



**DON'T FREEZE  
YOUR BUSINESS  
DON'T LET YOUR  
POTENTIAL DRY UP  
FREEZE  
DRY** **INSTEAD!**

PHARMACEUTICALS

FOOD

NUTRACEUTICALS

R & D



**TECHNOLOGY IS MEANT  
TO SERVE, ELSE  
IS AN UNCALLED  
-FOR EXPENSE**

Our range of highly specialised equipment covers a wide scope of industrial uses at different scales. Different models of our freeze dryers, for instance, may well serve food, pharmaceutical or cosmetic producers at the beginner's scale for product development and as a simulation of a fully developed production unit.

#### FOOD PROCESSING

Coffee / Fruit and juice / Vegetables / Meat / Fish and Seafood /Eggs / Dairy

#### DAIRY INDUSTRY

Milk / Cheese / Cream  
Yogurt / Ice cream

#### PET FOOD

#### NUTRACEUTICALS

Antioxidants / Algae / Aloe vera  
Bean and vegetable sprouts /Echinacea  
Seeds / Tea / Wheatgrass/ Probiotics

#### PHARMACEUTICAL

Vaccines and antibodies / Penicillin  
Blood plasma / Proteins / Enzymes  
Hormones / Viruses and bacteria

#### RESEARCH

Vaccines and antibodies / Antibiotics  
Blood plasma / Proteins / Enzymes  
Hormones /Viruses and bacteria  
Active pharmaceutical ingredients  
Pathological samples and cultures


#### DOCUMENT RECOVERY

#### FLORAL

#### TAXIDERMMY

Hunting and fishing trophies  
Museums and collectors  
Preserving deceased pets





## WHAT IS THE USE OF ENGINEERING IF IT DOES NOT SOLVE PROBLEMS?

In an ideal world we would work only on one-off solutions: understand the need, appreciate the limitations and offer a bespoke solution for researchers and manufacturers alike to succeed in their R&D endeavours. As it happens, we do a lot of that, but we are best known for our products and their applications.

We have been born into a family of suppliers of high-tech equipment for academia and business. For forty years now at Gellert Engineering we develop technologies to manage humidity, pressure, temperature, vacuum and luminance. Our loyal clients value us for:

- > OUR DRIVE FOR INNOVATIVE SOLUTIONS
- > OUR EXPERIENCE IN PROCURING FOR INDUSTRY AND ACADEMIA, AND
- > OUR RELIABILITY AS QUALITY MACHINERY MAKERS

Less water. More value.



## R&D AND QUALITY CONTROL: INDISPENSABLE NOW MORE THAN EVER!

There is no better way to establish a competitive edge or stay true to your reputation, but for a top-notch laboratory, and for that you need equipment up to the task. We have been working with researches in the academic and business world since 1981 and we can fully appreciate their needs.



## CUSTOM-MADE SOLUTIONS

No projects are too small for us, because all new ideas deserve to be studied. Although our current range of solutions covers a broad spectrum of applications, we acknowledge that new designs, projects or ideas require tailor-made solutions. We often assist our customers in the development of these one-offs or unique solutions.



CRYO 5™



CRYO 10™



CRYO 20™



CRYO 40™

**LABORATORY / HORECA [5kg]**

**CRYO 5™**

Ice condenser capacity:	5kg
Ice condenser performance:	5kg/24hr
Ice condenser temperature:	-50 °C
Chamber volume:	65 L
Shelf dimensions:	535x165 mm (B x T)
Number of shelves:	6 + 1
Shelf area:	0,529 m <sup>2</sup>
Shelf spacing:	10 mm - 215 mm
Shelf temperature:	up to +50 C
Material (Chamber & condenser):	st. steel 304 or 316

Accessories:

- Electromagnetic pressure control and stop valve
- Manifold horizontal with rubber valves for connection of 4 round flasks

**LABORATORY / HORECA [10kg]**

**CRYO 10™**

Ice condenser capacity:	10kg
Ice condenser performance:	10kg/24hr
Ice condenser temperature:	-50 °C
Chamber volume:	100 L
Shelf dimensions:	535x330 mm (B x T)
Number of shelves:	6 + 1
Shelf area:	1,058 m <sup>2</sup>
Shelf spacing:	10 mm - 215 mm
Shelf temperature:	up to +50°C
Material (Chamber & condenser):	st. steel 304 or 316

Accessories:

- Electromagnetic pressure control and stop valve
- Manifold horizontal with rubber valves for connection of 4 round flasks

**PILOT [20kg]**

**CRYO 20™**

Ice condenser capacity:	20kg
Ice condenser performance:	18kg/24hr
Ice condenser temperature:	-50 °C
Chamber volume:	300 L
Shelf dimensions:	500x700 mm (B x T)
Number of shelves:	6 + 1
Shelf area:	1,95 m <sup>2</sup>
Shelf spacing:	40 mm
Shelf temperature:	-35°C to +50°C
Shelf temperature accuracy:	max. ±1 °C

Ice condenser cooling system:

Air cooled

Shelf cooling system:

(see ice condenser cooling system)

Unit dimensions:

1878 x 1082 x 1062 mm (H x W x D)

