



**LENNOX<sup>®</sup>**

# PRODUCT CATALOGUE



PROVIDING **GLOBAL SYSTEM** SOLUTIONS

**ROOFTOP  
BALTIC**



Cooling only



Heat pump



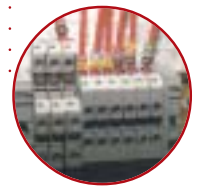
Cooling and gas heat



Dual fuel



- Compliant with EUROVENT certification program
- Compliant with EN 60204-1
- Compliant with PED 97-23 directive
- Alternate defrost : Heat pump Baltics with 2 circuits, have independent defrost. When one circuit is in defrost cycle, the second is still in heat pump mode
- Dynamic defrost : using a set of sensors, Climatic™50 detects when coils are frozen and starts defrost cycle only when needed
- Aluzinc casing (10 years warranty against corrosion)
- Stainless steel fixings
- Aluminium condensate drain pan
- Easy access to all components
- Thermostatic expansion valves
- Variable drive pulley as a standard feature
- External pressure tap allows easier measurements of HP/LP without opening the rooftop
- External static pressure up to 400 Pa (size 20 to 35) and 500 Pa (size 40 to 70)
- 93% efficiency gas burner
- Fireproof (MO) insulation
- Removable condensate drain pan, the bent drain traps are shipped as a kit
- Plug and play unit, all units have factory fitted options, fully tested and wired
- All electrical components are protected by circuit breakers
- Numbered wires , all wires and connectors are numbered as shown on the electrical drawing to facilitate maintenance and diagnostic
- BDK units (dual-fuel), combine heat pump heating with gas fired heating  
CLIMATIC 50 allows the selection of the most efficient way to generate heat based on the outside temperature
- Scroll compressors



CLIMATIC™ 50

- 16 bits, 2 megabytes flash memory processor
- Can display 50 different faults
- 100 settings available for customisation
- 100 readings available for diagnostic and monitoring
- Anti shortcycle, equalisation of compressor running time functionality
- Master-slave capability, staggered start feature
- Automatic summer/winter time change
- 4 dry outputs contacts and 2 dry inputs contacts are available as standard

