



Productive solutions at the right price

The widest range of High performance machine tools now available from the engineering technology group



it to design and manufacture its machines using tried and tested proprietary components, such as linear guides, ball screws, CNC, motor packages and linear scales, from leading German and Japanese suppliers. Companies worldwide that have recognised this combination of high specification and competitive prices include blue chip organisations such as Airbus, Boeing, NASA, Toyota, BMW, Ferrari, GM, VW, Siemens and Caterpillar. Says Paul Rhodes: "Compared to other leading brands of mid-range Japanese and German manufacturers, a five-axis machining centre from Feeler will give equivalent performance and quality for around 60% of the cost. We are sure that Feeler machines will appeal to customers all the way from small subcontract engineering companies up to Tier One automotive and aerospace suppliers."

Introducing the Feeler range

The Engineering Technology Group is offering a broad range of machines from Feeler, covering all types of material, volume requirement, component size and market sector. The FVP series, the most popular vertical machining centre in the world, with 3,500 units sold a year, is an ideal low-cost, entry-level machine for small subcontractors. These BT 40 machines are available in three-, four- or three + two-axis configurations and offer a step up in capability, build quality and specification from the general run of commodity low-cost offerings.

For light machining of aluminium castings and extrusions, the TV-510 series is a range of BT30 mill/drill/tap centres with spindle speeds of up to 15,000 rpm and 60m/sec rapid traverse speeds. This high-speed capability is complemented by a 1.2 second tool change and in three- and four-axis configurations. Typical applications would be the machining of automotive die-castings. A step up in size from the TV-510 is the QM series of vertical machining centres. ideal for a vast range of materials, this series offers 48 m/sec rapid traverses, 2.2 second tool change, BT40 tooling and an X-axis up to 800mm.

A new venture from the Engineering Technology Group brings to the UK a broad range of high-quality competitively priced machine tools from one of the world's largest manufacturers. Manufactured by the Fair Friend Group, the Feeler range includes drill-tap centres, light-, medium- and heavy-duty vertical machining centres, horizontal machining centres, five-axis vertical machining centres and long bed milling machines. These highly capable machines fill the gap between low-specification, low-duty budget machines and the highest-specification Chiron and Handtmann machine tools already offered by the Engineering Technology Group.

And complementing the Engineering Technology Group's Nakamura-Tome twin-spindle, multi-turret turning centres, new additions from the Feeler range include large slant-bed, two-axis lathes with turning lengths up to 4m and vertical lathes with capacities up to 3m diameter.

The Feeler machines are available as standalone units or as part of a fully engineered, production-ready turnkey system with comprehensive performance and aftercare support. As Engineering Technology Group Chairman Paul Rhodes comments: "Whereas in the past the benefits of turnkey systems have been the preserve of larger OEMs and specialist manufacturers, they are now available to small and medium-sized manufacturers and subcontractors."

Aiming for the top

Although the Fair Friend Group and the Feeler brand are, so far, fairly unknown in the UK, it can only be a matter of time before they make the same impact here as they have in the rest of the world. The Taiwan-headquartered Group is already the largest machine tool manufacturer in Greater China and has an annual production of 8,000 machines. 5,000 of these are vertical machining centres, making it the second biggest VMC manufacturer in the world. With 2,000 graduates – 30% of its workforce – devoted to research and product development, it is likely to become the world's biggest machine tool manufacturer within the next ten years. Combined with low assembly costs, the sheer volume of its production gives Feeler the economies of scale and buying power to offer high-quality machines at extremely competitive prices. This allows





Single- and twin-pallet versions are available and the machine can also be supplied with a fourth axis or in a 3+2 five-axis configuration – often more than sufficient for one-setup machining when there is no need for simultaneous 5-axis machining of complex surfaces. This machine competes very effectively with Korean and Japanese alternatives due to its superior working range and pallet size. Where shaving seconds of cycle times is crucial, the HV variant offers 60m/min rapids on X and Y axes. Until now the Engineering Technology Group hasn't had a horizontal machining centre – Feeler's FMH-500 range changes that with a very capable and competitively priced machine.

