

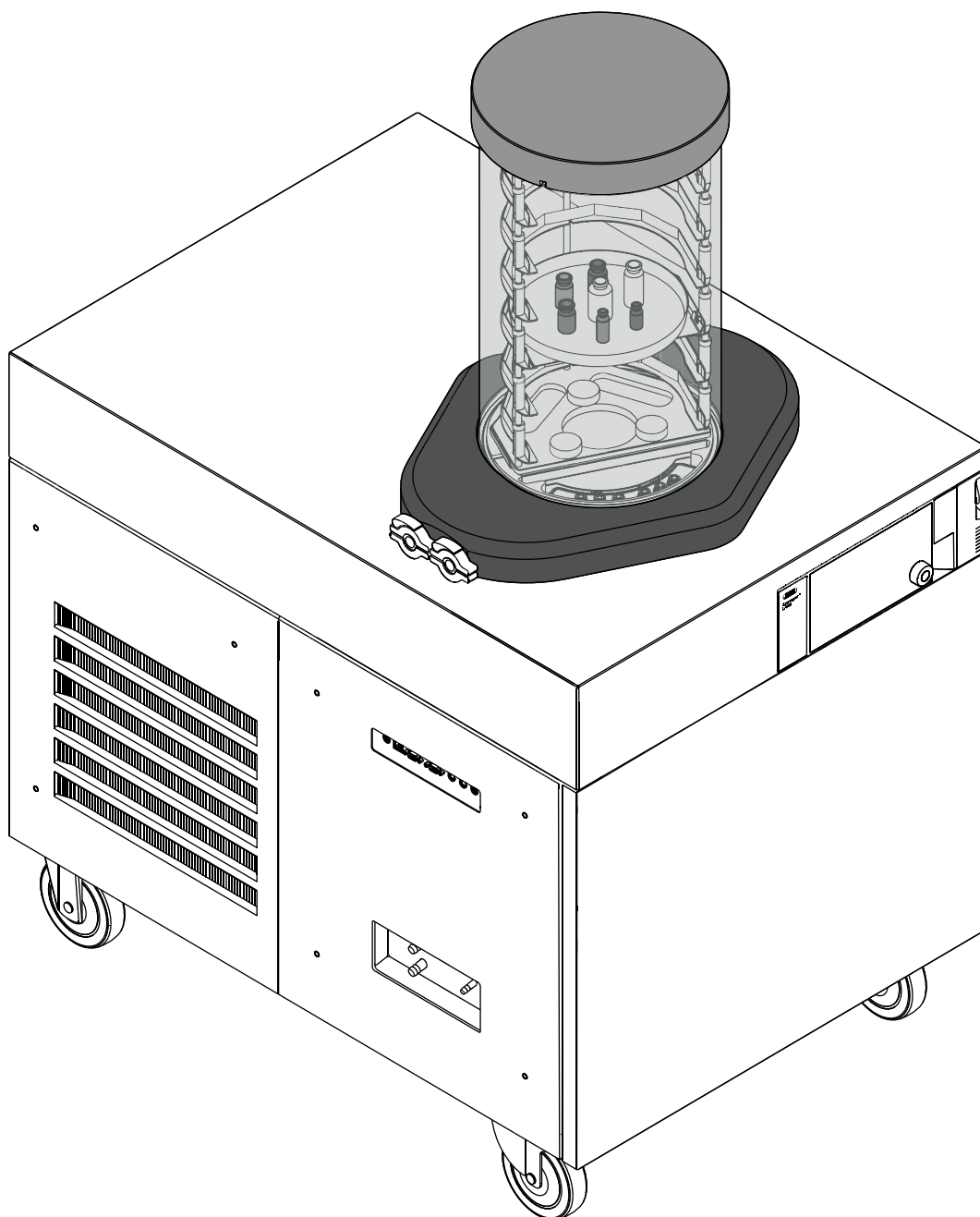


Lyovapor™ L-300

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 | 3 x 380 - 400 (50 Hz) |
| 4 | 3 x 208 - 220 (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 | 3 x 380 - 400 V (50 Hz) |
| 4 | 3 x 208 - 220 V (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

