



Technical Sheet

Flair 325

Heat recovery appliance

English



Air for Life

General information

The Flair 325 and the Flair 325 Plus is a ventilation unit for the balanced ventilation of dwellings with heat recovery.

Features:

- Maximum capacity 325 m³/h
- High return plastic 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 including modular preheater
- Low sound level
- Constant flow control

The Flair 325 is available in two types:

- **the "Flair 325"**
- **The "Flair 325 Plus"**

The Flair 325 Plus has, compared with standard Flair 325, an extra pcb giving this more functions/ connection possibilities (→).

These installation instructions describe both the standard Flair 325 and the Flair 325 Plus.

The Flair 325 and the Flair 325 Plus 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 4).

It is possible, however, to later equip the appliance with a Plus pcb.

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

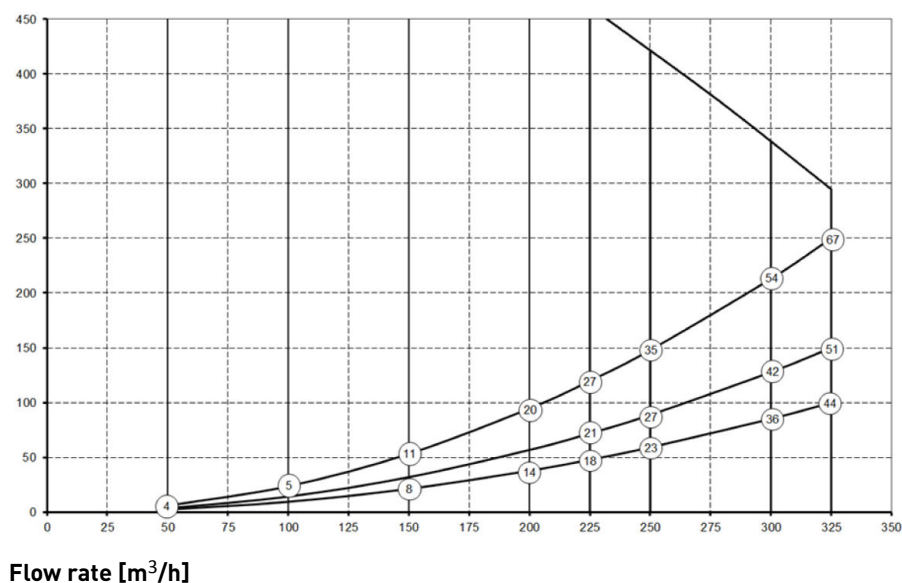
Technical information

Technical information

Flair 325 (Plus)										
Supply voltage [V/Hz]	230V/50Hz									
Dimensions (w x h x d) [mm]	750 x 650 x 560									
Duct diameter [mm]	ø160									
Ext. diameter condensate discharge [mm]	ø32									
Weight [kg]	37									
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]	50	100		150		250		325		
Permissible resistance of duct system [Pa]	2	6	9	24	21	53	59	148	100	250
Rated power (excl. preheater) [W]	6.1	6.6	7.9	10.3	15.1	21.0	46.6	69.1	87.5	144.5
Rated current (excl. preheater) [A]	0.08	0.08	0.09	0.11	0.15	0.21	0.41	0.59	0.73	1.07
Max. rated current (incl. preheater switched on) [A]	6									
Cos φ	0.341	0.343	0.389	0.394	0.430	0.439	0.492	0.507	0.521	0.542
Sound power										
Ventilation capacity [m³/h]				100	150	150	200	200	250	325
Sound power level Lw(A)	Static pressure [Pa]			25	25	50	50	100	150	150
	Casing radiation [dB(A)]			27	34	35	40	41	46	51
	Duct "From dwelling" [db(A)]			32	40	38	46	44	49	55
	Duct "To dwelling" [db(A)]			44	49	51	55	57	62	69

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

Resistance of duct system [Pa]

