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



Model

MAIN 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

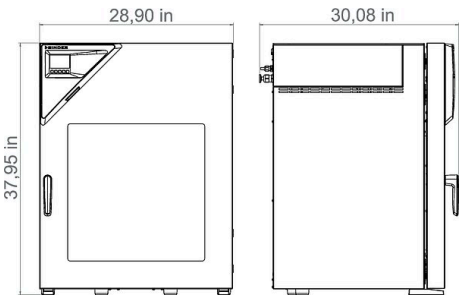
Interior volume [cu.ft.]	Voltage	Option model	Version	Art.-No.
4.2	200…230 V 1~ 50/60 Hz	Standard	VD115-230V	9630-0003
	100…120 V 1~ 50/60 Hz	Standard	VD115UL-120V	9630-0007

TECHNICAL DATA

Description	**VD115-230V[1]**	**VD115UL-120V[1]**
Article Number	**9630-0003**	**9630-0007**
Performance Data Temperature		
Temperature range +9 °C above ambient temperature to [°C]	220	220
Temperature variation at 100 °C [± K]	2.9	2.9
Temperature fluctuation at 100 °C [± K]	0.1	0.1
Heating-up time to 100 °C [min]	130	130
Vacuum Data		
Leak rate [bar/h]	0.01	0.01
Electrical data		
Nominal Voltage [V]	200...230	100...120
Power frequency [Hz]	50/60	50/60
Nominal power [kW]	1.6	1.6
Unit fuse [A]	10	20
Phase (Nominal voltage)	1~	1~
Connections		
Vacuum connection with small flange [DN mm]	16	16
Measuring access port with small flange [DN mm]	16	16
Universal connection for air / inert gas with flow limiter thread (RP") 3/8	3/8	3/8
Compressed air connection for pressure-encapsulation [NW]	5	5
Measures		
Interior volume [cu.ft.]	4.2	4.2
Net weight of the unit (empty) [lbs]	322	322
permitted load [lbs]	154	154
Load per rack [lbs]	44	44
Viewing window width [in]	20.69	20.69
Viewing window height [in]	18.44	18.44
Wall clearance back [in]	3.94	3.94
Wall clearance sidewise [in]	2.76	2.76
Internal Dimensions		
Interior width [in]	19.94	19.94
Interior height [in]	19.94	19.94
Interior depth [in]	18.12	18.12
Doors		
Unit doors	1	1
Housing dimensions not incl. fittings and connections		
Width net [in]	29.27	29.27
Height net [in]	37.11	37.11
Depth net [in]	22.89	22.89
Environment-specific data		
Sound-pressure level [dB(A)]	40	40
Fixtures		
Number of shelves (std./max.)	1/6	1/6

1 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	*	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	–	8012-2022
			8012-2021
Calibration certificate, temperature	for temperature, measurement in center of chamber at specified temperature	–	8012-1145
	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	–	8012-0919
	temperature measurement incl. certificate, 9 measuring points at specified temperature	–	8012-0916
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

* Notes › See last page

ACCESSORIES

Designation	Description	*	Art.-No.
APT-COM™ 4	Multi Management Software APT-COM™		
	version 4, GLP edition	–	9053-0042
	version 4, PROFESSIONAL edition	–	9053-0040
APT-COM™ 4 BASIC-Edition	Multi Management Software APT-COM™		
	version 4, BASIC edition	–	9053-0039
Expansion racks	stainless steel	–	8012-2257
	aluminum	–	8012-2057
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	8012-2250
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		
	230 V / 50-60 Hz option model	–	8012-1966

* Notes › See last page

Designation	Description	*	Art.-No.
Qualification documents	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
	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
Vacuum module with vacuum pump VAP 1	Pump chamber for vacuum pumps, with switchable power socket. Chemical membrane pump with a nominal air flow of 2.0 m³/hour, final pressure 7 mbar		
	120 V / 50-60 Hz option model	–	8012-1963
	230 V / 50-60 Hz option model	–	8012-1960
Vacuum module with vacuum pump VAP 2	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
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
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
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
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

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Maintenance services			
Installation services			
Validation services			
Calibration services			
Warranty service			
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	05	DL20-0710
Execution of IQ/OQ	Execution of IQ/OQ in accordance with qualification folder	05	DL42-0300
Execution of IQ/OQ/PQ	Execution of IQ/OQ/PQ in accordance with qualification folder	05	DL44-0500
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	05	DL20-0930
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	05	DL20-0400
Pressure calibration	Digital pressure display calibration at a specified test pressure of 20–900 mbar, including certificate	03, 04, 05	DL30-0410
			DL30-0411
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	05	DL20-0820

* Notes › See last page

Designation	Description	*	Art.-No.
Temperature calibration	Calibration of one (1) test temperature specified by the user in center of chamber, including certificate	03, 04, 05	DL30-0101
	Extension of calibration of one (1) additional test temperature specified by the user in the center of the usable space, including certificate	03, 04, 05	DL30-0102
Temperature measurement, 15 measuring points	Temperature measurement with 15 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0218
Temperature measurement, 9 measuring points	Temperature measurement with 9 measuring points with a set value specified by the user, including certificate	03, 04, 05	DL30-0109
Unit installation	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)	05	DL10-0100
Unit instructions	Instruction regarding operating principle and basic functions of the unit, operation of the control electronics including programming	05	DL10-0500
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.	05	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.	05	DL20-0420
Warranty extension from 2 to 3 years	The warranty is extended by 1 year from the delivery date, wear parts are excluded	–	DL50-0020

* Notes › See last page

NOTES

01 Condensation may occur in the area around the access port. Access ports may be placed in custom locations for an additional charge.
02 UL mark is not granted when this option is used.
03 Sensor calibration is performed in an accredited calibration laboratory.
04 Calibration is performed according to the BINDER factory standard.
05 Quoted prices do not include travel costs. Please refer to the chapter on BINDER Service for travel costs for your region. Quoted prices for services performed in Switzerland do not include a country-specific added fee (available on request).

BINDER GmbH
Tuttlingen, Germany
TEL +49 7462 2005 0
FAX +49 7462 2005 100
info@binder-world.com
www.binder-world.com

BINDER Asia Pacific (Hong Kong) Ltd.
Kowloon, Hong Kong, P.R. China
TEL +852 39070500
FAX +852 39070507
asia@binder-world.com
www.binder-world.com

BINDER Environmental Testing Equipment (Shanghai) Co., Ltd.
Shanghai, P.R. China
TEL +86 21 685 808 25
FAX +86 21 685 808 29
china@binder-world.com
www.binder-world.com

BINDER Inc.
Bohemia, NY, USA
TEL +1 631 224 4340
FAX +1 631 224 4354
usa@binder-world.com
www.binder-world.us