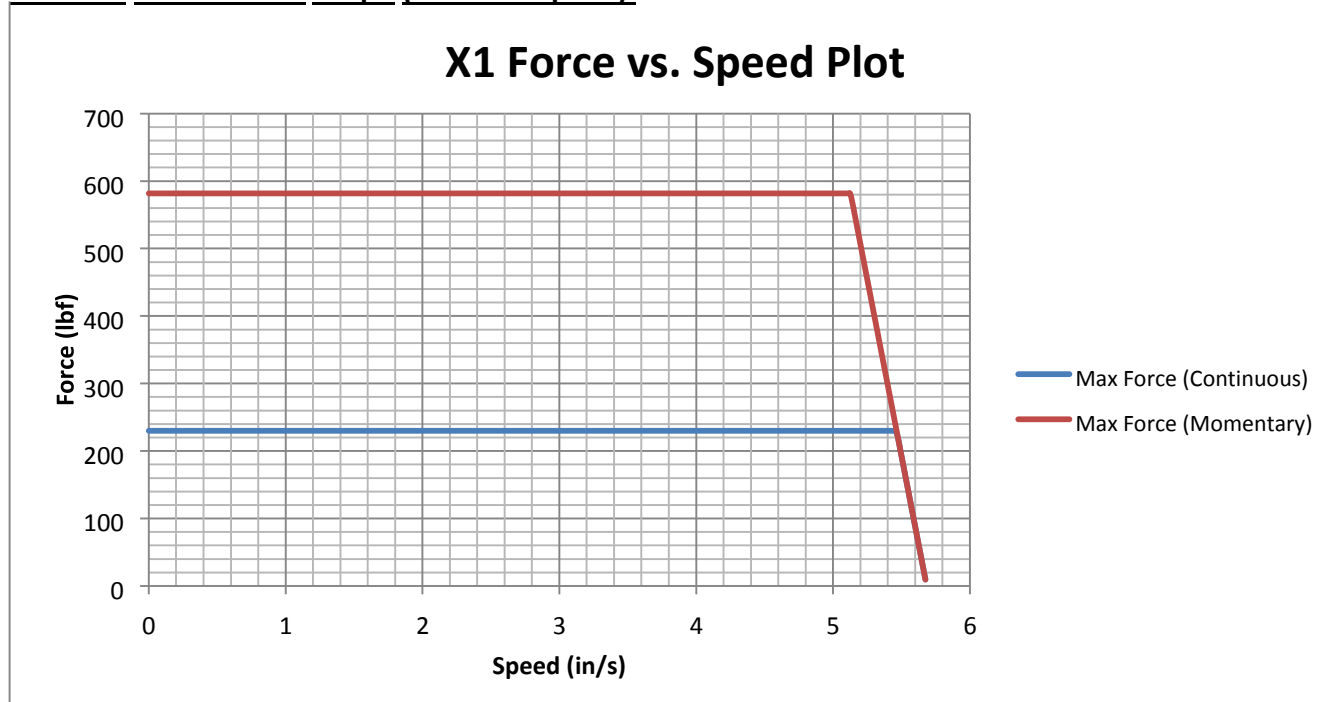


X1 - High-Performance Linear Actuator from Ultra Motion

Product Description:

The X1 linear actuator is sealed for operation in vacuum or at a depth of up to 15 ft. of seawater. The actuator has a 1.25 inch stroke length, a custom 200W brushless DC motor with a power-off brake (modified to withstand shock and vibration), high-load ball bearing nut with a 0.125" pitch, and a total gear reduction of 6.24:1. This actuator also includes an integrated version of Ultra Motion's PHASE INDEX™ digital absolute position encoder with a 0-5V analog output. This encoder provides robust high speed position feedback reliably and over a wide temperature range. An internal linear potentiometer is also included for redundant position feedback. The actuator is fully shielded against EMI, and has D38999 interface connectors.

