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MORE THAN JUST DRY AIR

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PRODUCT CATALOGUE





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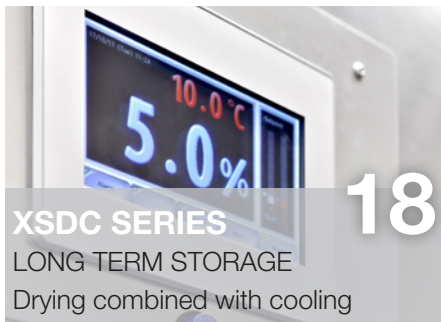
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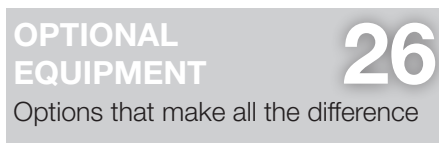
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# SDB SERIES

## ENTRANCE MODEL



### Reliable and easy to use

#### FEATURES:

- Maintenance-free U-4001 drying unit with integrated fan
- ESD safe design (IEC 61340-5-1)
- User-friendly humidity visualisation through hygrometer
- Coated shelves
- Lockable doors
- Relative air humidity below 5% RH

#### OPTIONS:

- SMD reel rack
- Honeycomb module for IC tubes, etc.
- Additional shelves

*For more options, see page 26.*

# SDB SERIES

The drying cabinets of the SDB series have been specifically designed as low-cost entrance models and feature only the basic functions. The patented 4001 drying unit guarantees constant low relative humidity for medium to long-term storage.



	SDB 151-40	SDB 1104-40	SDB 1106-40	
Ext. dimensions (WHD)	500 x 630 x 580 mm	1200 x 1840 x 658 mm	1200 x 1840 x 658 mm	
Int. dimensions (WHD)	490 x 560 x 530 mm	1190 x 1533 x 630 mm	1190 x 1533 x 630 mm	
Effective capacity	135 l	1139 l	1139 l	
Weight	37 kg	155 kg	155 kg	
Power consumption	24 W/h	24W/h	24 W/h	
Number of shelves	3	5	5	

## Characteristics



**U-4001 series dryer:**  
Air drying RH to below 2%  
Regeneration: static (timer-controlled)



**Sensor:**  
Stand alone battery operated humidity measurement device



**Performance:**  
30 min recovery time after door opening to below 5% RH



**Control:**  
No integrated control  
Display of climate data through hygrometer



**Convection:**  
Forced convection through forced air circulation



**Documentation:**  
External data logger optional

# SD SERIES

ROBUST DESIGN



## Advanced technology and Robust design

### FEATURES:

- Maintenance-free U-2000 drying unit with integrated fan
- ESD safe design (IEC 61340-5-1)
- Limit value monitoring (RH; °C)
- Door alarm, humidity alarm
- Digital control panel with humidity and temperature display
- Lockable doors
- Regulated relative humidity

- Suitable for storage and drying according to IPC standards
- Interruption-free and redundant drying by means of 2 drying units (SD-1104/1106 and SDF-1704 only)

### OPTIONS:

- Automatic nitrogen unit
- Heater (40°C)
- Feeder rack

*For more options, see page 26.*

# SD SERIES

The SD series comprises a wide range of cabinet models. Thanks to their advanced design, chrome steel standard shelves and reliable drying units, they offer maximum protection for medium to long-term storage.



	SD 151-21	SD 302-21	SD 502-21	SD 702-21	SD 1104-21	SD 1106-21	SD 1704-21
Ext. dimensions (WHD)	500 x 630 x 580 mm	500 x 1127 x 640 mm	880 x 898 x 740 mm	620 x 1840 x 768 mm	1200 x 1840 x 658 mm	1200 x 1840 x 658 mm	1200 x 1840 x 960 mm
Int. dimensions (WHD)	490 x 560 x 530 mm	490 x 1124 x 594 mm	870 x 830 x 702 mm	610 x 1533 x 735 mm	1190 x 1533 x 630 mm	1190 x 1533 x 630 mm	1190 x 1560 x 910 mm
Effective capacity	135 l	320 l	496 l	680 l	1139 l	1139 l	1700 l
Weight	37 kg	68 kg	70 kg	152 kg	176 kg	176 kg	197 kg
Power consumption	35 W/h	35 W/h	35 W/h	35 W/h	70 W/h	70 W/h	70 W/h
Number of shelves	3	7	3	5	5	5	depending on cabinet layout

## Characteristics



**U-2000 series dryer:**  
RH drying to below 2% RH  
Regeneration: timer-controlled



**Sensor:**  
Integrated sensor,  
accuracy +/- 3% RH  
Offset configuration



**Performance:**  
30 min recovery time after  
door opening to below 5% RH



**Control:**  
Humidity and temperature  
display with parameter value  
input; humidity and door  
monitoring functions



**Climate control:**  
Optional heating up to 40°C  
Forced air circulation



**Documentation:**  
External data logger optional

# SD+ SERIES

PRECISION DRYING



## Economical and precise

### FEATURES:

- Maintenance-free U-2000 drying unit with integrated fan
- ESD safe design (IEC 61340-5-1)
- Limit value monitoring (RH; °C)
- Door alarm, humidity alarm
- Lockable doors
- Dynamic regeneration
- Integrated data logger
- Including software for PC visualisation

- Ethernet interface
- Regulated relative humidity

### OPTIONS:

- Additional shelves
- Heater (40°C)
- Alarm light
- N<sup>2</sup> (nitrogen)

*For more options, see page 26.*



# SD+ SERIES

The models of the SD+ series are essentially upgraded versions of the SD series. The cabinets are equipped with high-precision sensors. Dynamic regeneration of the drying units minimizes power consumption. A second drying unit ensure uninterrupted and redundant drying (SD+ 1104 and 1106 only). Datalogging through standard ethernet interface.



