

Continual innovation

Only a few months after EMO, Gildemeister Group machine tool sales company DMG's annual Open House held in Pfronten, Bavaria, unveiled yet more new products and market strategies

The DMG Open House saw the launch of an innovative vertical lathe; the unveiling of a new Eco Line low-cost machine tool range; the establishment of an Aerospace Centre of Excellence at Pfronten; a centralised global spares activity at Geretsried, Germany (commencing this month); the bringing together of all DMG Electronic activities at Pfronten (also this month) that promises many new product developments; a renewed push on its high speed milling technology; and an emphasis on automation using robots (first unveiled at EMO). Most important, however, was the revelation that 2007 was 6,000-employee Gildemeister Group's best ever year.

Last year the company saw sales of over €1.5 billion – up 18 per cent, while order intake rose by 29 per cent to reach over €1.85 billion, helping to deliver a massive 85 per cent boost to profits, taking them to over €50 million.

Gildemeister Group entered 2008 with an order backlog of €750 million; a 68 per cent increase over the previous year.

Sales in its domestic, number one, market achieved 19 per cent growth, while order intake was up 31 per cent; equivalent figures for international markets were 16 and 28 per cent. Export sales represented 53 per cent of the total, and export orders amounted to 55 per cent of the total.

But this being a publicly quoted company, predictions about the future must be couched in cautious language, so it was that Group board

chairman Dr Ruediger Kapitza offered modest-sounding figures for 2008, putting order intake at in excess of €1.9 billion and sales in excess of €1.8 billion.

VERTICAL CHALLENGE

The new inverted spindle vertical lathe, the CTV 160 (160/200 mm diameter chuck), is, in fact, a replacement for an earlier model of the same name. However, it boasts a novel layout that will also be seen later in the year in the CTV 250, it was revealed.

Although the CTV 160 is a VTL, the frame is actually more like that of a moving

column milling machine where the inverted spindle moves in both X and Y axes above a turret that simply indexes. This not only helpfully increases Y-axis travel (± 90 mm) but also allows the spindle to act as a 2-axis pick-and-place module. In other designs, because the spindle only moves in X, the part conveyor must index to present the new part for the spindle to pick up; the CTV160's spindle is both able to put down the finished part and then move in Y to pick up the new one. This gives a chip-to-chip time of just 5 secs –

The CTV 160 is an inverted spindle VTL boasting X- and Y-axis head movement



putting it right at the top of "the competition scale," said Dr Ing Juergen Waltz, managing director Gildemeister Drehmaschinen. Incidentally, two machines can share one conveyor unit in a left-hand/right-hand type of layout.

It should also be noted that the CTV160 comes with a fully integrated, 20-position conveyor system – a complete 4.7 m² footprint package ready to go.

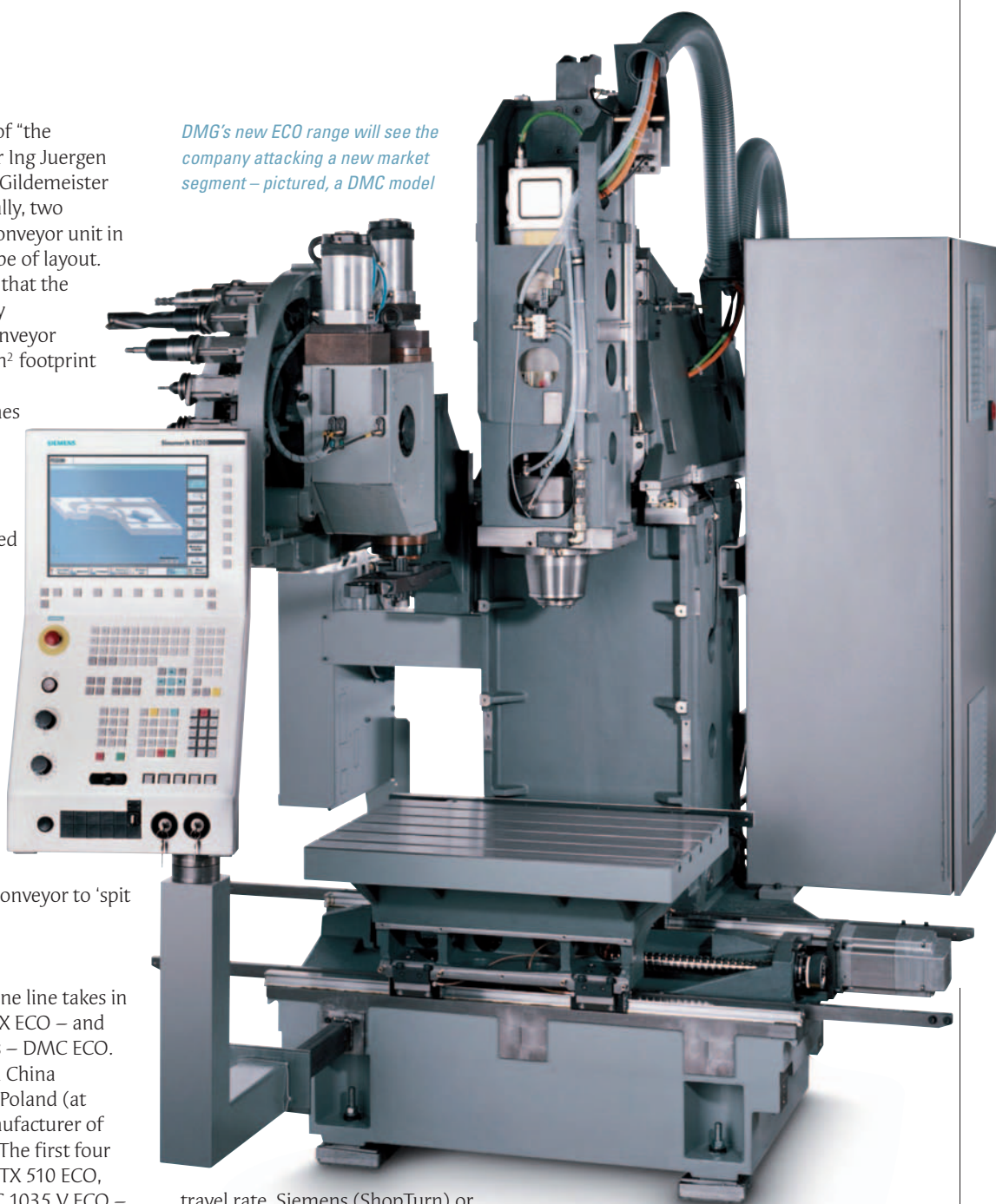
And while such machines are normally associated with high volume manufacture, this one is targeted at the universal requirement. It can be fitted with the Siemens 840D SolutionLine, or the DMG ErgoLine CNC featuring integrated ShopTurn software to support rapid at-the-machine programming. A lower tech product feature that will chime with setters everywhere, is the ability to easily recover chuck jaws dropped into the swarf conveyor: it is not necessary to wait for the conveyor to 'spit it out', it was underlined.

