

# Model VD 56 | 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 56

### **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 inhouse 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]	Voltage	Option model	Version	ArtNo.
55	200230 V 1~ ph 50/60 Hz	Standard	VD056-230V	9630-0002
	100120 V 1~ ph 50/60 Hz	Standard	VD056UL-120V	9630-0006



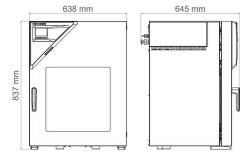
## **TECHNICAL DATA**

### ### ### ### ### ### ### ### ### #	Description	VD056-230V1	VDo56UL-120V¹	
Temperature range +9 °C above ambient temperature fo [°C]         200         10           Temperature fluctuation [ K]         0.1         0.1           Heading-up time to 100 °C [min]         80         0.0           Vacuum Data         Very Carlon (March 1997)         Very Carlon (March 1997)           Electrical data         Very Carlon (March 1997)         100–130           Power fequency [Nz]         50.0         100–130           Power fequency [Nz]         14         10           Unit base [A]         14         10           Phase (Rominal voltage)         1-0         10           Phase (Rominal voltage)         1-0         10           Phase (Rominal voltage)         1-0         10           Vacuum connection with small flange [DN mm]         16         10           Measuring access port with small flange [DN mm]         16         10           Measuring access port with small flange [DN mm]         16         10           Measuring access port with small flange [DN mm]         16         10           Moverage access port with small flange [DN mm]         16         10           Moverage access port with small flange [DN mm]         26         5           Moverage access port with small flange [DN mm]         26         10	Article Number	9630-0002	9630-0006	
Temperature fluctation [a N]         o.1         o.3         o.3           Iteating put funct son or [min]         6.0         0.0         <	Performance Data Temperature			
Meaning up time to so °C (min)         80         80           Vacuum Data         Commend of the part of the	Temperature range +9 °C above ambient temperature to [°C]	220	220	
Vacuum Data         Leak relay [har] (har)         Oo.1	Temperature fluctuation [± K]	0.1	0.1	
Leak rate [bar/h]         o.o.         o.o.         o.o.         control         <	Heating-up time to 100 °C [min]	80	80	
Electrical data         Concapage (Village (V))         100—130           Power frequency (Hz)         500—230         100—130           Power frequency (Hz)         140         14           Unit fuse (A)         8         16           Phase (Nominal voltage)	Vacuum Data			
Rated Voltage [V]         2000—230         100—130           Power frequency [rtz]         50/60         50/60           Nominal power [kW]         1.4         1.4           Unit fuse [A]         8         6           Phase (Nominal voltage)         1-         1-           Commercions             Vacuum connection with small flange [DN mm]         16         6           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           Measuring access port with small flange [DN mm]         16         5           Wester (Commercion for pressure-encapsulation [NW]         3/8         3/8           Compressed air connection for pressure-encapsulation [NW]         5         5           Measures         5         5         5           Measures         5         5         5           Wester (Ling Lond) [kg]         5         6         6           Vewing wind width [mm]         420         420         4           Wall clearnace back [mm]         40         40         4 <td>Leak rate [bar/h]</td> <td>0.01</td> <td>0.01</td>	Leak rate [bar/h]	0.01	0.01	
Power frequency [Hz]         50/60         50/60           Nominal power [kW]         1.4         1.4           Unit fuse [A]         8         16           Phase (Nominal voltage)         1-           Connections           Vacuum connection with small flange [DN mm]         16         16           Measuring access port 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           Compressed air connection for perseure-encapsulation [NW]         5         5         5           Compressed air connection for perseure-encapsulation [NW]         5         5         5           Measure           Universal connection for perseure-encapsulation [NW]         5         5         5           Measure           Universal connection for perseure-encapsulation [NW]         20         20           Universal connection for perseure-encapsulation [NW]         420         420           Universal connection for perseure-encapsulation [NW]         420         420 <th col<="" td=""><td>Electrical data</td><td></td><td></td></th>	<td>Electrical data</td> <td></td> <td></td>	Electrical data		
Nominal power [kV]         1.4         1.4           Unit fuse [A]         8         16           Phase (Nominal votage)         1-           Commections         1-           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 [WV]         5         5           Measures         5         55         5           Net weight of the unit (empty) [kg]         95         101         1           Permitted load [kg]         60         60         1           Load per rack [kg]         20         20         20           Viewing window width [rm]         420         420         420           Viewing window height [mm]         400         400         400           Viewing window height [mm]         400         400         400           Viewing window height [mm]         400         400         400           Internal Dimensions         400         400         400           It leight [mm]         400         400 <th< td=""><td>Rated Voltage [V]</td><td>200230</td><td>100120</td></th<>	Rated Voltage [V]	200230	100120	
Unit fuse [A]         8         16           Phase (Nominal voltage)         1-         1-           Connections          1-           Vacuum connection with small flange [DN mm]         16         16           Measuring access port with small flange [DN mm]         16         16           Universal connection for air / nert gas with flow limiter thread (RP") 3/8         3/8         3/8           Compressed air connection for pressure-encapsulation [NW]         5         5           Measures              Interior volume [L]         55         5         5           Net weight of the unit (empty) [kg]         95         101            Permitted load [kg]         60         60            Load per rack [kg]         20         20            Viewing window width [mm]         420         420            Wall clearance sidewise [mm]         70         70            Wall clearance sidewise [mm]         400         400            Height [mm]         400         400            Beight [mm]         400         400            Depth [mm]         638	Power frequency [Hz]	50/60	50/60	
