

**TECH**  
CONTROLLERS

**OEM**

**RECUPERATION CONTROLLERS**





# TECH CONTROLLERS

We are a company specializing in the production of advanced temperature management devices and smart home systems, achieving a production efficiency of 2000 to 2500 units per day. The company has been operating in the Polish market since 2004. We employ over 500 workers, including more than 100 engineers, which demonstrates a strong technological and engineering foundation. We have advanced production resources, including four SMT lines, two wave soldering lines, three robotic final assembly lines, and three selective soldering lines. We also have our own service center and a warehouse for spare parts and consumables.

We use advanced quality control and product data collection systems, such as AOI vision systems, in-circuit testing systems, and supporting ERP, MES, and Traceability systems. Thanks to the use of the latest technologies, we have the ability to produce according to the highest third-class standards under IPC norms.

We have already sold hundreds of thousands of various types of controllers and are successfully expanding the range of our offerings, ensuring customer satisfaction.

The history of our company is primarily about the people who create it, their knowledge, experience, commitment, and perseverance. Our future plans include maintaining good relationships with our product recipients, acquiring new customers, and creating new, high-quality products.

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# RECUPEARTION CONTROLLERS



## RECUPEARTION CONTROLLERS

Thanks to recuperation controllers, we can manage the operation of mechanical ventilation both from the location where they are installed and from anywhere in the world using a mobile application. The controller allows for maintaining optimal comfort while ensuring significant savings by minimizing energy losses.

## **Who are we?**

Our company manufacture consumer electronics, create advanced solutions for intelligent management energy in IoT systems. We offer fully customized OEM solutions, dedicated to manufacturers and device distributors. Our products are used in the HVACR industries.

## **What sets us apart?**

We focus on partnership cooperation and the development of fully personalized products, both in terms of design and software.

## **Our Offer**

We are a manufacturer of electronics for intelligent energy management in HVAC systems. We produce controllers for heat pumps, boilers, ventilation, and underfloor heating. We provide fully customized OEM solutions dedicated to manufacturers and distributors of devices.

## **Collaboration Stages**

At TECH CONTROLLERS, we operate flexibly and transparently, guided by the principles of modern project management. We focus on goals, commit to every project, and base our communication and collaboration on mutual respect, trust, and reliability. This enables us to implement our devices more quickly and effectively.

# RECUPEARTION CONTROLLERS - ULTIMATE



2 colors to choose from





## Features:

- Display and edit current date and time
- Display and edit operating mode
- Display and edit set temperature
- Change unit operating parameters
- Screen saver
- Visual graphical interface
- Individually customized on-screen menu
- Ability to customize graphics
- Software update capability
- Option to install an additional built-in radio module and/or WiFi



display	SCREEN TYPE	touch
	SCREEN SIZE	5"
	SCREEN TYPE	capacitive
	SCREEN RESOLUTION	800x600 pixels
	COLOR DEPTH	32-bit
	CONTROLLER BUTTONS	touch screen
	COMMUNICATION	wired
	POWER SUPPLY	12V DC
	CONTROLLER DIMENSIONS [mm]	136 x 92.8 x 16.1

# RECUPEARTION CONTROLLERS - ELITE



2 colors to choose from



## Features:

- Display and edit current date and time
- Display and edit operating mode
- Display and edit set temperature
- Change unit operating parameters
- Screen saver
- Visual graphical interface
- Individually customized on-screen menu
- Ability to customize graphics
- Software update capability
- Option to install an additional built-in radio module and/or WiFi



display	SCREEN TYPE	touch
	SCREEN SIZE	4,3"
	SCREEN TYPE	capacitive
	SCREEN RESOLUTION	800x600 pixels
	COLOR DEPTH	32-bit
	CONTROLLER BUTTONS	touch screen
	COMMUNICATION	wired
	POWER SUPPLY	12V DC
	CONTROLLER DIMENSIONS [mm]	123,6 x 82,4 x 15,4

# RECUPEARTION CONTROLLERS - ADVANCED



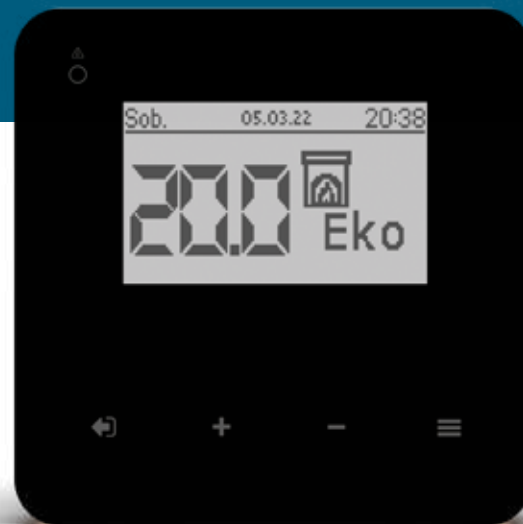
## Features:

