

Orbital welding (welding generators)



Our new range of AXXAIR welding generators has been designed to facilitate the use and programming of your equipment. Intuitively, you will have access to sophisticated functions allowing you to make the most demanding welds with ease.

Particular attention has been paid to the choice of technologies used, while favouring as much as possible standard commercial components, in order to facilitate access to parts.

This flexibility will be a genuine asset for your future projects and allow you to be competitive in all your work.

FLEXIBILITY, PRODUCTIVITY

With the latest touch screen interface, we offer you all the possibilities including the most advanced while taking into account the users.

QUALITY AND REPEATABILITY

A classification system for programmes by welding configuration (diameter, wall thickness and head type) allow you to find the corresponding programme for the welding application you are looking for very easily. Each configuration can hold 9 programmes.

PORTABILITY

In order to facilitate mobility on site or in the workshop, transport trolleys for generators are recommended, thus enabling efficient management of the generator and its gas cylinder.



The axis board that controls the motors used on the heads was specifically designed to be able to control various motors and servo systems: DC, brushless, stepping motors, and also encoders and tachometers.

Here, the innovation resides in the ability to easily control the motors used in our competitors' heads so as to offer greater flexibility to our customers that already have them. A 32-pin "quickfit" connector allows interaction between our generator and AXXAIR welding heads and other brands.



Please do not hesitate to contact us for all enquiries relating to orbital welding generators.

We will be glad to share our know-how with you and to devise a solution that best meets your needs!



SAXX-200

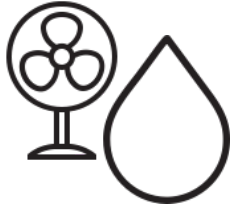
Fully-assured gas management

2 separate gas lines, free choice of inerting gas flow management



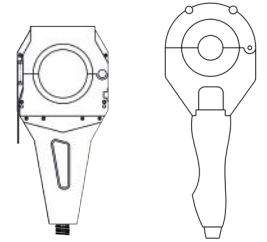
Gas flow is controlled on the generator using the buttons (flow rate displayed on the screen)

Air Cooling or Water cooling



Compatible with closed welding heads:

AMI, Polysoude, ESAB, Orbitec and Orbitalum



Interface 5.7 colour touch screen + WiFi

13 languages, possibility of remote control by smartphone or tablet



Integral printer:
Printing program and actual parameters

USB on front panel

200 programs per stick (possible to use several sticks)
Remote update possible



Acquisition and documentation

Records the last 999 welds + weldreport (formatting of the data and presentation of the instructions in the form of demos)

Ppm measuring device

Capable of managing thresholds and sending an electrical pulse to the station in order to start the welding



Axis for added metal

Possibility of using Step mode

Cooler: removable without tools

Cooling capacity 700 W, min flow safety system



SAXX-200

AXXAIR welding generator options

You can now order your SAXX-200 generator with **the options you need.**

CAUTION: The options must be factory fitted. (Exception: Scool-700 cooler)

Second gas line

This second gas line allows control from the generator of **your internal inerting** and / or dual gas management of the welding torch.

- Gas savings
- Welding process safety



WIFI

This option includes a built-in **Wifi antenna** in the station. The operating distance is 20-30 m depending on the environment.

We have authorized remote control via a smartphone or tablet. In fact, one application provides access to all functions, including programming.



Wire feed

This option includes the axis board and the connectors. It must be completed by the dispenser (see accessories).

The Axxair welding generator makes it possible to use the **step mode** and to **synchronize the wire feed** with the current pulse

WATER cooler

Removable cooler without tools with a cooling capacity of **700W** with a flow safety sensor. It is essential to use in all water cooled machines.

