

# REVOMAX II

BY OPTICLIMATE

## Installation Manual



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# 1. SPECIFICATIONS

MODEL	6000 REV2	10000 REV2	15000S REV2	15000 REV2
	REGULAR & DEEP COOL	REGULAR & DEEP COOL	REGULAR & DEEP COOL	REGULAR & DEEP COOL
Nominal Power Capacity - kWatt	6 kW	10 kW	15 kW	15 kW
Maximum Power Capacity - kWatt	7 kW	12 kW	19 kW	19 kW
De-humidification Capacity - Liters/24Hrs*	85 L	105 L	165 L	165 L
<b>Electricity</b>				
Power Supply - Volt	230v-400v	230v-400v	230v-400v	400v
Phase	1 or 3	1 or 3	1 or 3	3
Compressor (inverter) - Volt	DC (230V)	DC (230V)	DC (230V)	DC (400V)
Compr. Freq. Min (Max) - Hz	30 (110) Hz	30 (90) Hz	30 (85) Hz	30 (85)Hz
Fuse MCB single-phase (3-phase)	C32 (C20)	C40 (C25)	C63 (C40)	C25 3ph+N
Total 3-Phase Ampere	17 A	24 A	n/a	23 A
Total 1-Phase Ampere	28 A	38 A	68 A	n/a
Cable diameter (mm) 3 phase	2,5 mm <sup>2</sup>	4 mm <sup>2</sup>	10 mm <sup>2</sup>	6 mm <sup>2</sup>
Cable diameter (mm) 1 phase	6 mm <sup>2</sup>	6 mm <sup>2</sup>	25 mm <sup>2</sup>	n/a
Internal Glass Fuse Heater (3x) - Ampere	16 A	16 A	16 A	16 A
Internal Glass Fuse Main - Ampere	5 A	5 A	5 A	5 A
Power Factor cos $\Phi$	0,9	0,9	0,9	0,9
<b>Cooling &amp; Heating</b>				
Nominal (cooling) rated power - kWatt	1,3 kW	2,1 kW	5,0 kW	5,0 kW
Max cooling rated power - kWatt	1,9 kW	3,5 kW	6,5 kW	6,5 kW
Max current (cooling) - Ampere	9 A	16 A	30 A	16 A
Electrical Heating Power - kWatt	3 x 1,3 kW	3 x 1,6 kW	3 x 2,7 kW	3 x 2,7 kW
Electrical Heating Current - Ampere	3 x 5,5 A	3 x 8,0 A	3 x 13,0 A	3 x 13,0 A
De-Humidify 20 degrees WB - kg	5 kg	8 kg	12 kg	12 kg
Coefficient of Performance COP	4,6	4,6	3,2	3,5
Total max power capacity (heating& cooling)	10,9 kW	16,8 kW	17,6 kW	17,6 kW
<b>Airflow</b>				
Rated Air Flow m <sup>3</sup> /h	1300 m <sup>3</sup> /h	1900 m <sup>3</sup> /h	2200 m <sup>3</sup> /h	2200 m <sup>3</sup> /h
Static Pressure Pascal	0 Pa	0 Pa	0 Pa	0 Pa
Rated Air Flow m <sup>3</sup> /h	1100 m <sup>3</sup> /h	1600 m <sup>3</sup> /h	2450 m <sup>3</sup> /h	2450 m <sup>3</sup> /h
Static Pressure Pascal	100 Pa	100 Pa	100 Pa	100 Pa
<b>Refrigerant</b>				
Type	R410A	R410A	R410A	R410A
Charge Volume - kg	2,3 kg	2,7 kg	3,45 kg	3,85 kg
GWP number	2088	2088	2088	2088
CO <sub>2</sub> Equivalent - Ton	4,8	5,64	7,2	7,2
<b>Flow demand cold water (25 deg. Celcius Max)</b>				
Cooling mode - Liters/min	2,0 - 4,0 L/min	3,0 - 6,0 L/min	3,0 - 10,0 L/min	3,0 - 10,0 L/min
Heating mode - Liters/min	0,0 - 4,0 L/min	0,0 - 6,0 L/min	0,0 - 10,0 L/min	0,0 - 10,0 L/min
<b>Flow demand recirculating water</b>				
Cooling mode - m <sup>3</sup> /hour	1,2 m <sup>3</sup> /h	2 m <sup>3</sup> /h	3 m <sup>3</sup> /h	3 m <sup>3</sup> /h
Heating mode - m <sup>3</sup> /hour	1,2 m <sup>3</sup> /h	2 m <sup>3</sup> /h	3 m <sup>3</sup> /h	3 m <sup>3</sup> /h
<b>Water Temperature Limits</b>				
Temp In (recirculating) - ° Celcius Max	25 (55) °	25 (55) °	25 (55) °	25 (55) °
Temp Out (recirculating) - ° Celcius Max	65 (65) °	65 (65) °	65 (65) °	65 (65) °
Delta (recirculating) - AT	5 °	5 °	5 °	5 °
<b>Size L x W x H cm</b>	91 x 57 x 44 cm	99 x 67 x 49 cm	114 x 70 x 54 cm	114 x 70 x 54 cm
<b>Weight kg</b>	79 kg	94 kg	124 kg	124 kg

\* measured at 27 degrees Celcius / 60 % humidity

MODEL	21000 REV2	30000 REV2	30000 Free Air	30000 SEP-FAN
	REGULAR & DEEP COOL	REGULAR & DEEP COOL		
Nominal Cooling Capacity - kWatt	21 kW	30 kW	30 kW	30 kW
Maximum Cooling Capacity - kWatt	23 kW	35 kW	35 kW	30 kW
De-humidification Capacity - Liters/24Hrs	230 L	315 L	315 L	315 L
<b>Electricity</b>				
Power Supply - Volt	400v	400v	400v	400v
Phase	3	3	3	3
Compressor (inverter) - Volt	DC (400v)	DC (400V)	DC (400v)	DC (400v)
Compr. Freq. Min (Max) - Hz	30 (85) Hz	30 (85) Hz	30 (85) Hz	30 (85) Hz
Fuse MCB single-phase (3-phase)	C32 3ph+N	C50 3ph+N	C50 3ph+N	C50 3ph+N
Total 3-Phase Ampere	27 A	36 A	36 A	36 A
Total 1-Phase Ampere	n/a	n/a	n/a	n/a
Cable Diameter (mm) 3 phase	6 mm <sup>2</sup>	10 mm <sup>2</sup>	10 mm <sup>2</sup>	10 mm <sup>2</sup>
Cable Diameter (mm) 1 phase	n/a	n/a	n/a	n/a
Internal Glass Fuse Heater (3x) - Ampere	16 A	16 A	16 A	16 A
Internal Glass Fuse Main - Ampere	5 A	8 A	8 A	8 A
Power Factor cos $\Phi$	0,9	0,9	0,9	0,9
<b>Cooling &amp; Heating</b>				
Nominal cooling rated Power kWatt	6,0 kW	9,0 kW	9,0 kW	9,0 kW
Max cooling rated Power - kWatt	6,3 kW	15,0 kW	15,0 kW	15,0 kW
Max current cooling - Ampere	20 A	25 A	25 A	25 A
Electrical Heating Power - kWatt	3 x 2,7 kW	3 x 3,7 kW	3 x 3,7 kW	3 x 3,7 kW
Electrical Heating Current - Ampere	3 x 13,0 A	3 x 16,0 A	3 x 16,0 kW	3 x 16,0 kW
De-Humidify 20 degrees WB - kg	17 kg	19 kg	19 kg	19 kg
Coefficient of Performance w/w	3,5	3,3	3,3	3,3
Total max Power capacity (heating & cooling) kW	17,6 kW	26,1 kW	26,1 kW	26,1 kW
<b>Airflow</b>				
Rated Air Flow m <sup>3</sup> /h	3900 m <sup>3</sup> /h	6500 m <sup>3</sup> /h	6000 m <sup>3</sup> /h	6500 m <sup>3</sup> /h
Static Pressure Pascal	0 Pa	0 Pa	0 Pa	0 Pa
Rated Air Flow m <sup>3</sup> /h	3100 m <sup>3</sup> /h	5000 m <sup>3</sup> /h	5000 m <sup>3</sup> /h	5000 m <sup>3</sup> /h
Static Pressure Pascal	200 Pa	200 Pa	200 Pa	200 Pa
<b>Refrigerant</b>				
Type	R410A	R410A	R410A	R410A
Charge Volume - kg	4,4 kg	6 kg	6 kg	6 kg
GWP number	2088	2088	2088	2088
CO2 Equivalent - Ton	9,19	12,53	12,53	15,53
<b>Flow demand cold water (25 deg. Celcius Max)</b>				
Cooling mode - Liters/min	3,0 - 12,0 L/min	3,0 - 20,0 L/min	3,0 - 20,0 L/min	3,0 - 20,0 L/min
Heating mode - Liters/min	0,0 - 12,0 L/min	0,0 - 20,0 L/min	0,0 - 20,0 L/min	0,0 - 20,0 L/min
<b>Flow demand recirculating water</b>				
Cooling mode - m <sup>3</sup> /h	4,5 m <sup>3</sup> /h	6 m <sup>3</sup> /h	6 m <sup>3</sup> /h	6 m <sup>3</sup> /h
Heating mode - m <sup>3</sup> /h	4,5 m <sup>3</sup> /h	6 m <sup>3</sup> /h	6 m <sup>3</sup> /h	6 m <sup>3</sup> /h
<b>Water Temperature Limits</b>				
Temp In (recirculating) - ° Celcius Max	25 (55) °	25 (55) °	25 (55) °	25 (55) °
Temp Out (recirculating) - ° Celcius Max	65 (65) °	65 (65) °	65 (65) °	65 (65) °
Delta (recirculating) - $\Delta T$ ° Celcius	5 °	5 °	5 °	5 °
<b>Size L x W x H cm</b>	122 X 82 X 59 cm	148 x 86 x 74,9 cm	148 x 86 x 74,9 cm	148 x 86 x 74,9 cm
<b>Weight kg</b>	181 kg	232 kg	232 kg	232 kg

\* measured at 27 degrees Celcius / 60% humidity

## 2. SAFETY



### CAUTION

Please read this manual carefully before attempting to install the Opticlimat Revomax II. If you are not comfortable with the installation of high performance climate control systems, you should seek the services of an installation professional.

These products may represent a possible shock or fire hazard if improperly installed or attached in any way. Products should be installed in accordance with the owners manual and local electrical guidelines and law.

### 2.1 SAFETY PRECAUTIONS

#### Installation

- Make sure the Revomax is installed spirit level.
- Make sure a P-trap is installed on the condensation outlet.
- Make sure the return air filter and/or plenum box are clean without obstructions or high air resistance.
- Make sure the supply air ducting and/or air distribution hose is of the correct diameter, typically the same diameter of the supplied flange.
- Make sure all covers and panels are on the machine while in operation.

#### Electricity

- Make sure the correct diameter cable is used to power the machine (see spec sheet, chapter 1 /local code).
- Make sure the correct MCB (miniature circuit breaker) is installed (see spec sheet, chapter 1 /local code).
- Make sure the correct RCD (residual current device) type B (earth-leak) is installed (see data sheet/local code).
- Make sure the room temperature sensor is connected on the correct position on the circuit-board.
- Make sure the room temperature sensor is in the room and shielded from direct light or air streams.

