



**FLEXIHEAT UK LTD**  
www.flexiheatuk.com  
01202 822221

## TECHNICAL DOCUMENTATION



The following document refers to the listed equipment /

- AIRSTREAM PRO C150 EC
- AIRSTREAM PRO C200 EC
- AIRSTREAM PRO W150 R1 EC
- AIRSTREAM PRO W200 R1 EC
- AIRSTREAM PRO W150 R2 EC
- AIRSTREAM PRO W200 R2 EC

**Table of contents**

1. INTRODUCTION ..... 4

1.1. PRECAUTIONS, REQUIREMENTS, RECOMMENDATIONS ..... 4

1.2. TRANSPORT ..... 4

1.3. BEFORE THE INSTALLATION ..... 4

1.4. INTENDED USE ..... 5

1.5. OPERATION ..... 5

2. STRUCTURE AND DIMENSIONS ..... 5

2.1. STRUCTURE ..... 5

2.2. MAIN DIMENSIONS ..... 6

3. ASSEMBLY ..... 6

3.1. STREAM RANGE ..... 6

3.2. HORIZONTAL ASSEMBLY ..... 6

3.3. BEFORE THE INSTALLATION ..... 7

3.4. JOINING CURTAINS ..... 8

4. CONNECTION ..... 9

4.1. HYDRAULIC CONNECTION ..... 9

4.2. TRANSPORT ..... 10

5. START-UP, OPERATION, MAINTENANCE ..... 13

5.1. START-UP ..... 13

5.2. OPERATION AND MAINTENANCE ..... 13

6. SERVICE ..... 14

6.1. COMPLAINT PROCEDURE ..... 14

6.2. INDUSTRIAL SAFETY INSTRUCTION ..... 14

7. PARAMETERS ..... 15

7.1. MAIN PARAMETERS ..... 15

7.2. TRANSPORT ..... 16

8. WARRANTY CARD ..... 19

## **1. INTRODUCTION**

### **1.1. PRECAUTIONS, REQUIREMENTS, RECOMMENDATIONS**

Detailed analysis of this documentation, as well as assembly and use of equipment, according to the descriptions contained therein, and following all safety requirements, is the basis for the correct and safe operation of the device. Any other use that contradicts this instruction may cause accidents with serious consequences. Unauthorised personnel should have limited access to the device, while the personnel should be properly trained. The term operational personnel refers to people, who, as the result of completed training, own experience and knowledge of important standards, documentation and provisions, concerning safety and working conditions, have been authorised to carry out necessary work and are able to recognise potential hazards and avoid them. This technical documentation must be delivered together with the device. The documentation contains information concerning all possible configurations of air curtains. Examples of air curtain assembly and installation, as well as activation, use, repair and maintenance. Provided that the device is operated according to the intended use, this documentation contains a sufficient number of instructions, required by the qualified personnel. The documentation should be placed near the device and be readily available to the service team. The manufacturer reserves the right to introduce changes to the instruction, as well as changes to the device that affect its operation, without prior notice. FLEXIHEAT UK shall bear no responsibility for on-going maintenance, inspections, programming of equipment and damage, caused by standstills of equipment related to the waiting for warranty services, all and any damage related to the Client's property, other than the device in question, as well as malfunctions that result from incorrect installation or improper use of the device.

AIRSTREAM PRO air curtain are intended for indoor use only.

**DO NOT COVER**

**WARNING:** To avoid overheating – do not cover the device!

### **1.2. TRANSPORT**

Prior to the installing and taking the device out of the cardboard box, it is required to check whether the cardboard box has not been damaged in any way and/or the adhesive tape (installed at the company) has not been broken off or cut. It is recommended to check whether the device's casing has not been damaged in transport. Should any of the above situation occur, please contact us through telephone or e-mail: Tel 01202 822221 sales@flexiheatuk.com

The device should be transported by two people. Use appropriate equipment, when transporting the device, so as to avoid damage of the units and potential hazard to health.

### **1.3. BEFORE THE INSTALLATION**

Record the serial number of the device in the warranty card, prior to the commencement of the installation process. It is required to properly fill-in the warranty card, after the completion of the assembly. Prior to the commencing of any installation or maintenance work, it is required to disconnect power supply and protect it against unintentional activation. Assembly, connection and first start should be performed by qualified personnel, according to the guidelines provided in this manual.

The order of installation steps: Mount the device in its intended operation place, Perform the hydraulic connection, check connections for tightness and vent the system, Perform the electrical connection, Make sure the device is correctly connected (according to the diagram), Turn the power on and start the device.

**1.4. INTENDED USE**

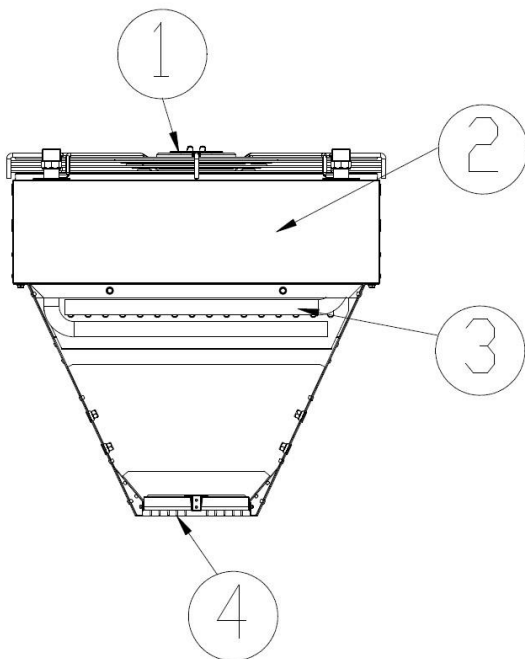
The use of the Airstream PRO air curtain enables the leaving of the room door open, regardless of weather conditions, thus providing a protective barrier. The curtain also enables a simultaneous keeping of the required heating comfort inside the room/facility. The places in which it is possible to install the device include: diagnostic station, train depot, supermarkets, as well as shops, store-rooms, manufacturing facilities or warehouse rooms. Please notice that the use of an air curtain not only provides a protective barrier, but also it is an additional heat source in the room.

It is allowed to use the Airstream Pro air curtain in rooms **with high humidity**, e.g. in car washes, provided that the device is not exposed to a direct stream of water (the motors have an IP protection rating of IP54 ) and **there is no risk of condensation on the elements of the device. It is prohibited to use the Airstream PRO curtains in rooms with aggressive environment (e.g. high concentration of ammonia) that may cause corrosion of aluminium or copper.**

**OPERATION**

The AIRSTREAM PRO air curtain, thanks to axial fans, draws air from the room and pushes it back into the room. The air stream is directed at high speed from the top to the bottom, creating an air barrier. AIRSTREAM PRO air curtains equipped with water heat exchanger, thanks to its well-developed heat exchange surface, generate high heating power and effectively heating the pumped air.

**2 STRUCTURE AND DIMENSIONS**  
**2.1. STRUCTURE**



1:AXIAL FLOW FAN - maximum working temperature is 60°C, nominal power supply voltage is 230V/50Hz. Motor protection is IP54, insulation class F for EC motors IP is 54. Air feed is performed by the axial flow fan, which is secured with a protective grate. Adequate blade profile and proper bearings guarantee silent and unailing operation of the device.

2. CASING – made of galvanised steel

3:HEAT EXCHANGER - the maximum parameters of the heating medium are: 130°C and 1.6MPa (16 Bar). The aluminum-copper construction consists of copper tubes and fins. Connection are ¾"

4. OUTLET GRID - direct the air flow

## HOW FAR IS THE AIR CURTAIN FROM THE DOOR HORIZONTALLY?

An air curtain should be installed close enough to the opening to prevent heat loss from cold air entering the space or vice versa for cold room applications. As shown in Figure 16, in an ideal installation, there would be no separation horizontally between the opening and the air curtain. However, the air curtain can still be effective provided the separation is within 50 cm.

