



VACUUM FOR TURF
COOLING & COMPOST

Performance & Savings!



VACUUM COOLING for Turf & Compost

**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 vacuum that we create which is created in the room forces (2 – 3%) of the moisture inside the turf/compost to evaporate. The energy that is needed 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!



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 coolers. 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.



COOLING

Up to **90%**
Savings on cooling time
Up to **80%**
Savings on cooling space & energy



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.

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

WEBER COOLING

Market references

For turf we've supplied vacuum coolers to customers in Europe and the USA. "With our 2 x 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.



Ultra-fast cooling of vegetables & herbs
Allowing for same-day-to-market deliveries
For quality preservation and waste reduction
Reducing the heat load in your cold room storage
Increasing your storage capacity and/or shipping times



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.

FRESH APPLICATIONS

- VEGETABLES & HERBS
- FLOWERS & COLD CHAIN
- TURF & COMPOST

FOOD APPLICATIONS

- BREAD & BAKERY
- FOOD & KITCHEN
- SUSHI & RICE

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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