

Press release

FIVES TAKES MILL-TURN TO A NEW DIMENSION WITH EXTENDED-RANGE CONTOURING HEAD ON GIDDINGS & LEWIS BORING MILLS

Now
producing
features up
to 780 mm
OD

FOND DU LAC, Wis., June 2014 – Fives upsizes features that can be turned on Giddings & Lewis boring mills with introduction of a larger-range integrated contouring head that handles up to 980 mm I.D. (38.6 in) and 780 mm O.D. Rated at 56 kW (75 hp), the integrated head takes on larger turned features than ever before possible on a boring mill to accommodate the increased size of energy-industry parts in particular. "The part types have not changed; they are just larger, thus driving the requirement for larger turned features produced with high accuracy," said Pete Beyer, Director of Product Strategy and Development at Fives Giddings & Lewis. "This extended travel exceeds anything we could do in the past with a separate contouring attachment, which requires significant operator intervention, a head changing system and a storage solution as well."

Use
standard
modular
tooling

Unique in the industry, the new contouring head has a standard Kennametal KM80™ or Sandvik Coromant® Capto C8 interface, which greatly reduces tooling costs. It loads tools via the machine's automatic toolchanger for faster processing without operator involvement. The head accommodates tools up to 600 mm (23.6 in) long, weighing up to 18 kg (39.6 lbs). It can produce features with repeatability of ± 0.005 mm (± 0.0002 in) and accuracy of ± 0.015 mm (± 0.0006 in). In addition, the live boring spindle can use 50-taper tools as long as 750 mm (29.5 in), and an auto-coupler provides the interface for feedout tools, such as programmable boring bars.

Switch
between
heads
automatically

The contouring spindle's U-axis slide stroke of 440 mm (17.3 in) provides the ability to produce small- or large-diameter features in a single setup on a boring mill, without head changing or manual intervention, allowing complex features to be machined with greatly reduced cycle time and labor. The contouring head can produce features such as bottle bores, valve seats, seal faces, phonographic sealing surfaces, O-ring grooves, straight/tapered threads, chamfers, external profiles and others.

Reduce setups
and machines
required

"Some customers are interested in moving turning operations from a turning center to the boring mill with integrated contouring head," Beyer explained. "If the percentage of turning versus milling is small or the part is difficult to fixture or highly unbalanced, it makes more sense to do turning operations by spinning the tool on a boring mill than by spinning the part on a lathe."

The contouring spindle is located immediately above the machine's live spindle, but slightly offset in the Y and W/Z axes to avoid tool interference. A touch probe can be used in the boring spindle or on an auxiliary arm for in-process or post-process measurement of part features machined by either spindle. Standard services, such as coolant supply with high pressure 40 bar (580 psi), are plumbed through the contouring head to eliminate manual intervention and ensure maximum tool life. For additional information, see: www.fivesgroup.com



fives

Metal Cutting | Composites

Press release

About Fives in Metal Cutting and Composites

Fives designs and supplies machine tool and complete manufacturing solutions in a broad range of industrial sectors.

With a strong foundation based upon renowned brands such as Cincinnati, Giddings & Lewis, Forest-Liné, Liné Machines and Rouchaud, Fives is recognized as the preeminent provider of outstanding manufacturing solutions which are at the heart of its customers' performance.

Fives Metal Cutting | Composites dedicated teams – approximately 1200 people in over 15 countries – serve key industrial markets including aerospace, automotive and truck, heavy equipment, oil and gas, rail, wind, energy and general machining. With manufacturing and support operations strategically located worldwide, Fives and its Metal Cutting & Composites businesses offer comprehensive lines of equipment and technologies including automated assembly, laser welding and cutting, turning milling, composites processing and software with the associated support services (maintenance, spare parts, retrofit, overhauling and upgrading).

About Fives

Fives is an industrial engineering Group with a heritage of over 200 years of engineering excellence and expertise. Fives designs and supplies machines, process equipment and production lines for the world's largest industrial groups in various sectors such as aluminum, steel, glass, automotive, logistics, aerospace, cement and energy, in both developing and developed countries.

In all these sectors, Fives designs and manufactures equipment and innovative solutions, which better anticipate and meet the needs of its customers in terms of performance, quality, safety and respect for the environment.

In 2013, Fives achieved a turnover of 1.6 billion Euros and employed about 8,000 people in over thirty countries.



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