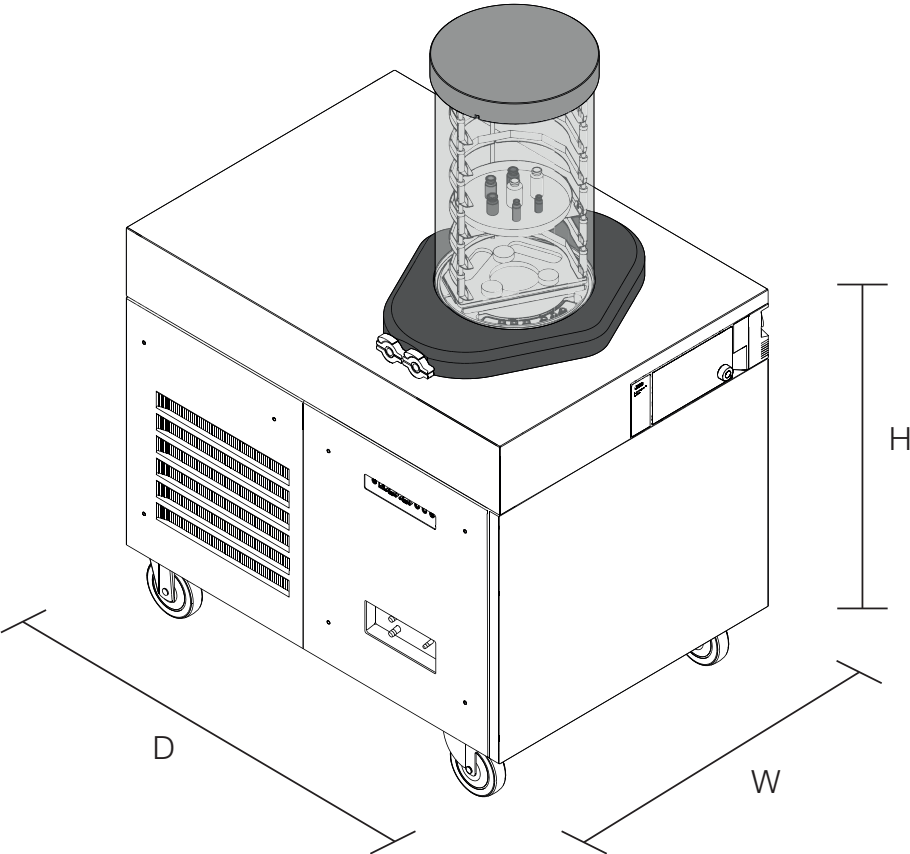
Lyovapor™ L-300

| | | |
|---|------------------------------------|------------------------------------|
| 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 | 3 x 380 - 400 VAC | 3 x 208 - 220 VAC |
| Power consumption (rated) | 3500 W | 3000 W |
| Power consumption (maximum) | 6000 W | 4500 W |
| Lug | 16 A | 16 A |
| Frequency | 50 Hz | 60 Hz |
| Overvoltage category | II | II |
| Protection rating | IP20 | IP20 |
| Pollution degree | 2 | 2 |
| Condensing capacity | ≥ 12 kg/24 h | ≥ 12 kg/24 h |
| Lowest condenser temperature | -105 °C | -105 °C |
| Temperature divergence | ± 1.0 °C | ± 1.0 °C |
| Condenser capacity | Unlimited | Unlimited |
| 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 | 80 g |
| Drying shelf temperature | to 60 °C | to 60 °C |
| Drying shelf temperature tolerance | ± 1.0 °C | ± 1.0 °C |
| Inlet water temperature | 5 - 25 °C | 5 - 25 °C |
| Inert gas pressure | 1.1 - 1.5 bar (max. 2 bar) | 1.1 - 1.5 bar (max. 2 bar) |
| EMC to EN 61326 | Class B | Class B |
| Coolant pressure | < 5 bar | < 5 bar |
| Coolant connection | DN10 mm | DN10 mm |
| 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* | Typically ≤ 30 mTorr | Typically ≤ 30 mTorr |
| Vacuum control range* | 50 to 750 mTorr | 50 to 750 mTorr |
| Noise emission to DIN 45635 ** | Typically < 68 dB(A) | Typically < 68 dB(A) |

