

Product catalogue

Cutting, facing & orbital welding machines

for thin wall tubes < 3 mm wall thickness



Join experience

2

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.





Global Process

AXXAIR has been designing, manufacturing and distributing its orbital tube working m a c h i n e s since 1997.

Our business is based upon the global tube



working process: preparation (cutting, bevelling or squaring) and orbital welding. Our overall product strategy allows us to offer innovative solutions and adopt a global approach to your tube and pipework projects.

A Worldwide presence

AXXAIR is established in where areas 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, AXXAIR the Group, family-owned company, has become a successful group, whose business is continually expanding both in France and on export markets.



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 subcontract 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 of 3 staff.



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 you understand that 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



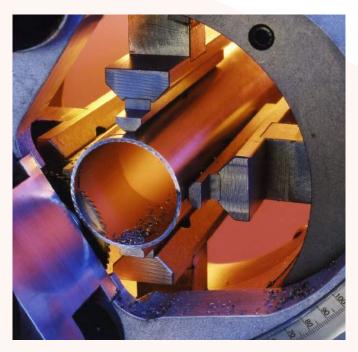
AXXAIR's orbital cutting



Tube preparation is essential to be able to have quality welding.

An orbital cutting machine allows a cut of high quality thanks to the saw blade that is turning around the tube.

The geometry of the thin wall tubes remains, therefore, intact: no tube distortion when clamping (stainless steel concentric jaws) and no deformation due to repetitiveness as the blade follows the tube section.



This precision is required for the welding machine to be able to close the seam and to make an adequate welding sealing.

Therefore, orbital cutting is an essential step before automatic 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, CC121ECC and 171ECO) are easily scalable for beveling and welding use.

QUALITY

Cutting with no tube distortion (multi-contacts concentric clamping) ideal for thin wall stainless steel tubes. Geometric cuts (perpendicular cuts <0,25 mm) and a great surface quality (limited burring).

PORTABILITY

Machines easy to carry and move, can be used both on site or in workshop. Ideal preparation for thin stainless steal tubes.









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

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







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





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

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

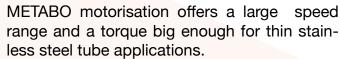
Our ECO range differs from this concept; it only offers a pipe cutting function for customers searching for alternatives.

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

Machines dedicated to thin tubes < 5 mm wall thickness

Easy to transport and less heavy

Attractive prices



This motor also has a handle that gives the possibility for the motor to be turned manually around the machine.

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

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

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



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

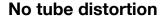






81M - 121ECO - 171ECO





Concentric clamping system





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

<u>Limited</u> <u>vibration and tube</u> distortion

Optimised blade to jaws distance





Uptake

121ECO +171ECO: dual output cutting motor with 2 blade positions

Motor 1300W

Adjustment via the speed changer

Cutting capacity:

Up to 5 mm wall thickness



Cutting precision

Perpendicular cuts < 0.25 mm

Continuous use

Electric rotary seal with anti-twist cable

Easy handling and transportation



Cut	<mark>ting r</mark> ange
81M	ø5 - ø78 mm 0.25 – 3 "
121ECO	<mark>ø5 -</mark> ø121 mm 0.25 – 4.5 "
171ECO	<mark>ø16 -</mark> ø170 mm 0.625 – 6.625 "







81M - 121ECO - 171ECO

INNOVATIVE ORBITAL SOLUTIONS

Technical features:

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

Electric motor 1300W:

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

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

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







		Product	Tube cutting mad diameter	Net	Customs	Dimensions	
		Code	With basic jaws	With extra jaws (included)	weight	Code	(HxLxw in mm)
		81M11	Ø <mark>5</mark> - Ø <mark>78</mark>	-	15 kg		263 x 346 x 236
	120V 1300W	121ECO1	Ø24 - Ø1 <mark>21</mark>	Ø <mark>5</mark> - Ø108	38 kg	846150 9000	432 x 520 x 297
		171ECO1	Ø70 - Ø1 <mark>70</mark>	Ø <mark>16</mark> - Ø118	44 kg		453 x 550 x 307
		81M21	Ø <mark>5</mark> - Ø <mark>78</mark>	-	15 kg		263 x 346 x 236
	230V 1300W	121ECO2	Ø24 - Ø1 <mark>21</mark>	Ø <mark>5</mark> - Ø108	38 kg	846150 9000	432 x 520 x 297
		171ECO2	Ø70 - Ø1 <mark>70</mark>	Ø <mark>16</mark> - Ø118	44 kg		453 x 550 x 307







NEW PRODUCTS in the orbital cutting range CCx22

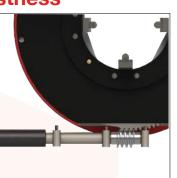


Customer satisfaction and our continuous improvement policy have led our developers to redesign part of our cutting programme. The aim is to provide easier

and stronger clamping and sealing against chip. The level of quality is higher than ever and stability has been improved.



A more effective clamping system (+30%) with an endless = screw engaging directly with the cam lock.

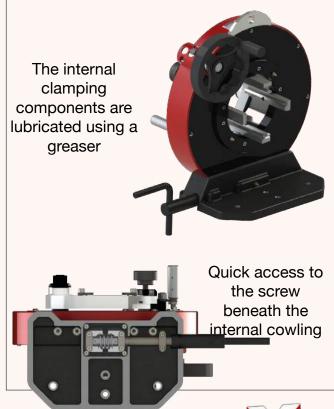




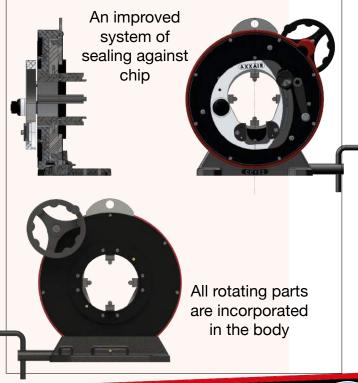
Easy Handling

Introduction of a lifting eye for use in a workshop or on site.

Easy maintenance and inspection



perfect sealing against chips







122 - 172 - 222 - 322 👰



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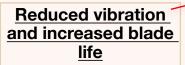
INNOVATIVE ORBITAL SOLUTIONS

No tube distortion

Concentric clamping



Stainless steel basic and auxiliary jaws as standard



Optimised blade to jaw distance



Scalability

Can be transformed into an orbital bevelling and welding machine

Continuous use

Electric rotary seal with anti-twist cable



Cutting quality

Rotation handle for controlled and continuous cutting speed

Uptake

Dual output cutting motor with 2 blade positions

Cutting precision

Perpendicularity of < 0.25 mm

1200W motor or pneumatic motor (as required)

Cutting capacity:

Up to 7 mm wall thickness

Easy handling and transportation



Cutting range								
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	<mark>ø141 -</mark> ø328 mm 5.563" – 12.750 "							



122-172 - 222-322

Technical features:

- Fast speed motor:

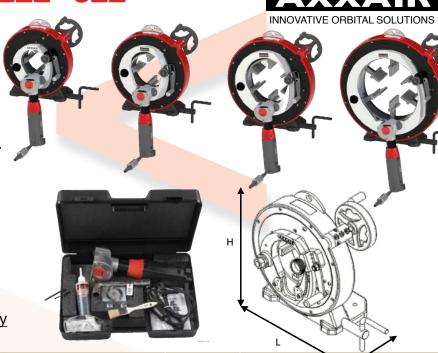
120V or 230V, 1200W, electronic speed variator with cutting compensator

Vibration level according to EN 28662 norm: <2.5m/s², protection class: IP 20

- Pneumatic motor:

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

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



	Product		ine for the following rs (in mm):	Customs	Dimensions	
	Code	With basic jaws	With extra jaws (included)	weight	Code	(HxLxw in mm)
120V	122FS19	Ø29 - Ø119	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	846150 9000	493 x 566 x 304
fast	222FS19	Ø128 - Ø <mark>228</mark>	Ø <mark>55</mark> - Ø155	59 kg	9000	548 x 594 x 304
motor	322FS19	Ø230 - Ø <mark>328</mark>	Ø141 - Ø239	71 kg		649 x 644 x 304
	122FS29	Ø29 - Ø119	Ø5 - Ø99	44 kg		443 x 541 x304
230V 1200W	172FS29	Ø74 - Ø1 <mark>73</mark>	Ø <mark>16</mark> - Ø116	51 kg	846150	493 x 566 x 304
fast motor	222FS29	Ø128 - Ø <mark>228</mark>	Ø <mark>55</mark> - Ø155	59 kg	9000	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- matic	172PD	Ø74 - Ø <mark>173</mark>	Ø <mark>16</mark> - Ø116	51 kg	846150	493 x 566 x 304
motor	222PD	Ø128 - Ø <mark>228</mark>	Ø <mark>55</mark> - Ø155	59 kg	9000	548 x 594 x 304
	322PD	Ø230 - Ø <mark>328</mark>	Ø141 - Ø239	71 kg		649 x 644 x 304







AXXAIR INNOVATIVE ORBITAL SOLUTIONS

No tube distortion

Concentric clamping



Basic **stainless steel** jaws as standard

<u>Uptake</u>

Dual output cutting motor with 2 blade positions

Cutting quality

Rotation handle as standard

Reduced vibration and increased blade life

Optimised blade to jaw distance



Continuous use

Electric rotary seal with anti-twist cable

Cutting precision

Perpendicular cuts < 0.4 mm

Easy handling and transportation



1200W motor or pneumatic motor

(as required)

Cutting capacity:

Up to a wall thickness of 7 mm

Cutting range								
421	ø212 - ø422 mm 8.625 - 16 "							
521	ø312 - ø522 mm 12.75 – 20 "							
721	ø447 - ø725 mm 18 – 28"							
1100	ø711 - ø1016 mm 28 – 40 "							







421-521-721-1100

AXXAIR

Technical features:

- Fast motor:

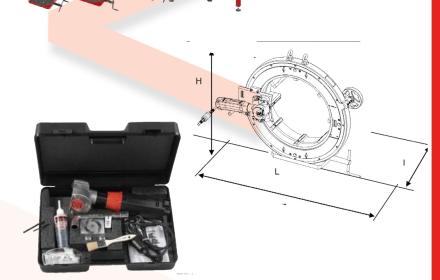
120V or 230V, 1200W, electronic speed variator with cutting compensator

Vibration level according to EN 28662 norm: <2.5m/s², protection class: IP 20

- 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	Tube cutting machine for following diameters (in mm):		Net	Customs	Dimensions
	Code	With basic jaws	With extra jaws (included)	weight	Code	(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	84615 09000	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	84615 09000	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	84615 09000	905x889x315
motor	721PD	Ø653 -Ø <mark>725</mark>	Ø <mark>447</mark> - Ø654	256 kg		1104x1077x315
	1100		On dema	and		







