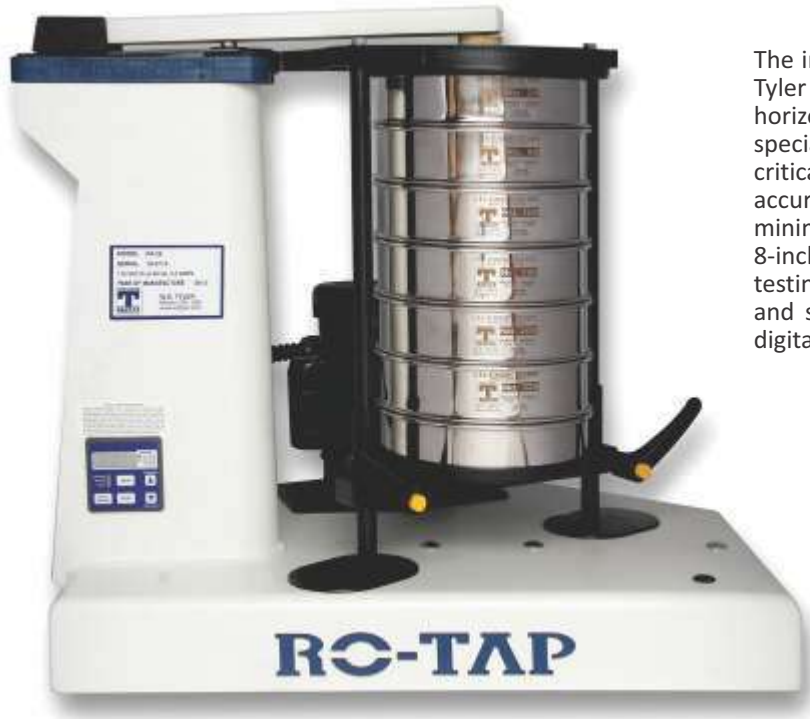


TEST SIEVES & SHAKERS

NEXOPART
simplicity for your lab



RO-TAP® RX-29 AND RX-30 MODELS



The industry standard in test sieve shakers, the original W.S. Tyler Ro-Tap® has a unique two-dimensional operation: a horizontal, circular motion, and a vertical tapping motion. This special action allows material particles to stratify and “seek” critical openings in the test media. This unit provides the most accurate and consistent particle analysis testing and requires minimal maintenance. The RX-29 is designed for testing with 8-inch diameter test sieves. The RX-30 model is designed for testing with 12 in. diameter test sieves. Each unit is test run and serialized prior to shipment and features a 99-minute digital timer/clock with a tolerance of .1 seconds

Number of Sieves

Model	Full Height	Half Height
RX-29 (8 in. or 200 mm diameter)	6 sieves with full height pan	13 sieves with half height pan
RX-30 (12 in. or 300 mm diameter)	4 sieves with full height pan	8 sieves with half height pan
RX-30 (12 in. or 300 mm diameter)	6 sieves with half height pan	8 sieves with half height pan

Specifications

Oscillations per Minute	278 ± 10
Oscillations Displacement	1-1/8 in. x 7/16 in.
Taps per Minute	150 ± 10
Dimensions	28 in. wide x 21 in. deep x 25 in. high (71 cm x 54 cm x 64 cm)
Weight	180 lbs. (82 kg)
Testing Applications	RX-29: 2 in. through US #635 mesh (20 µm) RX-30: 4 in. through US #500 mesh (25 µm)

AIR JET SIEVES



8" DIAMETER TEST SIEVES



200MM DIAMETER TEST SIEVES



200MM DIAMETER AIR JET SIEVES



NEXOPART EML 200

Precision in an entirely new dimension





With state-of-the-art features and customizable options, EML Series Sieve Shakers can be perfectly tailored to satisfy your particular requirements enabling seamless analysis of materials, regardless of their shape, size, or composition.



The **EML 200 Pure** is the basic model and is very easy to operate and control. You can choose between two fixed amplitudes for coarse or fine materials. A defined interval also occurs every 10 seconds. Perfect for those who are looking for simple and straightforward results.

The **EML 200 Premium** is equipped with a user-friendly data interface that allows an easy selection of amplitudes. It is perfect for those users who have special requirements for accurate and repeatable sieve analysis.

The **EML 200 Premium Remote** is exceptionally suitable for wet sieve analyses. It not only offers all the features of the EML 200 Premium but is additionally equipped with a separate control unit and a cover with an integrated full cone nozzle.




-  Sample weights of up to 3 kg
-  Two hard-code adjustable amplitudes (model specific)
-  One predefined interval (**only EML 200 Pure**)
-  Wet and dry sieving (**only EML 200 Premium Remote**)

NEXOPART EML 315 & EML 450



The **EML 315** is available for wet or dry sieve analysis. You can use this machine for various sieves with diameters of up to 315 mm. The EML 315 for wet sieving differs from the dry sieving version. It is equipped with a cover, with an integrated wide spreading spray diffuser as well as further accessories for wet sieving. Both machine models feature a separate control unit.

The **EML 450** is the heavyweight of the EML series and offers options for wet or dry sieve analysis. With sample weights of up to 15 kg, it offers the largest analysis surface area and is ideal for test sieves with diameters of up to 450 mm. The EML 450 for wet sieving differs from the dry sieving version. It is equipped with a cover, with an integrated wide spreading spray diffuser as well as further accessories for wet sieving. Both machine models feature a separate control unit.

-  Sample weights of up to 6 kg (EML 315) & 15 kg (EML 450)
-  Adjustable amplitudes
-  Wet and dry sieving

NEXOPART UWL 400

The greatest dimension in precision



NEXOPART

simplicity for your lab

Sieving material weighing up to 20 kg? Wet or dry sieving? No problem for the NEXOPART UWL 400. It is NEXOPART's largest and most powerful 3D test sieve shaker to date and equipped with two three-phase unbalance motors, it is able to easily analyze large and heavy bulk materials.



NEXOPART TwinNut®

The TwinNut® quick-release clamping system is ideal particularly when sieving with frequently varying sieve tower heights. Simply open the TwinNut®, slide it to the desired position on the guide bars, and adapt the height without time-consuming, screwing and unscrewing.

The TwinNut® is available for the EML 200 Premium - UWL 400 models.



Sample weights of up to 20 kg



Wet and dry sieving



Two three-phase unbalance motors

NEXOPART e200 LS AIR JET SIEVING MACHINE

Solution for very fine powders



Sample weights of up to 30 g



Simple and fast to operate



Upgradeable at any time

The NEXOPART e200 LS unfolds its full effectiveness exactly where fine powders often clog the test sieve, as they have an increased tendency to agglomerate and make sieve analysis more difficult. The e200 LS, in contrast, is perfectly suited for separating, fractioning and analyzing grain sizes of fine to very fine powders in various branches of industry such as mineral, chemical, pharmaceutical (by complying with 21 CFR Part 11), toner production, food and beverage, cement and construction materials sectors. Quiet, fast and efficient, it delivers accurate measurement results and a high level of reproducibility.



COLD



CHILLERS

HOT



**CIRCULATING
BATHS**



**GENERAL PURPOSE
WATER BATHS**

Controllers

MX



- Heats to 135°C
- Stability: $\pm 0.07^{\circ}\text{C}$
- 1-speed Pump

Standard Digital (SD)



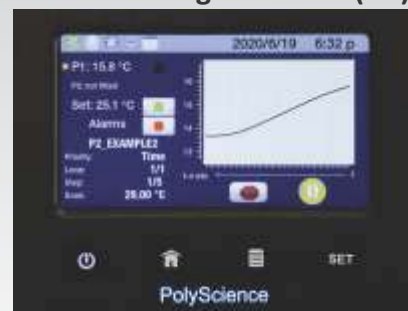
- Heats to 170°C
- Stability: $\pm 0.04^{\circ}\text{C}$
- 2-speed Pump

Advanced Digital (AD)



- Heats to 200°C
- Stability: $\pm 0.01^{\circ}\text{C}$
- Variable-speed Pump
- Full Connectivity

Advanced Programmable (AP)



- Heats to 200°C
- Stability $\pm 0.005^{\circ}\text{C}$
- Variable-speed Pump
- Full Connectivity
- Open Mode Time/
Temperature Ramping



CIRCULATING BATHS



ACHIEVE THE TEMPERATURE YOU WANT, WHEN YOU WANT IT.

PolyScience circulating baths are designed to work hard for your specific needs while making your job more efficient and ensuring the most precise temperature control.

- Reservoir sizes ranging from 6 to 75 liters
- Refrigerated and Heated, Heated and Open Bath models, and Immersion Circulators
- Four types of digital temperature controllers, from the essentials to fully programmable
- Intuitive setup and operation, featuring either multi-language help or screen prompts (depending on model)

Capacity	7 liter	7 liter	15 liter	15 liter	20 liter	28 liter	45 liter
Maximum Temperature	200 °C						135°C
Minimum Temperature	-20°C	-40°C	-30°C	-40°C	-30°C	-30°C	-25°C
Cooling Capacity @20°C	200 W	360 W	915 W	1000 W	915 W	915 W	1400 W
Working Access (LxWxD) inch	6.2 x 5.6 x 5	6.2 x 5.6 x 5	8.4 x 10.9 x 5.5	8.4 x 10.9 x 5.5	9.9 x 12.5 x 5.5	12.4 x 14.1 x 5.5	21.6 x 15.7 x 5.5
Drain	•	•	•	•	•	•	•
Lid Dock™	•	•	•	•	•	•	
Advanced Programmable	AP07R-20	AP07R-40	AP15R-30	AP15R-40	AP20R-30	AP28R-30	AP45R-20
Advanced Digital	AD07R-20	AD07R-40	AD15R-30	AD15R-40	AD20R-30	AD28R-30	AD45R-20
Standard Digital	SD07R-20		SD15R-30		SD20R-30	SD28R-30	
MX	MX07R-20		MX15R-30		MX20R-30		

1 Maximum temperature is controller dependent

GENERAL PURPOSE WATER BATHS



PolyScience water baths utilize a full color TFT display. Clear hinged gable cover continues to be a standard feature on all the water baths and the intuitive plain-language user interface offers five selectable languages.

Research, communication and listening to customers' needs is what drives the innovation to make the range of PolyScience Water Baths stand out from the competition. These intelligent water baths are the perfect blend of control, convenience, safety and of course, budget.

