

Technical data sheet

Mini Spray Dryer S-300



Scope of delivery

All configurations are supplied ready to use.

| Component | Mini Spray Dryer S-300 | Mini Spray Dryer S-300 | Mini Spray Dryer S-300 |
|--------------------------------------|---------------------------|---------------------------|---------------------------|
| | | Advanced | Corrosive |
| Instrument | 1 | 1 | 1 |
| Two fluid nozzle, complete | 1 | 1 | - |
| Two fluid nozzle corrosive, complete | - | - | 1 |
| Nozzle cleaning brush | 1 | 1 | 1 |
| Hose clip 25-40 DIN3017 | 1 | 1 | - |
| Compressed gas hose | 1 | 1 | 1 |
| Hose adapter 4/2 | 1 | 1 | 1 |
| Hose coupling | 1 | 1 | 1 |
| Power supply | 1 | 1 | 1 |
| Hose Tygon MH2075 | - | 1 | 1 |
| Hose Tygon HCF4040A | - | 1 | 1 |
| Feed switch valve | - | 1 (only Pro) | 1 (only Pro) |
| Ultrasonic Package S-300 | - | - | - (not available) |

Order code

Choose the configuration according to your needs:

1 1 S 3 0 0 **1** **1 0 0**

Version

- B Mini Spray Dryer S-300
- A Mini Spray Dryer S-300 Advanced
- C Mini Spray Dryer S-300 Corrosive

Auto mode

- 0 No auto mode
- 1 With auto mode (Advanced and Corrosive only)

Temperature

- 0 220°C
- 1 250°C (Advanced and Corrosive only)

Technical data

Mini Spray Dryer S-300

| | Mini Spray Dryer S-300 | Mini Spray Dryer S-300 Advanced | Mini Spray Dryer S-300 Corrosive |
|---------------------------------|----------------------------|---------------------------------|----------------------------------|
| Dimensions (W x D x H) | 620 mm x 640 mm x 1052 mm | 620 mm x 640 mm x 1052 mm | 620 mm x 640 mm x 1052 mm |
| Weight (without glass assembly) | 54.0 kg | 54.0 kg | 54.0 kg |
| Weight (with glass assembly) | 62.5 kg | 62.5 kg | 62.5 kg |
| Connection voltage | 220 - 240 ± 10 % VAC | 220 - 240 ± 10 % VAC | 220 - 240 ± 10 % VAC |
| Heating Control | ± 3 °C | ± 3 °C | ± 3 °C |
| Power consumption | max. 2300 W | max. 2300 W | max. 2300 W |
| Fuse | 10 AT | 10 AT | 10 AT |
| Overvoltage category | II | II | II |
| Frequency | 50 / 60 Hz | 50 / 60 Hz | 50 / 60 Hz |
| IP Code | IP20 | IP20 | IP20 |
| Pollution degree | 2 | 2 | 2 |
| Minimum clearance on all sides | 100 mm | 100 mm | 100 mm |
| Spray drying gas | Nitrogen Compressed air | Nitrogen Compressed air | Nitrogen Compressed air |
| Pressure range | 6.5 - 7.0 bar | 6.5 - 7.0 bar | 6.5 - 7.0 bar |
| Spray gas range | 80 - 1800 L/h | 80 - 1800 L/h | 80 - 1800 L/h |
| Max. temperature | 220 °C | 220 / 250 °C | 220 / 250 °C |
| Max. flow rate | 35 m ³ /h | 35 m ³ /h | 35 m ³ /h |
| Sample feed | 0.1 - 30.0 mL/min | 0.1 - 30.0 mL/min | 0.1 - 30.0 mL/min |
| External connection dry-ing gas | KF25 | KF25 | KF25 |

| | Mini Spray Dryer S-300 | Mini Spray Dryer S-300 Advanced | Mini Spray Dryer S-300 Corrosive |
|-------------|------------------------|---------------------------------|----------------------------------|
| Certificate | CSA / CE | CSA / CE | CSA / CE |

