

UNOLS East Coast Winch Pool

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Who We Are

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Brian Guest
Manager



Jamie Haley
System
Maintenance



Josh Eaton
Engineering

What We Do

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In Simple Terms

- Provide portable overboarding systems to vessels and the scientific community.
- Maintain these systems in proper working order.
- Handle the logistics (shipping) to get them where they are needed.
- Provide engineering solutions for unique needs.

ECWP Winch Assets

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- 2 ea. MacArtney MASH2K (one with MRU)
- 2 ea MacArtney MASH4K (one with MRU)
- 2 ea Dynacon 10030 Light duty winches
- 1 ea Hawboldt Medium duty
- 1 ea Dynacon Medium duty (GEOTRACES)
- 1 ea Rapp Hydema Heavy duty (Jason)
- 1 ea TSE mooring spooler
- 1 ea Sea-Mac 1300 lb SWT

ECWP Winch Assets

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MacArtney
MASH2K
~3000 lb load

MASH4K
~6000 lb load



TSE
~7000 lb
max pull



Dynacon
~3500 lb load



SeaMac
~1200 lb load

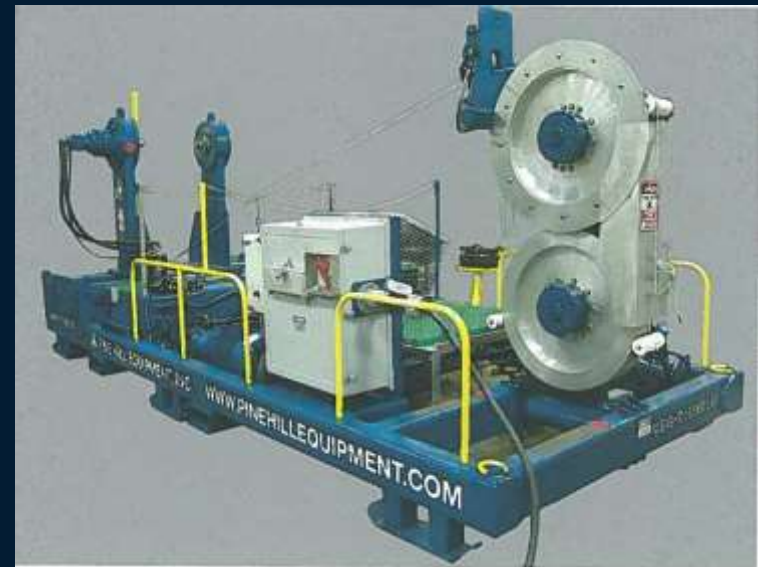
ECWP Tensioning System

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TSE - ~3000 lb tension

Pine Hill - ~5000 lb tension



Heave Compensation

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Heave Compensation

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Heave Compensation

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Kongsberg MRU type H

Model	Roll/Pitch	Acceleration	Heave	Pfree Heave*	Period	Pfree Period*
MRU H	0.05°	0.01 m/s ²	5 cm	3 cm	25 s	50 s

*PFreeHeave® is a delayed heave output where phase errors are removed. The delay is 132 sec.

Schedule

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AUTHORIZED USERS
Woods Hole Oceanographic INSTITUTION

UNOLS East Coast Winch Pool

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UNOLS Winch Pool Schedule

■ = equipment in-use
 Start month: Jan Start year: 2016 End month: Jul End year: 2016 Go

Inventory	Jan	Feb	Mar	Apr	May	Jun	Jul
MASH4K-1							
MASH4K-2							
MD-1							
MD-5							
LD-1							
LD-2							
MASH2K-1							
MASH2K-2							
MS-1							
ULD-1							
Liebhiser							
Pine							
TSE							
HD-2							
Large Turn Table							
Small Turn Table 2							
Turn Table							
16" Metering Block							
Metering							

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Shipping

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Shipping is a large portion of our budget so we work hard to cut cost. A few ways we do this are:

- Have systems ready as early as possible to take advantage of LTL shipping.
- Combine shipments with science gear and cost share.
- Request quotes from multiple companies.

Shipping

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Winch Pool Shop

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The shop was designed specifically for the winch pool with the purpose of maintaining, testing and storing winch systems.



Winch Pool Shop

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- We have the ability to handle large winch systems
- Two 20 ft side opening containers for storage
- Large outside area will accommodate spooling and loading of trucks.
- Three pallet racks for inside storage
- Enough square footage to accommodate up to 10 winches for inside storage and repair.
- Carpenter shop, warehouse, stockroom and shipping department within 100 yards

Winch Pool Shop

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Features include 5 Ton overhead hoist



Winch Pool Shop

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Two foot on center bolt down pad allows us to secure winches while spooling tension members and conducting pull test.



More Than Just Winch Rental

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Besides providing overboarding equipment, the winch pool staff is involved in numerous projects that will benefit users of the pool and the pool itself.

- New Winch – Currently under construction with testing scheduled for this summer. Unique and innovative design for mooring and synthetic uses.
- Lost Coast Heave Sensor – Testing to begin very soon. Intended to be a simple replacement for the expensive Kronsberg system where improved heave response is desired but not to a high level of precision.
- Portable Winch/OHS Test System – To allow on site testing of OHS for generating MCD. Provides dynamic testing ability.

More Than Just Winch Rental

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- Performed analysis and writing MCD's for R/V Blue Heron, using Solid Works Finite Element Analysis (FEA) to analyze existing equipment.
- Upgrade one of our Dynacon winches to include tension and payout information which is displayed via a LCi90.
- Provided consulting services to SKIO and U Miami for winch purchase review.

More Than Just Winch Rental

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- Worked with U Miami, SKIO and URI to devise App B testing plan.
- Worked with U of Delaware to develop an RFQ to purchase a new multipurpose winch that will be part of the ECWP but tailored to and for use primarily aboard the R/V Sharp.
- Developed hydrostatic wire cutter that may be commercially licensed.

East Coast Winch Pool

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Overall, utilizing the various resources at WHOI and our winch pool staff, we are able to provide the scientific community and UNOLS vessels with overboard handling systems in excellent condition, expert wire winding, engineering support, training and advice as well as the logistics to get these systems delivered anywhere in the world that they are needed.

Winchpool.whoi.edu