

Bühler's Portalink: **Maximizing Unloading Capacity**

Kushiro Port, Hokkaido, Japan



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Bühler's Portalink has been installed in the Japanese port of Kushiro for the past five years, transforming the capacity of this vital facility by unloading more materials than any other unloader in Japan. Located on the island of Hokkaido, the strategically important state-owned port has been in operation since the late 19th century and was selected as an international bulk strategic port for grains in 2011.

Hokkaido's Role in Japan's Food Supply

The Hokkaido region plays a central role in Japan's food supply, with Kushiro Port serving as a crucial logistics hub. Around 50% of Japan's milk is produced in Hokkaido, and much of the material unloaded at Kushiro is used in feed production for the region's livestock and dairy farmers.

Kushiro Port: A Strategic Grain Hub

Kushiro Port, selected as an international bulk strategic port for grains in 2011, was developed in the waterfront industrial area of the West Port District No. 2 Wharf, with the Kushiro Port International Logistics Terminal as its center. It supports the local community and the entire eastern Hokkaido region, Japan's food supply base, by serving as an important logistics hub port.

Commitment to Stable Operations

Kushiro-Nishiko-Kaihatsufuto K.K., commissioned by Kushiro City, the port administrator, maintains and manages port facilities like sheds, open yards, and loading and unloading machinery. Certified as a designated wharf operator in 2015, the company has been investing in equipment such as unloaders and conveyor belts since 2016. They have managed and operated the international logistics terminal as a private wharf operator since 2019. “The corn and other grain raw materials that we unload using our own unloading machinery are used as feed to supply dairy farmers in eastern Hokkaido, so we are making stable operations our number one priority,” explains Mutsuo Tsujioka, head of business department at Kushiro-Nishiko-Kaihatsufuto.



“ Since 2019, we have been in charge of the management and operation of an international logistics terminal as a private wharf operator. The corn and other grain raw materials that we unload using our own unloading machinery are used as feed to supply dairy farmers in eastern Hokkaido, so we are making stable operations our number one priority. ”

Mutsuo Tsujioka

Head of Business Department
Kushiro-Nishiko-Kaihatsufuto K.K



Portalink Installation

Doubling Capacity Despite Winter Challenges

Bühler's First State-Owned Ship Unloader Installation in Japan

In 2019 the decision was taken to boost the port's capacity, with Bühler commissioned to install its market-leading Portalink. Although it wasn't the first ship unloader Bühler has installed in Japan, it was the first to be provided to a state-owned customer – making it a hugely significant project.

Mr. Tsujioka explains: "An unloader with an unloading capacity of 800 tons per hour, double the previous capacity, was installed at the pier, and since the facility began operation, most of the corn has been unloaded using the new unloader."

Challenging Installation in Harsh Conditions

The Portalink's installation proved to be a test for the ingenuity of Bühler's engineers. Not only is assembly of an unloader like the Portalink impossible on the pier itself, the commissioning also took place in the depths of winter. This meant that workers were regularly having to contend with temperatures as low as minus 20 degrees.

“As a bulk grain handling machine, Bühler's Portalink has the unloading capacity to handle large ships, which improves work efficiency and makes it possible to receive large volumes of grain.

In addition, the transshipment function makes it possible to transport grains to other ports using Kushiro Port as a hub.”

Satoshi Kishimoto

in charge of Bühler unloader
Kushiro-Nishiko-Kaihatsufuto K.K.





Innovative Pre-Assembly and Logistics

The solution was to pre-assemble the unloader into large transportable units in China and deliver it by ship to Kushiro, where it was then placed directly onto the pier for final assembly. These logistical challenges were more than worth it, however, with the Portalink increasing the facility's total unloading capacity to 1,600 tons per hour. In combination with a new pier this means that fully loaded ships can now enter the port for the first time, instead of having to first reduce their loads as was previously the case. The Portalink also has a loading capacity of 800 tons per hour, which means that grains can be transported to other ports using Kushiro as a hub.

High Capacity and Advanced Features

The fully mobile Portalink's high capacity, outstanding chain conveyor technology and low energy use made it a highly attractive option. But it was the extra features tailored to Kushiro's specific needs – along with Bühler's reputation for exemplary after-sales service – that made it the perfect choice. An additional jib crane allows operators to lift 15-ton bulldozers directly into a ship's hatches without any pause in unloading, while the active seismic zones in the region mean it has also been fitted with highly effective earthquake shock absorbers.

Bühler's Portalink Project Data

International Cooperation, Local Expert Support

The project was a triumph of international cooperation for a client with very specific needs, involving Switzerland, Germany, and Japan, as well as the invaluable contribution of the factory staff in China. Despite the significant logistical and environmental challenges, the installation was executed flawlessly and the Portalink at Kushiro continues to unload more materials than any other unloader in Japan.

All of this has provided a major boost to both Bühler's standing in Japan and its strong partnership with Kushiro-Nishiko-Kaihatsufuto K.K. The client remains satisfied with the Portalink's performance – even in such a tough environment – as well as the after-sales service from Bühler's staff in the Hokkaido region.



Facts

- Portalink 800-27RK
 - Unloading capacity: 800 t/h
 - Slewing jib crane for 15 ton bulldozers
 - Vessel size: up to 80.000 DWT
 - Products conveyed: Corn, other grains
- Transit loading capacity: 800t/h
- No.1 unloading amount per machine in Japan



“The unloader has been successfully delivered, has operated smoothly, and continues to meet the requirements of the customer. With these facts, I can say that our unloaders have established a strong reputation in the Japanese market, and Bühler is recognized as being able to provide the most efficient and advanced unloaders to meet the current and future demands of our customers.

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Kenji Yamauchi
Manager GQ
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