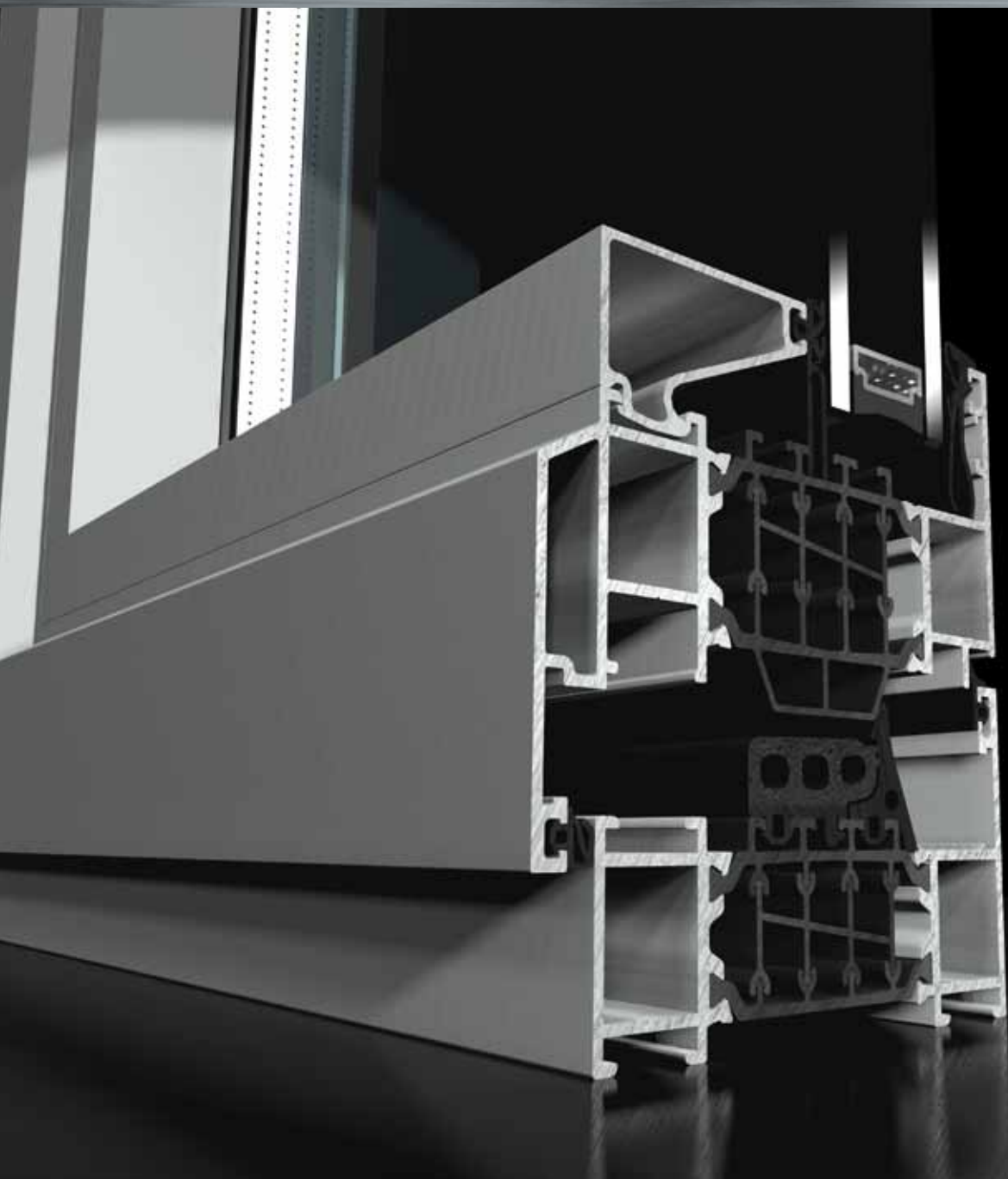


ST80 Extreme Performance Window System



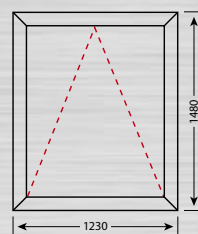
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ST60 High Performance Window System



This window system is available in a variety of different types and styles including tilt and turn, casement, bead in - open out, all complete with a multipoint locking facility for added security. The versatility of the locking mechanism used in this window system allows a design team to incorporate extra large sashes into a façade or window. This system has a polyamide assembly, which ensures that it is thermally efficient. Another advantage of this window is that it offers a choice to specify dual colour configuration. The ST60 system suite also includes parallel push out sashes, multi panel patio and rebate doors along with a numerous re-enforcement mullions and deep transoms.

