BRINK

Air for life

Technický list

Flair 450

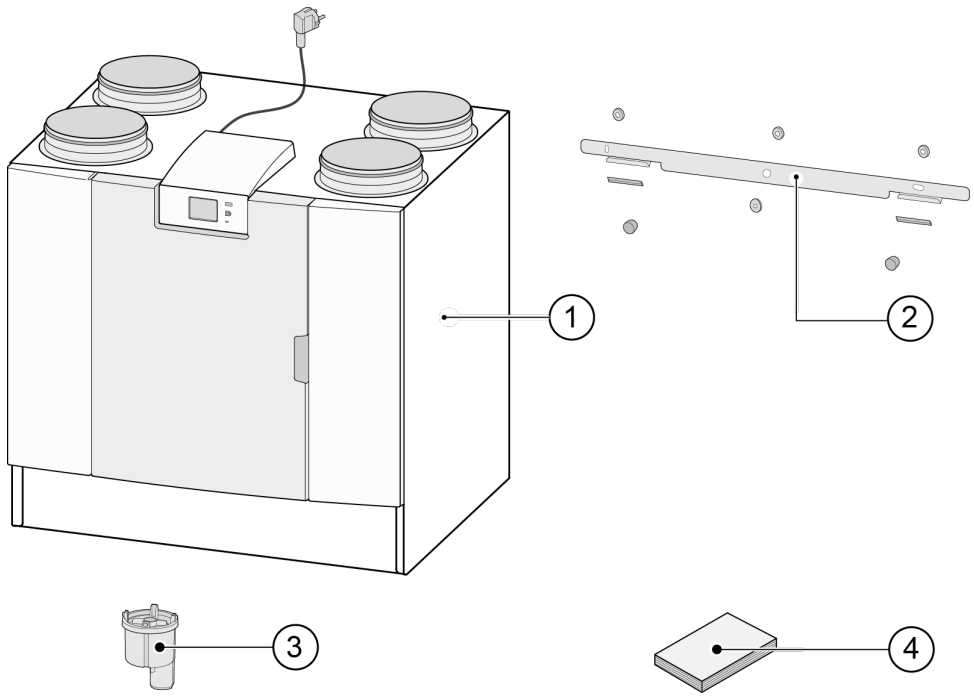
1 Delivery

1.1 Delivery size

Before installation of the heat recovery appliance is started, check that it has been supplied in complete and undamaged condition.

The delivery size of the heat recovery appliance type Flair 450/600 consists of the following components:

1. Heat recovery appliance
2. Wall mounting bracket consisting of:
   - 1x mounting bracket
   - 2x protective caps
   - 2x rubber strip
   - 3x rubber rings
   - 1x washer
3. Siphon
4. Documentation set consisting of:
   - 1x short installation instructions
   - 1x occupant's instructions



2 General

The Flair 450/600 is a ventilation unit with heat recovery for the balanced ventilation of dwellings.

Features:

- Maximum capacity 450 m³/h or 600 m³/h
- High efficiency heat exchanger
- Filters ISO Coarse 60%
- Modular electric preheater
- Automatic bypass valve
- Touchscreen
- Adjustable air quantity
- Filter indication on the appliance and the possibility of a filter indication on the multiple switch
- An intelligent frost protection
- Low sound level
- Constant flow control

The Flair 450/600 is available in two types:

- **the "Flair 450"**
- **the "Flair 600"**

For al the Flair 450/600 there is an optional Plus PCB available with more functions/ connection possibilities (> Electrical diagram page 36).

These installation instructions describe both the standard Flair 450/600 and the Flair 450/600 with optional Plus PCB.

The Flair 450/600 are available in **Left-hand** and **Right-hand** versions; it is not possible to convert the left and right-hand models into one another.
For the correct connection ducts and dimensions (> Connections and dimensions page 9).

For continues balanced ventilation, we recommend, using an additional external preheater for environments with a outside temperature less then -10 °C.
When the appliance is placed in an area where very cold outside air is expected for a long time (<-15 °C), an extra preheater (see → Connecting preheater page 47) must always be installed!

The appliance comes ready to plug in with a 230 V mains plug.