#### Water/glycol

- Always install the watercooler outside the building. We do not support indoor placed watercoolers.
- Make sure flow and return piping has the correct diameter, we recommend at least 40mm (closed loop only, chapter 5.3).
- Make sure there is no air trapped in the system. Use an air vent at the high point of the circuit (closed loop only, chapter 5.3).
- Never use water only, when outdoor temperatures are below freezing. (closed loop only, chapter 5.3).
- Use dipswitch 3 to start the pump and open water valve to test for leaks/air before full operation (chapter 4.1).
- Use water/glycol mix for below zero temperature protection (closed loop only, chapter 5.3).
- Make sure fresh water supply is steady below 25 degrees all year round.

#### General

- Keep distance from the fan / supply air. Turning parts and rotating fan blades are dangerous.
- Do not power the machine when the electric compartment is open, circuit-boards and connectors might be charged.
- In a food / agro environment always use food-grade glycol (propylene glycol) (closed loop only, chapter 5.3).
- Make sure you are aware of all features and settings for correct day-to-day operation.
- Electrical connections should be done by a certified electrician. In some regions this is required by law.
- Water glycol setup should be done by a certified installer. In some regions this is required by law.
- Operating the system should be done by personnel that is fully aware of it's functions.
- Do not operate the unit without the filter or with a less effective filter. The heat exchange coils inside the unit become clogged and require disassembly to clean.

## 2.2 INTRODUCTION

The OptiClimate RevomaxII is a state-of-the-art climate control system designed to provide an optimal growing environment for a wide variety of plant species. Leveraging advanced Infinity DC inverter technology, this system offers unmatched flexibility in climate control, allowing for precise adjustments up to one tenth Hertz increments in cooling, heating, dehumidification, and air filtration. Its capacity to maintain super stable humidity, room temperature and output temperature ensures the health and productivity of your plants under any indoor condition.

### Model Variations

#### Output Power

The RevomaxII is available in 6000 to 30000 Watt versions. The model you need with sufficient cooling capacity can be calculated by adding up the power outputs for all heat generating devices like fixtures. In most common situations, it's a 1-1 relationship. Example: 12 x 800 Watt HPS fixtures generate 9600 Watts of heat, which means you need a 10000 RevomaxII model to cool the growing area. LED does not generate much heat. To calculate the needed capacity for de-humidification, you need up to 650 watts per m<sup>2</sup> of green to get 50% of relative humidity (RH) in the night cycle (depending on your crop).

#### Regular

All RevomaxII models are able to cool to a maximum of 0.2 degrees celcius deviation of the setpoint temperature. With the RevomaxII you are able to control humidity with a maximum 'swing' of 4% (depending on the humidity load) of the set humidity level. In case you use LED fixtures, you might even need to heat the room instead of cooling it. The RevomaxII is unique and can heat a room while de-humidifying.

#### Deep Cool

Normal Revomax units can cool a space to about 16 degrees Celsius, which is more than sufficient for all plants and vegetables, as they thrive in warmer conditions. But if you're looking to turn the space into a cold storage solution—keeping your harvest fresh, just like in a fridge—then we've developed the Revomax Deep Cooling system, designed specifically for your post-harvest needs. Depending on the insulation and capacity the unit can cool close to 0 degrees Celcius.

#### Separate Fan

With the sep-fan model (separate-fan) you are able to place the active fan in another location, combined with air hoses or air duct systems.

#### Free Air

The RevomaxII Free Air is made to blow air freely instead of using a ducting system or hoses. The Free Air is designed in such a way that it takes up as little volume as possible and thus takes up as little space as possible and at the same time intercepts as little light as possible.

### Product Features

**Broad Capacity Range:** We are able to adjust the cooling capacity in significantly smaller increments than our competition. We can reach 20-30 percent increments versus more than 60 percent at our competitors. This ensures a very stable climate all year round.

**Optimized for LED Growing:** Addresses the challenges of growing with LED lights by ensuring the room reaches optimal temperatures for photosynthesis more quickly and efficiently.

**Advanced Safety Features:** Includes built-in temperature protection, water leak safeguard (optional), and a fireproof system to ensure the operation is as safe as it is efficient.

**Smart Remote Control:** Comes with a smart remote controller for easy management of settings and receiving alarms and warnings via email, enhancing convenience and monitoring.

**Superior Air Quality Management:** Its built-in lightweight filter keeps the interior components clean ensuring your plants thriving at any moment during the growth cycle.



RevomaxII unit



Dimlux Xtremell LED Fixture



Dimlux Expert HPS Fixture



Separate Fan



Separate Fan on RevomaxII



RevomaxII Free-Air

# 3. INSTALLATION

## 3.1 PACKAGE CONTENTS

### SYSTEM HARDWARE

All RevomaxII units are supplied with a model specific connectorset (chapter 3.2) containing the following items:

- 1 Revomax II unit - in selected specification
- 2 Mounting Brackets
- 3 Rubber damping rings
- 4 Smart Remote Controller with accessories
- 5 Controller Cable
- 6 Various Mounting Parts
- 7 Humidity & Light Sensor
- 8 Temperature Sensor
- 9 Flange

**1. REVOMAX II UNIT**



**2. MOUNTING BRACKETS**



**3. RUBBER DAMPING RINGS**



**4. SMART REMOTE CONTROLLER**



**5. CONTROLLER CABLE**



**6. VARIOUS MOUNTING PARTS**



**7. HUMIDITY & LIGHT SENSOR**



**8. TEMPERATURE SENSOR**



**9. FLANGE**



### 3.2 CONNECTOR SET VARIATIONS

MODEL RANGE	FLANGE	INCLUDED CONNECTOR SET
REVOMAX 6000 & DEEP COOL	Ø250 AC 3-115	STANDARD 3500/6000 1-7810K
REVOMAX 10000 & DEEP COOL	Ø250 AC 3-116	STANDARD 10000/15000/21000 1-7810G
REVOMAX 15000 & DEEP COOL	Ø315 AC 3-118	STANDARD 10000/15000/21000 1-7810G
REVOMAX 21000 & DEEP COOL	ØD398 AC 3-125	STANDARD 10000/15000/21000 1-7810G
REVOMAX 30000 & DEEP COOL	ØD448 AC 3-126	STANDARD 10000/15000/21000 1-7810G
REVOMAX 30000 FREE AIR	ØD448 AC 3-126	STANDARD 10000/15000/21000 1-7810G

For the 21000 and 30000 models the Flange is sold separately

### 3.3 SUPPLIED SENSORS

#### Humidity Sensor with light cell

Detects actual humidity of the room, hang halfway between canopy and fixtures for optimal readings. Humidity level is shown on the Smart Remote Controller and is used to control the settings on the RevomaxII unit. Depending on the growing needs we can use the light sensor or the internal clock to determine the day and night cycle.

#### Air Temperature Sensor

Detects actual air temperature of the room, hang halfway between canopy and fixtures for optimal readings. The temperature is shown on the Smart Remote Controller in degrees Celcius and its values are used to control the settings on the RevomaxII unit.

### 3.4 OPEN TAP & CLOSED LOOP WITH COOLER

The RevomaxII system is designed to be very flexible in setup and combinations while maintaining its trademark performance. This manual describes the basic installation options. Both have near endless combinations and scale up easily. Whenever your situation does need specific setups that are not part of this manual (chapter 5 & 6), contact our specialists at Airlux Technologies for a tailored system design .

#### Mandatory accessories

In both basic setups, as well as complex ones, you need extra materials and hardware that suit your situation. Make sure to order at least the 'open tap' or 'closed loop with cooler' accessory kits. In chapter 5 & 6, this topic is described further.

Note: without the extra materials you will not be able to complete a functioning installation.

Check chapter 7 for ordering details.



RevomaxII Flange



Humidity & Light Sensor



Temperature Sensor



### 3.5 DIMENSIONS

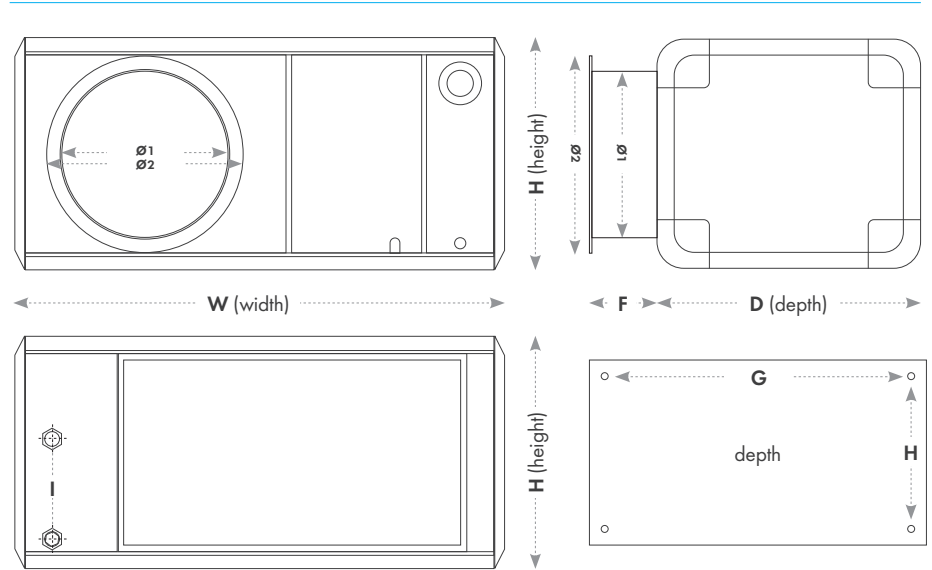
#### DIMENSIONS (MM)

Model	W	D	H	Ø1	Ø2	F	G	H	I
6000	910	570	440	245	310	55	805	405	250
10000	990	670	490	245	310	55	870	500	250
15000	1140	700	550	310	410	70	1015	535	250
21000	1220	820	590	398	-	-	1100	660	250
30000	1480	860	750	448	-	-	1365	675	465
30000 FREE AIR	1480	860	750	600	720	280	1365	675	465

#### WEIGHT

Model	KG	LB
6000	79	174,1
10000	94	207,2
15000	124	273,3
21000	181	399,0
30000	232	511,5
30000 FREE AIR	227	511,5

#### LINE DRAWING



### 3.6 PLACEMENT

The Revomax II is a high performance climate control system that needs 15 cm of open space for airflow to function properly. Please ensure to leave at least 15 cm of space on all sides (except at the bottom of the unit).

Mount the unit in any of the available options as described in chapter 3.7 to 3.11. Make sure the frame or structure is strong enough to carry the weight of your unit. For reference, check the table above.

For specific instructions check chapter 3.7.



Installation spacing for optimal airflow

### 3.7 PREPARING THE UNIT

1. Place the transport casing on a flat, stable surface
2. Carefully remove the packaging from the unit
3. Unscrew the bolts from the wooden pallet the unit was supplied on.
4. Choose mounting option:
  - A - Ceiling
  - B - Frame
  - C - Surface

Continue to the corresponding section below:

### 3.8 INSTALLATION OPTION A > CEILING

Install the Revomax II to the ceiling to maximize floor space. The additional needed installation equipment is not included in the package. All materials are industry standard and readily available at any hardware store.

