

# **LabTech**

A complete range  
of laboratory solutions



# WATER CHILLERS

LABTECH'S STATE-OF-THE ART WATER CHILLERS ENSURE ACCURATE AND CONSTANT COOLING CONDITIONS OF INSTRUMENTS EVEN IN THE HARSH LABORATORY CONDITIONS

## BEST BY DESIGN, PERFORMANCE AND RELIABILITY

Even if water is one of the most precious and scarce resources, it is still largely used as coolant in many laboratories. Most of the water used as coolant is not recycled, involving higher and higher laboratory costs. LabTech offers a complete line of recirculating water chillers to virtually match all laboratory needs. LabTech's state-of-the-art water chillers ensure accurate and constant cooling of instruments even in the harsh laboratory conditions.



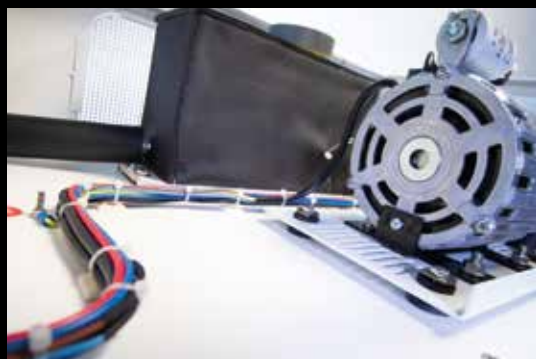
### High Energy Efficiency

The "hot gas bypass" technology carries back the hot uncondensed refrigerant through a reservoir coil eliminating both the ON/OFF compressor cycle and energy-waste.



### Low Noise Level

One of the most annoying phenomena in modern labs is the noise. The noise level is one of the basic parameters we consider in addition to all what it is necessary to realize and manufacture a state-of-the-art instrument.



### High Quality Components

All parts used in LabTech's chillers have to pass strict quality control tests: the quality control ensures a long lifespan even with 24/7 use.

## INNOVATION INSPIRED

LabTech develops and produces innovative temperature control instruments. LabTech instruments are used whenever high precise temperature control and rapid temperature changes are required. LabTech follows “Green Lab Conditions” regulations using eco-friendly materials. The LabTech water chiller line constantly adopts new technologies and innovations to maintain world-class reliability and quality. The LabTech water chiller line is specially designed for analytical, medical and industrial use providing accurate control of the liquid temperature. All production steps are focused to offer high quality and customized solutions to meet any requirement.

## 9 GOOD REASONS TO CHOOSE LABTECH WATER CHILLERS

- » High energy efficiency
- » Operating cost reduction
- » Excellent price/performance ratio
- » High quality components
- » Rapid and powerful cooling
- » Compact design
- » Accurate temperature
- » Quiet operations
- » Green lab conditions

## MAIN APPLICATIONS

- » AAS
- » CP-OES
- » ICP-MS
- » XRF
- » XRD
- » Rotary evaporation
- » Laser
- » Distillation
- » Packaging
- » Sputtering
- » Industry
- » Electron microscopy
- » Wellness



# ROTARY EVAPORATORS

A MUST-HAVE INSTRUMENT FOR ANY ORGANIC CHEMISTRY LABORATORY, BUT NOT ONLY, THEY ARE THE IDEAL SOLUTION FOR ROUTINE EVAPORATION PROCESSES

## EVAPORATION SOLUTION PACKAGE

When the American, award-winner, chemical researcher Lyman C. Craig invented the rotary evaporation system in 1950, probably he could not imagine what an innovation he brought into the chemical and pharma industries. For sure he could not imagine that a rotary evaporator could be used even in modern “molecular cooking”. Compared to a static apparatus, the vacuum rotary evaporator can carry out single stage distillations quickly and gently. The capacity of a rotary distillation is generally about four times greater than a conventional

static distillation, therefore no surprise about their widespread success. Evaporation is a common and important step in many research and development applications. The concentration of solutions by distilling the solvent and getting rid of low and higher-boiling or solid residue is a necessary step in organic synthesis and extracting inorganic pollutants. Evaporators are also used outside research laboratories such as in chemical, pharma, petrochemical and food industries.





