



Dry Cabinet



Outstanding performance

A cabinet that grows with your demand, the MPD series is the first modular dry cabinet that can be expanded as your storage and drying needs increase.

Incorporating our extremely powerful U-5000 series dynamic drying unit, the basic MPD can be expanded to 4800 litres without the need for additional drying units.

Regeneration times are reduced due to the closed loop control of the drying unit which automatically responds to atmosphere and frequent door openings, while delivering precise humidity control to $\leq 0,5\%$ RH with traceability to a computer or network.



Standard Features

User friendly handling	Touchscreen display with easy menu structure
ESD features	Norm (IEC 61340-5-1) ESD metal painted body ($<10^6$ Ohm/sq) Dissipative glazing (in- and outside 10^8 Ohm/sq)
Online functionality	Interface and data logging through standard Ethernet interface Compatible with new MSL 2.0 software
Leveling out	Adjustable legs
Door & humidity alarm buzzer	Longer door openings are detected, high RH levels are detected
Transport	4 castors, ESD safe, for moving empty cabinets
Lockable doors	Every door can be locked separately with a key.
Sliding shelves	n height adjustable sliding shelves on metal rollers (4 pcs)
U-5000 series drying unit	$\leq 0,5\%$ RH, made in Germany
Rotronic sensor	Precision sensor, accuracy $\pm 0,8\%$ RH, $\pm 0,3^\circ\text{C}$
Power supply	Power cord 5 meter with IEC plug

Benefits

Drying time (see reference table)	Fast drying time, Level 3 component, $<1,4$ mm = 18 hours (60°C / 1% RH)
Recovery time after door opening	< 15 minutes to below 1% (with 1 cabinet and 1 door opening)
Modular system	Can be extended depending on your requirements
Temperature setting	Heating up to 40°C , accuracy $\pm 2^\circ\text{C}$
Energy saving construction	As a result of a Dynamic dry unit
Network	Standard ethernet interface
IPC	According to IPC-Jstd 033C
European Quality	Made in Germany
Maintenance	Easy to service, low maintenance

Technical data cabinets

- External dimensions: (W x H x D) 840 x 2040 x 900 mm
- Internal dimensions 1222: (W x H x D) 830 x 1780 x 730 mm
- Internal dimensions 1223: (W x H x D) 830 x 1780 x 850 mm
- Weight 1222: 140 kg
- Weight 1223: 125 kg
- Weight on shelf: 50 kg
- Shelves (WxD) 1222: 2 pcs short, 735 x 580 mm
2 pcs long, 735 x 740 mm
- Shelves (WxD) 1223: 4 pcs long, 735 x 740 mm
- Volume: 1200 L
- Electric supply: 230 VAC (120 VAC optional)
- Power consumption: 30 W/h
- Protection class: Class 1, hard grounded
- Humidity level cabinet: $\leq 0,5\%$ RH can be reached with drying unit U-5003
- Sensor accuracy: $\pm 0,8\%$ RH, $\pm 0,3^{\circ}\text{C}$
- Temperature accuracy: 40°C , $\pm 2^{\circ}\text{C}$ (with optional heater)

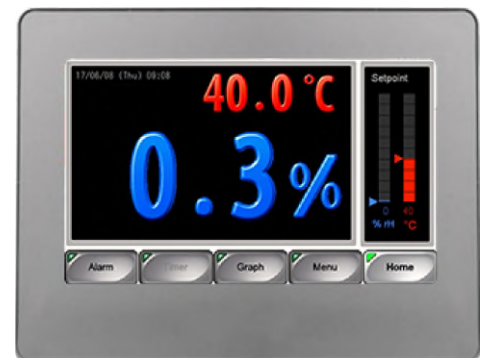
Technical data type 4 display

Settings

- Language Menu
- Nominal Value Humidity
- Humidity Alarm
- Delay Humidity Alarm
- Nominal Value Temperature (in combination with heater)
- Temperature Alarm (in combination with heater)
- Delay Temperature Alarm (in combination with heater)
- Sensor Offset
- Password Protection
- Floor Lifetime Reset Timer (optional)
- Manual Regeneration

Display

- Supply voltage (supplied by drying unit) 24 VAC/DC, 350 mA
- Input Touchscreen
- TFT Color LCD 4,3"
- Controllable Brightness
- Ethernet connection



Technical data Rotronic sensor HC2A-s



Based on the Airchip 3000 Technology use the HygroClip 2 probes can be used for control of temperature and humidity.

