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We are a specialized supplier with 25 years of experience in the field of design and production of laboratory and process equipment, where we ensure our clients the best solutions.

We are certainly proud of the fact that we are selected by those companies that have specific needs and are looking for custom-made solutions.

Our products

- Climatic Chambers
- Plant Growth Chambers
- Temperature Chambers
- Vacuum Dryers
- Freeze Dryers
- Shakers
- Pass-boxes
- VMAP Packaging Systems
- Tailored Solutions

Laboratory & Process Equipment



Climatic Chambers

- Temperature ranges: 5°C ... 95°C (any size), -40°C ... 180°C (LT – version), -75°C ... 180°C (ULT – version)
- Innovative system, which enables the uniform and stable temperature and Rh field throughout the entire working temperature range
- Process control through the user-friendly controller with an LCD display and programmable functions (10 programs, 10 steps, cycling, controlled passes-grades....)
- PID temperature and relative humidity controller
- Rh control with a 'dew-point' system
- 0.1°C temperature setting and display resolution
- 1% relative humidity setting and display resolution
- Double protection system against the high temperatures
- The interior chamber fully made of stainless steel AISI 304 highly polished
- The exterior made of aluminized sheet, powder coated (RAL 7035)
- Stainless steel wire shelves
- Simple temperature and Rh calibration
- Acoustic and visual alarm
- Wide selection of optional equipment

S Size Climatic Chambers



KK-105 CH

KK-190 CH

Booth size available in LT and ULT version

M Size Climatic Chambers



KK-265 CH

KK-340 CH

KK-500 CH

All available in LT and ULT version

XL Size Climatic Chambers



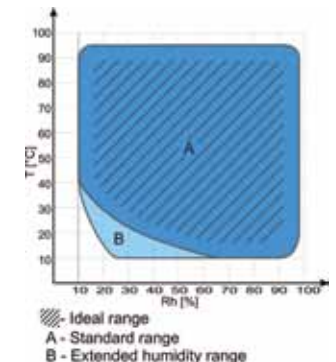
KK-1000 CH

KK-1700 CH

KK-2700 CH

KK-4075 CH

All available in LT and ULT version



Plant Growth Chambers

- Temperature range 5°C ... 60°C (others available on demand)
- Day & Night simulation
- Forced air circulation with a fan
- Innovative system for providing a uniform and stable temperature and RH field throughout the entire working temperature range.
- Process control through a user-friendly controller with an LCD display with the programmable functions (day time, night time, day temperature, day humidity, night temperature, night humidity)
- PID temperature and relative humidity control
- Humidity control with 'dew-point' system
- 0.1°C temperature setting and display resolution
- 0.1% relative humidity setting and display resolution
- Double protection system against the high temperatures
- The interior casing made of stainless steel (AISI 304)
- The exterior made of aluminized sheet, powder coated (RAL 7035)
- Stainless steel wire shelves
- Acoustic and visual alarm
- Large selection of optional equipment



S size Plant Growth Chambers

RK -265CH

RK- 340 CH

Compact design

Front light source

Available with CO2 control



M size Plant Growth Chambers

RK-500 CH

RK-700 CH

Reduced depth

Small footprint

Front light source



L size Plant Growth Chamber

RK-900 CH

Reduced depth

Front & back light source

3 level light intensity control

Walk In Models

Volume capacity: 10 ... 35 m³

Built to fit



Temperature Chambers

- Variety of temperature chamber for general and focused purposes
- Temperature ranges all together covering range -75°C ... 180°C / 300°C
- Forced or natural air circulation
- Innovative system for providing a uniform and stable temperature field throughout the entire working temperature range.
- Process control through a user-friendly controller with an LCD display
- PID temperature control
- 0.1°C temperature setting and display resolution
- Double protection system against the high temperatures
- The interior casing made of stainless steel (AISI 304)
- The exterior made of aluminized sheet, powder coated (RAL 7035)
- Stainless steel wire shelves
- Acoustic and visual alarm
- Wide volume range from 25L ... 5 m³
- Large selection of optional equipment

Temperature Chambers with Heating only Function

Natural or forced Air circulation
Standard temperature range
 $T_{\text{ambient}} + 5^{\circ}\text{C} \dots 300^{\circ}\text{C}$ (500°C)
Basic or advanced programmable controllers

Commonly used for:

- Drying
- Sample / material conditioning
- Stress tests
- Dry heat sterilization



Temperature Chambers with Heating and Cooling Function

Forced Air circulation
Standard temperature range:
-10°C ... 100°C, -40°C ... 180°C,
- 75°C ... 180°C

Advanced programmable controllers

Commonly used for:

