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TARPO BS Block dryer

for wood chips, solid digestate from Biogas stations, grains and brewery draff

TARPO Ltd. is a Czech company without foreign participation, which operates in the Czech and European market for 25 years. Our area of interest is development and production of energy equipments (gasification complexes, drying lines). Specialization is drying of biomass in various forms: wood chips, sawdust, brewery draff, solid digestate from Biogas stations, grains and sewage sludge.

Dryer is always designed and optimized according to type of dried material. The drying line output can be designed in a large power range, depending on customer´s requirements, i.e. from tens kilograms up to tens of tons per hour. Line controls the control system with PLC so as to minimize maintenance. At the same time, the operator has access to accurate information about the operational status of the whole complex.

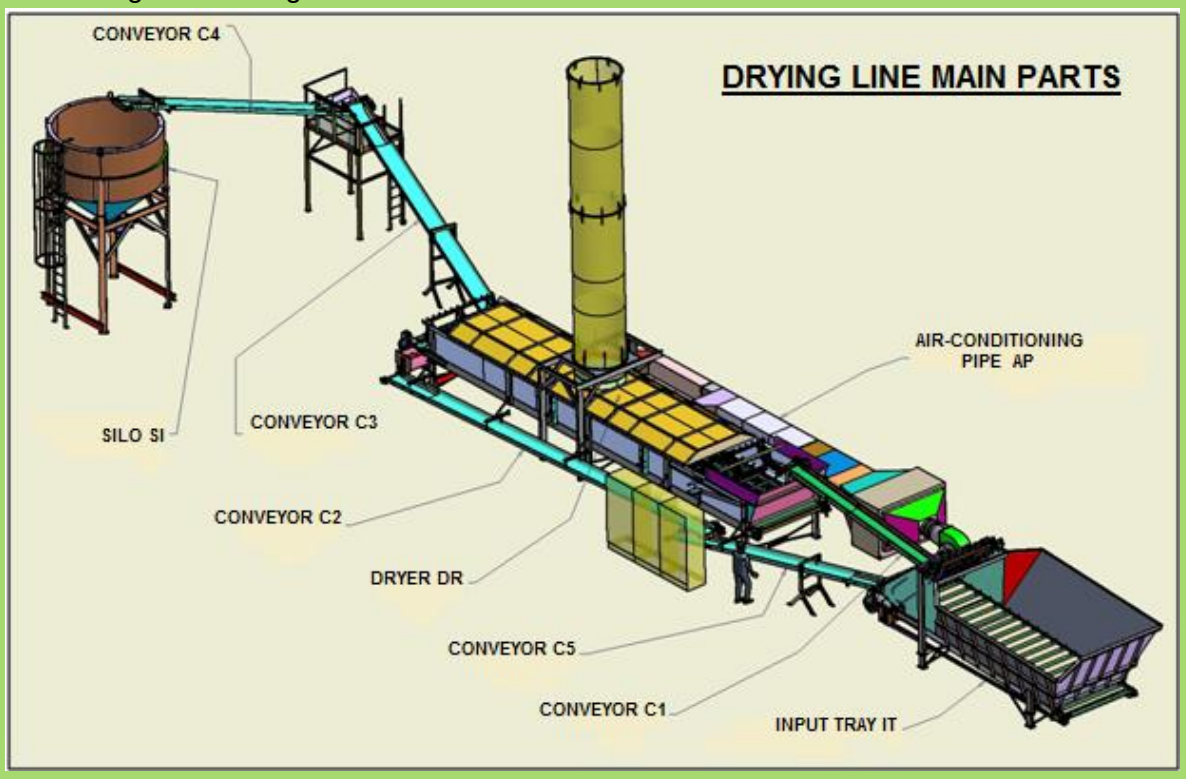
Our drying technology is industrially protected. Delivery time is about 3-4 months, depending on the type and size of the dryer. As a part of delivery can be also silo with displaceable floors, transportation paths, sorters, etc.

Example of brewery draff dryer parameters

• volume of evaporated water max.	510 kg/h
• heat-exchanger power output max.	540 kW
• heating water parameters	90/70 °C
• dryer´s power output max.	800 kg/h draff
• transport volumetric output of route	40 m^3/h draff (max.hour.output)
• dryers operation	24 h per day,7 days a week,330 days of the year
• TZL emission from the dryer´s outlet max.	15 mg/Nm^3, tj. 2300 kg/year
• outlet saturated vapor amount	6 Nm^3/s
• installed electric power output	32 kW

Dried product characteristics: dried material is brewer´s draff, which is a secondary product during the production of barley malt, the specific weight of wet draff is ca. 700kg/ m^3 and dry matter content is min. 25%.

Use of dried product: dried draff is very desirable for feeding mixture of farm animals. Drying is preserved for long-term storage.



Description of drying line activities

Operation fills the input tray IT with wet draff on the side by means of the front loader, material is moving by means of rotary rakes toward to output screw and to raker. Thanks to the mild floor slope and 5 draining slits the excess water dripping off from the wet draff into the drip-moulders out of the input tray directly to putted barrels. Draff carrying away by rakes and combed by means of rotary rake of tank by small degrees falls down into carry out screw and subsequently on conveyor C1. Material is relocated into the hopper of dryer DR. During the simultaneous movement of rakes and dryer´s returnable are driff combing into the right drying height, which is about 0,2 m. Rakes at the bottom of dryer DR slowly moves the draff to the other end of dryer. The warm air is supplied into the dryer by means of air-conditioning pipes AP. Air is warming up in exchanger, it is used the waste heat from biogas station.

At the end of the dryer is dried brewery draff with the aid of plough push off on the screw conveyor. The draff, which falls down from dryer to conveyer C3, moves away through the transport path across the conveyor C4 into silo SI, silo has capacity 12 m^3. From the silo is dried draff dosed into big bags with capacity about 2 m^3.

Operation requirements

The whole device is controlled by the control system. Operation of the whole line is monitored, all critical points are monitored and detected by the respective sensors. The maximum quantity of material in the tank and in silo is sensed by limit sensors. Continuous inspections are ensured through the agency of trained workers of these professions: 1 engineer and 1 electrician.