LOW COST RANGE

DMG's new low-cost Ecoline line takes in both universal lathes – CTX ECO – and vertical machining centres – DMC ECO. The machines are made in China (Shanghai factory) and in Poland (at FAMOT – the leading manufacturer of machine tools in Poland). The first four offerings – CTX 30 ECO, CTX 510 ECO, DMC 635 V ECO and DMC 1035 V ECO – all retail for under €50,000. This will attract a completely new segment of customers, says Dr Thorsten Schmidt, senior executive for sales and service.

The CTX 310 ECO is a 51 mm bar/200 mm chuck machine having a 11 kW, 5,000 rpm, 112 Nm spindle motor; a VDI 30, 12-station turret (with six able to hold driven tools); a travelling tailstock; and a 24 m/min X-axis and 30 m/min Z-axis

DMG's new ECO range will see the company attacking a new market segment – pictured, a DMC model



travel rate. Siemens (ShopTurn) or Fanuc (Manual Guide i) control with 15 inch screens can be fitted.

The DNC 630 V ECO has a work area of 635 by 510 by 460 mm, the larger 1035 model's equivalents are 1,035 by 560 by 510 mm, and both feature a 13 kW, 8,000 rpm, 82 Nm torque spindle, and a 20-position tool magazine. Siemens 810D with ShopMill software and 15 inch screen are a feature, as are rapid traverse

rates of 25 m/min.

DMG also underlined its high speed milling credentials at the Open House. Its range encompasses the HSD 20 linear with 200 by 200 by 280 mm traverses for smaller workpieces through to the HSC 105 linear, for large workpieces weighing up to 1,800 kg.

On the automation front, the use of

robots to service machine tools from pallet stores was a common theme, but the Open House also showed another possibility. The HSC 20 linear, for instance, can be complemented by the new LM 100 gantry-type storage system for smaller workpieces.

This accommodates clamping systems of various designs and stores up to 99 parts that are brought to their machining position by means of a gantry loader. On the tool side, there is the option of a 60-position pick-up magazine.

Moving to the launch of the Aerospace Centre of Excellence, Dr Christian Lang, managing director, sales and marketing, Deckel Maho offers that DMG has delivered some 250 machines to this sector over the past five years. Often supplied to, OEMs, today they are pushing more work out into the supply chain. Indeed, the potential audience is put at more than 3,000 companies, while

there is a major opportunity presented due to the number of new aircraft programmes, Dr Lang explains. These programmes are world-wide - Europe, the US, China, Russia and India. Indeed, by 2022 there will be 29,000 more civil aircraft plus another 11,000 military aircraft flying, he offers. In 2005, global investment in aerospace production capability is put at €1 billion.

AEROSPACE COMPONENT FOCUS

"We want to participate in this business," Dr Lang reveals, "but companies in the supply chains do not know what machines and processes to employ."

That's where the Aerospace Centre of Excellence comes in; it intends to deliver complete machine-plus-process solutions to such companies. And with new programmes comes the opportunity to develop new processes more freely than is the case with existing aircraft where

production processes are 'sealed', so limiting scope for process innovation.

The Centre will work on specific types of product - engine casings, for instance, to optimise production times. Indeed, it has already demonstrated a massive saving in casing machining time of the order of 70 per cent - one machine can now produce three parts in the time it took to take one.

Developed both with OEMs and independently, these new, improved processes can then be transferred to companies in the supply chain.

The Centre of Excellence at Pfronten currently has five people on the technical support side and a similar number on the marketing side, but these numbers will grow in the future, Dr Lang says.

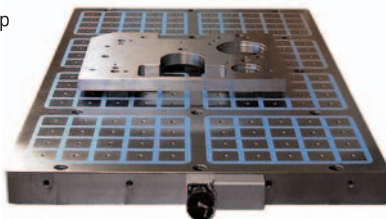
Access to the Centre will be through normal DMG channels, and the target is to add another €30 million to aerospace sales over the next two years. □

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