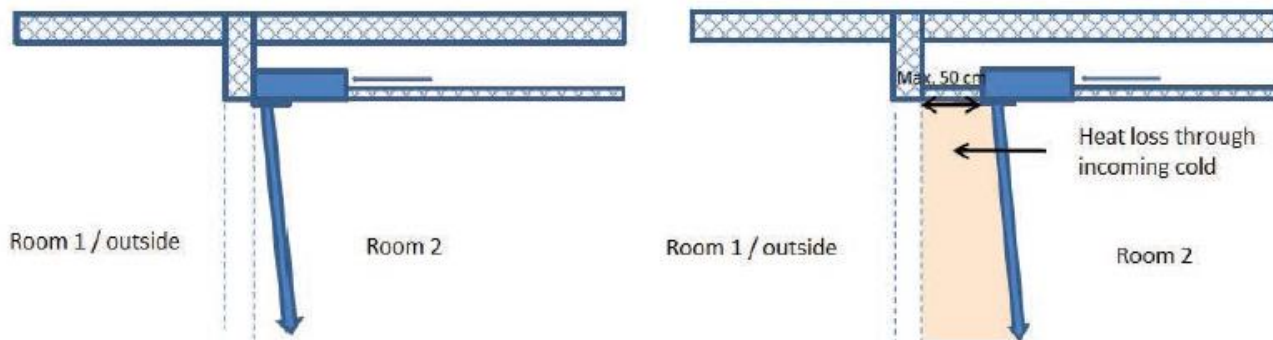


Figure 16 – Horizontal installation recommendations: ideal (left) and maximum (right)

## HOW FAR AWAY IS THE AIR CURTAIN FROM THE DOOR VERTICALLY?

Ideally, the outlet of an air curtain is installed directly above the opening it is designed to protect. If an air curtain is installed too far above the opening, the result will be one of the following two outcomes: the air curtain may not be fully effective, or a larger more powerful unit may be required. Both these outcomes are a consequence on the energy required to create and maintain the jet of air across the opening. As a general check, unless the additional height has been taken into consideration, a vertical separation of up to 50 cm is acceptable (Figure 17).

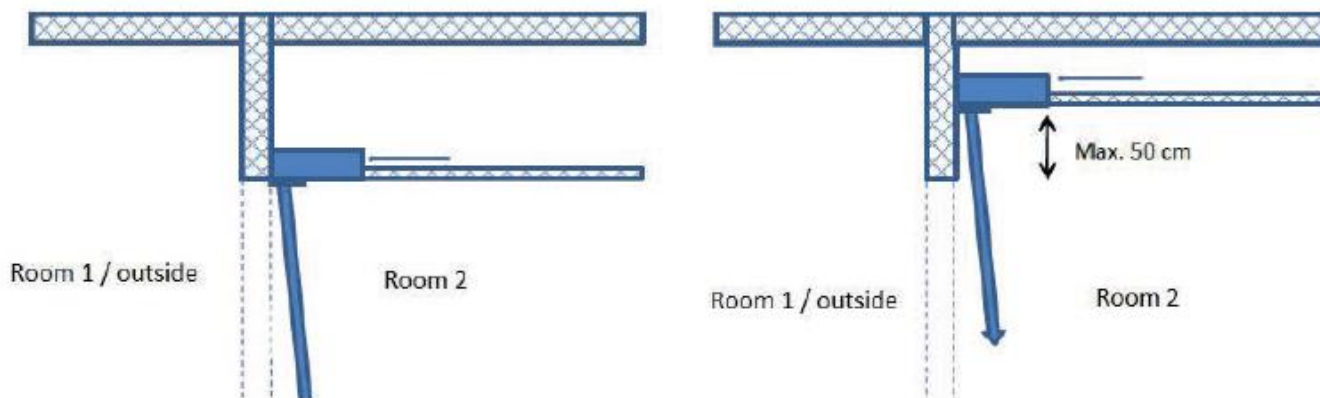
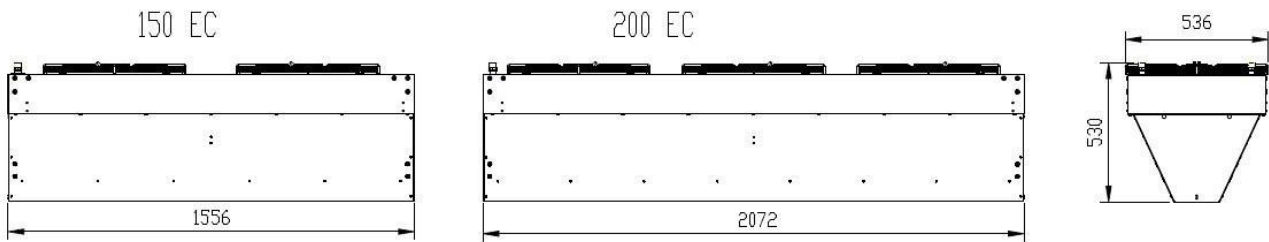


Figure 17 – Vertical installation recommendations: ideal (left) and maximum (right)

2.2. MAIN DIMENSIONS



3. ASSEMBLY

**IMPORTANT!**

- The place of assembly should be carefully selected, taking into account the occurring of potential loads or vibrations.
- Prior to all installation or maintenance work, disconnect power supply and secure it against unintentional reactivation.
- It is recommended to use filters in the hydraulic system. It is recommended to clean/rinse the system, draining a few litres of water, prior to the connecting of hydraulic conduits (the supply conduits, in particular).

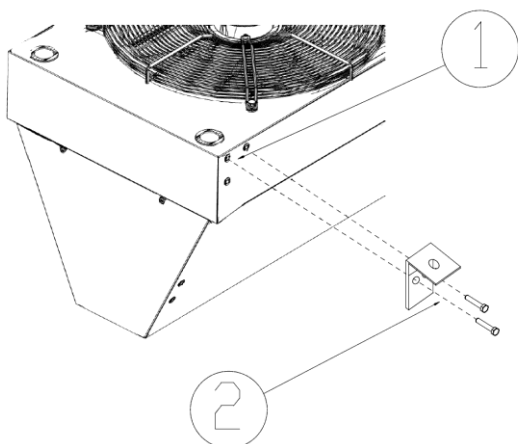
**IMPORTANT!** The air is blown out of the curtain at high velocity, along the surface of the opening, thus creating a protective barrier. Air curtains should cover the entire width of the door opening, in order to obtain the maximum performance of the curtain.