The HygroClip 2 probes can be configured with the ROTRONIC HW4 software and share the following features:

- Measurement of relative humidity and temperature.
- Programmable automatic sensor test with failsafe mode and sensor drift compensation.

Technical data dry-unit U-5000 series

- Dehumidifying performance: 120 g/h max.
- Minimal humidity 0,2% RH
- Dehumidifying Temperature 10 – 60° C
- Electric supply: 230 VAC
- Dimensions (L x B x H): 487 x 487 x 150 mm
- Weight: 14 kg

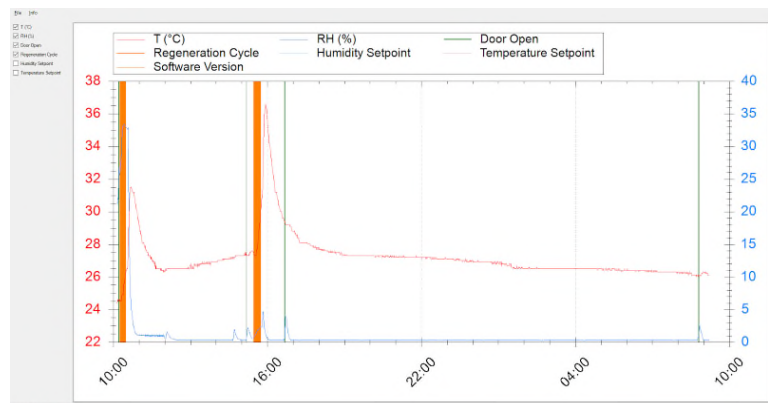


Technical data heater SH-1200

- Voltage: 230 VAC / 50 Hz (120 VAC / 60 Hz optional)
- Power: 1650 W
- Thermal protection: 70 °C
- Temperature range: 0 - 40 °C
- Air flow: 550 m³/h

Free Viewer software

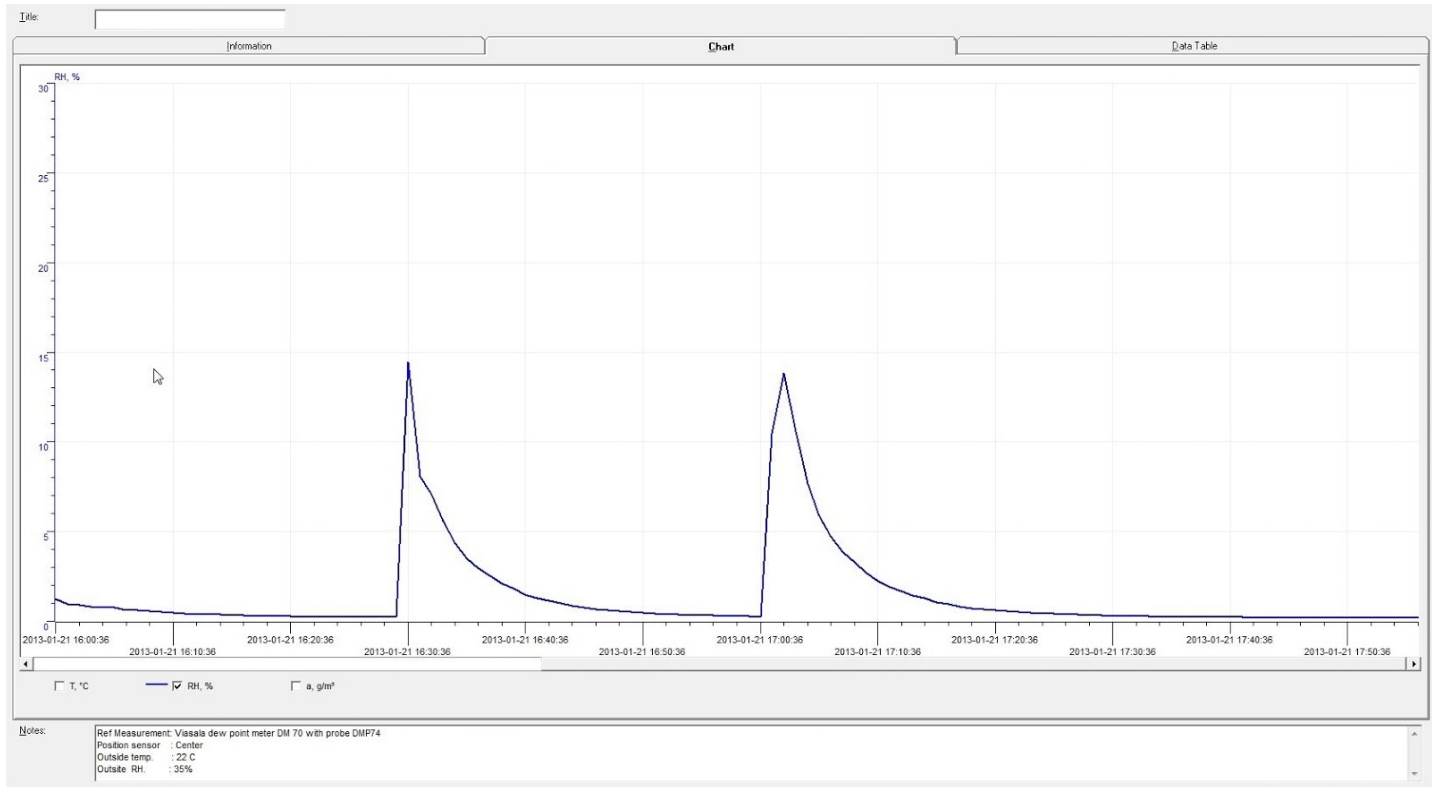
- Writing of climate data, door openings and alarms to SD card
- Transfer data through Ethernet to PC (history data)
- User-friendly display of all relevant data
- Data processing in MS-Excel
- Seamless documentation
- Excellent process safety



