

# Vacuum drying chambers



VD | VDL series





# Vacuum drying chambers

Series VD

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Series VDL

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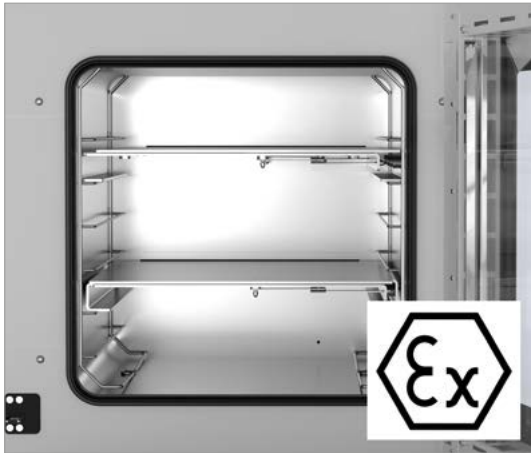
Both BINDER vacuum drying chamber models enable effective drying without residue or damaging the material being dried. With their proven technological features, they excellently address the strict requirements of industrial and scientific laboratories. Samples and similar materials incorporating flammable and non-flammable solvents can be dried, depending on the individual use. The chambers use a unique safety design that, together with accustomed outstanding performance, sets the bar in terms of quality and safety.

# PRODUCT SELECTION VACUUM DRYING CHAMBERS

Features	Series VD › Page 6	Series VDL › Page 10
<b>Model</b>		
Model 23	•	•
Model 56	•	•
Model 115	•	•
<b>General data</b>		
For flammable solvents (ATEX)	–	•
Temperature range 10 °C above ambient temperature to [°C]	220	110
Ethernet interface	•	•
<b>Controller and timer functions</b>		
Controller display	LCD	TFT Touch
Ramp function	•	•
Time delayed OFF	•	•
Time delayed ON	•	•
Temperature dependent delayed OFF	•	•
Programming option	•	•
Weekly program function	•	•
Real-time clock	•	•
Temperature alarm, visual	•	•

•Standard equipment

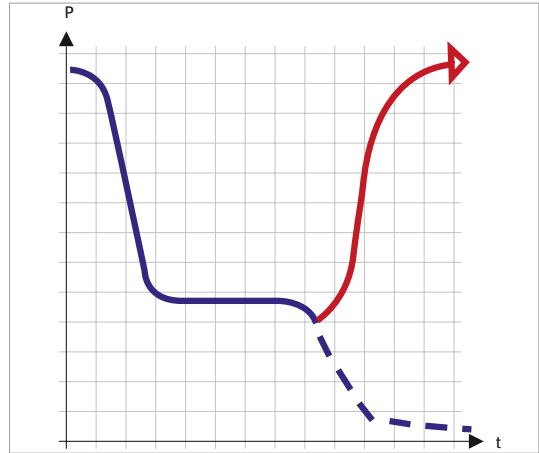
## ADVANTAGES AT A GLANCE



### EXPLOSION-PROTECTED INTERIOR

Series VDL

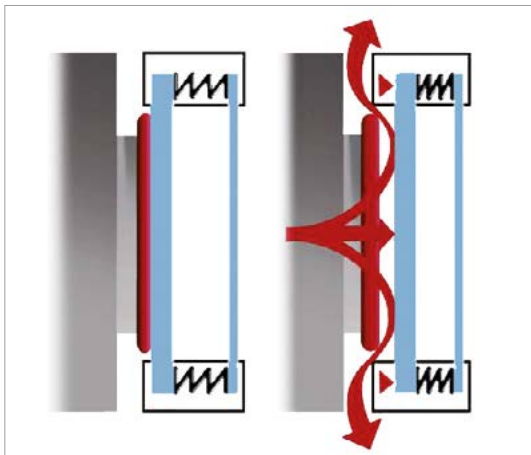
Thanks to ATEX-compliant unit concept with pressure control device for heating activated from vacuum of < 100 mbar. The device conforms to ATEX category EX II 2/3/- G IIB T3 Gb/Gc/- X.



