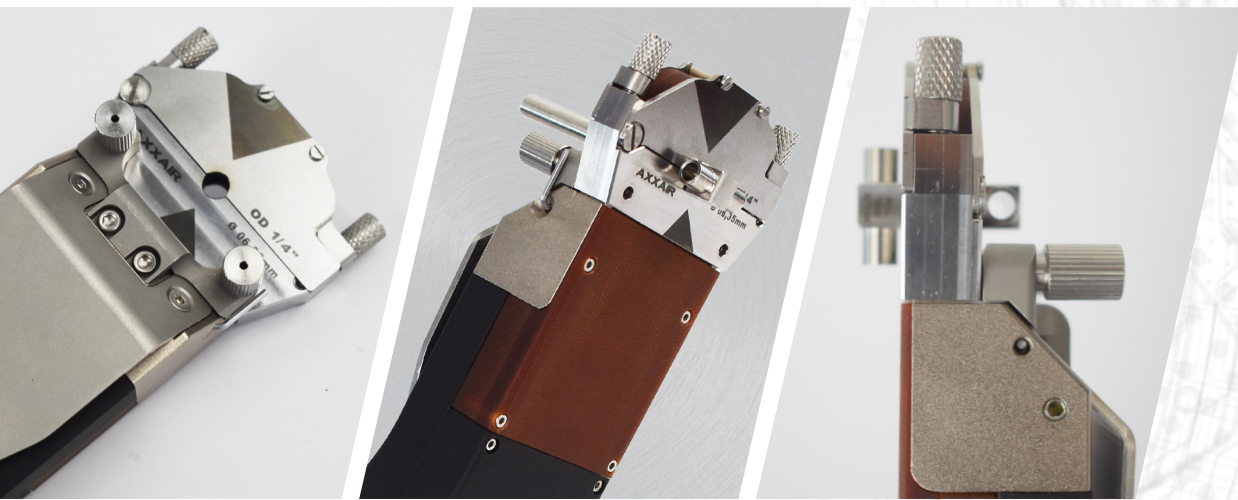


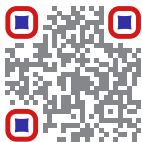
ORBITAL WELDING SOLUTIONS

MICROFIT CLOSED WELD HEAD X-500

0.118 - 0.5" o/d / 3 - 12.7 mm o/d



SCAN QR CODE
TO WATCH VIDEO



AN  GROUP BRAND

PRODUCT BROCHURE

www.AXXAIR.com



The **Specialized Fabrication Equipment Group** (in short: **S.F.E. Group**) was founded in 2019 after the merger of three world leading OEM's in the field of pipe fabrication tooling and machinery: B&B Pipe and Industrial Tools LLC (USA), Mathey Dearman Inc. (USA) and TAG Pipe Equipment Specialists (UK). In a time span of 5 years, another 4 renowned and market leading companies were acquired and added to the **S.F.E. Group** portfolio: Axxair (France, 2022), Magnatech (USA, 2023), Climax (USA, 2023) and Sumner (USA, 2025).

The vision and philosophy of the **S.F.E. Group** is to offer globally a comprehensive innovative and cost-effective range of specialized fabrication, welding and machining equipment and derived rental solutions, for a wide range of applications within all critical industries, while optimizing performance, efficiency and safety.

