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SATFX-52 / SATFX-76 / SATFX-115



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Pour assurer un travail en sécurité, il est impératif de lire le manuel d'utilisation en entier avant la première utilisation. Le présent manuel est à lire et à conserver par l'opérateur près du poste de travail. Document non contractuel.

To ensure security at work, it is essential to read the entire user manual before the first usage. This manual is meant to be read and kept by the user next to his workstation. Non-contractual document.

Um für eine Arbeit in Sicherheit zu sorgen, ist es unbedingt erforderlich, die Gebrauchsanleitung vor der ersten Verwendung vollständig zu lesen. Die vorliegende Anleitung ist vom Bediener zu lesen und in der Nähe des Arbeitsplatzes aufzubewahren. Dokument unverbindlich.

Para garantizar un trabajo seguro deberá leer el manual de instrucciones en su totalidad antes de su primer empleo. El operador deberá leer y guardar este manual cerca del puesto de trabajo. Documento no contractual.

Per garantire un lavoro in completa sicurezza, leggere obbligatoriamente tutto il manuale d'istruzioni prima di usarlo la prima volta. L'operatore deve leggere e conservare questo manuale vicino alla postazione di lavoro. Documento non contrattuale.

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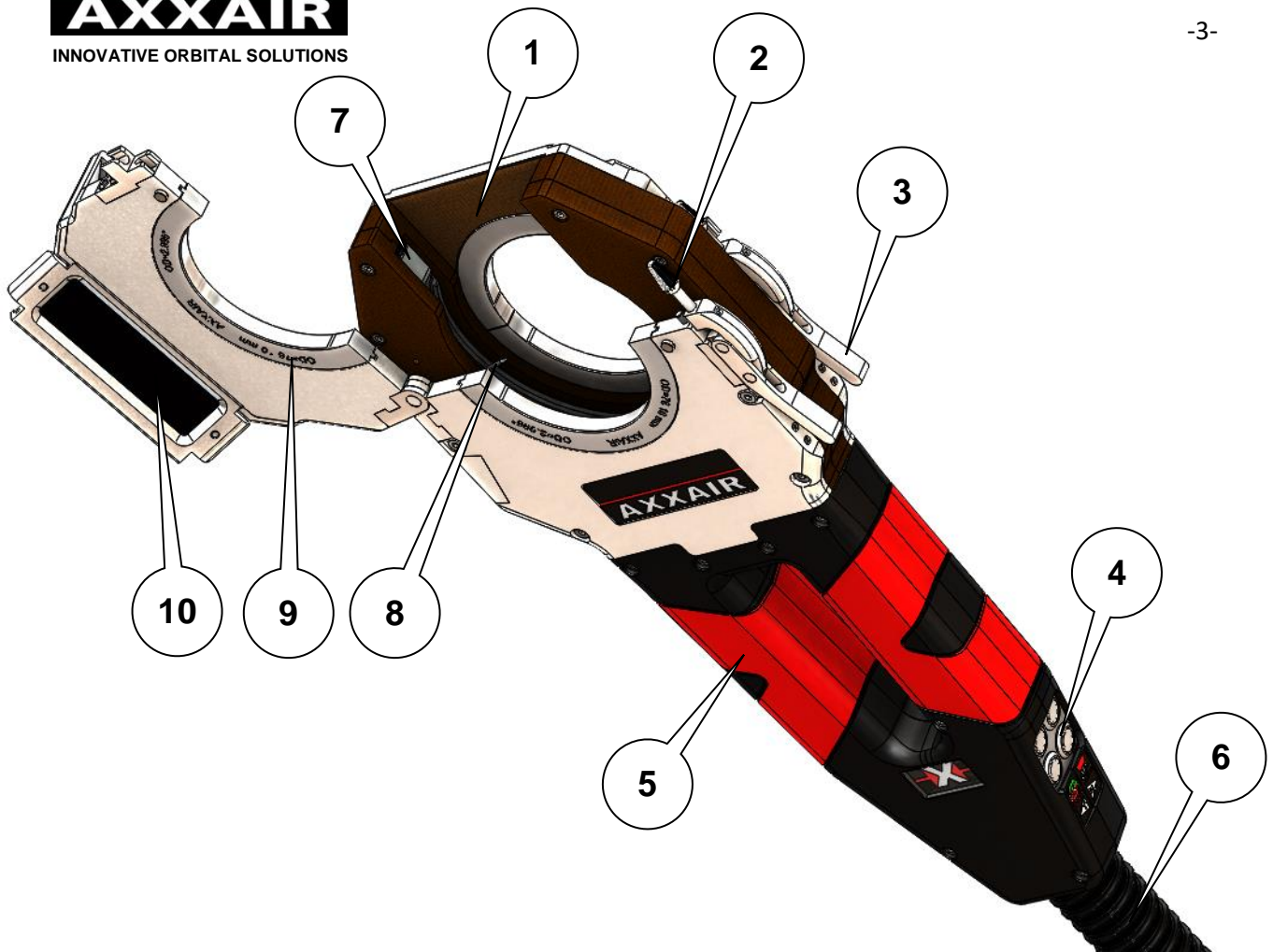
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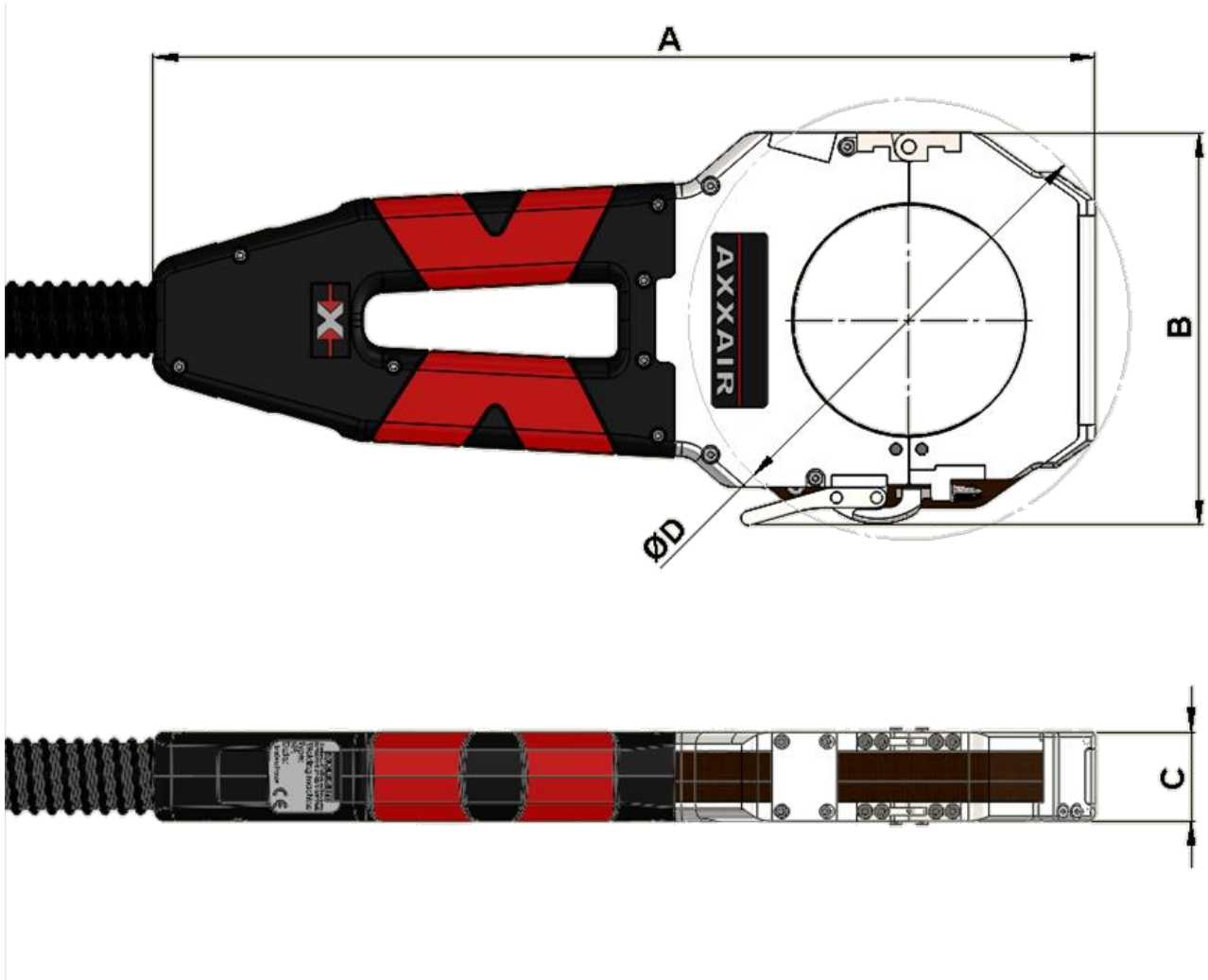


	FRANÇAIS	ENGLISH	DEUTSCH	ESPAÑOL	ITALIANO	PORTUGUES
1	Volet	Frame	Klappe	Aleta	Ganascia	Suporte da mandíbula
2	Vis de réglage serrage	Clamping adjustment screw	Feststellschraube der Öffnung	Tornillo ajuste apriete	Vita di regolazione serraggio	Parafuso de ajuste de fechamento
3	Levier d'ouverture	Release lever	Öffnungshebel	Palanca de apertura	Leva di apertura	Trava da mandíbula
4	Clavier	Keypad	Tastatur	Teclado	Tastiera	Teclado
5	Poignée machine	Machine handle	Griff Maschine	Empuñadura de máquina	Impugnatura macchina	Empunhadura da máquina
6	Faisceau de 8 mètres	8-meter hose	Strahl 8 m	Cable de 8 metros	Fascio di 8 metri	Mangueira de 8 metros
7	Rotor	Rotor	Rotor	Rotor	Rotore	Rotor
8	Electrode	Electrode	Elektrode	Electrodo	Elettrodo	Eletrodo
9	Mors de serrage	Clamping collet	Spannbacke	Mordaza de apriete	Morsa di serraggio	Mandíbula
10	Fenêtre de visualisation	Viewing window	Ansichtfenster	Ventanilla de inspección	Finestra di visualizzazione	Janela de visualização



	A mm	B mm	C mm	D mm	Ø min	Ø max		
SATFX-52	375	142	37,6	Ø160	6 mm	52 mm	8,6 kg	< 70 dB
SATFX-76	399	166	37,6	Ø187	6 mm	77 mm	8,9 kg	< 70 dB
SATFX-115	439	206	37,6	Ø242	12 mm	115 mm	9,4 kg	< 70 dB

Le poids des machines inclut le faisceau. The weight of the machines including the beam.



USER MANUAL

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1. Security Instructions :

1.1. PICTOGRAMS, SYMBOLS, MEANINGS

You'll find below the various significations and explanations on the symbolic used in this manual.

In this manual, warning messages and symbols are used to alert you about the danger of injuries or material damage during the use of machinery. It is essential to read carefully and to keep in mind these warnings in order to work safely.



DANGER

DIRECT DANGER
Non observance could result in death or critical injury.
Observe and apply carefully usage recommendations



WARNING

POSSIBLE DANGER
Non-observance could result in serious injury.
Observe and apply carefully usage recommendations



DANGER of electrical shock
Observe and apply carefully usage recommendations



DANGER of crushing with serious injury.
Observe and apply carefully usage recommendations



Prohibition on people with medical implants
Observe and apply carefully usage recommendations



DANGER of misuse
Please read the relevant manual



Wear a welding protective shield or welding protective glasses is REQUIRED



Wear of security gloves is REQUIRED



Wear of security mask is REQUIRED



Wear of security boots is REQUIRED



PROHIBITION to dump in garbage can.
Recycling required



1.2. Requirements for the person responsible

In the workshop / outside / onsite

The head of the company is responsible for the security in the machine's workplace and must only allow qualified technicians to use the machine in the danger area.

About staff's safety

The instructions described below must be observed and applied for the operator's safety. The use of personal protective equipment (PPE) is mandatory.

1.3. Intended use of the machine

These machines are intended for closed-chamber weld head orbital TIG welding. This range of machines welds end-to-end pipe, elbow joints, pipe ferrules, T-joints, SMS connectors and other in a fully sealed inert environment.

WARNING, do not modify any parts of the machine!

The user will be the only person responsible for damages caused by improper use. An improper use of the machine will void the warranty.

1.4. Safety instructions

It is strictly forbidden to use the machine outside during a stormy or a rainy weather!

The machine must only be used by qualified technicians who have been trained to use the equipment.

This machine should be used only for the job for which it was designed.

Keep your working area tidy. Untidiness increases the risks of accidents.

Maintain tools with care. Keep the machine clean for a better and safer performance.

Always work in a well-lit place.

When not in use, tools should be stored in a dry, secure place. The machine should be stored in a dry and properly ventilated place.

Stay alert. Watch what you are doing. Use common sense. Do not operate tool when you are tired.

Use AXXAIR accessories only.

Repair by experts only. The machine is in accordance with the relevant safety rules. Damaged parts should be properly repaired or replaced by an authorised after-service centre. **DO NOT USE MACHINE IF DAMAGED**

WARNING! In order to reduce all risks of possible body harm when using electric equipment. PLEASE READ THESE INSTRUCTIONS THOROUGHLY BEFORE USING THE MACHINES. Keep these safety instructions.

When the machine must be stopped for a long period (end of a working day or for holidays), it is better to disconnect the mains power.

Do not expose the electric tools to the rain. Do not use them in a humid or wet environment or in the presence of inflammable gases or liquids. Protect yourself against electric shocks. Avoid being in touch with areas related to the ground.



Dress properly with clothes adapted for the job. Do not wear loose clothing or jewellery. They could be caught up in moving parts.

Secure the machine on a workbench or into the ground in order to work safely.

Check if your machine is damaged. Before using the machine ALWAYS check that no parts have been damaged in order to be sure that it can perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation.











Use appropriate means for handling the machine.

IMPORTANT:











The recommendations are about personal protection equipment. They are only applicable for the described machines used in this manual. Any requirements of additional equipment resulting from outside ambient conditions or the closeness of other machines are not taken into account.

These recommendations do not resign in any way the agency responsible for its statutory obligations regarding health and regarding safety at work to his employees.

Arc welding can be dangerous for the operator as well as for those around him, so take all necessary precautions before using the welding machine. Observe and respect the safety rules imposed by your employer, which must be based on the texts in force and on the manufacturer's recommendations.

	<p>Hot parts = Risk of skin burns Do not touch the hot parts of the machine (the upper shutters, the viewing window, as well as the viewing glass) with bare hands. Wear protective gloves when opening and closing the machine between two welds.</p>	
	<p>Electric shock = Danger of death Do not touch the conductive parts. Do not touch the electrodes with bare hands or wet protective gloves. Install and ground welding equipment in accordance with current standards. Insulate yourself from the ground and from the workpiece. Make sure that the adopted working position is safe for yourself and for those around you.</p>	
 <p>WARNING</p>	<p>Smoke and gas = can be harmful to health Keep your face as far away as possible from welding smokes. Ventilate and suck the welding smokes with a suitable device that ensures a healthy working environment. Attention, risk of anoxia when opening the machine after a welding cycle.</p>	
 <p>DANGER</p>	<p>Arc light radiation = can damage eyes and burn skin. Protect eyes and skin. Use a welding shield and wear protective clothing and gloves. Protect surrounding people from these effects with protective curtains. Only a trained operator can use the machine.</p>	
 <p>DANGER</p>	<p>If the power cable is damaged, a direct contact could cause an electric discharge. Fatal electric shock! Do not abuse the cable. Never carry the machine by the cable or yank it to disconnect it. Keep the cable away from heat, oil and sharp objects.</p>	



 DANGER	<p>Damaged insulation Fatal electric shock Do not drop or hit the machine Hold the machine exclusively from the isolated sides of it.</p>	
 DANGER	<p>Damaged power outlet Fatal electric shock Do not abruptly unplug the power outlet. Store properly the power outlet when it is unplugged.</p>	
 WARNING	<p>Falling of heavy objects (tube). Various injuries (crushing) or material damages. Do not manipulate heavy objects without protection. Wear safety boots.</p>	
 DANGER	<p>DANGER of crushing with serious injuries. Various injuries (crushing). Do not approach your hands from tube clamping system without shutting off system power.</p>	
 DANGER	<p>Elements/security parts are damage or faulty. Default of security elements could provoke serious injuries! Do not use the machine if any part of it is damaged. Before using the machine again, carefully verify if the moving parts work correctly.</p>	
 DANGER	<p>Loose-fitting clothes, jewellery or long hair can be caught in moving parts. Serious injury. Do not wear inappropriate clothes or jewellery. Keep your hair, clothing and gloves away from moving parts.</p>	



CAUTION: a set of components integrated into the machine emits high frequency waves in order to create the electric arc

It is strictly forbidden to use the machine if a person with one or more medical implants is nearby!



1.5. Environmental Protection

AXXAIR's packaging is 100% recyclable.

To protect the environment, eliminate used packaging and grease according to the requirements.

Mechanical components and electrical tools which are out of order have large amounts of precious raw materials that could be also sent to recycling.

For European countries only, do not throw electrical devices in household waste! According to the European directive 2002/96/CE concerning the waste of electric or electronic equipment (DEEE), and its transposition in the national legislation, the electric devices must be collected separately and subjected to an environment-friendly recycling.



2. Presentation :

These machines are controlled by an AXXAIR welding generator of type SAXX. They cannot be controlled by a SASL type generator.

	SATFX-52	SATFX-76	SATFX-115
Maximum welding current rating:		150 A	
Maximum welding current for a 100% arc time factor:		100 A	
Electrode diameter:		1.6 mm ou 2.4 mm	
Cooling unit:	An external cooling AXXAIR unit is required when welding using these weld heads.		
Operating temperature:	Ambient temperature must be within the range of 0 °C to +40 °C		

The CE marking on the machine refers to the Machinery Directive 2006/42/EC. This marking is valid only if this machine is coupled with a generator of the AXXAIR type SAXX range.



3. Accessories

Accessories not included as standard.



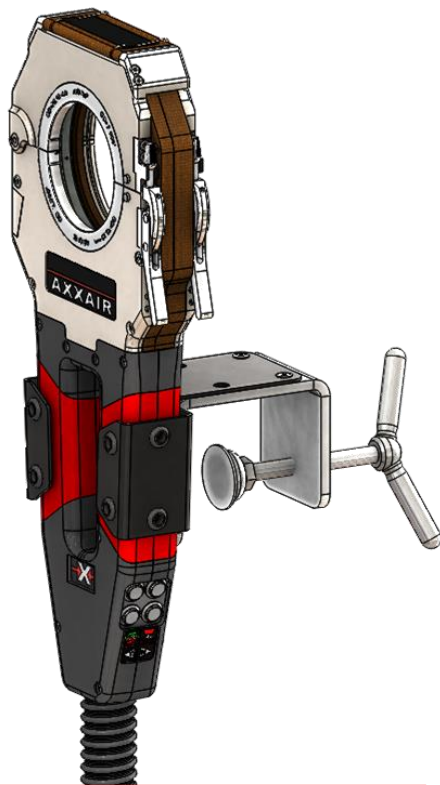
The use of accessories not suitable for AXXAIR machines presents a danger
Various physical injuries or damage to property.

WARNING

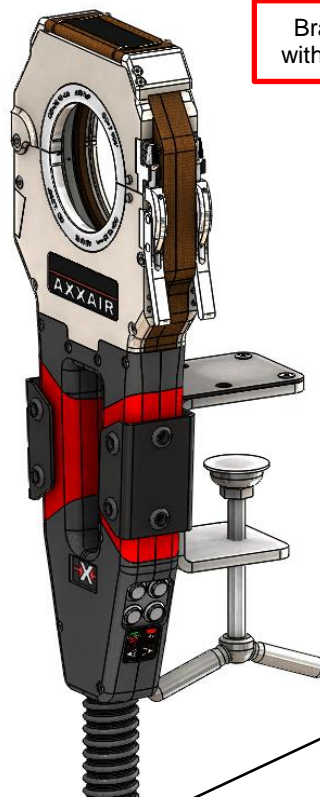
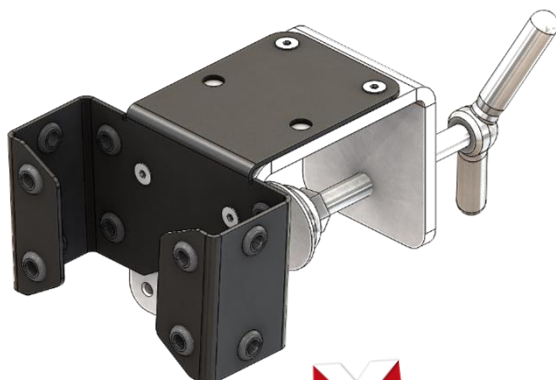
Use only accessories designed and adapted for AXXAIR machines

- Machine support:

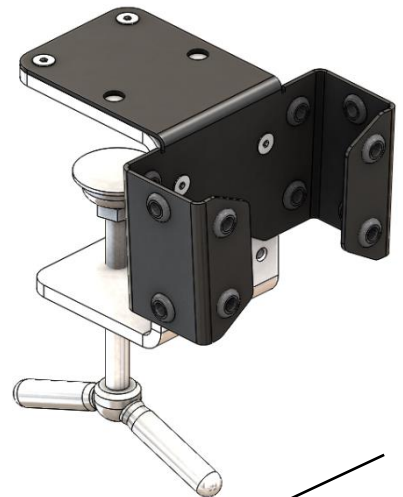
A machine support is available as an accessory under the reference **SATFX-SUP**.
This support allows the installation of the machine on all possible types of support (workbench, barrier, etc...).



