

Product catalogue

Orbital machines for the processing of thin walled tubes with wall thicknesses < 3 mm







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Frédéric Legrand - CEO and founder of AXXAIR -



AXXAIR

- designer, manufacturer and distributor -

AXXAIR supports its customers in more than 60 countries worldwide by offering global orbital cutting, squaring, bevelling and welding solutions.

We focus heavily on the needs of users and have adopted a service-oriented approach. We begin by determining the user's needs in terms of preparing items for welding and, of course, orbital welding itself.

We then provide the user's personnel with training on this equipment, in order to ensure that users are able to independently manage the applications they may need to use.



"

Understanding our customers and their needs, anticipating and meeting their expectations - these are AXXAIR's goals. We are able to respond to developments in our customers' ever-changing markets thanks to our various departments, R&D and Design Office.

AXXAIR offers unique and original tube working solutions. We believe that a lasting, high quality relationship with our customers is essential and have therefore developed local services to provide our customers with advice, by means of our subsidiaries and our distribution network.

AXXAIR is able to assist you at every stage of your project: creating samples, demonstrations, training, after-sales service, advice, etc.

"

Services and a team : - Join experience -

AXXAIR is your first point of contact for all tube working issues, from preparation to welding. With an experienced, responsive and committed team, AXXAIR will always suggest the most suitable solution.

"Join experience" sums up our philosophy, which is based on a community that always goes the extra mile.





Our founding principles

Global Process

AXXAIR has been designing, manufacturing and distributing its orbital tube working machines since 1997.



Our overall product strategy allows us to offer innovative solutions and adopt a global approach to your tube and pipework projects.

Production



AXXAIR SAS is committed to maintaining industrial employment in France. To this end, 98% of manufacturing is carried out in the Rhone-Alpes region of France.

We sub-contract 100% of our production to partners, including machine shops, sheet metalworking sub-contractors, electronics specialists, etc.

We design all our machines in our in-house design office, which has an expert team.



A Worldwide presence

AXXAIR is established in areas where customer demand is high, in order to be able to provide a local, high-quality service, with ever faster turnaround times.

Our products are distributed in more than 60 countries by our network of subsidiaries (in Korea, the USA and Germany) and our "distributor" partners, all of whom have been trained on our premises. With a commercial strategy based on innovation, quality and performance, the AXXAIR Group, a family-owned company, has become a successful group, whose business is continually expanding both in France and on export markets.



Sustainable development

AXXAIR is committed to the sustainable development of industrial activities. As a part of our sustainable approach, we have decided to stop producing printed catalogues.

In today's connected world, we believe that digital catalogues, with added features, are a practical and suitable alternative for everyone. We hope that you understand and will adopt this approach, for our good and the good of future generations.

This on-line catalogue can be printed, should you wish to do so, such that our vision is not imposed unilaterally. However, we would like to encourage you not to print it, or to only print out the information that is of greatest interest to you.





Transporting sensitive fluids

Many industries are using tubes to transport fluids. The more sensitive the more attention has to be paid to all connections that are most of the time

welded: tube to tube or tube to T or tube to elbows for example. Most of those tubes are made of stainless steel in order to avoid corrosion and exchanges between the tube and the fluid.

Food-processing industry

Food and beverage manufacturing are using a lot of Stainless steel tubes. It is necessary of course to correctly seal the connections but also to be sure the internal surface of the tube is correctly welded (penetration).

The purpose is always to avoid any retention zones that could pollute the liquids you transport in the tube.

- Food processing
- Beverage processing:
 - beer or wine manufacturing for example

Semi-conductor industry

The manufacturing of electronic components needs to have a very highly controlled atmosphere (clean rooms) as well as very high level quality tubes for the process.

Those tubes are transporting pure gases or pure water and to be welded with a very high quality.

An example is the manufacturing of memory.

Pharmaceutical industry

In this case the liquid that is transported is for producing medicine. In this case, even the inner surface of the tubes need to be electro polished to lower the possibility of interaction between liquid and tube surface.

As a consequence, the welds have to be with a very high quality of geometric aspects, in width, in surface finish. They are usually 100% X-rayed to guaranty the production will not be polluted.

Aeronautics industry

This industry is paying a lot of attention to weight and is therefore using a lot of aluminum components and almost all tubing is made with titanium tubes which is very light and resistant.

Welding titanium needs a very high gas protection inside and outside the tube.

Orbital closed head welding is the best solution for those applications.

- Aerospace
- Aircraft manufacturing



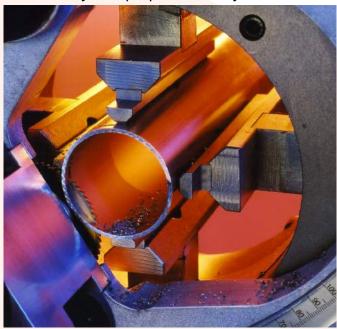
AXXAIR Orbital cutting



A proper tube preparation is essential to produce a proper weld.

AXXAIR's orbital cutting machines feature stainless steel concentric jaws to prevent the deformation of the tubes, especially the one with thin walls, during clamping.

The perfect position of the tube within the machine also guaranty the perpendicularity of the cut as the saw travels around the tube and the consistency that perpendicularity cut after cut.



The precision of our cutting machine allow a perfect tube to tube alignement, with the smallest gap possible, removing the need to facing the tube therefore saving a significant amount of time and money.

AXXAIR's orbital cutting machines are an indispensable tool for any automatic and orbital welding.

AXXAIR offers the largest orbital cutting range in the world!

11 different models to cut tubes from diameter 5 to 1100 mm!



FLEXIBILITY, PRODUCTIVITY

AXXAIR frames (except CC81, CC121ECO and 171ECO) are easily scalable for beveling and welding use.

QUALITY, GEOMETRIC PRECISION

Cutting with no tube distortion (multi-contacts concentric clamping) ideal for thin wall stainless steel tubes.

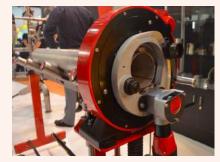
Great perpendicularity (<0.25 mm) of the cut and superb surface finish (few burrs).

PORTABILITY

With the easy to remove sawing attachment, AXXAIR's cutting machines are easy to transport on site or move within a workshop.









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

We are glad to share our decades long experience in orbital cutting and helping you to select the solution that fits your needs.





The ECO Cutting range 81M - 121ECO - 171ECO





For more than 20 years AXXAIR has been developing scalable, flexible and reliable machines featuring our patented concentric clamping design and many other functions.

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

Our ECO range differs from this concept and is specialized in cutting thin wall tubes.

It offers the same quality of cut than the CC 122 - 322 range in a more affordable package for customers who do not need to bevel or weld with the same machine.

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 < 5 mm wall thickness*

Easy to move around and lightweight

Attractive prices

AXXAIR choose Metabo to power our ECO range because of the large speed range and higher torque matching the requirements for cutting stainless steel thin wall tubes.

The handle of the Metabo power unit also makes easy and convenient to rotate the blade around the tube.

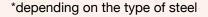
Our 121 and 171ECO range share the same safe and efficient diameter setting and blade penetration unit than our CC range.

The ECO range comes in a more affordable package but still features most of the designs that made our more advanced CC rangeso popular among the industry.

Because our ECO range is dedicated to cutting, some of the upgrades and accessories available on the CC range like automatic rotation or automatic clamping are not available for this type of cutting machines.

For more details, accessories and the references please see the following pages of this catalogue.









81M - 121ECO - 171ECO

AXXAIR

No tube deformation

Concentric clamping system



Basic and extra stainless steel jaws: no pollution of stainless steel tubes

Limited vibration and tube distortion

Optimised blade to jaws distance



Cutting precision

Perpendicular cuts < 0.25 mm



Operator safety feature

Penetration check feature

<u>Uptake</u>

121ECO +171ECO: feature a dual blade position allowing to cut elbows or flanges with no wasting of tube.

Motor 1300W

Speed adjustment through gearbox and electronic variator

Cutting capacity:

Up to 5 mm wall thickness*



Easy handling and transportation



*depending on the type of steel

Continuous use

Anti-twist cable with bearings.

Protects the electric cable from damage resulting from rotation around the tube.

Opening capacity						
81M	ø5 - ø78 mm 0.25 – 3 "					
121ECO	<mark>ø5 -</mark> ø121 mm 0.25 – 4.5 "					
171ECO	ø16 - ø170 mm 0.625 – 6.625 "					





81M - 121ECO - 171ECO

INNOVATIVE ORBITAL SOLUTIONS

Technical features:

With the Metabo power unit, our ECO range features a large range of blade rotation speed and the right torque for cutting stainless steel thin wall tubes.

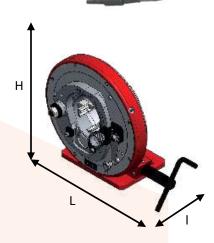
Electric motor 1300W:

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

Exept the 81M, all the machines' cutting motors are shipped in a convenient carrying case together with all necessary tools for operating the machine.

Because of it's small form and low weight, the 81M cutting motor and the tools are included in the machine's transport case.







	Product	Machine's jaw ope	ning capacity in mm		Dimensions (HxLxw in mm)	
	Code	With basic jaws	With extra jaws (included)	Net weight		
	81M11	Ø5 - Ø78	-	15 kg	263 x 346 x 236	
120V 1300W	121ECO1	Ø24 - Ø1 <mark>21</mark>	Ø <mark>5</mark> - Ø108	38 kg	432 x 520 x 297	
	171ECO1	Ø70 - Ø1 <mark>70</mark>	Ø <mark>16</mark> - Ø118	44 kg	453 x 550 x 307	
	81M21	Ø5 - Ø78	-	15 kg	263 x 346 x 236	
230V 1300W	121ECO2	Ø24 - Ø1 <mark>21</mark>	Ø <mark>5</mark> - Ø108	38 kg	432 x 520 x 297	
	171ECO2	Ø70 - Ø1 <mark>70</mark>	Ø <mark>16</mark> - Ø118	44 kg	453 x 550 x 307	





122 - 172 - 222 - 322 🚳

AXXAIR

INNOVATIVE ORBITAL SOLUTIONS

No tube deformation

Concentric clamping



Basic and extra stainless steel jaws: no pollution of stainless steel tubes

Reduced vibration and increased blade life

Optimised blade to jaw distance



1200W motor or pneumatic motor (as required)

Cutting capacity:

Up to 5 mm wall thickness*

Easy handling and transportation



*depending on the type of steel

Cutting precision

Perpendicularity of < 0.25 mm



Cutting quality

Rotation handle for controlled and continuous cutting speed

A perfect sealing against chips

All rotating parts are incorporated in the body



Global Process

Can be transformed into an orbital bevelling and welding machine

Uptake

feature a dual blade position allowing to cut elbows or flanges with no wasting of tube.

Opening capacity					
122	ø5 - ø119 mm 0.25" - 4.5 "				
172	ø16 - ø173 mm 0.625" – 6.625 "				
222	ø55 - ø228 mm 2.375" – 8.625 "				
322	ø141 - ø328 mm 5.563" – 12.750 "				

Continuous use

Anti-twist cable with bearings.
Protects the electric cable from damage resulting from rotation around the tube.







122- 172 - 222- 322









Technical features:

- Fast speed motor:

120V or 230V, 1200W, electronic speed variator with cutting compensator Vibration level according to EN 28662 norm: <2.5m/s², protection class: IP 20

Rotation speed (6 speed variations): from 95 RPM to 280 RPM

- Pneumatic motor:

60 to 110 rpm, air flow rate 1500 I/min at 6 bar.

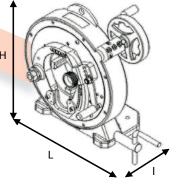
- Robustness:

Very efficient clamping system thanks to a screw withoutend directly engaged on the clamping cam.

- Easy maintenance and control:

Lubrication of the inner parts with the grease nipples





All motors are supplied in their own individual cases, including the necessary tools

	Product	Machine's jaw o	pening capacity in mm	Netweight	Dimensions	
	Code With basic jaws		With extra jaws (included)	Net weight	(HxLxw in mm)	
120V	122FS19	Ø29 - Ø <mark>119</mark>	Ø <mark>5</mark> - Ø99	44 kg	443 x 541 x 304	
1200W	172FS19	Ø74 - Ø <mark>173</mark>	Ø <mark>16</mark> - Ø116	51 kg	493 x 566 x 304	
fast	222FS19	Ø128 - Ø <mark>228</mark>	Ø <mark>55</mark> - Ø155	59 kg	548 x 594 x 304	
motor	322FS19	Ø230 - Ø <mark>328</mark>	Ø141 - Ø239	71 kg	649 x 644 x 304	
0001/	122FS29	Ø29 - Ø119	Ø <mark>5</mark> - Ø99	44 kg	443 x 541 x304	
230V 1200W	172FS29	Ø74 - Ø1 <mark>73</mark>	Ø <mark>16</mark> - Ø116	51 kg	493 x 566 x 304	
fast	222FS29	Ø128 - Ø <mark>228</mark>	Ø <mark>55</mark> - Ø155	59 kg	548 x 594 x 304	
motor	322FS29	Ø230 - Ø <mark>328</mark>	Ø141 - Ø239	71 kg	649 x 644 x 304	
	122PD	Ø29 - Ø119	Ø <mark>5</mark> - Ø99	44 kg	443 x 541 x304	
Pneu-	172PD	Ø74 - Ø173	Ø <mark>16</mark> - Ø116	51 kg	493 x 566 x 304	
matic motor	222PD	Ø128 - Ø <mark>228</mark>	Ø <mark>55</mark> - Ø155	59 kg	548 x 594 x 304	
	322PD	Ø230 - Ø <mark>328</mark>	Ø141 - Ø239	71 kg	649 x 644 x 304	





421-521-721-1100





No tube deformation

Concentric clamping



Basic and extra stainless steel jaws: no pollution of stainless steel tubes

Cutting precision

Perpendicular cuts < 0.4 mm

Uptake

feature a dual blade position allowing to cut elbows or flanges with no wasting of tube.

Cutting quality

Rotation handle for controlled and continuous cutting speed

Reduced vibration and increased blade life

Optimised blade to jaw distance



Continuous use

Anti-twist cable with bearings.
Protects the electric cable from damage resulting from rotation around the tube.

Easy handling and transportation



*depending on the type of steel

<u>1200W motor or</u> <u>pneumatic motor (as required)</u>

Cutting capacity:

Up to a wall thickness of 5 mm*

Opening capacity							
421	<mark>ø212 -</mark> ø422 mm 8.625 - 16 "						
521	ø312 - ø522 mm 12.75 – 20 "						
721	<mark>ø447 -</mark> ø725 mm <mark>18</mark> – 28"						
1100	ø711 - ø1016 mm 28 – 40 "						



421-521-721-1100

Technical features:

- Fast motor:

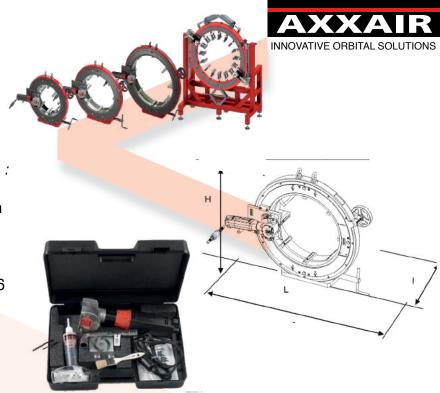
120V or 230V, 1200W, electronic speed variator with cutting compensator Vibration level according to EN 28662 norm: <2.5m/s², protection class: IP 20

Rotation speed (6 speed variations): from 95 RPM to 280 RPM

- Pneumatic motor:

60 to 110 rpm, air flow rate1500 l/min at 6 bar

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



	Product	Machine's jaw ope	ning capacity in mm		Dimensions	
	Code	With basic jaws	With extra jaws (included)	Net weight	(HxLxw in mm)	
120V	421FS19	Ø350 - Ø <mark>422</mark>	Ø <mark>212</mark> - Ø352	186 kg	802x838x315	
1200W fast	521FS19	Ø450 - Ø <mark>522</mark>	Ø <mark>312</mark> - Ø452	223 kg	905x889x315	
motor	721FS19	Ø653 -Ø <mark>725</mark>	Ø <mark>447</mark> - Ø654	256 kg	1104x1077x315	
230V	421FS29	Ø350 - Ø4 <mark>22</mark>	Ø <mark>212</mark> - Ø352	186 kg	802x838x315	
1200W fast	521FS29	Ø450 - Ø <mark>522</mark>	Ø <mark>312</mark> - Ø452	223 kg	905x889x315	
motor	721FS29	Ø653 -Ø <mark>725</mark>	Ø447 - Ø654	256 kg	1104x1077x315	
Pneu-	421PD	Ø350 - Ø4 <mark>22</mark>	Ø <mark>212</mark> - Ø352	186 kg	802x838x315	
matic	521PD	Ø450 - Ø <mark>522</mark>	Ø <mark>312</mark> - Ø452	223 kg	905x889x315	
motor	721PD	Ø653 -Ø <mark>725</mark>	Ø <mark>447</mark> - Ø654	256 kg	1104x1077x315	
	1100		On dema	nd		







Orbital cutting - Accessories



Our support legs and stands have been designed to further facilitate cutting by ensuring that the machine is stable in different conditions: in a workshop or on site.

The great advantages of these products:

- lightness
- flexible handling
- easy to use



Product Code	Description	Net Weight	Dimensions (in cm)	
CCPS21	Support feet	10 kg	103 x 32 x 11	

Support legs for orbital cutting machine:

- quick assembling and dismantling
- height adjustment with screws
- storage box at the back
- optimum stability

81	√121ECO	√171ECO	√ 122	√ 172	√222	√322	421	521	721	1100
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Product Code	Description	Net Weight	Dimensions (in cm)	
CCSER1	Simple stand	10 kg	60 x 26 x 10	

Simple stand for supporting tubes with height adjustment:

- quick assembling and dismantling
- height adjustment

√81	√121ECO	√171ECO	√ 122	√172	√222	√322	421	521	721	1100



Product Code	Description	Net Weight	Dimensions (in cm)
CCSER2	Stand (with chrome steel bearings)	11 kg	60 x 26 x 10

Stand with chrome steel bearings for supporting tubes with height adjustment:

- easy assembling and dismantling
- height adjustment

- facilitates tube feeding

after each cut

√81 √121ECO √171ECO **√122 √222 √**322 421 521 721 1100 **√172**







Orbital cutting - Accessories



Our support benches help you to position and feed your tubes without the aid of stands. The height-adjustable table helps you easily

The height-adjustable table helps you easily and precisely set the height of your machine, for cutting tubes placed on the support bench.

