



# SAILING SYSTEMS

Winches and Feeders

**RONDAL**

ULTIMATE RELIABILITY



# PLAN FOR THE UNEXPECTED







## PRODUCTS THAT ENSURE ULTIMATE RELIABILITY IN ANY SITUATION

Rondal designs and manufactures high-performance sailing systems and equipment for superyachts. Rondal is recognized as the best for its unrivalled Dutch build quality and innovative technical solutions, achieved through a dedicated focus on continuous improvement in both products and services.

As a building partner, Rondal leverages decades of experience and relieves the client by taking on turnkey projects. The products of Rondal ensure ultimate reliability in any situation.

The Rondal team consists of approximately 75 professionals, including highly qualified engineers, composite workers, CNC machine operators, welders, and mechanics, as well as a host of complementary specialists.

With decades of experience in composite and aluminum engineering and manufacturing, Rondal serves the market with specialized products for both sailing yachts and motor yachts.



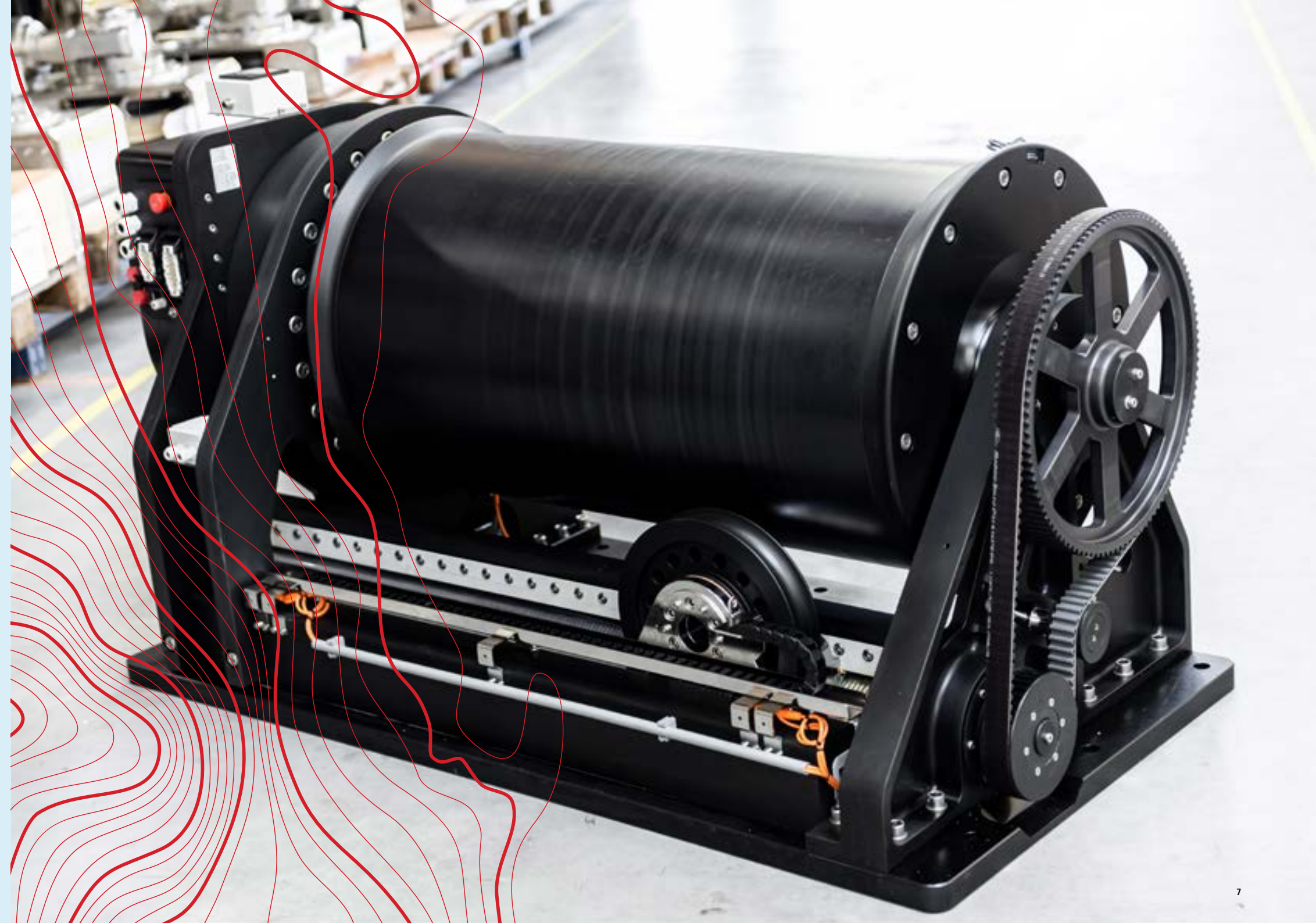




### LOADED WITH QUALITY

Modern winches must possess exceptional power to withstand the immense loads exerted by supersized rigs and sails crafted with advanced sail-making technologies.