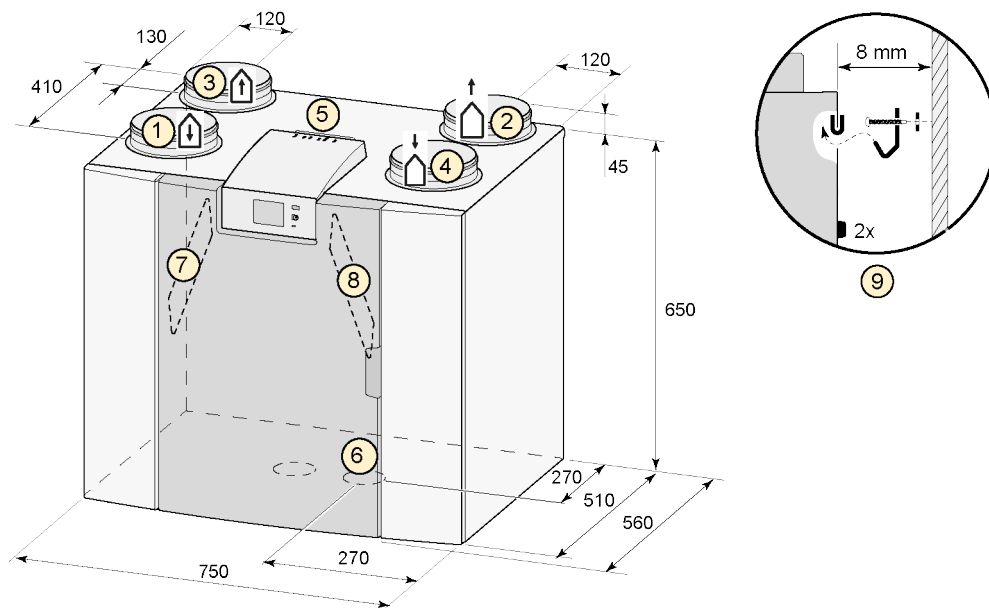


Note:
The stated value in the circle is the capacity (in Watt) per fan.





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.

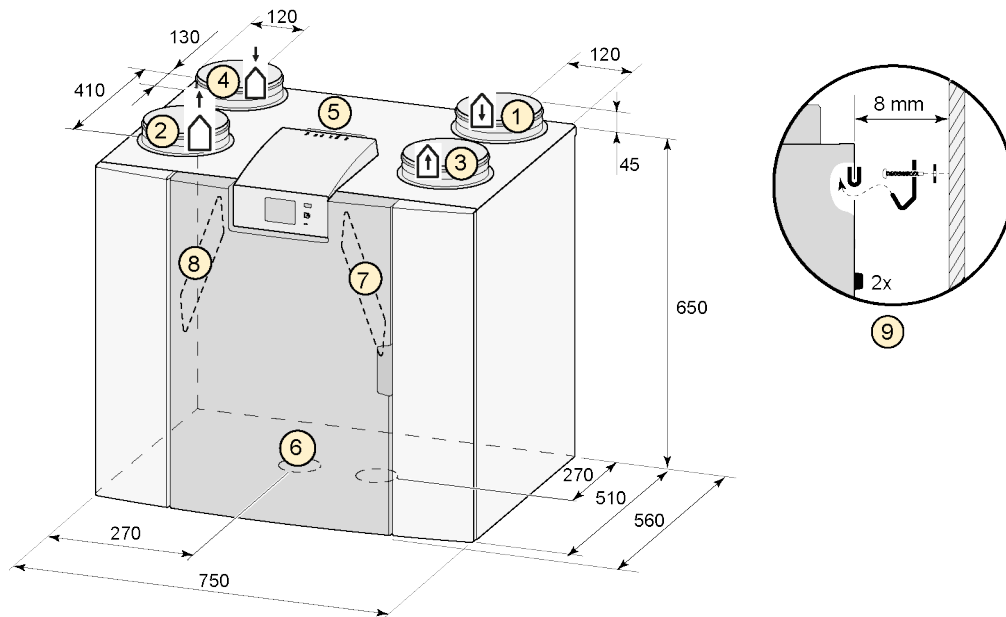
Left-hand version







All dimensions in millimeters. Diameter of all collars is 160 mm

1	To dwelling	
2	To outside	
3	From dwelling	
4	From outside	
5	Electrical connections	
6	Siphon connection	
7	Exhaust air filter	
8	Supply air filter	
9	Mounting	

