



LOW-EMISSION GLASSES



GLASS UNLIMITED

THE PLANIBEL LOW-E RANGE

PLANIBEL LOW-E

PLANIBEL G & G fast

The only pyrolitic LOW-E glasses

PLANIBEL G and PLANIBEL G fast are the two pyrolitic products in the PLANIBEL LOW-E range. Both glasses are highly rated for their ease of processing. They are easy to toughen and the coating does not need to be edge-stripped. G fast can be toughened with the coating against the rollers, thus improving cycle times by around 15% and enabling the use of all types of furnace (even radiation models). In addition, its scratch-resistant nature actually improves the toughening performance. PLANIBEL G and PLANIBEL G fast both offer very good light transmission and the highest solar gain in its class (SF = 72%). Lastly, both products can be used in single or double glazing.

PLANIBEL TOP N+ & TOP N+ ζ

NEW!

The best thermal insulation

PLANIBEL TOP^{N+} and TOP^{N+} ζ glasses offer the best combination of thermal insulation and light transmission. The newest arrival in the Planibel LOW-E range, TOP^{N+} is a leading-edge glass. With a neutral appearance, it offers a high light-transmission level and an appreciable solar heat gain. PLANIBEL TOP^{N+} guarantees the best thermal insulation rating in its class, with a value of 1.1 W/(m².K) in an insulating glass unit with 90% argon. Its toughenable version, PLANIBEL TOP^{N+} ζ , is similar in performance and appearance to PLANIBEL TOP^{N+}. This is good news for architects, who can use both products in the same facade. PLANIBEL TOP^{N+} and TOP^{N+} ζ are available on Clearvision for better neutrality and increased free solar heat gain. The TOP^{N+} ζ coat slightly changes its color after toughening but matches the aesthetics of the existing Top^{N+}.

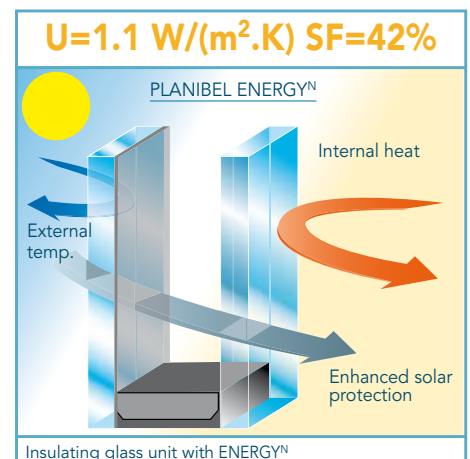
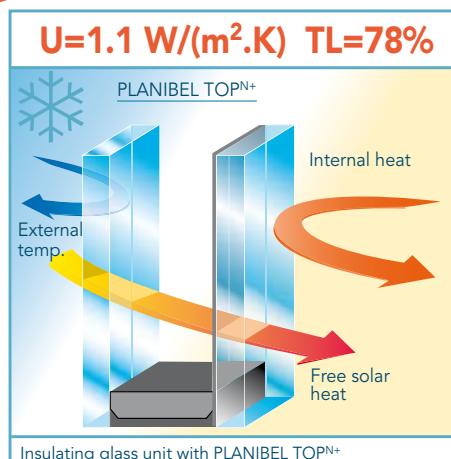
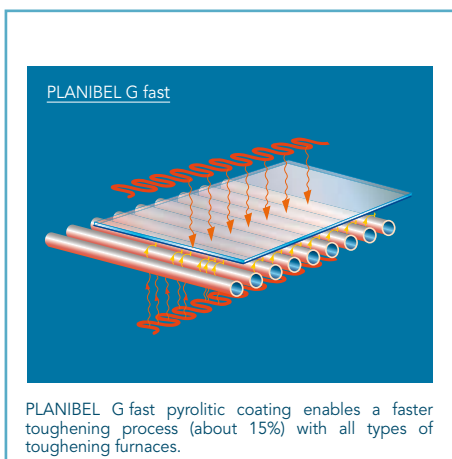
PLANIBEL ENERGY^N & ENERGY^N ζ

Smart glasses for all seasons

This leading-edge product in the LOW-E range combines thermal insulation with enhanced solar protection. ENERGY^N is a 'smart glass', reflecting the sun's heat and insulating against the cold. In addition to a thermal insulation rating of 1.1 (90% argon), it offers the lowest solar factor in its class (SF = 42%). This innovative glass helps enhance quality of life in both summer and winter, while protecting the environment and reducing energy bills. ENERGY^N is totally neutral, as is its toughenable version, ENERGY^N ζ . Both products offer an ideal solution for architects and designers, who can combine them as they see fit. In addition, ENERGY^N ζ can be bent and screen-printed (under certain conditions).

