



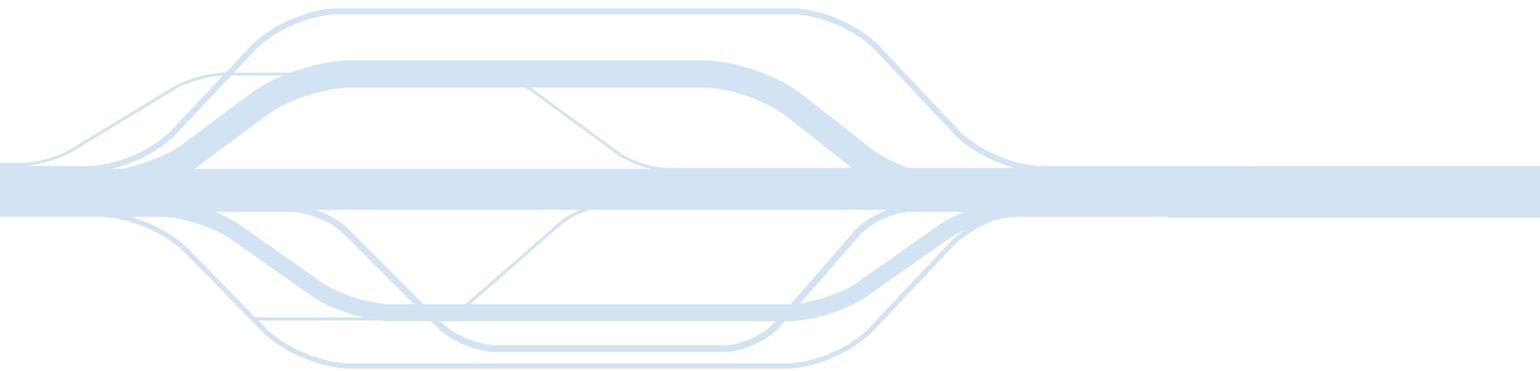
Hot air for
effective, reliable
goods wagon deicing

EPN
DEICING
SOLUTIONS

Fast thawing of frozen freight

Deicing with the aid of hot air is an extremely fast, energy-efficient method for thawing frozen freight such as dressed ore and other bulk goods. For example, using EPN Solutions' method an ore car can be deiced within 3-4 minutes. Better yet, equipment start-up and recovery time between each deicing cycle is very fast.

EPN Solutions' deicing equipment is based on accessibility and operational reliability. The method was developed to entail low downtime and minimum maintenance. Many problems associated with other methods are avoided by using hot air.



Here's how it works

- The wagons are driven through a 'tunnel' located in a building with peripheral equipment.
- High volumes of hot air at 100-200 °C are blown at high speed onto the wagon body and goods.
- The wagons are driven slowly through the tunnel at a speed adapted to the type of goods and prevailing temperature. The deicing process is complete once the wagons have passed through the installation.
- The goods are thawed and can be released from the wagon body. Ready to unload!
- The locomotive chassis and bogies can also be deiced by reducing the temperature to around 60-70 °C and humidifying the air.
- Excess heat from the deicing process can be used for heating buildings and goods storage spaces.

No impact on sensitive equipment

By using hot air in contrast to e.g. hot water, there is no risk of affecting sensitive electrical and electronic equipment on the locomotive and carriages. Deicing is dry, which eliminates the risk of damage such as corrosion.

In energy terms the hot-air method compares well to the most efficient methods on the market, with the added advantages of rapid start-up – ready for use a few minutes from cold, or warmed through for immediate availability. Short recovery times

between deicing cycles result in a high-capacity installation.

High operational reliability and low maintenance costs contribute further to cost-effective operations.