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	Customs Code	Dimensions (in cm)
CCPS21	Support feet	10 kg	84669 37000	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	Customs Code	Dimensions (in cm)
CCSER1	Simple stand	10 kg	84669 37000	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	Customs Code	Dimensions (in cm)
CCSER2	Stand (with chrome steel bearings)	11 kg	84669 37000	60 x 26 x 10

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

- easy assembling and dismantling
- facilitates tube feeding

- height adjustment

after each cut

√81	√121ECO	√171ECO	√122	√172	√222	√322	421	521	721	1100
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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	Customs Code	Dimensions (in cm)
CCBSB-X1	Bench with height adjustment	57 kg	84669 37000	184 x 95 x 51

Height-adjustable support bench, 1.5m

- stainless steel rollers

- handle for height adjustment

-1.5 m long

- maximum load: 350 kg

- ø min pipe: 5 mm

- ø max pipe: 321 mm

- compatible with machines 121 to 321

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



Product Code	Description	Net weight	Customs code	Dimensions (in cm)
CCBSB-X2	Additional 1.5 m bench	38 kg	84669 37000	150 x 95 x 51
Additionnal au	anart hanahi			

Additionnal support bench:

- stainless steel rollers
- 1.5 m long
- maximum load 350 kg uniformly distributed

- ø min pipe : 5 mm

- ø max pipe: 321 mm

- compatible with machines 121 to 321

81 **121ECO 171ECO 122 172 122 122 122 122 122 122 122 123 125 121 121 120**



Product Code	Description	Net Weight	Customs Code	Dimensions (in mm)
CCBSB-B005	Connection	3 kg	84669 37000	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

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



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.

They can be assembled on the <u>feed-in or</u> <u>feed-out</u> section of the cutting machine and are available <u>with a ruler or with an LCD</u> <u>display.</u>

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) - Lengths available:

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

- Working stroke: Length 200 mm
- Delivered by module of 1500mm to be put together

Feed-in assembly

- Max load per module:
 350 kg (evenly distributed)
- Max push on the stop: 10 kg
- Operating temperature: 0 50 ° C

- Relative humidity: 35 - 85%



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

81 **121ECO 171ECO 122 172 12**





Orbital Cutting - Accessories (End stop)



Ruler

Ruler in mm

- Equipped with a magnifying lens

- Resolution 1.0 mm



LCD display

- Resolution 0.1 mm

 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 easily done without loss of the value and configuration parameters.







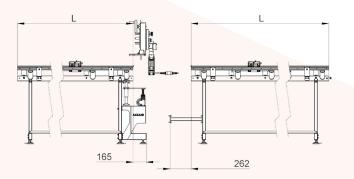


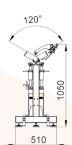
AXXAIR INNOVATIVE ORBITAL SOLUTIONS

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)	Working stro (in mm)	ke	e Product code			v	Net veight	Customs code
		1500	1300		CCBSB-	-AM-R-15		(65 kg	
		3000	2800		CCBSB-	-AM-R-30		1	04 kg	
	Ruler	4500	4300		CCBSB-	-AM-R-45		1	43 kg	84669
on the	Tuici	6000	5800		CCBSB-	-AM-R-60		1	63 kg	37000
feed-in		7500	7300		CCBSB-	-AM-R-75		2	200 kg	
		9000	8800		CCBSB-	-AM-R-90		2	238 kg	
section of the		1500	1300		CCBSB-	-AM-D-15		(65 kg	
cutting		3000	2800		CCBSB-	-AM-D-30		1	04 kg	
line	LCD	4500	4300		CCBSB-	-AM-D-45		1	43 kg	84669
	display	6000	5800		CCBSB-AM-D-60			1	63 kg	37000
		7500	7300		CCBSB-AM-D-75			2	200 kg	
		9000	8800		CCBSB-	AM-D-90		2	238 kg	
81 🗸	121ECO 🗸 17	71ECO 🗸 1	22 /172	√222	√322	421	521		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).







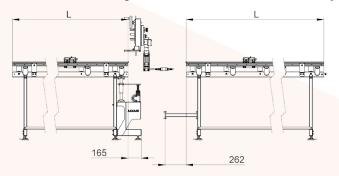
AXXAIR

INNOVATIVE ORBITAL SOLUTIONS

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.

<u>Attention:</u> 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)	Working str (in mm)	oke	Produc	t code		Net	weight	Customs code	
		1500	1300		CCBSB-	AV-R-15		4	6 kg		
		3000	2800		CCBSB-	AV-R-30		8	5 kg		
	Ruler	4500	4300		CCBSB-	AV-R-45		12	24 kg	84669	
on the	rtulei	6000	5800		CCBSB-	AV-R-60		16	63 kg	37000	
food out		7500	7300		CCBSB-	AV-R-75		20	01 kg		
feed-out		9000	8800		CCBSB-AV-R-90		24	10 kg			
section		1500	1300		CCBSB-	AV-D-15		4	6 kg		
of the cutting		3000	2800		CCBSB-AV-D-30			85 kg			
line	LCD	4500	4300		CCBSB-	AV-D-45		12	24 kg	84669	
	display	6000	5800		CCBSB-AV-D-60			16	63 kg	37000	
		7500	7300		CCBSB-	AV-D-75		20	01 kg		
		9000	8800		CCBSB-AV-D-90			24	10 kg		
81	121ECO 🗸 1	71ECO 🗸	√ 172	√222	. √322	421	52	21	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	Customs Code	Dimensions (in mm)
CCBSB2-003	Height- adjustable table	53.5 kg	84669 37000	

Height-adjustable table for 422 / 521 / 721:

- adjustable table height - optimum stability

81	121ECO	171ECO	122	172	222	322	√ 421	√ 521	√ 721	1100
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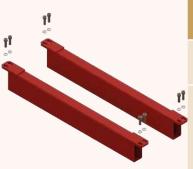
Product Code	Description	Net Weight	Customs Code	Dimensions (in mm)
CCBSB2-004	Support bench	72.8 kg	84669 37000	

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
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Product Code	Description	Poids net	Code douanier	Dimensions (en mm)
CCBSB2-005	Connecting bar	6.5 kg	84669 37000	

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 inverter:

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 generator: 4-button display (Start, Stop, Left, Right) with the addition of a generator connection cable

(Ref. SAEX-A02 for addition, more details in the "ORBITAL WELDING" section of the 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 or French
- choose the unit of measure: mm or inch

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

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



Product Code	Description	Net Weight	Customs Code	Dimensions (in mm)
SAEX-00	Autoline elec- tric inverter	6.3 kg	8515 900090	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 **122 122 122 122 122 122 122 123** 421 521 721 1100



Product Code	Description	Net Weight	Customs Code	Dimensions (in mm)
SAEX-000	Autoline elec- tric inverter	6.3 kg	8515 900090	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
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1100



Orbital Cutting - Consummables





Orbital cutting blades

Customs Code: 8202310000

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.



121ECO √171ECO

EN COLD		roduct Code	Cutting tubes thickne					ø of the blade		Number of teeth	
	Ľ	S63128	0,5 to 0,9 mm		,(02 - ,04"		63 m	m		128
	Ľ	S63100	0,7 to 1,5 mm		,(03 - ,06"		63 m	m		100
	L	S6364	1 to 3 mm		,04 - ,12"		63 mm		64		
	L	S6872	1 to 3 mm		,04 - ,12"			68 m	m	72	
	L	S6844	2 to 7	nm	,08- ,28"		68 mm		44		
1	L	S8080	1 to 3	mm	,(04 - ,12"		80 mm		80	
	L	S8054	2 to 7	mm	,	08- ,28"		80 m	m		54
√1	22	√172	√ 222	√322		√ 422		√521	/ 7	721	√1100



√81

Product Code	Description	Volume	Customs Code
CCLUH	Liquid lubricant	250 ml	3403198000

High performance oil lubricant, sold in packs of 5:

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

81 121ECO 171ECO \(\sqrt{122} \) \(\sqrt{172} \) \(\sqrt{222} \) \(\sqrt{322} \) \(\sqrt{422} \) \(\sqrt{521} \) \(\sqrt{721} \) \(\sqrt{110} \)	81	121ECO	171ECO	√ 122	√172	√222	√322	√ 422	√521	√ 721	√1100
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Product Code	Description	Volume	Customs Code
CCLUP	Paste lubricant	250 ml	3403198000

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

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

√81	√121ECO	√171ECO	122	172	222	322	422	521	721	1100	
											_



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	Customs Code
FS xx / MOPD	Cutting motor	5 kg	8466937000

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

	Product Code	Frame
120V	Low-speed motor: FS15	122
1200	High-speed motor: FS25	172
230V	Low-speed motor: FS19	172
2300	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 the information you need, with the relevant product codes, appears in the orbital cutting accessories and consumables section of this catalogue.



Product Code	Description	Net Weight	Customs Code
GA10 - x - xx	Bevelling motor kit	5 kg	8466937000

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

	Product Code	Frame
	GA10-1-120	122
100)/	GA10-1-170	172
120V	GA10-1-220	222
	GA10-1-320	322

	Product Code	Frame
	GA10-2-120	122
0001	GA10-2-170	172
230V	GA10-2-220	222
	GA10-2-320	322

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

All the information you need, with the relevant product codes, appears in the orbital bevelling accessories and consumables section of this catalogue. ("thick" catalogue)



Product Code	Description	Net Weight	Customs Code
SX - KIT x	Torch kit	depending on the chosen product	8466937000

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

Cooling	Product Code	Frame
AIR	SX-2KITA	122
	SX-2KITE	172
Water	SX-2KIT-NAOF (AVC/OSC)	222 322

To use this KIT and to prefab weld, you will need to order: a suitable AXXAIR welding generator for the tubes you want to weld. All the information you need, with the relevant product codes, appears in the orbital welding section of this catalogue.



AXXAIR's 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 disc cutting, band saw or cutting wheels.



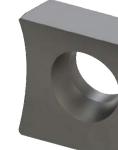
Tubes with small diameters <25.4 mm are particularly concerned by the facing process. They are often cut with tube cutters or abrasive cutting machines. Generally speaking, tubes must be faced before welding in order to obtain quality welds.

One category of tubes is particularly concerned: electropolished tubes 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 mains for more flexibility. HSS TIALN blades, reversible and with two cutting edges guarantee optimal lifetime of consumables.



