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LYOMAC TECHNOLOGY

LYOMAC FOOD FREEZE DRY SOLUTION 凛马冻干设备解决方案

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Food Freeze Dry Solution

食品冻干解决方案



ABOUT LYOMAC

Lyomac technology is always looking to provide high-efficiency, energy-saving, reliable vacuum freeze dry equipment, as a technology-oriented freeze drying equipment manufacturer, Lyomac listen carefully to the needs of the market, taking into account the quality of the equipment and tailor-made the optimized freeze drying solution for every user. Providing complete freeze drying equipment covering laboratory research scale to industrial production scale plant, capacity up to 2000kgs.

Through the 6S and ISO quality management system, the projects delivered by Lyomac has achieved a good reputation in the international market with stable quality .all international standard such as CE, ASME, EU-PED are versed at lyomac,

Lyomac see ourself as a international freeze dry technology innovator, we have been committed to providing more advanced and convenient freeze-drying systems, dozens of patents held by our company and our employees provide irrefutable evidence of this.

凛马科技一直致力于提供高效，节能，可靠的真空冷冻干燥设备，作为以技术为导向的冻干设备生产商，凛马过去20年中认真倾听市场需求，在兼顾生产质量的同时，为客户量身定制提供完整的冻干解决方案。包括从小型试验型到大型工业生产型冻干设备，产量可达每批次2000kg，通过6S和ISO质量体系的管理，凛马向全球交付的冻干设备以其稳定优越的品质受到用户的一致肯定。

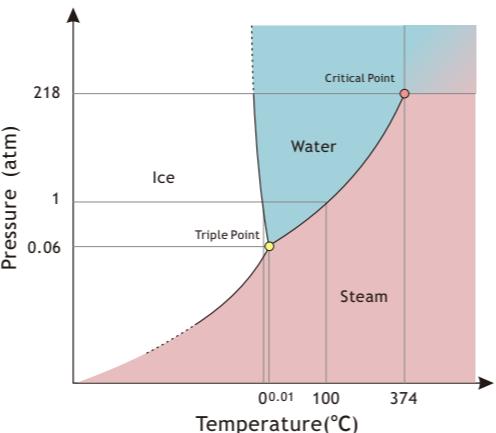
我们秉承技术创新为第一生产力，致力于为用户提供更高效更便捷的冻干系统，数十项专利技术是我们公司和员工共同成果，我们也将一直坚持创新，不断前行。



What's freeze drying?

Freeze drying is the process of dehydrating frozen foods under a vacuum so the moisture content changes directly from a solid to a gaseous form without having to undergo the intermediate liquid state through sublimation. In this process, freeze dried food maintains its original size and shape with a minimum of cell rupture. Removing moisture prevents a product from deteriorating at room temperature.

冷冻干燥是在真空下对冷冻食品进行脱水的过程，水分直接从固态升华为气态，而无需通过中间液态。在这个过程中，冻干食品保持其原始大小和形状，细胞破裂少。去除水分可防止产品在室温下变质。



Freeze Drying benefits

-  Retains, to the greatest possible extent, the original shape, color, taste, texture and nutrients
最大可能保持原始形状、颜色、风味和营养
-  Instant rehydration
复水性佳
-  Lightweight for easy handling and transportation
重量轻
-  No refrigeration needed during transportation and storage
常温下保存运输
-  Long shelf life
长时间保存

Applications

- | | | | | | |
|---|---|---|---|--|---|
|  |  |  |  |  |  |
| Coffee, tea and other extracts and liquids
咖啡茶等提取液 | Vegetables, fruit and berries
蔬菜水果浆果 | Meat and seafood products
肉制品海鲜 | Prepared meals
熟食 | Milk products
奶制品 | Dyes, pigments and enzymes
染料、颜料和酶 |
| And many more
其他 | | | | | |



主系统构成

Main System Scope



Blast Freezer 速冻隧道

Ground/Suspended Trolley system 悬挂/地面小车系统

Chamber 舱体



De-icing

Vacuum system 真空系统

Heating system 加热系统



Refrigeration system 制冷系统

PLC and PC control PC和PLC控制系统

THE FULL RANGE

Lyomac Freeze Dry Solution LMF Series capacity from 50 kgs to 2000kgs, covering most demand for Pilot to industrial production, pursuit of high efficiency, energy saving, environmental protection and easy operation solutions

LMF系列冻干设备产量从可达50到2000kg，满足中试到工业生产的需求，具有高效，技能，环保和简便操作等特点。

FEATURE

- ① All in one design, shelf with the function of cooling, freezing and drying in same chamber
- ② LMF conductive freeze dryer adopts electric heating source, fully PID controlled
- ③ Whole machine built with SUS304, sanitary and durable
- ④ Integrated compact design, space-saving, all system remote controlled on PC

- ① 一体化设计，隔板具有冷冻功能，干燥和冷冻在同一个舱体
- ② LMF接触式冻干机采用电加热，由PID控制
- ③ 整机采用不锈钢304制造，洁净度高且耐用
- ④ 整体紧凑式设计，节省空间，所有系统通过电脑远程操控

接触式冻干设备

LMF Conductive Freeze Dryer-LMF



Model	LMF-5	LMF-10	LMF-15	LMF-20	LMF-25	LMF-30	LMF-50
Capacity (Kgs)	50	100	150	200	250	300	500
Shelf Area(m ²)	5.40	10.80	15.84	19.8	25.20	29.70	51.30
Shelf Size(mm)	1200*900*20	1200*900*20	1200*1200*20	1500*1200*20	1500*1200*20	1800*1500*20	1800*1500*20
Tray Size(mm)	400*300*30	400*300*30	400*300*30	400*300*30	400*300*30	500*300*30	500*300*30
Tray Qty(Nos)	45	90	132	165	210	198	342
Power(kw)	40	63	93	120	135	147	215
Dimension(mm)	4500*1750*2200	6000*1750*3800	6800*2000*4200	7500*2000*4200	7200*3000*4200	7600*3000*4200	9600*2300*4700

LMF Radiation Freeze Dryer

Model	LMF-60	LMF-70	LMF-90	LMF-100	LMF-120	LMF-150	LMF-200
Capacity(kgs)	600	700	900	1000	1200	1500	2000
Shelf Area(m ²)	58.0	69.8	88.4	104.7	117.8	147.3	206.2
Tray Size(mm)	710*610*37	650*610*37	710*610*37	650*610*37	710*610*37	710*610*37	710*610*37
Tray Qty(pcs)	136	178	204	260	272	340	476
Trolley(set)	2	3	3	4	4	5	7
Power(kw)	118	140	195	240	285	396	461
Steam consumption	180kgs/h	210kgs/h	270kgs/h	300kgs/h	360kgs/h	450kgs/h	600kgs/h
Installation space(m ²)	230	280	300	380	430	450	480

FEATURE:

- ① Consists of blast freezer and freeze dryer, material get frozen in the blastfreezer and move to chamber to get dried.
- ② Large loading capacity up to 2000kgs
- ③ LMF radiation freeze dryer adopts steam as heating source, high efficiency.
- ④ The aluminum shelf adopts the overall anodizing treatment with superior flatness to ensure temperature uniformity and high radiation efficiency.
- ⑤ Over-head mono-rails system realize clean and convenient material transportation, high degree of automation, simple and convenient operation

Optional Choice:

- ① Automatic Tray Washer
- ② Robot Arm loading System
- ③ Tray Sterilizer

Key Point to choose the freeze dryer

如何选择冻干机配置

USER'S REQUIREMENT



LAYOUT OF FREEZE DRY PLANT REFERENCE

