Beaubury Moulds

Palletisation and automation increases capacity

In the blow moulding industry we believe we have very high tech operation and now have the capacity to take on an increase, both in our core product or to expand into other sectors. The future on the shop floor however is planned, and will see an even greater degree of Erowa automation employed as productivity levels rise.' concluded Paul Mathews.

As is often the case, having taken the first step towards automating the production of component parts, the results set in place a change in thinking that effects subsequent operations. This was certainly the case at Aylesbury-based Beaubury Moulds. This pro-active precision engineering company, having taken the 'first step' when installing its first 5-axis machining centre, has subsequently automated an element of its three-axis machining operations and has plans to continue down the automated route.

'We were looking to purchase our first 5-axis machine' stated Beaubury's Production Director, Paul Mathews. 'We were also drilling deep holes and encountering huge problems. However,on selecting a 5-axis Deckel Maho DMU 60P we knew we would experience holding problems hitting all sides at 18K. As a jobbing shop machining one-offs we had always made our own 'bespoke' work holding systems, but this would be unsatisfactory on the Deckel. We also wanted to maximise machining time and had heard good things about the Erowa system. As a result, the arrival of the 5-axis coincided with the installation of Erowa's UPC palletisation system and an immediate increase in productivity.'

'The capacity of the DMU 60P has overcome our drilling problems but it is the Erowa palletisation system has given us the greater benefit, we don't have to block anything up' added Mathews. 'The Erowa UPC receiver is fixed to the table providing a known reference. We simply set a manifold block up off-line on the pallet and pneumatically clamp it in the receiver place. Jobs too heavy to be loaded manually, typically 90kg, are loaded from the bench using Erowa's ErowaLift. Roughing and finishing in one set up, enables us to machine jobs in one hit'

Since its formation in 1964, Beaubury Moulds, has been pro active in its pursuit of technical innovation and its application to the manufacture of tooling for the plastic blow moulding industry.

Set-up on the 3-axis machining centres at Beaubury had been prolonged on short runs, individual components being 'clocked' into position. The experience of Erowa's automated systems on the 5-axis, saw Paul Mathews extend 'the obvious benefits' to a Bridgeport DMC 620 Digital, which was doing aluminium mould work. 'It was being done in a vice' explained Mathews 'setting a stop up and changing the blocks. After trialing work out on the Triag modular workholding system which enables us to hold a variety of shapes and sizes quickly and efficiently we moved to setting the Triag system up on Erowa's UPC, but we didn't stop there. We saw the opportunity to really embrace automation and purchased an Erowa EasyChange robot handling system to maximise the productivity of the DMC 620.'

The Erowa EasyChange is set up to carry four Erowa pallets, each one carrying a known reference point and pre-determined array of Triag clamping systems. Pallet loaded jobs are presented to the machining envelope of the DMC 620 Digital through a side door. 'The operator simply gets all the drawings from the CAD office and calls down the 3D cavity data from the CAM stations and gets one impression for each side for all the cavity work undertaken. Depending on the way he sets the job up, the operator will move his datums depending on where the bottom of the chucks are - carrying out 3D positioning for the programming. However, depending on the workload he could set up an Erowa pallet/Triag rail system with up to three jobs per pallet.'

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