## MAIN APPLICATIONS

- » Active agent concentration
- » Chemical synthesis and extraction
- » Concentration of solution and suspension
- » Liquid mixture separation
- » Molecular cooking
- » Powder drying
- » Research
- » Solvent distillation & recycling
- » Vacuum distillation of sensitive substances

## INNOVATION INSPIRED

With an innovative design, the EV series rotary evaporators include color digital display to monitor and control rotation speed/temperature, motorized vertical lift, evaporation flasks, on line sample adding through PTFE valve. The stand alone heating bath guarantees maximum safety in operations and easy maintenance. It can be completed with the LabTech vacuum and cooling accessories to reach top efficiency of process.



# GAS GENERATORS

THE GAS GENERATORS LINE IS ONE OF THE LARGEST OF LABTECH ARRAY AND IT OFFERS SOME 20 MODELS TO CHOOSE FROM, EITHER FOR NITROGEN, HYDROGEN OR ZERO AIR

## ALL THE GAS YOU NEED

The gas generators line is one of the largest of LabTech array. Continuous and consistent source of high purity nitrogen, hydrogen, zero air for GC is paramount in every high-quality test lab. Complete solutions for carrier gas, make up gas, reference gas, sample preparation and as flame support or fuel gases are available. Modern and efficient labs do not like to deal with heavy and cumbersome cylinders and hassle-free generators are an excellent alternative in lack of a pipeline. In a short amount of time the investment is fully amortized.

## WHY TO CHOOSE LABTECH GAS GENERATORS?

- » Compact dimensions
- » High and constant gas purity
- » Allows 24h/day operations
- » User friendly approach
- » High quality guaranteed
- » Cost reduction





## Nitrogen - LN Series

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LabTech develops innovative gas generators that can be used whenever high-quality nitrogen gas and rapid flow changes are required. By adapting new technologies and innovations in order to maintain a high reliability level, all production steps are focused to offer high-quality solutions to meet any requirements.

### MAIN APPLICATIONS

- » Carrier gas for GC and GS-MS
- » Flame ionization detector (FID) for feed gas
- » ICP-MS collision gas
- » Production of  $H_2O_2$



## Hydrogen - LMH & LMHPLUS Series

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The LMH & LMHPLUS series use an electrolytic cell with a polymeric membrane (PEM) to produce pure hydrogen gas. The innovative gas-drying system of the LMHPLUS series is completely ordinary maintenance-free and can run operations 24 hours a day.

### MAIN APPLICATIONS

- » GC
- » ELSD
- » Automated nitrogen concentrator
- » ICP
- » LC/MS



## Zero Air - LZA Series

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Zero air instruments are widely used, for example like zero reference for any instrument that measures hydrocarbon concentration or source of fuel air for FID. The LZA series is one of the most compact and efficient hydrocarbon-free air purifier systems for laboratory use.

### MAIN APPLICATIONS

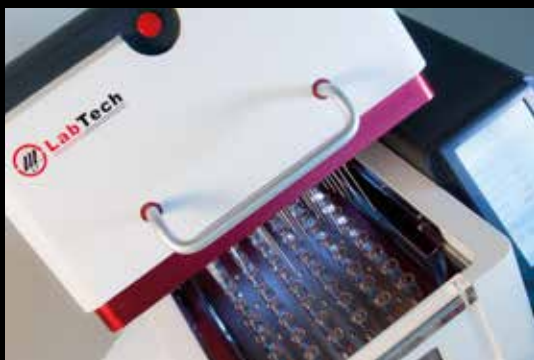
- » THA
- » NPD
- » Pulsed flame photometric detector (PFPD)
- » FPD
- » FID

# CONCENTRATORS

ALSO KNOWN AS BLOW DOWN EVAPORATORS, THEY ARE A SOLID ALTERNATIVE TO ROTARY EVAPORATION, CAPABLE OF PROCESSING MULTIPLE SAMPLES TOGETHER

## LABTECH AUTOMATED CONCENTRATION PRODUCT RANGE

Concentrators (aka nitrogen evaporators or nitrogen blowdown concentrators) are a valid alternative to rotary evaporation mainly in case of small volumes (under 50mL) and a large quantity of samples.



