

More power and flexibility from new J&S CNC grinder

The next generation UltraGrind CNC cylindrical grinding machine has been launched by Jones & Shipman. The new machine featuring a brand new modular wheelhead design not only offers multiple wheel spindles configured to suit customer requirements, but also provides more power, more accuracy and increased component weight handling. There is also a high degree of modularity in the way the machine can be configured from build, allowing customer specific machines to be manufactured quickly and easily.

The UltraGrind CNC is designed for the precision production environment such as aerospace and higher volume manufacture including automotive, as well as high-precision sub-contract machining for biomedical, high-end process tool/die sets, F1 and motorsport engineering.

Viewed as a key strategic development, a special UltraGrind project team was created to design the machine. They carried out customer surveys not only with J&S customers but many users of other equipment to ensure this project met market requirements now and in the future. From the feedback this team were able to create the specification, build and test the machine to ensure that it achieved the highest levels of accuracy and flexibility always associated with Jones & Shipman machinery. Built on a one-piece bed design, the machine combines great rigidity, stability and stock removal rates whilst maintaining high precision. It incorporates many mechanical, electrical and software features, suggested from the customer research, that ensure it is easier to operate and change over in demanding production environments.

Mike Duignan, Sales & Marketing Director of Jones & Shipman commented: "The launch of the new UltraGrind machine is an exciting development for the precision grinding industry. The machine brings new standards of accuracy for a one-piece bed grinder, keeping the company at the forefront of the precision tool technologies industries. We will be demonstrating a working prototype at the CIMT so visitors to the Show will be able to see all the machine's distinct advantages. We have already received a number of orders for the UltraGrind, including one for two machines from a premium subcontractor to the aerospace industry."

A brand new modular wheelhead design ensures customers have a wide choice of external and internal grinding spindle combinations, effectively allowing the customer to specify a custom machine, but without the cost and build time associated with it. The modular wheelhead design gives wheel sizes up to $\text{Æ}500 \times 100\text{mm}$ and wheel spindle power up to 15kW, with ultra rigid spindles providing substantially increased metal removal rates and increased productivity.

Angular wheelhead positional accuracy and repeatability are assured via a high precision 1° Hirth coupling. An optional true B axis programmable to 0.001° utilising feedback from a high accuracy encoder mounted directly to the rotational spindle axis, infinitely variable positional resolution can be achieved. The machine currently offers 650mm or 1000mm between centres (with larger machine length capacities planned) and centre heights of 180mm, 200mm and 250mm. The increased diameter capacity (of up to 500mm) means there are options to cater for larger mass components up to 450Kg, and odd shaped components, which can result in high rotational inertia.

The UltraGrind machine uses a brand new Jones & Shipman's proprietary Windows® based graphical programming software suite, which further builds on the success of the Easy software that removes the requirement for operators to input code, although ISO programming is fully supported and codes can be easily viewed and used if that is the customers preference. The user-friendly software is built around a Fanuc® 320i with touchscreen control system. This reduces the time needed for operator training, machining set-up and changeover times.

Simplicity does not limit flexibility, however. A full suite of dressing and grinding programs are available for the operator. Easy to follow Jones & Shipman set up pages allow the operator to digitise diamond and wheel positions by means of a simple user-friendly touch screen interface. Graphical images that represent programs and set-up are simply touched to program, providing quick and simple input. A wide range of additional options including gauging and autoloading are also available.

About Jones & Shipman and Precision Technologies Group (PTG)

JONES & SHIPMAN

Jones & Shipman is part of PTG, together with its sister companies Holroyd, Crawford Swift, Binns & Berry and Edgetek. The Group is firmly at the forefront of high precision machine tool design, build and supply. Its machines produce ultra precision components in a diverse range of industries including aerospace, medical, mould tool & die, power generation, oil, gas, steel and high end automotive. In addition, the Group has developed some of the most sophisticated, bespoke software in the marketplace from simple rapid set and intuitive user interface right up to on machine 3D scanning, with automatic profile adjustment. These are just some of the world-class innovations that PTG can offer its customers.

The Group also offers technical consulting services, the ability to supply full turnkey packages and has a remanufacturing factory for large capacity specialist machines for the steel, oil and gas and aerospace industries.

Photo Caption: New UltraGrind CNC cylindrical grinding machine from Jones & Shipman offers more power, machine build flexibility and accuracy.

About JONES & SHIPMAN

We have more than 100 years of accumulated knowledge, experience and expertise as industry leaders serving a global customer base.

Our grinding and superabrasive machines and machining systems, produce ultra precision components in a diverse range of industries including aerospace, medical, mould tool & die, power generation and high end automotive.

We have developed some of the most sophisticated, bespoke software in the marketplace boasting a simple rapid set and intuitive user interface. An investment that allows customers to operate more efficiently and effectively with faster turnaround between jobs.

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