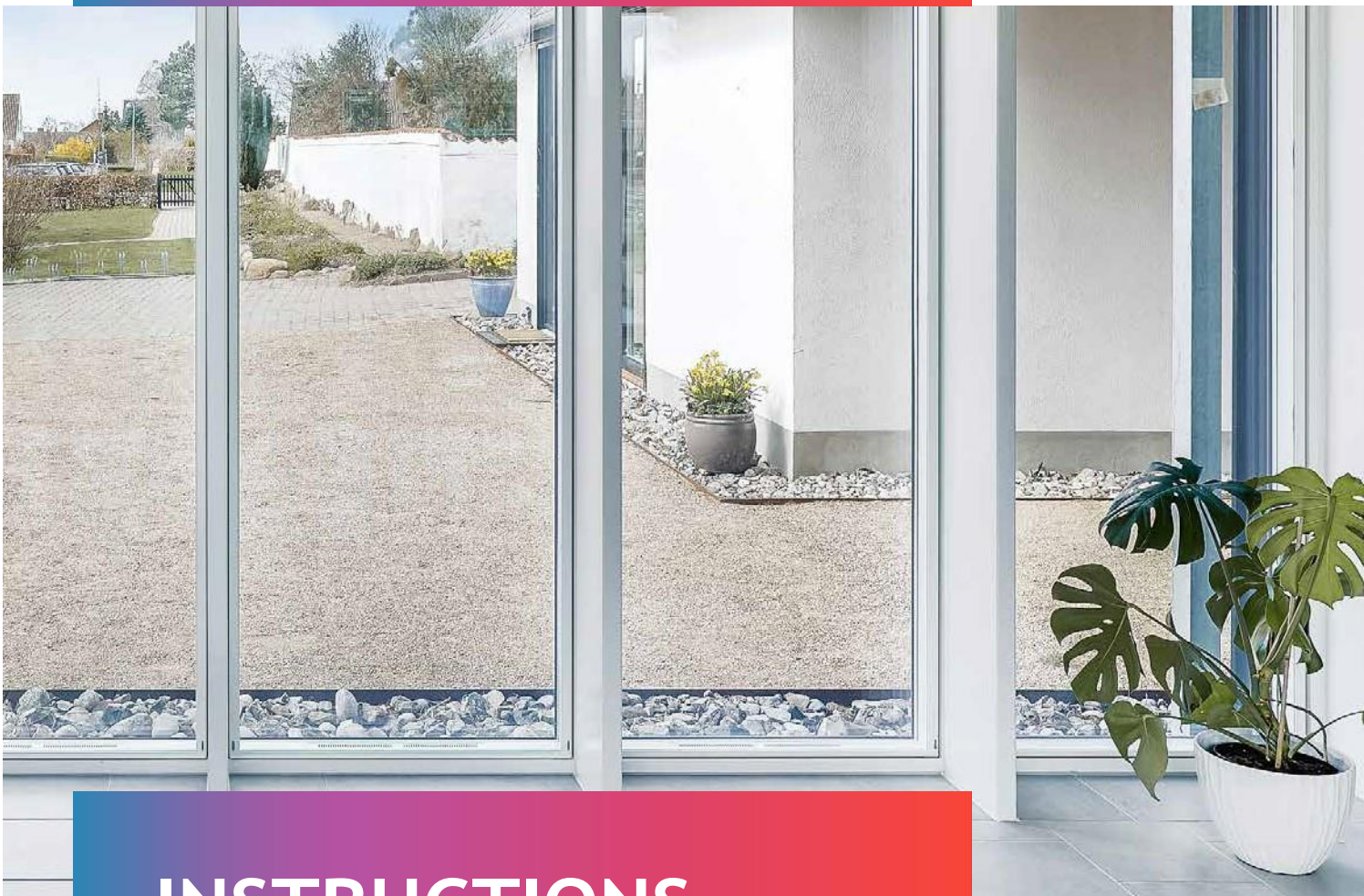




LIVINGBETTER



# INSTRUCTIONS FOR ENTERING EQUIVALENT INPUT DATA INTO BE18

# LIVINGBETTER CONCEPT DATA FOR ENTRY INTO BE18

Project-specific values that must be entered into the energy framework calculation are stated in the offer and order confirmation material for LivingBetter ventilation windows and IKM A/S heat pumps.

These instructions show where to enter the data and ensure that the building's energy framework is calculated correctly. Naturally, the data varies from that entered in connection with standard products and solutions, as these do not have the same impact on energy consumption and the indoor climate.



## ENERGY VALUES FOR THE VENTILATION WINDOW

LivingBetter receives scale drawings (floor plans and façades) from the customer. Based on the drawings, we draw up proposals to indicate the volume of supply air that is required to meet BE18 requirements.

This figure is then used to calculate more precise b-values that can be entered in the BE18 program. The b-values are stated in a table at the back of LivingBetter's offer.