### AUTOMATIC DRYING DETECTION

Series VD, VDL

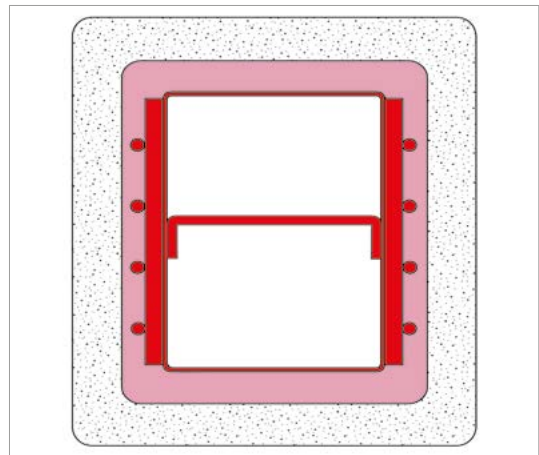
Thanks to the program control, the second pressure drop that typically takes place at the end of drying is detected and the interior is automatically ventilated.



### TESTED SAFETY

Series VD, VDL

Shatterproof, spring-mounted safety glass panel, inert gas connection for interior flushing, and electronic components decoupled from the interior provide safety for users.



### DIRECT HEAT TRANSFER

Series VD, VDL

Thanks to patented expansion racks providing flexible placement for precise temperature control.

## Series VD | for non-flammable solvents

BINDER's VD series vacuum drying chambers while deliver impressive performance through their precise temperature control and gentle drying. The patented expansion rack technology from BINDER also ensures optimal heat transfer. The shelves provide flexible placement and are easy to dry in the interior of the chamber.



VD 56 model

### BENEFITS

- Fast, gentle drying
- Direct 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

### MAIN FEATURES

- Temperature range: Ambient temperature plus 10 °C 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
- Shatterproof, spring-mounted safety glass panel
- Large viewing window with option of interior lighting
- Computer interface: Ethernet
- 2 relay outputs, 24 V DC (max. 0.4 A)

### AVAILABLE SIZES








Model	Interior volume [L]	Online data sheets
VD 23	24	> <a href="https://go2binder.com/en-VD23">go2binder.com/en-VD23</a>
VD 56	55	> <a href="https://go2binder.com/en-VD53">go2binder.com/en-VD53</a>
VD 115	119	> <a href="https://go2binder.com/en-VD115">go2binder.com/en-VD115</a>

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## ACCESSORIES

<b>Touchscreen controller</b>	Large display field with intuitive operation, actual and target values of main process parameters are shown on the display at the same time. In addition, the graphic temporal evaluation of process parameters can be displayed.	
<b>Expansion racks</b>	The expansion racks ensure maximum heat transfer to the items to be dried. You can choose between aluminum and stainless steel racks.	
<b>Analogue output for temperature and pressure</b>	For external monitoring and evaluation of the process parameters, integration into in-house systems is possible.	
<b>Universal ventilation</b>	For comfortable selection of different ventilation with air or inert gas. The valves can be specifically controlled via the controller or the multi management software APT-COM.	
<b>Universal access port DN 40</b>	Additional universal access port DN 40, for leading sensors or supply lines into the chamber	
<b>Pump module with vacuum pump</b>	The pump module lifts your vacuum oven to the optimum working height, it also significantly reduces the noise of the vacuum pump and protects the pump and glass material from mechanical damage. The pump in the module can be switched on and off using a switchable socket via the control of the vacuum furnace.	
<b>Vacuum pumps</b>	Choice of chemistry diaphragm pumps that are optimally matched to the vacuum ovens. The scoop is resistant to a variety of chemicals, especially acids. The final vacuum can be regulated via the vacuum oven.	
<b>Multi Management Software APT-COM</b>	Software for managing, recording and documenting device parameters is available in three versions: Basic, Professional and GLP.	
<b>Services</b>	You can access our installation, maintenance, calibration, validation, or warranty services by taking out a Maintenance Service Agreement or by simply getting in touch when you need us. More information is available in the accessories and services chapter.	
<b>BINDER INDIVIDUAL</b>	Using a BINDER series production product as a basis, we develop individual solutions as a single unit or in small batches. All products are tested, certified, and supplied with a full functional guarantee and warranty. More information is available in the accessories and services chapter.	

