

## CASE STUDY

### Diana Food Equateur



**Client's Field of Activity** Processing tropical fruits into powders and flakes

#### Business Challenges

- Control the production atmosphere of the processing unit
- Maintain low humidity in a tropical country with outdoor conditions up to 21g of water / kg of dry air

#### Technical Challenges



- Prevent "sticking" of the fruit puree on the rollers
- Prevent clogging when processing fruit into a fine paste (similar to edible paper) in roller dryers
- Make easier the food conveying
- Provide dry air to prevent the finished product from regaining humidity
- Reduce airborne contaminations

#### Products – Solutions And Services brought by DESSiCA



#### Products

- Supply of two modular DS rotary adsorption dryers in stainless steel, a chiller and two air handling units.
- The system is involved in two stages of the powders and flakes manufacturing process :
  - During the processing and grinding phase, the dehydrator treats humid air
  - In the packing room, the air is treated by a dehydrator and an air handling unit.
- The installation was carried out inside the premises to maintain air less than 5g of water per kg of dry air.
- The dehydrator has been fitted with a sub-assembly to record temperature and relative humidity.

### Products – Solutions and Services brought by DESSiCA



### Installation

- The equipment was integrated and assembled by the local teams. The development was carried out on site in collaboration between the DESSiCA developers, the process engineers and the customer's automation department.

### Support and services

- Technical solution with low maintenance requirements apart from changing air filters 1 to 2 times a year
- Desiccant wheel life : 80% minimum yield after 10 years (subject to proper use)

### Key benefits and return on Investment (ROI) for Diana Food Equateur



- The installation provided by DESSiCA and its mode of operation fully met Diana Food Equateur's expectations.
- The installation of the system allowed Diana Food Ecuador to obtain dry air allowing the smooth running of the powder and flake preparation process whatever the external climatic conditions.
- After an initial installation in the pilot plant in Rennes (France-35), Diana Food has renewed its confidence in this installation in Ecuador. The facility has been in operation since December 2018.



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