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Model VD 53 | Vacuum drying chambers for non-flammable solvents

A BINDER vacuum drying oven VD series gently dries materials with homogeneous temperature distribution. The patented expansion shelf technology from BINDER ensures optimal heat transfer. The shelves are easy to position where required and the inner chamber of the vacuum drying oven is easy to clean.

BENEFITS

- Fast and gentle drying
- Direct heat transfer through large thermal conducting plates
- Safe work with one-of-a-kind safety concept
- Coordinated, modular system with vacuum pump and vacuum module

Model 53

Model 53

MAIN FEATURES

- Temperature range: room temperature plus 15 °C to 200 °C
- APT.line™ preheating chamber technology
- Controller with time-segment and real-time programming
- 2 aluminum expansion racks
- Inert gas connection
- Shatterproof, spring-mounted safety glass panel
- Class 2 independent adjustable temperature safety device (DIN 12880) with visual alarm
- Computer interface: RS 422
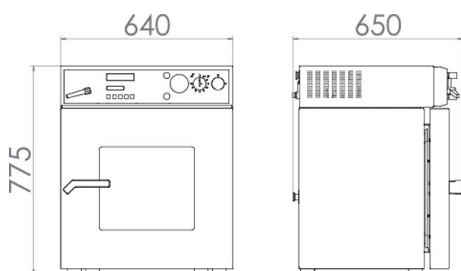- 2 relay outputs, 24 V DC (max. 0.4 A)

ORDERING INFORMATION

Interior volume [L]	Voltage	Option model	Version	Art.-No.
Model VD 53				
53	230 V 1~ ph 50/60 Hz	Standard	VD053-230V	9030-0030
	120 V 1~ ph 60 Hz	Standard	VD053UL-120V	9030-0036

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TECHNICAL DATA

Description	VD053-230V[1]	VD053UL-120V[1]
Article Number	9030-0030	9030-0036
Performance Data Temperature		
Temperature range 15 °C above ambient temperature to [°C]	200	200
Temperature variation at 100 °C [± K]	2	2
Temperature fluctuation [± K]	0.1	0.1
Heating-up time to 100 °C [min]	80	80
Vacuum Data		
Permitted end vacuum [mbar]	0.01	0.01
Leak rate [bar/h]	0.01	0.01
Electrical data		
Rated Voltage [V]	230	120
Power frequency [Hz]	50/60	60
Nominal power [kW]	1.2	1.2
Unit fuse [A]	10	12.5
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
Inert gas connection with flow limiter (RP")	3/8	3/8
Internal Dimensions		
Depth [mm]	340	340
Height [mm]	400	400
Width [mm]	400	400
Housing dimensions not incl. fittings and connections		
Width net [mm]	635	635
Height net [mm]	775	775
Depth net [mm]	550	550
Measures		
Viewing window width [mm]	350	350
Viewing window height [mm]	307	307
Wall clearance back [mm]	100	100
Wall clearance sidewise [mm]	135	135
Interior volume [L]	53	53
Net weight of the unit (empty) [kg]	95	95
permitted load [kg]	45	45
Load per rack [kg]	20	20
Doors		
Unit doors	1	1
Fixtures		
Number of shelves (std./max.)	2/5	2/5

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.

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DIMENSIONS incl. fittings and connections [mm]

