# Totech

## SUPER DRY®

Drying Cabinets and Vacuum Machines for Moisture Sensitive Components

# Content

**Jos Brehler**
CEO Totech Europe B.V.

We are very pleased to welcome you to our newest brochure, and to show you the many new innovations that have been introduced in our new product line-up, much of which is German engineered and manufactured. During the past 5 years Totech Europe has grown into a global market leader, supplying MSD management solutions to many well-known companies with whom we have worked closely to extend our technology. We also provide custom designs to meet special applications and invite you to contact us with any special requirements you might have.
Our development efforts have produced new levels of drying performance but also environmentally responsible products such as our XSD & XSDB series. The control and management of moisture sensitive components and PCB's in today's industry is a fast changing challenge. Super Dry by Totech is here to help you meet that challenge head on.

✖ Standard    * without temperature adjustment, Ø-room temperature: 25°C

✖ Optional available

# Dry storage cabinets SDB-Series Wide choice at low prices.

| Storage<br>< 5% RH | Drying<br>1 - 2% RH* | Room temp.<br>Ø 25°C |
|---|---|---|

\* Depending on amount of dooropenings

**MADE IN ASIA**

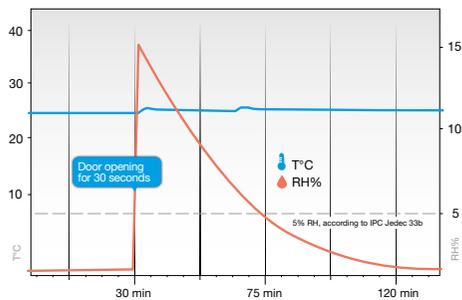**EPA**

Our Super Dry Basic storage cabinet Series combines 3 different sizes with patented drying technology. Specially designed for Dry Storage < 5% RH in conformity with IPC. These cabinets do not have door or humidity alarm and will be deliverd with painted ESD shelfs.

## Options:

- no further options available



SDB 1104, 1106

### SDB 151-21

| |
|---|
| **Ext. dimensions (whd): 500 x 630 x 580 mm** |
| **Int. dimensions (whd) (excl. dry unit): 490 x 560 x 530 mm** |
| **Effective capacity: 145 l** |
| **Weight: 29 kg** |
| **Number of shelves: 3** |
| **Drying unit: 1 x U-2000 for 1 - 2% RH\*** |
| **Power consumption: 21 W/h** |

### SDB 1104-21

| |
|---|
| **Ext. dimensions (whd): 1200 x 1840 x 670 mm** |
| **Int. dimensions (whd) (excl. dry unit): 1190 x 1560 x 620 mm** |
| **Effective capacity: 1160 l** |
| **Weight: 155 kg** |
| **Number of shelves: 5** |
| **Drying unit: 1 x U-2000 for 1 - 2% RH\*** |
| **Power consumption: 21 W/h** |

### SDB 1106-21

| |
|---|
| **Ext. dimensions (whd): 1200 x 1840 x 670 mm** |
| **Int. dimensions (whd) (excl. dry unit): 1190 x 1560 x 620 mm** |
| **Effective capacity: 1160 l** |
| **Weight: 160 kg** |
| **Number of shelves: 5** |
| **Drying unit: 1 x U-2000 for 1 - 2% RH\*** |
| **Power consumption: 21 W/h** |

\* Depending on amount of dooropenings







(These cabinets cannot be equipped with N2 or Heater)

**Control panel with operation field of the 21-Series**

# Dry storage cabinets SD-Series

* Depending on amount of dooropenings

Optimal protection with minimal deployment. User-friendly operation and compact construction guarantee safe and reliable storage requirements.

MADE IN ASIA

The cabinet of the SD-Series is equipped with a patented drying unit. This achieves a low humidity of < 5% RH. Humidity, temperature and alarm function are shown and can be adjusted on a digital display. The circulation of the air in the cabinet is regulated through a door automatic. All surfaces are painted in a conducted way and in conformity with current ESD standards. These series were developed for a medium to long-term storage to avoid damages of humidity and oxidation.

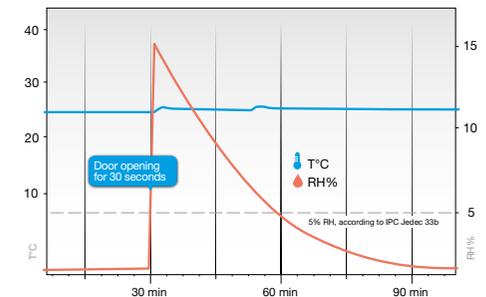| Ext. dimensions: 500 x 630 x 580 mm |
| Int. dimensions (whd) (excl. dry unit) : 490 x 560 x 530 mm |
| Effective capacity: 145 l |
| Weight: 29 kg |
| Number of shelves: 3 |
| Drying unit: 1 x U-2000 for 1 - 2% RH* |
| Power consumption: 31 W/h |

SD 151-21

| Ext. dimensions: 500 x 1230 x 640 mm |
| Int. dimensions (whd) (excl. dry unit) : 490 x 1160 x 590 mm |
| Effective capacity: 340 l |
| Weight: 60 kg |
| Number of shelves: 7 |
| Drying unit: 1 x U-2000 for 1 - 2% RH* |
| Power consumption: 31 W/h |

