

Reducing Wastewater and Chemical Use in Industrial/Commercial Cleaning Applications Using Dry Vapour Technology

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“Changing the way industry cleans”.

PROCESS/PRODUCT DESCRIPTION:

- Super heated water vapour
- Low pressure discharge
- Wastewater and chemical reduction
- Bacteria, mould and pathogen elimination
- “in place” and mobile solutions



Saturno dry vapour equipment, which has been used extensively for many industrial cleaning tasks throughout Europe for over 20 years, produces a super heated jet of water vapour at 6% moisture, 356F/180C at a pressure of 10 bar (140 psi). Depending on the model, water consumption (and waste water creation) is as low as 1 and 3 gallons per hour, compared to 200 to 400 gallons per hour produced by pressure washers.

The superheated vapour breaks the physical bonds that hold biofilm, oil, grease, mould/mildew and contaminants to surfaces. It penetrates and cleans the pores present in all surfaces including glass and stainless steel and the intense heat sanitizes surfaces killing bacteria, viruses, moulds and mildews. The vapour removes any contaminants leaving the surface free of residues, dry and ready to use immediately. The heat transfer is to the very top of the surface so cool down time is minimal and there is little or no heat load for the facility’s air conditioning to handle.

The equipment can introduce solvents, detergents and other chemicals with the vapour where faster breakdown and cleaning is required. It also comes with a variety of optional accessories, including a

Saturno Dry Vapour Cleaning System

vacuum recovery system, to address almost any cleaning requirement.

Global offers specially formulated detergents, disinfectants and degreasers that are environmentally friendly. Customers can use their own products if preferred.



Removing mould from a cooler wall



Removing grease/oil from a press

Process/Product Applications

- Hazmat clean up
- Meat and poultry industry
- Bakery and Food ingredient
- Restaurants and Food Preparation
- Automotive Industry
- Painting Industry
- Small Parts Manufacturing
- Passivating and Phosphating
- Mechanical and Electromechanical Plants
- Pharmaceutical Labs
- Electronic Labs

Meat Transporting Equipment



Before



After

Saturno vs traditional cleaning methods:

Water reduced from 80 gal to 2.5 gal, detergent reduced from 40 oz to 0.35 oz and time taken shortened from 120 minutes to 15 minutes.

The Saturno equipment can provide effective and efficient cleaning solutions to companies in most industries including manufacturing, food and meat processing/preparation, bakery, service industries and hazmat. Using dry vapour instead of pressure washing or steam cleaning, significantly reduces water and chemical usage, reduces labour, minimizes scheduled downtime and prevents equipment damage.

In Food processing and preparation industries effective cleaning processes are essential to ensure food safety, adhere to HACCP protocols, pass facility audits and avoid product recall or excessive scrapping. The Saturno equipment can clean and sanitize virtually any item including overhead transport chains, machinery, production lines, conveyor belts, production rooms, packaging equipment, refrigeration rooms and freezers quickly and with minimal water and chemical usage.

In addition to savings in labour, chemicals and water, Saturno equipment offers superior protection against pathogens, bacteria and allergens on food processing surfaces and in food products. The Guelph Food Technology Center conducted a series of tests using this equipment to: 1) remove organisms representative of pathogenic strains of E coli, listeria and Pseudomonas; and 2) clear common allergens from various food processing work surfaces. For pathogenic organisms, use of Saturno equipment without any chemicals or sanitizers “*resulted in counts below the limit of detection... or significantly reduced (3-4 log reduction) across all work surfaces*”. For allergens, use of Saturno, after normal pressure cleaning using 60 C water, resulted in “*allergen levels decreased by as much as 2 log*

cycles” – their conclusion “a water wash alone is not sufficient to clean food processing surfaces of allergen residues”.

In Mechanical industries degreasing and cleaning of equipment is usually carried out by using expensive detergents, degreasers and harsh chemical solvents. This process carries health and safety risks, expensive wastewater and chemical disposal issues and environmental concerns. Using Saturno equipment, components and parts are degreased and cleaned using small amounts of water and biodegradable degreasers eliminating these problems completely. Oil and chemical spills can be vacuumed up and the vapour removes all traces of the spill even from rough cement. Dry vapour is also very effective at cleaning recessed areas, corners, holes, gears, conveyor belts that are difficult, or impossible, to address with traditional methods.



High temperature high pressure grease removed in 4 minutes with less than 1 cup water and a tablespoon of detergent



Process/Product Operation

- Safe and simple operation
- CSA approved equipment
- Cost effective
- Environmentally friendly

The equipment is easily operated through the low voltage controls on the handle and various attachments such as brushes, lances, squeegees and suction tools are available to provide custom cleaning solutions. As a result of this design and the low operating pressure, there is no scald hazard for operators. It is also safe to use around sensitive electrical equipment, motors, circuit panels, electrical outlets, etc due to the low moisture content of the vapour.

Water usage can be reduced by up to 95% compared to pressure washing significantly reducing supply and disposal/treatment costs. Reduced

chemical usage results in savings on supply and storage of chemicals and solvents with savings of 50% easily achieved, and many customers reporting 80 – 90% reductions.

Time and labour can be saved by eliminating the need to disassemble many types of equipment. Most equipment, including equipment that is usually disassembled and cleaned using a dip process or a spray booth, can be cleaned in place with minimal mess or disruption. The ease with which the system can clean problem areas significantly reduces the amount of scheduled downtime required for scheduled maintenance.

Vendor Information

Equipment Sales and Information:

Global Vapor Ltd.
www.globalvapor.com

Contract cleaning services are also offered. Please check out our website and view our brochures!

Global Vapor Ltd. was established to provide new, innovative, ecological cleaning equipment for industrial use. This technology has been used extensively in Europe for over 20 years with outstanding results. Dry vapour is produced by superheating pure water under pressure which increases the boiling point to 160 C/356F. When it is released as low moisture, high temperature vapour it provides new levels of cleanliness and sanitation while simultaneously reducing cleaning times, costs, water consumption and chemical usage.

Global's mission is:

To contribute bottom line value to the cleaning operations of our customers by providing solutions that:

- *Reduce the material and labour costs associated with cleaning functions.*
 - *Improve operational and cleaning efficiencies.*
 - *Reduce the time and lost revenue associated with planned line shutdowns*
 - *Minimize environmental impact*
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In Partnership with:
REA North America Ultra Vapor
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