

INSTALLATION AND OPERATING MANUAL

Water heat exchanger 334

Water heat exchanger 444

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1. General information

The heat exchanger is used to expand the capabilities of the WANAS COMBO heat recovery unit to include heating and cooling. Proper connection of the heat exchanger to the water circuit is essential for correct operation..

WANAS 334:

- Maximum heating capacity of the heat exchanger: 3.1 kW
- Maximum cooling capacity of the heat exchanger: 3.01kW

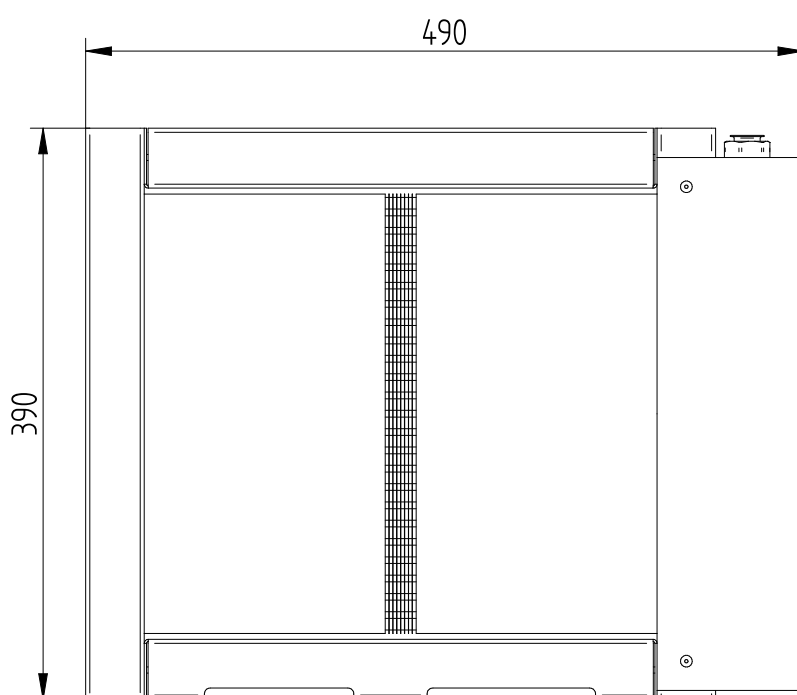
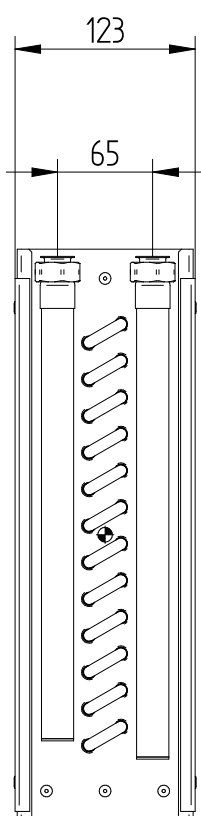
WANAS 444:

- Maximum heating capacity of the heat exchanger: 7.3 kW
- Maximum cooling capacity of the heat exchanger: 7.3 kW

If you intend to dispose of this product, do not throw it away with ordinary household waste. In accordance with Directive 2012/19/EU (WEEE) in force in the European Union, electrical and electronic equipment must undergo a separate disposal process. The aim of the directive is to prevent the negative environmental impact of electronic waste through its collection, reuse, recycling and recovery. The appliance is marked with the crossed-out wheelie bin symbol, which serves as a reminder of the obligation to collect end-of-life equipment separately. For further information on collection points and how to dispose of electronic waste, please contact your local council or a waste management company.	
The manufacturer declares that the product complies with the 'Low Voltage Directive 2014/35/EU (LVD)', concerning the safety of electrical equipment operating within a specified voltage range. The product meets the essential requirements of the directive and has been marked with the 'CE' mark following a conformity assessment procedure.	

