BROCHURE

SEVAR
Drying Technologies

PILOT BELT DRYER BD 750/2

Wet material feed hopper and the roller press above the feed module, exhaust air ducts and exhaust air fan on the right

Discharge module with mobile collecting tray and control cabinet above

View into the second dryer module with granulated dry material

The **pilot-scale belt dryer** provides a **water evaporation capacity of up to 50 kg/h [110 lb/h]**. The pilot dryer enables the operator to dry a representative quantity (e.g. 70 kg/h [150 lb/h]) of wet material in order to check the drying parameters of this specific material. Depending on the belt speed, **partial or full drying** is realized with one dryer belt.

The dewatered, wet material is dried in two modules with electrically heated ambient air at **temperatures of up to 140 °C [285 °F]**. Both modules are equipped with recirculation fans with a capacity of 3,000 Nm^3/h [1,766 scfm]. The air circulating through the prodct layer takes up the amount of water to be evaporated. The humid exhaust air is removed from the system by the exhaust air fan. The exhaust air fan is designed for 2,000 Nm^3/h [1,177 scfm].

The wet product dewatered to 20 - 40 % DS is fed manually or with a pump into a feed hopper with a volume of approx. 0.8 m^3 [28 ft^3] installed above the roller press. The roller press with scraper system granulates and distributes the material on the 0.75 m [2.4 ’] wide dryer belt. The **variable layer thickness** of approx. 8 - 10 cm [3” - 4”] on the dryer belt is determined by the speed of the frequency-controlled motors of the roller press and the dryer belt. The dryer belt runs through both drying modules before the dry material is discharged into a mobile container.

During the entire drying process, the operator can follow the process and take samples by **opening the side and front doors**. Thanks to the frequency-controlled motors, parameters such as throughput and water evaporation can be flexibly set and adjusted.

As an option, the humid exhaust air can be directed via a vertical spray condenser. The evaporated water is condensed and the condensate is cleaned in a WWTP.

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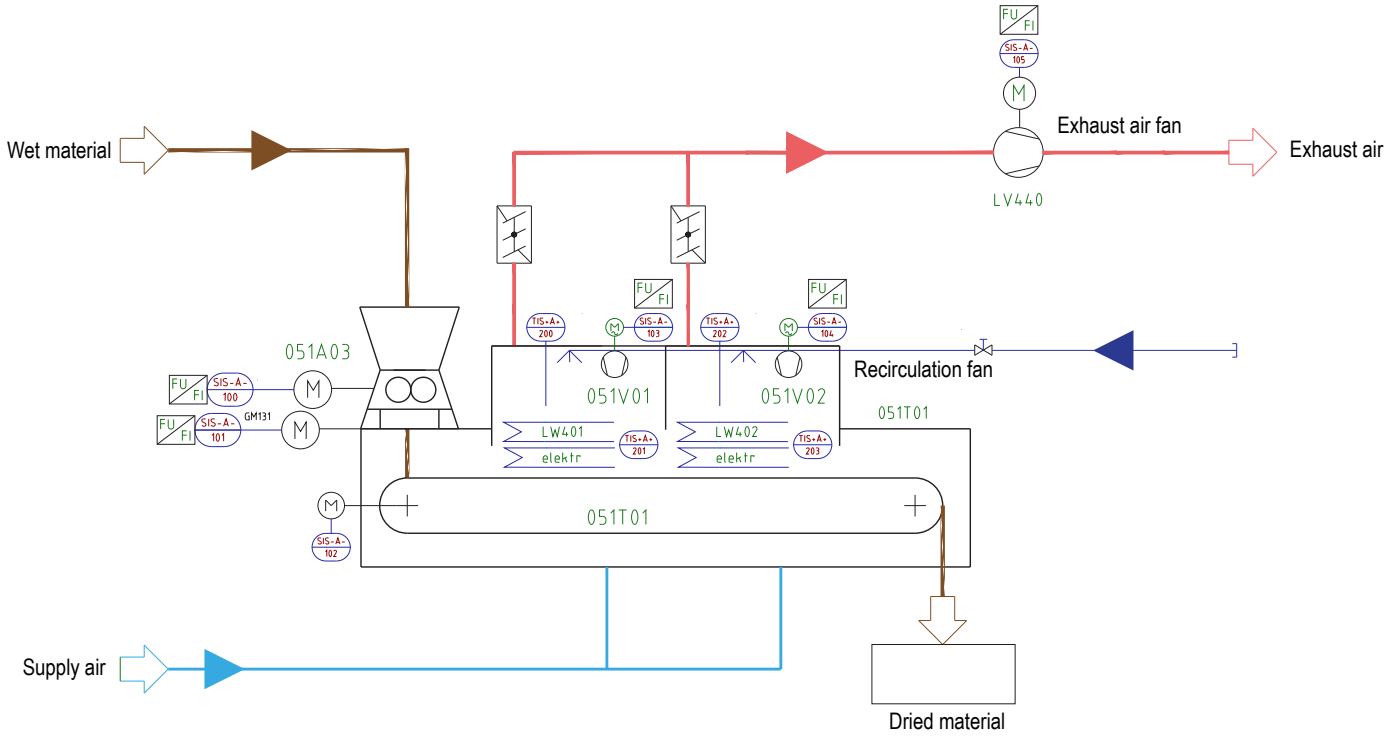
FUNCTIONAL PRINCIPLE



Source: SEVAR AG

TECHNICAL DATA

Scope of supply:	Pilot Dryer BD 750/2 with wet material hopper and dry product storage tank, electrical heating, roller press, one belt (optionally: condenser)
Type of drying:	Partial or full drying
Heating source:	Direct heating: Drying air is electrically heated up to 140 °C [285 °F]
Material:	Municipal and industrial sewage sludge, digestate, organic materials
DS input:	20 - 40 %
DS output:	45 - 95 %
Water evaporation:	20 - 50 kg H_2O/h [45 - 110 lb/h]
Electrical power installed:	Thermal heating 50 kW [67 HP]; fans + motors 3.2 kW [4.3 HP]
Operating hours:	up to 24 h/d, fully automatic (except material in- and output)
Outervdimensions (LxWxH):	3800 x 2000 x 2500 mm [12.5' x 6.6' x 8.2']

SEVAR AG

SEVAR AG emerged in 2020 from the environmental technology division of Haarslev Industries A/S. The over 30 years proven **technology of belt drying** is continued under the already wellknown name SEVAR with a motivated team. The young German company with headquarters and production near Karlsruhe is supported by an international network of partners and agents. SEVAR designs and manufactures equipment for the **thermal treatment of municipal and industrial sewage sludge**, biomass and digestate. The treatment of the humid exhaust air resulting from the drying process with condensation and odor control is also considered. Reference plants are available for visiting worldwide.