



STANDARD FEATURES

Stage	Linear Motor Tripod with Yaw Rotary Stage
Travel	4 Degrees of Freedom (Z, Pitch, Roll, and Yaw Axis Motion)
Z Travel	6 - 106 mm
Angular Travel	+/- 3 to +/- 18 degrees (Pitch and Roll) 360 degrees continuous (Yaw)
Max Payload	2.0 - 7.0+ kg
Motor	Ironless Core Linear Motor and Frameless Torque Motor
Feedback	Non-Contact Optical Encoder
Scale	Gold Tape Scale and Stainless Steel Ring 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
Cables	High Flex, 10M Cycle, 3m Length
Structure	Anodized Aluminum 6061-T6 Optional: Stainless Steel
Environment	Standard (Additional Options are Available)
Temperature	0°C to 50°C
Humidity	10% to 80% Non-Condensing
Precision	6-D Nano Precision™ Test Methods

Z TRAVEL	PITCH & ROLL TRAVEL	R DIAMETER	ROTARY STAGE	OPTION	LENGTH	WIDTH	HEIGHT	A (inch)	B (inch)	C	D	E	F	G	H	I	J	K	L	M
6	+/- 3 degrees	56	AI-TM-56R	-	200	191.3	143.6	3	3	200	223	1	12	80	62.5	8	30	22.5#	M6 or 1/4-20	M3
24	+/- 12 degrees	56	AI-TM-56R	-	241.1	219.1	176.7	3	3	244	263	1	12	80	100	8	30	22.5#	M6 or 1/4-20	M3
55	+/- 16 degrees	104	AI-TM-104R	-	403.1	373.5	354.9	4	7	550	550	45	19.1	100	100	32	80	32.5	M6 or 1/4-20	M4
106	+/- 18 degrees	104	AI-TM-104R	-	504.2	462.8	504	4	7	508.5	508.5	45	19.1	101.6	100	32	80	32.5	M6 or 1/4-20	M4

* 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.

M5 dowel pins on the AI-TM-56R yaw axis are rotated 90 degrees relative to dowel pins shown on this datasheet.

ALIO INDUSTRIES PROPRIETARY INFORMATION
(Tel) 303.339.7500 - SALES@ALIOINDUSTRIES.COM - WWW.ALIOINDUSTRIES.COM



TITLE

**AI-TRI-LM-(Z TRAVEL)00
-(R DIAMETER)R-(OPTION)**

SIZE	DWG NO	REV
B	0010-08009	001

FINISH	SCALE	ALIO STD TEMPLATE - REV 006	SHEET	1	OF	1
SEE NOTES	2					

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