Performance test

Configuration of cabinets:

1 x MPD-1222



Test conditions

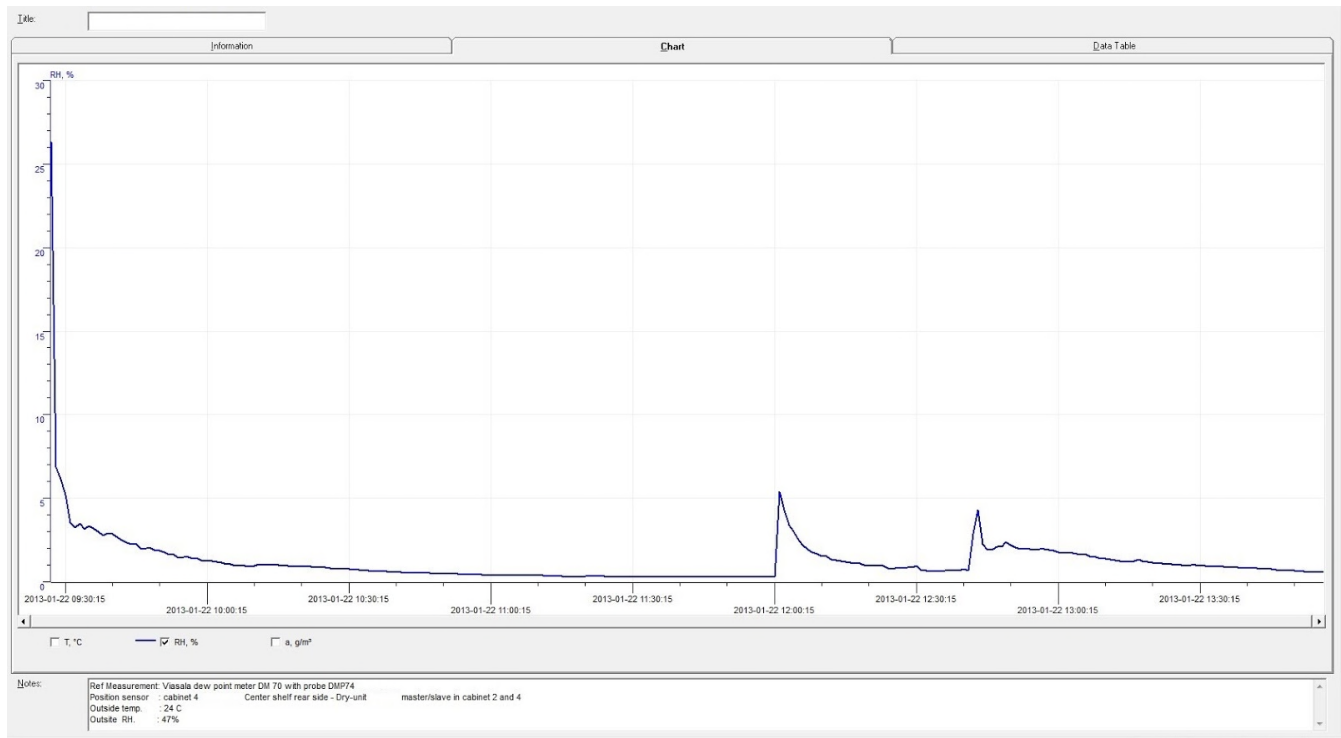
- Type of dew point sensor: 1x Vaisala
- Type of dew point sensor: Rotronic sensor
- Accuracy of dew point sensor: $\pm 0,3^{\circ} \text{C}$ at $+ 20^{\circ} \text{C}$ ($+ 68^{\circ} \text{F}$)
- Location of sensors: In the direct surrounding of cabinet sensor
- Ambient conditions: Hum. $50 \pm 5\% \text{ rH}$, $22^{\circ} \text{C} \pm 2^{\circ} \text{C}$, Pressure $994 \pm 20 \text{ hPa}$
- Door openings: 2 door openings, 15 sec. (average RH 0,70%)



