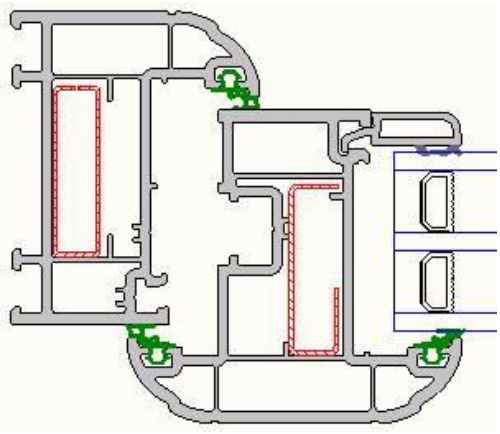
OMEGA windows, doors & conservatories

Triple Glazing

Both the Deceuninck 2800 sculpted suite and the 2500 chamfered suite are available with 40mm triple glazed units.



Detailed section of 2800 Sculpted frame 40mm triple glazed unit and 3138 bead

Standard make up of a 40mm unit

- 4mm outer pane
- *14mm super spacer with 90% argon*[1]*
- 4mm toughened inner pane[*2]
- *14mm super spacer with 90% argon*[1]*
- 4mm outer pane

[*1] *The spacer bars need to be the same width otherwise we are not able to use the super spacer bar robot.*

[*2]*The inner pane is toughened to reduce the risk of the pane breaking due to thermal stress.*

Cross section of 2500 Sculpted frame 40mm triple glazed unit and 3038 bead

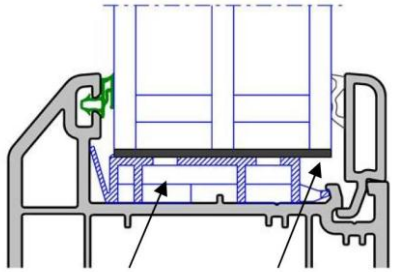
Depending on the make-up of the 40mm unit the u'value will change, the table below shows some of the more common variations: -

Outer pane	Super spacer (with argon)	Inner pane (toughened)	Super spacer (with argon)	Outer pane	Glass U'value	Overall U'value
4mm plani +	20mm			4mm float	1.219	1.4
4mm float	14mm	4mm float	14mm	4mm float	1.7	1.8
4mm plani +	14mm	4mm float	14mm	4mm float	0.976	1.2
4mm plani +	14mm	4mm float	14mm	4mm plani +	0.683	1
4mm plani +	14mm	4mm float	14mm	4mm patterned	0.976	1.2
4mm plani +	12mm	6mm float	12mm	6.4mm lami	0.976	1.2
4mm patterned	12mm	6mm float	12mm	6.4mm lami	1.7	1.8
4mm plani +	12mm	6mm patterned	12mm	6.4mm lami	0.976	1.2

All stats above are based on using a combination of plastic thermal chamber and steel reinforcing.

Important information

- Leads, stains and bevels are all ok
- You cannot have duplex Georgian bar with triple glazing
- Standard 12mm internal Georgian bar is ok– we recommend fitting the bars to the outside of the units. Please note that both sections of the super spacer bar will have slots in even though we will only be using one side.
- Secured by Design jobs will require laminated glass in vulnerable areas
- Door panels, composite doors and vertical sliders cannot have 40mm triple glazing
- It is vital that you use the correct glazing packers so that the glass is fully supported



Reasons to have triple glazing

Save energy and money

Old and single-glazed windows let in the draught and are responsible for high heating costs. The thermal insulation of modern windows is much better than it was a few years ago. A window with single glazing from the early 1980's had an average heat transfer coefficient of approx. 5-6 W/m2K. Today, windows are approx. 1.4 W/m2K, with future u'values of ≤ 0.95 W/m2K already being considered. This corresponds to a saving of more than five times the amount of energy. This is the only way to reduce heating costs and energy consumption effectively. Today, the extra cost for triple glazing is minimal and pay back is quickly accomplished through higher energy efficiency.

Enhanced comfort and cosier living with triple glazing

We all know the feeling. In the cold season we sense a cold air flow in the proximity of windows. We get colder in areas around windows and turn up the heating more than needed. The sense of well-being is not only a function of the room temperature and air flows, it is also influenced by the temperatures of the floor and wall surfaces and also of the windows. A larger temperature difference between the individual surfaces results in the colder surfaces drawing heat off the warmer surfaces. People notice this in the form of skin cooling, and this has an impact on our sense of temperature. Triple glazing has a substantial impact on both the air flow and the surface temperature.

Thermal comfort with triple glazing

Low heat losses that provide us with thermal comfort are due to the high insulating values of triple glazing. In a triple-glazed window the intermediate spaces between the glass sheets are filled with argon which has low thermal conductivity. This means that only very little heat transfers through to the outer glass sheet where it can escape. The temperature at the inside sheets is therefore correspondingly high.

According to a study carried out at the Testing Institute in Rosenheim in which double glazing was compared with triple glazing at an outside temperature of minus 10 degrees centigrade and a room temperature of plus 20 degrees centigrade, the temperature difference was almost 9 degrees. The double glazing had an inside surface temperature of 9.5 degrees, the triple glazing had an inside surface temperature of 17.7 degrees. As a result of the minor difference of the inside surface temperature to the room temperature and the other surface temperatures the feeling of well-being is enhanced substantially. There is no air flow, a "lake of cold air" does not develop putting an end to all shivering near windows. People who are planning a new building or renovation work should seriously consider triple glazing.

Cross sections

Internal and external cross sections of 2500 with 40m triple glazed units

Cross sections

Internal and external cross sections of 2800 with 40m triple glazed units