

From old distorting bins to modern seed processing plant

Major UK-based seed processor, KWS UK, employs BM Silo as a trusted partner to provide bins for one of their processing plants.

Brief

When KWS UK took over a local company more than 20 years ago, they also inherited much of the old equipment with the purchase. Over time, the intake system, cleaners, and packing facility were gradually replaced.

One year ago, they finally reached the last phase of the modernization project – replacing the nest of nine seed bins, which held the seed after the cleaner and before the packer.

This seed plant processes wheat, barley, oats, and rape from the client's (KWS UK) own breeding program.

KWS UK is an international and important player in the plant breeding and seed cleaning sector, with core business in three product segments: maize, sugar beet and cereals.

Need

- ✓ **Provide exactly nine bins with a storage capacity of 28.5 t each**
- ✓ **Using only the existent space**
- ✓ **Provide a completely self-cleaning solution**
- ✓ **Access to the bins from above, below and from one side**
- ✓ **Building on-site and only moving into the final position from one side only with limited access**

100%
bespoke project

The challenge

Tackling distorting bins into a modern seed processing plant that runs 24/7

The nine silos that needed to be replaced were initially designed to store grass seeds and were now unsuitable for the new, heavier raw material.

The old bins were a mismatched collection rather than a set and where distorting under the regular filling and emptying regime, and not all bins could hold the volume desired by the client, i.e., one batch. The bins provided by BM Silo all hold a minimum of 28.5 t. each, as this equates to a 30 t batch less the 5% losses sustained during cleaning.

The space for the new bins did not leave much room for standard solutions, because of the area available and the access solutions required by the client had to fit in the area of the old silos, specifically, 8.94 x 8.94 m for the new nine bins. Additionally, the client needed access to the silos from above, below, also they could only be built from one side.



Above all, the customer needed the silos to be completely self-cleaning with no ledges whatsoever to avoid contamination. Therefore, it was crucial to choose bins without inner stiffeners, ensure full discharge, and prevent residues from contaminating future batches.

Ensuring safe and clean storage is the guarantee for seeds of the highest quality, which is a major factor for the higher quality seed.

The solution

“Tetris”-style installation

BM Silo was pleased to receive the project having extended experience with such products and abilities and understanding the situation and its requirements. To maximise the space, the bins had to be a bespoke 2.9 m x 2.9m, and because of the access could be built and moved into the

final position like a Tetris-inspired installation.

BM Silo had the necessary experience to provide all elements asked by the client, the challenge being that these elements had never been put together before. This required hours of construction and good internal collaboration as well as with the dealer.

In the end, BM Silo delivered a completely customized project with nine C-290 asymmetrical silos with 60° asymmetrical hopper bottoms. Also, the accessories such as the guardrail and handrail were specially manufactured.

From the client’s point of view, one of the key successes of this project was the planning of the bins to fit onto a bespoke entablature, the fact that they could be assembled from one side only and that the finished bin tops were ready for personal access.

“The only bin provider company that could overcome all our client requests, at a reasonable price and delivery time.”

Robin Mumby, BM Silo dealer

Conclusion

Fulfilling the task with no compromises

One year after implementation, the bins have proved to do their job flawlessly. Each cleans out perfectly. Each holds the same batch size making production planning much easier and most importantly the bins are safe.





KEY SUCCESSES


 **0%**
residues left in the silo

 **100%**
bespoked bins for limited space

 **100%**
succesful emptying

 universality - any seed lot can be accessed

 all bins hold the same amount of seed

 easy planning and safe bins

Delivery and budgets achieved!