Model M 115 | Drying and heating chambers Classic.Line with forced convection and advanced program functions

BENEFITS

- Uniform drying conditions thanks to APT.line™ technology
- Identical test conditions throughout the chamber interior independent of sample size and quantity
- · Outstanding thermal insulation saves operation costs
- Advanced programming options



Model 115



Model 115

MAIN FEATURES

- $\bullet\,$ Temperature range: room temperature plus 5 °C to 300 °C
- APT.line $^{\text{TM}}$ preheating chamber technology
- Adjustable fan speed
- Program-controlled ventilation flap
- Color LCD controller with time-segment programming
- 2 chrome-plated racks
- Class 2 independent adjustable temperature safety device (DIN 12880) with visual alarm
- Computer interface: RS 422

ORDERING INFORMATION

Interior volume [L]	Voltage	Option model	Version	ArtNo.
Model M 115				
115	230 V 1~ 50/60 Hz	Standard	M115-230V	9010-0202

TECHNICAL DATA

Description	M115-230V
Article Number	9010-0202
Performance Data Temperature	
Temperature range 5 °C above ambient temperature to [°C]	300
Temperature uniformity at 150 °C [± K]	1.5
Temperature fluctuation at 150 °C [± K]	0.3
Heating-up time to 150 °C [min]	16

Data Sheet Model M 115

Description	Mara analy
Description	M115-230V
Article Number	9010-0202
Recovery time after 30 seconds door open at 150 °C [min]	3
Air change data	
Air change (approx.) at 150 °C [x/h]	96
Electrical data	
Rated Voltage [V]	230
Power frequency [Hz]	50/60
Phase (Nominal voltage)	1~
Measures - Outer dimensions	
Width net [mm]	835
Height net [mm]	865
Depth net [mm]	645
Wall clearance back [mm]	160
Wall clearance sidewise [mm]	100
Measures - Internal Dimensions	
Width [mm]	600
Height [mm]	480
Depth [mm]	410
Measures	
Interior volume [L]	115
Net weight of the unit (empty) [kg]	89
Load per rack [kg]	20
Environment-specific data	
Energy consumption at 150 °C	544 Wh/h

OPTIONS AND ACCESSORIES

Designation	Description	*	ArtNo.
Access port with silicone plug	10 mm, back	01	8012-0390
	10 mm, left	01	8012-038
	10 mm, right	01	8012-0387
	10 mm, top	01	8012-0386
	30 mm, back	01	8012-0540
	30 mm, left	01	8012-0537
	30 mm, right	01	8012-0536
	30 mm, top	01	8012-0539
	50 mm, back	01	8012-0540
	50 mm, left	01	8012-0542
	50 mm, right	01	8012-0541
	50 mm, top	01	8012-054
	100 mm, left	01, 11	8012-0722
	100 mm, right	01, 11	8012-0721
Analog output, 4 – 20 nA	for temperature values (output not adjustable)	-	8012-048
Base	with casters	-	9051-0033
Calibration certificate, expanded	each measurement at additional measuring point or testing temperature	-	8012-002

