

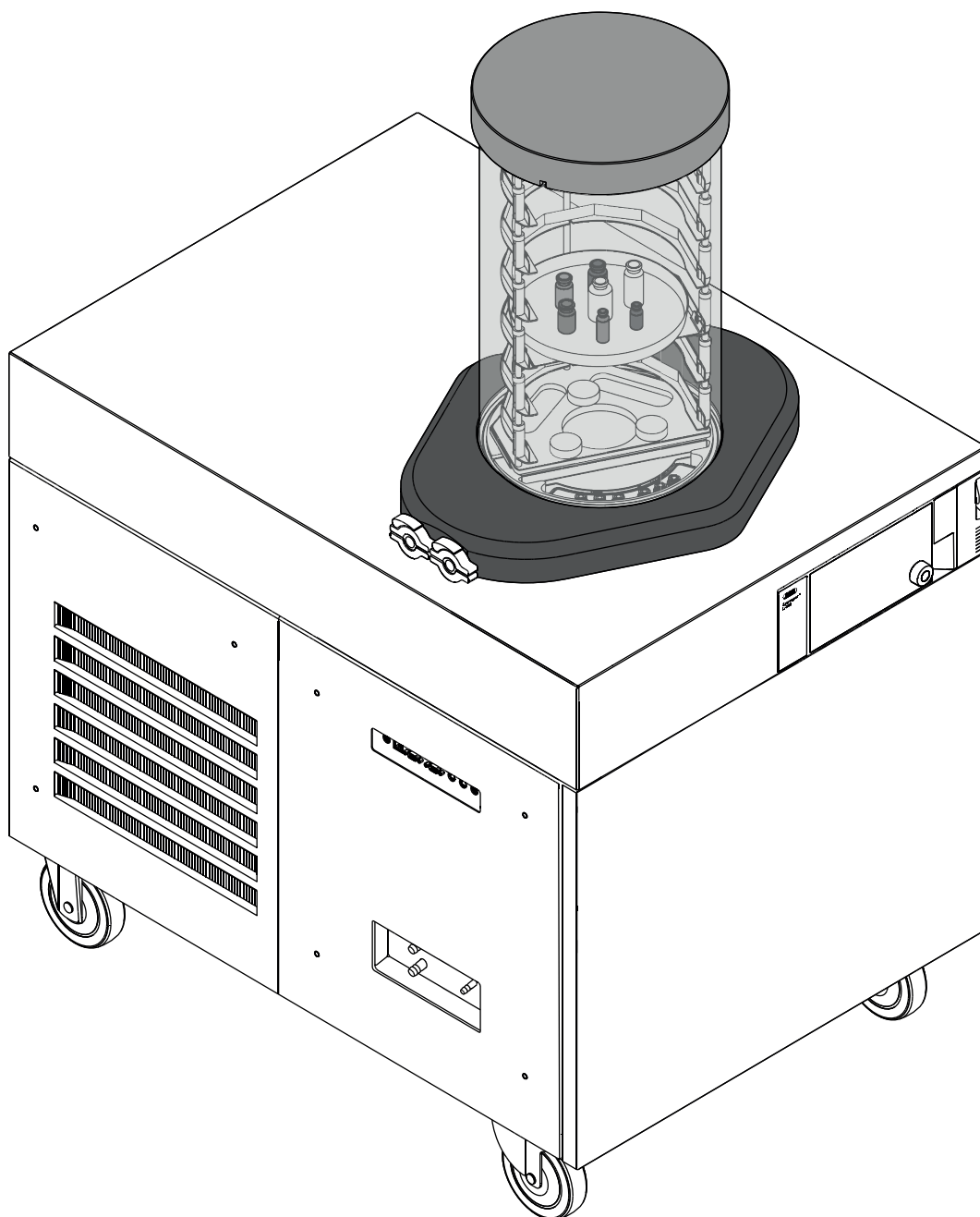


Lyovapor™ L-300

Technical data sheet

With Infinite-Technology™ the Lyovapor™ L-300 offers continuous sublimation for the first time with two alternate working and automatically hygienically cleaned condensers at -105 °C.

In addition, Infinite-Control™ allows entire process control of all relevant parameters, also via mobile device.



