

STAY COOL

GRAIN COOLER



From the country that gave the world the midnight sun, the Nobel Prize, Volvo, and discoveries like the wrench, the ball bearing, the propeller, and dynamite. The Grain Cooler is manufactured by the Swedish company PM-LUFT AB, one of Europe's leading manufacturers of equipment for climate control, with more than 25 years of experience designing and building grain coolers.

PM-LUFT responds quickly if you need help, and customer support is available worldwide.

Naturally, we have a quality assurance system that is compliant with ISO 9001 and ISO 14001.

More facts on Grain Cooler

For more information, please contact PM-LUFT.



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cool down
– cash in!

You have everything to gain from cooling your grain



GRAIN COOLER

It isn't far from Sweden to the North Pole. Though the midnight sun shines round the clock in summer, it's dark and cold for most of the rest of the year. The temperature difference from summer to winter can be as much as 60°C (140°F).

This has taught us to take advantage of cooling – something you can benefit from, too. Manufactured in Sweden, PM-LUFT's Grain Cooler is the best solution for your crops after harvest. Chill them with the Grain Cooler and discover the financial, environmental, and health-related advantages.

cash in on the arctic wind

Suppose

we could increase your productivity and cut your costs. Not possible? Well...

What if

- we could cut your overall energy costs at the same time that your drying capacity is increased?
- we could reduce the fissuring/cracking problem when handling rice and corn?
- we could create a safe storage temperature resulting in an insect-free environment, avoiding highly toxic chemicals?
- we could ensure proper moisture retention?

How is it possible?

Temperature is the single most important factor when storing grain.

Using a PM-LUFT Grain Cooler the temperature can always be controlled, regardless of ambient conditions, and safe storage conditions will be obtained.

Grain is food!

And we can help you treat it that way.

You probably store your milk in the fridge to keep it fresh longer. Grain should be treated the same way.

A PM-LUFT Grain Cooler will give you all the advantages mentioned above, and more.

Too good to be true?

PM-LUFT AB has more than twenty-five years of experience developing and manufacturing Grain Coolers. Our coolers are used in many climates around the world. Any type of grain, rice, or seed can be chilled using our technology.

Seeing is believing!

Try the Grain Cooler and find out how you can increase your productivity and cut your costs!

TOO COOL TO BE TRUE

ECOLOGICAL

Cold cash

In the US alone it is estimated that insects damage at least 10% of all stored grain every year. Translated into cold cash, we're talking about hundreds of millions of dollars.

And if you take into consideration other costs that result from storing grain at the wrong temperature, the figure rises to several billion dollars. High storage temperatures cause weight loss, overdrying, as well as insect infestation, fungus, and mold.

In other parts of the world, as much as 40% or more of the crops can be destroyed after harvest.

By storing grain at the right temperature at all times, regardless of the ambient conditions, storage losses can be avoided or cut to an absolute minimum.

Save energy – and money

A Grain Cooler uses much less energy than traditional storage methods. The cooler only needs to be used periodically, replacing traditional aeration, turning and fumigation. The Grain Cooler also slashes your drying costs. A savings of 50% or more is possible thanks to reduced energy usage and increased drying capacity.

Compare your current expenses to what they would be if you used the Grain Cooler. Experience shows that the Grain Cooler pays for itself in one to two years.

ESTIMATED COSTS

Traditional handling vs. grain chilling of 500,000 bu (15,000 ton) corn. The results will be similar no matter what type of grain being chilled.

TRADITIONAL HANDLING

Drying, from 17% to 15%. Temperature of the Grain after the drier 95°F (35°C)	\$ 40,000
Aeration using two 50 HP fans, two aeration cycles to reach safe storage temperature, 7 cents/kWh	\$ 1,500
Moisture, 14% after aeration, 1.5% shrinkage	\$ 13,000
Turning, three times at 1 cent/bushel each	\$ 15,000
Fumigation, one time, 5 cents/bushel	\$ 2,500
Total cost	\$ 71,590

GRAIN COOLER

Cooling, 0.5 cents/bushel at 7 cents/kWh	\$ 2,600
*Shrinkage, drying shrinkage 1.5%	\$ 13,000
Turning	\$ 0
Fumigation	\$ 0
Total cost	\$ 15,600

TOTAL SAVINGS USING GRAIN COOLER **\$ 55,990**

* The cooling process will reduce the moisture content to 15–15.5% at the same time as a safe storage temperature is reached. Further reduction of the moisture below market trading level @ 15.5% is not necessary and therefore we have not calculated with any shrinkage cost below 15.5%.