BC/BH/BG/BD - 20 → 70kW

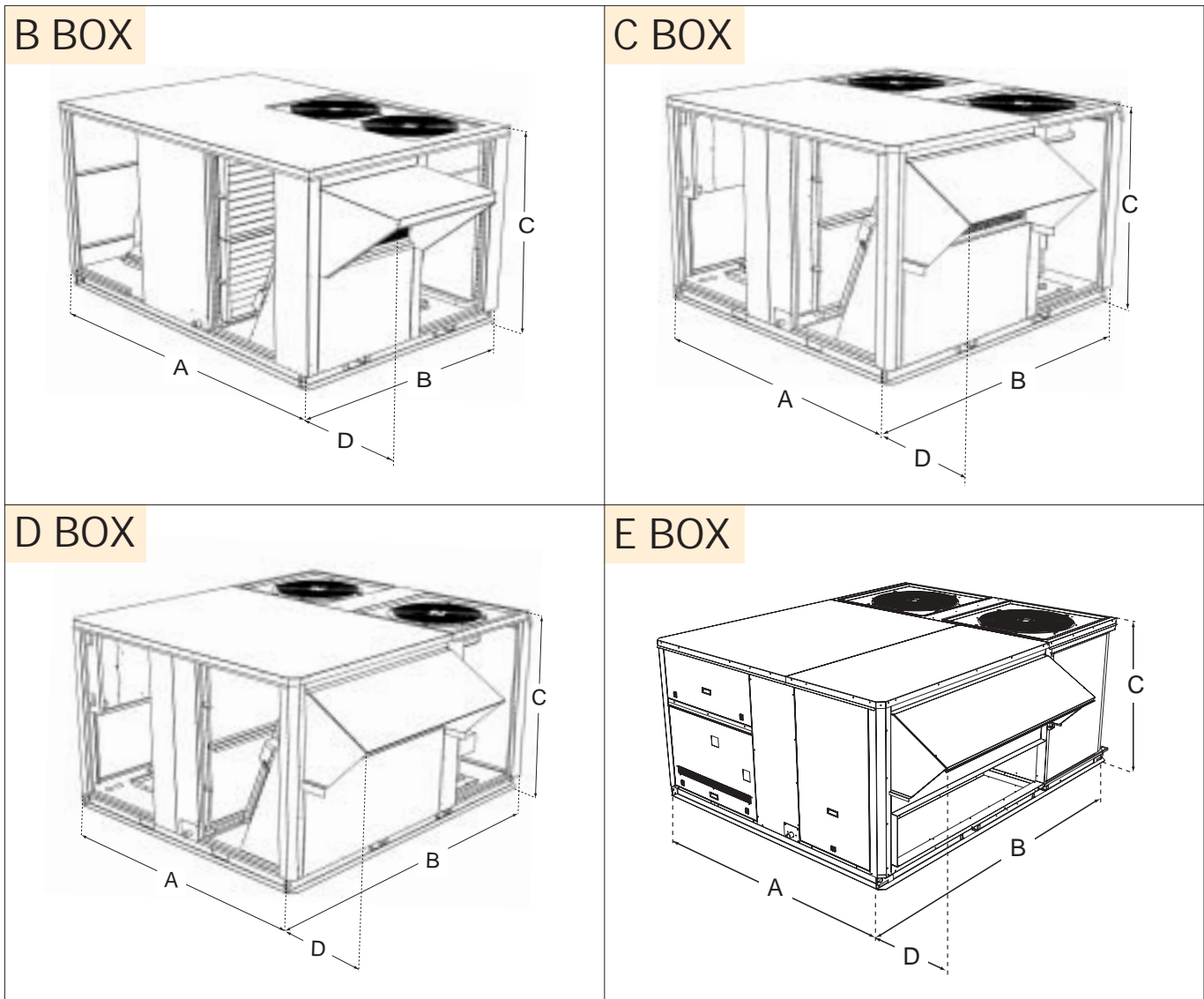
## GENERAL DATA

BALTIC - BCK/BHK/BGK/BDK		020	025	030	035	040
<i>Cooling mode BCK/BGK (1)</i>		<i>S</i>	<i>S</i>	<i>D S</i>	<i>D S</i>	<i>D S</i>
Gross cooling capacity (35°C ext, 27°C in, 47% HR) Eurovent kW		19,8	24,0	31,0 31,6	35,7 35,6	41,7 41,4
Gross cooling capacity (32°C ext, 26°C in, 60% HR) kW		20,9	25,3	32,8 33,2	37,6 37,4	44,2 43,8
Gross COP cooling (35°C ext, 27°C in, 47% HR)		2,5	2,4	2,7 2,7	2,6 2,6	2,8 2,8
Gross COP cooling (32°C ext, 26°C in, 60% HR)		2,8	2,6	3,0 2,9	2,9 2,9	3,1 3,1
Power input BCK kW		7,8	10,0	11,5 11,7	13,6 13,5	14,9 14,9
<i>Heating mode BHK</i>						
Net heating capacity (7°C ext, 20°C in) kW		18,3	23,4	28,6 29,6	33,5 33,8	37,7 38,2
Net COP heating (7°C ext, 20°C in)		2,8	2,8	2,8 2,9	2,9 2,9	2,9 2,9
<i>Auxiliary heating</i>						
Gas heat capacity kW - S(2)		18,6	18,6	18,2	18,2	30,7
Gas heat capacity kW - H (2)		30,7	30,7	42,8	42,8	55,8
Electric heater capacity kW - S (2)		12	12	24	24	27
Electric heater capacity kW - M (2)		24	24	36	36	45
Electric heater capacity kW - H (2)		36	36	48	48	54
Hot water coil capacity (20°C in / water 90-70°C) kW - H (2)		33,7	38,4	49,0	53,5	66,5
<i>Refrigeration circuit</i>						
Number of compressors / Number of circuits nb		1/1	1/1	2/2 1/1	2/2 1/1	2/2 1/1
Scroll compressor type		ZR81	ZR108	ZR61 ZR125	ZR72 ZR144	ZR81 SZ161
Refrigerant charge per circuit kg		4,5	4,5	5 8	5 8,5	7 11,5
Max. Outdoor temp. at Indoor 27°C DB/ 19°C WB °C		45	43	45 45	45 45	45 45
<i>Ventilation</i>						
Nominal airflow at 100 Pa m³/h		3600	4500	5400	6300	7200
Minimum airflow m³/h		2900	3600	4300	5000	5800
Maximum airflow m³/h		4300	5400	6500	7600	8600
<i>Acoustic</i>						
Outdoor sound pressure at 10 meters (Standard unit) dB(A)		55	56	53 53	54 53	54 54
Outdoor sound pressure at 10 meters (Low Noise unit) dB(A)		45	45	50 -	50 -	51 -
