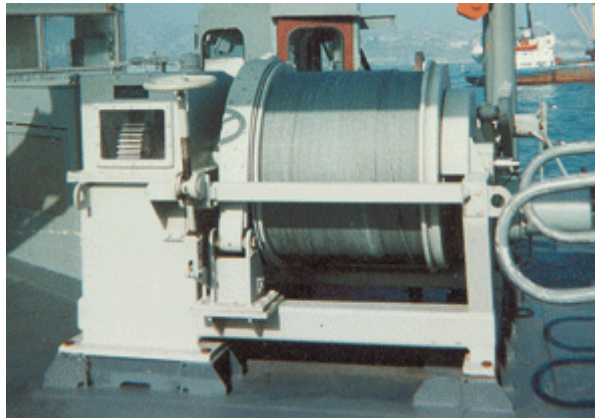


CUSTOM MARINE WINCH SYSTEMS

Deep Sea Research Winches

- Line sizes from 1/4" (6mm) to 1 1/2" (38mm)
- Line capacities up to 45,000 feet (13,700 meters)
- Levelwind system
- Line monitoring systems
- Full range of control options
- Hydraulic, AC electric & DC electric
- Single & multiple drum configurations
- Provisions for slip-ring assemblies



Near-Shore Research Winches

- Designed for CTD's & Water sampling carousels
- Levelwind assembly
- Line sizes from 3/16" (5mm) to 5/16" (8mm)
- Total capacity of 6,500 feet (2000 meters) in either wire rope or EM cable
- Electric & hydraulic drives
- Permanent or portable installations



Traction Winch Systems

- Line sizes from 1/4" (6mm) to 1" (25mm)
- Line capacities up to 45,000 feet (13,700 meters)
- Ideal fiber optic cable or below deck installation
- Eliminates spooling problems due to slack line
- Complete control and instrumentation options
- Optimizes spooling for 3x19 wire rope
- Provisions for slip-ring assemblies



Towing Winches

- Single & double drum configurations

- 1" (25mm) to 2 1/2" (64mm) wire rope clutches
- Levelwind systems
- Manual and pneumatic drum brakes and clutches
- Integral gear boxes and line board shafts
- Diesel, hydraulic & electric drives
- Full range of control options
- Warping heads and rope guides to suit vessel layout



Escort & Ship Assist Winches

- Fast Line Speeds
- Emergency abort operating mode
- Levelwind system
- High braking capacities
- Line monitoring system
- Full range of control options
- Hydraulic & electric drives
- Proprietary split drum design available
- Automatic render/recover mode



Mooring Winches

- Electric or Hydraulic Drives
- To suit soft-line or wire-rope
- From 5/8" dia. to 2-1/2" diameter rope
- Full range of control options
- Constant-tension versions available
- Explosion-proof electric versions available



Specialty Winches

- Bridge winches
- Barge-haul winches

- Mooring winches
- Combination winches
- Multiple drums with different sizes
- Diesel, hydraulic & electric drives
- Full range of control options



General Deck Equipment

- Anchor windlasses for 3/4" (19 mm) to 4" (102 mm) chain
- Capstans with 12" (305 mm) to 36" (914 MM) diameter barrels
- Chain stoppers, pelican hooks, and line sheaves
- Unit mounted or multiple deck configurations
- Integrated gypsies and auxiliary drums
- Custom configurations



Control & Instrumentation Systems

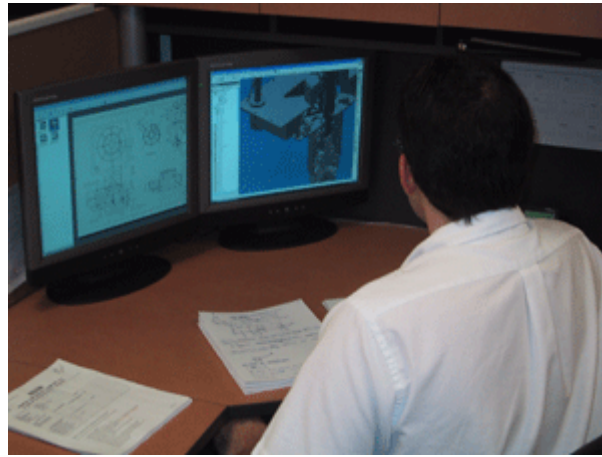
- Multiple control stations
- Proprietary line monitoring system for escort and ship-assist operations
- Research winch instrumentation systems with full range of display configurations
- PLC based automatic and manual control systems
- Complete control and instrumentation options
- Electric, hydraulic, and pneumatic controls



Engineering Services

- Project Management
- Design & Drafting Services
- On-site Equipment Surveys

- System Design Consulting



Contract Fabrication and Machining Services

- Large/Heavy Custom Fabrications
- Complete Machining Capability
- All types of repairs including straightening and forming