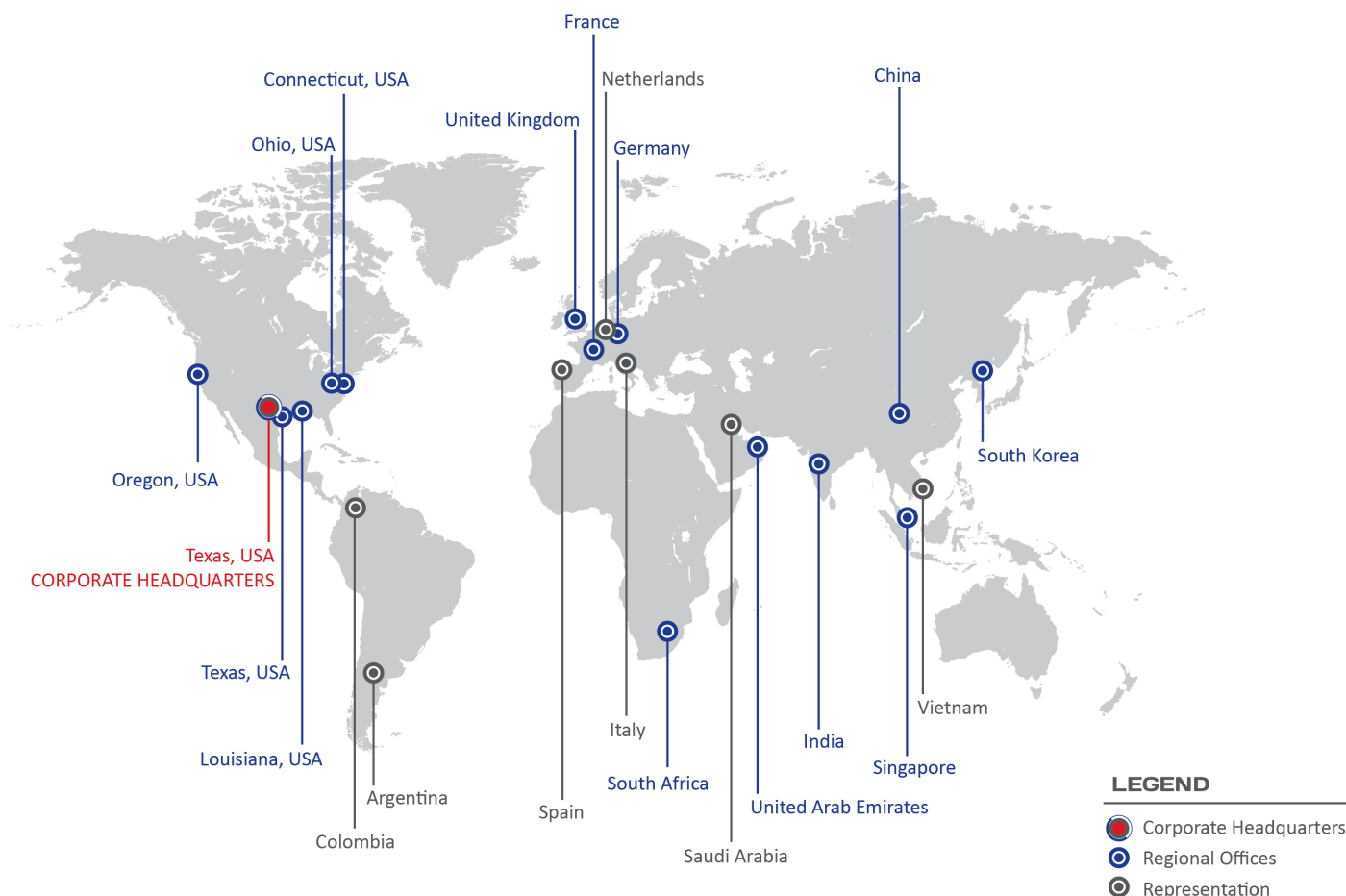
Leveraging over 200 years of combined experience in engineering, manufacturing, and field applications, the **S.F.E. Group** is committed to driving innovation. Through continuous product development and strategic acquisitions, the **S.F.E. Group** is actively growing its portfolio and expanding its global presence to meet the demands of industries around the world. Currently, the **S.F.E. Group** consists of 12 complimentary brands, each supporting the others in delivering cutting-edge solutions.

With offices and warehousing on 5 continents, 400+ employees and more than 500 partnerships and distributors worldwide, **S.F.E. Group** prides itself on consistently offering the highest standards of both product quality and service locally to all its customers.

S.F.E. Group looks forward to welcoming you into its global network as a partner, distributor or end user customer and remains at your disposal at any time.

Contact Americas: sales@sfe-brands.com
Contact International: sales-int@sfe-brands.com

S.F.E. GROUP GLOBAL PRESENCE





INTRODUCING AXXAIR



Originally founded in 1997, the brand **AXXAIR** encompasses within S.F.E. Group the overall tube working processes: orbital cutting, tube bevelling, squaring and orbital GTAW welding.

The **AXXAIR** brand has been in the global market for nearly 30 years and has established itself as a leading and international reference on the field of tube processing applications. **AXXAIR** offers innovative solutions to improve processes, productivity, efficiency and quality in the field of orbital cutting, bevelling and welding on a wide variety of different materials such as stainless steel, titanium, carbon steel, duplex and super duplex stainless steel, nickel alloys and even plastic.

Within the **AXXAIR** range S.F.E. Group not only offers a standard range of products, but also customized solutions for specific target markets: the food and beverage industry, aerospace, pharmaceuticals, the manufacturing of semi-conductors, aeronautics, chemical and petrochemical industry as well as the nuclear industry and many other possible areas of application.

