Delmar Betsinor Haute Couture Cladding



COMPANY

Delmar Groupe is a family owned industrial group based in Belgium, and is one of the market leaders in the production of precast concrete elements.

> Delmar, based in Comines (Belgium) with a subsidiary in Troyes (France), specialises in the design and manufacture of concrete stairs and balconies. Being the founder of the precast balanced stair, we later widened our range to include straight stairs and landings. Today we can offer a full range of precast products including balconies and wall elements.

Since our establishment 25 years ago, we have built up a permanent customer base of both large and small contractors, mainly in Belgium, France, UK and Switzerland. Our customers choose Delmar for high quality, customer service and on-time delivery.

Betsinor is a leading French producer of architectural elements in GRC and UHPC (Ductal®), purchased by the Delmar Groupe in April 2017. From our modern production facility, built in 1985 at Courrières (62), France, we can make even the most complicated concepts become reality. Possible in any colour

and with a vast range of textures available, the only limit is the imagination!

Due to the boundless possibilities of glass fibre reinforced concrete and ultra-high-strength concrete, the architect is given the freedom to sculpt a façade. Organic, refined 3D shapes or massive monolithic features are all there to be realised.

GRC and UHPC are not confined to new builds. They are perfect for renovating of facades, giving older buildings a new, modern look and insulating them according to current standards.

Betsinor is a full member of GRCA and our GRC and UHPC ranges have CSTB technical assessments. The material is non-combustible and highly impact resistant, but also suitable for seismic regions. Delmar Betsinor is the only European producer of GRC panels certified for high rise buildings in France.



Arc de Triomphe, Paris - Stairs in UHPC

BELGIUM

Shopping Center Waesland, Sint-Niklaas - Façade in GRC elements

Courthouse, Antwerp -Facade in 3D GRC elements

Toison d'Or, Brussels -Facade in GRC elements





The Corniche, London - Curved GRC elements

Courthouse, Antwerp - Facade in 3D GRC elements



Centre Culturel, Monéteau

FRANCE & INTERNATIONAL

Montrouge Silvae (Credit Agricole), Paris - Facade in structured GRC elements

Rex Beaujon (Parking), Bordeaux - Facade in UHPC perforated elements

Bagnols-sur-Ceze (Hospital), Bagnols - Facade in GRC elements

Arc de Triomphe, Paris -Stairs in UHPC

Tour de Lyon (new Marriott hotel), Paris - Facade in curved GRC elements

Opera house, Astana (Kazachstan)

Sphere at the new library of Alexandria, Egypt

Railway maintenance centre, Zurich (Switzerland)

Lehrter Railway station, Berlin (Germany)

KEY FIGURES DESIGN WITH GRC

Dimensions Up to 18m² in one panel (or 24m² for Ductal panels)

GRC Grade 18

MOR Modulus Of Rupture: 24 N/mm²

LOP Limit Of Proportionality: 9.6 N/mm²

Ratio With a ratio of 1:3 (width vs height)

Joints size Between 12- 20mm (ideally: 15mm)

Thickness 12-15mm current thickness + 80 - 120mm stiffening ribs = 100mm installation space

Sphere at the new library of Alexandria





Weight 60-70kg/m²

Moulds Optimal use of moulds for cost efficiency: 50 times/ each mould

Section of a panel with return: Return R = **500 mm** MAX



Plan of a U-shaped panel (columns): Inside space S = **250 mm** MIN







Delmar Betsinor 8, Northumberland Avenue London WC2N 5BY

French headquarters 57 rue du Lieutenant Giard 62710 Courrières, France www.betsinor.com +33 (0)3 21 13 75 57 info@betsinor.com

Part of the Delmar Group 44 route des Ecluses, 7780 Comines, Belgium www.delmarprecast.co.uk