

TROX UK INVESTMENT PAID DIVIDENDS FOR THE CO- OPERATIVE'S PRESTIGIOUS BREEAM 'OUTSTANDING' HEAD OFFICE

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TROX UK's investment in manufacturing technology and R & D helped the company secure and deliver a prestigious £2.3 million order for The Co-operative Group's head office.

One Angel Square in Manchester is a landmark commercial building delivered by BAM as main contractor. Reflecting The Co-operative Group's commitment to environmental sustainability, when it was officially opened last year by Her Majesty the Queen, it was awarded the highest ever BREEAM Outstanding score of 95.16%. The building is expected to operate with at least an 80% reduction in carbon emissions, and a 50% reduction in energy consumption compared to the Co-operative's previous estate.

The Co-operative Group's aim is to set a sustainability benchmark for every other UK business, and to showcase what can be achieved through a socially responsible approach to design and construction. The 15-storey building incorporates a soaring open atrium and a double skinned façade to maximise the carbon reduction opportunities of natural heating, cooling and lighting. It features pioneering technology throughout including heat recovery systems from the atrium and a ventilation system that uses three large earth tubes beneath the building to help adjust the temperature of incoming air. Energy is also generated on-site by a CHP (combined heat and power) plant fuelled by rapeseed oil.

To meet the demands of this environmentally significant project, a supplier was needed that could provide equipment with leading edge energy efficiency performance and outstanding technical support. In today's economic climate, it was also crucial that the company could provide customised equipment with competitive pricing, within tightly-controlled schedules, and with the benefits of off-site manufacture.

TROX UK was able to meet all of these requirements to win the £2.3 million order, and products were off-site manufactured at its factory in Thetford.

"This was a superb contract for us at TROX UK to be involved in, and cuts straight to the heart of our company focus in terms of helping customers achieve energy and building efficiency," said TROX UK's sales director, Neil Addison.

"We formed a great working relationship with all those involved in the extensive project and were pleased to be able to serve them with off-site manufacture as a result of our excellent UK manufacturing facility in Norfolk."

TROX HVAC systems have since been installed on all fourteen storeys of office accommodation as well as for the basement car park of the new head office. TROX equipment is also installed in the site's restaurant, leisure facilities and internal atrium.

The systems supplied included 6000 linear metres of multi-service passive chilled beams (MSCBs), in several different dimension variants, as well as 450 linear metres of feature rafts containing luminaires for the 8th floor restaurant, entrance area and café. Grilles, diffusers and displacement units were also supplied as a separate package.

Ongoing investment in product development by the TROX Group over recent years meant that the company was able to offer the customer a combination of industry-leading energy efficient products, proven reliability and comprehensive technical support. During the design phase, full scale mock-up beams were put through demanding performance tests under controlled conditions in the TROX laboratory to provide the architect and contractor with data confirming the performance and effectiveness of the chilled beams ahead of installation.

To ensure accuracy, TROX had a coffer manufactured for use in the laboratory tests which would replicate those to be used on site. The mock-up also enabled the architects to assess the visual impact of the chilled beams, which had been designed specially to suit the distinctive interior design of the new building.

In addition, TROX's programme of investment in manufacturing technology meant that the company was able to meet significant production challenges presented by the project. These

included the scale of the project, the speed of manufacture/delivery and the complexity of the products to be supplied.

Most of the chilled beams were provided to site in single assemblies 4500mm long by 1700mm wide, ready-assembled and complete with header pipework, valves, lights, sensors, PIRs and detectors. The volume of equipment required for the project meant that, between June 2011 and January 2012, on average, one articulated lorry-load of TROX equipment was being delivered to site each day in line with the project schedule. As the MSCBs were manufactured to unique designs with a number of variants, the project demanded both high capacity manufacture and extremely high levels of production flexibility.

In this project, perhaps more than any other to date, TROX's two recently-installed fully-automated Trumpf punch presses came into their own. As well as having increased production capacity at the factory by around 60% since their installation, the presses have perfect repeatability. This means they can increase throughput at the same time as ensuring that the extremely tight tolerances and stringent quality standards demanded by TROX continue to be met.

The company's recent £600,000 investment in CAM (computer aided manufacture) equipment, also enabled the company to rise to the challenge. The equipment, which includes an advanced technology Salvagnini panel bending machine, creates components for the TROX range of chilled beams in a third of the time, and provides exceptional levels of flexibility for cost-effective manufacture of customised products and variants.

Mr Addison added: "Projects of this nature, for significant corporate brands, are made possible because of TROX UK's constant commitment to R&D and to its huge effort in recruiting, developing and retaining the right professionals.

"We look forward to yet more large-scale undertakings of this nature."

ISSUED BY:

TROX UK Ltd
Caxton Way
Thetford
IP24 3SQ
Tel: 01842 754545
Fax: 01842 763051
www.troxuk.co.uk