

„Engineering under high pressure“

Made in Germany

**ZIRBUS**  
TECHNOLOGY



## Autoclaves Freeze Dryers

Equipment for Lab, R&D, Pharma, Biotechnology  
and Food Applications

**ZIRBUS**  
TECHNOLOGY

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# ZIRBUS company - in house production progress

Construction - Welding - Mechanical assembling - Electrical assembling - Programming - Testing



Since its founding in 1984 ZIRBUS technology GmbH has gained an excellent reputation as a German manufacturer on the worldwide market. We not only manufacture autoclaves but also focus on process engineering. In the field of autoclaves and freeze dryers, a steadily growing clientele relies on our branded ZIRBUS device.



## Certified quality

Implemented by ZIRBUS technology GmbH and practiced Quality Management (QM) system DIN EN ISO 9001 provides the framework for our quality and quality cost-oriented action. In addition, a risk management system is part of the QM system.  
ASME-PED Modul H-EN ISO 9001

## ZIRBUS technology GmbH

Manufacturer of Autoclaves and lyophilizers

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## Lab Autoclaves

25 – 200 litres, vertical and horizontal

We find the right solution for sterilizations in your Laboratory.

### Benchtop - Autoclaves



LabStar 70

Labstar	Chamber volume in litre	Effective space in mm (Ø x h) / (w x h x d)
25	25	Ø 300 x 360
40	40	295 x 295 x 460
70	65	310 x 310 x 680
100	100	Ø 500 x 510
150	150	Ø 500 x 750
200	200	Ø 500 x 1000

Our table-top Autoclaves not only fit on any laboratory table, the chamber is also designed to achieve optimum loading capacity with many standard bottles (e.g. Schott and Erlenmeyer flasks).

### Vertical - Autoclaves



LVSA 40/75

Labstar	Chamber volume in litre	Effective space in mm (Ø x h) / (w x h x d)
40/60	80	Ø 400 x 620
40/75	96	Ø 400 x 770
50/60	133	Ø 500 x 680
50/70	153	Ø 500 x 780

The laboratory vertical stand-alone autoclaves, LVSA, are particularly characterised by their low loading height and simple operation. Our autoclaves are available in four different sizes.

#### Application Areas:

- in the laboratory for sterilizing raw materials, e.g. agar
- waste sterilization of solid and liquid waste up to safety level S2, in transit devices up to security level S3
- island solution in the large laboratory to sterilize small quantities quickly and cost effectively

# Lab Freeze Dryers – VaCo Series


The entry into freeze-drying technology – Laboratory Freeze Dryers in modular system


## Benchtop - Freeze Dryers




VaCo 5



 MICROPROCESSOR CONTROL AND TOUCH PANEL

 SIX VACUUM PORTS STANDARD CONNECTION (29/32)

 ACRYLIC DRYING CHAMBER

 MADE OF COMPLETELY STAINLESS STEEL

	VaCo 2	VaCo 5	VaCo 10
Performance kg/24h	2	5	15
Total capacity kg	3	8	20
Temperature ranges	-50°C or -80°C		

Due to a modular system, the VaCo-Series is perfectly suited for a wide range of tasks in your laboratory. The units are available with either a -50°C condenser or -80°C condenser .



# Pilot and small scale production Freeze Dryers

The way to your production plant

## Pilot – Freeze Dryers

Freeze dryers of this series are designed for the laboratory or product development. The stand-alone units have an ice capacity from 5 up to 40kg and a shelf area of up to 2.7m<sup>2</sup> depending on the unit/design.



Sublimator 5



	Sublimator 5	Sublimator 15	Sublimator 25	Sublimator 40
Shelves are	0.18 ... 0.36m <sup>2</sup>	0.50 ... 1.12m <sup>2</sup>	1.05 ... 2.02m <sup>2</sup>	2.00 ... 2.70m <sup>2</sup>
Ice capacity kg	5	15	25	40
Temperature ranges	Condenser -50°C or -80°C, shelves -40°C or -55°C			

All systems with two chamber system, condenser separated from drying chamber.  
- GMP, SIP/CIP,ATEX, isolator connection available.



