Efficient Solutions for Small-Scale Pellet Manufacturing

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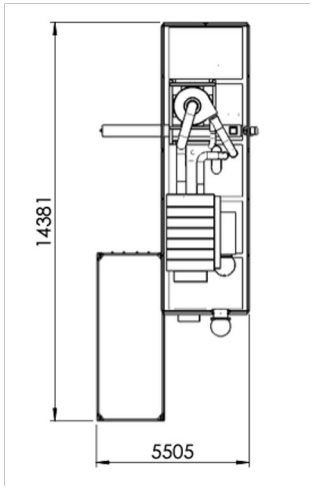
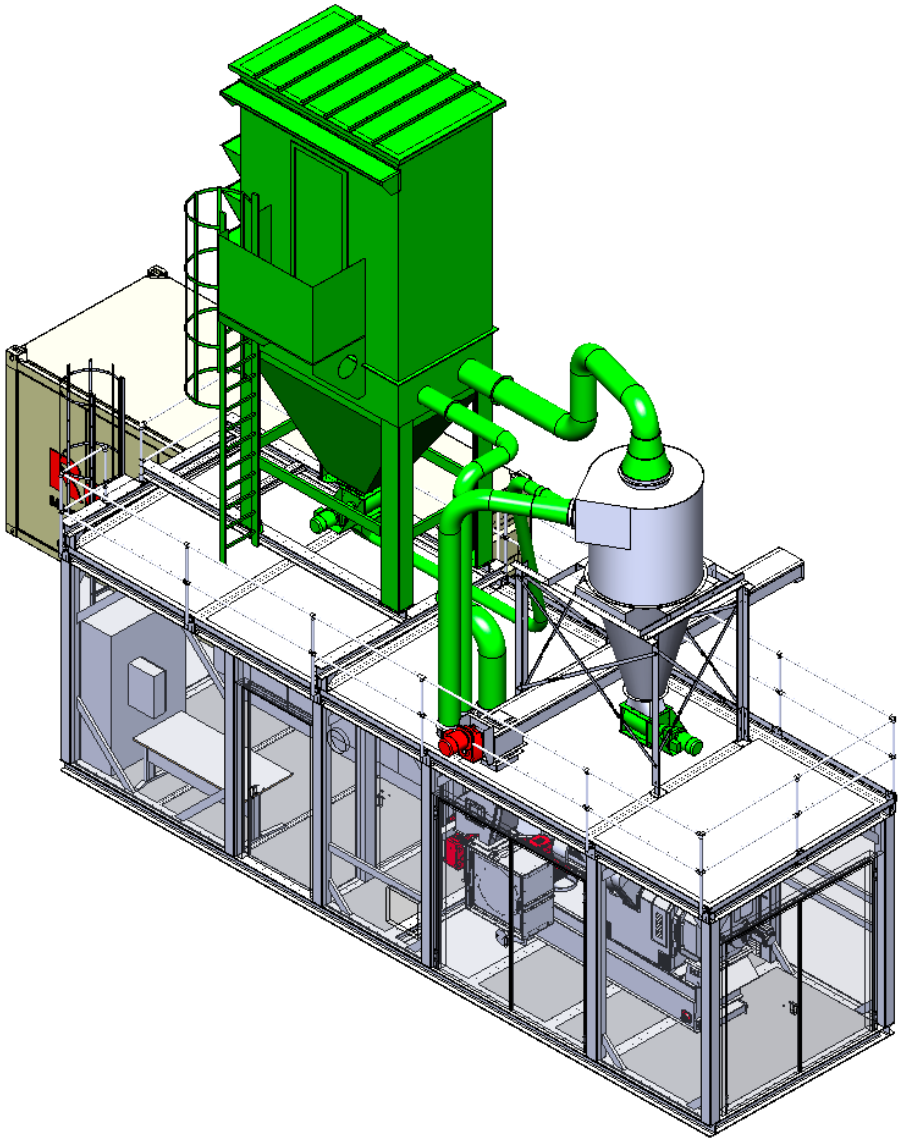
Modular Pellet Production Plant Type 2.0

Our modular pellet production plants provide an efficient and reliable solution for converting wood industry residues into high-quality pellets. Designed specifically for small-scale production, these plants enable sawmills, planing mills, and other woodworking industries to transform their by-products into valuable pellet.

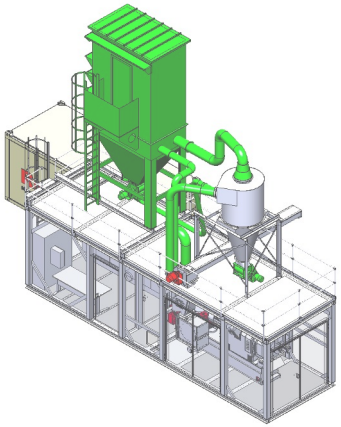
The modular concept allows flexible configurations depending on the type and condition of raw materials, such as dry planing chips, block chips, fresh sawdust, or wood chips. By integrating additional equipment, the system can also be adapted for the adding value to agricultural by-products and production residues, including the production of granular fertilizers or feed.

This brochure presents schematic examples of possible plant configurations, illustrating different process layouts for various raw materials and production needs. It also demonstrates alternative solutions for handling and packaging finished pellets, including bulk loading and bagging options.





C1 pellet plant base module RPB 2.0



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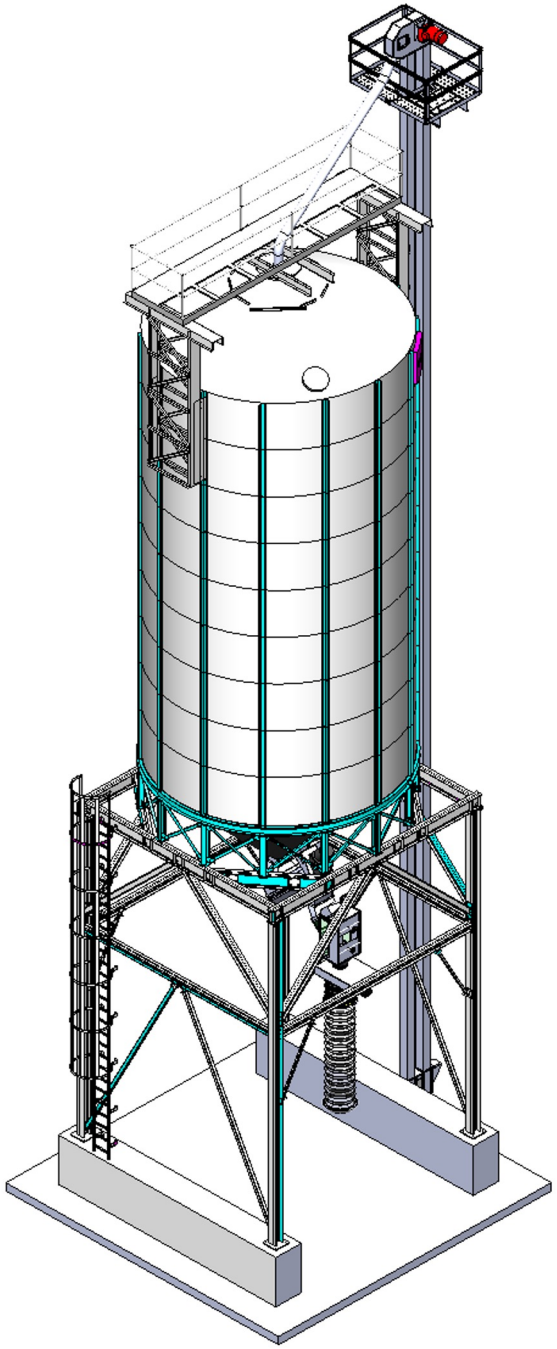
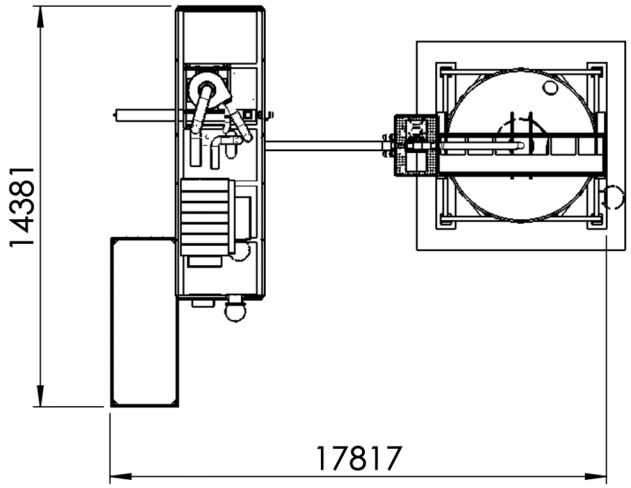
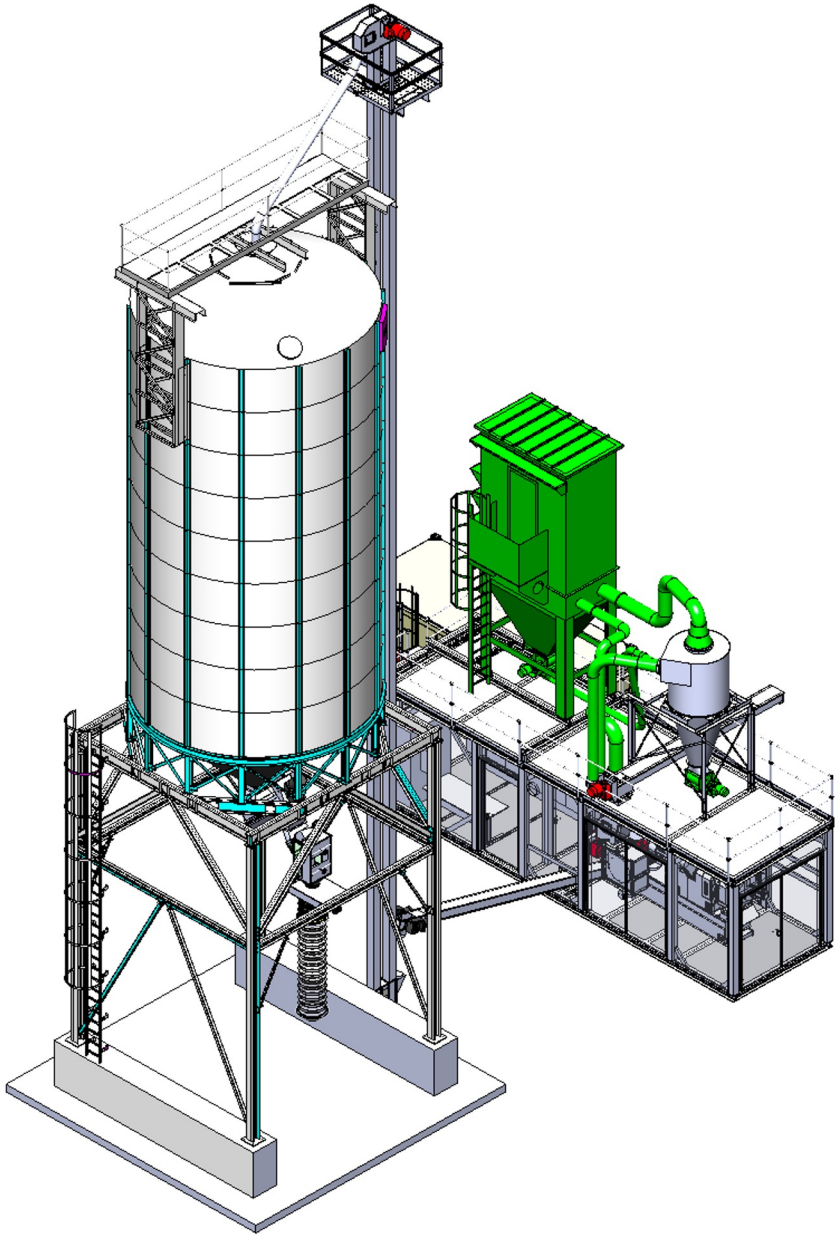
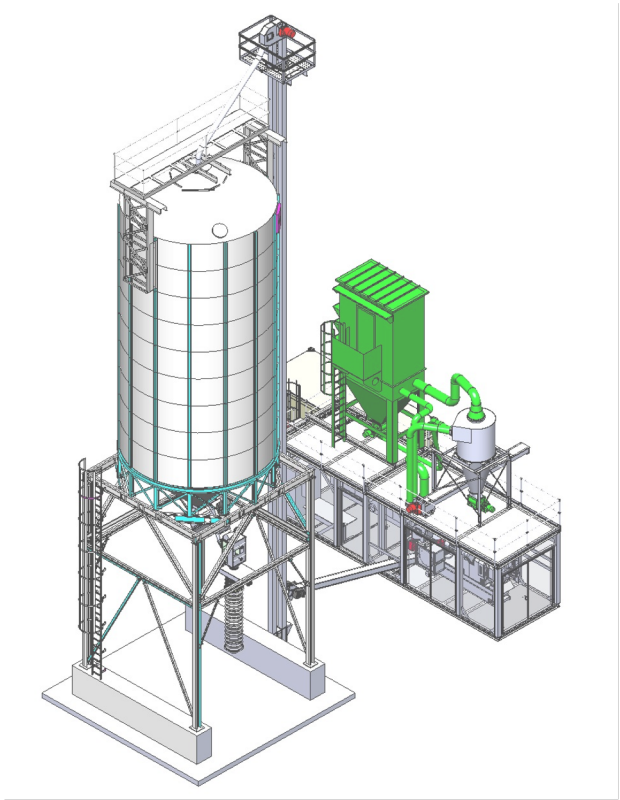