* With default vacuum pump / without samples

** Without vacuum pump

Installation requirements



W= 710 mm + 400 mm Clearance
D = 1000 mm + 400 mm Clearance
H = 900 mm + 400 mm Clearance (up to 2000 mm depending on configuration)

Power supply

| | | |
|---------------------------|---|---------------------------|
| Power supply | 3 x 380 - 400 VAC | 3 x 208 - 220 VAC |
| Power consumption (rated) | 3500 W | 3000 W |
| Lug | 16 A | 16 A |
| Frequency | 50 Hz | 60 Hz |
| Electricity network | Three-plase star with earthed neutral (3P+N+PE) | Three-phase delta (3P+PE) |

Defrost water supply



NOTE
Do not connect to the domestic water connection.

Pump requirements

| | |
|-------------------------------|--------------------------|
| Connecting voltage | 180 - 265 V |
| 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 |

Lyovapor™ L-300 50 Hz Plug

| | |
|---------------|----------------|
| Load capacity | 16 A / 400 VAC |
| Poles | 5 |
| Time setting | 6 h |
| Color | red |

Lyovapor™ L-300 60 Hz Plug

| | |
|---------------|----------------|
| Load capacity | 16 A / 230 VAC |
| Poles | 4 |
| Time setting | 9 h |
| Color | blue |

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 |
| Upgrade Kit | 11065847 |
| To upgrade the L-300 to L-300 Pro. Contains user interface Pro, adapter and electricity for heat-able 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 |

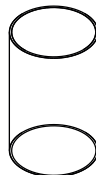
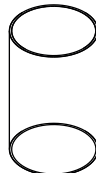
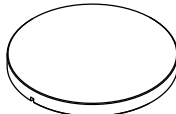
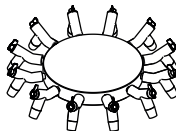
| Drying chamber non-heatable shelves | Order no. |
|--|-------------|
| Drying chamber 4 shelves with top cover, support ring and 4 non-heatable shelves | 11DCIN14100 |
| Drying chamber manifold, 4 shelves with top cover manifold, support ring, 4 non-heatable shelves and 12 manifold valves | 11DCIN14200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

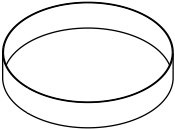
| Drying chamber non-heatable shelves | Order no. |
|--|-------------|
| Drying chamber 6 shelves with top cover, support ring and 6 non-heatable shelves | 11DCIN16100 |
| Drying chamber manifold, 6 shelves with top cover manifold, support ring, 6 non-heatable shelves and 12 manifold valves | 11DCIN16200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

| 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 |

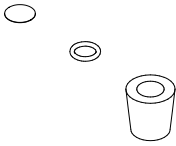
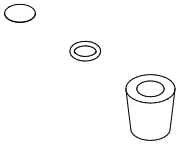
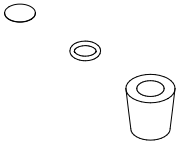
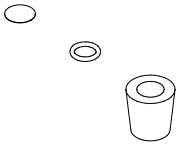
Spare parts and accessories

Top-mount drying rack accessories




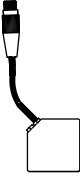
| | Order no. | Image |
|---|-----------|---|
| Drying chamber tube, PMMA, for 4 shelves L 368 mm, Ø 300 mm | 11063278 |  |
| Drying chamber tube, PMMA, for 6 shelves L 480 mm, Ø 300 mm | 11065093 |  |
| Top cover, PMMA, without sealing Ø 300 mm, H 50 mm | 11062912 |  |
| Top cover manifold, PMMA, with 12 valves, without sealing Ø 300 mm, W 546 mm, H 127 mm | 11065595 |  |

| | Order no. | Image |
|---|-----------|---|
| 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 |  |
| 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 |  |

