



HSD 1104-51 Dry Cabinet



Outstanding performance fast recovery time

The HSD cabinet series has an outstanding performance for drying moisture sensitive components and pcb's as a result of a high performance drying unit. Therefore it is very suitable for operation with frequent approach.

The dynamic drying unit of the 5000 series reaches very reliable low humidity values of 0,5% RH and automatically regenerates if necessary.

Humidity, temperature, alarm functions are shown and can be adjusted on a digital display.

Data can be taken out from the cabinet through RS232 with optional software.



Features

- **ESD safe design**
- **Lockable doors**
- **Data logging**
- **Online read out**
- **Door & humidity alarm buzzer**
- **Lockable doors**
- **Transport**
- **Shelves**
- **U 5000 series drying unit**
- **Accuracy of sensor RH% & T°C**
- **Power supply**
- Norm (IEC 61340-5-1)
ESD metal painted body (10^6 Ohm/sq)
Dissipative glazing (in- and outside 10^8 Ohm/sq)
- 4 doors, locked with key
- Integrated data logger over sensor with standard 2000 measuring points (optional software is required)
- RS 232 interface for data (optional software is required)
- Longer door openings are detected, high RH levels are detected
- Every door can be locked separately with a key
- Castors
- 5 in height adjustable chrome steel shelves
- < 0.5% RH, made in Germany
- +/- 3% RH, +/-0.3 °C
- Power cord 5 meter with IEC plug

Benefits

- **Recovery time after door opening**
- **Energy saving consumption% & T°C**
- **Network**
- **IPC**
- **European Quality**
- **Maintenance**
- < 6 minutes to below 1% (with 1 door opening)
- Average power consumption of 58 W/h
- Optional
- According to IPC/JEDEC J- STD 033C & IPC-1601
- Made in Germany
- Easy to service, low maintenance



Technical Data Cabinet

- External dimensions: (W x H x D) 1200 x 1675(1840) x 658(768) mm
- External dimensions: (WxHxD) 1190 x 1533 x 630 mm
- Weight: 189 kg
- Weight on shelf: 50 kg
- Max. loading capacity: 300 kg
- Body: Steel, conductive coated 10^6 - 10^8 Ω /sq
- Shelves (W x D): 5 pcs, 1150 x 490 mm adjustable
- Volume: 1179 L
- Voltage: 230 V AC (120 V AC optional)
- Power consumption: Average 58 W/h
- Protection class: hard grounded, Class 1
- Humidity level cabinet: <0,5 % RH
- Sensor Accuracy: ± 3 % RH, $\pm 0,3$ °C

Technical Data 21 Display

Settings:

- Nominal value humidity
- Nominal value humidity alarm (light)
- Delay time humidity alarm
- Nominal value temperature
- Door alarm buzzer
- Offset possibilities



Technical Data N² (Auto) Flow

- Power supply: 90 - 240 V AC (110 V AC optional)
- N² Connection: 8 mm hose connection
- N² Pressure: 1 – 6 bar
- N² Standby- amount: 0 – 25 L/min
- N² Purge: 0 – 100 L/min
- (Purge-Time): 0 – 99 min

