

DYNACON®

PRODUCTS OVERVIEW

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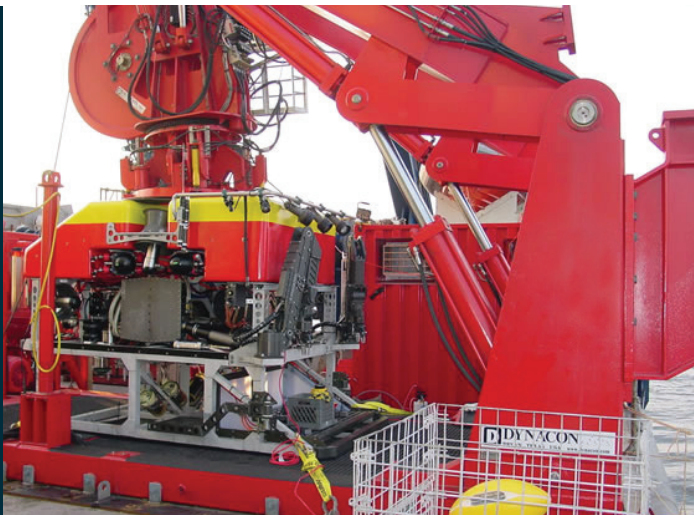
DYNACON

Dynacon specializes in the custom design and manufacture of winches and handling systems for all offshore applications.

Dynacon specializes in the custom design and manufacture of winches and handling systems ranging from D.C. electric drive drum winches for oceanographic applications to electro-hydraulic and diesel-hydraulic traction winch systems with motion compensated cranes for deep-water operations. Dynacon's Launch and Recovery Systems (LARS) have been used for the deployment and retrieval of remotely operated vehicles (ROVs), towed bodies, oceanographic instrumentation, autonomous underwater vehicles (AUVs) and other payloads since 1986. These systems are used around the globe for launch and recovery missions. All of our LARS systems can be modified to suit a variety of ROV launch and recovery specifications for our clients.

With our specialized facility, all aspects of the production process including in-house design, engineering, fabrication, assembly and testing are accomplished at our Bryan, Texas facility.

Dynacon winches and handling systems can be designed and built to meet certification requirements of the American Bureau of Shipping (ABS), Det Norske Veritas (DNV), Lloyd's Registry of Shipping, the U.S. Coast Guard, or other certifying agencies.



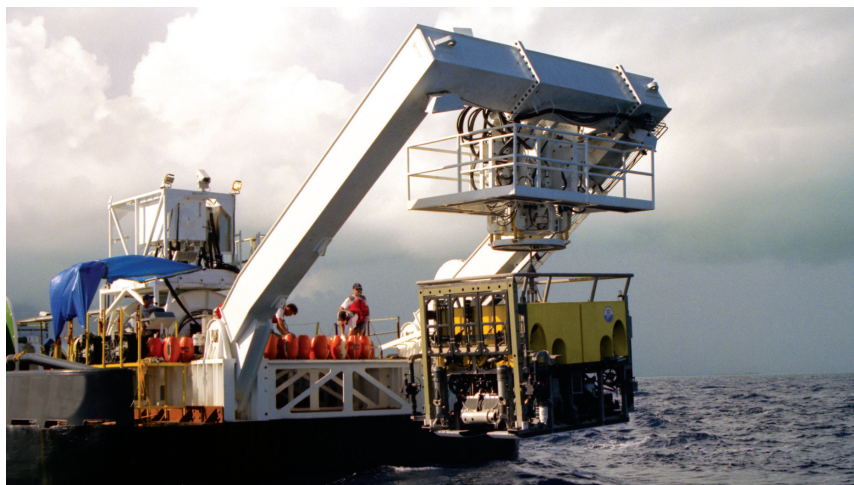
DYNACON CAPABILITIES

Our primary goal is to understand the specific requirements of our customers' project. This ensures the final product is a solution that fits our customers needs. All aspects of the production from concept to final testing are performed onsite at Dynacon.

Dynacon has extensive experience in the design and manufacture of winches and Launch and Recovery Systems. Using this extensive experience, combined with sound engineering practices and quality personnel, uniquely positions Dynacon to deliver exceptional products.