- Variety of window types
- Dual colour
- Independently tested to current BS EN ISO standards. Air 600pa - Water 1050pa - Static 2000pa
- Large opening sashes can be accommodated



Typical Whole Window U Values

Glass	ST60
0.6	1.42
0.7	1.48
0.8	1.55
1.16	1.80
1.4	2.00
1.7	2.20

These figures relate to the standard EN window configuration of 1230 x 1480 frame with full opening vent. (psi value is 0.039) L2 used for commercial thermal evaluation. All values shown are Wm²/K

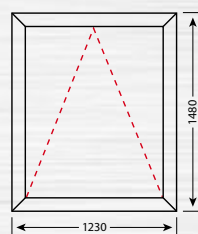


ST70 Super Performance Window System



The ST70 super performance window system uses unique eco-friendly polyamide, allowing it to achieve an excellent thermal performance whether the window is used in an open in or open out configuration. By using a centre seal gasket in all window types the designer can be assured that air leakage rates are significantly lower than the required industry standard of class A3. Along with the ST80, the ST70 window system was independently tested to comply with the most up to date and rigorous test regime-BS6375 part 1 2009. This test pays critical attention to air leakage under both positive and negative pressure cycles, ensuring thermal efficiency.

- Available open in or out
- Dual colour
- Fully tested to current BS EN ISO standards.
Air 600pa - Water 1050pa - Static 2000pa
- Polyamide eco-friendly thermal barrier
- Uf evaluation is bench marked against hot box tests