This calculation method has been devised in cooperation with Aalborg University (AAU) in compliance with the Danish Building Research Institute's and follows the Guidance on Equivalence Data for Special Components and Solutions - version 2022.03.15.



## THE VENTILATION WINDOW

The ventilation window is defined as a double window structure with a double-glazed unit on the inside and a single-glazed unit on the outside (the opposite is also possible) fitted in conjunction with LivingBetter's patented thermostatic valve system and with air channels, made to LivingBetter's specifications and fully tested by an independent research institute.

The window's function presupposes that there is negative pressure in the building, achieved either by natural or mechanical air extraction. For the ventilation window to contribute to the energy framework calculation, a mechanical means of extraction (e.g. an exhaust air heat pump) is required that recovers energy from the exhaust air.

Fraunhofer Gesellschaft (research institute) and Aalborg University (AAU) have conducted exhaustive tests on ventilation windows fitted with the LivingBetter thermostatic valve system. The test results make it possible to calculate and substantiate air volume and energy recovery so that the solution meets energy labelling requirements.

# THE EXTRACT AIR HEAT PUMP



When installed in combination with ventilation windows, IKM's extract air heat pump operates constantly and maintains negative pressure in the building at all times. The heat pump recovers energy from exhaust air. This energy is used to produce domestic hot water and central heating.

IKM A/S exhaust air heat pumps are approved in accordance with EN14825. The BE data is stated in accordance with EN14511 Air condition systems, table 9, exhaust air. Domestic hot water meets the requirements of EN16147 profile (L).

Please note: An extract air heat pump is not listed on the so-called positive list. The only heat pumps on this list are heat pumps that have an outdoor unit. Even so, IKM extract air heat pumps are approved for use in new residential houses or renovation projects.



# LIVINGBETTER CONCEPT DATA FOR ENTRY INTO BE18

## b-value factor

In the air volume chart below, the element's static U-value is entered and the b-value factor for the ventilation window's reduced heat loss is calculated. The b-value factor depends on the air volume passing through the window.

The static U-value is stated in LivingBetter's offer/order confirmation

Enter b-value factor into BE18

| Beregning af b-værdier for LivingBetter Ventilationsvinduer med CWT ventil teknologi<br>(Ind-data fra LivingBetter tilbud/ordre skrevet med blå)             |                                 |       |                              |                                                                                     |                                                                                                                                  | Ud-data til indtastning i Energiberegning                                            |                       |                |                                        |                      |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------|------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------|----------------|----------------------------------------|----------------------|----------------|
| Boligens brutto areal<br><br>80 m <sup>2</sup>                                                                                                               |                                 |       |                              | Differenstryk i bygningen (Pa)<br><br>14,5<br><br>-----<br><br>Anbefalet 12 - 16 Pa | Ventilationsvindues statiske værdier<br>(data fra tilbud/ordre)<br>Uden luftstrøm i vinduet (0,0 l/s)<br>(0,0 m <sup>3</sup> /t) | Ventilationsvindues værdier ved mekanisk ventilation<br>(Luftvolumen ind pr. ventil) |                       |                | Elementets Glasandel (f <sub>g</sub> ) |                      |                |
| Nødvendig grundventilation jf. BR18 ved ventilation med (0,3 l/s/m <sup>2</sup> ) 1,08m <sup>3</sup> /t/m <sup>2</sup> :<br>24,0 l/s 86,40 m <sup>3</sup> /t |                                 |       |                              |                                                                                     |                                                                                                                                  | 4,0 l/s<br>14,4 m <sup>3</sup> /t                                                    |                       |                |                                        |                      |                |
| Tilbud/ordre position id                                                                                                                                     | Dimension total<br>Bredde Højde |       | Dimension VV<br>Bredde Højde |                                                                                     | Antal CWT-ventiler i vinduselement                                                                                               | U <sub>w</sub> -værdi<br>[W/m <sup>2</sup> *K]                                       | g <sub>g</sub> -værdi | b-værdi data   |                                        | Total f <sub>f</sub> |                |
|                                                                                                                                                              | Bredde                          | Højde | Bredde                       | Højde                                                                               |                                                                                                                                  |                                                                                      |                       | b-værdi faktor | g <sub>g</sub> -værdi                  |                      | E <sub>w</sub> |
| L1                                                                                                                                                           | 141,0                           | 210,0 | 50,0                         | 210,0                                                                               | 1                                                                                                                                | 0,90                                                                                 | 0,63                  | 0,93           | 0,63                                   | 17,9                 | 0,76           |
| L2                                                                                                                                                           | 120,0                           | 124,5 | 120,0                        | 124,5                                                                               | 3                                                                                                                                | 0,90                                                                                 | 0,63                  | 0,71           | 0,63                                   | 44,9                 | 0,84           |
| L3                                                                                                                                                           | 109,0                           | 139,5 | 109,0                        | 139,5                                                                               | 2                                                                                                                                | 0,90                                                                                 | 0,63                  | 0,74           | 0,63                                   | 42,7                 | 0,84           |
| Samlet antal CWT-ventiler                                                                                                                                    |                                 |       |                              |                                                                                     | 6                                                                                                                                |                                                                                      |                       |                |                                        |                      |                |

Ovenstående ud-data til indtastning i Energiberegning overholder Bygningsreglementet jf. SBI-anvisning 213 "Ventilationsvinduer" LivingBetter A/S er ikke ansvarlig for korrekt boligareal mv. samt om gældende tegningsmateriale har været stillet til vores rådighed.

