

# Orbital welding : Tube-to-tube sheet



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

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

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



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

- Length of the tube in relation to the tube sheet (dressing operation)

- Centring of the tubes on the tube sheet:

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

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

## FLEXIBILITY, PRODUCTIVITY

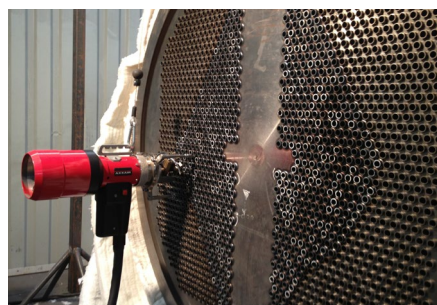
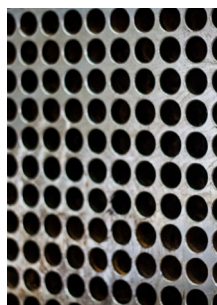
This head can weld in simple fusion or with the supply of wire. The wire feed is mounted on the head (1 kg reel) and rotates with the torch to ensure controlled wire output.

## QUALITY AND REPEATABILITY

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

## PORTABILITY

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



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

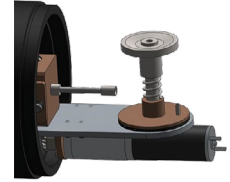
We will be glad to share our know-how with you and to devise a solution that best meets your needs!

# SATP-80X

## Water Cooled

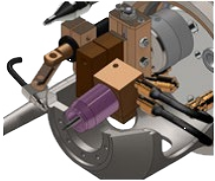


## Wire holder 1 kg



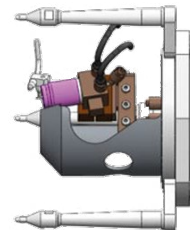
## Tilting head

Water cooled with tilting wire



## Positioning stops

Adjustable stops for better tube sheet stability



## Mandrel system

Concentric tightening from the inside of the tube

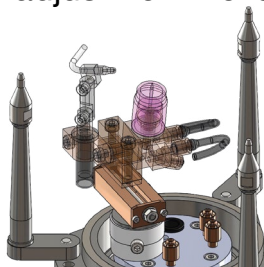


## Compatible with the SAXX power sources



## Flexibility

Head and wire adjustment trolley



## Electric motor with wire feed



## Welding range

SATP-80X	$\varnothing$ 10 - $\varnothing$ 80 mm 0.4 - 3 "
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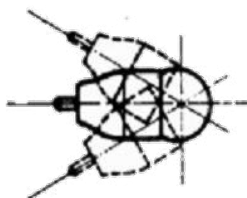
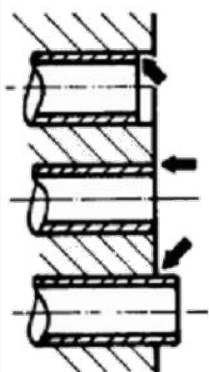
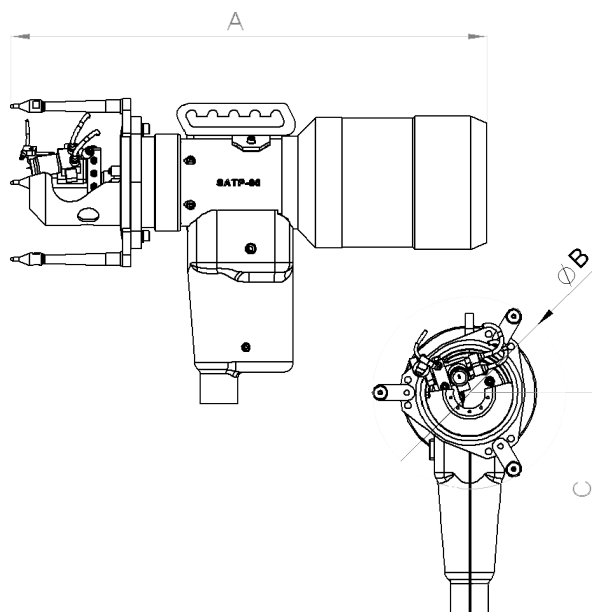
# SATP-80X

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



## Technical characteristics:

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



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

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