Laboratory freeze dryers

coolvacuum.com

Coolvacuum
a Dara Pharma company

LyoMicron

Reliability and flexibility
for all applications.



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LyoMicron

Reliability and flexibility for all applications.

Ice condenser capacity up to 7 kg.

Output up to 2,800 for 2R vials.

Laboratory / Small scale production.

420 x 630 x 380 mm.

Ice condenser capacity up to 7 kg.

LyoMicron has been designed for freeze-drying tests in conceptual phase, or for freeze-drying batches produced at small scale.

Its compact design and powerful performance allow to satisfy any laboratory need, and can be equipped with a wide range of optional accessories. Therefore, it provides the most suitable performance for every need.



Ice condenser temperature up to -85 °C*.



Lightweight unit.
Weight from 65 kg*.



* According to the model.

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Wide range of accessories

Coolvacuum offers a wide range of accessories, adaptable to the requirements of our customers, to achieve the optimal freeze-drying process for each application.



Rectangular chamber.



Circular chamber.



Circular chamber with shelves and neoprene valves.



Circular chamber with vials stoppering.



Stainless manifolds for neoprene valves.

Specifications

- Ice condenser in AISI 316L stainless steel with internal coil.
- Detachable product temperature probe.
- Air-cooled refrigerating compressor (air-cooling free from HCFC).
- Automatic defrost cycle of ice condenser by hot gas.
- Three user levels protected with passwords.
- Programming of automatic cycle recipes.
- Interactive graphs for vacuum and temperature control.
- USB connector for data export and graphs generating.
- LAN Ethernet output for monitoring and controlling in remote with PC or App.
- Sound level <68 dB (A).
- External vacuum pump supplied with gas Ballast for removing water vapours and other condensable vapours from the oil.
- Exhaust gases filter and check valve for the vacuum pump.

Optional equipment

- Ice condenser temperature up to -55 °C / -85 °C.
- Coolvacuum's Trend Software for registering cycle/batch data.
- SCADA software for acquiring all the relevant data from production, according with FDA 21CFR part 11.
- Remote connection.
- Vacuum control for cycle optimization.
- Organic solvent ice condenser.

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Base Software

Coolvacuum leading automation solutions for freeze-drying processes offer a safe, reliable and user-friendly control and data acquisition for the system.

In R&D and drug development, data recording and recipe adjustment are of special importance, as they define, develop, and set the parameters for efficient future production and obtaining maximum performance from the freeze-dried product. All automation and controls are designed to current GAMP guidelines and comply with CFR21 part 11 regulations.

Users	Register with different user levels from the freeze dryer's control screen.
Recipe programming	Enter the freeze-drying recipes parameters from the control screen.
Data export	Production data can be extracted via USB or memory card.



Base Software.



Control from smartphone.
Real-time data.

Vacuum pumps

Two-stage rotary vane pumps in oil bath are used for medium and low pressure and are suitable for the R&D centers and laboratory environment.

- Oil level sight glass.
- Maximum vacuum 4 x 10^{-3} mbar.
- Input connections 25 KF.
- Robust and silent.
- Easy maintenance.
- Hybrid pump for organic solvents.

References:

Ref. LM-LABOVAC-P6
6 m^3/h pump

Ref. LM-LABOVAC-P12
12 m^3/h pump

Ref. LM-LABOVAC-CH6
6 m^3/h with resistance for chemical products

Ref. LM-LABOVAC-CH12
12 m^3/h with resistance for chemical products



Always working with top manufacturers.



Coolvacuum can adapt its equipment and install a specific pump depending on product or process requirements.

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Accessories



Ref. LM-CAMP-3200-CV

With Resistances
Ref. LM-CAMP-3200-H-CV

Circular chamber with manual closing of vials.
Electrically heated shelves (optional).
Number of shelves: 3 usable + 1 for closing.
Shelves clearance: 70 mm.
Shelves area: 0.09 m^2.
Tray size: ø 200 mm.
Tray included.
Height increase: 420 mm.



Ref. LM-CAMP-6200
Ref. LM-CAMP-8200

With Resistances
Ref. LM-CAMP-6200-H
Ref. LM-CAMP-8200-H

Circular chamber with 6 / 8 shelves.
Electrically heated shelves (optional).
Shelves clearance: 35 mm.
Shelves area: 0.18 / 0.25 m^2.
Tray size: ø 200 mm.
Tray included.
Height increase: 420 mm.



Ref. LM-COLM-6M
Ref. LM-COLM-12M
Ref. LM-COLM-24M

Stainless steel manifolds for 6 / 12 / 24.
Neoprene valves included for 6 / 12 / 24.
Valves connection CN 29 / 32.
Height increase: 320 / 570 mm.



Ref. LM-CAMP-6200-6M
Ref. LM-CAMP-8200-6M

With Resistances
Ref. LM-CAMP-6200-H-6M
Ref. LM-CAMP-8200-H-6M

Circular chamber with 6 / 8 shelves.
6 neoprene valves (included).
CN 29 / 32 connection for flasks.
Electrically heated shelves (optional).
Shelves clearance: 35 mm.
Shelves area: 0.18 / 0.25 m^2.
Tray included.
Height increase: 420 mm.



Ref. LM-CAMPC-565

With Resistances
Ref. LM-CAMPC-565-H

Rectangular chamber with 5 shelves.
Electrically heated shelves (optional).
Shelves clearance: 43 mm.
Shelves area: 0.63 m^2.
Tray size: 320 x 390 mm.
Tray included.
Height increase: 450 mm.

