

VD series: Universal vacuum drying ovens

Safe and gentle drying under vacuum. The APT.line® vacuum drying ovens are simply without equal in terms of features. That makes them the professional, versatile choice for a multitude of tasks.



► Performance features and equipment:

- Electronically controlled APT.line® preheating chamber technology with 2 expansion racks
- Temperature range: 5 °C above room temperature up to 200 °C (optional up to 250 °C)
- MP-controller with 2 programs with 10 sections each, or alternatively 1 program with 20 sections
- The time interval of single program sections can be adjusted up to a maximum of 99:59 or 999:59 hours
- Program controller timer functions: delayed ON, delayed OFF, and temperature-dependent delayed OFF
- Adjustable ramp functions via program editor
- Elapsed time indicator
- Fine dosing ventilation valve
- Spring-mounted safety glass pane with splinter protection
- Fine dosing inert gas valve with cross-flow technology
- Adjustable safety device, Class 2 (DIN 12880), with visual temperature alarm
- DN 16 measuring port in rear wall
- Analog pressure gauge (displays interior pressure in relation to current ambient pressure)
- The electronically polished inner chamber, the suction and ventilation tubes, the pressure reservoir, the sliding shelf supports, and the ball-cock valve are all made of 1.4571 (V4A) stainless steel.
- Tempered silicone door gasket
- 2 × 24 V DC (max 0.4 A) switching outputs, switched via 2 controller contacts in the program controller
- RS 422 interface for communication software APT-COM® DataControlSystem, or switch over to printer output with RS 232/RS 422 interface converter





| | VD 23 | VD 53 | VD 115 |
|---|-----------------------|------------------------|------------------------|
| ▶ Exterior dimensions | | | |
| Width (mm/inch) | 515 / 20.3 | 634 / 25.0 | 740 / 29.1 |
| Height (inclusive feet/castors) (mm/inch) | 652 / 25.7 | 771 / 30.4 | 897 / 35.3 |
| Height with option vacuum module (mm/inch) | 622 / 24.5 | 622 / 24.5 | 622 / 24.5 |
| Total height with option vacuum module (mm/inch) | 1274 / 50.2 | 1393 / 54.8 | 1516 / 59.7 |
| Depth (mm/inch) | 500 / 19.7 | 550 / 21.7 | 670 / 26.4 |
| Plus door handle, connection (mm/inch) | 100 / 3.9 | 100 / 3.9 | 100 / 3.9 |
| Wall clearance rear (mm/inch) | 100 / 3.9 | 100 / 3.9 | 100 / 3.9 |
| Wall clearance side (mm/inch) | 135 / 5.3 | 135 / 5.3 | 135 / 5.3 |
| ▶ Interior dimensions | | | |
| Width (mm/inch) | 285 / 11.2 | 400 / 15.8 | 506 / 19.9 |
| Height (mm/inch) | 285 / 11.2 | 400 / 15.8 | 506 / 19.9 |
| Depth (mm/inch) | 285 / 11.2 | 330 / 13.0 | 450 / 17.7 |
| Interior volume (l/cu.ft.) | 23 / 0.8 | 53 / 1.9 | 115 / 4.1 |
| Expansion shelves (Aluminium) (number standard/max.) | 2/4 | 2/5 | 2/6 |
| Distance between the shelves (width x depth) (mm/inch) | 53 / 2.1 | 62 / 2.4 | 68 / 2.7 |
| Usable space per shelf (width x depth) (mm/inch) | 234x280 / 9.2x11.0 | 349x320 / 13.7x12.6 | 455x440 / 17.9x17.3 |
| Load per shelf (kg/lbs.) | 20 / 44 | 20 / 44 | 20 / 44 |
| Permitted total load (kg/lbs.) | 35 / 77 | 45 / 99 | 65 / 143 |
| Weight of the unit (empty) (kg/lbs.) | 63 / 139 | 80 / 177 | 150 / 331 |
| ▶ Temperature data | | | |
| Temperature range, 5 °C/41 °F above ambient up to (°C/°F) | 200 / 392 | 200 / 392 | 200 / 392 |
| Temperature variation ³⁾ | | | |
| at 100 °C (± °C) | 2 | 2 | 3 |
| at 200 °C (± °C) | 4 | 4 | 6 |
| For VD up to nominal temperature 250°C (± °C) | 5 | 6 | 8 |
| Temperature fluctuation ³⁾ (± °C) | 0.4 | 0.4 | 0.4 |
| Heating up time ²⁾ | | | |
| to 100 °C (Min.) | 55 | 70 | 80 |
| to 200 °C (Min.) | 107 | 136 | 160 |
| Vacuum connection with small flange (DN mm) | 16 | 16 | 16 |
| Measuring access port with small flange (DN mm) | 16 | 16 | 16 |
| Inert gas connection with flow limiter (RP) | 3/8 | 3/8 | 3/8 |
| Permitted end vacuum (mbar) | 1x10 ⁻² | 1x10 ⁻² | 1x10 ⁻² |
| Leak rate (max.bar 1/h) | 1x10 ⁻² | 1x10 ⁻² | 1x10 ⁻² |
| ▶ Electrical data | | | |
| Housing protection acc. to EN 60529 | IP 20 | IP 20 | IP 20 |
| Nominal voltage (+ 10 %) 50/60 Hz (V) | 230 | 230 | 230 |
| Nominal power (W) | 800 | 1200 | 1900 |
| Energy consumption | | | |
| at 100 °C (W) | 140 | 250 | 280 |
| at 200 °C (W) | 330 | 550 | 800 |
| at 250 °C (W) | 440 | 800 | 1120 |

1) value without window 2) up to 98 % of the set value

All technical data are specified for units with standard equipment at an ambient temperature of + 25 °C and a voltage fluctuation of ± 10 %. The temperature data are determined in accordance to DIN 12880, part 2 respecting the recommended wall clearances of 10 % of the height, width and depth of the inner chamber. All indications are average values, typical for units produced in series. We reserve the right to alter technical specifications at all times.