

PRIESTLEY WHARF ELEVATOR CONTROL REFURBISHMENT PROJECT

MAGNETEK HPV® 900AF PERMANENT MAGNET DC MOTOR DRIVE



U.S. Patent No. 9,093,937

PROJECT **Priestley Wharf, Birmingham, UK**

CONTRACTOR **Concept Elevators**

PRODUCT **HPV® 900AF DRIVE**

Results

Magnetek visited the UK installation site of our HPV 900AF axial flux drive during the final commissioning process of a four-floor elevator control system at Priestley Wharf.

Installed in 1997, the original control system suffered various failures and was eventually decommissioned due to high costs for spare parts. Concept Elevators sought to replace the poorly functioning control system and chose to utilize Magnetek's HPV 900AF drive as a more cost-effective, quality alternative.

The HPV 900AF drive, with patented technology, is designed with modernization in mind, engineered to meet the needs of today's machine room-less (MRL) axial flux disk type motors. Its permanent magnet synchronous axial flux control capability provides ease of installation whilst delivering optimal performance. The HPV 900AF is a practical, affordable, and convenient solution when retaining an axial flux type PM motor.

The refurbishment process followed the same basic principles of other MRL style elevators, and was installed, tested, commissioned, and returned to service ahead of schedule.

Priestley Wharf's building complex has several identical elevators, so Magnetek took the opportunity to measure comparative ride quality readings using the Physical Movement Technologies, Elevator Velocity Accelerometer (PMT-EVA), to draw back-to-back comparisons.

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Challenge

- Retrofit a high-quality solution for a four floor elevator control system
- Install long-lasting, easy-to-use controls for elevator refurbishment
- Identify changes in elevator ride quality and performance after new equipment installation

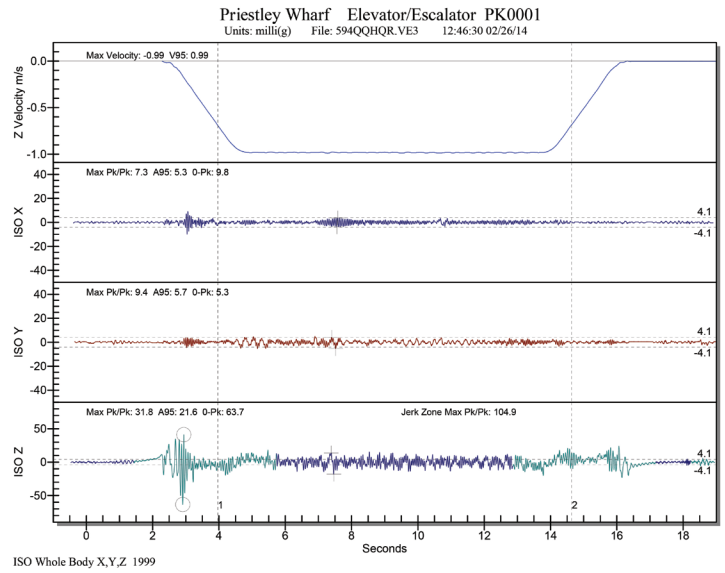
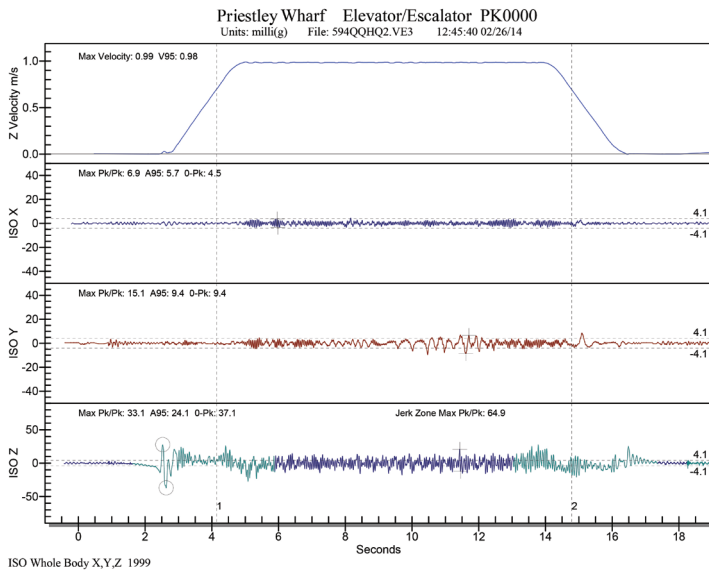
Solution

- Installed the HPV 900AF drive
- Minimized need for spare or replacement parts
- Compared ride quality readings on identical elevators resulting in measurable improvement

Due to the low foot traffic in the building, previously installed 'direct-to-floor' control was deemed unnecessary in the new installation, a modification leading to measurable improvements included on the travel plot graphs. The ride profile and ride quality were considered to be comparable or better than the original equipment.

Concept Elevators and Priestley Wharf were pleased with the smooth installation, equipment performance, and technical support provided during the project and intend to use the same solution on other elevators in the same complex and on other sites.

Original Installation



Magnetek Installation

