Breaking the myth

**TESA** is a well-known hand-held measuring instrument brand. Less familiar to the UK audience is its sophisticated measuring machine technology.

Andrew Alcock reports

**TESA** — top quality, but expensive, calipers, micrometers, bore gauges and height gauges? If that is your perception, then it is wrong. Yet it is still a common misconception, says TESA Technology UK’s general manager, John Drover. It’s a myth that he is determined to break, however, both in terms of product range and in terms of cost. He is also keen to ensure that customers know that TESA also supplies surface measurement equipment, profile projectors, vision systems and CMMs.

Mr Drover, who took on the general manager role at the beginning of the year, has been associated with precision measuring instruments for 23 years. He worked for Thomas Mercer, a company well known for its dial test indicators (still part of the current TESA product range), which was bought by Brown & Sharpe, which, in turn, was acquired by Sweden’s Hexagon AB. Two global divisions were subsequently created — Hexagon Metrology and TESA. In the UK, both Hexagon Metrology and TESA Technology UK are located at Metrology House, Telford.

Since the acquisition of the precision measuring instruments (PMI) activity by Hexagon, the general manager underlines that most of product development investment has, in fact, been made on the PMI side rather than in the CMM division. Clearly the results of this investment have yet to establish themselves in the minds of the UK buying audience, he agrees.

But while the product range and technology breadth have increased and developed over the past 10 years or more, one thing that hasn’t changed is that all its products are made in Switzerland, either within its own factory or at sub-contractors within the country. It was a policy decision made prior to acquisition by Hexagon and one that continues; the Swiss flag brand on all its products underlines this message.

**NOT ONE OF THE CROWD**

In the area of hand-held measuring instruments such as calipers and micrometers (included in TESA’s Classic products range), there are three product quality bands generally available, explains Mr Drover — low, mid-range and high quality. The lowest quality is imported from China, but with time the quality will improve and challenge the mid-range, so high quality is where TESA has decided to remain rather than join the fray, as other manufacturers have. But Tesa must compete on price; and it does, insists the general manager.

“As well as being the best quality, we have to be price competitive, and we are. That’s not to say we are the lowest priced on every product, but on the high...”
volume products, such as callipers, we are often lower priced than our competitors. That said, we are never going to compete with a lot of the China-manufactured products that are coming in, but people accept that," Mr Drover explains. The company’s competitive position has been made possible by taking cost out of the product by analysing and improving production processes in Switzerland, he adds.

Asked to explain the benefits of high quality Classic measuring instruments such as calipers, Mr Drover explains it like this. The quality credentials of TESA products, such as calipers, mean that, while instruments may all align with the same standard, not only will TESA products last longer but they will also remain within specification longer – that is, they will remain true to their last calibration for longer. And since calibration intervals are not defined in any standard quality specification, manufacturers’ customers might also take an interest in the quality of the measuring instruments employed by their suppliers because of the implications for product consistency and accuracy.

But while TESA’s Classic range still accounts for 50 per cent of its UK turnover, product development in the last 10 years has seen measuring machine sales grow to represent the other 50 per cent of its UK business. It is these products that some in UK industry still do not link with the TESA name.

It’s a message reinforced by the company’s latest TESA Essentials publication. While this has been published for some time, the January issue is both the largest and the first to be UK-focused. "We have seen that not all products sell similarly well in all countries. Our previous publication was globally generic and so some of the products were not necessarily relevant to the UK. And while underlining the price message for our Classic range products, we also highlight some of our higher technology items," explains Mr Drover.

HIGH TECH MACHINES

These include surface finish measuring equipment, CMMs, TESA’s range of CMM probes, profile measuring and vision measuring machines, plus the pioneering TESA-Scan machine.

With the surface finish market well served, an attractive price/feature package is how TESA is battling for a place

Getting the right measurement approach

The use of calipers and micrometers with vernier scales is constantly falling. Digital readouts are increasingly preferred. There is no room for interpretation of readings. And as vernier use becomes increasingly rare, people in industry are not trained how to use such devices. In addition, digital technology allows UK companies to operate in both imperial and metric regimes, which many in this country must do.

In more general terms, it is also the case that people within companies may not be aware of the best device/machine to use in their measurement tasks, explains Mr Drover. A recent visitor to the mobile TESA demonstration vehicle, having come in for a profile projector, was asked what he wanted to measure and in response was then shown the company’s TESA-Scan. Seeing the benefit immediately, the customer bought one.

Indeed, TESA is offering an onsite survey service to review companies’ current measurement approaches/practices with a view to advising on ways of improving measurement accuracy, consistency and efficiency. The company also offers measurement training courses.

Although known for its manual CMMs, the introduction of a small computer-driven model has proved successful for TESA
in this arena. And it is being successful when customers see the units, says the general manager.

In terms of CMMs, while TESA sells manual machines it has latterly added a small computer driven model which has proved very successful – MH3D DCC for up to 580 by 730 by 400 mm size parts. Hexagon now also offers such a small machine, but the two companies tend to serve different markets – Hexagon the larger companies, TESA, smaller firms.

One differentiator is that TESA will only sell its CMMs with its own probes, and there are claimed technical and price advantages for these over other probes available in the market, says Mr Drover. It also means that the whole package comes from one source so there is no potential for any probe supplier/CMM supplier issues in times of trouble.

Now available for two years or so, the latest addition to the probe range is the TESA Star M motorised probe head with a 4-axis probe offering a probe sweep function, just recently launched at the Control exhibition, Germany.

But CMMs are considered to be a mature market now in the UK: it is quite the opposite for vision products, which, in the form of the Vista range, have been in the TESA stable for only a couple of years. “These are the products with the most growth potential in the UK and globally. Vision is not replacing anything. Again, as a new entrant, TESA has not only made sure that it has priced its technology competitively, but also that it has “a massive advantage over everybody else” because it employs the same PC-DMIS software that is a common feature of the TESA and Hexagon CMMs – “a unique capability”.

“We can go to existing PC-DMIS users and offer a vision system that will complement their CMMs. This makes it easier for them in terms of operator familiarity and training. Also, a slightly modified PC-DMIS CMM program will work on our vision system, too.” But more importantly TESA vision systems can measure parts successfully where others fail, claims Mr Drover. In one particular case, it could do so where the alternative machine, costing £20,000 more, couldn’t. Superior edge-finding capability and software are the key elements in this. The company has also combined both tactile and vision capabilities in its latest technology offering.

**SEEING POTENTIAL**

An optical measuring product that TESA does have, and which it has had for well over 15 years yet remains one of the few examples in the world, is the TESA-Scan, available in bench and floor-standing models. For the automatic, non-contact measurement of the external features of turned parts, regardless of complexity, TESA-Scan measures in seconds – 0.5 secs per feature – taking in diameters, lengths, chamfers, roundness, perpendicularity, parallelism and threads. And with small, complex turned parts increasingly a UK focus, this machine is increasingly attractive. Already TESA sells 20 of these per year with companies such as Delphi, Parker Pen, Nissan, Goodrich and Ford among its customer base, along with smaller SMEs.

With a catalogue of some 5,000-plus products and with an increasing portfolio of sophisticated measuring machines, Mr Drover underlines that “there is hardly a dimensional measuring task that TESA cannot satisfy”. It only remains for the UK to modify its perception of the small measurement tool specialist. Mr Drover is confident that view will change.

A sales growth target of 20 per cent per annum for the next few years demonstrates the company’s self-belief and determination to get this message across successfully. }