The S.F.E. Group **AXXAIR** brand portfolio consists of a **complete range of orbital cutting machines** (0.25 - 40" / 5 - 1,016 mm o/d), **orbital bevelling machines** (0.6 - 12.75" / 15 - 328 mm o/d), **squaring machines** (0.1 - 8.5" / 3 - 220 mm o/d), as well as **welding machines: prefabrication welding solutions** (0.5 - 12.75" / 12 - 328 mm o/d), **SATO open heads** (0.4 - 8.625" / 10 - 220 mm o/d), **SATFX closed heads** (0.25 - 6.625" / 6 - 170 mm o/d), the **Microfit welding X- and SAMX-ranges** (0.118 - 1" / 3 - 25.4 mm o/d), and finally the **SATP tube to tube sheet** (0.47 - 3.23" / 12 - 82 mm o/d) application.

Being a patented manufacturer of orbital tube and pipe processing machines, **AXXAIR** is constantly exploring new concepts in the field of orbital tube cutting, pipe bevelling, and GTAW orbital welding.

AXXAIR products are always nearby available within the S.F.E. Group global network and can be consulted on the dedicated website: www.AXXAIR.com.

INDUSTRIES SERVED



AEROSPACE & AERONAUTICS



BIOTECHNOLOGY & LIFE SCIENCES



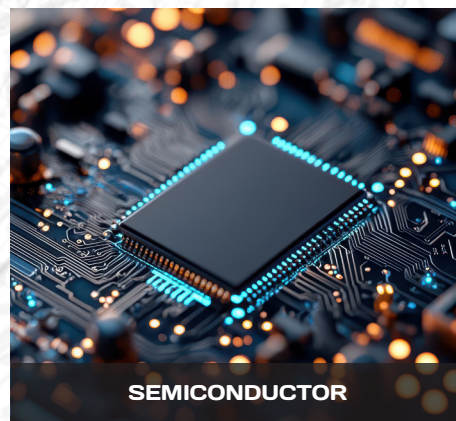
CHEMISTRY



FOOD & BEVERAGE



PHARMACEUTICAL



SEMICONDUCTOR

OUR BRANDS

CLIMAX



H&S TOOL



MAGNATECH



Our group policy is one of continuous improvements and acquisitions. Products and data tables are subject to change and may vary from those illustrated. Copyright © 2025 Specialized Fabrication Equipment Group, All rights reserved.



0.118 - 0.5" o/d / 3 - 12.7 mm o/d

- **Functions:** Orbital TIG
- **Materials:** Any kind of stainless steel and exotic alloys
- **Powered by the SAXX power source range**
(available in AMI compatible version with automatic calibration)

The extremely thin design of the X-500 weld head, the thinnest of all AXXAIR closed heads, is ideal for welding micro-fittings and tubes in tight spaces while ensuring precision and reliability in every weld, ideal for the semiconductor, aerospace and pharmaceutical industry.

The X-500 covers the size range of 0.118 - 0.5" / 3 - 12.7 mm o/d using diameter specific clamping cassettes. Air-cooled and water-cooled versions are available.

MAIN FEATURES

- **High level of performance:** up to 20 welds per hour for the air-cooled version and up to 30 welds per hour for the water-cooled version
- **Greaseless operation:** compatible with international cleanroom application and operational standards
- **Optimized gas diffusion:** welds with very limited coloration
- **Integrated remote control:** start/stop, gas and electrode rotation
- **Easy maintenance and cleaning of the rotor:** with an integrated tool in the machine body
- **Compact and light:** 12.3 lbs / 5.6 kg with 8 meters cable (26 ft)

NEW !

X-500 with cassette



QUICK SET UP OF THE CASSETTE

Thanks to the quick-fit cassette mounting system delivered with the machine



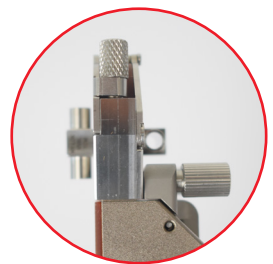
HOOK

Allows to hang the machine on different supports



SINGLE INTEGRATED TOOL

For disassembling the machine to clean the rotor, adjust/change the electrode



NARROW DESIGN

To weld microfittings or tubes with a straight length as short as 6.35 mm / 0.25"



CASSETTE HOLDER (INCLUDED WITH THE MACHINE)

