



# multifreezer

TUNNEL DE SURGÉLATION ET DE REFROIDISSEMENT



## MECHANICAL COOLING DEEP-FREEZE TUNNEL

### Technical specifications

#### Characteristics of existing tunnels:

Length: 4.5 m to 30 m.  
Width: 1 m to 2.1 m.  
Capacity: 50 to 2,500 kg/h.

#### General characteristics:

Fluids used with a pump supply system: ammonia, glycol water, freon, alkali, tyfoxit, nitrogen (-160 °C on plates and without cooling coil), CO<sub>2</sub> (-50°C)  
Total height: ≈ 2,220 mm  
Loading height: from 800 to 900 mm.  
Product temperature: 100°C to -50°C.  
Film used: high-density PE from 10 to 30 µm foodstuff approved (>0,01/m<sup>2</sup>).  
Speed of the film conveyor: variable.  
Cleaning: <500 litres of water.  
Minimum time without defrosting: 20 hours.  
Electrical installation: 380 V three-phase plus earth / 50 Hz

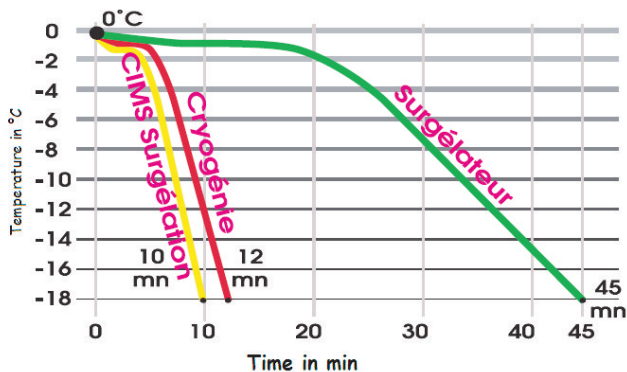


The products are placed on the film which serves as a conveyor. They are then cooled or deep-frozen:

By contact with the cooling plate: conductive exchange between the products and the heat exchanger plates where the cooling capacity is at a constant temperature.

With a top evaporator: convective heat exchange between the products and the cold air. The cold air circulates inside the tunnel and passes over the cooling coil and then around the products. The air is pulsed. This improves the surface exchange coefficient, control of the temperature conditions and the air speed.

Comparison with other deep-freezing methods



This curve represents a comparison of various procedures used to deep-freeze a minced meat steak .  
The Multifreezer deep-freezing times are very short compared to other methods.

**CIMS**  
Surgélation 

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