

**MARINE &  
OFFSHORE**

# **Reliability at full steam**



**HÄGGLUNDS** 



# Smooth sailing in tough applications

**When you work on the open water, you have to rely on what's on board. But that doesn't mean you're alone. For more than half a century, Bosch Rexroth has been at marine customers' side. Compact, efficient and utterly reliable, our Hägglunds drive solutions take performance to the extreme. Combined with our singular focus and application knowledge, that keeps your equipment and business on a steady course.**

Marine customers were the first to experience the ease and reliability of our Hägglunds hydraulic direct drive systems. In fact, marine cranes and winches were what we had in mind when we developed them. Since the introduction of our Hägglunds Viking motor, which is now joined by the Hägglunds CA, CB, CBp and CBm motors, Hägglunds solutions have been installed on everything from fishing trawlers to cruise ships, dredgers to research vessels.

## **AN OCEAN OF DIFFERENCE**

Durable Hägglunds drives bring you advantages you won't find anywhere else. They provide unbeatable torque, delivered with exceptional efficiency and built-in overload protection – but without a gearbox. Compact and easy to maintain, they let you handle any challenge you meet, on the water or under it. ●









Courtesy by Royal IHC

# Any vessel, any challenge

## GET BENEATH THE SURFACE

Häggblunds drives don't just withstand salt, wind and waves. The enclosed motors can dive down deep – well below the 40 meters needed for dredging.

## SAVE SPACE ON BOARD

Häggblunds drives need no gearboxes, which means less footprint, less noise and no hassle with lubricating oil. On winches, the brakes and valves mount right on the motor.

## GO FULL FORCE

Häggblunds drives offer an unbeatable power-to-weight ratio. Since their full torque is available from zero speed, you gain an immediate advantage.

## RESIST SHOCKS AND OVERLOAD

Häggblunds drives have a low moment of inertia and built-in overload protection. If your equipment jams or strikes something unexpectedly, the drive system takes it in stride.

## RESPOND INSTANTLY

With their high efficiency and low moment of inertia, Häggblunds drives let you take full advantage of the control system. That means rapid actions and near-immediate stops.

## START AND STOP WITHOUT WORRY

There's no risk of overheating with Häggblunds drive systems. So you never need to think about the number or frequency of stops and starts.

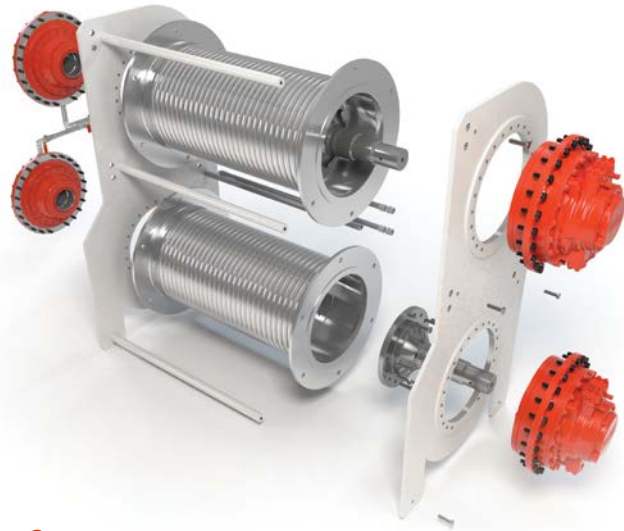
## CONTROL YOUR TENSION

The up to 98 percent starting torque of Häggblunds drives is maintainable throughout their speed range. Simply put, your winches get the best tension control available.

## FREE YOURSELF FROM LIMITATIONS

Free-wheeling capacity makes Häggblunds motors perfect for winches, but also makes it possible to mount them in tandem (or back to back) or to install several of them through a ring gear. That creates an even wider speed and power range. ●





# Complete marine solutions

**Hägglands solutions offer incredible versatility, which enables a perfect drive system match for even the most complex needs. You can be sure of the right solution for your vessel by drawing on our decades of application expertise.**

## **DREDGING**

On dredgers, Hägglands solutions handle multiple duties. With motors submersible to well below 40 meters, they withstand shock loads and vibrations, making them an ideal fit for your cutter head drives. But they also offer a space-saving solution for driving your winches, complete with a DNV ATEX brake. Above or below the waterline, full torque from zero speed gives you power right from the start.