DYNACON LAUNCH AND RECOVERY SYSTEMS (LARS)

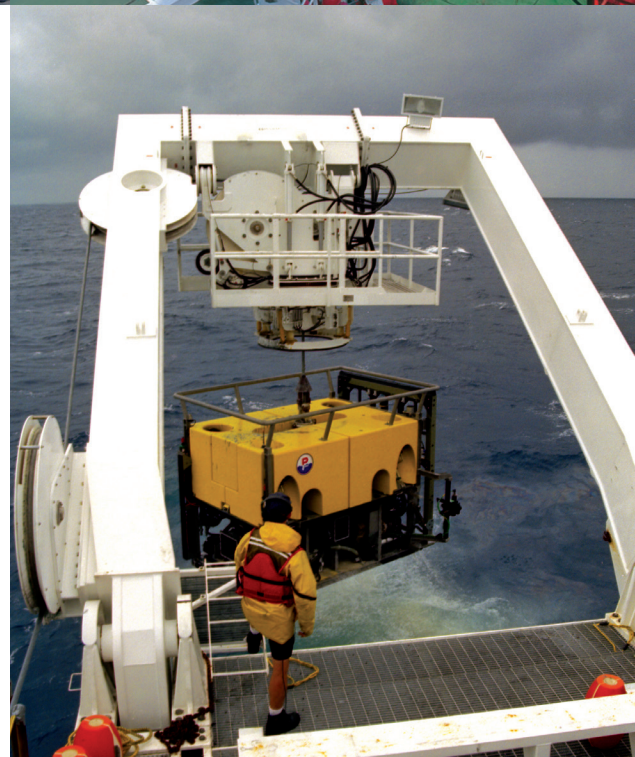
At Dynacon, we have been meeting and exceeding our customer's needs since 1986. Our complete understanding of what our customers need in a product, means we can provide solutions and make design recommendations to best achieve those goals.



The Dynacon product range includes all components required for launch and recovery operations. This includes winches, A-Frames, power units and hanging sheaves. We also offer specialized equipment including heave compensation systems. Training, installation support and after sale support for all equipment are available or all customers for the life of the equipment.

Dynacon's systems are designed and built for the harsh marine environment. The structural designs are in manufactured and tested accordance with the most rigorous published standards. Electrical and hydraulic systems are efficient to use and incorporate safety interlocks to protect operators and equipment. All components utilize proper corrosion protection techniques to provide long service life while minimizing routine maintenance.

The Dynacon Launch and Recovery Systems have an exceptional track record for safe and efficient operation. Our unique, proven equipment can increase your operational efficiency and minimize your installation and operating costs.



ROV Winch Systems

Dynacon offers Remotely Operated Vehicles (ROV) winch systems that work up to a depth of 4,000 meters. All ROV winch systems are custom engineered to suit our customer's specifications. Typical options include various levelwind configurations, horsepower ratings, hazardous area ratings and controls. We have the ability to custom design a solution to fit your specific needs.



421 ROV Winch System
3,000 Meter
Medium Duty ROV Winch



421 D2 ROV Lift Winch
2,500 Meter
Medium Duty ROV Winch



421 D3 ROV Lift Winch
3,000 Meter
Heavy Duty ROV Winch



521 ROV Lift Winch
2,500 Meter
Heavy Duty ROV Winch



521 XL ROV Lift Winch
3,000 Meter
Heavy Duty ROV Winch

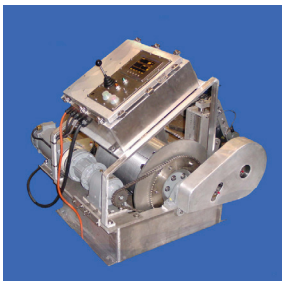


721 XL ROV Lift Winch
4,000 Meter
Heavy Duty ROV Winch

Oceanographic Winches

Dynacon has a number of standard designs for electric, hydraulic and electro-hydraulic winch systems designed for coring, Conductivity Temperature and Depth (CTD), side scan sonar and similar applications. Variations of these standard designs, as well as unique designs, are routinely built.

Numerous Dynacon systems have been provided to universities, military and commercial customers worldwide.



418 Electric Oceanographic Winch
2 Horsepower
350 lbs. safe working load



10030 Cantilever Winch
30 Horsepower
1,850 lbs. safe working load



12030 Cantilever Winch
30 horsepower
3,700 lbs. safe working load

Traction Winches

Dynacon specializes in ultra deep-water traction winch systems. These systems are used in conjunction with deep-tow sonar, sub-bottom profiling, towed camera sleds and deep-water search and salvage operations. The winch systems are available in a variety of configurations to suit the intended purpose of our customers.



