

# DTR

Installation and operation  
instructions

**Freon heating-cooling coil**  
**WANAS Mini R32**





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# 1. GENERAL INFORMATION

## 1.1 Introduction

All guidelines provided in the installation and operating manual regarding mounting, commissioning, and safety must be adhered to.

The **WANAS Mini Freon Cooler** is a device designed to expand the mechanical ventilation system with a WANAS heat recovery unit to include heating and cooling capabilities. This expansion allows for cooling or heating the air supplied to the rooms.

For proper operation of the device, an external air conditioning unit is necessary – an external condensing unit and the AHUKit control module. The device should be installed on the supply air duct, downstream of the heat recovery unit, and is controlled using any WANAS heat recovery unit.

### ADVANTAGES:

- **Comfort-**The ability to lower or raise the temperature in the building, and during the summer, it is possible to dehumidify the supplied air.
- **Efficiency:** During the summer, it can cool the air behind the heat recovery unit by up to 11°C.
- **Consistent Design:** The external appearance is in line with WANAS heat recovery units.
- **Easy Control:** The unit is controlled via a controller, which is standard equipment for all WANAS heat recovery units.
- **Convenient Installation:** The module can be installed in any orientation relative to the airflow and is reversible.

## 1.2 Safety

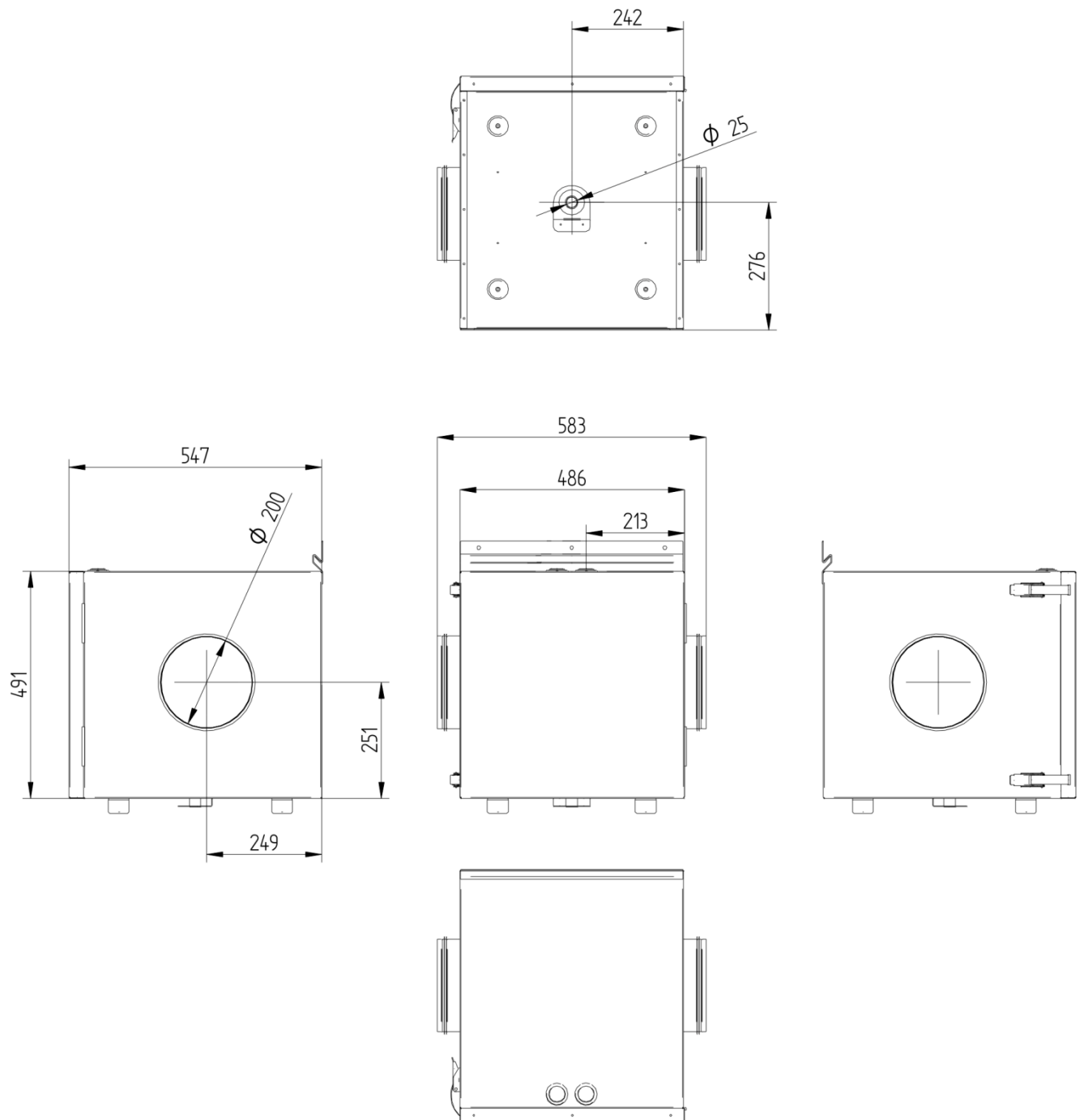
- The device may only be operated by adults who have read the user manual.
- The device should be installed by individuals with the appropriate qualifications and certifications.
- It is prohibited to operate the device in a building where construction work is underway.
- The manufacturer is not responsible for damages resulting from the use and installation of the device not in accordance with the manual.
- The cooler should be installed in an environment where the temperature ranges from 5°C to 45°C.
- The cooler must be charged with refrigerant R32.
- The manufacturer's requirements for the cooling unit must be strictly followed.
- Before operating the cooler, the siphon must be filled.