3 Version

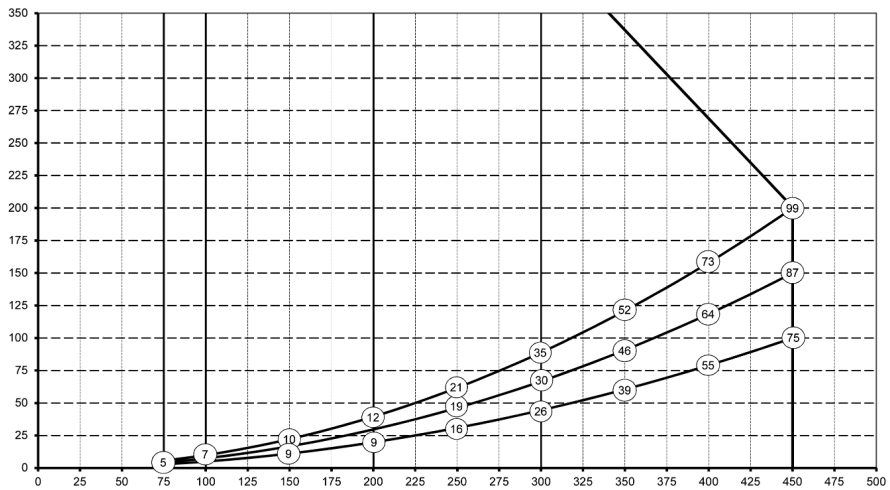
3.1 Technical information Flair 450

Flair 450										
Supply voltage [V/Hz]	230V/50Hz									
Dimensions (w x h x d) [mm]	850 x 800 x 660									
Duct diameter [mm]	ø200									
Ext. diameter condensate discharge [mm]	ø32									
Weight [kg]	49									
Filter class	ISO Coarse 60% (ISO ePM1.0 50% for the air supply optional)									
Fan setting (factory setting)	0		1		2		3		max	
Factory setting [m³/h]	75		100		200		300		450	
Permissible resistance of duct system [Pa]	3	6	5	10	20	40	44	89	100	200
Rated power (excl. preheater) [W]	10.4	10.8	12.4	13.2	17.6	23.8	51.9	69.3	149.5	198.8
Rated current (excl. preheater) [A]	0.17	0.17	0.19	0.19	0.20	0.27	0.53	0.69	1.32	1.68
Max. rated current (incl. preheater switched on) [A]	5.2									
Rated power preheater [W]	1000									
Cos φ	0.271	0.274	0.291	0.295	0.378	0.383	0.425	0.437	0.492	0.514

Sound power								
Ventilation capacity [m³/h]		100	200	200	300	300	450	450
Sound power level Lw(A)	Static pressure [Pa]	25	25	50	50	100	100	150
	Casing radiation [dB(A)]	< 38.1	36.5	42.0	45.5	46.0	51.7	54.0
	Duct “Extract air" [db(A)]	< 36.3	38.5	40.0	45.0	42.5	49.0	49.5
	Duct "Supply Air" [db(A)]	< 38.5	43.5	47.5	53.0	53.5	58.6	59.0

*) Duct noise including end correction
In practice the value may differ by 1dB(A) through measurement tolerances.

Resistance of duct system [Pa]