- Display and edit the current date and time
- Display and edit the operating mode
- Display and edit the set temperature
- Change unit operating parameters
- Screen saver
- Visual graphical interface
- Individually customized on-screen menu
- Ability to customize graphics
- Software update capability



display	SCREEN TYPE	touch
	SCREEN SIZE	4,3"
	SCREEN TYPE	resistive
	SCREEN RESOLUTION	640x480 piks
	COLOR DEPTH	32bit
	CONTROLLER BUTTONS	touch screen
	COMMUNICATION	wired
	POWER SUPPLY	12V DC
	CONTROLLER DIMENSIONS [mm]	145,4 x 101,8 x 26,1

# RECUPEARTION CONTROLLERS - STARTER



2 colors to choose from



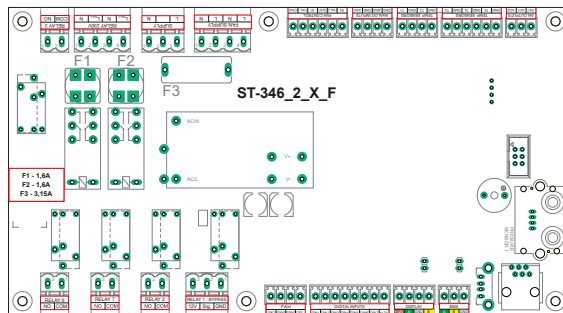
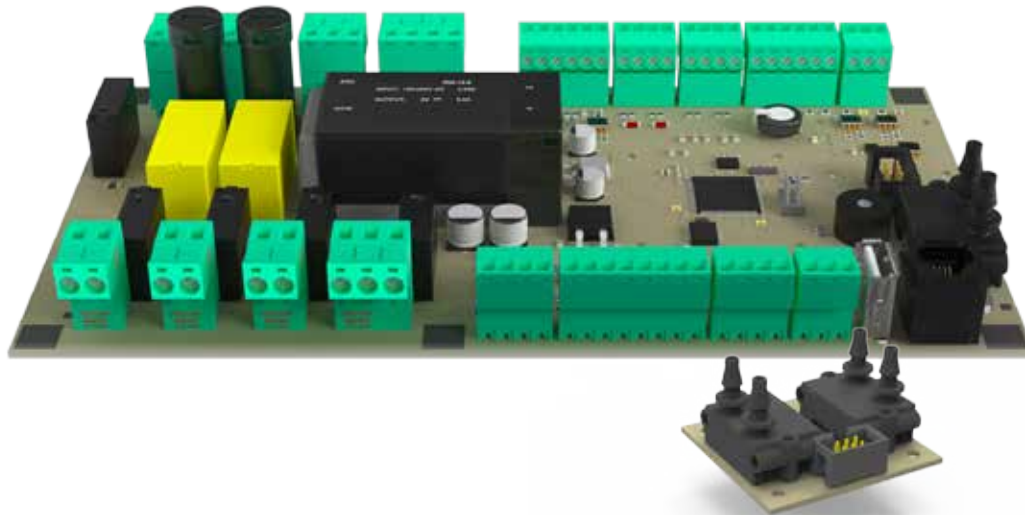
## Features:

- Display current date and time
- Display operating mode
- Display set temperature
- Change unit operating parameters
- Ability to lock keys
- WiFi module

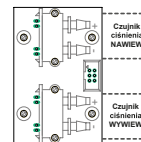


ekran	SCREEN TYPE	COG
	SCREEN SIZE	20 x 30
	SCREEN TYPE	not applicable
	CONTROLLER BUTTONS	touch
	COMMUNICATION	wired
	POWER SUPPLY	12V DC
	CONTROLLER DIMENSIONS [mm]	84,6 x 84,6 x 16,2

