

**MIRKA**

Mirka  
**Robotic  
Solutions**

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[mirka.com](http://mirka.com)



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 is mounted on a grey, textured surface, likely a metal part of a robot. The sander has a cylindrical body with a flange at the top and a sanding disc at the bottom. The background is slightly blurred, showing more of the grey surface.

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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  
1.25" • 5.0mm Orbit



## AIROS 350CV/NV

Random Orbital Sander  
3" • 5.0mm Orbit



## AIROS 550CV/NV

Random Orbital Sander  
5" • 5.0mm Orbit



## AIROS 650CV/NV

Random Orbital Sander  
6" • 5.0mm Orbit



## AIOS 130NV

Orbital Sander  
1.25" • 3.0mm Orbit



## AIOS 353CV

Orbital Sander  
3 x 5" • 3.0mm Orbit



## AIROP 312NV

Random Orbital Polisher  
3" • 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*
<b>Power</b>	50 W	350 W	350 W	350 W
<b>Input voltage</b>	90 – 264 VAC	90 – 264 VAC	90 – 264 VAC	90 – 264 VAC
<b>DC voltage to sander</b>	48 VDC	48 VDC	48 VDC	48 VDC
<b>Speed</b>	4,000 – 8,000 rpm	4,000 – 10,000 rpm	4,000 – 10,000 rpm	4,000 – 10,000 rpm
<b>Orbit</b>	5.0 mm	5.0 mm	5.0 mm	5.0 mm
<b>Weight</b>	1.8 lbs	2.4 lbs	2.9 lbs	2.9 lbs
<b>Height</b>	4.2"	4.4"	4.4"	4.4"
<b>Size of pad</b>	1.25" (32 mm)	3" (77 mm)	5" (125 mm)	6" (150 mm)
<b>Ambient operating temp.</b>	0 – 45 °C	0 – 45 °C	0 – 45 °C	0 – 45 °C
<b>Vacuum hose</b>	Not applicable	Ø 27 mm	Ø 27 mm	Ø 27 mm
<b>Communication Interfaces</b>	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*
<b>Power</b>	50 W	350 W	350 W
<b>Input voltage</b>	90 – 264 VAC	90 – 264 VAC	90 – 264 VAC
<b>DC voltage to sander</b>	48 VDC	48 VDC	48 VDC
<b>Speed</b>	4,000 – 8,000 rpm	5,000 – 10,000 rpm	4,000 – 8,000 rpm
<b>Orbit</b>	3.0 mm	3.0 mm	12.0 mm
<b>Weight</b>	1.5 lbs	2.6 lbs	2.4 lbs
<b>Height</b>	5.0"	4.6"	4.4"
<b>Size of pad</b>	1.25" (32 mm)	3 x 5" (81 x 133 mm)	3" (77 mm)
<b>Ambient operating temp.</b>	0 – 45 °C	0 – 45 °C	0 – 45 °C
<b>Vacuum hose</b>	Not applicable	Ø 27 mm	Not applicable
<b>Communication Interfaces</b>	Modbus RTU RS-485 included. Profinet - Modbus gateway optional. Other alternatives also available.		

\* CV = Central Vacuum / NV = Non Vacuum





# BUILD YOUR OWN SYSTEM

- Tailor to your business needs

## 1 Choose communication integration

- Profinet
- Modbus
- Digital



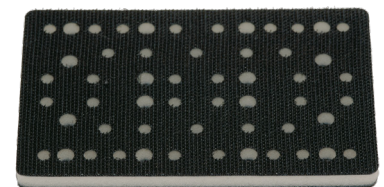
## 2 Decide your sanding process

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.