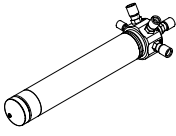
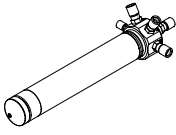
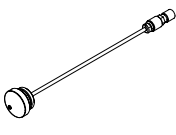
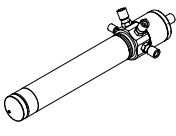
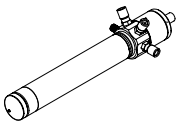
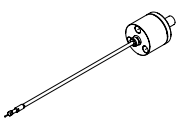
Ambient conditions

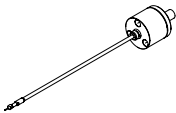
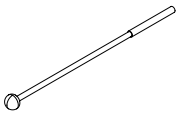
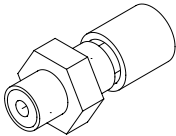
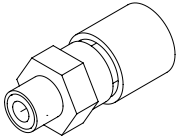
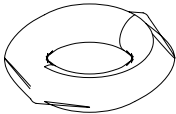
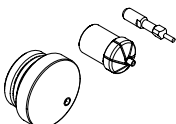
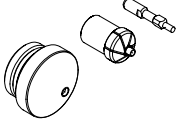
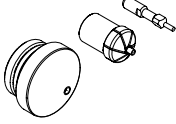
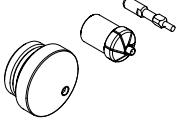
For indoor use only.

| | |
|---------------------------------|--|
| Max. altitude above sea level | 2000 m |
| Ambient and storage temperature | 5 – 40 °C |
| Maximum relative humidity | 80% for temperatures up to 31 °C decreasing linearly to 50 % relative humidity at 40 °C |

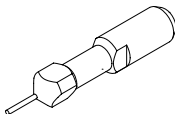
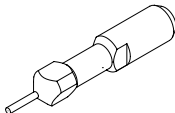
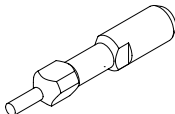
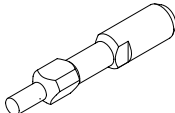
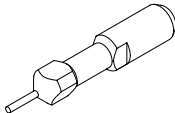
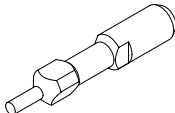
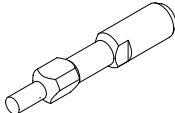
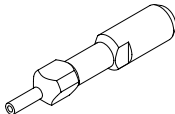
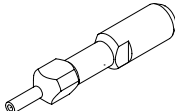
Spare parts and accessories

Nozzles

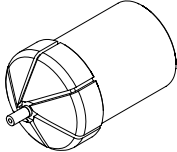
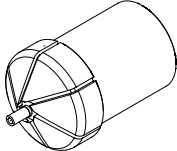
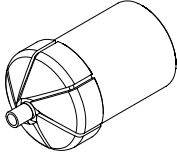
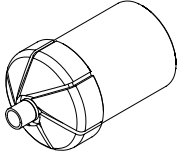
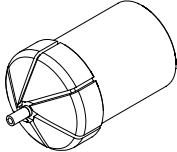
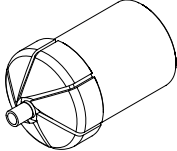
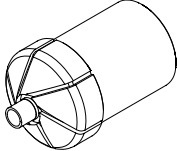
| | Order no. | Image |
|---|-----------|---|
| Three-fluid nozzle, complete Nozzle for two independent sample feeds at the same time. Allows to spray dry immiscible samples for microencapsulation applications. | 046555 |  |
| Three-fluid nozzle corrosives, complete | 11056971 |  |
| Three-fluid nozzle conversion kit | 046556 |  |
| Two-fluid nozzle 1.5 mm, complete | 044698 |  |
| Two-fluid nozzle corrosives, complete | 11056320 |  |
| Nozzle cleaning 0.7 mm, complete | 044643 |  |

| | Order no. | Image |
|---|-----------|---|
| Nozzle cleaning 0.7 mm acid proof, complete | 11059876 |  |
| Cleaning brush for nozzle | 044782 |  |
| Screw connection product tube | 044628 |  |
| Screw connection air and cooling | 044629 |  |
| O-ring for nozzle cleaner, FKM (black), 2x 3.00 x 1.50 mm | 044469 |  |
| Set nozzle 1.4 mm Wider diameter for the two fluid nozzle to work with viscous sample materials. | 046380 |  |
| Set nozzle 2.0 mm Wider diameter for the two fluid nozzle to work with viscous sample materials. | 046381 |  |
| Nozzle set 1.4 mm titanium | 11056415 |  |
| Nozzle set 2.0 mm titanium | 11056416 |  |