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## TECHNICAL DATA

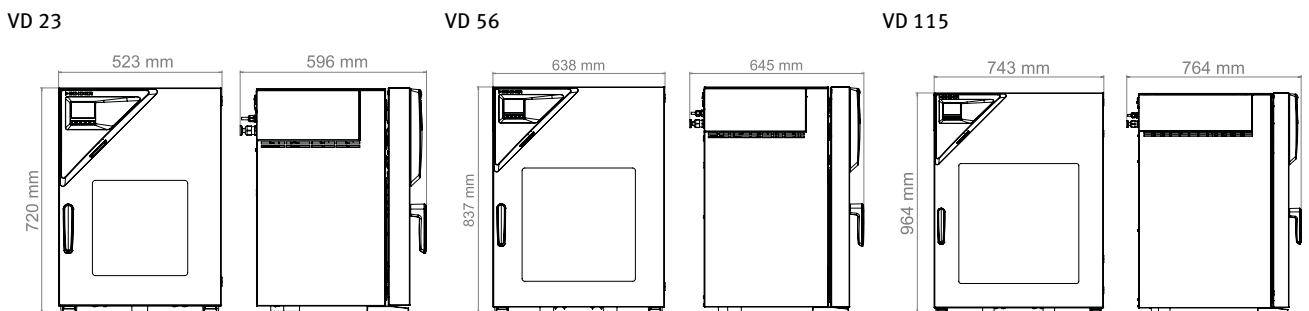
Description	VD 23	VD 56	VD 115
<b>Measures</b>			
Interior volume [L]	24	55	119
Net weight of the unit (empty) [kg]	68	101	146
Permitted load [kg]	50	60	70
Load per rack [kg]	20	20	20
Wall clearance back [mm]	100	100	100
Wall clearance sidewise [mm]	135	135	135
<b>Internal Dimensions</b>			
Width [mm]	285	400	506
Height [mm]	285	400	506
Depth [mm]	295	343	460
<b>Housing dimensions not incl. fittings and connections</b>			
Width net [mm]	523	638	743
Height net [mm]	698	815	942
Depth net [mm]	413	461	581
<b>Performance Data Temperature</b>			
Temperature range 10 °C above ambient temperature to [°C]	220	220	220
Temperature variation at 100 °C [± K]	1.0	1.5	2.9
Temperature fluctuation [± K]	0.1	0.1	0.1
Heating-up time to 100 °C [min]	80	80	130
<b>Electrical data</b>			
Nominal power (version 120 V) [kW]	0.9	1.4	1.6
Nominal power (version 230 V) [kW]	0.9	1.4	1.6
<b>Fixtures</b>			
Number of shelves (std./max.)	1/4	1/5	1/6

## ORDERING INFORMATION [Art. No.]

**Further details:** Go to [www.binder-world.com](http://www.binder-world.com) > Search > Enter Article Number

Voltage	Option model	VD 23	VD 56	VD 115
200...230 V 1~ 50/60 Hz	Standard	9630-0001	9630-0002	9630-0003
100...120 V 1~ 50/60 Hz	Standard	9630-0005	9630-0006	9630-0007

