

CONTACT:

Cullen Building Products Limited, 1 Wheatstone Place, Southfield Industrial Estate, Glenrothes KY6 2SW
 Tel: +44 1592 771132 Fax: +44 1592 771182 Email: sales@cullen-bp.com Web: www.cullen-bp.com
 AIDA Engineering UK Ltd, City Road, Derby DE1 3RP, UK
 Tel: +44 1332 232323, Fax: +44 1332 232324 Email: info@aida-uk.com Web: www.aida-uk.com

Production casebook

Cullen, a family-owned supplier of timber engineering connectors in the UK, recently invested in AIDA gap frame press technology in a bid to expand its product range and generate new growth.

Based in Glenrothes (Scotland), Cullen has an 85,000 square foot facility. Its in-house capabilities also include fast-track prototype design and development, a fully equipped and calibrated test laboratory, press tool design and high-tech manufacturing. The company has sales and distribution sites in Manchester and Thetford, UK.

New press purchase

Part accuracy and consistency are vital to the company's design and production of precise structural components, making press selection a key ingredient to Cullen's manufacturing processes. With six AIDA gap presses (one NC2 200-tonne, one NC1 200-tonne, one NC1 150-tonne and three NC1 80-tonne presses) purchased over the last five years, Cullen recently added an AIDA NC1 150-tonne gap press to support the company's ongoing growth.

Running galvanised material and stainless steel, the NC1's frame accuracy and close bearing tolerances are especially important features for the production of Cullen's high quality parts.

"With our existing AIDA gap frame presses we've experienced better tool life and less downtime," said Doug Cullen, MD of Cullen Building Products. "Our initial decision to consider another AIDA gap press was based on the quality of the press and the local service and support AIDA UK provides from its facility in Derby."

Installation of the new gap press is the next step in Cullen's plans for growth and the introduction of new multiple market leading products. Once installed, the gap press will operate on a five-day week for medium to high volume parts production. With a strong presence in the United Kingdom, Cullen plans to extend its reach to continental Europe.

Accent on growth

Cullen supports growth with AIDA gap frame press technology

EDITOR'S NOTE

AIDA Engineering UK Ltd has just introduced the second edition of Pressing Matters, a series of newsletters with technology tips and application stories for manufacturers. It also recently named Christopher Wale as sales manager for the United Kingdom.

Operational capability

For blanking operations, producing parts such as Cullen's timber engineering connectors, the press punch hits the material fed into the press. All motion then stops until enough pressure is built up to break the material. The pressure is then released (creating a force called reverse tonnage).

"We control punch penetration by limiting frame deflection and building our NC presses with low overall bearing clearance," AIDA told ISMR. "Offering the lowest deflection and bearing clearance in the industry, our gap frame presses also provide reduced vibration which improves part quality and increases die life. The NC1 gap press also has the best angular deflection rating under full load, exceeding industry standards by two-thirds."

Parts production is also enhanced with AIDA's Hydraulic Overload Protection (HOLP) system. HOLP helps customers like Cullen reduce operating costs by avoiding damage to die and press components and enhances quality by eliminating the production of bad parts. When an overload occurs, an oil-filled chamber collapses, triggering AIDA's oil escape system which responds in 7 to 10 milliseconds – 'the fastest response time in the industry.'

"Recovery time to re-set the overload takes seconds, so downtime can be significantly reduced and die and press components are protected beyond the level provided by conventional presses," continued AIDA.

Technology transfer approach

"We routinely examine successful manufacturing techniques used in other industries and then look for ways to adapt and apply those techniques to enhance our own methods," Cullen said. "We also look for partnerships that can deliver added value e.g. with AIDA who will be visiting our facility to help us improve our manufacturing processes and look at some potential turnkey projects."

AIDA's initial visit and evaluation of Cullen's manufacturing facility resulted in recommendations on ways the company could increase die change speed by using pre-rollers, die lifters and hydraulic clamping systems instead of specific machines.

AIDA will assist Cullen with new process development by recommending the best manufacturing methods. It will also develop turnkey solutions that include coil handling equipment and packaging. **ISMR**



AIDA NC gap press at Cullen's manufacturing facility in Scotland