Performance glass for rail
(rolling stock and infrastructure)
You imagine, we deliver

Romag will work with you, every step of the way

2_3 Bespoke design and manufacture
4_5 Extraordinary projects
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12 Innovative Solar PV
Bespoke design and manufacture

With over 70 years’ experience, Romag has a history of processing glass in innovative ways to meet the specialist and sometimes complex needs of our clients; an ‘all inclusive’ service provider, we will work from concept, to design and build, right through to installation and beyond. Romag will work with you, every step of the way.

Precision  Romag is a world leader for innovation in glass. Many of our clients have come to us needing solutions to seemingly impossible problems. Our technical design team has the specialist experience and know-how to keep pace with transportation innovation and we take customers’ exacting new specifications and standards on board to develop the very best solution.

Doing so, Romag have secured many design and build contracts, like the asymmetric, compound curved windscreen for Bombardier’s Crossrail. Curved in all directions it is typical of the way we shape glass conform to incredibly demanding parameters in contours, composition and quality.

Performance  Our continual investment in new technologies ensures we provide bespoke, reliable solutions of the highest quality that keep us ahead of our competitors and our customers at the forefront of their markets.

Whether it is a train or tram windscreen, glass for side body doors and windows, internal glass and headlights or attractive architectural, structural or security glass for stations; these are all solutions that Romag as an expert glass processor has successfully delivered – from idea conception to installation. Every job is bespoke, but bespoke doesn’t always mean small quantities; for example we are set to produce 13,514 double-glazed passenger side windows for 886 carriages for the 65 trains that will run on the UK East Coast and Great Western main lines.

Whatever the scale of your project, Romag’s industry-leading design team and multi-skilled, highly experienced workforce will provide high quality glass that gives you the edge in your market.

Protection  Romag’s long standing tradition of innovation in glass was established in 1943 during the manufacture of flying goggles for the RAF. Since then, investment in technologies and machinery has meant that Romag are one of the world’s leading processors of security, architectural and transport glass.

We firmly believe that our glass not only needs to look good, but it must provide outstanding protection against a specified threat level. Throughout the design process our products are tested to their limits. For instance, the windscreen on Bombardier’s latest London tube trains have an incredibly complex curved profile. It took five months for us to develop the tooling to build and bend them, layer by laminated layer and over 30 different impact tests at our in-house testing facility to prove their resistance and resilience.

Today’s demands for high quality glass with excellent optical and visual appearance requires the best production facilities. Hence we have a suite of temperature and humidity controlled clean rooms to ensure glass laminates are of the highest quality - every time.

Romag is an ISO: 9001 and ISO: 14001 factory, and all our products are fully tested and certified independently to European standards. Our expertise in the rail industry has meant we have secured ‘design and build’ contracts with world leading manufacturers including Hitachi Rail Europe and Bombardier, and Romag are a preferred supplier for Siemens.

Bespoke glass luggage racks and draft screens for Hitachi

Tinted, printed and shaped architectural glass for Deansgate – Castlefield tram station

Romag supplied the side body windows on this AT200 commuter train

Precision  Romag is a world leader for innovation in glass.
Romag have an in-house testing facility for the development of new products.

The complex, asymmetrical, compound curve windscreen for Crossrail was developed at our County Durham factory.

Romag offer the capability of heating both flat and curved glass for rapid de-icing and de-fogging to ensure the driver’s vision is not compromised. This can be produced through the use of coatings on the glass surface or micro fine wires inside the lamination. Heating is designed to the client’s specification to achieve the required power density over a range of voltages.

Impact Resistance. Romag are proud to have an onsite testing facility enabling us to test our products to the latest standards GM/RT2100 BS EN 1512, GM/RT2456 and BS857 as well as many others that predate them. The testing centre is highly technical, allowing us to simulate real-life situations in different climates including extreme hot and extreme cold, and clients are invited to be on site to witness the testing process. The test facilities include a dedicated air canon capable of propelling impactors to rail industry standards. Custom designed impactors can also be produced on request to specification. Other facilities includes hard body drop and saving tyre impact testing whilst additional test equipment can be designed to specification.

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Romag secured a long-term supply with Bombardier for the windscreens for Crossrail.

Romag are in possession of Europe’s largest 360° water jet cutter. Custom built, the machine allows us to cut custom shapes out of laminated glass, increasing precision and speeding up our production processes and output capabilities.

Bends and Curves. Romag's production capabilities in curved glass are unmatched. We have the technical expertise and machinery to produce the most complex of shapes without compromising optical quality. The mould preparation is a highly skilled process conducted by our dedicated fabrication team. Every curve requires bespoke tooling and we also have the ability to produce curved glass to templates.

