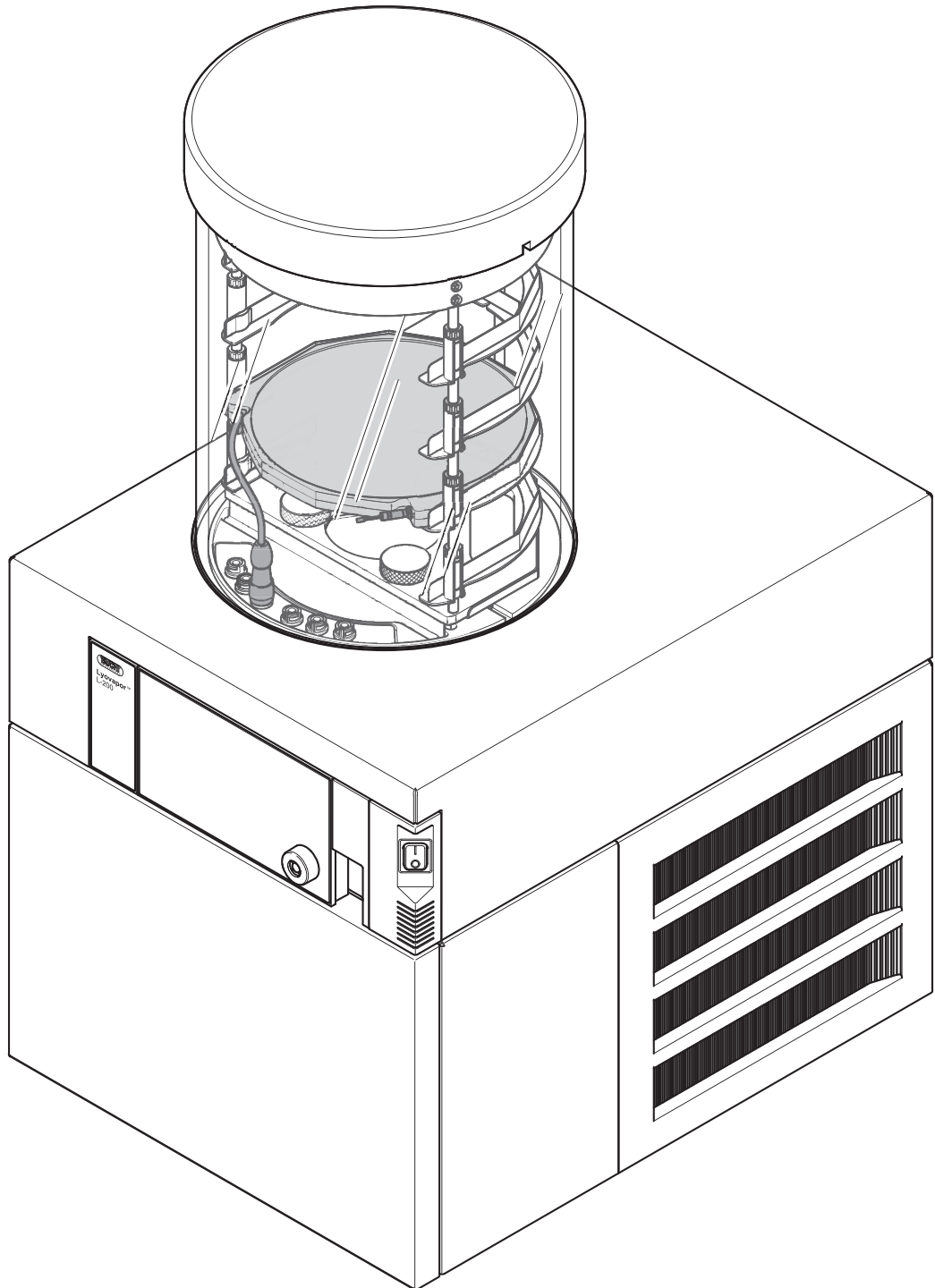




Lyovapor™ L-200

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 | 1 | 1 |
| Regulation valve | 1 | 1 |
| Vacuum pump | * | * |
| Drying chamber heatable shelf | - | 1 |
| Drying chamber non-heatable shelf | 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

| | | | | | | | | | | | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|--|--|--|--|--|--|--|--|--|----------|--|
| 1 | 1 | L | 2 | 0 | 0 | I | N | | | | | | | | | | 0 | |
|----------|----------|----------|----------|----------|----------|----------|----------|--|--|--|--|--|--|--|--|--|----------|--|