CTD Traction Winch System

60 to 100 horsepower
4,000 lbs. to 9,200 lbs. safe working load



766 Deep Tow Traction Winch Systems

200 horsepower
20,000 lbs. safe working load



Deep Tow Traction Winch System

200 horsepower
30,000 lbs. safe working load

Multi-Drive Winch

The Dynacon MDW (Multi-Drive Winch) is a versatile and robust winch designed for various lifting applications. The MDW is a General-Purpose Winch capable of lifting various loads, including ROVs, trenchers, trawling equipment, man lifts, submarine rescue vehicles, CTDs, and other subsea loads. The MDW improves the lifespan of the drive system and reduces reliance on a single gearbox, motor, and brake.

Features & Benefits

- Innovative design with new onboard chiller for cooling drive components
- Enhanced onboard water-cooled braking resistor
- Small footprint similar to M521XL
- Large drum capacity of M721 XL (4,400 meters of 41mm umbilical)
- Multi-Drive inputs for redundancy for 4 motors, 3 to recover
- Caliper Brakes (Fail Safe)
- Drum Swapable (Drive system stays intact)
- Conventional or Right Angle Levelwind capability
- Drum Lift Points are integrated



A-Frames

Dynacon offers many types of A-Frames for numerous applications including Remotely Operated Vehicles, towed systems and IWOCs support. All A-Frames can be custom engineered to your specific application.

Our line of self-erecting A-Frames enables safe and rapid installation on the vessel.



Self-Erecting A-Frame 6023
11 tonnes luffing rating
20 tonnes overboard rating



Self-Erecting A-Frame 966
13.5 tonnes luffing rating
22 tonnes overboard rating



Self-Erecting A-Frame 9966
12 tonnes luffing rating
22 tonnes overboard rating



Conventional A-Frame 952
16 tonnes luffing rating
30 tonnes overboard rating



Conventional A-Frame 1217
5.6 tonnes luffing rating
7 tonnes overboard rating



Launch & Recovery System 6015
12 tonnes luffing rating
20 tonnes overboard rating



General Purpose A-Frame 474
4.5 tonnes luffing rating
7.5 tonnes overboard rating

Telescoping Launch & Recovery Systems

The Dynacon Telescoping A-Frames are versatile systems with the ability to operate with many types of packages. The Telescoping A-Frames for ROV systems allows the ROV, TMS and work package to unstack so maintenance can be performed at the deck level.



Telescoping Launch & Recovery System 1015
13.5 tonnes luffing rating
22 tonnes overboard rating



Telescoping Launch & Recovery System 7021
10 tonnes luffing rating
20 tonnes overboard rating

Heave Compensation Systems

Dynacon manufactures Heave Compensation Systems to eliminate vessel motion from impacting the deployed package. We offer three types of heave compensation control systems. Passive heave compensation includes manually adjusted controls. Auto-passive heave compensation includes a monitoring package and control system that optimizes its performance. The active over passive adds an electro hydraulic power unit that actively supplements the auto passive system.



CTD Motion Compensation Crane 1075

3,400 kg safe working load
+/- 1.25 meters of vertical compensation range
5.5 meters overboard reach



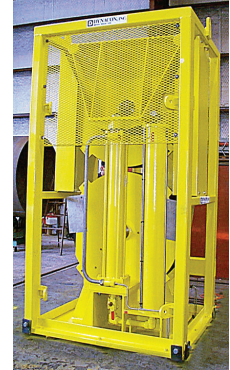
CTD Motion Compensation Crane 630

1,800 kg safe working load
+/- 1.25 meters of vertical compensation range
7.0 meters overboard reach



Flying Sheave Heave Compensator 1160

15,900 kg safe working load
+/- 3.5 meters of vertical compensation range 1.2 meter sheave tread diameter



Flying Sheave Heave Compensator 501

9,000 kg safe working load
+/- 2.75 meters of vertical compensation range 1.2 meter sheave tread diameter

