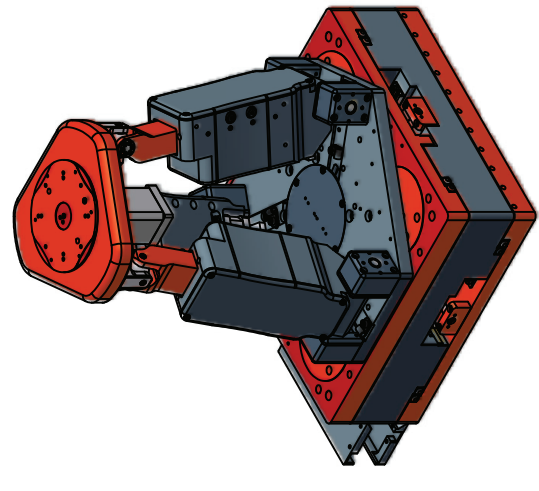




ALIO STAGE AND MOTOR SPECIFICATIONS



MODEL OPTION	UNITS	AI-HH-ST14-200XY-60Z-104R
NOTE SPECIFICATIONS MAY VARY WITH MOTOR AND ENCODER OPTIONS CONTACT ALIO FOR ADDITIONAL INFORMATION		
XY TRAVEL	mm	200
Z TRAVEL	mm	60
PITCH AND ROLL RANGE [1]	deg	+/- 30
YAW TRAVEL	deg	360 deg continuous
MAX LINEAR VELOCITY [2]	mm/s	20.0 (standard)
MAX ANGULAR VELOCITY (PITCH & ROLL) [2]	deg/s	10.0 (standard)
MAX ANGULAR VELOCITY (YAW) [2]	deg/s	540
ASSEMBLY MASS	kg	28
X MOVING MASS	kg	22.9
Y MOVING MASS	kg	13.9
Z MOVING MASS	kg	3.8
YAW MOVING MASS	kg	0.6
YAW MASS MOMENT OF INERTIA	kg*mm ²	900
MAX PAYLOAD [3]	kg	10 (standard)
MAX CENTER OF GRAVITY HEIGHT [3,4]	mm	75
LINEAR RESOLUTION W/ "LENC" OPTION	nm	~5
PITCH AND ROLL RESOLUTION W/ "LENC" OPTION	arc-sec	~0.01
YAW RESOLUTION W/ "LENC" OPTION	arc-sec	0.02
YAW ROTARY STAGE	Model	AI-STG17-104R
XY LINEAR STAGE	Model	AI-ST14-20000-XY
TRIPOD MOTOR INFORMATION		
MOTOR TYPE	--	STEPPER MOTOR
MOTOR MODEL	--	ST14 (NEMA 14)
STEP ANGLE	deg	1.8
MOTOR CONNECTION	--	4 LEAD - BIPOLAR
THRUST FORCE (STANDARD)	N	100
THRUST FORCE (OPTIONAL)	N	50 - 240
PHASE RESISTANCE [5]	Ohm	3.3
INDUCTANCE	mH	3.6
RATED CURRENT (AMPS/PHASE) [6]	Amp	1.0
YAW MOTOR INFORMATION		
MOTOR TYPE	--	STEPPER MOTOR
MOTOR MODEL	--	ST17 (NEMA 17)
STEP ANGLE	deg	1.8
MOTOR CONNECTION	--	4 LEAD - BIPOLAR
GEAR RATIO	RATIO	10:1
TORQUE (STANDARD)	N-m	1.3
PHASE RESISTANCE [5]	Ohm	1.43
INDUCTANCE	mH	1.5
RATED CURRENT (AMPS/PHASE) [6]	Amp	1.5
XY MOTOR INFORMATION		
MOTOR TYPE	--	STEPPER MOTOR
MOTOR MODEL	--	ST14 (NEMA 14)
STEP ANGLE	deg	1.8
MOTOR CONNECTION	--	4 LEAD - BIPOLAR
THRUST FORCE (STANDARD)	N	100
THRUST FORCE (OPTIONAL)	N	50 - 240
PHASE RESISTANCE [5]	Ohm	3.3
INDUCTANCE	mH	3.6
RATED CURRENT (AMPS/PHASE) [6]	Amp	1.0

Notes:

- Angular travel is measured when the Z axis is at mid-stroke and the other angle is zero degrees. Deviation from this specified off axis position reduces angular travel.
- Maximum velocity specified is for motor in unloaded state. Stage velocity limitations vary greatly depending on stage load and motion profile.
- Higher payload options available upon special request.
- Contact ALIO technical sales for questions concerning high or offset centers of gravity.
- Resistance values do not include cable resistance. ALIO extension cables add 0.146 ohm/m.
- Do not exceed rated current specifications.
- All electrical specifications may vary by 10% from listed values.
- Additional motor options are available for optimized performance as necessary per customer requirements.

DRAWN	5/12/2012	
NBROWN		
CHECKED		
Tolerances: Surface Roughness: x.x ± .05 in [1.3 mm] x.xx ± .01 in [0.25 mm] ✓ RMS MAX. x.xxx ± .005 in [0.13 mm] Angles ± 0.5°		
TITLE AI-HH-ST(MOTOR)-(XY TRAVEL)XY -(Z TRAVEL)Z-(R DIAMETER)R -(OPTION)		
SIZE	DWG NO	REV
B	0010-08037	001
FINISH	SEE NOTES	SCALE
		ALIO STD TEMPLATE - REV 006
		SHEET 1 OF 1

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