Indoor sound power (supply) dB(A)		76,4	80,8	77 77	80,2 80,2	77,1 77,1
BALTIC - BCK/BHK/BGK/BDK		045	050	060	070	
<i>Cooling mode BCK/BGK (1)</i>		<i>D S</i>	<i>D</i>	<i>D</i>	<i>D</i>	
Gross cooling capacity (35°C ext, 27°C in, 47% HR) Eurovent kW		45,6 46,3	48,8	60,4	72,0	
Gross cooling capacity (32°C ext, 26°C in, 60% HR) kW		48,1 49,0	51,6	63,5	76,0	
Gross COP cooling (35°C ext, 27°C in, 47% HR)		2,9 2,7	2,7	2,6	2,8	
Gross COP cooling (32°C ext, 26°C in, 60% HR)		3,1 3,0	3,0	2,9	3,1	
Power input BCK kW		16,0 17,0	18,0	23,0	25,6	
<i>Heating mode BHK</i>						
Net heating capacity (7°C ext, 20°C in) kW		41,2 42,9	45,1	58,1	67,8	
Net COP heating (7°C ext, 20°C in)		3,0 2,9	2,9	2,8	2,8	
<i>Auxiliary heating</i>						
Gas heat capacity kW - S(2)		30,7	30,7	55,8	55,8	
Gas heat capacity kW - H (2)		55,8	55,8	111,6	111,6	
Electric heater capacity kW - S (2)		27	27	27	27	
Electric heater capacity kW - M (2)		45	45	45	45	
Electric heater capacity kW - H (2)		54	54	54	54	
Hot water coil capacity (20°C in / water 90-70°C) kW - H (2)		71,2	75,5	107,6	118,1	
<i>Refrigeration circuit</i>						
Number of compressors / Number of circuits nb		2/2 1/1	2/2	2/2	2/2	
Scroll compressor type		ZR81 SZ185 +ZR94	ZR94	ZR125	ZR144	
Refrigerant charge per circuit kg		7 12	7,1	7	10	
Max. Outdoor temp. at Indoor 27°C DB/ 19°C WB °C		43 45	42	45	45	
<i>Ventilation</i>						
Nominal airflow at 100 Pa m³/h		8100	9000	10800	12600	
Minimum airflow m³/h		6500	7200	8600	9900	
Maximum airflow m³/h		9700	10800	13000	16000	
<i>Acoustic</i>						
Outdoor sound pressure at 10 meters (Standard unit) dB(A)		55 -	55	54	55	
Outdoor sound pressure at 10 meters (Low Noise unit) dB(A)		51 -	51	51	51	
Indoor sound power (supply) dB(A)		79,5 -	81,7	79,5	83,1	

(1) : S = Single circuit - D = Dual circuit (2) : S = Standard heat - M = Medium heat - H = High heat