Overview of Lyovapor™ L-300 Solutions

	L-300 Continuous	L-300 Pro Modular
Lyovapor™ L-300	1	1
Vacuum sensor	1	1
Integrated vacuum control	1	1
Vacuum pump	1	1
Drying chamber heatable shelf	-	1
Drying chamber non-heatable shelf	1	1
Drying 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-300 Continuous

1	1	L	3	0	0	I	N									0	0	
---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--	---	---	--

Drying chamber

000 Without

010 Manifold rack 12

020 Manifold rack 24

030 Manifold rack 36

141 Shelves 4

142 Shelves 4 & manifold top 12

161 Shelves 6

162 Shelves 6 & manifold top 12

Pressure control

5 Internal vacuum control

Sample temperature sensor

0 Without sensor

Software

0 Without software

Vacuum pump

2 Vacuum pump "Edwards nXDS10iC"

Voltage/Frequency

3 380 - 400 V 3N~, 50 Hz

4 208 - 220 V 3~, 60 Hz

Order Code

Choose the configuration according to your needs:

Lyovapor™ L-300 Pro Modular

1	1	L	3	0	0	P	H									0	0	
---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--	---	---	--

Drying chamber

000 Without

241 Heatable shelves 4

242 Heatable shelves 4 & manifold top 12

243 Heatable shelves 4 & stoppering top

261 Heatable shelves 6

262 Heatable shelves 6 & manifold top 12

Pressure control

5 Internal vacuum control (IVC)

6 IVC + DC Capacitive vacuum sensor

7 IVC + DC Pirani vacuum sensor

8 IVC + DC Capacitive and Pirani vacuum sensor

Sample temperature sensor

0 Without sensor

1 With sensor (quantity according to shelf amount)

Software

0 Without software

1 Software

Vacuum pump

2 Vacuum pump "Edwards nXDS10iC"

Voltage / Frequency

3 380 - 400 V 3N~, 50 Hz

4 208 - 220 V 3~, 60 Hz

Order Code

Choose the configuration according to your needs:

Drying chambers with heating options

The amount of optional sample temperature sensors is determined by the ordered shelves. One sensor for each shelf.

1

1

D

C

P

H

0

Shelf type

2 Heatable shelf

Amount of shelves

1 shelves

2 shelves

3 shelves

4 shelves

5 shelves

6 shelves

Top cover type

1 Plain

2 Manifold

3 Stoppering (only 4 shelves)

Sample temperature sensor

0 Without temperature sensor

1 With temperature sensor

Specifications supplied

All configurations are supplied ready to use.

Component	Lyovapor™ L-300
Lyovapor™ L-300 or Lyovapor™ L-300 Pro	1
Operation Manual	1
Technical data sheet	1
Vacuum tubing	1
O-ring 300 mm	1
Vacuum clamp, ISO-KF 16	1
Vacuum clamps, ISO-KF 25	1
Vacuum tubing adaptor, ISO-KF 16 to ISO-KF 25	1
Canister for defrost and waste water	1
Level sensor*	1
Main plate	1
O-ring 430 mm	1
SD Card (Lyovapor™ L-300 Pro)	1
Tubing*	