# ACCESSORIES Robotic Sanding



**Backing Pad**  
6"



**Backing Pad**  
5"



**Backing Pad**  
3"



**Backing Pad**  
1.25"  
Quick Lock • Soft



**Backing Pad**  
1.25"  
Quick Lock • Soft Edge



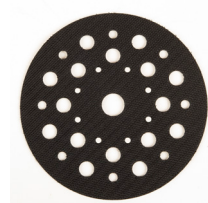
**Backing Pad**  
1.25" • Soft



**Backing Pad**  
3 x 5"



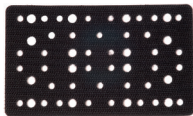
**Pad Saver**  
6"



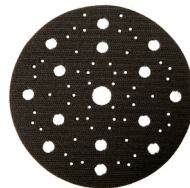
**Pad Saver**  
5"



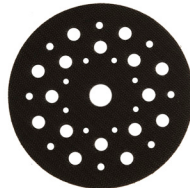
**Pad Saver**  
3"



**Pad Saver**  
3 x 5"



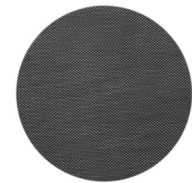
**Interface 67  
Holes Grip**  
6"



**Interface 33  
Holes Grip**  
5"



**Interface 6  
Holes Grip**  
3"



**Net Interface  
Grip**  
3"



**Net Interface  
Grip**  
6"



**Interface 54  
Holes Grip**  
3 x 5"



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



**Hose and Connector**  
1" x 33' (27mm/32mm)



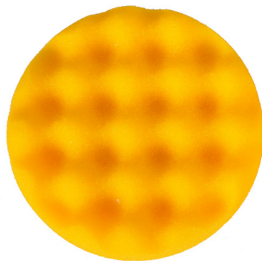


# ACCESSORIES

Robotic Polishing



**Backing Pad**  
3"



**Polishing Foam Pad Yellow Waffle**  
3.3" (85mm)



**Polishing Foam Pad Burgundy Waffle**  
3.3" (85mm)



**Lambswool Pad Pro**  
3.15" (80mm)



**Polarshine® 8**  
Polishing Compound



**Polarshine® 10**  
Polishing Compound



**Polarshine® 12**  
Polishing Compound

## Abranet® Net Abrasive

9A Series



### Technical Specifications

<b>Grain</b>	Aluminum oxide
<b>Bonding</b>	Resin over resin
<b>Backing</b>	Polyamide NET
<b>Coating</b>	Closed
<b>Color</b>	Brown
<b>Attachment</b>	Grip

#### FEATURES AND BENEFITS:

- High performance and long lifespan
- Removal of dust particles eliminates loading and pilling problems
- Woven mesh backing works with hook and loop attachment
- Net abrasives are a key component for dust-free sanding

## Abranet® Ace Net Abrasive

AC Series



### Technical Specifications

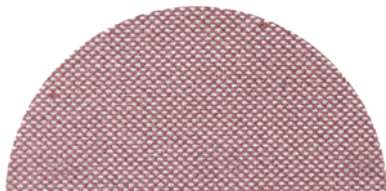
<b>Grain</b>	Ceramic/Ceramic coated
<b>Bonding</b>	Resin over resin
<b>Backing</b>	Polyamide NET
<b>Coating</b>	Closed
<b>Color</b>	Maroon
<b>Attachment</b>	Grip

#### FEATURES AND BENEFITS:

- Developed to achieve outstanding results on challenging surface conditioning and repair applications
- Well designed for metal applications
- Removal of dust particles eliminates loading and pilling problems
- Improved woven mesh backing offers increased strength and edge wear
- Net abrasives are a key component for dust-free sanding

## Abranet® Ace HD Net Abrasive

AH Series



### Technical Specifications

<b>Grain</b>	Ceramic
<b>Bonding</b>	Resin over resin
<b>Backing</b>	Polyamide NET
<b>Coating</b>	Closed
<b>Color</b>	Brown
<b>Attachment</b>	Grip

#### FEATURES AND BENEFITS:

- Ceramic grains allow for maximum cutting speed and consistent performance across a variety of surfaces and substrates
- Coarse grit range makes this ideal for aggressive stock removal
- Features exceptional resistance to edge wear and clogging
- Net abrasives are a key component for dust-free sanding

