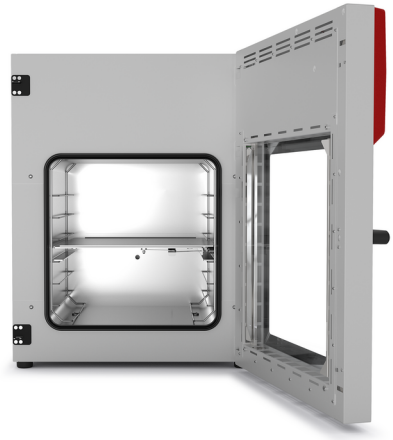
Model VD 115 | Vacuum drying chambers for non-flammable solvents

BINDER's VD series vacuum drying chambers deliver impressive performance through their precise temperature control and gentle drying. The patented expansion rack technology from BINDER also optimizes heat transfer. The shelves can be repositioned for flexible placement and the interior of the chamber is easy to clean.

BENEFITS

- Fast, gentle drying
- Optimum heat transfer through large thermal conducting plates
- Safe work thanks to proven safety concept
- Also option of modular complete system with vacuum pump and pump chamber

Model 115



Model 115

IMPORTANT FEATURES

- Temperature range: +9°C above ambient temperature to +220 °C
- Controller with digital display of pressure and temperature
- Program-controlled drying monitoring with automatic ventilation at end of process
- Internal data logger, measured values can be read out in open format via USB
- 1 aluminum expansion rack, can be custom-positioned
- Inert gas connection
- Universal access port DN 16 - for the introduction of external measuring devices
- Shatterproof, spring-mounted safety glass panel
- Large viewing window with option of interior lighting
- Computer interface: Ethernet

OPTIONAL EQUIPMENT

- Touchscreen Controller - Graphical display of main process parameter
- Expansion racks - Choice of aluminum or stainless steel racks depending on the application requirements
- Analogue output for temperature and pressure signals - for external monitoring and evaluation of the process parameters, integration into in-house systems is possible
- Universal ventilation - Selection of different ventilation by air or inert gas
- Universal access port DN 40 - for the introduction of external measuring devices
- Multi Management Software APT-COM - Manage, record and document device parameters
- Services - extensive services ensure correct device function

ORDERING INFORMATION

Interior volume [L]	Power supply - unit fuse	Plug*	Version	Model version	Art.-No.
Model VD 115					
119	200...230 V 1~ 50/60 Hz -10,0 A	CEE 7/7	Standard	VD115-230V	9630-0003
	100...120 V 1~ 50/60 Hz -20,0 A	NEMA 5-15	Standard	VD115UL-120V	9630-0007

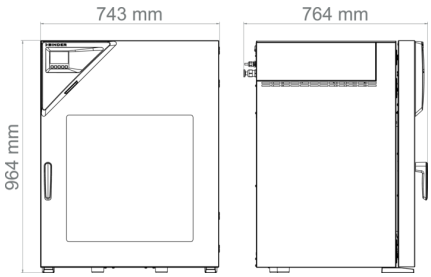
TECHNICAL DATA

Data		
Designation	VD115-230V	VD115UL-120V
Article Number	9630-0003	9630-0007
Option model	Standard	Standard
Performance Data Temperature		
Temperature range	+9 °C above ambient temperature to 220 °C	+9 °C above ambient temperature to 220 °C
Temperature uniformity at 100°C	2.9 ± K	2.9 ± K
Temperature fluctuation at 100°C	0.1 ± K	0.1 ± K
Heating up time to 100°C	130 min	130 min
Vacuum Data		
Leckrate	0,01 bar/h	0,01 bar/h
Electrical data		
Rated Voltage	200...230 V	100...120 V
Power frequency	50/60 Hz	50/60 Hz
Nominal power	1,6 kW	1,6 kW
Unit fuse	10,0 A	20,0 A
Phase (Nominal voltage)	1~	1~
Connections		
Vacuum connection with small flange	16 DN mm	16 DN mm
Measuring access port with small flange	16 DN mm	16 DN mm
Compressed air connection for pressure-encapsulation	5 NW	5 NW
Measures		
Interior volume	119 L	119 L
Net weight of the unit (empty)	146 kg	146 kg
Load per rack	20 kg	20 kg
Permitted load	70 kg	70 kg
Wall clearance back	100 mm	100 mm
Wall clearance sidewise	70 mm	70 mm
Housing dimensions not incl. fittings and connections		
Width net	743 mm	743 mm