Actuator Performance Graph (Force vs. Speed):



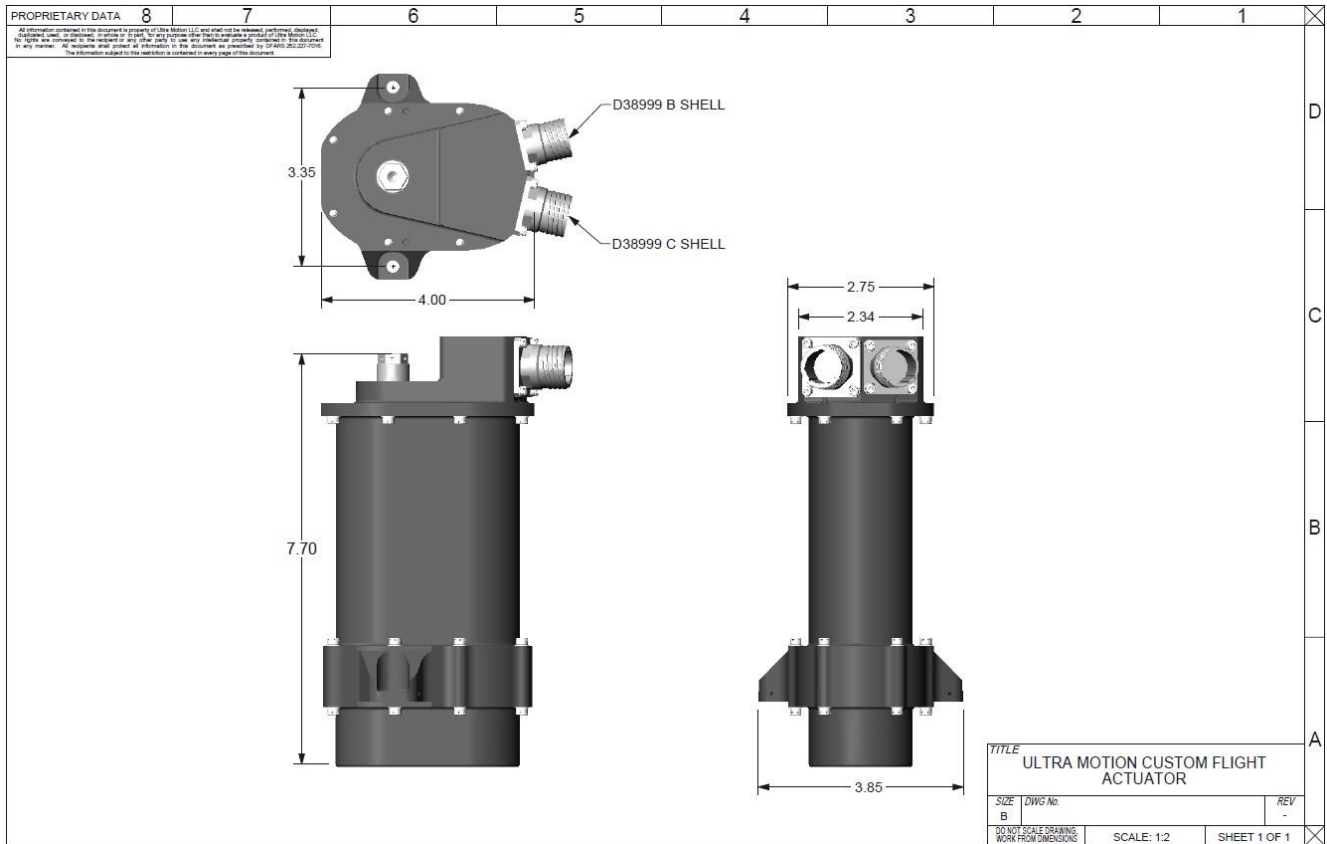
Product Specifications:

Stroke Length:	1.25 inches
Lead Screw:	Steel ball screw with recirculating ball bearing nut, 0.125 inch pitch per revolution, 98% efficient
Gear Drive Ratio:	4.8:1 (Planetary), 1.3:1 (Gear-train Reduction)
Rated Maximum No-Load Speed:	5.5 inches/second
Rated Continuous Force:	230 lbf

Rated Momentary Force (<60s):	580 lbf
Rated Momentary Force (<15s):	1150 lbf
Sealing:	Vacuum to + 20 psig
Temperature (Operational):	-15F to 165F
Connector Interface:	D38999 B Shell (x1), D38999 C Shell (x1)
Encoder Linear Resolution:	0.00012"

Feedback 1: 14-bit Ultra Motion PHASE INDEX™ Encoder with 0-5V analog output (10240 total counts over 1.25 inch stroke, resolution of 0.00012").

Feedback 2: Internal Linear Potentiometer (secondary redundant position).



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