

A large, semi-transparent blue triangle is overlaid on the bottom left and center of the page. Inside this triangle is a white technical drawing of a circular mechanical component, possibly a bearing or a pulley. The drawing includes various dimension lines and numerical values such as '1380', '1630', 'Ø72', 'Ø72.2', '10.5', '18.5', '30.8', '47.8', and '21'. The drawing is oriented diagonally, following the shape of the blue triangle.

# Ibstock Brick Customer Success Story

**Customer:** Ibstock Brick

**Region:** Dorket Head, Nottingham, England

**Sector:** Brick Manufacturing

**Benefit:** 60% energy savings annually

Ibstock Brick is the UK's largest manufacturer of clay and concrete building products, employing over 2600 people in the UK and USA with annual sales of almost £430m. Ibstock plc is now one of the biggest building materials businesses quoted on the London Stock Exchange. The company's Dorket Head site near Nottingham has been producing bricks since the 1860s and, following modern re-development, now has an output in the region of 95 million bricks per year.



## Challenge:

Ibstock Brick has an annual production output of 95 million bricks per year. They needed a faster production line and increased output levels which required more suction power. With their current setup of liquid ring pumps, this meant installing larger equipment of the same type.

While looking at alternate options it became clear that larger liquid ring pumps were susceptible to the extreme heat conditions of the brick production facility. Ibstock Brick needed a vacuum pump with water handling abilities in tough, humid conditions. This was vital to achieve consistent product quality and increase productivity.

*"I am very impressed with the performance of the Atlas Copco pumps. Not only have they allowed us to achieve our production increase and maintain a constant vacuum level to ensure consistent product quality, they are also quieter, occupy a footprint that's only the size of a pallet and, better still, provide the added bonus of a potential 60% reduction in the energy demand for the process."*

**Daryl Leivers**  
Process Improvement Engineer  
Ibstock Brick



## Solution:

Ibstock Brick opted for oil-injected rotary screw pumps from Atlas Copco. They installed two plug-and-play 5.5 kW Atlas Copco GHS 350 VSD<sup>+</sup> vacuum pumps, one for the main operation and the other as a standby machine. Each provides a nominal displacement of 390 m<sup>3</sup>/h and an ultimate vacuum of 0.35 mbar(a). The installation was completed with liquid separators and particulate filters, with all equipment subject to a total responsibility service contract with Atlas Copco.

Based on proven compressor screw technology, they provide significantly higher performance levels and reduced maintenance, noise and heat emissions compared to other conventional oilsealed and dry vane pumps. The variable speed drive makes it possible to tailor vacuum production to precisely meet process demand.

## Outcome:

The Atlas Copco GHS 350 VSD<sup>+</sup> vacuum pumps handle the humid production environment at Ibstock. In the humid versions of the GHS VSD<sup>+</sup> pumps, electronically controlled gas ballast and temperature management allows adaptation to the plant's specific process and enables the pumps to handle 100% water vapour at pressures above 30 mbar(a). The gas ballast is automatically switched and pre-and-post purge cycles are provided and controlled within the unit.

In contrast to 'on-off' control standards of other vacuum technologies, the GHS VSD<sup>+</sup> pumps feature a unique pressure set point control function that ensures the pumps maintain a constant reliable level of vacuum however variable the production demand. This has helped Ibstock maintain consistent product quality, achieve increased productivity and benefit from the added bonus of a potential 60% energy saving.

**Atlas Copco**

[atlascopco.com/vacuum](https://atlascopco.com/vacuum)