- Programmable High Limit Value
- Eco Mode
- User-settable alarms: audible & visible
- Displays actual and set point temperature simultaneously
- 5 programmable pre-sets for frequently used temperatures
- Programmable timer
- Hinged gable cover
- Programmable Calibration / Temperature Offset

Capacity	20 liter	28 liter
Temperature Range	Ambient +5° to 100 °C	
Temperature Stability	±0.1°C	
Temperature Uniformity	±0.2 °C	
Heater Wattage	1400	1400
Working Access (L x W x D) inch	9.5 x 17 x 6 in	9.5 x 17 x 8 in
Overall Dimensions (L x W x D) inch	22.5 x 17.5 x 12 in	22.5 x 17.5 x 14 in
Electrical Requirements (V/Hz/A)	240 / 50 / 6	240 / 50 / 6
Shipping Weight	28 lbs / 12.7 kg	
Part No.	240V	WBE20A12E

DURACHILL CHILLERS



DuraChill® Portable Recirculating Chillers are the most effortless chiller on the market. With a wide range of new and exclusive features, DuraChill® Chillers promote ease of use, minimal maintenance and environmental safety. DuraChill® has been designed for future migration to low global warming potential natural refrigerants.

Applications

- Plasma Thawing
- Condenser Cooling
- CT Scanning
- Bioreactors
- MRI
- Dry Ice Replacement
- PET Scanners
- Tap Water Cooling Replacement
- Distillation
- Laser Cooling
- FT-IR
- ICP
- Injection Molding
- Electron Microscopes
- GC/MS
- Hydraulics Cooling
- Reaction Vessels
- Semi Conductor
- Welder Cooling

Model		CA02	CA03	CA05	CA10
Cooling Capacity @ 20°C	50 Hz	0.7 kW	1.28 kW	1.84 kW	2.65 kW
Cooling Capacity @ 10°C	50 Hz	0.5 kW	0.94 kW	1.29 kW	1.9 kW
Cooling Capacity @ 0°C	50 Hz	0.3 kW	0.49 kW	0.77 kW	1.0 kW
Fluid Temperature Range		-10 to 70°C			
Temperature Stability		±0.1 °C			
Displayable Temperature Units		°C or °F			
Displayable Pressure Units		PSI or kPa			
Pump Inlet and Outlet		1/2 inch female NPT			
Connectivity		RS-232. USB Serial Port Emulation. USB TMC, Dry Contact On/Off/Status			
Self-Changing Air Filter		Yes			
UV Biological Growth Inhibitor		Yes			
Optional Remote Temperature Probe		Remote monitoring / Remote control			
Ambient Air Temperature Tracking		Yes			
Pump Pressure Range (Turbine Pump)	50 Hz	20 to 75 psi / 138 to 621 kPa			
Pump Pressure Range (Positive Displacement Pump)	50 Hz	20 to 83 psi / 138 to 572 kPa		20 to 83 psi / 138 to 572 kPa	
Maximum Pump Flow Rate (Turbine Pump)	50 Hz	2.2 qpm / 8.3 lpm		2.9 qpm / 11 lpm	
Maximum Pump Flow Rate (Positive Displacement Pump)	50 Hz	2.0 qpm / 7.6 lpm		2.9 qpm / 11 lpm	
Power Requirements (with Turbine Pump)	50 Hz	240V, 50Hz, 8.9A	240V, 50Hz, 9.0A	240V, 50Hz, 9.2A	240V, 50Hz, 13.5A
Power Requirements (with Positive Displacement Pump)	50 Hz	240V, 50Hz, 8.2A	240V, 50Hz, 8.3A	240V, 50Hz, 8.5A	240V, 50Hz, 12.0A
Part Number (with Turbine Pump)	50 Hz	CA02A2T1-41AA1N	CA03A2T1-41AA1N	CA05A2T1-41AA1N	CA10A2T1-41AA1N
Part Number (with Positive Displacement Pump)	50 Hz	CA02A2P1-41AA1N	CA03A2P1-41AA1N	CA05A2P1-41AA1N	CA10A2P2-41AA1N

Note: Specifications are subject to change

DURACHILL® BENCHTOP CHILLERS



- Intuitive touchscreen display with 5 operating languages
- Continuous fluid level monitoring
- Variable fan speed technology
- UV light biological growth inhibitor
- Patented self-diagnostic system
- Fluid temperature range of -30 to 30°C
- Temperature stability of $\pm 0.1^{\circ}\text{C}$
- Displayable temperature units in $^{\circ}\text{C}$
- Displayable pressure units in kPa or PSI
- Easy-priming pump
- Environmentally friendly natural refrigerant option

The natural refrigerant option is better for the environment and also achieves a low temperature of -30°C , making DuraChill Benchtop the coldest in its class.

- Refrigeration stepper valves

Saving energy and providing more precision and efficiency to your cooling process, even at lower temperatures.

- Hot gas bypass

Adding an additional level of safety to each unit.

- Remote probe

Control a jacketed reactor or any other process that requiring a secondary temperature sensor with the easily-equipable optional remote probe.

Model		BA05 (R134a)	BA05 (R290)	BA06 (R134a)	BA06 (R290)
Operating Temperature Range		-10° to 30°C	-10° to 30°C	-20° to 30°C	-30° to 30°C
Cooling Capacity @ 20°C^1	50 Hz	400 W [†]	400 W [†]	1000 W [†]	1050 W [†]
Cooling Capacity @ 10°C^1	50 Hz	375 W [†]	350 W [†]	700 W [†]	875 W [†]
Cooling Capacity @ 0°C^1	50 Hz	350 W [†]	250 W [†]	450 W [†]	650 W [†]
Cooling Capacity @ -10°C^1	50 Hz	200 W [†]	150 W [†]	250 W [†]	500 W [†]
Reservoir Capacity		0.4 gal / 1.5 L			
Pump Inlet and Outlet		1/2 inch female NPT			
Connectivity		RS-232, USB-B, Dry Contact On/Off/Status, Remote Probe			
UV Biological Growth Inhibitor		Yes			
Optional Remote Temperature Probe		Remote monitoring / Remote control			
Ambient Air Temperature Tracking		Yes			
Maximum Sound Level (at 1m)		60 dBA			
Maximum Pump Pressure		16.5 psi / 114 kPa			
Maximum Pump Flow Rate		6.4 qpm / 24.6 lpm			
Power Requirements	50 Hz	240V, 50Hz, 2.4A	240V, 50Hz, 2.5A	240V, 50Hz, 2.5A	240V, 50Hz, 3.2A
Part Number	50 Hz	BA05A0G3-310A13E	BA05E0G3-310A13E	BA06A0G3-310A13E	BA06E0G3-310A13E
Unit Weight		24.3 kg			
Shipping Weight		35.5 kg			
Dimensions		16.9 x 9.1 x 18.4 inch			

1. Cooling capacity based on a 50%/50% mix of ethylene glycol and distilled water as coolant at ambient temperature of 20°C .

[†] For conversion of W to BTU/hr, multiply by 3.412

LABORATORY INSTRUMENTS



Water Baths
Freeze Dryers
Sieve Shakers
Lab Testing Instruments



UNIVERSAL WATER BATH

- Circulating bath
- Chiller
- Refrigerated bath
- General purpose bath

CIRCULATING / REFRIGERATED WATER BATH /CHILLER



NEW Advance model



- Compact and space saving, table top models
- Microprocessor based PID controlled
- User-Friendly Operation
- External Circulation
- Dual display with 7 segment LED display
- R-134a / R-404a CFC free Refrigerant
- Robust cooling, Powerful pump
- Inner bath of SS and outer housing MS powder coated
- Can be used as chiller, circulator, water bath & refrigerated bath
- High temperature cut-off* (WB-Adv only)
- Low level cut-off*
- RS485 is also available* (WB-Adv only)

ORDERING INFORMATION

Order Code	Description
WB 2000-Adv	Circulating Waterbath, -10°C to 100°C, 5 Ltr. Horizontal
WB 2100-Adv	Circulating Waterbath, -20°C to 100°C, 5 Ltr. Horizontal
WB 2000V-Adv	Circulating Waterbath, -10°C to 100°C, 5 Ltr. Vertical
WB 2100V-Adv	Circulating Waterbath, -20°C to 100°C, 5 Ltr. Vertical
WB 2200V-Adv	Circulating Waterbath, -30°C to 100°C, 9 Ltr. Vertical
WB 2300V-Adv	Circulating Waterbath, -40°C to 100°C, 9 Ltr. Vertical

*NEW Advance Series

ORDERING INFORMATION

Order Code	Description
WB 2000	Circulating Waterbath, -10°C to 100°C, 5 Ltr. Horizontal
WB 2100	Circulating Waterbath, -20°C to 100°C, 5 Ltr. Horizontal
WB 2000V	Circulating Waterbath, -10°C to 100°C, 5 Ltr. Vertical
WB 2100V	Circulating Waterbath, -20°C to 100°C, 5 Ltr. Vertical
WB 2200V	Circulating Waterbath, -30°C to 100°C, 9 Ltr. Vertical
WB 2300V	Circulating Waterbath, -40°C to 100°C, 9 Ltr. Vertical

GENERAL PURPOSE WATER BATH



NEW

WBGP Series

- Microprocessor based PID Controller
- PC Interface with RS-485
- Hinged gable cover
- Acoustic and Visual alarms for temperature
- Reservoir made of SS304
- Reservoir drain
- Electrical heaters connected to the outer surface for gentler and stable heating of the media

DEEP FREEZER & COOLING CABINET



- Microprocessor based PID Controller
- PC Interface with RS-485
- Automatic defrost with re-evaporation of defrost water
- 8 mm access port on top
- Double walled 80mm PUF insulation (Deep Freezer)
- Double walled 60mm PUF insulation (Cooling Cabinet)
- Acoustic and Visual alarms for temperature and door
- Door alarm when door open for extended period of time
- Efficient air distribution system ensures the temperature inside the cabinet remains stable at all times
- CFC Free Refrigerant

Deep Freezer

Model No	DF 400	DF 600	DF 900
Volume	400 Litres	600 Litres	900 Litres
Temperature Range	-25°C to 0°C		

Cooling Cabinet

Model No	CC 400	CC 600	CC 900
Volume	400 Litres	600 Litres	900 Litres
Temperature Range	2° to 10°C		

ULTRASONIC CLEANER



Sweep & Degassing Function

with Digital temperature controller

Advanced MOSFET technology aids in generating efficient sonication. The Ultrasonic cleaner with various operation modes like degassing, Cleaning, Sweep modes gives optimum uses of the Sonicator in its application.