## DIMENSIONS incl. fittings and connections [mm]





## ORDERING INFORMATION OPTION

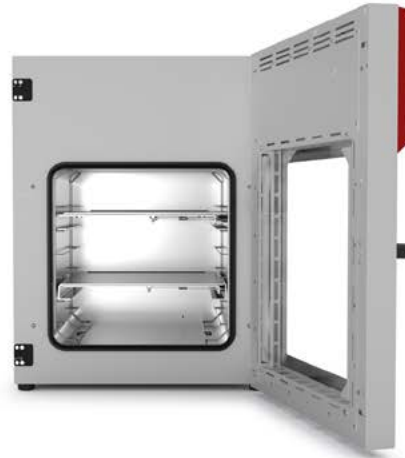
Model		VD 23	VD 56	VD 115
<b>Art. No.</b>				
8612-0001	Add. access ventilation	•	•	•
8612-0003	Add. access port DN 40	•	•	•
8612-0004	Analog output 4-20mA	•	•	•
8612-0015	Touch controller MB2	•	•	•
8612-0005	Interior lighting LED	•	•	•
8612-0006	Specimen temp. measurement	•	•	•
8612-0002	Door lock	•	•	•
8612-0011	Shelves stainless steel 023 (exchange)	•		
8612-0012	Shelves stainless steel 056 (exchange)		•	
8612-0013	Shelves stainless steel 115 (exchange)			•
8612-0007	Door gasket FKM 023	•		
8612-0008	Door gasket FKM 056		•	
8612-0009	Door gasket FKM 115			•
8012-0440	Calibr. cert. pressure	•	•	•
8012-1145	Calibr. cert. Temp 1P	•	•	•
8012-1127	Calibr. cert. Temp 1P extension	•	•	•
8012-0916	Calibr. cert. Temp 9P	•	•	•
8012-0919	Calibr. cert. Temp 15P	•	•	•

## ORDERING INFORMATION ACCESSORY

8009-1031	Expansion shelf	•		
8009-1030	Expansion shelf		•	
8009-1029	Expansion shelf			•
8009-1093	Expansion shelf stainless steel	•		
8009-1092	Expansion shelf stainless steel		•	
8009-1091	Expansion shelf stainless steel			•
5013-0217	Vacuum pump VAP 1 (230V)	•	•	•
5013-0223	Vacuum pump VAP 1 (120V)	•	•	•
5013-0218	Vacuum pump VAP 2 (230V)	•	•	•
5013-0219	Vacuum pump VAP 2 (120V)	•	•	•
8012-1958	Vacuum module VD 023 with VAP 1 (230V)	•		
8012-1959	Vacuum module VD 056 with VAP 1 (230V)		•	
8012-1960	Vacuum module VD 115 with VAP 1 (230V)			•
8012-1961	Vacuum module VD 023 with VAP 1 (120V)	•		
8012-1962	Vacuum module VD 056 with VAP 1 (120V)		•	
8012-1963	Vacuum module VD 115 with VAP 1 (120V)			•
8012-1964	Vacuum module VD 023 with VAP 2 (230V)	•		
8012-1965	Vacuum module VD 056 with VAP 2 (230V)		•	
8012-1966	Vacuum module VD 115 with VAP 2 (230V)			•
8012-1967	Vacuum module VD 023 with VAP 2 (120V)	•		
8012-1968	Vacuum module VD 056 with VAP 2 (120V)		•	
8012-1969	Vacuum module VD 115 with VAP 2 (120V)			•
9053-0039	APT-COM 4 Basic Edition (act.key)	•	•	•
9053-0042	APT-COM 4 GLP Edition (act.key)	•	•	•
9053-0040	APT-COM 4 Professional Edition (act.key)	•	•	•
7007-0001	Qualification documents IQ/OQ (in folder)	•	•	•
7057-0001	Qualification documents IQ/OQ (PDF)	•	•	•
7007-0005	Qualification documents IQ/OQ/PQ (in folder)	•	•	•
7057-0005	Qualification documents IQ/OQ/PQ (PDF)	•	•	•

## Series VDL | for flammable solvents

BINDER VDL series safety vacuum drying chambers ensure maximum safety when drying organic solvents and bear GS marking as standard. Explosion-protected unit with classification according to ATEX directive 2014/34/EU: EX II 2/3/- G IIB T3 Gb/Gc/- X.