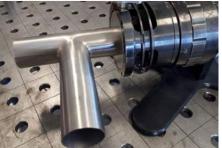
QUALITY

Facing creates a clean surface free of burrs and without tube deformation: sharpness and accuracy guaranteed. Thin tubes are therfore ready for welding.

PORTABILITY

Our facing machines are light 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 to devise a solution that best meets your needs!









AXXAIR

INNOVATIVE ORBITAL SOLUTIONS

High quality blades

HSS TIALN blade Reversible, two cutting edges



QuiXS:

Lets you change the head or fit a chuck in just a few seconds.



Clamping shells

Stainless steel jaw opens wide for easy positioning of tube



Accurate manual advance

0.1 mm steps

DC 65-G/DC65-M

30° and 45° outside bevel possible with optional tool holder

Drill / Driver	Mains motor
 - QuiXS quick change system - 18V motor - Lithium-Ion technology - LED battery charge indicator - Supplied with two 3Ah 18V batteries, rapid battery charger 	 Motor 1100W. Two speed reducer with thumbwheel speed change Top quality speed changer Anti-start protection Reduction housing in cast aluminium

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







65-G

DC25-P - 65-G - 25-M - 65-M

AXXAIR INNOVATIVE ORBITAL SOLUTIONS



25-P

Technical characteristics:

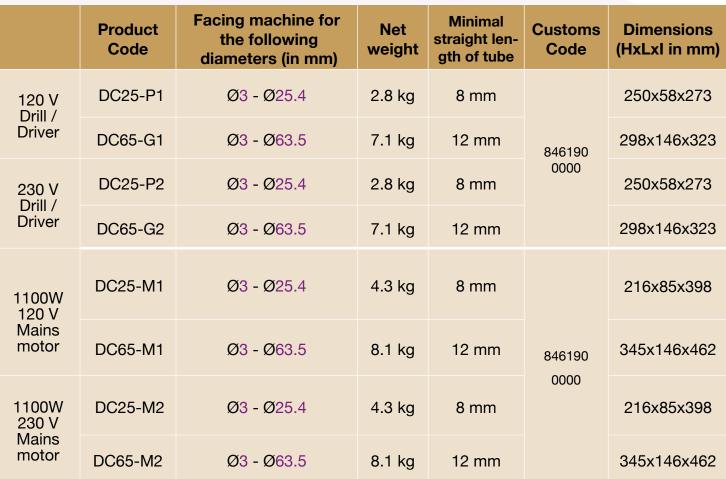
18V motor (Drill/Driver):

- 120 or 230 V
- Supplied with two 1.5 Ah 18V batteries, rapid battery charger

Mains motor 1100 W:

- -120 V or 230 V, 1100 W
- Two speed reducer with thumbwheel speed change
- Top quality speed changer
- Anti-start protection
- Reduction housing in cast aluminium

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









DC PACKS



AXXAIR offers a set which combines the best in squaring in a single box.

Mains motor 1100 W

Available for 120 V or 230 V

DC65 squaring head

Stainless steel jaw opens wide for easy positioning of tube

DC25 squaring head

Stainless steel jaw opens wide for easy positioning of tube

DC65 squaring head

Stainless steel jaw opens wide for easy positioning of tube

Drill/Driver

Available for 120 V or 230 V

Simplicity of settings

Tool adjusted to the diameter of tube to be machined in just a few seconds.



DC25 squaring head

Stainless steel jaw opens wide for easy positioning of tube





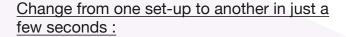
DC PACKS

AXXAIR INNOVATIVE ORBITAL SOLUTIONS

Caractéristiques techniques:

Each DC PACK is composed of:

- One mains motor 1100 W
 OR one 18V motor (Drill/Driver) 3.0 Ah
- One DC25 squaring head
 AND one DC65 squaring head



DC25: true up tubes with a light, ultra-compact machine

DC65: squaring and bevelling (optional bevelling tool holder) on the bench or directly on the tubes (dismountable foot)





	Product Code	Facing machine for the following diameters (in mm)	Net weight	Minimal straight length of tube	Customs Code	Dimensions (HxLxI in mm)
120 V Driller / Driver	DCPACK-G1	Ø3 - Ø25.4 and Ø3 - Ø63.5		298x146x323		
230 V Driller / Driver	DCPACK-G2	Ø3 - Ø25.4 and Ø3 - Ø63.5	< 7.1 kg	DC25: 8mm DC65: 12mm	0000	298x146x323
1100W 120 V Mains motor	DCPACK-M1	Ø3 - Ø25.4 and Ø3 - Ø63.5	< 8.1 kg	DC25: 8mm DC65: 12mm	846190	345x146x462
1100W 230 V Mains motor	DCPACK-M2	Ø3 - Ø25.4 and Ø3 - Ø63.5	<8.1 kg	DC25: 8mm DC65: 12mm	0000	345x146x462









Clamping shells

DC115 : Stainless steel clamping jaws

DC221 : Aluminium clamping jaws



Accurate manual advance

0.1 mm steps

30° and 45° outside bevel

possible with optional tool holder

Easy positioning of tube

1 set of jaws for each diameter



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









1100 W motor

Motor 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



Fac	ing range
DC115	ø12 - ø115 mm
AM	0.5" - 4.5"
DC221	ø50 - ø220 mm
AM	2" – 8.5 "



DC115-AM - 221-AM

Technical characteristics:

Burr-free tube squaring and edge breaking machine used after a band saw cut or on electropolished tubes

- Thickness < 0,12» (3 mm) according to material
- 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 length of tube	Customs Code	Dimensions (HxLxI in mm)
120V		Ø12 - Ø115	11 kg	28 mm	846190	219x314x462
Moteur 1100W	DC221-AM1	Ø50 - Ø220	21 kg	39 mm		327x425x540
230 V	DC 115-AM2	Ø12 - Ø115	11 kg	28 mm	0000	219x314x462
Moteur 1100W	DC221- AM2	Ø50 - Ø220	21 kg	39 mm		327x425x540







DC115-BM - 221-BM

AXXAIR INNOVATIVE ORBITAL SOLUTIONS



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





1100 W motor

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		3115 mm - 4.5"				
DC221 BM		220 mm - 8.5 "				







DC115-BM - 221-BM

Technical characteristics:

Burr-free tube squaring and edge breaking machine used after a band saw cut or on electropolished tubes

- Thickness < 0,12» (3 mm) according to material
- Ideal tool to face a tube 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 len- gth of tube	Customs Code	Dimensions (HxLxl in mm)
120V Moteur	DC115-BM1	Ø12 - Ø115	37 kg	58 mm		219x314x462
1100 W	DC221-BM1	Ø50 - Ø220	55 kg	62 mm	846190	327x425x540
230 V Moteur	DC 115-BM2	Ø12 - Ø115	37 kg	58 mm	0000	219x314x462
1100 W	DC221- BM2	Ø50 - Ø220	55 kg	62 mm		327x425x540





Orbital Facing - 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 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	Customs Code	Dimensions (in cm)
CCBSB-X1	Height-adjus- table tube support bench	57 kg	84669 37000	184 x 95 x 51

Height-adjustable support bench, 1.5 m:

- stainless steel rollers

- height adjustment handle

- maximum load 350 kg

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

		uniformly di	istributed	
ĺ				

DC25-P	DC65-G	DC25-M	DC65-M	DC115-AM	DC221-AM	√DC115-BM	√DC221-BM



Product Code	Description	Net weight	Customs Code	Dimensions (in cm)
CCBSB-X2	Additional support bench	38 kg	84669 37000	150 x 95 x 51

Additional tube support bench, 1.5 m:

- stainless steel rollers

- maximum load 350 kg uniformly distributed

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

DC25-P	DC65-G	DC25-M	DC65-M	DC115-AM	DC221-AM	√DC115-BM	√DC221-BM
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Product Code	Description	Net weight	Customs Code	Dimensions (in cm)
CCSA21	Pneumatic clamping	8.2 kg	84669 37000	560 x 200 x 190

Pneumatic clamping for DC115-BM / DC221-BM

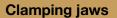
DC25-P DC65-G DC25M DC65M DC115AM DC221AM \(\sqrt{DC115BM} \) \(\sqrt{DC221B}	ВМ
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Orbital Facing - Accessories





Customs code: 8466937000

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 - 25.4 mm	1/8" - 1"	
DC65	DCM65A-XX	25.1mm - 63.5 mm	1" - 2.5"	
	DCM65B-XX	3 mm - 25 mm	1/8" - 1"	
DC115	DC115 DCM115- XXX		1/2" - 4.5"	
DC221 DCM221- XXX		50 mm - 220 mm	2" - 8.5"	

√DC25-P	√DC65-G	√DC25-M	√DC65-M	√DC115-AM	√DC221-AM	√DC115-BM	√DC221-BM
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Jaws fot micro-fiting

Customs code: 8466937000

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-P	DC65-G	√DC25-M	DC65-M	DC115-AM	DC221-AM	DC115-BM	DC221-BM
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Orbital Facing - Accessories





Product Code	Description	Net weight	Customs Code	Dimensions (in mm)
DCM6525	Spacer	0.022 kg	84669 37000	Ø 76

Spacer for fitting DC25 jaws on a DC65

DC25-P	√DC65-G	DC25-M	√DC65-M	DC115-AM	DC221-AM	DC115-BM	DC221-BM
DC25-P	√ DC65-G	DC25-IVI	√ DC65-M	DC115-AM	DC221-AM	DC 1 12-BM	DC221-BIVI



Product Code	oduct Code Description		Customs Code	Dimensions (in mm)
DC65-P300	Tool holder for bevelling	0.028 kg	84669 37000	22 x 13 x 28.5

Tool holder for bevelling the outer edge at 30°:

- Bevelling possible over the whole of the machine's range (0,1 to 2,5 inches),
- If squaring and bevelling, range between 20 and 53 mm diameter, max
- Tool holders are supplied without blades

DC25-P	√DC65-G	DC25M	√DC65M	√DC115AM	√DC221AM	√DC115BM	√DC221BM	
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Product Code	Description	Net weight	Customs Code	Dimensions (in mm)
DC65-P450	Tool holder for bevelling	0.026 kg	84669 37000	22 x 12.5 x 28.5

Tool holder for bevelling the outer edge at 45°:

- Bevelling possible over the whole of the machine's range (0,1 to 2,5 inches),
- If squaring and bevelling, range between 20 and 53 mm diameter, max
- Tool holders are supplied without blades

DC25-P	√DC65-G	DC25-M	√DC65-M	✓ DC115-AM	√DC221-AM	√DC115-BM	√DC221-BM	





Orbital Facing - Consumables



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	Customs Code	Dimensions (in mm)
DC-OUT1	Box of 10 blades	0.028 kg	84669 37000	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	Customs Code	Dimensions (in mm)
DC-UOUT1	Blade (single unit)	0.022 kg	84669 37000	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-P	√DC65-G	√DC25M	√DC65M	√DC115AM	√DC221AM	√DC115BM	√DC221BM
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Orbital welding (Prefabrication)



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

Our programme 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 iaws.