Safety remains paramount, along with ease of maintenance. Rondal utilizes cutting-edge materials and the latest technologies to meet these combined demands, resulting in smaller, lighter, and faster winches.











### CAPTIVE REEL WINCH PRINCIPLE

The captive reel winch, available in aluminum and carbon, stores the line in a single layer to prevent a second layer from jamming in the first layer. The drum length is calculated based on the line diameter and the length of line to be stored, also known as the retrieving length. Adjacent to the drum, there is a spindle-driven slider to ensure that the line turns are properly stored. The spindle is driven by pulleys, which are interchangeable, allowing for adjustments to the line diameter if necessary. End switches safeguard the winch's operation, the winch will stop as soon as all but the safety windings of line have been paid out, and will also stop when the drum is full.

Underneath the drum, sensors detect slack in the line, causing the drum to stop when slack is detected. To prevent slack in the line, all Rondal winches are equipped with an optical sensor. This sensor transmits a light beam beneath the drum. If the line slackens, the turns around the drum will drop and interrupt the beam, generating an electrical signal that stops the winch. Simultaneously, a signal indicating a malfunction in the winch operation is dispatched to the steering position. The reel winch is available with the spindle on either the left or right-hand side of the drum. The gearbox and brake are located inside the drum and connected to the motor right adjacent the drum.







### **ELECTRIC CAPTIVE REEL WINCHES**

Rondal's electric captive winches are designed to optimize performance and efficiency, making them an exceptional choice for modern yachts. These winches utilize advanced peak shaving technology, enabling setups that cater to average power requirements rather than maximum demands. This flexibility allows peak energy needs to be easily managed through a battery bank and/or additional generator sets.

One of the standout features of the electric captive RW winches is their ability to regenerate power. When releasing tension on the sheets, these winches can feed energy back into the system, enhancing the battery reserve and providing crucial support for essential sailing systems in the event of a generator failure.

Additionally, the winches are equipped with optional load sensors that provide real-time load readings for sails and sheets, along with safety alarms for added security. They can achieve impressive speeds of approximately 80 m/min, ensuring quick tacking and gybing for optimal sailing performance.

THE NEW  
RONDAL WINCH

Our winches are designed to meet the demands of today and tomorrow—lightweight, reliable, and compatible with both electric and hydraulic systems. With speeds reaching up to 80 m/min, these winches offer unmatched performance, whether driven hydraulically or electrically. Crafted with composite drums, they are robust yet lightweight, ensuring optimal handling and durability.

All models are equipped with variable displacement motors, while the RW8000 feature fixed displacement motors specifically

