

Coating box environmental control Installation and maintenance manual

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2 Installation procedure

2.1 Delivery contents

When unpacking check that all parts are present in the delivery.

The delivery contains following part:

- 1pc Coating unit including front door
- 1pc Control unit
- 1pc Motor control connecting cable (25 way D-SUB)
- 1pc A/C control connecting cable (37 way D-SUB)
- 1pc A/C power cable (19 way ITT Neptune)
- 1pc Mains cable
- 2pc Dip-coating user guide
- 2pc A/C user guide
- 2pc Installation and maintenance guide

2.2 Installing device

- Put the coating device on a flat and rigid surface. The space above the unit must be free to allow the air to circulate. Be aware that the device is heavy and should be always moved by two people.
- Put the control unit near the coating unit. The control unit should be also placed on a flat and rigid surface. The cooling air inlets are in the bottom and must not be covered or obstructed. The ventilator in the back side of the unit must have free space so the cooling air can flow freely.
- Connect Motor control cable between the coating unit and the control unit.
- Connect A/C control cable between the coating unit and the control unit.
- Connect A/C power cable between the coating unit and the control unit.
- NOTE: The connector on cables can not be misconnected due to connectors shape.
- Connect the mains cable to the coating unit. And put the switch located near the mains inlet to position 1.
- Switch the device ON by the mains switch on the front panel.

2.3 Installing device on an IDLab tray

When installing on a tray provided by IDLab.

- Unpack the tray and put it on the wheels in the middle of the room so you have access to the tray from all sides.
- Brake two front wheels to avoid moving of the tray when putting the device on it.
- Put the coating device on the top surface of the tray. Be aware that the device is heavy and should be always moved by two people. Because the tray is quite high consider help of another person.
- Put the control unit on the tilted shelf so it is held by a supporting plate mounted on a tilted shelf.
- Connect Motor control cable between the coating unit and the control unit.
- Connect A/C control cable between the coating unit and the control unit.
- Connect A/C power cable between the coating unit and the control unit.
- NOTE: The connector on cables can not be misconnected due to connectors shape.
- Connect the mains cable to the coating unit. And put the switch located near the mains inlet to position 1.
- Switch the device ON by the mains switch on the front panel.

3 Maintenance tasks

3.1 Refilling of the humidifier vessel

Humidifier vessel is located on the left side of the device. There is a ultrasonic mist maker producing water aerosol which is injected into the coating box by ventilator.

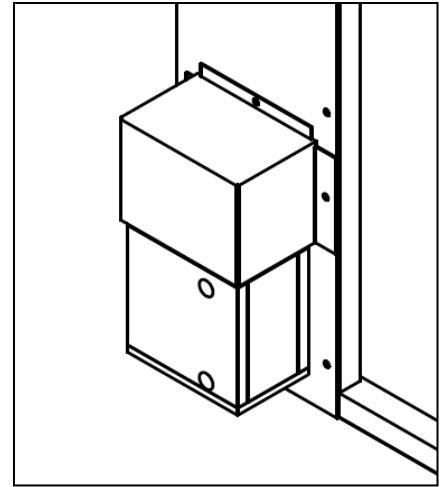
When water level in the vessel is lower than the mark it should be refilled.

Tools needed

- allen key number 6
- syringe or washing bottle

To refill water in the vessel follow these steps.

- Open the top vessel entry by unscrewing the plug using an allen key number 6.
- Prepare distilled water into syringe or washing bottle so you can easily inject water into the vessel. **Always use distilled water.**
- Inject water into vessel until it reaches desired level.
- Close the entry by plug.



3.2 Draining the humidifier vessel

Tools needed

- allen key number 6
- flat dish to drain water into

To drain the water from the humidifier vessel follow these steps

- Put a flat dish bellow the humidifier vessel so the water from bottom entry will flow into it
- Using allen key number 6 remove the top plug.
- Using allen key number 6 remove the bottom plug.
- Leave the entries open so the residual moisture can dry up.