- Increasing the duty cycle



SAXX-200

Technical characteristics

Duty cycle:

230 V		110 V	
25 %	200 A	35 %	140 A
60 %	140 A	60 %	115 A
100 %	115 A	100 %	100 A

Power supply:

- Single phase network **with earth**
- Supply voltage: 110 to 230 V +/-15%
- Input current consumed 23A at 230V and 32A at 110V
- Frequency: 50/60Hz
- Cable supplied: HO7RN-F 3x2.5 mm² black, length 3m

Gas supply:

- Maximum inlet pressure: 5 bars
- Maximum flow rate: 50 l / min per gas line
- Inlet connectors: M12x100 male
- Outlet connectors: female blanking union Series 20

Technology:

- Colour touch screen 5.7"
- 13 languages
- Up to 16 users with passwords and custom permissions
- Simple and intuitive programming with automatic parameter calculation and programming
- 200 programs in 20 sectors maximum / key

Integral printer:

- 32 characters / line
- Print program and actual parameters



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Intelligence:

- Alarms: More than 30 alarms to protect the system and check that welding is normal.
- Welding voltage measured in increments of 0.1 A
- Minimum pulse time of 50 ms

Auxiliary connector:

- Possibility of triggering the welding start via an oxygen meter (dry contact)

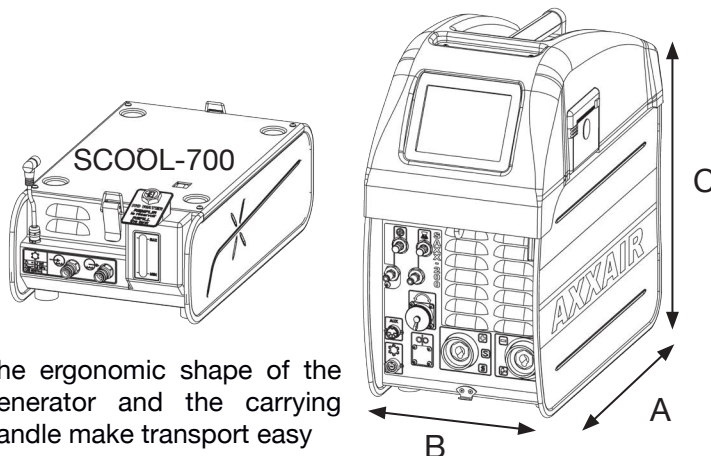
Wi-fi: (Option)

Remote control of the screen on smartphone or tablet via application, range: 20 to 30 m

Cooling connector:

For SCOOOL-700 cooler only: It must be connected to a SAXX200 to operate (No standalone operation)

- Max pressure: 5 bars
- Cooling power according to CEI60974-2 standard: 0.7 kW



The ergonomic shape of the generator and the carrying handle make transport easy

	Product Code	Description	Net weight	Customs code	Dimensions A x B x C (mm)
NEW	SAXX-200	Orbital TIG station, 200A, auto-voltage, one line of gas, air cooled	21 kg	85153 10000	468 x 249 x 482
Option	SCOOOL-700	Cooler (water), 700W for SAXX-200	8 kg	85159 00090	468 x 249 x 146
Option	SGAS	Second digital gas line on SAXX-200	-	85159 00090	-
Option	SWIFI	Wifi antenna for SAXX-200 for remote control	-	85159 00090	-
Option	SWIRE	Wire board for SAXX-200	-	85159 00090	-



Join **experience**



Orbital welding (Open head)

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Our range of open welding heads (SATO series) allows you to make very high quality welds in a minimal space.

On these heads you will find a mechanical tracking system to keep a constant arc height. The torch can tilt to weld at an angle.

Open heads are mainly recommended for the agro-food, pharmaceutical, chemical sectors, for wall thicknesses less than but also greater than 3 mm.



This type of machine can be used to weld carbon steel tubes.

Open heads offer very wide welding possibilities thanks to the inclination of the torch and the addition of filler metal. The clamping range is achieved without the addition of jaws.

The tracking system is by roller so as not to scratch the tube. All the parts in contact with the tube are made of stainless steel so as not to contaminate it.

With its unique symmetrical clamping system, its stepping motor control, this range offers a very wide range of use.