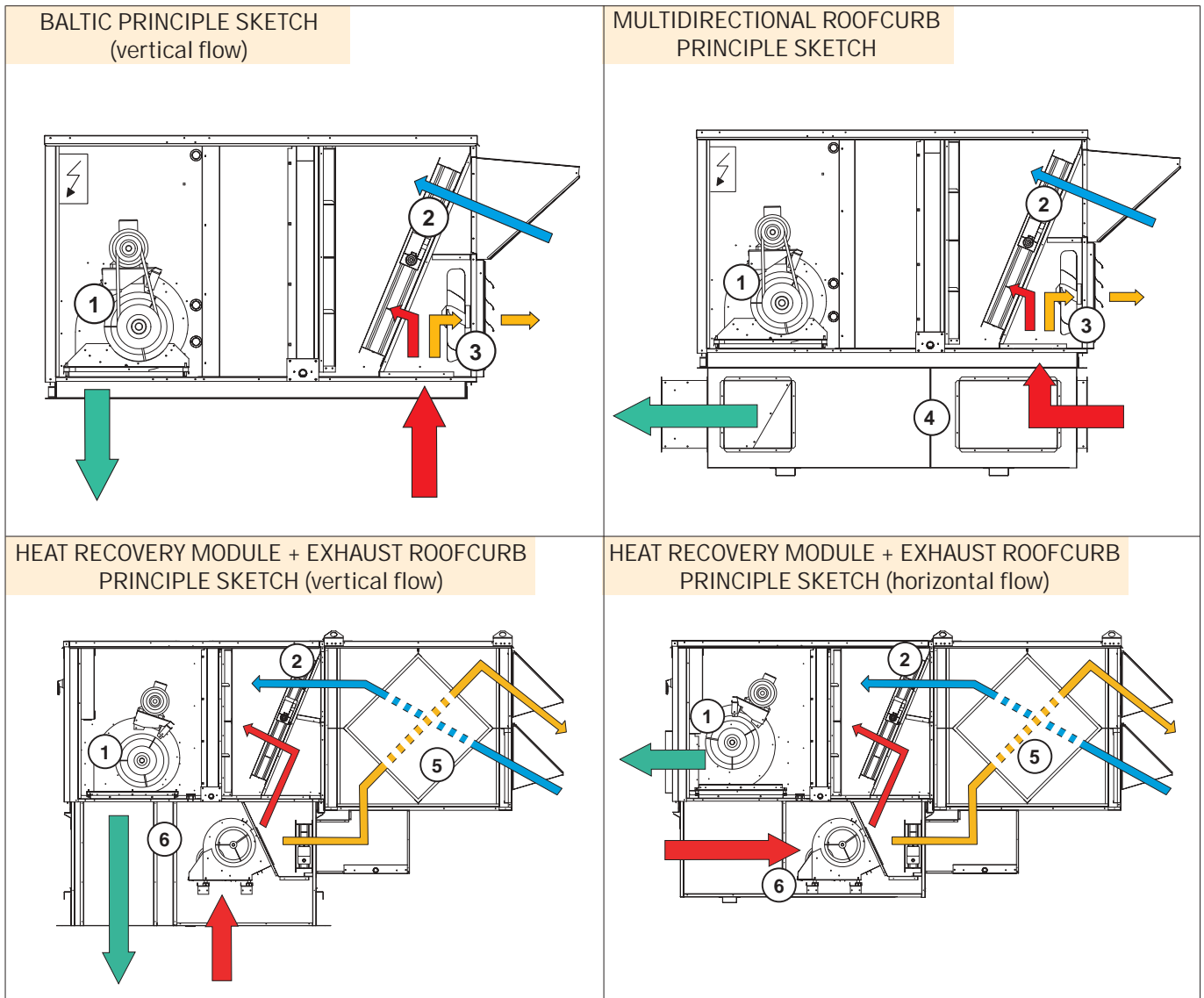


## PHYSICAL DATA



BALTIC	BCK/BHK/BGK/BDK	020	025	030	035	040	045	050	060	070				
<i>View</i>		<i>B BOX</i>	<i>B BOX</i>	<i>C BOX</i>	<i>C BOX</i>	<i>D BOX</i>	<i>D BOX</i>	<i>D BOX</i>	<i>E BOX</i>	<i>E BOX</i>				
A	mm	2017	2017	1890	1890	1910	1910	1910	2260	2260				
B	mm	1418	1418	1915	1915	2235	2235	2235	2873	2873				
C	mm	1220	1220	1221	1221	1221	1221	1221	1225	1225				
D	mm	484	484	414	414	418	418	418	418	418				
<i>Weight of standard units (S:single/D:dual)</i>		<i>S</i>	<i>S</i>	<i>D</i>	<i>S</i>	<i>D</i>	<i>S</i>	<i>D</i>	<i>S</i>	<i>D</i>	<i>D</i>	<i>D</i>		
Without hood	kg	394	414	541	528	547	529	589	591	604	604	619	796	852
With hood	kg	417	437	569	556	575	556	622	624	677	677	652	837	893
<i>Weight of gas units</i>		<i>S</i>	<i>S</i>	<i>D</i>	<i>S</i>	<i>D</i>	<i>S</i>	<i>D</i>	<i>S</i>	<i>D</i>	<i>S</i>	<i>D</i>	<i>D</i>	<i>D</i>
Standard heat without hood	kg	445	465	602	589	608	590	663	665	678	678	693	904	960
Standard heat with hood	kg	468	488	630	617	636	618	696	698	711	711	726	945	1001
High heat without hood	kg	454	474	621	608	627	609	685	687	700	700	715	963	1019
High heat with hood	kg	477	497	649	636	655	637	706	708	733	733	748	1004	1060

