

Industry: General Manufacturing

Item to Clean

Extruded aluminum ski covers (approximately 5" × 77")

Contamination

Water-soluble coolant and aluminum chips

Cleanliness Requirement

Chip-free surface; removal of loose chips prior to downstream processing

Dryness Requirement

As dry as possible using air blow-off, with parts exiting nearly dry

Production Rate

One part every 30–40 seconds (5.25–7 FPM), processed side-by-side

Customer Background

Customer is a leading manufacturer of precision aluminum extrusions serving the automotive, transportation, construction, and industrial markets. The company produces complex aluminum components that require consistent cleaning before downstream manufacturing and finishing operations.

Challenge

The customer needed to remove water-soluble coolant and loose aluminum chips from long extruded ski covers measuring approximately 77 inches in length. The system had to maintain a continuous production rate of one part every 30–40 seconds while processing two parts side-by-side. In addition to achieving chip-free surfaces, the parts needed to exit the washer nearly dry to minimize handling issues and support efficient downstream operations.

Solution

Alliance Manufacturing proposed an Aquamaster CB-1614F conveyORIZED parts washer featuring a heated wash stage, heated rinse stage, intermediate blow-off, and final blow-off drying. The system was configured with stainless steel pumps, optional heated blow-off capability, micro-filtration, contamination monitoring, automatic chemical injection, and oil skimming to maintain cleaning performance while reducing maintenance and extending solution life. The automated conveyor system delivers consistent cleaning results while supporting high-volume production requirements.

Cleaning Method

Parts travel continuously through an inline aqueous cleaning process consisting of a heated spray wash to remove coolant and chips, followed by a heated rinse to eliminate remaining residues. Intermediate blow-off zones reduce solution carryover between stages, while a high-velocity air blow-off section removes residual moisture, allowing the long aluminum extrusions to exit the system clean, nearly dry, and ready for the next manufacturing operation.