**PILOT [40kg]**

**CRYO 40™**

Ice condenser capacity:	40kg
Ice condenser performance:	38kg/24hr
Ice condenser temperature:	-50 °C
Chamber volume:	650 L
Shelf dimensions:	500x700 mm (B x T)
Number of shelves:	12 + 1
Shelf area:	4 m <sup>2</sup>
Shelf spacing:	40 mm
Shelf temperature:	-35°C to +50°C
Shelf temperature accuracy:	max. ±1 °C

Ice condenser cooling system:

Air cooled

Shelf cooling system:

(see ice condenser cooling system)

Unit dimensions:

1878 x 1082 x 1062 mm (H x W x D)

**Laboratory** lyophilizers are suitable for laboratories as well as for small productions. Operation and programming are done through the integrated PLC, while with the AUTODRY function, even inexperienced users can easily complete the process successfully. A manifold is optionally available for lyophilization in bottles.

**Pilot** lyophilizers are suitable for product development but also for the production of small quantities. They simulate the operation of industrial units and the user can transfer the developed recipe on larger commercial freeze dryers.



CRYO 300™

**COMMERCIAL [100kg]**

CRYO 100™

Ice condenser capacity:	100kg
Ice condenser performance:	80kg/24hr
Ice condenser temperature:	-65°C
Chamber volume:	3000 L
Shelf dimensions:	800x2000 mm (B x T)
Number of shelves:	7 + 1
Shelf area:	10 m <sup>2</sup>
Shelf spacing:	40 mm
Shelf temperature: -35°C to +50°C for ice condenser at:	-50 °C
Shelf temperature accuracy:	max. ±1 °C
Ice condenser cooling system:	Air cooled (optionally water cooled)
Shelf cooling system:	(see ice condenser cooling system)
Unit dimensions:	1300x2400 mm (diam x D)

**COMMERCIAL [300kg]**

CRYO 300™

Ice condenser capacity:	300kg
Ice condenser performance:	280kg/24hr
Ice condenser temperature:	-65°C
Chamber volume:	7500 L
Shelf dimensions:	1200x2000 mm (B x T)
Number of shelves:	12 + 1
Shelf area:	29m <sup>2</sup>
Shelf spacing:	40 mm
Shelf temperature: -35°C to +50°C for ice condenser at:	-50 °C
Shelf temperature accuracy:	max. ±1 °C
Ice condenser cooling system:	Air cooled (optionally water cooled)
Shelf cooling system:	(see ice condenser cooling system)
Unit dimensions:	2000x3000 mm (diam x D)

**COMMERCIAL [600kg]**

CRYO 600™

Ice condenser capacity:	600kg
Ice condenser performance:	580kg/24hr
Ice condenser temperature:	-65°C
Chamber volume:	15000 L
Shelf dimensions:	1200x4000 mm (B x T)
Number of shelves:	12 + 1
Shelf area:	58 m <sup>2</sup>
Shelf spacing:	40 mm
Shelf temperature: -35°C to +50°C for ice condenser at:	-50 °C
Shelf temperature accuracy:	max. ±1 °C
Ice condenser cooling system:	Air cooled (optionally water cooled)
Shelf cooling system:	(see ice condenser cooling system)
Unit dimensions:	2000x6000 mm (diam x D)

**COMMERCIAL [1000kg]**

CRYO 1000™

Ice condenser capacity:	1000kg
Ice condenser performance:	900kg/24hr
Ice condenser temperature:	-65°C
Chamber volume:	7500 L
Shelf dimensions:	1200x4000 mm (B x T)
Number of shelves:	18 + 1 19+1 or 12+1 also available
Shelf area:	86,4 m <sup>2</sup> 91,2 m <sup>2</sup> or 57,6 m <sup>2</sup> also available
Shelf spacing:	45mm (41mm) 40mm(36mm) or 80mm(76mm) also available
Shelf temperature: -35°C to +50°C for ice condenser at:	-50 °C
Shelf temperature accuracy:	max. ±1 °C
Ice condenser cooling system:	Air cooled (optionally hybrid)
Shelf cooling system:	(see ice condenser cooling system)
Unit dimensions:	5000x6000 mm (W x D)

**Commercial** lyophilizers can be manufactured according to customer's specifications. They follow the single chamber technology and the cooling of the system can be assisted by a hybrid water system while the chamber can have a second door to export the product to a clean room. The system can be placed in a container for increased mobility.

Enter the world of freeze drying





## SCALE UP -THE REASONABLE WAY TO TEST AND INTEGRATE NEW TECHNOLOGIES

Let's talk new business!

If you are about to start a new line of products and a new production line for them, you will most probably benefit by our scale-up strategy.

Since we are developers ourselves and not solely equipment manufacturers, we can work with you on specific applications for your concept and secure a custom, sustainable, high ROI solution.

Over the years we have helped hundreds of producers to achieve their plans by offering:

- > PROTOTYPE DEVELOPMENT
- > UNIT INTEGRATION
- > COMPLETE SYSTEM DEVELOPMENT
- > EXISTING UNIT REDESIGN
- > EXISTING UNIT OVERHAULING

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