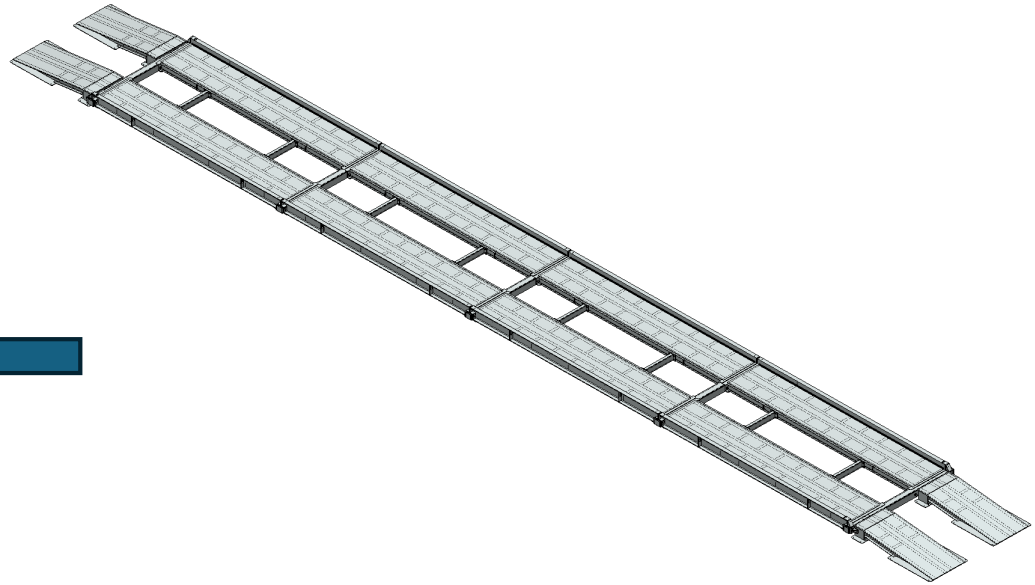
+ pellet storage silo and truck loading station



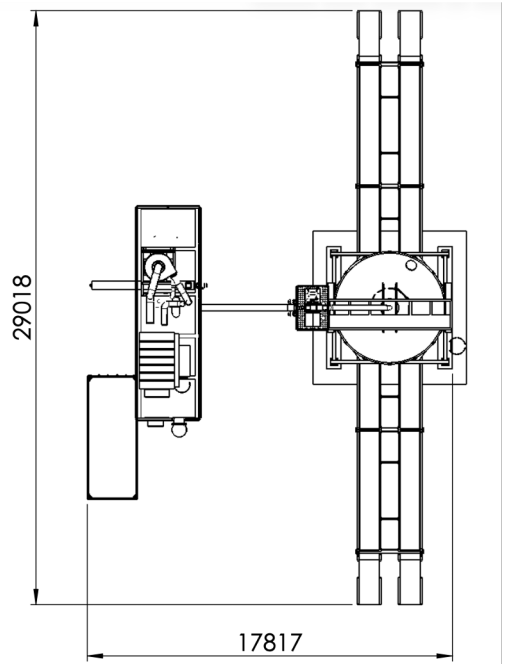


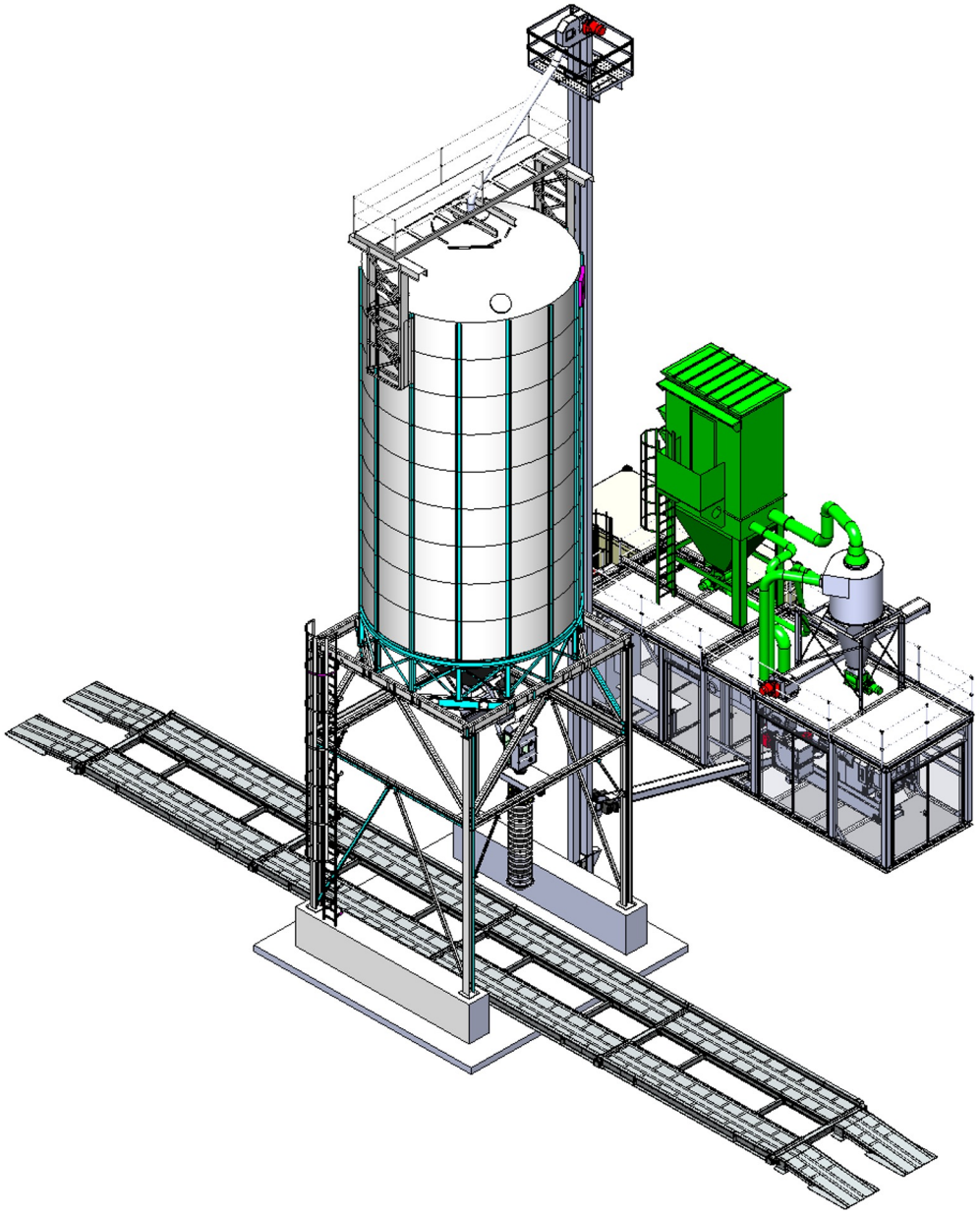
C2 C1 + pellet storage and truck loading station