# Standard floor and standing Autoclaves

150 – 1.033 litres. Short cycle times, low media consumption, reproducible results

## Application Areas:

- medium and large laboratories, for waste disposal, also in S2 laboratory
- in S3 laboratory as pass-through version with gas-tight separation
- in pharmaceutical companies for the sterilization of excipients for production
- in the production of sterilization of end products, e.g. contact lenses
- operating centers and hospital laboratories for the sterilization of instruments, laundry etc.
- RKI approved and listed waste program



HST 6 x 6 x 6

Series 4	HST 4 x 4 x 6	HST 4 x 6 x 6	HST 4 x 6 x 9
Chamber volume in litre	150	210	305
Effective space in mm (w x h x d)	450 x 500 x 670	450 x 700 x 670	450 x 700 x 970

Series 6	HST 6 x 6 x 6	HST 6 x 6 x 9	HST 6 x 6 x 12	HST 6 x 6 x 16	HST 6 x 6 x 18
Chamber volume in litre	304	440	577	758	850
Effective space in mm (w x h x d)	650 x 700 x 670	650 x 700 x 970	650 x 700 x 1270	650 x 700 x 1670	650 x 700 x 1870

Series 8	HST 8 x 6 x 6	HST 8 x 6 x 9	HST 8 x 6 x 12	HST 8 x 6 x 16	HST 8 x 6 x 18
Chamber volume in litre	370	535	700	812	1033
Effective space in mm (w x h x d)	650 x 850 x 670	650 x 850 x 970	650 x 850 x 1270	650 x 850 x 1670	650 x 850 x 1870

The stand-alone autoclaves are powerful, compact and economical for laboratory and pharmaceutical applications. Due to the wide range of options they offer the right solution for every application.

## Floor standing Autoclaves

568 – 5.060 litres. Safe in process, easy to use, reliable in operation.



Series	Effective internal width of chamber
6H	660
8H	850
10H	1000
12H	1200
14H	1450
16H	1650

Chamber height and depth on customer request

### Application Areas:

- pharmaceutical industry for the sterilization of end products under GMP aspects
- SPF animal husbandry for the sterilization of cages with litter, animal feed
- food company for the sterilization of raw materials





# Production Freeze Dryers

Bulk and vial drying

Rectangular chamber systems with separated condenser of 50-1.200kg ice capacity, up to 65m<sup>2</sup> shelf area application in production and pharmaceutical industry.



800kg / 56sqm production unit



Customized solutions:

- Pharmaceutical design with CIP/SIP, GMP, pizza door, isolator connection
- Biotech

All systems with two chamber system, condenser separated from drying chamber.  
- GMP, SIP/CIP,ATEX, isolator connection available.