- Stability testing
- Stress testing
- Sample / material conditioning
- Cold Storage
- Low or environment temperature incubation



Vacuum Dryers

- Temperature range $T_{\text{ambient}} + 5^{\circ}\text{C} \dots 200^{\circ}\text{C}$
- Programmable microprocessor controller with an LCD display
- Start-up operation delay (start-up at a specified time and day)
- Material temperature monitoring
- 0.1°C temperature resolution
- $\pm 0.1^{\circ}\text{C}$ temperature stability
- Simple temperature calibration
- RS 232 communication port
- Inert gas purging
- Additional free port NW-40 (for calibrations)
- Glass door with over pressure release function
- Over temperature shut-off
- Two-stage silicon seal
- Radiused chamber made of stainless steel AISI 304 (optional AISI 316)
- Exterior made of aluminized sheet, powder coated (RAL 7035) (optional AISI 304)
- Shelf temperature display (SC label at the end of the type)
- Heated shelves (independent PID controller for each shelf) (...SC models)
- Vacuum control & digital display (...SC models)
- Qualification documentation available
- Available with different vacuum pumps
- Large selection of optional equipment

Table Top Models



VS-25 C
VS-25 SC

2 heated shelves
Vacuum control



VS-50C
VS-50SC

2 heated shelves
Vacuum control



VS-130SC

5 heated shelves
Vacuum control

All commonly used for:

- Vacuum drying
- Dry mass determination
- Food & Drug QA labs

Industrial Vacuum Dryers



Capacity: $1\text{m}^2 \dots 10\text{m}^2$

Heating / Cooling: fluid circulation through shelves, walls and doors

Condenser: $1 \dots 5\text{m}^2$ (-75°C available)

Standard installation or according to ATEX

Commonly used for:

- Pharma vacuum drying

Freeze Dryers

In research – The unit is used for various drying procedures. The products can be dried in different containers. This unit is typically used at universities and research laboratories.

Pilot systems – Freeze drying R&D, optimization of product and drying cycle. This unit is typically used in the pharmaceutical industry as well as in research and development laboratories.

Production – Small batch quantities with capacity up to 3.2m². The prime considerations are: low costs per surface area, endurance and simple use. This unit is typically used by small companies engaged in the field of biotechnology.



Table Top Models

Lio-5P

Condenser temperature down to -55°C



Lio-5 PLT

Condenser temperature down to -100°C



Stand Alone Models

Lio-10P

0,1m² compact unit

Lio-1000

0,1m² unit

Lio-2000

0,2m² unit

Lio-4000

0,45m² unit

Lio-8000

0,9m² unit

Featuring separate chamber for drying and condenser

Temperature controlled shelf / shelves

Built in vacuum pump

Advanced programmable controller...

available with condenser down to -95°C



Shakers

This shakers are the result of users needs and discoveries of many years in static incubation. We produce incubators with independent thermo stated cabinet with an incorporated shaker or as shakers that can be installed in the conditioned environment.

To make things easier shakers are usually equipped with different clamps or holding devices. That can even be customized to specific volumes, shapes or materials.

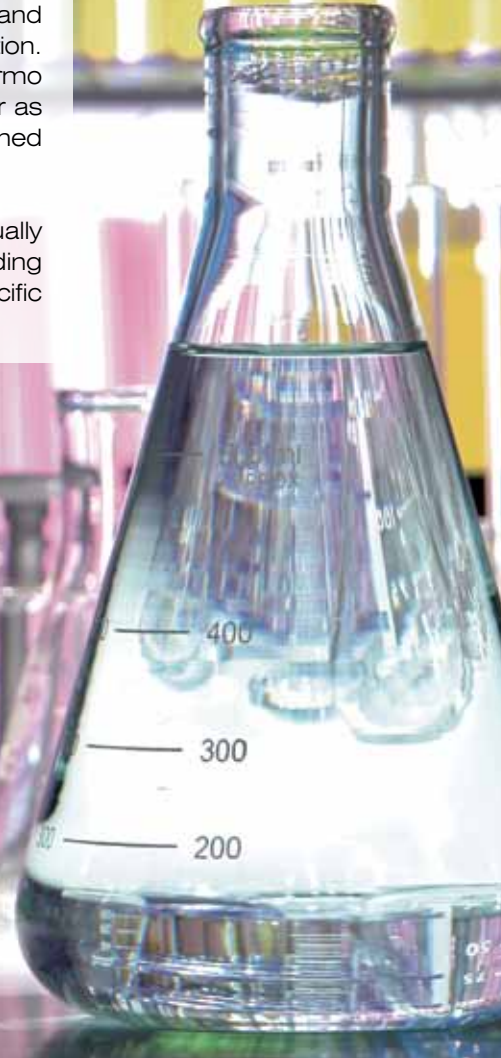


Table Top Model

IS-190

Temperature control T_{ambient}
+5°C...70°C

Linear movement with
amplitude 44 mm
Shaking plate size
490 x 450 mm



Stand Alone Model

IS-200K

Temperature control
10°C ... 70°C (refrigerated)