## **TOWING WINCHES**

With their incredible power-to-weight ratio, Hägglands solutions save space on board while boosting your towing muscle. From zero to full speed, you get access to every bit of torque they deliver. What you don't get, however, is the hassle of gearboxes and the ongoing need to purchase, cool and maintain lubricating oil.

## **THRUSTERS AND PODS**

As drives for your thrusters or slewing drives for your thrusters and pods, Hägglands solutions save space in

installation – and safeguard your mobility in operation. Able to start and stop repeatedly with no risk of overheating, they also absorb the sudden peak load if you strike ice or debris. On thrusters, in particular, you'll find no substitute for the Hägglands CBp motor, which combines all this with extreme power density.

## **RORO RAMPS**

Your RoRo ramps need precise tension control, especially if you have to balance them against the quay. Hägglands solutions give you a starting torque of up to 98 percent, which they maintain throughout their speed range. Rugged and reliable, they also place a safety brake on the drum without intermediate gearing, which means you can keep the load supported – even if the drive line should fail.

## **PIPE AND CABLE LAYING**

High-performance tension control isn't only for winches. You need it when laying cable or pipe in a tough marine environment. With starting torque of up to 98 percent that can be maintained throughout their



speed range, Hägglunds solutions on your tensioners keep things reliably taut. And in the unlikely event of a drive line failure, a safety brake without intermediate gearing minimizes your risk of dropping the load.

#### **ANCHOR HANDLING WINCHES**

Offering you full torque from zero to full speed, compact Hägglunds solutions have a high power density that makes simple work of hauling anchor. Though no gearbox is needed with a Hägglunds drive, you can choose to install several Hägglunds motors through a ring gear. That gives you exceptional torque with a number of speed steps – and redundancy as well.

#### **OFFSHORE WINCHES**

When you work offshore, the remoteness and harsh conditions make reliability more important than ever. Built for the most severe conditions above or below the surface, Hägglunds solutions combine robust engineering with space-saving simplicity. But they also give you performance you can count on, including the best tension control available for winches.

#### **FISHING**

With their low moment of inertia and exceptional control, Hägglunds solutions let you trawl more efficiently – eliminating snags and lost trawls. The motor, brakes and valves mount right on the drum, which gives you not only more space and less noise on board, but also free-wheeling ability for shooting out the net. Select the maximum speed range when starting the winch to pay in, then switch over to low speed for maximum line pull when lifting your catch.

#### **CRANE WINCHES**

Keeping business going at sea means keeping cargo lifts and other crane operations in motion. Hägglunds solutions help your cranes stay in service, providing immediate overload protection if a hook or load jams. With their high starting efficiency and low moment of inertia, the drives are quick to respond. And the same is true for their class-approved brakes, which keep your load from dropping in a drive line failure. ●

# Made for marine use

**We provide not just Hägglunds hydraulic motors, but complete drive systems with accessories, power units and even online condition monitoring.**



## **HÄGGLUNDS VIKING THE MODERN ORIGINAL**

Designed for winches over 50 years ago, the Hägglunds Viking has been continuously developed. Elegant in its simplicity, with a rotating casing that allows a direct-mounted band brake, it gives you up to 98 percent starting efficiency and the best winch tension control – which is why it's still the marine standard today.



## **HÄGGLUNDS ATOM TINY BUT POWERFUL**

Revamped and renamed, the Hägglunds Atom is a powerhouse in miniature. The Hägglunds Atom takes over from the existing Hägglunds CAb – supplying not only more revolutions per minute, but also far more power than motors of similar size. The result is a tiny, power-dense package ideal for marine applications.



## **HÄGGLUNDS CA COMPACT CONTINUITY**

Tried and true for over 30 years, the Hägglunds CA is power-dense and fit for continuous use. Possible to mount with a multi-disc brake on the opposing side or on the rear of the motor, it has a modular construction and a flexible range of valves that enable a space-saving build with just the functions you need.



## **HÄGGLUNDS CB POWERFUL VERSATILITY**

From winch drives and cutter head drives to the slewing drives of pods, the Hägglunds CB opens up new possibilities with its through-hole and many mounting possibilities. Available in a wide range of sizes and displacements, it gives you high flexibility and quick response in heavy-duty applications.





