

AXXAIR

INNOVATIVE ORBITAL SOLUTIONS

ORBITAL WELDING CLOSED HEAD SATFX-170



**WELDING
RANGE**

Ø 38 - 170 mm
(Ø 1.5" - 6")





Orbital welding : Closed heads

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

Orbital welding with a closed head is done by a **simple fusion without adding filler metal**. Consequently, these heads are recommended for welding **thin tubes of different grades of stainless steel** with thicknesses of less than 3 mm.

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

FLEXIBILITY, PRODUCTIVITY



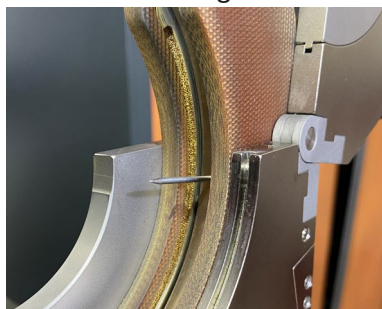
Productivity remains our top priority. The liquid cooling circuit has been optimized to allow for **greater heat evacuation** and thus:

- increases the service life of the SATFX
- guarantees a substantial welding output. The operating current at 100% is **100 A for SATFX 52-76-115 and 120A for SATFX-170.**



QUALITY AND REPEATABILITY

A homogeneous diffusion of the inert gas, high quality materials and special component processing, a grease-free operation, easy maintenance and cleaning plus numerous configurations make the SATFX range the ideal response to the requirements of high-tech industries.



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



The new SATFX heads have been designed to meet the needs of our customers who are often confronted with the most demanding welding specifications. The protective atmosphere provided by the closed heads permits welding in an inerting chamber. This results in **welds with very minimal discoloration and perfectly clean weld beads.**

This type of equipment is used in **industrial sectors sensitive to hygienic conditions** such as aeronautics, semi-conductors, pharmaceuticals as well as food and beverage processing.

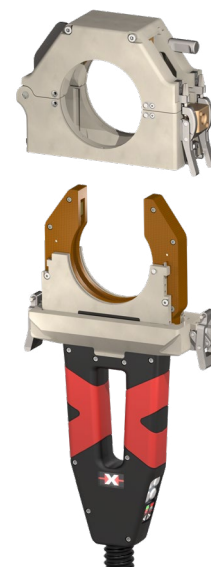
The narrow width of the head makes it ideal for construction sites where only a small amount of straight sections are in demand. However, these welding heads are also used in workshops and clean rooms.



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

INNOVATION : GLOBAL PROCESS 2 in 1

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



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

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

*except SATFX-170 **contact us for more information

NEW !**SATFX-170****AXXAIR**

INNOVATIVE ORBITAL SOLUTIONS

General characteristics

- **Liquid cooling** of the machine
- Operating **without grease**: compatible with clean room standards
- **Direct gas supply** with an optimized gas diffusion system
Max flow rate: 60l/min

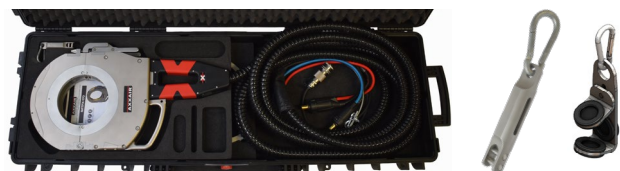
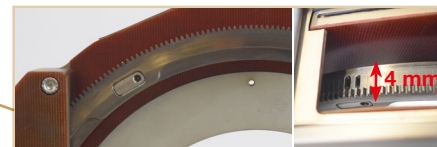


Standards jaws in Aluminum

2 ergonomic handles which facilitate the handling and the positioning of the machine on the assembly to be welded

Delivered in a shockproof case

Waterproof and dustproof, with a cable support and a shutter handling tool.

2 pivoting windows with **welding glass** (grade 10)**Integrated electrode offset adjustment**

Adjustable force clamping system to ensure a consistent clamping of the machine on the assembly to be welded

**Stainless steel remote control:** Start/stop, gas and electrode rotation

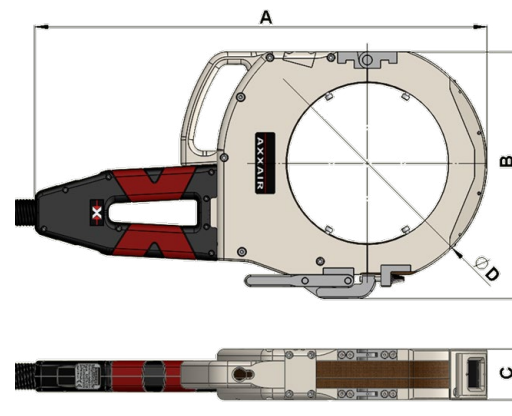
Illuminated logo: Shows status of the machine

8 meters cable

Maintenance and cleaning : 3 Allen keys allow the machine to be disassembled to clean the interior, without having to empty the head's coolant circuit. An easy and direct access to the gear system allows a simplified cleaning.

