



**SERVICE +
SOLUTIONS**

**1000LBS AUTOMATIC
CASE STUDY**

**DOOR + GLASS + METAL
905-669-9911**

HELPING HEAVY ENTRANCES SWING SMOOTHLY



OVERVIEW:

The current architectural zeitgeist in the luxury housing market says when it comes to windows and doors size matters. On a recent project in the upscale Forest Hill neighborhood in Toronto E1 was challenged with what could only be consider an extreme door. Luxury homes are, more often than not, subject to ongoing design changes. With each revision the door grew in stature as the architect's vision for the residence came into focus.



Services
Automatics
Doors
Glass

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SOLUTION:

In the original design, provisions were made for a relatively normal size door (200lbs to 300lbs) however, by the time of the final design iteration was released the door had grown to a 1,000lbs bronze and glass behemoth. The door was big and beautiful. A magnificent door imported from France made of solid extruded bronze with handmade hardware, a deep, rich patina and crystal clear starphire glass. Both architect and engineer agreed that the door was now too big and heavy to be safely opened manually. The door required an automatic operator to control swing which is when they turned to E1.

E1 understood the nature of the issues immediately because of its experience with previous large scale doors and windows. E1 designers knew the only operator with the power to control a door like this was the Tormax TN110 (iMotion 1401) in floor automatic closer. The problem was there was no room to set the closer under directly under the door. The only solution was to offset the closer setting it deeper into the floor back inside the house and develop a chain drive system to connect the closer to the pivot of the door.

E1 was up to the challenge. E1 technicians cut a large hole in the floor and set the closer housing with high strength anchor cement. The installed the new custom spindles and sprockets and connect the chain take care to set the tension to spec.

Once the closer, pivot and chain drive were in place the next big challenge was hanging the door itself. The 1,000 lbs door is set back under a 6' stone soffit with very little clearance top and bottom. The door is fragile and the finishes delicate so careful handling was required. E1 technicians again rose to the challenge employing a innovative "C" hook with a heavy duty vacuum lifter to neatly swing the door into place, placing it gently onto the pivots with very little stress on either the door or frame.

Over the last 5 years E1 has become a leader in the installation of large format doors and windows installing some of the largest doors and windows in the world.

HIGHLIGHTS:

The TN110 can move doors up to 1,000lbs

Geared to be off side to allow hidden integration into door system

Door was glazed in place in difficult to access entrance

Project used suction lifter and c-hook to get glass into place

Team custom built landing infrastructure to have glass meet door precisely in place

The TN110 from Tormax Automatics, is truly a state of the art automatic door opener and can be concealed in buildings. Allowing architects, designers and contractors the ability to achieve hidden automatic entrance access

A North American first in heavy residential door automation

Location:
Toronto, Canada