

Selecting High Performance Windows

WHAT SHOULD YOU CONSIDER?



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HIGH PERFORMANCE
BESPOKE
Windows & Doors

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WHAT SHOULD YOU CONSIDER?

CHECK LIST

1. What is the whole window U Value not just centre pane value. Make sure the heat conductivity has been calculated according to standard EN14351 for a 1.23m *1.48m opening window pursuant to the rules of standard ENISO 10077-1; double glazed argon-filled, two planitherm ONE selective panes and a Swisspacer U Glazing unit. It is recommended to have an average overall window home U Value not > 1.3 W/msqk.

2. What is the whole window U Value of each door and does the doors have proper certification?

3. What is the Solar gain value (g value)? – g-value is the coefficient commonly used in Europe to measure the solar energy transmittance of glass – called a Solar Factor on some window literature (%) i.e. 53% = 0.53; where 1.0 or 100% represents the maximum amount of solar energy passing through it and 0.0 or 0% represents a window with no solar energy. We recommend values not < 0.50

4. Does the window system meet the following minimum standard & does the manufacturer have test certifications as prove:
 - a. Overall average window whole U Value (not centre pane U Value) should be not > 1.3 w/msqk
 - b. Air Permeability: Class 4 – 600pa
 - c. Water Tightness: Class E1500 – 1500pa
 - d. Resistance to Wind Load: Class 4
 - f. ISO 9001

5. What is the energy consumption of the window? To calculate the energy consumption of your windows (or compare the price offers you have received), you could use the formula developed by the Energy Efficient Building Core Facility of the University of Tartu:

$E = 120 *U_w - 220 *g_w + 45 L(50)$ (kWh/msq per year. Where

U_w – heat conductivity U Value

G_w –Solar Gain (g number)

$L(50)$ – air leaks at a 50 PA pressure difference; measured by an independent laboratory. What is relevant with this formula is that the data needs to be tested. If you cannot get this data from your manufacturer results measured in a laboratory for the air leak, it would make sense to use the air leak value of 6.0 m3/hm2 used in the regulation on minimum requirement for Energy Efficiency.

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WHAT SHOULD YOU CONSIDER? CONT.....

CHECK LIST

- 6. Does this product or company have a responsible purchasing system and certification (wood certified from sustainable sources) with chain of custody certification as proof?
- 7. Is the window system sustainable, what rating does the window system receive in the BRE Green Guide? (Recommend to use products with a A and A+ in BRE Green Guide)
- 8. Does the construction and aesthetics of the product allow producing large glazed screens, for example 2.5*3.5m fixed frames or sliders 5.9m*3m and are these units certified?
- 9. What is the life cycle cost of the windows, how many times will they need replaced in their service life span?
- 10. Does the system and company have a comprehensive 10 year warranty?
- 11. Consider do you really need Tripe glazing – what is the real benefit to you?
 - a. Do you want maximum comfort?
 - b. Do you want to reduce energy savings to a minimum?
 - c. Do you want to protect the environment by helping to recue CO2 emissions?
 - d. Before choosing triple glazing; consider will the window/door system hinges hold the weight of the glass?
 - e. How much solar gain do you want for you home? The lower the G Value the less solar gain, however the lower the G Value the lower the Effective U Value of the window. The effective Value of a window is measured by adding together the U Value and G Value.
 - f. Is the reduction of noise better or worse by using this triple glazed product?



CHECK LIST

- 12. Is the window frame material Naturally Renewable

 - a. If timber does the windows have FCS chain custody Certification?
 - b. class A1-A3?
 - c. If timber, is the timber cross laminated or finger jointed?
 - d. If timber is the timber free from knots?
 - e. If timber does the timber construction give solid strength and stability in door screens to reduce impact loading and vibration and cold spots?

- 13. Is the timber slow grown for 100 years?
- 14. What is the sound Insulation value of the windows? The noise control of glass is measured by the value of noise controlling index R_w , expressed in decibels (dB). The higher the value, the better the glass controls the noise. It is recommended $R_w (C;Ctr) = < 33 \text{ db} (-1; -4)$. Has the noise control been measured according to EN14351 for 1.23m*1.48m openable window?
- 15. What experience does your supplier have in the installation of high performance windows specifically, do they have over 10 years' experience?
- 16. What are the lead times of the windows we recommend not > 5/6 weeks? Every week can cost thousands!
- 17. Transportation of windows – are the window pallets shrink wrapped and have you considered protection of the windows on site after installation?
- 18. Are these windows certified for Security Pass24?
- 19. Is sun degradation of furniture important to you?
- 20. Is automation of windows necessary?





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