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 [L]         55         55           Net weight of the unit (empty) [kg]         6         55         55           Net weight of the unit (empty) [kg]         6	Nominal power [kW]	1.4	1.4	
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         5           Measures           101	Unit fuse [A]	8	16	
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         ***********************************	Phase (Nominal voltage)	1~	1~	
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         ************************************	Connections			
Universal connection for air / inert gas with flow limiter thread (RPP') 3/8         3/8         3/8           Compressed air connection for pressure-encapsulation (NW)         5         5           Measures         Interior volume [L]         55         55         55           Net weight of the unit (empty) [kg]         95         101         101           Permitted load [kg]         60         60         60           Load per rack [kg]         20         20         20           Viewing window width [mm]         420         420         420           Viewing window height [mm]         420         420         420           Wall clearance sidewise [mm]         100         100         400           Width [mm]         400         400         400           Height [mm]         400         400         400           Pepth [mm]         343         343         343           Doors         1         1         1           Unit doors         1         1         1           Housing dimensions not incl. fittings and connections         815         815           Width net [mm]         638         638           Height net [mm]         461         461 <t< td=""><td>Vacuum connection with small flange [DN mm]</td><td>16</td><td>16</td></t<>	Vacuum connection with small flange [DN mm]	16	16	
Compressed air connection for pressure-encapsulation [NW]         5         5           Measures         55         55           Net weight of the unit (empty) [kg]         95         101           Permitted load [kg]         60         60           Load per rack [kg]         20         20           Viewing window width [mm]         420         420           Wall clearance back [mm]         100         400           Wall clearance back [mm]         70         70           Internal Dimensions         70         70           Width [mm]         400         400           Height [mm]         400         400           Doors         1         1           Unit doors         1         1           Housing dimensions not incl. fittings and connections         815         815           Width net [mm]         638         638         638           Height net [mm]         461         461         461           Environment-specific data         40         40         40           Fixtures         40         40         40	Measuring access port with small flange [DN mm]	16	16	
Measures           Interior volume [L]         55         55           Net weight of the unit (empty) [kg]         95         101           Permitted load [kg]         60         60           Load per rack [kg]         20         20           Viewing window width [mm]         420         420           Viewing window height [mm]         420         420           Wall clearance back [mm]         70         70           Wall clearance sidewise [mm]         70         70           Internal Dimensions         400         400           Width [mm]         400         400           Height [mm]         343         343           Doors         Unit doors         1         1           Housing dimensions not incl. fittings and connections         400         400           Width net [mm]         638         638           Height net [mm]         658         638           Height net [mm]         461         461           Environment-specific data         40         40           Environment-specific data         50         40           Environment-specific data         40         40	Universal connection for air / inert gas with flow limiter thread (RP") 3/8	3/8	3/8	
Interior volume [L]         55         55           Net weight of the unit (empty) [kg]         95         101           Permitted load [kg]         60         60           Load per rack [kg]         20         20           Viewing window width [mm]         420         420           Wiewing window height [mm]         420         420           Wall clearance back [mm]         100         100           Wall clearance sidewise [mm]         70         70           Internal Dimensions         400         400           Width [mm]         400         400           Depth [mm]         343         33         33           Doors         Unit doors         1         1         1           Housing dimensions not incl. fittings and connections         463         638         638           Width net [mm]         815         815         815           Depth net [mm]         461         461         401           Environment-specific data         50         40         40           Fixtures         40         40         40	Compressed air connection for pressure-encapsulation [NW]	5	5	
Net weight of the unit (empty) [kg]         95         101           Permitted load [kg]         60         60           Load per rack [kg]         20         20           Viewing window width [mm]         420         420           Viewing window height [mm]         420         420           Wall clearance back [mm]         100         100           Wall clearance sidewise [mm]         70         70           Internal Dimensions         400         400           Width [mm]         400         400           Height [mm]         400         400           Depth [mm]         343         343           Doors         Unit doors         1         1           Housing dimensions not incl. fittings and connections         40         40           Width net [mm]         638         638           Height net [mm]         815         815           Depth net [mm]         461         461           Environment-specific data         5         40           Fixtures         40         40	Measures			
Permitted load [kg]         60         60           Load per rack [kg]         20         20           Viewing window width [mm]         420         420           Viewing window height [mm]         420         420           Wall clearance back [mm]         100         100           Wall clearance sidewise [mm]         70         70           Internal Dimensions         400         400           Height [mm]         400         400           Height [mm]         343         343           Doors         1         1           Unit doors         1         1           Housing dimensions not incl. fittings and connections         815         638           Width net [mm]         638         638           Height net [mm]         461         461           Environment-specific data         461         461           Environment-specific data         50 und-pressure level [dB(A)]         40         40	Interior volume [L]	55	55	
