

Neumann Equipment Projects

Project: 1.5T Oceanographic Winches for Sonartech

In conjunction with Sonartech and BAE Systems Neumann Equipment developed and manufactured the Sonographic winches used on an Australian Navy vessel. Sonographic winches are a specialist piece of equipment used to deploy systems to conduct research and underwater exploration using sonar “tow fish” and remote operated vehicles (ROV’s).

These winches are subject to extreme offshore conditions and extraordinary fatigue loading due to constant heaving at sea. On average the wave period in open ocean is around 9 seconds. This means that every 9 seconds these winches can be expected to resist a fatigue loading event or load cycle.

Due to the high minimum bend radius of the coaxial communication winch rope these winches are designed generally with very large winch drum and sheave arrangements. Neumann Equipment understand the importance of carefully supporting and terminating the coaxial cables and have developed advanced methods of ensuring that the integrity of these cables is not compromised during termination.

Our custom Sonographic winches are not only built to endure the extreme environmental conditions but also comply with the relevant DNV offshore lifting (DNV-OS-H205) and Australian Winch & Hoists standards (AS 1418).



MODEL NUMBER	1.5T OGW
Rated Line Pull	1,500kg
Mechanism Classification	M7
Rated Line Pull Out of Water	600kg
Maximum Line Speed	65m/min
Bare Drum Diameter	460mm
Gearbox Ratio	47.6:1
Hydraulic Pressure	227 bar
Oil Flow Required	52 L/min
Coax Cable Diameter	11.4mm
Drum Capacity	1,500m

This specific winch was developed as a self-contained unit with integrated electro-hydraulic power and hydraulic control systems as well as distance and tension monitoring. Tension monitoring of these systems is critical due to the unknown nature of the sub-sea environment and considering that the equipment being used underwater is expensive to replace we do all that we can to ensure that equipment is protected and can be recovered if caught underwater.



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