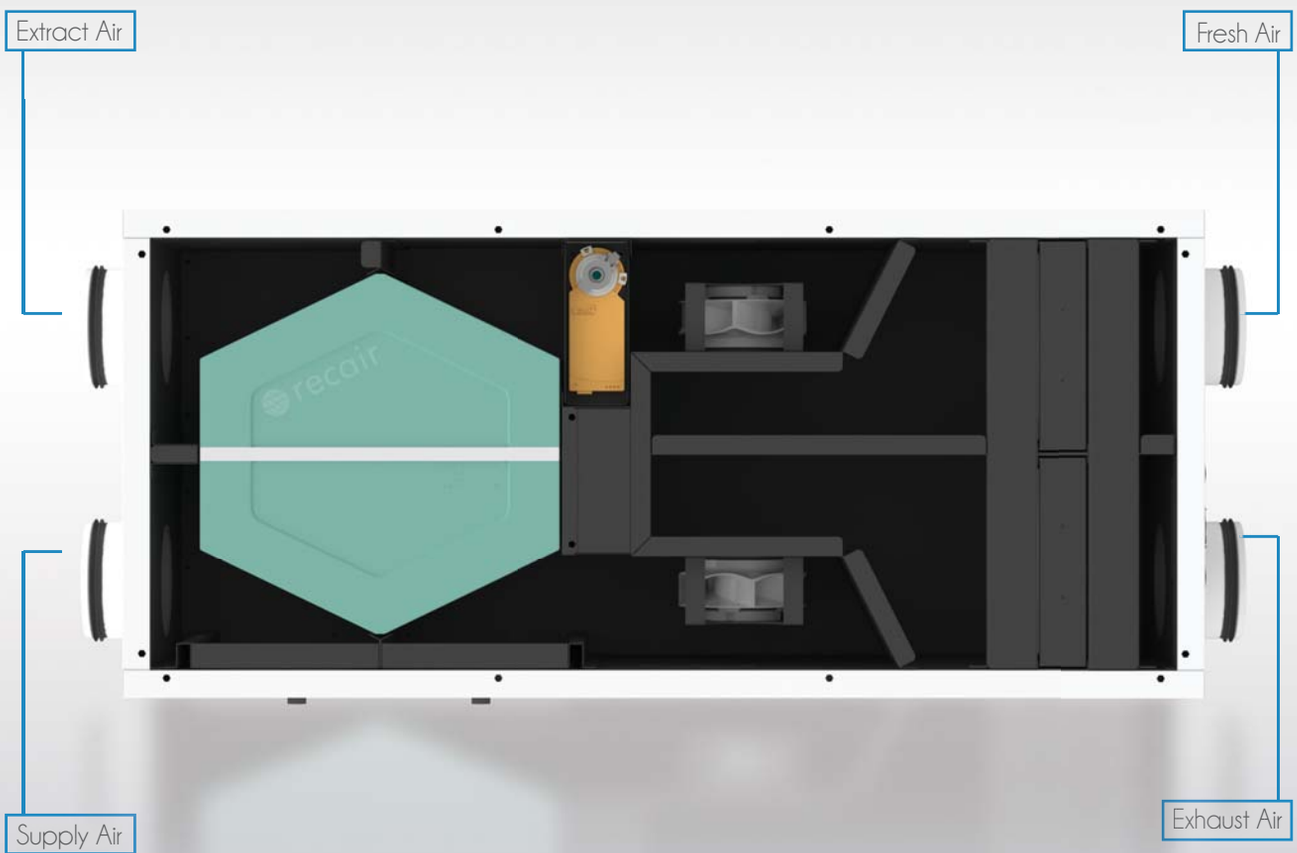
www.bskhavalandirma.com.tr

BSK BRHR
Residence type high efficiency Heat Recovery Unit

Recovery of our planet starts at home.

Breathe fresh air while
Decreasing your heating costs
With BSK Heat Recovery Units

GENERAL FEATURES



As building efficiencies rise with increased weather resistances and insulations, they become more airtight, since a substantial percent of heat loss is caused by air leakages. As a result of this increase in seals, however, houses breathe less and need more ventilation for fresh air. Conventional ventilation methods, such as opening windows, offer quick fixes with unnecessary loss of heated air from inside. Another issue with inadequate ventilation is humidity build-up which can cause serious problems like molding and health issues.

With BSK Heat Recovery Units, we offer ecological solutions to your home or office ventilation. BSK Heat Recovery Units utilize high efficiency heat exchangers to transfer energy from the warm inside air, to the cold outside air before reaching inside. This process reduces energy waste while preserving a stable ambient temperature for the heating system. Additionally, constant ventilation keep the house's moisture in check, preventing mold buildups, while also getting some work off from the heating system since heating humid air requires more energy.

You can choose from a wide range of BSK Heat Recovery Unit models and accessories to best cover your needs. Each unit comes with a high efficiency heat recovery system, automatic defrost mode, turbo mode for humidity removal and bypass mode for free cooling, and an easy to use control panel for manual operating. Or use our new mobile app, which can connect to your device through Wi-Fi, if enabled, to gain maximum control over it, even when you are not at home.