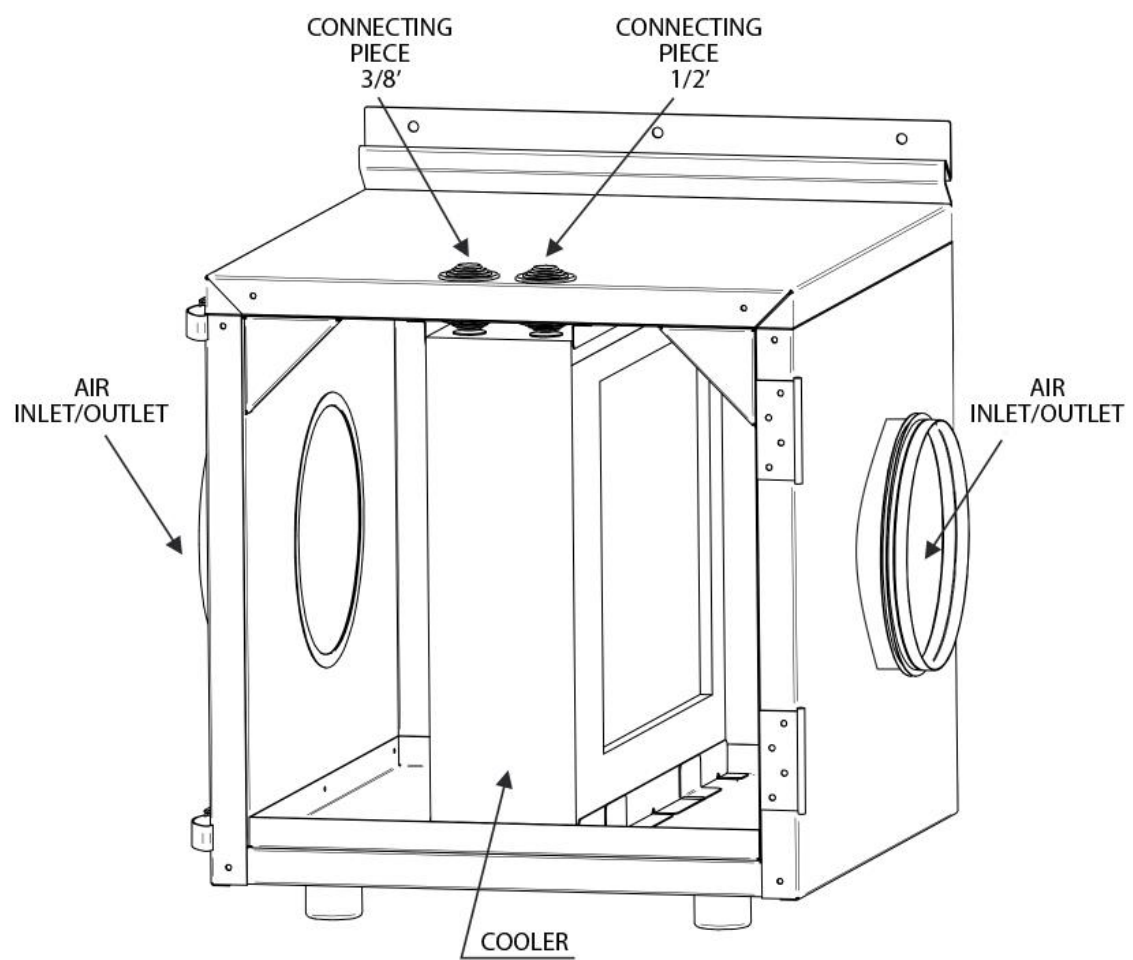
## 1.3. Delivery

Each unit in the set includes a mounting bracket, expansion plugs for bracket installation, a siphon, and a PT1000 temperature sensor.

Additionally, a separate external cooling unit with a maximum power of 5.3 kW and an external control module AHUKit must be purchased.

## 2. DIMENSIONS AND CONSTRUCTION OF THE HEAT EXCHANGER





### 3. PARAMETERS

Recommended flow rate up to	m <sup>3</sup> /h	600
Maximum heating power	kW	3
Maximum cooling power	kW	2,9
Energy consumption	W	-
Weight	kg	29,5
Connector arrangement	-	uniwersalny

#### COOLING FUNCTION \*

Air flow	Power consumption of AC	Power consumption of the recuperator	Temp. before	Humidity before	Temp. after	Humidity after	Humidity at 22°	Cooling capacity	AHU power
[m <sup>3</sup> /h]	[W]	[W]	°C	%	°C	%	%	[kW]	0-10
100	204	16	24,5	50	2,9	100	28,5	0,72	1
150	202	21	24,3	51,7	5,6	100	34,4	0,94	1