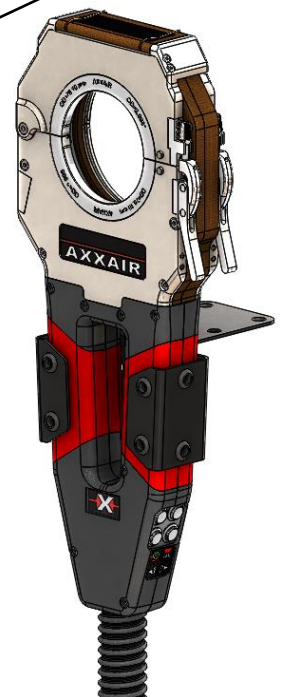
Bracket configuration for mounting with clamp type vice on a barrier



Bracket configuration for mounting with clamp type vice on a workbench



Bracket configuration for screw mounting on a workbench



- Clamping collets

SATFX type machines can be used with fine clamping collets (thickness 8 mm stainless steel) adapted to the diameter of the tubes to be welded. A set of fine clamping collets consists of **four half-shells** machined to the outside diameter of the tube.

A multitude of diameters are offered as standard.

REFERENCES:

SATFX-52 => SMN052-**XX**
 SATFX-76 => SMN076-**XX**
 SATFX115 => SMN115-**XX**

To order your collets, you must replace the **XX** with the outside diameter of the tube in millimeters (within the capacity limit of the machines). *Example:*

1 set of collets for a SATFX-52 machine, to hold a Ø38.10mm tube:

REFERENCE = **SMN052-38.1**



Two wide collets (width 22mm aluminium are also offered as a standard for the SATFX range of machines. One set of wide collets consists of **two half shells** machined to the external diameter of the tube.

Example :

1 set of collets for a SATFX-52 machine, to hold a Ø38.10mm tube:

REFERENCE = **SML052-38.1**



REFERENCES:

SATFX-52 => SML052-**XX**
 SATFX-76 => SML076-**XX**
 SATFX115 => SML115-**XX**

- Clamping collets adaptation spacers:

AXXAIR offers, as an accessory, a set of spacers (thickness 8 mm stainless steel) which makes it possible to use the collets of a lower capacity machine. A set of spacers consists of **four half-shells** machined to the outside shape of the collets concerned.

SATFX-76 => **SMN076-ET40** (adaptation of SATF-40NDHX collets)
 SATFX-76 => **SMN076-ET52** (adaptation of SATFX-52 collets)
 SATFX-115 => **SMN115-ET40** (adaptation of SATF-40NDHX collets)
 SATFX-115 => **SMN115-ET52** (adaptation of SATFX-52 collets)
 SATFX-115 => **SMN115-ET65** (adaptation of SATF-65NDHX collets)
 SATFX-115 => **SMN115-ET76** (adaptation of SATFX-76 collets)



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



- Electrodes

AXXAIR offers pre-cut electrodes as standard. This makes it possible to cover the entire clamping range of the machine without damaging the rotation system. The electrode must be chosen according to the outside diameter of the tube to be welded.

Electrodes for SATFX-52			
Ø of the tube	Electrode reference Ø1.6	Electrode reference Ø2.4	Electrode length (mm)
06 – 11,5 mm	SCE16-48	SCE24-48	48.0
11,5 – 18,5 mm	SCE16-44.5	SCE24-44.5	44.5
18,5 – 25,5 mm	SCE16-41	SCE24-41	41.0
25,5 – 32,5 mm	SCE16-37.5	SCE24-37.5	37.5
32,5 – 39,5 mm	SCE16-34	SCE24-34	34.0
39,5 – 46,5 mm	SCE16-30.5	SCE24-30.5	30.5
46,5 – 52 mm	SCE16-27	SCE24-27	27.0

Electrodes for SATFX-76			
Ø of the tube	Electrode reference Ø1.6	Electrode reference Ø2.4	Electrode length (mm)
06 – 7,5 mm	SCE16-62	SCE24-62	62.0
7,5 – 14,5 mm	SCE16-58.5	SCE24-58.5	58.5
14,5 – 21,5 mm	SCE16-55	SCE24-55	55.0
21,5 – 28,5 mm	SCE16-51.5	SCE24-51.5	51.5
28,5 – 35,5 mm	SCE16-48	SCE24-48	48.0
35,5 – 42,5 mm	SCE16-44.5	SCE24-44.5	44.5
42,5 – 49,5 mm	SCE16-41	SCE24-41	41.0
49,5 – 56,5 mm	SCE16-37.5	SCE24-37.5	37.5
56,5 – 63,5 mm	SCE16-34	SCE24-34	34.0
63,5 – 70,5 mm	SCE16-30.5	SCE24-30.5	30.5
70,5 – 77 mm	SCE16-27	SCE24-27	27.0



Electrodes for SATFX-115			
Ø of the tube	Electrode reference Ø1.6	Electrode reference Ø2.4	Electrode length (mm)
12 – 19,5 mm	SCE16-76	SCE24-76	76.0
19,5 – 26,5 mm	SCE16-72.5	SCE24-72.5	72.5
26,5 – 33,5 mm	SCE16-69	SCE24-69	69.0
33,5 – 40,5 mm	SCE16-65.5	SCE24-65.5	65.5
40,5 – 47,5 mm	SCE16-62	SCE24-62	62.0
47,5 – 54,5 mm	SCE16-58.5	SCE24-58.5	58.5
54,5 – 61,5 mm	SCE16-55	SCE24-55	55.0
61,5 – 68,5 mm	SCE16-51.5	SCE24-51.5	51.5
68,5 – 75,5 mm	SCE16-48	SCE24-48	48.0
75,5 – 82,5 mm	SCE16-44.5	SCE24-44.5	44.5
82,5 – 89,5 mm	SCE16-41	SCE24-41	41.0
89,5 – 96,5 mm	SCE16-37.5	SCE24-37.5	37.5
96,5 – 103,5 mm	SCE16-34	SCE24-34	34.0
103,5 – 110,5 mm	SCE16-30.5	SCE24-30.5	30.5
110,5 – 115 mm	SCE16-27	SCE24-27	27.0



- Offset electrode support:

SATFX machines can be used with an electrode offset or tilt accessory (SSEDX or SSEIX for Ø2.4mm or 1.6mm electrodes). The SSEDX accessory allows a lateral displacement of **2 to 6.5mm** from the original position which allows for the welding of short elbows and other things.

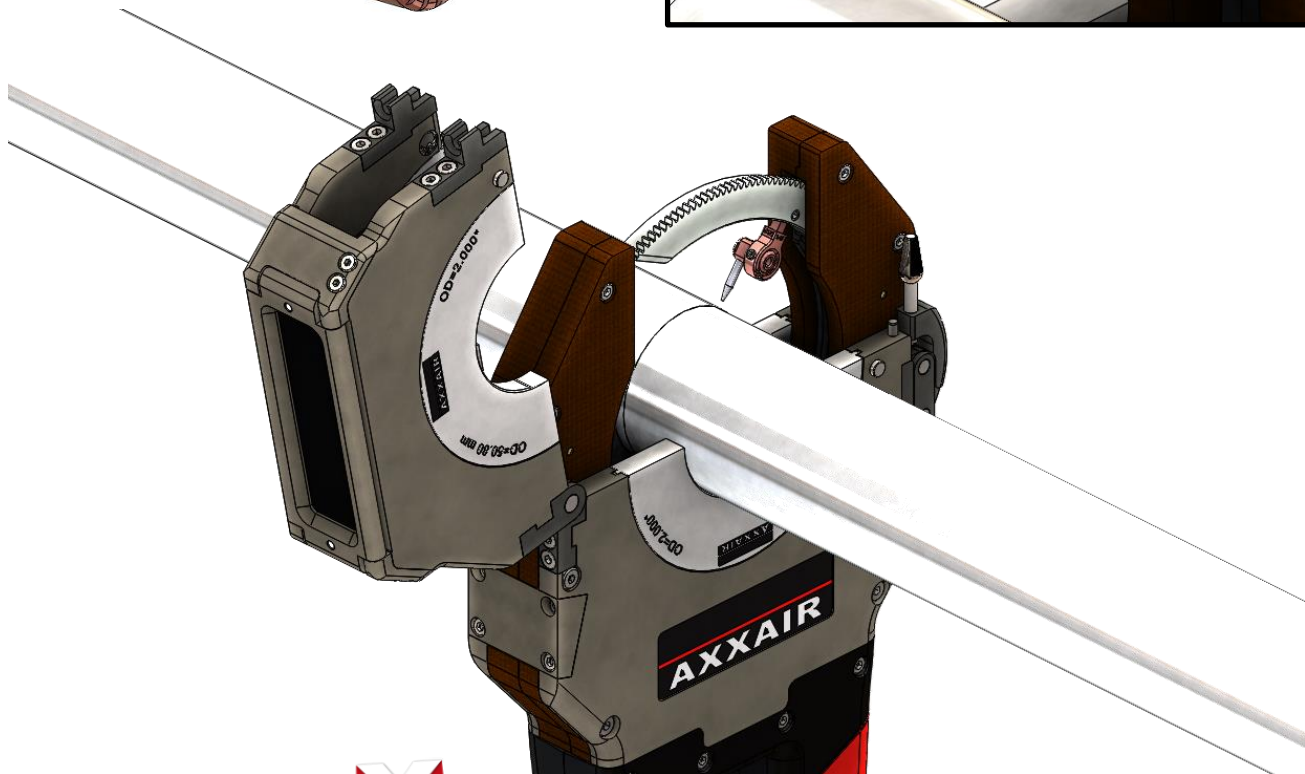
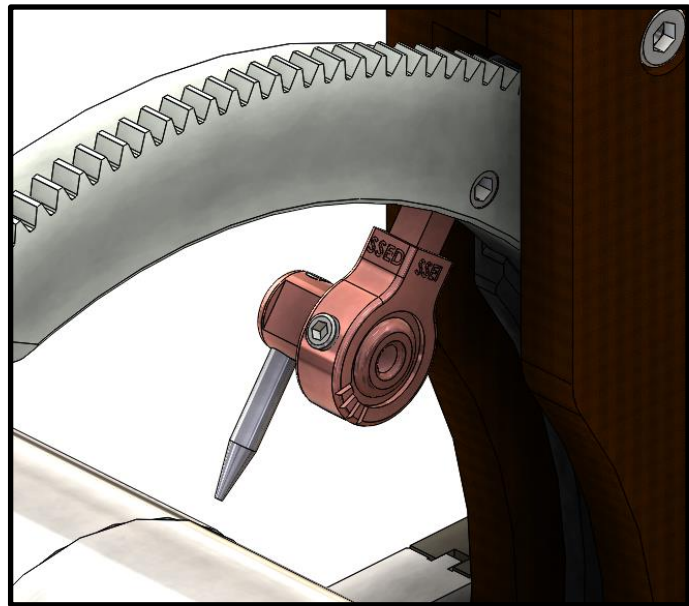
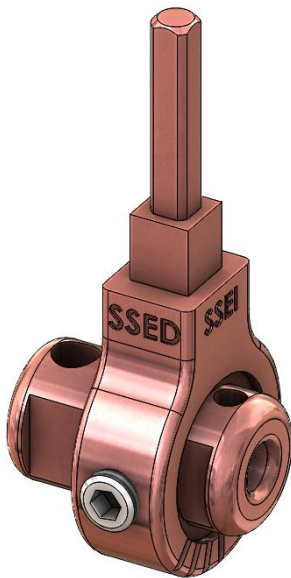
The SSEIX accessory allows the electrode to be tilted from **0 ° to 45°**, which makes it possible to produce angle welds (flange welds or other accessories).

WARNING, the use of these accessories reduces the range of use of the machine.

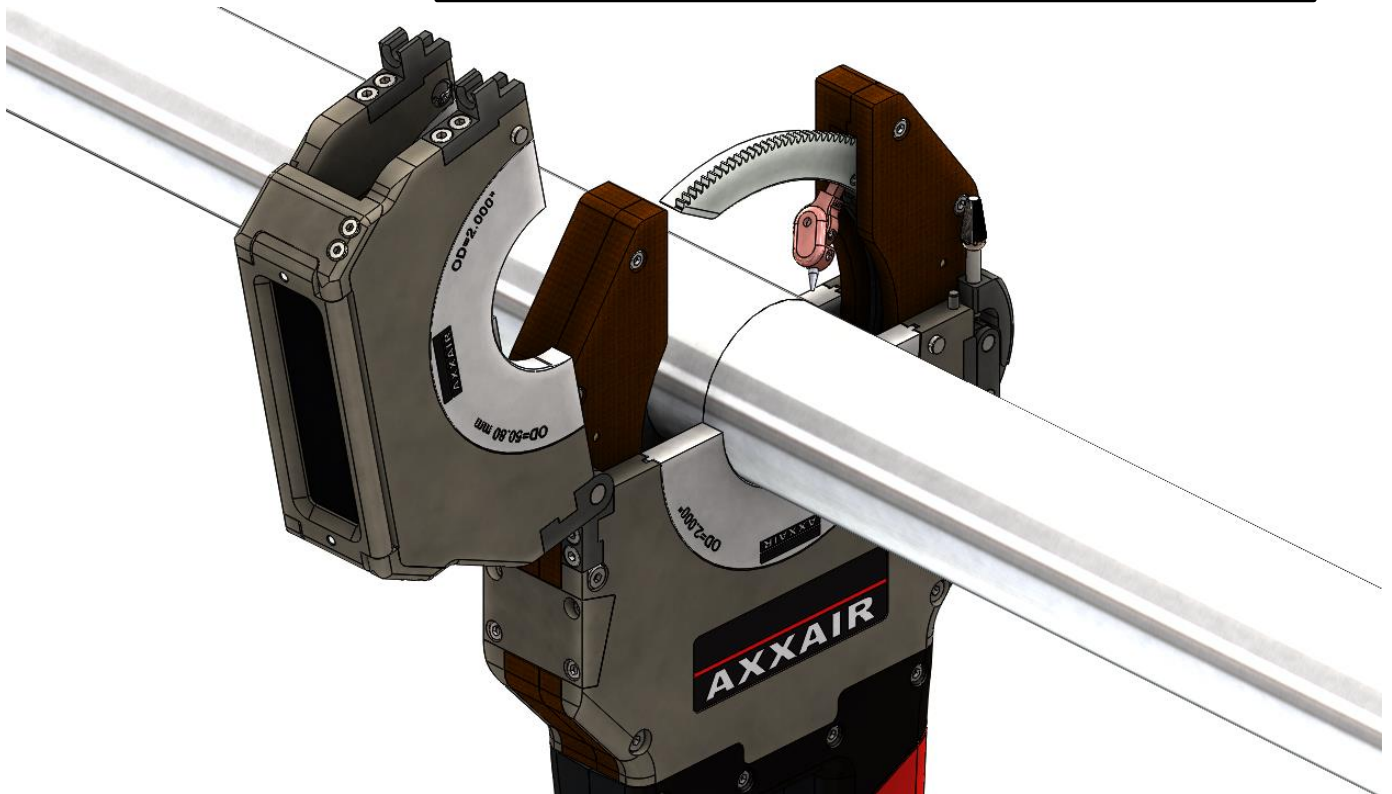
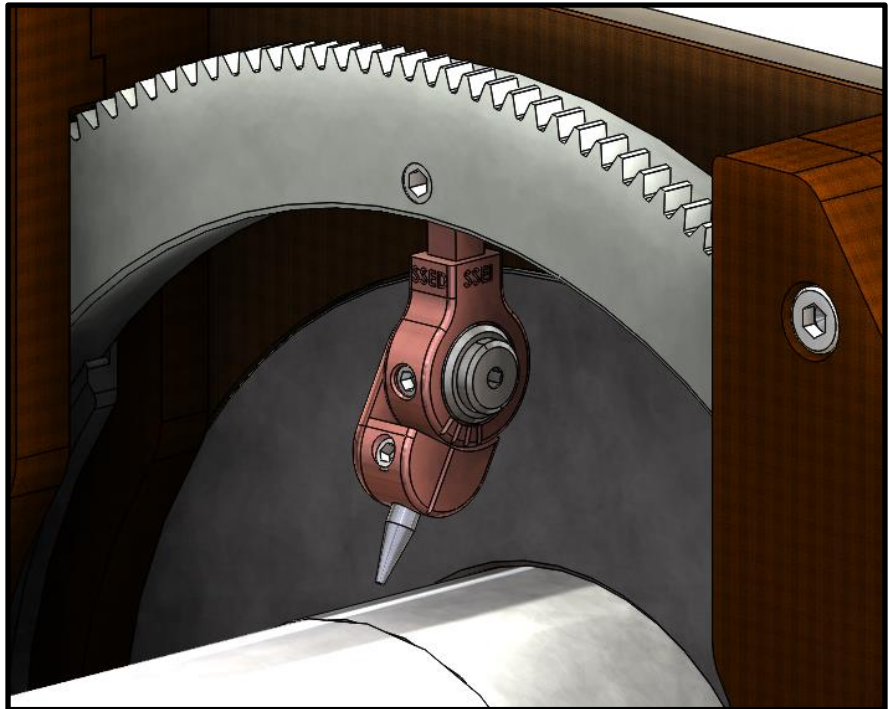
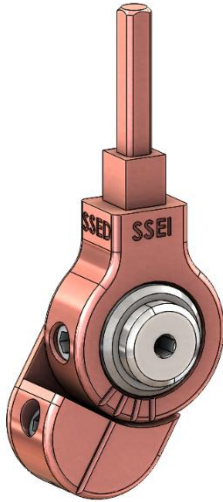
For SSEDX: SATFX-52 from Ø6 to Ø43mm; SATFX-76 from Ø6 to Ø67mm; SATFX-115 from Ø12 to Ø107mm.

For SSEIX: SATFX-52 from Ø6 to Ø28mm; SATFX-76 from Ø6 to Ø52mm; SATFX-115 from Ø12 to Ø92mm.

SSEDX :



SSEIX :



The mounting of these accessories requires the use of electrodes of different lengths



For more information on assembly and operation, please refer to the SSEDX-SSEIX user manual.



- Cable extensions

SATFX machines are delivered as standard with a bundle of 8m.
AXXAIR offers two optional harness extensions to connect SATFX machines to SAXX generators”

Length	Product code
5m	SAFS-05MX
10m	SAFS-10MX

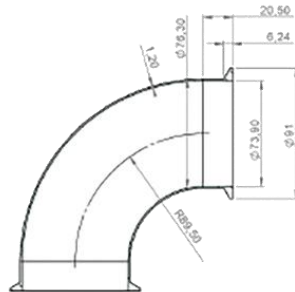
PLEASE note, to ensure the machine is working correctly, a maximum length of 20m extension cord or a maximum quantity of 2 extension cords is recommended. If you need more than 20m, please contact us.