SD 302-21

| Ext. dimensions: 880 x 900 x 740 mm |
| Int. dimensions (whd) (excl. dry unit) : 870 x 830 x 690 mm |
| Effective capacity: 500 l |
| Weight: 60 kg |
| Number of shelves: 3 |
| Drying unit: 1 x U-2000 for 1 - 2% RH* |
| Power consumption: 31 W/h |

SD 502-21

Door opening for 30 seconds

T°C
RH%

5% RH, according to IPC Jedec 33b

30 min     60 min     90 min

SD 151, 302, 502

* Depending on amount of dooropenings

# Dry storage cabinets SD-Series

\* Depending on amount of dooropenings

**MADE IN ASIA**

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**Included:**

- Door & RH alarm
- Chrome steel shelves
- Pre mounted holes for heater & auto flow system
- 2 dry units (SD 1106, SD 1104)
- ESD wristband
- Earth plug

**Options:**

- Shelves
- Adjustable legs
- Automatic nitrogen unit with door contact switch
- Two-colour alarm lights
- Datalogging through network, incl. software **
- Optional accessories
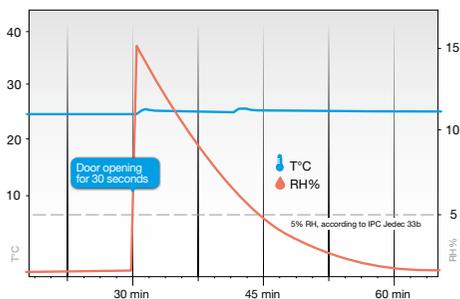
## SD 702-21

| Ext. dimensions: 620 x 1840 x 780 mm |
|---|
| Int. dimensions (whd) (excl. dry unit): 610 x 1560 x 730 mm |
| Effective capacity: 700 l |
| Weight: 110 kg |
| Number of shelves: 5 |
| Drying unit: 1 x U-2000 for 1 - 2% RH* |
| Power consumption: 31 W/h |

## SD 1104-21

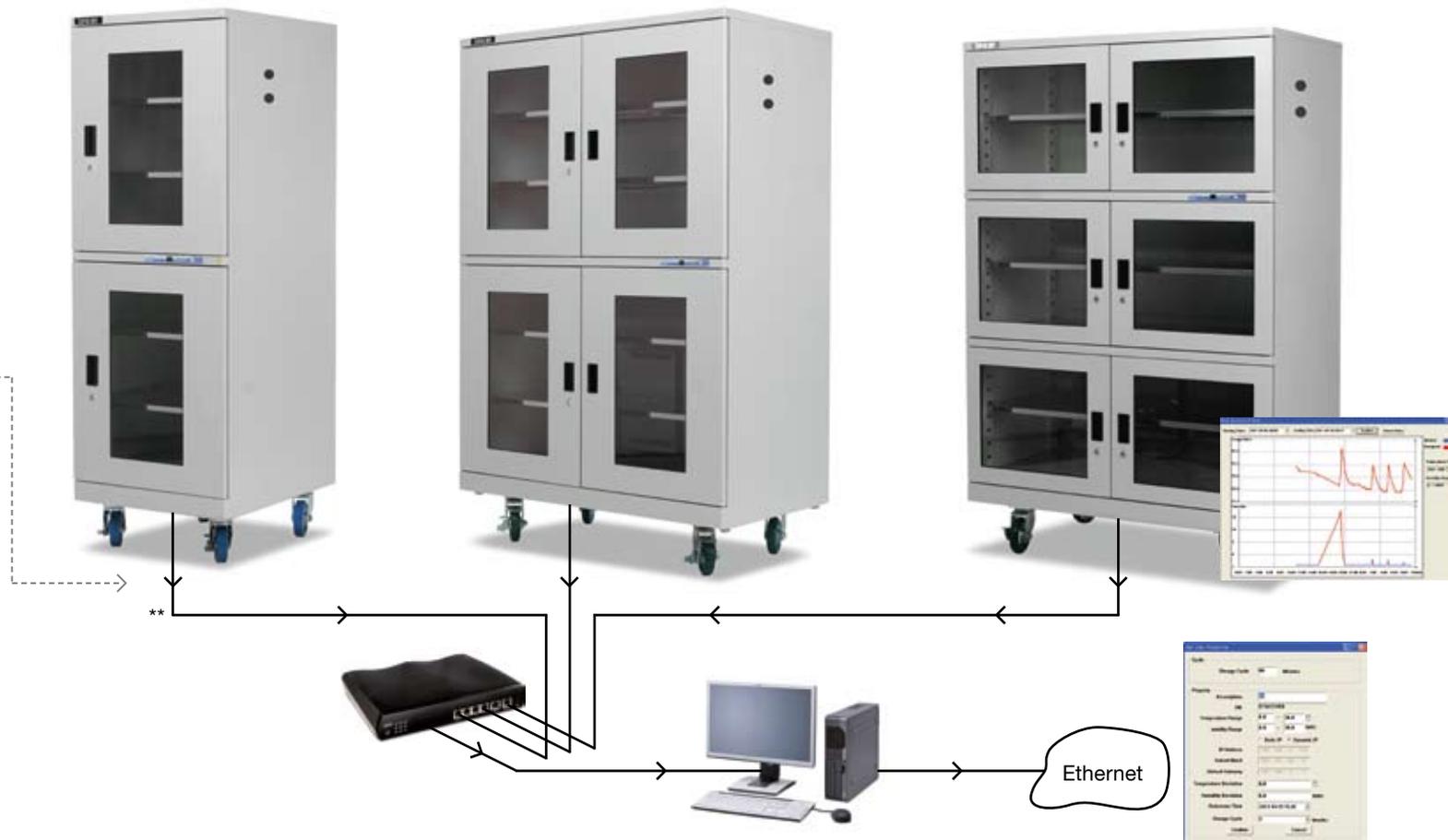| Ext. dimensions: 1200 x 1840 x 670 mm |
|---|
| Int. dimensions (whd) (excl. dry unit): 1190 x 1560 x 620 mm |
| Effective capacity: 1160 l |
| Weight: 155 kg |
| Number of shelves: 5 |
| Drying unit: 2 x U-2000 for 1 - 2% RH* |
| Power consumption: 62 W/h |