Load per rack [kg]         20         20           Viewing window width [mm]         420         420           Viewing window height [mm]         420         420           Wall clearance back [mm]         100         100           Wall clearance sidewise [mm]         70         70           Internal Dimensions         Width [mm]         400         400           Height [mm]         400         400           Depth [mm]         343         343           Doors         Unit doors         1         1           Housing dimensions not incl. fittings and connections         Width net [mm]         638         638           Height net [mm]         815         815           Depth net [mm]         461         461           Environment-specific data         40         40           Fixtures         40         40	Net weight of the unit (empty) [kg]	95	101	
Viewing window width [mm]         420         420           Viewing window height [mm]         420         420           Wall clearance back [mm]         100         100           Wall clearance sidewise [mm]         70         70           Internal Dimensions         Width [mm]         400         400           Height [mm]         400         400           Depth [mm]         343         343           Doors         Unit doors         1         1           Housing dimensions not incl. fittings and connections         Width net [mm]         638         638           Height net [mm]         815         815           Depth net [mm]         461         461           Environment-specific data         40         40           Sound-pressure level [dB(A)]         40         40	Permitted load [kg]	60	60	
Viewing window height [mm]         420         420           Wall clearance back [mm]         100         100           Wall clearance sidewise [mm]         70         70           Internal Dimensions         ************************************	Load per rack [kg]	20	20	
Wall clearance back [mm]         100         100           Wall clearance sidewise [mm]         70         70           Internal Dimensions	Viewing window width [mm]	420	420	
Wall clearance sidewise [mm]         70         70           Internal Dimensions         400         400           Width [mm]         400         400           Height [mm]         343         343           Doors         1         1           Unit doors         1         1           Housing dimensions not incl. fittings and connections         400           Width net [mm]         638         638           Height net [mm]         815         815           Depth net [mm]         461         461           Environment-specific data         50und-pressure level [dB(A)]         40         40           Fixtures         5         40         40	Viewing window height [mm]	420	420	
Internal Dimensions           Width [mm]         400         Fixtures         Fixtures         400         400         400         400         Fixtures         Fixtures         400         400         400         Fixtures         Fixtures         Fixtures         400         400         400         Fixtures         Fixtures <td< td=""><td>Wall clearance back [mm]</td><td>100</td><td>100</td></td<>	Wall clearance back [mm]	100	100	
Width [mm]       400       400         Height [mm]       400       400         Depth [mm]       343       343         Doors         Unit doors       1       1         Housing dimensions not incl. fittings and connections       Width net [mm]       638       638         Height net [mm]       815       815         Depth net [mm]       461       461         Environment-specific data       40       40         Fixtures       40       40	Wall clearance sidewise [mm]	70	70	
Height [mm]       400       400         Depth [mm]       343       343         Doors       Unit doors       1       1         Housing dimensions not incl. fittings and connections         Width net [mm]       638       638         Height net [mm]       815       815         Depth net [mm]       461       461         Environment-specific data       Sound-pressure level [dB(A)]       40       40         Fixtures       Fixtures	Internal Dimensions			
Depth [mm]         343         343           Doors         1         1           Unit doors         1         1           Housing dimensions not incl. fittings and connections         638         638           Width net [mm]         638         638           Height net [mm]         815         815           Depth net [mm]         461         461           Environment-specific data         5         40           Fixtures         40         40	Width [mm]	400	400	
DoorsUnit doors11Housing dimensions not incl. fittings and connectionsWidth net [mm]638638Height net [mm]815815Depth net [mm]461461Environment-specific data4040FixturesFixtures	Height [mm]	400	400	
Unit doors         1         1           Housing dimensions not incl. fittings and connections         538         638           Width net [mm]         638         638           Height net [mm]         815         815           Depth net [mm]         461         461           Environment-specific data         5         40           Fixtures         Fixtures         40	Depth [mm]	343	343	
Housing dimensions not incl. fittings and connections         Width net [mm]       638       638         Height net [mm]       815       815         Depth net [mm]       461       461         Environment-specific data       50und-pressure level [dB(A)]       40       40         Fixtures       Fixtures	Doors			
Width net [mm]       638       638         Height net [mm]       815       815         Depth net [mm]       461       461         Environment-specific data       5       40         Fixtures       40       40	Unit doors	1	1	
Height net [mm]         815         815           Depth net [mm]         461         461           Environment-specific data         40         40           Fixtures         Fixtures         40	Housing dimensions not incl. fittings and connections			
Depth net [mm]         461         461           Environment-specific data         Sound-pressure level [dB(A)]         40         40           Fixtures         Fixtures	Width net [mm]	638	638	
Environment-specific data  Sound-pressure level [dB(A)] 40 40  Fixtures	Height net [mm]	815	815	
Sound-pressure level [dB(A)] 40 40  Fixtures	Depth net [mm]	461	461	
Fixtures	Environment-specific data			
	Sound-pressure level [dB(A)]	40	40	
Number of shelves (std./max.) 1/5 1/5	Fixtures			
	Number of shelves (std./max.)	1/5	1/5	