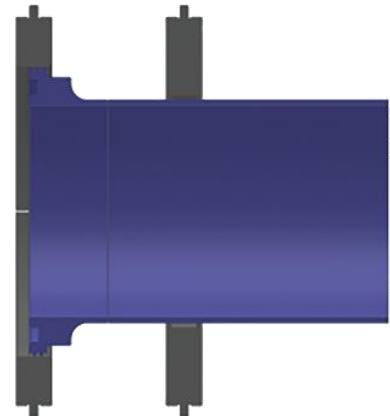
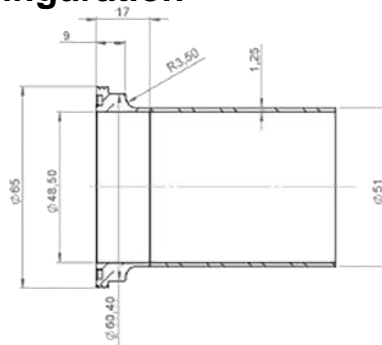
- Accessories on request :

In order to make the most of the possibilities of SATFX machines, AXXAIR is able to provide you with special collets on request. These make it possible to weld different configurations that cannot be performed with standard equipment. See several examples:

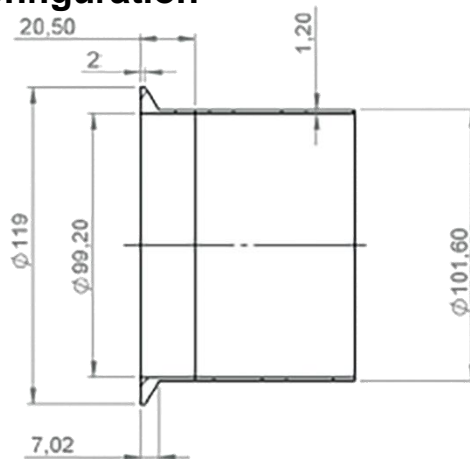
Ferrules – elbow – ferrule (large diameter)



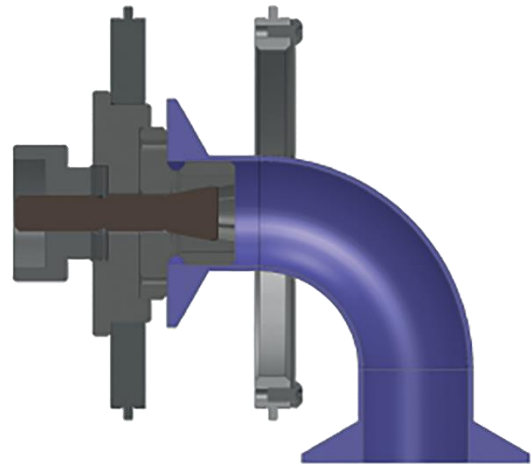
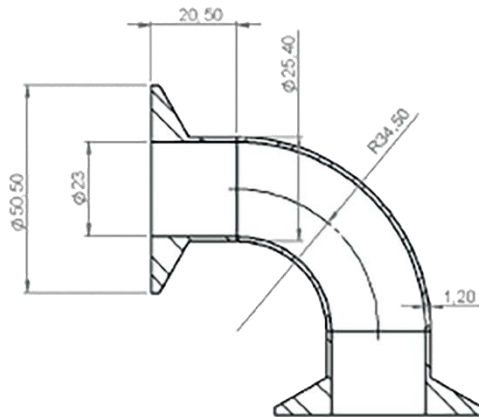
Tube – connector configuration



Tube – ferrule configuration



Ferrule – elbow – ferrule configuration (small diameter)

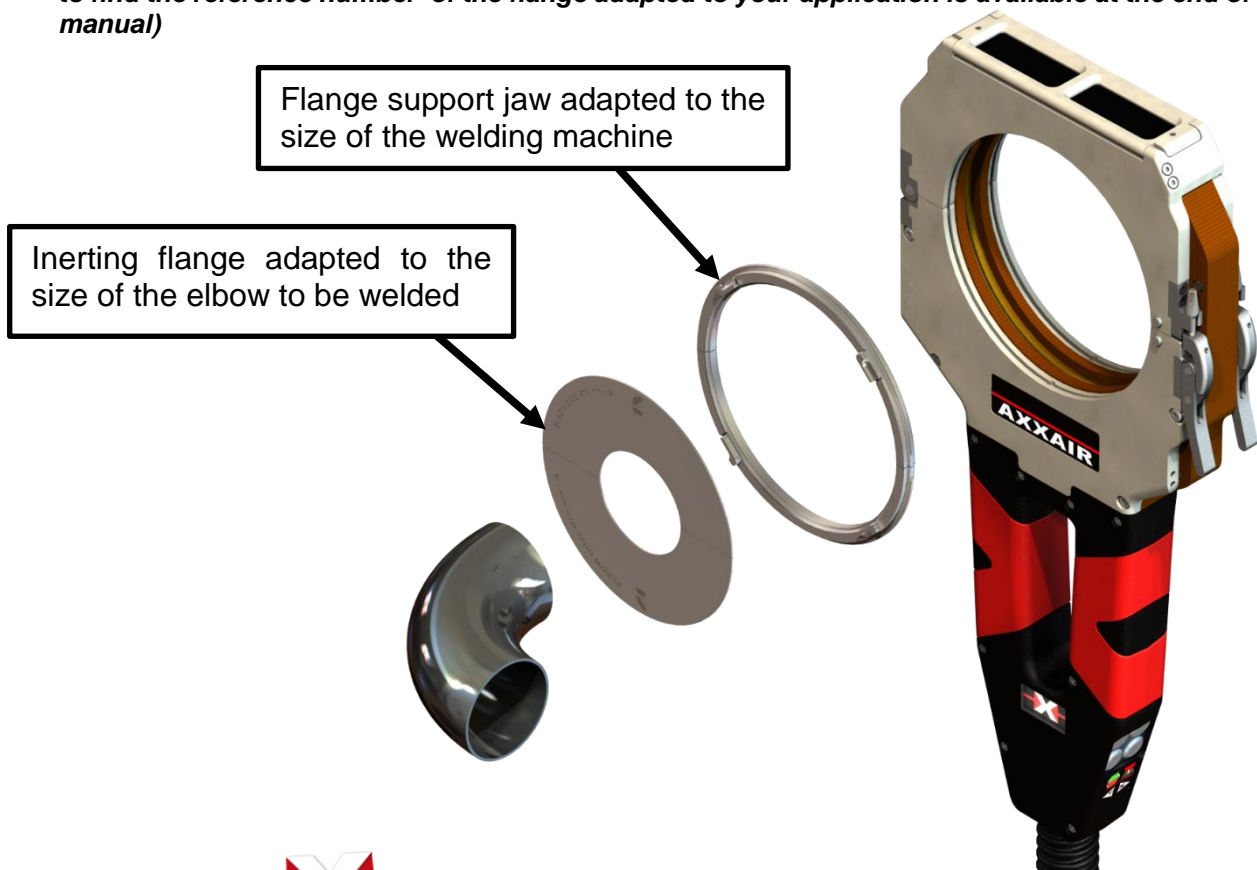


Tube – elbow configuration

In order to adapt to the different configurations of welding assemblies, AXXAIR now offers inerting flanges that match the shape of your elbows. Gas protection remains optimised and avoids the use of adhesive tape and cleaning of the elbow after welding

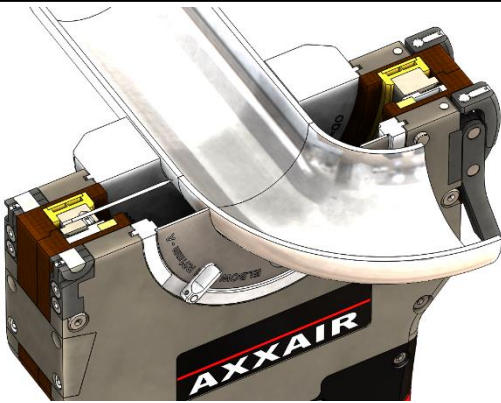
To weld your tube-elbow assemblies using a SATFX closed head, you will need:

- a support jaw (2 half-shells) adapted to your machine
- a set of flanges (2 half-shells) for each diameter and radius of elbow to be welded (**a table to help you to find the reference number of the flange adapted to your application is available at the end of this manual**)

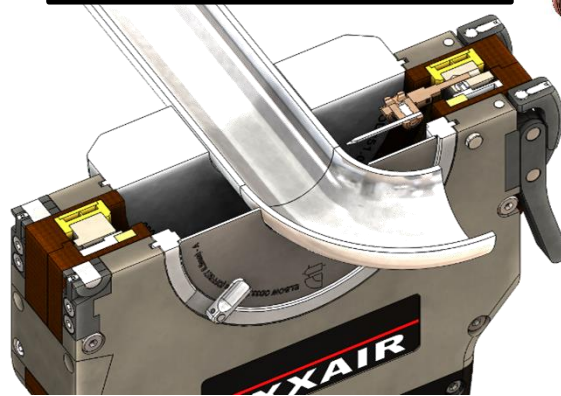


Depending on the configuration of the elbow to be welded, the use of an SSEDX electrode holder may be required. In *the reference table of the flanges*, which you will find at the end of the manual, the SSEDX column tells you whether or not the accessory is necessary, depending on the diameter and radius of the elbow to be welded.

Standard configuration with welding plane at machine axis



Configuration requiring an SSEDX electrode holder. Welding plane offset relative to the machine axis



On the side opposite the elbow to be welded, tighten the tube with two wide half-shells jaws. The purpose of this is to ensure better clamping of the machine on the assembly to be welded,

Support jaw:

A set of support jaws consists of two half-shells made of stainless steel with a thickness of 10.6 mm, in order to accommodate all the inerting flanges for welding elbows.

The revolving pins enable the flanges to be held in position in all the angular positions of the elbow to be welded.

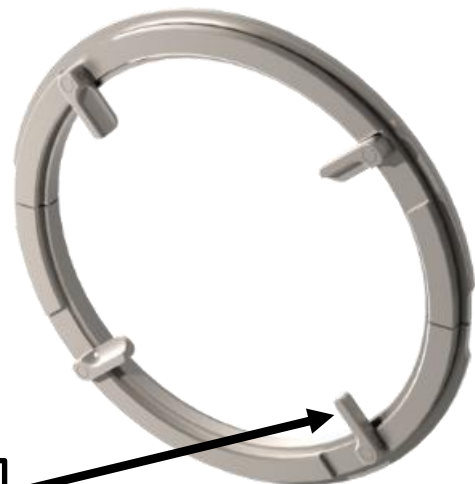
The jaws are mounted on the machine in the same way as standard jaws (see "ASSEMBLY OF THIN AND WIDE JAWS").

REFERENCES:

SATFX-52 => **SMN052-SFLAX**

SATFX-76=> **SMN076-SFLAX**

SATFX115 => **SMN115-SFLAX**



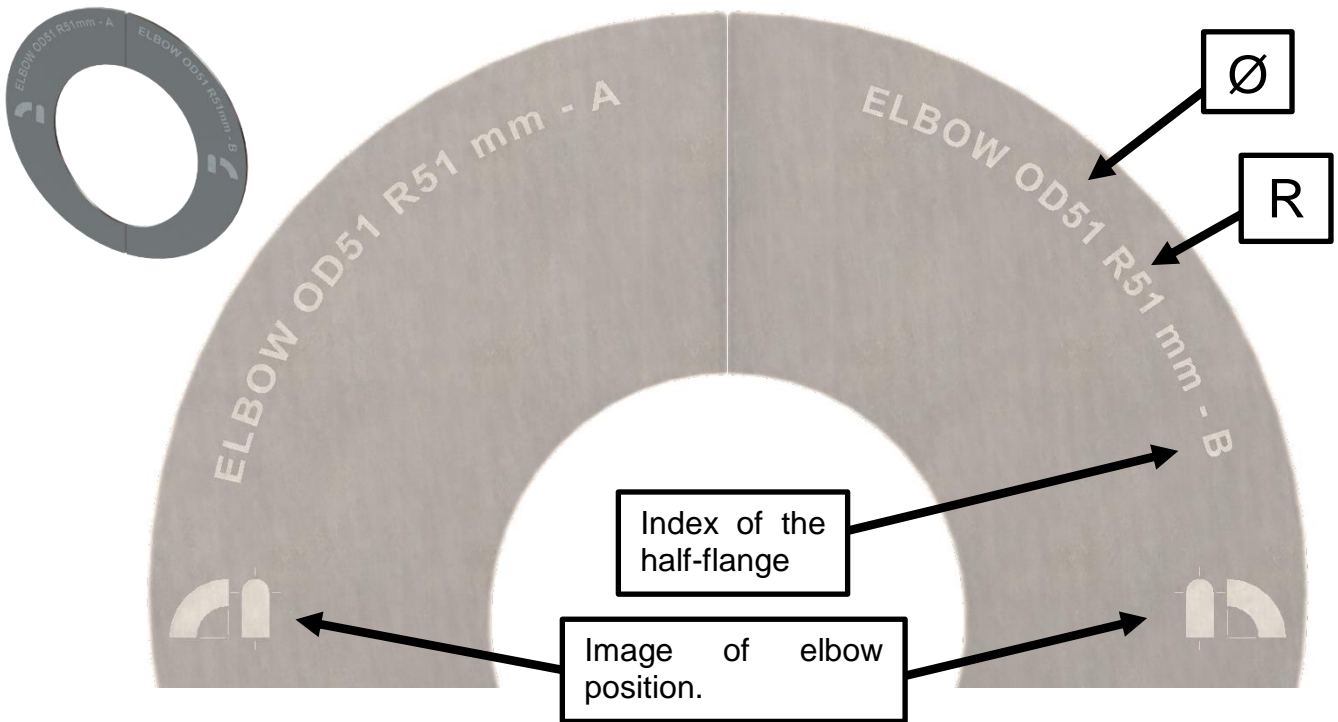
Revolving pin

Inerting flange

The inerting flanges consist of 2 stainless steel half-shells (one half-flange index A and one half-flange index B), cut to the shape of the elbow to be welded.

On the outer face of the flanges, an engraving inscription indicates the diameter and the radius of the elbow for which it is cut.

A symbol indicates the position of the elbow relative to the position of the flanges.

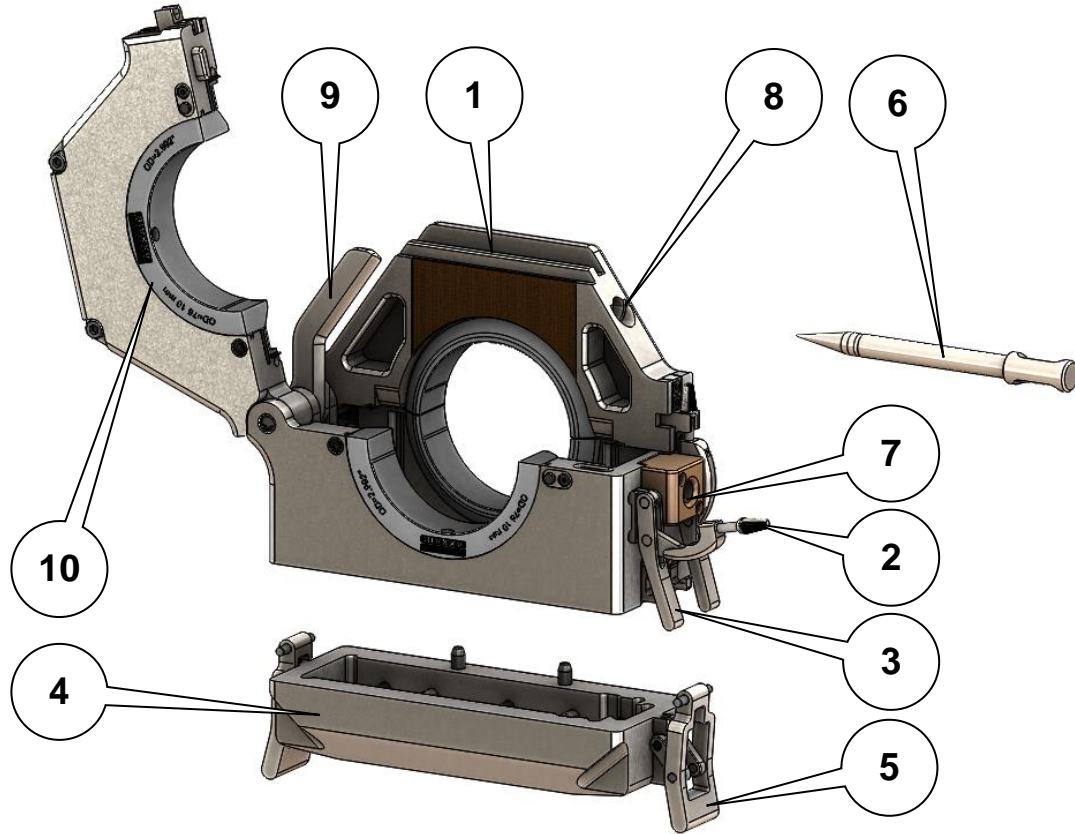


**For any other specific requirements,
please do not hesitate to contact us
to examine the solutions that we can
provide!**

- Cassettes


These cassette assemblies are intended to be mounted on SATFX-52/76/115 welding machines. They enable the operator to carry out welds in a tight and restrictive environment, where it is difficult to operate these welding machines.

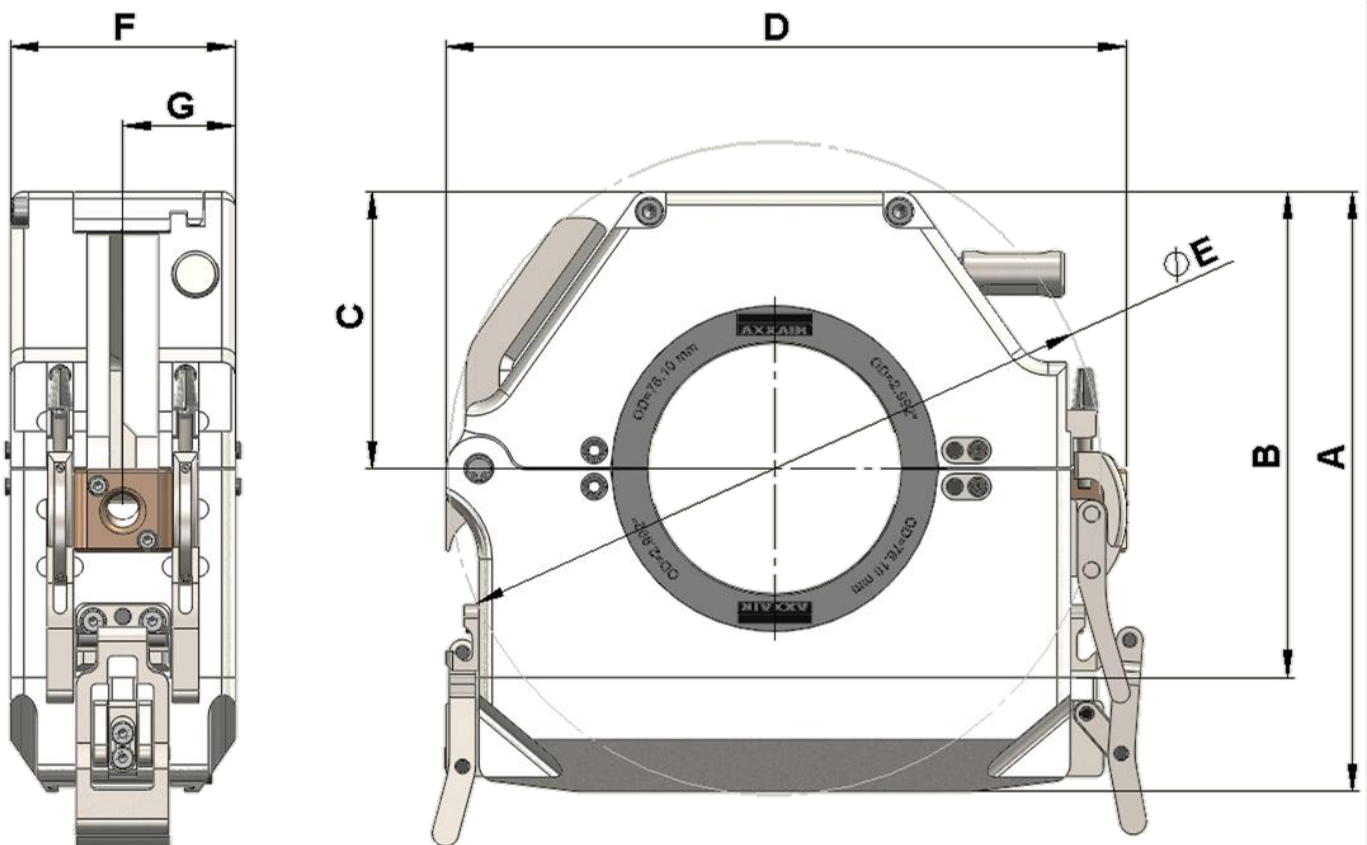
When the cassette is in place on the tubes or accessories to be welded, the operator only has to position the machine in the cassette, then launch the welding program from the generator or from the keyboard of the SATFX machine (see user manuals SAXX200/210/300-MA and SATFX-MA).