VDL 115 model

### BENEFITS

- Fast, gentle drying
- Direct heat transfer through large thermal conducting plates
- User safety due to ATEX certified explosion proof concept
- Also option of modular complete system with vacuum pump and pump chamber

### MAIN FEATURES

- Temperature range: Ambient temperature +10 °C to +110 °C
- ATEX conformity for units: EX II 2/3/- G IIB T3 Gb/Gc/- X
- Intuitive touchscreen controller with graphical pressure and temperature display
- 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
- Pressure control device for heating activated from < 100 mbar
- 1 aluminum expansion rack, can be custom-positioned
- Inert gas connection
- Shatterproof, spring-mounted safety glass panel
- Large viewing window

### AVAILABLE SIZES

Model	Interior volume [L]	Online data sheets
VDL 23	24	› <a href="https://go2binder.com/en-VDL23">go2binder.com/en-VDL23</a>
VDL 56	55	› <a href="https://go2binder.com/en-VDL53">go2binder.com/en-VDL53</a>
VDL 115	119	› <a href="https://go2binder.com/en-VDL115">go2binder.com/en-VDL115</a>









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## ADDITIONAL OPTIONS AND ACCESSORIES

<b>Expansion racks</b>	The expansion racks ensure maximum heat transfer to the items to be dried. You can choose between aluminum and stainless steel racks.	
<b>Analogue output for temperature and pressure</b>	For external monitoring and evaluation of the process parameters, integration into in-house systems is possible.	
<b>Universal ventilation</b>	For comfortable selection of different ventilation with air or inert gas. The valves can be specifically controlled via the controller or the multi management software APT-COM.	
<b>Universal access port DN 40</b>	Additional universal access port DN 40, for leading sensors or supply lines into the chamber	
<b>Pump module with vacuum pump</b>	The pump module lifts your vacuum oven to the optimum working height, it also significantly reduces the noise of the vacuum pump and protects the pump and glass material from mechanical damage. The pump in the module can be switched on and off using a switchable socket via the control of the vacuum furnace.	
<b>Vacuum pumps</b>	Choice of chemistry diaphragm pumps that are optimally matched to the vacuum ovens. The scoop is resistant to a variety of chemicals, especially acids. The final vacuum can be regulated via the vacuum oven.	
<b>Multi Management Software APT-COM</b>	Software for managing, recording and documenting device parameters is available in three versions: Basic, Professional and GLP.	
<b>Services</b>	You can access our installation, maintenance, calibration, validation, or warranty services by taking out a Maintenance Service Agreement or by simply getting in touch when you need us. More information is available in the accessories and services chapter.	
<b>BINDER INDIVIDUAL</b>	Using a BINDER series production product as a basis, we develop individual solutions as a single unit or in small batches. All products are tested, certified, and supplied with a full functional guarantee and warranty. More information is available in the accessories and services chapter.	

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## TECHNICAL DATA

Description	VDL 23	VDL 56	VDL 115
<b>Measures</b>			
Interior volume [L]	24	55	119
Net weight of the unit (empty) [kg]	72	104	158
Permitted load [kg]	50	60	70
Load per rack [kg]	20	20	20
Wall clearance back [mm]	100	100	100
Wall clearance sidewise [mm]	135	135	135
<b>Internal Dimensions</b>			
Width [mm]	285	400	506
Height [mm]	285	400	506
Depth [mm]	295	343	460
<b>Housing dimensions not incl. fittings and connections</b>			
Width net [mm]	523	638	743
Height net [mm]	698	815	942
Depth net [mm]	413	461	581
<b>Performance Data Temperature</b>			
Temperature range 10 °C above ambient temperature to [°C]	110	110	110
Temperature variation at 100 °C [± K]	1.0	1.5	2.9
Temperature fluctuation [± K]	0.1	0.1	0.1
Heating-up time to 100 °C [min]	150	150	180
<b>Electrical data</b>			
Nominal power (version 120 V) [kW]	0.9	1.4	1.6
Nominal power (version 230 V) [kW]	0.9	1.4	1.6
<b>Fixtures</b>			
Number of shelves (std./max.)	2/4	2/5	2/6

