



XD™ LASER

Precision Laser Measurement System

[Metric Units]

Standard XD™ Series	XD1™	XD3™	XD5™	XD6™
Environmental Compensation Air Temperature Accuracy: Air Pressure Accuracy: Relative Humidity Accuracy: Material Temperature Accuracy:	±0.2°C ±1.0 mm Hg ±5% ±0.1°C	±0.2°C ±1.0 mm Hg ±5% ±0.1°C	±0.2°C ±1.0 mm Hg ±5% ±0.1°C	±0.2°C ±1.0 mm Hg ±5% ±0.1°C
Linear and Diagonal Measurement Resolution: Measurement Range: Accuracy:	± 0.02 µm 0-45 m (80 m optional) 0.5 ppm	± 0.02 µm 0-45 m (80 m optional) 0.5 ppm	± 0.02 µm 0-45 m (80 m optional) 0.5 ppm	± 0.02 µm 0-45 m (80 m optional) 0.5 ppm
Straightness Measurement Straightness Measurement Range: Straightness Accuracy: Straightness Resolution: Measurement Distance:		± 0.5 mm ±(2 µm + 0.4 µm/m) or 2% of max measured error 0.1 µm 15 m	± 0.5 mm ±(1 µm + 0.2 µm/m) or 1% of max measured error 0.1 µm 25 m	± 0.5 mm ±(1 µm + 0.2 µm/m) or 1% of max measured error 0.1 µm 25 m
Squareness Measurement Accuracy:		±(1.0 arcsec + 0.4 arcsec/measured travel in meters)	±(1.0 arcsec + 0.2 arcsec/measured travel in meters)	±(1.0 arcsec + 0.2 arcsec/measured travel in meters)
Angularity Measurement Measurement Range: Angular Resolution: Measurement Distance: Pitch & Yaw Measurement Accuracy:			±800 arcsec 0.1 arcsec 25 m ±(1.0 arcsec + 0.1 arcsec/m) or 1% of max measured error	±800 arcsec 0.1 arcsec 25 m ±(1.0 arcsec + 0.1 arcsec/m) or 1% of max measured error
Roll Measurement Accuracy: <i>For Horizontal Axes Only</i>			±1.0 arcsec or 1% of max measured error	±1.0 arcsec or 1% of max measured error
Parallellism Measurement Accuracy:				±(1.0 arcsec + 0.2 arcsec/measured travel in meters)
Velocity Measurement Velocity:	> 3.0 m/sec	> 3.0 m/sec	> 3.0 m/sec	> 3.0 m/sec
Laser Specification Operating Temperature: Operating Humidity: Output Power:	-5°- 40° C 0-95% non condensing Class 2 Laser	-5°- 40° C 0-95% non condensing Class 2 Laser	-5°- 40° C 0-95% non condensing Class 2 Laser	-5°- 40° C 0-95% non condensing Class 2 Laser
Laser Head Weight Laser Head Dimensions	2.5 kg 230 mm L, 108 mm W, 102 mm H	2.5 kg 230 mm L, 108 mm W, 102 mm H	Sensor: 290 g 70 mm L, 94 mm W, 45 mm H	Sensor: 340 g 70 mm L, 94 mm W, 45 mm H

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[Imperial Units]

Standard XD™ Series	XD1™	XD3™	XD5™	XD6™
<p>Environmental Compensation Air Temperature Accuracy: Air Pressure Accuracy: Relative Humidity Accuracy: Material Temperature Accuracy:</p>	<p>±0.36°F ±0.4 in. Hg ±5% 0.18°F</p>	<p>±0.36°F ±0.4 in. Hg ±5% 0.18°F</p>	<p>±0.36°F ±0.4 in. Hg ±5% 0.18°F</p>	<p>±0.36°F ±0.4 in. Hg ±5% 0.18°F</p>
<p>Linear and Diagonal Measurement Resolution: Measurement Range: Accuracy:</p>	<p>0.78 µin. 0-147.6 ft. (263 ft. optional) 0.00006 in./ft.</p>	<p>0.78 µin. 0-147.6 ft. (263 ft. optional) 0.00006 in./ft.</p>	<p>0.78 µin. 0-147.6 ft. (263 ft. optional) 0.00006 in./ft.</p>	<p>0.78 µin. 0-147.6 ft. (263 ft. optional) 0.00006 in./ft.</p>
<p>Straightness Measurement Straightness Measurement Range: Straightness Accuracy:</p>		<p>±0.02 in. ±(80 µin. + 4.8 µin./ft.) or 2% of max measured error</p>	<p>±0.02 in. ±(40 µin. + 2 µin./ft.) or 1% of max measured error</p>	<p>±0.02 in. ±(40 µin. + 2 µin./ft.) or 1% of max measured error</p>
<p>Straightness Resolution: Measurement Distance:</p>		<p>7.9 µin. 49.2 ft.</p>	<p>7.9 µin. 82 ft.</p>	<p>7.9 µin. 82 ft.</p>
<p>Squareness Measurement Accuracy:</p>		<p>±(1.0 arcsec + 0.12 arcsec/measured travel in ft.)</p>	<p>±(1.0 arcsec + 0.06 arcsec/measured travel in ft.)</p>	<p>±(1.0 arcsec + 0.06 arcsec/measured travel in ft.)</p>
<p>Angular Measurement Measurement Range: Angular Resolution: Measurement Distance: Pitch & Yaw Measurement Accuracy:</p>			<p>±800 arcsec 0.1 arcsec 82 ft. ±(1.0 arcsec + 0.03 arcsec/ft.) or 1% of max measured error</p>	<p>±800 arcsec 0.1 arcsec 82 ft. ±(1.0 arcsec + 0.03 arcsec/ft.) or 1% of max measured error</p>
<p>Roll Measurement Accuracy: For Horizontal Axes Only</p>				<p>±1.0 arcsec or 1% of max measured error</p>
<p>Parallellism Measurement Accuracy:</p>				<p>±(1.0 arcsec + 0.06 arcsec/measured travel in ft.)</p>
<p>Velocity Measurement Velocity:</p>	<p>>3.3 ft./sec</p>	<p>>3.3 ft./sec</p>	<p>>3.3 ft./sec</p>	<p>>3.3 ft./sec</p>
<p>Laser Specification Operating Temperature: Operating Humidity: Output Power:</p>	<p>23°-104°F 0-95% non-condensing Class 2 Laser</p>	<p>23°-104°F 0-95% non-condensing Class 2 Laser</p>	<p>23°-104°F 0-95% non-condensing Class 2 Laser</p>	<p>23°-104°F 0-95% non-condensing Class 2 Laser</p>
<p>Laser Head Weight Laser Head Dimensions</p>	<p>0.75 lb. 3.31 in. L, 3.7 in. W, 1.77 in. H</p>	<p>0.75 lb. 3.31 in. L, 3.7 in. W, 1.77 in. H</p>	<p>Sensor: 0.75 lb. 3.31 in. L, 3.7 in. W, 1.77 in. H</p>	<p>Sensor: 0.75 lb. 3.31 in. L, 3.7 in. W, 1.77 in. H</p>

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