

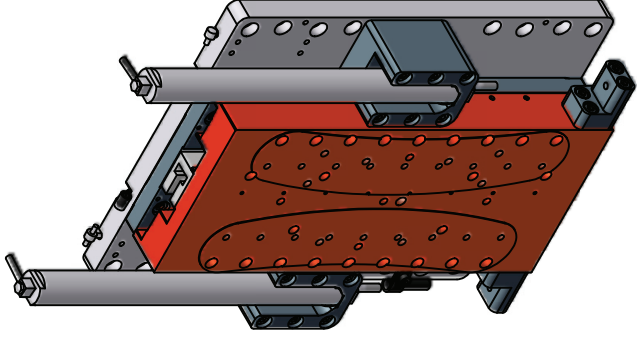


# ALIO STAGE AND MOTOR SPECIFICATIONS

MODEL	UNITS	AI-CM-2500-Z-CB-BASE	AI-LM-5000-Z-CB-BASE	AI-LM-10000-Z-CB-BASE	AI-LM-15000-Z-CB-BASE
Z TRAVEL	mm	25	50	100	150
MAX VELOCITY [7]	m/s	0.20	0.25	0.25	0.25
MAX ACCELERATION [7]	G	0.25	0.5	0.5	0.5
ASSEMBLY MASS	kg	2.2	4.4	7.0	7.7
MOVING MASS	kg	0.8	1.5	2.5	2.9
MAX PAYLOAD [7,8]	kg	1.5	4.0	7.5	10.0
COUNTERBALANCE PRESSURE [9]	psi	27	65	40	50
<b>MOTOR INFORMATION</b>					
MOTOR TYPE	--	LINEAR BRUSHLESS			
MOTOR MODEL	--	C12-1	P12-1	P12-2	P12-2
MAGNETIC PITCH (N-N)	mm	30.48	30.48	30.48	30.48
MAX VOLTAGE (LINE TO LINE) [1]	V	500	500	500	500
ELECTRICAL TIME CONSTANT	msec	0.2	0.19	0.19	0.19
MAX MOTOR TEMP	°C	130	130	130	130
<b>DELTA CONNECTION</b>					
FORCE CONSTANT	N/Apk	3.5	8.1	16.3	16.3
PHASE RESISTANCE (@25° C) [2]	Ohm	2.9	5.8	11.6	11.6
PHASE RESISTANCE (@130° C) [2]	Ohm	4.2	8.2	16.4	16.4
INDUCTANCE	mH	0.6	1.1	2.1	2.1
CONTINUOUS FORCE [3]	N	10	23	47	47
CONTINUOUS CURRENT [3]	Apk	2.8	2.9	2.9	2.9
PEAK FORCE [4]	N	21	75	151	151
PEAK CURRENT [4]	Apk	6.0	9.2	9.2	9.2
BACKEMF CONSTANT	V/m/s	3.5	8.1	16.3	16.3
<b>WYE CONNECTION</b>					
FORCE CONSTANT	N/Apk	7.2	14.1	28.2	28.2
PHASE RESISTANCE (@25° C) [2]	Ohm	8.7	17.4	34.7	34.7
PHASE RESISTANCE (@130° C) [2]	Ohm	12.5	24.6	49.1	49.1
INDUCTANCE	mH	1.7	3.2	6.4	6.4
CONTINUOUS FORCE [3]	N	10	23	47	47
CONTINUOUS CURRENT [3]	Apk	1.6	1.7	1.7	1.7
PEAK FORCE [4]	N	21	75	151	151
PEAK CURRENT [4]	Apk	3.5	5.4	5.4	5.4
BACKEMF CONSTANT	V/m/s	7.2	14.1	28.2	28.2

**Notes:**

1. Back EMF plus IR drop must not exceed maximum line to line voltage.
2. Resistance values do not include cable resistance. Cable resistance adds 0.146 ohm/m for Delta connection and 0.44 ohm/m for Wye Connection.
3. Continuous operating limits are based on continuous operation at maximum temperature with aluminum heat sink (300mm x 12.5mm x motor length).
4. Maximum on time at peak operating limits is 10 seconds.
5. All specifications may vary by 12% from listed values.
6. Additional motor options are available for optimized performance as necessary per customer requirements.
7. Specifications are dependent on load and center of gravity.
8. Higher payload options available upon special request.
9. Pneumatic counterbalance supply pressure listed is the estimated pressure required at the max payload.



A

DRAWN  
NBROWN  
CHECKED



TITLE

**AI-LM-(TRAVEL)00-Z-CB-BASE**

SIZE

B

DWG NO

0010-08031

REV

001

SCALE

SEE NOTES

2

ALIO STD TEMPLATE - REV 006

SHEET

1

OF

1

4

3

2

1

4

3

2

1

B

B

A

A