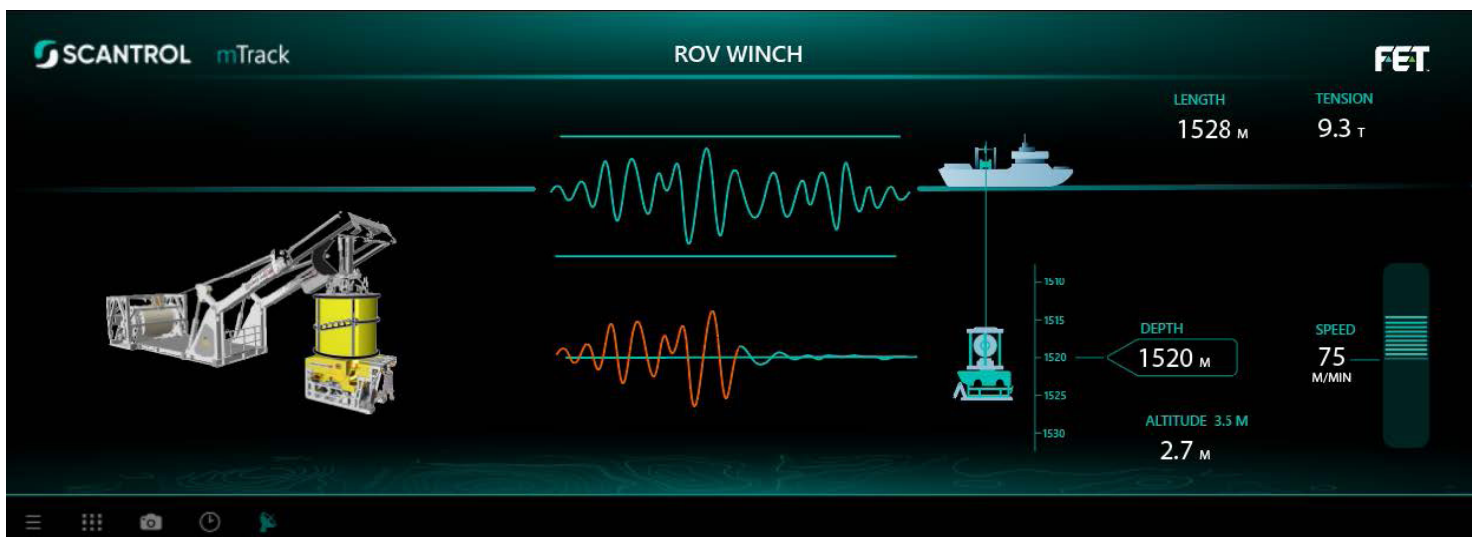
Active Heave Compensation

Benefits & Features of Active Heave Compensation:

- Test and tune in your factory or at the dockside – no tuning at sea
- Standardized solution, no vessel-specific programming – just configuration
- Integrated MRU - save costs, ensure long-term stability, with no requirement for recalibration
- Connect to vessel internet for free OTA assistance

In 2017 Dynacon and Scantrol signed a cooperation agreement and jointly developed a standardized AHC solution for Dynacon LARS systems.

The AHC solution has a short lead time, is sold and integrated by Dynacon and is available for new and existing LARS systems.



Linear Cable Engines (LCE)

FET's Dynacon product line provides Linear Cable Engines for subsea applications to facilitate cable handling with two designs incorporating either track tensioners or standard wheel power modules.

Features & Benefits

- Containerized Modular design
- Standardized with exchangeable components
- Designed for easy integration
- Optimized efficiency and decreased necessary deck capacity
- All structural components are painted carbon steel
- Integrated control system
- Electrically/hydraulically driven
- Low noise operation
- Fully integrated with vessel control system

Options

- Side-loaded versions
- Wide-opening versions
- Service and maintenance program
- Spare parts package
- Remote control
- Wireless remote control
- Pinch status
- Extra high speed
- Complete control system monitoring
- Complete control system data log
- Tarpaulin cover

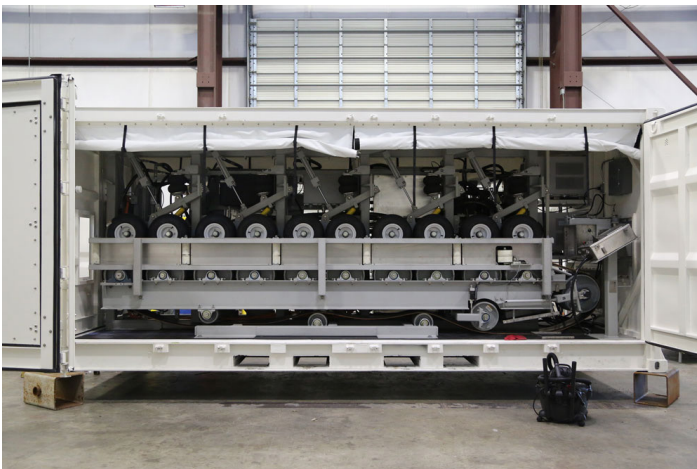


Model 5K Linear Cable Engine (LCE)