High Efficiency Heat Exchange System

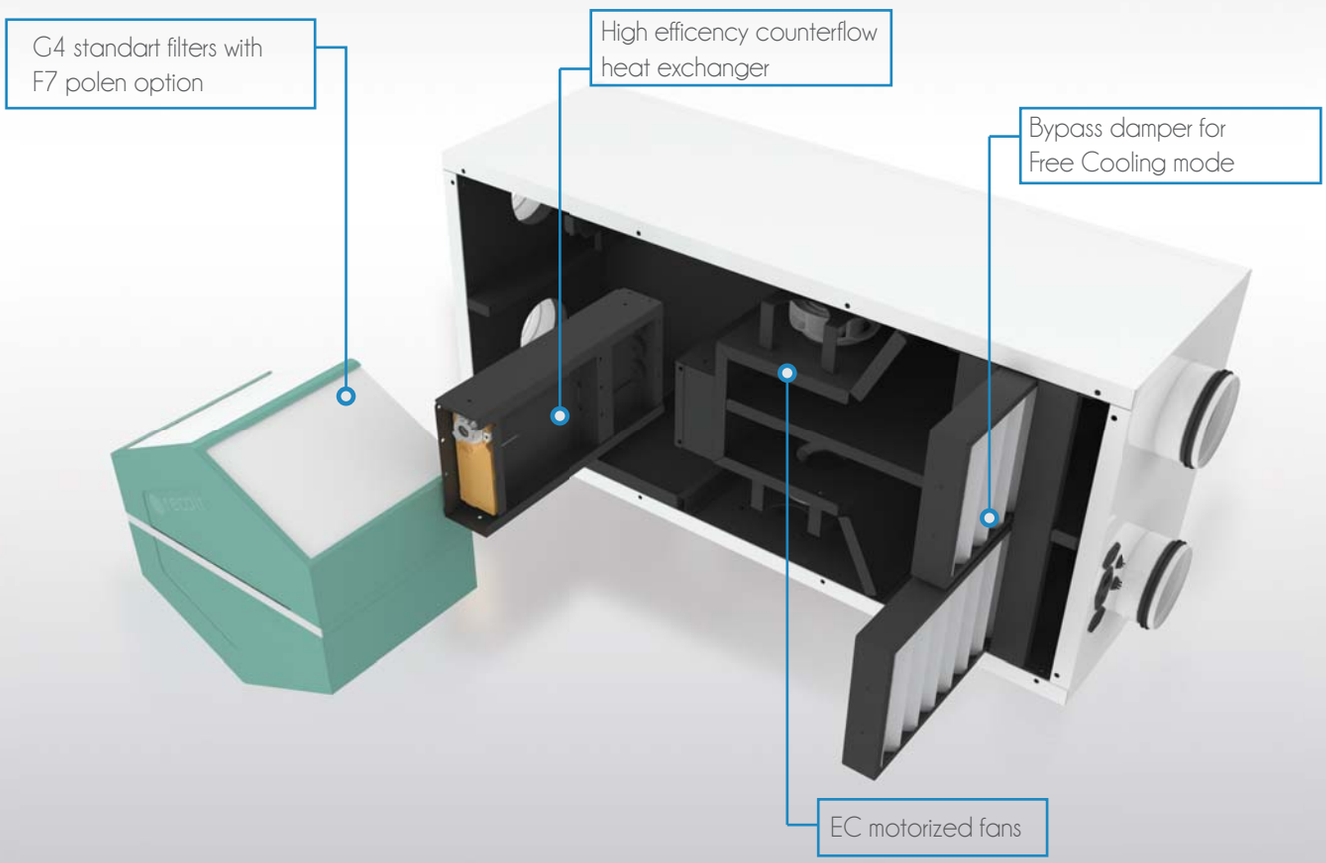
All of our BSK Heat Recovery Units are fitted with high efficiency hexagonal counter flow heat exchangers ready for the ErP 2020 directives. Plastic plate heat exchangers offer up to 95% thermal efficiency. Our fans are self-motorized with energy saving EC motors and operate quietly, fully controllable with BSK APP and digital control panel. The metal casing is electrostatic powder painted and insulated with 20 mm acoustic material on the inside to further reduce the noise levels for comfortable in-house use.

IoT Ready Controls

Controlling your BSK Heat Recovery Unit is made simple with a digital control panel where you can adjust the fans manually or set it to automatic mode and load weekly programs. However we took the control to the next step with our new mobile app, BSK APP, you can further regulate your ventilation even when you are not at home. You can monitor intake and exhaust air temperatures, schedule automatic programs or manually set fan levels. Get notified when your filters need a change or a malfunction happens. Track your device usage and keep an eye on how much energy you saved with built in statistical graphs.

Filters

To increase the air quality and protect the performance of your BSK Heat Recovery Unit, we equip two G4 panel filters, in accompany of EN 799 filter standards, to the air intake vents. Built-in pressure sensors will notify you when the filters are full and needs a change. With our easy-to-use slotted design, all you need to do is open the cover panel and swap filters. If you need allergy protection, optional F7 pollen filters are also available on request.



Free Cooling

On seasonal transitions (spring and autumn) when indoor and outdoor temperature differences are not significant, BSK Heat Recovery Units automatically switch to Free Cooling mode by opening the built-in bypass vent. The air will pass through this canal without going through the heat exchanger, thus reducing the stress on fans and operate on an even less power. You can also activate this mode manually from your BSK APP, or digital control panel.

Defrost Mode

We suggest that you equip a pre-heater for uses below -3°C to avoid freezing inside the unit, however to prevent this from happening when there is no heater attached, our devices automatically enter defrost mode when temperature requirements are not met. Defrost mode adjusts intake and exhaust air rates to prevent icing and keep the device temperature at a safe level. We strongly advise you to use a pre-heater for climate conditions below -10°C.