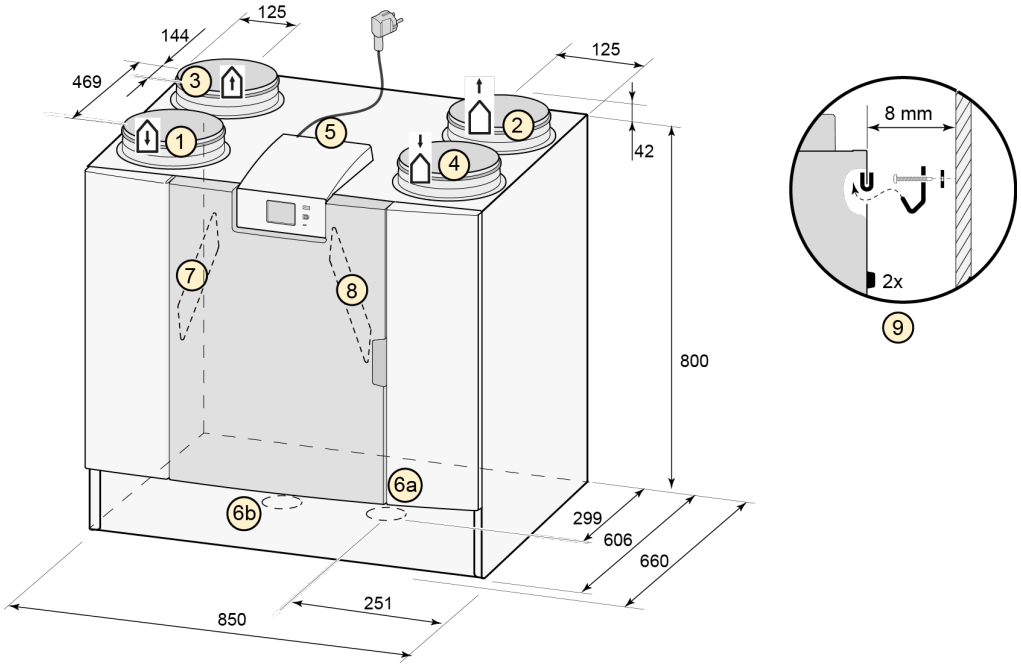
Flow rate [m³/h]

Note:
The stated value in the circle is the capacity (in Watt) per fan.

3.3 Connections and dimensions

The Flair appliance is available in a left-hand and right-hand version. With a left-hand version the "warm" connections (from dwelling 3 and to dwelling 1) are on the left-hand side of the appliance; the condensate discharge is then mounted at the right-hand opening below the appliance. With a right-hand version the "warm" connections (1 & 3) are on the right-hand side of the appliance.

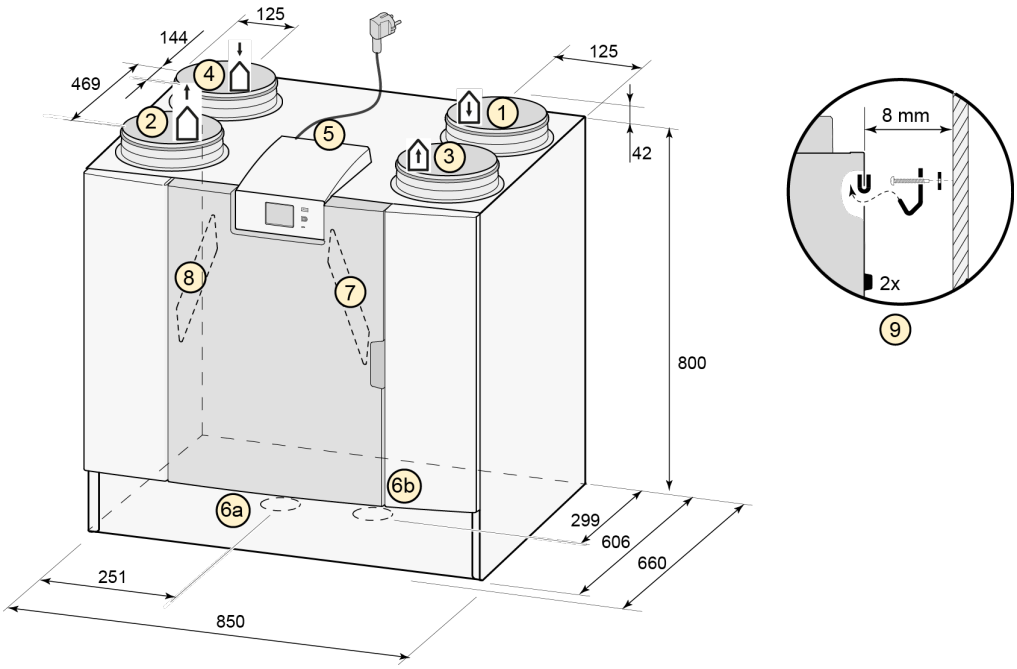
Left-hand version



All dimensions in millimeters. Diameter of all collars is 200 mm

1	Supply air	
2	Exhaust air	
3	Extract air	
4	Outdoor air	
5	Electrical connections	
6a	Siphon connection	
6b	Sealing cap unused condensate discharge connection; do not remove!	
7	Extract air filter	
8	Supply air filter	
9	Mounting bracket	