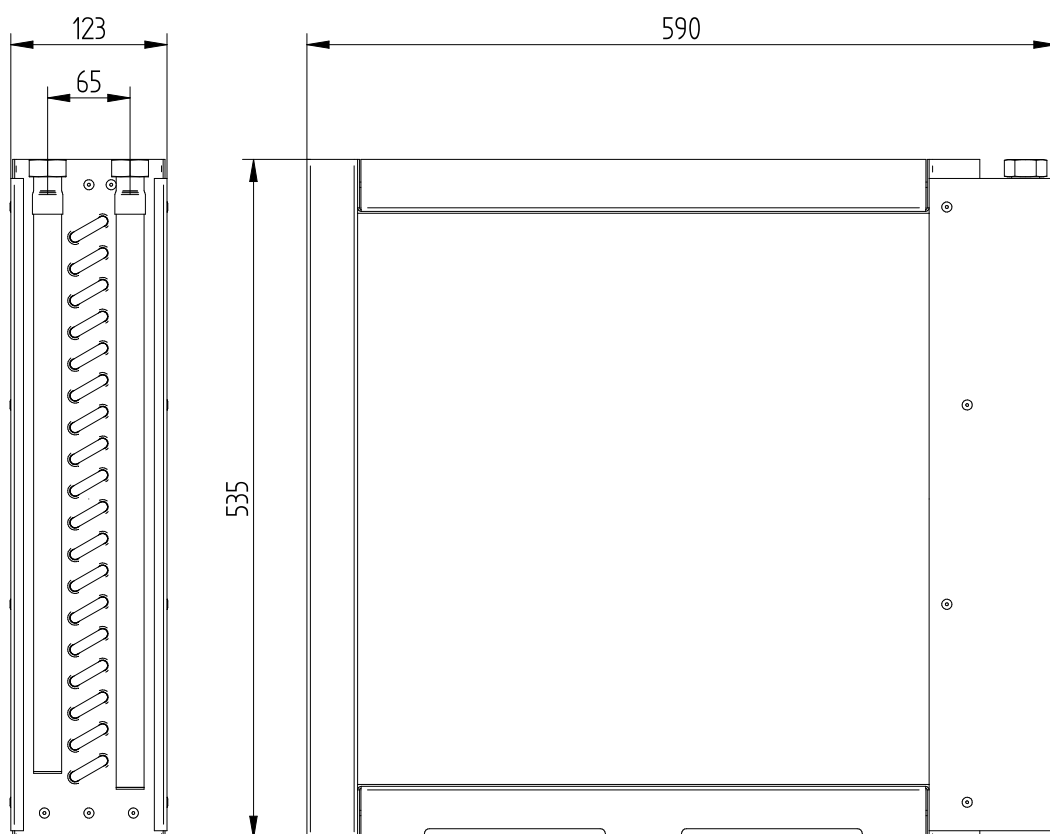
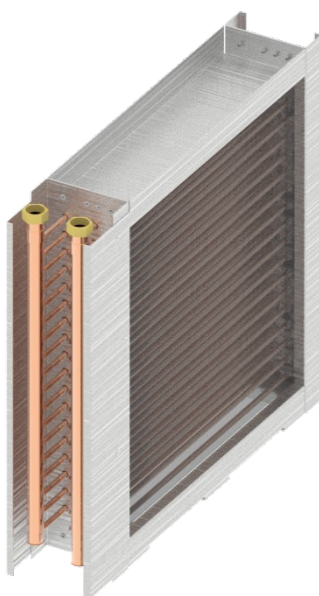
1. Device dimensions

WANAS 334



NOTE: The actual appearance and colour of the device may differ from the illustration shown.

WANAS 444



NOTE: The actual appearance and colour of the unit may differ from the illustration shown.

2. 334 Water heat exchanger specifications

1.1. 334 water exchanger specifications

COOLING FUNCTION – medium water

Air flow	Temperature before the heat exchanger	Humidity before the heat exchanger	Temperature after the heat exchanger	Humidity after the heat exchanger	Cooling capacity
[m ³ /h]	°C	%	°C	%	[kW]
100	28	35	9,6	93,5	0,7
150	28	35	10,8	90,1	1,0
200	28	35	11	89,4	1,3
250	28	35	11,3	88,5	1,6
300	28	35	11,6	87,5	1,8
350	28	35	11,9	86,5	2,1
400	28	35	12	85,5	2,3
450	28	35	12,6	84,5	2,5
600	28	35	13,3	82	3,1

HEATING FUNCTION – medium water

Air flow	Temperature before the heat exchanger	Humidity before the heat exchanger	Temperature after the heat exchanger	Humidity after the heat exchanger	Cooling capacity
[m ³ /h]	°C	%	°C	%	[kW]
100	18	50	39,1	14,7	0,7
150	18	50	37,5	16	1,0
200	18	50	36,3	17	1,3
250	18	50	35,3	18	1,5
300	18	50	34,8	18,5	1,7
350	18	50	34,6	18,7	2,0
400	18	50	34,3	19,1	2,2
450	18	50	34	19,4	2,5
654	18	50	33,1	20,4	3,1

For cooling: Supply water temperature 7°C. Return water temperature 8.2°C.

For heating: Supply water temperature 43°C, return water temperature 39°C.

