

WATERWASH

VS

CO₂ CLEANING



Multi-step cleaning process using water, chemicals, rinsing, and drying.

Requires significant utilities, wastewater treatment, and large floor space.



Single-step cleaning process that removes contamination using solid CO₂ crystals.

No drying or downtime required between steps. Compact, efficient, and sustainable solution.

Processes Involved

Spray wash, chemical wash, reverse osmosis rinse, drying/ventilation, wastewater treatment



Processes Involved

CO₂ spray cleaning

Energy Use

Approximately **265 kW*** per hour



Energy Use

Approximately **30 kW*** per hour

Emissions

Approximately **168 kg*** of CO₂ per hour



Emissions

Approximately **26 kg*** of CO₂ per hour ⁽¹⁾

Operating Cost

Approximately **\$100*** per hour



Operating Cost

Approximately **\$18*** per hour ⁽²⁾

*Reference: "Replacing 5-Stage Power Wash for Automotive Plastics Cleaning" – presented at FABTECH 2025

1. Emissions do not include 42 kg/hr CO₂ spray usage

2. Operating cost includes CO₂ supply, clean dry air (CDA), and electricity