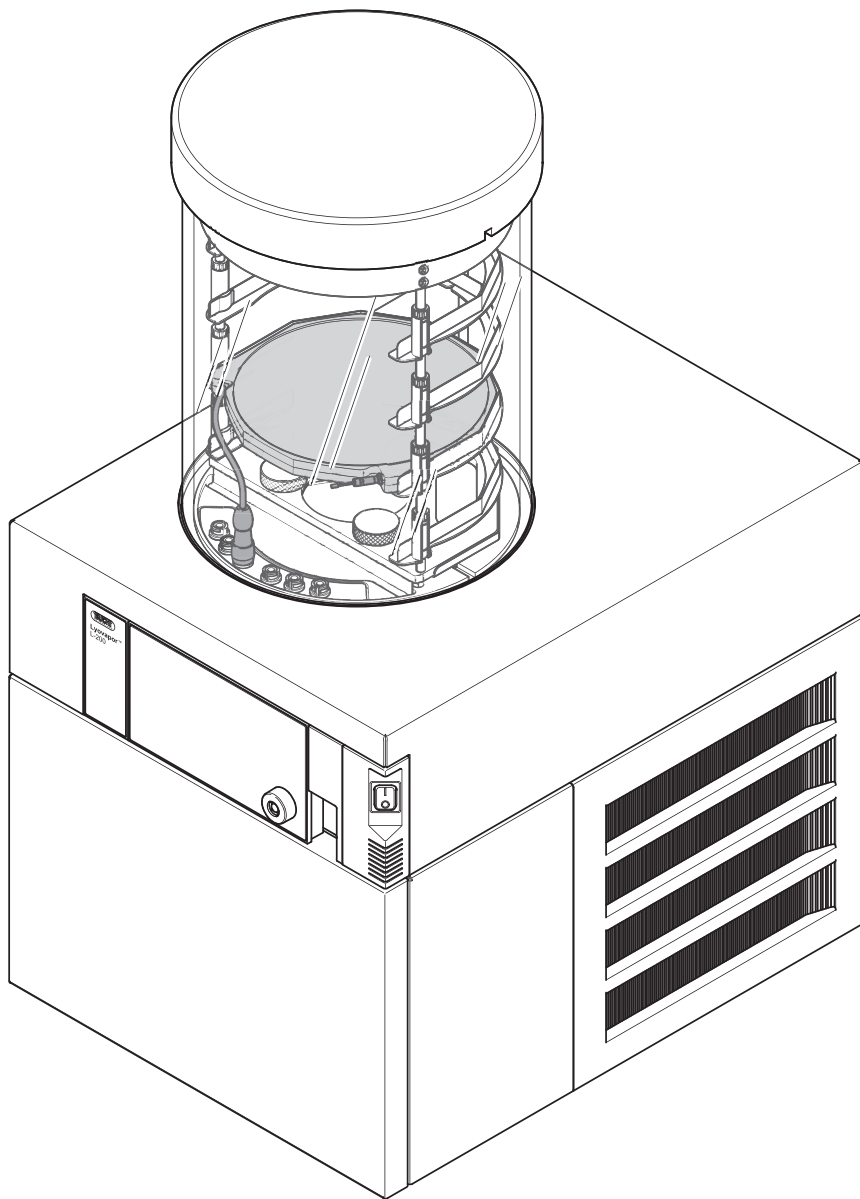




Lyovapor™ L-200

Technical data sheet

The compact Lyovapor™ L-200 offers high-quality Freeze Drying (-55 °C, 6 kg) with a high level of automation. Infinite-Control includes easy method creation, method running, data logging, chart recording in real time and interruption if needed at anytime - anywhere.



Overview of Lyovapor™ L-200 Solutions

	L-200 Classic	L-200 Pro Control
Lyovapor™ L-200	1	1
Vacuum sensor	1	1
Main valve	1	1
Aeration valve	*	*
Regulation valve	*	*
Vacuum pump Duo 6	*	*
Drying chamber heateble shelf	–	1
Drying chamber unheateble shelf	1	1
Drying chamber rack manifold	1	1
User interface	1	Pro
Additional external vacuum sensors	–	*
Lyovapor™ Software	–	*
BUCHI Monitor App	1	1

* Optional, according to order code

Order code

Choose the configuration according to your needs:

Lyovapor™ L-200 Classic



Drying Chamber

- 000 Without
- 010 Manifold rack 12
- 020 Manifold rack 24
- 141 Tray 4
- 142 Tray 4 & manifold top 12
- 161 Tray 6
- 162 Tray 6 & manifold top 12

Pressure Control

- 1 Vacuum control
- 2 Advanced vacuum control

Temperature Sensor

- 0 Without sensor

Software

- 0 Without software

Vacuum pump

- 0 Without vacuum pump
- 1 Vacuum pump "Pfeiffer Duo 6"

Trolley

- 0 Without
- 1 Convenient mobile trolley

Voltage/Frequency

- 1 220 – 240 V (50 Hz)
- 2 208 – 230 V (60 Hz)