3.1. STREAM RANGE

Fan speed	III	II	I
Height (width) of assembly [m]	H3	H2	H1
AIRSTREAM PRO C150, AIRSTREAM PRO C200	8m	6.5	5
AIRSTREAM PRO W150 R1, AIRSTREAM PRO W200 R2	7.5m	6	4.5
AIRSTREAM PRO W150 R2, AIRSTREAM PRO W200 R2	7m	5.5	4

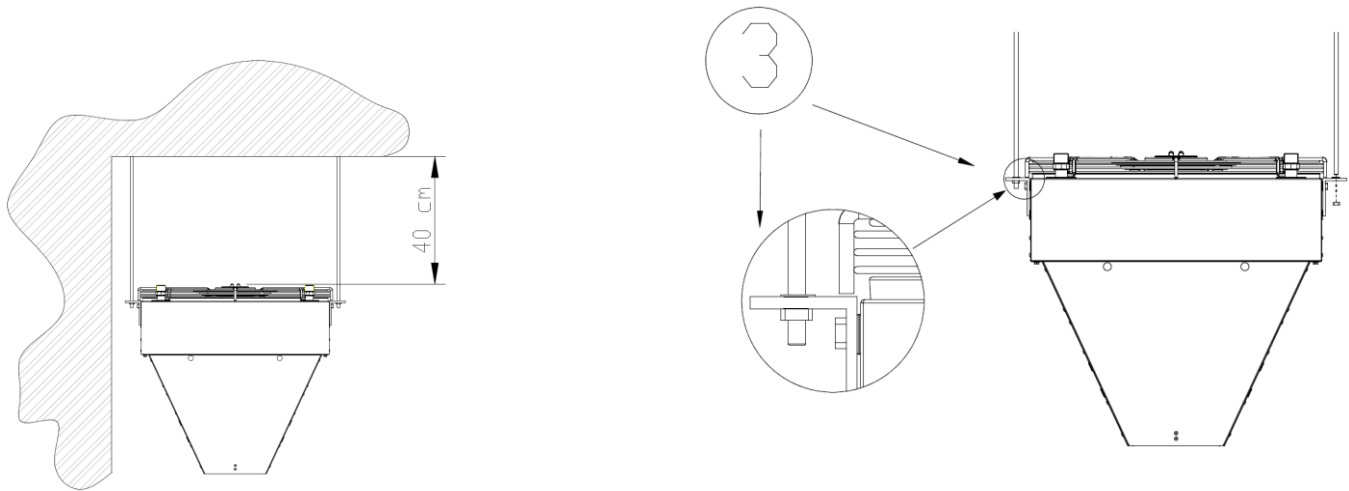
3.2. HORIZONTAL ASSEMBLY

**IMPORTANT!** Four holders are included for horizontal mounting on the mounting pins

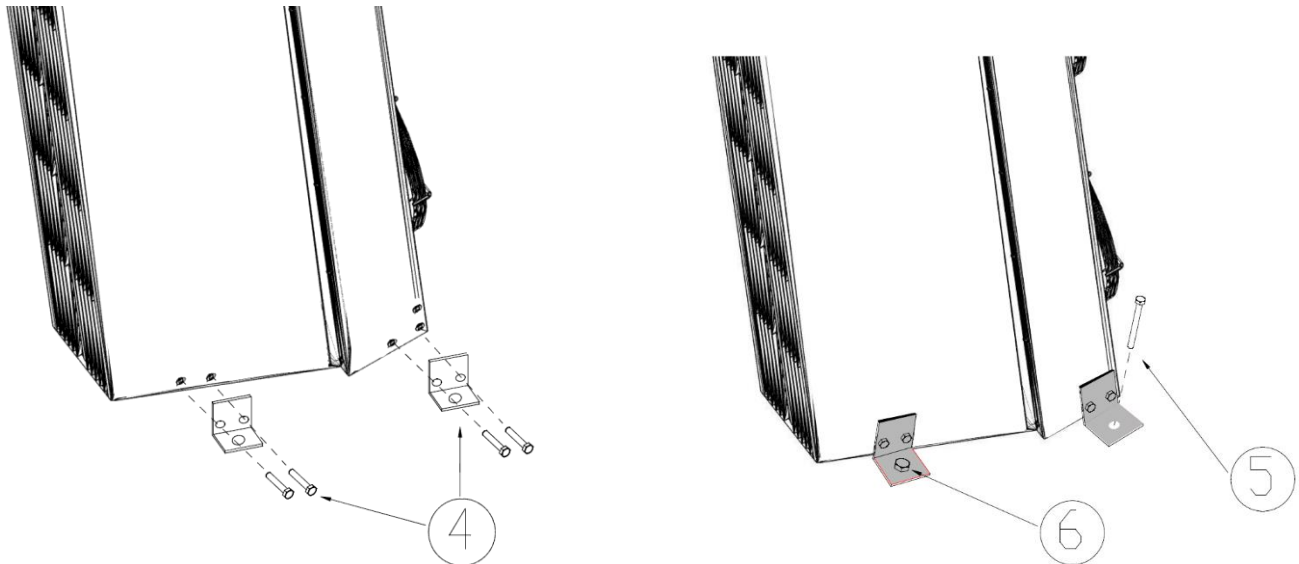


1. There are threaded holes in the four corners of the air curtain for attaching mounting brackets to the air curtain.
2. The mounting bracket should be fixed to the air curtain with the two M8 screws included in the package.
3. A mounting pin should be inserted and tightened securely into the previously fixed holders. The curtain should be hung on four mounting pins.

The minimum distance from the ceiling is 40 cm.



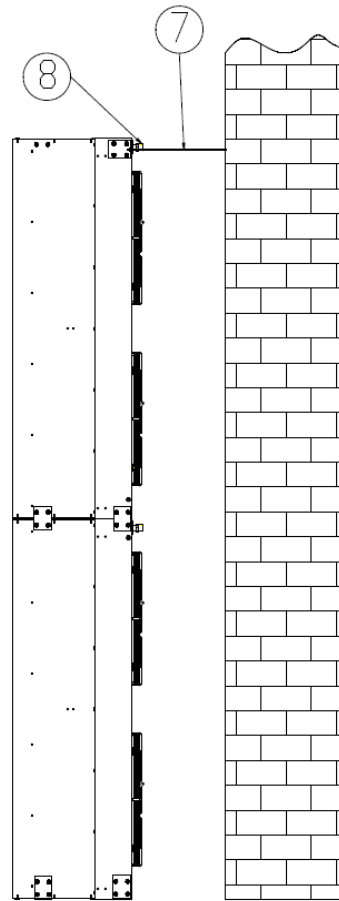
**3.3. BEFORE THE INSTALLATION**



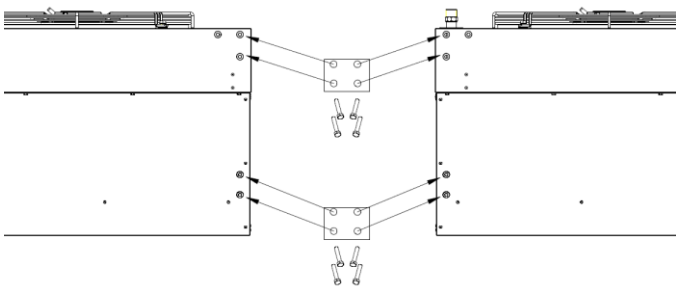
- 4. Four mounting holders should be attached to the underside of the air curtain. The brackets should be directed towards the ground
  
- 5. The curtain should be fixed to the substrate by means of holders that have been previously fixed, using the appropriate screw.
  
- 6. The curtain should be fixed to the substrate by means of holders that have been previously fixed, using the appropriate screw.



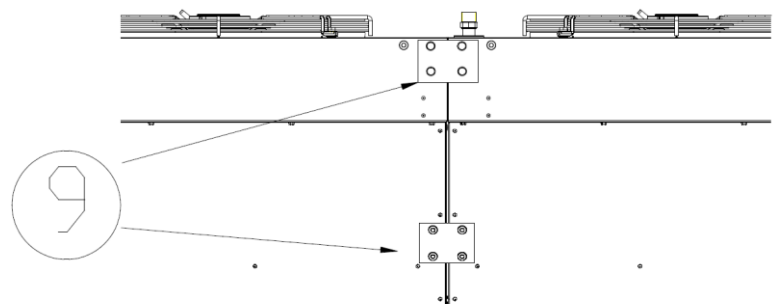
7. In the case of vertical installation, the curtain shall be additionally fixed to the wall using twomounting brackets and two mounting pins. If several units are mounted on top of each other, the unit should be connected to the wall using the mounting pins of each successive unit placed on top of the first unit.
  