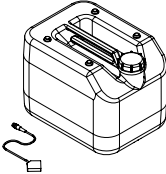
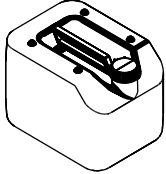
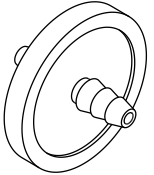
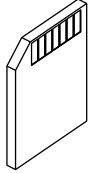
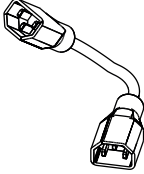
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|--|-----------|---|
| Baseplate, stainless steel, for manifold rack | 11064953 |  |
| Baseplate, PMMA, for manifold rack | 11065733 |  |
| Suction nipple For manifold application to create vacuum in sample flasks | 11065819 |  |
| Ampoule adapter for manifold with 19 ampoule connections and cap adapter | 11065725 |  |
| Manifold valve, natural rubber, with SJ 29/32 | 11062300 |  |
| Flask beaker for manifold 200 mL with cap adapter and integrated filter | 11066141 |  |
| Flask beaker for manifold 600 mL with cap adapter and integrated filter | 11066142 |  |
| 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 |  |

| | Order no. | Image |
|---|-----------|---|
| 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 |  |

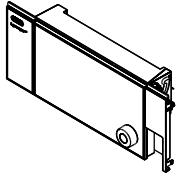
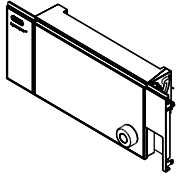
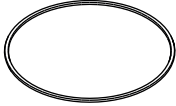
Accessories


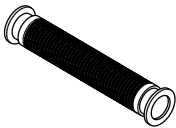
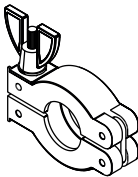
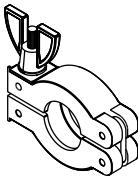
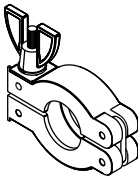
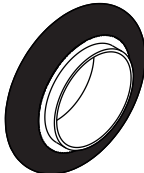
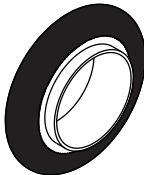


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|--|-----------|---|
| Pirani pressure sensor Inficon PSG 550 | 11062229 |  |
| Capacitive pressure sensor Inficon CDG 020 D | 11062230 |  |
| PT1000 sample temperature sensor | 11064031 |  |
| Level sensor capacitive, for water canister | 11069608 |  |


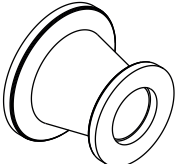
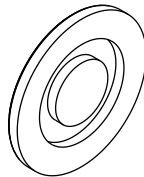
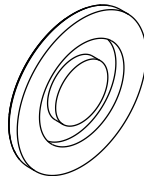
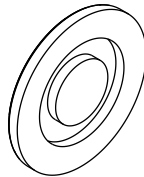
Further accessories

| | Order no. | Image |
|---|-----------|---|
| Set for defrost and waste water incl. canisters, level sensors, tubing | 11067317 |  |
| Canister 20 L, for waste and defrosting water | 11066068 |  |
| 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 |  |

| | Order no. | Image |
|-----------------------------------|-----------|---|
| O-Ring Ø 430 mm | 11065343 |  |
| Vacuum hose, KF 25, L 1000 mm | 11066031 |  |
| Vacuum clamp KF 16 | 11064939 |  |
| Vacuum clamp KF 25 | 11063662 |  |
| Vacuum clamp, KF 40 | 11063663 |  |
| 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 |  |

| | Order no. | Image |
|--|-----------|---|
| O-Ring, Silicone, 161.3 x 5.33 mm | 11062421 |  |
| Vacuum flange adapter, stainless steel, KF 16 to KF 25 | 11064870 |  |
| Blind flange KF 16 | 11064902 |  |
| Blind flange KF 25 | 11063660 |  |
| Blind flange KF 40 | 11063661 |  |

Software

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