

TARPO VS 7/8 - Vertical continuous dryer

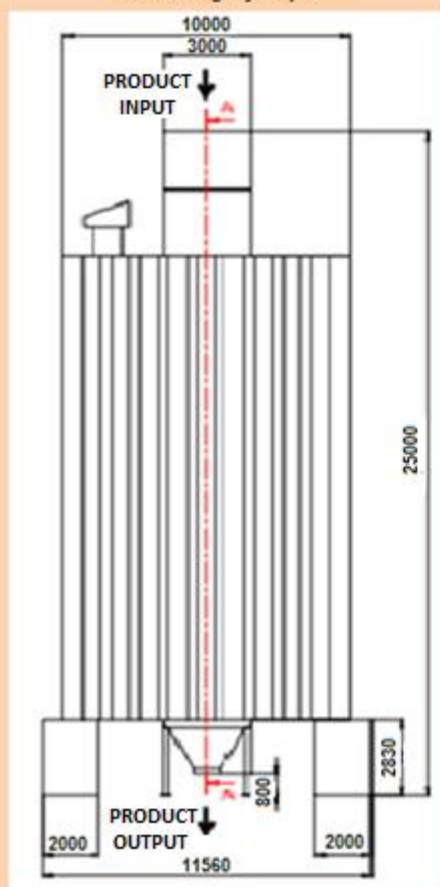
TARPO VS 7/8 parameters	
<i>Built up area</i>	<i>8 x 15 m</i>
<i>Height of dryer</i>	<i>25 m</i>
<i>Power input</i>	<i>175 kW</i>
<i>Heat input</i>	<i>13,8 MW</i>
<i>Heating medium</i>	<i>natural gas</i>
<i>Natural gas consumption</i>	<i>ca. 0,38 m³/s</i>
<i>Entrance output</i>	<i>50 t/h</i>
<i>Product input humidity</i>	<i>35%</i>
<i>Product output humidity</i>	<i>14%, relative</i>
<i>Evaporated water amount</i>	<i>12 210 kg/h</i>

TARPO VS 7/8 Vertical continuous dryer is designed as a grain dryer with double heat recuperation for the most effective operation and power input of ventilators was as low as possible in terms of electricity consumption.

The drying process is automatically controlled by PLC and the values of parameters can be remotely transmitted via Intranet or Internet.

This dryer has a minimized built up area. The product input is at the top of the dryer and outlet is at the bottom of the dryer. All parts of the dryer, which come into contact with the product, are galvanized, the external cladding panels are galvanized and enameled. Emission values meet the requirements of the relevant standards.