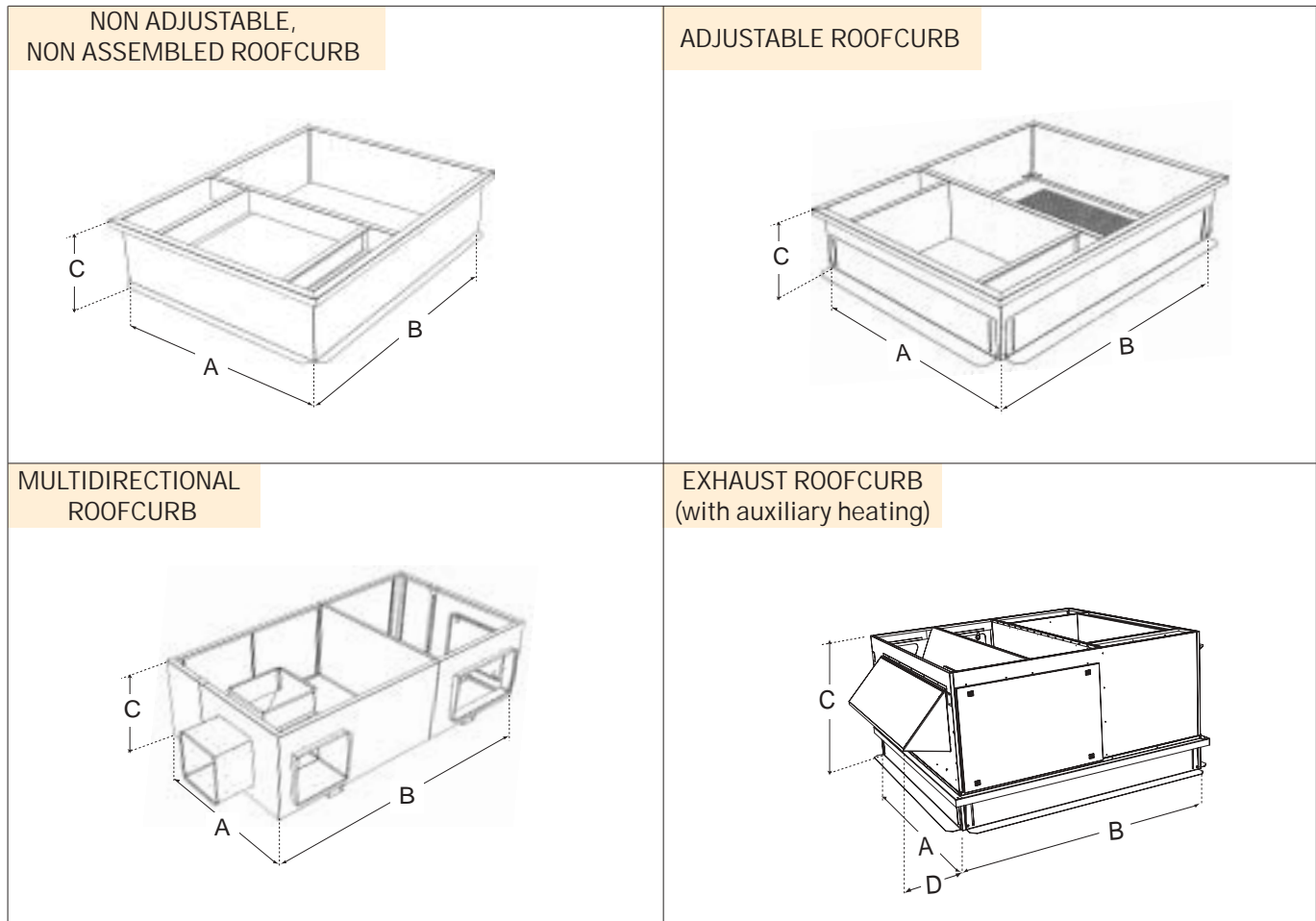
## PRINCIPLE SKETCH



- |  |             |   |                              |   |                           |
|--|-------------|---|------------------------------|---|---------------------------|
|  | Fresh air   | 1 | Supply fan                   | 4 | Multidirectional roofcurb |
|  | Return air  | 2 | Economiser damper            | 5 | Heat recovery module      |
|  | Exhaust air | 3 | Exhaust damper or            | 6 | Exhaust Roofcurb          |
|  | Supply air  |   | Exhaust damper + exhaust fan |   |                           |



## ROOFCURB

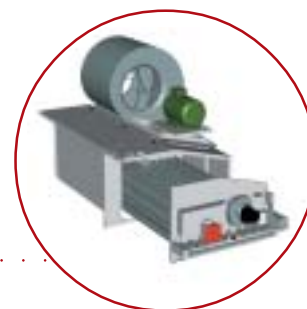


### ROOF OPENING / EXTERNAL DIMENSION

BALTIC BCK/BHK/BGK/BDK		020	025	030	035	040	045	050	060	070	
<i>Non-adjustable, non assembled roofcurb</i>											
BCK BHK BGK BDK	A	mm	1183	1183	1380	1380	1630	1630	1630	2080	2080
	B	mm	1893	1893	1740	1740	1740	1740	1740	2090	2090
	C	mm	400	400	400	400	400	400	400	400	400