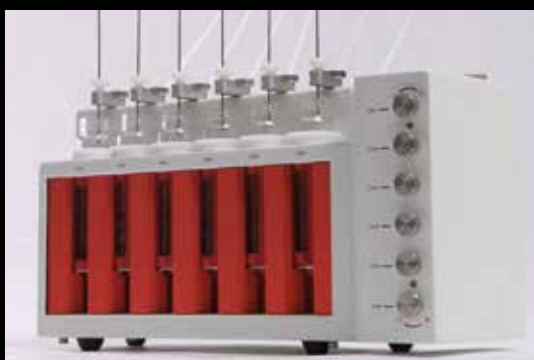
### MultiVap54

The MultiVap54 is the latest multi-channel and multifunctional parallel instrument designed by LabTech, including all accessories and functions to ensure the highest standard of efficiency, speed, reliability, throughput and safety of any concentration process.



### MultiVap10

The LabTech MultiVap10 system increases the capacity and sample throughput in laboratories and maintains quality and low cost. With this system it is possible to evaporate to solid state or concentrate into a fixed end-point volume.



### MultiVap6

The MultiVap6 is a basic, cost effective sample preparation instrument featuring 6 independent channels. Without transferring, samples are directly concentrated in the vial thereby reducing the risk of transfer loss, improving recovery and saving precious time.



## STATE-OF-THE-ART IN SAMPLE CONCENTRATION

Concentrators accelerate the evaporation by decreasing the partial vapor pressure of the solvent just above the surface of the liquid. Blowdown evaporators use a jet of gas to continually force off the layer of air that is saturated with vapor. By immediately removing molecules that enter the vapor state, the molecules do not have a chance to return to the liquid, which increases the evaporation rate. As said blowdown technique is very useful for small sample volumes because with larger samples nitrogen blowdown will take longer and semi-volatile compounds may be lost. Since the samples are immersed in a water bath, with programmable temperatures, the evaporation is further accelerated. LabTech offers 3 models, 2 of them automated and one manual, hosting different tube sizes to satisfy multiple needs.

## MAIN APPLICATIONS

- » Chemistry
- » Environmental organic analysis
- » Food
- » Forensic medicine
- » Geochemistry
- » Organic analytical chemistry
- » Petroleum analysis



# CENTRIFUGES

THE CENTRIFUGES RANGE ENCOMPASSES 14 MODELS, DIVIDED IN 4 FAMILIES, THAT EVEN THANKS TO A WIDE ARRAY OF ACCESSORIES CAN BE USED IN MANY FIELDS

## CENTRIFUGES SOLUTION

Labtech's range virtually satisfies the needs of any modern lab with its 14 models divided in 4 families covering low and high speed, ventilated and refrigerated, small and large capacity, bench top and floor standing models supported by an incredible array of accessories that provide flexibility and versatility.

## 10 GOOD REASONS TO CHOOSE LABTECH CENTRIFUGES

- » Fast cooling
- » Up to 100 (or 10) program memory
- » Motorized lid mechanism
- » Rotor ID
- » Automatic lid release
- » Large assortment of rotors
- » Large assortment of buckets and adaptors
- » User ID and password function
- » Automatic RPM/RCF conversion
- » Excellent price/performance ratio





### Micro Centrifuges

3 compact units designed to offer maximum performance in a small footprint for every workstation up to 27.237 xg, either refrigerated or ventilated, carrying popular microtubes.



### Low-Speed, Clinical Centrifuges

3 compact, robust and versatile low-speed models, either ventilated or refrigerated, well suited for routine work reaching up to 3.960 xg. Max capacity 4x100mL and 6x50mL fixed angle.



### Large Capacity, High-Speed Centrifuges

3 multi-purpose, large capacity, either bench top or floor-standing, centrifuges including the top-of-the-range model that can process samples up to 54.111 xg. Max capacity 4x750mL or 8x400mL blood bags swing out and 6x500mL fixed angle.



### Multi-Purpose, High-Speed Centrifuges

5 high-speed and versatile centrifuges that share rotors, buckets and accessories so as to offer a cost-efficient solution and save precious bench space. Speed ranges from 12.000 to 15.000 rpm generating values from 16.582 to 25.910 xg.

