



## Part of glass.(Emperor Glass)

September 1, 2012

A high-pressure NEOLINE pump is enabling Emperor Glass to reduce the time it takes to process sheets using **waterjet** cutting.

Emperor Glass's **waterjet** cutting machine has been in operation since February 2012, processing glass sheets measuring up to 6.4 x 3.2m. It has resulted in a three-fold reduction in the time taken to profile glass compared with using CNC routing, drilling and polishing centres on site. Another benefit is that other materials such as metal, stone and granite can be processed by the **waterjet** machine without any alteration to the machine set-up, whereas to achieve similar on the router would require complete tooling changes.

Hazim Uddin, chief technical officer at Emperor Glass, said: 'We spent three years researching the market, concentrating in particular on the all-important high-pressure pump that delivers the water and garnet abrasive at more than 50,000lb/in<sup>2</sup>. The NEOLINE pump from **KMT** came out on top.'

He goes on to compare the production of a typical 2 x 1m glass door using the two different machining processes. With CNC routing, the route involves trimming a sheet to size plus 10mm all round on a separate cutting table, transferring it to the router and downloading the program, removing 8mm from the periphery in a first pass and 1.5mm in a second, completing any drilling and profiling according to the design, and polishing the edges in three or four operations using successively finer abrasive. Floor-to-floor time is 30-45 minutes.

On the **waterjet** machine, multiple components are nested in a program so that they can be cut from one large sheet to save glass. Up to nine doors can be produced from a single sheet and no prior cutting to size is necessary. Each door is cut with a 3mm allowance for polishing and bevelling the edges. The time to produce one door using this method and then finish the edges on a separate machine is 10-15 minutes.