Order code

Choose the configuration according to your needs:

Lyovapor™ L-200 Pro Control



Drying Chamber

- 000 Without
- 241 Heated shelves 4
- 242 Heated shelves 4 & manifold top 12
- 243 Heated shelves 4 & stoppering top
- 261 Heated shelves 6
- 262 Heated shelves 6 & manifold top 12

Pressure control

- 1 Vacuum control
- 2 Advanced vacuum control

Temperature Sensor

- 0 Without sensor
- 1 With sensor (quantity according to shelf amount)

Software

- 0 Without software
- 1 With control and report software (USB-stick, not on CD)

Vacuum Pump

- 0 Without vacuum pump
- 1 Vacuum pump "Pfeiffer Duo 6"

Trolley

- 0 Without
- 1 Convenient mobile trolley

Voltage/Frequency

- 1 220 – 240 V (50 Hz)
- 2 208 – 230 V (60 Hz)

Scope of delivery of Lyovapor™ L-200

All configurations are delivered ready to use and are complete of:

Components	Lyovapor™ L-200
Lyovapor™ L-200	1
Power cable	1
Vacuum hose	1
Vacuum connection cross	1*
Vacuum connection elbow	2*
Main valve	1
Regulation valve	1*
Pressure sensor	1
Aeration valve	1*
Vacuum sealing ISO-KF 16	5
Vacuum clamp ISO-KF 16	5
Vacuum sealing ISO-KF 25	3
Vacuum clamp ISO-KF 25	3
O-Ring Ø 300 mm	2
Vacuum flange adapter	1
Operation Manual	1
Technical Data Sheet	1

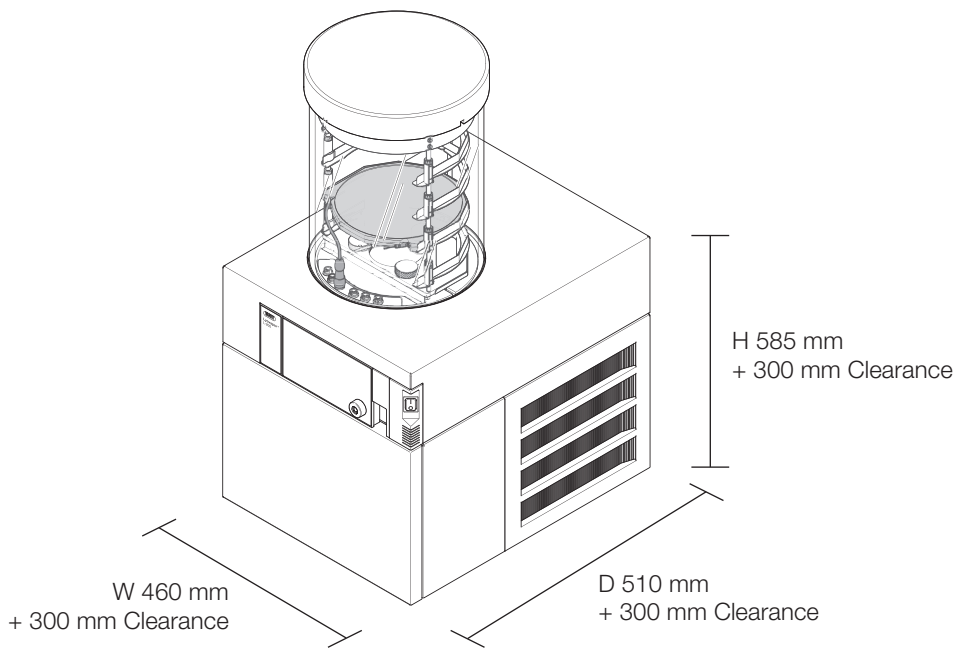
* Optional, according to order code

Technical data

Dimensions (W × H × D)	460 × 585 × 510 mm
Weight	75 kg
Minimum clearance on all sides	300 mm
Connection voltage	220 – 240 VAC
Power consumption	1200 W
Fuse	10 A / 250 V
Frequency	50 Hz / 60 Hz
Environmental condition	For indoor use only
– Temperature	15 – 30 °C (25 °C)
– Altitude	Up to 2000 m
– Humidity	Maximum relative humidity 80 % for temperatures up to 30 °C
Overvoltage category	II
Degree of protection	IP21
Pollution degree	2
Condenser power	≥ 4 kg / 24 h
Lowest condenser temperature	-55 °C
Temperature uniformity	± 1.0 °C
Maximum condenser capacity	≤ 6 kg
Condenser surface area	1410 cm ²
Number of compressors	1
System refrigerant	R507 CFC free
Amount of refrigerant	485 g
Vacuum time to 0.1 mbar*	Typ. ≤ 10 min
Volume-based leak rate*	Typ. ≤ 0.001 mbar × L / sec
Lowest system vacuum*	Typ. ≤ 30 mTorr
Vacuum level control range*	50 to 500 mTorr
Shelf heating range	Up to 60 °C
Shelf temperature control tolerance	± 1.0 °C

