

DATASHEET

OMNIVANCE™ COLLABORATIVE SURFACE FINISHING CELL

Collaborative robotic solution
for flexible finishing tasks



OmniVance™ Collaborative Surface Finishing Cell is an easy-to-use and flexible surface finishing solution, which employs a collaborative robot (cobot) to execute automatic polishing or sanding.

The solution is suitable for various materials and geometries, from flat shapes to 3D forms, enabling consistent performance across different part types. This automated system boosts production by improving efficiency, ensuring consistent quality and preserving operator health by automating repetitive surface-finishing tasks.

The OmniVance™ Collaborative Surface Finishing cell is extremely easy to use. Thanks to its revolutionary application software Surfin Companion provides a very intuitive and collaborative experience. It allows any operator, even first-time users and those not trained in robotics, to create and execute automatic polishing or sanding within minutes.

Key benefits for the customer

- **Lower deployment costs and faster ROI:** delivered as a complete plug-and-play solution, including cobot and safety components, it does not require additional engineering effort. The cell is already validated and ready to switch on and begin production.
- **Higher productivity with minimal setup and programming effort:** user-friendly software, intuitive interaction and automatic path generation allow operators to become productive quickly, creating and executing finishing sequences in minutes and reducing programming time — ideal for accelerating turnaround in high-mix environments.

The software also includes Easy Record, a groundbreaking feature that automatically generates the robot's motion simply by guiding the arm by hand through lead-through functionality. This makes path creation faster and more natural, reducing programming time by up to 70%.

Certified finishing performance and operator well-being

Equipped with GoFa™'s integrated Force Control, precise tactile sensing and intuitive lead-through programming, the cell ensures consistently high-quality surface finishing across every job. Prepared for efficient dust extraction, the cell maintains a clean, healthy workspace while the cobot takes over the most repetitive and strenuous tasks. This safeguards operator's well-being and boosts overall process consistency and quality. With a fully plug-and-play design and CE certification, the cell is fast to deploy and eliminate engineering and integration costs, delivering guaranteed results from day one.

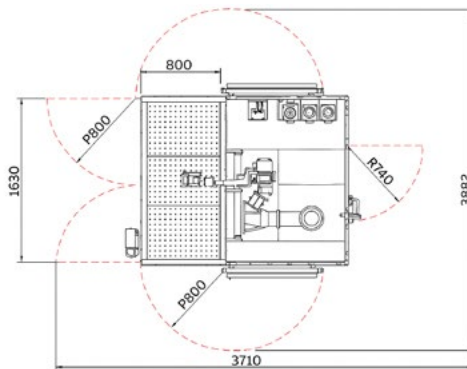
- **Consistently high-quality finishing with less rework:** GoFa™'s integrated Force Control, precise tactile sensing and intuitive lead-through programming ensure repeatable, high-precision surface finishing across different parts and materials.
- **Safer, cleaner and more ergonomic working conditions:** its predisposition for efficient dust extraction maintains a clean and healthy environment, while the cobot takes over repetitive and physically demanding operations, reducing operator exposure to dust, strain and hazardous tasks.
- **Certified safety and compliance for peace of mind:** ABB's CE-marked design provides a fully compliant and inherently safe operating environment, simplifying internal approval processes and ensuring reliable, risk-free operation for users.

FEATURES	BENEFITS	High uptime / Reliability	Easy to use	Flexible operations	Higher efficiency	LVHM* productivity	Costs optimization	Safety & CE
Layout								
Reduced footprint				●	●		●	
Plug & play solution			●		●		●	●
Installation								
Turnkey solution: pre-tested and ready to operate		●					●	●
Programming								
Motion path creation through manual robot lead			●	●	●			
2D & 3D shape motion path generation			●	●	●			
Easy path/targets editing directly from the flexpendant			●	●	●			
Easy Teach Device for smooth tasks programming **			●	●	●			
Easy and flexible cycle generation with Wizard			●	●	●			
Application and process management								
EOAT*** prepared for dust extraction					●			
Bench prepared for dust extraction					●			
Precise control of surface contact force				●	●	●		
Precise control of finishing tool speed				●	●	●		
Easy recall of process parameter recipes			●	●		●		

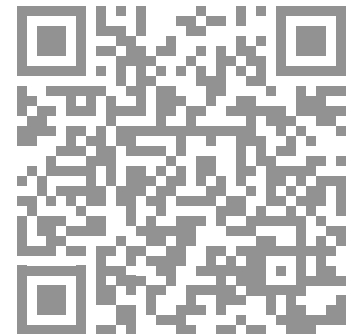
* low volume / high mix

** Optional

*** End of Arm Tool



How it works



CONFIGURATION / PRODUCT VARIANTS

OPTIONS	PRODUCT	OmniVance™ Collaborative SF Cell SANDING	OmniVance™ Collaborative SF Cell POLISHING
ABB GoFa™ robot 12 kg payload 1270 mm reach with integrated force control		●	●
Electric process tool		●	●
Prepared for volumetric dust extraction – bench		●	●
Prepared for high prevalence dust extraction – tool		●	
ABB Surfin Companion software for full control of all cell functionalities, including the creation of process recipes		●	●
Dedicated sanding/polishing Wizard blocks ready to use		●	●
Easy Teach Device *		●	●
Automatic abrasive changer kit with remover unit and storage 77–125 mm *		●	
Additional abrasive discs storage 77–125 mm *		●	
Additional electric tool sanding 77–125 mm or polishing 77 mm *		●	●
Electrical cabinet cooling system *		●	●
Cobot protection kit *		●	●
Clamping part fixing set *		●	●
Non metallic high prevalence dust extractor – tool *		●	
Metallic high prevalence dust extractor – tool *		●	
Workbench 1800×800 mm, Ø16 mm workpiece clamping holes, max load 260 kg/m²		●	●
CE Certification		●	●

* Optional

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