## SD 1106-21

| Ext. dimensions: 1200 x 1840 x 670 mm |
|---|
| Int. dimensions (whd) (excl. dry unit): 1190 x 1560 x 620 mm |
| Effective capacity: 1160 l |
| Weight: 160 kg |
| Number of shelves: 5 |
| Drying unit: 2 x U-2000 for 1 - 2% RH* |
| Power consumption: 62 W/h |

\* Depending on amount of dooropenings

Door opening for 30 seconds

T°C
RH%

5% RH, according to IPC Jedec 33b

40
30
20
10

15
10
5

30 min    45 min    60 min

SD 1104, 1106

**

Ethernet

# Drying cabinet HSD-Series

Our HSD Series combines a large choice of various cabinet sizes with high achievement
(very fast recovery time) drying technology. Catagory: Very good – our practice test winner for your production.

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**EPA**

**Control panel with operation field of the 52-Series**

## Included

- Height adjustable and sliding shelves
- Lockable doors
- Drying unit U-5000 Series, < 0.5% RH
- Precision sensor (Rotronic)
- Door and humidity alarm
- Control panel with operation field
- Humidity and temperature report
- RS 232 interface for guarding online data
- ESD-safe design
- 4 Transport castors/ 4 Feet
- Integrated data logger (optional software needed to read it)

| HSD 241-52 | HSD 351-52 | HSD 472-52 |
|---|---|---|
| Ext. dimensions (whd): 610 x 820 x 670 mm | Ext. dimensions (whd): 610 x 1100 x 670 mm | Ext. dimensions (whd): 610 x 1380 x 670 mm |
| Int. dimensions (whd) (excl. dry unit) : 600 x 600 x 660 mm | Int. dimensions (whd) (excl. dry unit) : 600 x 880 x 660 mm | Int. dimensions (whd) (excl. dry unit) : 600 x 1170 x 660 mm |
| Effective capacity: 240 l | Effective capacity: 350 l | Effective capacity: 470 l |
| Weight: 55 kg | Weight: 70 kg | Weight: 80 kg |
| Number of shelves: 2 sliding shelves | Number of shelves: 2 sliding shelves | Number of shelves: 3 sliding shelves |
| Dry unit: 1 x U-5002 for < 0.5% RH | Dry unit: 1 x U-5002 for < 0.5% RH | Dry unit: 1 x U-5002 for < 0.5% RH |
| Power consumption: 30 W/h | Power consumption: 30 W/h | Power consumption: 30 W/h |

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# Drying cabinet HSD-Series

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The HSD cabinet is especially characterized by its fast back drying, the precision sensor, and its reliable control unit. The dynamic drying unit U-5000 Series guarantees a fast drying and regeneration adapted to the number of its opening cycles. Therefore it is very suitable for operation with frequent approach. The maximum dryness is around < 0.5% RH and provides optimal storage conditions for your materials.

