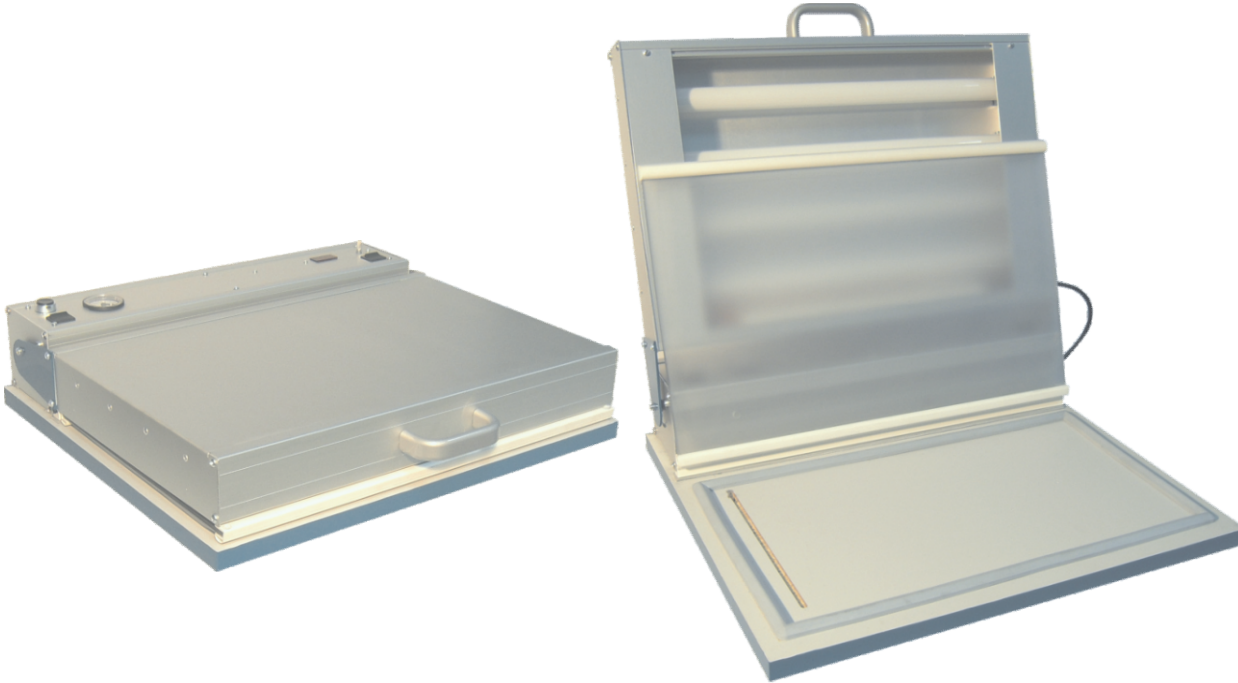


TopVAC Exposure Box

...for expose UV-ligth sensitive foils and plates



TopVAC Exposure Boxes will be used for exposure single-side fotosensitive materials such as base materials, or photo-sensitive films.

VAC Exposure Boxes are composed on a solid base plate with vacuum frame, the lighting box and the control unit with electronic timer and vacuum pump.

The exposure unit is mounted inside the top cover of the device. Four ACTINIC UV-lamps ensures intensive and all-over illumination of the exposure area.

Using the devices is very easy and user-friendly. The oscillator-based electronic timer allows the precise adjustment of the exposure time, with 1-knob operation (mode, time, Start/Stop) only. The seven-segment LED displays the adjusted time and during exposure, the remaining time.

The Exposure Boxes are designed for using in dry rooms, schools, living rooms, office, as well in laboratory and small factories

- Solid base plate (PVC laminated hardboard)
- Exposure box out of anodised aluminum profiles and plates
- Special flourescent lamps (ACTINIC), wave length 350 - 400nm (UV-A)
- Intensive and all-over illumination of the exposure area
- Backside mounted control unit with integrated vacuum pump and electronic timer
- Constant contact pressure by vacuum frame and cellular rubber frame
- Electronic timer with selectable time ranges 1-600 seconds, or 1-100 minutes, 1-knob operation,

seven-segment LED display

- Electronic ballast according EN60929, EN-EC 03, EI=A2, no stroboscopic effect, no flicker, power factor >0,92