## HÄGGLUNDS CBM UNMATCHED POWER DENSITY

Our development of Hägglunds solutions never stops. The Hägglunds CBM packs 50 percent more torque into a motor that's smaller and up to 50 percent lighter than its predecessor. That creates a truly compact powerhouse – offering you not only the world's highest available torque, but also world's highest torque-to-weight ratio.



## HÄGGLUNDS CBP HIGH-SPEED EFFICIENCY

Featuring a through-hole with splines, the Hägglunds CBP runs at higher speeds with increased efficiency, which brings you new drive solution opportunities. Despite its small size and low weight, it can operate continuously with immense power, for example in applications such as thrusters and pods.

## MARINE ACCESSORIES

- Brakes
- Valves
- Speed encoders
- Torque arms
- Bearing brackets
- Stainless steel wear rings
- Protective covers
- Marine painting



## MARINE CERTIFICATIONS

We can deliver Hägglunds drives with certifications from major marine classification societies, including ABS and DNV-GL.

## ENVIRONMENTALLY SOUND HYDRAULIC FLUIDS

All Hägglunds motors can be operated with Environmentally Acceptable Lubricants (EAL).



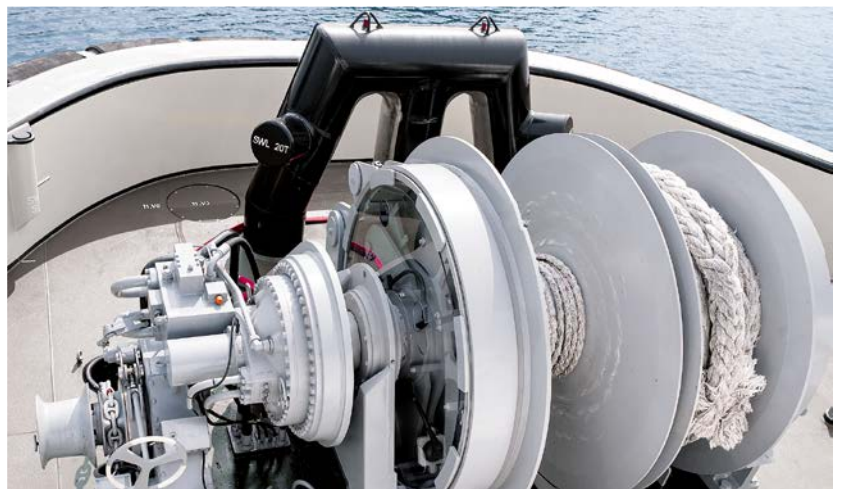




Courtesy by Royal IHC



Designed, engineered and manufactured by ACE Winches





# Right where you need us to be

**Your productivity is our constant focus. That's why we're ready at your side – on site, around the world and online through cutting-edge connectivity. What you get from our experts and specialist knowledge isn't just support. It's partnership.**

No matter where you find yourself, you'll also find Bosch Rexroth. Our global organization is as active locally as it is worldwide, ready to assist with you with engineering, installing, optimizing or upgrading. Around the clock, our experts deliver the services and tailored support to keep you and your equipment going strong.

## **RESPONSIBILITY IN EVERY DETAIL**

We see that your drive solution works as a whole, which means caring for even its smallest aspects. You get everything you need from a single supplier, from original Hägglunds spare parts to in-depth application knowledge. Each of our Hägglunds products and solutions is fully tested in our own hydraulic laboratory in Sweden.

## **MOVING YOU FORWARD**

Your needs change over time, but we remain dedicated to meeting them. Many of our customers have worked with us for decades, and we've kept them up to date with smart upgrade packages as our modular solutions develop. We'll do the same for you.

## **CONNECTING AT THE FOREFRONT**

Today you'll find Hägglunds expertise more accessible than ever, thanks to our Hägglunds Inside Intelligence connectivity solutions. Through Hägglunds CMp, for example, our experts can monitor and keep you aware of your drive system's health – and provide you with valuable insights to improve its use. ●





## **HÄGGLUNDS**

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Subject to revision

Hägglands is a brand of Rexroth, a leading global supplier of drive and control technologies. Hägglands solutions enrich a comprehensive Rexroth portfolio.