#### Needed additional equipment (not included)

- 4 threaded rods M8 of desired length - bottom Revomax II to ceiling
- 4 M8 nuts
- 4 threaded rod ceiling plates
- 4 rubber damping rings
- 4 washing rings
- Lifting equipment

#### Steps

1. Mount the ceiling plates on the ceiling with corresponding spacing, check technical drawings (chapter 3.5) of your specific model
2. Use lifting equipment to raise the unit, spirit leveled, exactly below the ceiling plates
3. Use the equal length threaded rod and pass them through the casing on the edges of the casing
4. Connect the threaded rod to the ceiling plates
5. Use the rubber mounting rings below the holes to dampen vibrations
6. Use the mounting nuts and washer rings to secure the threaded rods

### 3.9 INSTALLATION OPTION B > FRAME

For maximum flexibility and ease of install, use a 3rd party wall mount heavy duty air conditioning frame to mount the Revomax II on the wall. The Needed equipment:

#### Needed additional equipment (not included)

- Heavy duty 3rd party wall mount frame
- Lifting equipment
- Brackets (included)

#### Steps

1. Place or mount the frame on the wall, make sure to place with corresponding spacing
2. Lift the unit on the brackets
3. Securely attach the unit on the frame, use the supplied rubber rings to dampen vibrations

### 3.10 INSTALLATION OPTION C > SURFACE

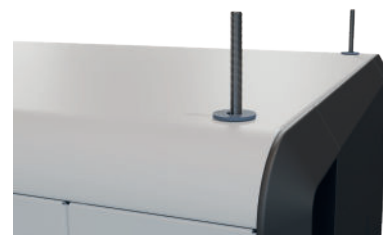
The Revomax II system can also just be placed on any stable surface. Floors or heavy duty shelves. No extra equipment needed except for lifting the unit on the target surface.

#### Needed additional equipment (not included)

- Lifting equipment
- Brackets (included)



RevomaxII is delivered on wooden pallet



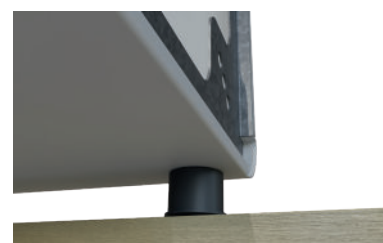
Pass-through threaded rods holes



Pass-through threaded rods holes



Example wallmount



RevomaxII on surface

### 3.11 EXAMPLE INSTALLATIONS



*Ceiling mounted*



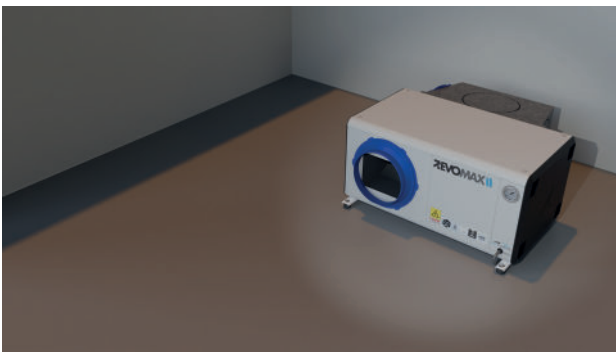
*Ceiling mounted with airhose, inside growing area*



*Wall mounted*



*Wall mounted with airhose inside growing area*



*Surface mounted with plenumbox (needs hoses)*



*Surface mounted outside the growing area with plenumbox*

# 4. CONNECTING

## 4.1 CONNECTING THE SUPPLIED PERIPHERALS

Remove the front panel to connect the supplied Smart Remote Controller and sensors. Lead the sensors to the growth area and place on crop level, outside the range of a direct lighting source. The connection board is accessible behind the front panel.

### Connect the following cables to the corresponding connection ports:

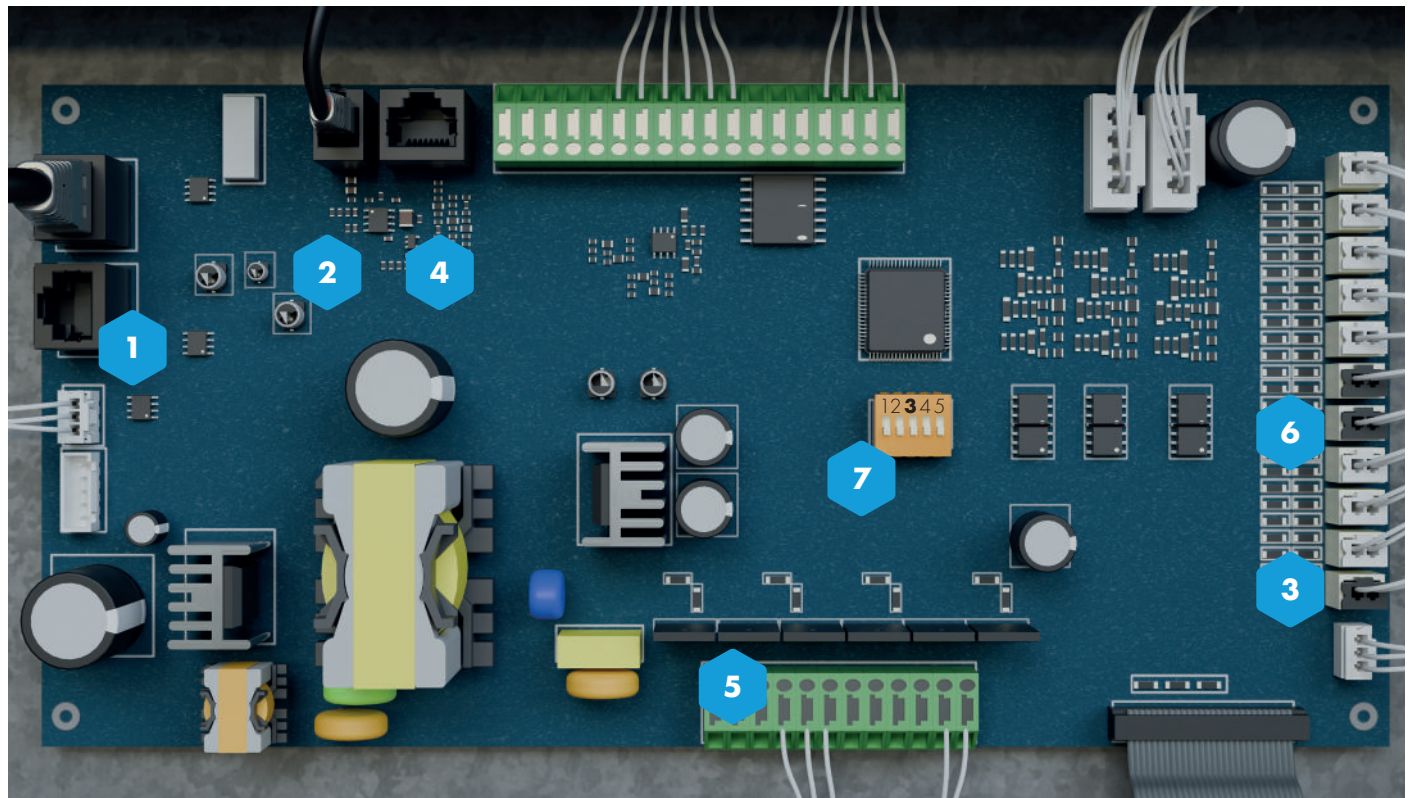
1. Smart Remote Controller
2. RH Humidity & Light sensor - to be placed in the grow area. Detects optimal settings for humidity and night/day cycle.
3. Room temperature sensor - to be placed in the grow area. Do not position the sensor a direct light source.

### Option: closed loop with cooler

4. Compressor start sensor
5. Solenoid Valve (magnetic valve)

### Option: tap water

6. Water leak sensor
7. Dipswitch 3



RevomaxII connection board

### Testing & Discharge Water

When used in a closed loop setup with a cooler the system can be tested with dipswitch nr 3. When dipswitch 3 is turned on, the pump starts pumping and the valve opens without having the system fully booted up. Use this mode to discharge water, test for leaks or to vent the system from air. For more information check chapter 5.3.

Note: the system needs to be fully installed and connected for the test to work. Use dipswitch 3 for testing and discharge purposes only. When the system is in normal operation make sure to turn off dipswitch 3.



## 4.2 CONNECTING THE SMART REMOTE CONTROLLER

Use the supplied controller cable (USB to UTP) to connect the Smart Remote Controller (USB connector) on port 1 (UTP connector) on the control board in the Revomax unit (chapter 4.1). After powering up the Smart Remote Controller (use the supplied power adapter) and RevomaxII, the unit will first initialize, this can take a few minutes. All valves and sensors are automatically tested during startup. The remote controller cannot be operated during this initializing phase. You will see several screens pop-up and close again, this is normal.

Check the RevomaxII user manual for daily operation and configuration of the Smart Remote Controller.



## 4.3 POWER SUPPLY

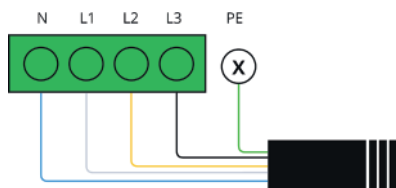
All Revomax II units must be connected to a 3-phase 400 volt power supply.

Alternatively, the 6000, 10000 and 15000S model can also be powered by a standard 1-phase 230v domestic power supply.

Always use a circuit breaker (MCB), specified cable thickness as specified earlier and earth leakage switch (RCD type B). Lead a suitable power cable through the rubber pass-through on the front of the unit and connect all wires in the correct manner as shown below. Always use at least the specified cable diameter for connecting the power supply to the RevomaxII.

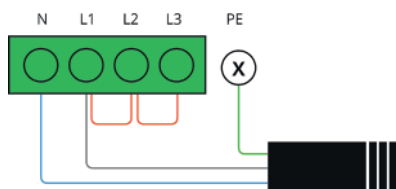
Ask assistance from a certified electronic engineer when connecting a 400v 3-phase system.

**NOTE: always use a dedicated MCB and RCD type B for the Revomax II. Do not combine with other devices on the same circuit.**



**400v:** all models

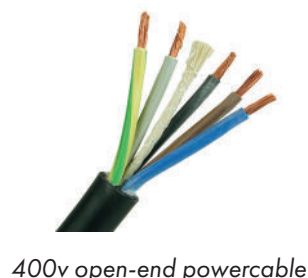
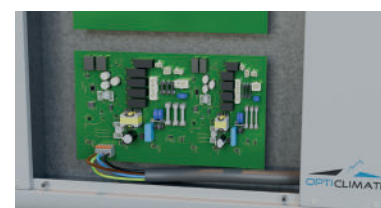
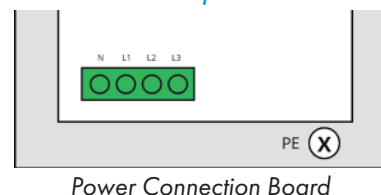
Connect the cable in following schematic. Make sure to use the grounding PE cable for safety. Local rules and code apply.



**230v:** 6000, 10000, 15000S model only

Connect the cable in following schematic. Make sure to use the grounding PE cable for safety. Local rules and code apply.