Right-hand version



All dimensions in millimeters. Diameter of all collars is 160 mm

1	To dwelling	
2	To outside	
3	From dwelling	
4	From outside	
5	Electrical connections	
6	Siphon connection	
7	Exhaust air filter	
8	Supply air filter	
9	Mounting	

Service parts

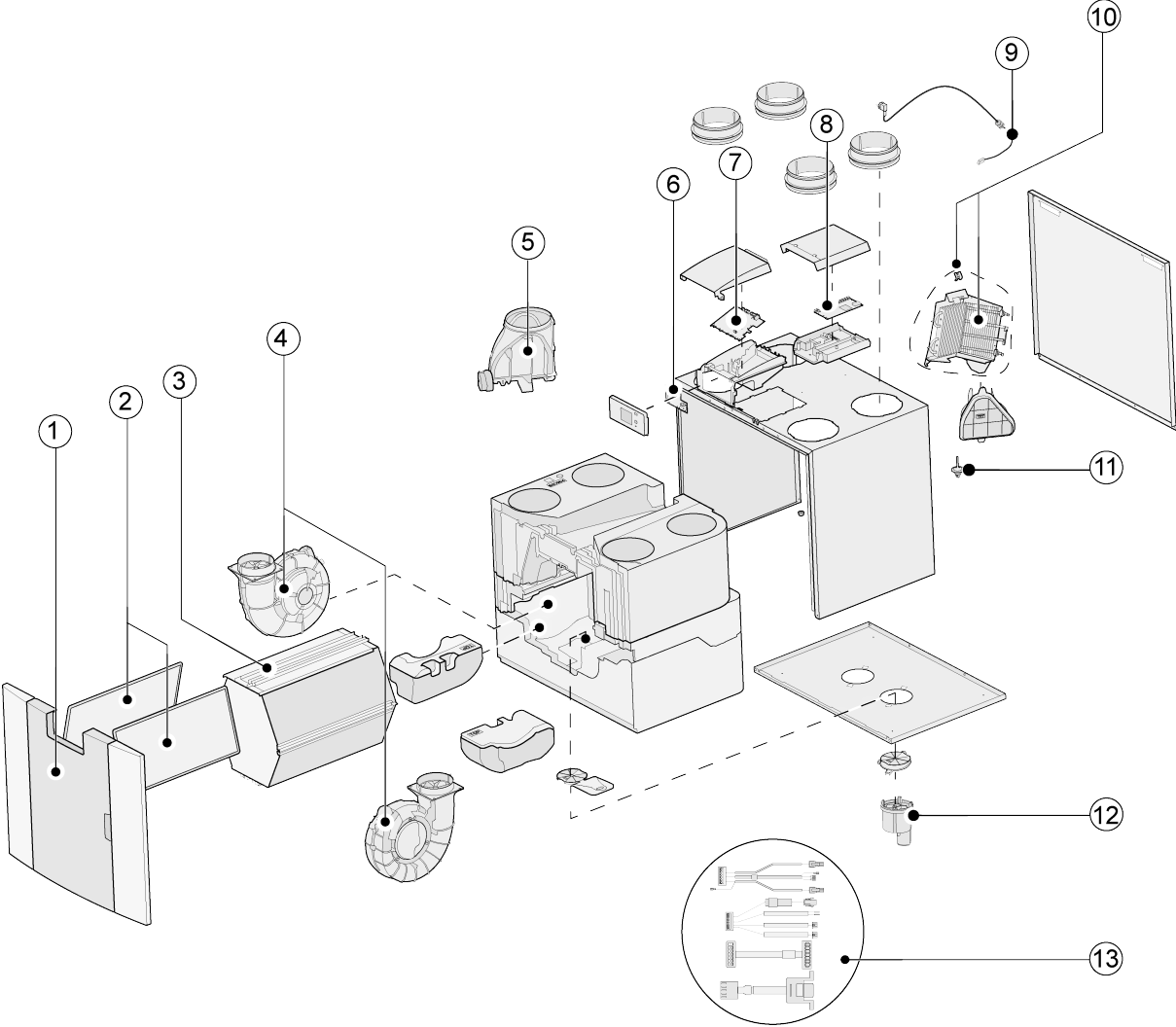
Exploded view

When ordering parts, in addition to the article code number (see exploded view), please state the heat recovery appliance type, the serial number, the year of production and the name of the part:

N.B.: Appliance type, serial number and year of production are stated on the identification plate behind the plastic front panel on the appliance.

Example	
Appliance type	Flair 325 Plus
Serial number	430000184701
Year of production	2019
Part	Fan
Article code	532759
Quantity	1

Service articles



No.	Article description	Article code
1	Front panel complete	532763
2	Filters (2 items) ISO Coarse 60%	532716
3	Heat exchanger	532754
4	Fan (1 item)	532759
5	Bypass valve with motor complete	532760
6	Display pcb UBP-2	532752
7	Basic pcb UWA2-B	532750
8	Plus pcb UWA2-E (only applicable with Plus version)	532751
9	Mains plug and cable 230 V *	532756
10	Internal preheater incl. maximum security	532761
11	Temperature sensor NTC 10K	531775
12	Condensation discharge	532762
13	Cable set	532767

* The power cable is fitted with a circuit board connector. When replacing it, always order a replacement mains cable from Brink.
To prevent dangerous situations, a damaged mains connection can only be replaced by a qualified expert.

Certificates

Conformity declaration

Conformity declaration

Manufacturer: Brink Climate Systems B.V.

Address: Postbus 11
NL-7950 AA, Staphorst, The Netherlands

Product: Heat recovery appliance type:
Flair 325
Flair 325 Plus