Drying chamber

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

Pressure control

- 2 Advanced vacuum control

Sample temperature sensor

- 0 Without sensor

Software

- 0 Without software

Vacuum pump

- 0 Without vacuum pump
- 1 Vacuum pump "Pfeiffer Duo 6"
- 3 Vacuum pump "Edwards nXDS6iC"

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

| | | | | | | | | | | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|--|--|--|--|--|--|--|--|----------|--|
| 1 | 1 | L | 2 | 0 | 0 | P | H | | | | | | | | | 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

- 2 Advanced vacuum control

Sample temperature sensor

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

Software

- 0 Without software
- 1 Software

Vacuum pump

- 0 Without vacuum pump
- 1 Vacuum pump "Pfeiffer Duo 6"
- 3 Vacuum pump "Edwards nXDS6iC"

Trolley

- 0 Without
- 1 Convenient mobile trolley

Voltage / Frequency

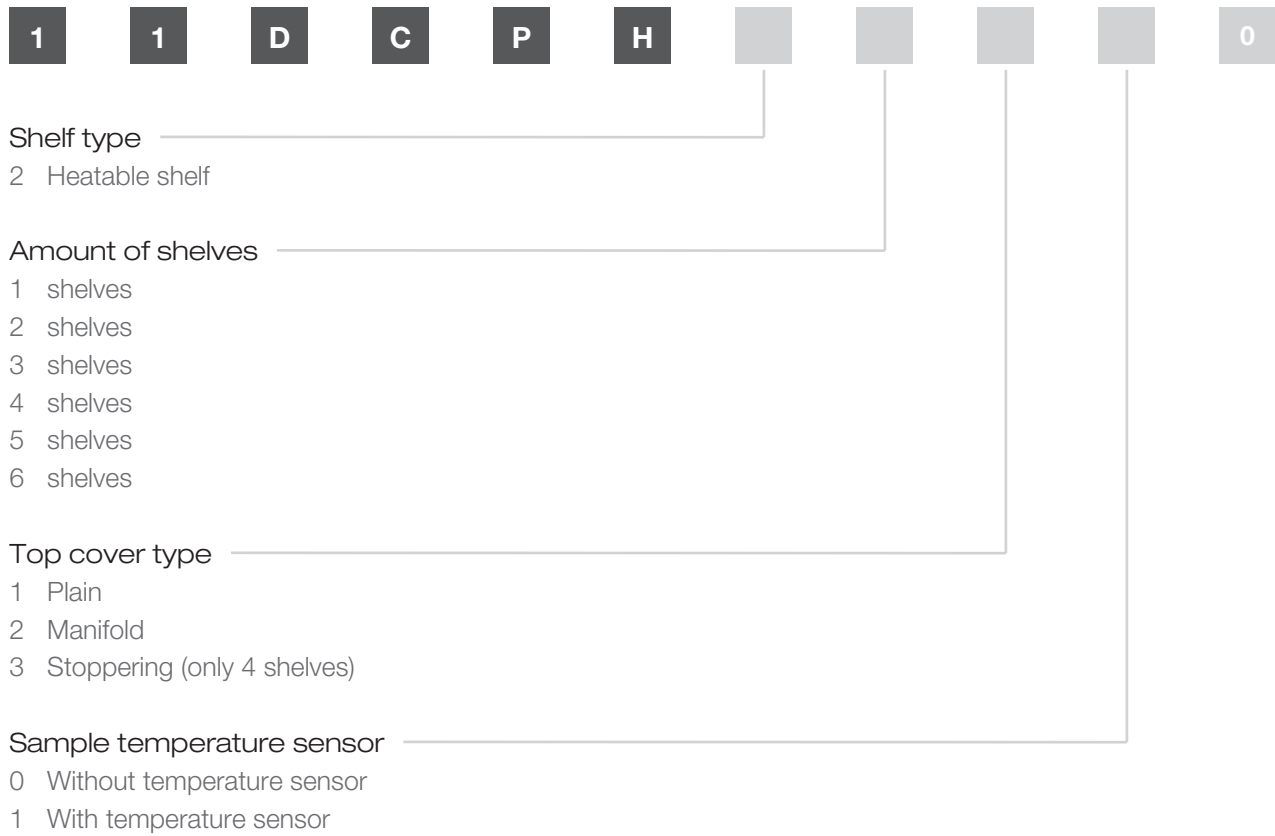
- 1 220 – 240 V (50 Hz)
- 2 208 – 230 V (60 Hz)