- Powerful and reliable cleaning.
- Built-in micro processor controller with MOSFET based technology.
- Built-in digital thermometer and timer to set an optimum condition for cleaning.
- Easy to read operation status on digital display.
- With SS lead & basket
- Frequency 30 ± 3 KHz

Standard Supply



Order Code	USC100	USC200	USC300	USC400	USC500
Volume Capacity	1.5 Ltr.	3 Ltr.	5.5 Ltr.	10 Ltr.	20 Ltr
Temperature Range	Fixed @ 45°C	RT to 70°C	RT to 70°C	RT to 70°C	RT to 70°C
Bath Dimension [L x W x H mm]	240 x 140 x 65	200 x 150 x 100	250 x 200 x 110	300 x 200 x 150	450 x 300 x 150
Basket Size [L x W x H mm]	210 x 110 x 40	180 x 130 x 60	230 x 180 x 60	280 x 180 x 100	400 x 250 x 100
Ultrasonic Power	50 Watts	100 Watts	150 Watts	300 Watts	500 Watts
Timer Range	0 - 15 min	0 - 60 min	0 - 60 min	0 - 60 min	0 - 99 min
Rated Supply	230 VAC	230 VAC	230 VAC	230 VAC	230 VAC

FREEZE DRYER

with
Vacuum Pump



Freeze dryer is widely used in medicine, pharma, biology research, chemical industry and food production, etc. Freeze drying process ensures easy long term preservation of materials/samples.

The vacuum freeze drying technology, which is also called sublimation drying, is a technical method that freezes the samples in advance, and then sublimates its moisture under vacuum state.

- Condenser, trays, drying shelf and pre-freezing shelf are made of stainless steel 304, anti-corrosion.
- Color LCD touch screen display.
- Condenser with uniform and good ice capture function.
- Transparent acrylic drying chamber.
- Vacuum pump with high pumping speed, to reach good final vacuum.
- CFC-free refrigerant, low noise, good efficiency.

Order Code	FD-50	FD-80	FD-50B	FD-80B
Condenser temperature	-50°C	-80°C	-50°C	-80°C
Tray Dimension	200mm dia x 4 layers	200mm dia x 4 layers	200mm dia x 4 layers with 8 ports manifold	200mm dia x 4 layers with 8 ports manifold
Freeze Drying Area	0.12m ²			
Condenser Capacity	3-5kg			
Vacuum degree	< 10 Pa			
Bulk Capacity	1.2L, 10mm thickness			
Voltage	220V, 50Hz			
Power	700W			
Dimension [L x W x H]	460 x 625 x (370 + 465) mm			

ORDERING INFORMATION

Order Code	Description
FD-50	Freeze dryer -50°C, 4 layers
FD-50B	Freeze dryer -50°C, 4 layers with 8 ports manifold
FD-80	Freeze dryer -80°C, 4 layers
FD-80B	Freeze dryer -80°C, 4 layers with 8 ports manifold

ACCESSORIES

FD-NV	Nitrogen Valve
FD-COM	Communication Interface

ELECTROMAGNETIC SIEVE SHAKER

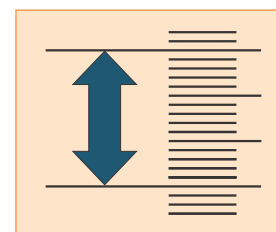


- 3 directional shifting motion
- Intermittent and Continuous motion
- Very low noise operation
- Wet Sieve attachment (Optional)
- Mesh is uniformly tensioned
- Maintenance free & low noise
- Globally comparable & reproducible results



Test Sieves

**Touch Screen
Controller with
Amplitude Program**



Amplitude (2.5 mm)

Order Code	SSA 200	SSA-200-A
Display	16 x 2 character alphanumeric LCD	7" Touch Screen High Resolution, Resistive
Intermittent operation	At interval Upto 0.5 seconds	
Capacity	Upto 8 Sieves of 50 mm height	
Shake time	Programmable from 1min to 99 min	
Power (Vibration) level	Programmable from 5 to 20	Programmable from 1 to 20
Max.Batch / Feed Capacity	3 Kg	
Noise level	Less than 61 dB without sieves at maximum amplitude Less than 71 dB without sieves and material at maximum amplitude	
Dimensions [L X W X H]	339 X 312 X 270mm	385 X 305 X 245mm
Weight	50 Kg Approx without sieves	35 Kg Approx without sieves
Power	220 / 230 V AC, 50 Hz, 600 Watts	
Standard Supply	Main Unit + Lid + Receiver + 2 Nos. of sieves (Mesh Size from 5.6 mm to 40 µm with compliance certificate, S - 200 XX user selectable)	Main Unit + Lid + Receiver + 8 Nos. of sieves
User Management	—	4 level password (1 admin, 9 users)
Data Storage	—	50 datas

TEST SIEVE

International Style



Certificate

Indian Style






Calibration certificate

- Sieves made from stainless steel (Mesh- SS 316 / Ring- SS 304) with laser marking of specification & serial number
- Specially designed sieves without crevasses and without Lead
- No soldering process involved
- Lead free, which makes it ideal for food grade products



International Test Sieves Comparison Table				200 mm/8 Inch Brass Frame Indian Style	200 mm/8 Inch SS Frame Indian Style	200 mm/8 Inch SS Frame International Style
Bss	ASTM	ISS	Mesh Size	non Certified	non Certified	With Certificate
3	3.35	5.6	5.6 mm	IBS 200-5.6 mm	ISS 200-5.6 mm	S 200-5.6 mm
		5	5 mm			S 200-5 mm
3.5	4	4.75	4.75 mm	IBS 200-4.75 mm	ISS 200-4.75 mm	S 200-4
		4.5	4.5 mm			S 200-4.5 mm
4	5	4	4 mm	IBS 200-4 mm	ISS 200-4 mm	S 200-5
		3.55	3.55 mm			S 200-3.55 mm
5	6	3.35	3.35 mm	IBS 200-3.35 mm	ISS 200-3.35 mm	S 200-6
		3.15	3.15 mm			S 200-3.15 mm
6	7	2.8	2.8 mm	IBS 200-2.8 mm	ISS 200-2.8 mm	S 200-7
		2.5	2.5 mm			S 200-2.5 mm
7	8	2.36	2.36 mm	IBS 200-2.36 mm	ISS 200-2.36 mm	S 200-8
		2.24	2.24mm			S 200-2.24mm
8	10	2	2 mm	IBS 200-2 mm	ISS 200-2 mm	S 200-10
		1.8	1.8 mm			S 200-1.8 mm
10	12	1.7	1.7 mm	IBS 200-1.7 mm	ISS 200-1.7 mm	S 200-12
		1.6	1.6 mm			S 200-1.6 mm
12	14	1.4	1.4 mm	IBS 200-1.4 mm	ISS 200-1.4 mm	S 200-14
		1.25	1.25 mm			S 200-1.25 mm
14	16	1.18	1.18 mm	IBS 200-1.18 mm	ISS 200-1.18 mm	S 200-16
		1.12	1.12 mm			S 200-1.12 mm
16	18	1	1 mm	IBS 200-1 mm	ISS 200-1 mm	S 200-18
		900	900 μ			S 200-900 μ
18	20	850	850 μ	IBS 200-850 μl	ISS 200-850 μ	S 200-20
		800	800 μ			S 200-800 μ
22	25	710	710 μ	IBS 200-710 μ	ISS 200-710 μ	S 200-25
		630	630 μ			S 200-630 μ
25	30	600	600 μ	IBS 200-600 μ	ISS 200-600 μ	S 200-30
		560	560 μ			S 200-560 μ

TEST SIEVE

International Test Sieves Comparison Table				200 mm/8 Inch Brass Frame Indian Style	200 mm/8 Inch SS Frame Indian Style	200 mm/8 Inch SS Frame International Style
Bss 	ASTM 	ISS 	Mesh Size	non Certified	non Certified	With Certificate
30	35	500	500 μ	IBS 200-500 μ	ISS 200-500 μ	S 200-35
		450	450 μ			S 200-450 μ
36	40	425	425 μ	IBS 200-425 μ	ISS 200-425 μ	S 200-40
		400	400 μ			S 200-400 μ
44	45	355	355 μ	IBS 200-355 μ	ISS 200-355 μ	S 200-45
		315	315 μ			S 200-315 μ
52	50	300	300 μ	IBS 200-300 μ	ISS 200-300 μ	S 200-50
		280	280 μ			S 200-280 μ
60	60	250	250 μ	IBS 200-250 μ	ISS 200-250 μ	S 200-60
		224	224 μ			S 200-224 μ
72	70	212	212 μ	IBS 200-212 μ	ISS 200-212 μ	S 200-70
		200	200 μ			S 200-200 μ
85	80	180	180 μ	IBS 200-180 μ	ISS 200-180 μ	S 200-80
		160	160 μ			S 200-160 μ
100	100	150	150 μ	IBS 200-150 μ	ISS 200-150 μ	S 200-100
		140	140 μ			S 200-140 μ
120	120	125	125 μ	IBS 200-125 μ	ISS 200-125 μ	S 200-120
		112	112 μ			S 200-112 μ
150	140	106	106 μ	IBS 200-106 μ	ISS 200-106 μ	S 200-140
		100	100 μ			S 200-100 μ
170	170	90	90 μ	IBS 200-90 μ	ISS 200-90 μ	S 200-170
		80	80 μ			S 200-80 μ
200	200	75	75 μ	IBS 200-75 μ	ISS 200-75 μ	S 200-200
		71	71 μ			S 200-71 μ
240	230	63	63 μ	IBS 200-63 μ	ISS 200-63 μ	S 200-230
		56	56 μ			S 200-56 μ
300	270	53	53 μ	IBS 200-53 μ	ISS 200-53 μ	S 200-270
		50	50 μ			S 200-50 μ
585	325	45	45 μ	IBS 200-45 μ	ISS 200-45 μ	S 200-325
		40	40 μ			S 200-40 μ
400	400	38	38 μ	IBS 200-38 μ	ISS 200-38 μ	S 200-400
		36	36 μ			S 200-36 μ
		32	32 μ			S 200-450
500	500	25	25 μ	IBS 200-25 μ	ISS 200-25 μ	S 200-500
600	600(635)	20	20 μ	IBS 200-20 μ	ISS 200-20 μ	S 200-600(635)

LEAK TEST APPARATUS (LTA 201-N)



Leak Test Apparatus is designed with utmost precision using top notch quality material and advanced equipment. It comprises of a polycarbonate desiccator housing to sustain the vacuum for long time. It finds wide applications in numerous industries such as food, pharmaceuticals, chemicals etc. This apparatus is also used to test the quality of packing process in strips, blisters and sachets containing tablets, granulates and liquids

- 5" resistive high quality touch screen
- 50 tests and 50 methods with Date and Time
- SS 304 enclosure
- Selectable Pressure Unit
- Interfaces : LAN, RS-232, External 80/40 Column Printer
- Self-Test with Error diagnosis for Valves, Pumps and Sensor
- Password protection

Order Code	LTA 201
Vacuum Range	50-600 mmHg
Accuracy	Better than +/- 10 mmHg
Hold Time	Upto 60 min
Desiccator	8" or 10" or 12" (Optional)
Display	5" Touch screen
Real Time Clock	Yes
Dimension (WxDxH) mm	360 X 260 X 170
Weight	12 Kg
Power Supply	230 V, 50 Hz, 1 Phase

TABLET HARDNESS TESTER – PORTABLE



This handheld, easy to operate and compact instrument with very high accuracy for the tablet hardness testing gives direct test results on the digital display with audio and visual alarms.

