



Swissmill is renewing its common wheat mills. After 36 years in operation, the tried-and-true roller mills of mills A and B are being replaced with Diorit four-roller mills from Bühler. The upgrade will be carried out during ongoing production and is scheduled to be completed by summer 2022.

**History is repeating itself.** In 1985, Coop Mühle Zürich, as it was known at the time, put two complete, new Bühler mills into operation at its location in Sihlquai, Zürich. Work has been ongoing since fall 2021 to replace these “old” roller mills of the MDDK generation with the first generation of the new roller mills MDDY. “The seasoned roller mills will be replaced to bring product safety, hygiene and occupational safety in line with the new state of the art,” explains Antoine Bolay, Production and Technology Manager at Swissmill. Bolay and his team are collaborating with experts at Bühler AG to develop a detailed plan for the gradual modernization of the wheat mills A and B. The project is expected to be completed by mid-2022.

### Renewal during ongoing production

The renewal of the two wheat mills is being carried out under strenuous conditions. The space available in the mill building at Swissmill is limited, and an expansion is not possible. Not only that, but there are also no alternative facilities and production interruptions must thus be kept to a minimum. “This means that we have to renew the mills during ongoing production and on a step-by-step basis,” says Simon Künzle, Technology Manager at Swissmill, about the challenging starting point. “Production, mechanics, electrics and automation must be in perfect harmony for this to work.”



Handover of the first Diorit to Antoine Bolay and Simon Künzle from Swissmill

Prior to the most important step for modernizing the two mills - namely exchanging the roller mills - the 72 drives of both mills were upgraded with energy-efficient motors and specially designed motor suspensions. The new suspensions make it possible to replace defective motors in the shortest possible time and with a minimum of personnel. The electrical setup, such as the power distribution and supply lines, was also completely renewed. Once again, this was only possible thanks to the hard work of everyone involved.

During the last stage of the upgrade, the mill diagram was also adapted and aligned with present-day conditions. It may sound simple, but this entailed a lot of work for the Swissmill crew. Many meters of pipelines, cables and quite a few machines had to be routed and set up. The relief was palpable, when the mills were put back into operation and the first improvements could be felt.



### Restored, not overhauled

The short production standstill was also used to restore the 12 drawer-type plansifters MPAD. The 144 doors and 72 inlets were thoroughly restored and repaired during extensive manual work carried out together with Bühler and the Swissmill millers. “As it was not feasible for Swissmill to exchange these important machines due to both time and technology constraints, another solution had to be found to extend their lifetime,” explains Martin Ruckstuhl from Bühler sales.

### Diorit MDDY

The central step in the current renewal of mills A and B at Swissmill was the replacement of the 36-year-old roller mills MDDK with new Diorit. Both mills are being retrofitted one after the other in six stages during ongoing production. The reasons for choosing the new Bühler Diorit roller mills were manifold. For example, the existing mill layout, the proven and reliable technology and the new control system, which in connection with Mercury fulfills all requirements, were all factors that contributed to the choice. “It was also important to us that the machine would be produced and assembled in Switzerland,” says Simon Künzle.

### Swissmill

The origins of Swissmill can be traced back to the Zürich City Mill, established in 1843 and located in a row of several other mills directly on the Limmat River. It was the only mill to survive the economic difficulties at the turn of the century. In 1913, the mill cooperative of the Federation of Swiss Consumer Associations took over the city mill. This marked the beginning of the company's modern history. In 1969, the Federation of Swiss Consumer Associations became Coop Switzerland. In 1998, Coop merged the two companies Stadtmühle CMZ Zürich AG and Minoterie Coop Rivaz, in which the Coop Group held a majority stake, to form the Swissmill we know today. This gave rise to the biggest milling company in Switzerland. As a result, production was concentrated in

Zürich and ongoing investments were made in modernizing the plant. Swissmill operates various production lines (two for common wheat, one for durum wheat, one for special flours and one for corn, as well as a hulling mill that mainly covers the increasing demand for oat products) with a total capacity of 1000 t/24 h. It employs 90 people, mills over 220,000 tons of grain per year – 90% of which is Swiss grown – into over 100 types of flours and semolina. Common wheat for bread production accounts for the largest production percentage. Grain flakes, mixtures and specialties are also produced. Swissmill produces around one quarter of bread flour and around 40% of pasta flour in Switzerland.

## Diorit with advanced options

The Diorit four or eight-roller mill MDDY/MDDZ from Bühler has established itself on the global market as a cost-efficient yet high performing grinding solution thanks to its robust design, reliable grinding, and exemplary hygiene. In 2019, Bühler upgraded the Diorit with a focus on user-friendliness.

The machine control was completely overhauled and the user interface was graphically redesigned. It facilitates intuitive, simple monitoring and control of the roller mills. By virtue of the integrated web server, Diorit can also be operated remotely. The modern sensor technology ensures that the rollers always operate in the right position and at the right speed. As of 2022, Bühler offers advanced options for the Diorit, such as speed monitoring for the feed rollers, an insulated cover, bearing temperature monitoring, roller temperature and vibration monitoring, a completely stainless construction, and much more. The roller mill is manufactured in various Bühler factories to optimize supply chains and cover different market needs.



## Roller mill exchange underway

The replacement of the 36 MDDK with the modern Diorit roller mills is in full swing. Bühler has delivered two to four new roller mills on a weekly basis since the beginning of October 2021. The mill is ready for production again just 24 hours after it is switched off.

“The cooperation with Bühler is going very well, We are working hand in hand, and have so far been able to keep well within the ambitious schedule.”

— **Simon Künzle**  
Technology Manager at Swissmill

“It is great to be able to carry out and witness such an upgrade to the mills. The A mill was finished at the end of 2021 and the B mill should be upgraded by mid-2022.”

— **Antoine Bolay**  
Production and Technology Manager at Swissmill



**Old/new comparison:** The (still) old roller mills of the A mill on the right, the new Diorit MDDY of the B mill on the left

## Further steps planned

The modernization of the Swissmill mills does not end with the replacement of the roller mills in mill A and B.

“We will also be replacing the existing Sortex of the two cleaning lines with Sortex H, the latest generation of optical sorter,” reveals Simon Künzle. Restorations and expansions are also planned for the remaining mills. For Antoine Bolay, one thing is clear: “A mill is a structure that must constantly adapt to changing market conditions and the new possibilities technology affords.”

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