* Vacuum pump “Pfeiffer Duo 6”

Installation requirements



Power supply

Connection voltage	220 – 240 VAC
Power consumption	1200 W
Fuse	10 A / 250 V
Frequency	50 Hz / 60 Hz

Pump requirements

Connecting voltage	180 – 265 V
End pressure with gas ballast	3×10^{-3} hPa
End pressure without gas ballast	3×10^{-3} hPa
Absorption capacity 50 Hz	5 m ³ / h
Absorption capacity 60 Hz	6 m ³ / h
Maximum power consumption	550 W

Drying chamber bundles

Drying chamber manifold	Order number
Drying rack manifold 12, complete with 12 manifold valves and baseplate, for L-200 and L-300	11DCIN01000
Drying rack manifold 24, complete with 24 manifold valves and baseplate, for L-200 and L-300	11DCIN02000
Drying rack manifold 36, complete with 36 manifold valves and baseplate, for L-200 and L-300	11DCIN03000

Drying chamber nonheatable shelves	Order number
Drying chamber 4 shelves, complete with top cover and 4 shelves	11DCIN14100
Drying chamber manifold, 4 shelves, complete with top cover manifold, 4 shelves and 12 manifold valves	11DCIN14200
Drying chamber 6 shelves, complete with top cover and 6 shelves	11DCIN16100
Drying chamber manifold, 6 shelves, complete with top cover manifold, 6 shelves and 12 manifold valves	11DCIN16200

Drying chamber heatable shelves	Order number
Drying chamber 4 heatable shelves, complete with top cover, 4 heatable shelves and 4 sample temperature sensors	11DCPH24110
Drying chamber manifold, 4 heatable shelves, comp. with top cover manifold, 4 heatable shelves, 12 manifold valves and 4 sample temperature sensors	11DCPH24210
Drying chamber stoppering, 4 heat. shelves, comp. with top cover stoppering, 4 heatable shelves and 4 sample temperature sensors	11DCPH24310
Drying chamber 6 heatable shelves, complete with top cover, 6 heatable shelves and 6 sample temperature sensors	11DCPH26110
Drying chamber manifold, 6 heatable shelves, comp. with top cover manifold, 6 heatable shelves, 12 manifold valves and 6 sample temperature sensors	11DCPH26210
Drying chamber stoppering, 6 heat. shelves, comp. with top cover stoppering, 6 heatable shelves and 6 sample temperature sensors	11DCPH26310

Accessories

Drying chambers	Order number
Drying chamber tube, PMMA, L 350 mm, D 300 mm	11063278
Drying chamber tube, PMMA, L 480 mm, D 300 mm	11065093
Top cover, PMMA, D 300 mm	11062912
Top cover manifold, PMMA, with 12 valves, D 300 mm	11065595
Top cover stoppering, complete, D 300 mm	11064314
Rack, for 4 shelves, complete	11065102
Rack, for 6 shelves, complete	11065103
Support for rack, stainless steel	11063789
Nonheatable Shelf, stainless steel	11065115
Heatable shelf, aluminum coated, with connection cable	11064095
Sample tray, stainless steel, D 220 mm	11061439
Drying rack manifold, stainless steel, with 12 valves	11063664
Baseplate, stainless steel, for manifold rack	11064953
Baseplate, PMMA, for manifold rack	11065733
Manifold valve, comp, natural rubber, with SJ 29/32	11062300

Sensors	Order number
Sample temperature sensor PT1000	11064031
Pirani / piezo pressure sensor, with cable	11062228
Pirani pressure sensor	11062229
Capacitive pressure sensor	11062230
Cable for pressure sensor Pirani 11062229	11064728
Cable for pressure sensor capacitive 11062230	11064729

Vacuum	Order number
Main valve L-200, with cable	11062223
Aeration valve L-200, with cable	11064724
Regulation valve L-200, with cable	11064725
Vacuum clamp KF 16	11064939
Vacuum clamp KF 25	11063662
Vacuum clamp, stainless steel, KF 40	11063663
Vacuum connection cross, stainless steel, KF 16 / KF 25	11064256
Vacuum connection elbow, stainless steel, KF 16, 90 °	11064257
Vacuum flange adapter, stainless steel, KF 16 to KF 25	11064870

Electronics	Order number
User interface L-200	11063580
User interface L-200 Pro	11063581
SD-Card 1 GB	11064730
Lyovapor™ software DVD	11065667
Connection cable, for vacuum pump	11064934

Various	Order number
Trolley L-200, stainless steel coated	11063692

Spare parts

	Order number
O-Ring, Silicone, 278.44x6.99	11063461
Sealing, FKM, KF 16, center ring	11063455
Sealing, FKM, KF 25, center ring	11063457
Sealing, FKM, KF 25, outer ring	11063458
Vacuum hose, PVC, with steel spiral, KF 25, L 1000 mm	11063485
Blind flange, stainless steel, KF 16	11064902
Blind flange, stainless steel, KF 25	11063660