## g<sub>g</sub>-value

Enter g<sub>g</sub>-value in the "Data/Statisk værdi" (Data/static value) folder.

The static g<sub>g</sub>-value is stated in LivingBetter's offer/order confirmation

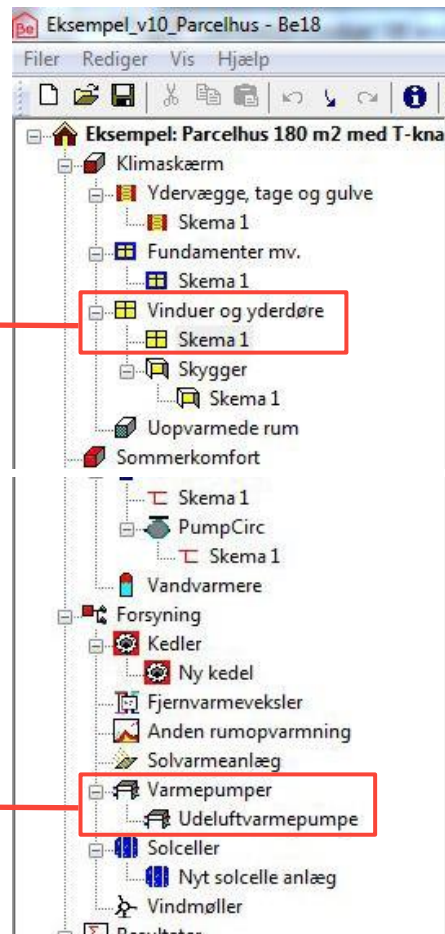
| Beregning af b-værdier for LivingBetter Ventilationsvinduer med CWT ventil teknologi<br>(Ind-data fra LivingBetter tilbud/ordre skrevet med blå)                 |  |                                 |  |                                                                             |  |                                                                                                                                   | Ud-data til indtastning i Energiberegning |                                                                                                                            |  |                                                                     |                                        |  |                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------|--|-----------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------|----------------------------------------|--|----------------------|
| Boligens brutto areal<br><br>80 m <sup>2</sup>                                                                                                                   |  |                                 |  | Differenstryk i bygningen (Pa)<br><br>14,5<br>-----<br>Anbefalet 12 - 16 Pa |  | Ventilationsvinduets statiske værdier<br>(data fra tilbud/ordre)<br>Uden luftstrøm i vinduet (0,0 l/s)<br>(0,0 m <sup>3</sup> /t) |                                           | Ventilationsvinduets værdier ved mekanisk ventilation<br>(Luftvolumen ind pr. ventil)<br>4,0 l/s<br>14,4 m <sup>3</sup> /t |  |                                                                     | Elementets Glasandel (f <sub>g</sub> ) |  |                      |
| Nødvendig grundventilation jf. BR18 ved ventilation med (0,3 l/s/m <sup>2</sup> ) 1,08m <sup>3</sup> /t/m <sup>2</sup> :<br><br>24,0 l/s 86,40 m <sup>3</sup> /t |  |                                 |  |                                                                             |  |                                                                                                                                   |                                           |                                                                                                                            |  |                                                                     |                                        |  |                      |
| Tilbud/ordre position id                                                                                                                                         |  | Dimension total<br>Bredde Højde |  | Dimension VV<br>Bredde Højde                                                |  | Antal CWT-ventiler i vinduselement                                                                                                |                                           | U <sub>w</sub> -værdi [W/m <sup>2</sup> *K]<br><br>g <sub>g</sub> -værdi                                                   |  | b-værdi data<br>b-værdi faktor g <sub>g</sub> -værdi E <sub>w</sub> |                                        |  | Total f <sub>g</sub> |
| L1                                                                                                                                                               |  | 141,0 210,0                     |  | 50,0 210,0                                                                  |  | 1                                                                                                                                 |                                           | 0,90 0,63                                                                                                                  |  | 0,93 0,63 17,9                                                      |                                        |  | 0,76                 |
| L2                                                                                                                                                               |  | 120,0 124,5                     |  | 120,0 124,5                                                                 |  | 3                                                                                                                                 |                                           | 0,90 0,63                                                                                                                  |  | 0,71 0,63 44,9                                                      |                                        |  | 0,84                 |
| L3                                                                                                                                                               |  | 109,0 139,5                     |  | 109,0 139,5                                                                 |  | 2                                                                                                                                 |                                           | 0,90 0,63                                                                                                                  |  | 0,74 0,63 42,7                                                      |                                        |  | 0,84                 |
| Samlet antal CWT-ventiler                                                                                                                                        |  |                                 |  |                                                                             |  | 6                                                                                                                                 |                                           |                                                                                                                            |  |                                                                     |                                        |  |                      |

Ovenstående ud-data til indtastning i Energiberegning overholder Bygningsreglementet jf. SBI-anvisning 213 "Ventilationsvinduer" LivingBetter A/S er ikke ansvarlig for korrekt boligareal mv. samt om gældende tegningsmateriale har været stillet til vores rådighed.