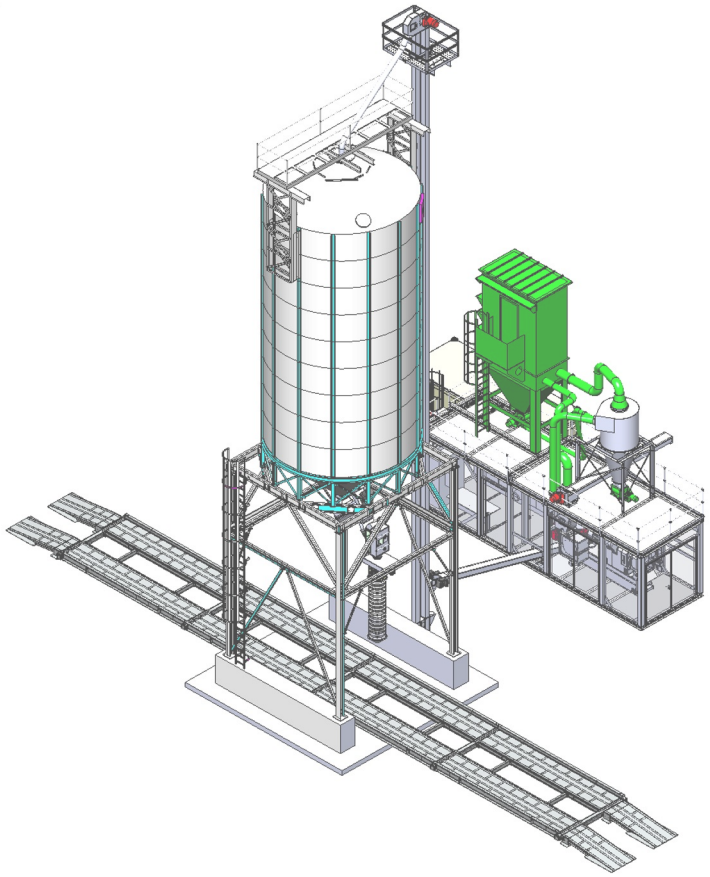


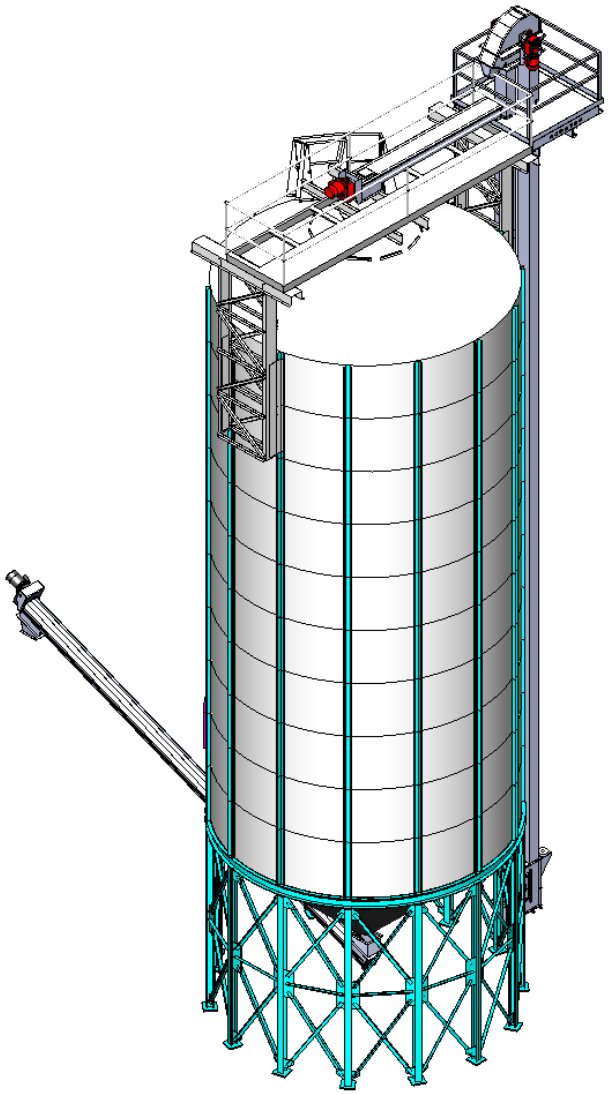
truck weighing bridge



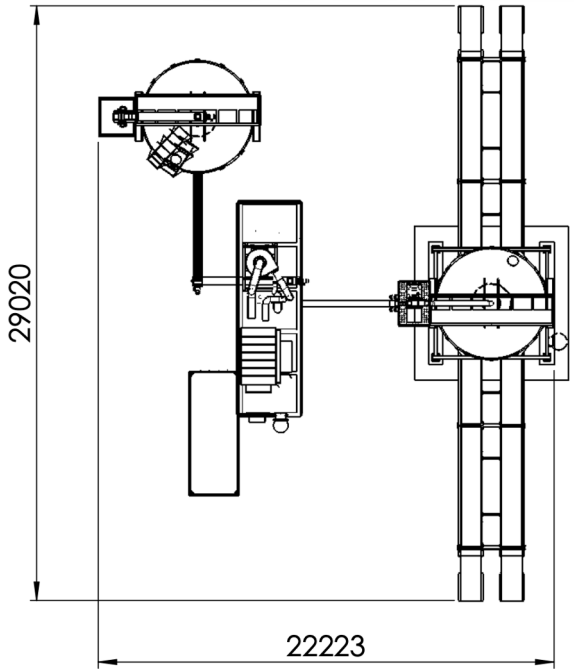


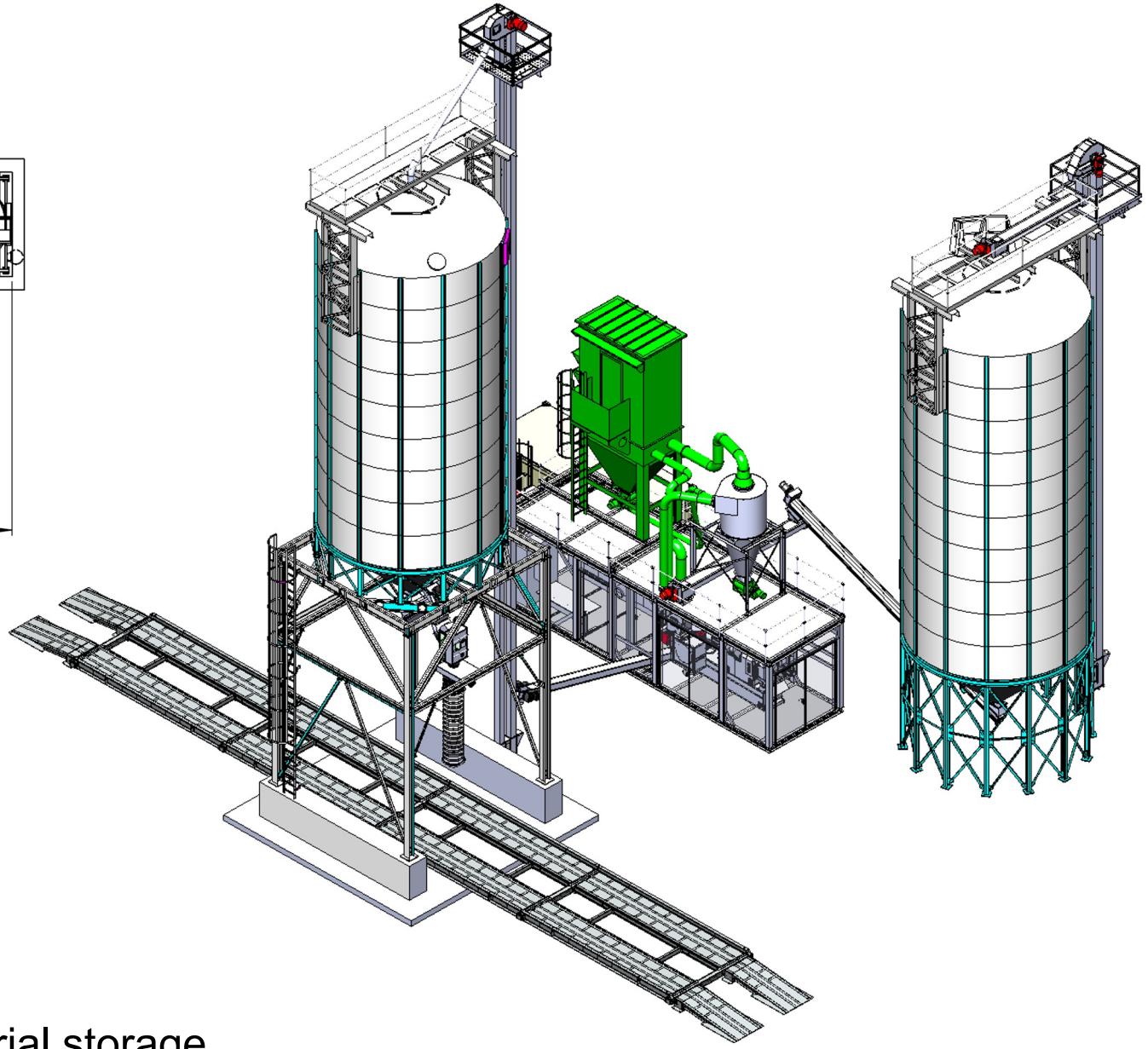
C3 C2 + truck weighing bridge



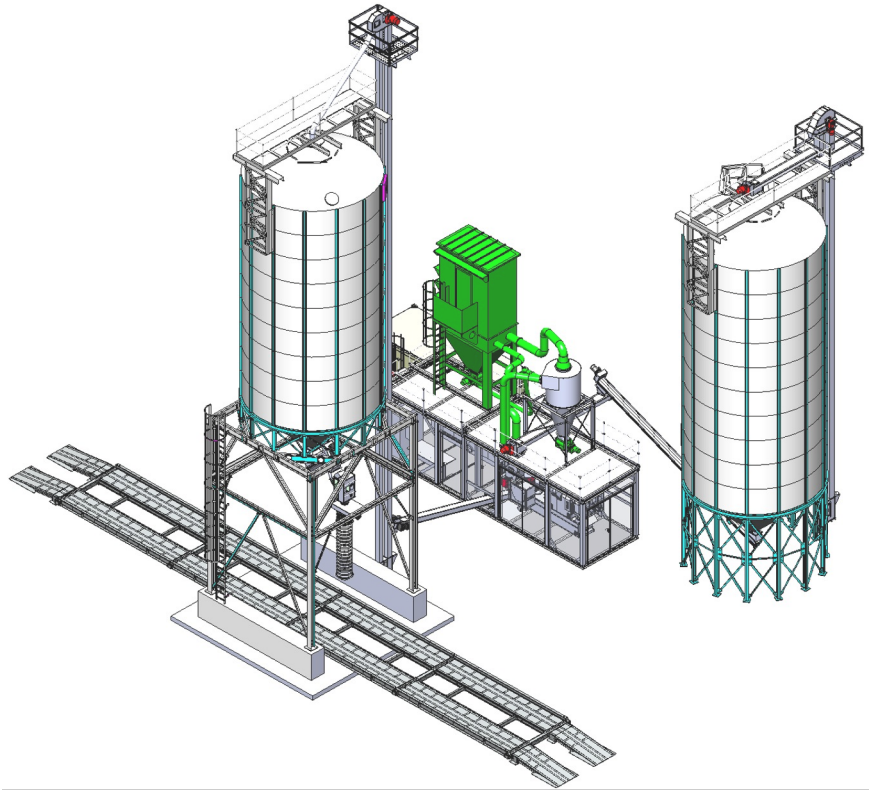


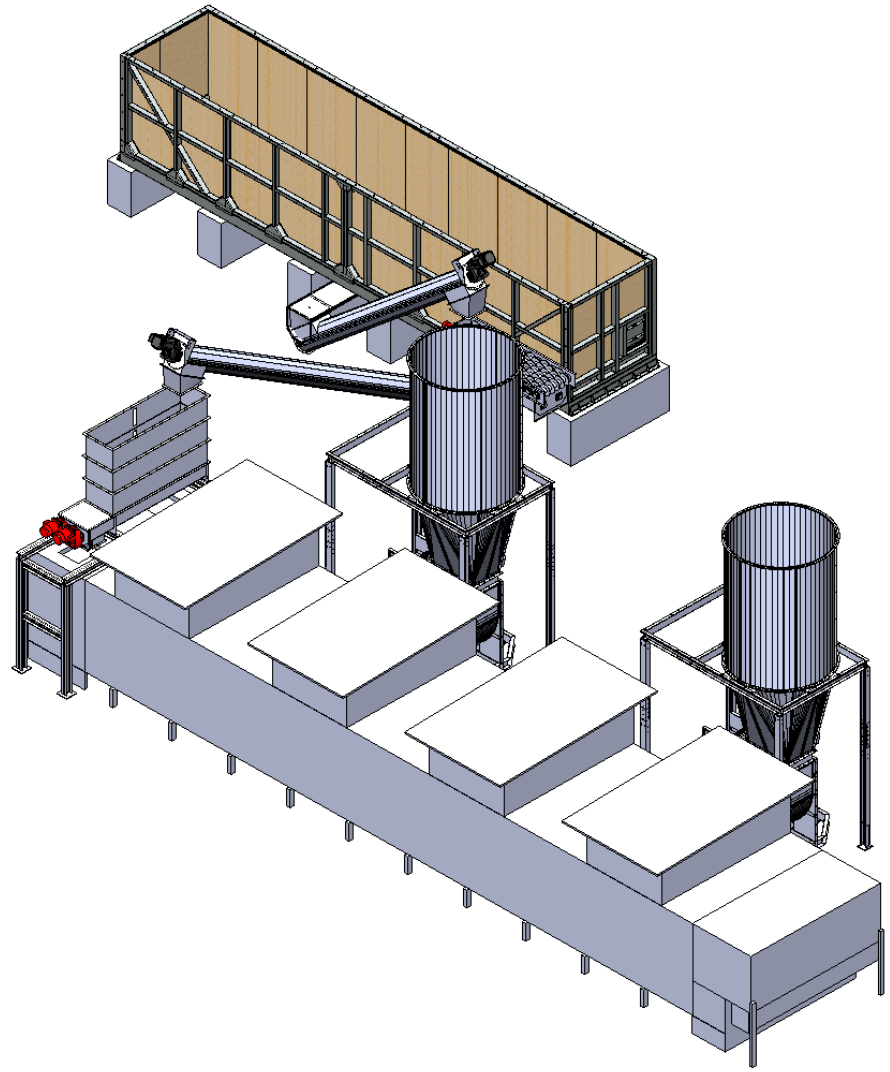
dry raw material storage