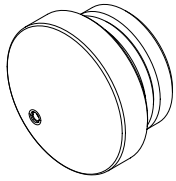
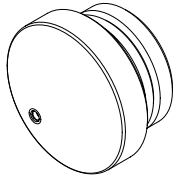
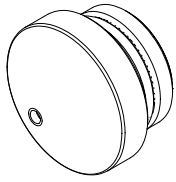
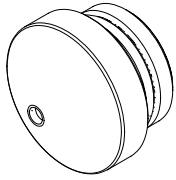
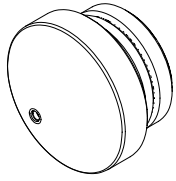
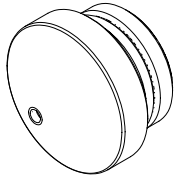
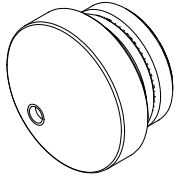
Nozzle needles

| | Order no. | Image |
|------------------------------|-----------|---|
| Needle 0.5 mm | 11056864 |  |
| Needle 0.7 mm | 044618 |  |
| Needle 1.4 mm | 046372 |  |
| Needle 2.0 mm | 046373 |  |
| Needle 0.7 mm titanium | 11056315 |  |
| Needle 1.4 mm titanium | 11056417 |  |
| Needle 2.0 mm titanium | 11056422 |  |
| Needle 0.7 mm empty | 046554 |  |
| Needle 0.7 mm titanium empty | 11056969 |  |

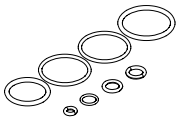
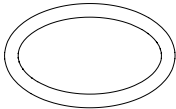
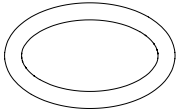
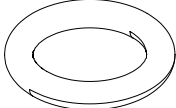
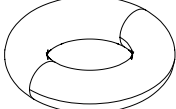
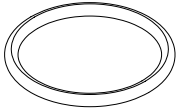
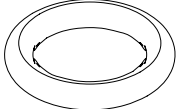
Nozzle tips

| | Order no. | Image |
|----------------------------|-----------|---|
| Nozzle tip 0.5 mm | 11056865 |  |
| Nozzle tip 0.7 mm | 044634 |  |
| Nozzle tip 1.4 mm | 046376 |  |
| Nozzle tip 2.0 mm | 046377 |  |
| Nozzle tip 0.7 mm titanium | 11056317 |  |
| Nozzle tip 1.4 mm titanium | 11056419 |  |
| Nozzle tip 2.0 mm titanium | 11056424 |  |

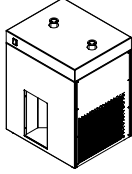
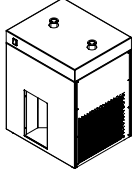
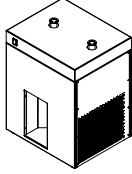
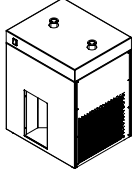
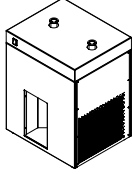
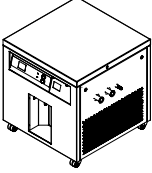
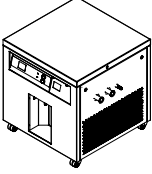
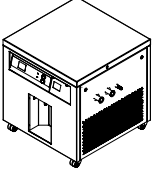
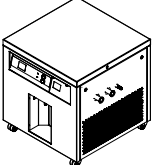
Nozzle caps