- High levels of accuracy with peak force measurements.
- Easy to operate and handy to carry.
- Force gauge displays the test direction.
- Allows for real time data transfer.
- Can store 10 test values and calculate the average of the stored test value automatically.
- Zero point adjustment for calibration.

Description	THT 101
Display	LCD with backlit display
Keypad	User Friendly 9 Keys operations
Hardness Range	5-500N
Hardness Accuracy	±0.05% FS
Measurable Units	N (Newton), KGF (KiloGram Force) and LBF (Low Bound Force)
Interface Ports	RS232
Battery	1200 mAh, 8.4V, Ni-MH rechargeable battery
Acrylic Safety Glass Cover	Yes
Tablet Size	2mm to 28mm
Dimensions [L x B x H] mm	355 x 60 x 105
Electrical Power / Adapter	230V 50 Hz to DC 12V, 300mA

HOT PLATE MAGNETIC STIRRER



MS 101



MS 303

- Robust top made of nano-crystalline glass ceramic for resistance against temperature shocks and liquid splash
- Elevated control panel for protection against leaking liquids
- Display for easy value setting, all set values readily visible without toggle. No shared display
- 3 heating modes for rapid, gradual & accurate heating
- Pulse mode for vigorous mixing of liquids
- Constant speed across diverse loads and viscosity
- Compatible with PT- 1000 Temperature Probe for accurate measurement of media temperature (available as an optional accessory)
- Powerful BLDC motor for constant speed delivery under varying load conditions

Order Code	MS 101	MS 303
Speed Range	200 - 2200 in steps of 10 RPM	
Dimensions (L x W x H)	156 X 248 X 155 mm	330 X 225 X 113 mm
Stirring Quantity in Ltr (Max)	10	20
Heating Temp. Range (°C)	Ambient to 320°C	Ambient to 550°C
Set-up Plate Feature	Ceramic Coated SS	Ceramic Plate
Set-up Plate Dimensions	140 mm dia (Round)	180 X 180 mm
RS 232 interface	N.A	Yes
Weight	1.4 kg	4.9 kgs
Temp. Accuracy	±1°C	
IP Rating	IP 21	
Safety Temp. Circuit	Yes	
Slip Detection	Yes	

OVERHEAD STIRRER



- Brushless DC motor for quiet operation and maintenance free long operation
- Microprocessor controlled for consistent accuracy with viscous and non-viscous liquids
- Reversible mixing motion - CW/CCW
- Large digital display for all the parameters at one glance
- Uninterrupted operation through Smart control
- Safety cut-off for overload, over current & over temperature
- Counter reaction to speed change
- Push through shaft for viscous liquid or smaller vessels



OHS-B
Cross-Welded



OHS-C
Straight Blade



OHS-D



OHS-E
Pivoting Blade



OHS-F
Collapsible Blade



OHS-G
Square Blade



OHS-H
Anchor Blade



OHS-I

Paddle Blade



OHS-J

Order Code	OHS 200
Capacity [H ₂ O]	25 Ltr.
Speed Range	50-2000 RPM
Torque	20 Ncm
Viscosity	10000 mPas
Timer	1 min to 99 hr 59 mins & infinite mode
Dimensions [L X W X H]	79 X 221 X 179 mm
Protection Class	IP 54
Weight	1.8 kg

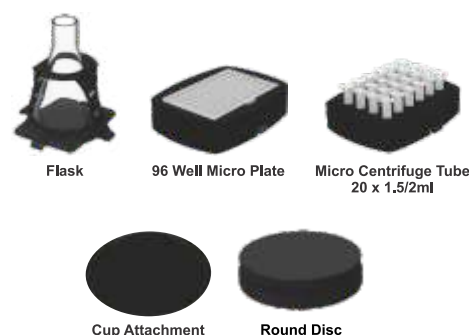
VORTEX MIXER (VM 101)



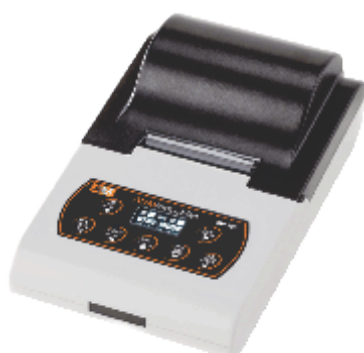
Vortex Mixer assures the highest performance in terms of speed, reliability, precision and safety. It has a variable speed with digital control that allows low RPM start-up for gentle shaking and high speed mixing of vigorous vortexing samples.

- Continuous and touch operations
- Brushless DC motor for maintenance free long life.
- Steady and safe operation
- Variable timer from 1 min to 999 min for continuous operation
- Can be used in hoods & cold rooms
- Specially designed vacuum suction feet hold to the surface and prevent the unit from moving
- Aluminum cast base

Description	Specifications
Orbital diameter [mm]	4
Motor type	Brushless DC motor
Speed range [RPM]	300-4200
Display	Digital RPM / Time
Run type	Continuous / Touch
Dimensions (mm)	205 x 136 x 139 (W x D x H)
Protection class acc. to DIN 60529	IP21
Supply Voltage / Adapter details	110-240VAC input to adapter, 24V DC , 1.5 A output
Power	20 W
Weight	3 Kg



UNIVERSAL STATISTIC PRINTER



The balance printer USP -100 has a streamlined appearance, completely meets the quality requirements of the chemical and pharmaceutical industry and GLP/GMP standard certification.

- Various modes of operation for different applications: Direct Mode, Interval Printing, Statistical (Sum, Mean etc.), Formulation, Pipette Calibration, Comparator Mode
- Prints Time and Date information when hooked to a balance without clock function.
- Password Protection for Date / Time Setting.
- Plug and Play Interfacing.
- Enhanced Support for ISO/GLP.
- User Defined Header & Footer.

Specifications	
Display	Alpha Numeric LED Display
Printing	<ul style="list-style-type: none"> • Method : Impact dot matrix • Speed : 2.7 lines/sec. (approx.) • Printer mechanism durability : 1.5 million lines • Character size : 1.7mm (W) × 2.6mm (H) ASCII • Inking : Ink ribbon • Print format : 24 digits / line (5 × 7 dot matrix) • Paper : Normal paper 57.5mm width
Interface	Compatible with all types of Weighing balances having RS232 & DB9 interfacing facility
Power Supply	12 V DC /1.5 A
Dimension [L x W x H]	188.5 x116 x 87mm

ABEL FLASH POINT APPARATUS



- Conforms to IP-33 & IP-170 & IS1448 (P-20) standards
- Outer body made of heavy gauge mild steel, painted with powder coated paint
- Digital temperature controller cum indicator & PT-100 sensor
- Electrically heated model with metallic heating plate with gas jet/oil test jet and manual stirrer

Order Code	AFP - D
Supply	230V AC, Single Phase, 50 Hz
Standard Package Contains	<ul style="list-style-type: none"> • Thermometer IP-74C - 1 No • Thermometer IP-75C - 1 No • Energy Regulator • Test Cup made of Brass • Water Bath (Heating Vessel) Made of copper • Manual Stirrer • Oil test Jet OR Gas test jet with control valve and silicon tubing

PENSKY MARTENS CLOSED CUP FLASH POINT APPARATUS



- Conforms to ASTM D-93, IP-34 & IS1448 standards
- Outer body made of heavy gauge mild steel, painted with powder coated paint
- Digital temperature controller cum indicator & PT-100 sensor
- Electrically heated model

Order Code	PMCC - D
Supply	230V AC, Single Phase, 50 Hz
Standard Package Contains	<ul style="list-style-type: none"> • Thermometer IP-15C/ASTM-9C - 1 No • Thermometer IP-16C/ASTM-10C - 1 No • Test Cup & Cup Cover • Pilot Flame • Motorized Stirrer • Heating Unit • Oil test jet OR Gas test jet with control valve, 'Y' connection, silicon tubing & rubber tubing

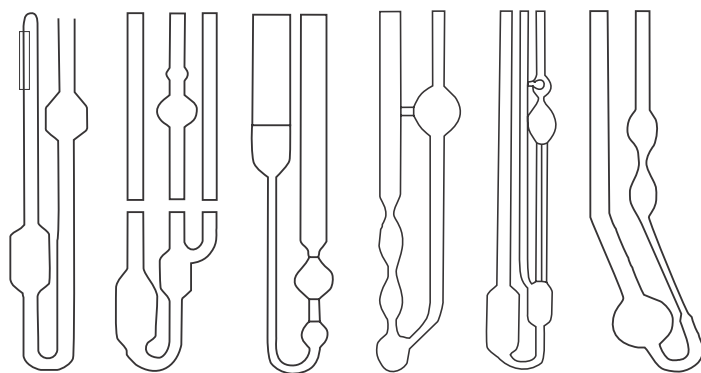
CLEVELAND OPEN CUP FLASH POINT APPARATUS - DIGITAL



- Conforms to ASTM D-92, IP-36 & IS1448 (P-69) standards
- Electrically heated model with metallic heating plate
- Manually controlled flame
- Outer body made of heavy gauge MS powder coated
- Digital temperature controller cum indicator & PT-100 sensor

Order Code	COC - D
Supply	230V AC, Single Phase, 50 Hz
Standard Package Contains	<ul style="list-style-type: none"> • Thermometer IP-28C - 1 No • Open Cup with handle • Clamp for thermometer • Oil test jet OR Gas test jet with control valve and silicon tubing

'U' TUBE VISCOMETER



UTDF

SL

UTRF

CFRF

UBBEL

CFDF

UTDF - 'U' Tube Direct Flow
SL - Suspended Level

CFRF - Cannon Fenske Reverse Flow
CFDF - Cannon Fenske Direct Flow

UTRF - 'U' Tube Reverse Flow
UBBEL - Ubbelohde Viscometer

- Conforms to ASTM D-445 & 446.
- 'U' Tube Reverse Flow / Cannon Fenske Reverse Flow Viscometers for opaque liquid.
- 'U' Tube Direct Flow / Cannon Fenske Direct Flow Viscometers for transparent liquid.
- Suspended Level / Ubbelohde Viscometers for transparent liquid.
- Supplied with test certificate of constant @40°C or @40°C & 100°C.