## HSD 702-52

**Ext. dimensions (whd): 610 x 1950 x 670 mm**

**Int. dimensions (whd) (excl. dry unit) : 600 x 1730 x 660 mm**

**Effective capacity: 700 l**

**Weight: 90 kg**

**Number of shelves: 5 sliding shelves**

**Dry unit: 1 x U-5002 for < 0.5% RH**
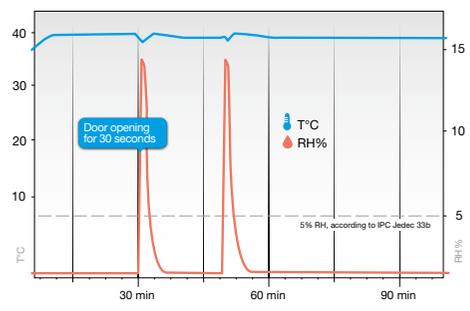
**Power consumption: 30 W/h**

## HSD 1404-52

**Ext. dimensions (whd): 1240 x 1950 x 670/780 mm**

**Int. dimensions (whd) (excl. dry unit) : 1190 x 1740 x 660 mm**

**Effective capacity: 1400 l**

**Weight: 180 kg**

**Number of shelves: 5 sliding shelves**

**Dry unit: 1 x U-5002 for < 0.5% RH**

**Power consumption: 30 W/h**

## HSD 1406-52

**Ext. dimensions (whd): 1240 x 1950 x 670/780 mm**

**Int. dimensions (whd) (excl. dry unit) : 1190 x 1740 x 660 mm**

**Effective capacity: 1400 l**

**Weight: 180 kg**

**Number of shelves: 5 sliding shelves**

**Dry unit: 1 x U-5002 for < 0.5% RH**

**Power consumption: 30 W/h**

Door opening for 30 seconds

T°C
RH%

5% RH, according to IPC Jedec 33b

30 min          60 min          90 min

# Modular drying cabinet MSD-Series

The cabinet that grows with your requirements. Made to size solutions are possible through modular construction.
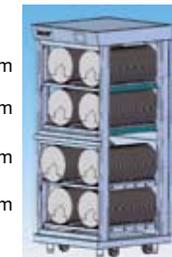The standard cabinet can be extended with further modular cabinets up to 6000 l.

MADE IN GERMANY

NEW

The cabinet is characterized by its innovative modular construction and makes a step by step extension of the storage capacity in the process of cabinet construction posssible. Further cabinet parts or drying units can be integrated on demand in the system of the cabinet. The conveniently arranged and user-friendly display makes a safe adjustment of the following functions possible: humidity, alarm functions and heating. The serial production of RS 232 interface makes a simple reading of the integrated Dataloggers with our software possible. Our dynamic Drying unit U-5000 makes regenerations adapted to your demands.

50 reels / reelrack ø 330 x 8 mm
50 reels / reelrack ø 330 x 8 mm
38 reels / reelrack ø 330 x 8 mm
38 reels / reelrack ø 330 x 8 mm

MSD 1222

50 reels / reelrack ø 330 x 8 mm
50 reels / reelrack ø 330 x 8 mm
50 reels / reelrack ø 330 x 8 mm
50 reels / reelrack ø 330 x 8 mm

MSD 1223

### Included

- Height adjustable and sliding shelves
- Lockable doors
- Drying unit U-5000 Series, < 0.5% RH
- Precision sensor (Rotronic)
- Door and humidity alarm
- Control panel with operation field
- Humidity and temperature report
- RS 232 interface for guarding online data
- ESD-safe design
- 4 Transport castors/ 4 Feet
- Integrated data logger

MSD 1223 + MSD 1222-52

| Ext. dimensions (whd): 840 x 2040 x 900 mm |
| Int. dimensions (whd): 830 x 1780 x 850 mm |
| Effective capacity: 1200 l |
| Weight: 120 kg |
| Number of shelves: 4 sliding shelves |
| *No drying unit pre-installed* |
| Power consumption: 30 W/h |

**+**

| Ext. dimensions (whd): 840 x 2040 x 900 mm |
| Int. dimensions (whd) (excl. dry unit) : 830 x 1780 x 850/730 mm |
| Effective capacity: 1150 l |
| Weight: 150 kg |
| Number of shelves: 4 sliding shelves |
| Dry unit: 1 x U-5002 for < 0.5% RH |
| Power consumption: 30 W/h |

Door opening for 30 seconds

T°C
RH%

5% RH, according to IPC Jedec 33b

30 min     60 min     90 min

MSD 1223-00

MSD 1222-52

# Custom-made cabinets

Our custom-made cabinets are the answer to the increased interest of our customers in individual solutions. With this modular concept we are in a position to react quickly to the wishes of our customers. By using reliable parts we guarantee a safe process also with special solutions. We are interested in low energy values and environment-friendly solutions. You have a choice in our single parts MSD / HSD and XSD. You can choose from the following components:

### Equipment possibilities

- Drying unit U-5000 Series
- Computer steering with full color touch-screen Display LCD 5.7" (320x240 Pixel)
- network/ Wifi possibilities
- Control panel with operation field
- Double-walled insulation
- Heat-resistant double glazing
- Heating up to 60°C
- Electrical sliding door
- Individual cabinet sizes
- Individual Construction
- RS 232 interface for guarding online data
- Software for data processing
- Log steering with control panel etc.

Dry Tower

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# Insulated drying cabinets XSD & XSDB-Series

| Drying 0.5% RH | Average drying conditions / day 1% RH | Temp. 40°C | Temp. 60°C | Nitrogen optional |
|---|---|---|---|---|

The combination of high achievement dryer, heating and thick-walled insulation enables the XSD-Series to effect a quick drying of moist components and pcb's.