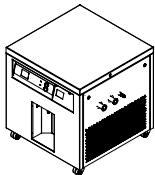
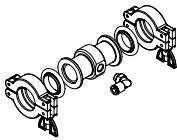
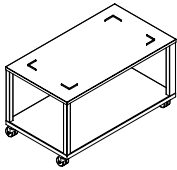
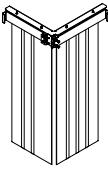

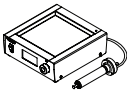
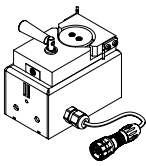
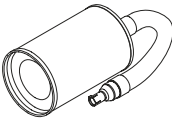
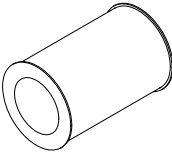
| | Order no. | Image |
|----------------------------|-----------|---|
| Nozzle cap 1.4 mm | 044649 |  |
| Nozzle cap 1.5 mm | 044647 |  |
| Nozzle cap 2.2 mm | 046374 |  |
| Nozzle cap 2.8 mm | 046375 |  |
| Nozzle cap 1.5 mm titanium | 11057509 |  |
| Nozzle cap 2.2 mm titanium | 11057510 |  |
| Nozzle cap 2.8 mm titanium | 11057511 |  |


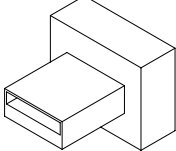
O-rings nozzle

| | Order no. | Image |
|---|-----------|---|
| Set of O-rings for nozzle | 044759 |  |
| O-ring for nozzle, FKM (green), 2x 21.00 x 2.00 mm | 044645 |  |
| O-ring nozzle cap silicone (red), 2x 16.00 x 2.00 mm | 002103 |  |
| O-ring for needle and nozzle tip, FKM (green), 4 x 6.00 x 1.50 mm | 004222 |  |
| O-ring for nozzle cleaner, FKM (black), 2x 3.00 x 1.50 mm | 038348 |  |
| O-ring for screw coupling, FFKM (black) 2x 37.69 x 3.53 mm | 046363 |  |
| O-ring for nozzle tip, FFKM (green), 2x 6.00 x 1.50 mm | 046361 |  |

Accessories

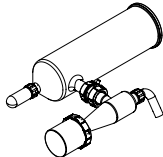
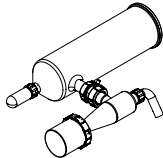
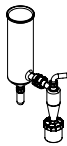
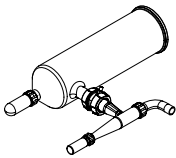
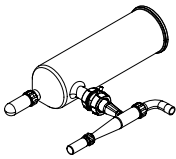
| | Order no. | Image |
|--------------------------------|-----------|---|
| Dehumidifier S-396 200 V | 11073817 |  |
| Dehumidifier S-396 210 V | 11073816 |  |
| Dehumidifier S-396 220 V | 11074006 |  |
| Dehumidifier S-396 230 V | 11073814 |  |
| Dehumidifier S-396 240 V | 11073815 |  |
| Inert Loop S-395 200V 50Hz | 11074620 |  |
| Inert Loop S-395 220-240V 50Hz | 11074621 |  |
| Inert Loop S-395 200V 60Hz | 11074622 |  |
| Inert Loop S-395 220V 60Hz | 11075174 |  |

| | Order no. | Image |
|--|-----------|---|
| Inert Loop S-395 240V 60Hz | 11074623 |  |
| Inert gas adapter S-300, complete | 11074499 |  |
| Trolley S-300 | 11074575 |  |
| Protective curtain right, complete | 11071754 |  |
| Protective curtain left, complete | 11071651 |  |
| Ultrasonic Package S-300 | 11074994 |  |
| Peristaltic pump external Second peristaltic pump for three fluid nozzle, nozzle cooling or shorter distance between pump and nozzle. | 11070786 |  |
| Inlet filter, complete Protects the sample from particles of the environmental drying air. Only for open mode. | 011235 |  |
| Replacement filter with seal | 011238 |  |

