

Case study: Air Treatment  
Refurbishment of MX series dehumidifiers

#### Quick facts

The refurbishment and upgrade of Munters MX dehumidifiers will:

- Ensure long term protection against humidity related damage
- Reduces running costs
- Reduce energy by 20%
- Ensure consistent control of relative humidity levels all year round

## Refurbishment goes swimmingly at Manchester Aquatics Centre

Munters, global leaders in energy efficient air treatment, has recently completed a refurbishment project for the dehumidifiers at Manchester Aquatics Centre. The three MX series desiccant dehumidifiers have now been retrofitted with Munters Energy Recovery Purge (ERP) technology in order to reduce running costs by approximately 20% per year while preserving the building fabric and optimising comfort.

Purpose built for the 2002 Commonwealth Games, Manchester Aquatics Centre attracts 1.2 million visitors per year.

Managed by Manchester Sport and Leisure Trust and maintained by Serco Leisure Ltd, the main pool area (pictured) boasts a 50m swimming pool, a 25m diving pool and a leisure pool with two water flumes.

This substantial pool area is home to the City of Manchester Swim team and the GB water polo team.

In the basement, there is an additional 50m training pool used by the GB disability team, which played host to teams from Australia and Brazil during the London 2012 Olympic Games.

The need to refurbish and upgrade the current system arose during discussions around routine maintenance. "We noticed that the dehumidifiers could not continue to operate at their most effective because Munters technology has moved on since their initial installation in 2000" says Andy Dove, Munters Service Area Manager. "Ensuring humidity is maintained correctly helps to protect the building from costly damage and ensures a comfortable environment for swimmers. By incorporating Munters Energy Recovery Purge (ERP), we knew we could offer added value through energy savings."

As the home of the GB water polo team and with around 15 major events per year, Manchester Aquatics Centre must maintain 55% relative humidity (RH) as per guidelines from FINA (Fédération Internationale de Natation), the world governing body covering swimming, diving, water polo, synchronised swimming and open water swimming. Accurately controlling relative humidity levels in and around the pool is essential to preventing condensation on walls, ceilings and windows, which can lead to mould growth and result in unnecessary building maintenance and repairs.

### Refurbishment and Installation

The refurbishment project was managed by Serco Leisure Ltd and while other solutions were considered, Munters were chosen because of our combined expertise,

knowledge and full after sales support. Munters After Sales team carried out the refurbishment of the three Munters gas reactivated MX dehumidifiers. This involved replacing all major components, replacing the old reactivation exhaust duct work and incorporating Munters Energy Recovery Purge (ERP).

During initial discussions about the refurbishment, Serco Leisure Ltd highlighted their desire to use polypropylene instead of stainless steel for the reactivation exhaust ductwork. Munters engineers worked closely with to the customer to adapt the solution and provide a bespoke solution that would deliver the best return on investment.

The refurbishment has ensured a comfortable environment for swimmers and predicted energy costs are reduced by 20% compared to the previous solution. By precisely controlling relative humidity to 55% all year round, the building is protected and maintenance costs are reduced. The refurbishment allows Serco Leisure Ltd to confidently replace other equipment too.

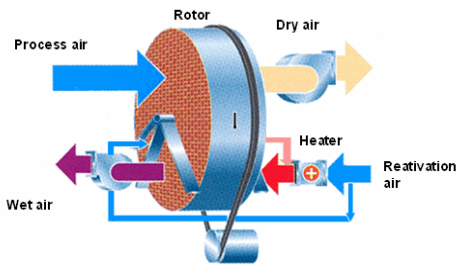
Paul Rogers, Technical Manager for Serco Leisure Ltd says "Previously we were reluctant to invest in new equipment because of potential damage that could be caused by high humidity".

One example of this was the alarm system. Call outs and maintenance costs will be significantly reduced, saving thousands per



One of the two MX7600 dehumidifiers that supply dry air to the main pool hall

year. "Without this work taking place, we would not have been able to invest in new equipment" says Paul Rogers. "I was also impressed by the refurbishment process and Munters Service team, who carried out the installation faster than I expected."

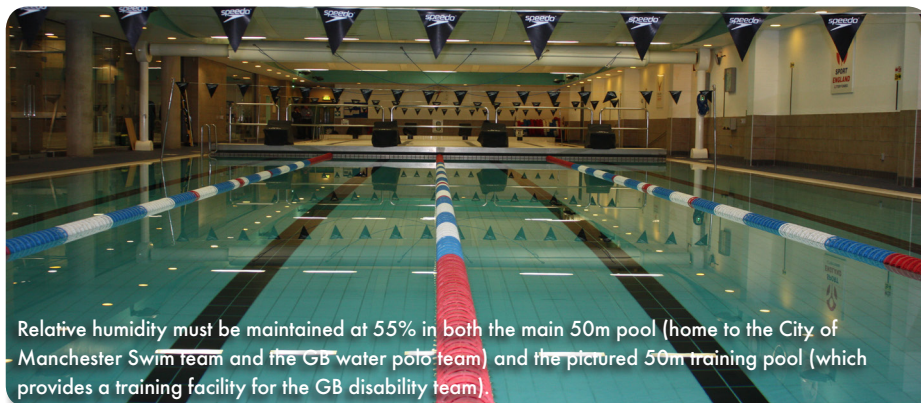


Munters Energy Recover Purge

Munters ERP can be supplied as both a pre-installed feature and as a retrofit and works by recirculating air into the regeneration cycle after the heater.

Munters is a global leader in energy efficient air treatment solutions for process, indoor comfort and environmental protection with over 300,000 installations worldwide.

For more information about our solutions for swimming pools, visit [www.munters.co.uk/pools-uk](http://www.munters.co.uk/pools-uk).



Relative humidity must be maintained at 55% in both the main 50m pool (home to the City of Manchester Swim team and the GB water polo team) and the pictured 50m training pool (which provides a training facility for the GB disability team).

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