# SIMPLE



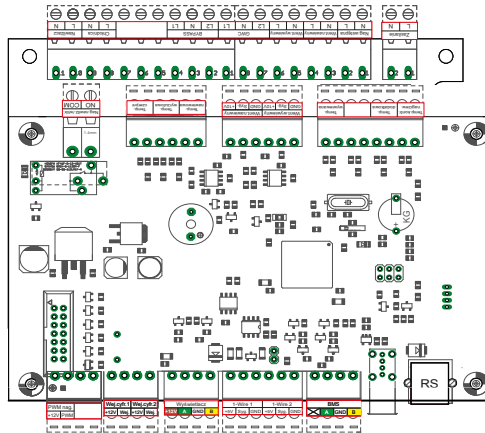
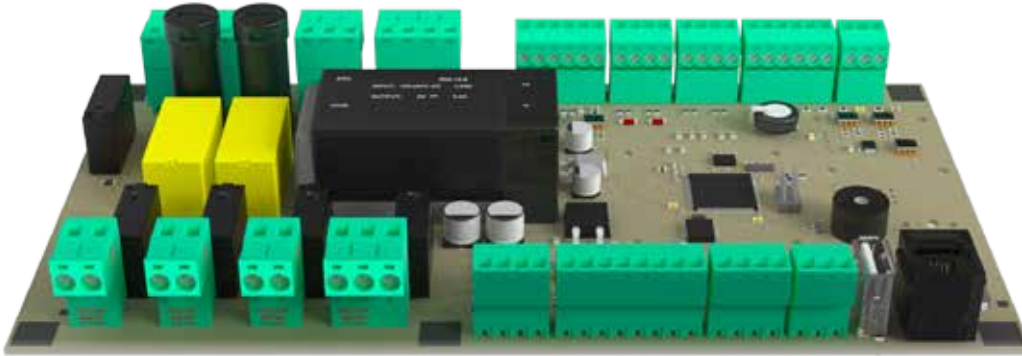
## ADDITIONAL FEATURE



INPUTS	SIMPLE
INLET PRESSURE TRANSDUCER	.*
EXHAUST PRESSURE TRANSDUCER	.*
INLET TEMPERATURE SENSOR	.
EXHAUST TEMPERATURE SENSOR	.
HEATER PWM	.
PRIMARY HEATER TEMPERATURE SENSOR	
SECONDARY HEATER	.
SECONDARY HEATER SENSOR	.
GROUND HEAT EXCHANGE SENSOR	.
1-WIRE SENSOR	.
BYPASS	.
BMS	.
TECH RS FOR INTERNET MODULE	.
0-10V WITH FEEDBACK SIGNAL FROM THE FAN INLET FAN CONTROL	.
0-10V WITH FEEDBACK SIGNAL FROM THE FAN	.
0-10V INPUT	.
FREE VOLTAGE CONTACT	.
FAN POWER SUPPLY 230V	.
RELAY OUTPUT 230V	.
ADDITIONAL SENSOR	.
0-10V OUTPUT	.
DIGITAL TWO-STATE INPUT	.
MODBUS 485	.
MODBUS 485 MASTER	.
MODBUS 485 SLAVE	.
* WITH THE OPTION FOR REMOVAL OR SEPARATE SALE	

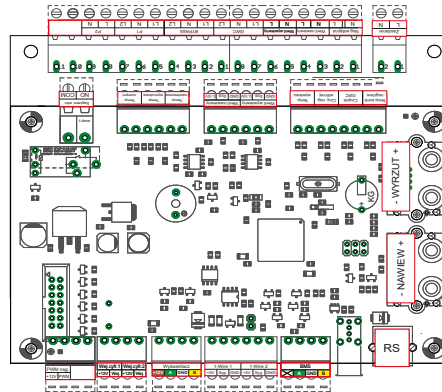
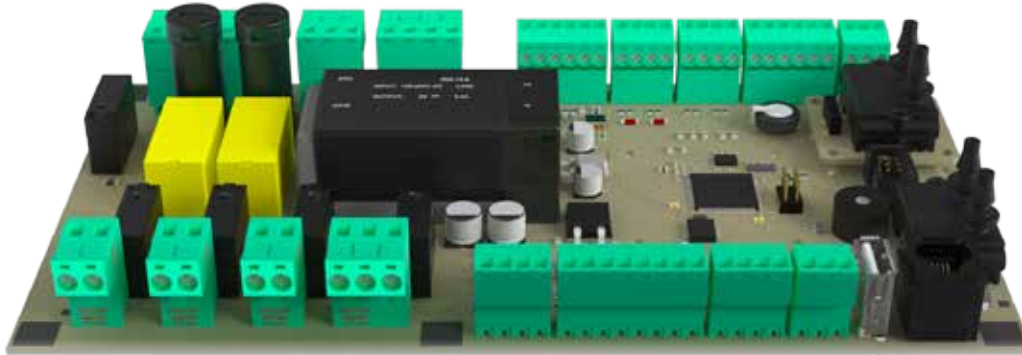