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!





NEW PRODUCTS In the SXx22 orbital welding range



We have decided to strengthen this part of our range of orbital welding machines.









Robustness. improved seating, more "positive" clamping and continuity guided the choices of our developers and pilot customers.

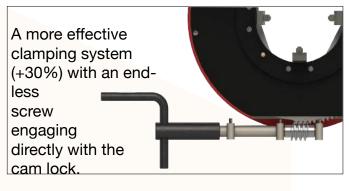
The stability of the assembly has been greatly improved by the redesign of support plate.



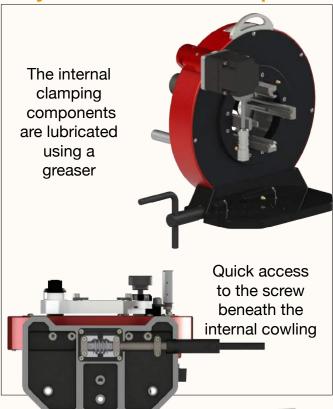
Easy handling

Introduction of a lifting eye for use in a workshop or on site.

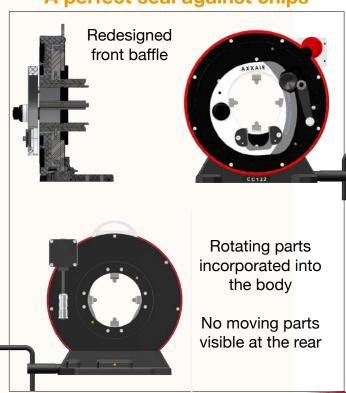
Robustness



Easy maintenance and inspection



A perfect seal against chips







SX122 - 172 - 222 - 322

INNOVATIVE ORBITAL SOLUTIONS

No tube distortion

Concentric clamping



Stainless steel basic and auxiliary iaws as standard

Air Cooled or Water Cooled







Rotating

Connect to the SAXX range welding generator

Constant distance: electrode-tube

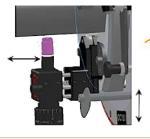
Mechanical tracking of tube ovalization from the outside.



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



Easy handling and transportation





Compatible

We	Welding range				
122	ø5 - ø119 mm 0.25" - 4.5"				
172	ø16 - ø173 mm 0.625" – 6.625"				
222	55 - ø228 mm 2.375" – 8.625"				
322	ø141 mm - ø328 mm 5.563" – 12.750"				

Micrometric adjustment of the height of the arc

Accuracy of adjustment without specific tooling







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 temperature must be between 0 °C and + 40 °C.

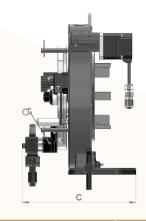
Compatible with AXXAIR type SAXX welding generators, we have an automatic parameter calculation mode.

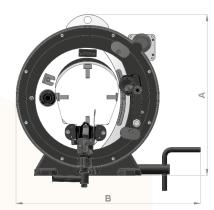
The generator will offer you parameters adapted to the characteristics of the tubes / accessories to be welded.

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 "thick" catalogue

SX-xx2-E (WATER)	200 A.	
SX-xx2-A (AIR)	100 A	





	Product	Tube welding machine for the following diameters (in mm):		Net	Customs	Dimensions (Av.P.) O in
	Code	With basic jaws	With extra jaws (included)	weight	code	(AxBxC in mm)
ETA	SX122-A	Ø29 - Ø1 <mark>19</mark>	Ø <mark>5</mark> - Ø99	45 kg	85153 10000	446 x 541 x 350
Cooling	SX172-A	Ø74 - Ø1 <mark>73</mark>	Ø <mark>16</mark> - Ø116	52 kg		493 x 566 x 350
AIR	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	Ø5 - Ø99	45 kg		446 x 541 x 350
Cooling	SX172-E	Ø74 - Ø <mark>173</mark>	Ø <mark>16</mark> - Ø116	52 kg	85153	493 x 566 x 350
WATER	SX222-E	Ø128 - Ø <mark>228</mark>	Ø <mark>55</mark> - Ø155	60 kg	10000	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	Customs code	Dimensions (in cm)
CCPS21	Support legs	10 kg	84669 37000	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	Customs code	Dimensions (in cm)
CCSER1	Stand	10 kg	84669 37000	60 x 26 x 10

Simple stand for supporting tubes with height adjustment:

- quick assembly and dismantling
- height adjustment

/SX122-A



Product Code	Description	Net weight	Customs code	Dimensions (in cm)
CCSER2	Stand (with chrome steel bearings)	11 kg	84669 37000	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	Customs code	Dimensions (in cm)
CCBSB-X1	Height- adjustable tube support bench	57 kg	84669 37000	184 x 95 x 51

Height-adjustable support bench, 1.5m:

- stainless steel rollers

- maximum load 350 kg

- height adjustment handle

- 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	Customs code	Dimensions (in cm)
CCBSB-X2	Additional sup- port bench	38 kg	84669 37000	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	Customs code	Dimensions (in mm)	
CCBSB-B005	Connecting bar	3 kg	84669 37000	100 x 80 x 402	

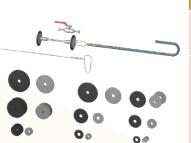
Connecting bar for CCBSB-X1 and CCBSB-X2:

 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







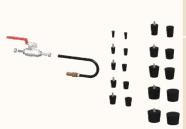
Product Code	Description	Net weight	Customs code	Packaging (in cm)
SKIF-01	Gas protection KIT	2.9 kg	85159 00090	35 x 30 x 9.5

Gas membrane protection KIT for tubes Ø 40 to 120 mm

- consists of: 9 sets of membranes with washers, 1 gas pipe 6 m,
- 1 metal cable, 1 gas valve 1/4 turn, 1 carabiner

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

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



Product Code	Description	Net weight	Customs code	Packaging (in cm)
SKIB-01	Gas protection KIT	2 kg	85159 00090	35 x 30 x 9.5

Gas plug protection KIT for tubes Ø 6 to 41 mm

- consists of: 10 sets of perforated plugs, 1 gas inlet union,1 hose Ø 4/6 length 5

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

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



Product Code	Description	Net weight	Customs code	Dimensions (in mm)
SADFP-02	Wire guide	0.05 kg	85159 00090	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	Customs code	Dimensions (in cm)
SADF2X	Wire dispenser	12 kg	85159 00090	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 √SX222-A √SX322-A √SX322-E √SX172-A √SX122-E √SX172-E √SX222-E







Product Code	oduct Code Description		Customs code	Plastic box (in cm)	
SKTDI-30	Inclined torch	0.3 kg	85159 00090	12 x 17.5 x 4	
0001 11 11					

30° inclined torch kit

√SX122-A



Product Code	Description	Net weight	Customs code	Plastic box (in cm)	
SKTDI-45	Inclined torch	0.3 kg	85159 00090	12 x 17.5 x 4	
45° inclined torch kit					

√SX122-A	√SX172-A	√SX222-A	√SX322-A	√SX122-E	√SX172-E	√SX222-E	√SX322-E
V 0/1.22 /1	V 0/1.72 /1	V O/LLL /\	V CAULL A	V O/(:	V OX	V 0/1111 L	V ONOLL L

Orbital welding (Prefab) - Consumables



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

This increases the life of the electrodes.



Product Code	Description	Net weight	Customs code	Plastic box (cm)
SCE16-50	Electrodes	0.02 kg	85159 00010	5.5 x 4.5 x 1

Electrode diameter 1.6 mm, length 50mm

- Box of 10 electrodes



Product Code	Description	Net weight	Customs code	Plastic box (cm)
SCE24-50	Electrodes	0.05 kg	85159 00010	5.5 x 4.5 x 1

Electrode diameter 2.4 mm, length 50mm

- Box of 10 electrodes



Product Code	Description	Net weight	Customs code	Plastic box (cm)
SKTD-xx	Replacement torch	0.3 kg	85159 00090	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



1 machine - 3 applications



For more than 20 years the AXX-AIR group has specialized in triple and exclusive orbital welding preparation solutions:

global process

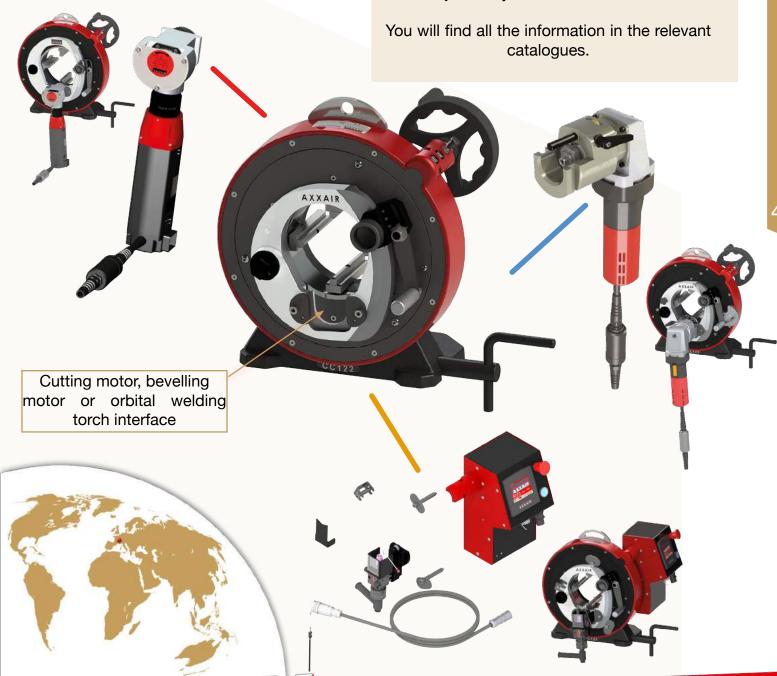
A single machine frame (122, 172, 222 and 322) makes it possible to carry out three operations: **Cutting, bevelling and orbital welding.**

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.