ENGLISH	
1	Frame
2	Clamping adjustment screw
3	Release lever
4	Cassette / machine interface
5	Cassette clamping lever on machine
6	Positioning pen
7	Stylus guide piece
8	Stylus storage port
9	Stop blade
10	Clamping collet



	SATFX52-CA01	SATFX76-CA01	SATFX115-CA01
\varnothing min	6mm	6mm	12mm
\varnothing max	52mm	77mm	115mm
	2,3kg	2,7kg	3,5kg
A	158	182	222,5
B	123,5	147,5	188
C	72	84	104
D	182,5	206,5	246,5
\varnothing E	175	199	238
F	68,1	68,1	68,1
G	34,05	34,05	34,05



For more information on assembly and operation, please refer to the cassette user manual.

4. Machine handling and storage

Handling :

The SATFX weld heads are portable devices that require no special handling (less than 10 kg for all machines).

However, standard precautions should be taken to avoid damaging the head and its hose during handling and transport.

Cable support

The machines are supplied with a suspension assembly to attach to the cable (about 1m from the machine). This assembly makes it possible to support the weight of the cable, which facilitates the handling of the machine.



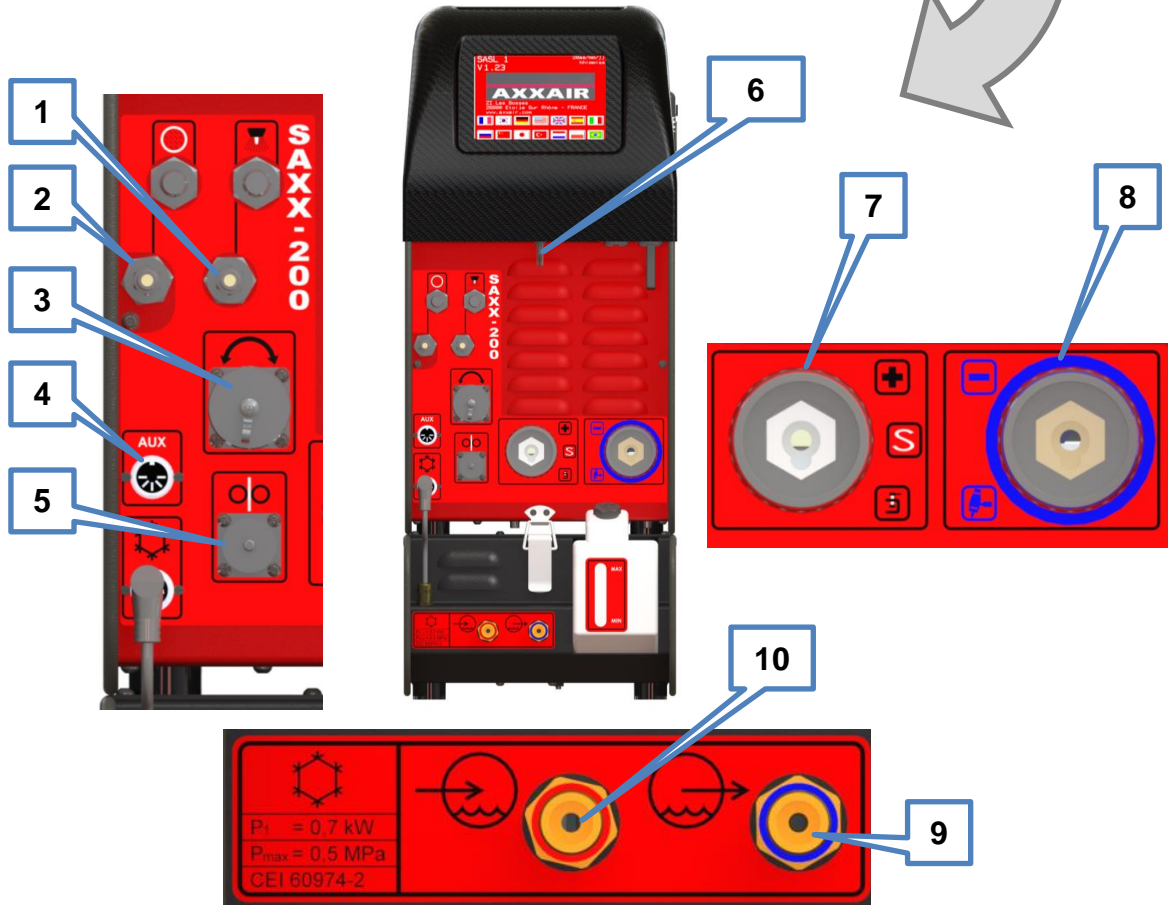
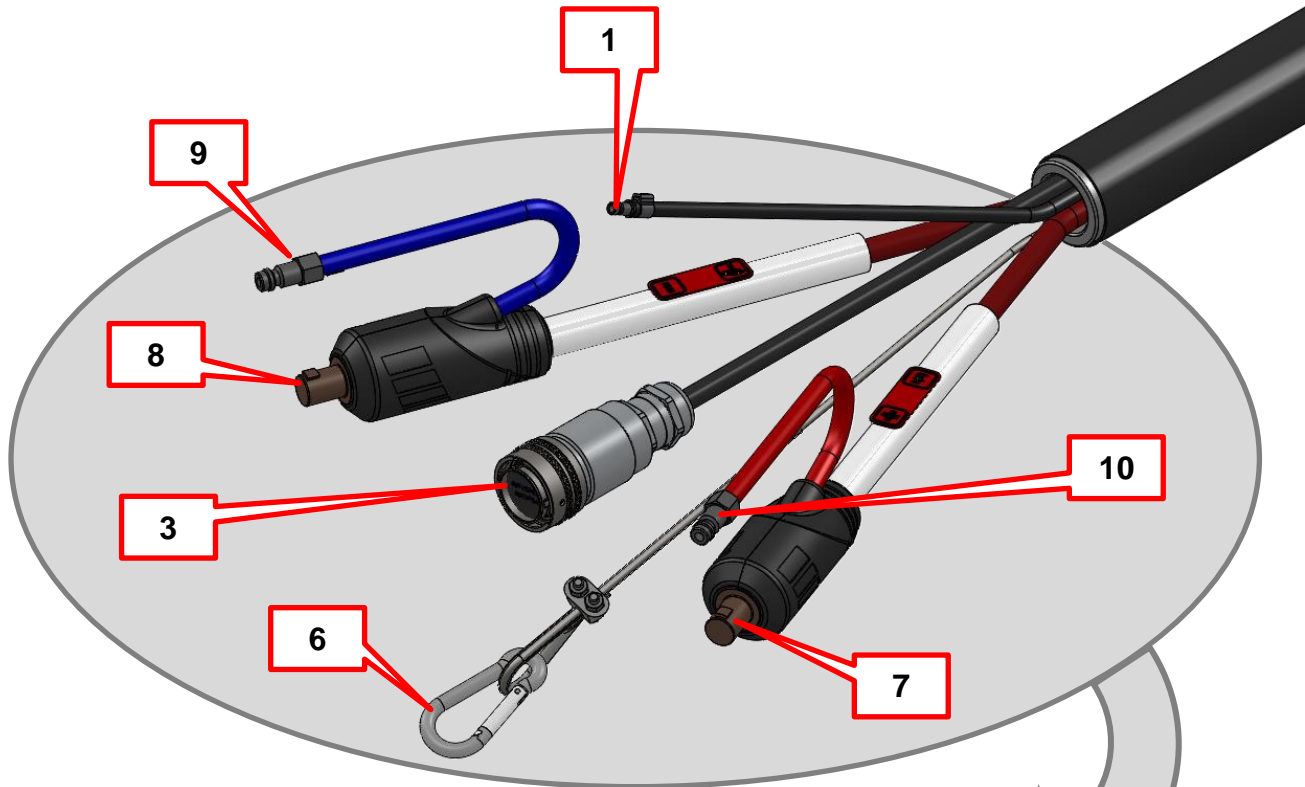
Storage :

The machines are supplied in a waterproof suitcase to ensure their integrity. If necessary, this case can also accommodate the cassette of the machine concerned.



If the weld head is not going to be used for a long period of time, store it in its original packaging. Cleaning the head and emptying the coolant is recommended before repacking the weld head. Protect the weld head from corrosion. Place a desiccant in the container where the weld head is stored.

5. Connecting the weld head :



Warning: All connections must be made while power is off and the power button in the OFF position

6. Mounting the thin and large clamping collets :

Each SATFX clamping collet set is designed for one tube diameter only. The thin collets are in stainless steel, and the large collets in aluminum. The use of AXXAIR collets is the only guarantee of the life of your head. No guarantee can be applied in the event of use of collets other than those supplied by AXXAIR.

Notes :

Thin collets :

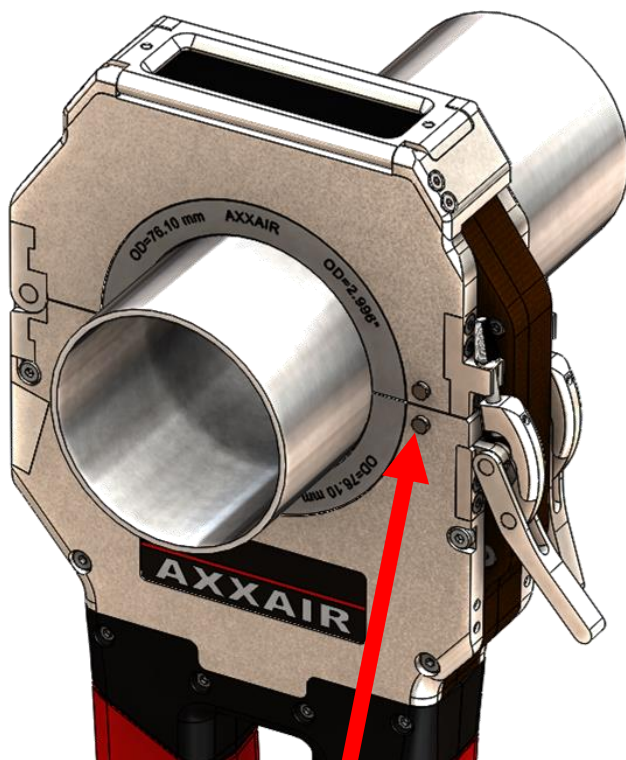
- A thin collet set consists of 4 parts. The diameter of use is engraved on the collet.
- The mounting of the collets is a keyless mounting. The collets are clipped into the outer flanges and into the shutters.

Large collets :

- A large collet set consists of 2 parts. The diameter of use is engraved on the collet.
- The assembly of the collets is an assembly with a 2.5mm Allen key. The collets are screwed into the outer flanges and into the shutters.

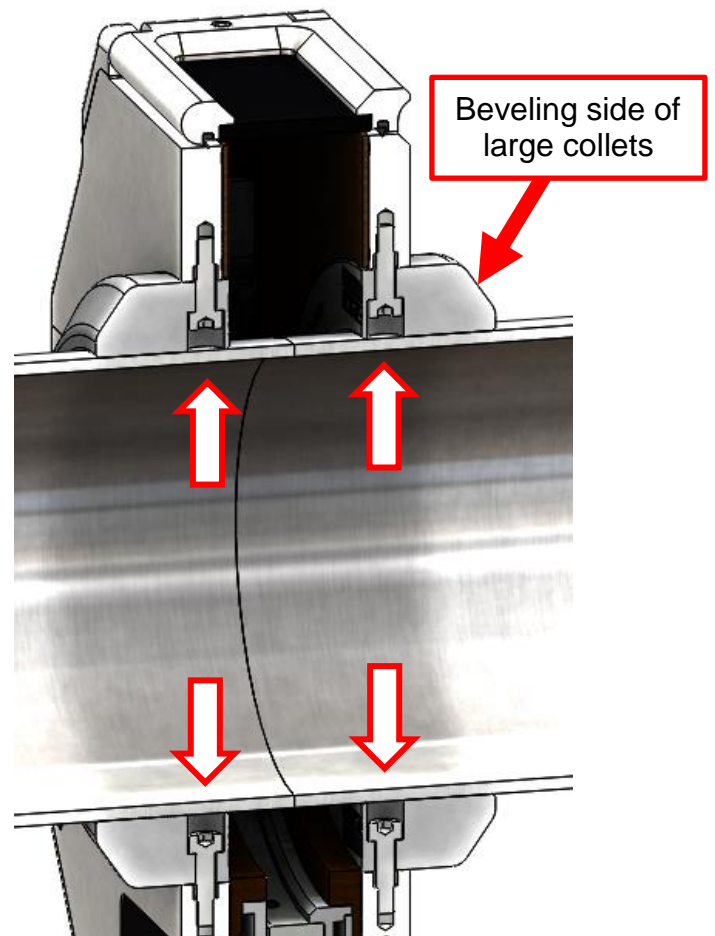
The flat side of the collets should be aligned with the inside of the machine, and the beveling side of collets must be place outside of the machine.

THIN COLLETS



To fix the collets, press the button, position the collet and then release the button.

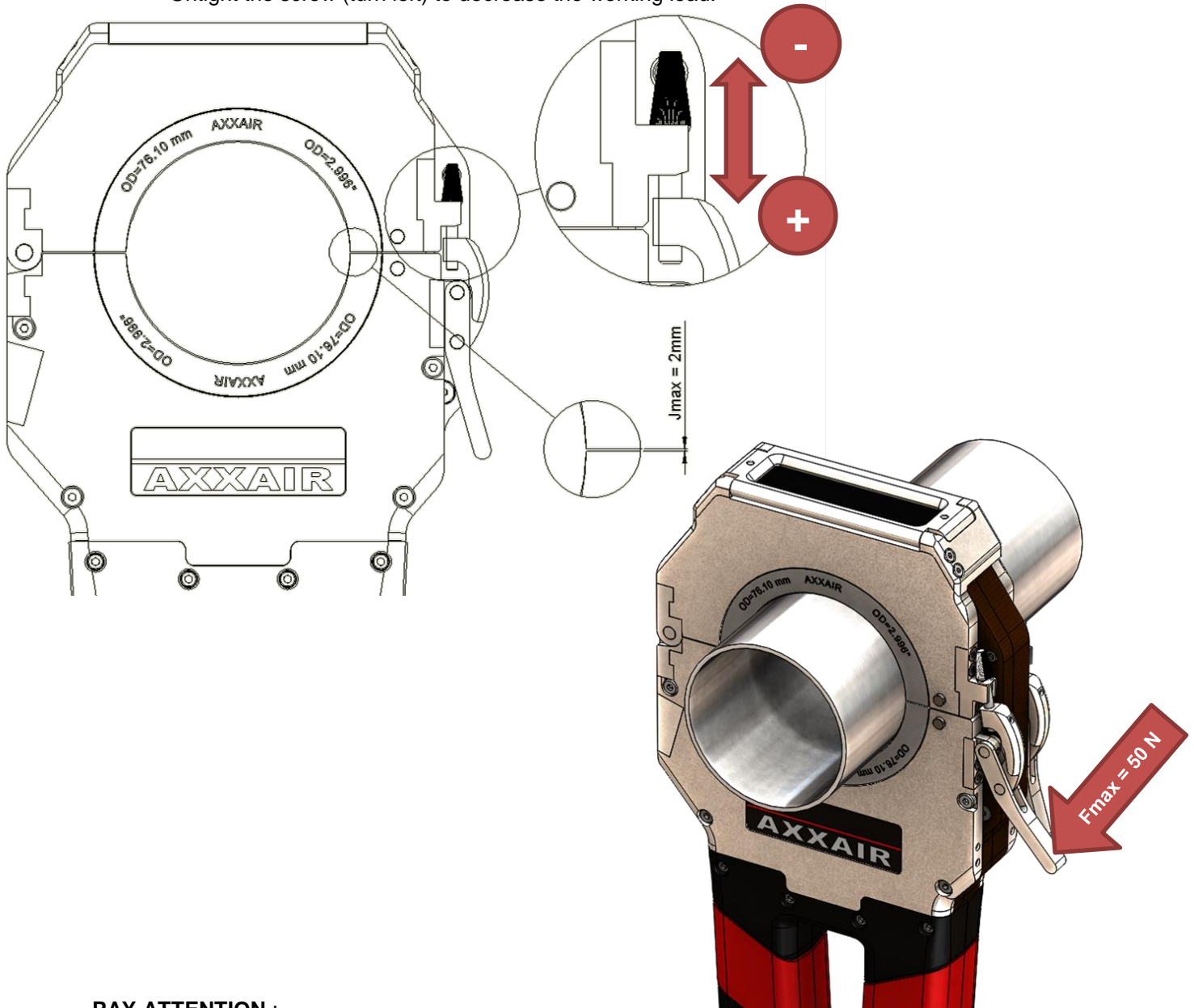
LARGE COLLETS



7. Adjustment of the clamping force :

In order to adjust the clamping to the tube geometry, the machine is equipped with two screws which can be adjusted in order to control the load needed to close the head.

- ⇒ Turn the screws to the right (tightening) to increase the load needed to close the bracket
- ⇒ Untight the screw (turn left) to decrease the working load.

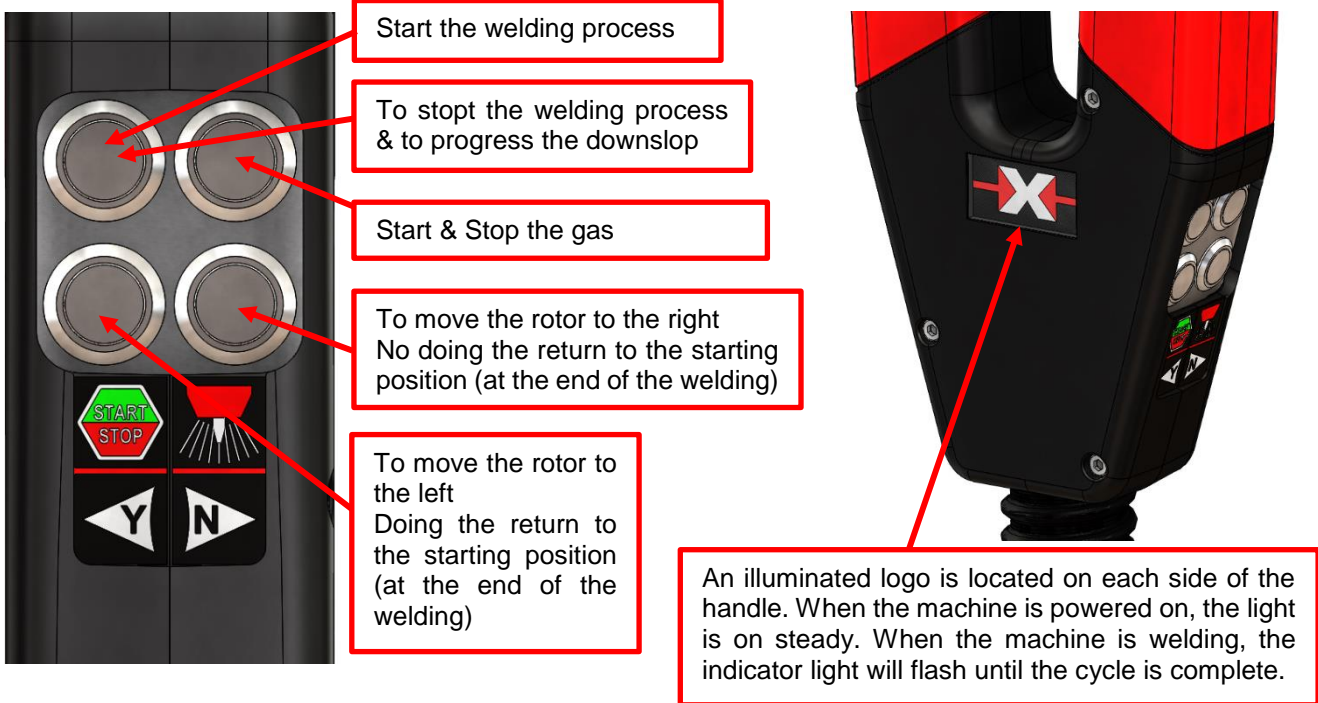


PAY ATTENTION :

- ⇒ The clamping force of the collets is not sufficient to correctly align the tubes and resist the stress coming from the welding temperature. In order to get a good alignment it is mandatory to tack the tubes before the welding.
- ⇒ You need to use one set of collets per diameter.
- ⇒ Insure that the roundness of the tubes are compatible with orbital welding.
- ⇒ The maximum load to use on the closing lever is 50N (about 5 Kg, 11lbs). **If the load gets too high, the adjustment is not done correctly or the tube is not adapted to an orbital welding application.**

8. Keypad and indicator light

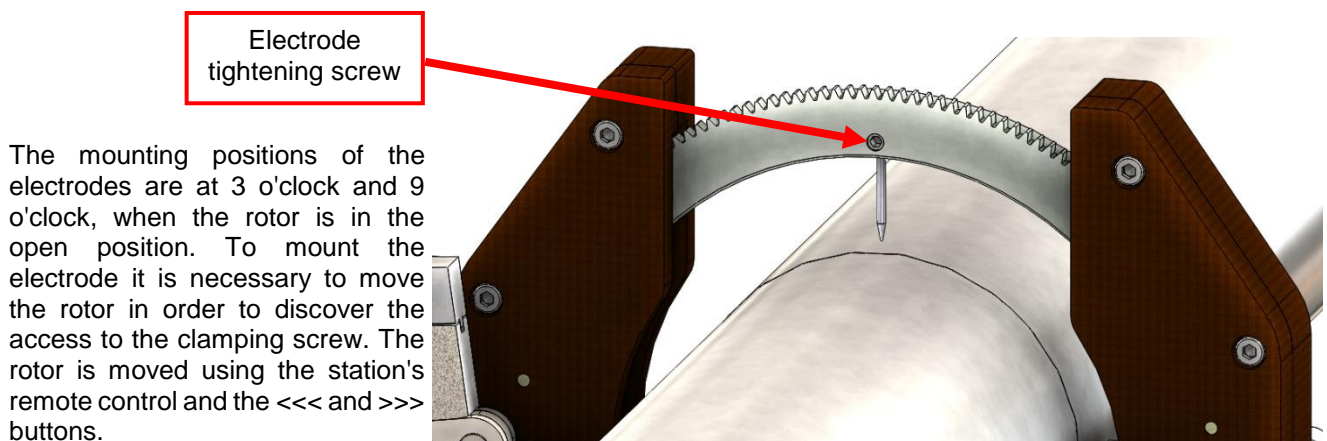
To activate the keyboard, you must load a program or go to manual mode.