The additional tube support bench allows you to position your longest tubes in a stable manner on all benches.

We also recommend that you support the cut section in front of your cutting machine using one or more additional benches, depending on the length of the tube.



Product Code	Description	Net Weight	Dimensions (in cm)
CCBSB-X1	Bench with height adjustment	57 kg	184 x 95 x 51

Height-adjustable support bench, 1.5m

- stainless steel rollers

- handle for height adjustment

/172

-1.5 m long

122

- maximum load: 350 kg

- ø min pipe: 5 mm

- ø max pipe: 321 mm

- compatible with machines 121 to 321

81 **\sqrt{121ECO} \sqrt{171ECO} \sqrt{122} \sqrt{172} \sqrt{222} \sqrt{322} \sqrt{421} \sqrt{521} \sqrt{721} \sqrt{1100}**



/121ECO √171ECO

Product Code	Description	Net weight	Dimensions (in cm)
CCBSB-X2	Additional 1.5 m bench	38 kg	150 x 95 x 51
Additionnal sup - stainless stee - 1.5 m long - maximum loa uniformly dis	d 350 kg	- ø min pipe : 5 mm - ø max pipe: 321 mm - compatible with machir	nes 121 to 321



81

Product Code	Description	Net Weight	Dimensions (in mm)
CCBSB-B005	Connection	3 kg	100 x 80 x 402

421

521

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1100

√322

Connecting bar for CCBSB-X1 and CCBSB-X2:

√222

- Allows the height-adjustable table to be connected to a bench placed in front of the machine

81	√121ECO √171ECO	√ 122	√ 172	√222	√322	421	521	721	1100
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Orbital cutting - Accessories (End stop)

AXXAIR

NNOVATIVE ORBITAL SOLUTIONS

In addition to our CCBB-X1 and CCBB-X2 benches, we offer benches with an end stop system.

These stops are very simple to use and avoid all measurement errors.

No pollution of the tube:

All parts that are in contact with the tube are made of stainless steel (the rollers but also the stop finger)

Retractable stop:

In order to facilitate the evacuation of the cut, the stop is manually retractable.



- Lengths available:

1500 - 3000 - 4500 - 6000 - 7500 and 9000 mm

- Working stroke: Length 200 mm
- Delivered by module of 1500mm to be put together
- Max load per module: 350 kg (evenly distributed)
- Max push on the stop: 10 kg
- Operating temperature: 0 50 ° C
- Relative humidity: 35 85%

They can be assembled on the <u>feed-in or</u> <u>feed-out</u> section of the cutting machine





They are available with a ruler or with an LCD display.

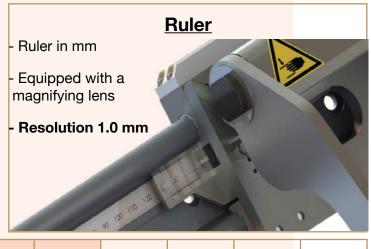
LCD display

Possibility of selecting the direction of counting, the position of the decimal point, the unit of measurement (mm or inches), reset / preset of the measurement, absolute / relative dimension.

Battery powered. Lifetime of about 4 years.
 The discharged battery icon appears when battery replacement is required.

Replacement is required.
Replacement is easily done without loss of the value and configuration parameters.

- Resolution 0.1 mm



81 **\sqrt{121ECO} \sqrt{171ECO} \sqrt{122} \sqrt{172} \sqrt{222} \sqrt{322} \sqrt{421} \sqrt{521} \sqrt{721} \sqrt{1100}**





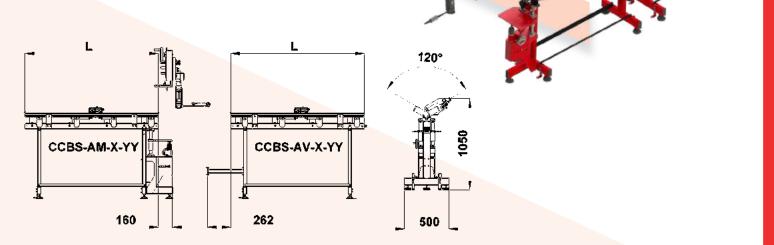
Orbital cutting - Accessories (End stop)

AXXAIR

Feed-in assembly

The parts are delivered unassembled in transport boxes, per module of 1,5 m.

They must be assembled, aligned and fixed to the ground. The magnetic ruler (with LDC display) or the ruler must be glued at the end of the assembly.



The system is delivered with the height-ajustable support bench (CCBSB-X1), additionnal support benches, the starting end stop module and its extensions.

Assembly	Reader	Length (in mm)	Workin	ng stroke	(in mm)	Produ	ıct code		Ne	t weight
		1500		1300		CCBSB	-AM-R-15	;		65 kg
		3000		2800		CCBSB	-AM-R-30)	1	04 kg
	Ruler	4500		4300		CCBSB	-AM-R-45	5	1	43 kg
on the	Tulei	6000		5800		CCBSB	-AM-R-60)	1	63 kg
feed-in		7500		7300		CCBSB-AM-R-75		2	200 kg	
1.		9000		8800		CCBSB	-AM-R-90)	2	238 kg
section of the		1500		1300		CCBSB	-AM-D-15	5	(65 kg
cutting		3000		2800			CCBSB-AM-D-30			04 kg
line	LCD	4500		4300		CCBSB-AM-D-45		1	43 kg	
	display	6000		5800		CCBSB-AM-D-60			1	63 kg
		7500		7300		CCBSB-AM-D-75		5	2	200 kg
		9000	8800		CCBSB-AM-D-90)	238 kg		
81 🗸	121ECO 🗸 1	71ECO 122	√ 172	√222	√322	421	521	7	721	1100

You can add CCBBSB-X2 modules to support the tube after the cutting process (in front of the cutting machine) with the CCBSB-B005 connecting bar (see previous pages).





Orbital cutting - Accessories (End stop)

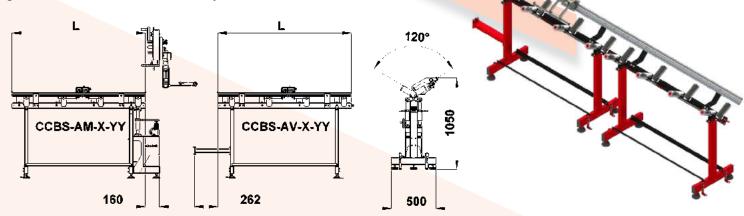
Feed-out assembly

The parts are delivered unassembled in transport boxes, per module of 1,5 m.

They must be assembled, aligned and fixed to the ground.

The magnetic ruler (with LDC display) or the ruler must be

glued at the end of the assembly.



The system comes with: CCBSB-X2 support bench modules, the starting end stop module and its extensions, the CCBSB-B005 connecting bar.

Attention: For all references with AV (bench with end stop on the feed-out section) we must also deliver at least one CCBSB-X1 bench (height-adjustable support bench) to support the cutting machine.

Assembly	Reader	Length (in mm)	Workin	ng stroke (in mm)	Prod	uct code		Net weight
		1500		1300		CCBS	B-AV-R-1	5	46 kg
		3000		2800		CCBS	B-AV-R-30)	85 kg
	Ruler	4500		4300		CCBS	B-AV-R-4	5	124 kg
on the		6000		5800		CCBS	B-AV-R-60)	163 kg
for all and		7500		7300		CCBS	B-AV-R-7	5	201 kg
feed-out		9000	8800		CCBSB-AV-R-90			240 kg	
section		1500		1300		CCBS	B-AV-D-1	5	46 kg
of the		3000		2800		CCBSB-AV-D-30			85 kg
cutting line	LCD	4500		4300		CCBSB-AV-D-45			124 kg
	display	6000		5800		CCBSB-AV-D-60			163 kg
	7500			7300		CCBSB-AV-D-75		5	201 kg
		9000	8800		CCBSB-AV-D-90)	240 kg	
81	121ECO 🗸 1	71ECO 122	√172	√222	√322	421	521	721	1100





Orbital cutting - Accessories



Our support benches help you to position and feed your tubes without the aid of stands.

The height-adjustable table helps you easily and precisely set the height of your machine, for cutting tubes placed on the support bench.

The additional tube support bench allows you to position your longest tubes in a stable manner on all benches.

We also recommend that you support the cut section in front of your cutting machine using one or more additional benches, depending on the length of the tube.

These products are available on request



Product Code	Description	Net weight	Dimensions (in mm)
CCBSB2-003	Height- adjustable table	53.5 kg	75 x 73 x 54

Height-adjustable table for 422 / 521 / 721:

adjustable table height - optimum stability

81 121ECO 171ECO 122 172 222 322 **/421 /521 /721** 1100



Product Code	Description	Net Weight	Dimensions (in mm)
CCBSB2-004	Support bench	72.8 kg	97 x 71 x 150

Tube support bench for 422 / 521 / 721:

- quick assembly and dismantling 1.5 m long
- height adjustment

- optimum stability

81	121ECO	171ECO	122	172	222	322	√ 421	√521	√ 721	1100



Product Code	Description	Poids net	Dimensions (en mm)
CCBSB2-005	Connecting bar	6.5 kg	8.5 x 4 x 65

Connecting bar between two CCBSB2 support benches:

- quick assembly and dismantling - ensures optimum stability

81	121ECO	171ECO	122	172	222	322	√ 421	√ 521	√ 721	1100
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Orbital cutting - Accessories



New autoline electric rotation:

Measures and displays the cutting/bevelling motor's power consumption

- enables the motor and cycle to be stopped in the event of overconsumption
- protects the motor and frees the operator from watching the machine
- detects whether the motor is straining and whether the blade is worn

Welding mode with prefab machine and SAXX power source: 4-button display (Start, Stop, Left, Right) with the addition of a power source connection cable

(Ref. SAEX-A02 for addition, more details in the "ORBITAL WELDING" section of this catalogue)

3.5 colour touch-screen allowing you to:

- enter the diameter and precisely adjust the feed speed in mm/min
- aid adjustment with a suggested motor speed and feed speed based on the type of material and the blade used
- perform quick and easy configuration
- display the cutting/bevelling motor's consumption
- display in English, French or German
- choose the unit of measure: mm or inch

This rotation is compatible with our previous **121**, **171**, **221**, **321**, **421**, **521** and **721** models.

The previous SAEP-00/000 rotation cannot be fitted to our new122, 172, 222 and 322 models.



Product Code	Description	Net Weight	Dimensions (in mm)
SAEX-00	Autoline electric rotation	6.3 kg	320 x 261x 193

Autoline electric inverter for CC122 to 322:

- 110 V to 230 V
- easy to use
- even rotation
- precise adjustment

	81	121ECO	171ECO	√ 122	√ 172	√222	√322	421	521	721	1100
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Product Code	Description	Net Weight	Dimensions (in mm)
SAEX-000	Autoline electric rotation	6.3 kg	320 x 261x 193

Autoline electric inverter for CC421 to 721:

- 110 V to 230 V
- easy to use
- even rotation
- precise adjustment

81	121ECO	171ECO	122	172	222	322	√ 421	√ 521	√ 721	1100
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Accessories (electric clamping)





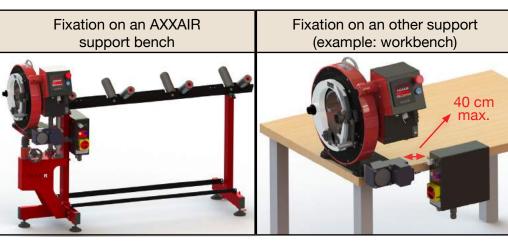
You realize **important series** in your company and want to be more effective during your projects? Our electric clamping is the ideal answer for the preparation and / or welding of your tubes.

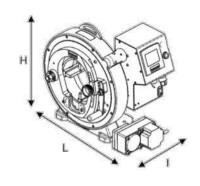
The electric clamping makes it possible to carry out a **repetitive and constant force tightening** on tubes with identical diameters and thicknesses.

The **clamping force is adjustable**, it prevents the tubes from being deformed or marked.

Technical specifications:

- 24Vdc brushless motor, motor torque: 34N.m
- Tightening force on the tube: 850 kg maximum, adjustable from 15 to 100%
- Clamping speed: 86 mm / min (diameter)
- The electric clamping is sold with the body frame and the automatic rotation





Product code	Machine's law opening capacity in mm		Net weight	Dimensions (HxLxI in mm)
Code	With basic jaws	With extra jaws (included)	Weigiit	(HALAI III IIIIII)
122-AU	Ø29 - Ø1 <mark>19</mark>	Ø 5 - Ø99	51 kg	470 x 498 x 359
172-AU	Ø74 - Ø1 <mark>73</mark>	Ø <mark>16</mark> - Ø116	58 kg	520 x 530 x 359
222-AU	Ø128 - Ø <mark>228</mark>	Ø <mark>55</mark> - Ø155	66 kg	575 x 575 x 359
322-AU	Ø230 - Ø <mark>328</mark>	Ø141 - Ø239	80 kg	675 x 662 x 359

<u>Caution:</u> Remember to order one or more motors (cutting, beveling or welding torch) and the consumables needed with the sets listed above.





Orbital cutting - Consumables





Orbital cutting blades

High quality blades (HSS + Cobalt) sold in boxes of 5:

- The tooth pitch & design are essential for chip evacuation, in order to achieve a high quality cut. AXXAIR has produced the most efficient blade design possible for various cutting applications.
- Often preferred to our competitors' blades, AXXAIR blades are compatible with the majority of other orbital cutting machines.



Product Code	Cutting tube thickne		ø of the blade	Number of teeth
LS63128	0,5 to 0,9 mm	,02 - ,04"	63 mm	128
LS63100	0,7 to 1,5 mm	,03 - ,06"	63 mm	100
LS6364	1 to 3 mm	,04 - ,12"	63 mm	64
LS6872	1 to 3 mm	,04 - ,12"	68 mm	72
LS6844	2 to 7mm	,08- ,28"	68 mm	44
LS8080	1 to 3 mm	,04 - ,12"	80 mm	80
LS8054	2 to 7 mm	,08- ,28"	80 mm	54

√ 81	√121ECO	√171ECO	√ 122	√ 172	√222	√322	√ 422	√521	√ 721	√ 1100
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Product Code	Description	Volume
CCLUH	Liquid lubricant	250 ml

High performance oil lubricant, sold in packs of 5:

- Recommended for all FS cutting motors
- Safety data sheet available on request

81 12	1ECO 171ECO	√ 122	 	√222	√ 322	√422	√ 521	√721	√ 1100



Product Code	Description	Volume
CCLUP	Paste lubricant	250 ml

Paste lubricant, sold in packs of 5 lubricants-tubes:

- Recommanded for metabo motors
- Safety data sheet available on request

′81 √121ECO √171ECO 122 17	222 322	422 521	721 1100
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1 machine - 3 applications

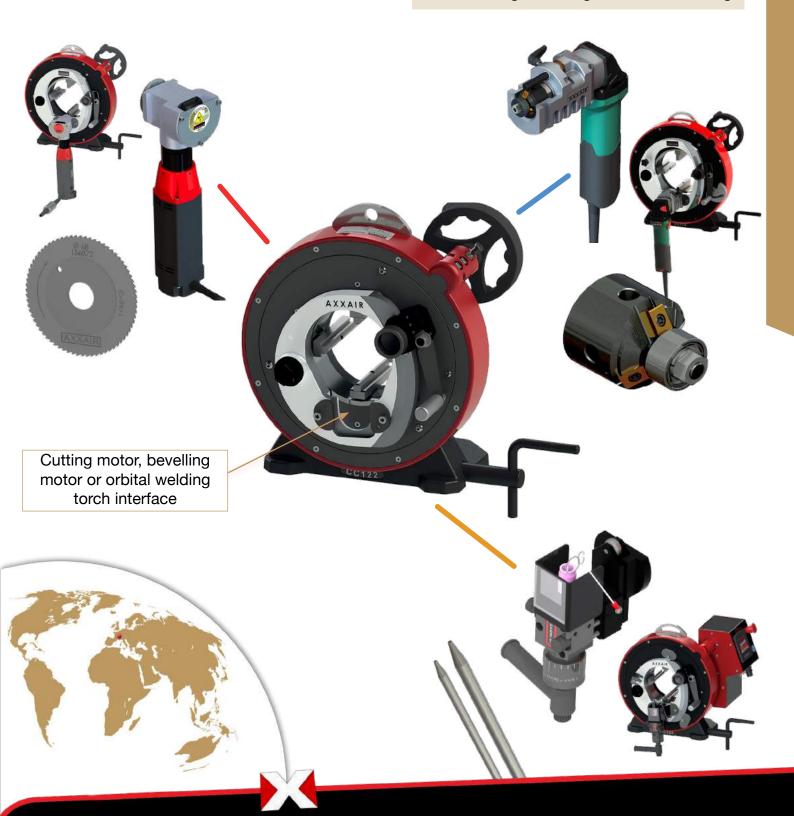


The AXXAIR Group was the first to offer a triple and exclusive solution, from preparation to orbital welding:

the global process

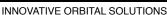
For more than 20 years, a single machine frame (122, 172, 222 and 322) has enabled three operations to be carried out:

Cutting, bevelling and orbital welding



A machine - 3 applications







Product Code	Description	Net weight
FS xx / MOPD	Cutting motor	5 kg

Low-speed / high-speed / pneumatic motor with dual output (uptake):

	Product Code	Frame
120V	Low-speed motor: FS15	122
1200	High-speed motor: FS19	
0001/	Low-speed motor: FS25	172
230V	High-speed motor: FS29	222
Pneu- matic	MOPD	322

To use this motor you will need to order: suitable cutting blades for the tube thickness you want to cut and, if necessary, lubricant.

All information and relevant product codes appear in the orbital cutting accessories and consumables section of this catalogue.



Product Code	Description	Net Weight
GA10 - x - xx	Bevelling motor kit	5 kg

120V / 230V beveling motor supplied with a chip shield and a workpiece guide tailored to the frame of your cutting / prefab welding machine:

	Product Code	Frame
	GA10-M1-122	122
	GA10-M1-172	172
120V	GA10-M1-222	222
	GA10-M1-322	322

	Product Code	Frame
GA10-M2-122		122
230V	GA10-M2-172	172
	GA10-M2-222	222
	GA10-M2-322	322

To use this motor and bevel your tubes you will need to order: one or more milling heads and carbide inserts.

