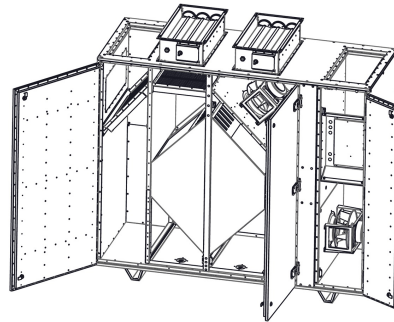


# Heat recovery unit Blauair BL07 CFV 5000



|  |            | <b>Supply</b> | <b>Extract</b> |
|--|------------|---------------|----------------|
| Air flow                                 | [ cfm ]    | 2500          | 2500           |
| External pressure                        | [ in. WG ] | 1             | 1              |
| Inlet temperature, summer                | [ F ]      | 85            | 70             |
| Relative humidity, summer                | [ % ]      | 40            | 50             |
| Inlet temperature, winter                | [ F ]      | 5             | 70             |
| Relative humidity, winter                | [ % ]      | 90            | 40             |
| After heat exchanger temperature, summer | [ F ]      | 73.28         | 82.09          |
| Exchange efficiency dry, summer          | [ % ]      | 78.12         | 80.6           |
| After heat exchanger temperature, winter | [ F ]      | 64.35         | 31.65          |
| Exchange efficiency dry, winter          | [ % ]      | 84.23         | 73.35          |
| Unit SFP                                 | [ cfm/W ]  | 0.88          |                |
| Heating type                             |            | None          |                |

## Heat exchanger

Counterflow aluminum plate heat exchanger

Eurovent certified heat recovery efficiency

Removable drain pans on both supply and extract

Automatic full-size by-pass

| Supply                                 |             |        | Extract                                |          |        |
|--|-------------|--------|--|----------|--------|
| Temperature after heat exchanger       | [ F ]       | 73.28  | Temperature after heat exchanger       | [ F ]    | 82.09  |
| Relative humidity after heat exchanger | [ % ]       | 58.78  | Relative humidity after heat exchanger | [ % ]    | 33.53  |
| Condensation                           | [ kg/h ]    | 0      | Condensation                           | [ kg/h ] | 0      |
| Exchange efficiency dry                | [ % ]       | 78.12  | Exchange efficiency dry                | [ % ]    | 80.6   |
| Exchange efficiency wet                | [ % ]       | 78.12  | Exchange efficiency wet                | [ % ]    | 80.6   |
| Heat recovery dry                      | [ kBTU/hr ] | -32.04 |  |          |        |
| Heat recovery wet                      | [ kBTU/hr ] | -32.04 |  |          |        |
| Supply                                 |             |        | Extract                                |          |        |
| Temperature after heat exchanger       | [ F ]       | 64.35  | Temperature after heat exchanger       | [ F ]    | 31.65  |
| Relative humidity after heat exchanger | [ % ]       | 7.25   | Relative humidity after heat exchanger | [ % ]    | 100    |
| Condensation                           | [ kg/h ]    | 0      | Condensation                           | [ kg/h ] | -15.33 |
| Exchange efficiency dry                | [ % ]       | 84.23  | Exchange efficiency dry                | [ % ]    | 73.35  |
| Exchange efficiency wet                | [ % ]       | 91.31  | Exchange efficiency wet                | [ % ]    | 59     |
| Heat recovery dry                      | [ kBTU/hr ] | 126.11 |  |          |        |
| Heat recovery wet                      | [ kBTU/hr ] | 140.81 |  |          |        |

## Fans, winter

EC fan, backward curved impeller

Phase/voltage [50/60Hz/VAC] ~3, 380/480

Sound pressure level at 3 meters to environment 39 db(A)

Insulation class B

Motor protection class IP 54

### Supply fan, winter

|                                   |            |         |
|-----------------------------------|------------|---------|
| RPM                               | [ 1/min ]  | 1202.07 |
| Electric power consumption, Pe    | [ kBTU/h ] | 3.51    |
| Current, I                        | [ A ]      | 1.63    |
| Total fan pressure , Pf           | [ in. WG ] | 2.06    |
| Static fan pressure , Psf         | [ in. WG ] | 1.99    |
| Static fan efficiency $\eta_{es}$ | [ % ]      | 56.79   |
| Number of fans                    |            | 1       |