8. The AIRSTREAM PRO W150-200 air curtains should be mounted vertically with the connectors placed upwards.



### 3.4. JOINING CURTAINS



9. Two flat mounting parts are included for connecting two air curtains together.



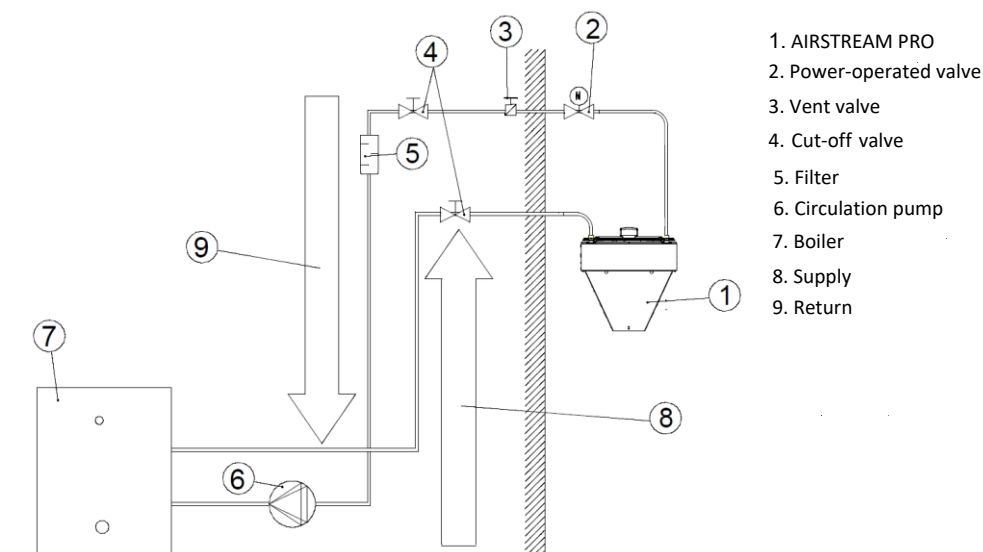
The units are to be connected together at the four points shown in the drawings. The four flat fastening elements and the M8 bolt set included in the kit should be used for the connection.

4. CONNECTION

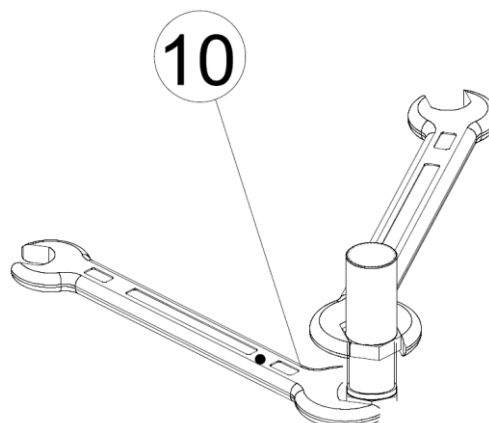
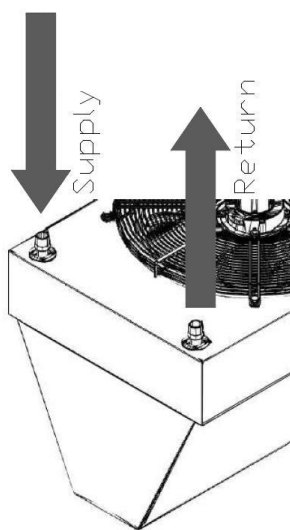
4.1. HYDRAULIC CONNECTION

CONNECTING OF HEATING MEDIUM. Protect the heat exchanger connection against the impact of the torque movements, when installing the pipes transporting the heating medium. **The weight of installed pipelines should not impose a load on the heater's connections.** Use our Flexi's **IMPORTANT!** Pay particular attention to the leak-tightness of connections, when filling the hydraulic system. Make sure that the water flowing from any leaky connection does not leak to the electric motors (especially in a vertical assembly).

**IMPORTANT!** It is recommended to use filters in the hydraulic system. It is recommended to clean/rinse the system, draining a few litres of water, prior to the connecting of hydraulic connections (the supply connections, in particular).



- 1. AIRSTREAM PRO
- 2. Power-operated valve
- 3. Vent valve
- 4. Cut-off valve
- 5. Filter
- 6. Circulation pump
- 7. Boiler
- 8. Supply
- 9. Return



10. During the hydraulic connection it is necessary to use two wrenches where one is responsible for stabilizing the position of the connector so that it is not damaged during the tightening procedure

Maximum operating pressure of the medium	
Maximum working pressure of the medium	16 Bar
Oil and grease	< 1 mg/l
pH at 25°C	8 - 9
Residual water hardness	[Ca <sup>2+</sup> , Mg <sup>2+</sup> ] / [HCO <sub>3</sub> <sup>-</sup> ] > 0.5
Oxygen	< 0.1 mg/l

#### 4.2. TRANSPORT

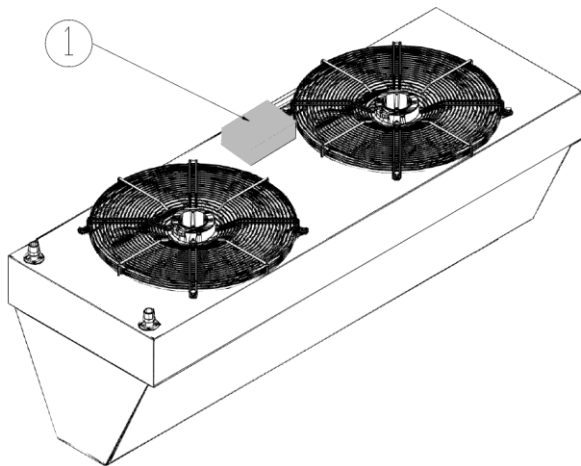
The system must be equipped with protective equipment that guarantees the disconnecting of the device on all poles of the power source. Connection to the electric system must be performed by a duly authorized and qualified person. The cable entries are located in the installation box on top of the air curtain. The box is fitted with a cable gland for both power and control cables.

The device should be transported by two people. Use appropriate tools, when transporting the device, so as to avoid the damaging of goods and potential hazard to health.

**IMPORTANT!** Recommended safety: according to the table below!

Recommended safety devices and wires

Device	AIRSTREAM PRO 150 EC	AIRSTREAM PRO 200 EC
	1.5m	2m
Overload and short circuit protection /	C6/6kA	C10/6kA
Differential current protection /	IDN=30mA type AC lub A	IDN=30mA type AC lub A
	IN=16A	IN=16A
Power wire cross-section /	3x1.5mm <sup>2</sup>	3x1.5mm <sup>2</sup>

