

Project Report



LiquiDrainer[®] in Airline Catering

Draining filled one-way packagings at LSG Sky Chefs at Munich Airport



LSG Sky Chefs uses the Strautmann LiquiDrainer® for draining



LSG Sky Chefs is an affiliate company of Lufthansa and one of the biggest airline caterers worldwide.

About 490 m meals are prepared annually in more than 200 firms. In Germany the location at Munich Airport is of central relevance due to 320 to 350 flights supplied every day. Annually, 1,250 staff members of LSG Sky Chefs prepare 15 m meals in Bavaria's biggest kitchen; more than 7 m beverages are loaded.

When an airplane lands, beverage containers like PET bottles, beverage cans and TetraPaks® which were opened or emptied during the flight must be disposed of by LSG. Containers still closed are reprocessed. The empty and open containers from returning beverage trolleys are drained and pre-compacted by means of the Strautmann **LiquiDrainer®**.

First, the beverage trolleys are transported from the planes into the sorting hall of LSG Sky Chefs. Then, the individual trays are removed from the beverage trolleys and put on a conveyor. Empty and open containers are thrown directly into the large charging funnel of the **LiquiDrainer®**, those being unused are conveyed to reprocessing.

In the **LiquiDrainer®** a rotor seizes the containers, perforates them and squeezes them out. Containers are pre-compacted simultaneously. Liquids are discharged purposefully and routed through a rough filter box. The drained and pre-compacted containers are ejected automatically via the discharging slide by the following material and collected and gathered in big bags.

Thus, expenses of costly wet waste combustion can be saved.

Figures and facts

Machine type	LiquiDrainer®
Erection	In-house
Operation	7 days a week / 2-shift
Draining process	
Feeding the machine	Manually
Control of the draining process	Fully automatically
Discharge of material	Automatically and continuously
Material	
Reusable material	PET, tin plate and TetraPak®
Output of material	Approx. 500 kg daily



Thanks to the space saving construction the LiquiDrainer® can be integrated into the disposal or recycling process immediately.

Material

The approx. 1,600 beverage trolleys returning every day partly contain unopened, but also opened or drained one-way beverage containers made of PET, tin plate or TetraPak®. Following the draining by means of the **LiquiDrainer®** approx. 500 kg of shredded beverage containers remain.



Material feed

The individual trays of the beverage trolleys are put on the conveyor manually and the beverage containers in them are examined. Unopened containers are taken to reprocessing via the conveyor, whereas empty and opened ones are thrown into the big charging hole of the **LiquiDrainer®**.

Operation

Operating the machine is very easy; throwing in the containers automatically enables the operations of the **LiquiDrainer®**. A revolving rotor roller seizes the material, perforates it and presses it out. The liquid is discharged purposefully and the drained and pre-shredded containers are ejected via the discharging slide.



Logistics

The disposal of the drained containers is very clean and simple. The **LiquiDrainer®** directly ejects them into big bags. Thanks to the reduction in weight and volume bigger containers can be used for transport instead of standard dustbins and even more containers can be moved at one go.

Customer opinion



After formerly opened bottles returning from all over the world were disposed of within the scope of expensive wet waste combustion, a search for an alternative solution began. So, the **LiquiDrainer®** was developed further in cooperation with Strautmann Umwelttechnik.

“Formerly, the entire containers were just packed into dustbins and moved from one point to the next.“ The draining and compaction of the containers resulted in a drastic reduction of travel paths and an immense increase of productivity. Thus, the **LiquiDrainer®** helped to reduce handling expenses to one third.

“For us, an alternative to the **LiquiDrainer®** did not exist.“

(Günter Rusch, Facility
Management, LSG Sky Chefs)

Advantages at a glance

+ Optimum process integration

Thanks to the compact and space-saving construction the Strautmann **LiquiDrainer®** can be used directly in the sorting hall, i.e. exactly at the place where the material occurs. Thus, the handling expenditure can be reduced to a minimum!

+ Easy operation

Containers are thrown in in whole and the pressing operation starts automatically. The **LiquiDrainer®** is very easy to operate and shows an extreme low susceptibility to failures. Therefore, maximum process safety is guaranteed.

+ Fast draining

Containers are thrown in and need not to be opened manually before. They are seized, perforated and squeezed out automatically. Thus, a high throughput is guaranteed.

+ Minimum disposal expenses

Formerly, containers including the remaining contents were taken to the costly wet waste combustion. Thanks to the **LiquiDrainer®** containers are drained now, which allows a cheaper or at least cost-neutral waste disposal. Expenses for the more expensive wet waste combustion do not longer apply!

+ Easy material handling

Formerly, containers incl. contents were collected in dustbins which had to be transported from one point to the next very frequently due to the high weights and large volumes of the containers.

The **LiquiDrainer®** reduces weight and volume of thrown-in containers considerably. Therefore, now definitely fewer travel paths are required for removal. Handling expenses are reduced by two thirds!