

“The alternative from Bosch Rexroth was the one that let us resume production most quickly. We’ve had a great cooperation with them!”

Björn Vedin, CEO Domsjö Fabriker



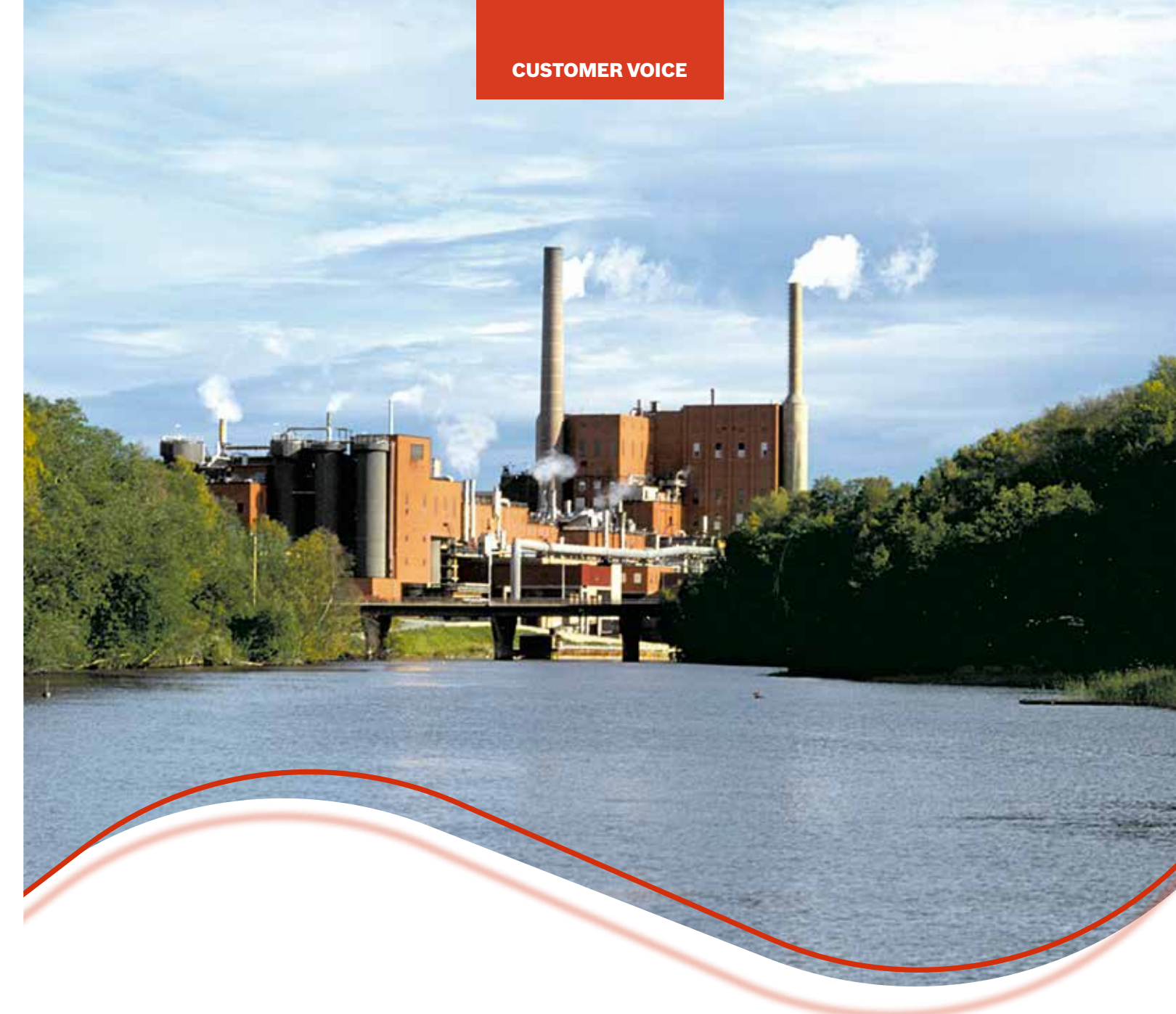
Domsjö Fabriker

Together with its owner and customers, Domsjö Fabriker is driving developments towards a sustainable bioeconomy that looks after our forests as the unique and renewable resource they are. Domsjö refines timber raw products to primarily cellulose, bioethanol and lignin. The company, whose production facilities are located just outside central Örnsköldsvik on the “High Coast of Sweden”, has 350 employees in Sweden and 15 in the Baltic region. Annual turnover amounts to SEK 2.3 billion. Domsjö Fabriker is part of the Aditya Birla Group.



“We do everything to find a technical solution that suits the customer. In this case, we created an entirely new mounting for the torque arm within a short time, which fitted both existing equipment and our motor,” says Andreas Söderlund, sales manager for Hägglunds solutions. Here he discusses with Domsjö Fabriker’s maintenance manager Jan Nordlander.

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



Success story Aditya Birla, Domsjö Fabriker

Flexible solution leads to a quick start-up



Rapid refurbishment of line for cellulose washer thanks to good cooperation and strong commitment

Domsjö Fabriker experienced two dramatic weeks when a gearbox for a drum displacement washer for cellulose in the factory’s bleaching plant broke down. The job of the DD washer is to ensure, through washing and bleaching, that all pulp has the right properties prior to production. Thanks to a great team effort, production could resume quicker than feared.