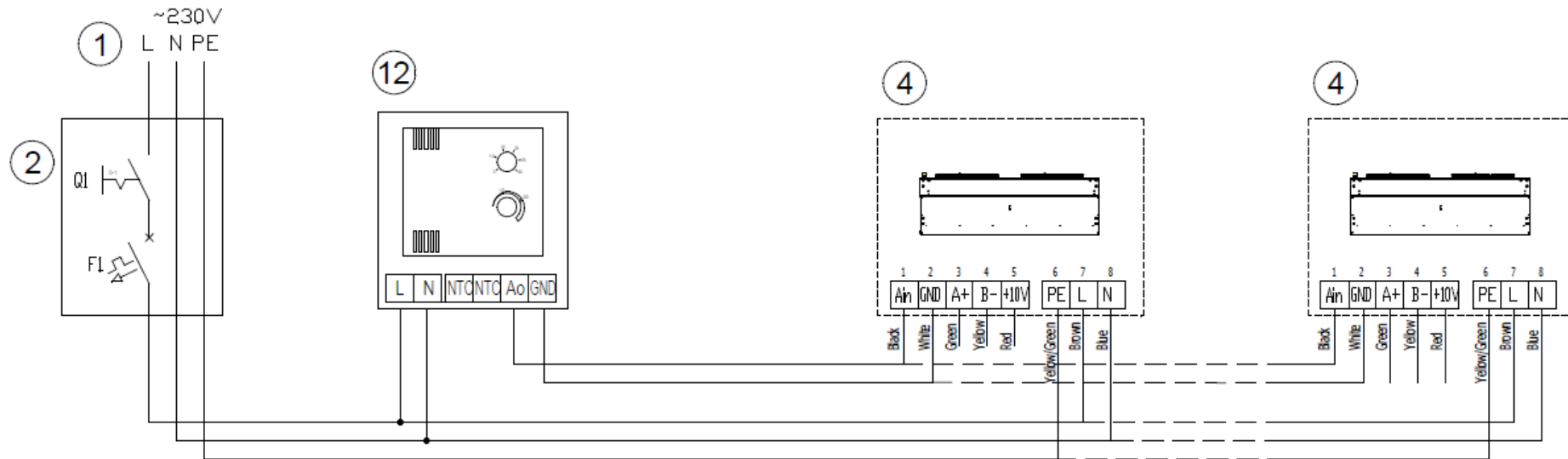


1. On the top of the casing there is a connection box (in case of Airstream PRO 200 there are two connection boxes on the casing. **(Do not open a sealed box!)** In order to connect the device remove the box cover by unscrewing the screws located in the corners of the box. The box is equipped with glands for power and control cables.

AIRSTREAM PRO 150 EC AIRSTREAM PRO 200 EC	Power supply: 3 x 1.5 mm <sup>2</sup> Control: 0-10V DC, LiCY 2x0.75mm <sup>2</sup> (shield)	
--	---	--

## AIRSTREAM PRO – Industrial air curtain

### 4.2.1. Electric diagram for AIRSTREAM PRO EC air curtains



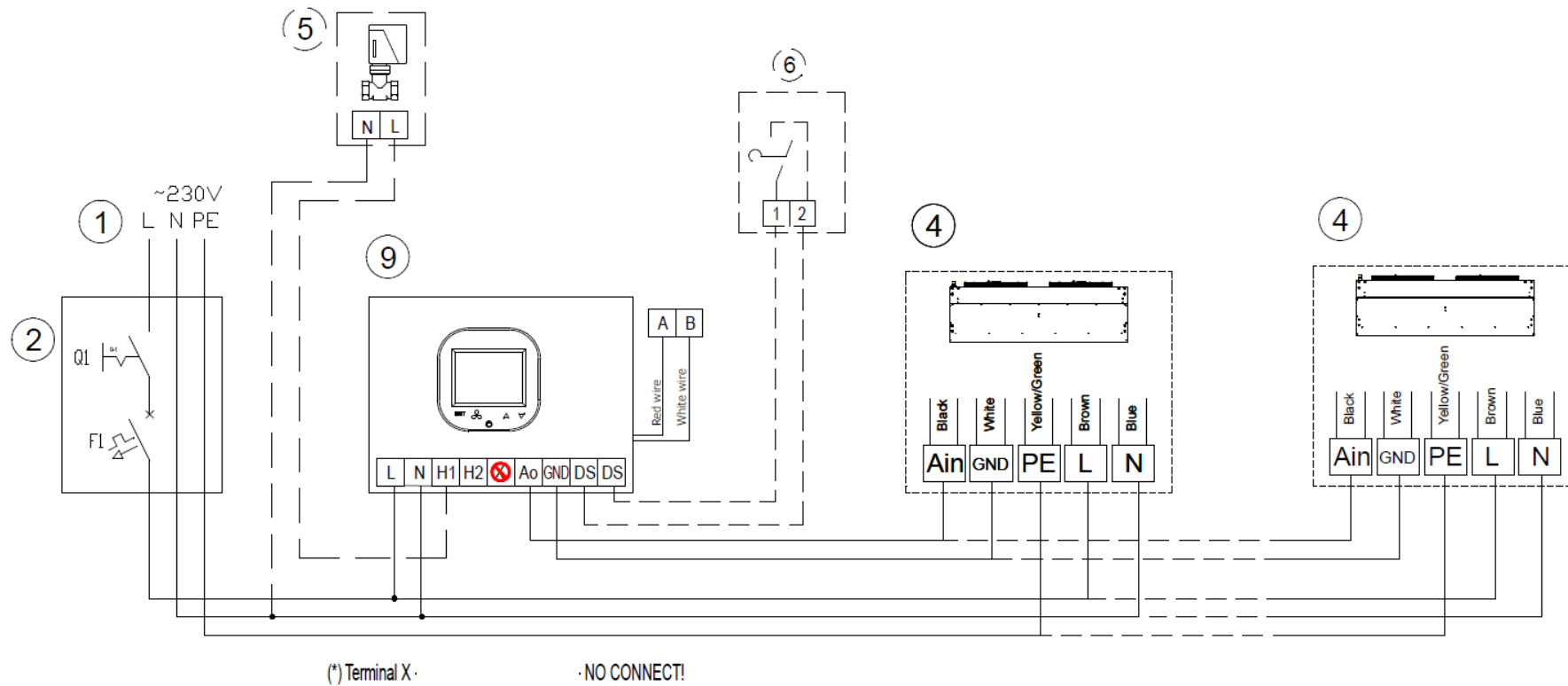
- |                                   |
|-----------------------------------|
| 1. power supply 230V – 50Hz *     |
| 2. main switch, fuses *           |
| 4. AIRSTREAM PRO EC               |
| 12. Potentiometer with thermostat |

\* **IMPORTANT!!** The device does not include: the main switch, fuses and feeder cable

\*\* **IMPORTANT!!** Do not connect the valve with actuator (5) together with the door sensor (6). Choose one of these elements

## AIRSTREAM PRO – Industrial air curtain

### 4.2.2. Electric diagram for AIRSTREAM PRO EC air curtains



- 1. power supply 230V – 50Hz \* 2. main switch, fuses \*
- 4. AIRSTREAM PRO EC
- 5. valve with actuator \*\*
- 6. door sensor \*\*
- 9. controller HMI AIRSTREAM EC

\* **IMPORTANT!!** The device does not include: the main switch, fuses and feeder cable

\*\* **IMPORTANT!!** Do not connect the valve with actuator (5) together with the door sensor (6). **Choose one of these elements**

## 5. START-UP, OPERATION, MAINTENANCE

### 5.1. START-UP

- Prior to the commencing of any installation or maintenance work, disconnect power supply and secure it against unintentional reactivation.
- It is recommended to use filters in the hydraulic system. It is recommended to clean/rinse the system, draining a few litres of water, prior to the connecting of hydraulic conduits (the supply conduits, in particular).
- It is advised to use vent valves in the highest point of the system.
- It is recommended to install shut-off valves directly after the device, should the disassembly of the device be necessary.
- All protective equipment is to be installed before the pressure increases, according to maximum the permissible pressure rating of 1.6MPa.
- Hydraulic connection should be free of any stresses and loads.
- Check the correctness of hydraulic connections (leak-tightness of the vent, collecting pipes, correctness of fittings installation), prior to the initial start-up of the device.
- It is recommended to check the correctness of electrical connections (of automatics, power supply), prior to the initial start-up of the device. It is advised to use an additional, external residual- current protection.

**IMPORTANT!** All connections should be carried out, according to this technical documentation and the documentation delivered with automation equipment.