You can choose between a water or air cooled torch .

FLEXIBILITY, PRODUCTIVITY

AXXAIR open heads are available with or without filler metal. They have an optimized rotation sweep and 2 positions of feed motor to choose from. High duty cycle (water cooled torch), transport of welding equipment by air (air cooled torch).

QUALITY AND REPEATABILITY

The SATO range is connected to our orbital generators, which permanently control all the welding parameters, guaranteeing repeatable and quality welds.

PORTABILITY

In order to allow you to weld in restrictive conditions and locations, the size of rotating elements and the weight of the machines have been optimized. Our machines are supplied with integrated remote control and 5 m welding cable allowing the operator to work remotely from the generator.



Please do not hesitate to contact us for all enquiries relating to orbital welding technology.

We will be glad to share our know-how with you and to devise a solution that best meets your needs!



Join **experience**



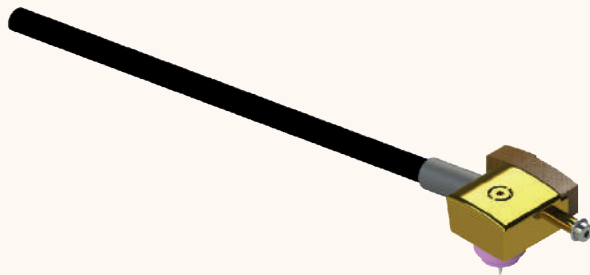
Orbital welding

AIR cooling or WATER cooling?

Why choose an AIR cooled machine?

Strong demand from construction sites requiring the shipment of the machines as air freight has led us to propose a solution without liquid coolant. The latter may also be suitable for frequent and rough/harsh transport, in order to eliminate any risk of liquid flowing onto the electronic boards.

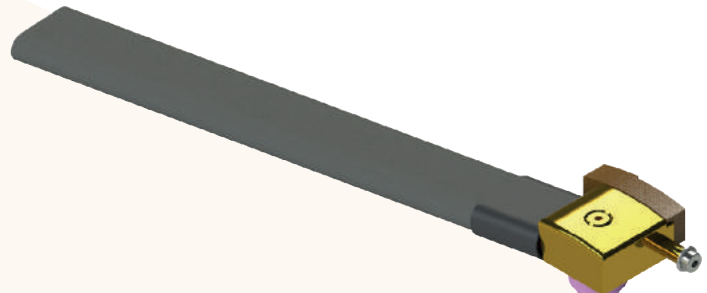
Since the AIR duty cycle is smaller than that for WATER, it is essential not to exceed the recommendations listed below.



Why choose a WATER cooled machine?

WATER cooling is the most used for all types of applications. It is distinguished especially by the fact of being able to realize several consecutive welds.

It significantly improves the duty cycle especially for demanding applications.



Model	100% Duty cycle
SATO-XXE41/42 (WATER)	200 A
SATO-XXE43/44 (AIR)	100 A

Welding machine duty cycle defines the time of use in arc welding and the cooling time required between two welding operations at 40 °C.

Example: A 70% duty cycle at 150 amps = 7 min max use at 150 amperes + 3 minutes waiting time to restart a welding cycle.

The duty cycle therefore has a significant impact on the machine use cycle. For applications requiring a high duty cycle, the welding machine must be able to meet these requirements.

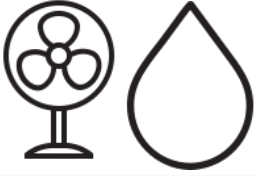
Since AXXAIR hardware is designed to be scalable, it is simple to switch from a water version to an air version.



