FläktGroup®

SIMPLY INTELLIGENTLY REGULATED

ISYteq CONTROL SYSTEM FOR AIR-HANDLING UNITS

WHAT REALLY COUNTS
DEMAND-CONTROLLED, COMFORTABLE BUILDING CLIMATE CONTROL

The energetic state of a building is of considerable significance for investors, systems builders, planners and architects. The building technology plays a primary role. After all, buildings contribute about 40% to world energy consumption. A demand-driven technology in buildings is essential for a sustainable and efficient solution.

ISYteq
CONTROL SYSTEM
by **FLÄKTGROUP**

This especially includes optimal and flexible air-handling units. Whether winter or summer, whether in an open-space office full of people or a conference room only partially used – air treatment and climate control technology must individually adjust to the respective environment. This succeeds only with an intelligent, networked control system. An efficient control system not only avoids unnecessary costs and energy wastefulness. Precise hardware and software leads to an agreeable, always suitable indoor climate monitoring.

The control system ISYteq unites innovative technology with simple operation.

EASY OPERATION

Modern user interface can be used for PC, tablet or cell phone

FLEXIBLE CONNECTION

Several standard protocols and interfaces for connection to an external building automation system

RELIABILITY

Longevity and high availability

HIGH ADAPTABILITY

System adapts to environments and tasks

EXACT CONTROL AND REGULATING SYSTEM

Centrally and decentrally

RAPID COMMISSIONING

Delivered pre-assembled, wired, pre-set, tested and commissioned for operation

SIMPLE SYSTEM INTEGRATION

Simple assembly and smooth connection

ISYteq CORE FUNCTIONS

Temperature/air flow/pressure control system

Energy-optimized mixed air flap control system

Heating with PWW, electric heating, frost protection air and water-side – cooling with PCW, evaporator/condensing unit
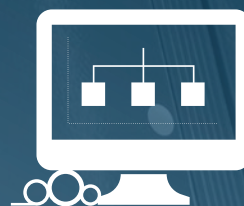
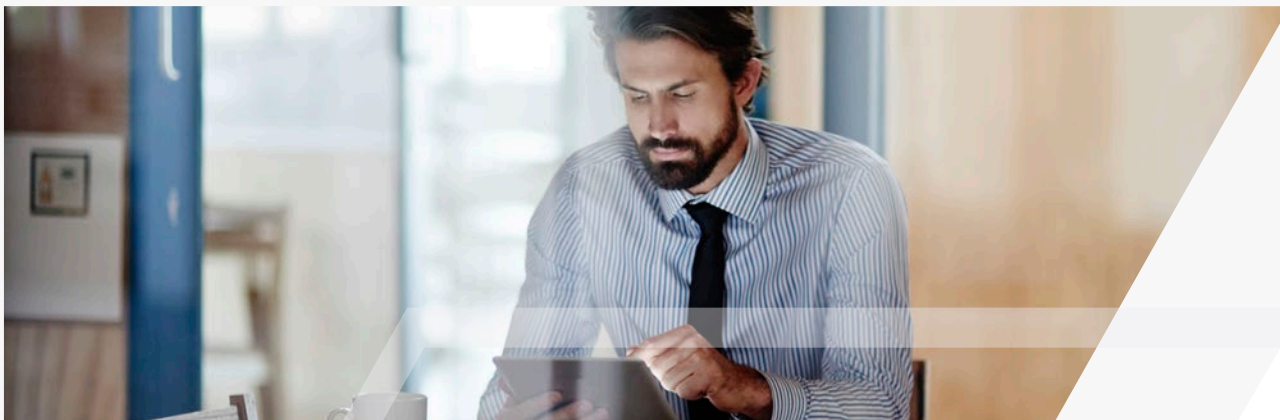**Communication and connection to Modbus and BACnet**

Humidity control

Energy recovery

Monitoring function

INNOVATIVE TECHNOLOGY
WITH INTUITIVE OPERATION

The control system ISYteq unites innovative technology with simple operation. **The Comfort not only makes uncomplicated and time-saving commissioning noticeable, but also the intuitive handling.** The FläktGroup Air Handling units with their optimised components and pre-configured control system leaves the factory with a reliable and suitable equipment state to the satisfaction of every customer.