### Extract fan, winter

|                                   |            |         |
|-----------------------------------|------------|---------|
| RPM                               | [ 1/min ]  | 1271.21 |
| Electric power consumption, Pe    | [ kBTU/h ] | 4.01    |
| Current, I                        | [ A ]      | 1.86    |
| Total fan pressure , Pf           | [ in. WG ] | 2.33    |
| Static fan pressure , Psf         | [ in. WG ] | 2.26    |
| Static fan efficiency $\eta_{es}$ | [ % ]      | 56.55   |
| Number of fans                    |            | 1       |

#### Fans sound power, winter Lw, (dB)

| Hz     | 62.5 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | LwA |
|--------|------|-----|-----|-----|------|------|------|------|-----|
| Inlet  | 66   | 68  | 67  | 65  | 62   | 61   | 57   | 53   | 68  |
| Outlet | 69   | 71  | 69  | 71  | 72   | 64   | 60   | 56   | 74  |

#### Fans sound power, winter Lw, (dB)

| Hz     | 62.5 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | LwA |
|--------|------|-----|-----|-----|------|------|------|------|-----|
| Inlet  | 68   | 70  | 70  | 67  | 63   | 62   | 58   | 55   | 70  |
| Outlet | 72   | 73  | 72  | 73  | 73   | 66   | 61   | 58   | 76  |

### SFP, winter

|  |           |      |
|--|-----------|------|
| Unit external SFP, real at operation point | [ cfm/W ] | 0.88 |
|--|-----------|------|

## Filter

Filter, class (EN779) F7, Frames 253x603x48, panel type, PP+PET,

## Dampers

Multi-blade damper for air flow control

The housing made of galvanized steel. The aluminium blades driven by plastic gearwheels. Lever with removable metal handle and fixing clamp. Standard connection flange for rectangular air ducts or other ventilation system components. Flanges should be connected with galvanized bolts and clamps.

## Casing

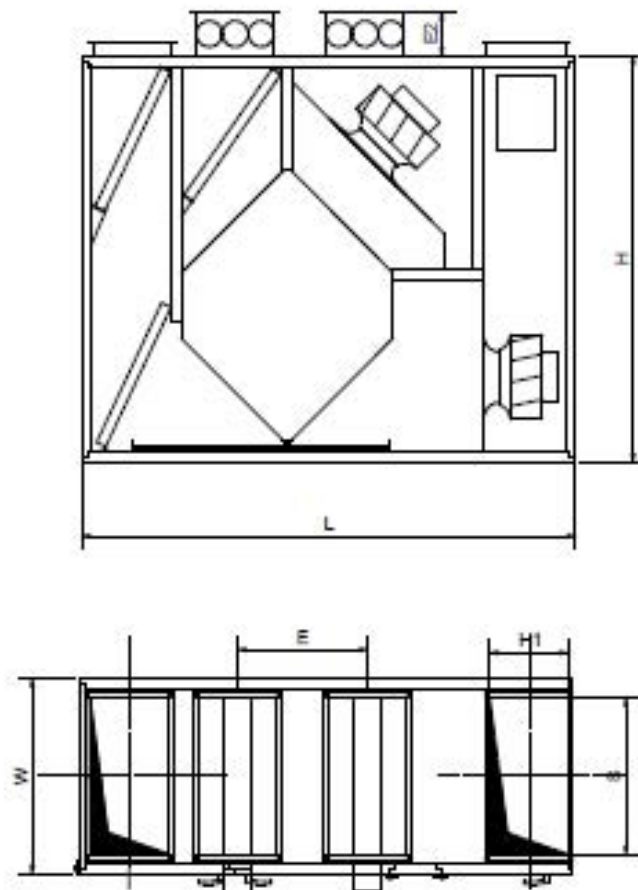
Double skin frameless casing with 40 mm mineral wool 90 kg/m<sup>3</sup>; non-flammable; outer skin: zinc-aluminum; inner skin: zinc-aluminum; EN1886 class: D1, T2, TB2; corrosion resistance according to ISO 12944: class C4. Insulation class B

| L    | W    | H    | S    | H1  | E2  | S1  | S2  | S3   | E   |
|------|------|------|------|-----|-----|-----|-----|------|-----|
| 2330 | 1390 | 1800 | 1000 | 400 | 170 | 500 | 360 | 1000 | 500 |