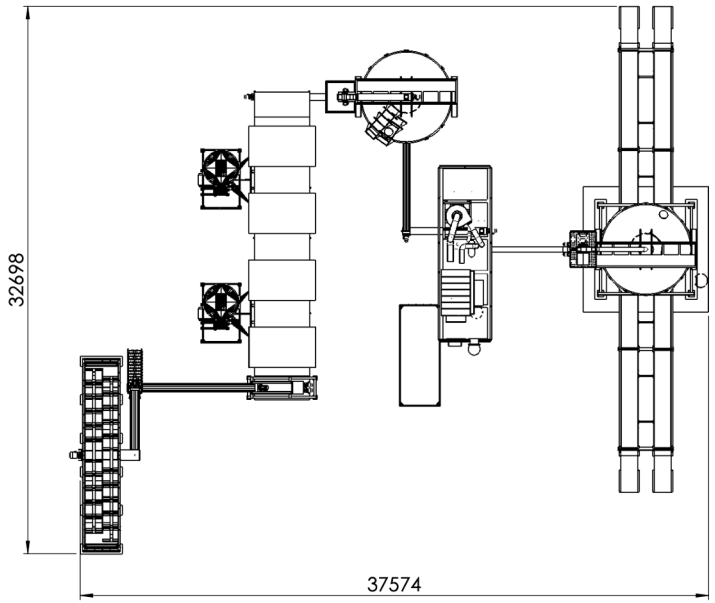


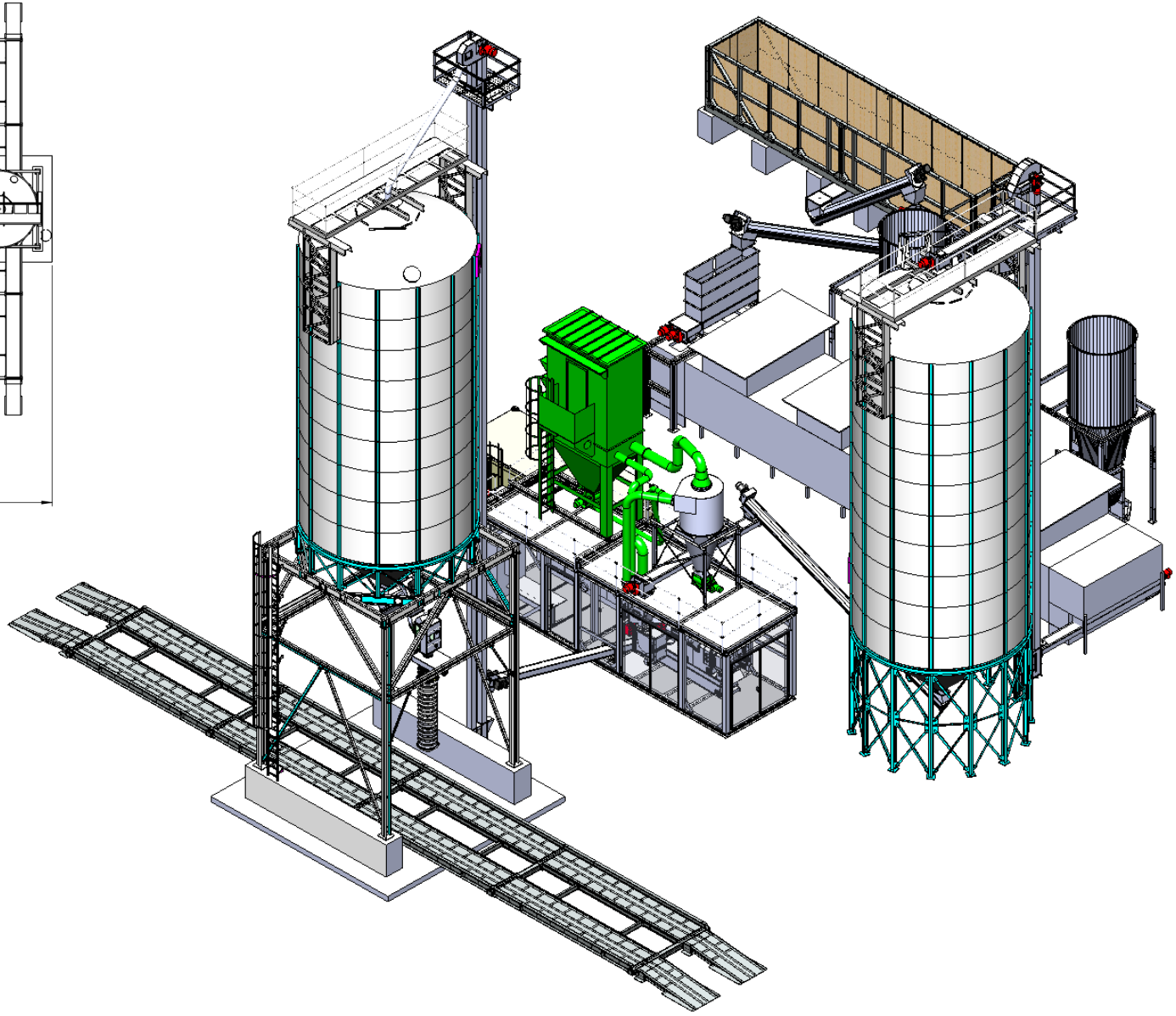
C4 C3 + dry raw material storage



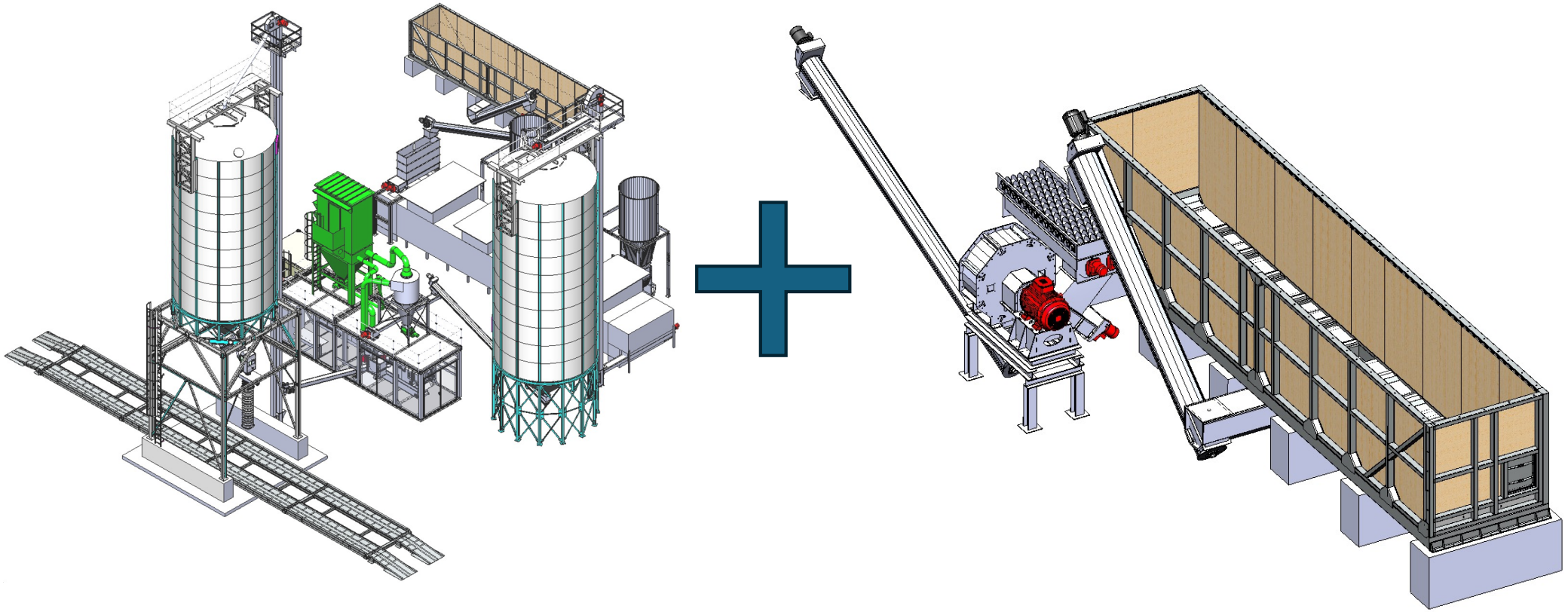


+ wet material receiving and drying unit: wet raw material receiving/feeding storage, disc screener, metal detector, buffer bin and modular belt dryer