EASY OPERATION

Every ISYteq controller can be linked in an Ethernet LAN via a web interface with other ISYteq controllers from the FläktGroup family. Therefore the customer operates the unit either with the touch-display or with his own device. Notebook, tablet or cell phone can be connected with the Ethernet port or into the same LAN network. Thanks to the available webserver, the application can be started with every device simply in the browser. This is then identical with the figure on the touch display.

EASY ACCESS

Thanks to the two integrated USB ports, the software or firmware of the controller can be easily updated with a USB stick. Also customer-specific applications can be simply stored over the USB. The second USB port can be employed to connect to a notebook and to download data such as configuration data or also data records (historical data). FläktGroup offers the possibility of remote access to the plant which is independent of the company network, in order to send a fault message or for long-term monitoring.

DATA RECORDING AND ALARMS

Both a live data display as well as historical data records make it possible to analyse and, if necessary, to optimise the operational management and the behavior of the facility for the service staff and customer. Thanks to an Alarm Management System, extensive measured values are recorded, continuously examined and harmonized. If one of the monitoring devices is activated, a tiered colored signal and the appropriate message appears on the touch display as text. The last 1024 alarms are saved in a list according to the sequence of their occurrence. These will be displayed with date and time.

IT'S SO EASY TO START
– EFFICIENT AND INTELLIGENT
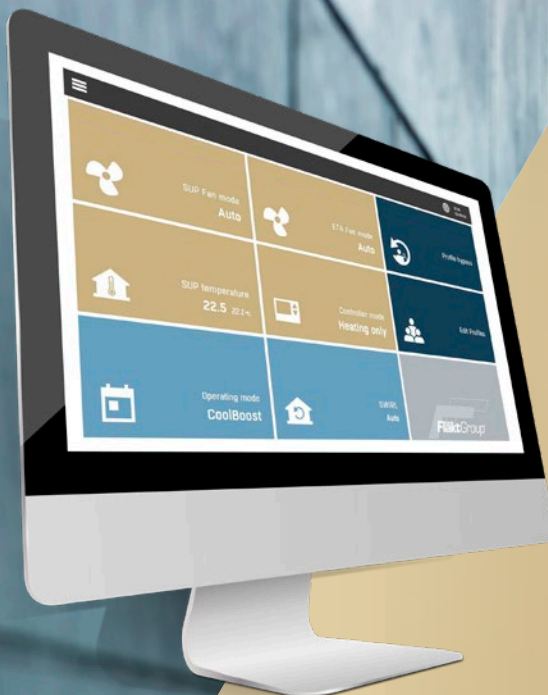
CUSTOMIZED PRE-CONFIGURATION

With the ISYteq control system for air-handling units, there is no time-consuming search for a customized solution. This is already provided by the pre-configuration. The all-inclusive principle eliminates the need for costly modular configuration.

The control system is very easy to connect, assemble and operate. A practical and customized solution is found for everyone: customers, planners, service personnel and users. Whether with the touch control panel or by means of simple USB access and an external notebook – the air-handling units can always be optimally adapted with an integrated web surface to the desired functionalities.

CONNECTION TO THE BUILDING AUTOMATION SYSTEM

There are several open protocols routinely available for the connection to an external building automation system. The two interfaces BACnet and Modbus are always on board as standards and must not be supplemented by add-on modules. This enables the easy and cost-efficient integration in the building automation. The Ethernet interface with integrated Webserver is suitable for the integration in a local network (LAN). This enables a very simple and clear access with the PC, tablet or smartphone.