9. Electrode mounting:

SATFX machines can weld with Ø1.6mm and Ø2.4mm electrodes. Two locations are available, each location is exclusively dedicated to one electrode diameter.

These electrodes are held on the rotor by a pressure screw as shown in the picture.



The mounting positions of the electrodes are at 3 o'clock and 9 o'clock, when the rotor is in the open position. To mount the electrode it is necessary to move the rotor in order to discover the access to the clamping screw. The rotor is moved using the station's remote control and the <<< and >>> buttons.

CAUTION: This screw is an M4 headless screw that must be tightened with care. It should not be manipulated with a ball driver hex wrench, which could damage the screw head! The Allen wrench required is provided to you. Two additional screws are supplied with the machine in case of loss.

10. Adjustment tube-electrode distance :

The choice of the length of the electrode depends on the external diameter of the tube to be welded. In effect, the electrode adjustment stroke is only a few millimetres, and the length of the electrode should therefore be adapted to the diameter to be welded.

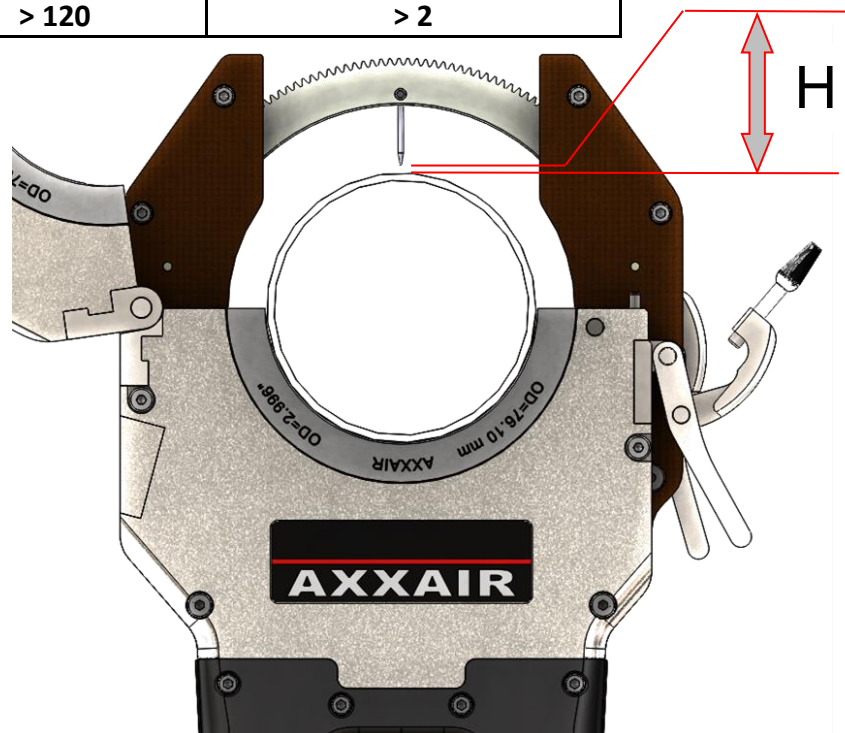
To choose the correct length of the electrodes, see the "Electrodes" section of the "Accessories" chapter, the tables corresponding to the machine used. The diameter ranges are defined for an arc height of between 0.5 mm and 2.3 mm.

If the tube in question corresponds to two different electrode sizes, we would advise you to choose the longest electrode in the aims of stability, on the condition that the electrode does not exceed the dimension of the rotor teeth!

IMPORTANT: Adjust the height of the arc must be carried out carefully before placing the cassette on the element to be welded. Indeed, depending on the quality of the tubes, their shape may have a more or less pronounced ovality. Particular care must therefore be taken to carry out this adjustment in order to prevent the electrode from touching the solder bath. In case of doubt, we advise you to increase the tube / electrode distance by a few tenths. The standard setting is the thickness value. It is easier to make this precise adjustment by using the set of shims provided for this purpose between the tube and the flat of the electrode

Préconisation distance tube/electrode:

Thickness of tube (mm)	High intensity (Ampers)	Tube/Electrode distance (mm)
< 0,5	< 20	0,5 à 0,7
0,5 à 1	20 à 40	0,8 à 1,2
1,1 à 2	40 à 80	1,2 à 1,5
2 à 3	80 à 120	1,5 à 2
> 3	> 120	> 2



Note: The choice of the type of electrode used in orbital welding is essential for the proper functioning of the equipment. In order to offer you the best quality / price compromise and guarantee the reliability of the electrodes, AXXAIR has tested all the standard electrodes that are found on the market. We ask that you only use AXXAIR electrodes



11. Using SSEDX and SSEIX

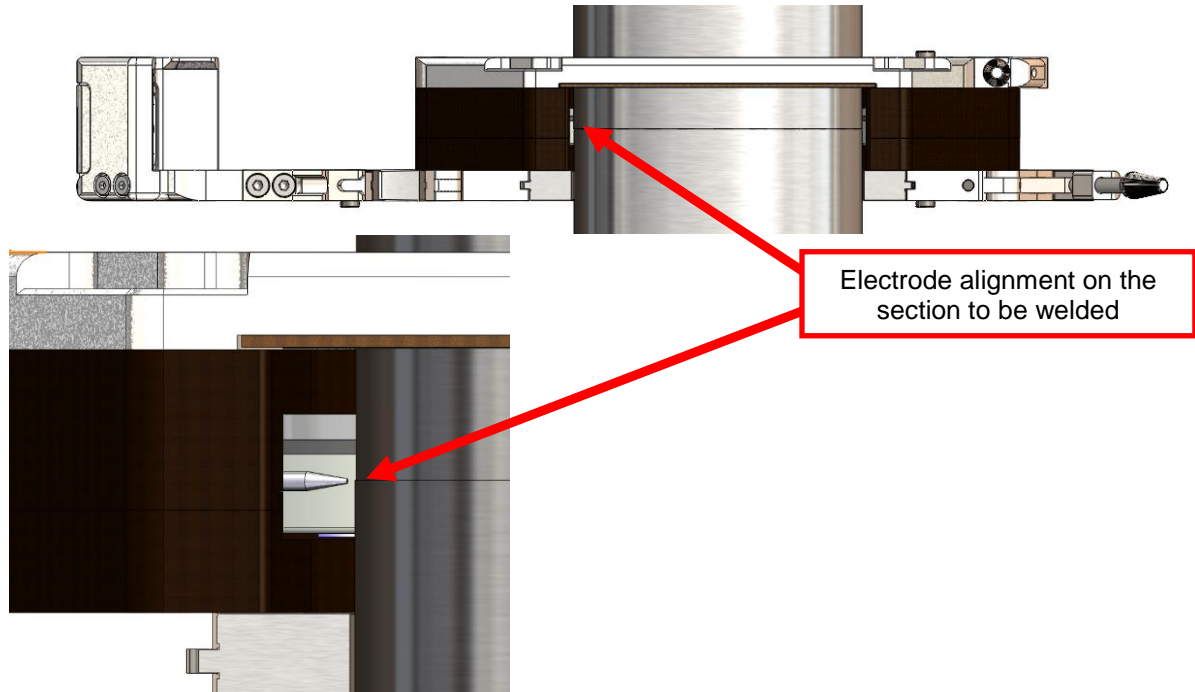


For more information on assembly and operation, please refer to the SSEDX-SSEIX user manual.



12. Securing the pipe to be welded :

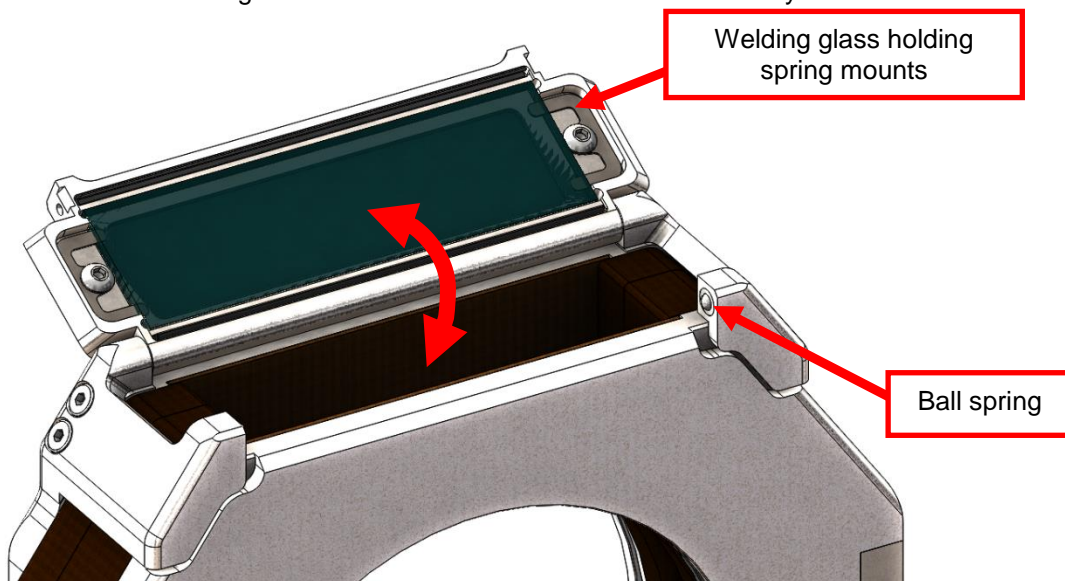
This operation requires for the electrode to align with welding faces. Great accuracy is required to ensure that the weld is properly carried out in the joint seam of the section



13. Use of the viewing window:

SATFX machines are equipped with a viewing window that makes it possible to check the alignment of the electrode with the welding plane before launching a welding cycle. The integrated welding glass (grade 10) is fixed by two spring clips screwed into the window body. It can be replaced if necessary (see procedure in the paragraph «Welding machine maintenance»).

When the window is closed, you need to hear a small "CLICK" due to the ball of the spring which is positioned in its housing. The window will therefore be closed correctly.



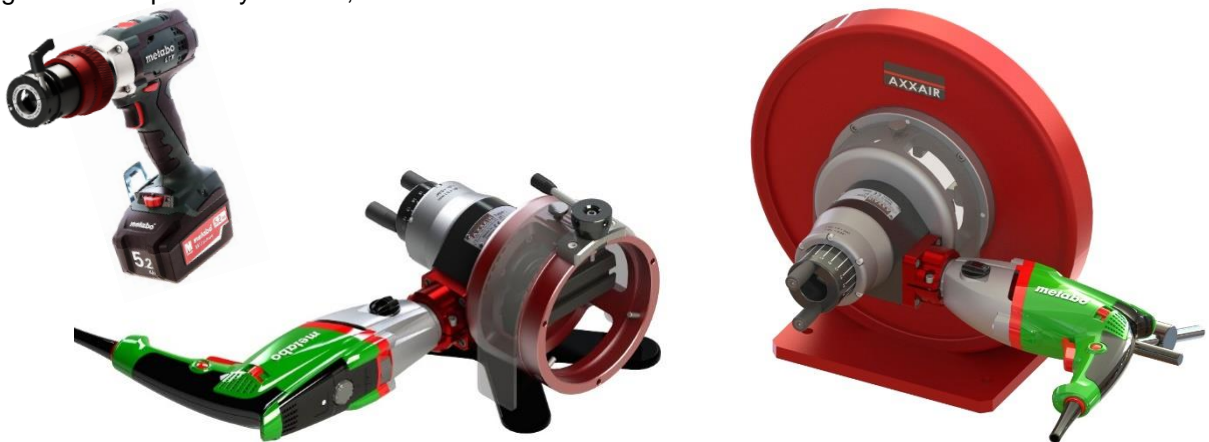
14. Welding step by step :

Preparing to weld :

Good preparation for closed chamber welding is essential to achieve satisfactory welding results. You must have a cut perfectly perpendicular to the axis. We recommend that you use an x22 type orbital cutting machine.



Depending on the quality required, you may straighten the face shaping with a tool (DC machine type) so as to guarantee a perfectly smooth, streak-free surface.



15. Handling the pipe :

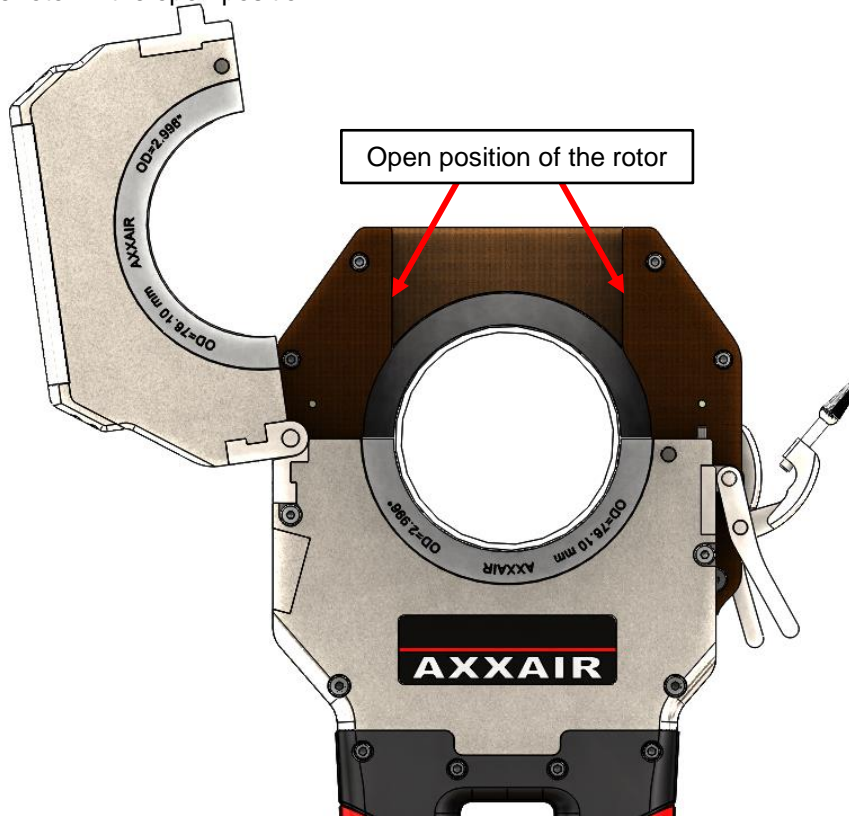
To ensure proper geometrical alignment it is recommended to manually tack weld the work pieces to be welded or use the weld head in tack weld operation mode (use of side collets recommended).

CAUTION: SATF weld heads are attached to the pipe and support their own weight. Weld heads cannot withstand the alignment forces of long pipes! You must tack weld the pipe or support pipe weight using alignment systems and not the weld head.

16. Welding :

Welding is performed as follows:

- Put the rotor in the open position



- Arranging the two pieces to be welded: close the frames using the toggle clamps and aligning the electrode with the section to be welded.
- Check the alignment of the electrode with the welding plane, using the viewing window when the two parts to be welded are in place.
- Purge the system to evacuate oxygen in the hoses and in the weld head (do this when using the system for the first time or when the system has not been in operation for a substantial period of time).
- Proceed with inerting the pipe (see the systems recommended by AXXAIR)
- Choose the suitable welding program, previously created. The standard starting position of the weld is the open rotor position (see diagram above), but it can be modified with the "AUTO positioning" function of the generator.
- A pre-gas time of 30 seconds is applied by default in the automatic programs, it is recommended that you comply with this time. It is necessary for the complete chambering of the welding head.
- Start the welding cycle.

Reminder:

The use of a closed head requires sufficient filling of the head with inert gas before the start of the welding, and therefore before the creation of the arc.

This is programmed on the generator by the "Pre-gas" function. The minimum pre-gas time required is recorded by the self-calculation property of the generator when creating the program, and can be modified as desired.

17. Welding settings :

SATFX machines must exclusively be used with a SAXX type generator of the AXXAIR range. For any other use not specified in this manual, AXXAIR declines all liability. Improper use may be subject to cancellation of the warranty.

When using an AXXAIR welding power source, there is an automatic configuration calculation mode. As to weld head selection, use either **SATFX-52, la SATFX-76 ou la SATFX-115.**

For use of welding machines on SAXX generators, please refer to AXXAIR generators operating manuals.

Notice Originale- Original instructions – Originalbetriebsanleitung
Instrucciones originales - Istruzioni originali
- 1 -

SAXX-200

Ind D

Mode d'emploi :5
User instructions :43
Bedienungsanleitung :81
Modo de empleo :119
Manuale d'istruzioni :157

Le présent manuel est à lire et à conserver par l'opérateur près du poste de travail. Document non contractuel.
 The operator must read and keep this manual on its working station. This document is not contractual.
 Dieses Handbuch ist vom Bedienpersonal zu lesen und in des Nähe der Arbeitsstätte aufzubewahren. Kein vertragliches Dokument.
 El operario deberá leer este manual y guardarlo cerca del puesto de trabajo. Documento no contractual.
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330B Route de Portes Les Valence - 21 Les Bœufs - 26800 Etoile sur Rhône
 Tél: +33 475 575 070 - Fax: +33 475 575 080 - commerce@axxair.com - www.axxair.com
 SAS au capital de 135 720 € - RCS Romans BA14 581 363 - Code APE 2841 Z - Siret 414 581 363 00028 - TVA FR13414 581 363

Notice Originale- Original instructions – Originalbetriebsanleitung
Instrucciones originales - Istruzioni originali
- 1 -

SAXX-210 SAXX-300

Ind B

Mode d'emploi :5
User instructions :44
Bedienungsanleitung :83
Modo de empleo :122
Manuale d'istruzioni :161

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18. Welding machine maintenance :

General recommendations:

Before you use the machine each time, visually inspect the electric cords and water hose. Replace if necessary.

It is essential that all foreign bodies are removed from the machine.

Maintenance operations should be performed by qualified personnel using authentic replacement parts.

Before starting, disconnect all power supply sources.

WARNING:

YOU MUST USE A COOLANT RECOMMENDED BY AXXAIR. NEVER ADD WATER TO THE COOLANT TANK BECAUSE THIS COULD CAUSE CHEMICAL REACTIONS THAT MAY DAMAGE THE MACHINE AND VOID THE WARRANTY!

PREVENTIVE MAINTENANCE

You will find a screw kit in the case of the machine to carry out small maintenance operations.