^{*} Notes > See last page

Calibration certificate, temperature temperature temperature temperature temperature Cart stable cart, stable cart, software Doata Logger Kit T 350: temperature Door gasket made of FK Door lock lockable do lockable controller keyboard Magnetic Pouch (A4) Measurement of air lockable colokable colokable controller keyboard Measuring channel for digital display of specimen temperature pH-neutral detergent concentrate Pt 100 temperature sensor Rack Rack, accessories set of 4 fas stainless si stainless si set of 4 fas stainless si set of 4 fas stainless si set of 4 ant stainless si APT-COM™ version 2	rature, measurement in center of chamber at specified temperature are measurement incl. certificate and 27 measuring points at specified temperature	_	
temperature stable cart, T 350: temperature Dota Logger Kit, software Door Jock Door Jock Door Jock Gas-tight option model HEPA air filter Interface converter Interface converter Interface converter RS 422 cabe to a unit 120 V, 60 230 V, 50 RS 422 cabe unit (USB-F) Lockable controller keyboard Magnetic Pouch (A4) Measurement of air exchange rate Measuring channel for digital display of specimen temperature DH-neutral detergent Pt 100 temperature sensor Rack Rack Rack, accessories RS 422 interface RS 422 cond additional stainless si set of 4 fas RS 422 cond RS 422 cond RS 422 cond stainless si Stainless si Stainless si Stainless si Stainless si Stainless si APT-COMTM- version 2			8012-0030
temperature Stable cart, Data Logger Kit, Software Door Jock BE Jock Door Jock Door Jock BE Jo	we management in a continue to	-	8012-0921
Cart stable cart, Data Logger Kit T 350: temp Data Logger Kit, Software LOG ANALY Software LOG ANALY Software LOG ANALY Door lock Lockable do Door lockable do Door lock Lockable do Door lockable do Door lock Lockable do Door lockable do Door lock Lockable do Door lock	re measurement incl. certificate, 15- 18 measuring points at specified temperature	-	8012-0918
Data Logger Kit, Software Door gasket Door lock Dockable of lockable do lockable controller lockable do lockable do lockable controller lockable cont	re measurement incl. certificate, 9 measuring points at specified temperature	-	8012-0915
Data Logger Kit, software Door gasket Door lock Door	stable cart, casters with locking brakes		9051-0018
Door gasket made of FK Door lock lockable do Gas-tight option model incl. additional HEPA air filter class H14 fi nert gas connection with gas in RS 422 cab a unit 120 V, 60 230 V, 50 RS 422 cab to a unit 120 V, 60 230 V, 50 RS 422 cab unit (USB-p Lockable controller keyboard Lockable co Magnetic Pouch (A4) insert pouch or digital display of specimen temperature or digital display of specimen temperature sensor additional Rack Crack RS 422 interface modular pl RS 422 cinterface, cable RS 422 interface, cable SS 422 interface, cable	perature logging from o °C to 350 °C	19	8012-0714
Door lock lockable do Gas-tight option model incl. addition HEPA air filter class H14 filter Intert gas connection with gas in RS 422 cab a unit 120 V, 60 230 V, 50 RS 422 cab to a unit 120 V, 60 230 V, 50 RS 422 cab unit (USB-particular) RS 422 cab unit (USB-particular) RS 422 cab unit (USB-particular) Resurement of air exchange rate in accordant exchange rate Measuring channel for digital display of expecimen temperature pH-neutral detergent concentrate Pt 100 temperature sensor chrome plates at a ditional stainless site and stainless s	YZE software kit, configuration and evaluation software for all BINDER Data Logger Kits (incl. USB data cable)	19	8012-0821
Again to pation model incl. additional statement of air exchange rate Measuring channel for digital display of specimen temperature sensor Rack Rac	KM, silicone-free	03	8012-0495
HEPA air filter class H14 filter nert gas connection with gas in RS 422 cab a unit 120 V, 60 230 V, 50 RS 422 cab to a unit 120 V, 60 230 V, 50 RS 422 cab unit (USB-particle) cockable controller ceyboard controller ceyboard in accordant in acc	loor handle	-	8012-0318