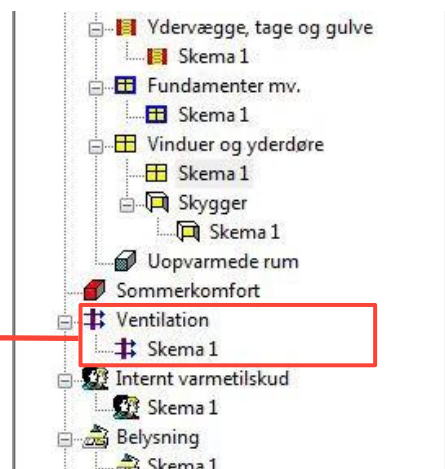
The static values for windows and doors **without** ventilation are stated in LivingBetter's offer/order confirmation (see individual positions).

# ENTER INPUT DATA

**The BE18 program:**  
Input data b-values



**The BE18 program:**  
Input data values  
heat pump



**The BE18 program:**  
Input data values  
ventilation

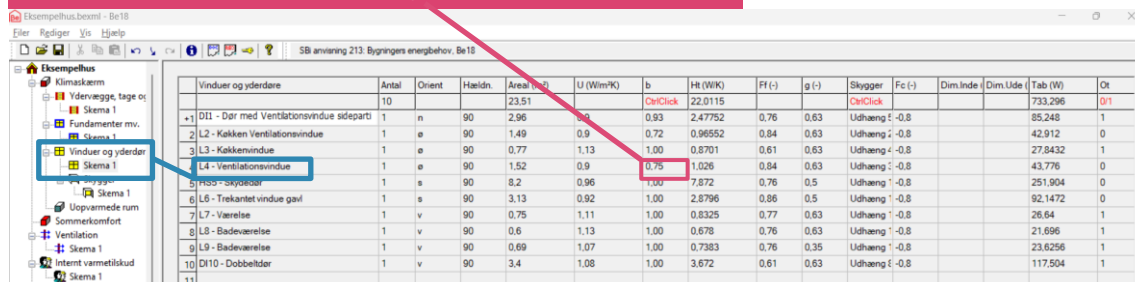


## THE BE18 PROGRAM:

Enter the windows' energy parameters in the "Vinduer og yderdøre" (Windows and outside doors) folder.

Calculate **b-value** factor as instructed in SBI 213 and enter in column b

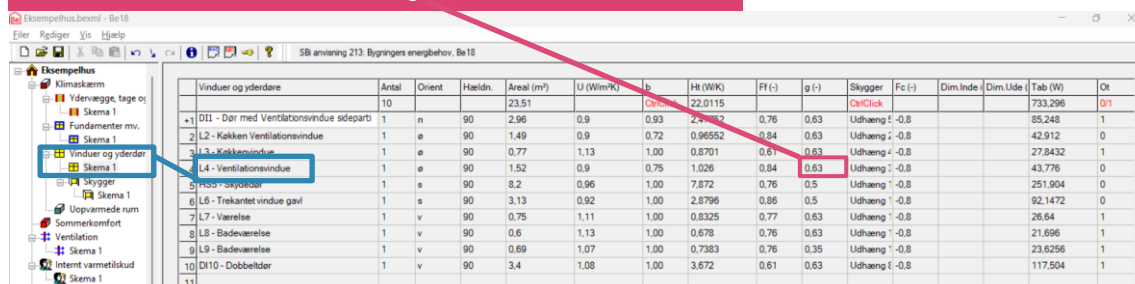
Stated in the table at the back of the LivingBetter's offer/order confirmation