ORDERING INFORMATION

Order Code	Description
UBBELOHDE VISCOMETER for transparent liquids	
UBBEL-1	Size number 1 - Viscosity range from 2 to 10 cSt
UBBEL-1C	Size number 1C - Viscosity range from 6 to 30 cSt
UBBEL-1B	Size number 1B - Viscosity range from 10 to 50 cSt
UBBEL-2	Size number 2 - Viscosity range from 20 to 100 cSt
CANNON-FENSKE ROUTINE VISCOMETER DIRECT FLOW TYPE for transparent liquids	
CFDF-75	Size number 75 - Viscosity range from 1.6 to 8 cSt
CFDF-100	Size number 100 - Viscosity range from 3 to 15 cSt
CFDF-150	Size number 150 - Viscosity range from 7 to 35 cSt
CFDF-200	Size number 200 - Viscosity range from 20 to 100 cSt
CFDF-300	Size number 300 - Viscosity range from 50 to 200 cSt
CFDF-350	Size number 350 - Viscosity range from 100 to 500 cSt
CFDF-400	Size number 400 - Viscosity range from 200 to 1200 cSt
CANNON-FENSKE VISCOMETER REVERSE FLOW TYPE for opaque liquids	
CFRF-75	Size number 75 - Viscosity range from 1.6 to 8 cSt
CFRF-100	Size number 100 - Viscosity range from 3 to 15 cSt
CFRF-150	Size number 150 - Viscosity range from 7 to 35 cSt
CFRF-200	Size number 200 - Viscosity range from 20 to 100 cSt
CFRF-300	Size number 300 - Viscosity range from 50 to 200 cSt
CFRF-350	Size number 350 - Viscosity range from 100 to 500 cSt
BS/IP U RF VISCOMETER for opaque liquids	
UTRF-1	Size number 1 - Viscosity range from 0.6 to 3 cSt
UTRF-2	Size number 2 - Viscosity range from 2 to 10 cSt
UTRF-3	Size number 3 - Viscosity range from 6 to 30 cSt
UTRF-4	Size number 4 - Viscosity range from 20 to 100 cSt
UTRF-5	Size number 5 - Viscosity range from 60 to 300 cSt
BS/IP SL VISCOMETER for transparent liquids	
SL-1	Viscosity range 3.5 to 10 cSt
SL-1A	Viscosity range 6 to 30 cSt
SL-2	Viscosity range 20 to 100 cSt
SL-2A	Viscosity range 60 to 500 cSt
BS/IP U DF VISCOMETER for transparent liquids	
UTDF-A	Viscosity range 1 to 5 cSt
UTDF-B	Viscosity range 2 to 15 cSt
UTDF-C	Viscosity range 6 to 45 cSt
UTDF-D	Viscosity range 20 to 120 cSt
UTDF-E	Viscosity range 60 to 500 cSt

KINEMATIC VISCOSITY BATH



ANM Kinematic Viscosity baths are used in determination of viscosity of fluids. These units conform to specifications and methods as per **ASTM D-445/446** and **IP -71 standards**. The apparatus are supplied with standard accessories used in the method.

- Double walled constructions, outer body made of heavy gauge mild steel, painted with powder coated paint, inside made of stainless steel.
- Glass wool insulation to prevent heat loss.
- Leak proof argon arc welded & fine finished joints.
- Toughened glass windows with In-built light arrangement.
- A stirrer for turbulence free agitation & uniform temp. throughout the bath.
- Digital temperature controller cum indicator and PT-100 sensor.

Description	
Temperature Range	Ambient +5°C to 120°C
Display Resolution	0.1°C (0.01°C up to 99.99°C and above 100°C will be 0.1°C in KVB-04-P Model.)
Accuracy	± 0.05°C
Heater wattage	1.5 KW
Supply	230V AC, Single Phase
Standard Package Contains	<ul style="list-style-type: none"> • Thermometer IP-32C / IP-66C / IP-92C (Any One) - 1 No • Viscometer Holder made of Bakelite • Digital Stop Watch -1No.

H₂O STABILIZER



- Stops/minimizes the biological breeding of bacteria, algae, fungus in instrument where water is stored
- Water changing duration is minimized
- Heat-transfer efficiency is maintained
- The transparency/cleanliness of water is maintained
- All contact parts are protected against corrosion
- Safe to use
- Biodegradable
- Non irritating to skin at recommended concentrations
- It can also be used as a general purpose fluid for routine Laboratory applications

FOAMLESS DETERGENT & NEUTRALIZER FOR LAB GLASSWARE WASHER/DRYER



- Glassware Washing Machines require foamless surfactant free detergent for trouble free operation.
- Detergent & Neutralizer are available in pack size of 10 liters along with Certificate of Analysis (COA).

ORDERING INFORMATION

Order Code	Description
FLD	Foamless Detergent for Glassware Washer, 10 Ltr.
FLN	Neutralizer for Glassware Washer, 10 Ltr.

BWS WATERPROOF PLATFORM SCALES



- IP65 Water Proof Rating
- OIML approval from Delta (approval no.DK0199.165)
- Stainless steel housing and load cell
- Applications: - Check weighing - Accumulation - Animal weighing - Peak hold
- 52mm LCD, Display with white backlight
- Capacities : 30kg ~ 300kg
- Max. Divisions : 3,000e; 15,000d
- Keyboard : 7keys (Mechanical switch)
- Housing : SST
- Power : Input - AC 100~240V, 50/60HZ
Output - DC 12V/500mA
6V/4Ah rechargeable battery as standard
- Optional RS-232 interface to connect to computer or printer
- Optional analog output (4V~20mA/0~10V)
- Optional bluetooth
- Optional initial-verification

Order No.	Capacity	Readability	Class	Approx Weight	Pan size
BWS-4050-60K	60 kg	5 g	II	21 kg	400 x 500 mm
BWS-4050-150K	150 kg	10 g	II	21 kg	400 x 500 mm
BWS-6050-60K	60 kg	5 g	II	27 kg	650 x 500 mm
BWS-6550-150K	150 kg	10 g	II	27 kg	650 x 500 mm
BWS-6550-300K	300 kg	20 g	II	27 kg	650 x 500 mm

BW SERIES PLATFORM SCALES



- 52mm LCD Display with white LED backlight
- Capacities : 30kg~600kg
- Max. Divisions : 3,000e; 15,000d
- Housing : ABS plastic indicator
- Keyboard : 7keys (Mechanical switch)
- Power : Input - AC 100~240V, 50/60HZ
Output - DC 12V/500mA
6V/4Ah rechargeable battery (Not Included)
- Application : - Check weighing - Accumulation - Animal scale - Keyboard lock
- Aluminum Diecast Platform & MS Platform Options
- Battery provides up to 70 hours of continuous use (without backlight)
- Optional RS-232 interface
- Optional analog output (0-10V/4-20mA)
- Optional setpoint output (HI/OK/LOW/BEEP)
- Optional bluetooth
- OIML approval from DELTA (Approval No.DK0199.411)

Order No.	Capacity	Readability	Class	Approx Weight	Pan size
BWS-60KS	60 kg	5 g	II	16.4 kg	350 x 450 mm
BWS-150KS	150 kg	10 g	II	16.4 kg	350 x 450 mm
BWS-60KM	60 kg	5 g	II	18.3 kg	420 x 520 mm
BWS-150KM	150 kg	10 g	II	18.3 kg	420 x 520 mm
BWS-300KM	300 kg	20 g	II	18.3 kg	420 x 520 mm
BWS-300KL	300 kg	20 g	II	65.4 kg	600 x 800 mm

Q7 SERIES BENCHTOP SCALES



T-Touch



ANM T-Scale
Your Precision Partner

- Touchscreen : 7" TFT Colour Display
- TOS I Embedded Operating System(454MHz)
- PLU Product Management
- Sleep function
- 128mb RAM, 256mb Flash memory
- Detailed Weighing Records
- Visible print format
- Capacities : 6kg ~ 30kg
- Max. Divisions : 3,000e; 2 x 3,000e; 30,000d
- Pan size : 230 x 300mm
- 2 x USB high speed; 1 x RS-232 Interface
- OIML approval from Delta (approval no. DK0199.589)
- Housing : ABS plastic
- Keyboard : 5keys (Mechanical switch)
- Power : Input - AC 100 ~ 240V, 50/60HZ
Output - DC 12V/2500mA
6V/4Ah rechargeable battery (Not Included)

Order No.	Capacity	Readability	Class	Approx Weight	Pan size
Q7-20-6K-M	6 kg	2 g	III	5.1 kg	230 x 300 mm
Q7-20-15K-M	15 kg	5 g	III	5.1 kg	230 x 300 mm
Q7-20-6K-MR	3/6 kg	1/2 g	III	5.1 kg	230 x 300 mm
Q7-20-15K-MR	6/15 kg	2/5 g	III	5.1 kg	230 x 300 mm

S29 SERIES WATERPROOF SCALES



- IP65 Water Proof Rating
- Weighing units conversion
- With hand breathable knob design
- OIML approval from Delta (approval no.DK0199.255)
- Battery provides up to 70 hours of continuous use(without backlight)
- Optional 20mm rear display
- 25mm LCD, Display with white backlight
- Capacities : 3kg ~ 25kg
- Max. Divisions : 3,000e; 2 x 3,000e; 6,000d
- Platform size : 230 x 190mm
- Housing : SST
- Keyboard : 3keys (Mechanical switch)
- Power : Input - AC 100 ~ 240V, 50/60HZ
Output - DC 12V/500mA
6V/4Ah rechargeable battery as standard

Order No.	Capacity	Readability	Class	Approx Weight	Pan size
S29-3K-M	3 kg	1 g	III	4.2 kg	230 x 190 mm
S29-6K-M	6 kg	2 g	III	4.2 kg	230 x 190 mm
S29-15K-M	15 kg	5 g	III	4.2 kg	230 x 190 mm
S29-25K-M	25 kg	10 g	III	4.2 kg	230 x 190 mm
S29-6K-MR	6 kg	1 g / 2 g	III	4.2 kg	230 x 190 mm
S29-15K-MR	15 kg	2 g / 5 g	III	4.2 kg	230 x 190 mm
S29-25K-MR	25 kg	5 g / 10 g	III	4.2 kg	230 x 190 mm

CHROMATOGRAPHY CONSUMABLES



D2 LAMP

- OEM Equivalent Lamps
- Long Life
- 2000Hr Life warranty



New! EQ series Equivalent Long Life D2 Lamps for HPLC Detectors (VWD/UV, PDA/DAD) such as Agilent, Shimadzu, Thermo-Dionex, Waters.



Kindly contact us for Ordering P/N and Price!



