



MIRKA AUTOMATION

– The first smart sanders and polishers for industrial robots

The Mirka Automated Industrial Random Orbital Sander, Mirka® AIROS is an industry first. It is an electric smart sander for industrial robots, built inside a sturdy yet light aluminium housing, featuring an ISO 9409-1 compatible flange for mechanical robot coupling. It can be adapted to fit all mechanical couplings, offering maximum flexibility. The long-life, brushless 48V motor on the AIROS is extra safe for wet sanding, and it runs on constant, configurable RPM.

1 EASY TO INTEGRATE

Mirka® AIROS is light electric sander that is easy to integrate, requiring lower weight handling capacity and saving electricity compared to traditional pneumatic options. Mirka® AIROS is specifically designed for robotic sanding application and built for continuous usage in robotic environment. Mirka® AIROS has standardized connections ensuring faster and easier installation and maintenance, resulting in reduced downtime and improved productivity. Mirka® AIROS is equipped with custom flanges for most robot types to offer maximum flexibility by enabling all mechanical couplings from standard ISO to be customised by means of an adapter.

2 SMART SANDING SOLUTION WITH EXACT RPM MANAGEMENT

Mirka® AIROS has built-in intelligence that allows two way communication between Mirka® AIROS and control system. Full live control of sanding process ensures consistent quality and enables controller to learn about application and even improve the quality based on logged data. Additionally smart electric sanding solution enables full control over RPM that can be configured according the needs of different phases of process. Constant RPM ensures consistent quality level that is always reproducible even under higher loads.

3 MIRKA ECOSYSTEM

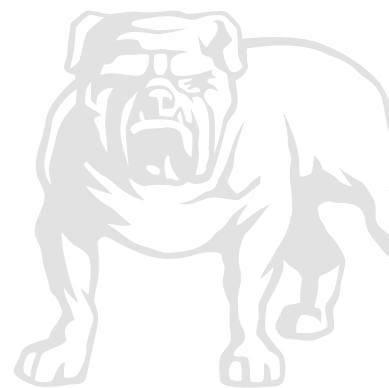
Mirka® AIROS is part of the Mirka ecosystem, making it the most dependable solution in the market. Mirka solutions consist of sanding heads, controller unit, abrasives (including custom designed abrasives for specific requirements) and naturally knowledge and support of true finishing professionals through the whole process. Since Mirka® AIROS sanding head is separate from controller unit, parts are easy to replace decreasing downtime and costs.

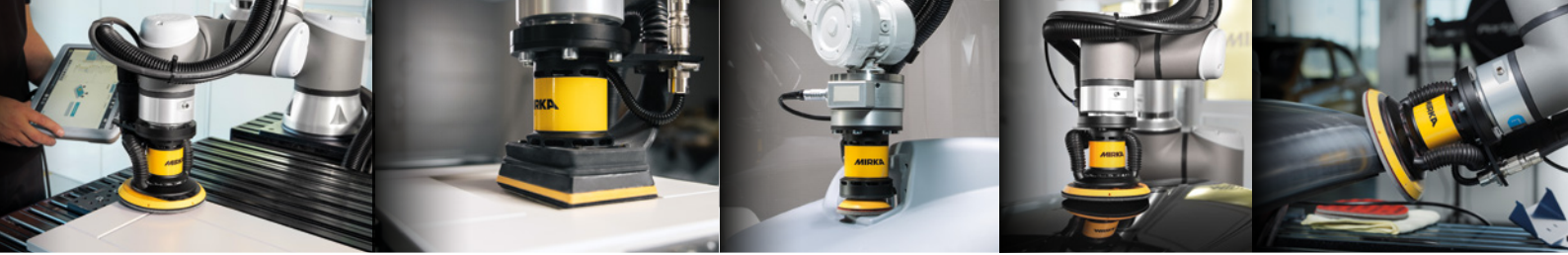
4 DUST & WATER PROOF ELECTRIC SANDER

Mirka® AIROS is an IP66 classified electric sander suitable for all sanding applications, even wet sanding and safe usage on hazardous materials. Dust and waterproof design of Mirka® AIROS combined with a rigid and robust aluminium housing ensure longer lifetime and safer operations. No lubrication oil is needed.

5 MIRKA® AIOS AND AIROP

In addition to the Mirka® AIROS, Mirka offers a model with a non-random sanding pad, the Mirka® AIOS, which is directed for spot repair work in an automated process. The Mirka® AIROP is a random orbital polisher with an advanced electric polishing head, compatible with Mirka polishing pads and compounds. By offering these expansions to the range of robotic solutions, Mirka aims to offer a complete package for automated surface finishing processes.





Specifications

The control electronics are separate from the tool and can be installed in a cabinet or other enclosure. The electronics include:

- Circuit board with speed controller and relay
- 48 VDC power supply compatible with 90 – 264 VAC
- Modbus RTU port for RS-485 serial communication
- Profinet - Modbus gateway (optional)

Mirka Automation sanding and polishing heads

Technical Data	AIROS 150 NV*	AIROS 350 CV/NV*	AIROS 550 CV/NV*	AIROS 650 CV/NV*
Power	50 W	350 W	350 W	350 W
Input voltage	90 – 264 VAC	90 – 264 VAC	90 – 264 VAC	90 – 264 VAC
DC voltage to sander	48 VDC	48 VDC	48 VDC	48 VDC
Speed	4,000 – 8,000 rpm	4,000 – 10,000 rpm	4,000 – 10,000 rpm	4,000 – 10,000 rpm
Orbit	5.0 mm	5.0 mm	5.0 mm	5.0 mm
Weight	0.8 kg	1.1 kg	1.3 kg	1.3 kg
Height	107 mm	113 mm	113 mm	113 mm
Size of pad	32 mm (1")	77 mm (3")	125 mm (5")	150 mm (6")
Ambient operating temp.	0 – 45 °C	0 – 45 °C	0 – 45 °C	0 – 45 °C
Vacuum hose	Not applicable	Ø 27 mm	Ø 27 mm	Ø 27 mm
Communication Interfaces	Modbus RTU RS-485 included. Profinet - Modbus gateway optional. Other alternatives also available.			

Mirka Automation sanding and polishing heads

Technical Data	AIOS 130 NV*	AIOS 353 CV*	AIROP 312 NV*
Power	50 W	350 W	350 W
Input voltage	90 – 264 VAC	90 – 264 VAC	90 – 264 VAC
DC voltage to sander	48 VDC	48 VDC	48 VDC
Speed	4,000 – 8,000 rpm	5,000 – 10,000 rpm	4,000 – 8,000 rpm
Orbit	3.0 mm	3.0 mm	12.0 mm
Weight	0.7 kg	1.2 kg	1.1 kg
Height	127 mm	117 mm	113 mm
Size of pad	32 mm (1")	81 x 133 mm (3 x 5")	77 mm (3")
Ambient operating temp.	0 – 45 °C	0 – 45 °C	0 – 45 °C
Vacuum hose	Not applicable	Ø 27 mm	Not applicable
Communication Interfaces	Modbus RTU RS-485 included. Profinet - Modbus gateway optional. Other alternatives also available.		

* CV = Central Vacuum / NV = Non Vacuum

For more information please visit mirka.com and check our videos on the Mirka YouTube channel

Mirka Ltd Finland

Dedicated to the finish.