200	196	31	24	50,3	7,6	100	39,4	1,10	1
250	196	44	24,1	50,3	9,2	99,1	43,6	1,25	1
300	196	59	24,6	49,6	10	99,8	46,3	1,47	1
350	194	79	24,4	50,8	11,8	89,7	47	1,48	1
400	880	113	29,5	51,9	11	95,2	49,1	2,48	6
450	732	156	29,7	54,6	12,9	98,4	57,1	2,53	9
605	716	339	29,6	54	14,7	93,6	60,8	3,02	9

#### HEATING FUNCTION

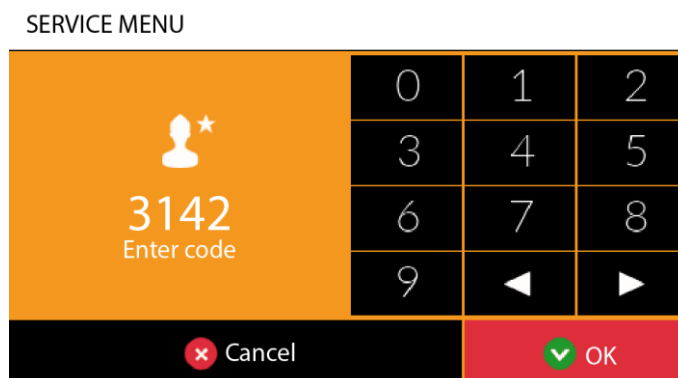
Air flow	Power consumption of AC	Power consumption of the recuperator	Temp. before	Humidity before	Temp. after	Humidity after	Humidity at 22°	Cooling capacity	AHU power
[m <sup>3</sup> /h]	[W]	[W]	°C	%	°C	%	%	[kW]	0-10
100									
150									
200	280	34	22,6	58,3	26	42,6	54,2	0,23	1
250	296	37	22,9	58,6	43,1	19	62,5	1,69	1
300	259	56	22,8	57,5	38,9	22,1	58,2	1,62	1
350	455	70	22,6	58,6	42,9	18,5	60,2	2,38	2
400	540	93	21,6	57,9	41,8	19,2	59	2,71	4
450	488	123	21,7	57,7	40,3	19,4	55,1	2,80	6
654	430	336	22,3	55,5	35,5	24,5	53,6	2,89	9