.....



# 5. WATER CONNECTION

The Revomax II needs a clean, continuous and cool water supply to operate properly. This can be achieved in two distinct operation methods: tap water or a closed loop with an OptiClimate watercooler. Both are viable options, depending on your growing needs and surrounding situations like the availability of clean water and climate. In this chapter we will explore both options in a basic setup. This means a single RevomaxII without a watercooler and a single RevomaxII with a single watercooler. As described in chapter 5.1, there are more installation options. Ask your dealer or find us at [airluxtechnologies.com](http://airluxtechnologies.com) for assistance.

Check the specifications of your model in chapter 1 to determine the cool water supply in m<sup>3</sup> per hour. In the case that your basic water supply is below 25 degrees celcius all year round without exception, you can operate without a separate water cooler.

Note that when you want to create a closed loop, the RevomaxII heats the water when in cooling mode. Extra cooling capacity might be needed. Check chapter 5.2 for more information. When the inlet water temperature rises above 25 degrees Celcius, the Revomax cannot cool to specification. A watercooler with sufficient capacity is mandatory.



*Revomax Backside:  
water connections*

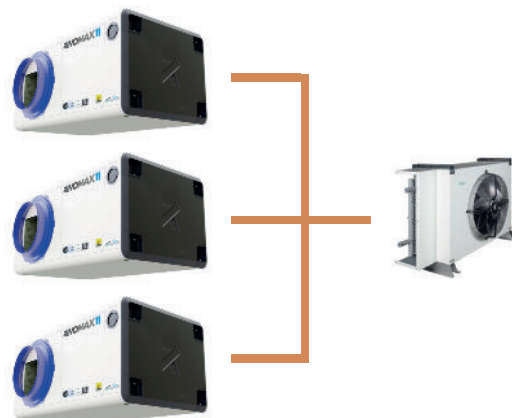
- 1. Water Outlet
- 2. Water Inlet
- 3. Condensation Outlet

## 5.1 CONFIGURATION OPTIONS

Beside the basic options as to be explained in the next part (chapter 5.2 and 5.3), take a brief look at what we can do with the RevomaxII. All variations are perfectly viable and scalable and need a professional design and preparation from your dealer or find us at [airluxtechnologies.com](http://airluxtechnologies.com). The high-performing RevomaxII system needs to be installed with all hardware and guidelines (chapter 2.1) in mind to ensure long-term reliable operation.

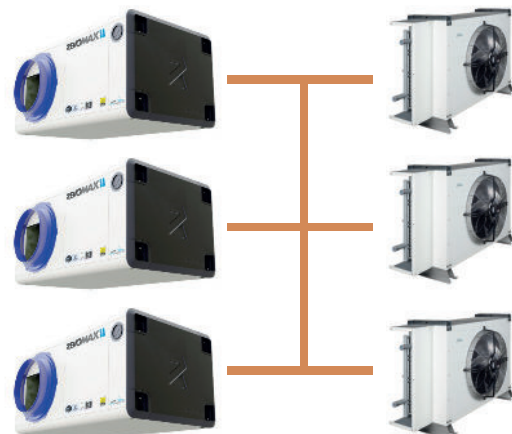
### Option 1: Multi-RevomaxII setup with single cooler

Install two or more RevomaxII units in multiple growing areas or rooms, combined with one big watercooler unit.



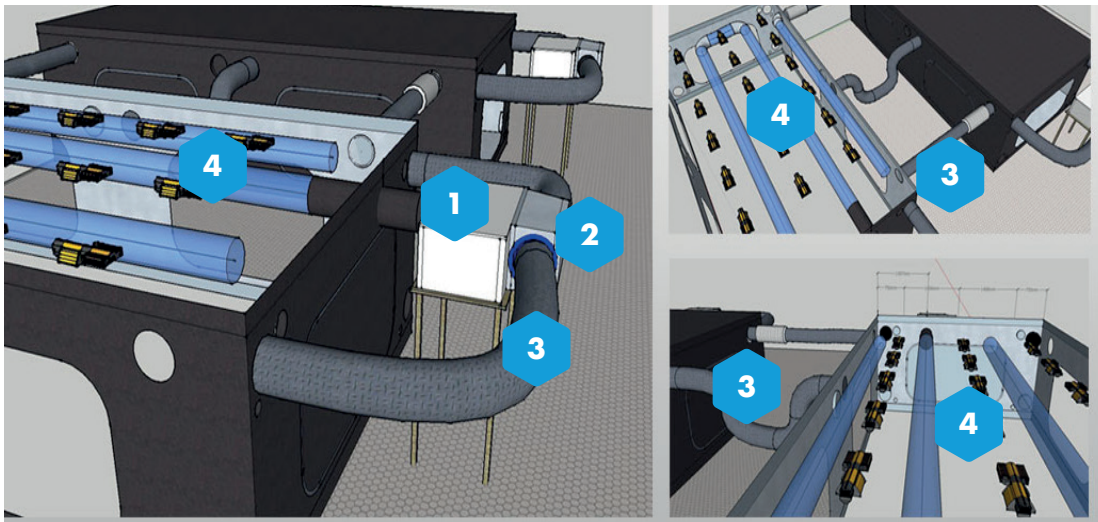
### Option 2: Multi-RevomaxII setup with multiple coolers

Install multiple RevomaxII units in multiple growing areas combined with multiple watercoolers



### Option 3: RevomaxII unit outside growing area

Install the RevomaxII unit outside the growing area with our Plenumbox and airhose system



Multiple views of Plenumbox based multi-room setup

1. RevomaxII unit
2. PlenumBox
3. Airhose system
4. Growing Area

### Whatever your growing needs

With the flexibility of the RevomaxII system you can easily scale to whatever situation you might have. There is no growing area too complex or difficult for us! Challenge us for your next project. Contact your dealer or find us at [airluxtechnologies.com](http://airluxtechnologies.com) to guide you through the next level of indoor farming.



RevomaxII sep-fan and custom aluminium airhoses. The fan is installed integrated in the airhoses.

## 5.2 WITHOUT WATER COOLER

Connect the water supply with a standard 3/4 inch water connection screw set, plumber-grade piping or Tyleen hose-set. Connect them directly to a steady water supply that is under 25 degrees Celsius year round and make sure to connect the drainage or recycle destination accordingly. The heated water can be used for building/office heating.

### Solenoid valve & water leak sensor (sold separately, see chapter 7)

Use our magnetic solenoid valve and water leak sensor for safety. When a leak is detected the system will shut down to prevent damage. Place the valve directly after the water source in a fixed, easy to access location. The magnetic coil of the valve must be placed upwards or alternatively to the side. Never downwards.

### Strainer & Insulation (sold separately)

It's highly recommended to use a strainer to filter the water and insulate the water supply piping to prevent condensation build-up and optimize efficiency.

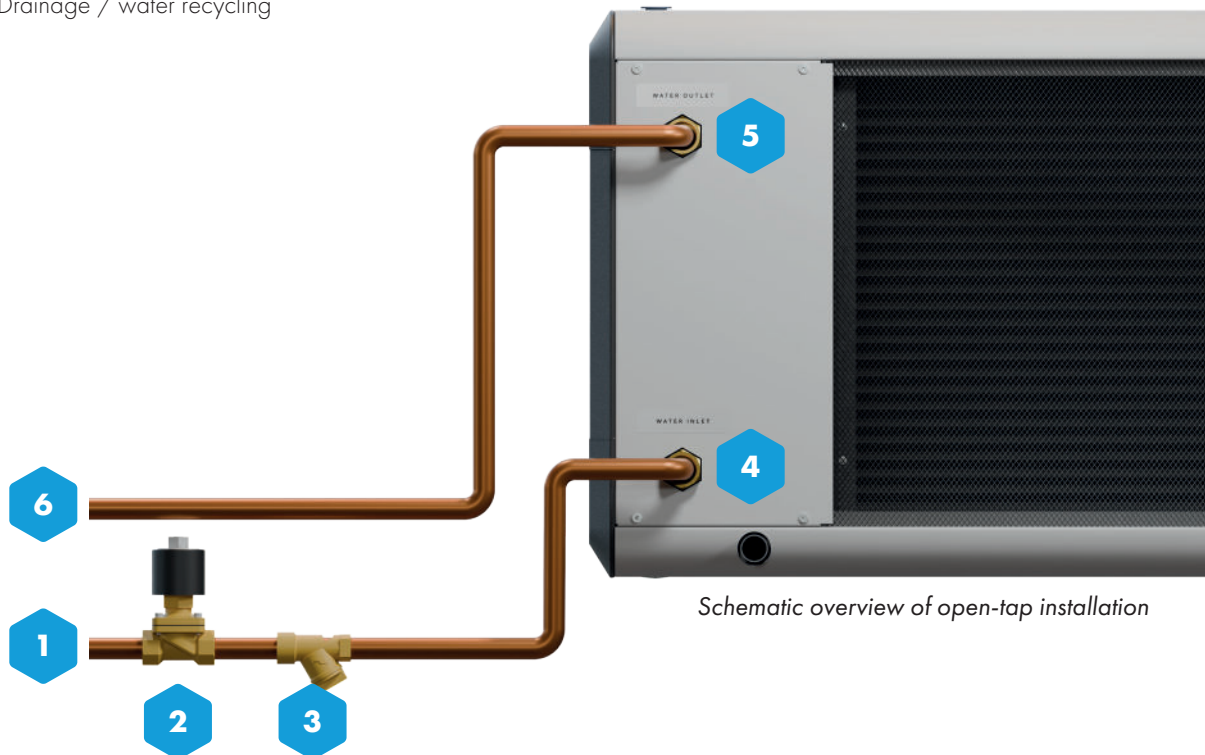
### Piping (not included)

The piping is not included in the RevomaxII package. The system can be connected with industry-standard PE or other type of water piping. We recommend using PE (Poly-Ethylene) piping 'quick-connectors' for easy and flexible installation. The needed diameter depends on local water pressure and RevomaxII variant. We recommend using a certified plumber for the installation of the piping.

### Connection diagram

Connect the system in following sequence to operate correctly:

1. Water source
2. Solenoid (magnetic) Valve - optional - closes when the water leak sensor detects water leakage
3. Water strainer - optional - filters particles that could be present in the water source like a river
4. RevomaxII water inlet
5. RevomaxII water outlet
6. Drainage / water recycling





### 5.3 WITH WATER COOLER

The most common option is a closed loop water system. When cool fresh water is not available, economically viable or when the water temperature is above 25 degrees Celcius regularly, watercooler is mandatory for stable operation to specification.

#### Water cooler capacity

The needed capacity of the water cooler depends on variables like climate, season, sunshine, humidity, ambient temperatures and other hardware in operation that generates heat. Therefore, the needed cooler's capacity needs to be assessed per case.

In most moderate operating situations the rule of thumb is for the water cooler to have the same level or slightly exceeded power output versus the Revomax II unit. For example: a Revomax II 30000 (30kw) needs a watercooler that at least has the same 30 kw capacity. All our water coolers are designed with a small amount of headroom so the 32 kw industrial grade water cooler is usually a good fit.

It's possible to connect multiple Revomax unit's to a single cooler as long as the cooling capacity is met. For more information or specific watercooling questions needs contact your dealer or find us at [airluxtechnologies.com](http://airluxtechnologies.com).



