

Alternative fuels receiving and dosing unit



A simple transition to alternative fuels

Key benefits

- **Dosing up to 100m³ of AF per hour**
- **Fast delivery time and installation**
- **Local control system reduces need for wiring at installation**
- **Works with a range of fuel types, including:**
 - **Refuse Derived Fuel (RDF)**
 - **Process Engineered Fuel (PEF)**
 - **Municipal Solid Waste (MSW)**
 - **Biomass (e.g. wood waste, rice husks)**
 - **Tire chips (without metal)**

Many cement plant operators are looking to take advantage of the benefits offered by alternative fuels (AF), including reduced operating costs and an improved environmental profile. The AF receiving and dosing unit is a simple and cost-effective way to demonstrate the effectiveness of alternative fuels at your plant before making the transition to a more permanent solution.

Fully portable and with its own local control system, the AF receiving and dosing unit includes everything you need to set up quickly. It enables you to test both the AF supply chain and a wide variety of AF types in order to ascertain the optimum mix for your plant, and ensure you maximise your return on investment in AF right from the start.



Volumetric unit for AF utilization during installation



Feeding of dosing unit

The Titan Pennsuco Plant in the US made the switch to alternative fuels in 2012.

Today the plant runs 5 tph of PEF.



The AF receiving and dosing unit

We're using a step-wise approach that works well to establish what is possible and quickly help plants obtain measurable benefits.

In the first phase, an AF receiving and volumetric dosing unit is installed. It is coupled to a screw conveyor, a rotary valve and a blower for pneumatic transportation. This is a simple and quick means to utilise AF. With this solution, plants will be able to demonstrate utilisation of AF and ensure sustainability of the fuel supply chain.

A next step could be a receiving and gravimetric dosing unit meant for continuous supply of AF at a higher rate. This unit is coupled to a drag chain conveyor, a Pfister® rotor weighfeeder and a blower for pneumatic transportation. It will accurately allow plants to utilise fuel of different qualities and be tailored to the plant's requirements for different fuel parameters.

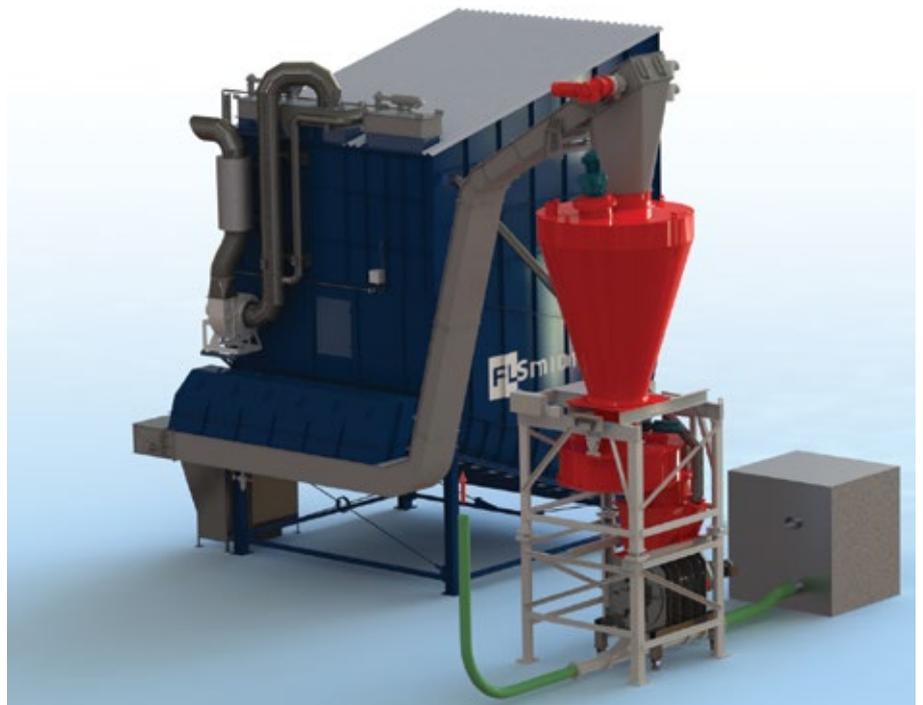
Based on operating data from the plant and a proven AF supply chain, a third step can include a more permanent installation (e.g. docking station solution with gravimetric dosing via a Pfister® rotor weighfeeder unit). Such a solution will further reduce bottlenecks and fully exploit the benefits of AF.

