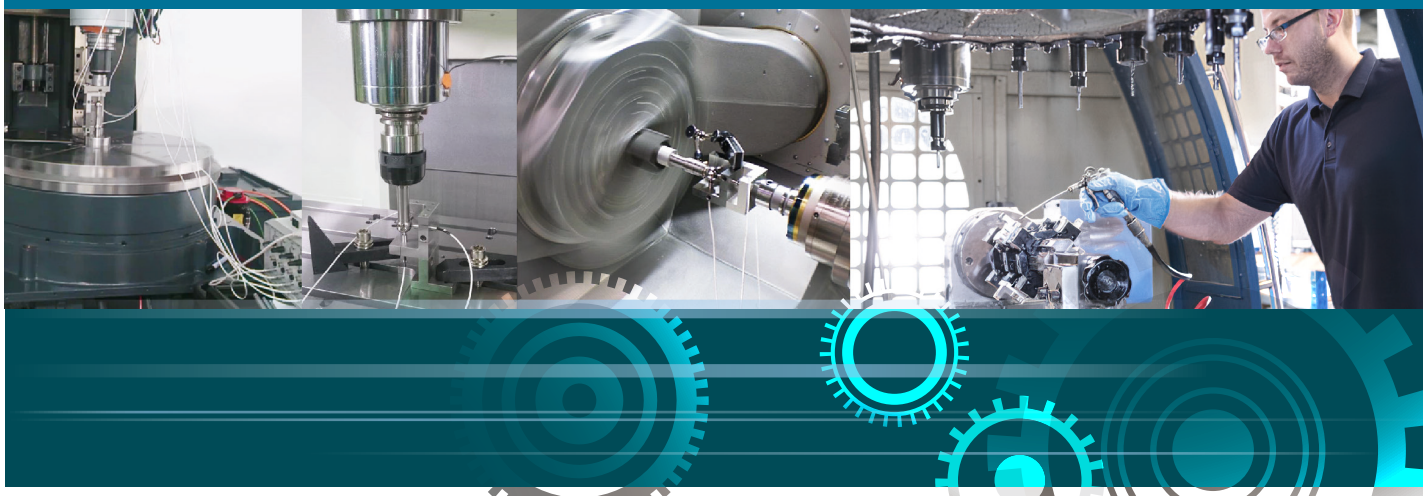
G-TECH

STDM V2

Machine Tool & Spindle Thermal Drift Measuring System



Analyze Performance of your Machine Tool
Troubleshooting and Process Improvement

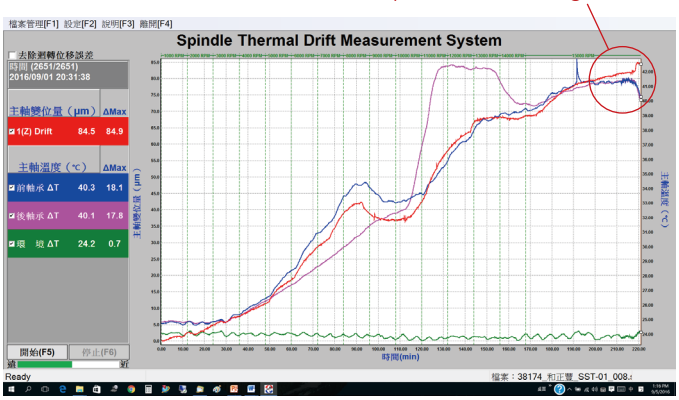
STDM (Spindle Thermal Drift Measuring) is a measuring device for detecting the thermal growth and thermal drift of the machine tool.

Thermal growth : Thermal deformation is the main error source of the machine tools. The distortion and bending of the structure caused by heat during the machine tool operating would influence the position of tool to generate geometric accuracy error and drilling cylindricity error. Nonuniform heat source leads the spindle to tilt and further makes bad behavior of drill, plane-ness and roughness. Measuring the thermal distortion help you to understand the warming time of the machine tool for thermal stability to enhance the processing accuracy.

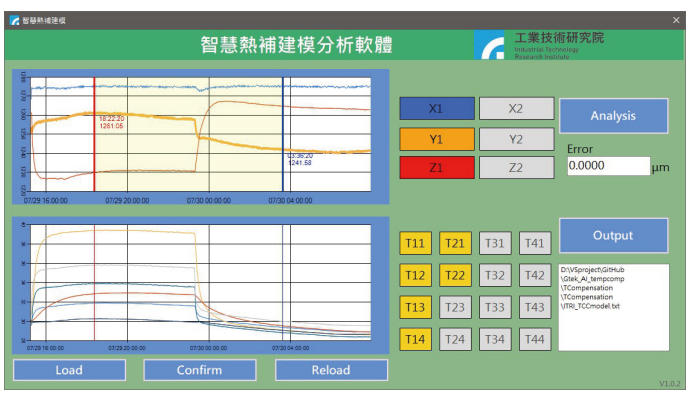
Software

Measurement screen

The distortion exceeds 80 μm for Z axis during 1 hour.



Channel settings screen

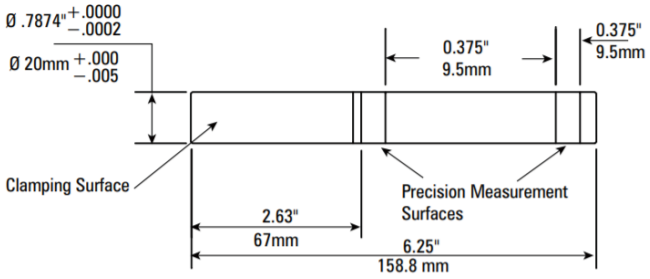
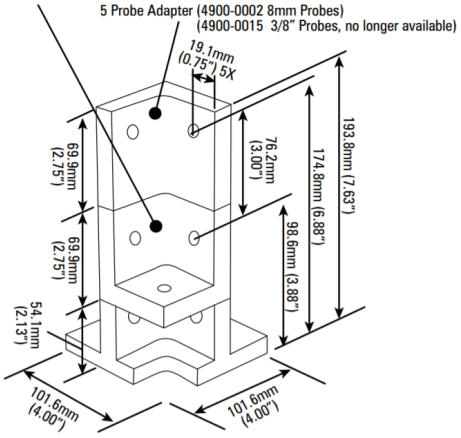


Hardware

- STDM V2 Data acquisition system
- 3 units of capacitive sensor
- 8 units of PT100 temperature sensor
- Master Target and sensor nest (Option)



Specification

STDM V2		
Input Displacement	1-CH / 3-CH / 5-CH	
Input Temperature	3-CH / 8-CH	
ADC Resolution	24 bits	
Max. sampling rate	Temperature: 2Hz, Displacement: 102.4kHz	
Input impedance	1MΩ	
Ethernet output	RJ45 (Ethernet)	
Sensors		
Capacitive sensor	LION CAP100e/ C9.5-5.6-2.0 (range: 250~2250 um, resolution: : 0.5μm)	
Temperature	PT100 / 4 wired (range: -20°C-140°C, resolution: 0.1°C)	
Master Target	Dimensions: Dia. 20 mm X 158.8 mm  	Option
Probe Nest	Dimensions: 3 Probe Nest (4900-0001 8mm Probes) (4900-0010 3/8" Probes, no longer available)  	Option

G-TECH
www.g-tech-inst.com
G-TECH INSTRUMENTS INCORPORATION
0800-225665 info@g-tech-inst.com