The Engineering Technology Group will have an FMH-500 with 12,000 rpm spindle, 60m/min rapids and twin 500kg capacity pallets at its Southam headquarters for the Feeler launch.

For heavy machining applications, the FBM series of horizontal machining and boring machines, or the VB series of box-way design BT50 verticals are the answer.

The VB series, for example, is ideal for oil industry, energy, machine building, marine and transport applications, offering payloads up to 2.7 tonnes, X-axis travel up to 2.2m and Y-axis up to 1m.

The FBM range of rugged horizontal boring and milling machines is aimed at heavy industry machining applications, for components such as valve blocks and manifolds for, for example, the offshore sector, where multiple sides have to be faced, milled and bored. Machines are available in three- or four-axis configurations with working areas up to 1800mm (X) by 1600mm (Y) and payloads up to 2 tonnes.

For full simultaneous five-axis machining, Feeler offers the high-specification B-800 range – again at a price advantage of around 40% compared to established Japanese and German mid-range machines. A trunion-type machine, with direct drive A and C axes, solid box-way construction and proven Heidenhain control, the B-800 range is expected to be particularly attractive to aerospace and motor sport customers that are machining parts from solid billet.

For large turning applications, the FT series of 2-axis machines offers a complete range of slant-bed, box-way turning centres with turning lengths from 500mm to 4m – ideal for large shaft work in the oil industry, printing and paper machinery and the energy sector. A C-axis option allows driven tool machining. As with the rest of the Feeler range, these are very competitively priced.

These are complemented by a range of large capacity vertical turning machines, ideal for components such as turbine rings,

with turning diameters from 450 to 3m. These are also available with driven tools.

For very big and heavy components, Feeler offers the FV range of double-column, long bed milling machines. Extremely rugged, with a hand-scraped box-way construction, these are available with X-axis travel of up to 8m, making them suitable for aerospace components, machine building and composite machining for motorsport.

What the market wants

As Feeler project leader Dave Broomfield explains: "With Feeler we can offer the market a full range from an entry-level machine all the way up to twin-pallet vertical machines, twin-pallet horizontal machines and five-axis machines for billet work. All built using high quality components and, with the exception of the 5-axis B-800 where we prefer the proven Heidenhain control, all using the latest Fanuc 0iMD control.

"Across the complete range, Feeler offers a very good specification that can achieve the quality, cycle times and reliability that are fit for purpose to achieve aerospace and automotive standards."

It is not just a case of selling machine tools though; it is also about drawing on the strengths of the Engineering Technology Group to provide a complete application-based turnkey solution.

"We can supply a 'machine in a box' if that is what the customer wants and they can then do their own fixturing and applications engineering," says Stuart. "But as a result of the recession many companies can no longer afford to sustain these resources and capabilities in-house. We can help you bridge that gap and offer you the machine complete with the applications you want – so that's work-holding, fixtures, automation, cutting tool selection, CAD/CAM programming in Delcam and CATIA systems, prove-out, production guarantees, preventative maintenance agreements, service contracts, training – it's a one-stop shop."

The Engineering Technology Group has already supplied five machines on this basis to an automotive industry supplier, where they are producing parts such as cam caps, bearing ladders and mounting brackets. They have proved their reliability and stable quality in full three-shift working, and the customer has now ordered two more machines.

As Paul Rhodes concludes: "We listened to the market and realised that it's not just the top end of the market that wants turnkey solutions, and so we are now offering these benefits to companies such as subcontractors and small- to-medium manufacturers.

"If you tell us what you want to do, we can help you grow your business by providing a turnkey solution that answers all your current needs and equips you for the future."

The Feeler range at a glance

TV-510 – Drilling and tapping machines for aluminium machining

FVP – High-quality entry-level vertical machining centre

QMP – Linear guide vertical machining centre for aluminium machining

HV – Similar to QM with faster rapids

FMH-500 – Single- and twin-pallet horizontal machining centres

VB – Box-way vertical machining centre for heavy duty applications

FBM – Heavy-duty horizontal drilling and boring machines

B-800 – Box-way true five-axis machining centre with Heidenhain control

FV – Double-column long bed mills up to 8.2m and 24 tonnes

FT – Two-axis slant-bed lathes up to 4m length

FVT—Vertical Lathes