



# Drizzling

by ALIT Technologies

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# What is DRIZZLING?



It is a brand-new **dosing and nebulization system** for the application of chrome-free products and nanotechnological passivation products on metal surfaces.



# What is DRIZZLING?



Thanks to **DRIZZLING** the concentrate solution of liquid passivation products will be continuously and in-line diluted with an exact amount of demineralised water, and directly sprayed on parts to be treated.



# What is DRIZZLING?



**DRIZZLING** allows the precise and continuous mixing of demineralised water and passivating product. This creates an always fresh and pollutant-free solution, which is directly nebulised onto the metal surfaces to be treated.



Demineralised water



Passivating agent



**Constant preparation and application of FRESH solution**



**No need of the passivation tank**



# ADVANTAGES OF DRIZZLING



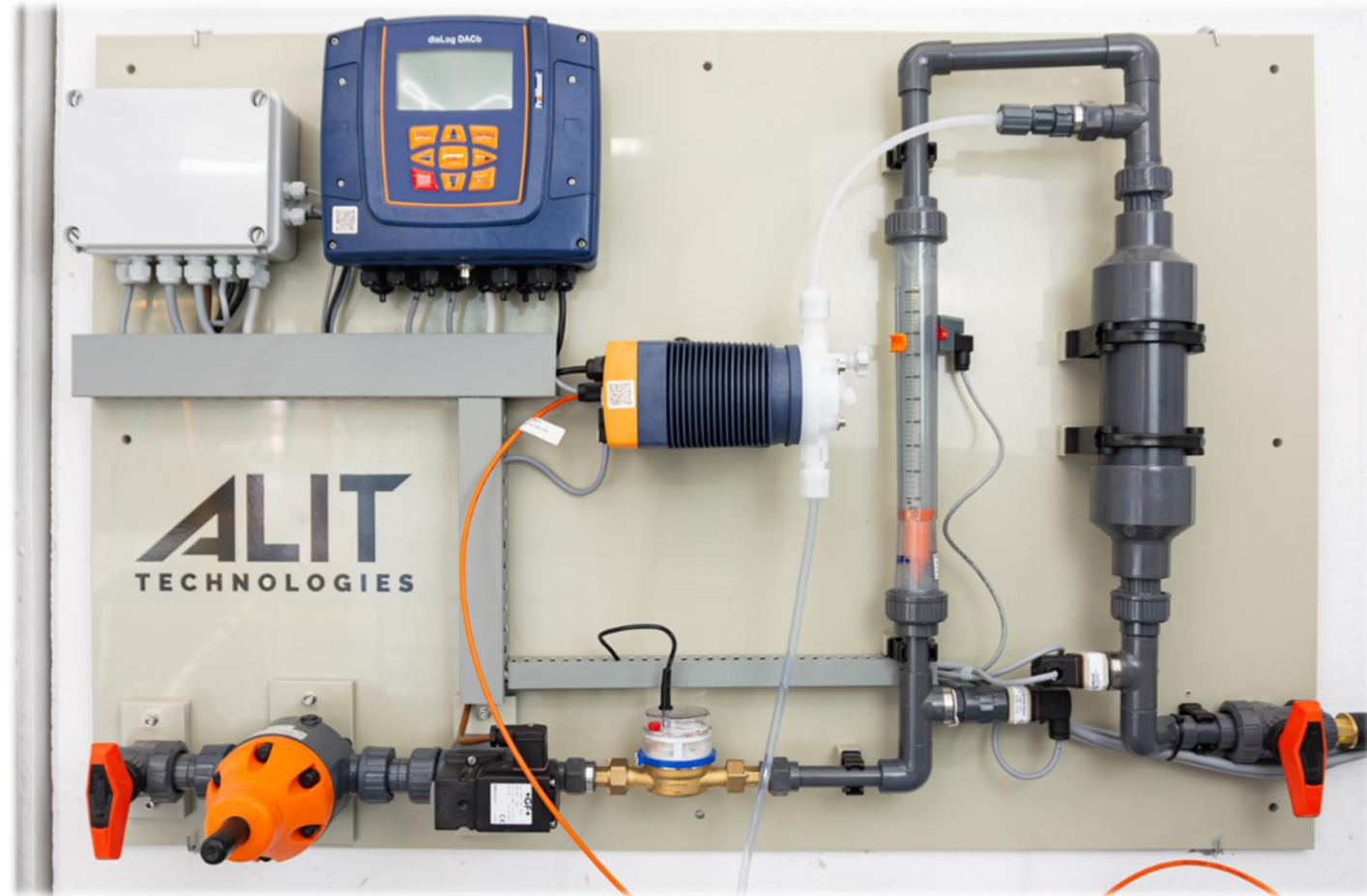
- **No need for a recirculating passivation tank:** thanks to the low volume of solution sprayed onto the workpieces, a tank is no longer required to collect the solution for continuous recovery and re-spraying;
- **Ever-clean solution:** thanks to the reduced volumes of atomized solution, the Drizzling system allows using an ever-fresh, “disposable” solution;
- **No disposal of passivating solutions due to their ageing:** possibility of converting chromate conversion coating lines to chrome-free lines easily and with guaranteed success;
- **Minimum space requirements,** as the demineralized water feeding tank can be installed outside the line, if a process tank cannot be used. Moreover, the system can be easily mounted within an existing tunnel.