| Vinduer og yderdøre                        | Antal | Orient | Hældn | Areal (m²) | U (W/m²K) | b    | Ht (W/K) | Ff (-) | g (-) | Skjgger       | Fc (-) | Dim.Inde | Dim.Ude | Tab (W) | Øt  |
|--------------------------------------------|-------|--------|-------|------------|-----------|------|----------|--------|-------|---------------|--------|----------|---------|---------|-----|
| D11 - Dør med Ventilationsvindue sideparti | 10    | n      | 90    | 23.51      | 0.9       | 0.93 | 2.47752  | 0.76   | 0.63  | Udhaeng (-0.8 |        |          |         | 733.296 | 0.1 |
| L2 - Køkken Ventilationsvindue             | 1     | e      | 90    | 1.49       | 0.9       | 0.72 | 0.96552  | 0.84   | 0.63  | Udhaeng (-0.8 |        |          |         | 42.912  | 0   |
| L3 - Køkkenvindue                          | 1     | e      | 90    | 0.77       | 1.13      | 1.00 | 0.8701   | 0.61   | 0.63  | Udhaeng (-0.8 |        |          |         | 27.9432 | 1   |
| L4 - Ventilationsvindue                    | 1     | e      | 90    | 1.52       | 0.9       | 0.75 | 1.026    | 0.84   | 0.63  | Udhaeng (-0.8 |        |          |         | 43.776  | 0   |
| HSS - skydebor                             | 1     | s      | 90    | 8.2        | 0.96      | 1.00 | 7.872    | 0.76   | 0.5   | Udhaeng (-0.8 |        |          |         | 251.904 | 0   |
| L6 - Trekantet vindue gav                  | 1     | s      | 90    | 3.13       | 0.92      | 1.00 | 2.8796   | 0.86   | 0.5   | Udhaeng (-0.8 |        |          |         | 92.1472 | 0   |
| L7 - Værelse                               | 1     | v      | 90    | 0.75       | 1.11      | 1.00 | 0.8325   | 0.77   | 0.63  | Udhaeng (-0.8 |        |          |         | 26.64   | 1   |
| L8 - Badeværelse                           | 1     | v      | 90    | 0.6        | 1.13      | 1.00 | 0.678    | 0.76   | 0.63  | Udhaeng (-0.8 |        |          |         | 21.696  | 1   |
| L9 - Badeværelse                           | 1     | v      | 90    | 0.69       | 1.07      | 1.00 | 0.7383   | 0.76   | 0.35  | Udhaeng (-0.8 |        |          |         | 23.6256 | 1   |
| D110 - Dobbeltør                           | 1     | v      | 90    | 3.4        | 1.08      | 1.00 | 3.672    | 0.61   | 0.63  | Udhaeng (-0.8 |        |          |         | 117.504 | 1   |

The **g-g-value** is entered in column g

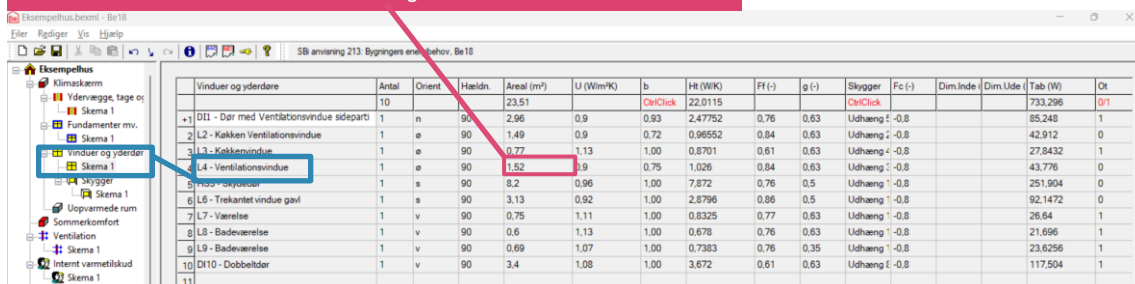
Stated in the table at the back of the LivingBetter's offer/order confirmation



| Vinduer og yderdøre                        | Antal | Orient | Hældn | Areal (m²) | U (W/m²K) | b    | Ht (W/K) | Ff (-) | g (-) | Skjgger       | Fc (-) | Dim.Inde | Dim.Ude | Tab (W) | Øt  |
|--------------------------------------------|-------|--------|-------|------------|-----------|------|----------|--------|-------|---------------|--------|----------|---------|---------|-----|
| D11 - Dør med Ventilationsvindue sideparti | 10    | n      | 90    | 23.51      | 0.9       | 0.93 | 2.47752  | 0.76   | 0.63  | Udhaeng (-0.8 |        |          |         | 733.296 | 0.1 |
| L2 - Køkken Ventilationsvindue             | 1     | e      | 90    | 1.49       | 0.9       | 0.72 | 0.96552  | 0.84   | 0.63  | Udhaeng (-0.8 |        |          |         | 42.912  | 0   |
| L3 - Køkkenvindue                          | 1     | e      | 90    | 0.77       | 1.13      | 1.00 | 0.8701   | 0.61   | 0.63  | Udhaeng (-0.8 |        |          |         | 27.9432 | 1   |
| L4 - Ventilationsvindue                    | 1     | e      | 90    | 1.52       | 0.9       | 0.75 | 1.026    | 0.84   | 0.63  | Udhaeng (-0.8 |        |          |         | 43.776  | 0   |
| HSS - skydebor                             | 1     | s      | 90    | 8.2        | 0.96      | 1.00 | 7.872    | 0.76   | 0.5   | Udhaeng (-0.8 |        |          |         | 251.904 | 0   |
| L6 - Trekantet vindue gav                  | 1     | s      | 90    | 3.13       | 0.92      | 1.00 | 2.8796   | 0.86   | 0.5   | Udhaeng (-0.8 |        |          |         | 92.1472 | 0   |
| L7 - Værelse                               | 1     | v      | 90    | 0.75       | 1.11      | 1.00 | 0.8325   | 0.77   | 0.63  | Udhaeng (-0.8 |        |          |         | 26.64   | 1   |
| L8 - Badeværelse                           | 1     | v      | 90    | 0.6        | 1.13      | 1.00 | 0.678    | 0.76   | 0.63  | Udhaeng (-0.8 |        |          |         | 21.696  | 1   |
| L9 - Badeværelse                           | 1     | v      | 90    | 0.69       | 1.07      | 1.00 | 0.7383   | 0.76   | 0.35  | Udhaeng (-0.8 |        |          |         | 23.6256 | 1   |
| D110 - Dobbeltør                           | 1     | v      | 90    | 3.4        | 1.08      | 1.00 | 3.672    | 0.61   | 0.63  | Udhaeng (-0.8 |        |          |         | 117.504 | 1   |

