

Joshua Eaton, Manager, UNOLS East Coast Winch Pool

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Maximum Capability Document

Lebus Capstan System

This document has been prepared in accordance with Appendix B of the UNOLS RVSS. Historically, this machine has primarily been used for mooring deployment and recovery. Per Appendix B this machine is rated for "Station Keeping - Deep Water" (Section B.3.5.6) which includes recovery and deployment of moored buoys. The East Coast Winch Pool does not approve Mooring Spoolers for use with oceanographic tension members, therefore, Appendix A does not apply. However, since there is no tension monitoring system on this winch, the East Coast Winch Pool recommends that the Deck Safety and Winch Operator requirement of Table 6.1 (Factor of Safety, FS, of 5.0) of Appendix A be followed as a minimum. Due diligence is required by the User to verify through calculation that normal operations will not exceed MPT and that DLT is never exceeded.

System Characterizations

Empty Weight 6,400 lbf
Maximum Weight 6,400 lbf
Maximum Pull / MPT 7,000 lbf
Maximum Brake Holding Static Load 10,500 lbf
Maximum Continuous Allowed Structure Load / DLT 18,500 lbf
Maximum Speed 60 m/min
Power Requirements 3 Phase 480

3 Phase 480VAC 50/60Hz

100 Amp Circuit

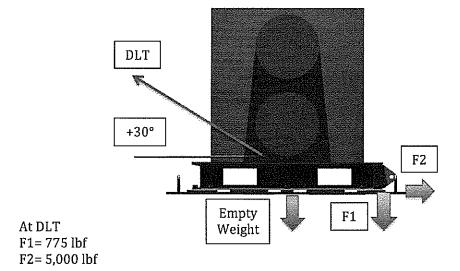


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Free Body Diagram



Forces noted are the maximum forces per bolt, at DLT, for a 4 bolt hold down pattern (2 of rows spaced 48). Analysis is good for a vertical fleet angle of $\pm 30^{\circ}$ and a horizontal fleet angle of $\pm 40^{\circ}$.

