



Case study: Air Treatment
Preventing condensation in tankers at
Kampffmeyer Mills, Berlin

Munters Drytainer™ :

- Condensation-free so products arrive in optimum condition
- Bactericidal desiccant system aids hygiene
- High product quality is maintained
- Increases end customer satisfaction
- Fast and troublefree loading/unloading
- Less frequent and faster cleaning of tank
- Reduced product waste

Munters Drytainer™ protects bulk materials against bacterial growth

Kampffmeyer Milling Group, headquartered in Hamburg, Germany has production in 9 different locations. The company is the leading supplier of high quality milled grain products for the German food industry and bakery trade with production in accordance to the highest quality standards.

Munters Drytainer is being used to prevent

condensation during transport to reduce running costs and the bactericidal qualities improve of the quality of delivered flour.

In Kampffmeyer's Berlin plant, 250-300 tons of wheat flour is daily produced on a "just-in-time"-principle. The products are distributed to the customers straight after production by 5 vehicles, each with a tank

capacity of 20-25 tons. Customers are mostly situated close by enabling multiple deliveries to the same customer daily.

The flour product is loaded onto the container with a product temperature of 28-30°C. As the temperature almost always exceeds the outdoor temperature and the temperature of the container surface, the risk of condensation inside the container is frequently present.

Condensation = Hygienic effects

Condensation is a constant issue for road hauliers as the product quality is instantaneously affected by the risk of mould and bacterial growth and furthermore the unloading of the product can be disturbed and delayed by clogging material.

For more than 7-8 years Kampffmeyer Mühlen in Berlin had been looking for an efficient, competitively priced and simple solution on the condensation issue. Different solutions were tested, however when Feldbinder, the supplier of the silo trailer, recommended Munters Drytainer™, the right solution was found.

Drytainer™ secures high product quality

The Drytainer™ dehumidification system was installed on one vehicle and today Logistic Manager Manuela Ziem concludes that "With Drytainer™ we always deliver a top quality product to our customers in a completely condensation-free tanker. The guaranteed dry haulage environment makes us stand out among our competitors and is highly appreciated by our customers".

The Drytainer™ dehumidifier is practically and neatly installed onto the vehicle and dry air is pumped into the ullage space inside the silo/tank. The dewpoint inside the tanker is kept lower than the outdoor dewpoint thereby preventing the formation of condensation. When loading the warm flour onto the tank on a cold winters day, the driver of the vehicle connects the Drytainer™ to the mains power (or powers it by the truck's own battery) for a short while before filling. This ensures a dry



Driver Mr. Ziemon appreciates the efficient condensation control provided by Drytainer™. The solution is easy to handle and makes cleaning of the tanker both easier and faster as no product is any longer sticking to the inner surface of the tank.

environment in the tank in advance of loading and condensation is no longer an issue. After unloading on customer sites a very fast cleaning by simple brooming is sufficient as no product sticks to the dry inner surface of the tanker. Kampffmeyer's experience is that a thorough cleaning is no longer necessary apart from the mandatory cleaning processes prescribed by regulations from the authorities.

"Even on a cold winter morning the tank remains completely dry after filling. That could never happen without Drytainer™!", the driver, Mr. Ziemon, says.

Best solution available

Feldbinder is one of Europe's biggest manufacturer of customized silo and tank

trailers, railway wagons and containers of aluminum and stainless steel for the transport of liquids and powders.

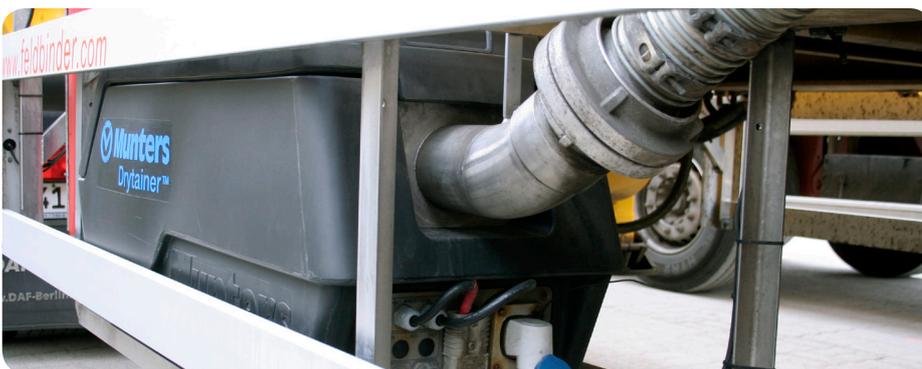
Head of R&D, Mr. Rainald Schulz finds that the Drytainer™ dehumidification system is the best system for solving condensation problems during road haulage.

Mr. Schulz confirms that the frequency of cleaning cycles can be dramatically reduced by controlling the humidity inside the tank, hereby saving both manpower and detergents.

Many companies using Drytainer™ report it

- cuts condensation build-up inside tankers
- ensures product arrives in optimum condition
- keeps tankers clean even up to 6 months running
- saves on vehicle turnaround times
- reduces 'clogging' of in-line filters, so reduces discharge times
- prevents 100's kg of product per load sticking

For more information and for details of Munters desiccant drying technology certified to show significant bactericidal qualities for condensation control during road haulage, please visit www.munters.com/drytainer or contact your nearest office.



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