- Safe Working Load = 5,000 lbf
- Line Speed = 1,215 feet / minute
- Integrated lateral supports
- Side loading of cable, (optional customer container)
- Optional belt materials for ideal matching with cable jacket, (testing required)
- Electric Drive
- Linkable for control of multiple units to achieve increased outboard line tension
- Liquid cooled drive system components with integral chiller and external heat exchangers (to be mounted outside container by customer)
- Hydraulic power for lifting and tensioning mechanisms
- Air power for squeeze loads
- Pass up to 7" body / union at full speed
- Pass up to 14" body / union at reduced speed
- Installed into 20' ISO container

Model 1.2K Linear Cable Engine (LCE)

- Safe Working Load = 1,200 lbf
- Line Speed = 1418 feet / minute
- Max normal load per tire = 500 lbf
- Integrated Dragboard on entry into LCE
- Optional belt materials for ideal matching with cable jacket, (testing required)
- Electric Drive
- Computer linkable for control of multiple units for increased outboard line tension
- Liquid cooled drive system components with integral chiller and external heat exchangers (to be mounted outside container by customer)
- Hydraulic power for lifting and tensioning mechanisms
- Air power for squeeze loads
- Installed into custom 20' ISO container



Electro-Hydraulic Power Units

FET's Dynacon product line manufactures Electro-Hydraulic Power Units to power A-Frames and Winch applications. We offer multiple horsepower designs to meet your requirements and applications, including the integration of Active Heave Compensation.

Dynacon will assist you in determining the best design to fit your deck space, flow and pressure requirements and will construct to the certification and zone ratings required. The importance of a properly sized hydraulic power unit that has sufficient horsepower and flow dynamics is critical to maximize the performance of an active heave system. Scantrol AHC controller modules are utilized in our systems.



Tuff Coat M Marine Lubrication Systems

Dynacon developed the Tuff Tool lubricator to inject Tuff Coat M lubricant into umbilicals and wire rope under tension. High pressure forces the lubricant to the inner core of the cable, which provides maximum protection from corrosion and wear. Regular applications of Tuff Coat will promote longevity of your cables.



Tuff Coat M Marine Lubrication Systems
Tuff Tool Lubricator installed on a wire rope



Tuff Coat M Lubricant
An ROV umbilical lubricated with Tuff Coat M

Overboarding Sheave Systems

Dynacon manufactures overboarding sheaves are designed with the highest standards in marine grade materials. All sheaves are built to custom order.



Overboard Sheave P19
1,500 kg safe working load
483 mm sheave tread diameter

Overboard Sheave 1101

20,000 kg safe working load
1,422 mm sheave tread diameter



Overboard Sheave 952

20,000 kg safe working load
1,219 mm sheave tread diameter

Overboard Sheave 1227

1,130 kg safe working load
711 mm sheave tread diameter



Services

Spooling Facility

The proper spooling of the cable onto the winch drum is critical to the successful operation of the winch system. Dynacon's spooling facility and equipment ensure the proper fit and tension profile. We can provide spooling tensions up to 35,000 lbs. Dynacon also offers cable lubrication services during the spooling process.

Factory Acceptance Testing

All of Dynacon's equipment is factory tested to all functional and performance specifications. In our unique testing facility our staff verifies each aspect of the test procedure to meet or exceed contract specifications. Dynacon offers its customers the opportunity to participate in the Factory Acceptance Testing.

Load Testing

Dynacon performs load testing on all new equipment. Engineering and testing can be reviewed and approved by third party certification agencies such as DNV, ABS or other client specific requirements. All certification records and supporting documentation are archived at our facility.

OUR CORE VALUES

No One Gets Hurt

The safety of our employees and customers is our first priority coupled with a healthy respect for the environment.

Integrity

In everything we do, in every interaction, both internally and externally, we strive to operate with the utmost integrity and mutual respect.

Customer Focused

Our products enhance our customer's performance and we listen to their needs and work with them to solve their challenges.

Good Place To Work

We are committed to creating a workplace that fosters innovation, teamwork and pride. Every team member is integral to our success and is treated equally and fairly.

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