

# Vacuum for Cooling

Fast and Efficient for Turf, Sedum & Mushroom Compost

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Sales | Rentals | Support | Refurbishments

Fast & uniform cooling, to the core minimizing cooling time & energy costs maximizing storage & transportation time

**Turf is harvested, and mushroom compost** is finished at relatively high temperatures: Temperatures can go up to 30 °C in high summer. As they are it is a living products, they continue to create heat (and moisture). To prevent excessive temperatures, loss of life and decreased achievable shipping times, quick pre-cooling is important.

### Pre-cooling for turf & compost is important but challenging.

**Vacuum cooling** is a rapid pre-cooling technology. The vac- uum that we create which is creat- ed in the room forces (2-3%) of the moisture inside the turf/compost to evaporate. The energy that is need- ed for the evaporation is taken from the product, causing the product to cool down. As vacuum is everywhere in the room, cooling takes place everywhere; even to the core of the product.

Vacuum Cooling is the fastest & most efficient pre-cooling method.

For turf & mushroom compost, vacuum cooling is suited very well, and thorough cooling down to 0-5 °C is possible within 30-45 minutes! For short storage times and medium shipping distances, a cooling temperature to around 5 °C or higher can be sufficient. For long distance transportation and long storage times, close to or below 1 °C is preferred.

This can be achieved in a fast and reliable way through vacuum cooling!

Watch our videos

Vacuum Cooling | Compost →

Vacuum Cooling | Sedum →



### A wide range of products can be cooled



Shelf life & transportation time of turf can be extended by up to 2-3 days (when cooling down to around 3-4 °C | 37-39 °F) or even up to a week (when cooled down to around 0 °C | 32 °F).

Distribution with refrigerated trucks is not strictly necessary anymore, although with high temperatures it is still recommended. Minimizing cooling cost for mushroom compost is relevant for increasing your profits. CO2 is a commonly used, but expensive. With vacuum cooling you can save approximately 90% on energy costs, compared to cooling with CO2. The pay-back time of your investment (if you switch from CO2) will be max. 2 years! You start saving money as of day one.

Savings with Hydronic Cooling: We use water chillers to generate the cold needed in the vacuum cool- ers. By buffering the cold water, we can cool large volumes of turf & compost with a relatively small chiller. For greenfield operations the cold water generated by the chiller can also be used to cool your cold rooms! We offer intelligent solutions that save on investment costs, amount of refrigerant used and on installed power, while at the same time maximize your up-time and minimizing maintenance & repair costs.





## Weber Cooling is leading in vacuum cooling

A special range of extra powerful vacuum coolers has been designed to cool both turf and mushroom compost. For compost you will need extra protection against the corrosive vapors which are formed during the cooling process. We have modified our cooling system to cope with this.

#### STANDARDIZED SOLUTIONS:

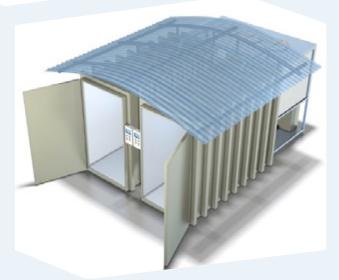
Our standardized solutions can handle 4, 6 or 8 standard pallets or bins, with around 1.000 kg of turf/compost.

Our dual room systems are designed for 12-16 pallets, our triple room configuration can handle up to 24 pallets per load.

#### TAILOR MADE SYSTEMS

We also offer Tailor Made Systems based on our standard range and Ultimate Solutions which are completely tailored to your specifications.





### Market references

**For turf** we've supplied vacuum coolers to customers in Europe and the USA. "With our 2 × 8 pallet cooler (each pallet 1.360 kg) we can cool down to 5 °C | 40 °F in only 22-23 min. To reach 1 °C | 35 °F we only need 30-35 min" says Marty, from IndySod, USA. "By using Weber Cooling's vacuum technology, we save on shipping costs, and are much more flexible in our delivery, and can provide our customers with absolutely fresh turf! No other solution could have provided us which such effective cooling!"

**For mushroom compost** (and mushrooms!) we've installed vacuum solutions at multiple customers in Europe and Asia. "With our 6-pallet vacuum cooling we can cool our mushroom compost back to 1-5 °C | 35-41 °F within 25-40 minutes. The operational costs of vacuum cooling are much lower than what we used to spend on CO2 cooling. With vacuum we can cool fast, reliable & homogenous!" according to a satisfied user.

### We have made Vacuum Cooling for Turf & Compost affordable for YOU!



Up to **80% savings** on cooling space & energy



Up to **90% savings** on cooling time



### Weber Cooling is the world leading supplier of Vacuum Cooling Solutions

We ONLY do vacuum cooling, for ALL applications where vacuum cooling is used. We've developed dedicated, tailor made solutions for each of these vacuum cooling applications.

FOOD APPLICATONS Bread & Pastry | Food & Kitchen | Rice & Sush

#### FRESH APPLICATONS

Vegetables & Herbs | Flowers & Cold Chain | Turf, Sedum & Substrate

#### Weber Cooling can provide highest quality solutions at lowest costs, thanks to our:

- Economies of scale we are the largest vacuum cooler supplier in the world.
- Low overhead we combine a lean and agile organization with a strong partner network.
- Intelligent design using modular technology and innovative solutions.

### We focus on CO2-reduction – for a greener world!

For all our vacuum cooling systems we now offer 'Hydronic Cooling". This technology is extremely energy efficient and guarantees highest cooling speeds. It reduces the amount of refrigerant by up to 70% and minimizes the risk of leakages.

We can also offer "zero-GWP" cooling solutions, using natural refrigerants like CO2 and Ammonia.

With regional offices in Europe & Asia and a dedicated worldwide partner network we provide fast & reliable maintenance & support. At our head office in the Netherlands we have testing facilities with our demo- and research vacuum coolers for on-site testing.



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