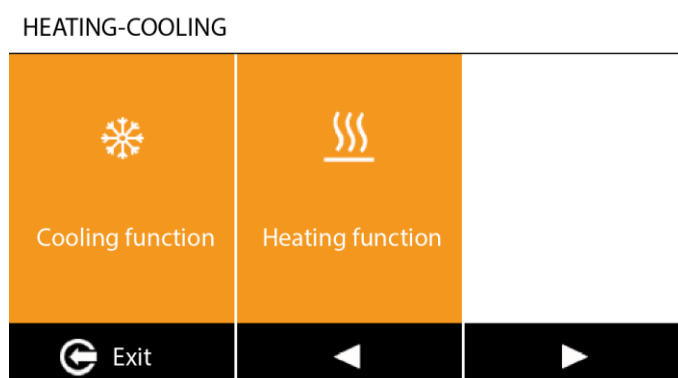
\* Tests conducted on the model set:  
Wanas COMBO 630 LIGHT with freon exchanger R32 WANAS Mini, external unit Midea x2-12n8d1-o and AHU Kit ka8140

## 4. FUNCTION ACTIVATION

### 4.1. Heating and cooling using a cooling unit

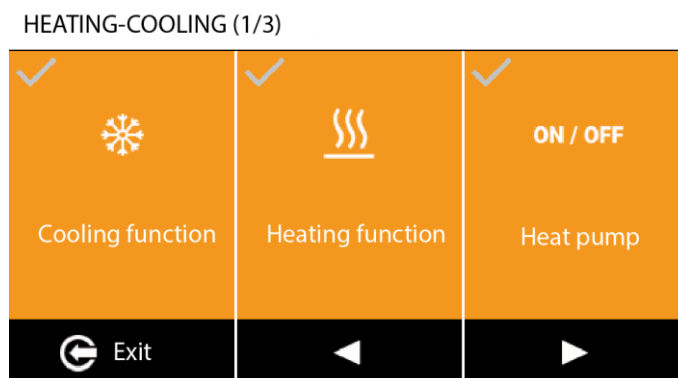


Advanced functions are available in the Service Menu. **Code: 3142**

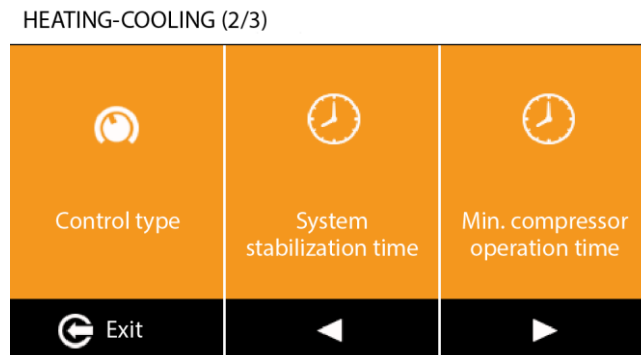


The Heating and/or Cooling functions are activated in the Service Menu.

Active functions are indicated by a flashing tick.