FläktGroup air-handling units can be equipped with the ISYteq control system. This makes it easy to link all units to each other. Every current plant parameter and setting can be displayed and adapted with the operator display as well as with other smart devices. Three users can be simultaneously connected.

EASY AND RAPID COMMISSIONING

Before delivery, the units are pre-assembled, wired, pre-set, tested and commissioned by the manufacturer. The control system is therefore already pre-configured plant-specifically for the individual customer in the factory. A modern test bench as well as a software configurator is employed for customer-specific programming.

This guarantees flawless functioning and testing according to the valid EN standards. Pre-set parameters with appropriate stored limit values make the control system immediately fit for service and minimize the commissioning time. The desired switching times and setpoints can be adapted by the operator at all times.

A MODERN AND INTUITIVE INTERFACE FOR YOUR
INDIVIDUAL PROFILE

With the operator control level of the new, attractive 7" touch display, the user can directly access every important function. The operating state can be reconstructed at a glance by the visualization of current plant information such as sensors, signals and setpoints. The possibility of plainly presenting the trend representation and records allows complete operating cycles to be presented in line diagrams, so it is easy to optimize the plant atall times.

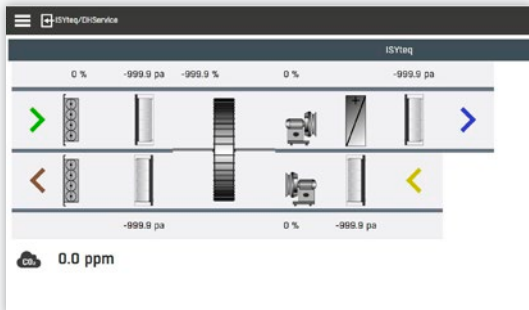### OWN PROFILE FOR DIFFERENT OPERATING STATES AND TIME PROGRAMS

The user can select between 4 functional profiles. As a result, setpoint values and switching times can be very quickly and easily entered, and current actual values and messages can be simply visualized and read off. The setting of week programs, special daily programs or a special holiday program is as simple as possible.

