

SIMPLIFY CLIMATE SOLUTIONS

# REMOTE MONITORING OF CLIMATE CONTROL PROJECTS

## REMOTE ACCESS TO LIVE DATA WILL REVOLUTIONISE YOUR BUSINESS

Simplify is a cloud-based climate management solution designed to remotely control, monitor and analyse the climate in buildings, construction and restoration projects.

Effectively acting as a real business management tool, the solution will deliver the fully transparent data feedback you need to optimise your climate control processes. This makes it the ideal tool for water damage restoration companies, insurance companies, construction businesses, pest control companies and many more.

The use of Simplify will reduce the need for on-site visits, providing remote access to critical data and streamline your day-to-day operations. With Simplify, data is collected from wireless sensors on-site available in the cloud on the Simplify dashboard. The system has a simple and intuitive user interface, making it easy to use for everyone in your organisation. It gives you the ability to not only track the performance of the process itself, but also the performance of your equipment, by delivering live\* information on power consumption and machine status to you no matter where you are.

### "Simplify delivers the fully transparent feedback needed to optimise your climate control processes."

#### APPLICATION AREAS

- Agriculture
- Construction
- Datacentres and telecommunication
- Disinfection and pest control
- Military camps
- Water damage restoration
- Waterworks
- Storage, preservation and archives
- Indoor air climate analysis

#### **COMPATIBLE UNITS**

- Air cooling units
- Air purifiers
- Dehumidifiers
- Fans
- Heating units

## REMOTE ACCESS TO LIVE DATA WILL REVOLUTIONISE YOUR BUSINESS

#### SIMPLIFY BENEFITS

- Reduce your costs of claims: Fewer on-site visits because you can monitor everything remotely
- Capture, share and utilise climate process data such as temperature, humidity, equipment status and indoor air quality
- Use data to create reports that **document** the **efficiency** of your climate control jobs
- Minimise equipment downtime: Responsive notification if a unit is switched off by mistake or if it malfunctions
- Carry out climate control jobs more efficiently: Less downtime and live\* control of data eliminates idle and/or wasted time
- Reduce your carbon footprint: Reduced claim life cycles minimise power consumption. Fewer on-site visits reduce vehicle
  maintenance and fuel costs
- Handle more claims: Faster project cycles enable you to handle more claims with the same pool of equipment
- Identify on-site issues within hours rather than days or weeks



<sup>\*</sup>Depending on the reporting intervals set – default setting is 60 minutes.

### THE POWER OF SIMPLICITY

#### **HOW IT WORKS**

In simple terms, Simplify remote monitoring uses wireless sensors on buildings and equipment that monitor the drying, heating or cooling process throughout your climate project, for instance in the construction or water damage restoration industry.

That way, Simplify lets you check the dehumidifying, heating or cooling status on active jobs from almost any device, anywhere. In addition, you can remotely monitor and control parameters such as power on/off, alarms, temperature, relative humidity, power consumption as well as indoor air quality. In other words, remote monitoring in a climate process removes and reduces costs associated with the management of a job or project and your assets.

#### Agile response to avoid downtime

The ability to remotely monitor the climate process gives technicians the capability to respond quickly to unpredicted events, such as equipment being switched off or simply not performing as expected. This speed of response reduces downtime and subsequently reduces the negative impact on the job life cycle.

#### Be notified when the job is done

The ability to remotely track progress of a job also means that time isn't wasted, with equipment being decommissioned as soon as possible so that it can be redeployed elsewhere, rather than sitting in a job for an extra week unnecessarily. Add to that the cost savings associated with reduced on-site visits made by technicians, their time (labour cost), their travel (travel costs), and the lost productivity of them being unavailable to attend other cases.

In addition, you can remotely monitor and control parameters such as power on/off, alarms, temperature, relative humidity, power consumption and indoor air quality.

#### EASY INSTALLATION WITH THE SIMPLIFY APP

The Simplify App is your tool for installation and archiving of each job, providing a fast, efficient, and simple to use method of installing the equipment on-site – within only two minutes.

It provides a pain-free user interface for anyone installing the system on-site. Simply scan the Control Unit's QR code and add the job reference. The geographical location is registered automatically, if enabled in the app settings. Then proceed to scan and name each sensor or relay being placed on-site, thereby connecting a network of sensors placed on the desired places on a location. The Simplify Sensors measure level of humidity, temperature and indoor air quality on the site and send the information to the Simplify Control Unit, the GSM communication base-station. The Simplify Control Unit sends the information to the cloud where it is available on the Simplify Dashboard.

#### Available for iOS and Android





### THE POWER OF SIMPLICITY



#### WHAT DOES SIMPLIFY CONSIST OF



#### **Simplify App**

The Simplify App is used to program the Simplify solution on-site within only two minutes. Available for iOS and Android.