Technical characteristics

Product code	SATFX-170
Description	Closed head with liquid cooling and 8 m cable for SAXX welding power sources
Tube diameter (min - max)	ø 38 - ø 170 mm (1.5" - 6")
Weight with cable	14.5 kg
Dimensions (AxBxC)	548 x 299 x 61.3 mm
Dimensions D	ø 290 mm
100% duty cycle	120 A
Maximum welding current	150 A



Accessories



Standards jaws aluminium
(thick.14mm), 4 half shells



Adaptation spacers
aluminium - thick.14mm
4 half shells



Clamping jaws

Clamping jaws are machined to the outside diameter of the tube.

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

For machine	Type of jaws	Product code	Net weight	Packaging (plastic)
SATFX-170	Standard aluminium jaws	SMN170-xx	Depending on the tube \varnothing	20 x 20 x 4 cm

Clamping jaws adaptation spacers

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

For machine	Jaws that you can use	Product code	Net weight	Packaging (plastic)
SATFX-170	SATFX-115	SMN170-ET115	1.130 kg	20 x 20 x 4 cm

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

Machine support

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

Product Code	Description	Net weight	Packaging (in cm)
SATFX-170- SUP	Machine support for SATFX 170	2,75 kg	30 x 20 x 17

Cable extensions

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

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

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



Accessories

SATFX closed heads - Elbow Flanges



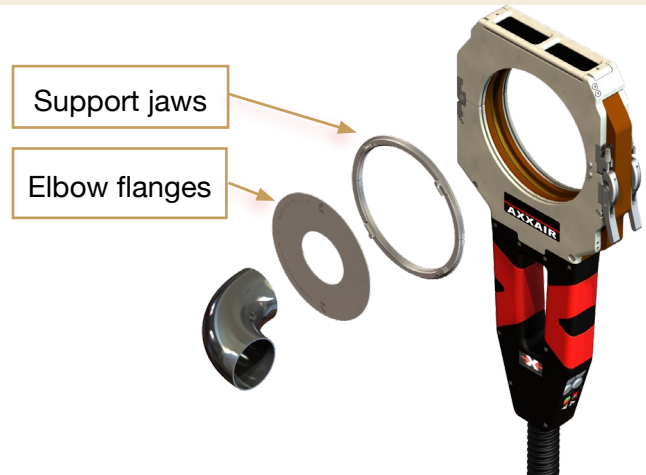
In order to fit various configurations of parts to be welded, AXXAIR offers flanges with a perfect shape for your elbows.

The use of these elbow flanges allows an optimized gas protection while avoiding the use of tape and the cleaning of the elbow after welding.

Use with SATFX 52 - 76 - 115 - 170

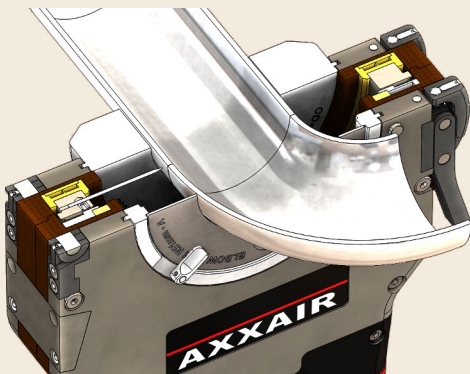
For welding your elbow-tube with a closed head, you will need:

- the specific elbow flange support jaws (2 half-shells) for your machine
- Elbow flanges (2 half-shells) for each outer diameter and radius of your elbow to be welded



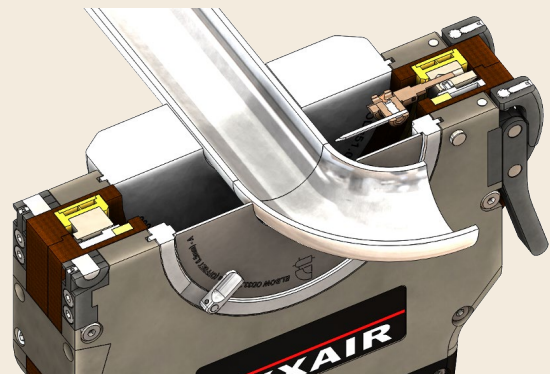
The use of the SSEDX offset electrode support may be required depending on the configuration of the elbow to be welded (in the following product code table, the SSEDX column shows whether the accessories is needed or not).

Standard configuration



Welding axis aligned with the machine

Configuration with offset electrode holder required



Offset welding axis with regards to the machine/head

See the following «accessories» part for more details on the SSEDX offset electrode holder.

