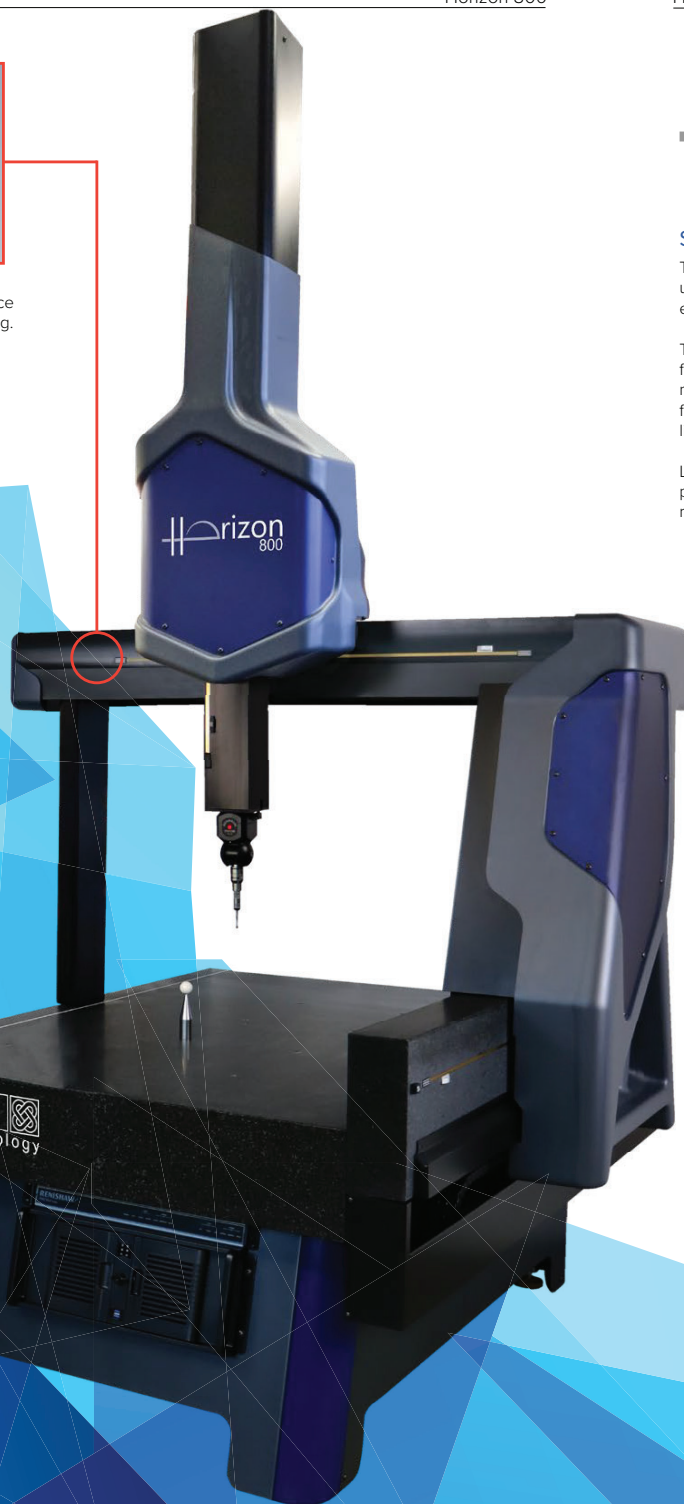




Linear drives produce a frictionless motion improving both metrology and reliability. This reduces maintenance and makes the Horizon perfect for fast contact scanning.



# Horizon 800

## 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 dispersed without affecting metrology performance.

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

The Horizon is the stand-out 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 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  $2\mu\text{m}$
- Automatic temperature compensation ensures that measurement results are reported as if they had been measured at  $20^\circ\text{C}$
- **Free software upgrades** - no maintenance fees or contracts

### Common Probe Options:

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

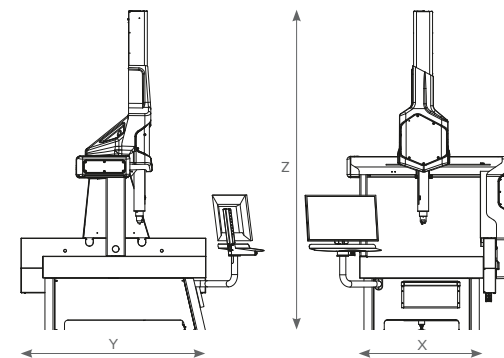
### Machine Options:

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



### Technical Information:

Axis Travel (mm)	X 800 Y 1000, 1600 Z 600
Overall Size (mm)	X 1403 Y 1530, 2130 Z 2700
Volumetric Accuracy:	TP20 $(1.9 + L/250)\mu\text{m}^*$ TP200 $(1.8 + L/250)\mu\text{m}^*$ SP25M $(1.75 + L/250)\mu\text{m}^*$
Scale Resolution:	$0.1\mu\text{m}$
Optimum Temp Range:	$18 - 22^\circ\text{C}^{**}$
Operational Temp Range:	$5 - 45^\circ\text{C}$
Table:	Granite
Table Load Capacity:	1000kg as standard.
Max. Velocity Vector:	1020mm/sec
Max. Acceleration Vector:	$1020\text{mm/sec}^2$
Air Consumption:	65 l/min (1.8 cfm)
Required Air Pressure:	5 bar (72 psi)



\*Maximum Permissible Error MPE<sub>v</sub> according to ISO 10360-2, 2009 within the thermal limits defined for optimum temperature range.

\*\*Installation environment thermal limits:  
Rate of change  $<1^\circ\text{C/hr}$  and  $<2^\circ\text{C/24hr}$  | Temperature gradient  $<1^\circ\text{C/m}$

