



## CA Gemini

A New, low cost, Roof and Wall solution from CA

In 1995 CA Group launched their Twin-Therm® built up roof and wall cladding system. Its introduction revolutionised the way in which the building envelopes were designed, delivered and installed. At that time most built up assemblies supplied and installed were put together by the roofing contractor with absolutely no understanding as to how these assemblies would perform, structurally, thermally or safely.

The key funders and developers began to demand systems that would stand the test of time. Elevations that would be supplied from the same material, ensuring that they weather at the same rate and continue to give pride to the building's appearance.

The mid 90's and early 00's experienced many serious and fatal accidents resulting from falls through roofs exposing the building owner to litigation on behalf of the Health and Safety Executive. Finally, these same clients were aware that future legislation in the form of building regulation change would make it more difficult for buildings to comply with these changes and maintain the value of their investment. This introduced a number of major issues which caused concern for developers, designers and specifiers such as:

- Would the assembly prevent falls through roofs?
- What was the delivered U-value ?
- Was the insulation installed continuously without gaps?
- Was the system non-combustible and in the event of a fire would the insulation contribute to the fire load and/or emit toxic noxious gasses as most other systems did?
- Was a meaningful guarantee offered?
- Was there any significant cost in disposal to the assembly at the end of the building's life?
- What was the environmental impact of the assembly?

The launch of Twin-Therm® eliminated most of these risks.

Today Twin-Therm® contributes to the delivery of "A-rated" buildings as a result of extremely low air leakage rates (tested down to 1.03m<sup>3</sup>/hr/m<sup>2</sup>@50Pa ). Rooflight U-values at 1.3 W/m<sup>2</sup>-k and thermal bridging virtually eradicated, all at no cost saw client and specifier delivering extremely high performance buildings.

The current economic climate is demanding further reduced costs, which is seeing extreme pressure imposed on some roofing contractors and designers who aspire to continue to design and deliver better buildings. CA and its customer base cannot ignore this demand as and when appropriate to deliver a lower cost offering.

To this end CA has launched the "Gemini" system to compete with the vast majority of assemblies being offered to main contractors to reduce cost whilst at the same time not compromising on the critical needs of the application.

Today, we offer four systems, they are as follows:

### Twin-Therm® 40

Twin-Therm® as you know it but all external sealants of a higher grade to contribute towards the 40 year system life. The only other variations are the internal and external rooflights which are of a different composition and thickness. This is a more expensive rooflight assembly than the Twin-Therm® 25 year option. This delivery complements the Corus Confidex® 40 year system and maintenance free coating introduced in 2008 and allows the client/specifier to have comfort that the entire roof or wall is covered for up to 40 years depending upon colour and building location.



## CA Gemini

A New, low cost, Roof and Wall solution from CA

### Twin-Therm® 25

Twin-Therm® as it is today, complete with Corus Confidex®

### Twin-Therm® 12

Twin-Therm® as it is today, complete with Corus Confidex®

### Gemini

Gemini is a low cost option that is equal to all other built up systems and the changes to standard Twin-Therm® system are as follows:

1. An industry standard liner panel ridge flashing is offered rather than the crank which on the face of it saves money on material. The contractor needs to be aware that this option requires fillers and lots of sealant and the detail does not perform in terms of air tightness as well as the T-crank ridge.
2. The spacer arrangement does not include Therma-block. We have developed a plastic spacer which is conical. 45mm diameter at the base, 35mm diameter at the top. At the top of the block the hole is feathered to allow the roofing contractors to pre-assemble the bar to the plastic spacer. The feathers prevent the screws falling out whilst being transported on to the roof or along the roof, similar to the existing T-block. Common to all other spacer systems there is a cold bridge resulting from the head of the fastener being in contact with the spacer and then being driven into the purlin, unlike T-block which isolates the T-bar from the fastener, eliminating the cold bridge.
3. The insulation is standard cladding roll, 1200mm not 1030mm wide and has no slits in its length and silicone on the top and bottom of the roll. Therma-quilt on the other hand has silicone on every fibre and is slit appropriately to allow the insulation to be installed continuously, thus ensuring there are no gaps on the roof at all.
4. Rooflights are sourced directly by the roofing contractor. Therma-lights are made specifically for CA's Twin-Therm® system, as Twin-Therm® is a dedicated system always using the same components and tested to an extreme test procedure, a Class B Non-Fragility (to ACR[M]001:2005) is offered using 6oz (or 1.83kg/m<sup>2</sup>) over 8oz (or 2.44kg/m<sup>2</sup>) GRP in the construction. The National Association of Rooflight Manufacturers (NARM) insists that if Non-Fragility is being given by them, then the rooflight has to be 8oz over 8oz (or 2.44kg/m<sup>2</sup>) GRP.
5. The guarantee offered by CA Group for the Gemini built up system is 12 years maximum. It is anticipated that when this system is selected, it is done so on price and we believe that the Corus Colorcoat® LG range will be selected. The guarantee is given to the customer, not the client which is different to the guarantee with Colorcoat HPS200® Ultra which is given direct to the client.
6. Corus Confidex Sustain® cannot be offered with Gemini.



## CA Gemini

A New, low cost, Roof and Wall solution from CA

Liner Panel Components	
Liner Panel: Colourcoat® Lining Enamel	CA LT 17 1000S
Ridge Detail	Ridge flashings & fillers
Fastners	Carbon Steel
Sealants side & end laps	T-strip & T-foil Plus
Profile Fillers	PEL T-Fill
Profile Fillers Sealant	T-butyl
Non-fragility (ACR[M]:001 - 2005)	Class C

Spacer System Components	
Galvanised Steel Spacer x 1.5mm Thick	Z-bar 60G
100mm deep plastic spacer	PS100
Plastic space fasteners	Carbon Steel
Insulation	CR180
Insulation Continuous	NA

External Skin Components	
External Profile	CA 32 1000R: Colourcoat LG™ or HPS200® Ultra or alternative
Fastners	Carbon Steel
Sealants side & end laps	T-strip
Profile Fillers	PEL T-Fill
Profile Fillers Sealant	T-butyl
Non-fragility (ACR[M]:001 - 2005)	Class B

Additional Information	
Sequential sheet packing	Yes
CAG System Guarantee	Up to 12 years
Coating Guarantee	Corus LG: Up to 25 years profilers Guarantee Corus Confidex®: Up to 40 years
Confidex Sustain®	No

Rooflight Components: Liner	
GRP liner to suit	8oz / 2.44kg/m <sup>2</sup> (NARM)
GRP liner supplied by CABP	No
Fastners	N/A
Sealants side & end laps	N/A
Spacer system installed for Non-fragility	N/A
Additional fasteners for Non-fragility	N/A
Non-fragility (ACR[M]:001 - 2005)	Class C (NARM)

Rooflight Components: Intermediate	
Intermediate core to suit U-value	Yes
Intermediate core supplied by CABP	No

Rooflight Components: External	
GRP top sheet to suit CA 32 1000R	8oz / 2.44kg/m <sup>2</sup> (NARM)
GRP top sheet supplied by CABP	No
Fasteners	N/A
Ext profile sealants side & end laps	N/A
Non-fragility (ACR[M]:001 - 2005)	Class C (NARM)