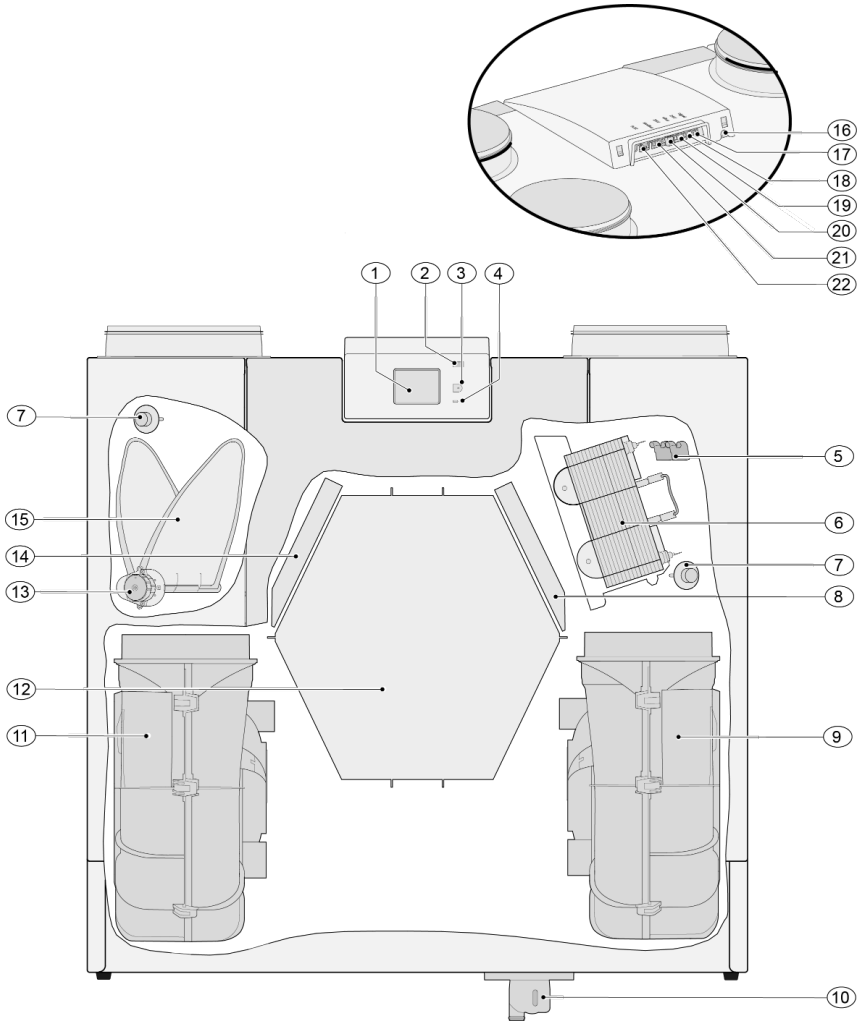
Right-hand version



All dimensions in millimeters. Diameter of all collars is 200 mm

1	To dwelling	
2	Exhaust air	
3	Extract air	
4	Outdoor air	
5	Electrical connections	
6a	Siphon connection	
6b	Sealing cap unused condensate discharge connection; do not remove!	
7	Extract air filter	
8	Supply air filter	
9	Mounting bracket	

3.4 Exploded view of appliance



The appliance shown above is a left-hand version: in the case of a right-hand version, the connector of the preheater, bypass valve and the siphon connector are installed in mirror image!				
1	Touchscreen		12	Heat exchanger
2	USB connector (X13)		13	Motor bypass valve
3	Service connector		14	Exhaust air filter
4	LED indicator		15	Bypass valve
5	Maximum protection preheater		16	Power cable 230 volt
6	Preheater		17	Signal output (X19))
7	Temperature sensor (2x)		18	24 volt connector (X18)
8	Supply filter		19	eBus connector (X17)
9	Exhaust fan		20	24 volt connector (X16)
10	Siphon		21	Modbus/ internal bus connector (X15)
11	Supply fan		22	Multiple switch connector (X14)

