

DURASTEEL® DELIVERS SAFETY AND SUPPORT FOR MANCHESTER AIRPORT EXPANSION PROJECT



Transforming safety at a world-class transport hub

Promat played an integral role in the £1bn Manchester Airport Transformation Programme (MAN-TP), a major infrastructure initiative designed to expand and modernise the airport throughout the early 2020s. The scale of this transformation, including a brand new Terminal 1, the doubling of Terminal 2, and significant upgrades to Terminal 3, reflects Manchester Airport's ambition to become a world-class transport hub capable of meeting future passenger demand and operational resilience.

As part of this expansion, eight new transformer units were installed to upgrade the airport's electrical supply, a vital component for uninterrupted operations. To ensure these transformers were fully protected, Promat was brought in to deliver a high-performance fire and blast protection solution using its trusted DURASTEEL® system. Our involvement was far more than just supplying materials; it was about applying deep technical knowledge and specialist support to overcome complex design and safety challenges.

Solving complex challenges with DURASTEEL®

The transformer buildings required a solution that could safeguard the airport's critical infrastructure against both fire and explosion, a necessity in such a high-risk and strategically important environment. While these buildings are physically separate from the passenger terminals, any incident affecting the transformers could disrupt power supply across the airport, posing a significant threat to safety and operations.

The design challenge was not just about protection, it was about adaptability. The ceiling system needed to self-span large areas without structural support from above, while withstanding maintenance loads from personnel, accommodating suspended services like lighting and ductwork, and incorporating movement joints where the ceiling met the walls. This combination of requirements called for a solution that few materials on the market could deliver. That's where Promat's expertise made the difference. Engaged early in the project, we worked directly with the architects and structural engineers to recommend a bespoke ceiling solution using DURASTEEL®, a system with proven performance in both fire and blast resistance. The ceiling was engineered to meet a 60-minute fire rating and to absorb blast energy without failure, a critical requirement in a high-risk, high-traffic environment like an international airport.

Our technical team also supported the structural design process by providing access to Promat's proprietary blast modelling software. This allowed the engineers to validate and fine-tune their designs with confidence, ensuring that the final specification would perform as required under real-world conditions.



Precision installation meets structural demands

Installation of the system was managed by The Invicta Group, working in close coordination with third-party fire and structural engineers. Over 300m² of DURASTEEL® was installed across the transformer rooms.

Unlike conventional ceilings where drop rods are used to fix fire-resistant boards to a concrete

slab above, this project required the ceiling to double as a floor, able to bear the weight of maintenance crews walking above, while also supporting mechanical and electrical systems hung beneath. Thanks to the inherent strength and durability of DURASTEEL®, the boards were successfully fixed to the surrounding steel frame, delivering the necessary performance in a space-efficient manner.

Upon completion, Promat's technical team conducted an on-site inspection to certify the installation. This step ensured the ceiling system was installed in line with our guidelines, met all third-party certification requirements, and adhered to the structural engineer's design criteria.



Proven performance, trusted partnership

Manchester Airport's transformer buildings posed a rare and highly demanding combination of structural and safety challenges. The success of this project showcases the flexibility, strength, and proven performance of the DURASTEEL® system, but more importantly, it highlights Promat's value as a trusted technical partner. As Benn Larkin, Sales Manager at Invicta, noted:

"Overall, this was a successful installation closely coordinated with the project team, and was completed well within the required timeframe for energisation of certain areas/rooms."

By partnering with Promat, Manchester Airport benefitted from more than just high-performance materials, they gained access to decades of expertise in passive fire protection, specialised technical support, and complete confidence that the solution would deliver under pressure.

When safety, reliability, and performance matter most, **trust Promat as your partner.**