	SD+ 302-22	SD+ 1104-22	SD+ 1106-22
Ext. dimensions (WHD)	500 x 1127 x 640 mm	1200 x 1840 x 658 mm	1200 x 1840 x 658 mm
Int. dimensions (WHD)	490 x 1124 x 594 mm	1190 x 1533 x 630 mm	1190 x 1533 x 630 mm
Effective capacity	320 l	1139 l	1139 l
Weight	68 kg	176 kg	176 kg
Power consumption	24 W/h	48 W/h	48 W/h
Number of shelves	7	5	5

## Characteristics



**U-2000 series dryer:**  
RH drying to below 2% RH  
Regeneration: dynamic



**Sensor:**  
Integrated Rotronic sensor,  
accuracy +/- 0.8% RH  
& +/- 0.2 °C



**Performance:**  
30 min recovery time after  
door opening to below 5% RH



**Control:**  
PLC with limit value input through  
text display or web interface  
Door, temperature and humidity  
alarm



**Climate control:**  
Optional heating up to 40°C  
Forced air circulation



**Documentation:**  
Integrated data logger  
Climate data recording  
Free Totech Viewer software

# HSD SERIES

EXTRA-FAST DRYING



## Maximum process safety

### FEATURES:

- Maintenance-free U-5000 drying unit with integrated fan
- ESD safe design (IEC 61340-5-1)
- Limit value monitoring (RH; °C)
- Door alarm, humidity alarm
- Lockable doors
- Regulated relative humidity below 0.5%
- Dynamic regeneration
- Integrated data logger

- Free software with viewer function
- Ethernet interface

### OPTIONS:

- Automatic nitrogen unit
- Heater (40°C)
- Alarm light

*For more options, see page 26.*

# HSD SERIES

The models of the HSD series come with a high-performance drying unit, precision measuring technology and an intuitive control panel.



	HSD 1104-52	HSD 1106-52	HSD 1704-52	
Ext. dimensions (WHD)	1200 x 1675 x 658 mm	1200 x 1675 x 658 mm	1200 x 1675 x 960 mm	
Int. dimensions (WHD)	1190 x 1533 x 630 mm	1190 x 1533 x 630 mm	1190 x 1533 x 910 mm	
Effective capacity	1179 l	1179 l	1700 l	
Weight	189 kg	189 kg	197 kg	
Power consumption	58 W/h	58 W/h	58 W/h	
Number of shelves	5	5	depending on cabinet layout	

## Characteristics



**U-5000 series dryer:**  
RH drying to below 0.5% RH  
Regeneration: dynamic



**Sensor:**  
Integrated Rotronic sensor,  
accuracy +/- 0.8% RH  
& +/- 0.2 °C



**Performance:**  
15 min recovery time after  
door opening to below 1% RH



**Control:**  
PLC with limit value input through  
text display or web interface  
Door, temperature and humidity  
alarm



**Climate control:**  
Optional heating up to 40 °C



**Documentation:**  
Integrated data logger  
Climate data recording  
Free Totech Viewer software

# MSD SERIES

MODULAR DESIGN



The cabinet that grows with your requirements.

#### FEATURES:

- Maintenance-free U-5000 drying unit with integrated fan
- ESD safe design (IEC 61340-5-1)
- Limit value monitoring (RH; °C)
- Door alarm, humidity alarm
- Coated sliding shelves
- Lockable doors
- Regulated relative humidity below 0.5%
- Dynamic regeneration
- Integrated data logger
- Online monitoring

- Free Totech Viewer software
- Ethernet interface
- Adjustable legs

#### OPTIONS:

- Passive MSD 1223 add-on cabinet
- Automatic nitrogen unit
- Additional drying unit
- Convection module with heater (40 °C)

*For more options, see page 26.*

# MSD SERIES

The MSD drying cabinets can grow with your demand. The modules are designed for easy extension to suit your needs.



	MSD 1222-54 Basic cabinet	MSD 1223-00 Add-on cabinet
Ext. dimensions (WHD)	840 x 2040 x 900 mm	840 x 2040 x 900 mm
Int. dimensions (WHD)	830 x 1780 x 850/730 mm	830 x 1780 x 850 mm
Effective capacity	1200 l	1255 l
Weight	140 kg	125 kg
Power consumption	30 W/h	30 W/h
Number of shelves	4	4

Capacity MSD 1222-54:	
Example storage	
Reels: 352	
Diameter: 330 mm	
Thickness: 8 mm	

## Characteristics



**U-5000 series dryer:**  
RH drying to below 0.5% RH  
Regeneration: dynamic



**Sensor:**  
Integrated Rotronic sensor,  
accuracy +/- 0.8% RH  
& +/- 0.2 °C



**Performance:**  
15 min recovery time after  
door opening to below 1% RH



**Control:**  
PLC with limit value input through  
touchscreen display or web interface  
Door, temperature and humidity  
alarm



**Climate control:**  
Optional heating up to 40°C  
Forced air circulation



**Documentation:**  
Integrated data logger  
Climate data recording  
Free Totech Viewer software

# XSD SERIES

HIGH END TECHNOLOGY



## Perfection down to the last detail

### FEATURES:

- Maintenance-free U-5000 series drying unit with integrated fan (XSDB & XSD series only)
- Insulated cabinet body
- 4" touchscreen display (XSDB & XSD series only)
- Powerful radial fan
- Heater (40°C) (XSDB)
- Heater (60 °C) (XSD)
- Cooling 2-20 °C (XSDC)
- ESD safe design (IEC 61340-5-1)
- Limit value monitoring (RH; °C)
- Door, humidity and temperature alarm
- Sliding grate shelves (XSD only)

- Lockable doors
- Regulated relative humidity below 0.5% RH
- Dynamic regeneration (XSDB & XSD series only)
- Integrated data logger (Not for XSDC 601-01)
- Free Totech Viewer software (Not for XSDC 601-01)
- Ethernet interface (Not for XSDC 601-01)
- Internal illumination (XSD & XSDC series only)

### OPTIONS:

- Drawers
- Heater (60°C) (XSDB)
- 7" touchscreen display

*For more options, see page 26.*

# XSDB / 54 / 57 SERIES

The premium cabinets of the XSD series combine high-performance drying along stable temperature and humidity curves with top-class design and craftsmanship.



	XSDB 701-54	XSDB 1402-54	
Ext. dimensions (WHD)	700 x 1930/2110 x 808 mm	1432 x 1930/2110 x 808 mm	
Int. dimensions (WHD)	544 x 1504 x 600 mm	1315 x 1504 x 600 mm	
Effective capacity	490 l	1190 l	
Weight	142 kg	230 kg	
Power consumption	230 W/h (40°C)	230 W/h (40°C)	
Number of shelves	5	10	

## Characteristics



**Dryer:**  
RH drying to below 0.5% RH  
Regeneration: dynamic



**Sensor:**  
Integrated Rotronic sensor,  
accuracy +/- 0.8 RH  
& +/- 0.2 °C



**Performance:**  
10 min recovery time after  
door opening to below 0.5% RH



**Control:**  
PLC with limit value input through  
touchscreen display or web  
interface  
Door, temperature and humidity  
alarm



**Climate control:**  
Heating up to 40°C  
(optional up to 60°C)  
Forced air circulation



**Documentation:**  
Integrated data logger  
Climate data recording  
Free Totech Viewer software

# XSD / 54 / 57 & XSDV SERIES

The XSD series based on the XSDB series but features a stainless steel cabinet body, LED lighting, 60°C heater as well as sliding shelves with telescopic rails.