**MADE IN GERMANY**

The XSD-Series reaches humidity values of < 0.5% RH and regenerates automatically if necessary. Thanks to the double walled stainless steel body with 60 mm insulation a temperature up to 60°C is reached at the lowest consumption of energy. A central radial fan supports the drying process and provides an even temperature and humidity division in the cabinet. With the precision sensor of the firm of Rotronic the relevant process data are captured and are filed for back reference.

| | XSD 53 serie | XSD 52 serie | XSDB 52 serie |
|---|---|---|---|
| Painted steel body | | | ✖ |
| Stainless steel body | ✖ | ✖ | |
| Lockable doors | ✖ | ✖ | ✖ |
| Heat-resistant glazing | ✖ | ✖ | ✖ |
| Radial fan for a stable temperature profile | ✖ | ✖ | ✖ |
| Insulated cabinet body / 60mm | ✖ | ✖ | ✖ |
| Continuously adjustable heating up to 40ºC | | | ✖ |
| Continuously adjustable heating up to 60ºC | ✖ | ✖ | optional |
| Drying unit U-5000 Series, <0,5%RH | ✖ | ✖ | ✖ |
| Precision sensor (Rotronic) | ✖ | ✖ | ✖ |
| ESD Safe design (also in-and outside glass) | ✖ | ✖ | ✖ |
| Full graphic display 5,7" 53 serie, resolution (320x240pixel) | ✖ | optional | optional |
| Network / Wifi possibilities | optional | optional | optional |
| Read out & control data on external computer or tablet / mobile phone | optional | optional | optional |
| Digital display 52 serie | | ✖ | ✖ |
| RS232 interface for data | ✖ | ✖ | ✖ |
| Integrated datalogger (software needed to read it) | ✖ | optional | optional |
| LED Light | ✖ | ✖ | optional |
| Metal shelves on metal rollers | ✖ | ✖ | optional |
| Metal shelves on sliding rail | optional | optional | ✖ |
| Heigth adjustable feet | ✖ | ✖ | ✖ |
| 5/10 shelves | ✖ | ✖ | ✖ |

**EPA** — **green solutions**

**XSDB 701-52/53**

- External dimensions (whd): 701,5 x 1930/2080 x 805 mm
- Internal dimensions (whd): 541 x 1513 x 601 mm
- Effective capacity: 456 l
- Weight: 142 kg
- Number of shelves: 5
- Dry unit: 1 x U-5002 for < 0.5% RH
- Average power consumption: 100W/h (40ºC)
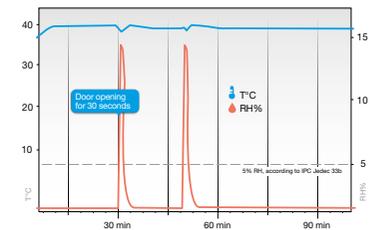
**XSD 1402-52/53**

- External dimensions (whd): 1433 x 1930/2080 x 800 mm
- Internal dimensions (whd): 1082 x 1513 x 601 mm
- Effective capacity: 1186 l
- Weight: 230 kg
- Number of shelves: 10
- Dry unit: 1 x U-5002 for < 0.5% RH
- Average power consumption: 150W/h (60ºC)

# Insulated drying cabinets XSD & XSDB-Series

## Equipment XSD 52/53 Series:

- Control panel with operation field of the 52-Series
- Humidity and temperature report
- Integrated data logger (optional software needed to read it for XSD 52)
- Network / Wifi possibilites
- RS 232 interface for data
- Interior lighting
- Computer steering with touchscreen Display LCD 5.7" (320x240 Pixel) just on 53-Series
- Reading of humidity and temperature for unlimited period of time just on 53-Series

### Network / Wifi possibilites on tablet or phone



### Control panel of the 53-Series

Full graphic touchscreen Display LCD 5.7"
320x240 Pixel



### Control panel of the 52-Series




Sliding shelve / LED light


Honeycomb modul for storage of IC tubes

## External dimensions / Internal capacity



1433    605

305

1625    2080

150

13 reels of
330 / 30 mm

MADE IN GERMANY

EPA    green solutions

SUPER DRY
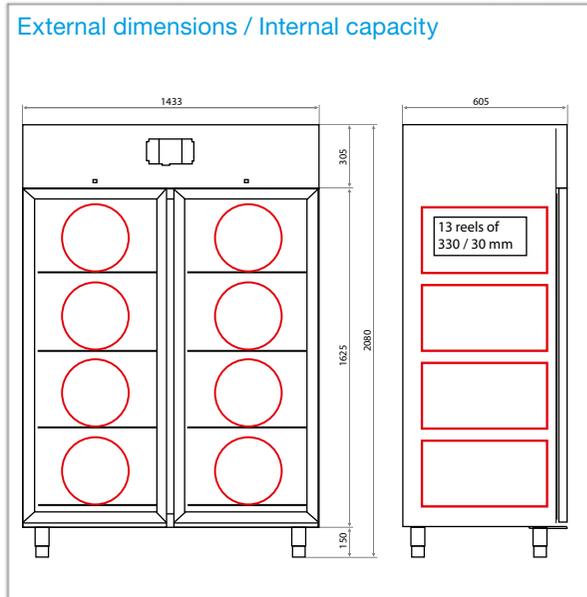
# Acrylic cabinets ESDA-Series

| Drying | Storage | Room temp. | N2 |
|--------|---------|-----------|-----|
| 1 - 2% RH* | < 5% RH | Ø 25°C | optional |

* Depending on amount of dooropenings

Our acrylic cabinet series offers conveniently arranged storage possibilities with low humidities.
Installation of an optional nitrogen or drying unit is available.