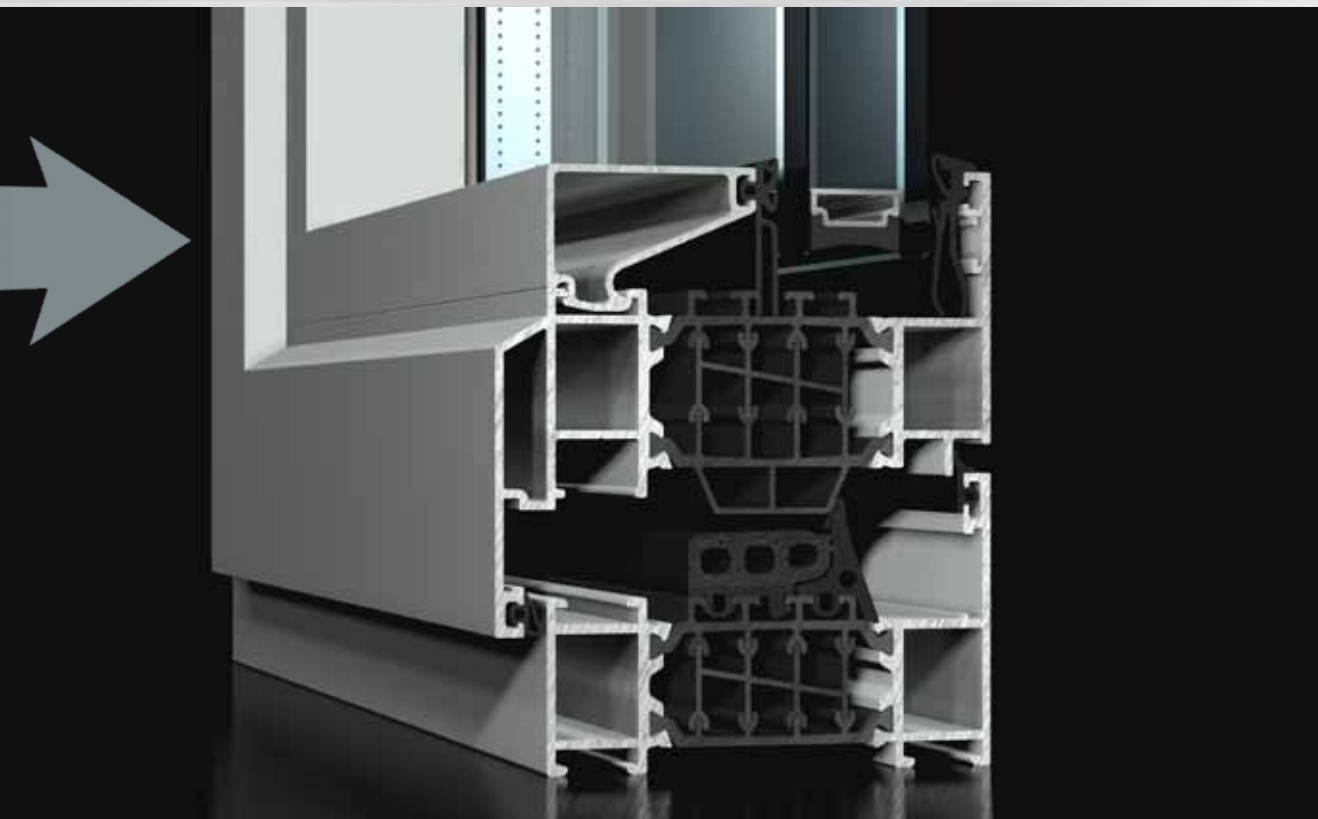
Typical Whole Window U Values

Glass	ST 70
0.6	1.14
0.7	1.20
0.8	1.28
1.16	1.55
1.4	1.70
1.7	1.92

These figures relate to the standard EN window configuration of 1230 x 1480 frame with full opening vent. (psi value is 0.039) L2 used for commercial thermal evaluation. All values shown are Wm²/K



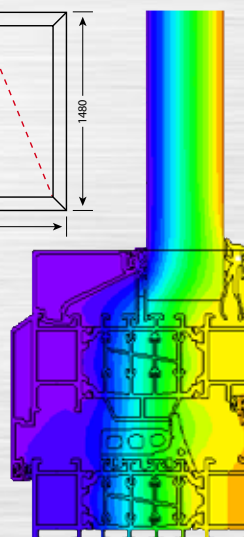
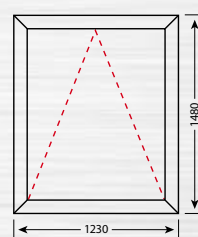
ST80 Extreme Performance Window System



The ST80 is one of the newest extreme performance aluminium window systems on the market. It was designed using the most modern thermal evaluation software. Bench marked using hot box testing, this window system uses the most up to date thermally efficient cores, gaskets and infills available. High thermal ratings are achieved whether the window is open in or open out due to the design of the insulated centre seal gasket. The system has been fully tested to comply with BS6375 part 1 2009 requirements. This window system suits all locations.

- Achieves an extreme thermal performance whether open in or open out

- Versatile multipoint locking systems
- Fully tested to current BS EN ISO standards.
Air 600pa - Water 1050pa - Static 2000pa
- Large variety of bulb mullions are available
- Dual colour