### 5.2. OPERATION AND MAINTENANCE

- The casing of the device does not require maintenance.
- The heat exchanger should be cleaned on a regular basis from dust and fat deposit. It is especially recommended to clean the exchanger before the heating season with the use of compressed air from the air intake side (after removing the inlet grid). You should pay special attention to the exchanger's lamellae which are very delicate.
- Should the lamellas be deformed (bent), straighten them with a special tool.
- The fan's motor does not require any exploitation service, the only service activities that may be necessary concern cleaning the air intakes from dust and fat deposit.
- Disconnect phase voltage, if the device is shut down for longer periods of time.
- The heat exchanger does not have any anti-freezing protections.
- It is recommended to provide a periodical purging of the heat exchanger, preferably using compressed air.
- Should the temperature in the room drop below 0°C, with a simultaneous drop of the heating medium temperature, there is a risk that the heat exchanger might freeze (split).
- The level of air pollutants should meet the criteria allowable concentrations of pollutants in indoor air, for non-industrial areas, the level of dust concentration up to 0.3 g / m<sup>3</sup>.
- It is forbidden to use device for the duration of the construction works except for the start-up of the system.
- The equipment must be operated in rooms used throughout the year, and in which there is no condensation (large fluctuations in temperature, especially below the dew point of the moisture content). The device should not be exposed to direct UV rays.
- The device should be operated at the supply water temperature up to 130 °C with working fan.  
It is prohibited to use AIRSTREAM PRO curtains in rooms with aggressive environment (e.g. high concentration of ammonia) that may cause corrosion of aluminium or copper.

## 6. SERVICE

### 6.1. COMPLAINT PROCEDURE

In order to report a problem with the device or elements of automation, please contact Flexiheat UK in the following ways:-  
email: sales@flexiheatuk.com  
tel: 01202 822221

In the case of damage in transport, send a complaint notification, including the delivery documentation (bill of lading, inventory issue) and photographs showing the defects. Should you have any questions, please contact us, using this telephone number: 01202 822221

**IMPORTANT! ALL CLAIMS FOR LOSS OR DAMAGE MUST BE REPORTED WITHIN THREE DAYS OF RECEIPT**

**NO CLAIMS CAN BE ACCEPTED IF THE GOODS HAVE BEEN SIGNED AS RECEIVED IN GOOD CONDITION**

The complaint procedure shall be initiated when the Service Department has received a correctly filled complaint notification, a copy of the purchase invoice and the Warranty Card, filled by the company that carried out the installation

### 6.2. INDUSTRIAL SAFETY INSTRUCTION

Special instructions concerning safety

**IMPORTANT!**

- Prior to the commencing of any work related to the device, it is required to disconnect the system, secure it properly and wait, until the fan stops revolving.
- Use stable working platforms and hoists.
- Depending on the temperature of the heating medium, pipes, elements of casing and surfaces of the heat exchanger can be very hot, even after the fan has stopped revolving.
- Sharp edges may be present! Wear gloves, protective shoes and clothing, when transporting the device.
- Strictly observe safety guidelines and industrial safety regulations.
- Loads can be placed only in the previously selected areas on the transporting unit. Protect the edges of the device, when lifting it, using a set of machines. Remember to distribute weight evenly.
- The equipment must be protected against moisture and dirt, and kept in rooms protected against the impact of weather conditions.
- Utilisation of waste: make sure that operating and auxiliary materials, including packaging material and spare parts, are disposed of in a safe, environment friendly manner, according to the binding, local statutory regulations.

**7. PARAMETERS**  
**7.1. MAIN PARAMETERS**

Parameters	Units	AIRSTREAM PRO W150-200				AIRSTREAM PRO C150-200	
		W150 R1	W200 R1	W150 R2	W200 R2	C150	C200
Air curtain length	m	1.5	2	1.5	2	1.5	2
Max. Height of door	m	7.5	7.5	7	7	8	8
Heating output range	kW	9-32	15-48	17-58	28-88	---	
Max. Air flow rate	m <sup>3</sup> /h	7,900	11,900	7,300	10,700	8,500	12,800
Max. Temperature of heating medium	°C	130				---	
Max. Working pressure	MPa	1.6				---	---
diameter of stub pipe connectors	"	3/4				---	---
Supply voltage	V/ph/Hz	~230/1/50					
EC Motor power	kW	2 x 0.25	3 x 0.25	2 x 0.25	3 x 0.25	2 x 0.25	3 x 0.25
EC Motor rated power	A	2 x 1.3	3 x 1.3	2 x 1.3	3 x 1.3	2 x 1.3	3 x 1.3
Weight (without water)	kg	50.5	66.1	53.6	69.6	43.4	58.3
IP	-	54					

Heating capacity for 80/60°C heating medium and 15°C supply air temperature



7.2. Water fed units - output data at various flow & return temperatures

AIRSTREAM PRO W150 R1																	
Parameters Tz/Tp [°C]																	
90/70 [°C]						80/60 [°C]				70/50 [°C]				60/40 [°C]			
Tp1	Qp	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]
[°C]	[m³/h]		[°C]				[°C]				[°C]				[°C]		
0	7900	32,4	11,0	1,40	13,8	27,9	9,8	1,20	10,8	23,2	8,1	1,00	8,0	18,5	6,5	0,80	5,5
	5700	27,2	13,2	1,20	10,1	23,4	11,4	1,00	7,9	19,5	9,5	0,90	5,8	15,6	7,6	0,70	4,0
	4500	23,9	14,6	1,10	8,0	20,5	12,6	0,90	6,2	17,1	10,5	0,70	4,6	13,6	8,4	0,60	3,2
5	7900	30,2	15,8	1,30	12,6	25,6	14,1	1,10	9,3	21,0	12,5	0,90	6,7	16,3	10,8	0,70	4,3
	5700	25,3	17,5	1,10	8,9	21,5	15,6	0,90	6,8	17,7	13,7	0,80	4,9	13,7	11,8	0,60	3,2
	4500	22,2	18,9	1,00	7,0	18,9	16,8	0,80	5,4	15,5	14,7	0,70	3,9	12,0	12,5	0,50	2,5
10	7900	28,0	20,1	1,20	10,6	23,4	18,5	1,00	7,9	18,8	16,8	0,80	5,5	14,0	15,1	0,60	3,3
	5700	23,5	21,8	1,00	7,7	19,7	19,9	0,90	5,8	15,8	17,9	0,70	4,0	11,8	15,9	0,50	2,4
	4500	20,6	23,1	0,90	6,1	17,2	21,0	0,80	4,6	13,8	18,8	0,60	3,2	10,3	16,6	0,40	1,9
15	7900	25,8	24,5	1,10	9,1	21,2	22,8	0,90	6,6	16,6	21,1	0,70	4,3	11,8	19,3	0,50	2,4
	5700	21,6	26,0	1,00	6,7	17,8	24,1	0,80	4,8	13,9	22,1	0,60	3,2	9,9	20,0	0,40	1,8
	4500	18,9	27,2	0,80	5,3	15,6	25,1	0,70	3,8	12,2	22,9	0,50	2,5	8,6	20,6	0,40	1,38
20	7900	23,5	28,8	1,00	7,8	19,0	27,1	0,80	5,4	14,3	25,4	0,60	3,4	9,4	23,5	0,40	1,63
	5700	19,8	30,2	0,90	5,7	15,9	28,2	0,70	4,0	12,0	26,2	0,50	2,5	7,9	24,1	0,30	1,18
	4500	17,3	31,4	0,80	4,5	14,0	29,2	0,60	3,1	10,5	26,9	0,50	1,9	6,8	24,5	0,30	0,91

Tz – inlet water temperature; Tp – outlet water temperature; Tp1 – inlet air temperature; Tp2 – outlet air temperature; Pg – heating capacity; Qw – water flow; Qp- air flow rate; Δp – pressure drop in the heat exchanger