Performance test

Configuration of cabinets:

1 x MPD-1222
1 x MPD-1223



Test conditions

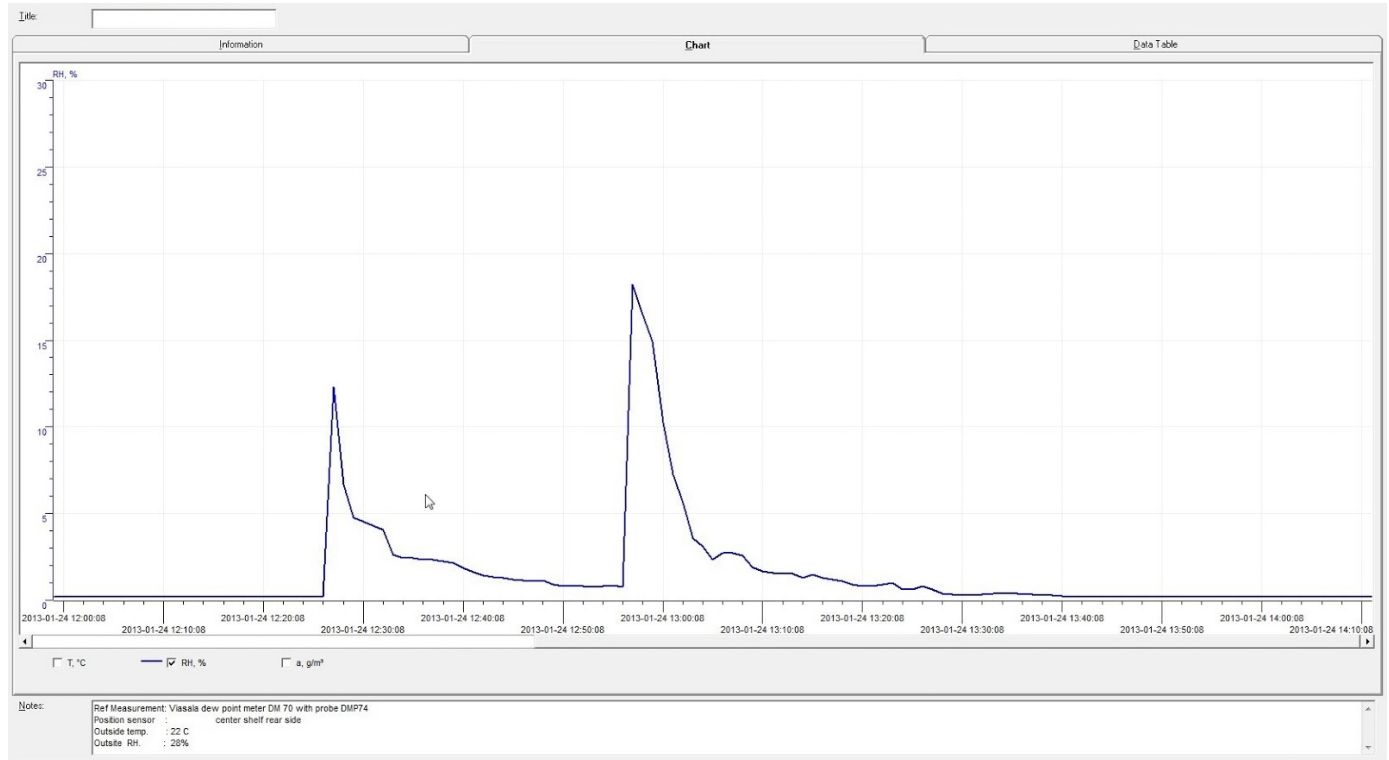
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- Door openings: 2 door openings, 15 sec. (average RH 0,70%)