OptiClimate Watercooler

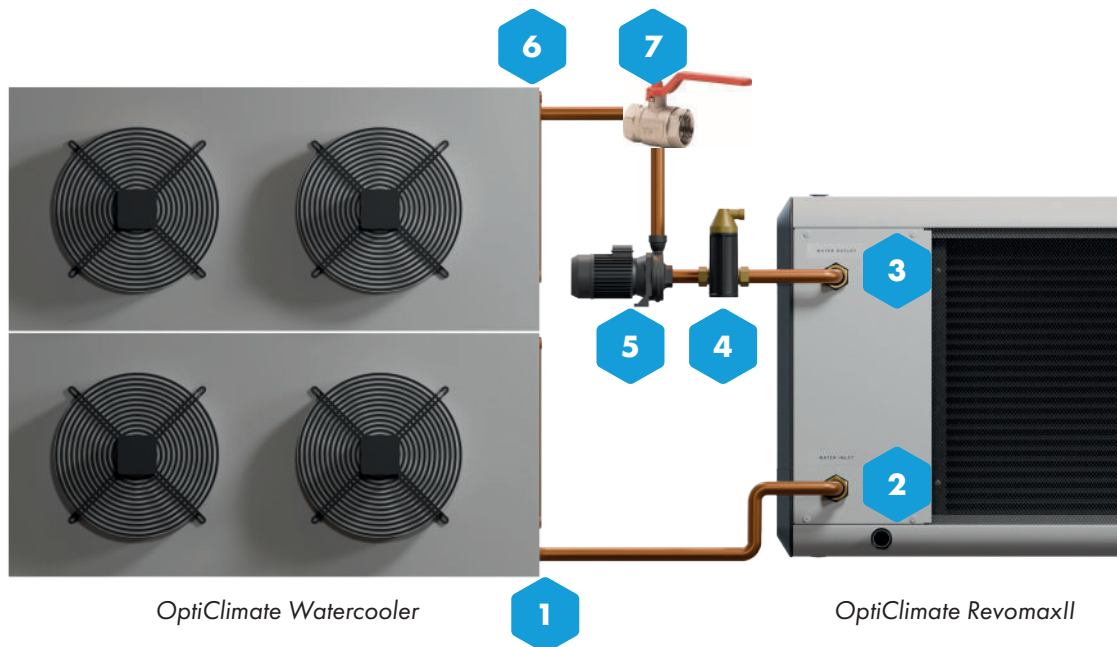
#### Piping (not included)

All piping is not included in the RevomaxII package. The system can be connected with industry-standard PE or other type of water piping. We recommend using 40mm PE (Poly-Ethylene) piping with 'quick-connectors' for easy and flexible installation. We recommend using a certified plumber for the installation of the loop.

#### Connection diagram

Connect the system in following sequence to operate correctly. All items are supplied when you buy an OptiClimate RevomaxII with an OptiClimate watercooler.

1. Watercooler water outlet
2. Revomax water inlet
3. Revomax water outlet
4. In line (micro-bubble) Air separator - filters out excess air from the system.
5. Circulation pump - creates water flow in the system
6. Cooler water inlet
7. Water filling tap - tap to fill the closed loop water system.

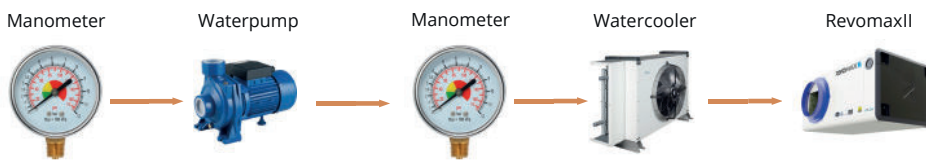


#### Detailed installation guide

Please refer to chapter 6 for detailed instructions on the watercooler.

## 5.4 MANOMETERS

To measure water pressure and make sure the cooling works optimally and without leaks we need to install two manometers. One in front of the pump and one behind it. Use the supplied tap-saddles to install



Manometer install sequence



Tapsaddle

## 5.5 WATERCOOLER ADDITIONAL PARTS

### Compressor Start Sensor, Pump & SmartBox 6/3 (Water cooler kit)

Powers and controls the water flow within the closed loop system.

### In line Air Separator (supplied with watercooler)

Filters micro air bubbles from the water flow, install right before the pump.

### Automatic bleeder (supplied with watercooler)

Lets air escape from the loop in a controlled way, install on the highest point in the loop.

### Piping (sold separately)

We recommend using 40mm PE (Poly-Ethylene) piping with 'quick-connectors' for easy and flexible installation. We recommend using a certified plumber for the installation of the loop.

### Glycol (sold separately)

The RevomaxII system is compatible with a water-glycol mix. When the system is used in area's that have below zero degrees Celcius temperatures regularly (Winter-time), a Water-Glycol Mix is mandatory to prevent the system from freezing up and corrosion.

For each potential degree Celcius below zero, you need 1% of glycol in your mix. For example, in the Netherlands temperatures rarely, if ever, reach below -15 degrees Celcius. So a safe mix and a bit of headroom a 20% mix is advised.

Add the correct amount of glycol to the system first, then water until static pressure is 1.5 bar (The installed manometer, not the manometer on the RevomaxII unit). In the case the system is already filled with water, drain double the amount of calculated glycol of water first, then add the glycol and re-fill the water until pressurized at 1.5 bar again.

NOTE: on the market you can obtain pure glycol or pre-mixed water-glycol. Make sure to use the correct type. Airlux Technologies strongly recommend PROPYLENE glycol, not ETHYLENE.

## 5.6 WATERCOOLER FILLING THE LOOP

The closed loop needs to be filled with water or a water-glycol mix as stated above. The OptiClimate Water Cooler is supplied with a tap that needs to be installed in front of the pump. Below are the basic steps to fill the loop.

Note: install the temperature sensors before filling the loop as it requires drilling in the piping. For instructions check chapter 6.

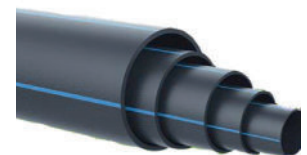
Note: when the temperature at the cooler location is below zero Celcius, do not fill the system. This can lead to permanent damage to the cooler.



Smartbox 6/3



Air Separator



PE piping

## Steps

1. Check all water connections before filling the loop.
2. Connect a water hose from a fresh water source to the installed tap.
3. Open the automatic air bleeder so access air can escape in a controlled way.
4. Start the water supply slowly and wait for the pressure to build up to 1 bar, check the manometer that is installed before the pump.
5. Wait for all air to escape.
6. Use dipswitch 3 as explained in chapter 4 to start the water flow. The system needs to be fully booted before this works.
7. Make sure to deaerate the system, run for two ours and check carefully for leaks and if the pressure remains at the same level.
8. When successful, empty the loop. When not, re-check for leaks and re-initiate the process.
9. Re-fill the loop: add the correct amount of glycol and water after. Repeat steps 2 to 8.
10. Make sure the pump is running, add the appropriate amount of glycol.
11. Wait for the pressure to built up to 1.5 bar.
12. Close the loop, the system is now ready for use.

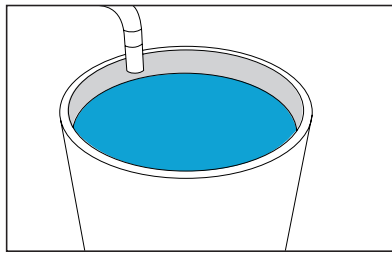


Filling tap

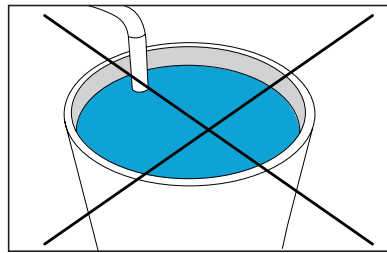
## 5.7 CONDENSATION WATER

### Discharge of the condensation water

The unit will dehumidify the air during cooling and in dehumidify mode. The moisture extracted from the air is collected in the internal condensation pan, which has a 3/4 drain pipe where the condensate will run off. The condensate is clean and can be used as irrigation water if desired. Collect or dispatch the water depending on your needs. Equipment or reservoirs are not included.

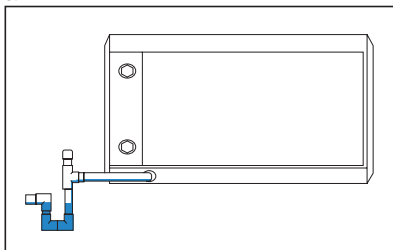


Correct: drainage above reservoir

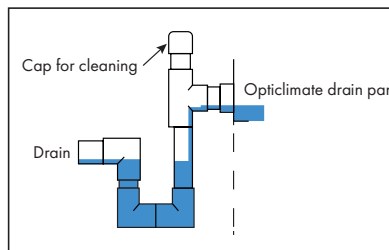


Incorrect: drainage in reservoir

Make sure the drainage outlet rests above the water-reservoir at all times. When in the water, the drainage stops and the RevomaxII can flood internally because the water cannot run off. Use a "P-trap" on the condensation outlet to prevent air entering the unit and to prevent condensate run-off problems.



P-trap connected correctly



P-trap close-up



CONDENSATION OUTLET



P-trap

### Reservoir

Depending on the humidity, watering habits and climate the Revomax dehumidifies up to 96 percent of water in the air. Make sure to have a large enough reservoir or drainage capacity when collecting the condensation water.

### Condensation Lift Pump

If the unit is installed at the same level or lower than the drain or sewer, a condensation lift pump is mandatory for correct operation. Our basic lift pump (SKU 1-10) pumps the water through a 9mm hose to a height of 4 meters into the drain or collecting tank. Stronger pumps are also available. For more information or pump-capacity questions, don't hesitate to contact your dealer or find us at [airluxtechnologies.com](http://airluxtechnologies.com)