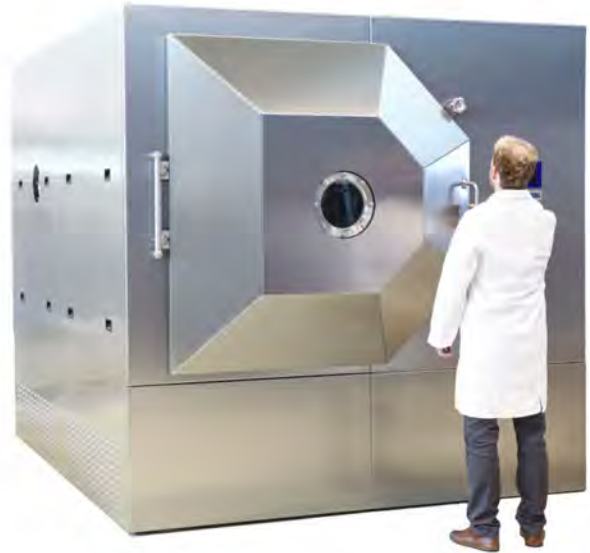
# Production Bulk Freeze Dryers – EKS

## One chamber system

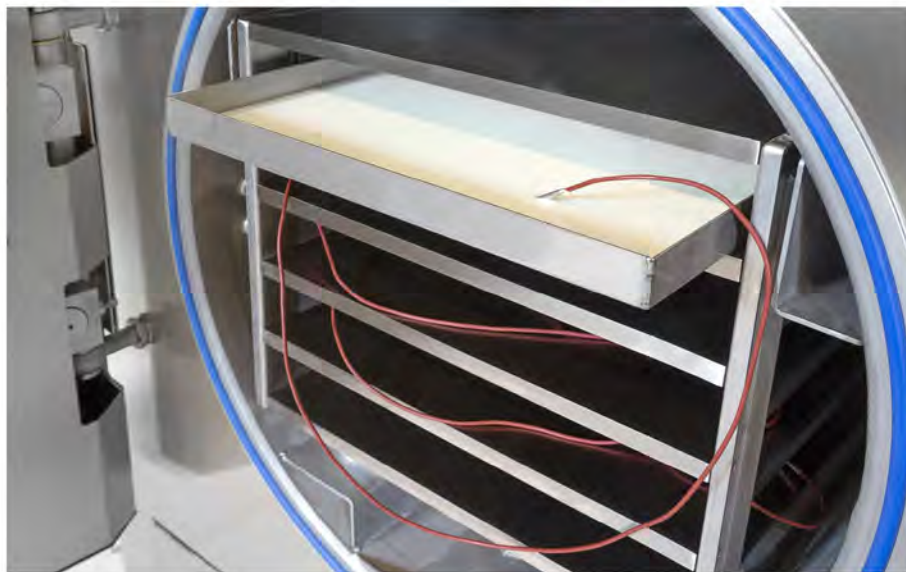
Round chamber systems with integrated condensor 10 to 500kg, up to 30m<sup>2</sup> shelf area. Simple design for competitive prices.



100 EKS Freeze Dryer



150 EKS Freeze Dryer



Sublimator EKS	10	30	50	100	150	300
Shelve area m <sup>2</sup>	1,3	3,2	5,1	10,0	16,2	44,0
Ice capacity kg	15	45	75	150	200	450
Temperature ranges	Condenser -50°C or -75°C, shelves -40°C or -55°C					

The EKS Systems are specially for drying of food products. You can load non freezed product and the EKS Freeze Dryer automatic freeze and dry the product.



# Freeze Dryers EKS-R

One chamber system

Round chamber systems with integrated condenser 1 to 90m<sup>2</sup> tray area, up to 1.200kg ice condenser, heated radiation shelves.



10 EKS-R Freeze Dryer



50 EKS-R Freeze Dryer



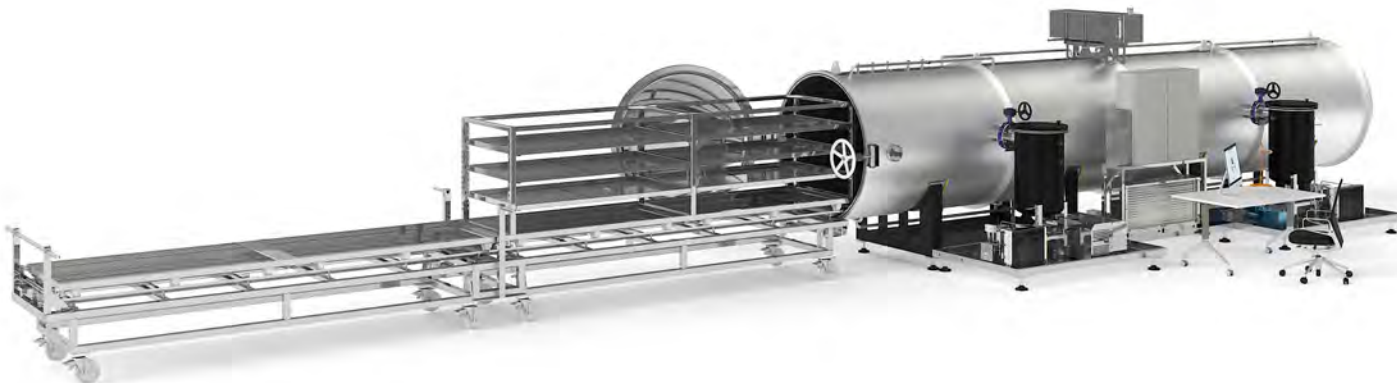
1.000 EKS-R Freeze Dryer

Sublimator EKS-R	10	30	50	100	150	300
Shelve area m <sup>2</sup>	1,4	3,5	8,3	15,8	24,0	44,0
Ice capacity kg	15	45	75	150	200	450
Temperature ranges	Condenser -50°C or -75°C					

The EKS Systems are specially for drying of food products. At EKS-R versions are radition heated shelves for constant heating.