All information and relevant product codes appear in the orbital bevelling accessories and consumables section of this catalogue.



Product Code	Description	Net Weight
SX - KIT x	Torch kit	depending on the chosen product

KIT for upgrading a CC/GA to an SX Air / Water / AVC+OSC torch

Cooling	Product Code	Frame	
AIR	SX-2KITA	122	
EALL	SX-2KITE	172 222	
EAU	SX-2KITNAOF (AVC/OSC)	322	
If you have acquired the electrical clamping (xx2-AU), please order the references below, they are delivered without automatic rotation:			
AIR	SX-3KITA	122	
EALL	SX-3KITE	172 222	
EAU	SX-3KITNAOF (AVC/OSC)	322	

To use this KIT and to prefab weld, you will need to order: a suitable AXXAIR welding power supply for the tubes you want to weld.

All information and relevant product codes appear in the orbital welding section of this catalogue.



AXXAIR Orbital facing



Tube facing is used on thin tubes with a thickness of less than 3 mm. It consists in bringing into conformity the end of a tube or an accessory.

This conformity acts on three aspects:

the perpendicularity of the face of the tube the surface state of the face - potentially a length adjustment.

After the facing process, the face will be perpendicular to the axis of the tube, without burrs, with a low RA and the desired length.

Facing machines are used when the cutting process is not sufficiently precise for the application or when the cutting process generates burrs.

To give an exemple: abrasive cutting disc, band saw or tube cutter.



Tube with small diameters <25.4 mm are particularly concerned by the facing process. They are often cut with tube cutters or abrasive cutting machines. Generally speaking, tube must be faced before welding in order to obtain quality welds.

One category of tube is particularly concerned: electropolished tube used in semiconductor or pharmaceutical industries.

It is forbidden to scratch the polished surface inside the tubes: the cuts are therefore only done with a cutting wheel. This process does not generate chips but only dust. The result of this cut is not exploitable without a facing operation which unrolls the chip towards the outside of the tube.

FLEXIBILITY, PRODUCTIVITY

Our facing machines operate on battery or corded for more flexibility. HSS TIALN blades, reversible with two cutting edges guarantee optimal lifetime of consumables.

QUALITY

Facing creates a clean and burfree surface without tube deformation: sharpness and accuracy guaranteed.

Thin tube are therfore ready for welding.

PORTABILITY

Our facing machines are llightweight and designed to be used on site as well as in the workshop.









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

We will be glad to share our know-how with you and find an adapted solution to your needs!









DC25 MA - DC65 MA

High quality blades

HSS TIALN blade Reversible, two cutting edges



Clamping shellls

Stailess steel molded jaws

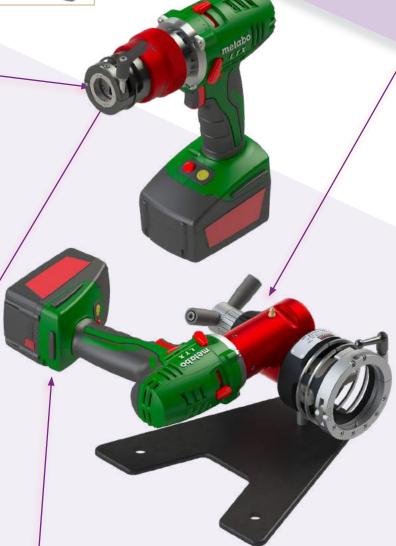


Easy adjustment

Indexable wrist and wide opening with spring









INNOVATIVE ORBITAL SOLUTIONS

Accurate manual advance

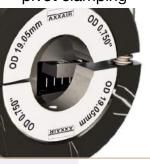
Graduated vernier scale





Easy set up of the tube

Large opening and pivot clamping



Delivered in an anti-shock case

Water- and dustproof



Brushless motor 18V

- 2 mechanical speeds + electric speed variator
- Special handy design
- Work without return shock
- Integrated work lamp
- Comes with two 5.2 AH battery, LiHD technology, maximum autonomy

Facing range				
DC25-MA	ø3 - ø25.4 mm 0.1 - 1"			
DC65-MA	ø3 - ø63.5 mm 0.1 – 2.5"			







DC25 MA - DC65 MA

Technical characteristics:

Thickness < 3 mm (0,12") according to material

Burr-free tube squaring and edge breaking machine used after a band saw cut or on electropolished tubes. Ideal tool to face a band saw cut before automatic welding

18 V Drill / Driver motor:

- 220-240 V ~ 50 / 60Hz **or** 100-120V ~ 60Hz
- High rotation torque
- Rugged reduction housing which allows heat dissipation and optimal durability
- Come with two 18V Li-Power, 5.2 Ah batteries and a fast battery charger
- 2 mechanical speeds + electric speed variator :

Speed 1 : 0-500 tr/min (rpm) Speed 2 : 0-1700 tr/min (rpm)

All motors are supplied in their own individual cases, including the necessary tools

DC25

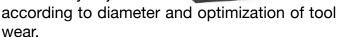
There are two mounting positions for the blade to cover the range of diameter.





DC65

Adjustment of the tool support by sliding: allows easy adjustment



- 30° and 45° outside bevel possible with optional tool holder
- Facing and bevelling in one operation
- Possibility to use two tools simultaneously



	Product Code	Facing machine for the following diameters (mm)	Net weight	Minimal straight length of tube	Dimensions (HxLxI in mm)
120 V	DC25-MA1	Ø3 - Ø25.4 0.1 - 1"	2.5 kg	With standard jaws: 9mm (0.354") With micro-fit jaws: 5mm (0,196")	285 x 220 x 75
Drill / Driver	DC65-MA1	Ø3 - Ø63.5 0.1 - 2.5"	5.5 kg	With standard jaws : 10mm (0,393")	140 x 325 x 250
230 V	DC25-MA2	Ø3 - Ø25.4 0.1 - 1"	2.5 kg	With standard jaws : 9mm (0.354") With micro-fit jaws : 5mm (0,196")	285 x 220 x 75
Drill / Driver	DC65-MA2	Ø3 - Ø63.5 0.1 - 2.5"	5.5 kg	With standard jaws : 10mm (0,393")	140 x 325 x 250







High quality blades

HSS TIALN blade Reversible, two cutting edges



Clamping shellls

Stailess steel molded jaws

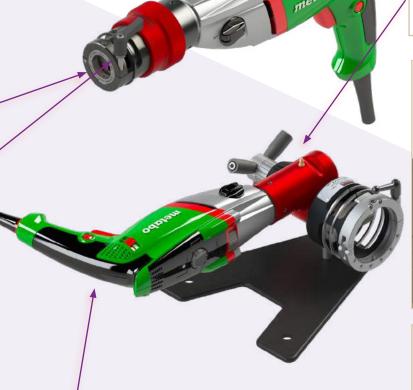


Easy adjustment

Indexable wrist and wide opening with spring









INNOVATIVE ORBITAL SOLUTIONS

Accurate manual advance

Graduated vernier scale



Easy set up of the tube

Large opening and pivot clamping



Delivered in an anti-shock case

Water- and dustproof



Mains motor, 1100 W

- 2 mechanical speeds + electric speed variator
- Special handy design
- Work without return shock
- Rugged reduction housing which allows heat dissipation and optimal durability

Facing range				
DC25-MS	ø3 - ø25.4 mm 0.1 - 1"			
DC65-MS	ø3 - ø63.5 mm 0.1 – 2.5"			





INNOVATIVE ORBITAL SOLUTIONS



DC25 MS - DC65 MS

Technical characteristics:

Thickness < 3 mm (0,12") according to material

Burr-free tube squaring and edge breaking machine used after a band saw cut or on electropolished tubes. Ideal tool to face a band saw cut before automatic welding

Mains motor 1100 W:

- 220-240 V ~ 50 / 60Hz or
- 100-120V ~ 60Hz
- High rotation torque
- Two speed gearbox with variable speed drive
- High quality speed controller
- Immobilizer protection
- Housing reducer in cast aluminum
- 2 mechanical speeds + electric speed variator :

Speed 1 : 0-1000 tr/min (rpm) Speed 2 : 0-3100 tr/min (rpm)

All motors are supplied in their own individual cases, including the necessary tools

DC25

There are two mounting positions for the blade to cover the range of diameter.





Adjustment of the tool support by sliding: allows easy adjustment

according to diameter and optimization of tool wear.

- 30° and 45° outside bevel possible with optional tool holder
- Facing and bevelling in one operation

- Possibility to use two tools simultaneously



	Product Code	Facing machine for the following diameters (in mm)	Net weight	Minimal straight length of tube	Dimensions (HxLxI in mm)
1100W 120 V	DC25-MS1	Ø3 - Ø25.4 0.1 - 1"	2.5 kg	With standard jaws: 9mm (0.354") With micro-fit jaws: 5mm (0,196")	300x 370 x 76
Mains motor	DC65-MS1	Ø3 - Ø63.5 0.1 – 2.5"	5.5 kg	With standard jaws : 10mm (0,393")	132 x 345 x 340
1100W 230 V	DC25-MS2	Ø3 - Ø25.4 0.1 - 1"	2.5 kg	With standard jaws: 9mm (0.354") With micro-fit jaws: 5mm (0,196")	300x 370 x 76
Mains motor	DC65-MS2	Ø3 - Ø63.5 0.1 – 2.5"	5.5 kg	With standard jaws : 10mm (0,393")	132 x 345 x 340









Clamping shells

DC115 : Stainless steel clamping jaws

DC221 : Aluminium clamping jaws



Accurate manual advance

0.1 mm steps (0,0393")

30° and 45° outside bevel

possible with optional tool holder

Easy set up of of tube

1 set of jaws for each diameter



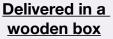


Possibility to use two (DC115) or three (DC221) tools simultaneously

Sliding adjustment of tool holder offers easy diameter change and optimal tip wearing









<u>1100 W motor</u>

Motor mains 1100W with large speed range (2 gears)

Screw and wheel drive to optimize the speed range and eliminate vibrations

High quality blades

HSS TIALN blade.

Reversible, two cutting edges



Facing range			
DC115 AM		115 mm - 4.5"	
DC221 AM		220 mm 8.5 "	



DC115-AM - 221-AM

Technical characteristics:

Thickness < 3 mm (0,12") according to material

Burr-free tube squaring and edge breaking machine used after a band saw cut or on electropolished tubes. Ideal tool to face a band saw cut before automatic welding

- Accurate manual advance: 4/1000" (0,1 mm) step graduation
- Sliding adjustment of tool holder offers easy diameter change and optimal tip wearing
- 30° and 45° outside edge breaking possible with optional tool holder
- Squaring and edge breaking in one operation

All motors are supplied in their own individual cases, including the necessary tools



- **Motor 1100W,** large speed range (2 gears): Screw and wheel drive to optimize the speed range and eliminate vibrations



	Product Code	Facing machine for the following diameters (in mm)	Net weight	Minimal straight len- gth of tube	Dimensions (HxLxl in mm)
120V	DC115-AM1	Ø12 - Ø115 0.5" - 4.5"	11 kg	28 mm 1.102"	219x314x462
Moteur 1100W	DC221-AM1	Ø50 - Ø220 2" - 8.5 "	21 kg	39 mm 1.535"	327x425x540
230 V	DC 115-AM2	Ø12 - Ø115 0.5" - 4.5"	11 kg	28 mm 1.102"	219x314x462
Moteur 1100W	DC221- AM2	Ø50 - Ø220 2" - 8.5 "	21 kg	39 mm 1.535"	327x425x540





DC115-BM - 221-BM

AXXAIR INNOVATIVE ORBITAL SOLUTIONS

Stainless steel concentric jaws

DC115 : 4 Stainless steel concentric jaws

DC221 : 6 Stainless steel concentric jaws



High quality blades

HSS TIALN blade Reversible, two cutting edges



Accurate manual advance

0.1 mm steps

Bench mounting



1100 W motor

Mains motor 1100W with large speed range (2 gears) Screw and wheel drive to optimize the speed range and eliminate vibrations



Multi-tools

Possibility to use two (DC115) or three (DC221) tools simultaneously

Sliding adjustment of tool holder offers easy diameter change and optimal tip wearing





30° and 45° outside bevel

possible with optional tool holder

Delivered in a wooden box



Facing range				
DC115 BM		9115 mm - 4.5"		
DC221 BM		9220 mm - 8.5 "		





DC115-BM - 221-BM

INNOVATIVE ORBITAL SOLUTIONS

Technical characteristics:

Thickness < 3 mm (0,12") according to material

Burr-free tube squaring and edge breaking machine used after a band saw cut or on electropolished tubes. Ideal tool to face a band saw cut before automatic welding

- Accurate manual advance: 4/1000" (0,1 mm) step graduation
- Sliding adjustment of tool holder offers easy diameter change and optimal tip wearing
- 30° and 45° outside bevel possible with optional tool holder
- Squaring and beveling in one operation
- Possibility to use two (DC115) or three (DC221) tools simultaneously
- Delivered in high quality protection case

All motors are supplied in their own individual cases, including the necessary tools



Wide range of use with stainless steel concentric clamping for all diameters



	Product Code	Facing machine for the following diameters (in mm)	Net weight	Minimal straight length of tube	Dimensions (HxLxI in mm)
120V	DC115-BM1	Ø12 - Ø115 0.5" - 4.5"	37 kg	58 mm 2.283"	219x314x462
Moteur 1100 W DC221-E	DC221-BM1	Ø50 - Ø220 2" - 8.5 "	55 kg	62 mm 2.440"	327x425x540
230 V	DC 115-BM2	Ø12 - Ø115 0.5" - 4.5"	37 kg	58 mm 2.283"	219x314x462
Moteur 1100 W	DC221- BM2	Ø50 - Ø220 2" - 8.5 "	55 kg	62 mm 2.440"	327x425x540





Orbital Facing - Accessories

AXXAIR

INNOVATIVE ORBITAL SOLUTIONS

Our support benches help you to position and feed your tubes without the aid of stands.

The height-adjustable table helps you easily and precisely set the height of your machine, for facing the tubes placed on the support bench.

The additional tube support bench allows you to position your longest tubes in a stable manner on all benches.



Product Code	Description	Net Weight	Dimensions (in cm)
CCBSB-X1	Height-adjustable tube support bench	57 kg	184 x 95 x 51

Height-adjustable support bench, 1.5 m:

- stainless steel rollers

- height adjustment handle

- maximum load 350 kg uniformly distributed

- min tube ø: 5 mm - max tube ø: 321 mm

DC25-MA	DC65-MA	DC25-MS	DC65-MS	DC115-AM	DC221-AM	√DC115-BM	√DC221-BM
							,



Product Code	Description	Net weight	Dimensions (in cm)			
CCBSB-X2	Additional support bench	38 kg	150 x 95 x 51			
Additional tube support bench, 1.5 m:						

stainless steel rollers
maximum load 350 kg
max tube ø: 321 mm
max tube ø: 321 mm



Product Code	Description	Net weight	Dimensions (in cm)	
CCSA21	Pneumatic clamping	8.2 kg	560 x 200 x 190	

Pneumatic clamping for DC115-BM / DC221-BM

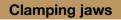
DC25-MA	DC65-MA	DC25-MS	DC65-MS	DC115AM	DC221AM	√DC115BM	√DC221BM	
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Orbital Facing - Accessories





Clamping jaws for orbital facing machines:

A set of jaws is necessary for each outside diameter of tube to be machined



For machine Product Code		Diameter of the tube		
DC25	DCM25-XX	3 mm à 25.4 mm	1/8" - 1"	
DC65	DCM65-XX	3 mm à 63.5 mm	1/8" - 2.5"	
DC115	DCM115-XXX	12 mm à 115 mm	1/2" - 4.5"	
DC221	DCM221-XXX	50 mm à 220 mm	2" - 8.5"	

✓DC25-MA	JDC65-MS JDC115-AM	✓ DC221-AM DC115-BM	DC221-BM
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Jaws fot micro-fiting

Stainless steel micro-fiting jaws for DC25 ONLY

- Straight length: 4,3 mm mini



Product Code	Diameter of the tube		
DCM25-MF03.18	3,18 mm	1/8 "	
DCM25-MF06.00	6 mm	0.236"	
DCM25-MF06.35	6.35mm	1/4 "	
DCM25-MF08.00	8.00 mm	0.315 "	
DCM25-MF10.00	10.00 mm	0.394 "	
DCM25-MF12.00	12.00 mm	0.472 "	
DCM25-MF12.70	12.7 mm	1/2 "	

√DC25-MA	DC65-MS	√DC25-MA	DC65-MS	DC115-AM	DC221-AM	DC115-BM	DC221-BM
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Orbital Facing - Accessories





Product Code	Description	Net weight	Dimensions (in mm)
DCM6525	Spacer	0.022 kg	Ø 76

Spacer for fitting DC25 jaws on a DC65

DC25-MA	DC25-MA	√DC65-MA	DC25-MS	√DC65-MS	DC115-AM	DC221-AM	DC115-BM	DC221-BM
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Product Code	Description	Net weight	Dimensions (in mm)
DC65-P300	Tool holder for bevelling	0.028 kg	22 x 13 x 28.5

Tool holder for breaking the corner at 30°:

- Tool holders are supplied without blades
- Corner breaking is possible on the whole machine's range
- Possibility to face the tube and break the corner at the same time on the whole machines' ranges*

*exeption for the DC65:

- If facing and breaking corners at the same time: reduced range: 20 - 53 mm

DC25-MA	√DC65-MA	DC25-MS	√DC65-MS	√DC115-AM	√DC221-AM	√DC115-BM	√DC221-BM
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Product Code	Description	Net weight	Dimensions (in mm)
DC65-P450	Tool holder for bevelling	0.026 kg	22 x 12.5 x 28.5

Tool holder for breaking the corner at 45°:

- Tool holders are supplied without blades
- Corner breaking is possible on the whole machine's range
- Possibility to face the tube and break the corner at the same time on the whole machines' ranges*

*exeption for the DC65:

- If facing and breaking corners at the same time: reduced range: 20 - 53 mm







Orbital Facing - Accessories



Our HSS TIALN blades assure a high quality burr-free tube squaring.

They are reversible and have two cutting edges.

It does not alter the nature of the material. There is less wear on the insert, thanks to the cleanness of the process.



