

Curtis Machine Tools' innovative new grinding machines provide double the output

Impressive productivity in a small space with the new Vector Quad and Vector Pendulum

Curtis Machine Tools has announced world premieres of two revolutionary grinding machines at EMO Hannover: the Vector Quad and The Vector Pendulum, which will bring the grinding of small parts into a new era of productivity.

The grinding machines are deemed to be ground-breaking because they have double the output compared to that of a conventional grinder. The innovation is simple in principle, based on the doubling of work spindles, despite the fact that the base area of the quad remains unchanged from that of the Vector twin. Equally, the Pendulum is a compact grinding machine with twice the capacity. Both machines are priced to make the productivity gains much more attractive than purchasing two separate machines.

CMT is one of the leading European manufacturers of grinding machines for small, high-precision components, such as diesel injectors and turbocharger parts. The two new innovations are suitable for use as either a single machine or can be integrated into a fully automated production line with the facility for ancillary processes to be incorporated as required.



Two operations in one machine: a world first Vector Pendulum by CMT: like a pendulum, the grinding wheel alternates between two workpieces, dressing en route giving two operations in one machine



Double the output with the same footprint: a world first Vector Quad by CMT. Two workpieces ground simultaneously with automation in parallel giving a spark to spark time approaching zero

Michael Scarfe, managing director of Curtis Machine Tools enthuses: "We see this innovation as a revolution in grinding, as users actually get double the output without having to pay twice as much."

The Vector Quad is equipped with four workpiece spindles and the Vector Pendulum with two workpiece spindles. This increases productivity when grinding large volumes of small parts, such as diesel injectors, turbochargers, hydraulic parts and cutting tools, to previously unimaginable heights. At the same time, the spark-to-spark time is reduced because the loading/unloading of the parts occurs automatically and in parallel with the grinding process. The concept of the Vector

Quad is based on the proven Vector Twin. However, the new machine has an indexing workhead with four spindles, enabling the outer diameters or contours to be ground simultaneously on two workpieces using the same grinding wheel. Conventional plunge grinding is equally possible as is peel grinding. The workpieces can have a maximum diameter of 45 mm and be held in either collets or chucks. Whilst two parts are being ground, either the standard loading system or a robot loads the two other spindles with the next two workpieces. This not only halves the process time when grinding large volume parts, but also the spark-to-spark time drops to almost zero," explains Michael Scarfe.