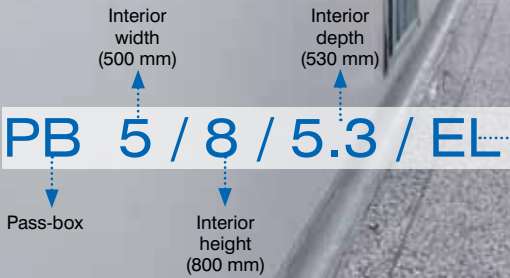
Circular movement with
amplitude 50 mm
Shaking plate size
800 x 660 mm

Pass-boxes

Pass boxes are most commonly used to allow safe transfer of material, equipment, documents or samples between Clean rooms or rooms in different grade or/and pressure. Usage of pass boxes minimizes the risk of airborne cross contamination. Further add on function such as air circulation and filtration, UV lights, etc. to the base model will make transfers of your material even safer and cleaner.

- Stainless steel interior & exterior housing with mirror finish
- Power supply free innovative interlock as standard
- Single-handed operation
- Large radius corners making it perfectly cleanable & sealable
- Tempered 12 mm thick glass doors
- Installation parts included as standard (booth side frame, support bracket/legs, screws)
- More than 500 installations world wide

Characterization



- / Mechanical interlock
 - EL Electrical interlocks
 - LUX Floor version
 - UV UV C sterilization light
 - H Internal air circulation through HEPA Filter
 - AIR Air supply from / to HVAC system
 - H2O2 H₂O₂ ports for sterilization
 - 90° Corner version
 - LUX Floor installation
- Different combinations available!

Most Frequent Dimensions / Models

	Interior			Exterior			Equipment	View
	W	H	D	W	H	D		
PB 4/4/4	400	400	400	500	500	450	/	
PB 5/5/5	500	500	500	600	600	550	/	
PB 6/6/6	600	600	600	700	700	650	/	
PB 8/8/8	800	800	800	900	900	850	/	
PB 6/6/6 UV	600	600	600	700	850	750	UV – C surface sterilization	
PB 6/6/6 HUV	600	600	600	750	970	750	Internal air circulation through HEPA filter sterilization	
PB 6/6/6 AIR	600	600	600	700	700	750	Air shower with supply from HVAC system	
PB 6/6/6 EL	600	600	600	700	750	750	Electrical interlock	
PB 8/10/8 LUX	800	1000	800	1000	1150	950	Floor installation	
PB 6/6/6 90°	600	600	600	*	*	*	Corner installation	

All other dimensions available on demand!

VMAP Packaging Systems

The presented solution is a result of decades-long experience in the field of design and manufacture of customized and specialized laboratory and process equipment. It is the latest development of the so-called Vacuum Modified Atmosphere Packaging technology. Its sole purpose is packaging pharmaceutical goods in an atmosphere which keeps oxygen level below 0.3%.

- Packaging in oxygen free atmosphere
- Oxygen atmosphere analysis for each cycle packet
- Packaging in Alu or PVC bags
- Isolation of container
- Capacity range from 0.7 m³ up to 8 m³
- Clean room installation



VKN-440

440 L
1 x 600 mm bag sealer



VKN-770

770 L
1 x 600 mm bag sealer



VKN-1000

1000 L
2 x 600 mm bag sealer



VKN-3780

3780 L
2 x 1200 mm bag sealer
Container isolation



VKN-8000

8000 L
Bag sealer available on demand
Container isolation

Control system based on Siemens S7-300 platform
Including profi-bus / Ethernet
and application for digital report on SCADA system
Including CFR 21 part 11 guidelines on electronic records and electronic signatures
Tailored size and control systems available!

Tailored Solutions

Over 200 tailored projects for known clients and applications.

Designed, manufactured and tested all under the same roof!

- Temperature control
- Pressure control
- Vacuum control
- Relative humidity control
- CO₂ control
- O₂ control
- Fluid level control



Tailored Climatic Chambers

Extreme temperature ranges
Extended Rh control ranges
Extreme size



Tailored Water or Oil Baths

World class metrology performances
Extreme temperature ranges
Calibration purposes
R&D support
Material conditioning



Tailored Process Equipment

Drying
Continues heating
IR Flash heating
Heat modification
Testing according to EN standards requirements