Control panel with operation field of the 21-Series

Our ESDA-Series is suitable for storage under controlled atmosphere. This can be achieved through a nitrogen-unit and / or installation of our drying unit.

## Included:

- Door alarm & RH alarm included
- Chrome steel shelves
- Pre mounted holes for nitrogen unit
- 1 dry unit
- ESD wristband
- Earth plug

## Options:

- Shelves
- Adjustable legs
- Automatic nitrogen unit with door contact switch
- Two-colour alarm lights
- Datalogging through network, incl. software **
- Optional accessories

N2 Auto Purge system

Nitrogen unit

| **External dimensions (whd): 574 x 750 x 517 mm** |
|---|
| **Internal dimensions (whd): 560 x 730 x 480 mm** |
| **Effective capacity: 200 l** |
| **Weight: 30 kg** |
| **Number of shelves: 2** |
| **Available with U-4000 Dry unit, continous drying** |
| **No control panel** |

## ESDA 201

| **External dimensions (whd): 574 x 1690 x 517 mm** |
|---|
| **Internal dimensions (whd): 560 x 1480 x 480 mm** |
| **Effective capacity: 400 l** |
| **Weight: 50 kg** |
| **Number of shelves: 5** |
| **Drying unit: U-2000 for 1 - 2% RH*** |
| **Power consumption: 21 W/h** |

## ESDA 402

| **External dimensions (whd): 1152 x 1690 x 517 mm** |
|---|
| **Internal dimensions (whd): 1120 x 1480 x 480 mm** |
| **Effective capacity: 800 l** |
| **Weight: 100 kg** |
| **Number of shelves: 10** |
| **Drying unit: U-2000 for 1 - 2% RH*** |
| **Power consumption: 21 W/h** |

## ESDA 804

Door opening for 30 seconds

T°C
RH%

5% RH, according to IPC Jedec 33b

30 min    60 min    90 min

* Depending on amount of dooropenings
** see page 5

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# Drying Cabinet for feeder systems

The cabinets of the SDF and XSD-Series are equipped with high performance dryers and are suitable for storage in between of complete feeder systems. Special sizes on application.

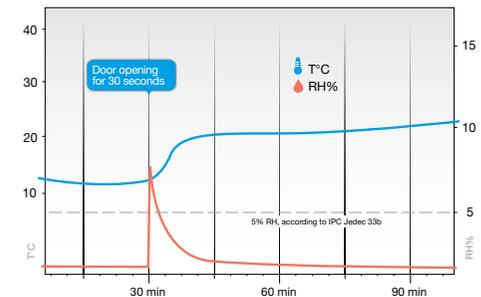| Drying* 1% RH | Room temp. Ø 25°C | Temperature to 40°C & 60°C (optional) | Nitrogen optional |
|---|---|---|---|

\* <5% RH SDF, 1% RH XSD



EPA

The feeder cabinets achieve a very low humidity level of up to 1% RH and are suitable for storage in between of feeder (trolley) systems. The internal life of the cabinets is especially geared to its feeder system. With this the upper part of the cabinet can be fitted with shelves. The XSD-Series can be supplied with Touchscreen Display, Heating (up to 60°C) and dynamic Drying unit U-5000 series.

Feedersystem XSD



Door opening for 30 seconds

T°C
RH%

5% RH, according to IPC Jedec 33b

30 min          60 min          90 min

**External dimensions (whd): 1200 x 1840 x 960 mm**

**Internal dimensions (whd): 1190 x 1560 x 910 mm**

**Effective capacity: 1700 l**

**Weight: 197 kg**

**Dry unit: 2 x U-2000 for <5% RH**

**Power consumption: 62 W/h**

SDF 1704-21
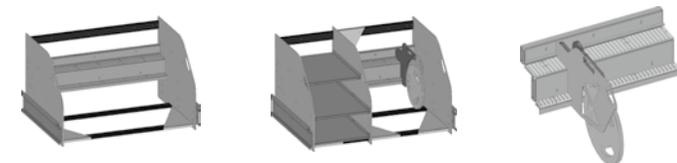
Different feeder racks available:
Siplace, Europlacer Assembleon, Fuji, Juki etc.

# Vacuum Machines SDV 46

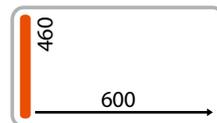Our ESD vacuum machine series is particularly suitable for being used in ESD protected sections. The controlled reduction of humidity and oxygen content serve to ensure safe storage and transport conditions. Ideally suitable for the packaging of moisture-sensitive materials.

**Control Display Z3000 / (Model Z-2000, Time Controlled)**
Our sensor control has been equipped with a vacuum sensor, and allows for the accurate setting of important parameters. Humidity and oxygen content can be reduced in a controlled manner. 99 program memories facilitate your packaging result's reproducibility and ensure easy handling and operation.

**ESD Safe**
Our machines have been equipped with acrylic covers. All surfaces are electrically conductive. Critical surfaces have been coated with dissipative plastics, and feature a bleeder resistance of 1-6 Ohm/sq, compliant with the ESD standard.

**Nitrogen**
Optionally, a nitrogen unit may be installed to facilitate the packaging of materials, which are vulnerable to oxidation or of pressure-sensitive nature. The additional reduction of oxygen content and diffusion rate are ideal for long-term storage.