**Area (m2)** is the gross window area (stated in the offer)

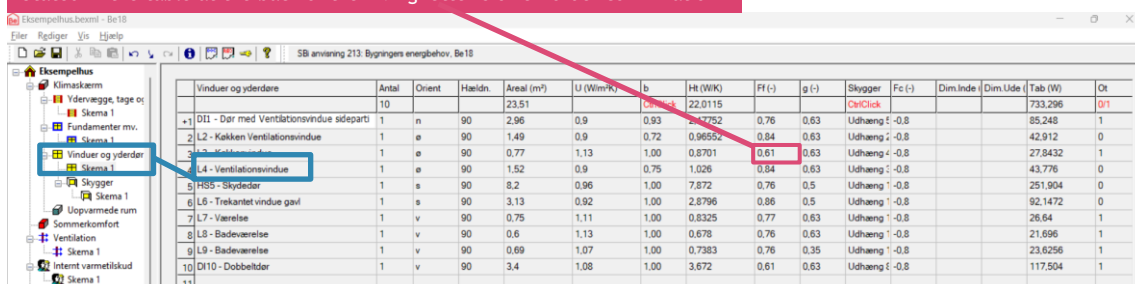
Stated in the table at the back of the LivingBetter's offer/order confirmation



| Vinduer og yderdøre                        | Antal | Orient | Hældn | Areal (m²) | U (W/m²K) | b    | Ht (W/K) | Ff (-) | g (-) | Skjgger       | Fc (-) | Dim.Inde | Dim.Ude | Tab (W) | Øt  |
|--------------------------------------------|-------|--------|-------|------------|-----------|------|----------|--------|-------|---------------|--------|----------|---------|---------|-----|
| D11 - Dør med Ventilationsvindue sideparti | 10    | n      | 90    | 23.51      | 0.9       | 0.93 | 2.47752  | 0.76   | 0.63  | Udhaeng (-0.8 |        |          |         | 733.296 | 0.1 |
| L2 - Køkken Ventilationsvindue             | 1     | e      | 90    | 1.49       | 0.9       | 0.72 | 0.96552  | 0.84   | 0.63  | Udhaeng (-0.8 |        |          |         | 42.912  | 0   |
| L3 - Køkkenvindue                          | 1     | e      | 90    | 0.77       | 1.13      | 1.00 | 0.8701   | 0.61   | 0.63  | Udhaeng (-0.8 |        |          |         | 27.9432 | 1   |
| L4 - Ventilationsvindue                    | 1     | e      | 90    | 1.52       | 0.9       | 0.75 | 1.026    | 0.84   | 0.63  | Udhaeng (-0.8 |        |          |         | 43.776  | 0   |
| HSS - skydebor                             | 1     | s      | 90    | 8.2        | 0.96      | 1.00 | 7.872    | 0.76   | 0.5   | Udhaeng (-0.8 |        |          |         | 251.904 | 0   |
| L6 - Trekantet vindue gav                  | 1     | s      | 90    | 3.13       | 0.92      | 1.00 | 2.8796   | 0.86   | 0.5   | Udhaeng (-0.8 |        |          |         | 92.1472 | 0   |
| L7 - Værelse                               | 1     | v      | 90    | 0.75       | 1.11      | 1.00 | 0.8325   | 0.77   | 0.63  | Udhaeng (-0.8 |        |          |         | 26.64   | 1   |
| L8 - Badeværelse                           | 1     | v      | 90    | 0.6        | 1.13      | 1.00 | 0.678    | 0.76   | 0.63  | Udhaeng (-0.8 |        |          |         | 21.696  | 1   |
| L9 - Badeværelse                           | 1     | v      | 90    | 0.69       | 1.07      | 1.00 | 0.7383   | 0.76   | 0.35  | Udhaeng (-0.8 |        |          |         | 23.6256 | 1   |
| D110 - Dobbeltør                           | 1     | v      | 90    | 3.4        | 1.08      | 1.00 | 3.672    | 0.61   | 0.63  | Udhaeng (-0.8 |        |          |         | 117.504 | 1   |