# THE DOSING PANEL

## THE DOSING SYSTEM WITH PLC IS COMPOSED OF:

- Flow pressure and conductivity control of incoming demineralized water
- Conductivity control of the mixed solution (indirect concentration measurement)
- Product level control in the drum
  - Remote alarms



# THE DISTRIBUTION PANEL

## DISTRIBUTION SYSTEM IS COMPOSED OF:

- Flow adjustment and control of the water-product solution for each nozzle of the spraying bar
- Configuration settings according the pre-treatment plant
  - Air pressure control



# THE SPRAYING BAR

## THE SPRAYING BAR FEATURES:

- Made of AISI 316L stainless steel
- East to install on already existing lines
- For tunnel heights of 2 to 8 meters
  - One spray ramp
- Electronic flow control of the water-product solution for each nozzle (OPTIONAL)





# ALARMS

- Minimum level alarm in the demineralized water tank
  - Alarm in case the conductivity of the incoming demineralized water is too high
- Alarm in case the incoming demineralized water flow is too low
- Alarm in case the conductivity of the water-product solution lies outside the optimal range
  - Minimum level alarm in the drum containing the product to be dosed
  - Alarm in case the outlet flow is too low for each nozzle (OPTIONAL), if a nozzle is clogged

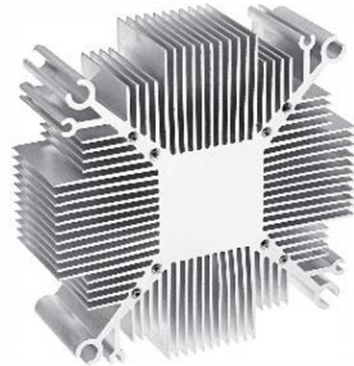


# DRIZZLING – CASE STUDY

DRIZZLING installed in a vertical powder coating line for aluminum profiles

## Painting line in Northern Italy

**Qualicoat** approved company from 30 years  
Big producer of aluminium profiles and micro-profiles:  
from extrusion, to anodizing and painting



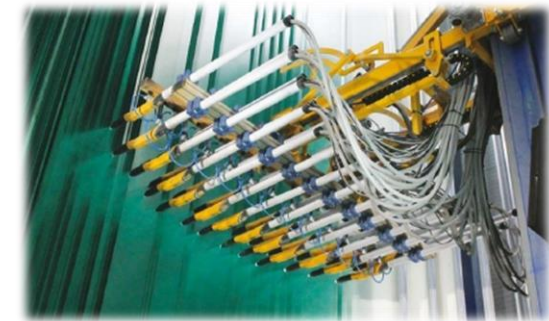
**15** Tons Aluminium/day (1x8h)

Pre-treatment line with:

- Alkaline degreasing
- Acid deoxidation
- **DRIZZLING** passivation

**800** m<sup>2</sup>/h

Pre-treated and painted surface



# DRIZZLING – CASE STUDY

DRIZZLING installed in a vertical powder coating line for aluminum profiles



800 m<sup>2</sup> /h

Pre-treated and painted surface

400 l/h

DRIZZLING liquid solution sprayed on profiles

1.0 Kg/h

Consumption of passivating agent



# DRIZZLING – CASE STUDY

DRIZZLING installed in a vertical powder coating line for aluminum profiles



**2-4** mgTi/m<sup>2</sup>

Passivation coating layer

**400** l/h

**DRIZZLING** solution to the waste line

**Electronic flowmeter control** of the water-product solution for each nozzle:  
Perfect quality!



# DRIZZLING by ALIT Technologies



Which services do we offer?

- Engineering and customization of **DRIZZLING** technology
- Internal **DRIZZLING** assembling
- Express delivery to the final customer
  - Easy Installation
- Testing-training-analysis





Thanks for your attention!