Domsjö Fabriker is a Swedish company with roots going back to 1903. Owned by Indian Aditya Birla, it primarily produces specialty cellulose for the textile industry. Roughly half of the factory’s production goes to its owner, while the other half goes to a host of different customers in areas ranging from car tires to medicine production.

“We have a very good product,” says factory CEO Björn Vedin. “If we’re not the actual leaders, we certainly come close. Our ambition is to expand within our main segment, but also within other products, such as lignin and bioethanol. Today we have a good market and a high demand for our products following the Covid pandemic, which, of course, made the breakdown extra unfortunate.”

The breakdown occurred at a critical position, since all cellulose in the factory is bleached and washed via this production line.

“The situation affected our ability to supply products to all customers, so getting the factory up and running meant everything, of course,” says Jan Nordlander, maintenance manager for the fiber line. “In dialog with the machine builder,

we were working with several proposed solutions in parallel to find the quickest way forward. That way was a hydraulic drive from Hägglunds, since it required the fewest modifications to existing mechanical equipment and buildings.”

From the initial contact with Bosch Rexroth regarding a new motor, it took approximately one and a half weeks until start-up. In a project requiring the modification of existing equipment, that was fast work.

“The alternative from Bosch Rexroth was the one that let us resume production most quickly. We’ve had a great cooperation with them! We were at a total standstill for about two weeks. If we had chosen a different solution, the stoppage would have been considerably longer,” says CEO Björn Vedin.

PRODUCTION START BEFORE THE ORDER WAS RECEIVED

Part of the reason for the record-quick delivery was that Bosch Rexroth in Mellansel, Sweden, began producing the Hägglunds motor before an order was even in place.



Drum displacement washer

BRIEF FACTS

DD washer with drum size:
4,000 x 6,000 mm
Nominal torque:
430,000 – 500,000 Nm
Nominal rotation speed:
0.8 – 1 RPM
Hägglunds clamp coupling motor:
CBM 3000 2400

“We were quickly alerted to what had happened,” says Thomas Lundberg, sales manager for Hägglunds solutions at Bosch Rexroth. “In order to help them as rapidly as possible, we began production immediately. These CBM motors are coveted in the market, so we dared to take the risk in order to help a customer.”

Lundberg continues, “When something breaks down, the first thing you might think to do is replace the broken-down component with a new identical component. In this case, I think the fact that we and the machine builder acted so quickly is what made things go in our favor. Hopefully, combined with the knowledge that

our solutions provide great additional value over time. Our motors are very reliable, so they get used in places where stoppages must not occur. If our customers need help, we need to be able to offer it very quickly. That was a competitive advantage for us in this situation.”

COLLABORATION THE GREATEST SUCCESS FACTOR

Unanimously, Domsjö Fabriker’s representatives point to the collaboration and commitment in solving the problem as the greatest success factor. In projects where modifications are required, dialog is especially important.

“We’re satisfied with the Hägglunds systems where we have them. They’ve worked really well for us!”

Jan Nordlander, Maintenance Manager Domsjö Fabriker

“We couldn’t have pulled off this modification at a distance,” says maintenance manager Jan Nordlander. “It required contractors coming here and adapting the solution to the existing site and size. The machine builder, Andritz, contributed design documentation, and once we had chosen a hydraulic solution in dialog with them, Hägglunds was brought in. The Hägglunds designer sat down to draw on Thursday night. On Friday morning, the documentation for all production was ready. Local contractors then modified and produced the torque arm and shaft pivot. We got these on Saturday morning, fitted them the same day, and on Sunday we were up and running!”

“The reason this went so incredibly quickly is first and foremost our own organization,” adds CEO Björn Vedin, “which got going the same day and then worked day and night to bring this about, along with Andritz and Bosch Rexroth. The proximity to Bosch Rexroth made things easier of course, and there were also many other companies that chipped in to get this done for Domsjö Fabriker. I am extremely proud that this could happen.”

EXTENDED SERVICE AGREEMENT AND FLEXIBLE MAINTENANCE

Now the equipment is operated in a new way – a good way, according to maintenance manager Jan Nordlander. The washing is running well, just as it did before, and now an extended Hägglunds service agreement covers its operation.

“The start-up went very smoothly and we got up to full production straight away,” says Nordlander. “We’ve had a Hägglunds service agreement for a while, and now we’ve added

more pieces of equipment to it. The Hägglunds people know our operations best and help us to manage spare parts and the planning of maintenance.”

In addition to the DD washer, two wash presses in the plant are run with Hägglunds hydraulic systems.

“We’re satisfied with the Hägglunds systems where we have them. They’ve worked really well for us! The best part is that this is an operating solution that requires little maintenance,” Nordlander concludes. ●

SUMMARY

This case study of a breakdown shows how decisive flexibility and commitment are when it comes to achieving the earliest possible start-up. Thanks to their high power density and small size, Hägglunds hydraulic drive systems enable integration into existing machine structures, without extensive modifications. The example also shows the advantages of a reliable, long-term solution where the supplier offers preventive services and local spare part management. ●