SATO-40 - 80 -115 - 170 -220

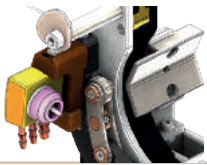
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Air Cooled or Water Cooled



Roller mechanical profile tracking

Constant arc voltage without marking the tube



Compatible With the SAXX generators

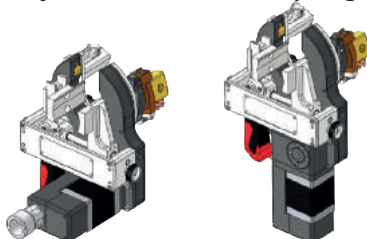


Transport

These heads are delivered in their individual transport case

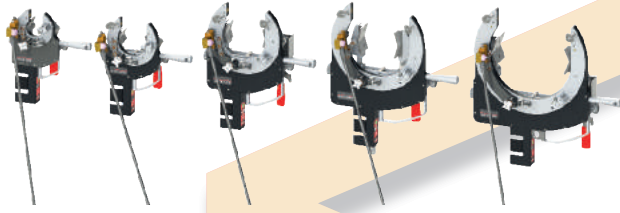


Straight or Angled motor
Symmetrical clamping



Axial Adjustment

Wheel for axial adjustment of the position of the electrode



Protection

High protection against arcing outside the electrode

Torch angle adjustment

Welding flanges and short T angle



Locked open position

Motorization with encoder

Allows STARTING IN ALL ANGULAR electrode positions

Welding range

SATO 40	∅ 10 - ∅ 40 mm 0.4- 1.5 "
SATO 80	∅ 19 - ∅ 80 mm 0.75 - 3 "
SATO 115	∅ 19 - ∅ 115 mm 0.75 - 4.5 "
SATO 170	∅ 25 - ∅ 170 mm 1 - 6.625 "
SATO 220	∅ 38 - ∅ 220 mm 1.5 - 8.265 "

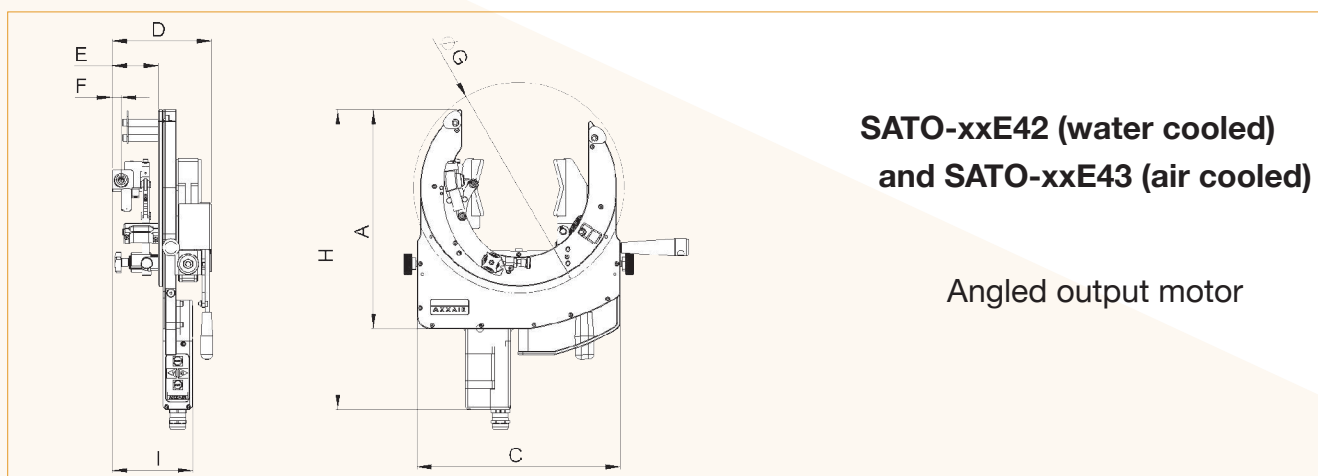


SATO-40 - 80 -115 - 170 -220

Technical characteristics:

