MCT
StarLight
StarLight NT
CNC GANTRY COORDINATE MEASURING MACHINE
MCT STARLIGHT: SPECIFICATIONS

<table>
<thead>
<tr>
<th>Models</th>
<th>Maximum Permissible Error ISO 10360-2 / ISO 10360-4</th>
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<tr>
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Performance data are only valid if the following specifications are met:
- TP2/TP20-5W/TP200: Std. Force Module, Stylus length 10 mm, Tip diameter 5 mm
- SP25: Stylus length 50 mm, Tip diameter 5 mm
- REVO: RSP2/RSH175 / RSP3 / SH251, stylus length 20 mm
- SP80: Stylus length 50 mm, Tip diameter 5 mm
- L = measuring length in mm
- CMM equipped with Multisensor temperature compensation system

Ambient temperature Range:
T1: 18° to 22°C, Max. Gradients: 1.0 °C/h - 2.0 °C/24h - 0.5 °C/m

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PERFORMANCE VERIFICATION

MPE<sub>E</sub>: Maximum Permissible Error of indication for size measurement
Measurement of a set of 5 sizes, taken through two opposite probing points on two nominally parallel planes. The set of 5 sizes is placed in 7 different positions/directions within the measuring volume. Each size is measured 3 times for a total of 105 measurements. All 105 measurements (100%) must be within the specified MPE<sub>E</sub>.

MPE<sub>P</sub>: Maximum Permissible Probing Error
A reference sphere is measured with 25 equally distributed probing points. The probing performance shall be verified in one position, placed in the middle of the CMM measure volume. Using all 25 measurements, compute the Gaussian associated sphere. For each of the 25 measurements, calculate the Gaussian radial distance R. Calculate the probing error P, as the range of the 25 Gaussian distances, Rmax - Rmin. The probing error P must be within the specified MPE<sub>P</sub>.

MPE<sub>SP</sub>: Maximum Permissible Scanning Probing Error
MPE<sub>SP</sub> is the Maximum Permissible Scanning Probing Error of the range of all measured sphere radii (sphere form error), with high point density and predefined path scanning, where t is the specified time (seconds) needed to perform the verification test. The scanning probing performance shall be verified in one single position, placed in the middle of the CMM measure volume. A reference sphere is measured by scanning 4 target scan lines to determine the range of the radial distance R. The scanning probing error THP is calculated as the range of sphere radii between the measured centre and all of the valued scan points. The measured THP and the time to perform the scanning test must be within the specified MPE<sub>SP</sub>. 

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within the measuring volume. Each size is measured 3 times for a total of 105 measurements. All 105 measurements (100%) must be within the specified MPEE.

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## STROKES, DIMENSIONS, WEIGHTS

<table>
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<tr>
<th>Models</th>
<th>Measuring Strokes</th>
<th>Overall Dimensions</th>
<th>Daylights</th>
<th>Pillars</th>
<th>Weights</th>
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TECHNICAL CHARACTERISTICS

STRUCTURE
CNC Coordinate Measuring Machine, Gantry type architecture
Guideways:
X Axis: guideways on stabilized welded steel beams
Y Axis: guideways on stabilized welded steel beam
Z Axis: micromachined anodized light alloy extrusion (SL), Silicon Carbide extrusion (SL NT)
Drive Method:
X Axis: rack & pinion system, Dual Drive system on both X beam for section 30.20 and 30.25
Y Axis: rack & pinion system
Z Axis: zero hysteresis friction drive
Sliding System:
Air bearings on all axes
Motion Control:
DC servomotor on all axes
Thermal Compensation:
Multi-sensors temperature compensation system for part and scale (Optional)
Measuring System:
Linear scales, System Resolution: 0.1 μm.
Dual Scale/Reader on X axis

PROBING SYSTEM
Manual Probe Head:
MIH, MH20, MH20i
Motorized Probe Head:
PH10M, PH10MQ
Motorized Continuous Probe Head:
PH20, REVO
Point-to-point Trigger Probe:
TP2, TP20, TP200
Analog Contact Probe:
SP600, SP25M, SP80
Stylus and Probe Changer:
Fully automated stylus and probe changers

OPTION
Multi-wire cable

ENVIRONMENT
Temperature Range for Metrological Specification:
Temperature Range: 18 ÷ 22 °C
Max. gradient per hour: 1.0 °K/h
Max. gradient per day: 2.0 °K/24h
Max. gradient in space: 0.5 °K/m (SL NT) - 1.0 °K (SL)
Operating Temperature:
15 ÷ 35 °C
Relative Humidity:
40 ÷ 80 % (non condensing)
Acceptable Vibrations:
(acceleration between peaks)
30 mm/s² from 1 to 10 Hz
15 mm/s² from 10 to 20 Hz
50 mm/s² from 20 to 100 Hz
Optional
-Metrology Room or CMM protection system

AIR SUPPLY
Air Consumption:
max. 300 Nl/min
Minimum Air Supply:
6 Bar

POWER SUPPLY
Power Supply Voltage:
230 V ± 10%; 50 Hz ± 2% (single phase)
115 V ± 10%; 60 Hz ± 2% (single phase)

WARRANTY
12 months from the date of acceptance test or a maximum of 15 months from date of shipment.