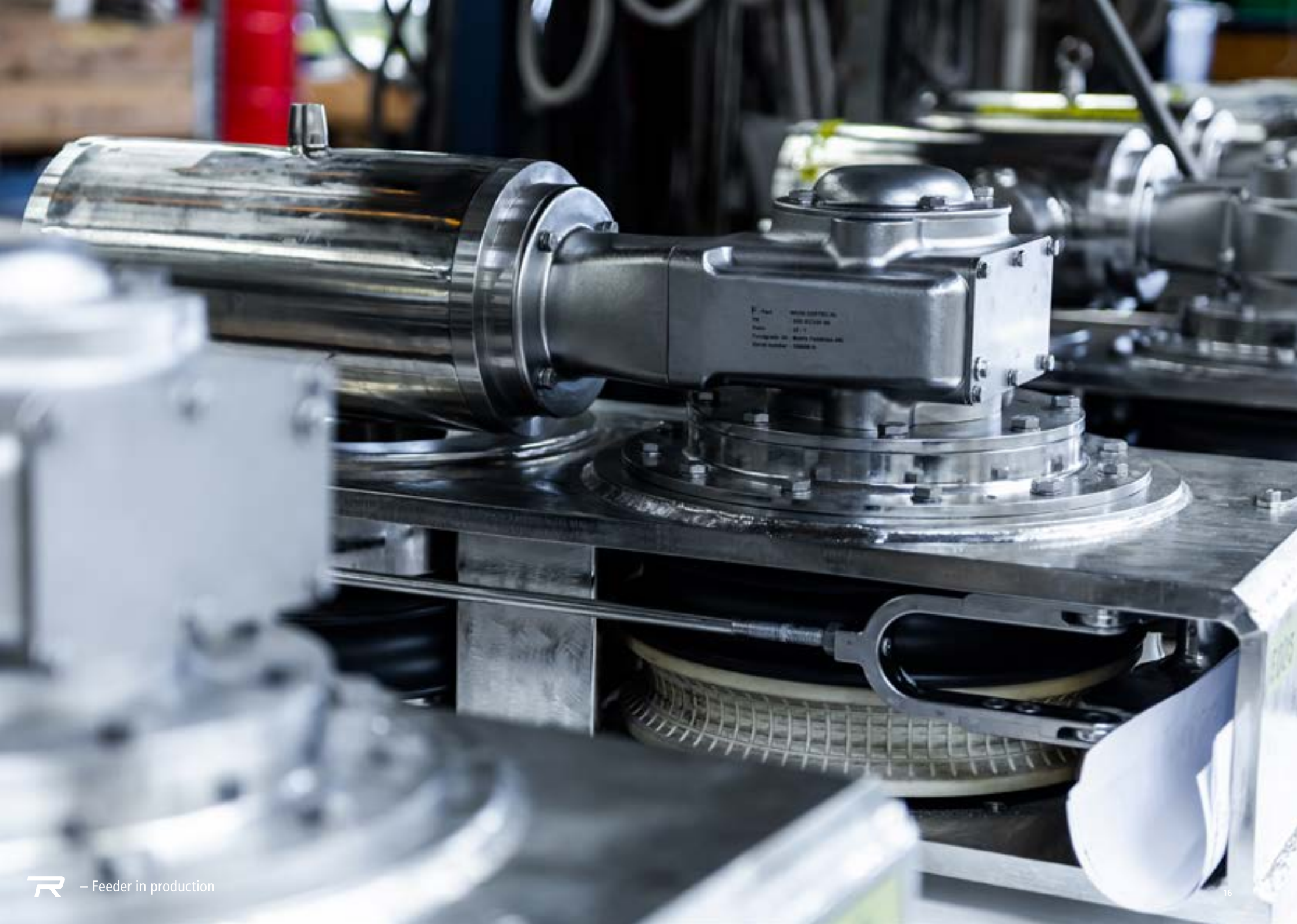
tailored for halyards, allowing full load at full speed. With lower working pressures ( $\leq 250$  bar) and electric drives under development, our winches are not only powerful but also adaptable to evolving needs.

Features such as load cell readiness, minimized interface with construction, and slack line detection ensure precise orientation and positioning, making them a future-ready solution for any application.



	RW8000LW	RW12000LW	RW18000LW	RW24000LW	RW32000LW	RW40000LW
PULL LOAD [kg]	8000	12000	18000	24000	32000	40000
HOLD LOAD [kg]	12000	18000	27000	36000	48000	60000
LINE DIAM. RANGE [mm]	18 - 28	22 - 32	28 -36	30 - 44	38 - 52	40 - 56
MAX. RETRIEVING LENGTHS AT SMALLEST LINE DIAM. [mm]	83	74	72	82	106	82
MAX. RETRIEVING LENGTHS AT LARGEST LINE DIAM. [mm]	55	52	57	59	83	59
HYDRAULICS						
- [L/min]	85	80	105	130	137	155
- [BAR]	280	310	325	315	275	305





### A FEEDER IS DESIGNED TO GUIDE AND TENSION THE LINE

Winches are often situated below deck, and the lines are guided to the deck's exit using blocks and sheaves. The lines below deck should always be kept under tension to prevent tangling and jamming. This tension ensures the lines are properly retained within the blocks and sheaves.

The feeder, located at the deck's exit, directs the line onto the deck, leading to various components or back into the

deck toward the winch. It is designed to guide the line from the winch to the deck and maintain tension between the feeder and the winch. However, the feeder should not be used to increase the pulling force on the line, as this function is solely for the winch.

Feeder wheels can be powered either electrically or hydraulically. The motor can be directly connected, geared, or linked with a drive belt to the main

shaft. This main shaft operates the feeder wheel, allowing the motor to rotate the feeder wheel in both directions (pull and ease). The feeder wheel is coated to optimize friction between the line and the feeder wheel. Pressure rollers are used to press the line against the wheel. The pressure applied by the rollers can be adjusted by increasing or decreasing tension on the rubber spring damper. The feeder is mounted on the ship's structure using a frame, and the feeder cover is installed

on the deck to provide a finishing touch and protect the feeder.”







# ADVENTURE IS WAITING FOR YOU THERE

WITH PRODUCTS THAT ENSURE ULTIMATE RELIABILITY  
IN ANY SITUATION



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