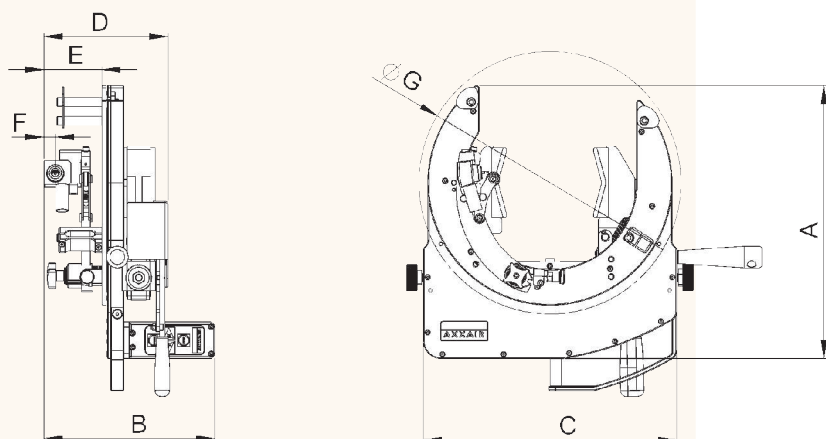
- WATER or AIR cooled head
- Mechanical profile tracking: constant arc height without marking the tube
- Quick symmetrical tightening by lever
- Motorization with encoder: allows starting from any angular position of the electrode
- Wide diameter range
- Inclination and axial adjustment of the electrode
- Small rotation sweep from the centre of the tube
- Compact design

Choice of two different models (to choose according to your applications)



SATO-XXE41 (water cooled) and SATO-xxE43 (air cooled)

Straight output motor



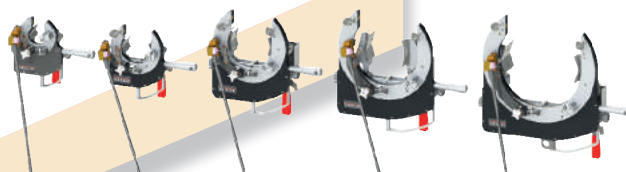
	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm
SATO-40	169	183 to 191	142	116 to 126	57 to 67	13	Ø140	270	113 to 121
SATO- 80	181	186 to 196	160	116 to 126			279		
SATO-115	265	186 to 196	230	133 to 143			Ø224	363	
SATO-170	312	186 to 196	290	133 to 143			Ø294	410	
SATO-220	353	186 to 196	350	133 to 143			Ø350	451	



SATO-40 - 80 -115 - 170 -220

AXXAIR

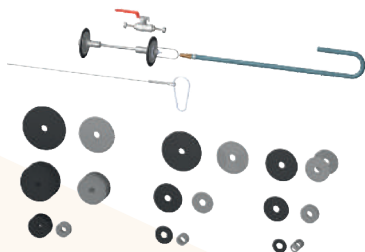
INNOVATIVE ORBITAL SOLUTIONS



Motor	Cooling	Product Code	Welding machine for tubes of the following diameters (in mm)	Net weight	Customs code	Dimensions (AxBxC in mm)
Angled motor	WATER	SATO-40E42	∅ 10 - ∅ 40 mm	3.8 kg	85153 10000	169 x 183 x 142
		SATO-80E42	∅ 19 - ∅ 80 mm	4.2 kg		181 x 186 x 160
		SATO-115E42	∅ 19 - ∅ 115 mm	6.7 kg		265 x 186 x 230
		SATO-170E42	∅ 25 - ∅ 170 mm	8 kg		312 x 186 x 290
		SATO-220E42	∅ 38 - ∅ 220 mm	9.4 kg		353 x 186 x 350
	NEW AIR	SATO-40E44	∅ 10 - ∅ 40 mm	3.8 kg	85153 10000	169 x 183 x 142
		SATO-80E44	∅ 19 - ∅ 80 mm	4.2 kg		181 x 186 x 160
		SATO-115E44	∅ 19 - ∅ 115 mm	6.7 kg		265 x 186 x 230
		SATO-170E44	∅ 25 - ∅ 170 mm	8 kg		312 x 186 x 290
		SATO-220E44	∅ 38 - ∅ 220 mm	9.4 kg		353 x 186 x 350
Straight Motor	WATER	SATO-40E41	∅ 10 - ∅ 40 mm	3.8 kg	85153 10000	169 x 191 x 142
		SATO-80E41	∅ 19 - ∅ 80 mm	4.2 kg		181 x 196 x 160
		SATO-115E41	∅ 19 - ∅ 115 mm	6.7 kg		265 x 196 x 230
		SATO-170E41	∅ 25 - ∅ 170 mm	8 kg		312 x 196 x 290
		SATO-220E41	∅ 38 - ∅ 220 mm	9.4 kg		353 x 196 x 350
	NEW AIR	SATO-40E43	∅ 10 - ∅ 40 mm	3.8 kg	85153 10000	169 x 191 x 142
		SATO-80E43	∅ 19 - ∅ 80 mm	4.2 kg		181 x 196 x 160
		SATO-115E43	∅ 19 - ∅ 115 mm	6.7 kg		265 x 196 x 230
		SATO-170E43	∅ 25 - ∅ 170 mm	8 kg		312 x 196 x 290
		SATO-220E43	∅ 38 - ∅ 220 mm	9.4 kg		353 x 196 x 350