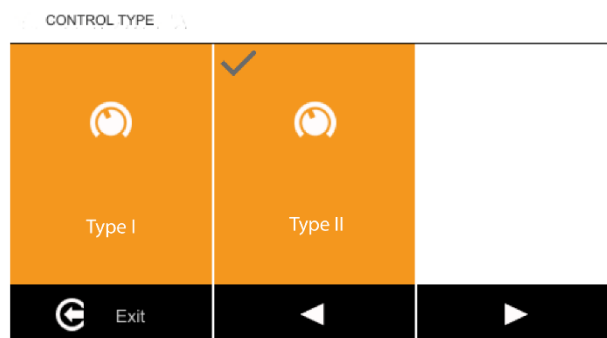


**HEAT PUMP Function** – Once the cooling function is activated in the Service Menu, the HEAT PUMP icon will appear, which corresponds to the connection with the external cooling unit – this icon must be activated.



Next, select the Control Type according to the external unit you have and its manufacturer, as specified in the table below.

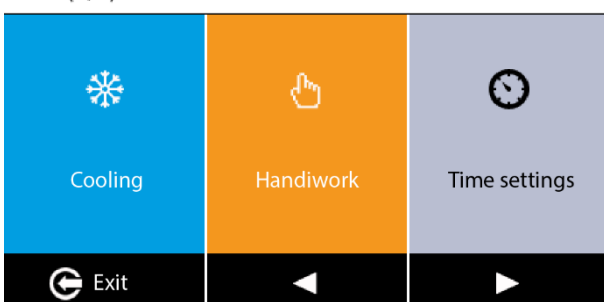
CONTROL TYPE	COOLING UNIT
<b>TYPE I</b>	GREE
<b>TYPE II</b>	MIDEA, ROTENSO, KASAI



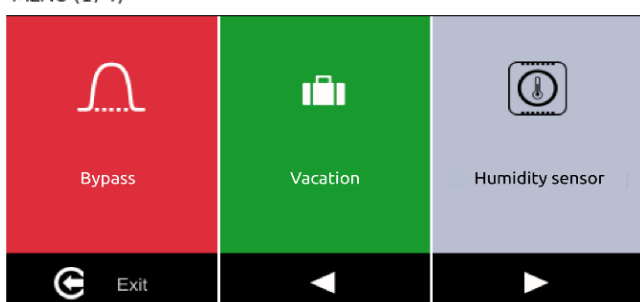
**TYPE I** – One output controls the activation and deactivation of the compressor, while the other output selects the heating or cooling mode.

**TYPE II** – One output controls the activation of cooling, while the other output controls the activation of heating.

MENU (2/4)



MENU (1/4)



**HEATING/COOLING Function-** once the function is activated, the HEATING/COOLING icon will appear in the main MENU.

HEATING

1

Days

MIN 1

MAX 60

✖ Cancel

✔ OK

COOLING

6

Days

MIN 1

MAX 60

✖ Cancel

✔ OK

Select the option you want to activate and the number of days for which it should be activated.

MON	TUE	WED	THU	FRI	SAT	SUN
From&	To&	Efficiency	Temperature			
-00:00-	05:00		20°			
05:00	10:00		20°			
10:00	15:00		20°			
15:00	20:00		20°			
20:00	-00:00-		20°			

