

ROBOTIC SANDING AND POLISHING

The ramping up of current production programs for many industries and meeting customers requirements (OTD, quality, repeatability...) both imply constant investments in high performing production means.

With manufacturing processes being more and more robotized, the appreciation of the amounts to be committed can now be re-evalutated. When choosing robotics for parts finishing upstream the machining process, it is now possible to limit costs and liberate these dedicated means.

END-EFFECTORS PROCESSES

In order to improve the surface appearance of shaped parts post-machining, GEBE2 has developped and mixed both polishing (minimizing surface roughness) and sanding (uniform visual aspect) processes in one robotic cell. The robot moves along the workpiece applying a rotary tool fitted with an abrasive material with a controlled force. Great care has been taken to create trajectories in order to obtain uniform roughness.

End-effectors processes specifications

	Polishing	Sanding
Technology	Rotative	Roto-orbital
Rotation speed	0-10 000 rpm	
Abrasive diameters	50/80/100/150 mm	80/150 mm
Grains	Standard	
Controlled force	Yes (0-100N)	



Aluminum panel stripping ►

Polishing machining grooves on titanium



GEBE2



EQUIPMENTS INTEGRATION

Abrasive management	Manual/Automatic	
Dust management	Collection system/At source	
Part loading	Manual/Automatic	
Autonomy	Multiple storage with various grain and size	
Part programming	Turnkey/independance (CAD-CAM software)	

Robotized cells

GEBE2 also provides full conception and manufacturing and robotized cells with polishing and sanding processes.



PROGRAMMING

Sanding robot programming might involve a toolpath programming via a computer-aided manufacturing process.

Integration of the effector to the robot allows to assure the normality of the sanding tool in relation to the surface of the part besides the right contact between the abrasive and part.

PROCESSES ROBOTIZATION / FEASIBILITIES

GEBE2 have available a dedicated team and test platforms to help determining robotic parameters regarding the required process or carry out your technical feasibility studies.