Additional configurations of the AF receiving and dosing unit are also applicable that incorporate mechanical conveying technology (e.g. belt conveyors). Such configurations can be evaluated in consultation with us.

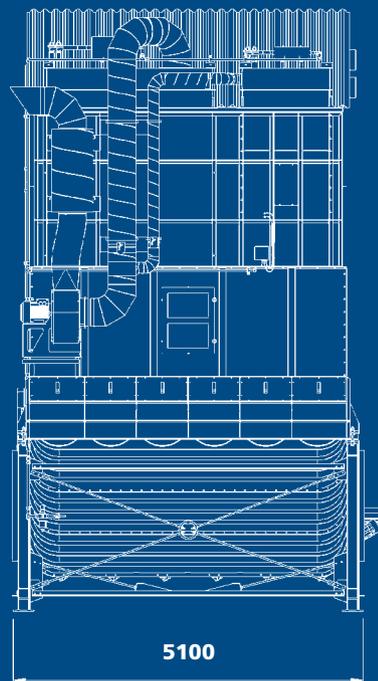
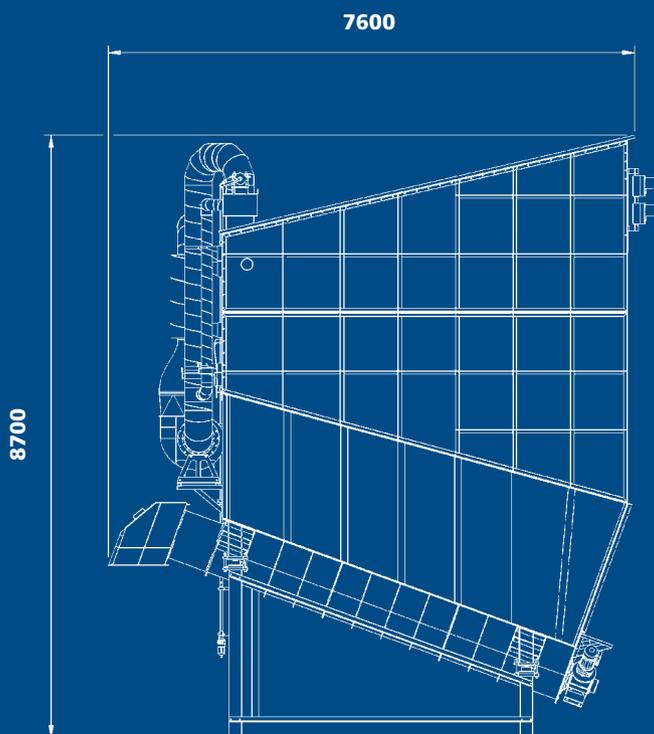
Whatever approach is chosen, everything is developed in close collaboration with the plants' own team – helping to identify the limits for AF utilisation and to find out where the bottlenecks are.



AF receiving and volumetric dosing unit



AF receiving and gravimetric dosing unit



Volumetric dosing range (m³/h):	10-100
2D Material: 50% <	25x25
2D Material: 100% <	50x50
3D Material: 50% <	25x25x10
3D Material: 100% <	50x50x20
Density, loose (t/m³):	0.07-0.4
Moisture content (wt.%):	<25

The receiving and dosing unit is capable of handling most pneumatically-conveyable alternative fuels within the specifications given in the table. Consultation with FLSmidth is requested in order to determine the actual maximum dosing for a given specific alternative fuel.

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