▼ ▲

✖ Cancel

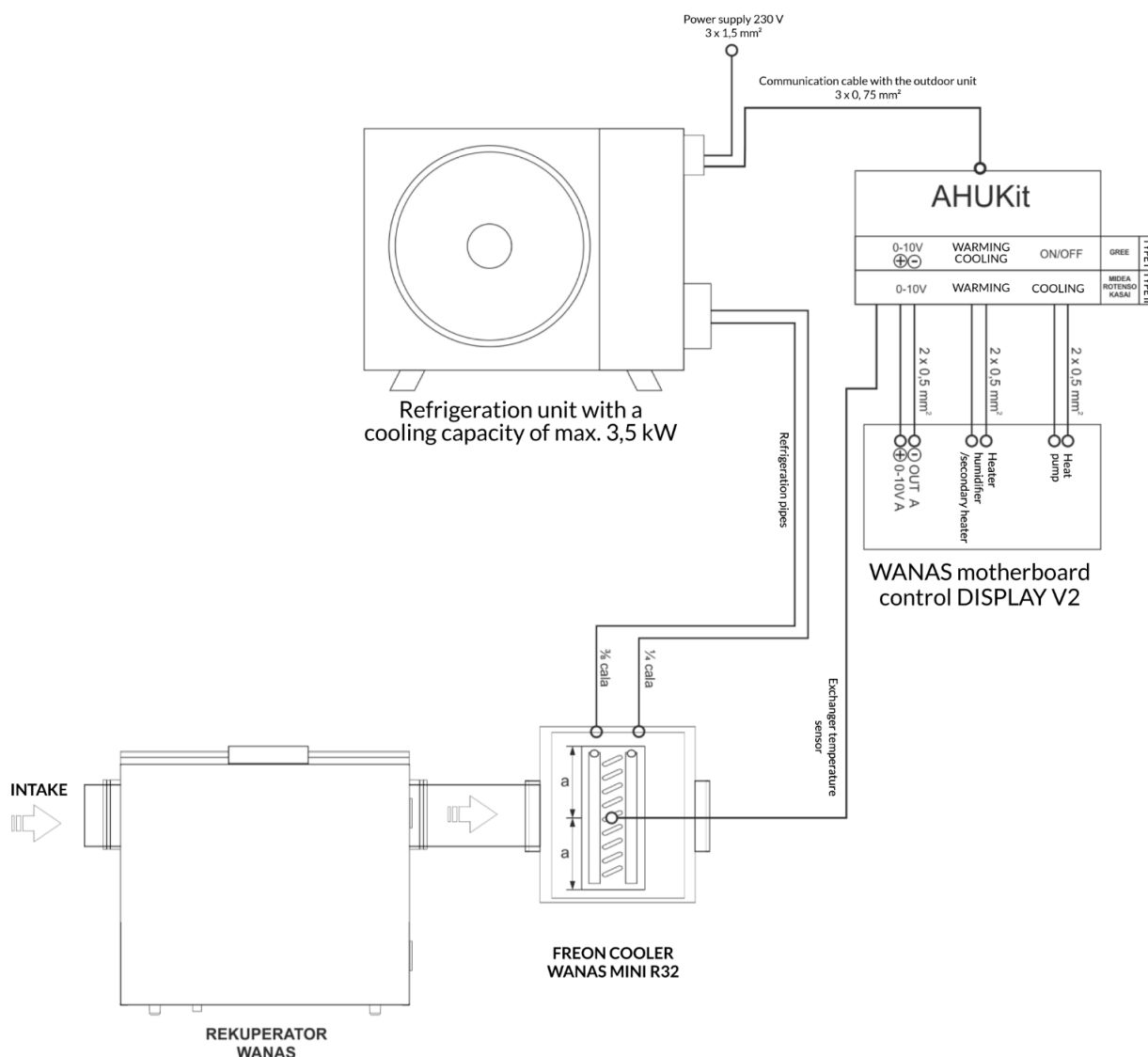
✔ OK

- Heating is activated when the room temperature is lower than the set value in the weekly program.
- The cooler is activated when the room temperature is higher than the set value in the program menu.

**WARNING:** The Freon-based heater/cooler is not intended for heating the building but for preliminary heating/cooling of the supplied air.