**IPC Conform**
The construction & control system are based on the IPC regulation

| Int. dimensions (whd): 650 x 210 x 475 mm |
| --- |
| Sealing length: 460 mm |
| Vacuum pump: 21 m³/h |
| Weight: 95 kg |
| Digital steering Z-3000 (sensor controlled) |

SDV 46

Sealing length

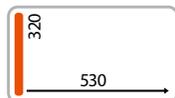460

600

# Vacuum Machines SDV-Series

The ideal combined action of vacuum chamber, heating system, and vacuum pump characterizes this apparatus.

Dependent on the size of the machine trays, sticks and reels can be packed in conformity with the "IPC norm Jedec 033B". All models are available in ESD Design, with Nitrogen Unit, and Under Carriage. In case you are interested in consumer materials such as drying means, humidity indicators or moisture barrier bags, go to our webshop, www.totech-superstat.com

| Int. dimensions (whd): 580 x 125 x 350 mm | Int. dimensions (whd): 450 x 210 x 460 mm | Int. dimensions (whd): 450 x 210 x 460 mm | Int. dimensions (whd): 650 x 210 x 475 mm | Int. dimensions (whd): 650 x 210 x 475 mm |
|---|---|---|---|---|
| Sealing length: 320 mm | Sealing length: 420 mm | Sealing length: 420 mm | Sealing length: 460 mm | Sealing length: 460 mm |
| Vacuum pump: 10 m³/h | Vacuum pump: 16 m³/h | Vacuum pump: 16 m³/h | Vacuum pump: 16 m³/h | Vacuum pump: 21 m³/h |
| Weight: 60 kg | Weight: 69 kg | Weight: 70 kg | Weight: 92 kg | Weight: 95 kg |
| Digital steering Z-2000 (timer controlled) | Sensor steering Z-2000 (timer controlled) | Sensor steering Z-3000 (sensor controlled) | Digital steering Z-2000 (timer controlled) | Digital steering Z-3000 (sensor controlled) |

## SDV 26

320 / 530

Sealing length

## SDV 36 basic

410 / 420

## SDV 36

410 / 420

## SDV 46 basic

460 / 600

## SDV 46

460 / 600
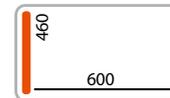
Moisture Barrier Bags

Humidity Indicator & Desiccant

100 x 660 mm

250 x 500 mm

420 x 440 mm

420 x 540 mm
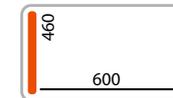
# Advantages Totech cabinets
## SUPER DRY®

| | **XSD 701-53**<br>**XSD 1402-53** | **XSDB 701-52**<br>**XSDB 1402-52** | **Competitors** |
|---|---|---|---|
| • Drying time (example) | • Level 3 component < 1,4mm = 18 hours, (60°C / 1%RH) | • Level 3 component < 1,4mm = 18 hours, (40°C / 1%RH) | • Level 3 component < 1,4mm = (25°C / 5%RH) 16 days |
| • Recoverytime after door opening | • < 4 minutes | • < 6 minutes | • < 1 hours |
| • Accuracy of Sensor RH% & T°C | • 1% / ± 1°C (Rotronic) | • 1% / ± 1°C (Rotronic) | • 3% / ± 1°C |
| • Accuracy of Temperature | • ± 2°C | • ± 2°C | • ± 10°C |
| • User Friendly Handling | • Full color multilanguage touchscreen display | • Display multi language, 5 menu's & up and down button | • Only up & down button |
| • ESD features | • Conductive windows and stainless steelbody | • Conductive windows and painted steelbody | • No ESD for windows and paint |
| • Datalogging | • Endless | • Standard 2000 measuring points | • Not standard, available as option |
| • Online read out | • Online readout RJ45 ethernet connection/ Wifi | • RS232 Standard | • Not standard, available as option |
| • RH% Setting & Stability | • All settings possible & stable read out | • All settings possible & stable read out | • No settings or not stable read out |
| • Internal illumination | • LED Standard | • Optional | • Not available |
| • Door & humidity alarm buzzer | • Standard | • Standard | • Not standard |
| • Energy saving consumption | • Due to 800 Watt/h and 60 mm double PUR Insolation & dynamic dry unit | • Due to 800 Watt/h and 30 mm double PUR Insolation & dynamic dry unit | • No or poor insolation & no dynamic dry unit |
| • Specification | • Fast drying | • Fast drying | • Not in programm |