nert gas connection with gas in RS 422 cab a unit 120 V, 60 230 V, 50 RS 422 cab to a unit 120 V, 60 230 V, 50 RS 422 cab unit (USB-particle) Rockable controller ceyboard Lockable controller ceyboard in accordant in ac	ional measures for gas containment	09	8012-0181
RS 422 cab a unit 120 V, 60 230 V, 50 RS 422 cab to a unit 120 V, 60 230 V, 50 RS 422 cab unit (USB-public Reyboard	filter (according to EN 1822, min. 99.995 %)	-	8012-0222
a unit 120 V, 60 230 V, 50 RS 422 cab to a unit 120 V, 60 230 V, 50 RS 422 cab to a unit 120 V, 60 230 V, 50 Interface converter, ISB / RS422 Interface controller tecyboard Magnetic Pouch (A4) Measurement of air exchange rate Measuring channel or digital display of in accordant Pt 100 temperature in additional stainless si Rack, accessories RS 422 interface RS 422 con	nlet and outlet, Ø 10 mm, incl. additional measures to provide the greatest possible impermeability to gas	-	8012-0841
nterface converter RS 422 cab to a unit 120 V, 60 230 V, 50 Interface converter, JSB / RS422 Cockable controller ceyboard Magnetic Pouch (A4) Measurement of air exchange rate Measuring channel or digital display of specimen temperature OH-neutral detergent Chrome pla stainless si Rack Rack, accessories RS 422 interface RS 422 interface, cable 15 m) RS 422 extension RS 422	RS 422 cable set and RS 232 / RS 422 interface converter for connection to 10-way plug distributor or for connection to		
RS 422 cab to a unit 120 V, 60 230 V, 50 Interface converter, IJSB / RS422 Lockable controller (Lockable contr	o Hz option model	-	8012-0557
RS 422 cab to a unit 120 V, 60 230 V, 50 Interface converter, USB / RS422 Interface controller Reyboard Magnetic Pouch (A4) Measurement of air exchange rate Measuring channel or digital display of Expecimen temperature OH-neutral detergent Chrome pla stainless si RS 422 interface RS 422 interface, cable SS 423 interface, cable SS 425 interface, cable SS 426 interface, cable SS 427 interface, cable SS 428 interface, cable SS 429 interface, cable SS 421 interface, cable SS 422 interface, cable SS 423 interface, cable SS 424 interface, cable SS 425 interface, cable SS 426 interface, cable SS 427 interface, cable SS 428 interface, cable SS 429 interface, cable SS 421 interface, cable SS 422 interface, cable	o/6o Hz option model	-	8012-0556
nterface converter, JSB / RS422 cockable controller desploard Magnetic Pouch (A4) Measurement of air exchange rate Measuring channel for digital display of expecimen temperature pH-neutral detergent Chrome pla stainless si Rack, accessories RS 422 interface RS 422 con RS 422 con RS 422 interface, cable 15 m) RS 422 exter RS 423 exter RS 424 exter RS 425 exter RS 425 exter RS 427 exter RS 427 exter RS 428 exter RS 429 exter RS 421 exter RS 422 exter RS 422 exter RS 422 exter RS 422 exter RS 423 exter RS 424 exter RS 425 exter RS 427 exter RS 427 exter RS 427 exter RS 428 exter RS 429 exter RS 421 exter RS 422 exter	ble set and RS 422 / Ethernet interface converter for connection to 10-way plug distributor or for connection		
nterface converter, JSB / RS422 Lockable controller (eyboard Magnetic Pouch (A4) Measurement of air exchange rate Measuring channel for digital display of specimen temperature OH-neutral detergent Ct 100 temperature Sensor Rack Chrome pla stainless s: Rack, accessories RS 422 interface RS 422 interface, cable (15 m) RS 422 exter RS 421 merface, cable (15 m) RS 422 exter RS 422 exter RS 422 exter RS 423 exter RS 423 exter RS 424 exter RS 425 exter RS 425 exter RS 425 exter RS 426 exter RS 427 exter RS 427 exter RS 428 exter RS 429 exter RS 421 exter RS 422 exter	o Hz option model	-	8012-0405
JSB / RS422 unit (USB-p- Lockable controller keyboard Lockable co Magnetic Pouch (A4) insert pouc Measurement of air exchange rate in accordant Measuring channel for digital display of specimen temperature DH-neutral detergent concentrate Rack accessories set of 4 fas RS 422 interface modular pl RS 422 interface, cable (25 m) RS 422 extends RS 422 interface, cable (35 m) RS 422 extends RS 422 extends RS 423 extends RS 424 extends RS 425 extends RS 425 extends RS 426 extends RS 427 extends RS 427 extends RS 428 extends RS 429 extends RS 421 extends RS 422 extends RS 422 extends RS 423 extends RS 423 extends RS 424 extends RS 425 extends RS 425 extends RS 426 extends RS 427 extends RS 427 extends RS 428 extends RS 429 extends RS 421 extends RS 422 extends	o/6o Hz option model	-	8012-0380