Join experience

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



Cycle start button

Starting the welding cycle or TEST mode



AIR cooled

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

Compact and light

Weight: 4.5 kg with cable

Thermal shield

We shield the electrode very exposed

surrounding on the rotor as it is

Compatible with SAXX welding generators



Transport

These heads are delivered in their work site case



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.



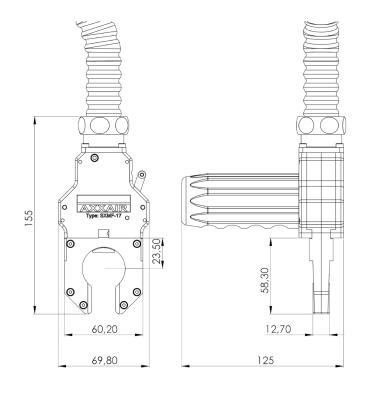
Please refer to the following pages in order to find the products' codes and sideplates' configurations.

The head SXMF-17 is delivered with:

- A transport case
- Tool to set up the tungsten
- Tool to adjust the tungsten
- Tool to set up the collets
- User manual



SXMF-17 with mounted cassette



Product Code	Description	Tube welding machine for the following diameters (in mm):	Diameter electrode	Weight without cable	Customs code	Dimensions
SXMF-17	Welding machine SXMF-17	1/8" to 5/8" ø 3 - ø17.2 mm	0.040» Ø1.0 mm	1.4 lbs. (0.6 kg)	85153 10000	See above





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.

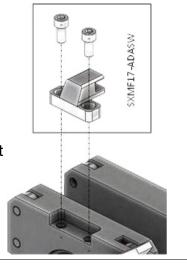
You always need the central body in combination of one of the side plates depending on what you are clamping. The combinations are multiple and the central body is mandatory in all combinations. You have to pay attatention to have the clamping levers on the same side (always use one left and one right 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.







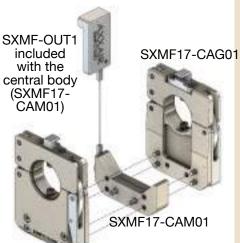


Standard Cassettes & Sideplates





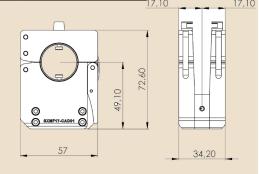




Standard cassette SXMF Customs code: 8515900090

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

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



1100.40

SXMF17-CAD01





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

Collets for sta	andard site	Customs code	8515900090	
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	
		SMX17-14	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





Wide Sideplate (right/left)

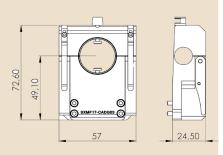




Wide siteplate (right and left) for SXMF

Description	Product code
Wide sideplate	SXMF17-CADG03
Standard central body SXMF (common to all siteplates)	SXMF17-CAM01

Wide to order to clamp the following fittings.



Customs code: 8515900090



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

Customs code: 8515900090 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

toms co		





Fitting collets for wide siteplate			C	sustoms code:	8515900090
5/16 in	6.4mm (0.25 in)				
- 0	01/8 in - 1/4 in	Producod		Fitting body size	Fitting type
7/16 in	6.4 mm (0.25 in)	SMX17	-LRA	1/8 in, 1/4 in	Body Union Elbow
	Ø 3/8 in - 8			6 mm 3/8 in	or
7/16 in		SMX17	-LRB	8 mm 10 mm	Body Union Tee
9/16 in	6.4 mm (0.25 in)	/		1/2 in	or
ni 9746 in	012	SMX17	-LRC	12 mm	Body Union Cross
ō					





Thin sideplates

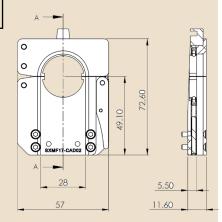






Description	Product code
Right thin sideplate	SXMF17-CAD02
Left thin sideplate	SXMF17-CAG02
Standard central body SXMF (common to all sideplates)	SXMF17-CAM01

It is possible to order the entire cassette assembly or only the right or left sideplates with the center body for a customized configuration.



Customs code: 855900090

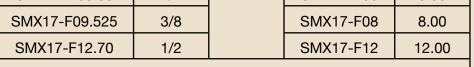




Minimal straight length of the tube: 0.5» (12.70 mm)

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



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





Orbital welding (Microfit head) - Accessories

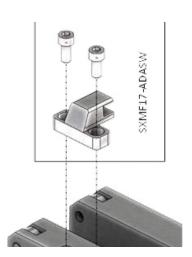




Cable extention		Customs code : 8515900090		
Product code		Lenght	Net weight	
SAFS-05MAX		5m	7 kg	
SAFS-10MAX		10m	14 ka	

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

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



Screw kit for Swagelok	Customs code: 8515900090
Description	Product code
Adaption kit for Swagelock casse	ttes 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	Customs code 851590001
Hectrodes for Salvir 17	Gustoms code ob 159000 i

Product code Outside diam			of the tube to be ded	Electrode	
		inches	mm	lenght	
	SCE10-20.0	1/8, 3/16, 1/4	3, 6	20.0mm	
5	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, 17.3	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



0



Orbital welding (Closed head)



Our range of closed welding heads (SATF series) allows you to make very high quality welds in a minimum space.

These heads have been studied to meet the most stringent welding requirements and in the tightest areas.

This type of equipment is mainly used in the aerospace, semiconductor, pharmaceutical or food industries. It is essential for welding titanium which is very sensitive to oxidation.



Closed heads provide optimum gas protection (closed chamber) which results in welds with very limited colouration. They are recommended for welding stainless steel tubes of wall thickness <3 mm in simple fusion without added wire.

The alloy parts of the machine are designed to accept any type of assembly and to offer more welding possibilities.

A control keypad is integrated into the handle of the machine. It allows you to control all primary functions of the head. The welding cycle is visualized by an LED.

The SATF range, combined with our AXXAIR welding generators and its permanent control of the welding parameters, guarantees repeatable and quality welding. This type of weld can be inspected using the most stringent means, such as X-ray inspection.

FLEXIBILITY, PRODUCTIVITY

Productivity remains our primary concern. A liquid cooling circuit has been developed to increase the machine life cycle and also to allow a high welding rate.

QUALITY AND REPEATABILITY

Thanks to its new adjustable closing system and the carefully designed shape of its jaws, the SATF range allows optimum tube positioning (concentricity between the axis of rotation of the electrode and your tube) 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 optimized. Our welding cable, housed in an ultra flexible and very resistant protective sheath, also facilitates manipulation of the welding head.









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!





SATF-40NDHX - 65NDHX - 115NDHX

Protection

High protection against arcing outside the electrode

Power drive system with encoder

Allows STARTING IN **ALL ANGULAR POSITIONS** positions of the electrode

Water cooled



Length of the cable: 5 metres

Compatible with SAXX welding generators



These heads can also be used on the old AXXAIR welding stations with adapter cables



Transport + suspension

These heads are delivered in their work site case and with a suspension assembly





INNOVATIVE ORBITAL SOLUTIONS

Viewing window

Fixed and transparent option



Strengthening of closing systems

Adjustable force closing systems. Allows precise adjustment of the force of the jaws on the tube to be welded according to its geometry



Fine tube welding

Up to 2.5 mm (3 mm in some cases)

Remote control keypad

It incorporates an LED on the handle to indicate whether the machine is in welding cycle or not.





SATF 40NDHX - 65NDHX - 115NDHX

INNOVATIVE ORBITAL SOLUTIONS

Technical characteristics:

Maximum welding current	120 A
100% Duty cycle	60 A

The new NDHX heads are used with SAXX range welding stations.

Changes have been incorporated in the upper part, for the closing and flap guide systems. The new adjustable force closing system allows you to precisely set the force of the jaws on the tube to be welded according to its geometry. Closing is more precise and the parts to be welded are better positioned.

The heads are cooled in two ways: on the electrode holder by contact and on the outer aluminium plates in the lower part.

This cooling is essential to guarantee a long service life of the parts because it minimizes distortion effects due to expansion.

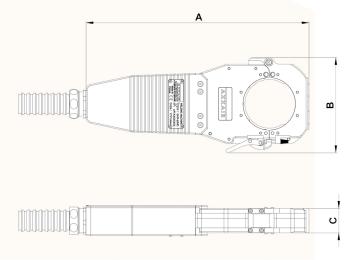
- Cable extensions
- Remote electrodes
- Flange for welding elbows



Specific features

Option: Possibility of mounting a window in the upper part thus verifying the correct positioning of the electrode, for the parts to be welded, before starting the cycle.

CAUTION: If you use the head with a window, it is necessary to wear suitable eye protection (welding mask).



Product Code	Description	Tube welding machine for the following diameters (in mm):	Net weight	Customs code	Dimensions (AxBxC in mm)
SATF-40NDHX	Water-cooled closed head for SAXX	ø 6 to ø 40 mm	8.8 kg		336 x 122 x 40
SATF-65NDHX	Water-cooled closed head for SAXX	ø 6 to ø 65 mm	9.2 kg	85153 10000	366 x 152 x 40
SATF-115NDHX	Water-cooled closed head for SAXX	ø 25 to ø 115 mm	9.9 kg	10000	421 x 222 x 40





SATF 40MIH - 65MIH -115MIH

Machines for AMI stations with original connectors

Protection

High protection against arcing outside the electrode

Drive system

Continuous current with **Tachometer**

Water cooled



Length of the cable: 5 metres

Fine tube welding

Up to 2.5 mm (3 mm in some cases)

Compatible with AMI stations

AMI stations with auto-calibration of welding heads Generator type 205, 207, and 307.

(Not compatible with generator 227)



Transport + suspension

These heads are delivered in their carrying case and with a suspension assembly





INNOVATIVE ORBITAL SOLUTIONS

Viewing window

Fixed and transparent option



Strengthening of closing systems

Adjustable force closing systems. Allows precise adjustment of the force of the jaws on the tube to be welded according to its geometry



Compatible with **SAXX** generators

Can also be used on SAXX welding stations by means of an adapter cable (Ref SAFS-ADMI1)







SATF 40MIH - 65MIH - 115MIH

INNOVATIVE ORBITAL SOLUTIONS

Technical characteristics:

Maximum welding current	120 A
100% Duty cycle	60 A

These heads compatible with AMI are (Arc Machines) stations that have the autocalibration option. The connectors are an integral part of the cable.

If you want to use these heads later with the new AXXAIR SAXX-200, you only need to get an adapter cable. You will find all the information on the adapter cables in the welding generator accessories.

Changes have been incorporated in the upper part, for the closing and flap guide systems. The new adjustable force closing system allows you to precisely set the force of the jaws on the tube to be welded Closing is more precise and the parts to be welded are better positioned.