| | **MSD / HSD** | **SD / ESDA Serie** | **Competitors** |
|---|---|---|---|
| • Drying time (example) | • Level 3 component < 1,4mm = 8 days, (25°C / 1%RH) | • Level 3 component < 1,4mm = 13 days, (25°C / 3%RH) | • Level 3 component < 1,4mm = (25°C / 5%RH) 16 days |
| • Recoverytime after door opening | • < 6 minutes | • < 45 min | • < 1 hours |
| • Accuracy of Sensor RH% & T°C | • 1% / ± 1°C (Rotronic) | • 3% / ± 1°C | • 3% / ± 1°C |
| • Accuracy of Temperature | • ± 5°C | • ± 5°C / ESDA (no heater) | • ± 10°C |
| • User Friendly Handling | • Display multi language, 5 menu's & up and down button | • Up en down settings, calibration as well as alarm settings | • Only up & down button |
| • ESD features | • ESD metal painted body also window ESD safe | • Dissipative body also window ESD safe | • No ESD for windows and paint |
| • Datalogging | • Standard 2000 measuring points | • Available as option | • Not standard, available as option |
| • Online read out | • RS232 Standard | • Available as option RJ45 ethernet connection | • Not standard, available as option |
| • RH% Setting & Stability | • All settings possible & stable read out | • All settings possible & stable read out | • No settings or not stable read out |
| • Internal illumination | • Not available | • Not available | • Not available |
| • Door & humidity alarm buzzer | • Standard | • Not standard | • Not standard |
| • Energy saving consumption | • Dynamic dry unit | • N/a | • No or poor insolation & no dynamic dry unit |
| • Specification | • Fast drying, MSD can grow with your needs | • Stable dry unit | • Not in programm |

# General options and accessories for all cabinet series

Shelves

Separation elements

External alarm lights

Door alarm

Height adjustable feet

ESD wheels

SMD reel holders

SMD reel holder extendable

SMD reel holder on extendable shelf

High accuracy sensor

Various data loggers

Nitrogen unit

N2 Auto Purge system

Calibration apparatus

Various steerings

Cover Plate

Feeder system

RS 232 interface

U-7000

U-5002

Double Glazing

Heater 40°C

Heater max. 40°C

# ESD & Cleanroom

## Totech
### SUPERSTAT

A leader in ESD & Cleanroom safety, with a broad depth of products.

We have all the static control products you will need to outfit your static safe environments and Cleanroom Areas.

You will see that we will have many opportunities for innovative new products, including a wider offering of static control and cleanroom products.

### We Aim for the following:

- Customer Satisfaction
- Quality Products
- Very Competitive Pricing
- Innovation
- Highly Motivated and Specialist Team
- Long Term Relationships with Customers
- Maximum Availability
- Respect Delivery Terms

## Our ESD product offering

- ESD Flooring
- ESD Workstations
- Personnel Grounding
- ESD Garments
- ESD Table Mats
- Cleanroom Wipes
- .Cleanroom Garments

- ESD Packaging Materials
- ESD Handling and Storage
- ESD Foams
- ESD Test and Measurement
- ESD Brushes
- Cleanroom Accessories
- Kapton tapes

- ESD Paper
- ESD Office Equipment
- ESD Service Equipment
- ESD Tapes
- ESD Gloves
- Cleanroom Masks
- ESD Shoes

# Reference Table Drying cabinets

Our reference table offers you a survey of the drying times of your components. Please read it dependent on component strength, MSL Level, temperature and humidity Level.

* according 100TQFP-Test
  (Semiconductor Device (100TQFP) Dehumidifying Property)

** according to IPC J-STD-033B

| Body Thickness | Level | Drying at 1% RH (MSD, HSD, HSDi & XSD-Series) | | | Drying at 2% RH (SDB, SD & SDA-Series) | | **Drying at 5% RH | |
|---|---|---|---|---|---|---|---|---|
| | | 25°C 1% RH | 40°C 1% RH | 60°C 1% RH | 25°C 2% RH | 40°C 2% RH | 40°C 5% RH | 90°C 5% RH |
| Thickness ≤ 1,4 mm | 2a | 5 days | 2 days | 12 hours | 7 days | 3 days | 5 days | 23 hours |
| | *3 | 8 days | 3 days | 18 hours | 12 days | 5 days | 8 days | 33 hours |
| | 4 | 9 days | 4 days | 24 hours | 13 days | 6 days | 9 days | 37 hours |
| | 5 | 10 days | 5 days | 30 hours | 14 days | 7 days | 10 days | 41 hours |
| | 5a | 10 days | 6 days | 36 hours | 15 days | 9 days | 10 days | 54 hours |
| Thickness > 1,4 mm ≤ 2,0 mm | 2a | 22 days | 10 days | 2 days | 30 days | 15 days | 22 days | 3 days |
| | 3 | 23 days | 11 days | 2 days | 35 days | 16 days | 23 days | 4 days |
| | 4 | 28 days | 14 days | 3 days | 40 days | 17 days | 28 days | 5 days |
| | 5 | 35 days | 16 days | 4 days | 50 days | 24 days | 35 days | 6 days |
| | 5a | 56 days | 18 days | 4 days | 67 days | 27 days | 56 days | 8 days |
| Thickness > 2,0 mm ≤ 4,5 mm | 2a | 67 days | 20 days | 5 days | 80 days | 30 days | 67 days | 10 days |
| | 3 | 67 days | 22 days | 5 days | 80 days | 31 days | 67 days | 10 days |
| | 4 | 67 days | 22 days | 5 days | 80 days | 31 days | 67 days | 10 days |
| | 5 | 67 days | 22 days | 5 days | 80 days | 31 days | 67 days | 10 days |
| | 5a | 67 days | 22 days | 5 days | 80 days | 31 days | 67 days | 10 days |

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