**Ff (-)** is the window's glazing factor (%). Calculated as area of glass/gross area

Stated in the table at the back of the LivingBetter's offer/order confirmation



| Vinduer og yderdøre                        | Antal | Orient | Hældn | Areal (m²) | U (W/m²K) | b    | Ht (W/K) | Ff (-) | g (-) | Skjgger       | Fc (-) | Dim.Inde | Dim.Ude | Tab (W) | Øt  |
|--------------------------------------------|-------|--------|-------|------------|-----------|------|----------|--------|-------|---------------|--------|----------|---------|---------|-----|
| D11 - Dør med Ventilationsvindue sideparti | 10    | n      | 90    | 23.51      | 0.9       | 0.93 | 2.47752  | 0.76   | 0.63  | Udhaeng (-0.8 |        |          |         | 733.296 | 0.1 |
| L2 - Køkken Ventilationsvindue             | 1     | e      | 90    | 1.49       | 0.9       | 0.72 | 0.96552  | 0.84   | 0.63  | Udhaeng (-0.8 |        |          |         | 42.912  | 0   |
| L3 - Køkkenvindue                          | 1     | e      | 90    | 0.77       | 1.13      | 1.00 | 0.8701   | 0.61   | 0.63  | Udhaeng (-0.8 |        |          |         | 27.9432 | 1   |
| L4 - Ventilationsvindue                    | 1     | e      | 90    | 1.52       | 0.9       | 0.75 | 1.026    | 0.84   | 0.63  | Udhaeng (-0.8 |        |          |         | 43.776  | 0   |
| HSS - skydebor                             | 1     | s      | 90    | 8.2        | 0.96      | 1.00 | 7.872    | 0.76   | 0.5   | Udhaeng (-0.8 |        |          |         | 251.904 | 0   |
| L6 - Trekantet vindue gav                  | 1     | s      | 90    | 3.13       | 0.92      | 1.00 | 2.8796   | 0.86   | 0.5   | Udhaeng (-0.8 |        |          |         | 92.1472 | 0   |
| L7 - Værelse                               | 1     | v      | 90    | 0.75       | 1.11      | 1.00 | 0.8325   | 0.77   | 0.63  | Udhaeng (-0.8 |        |          |         | 26.64   | 1   |
| L8 - Badeværelse                           | 1     | v      | 90    | 0.6        | 1.13      | 1.00 | 0.678    | 0.76   | 0.63  | Udhaeng (-0.8 |        |          |         | 21.696  | 1   |
| L9 - Badeværelse                           | 1     | v      | 90    | 0.69       | 1.07      | 1.00 | 0.7383   | 0.76   | 0.35  | Udhaeng (-0.8 |        |          |         | 23.6256 | 1   |
| D110 - Dobbeltør                           | 1     | v      | 90    | 3.4        | 1.08      | 1.00 | 3.672    | 0.61   | 0.63  | Udhaeng (-0.8 |        |          |         | 117.504 | 1   |

# THE BE18 PROGRAM:

## Heat pumps:

Enter the heat pump's energy parameters in the table in the "Varmepumper" (Heat pumps) folder.

This data is project specific. Input data available from supplier.

| Varmepumpe                           |                        |
|--------------------------------------|------------------------|
| Funktion                             | Andel af etageareal, - |
| Kombineret                           | 1                      |
| Rumopvarmning                        |                        |
| 1,64                                 | 1,67                   |
| 5,29                                 | 3,43                   |
| 1                                    | 0                      |
| Test-temperaturer, °C                |                        |
| 20                                   | 20                     |
| 35                                   | 50                     |
| Aftæk                                |                        |
| Jordvarme                            | Jordtænde              |
| 0                                    | 0                      |
| 17,9                                 | 0                      |
| Varmepumper tilknyttet ventilationen |                        |
| 0                                    | 0                      |
| 20                                   |                        |
| 0,021                                | 0                      |
| Data for anden kilde                 |                        |

## Domestic hot water:

Enter the heat pump's hot water tank data and (if relevant) circulation pumps and distribution data in the VBV Beholder (Domestic hot water tank) and PumpCirc tables respectively, in the "Varmt brugsvand" (Domestic hot water) folder.