Product Code	Description	Net weight	Dimensions (in mm)
DC-OUT1	Box of 10 blades	0.028 kg	12.5 x 40 x 100

HSS TIALN blade (box of 10 blades):

- HSS TIALN (High Speed Steel) for working steel with a high speed



Product Code	Description	Net weight	Dimensions (in mm)
DC-UOUT1	Blade (single unit)	0.022 kg	4 x 9.5 x 9.5

HSS TIALN blade (single unit):

- HSS TIALN (High Speed Steel) for working steel with a high speed

√DC25-MA	√DC65-MA	√DC25-MS	√DC65-MS	√DC115-AM	√DC221-AM	√DC115-BM	√DC221-BM



3 mm Wal

Orbital welding (Prefabrication)



Orbital welding involves rotating a Tungsten electrode around a tube to weld it to other tubes or accessories.

Our welding range incorporates a unique and atypical orbital welding machine for so-called "prefab" because it cannot be brought to the tube, it is the tube that is brought to the machine.

It is an axial loading machine which involves being able to pull out the tube as well as the welded accessory.



These machines that use standard cutting and bevelling frames have the advantage of being very robust and easy to use.

In fact, the SX range is mainly intended for workshop or building site prefabrication use. These machines are also used to carry out repeatable production welding on suitable elements.

Our machines can all be equipped with either an air-cooled torch or a water-cooled torch, with or without filler metal.

FLEXIBILITY, PRODUCTIVITY

Welding with a water or air cooled torch with or without filler metal. It allows production of medium to large series of welding sub-assemblies. The diameter range of each machine is very wide and does not require specific jaws.

QUALITY AND REPEATABILITY

TIG welding without tube distortion (multi-contact concentric clamping) ideal for thin walled stainless steel tubes. Mechanical tracking and axial adjustment optimize the quality of your welds.

EASY TO USE

Robust and intuitive, it is adapted to any operator profile.









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!







SX122 - 172 - 222 - 322

INNOVATIVE ORBITAL SOLUTIONS

No tube deformation

Concentric clamping



Basic and extra stainless steel jaws: no pollution of stainless steel tubes

Air Cooled or Water Cooled

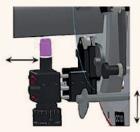




Accurate positioning

Axial adjustment of

the electrode position: facilitates location of the parts to be welded Adjustment of the tube's axial position +/- 5 mm



power sources

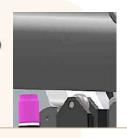
Rotating

Connect to the

SAXX range welding

Constant distance: electrode-tube

Mechanical tracking of tube ovalization from the outside.



Micrometric adjustment of the height of the arc

Accuracy of adjustment without specific tooling



Easy handling and transportation



Compatible with the SAXX power sources



Opening capacity					
122	ø12 - ø119 mm 0.25" - 4.5"				
172	ø16 - ø173 mm 0.625" – 6.625"				
222	55 - ø228 mm 2.375" – 8.625"				
322	<mark>ø141 mm</mark> - ø328 mm 5.563" – 12.750"				





SX122 - 172 - 222 - 322

INNOVATIVE ORBITAL SOLUTIONS

Technical characteristics:

Machines for TIG orbital prefab welding.

Choice of: AIR cooling or WATER cooling

For optimum use, the ambient temperatu must be between 0 °C and + 40 °C.

Compatible with AXXAIR's SAXX orbital power sources that have an automatic parameter calculation mode.

The power source will offer you parameters adapted to the characteristics of the tubes / accessories to be welded.

The machine can be supplemented by a wire feed system. For details, please refer to accessories.

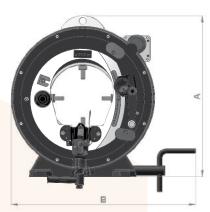
For welding with an AVC / OSC system please refer to the catalogue for thick walled tubes.

ure		3	
	Model	100% Duty	y cycle



SX-xx2-E (WATER)

SX-xx2-A (AIR)



200 A

100 A

	Product	Machine's jaw ope	ning capacity in mm		Dimensions (AxBxC in mm)	
	Code	With basic jaws	With extra jaws (included)	Net weight		
	SX122-A	Ø29 - Ø119	Ø12 - Ø99	45 kg	446 x 541 x 350	
Cooling AIR	SX172-A	Ø74 - Ø1 <mark>73</mark>	Ø <mark>16</mark> - Ø116	52 kg	493 x 566 x 350	
	SX222-A	Ø128 - Ø <mark>228</mark>	Ø <mark>55</mark> - Ø155	60 kg	548 x 594 x 350	
	SX322-A	Ø230 - Ø <mark>328</mark>	Ø141 - Ø239	73 kg	649 x 644 x 350	
	SX122-E	Ø29 - Ø119	Ø <mark>12</mark> - Ø99	45 kg	446 x 541 x 350	
Cooling	SX172-E	Ø74 - Ø <mark>173</mark>	Ø <mark>16</mark> - Ø116	52 kg	493 x 566 x 350	
WATER	SX222-E	Ø128 - Ø <mark>228</mark>	Ø <mark>55</mark> - Ø155	60 kg	548 x 594 x 350	
	SX322-E	Ø230 - Ø <mark>328</mark>	Ø141 - Ø239	73 kg	649 x 644 x 350	







Our support legs and stands have been designed to further facilitate welding by ensuring that the machine is stable in varied conditions: in the workshop or on site.

The great advantages of these products are:

- lightness
- flexible handling
- ease of use



Product Code	Description	Net weight	Dimensions (in cm)
CCPS21	Support legs	10 kg	103 x 32 x 11

Support legs for orbital welding machine:

- quick assembly and dismantling
- height adjustment with screws

√SX122-A	√SX172-A	√SX222-A	√SX322-A	√SX122-E	√SX172-E	√SX222-E	√SX322-E
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Product Code	Description	Net weight	Dimensions (in cm)
CCSER1	Stand	10 kg	60 x 26 x 10

Simple stand for supporting tubes with height adjustment:

- quick assembly and dismantling
- height adjustment

✓SX122-A ✓SX172-A ✓SX	222-A /SX322-A /S	SX122-E	✓SX222-E ✓SX322-E
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Product Code	Description	Net weight	Dimensions (in cm)
CCSER2	Stand (with chrome steel bearings)	11 kg	60 x 26 x 10

Stand with chrome steel bearings for supporting tubes with height adjustment:

- quick assembly and dismantling
- height adjustment

√SX122-A	√SX172-A	√SX222-A	√SX322-A	√SX122-E	√SX172-E	√SX222-E	√SX322-E
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Our support benches help you to position and feed your tubes without the aid of stands. The height-adjustable table helps you easily and precisely set the height of your machine, for welding tubes placed on the support bench.

The additional tube support bench allows you to position your longest tubes in a stable manner on all benches. We also recommend that you support the cut section in front of your machine using one or more additional benches, depending on the length of the tube.



Product Code	Description	Net weight	Dimensions (in cm)
CCBSB-X1	Heightadjustable tube support bench	57 kg	184 x 95 x 51

Height-adjustable support bench, 1.5m:

- stainless steel rollers

- height adjustment handle

- maximum load 350 kg

- min tube ø: 5 mm

max tube ø: 321 mm

SX122-A /SX172-A

√SX222-A √SX322-A √SX122-E

√SX172-E

√SX222-E

√SX322-E



Product Code	Description	Net weight	Dimensions (in cm)
CCBSB-X2	Additional support bench	38 kg	150 x 95 x 51

Additional tube support bench:

- stainless steel rollers

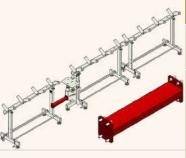
1.5 m long

- maximum load 350 kg

- min tube ø: 5 mm

max tube ø: 321 mm

/SX122-A √SX172-A √SX222-A √SX322-A √SX122-E √SX172-E √SX222-E √SX322-E



Product Code	Description	Net weight	Dimensions (in mm)
CCBSB-B005	Connecting bar	3 kg	100 x 80 x 402

Connecting bar for CCBSB-X1 and CCBSB-X2:

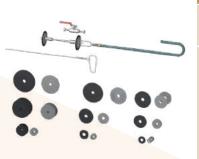
 Allows the height-adjustable table to be connected to a bench placed in front of the machine

SX122-A √SX172-A √SX222-A √SX322-A √SX122-E √SX172-E √SX222-E √SX322-E









Product Code	Description	Net weight	Packaging (in cm)
SKIF-01	Gas protection KIT	4.5 kg	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 1/4 turn gas valve, 1 carabiner

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

/SX122-A √SX172-A √SX222-A /SX322-A /SX122-E √SX172-E √SX222-E √SX322-E



Product Code	Description	Net weight	Packaging (in cm)
SKIB-01	Gas protection KIT	1.7 kg	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.

√SX122-A	√SX122-A	√SX172-A	√SX222-A	√SX322-A	√SX122-E	√SX172-E	√SX222-E	√SX322-E
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Product Code	Description	Net weight	Dimensions (in mm)
SADFP-02	Wire guide	0.05 kg	51 x 90 x 65

Wire guide for SX

√SX122-A √SX172-A √SX222-A √SX322-A √SX122-E √SX172-E √SX222-E √SX322-E



Product Code	Description	Net weight	Dimensions (in cm)
SADF2X	Wire dispenser	12 kg	59.7 x 38.4 x 24

Wire Dispenser for SAXX, cable sheath 5 m max:

- Supplied with SAXX power supply-connection cable and teflon sheath to guide the wire
- Drive pressure adjusted by adjustable spring, with handle.

√SX122-A √SX172-A √SX222-A √SX322-A √SX122-E √SX172-E √SX222-E √SX322-E







Product Code	Description	Net weight	Plastic box (in cm)				
SKTDI-30	Inclined torch	0.3 kg	12 x 17.5 x 4				
30° inclined torch kit							

√SX122-A √SX172-A √SX222-A √SX322-A √SX122-E √SX172-E √SX222-E √SX322-E



√SX172-A

√SX122-A

Product Code	Product Code Description Net weight					
SKTDI-45	Inclined torch	0.3 kg	12 x 17.5 x 4			
45° inclined torch kit						
√SX222-A	√SX322-A √SX12	22-E √SX172-E	√SX222	-E √SX322-E		







Accessories (electric clamping)





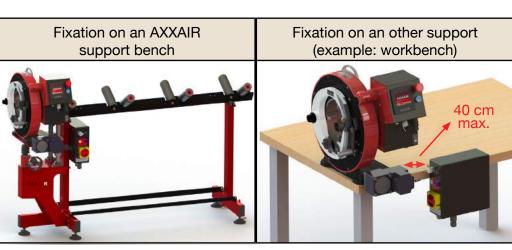
You realize **important series** in your company and want to be more effective during your projects? Our electric clamping is the ideal answer for the preparation and / or welding of your tubes.

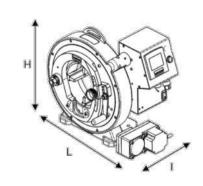
The electric clamping makes it possible to carry out a **repetitive and constant force tightening** on tubes with identical diameters and thicknesses.

The **clamping force is adjustable**, it prevents the tubes from being deformed or marked.

Technical specifications:

- 24Vdc brushless motor, motor torque: 34N.m
- Tightening force on the tube: 850 kg maximum, adjustable from 15 to 100%
- Clamping speed: 86 mm / min (diameter)
- The electric clamping is sold with the body frame and the automatic rotation





Product code	Body frame, automatic rotation and electric clamping Machine's jaw opening capacity in mm			Dimensions (HxLxI in mm)
Code	With basic jaws	weight	(HAEAI III IIIIII)	
122-AU	Ø29 - Ø119	Ø 5 - Ø99	51 kg	470 x 498 x 359
172-AU	Ø74 - Ø <mark>173</mark>	Ø <mark>16</mark> - Ø116	58 kg	520 x 530 x 359
222-AU	Ø128 - Ø <mark>228</mark>	Ø <mark>55</mark> - Ø155	66 kg	575 x 575 x 359
322-AU	Ø230 - Ø <mark>328</mark>	Ø141 - Ø239	80 kg	675 x 662 x 359

<u>Caution:</u> Remember to order one or more motors (cutting, beveling or welding torch) and the consumables needed with the sets listed above.



Orbital welding (Prefab) - Consumables

INNOVATIVE ORBITAL SOLUTIONS

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

This increases the life of the electrodes.



Product Code	Description	Net weight	Plastic box (cm)
SCE16-50	Electrodes	0.02 kg	5.5 x 4.5 x 1

Electrode diameter 1.6 mm, length 50mm

- Box of 10 electrodes



Product Code	Description	Net weight	Plastic box (cm)		
SCE24-50	Electrodes	0.05 kg	5.5 x 4.5 x 1		
Electrode diameter 2.4 mm, length 50mm					

- Box of 10 electrodes

√SX122-A	√SX172-A	√SX222-A	√SX322-A	√SX122-E	√SX172-E	√SX222-E	√SX322-E
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Product Code	Description	Net weight	Plastic box (cm)
SKTD-xx	Replacement torch	0.3 kg	12 x 17.5 x 4

Replacement kit for straight torch Ø 1.6 mm or Ø 2.4

- consists of: 5 nozzles, 2 plugs 9/20, 2 long electrode clamps, 10 electrodes (Ø 1.6 mm or Ø 2.4) and 2 mesh diffusers

Ø electrode	Kit Product Code
1.6 mm	SKTD-01
2.4 mm	SKTD-02

/SX122-A √SX172-A √SX222-A √SX322-A √SX122-E √SX172-E √SX222-E √SX322-E





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1 machine - 3 applications



The AXXAIR Group was the first to offer a triple and exclusive solution, from preparation to orbital welding:

global process

For more than 20 years, a single machine frame (122, 172, 222 and 322) has enabled three operations to be carried out:

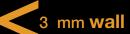
cutting, bevelling and orbital welding

BUT CAUTION,

The SX-xx2 machine is dedicated to prefab welding. Its automatic rotation allows only orbital welding work.

To use the machine frame for several operations (prefab welding, cutting and / or bevelling), a cutting or bevelling machine must be ordered with the welding KIT adapted to your needs.





Orbital Welding (Microfit closed heads)



The Microfitting Series has been designed to weld small diameters tubing and fittings mainly in the semiconductor industry.

This head is a cassette system which allows first to position the parts to be welded in the cassette that is a clamping feature. Once centered and positionned correctly, the welding head is slided in the cassette to correctly position the electrode to the surface to be welded.

The cassette combinations are multiple depending on the type of parts to be welded, tube-tube, tube-union elbow, union elbow-union elbow for example.



The automatic welding cycle can than be strated directly through the start button on the motor handle of the head.

The SAXX-200 air cooled is the perfect combination with the SXMF heads to control all steps of the welding cycle. You can refer on all SAXX power sources advantages in the section SAXX power sources.

The SAXX offers functions such as dual digital gas control, auto-calculation of the parameters, compatible competitor head control, USB memory stick, welding data aquisition.

FLEXIBILITY, PRODUCTIVITY

Productivity remains our primary concern. AXXAIR's cassettes have been designed to fit various configurations of differnets parts to be welded and the weld heads provides high duty cycles.

QUALITY AND REPEATABILITY

The SMMF range allows optimum tube positioning while controlling the tightening forces so as not to distort or mark your tubes.

PORTABILITY

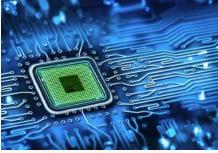
In order to allow you to weld in restrictive conditions and locations, the size and weight of the machines have been significantly reduced.

Our welding cable, housed in an ultra flexible and very resistant protective sheath, also facilitates manipulation of the welding head.









Do not hesitate to contact us for your demands as the applications can be various and the welding configurations multiple.

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







SXMF-17

INNOVATIVE ORBITAL SOLUTIONS

AIR cooled

The aluminium hosing on each side of the head protect but also help to evacuate more heat



Weight: 4.5 kg with cable

Thermal shield

We shield the electrode surrounding on the rotor as it is very exposed

Compatible with **SAXX** power sources



Transport

These heads are delivered in their work site case



Cycle start button

Starting the welding cycle or TEST mode



Cassette locking lever

Allows a stable hold of the cassette when it is placed on the head. Compatible Swagelock casstetes, please contact us

Body with inclined contact surfaces

Allows easy removal of the cassette even when it is hot

Welding range

SXMF-17

ø3 mm - ø17.2 mm 1/8" - 5/8"





SXMF-17

Technical characteristics:

Maximum welding current for a duty cycle of 35%	70 A
Maximum welding current for a duty cycle of 50%	55 A
Maximum welding current	80 A

- Cable lenght: 16 feet / 5 meters

- Operating temperature: 32°F to 104°F (0°C to 40°C)

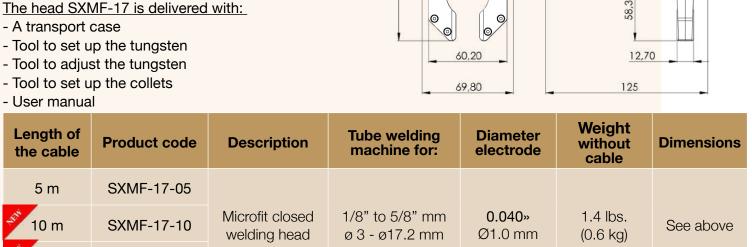
The SXMF-17 is a cessette type orbital welding head.It is controlled by AXXAIR's power sources. The air cooled SAXX-200 orbital power supply is recommended.



The SXMF-17 machine can weld different tube configurations (Tube/Tube - Tube/elbow union-Fitting/Fitting - ...), 3 cassettes and various accessories are available.

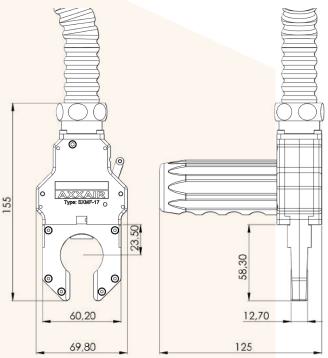


Please refer to the following pages in order to find the products' codes and sideplates' configurations.





SXMF-17 with mounted cassette





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SXMF-17-15

AXXAIR Sideplates for SXMF-17



The cassettes offer multiple weld configurations and can be combined accordingly. Thus you will have complete cassettes such as our tube-tube cassettes but for the orther configurations of the cassettes will have to choosen as a kit of left Side plate and right side plate to the central body.

They have a special treatment that offer a very good conductivity and hard surface finish for durability.

