



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 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	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	--	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	176.7	3	3	244	263	1	12	80	100	8	30	22.5#	M6 or 1/4-20	M3
24	+/- 12 degrees	56	AI-TM-56R	MS	261	170.9	3	3	261	272	1	12.7	30	100	8	30	22.5#	M6 or 1/4-20	M3
40	+/- 16 degrees	56	AI-TM-56R	--	331.6	247.9	110mm	85mm	332	332	1	19.1	30	100	8	30	22.5#	M6 or 1/4-20	M3
40	+/- 12 degrees	104	AI-TM-104R	--	399	250.5	110mm	85mm	401	401	1	19.1	30	100	32	80	32.5	M6 or 1/4-20	M4
55	+/- 16 degrees	104	AI-TM-104R	--	403.1	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	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 mount surface are rotated 90 degrees relative to dowel pins shown on this datasheet.

ALIO INDUSTRIES PROPRIETARY INFORMATION
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TITLE

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

SIZE

0010-08009

REV

002

FINISH SEE NOTES

SCALE 1 OF 1

ALIO STD TEMPLATE - REV 006 SHEET 1 OF 1

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