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Romag secured a prestigious, long-term supply contract with Bombardier (Derby) for train windscreens for their new Aventra platform. This contract win is further testament to Romag’s ability to work closely with our customers to develop bespoke glass solutions to resolve complex technical problems. As can be seen from the images on pages four and five, the large, framed, double curved, heated windscreen was designed specifically for the new Aventra train platform.

Romag won a significant contract with Hitachi Rail Europe for work on the Intercity Express Programme (IEP) trains on the British East Coast Line. The new fleet of trains are being manufactured at high tech plant in Newton Aycliffe and Romag supply the high performance glass for the body side windows. The high performance glass meets and exceeds regulations and expectations including containment post impact, telephone attenuation, pressure pulse testing and small missile impact resistance.

Romag continues to develop and supply high quality compliant glass for the rail industry and have recently been awarded global supplier approval by Siemens. This has led to Romag’s unique project management approach being used to develop a number of new, on-going projects for Siemens in the UK, Germany and Austria and re-engineering existing rolling stock projects to maintain current supply of existing glass to Siemens services.

Romag’s willingness to adopt new standards such as IRIS and DIN 6701 has also played a major part in becoming an approved supplier to such a prestigious customer.
Elegant architecture

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Glass and solar in rail architecture. Romag are proud to be a one-stop-shop for all glass requirements in the rail industry, this includes curved, printed or coloured architectural and security glass for stations and train stops including innovative solar PV to meet carbon reduction targets.

Romag have a reputation for innovation and product development. We draw upon a wealth of resources to meet the most complex of specialist glass and solar PV needs. Romag’s unrivalled capability ensures we are able to make a promise, we will prove the performance you ask, with the precision you specify and the protection you can trust, with a brilliance only Romag can supply.

St Peter’s Square in Manchester has undergone a multi-million pound redevelopment. Romag manufactured the green tinted glass panels that form four eye-catching canopies for passengers sheltering from the elements on two newly built platforms, designed by German architects Latz + Partners.

Manchester Victoria has just undergone a £44 million redevelopment and Romag supplied the clear glass balustrading of a new bridge that links the station with the adjoining arena. The bridge completely transforms the layout of the concourse, making it easier for train, tram and arena customers to travel around the station. The 60m bridge is fully accessible, offering new and modern retail space at the heart of the station.

Romag are experts in architectural glass, from toughened heat soaked to physical attack resistance, bolt resistance and beyond.
Deansgate Castlefield tram station  An oasis right in the heart of Manchester, the Deansgate-Castlefield tram station has successfully undergone a complete transformation. Romag supplied glass balustrading for an impressive staircase to the station that incorporates a living wall, as well as printed and shaped glass for a specialised island platform. The redevelopment of the station has transformed the station into a greener environment; a breath of fresh air within the city.

Exchange Square tram station  High performance shaped architectural glass from Romag was specified as an eye-catching feature on a new passenger stop completed for Greater Manchester’s Metrolink tramway system. More than 132 sq.m of clear glass laminate was supplied by Romag for the Exchange Square stop in the city centre, where it will provide an attractive protective canopy for passengers sheltering from the elements. The final design was specifically produced using 17.5mm toughened heat soaked laminated glass, drilled and shaped. Transport for Greater Manchester (TfGM) and Manchester council opted for the stop’s design because it will make the most of the limited space in Exchange Square, whilst keeping plenty of room for pedestrians.

Romag glass transformed this urban Manchester staircase to an oasis in the heart of the city

Romag printed and shaped glass is an impressive embellishment to this Manchester tram stop

Architectural
Innovative Solar PV

King Cross Station  Romag were tasked with creating bespoke Building Integrated solar panels (BIPV) for Kings Cross Station, that combined the very best in modern design, technical excellence and sustainability in the redevelopment of the iconic Grade 1 listed building.

The technology involves solar cells in a custom, frameless glass laminate and fit to the glass ceiling in a seamless design that respects the integrity of the original structure. The 1392 panels produce 175,000kWh of electricity each year, saving over 100 tonnes of CO₂ emissions per annum.

Romag will work with you, every step of the way
The achievements shown in this brochure are the latest examples of how Romag continually push the boundaries of what is possible with glass. As far as your imagination takes you, Romag has the unique experience, technical expertise and creativity to develop and deliver the perfect bespoke solution - to the highest standards of performance, precision and protection.

Let’s start exploring the possibilities together.