AXXAIR has 3 types of sideplates:

- Model «Standard» is used for tube clamping
- Model called «Large» for Fitting clamping
- Model called «Thin» to clamp tubes below 12.7 mm straight length.

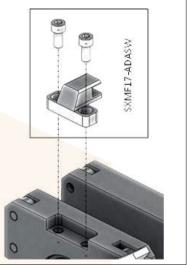
You always need the central body in combination of one of the side plates depending on what you are clamping. The combinations are multiple and the central body is mandatory in all combinations. You have to pay attatention to have the clamping levers on the same side (always use one left and one right except for fitting where it does not matter).

Attention: sideplates will have different collets.



Adaptable

In order to make your **Swagelockcassettes** compatible with the SXMF-17, **AXXAIR** has designed an adapter kit for the Swagelok cassettes.



Flexible



Combine the sideplates with the central body depending on your applications.

Precise

Each cassette model of AXXAIR has its own references of jaws corresponding to the specific characteristics of the parts to be clamped.

All of AXXAIR's clamping collets made of stainless steel.



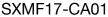






Standard Cassettes & Sideplates







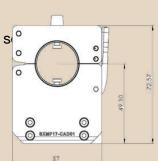
Standard cassette SXMF

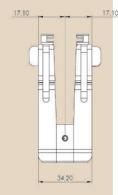
Description	Product code
Standard Cassette SXMF Tube-Tube (complet kit)	SXMF17-CA01
Standard right sideplate	SXMF17-CAD01
Standard left sideplate	SXMF17-CAG01
Standard central body SXMF (common to all siteplates)	SXMF17-CAM01



SXMF17-CAM01

Recommended standard cassette s for your microfit welds. Subsequently, the thin or wide sideplates can be ordered for specific welds.









Minimal straight length of the tube: 0.689» (17.50 mm)

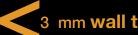
Collets for standard siteplates

Product code	Ø in inches		Product code	Ø in mm
SMX17-03.175	1/8		SMX17-03	3.00
SMX17-04.763	3/16		SMX17-04	4.00
SMX17-06.35	1/4		SMX17-05	5.00
SMX17-07.938	5/16		SMX17-06	6.00
SMX17-09.525	3/8		SMX17-08	8.00
SMX17-12.70	1/2		SMX17-09	9.00
SMX17-14.287	9/16		SMX17-10	10.00
SMX17-15.875	5/8		SMX17-11	11.00
			SMX17-12	12.00
				14.00
These jaws (sold by 2) are compatible only with the standard siteplates			SMX17-15	15.00
			SMX17-16	16.00
		SMX17-17.2	17.20	





_ 24.50



Wide Sideplate (right/left)





Wide siteplate (right and left) for SXMF **Description Product code** Wide sideplate SXMF17-CADG03 Standard central body SXMF SXMF17-CAM01 (common to all siteplates) Wide to order to clamp the following fittings.



Minimal straight length of the welding piece: 1.189" (30.20 mm)

Tube collets for wide siiteplate

Product code	Ø in inches	Product code	Ø in mm
SMX17-LT03.175	1/8	SMX17-LT03	3.00
SMX17-LT06.35	1/4	SMX17-LT06	6.00
SMX17-LT09.525	3/8	SMX17-LT08	8.00
SMX17-LT12.70	1/2	SMX17-LT10	10.00
SMX17-LT15.875	5/8	SMX17-LT12	12.00

These jaws (sold by 2) are compatible only with the wide siteplates

Fitting collets for wide siteplate





5/16 in	6.4mm (0.25 in)			
	0018	Product code	Fitting body size	Fitting type
7/16 in	6.4 mm (0.25 in)	SMX17-LRA	1/8 in, 1/4 in 6 mm	Body Union Elbow
1716 in		SMX17-LRB	3/8 in 8 mm 10 mm	or Body Union Tee
9/16 in	9/16 in E	SMX17-LRC	1/2 in 12 mm	or Body Union Cross
ă.				



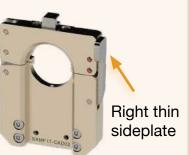


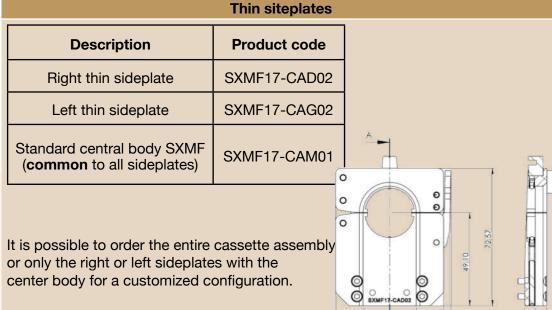
Thin sideplates





Left thin sideplate









Minimal straight length of the tube: 0.5» (12.70 mm)

Collets for thin sideplates

Product code	Ø in inches	Product code	Ø in mm
SMX17-F03.175	1/8	SMX17-F03	3.00
SMX17-F06.35	1/4	SMX17-F06	6.00
SMX17-F09.525	3/8	SMX17-F08	8.00
SMX17-F12.70	1/2	SMX17-F12	12.00

These jaws (sold by 2) are only compatible with the thin sideplates





Orbital welding (Microfit head) - Accessories





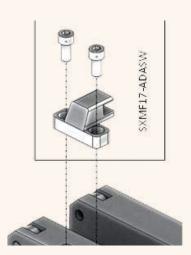
Cable extention

Product code	Lenght	Net weight
SAFS-05MAX	5m	7 kg
SAFS-10MAX	10m	14 kg

The SXMF-17 machines is delivered with a cable of 5 metres

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

We strongly advise to be limited to one extension per head.



Screw kit for Swagelok

Description	Product code
Adaption kit for Swagelock cassettes	SXMF17-ADASW

This kit also includes the screw tightening key (BTR 3/32 ").

Tightening torque of fixing screws: 0.5 Nm max.

Orbital welding (Microfit head) - Consumables



Electrodes for SXMF17

Outside diameter of the tube to b Product code welded			Electrode
	inches	mm	lenght
SCE10-20.0	1/8, 3/16, 1/4	3, 6	20.0mm
SCE10-17.5	5/16, 3/8, 1/2	8, 10, 12	17.5 mm
SCE10-15.0	5/8, 9/16	14, 15, 16, 17.2	15.0mm

- -A range of electrodes is available to meet the constraints of the SXMF-17 head:
- diameter of 0.040» (1,02mm) with the length adapted to the tube diameter.
- sold per pack of 10



AXXAIR

Orbital welding (Closed heads)

Our new range of closed SATFX welding heads enables you to achieve high quality welds in a minimal space.

Orbital welding with a closed head is done by a simple fusion without additional wire feeding. Consequently, these heads are recommended for welding thin tubes of many types of stainless steel with thicknesses of less than 3 mm.

SATFX heads are also indispensable for welding other nickel or titanium based alloys which are very sensitive to oxidation and are used when an installation with an impeccable resistance to chemicals or heat is required.



The new SATFX heads have been designed to meet the needs of our customers who are often confronted with the most demanding welding specifications.

The protective atmosphere provided by the closed heads permits welding in an inerting chamber. This results in welds with very minimal discoloration and perfectly clean weld beads.

This type of equipment is used in industrial sectors sensitive to hygienic conditions such

as aeronautics, semi-conductors, pharmaceuticals as well as food and beverage processing.

The narrow width of the head makes it ideal for construction sites where only a small amount of straight sections are in demand. However, these welding heads are also used in workshops and clean rooms.

The SATFX range, coupled with our SAXX welding power supplies and their continuous monitoring of welding parameters, guarantee repeatable welds of high quality. This type of weld passes the most strenuous tests, such as X-ray inspection.

*contact us for more information





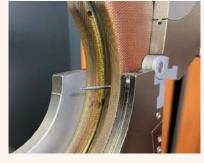
Productivity remains our top priority. The liquid cooling circuit has been optimized to allow for greater heat evacuation and thus:

- increases the service life of the SATFX
- guarantees a substantial welding output. The operating current at 100% is **100 A**.

QUALITY AND REPEATABILITY

Direct wire feeding and a homogeneous diffusion of the inert gas, high quality materials and special component processing, a grease-free operation, easy maintenance and cleaning plus numerous configurations make the SATFX range the ideal response to the

requirements of hightech industries.



They allow for intense, versatile and long-lasting usage on your construction sites and in your workshops.

INNOVATION: GLOBAL PROCESS 2 in 1

The SATFX closed welding heads can easily be transformed into a cassette machine. The cassette allows for easy placement on the parts to be welded in confined areas. Welding without tacking is possible under certain conditions.*

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

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















High protection against arcing outside the electrode

Power drive system with encoder: allows starting in all angular positions of the electrode

Water cooling of the electrode holder and aluminium flanges.

Standard stainless steel jaws for quick assembly without tools.



Wide aluminium jaws for optimal machine stability when welding accessories.

Illuminated logo on each side

Operating without grease: compatible with clean room standards.

Length of the cable: 8 meters



Large pivoting window with welding glass to check the electrode alignment after tightening the two frames.



The welding glass (shade10) allows to observe the weld and protect the operator's eyes.

Closing system with adjustable force without tools.

Allows precise adjustment of the force of the jaws on the tube to be welded and helps opening after welding.

Perfect gas protection in the welding head.

Optimized handling: Ergonomic design with soft touch compound areas and overall weight greatly reduced.

4 stainless steel remote control buttons.

Global Process: 2 in 1

Cassettes for welding in confined areas.

Easy positioning of the cassette on the parts to be welded before fixing the central body of the head.



These heads are delivered in a water- and dustproof suitcase and with a suspension assembly.



Welding range				
SATFX-52	ø 6 - ø 52 mm 0.25 - 2 "			
SATFX-76	ø 6- ø 77 mm 0.25 - 3 "			
SATFX-115	ø 12 - ø 115 mm 0.5 - 4.5 "			



Technical characteristics:





SATFX-52 - 76 - 115

INNOVATIVE ORBITAL SOLUTIONS

Maximum welding current 150 A 100% duty cycle 100 A

These closed heads are designed for orbital butt TIG welding of tubes, tubes-elbows, tube-ferrules, tubes-T, tubes-fittings and others in a fully inerted closed chamber.

The SATFX heads are driven by the AXXAIR orbital welding power sources of the SAXX range.

Integral water cooling of the heads and new treatment of the aluminium parts offering a better electrical and thermal conductivity.

The double cooling of the rotor and the head body is essential to guarantee a good lifespan of the parts by minimizing the effects of expansion deformation.

Illuminated logo on each side of the head: it allows to visualize if the power source is turned on or off and if the machine is in a welding cycle or not.



When the power source is powered on and the head connected, the light is on steady. When the machine is welding, the indicator light flashes.



4 stainless steel remote control buttons: Start/stop, gas purging, rotation of the rotor in one direction and rotation in the other direction.

Regardless of the starting position during welding, the rotor automatically returns to the open position of the rotor so that the welded parts can be removed easily.

Ergonomic design: Ergonomic handle with soft touch overmolding that brings the hand closer to the center of gravity of the head, providing unparalleled handling comfort.

Maintenance:

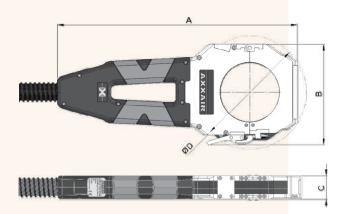
All rotation axes and toggle clamps can easily be changed.



Cleaning: A single hexagonal wrench allows the machine to be disassembled in a few minutes to clean the interior, without having to empty the head's coolant circuit.

Gas diffusion: more direct gas supply through two sintered bronze semi-circular bunds. This allows a trouble-free distribution and flow, even with a high gas flow rate and without blowing out the arc.

Max flow rate: 60l/min



Thickness of 37.6 mm: possibility to weld with the stainless steel jaws standard microfitting fittings or other accessories with a straight part of 19.1 mm.

Product Code	Description	Tube welding machine for the following diameters	Net weight with cable	Dimensions A x B x C in mm	Dimensions D
SATFX-52	Water-cooled closed head	ø 6 - ø 52 mm	8.6 kg	375 x 142 x 37,6	ø 160 mm
SATFX-76	with 8m cable for SAXX	ø 6 - ø 77 mm	8.9 kg	399 x 166 x 37,6	ø 187 mm
SATFX-115	welding power sources	ø 12 - ø 115 mm	9.4 kg	439 x 206 x 37,6	ø 242 mm







rbital welding (Closed heads) - Accessories **Cassettes**

Global Process 2 in 1

These cassettes are intended to be mounted on the closed welding heads of the SATFX range. They allow the operator to perform welds in a cramped and restrictive environment, where it is difficult to operate these welding machines.

When the cassette is in place on the tubes or accessories to be welded, the operator only has to fix the machine body in the cassette and then start the welding program from the power supply or from the welding head's keyboard.

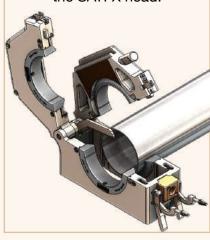
Flexibility: The SATFX heads can be quickly converted to cassette machines and vice versa.

Please note that the cassettes can be ordered later on.



Thin and wide clamping jaws can be used.

Stop blade for placing the cassette on a single tube or accessory and tacking with the SATFX head.

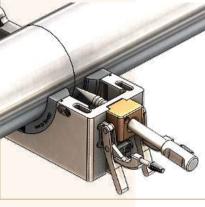


Interface to be fixed on the welding head.



Positioning pen for placing the cassette on two tubes or accessories in line, already tacked.

The tip of the pen represents the tip of the electrode.



The cassettes benefit from the same closing system with adjustable force without tools that allows precise adjustment of the jaw force on the tube to be welded and assists opening after welding.

Cassette clamping lever on machine.





rbital welding (Closed heads) - Accessories **Cassettes**





Product Code	Description	Net weight	Packaging (in cm)
SATFX52-CA01	Cassette for SATFX-52	2,3 kg	30 x 30 x 15

Cassette to be mounted on the SATFX-52 closed welding head for welding in confined spaces. Easy positioning of the cassette on the parts to be welded before fixing the central body of the head.

√SATFX-52	SATFX-76	SATFX-115



Product Code	Description	Net weight	Packaging (in cm)
SATFX76-CA01	Cassette for SATFX-76	2,7 kg	30 x 30 x 15

Cassette to be mounted on the SATFX-76 closed welding head for welding in confined spaces. Easy positioning of the cassette on the parts to be welded before fixing the central body of the head.

SATFX-52	√SATFX-76	SATFX-115
3A11 A-32	V SAIFA-10	0/11 /-110

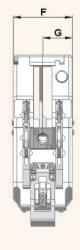


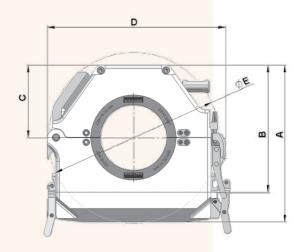
Product Code	Description	Net weight	Packaging (in cm)
SATFX115-CA01	Cassette for SATFX-115	3,5kg	30 x 30 x 15

Cassette to be mounted on the SATFX-115 closed welding head for welding in confined spaces. Easy positioning of the cassette on the parts to be welded before fixing the central body of the head.

SATEX-52	SATEX-76	SATEX-115

	SATFX52-CA01	SATFX76-CA01	SATFX115-CA01
Α	158	182	222,5
В	123,5	147,5	188
С	72	84	104
D	182,5	206,5	246,5
ØE	175	199	238
F	68,1	68,1	68,1
G	34,05	34,05	34,05













Orbital welding (Closed heads) - Accessories

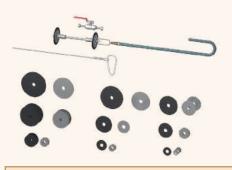




Product Code	Description	Net weight	Packaging (in cm)
SATFX-SUP	Machine support	1.39 kg	20 x 20 x 20

This modular support allows the installation of the machine on all possible types of support (workbench, barrier, etc...).

√SATFX-52 ✓SATFX-76 ✓SATFX-115



Product Code	Description	Net weight	Packaging (in cm)
SKIF-01	Gas protection KIT	4.5 kg	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 1/4 turn gas valve, 1 carabiner

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

/SATFX-52 ✓ SATFX-76 ✓SATFX-115



Product Code	Description	Net weight	Packaging (in cm)
SKIB-01	Gas protection KIT	1.7 kg	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.

√SATFX-115 ✓SATFX-76 /SATFX-52



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

In order to guarantee the proper functioning of the machine, a maximum length of 20m of extension or a maximum quantity of 2 extension cables is recommended. For a higher need, please consult us.

Cooling and use	Length	Product Code	Net weight	Dimensions (AxBxC in mm)
WATER -	5 metres	SAFS-05MX	7 kg	40 x 59 x 25
WITHOUT WIRE	10 metres	SAFS-10MX	14 kg	40 x 59 x 25
	(0		/	

√SATFX-52 ✓ SATFX-76 ✓SATFX-115





Orbital welding (Closed heads) - Accessories





Thin clamping jaws, thickness 8 mm, stainless steel

A set of thin clamping jaws consists of **four half-shells** machined to the outside diameter of the tube.

	For Machine	Product Code	Net weight	Packaging (plastic)
	SATFX-52	SMN052-xx	Depending on the tube ø	7.5 x 8 x 3 cm
	SATFX-76	SMN076-xx	Depending on the tube ø	11 x 11.5 x 3 cm
Γ	SATFX-115	SMN115-xx	Depending on the tube ø	17 x 18 x 3 cm

To order the jaws, replace xx with the outside diameter of the tube you want to weld. Example: A set of jaws for clamping a tube with an outside diameter of ø 38.10 mm = SMN052-38.1

√SATFX-52	√SATFX-76	√SATFX-115
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Wide clamping jaws, thickness 22 mm, aluminium

One set of wide jaws consists of two half shells machined to the external diameter of the tube.

For Machine	Product Code	Net weight	Packaging (plastic)
SATFX-52	SML052-xx	Depending on the tube ø	7.5 x 8 x 3 cm
SATFX-76	SML076-xx	Depending on the tube ø	11 x 11.5 x 3 cm
SATFX-115	SML115-xx	Depending on the tube ø	17 x 18 x 3 cm

To order the jaws, replace xx with the outside diameter of the tube you want to weld. Example: A set of jaws for clamping a tube with an outside diameter of ø 38.10 mm = SML052-38.1

√SATFX-52	√SATFX-76	√SATFX-115
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Clamping jaws adaptation spacers, thickness 8 mm, stainless steel



A set of spacers consists of four half-shells machined to the outside shape of the jaws concerned. It allows you to use the jaws of a machine of lower capacity.