The product described above complies with the following directives:

- ◆ 2014/35/EU (low voltage directive)
- ◆ 2014/30/EU (EMC directive)
- ◆ RoHS 2011/65/EU (substances directive)
- ◆ 2009/125/EG (1253/1254 EU (EU ErP directive))

The product bears the CE label:



Staphorst, 24-11-2017

A handwritten signature in blue ink, appearing to read 'M. Schouten', is written over a light blue horizontal line.

M. Schouten
Managing Director

1 ERP values

Technical information sheet Flair 325 (Plus) in accordance with Ecodesign (ErP), no. 1254/2014 (Annex IV)					
Manufacturer:		Brink Climate Systems B.V.			
Model:		Flair 325 (Plus)			
Climate zone	Type of control	SEC Value in kWh/m ² /a	SEC Class	Annual electricity consumption (AEC) in kWh	Annual heating saved (AHS) in kWh
Average	manual	-40.99	A	233	4614
	clock control	-41.59	A	215	4628
	1x sensor (RV/CO ₂ /VOC)	-42.72	A+	181	4657
	2 or more sensors (RV/CO ₂ /VOC)	-44.71	A+	124	4714
Cold	manual	-85.11	A+	770	9026
	clock control	-85.85	A+	752	9054
	1x sensor (RV/CO ₂ /VOC)	-87.25	A+	718	9110
	2 or more sensors (RV/CO ₂ /VOC)	-89.79	A+	661	9222
Hot	manual	-15.72	E	188	2086
	clock control	-16.24	E	170	2093
	1x sensor (RV/CO ₂ /VOC)	-17.21	E	136	2106
	2 or more sensors (RV/CO ₂ /VOC)	-18.88	E	79	2132
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		91%			
Maximum flow rate:		325m ³ /h			
Maximum rated power:		144.5 W			
Sound power level L _{wa} :		41 dB(A)			
Reference flow rate:		228m ³ /h			
Reference pressure:		50Pa			
Specific Power Input (SEL):		0.15 W/m ³ /h			
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	2.85%			
	External	2.85%			
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:		http://www.brinkclimatesystems.nl/nl/professionals			
Bypass:		Yes, 100% Bypass			

