



Subcontract Case Study 11/2011

Company: Paragon Precision

..... Axiom too

Subcontract Case Study

Paragon Precision
Axiom too



Established in 1973 by John Kratovil, [Paragon Precision](#) Products has developed into a leading manufacturer and supplier of high-quality turned/milled components to international markets. The demanding global industries supplied by Paragon include the defence, aviation, automotive, autosport, fibre optics, medical and scientific research sectors. The well known company also has extensive experience in manufacturing and supplying highly specified components for a range of military applications.

Paragon is committed to maintaining the highest standards of component quality and service whilst optimising productivity; this is achieved by utilising advanced CNC Machine Tool technology. Further efficiencies are gained through the implementation of a progressive Kanban system and whenever possible, by the use of “lights out” production. Paragon’s policy of continuous investment in the most up to date, highly productive technology and the use of progressive production systems, enables the company to produce high-quality components in small, medium and large batch quantities, at very competitive prices. An illustration of the success of the company’s abiding price/quality philosophy is the recent award of a large production contract, won despite the presence of extremely aggressive Chinese competition.

Paragon’s modern production facility provides a clean and efficient, purpose-designed operating environment where a team of precision engineers are able to produce high-quality components to exacting specifications. The company’s well-equipped CNC machine shop houses a comprehensive range of precision machining, milling and turning equipment, all using up to date CNC technology. Operation of the company’s machine tools is optimised by the use of a fully automated, feature-rich CAMWARE system that provides extensive CAD drawing capability and design tools.

To ensure that this ISO 9001 Quality Assured company retain the hard won reputation they enjoy for the high quality of their output, regular investments are made in the best available quality control technology. An illustration of Paragon’s commitment to quality is the company’s recent purchase of an advanced [Axiom too Coordinate Measuring Machine](#) from Aberlink Innovative Metrology.

Paragon Precision Products Managing Director Paul Kratovil explains the reasons behind the company’s latest, high-tech acquisition. “Although our Inspection Department is well equipped with a range of modern measuring and testing equipment, the high volume of work now passing through our production facility meant that we needed to procure a high-accuracy, high-speed CMM that could keep pace with our current levels of production. As our proposed CMM would represent the most expensive piece of quality control equipment ever purchased by the company, we considered many alternatives makes. We also took advice from our customers, who operate several different CMMs. Although some alternatives came close, the ‘stand-out’ CMM was the Axiom too from Aberlink.”

Subcontract Case Study

Paragon Precision
Axiom too

Available in [manual](#) and [CNC](#) variants, the cost effective Axiom too is the best selling CMM from the largest UK owned Coordinate Measuring Machine manufacturer – Aberlink Innovative Metrology. Aberlink’s popular Axiom too CMM can truly be described as the complete Inspection Centre; high measuring accuracies are achieved through the use of the latest metrology techniques and advanced in-house manufacturing methods. The Axiom too boasts an all aluminium bridge resulting in a very low thermal mass, rendering the machine ideal for use either in controlled environments or within less than perfect shop-floor conditions. Thanks to the Axiom too’s use of advanced materials, the machine’s reduced inertia results in class leading speed of operation. For increased accuracy air bearings of optimised stiffness are employed on all axes, whilst a granite Y Beam allows preloading of bridge bearings in both directions. Borrowed from the Aerospace industry, the CMM’s sturdy component support consists of an advanced granite/aluminium honeycomb construction, this technology, provides natural damping and further improves the machine’s thermal properties. Despite the Axiom too’s generous measuring volume 640x600x500 or 640x900x500, the machine’s compact design occupies a relatively small footprint.

Equally rewarding when used by the novice or an experienced CMM operator, the Axiom too utilises Aberlink’s famous, intuitive 3D software, ensuring greater user productivity and profitability. A welcome bi-product of any Aberlink CMM inspection routine is that a simultaneous picture of the measured component is created on the computer screen. Dimensions between the measured features, mirroring those that appear on the component drawing, are then picked off as required. In essence this ‘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.

Paragon Precision Products Managing Director Paul Kratovil continued. “From the moment of our first contact with Aberlink, we were impressed by the company’s very professional manner and their understanding of our needs, later a very impressive machine demonstration helped us to make our decision. Following a short learning curve, our operators found the Axiom too very easy to operate, and are now using our new CMM for a multitude of measuring tasks. The speed and accuracy of the Aberlink machine ensures that it is able to perform a range of complex gauging procedures extremely rapidly. Our new CMM has also proven very easy to programme, by undertaking a manual mode inspection routine of a given component, Aberlink’s 3D software automatically creates a part programme for future use. When working in a CNC mode, the Axiom too’s large component support allows us to load multiple parts, and by selecting the appropriate, pre-written part programme, measure parts in a fully automatic mode.”

“As a company we have always adhered to our philosophy of purchasing the best tool for the job in hand, as illustrated by our range of premium quality machine tools. Having applied this same attitude to our CMM purchase, it was particularly pleasing that on this occasion the ‘best tool for the job’ was a British CMM that came in at a very competitive price.”

Visit us at: www.aberlink.com email: sales@aberlink.com
or call: +44 (0)1453 884461 for more information.