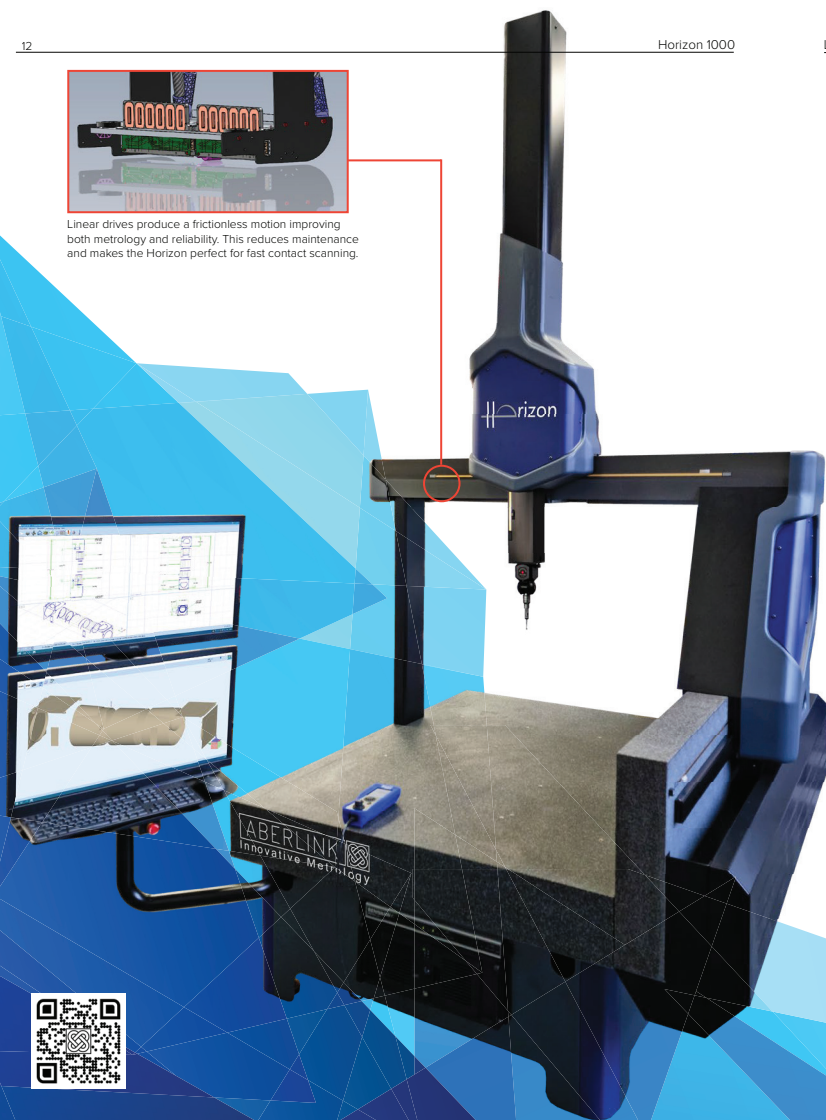




Linear drives produce a frictionless motion improving both metrology and reliability. This reduces maintenance and makes the Horizon perfect for fast contact scanning.



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 granite table and granite Y-axis rail has been designed to take full advantage of the natural thermal density of this remarkable material. The Y-axis linear drive system has been positioned away from the Y-axis linear encoder so that the heat generated by the linear drive is absorbed by the granite without affecting metrology performance.

Drawing upon the tremendous success of the Horizon, the Horizon L has a larger X-Y-Z axis travel whilst utilising the same frictionless linear drives.

The entire design of the Horizon L has been optimised to take full advantage of parts already used on the Horizon whilst improving the stiffness-to-weight ratio across the bridge assembly.

The Y-axis rail is 200mm taller so that the same right-hand-side linear drive system is common and improves rigidity; the carriage assembly has reduced in size and weight, without compromising metrology performance, to improve the stiffness-to-weight ratio; the Z-axis motor has increased power to optimise its performance; the left-hand-side air bearing assembly has a custom extruded profile to keep weight to an absolute minimum and maintain stiffness.

Key Features:

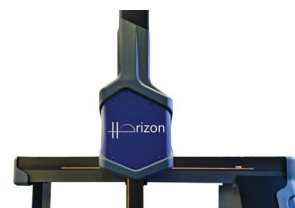
- Linear motors offer frictionless, smooth, silent motion.
- No wearing parts means greater reliability and reduced maintenance.
- Drives applied through the centre of gravity improves both speed and accuracy.
- Thermal isolation of linear motors from the metrology structure avoids thermally induced metrology errors.
- Smooth motion allows for fast and accurate contact scanning.
- The most accurate machine in the Aberlink range. First term volumetric error specification under 2µm
- Automatic temperature compensation ensures that measurement results are reported as if they had been measured at 20°C
- **Free software upgrades** - no maintenance fees or contracts

Common Probe Options:

- RTP20
- PH10T (w/TP20, TP200)
- PH10M (w/SP25)
- PH6M (w/SP25)

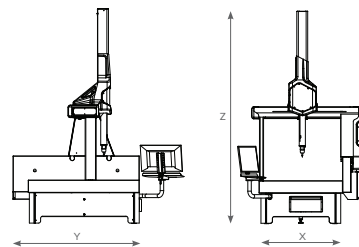
Machine Options:

- Auto Temperature Compensation
- CCD Camera System
- Collimated Back Light Option
- Dual Monitor
- Fixture Kit



Technical Information:

Model	Horizon	Horizon L
Axis Travel (mm)	X 800 Y 1000, 1600 Z 600	X 1000 Y 1200, 2000 Z 800
Overall Size (mm)	X 1403 Y 1530, 2130 Z 2700	X 1603 Y 1830, 2630 Z 3110, 3160
Volumetric Accuracy:	TP20 (1.8 + L/350) µm * TP200 (1.7 + L/350) µm * SP25M (1.5 + L/350) µm *	
Scale Resolution:	0.1µm	
Optimum Temp Range:	18 - 22°C **	
Operational Temp Range:	5 - 45°C	
Table:	Granite	
Table Load Capacity:	1000kg as standard	
Max. Velocity Vector:	1000mm/sec	
Max. Acceleration Vector:	1000mm/sec²	
Air Consumption:	100 l/min (3.53 cfm)	
Required Air Pressure:	7 bar (100 psi)	



*Maximum Permissible Error (MPE), according to ISO 10360-2, 2009 within the thermal limits defined for optimum temperature range.
**Installation environment thermal limits:
Rate of change <0.5°C/hr and <2°C/24hr | Temperature gradient <0.1°C/m