Technical data

Part no.	UV-AX3623
Dimension (LxBxH)	480 x 425 x 110 mm
Mounting area	360 x 230 mm
Power supply	AC 230V, 50-60Hz
Power consumption	80 W
Number of UV lamps	6x18 W
UV wave length	365 nm
Timer	1 ... 600 s / 1 ... 100 min



- The UV Exposure Box is suited for light exposure of photo sensitive coated materials, such as photopositive coated base material, front plates and films. Other usings are not allowed.
- The device is designed for power supply 230V (50- 60Hz) and may be used only in perfect technical condition. Using the Exposure Box it's not allowed by children and people which are not instructed.
- All operations have to be done by professionals. Therefore they have to consider all instructions of the electronic industry and the accident prevention.
- Don't use the device without connecting earth line.
- Before opening the housing (e. g. to change the lamps) the device must be free of voltage. Please disconnect the power cord from mains voltage. Please note: Not all wires inside the device, which may have contact to high voltage, are covered
- Assembly and using of the device has to be done only according to the declaration of conformity.
- Ambient temperature 0 bis +40°C
Storage temperature -10° bis +60°C
- The device must not be exposed to high humidity, strong vibrations or explosive gas.
- Keep this manual careful and undertake every user to consider. If you don't provide this manual, loss of property, risk of injury up to loss of life may happen.

1. Instruction

1.1 Setting up

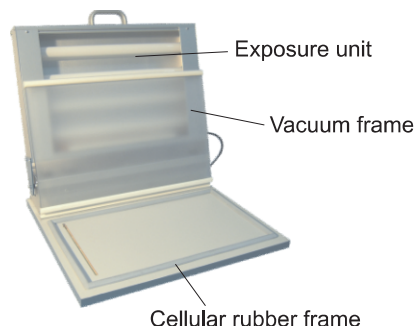
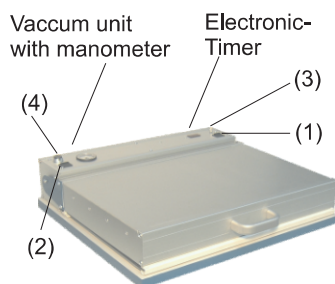
The **TopVAC** UV-Exposure Box has to be placed on a level and fixed plate or desk. It's advantageous if the working place can be darkened.

1.2 Initial Startup

For power supply the Exposure Box you need the voltage:

AC 230V (50-60Hz)

To adapt the device to mains voltage, a power cord with isolated ground connector is mounted.



For switching ON the unit, press power switch (1). The 7-Segment display of the electronic timer is flashing now.

To mount the photosensitive material and the layout, open the lid of exposure box and the vacuum frame..

Put your photo-sensitive material with sensitive layer up on the base plate. Now you can mount the layout at the top of the layer and close the vacuum frame.

To activate the vacuum pump, switch ON the vacuum switch (2). Now the air between the frame and the base plate will exhaust. While vacuum pump is working you'll hear a low grumble.

Please control the vacuum and make sure, that the PVC-foil above your layout is out of wrinkle.

After vacuum is generated, please shut the exposure unit.

Now you can start the exposure process by pushing the adjust-knob of the electronic timer (3). Note: Programming the timer, see chapter 1.4

After exposure time is over, you can open the lighting unit and switch OFF the vacuum pump (2). Then clear the vacuum by pressing the push button "OPEN" (4).

Now you can open the vacuum frame and remove as well layout and exposed material.

1.3 Maintenance and Service

The exposure box is free of service.

Only the ACTINIC lamps will lose intensity during operation (approx.: 15% after 1000 h).

The vacuum frame is built out of a flat laminate with a thin PVC foil on top. Please pay attention to the PVC-foil and the rubber frame mounted on the base plate. If something is damaged, you won't get the vacuum.