	For Machine	Jaws that you can use	Product code	Net weight	Packaging (plastic)
	CATEV 70	SATF-40NDHX	SMN076-ET40	0.5 kg	7.5 x 8 x 3 cm
	SATFX-76	SATFX-52	SMN076-ET52	0.4 kg	7.5 x 8 x 3 cm
		SATF-40NDHX	SMN115-ET40	1.7 kg	7.5 x 8 x 3 cm
	SATFX-115	SATFX-52	SMN115-ET52	1.2 kg	7.5 x 8 x 3 cm
		SATF-65NDHX	SMN115-ET65	1.0 kg	11 x 11.5 x 3 cm
		SATFX-76	SMN115-ET76	0.9 kg	11 x 11.5 x 3 cm

Exemple: With the spacer SMN115-ET76, you can use the jaws of the head SATFX-76 with the SATFX-115.

√SATFX-52	√SATFX-76	√SATFX-115	
V SATI A-32	V 3A11 A-70	V 0A11 A-110	,

AXXAIR also offers adaptation spacers for jaws from other manufacturers. For further information, please contact us.





Orbital welding (Closed heads) - Accessories





Product Code	Description	Net weight	Dimensions
SSEDX	Offset electrode support	0.008 kg	150 x 210 mm

Remote electrode holder for Ø1.6 mm and Ø2.4mm electrodes:

The SSEDX accessory allows a lateral displacement of 2 to 6.5mm from the original position which allows for the welding of short elbows for example.

If you use this system, the usable diameter range of the tube is reduced:

Machine	ø min	ø max
SATFX-52	6 mm	43 mm
SATFX-76	6 mm	67 mm
SATFX-115	12 mm	107 mm

See cosumables to find the electrodes required for its use.

√SATFX-52 ✓SATFX-76 ✓ SATFX-115



Product Code	Description	Net weight	Dimensions
SSEIX	Inclined electrode holder	0.015 kg	150 x 210 mm

Inclined electrode holder for Ø1.6 mm and Ø2.4mm electrodes:

The SSEIX accessory allows the electrode to be tilted from 0 ° to 45°, which makes it possible to produce angle welds (flange welds or other accessories).

If you use this system, the usable diameter range of the tube is reduced:

Machine	ø min	ø max
SATFX-52	6 mm	28 mm
SATFX-76	6 mm	52 mm
SATFX-115	12 mm	92 mm

See cosumables to find the electrodes required for its use.

SATFX-52	√SATFX-76	√SATFX-115
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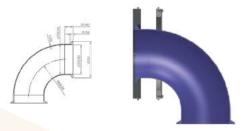






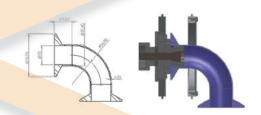
Orbital welding (Closed heads) **Accessories on request**





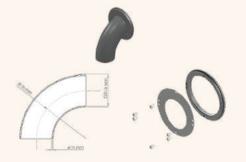
Ferrule - elbow - ferrule configuration (large diameter)

- Elbow end: adaptor jaws + gas protection side plates in stainless steel
- Ferrule end: special jaws

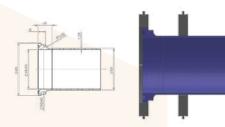


Ferrule - elbow - ferrule configuration (small diameter)

- Elbow end: adaptor jaws + gas protection side plates in stainless steel
- Ferrule end: special jaws







Tube - elbow configuration

- Tube end: standard jaws
- Elbow end: adaptor jaws + gas protection side plates in stainless steel

Tube - ferrule configuration

- Tube end: standard jaws
- Ferrule end: special jaws

Tube – connector configuration

- Tube end: standard jaws
- Connector end: special jaws

For any other specific requirements, please do not hesitate to contact us to examine the solutions that we can provide!









Our electrodes are specifically sharpened to 20° with a flat. This increases the service life of the electrodes.

We offer pre-cut electrodes to cover the entire clamping range of the head without damaging the rotary system. The electrode must be selected according to the outer diameter of the tube to be welded.



Electrodes for SATFX-52

Tube OD / ø of the Tube	Electrode Product Code ø1.6	Electrode Product Code ø2.4	Electrode length in mm
06 – 11,5 mm	SCE16-48	SCE24-48	48.0
11,5 – 18,5 mm	SCE16-44.5	SCE24-44.5	44.5
18,5 – 25,5 mm	SCE16-41	SCE24-41	41.0
25,5 – 32,5 mm	SCE16-37.5	SCE24-37.5	37.5
32,5 – 39,5 mm	SCE16-34	SCE24-34	34.0
39,5 – 46,5 mm	SCE16-30.5	SCE24-30.5	30.5
46,5 – 52 mm	SCE16-27	SCE24-27	27.0

√SATFX-52 SATFX-76 SATFX-115

Electrodes for SATFX-76

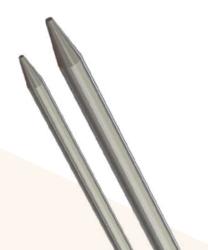
Tube OD / ø of the Tube	Electrode Product Code ø1.6	Electrode Product Code ø2.4	Electrode length in mm
06 – 7,5 mm	SCE16-62	SCE24-62	62.0
7,5 – 14,5 mm	SCE16-58.5	SCE24-58.5	58.5
14,5 – 21,5 mm	SCE16-55	SCE24-55	55.0
21,5 – 28,5 mm	SCE16-51.5	SCE24-51.5	51.5
28,5 – 35,5 mm	SCE16-48	SCE24-48	48.0
35,5 – 42,5 mm	SCE16-44.5	SCE24-44.5	44.5
42,5 – 49,5 mm	SCE16-41	SCE24-41	41.0
49,5 – 56,5 mm	SCE16-37.5	SCE24-37.5	37.5
56,5 – 63,5 mm	SCE16-34	SCE24-34	34.0
63,5 – 70,5 mm	SCE16-30.5	SCE24-30.5	30.5
70,5 – 77 mm	SCE16-27	SCE24-27	27.0

SATFX-52 ✓SATFX-76 SATFX-115











Electrodes for SATFX-115					
Tube OD / ø of the Tube		Product Code 1.6	Electrode Product ø2.4	Code	Electrode length in mm
12 – 19,5 mm	SCE	16-76	SCE24-76		76.0
19,5 – 26,5 mm	SCE	16-72.5	SCE24-72.5		72.5
26,5 – 33,5 mm	SCE	16-69	SCE24-69		69.0
33,5 – 40,5 mm	SCE	16-65.5	SCE24-65.5		65.5
40,5 – 47,5 mm	SCE	16-62	SCE24-62		62.0
47,5 –54,5 mm	SCE	16-58.5	SCE24-58.5		58.5
54,5 – 61,5 mm	SCE	16-55	SCE24-55		55.0
61,5 – 68,5 mm	SCE	16-51.5	SCE24-51.5		51.5
68,5 – 75,5 mm	SCE	16-48	SCE24-48		48.0
75,5 – 82,5 mm	SCE	16-44.5	SCE24-44.5		44.5
82,5 – 89,5 mm	SCE	16-41	SCE24-41		41.0
89,5 – 96,5 mm	SCE	16-37.5	SCE24-37.5		37.5
96,5 – 103,5 mm	SCE	16-34	SCE24-34		34.0
103,5 – 110,5 mm	SCE	16-30.5	SCE24-30.5		30.5
110,5 – 115 mm	SCE	16-27	SCE24-27		27.0
SATFX-52		S	ATFX-76		√SATFX-115





INNOVATIVE ORBITAL SOLUTIONS

Electrodes when using the accessory SSEDX



SSEDX: Remote electrode holder for Ø1.6 mm and Ø2.4mm electrodes.

If you use this system, the usable diameter range of the tube is reduced.



Electrodes for SATFX-52 when using the accessory SSEDX

Tube OD / ø of the Tube	Electrode Product Code ø1.6	Electrode Product Code ø2.4	Electrode length
06 – 13 mm	SCE16-27	SCE24-27	27.0 mm
09 - 16 mm	SCE16-25.5	SCE24-25.5	25.5 mm
11 - 18 mm	SCE16-24.5	SCE24-24.5	24.5 mm
16 - 23 mm	SCE16-22.0	SCE24-22.0	22.0 mm
18 - 25 mm	SCE16-21.0	SCE24-21.0	21.0 mm
20 - 27 mm	SCE16-20.0	SCE24-20.0	20.0 mm
22 - 29 mm	SCE16-19.0	SCE24-19.0	19.0 mm
23 - 30 mm	SCE16-18.5	SCE24-18.5	18.5 mm
24 - 31 mm	SCE16-18.0	SCE24-18.0	18.0 mm
25 - 32 mm	SCE16-17.5	SCE24-17.5	17.5 mm
30 - 37 mm	SCE16-15.0	SCE24-15.0	15.0 mm
36 - 43 mm	SCE16-12.0	SCE24-12.0	12.0 mm

ALL CONTRACTOR OF THE PROPERTY	Electrodes for SATFX-76 when using the accessory SSEDX

Tube OD / ø of the Tube	Electrode Product Code ø1.6	Electrode Product Code ø2.4	Electrode length
06 – 09 mm	SCE16-41.0	SCE24-41.0	41.0 mm
09 - 16 mm	SCE16-37.5	SCE24-37.5	37.5 mm
16 - 23 mm	SCE16-34.0	SCE24-34.0	34.0 mm
23 - 30 mm	SCE16-30.5	SCE24-30.5	30.5 mm
30 - 37 mm	SCE16-27.0	SCE24-27.0	27.0 mm
33 - 40 mm	SCE16-25.5	SCE24-25.5	25.5 mm
35 - 42 mm	SCE16-24.5	SCE24-24.5	24.5 mm
40 - 47 mm	SCE16-22.0	SCE24-22.0	22.0 mm
42 - 49 mm	SCE16-21.0	SCE24-21.0	21.0 mm
44- 51 mm	SCE16-20.0	SCE24-20.0	20.0 mm







Electrodes when using the accessory SSEDX

Electrodes for SATFX-76 when using the accessory SSEDX

Tube OD / ø of the Tube	Electrode Product Code ø1.	6 Electrode Pr	Electrode Product Code ø2.4				
46 - 53 mm	SCE16-19.0	SCE	SCE24-19.0				
47 - 54 mm	SCE16-18.5	SCE	24-18.5	18.5 mm			
48 - 55 mm	SCE16-18.0	SCE	SCE24-18.0				
49 - 56 mm	SCE16-17.5	SCE	24-17.5	17.5 mm			
54 - 61 mm	SCE16-15.0	SCE24-15.0		15.0 mm			
60 - 67 mm	SCE16-12.0	SCE16-12.0 SCE24-12.0		12.0 mm			
SATFX-52	√SATFX	-76	SATFX-115				

Electrodes for SATFX-115 when using the accessory SSEDX

Tube OD / ø of the Tube	Electrode Product Code ø1.6	Electrode Product Code ø2.4	Electrode length
12 – 14 mm	SCE16-58.5	SCE24-58.5	58.5 mm
14 - 21 mm	SCE16-55.0	SCE24-55.0	55.0 mm
21 - 28 mm	SCE16-51.5	SCE24-51.5	51.5 mm
28 - 35 mm	SCE16-48.0	SCE24-48.0	48.0 mm
35 - 42 mm	SCE16-44.5	SCE24-44.5	44.5 mm
42 - 49 mm	SCE16-41.0	SCE24-41.0	41.0 mm
49 - 56 mm	SCE16-37.5	SCE24-37.5	37.5 mm
56 - 63 mm	SCE16-34.0	SCE24-34.0	34.0 mm
63 - 70 mm	SCE16-30.5	SCE24-30.5	30.5 mm
70 - 77 mm	SCE16-27.0	SCE24-27.0	27.0 mm
73 - 80 mm	SCE16-25.5	SCE24-25.5	25.5 mm
75 - 82 mm	SCE16-24.5	SCE24-24.5	24.5 mm
80 - 87 mm	SCE16-22.0	SCE24-22.0	22.0 mm
82 - 89 mm	SCE16-21.0	SCE24-21.0	21.0 mm
84 - 91 mm	SCE16-20.0	SCE24-20.0	20.0 mm
86 - 93 mm	SCE16-19.0	SCE24-19.0	19.0 mm
87- 94 mm	SCE16-18.5	SCE24-18.5	18.5 mm
88 - 95 mm	SCE16-18.0	SCE24-18.0	18.0 mm
89 - 96 mm	SCE16-17.5	SCE24-17.5	17.5 mm
94 - 101 mm	SCE16-15.0	SCE24-15.0	15.0 mm
100 - 107 mm	SCE16-12.0	SCE24-12.0	12.0 mm

SATFX-52 SATFX-76 ✓SATFX-115





INNOVATIVE ORBITAL SOLUTIONS

Electrodes when using the accessory SSEIX



SSEIX: Inclined electrode holder for ø1.6 mm and ø2.4mm electrodes.

If you use this system, the usable diameter range of the tube is reduced.



Electrodes for SATFX-52 when using the accessory SSEIX

Tube OD / ø of the Tube 0° inclined	Tube OD / ø of the Tube 15° inclined	Tube OD / ø of the Tube 30° inclined	Tube OD / ø of the Tube 45° inclined	Electrode Product Code ø1.6	Electrode Product Code ø2.4	Electrode length
-	-	-	6,00 - 12,61 mm	SCE16-27	SCE24-27	27 mm
-	-	-	7,73 - 14,73 mm	SCE16-25.5	SCE24-25.5	25,5 mm
-	-	-	9,14 - 16,14 mm	SCE16-24.5	SCE24-24.5	24,5 mm
-	-	-	12,68 - 19,68 mm	SCE16-22.0	SCE24-22.0	22 mm
-	-	6,00 - 12,38 mm	14,09 - 21,09 mm	SCE16-21.0	SCE24-21.0	21 mm
-	-	7,11- 14,11 mm	15,50 - 22,50 mm	SCE16-20.0	SCE24-20.0	20 mm
-	-	8,85 - 15,85 mm	16,92 - 23,92 mm	SCE16-19.0	SCE24-19.0	19 mm
-	-	9,71 - 16,71 mm	17,63 - 24,63 mm	SCE16-18.5	SCE24-18.5	18,5 mm
-	6,00 - 12,70 mm	10,58 - 17,58 mm	18,33 - 25,33 mm	SCE16-18.0	SCE24-18.0	18 mm
6,00 - 12,50 mm	6,67 - 13,67 mm	11,44 - 18,44 mm	19,04 - 26,04 mm	SCE16-17.5	SCE24-17.5	17,5 mm
10,50 - 17,50 mm	11,50 - 18,50 mm	15,77 - 22,77 mm	22,58 - 29,58 mm	SCE16-15.0	SCE24-15.0	15 mm
16,5 - 23,5 mm	17,29 - 24,29 mm	20,97 - 27,97 mm	26,82 - 33,82 mm	SCE16-12.0	SCE24-12.0	12 mm

SATFX-76 SATFX-115 ✓SATFX-52

For special application only - Outside standard machine template

For application with jaws for flanges only





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Electrodes when using the accessory SSEIX

Electrodes for SATFX-76 when using the accessory SSEIX

Tube OD / ø of the Tube 0° inclined	Tube OD / ø of the Tube 15° inclined	Tube OD / ø of the Tube 30° inclined	Tube OD / ø of the Tube 45° inclined	Electrode Product Code ø1.6	Electrode Product Code ø2.4	Electrode length		
-	-	-	9,83 - 16,83 mm	SCE16-41.0	SCE24-41.0	41 mm		
-	-	-	14,78 - 21,78 mm	SCE16-37.5	SCE24-37.5	37,5 mm		
-	-	6,89 - 13,89 mm	19,73 - 26,73 mm	SCE16-34.0	SCE24-34.0	34 mm		
6 - 10,5 mm	6,00 - 12,57 mm	12,95 - 19,95 mm	24,68 - 31,68 mm	SCE16-30.5	SCE24-30.5	30,5 mm		
10,5 - 17,5 mm	12,34 - 19,34 mm	19,01 - 26,01 mm	29,63 - 36,63 mm	SCE16-27	SCE24-27	27 mm		
13,5 - 20,5 mm	15,23 - 22,23 mm	21,61 - 28,61 mm	31,75 - 38,75 mm	SCE16-25.5	SCE24-25.5	25,5 mm		
15,5 - 22,5 mm	17,17 - 24,17 mm	23,34 - 30,34 mm	33,16 - 40,16 mm	SCE16-24.5	SCE24-24.5	24,5 mm		
20,5 - 27,5 mm	22,00 - 29,00 mm	27,67 - 34,67 mm	36,70 - 43,70 mm	SCE16-22.0	SCE24-22.0	22 mm		
22,5 - 29,5 mm	23,93 - 30,93 mm	29,40 - 36,40 mm	38,11 - 45,11 mm	SCE16-21.0	SCE24-21.0	21 mm		
24,5 - 31,5 mm	25,86 - 32,86 mm	31,13 - 38,13 mm	39,52 - 46,52 mm	SCE16-20.0	SCE24-20.0	20 mm		
26,5 - 33,5 mm	27,79 - 34,79 mm	32,87 - 39,87 mm	40,94 - 47,94 mm	SCE16-19.0	SCE24-19.0	19 mm		
27,5 - 34,5 mm	28,76 - 35,76 mm	33,73 - 40,73 mm	41,65 - 48,65 mm	SCE16-18.5	SCE24-18.5	18,5 mm		
28,5 - 35,5 mm	29,72 - 36,72 mm	34,60 - 41,60 mm	42,35 - 49,35 mm	SCE16-18.0	SCE24-18.0	18 mm		
29,5 - 36,5 mm	30,69 - 37,69 mm	35,46 - 42,46 mm	43,06 - 50,06 mm	SCE16-17.5	SCE24-17.5	17,5 mm		
34,5 - 41,5	35,52 - 42,52 mm	39,79 - 46,79 mm	46,60 - 53,60 mm	SCE16-15.0	SCE24-15.0	15 mm		
40,5 - 47,5 mm	41,31 - 48,31 mm	44,99 - 51,99 mm	50,84 - 57,84 mm	SCE16-12.0	SCE24-12.0	12 mm		
S	ATFX-52		√SATFX-76		SATFX-115			

