

# CK2

## “Natural Solar Drying”

New machine for dehydrating plums

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## CK2 Itda: a (short) history



Company founded in 2011 in Chile: use of green energy to dry fruits

- drying service (plums) in a standard way (several M kg/year)
- use of green energy and sustainable models
- understand, create model and measure drying processes
- large scale “drying service” for several producers in Chile
- in parallel: development of a new concept: “CK2 natural solar drying” together with Swiss companies
- cooperation Chile – Switzerland



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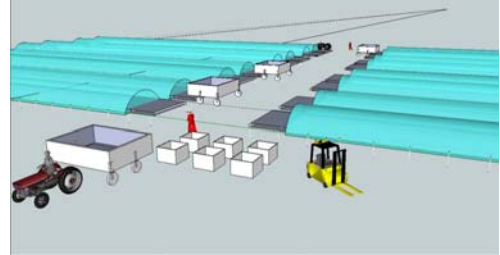
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## CK2 “Natural solar drying”: specs



### Specifications for the new development :

1. develop a simple drying machine using solar energy to dry fruits
2. drying plums in less than 5 days
3. cost of the machine + process < cost for standard sun drying process
4. protection against rain, dust
5. use of green energy and sustainable models
6. easy and quick to load and unload
7. scalable to dry large quantity of plums (>5M kilos)
8. compatible for the drying of other fruits
9. see opportunity to patent



Theoretical model based on a functional analysis (2011)

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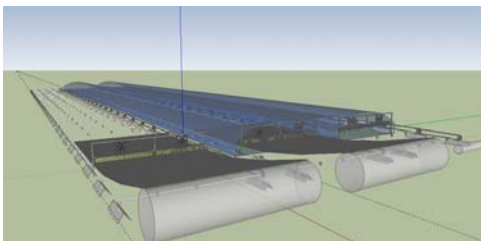
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## CK2 “Natural solar drying”: product



### Specifications for the new development :

1. solar tunnel with motorized metal conveyor
2. automatic loading/unloading at 1 side of the tunnel
3. air forced tunnels: fans are driven by timer/temperature/moisture
4. tunnel dimensions: length=50m, width=4m, height =1.5m (adaptable)
5. air temperature up to 65°C
6. drying plums in 3 days
7. can be disassembled
8. patent pending



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Model of the solar driers

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1<sup>st</sup> prototype of the solar dryer (2012)

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## CK2 “Natural solar drying”: now...



1. Large amount of plums dehydrated in solar tunnels
2. Excellent quality (perfect drying, no contamination)
3. Cost effective (very limited manpower, quick drying)



Plums in a CK2 solar tunnel (2014)

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## CK2 “Natural solar drying”: future...



1. Increase amount of plums dehydrated with solar tunnels in Chile
2. Starting new cooperation with other commercial partners
3. Drying of other fruits
4. Encouraging development of new sustainable cost effective products



Grapes dehydrated in a CK2 solar tunnel (2015)



Cherries dehydrated in a CK2 solar tunnel (2015)

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CK2: We see a bright future...  
as long as the sun shines...



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