Accessories

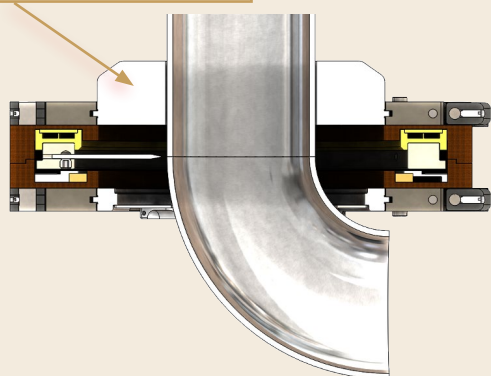
SATFX closed heads - Elbow Flanges



Tube end

It is recommended to use wide clamping jaws (2 half-shells) to ensure a better hold of the closed head on the tube-elbow to be welded and already tacked (SATFX 52 - 76 115 only).

Wide clamping jaws



Elbow end

The elbow flanges rotate in order to give flexibility and to fit perfectly your different configurations and welding postures.

Elbow flange rotation on their support



Elbow flange support, thickness 10.6 mm, stainless steel

A set of elbow flange support jaws is made of 2 thin half-shells.

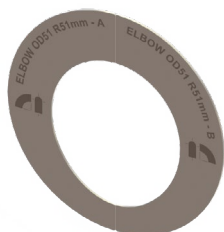


For Machine	Product Code	Net Weight	Packaging (plastic)
SATFX-170	SMN170-SFLAX	0.495 kg	20 x 20 x 4 cm

These jaws have to be used with elbow flanges depending on elbow to be welded dimensions (OD and radius)

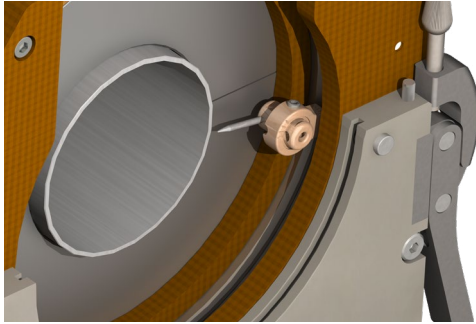
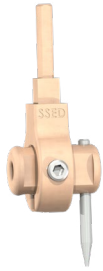
Elbow flanges, stainless steel

SATFX-170: accessory available, please contact us.



Accessories

for SATFX closed heads



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

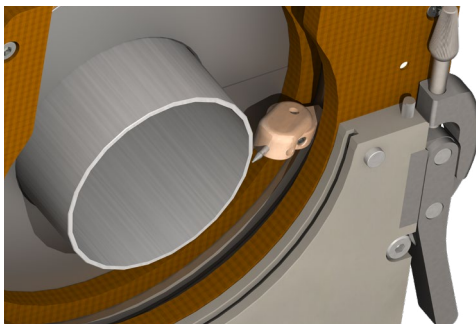
Offset electrode holder for $\varnothing 1.6$ mm and $\varnothing 2.4$ mm electrodes:

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

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

Machine	\varnothing min	\varnothing max
SATFX-170	38 mm	161,3 mm

See consumables to find the electrodes required for its use.



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

Inclined electrode holder for $\varnothing 1.6$ mm and $\varnothing 2.4$ mm electrodes:

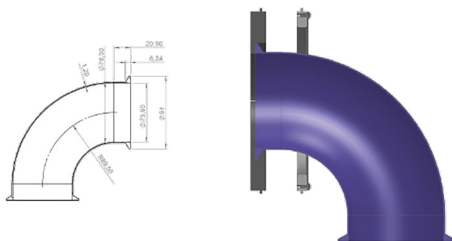
The SSEIX accessory allows the electrode to be tilted from 0° to 45° , which makes it possible to produce angle welds (flange welds or other accessories).

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

Machine	\varnothing min	\varnothing max
SATFX-170	38 mm	152 mm

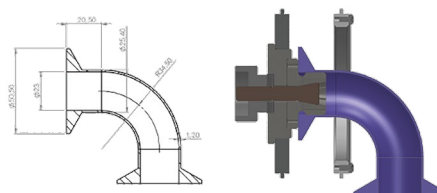
See consumables to find the electrodes required for its use.

