

# Horizon

## Starting the linear drive revolution

The Horizon CMM breaks new ground in design and innovation using frictionless linear drives, which are the key to its fast and exceptionally smooth motion.

The kinematic isolated drive structure is completely independent of the CMM structure and ensures that the motor thrust is directed through the centre of gravity of the moving parts. This not only avoids acceleration induced metrology errors but also has the effect of thermally isolating the motors from the metrology structure of the CMM.

Linear motors are non-contact and therefore have no wearing parts and thus provide the perfect solution for CMM drives, improving reliability and reducing maintenance.

The Horizon is a standout machine with fast, smooth, silent motion ideally suited to contact scanning and with a first-term accuracy specification of under two microns.



## Key Features

- Linear motors offer frictionless, smooth, silent motion.
- No wearing parts means greater reliability and reduced maintenance.
- Drives applied through the centre of gravity improves both speed and accuracy.
- Thermal isolation of motors from the metrology structure avoids thermally induced metrology errors.
- Smooth motion allows fast and accurate contact scanning.
- The most accurate machine in the Aberlink range. First term volumetric error specification under  $2\mu\text{m}$
- Automatic temperature compensation ensures that measurement results are reported as if they had been measured at  $20^{\circ}\text{C}$

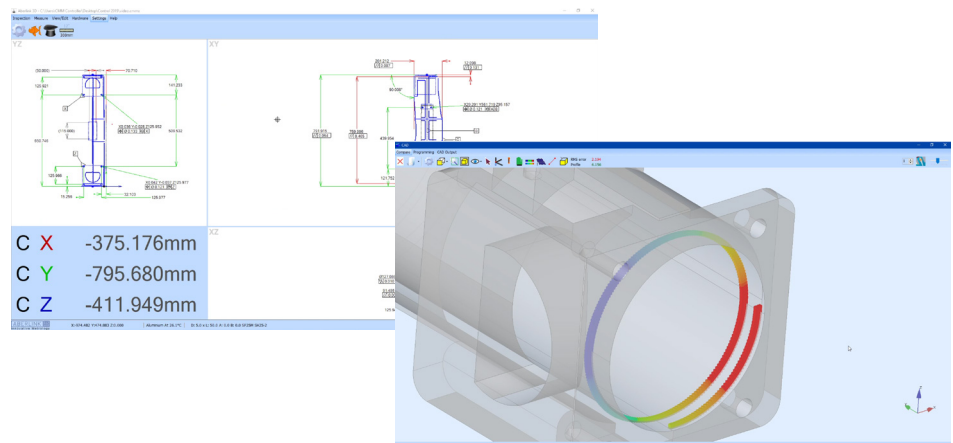
## HORIZON powered by Aberlink 3D - making measurement easy

The Whole philosophy for Aberlink is to make measurement easy. Aberlink 3D software has been written by engineers for engineers and sets the industry standard for simple-to-use software. As a component is measured a representation of it is built up on the screen. The user simply clicks on the measured features to call up dimensions exactly as they would appear on a drawing.

However, Aberlink 3D is not only easy to use but also has the depth of functionality to make it the choice for either occasional users or full-time inspection professionals. The software incorporates GD & T dimensioning, RPS alignment, SPC data analysis and further modules are also available for off-line programming of parts from a CAD model and also for comparing measured results to the CAD.

Inspection reports can be in the form of fully dimensioned graphical representations as created on the screen, or tabulated reports in various formats that can show nominals, tolerances, errors, pass/fails, geometric tolerances etc. These reports can all be output as an Excel spreadsheet.

Popular throughout the world, Aberlink's measurement software provides the user with a powerful, yet easy-to-use interface. This substantially increases component throughput and vastly reduces the learning period for new users.



## Specification

**Measuring Volume**  
 X 800mm  
 Y 1000, 1500, 2000mm  
 Z 600mm

**Overall Size**  
 (without monitor arm)  
 X 1403mm  
 Y 1530, 2030, 2530mm  
 Z 2700mm

**Table**  
 Solid Granite

**Table Load Capacity**  
 1000kg

**Accuracy**  
 TP20 (1.9 + 0.4L/100)  $\mu\text{m}$   
 TP200 (1.8 + 0.4L/100)  $\mu\text{m}$   
 SP25M (1.75 + 0.4L/100)  $\mu\text{m}$

**Scale Resolution**  
 0.1 $\mu\text{m}$

**Max. Acceleration Vector**  
 1020mm/sec<sup>2</sup>

**Max. Velocity Vector**  
 1020mm/sec

**Air Consumption**  
 50 l/min (1.8 cfm)

**Required Air Pressure**  
 5 bar (72 psi)