NEW!

In the ζ version alone, the new protective AGC coat guarantees better scratch resistance during transport and processing.





PLANIBEL LOW-E: LOW-EMISSION GLASSES

The range of coated glasses from AGC Flat Glass Europe* is not only the most extensive available, but is also undergoing improvements in terms of technical specifications (solar control, thermal insulation), appearance and processing options.

Owing to AGC's policy of ongoing research, processors and architects now have access to pyrolytic- and Magnetron LOW-E glasses that can be toughened, bent and screen-printed. These advances mean that processors can offer their clients enhanced service, faster turnaround and shorter replacement times. They also open up interesting avenues for architects and facade designers.

All of these glasses offer a neutral appearance and a high light transmission rating. The metal oxide particles in the coating reinforce the insulating properties of the glass, thus improving the building's energy balance.

* in this document, AGC stands for AGC Flat Glass Europe

Comparative performance table for the PLANIBEL LOW-E range

	G & G fast	TOP N+ & TOP N+℄	ENERGY^N & ENERGY^N℄
Type of coating	pyrolytic	magnetron	magnetron
Neutral appearance	●●●	●●●	●●●
Light transmission	●●●	●●●	●●●
Low light reflection	●●●	●●●	●●●
Thermal insulation	●	●●●	●●●
Solar protection	●	●	●●●

Processing options

	G & G fast	TOP N+ & TOP N+℄	ENERGY^N & ENERGY^N℄
Laminated	x	x	x
Double glazing	x	x	x
Toughened			
Bent (*)	G & G fast	TOP ^{N+} ℄	ENERGY ^N ℄
Screen-printed (*)			
No edge stripping	x		
Single glazing	x		
Always in stock	x		

(*) some conditions do apply

PLANIBEL LOW-E : Overview of performance and availability of the range

Insulating glass unit 4-12-4mm

		G (#3)	G fast (#3)	TOP N+ (#3)	TOP N+∠ (#3)	ENERGY N (#2)	ENERGY N∠ (#2)
LT (%)		74	74	78	80	71	75
LR (%)		17	18	13	13	12	13
SF (%)	EN 410	72	72	60	64	42	45
U _g value - W/(m ² .K)	90% argon	1.6	1.6	1.3	1.3	1.3	1.3

Insulating glass unit 4-15-4mm

		G (#3)	G fast (#3)	TOP N+ (#3)	TOP N+∠ (#3)	ENERGY N (#2)	ENERGY N∠ (#2)
LT (%)		74	74	78	80	71	75
LR (%)		17	18	13	13	12	13
SF (%)	EN 410	73	72	61	64	42	45
U _g value - W/(m ² .K)	90% argon	1.5	1.5	1.1	1.1	1.1	1.1

Abbreviations: LT: Light Transmission; LR: Light Reflection; SF: Solar Factor; U_g value: Thermal transmittance of the glass.
The # symbol indicates the position of the low-emissivity coating in the double glazing composition.

PLANIBEL LOW-E: Availability in single glazing

(mm)	3	4	5	6	8	10
G	x	x		x		
G fast		x				
TOP N+	x	x	x	x	x	x
TOP N+∠		x		x	x	x
ENERGY N		x		x	x	x
ENERGY N∠		x		x	x	x

PLANIBEL LOW-E: Availability in laminated units STRATOBEL

Composition⁽¹⁾	33.x	44.x	55.x	66.x	88.2	1010.2
	1-2-4 PVB	1-2-4-6 PVB	1-2-4 PVB	1-2-4 PVB	2 PVB	2 PVB
G	x	x		x		
TOP N+	x	x	x	x	x	
ENERGY N		x		x	x	

(1) Stratobel 66.x comprises two 6mm-thick sheets where x stands for the number of clear PVB interlayers possible (1, 2 or 4 interlayers in this specific case).
Compositions are given by way of example. Please contact your AGC representative for exact delivery times and conditions.

Visit www.yourglass.com for more complete and recent information on our range of PLANIBEL LOW-E products (technical performance, availability, processing guides). Click on "Brands" and then "PLANIBEL LOW-E".