	XSD 701-54	XSD 1402-54	XSDV
Ext. dimensions (WHD)	700 x 1930/2110 x 808 mm	1432 x 1930/2110 x 808 mm	variable
Int. dimensions (WHD)	544 x 1504 x 600 mm	1315 x 1504 x 600 mm	variable
Effective capacity	490 l	1190 l	variable
Weight	142 kg	230 kg	variable
Power consumption	230 W/h (40°C)	230 W/h (40°C)	variable
Number of shelves	5	10	variable

## Characteristics



**Dryer:**  
RH drying to below 0.5% RH  
Regeneration: dynamic



**Sensor:**  
Integrated Rotronic sensor,  
accuracy +/- 0.8% RH  
& +/- 0.3 °C



**Performance:**  
10 min recovery time after  
door opening to below 0.5% RH



**Control:**  
PLC with limited value input through  
touchscreen display or web interface  
Door, temperature and humidity  
alarm



**Climate control:**  
Heating up to 60°C  
Forced air circulation



**Documentation:**  
Integrated data logger  
Climate data recording  
Free Totech Viewer software



# XSDC SERIES

The XSDC series is the ideal solution for controlled cooling. It provides a stable temperature for all cooling storage needs like solder paste.



	XSDC 601-01	XSDC 601-02	
Ext. dimensions* (WHD)	702 x 2060 x 672 mm	702 x 2060 x 672 mm	
Int. dimensions* (WHD)	550 x 1526 x 579 mm	550 x 1526 x 579 mm	
Effective capacity*	466 l	466 l	
Weight*	113 kg	113 kg	
Power consumption*	60-100 W/h	60-100 W/h	
Number of shelves*	3	3	

## Characteristics



**Dryer:**  
No drying available



**Sensor:**  
Rotronic Sensor  
accuracy +/- 0.8% RH  
& +/- 0.2 °C



**Performance:**  
20 min recovery time after  
10 hour power down to  
below 5 °C



**Control:**  
PLC with limit value input through  
text display and web interface  
(601-02)  
Door and temperature alarm



**Climate control:**  
Cooling 2-20 °C  
Forced air circulation



**Documentation:**  
Integrated data logger  
Climate data recording  
Free Totech Viewer software  
(all 601-02 only)

# XSDC SERIES

LONG TERM STORAGE



## Drying combined with cooling

### FEATURES:

- Maintenance-free U-5000 series drying unit with integrated fan
- Insulated cabinet body
- Powerful radial fan
- Cooling 10 °C below environment temperature
- ESD safe design (IEC 61340-5-1)
- Limit value monitoring (RH; °C)
- Door, humidity & temperature alarm
- Lockable doors
- Regulated relative humidity below 5% RH

- Dynamic regeneration
- Integrated data logger
- Free Totech Viewer software
- Interior lighting

### OPTIONS:

- Drawers
- Humidity & temperature alarm light
- 7" touchscreen display

*For more options, see page 26.*

# XSDC LONG TERM STORAGE

The XSDC Long Term Storage cabinet provides a stable low temperature and humidity for all long term storage needs. Data logging of temperature and alarms is achieved with the integrated data logger. Clean air filters can be equipped to provide additional component protection.



	XSDC 1402-54
Ext. dimensions (WHD)	1432 x 1930/2110 x 808 mm
Int. dimensions (WHD)	1315 x 1504 x 600 mm
Effective capacity	1190 l
Weight	255 kg
Power consumption	790 W/h
Number of shelves	10

## Characteristics



**Dryer:**  
RH drying to below 5% RH  
Regeneration: dynamic



**Sensor:**  
Integrated Rotronic sensor,  
Accuracy +/- 0.8% RH  
& +/- 0.2 °C



**Performance:**  
30 min recovery time after  
door opening to below 5% RH



**Control:**  
PLC with limit value input through  
text display or web interface  
Door, humidity and temperature  
alarm



**Climate control:**  
Cooling 10 °C below  
environment temperature



**Documentation:**  
Integrated data logger  
Climate data recording  
Free Totech Viewer software

# XSDR SERIES

## RESET PROCESS AUTOMATION



## Reset of multiple MSL level components at the same time

### FEATURES:

- Maintenance-free U-2000 series drying unit with integrated fan
- MSL timers for embedded containers for each chamber
- Touchscreen display
- Two separate chambers which can be independently heated up to 60 °C
- Regulated relative humidity for each chamber (<1% RH)
- Insulated cabinet body
- ESD safe design (IEC 61340-5-1)
- Limit value monitoring (RH; °C)
- Door, humidity & temperature alarm
- Lockable top chamber door

- Regulated relative humidity below 5% RH
- Dynamic regeneration
- Integrated data logger
- Free Totech Viewer software
- Interior lighting
- SMD reel racks with reel support

### OPTIONS:

- SMD reel rack with reel support
- Humidity & temperature alarm light

*For more options, see page 26.*

# XSDR SERIES

The XSDR series has an outstanding performance for drying moisture sensitive components and pcb's. It is equipped with two chambers that are individually adjustable. It is developed to reset the floorlifetime of components, based on our Reference Table (p. 27). It has an integrated timer that can be manually set, and it will notify the user when the component is ready for use again. The dynamic drying units of the 2000 series reach very reliable low humidity values of  $\leq 1\%RH$  and automatically regenerate if necessary. As a result of an insulated double metal sandwich construction, a precise temperature of  $60^{\circ}C$  can be reached with a very low power consumption.