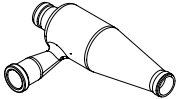
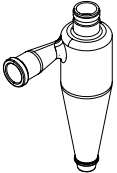
| | Order no. | Image |
|---------------------------------------|-----------|---|
| Spray cylinder chrome steel, complete | 11064367 |  |
| Adapter USB-Wi-Fi/Bluetooth | 11072500 |  |
| Oil-free compressor, 230V 50Hz | 027907 | |
| Oil-free compressor, 230V 60Hz | 11055737 | |
| Compressed air maintenance unit | 004366 | |

Glassware

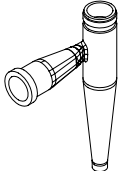
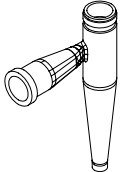
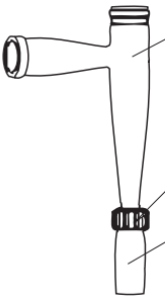
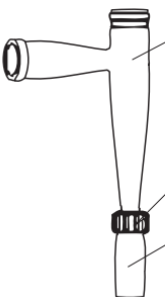
Glass assemblies

| | Order no. | Image |
|---|-----------|---|
| Glass assembly S-300, complete | 11071071 |  |
| Glass assembly S-300 brown, complete | 11073658 |  |
| Glass assembly corrosive S-300, complete | 11071420 |  |
| Glass assembly S-300 HP cyclone, complete | 11074494 |  |
| Glass assembly S-300 HP cyclone brown, complete | 11074495 |  |


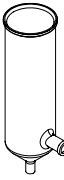
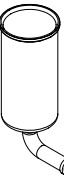

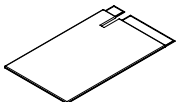
Cyclones

| | Order no. | Image |
|---|-----------|---|
| Standard cyclone | 11071060 |  |
| Cyclone brown | 11073659 |  |
| Standard cyclone with collection vessel, complete | 11073661 | |

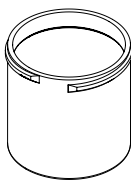
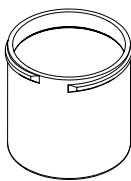
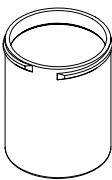
High performance cyclones

| | Order no. | Image |
|--|-----------|---|
| High performance cyclone | 046368 |  |
| High performance cyclone brown | 11056879 |  |
| High performance cyclone, complete | 11074500 |  |
| High performance cyclone brown, complete | 11074496 |  |

Spray cylinder

| | Order no. | Image |
|---------------------------------------|-----------|---|
| Spray cylinder | 044673 |  |
| Spray cylinder brown | 044726 |  |
| Spray cylinder vertical outlet | 044697 |  |
| Spray cylinder vertical outlet, brown | 044728 |  |
| Cylinder insulation | 040058 |  |

Collection vessels

| | Order no. | Image |
|--------------------------------------|-----------|---|
| Product collection vessel | 044678 |  |
| Product collection vessel brown | 044727 |  |
| Large Product collection vessel 1.1L | 11056990 |  |

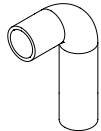
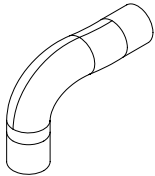
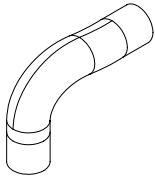

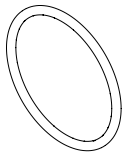

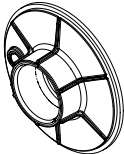
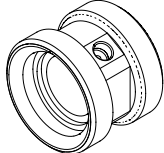

| | Order no. | Image |
|---|-----------|---|
| Plastic closure for product collection vessel | 046358 |  |