Order Code

Choose the configuration according to your needs:

Drying chambers with heating options

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



Scope of delivery

All configurations are supplied ready to use.

| Component | Lyovapor™ L-200 |
|---|-----------------|
| Lyovapor™ L-200 or Lyovapor™ L-200 Pro | 1 |
| Power cord | 1 |
| Operation Manual | 1 |
| Technical data sheet | 1 |
| Vacuum clamp, ISO-KF 16 | 1 |
| Vacuum clamps, ISO-KF 25 | 1 |
| O-ring 300 mm | 1 |
| Vacuum tubing adaptor, ISO-KF 16 to ISO-KF 25 | 1 |
| Cross-pipe (inc. seals and clamps)* | 1 |
| 90° elbow, ISO-KF 16 | 2 |
| Main valve (inc. seals and clamps) | 1 |
| Pressure regulating valve (inc. seals and clamps) | 1 |
| Pressure sensor PPG010 (inc. seals and clamps) | 1 |
| Aeration valve (inc. seals and clamps) | 1 |

Technical data

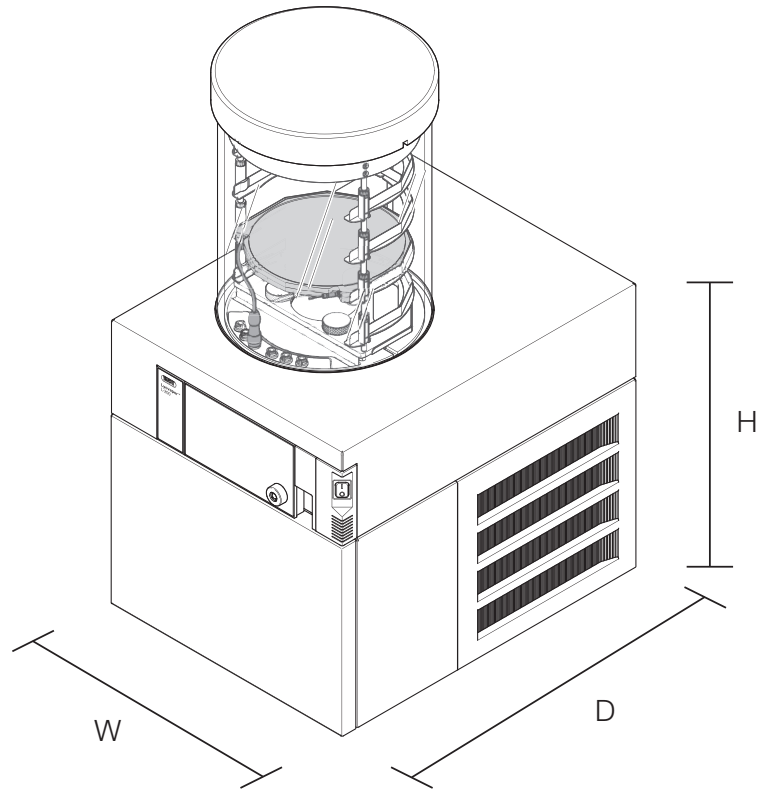
Lyovapor™ L-200

| | | |
|---|----------------------|----------------------|
| Dimensions without drying attachments (W x D x H) | 460 x 585 x 510 mm | 460 x 585 x 510 mm |
| Weight | 75 kg | 75 kg |
| Minimum clearance on all sides | 300 mm | 300 mm |
| Connection voltage | 220-240 VAC | 208-230 VAC |
| Power consumption (rated) | 1200 W | 1200 W |
| Power consumption (maximum) | 1800 W | 1800 W |
| Lug | 10 A/250 V | 10 A/250 V |
| Frequency | 50 Hz | 60 Hz |
| Overvoltage category | II | II |
| Protection rating | IP20 | IP20 |
| Pollution degree | 2 | 2 |
| Condensing capacity | ≥ 6 kg / 24 h | ≥ 6 kg / 24 h |
| Lowest condenser temperature | -55 °C | -55 °C |
| Temperature divergence | ± 1.0 °C | ± 1.0 °C |
| Condenser capacity | ≤ 6 kg | ≤ 6 kg |
| Condenser surface area | 1410 cm ² | 1410 cm ² |
| Number of compressors | 1 | 1 |

| | | |
|-------------------------------------|------------------------------------|------------------------------------|
| Refrigerant | R507 CFC-free | R507 CFC-free |
| Refrigerant quantity | 485 g | 467 g |
| Drying shelf temperature | up to 60 °C | up to 60 °C |