	<b>XSDR 702-24</b>
Ext. dimensions (WHD)	700 x 2060 x 850 mm
Int. dimensions (WHD)	582 x 696 x 685 mm
Effective capacity	260 l
Weight	138 kg
Power consumption	30 W/h per chamber
Number of shelves per chamber	2 (additional shelves available as an option)

## Characteristics



**Dryer:**  
RH drying to below 1% RH  
Regeneration: dynamic



**Sensor:**  
Integrated Rotronic sensor,  
Accuracy +/- 0.8% RH  
& +/- 0.2 °C



**Performance:**  
30 min recovery time after  
door opening to below 5% RH



**Control:**  
PLC with limit value input through  
touchscreen display or web interface  
Door, humidity and temperature  
alarm



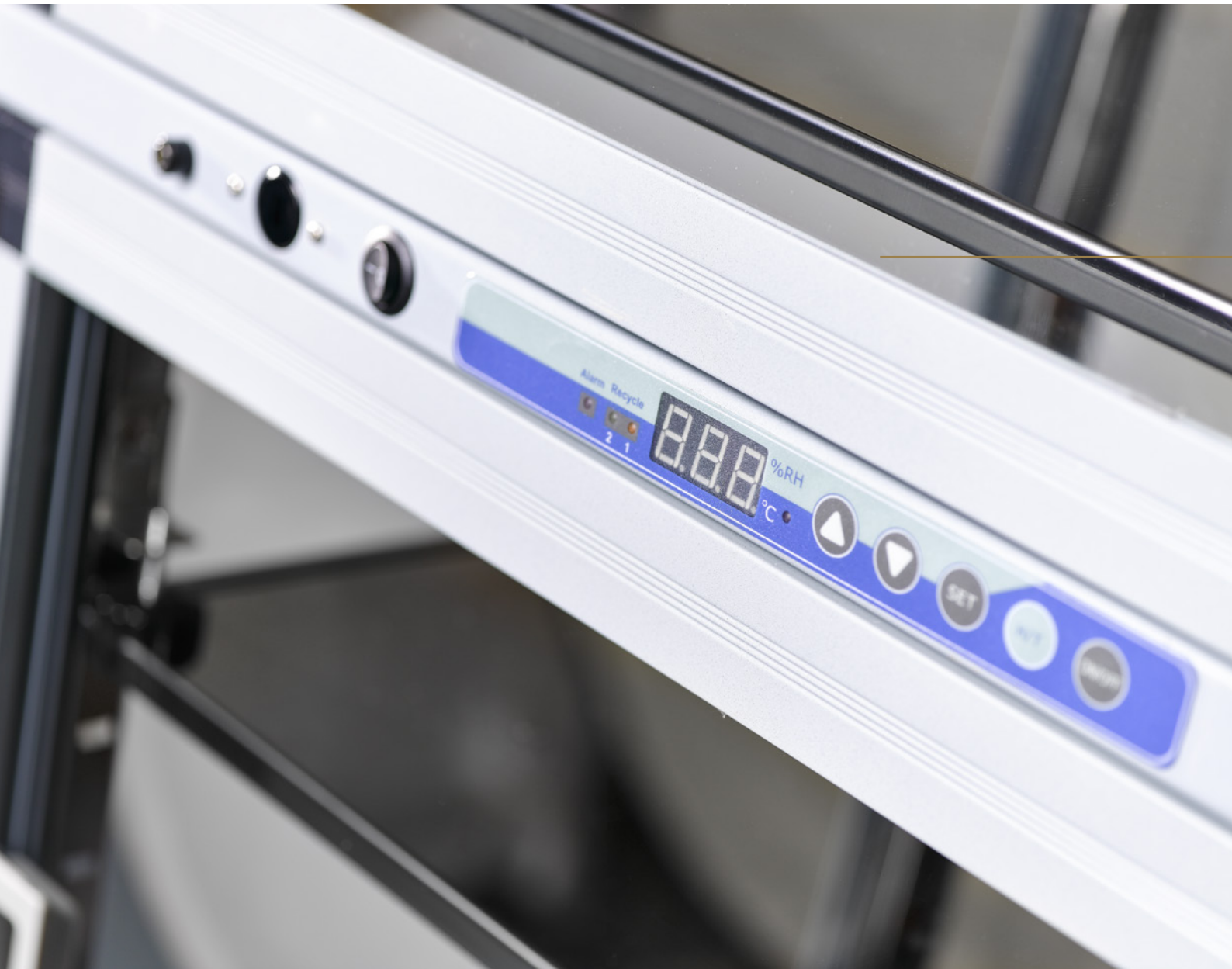
**Climate control:**  
Heating up to  $60^{\circ}C$  for each  
chamber  
Forced air circulation



**Documentation:**  
Integrated data logger  
Climate data recording  
Free Totech Viewer software

# ESDA SERIES

## ACRYLIC CABINETS



### Transparency combined with versatility

#### FEATURES:

- High-quality polycarbonate cabinet body
- Lockable doors
- U-2000 drying unit  
(ESDA 402-21 and 804-21 only)
- ESD safe design
- Door and humidity alarm  
(ESDA-402-21 and ESDA-804-21 only)
- Digital control panel  
(ESDA-402-21 and ESDA-804-21 only)

#### OPTIONS:

- External signal lamp
- ESD wheels
- Nitrogen unit
- U-4000 drying unit

*For more options, see page 26.*

# ESDA SERIES

The cabinets of the ESDA series have been designed with transparency in mind. They come with a wide range of equipment options, such as nitrogen units, various different dryers, ESD safe design, etc.



	ESDA 201-00	ESDA 402-00	ESDA 804-00	ESDA 402-21	ESDA 804-21
Ext. dimensions (WHD)	574 x 750 x 517 mm	574 x 1690 x 517 mm	1152 x 1690 x 517 mm	574 x 1690 x 517 mm	1152 x 1690 x 517 mm
Int. dimensions (WHD)	560 x 730 x 480 mm	560 x 1480 x 480 mm	1120 x 1480 x 480 mm	560 x 1480 x 480 mm	1120 x 1480 x 480 mm
Effective capacity	200 l	400 l	800 l	400 l	800 l
Weight	23 kg	59 kg	87 kg	60 kg	88 kg
Power consumption	/	/	/	35 W/h	35 W/h
Number of shelves	2	5	10	5	10

## Characteristics



**U-2000 & U-4001 series dryer:**  
RH drying to below 2% RH  
Regeneration: timer-controlled



**Sensor:**  
No integrated sensor  
(xxx-21 with integrated sensor  
accuracy +/- 3% RH)



**Performance:**  
30 min recovery time after  
door opening to below 5% RH  
(only with drying unit)



**Control:**  
Humidity and temperature  
display with parameter value  
input; humidity and door  
monitoring functions  
(xxx-21 only)



**Convection:**  
Forced convection through  
forced air circulation  
(only with drying unit)



**Documentation:**  
External data logger optional

# SDR SERIES

## WALK-IN DRY ROOMS



### Custom-built dry rooms

#### OPTIONS:

- Maintenance-free U-5000 drying unit with integrated fan (also available with U-7000 drying unit)
- Insulated wall panels
- Heater (40 °C) with powerful radial fan
- Heater (60 °C) with powerful radial fan
- Limit value monitoring (RH; °C)
- Door alarm, humidity alarm
- Lockable doors
- Sight panels
- Regulated relative humidity below 5%
- Dynamic regeneration
- Integrated data logger
- Free software with viewer function
- 4" / 7" Touchscreen display



# SDR SERIES

Custom-built dry rooms. We assist you in choosing the right dimensions, colour, drying capacity and software for your specific application. We use top-quality series components and advanced technology to build affordable dry rooms that meet your requirements.



