

## Conversation with an English turned parts manufacturer

# The way to success

In the heart of Gloucester's historic docklands is a turned parts manufacturer who has become one of the South West's latest success stories. Now fully installed in their new 7000 Sq Ft premises and employing 17 people, Alphatool Productions are very confident for the future.



From left to right: Mr Erich Schmid, Mr Tim Norman, Mr David Wilcock, Mr Dave Gwilliam and Mr Anton Menth.

**S**ince the start of Alphatool in 1982, partners Doug Gwilliam & David Norman have run a traditional cam auto shop based on TORNOS-BECHLER & Petermann sliding head machines & turret type autos. They mainly catered for mid to high volume production runs with smaller batches being produced on their fixed head CNC lathes.

Increasingly Doug & David were asked to take on more complex components with 2 to 3 operations in addition to the turning. These type of components made production challenging, as it was relatively simple to produce first operation turned parts but the subsequent operations were labour intensive, gave longer lead times, needed more quality control monitoring & increased work scheduling. The search was on for a more effective way.

Conventional CNC sliding head machines were looked at in some detail and although they could produce the components complete, they could not compete against the production cycle times of the cam autos and the overlapped subsequent operations. So this solution was not cost effective. Rotary transfer machines were another alternative, but again this was only a part solution to the problem and still not cost effective.

**In January 1996** Alphatool were presented with the DECO 2000 concept by TORNOS-BECHLER, the new generation of PNC (Parallel Numeric Control) – sliding heads that would replace the current CNC generation. The DECO would enable Alphatool to produce their existing components at their cam machine production rates but also include the subsequent operations in the same cycle time. This seemed too good to be true.

**In February '96** Dave Gwilliam & Tim Norman the sons of Doug & David visited the TORNOS-BECHLER Factory in Moutier Switzerland to see the official launch of the DECO 2000. The machine was initially launched with 7 mm bar capacity in the 9 & 5 axis formats. Tim & Dave confirmed their order for the first TORNOS-BECHLER DECO 2000 to be supplied to the UK.

**When delivered in October '96**, their 9 axis DECO was set on a component that they had been turning on Tornos cam machines in 30 seconds and then carrying out manual second operation drilling & tapping and third operation slotting. Even the Tornos Engineers were pleased to see the parts coming off the DECO in 20 seconds complete, using feeds and speeds that would give reliable unmanned running. In addition to the above savings Alphatool were now also able to make complete parts unmanned & not have to wait for the manned shift to complete operations 2 and 3.

**By April '97** the success of the first machine led to the ordering of a 2nd TORNOS-BECHLER DECO 2000 machine, this time a 10 mm diameter 9 axis configuration.

**In June '97** again in Moutier the TORNOS-BECHLER DECO 2000 20 mm machine was launched. Amongst many customers from the UK visiting was David Norman, who could now see an increasing work load on larger diameter parts. Reading across the cost savings from the smaller DECO and the nature of the larger parts being more complex, Alphatool needed no persuading as to what the next step would be. Tim & Dave visited the Emo Show in Hannover and ordered the 10 axis version of the DECO 20 mm. By that time the machine was also available in 25.4 mm capacity. (Inset photograph shows Dave & Tim after negotiating DECO 20 order together with Mr Anton Menth MD TORNOS-BECHLER SA, Mr Erich Schmid - Sales Director TORNOS-BECHLER SA and Mr David Wilcock - MDTORNOS Technologies UK Ltd.

**Unusually** for the industry, Alphatool have a low average age work force. This is actively encouraged, as it is seen by Doug & David as *«the only way the business will keep its skills long into the future. There is a healthy learning environment where the more senior setters help develop the skills of the more junior engineers»*. Supplementary courses with the local college are also encouraged. David Norman says *« The introduction of state of the art technology machines like the TORNOS-BECHLER DECO 2000 are much more easily absorbed into the cam shop environment when the work force has a wide skill range. Bringing together the traditional setting skills and metal cutting knowledge with current computer systems is very important in getting the best from the equipment and keeping your competitive edge»*.

**As** the software for programming the range of DECOs is the same, Alphatool will still be using the same PC that they purchased for the first DECO to run all three. This also gives them the flexibility of more people having the skills to run more machines and all programmes stored centrally for quick access.

**All** at Alphatool feel that the DECO machines have bought about a turn around for their once traditional cam shop. Says Doug Gwilliam *«This is the beginning of the end of the cam operated machine. Now that high speed machines like the TORNOS-BECHLER DECO 2000 can compete with cam machine production rates but can be reset-up on a new job in a fraction of the time, give consistent high quality and eliminate subsequent operations, all jobs become viable on these machines. This is the way forward »*.