



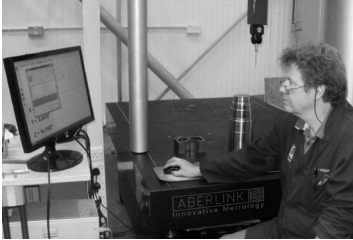
Oil & Gas Case Study 02/2011

Company: Q-Mass Ltd

.....Zenith too

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Q-Mass Ltd
Zenith too



When [Q-Mass](#) commenced trading as a sub contract machining business in early 2006, it was clear that, mindful of the established competition serving the demanding Oil and Gas industry, the fledgling business needed to provide something different to become successful. With the new company's main focus concentrated on the quality of its work, the owners of Q-Mass (Quality Manufacturing and Supply Solutions) knew that they had to deliver consistently high-quality, added value components, on time and at a competitive price.

To enable the company's ambitious objectives to be realised, Q-Mass recruited a strong team of people whose array of abilities encompassed all of the required technical skills. The company also invested in a variety of state-of-the-art machine tools. The early success of Q-Mass proved the founding principles of the company to be correct. Further continuous investment has resulted in Q-Mass becoming regarded as one of the most capable UK machine shops serving the Oil and Gas industry.

Now operating from a modern 30,000 square feet manufacturing plant in Central Scotland, much of Q-Mass's work is related to new product development, where the technology required by the oil industry means increasingly complex designs need to be manufactured. These intricate parts often include complex geometries, gun drilling, hydraulic ports, tight tolerances, and are often characterised by challenging lead times.

To ensure the highest standards of components being delivered to its customers, in addition to thorough 'in process' inspection procedures being carried out, painstaking final inspection routines are undertaken on all of Q-Mass's output. Prompted by the growing complexity of Q-Mass's output and the increasing size of components manufactured by the company, a recent search for a large volume Coordinate Measuring Machine was undertaken.

Company owner, Ronnie Robertson explained. "It is no coincidence that the 'Q' of Q-Mass (Quality Manufacturing and Supply Solutions) stands for 'Quality'. Having set-out to found our company ethos on the quality of the work we undertake, we have now firmly established our reputation through the high standards of our output.

"To enable the precise measurement of our ever more complex parts and to allow the inspection of our increasingly larger components, we recently carried out a search for a large capacity CMM. After considering the alternative machines, we purchased a [Zenith too CNC CMM](#) from [Northern Metrology](#). Following training on the new Aberlink CMM, our inspectors have been able to master the machine's relatively simple controls and Aberlink's intuitive measuring software.

"In addition to our new CMM's generous XYZ measuring envelope of 40" x 60" x 32", that is able to accommodate our larger parts, the Zenith too's ease of use and comprehensive capability ensures that even our most demanding of parts can be inspected with high levels of accuracy.

"As much of our output is under challenging time constraints we have been delighted that the rapid CNC action of the new Aberlink CMM has also resulted in significantly reduced inspection times."

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Manufactured by Aberlink Innovative Metrology, the largest UK owned Coordinate Measuring Machine manufacturer, the large capacity Zenith too Coordinate Measuring Machine range consists of 10 machines with XYZ capacities from 1000x1000x600 –1000x3000x800.

The range's cutting edge, all aluminium construction, advanced drive design and raised guide-ways ensures that despite their generous measuring envelopes, the machines' extremely low inertia characteristics guarantees supreme speed of operation. Impressive accuracy and repeatability figures are further aided by the range's measuring structure being completely independent of the machine's granite surface table. Although the Aberlink series is perfectly suited to use within environmentally controlled inspection environments, it is on the shop floor where the Zenith too range's low thermal mass and extremely robust characteristics come to the fore, enabling the accurate measurement of large components to take place nearer to their point of manufacture.

The impressive hardware of the new Zenith too is complemented by the range's intuitive Windows based software. A welcome bi-product of any Zenith too CMM inspection routine is that a simultaneous picture of the measured component is created in real-time on the operator's computer screen. Dimensions between the measured features, mirroring those that appear on the component drawing, are then picked off as required. In essence Aberlink's 'smart' software represents an intelligent measuring system that is able to automatically recognise and define the various features being measured. [Aberlink 3D is the easiest to use CMM software currently available](#), so much so, that a complete novice is usually able to perform relatively involved measurement routines after just 5 minutes training.

Aberlink supply a complete Zenith too 'turn-key' package, including a comprehensive training programme, a wide choice of motorised or manual probes, Aberlink's celebrated 3D software and not least the latest generation of high speed custom controllers, that are capable of generating true, three dimensional contours.

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