Checking the welding head cable		
	Frequency	Operations
	Every 6 months or every 1000 welds	Switch off the machine (disconnect the main power supply) <ul style="list-style-type: none"> • Brush or rag clean the entire welding cable • Visually inspect all hoses • Check that no hose is bent, pinched, worn, or shows any signs of tearing, or herniation • Check that there are no leaks (coolant, or gas), or noise, that may reveal a leak • Check that all connections are tight

Search for abnormal noises		
	Frequency	Operations
	Every 6 months or every 1000 welds	Machine live, operating. <ul style="list-style-type: none"> • Perform a complete rotation of the welding machine rotor (from the generator screen and from the buttons present on the welding head) • No abnormal noise shall occur during operation: cracking, scratching, muffled and screeching noise or any other unusual noise.



Checking electrical connections		
	Frequency	Operations
	Every 6 months or every 1000 welds	<p>Machine powered down (main power disconnected).</p> <ul style="list-style-type: none"> • Check that the connectors are connected correctly • Check that there are no traces of heating on the connectors as well as on the cables
	Every 6 months or every 1000 welds	<p>Machine powered down (main power disconnected). Check the general condition of the rotation motor:</p> <ul style="list-style-type: none"> • Absence of dust, grease, coolant • Absence of shocks • Check the connections in the welding head. No crushing, pinching, and cables must not be stripped or disconnected

Search for leaks on the circuit		
	Frequency	Operations
	Every 6 months or every 1000 welds	<p>Machine live, operating. Check the absence of the following elements: <i>(likely consequences of leakage)</i></p> <ul style="list-style-type: none"> • Abnormal sound • Discharge • Frequent filling of coolant tank
	Once a year	<p>Machine live, operating.</p> <ul style="list-style-type: none"> • Perform complete emptying of the cooling circuit • Perform flushing of pipework with pure water • Replace the coolant with a new coolant <i>(during filling, several circuit On/Offs must be carried out in order to completely fill the cooling unit. A 5B alarm may appear. In this case, please acknowledge the alarm before repeating the operation until the circuit operates smoothly).</i> • Operate the cooling system for approximately 5 minutes to check that there are no leaks due to handling



Checking transmission		
	Frequency	Operations
	Every 6 months or every 1000 welds	<p>Machine powered down (main power disconnected).</p> <ul style="list-style-type: none"> • Completely disassemble the welding head, then perform a complete cleaning of the transmission, from the motor to the rotor • Remove all traces of grease or other debris • Check the integrity of the pinions • Check the tothing: Any pinion with irregular (abnormal) wear, burrs or sharp edges must be replaced with a new spare part • Check the pinion fixings, there must be no play (axial and radial). Otherwise, the bearings in question must be replaced. • Completely reassemble the machine according to the procedure below.



PROCEDURE FOR CLEANING SATFX MACHINES

This operation must be carried out flat on a clean workbench. This maintenance operation must be carried out conscientiously and in an orderly manner.

Before any maintenance work, the general power supply of the machine must be cut off, then disconnect the welding generator unit.

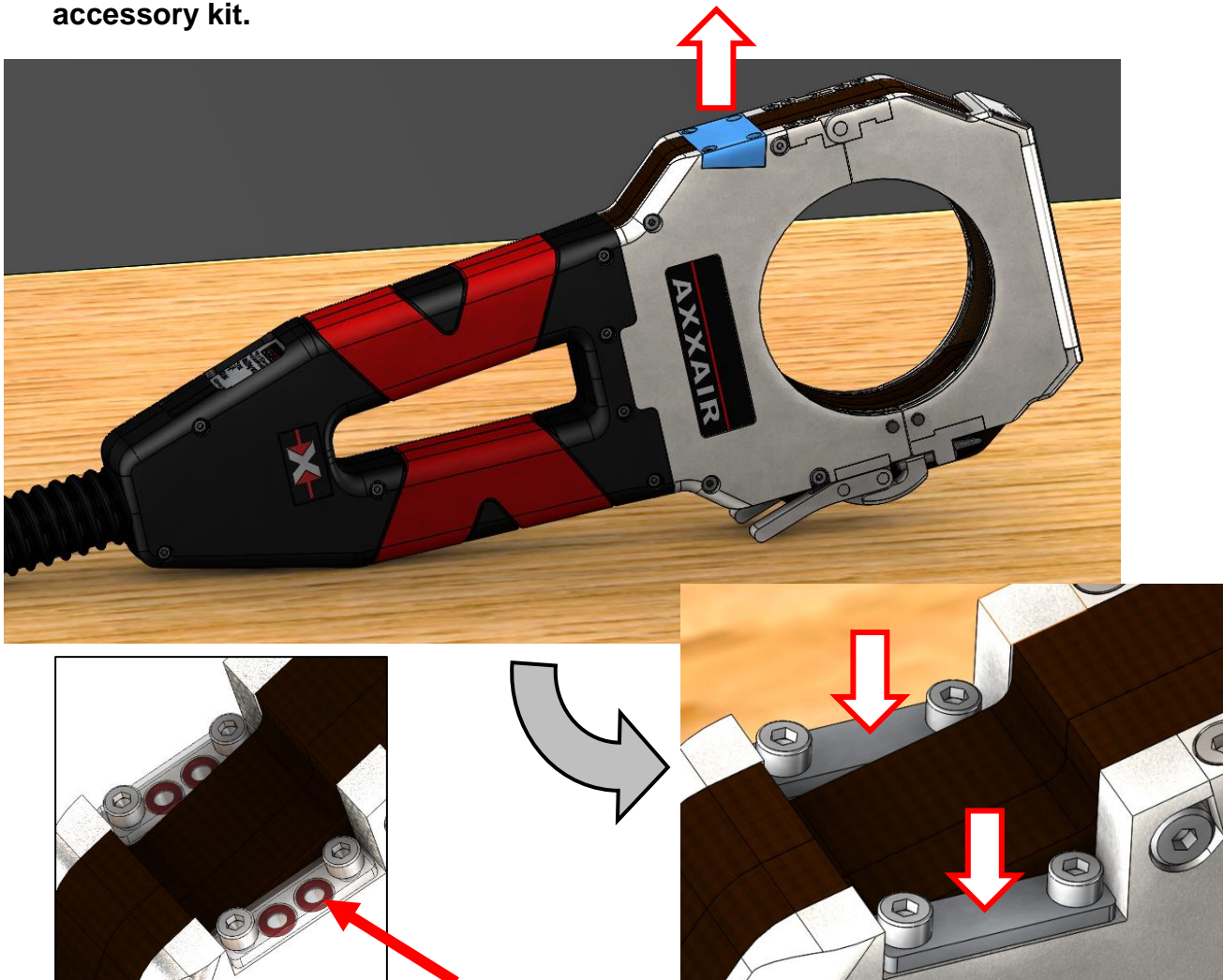
Tools required:

- Soft cloth (cotton, microfiber, etc.)
- 2.0mm and 2.5mm BTR wrench
- Phillips Screwdriver
- Dry brush
- A cleaning / degreasing product (Orapi Kleaner 503 for example).
- Electrolube SGB200D contact grease.

DISASSEMBLY OF THE HEAD:

Remove coolant connection.

Attention, do not lose the 4 red seals present between the connection and the machine. Please leave them in place and secure the 2 caps provided in the accessory kit.



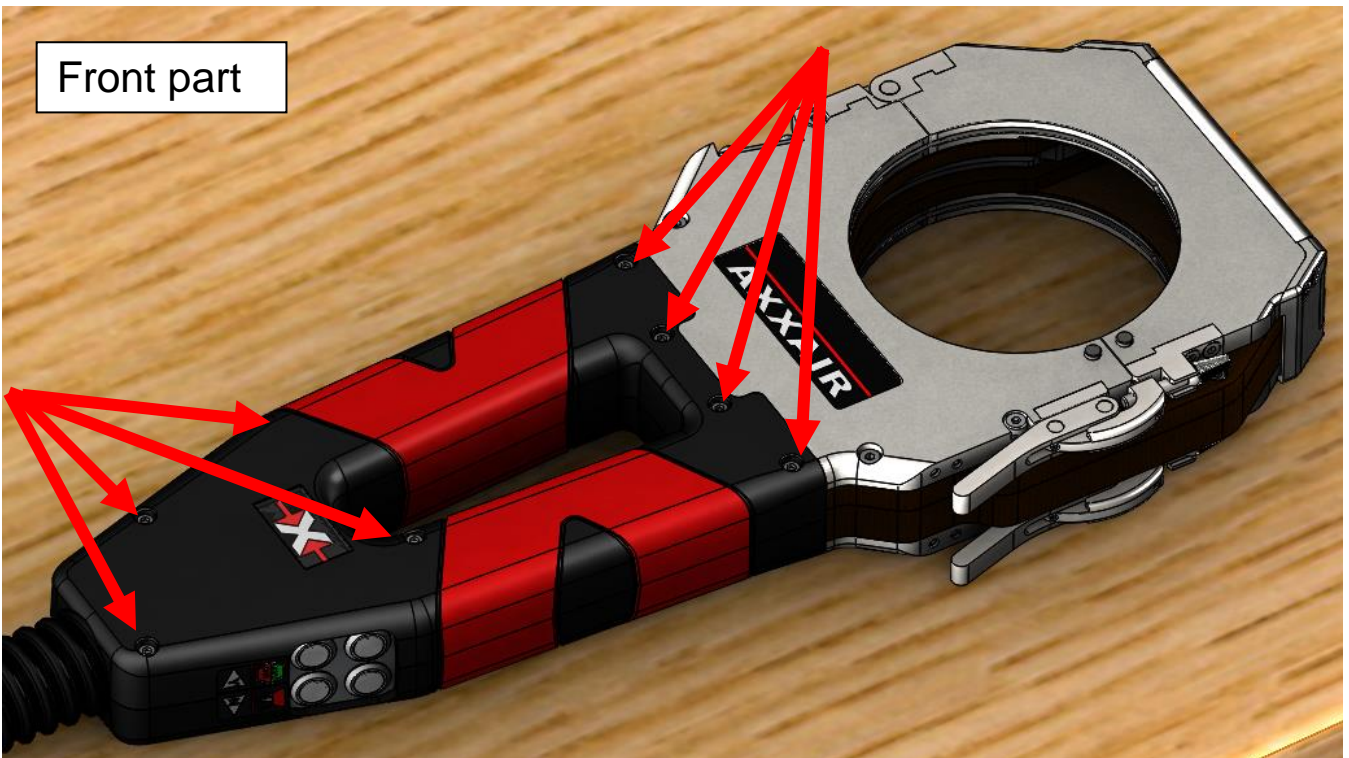
Remove the 12 screws from the handle.

- 4 screws at bottom of rear handle
- invert the machine and remove the 8 screws from the front of the handle.

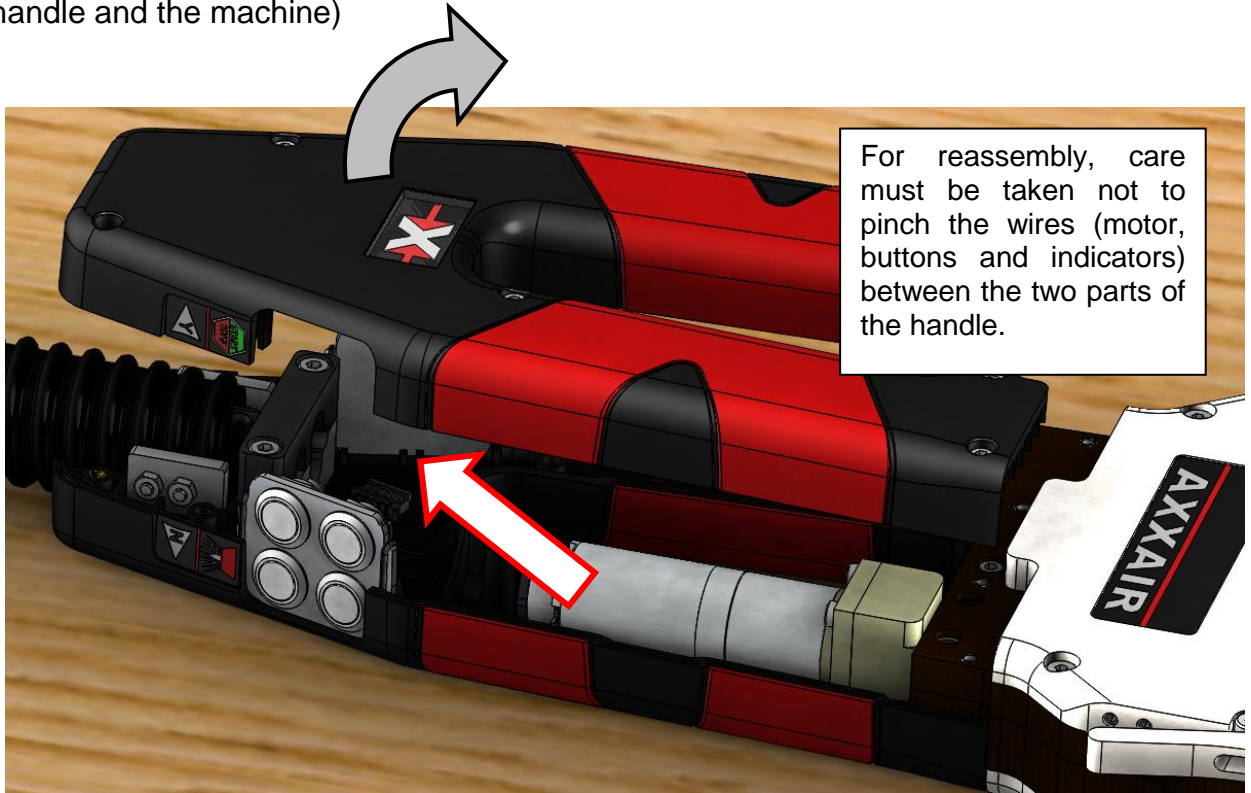
Back part



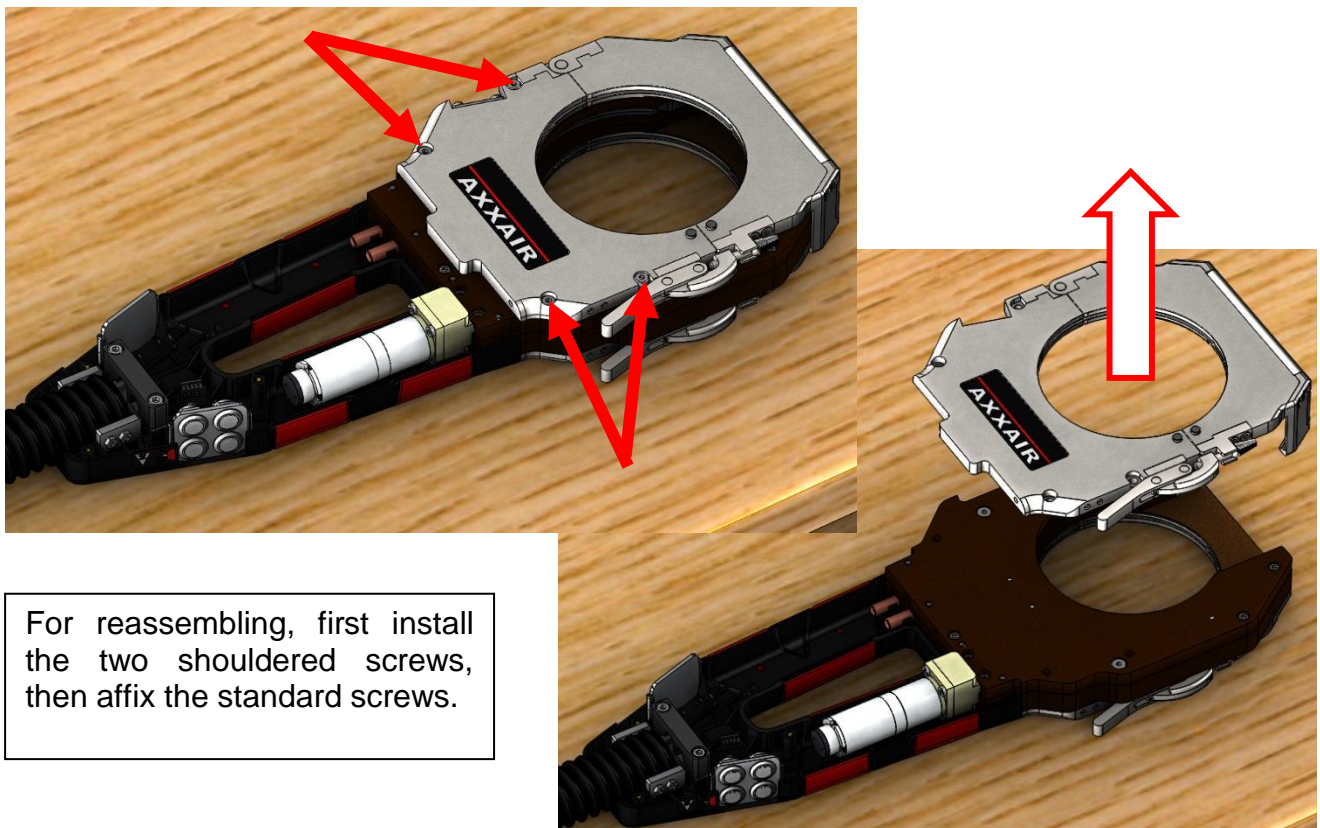
Front part



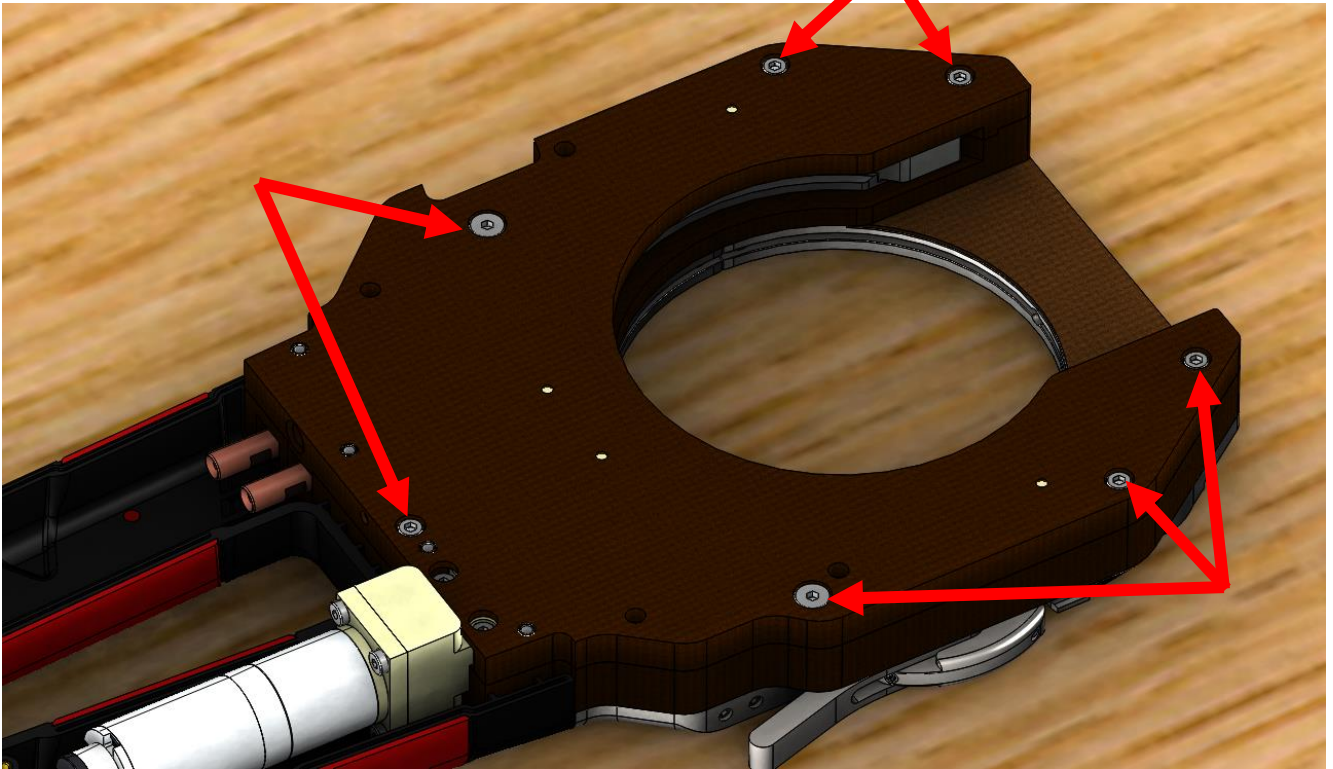
Remove the front of the handle and disconnect the LED (connection remaining between the handle and the machine)



Remove the 4 screws fixing the aluminum flange, then remove the assembly.