3.3 Cleaning of the humidifier vessel

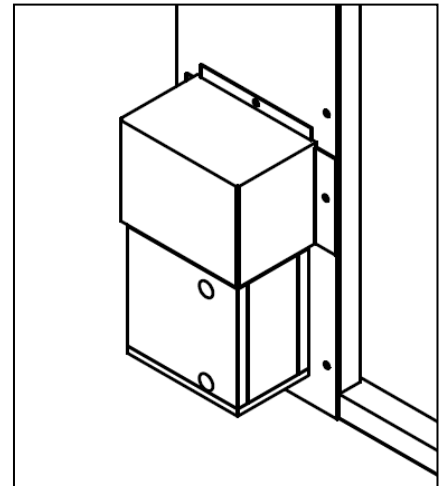
When the inner space of humidifier vessel

Tools needed

- allen key number 3
- allen key number 4
- wrench number 15

To clean the humidifier vessel follow these steps

- Remove vessel cover by unscrewing three screws. Two of them using allen key number 3 and one using allen key number 4.
- Loosen the cable gland using wrench number 15 so the cable can easily slide through.
- Remove six screws which hold the vessel on the mounting plate. Use allen key number 4.
- Remove the vessel and its cover from the mounting plate.
- Remove the vessel cover and slide the vessel along the cable so you have access into the vessel. (the sealing might be a little bit sticky. You can use a flat screwdriver to loosen it from the vessel)
- Unscrew the mist maker holder using the allen key number 4.
- Remove the mist maker, mist maker holder and the foam rubber which holds it in position.
- **WARNING: Never touch the gold disc on the top of mist maker by hand or any other tool. It may cause the permanent damage.**
- Clean the vessel, vessel cover and mist maker holder.
- When cleaning the mist maker use only a stream of clean distilled water to clean the gold disc on the top of mist maker.
- When all parts are clean and dry assembly the humidifier in reversed order.
- Insert mist maker and secure it in its position by mist maker holder and the piece of foam rubber. Fasten the holder by a screw using allen key number 4.
- Slide the mist maker cover on the cable and place it on its position.
- Fasten the vessel with cover on the mounting plate by six screws using allen key number 4.
- Pull the cable through the cable gland so it goes straight from the mist maker to the cable gland. Tighten the cable gland using wrench number 15.
- Mount the humidifier cover by three screws. Two of them using the allen key number 3 and one using allen key number 4.



3.4 Checking and refilling of the cooling liquid

Once a year the level of cooling liquid should be checked and the liquid should be refilled if needed. **This task should be done by a qualified technician only.**

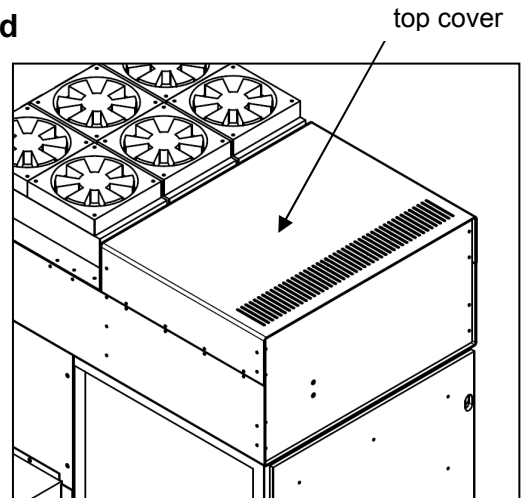
The cooling liquid container is located below the top cover of the coating box. As a cooling liquid a distilled water with ethylene glycol is used. The purpose of ethylene glycol is only to avoid fungus growing in the liquid so the ration of 1:30 (ethylene glycol / water) is enough.

Tools needed to check:

- Philips screwdriver
- Torch

Tools needed to refill:

- Wrench number 18
- Syringe
- Cooling liquid (ethylene glycol in distilled water 1:30)



To check the cooling liquid follow these steps

- **Switch off the device and disconnect it from mains plug.**
- Using philips screwdriver remove 14 screws which hold the top cover in position.
- Remove the top cover.
- Check the liquid level on both liquid containers. The level should be at least 7 cm from the bottom of the container.
- The container for internal circuit is covered by thermal insulation. To be able to check the liquid loosen the welcro and remove the cut-out in the insulation, so you have clean sight into the container. Use torch if necessary.
- When the liquid level is too low. Open the container by removing the plug on the top. Use wrench number 18 to loosen the plug.
- Fill in the liquid to a level of 8 cm above the bottom.
- Close liquid containers, put back the thermal insulation cut-out and secure it by welcro.
- Close the top cover and fix it by 14 screws.