ModBus Compatible

Our units use ModBus protocol to connect and communicate with each other and/or your building management system and report malfunctions or periodic maintenances. You can control monitor and control your device through a computer or a central system.

Humidity Control

Built-in humidity sensor can automatically set your BSK Heat Recovery Unit to Turbo mode when a set level of humidity is reached in your house to quickly dissipate the moisture to prevent it building up.

MODEL TYPES

Technical Specifications

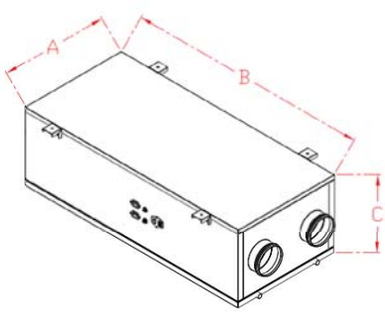
	BRHR-100	BRHR-150	BRHR-180	BRHR-325
Energy Class	A+			
Max. Thermal Efficiency	95 %			
Supply Voltage	230V / 50Hz (IEC320-C13 socket)			
Casing Type	Galvanized steel sheet RAL 9003 electrostatic paint and film coated			
Heat Exchanger Type	Hexagonal plastic plate counter flow			
Fan Type	Self motorized fans with EC motors			
Filter Class	2 x G4 filter (optional F7)			
Duct Connections	Ø 125mm			Ø 160mm
Condensation Drain	Ø 20mm			
Operating Temperatures	-25°C to +60°C			

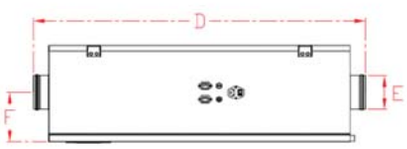
Ecodesign Data

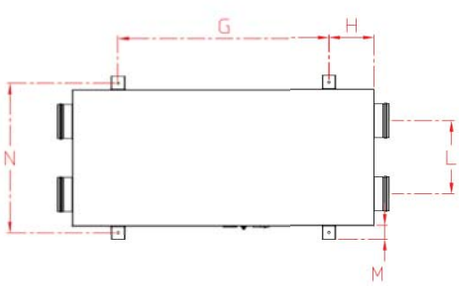
	BRHR-100	BRHR-150	BRHR-180	BRHR-325	[Unit]
Model identifier	S / H / V				
Manufacturer	BSK Ventilation				
ErP	ErP 2020 ready				kWh/(m².a)
Specific energy consumption (SEC) - Cold	-81,44	-80,89	-80,77	-79,77	kWh/(m².a)
Specific energy consumption (SEC) - Average	-43,12	-42,8	-42,68	-42,3	kWh/(m².a)
Specific energy consumption (SEC) - Warm	-17,1	-17,1	-16,3	-16,3	
Type	Residential ventilation unit				
Type of drive	Variable speed drive (VSD)				
Type of HRS	Recuperative				
Thermal efficiency of HRS	90				%
Maximum flow rate	100	150	180	325	m³/h
Effective electrical power input	17,3	25,3	32	32	W
Sound power level (Lwa)	37				dB(A)
Reference flow rate	0,032	0,032	0,034	32	m³/s
Reference pressure difference	50				Pa
SPI	0,173	0,17	0,18	0,18	W/(m³/h)
Control factor	0,85				
Casing leakage class	L1				
Reference value at 800 J energy consumption (100Pa)	70	127	15	265	m³/h
Declared maximum int/ext. leakage rate	0,7 / 0,9	0,7 / 0,10	1,0 / 1,6	1,0 / 1,7	%
Visual filter warning	Manuel room panel: Pressure controlled LED alert Digital room panel: Time controlled onscreen alert Mobile application: Pressure controlled notification				
Web page for instructions	www.bskhavalandirma.com.tr				

BSK BRHR – S

Upside-down orientation for ceiling mounts





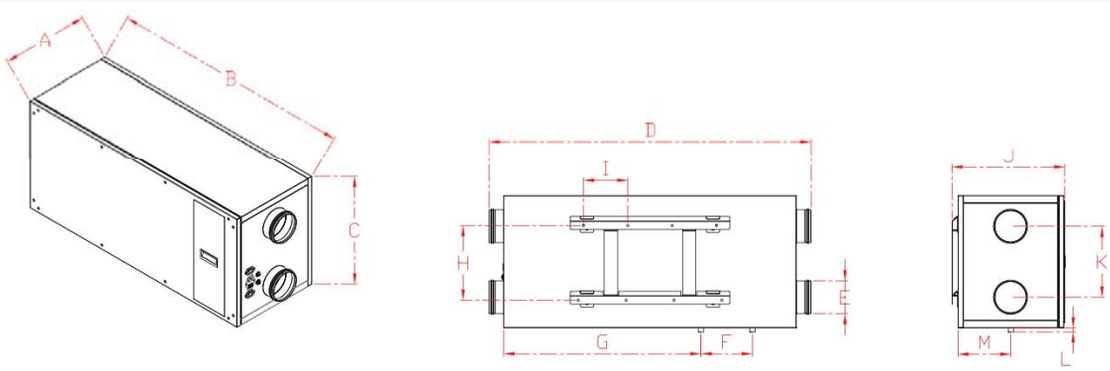


BRHR S Model Dimension Table (mm)