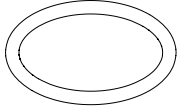
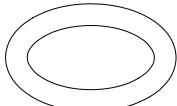
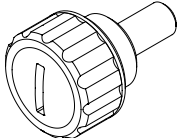
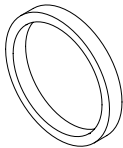
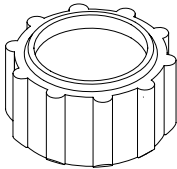
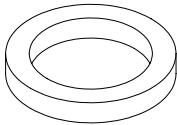
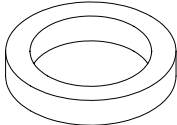
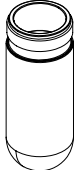
HP collection vessels and accessories

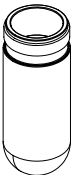
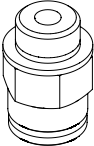
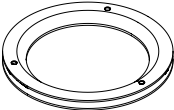
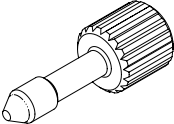
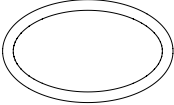
| | Order no. | Image |
|--|-----------|---|
| Small product collection vessel for HP cyclone | 046367 |  |
| Small product collection vessel for HP cyclone brown | 11056878 |  |
| Large product collection vessel for HP cyclone, complete | 11056899 |  |
| Cover for large collection vessel HP cyclone | 11056901 |  |
| Screw cap SVL 30 | 005223 |  |
| Flange screw coupling | 034139 |  |

Other glassware related spare parts


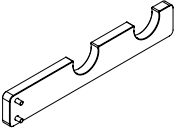
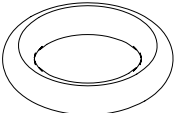
| | Order no. | Image |
|------------|-----------|---|
| Angle tube | 11070485 |  |

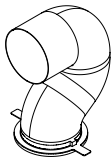
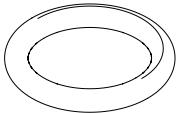
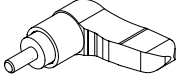
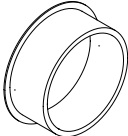
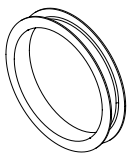
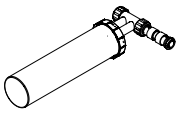
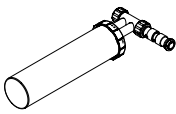
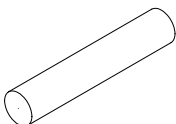

| | Order no. | Image |
|---------------------------------|-----------|---|
| Angle tube brown | 11073660 |  |
| Angle tube for HP cyclone | 11073621 |  |
| Angle tube for HP cyclone brown | 11074322 |  |
| Cap nut 130 | 11070711 |  |
| O-ring 104 x 6.99 FKM 70 | 11071062 |  |
| Cover product vessel at cyclone | 11072625 |  |
| Cover product vessel corrosive | 11071425 |  |
| Coupling flange | 11073537 |  |
| Coupling flange corrosive | 11071421 |  |

| | Order no. | Image |
|----------------------------------|-----------|---|
| Set flange screw coupling 1 pcs. | 11074579 |  |
| O-ring FKM for screw coupling | 001535 |  |
| Tension spring | 032017 |  |
| Knurled handle with recess | 11071059 |  |
| Gasket SVL 42.00 x 35.00 mm | 11071061 |  |
| Cap nut SVL 42 | 003551 |  |
| Silicone seal SVL 42 | 040674 |  |
| PTFE Seal SVL 42 | 003575 |  |
| Separation flask | 004188 |  |


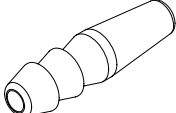
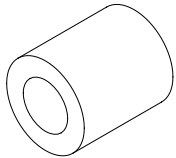
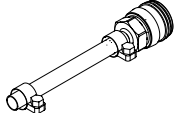
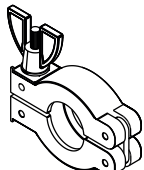
| | Order no. | Image |
|----------------------------------|-----------|---|
| Separation flask brown | 004343 |  |
| Quick connector Nozzle Ø6 | 11071105 |  |
| Spray cylinder holder | 044710 |  |
| Screw for spray cyclinder holder | 044712 |  |
| O-ring to spray cylinder | 044711 |  |