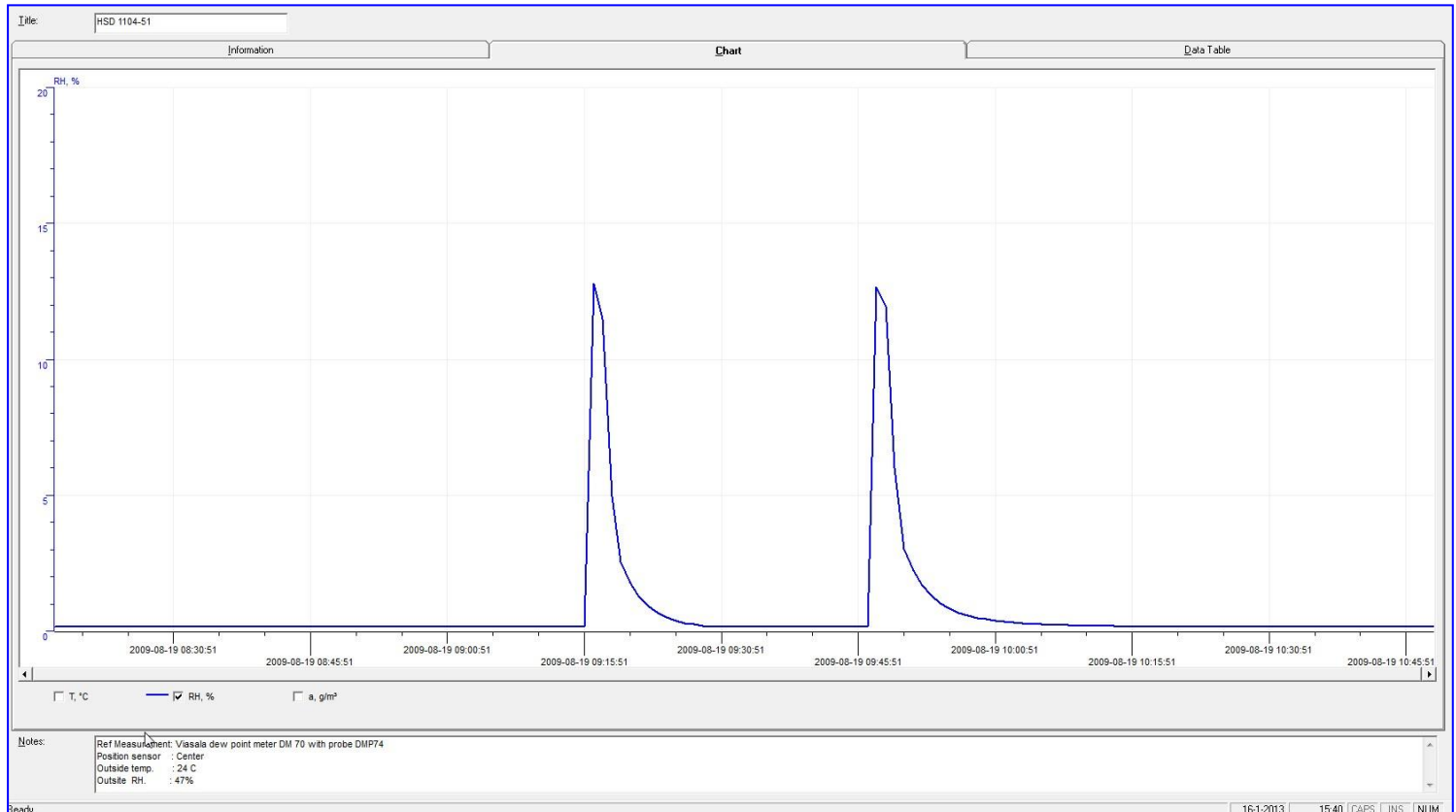


Technical Data dry-unit U 5000 series

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



Performance test



Test conditions



Instrument:

Type of dew point sensor:

Accuracy of dew point sensor:

Location of sensor:

Ambient conditions:

Dooropenings:

Vaisala.

Vaisala drycap 180M

$\pm 0,2^{\circ} \text{C}$ at $+ 20^{\circ} \text{C}$ ($+ 68^{\circ} \text{F}$)

In the direct surrounding of cabinet sensor

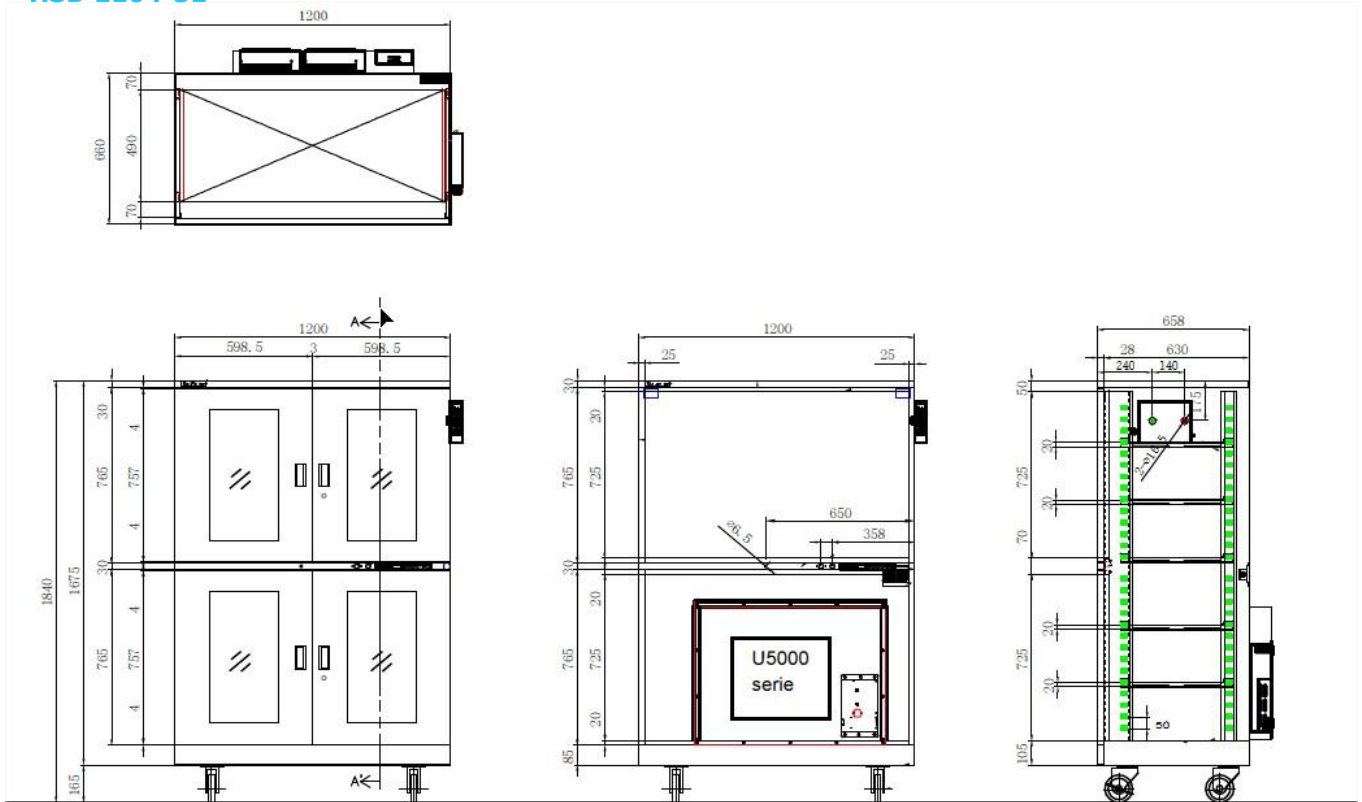
Humidity $50 \pm 5\% \text{ rH}$, $25^{\circ} \pm 2^{\circ} \text{C}$, Pressure $994 \pm 20 \text{ hPa}$.