## Characteristics



**U-5000/U-7000 series dryer:**  
RH drying to below 5% RH  
Regeneration: dynamic



**Sensor:**  
Integrated Rotronic sensor,  
Accuracy +/- 0.8% RH  
& +/- 0.2 °C



**Performance:**  
Depending on dry room size



**Control:**  
PLC with limit value input through  
text display or web interface  
Door, humidity and temperature  
alarm



**Heating:**  
Active heating by means  
of integrated heater, up  
to 60 °C (optional)



**Documentation:**  
Integrated data logger  
Climate data recording  
Free Totech Viewer software

# OPTIONAL EQUIPMENT AND ACCESSORIES

Options that make all the difference



	Additional shelves	Separation elements	SMD reel holders	Pull-out SMD reel holders	Reel holders on sliding shelves	External alarm lights	Height adjustable feet	ESD reels	Manual/autom. nitrogen unit	Pull-out feeder system	Heater 40°/60°C	Honeycomb module for IC tubes, etc., also available with optical position indicator	Feeder holder	Data logger and software
SDB 151-40	coated	●	●				●		●/○		●/○			●
SDB 1104-40	coated	●	●	●			●	●	●/○		●/○	●	●(ASM only)	●
SDB 1106-40	coated	●	●	●			●	●	●/○		●/○		●(ASM only)	●
SD 151-21	chrome steel	●	●			●	●		●/●		●/○			●
SD 302-21	chrome steel	●	●			●	●		●/●		●/○			●
SD 502-21	chrome steel	●	●			●	●		●/●					●
SD 702-21	chrome steel	●	●			●	●	●	●/●				●(ASM only)	●
SD 1104-21	chrome steel	●	●	●		●	●	●	○/●		●/○	●	●(ASM only)	●
SD 1106-21	chrome steel	●	●	●		●	●	●	○/●		●/○		●(ASM only)	●
SDF 1704-21	chrome steel	●	●			●	●	●	○/●	●	●/○	●	●	●
SD+ 302-22	chrome steel	●	●			●	●	●	●/●		●/○		●(ASM only)	●●
SD+ 1104-22	chrome steel	●	●	●		●	●	●	○/●		●/○	●	●(ASM only)	●●
SD+ 1106-22	chrome steel	●	●	●		●	●	●	○/●		●/○		●(ASM only)	●●
HSD 1104-52	stainless steel	●	●	●		●	●	●	○/●		●/○	●	●(ASM only)	●●
HSD 1106-52	stainless steel	●	●	●		●	●	●	○/●		●/○		●(ASM only)	●●
HSDF 1704-52	stainless steel	●	●			●	●	●	○/●	●	●/○	●	●	●●
MSD 1222-52	coated/ stainless steel	●	●		●	●	●●		○/●		●/○	●	●	●●
MSD 1223-00	coated/ stainless steel	●	●		●		●●				●/○	●	●	
XSD 701-54/57	stainless steel		●		●	●	●●	●	○/●		●●/●●	●	●(ASM only)	●●
XSD 1402-54/57	stainless steel		●		●	●	●●	●	○/●		●●/●●	●	●(ASM only)	●●
XSDB 701-54/57	stainless steel		●		●	●	●●	●	○/●		●●/●	●	●(ASM only)	●●
XSDB 1402-54/57	stainless steel		●		●	●	●●	●	○/●		●●/●	●	●(ASM only)	●●
XSDV	coated/ stainless steel	●	●	●	●	●	●●	●	○/●	●	●/●	●	●	●●
XSDC 601-01	coated		●				●●	●					●	●
XSDC 601-02	coated		●				●●	●					●	●●
XSDC 1402-54/57	stainless steel	●	●	●	●	●	●●	●	○/●	●	●/●	●	●	●●
XSDR	stainless steel		●		●	●	●●	●			●●/●●		●(ASM only)	●●

● optional    ●● standard    ○ not available

# REFERENCE TABLE

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.