## **NEW** Galaxy Film Abrasive

FY Series



### Technical Specifications

<b>Grain</b>	Ceramic/Aluminium oxide
<b>Bonding</b>	Low VOC resin system
<b>Backing</b>	Polyester film
<b>Coating</b>	Semi-open
<b>Color</b>	Blueish
<b>Attachment</b>	Grip and PSA

#### FEATURES AND BENEFITS:

- Self-Sharpening grains continue cutting – from edge to edge
- New, sharp grains form as you sand
- Lasting sharpness means a long life and a fast cut
- Clog resistant coating repels dust to keep grains free to cut
- Scratch pattern of finer grits polishes out easily



## Abralon® Foam Abrasive

8A Series



### Technical Specifications

<b>Grain</b>	Silicon carbide
<b>Bonding</b>	Special Resin
<b>Backing</b>	Knitted fabric on foam
<b>Coating</b>	Special Abralon® method
<b>Color</b>	Gray
<b>Attachment</b>	Grip
<b>Foam Density</b>	33 kg/m <sup>2</sup>
<b>Foam Thickness</b>	6.5 mm

#### FEATURES AND BENEFITS:

- Combines benefits of abrasive cloth and non-woven products
- Constructed of fabric face, foam center and a grip backing
- Abrasive grains are bonded evenly to the fabric face

## Abralon® J3 Foam Abrasive

8M Series



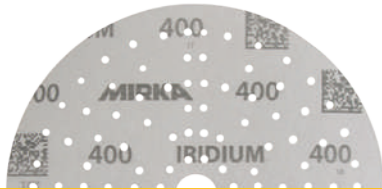
### Technical Specifications

<b>Grain</b>	Silicon carbide
<b>Bonding</b>	Special Resin
<b>Backing</b>	Knitted fabric on foam
<b>Coating</b>	Special Abralon® method
<b>Color</b>	Gray
<b>Attachment</b>	Grip
<b>Foam Density</b>	62 kg/m <sup>2</sup>
<b>Foam Thickness</b>	3 mm

- Can be used for dry or wet sanding
- Open cell design holds large amounts of water or solvent for lubrication and cooling

## Iridium Paper Abrasive

24 Series



### Technical Specifications

<b>Grain</b>	Ceramic / Aluminum oxide
<b>Bonding</b>	Low VOC resin system
<b>Backing</b>	Latex C-paper
<b>Coating</b>	Semi-open
<b>Color</b>	Gray
<b>Attachment</b>	Grip and PSA

#### FEATURES AND BENEFITS:

- Fast sanding and consistent scratch pattern saves you time and money
- Consistent quality and non-stick coating repels dust and provides a long disc life
- Effective multihole pattern delivers outstanding performance without clogging
- Premium paper backing offers remarkable flexibility and grain adhesion

## **NEW** Iridium SR Film Abrasive

24 Series



### Technical Specifications

<b>Grain</b>	Silicon Carbide
<b>Bonding</b>	Slurry
<b>Backing</b>	Film, 3 mil
<b>Coating</b>	Closed
<b>Color</b>	Green, Gray, Purple
<b>Attachment</b>	PSA

#### FEATURES AND BENEFITS:

- Premium finishing product
- Excellent quality consistency
- Fast cut and long life
- Easy and fast to polish out
- Efficient silicon carbide grains
- Stable and robust backing



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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 [tools.ca@mirka.com](mailto:tools.ca@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 center in Canada.

Dedicated to the finish.





**MIRKA**

## CONSULT OUR TEAM

### Automated Robotic Solutions

To help you find the right automated solution, our sector managers will utilize their expertise for industrial and manufacturing applications, to guide you to the perfect solution. We will ensure that you have the correct support throughout the installation process.



### Like to know more?

If you'd like to find out more information about our automated robotic solutions, simply complete the online form and a member of team will be intouch.

Contact us

Dedicated to the finish.



# 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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