

## DECK EQUIPMENT

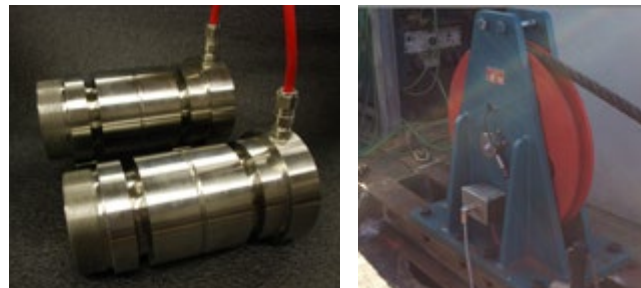
Rugged Controls can provide instrumented sheave and shackle assemblies. These assemblies are customized to your application and can be provided with sensors for tension, payout, speed and angles.



## SENSORS

For over 25 years Rugged Controls's in-house design and engineering team has designed sensors, provided system integration and completed installation/commissioning services for beginning to end solutions.

Sensors include: Load pins, load cells, rotational sensors, pressure transducers and inclinometers.



## RENTALS

Rugged Controls rents running line tensiometers (cable line riders) from 0-4.5" cable diameter, up to 500 tons max tension, instrumented sheaves/shackles and tension links. Each system can be provided with a local data display and software for data-logging.

Stocking rental depots in Seattle, WA and Houma, LA



## CALIBRATION SERVICES

Calibration capability up to 1,200,000 lbf

Rugged Controls offers a nationwide calibration service for new and retrofit horizontal and vertical test machines.

Calibrations comply with ISO/IEC 17025:2005, ISO 10012-1, and MIL-STD-45662A. All machine verifications performed are in accordance with the ASTM Standard E 4-10 "Standard Practices for Force Verification of Testing Machines" which has been approved for use by agencies of the Department of Defense and is accepted by ISO.



# RUGGED CONTROLS

PROVEN PERFORMANCE, CUTTING EDGE FEATURES, INNOVATIVE DESIGN, COMPREHENSIVE TECHNICAL SUPPORT, AND THE INDUSTRY'S BEST "TOTAL PACKAGE" VALUE IN ADVANCED CONTROL AND MONITORING SYSTEMS.

## MONITORING AND CONTROL SOLUTIONS

- CONTROLS
- LCI-90i AND LCI-80x
- SOFTWARE
- TENSIOMETERS
- SYSTEM INTEGRATION



RUGGED-CONTROLS.COM

IN 2016, Rugged Controls rebranded the LCI division of Measurement Technology NW. For over 20 years we have been a world-wide leader for sensors, systems and solutions for control and monitoring. Rugged Controls will continue our tradition of innovative products into the next generation.



## RUGGED PROGRAMMABLE CONTROLLERS



### LCI-90i

The LCI-90i is a next-generation programmable controller that combines advanced signal-processing capabilities with rugged reliability for new projects and retrofits of existing equipment.

Versions:

- Single-Winch
- Pump Monitoring
- Crane Monitoring
- Hazardous Locations Display
- Multi-Winch
- Bulk Tank Weight
- Torque Display



### LCI-80x

Noted for years of performance in extreme environments where viewability is critical, the LCI-80x RPC is set apart from other panel meters, HMIs and analog gauges, not only by its robust durability but its advanced control and datalogging capabilities. Suited for harsh applications from simple to advanced automatic controls, preconfigured versions are available for common applications.

## TENSIOMETERS



Three models are available - our standard Removable Center Sheave model, Single Side Plate model, and our new Variable Wire Diameter model, suitable for multiple wire rope sizes.

Running Line Tensiometers (RLT's) are ideal for line tension, speed, and payout monitoring - key variables for offshore mooring applications, crane and hoists, or for ensuring the safety of oceanographic payloads and towed cargo.

Standard models are available for applications ranging from 0 to 500 tons, and wire rope diameters up to 4.5 inches.

All units are constructed from thermoplastic coated alloy steel with 316 stainless steel fasteners and 4340 hardened steel sheaves.



## DATA-LOGGING SOFTWARE



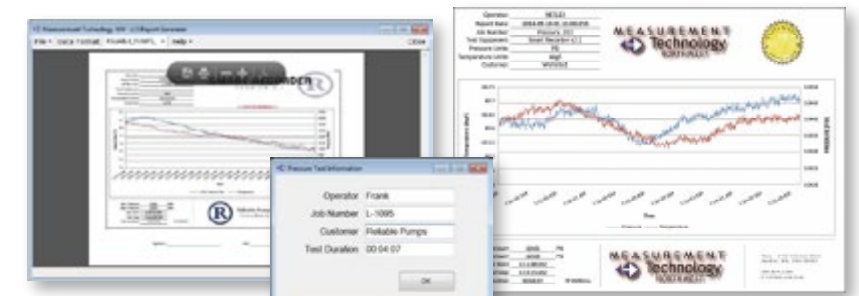
Rugged Controls WinchDAC Software

Our data-logging software is designed to simultaneously monitor multiple parameters from different sensors via a central PC interface.

Sensor signals are processed by an LCI Rugged Programmable Controller, with parameter data routed through a single serial or Ethernet network to a centrally located PC.

Data can be viewed in real-time on location or at a remote location over the Internet.

Our Report Generator software allows for easy post-process conversion of measurement data to branded PDF reports. This system uses the unique output of the LCI display to ensure data integrity in the finished report.



PDF Report in LCI-Report Generator Software

Entering Header Info

Branded PDF Report

## PLC CONTROLS



Control and monitoring solutions for offshore mooring winch and hoist systems.

Measurement Technology NW is a global industry leader in the development of winch monitoring and control systems for offshore rigs and related support vessels. We specialize in all types of PLC products and HMI interface systems.

Rugged Controls creates the connection between deck equipment, vessel operations, and remote monitoring. Our control systems provide the reliability and increased safety demanded by offshore and marine operations.

From simple local pendant controls to local control panels with remote I/O linked to a central control room, Rugged Controls can provide complete control solutions.