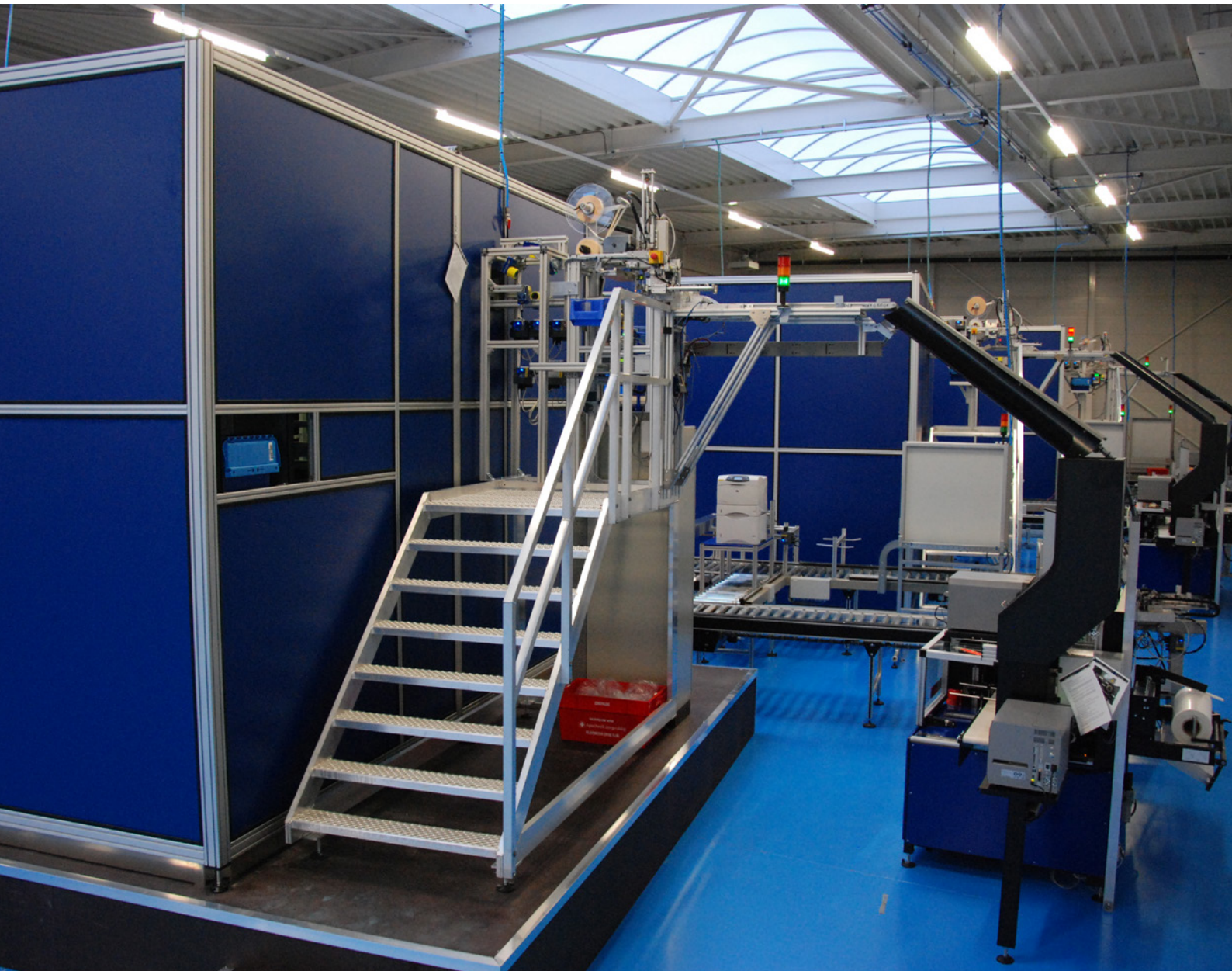
MSL level	Drying at 1% RH <i>(HSD, MSD &amp; XSD-Series)</i>			Drying at 2% RH <i>(SDB, SD, SD+ &amp; ESDA Serie)</i>		**Drying at 5% RH <i>(N<sup>2</sup>-Cabinets)</i>		
	25°C 1% RH	40°C 1% RH	60°C 1% RH	25°C 2% RH	40°C 2% RH	40°C 5% RH	90°C 5% RH	
<b>Body thickness</b> ≤ 1,4 mm	2	3 days	36 hours	10 hours	8 days	3 days	8 days	17 hours
	2a	4 days	2 days	12 hours	9 days	4 days	9 days	23 hours
	*3	8 days	3 days	18 hours	12 days	5 days	13 days	33 hours
	4	9 days	4 days	24 hours	15 days	6 days	15 days	37 hours
	5	10 days	5 days	30 hours	17 days	7 days	17 days	41 hours
	5a	10 days	6 days	36 hours	22 days	9 days	22 days	54 hours
<b>Body thickness</b> ≤ 2,0 mm	2	18 days	8 days	2 days	25 days	10 days	25 days	63 hours
	2a	22 days	10 days	2 days	30 days	15 days	29 days	3 days
	3	23 days	11 days	2 days	35 days	16 days	37 days	4 days
	4	28 days	14 days	3 days	40 days	17 days	47 days	5 days
	5	35 days	16 days	4 days	50 days	24 days	57 days	6 days
	5a	56 days	18 days	4 days	67 days	27 days	79 days	8 days
<b>Body thickness</b> > 2,0 mm ≤ 4,5 mm	2	67 days	20 days	5 days	80 days	30 days	79 days	10 days
	2a	67 days	22 days	5 days	80 days	30 days	79 days	10 days
	3	67 days	22 days	5 days	80 days	31 days	79 days	10 days
	4	67 days	22 days	5 days	80 days	31 days	79 days	10 days
	5	67 days	22 days	5 days	80 days	31 days	79 days	10 days
	5a	67 days	22 days	5 days	80 days	31 days	79 days	10 days