## Special Freeze Dryers

Application in automotive, conservation, restoration, file rescue and many more.



Drying chamber with diameter 1.50m, 8.0m length for archeological wood preservation

## Isolators/Glove boxes

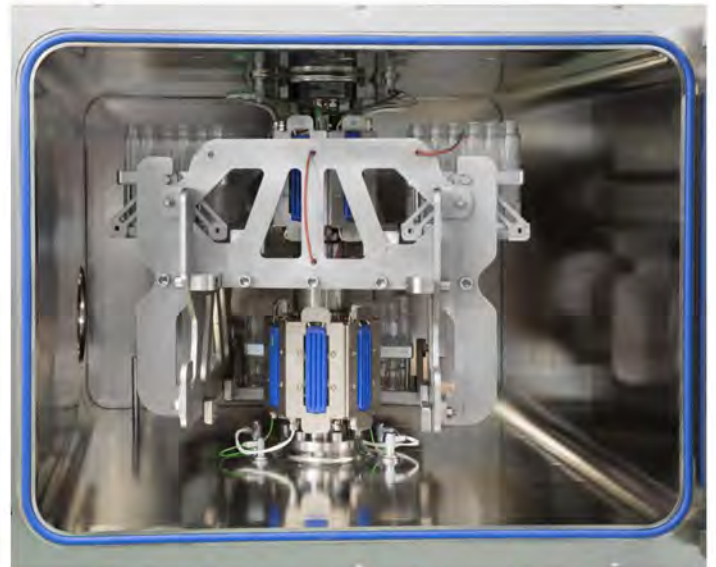
For connection to Autoclaves and/or Freeze Dryers





## Vacuum Dryers

High volume centrifugal concentration evaporators with up to 36 Microtiter Plates.  
Horizontal and vertical models with low temperature condensors.



Special designed rotor system with inner heating elements

## Vacuum tray dryers

Round and rectangular design with 1.0 to 20.0m<sup>2</sup> tray area.



Vacuum Dryer

Application Areas:

- Pharmaceutical Industrie (GMP designed, SIP/CIP, ATEX)
- Biotech, Life Sciences, Chemistry, Food

## High Pressure Autoclaves

Specially made for vulcanisation, foiling, steam treatment and many more.

Chamber volume of 45 to 6.900 Litres; Temperature up to 220°C; Pressure up to 20.0 bar



High Pressure Autoclave HDA 240-20-220



High Pressure Autoclave HDA 270-10-180

## Culture Media Preperator

Compact Nutrient Media Autoclave for producing of sterile medias.

NBA	30	60
Chamber volume in litre	30	60



Magnetic stirrer



NBA 30



## Steam Generators - Steamboy

Electrical Steam Generators with performance from 9 to 78 kW (12 to 102kg/h steam power)  
Clean Steam version for GMP applications are available.



Steamboy	Electrical power (kW)	Steampower (kg/h)
9	9,0	12
18	18,0	24
22	22,5	30
30	30,0	39
37	37,5	49
50	50,0	65
65	65,0	85
80	78,0	102

## Waste Water Sterilizers - WWS

For Sterilization of washing water in safety laboratories class S3



Technical datas	Volume	Outer dimensions (w x h x d)
WWS 60	60 litre	600 x 1500 x 750 mm
WWS 30twin	2 x 30 litre	1400 x 1150 x 700 mm

# Serv Tec

## Service

Availability, reliability and qualification are the conditions for one outstanding service. Training and regular training of our employees ensure that our service team is there for you quickly and conscientiously.

## Hotline

Our technical hotline will help you with any questions regarding operation, plant or process engineering problems. We have a regular reaction time of max 24 hours.

## Spare parts

Spare parts deliveries are processed immediately. Delivery usually takes place by next day.

## Consultation

We advise you in your project and support you with our experience.



## Our service includes:

- device and system planning
- delivery, installation, commissioning
- training and instruction of users
- maintenance work/contracts
- calibration of pressure and temperature sensors
- validation according to DIN EN ISO 17665-1
- execution and preparation of qualification documents (IQ/OQ)
- customer-specific process development and process optimization
- repair on site or in the factory Bad Grund
- conversion and modernization of old appliances
- carrying out the recurring examination
- order sterilization and wage drying
- VDE testing according to DIN



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