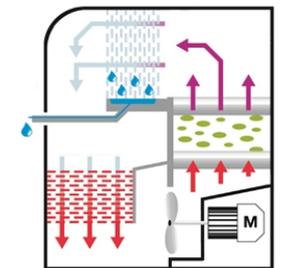


Air drying tunnel LDT



Operating principle

To create a fresh appearance and assist extended shelf life of all leaf products (i.e. lettuce) it is most important to control the exact level of moisture prior to packing. The Sormac air drying tunnel LDT is the very latest in 'State of the Art' technology and is especially effective on delicate specialised baby leaf as well as robust varieties such as Iceberg and Romaine.

The production process prior to the drying tunnel requires the product to be de-watered sufficiently with an air venturi system which removes the majority of the free water, the product is transported through the system on a special de-watering belt which delivers the product directly into the main drying tunnel. In the drying tunnel the product is dried in an upwards directed air stream which passes through the transporting belt. The air temperature of 25 - 30° C (77° F - 86° F) which is maintained by the plc programming directs the warm air to flow through the product at a regulated speed. The selected air speed ensures optimal contact with the product at all times.

The air stream that is in circulation through the product absorbs moisture from the surface of the lettuce and is cooled down in

a heat exchanger at a temperature of approx. 5° C (41° F). The cold air passes over the heat exchanger (cold) removing the moisture by means of condensation on the cold plates. The cooled drier air continues in the re-circulation mode and is then re-heated through the second heat exchanger up to approx. 25° C (77° F), so that the relative air moisture is lowered. During the drying process the product begins to cool down, because of the vaporization of the surface water on the product.

The cooling down and warming up of the air is controlled through the PLC by very accurate water temperature control. There are various permutations and options available for the cooling installations which can take into account existing facilities.

The air drying tunnel moisture settings can achieve less than 2% on the surface of the product. The advantage of the air drying tunnel in comparison with other Thermally Heated Systems is that no heat and moisture is given to the surroundings factory controlled atmosphere.

Capacity

The capacity is dependent on factors and variations of product moisture content before drying and the desired moisture content. There have been constructed tunnels from 1.000 kg/h to 3.000 kg/h (2,200 - 6,600 lbs/hr).

Scope of supply

- > double transport belt
- > two heat exchangers
- > ventilators / fans
- > housing
- > electrical control system

Features

- > very gentle handling at volume production
- > suitable for delicate products
- > low end moisture can achievable
- > no energy discharge into the adjacent surroundings

Product specification

The air drying tunnel is suitable for leafy vegetables e.g. lettuce, baby leaf, spinach, cut cabbage etc.

Options

- > cooling system with warm and cold water tank
- > de-watering belt
- > cooling section on exit