<i>Assembled adjustable roofcurb</i>											
BCK BHK BGK BDK	A	mm	1186	1186	1383	1383	1633	1633	1633	2082	2082
	B	mm	1896	1896	1743	1743	1743	1743	1743	2092	2092
	C	mm	401	401	401	401	401	401	401	401	401
<i>Multidirectional roofcurb (External dimensions. No roof opening required)</i>											
BCK BHK BGK BDK	A	mm	1236	1236	1433	1433	1683	1683	1683	2080	2080
	B	mm	2129	2129	1982	1982	1846	1846	1846	2090	2090
	C	mm	650	650	650	650	650	650	650	750	750
<i>Exhaust vertical roofcurb</i>											
BCK BHK BGK BDK	A	mm	1390	1390	1587	1587	1837	1837	1837	2287	2287
	B	mm	2100	2100	1947	1947	1947	1947	1947	2297	2297
	C	mm	900	900	900	900	900	900	900	1050	1050
	D	mm	344	344	344	344	344	344	344	344	344
<i>Exhaust horizontal roofcurb</i>											
BCK BHK BGK BDK	A	mm	1227	1227	1227	1227	1674	1674	1674	2124	2124
	B	mm	2038	2038	1989	1989	1836	1836	1836	2186	2186
	C	mm	740	740	740	740	740	740	740	890	890
	D	mm	344	344	344	344	344	344	344	344	344

