

CASE STUDY - 04



Challenge

When a major Middle Eastern utility company was constructing a new water treatment works, it found that it required a set of unusually tall (8m), but relatively narrow sliding doors. Due to the unusual nature of the doors, they required a bespoke engineered solution. So, they turned to Rhino Doors.

Typically, all electric Rhino horizontal doors that are based upon the 'standard' Rhino NPSA platform utilise a drive system that is mounted at the top of the door, protecting the motor and drive system from damage.

Manual override systems are usually an integral part of the design of electrically driven doors – enabling the doors to be manually operated if required. However, the excessive height of the doors requested by the client meant that a traditional manual override system would not be up to the challenge. Rhino had to devise a solution that would offer reliable, consistent and long-lasting operation.

Solution

It may seem unusual that doors of this height can be manually operated (to provide context, 8m is the same as a London bus stood upright). That these doors can be manually operated is testament to the innovative top hung design utilised by Rhino that facilitates fine balancing of the door panels.

But to be manually operated, requires a reliable, high-quality manual override system.

A traditional manual override system for electrically operated doors of this kind would consist of a cable system via a lever positioned at working-height on one of the door panels. However, the height of these doors was such that a cable-operated override system risked stretching over time, resulting in unreliable disengagement of the motor.

Rhino devised a novel and reliable solution. To permit positive disengagement of the motor, a new linkage system was designed to provide not only consistent movement, but also increased mechanical advantage for the operator.

Results

In total, two large oversized doors were supplied to the client with both doors having been successfully installed with the improved manual override system that provides reliable and consistent disengagement of the drive motors when this is needed.

Consistent with Rhino's policy of continual improvement, the design has now been adopted as a standard for all doors above a certain height



Find out how Rhino Doors can engineer a portal/entry solution for you at:

www.rhinodoors.com