<sup>1</sup> 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	*	ArtNo.
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,	Calibration of the pressure display to a specified value, including certificate	-	8012-2021
pressure	Extension of the calibration of the pressure display by another pressure value, including certificate	-	8012-2022
	for temperature, measurement in center of chamber at specified temperature	-	8012-1145
Calibration certificate, temperature	temperature measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-0919
temperature	temperature measurement incl. certificate, 9 measuring points at specified temperature	-	8012-0916
Door gasket	made of FKM, silicone-free	-	8612-0008
Door lock	lockable door handle	-	8612-0002
Expansion racks	stainless steel expansion rack instead of standard aluminum expansion rack, incl. calibration	-	8612-0012
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

<sup>\*</sup> Notes > See last page

# **ACCESSORIES**

Designation	Description	*	ArtNo.
APT-COM™ 4 BASIC-	for simple logging and documentation requirements with up to 5 networked units.		,
Edition	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	convenient unit and user management built on the BASIC edition. Suitable for networking up to 100 units.		
PROFESSIONAL-Edition	version 4, PROFESSIONAL edition	-	9053-0040
Expansion racks	stainless steel	-	8009-1092
	aluminum	-	8012-2056
pH-neutral detergent	concentrated, for gentle remove of residual contaminants; 1 kg	-	1002-0016
Pump chamber with VAP 1 vacuum pump	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	-	8012-1962
	230 V / 50-60 Hz option model	-	8012-1959

<sup>\*</sup> Notes > See last page



Designation	Description	*	ArtNo.
Pump chamber with VAP	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		
2 vacuum pump	120 V / 50–60 Hz option model	-	8012-1968
	230 V / 50-60 Hz option model	-	8012-1965
	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
O!! G!	Hard copy inside folder	-	7007-000
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	-	7057-000
	Hard copy inside folder	-	7007-000
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
	Chemical membrane pump with a nominal air flow of 2.0 m³/hour, final pressure 7 mbar		
Vacuum pump VAP 1	120 V / 50-60 Hz option model	-	5013-0223
	230 V / 50-60 Hz option model	-	5013-0217
	Chemical membrane pump with a nominal air flow of 4.0 m³/hour, final pressure 1,8 mbar		
Vacuum pump VAP 2	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.	-	8500-016

<sup>\*</sup> Notes > See last page

# **SERVICES**

Designation	Description	*	ArtNo.
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)	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
Maintenance contracts			
Maintenance services			
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
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
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
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
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<sup>\*</sup> Notes > See last page



Designation	Description	*	ArtNo.
Calibration services			
Calibration certificate, temperature	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
Pressure calibration	District was a way display and hyperian at a practical test was a way of a grown when including a wiff arts	03, 04,	DL30-0410
	Digital pressure display calibration at a specified test pressure of 20–900 mbar, including certificate	05	DL30-0411
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
Validation services			
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
Warranty service			
1-year warranty extension	The warranty is extended by 1 year from the delivery date, wear parts are excluded	-	DL50-0020

<sup>\*</sup> Notes > See last page



### **NOTES**

- Condensation may occur in the area around the access port. Access ports may be placed in custom locations for an additional charge. UL mark is not granted when this option is used.
- 02
- Sensor calibration is performed in an accredited calibration laboratory. 03
- Calibration is performed according to the BINDER factory standard.
- 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**

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