Performance test

Configuration of cabinets:

1 x MPD-1222
2 x MPD-1223



Test conditions

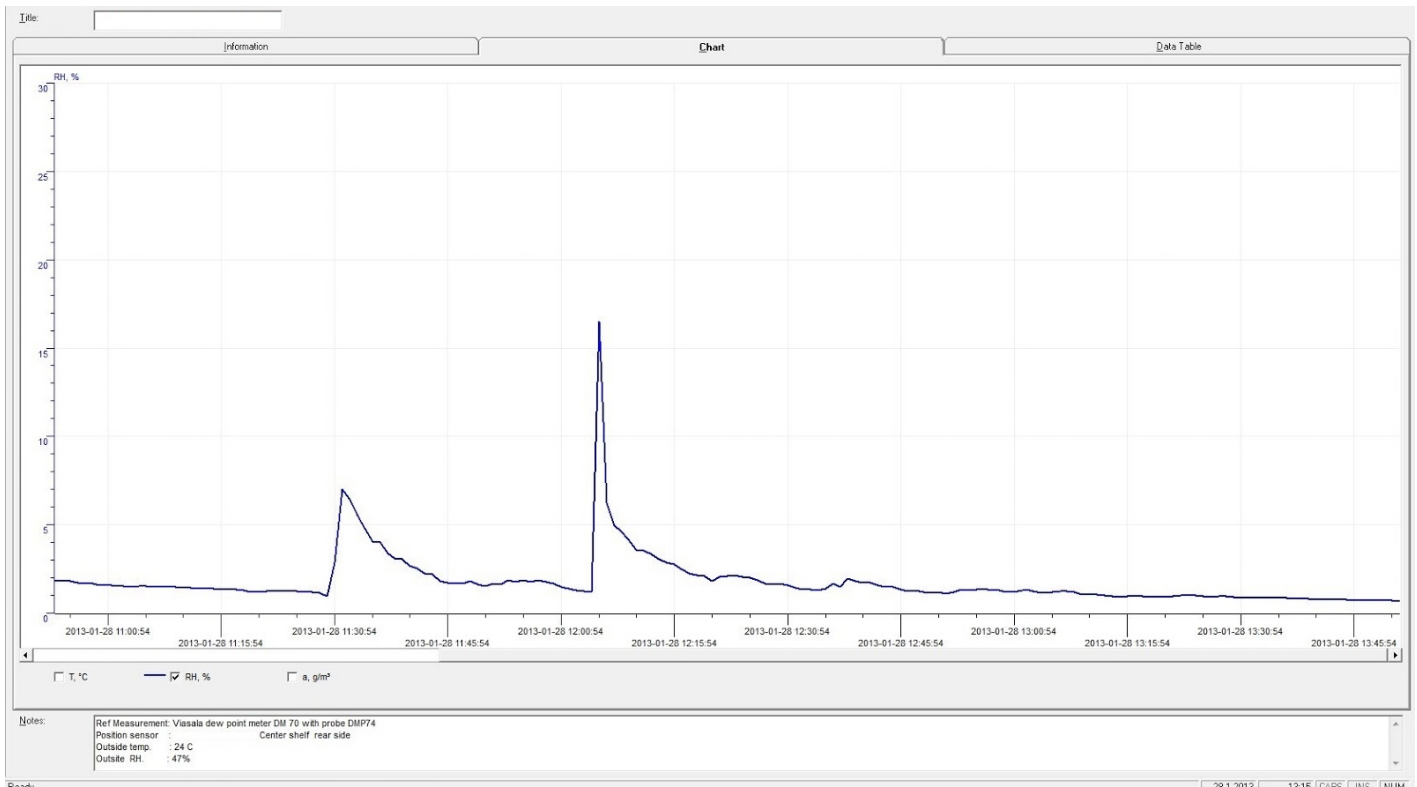
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- Type of dew point sensor: Rotronic sensor
- Accuracy of dew point sensor: $\pm 0,3^{\circ}\text{C}$ at $+ 20^{\circ}\text{C}$ ($+ 68^{\circ}\text{F}$)
- Location of sensor: In the direct surrounding of cabinet sensor
- Ambient conditions: Hum. $50 \pm 5\%$ rH, $22^{\circ}\text{C} \pm 2^{\circ}\text{C}$, Pressure 994 ± 20 hPa
- Door openings: 2 door openings, 15 sec. (average RH 0,70%)



Performance test

Configuration of cabinets:

1 x MPD-1222
3 x MPD-1223



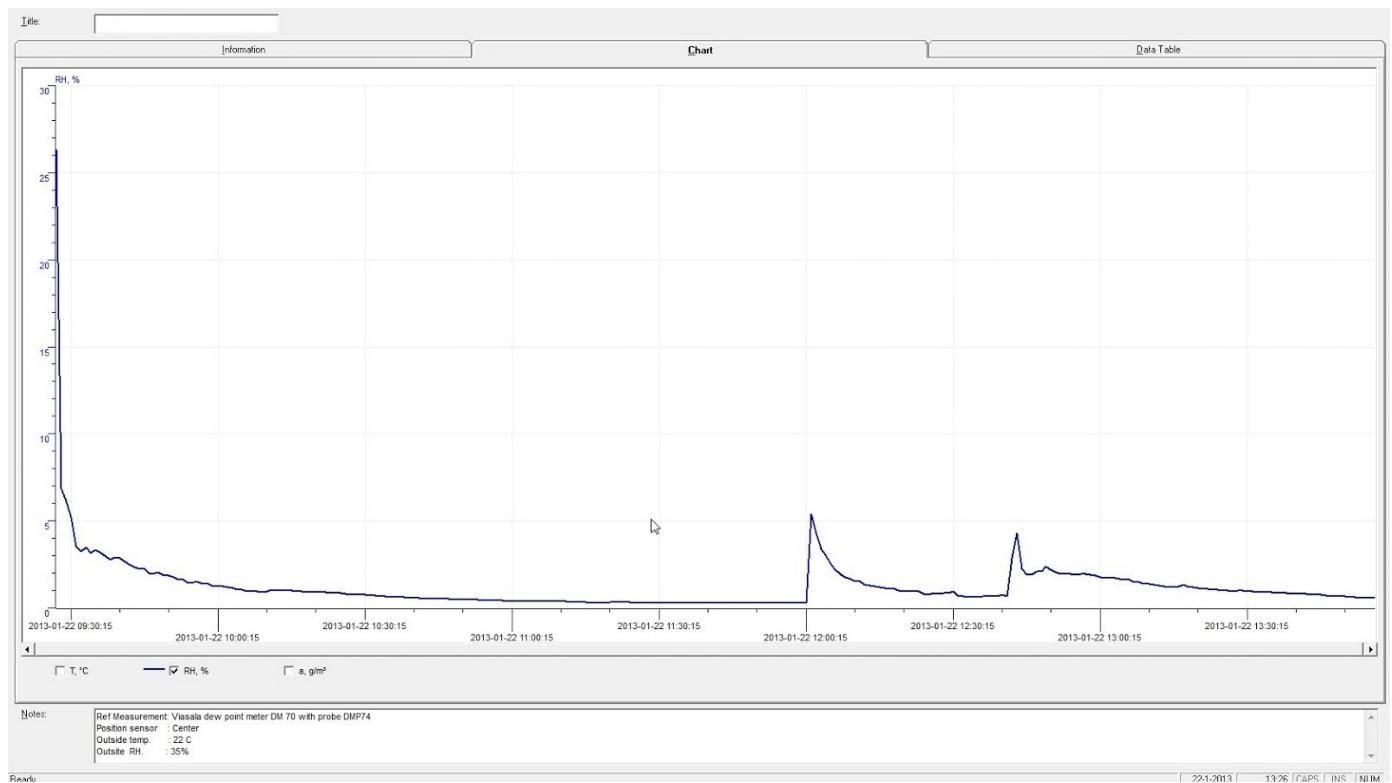
Test conditions

- Type of dew point sensor: 1x Vaisala
- Type of dew point sensor: Rotronic sensor
- Accuracy of dew point sensor: $\pm 0,3^{\circ} \text{ C}$ at $+ 20^{\circ} \text{ C}$ ($+ 68^{\circ} \text{ F}$)
- Location of sensor: In the direct surrounding of cabinet sensor
- Ambient conditions: Hum. $50 \pm 5\% \text{ rH}$, $22^{\circ} \text{ C} \pm 2^{\circ} \text{ C}$, Pressure $994 \pm 20 \text{ hPa}$
- Door openings: 2 door openings, 15 sec. (average RH 0,70%)



Performance test

Configuration of cabinets: 2 x MPD-1222
3 x MPD-1223
Master and slave U-5000 series drying unit