* Measurements executed by TZWL according to the EN 13141-7 standard

Classification from 1 January 2016	
SEC class ("Average climate zone")	SEC in kWh/m ² /a
A+ (Most efficient)	SEC < -42
A	-42 ≤ SEC < -34
B	-34 ≤ SEC < -26
C	-26 ≤ SEC < -23
D	-23 ≤ SEC < -20
G (Least efficient)	-20 ≤ SEC < -10

EN 13141-7:2010 Certificate

KF.82.01.257.AD.01
18.05.18



Declaration of conformity regarding the determination of energetic efficiency according to EN 13141-7:2010

On behalf of Brink Climate Systems B.V. the determination of energetic efficiency was conducted by Europäisches Testzentrum für Wohnungslüftungsgeräte (TZWL) e. V. in Dortmund, Germany.

Tests were carried out according to:

- EN 13141-7:2010; Ventilation for buildings - Performance testing of components/products for residential ventilation - Part 7: Performance testing of a mechanical supply and exhaust ventilation units (including heat recovery) for mechanical ventilation systems intended for single family dwellings

Technical data of the tested unit:

Manufacturer:	Brink Climate Systems B.V.
Type:	Flair 325 4/0 L EU
Serial Number:	430000180301
Year of construction:	2018
Power supply:	230 V ~ 50 Hz
CE-Label:	Yes
Maximum volume flow:	325 m ³ /h

Results, energetic efficiency 7°C:

Air flow [m ³ /h]	Temperature ratio, supply air $\eta_{h,su}$ [%]	Total electric power consumption P_E [W]	Specific electric power consumption [W/m ³ /h]
51	98,4	11,7	0,23
224	90,8	34,7	0,15
325	90,5	79,2	0,24

Results, energetic efficiency 2°C:

Air flow [m ³ /h]	Temperature ratio, supply air $\eta_{h,su}$ [%]	Total electric power consumption P_E [W]	Specific electric power consumption [W/m ³ /h]
50	97,7	11,5	0,23
225	94,0	37,0	0,16
327	93,2	86,8	0,27

Results of performance tests of aerodynamic characteristics, of heat recovery characteristics and of the effective power consumption are taken from tests with number M.82.01.257.AD.

Passive House Certificate

CERTIFICATE
 Certified Passive House Component
 Component-ID: 1288vs03 valid until 31st December 2019

Passive House Institute
 Dr. Wolfgang Feist
 64283 Darmstadt
 Germany



Category: Air handling unit with heat recovery
 Manufacturer: Brink Climate Systems B.V.
 Netherlands
 Product name: Brink Flair 325

Specification: Airflow rate < 600 m³/h
 Heat exchanger: Recuperative

This certificate was awarded based on the product meeting the following main criteria
 Heat recovery rate η_{HR} $\geq 75\%$
 Specific electric power $P_{E,spec}$ ≤ 0.45 Wh/m³
 Leakage $< 3\%$
 Comfort Supply air temperature $\geq 16.5^\circ\text{C}$ at outdoor air temperature -10°C

Airflow range
69-251 m³/h
Heat recovery rate
$\eta_{HR} = 91\%$
Specific electric power
$P_{E,spec} = 0.21$ Wh/m³



At an airflow of 202 m³/h, the specific electric power $P_{E,spec} = 0.19$ Wh/m³.

www.passivehouse.com

Brink Climate Systems B.V.
 Wethouder Wasserballestraat 8, 7951 GN Staphorst, Netherlands
 ☎ +31 (0)522 46 96 13 | ✉ info@brinkclimatesystems.nl | 🌐 http://www.brinkclimatesystems.nl |

Passive House comfort criterion

At an outdoor air temperature of -10°C a supply air temperature higher than 16.5°C is achieved by use of an internal and additional external electric preheater. The criterion is therefore met.