Height net	942 mm	942 mm
Depth net	581 mm	581 mm
Internal Dimensions		
Interior width	506 mm	506 mm
Interior height	506 mm	506 mm
Interior depth	460 mm	460 mm
Unit doors	1	1
Environment-specific data		
Sound-pressure level	40 dB(A)	40 dB(A)
Energy consumption at 100°C	230 Wh/h	230 Wh/h
Fixtures		
Number of shelves (std./max.)	1/6	1/6

All technical data is specified for unloaded units with standard equipment at an ambient temperature of +22 °C ±3 °C and a power supply voltage fluctuation of ±10%. The temperature data is determined in accordance to BINDER factory standard following DIN 12880, observing 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 change technical specifications at any time.

DIMENSIONS Incl. fittings and connections [mm]



OPTIONS

Designation	Description	VD 115	*	Art.-No.
Additional universal ventilation	Additional universal connection for ventilation with ambient air or inert gas. Flow limiter thread (RP"), and connection with 3/8" male thread.	•	-	8612-0001
Analog output 4-20 mA	for temperature and pressure values (output not adjustable)	•	-	8612-0004
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	•	-	8012-1127
Calibration certificate, pressure	Calibration of the pressure display to a specified value, including certificate	•	-	8012-2021
	Extension of the calibration of the pressure display by another pressure value, including certificate	•	-	8012-2022
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	•	-	8012-1145
	temperature measurement incl. certificate, 9 measuring points at specified temperature	•	-	8012-0916

Designation	Description	VD 115	*	Art.-No.
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	•	-	8012-0919
Door gasket	made of FKM, silicone-free	•	-	8612-0009
Door lock	lockable door handle	•	-	8612-0002
Expansion racks	stainless steel expansion rack instead of standard aluminum expansion rack, incl. calibration	•	-	8612-0013
Interior lighting	LED light strips on the left and right in the door	•	-	8612-0005
Temperature measurement of the specimen	with flexible Pt 100 sensor and digital specimen temperature display	•	-	8612-0006
Touchscreen controller	Large display panel with intuitive operation, actual and set values of main process parameters are shown simultaneously on the display. In addition, the graphic chronological evaluation of process parameters is displayed.	•	-	8612-0015
Universal access port	Additional DN 40 small flange universal access port with blind flange, for positioning sensors or supply lines in the chamber.	•	-	8612-0003

ACCESSORIES

Designation	Description	VD 115	*	Art.-No.
APT-COM™ 4 BASIC-Edition	for simple logging and documentation requirements with up to 5 networked units.			
	version 4, BASIC edition	•	–	9053-0039
APT-COM™ 4 GLP-Edition	for working under GLP-compliant conditions. Measured values are documented in a tamper-proof way in line with the requirements of FDA Regulation 21 CFR 11.			
	version 4, GLP edition	•	–	9053-0042
APT-COM™ 4 PROFESSIONAL-Edition	convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.			
	version 4, PROFESSIONAL edition	•	–	9053-0040
Expansion racks	stainless steel	•	-	8012-2257
	Expansion racks	aluminum		
		aluminum	-	8012-2057
Pump chamber with VAP 1	Pump chamber for vacuum pumps, with switchable power socket. Chemical membrane pump with a			

Designation	Description	VD 115	*	Art.-No.
	nominal air flow of 2.0 m³/hour, final pressure 7 mbar			
vacuum pump	120 V / 50-60 Hz option model	•	-	8012-1963
	230 V / 50-60 Hz option model	•	-	8012-1960
Pump chamber with VAP 2 vacuum pump	Pump chamber for vacuum pumps, with switchable power socket. Chemical membrane pump with a nominal air flow of 4.0 m³/hour, final pressure 1,8 mbar			
	120 V / 50–60 Hz option model	•	-	8012-1969
	230 V / 50-60 Hz option model	•	-	8012-1966
Qualification documents	IQ/OQ/PQ documents – supporting documents for validation performed by customers, according to customer requirements, PQ section added to qualification folder IQ/OQ; parameters: temperature, CO_2, O_2 – or pressure, depending on unit			
	Digital in PDF format	•	-	7057-0005
	Hard copy inside folder	•	-	7007-0005
	IQ/OQ documents – supporting documents for validation performed by customers, consisting of: IQ/OQ checklists incl. calibration guide and comprehensive unit documentation; parameters: temperature, CO_2, O_2, pressure, depending on unit			
	Digital in PDF format	•	-	7057-0001
	Hard copy inside folder	•	-	7007-0001
Vacuum pump VAP 1	Chemical membrane pump with a nominal air flow of 2.0 m³/hour, final pressure 7 mbar			
	120 V / 50-60 Hz option model	•	-	5013-0223
	230 V / 50-60 Hz option model	•	-	5013-0217

