

ROBOTIC SANDING



Inescapable step within parts manufacturing, sanding still is a tedious, manual operation with erratic quality. In order to get this processes automated, GEBE2 has developed a sanding robot working using :

- A smart effector able to reproduce man's gesture
- Specific programming methods
- Automated management of sanding consumables

MULTITASK EFFECTOR

Robotized sanding is based on controlling two key functions :

- sanding discs methods
- contact pressure

Dust is collected around the sanding disc.

Two versions of effectors are available:

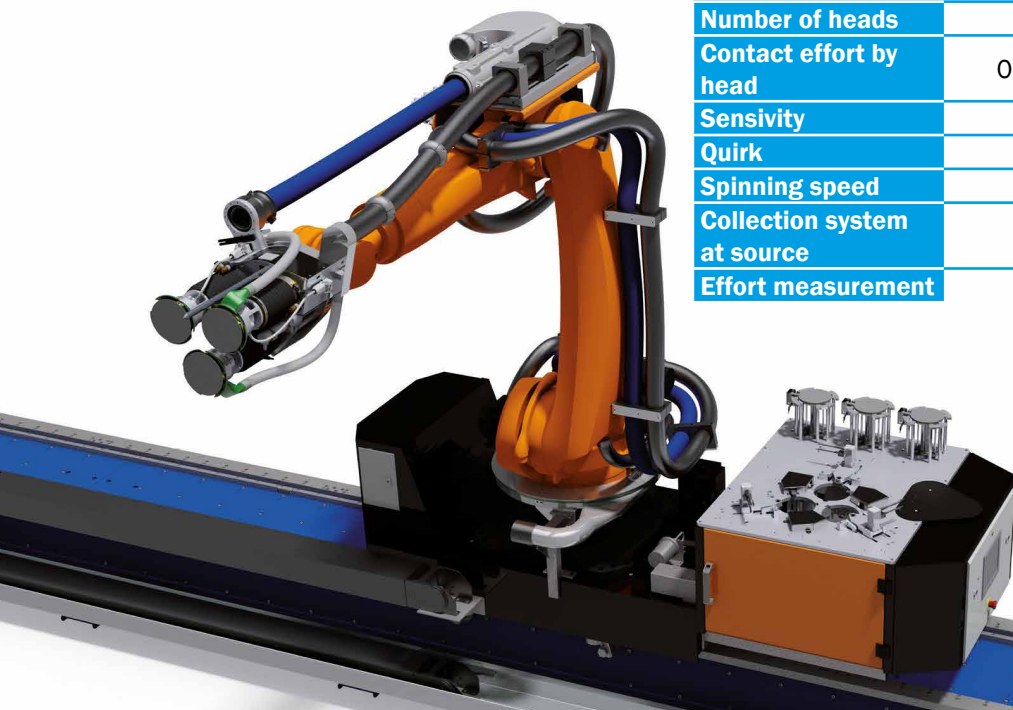
- a single-head effector for small parts with a complex geometry.
- a multi-head effector for an optimised productivity on large parts.



Single-head or three-head effector

EFFECTOR RANGE

	Single-Head	Three heads
Disc diameter	80 or 150 mm	
Number of heads	1 to 4	
Contact effort by head	0 to 100 N	0 to 200 N
Sensivity	1 N	2 N
Quirk	2.5mm 5mm or on request	
Spinning speed	0 to 10 000 rpm	
Collection system at source	Standard	
Effort measurement	Optional	



PROGRAMMING

Sanding robot programming might involve a toolpath programming via a computer-aided manufacturing software (CAM).

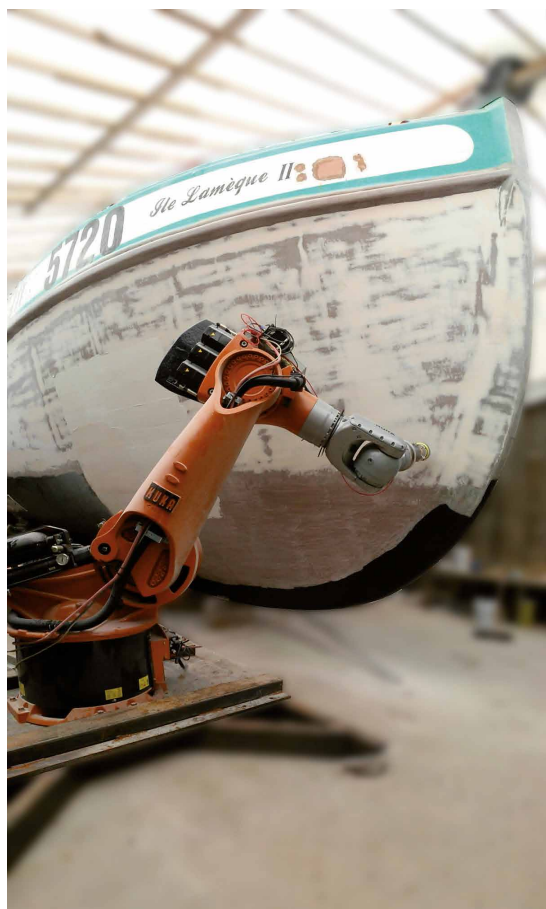
In the case of low-curved parts, we offer a semi-automated programming; the robot generates its own path from 4 positions learned on the complex surface. This simplified programming method allows a quick setup by the operator.

In both cases, 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.

ABRASIVE MANAGEMENT

In order to get the robot more autonomous while doing its duty, an automatic disk replacer is available.

Used disc removal	Yes
Disc removal control	Yes
New disc setup	Yes
Disc replacement cycle time	20s
Storage capacity	50 disks
Multiple storage with various grain and size in option	



Automated sanding on a boat hull

Robotic sanding on an aeronautic part

