A selection of quality vacuum dryers for laboratories and industrial equipment

Standard equipment:

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- Temperature range Tambient + 5°C ÷ 200°C
- Simple microprocessor controller with an LCD display
- Optional settings of 10 different automatic programmes and optional manual control
- A selection of an optional temperature 'steps' in each programme from 1 to 10
- Operation delay of the vacuum pump (possible to set the pre-heating first and then the vacuumization or reverse)
- Start-up operation delay (start-up at a specified time and day)
- Subject temperature display
- Vacuum analogue display
- Display and temperature setting resolution 0.1°C
- Temperature stability ±0.1°C
- Programme for a simple temperature calibration
- RS 232 communication port (printer or PC)
- Needle valve for inlet of the inert gas (venting or inlet of the gas when the procedure is completed)
- Additional reserve plug NW-40 (for calibrations)
- Observation glass with an additional protective glass
- Safety thermostat
- Two-stage silicon seal
- The interior casing is made of stainless steel AISI 304 (optional AISI 316)
- The exterior is made of aluminized sheet, powder coated (RAL 7035) (optional AISI 304)
- Shelf temperature display (SC label at the end of the type)
- Heated shelves (SC label at the end of the type)
- Vacuum control and vacuum digital display (SC label at the end of the type)

All required documentation (IQ & OQ optional)

Type	Volume	Internal dimensions (HxWxL) mm	External dimensions (HxWxL) mm	Wattage
VS-25 C	25 L	300 x 280 x 300	480 x 600 x 465	230V~50/60 Hz 1,5 kW
VS-25 SC	25 L	300 x 280 x 300	480 x 600 x 465	230V~50/60 Hz 1,5 kW
VS-50 C	50 L	405 x 340 x 370	730 x 510 x 510	230V~50/60 Hz 1,52 kW
VS-50 SC	50 L	405 x 340 x 370	730 x 510 x 510	230V~50/60 Hz 1,92 kW
VS-100 C	102 L	405 x 340 x 740	730 x 510 x 895	230V~50/60 Hz 3,00 kW
VS-130 SC 5 heated shelves	130 L	495 x 495 x 530	675 x 850 x 730	3x400V~50/60 Hz 3.2 kW

In addition we also manufacture industrial vacuum dryers with different volumes and configurations even for the EX environment.

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Additional equipment

- Calibration with a written report (3 temperatures, 10 sensors + vacuum)
- IQ & OQ documentation and construction in the field
- The exterior casing is made of stainless steel AISI 304 sheet
- The chamber is made of acid resistant stainless steel AISI 316 sheet
- Printer for recording the procedure
- Stainless steel tube framework to position the dryer and vacuum pump
- **Oil rotation vacuum pump**
- **Chemical resistant membrane vacuum pump**
  More about the additional equipment >>

Vacuum pump

The key factor in vacuum drying is **to ensure the correct vacuum**. There are many types of vacuum pumps available to achieve this for specific drying. In practice, for the majority of the time we deal with **two types of pumps**:

- **Oil vacuum pump:**

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Oil vacuum pumps are **the most frequent and favourable in price**. They can easily achieve vacuums down to 1 mbar or even lower. They are usually **robust** and also **very durable** if they are properly maintained. However, there are some deficiencies. Oil vacuum pumps are usually not chemical resistant, which means that a steam condenser is necessary while drying aggressive mediums. Otherwise, these aggressive mediums can damage the vital parts of the pump, the oil quality can drastically deteriorate which requires a regular change of oil and the pump will need cleaning.

Oil fumes can appear in the pump's exhaust when using oil vacuum pumps. These fumes pollute the environment with an offensive smell. However, the amount of fumes can be reduced by using exhaust filters or channelling the fumes out in to the open air.

Despite some deficiencies, these pumps are the most favourable in terms of price.

Characteristics of the oil vacuum pump, suitable for using in our dryer:

Type:	RS9D
Capacity:	9 m3 / h
Final vacuum:	1 x 10-2 mbar
Number of stages:	2

- **Chemical resistant membrane vacuum pump:**

This pump is **chemical resistant and enables aggressive mediums to dry**, because the pump is 'dry' and an oil change is not required. This considerably extends the maintenance intervals. The membrane pump has a series-integrated glass collecting container on the exhaust duct, which prevents the condensed liquid from entering the pump. There is also a pair of built-in insulated glass condensers on the exhaust side, which can be cooled with water, and thereby providing quality condensation and the collection of the exhaust fumes.

Since the pump is not lubricated with oil, there are no oil fumes left in the exhaust. Despite the multi-stage construction, the vacuum can reach down to 2 mbar.

Characteristics of the chemical resistant vacuum pump, suitable for use with our dryer:

Type:	MD4C+AK+EK
Capacity:	3 m3 / h
Final vacuum:	2 mbar
Number of stages:	3

Please contact us for more information and questions about our products and services.