DST Seibu Giken Biltong Drying

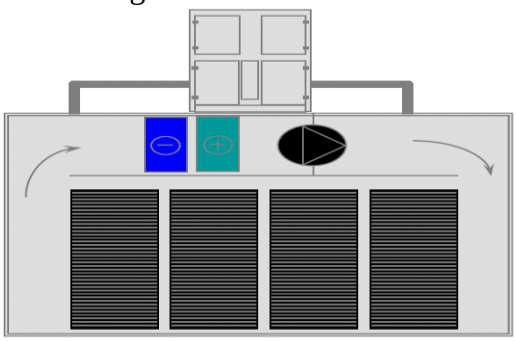
The Dry Air Specialists

To optimise product drying such as biltong we can reduce the trial and error time buy suggesting a drying approach which tackle the key parameters in drying food. Temperate Humidiity airflow and handling methods are key consideration.

Sample – 20ft container size dry room design

Air flow 2-4m/s recommended Velocity through product between 2m/s and 4m/s for turbulence on product skin for faster drying. Recirculation in room with false ceiling and 1.8mH hanging trays

H 1800 of racking W 2300L 6000Face area = 4m2



Max airflow 4x4m/2 16,000l/s ESP 200Pa est

Dehumidification capacity

2000kg/day product, Moisture removal 10%

EST Drying time 24hrs

Capacity average - 2000 x 1.2 x 24= 8.3kg (L)/h

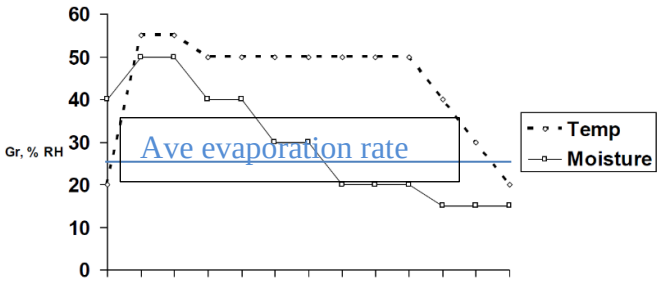
Heat load from DST R061R Dehumidifier to room 7kW – (0- 5.6kW average cooking from 8.3kg/h evaporation. Max est 7kW)

Cooling load 7kW desiccant heat generation from drying 8.3kg/h (plus summer heat gain 2kW)

Method- Product drying with Desiccant Dehumidifier – Batch drying

The use of desiccant dehumidifiers for product drying in in a bypass to recirculated air. The heat given off by the desiccant is adequate for heating room and therefore cooling equipment is needed to avoid over cooling. As each product has its one drying characteristics it is important to know a drying profile to make initial selection. Initial evaporation rates are usually substantially more than the calculated average

Simply measure the change in weight over time will allow for oversizing, where some drying trend and initial moisture loss test will help reduce the equipment sizing.



SAMPLE ONLY time profile of product moisture content and suggested room temperature control, cooler at end of cycle to avoid overheating dry product.

For site specific selection and energy modelling contact

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