Case Study: Robotic Surface Finishing Application on Complex Aluminum Shapes

Lanulfi Achieves Cost Reduction Through Abrasive Automation

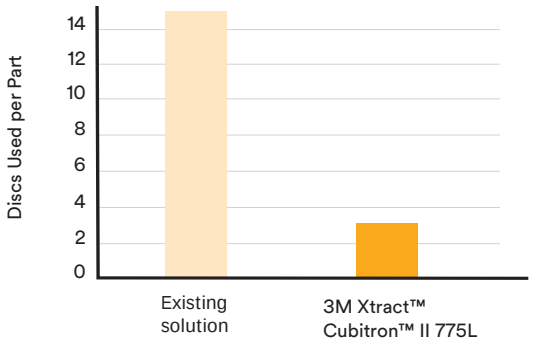
Customer Challenge: Lanulfi, a manufacturer of steel and aluminum molds, accepted a new order for the production of aluminum molds for bus sides. The customer ordered a large volume and required tight delivery times.

Problem Solved: The automation experts at Roboticom helped Lanulfi evaluate and introduce an innovative robotic system to manufacture aluminum bus sides and satisfy their customer. Economic, social and environmental considerations led Lanulfi to adopt a robotic technology specifically developed for their production needs.

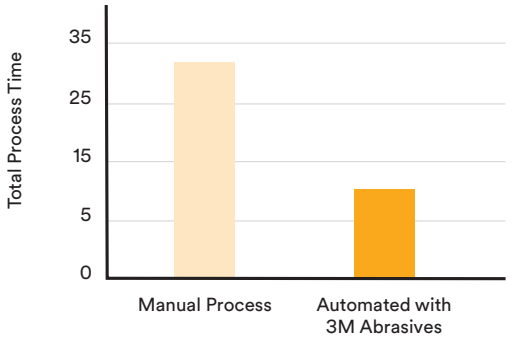
Roboticom involved 3M Abrasives at an early stage, quickly identifying the right abrasive products to speed up the project timeline. This new automated process uses the latest generation of 3M Xtract™ Cubitron™ II Film Disc 775L with a diameter of 150mm and 75mm for removal and pre-finishing operations, and 3M™ Film Disc 375L for fine grade finishing.

By automating these processes with abrasive discs from 3M, Lanulfi was able to realize significant efficiency gains. In the robotic sanding process, each disc change takes about 30 seconds. During the same cycle, using the same grades, the existing solution uses 15 discs. Achieving the same results with the 3M solution requires only three discs — a 5X reduction in discs used per part, resulting in significant cost savings.

From Lanulfi CEO, Marco Lanulfi: “The time savings obtained are truly remarkable, just consider that to carry out the finishing operations with the robot 10 hours per mold are required today, versus the 32 hours that would have been necessary with the use of the labor of two operators for two days.”



5X **Fewer Discs per Part**



68% **Faster Process**

Solution Spotlight:

3M Xtract™ Cubitron™ II Film Disc 775L

As robotic material removal grows more common, manufacturers require abrasives optimized for automated processes.

3M Xtract™ Cubitron™ II Film Disc 775L is powered by 3M Precision-Shaped Grain, a self-fracturing ceramic grain that cuts fast, lasts long, and requires fewer disc changes. Its film backing offers excellent tear resistance and edge retention, contributing further to the product's long lifespan.

These characteristics make 3M Xtract™ Cubitron™ II Abrasives an ideal choice for a wide range of robotic grinding and finishing processes.

Thanks to a strong relationship between Roboticom, Lanulfi and 3M, Roboticom was able to provide its customer with a new, automated production process. This new process enables Lanulfi to be more flexible, efficient and productive in the metalworking industry.

Long Product Life

Fewer Disc Changes

Legendary Cutting Speed

Lower Labor Cost

Ready to talk about your process? **Contact your local 3M Sales Representative today.**

3M Abrasive Systems Division
3M Deutschland GmbH
Carl-Schurz-Str. 1
41453 Neuss | Germany
Tel: +49 2131 14 2710
www.3m.co.uk/Robotics

LANULFI MOULDS S.R.L.
Via dell'Industria n. 1 36010
Monticello Conte Otto VI - Italy
(+39) 0444 946083
info@lanulfi.com

Distributed by 3M Premium Robotics and Automation Partner:

roboticom
Advanced Robotic Applications
Via Giuntini, 13 56023
Navacchio di Cascina (PISA) ITALY
Ph: +39.050.3148655
https://www.roboticom.it