Designation	Description	VD 115	*	Art.-No.
Vacuum pump VAP 2	Chemical membrane pump with a nominal air flow of 4.0 m³/hour, final pressure 1,8 mbar			
	120 V / 50-60 Hz option model	•	-	5013-0219
	230 V / 50-60 Hz option model	•	-	5013-0218
Vacuum pump connection kit	for vacuum pump VAP1 and VAP2; consisting of aluminum clamping ring, universal centering ring, small flange with hose nozzle, (2.5 m) rubber hose and 2 hose clamps	•	-	8012-1995
WLAN kit	The kit contains a client bridge that establishes a wireless connection between BINDER units and APT-COM4, LIMS, or customer-specific software via an Ethernet interface. It provides an alternative solution in situations where units need to be positioned in locations without an on-site Ethernet connection. In secured networks, installation and configuration must be performed by the customer's IT service.	•	-	8012-2262
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	•	-	8012-2250

SERVICES

Designation	Description	*	Art.-No.
Calibration services			
Calibration certificate, temperature	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate	–	DL30-0101
	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate	–	DL30-0102
Pressure calibration	Digital pressure display calibration at a specified test pressure of 20–900 mbar, including certificate	–	DL30-0410
	Expansion – Digital pressure display calibration at a specified test pressure of 20–900 mbar, including certificate	–	DL30-0411
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points with a set value specified by the user, including certificate	–	DL30-0109
Temperature measurement, 15 measuring points	Temperature measurement with 15 measuring points with a set value specified by the user, including certificate	–	DL30-0218

Designation	Description	*	Art.-No.
Installation services			
Unit commissioning	Connect the unit to the customer-side connections (electricity, water, wastewater, gas), basic functions check, brief operating instructions. (excl.: unpacking, setup, controller instructions, programming, installation work)	–	DL10-0100
		–	DL10-0120
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	–	DL10-0500
		–	DL10-0510
Maintenance contracts			
BRONZE 3-year maintenance contract	Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts	–	DL20-0710
GOLD 3-year maintenance contract	Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts, testing of all key functions, replacement of wear parts, calibration of one temperature/humidity/pressure value, including certificate	–	DL20-0930
SILVER 3-year maintenance contract	Maintenance service as contractually agreed, visual inspection of mechanical and electrical components, check of control response, 20% discount on spare parts, testing of all key functions, calibration of one test temperature specified by the user in the center of the usable space, without certificate	–	DL20-0820
Maintenance services			
Maintenance	One-off maintenance service in accordance with maintenance schedule. Visual inspection of mechanical and electrical components, testing of all key functions. Calibration of a test temperature specified by the user in center of usable space without certificate	–	DL20-0400
		–	DL20-0450
VAP 1 vacuum pump maintenance	Maintenance service of the VAP 1 vacuum pump according to the maintenance schedule, visual inspection, replacement of the diaphragms, O-rings and seals, (Service Kit 8500-0158 included in the scope of services) as well as final functional test.	–	DL20-0410
VAP 2 vacuum pump maintenance	Maintenance service of the VAP 2 vacuum pump according to the maintenance schedule, visual inspection, replacement of the diaphragms, O-rings and seals, (Service Kit 8500-0159 included in the scope of services) as well as final functional test.	–	DL20-0420
VAP 5 vacuum pump maintenance	Maintenance service of the VAP 5 vacuum pump according to the maintenance schedule, visual inspection, replacement of the diaphragms, O-rings and seals, (Service Kit 8500-0160 included in the scope of services) as well as final functional test.	–	DL20-0430
Validation services			
Executing of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	–	DL42-0300
Executing of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	–	DL42-0310
		–	DL44-0500
Warranty service			
1-year warranty extension	The warranty is extended by 1 year from the delivery date, wear parts are excluded	–	DL50-0020

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