Model	A	B	C	D	E	F	G	H	I	J	K
100 S	496	1100	356	1210	125	186	770	165	266	25	546
150 S	496	1100	356	1210	125	186	770	165	266	25	546
180 S	535	1100	406	1210	125	236	770	165	305	25	585
325 S	535	1100	506	1210	160	336	770	165	305	25	585

BSK BRHR – V

Vertical orientation for wall mounts

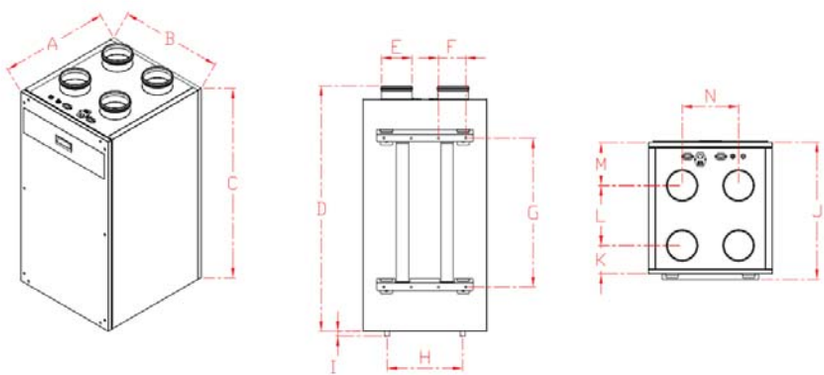


BRHR V Model Dimension Table (mm)

Model	A	B	C	D	E	F	G	H	I	J	K	L	M
100 V	404	1100	496	1210	125	193	740	280	180	427	266	20	197
150 V	404	1100	496	1210	125	193	740	280	180	427	266	20	197
180 V	454	1100	535	1210	125	193	740	280	180	477	273	20	229
325 V	588	1100	535	1210	160	193	740	280	180	611	273	20	395

BSK BRHR – H

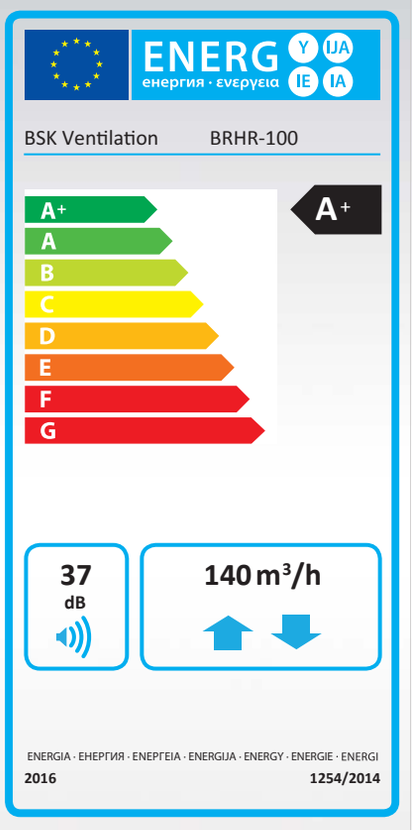
Horizontal orientation for wall or floor mounts



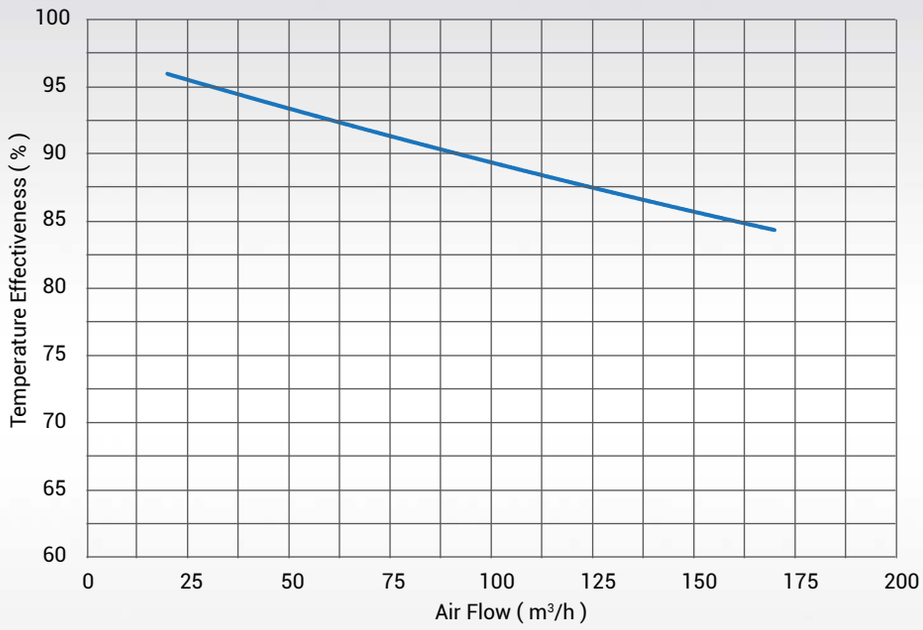
BRHR H Model Dimension Table (mm)

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
100 H	538	500	935	990	125	110	600	305	20	560	115	242	119	228
150 H	538	500	935	990	125	110	600	305	20	560	115	242	119	228
180 H	538	500	935	990	125	110	600	305	20	560	115	242	119	228
325 H	678	570	935	990	160	110	600	305	20	700	133	322	122	276

