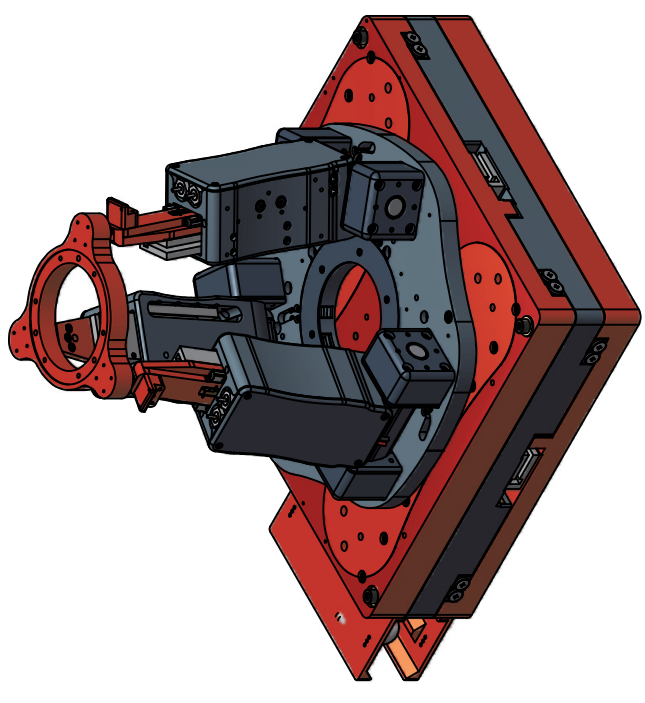




# ALIO STAGE AND MOTOR SPECIFICATIONS



ALIO INDUSTRIES PROPRIETARY INFORMATION  
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## AI-6D-(XY TRAVEL)XY-(Z TRAVEL)Z-(OPTION)

REV	004
DWG NO	0010-08032
SCALE	1 OF 1

MODEL	UNITS	AI-6D-100XY-6Z	AI-6D-100XY-6Z-CM	AI-6D-100XY-24Z	"CM"=LOW FORCE XY "MS"=MAGNETIC SPRING	AI-6D-100XY-24Z-MS	AI-6D-150XY-40Z	AI-6D-200XY-40Z	AI-6D-250XY-55Z	AI-6D-250XY-92Z	AI-6D-250XY-106Z
XY TRAVEL	mm	100	1000.0	100	"MS"=MAGNETIC SPRING	100	150	200	250	250	250
Z TRAVEL	mm	6.0	6.0	24	"CM"=LOW FORCE XY "MS"=MAGNETIC SPRING	24	40	40	55	92	106
PITCH AND ROLL RANGE [9]	deg	+/-3	+/-3	+/-15	"MS"=MAGNETIC SPRING	+/-15	+/-16	+/-16	+/-20	+/-20	+/-20
MAX LINEAR VELOCITY [10]	m/s	0.4	0.05	0.5	"MS"=MAGNETIC SPRING	0.05	0.5	0.5	0.5	0.3	0.5
MAX ANGULAR VELOCITY (PITCH & ROLL) [10]	deg/s	90	90	90	"MS"=MAGNETIC SPRING	90	90	90	90	90	90
ASSEMBLY MASS	kg	16.4	9.2	12.1	"MS"=MAGNETIC SPRING	20	30	42	68	106	75
X MOVING MASS	kg	13.6	7.8	10.8	"MS"=MAGNETIC SPRING	16.5	26	34	53	91	60
Y MOVING MASS	kg	7.0	5.5	8.1	"MS"=MAGNETIC SPRING	10.0	18	21	31	78	38
Z MOVING MASS	kg	0.80	0.80	2.1	"MS"=MAGNETIC SPRING	2.1	3.0	3.0	3.6	21	6.6
MAX PAYLOAD [11]	kg	2.0	2.0	3.5	"MS"=MAGNETIC SPRING	3.5	7.5	7.5	10	35	10
MAX CENTER OF GRAVITY HEIGHT [11,12]	mm	40	40	50	"MS"=MAGNETIC SPRING	50	75	75	75	75	100
COUNTERBALANCE PRESSURE [13]	psi	25	25	40	"MS"=MAGNETIC SPRING	--	42	42	54	40	66
LINEAR RESOLUTION	nm	~5	~5	~5	"MS"=MAGNETIC SPRING	--	~5	~5	~5	~5	~5
PITCH AND ROLL RESOLUTION	arc-sec	~0.03	~0.03	~0.02	"MS"=MAGNETIC SPRING	~0.02	~0.02	~0.02	~0.02	~0.02	~0.02
XY LINEAR STAGE	Model	AI-LM-10000-XY	AI-CM-10000-XY	AI-LM-10000-XY	AI-LM-10000-XY	AI-LM-10000-XY	AI-LM-15000-XY	AI-LM-20000-XY	AI-LM-25000-XY	AI-LM-25000-XY	AI-LM-25000-XY

TRIPOD MOTOR INFORMATION											
MOTOR TYPE	MOTOR MODEL	MAGNETIC PITCH (N-N)	MAX VOLTAGE (LINE TO LINE) [1]	ELECTRICAL TIME CONSTANT	MAX MOTOR TEMP	MOTOR CONNECTION	FORCE CONSTANT	PHASE RESISTANCE (@25°C) [2,3]	PHASE RESISTANCE (@130°C) [2,3]	INDUCTANCE	CONTINUOUS FORCE [4]
LINEAR BRUSHLESS	P16-0.5	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-1	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-2	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-3	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-4	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-5	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-6	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-7	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-8	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-9	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-10	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-11	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-12	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-13	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-14	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-15	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-16	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-17	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-18	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-19	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-20	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-21	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-22	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-23	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-24	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-25	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-26	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-27	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-28	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-29	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-30	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-31	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-32	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-33	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-34	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-35	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-36	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-37	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-38	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-39	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-40	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-41	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-42	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-43	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-44	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-45	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-46	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-47	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-48	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-49	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-50	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-51	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-52	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-53	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-54	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-55	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-56	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-57	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-58	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-59	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-60	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-61	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-62	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-63	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-64	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-65	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-66	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-67	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-68	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-69	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-70	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-71	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-72	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-73	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-74	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-75	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-76	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS	P16-77	30.48	500	0.20	130	DELTA CONNECTED	7.2	2.9	4.2	0.6	15
LINEAR BRUSHLESS											