LyoMicron References

LyoMicron is available in two configurations. The model LyoMicron55 features an ice condenser that reaches -55 °C, and 1 compressor.

Meanwhile, LyoMicron85 is equipped with a condenser that reaches -85 °C and 2 compressors. Therefore, LyoMicron covers any production needs of our clients.

Reference / Model	Ref. LM-LYOMICRON55	Ref. LM-LYOMICRON85
Ice condenser temperature	-55 °C	-85 °C
Overall dimensions (W x D x H)	420 x 630 x 380 mm	740 x 600 x 380 mm
Ice condenser capacity	7 kg	
Ice condenser capacity for 24h	5 kg / 24h	
Electrically heated shelves	Optional	
Number of compressors	1	2
Electric power	850 W	1,100 W
Weight	65 kg	85 kg

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Our commitment, your guarantee.

Coolvacuum is a synonym for trust and reliability. Our pursuit of excellence and customer-oriented service complements our high-quality equipment and high level of commitment. Coolvacuum offers, from the very beginning, a wide and flexible range of products and services designed to provide you with optimal support and ensure the machine's performance at its full capacity.

Coolvacuum's range of service 4.0, following the "Flexibility in motion" concept, takes advantage of cutting-edge technological advances, such as augmented reality or predictive maintenance, to provide the best technical support in terms of quality, efficiency, effectiveness, and response time.

Our technicians are available 24/7 to assist and solve any technical problems remotely worldwide. Coolvacuum's service excellence is achieved thanks to a cross-functional team of more than 15 nationalities and personalized customer attention managers. Represented in more than 80 countries with continuous support from local offices and sales representatives.



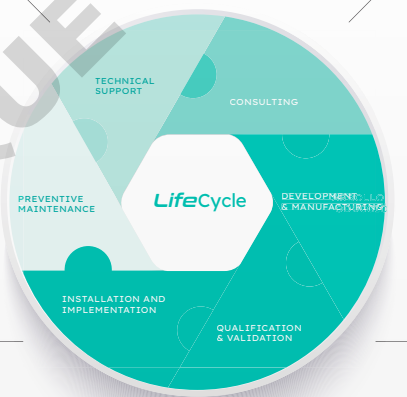
Worldwide assistance, present in more than 80 countries.

LifeCycle

Technical Support
Our team offers local and remote support to attend to attend any technical need.

Preventive Maintenance
We plan and adapt our interventions and specific actions to your production calendar.

Installation and Implementation
It is essential to adapt to the client's requirements, so that our interventions at the clients facilities have the least possible impact on their activity.



Consulting
Understand and satisfy customer's needs to find personalized solutions.

Development and Manufacturing
The services are planned and executed in a clear, direct, and rigorous way.

Qualification and Validation
All the necessary services are documented and executed so that the products are easily validated.

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online ecatalogue

PRODUCTION GMP

FREEZE DRYING EQUIPMENT



LyoNano

For small batches

From 0.5 to 2.5 m²

Designed for aseptic batches.
Compact and adaptable.



LyoCompact

Small scale production

From 2 to 6 m²

Compact solutions. Cutting-edge technology with a reduced footprint.



LyoCool

Medium scale production

From 7 to 15 m²

Optimal balance.
Maximum flexibility.

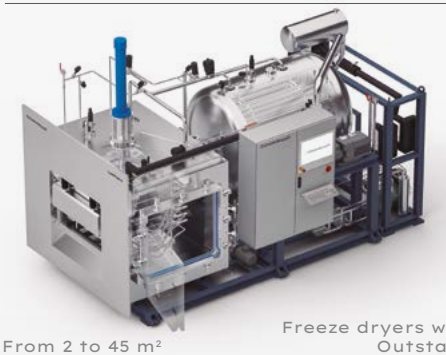


LyoPro

Large scale production

From 16 to 45 m²

Maximum performance.
Large-scale security and reliability.



LyoPharm

All types of production

From 2 to 45 m²

Freeze dryers within everyone's reach.
Outstanding standardization.

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Coolvacuum Headquarters

Pol. Ind. Coll de la Manya
Galileo Galilei, 13
08403 Granollers
Barcelona · SPAIN

+34 938 718 784
info@coolvacuum.com

Coolvacuum
a Dara Pharma company

USA

Coolvacuum USA

1256 N. Church Street
Moorestown
NJ, 08057

+52 (33) 3627 7090
info@coolvacuum.com

INDIA

Coolvacuum INDIA

Trikutta Towers
Opposite Adi Shankaracharya Marg
Jogeshwari - Vikhroli Link Rd,
Mercury CHS, Ramabai Ambedkar Nagar,
Powai Mumbai. Maharashtra, 400076

+91 750 655 2220
info@coolvacuum.com

MEXICO

Coolvacuum MEXICO

Zapopan Office and Plant, Jalisco
Parque Pinar Empresarial
Carr. Nogales, Km 15,5
Camino a CUCBA No. 175, Nave 38
Col. Venta del Astillero, 45221

+52 (33) 3627 7090
info@coolvacuum.com

Mexico City Office
Moliere No. 330, Desp. 403
Col. Polanco Reforma, 11550

+52 (55) 5281 8680
+52 (55) 5281 8679
info@coolvacuum.com

KOREA

Coolvacuum KOREA

Kyunggi-Do, 431-763

+82 31 479 5840
info@coolvacuum.com

COLOMBIA

Coolvacuum COLOMBIA

Avenida el dorado #68c - 61
Oficina 204
Edificio Torre Central Davivienda
Bogotá

+57 (1) 432 5929
info@coolvacuum.com

Flexibility in motion

19102021

DOMINIQUE DUTSCHER SAS