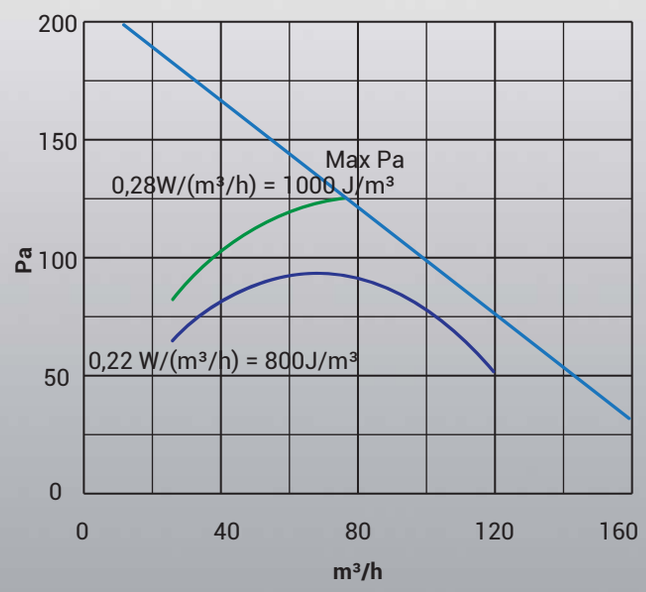
BRHR - 100 GRAPHS



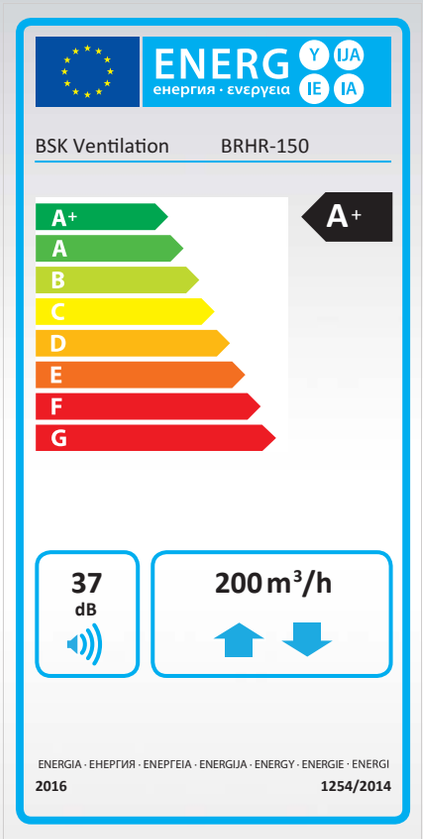
TEMPERATURE EFFECTIVENES



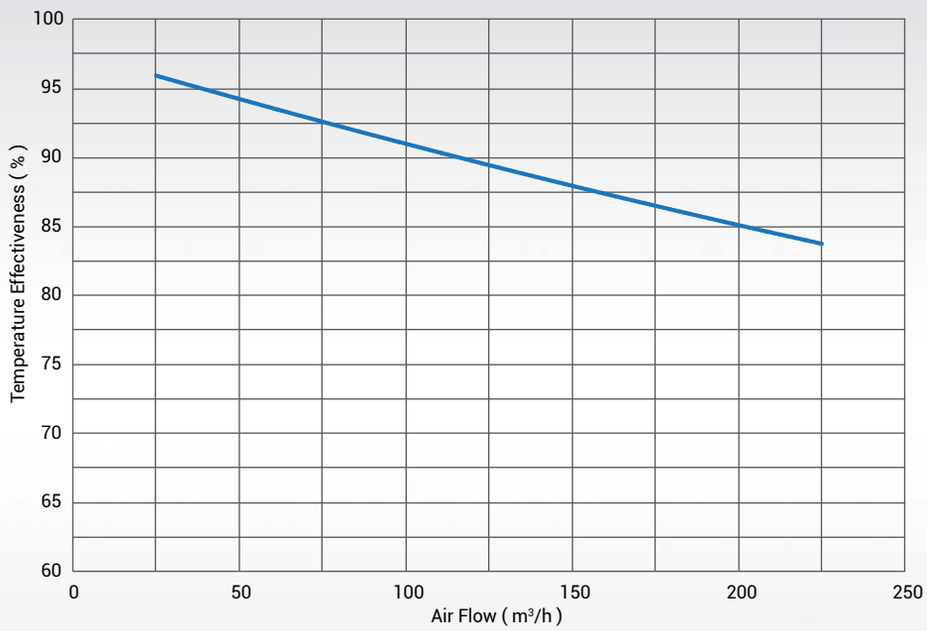
PERFORMANCE GRAPH



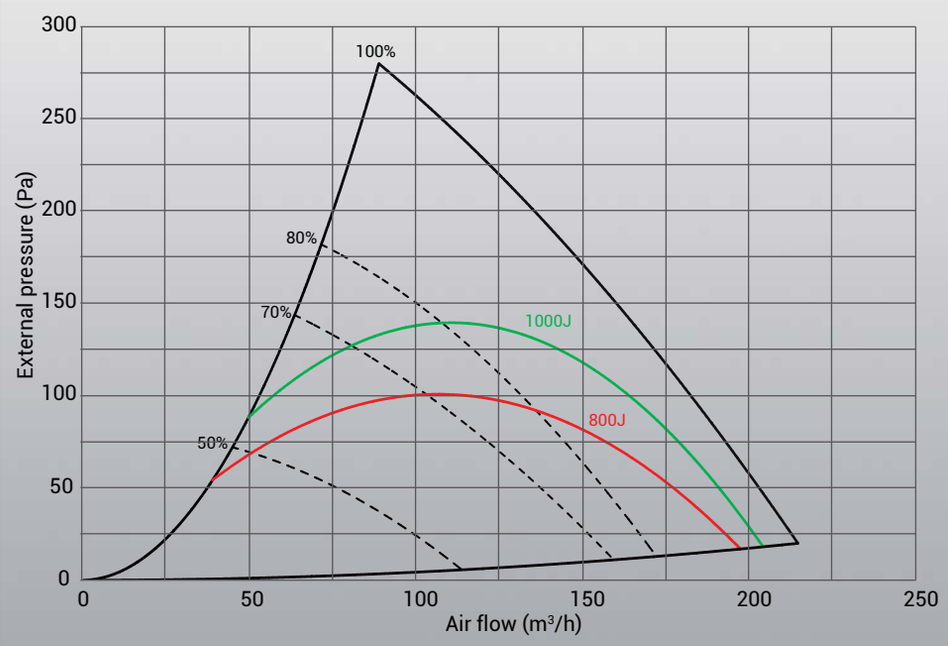
BRHR - 150 GRAPHS



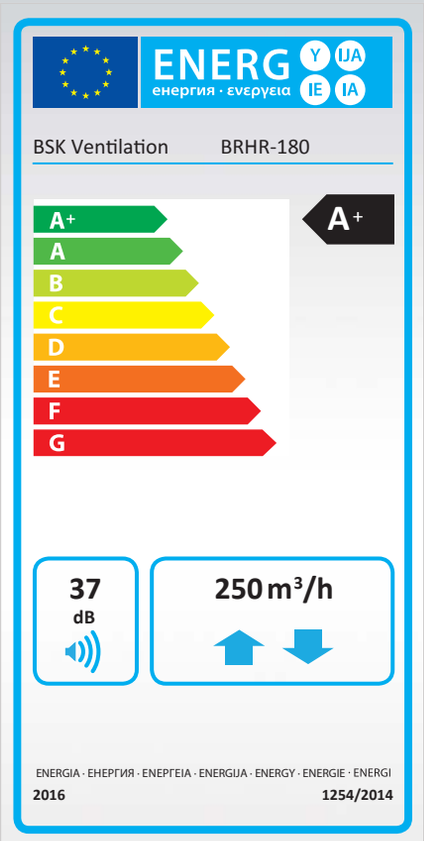
TEMPERATURE EFFECTIVENES



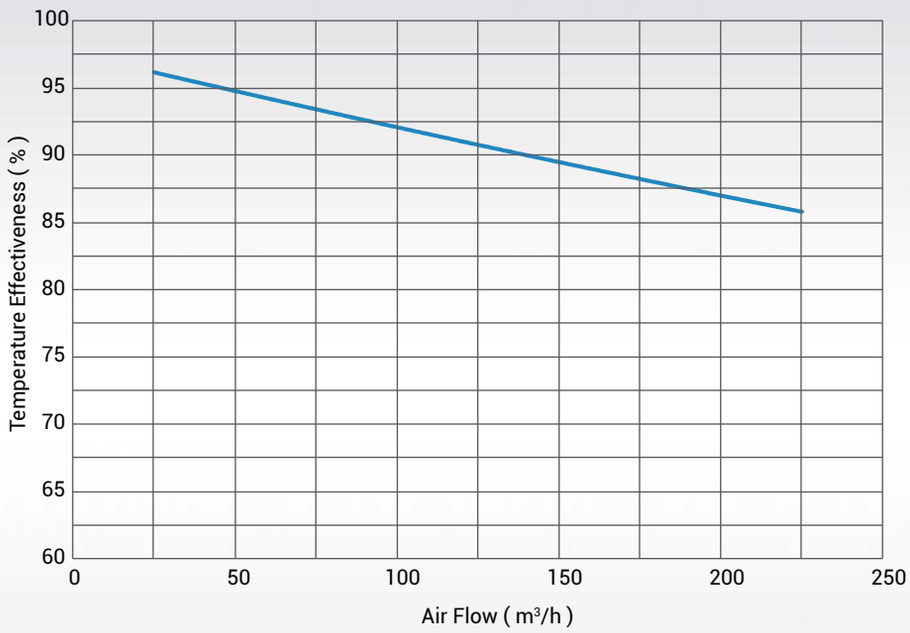
PERFORMANCE GRAPH



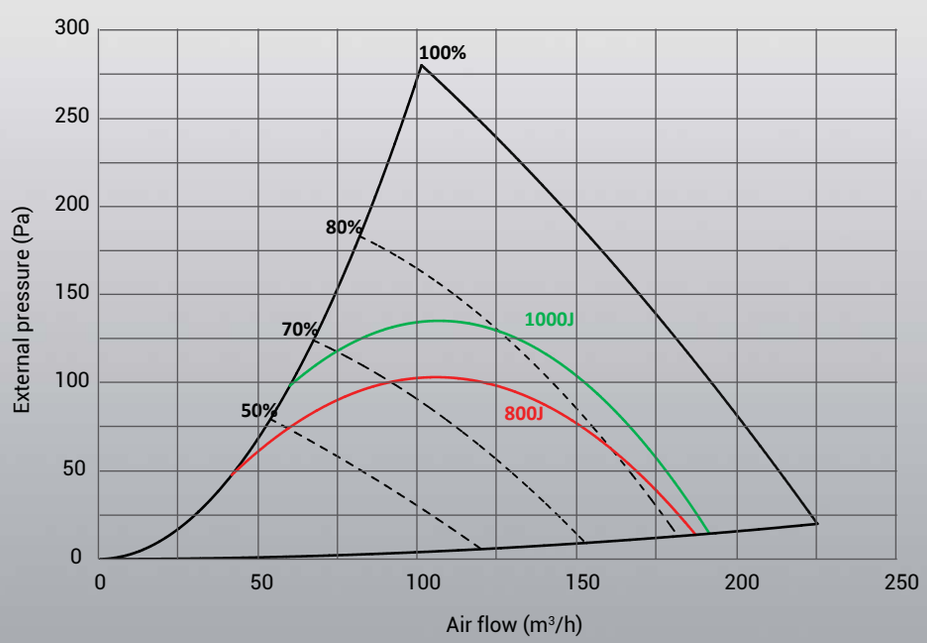
BRHR - 180 GRAPHS



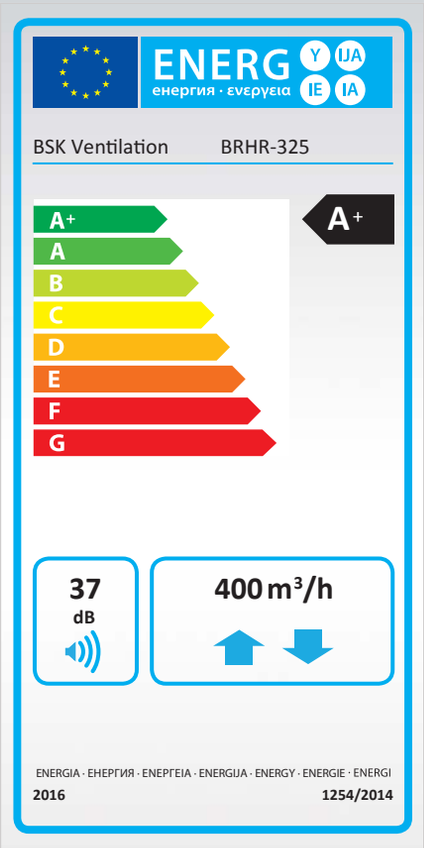
TEMPERATURE EFFECTIVENES



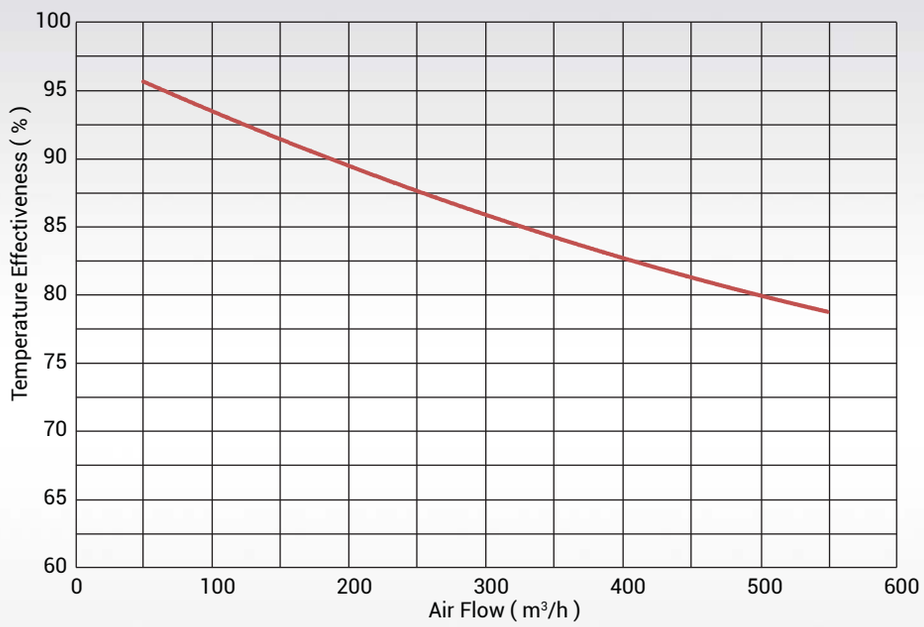
PERFORMANCE GRAPH



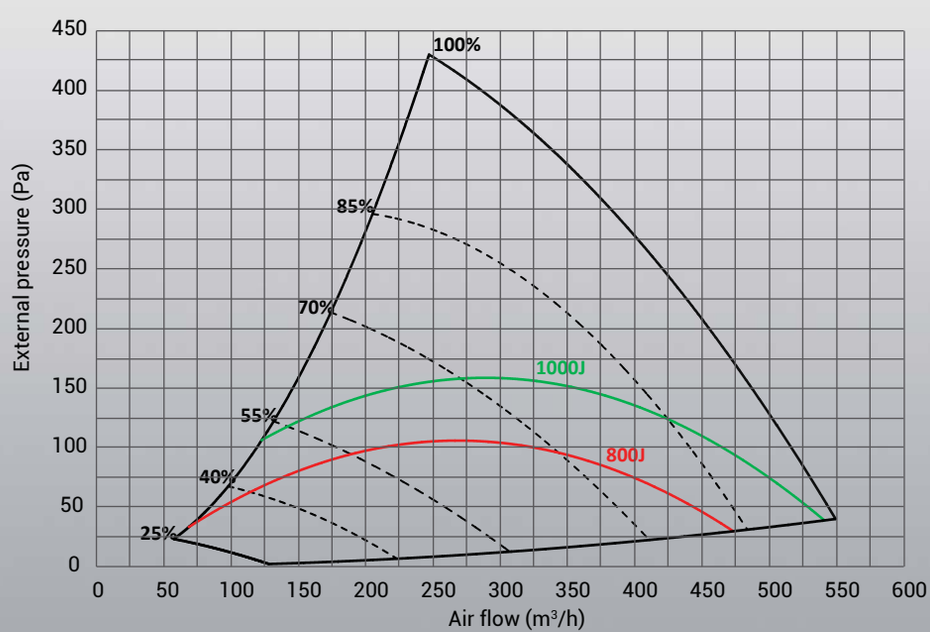
BRHR - 325 GRAPHS



TEMPERATURE EFFECTIVENES



PERFORMANCE GRAPH



CONTROL FEATURES

BSK heat recovery units can come with different control panel options. Depending on the model you want there may be some functions not available, or different. The manual control panel offers essential features with simple control options. Boost mode and free-cooling mode is automated however the set temperature for free cooling is predefined and cannot be changed by users. Digital control panel offers extended controlling options and supports more accessories to be connected. You can also choose to have a Wi-Fi enabled digital control panel and use our new mobile application to gain access to all the controlling options and can control your device from anywhere.