* Option

Technical data

Lyovapor™ L-300

Specification	L-300 for 50Hz	L-300 for 60Hz
Dimensions without drying attachments (W x D x H)	710 x 1000 x 900 mm	710 x 1000 x 900 mm
Weight	272 kg	272 kg
Minimum clearance on all sides	400 mm	400 mm
Power supply	380 – 400 V 3N~	208 – 220 V 3~
Power consumption (maximum)	6000 VA	5000 VA
Lug	16 A	16 A
Frequency	50 Hz	60 Hz
Electrical connector (Specified according to UK standard)	CEE 400 V 16 A (IEC 60309), 3P+N+PE, 6h, red	NEMA L21-20, 4-pole/5-wire, 20 A, 3Ø 208 V
Max. current for all connections	0.5 A	0.5 A
Voltage per connection	24 V	24 V
Connection voltage for each heatable shelf (Lyovapor™ L-300 Pro only)	48 V	48 V
Max. current for each connection heatable shelf (Lyovapor™ L-300 Pro only)	max. 3 A	max. 3 A
Overvoltage category	II	II
Protection rating	IP20	IP20
Pollution degree	2	2
Condensing capacity at 25 °C ambient temperature	≤ 12 kg/24 h	≤ 12 kg/24 h
Lowest condenser temperature (without samples)	-105 °C	-105 °C
Temperature divergence	± 3.0 °C	± 3.0 °C
Condenser capacity	Unlimited (2 x ≤ 1 kg)	Unlimited (2 x ≤ 1 kg)
Condenser surface area	2 x 1280 cm ²	2 x 1280 cm ²
Number of compressors	2	2
Refrigerant 1	R507 CFC-free	R507 CFC-free
Refrigerant 1 quantity	790 g	790 g
Refrigerant 2	Ethylene CFC-free	Ethylene CFC-free
Refrigerant quantity 2	98 g	98 g
Drying shelf temperature regulation	to 60 °C	to 60 °C
Drying shelf temperature tolerance	± 1.0 °C	± 1.0 °C
Inert gas pressure (relative pressure)	max. 0.5 bar	max. 0.5 bar
EMC to EN 61326	Class B	Class B

Specification	L-300 for 50Hz	L-300 for 60Hz
Coolant pressure (relative pressure)	< 4 bar	< 4 bar
Coolant connection	DN10 mm	DN10 mm
Inlet water temperature	15 - 25°C	15 - 25°C
Cooling capacity of condenser for water cooling	Min. 350 W	Min. 350 W
Vacuum generation time to 0.1 mbar*	Typically ≤ 15 min	Typically ≤ 15 min
Volume-based leakage rate*	Typically ≤ 0.001 mbar x L/sec	Typically ≤ 0.001 mbar x L/sec
Minimum system vacuum (with default vacuum pump / without samples)	Typically ≤ 30 mTorr	Typically ≤ 30 mTorr
Vacuum control range (with default vacuum pump / without samples)	50 to 750 mTorr	50 to 750 mTorr
Noise emission to DIN 45635 (without vacuum pump)	Typically < 68 dB(A)	Typically < 68 dB(A)
Certificates	CE / CSA	CE / CSA

Ambient conditions

For indoor use only.

Max. altitude above sea level	2000 m
Ambient temperature	15 - 30°C
Maximum relative humidity	80 % for temperatures up to 30°C
Storage temperature	max. 45°C

Pump requirements

Connecting voltage	208 - 230 V 50/60 Hz
End pressure with gas ballast	3 x 10 ⁻³ hPa
End pressure without gas ballast	3 x 10 ⁻³ hPa
Absorption capacity 50 Hz	9 m ³ / h
Absorption capacity 60 Hz	10.5 m ³ / h
Maximum power consumption	550 W

Plain Instrument

Plain Instrument	Order no.
Lyovapor™ L-300, 50 Hz	11L300IN0005000003
Lyovapor™ L-300, 60 Hz	11L300IN0005000004
Lyovapor™ L-300 Pro, 50 Hz	11L300PH0005000003
Lyovapor™ L-300 Pro, 60 Hz	11L300PH0005000004

Plain Instrument	Order no.
Upgrade Kit	11065847
To upgrade the L-300 to L-300 Pro. Contains user interface Pro, adapter and electricity for heatable shelf connections	

Drying chamber bundles

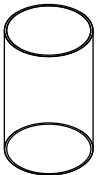
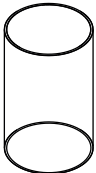
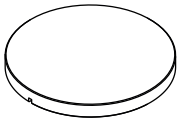
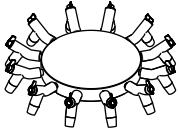
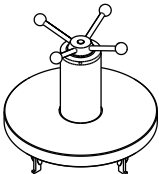
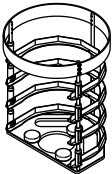
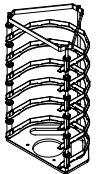
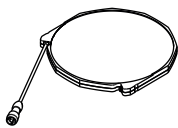
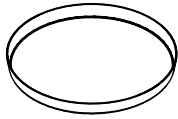
Drying rack manifold	Order no.
Drying rack manifold 12 with 12 manifold valves and baseplate	11DCIN01000
Drying rack manifold 24 with 24 manifold valves and baseplate	11DCIN02000
Drying rack manifold 36 with 36 manifold valves and baseplate	11DCIN03000