Orbital welding (Open heads) - Accessories

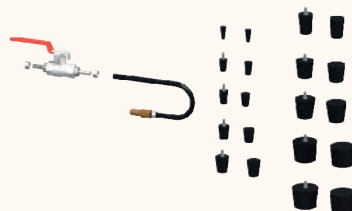


Product Code	Description	Net weight	Customs code	Packaging (in cm)
SKIF-01	Gas protection KIT	4.5 kg	85159 00090	35 x 30 x 9.5

Gas membrane protection KIT for tubes Ø 40 to 120 mm
 - consists of: 9 sets of membranes with washers, 1 gas pipe 6 m, 1 metal cable, 1 ¼ turn gas valve, 1 carabiner

Inerting the tubes during welding allows more gas savings as we only inert the area to be welded.

✓ SATO-40E4x	✓ SATO-80E4x	✓ SATO-115E4x	✓ SATO-170E4x	✓ SATO-220E4x
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Product Code	Description	Net weight	Customs code	Packaging (in cm)
SKIB-01	Gas protection KIT	1.7 kg	85159 00090	35 x 30 x 9.5

Gas plug protection KIT for tubes Ø 6 to 41 mm
 - Consists of: 10 sets of perforated plugs, 1 gas inlet connector, 1 hose Ø 4/6 length 5 metres

Facilitates and accelerates inerting. Avoids the use of adhesive paper.

✓ SATO-40E4x	✓ SATO-80E4x	✓ SATO-115E4x	✓ SATO-170E4x	✓ SATO-220E4x
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Product Code	Description	Net weight	Customs code	Dimensions in mm
SATOB-02	Two axis wire guide	0.05 kg	85159 00090	51 x 90 x 65

SATO Two axis wire guide:
 - For use with the SAXX-200

✓ SATO-40E4x	✓ SATO-80E4x	✓ SATO-115E4x	✓ SATO-170E4x	✓ SATO-220E4x
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Product Code	Description	Net weight	Customs code	Dimensions (in cm)
SADF2X	Wire drum	12 kg	85159 00090	59.7 x 38.4 x 24

Wire Dispenser for SAXX-200, duct 5 m max:
 - Supplied with the SAXX power supply-connection cable and Teflon duct to guide the wire
 - Drive pressure adjusted by adjustable spring, with handle.

✓ SATO-40E4x	✓ SATO-80E4x	✓ SATO-115E4x	✓ SATO-170E4x	✓ SATO-220E4x
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Orbital welding (Open heads) - Accessories

5 or 10 metres welding cable extensions



To increase the operating distance between the welding head and the SAXX generator, we offer cable extensions.

The choice of the cable is made according to the cooling of the torch (water or air) and with or without filler metal.