FULL-GRAPHICS VISUALIZATION OF UNITS AND FUNCTIONS

Extensive measured values are recorded, continuously examined, harmonized and saved for fault free operation. Colored signaling, an appropriate text message as well as a signal serve to identify a possible malfunction and send direct information to the building management system.
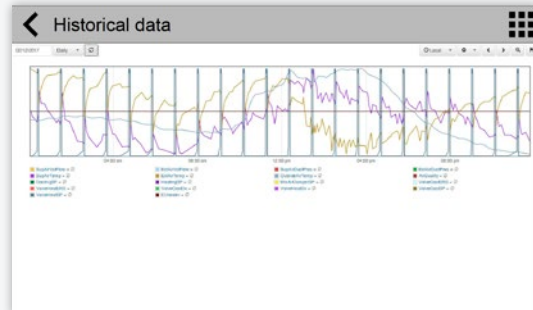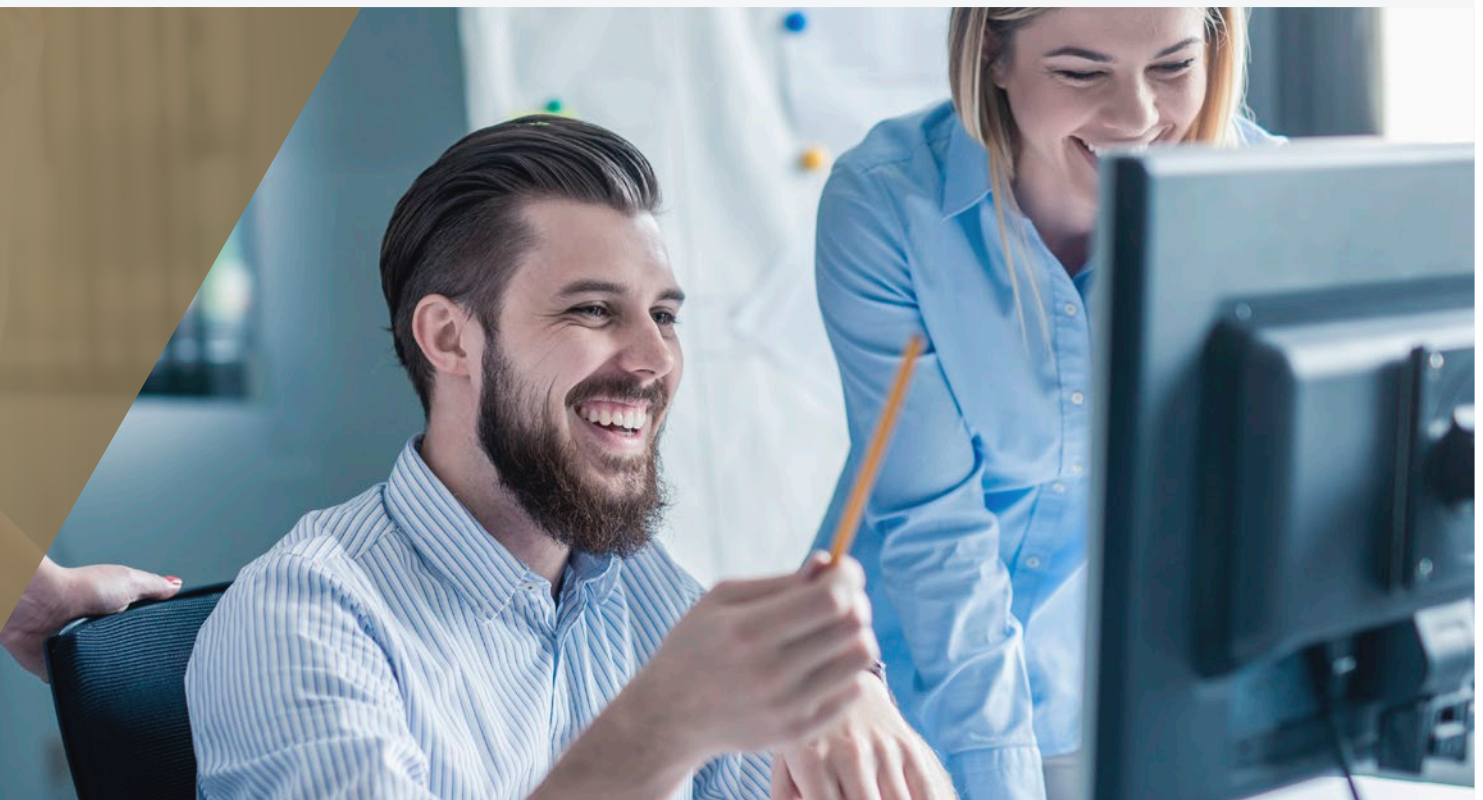
GRAPHIC FLOW CHART REPRESENTATION

Graphic representation of the facility with all sensors and actuators. The screen is dynamically structured so that only units are displayed that are available in the plant configuration.

• Plant values are automatically updated in the display
• Display of all measured values, sensor states and switching status of all drives
• Manual operation of individual drives
• State of the filter monitoring
• Acknowledge error with respective operating authorization