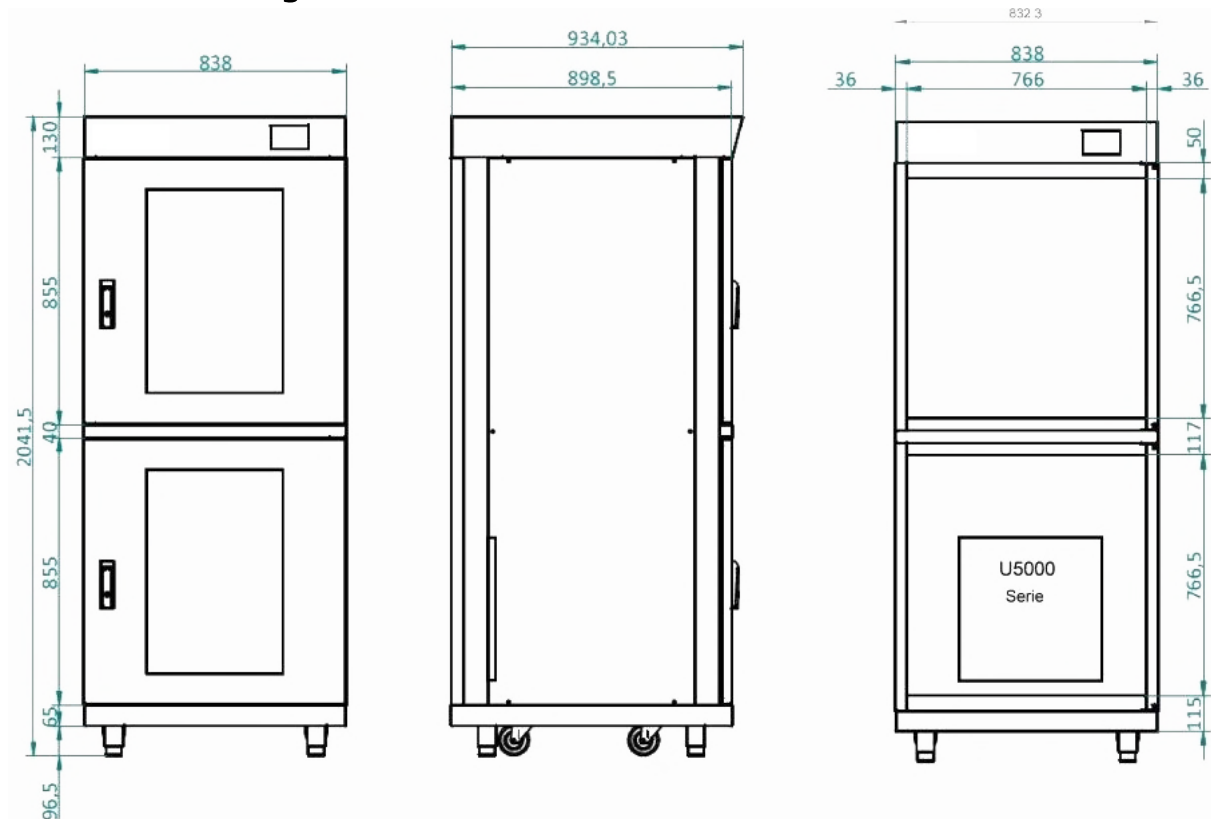
Test conditions

- Type of dew point sensor: 1x Vaisala
- Type of dew point sensor: Rotronic sensor
- Accuracy of dew point sensor: $\pm 0,3^{\circ} \text{C}$ at $+ 20^{\circ} \text{C}$ ($+ 68^{\circ} \text{F}$)
- Location of sensors: In the direct surrounding of cabinet sensor
- Ambient conditions: Hum. $50 \pm 5\% \text{ rH}$, $22^{\circ} \text{C} \pm 2^{\circ} \text{C}$, Pressure $994 \pm 20 \text{ hPa}$
- Door openings: 2 door openings, 15 sec. (average RH 0,70%)

For more detailed test results, please refer to our website.



Technical drawings



Dimensions mentioned in mm.

Shelves

Number of different types of shelves that can be mounted in the cabinet

Number of shelves bottom section	2	3	4	5	6	7	8
Distance (in mm) between shelves if equally divided	375	290	170	130	90	65	50
Remaining space between top shelf and middle beam	310	75	115	75	115	115	155

Number of shelves top section	2	3	4	5	6	7	8
Distance (in mm) between shelves if equally divided	375	290	170	130	90	65	50
Remaining space between top shelf and top cabinet	310	75	115	75	115	115	155

Options



SMD Reel rack with reel supports
L x W = 530 x 265 mm incl. 18 reel supports.