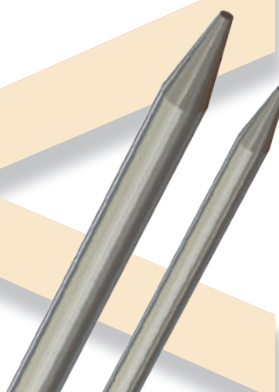
Cooling		Length	Product Code	Net weight	Customs code	Dimensions (AxBxC in mm)
AIR	WITHOUT WIRE	NEW 5 metres	SAFS-05MAX	7 kg	85159 00090	40 x 59 x 25
		NEW 10 metres	SAFS-10MAX	14 kg		40 x 59 x 25
	WIRE	NEW 5 metres	SAFS-05MAXF	7 kg	85159 00090	40 x 59 x 25
		NEW 10 metres	SAFS-10MAXF	14 kg		40 x 59 x 25
WATER	WITHOUT WIRE	NEW 5 metres	SAFS-05MX	7 kg	85159 00090	40 x 59 x 25
		10 metres	SAFS-10MX	14 kg		40 x 59 x 25
	WIRE	NEW 5 metres	SAFS-05MXF	7 kg	85159 00090	40 x 59 x 25
		10 metres	SAFS-10MXF	14 kg		40 x 59 x 25
✓ SATO-40E4x		✓ SATO-80E4x	✓ SATO-115E4x	✓ SATO-170E4x	✓ SATO-220E4x	



Orbital welding (Open head) - Consumables

Our electrodes are specifically sharpened to 20° with a flat.

This increases the life of the electrodes.



Product Code	Description	Net weight	Customs code	Plastic box (cm)
SCE16-50	Electrodes	0.02 kg	85159 00010	5.5 x 4.5 x 1
Electrode diameter 1.6 mm , length 50mm				
- Box of 10 electrodes				

✓ SATO-40E4x	✓ SATO-80E4x	✓ SATO-115E4x	✓ SATO-170E4x	✓ SATO-220E4x
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Product Code	Description	Net weight	Code code	Plastic box (cm)
SCE24-50	Electrodes	0.05 kg	85159 00010	5.5 x 4.5 x 1
Electrode diameter 2.4 mm , length 50mm				
- Box of 10 electrodes				

✓ SATO-40E4x	✓ SATO-80E4x	✓ SATO-115E4x	✓ SATO-170E4x	✓ SATO-220E4x
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Product Code	Description	Net weight	Customs code	Plastic box (cm)
SKTO-01	Replacement torch	0.3 kg	85159 00090	12 x 17.5 x 4
Replacement kit for open head torch Ø 1.6 mm or Ø 2.4				
- Consists of: 4 long nozzles and 2 short nozzles, 4 electrode clamps, 20 electrodes Ø 1.6 and 20 Ø 2.4 electrodes, 2 Teflon rings, 1 short cap type 9/20 and 1 screw-driver FACOM				

✓ SATO-40E4x	✓ SATO-80E4x	✓ SATO-115E4x	✓ SATO-170E4x	✓ SATO-220E4x
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The ECO Cutting range

81M - 121ECO - 171ECO



For 20 years AXXAIR has been developing and offering scalable, flexible and reliable machines with many functions based on a patented concentric clamping system.

The frames of our cutting machines 122 - 322 (page 9-11) can be fitted with a cutting motor, a bevelling motor or with a TIG welding torch.

Our ECO range differs from this concept; it only offers a pipe cutting function for customers searching for alternatives.

We developed the ECO cutting range in order to respond to these users looking simply for a cutting solution for thin tubes.

Machines dedicated to thin tubes <3 mm wall thickness

Easy to transport and less heavy

Attractive prices

METABO motorisation offers a large speed range and a torque big enough for thin stainless steel tube applications. This motor also has a handle that gives the possibility for the motor to be turned manually around the machine.

The design of the 121ECO and the new 171ECO, has the same system to set diameters and blade penetration as our range x22.