2 dooropenings, 15 sec. (average RH 0,70%)



Technical Drawings

HSD 1104-51



Dimensions mentioned in mm.

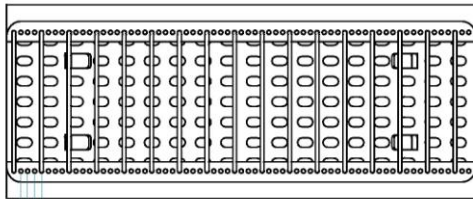
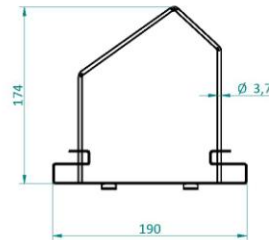
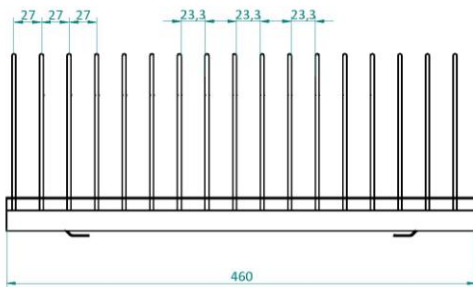
Number of shelves bottom section	2	3	4	5
Distance (in mm) between shelves if equally divided in bottom section	350	230	175	125
Remaining space between top shelf and middle beam	370	225	125	120
Remaining space between bottom shelf and bottom cabinet	330	230	180	125
Loading capacity shelves m ² (1155 mm x 490 mm)	1,13	1,70	2,26	2,83
Number of shelves top section	2	3	4	5
Distance (in mm) between shelves if equally divided (if bottom shelf is mounted at lowest possible position in top section)	350	230	175	125
Remaining space between top shelf and top beam	370	230	125	125
Remaining space between bottom shelf and middle beam	330	230	180	130
Loading capacity shelves m ² (1155 mm x 490 mm)	1,13	1,70	2,26	2,83
Shelves are adjustable every mm	50	50	50	50

Measurements can slightly deviate.

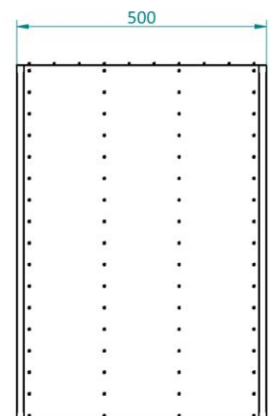
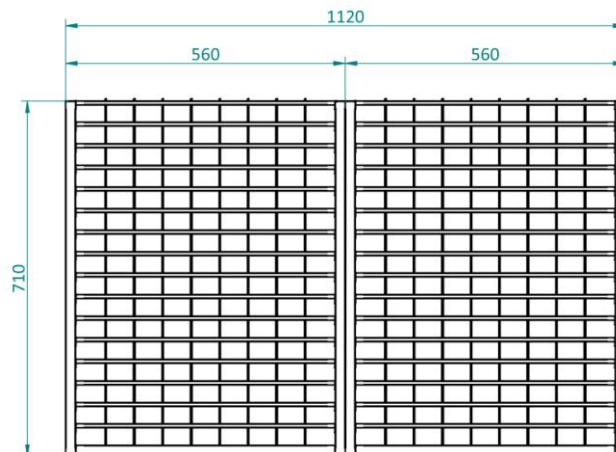
Note: Calculations measured from the bottem shelves (each section) on the lowest possible position.