Accessories on request



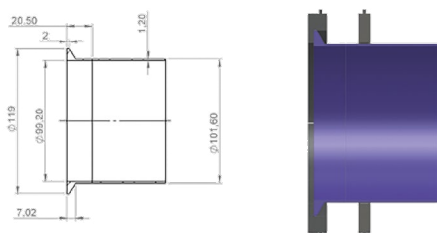
Ferrule – elbow – ferrule configuration (large diameter)

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



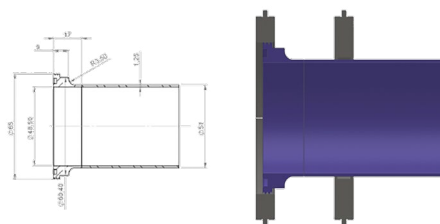
Ferrule – elbow – ferrule configuration (small diameter)

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



Tube – ferrule configuration

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



Tube – connector configuration

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

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



Consumables

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

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

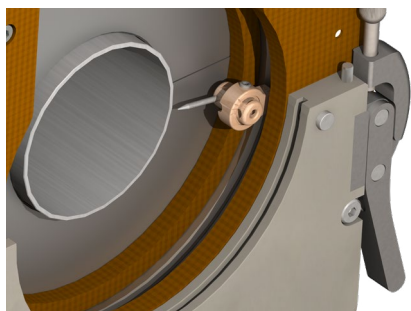


Electrodes for SATFX-170

Tube OD / ø of the Tube	Electrode Product Code ø1.6	Electrode Product Code ø2.4	Electrode length in mm
38 – 45 mm	SCE16-93.5	SCE24-93.5	93.5
45 – 52 mm	SCE16-90	SCE24-90	90
52 – 59 mm	SCE16-86.5	SCE24-86.5	86.5
59 – 66 mm	SCE16-83	SCE24-83	83
66 – 73 mm	SCE16-79.5	SCE24-79.5	79.5
73 – 80 mm	SCE16-76	SCE24-76	76
80 – 87 mm	SCE16-72.5	SCE24-72.5	72.5
87 – 94 mm	SCE16-69	SCE24-69	69
94 – 101 mm	SCE16-65.5	SCE24-65.5	65.5
101 – 108 mm	SCE16-62	SCE24-62	62
108 – 115 mm	SCE16-58.5	SCE24-58.5	58.5
115 – 122 mm	SCE16-55	SCE24-55	55.0
122 – 129 mm	SCE16-51.5	SCE24-51.5	51.5
129 – 136 mm	SCE16-48	SCE24-48	48.0
136 – 143 mm	SCE16-44.5	SCE24-44.5	44.5
143 – 150 mm	SCE16-41	SCE24-41	41.0
150 – 157 mm	SCE16-37.5	SCE24-37.5	37.5
157 – 164 mm	SCE16-34	SCE24-34	34.0
164 – 170 mm	SCE16-30.5	SCE24-30.5	30.5

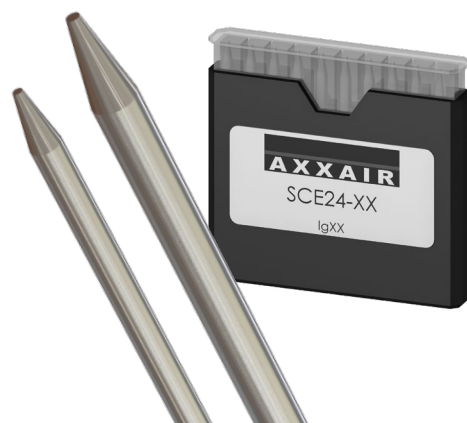
Consumables

Electrodes when using the accessory SSEDX



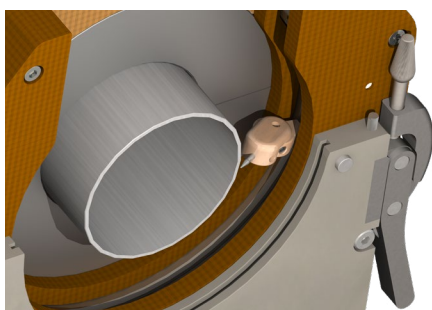
SSEDX: Offset electrode holder for $\varnothing 1.6$ mm and $\varnothing 2.4$ mm electrodes.

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



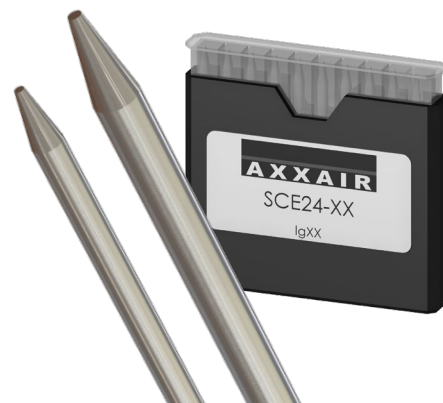
SATFX-170: Please contact us if you wish to use the offset electrode holder (SSEDX)

Electrodes when using the accessory SSEIX



SSEIX: Inclined electrode holder for $\varnothing 1.6$ mm and $\varnothing 2.4$ mm electrodes.

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



SATFX-170: Please contact us if you wish to use the inclined tungsten holder (SSEIX)



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OUR BRANDS