	Manual Control Panel	Digital Control Panel	Mobile Application
Fan level control	●	●	●
Individual Fan control		●	●
Humidity control *	Analog sensor	Digital sensor	Digital sensor
Boost mode	●	●	●
Automatic by-pass damper *	●	●	●
By-pass damper control (on / off)		●	●
F7 Pollen filters *	●	●	●
Filter information (Sensor based) *	Analog sensor	Digital sensor	Digital sensor
Filter information (Time based)		●	●
Fresh air temperature	●	●	●
Return air temperature *		●	●
Pre-heater (on / off) *	●	●	●
Heating coil (on / off) *		●	●
Heating coil (proportional control) *		●	●
Electric after heater		●	●
CO2 control *		●	●
ModBus connection		●	●
Weekly programing		●	●
Wireless control			●
Airflow control *			●
Use statistics			●

"*" Optional

OPTIONAL ACCESSORIES

Pre-heater

For subzero outside conditions, you should equip an electrical pre-heater to prevent ice forming inside the unit. This electrical pre-heater can connect to your BSK Heat Recovery Unit's fresh air intake vent.

Water Heater

If your house is already heated by hot water, you can equip duct type water coils to the supply air vent to further heat the incoming air for a precise control of temperature. For buildings without the option for a water heater, we also offer electrical heaters.

CO_2 Sensor

