



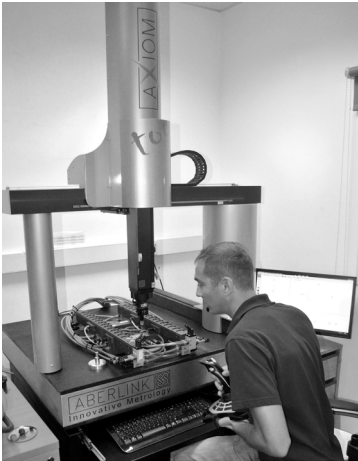
Plastics Case Study 10/2014

Company: Jarden Plastic Solutions

Axiom too

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Jarden Plastic Solutions  
Axiom too



The development of stronger and lighter materials, along with improvements made in manufacturing techniques, has resulted in the increased use of plastics in areas that were previously the domain of metals. The growing use of plastics for technically challenging applications, that have demanding dimensional tolerances, has meant that over the past few years, many plastic component manufacturers have invested in precise, CNC Coordinate Measuring Machines.

The sheer volume of parts that are produced by modern injection-moulding machines means that rapid feed-back, related to component features that are reaching out of tolerance conditions, is an absolute necessity. The accuracy and speed of several of today's CNC CMMs allows them to keep pace with the demands of plastic industry.

[Jarden Plastic Solutions](#) is a renowned multinational company specialising in high-volume, precision injection moulding for the medical, consumer packaging and high-end industrial markets. The company's proprietary engineering processes and extensive manufacturing capabilities enable it to provide first class design and engineering services to its growing list of customers.

The company's impressive 60,000 square-foot Christchurch facility boasts a diverse customer base and is able to undertake the production of medical moulding and complex assemblies within its Class 8 Cleanroom.

To provide comprehensive support to the company's process management system, and to help guarantee the quality of the company's output, the Jarden Plastic Solutions, Christchurch Quality department uses two advanced Aberlink Axiom CMMs. Company Quality Engineer, Ian Brown explained. "Any delays in receiving feedback from our quality control department, related to the quality of parts currently being produced, can result in the production of substandard products; therefore we undertook a search for suitable Coordinate Measuring Machines. Having looked at the alternatives, we purchased two [Aberlink Axiom too CMMs](#), as they had the required accuracy specification and also the speed of action that was able to cope with our high production volumes.

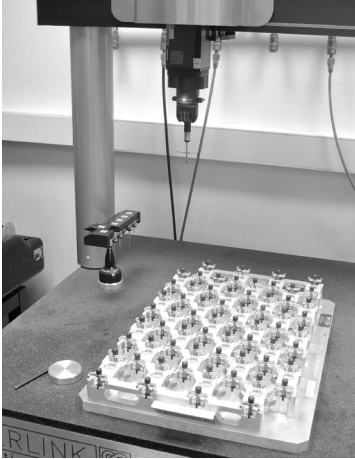
"As much of our work consists of the production of repeat batches, we have created numerous part programmes that we are able to recall when required. To enable very accurate results to be achieved by our Aberlink CMMs and to further speed-up our measuring routines, whilst a batch of one kind of component is being measured in a fully automated CNC mode, we load a second batch of another category of parts onto a special pallet type fixture.

As the removal of the first fixture, replacing it with another, recalling the new part program and starting a new batch measurement, takes very little time, our Aberlink CMMs are able to get through an impressive amount of precise work.

"It helps that the Axiom too has a generous bed, as this allows us to use large portable fixtures that are able to hold many parts. Also, in addition to satisfying our accuracy requirements, the Aberlink machine has the fastest operational speed of the CMMs we considered purchasing."

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Available in [manual](#) and [CNC](#) variants, the recently upgraded, cost effective Axiom too is the best-selling CMM from the largest UK owned Coordinate Measuring Machine manufacturer. Popular throughout the plastic industry, Aberlink Innovative Metrology's 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 aluminium bridge with 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, with the controller and all peripherals housed within the Axiom too's workbench.

Equally rewarding when used by the novice or an experienced CMM operator, the easy to use 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](#), as a result a complete novice is usually able to perform relatively involved measurement routines after just 5 minutes training.

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