1.2. 334 water exchanger specifications 40% ethylene glycol solution

COOLING FUNCTION – medium 40% ethylene glycol solution

Air flow	Temperature before the heat exchanger	Humidity before the heat exchanger	Temperature after the heat exchanger	Humidity after the heat exchanger	Cooling capacity
[m ³ /h]	°C	%	°C	%	[kW]
100	28	35	8,7	93,8	0,8
150	28	35	10	90,5	1,1
200	28	35	11	87,6	1,3
250	28	35	11,9	85	1,5
300	28	35	12,6	82,6	1,7
350	28	35	13,2	80,8	1,9
400	28	35	13	81,5	2,2
450	28	35	13,1	81,1	2,4
600	28	35	13,7	79,4	3,1

HEATING FUNCTION – 40% ethylene glycol solution

Air flow	Temperature before the heat exchanger	Humidity before the heat exchanger	Temperature after the heat exchanger	Humidity after the heat exchanger	Cooling capacity
[m ³ /h]	°C	%	°C	%	[kW]
100	18	50	43,6	11,6	0,9
150	18	50	41,6	12,9	1,2
200	18	50	40,0	14	1,5
250	18	50	38,6	15	1,8
300	18	50	37,5	16	2,0
350	18	50	36,6	16,8	2,2
400	18	50	35,7	17,6	2,4
450	18	50	35	18,3	2,6
654	18	50	33,2	20,3	3,1

For cooling: Supply water temperature 6°C. Return water temperature 6.8°C.

For heating: Supply water temperature 49°C, return water temperature 44.5°C

3. 444 water exchanger specifications

3.1. Medium - water

COOLING FUNCTION – medium water

Air flow	Temperature before the heat exchanger	Humidity before the heat exchanger	Temperature after the heat exchanger	Humidity after the heat exchanger	Cooling capacity
[m ³ /h]	°C	%	°C	%	[kW]
300	28	35	9,3	94,3	2,2
450	28	35	10	92,3	3,1
600	28	35	10,7	90,4	3,9
750	28	35	11,2	88,8	4,7
900	28	35	11,7	87,3	5,4
1050	28	35	12,1	85,9	6,1
1200	28	35	12,5	84,6	6,7
1350	28	35	12,9	83,4	7,3

HEATING FUNCTION – medium water

Air flow	Temperature before the heat exchanger	Humidity before the heat exchanger	Temperature after the heat exchanger	Humidity after the heat exchanger	Cooling capacity
[m ³ /h]	°C	%	°C	%	[kW]
300	18	50	38,5	15,2	2,1
450	18	50	37,5	16	3,0
600	18	50	36,7	16,7	3,8
750	18	50	35,9	17,4	4,6
900	18	50	35,3	18	5,3
1050	18	50	34,7	18,6	6,0
1200	18	50	34,2	19,1	6,6
1350	18	50	33,8	19,6	7,3

For cooling: Supply water temperature 7°C. Return water temperature 7.9°C.

For heating: Supply water temperature 43°C, return water temperature 40°C.

3.2. Medium - 40% ethylene glycol

COOLING FUNCTION – medium 40% ethylene glycol

Air flow	Temperature before the heat exchanger	Humidity before the heat exchanger	Temperature after the heat exchanger	Humidity after the heat exchanger	Cooling capacity
[m ³ /h]	°C	%	°C	%	[kW]
300	28	35	10,0	90,3	2,1
450	28	35	11,2	86,8	2,9
600	28	35	11,2	86,9	3,8
750	28	35	11,6	85,6	4,6
900	28	35	12	84,3	5,4
1050	28	35	12,4	83,1	6,1
1200	28	35	12,8	81,9	6,7
1350	28	35	13,2	80,7	7,3