ALARM MANAGEMENT AND HISTORICAL DATA RECORDING

Trend representation for the analysis and optimization of the plant operation. There is the possibility of viewing both "live data" as well as "historical data". Selectable sensor values and functional changes over certain selectable time periods are monitored and saved.
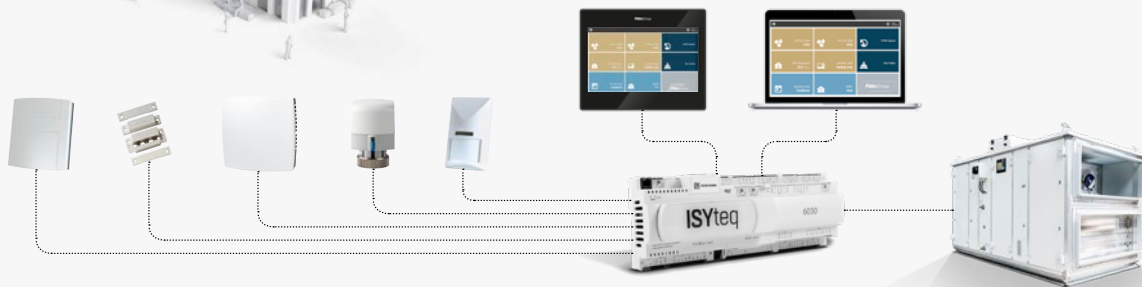
ISYteq **EASILY LINKS AND OPTIMISES**
YOUR VENTILATION SYSTEM

FläktGroup can provide everything from Air Handling Units (AHU's), ultrasound air volume dampers and a variety of fan coil units to advanced control system solutions, and not least our great experience as experts in the field of optimising complete ventilation systems.

SINGLE UNIT INSTALLATION

AHU's are utilized in many applications from single units in small building to multiple connected units in larger buildings. The control and regulation of the entire system enables optimum room comfort, additional components can be connected and controlled via the 0 to 10 V DC signals, it is just as easy to configure additional inputs and outputs thanks to universal I/O's.

MULTIPLE UNIT INSTALLATION

Ordering a whole system consisting of air handling units and fan coil units with ISYteq controllers fitted enables connection to all the ISYteq interfaces regardless of 1 or multiple units. No software is required for setup with the built-in web browsers at your fingers tips. Both web-browsers can be customized to suit your preferences and requirements.

Easy connection to Building Management Systems

ISYteq permits simple, cost-efficient and problem-free integration to the building automation system. Easy integration is possible with the standard existing BACnet TCP/IP & MSTP or Modbus TCP/IP & RTU interfaces. BACnet and Modbus interfaces are always on board as standard.

TOUCH DISPLAY

- Full graphic visualization of the unit functions and menus
- Touch surface
- Intuitive visualization
- Webserver and touch control panel visualization are identical
- Alarm management (including history)
- Data trends (historical/live)
- Commissioning and configuration with touch control panel
- Week program and special daily program
- Profile management (four different ones) for greater flexibility of user management (with allocation of access rights)
- Three users are simultaneously switchable

CONTROLLER

- BAC-Net IP/MSTP onboard
- Modbus IP/RTU RS485 onboard
- Webserver onboard
- 2 Ethernet ports onboard
- 2 USB ports (slave/host) for software update and data download
- Internal memory for life data storage (COV) and alarm information
- Real-time data can be saved for up to one month
- Controller 24 VAC and DC
- Universal I/Os can be configured as different inputs or outputs
- Software or firmware update with a USB stick
- Three users are simultaneously switchable

TOUCH DISPLAY	
Type	Resistive
Display Size	7"
Power Supply	24 VAC/DC
Backlighting	LED
Protection Rating	IP66 (front)
Working Temperature	-20°C to +70°C

CONTROLLER PORTS	
Built in BMS Port (RS485)	2 pcs.
Ethernet (10/100 Mbps 100-BASE TX Standard)	2 pcs.
Slave USB	1 pcs.
Host USB	1 pcs.
SD Memory	Optional

*Fläkt*Group®

EXCELLENCE
IN SOLUTIONS

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FläktGroup is the European market leader for smart and energy efficient Indoor Air and Critical Air solutions to support every application area. We offer our customers innovative technologies, high quality and out-standing performance supported by more than a century of accumulated industry experience. The widest product range in the market, and strong market presence in 65 countries worldwide, guarantee that we are always by your side, ready to deliver Excellence in Solutions.

PRODUCT FUNCTIONS BY FLÄKTGROUP

Air Treatment | Air Movement | Air Diffusion
Air Distribution | Air Filtration | Air Management & ATD's
Air Conditioning & Heating | Controls | Service

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