14 Conformity declaration

Manufacturer:	**Brink Climate Systems B.V.**
Address:	**P.O. Box 11** **NL-7950 AA, Staphorst, The Netherlands**
Product:	**Heat recovery appliance type:** **Flair 450** **Flair 600**

The product described above complies with the following directives:

♦ 2014/35/EU	(OJEU L 96/357; 29-03-2014)
♦ 2014/30/EU	(OJEU L 96/79; 29-03-2014)
♦ 2009/125/EU	(OJEU L 285/10; 31-10-2009)
♦ 2017/1369/EU	(OJEU L 198/1; 28-07-2017)
♦ RoHS 2011/65/EU	(OJEU L 174/88; 01-07-2011)

The product described above has been tested according to the following standards:

♦ EN 55014-1:	2017 + A11: 2020
♦ EN 55014-2:	2021
♦ EN IEC 61000-3-2:	2019 + A1:2021
♦ EN 61000-3-3:	2013 + A1:2019
♦ EC 61000-3-3:	2013/AMD2:2021
♦ EN 60335-1:	2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A2:2019 + A14:2019
♦ EN 60335-2-40:	2003 + A11 + A12 + A1 + C + A13 + AC:2013
♦ EN 62233:	2008 + AC:2008

Staphorst, 15-12-2021

A. Hans
Managing Director

15 ERP values Flair 450

Technical information sheet Flair 450 in accordance with Ecodesign (ErP), no. 1254/2014 (Annex IV)					
Manufacturer:		**Brink Climate Systems B.V.**			
Model:		**Flair450**			
Climate zone	**Type of control**	**SEC Value in kWh/m²/a**	**SEC Class**	**Annual electricity consumption (AEC) in kWh**	**Annual heating saved (AHS) in kWh**
Average	manual	-40.06	A	283	4646
	clock control	-40.76	A	260	4658
	1x sensor (RV/CO_2/VOC)	-42.09	A+	217	4684
	2 or more sensors (RV/CO_2/VOC)	-44.38	A+	146	4735
Cold	manual	-79.11	A+	820	9088
	clock control	-79.94	A+	797	9113
	1x sensor (RV/CO_2/VOC)	-81.51	A+	754	9163
	2 or more sensors (RV/CO_2/VOC)	-84.29	A+	683	9263
Hot	manual	-15.06	E	283	2101
	clock control	-15.69	E	215	2106
	1x sensor (RV/CO_2/VOC)	-16.88	E	172	2118
	2 or more sensors (RV/CO_2/VOC)	-18.90	E	101	2141
Type of ventilation unit:		Balanced residential ventilation appliance with heat recovery			
Fan:		EC - fan with infinitely variable control			
Type of heat exchanger:		Recuperative plastic cross-counterflow heat exchanger			
Thermal efficiency		92%			
Maximum flow rate:		450 m³/h			
Maximum rated power:		192 W			
Sound power level Lwa:		47 dB(A)			
Reference flow rate:		315 m³/h			
Reference pressure:		50 Pa			
Specific Power Input (SEL):		0.20 Wh/m³			
Control factor:		1.0 in combination with multiple switch			
		0.95 in combination with clock control			
		0.85 in combination with 1 sensor			
		0.65 in combination with 2 or more sensors			
Leakage*	Internal	0.90%			
	External	0.90%			
Position dirty filter indication:		On the display of the appliance / on the multiple switch (LED) / on the Brink Air Control. **Attention!** For optimal energy efficiency and a proper operation, a regular filter inspection, cleaning or replacement is necessary.			
Internet address for Assembly instructions:		https://www.brinkclimatesystems.nl/support/downloads			
Bypass:		Yes, 100% Bypass			

* Measurements executed by TZWL according to the DiBt-standards

Classification from 1 January 2016	
SEC class ("Average climate zone")	SEC in kWh/m²/a
A+ (Most efficient)	SEC < -42
A	-42 ≤ SEC < -34
B	-34 ≤ SEC < -26
C	-26 ≤ SEC < -23
D	-23 ≤ SEC < -20
E (Least efficient)	-20 ≤ SEC < -10

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