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### Mini V Linear Actuator Test Data

The test data below gives is an indication of the speeds and loads which can be expected from a Mini V Linear Actuator. The numbers are only meant as an indication, and in no way should be expected, as different actuator configurations, controllers, and settings could have an impact on the data below.

**Actuator Configuration:** Mini V Actuator – 250mm – NEMA17 77oz Motor 1.68A

**Driver Settings:** 8x Microstepping, 1.25A Current, 26.667 Steps/mm

**Testing Load:** No Load

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#### Position Test

Move forward and back to five setpoints, repeating 6 times.

Target distance	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Average	Average Deviation	Actual Deviation
20	20.04	20.51	20.06	20.52	20.06	20.51	20.283	0.230	0.283
40	39.85	40.31	39.86	40.32	39.87	40.31	40.087	0.227	0.227
60	59.96	60.44	59.98	60.43	59.99	60.42	60.203	0.227	0.227
80	80.03	80.54	80.06	80.53	80.07	80.53	80.293	0.240	0.293
100	99.83	100.39	99.84	100.37	99.85	100.4	100.108	0.268	0.268
								<b>Repeatability</b>	<b>Accuracy</b>
								0.238	0.260

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#### Force Test

Vary pressure in air cylinder until actuator can no longer move a set distance. Speed set to 2000mm/min, acceleration set to 50 mm/s<sup>2</sup>

Result: Motor stalls at approximately 11N (1.12kg)

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#### Speed Test

Increase speed and acceleration and test long enough movement to allow actuator to reach full speed, distance tested was 250mm, acceleration set to 200 mm/s<sup>2</sup>, test done under no load.

Result: Max speed 20000mm/min, beyond this motor stalls.