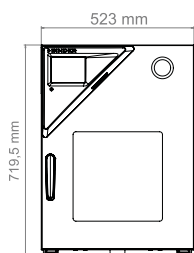
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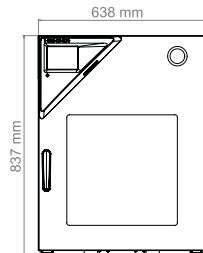
Voltage	Option model	VDL 23	VDL 56	VDL 115
200...230 V 1~ 50/60 Hz	Standard	9630-0009	9630-0010	9630-0011
100...120 V 1~ 50/60 Hz	Standard	9630-0013	-	9630-0015
100...230 V 1~ 50/60 Hz	Standard	-	9630-0014	-

## DIMENSIONS incl. fittings and connections [mm]

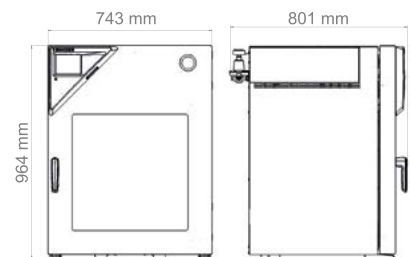
VDL 23



VDL 56



VDL 115



## ORDERING INFORMATION OPTION

Model		VDL 23	VDL 56	VDL 115
Art.-Nr.				
8612-0001	Add. access ventilation	•	•	•
8612-0003	Add. access port DN 40	•	•	•
8612-0004	Analog output 4-20mA	•	•	•
8612-0006	Specimen temp. measurement	•	•	•
8612-0002	Door lock	•	•	•
8612-0011	Shelves stainless steel 023 (exchange)	•		
8612-0012	Shelves stainless steel 056 (exchange)		•	
8612-0013	Shelves stainless steel 115 (exchange)			•
8612-0007	Door gasket FKM 023	•		
8612-0008	Door gasket FKM 056		•	
8612-0009	Door gasket FKM 115			•
8012-0440	Calibr. cert. pressure	•	•	•
8012-1145	Calibr. cert. Temp 1P	•	•	•
8012-1127	Calibr. cert. Temp 1P extension	•	•	•
8012-0916	Calibr. cert. Temp 9P	•	•	•
8012-0919	Calibr. cert. Temp 15P	•	•	•

## ORDERING INFORMATION ACCESSORY

8009-1031	Expansion shelf			
8009-1030	Expansion shelf	X		
8009-1029	Expansion shelf		X	•
8009-1093	Expansion shelf stainless steel			
8009-1092	Expansion shelf stainless steel	X		
8009-1091	Expansion shelf stainless steel		X	•
5013-0049	Vacuum pump VP 4 (230V)	•	•	•
8012-1970	Vacuum module VDL 023 with VP4 (230V)	•		
8012-1971	Vacuum module VDL 056 with VP4 (230V)		•	
8012-1972	Vacuum module VDL 115 with VP4 (230V)			•
9053-0039	APT-COM 4 Basic Edition (act.key)	•	•	•
9053-0042	APT-COM 4 GLP Edition (act.key)	•	•	•
9053-0040	APT-COM 4 Professional Edition (act.key)	•	•	•
7007-0001	Qualification documents IQ/OQ (in folder)	•	•	•
7057-0001	Qualification documents IQ/OQ (PDF)	•	•	•
7007-0005	Qualification documents IQ/OQ/PQ (in folder)	•	•	•
7057-0005	Qualification documents IQ/OQ/PQ (PDF)	•	•	•

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