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

\*\* according to IPC J-STD-033C

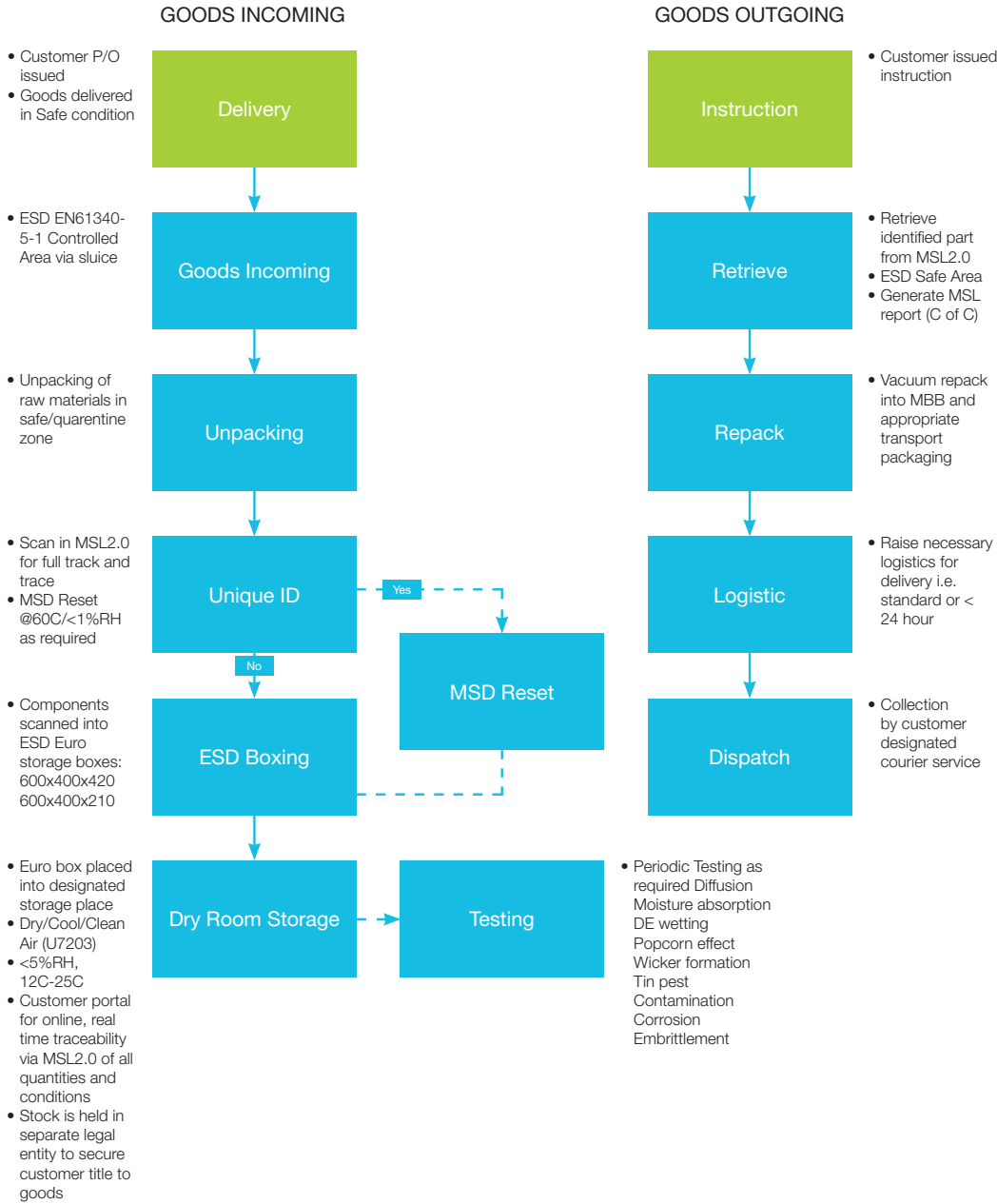
# STORAGE

## STORAGE AS A SERVICE



`Storage as a Service` by Super-Dry Totech completes our offering for MSD and Long-Term Storage solutions. For those companies that do not wish to make the investment in capital equipment, or maybe looking for a flexible and scale-able off-site warehousing solution, this is the alternative value-added service. As we see, there is a growing trend in the electronics industry that component lead-times are increasing, whilst reducing development cycles make it increasingly necessary to hold extra stocks on the operational side. Warranty management, and last time buys are other reasons why we see growing requirements for specialised storage services. We fill that space. Our new facility in Zwolle, Netherlands, houses a safe, secure quarantined area, that is compliant to international standards for MSD and LTS component storage. We use our patented technologies for temperature and humidity control with transparent and fully traceable management logging so that customers can access online information to verify the status of their stocks in real-time. We also provide a full range of interim testing regimes as necessary. Full technical details are available at your request. Please contact us to explore the possibilities of off-site, flexible, `Storage as a Service`.

# PROCESS MAP SUPERDRY-TOTECH MSL AND LONG TERM STORAGE



# SOFTWARE

USER FRIENDLY DOCUMENTATION



# TOTECH VIEWER

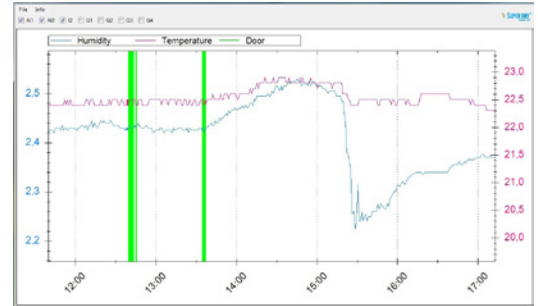
Standard cabinet monitoring with integrated logger (standard for SD+, MSD, HSD, XSDB, XSD, XSDV)

### FUNCTIONS:

- Writing of climate data, door openings and alarms to SD card
- Transfer of data through Ethernet to PC
- User-friendly display of all relevant data
- Data processing in MS Excel

### BENEFITS:

- Seamless documentation
- Excellent process safety



# TOTECH MONITOR

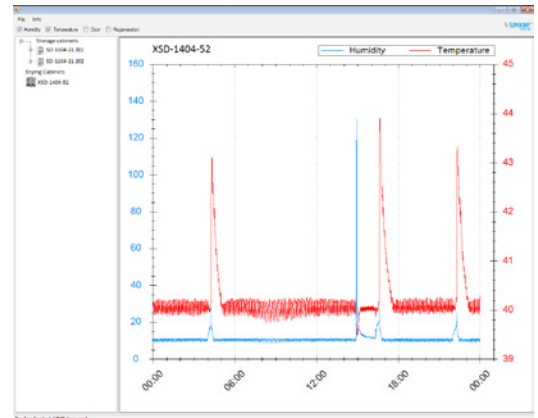
Real-time cabinet monitoring with alarm function (optional)

### FUNCTIONS:

- Online monitoring of humidity and temperature
- Management of data of multiple drying cabinets
- Measurements displayed on PC in table or chart format
- Automatic device identification
- Real-time alarm messages via e-mail and/ or SMS

### BENEFITS:

- Seamless documentation
- Excellent process safety
- Tamper-proof
- Fast response thanks to real-time monitoring



# MSL 2.0

Reliable cabinet and component monitoring (optional)

### CABINET MONITORING:

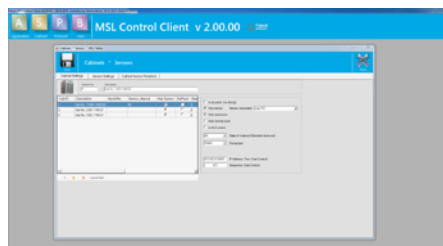
- Online monitoring of humidity and temperature
- Management of data of multiple drying cabinets
- Measurements displayed on PC in table or chart format
- Automatic device identification

### COMPONENT MONITORING:

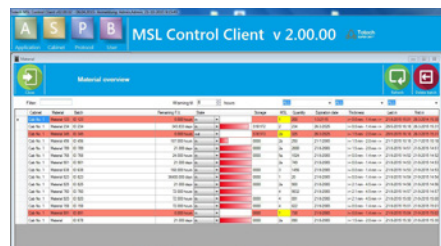
- Recording of all loading and unloading processes
- Dynamic calculation of remaining floor life time
- Documentation of drying process
- Lockout function upon expiry of floor life time

### COMPONENT LOGISTICS:

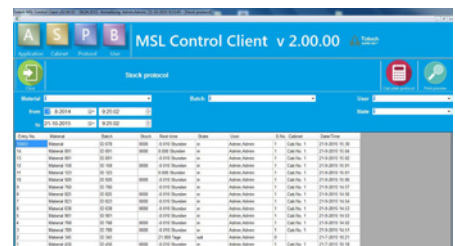
- Continuous localisation of all components
- Traceability of all stock movements
- Information and evaluations about unused material



All data from all cabinets available at a glance



Dynamic calculation of remaining floor life time



Stock reports available at a push of a button

# DRY TOWER

VOLUME & PROCESS OPTIMIZED COMPONENT STORAGE



## BENEFITS:

REDUCED PERSONNEL TIME

VOLUME OPTIMISED STORAGE

SHORT SETUP TIME

HIGH DEGREE OF AUTOMATION

PERFECT DOCUMENTATION



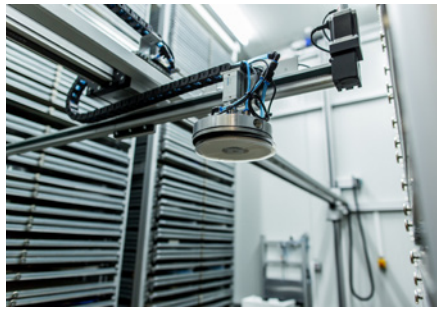


## DRAWER CABINETS

Our Dry Towers consist of up to four cabinets equipped with the maximum number of drawers. A chaotic placing strategy guarantees volume optimised storage.