Condensation Lift Pump

# 6. WATERCOOLER SETUP

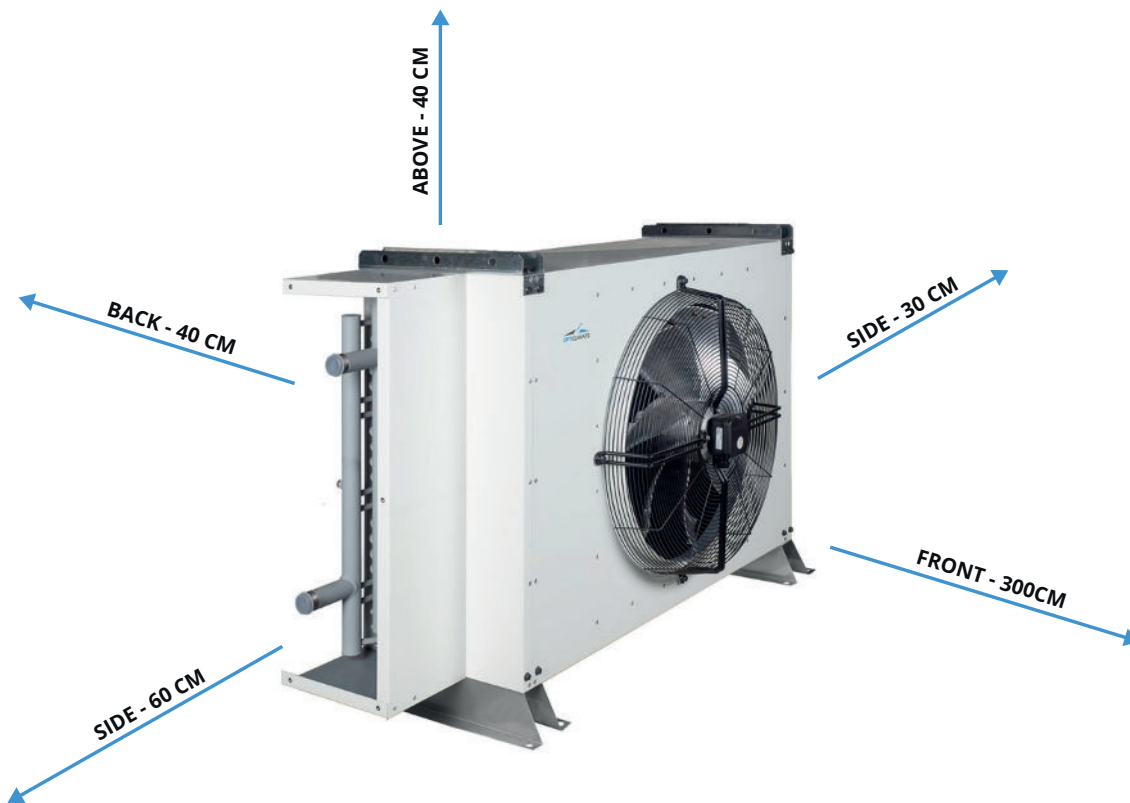
## 6.1 PLACEMENT

A watercooler needs room to suck air into its fans and dispatch the air on the other side. To provide the watercooler with sufficient free air to use for cooling, the watercooler needs to be placed outdoors and with sufficient room to operate.

We recommend, when possible, to place the watercooler outside of direct sunlight for best performance. Also, in snowy and sandy areas it's extremely important to keep the in- and outlet free of obstacles during operation. Build a roof or shelter to protect the watercoolers in- and outlet and/or direct sunlight.

Opticlimat has several types of watercoolers in its range. There are compact models, industrial grade models and two types of alignment: horizontal and vertical. Make sure to use the type of alignment correctly.

Use the guidelines below to ensure proper operation



## 6.2 BASIC CONTROL SETUP

In a closed loop system as described in chapter 5, we need to install an extra start-stop sensor, temperature sensor and controls for the watercooler and pump. This completes the setup. Depending on your growing needs we can use a basic setup or an advanced setup with inverters (chapter 6.3). The advanced method automates the water flow and cooling with continuously adjustable controls which makes the operating temperatures and humidity much more stable.

For the advanced control setup continue to 6.3.

Before continuing the installation please make sure the system is connected as described in chapter 4 and 5.3 or 5.4.

The basic setup is controlled by a SmartBox 6/3 and controls the pump and watercooler via a power outlet. After connecting the water flow parts as described in chapter 5.3, we also need to connect the control system. All needed accessories are supplied with the watercooler and applicable connection-kit (chapter 7).



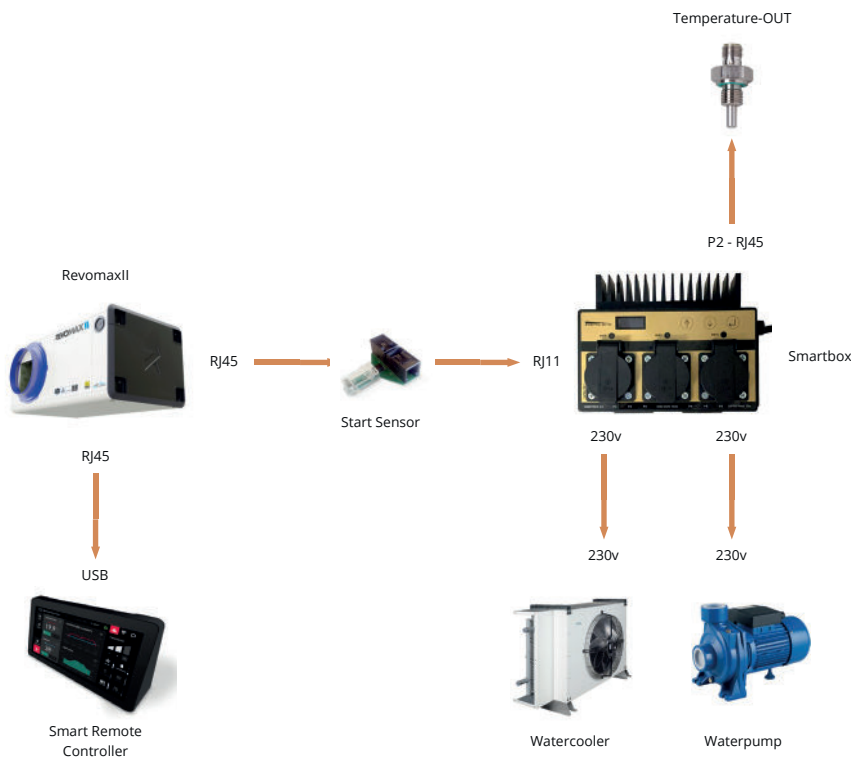
OptiClimate watercooler

### 1. Added peripherals

- Watercooler - to be placed outside of the building, cools water that was heated during the cooling process in the RevomaxII
- Water pump - to be placed inside the building - creates water flow, pumps water(glycol mix) around
- Start Sensor - reads water demand and starts the pump
- Temperature Sensor - measures water temperature after cooling and signals SmartBox to in- or decrease speed of the coolerfan
- Manual valve - manual control of the waterflow
- Smartbox 6/3 - main control and connection unit, controls the watercooler and water pump

### 2. Control setup

The following schematic refers to the control setup. After the water connection is now done (see chapter 5), we now need to install and connect all electronics and control hardware.



Basic control setup

### 3. Connect start sensor, watercooler and waterpump

#### Steps:

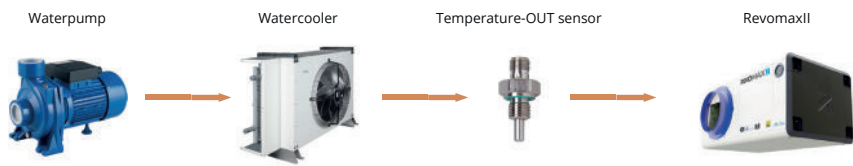
1. Place the start sensor on the control board position 4 (see chapter 4) and connect the supplied Opticlimat communication cable to the SmartBox 6/3 on the IN/OUT port on the left part of the controller
2. Connect the OptiClimate watercooler (fan) on OUT1 (230V for European model, a UK version is available, ask your dealer or our support desk)
3. Connect the OptiClimate water pump to OUT3 (230V for European model, a UK version is available, ask your dealer or our support desk)



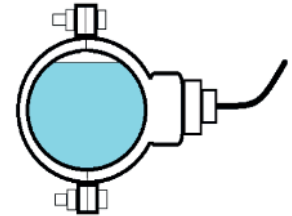
Tapsaddle

### 4. Install temperature sensor

Install the temperature sensor between the watercooler (out) and RevomaxII (in). Note the water flow direction (orange arrows). Make sure the loop is empty before installing the temperature sensor.



Temperature install sequence



Sideview tapsaddle

Drill a hole in the side of the pipe and use the supplied tap saddle and connection ring to 'close' the hole. After installation (re)fill the loop with water (glycol-mix). We designate the water temperature as OUT because it is installed after the watercooler.

Always install sideways to prevent measuring air.

### 5. Water flow control

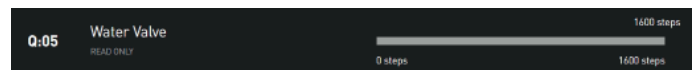
When using the basic setup, the water flow must be adjusted manually by opening and closing a valve that is installed directly after the pump in the closed loop. The system works optimally when the delta temperature (the difference between the outgoing water and incoming water temperature) is no more than 5 degrees Celcius.



Manual valve install sequence

### 6. Smart Remote Settings

In the Smart Remote Controller first make sure the internal valve in the Revomax is fully opened. Check the current output in the menu > settings > outputs menu.



Water valve control

Wait for the grow area to heat up to the target room temperature and for the water temperature being at target temperatures (check the user manual for more information). The RevomaxII must be active and in cooling mode. The target temperature must be set to 16 degrees celcius to force the unit to cool.



Water temperature control

### 7. Delta Temperature

Target temperatures are 32 degrees Celcius in (I:11) and 37 degrees Celcius out (I:08), this means the delta (difference) is 5 degrees, which is optimal. Check the menu > settings > all sensors

- When the delta is too LOW (less than 5 degrees): CLOSE the valve, there is too much flow
- When the delta is too HIGH (more than 5 degrees): OPEN the valve, there is too little flow

Adjust in small increments and wait for the system to respond. This can take a few minutes. After all temperatures are stable for a few hours, adjust the room temperature to the desired temperature.



## 6.3 ADVANCED CONTROL SETUP

For systems above 15 kWatts of cooling power, you can install inverters for more precise control over the temperature and a more stable climate overall in your growing area. The advanced setup automates the water flow control and seamlessly and continuously adjusts the pump and the watercooler fan.

When using the advanced setup with inverters, contact your dealer or our professionals at Airlux Technologies for additional support and system design.

### 1. Added peripherals (optional)

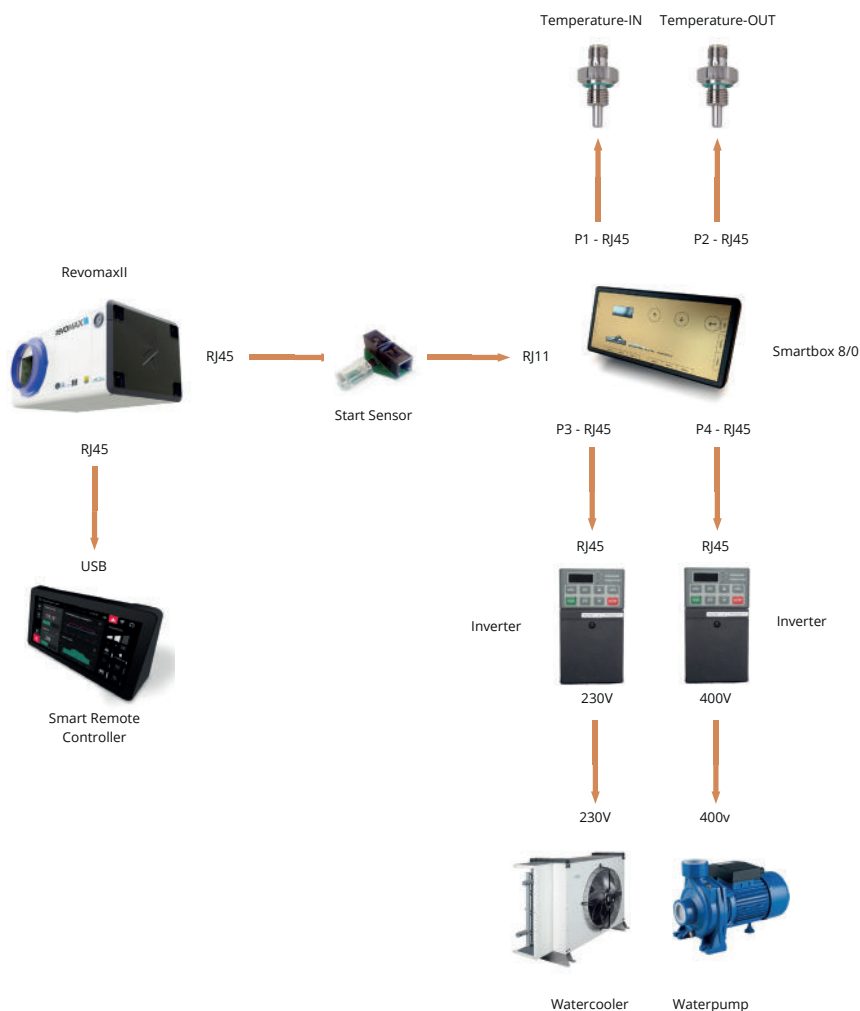
- Watercooler - to be placed outside of the building, cools water that was heated during the cooling process in the RevomaxII
- Water pump - to be placed inside the building - creates water flow, pumps water(glycol mix) around
- Start Sensor - reads water demand and starts the pump
- Temperature sensor 2 x - Measures water temperature before (IN) and after (OUT) cooling and signals SmartBox to in- or decrease speed of the coolerfan and/or water flow
- Pressure sensor 2 x - Checks the pressure in the system at all times, indicates when pressure becomes too low
- Inverters 2 x - control the pump and watercooler continuously
- Smartbox 8/0 - main control and connection unit, controls the inverters