Input data available from supplier

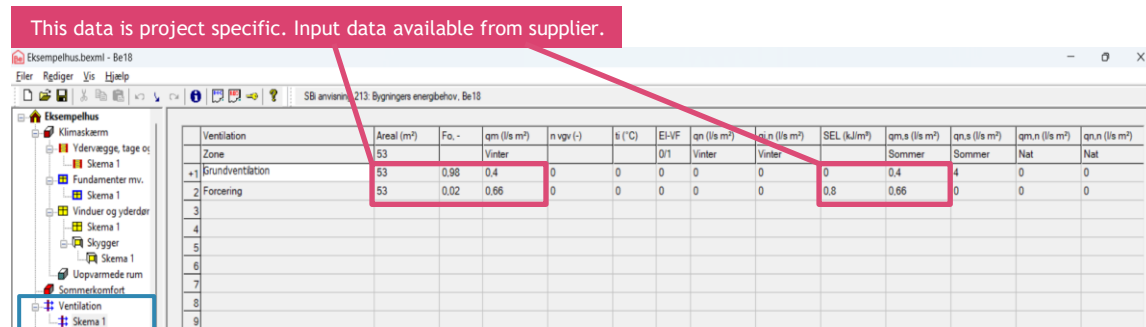
| Varmtvandsbeholder                     |                                                                          |
|----------------------------------------|--------------------------------------------------------------------------|
| Beskrivelse                            | VBV Beholder                                                             |
| 1                                      | Antal beholdere                                                          |
| 1                                      | Andel af varmtvandsforbrug, -                                            |
| 170                                    | Beholdervolumen, liter (For solvarmebeholdere opgives totalvolumen)      |
| 50                                     | Fremløbstemperatur fra centralvarme, °C                                  |
| Nej                                    | El-opvarmning af VBV (Hvis 'Nej' kører kedlen om sommeren)               |
| <input type="checkbox"/>               | Solvarmebeholder med varmespiral i top. (Korrektion for temp.lagdeling)  |
| 2,3                                    | Varmetab fra varmtvandsbeholder, W/K                                     |
| 0                                      | Temperaturfaktor, b for opstillingsrum, - (Opv. zone: b = 0, Ude: b = 1) |
| Ladekreds-pumpe                        |                                                                          |
|                                        | Effekt, W                                                                |
|                                        | Lade-eff, kW                                                             |
| For kombi-pumpe angives Effekt til 0 W | 0                                                                        |
|                                        | Styret                                                                   |
|                                        | 6                                                                        |

On page 9 of this guide, an example is provided showing how heat pump data is presented.

# THE BE18 PROGRAM:

## Ventilation:

Enter project-specific calculated values in the table in the “Ventilation” folder.



The heat pump calculation shows both the base ventilation  $q_m$  (l/s/m²) and the forced air volume  $q_m$  (l/s/m²).

## NOTE!

Refer to the table below from SBI-Anvisning 213 (p. 77) regarding the fields where data must be entered. This depends on the specific building type in question.

**TABEL 10.** Oversigt over ventilationsdata.

|                        | Vinter                           |           | Sommer             |           |
|------------------------|----------------------------------|-----------|--------------------|-----------|
|                        | Dag                              | Nat       | Dag                | Nat       |
| <i>Boliger</i>         |                                  |           |                    |           |
| Naturlig ventilation   | $q_n$                            | —         | $q_{n,s}$          | —         |
| Nat. vent. og emhætte  | $q_m, SEL, q_n$                  | —         | $q_{n,s}$          | —         |
| Mek. udsugning         | $q_m, SEL$                       | —         | $q_{m,s}, q_{n,s}$ | —         |
| Bal. mek. vent.        | $q_m, \eta_{VGV}, t_p, SEL, q_n$ | —         | $q_{m,s}, q_{n,s}$ | —         |
| <i>Andre bygninger</i> |                                  |           |                    |           |
| Naturlig ventilation   | $q_n$                            | $q_{i,n}$ | $q_{n,s}$          | $q_{n,n}$ |
| Mek. udsugning         | $q_m, SEL$                       | $q_{i,n}$ | $q_{m,s}$          | $q_{m,n}$ |
| Bal. mek. vent.        | $q_m, \eta_{VGV}, t_p, SEL, q_n$ | $q_{i,n}$ | $q_{m,s}, q_{n,s}$ | $q_{m,n}$ |

On the next page, you will find the key points to consider when entering ventilation data for a ventilation window + exhaust air heat pump solution

- $q_m$  basic ventilation and forced = Enter based on heat pump calculations
- $n_{vgv}$  = set to 0
- $t_i$  = set to 0
- $El_{-vf}$  = set to 0
- $q_n$ , winter = set to 0
- $q_{i,n}$ , winter = set to 0. Infiltration is not present because pressure equalization occurs through the open vents in the ventilation windows. Therefore, infiltration is disregarded.
- $SEL$ , basic ventilation = set to 0, as it is included in the heat pump's input.
- $SEL$ , forced = typically set to  $0,8 \text{ kJ/m}^3$  (provided in the heat pump calculation)
- $q_n$ , summer = calculated by the consultant for the specific project.