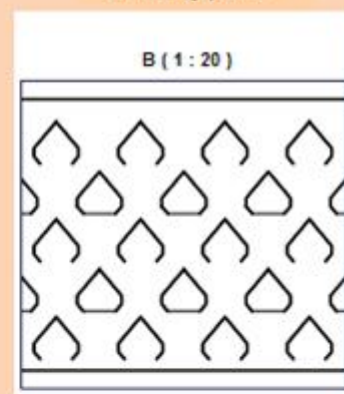
Drawing of dryer



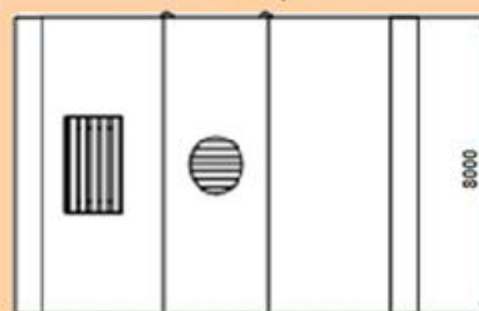
Drying pores



Detail of pore

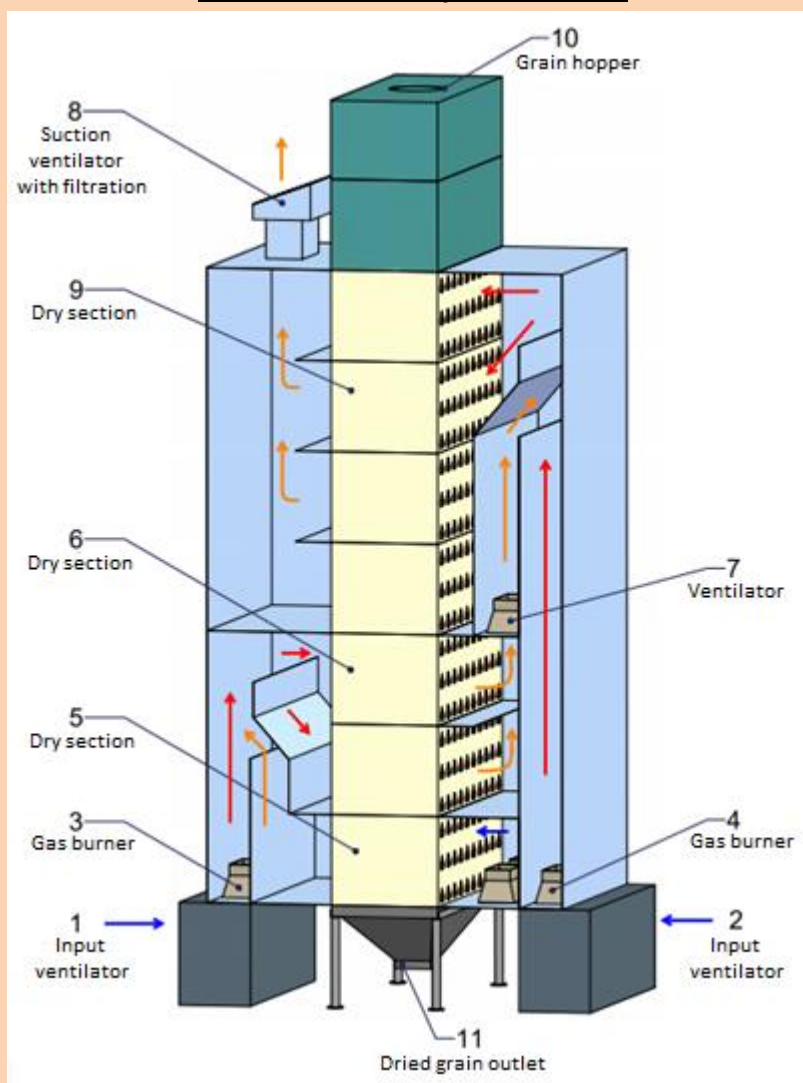


Ground plan



This is only an exemplary model of the dryer.
Dryer is always designed and made according to customer's possibilities.

TARPO VS 7/8 dryer's scheme



Description of dryer's operation

Dryer VS 7/8 is designed so, that compared to conventional dryers with active recuperation, has reduced the heat consumption up to 16% and electricity consumption up to 18%.

This is achieved by substantial reducing of the hot air flow and double heat recuperation from air output of one section being used in the other sections while it is reheated to the required temperature.

Outside cold air is pushed by ventilator into the inlet of cooling section, where is preheated by passing through a hot grain and is mixed with mixture of air (inlet 1) and with the flue of gas burner (3).

This way prepared drying medium at temperature about 125°C passes through a second drying section (6) = **dry drying**. At the output from this section, the air, which is only partially saturated with moisture, pressed by a ventilator (7) to the inlet section (9) = **wet drying**. In order to achieve the optimal temperature, the air is mixed together with combustion products from gas burner (4), to which is added via the outside air from the input (2).

The air passes through the wet grain section (9), where it is completely saturated with moisture and about a mild temperature gets out of dryer due to ventilator (8) into the atmosphere. This arrangement provides the advantage, that in the wet grain area is effectively caught the dust, that might be released in a dry section and thus ensures a very low dustiness at the outlet from the dryer. Grain is cooled with outside cold air before outlet from the dryer, so that get out at low temperature, suitable for storage.

The heat from cooling is used during the next drying in the upper sections of the dryer.