CO_2 sensor allows automatic control for ventilation rate in crowded venues or houses with fireplaces. When the CO_2 levels rise, your BSK Heat Recovery Unit increases ventilation rate to supply you with the best air quality.

F7 filter

Our standard G4 filters offers good protection against dust and common particles, however you may need additional protection from pollens and other smaller particles especially if residents are allergic. We suggest the F7 grade pollen filters for such individuals.

Silencer

We designed BSK Heat Recovery Units to be as quiet as possible; however you may need to further reduce the noise levels in some situations. You can add the duct type silencer or the flexible silencer for those tight spaces, to the supply vent and enjoy the silence.

Drainage siphon

Condensation inside the BSK Heat Recovery Unit is kept at a minimum but varying humidity and temperature levels may increase the precipitation. With this apparatus you can connect your unit to your existing water system and get rid of the water droplets hassle free.

PLC Controller

We can add a PLC controller solution for your special use cases when additional control or functions may be needed.

MOBILE APPLICATION

BSK Heat Recovery Units are ready for the Internet of Things and smart home revolution, connect your unit to your home network through Wi-Fi and gain access to extensive control and monitoring options for your device with our new BSK mobile application, available both on Android and iOS platforms.

With it you can;

- Schedule weekly programs to automate your BSK Heat Recovery Unit,
- Or have manual control over your fan levels and unit modes,
- Monitor inside and outside temperatures and humidity levels with built-in sensors,
- Set alarms to remind you of filter changes, and get notified when they are full,
- Inspect your usage statistics, such as use time, energy savings and more.

ORDERING DETAILS

Unit Codes

1. Model	2. Capacity	3. Type	4. Control	5. Bypass	6. Filter	7. Direction
*BRHR	*100	*V	*D	*BY	*G4	*L
	100m³/h	Vertical type	Digital Control	With bypass	G4 filter	Left
	*150	*H	*M	*BNO	*F7	*R
	150m³/h	Horizontal type	Manuel control	Without bypass	F7 filter	Right
	*180	*S	*A			*X
	180m³/h	Ceiling type	App control			N/A
	*325					
	325m³/h					
Example Code:						
BRHR	100	V	D	BY	G4	L

Accessory Codes

1. Model	2. Type	3. Model	4. Size	5. Capacity
*BRHR	*A Accessory	*CO_2 CO_2 sensor	*125 125mm	*300W
		*PFC Pre-heater	*160 160mm	*600W
		*WH Water heater		*900W
		*HS Humidity sensor		*1200W
Example Code:				
BRHR	A	PFC	125	300W

You can use the code system above to order or ask about specific products.

NOTES

NOTES

BSK Ventilation Equipment INC.

Mimar Sinan mah. Basra cad. No: 59 / A Sultanbeyli,
Istanbul TURKEY
Phone: +90 (216) 669 09 70
e-mail : info@bskhavalandirma.com.tr

www.bskhavalandirma.com.tr