## MAIN APPLICATIONS

- » Biochemistry
- » Biology
- » Cell biology
- » PRP extraction
- » Organic/Inorganic chemistry
- » Environment
- » Cosmetics/Perfums
- » Histology
- » Petroleum
- » Oceanography
- » Water quality
- » Life Science

# LIQUID NITROGEN GENERATORS

MAKE YOURSELF INDEPENDENT FOR THE PRODUCTION OF LIQUID NITROGEN BY FREEING YOU FROM THE BURDEN OF CONTAINERS, PRODUCING IT LOCALLY

## “BREW” YOUR OWN LIQUID NITROGEN

“Drafting” your own high-quality liquid nitrogen, anywhere, anytime. On site liquid nitrogen generation is extremely easy. Experience first-hand the convenience of having the generator in your lab without delivery hassles. Never run out of liquid nitrogen. The LLN Series is designed and developed for small/medium volume users offering safer and more efficient alternative to deliveries. Models available from 10L/day up to 80L/day.

## MAIN APPLICATIONS

- » Cells
- » Cryopreservation of biological samples
- » Cryotherapy (e.g. removal of skin abnormalities)
- » Bacteria, virus manipulation
- » Superconductivity coolant
- » Livestock industries (cattle branding)
- » Cryogenic insulation in oil industry
- » Avant-garde and molecular cuisine
- » NMR



## DESIGN, PERFORMANCE AND FLEXIBILITY

Freeze drying, aka lyophilization or cryodesiccation, is a low temperature dehydration process which involves freezing the product, lowering pressure, then removing the ice by sublimation. With 3 models featuring temperatures from  $-110^{\circ}\text{C}$  to  $-55^{\circ}\text{C}$  and ice condensing capacity from 3 to 8 kg all goals of a lab can be achieved.

## MAIN APPLICATIONS

- » Bacteriology
- » Banking of microorganisms and seeds
- » Biotechnology
- » Chemical synthesis
- » Drying of plants and food
- » Food preservation
- » Drug formulation, vaccines, etc.
- » Sample prep for EM or medical investigations
- » Shelf-life extension
- » Nanotechnology
- » Pharmaceuticals



THE FREEZE DRYERS RANGE INCLUDES 3 MODELS FEATURING TEMPERATURES FROM  $-55^{\circ}\text{C}$  TO  $-110^{\circ}\text{C}$  AND ICE CONDENSING CAPACITY FROM 3 TO 8 KG

**FREEZE  
DRYERS**

# THERMOSTATIC BATHS

LABTECH'S THERMOSTATIC BATHS ARE KNOWN FOR THEIR EXCELLENT PRICE/PERFORMANCE RATIO AND THEY CAN SOLVE THE NEEDS OF ROUTINE WORK IN NUMEROUS LABORATORIES

## PERFORMANCE, RELIABILITY AND EASY TO USE

Incubating is a widespread operation in many labs. A simple, easy to use and low-cost solution is liquid bathing, among other techniques. Non-circulating and circulating water baths are available but the last ones are ideal for applications when consistency and temperature uniformity are crucial. LabTech focuses on circulating baths that cover numerous applications. With temperatures ranging from  $-40^{\circ}\text{C}$  to  $100^{\circ}\text{C}$  and capacities of the bath from 6 to 25L the needs of an average lab can be satisfied.



## MAIN APPLICATIONS

- » Calorimetry
- » Distillation
- » Electrophoresis
- » Fermentation
- » Photometry
- » Polarimetry
- » Rheometry
- » Rotary evaporation
- » Viscosimetry

## PRODUCTIVITY AND EFFICIENCY IN METAL SAMPLE PREP

LabTech offers a complete range of DigiBlock digestion systems to fit any customer need. The DigiBlock heating surface is made of graphite or aluminum alloy protected by PTFE coating and can accommodate as many as 54 graduated tubes and operates from room temperature up to 450°C. DigiBlock complies with the highest international standards to perform EPA approved methods.

### Touch version

Includes a practical controller (connected to the main unit via a 2-meter long cable) that can be mounted on any metallic surface thanks to built-in magnets that allow to control the entire sample digestion process. It's also possible to create, save and load many multi temperature points rumps.