Agilent

1100, 1200, 1260, 1290

Cyberlab Part Number	Description
D2-AGI-VWD	D2 Lamp for Agilent 1100/1200 VWD/UV equivalent to G1314-60100/G1314-60101
D2-AGI-DAD	D2 Lamp for Agilent 1100/1200 DAD/PDA equivalent to P/N 5181-1530/2140-0813/2140-0820
D2-AGI-1260	D2 Lamp for Agilent 1260/1290 equivalent to 5190-0917

Waters™

2996, 2487 Alliance

Cyberlab Part Number	Description
D2-WAT-2487	D2 Lamp for Waters Alliance 2487 UV/VWD equivalent to P/N WAS081142
D2-WAT-2996	D2 Lamp for Waters Alliance 2996 PDA/DAD equivalent to P/N WAT052586/WAT057760
D2-WAT-UPLC	D2 Lamp for Waters ACQUITY UPLC 2489/2998 equivalent to P/N 20100018

SHIMADZU

SPD10A, AVP, AVVP, M10AVP, 2010

Cyberlab Part Number	Description
D2-SHI-2010	D2 Lamp for Shimadzu HPLC LC-2010 equivalent to P/N 228-37401-00
D2-SHI-SPD	D2 Lamp for Shimadzu SPD10A/10AVP equivalent to P/N 228-34016-02
D2-SHI-UVAA	D2 Lamp for Shimadzu AA/UV Spectrophotometers equivalent to P/N 062-65055-05

SHIMADZU

Prominence i

Cyberlab Part Number	Description
D2-SHI-NEXPROD	D2 Lamp for Shimadzu NEXERA (LC 2040/2040C) & Prominence i (LC2030/2030C) equivalent to P/N 228-55626-01

EPA / TOC VIAL KIT (CERTIFIED & PRE-ASSEMBLED)



- Suitable for water or soil samples.
- Ultra-low bleed septa are suitable for all environmental sample analysis.
- Ideal for EPA method 5035.
- 40 ml Clear glass screw Neck Vials

Part No.	Description
KT-40-0402	40ml Clear Glass Screw Neck Vial with PP Screw Cap White Center Silicon natural / PTFE Beige BONDED Septa with Dust Protection Lid
SCSPC-24-0842	PP White colour top screw cap with Silicon natural / PTFE Beige BONDED septa with Dust Protection Lid

8MM SCREW TOP VIAL, CAP & SEPTA



Part No.	Description
	8mm Screw Top Vials, Cap and Septa
ST-08-4427	1.5 ml Clear Glass Screw Top Vials, w/o write on
ST-08-4428	1.5 ml Clear Glass Screw Top Vials, with write on
ST-08-4429	1.5 ml Amber Glass Screw Top Vials, w/o write on
ST-08-4430	1.5 ml Amber Glass Screw Top Vials, with write on
SCSP-08-4437	PP Black Colour Screw Cap, with Red PTFE/ White Silicon BONDED septa

11MM SNAP TOP VIAL, CAP & SEPTA



Part No.	Description
	11mm Crimp Top Vials, Cap and Septa
ST-11-1232	1.5ml Clear Glass Snap Top Vials, w/o write-on
ST-11-1232W	1.5ml Clear Glass Snap Top Vials, with write-on
ST-11-1232A	1.5ml Amber Glass Snap Top Vials, w/o write-on
ST-11-1232WA	1.5ml Amber Glass Snap Top Vials, with write-on
SCSP-11-4500	11mm Clear Snap Cap with Red PTFE /White Silicon Septa
SCSP-11-2074	11mm Clear Snap Cap with Red PTFE /White Silicon with Slit Septa
SCSP-1B-4500	11mm Blue Snap Cap with Red PTFE /White Silicon Septa
SCSP-1B-2074	11mm Blue Snap Cap with Red PTFE /White Silicon with Slit Septa

11MM CRIMP TOP VIAL, CAP & SEPTA



Part No.	Description
	11mm Crimp Top Vials, Cap and Septa
CT-11-4491	1.5ml Clear Glass Crimp Top Vials, w/o write-on
CT-11-4492	1.5ml Clear Glass Crimp Top Vials, with write-on
CT-11-4493	1.5ml Amber Glass Crimp Top Vials, w/o write-on
CT-11-4494	1.5ml Amber Glass Crimp Top Vials, with write-on
CC-11-4500	11mm Silver Aluminium Crimp Caps with Centre hole, with Red PTFE /White Silicon Septa
CC-11-4498	11mm Silver Aluminium Crimp Caps with Centre hole, with PTFE / Red Silicon Septa

13MM SCREW TOP VIAL, CAP & SEPTA



Part No.	Description
	13mm Screw Top Vials, Cap and Septa
ST-13-0222	4ml Clear Glass Screw Top Vials, w/o write-on
ST-13-1335	4ml Clear Glass Screw Top Vials, with write-on
ST-13-0280	4ml Amber Glass Screw Top Vials, w/o write-on
ST-13-1336	4ml Amber Glass Screw Top Vials, with write-on
SCSP-13-4437	PP Black Colour Open Top Screw Cap, 8.5mm hole with Red PTFE / White Silicone BONDED septa

1ML SHELL VIAL



Part No.	Description
	1ml Shell Vial
SV-01-0513	1ml Clear Glass Shell Vial with PE Plug Cap
SV-PP-2194	1ml PP Shell Vial with PE Plug Cap

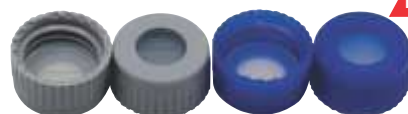
9MM SCREW TOP VIAL, CAP, SEPTA & INSERT

CYBERLAB™



Part No.	Description
9mm Screw Top Vial	
ST-09-2068	1.5 ml Clear Glass Screw Top Vials, with write on
ST-09-2069	1.5 ml Amber Glass Screw Top Vials, w/o write on
ST-09-2070	1.5 ml Amber Glass Screw Top Vials, with write on
ST-09-2068-33	1.5ml Clear Glass Screw Top Vials, with write-on 33 Expansion
ST-09-0932	0.3 ml (300 µl) PP Micro Vial
ST-PP-1205	1.5ml PP Screw Top Vials
9mm Cap, Septa and Insert	
SCSPB-09-0730	PP Blue Colour Open Top Screw Cap, 6mm hole with Red PTFE / White Silicon BONDED septa for 9-425 vials
SCSPB-09-2074	PP Blue Colour Open Top Screw Cap, 6mm hole with Red PTFE / White Silicon SLIT BONDED septa for 9-425 vials
SCSPB-09-1534	PP Blue Colour Open Top Screw Cap, 6mm hole with White PTFE / Beige Silicon SLIT BONDED septa for 9-425 vials
SCSP-09-0730	PP Blue Colour Open Top Screw Cap, 6mm hole with Red PTFE / White silicon septa for 9-425 vials
SCSP-09-2074	PP Blue Colour Open Top Screw Cap, 6mm hole with Red PTFE / White Silicon with SLIT septa for 9-425 vials
SCSPB-09-4499	9mm, PP Blue Screw Cap ,6mm Center hole with Red silicon / clear PTFE BONDED Septa NEW
SCSPB-09-4498	9mm, PP Blue Screw Cap, 6mm Center hole with Red silicon / clear PTFE SLIT BONDED Septa NEW
MI-09-0865	(100µl) 0.1ml 31 x 6 mm with assembled plastic spring
MI-09-0866	(200µl) 0.2ml 31 x 6 mm flat boom

9MM LC CLEAN BONDED



- Color free, Bonded ultra clean septa.
- Suitable for critical samples.
- For all LC, HPLC and LCMS analysis.

Part No.	Description
SCSPB-09-2000	PP Blue Screw Cap with Clear LC Clean BONDED Septa
SCSPB-09-2001	PP Grey Screw Cap with Clear LC Clean SLIT BONDED Septa.

9MM ULTRA MASS SPEC CERTIFIED (UM4)



- Extreme low-bleed.
- Conditioned to level 4 standard.
- Cleanest in the industry.
- Pharmaceutical grade.

Part No.	Description
SCSPB-UM-0730	UM4, PP Blue Colour Open Top Screw Cap, 6mm hole with White PTFE /Purple Silicon BONDED septa
SCSPB-UM-2074	UM4,PP Blue Colour Open Top Screw Cap, 6mm hole with White PTFE /Purple Silicon SLIT BONDED septa

9MM, Y PRE-SLIT SEPTA

Partial Cut
Septa in
Y Design



Intact PTFE to
Prevent
Evaporation

- Prevent sample evaporation until the septum is pierced.
- The Y shape of the pre-cut allows a larger area for the needles to penetrate

Part No.	Description
SCSP-9Y-2074	PP Blue Colour Open Top Screw Cap, 6mm hole with Red PTFE / White Silicon with Y Silicon SLIT, PTFE not slit septa

9MM MAGNETIC SCREW CAP



- Designed for instruments using a magnetic sample transport system.
- For liquid injection technique (Temp. upto 130°C).
- Truly Bonded Septa.
- Secure grip to autosampler magnets.

Part No.	Description
MCSPB-09-0730	Blue Polymag Cap with Bonded Red PTFE/White Silicon BONDED Septa
MCSPB-09-2074	Blue Polymag Cap with Bonded Red PTFE/White Silicon SLIT BONDED Septa

HEADSPACE VIAL, CAP & SEPTA



Part No.	Description
20ml Headspace Vials	
PE-OC-0297	20ml Clear Glass Flat Bottom Vial for PE
PE-OC-0297 (R)	20ml Clear Glass Round Bottom Vial for PE
UN-RB-0873	20ml Clear Glass Round Bottom Vial
UN-FB-0796	20ml Clear Glass Flat Bottom Vial
10ml and 6 ml Headspace Vials	
UN-10-1405	10ml Clear Glass Round Bottom Vial
UN-10-0795	10ml Clear Glass Flat Bottom Vial
UN-06-0801	6ml Clear Glass Vial

Part No.	Description
Headspace Cap and Septa	
ALNS-STAG-0638	20mm, Silver Aluminium Crimp Cap with Silicon White / PTFE Beige (Tan) Septa
ALNS-STAG-6579	20mm, Silver Aluminium Crimp Cap with Silicon White / PTFE Beige Dark (Tan) Septa
MG-08-0638	20mm Gold Magnetic Cap With Silicon White/PTFE Beige Septa
BM-08-6579	20mm, Blue Bi-metallic Crimp Cap with Silicon White / PTFE Beige Dark (Tan) Septa
BM-08-0638	20mm, Red Bi-metallic Cap with Silicon White / PTFE Beige Septa
ALNS-BTGR-0057	20mm, Silver Aluminium Crimp Cap, Butyl / PTFE Septa
ALWS-BTGR-6239	20mm Aluminium Pressure Release Cap Butyl / PTFE Septa.

CRIMPER AND DECAPPER



Part No.	Description
Crimper and Decapper	
CRIMP-11	Manual Crimper 11mm
DECAP-11	Manual Decapper 11mm
CRIMP-20	Manual Crimper 20mm
DECAP-20	Manual Decapper 20mm

20ML HEADSPACE VIAL, CAP & SEPTA



Part No.	Description
20ml Head Space Screw Top Vial, Cap and Septa	
ST-20-1307	20 ml Clear Glass Round Bottom Screw Top Vial
ST-20-1311	20 ml Amber Glass Round Bottom Screw Top Vial
SCSP-20-1309	18 mm Silver Magnetic Screw Cap with Silicon White/PTFE Blue Septa
MPHS-18-6331	18 mm Magnetic PP Screw Cap with Blue PTFE / White Silicon SPME Septa

PEEK TUBING



Trajan precision bore PEEK tubing ensures reproducibility in your chromatographic flow rates and results through smooth internal surface along with consistent and tight tolerated IDs.