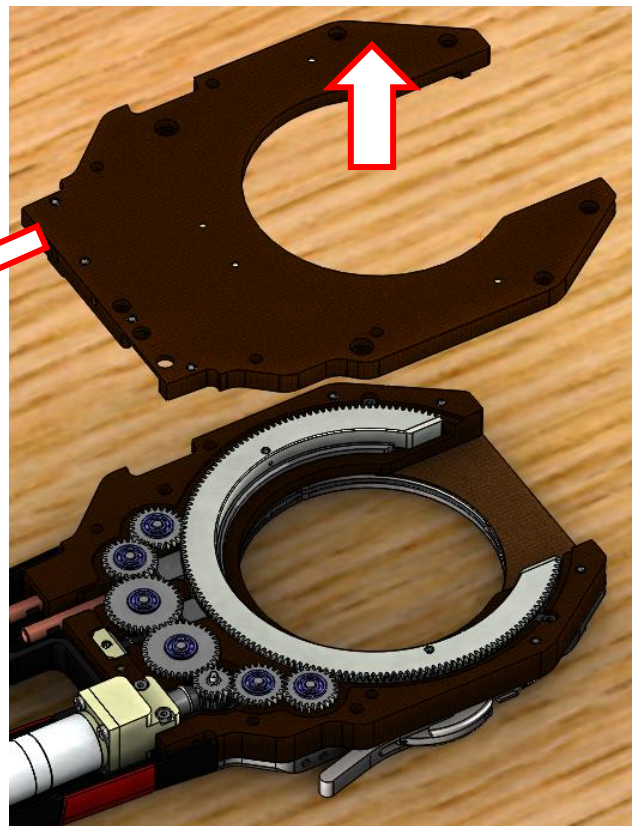
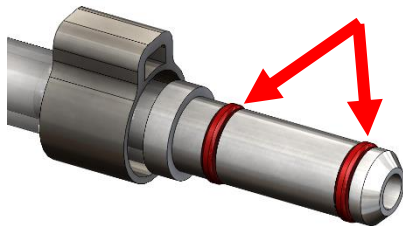
Remove the 7 fixing screws from the front of the insulator and remove the part.
ATTENTION, the gas unit is sheathed in this piece. Remove the gas fitting carefully in the bore axis to avoid damaging the 2 seals.



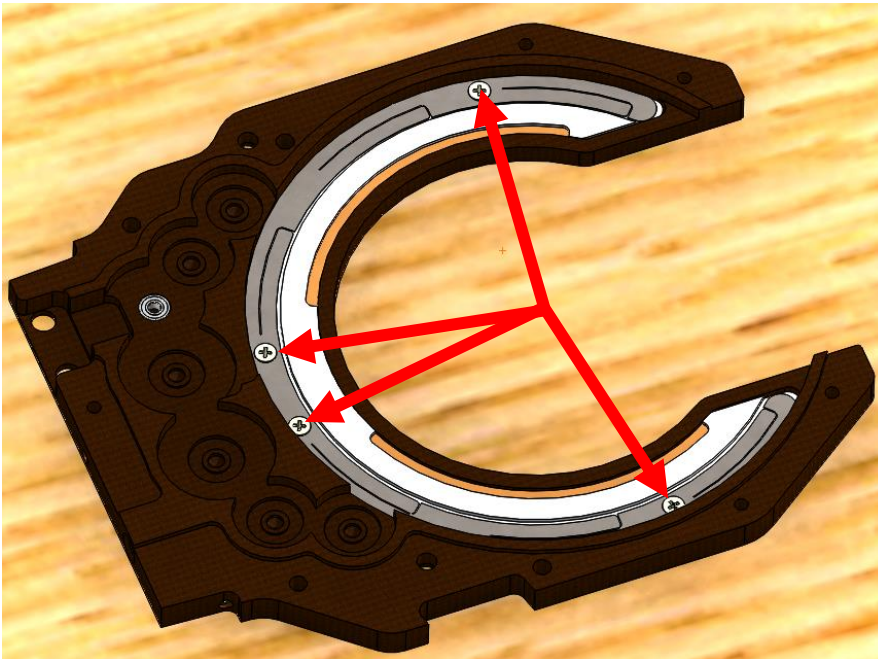
For reassembling, first install the two shouldered screws, then fix the standard screws.

Gas cable connection

When reassembling, if the seals have notches, they should be replaced with those provided in the accessory kit.



On the front part which has already been removed, remove the 4 PEEK screws, then disassemble the spring, the gas diffuser, as well as the two porous parts.

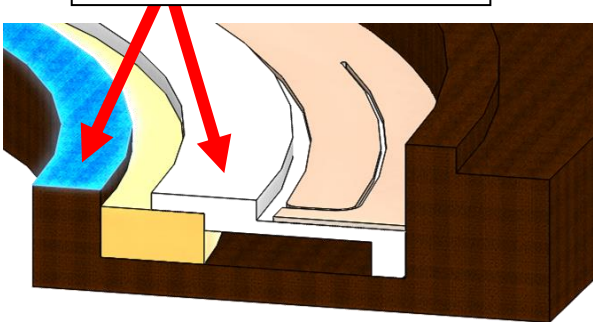
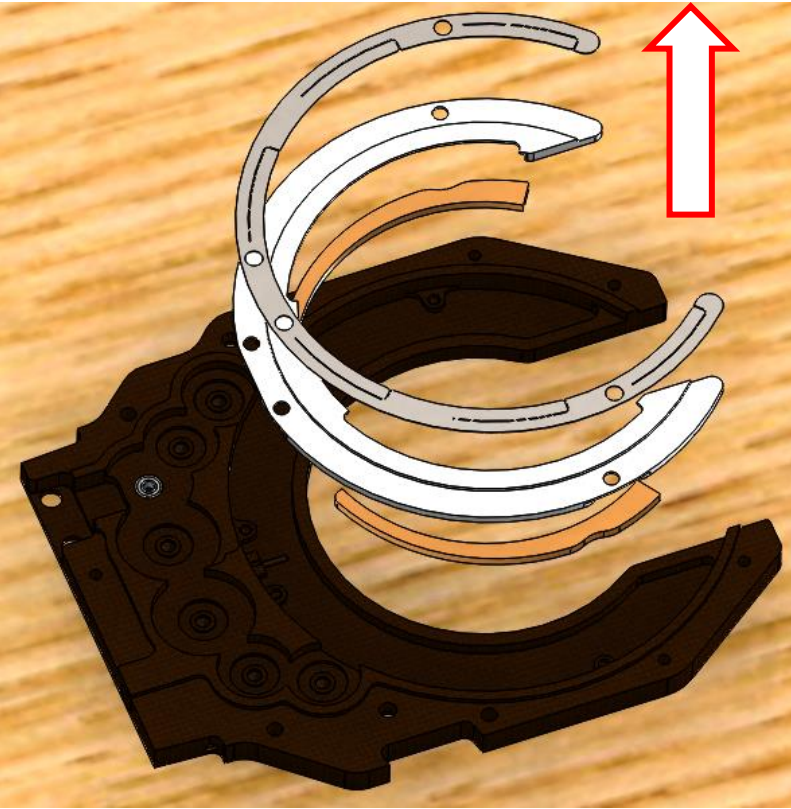


When reassembling, moderately tighten the PEEK screws so as not to deform or break them. If necessary, 4 screws are provided in the machine accessory kit.

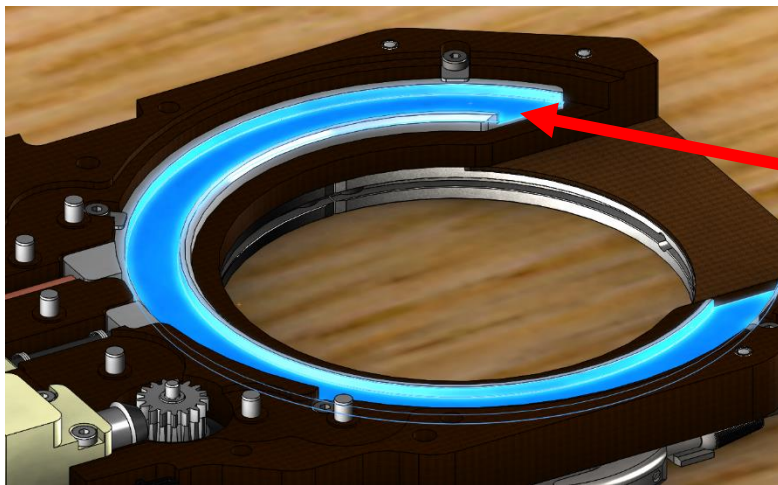
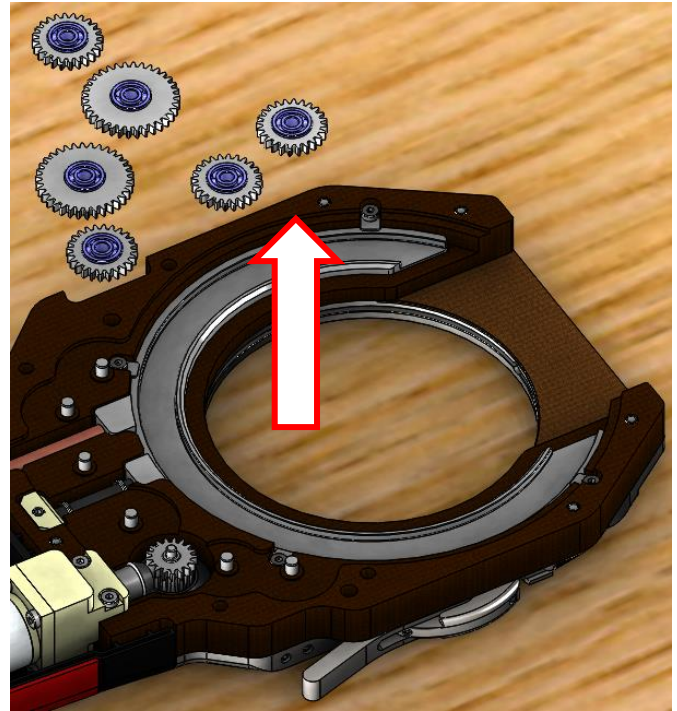
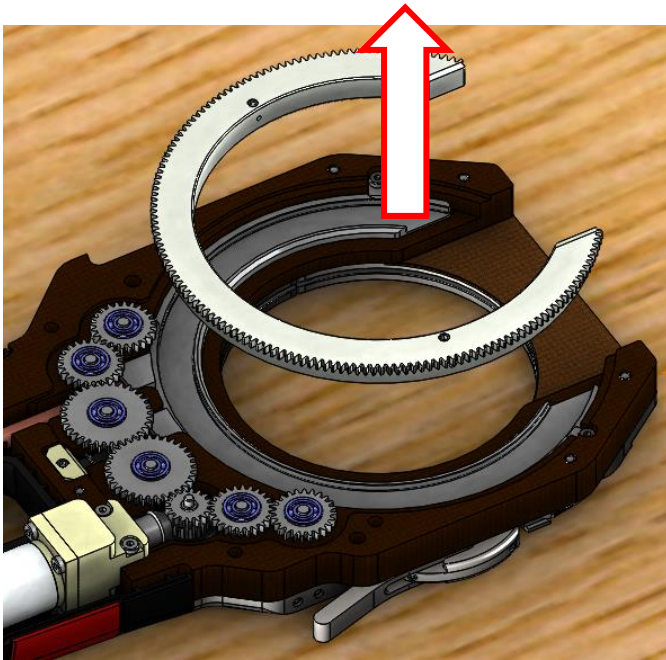
Clean the 2 drilled parts with a dry brush.

When reassembling, the aluminium part that holds the 2 drilled parts must not protrude from the internal surface of the insulator!!!

Areas to be compared, they must be aligned



Remove the rotor to clean it. Do the same for all pinions.



Clean the 3 blue surfaces of the rotor and rotor guide by following the steps below

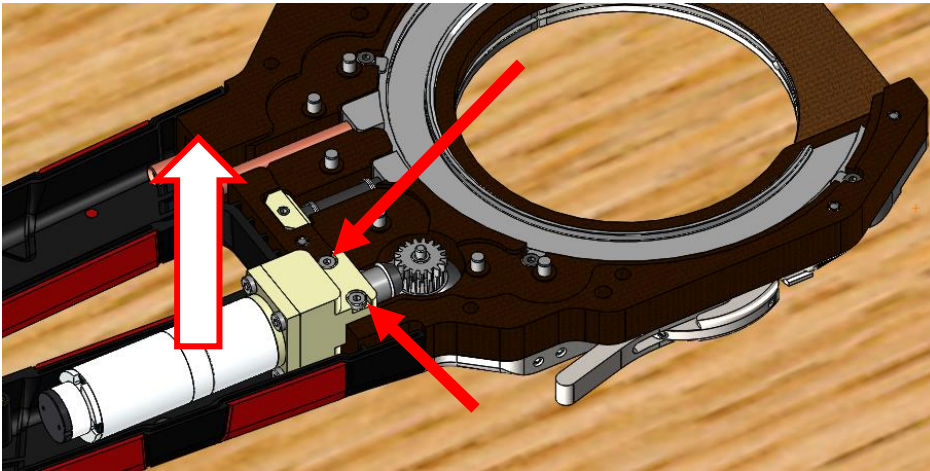
CAUTION, do not use abrasive tools to clean the parts!!!

Cleaning steps:

- Dust off these 2 parts.
- Clean them with a degreaser.
- Spray Electrolube SGB200D contact grease on a soft cloth and wipe it over the contact surfaces.
- Finish by wiping these surfaces with a clean part of the cloth.



Remove the 2 motor holding screws, then remove the motor and bevelled pinion.

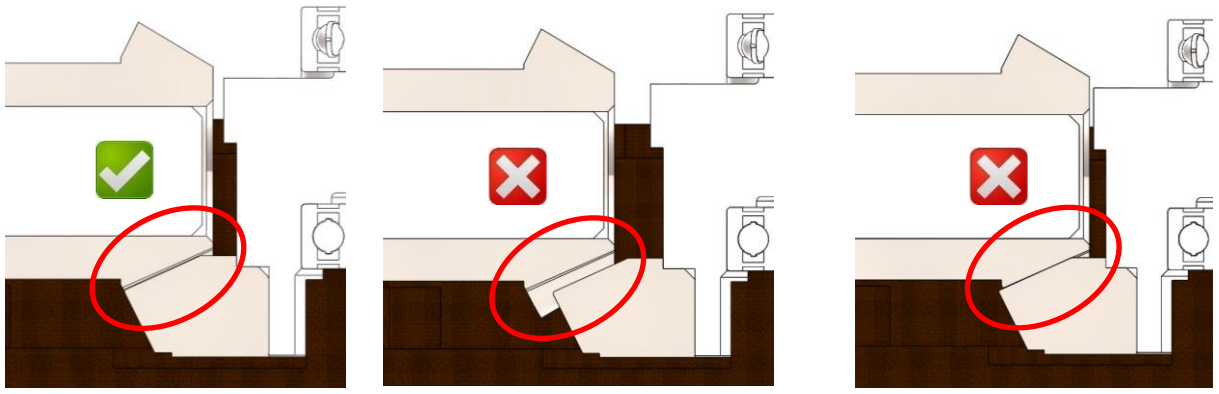
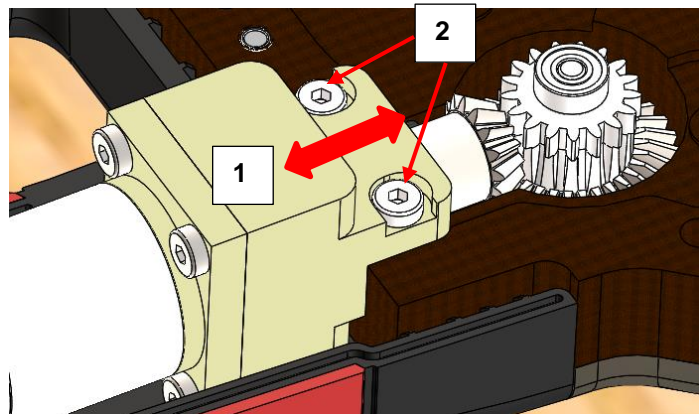


Clean all pinions and their housing in the insulating part, then reassemble the machine.



The reassembly operation is carried out by following the steps in the opposite direction to the disassembly.

When reassembling the motor, care must be taken to position it correctly. The conical gears must not be constrained (in the case of a motor that is too advanced) or too loose (in the case of a motor that is not sufficiently advanced).



WELDING GLASS REPLACEMENT PROCEDURE

This operation must be carried out flat on a clean workbench. This maintenance operation must be carried out conscientiously and in an orderly manner.

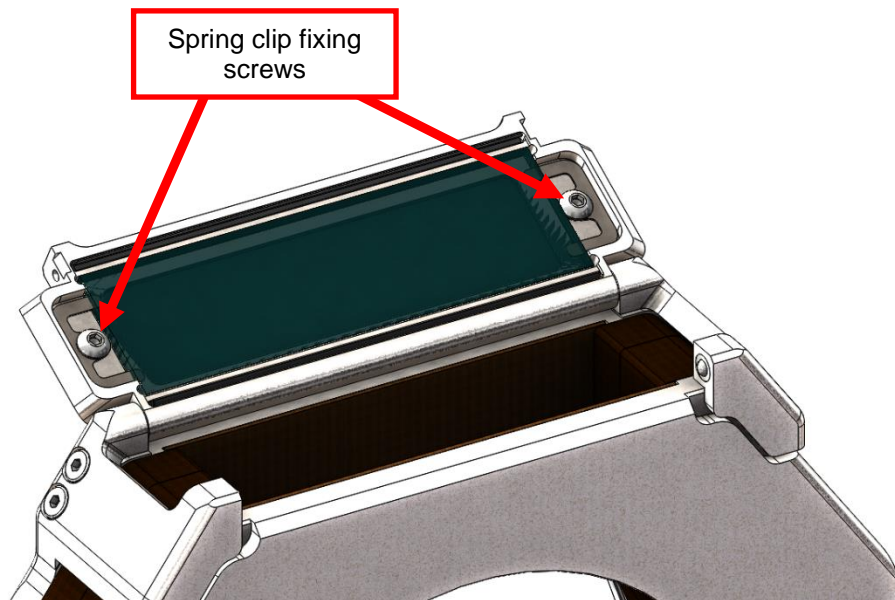
Before any maintenance work, the general power supply of the machine must be cut off, then disconnect the welding generator unit.

Tools required:

- 2.0mm BTR wrench

Using the 2.0mm BTR wrench, remove the two fixing screws from the spring clips, then remove the used or damaged welding glass.

Replace the glass, then replace the two clamps (be careful in the direction of assembly, the small bent ends must be pressed flat on the welding glass). Insert the screws on and tighten properly to hold the glass in place.



Notes/Notes/Aufzeichnung/Notas/Note/Notas

Lined writing area with a faint world map background and a curved white graphic element.