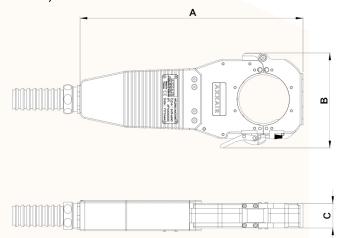
The heads are cooled in two ways: on the electrode holder by contact and on the outer aluminium plates in the lower part. This cooling is essential to guarantee a long life of the parts as it minimises the effects of distortion by expansion.



Specificities

Option: Possibility of mounting a window in the upper part thus verifying the correct positioning of the electrode, for the parts to be welded, before starting the cycle.

CAUTION: If you use the head with a window, it is necessary to wear suitable eye protection (welding mask).

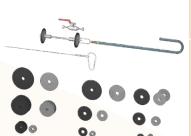


Product Code	Description	Tube welding machine for the following diameters (in mm):	Net weight	Customs code	Dimensions (AxBxC in mm)
SATF-40MIH	Water cooled closed head compatible with AMI orbital welding stations	ø 6 to ø 40 mm	8.8 kg		336 x 122 x 40
SATF-65MIH	Water cooled closed head compatible with AMI orbital welding stations	ø 6 to ø 65 mm	9.2 kg	85153 10000	366 x 152 x 40
SATF-115MIH	Water cooled closed head compatible with AMI orbital welding stations	ø 25 to ø 115 mm	9.9 kg		421 x 222 x 40



Orbital welding (Closed head) - Accessories





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

Gas membrane protection KIT for tubes Ø 40 to 120 mm

- consists of: 9 sets of membranes with washers, 1 gas pipe 6 m, 1 metal cable, 1 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.

✓SATF-40NDHX ✓SATF-65NDHX ✓SATF-115NDHX ✓SATF-40MIH ✓SATF-65MIH



Product Code	Description	Net weight	Customs code	Packaging (in cm)
SKIB-01	Gas protection KIT	1.7 kg	85159 00090	35 x 30 x 9.5

Gas plug protection KIT for tubes Ø 6 to 41 mm:

- consists of: 10 sets of perforated plugs, 1 gas inlet connector, 1 hose Ø 4/6 length 5 metres

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

✓SATF-40NDHX	✓SATF-65NDHX	√SATF-115NDHX	√SATF-40MIH	√SATF-65MIH	√SATF-115MIH
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See page **67** for the electrodes required for its use

Product Code	Description	Net weight	Customs code	Dimensions (in cm)
SSED-16 for ø1.6 SSED-24 for ø 2.4	Electrode holder	0.05 kg	85159 00090	3.5 x 3.5 x 1

Remote electrode holder for ø1.6 mm or ø2.4mm electrodes:

- The lateral adjustment range is between 4 and 7.5 mm
- Allows the welding electrode to be moved with respect to the welding plane (Positioning of off-centre welding plane)
- Example of use: short elbow welding

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

Machine	ømin	ømax	
SATF-65xxx	6 mm	36 mm	
SATF-115xxx	25 mm	89 mm	

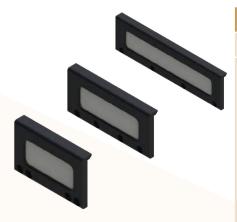
SATF-40NDHX ✓ SATF-65NDHX ✓SATF-115NDHX SATF-40MIH √SATF-65MIH ✓ SATF-115MIH





Orbital welding (Closed head) - Accessories





Viewing windows	Customs code
SATE Viewing windows	8515900090

Fixed and transparent viewing windows

For Machine	Product Code	Net weight	Packaging (plastic)
SATF40-XXX	SATF40-HW10	0.04 kg	6.5 x 4.5 x 1 cm
SATF65-XXX	SATF65-HW10	0.05 kg	9 x 4.5 x 1 cm
SATF115-XXX	SATF115-HW10	0.08 kg	14 x 4.5 x 1 cm

✓SATF-115NDHX ✓ SATF-40NDHX ✓ SATF-65NDHX √SATF-40MIH ✓ SATF-65MIH √SATF-115MIH

> **Clamping jaws Customs code** Set of jaws for SATF 851590090



Stainless steel clamping jaws set for SATF:

For Machine	Product Code	Net weight	Packaging (plas- tic box)
SATF40-xxx	SMN40-xx	Depending on the tube ø	7.5 x 8 x 3 cm
SATF65-xxx	SMN65-xx Depending on the tube ø		11 x 11.5 x 3 cm
SATF115-xxx	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: SMN40-38.1 = Set of jaws for SATF 40, external tube diameter: 38.1 mm

✓SATF-40NDHX	✓SATF-65NDHX	✓SATF-115NDHX	✓SATF-40MIH	✓SATF-65MIH	✓SATF-115MIH



Product Code	Description	Net weight	Customs code	Dimensions (in cm)	
SAGC-121	Closed head support	0.42 kg	85159 00090	17 x 12 x 9	

Screw-on support for closed heads

✓ SATF-40NDHX ✓ SATF-65NDHX ✓SATF-115NDHX ✓ SATF-40MIH ✓ SATF-65MIH √SATF-115MIH

Orbital welding (Closed head) - Accessories





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		Leng	th	Produc	ct Code	Ne weig		Customs code	Dimensions (AxBxC in mm)
WATED.	WITHOUT	5 metr	res	SAFS	-05MX	7 k	κg	85159	40 x 59 x 25
WATER	WIRE	10 met	res	SAFS-10MX		14	kg	00090	40 x 59 x 25
√SATF-40N	DHX √SAT	F-65NDHX	√SATF	-115NDHX	SATF-40N	ЛΙΗ	SA	TF-65MIH	SATF-115MIH

Orbital welding (Closed head) - Accessories on request

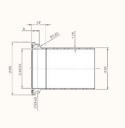


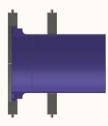


Ferrule – elbow – ferrule configuration (large diameter)

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

/SATF-40NDHX ✓SATF-115NDHX ✓ SATF-65NDHX ✓ SATF-40MIH √SATF-65MIH ✓ SATF-115MIH





Tube - connector configuration

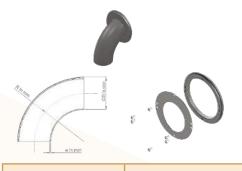
- Tube end: standard jaws
- Connector end: special jaws

✓ SATF-40NDHX √SATF-65NDHX √SATF-115NDHX √SATF-40MIH **✓** SATF-65MIH √SATF-115MIH



Orbital welding (Closed head) **Optional accessories**

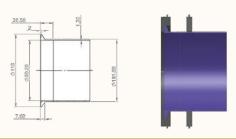




Tube - elbow configuration

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

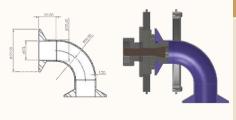
✓SATF-40NDHX	✓SATF-65NDHX	✓SATF-115NDHX	√SATF-40MIH	√SATF-65MIH	√SATF-115MIH
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Tube – ferrule configuration

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

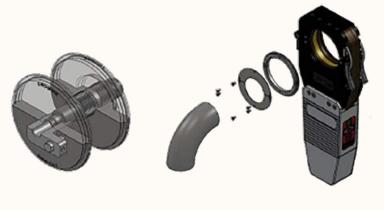
/SATF-40NDHX SATF-115NDHX ✓SATF-40MIH ✓ SATF-65NDHX √SATF-65MIH √SATF-115MIH



Ferrule - elbow - ferrule configuration (small diameter)

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

✓ SATF-40NDHX ✓SATF-65NDHX √SATF-115NDHX √SATF-40MIH ✓ SATF-65MIH ✓ SATF-115MIH





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

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Orbital welding (Closed head) - Consumables



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

This increases the life of the electrodes.

Depending on the tube used, we offer cut electrodes:

Electrodes for SATF-40xx

Customs code 8515900010

Electrode Product Code ø1.6	Electrode Product Code Ø2.4	TubeRange ø in mm	Electrode length in mm
SCE164A	SCE244A	5 to 12	29
SCE164B	SCE244B	12 to 19	25.5
SCE164C	SCE244C	19 to 26	22
SCE164D	SCE244D	26 to 33	18.5
SCE164E	SCE244E	33 to 40	15

✓SATF-40NDHX SATF-65NDHX SATF-115NDHX ✓SATF-40MIH SATF-65MIH SATF-115MIH

Electrodes for SATF-65xx

Customs code 8515900010

Electrode Produ Code Ø1.6			TubeRange ∅ i	n mm		Electrode igth in mm
SCE166A		SCE246A	5 to 12			43
SCE166B		SCE246B	12 to 19			39.5
SCE166C		SCE246C	19 to 26			36
SCE166D		SCE246D	26 to 33		32.5	
SCE166E		SCE246E	33 to 40			29
SCE166F		SCE246F	40 to 47			25.5
SCE166G		SCE246G	47 to 54			22
SCE166H		SCE246H	54 to 61		18.5	
SCE166I		SCE246I	61 to 68			15
SATF-40NDHX /	✓SATF-65NDHX SATF-115NDHX SATF-40MIH ✓SATF-65MIH		-65MIH	SATF-115MIH		

65

66

Orbital welding (Closed head) - Consumables





Electrodes

Customs code 8515900010

Electrode Produc ø1.6	t Code	Electrode Product Code Ø2.4		Tube Range ø in mm			Electrode ngth in mm
SCE1615A	4	S	6CE2415A	25 to 32			59.5
SCE1615B		S	CE2415B	32 to 39			56
SCE1615C	,	S	CE2415C	39 to 46			52.5
SCE1615D		S	CE2415D	46 to 53			49
SCE1615E		5	6CE2415E	53 to 60			45.5
SCE1615F		SCE2415F		60 to 67			42
SCE1615G		S	CE2415G	67 to 74			38.5
SCE1615H		S	CE2415H	74 to 81			35
SCE1615I		9	SCE2415I	81 to 88			31.5
SCE1615J	SCE1615J		SCE2415J	88 to 95			28
SCE1615K	SCE1615K		CE2415K	95 to 102			24.5
SCE1615L	SCE1615L		SCE2415L	102 to 109		21	
SCE1615M	SCE1615M SCE2415M 109 t		109 to 116			17.5	
SATF-40NDHX	SATF-6	5NDHX	✓SATF-115NDHX	SATF-40MIH	SATF-40MIH SATF-6		√SATF-115MIH

Orbital welding (Closed head) - Consumables



(Electrodes when using the **SSED** accessory)