AIRSTREAM PRO W200 R1																	
Parameters Tz/Tp [°C]																	
90/70 [°C]						80/60 [°C]				70/50 [°C]				60/40 [°C]			
Tp1	Qp	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]
[°C]	[m³/h]		[°C]				[°C]				[°C]				[°C]		
0	11900	47,6	11,1	2,10	34,1	41,1	9,5	1,80	26,8	34,5	8,0	1,50	20,2	27,8	6,5	1,20	14,2
	8600	40,0	12,9	1,80	25,1	34,5	11,1	1,50	19,7	29,0	9,3	1,30	14,8	23,4	7,5	1,00	10,4
	6800	35,2	14,3	1,60	19,9	30,4	12,4	1,30	15,6	25,5	10,4	1,10	11,8	20,6	8,4	0,90	8,3
5	11900	44,3	15,5	2,00	30,1	37,8	13,9	1,70	23,2	31,3	12,4	1,40	16,9	24,6	10,8	1,10	11,4
	8600	37,3	17,2	1,60	22,1	31,8	15,4	1,40	17,0	26,3	13,6	1,20	12,5	20,7	11,8	0,90	8,4
	6800	32,8	18,6	1,40	17,5	28,0	16,6	1,20	13,5	23,2	14,6	1,00	0,9	18,2	12,5	0,80	6,6
10	11900	41,1	19,9	1,80	26,3	34,6	18,3	1,50	19,8	28,1	16,7	1,20	13,9	21,4	15,1	0,90	8,8
	8600	34,6	21,5	1,50	19,3	29,1	19,7	1,30	14,5	23,6	17,9	1,00	10,3	18,0	16,0	0,80	5,1
	6800	30,4	22,8	1,30	15,3	25,6	20,8	1,10	11,5	20,8	18,7	0,90	8,1	15,8	16,7	0,70	5,2
15	11900	37,9	24,3	1,70	22,8	31,4	22,7	1,40	16,6	24,9	21,1	1,10	11,2	18,2	19,4	0,80	6,6
	8600	31,9	25,8	1,40	16,7	26,5	23,9	1,20	12,2	20,9	22,1	0,90	8,3	15,3	20,2	0,70	4,9
	6800	28,0	27,0	1,20	13,2	23,3	24,9	1,00	9,7	18,4	22,9	0,80	6,6	13,4	20,7	0,60	3,85
20	11900	34,7	28,6	1,50	19,4	28,2	27,0	1,20	13,7	21,7	25,4	0,90	8,8	14,9	23,7	0,60	4,63
	8600	29,2	30,0	1,30	14,3	23,8	28,2	1,00	10,1	18,2	26,3	0,80	6,5	12,5	24,3	0,50	3,40
	6800	25,7	31,1	1,10	11,3	20,9	29,1	0,90	8,1	16,0	27,0	0,70	5,1	11,0	24,8	0,50	2,70

Tz – inlet water temperature; Tp – outlet water temperature; Tp1 – inlet air temperature; Tp2 – outlet air temperature; Pg – heating capacity; Qw – water flow; Qp- air flow rate; Δp – pressure drop in the heat exchanger


AIRSTREAM PRO – Industrial air curtain

AIRSTREAM PRO W150 R2																		
Parameters Tz/Tp [°C]																		
90/70 [°C]						80/60 [°C]				70/50 [°C]				60/40 [°C]				
Tp1	Qp	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	
[°C]	[m³/h]		[°C]				[°C]				[°C]				[°C]			[°C]
0	7300	57,6	21,8	2,50	19,2	49,6	18,8	2,20	14,8	41,6	15,7	1,80	10,9	33,3	12,6	1,50	7,4	
	5150	47,2	25,4	2,10	13,3	40,7	21,9	1,80	10,3	34,1	18,3	1,50	7,6	27,3	14,7	1,20	5,2	
	4000	40,6	28,1	1,80	10,1	35,0	24,2	1,50	7,8	29,3	20,3	1,30	5,7	23,5	16,3	1,00	3,9	
5	7300	53,6	25,7	2,40	16,8	45,7	22,6	2,00	12,7	37,6	19,5	1,60	9,1	29,3	16,3	1,30	5,9	
	5150	43,9	29,0	1,90	11,7	37,4	25,5	1,60	8,8	30,8	21,9	1,30	6,3	24,1	18,1	1,00	4,1	
	4000	37,8	31,6	1,70	8,8	32,2	27,7	1,40	6,7	26,5	23,7	1,20	4,8	20,7	19,5	0,90	3,1	
10	7300	49,7	29,5	2,20	14,6	41,7	26,3	1,80	10,8	33,6	23,2	1,50	7,4	25,3	19,9	1,10	4,5	
	5150	40,7	32,6	1,80	10,1	34,2	29,0	1,50	7,5	27,6	25,5	1,20	5,1	20,8	21,5	0,90	3,1	
	4000	35,0	35,0	1,50	7,7	29,4	31,0	1,30	5,7	23,7	27,0	1,00	3,9	17,8	22,7	0,80	2,4	
15	7300	45,7	33,2	2,00	12,5	37,8	30,0	1,70	9,0	29,7	26,8	1,30	5,9	21,3	23,5	0,90	3,3	
	5150	37,5	36,1	1,70	8,7	31,0	32,5	1,40	6,2	24,4	28,8	1,10	4,1	17,4	24,8	0,80	2,3	
	4000	32,2	38,4	1,40	6,6	26,7	34,4	1,20	4,7	21,0	30,2	0,90	3,1	14,9	25,8	0,60	1,70	
20	7300	41,8	36,9	1,80	10,6	33,9	33,7	1,50	7,3	25,8	30,4	1,10	4,5	17,2	27,0	0,70	2,20	
	5150	34,3	39,6	1,50	7,4	27,8	35,9	1,20	5,1	21,1	32,1	0,90	3,1	14,0	28,0	0,60	1,50	
	4000	29,5	41,7	1,30	5,6	23,9	37,6	1,00	3,9	18,2	33,4	0,80	2,4	11,8	28,7	0,50	1,11	

Tz – inlet water temperature; Tp – outlet water temperature; Tp1 – inlet air temperature; Tp2 – outlet air temperature; Pg – heating capacity; Qw – water flow; Qp- air flow rate; Δp – pressure drop in the heat exchanger

AIRSTREAM PRO W200 R2																		
Parameters Tz/Tp [°C]																		
90/70 [°C]						80/60 [°C]				70/50 [°C]				60/40 [°C]				
Tp1	Qp	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	Pg [kW]	Tp2	Qw [m³/h]	Δp [kPa]	
[°C]	[m³/h]		[°C]				[°C]				[°C]				[°C]			[°C]
0	10700	87,5	22,6	3,90	47,5	75,7	19,6	3,30	37,0	63,8	16,5	2,80	27,5	51,7	13,4	2,30	19,1	
	7800	73,1	25,9	3,20	34,1	63,3	22,5	2,80	26,6	53,4	18,9	2,30	19,8	43,3	15,4	1,90	13,8	
	6100	63,2	28,7	2,80	26,1	54,8	24,8	2,40	20,4	46,2	20,9	2,00	15,2	37,5	17,0	1,60	10,6	
5	10700	81,6	26,5	3,60	41,7	69,8	23,4	3,10	31,8	57,9	20,2	2,50	23,0	45,8	17,0	2,00	15,3	
	7800	68,1	29,6	3,00	29,9	58,3	26,0	2,60	22,9	48,4	22,5	2,10	16,6	38,3	18,8	1,70	11,1	
	6100	58,9	32,2	2,60	22,9	50,4	28,3	2,20	17,5	41,9	24,3	1,80	12,7	33,2	20,3	1,40	8,5	
10	10700	75,6	30,2	3,30	36,2	63,9	27,1	2,80	27,0	52,0	23,9	2,30	18,9	39,9	20,7	1,70	11,9	
	7800	63,2	33,2	2,80	26,0	53,4	29,6	2,30	19,4	43,5	26,0	1,90	13,6	33,4	22,3	1,50	8,6	
	6100	54,6	35,6	2,40	19,9	46,2	31,7	2,00	14,9	37,6	27,7	1,60	10,5	28,9	23,6	1,30	6,6	
15	10700	69,7	33,9	3,1	31,2	58,0	30,8	2,50	22,6	46,1	27,5	2,00	15,2	34,0	24,2	1,50	8,9	
	7800	58,3	36,7	2,60	22,4	48,5	33,1	2,10	16,3	38,6	29,4	1,70	10,9	28,4	25,6	1,20	6,4	
	6100	50,4	39,0	2,20	17,2	41,9	35,0	1,80	12,5	33,4	30,9	1,50	8,4	24,6	26,7	1,10	4,91	
20	10700	63,9	37,6	2,80	26,6	52,1	34,4	2,30	18,6	40,2	31,1	1,80	11,8	28,0	27,7	1,20	6,22	
	7800	53,4	40,2	2,40	19,1	43,6	36,5	1,90	13,4	33,7	32,7	1,50	8,5	23,4	28,9	1,00	4,49	
	6100	46,1	42,3	2,00	14,6	37,7	38,2	1,70	10,3	29,1	34,1	1,30	6,5	20,2	29,8	0,90	3,44	