## BASIC



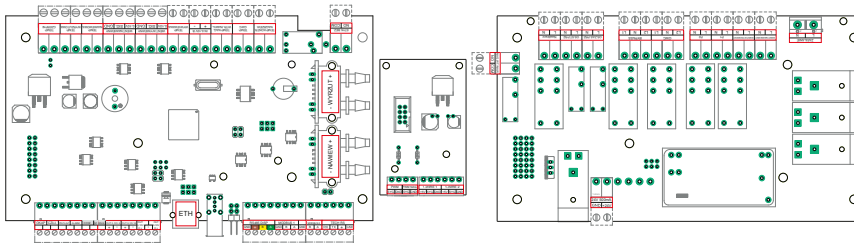
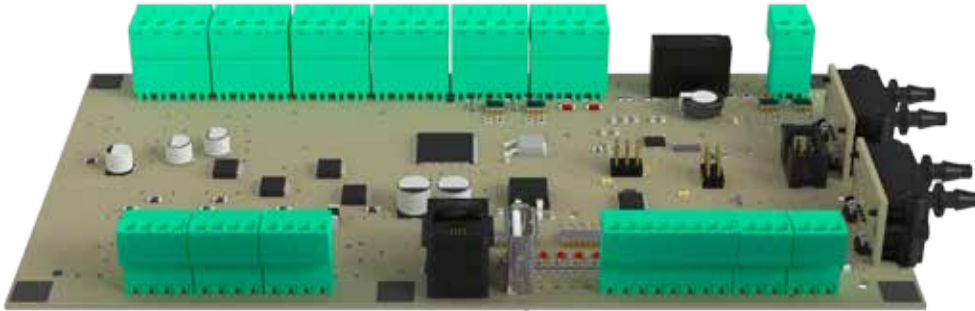
INPUTS	BASIC
INLET PRESSURE TRANSDUCER	
EXHAUST PRESSURE TRANSDUCER	
INLET TEMPERATURE SENSOR	•
EXHAUST TEMPERATURE SENSOR	•
HEATER PWM	•
PRIMARY HEATER TEMPERATURE SENSOR	•
SECONDARY HEATER	•
SECONDARY HEATER SENSOR	•
GROUND HEAT EXCHANGE SENSOR	•
1-WIRE SENSOR	•
BYPASS	•
BMS	•
TECH RS FOR INTERNET MODULE	•
0-10V WITH FEEDBACK SIGNAL FROM THE FAN INLET FAN CONTROL	•
0-10V WITH FEEDBACK SIGNAL FROM THE FAN	•
0-10V INPUT	•
FREE VOLTAGE CONTACT	•
FAN POWER SUPPLY 230V	•
RELAY OUTPUT 230V	•
ADDITIONAL SENSOR	•
0-10V OUTPUT	
DIGITAL TWO-STATE INPUT	•
MODBUS 485	•
MODBUS 485 MASTER	
MODBUS 485 SLAVE	•

## MEDIUM



INPUTS	MEDIUM
INLET PRESSURE TRANSDUCER	•
EXHAUST PRESSURE TRANSDUCER	•
INLET TEMPERATURE SENSOR	•
EXHAUST TEMPERATURE SENSOR	•
HEATER PWM	•
PRIMARY HEATER TEMPERATURE SENSOR	•
SECONDARY HEATER	•
SECONDARY HEATER SENSOR	•
GROUND HEAT EXCHANGE SENSOR	•
1-WIRE SENSOR	•
BYPASS	•
BMS	•
TECH RS FOR INTERNET MODULE	•
0-10V WITH FEEDBACK SIGNAL FROM THE FAN INLET FAN CONTROL	•
0-10V WITH FEEDBACK SIGNAL FROM THE FAN	•
0-10V INPUT	•
FREE VOLTAGE CONTACT	•
FAN POWER SUPPLY 230V	•
RELAY OUTPUT 230V	•
ADDITIONAL SENSOR	•
0-10V OUTPUT	
DIGITAL TWO-STATE INPUT	•
MODBUS 485	•
MODBUS 485 MASTER	
MODBUS 485 SLAVE	•