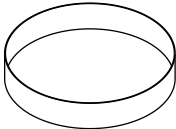
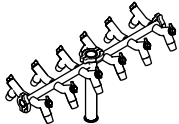
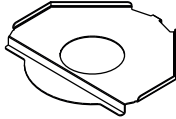
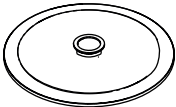
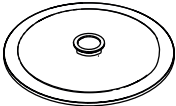
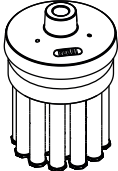
Drying chamber non-heatable shelves	Order no.
Drying chamber 4 shelves with top cover, support ring and 4 non-heatable shelves	11DCIN14100
Drying chamber manifold, 4 shelves with top cover manifold, support ring, 4 non-heatable shelves and 12 manifold valves	11DCIN14200
Drying chamber 6 shelves with top cover, support ring and 6 non-heatable shelves	11DCIN16100
Drying chamber manifold, 6 shelves with top cover manifold, support ring, 6 non-heatable shelves and 12 manifold valves	11DCIN16200

Drying chamber heatable shelves	Order no.
Drying chamber 4 heatable shelves with top cover, 4 heatable shelves and 4 sample temperature sensors	11DCPH24110
Drying chamber manifold, 4 heatable shelves with top cover manifold, 4 heatable shelves, 12 manifold valves and 4 sample temperature sensors	11DCPH24210
Drying chamber stoppering, 4 heatable shelves with top cover stoppering, 4 heatable shelves and 4 sample temperature sensors	11DCPH24310
Drying chamber manifold, 6 heatable shelves with top cover manifold, 6 heatable shelves, 12 manifold valves and 6 sample temperature sensors	11DCPH26210
Drying chamber 6 heatable shelves with top cover, 6 heatable shelves and 6 sample temperature sensors	11DCPH26110

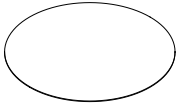
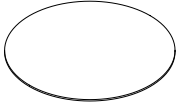
Spare parts and accessories

Top-mount drying rack accessories

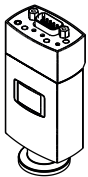


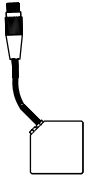
	Order no.	Image
Drying chamber tube, PMMA, for 4 shelves L 368 mm, Ø 300 mm	11063278	
Drying chamber tube, PMMA, for 6 shelves L 480 mm, Ø 300 mm	11065093	
Top cover, PMMA, without sealing Ø 300 mm, H 50 mm	11062912	
Top cover manifold, PMMA, with 12 valves, without sealing Ø 300 mm, W 546 mm, H 127 mm	11065595	
Top cover stoppering, without sealing only for rack for 4 heatable shelves Ø 300 mm, H 330 mm, W 320 mm	11064314	
Rack for 4 heatable shelves H 356 mm, Ø 265 mm , shelf distance 30-75 mm	11065102	
Rack for 6 heatable shelves H 468 mm, Ø 265 mm, shelf distance 30-75 mm	11065103	
Heatable shelf, aluminum coated, with connection cable Ø 219.5 mm, surface area 376 cm ²	11064095	
Sample tray, stainless steel Ø 220 mm, H 18.5 mm	11061439	

	Order no.	Image
Ferrule, Ø 218 mm, H 40 mm	11065816	
Drying rack manifold, stainless steel, with 12 valves H 340 mm, W 777 mm	11063664	
Drip pan, for manifold	11066358	
Support for rack, stainless steel H 4 mm	11063789	
Baseplate, stainless steel, for manifold rack	11064953	
Baseplate, PMMA, for manifold rack	11065733	
Suction nipple For manifold application to create vacuum in sample flasks	11065819	
Ampoule adapter for manifold with 19 ampoule connections and cap adapter	11065725	
Manifold valve, EPDM/Silicone, with SJ 29/32	11062300	