## OPTIONS

- ❑ Non adjustable, non assembled roofcurb  
Shipped folded flat for ease of shipping and handling, it is easily field assembled.
- ❑ Adjustable Roofcurb  
Aluzinc construction. For this adjustable roofcurb that can be installed on a roof with up to 4 to 5% slope in all directions.
- ❑ Multidirectional flow roofcurb  
Enable many airflow possibilities, including horizontal supply and return on the same side.
- ❑ Air Sock Control  
Soft start control allows the air socks to be progressively filled with air on start up.
- ❑ Humidity Control  
For dehumidifying or controlling a humidifier.
- ❑ Economiser  
"Free cooling" is provided through the use of fresh air when appropriate rather than cooling the return air includes fresh and return air damper and hood.
- ❑ Gravity exhaust damper  
Gravity exhaust damper relieves the pressure when outside air is being introduced in the system.
- ❑ Power Exhaust Fan  
Installed with economiser assembly, it provides exhaust air pressure relief when high levels of outside air are being introduced in the system.
- ❑ Analogic «Blower-on» sensor and dirty filter indication  
A differential pressure sensor measures the pressure drop across the evaporator coil and filters. It indicates if the filters are dirty, missing or if there is no airflow.
- ❑ Fire-Stat  
This thermostat provides a signal when the temperature of the airstream is above an adjustable set point.
- ❑ 93% high efficiency Gas Burner Option  
Lennox is proud to introduce the first high efficiency gas burner available on rooftop in Europe with 93% efficiency.
- ❑ filters F7 + pre-filters G4  
Set of two 50 mm filters. Adding a G4 prefilter before the F7 filter avoids excessive replacement of F7 filters.
- ❑ Panel filters with metal frames and disposable filter media (EU4 / G4)  
Metallic frame with washable filter media (rated EU4/G4) available.



## OPTIONS

- ❑ **Indoor Air Quality Sensor**  
This feature gives the possibility to match minimum fresh air requirements with occupancy. It measures CO2 levels and adjusts fresh air flow rate accordingly.
- ❑ **Electric Heater**  
3 sizes : "Standard", "Medium", and "High" heat. "Standard" and "Medium" heat are 2 stages electric heaters, "High" heat is fully modulated with TRIAC control allowing a constant supply temperature.
- ❑ **Hot Water Coil**  
2 and 3 row hot water coils configurations are available and offer fully modulated control through the use of a 3 way valve.
- ❑ **Customised color**  
Units can be supplied in various colours to suit any application or requirement.
- ❑ **Anti-Corrosion Protection**  
Where the units are installed in potentially aggressive environments. Coils can be treated with "blygold" coating.
- ❑ **DC 50 : Comfort Display**  
This is a remote controller for non-technical customer. It was designed to aesthetically fit in the room and be very easy to use.  
With DC50, the customer can change the scheduling of the different time zones, modify temperature set points and percentage of fresh air in each zone. . . . .
- ❑ **DS 50 : Service Display**  
This new service display controller is a plug and play feature. This allows service personnel to set, up to 100 settings, read up to 100 variables, up to 50 faults and read the history of the last 16 faults. . . . .
- ❑ **Disconnect Switch**  
A lockable main disconnect switch is available to increase safety around the rooftop unit.
- ❑ **Smoke Detector**  
The ionic head of the smoke detector can detect any type of smoke. When this occurs the unit will stop operating, the return air damper will close fully and the fresh air damper will open fully .
- ❑ **Low temperature kit (to 0° C)**  
This allows cooling operation when the external temperature approaches 0° C and the economizer cannot be used.
- ❑ **CLIMALOOK3**  
Climalook3 has the same functionality as Climalook2 but can also supervise up to 8 rooftops equipped with Climatic2 and 12 rooftops equipped with Climatic50.
- ❑ **MODBUS INTERFACE**  
This board is a modbus interface, which is needed for anyone who would like a BMS system to talk to the Baltic with "Modbus protocol". No other hardware than this board is required to have modbus dialog. One board required per rooftop.
- ❑ **LonTalk® INTERFACE**  
This board is a **LonTalk®** interface, which is needed for anyone who would like a BMS system to talk to the Baltic with "Lon protocol". No other hardware than this board is required to have **LonTalk®** dialog. One board required per rooftop.







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