Déclaration de conformité

AXXAIR SAS

330B Route de Portes les Valence
26800 – Etoile Sur Rhône, France
Standard : +33 (0)4 75 57 50 70

Déclaration de conformité
Declaration of conformity
EG-Konformitätserklärung
Declaración de conformidad
Dichiarazione di conformità



produit suivant: The following product: Die Bauart der Maschine: El producto siguiente: Il seguente prodotto:	<p>SATFX-XXX ORBITAL WELDING HEAD INCLUDING POWER SOURCE Including all compatible accessories.</p>	Année : Year : Baujahr : Año :Anno :
		<p>2020</p>
Numéro de série: Series number: Seriennummer: Número de serie: Numero di serie:		

<p>Déclare que le produit désigné ci-dessus est conforme aux dispositions des directives : et aux réglementations nationales les transposant. Declare that the product specified above is in accordance with the provisions of directives: and to national regulations transposing it. Erklärt, dass die vorstehend beschriebenen Produkt entsprechen den Bestimmungen der Richtlinien : und dazu gehörigen nationalen Vorschriften. Declara que el producto designado arriba se ajusta a la disposiciones de las directivas : y reglamentos nacionales las transponen. Dichiara che il prodotto designato sopra è conforme alle disposizioni delle direttive : è alle normative nazionali che le recepsiono.</p>	<p>2006/42/CE 2014/35/UE 2014/30/UE</p>
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Personne autorisée à constituer le dossier technique : Person authorised to compile the technical file: Bevollmächtigte Person für die Zusammenstellung der technischen Unterlagen: Persona facultada para compilar el expediente técnico: Persona autorizzata a costituire il Fascicolo Tecnico:	Luc MALRIC AXXAIR 26800 – Etoile Sur Rhône, France
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A Etoile Sur Rhône
Le 01/09/2020

M. LEGRAND
PDG / CEO



AXXAIR SAS

330B Route de Portes les Valence
26800 – Etoile Sur Rhône, France
Standard : +33 (0)4 75 57 50 70

Déclaration de conformité
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produit suivant: The following product: Die Bauart der Maschine: El producto siguiente: Il seguente prodotto:	SATFX-XXX ORBITAL WELDING HEAD INCLUDING POWER SOURCE Including all compatible accessories.	Année : Year : Baujahr : Año :Anno :
		2021
Numéro de série: Series number: Seriennummer: Número de serie: Numero di serie:		

Déclare que le produit désigné ci-dessus est conforme aux dispositions des directives : et aux réglementations nationales les transposant. Declare that the product specified above is in accordance with the provisions of directives: and to national regulations transposing it. Erklärt, dass die vorstehend beschriebenen Produkt entsprechen den Bestimmungen der Richtlinien : und dazu gehörigen nationalen Vorschriften. Declara que el producto designado arriba se ajusta a la disposiciones de las directivas : y reglamentos nacionales las transponen. Dichiara che il prodotto designato sopra è conforme alle disposizioni delle direttive : è alle normative nazionali che le recepsiono.	Supply of Machinery (Safety) Regulations 2008 Electrical Equipment (Safety) Regulations 2016 Electromagne tic Compatibility Regulations 2016
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Personne autorisée à constituer le dossier technique : Person authorised to compile the technical file: Bevollmächtigte Person für die Zusammenstellung der technischen Unterlagen: Persona facultada para compilar el expediente técnico: Persona autorizzata a costituire il Fascicolo Tecnico:	Luc MALRIC AXXAIR 26800 – Etoile Sur Rhône, France
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A Etoile Sur Rhône
Le 21/07/2021

M. LEGRAND
PDG / CEO



Orbital welding (Closed heads) - Accessories (Elbow Flanges)



AXXAIR
INNOVATIVE ORBITAL SOLUTIONS

OD mm	R mm	SATFX-52	SATFX-76	SATFX-115	SSEDX
6	19	21AAA00-19A	31AAA00-19A		✓
12	26	21ACI00-26A	31ACI00-26A	41ACI00-26A	✓
12,7	19,05	21ACP00-19,05A	31ACP00-19,05A	41ACP00-19,05A	✓
12,7	28,58	21ACP00-28,58A	31ACP00-28,58A	41ACP00-28,58A	✓
12,7	304,8	21ACP00-304,8	31ACP00-304,8	41ACP00-304,8	
13	26	21ACS00-26A	31ACS00-26A	41ACS00-26A	✓
13,5	20	21ACX00-20A	31ACX00-20A	41ACX00-20A	✓
13,5	21	21ACX00-21A	31ACX00-21A	41ACX00-21A	✓
13,7	20	21ACZ00-20A	31ACZ00-20A	41ACZ00-20A	✓
17,2	25	21AEI00-25A	31AEI00-25A	41AEI00-25A	✓
17,2	30	21AEI00-30A	31AEI00-30A	41AEI00-30A	✓
17,3	37,5	21AEJ00-37,5	31AEJ00-37,5	41AEJ00-37,5	
18	23	21AEQ00-23A	31AEQ00-23A	41AEQ00-23A	✓
18	27	21AEQ00-27A	31AEQ00-27A	41AEQ00-27A	✓
18	35	21AEQ00-35	31AEQ00-35	41AEQ00-35	
19	35	21AFA00-35	31AFA00-35	41AFA00-35	
19,05	28,6	21AFA01-28,6A	31AFA01-28,6A	41AFA01-28,6A	✓
19,05	304,8	21AFA01-304,8	31AFA01-304,8	41AFA01-304,8	
20	26	21AFK00-26A	31AFK00-26A	41AFK00-26A	✓
20	30	21AFK00-30A	31AFK00-30A	41AFK00-30A	✓
21	25	21AFU00-25A	31AFU00-25A	41AFU00-25A	✓
21,3	28	21AFX00-28A	31AFX00-28A	41AFX00-28A	✓
21,3	27	21AFX00-27A	31AFX00-27A	41AFX00-27A	✓
21,3	31,95	21AFX00-31,95A	31AFX00-31,95A	41AFX00-31,95A	✓
21,3	38	21AFX00-38	31AFX00-38	41AFX00-38	
21,3	38,1	21AFX00-38,1	31AFX00-38,1	41AFX00-38,1	
21,3	45	21AFX00-45	31AFX00-45	41AFX00-45	
21,7	38,1	21AGB00-38,1	31AGB00-38,1	41AGB00-38,1	
22	40	21AGE00-40	31AGE00-40	41AGE00-40	
23	26	21AGO00-26A	31AGO00-26A	41AGO00-26A	✓
23	30	21AGO00-30A	31AGO00-30A	41AGO00-30A	✓
23	34,5	21AGO00-34,5	31AGO00-34,5	41AGO00-34,5	
23	40	21AGO00-40	31AGO00-40	41AGO00-40	
23	60	21AGO00-60	31AGO00-60	41AGO00-60	
25	30	21AHI00-30A	31AHI00-30A	41AHI00-30A	✓
25	33	21AHI00-33A	31AHI00-33A	41AHI00-33A	✓
25	37	21AHI00-37	31AHI00-37	41AHI00-37	
25	37,5	21AHI00-37,5	31AHI00-37,5	41AHI00-37,5	
25	38	21AHI00-38	31AHI00-38	41AHI00-38	
25	38,1	21AHI00-38,1	31AHI00-38,1	41AHI00-38,1	
25	65	21AHI00-65	31AHI00-65	41AHI00-65	
25,4	27,5	21AHM00-27,5A	31AHM00-27,5A	41AHM00-27,5A	✓
25,4	35	21AHM00-35A	31AHM00-35A	41AHM00-35A	✓
25,4	38,1	21AHM00-38,1	31AHM00-38,1	41AHM00-38,1	
25,4	52,37	21AHM00-52,37	31AHM00-52,37	41AHM00-52,37	
25,4	304,8	21AHM00-304,8	31AHM00-304,8	41AHM00-304,8	
25,4	609,6	21AHM00-609,6	31AHM00-609,6	41AHM00-609,6	
26	30	21AHS00-30A	31AHS00-30A	41AHS00-30A	✓
26,7	28	21AHZ00-28A	31AHZ00-28A	41AHZ00-28A	✓
26,7	28,6	21AHZ00-28,6A	31AHZ00-28,6A	41AHZ00-28,6A	✓
26,7	38	21AHZ00-38	31AHZ00-38	41AHZ00-38	
26,7	38,1	21AHZ00-38,1	31AHZ00-38,1	41AHZ00-38,1	

Orbital welding (Closed heads) - Accessories (Elbow Flanges)



AXXAIR
INNOVATIVE ORBITAL SOLUTIONS

OD mm	R mm	SATFX-52	SATFX-76	SATFX-115	SSEDX
26,9	28	21AIB00-28A	31AIB00-28A	41AIB00-28A	✓
26,9	28,5	21AIB00-28,5A	31AIB00-28,5A	41AIB00-28,5A	✓
26,9	29	21AIB00-29A	31AIB00-29A	41AIB00-29A	✓
26,9	40,35	21AIB00-40,35	31AIB00-40,35	41AIB00-40,35	
26,9	57	21AIB00-57	31AIB00-57	41AIB00-57	
27,2	28,6	21AIE00-28,6A	31AIE00-28,6A	41AIE00-28,6A	✓
27,2	38,1	21AIE00-38,1	31AIE00-38,1	41AIE00-38,1	
28	31,8	21AIM00-31,8A	31AIM00-31,8A	41AIM00-31,8A	✓
28	37	21AIM00-37	31AIM00-37	41AIM00-37	
28	42	21AIM00-42	31AIM00-42	41AIM00-42	
28	50	21AIM00-50	31AIM00-50	41AIM00-50	
28	80	21AIM00-80	31AIM00-80	41AIM00-80	
29	50	21AIW00-50	31AIW00-50	41AIW00-50	
30	33,5	21AJG00-33,5A	31AJG00-33,5A	41AJG00-33,5A	✓
30	38	21AJG00-38	31AJG00-38	41AJG00-38	
30	45	21AJG00-45	31AJG00-45	41AJG00-45	
31,75	47,63	21AJX01-47,63	31AJX01-47,63	41AJX01-47,63	
32	35	21AKA00-35A	31AKA00-35A	41AKA00-35A	✓
32	43	21AKA00-43	31AKA00-43	41AKA00-43	
32	48	21AKA00-48	31AKA00-48	41AKA00-48	
33	45	21AKK00-45	31AKK00-45	41AKK00-45	
33	49,5	21AKK00-49,5	31AKK00-49,5	41AKK00-49,5	
33	90	21AKK00-90	31AKK00-90	41AKK00-90	
33,4	25,4				
33,4	38,1	21AKO00-38,1A	31AKO00-38,1A	41AKO00-38,1A	✓
33,4	38	21AKO00-38A	31AKO00-38A	41AKO00-38A	✓
33,7	38	21AKR00-38A	31AKR00-38A	41AKR00-38A	✓
33,7	50,55	21AKR00-50,55	31AKR00-50,55	41AKR00-50,55	
33,7	72	21AKR00-72	31AKR00-72	41AKR00-72	
34	38,1	21AKU00-38,1A	31AKU00-38,1A	41AKU00-38,1A	✓
34	51	21AKU00-51	31AKU00-51	41AKU00-51	
34	55	21AKU00-55	31AKU00-55	41AKU00-55	
35	50	21ALE00-50	31ALE00-50	41ALE00-50	
35	52,5	21ALE00-52,5	31ALE00-52,5	41ALE00-52,5	
35	55	21ALE00-55	31ALE00-55	41ALE00-55	
38	45	21AMI00-45	31AMI00-45	41AMI00-45	
38	52	21AMI00-52	31AMI00-52	41AMI00-52	
38	56	21AMI00-56	31AMI00-56	41AMI00-56	
38	57	21AMI00-57	31AMI00-57	41AMI00-57	
38	57,2	21AMI00-57,2	31AMI00-57,2	41AMI00-57,2	
38	105	21AMI00-105	31AMI00-105	41AMI00-105	
38,1	45	21AMJ00-45	31AMJ00-45	41AMJ00-45	
38,1	50	21AMJ00-50	31AMJ00-50	41AMJ00-50	
38,1	57,2	21AMJ00-57,2	31AMJ00-57,2	41AMJ00-57,2	
38,1	57,3	21AMJ00-57,3	31AMJ00-57,3	41AMJ00-57,3	
38,1	74,6	21AMJ00-74,6	31AMJ00-74,6	41AMJ00-74,6	
38,1	304,8	21AMJ00-304,8	31AMJ00-304,8	41AMJ00-304,8	
38,1	457,2	21AMJ00-457,2	31AMJ00-457,2	41AMJ00-457,2	
38,1	609,6	21AMJ00-609,6	31AMJ00-609,6	41AMJ00-609,6	
38,1	914,4	21AMJ00-914,4	31AMJ00-914,4	41AMJ00-914,4	
40	60	21ANC00-60	31ANC00-60	41ANC00-60	
41	60	21ANM00-60	31ANM00-60	41ANM00-60	



Orbital welding (Closed heads) - Accessories (Elbow Flanges)



AXXAIR
INNOVATIVE ORBITAL SOLUTIONS

OD mm	R mm	SATFX-52	SATFX-76	SATFX-115	SSEDX
42,1	31,8				
42,2	31,8				
42,2	47	21ANY00-47	31ANY00-47	41ANY00-47	
42,2	47,6	21ANY00-47,6	31ANY00-47,6	41ANY00-47,6	
42,4	47	21AOA00-47	31AOA00-47	41AOA00-47	
42,4	47,6	21AOA00-47,6	31AOA00-47,6	41AOA00-47,6	
42,4	48	21AOA00-48	31AOA00-48	41AOA00-48	
42,4	63,6	21AOA00-63,6	31AOA00-63,6	41AOA00-63,6	
42,4	93	21AOA00-93	31AOA00-93	41AOA00-93	
43	64,5	21AOG00-64,5	31AOG00-64,5	41AOG00-64,5	
43	70	21AOG00-70	31AOG00-70	41AOG00-70	
43	120	21AOG00-120	31AOG00-120	41AOG00-120	
44,5	51	21AOV00-51	31AOV00-51	41AOV00-51	
44,5	64,5	21AOV00-64,5	31AOV00-64,5	41AOV00-64,5	
44,5	66	21AOV00-66	31AOV00-66	41AOV00-66	
44,5	120	21AOV00-120	31AOV00-120	41AOV00-120	
48,1	38,1	21AQF00-38,1A	31AQF00-38,1A	41AQF00-38,1A	✓
48,3	38,1	21AQH00-38,1A	31AQH00-38,1A	41AQH00-38,1A	✓
48,3	57	21AQH00-57	31AQH00-57	41AQH00-57	
48,3	57,1	21AQH00-57,1	31AQH00-57,1	41AQH00-57,1	
48,3	57,2	21AQH00-57,2	31AQH00-57,2	41AQH00-57,2	
48,3	64,15	21AQH00-64,15	31AQH00-64,15	41AQH00-64,15	
48,3	72,45	21AQH00-72,45	31AQH00-72,45	41AQH00-72,45	
48,3	108	21AQH00-108	31AQH00-108	41AQH00-108	
48,6	57,2	21AQK00-57,2	31AQK00-57,2	41AQK00-57,2	
50	75	21AQY00-75	31AQY00-75	41AQY00-75	
50,8	60	21ARG00-60	31ARG00-60	41ARG00-60	
50,8	67,5	21ARG00-67,5	31ARG00-67,5	41ARG00-67,5	
50,8	76,2	21ARG00-76,2	31ARG00-76,2	41ARG00-76,2	
50,8	103,17	21ARG00-103,17	31ARG00-103,17	41ARG00-103,17	
50,8	304,8	21ARG00-304,8	31ARG00-304,8	41ARG00-304,8	
50,8	457,2	21ARG00-457,2	31ARG00-457,2	41ARG00-457,2	
50,8	609,6	21ARG00-609,6	31ARG00-609,6	41ARG00-609,6	
50,8	914,4	21ARG00-914,4	31ARG00-914,4	41ARG00-914,4	
50,8	1219,2	21ARG00-1219,2	31ARG00-1219,2	41ARG00-1219,2	
51	51		31ARI00-51	41ARI00-51	
51	67,5	21ARI00-67,5	31ARI00-67,5	41ARI00-67,5	
51	75	21ARI00-75	31ARI00-75	41ARI00-75	
51	76	21ARI00-76	31ARI00-76	41ARI00-76	
51	76,2	21ARI00-76,2	31ARI00-76,2	41ARI00-76,2	
51	76,5	21ARI00-76,5	31ARI00-76,5	41ARI00-76,5	
52	69	21ARS00-69	31ARS00-69	41ARS00-69	
52	70	21ARS00-70	31ARS00-70	41ARS00-70	
52	75	21ARS00-75	31ARS00-75	41ARS00-75	
52	78	21ARS00-78	31ARS00-78	41ARS00-778	
53	70		31ASC00-70	41ASC00-70	
53	75		31ASC00-75	41ASC00-75	
53	79,5		31ASC00-79,5	41ASC00-79,5	
53	150		31ASC00-150	41ASC00-150	
54	54		31ASM00-54	41ASM00-54	
54	68,5		31ASM00-68,5	41ASM00-68,5	
54	70		31ASM00-70	41ASM00-70	

Orbital welding (Closed heads) - Accessories (Elbow Flanges)



AXXAIR
INNOVATIVE ORBITAL SOLUTIONS

OD mm	R mm	SATFX-52	SATFX-76	SATFX-115	SSEDX
54	75		31ASM00-75	41ASM00-75	
54	150		31ASM00-150	41ASM00-150	
56	77		31ATG00-77	41ATG00-77	
60,3	50,8		31AUX00-50,8A	41AUX00-50,8A	✓
60,3	76		31AUX00-76	41AUX00-76	
60,3	76,1		31AUX00-76,1	41AUX00-76,1	
60,3	76,2		31AUX00-76,2	41AUX00-76,2	
60,3	80		31AUX00-80	41AUX00-80	
60,3	90,45		31AUX00-90,45	41AUX00-90,45	
60,3	135		31AUX00-135	41AUX00-135	
63	95		31AVY00-95	41AVY00-95	
63,5	82,5		31AWD00-82,5	41AWD00-82,5	
63,5	90		31AWD00-90	41AWD00-90	
63,5	94,5		31AWD00-94,5	41AWD00-94,5	
63,5	95,25		31AWD00-95,25	41AWD00-95,25	
63,5	131,75		31AWD00-131,75	41AWD00-131,75	
63,5	304,8		31AWD00-304,8	41AWD00-304,8	
63,5	457,2		31AWD00-457,2	41AWD00-457,2	
63,5	609,6		31AWD00-609,6	41AWD00-609,6	
63,5	914,4		31AWD00-914,4	41AWD00-914,4	
64	180		31AWI00-180	41AWI00-180	
70	80		31AYQ00-80	41AYQ00-80	
70	92		31AYQ00-92	41AYQ00-92	
70	95		31AYQ00-95	41AYQ00-95	
70	97,5		31AYQ00-97,5	41AYQ00-97,5	
70	105		31AYQ00-105	41AYQ00-105	
70	130		31AYQ00-130	41AYQ00-130	
71	97,5		31AZA00-97,5	41AZA00-97,5	
73	63,5		31AZU00-63,5	41AZU00-63,5	
73	95		31AZU00-95	41AZU00-95	
73	95,3		31AZU00-95,3	41AZU00-95,3	
73	109,5		31AZU00-109,5	41AZU00-109,5	
74	140		31BAE00-140	41BAE00-140	
76	114		31BAY00-114	41BAY00-114	
76,1	95		31BAZ00-95	41BAZ00-95	
76,1	96		31BAZ00-96	41BAZ00-96	
76,1	114		31BAZ00-114	41BAZ00-114	
76,1	114,15		31BAZ00-114,15	41BAZ00-114,15	
76,1	175		31BAZ00-175	41BAZ00-175	
76,2	114,3		31BBA00-114,3	41BBA00-114,3	
76,2	160,32		31BBA00-160,32	41BBA00-160,32	
76,2	304,8		31BBA00-304,8	41BBA00-304,8	
76,2	457,2		31BBA00-457,2	41BBA00-457,2	
76,2	609,6		31BBA00-609,6	41BBA00-609,6	
76,2	914,4		31BBA00-914,4	41BBA00-914,4	
76,2	1219,2		31BBA00-1219,2	41BBA00-1219,2	
76,3	82		31BBB00-82	41BBB00-82	
84	120			41BEA00-120	
84	126			41BEA00-126	
84	160			41BEA00-160	
85	90			41BEK00-90	
86	126			41BEU00-126	



Join **experience**



Orbital welding (Closed heads) - Accessories (Elbow Flanges)



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OD mm	R mm	SATFX-52	SATFX-76	SATFX-115	SSEDX
88,9	76,2			41BFX00-76,2	
88,9	114			41BFX00-114	
88,9	114,3			41BFX00-114,3	
88,9	114,5			41BFX00-114,5	
88,9	205			41BFX00-205	
101,6	88,9			41BKU00-88,9	
101,6	110			41BKU00-110	
101,6	133			41BKU00-133	
101,6	133,4			41BKU00-133,4	
101,6	133,5			41BKU00-133,5	
101,6	134,5			41BKU00-134,5	
101,6	150			41BKU00-150	
101,6	152			41BKU00-152	
101,6	152,4			41BKU00-152,4	
101,6	211,12			41BKU00-211,12	
101,6	304,8			41BKU00-304,8	
101,6	457,2			41BKU00-457,2	
101,6	609,6			41BKU00-609,6	
101,6	914,4			41BKU00-914,4	
101,6	1219,2			41BKU00-1219,2	
104	100			41BLS00-100	
104	110			41BLS00-110	
104	140			41BLS00-140	
104	150			41BLS00-150	
104	152			41BLS00-152	
104	200			41BLS00-200	
106	150			41BMM00-150	
108	142,5			41BNG00-142,5	
114,3	101,6			41BPR00-101,6	
114,3	152			41BPR00-152	
114,3	152,4			41BPR00-152,4	
114,3	152,5			41BPR00-152,5	
114,3	270			41BPR00-270	



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INNOVATIVE ORBITAL SOLUTIONS



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