| Inert gas pressure | 1.1 - 1.2 bar (max. 2 bar) | 1.1 - 1.2 bar (max. 2 bar) |
| Drying shelf temperature tolerance | ± 1.0 °C | ± 1.0 °C |
| Cooling capacity compressor | 1.97 kW | 2.33 kW |
| Vacuum generation time to 0.1 mbar* | Typically ≤ 10 min | Typically ≤ 10 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 500 mTorr | 50 to 500 mTorr |

* With Pfeiffer Duo 6 vacuum pump / without samples

Installation requirements



W= 460 mm + 300 mm Clearance

D = 585 mm + 300 mm Clearance (incl. vacuum regulation and vacuum hose)

H = 510 mm + 400 mm Clearance (up to 1100 mm depending on configuration)

Power supply

| | | |
|------------------------------|-------------|-------------|
| Frequency | 50 Hz | 60 Hz |
| Connection voltage | 220-240 VAC | 208-230 VAC |
| Power consumption (rated) | 1200 W | 1200 W |
| Lug | 10 A/250 V | 10 A/250 V |

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 |

Plain Instrument

| Plain Instrument | Order no. |
|----------------------------|--------------------|
| Lyovapor™ L-200, 50 Hz | 11L200IN0000000001 |
| Lyovapor™ L-200, 60 Hz | 11L200IN0000000002 |
| Lyovapor™ L-200 Pro, 50 Hz | 11L200PH0000000001 |
| Lyovapor™ L-200 Pro, 60 Hz | 11L200PH0000000002 |
| Upgrade Kit | 11065846 |

To upgrade the L-200 to L-200 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 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 |

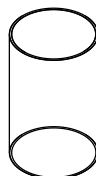
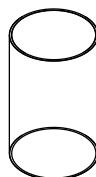
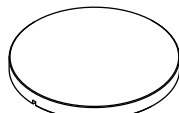
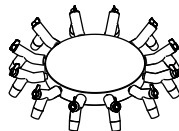
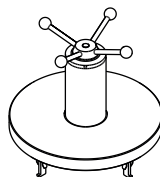
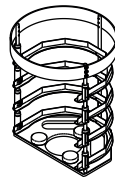
Drying chamber heatable shelves

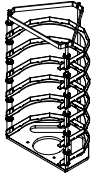

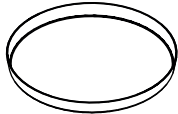
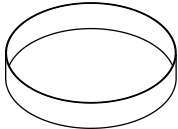
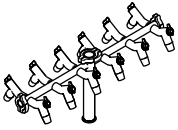
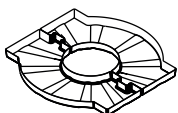
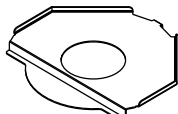
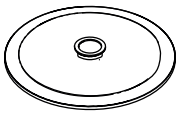
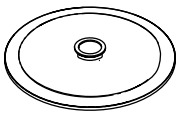
Order no.