### 2. Advanced control setup

The following schematic refers to the advanced control setup. After the water connection is now done (see chapter 5), we now need to install and connect all electronics and control hardware.



3-phase inverter



Advanced control setup

NOTE: The connections between the Smartbox 8/0 to the inverters and Cooler/Pump are non-standard connections. Carefully read the next sections to install correctly.

### 3. Connect start sensor

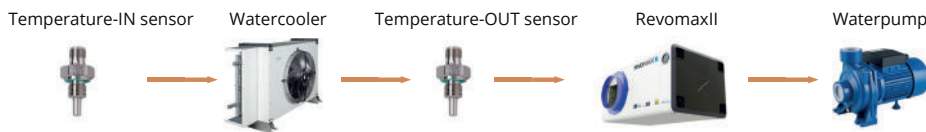
Place the start sensor on the control board position 4 (see chapter 4) and connect the supplied Opticlimat communication cable to the SmartBox 8/0 on the IN/OUT port on the left part of the controller

### 4. Install temperature sensor (2x)

The advanced control method requires two temperature sensors to operate. After connecting the pump and coolerfan with the inverters, now install two temperature sensors. The first is placed right after the cooler (temp OUT) and the second before the cooler (temp IN). This way we can measure and control the speed of the fan and water flow in a very stable and seamless way.

Make sure the loop is empty before installing the water sensor. Drill a hole in the side of the pipe and use the supplied tap saddle and connection ring to 'close' the hole. After installation (re)fill the loop with water (glycol-mix).

Always install sideways to prevent measuring air.

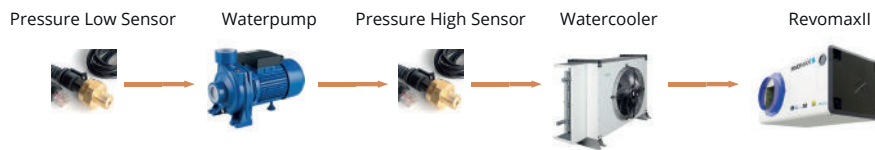


Temperaturesensors install sequence

### 5. Install pressure sensors (2x, optional)

When the closed loop loses pressure because of a leak, the pump could run dry. This causes damage. To prevent this happening we have optional pressure sensors. These sense a loss of pressure and warn the user so the loop can be checked for leaks and the loop can be (re-)filled to operating capacity. Use the same tap saddle and process as used for the temperature sensor.

The sensors are to be placed right before and after the pump.



Pressuresensors install sequence

Make sure the loop is empty before installing the water sensor. Drill a hole in the side of the pipe and use the supplied tap saddle and connection ring to 'close' the hole. After installation (re)fill the loop with water (glycol-mix).

## 6.4 CONNECTING THE INVERTERS

Inverters are high-precision control units that are directly connected to the watercooler fan and water pump. Follow these steps to connect:

### 1. Connecting Smartbox to Inverter

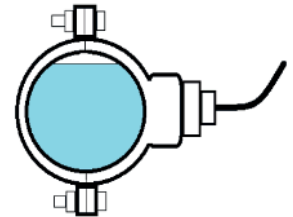
The Inverter must be connected to the SmartBox with the supplied **BLUE** interlink cable that is labeled on both sides. The cable end labeled **VFD** must be connected to the inverter, the cable end labeled **Smartport** must be connected to the SmartBox.



Custom labeled interlink cable



Tapsaddle



Tapsaddle sideview



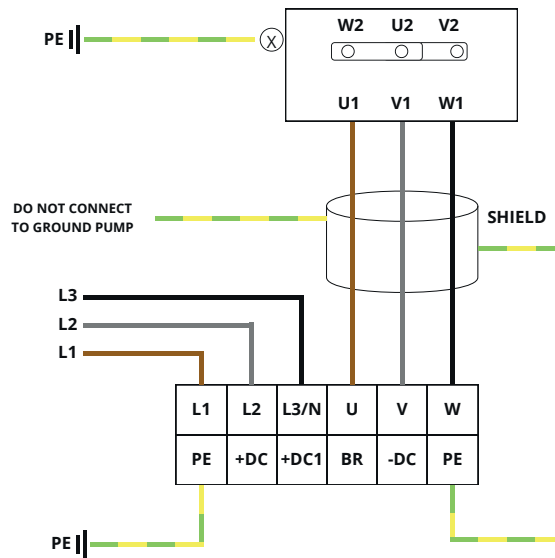
Pressure Sensor



## 2. Connecting Inverter 1 to pump

The inverter must be connected to the pump with a custom power cable setup. Pumps must be connected with a 3-phase inverter. Make sure to order a 3-phase pump in this situation. Connect the power cable in the correct manner, as stated below.

- Use a shielded cable in all cases
- Connect ground from pump separately, not with the same cable the pump is powered
- Keep distance between pump and inverter as short as possible, mount indoors

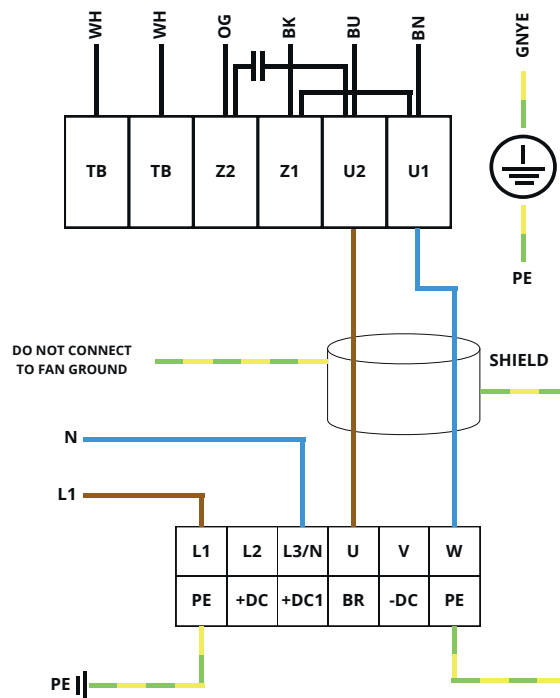


Power schematic inverter to pump

## 3. Connecting Inverter 2 to watercooler fan

The inverters must be connected to the watercooler(fan) with a custom power cable setup. Coolerfan must be connected to a single-phase inverter. Make sure to connect the power cable in the correct manner, as stated below.

- Use a shielded cable in all cases
- Connect ground from pump separately, not with the same cable the pump is powered
- Keep distance between pump and inverter as short as possible, mount indoors

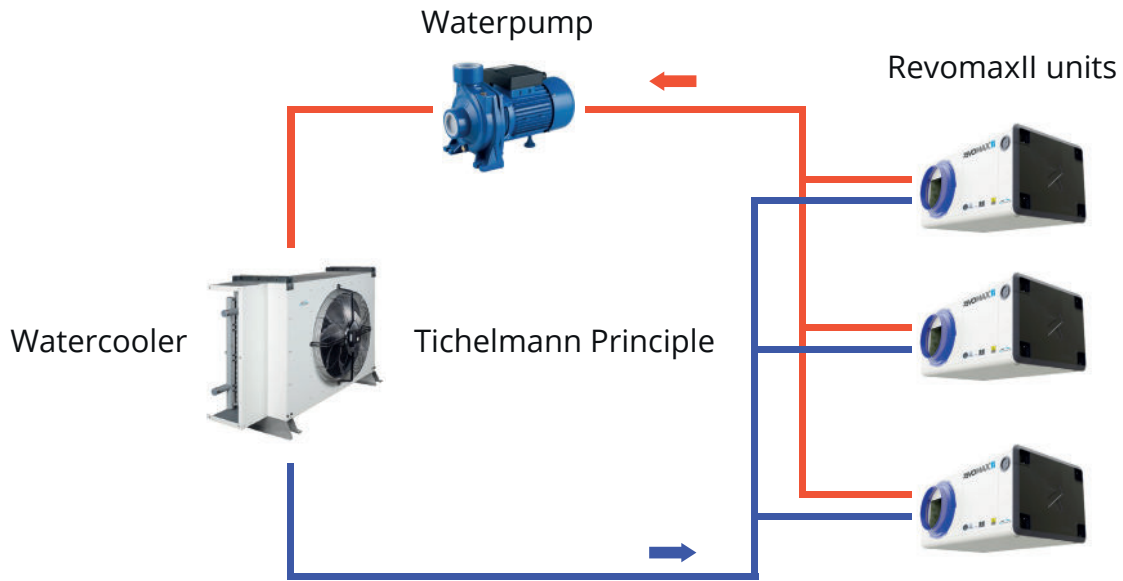


Power schematic inverter to watercooler fan

## 6.5 MULTIPLE REVOMAXII UNITS, SINGLE COOLER

For efficiency purposes you are able to install multiple RevomaxII units on a single cooler in a single closed loop. As long as the watercooler has sufficient cooling capacity to cool the combined heated water generated by the RevomaxII units. All install instructions from chapter 6.2 or 6.3 still apply. Only add extra piping and the second and/or third RevomaxII Unit. The setup must be built with identical models to work properly.

NOTE: the length of the piping from each RevomaxII to watercooler must be the same as other units to prevent uneven water distribution and temperature control. This is called the Tichelmann principle.



# 7 ESSENTIAL ACCESSORIES

Both the installation with and without watercooler require a basic installation package that is needed for installing the respective option. Without this package the system cannot be installed to a normal operating situation.