Features and benefits

- Excellent chemical resistance and inert to most commonly used solvents. Exceptions are very caustic reagents, strong acids and bases.
- Color coded to industry standards for easy identification of inner diameter.
- Leach free colorants.
- Smooth inner walls and precise IDs.
- Works well with either polymer fittings as well as stainless steel fittings.

Product specifications

- Operating temperature up to 100°C max continuous use.
- Operating pressure range up to 10,000 psi (690 bar), size dependent.
- Can be used across a broad pH range of 2 to 14.

Compatible	Cat No.	ID in mm	ID in Inch	OD in Inch	Colour
SHIMADZU	1302005001	0.13mm ID	0.005" ID	1/16"	
Agilent	1302007002	0.17mm ID	0.007" ID	1/16"	
Waters™	1302010003	0.25mm ID	0.010" ID	1/16"	
Preparative HPLC	302020004	0.50mm ID	0.020" ID	1/16"	

MANUAL CRIMPER AND DECAPPER



Crimper

Decapper

Manual crimper and decapper for aluminum crimp caps. Ergonomically designed manual crimping tools transform the standards of vial crimping and decapping.

Crimper

Part No.	Description
311990	11 mm Manual Crimper
320990	20 mm Manual Crimper

Decapper

Part No.	Description
311991	11 mm Manual Decapper
320991	20 mm Manual Decapper

ELECTRONIC BATTERY CRIMPER AND DECAPPER



Crimper

Decapper

Electronic battery crimper and decapper for aluminium crimp caps*. Reduce strain from repetitive manual crimping. Crimp with the push of a button!

*Not suitable for all-steel or magnetic ring crimp caps; The High Power Unit is required for this application.

Crimper

Part No.	Description
6A11CO	11 mm Electronic Crimper
6A20CO	20 mm Electronic Crimper

Decapper

Part No.	Description
6A11DO	11 mm Electronic Decapper
6A20DO	20 mm Electronic Decapper

SEPTAS

**BTO premium high-temp GC septa**

Maximum operating temperature 400 °C (330-350 °C for 17mm size). BTO is Bleed and Temperature Optimized for the most demanding GC and GC/MS applications. Septa BTO is formulated to extend low-bleed and outstanding mechanical properties of premium GC septa to the highest-temperature applications. Packaged in Glass Jars.

Part No.	DIA	Application	Type	Description
041896	9	BTO - Premium	High Temp & Center Guide	9 mm OD BTO premium high-temp center guide GC septa PK25
298705	9.5	BTO - Premium	High Temp	9.5 mm OD BTO premium high-temp GC septa PK50
041897	9.5	BTO - Premium	High Temp	9.5 mm OD BTO premium high-temp GC septa PK25
041898	11	BTO - Premium	High Temp & Center Guide	11 mm OD BTO premium high-temp center guide GC septa PK25
298718	11	BTO - Premium	High Temp & Center Guide	11 mm OD BTO premium high-temp center guide GC septa PK100
041899	11.5	BTO - Premium	High Temp & Center Guide	11.5 mm OD BTO premium high-temp center guide GC septa PK25

**AG3 low-bleed GC septa**

The CRS Advanced Green 3 was specifically created to combine significantly longer injection life, low bleed and low injection port adhesion. The result is a green septum you can use for all your critical analyses. Maximum temperature 350 °C (except in the 17mm size – please see specification details). Packaged in Glass Jar: 2 in. H x 1-1/2 in. W x 1-1/2 in. D; Weight: 59.5 g

Part No.	DIA	Application	Type	Description
041901	9.5	AG3	Low Bleed	9.5 mm OD AG3 low-bleed GC septa PK25
246225	11	AG3	Low Bleed & Center Guide	11 mm OD AG3 low-bleed center guide GC septa PK50
041902	11	AG3	Low Bleed & Center Guide	11 mm OD AG3 low-bleed center guide GC septa PK25
246424	Shimadzu	AG3	Low Bleed & Center Guide	Shimadzu Plug AG3 low-bleed center guide GC septa PK50

**General purpose blue GC septa**

Our Blue Septa is designed for non-demanding, routine applications. They are easy to penetrate. The septa can be used up to 275 °C and are suitable for 90% of all GC analyses.

Part No.	DIA	Application	Type	Description
234115	11	General Purpose	Blue	11 mm OD General purpose blue GC septa PK100
234116	11	General Purpose	Blue	11 mm OD General purpose blue GC septa PK50
234216	11.5	General Purpose	Blue	11.5 mm OD General purpose blue GC septa PK50
234120	Shimadzu	General Purpose	Blue	Shimadzu Plug General purpose blue GC septa PK100
234121	Shimadzu	General Purpose	Blue	Shimadzu Plug General purpose blue GC septa PK50

**Marathon long-life GC septa**

Long injection life, pre-pierced for minimal coring. Maximum temperature 350 °C. This septum typically achieves 400 injections without failure, when used with a rounded-tip (Agilent-style) needle and autosampler or needle guide. It is ideal for standard manual-injection GC and GC/MS. Center guide design requires less force for initial penetration, for a smoother feel. Packaged in Glass Jar: 2 in. H x 1-1/2 in. W x 1-1/2 in. D; Weight: 55.0 g

Part No.	DIA	Application	Type	Description
041915	11	Marathon	Long-life Center Guide	11 mm OD Marathon long-life center guide GC septa PK25
239297	11	Marathon	Long-life Center Guide	11 mm OD Marathon long-life center guide GC septa PK50

VESPEL GRAPHITE FERRULES

NEW




Part No.	Description
215104	1/16" GC ferrule 0.4 mm ID (long) 85% Vespel / 15% graphite PK10
215164	1/16" GC ferrule 0.4 mm ID Agilent style 85% Vespel / 15% graphite PK10
215105	1/16" GC ferrule 0.5 mm ID (long) 85% Vespel / 15% graphite PK10
215165	1/16" GC ferrule 0.5 mm ID Agilent style 85% Vespel / 15% graphite PK10
215108	1/16" GC ferrule 0.8 mm ID (long) 85% Vespel / 15% graphite PK10
215168	1/16" GC ferrule 0.8 mm ID Agilent style 85% Vespel / 15% graphite PK10

FERRULE & INLET LINERS



Connectors, Ferrules & Inlet Liners for Agilent ThermoFisher SCIENTIFIC

Part No.	Instrument	Column ID	Ferrule ID	Pack size
100% graphite ferrules				
072635	Injectors & detectors at atmospheric pressure e.g. FID(not for GC-MS)	0.1 - 0.32 mm	0.5 mm	10
072636		0.45 - 0.53 mm	0.8 mm	10

Description and geometry	OD (mm)	ID (mm)	Length (mm)	Pack Size	Part No.
For Agilent 5890,6850,6890,7890 and 4890 I For Thermo Scientific TRACE 1300GC					
 Split / Splitless FocusLiner	6.3	4	78.5	5	092002

O-Rings and Sealing Rings

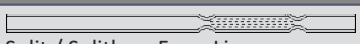

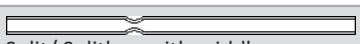
Part No.	Description	Usage	Pack Size
0726532	Viton O-Ring	Temperature up to 300°C. Suitable for liners with OD of 0.63 mm	10

Connectors & Ferrules for PerkinElmer Instruments

Part No.	Instrument	Column ID	Size of nut	Ferrule ID	Pack size
100% graphite ferrules					
072627	Injectors & detectors at atmospheric pressure e.g. FID(not for GC-MS)	0.1 - 0.32 mm	1/16"	0.5 mm	10
072626		0.45 - 0.53 mm	1/16"	0.8 mm	10

Connectors, Ferrules & Inlet Liners for SHIMADZU

Part No.	Column ID	Description	Pack size
GC17A, GC2010 and GC2014 detector/ injectors (not for MS interface or QP2010 injector)			
0726080	0.10 - 0.25 mm ID columns	100% graphite	10
0726082	0.45 - 0.53 mm ID columns	100% graphite	10

Description and geometry	OD (mm)	ID (mm)	Length (mm)	Pack Size	Part No.
For PerkinElmer AutoSystem and Clarus 500, 600					
 Split / Splitless FocusLiner	5	3.4	95	5	092062
 Split/ Splitless with middle gooseneck	5	3.4	95	5	092077
 Split/ Splitless with middle gooseneck	5	3.4	95	5	092085

O-Rings and Sealing Rings

Part No.	Description	Usage	Pack Size
0726533	Viton O-Ring	Temperature up to 350°C. For 2010 & 2014 (SPL-2010 injector & SPL-2014 injector)	10

GENERAL PURPOSE MANUAL SYRINGES

5 - 10 µL Metal Plunger

Standard Plunger Protection Syringes

HAMILTON



NEW

Syringe Part No.	Syringe Volume	Needle Length (mm)	Needle Gauge	Needle OD (mm)	Needle ID (mm)	Needle Tip	Syringe Code
Fixed Needle							
001000	5 µL	50	26	0.47	0.11	Bevel	5F
002000	10 µL	50	26	0.47	0.11	Bevel	10F
002030 (pack of 6)	10 µL	50	26	0.47	0.11	Bevel	10F
Removable Needle							
002050	10 µL	50	26	0.47	0.11	Bevel	10R

Guided Plunger

Fixed Needle							
001400	5 µL	50	26	0.47	-	Bevel	5F-GP
Removable Needle							
001450	5 µL	50	26	0.47	-	Bevel	5R-GP

1 µL Volume

HAMILTON



Syringe Part No.	Syringe Volume	Needle Length (mm)	Needle Gauge	Needle OD (mm)	Needle ID (mm)	Needle Tip	Syringe Code
8.0 mm Outer Diameter (OD) Barrel							
000500	1 µL	50	23	0.63	0.155	Cone	1BR-5
000505	1 µL	70	23	0.63	0.155	Cone	1BR-7
000570	1 µL	70	26	0.47	0.155	Cone	1BR-7/0.47

25 µL - 100 µL Metal Plunger

HAMILTON



Syringe Part No.	Syringe Volume	Needle Length (mm)	Needle Gauge	Needle OD (mm)	Needle ID (mm)	Needle Tip	Syringe Code
Fixed Needle							
003000	25 µL	50	25	0.5	0.2	Bevel	25F
004000	50 µL	50	25	0.5	0.2	Bevel	50F
005000	100 µL	50	25	0.5	0.2	Bevel	100F

10 µL PTFE Tipped Plunger

HAMILTON



Syringe Part No.	Syringe Volume	PTFE Tipped Plunger	Needle Length (mm)	Needle Gauge	Needle OD (mm)	Needle ID (mm)	Needle Tip	Syringe Code
Fixed Needle								
002200	10 µL	✓	50	26	0.47	0.11	Bevel	10F-GT