## MAIN APPLICATIONS

- » Biochemistry
- » Environment
- » Food and Feed
- » Mining
- » Petroleum analysis
- » Pharmaceutical

THE DIGIBLOCK COMPREHENSIVE  
FAMILY PROVIDES AN EXCELLENT  
COMBINATION OF HIGH TEMPERATURES  
AND CHEMICAL COMPATIBILITY

# DIGIBLOCKS

# HOTPLATES

HOTPLATES MUST BE STRONG AND ROBUST TO FACE THE HARSH TREATMENT THEY USUALLY GET IN MODERN LABORATORIES AND LABTECH HAS THE RIGHT SOLUTION

## DURABLE HEATING SOLUTIONS

Among the numerous instruments in use in modern labs for sure hot plates are not well treated. The greatest attention goes to more sensitive and expensive instruments. This is why our R&D team has worked hard to realize simple but extremely robust equipment capable of facing multiple heavy containers, chemical aggression and a non-friendly treatment by lab workers. The result is a 19-strong line of hotplates models that can meet the daily expectations of lab managers and technicians. Regardless the line, common characteristics are microprocessor control, durable and stable operation, corrosion resistant surface, robustness and compactness.







### EG Series

7 models featuring temperatures from ambient to 370°C, different kinds of heating surface materials, an extra-large heating surface of 60x40 cm and a handy remote control.



### S Series

3 models derived from the EH series covering temperatures from ambient to 450°C and featuring programmable and storable multipoint heating methods.



### EH Series

8 models featuring temperatures from ambient to 350°C, heating surface in PTFE coated aluminum alloy or stainless steel, a large heating area 40x30 cm. The EH20R includes a wireless remote controller for real-time monitoring.



### EH 45 Series Graphite

4 models featuring temperatures from ambient to 450°C, plain graphite or ceramic coated graphite a heating surface with additional chemical resistance.

## MAIN APPLICATIONS

- » Biochemistry
- » Biology
- » Clinical
- » Environment
- » Food and Feed
- » Pharmaceutical

# VACUUM PUMPS

SPECIALLY DESIGNED TO BE COMBINED WITH LABTECH ROTARY EVAPORATORS THEY ARE PERFECTLY AT EASE WITH COUNTLESS OTHER APPLICATIONS

## COMPACT, SILENT AND BEST IN DESIGN

In spite our membrane pumps have been created as ancillary items for our rotary evaporators they are pretty successful even in case of other applications such as vacuum filtration, degassing, impregnation, drying, distillation and so on, having being conceived for laboratory operations to meet the highest expectations for precision, reliability and ease of use. Compact and light they can be easily moved according to the user requirements. 3 models are available featuring pumping speeds from 18 to 50L/min.

## 6 GOOD REASONS TO CHOOSE LABTECH VACUUM PUMPS

- » Oil-free
- » Anticorrosive coating
- » Low noise and vibrations
- » Compact and light
- » Large vacuum volume
- » Excellent price/performance ratio

## MAIN APPLICATIONS

- » Degassing
- » Distillation
- » Drying chambers
- » Gel drying
- » Impregnation
- » Rotary evaporation



## COMPACT DESIGN

Air compressors are routine equipment widely used. In spite of being humble instruments it is extremely important they generate a clean and dry air and provide a good and constant compression. The all new air compressors perfectly fit the existing LabTech portfolio. Two models capable of covering the large majority of the needs of a medium lab are available: 4 and 5 bars.

## ADVANTAGES

- » Oil-free
- » Low noise
- » Compact foot print
- » Built-in humidity removal system
- » Automatic water drain
- » Self-protection function
- » Intuitive and simple operation
- » Easy maintenance

## MAIN APPLICATIONS

- » AAS
- » ICP-OES
- » MS
- » Evaporation
- » Zero Air Generator and Nitrogen Generator



SPECIFICALLY STUDIED FOR  
LABORATORY APPLICATIONS SUPPLY  
A FLOW RATE OF 20 AND 50L/MINUTE

# AIR COMPRESSORS



## LABTECH, YOUR RELIABLE LABORATORY SOLUTION PROVIDER.

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LabTech is a leading manufacturing company with skill and passion devoted to provide advanced laboratory solutions to the analytical community. We are located in Sorisole, northern Italy, with facilities in USA and China. Incorporated with global branches, LabTech is organized into R&D, production, marketing & sales and customer support. Major LabTech products include organic/inorganic sample preparation systems, laboratory cooling/heating/temperature control equipments, analytical instruments, gas generators, laboratory centrifuges and liquid nitrogen generators. With knowledgeable scientists and experienced engineers, our R&D team has developed and released a series of new lab equipments and instruments dedicated to the modern analytical laboratories. With all of these accomplishments and our endless research and development efforts, we are proud to be your professional partner.

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