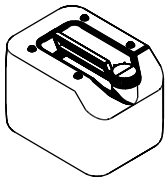
	Order no.	Image
Flask beaker for manifold 100 mL with cap adapter and integrated filter	11066140	
Flask beaker for manifold 200 mL with cap adapter and integrated filter	11066141	
Flask beaker for manifold 800 mL with cap adapter and integrated filter	11069474	
Flask beaker for manifold 1200 mL with cap adapter and integrated filter	11066143	
Manifold flask adapter set with 12 adapters, incl. filter paper	11066144	
Manifold flask adapter set with 6 adapters, incl. filter paper	11067334	
Manifold flask adapter set, US joint size with 12 adapters, incl. filter paper	11066171	
Manifold flask adapter set, US joint size with 6 adapters, incl. filter paper	11067333	
Filter round 20mm Set à 100pcs Filter for manifold valve	11065801	

	Order no.	Image
Filter round 47mm Set à 100pcs Beaker flasks with volume above 600 mL	11065731	
Filter round 30mm Set à 100pcs Beaker flasks with volume below 600 mL	11065728	

Accessories

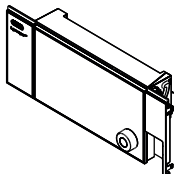
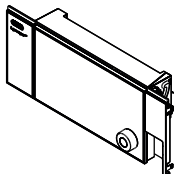


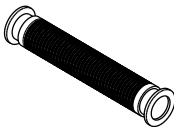
	Order no.	Image
Pirani pressure sensor Inficon PSG 550	11062229	
Capacitive pressure sensor Inficon CDG 020 D	11062230	
PT1000 sample temperature sensor	11064031	
Level sensor capacitive, for water canister	11069608	

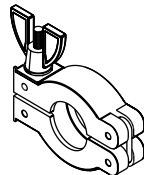
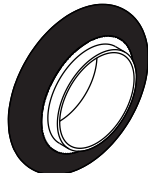
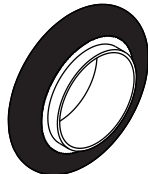
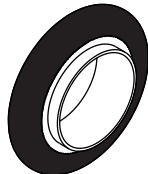


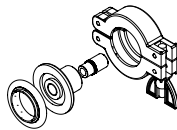
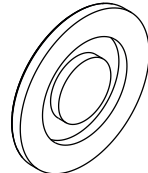
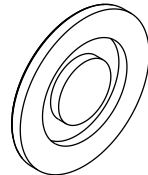
Further accessories

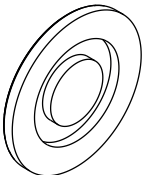
	Order no.	Image
Canister 20 L, for defrosting water	11066068	
Organic solvent filter set for water canister Inc. charcoal filter, cap, clamps	11073645	
Charcoal filter 2 pcs, for filter set	11073018	

	Order no.	Image
Air filter	11057925	
SD-Card 1 GB	11064730	
Connection cable, for vacuum pump	11064934	

Spare parts

	Order no.	Image
User interface	11063580	
User interface Pro	11063581	
O-Ring Ø 300 mm	11065367	
O-Ring Ø 430 mm	11065343	
Vacuum hose, KF 25, L 1000 mm	11066031	

	Order no.	Image
Vacuum clamp KF 16	11064939	
Vacuum seal KF 16	11063455	
Vacuum seal KF 25	11063457	
Vacuum seal KF 40	11063659	
O-Ring, Silicone, 94.61 x 6.99 mm	11062420	
O-Ring, Silicone, 161.3 x 5.33 mm	11062421	
Edward vacuum pump outlet filter	11068459	
Blind flange KF 16	11064902	
Blind flange KF 25	11063660	

	Order no.	Image
Blind flange KF 40	11063661	

Software

	Order no.
Lyovapor™ software licence	11065668
Lyovapor™ software DVD	11065667

IQ/OQ kits

	Order no.
IQ/OQ set L-300 en	11066041
Repeating OQ L-300 en	11066042
IQ/OQ set L-300 Pro en	11066043
Repeating OQ L-300 Pro en	11066044

Maintenance kits

	Order no.
Kit Customer for L-300	11062629
Frequently used wear and spare parts for self-servicing your device, conveniently gathered in one kit	
Kit Customer nXDS 6iC / 10iC	11062675
Frequently used wear and spare parts for self-servicing your device, conveniently gathered in one kit	