## 7.1 WITHOUT WATERCOOLER

For basic operation on a continuous tap water installation order all needed PE piping as recommended in chapter 6 (piping not included) and:

### SKU 1-7811 'tapwater leak-prevention kit'

- R-7962 waterleakage sensor
- A1-41 Solenoid (magnetic) valve
- A1-101 connectorset

### SKU 1-7812 'PE piping connector kit'

- A1.1 Bisontix Gel Tube
- A1.2 Teflon Tape
- A1.5 3/4" x 16mm 90 degrees angle
- A1.6 3/4" x 16mm strait

## 7.2 WITH WATERCOOLER

For basic operation in a closed loop with watercooler installation, order all needed PE piping as recommended in chapter 5 (piping not included) and one of the available connection kits.

### SKU 1-85710 'Watercooler Connectionkit < 32Kw 10 mtr'

- 2-587EU Smart Box 6/3 EU
- 1-7850 Start Sensor SmartBox
- 2-556 Water Temperature Sensor G1/4" thread 10 mtr
- A1.8109 Tap Saddle 30mm x 1/2" clamp
- A1.8107 Messing reducing ring with sensors 1/4"

### Other watercooler connection kits

- 1-85710 < 32 kw - 5 mtr
- 1-85805 > 32 kw - 10 mtr
- 1-85810 > 32 kw - 5 mtr

### PE piping connector kit

OptiClimate watercoolers are supplied with a PE Piping connectorkit. The PE piping is NOT included.

## 7.3 PLENUM BOX

When the RevomaxII unit is placed outside of the growing area, you need a PlenumBox to connect the unit to an airhose system. Note that the diameter of the outgoing hose should be the same as the flange mounted on your model. The air intake needs to be roughly twice the size.

## 7.4 AIRHOSES

Hoses are available in different materials, lengths and diameter sizes.

There are two material variants:

### 1. LPDE foil

Economical option

### 2. Fabric - LVS

Prevents condensation, anti-bacterial and washable

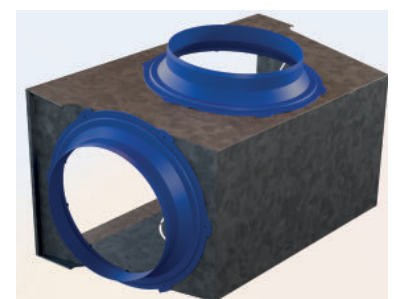
Ask your dealer for available options, lengths and diameters or find us at [airluxtechnologies.com](http://airluxtechnologies.com).



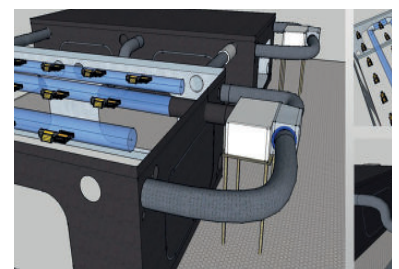
Solenoid (Magnetic) Valve



OptiClimate watercooler



Plenum Box



Example with Plenum Box

# 8 ACCESSOIRES

The RevomaxII has endless possibilities and configurations. In the matrix below you can find what accessories are compatible with what setup. Make sure to purchase the needed connectorkit for tapwater (1-7812) or watercoolers (1-85710 or variant). For specific needs ask your dealer or find us at [airluxtechnologies.com](http://airluxtechnologies.com).

## OptiClimate RevomaxII - All accessories & compatibility

SKU	Peripheral	Config option 1 Tapwater	Config Option 2 With Watercooler
<b>1-7812 TAP WATER PE PIPING CONNECTORKIT</b>		●	
A1.1	Bisonix Gel Tube	●	
A1.2	Teflon Tape	●	
A1.5	3/4" x 16mm 90 degrees angle	●	
A1.6	3/4" x 16mm strait	●	
<b>1-7811 TAP CONNECTORSET</b>		●	
1-41	Solenoid Magnetic Valve	●	
1-7811	Water Leakage Safeguard sensor	●	
A1-101	Connectorset	●	
<b>1-85710 WATERCOOLER CONNECTORKIT &lt;32KW 10 mtr</b>			●
2-587EU	Smart Box 6/3 EU		●
1-7850	Start Sensor SmartBox		●
2-556	Water Temperature Sensor G1/4" thread 10 mtr		●
A1.8109	Tap Saddle 30mm x 1/2" clamp		●
A1.8107	Messing reducing ring with sensors 1/4"		●
<b>1-85705 WATERCOOLER CONNECTORKIT &lt;32KW 5 mtr</b>			●
<b>1-85810 WATERCOOLER CONNECTORKIT 32KW 10 mtr</b>			●
<b>1-85805 WATERCOOLER CONNECTORKIT 32KW 5 mtr</b>			●
<b>VARIOUS WATERCOOLER ACCESSORIES</b>			●
2-360	Revomax Communication cable 5 mtr		●
2-361	Revomax Communication cable 10 mtr		●
2-362	Revomax Communication cable 20 mtr		●
A 1.8171	Waterpump 32kw P5S-120/4 - No Inverter 230V-Phase1		●
A 1.8171	Waterpump 32kw P5S-120/4T - Inverter 400V-Phase3		●
2-586	SmartBox 8/0		●
2-558	Pressure Sensor 0-10 bar G1/4" thread Smartport 5 or 10 mtr		●
1-861	Fan/Pump Inverter VFD 1.5KW, 200V~240V (1 phase)		●
1-862	Fan/Pump Inverter VFD 1.5kW, 380-480V (3 phase)		●
<b>SPARE PARTS</b>			●
Various	Dustfilters - Various sizes and models	●	●
1-7804	Smart Remote Controller SILVER Revomax (REVOMAX Only)	●	●
1-7803	Smart Remote Controller cable 7 mt Revomax	●	●
1-7851	Temperatuursensor Aluminium Revomax 5mt wit (extern)	●	●
1-7852	Temperatuursensor Aluminium Revomax 10mt wit (extern)	●	●
1-7853	Humidity (RH) sensor + Lightcel 5m Revomax	●	●
<b>INSTALLATION PARTS*</b>			●
Various	Airhose distribution hoses, different sizes, LPDE or Textile	●	●
Various	Insulator Springs for 6000, 10000 and 15000	●	●
Various	Plenumboxes, different sizes	●	●

\* contact your dealer or find us at [airluxtechnologies.com](http://airluxtechnologies.com)

# 9 TROUBLESHOOTING

Most common errors are easily resolved. For more advanced troubleshooting check our knowledgebase at <https://opticlimate.com/nl/knowledge-base/>

<b>Error/Symptom</b> RevomaxII does not turn on	<b>Possible Cause</b> RevomaxII is not properly powered	<b>Check</b> Are any LED's lighting up on the control board (chapter 4)	<b>Solution</b> Make sure the power supply is connected properly to all three phases (chapter 4)
		<b>Check</b> Is 230V connected to all three phases of the powerboard (chapter 4)	<b>Solution</b> Make sure the power supply is connected properly to all three phases (chapter 4)
	<b>Possible Cause</b> No valid firmware is installed	<b>Check</b> Does the remote controller show 'RevomaxII is missing firmware' message	<b>Solution</b> Execute the update proces from the remote controller
<b>Error/Symptom</b> OptiClimate communication is lost	<b>Possible Cause</b> No communication between the USB side of the communication cable, possible cable defect	<b>Check</b> Is the communication cable properly connected on the Smart Remote Controller (USB) Chapter 4	<b>Solution</b> Properly (re)connect the communication cable or replace the cable when still in error
<b>Error/Symptom</b> Connection lost with RevomaxII 'OptiClimate 1'	<b>Possible Cause</b> No communication between the UTP side of the communication cable, possible cable defect	<b>Check</b> Is the communication cable properly connected on the RevomaxII (UTP) Chapter 4	<b>Solution</b> Properly (re)connect the communication cable or replace the cable when still in error
	<b>Possible Cause</b> The powerconnection on the RevomaxII was lost	<b>Check</b> Is 230V connected to all three phases of the powerboard (chapter 4)	<b>Solution</b> Make sure the power supply is connected properly to all three phases (chapter 4)
<b>Error/Symptom</b> During update proces: Update file is corrupt (Smart remote controller)	<b>Possible Cause</b> The UDP (update) file cannot be read from the USB memorystick	<b>Check</b> Is the UDP file the same as you have received from our servicedesk	<b>Solution</b> Re-download the UDP you received from us to the USB memorystick and retry the update proces
		<b>Check</b> Is the USB drive firmly connected to the USB port on the Smart Remote Controller	<b>Solution</b> Retry the update proces
		<b>Check</b> Is the USB drive readable on a Windows PC	<b>Solution</b> Format the USB memorystick as FAT32 on a Windows PC re-download the UDP file and retry the update.
<b>Error/Symptom</b> Error while flashing firmware	<b>Possible Cause</b> During the update proces, the connection between the RevomaxII and Smart Remote Controller was lost	<b>Check</b> Was the powerconnection lost on the RevomaxII	<b>Solution</b> Re-boot the whole system (power-cycle) and retry the update proces.
		<b>Check</b> Was the communication lost during the update proces	<b>Solution</b> Re-connect and/or replace the communication cable and retry the update proces.

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**Error/Symptom**

The OptiClimate O is missing firmware

**Possible Cause**

The update proces was interrupted

**Check**

Was the power lost on the Smart Remote Controller during the update proces

**Solution**

Make sure the power supply is connected to the Remote Controller and retry the update proces

**Check**

Was the power lost on the RevomaxII during the update proces

**Solution**

Make sure the power supply is connected to the RevomaxII and retry the update proces

**Check**

Was the communication lost between the RevomaxII and Smart Remote Controller

**Solution**

Re-connect and/or replace the communication cable and retry the update proces.

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**Error/Symptom**

Temperature reading remains on zero degrees and humidity on 50%. This does not change.

**Possible Cause**

No communication between the RevomaxII and Smart Remote Controller, possible cable defect

**Check**

Is the communication cable properly connected on the Smart Remote Controller (USB) Chapter 4

**Solution**

Properly (re)connect the communication cable or replace the cable when still in error

**Check**

Is the communication cable properly connected on the RevomaxII (UTP) Chapter 4

**Solution**

Properly (re)connect the communication cable or replace the cable when still in error

**Check**

Was the power lost on the Smart Remote Controller during the update proces

**Solution**

Make sure the power supply is connected to the Remote Controller and retry the update proces

# 10 WARRANTY

The Revomax II series and accessories are designed and manufactured with maximum care and craftsmanship. Airlux Technologies warrants the delivered goods to be free of defects for the duration of the applicable warranty period under normal use and conditions after the original purchase date. When the product shows any defects within this period that is not due to improper use, Airlux Technologies will replace or repair the defect product with a suitable replacement with at least the same functionality and specifications. Warranty of the replaced products will remain under warranty for the remaining period from the original product and purchase date. For service, the owner ships the unit to the closest Airlux Technologies service location, to be determined by the service desk. Airlux Technologies will require the original receipt to determine the warranty eligibility.

Contact your dealer for warranty information or find us at [airluxtechnologies.com](http://airluxtechnologies.com)

By Phone: +31 20 776 6006

By e-mail: [support@airluxtechnologies.com](mailto:support@airluxtechnologies.com)



**Direct link:**

<https://www.opticlimat.com/nl/knowledge-base/>

Scan the QR-code to go to our online knowledge base for the latest manuals and information