TOMCAT
MACHINE PERFORMANCE

TMS¹

88 ANGULAR
84 VOLUMETRIC
91 LINEAR

THE MACHINE GEOMETRY ERROR SYSTEM

...first and only
CNC machine geometry error
monitoring and management
system

PHALANX system

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TMS¹

X Roll   X Pitch   X Yaw   X V Str   X H Str   X Accuracy   Y Roll   Y H Str   Y Accuracy

PHALANX system is a patent pending technology for geometry monitoring of CNC machine tools. The system uses an array of proprietary, high resolution precision measuring instruments that are affixed to the machine structure. These sensors map and measure the machine geometric error change. The continuously measured geometric change is processed through a tailored volumetric accuracy algorithm specific to the machine, using the machine kinematic stack, the instrument relationship, baseline geometry, and the measured geometry change. The purpose of this system is to empower the user by providing the most up-to-date machine spatial performance information for data driven and pro-active corrections, in order to sustain maximum machine accuracy performance, machine availability, and high productivity.

PHALANX SYSTEM COMPONENTS

DAQ SYSTEM

SENSORS

BLUE SERIES

RED SERIES

✔ BENEFITS TO PRODUCTION DEPARTMENT

Achieve confidence that the machine is in optimal condition to produce parts within tolerance

Integrate the System's machine geometry monitoring routines into the manufacturing process

Make proactive manufacturing decisions based on instant recognition of machine accuracy data

Optimize versatility in planning production runs based on machine geometry behavior data

Immediately determine if intervention is necessary in the event of catastrophic events

✔ BENEFITS TO MAINTENANCE DEPARTMENT

Analyze straightforward machine geometry outputs, which allows for more time fixing and less time diagnosing

Understand normal machine geometry and accuracy behavior over extended periods of time

Evaluate the entire machine geometry data concurrently in order to develop the best plan and execute the decisions for correction

Configure the System by setting allowable machine geometry errors

Drive machine alignment events with machine geometry data versus scheduling it on a timed basis