



| STANDARD FEATURES | |
|--------------------|---|
| Stage | Linear Motor Tripod |
| Travel | 3 Degrees of Freedom (Z, Pitch, and Roll Axis Motion) |
| Z Travel | 6 - 106 mm |
| Angular Travel | +/- 3 to +/- 20 degrees |
| Max Payload | 2.0 - 10.0+ kg |
| Motor | Ironless Core Linear Motor |
| Feedback | Non-Contact Optical Encoder |
| Scale | Gold Tape Scale |
| | Optional: Near Zero CTE ZeroMet |
| Linear Resolution | ~5 nm |
| Angular Resolution | < 0.04 arc-sec |
| Sensors | Integrated Home and End of Travel Limits |
| Bearings | High Precision Crossed Roller Bearings |
| Counterbalance | Frictionless Pneumatic Cylinder |
| | Optional: Non-Contact Magnetic Spring |
| Cables | High Flex, 10M Cycle, 3m Length |
| Structure | Anodized Aluminum 6061-T6 |
| | Optional: Stainless Steel |
| Environment | Standard |
| | Optional: Vacuum 10-5 Torr, Vacuum 10-7 Torr |
| Temperature | 0°C to 50°C |
| Humidity | 10% to 80% Non-Condensing |
| Precision | 6-D Nano Precision™ Test Methods |

| Z TRAVEL | PITCH & ROLL TRAVEL | OPTION | LENGTH | WIDTH | HEIGHT | A (inch) | B (inch) | C | D | E | F | G | H | I | J | K | L (degrees) | M (degrees) | N | O |
|----------|---------------------|--------|--------|-------|--------|----------|----------|-------|-------|----|------|-------|------|-----|-----|-------|-------------|-------------|--------------|----|
| 6 | +/- 3 degrees | - | 172.5 | 164.3 | 142.6 | 2 | 2 | 172.5 | 196 | 1 | 12 | 50 | 50 | 30 | 50 | 40 | 30 | 0 | M6 or 1/4-20 | M4 |
| 24 | +/- 15 degrees | - | 208 | 196.3 | 173 | 3 | 3 | 208 | 225 | 1 | 12 | 80 | 100 | 50 | 70 | 60 | 30 | 0 | M6 or 1/4-20 | M4 |
| 24 | +/- 16 degrees | MS | 251.8 | 220.8 | 189.9 | 3 | 3 | 252.5 | 256.5 | 1 | 12.7 | 50 | 62.5 | 50 | 70 | 60 | 30 | 0 | M6 or 1/4-20 | M4 |
| 40 | +/- 16 degrees | - | 331.6 | 303.3 | 246.9 | 3 | 3 | 333 | 333 | 1 | 19.1 | 30 | 62.5 | 75 | 100 | 87.5 | 30 | 60 | M6 or 1/4-20 | M5 |
| 55 | +/- 20 degrees | - | 363.8 | 339.9 | 308.6 | 4 | 7 | 363.9 | 363.9 | 1 | 19.1 | 100 | 100 | 100 | 125 | 112.5 | 30 | 60 | M6 or 1/4-20 | M5 |
| 92 | +/- 20 degrees | - | 435 | 380 | 482.5 | 4 | 7 | 435 | 445 | -- | 30 | 101.6 | 100 | -- | -- | 200 | 30 | 60 | M6 or 1/4-20 | M6 |
| 106 | +/- 20 degrees | - | 393.8 | 368 | 459.9 | 4 | 7 | 395 | 395 | 1 | 19.1 | 100 | 100 | 100 | 125 | 112.5 | 30 | 60 | M6 or 1/4-20 | M5 |

* All units millimeters unless otherwise noted.
 * All hole patterns centered on M5 dowel pin hole pattern on base and top stage.
 * See specification sheet and contact ALIO technical sales for assistance in model selection.

ALIO INDUSTRIES PROPRIETARY INFORMATION
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ALIO 6-D

TITLE
**AI-TRI-LM-(Z TRAVEL)00
 -(OPTION)**

DRAWN NBROWN
 CHECKED

5/12/2012

Tolerances: Surface Roughness:
 x.x ± .05 in [1.3 mm]
 x.xx ± .01 in [0.25 mm]
 x.xxx ± .005 in [0.13 mm] ✓ RMS MAX.
 Angles ± 0.5°

SIZE B
 DWG NO 0010-08008
 REV 003

FINISH SEE NOTES
 SCALE 1 OF 1
 SHEET 1 OF 1

NOTE: MODEL AI-TRI-LM-5500 SHOWN.