OPTIONS AND ACCESSORIES

Designation	Description	*	Art.-No.
APT-COM™ 4 BASIC-Edition	for simple logging and documentation requirements with up to 5 networked units.		
	version 4, BASIC edition	19	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	19	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	19	9053-0040
Calibration certificate, expanded	for temperature; for extending the measurement in center of chamber to include another test temperature	–	8012-1127
Calibration certificate, pressure	for digital pressure display, measurement at 100 mbar or at specified pressure (range 20 – 900 mbar)	–	8012-0440
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
Digital pressure display	Measuring range from 1 mbar to atmospheric pressure, display accuracy 1 mbar	–	8012-0806
Door gasket	made of FKM, silicone-free	03	8012-0501
Electric access port	9-pin, vacuum-tight access port for transmitting electrical currents, voltages, or signals (max. 50 V / 2 A per pin; vacuum connection DN 16 ISO-KF)	–	8012-0262
Expansion rack	aluminum	–	8009-0371
	stainless steel 1.4571 (V4A)	06	8009-0102
	stainless steel expansion rack instead of standard aluminum expansion rack, incl. calibration	–	8012-0617
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	–	1002-0016
Temperature measurement of the specimen	with flexible Pt 100 sensor and digital specimen temperature display	–	8012-0551
Vacuum module	to receive vacuum pumps, with switchable power socket		
	120 V, 13 A option model	–	8012-0274
	230 V, 16 A option model	–	8012-0131
Vacuum module with chemical membrane pump VP 1.1	nominal pumping speed 2.0 m³/h, final pressure 7 mbar, including all necessary parts for vacuum connection, ATEX conformity: II 3G IIC T3 X (only for inner chamber, areas coming in contact with media)		
	120 V option model	–	8012-0732
	230 V option model	–	8012-0729
Vacuum module with chemical membrane pump VP 2.1	Chemical membrane pump with nominal pumping speed 3.4 m³/h, final pressure 1.5 mbar, ATEX conformity: II 3G IIC T3 X (only for interior, areas coming in contact with media), including all necessary parts for vacuum connection		
	120 V option model	–	8012-0733
	230 V option model	–	8012-0730
Vacuum module with speed-controlled chemical membrane pump VP 3.1	nominal pumping speed 4.6 m³/h, final pressure 1.5 mbar, including all necessary parts for vacuum connection, digital vacuum controller (accurate to ≤1 mbar), ATEX conformity: II 3G IIC T3 X (only for inner chamber, areas coming in contact with media)		
	120 V option model	–	8012-0734
	230 V option model	–	8012-0731

* Notes › See last page

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Designation	Description	*	Art.-No.
Vacuum pump connection kit	for vacuum pump VP 1.1, VP 2.1, VP 3.1; consisting of aluminum clamping ring, universal centering ring, small flange with hose nozzle, (2.5 m) rubber hose and 2 hose clamps	–	8012-0146
Vacuum pump VP 1.1	Chemical membrane pump with nominal pumping speed 2.0 m³/h, final pressure 7 mbar, ATEX conformity: II 3G IIC T3 X (only for interior, areas coming in contact with media)		
	120 V option model	–	5013-0118
	230 V option model	–	5013-0117
Vacuum pump VP 2.1	chemical membrane pump with nominal pumping speed 3.4 m³/h, final pressure 1.5 mbar, ATEX conformity: II 3G IIC T3 X (only for inner chamber, areas coming in contact with media)		
	120 V option model	–	5013-0120
	230 V option model	–	5013-0119
Vacuum pump VP 3.1	Speed-controlled chemical membrane pump with nominal pumping speed 4.6 m³/h, final pressure 1.5 mbar, ATEX conformity: II 3G IIC T3 X (only for interior, areas coming in contact with media)		
	120 V option model	–	5013-0122
	230 V option model	–	5013-0121

* Notes › See last page

SERVICES

Designation	Description	*	Art.-No.
Installation services			
Installation	and set up of unit at operating location, connect to existing connections	13, 18	DL10-0100
Instruction	unit function instructions for operation and programming of the controller	18	DL10-0500
Preventive maintenance			
Preventive maintenance	Executive of equipment inspection according to maintenance plan	14, 18	DL20-0400
Calibration services			
Calibration digital pressure display	including certificate, measurement at specified pressure, range 20 – 900 mbar	14, 16, 17, 18	DL32-0000
Calibration temperature incl. certificate	including certificate, one measuring point in center of chamber at specified temperature	14, 16, 17, 18	DL30-0101
Temperature measurement 15 measuring points	including certificate, 15 measuring points at specified temperature	14, 16, 17, 18	DL30-0218
Temperature measurement 9 measuring points	including certificate, 9 measuring points at specified temperature	14, 16, 17, 18	DL30-0109
Validation services			
Execution of IQ/OQ	in accordance with qualification folder	15, 18, 20	DL42-0300
Execution of IQ/OQ/PQ	in accordance with customer's requirement, price: on request	15, 18	DL44-0500
Qualification folder IQ/OQ	supporting documents for validation performed by customer, consisting of: IQ/OQ checklists, unit schematics, QM certificate in accordance with ISO 9001	15, 18, 20	8012-0859
Qualification folder IQ/OQ/PQ	supporting documents for validation performed by customer, in accordance with customer's requirement, extension of Qualification folder IQ/OQ by chapter PQ	15, 18	8012-0948
Warranty service			
Extension of the warranty from 2 to 3 years	beginning with the date of delivery, wearing parts are not included	–	DL00-8041
Extension of the warranty from 2 to 5 years	beginning with the date of delivery, wearing parts are not included	–	DL00-8042

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Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct.
If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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Please contact us if this literature doesn't answer all your questions.