

MIRKA

Mirka
**Robotic
Solutions**

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mirka.co.uk

A close-up photograph of the Mirka AIROS sander. The device is primarily yellow and black, with the 'MIRKA' logo prominently displayed on the yellow section. It features a circular sanding head at the bottom, which is currently covered with a red abrasive disc. The sander is mounted on a grey, metallic-looking surface, likely part of an industrial robot arm. The background is slightly blurred, showing more of the robot's structure.

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Mirka® AIROS

– the first smart sander 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 build for continuous usage in robotic environment. Mirka® AIROS has standardized connections ensuring faster and easier installation and maintenance, leading less 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 build-in intelligence that allows two way communication between Mirka® AIROS and control system. Full live control of sanding process ensures the 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. Content RPM ensures the 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 for specific requirements) and naturally knowledge and support of true finishing professional 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 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 rigid and robust an aluminium housing ensure longer lifetime and safer operations. No lubrication oil needed.

Dedicated to the finish.



MIRKA AUTOMATION

- The first smart sanders and polishers for industrial robots



AIROS 150NV

Random Orbital Sander
32mm • 5.0mm Orbit



AIROS 350CV/NV

Random Orbital Sander
77mm • 5.0mm Orbit



AIROS 550CV/NV

Random Orbital Sander
125mm • 5.0mm Orbit



AIROS 650CV/NV

Random Orbital Sander
150mm • 5.0mm Orbit



AIOS 130NV

Orbital Sander
32mm • 3.0mm Orbit



AIOS 353CV

Orbital Sander
81x133mm • 3.0mm Orbit



AIROP 312NV

Random Orbital Polisher
77mm • 12.0mm Orbit



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.			

* CV = Central Vacuum / NV = Non Vacuum

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

ACCESSORIES Robotic Sanding



Backing Pad
150mm



Backing Pad
125mm



Backing Pad
77mm



Backing Pad
32mm
Quick Lock • Soft



Backing Pad
32mm
Quick Lock • Soft Edge



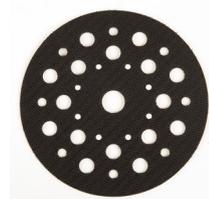
Backing Pad
32mm • Soft



Backing Pad
81 x 133mm



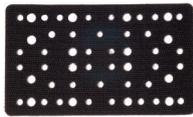
Pad Saver
150mm



Pad Saver
125mm



Pad Saver
77mm



Pad Saver
81x133mm



**Interface 67
Holes Grip**
150mm



**Interface 33
Holes Grip**
125mm



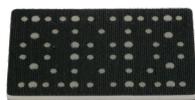
**Interface 6
Holes Grip**
77mm



**Net Interface
Grip**
77mm



**Net Interface
Grip**
150mm



**Interface 54
Holes Grip**
81x133mm



**10m Cable
(Shielded)**
For robot
sanding unit



Hose and Connector
27mm/32mm



Extension Hose
32mm x 10m

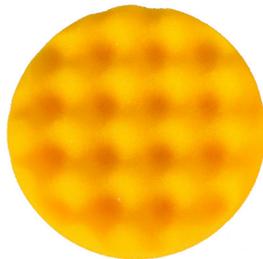


ACCESSORIES

Robotic Polishing



Backing Pad
77mm



**Polishing Foam Pad
Yellow Waffle**
85mm



**Polishing Foam Pad
Burgundy Waffle**
85mm



Lambswool Pad Pro
80mm



Polarshine® 8
Polishing Compound



Polarshine® 10
Polishing Compound



Polarshine® 12
Polishing Compound



BUILD YOUR OWN SYSTEM

- Tailor to your business needs

1 Choose communication integration

- Profinet
- Modbus
- Digital



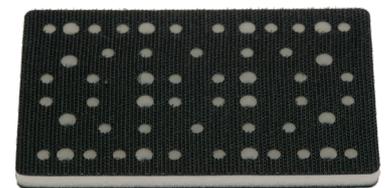
2 Decide your sanding process

By deciding what surface you're looking to sand and what finish you're looking to achieve will help you determine which sanding or polishing head you will require.



3 Accessories selection

The previous step will also help you to identify any accessories you may need, such as: choosing the correct interface pad for sanding curved or profiled surfaces.



4 Abrasive/Polish selection

We have a wide range of sanding and polishing products to choose from depending on your needs. Such as our pioneering net abrasive Abranet for dust free sanding.





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MIRKA WARRANTY

Automated Robotic Solutions - 12 month warranty

Our warranty is our statement of confidence, all of our sanding and polishing tools are designed to be durable and to do what you ask it. Not only that, our products are built to the highest standards of quality and performance.

Mirka robotic sanding tools have a 12-month warranty starting from the date of purchase and covering defects in material and workmanship.



Claims process

To submit a warranty repair claim for your sanding or polishing head, please contact enquiries.uk@mirka.com and complete the Mirka AIROS Repair Request Form.

A warranty claim must be submitted within the warranty period and as soon as possible from the point in time when the defect or problem has been detected.

Tools returned for warranty repair must be accompanied by a valid purchase receipt or invoice.

After Sales and Service

In order to keep the tool warranty valid and ensure optimal tool safety and function, the service on Mirka branded tools must be carried out by the Mirka service centre in Belgium.

Dedicated to the finish.



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MIRKA APPROVED INTEGRATORS

Automated Robotic Solutions

To help you integrate our automated solutions, we've teamed up with cobot integration specialists Cobots Online and RAR UK. Utilising their expertise for industrial and manufacturing applications, we will ensure that you have the correct support throughout the installation process.

Cobots Online



RAR AUTOMATION



Like to know more?

If you'd like to find out more information about the integration process. Simply complete the online form and a member of team will be in touch, alternatively contact **01908 866100**.

Contact us

Dedicated to the finish.

The Mirka logo is displayed in a yellow rectangular box in the top left corner of the page.

Universal Robots Kit

Mirka® Automation + Universal Robots Collaborative Solutions

Our UR installation kit includes the Mirka tool and its motor drive cabinet, cabling and the required UR adaptor flange. A Mirka abrasive sample kit is also included. The Universal Robots kit is available for all the Mirka Robotic Sanding heads: the AIROS, AIOS and AIROP models.



Contact us

How to Set up a Universal Robots Kit

This step by step guide instructs in setting up the Universal Robots kit for the Mirka® AIROS robotic sanding head, from unboxing the kit to installing the cabinet, the adapter, the sanding head, cabling and the necessary software.



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Notes



Mirka (UK) Ltd
Saxon House
Shirwell Crescent
Furzton Lake
Milton Keynes
MK4 1GA

T: 01908 866100
E: enquiries.uk@mirka.com
W: mirka.co.uk