Spare parts


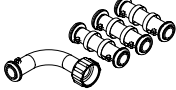
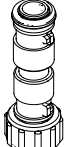
| | Order no. | Image |
|---------------------------------|-----------|---|
| Set O-ring Plastiperfl. S-300 | 11074501 |  |
| Tube holder | 11071708 |  |
| O-ring Ø 5.00x1.50 Plastiperfl. | 11074587 |  |

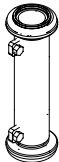
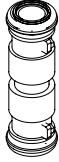
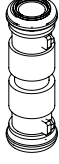
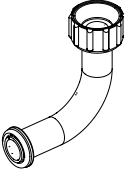
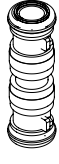
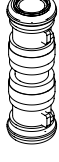
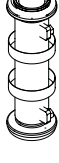
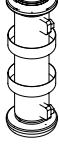
| | Order no. | Image |
|--------------------------------------|-----------|---|
| Ventilation hose aspirator, complete | 11071064 |  |
| O-ring Ø 27.94x5.33 FKM 75 | 11071073 |  |
| Clamping lever M4 | 11071171 |  |
| Cover cap Ø 25.4 | 11071194 |  |
| Gasket SVL 42x35 PTFE | 11071325 |  |
| Outlet filter, complete | 11071410 |  |
| Outlet filter corrosive, complete | 11071411 |  |
| PTFE membrane filter with clamp | 11075115 | |
| Polyester filter bags (6 units) | 035004 |  |
| Quick release clamp | 11071080 |  |

| | Order no. | Image |
|---|-----------|---|
| Filter holder grounded | 11073770 |  |
| Fixing nut T-sensor | 11073019 |  |
| Adapter T-sensor outlet | 11073020 |  |
| Outlet T-sensor | 11072981 |  |
| Product T-sensor | 11072982 |  |
| Outlet T-sensor corrosive | 11071406 |  |
| Set O-ring (5 units) Ø 5.00x1.50 FKM 70 | 11080661 |  |
| Product T-sensor corrosive | 11071407 |  |
| Closing pin | 11071611 |  |
| Silicon tube D2/4 (per m) | 004138 | |

| | Order no. | Image |
|---------------------------------------|-----------|---|
| Y-piece connector | 046304 |  |
| Metal tube connector | 004251 |  |
| Silicone tube for nozzle cooling, 4 m | 004139 |  |
| Compressed gas hose, complete | 11073584 |  |
| Tygon tube MH2375 transparent (per m) | 046314 | |
| Tygon tube F 4040 A yellow (per m) | 046315 | |
| Vacuum clamp KF 25 | 11063662 |  |

Hoses and tubes

| | Order no. | Image |
|-------------------------|-----------|---|
| Set hose drying gas TPR | 11071431 |  |
| Set tube PTFE | 11072713 |  |
| Hose filter conf. | 11071057 |  |

| | Order no. | Image |
|------------------------------|-----------|---|
| Tube Inert Loop PTFE conf. | 11071602 |  |
| Hose Inert Loop TPR conf. | 11071076 |  |
| Tube Dehumidifier TPR conf. | 11074039 |  |
| Tube filter FEP conf. corr. | 11072988 |  |
| Hose TPR 0.7 m conf. | 11071051 |  |
| Hose TPR 1.0 m conf. | 11071053 |  |
| Hose PTFE 0.7 m conf. | 11071054 |  |
| Hose PTFE 1.0 m conf. | 11071056 |  |
| Hose PTFE 0.7 m conf. coated | 11071606 |  |

| | Order no. | Image |
|------------------------------|-----------|---|
| Hose PTFE 1.0 m conf. coated | 11071608 |  |

Documents

| | Order no. |
|-----------------------|-----------|
| Set IQ/OQ S-300 en | 11074567 |
| Repeating OQ S-300 en | 11074568 |



11594263E en Mini Spray Dryer S-300 02.2024
Technical data are subject to change without notice
Quality Systems ISO 9001

We are represented by more than 100 distribution partners worldwide.
Find your local representative at:

www.buchi.com

Quality in your hands