Magnetic Pouch (A4) Measurement of air exchange rate Measuring channel for digital display of specimen temperature OH-neutral detergent concentrate sensor Rack chrome plates stainless stainles	ble set and RS 422 / USB interface converter for connection to 10-way plug distributor or for connection to a powered converter)	-	8012-0665
Measurement of air exchange rate in accordance acchange rate with additional specimen temperature additional stainless stainle	controller keyboard with key-operated switch	-	8012-0529
Measuring channel for digital display of specimen temperature OH-neutral detergent Chrome pla stainless si Rack Rack, accessories RS 422 interface RS 422 interface, cable (15 m) RS 422 extrement Rubber pads Shelf, perforated In accordant in accordant in accordant in accordant with additional with additional stainless si RACK Chrome pla stainless si RS 422 con RS 422 con RS 422 con RS 422 extrement Shelf, perforated APT-COMTM version 2	ch with magnetic strip	-	1007-0065
for digital display of specimen temperature OH-neutral detergent concentrate additional stainless si set of 4 fas modular plass and stainless si set of 4 fas modular plass si	nce with ASTM D5374, definition and protocol according to ambient temperature	-	8012-0195
Pt 100 temperature sensor additional chrome plates sensor chrome plates sensor chrome plates stainless si set of 4 fast sensor set of 4 fast set of 5 m) RS 422 interface, cable (15 m) RS 422 interface, cable (50 m) RS 422 extensor set of 4 and sensor sen	ional Pt 100 temperature sensor, measured data recorded via RS 422 interface	-	8012-0334
chrome pla stainless si Rack set of 4 fas RS 422 interface modular pl RS 422 interface, cable (50 m) RS 422 interface, cable Stainless si RS 422 con RS 422 con RS 422 interface, cable APT-COMTM version 2	ted, for gentle remove of residual contaminants; 1 kg	-	1002-0016
Rack stainless si Rack, accessories set of 4 fas RS 422 interface modular pl RS 422 interface, cable RS 422 interface, cable (50 m) RS 422 exters RS 422 exters RS 422 exters RS 422 exters APT-COM TM version 2	Pt 100, with flexible cable installed with external connection, incl. LEMO connector (3-pin)	-	8012-0115
Rack, accessories set of 4 fas RS 422 interface modular pl RS 422 interface, cable (15 m) RS 422 interface, cable (25 m) RS 422 interface, cable (35 m) RS 422 extr (50 m) RS 421 interface, cable (50 m) RS 422 extr (50 m) Set of 4 ant Shelf, perforated stainless si APT-COMTM version 2	ated	-	6004-000
RS 422 interface modular pl RS 422 interface, cable 15 m) RS 422 interface, cable (50 m) RS 422 extra Shelf, perforated stainless stainl	steel	-	6004-000
RS 422 interface, cable (15 m) RS 422 interface, cable (50 m) RS 422 extension (15 m) Rubber pads set of 4 and stainless significant (15 m) APT-COM TM version 2	steners for additional security	-	8012-0531
RS 422 con RS 422 interface, cable (50 m) RS 422 extra set of 4 ant Shelf, perforated stainless si APT-COM TM version 2	lug distributor for 10 RS 422 interfaces	-	8012-0295
(50 m) Rubber pads Set of 4 ant Shelf, perforated Stainless si APT-COM TM version 2	nnection cable (15 m) between plug distributor and RS 422 interface	-	5023-0036
Shelf, perforated stainless si APT-COM TM version 2	tension cable (50 m) between interface converter and unit or RS 232 / RS 422 plug distributor	-	5023-0117
APT-COM™ version 2	ti-slip feet, for safe stacking of unit	10	8012-0001
version 2	steel	-	6004-0030
	™ communications software		
version	2 to 3, GLP edition	19	9053-0016
version 3	3, BASIC edition	19	9053-0014
Software version 3	3, GLP edition	19	9053-0015
_	3, STANDARD edition	19	9053-0013
	[™] communications software, price: for free		
	3, GLP DEMO Edition	19	9053-0008
	indow in door, 320 x 260 mm, and 15 W interior lighting		8012-0057