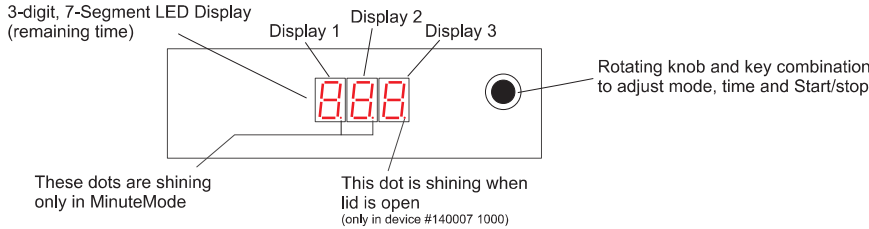
List of spare parts:

Part no.:	140905 0001	Vacuum-frame with PVC-foil
Part no.:	140901 0001	Cellular rubber frame (450x270mm)
Part no.:	410017	UV lamp (ACTINIC), 230V/15W

For cleaning the device please use water, ethyl alcohol or household cleaner. Before cleaning the device, please unplug power cord from mains voltage.

1.4 Operating instruction for electronic timer

The built-in electronic timer, is used for adjust the exposure time of the device. Time setting is possible in *SecondMode* or *MinuteMode*. Switching on the device, the timer is working in "*SecondMode*". Thereby the ON-time can be adjusted between 1 sec and 9min50sec.



Adjust the exposure time

After switch-on the device or plug in the power cord to mains voltage, all three displays are flashing. Turning the rotating knob counterwise (cw) or counterclockwise (ccw), display 3 will change the value of the digit. If the desired value is visible, you can store it by pushing the knob. Turning the knob again the value of display 2 will be changed. Store the desired value by pushing the knob again. After you have adjust value of display 1 in the same way, the complete display is flashing. Now you can start the count-down timer by pushing the knob once again. While the timer is count down, the power relay is on and by this the lamps of the Exposure Box are shining. The display is showing the remaining time now, until the count down is zero. The exposure unit will be switched OFF.

Seven-segment display	Range
Display 1 minutes	{0, 1, 2, 3, 4, 5, 6, 7, 8, 9}
Display 2 seconds (ten`s digits)	{0, 1, 2, 3, 4, 5}
Display 3 seconds (one`s digits)	{0, 1, 2, 3, 4, 5, 6, 7, 8, 9}

Example: Display Value

2 3 4	corresponds to	2 minutes, 34 seconds
7 5 9	corresponds to	7 minutes, 59 seconds
0 4 5	corresponds to	0 minutes, 45 seconds

1.5 Replacement of lamps

The UV-lamps (low pressure mercury-vapor lamp) will loose UV-A intensity while using (approx.: 15% after 1000 h).

If intensity of UV-A is to less to exposure the fotosensitive plates and films, you have to replace them. Therefore you have to remove the glass plate.

Procedure::

- Unplug the power cord from mains voltage.
- Remove screws (M3x6mm) out of the small aluminum strips, which are used for holding-down the glass plate.
- Remove the glass plate carefully.
- Replace the lamps. Therefore you have to turn the tubes 90° (1x click). After this you can take them upward out of the socket .
- After replacement the lamps and mounting all metal strips you have removed before. The device is ready for operation again.

Please decontaminate "old" lamps only in special container and consider the national rules for depositing!



If you push the knob while switching ON the Exposure Unit, operation mode "*MinuteMode*" will be selected. Now Display 3 indicates the time in seconds (10 seconds each count) and Display 1 / 2 are showing the time units minutes. Therefore, you can enter times up to 99 minutes and 50 seconds.

Example:

> 2.3.4 < = 23 minutes, 40 seconds
> 7.5.5 < = 75 minutes, 50 seconds
> 0.4.3 < = 4 minutes, 30 seconds

In this operation mode, the decimal point of Display 1 and 2 lights up.



It is not possible to start the timer, if the display is showing >000<.



You can interrupt the count-down at any time by pushing the rotary knob. The display flashes again and the flourescent lamps are switched off. The display is showing the remaining time now. For continue the exposure press the rotary knob once again.



DANGER!

Before opening the metal housing of the exposure box (for example to change the lamps), the device must be free of voltage. Please unplug the power cord from mains voltage. Please note: Not all components inside the device, which may have contact to high voltage, are covered.



UV-lamps are customary in industry, without any special safety requirements. In spite of this, we emphasize the following pre-caution:

Switch the UV-lamps ON only when the lid is closed!