

## WERS Ratings of Louvre/Fixed Combination Windows

### Breezway Technical Bulletin

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#### Background

A popular window configuration in very cold climates is to position a single bay of louvres on either side of a fixed lite/picture windows (known as a L/F/L configuration). This configuration gives a good combination of ventilation, views and insulation.

Confusion can emerge when comparing the overall U-value of this type of window.

#### How Is The Overall U-value Of A L/F/L Window Calculated?

Single window frames containing multiple window types within that frame are treated as multiple windows when assessing compliance with the energy efficiency requirements of the NCC (National Construction Code). A louvre/fixed/louvre window would therefore be assessed as if it were three separate windows: a fixed window and two louvre windows.

For easier comparison with other window systems, an overall U-value of the window can be calculated on an area weighted average basis using the following formula:

*Overall window U-value = (wt1 % of total window area x wt1 U-value) + (wt2 % of total window area x wt2 U-value) + (wt3 % of total window area x wt3 U-value)..*

Where:

wt1 = window type 1

wt2 = window type 2

wt3 = window type 3

etc...

NB: This area-weighted average is only useful for general comparisons with other window systems and cannot be used for certification purposes.

#### Example Of Methodology

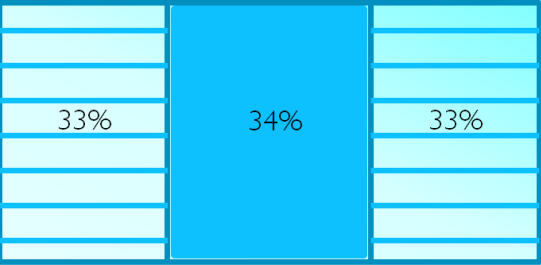
25%	50%	25%
U=4.4	U=4.1	U=4.4

Overall window U-value = (25% x 4.4) + (50% x 4.1) + (25% x 4.4) = 4.3

#### Examples Of Overall Window U-values

Table 1 illustrates some possible overall window U-values for varying configurations and various fixed lite glazing options.

Table 1: Overall Window U-values Of Various Selected Configurations

Window Configuration	Louvre Window				Fixed Lite / Picture Window				Overall Window U-value
	WERS ID	Window Type	Glazing	U-value	WERS ID	Window Type	Glazing	U-value	
	BRZ-006-08	Easyscreen Altair Louvre	6LE	4.4	BRZ-007-08	Easyscreen Fixed Lite	6LE	4.1	4.3
	BRZ-990-08	Easyscreen Altair Louvre with Crimsafe Screen	6LE	3.6	BRZ-007-08	Easyscreen Fixed Lite	6LE	4.1	3.8
	BRZ-006-08	Easyscreen Altair Louvre	6LE	4.4	TND-032-07	Trend Crestlite	6/12Ar/6EA	2.7	3.8
	BRZ-990-08	Easyscreen Altair Louvre with Crimsafe Screen	6LE	3.6	TND-032-07	Trend Crestlite	6/12Ar/6EA	2.7	3.3
	BRZ-006-08	Easyscreen Altair Louvre	6LE	4.4	BRZ-007-08	Easyscreen Fixed Lite	6LE	4.1	4.3
	BRZ-990-08	Easyscreen Altair Louvre with Crimsafe Screen	6LE	3.6	BRZ-007-08	Easyscreen Fixed Lite	6LE	4.1	3.9
	BRZ-006-08	Easyscreen Altair Louvre	6LE	4.4	TND-032-07	Trend Crestlite	6/12Ar/6EA	2.7	3.6
	BRZ-990-08	Easyscreen Altair Louvre with Crimsafe Screen	6LE	3.6	TND-032-07	Trend Crestlite	6/12Ar/6EA	2.7	3.2
	BRZ-006-08	Easyscreen Altair Louvre	6LE	4.4	BRZ-007-08	Easyscreen Fixed Lite	6LE	4.1	4.2
	BRZ-990-08	Easyscreen Altair Louvre with Crimsafe Screen	6LE	3.6	BRZ-007-08	Easyscreen Fixed Lite	6LE	4.1	4.0
	BRZ-006-08	Easyscreen Altair Louvre	6LE	4.4	TND-032-07	Trend Crestlite	6/12Ar/6EA	2.7	3.1
	BRZ-990-08	Easyscreen Altair Louvre with Crimsafe Screen	6LE	3.6	TND-032-07	Trend Crestlite	6/12Ar/6EA	2.7	2.9