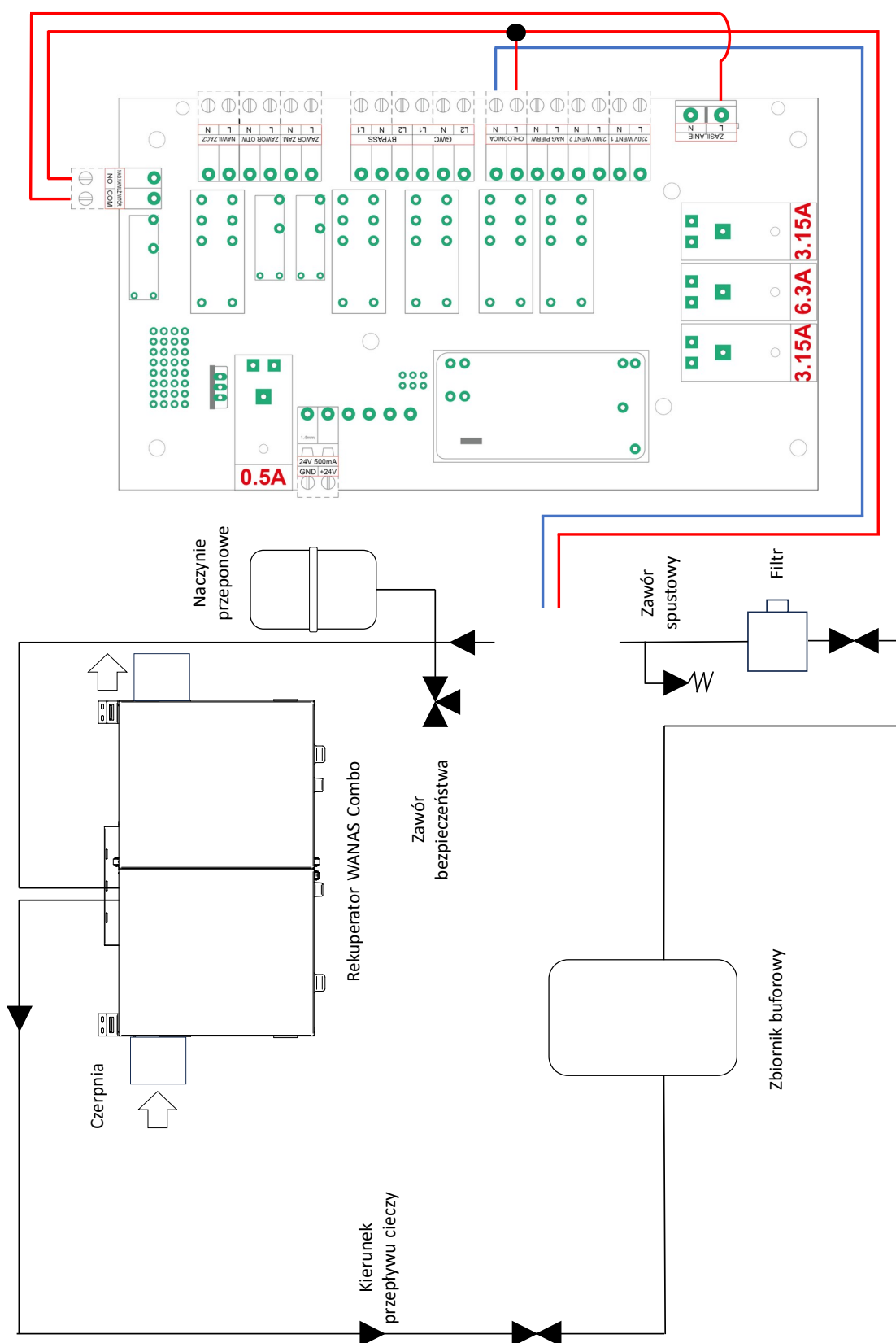
HEATING FUNCTION – medium 40% ethylene glycol

Air flow	Temperature before the heat exchanger	Humidity before the heat exchanger	Temperature after the heat exchanger	Humidity after the heat exchanger	Cooling capacity
[m ³ /h]	°C	%	°C	%	[kW]
300	18	50	39,4	14,4	2,2
450	18	50	37,4	16,1	3,0
600	18	50	35,8	17,5	3,6
750	18	50	34,8	18,6	4,3
900	18	50	35	18,4	5,2
1050	18	50	34,6	18,7	6,0
1200	18	50	34,3	19,1	6,6
1350	18	50	33,9	19,5	7,3

For cooling: Supply water temperature 5.9°C. Return water temperature 6.7°C.

For heating: Supply water temperature 46°C, return water temperature 42.6°C.

4. Schematic diagram of connection



5. Warranty and Service

5.1. Service

All faults must be reported to WANAS with a detailed description of the problem using [the 'Service Request' form](#) available at www.wanas.pl under the 'Contact' tab. Claims made during the warranty period will be assessed within 14 days and resolved within 30 days of the date of submission.

5.2. Warranty

- The manufacturer provides a 24-month warranty covering the correct operation of the device.
- The warranty period is calculated from the date of purchase of the device by the user.
- The warranty is granted and valid upon presentation of the device's proof of purchase.
- The warranty does not cover faults arising from incorrect use, maintenance or installation of the device.
- The cost of an unjustified service call shall be borne by the customer making the claim.
- The company provides servicing throughout Poland.

Contact the service department	
Tel:	+48 535 958 222
Service request	Click here