**Unit Weight** (without water cooler , DX coil, water heater), [Kg] - 715

**DX coil/water cooler weight**, [Kg] - 79

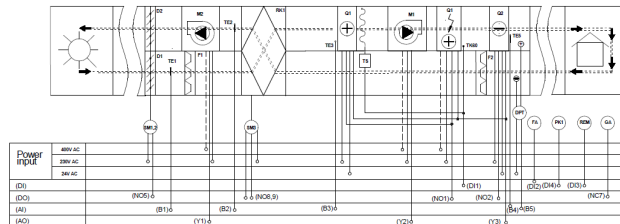
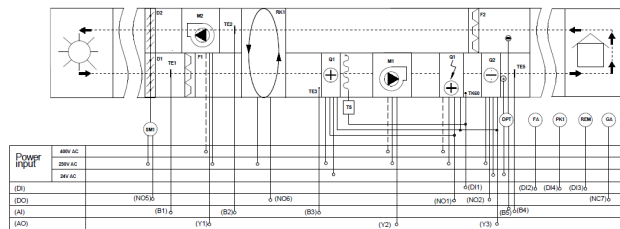
**Water heater weigh** , [Kg] - 65



## Controls

Control system features advanced functions that can be activated based on the devices installed on the air handling unit:

- Coils management: water heater, water cooler, direct expansion, cooler/heater coil;
- Fans management: 3 speed setup, air pressure control, airflow control;
- Heat recovery
- Temperature and/or humidity control;
- Automatic summer/winter (cooling/heating) changeover;
- Operation in comfort, precomfort or economy mode;
- Selection of up to four daily time bands, with settings for each operating modes;
- Holiday and special day function, with reduced set point;
- Air quality control with optional CO2/IAQ probe;
- Priority to temperature or humidity control, by room/supply/extract sensors
- Safety protectors for antifreeze, dirty filters, smoke/fire, no air or water low, inverter alarm;
- Parameter settings divided by level, user, installer or manufacturer, with password-protected access;
- Manual functioning mode;
- Supervisor protocol: Modbus slave build-in, Bacnet build-in;
- Freecooling and freeheating;
- Pumps management, overload alarms and anti-blocking for each pump;
- WEB-interface via integrated Ethernet port



| ERP  |            |   |
|--|------------|---|
| Trade mark                                       |            | Blauberg  |
| Model  |            | Heat recovery unit Blauair BL07 CFV 5000                                      |
| Declared typology                                |            | NRVU BVU  |
| Type of drive installed                          |            | Integrated MSD  |
| Type of heat recovery system                     |            | Regenerative  |
| Thermal efficiency of heat recovery              | [ % ]      | 84.23   |
| Supply flow rate                                 | [ cfm ]    | 2500  |
| Effective electric power input                   | [ HP ]     | 2.96  |
| SFPint   | [ cfm/W ]  | 0.47  |
| Face velocity at design flow rate                | [ f/m ]    | 5.08  |
| External pressure                                | [ in. WG ] | 1   |
| Internal pressure drop of ventilation components | [ in. WG ] | 0.99  |
| Static efficiency of fans                        | [ % ]      | 56.79   |
| Maximum leakage rates                            | [ % ]      | 2.7   |
| Maximum leakage rates                            | [ % ]      | 2.7   |
| Filtration class                                 |            | B   |
| Visual filter warning                            |            | Visual filter warning   |
| Sound power level                                | [ db ]     | 75.21   |
| Internet address                                 |            | <a href="http://blaubergventilatoren.de/">http://blaubergventilatoren.de/</a> |

Erp 2018 compliant according to Commission Regulation EU No 1253/2014, 7 July 2014