| | |
|---|-------------|
| 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

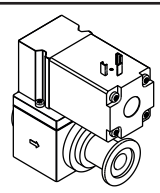
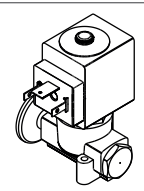
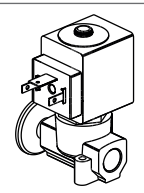
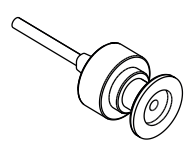
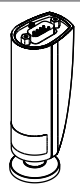

| | Order no. | Image |
|---|-----------|---|
| Drying chamber tube, PMMA, for 4 shelves L 368 mm, Ø 300 mm | 11063278 |  |
| Drying chamber tube, PMMA, for 6 shelves L 480 mm, Ø 300 mm | 11065093 |  |
| Top cover, PMMA, without sealing Ø 300 mm, H 50 mm | 11062912 |  |
| Top cover manifold, PMMA, with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

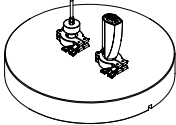
| | Order no. | Image |
|--|-----------|---|
| Rack for 6 heatable shelves H 468 mm, Ø 265 mm, shelf distance 30-75 mm | 11065103 |  |
| Heatable shelf, aluminum coated, with connection cable Ø 219.5 mm, surface area 376 cm² | 11064095 |  |
| Sample tray, stainless steel Ø 220 mm, H 18.5 mm | 11061439 |  |
| 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 |  |
| Baseplate, stainless steel, for manifold rack | 11064953 |  |
| Baseplate, PMMA, for manifold rack | 11065733 |  |

| | Order no. | Image |
|--|-----------|---|
| 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 |  |
| Manifold flask adapter set with 12 adapters, incl. filter paper | 11066144 |  |
| Manifold flask adapter set with 6 adapters, incl. filter paper | 11067334 |  |

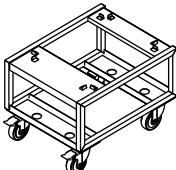
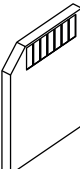
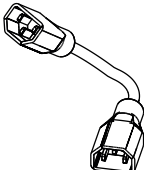
| | Order no. | Image |
|---|-----------|---|
| Manifold flask adapter set, US joint size with 12 adapters, incl. filter paper | 11066171 |  |
| Manifold flask adapter set, US joint size with 6 adapters, incl. filter paper | 11067333 |  |

Accessories

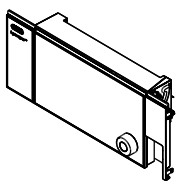
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| Main valve | 11062223 |  |
| Pressure regulation valve | 11064725 |  |
| Aeration valve | 11064724 |  |
| Pirani / Piezo pressure sensor PPG010 | 11062228 |  |
| Capacitive pressure sensor Inficon CDG 020 D | 11066564 |  |
| PT1000 sample temperature sensor | 11064031 |  |

| | Order no. | Image |
|--|-----------|---|
| Set for pressure difference test at L-200 incl. PPG010 and CDG 020D sensors, PMMA top cover, seals and clamps | 11067590 |  |

Further accessories

| | Order no. | Image |
|---------------------------------------|-----------|--|
| Trolley L-200, stainless steel coated | 11063692 |  |
| 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 |
|--|-----------|---|
| 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 |  |
| Vacuum flange adapter, stainless steel, KF 16 to KF 25 | 11064870 |  |
| Blind flange KF 16 | 11064902 |  |

| | Order no. | Image |
|--------------------|-----------|---|
| Blind flange KF 25 | 11063660 |  |
| Blind flange KF 40 | 11063661 |  |

Software

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



WolfLabs

Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.