Electrode Prod for SSEI		Electrode Prod. Code ø2.4 for SSED-24			-		
SCE16	66F	SCE246F			25.5 mm	6 to 9 mm	
SCE16	6G	SCE246G			22 mm	9 to 23 mm	
SCE16	6H	SCE246H			18.5 mm	16 to 23 mm	
SCE16	66I	SCE246I			15 mm	23 to 30 mm	
SCE16	-12	SCE24-12		12 mm		30 to 36 mm	
SATF-40NDHX	√SATF-65NDHX	SATF-115NDHX	SATF-40N	SATF-40MIH /SATF-65MIH		SATF-115MIH	

Electrode Prod for SSEI		Electrode Prod. Co for SSED-24		EI	ectrode length	Ø of the tube
SCE16	6A	SCE246A			43 mm	25 to 26 mm
SCE16	6B	SCE246B			39.5 mm	26 to 33 mm
SCE16	6C	SCE246C			36 mm	33 to 40 mm
SCE16	6D	SCE246D			32.5 mm	40 to 47 mm
SCE16	6E	SCE246E			29 mm	47 to 54 mm
SCE16	6F	SCE246F			25.5 mm	54 to 61 mm
SCE16	6G	SCE246G			22 mm	61 to 68 mm
SCE16	6H	SCE246H		18.5 mm		68 to 75 mm
SCE16	SCE166I SCE246I			15 mm		75 to 89 mm
SCE16	-12	SCE24-12		12 mm		82 to 89 mm
SATF-40NDHX	SATF-65NDHX	√SATF-115NDHX	SATF-40N	MIH SATF-65MIH		√SATF-115MIH



Orbital welding (Open head)



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



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 an optimized rotation sweep and positions of feed motor to choose from. High duty cycle (water cooled torch), transport of welding equipment by air (air cooled torch).

QUALITY AND REPEATABILITY

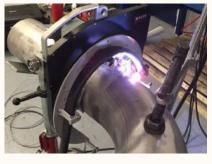
The SATO range is connected to our orbital generators, which permanently control all the welding parameters, guaranteeing repeatable and quality welds.

PORTABILITY

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









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

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





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.

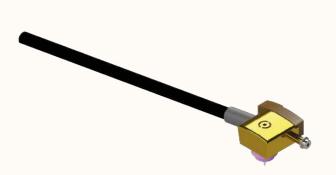
Since the AIR duty cycle is smaller than that for WATER, it is essential not to exceed the recommendations listed below.

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 - 1

INNOVATIVE ORBITAL SOLUTIONS

Air Cooled or Water Cooled



Roller mechanical profile tracking

Constant arc voltage without marking the tube



Compatible With the **SAXX** generators

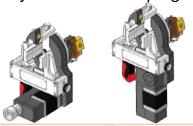


Transport

These heads are delivered in their individual transport case



Straight or **Angled motor** Symmetrical clamping



Axial **Adjustment**

Wheel for axial adjustment of the position of the electrode

Protection

High protection against arcing outside the electrode

Torch angle adjustment

Welding flanges and short T angle



Locked open position

Motorization with encoder

Allows STARTING IN ALL **ANGULAR** electrode positions

Wel	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 "							





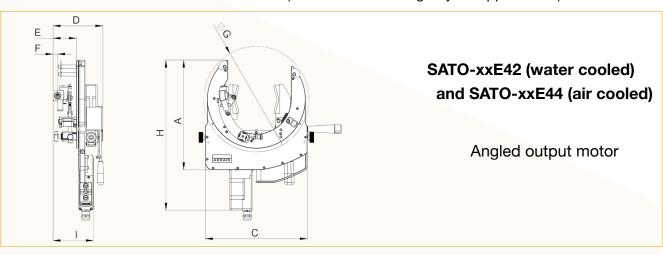
SATO-40 - 80 -115 - 170 -220

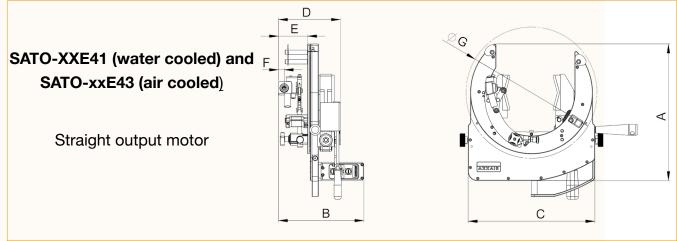


Technical characteristics:

- 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				279	
SATO-115	265	186 to 196	230	133 to 143	57 to 67 13	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

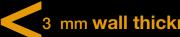






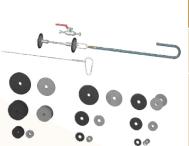
				1	1	1
Motor (Cooling	Product Code	Welding machine for tubes of the following diameters (in mm)	Net weight	Customs code	Dimensions (AxBxC in mm)
		SATO-40E42	ø 10 - ø 40 mm	3.8 kg		169 x 183 x 142
		SATO-80E42	ø 19 - ø 80 mm	4.2 kg		181 x 186 x 160
,	WATER	SATO-115E42	ø 19 - ø 115 mm	6.7 kg	85153 10000	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	AFIN .	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	85153 10000	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
		SATO-80E41	ø 19 - ø 80 mm	4.2 kg		181 x 196 x 160
,	WATER	SATO-115E41	ø 19 - ø 115 mm	6.7 kg	85153 10000	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	SEW.	SATO-40E43	ø 10 - ø 40 mm	3.8 kg		169 x 191 x 142
		SATO-80E43	ø 19 - ø 80 mm	4.2 kg		181 x 196 x 160
	AIR	SATO-115E43	ø 19 - ø 115 mm	6.7 kg	85153 10000	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	Customs code	Packaging (in cm)
SKIF-01	Gas protection KIT	4.5 kg	85159 00090	35 x 30 x 9.5

Gas membrane protection KIT for tubes Ø 40 to 120 mm

- consists of: 9 sets of membranes with washers, 1 gas pipe 6 m,
- 1 metal cable, 1 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	√SATO-80E4x	√SATO-115E4x	√SATO-170E4x	√SATO-220E4x



Product Code	Description	Net weight	Customs code	Packaging (in cm)
SKIB-01	Gas protection KIT	1.7 kg	85159 00090	35 x 30 x 9.5

Gas plug protection KIT for tubes Ø 6 to 41 mm

- Consists of: 10 sets of perforated plugs, 1 gas inlet connector,
- 1 hose Ø 4/6 length 5 metres

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

√SATO-40E4x ✓SATO-80E4x **√**SATO-115E4x **√**SATO-170E4x √SATO-220E4x



Product Code	Description	Net weight	Customs code	Dimensions in mm
SATOB-02	Two axis wire guide	0.05 kg	85159 00090	51 x 90 x 65

SATO Two axis wire guide:

- For use with the SAXX generators

√SATO-40E4x	√SATO-80E4x	√SATO-115E4x	√SATO-170E4x	√SATO-220E4x
V 02 11 0 10 111	V 02 11 0 00= 121	V 02 11 0 1 10 = 121	,	V 02 11 0 ==0= 121



Product Code	Description	Net weight	Customs code	Dimensions (in cm)
SADF2X	Wire drum	12 kg	85159 00090	59.7 x 38.4 x 24

Wire Dispenser for SAXX-200, duct 5 m max:

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

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



5 or 10 metres welding cable extensions



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

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

Cooling		Length	Product Code	Net weight	Customs code	Dimensions (AxBxC in mm)
	WITHOUT	5 metres	SAFS-05MAX	7 kg	85159	40 x 59 x 25
AIR	WIRE	10 metres	SAFS-10MAX	14 kg	00090	40 x 59 x 25
AIN		5 metres	SAFS-05MAXF	7 kg	85159	40 x 59 x 25
	WIRE	10 metres	SAFS-10MAXF	14 kg	00090	40 x 59 x 25
	WITHOUT WIRE	5 metres	SAFS-05MX	7 kg	85159	40 x 59 x 25
WATER		10 metres	SAFS-10MX	14 kg	00090	40 x 59 x 25
WAIER	MIDE	5 metres	SAFS-05MXF	7 kg	85159 00090	40 x 59 x 25
	WIRE	10 metres	SAFS-10MXF	14 kg		40 x 59 x 25
√SATO-	10E4x	√SATO-80E4x	√SATO-115E4x	√SATO-1	70E4x	√SATO-220E4x



Orbital welding (Open head) - Consumables



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

This increases the life of the electrodes.



Product Code	Description	Net weight	Customs code	Plastic box (cm)
SCE16-50	Electrodes	0.02 kg	85159 00010	5.5 x 4.5 x 1

Electrode diameter 1.6 mm, length 50mm

- Box of 10 electrodes

√SATO-40E4x	√SATO-80E4x	√SATO-115E4x	√SATO-170E4x	√SATO-220E4x
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Product Code	Description	Net weight	Code code	Plastic box (cm)
SCE24-50	Electrodes	0.05 kg	85159 00010	5.5 x 4.5 x 1

Electrode diameter 2.4 mm, length 50mm

- Box of 10 electrodes

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



Product Code	Description	Net weight	Customs code	Plastic box (cm)
SKTO-01	Replacement torch	0.3 kg	85159 00090	12 x 17.5 x 4

Replacement kit for open head torch Ø 1.6 mm or Ø 2.4

- Consists of: 4 long nozzles and 2 short nozzles, 4 electrode clamps, 20 electrodes Ø 1.6 and 20 Ø 2.4 electrodes, 2 Teflon rings, 1 short cap type 9/20 and 1 screwdriver FACOM

✓SATO-40E4x ✓SATO-80E4x ✓SATO-115E4x ✓SATO-170E4x ✓SATO-
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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!













Wire holder 1 kg



Water Cooled



Tilting head

Water cooled with tilting wire



Mandrel

Concentric tightening from the inside of the tube

system



Compatible With the **SAXX** generators



Flexibility

Head and wire adjustment trolley



Positioning stops

Adjustable stops for better tube sheet stability



Electric motor with wire feed



Welding range

SATP-80X

ø 10 - ø 80 mm 0.4 - 3 "



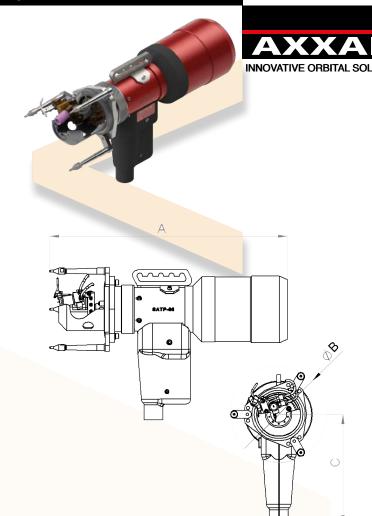


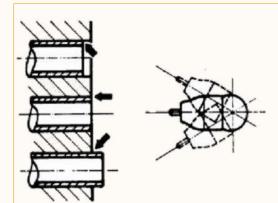
SATP-80X

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)
- Wire speed from 0 to 1.5 m / min
- 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	Customs code	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	85153 10000	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

Customs code 8515900090

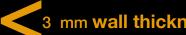
SATP Centring mandrels:

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 mandrels (continued)

Customs code 8515900090

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

Customs code 8515900090

Spindles for SATP mandrel:



Product Code	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.



