

# PROLIO-4000 VHP

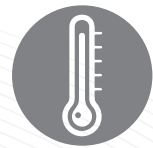


- New tool for pilot or R&D freeze-drying
- 0.4 m<sup>2</sup> shelf area
- Shelf fluid circulated cooling and heating
- - 90 °C condenser coil temperature
- Pneumatic vial cap stoppering system as standard
- 50 recipes, each with up to 50 segments
- Air-cooled compressor refrigeration system
- Vacuum pump built-in frame
- VHP decontamination ready

Vacuum & pressure



Temperature





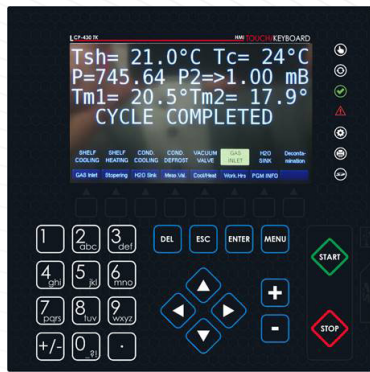
### Device Specifications:

- Perfected temperature control on shelves
- Smooth and easy to clean
- Shelves and chamber made in AISI 316
- Condenser with transparent cover
- Condenser made in AISI 316
- Exterior made in AISI 304
- Fully transparent door for product and process observation
- Vacuum control function
- VHP decontamination ready:
  - chamber decontamination
  - chamber and condenser decontamination

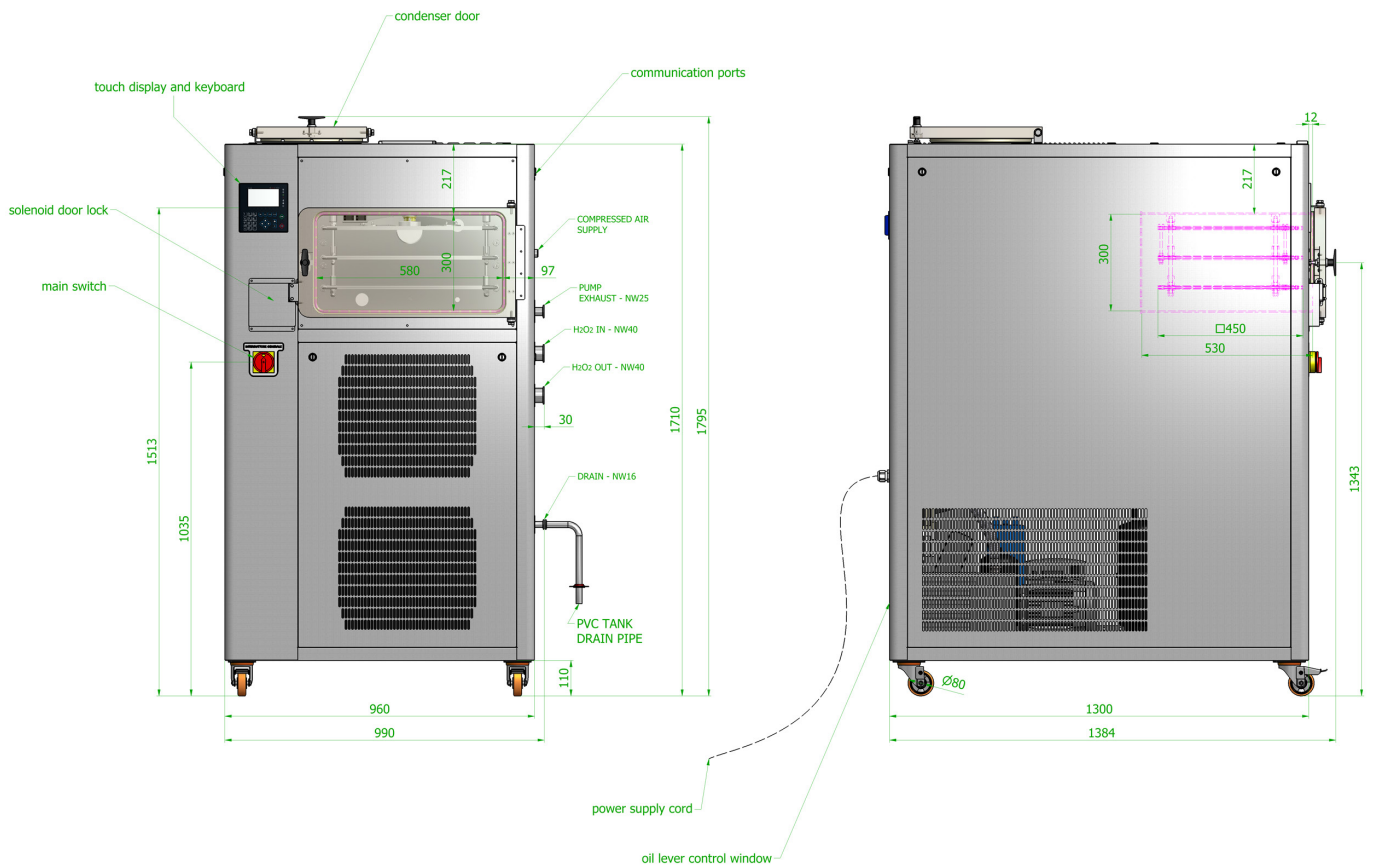


<b>Technical Data:</b>	<b>PROLIO-4000 VHP</b>
External dimensions (WxDxH)	<b>990 mm x 1385 mm x 1795 mm</b>
Chamber dimensions (WxDxH)	<b>580 mm x 530 mm x 300 mm</b>
Ice condenser performance	<b>8kg / 24h</b>
Ice condenser temperature	<b>- 90 °C</b>
Ice condenser defrost	<b>Electrical</b>
Number of shelves	<b>2 working + 1 guardian stoppering</b>
Shelf size (WxD)	<b>450 mm x 450 mm</b>
Shelf surface	<b>2 x 0.2 m<sup>2</sup> = 0.4 m<sup>2</sup></b>
Shelf spacing	<b>max 70 mm (stoppering fully open) min 30 mm (stoppering fully closed)</b>
Shelf temperature range	<b>- 40 °C ... + 60 °C</b>
Shelf temperature stability	<b>+/- 0.1 °C</b>
Shelf temperature uniformity	<b>+/- 0.5 °C</b>
Temperature set resolution	<b>0.1 °C</b>
Shelf cool down rate	<b>From + 40 °C to 0 °C ... 18 min From 0 °C to - 40 °C ... 45 min</b>
Heat up rate	<b>From - 40 °C to + 40 °C ... 50 min</b>
Cooling	<b>Air cooled compressor system</b>
Heating	<b>Electrical</b>
User interface	<b>Fully programmable 50 recipes each with up to 50 process steps</b>
Software	<b>Windows compatible History &amp; full remote control via virtual user interface</b>
Door	<b>Fully transparent single handed closing with el. lock</b>
Power supply	<b>3 x 400V / 50 Hz / 26.5 A</b>
Wattage (W)	<b>11000</b>
Interface	<b>RS 232 / USB</b>
Temperature probe	<b>PT-100 – shelf temperature PT-100 – condenser temperature PT-100 Material 1 PT-100 Material 2</b>
Vacuum probe	<b>Pirani - chamber Pirani - vacuum pump (optional)</b>
Weight	<b>480 kg</b>

User Interface:



Dimensions:



**InstruMetrics**  
ENGINEERING

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