

## Optidrive Elevator VFD ensures smooth carriage for diners at New Delhi Banquet Hall

### Case Study



 India

Company / Project

**NEW DELHI BANQUET HALL**

Applications  
Elevators

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### Optidrive Elevator secures venue's lucrative business

A problematic issue with the passenger lift at a prestigious Banquet Hall in New Delhi has been eliminated thanks to the installation of a dedicated Elevator variable frequency drive from Inverter Drives.

Inverter's sales partner in India, Tros Autotek PVT Ltd, was approached by one of the country's leading elevator manufacturers following reports that the lift in the newly constructed Banquet Hall, serving eight floors, felt uncomfortable to travel in and customers were complaining.

A **variable speed drive** from another manufacturer had already been installed to control the 7.5kW PM (gearless) motor, but it was not performing as expected and users were experiencing uncomfortable jerks when the lift started and stopped, as well as vibrations during the transition from high to slow speed.

**Ashok Patil, Commissioning Engineer at Tros Autotek**, takes up the story, "The entire ride quality was not very good and there was one short floor where the parking was located which was particularly bad. A jerky elevator ride is never pleasant, but in this case it could have damaged the Banquet Hall's business – diners do not want to be thrown around following a meal!"

The compact Elevator drive from Inverter Drives is specifically designed to ensure both geared and gearless elevators provide a smooth journey from start to finish. It benefits from a number of features including short floor management and Rescue Mode, and five independent S-ramps along with a dedicated motor holding brake control algorithm allow the system to be fine-tuned.

**Ashok** continues, "Like all AC Drives from Inverter, the Elevator drive is very easy to install and commission and it doesn't take up much space. Our customer noticed the difference as soon as the new drive was up and running and is very happy – he said 'The Elevator is working to my satisfaction in all conditions.'"

Inverter Drives' Elevator **variable frequency drive** incorporates TUV approved Safe Torque Off as standard and can be used to control both IM (geared) and PM (gearless) motors.

It was developed after Inverter identified this specific need as **Optidrive Elevator Product Manager, Justin Walker**, explains, "Variable speed drives are used in a vast number of motor control applications, but they are predominantly

industrial operations where the key objective is usually to save energy and money. Elevators are different in that the main priority is to provide precise motor control guaranteed to ensure a smooth passenger journey from start to finish.

"Optidrive Elevator is designed to address all aspects of lift control including noise levels where the high motor switching frequency (max 32kHz) ensures quiet motor operation – vital in buildings such as the Banquet Hall where the elevator journey must meet the same high standards as the ambience of the rest of the interior."

The New Delhi venue includes two lavish halls, both over 8,000 sq ft and able to seat more than 500 guests at a time. Offering the highest quality food and interior, the hall is marketed as a high quality venue for a range of occasions including weddings.

The elevator must therefore be capable of consistently providing a smooth journey – even in periods of high usage. This has been achieved since the installation of the elevator drive as **Ashok** confirms, "The ride quality is now spot on throughout the entire journey with smooth start/stop changeovers and no vibrations."