Product Code	Description	Net weight	Customs code	Plastic box (cm)
SCE246B	Electrodes	0.05 kg	85159 00010	5.5 x 4.5 x 1

Electrodes ø 2.4 mm, length 39.5mm for SATP:

- Box of 10 electrodes

✓SATP-80X



Orbital welding (welding generators)



Our new range of AXXAIR welding generators has been designed to facilitate the use and programming of your equipment.

Intuitively, you will have access to sophisticated functions allowing you to make the most demanding welds with ease.

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

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



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

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

AXXAIR welding heads and other brands.

FLEXIBILITY, PRODUCTIVITY

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

QUALITY AND REPEATABILITY

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

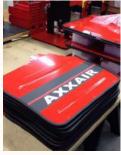
PORTABILITY

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









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

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





and tachometers.

Fully-assured gas management

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



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

Acquisition and documentation

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

Ppm measuring device

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



Air Cooling or Water cooling





Axis for added metal

Possibility of using Step mode

Cooler: removable without tools

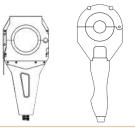
Cooling capacity 700 W, min flow safety system



INNOVATIVE ORBITAL SOLUTIONS

Compatible with closed welding heads:

AMI, Polysoude, ESAB, Orbitec and Orbitalum



Interface 5.7 colour touch screen + WiFI

13 languages, possibility of remote control by smartphone or tablet



Integral printer:

Printing program and actual parameters

USB on front panel

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







SAXX-200 AXXAIR welding generator options



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

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

Second gas line

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

- Gas savings
- Welding process safety



WIFI

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

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



Wire feed

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

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



WATER cooler

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

Increasing the duty cycle



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

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

Integral printer:

- 32 characters / line
- Print program and actual parameters







Intelligence

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

Auxiliary connector:

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

Wi-fi: (Option)

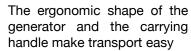
Remote control of the screen on smartphone or tablet via application, range: 20 to 30 m

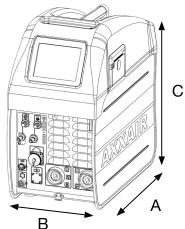
Cooling connector:

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

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







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





Gas management completely assured

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



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

Water cooling

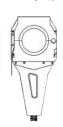




INNOVATIVE ORBITAL SOLUTIONS

Compatible with closed welding heads:

AMI, Polysoude, ESAB, Orbitec and Orbitalum





Interface 5.7 colour touch screen + WiFI (optional) 13 languages,

possibility of remote control by smartphone or tablet





Integral printer:

Printina program and real parameters

ppm measuring device

Capable of managing the thresholds by sending an electrical impulse to the station to to start the welding



Axis for added metal

Possibility of using Step mode

Acquisition and documentation

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

Remove control display 4 m long cable

USB front panel 200 programmes per

USB stick (multiple sticks can be used) Remote update possible









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 assistance
- 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:

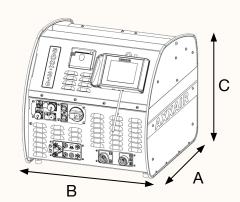
- Possibility of triggering the welding start via an oxygen meter (dry contact).

Cooling connector:

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

Wi-fi: (Option)

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



	Product Code	Description	Net weight	Code code	Dimensions A x B x C (mm)
KEW	SAXX-210	Orbital station 210 A., with double gas lines and wire axis	44 kg	85153 10000	562 x 620 x 545
Option	SWIFI	Wifi antenna for SAXX-210 for remote control	-	85159 00090	-





Product Code	Description	Net weight	Customs code	Dimensions (in cm)
SACG-X200	Trolley	22 kg	81515 900090	117 x 51 x 57

Trolley for SAXX-200 generator:

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

√SAXX-200

SAXX-210



Product Code	Description	Net weight	Customs code	Dimensions (in cm)
SACG-300	Trolley	55 kg	81515 900090	83 x 56 x 118

Trolley for SAXX-210 generator:

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

SAXX-200

√SAXX-210



Product Code	Description	Net weight	Customs code	Dimensions (in cm)
SPPM-10	PPM reader	2 kg	81515 900090	12 x 6 x 15

PPM reader compatible with SAXX generators:

- 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

√SAXX-200

√SAXX-210



Product Code	Description	Net weight	Customs code	Dimensions (in cm)
SAFS-G01	Gas splitter pipe	0.2 kg	81515 900090	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

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SAXX accessories



INNOVATIVE ORBITAL SOLUTIONS



Product Code	Description	Net weight	Customs code	Dimensions
SAFS- ADAMI1	Adapter kit	1.2 kg	85159 00090	L < 40 cm

Adapter kit for connecting the following heads to SAXX generators:

- AMI Models 8 and 9
- SATF-xxMI and SATF-xxMIH

√SAXX-200

√SAXX-210



Product Code	Description	Net weight	Customs code	Dimensions
SAFS- ADORBI1	Adapter kit	1.2 kg	85159 00090	L < 50 cm

Adapter kit for connecting the following heads to SAXX generators:

- Orbitalum ORBITALWELD models

(ORBIWELD38S, ORBIWELD76S and ORBIWELD115S)

√SAXX-200

√SAXX-210



Product Code	Description	Net weight	Customs code	Dimensions
SAFS-ADPO- LY1	Adapter kit	0.9 kg	85159 00090	L < 50 cm

Adapter kit for connecting the following heads to SAXX generators:

- 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	Customs code	Dimensions
SAFS- ADORBITEC	Adapter kit	0.3 kg	85159 00090	L < 50 cm

Adapter kit for connecting the following heads to SAXX generators:

- Orbitec models: OSW40, OSW80 and OSW170

√SAXX-200

√SAXX-210



Product Code	Description	Net weight	Customs code	Dimensions
SAFS- ADESAB	Adapter kit	0.5 kg	85159 00090	L < 50 cm

Adapter kit for connecting the following heads to SAXX generators:

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

√SAXX-200

√SAXX-210



SAXX accessories



Product Code	Description	Net weight	Customs Code	Dimensions (in cm)
SAFS- AD01	Adaptor	0.411 kg	85159 00090	I: < 35 cm

Adaptor for new generations of welding heads:

- SATF-xxNDX
- SATF-xxNDHX
- SATO-xxE41 SATO-xxE42 SATO-xxE43 SATO-xxE44 on welding power sources SASL

√SAXX-200

√SAXX-210



Adaptor for previous generation of welding heads:

- SATF-xxND
- SATO-xxE01 et SATO-xxE02 on new power sources SAXX

√SAXX-200

√SAXX-210



Product Code	Description	Net weight	Customs code	Packaging (in cm)
SAMD-NL	Pressure regulator	1.1kg	81515 900090	16 x 14.5 x 17

Pressure regulator 30 I / min compatible with:

- Finland, Netherlands, Sweden, Denmark

√SAXX-200

√SAXX-210



Product Code	Description	Net weight	Customs code	Packaging (in cm)
SAMD-FR	Pressure regulator	1.1kg	81515 900090	16 x 14.5 x 17

Pressure regulator 30 I / min compatible with:

- Algeria, Angola, France, Greece, Syria, Tunisia, Sudan, Lebanon, Morocco, Portugal, Gabon, Ivory Coast, Senegal, Chad, Mauritania, Congo, Guinea, Mali, Belgium

√SAXX-200

√SAXX-210





SAXX accessories





Product Code	Description	Net weight	Customs code	Packaging (in cm)
SAMD-AL	Pressure regulator	1.1kg	81515 900090	16 x 14.5 x 17

Pressure regulator 30 I / min compatible with:

- Germany, Austria, Bosnia Herzegovina, Croatia, Hungary, Israel, Switzerland, Macedonia, Montenegro, Poland, Serbia, Slovenia, Korea, Czech Republic

√SAXX-200 **√**SAXX-210



Product Code	Description	Net weight	Customs code	Packaging (in cm)
SAMD-UK	Pressure regulator	1.1kg	81515 900090	16 x 14.5 x 17

Pressure regulator 30 I/min compatible with:

- South Africa, Saudi Arabia, Brunei, Egypt, United Arab Emirates, Hong Kong, India, Singapore, Yemen, Indonesia, Iraq, Ireland, Jordan, Kuwait, Liberia, Libya. Sri Lanka, Malaysia, Malta, New Zealand, Nigeria, Pakistan, Peru, United Kingdom, Vietnam

√SAXX-200 **√**SAXX-210



Product Code	Description	Net weight	Customs code	Dimensions (in cm)
SATMX-E	TIG Manual torch	2.1kg	81515 900090	22 x 22 x 22

TIG Manual torch water cooled:

- Allows manual tacking and welding with the SAXX stations

✓ SAXX-200 (WATER cooled)

√SAXX-210



Product Code	Description	Net weight	Customs code	Dimensions (in cm)
SADF2X	Wire dispenser	12 kg	85159 00090	59.7 x 38.4 x 24

Wire Dispenser for SAXX, cable sheath 5 m max:

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

√SAXX-200 **√**SAXX-210





SAXX consumables





Product Code	Description	Net weight	Customs code	Packaging (in cm)
SACW-C006	Cooling liquid	3.3kg	38200 00090	15 x 15 x 27
Cooling liquid (3I container)				

√SAXX-200 **√**SAXX-210



Product Code	Description	Net weight	Customs code	Packaging (in cm)
SIMP-02	Rolls printer	0.7kg	85159 00090	29 x 9.5 x 5

Rolls for integrated printer (set of 10)

√SAXX-200 **√**SAXX-210



Product Code	Description	Net weight	Customs code	Dimensions (in cm)
SUSBX200	USB stick	0.02kg	85159 00090	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



Product Code	Description	Net weight	Customs code	Dimensions (in cm)
SUSBX210	USB stick	0.02kg	85159 00090	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



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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Join experience



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