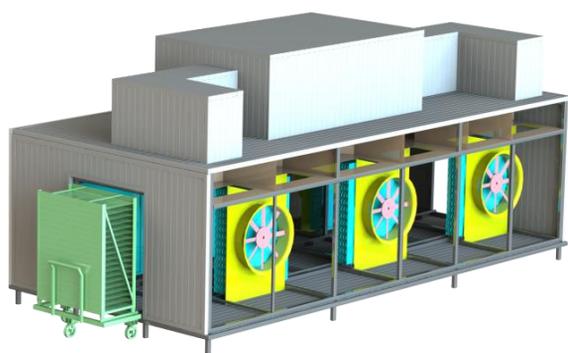


# Fruit and vegetables heat pump dehydration plant

## DRYWIND TRAY



The **Drywind tray dryer** has a medium-large capacity and is suitable for particularly soft and sensitive fruit and vegetables treatment (whole, sliced or diced).

The main plant features are:

- Flexibility in use;
- Continuous process;
- Modularity, i.e. single independent units to be combined;
- Higher coefficients of performance (COP) compared to traditional technologies;
- Low process air temperature and humidity values;
- “Easy building” plant solutions for building and installation costs reduction.

### Technical specifications

#### Drying tunnel

The drying chamber consists of a thermally insulated tunnel in which trolleys move forward by means of a mechanical advancement system. They are composed of a certain number of trays, where the products to be treated must be properly placed. The trolleys enter the tunnel one at a time from one end, move through the drying chamber and eventually exit from the opposite end at specific time intervals. The production capacity is modular, i.e. single drying unit can be combined for a higher productivity level.

The whole dryer chamber structure, all the parts in contact with the food product and all parts that require cleaning operations are realized in stainless steel AISI 316L. The trays for the products are realized in AISI 316L.

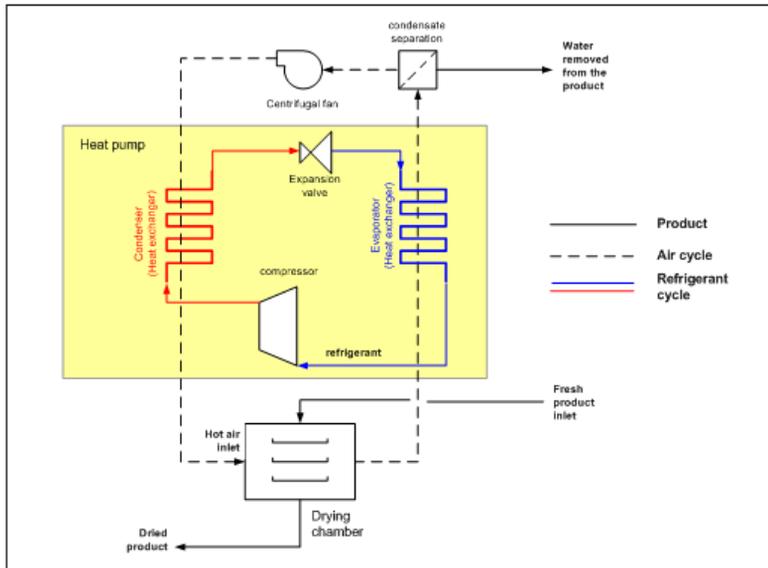
The trays charging and discharging, as well as the incoming and outcoming of trolleys are manual operations.

For the product drying process inside the chamber, the hot air flow is a closed-loop against the product direction. The chamber is equipped with specific filters for the drying chamber inlet air filtration. In order to improve the product dehydration uniformity, many air recovery systems are contemplated, as well as several heating stages (heat exchangers along the chamber).

#### UTA (Air treatment Unit)

The air treatment system (UTA) includes a closed-loop heat pump system and the use of new generation refrigerant gas. The presence of the heat pump improves the productive performance, reduces energy consumptions compared to traditional dehydration systems and it allows the treatment of soft and/or heat sensitive products.

## DRYWIND TRAY



*Dryer heat pump scheme*

### Dryer technical specifications

	<b>DRYWIND TRAY 100</b>	<b>DRYWIND TRAY 300</b>
Length L (mm)	6000	18000
Width W (mm)	1200	1200
Height H (mm)	1600	1600
Thermal power (kW)	100	300
Installed electric power (kW)	55	165
Operating hot temperature range (°C)	45 - 75	45-75
Trays number per trolley	16	16
Trays number per modular unit	12	36
Tray surface per trolley (m <sup>2</sup> )	8	8
Total evaporating surface (m <sup>2</sup> )	96	288
Total removed water (kg/h)*	70	210
Inlet treated product (kg/h)	85	250
UTA number	1	3
Specific consumption * *(kW*h)/kg dry product	~ 4	~ 4

\* Considering 85% inlet product moisture and 10% outlet product moisture\*\*calculated on the installed electric power

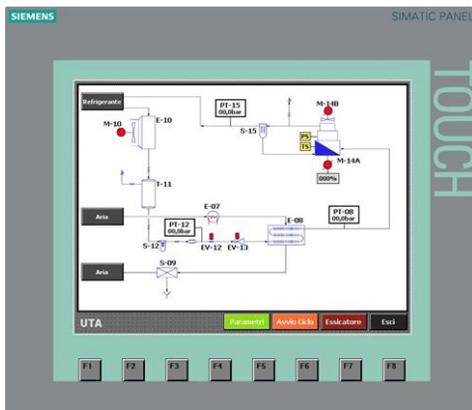
## DRYWIND TRAY

### Further specifications and dryer utilities

#### Service board and control panel

Service board including electric and electronic control and protection components. Control panel, control and anomaly detector alert of the machine. Main functions:

- "on - off" push-button for power supply, conveyor belt advancement;
- "Reset" push-button;
- Emergency push-button;
- Controller (PLC) and supervision through remote PC for automated handling of the plant.



#### Components, safety and conformity equipment

The used components are selected among the best international brands and are proportionate to guarantee a high reliability.

All safety devices are provided.

The electric and electronic setup has been realized according to the CEI-IEC norms.

The plant is CE marked.

Optional component: Automatic washing system