Allows the cassette to be cooled and to center the first piece for the next weld

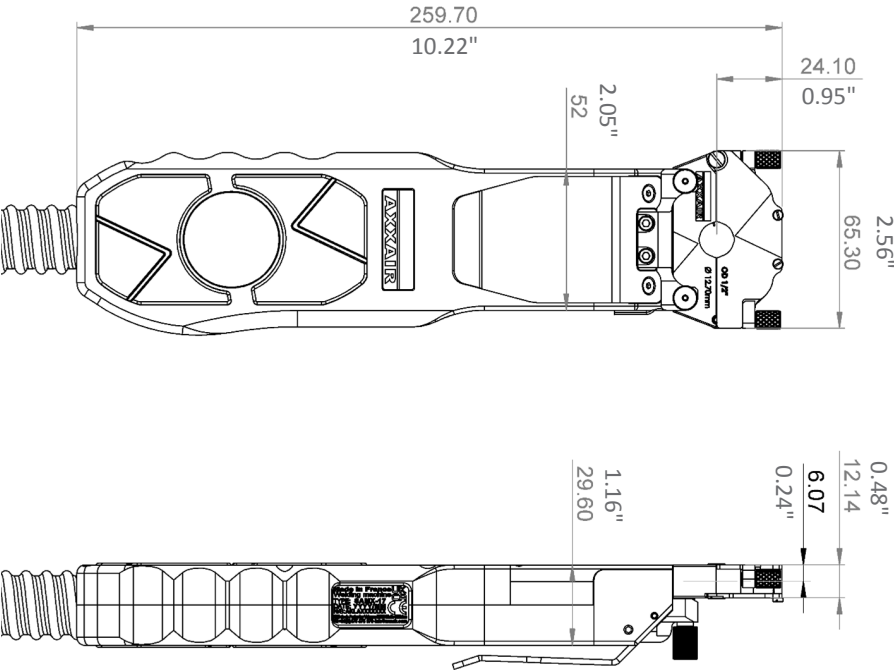
Cassettes are not included: to be ordered separately according to the tube diameter

POWER SOURCE

SAXX-201	SAXX-200	SAXX-210	SAXX-300
			
Orbital TIG welding power source 200A, 110 - 220v with or without cooling system	Orbital TIG welding power source 200A, 110 - 220v with or without cooling system	Orbital TIG welding power source 210A, 110 - 220v	Orbital TIG welding power source 300A, 400v

*The X-500MIA and X-500MIE machines are compatible with the AMI power supplies with auto-calibration
Directly compatible with AMI 205, 207 and 217, and compatible with an adaptator (SAFS-ADAMI4) with AMI 307
The machines are not compatible with AMI 227, 327, 415*

DIMENSIONS (MM/INCH)



DELIVERY AND STORAGE



Delivered in a shockproof case with a hook lead

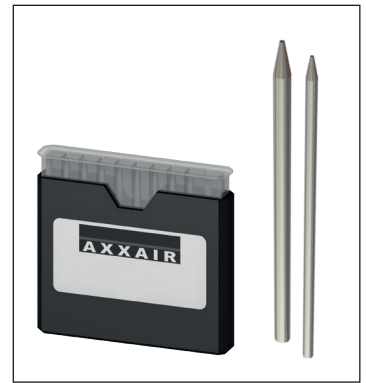
TECHNICAL FEATURES

PART NO.	X-500A	X-500E	X-500MIA	X-500MIE
DESCRIPTION	Microfit closed weld head with 8 m (26 ft) cable Air cooled	Microfit closed weld head with 8 m (26 ft) cable Water cooled	Microfit closed weld head with 8 m (26 ft) cable Air cooled Compatible with AMI power source	Microfit closed weld head with 8 m (26 ft) cable Water cooled Compatible with AMI power source
TUBE DIAMETER (O/D)	3 - 12.7 mm	3 - 12.7 mm	3 - 12.7 mm	3 - 12.7 mm
	0.118 - 0.5"	0.118 - 0.5"	0.118 - 0.5"	0.118 - 0.5"
ELECTRODE DIAMETER	1.0 mm	1.0 mm	1.0 mm	1.0 mm
	0.040"	0.040"	0.040"	0.040"
WEIGHT WITH CABLE	12.3 lbs / 5.6 kg	12.3 lbs / 5.6 kg	12.3 lbs / 5.6 kg	12.3 lbs / 5.6 kg
MAXIMUM NUMBER OF WELDS PER HOUR on a 12.7 mm diameter, 1.24 mm thick stainless steel tube	20	30	20	30
MAX WELDING CURRENT	80 A	80 A	80 A	80 A
OPERATING TEMPERATURE	+0°C / + 40 °C (32°F / 104°F)	+0°C / + 40 °C (32°F / 104°F)	+0°C / + 40 °C (32°F / 104°F)	+0°C / + 40 °C (32°F / 104°F)