For special application only - Outside standard machine template

For application with jaws for flanges only





INNOVATIVE ORBITAL SOLUTIONS

Electrodes when using the accessory SSEIX

Electrodes for SATFX-115 when using the accessory SSEIX							
Tube OD / ø of the Tube 0° inclined	Tube OD / ø of the Tube 15° inclined	Tube OD / ø of the Tube 30° inclined	Tube OD / ø of the Tube 45° inclined	Electrode Product Code ø1.6	Electrode Product Code ø2.4	Electrode length	
-	-	-	20,13 - 27,13 mm	SCE16-62.0	SCE24-62.0	62 mm	
-	-	-	25,08 - 32,08 mm	SCE16-58.5	SCE24-58.5	58,5 mm	
-	-	10,51 - 17,51 mm	30,03 - 37,03 mm	SCE16-55.0	SCE24-55.0	55 mm	
-	-	16,57 - 23,57 mm	34,98 - 41,98 mm	SCE16-51.5	SCE24-51.5	51,5 mm	
12 - 15,5 mm	12,00 - 18,77 mm	22,64 - 29,64 mm	39,93 - 46,93 mm	SCE16-48.0	SCE24-48.0	48 mm	
15,5 - 22,5 mm	18,53 - 25,53 mm	28,70 - 35,70 mm	44,88 - 51,88 mm	SCE16-44.5	SCE24-44.5	44,5 mm	
22,5 - 29,5 mm	25,29 - 32,29 mm	34,76 - 41,76 mm	49,83 - 56,83 mm	SCE16-41.0	SCE24-41.0	41 mm	
29,5 - 36,5 mm	32,05 - 39,05 mm	40,82 - 47,82 mm	54,78 - 61,78 mm	SCE16-37.5	SCE24-37.5	37,5 mm	
36,5 - 43,5 mm	38,81 - 45,81 mm	46,89 - 53,89 mm	59,73 - 66,73 mm	SCE16-34.0	SCE24-34.0	34 mm	
43,5 - 50,5 mm	45,57 - 52,57 mm	52,95 - 59,95 mm	64,68 - 71,68 mm SCE16-30.5		SCE24-30.5	30,5 mm	
50,5 - 57,5 mm	52,34 - 59,34 mm	59,01 - 66,01 mm	69,63 - 76,63 mm	SCE16-27	SCE24-27	27 mm	
53,5 - 60,5 mm	55,23 - 62,23 mm	61,61 - 68,61 mm	71,75 - 78,75 mm	SCE16-25.5	SCE24-25.5	25,5 mm	
55,5 - 62,5 mm	57,17 - 64,17 mm	63,34 - 70,34 mm	73,16 - 80,16 mm	SCE16-24.5	SCE24-24.5	24,5 mm	
60,5 - 67,5 mm	62,00 - 69,00 mm	67,67 - 74,67 mm	76,70 - 83,70 mm	SCE16-22.0	SCE24-22.0	22 mm	
62,5 - 69,5 mm	63,93 - 70,93 mm	69,40 - 76,40 mm	78,11 - 85,11 mm	SCE16-21.0	SCE24-21.0	21 mm	

SATFX-76

For special application only - Outside standard machine template

For application with jaws for flanges only

SATFX-52





√SATFX-115



Electrodes when using the accessory SSEIX



Électrodes pour SATFX-115 (en cas d'utilisation de l'accessoire SSEIX)								
Tube OD / ø of the Tube 0° inclined	Tube OD / ø of the Tube 15° inclined	ø of the Tube ø of th		Tube OD / ø of the Tube 45° inclined	Electrode Product Co ø1.6		Electrode Product Code ø2.4	Electrode length
64,5 - 71,5 mm	65,86 - 72,86 mm	71,13 - 78,13 mm		79,52 - 86,52 mm	SCE16-20.0		SCE24-20.0	20 mm
66,5 - 73,5 mm	67,79 - 74,79 mm	72,87 - 79,87 mm		80,94 - 87,94 mm	SCE16-19.0		SCE24-19.0	19 mm
67,5 - 74,5 mm	68,76 - 75,76 mm	73,73 - 80,73 mm		81,65 - 88,65 mm	SCE16-18.5		SCE24-18.5	18,5 mm
68,5 - 75,5 mm	69,72 - 76,72 mm	74,60 - 81,60 mm		82,35 - 89,35 mm	SCE16-18.0		SCE24-18.0	18 mm
69,5 - 76,5 mm	70,69 - 77,69 mm	75,46 - 82,46 mm		83,06 - 90,06 mm	SCE16-17.5		SCE24-17.5	17,5 mm
74,5 - 81,5 mm	75,52 - 82,52 mm	79,79 - 86,79 mm		86,60 - 93,60 mm	SCE16-15.0		SCE24-15.0	15 mm
80,5 - 87,5 mm	81,31 - 88,31 mm	84,99 - 91,99 mm		90,84 - 97,84 mm	SCE16-12.0		SCE24-12.0	12 mm
SATFX-52				SATFX-76 /SATFX-1			5	

For special application only - Outside standard machine template

For application with jaws for flanges only







Orbital welding (Open head)



an

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 filler without metal. They have 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

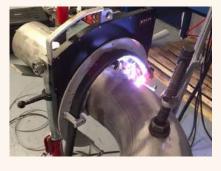
The SATO range is connected to our orbital generators, which permanently control all the welding parameters, guaranteeing repeatable and quality welds.

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 power source.









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!





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 -

INNOVATIVE ORBITAL SOLUTIONS

Air Cooled or **Water Cooled**



Roller mechanical profile tracking

Constant arc voltage without marking the tube



Compatible with the SAXX power sources



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





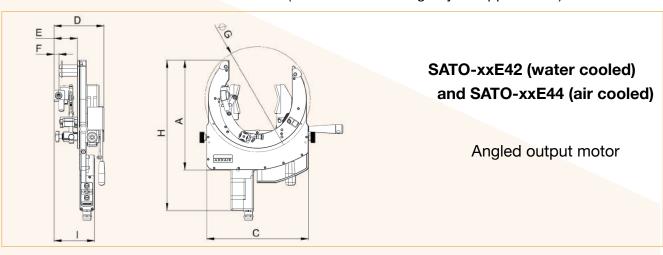
SATO-40 - 80 -115 - 170 -220

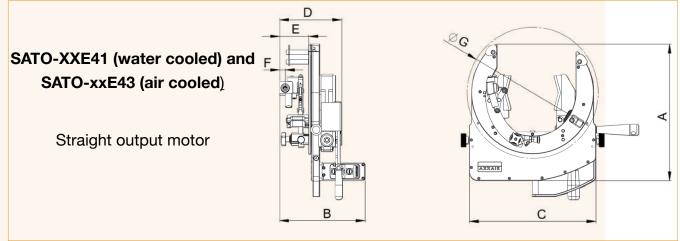


Technical characteristics:

- 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

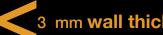
Choice of two different models (to choose according to your applications)





	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	l mm	
SATO-40	169	183 to 191	142	116 to 126			Ø140	270		
SATO- 80	181	186 to 196	160	116 to 126		Ø180	279			
SATO-115	265	186 to 196	230	133 to 143	57 to 67	13	Ø224	363	113 to 121	
SATO-170	312	186 to 196	290	133 to 143				Ø294	410	121
SATO-220	353	186 to 196	350	133 to 143			Ø350	451		





SATO-40 - 80 -115 - 170 -220





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





Orbital welding (Open heads) - Accessories





Product Code	Description	Net weight	Packaging (in cm)
SKIF-01	Gas protection KIT	4.5 kg	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 1/4 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	4x
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Product Code	oduct Code Description		Packaging (in cm)	
SKIB-01	Gas protection KIT	1.7 kg	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



Product Code	Description	Net weight	Dimensions (in mm)	
SATOB-02B	Two axis wire guide	0.05 kg	51 x 90 x 65	

SATO Two axis wire guide:

- For use with the SAXX power sources

√SATO-40E4x	√SATO-80E4x	√SATO-115E4x	√SATO-170E4x	√SATO-220E4x
			·	



Product Code	Description	Net weight	Dimensions (in cm)
SADF2X	Wire dispenser	12 kg	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	Dimensions (AxBxC in mm)
	WITHOU ⁻	5 metres	SAFS-05MAX	7 kg	40 x 59 x 25
AIR	WIRE	10 metres	SAFS-10MAX	14 kg	40 x 59 x 25
AIN		5 metres	SAFS-05MAXF	7 kg	40 x 59 x 25
	WIRE	TO metres SAFS-10MAXF	14 kg	40 x 59 x 25	
	WITHOU ⁻	5 metres	SAFS-05MX	7 kg	40 x 59 x 25
WATER	WATER WIRE	10 metres	SAFS-10MX	14 kg	40 x 59 x 25
WAIER		5 metres	SAFS-05MXF	7 kg	40 x 59 x 25
	WIRE	10 metres	SAFS-10MXF	14 kg	40 x 59 x 25
√SATO-4	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.



✓ SATO-40E4x

Product Code	Description	Net weight	Plastic box (cm)
SCE16-50	Electrodes	0.02 kg	5.5 x 4.5 x 1

Electrode diameter 1.6 mm, length 50mm

- Box of 10 electrodes



✓SATO-80E4x

√SATO-170E4x **√**SATO-220E4x



Product Code	Description	Net weight	Plastic box (cm)
SCE24-50	Electrodes	0.05 kg	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

√SATO-115E4x



Product Code	Description	Net weight	Plastic box (cm)
SKTO-01	Replacement torch	0.3 kg	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 screwdriver FACOM

√SATO-40E4x	√SATO-80E4x	√SATO-115E4x	√SATO-170E4x	√SATO-220E4x
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Orbital welding (Tube-to-tube sheet)



Our tube-to-tube sheet welding heads, fully water-cooled, are designed for heat exchanger production applications in various industries such as aeronautics, agri-food or energy production.

Indeed, heat exchangers play an increasingly important role in industry and this welding head allows the economical, reliable and very high quality assembly of the tubes on the plates.

The SATP-80X covers virtually all common tube to tube sheet configurations in both stainless steel, titanium and black steel.



In tube to tube sheet applications, preparation is a very important aspect to guarantee repeatable and quality welding results. The following steps are discussed at each project and are essential to ensure the success of your process:

- Length of the tube in relation to the tube sheet (dressing operation)
- Centring of the tubes on the tube sheet:

This operation consists in bringing the tube into contact with the end of the hole in the tube sheet in order to avoid collapsing associated with the clearance between the tube and tube sheet if this operation is neglected.

Centring machines allow this essential operation. This centring also allows the weld gases to be evacuated through the back of the plate. Centring is often neglected but avoids much inconvenience during production.

FLEXIBILITY, PRODUCTIVITY

This head can weld in simple fusion or with the supply of wire The wire feed is mounted on the head (1 kg reel) and rotates with the torch to ensure controlled wire output.

QUALITY AND REPEATABILITY

The specific mandrel of our SATP with centring by balls pushed by springs allows positioning while allowing fast installation and especially ensuring that the head can easily be brought out of the tube in the case of excess internal weld thickness.

PORTABILITY

Portable machines, which are easy to move and usable directly on site.









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

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







SATP-80X





Water Cooled



Wire holder 1 kg



Tilting head

Water cooled with tilting wire



Positioning stops

Adjustable stops for better tube sheet stability



Mandrel system

Concentric tightening from the inside of the tube



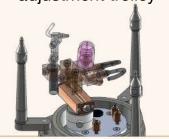


Compatible with the SAXX power sources



Flexibility

Head and wire adjustment trolley



Electric motor with wire feed

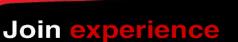


Welding range

SATP-80X

ø 10 - ø 80 mm 0.4 - 3 "





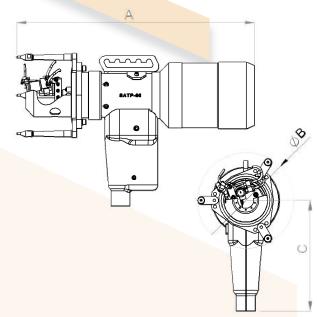
SATP-80X

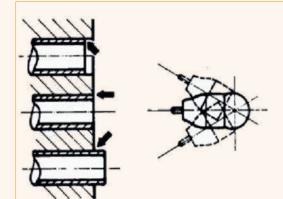
The SATP-80X covers virtually all common tube to tube sheet configurations in stainless steel as well as in titanium or black steel.

Technical characteristics:

- Rotating gas, current and cooling seal
- Tilting water cooled head
- Head and wire adjustment trolley
- Built-in rotating wire dispenser (Ø 0.8 mm)
- Cycle startup integrated in the handle for better ergonomics
- The head is fully cooled allowing a maximum welding current of 200A
- Specific mandrel with ball centring pushed by springs: precise positioning and quick installation.







- 3 tube-to-tube sheet welding configurations
- Outside diameter of the straight torch tube: 12 82 mm
- External diameter of the tube if torch tilted at 30 °: 12 40 mm

Product Code	Description	Net weight (Without reel)	ø wire	Max Wire Speed	Dimensions (AxBxC mm)
SATP-80X	Welding head SATP-80X ø10 to ø78 mm Supplied with wire dispenser	7.5 kg	0.8 mm	200 cm/min	451 x 182 x 210





Orbital welding (Tube to tube sheet) - Accessories



The mandrel used must be chosen according to the inner diameter of the tube to be welded to the tube sheet.

Depending on the mandrel used, it will be necessary to choose the compatible spindle.



SATP mandrels

SATP Centring mandrels:

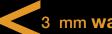
Tube inner ø (mm)	Mandrel Product Code	On spindle
9.8 to 10.3 mm	SATP-M11	
10.3 to 10.8 mm	SATP-M12	
10.8 to 11.3 mm	SATP-M13	CATD DO1
11.3 to 11.8 mm	SATP-M14	SATP-B01
11.8 to 12.3 mm	SATP-M15	
12.3 to 13.0 mm	SATP-M16	
12.8 to 14.0 mm	SATP-M21	
13.8 to 15.0 mm	SATP-M22	
14.8 to 16.0 mm	SATP-M23	
15.8 to 17.0 mm	SATP-M24	SATP-B02
16.8 to 18.0 mm	SATP-M25	SAIF-BUZ
17.8 to 19.0 mm	SATP-M26	
18.8 to 20.5 mm	SATP-M27	
19.8 to 22.5 mm	SATP-M28	



✓SATP-80X

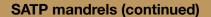






Orbital welding (Tube to tube sheet) - Accessories





SATP Centring mandrels:



Tube inner ø in mm	Mandrel Product Code	On spindle	
22.3 to 24.8 mm	SATP-M29		
24.5 to 27.0 mm	SATP-M30		
26.5 to 29.0 mm	SATP-M31		
28.5 to 31.0 mm	SATP-M32		
30.5 to 33.0 mm	SATP-M33		
32.5 to 36.0 mm	SATP-M34	SATP-B03	
35.5 to 39.0 mm	SATP-M35		
38.5 to 42.0 mm	SATP-M36		
41.5 to 45.0 mm	SATP-M37		
44.5 to 48.0 mm	SATP-M38		
47.5 to 51.0 mm	SATP-M39		
50.5 to 54.0 mm	SATP-M40		
53.5 to 58.0 mm	SATP-M41		
57.5 to 62.0 mm	SATP-M42		
61.5 to 66.0 mm	SATP-M43	SATP-B04	
65.5 to 70.0 mm	SATP-M44		
69.5 to 74.0 mm	SATP-M45		
73.5 to 78.0 mm	SATP-M46		

✓SATP-80X

SATP Spindles

Spindles for SATP mandrel:



Join experience

Product Code For Mandrel		For Mandrel
	SATP-B01	M11 to M16
	SATP-B02	M21 to M28
>	SATP-B03	M29 to M39
	SATP-B04	M40 to M46

√SATP-80X





Orbital welding (Tube to tube sheet) - Consumables



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

This increases the life of the electrodes.

Reference change



Product Code	Description	Net weight	Plastic box (cm)
CCE04 20 F	Flootrodoo	0.05 kg	5 5 y 4 5 y 1
SCE24-39.5	Electrodes	0.05 kg	5.5 x 4.5 x 1

Electrodes ø 2.4 mm, length 39.5mm for SATP:

- Box of 10 electrodes

✓SATP-80X



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Orbital welding (welding power sources)



Our AXXAIR orbital power supplies has been designed to be user friendly and intuitive. Our step by step design allows, even beginner, to easily generate programs after only a short learning period, while very advanced functions are available to advance users looking to customize their programs.

A particular attention has been paid to using as much as possible standard industrial components for their reliability and availability. The facilitatedaccess to parts makes our power sources robust and easy for maintenance.



The combination of an easy to use and sturdy package allows you to be competitive and makes this range the best choice for all your current or futur projects.

The electronics in charge of piloting the rotors of the welding heads is specifically designed to support various motor type, CD, brushless, stepping motors but also encoders or tachometers, making these power supply one of the most versatile on the market today.

Because our power supply can control most type of motors, we are able to control not only our products but also many of the other products available. Using a 32-pin « quick fit » connector we are able to design several cable adaptor to connect most products available today on our power supply. This great feature allows our customers to use our power supply as a one fits all, reducing the cost of ownership.

FLEXIBILITY, PRODUCTIVITY

Our latest touch screen interface allows us to make available even the most advanced features in a user friendly and intuitive way.

QUALITY AND REPEATABILITY

Part of the conviviality of our power supply comes from the innovative way we register a program. First you will create a configuration that includes the model and type of welding head, the tube diameter, the tube wall thickness and the tube material. Then within this configuration you will add you programs, up to 10 per configuration. This makes it really easy to retrieve and select a program even if it was created months ago.

PORTABILITY

Our power supply are among the easiest to carry on site or move around the workshop, however if you want to be able to move effortlessly the gas cylinder together with the power supply we designed a very







Do not hesitate to contact us for all enquiries relating to orbital welding power sources.

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



Orbital welding (welding power sources)



Since the launch of our orbital welding power sources SAXX in 2017, **WiFi has been offered as an option** to our customers in order to use the «Remote HMI» application (third party application).

Thanks to this application, combined with the WiFi, remote control of the SAXX with a smartphone, computer or tablet becomes possible.

The wifi option also allows sending and retrieving data from the SAXX thanks to a remote access to the power source's USB key.

Access to the USB key's content allows:

- to monitor alarms.
- to retrieve data from the acquisition files.
- to exchange configuration and programs from one power source to another power source from the SAXX range.

