

PRESS RELEASE

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MOLLART TAKES £1.25 MILLION MICRODRILLING MACHINE CONTRACT FOR AUTOMOTIVE VALVES

Mollart Engineering has won a four machine turnkey installation order from America worth £1.25 milion to provide a deep hole drilling facility for automotive engine valves produced at a rate of four per minute. The deep hole drilling operation is performed prior to subsequent sodium filling to improve heat dissipation.

Said Mollart Engineering's Managing Director Guy Mollart: "This was a significant contract to win against five other machine tool suppliers all very keen to take the business. However, they could not compete against our four spindle VDM Microdrill concept with fully integrated autoloading, its vertical up drilling method and specially developed collet chucks that counter-rotate the part to the rotation of the drill. This method of process ensures ultimate levels of concentricity even when producing four parts in a minute cycle."

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Indeed, said Mr Mollart: "On machine trials we were able to establish a concentricity within 0.1 mm TIR, surface finish within the customers 6R specification and a CPK value of 1.6 for the 3 mm diameter hole that is required to be produced 70 mm deep in each valve stem. Following deep hole drilling each valve will have a sodium pack inserted in the hole and a cap friction welded to the stem prior to finish grinding."

The VDM Microdrill machine is widely used in fuel injection, medical and fluid power industries for precision holes and for multiple hole drilling in a single cycle. The machine has a capacity between 0.5 mm and 6 mm diameter in both two and four spindle configurations. Fitted with an optional programmable CNC cross-table, holes of different sizes can be progressively drilled or multiple holes drilled in a component with no need to unclamp the part.

The American order involves the simultaneous loading and drilling of four valve stems at a time with the cycle partially overlapped with the drilling operation to minimise the production time.

As part of the proven process Mollart is supplying the latest solid carbide coated gundrills Type 113 developed by Botek, its tooling partner. Dependent on the process the new drill type is able to be run at penetration rates up to 800 times faster than conventional drills to a depth to diameter ratio of 80:1. In this application the drills are using through-the-tool supplied neat oil coolant and will be run at a penetration feed rate of 70 mm/min.

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With compliments:

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