^{*} Notes > See last page

SERVICES

Designation	Description	*	ArtNo.
Installation services		·	
Installation	and set up of unit at operating location, connect to existing connections	13, 18	DL100100
Instruction	unit function instructions for operation and programming of the controller	18	DL100600
Preventive maintenance			
Preventive maintenance	Executive of equipment inspection according to maintenance plan	14, 18	DL200200
Calibration services			
Calibration temperature	including certificate, one measuring point in center of chamber at specified temperature	14, 16, 17, 18	DL300101
Measurement of air exchange rate	including certificate (in accordance with ASTM D5374)	14, 16, 17, 18	DL330000
Temperature measurement 18 measuring points	including certificate, 18 measuring points at specified temperature	14, 16, 17, 18	DL300118
Temperature measurement 27 measuring points	including certificate, 27 measuring points at specified temperature	14, 16, 17, 18	DL300127
Temperature measurement 9 measuring points	including certificate, 9 measuring points at specified temperature	14, 16, 17, 18	DL300109
Validation services			
Execution of IQ/OQ	in accordance with qualification folder	15, 18, 20	DL410200
Execution of IQ/OQ/PQ	in accordance with customer's requirement, price: on request	15, 18	DL440500
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	8012-0862
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	8012-0950
Warranty service			
Extension of the warranty from 2 to 3 years	beginning with the date of delivery, wearing parts are not included	_	DL010041
Extension of the warranty from 2 to 5 years	beginning with the date of delivery, wearing parts are not included	-	DL010042

^{*} 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.
- Heat resistant only to max. 200 °C. 03
- Only available on units rated for 230 V. 04
- Attention: The pump is delivered separately. The electric connection for the pump (230 V/1~/50 Hz) must be carried out by an authorized electrician. 05
- Heating-up time may increase as a result of the lower heat conductivity.
- The additional heat input may affect the temperature behavior.
- 08
- The pump (packaged separately) is ready for connection.

 Not in conjunction with the optional access port, door with window and interior lighting. 09
- Not available on 23-liter units. 10
- Not available on 23- or 53-liter units. 11
- 12 Only available on units rated for 230 V or 400 V.
- Installation and connections take place at unit location; transport within the company only upon consultation.
- We recommend a BINDER service contract (see the chapter on BINDER Service) to cover unit inspections, calibrations and validations.
- OQ according to Yellow Paper = completed factory validation documentation of all OQ checklists. Sensor calibration is performed in an accredited calibration laboratory. 15
- 16
- Calibration is performed according to the BINDER factory standard. 17
- 18 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).
- $For \ additional \ accessories, \ refer \ to \ the \ Process \ documentation \ chapter.$
- When ordering IQ/OQ qualification folders and associated IQ/OQ execution on one order, we offer a 15 % discount for both items.

 When ordering IQ/OQ/PQ qualification folders and associated IQ/OQ/PQ execution on one order, we offer a 15 % discount for the item of the IQ/OQ/PQ folder.
- ATEX conformity: 21

Pumping chamber (pumped gases): Il 2G IIC T3 X Environment with inert purge gas: II 2G IIB T4 X Environment without inert purge gas: II 3G IIB T4 X

Motor: II 2G Ex d IIB T4 Gb

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