CONSUMABLES & ACCESSORIES

ELECTRODES

PART NO.	DESCRIPTION	OUTSIDE DIAMETER OF THE TUBE TO BE WELDED (MIN - MAX)	
SCE10-09.0	Tungsten electrode diameter 1.0 mm, length 9 mm (per 10)	0.465 - 0.5"	11.8 - 12.7 mm
SCE10-10.0	Tungsten electrode diameter 1.0 mm, length 10.0 mm (per 10)	0.386 - 0.480"	9.8 - 12.2 mm
SCE10-11.0	Tungsten electrode diameter 1.0 mm, length 11.0 mm (per 10)	0.307 - 0.402"	7.8 - 10.2 mm
SCE10-12.0	Tungsten electrode diameter 1.0 mm, length 12.0 mm (per 10)	0.228 - 0.323"	5.8 - 8.2 mm
SCE10-13.0	Tungsten electrode diameter 1.0 mm, length 13.0 mm (per 10)	0.150 - 0.244"	3.8 - 6.2 mm
SCE10-14.0	Tungsten electrode diameter 1.0 mm, length 14.0 mm (per 10)	0.079 - 0.165"	2.0 - 4.2 mm



CLAMPING CASSETTES

Stainless steel clamping cassettes. One cassette is required for each tube diameter.

Can be used to weld tube-to-tube, tube-to-fitting, fitting-to-fitting.

PART NO.	DESCRIPTION	OUTSIDE DIAMETER OF THE TUBE TO BE WELDED (INCH / MM)	
X-500-CA03.00	Cassette for o/d = 3.00 mm (0.118")	0.118"	3.00 mm
X-500-CA03.18	Cassette for o/d = 1/8" (3.175 mm)	1/8"	3.18 mm
X-500-CA04.76	Cassette for o/d = 3/16" (4.763 mm)	3/16"	4.76 mm
X-500-CA06.00	Cassette for o/d = 6.00 mm (0.236")	0.236"	6.00 mm
X-500-CA06.35	Cassette for o/d = 1/4" (6.35 mm)	1/4"	6.35 mm
X-500-CA08.00	Cassette for o/d = 8.00 mm (0.315")	0.315"	8.00 mm
X-500-CA09.53	Cassette for o/d = 3/8" (9.525 mm)	3/8"	9.53 mm
X-500-CA10.00	Cassette for o/d = 10.00 mm (0.394")	0.394"	10.00 mm
X-500-CA12.00	Cassette for o/d = 12.00 mm (0.472")	0.472"	12.00 mm
X-500-CA12.70	Cassette for o/d = 1/2" (12.70 mm)	1/2"	12.70 mm



X-500 is compatible with AMI and MAGNATECH clamping cassettes, please contact us.



0.25" / 6.35 mm

These cassettes can be used to weld fittings or tubes with a 6.35 mm straight length

TABLE MOUNT


The weld head is equipped with a hook that allows to hang the machine on this table mount, as well as on different other supports up to 5 mm thickness.

PART NO.	DESCRIPTION
SATFX-PSUP	Table mount for the X-500 and X-750 weld heads



LEAD EXTENSION

The X-500 weld head is delivered with a 8 m / 26 ft lead. To increase the operating distance between the weld head and the SAXX power source, cable extensions are available. It is strongly advised to use maximum one extension lead per weld head. Please contact us if your required length exceeds this maximum.

AIR / WATER COOLING	PART NO	DESCRIPTION	NET WEIGHT		PACKAGING DIMENSIONS		LEAD EXTENSION
X-500A AIR	SAFS-05MAX	5 m / 16.4 ft extension cable Air cooling - without wire	15.4 lbs	7 kg	16 x 23 x 10"	400 x 590 x 250 mm	
	SAFS-10MAX	10 m / 32.8 ft extension cable Air cooling - without wire	28.7 lbs	13 kg	16 x 23 x 10"	400 x 590 x 250 mm	
X-500E WATER	SAFS-05MX	5 m / 16.4 ft extension cable Water cooling - without wire	18 lbs	8.2 kg	16 x 23 x 10"	400 x 590 x 250 mm	
	SAFS-10MX	10 m / 32.8 ft extension cable Water cooling - without wire	35 lbs	15.9 kg	16 x 23 x 10"	400 x 590 x 250 mm	

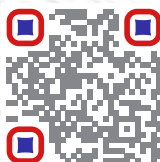


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FIT-UP PRO
By Melting Direction

SUMNER
MATERIAL LIFTS

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