

Industrial Tooling cuts Beaubury's Mould.

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Selection of the correct cutting tools for the job has been a major contributor to Beaubury Precision Moulds' success over the past 30 years. 'Our entire production is taken up with the design development and manufacture of plastic blow mould tooling -- which are typically produced from Dural QC7 aluminium tooling billets and Bohler M300 stainless mould steels especially developed for blow mould applications.' says programmer Paul Matthews.

'We have developed our own machining strategies based around our Delcam CAD/CAM facility and four high speed vertical machining centres. We use Power Shape to create the surfaces and Power Mill for generating the cutter paths. We frequently employ reverse engineering techniques for which we use Copy Cad a multitude of standard and special extra long reach TicN coated tools especially developed for us by Industrial Tooling Corp to cut them. A typical mould cavity may require an ITC 130mm long, short flute 6mm dia. ball nose to a short series 2mm ballnose to create the desired form. Speeds and feeds are critical, with the 6mm ballnose we run at 15,000revs/min with a feed rate of 2.5m/min.

To avoid gouging or scuffing the sides of the cavity ITC relieve the cutter shank as well. When cutting at these depths cutter geometry is critical to achieve crisp surface finishes. In this respect ITC has a complete understanding of what's required. While QC7 is a comparatively soft material to machine the stainless steels which have 17% chrome content require different treatment. Once again we use a selection of ITC's TicN or TiAlN coated carbide rippers and finishing cutters which we have found to be exceptional. Stock removal rates and speeds are predictable as is tool life. Of equal importance is the cost of cutters, they are affordable and always available at short notice. Of more importance for Beaubury is ITC's in house capability to produce dedicated tooling and specials almost over night.

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