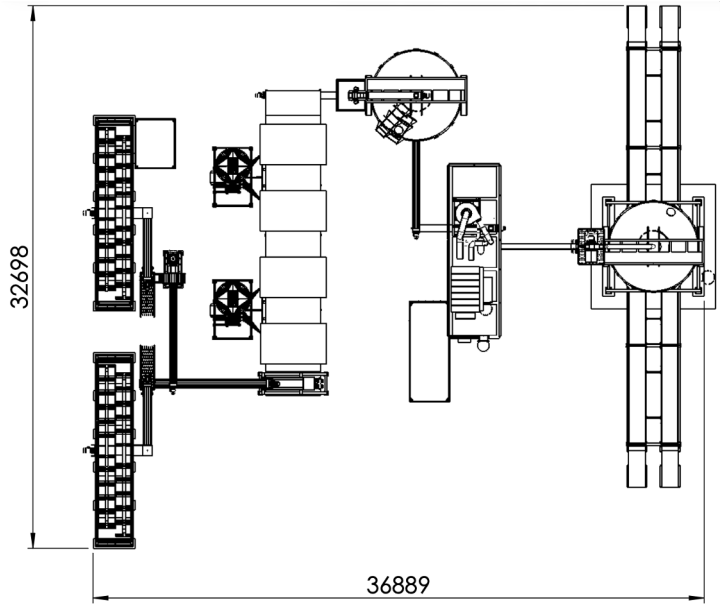


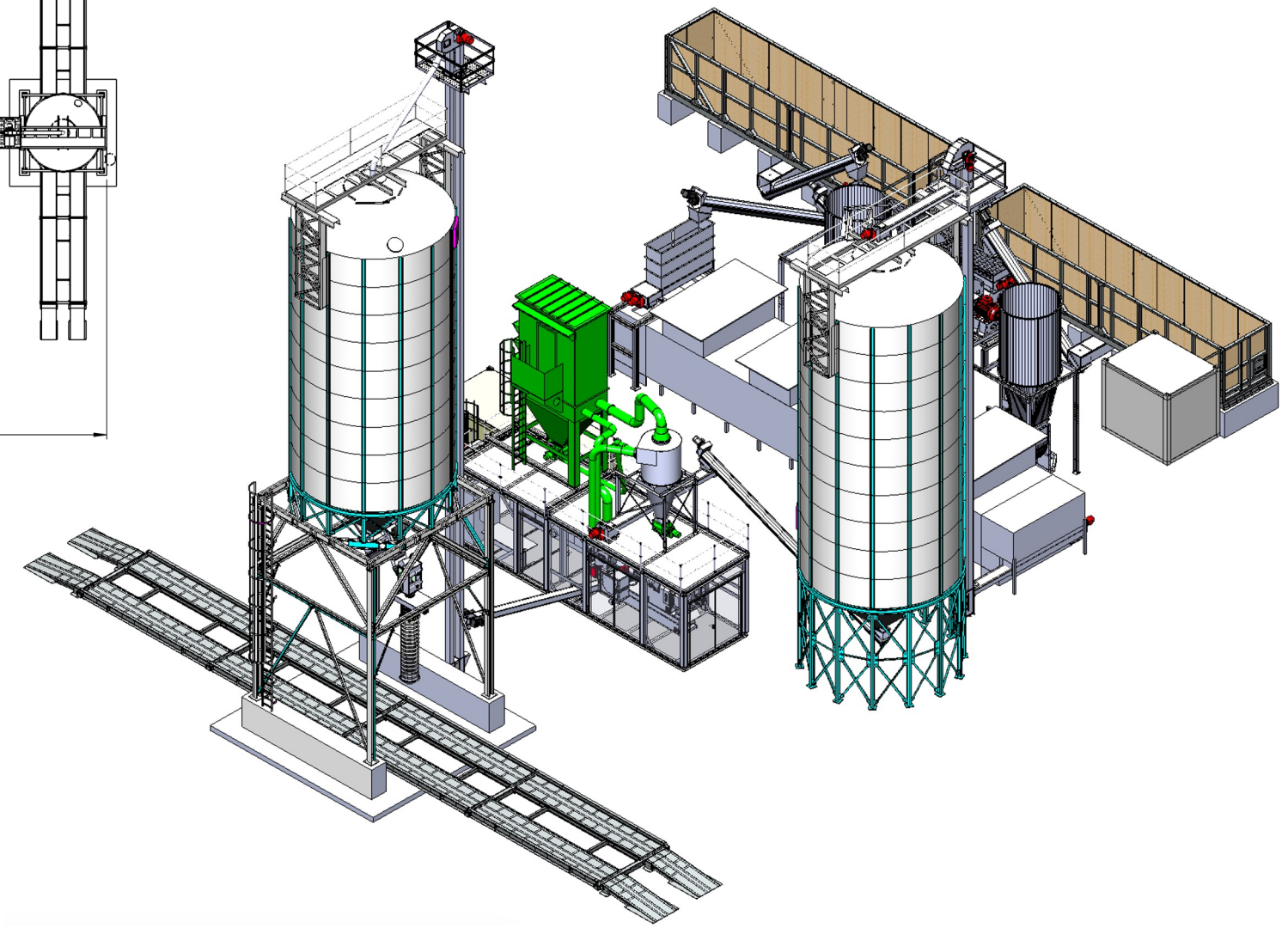


C5 C4 + wet material receiving and drying unit

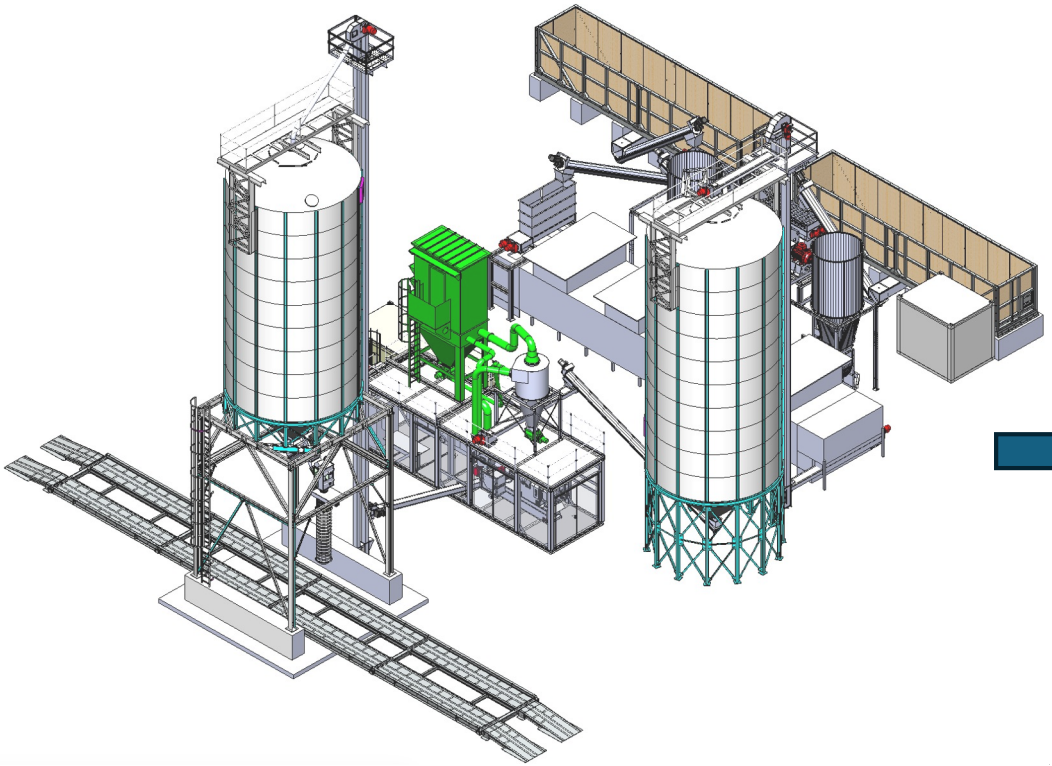


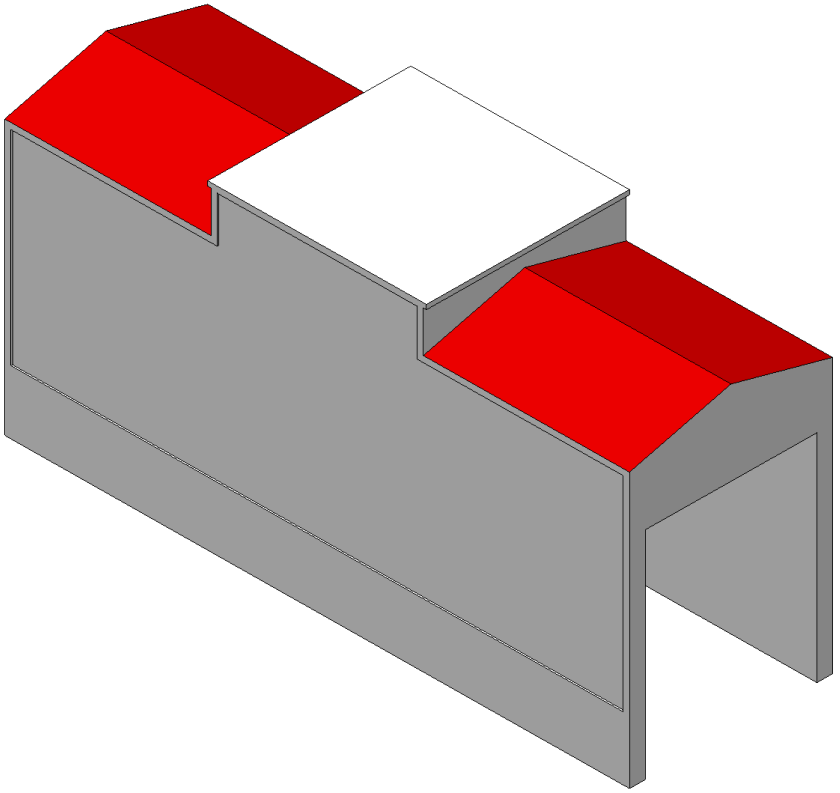
+ wet chip handling unit: chip receiving/feeding storage, disc screener, metal detector and RPM type mill



