

Alphacam Joins The Dots For Braille Production

Alphacam CAD CAM software is vital for a specialist cardboard box die manufacturer to comply with European guidelines on Braille.

Truform Laser Dies supply tools to the biggest cardboard box producers in Ireland. CNC programmer Ruairí Connolly says many boxes require Braille, particularly ones containing pharmaceutical products.

Male brass forces and female blocks are included with the dies for cutting and creasing those boxes, to ensure Braille is embossed into the cardboard. Until recently, Truform sub-contracted that part of the operation, but have now brought it in-house with a Dicesse Alcor CNC machine, driven by Alphacam.

“We import a 2D drawing into Alphacam and apply the tools to create the protruding domes on the force, and the corresponding holes on the block. When these are married together during die-cutting at the box manufacturer’s production process, it puts the required Braille dots on to the cartons on the printed sheet.”

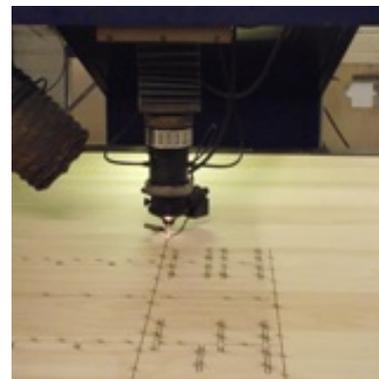
The dies themselves are laser-cut from special plywood, and have inserted hardened steel rules. They are designed in the specialist CAD system, then Alphacam is used for designing and milling the braille components.

It is in the Braille process that Alphacam really pays dividends. “We follow the Marburg medium specification, which is used throughout Europe, regulating the spaces between individual dots as well as the space between separate characters. Alphacam is absolutely vital for the precise programming requirements and accurate reproduction that is fundamental to achieve this in the swift turn-around times demanded by our customers.”

While each dot is created as a simple circle, it needs to be closed with no broken lines, and in a precise position within the character. “Once it is imported into Alphacam the appropriate tool is applied within minutes and it’s ready for manufacture. Alphacam’s automation is extremely important to facilitate speedy production.”

Ruairí says that Alphacam simplifies the process a great deal. “We normally offer a two-day lead time for a whole set of tooling, but with Alphacam, depending on requirements, we could turn urgent orders round in the same day.” Before bringing the Braille operation in-house there was a three-day lead time for the sub-contractor for braille components alone.

Now, in-house, the die and braille components are programmed simultaneously and all go into production at the same time.



About The Company:

Name: Truform Laser Dies

Website:
www.truformlaserdies.com

Benefits Achieved:

- Precise & quick production
- Confidence everything is correct before printing
- Alphacam has helped diversify component range

Comments:

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Ruairí Connolly
 CNC programmer

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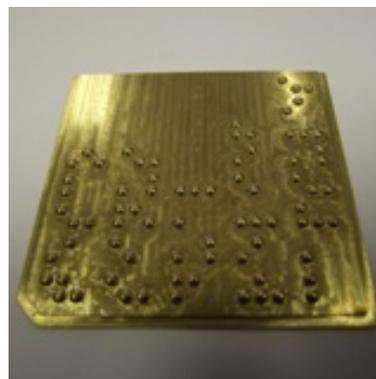
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Another benefit of the software is its simulation feature. “Before Alphacam, we could never see what we were going to produce, but the 3D simulation gives us confidence that everything is machineable and there won’t be any collisions. That’s vital as we could be producing 50 blocks and 50 forces at one time – we often do 30- or 40-off, and we’d have to scrap them all if something went wrong. As it is, we can ensure everything is absolutely perfect before we start to cut the blocks and forces.”

Alphacam have a range of modules and Truform have chosen the one that best fits their need at this time. In the near future, Truform are looking to more fully utilise their CNC machines by moving into 3D modelling. “We’ve carried out trials, and some customers have ordered other components from us, so Alphacam will help us to diversify.”

Operating with 30 employees out of 25,000 square foot premises in Dundalk, around 90 per cent of Truform’s dies are supplied to the carton and corrugated packaging industries across a range of manufacturing sectors including pharmaceutical, food, IT, cosmetics, engineering and electronics.

General Manager Brendan Tumilty says: “Our dies and tools are fitted into a high speed press. Printed sheets of cardboard are transferred through the press at speeds of up to 10,000 an hour, and the die compresses and cuts the sheet under anything up to 250-300 tonnes of pressure.” Brendan also states that “support from Alphacam in design preparation and machine control has been paramount in the success of this project to date and has strengthened our position as a key supplier of die-cutting tooling across the industry.”



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