Item number 20014005



Reel support
Additional reel supports for 20014005.

Item number 20014201



Heater SH 1200
Functions based on circulating air, digitally controlled up to max. 40°C, serving to support and dry your component parts according to IPC-J-STD 033C.

Item number 21001510



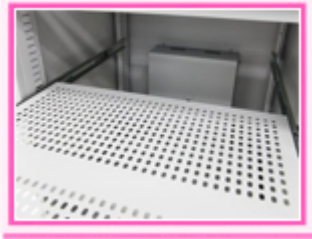
Humidity alarm signal lamp
Two-color (orange/green or red/green), magnetically fixed, providing optical signals on operational states and exceeded limit values. Operates on 24V.

Item number 20016030



N² Autoflow system
The autoflow system is developed to use in combination with a drying cabinet. The device is used for the quick removal of moisture in the cabinet after the doors have been opened. The drying process is realized by using nitrogen (N²), which is added automatically after the doors have been closed. (by means of adjustable timer function).
Item number 22613000

Options



ESD safe coated shelves 100% extractable (max 30 kg)

Long version (W x D) 735 x 740 mm
Item number 20011740

Short version (W x D) 735 x 580 mm
Item number 20017401



Stainless steel shelves 100% extractable (max 30 kg)

Long version (W x D) 735 x 740 mm
Item number 2001742

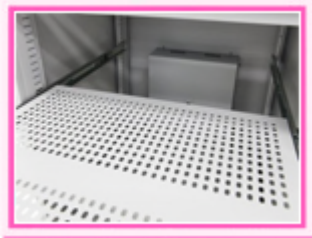
Short version (W x D) 735 x 580 mm
Item number 20011743



ESD safe coated shelves 100% extractable (max 50 kg)

Long version (W x D) 735 x 740 mm
Item number 20011747

Short version (W x D) 735 x 580 mm
Item number 20011746



Stainless steel shelves 100% extractable (max 50 kg)

Long version (W x D) 735 x 740 mm
Item number 2001749

Short version (W x D) 735 x 580 mm
Item number 20011748



U-5003 slave unit

The drying unit U-5003 slave unit is in hardware the same as a standard U-5003. However, it is equipped with special software to enable communication between master and slave drying units. The main drying unit is equipped with an upgraded software as well. The communication between the drying units is established by means of a Y-cable with 6-pole connectors.

Item number 47005055

Options



SMD Reel spring holder on extendable shelf

The Reel spring holders are suitable for all types of reels.
4 pcs mounted on shelf.

Item number 12001400



X Feeder system

This feeder rack is suitable for Siemens X Feeder systems.
Sold in combination with reel rack.

Item number 46204004



S Feeder system

This feeder rack is suitable for S Feeder systems.
Sold in combination with reel rack.

Item number 46204009



Hygroclip 2

Probe with maximum accuracy for all climate measurements.

Item number 47000027

Exchange calibrated sensor:
Item number 47000040



Humidity calibrator Hygropalm 22

Precision measuring device for calibrating sensors.

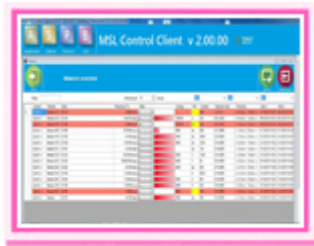
Set including Hygroclip sensor, case and cable:

Item number 20001019

Hygropalm only:

Item number 20001016

Options



MSL 2.0 software for 1000 components

Software solution for the monitoring of moisture sensitive components and their MSL states during storage and processing in the production. The exact drying state individually for each component is monitored and displayed with the software. One of the possibilities is that it can read out multiple HC2A-S sensors. To adjust storage conditions, picking of stock, removal of used parts and more stock control. A complete history for each component is traceable up to the full processing. The evaluation of the drying conditions is based on the requirements of the IPC / JEDEC J-STD-033B1 directive.

Item number 20010036



MSL software upgrade with additional 1000 components

Upgrade to monitor an additional 1000 components

Item number 200174502



Monitor software

Realtime cabinet monitoring with alarm function, sending e-mails with detailed information on the status of the cabinet. History data files with graphical overview

Item number 47000583



Ventilation channel MPD cabinet

Used to connect multiple MPD cabinets

Item number 21001800

Pro Dry BV
info@prodry-asy.com

For more information visit
www.prodry-asy.com

Subject to change without notice.

Some general descriptions and performance characteristics may not be applicable to all products. Technical specifications are subject to change without notice. Only features and technical data provided in purchasing contract are legally binding.

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