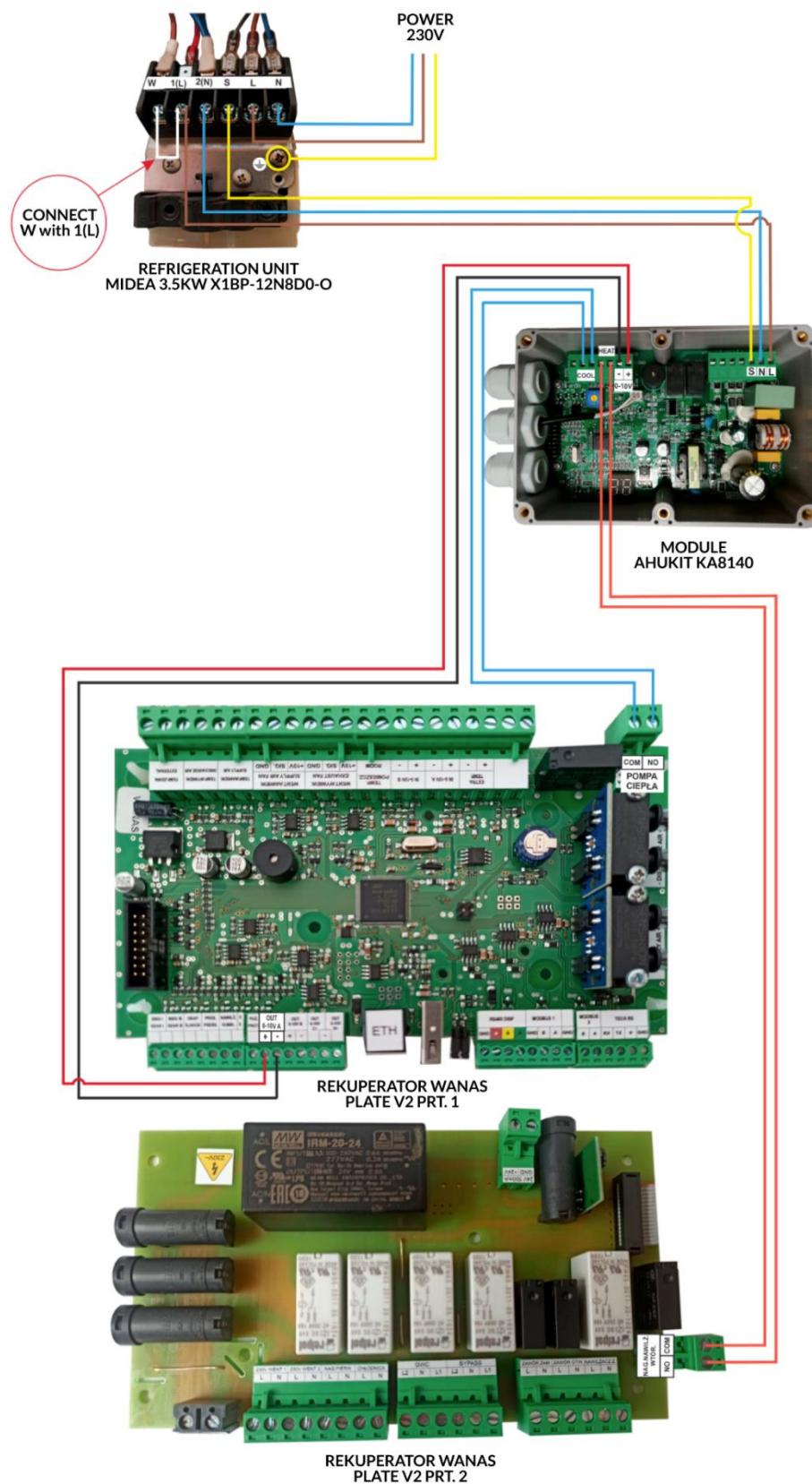
## 5. CONNECTION DIAGRAMS

### 5.1. Connection of the Freon-based heat exchanger WANAS for heating and cooling.



**WARNING:** After connecting the system, perform a leak test with nitrogen, followed by a leak test under vacuum – 0.5 bar. Fill the system with R32 refrigerant. If the distance from the external unit exceeds 5 meters, add refrigerant: 12g of refrigerant for each additional meter of installation. For distances below 5 meters, do not add refrigerant.

## 5.2. Connection of the Freon-based heat exchanger WANAS with the external Midea 3,5kW



## WARRANTY

- The manufacturer provides a 24-month warranty for the proper operation of the device.
- The warranty is valid from the date of purchase by the user.
- The warranty is granted and valid upon presentation of the purchase document for the unit.
- The warranty does not cover defects resulting from improper use, maintenance, or installation of the device.
- The cost of unjustified service calls is to be borne by the claimant.
- The company does not provide a warranty for the cooling unit. The warranty is the responsibility of the installer; the supplier only provides spare parts.
- The company provides service within Poland.
- Service requests should be submitted through the form available in the "Downloads" section on the website [www.wanas.pl](http://www.wanas.pl).