Tz – inlet water temperature; Tp – outlet water temperature; Tp1 – inlet air temperature; Tp2 – outlet air temperature; Pg – heating capacity; Qw – water flow; Qp- air flow rate; Δp – pressure drop in the heat exchanger

	<p>It is forbidden to place, dispose of and store worn-out electric and electronic equipment, together with other waste. Dangerous compound contained in electronic and electric equipment have a very adverse impact on plants, micro-organisms, and, most importantly, on humans, as they damage our central and peripheral nervous system, as well as circulatory and internal system. Additionally, they cause serious allergic reactions. Worn-out equipment is to be delivered to a local collection point for used electric equipment, which carries out a selective collection of waste.</p> <p style="text-align: center;"><b>REMEMBER!</b></p> <p>The user of equipment intended for households, and which has been worn out, is obliged to transfer such equipment to a collecting unit that collects worn-out electric and electronic equipment. The selective collecting and further processing of waste from households contributes to the protection of environment, reduces the penetration of hazardous substances into the atmosphere and surface waters.</p>

Warranty card

1. Stamp of the company to carry out installation		
2. serial number of device		
3. Place of installation	4. Date of installation	
5. Address, street	6. Apartment number	
7. City	8. Postal code	

**§ 1 Warranty period**

1. The warranty for the devices and the automation shall be 3 years, PARTS ONLY, following the date when the devices were purchased by the Customer.
2. The purchase date shall mean the date when FLEXIHEAT issued a VAT invoice documenting the sale of the device to the Customer.

**§ 2 Scope of warranty**

1. If a complaint is recognised as justified, Flexiheat shall, either replace the device(s) or replace the defective part(s)

**§ 3 Exclusions**

1. This warranty shall not include:
  - a. Damage to the housing caused by corrosion of sheet metal parts, particularly, but not exclusively, at folds, perforations, joints and embossing
  - b. Any parts subject to normal wear and tear, consumables.
  - c. Any damage arising through no fault of Flexiheat and device defects occurring for reasons other than inherent to the devices.
  - d. Device damage resulting from the impact of the surroundings, improper transport, storage.
  - e. Mechanical damage arising from incorrect operation and use of the device, repair and maintenance incompatible with the technical documentation enclosed with the device, the Operation & Maintenance Manual or by individuals without proper qualifications.
  - f. Devices whose installation or start-up was conducted in a manner incompatible with the technical documentation enclosed with the device, the Operation & Maintenance Manual or by individuals without proper qualifications.
  - g. Devices which were not inspected at least once a year and were not subject to current maintenance activities as required by the Operation & Maintenance Manual or whose technical inspections or maintenance activities were conducted by individuals without proper qualifications.
  - h. Devices which were subject to modifications, changes of operation parameters, repair or replacement of parts without the written consent of Flexiheat.
  - i. Any damage to or defects of devices which do not affect the functionality and correct operation of the devices.
2. This warranty shall not cover Flexiheat's obligation to ensure current maintenance, inspections or programming of devices
3. This warranty shall cover neither Flexiheat's liability for any damage caused by device downtime while waiting for warranty services nor any damage to any property of the Customer other than the devices.
4. In order to exercise their rights under the Warranty, the Customer shall file a complaint in the country where they have purchased the device. If a report is filed in another country than the country of purchase, Flexiheat is under no obligation to provide service under the warranty.

**§ 4 Complaints**

1. File any complaints online by sending the electronic application available to sales@flexiheatuk.com or on the phone by calling the complaint department along with sending the electronic application specified above.
2. A complaint report ought to include:
  - device type and serial number,
  - date of device purchase and start-up,
  - device installation site,
  - business name of the seller and installer of the device,
  - Customer's phone number and the Customer's contact person,
  - description of the device malfunction (description of the incorrect functioning, specifying the damaged part).
3. If the Customer claims that the device was damaged during transport, complete device in the original packaging securing the device against damage shall be delivered to the place of repair specified by Flexiheat. The device serial number must be consistent with the number on the original packaging and in the Warranty Card.
4. Filing a complaint, the Customer shall deliver a copy of the VAT invoice documenting the purchase of the device covered by the complaint.

**§ 5 Warranty service**

1. Services arising from this warranty shall be provided within the 14 days following the report date. In special cases, this time limit may be extended to 30 days.
2. Any parts removed from the device by the service technicians within warranty services and replaced with new parts shall become the property of Flexiheat.
3. Any costs arising from a groundless complaint report or interruptions in the work of service technicians at the Customer's request shall be borne by the Customer in line with the technical service price list available on request
4. Flexiheat shall have the right to refuse warranty if the Customer fails to pay for the device or for any previous technical service.
5. The Customer shall cooperate with the service technicians in terms of a warranty service performed on the site of the device installation, in particular by:
  - a. providing free access to the device in due time,
  - b. preparing the site for service provision, in particular providing any additional structures to access a device installed higher than 1.5 m above the floor and, if necessary, to remove and re-install the devices,
  - c. disconnecting and connecting the hydraulic system (water, glycol system) and the freon system, performing additional works to allow the service technicians to handle the complaint,
  - d. presenting the documents provided together with the device (a warranty card filled out by the installer),
  - e. making it possible for the service technicians to commence work immediately upon arrival, without unnecessary delay,
  - f. providing, free of charge, all possible assistance in service provision (e.g. providing access to an electrical power source or lighting in the place of service provision),
  - g. taking the actions necessary to protect people and objects and following OHS regulations at the place where the warranty service is being performed, which includes making sure that the service performance site meets the requirements defined in legal regulations.
6. The Customer shall promptly accept and confirm completion of the warranty service on the Service Card document. When in doubt as to the quality and completeness of the warranty service, the Customer has the right to complain to Flexiheat. Provisions of § 4 hereof shall apply to such a complaint as appropriate.

**§ 6 Other provisions**

1. In the event of any discrepancies between the Proposal plus the Purchase Order and these Flexiheat Standard Warranty Terms and Conditions, Flexiheat Standard Warranty Terms and Conditions shall prevail. In such an event, any contradictory provisions of the Proposal and the Purchase Order shall not apply.
2. In the event of any discrepancies between a contract signed by the Parties and these Flexiheat Standard Warranty Terms and Conditions, flexiheat Standard Warranty Terms and Conditions shall prevail.
3. The Operation & Maintenance Manual is available on [www.flexiheatuk.com](http://www.flexiheatuk.com)

TABLE OF INSPECTION AND MAINTANANCE

INSPECTIONS AND MAINTANCE								
Date	Made by/ Company	Cleaning, cleaning the heat exchanger						