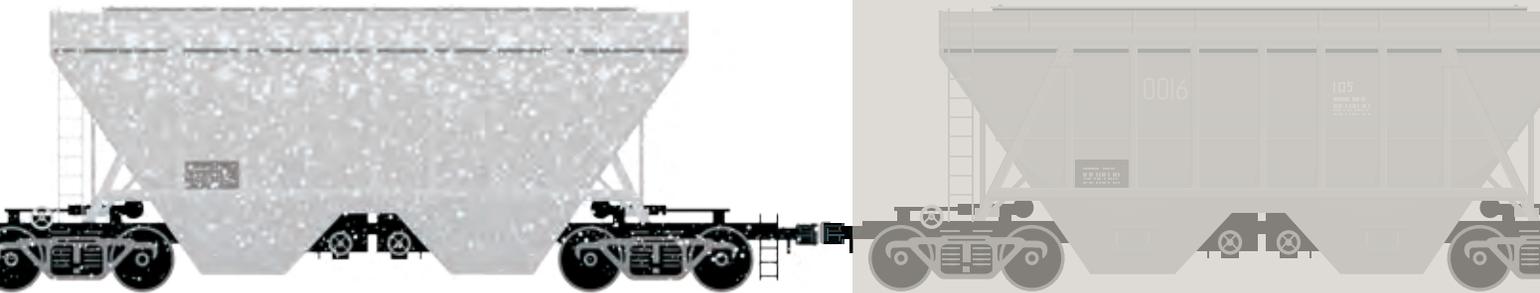
REDUCED COSTS

DEICING



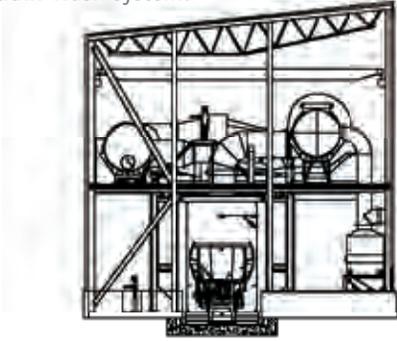
Eco-friendly method

The air in EPN Solutions installations can be heated by several means depending on circumstances on site. LPG, natural gas, ethanol and other types of biogas are all green alternatives whose waste products consist solely of carbon dioxide and water vapour. No need for complicated flue gas scrubbers and expensive hazardous waste handling.



Compact installation

A deicing installation from EPN Solutions is compact for maximum utilization of marshalling yard space. A deicing installation can also be combined to advantage with a train-wash system.



Modular construction for increased flexibility

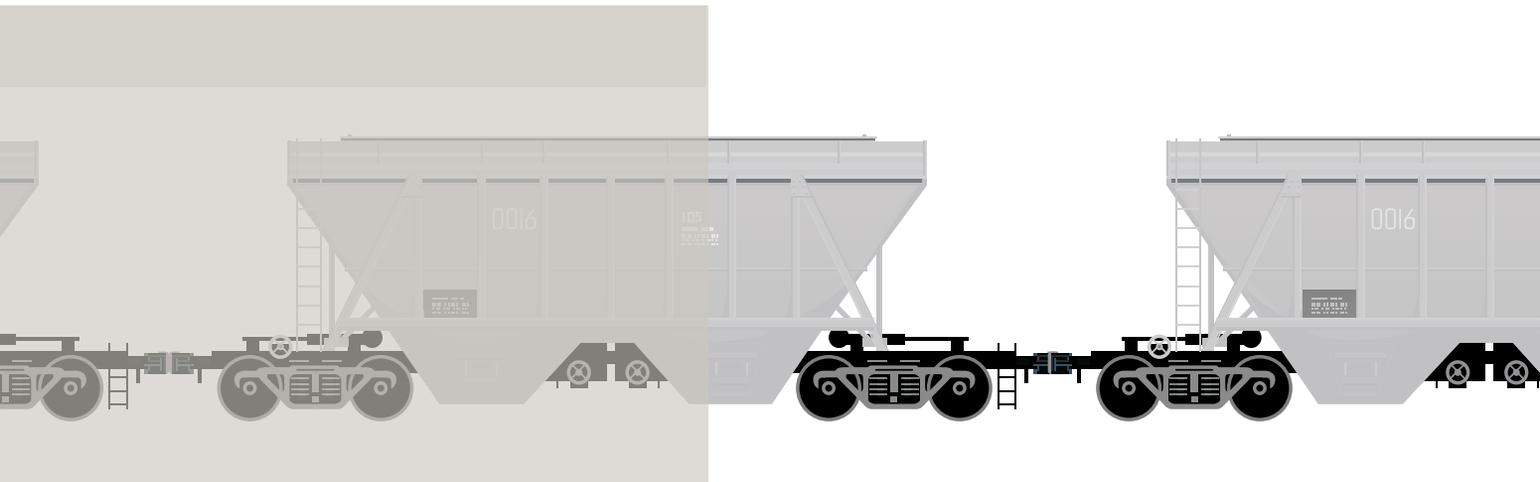
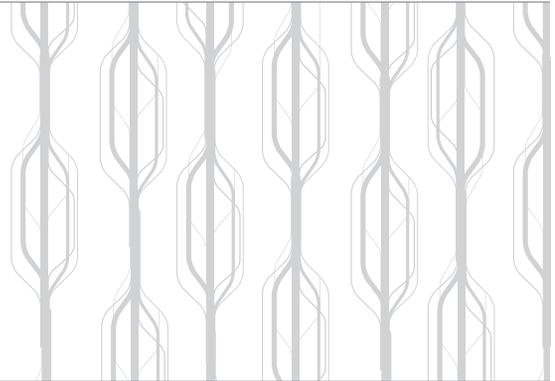
EPN Solutions' deicing installations are of modular construction, which provides flexibility both during assembly and for future use. If needed it is possible to disassemble the installation and relocate it.

Each installation is customized based on capacity requirements and other prevailing conditions.

freight trains

No breaks in the logistics chain

EPN Solutions' hot-air installations are the efficient deicing method for goods shipped in cold climates. They ensure continuous unloading even in the harshest of temperature conditions.



*Using EPN Solutions' method
an ore car can be deiced
within 3-4 minutes.*



Contact us for further information and proposals before your next project.

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