### BENEFITS

- Stores up to 43,000 reels per m<sup>2</sup>
- Optimised utilisation of height, depth and width
- Fast access to all components
- Volume optimised storage
- Extendable by combining any number of storage modules

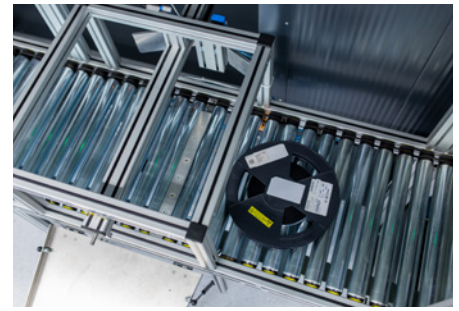


## 5-AXIS GRIPPER SYSTEM

The automated gripper system moving along 5 axes uses vacuum to transport component reels and trays safely and quickly. The gripper system can pick up loads of up to 3 kg.

### BENEFITS

- Short access times
- Safe and efficient component transport
- Suitable for reels, trays and closed packagings



## CONVEYOR TECHNOLOGY

The Dry Tower can be equipped with custom-engineered conveyor technology for batch processing of reels and boxes, catering for decentralised loading/unloading as well as line supply. Our system allows for maximum flexibility in your component logistics, as each batch is automatically transferred by roller and belt conveyors, lifts or autonomous transport systems to the best available position.

### BENEFITS

- Minimum personnel time
- Just-in-time line processing
- Decoupling of loading and retrieval processes

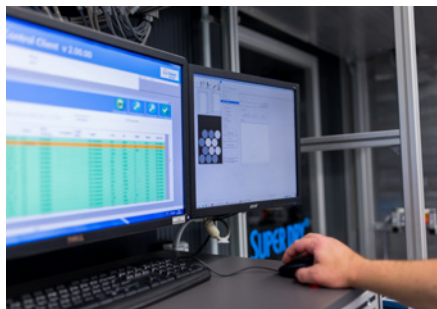


## CLIMATE CONTROL

Our U-7000 series drying unit guarantees controlled humidity values <5% RH. When components sensitive to moisture are brought into the unit, the processing time is automatically stopped, reducing the risk of damage from oxidation. Using a 40°C heater, MSL components can be dried gently at the right temperature.

### BENEFITS

- Permanent re-drying of components according to JEDEC standard
- Fast re-drying thanks to minimum relative air humidity
- Optional heating (up to 40°C) accelerates drying process



## SOFTWARE

The standard interface allows for the integration of the Dry Tower into your existing MES system. Important storage data and parameters such as humidity, temperature and operator intervention are documented for subsequent evaluation. Our integrated commissioning function allows for efficient retrieval in the desired sequence and with regard to FIFO.

### BENEFITS

- Reliable monitoring and documentation of moisture sensitivity levels as well as drying, stopping and processing times according to JEDEC standard
- Automatic commissioning function
- Standard interface for integration into existing systems
- Seamless logging along entire logistics chain
- Unrivalled versatility thanks to freely configurable storage strategies



**WE ASSIST YOU ALL THE WAY – FROM PLANNING TO IMPLEMENTATION.**

# SDV SERIES

PERFECT PACKAGING



## ESD safe packaging for long-term storage

### SDV 46 FEATURES:

- Deep-drawn stainless steel vacuum chamber
- Antistatic acrylic glass cover
- Double seam welding
- High-pressure sealing systems
- Inserts for level adjustment
- Z-3000 sensor control
- 99 Program memory slots
- Service function
- Key lock, fast-stop and step vacuum functions

- Shipped with initial equipment
- Quality Busch vacuum pump
- Cordless sealing systems

### OPTIONS:

- Nitrogen gas unit
- Additional sealing systems
- Trolley frame with bag tray
- Etc.

# SDV SERIES



## 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  $1 \times 10^6$  Ohm, compliant with the ESD standard.



## Nitrogen

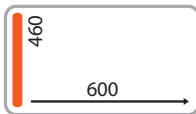
Optionally, a nitrogen unit may be installed to facilitate the packaging of materials, which are vulnerable to oxidation or of pressure-sensitive nature. The additional reduction of oxygen content and diffusion rate are ideal for long-term storage.



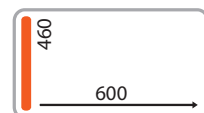
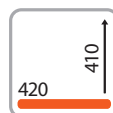
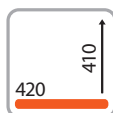
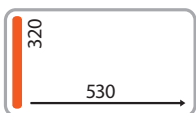
## IPC Conform

The construction & control system are based on the IPC regulation.

	<b>SDV 46</b>
Int. dimensions	650 x 210 x 475 mm
Seal length	450 mm
Vacuum pump	21m <sup>3</sup> /h
Weight	105 kg
Digital control	Z-3000 (sensor-controlled)



	<b>SDV 26</b>	<b>SDV 36 basic</b>	<b>SDV 36</b>	<b>SDV 46 basic</b>	
Int. dimensions	580 x 125 x 350 mm	450 x 210 x 460 mm	450 x 210 x 460 mm	650 x 210 x 475 mm	
Seal length	310 mm	410 mm	410 mm	450 mm	
Vacuum pump	10m <sup>3</sup> /h	16m <sup>3</sup> /h	16m <sup>3</sup> /h	16m <sup>3</sup> /h	
Weight	60 kg	69 kg	70 kg	102 kg	
Digital control	Z-2000 (timer-controlled)	Z-2000 (timer-controlled)	Z-3000 (sensor-controlled)	Z-3000 (sensor-controlled)	



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**DEALER:**



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