

How better components and assemblies increase converter efficiency

Technical article



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This article explains how manufacturers of converting machinery can improve productivity and profitability.

The converting industry was hit hard by the global financial crisis of recent years. Indeed, studies carried out by industry leading bodies reflect the harsh realities of the decline in the economy, highlighting negative changes in financial indicators, such as widespread decreases in pre-tax profitability and diminishing order sizes.

In uncertain market conditions, it is vital that converters continue to control costs, maintain operating margins and deliver ever higher standards of customer service. Although there are many factors that contribute to success, from a manufacturing viewpoint the ability to ensure that production systems function reliably and at optimum levels of performance is critical.

Manufacturers of converting machinery can improve productivity and profitability by outsourcing the

engineering of specialised components and assemblies to dedicated suppliers, with the skills and resources to design, prototype, manufacture, assemble and quality test, and then supply direct to line side.

The benefits of precision engineered components are especially felt on machinery that is often required to run for extended periods and has to operate at fast speeds, with high levels of accuracy and repeatability. Key to the reliable operation of such equipment is the performance of component parts that, although sometimes taken for granted, are vital elements in keeping machinery functioning consistently and without error. This has a significant impact on overall operating performance, increasing productivity and profitability to help converting companies develop a competitive edge in the marketplace.

Value-added services such as assembly also deliver real technical and commercial value. These can include a complete project management capability, with teams working alongside the customer from the early stages of the conceptual or design phases, through to manufacturing prototypes and beyond. These teams have the goal of designing-out cost,



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Dawson Shanahan has 25 years' experience in high speed machining on horizontal and vertical twin pallet milling machines and precision turning. We have been investing in our precision machining capability for decades and continue to expand our UK engineering facilities, furthering our already considerable abilities to develop and manufacture high quality, customer-specified components and assemblies that deliver exceptional value. We invest heavily in advanced CNC machine tools, support systems and in our teams of highly skilled design, production and quality engineers.

In particular, we operate dedicated manufacturing cells, including unmanned FMS cells for both milling and turning, plus multi-spindle machining centres with virtually zero chip to chip tool change and high speed spindle speeds. Combined, these result in high output at exceptional quality and at low part cost.

improving component functionality, performance and reliability, and reducing time to market. For example, in addition to our precision CNC machining and cold forming facilities, Dawson Shanahan has a dedicated assembly department, enabling us to assemble and test sub-assemblies and assemblies, ready for delivery direct to the production line.

By investing in the latest technology, engineering services are able to offer customers the accuracy they require at the rates they demand. Today, more than ever, customers need not only quality and volume from precision machining but also the best possible price. To keep costs down, precision engineering firms are constantly working on ways to provide savings by increasing throughput.

One way is to reduce production time by investing in machinery that requires less time for tool changes, so that actions can be performed simultaneously by multiple spindles while the part itself is moved into place.

Modular, multi-station CNC machining centres, offering high-speed milling with previously unheard of short cycle times, now provide customers with the highest degrees of precision, volume and flexibility. These machining centres offer multiple fixtures mounted on a central trunnion, served by machining stations consisting of CNC spindle units that hold multiple tools and have independent X, Y and Z axis movements. With such machines, a complex part can be machined, giving a significantly increased output compared to other standalone machining configurations.

To meet the needs of customers, manufacturers must examine how the advanced capacity and capability of milling machines has increased output and provided the best possible service in precision machining. An on-going investment in advanced, state-of-the-art, fully automated manufacturing systems enables component manufacturers to meet worldwide demand by providing exceptionally high quality manufacturing services with fast turnaround.