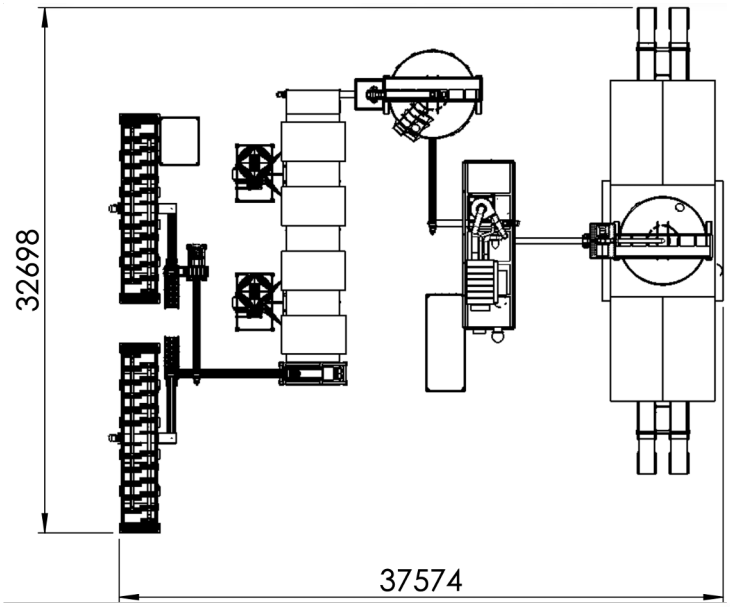


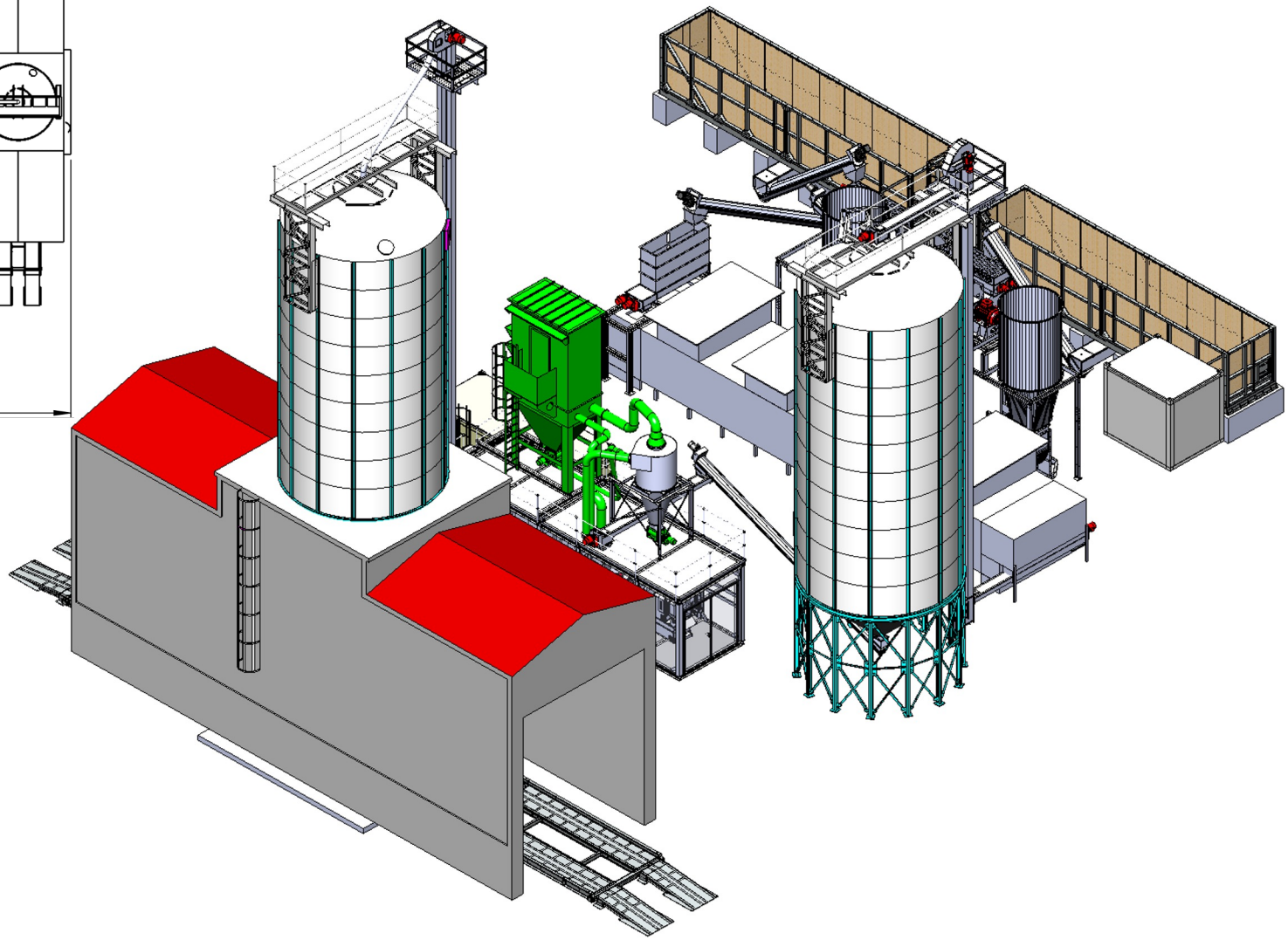
C6 C5 + wet chip handling unit



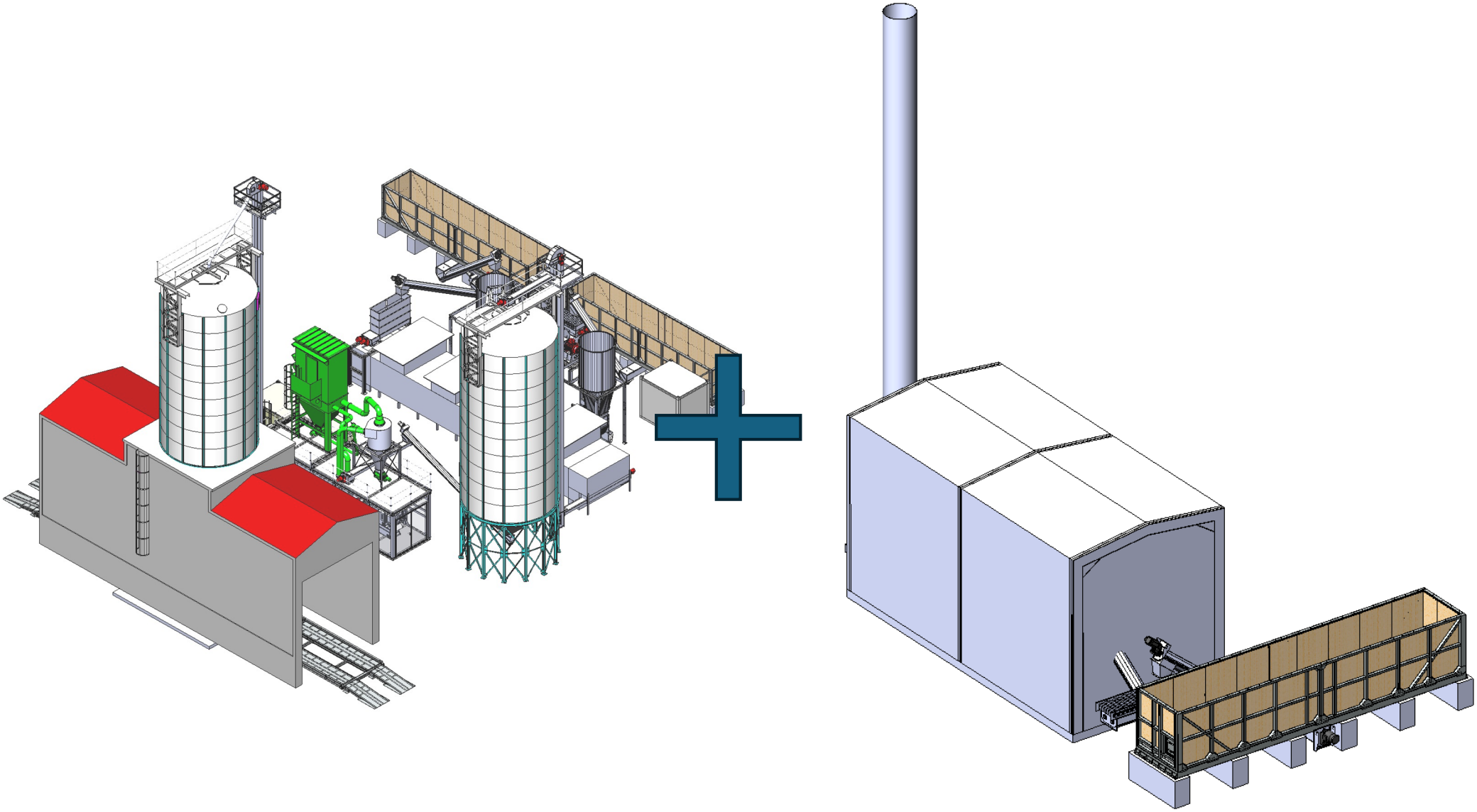


+ truck loading station weather protection hall

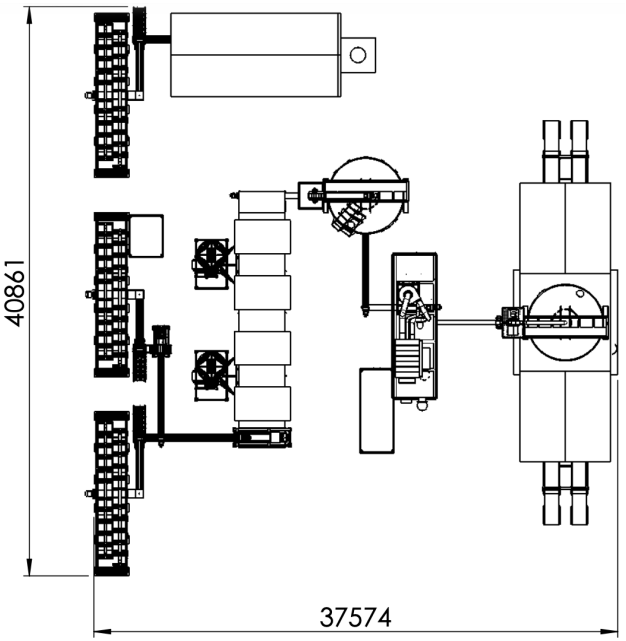


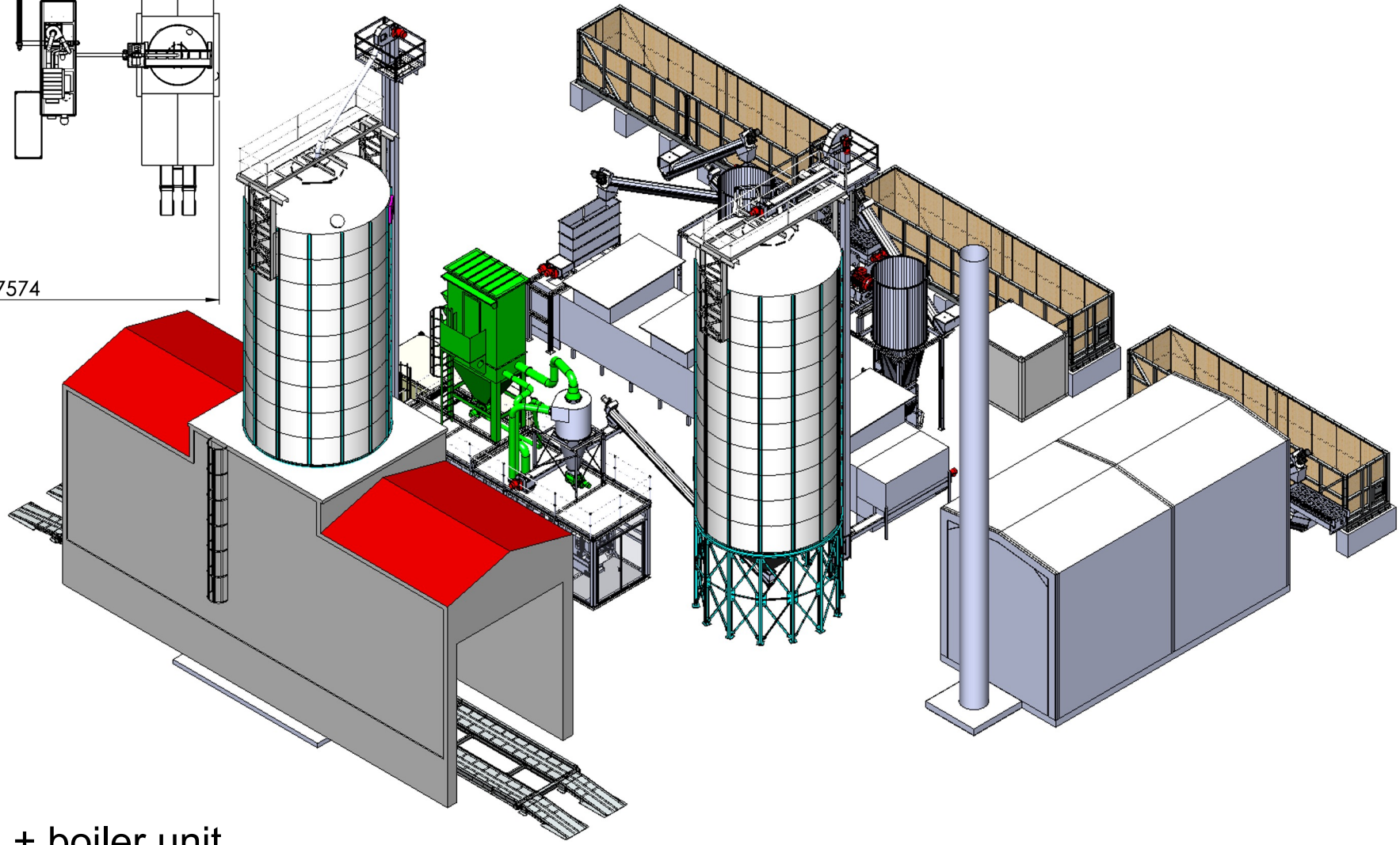


C7 C6 + truck loading station weather protection hall

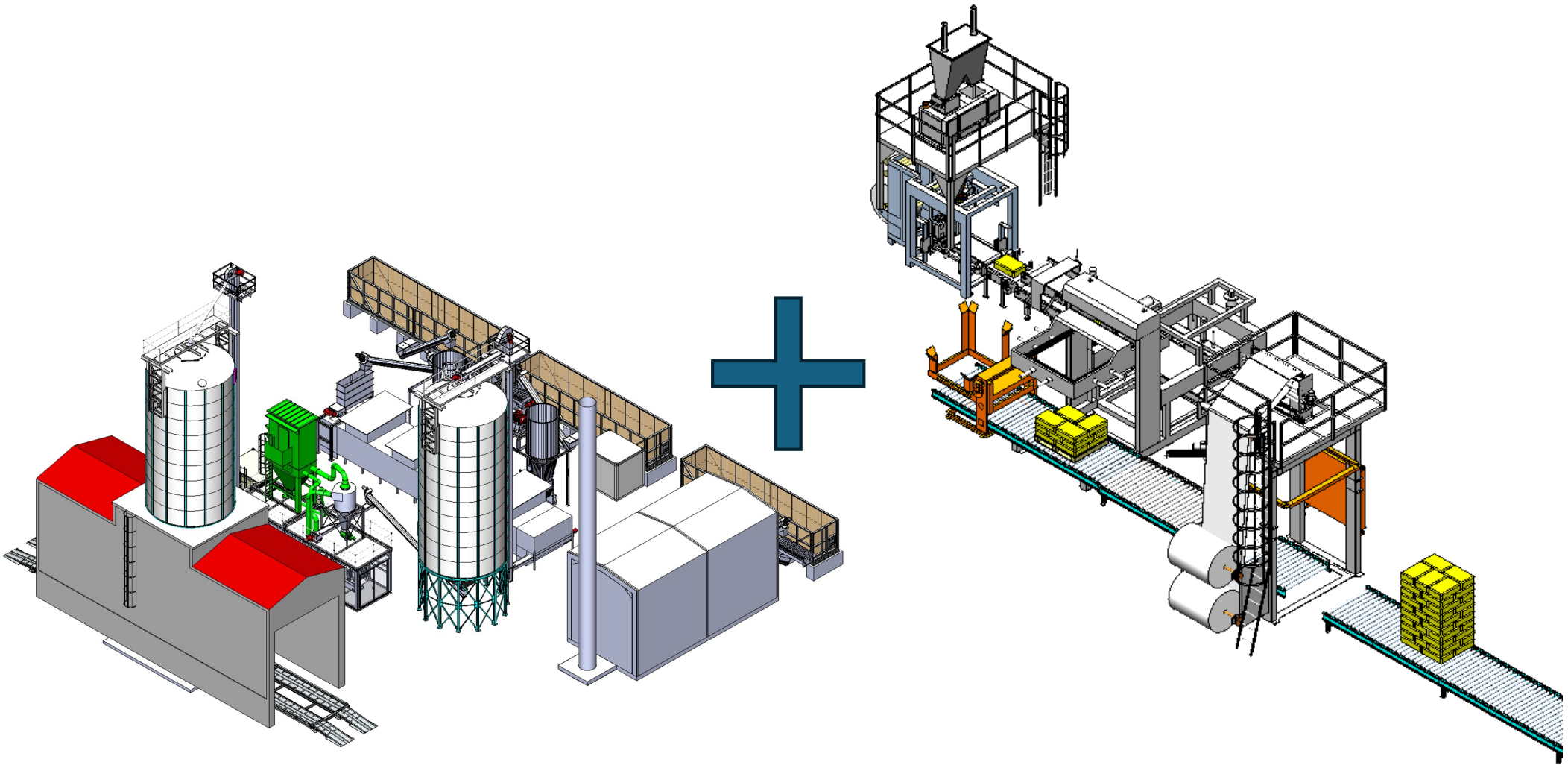


+ boiler unit: fuel receiving and feeding unit and boiler house

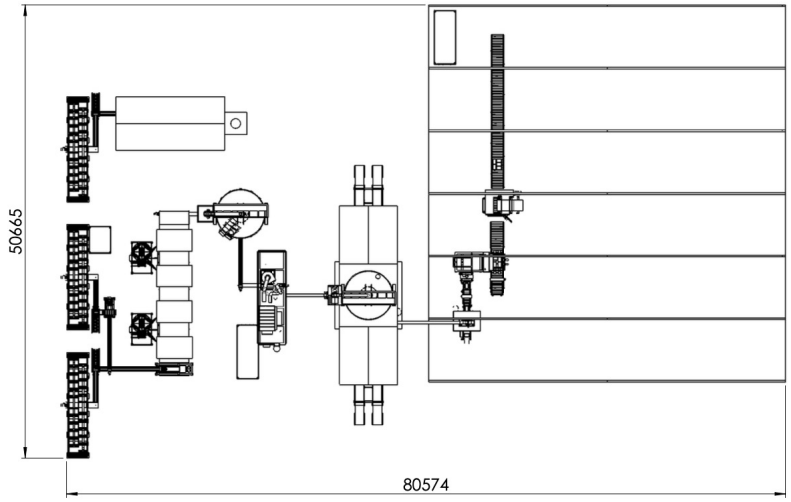


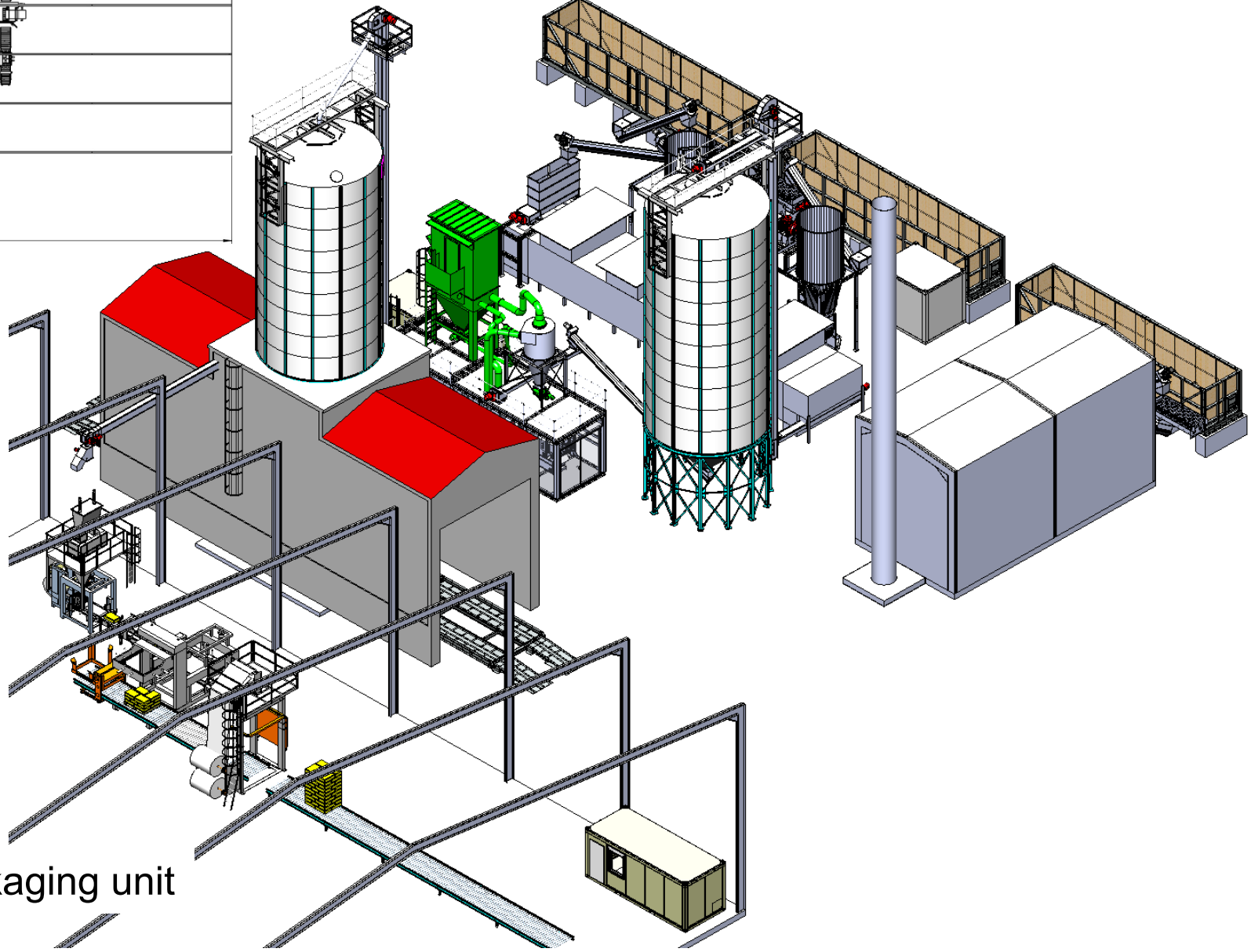


C8 C7 + boiler unit

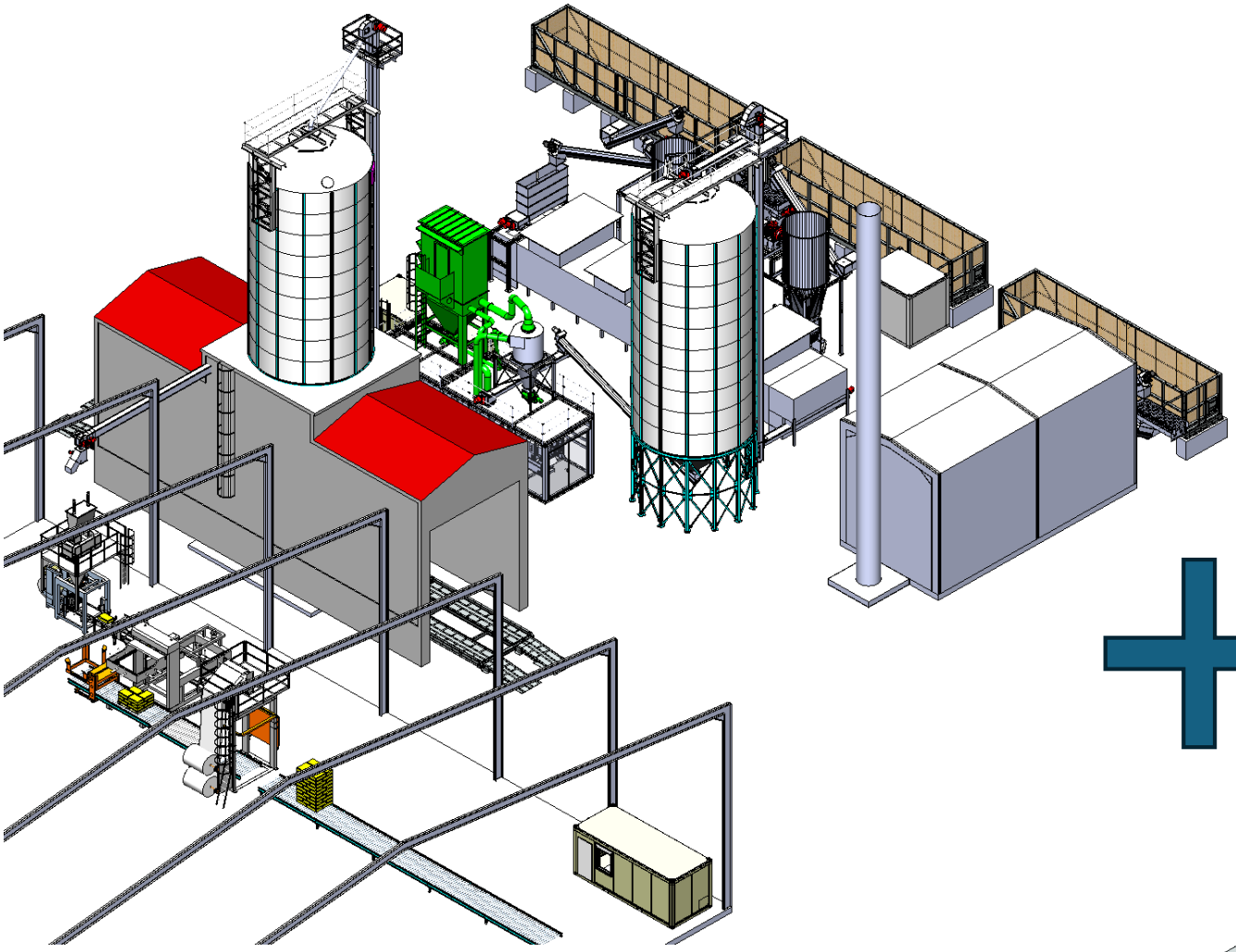


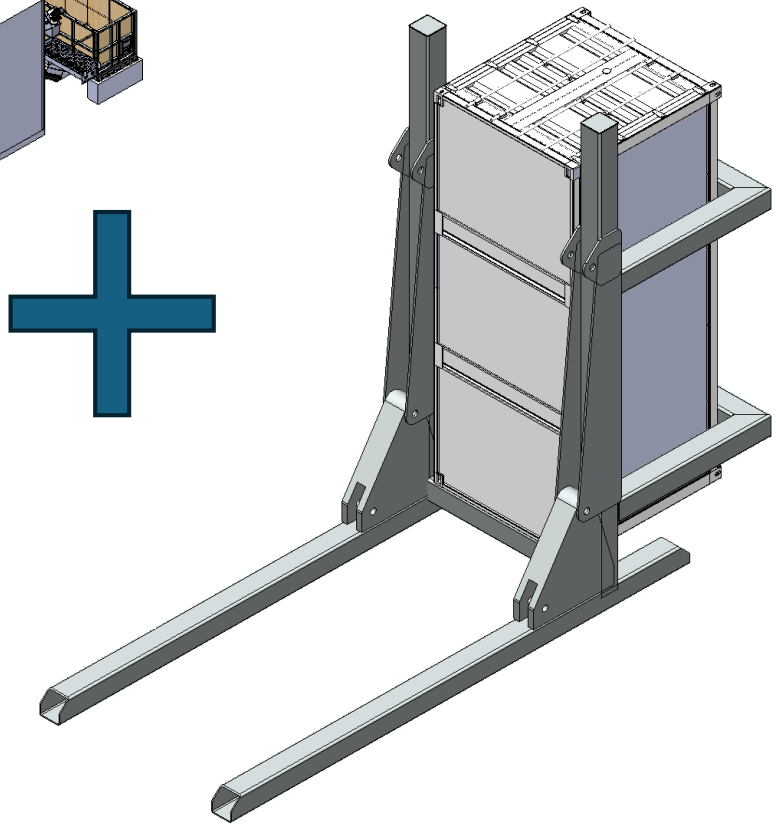
packaging unit unit



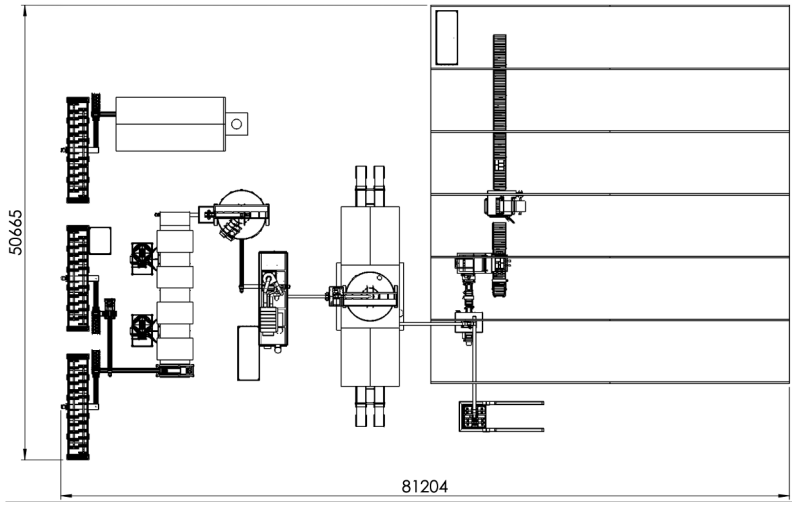


C9 C8 + packaging unit

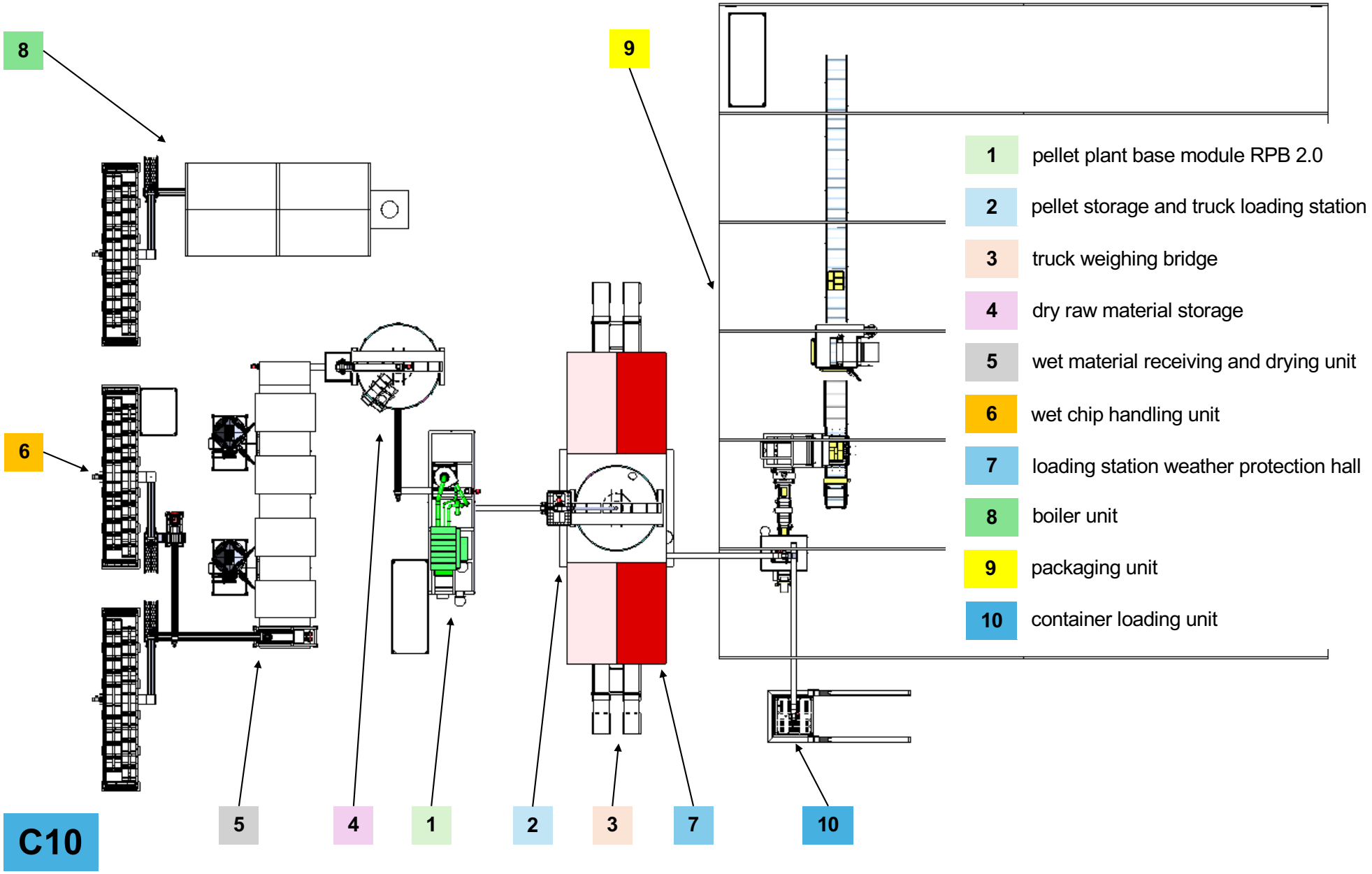




container loading unit



C10 C9 + packaging unit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C10
1 pellet plant base module RPB 2.0
2 pellet storage and truck loading station
3 truck weighing bridge
4 dry raw material storage
5 wet material receiving and drying unit
6 wet chip handling unit
7 loading station weather protection hall
8 boiler unit
9 packaging unit
10 container loading unit

Modular Pellet Production Plant Type 2.0

