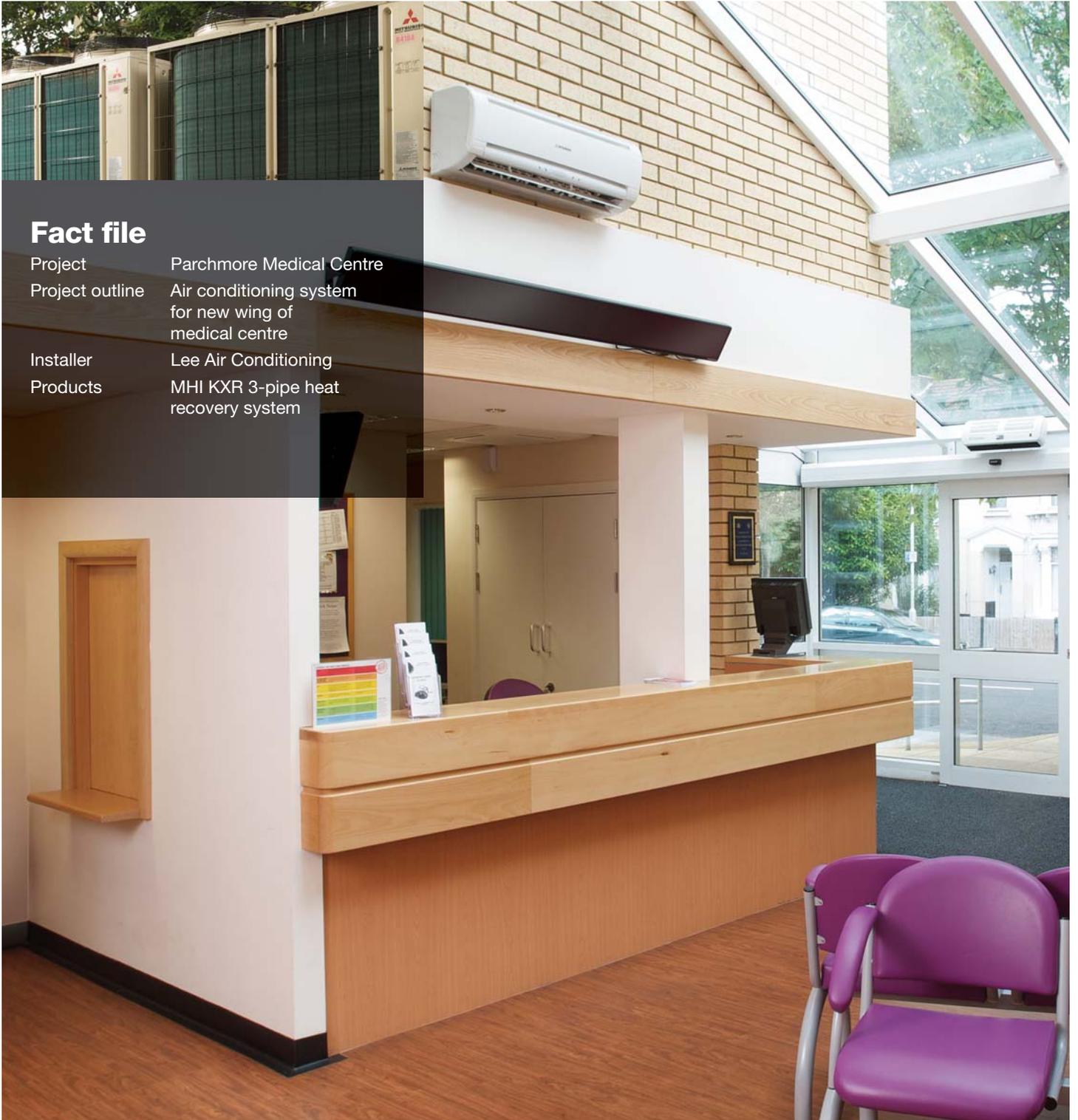


Case study: Healthcare

New heat recovery system for medical centre meets ECA's energy saving criteria

Fact file

Project	Parchmore Medical Centre
Project outline	Air conditioning system for new wing of medical centre
Installer	Lee Air Conditioning
Products	MHI KXR 3-pipe heat recovery system



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An energy saving VRF air conditioning system from Mitsubishi Heavy Industries (MHI) was prescribed to ensure high efficiency heating and cooling for the new wing of a south London medical centre. The KXR system installed at Parchmore Medical Centre in Thornton Heath utilises inverter technology and surplus heat recovery to achieve an impressive CoP of up to 3.4. The Centre's new MHI system qualifies for the Government's Enhanced Capital Allowance scheme, which offers enhanced tax relief for investment in plant and machinery that meets the required energy saving criteria. Being able to claim under the ECA scheme means that the Centre can cut its carbon emissions and the capital cost of purchasing the equipment.



The new Beulah Wing provides Parchmore Medical Centre with six additional consulting rooms, a minor operations suite, and a staff conference suite, and a staff conference facility. The KXR heat recovery system from MHI was installed by Surrey-based Lee Air Conditioning Services Limited – a longstanding installer of MHI equipment. “We recommended MHI for this project because of its comprehensive and competitively priced product range,” says Mike Kinnear, Managing Director of Lee Air Conditioning Services Limited. “MHI's KXR inverter range provides simultaneous heating and cooling as and where required. The three-pipe heat recovery system at the Medical Centre uses surplus heat on the sunnier, south facing side of the new extension to provide useful energy for the cooler, shadier side. Additionally, the system offers highly sophisticated control to provide

heating or cooling operations to individual units according to single or multiple area requirements. Energy efficiency is maximised by MHI's inverter controlled compressor which adjusts automatically to meet the precise demands of indoor units to optimise energy consumption and reduce temperature fluctuations.

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Parchmore Medical Centre's MHI system consists of two 8HP outdoor units with nominal cooling and heating capacities of 22.4kW and 25.0 kW respectively. Refrigeration pipework is routed through a duct into the building and into service risers to the ceiling void on each floor where it is distributed to a total of 17 indoor units. MHI 4-way cassettes are installed in most areas, with three slimline wall-mounts serving the lobby, waiting room, and stairway / lift area. Indoor units range from 1.64kW to 3.89kW depending on the cooling/heating requirements of each area. MHI's compact 4-way cassettes permit individual control of all four flaps to maximise the airflow in all directions. Wall-mounted units are designed to achieve uniform air conditioning to the furthest corners of the room.