Life shouldn't be poisoned

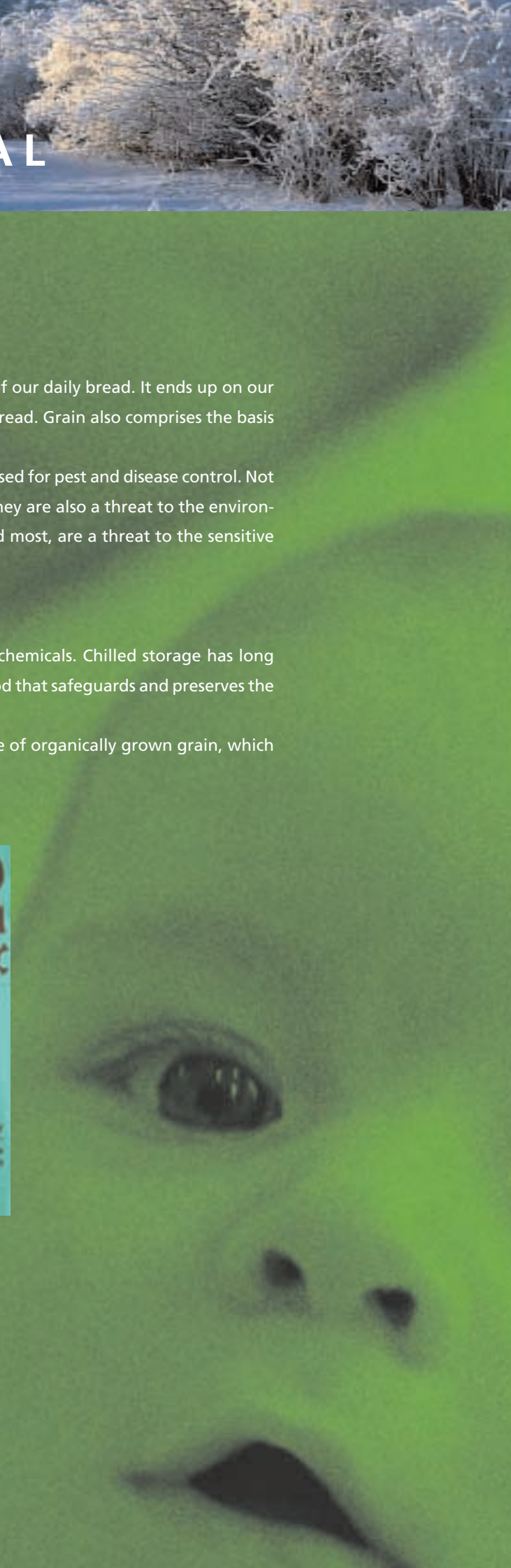
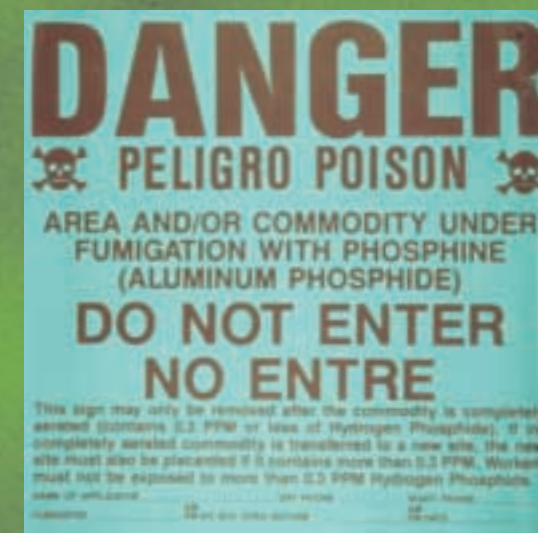
Grain is a living organism and literally a part of our daily bread. It ends up on our dinner tables in the form of cereal, pasta, or bread. Grain also comprises the basis of livestock feed.

Many people are worried about chemicals used for pest and disease control. Not only are chemicals unpleasant to work with, they are also a threat to the environment. Most chemicals, and those that are used most, are a threat to the sensitive ozone layer.

A success in Europe and Asia

By chilling grain, you eliminate the need for chemicals. Chilled storage has long been accepted in Europe and Asia as the method that safeguards and preserves the quality of stored grain.

Cooling is also ideal for the increasing share of organically grown grain, which may not be treated with toxic chemicals.



MORE COOL STUFF

Heat – grain’s mortal enemy

Grain is a living organism; when it breathes, it loses both weight and value. And when the temperature climbs, the risk of pests, mold and bacteria also rises.

Maintaining low, accurate storage temperatures are much more important for preserving the quality of your grain than reducing moisture content. As long as the proper temperature is maintained in relation to the moisture content even grain with a high moisture content can be stored safely.

Less expensive drying

Grain with a high moisture content must be dried. But a dryer devours energy – and money. High drying temperatures also raise the temperature of the grain, which increases the cooling time and creates future storage problems.

With the Grain Cooler its usually enough to cool the grain just once for it to continue to be perfect for storage. Otherwise cooling and drying can be alternated, which is still a much more efficient method than simply drying the grain at a high temperature.

Cooling lasts

When grain is cooled it holds it’s low temperature for a long time. The Grain Cooler can be used in essentially any type of storage.



A compact, practical cooler

The Grain Cooler is compact and moveable on its own wheels. Connect it to the bottom of the silo or warehouse and cooled air is blown in, rises up, and cools the grain.

Warm, moist air is pressed out and replaced by cold air with the correct humidity. Even though the Grain Cooler is placed outdoors it provides the right temperature and relative humidity for cooling stored grain, regardless of weather or wind.

But it’s just as easy to turn grain ...

Turning grain from one silo to another for temperature control is a common method. However, it is very expensive and not particularly effective; it takes time and requires an available silo. Turning also contributes to increased dust formation, which can lead to explosions.

For all grains

Everything needed to cool different types of grain is found in the Grain Cooler’s computer memory. Just choose the type of grain and the Grain Cooler takes care of the rest.

The Grain Cooler is an excellent choice for all types of grain – and most cone-shaped materials – for which a low storage temperature is desirable.