1 mL PTFE Tipped Plunger

Also Suitable for Syringe Pumps and Dispensers

HAMILTON



SGE Syringes
A **TRAJAN** Brand

Syringe Part No.	Syringe Volume	PTFE Tipped Plunger	Needle Length (mm)	Needle Gauge	Needle OD (mm)	Needle ID (mm)	Needle Tip	Syringe Code
Fixed Needle								
008102	1 mL	✓	50	22	0.72	0.37	Bevel	10F-GT
Removable Needle								
008100*	1 mL	✓	50	23	0.63	0.32	Bevel	1MR-GT
Fixed Luer Lock								
008025	1 mL	✓	-	-	-	-	Luer Lock	1MDF-LL-GT

* No thread in Plunger stem of syringe. Part numbers 008100

GC AUTOSAMPLER SYRINGES

Agilent Technologies



NEW

Syringe Part No.	Syringe Volume	PTFE Tipped Plunger	Needle Length (mm)	Needle Gauge	Needle OD (mm)	Needle ID (mm)	Needle Tip	Syringe Code
HP7673, 7683, 7693A and 6850ALS Fixed Needle								
002821	10 µL	✓	42	23-26	0.63/0.47	0.11	Cone	10F-AG-0.63/0.47
002826	10 µL	✓	42	23-26	0.63/0.47	0.11	Cone	10F-AG-GT-0.63/0.47

PAL SYSTEM



Syringe Part No.	Syringe Volume	PTFE Tipped Plunger	Needle Length (mm)	Needle Gauge	Needle OD (mm)	Needle ID (mm)	Needle Tip	Syringe Code
CTC PAL Headspace								
008631	2.5 mL	-	56	23	0.63	-	Side Hole	2.5MF-CTC-EGT-HS-5.6/0.63H

SHIMADZU



Syringe Part No.	Syringe Volume	PTFE Tipped Plunger	Needle Length (mm)	Needle Gauge	Needle OD (mm)	Needle ID (mm)	Needle Tip	Syringe Code
AOC 14, 17, 20 and 20i Fixed Needle								
001988	5 µL	-	42	23	0.63	0.11	Cone	5F-S-0.63
AOC 14, 17, 20 and 20i Removable Needle								
002898	10 µL	-	42	23	0.63	0.11	Cone	10R-S-0.63

GC Manual Syringe

BECKMAN COULTER

ALTEx

SSI

VICI



Syringe Part No.	Syringe Volume	PTFE Tipped Plunger	Needle Length (mm)	Needle Gauge	Needle OD (mm)	Needle ID (mm)	Needle Tip	Syringe Code
Fixed Needle								
003300	25 µL	-	51	22	0.028"	0.37	LC	25F-LC
004300	50 µL	-	51	22	0.028"	0.37	LC	50F-LC
005300	100 µL	-	51	22	0.028"	0.37	LC	100F-LC

SGE CAPILLARY COLUMNS



BP-1 : 100% Dimethyl Polysiloxane

Suitable Replacement for : DB-1, HP-1, Ultra-1, SPB-1, CP-Sil 5CB, Rtx®-1, ZB-1, CP-Sil 5CB MS, VF-1MS, Petrocol DH DB-Petro, HP-1MS, SPB-1 Sulfur, VB-1

Part No.	Length Meters	I.D. (mm)	Film Thickness μm
054090	30	0.53	1.0

BP-5 : 5% Phenyl / 95% Dimethyl Polysiloxane

Suitable Replacement for : DB-5, Rtx-5, HP-5, Ultra-2, PTE-5, SPB-5, MDN-5, CP-Sil 8CB, VB-5, ZB-5

Part No.	Length Meters	I.D. (mm)	Film Thickness μm
054177	30	0.32	0.25
054196	30	0.53	5.0

BP-10 (1701) : 14% Cyanopropylphenyl Polysiloxane

Suitable Replacement for : DB-1701, Rtx-1701, HP-1701, SPB-7, CP-Sil 19CB, 007-1701, PE-1701, SP-1701

Part No.	Length Meters	I.D. (mm)	Film Thickness μm
054268	25	0.32	0.5
054280	25	0.53	1.0

BP-624 : Cyanopropylphenyl Polysiloxane

Suitable Replacement for : DB-624, HP-VOC, Rtx Volatiles, Rtx 624, VOCOL, VB-624, ZB-624, OV-624, AT-624, HP-VOC, CP-Select624CB, 007-624

Part No.	Length Meters	I.D. (mm)	Film Thickness μm
054832	30	0.32	1.8
054836	30	0.53	3.0
054838	60	0.53	3.0

BP-20 (WAX) : Polyethylene Glycol

Suitable Replacement for : DB-Wax, HP-20M, Supelcowax 10, CP-Wax 52CB, Stabilwax, Carbowax, HP-Innowax, Rtx-WAX, RH-WAX, ZB-WAX, TG-WAX MS, VF-WAX MS, Elite-WAX

Part No.	Length Meters	I.D. (mm)	Film Thickness μm
054427	30	0.25	0.25
054433	30	0.32	0.25
054451	30	0.53	1.0
054431	50	0.32	0.25
054438	30	0.32	0.5

BPX-70 : 70% Cyanopropyl Polysilphenylene-siloxane

Suitable Replacement for : DB-23, CP-Sil 88, VF-23ms, SP-2330, SP-2380, Rtx®-2330, ZB-FAME

Part No.	Length Meters	I.D. (mm)	Film Thickness μm
054612	30	0.22	0.25
054622	30	0.25	0.25
054623	60	0.25	0.25
054624	120	0.25	0.25

SYNERGY

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Synergy has been a trusted service and technical support provider for over a decade, specializing in laboratory and analytical instruments across India.

With a trained and skilled team of engineers, our main goal is to ensure customer satisfaction by offering a comprehensive range of services that optimize the performance and reliability of your instruments.

Since inception, we have been committed to surpassing customer expectations. Through continuous improvement, we have expanded and refined our services, setting new industry standards along the way. Our dedication to excellence is evident in our partnerships with renowned brands, guaranteeing top-notch support and service nationwide.

OVERVIEW



Installation and Maintenance:

Our skilled technicians excel at installing and maintaining a variety of instruments. We take care of the necessary qualifications and documentation, seamlessly integrating the instruments into your workflow. Additionally, we offer training to users, empowering them to make the most of the instruments.



Demonstrations:

Get a firsthand experience of the capabilities and features of different instruments through our comprehensive demonstrations. Our knowledgeable team provides clear explanations and guidance on operating the instruments with confidence and efficiency.



In-house Lab Services:

Leverage our expertise for conducting tests on your samples using our supported instruments. We also offer customized Method Development and Sample Analysis services, providing insightful analysis that ensures accurate, reliable, and reproducible results. Make well-informed decisions based on the data generated from your samples.



Annual Maintenance Contracts (AMCs):

For customers seeking regular maintenance and support, we offer flexible AMC services. Our dedicated team ensures that your instruments are always in peak condition, minimizing downtime and maximizing productivity.



Calibration Services:

Trust our calibration services to guarantee precise and dependable measurements. We adhere to industry standards, ensuring that your instruments maintain their precision and performance.



Warranty and Out-of-Warranty Repairs:

Whether your instruments are within the warranty period or beyond, our skilled engineers promptly diagnose and resolve any issues. We aim to minimize disruptions and extend the lifespan of your instruments, safeguarding your investment.

At Synergy,

we take pride in delivering exceptional customer service. We strive to provide reliable technical assistance and tailored solutions to meet your specific needs. Trust us as your partner in maximizing the performance and value of your laboratory instruments.

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Deep Freezer, Freezer, Refrigerator



Water activity meters



Melting Point Apparatus



Glassware Washer, Dryers



Sonicator, Waterbath, Leak test Apparatus, Printer, Flashpoint Apparatus, Sieve shaker, Data logger



Viscometer, Rheometer, CAP Model, Texture Analyzer, Waterbath, Thermosel



Viscometer, Rheometer, CAP Model, Texture Analyzer, Waterbath, Thermocell



Autoclave



Weighing Balance, Moisture Balance



Muffle Furnace, Tube Furnace



Waterbath, Chiller



Sonicator, Pipette Cleaner



Flexi Pump, Blender, Colony Counter



Sieve Shaker



Tintometer, Turbidity Meter



HPLC



Refractometer

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WHY CHOOSE US?



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With over a decade of experience, we have a team of skilled engineers who are experts in lab instrument service and support. We stay up-to-date with the latest industry advancements to deliver exceptional solutions.



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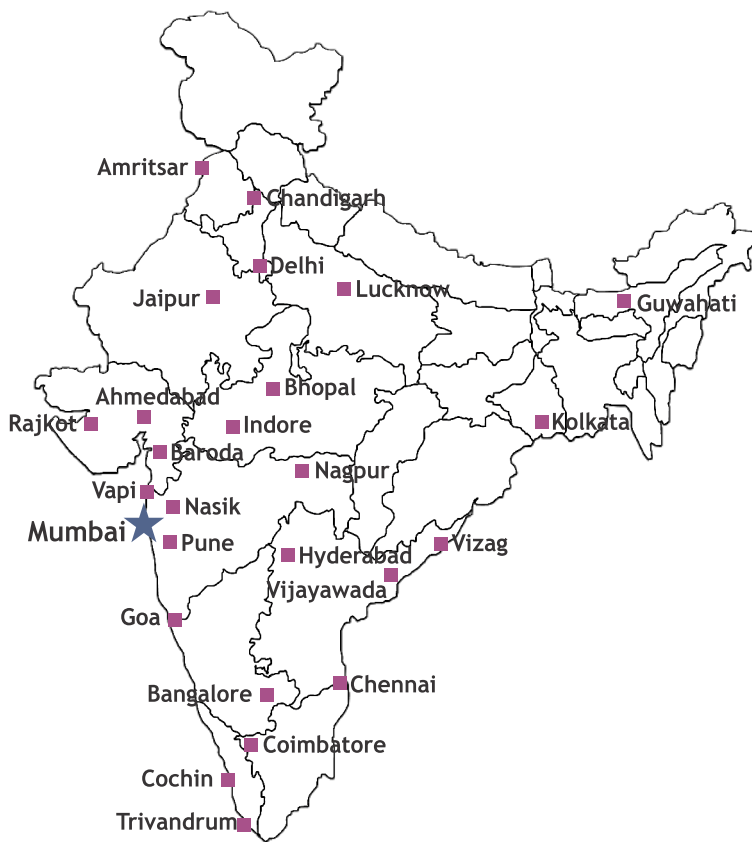
Convenience:

We have skilled professionals stationed all over India, we can conveniently access customers nationwide. Our prompt and efficient service ensures minimal disruption to your lab operations.

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