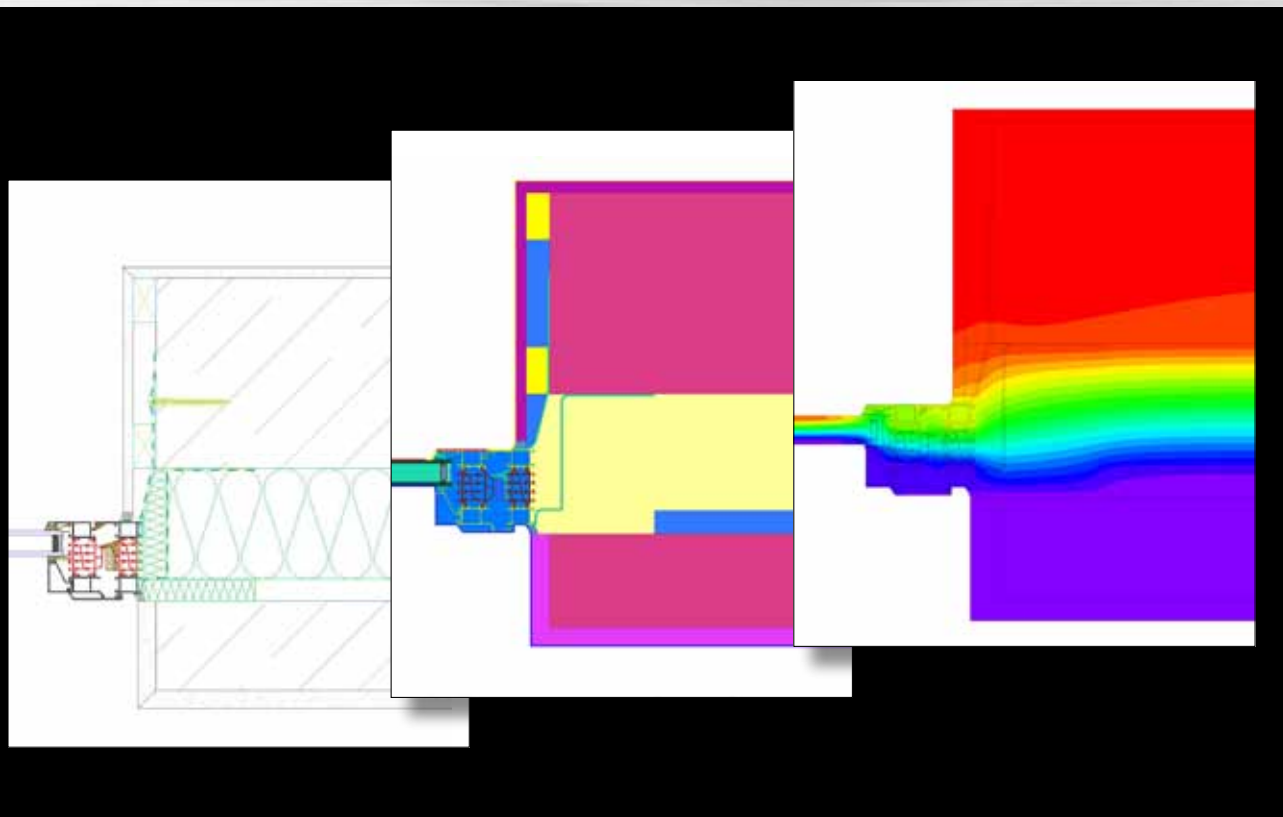
Typical Whole Window U Values

Glass	ST 80
0.6	1.00
0.7	1.07
0.8	1.15
1.16	1.40
1.4	1.60
1.7	1.80

These figures relate to the standard EN window configuration of 1230 x 1480 frame with full opening vent. (psi value is 0.039) L2 used for commercial thermal evaluation. All values shown are Wm²/K



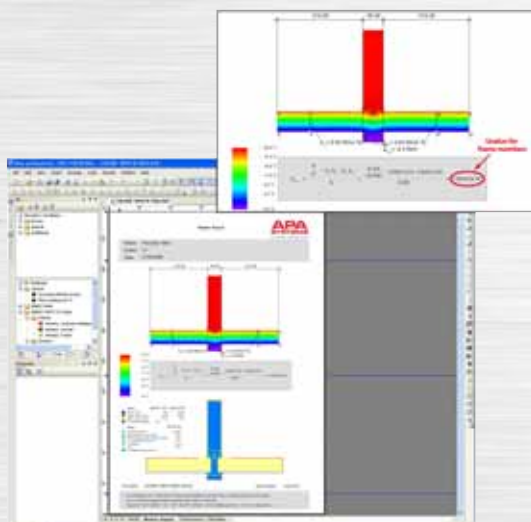
Thermal Performance



To achieve an accurate evaluation for the U-value of a proposed design, overall areas of aluminium framing along with the areas of glass, spandrel panels, plus an allowance for the spacer in the double glazed units need to be calculated and collated into a total area values. The combined total of these values is divided

by the total square metres of the area to get the average U-value for a specific façade or schedule.

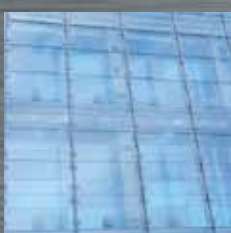
Using **APA-logiKal**, and **Flixo** thermal analysis packages, APA Systems have the software to help you choose the right type of aluminium system and glass to meet with your specifications. The **Flixo** software package evaluates the aluminium framing system along with producing condensation predictions calculations, and **APA-logiKal** evaluates the façade or window schedule and calculates an overall U-value for it.



Typical Whole Window U Values

Glass	ST 60	ST 70	ST 80
0.6 Wm ² /K	1.42 Wm ² /K	1.14 Wm ² /K	1.00 Wm ² /K
0.7 Wm ² /K	1.48 Wm ² /K	1.20 Wm ² /K	1.07 Wm ² /K
0.8 Wm ² /K	1.55 Wm ² /K	1.28 Wm ² /K	1.15 Wm ² /K
1.16 Wm ² /K	1.80 Wm ² /K	1.55 Wm ² /K	1.40 Wm ² /K
1.4 Wm ² /K	2.00 Wm ² /K	1.70 Wm ² /K	1.60 Wm ² /K
1.7 Wm ² /K	2.20 Wm ² /K	1.92 Wm ² /K	1.80 Wm ² /K

These figures relate to the standard EN window configuration of 1230 x 1480 frame and full opening vent. (psi value is 0.039)



APA Systems

Over the past decades APA Systems has become one of the market leaders in the supply of quality aluminium systems. APA supplies an extensive range of high specification aluminium systems to the Irish market. These include curtain wall facades, high performance window, door and modular framed systems. APA's experienced team welcomes the opportunity of discussing designs and solutions with the architect throughout all stages of building projects.

TURNING ARCHITECTURAL DESIGNS INTO REALITY

- Curtain Wall Systems
- Modular Framed Systems
- High Performance Window and Door Systems
- Structurally Bonded Framed Systems
- Solar Shading

Patented products designed and manufactured in Ireland by APA Systems