The pellet plant is designed to produce pellets from wood-based or other plant-based raw materials. The plant can be configured to suit the type of raw material used. The configurations presented here are primarily designed for producing of heating pellets from wood-based raw materials. The production capacity of the pellet production plant Type 2.0, depending on the raw material used, is 1.5 tons per hour (hardwood, such as beech or oak) to 2 tons per hour (softwood, such as spruce or pine). To achieve the best use of the plant, the optimal operating time is 24/7. The manufacturer guarantees an annual usage intensity of up to 8,000 operating hours. At such a load, the plant's productivity is up to 16,000 tons per year.
The pellet plant has low operating and maintenance costs. Depending on the configuration, the electricity consumption is 60 kWh - 120 kWh per ton of pellets produced. After startup, the plant operates in automatic mode for most of the time. One operator per shift is required to operate the plant. In simpler configurations, the pellet plant operator can also engage in other tasks while the plant is operating and monitor the operation of the pellet plant systems via remote control.

Explanation of the example configuration diagrams on the previous pages.

C1 Pellet plant base module RPB 2.0. The RPB is a mobile pellet unit, installed in a container. RPB is the abbreviation of Rematec Pelletizing Box.
RPB is delivered as an all-in-one module, pre-tested at the manufacturer. The machine container houses production equipment, electrical and control system components, spark and fire detection and extinguishing equipment. The operator's workstation is installed in a separate 20-foot office container included in the price of the equipment. As an option, the workstation can accommodate a laboratory module for testing raw materials and pellet quality, which is important for applying for the EN+ quality certificate.
The machine is designed for outdoor use and is fully weatherproof.
The raw material is sawdust, chips or planer shavings with a moisture content of 8% - 12%.

C2 If there is a need to store pellets in a warehouse that allows automatic loading of the production onto trucks, we offer a storage silo, which is combined with a truck loading equipment. The size of the warehouse can vary, as a standard we offer a 250 m^3 galvanized silo with working platform on high steel construction. The silo capacity is sufficient to keep the plant operating for more than three days (empty silo - full silo).
The package includes the necessary conveyors and elevators, as well as an emergency valve for separating pellets from the system before sending them to the warehouse, screening device for separating fine particles during loading and a dust-free loading nozzle. The silo includes also level sensors and optionally temperature sensors as well as fire detection devices and electrical and control equipment.

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