Efficiency criterion (heat recovery rate)

The effective heat recovery rate is measured at a test facility using balanced mass flows of the outdoor and exhaust air. The boundary conditions for the measurement are documented in the testing procedure.

$$\eta_{HR} = \frac{(0_{ETA} - 0_{EHA}) + \frac{P_d}{\dot{m} \cdot c_p}}{(0_{ETA} - 0_{ODA})}$$

With
 η_{HR} Heat recovery rate in %
 0_{ETA} Extract air temperature in $^\circ\text{C}$
 0_{EHA} Exhaust air temperature in $^\circ\text{C}$
 0_{ODA} Outdoor air temperature in $^\circ\text{C}$
 P_d Electric power in W
 \dot{m} Mass flow in kg/h
 c_p Specific heat capacity in Wh/(kgK)

Heat recovery rate
$\eta_{HR} = 91\%$

Efficiency criterion (electric power)

The overall electrical power consumption of the device is measured at the test facility at an external pressure of 100 Pa (50 Pa, respectively, for the intake and outlet). This includes the general electrical power consumption for operation and control but not for frost protection.

Specific electric power
$P_{E,spec} = 0.21$ Wh/m³

Efficiency ratio

The efficiency ratio provides information about the overall energy performance of the respective ventilation unit. It specifies the achieved reduction in ventilation heat losses by using a ventilation unit with heat recovery rather than without.

Efficiency ratio
$\epsilon_L = 0.76$

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Brink Flair 325

Leakage

The leakage airflow must not exceed 3% of the average airflow of the unit's operating range.

Internal leakage	External leakage
2.49%	0.88%

Settings and airflow balance

It must be possible to adjust the balance of airflows at the unit itself (either between the exhaust and the outdoor airflows or between the supply and the extract airflows, if the unit is respectively placed inside or outside of the insulated thermal envelope of the building).

- This unit is certified for airflow rates of 69-251 m³/h.
- Balancing the airflow rates of the unit is possible.
- The user should have at least all the following setting options:
 - ✓ Switching the system on and off.
 - ✓ Synchronized adjustment of the supply and extract airflows to basic ventilation (70-80%), standard ventilation (100%) and increased ventilation (130%) with a clear indication of the current setting.
- The device has a standby power consumption of 3.90 W. The target value of 1 W was exceeded. The device should be equipped with an additional external switch so that it can be disconnected from the mains, if required.
- After a power failure, the device will automatically resume operation.

Acoustical testing

The required limit for the sound power level of the device is 35 dB(A) in order to limit the sound pressure level in the installation room. The sound level target value of less than 25 dB(A) in living spaces and less than 30 dB(A) in functional spaces must be ensured by installing commercial silencers. The following sound power levels are met at an airflow rate of 248 m³/h:

Device	Duct			
	Outdoor	Supply air	Extract air	Exhaust air
44.5 dB(A)	48.5 dB(A)	60.5 dB(A)	49.0 dB(A)	59.0 dB(A)

- The unit does not fulfil the requirements for the sound power level. The unit must therefore be installed acoustically separated from living areas.
- One example of suitable silencers for supply and extract air ducts is mentioned in the detailed test report or can be obtained from the manufacturer. It is recommended to identify suitable silencers for each individual project.

Indoor air quality

This unit is equipped with following filter qualities by default:

Outdoor air filter	Extract air filter
ISO ePM1 50%	ISO Coarse 60%

On the outdoor air/ supply air side the filter quality class F7 is recommended. If not standard configuration, the F7 filter is available as accessory part.

Component-ID: 1288vs03

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Brink Flair 325

See also: [Complete Passive House Certificate](#)