## EXTRA



INPUTS	EXTRA
INLET PRESSURE TRANSDUCER	.*
EXHAUST PRESSURE TRANSDUCER	.*
INLET TEMPERATURE SENSOR	.
EXHAUST TEMPERATURE SENSOR	.
HEATER PWM	.*
PRIMARY HEATER TEMPERATURE SENSOR	.
SECONDARY HEATER	.
SECONDARY HEATER SENSOR	.
GROUND HEAT EXCHANGE SENSOR	.
1-WIRE SENSOR	.*
BYPASS	.
BMS	.
TECH RS FOR INTERNET MODULE	.
0-10V WITH FEEDBACK SIGNAL FROM THE FAN INLET FAN CONTROL	.
0-10V WITH FEEDBACK SIGNAL FROM THE FAN	.
0-10V INPUT	.
FREE VOLTAGE CONTACT	.
FAN POWER SUPPLY 230V	.
RELAY OUTPUT 230V	.
ADDITIONAL SENSOR	.
0-10V OUTPUT	.
DIGITAL TWO-STATE INPUT	.
MODBUS 485	.
MODBUS 485 MASTER	.
MODBUS 485 SLAVE	.
* WITH THE OPTION FOR REMOVAL OR SEPARATE SALE	

## COMPARISON OF MOTHERBOARDS

INPUTS	SIMPLE	BASIC	MEDIUM	EXTRA
INLET PRESSURE TRANSDUCER	•*		•	•*
EXHAUST PRESSURE TRANSDUCER	•*		•	•*
INLET TEMPERATURE SENSOR	•	•	•	•
EXHAUST TEMPERATURE SENSOR	•	•	•	•
HEATER PWM	•	•	•	•*
PRIMARY HEATER TEMPERATURE SENSOR		•	•	•
SECONDARY HEATER	•	•	•	•
SECONDARY HEATER SENSOR	•	•	•	•
GROUND HEAT EXCHANGE SENSOR	•	•	•	•
1-WIRE SENSOR	•	•	•	•*
BYPASS	•	•	•	•
BMS	•	•	•	•
TECH RS FOR INTERNET MODULE	•	•	•	•
0-10V WITH FEEDBACK SIGNAL FROM THE FAN	•	•	•	•
0-10V WITH FEEDBACK SIGNAL FROM THE FAN	•	•	•	•
0-10V INPUT	•	•	•	•
FREE VOLTAGE CONTACT	•	•	•	•
FAN POWER SUPPLY 230V	•	•	•	•
RELAY OUTPUT 230V	•	•	•	•
ADDITIONAL SENSOR	•	•	•	•
0-10V OUTPUT	•			•
DIGITAL TWO-STATE INPUT	•	•	•	•
MODBUS 485	•	•	•	•
MODBUS 485 MASTER				•
MODBUS 485 SLAVE	•	•	•	•
* WITH THE OPTION FOR REMOVAL OR SEPARATE SALE				

## COMPARISON OF CONTROLLERS

	<b>COG</b>	<b>Panel 5"</b>	<b>Panel 4,3" capacitive</b>	<b>Panel 4,3" resistive</b>
SCREEN TYPE	COG	touch	touch	touch
SCREEN SIZE	20 x 30	5"	4,3"	4,3"
SCREEN TYPE	LCD	capacitive	capacitive	resistive
SCREEN RESOLUTION	-	800x600piks	800x600 piks	640x480 piks
COLOR DEPTH	-	32bit	32bit	32bit
CONTROLLER BUTTONS	touch	touch screen	touch screen	touch screen
COMMUNICATION	wired	wired	wired	wired
POWER SUPPLY	12V DC	12V DC	12V DC	12V DC
CONTROLLER DIMENSIONS [mm]	84,6 x 84,6 x 16,2	136 x 92,8 x 16,1	123,6 x 82,4 x 15,4	145,4 x 101,8 x 26,1

## ADDITIONAL SENSORS

MODEL NAME	C-8rw
BUILT-IN TEMPERATURE SENSOR	YES
BUILT-IN HUMIDITY SENSOR	YES
ADDITIONAL SENSOR	NO
DISPLAY	NO
BUTTONS	NO
COMMUNICATION	wireless, 868MHz
POWER SUPPLY	2xAA, 1,5V
CONTROLLER DIMENSIONS [mm]	80 x 80 x 16



MODEL NAME	CO2
BUILT-IN TEMPERATURE SENSOR	NO
BUILT-IN HUMIDITY SENSOR	NO
ADDITIONAL SENSOR	YES CO2
DISPLAY	YES, LCD
BUTTONS	NO
COMMUNICATION	wireless - 868MHz, wired RS485
POWER SUPPLY	2xAA, 1,5V(wireless), 9V Flush-Mounted Power Supply (Wired)
CONTROLLER DIMENSIONS [mm]	60 x 60 x 30







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