#### Simplify Dashboard

The dashboard presents all of the Simplify data collected from the job site to the user. Data is presented in both a chart and tabular format showing temperature, relative humidity, vapor pressure, dewpoint, water content, power and energy consumption as well as indoor air quality from the Simplify Sensor Probes.



#### **Simplify Control Unit**

The Simplify Control Unit is the basic part of the Simplify solution connecting to GSM whenever available and communicating and controlling the network of sensors and equipment on-site programmed to it. It transmits data e.g. power consumption and alarms from sensors to the Simplify Dashboard in the reporting intervalls set.



#### **Simplify Sensor Box**

The Simplify Sensor Box, powered by a regular 9V lithium battery, is used to transmit data from the connected Simplify Sensor Probe, back to the Simplify Control Unit. It can be controlled from the Simplify Dashboard, adjusting the data frequency to desired levels.



#### Simplify Sensor Probe - Relative Humidity/Temperature

The probe is a humidity and temperature sensor with a unique precision of  $\pm$ 0.2 % in the range from 0-100% RH and  $\pm$ 0.2 deviation on the temperature measurements. The probe comes with different lengths of cable  $\pm$ 24cm, 300cm, and 2000cm.



#### Simplify Sensor Probe - Resistive

The probe is a resistive sensor measuring the moisture content in materials by measuring the resistivity i.e. between two pins using a range from 10kOhm-1GOhm translated in the dashboard to a moisture equivalent scale.



#### Simplify Sensor Probe - Indoor Air Quality

The probe is an indoor air quality (IAQ) sensor measuring a range of organic, volatile components in air (TVOC) and indoor air quality according to the Umwelt Bundesamt (German Federal Environmental Agency). scale from 1-5. The probe also measures estimated carbon dioxide (eCO<sub>2</sub>).



#### **Simplify Relay Box**

The Simplify Relay Box with three independently switchable 230V AC outlets and on-board MID approved kWh meter measures the total power consumption (kW and kWh) of all connected devices. The 230V AC outlets can be individually on/off controlled from the Simplify Dashboard thereby turning equipment on or off remotely.



#### Simplify CC4 Box

The Simplify CC 4 Box has four independently switchable 230V outlets and on-board MID approved kWh meter measures the total power consumption (kW and kWh) of all connected devices. It can be locked to fulfill MID requirements. The 230V AC outlets can be individually on/off controlled from the Simplify Dashboard thereby turning equipment on or off remotely.



#### Simplify Integration Box

The Simplify Integration Sensor is specially designed for integrating the Dantherm CDT MKII/III dehumidifiers to the Simplify solution.



#### WHAT IT MEANS TO A DAMAGE RESTORATION COMPANY

Working scenario	
Annual damage claims:	10,000
Dehumidifiers per claim:	2 CDT 60
Energy consumption:	1.12 kWh per unit
kWh price:	EUR 0.2126 (EU average in 2021)
Hourly wage of technician:	EUR 27.7 (EU average)
Driving distance per on-site visit:	40 km (equal to 30 minutes of work)
Transportation cost (fuel + maintenance):	EUR 0.35 per km (EU average)



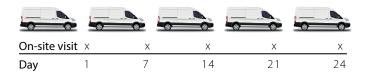


#### **CASE EXAMPLE:**

A big hospital construction-site applied +100 dehumidifiers and +150 sensor monitoring points scattered across an 18km route. **Without remote monitoring**, walking the route would have been a weekly hike easily costing a **full man-week of work** (15 minutes per sensor point). **With remote monitoring**, this was done in **one day** because any problem areas would be known in advance, enabling the technician to just go to those spots only. In addition to reducing costs, you can move your equipment to new projects faster.

At an hour rate of EUR 27.7, the above equals savings of 147.5 hours or EUR 4,085.

#### **Without Simplify**



Drying days per claim:	24
Driving distance per claim:	200km
Driving distance per year:	2,000,000km
Dehumidifiers needed per year:	1,333
Total running hours per year:	11,667,080 (1,333 units running 24/7/365)
Total cost of driving (wage/transportation):	EUR 1,392,500
Total energy costs per year:	EUR 2,780,453
Total:	EUR 4,172,953

#### With Simplify



Drying days per claim:	21
Driving distance per claim:	80km
Driving distance per year:	800,000km
Dehumidifiers needed per year:	1,176
Total running hours per year:	10,301,760 (1,176 units running 24/7/365)
Total cost of driving (wage/transportation):	EUR 557,000
Total energy costs per year:	EUR 2,452,972
Total:	EUR 3,009,972



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