Thus, these machines benefit from very performing characteristics and a design especially made for our evolutive range.

Our Eco range does not come with accessories such as rotation autoline and automatic electric clamping.



For more details, accessories and the references please see pages 7 et 8 of this catalogue.



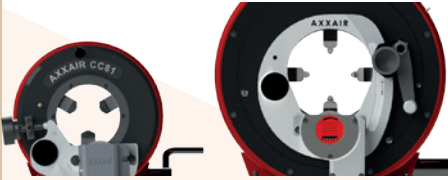
81M - 121ECO - **NEW** 171ECO

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No tube deforming

Concentric clamping system



Basic and extra stainless steel jaws: no pollution of the pipes

Operator safety feature

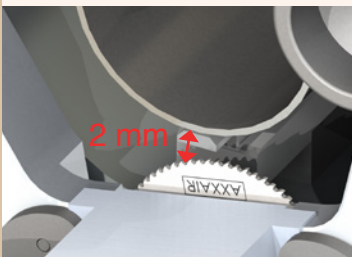
Penetration check feature

Elbow Cutting

121ECO + 171ECO: double shafted cutting motor with 2 blade positions

Limited vibration and tube distortion

Optimized blade-jaws distance



Motor 1300W

Adjustment via the speed changer

Cutting capacity:

Up to 5 mm wall thickness



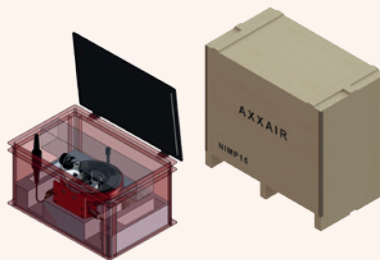
Cutting precision

Perpendicular cuts < 0.25 mm

Continuous use

Anti twist cable

Easy handling and transportation



Cutting range

81M	ø5 - ø78 mm 0.25 - 3 "
121ECO	ø5 - ø121 mm 0.25 - 4.5 "
171ECO	ø16 - ø170 mm 0.625 - 6.625 "



81M - 121ECO - 171ECO

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INNOVATIVE ORBITAL SOLUTIONS

Technical features :

METABO motorisation offers a large range of speed and an adequate torque for thin wall stainless steel tubes applications.

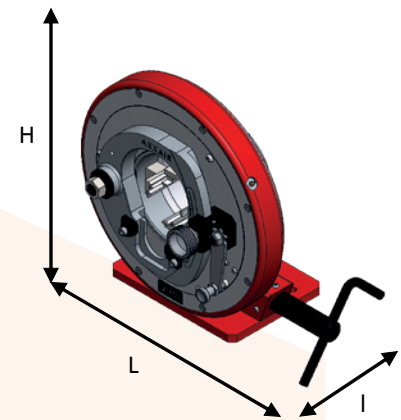
Electric motor 1300W:

- Mechanical gearbox and electric speed variator
- 50/60 HZ
- single-phase motor



All motors are delivered in their individual case, including the necessary tools

The 81M's motor and its necessary tools are put directly in the transport box.



	Reference	Tube cutting machine for following diameters (in mm):		Net weight	Customs Code	Dimensions (HxLxw in mm)
		With basic jaws	With extra jaws (included)			
120V 1300W	81M11	Ø5 - Ø78	-	15 kg	846150 9000	263 x 346 x 236
	121ECO1	Ø24 - Ø121	Ø5 - Ø108	38 kg		432 x 520 x 297
	NEW 171ECO1	Ø70 - Ø170	Ø16 - Ø118	44 kg		453 x 550 x 307
230V 1300W	81M21	Ø5 - Ø78	-	15 kg	846150 9000	263 x 346 x 236
	121ECO2	Ø24 - Ø121	Ø5 - Ø108	38 kg		432 x 520 x 297
	NEW 171ECO2	Ø70 - Ø170	Ø16 - Ø118	44 kg		453 x 550 x 307



Join **experience**