AXXAIR is **constantly striving to improve the operator's experience** of our customers. This is why we improved our SAXX power sources.

The new generation of SAXX-200, SAXX-210 and SAXX-300 completely moves into the **Industry 4.0 era** with a new WiFi module and an Ethernet interface to make the operator's work even more efficient.

An improved WiFi module with an external antenna will be offered on the new SAXX versions: SAXX-200, 210 and 300.

On the SAXX-200, the antenna is hidden under the power source's cover. It will be visible on the SAXX-210 and 300.

These improvements allow:

- an increased WiFi operating distance: **up to 100 m** depending on the working environment.*
- a better WiFi communication: quality and stability of the data transfer.

*It is important to ensure that there is no obstacle between the SAXX power source and the remote control tool.



From now on, access to the USB key and remote control of the SAXX power sources will also be possible with an Ethernet network cable.



All SAXX welding power sources are now equipped as standard with an **Ethernet socket** at the rear of the power sources.

It allows fast connection to an existing computer network by using a RJ45 of category at least 5 S/STP cable.

In order to operate the SAXX remotely, the «Remote HMI» application is still required.

The application is available on App Store, Google Play and Windows.









Fully-assured gas management

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

 Gas flow control and flow alarms

 Display of the actual flow rate right on the screen



INNOVATIVE ORBITAL SOLUTIONS

The ergonomic shape of the power source, the water cooler and the carrying handle make transport easy

PPM sensor

Capable of managing thresholds and sending an electrical pulse to the power source in order to start the welding. This ensures a consistently and properly purged welding area

Records PPM variation during the weld



Axis for added metal

Possibility of using Step mode

Removable water colling

Can be separated without tools and makes the power source extremely portable

Cooling capacity 700W, flow mini alarm





Interface 5.7 colour touch screen + WiFI

13 languages, possibility of remote control by smartphone or tablet



Compatible with most closed head on the market

AMI, Polysoude, ESAB, Orbitec and Orbitalum



Integrated printer

Printing program and actual parameters

Data acquisition

Records the last 999 welds on the USB key

Integrated WeldReport, data's formatting and presenting of the instructions in the form of DMOS.

USB port on front panel

200 programs per USB key, several keys can be used



- Software: Remote update possible
- Sending and retrieving data through remote access to the SAXX's USB key







Technical characteristics

Duty cycle:

230 V		110	O 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

This equipment comes with a 16A plug of type CEE7 / 7 to be connected to a socket protected by a 16A fuse or circuit breaker.

To allow use at maximum conditions or according to the country, it will be necessary to change the

The nameplate of the equipment will allow you to choose the socket and the protection (fuse and / or circuit breaker) adapted to the conditions of use (voltage and current).

Gas supply:

- Maximum inlet pressure: 5 bars
- Maximum flow rate: 50 I / 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







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 an application Range: 20 to 30 m

Cooling connector:

For SCOOL-700 cooler only: It must be connected to the SAXX-200 to operate (No standalone operation)

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

CAUTION: The power source is delivered without coolant. See "Consumables" to order the 3 liter can (SACW-C006).

Integral printer:

- 32 characters / line
- Print program and actual parameters





You can order your SAXX-200 power source with the options you need.

Second gas line: This second gas line allows control from the power source of your internal inerting and / or dual gas management of the welding torch.

- Gas saving
- Welding process safety

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

There is the possibility 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.

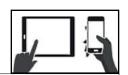
It is essential to use in all water cooled machines.

- Increasing the duty cycle









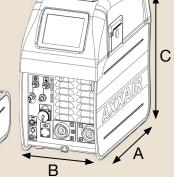
WIFI: This option includes a built-in Wifi antenna in the power source.

> Remote control by a smartphone, computer or tablet to use it as a remote control is possible.

> In fact, through an application, you have access to all functions including programming. The option also allows sending and retrieving data from the SAXX through access to the power source's USB key. Range: up to 100m







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Description	Product code	Cooled	Gas line	Second gas line	Wire feed	Wifi Antenna	Net weight	Dimensions AxBxC
	SAXX-200	AIR	x				21 kg	
Orbital TIG	SAXX-200I	AIR	х			x	21 kg	
welding	SAXX-200W	AIR	х		x		21 kg	468 mm
power source,	SAXX-200DG	AIR	х	Х			21 kg	x
	SAXX-200IW	AIR	х		x	x	21 kg	249 mm x
200A,	SAXX-200DGI	AIR	Х	х		x	21 kg	482 mm
autoline	SAXX-200DGW	AIR	X	X	Х		21 kg	
	SAXX-200DGIW	AIR	x	x	х	x	21 kg	
	SCOOL-700	Water cooler (700W)	Essential to the use of all water cooled machines. Compatible with all SAXX models listed above			8 kg	468 mm x 249 mm x 146 mm	

All options must be mounted at AXXAIR.





Fully-assured gas management

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



Gas flow control and flow alarms

Display of the actual flow rate right on the screen

Integrated printer

Printing program and actual parameters

PPM sensor

thresholds and sending an electrical pulse to the power source in order to start the welding. This ensures a con-

Records PPM variation during the weld



Water cooled





INNOVATIVE ORBITAL SOLUTIONS

Compatible with most closed head on the market

AMI, Polysoude, ESAB, Orbitec and Orbitalum



Interface 5.7 colour touch screen + WiFI

13 languages, possibility of remote control by smartphone or tablet



Remove control

display 4 m long cable

Capable of managing

sistently and properly purged welding area



Axis for added metal

Possibility of using Step mode

Data acquisition

Records the last 999 welds on the USB key

Integrated WeldReport, data's formatting and presenting of the instructions in the form of DMOS.

USB port on front panel

200 programs per USB key, several keys can be used

- Software: Remote update possible
- Sending and retrieving data through remote access to the SAXX's USB kev









Technical characteristics:

Duty cycle:

230 V		110	O V
50 %	210 A		
60 %	180 A	60 %	127 A.
100 %	160 A	100 %	110 A.

Power supply:

- Single phase network with earth
- Supply voltage: 110 to 230 V +/-15%
- Input current consumed 25A 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 I / min per gas line
- Inlet connectors: M12x100 male
- Outlet connectors: female blanking union Series 20

Technology:

- Colour touch screen 5"
- 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





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 (modifiable via "operator dynamics")

Integrated printer:

- 32 characters / line
- Print program and actual parameters

Auxiliary connector:

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

Cooling connector:

- Max pressure: 5 bars
- Cooling power according to standard CEI60974-2: 1.4 kW
- Liquid connectors: female blanking union Series 21

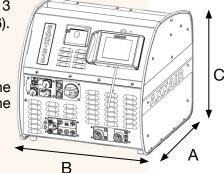
CAUTION: The power source is delivered without coolant. See "Consum-

ables" to order the 3 liter can (SACW-C006).

Wi-fi: (Option)

Remote control of the screen on smartphone or tablet via an application

Range: 20 to 30 m

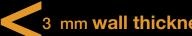


Product code	Description	Two gas lines	Wire feed	Wifi Antenna	Net weight	Dimensions AxBxC (in mm)
SAXX-210	Orbital TIG welding power source,	X	x		44 kg	562 x
SAXX-210I	210A, autoline, Water cooled	x	x	x	44 kg	620 x 545

All options must be mounted at AXXAIR.











Product Code	Description	Net weight	Dimensions (in cm)
SACG-X200	Trolley	22 kg	117 x 51 x 57

<u>Trolley for SAXX-200 power source:</u>

- Module for transporting the SAXX-200 and gas cylinders up to 10.5 m³

√SAXX-200

SAXX-210



Product Code	Description	Net weight	Dimensions (in cm)
SAGC-300	Trolley	55 kg	83 x 56 x 118

Trolley for SAXX-210 power source:

- Module for transporting the SAXX-210 and gas cylinders up to 10.5 m³

SAXX-200

√SAXX-210

Product Code	Description	Net weight	Dimensions (in cm)		
SPPM-10	PPM reader	2 kg	12 x 6 x 15		
PPM reader compatible with SAXX power sources: - Integrated pump					



- Trigger threshold adjustment

- Upper and lower tolerance adjustment
- Connected to the SAXX, it only allows welding to be triggered when the threshold is reached. The SPPM-10 guarantees the interior inerting of the tubing and the desired good colouration



Product Code	Description	Net weight	Dimensions (in cm)
SPPM-C10	Extension cable for SPPM-10	0.5 kg	40 x 59 x 25 cm

10 meter-extension cable for SPPM-10 (PPM reader)

√SAXX-200

√SAXX-210



Product Code	Description	Net weight	Dimensions (in cm)
SAFS-G01	Gas splitter pipe	0.2 kg	22 x 22 x 22

Gas splitter pipe:

- For connecting the back and front purge gas to the same cylinder. To be used in combination with a pressure regulator for an industrial gas cylinder.

√SAXX-200

√SAXX-210







Accessories SAXX **Switchbox**





You have repeatable welds to perform and you want to optimize the cycle time of your welding operations to be more efficient and increase productivity? The new AXXAIR Switch Box is the ideal response!

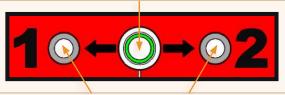
The Switchbox allows it to use two welding machines with one only orbital welding power source of the SAXX series and to use the two machines alternatively.

The parts that need to be welded can be postionned in one of the two machines while the other one is making a weld. The preparation and setting up time of the parts is thus optimized.

Once the weld is finished, the weld on the other machine can directly be started. The welded parts can be removed from the first machine and new parts can be placed in this machine.

Switch button

The green LED indicates if switching is possible. Switching is done either by this button, or by the start button of the inactive machine



Led lights

Indicate which machine is selected

Compatibility

Use of all welding machines compatible with the SAXX power sources *

Possibility of using 2 different machines with 2 different programs

SAXX connection

Connection for a welding machine

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Significant time saving, avoiding the simultaneous purchase of two welding power sources

Cost reduction

Intuitive and efficient use thanks to the SAXX interface

Flexibility

- Use of manual torches and ppm reader (SPPM-10)
 - Use of two gas lines (depending on options chosen in the SAXX)
- Use of two wire dispensers with 2 machines (depending on options chosen in the SAXX)

Two gas lines for each machine

(depending on options chosen in the SAXX)

Gas flow adjustment wheels for each connected machine

Connection for a second welding machine

U bolt common for both machines

* excluding AVC/OSC systems





Accessories SAXX Switchbox







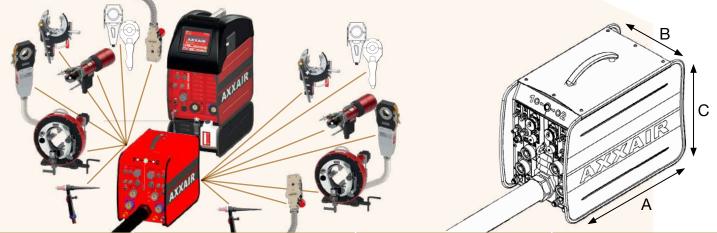
Technical caracteristics:

- Power suplly 110-230V
- 50-60 Hz (3m cable), 1,9 A max
- Max. welding current: 300A
- Length of the cables between the SASW-DGW and the SAXX: 1,5m
- Cooling circuit common to both machines
- Integrated carry handle
- Possible use of cable extensions (see accessories of welding machines) between the machines and the switchbox between the switchbox and the SAXX
- Version of the SAXX software: V2.40 or higher
- The use of two gas lines is integrated in the SAWS-DGW, to be able to use it:

The option «Second gas line» must be chosen in the SAXX power source

- The use of wire for one or two machines (two wire feeders can be used):

The option «Wire feed» must be chosen in the SAXX power source



Product Code	Description	Net weight	Dimensions (AxBxC)
SASW-DGW	Switchbox	13 kg (with cables)	467 x 247 x 385 mm

Compatible with:

- SATF (SATF-M, SATF-ND and SATF-MI), SATO (SATO-M, SATO-ND and SATO-E), SX, SATP, SXMF
- AMI models 8, 9 and 95, Polysoude: UHP, MW and MU IV, Orbitalum: Orbiweld and Orbiweld S, ESAB: PRB, Orbitec: OSW

Product Code	Description		
SASW-CCO	Coupling pipe cooling circuit for Switchbox		
Allows to control 2 machines with different cooling circuits			





If you have an AMI orbital welding head, model 8 or 9, you can use them with our SAXX power

To connect the heads to our SAXX power soruces, you need an adapter kit. Please choose the kit according to the AMI power source that you have acquired with this head.



Product Code	Description	Net weight	Dimensions
SAFS-ADAMI1	Adapter kit	1.2 kg	I: < 40 cm

Adapter kit for connecting the following heads to SAXX power sources:

- AMI Models 8 and 9, initially connected to the AMI power sources 205, 207, 217 and 217P
- AXXAIR's closed heads SATF-xxMI and SATF-xxMIH

√SAXX-200 √SAXX-210



Product Code	Description	Net weight	Dimensions
SAFS-ADAMI2	Adapter kit	1.3 kg	I: < 40 cm

Adapter kit for connecting the following heads to SAXX power sources:

- AMI Models 8 and 9, initially connected to the AMI power source 307

√SAXX-200 **√**SAXX-210



Product Code	Description	Net weight	Dimensions
SAFS-ADAMI3	Adapter kit	1.3 kg	I: < 40 cm

Adapter kit for connecting the following heads to SAXX power sources:

- AMI Models 8 and 9, initially connected to the AMI power sources 227, 327 and 415

√SAXX-210 √SAXX-200



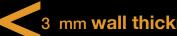
Product Code	Description	Net weight	Dimensions
SAFS-ADAMI4	Kit d'adaptation	1.2 kg	l: < 50 cm.

Kit d'adaptation pour brancher les têtes suivantes sur les générateurs AMI

- Têtes fermées AXXAIR du type SATF-xxMIH









If you have an orbital welding head from another brand and you want to use it with our SAXX power sources, please refer to the adaptation kits below.



Product Code	Description	Net weight	Dimensions
SAFS-ADORBI1	Adapter kit	1.2 kg	L < 50 cm

Adapter kit for connecting the following heads to SAXX power sources:

- Orbitalum ORBITALWELD models: ORBIWELD38S, ORBIWELD76S and ORBI-WELD115S

/SAXX-200 **√**SAXX-210



Product Code	Description	Net weight	Dimensions
SAFS-ADPOLY1	Adapter kit	0.9 kg	L < 50 cm

Adapter kit for connecting the following heads to SAXX power sources:

- MW Polysoude models (MW40, MW 65, MW115, MW170, MU IV 38, MU IV 115, UHP250, UHP500 and UHP1500)

√SAXX-200 √SAXX-210



Product Code	Description	Net weight	Dimensions
SAFS-ADORBITEC	Adapter kit	0.3 kg	L < 50 cm

Adapter kit for connecting the following heads to SAXX power sources:

- Orbitec models: OSW40, OSW80 and OSW170

√SAXX-200 **√**SAXX-210



Product Code	Description	Net weight	Dimensions
SAFS-ADESAB	Adapter kit	0.5 kg	L < 50 cm

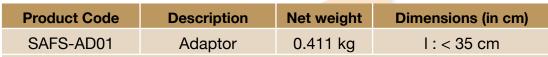
Adapter kit for connecting the following heads to SAXX power sources:

- ESAB models: PRB17-49, PRB33-90 and PRB60-170









Adapters for connecting the following AXXAIR welding heads to our former **SASL** power sources:

- SATF-xxNDX
- SATF-xxNDHX
- SATO-xxE41 SATO-xxE42 SATO-xxE43 SATO-xxE44

√SASL-160, SASL-200, SASL-300



Product Code	Description	Net weight	Dimensions (in cm)
SAFS-AD02	Adaptateur	0.48 kg	I: 35 cm

Adapters for connecting the former generation of AXXAIR welding heads to **SAXX** power sources:

- SATF-xxND
- SATO-xxE01 et SATO-xxE02

SAXX-200 √SAXX-210



Product Code	Description	Net weight	Dimensions (in cm)
SATDMX-A	TIG Manual torch	2.1kg	22 x 22 x 22

TIG Manual torch AIR cooled:

- Allows manual tacking and welding with the SAXX power sources

Product Code	Description	Net weight	Dimensions (in cm)
SATMX-E	TIG Manual torch	2.1kg	22 x 22 x 22

TIG Manual torch WATER cooled:

- Allows manual tacking and welding with the SAXX power sources

SAXX-200 **√**SAXX-210



Product Code	Description	Net weight	Dimensions (in cm)
SADF2X	Wire dispenser	12 kg	59.7 x 38.4 x 24

Wire feeder for SAXX, cable sheath 5 m max:

- Supplied with SAXX power supply-connection cable and teflon sheath to guide the wire
- Drive pressure adjusted by adjustable spring, with handle.





Product Code	Description	Net weight	Packaging (in cm)
SACW-CO06	Cooling liquid	3.3kg	15 x 15 x 27

Cooling liquid (3I container).

The cooling is not directly delivered with the power source.

√SAXX-200	√SAXX-210
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Product Code	Description	Net weight	Packaging (in cm)
SIMP-02	Printer rolls	0.7kg	29 x 9.5 x 5

Rolls for integrated printer (set of 10)

√SAXX-200	√SAXX-210



Product Code	Description	Net weight	Dimensions (in cm)
SUSBX200	USB stick	0.02kg	6 x 2 x 1

USB stick for SAXX-200:

USB stick with software for recording welding programmes and the WeldReport

√SAXX-200	SAXX-210
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Product Code	Description	Net weight	Dimensions(in cm)
SUSBX210	USB stick	0.02kg	6 x 2 x 1

USB stick for SAXX-210:

USB stick with software for recording welding programmes and the WeldReport

SAXX-200	√SAXX-210
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Our teams at your service

Knowing our customers and their needs, anticipating and meeting their expectations by always proposing the best solution: this is AXXAIR's objective. Please do not hesitate to contact us for all enquiries relating to our products and services.



Advice and estimates

Advise and support you and offer the best overall system for your requirements and applications.



✓Samples

Create your samples as required from your tubes and requirements.



✓ Rental

Rental of our orbital machines from our rental equipment.





✓ Demonstrations

Organize demonstrations on your sites or via video conference from our showroom.



✓ Training

Orbital technology training on your sites or on our own. Leave with your training certificate.



√Repairs and maintenance

Find a solution to your problems and repair your machines as soon as possible.

Count on our after-sales service, always listening to you!











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