Technical Drawings



Dimensions of the SMD Reel Rack, item number 20014000



Dimensions of the Honeycombe system, item number 20050101
(consist out of 1 piece left or right)



Options



N2 auto flow system,

The Auto-Flow-System is developed to use in combination with a Totech drying cabinet. The device is used for the quick removal of moisture in the cabinet after the doors has been opened. The drying process is realized by using nitrogen (N²), which is add automatically after the doors have been closed. (by means of adjustable timer function).

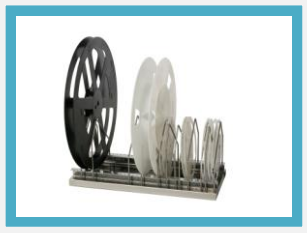
Item number 22613000.



N2 flow system,

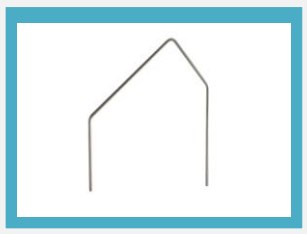
The Flow-System is developed to use in combination with a Totech drying cabinet. The device is used for adding nitrogen (N²).

Item number 20010020



SMD Reel rack ESD coated with reel supports,

Item number: 20014000



Reel support,

additional reel supports for 20014000:

Item number: 20014200



Humidity alarm signal Lamp,

two-color, (orange/green), magnetically fixed, providing optical signals on operational states and exceeded limit values. Operates on 24 V.

Item number: 20016030



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 Basic software,

Software solution for the monitoring of moisture sensitive components and their MSL States during storage and processing in the production. With the software the exact drying state individually for each component is monitored and displayed. Here, 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-033C directive.

Item number 20017450



MSL software upgrade standard,

Upgrade to monitor moisture sensitive components and your MSL were to an another storage facility (dry cabinet) with the standard-MSL-software.

Item number 20017452



MSL advanced software,

MSL upgrade offers multiple functions to the MSL standard Software. One of the possibilities is that it can read out multiple HC2-S sensors. To adjust storage conditions ,picking of stock, removal of used parts & more stock control.

Item number 20017451



HW4-E software,

Standard edition for use with 1 cabinet . Rotronic HW4 is a process oriented, validated software for use with the Rotronic line of digital humidity-temperature instruments.

Item number 47000034



HW4-P software,

Professional Edition for use with several cabinets. Rotronic HW4 is a process oriented, validated software for use with the Rotronic line of digital humidity-temperature instruments.

Item number 47000031



Rotronic datalogger set,

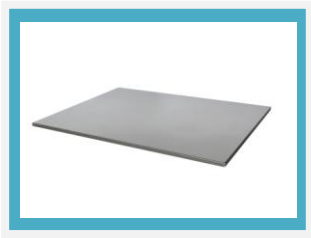
Including Software HW4-E-V3 and Cable AC3006

Item number 47000580

Sensor accuracy: +/- 0,8 % RH, +/- 0,3°C



Options

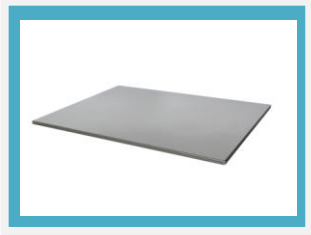


Shelf standard,

For cabinets type 1106 and 1104.

Item number 20111409

Brackets 2 pcs, item number 20111709



Shelf,

For cabinets with 2 drying units.

Item number 20111609

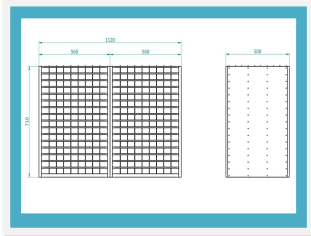
Brackets 2 pcs, item number 20111709



RS 232 Ethernet interface,

Ethernet to 1 x RS-232 ports.

Item number 47000041



Honeycombe system,

Flexible stainless steel storage system for IC Tubes components & PCB's. The width of the compartments is adjustable before installing the system in the cabinet. The number of compartments varies from 16 till 288. (consist out of 1 piece left or right)

item number 20050101

Version 12-04

