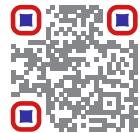


# ORBITAL WELDING SOLUTIONS

## MICROFIT CLOSED WELD HEAD SAMX-25



0.236 - 1" o/d / 6 - 25.4 mm o/d



PRODUCT BROCHURE

[www.AXXAIR.com](http://www.AXXAIR.com)

**AXXAIR**  
AN  GROUP BRAND



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.

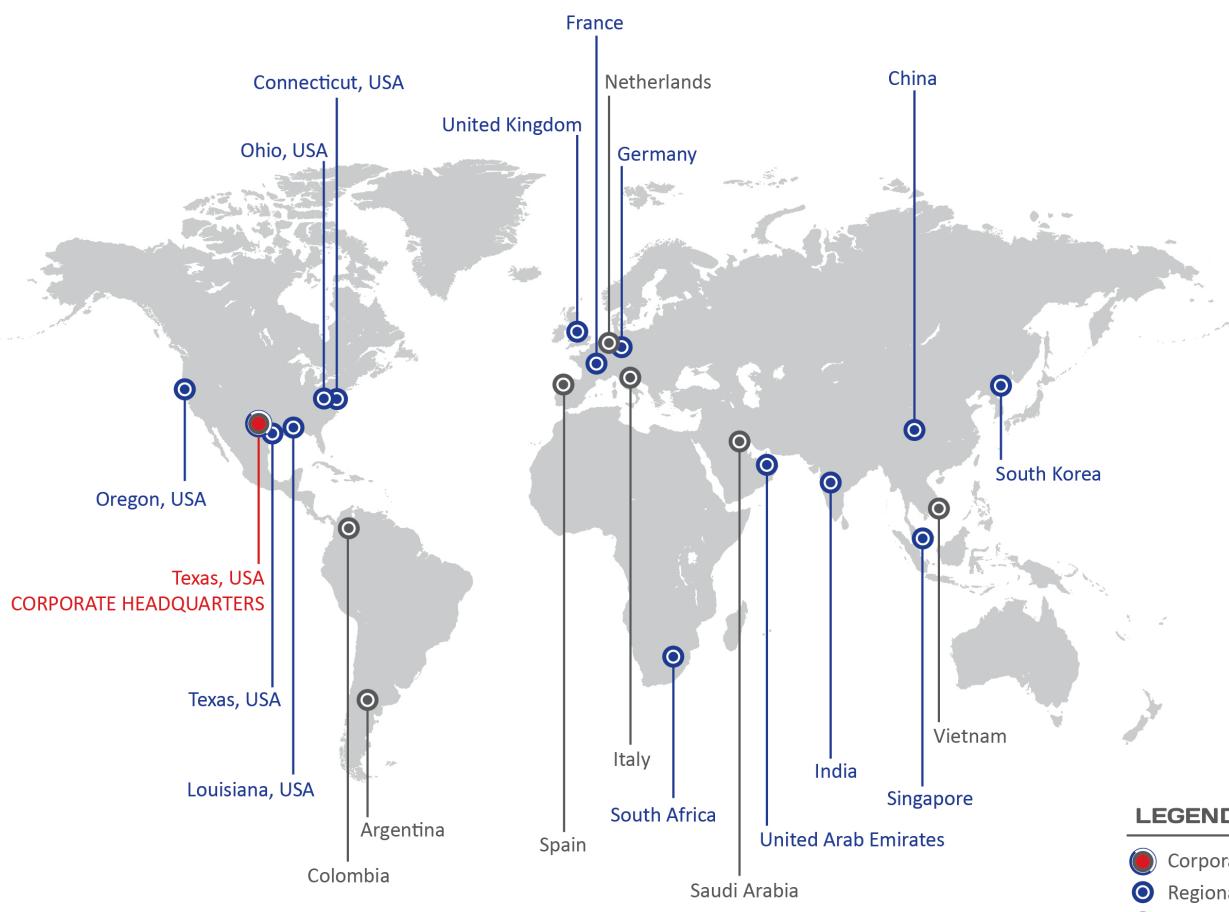
With offices and warehousing on 5 continents, 400+ employees and more than 500 partnerships and distributors worldwide, **S.F.E. Group** prides itself on consistently offering the highest standards of both product quality and service locally to all its customers.

**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](mailto:sales@sfe-brands.com)

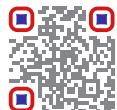
Contact International: [sales-int@sfe-brands.com](mailto:sales-int@sfe-brands.com)

## S.F.E. GROUP GLOBAL PRESENCE



### LEGEND

- Corporate Headquarters
- Regional Offices
- ◎ Representation



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](http://www.AXXAIR.com).

### INDUSTRIES SERVED



AEROSPACE & AERONAUTICS



BIOTECHNOLOGY & LIFE SCIENCES



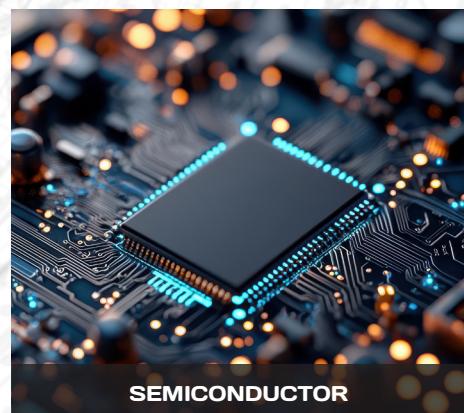
CHEMISTRY



FOOD & BEVERAGE



PHARMACEUTICAL



SEMICONDUCTOR

### OUR BRANDS



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.



0.236 - 1" o/d / 6 - 25.40 mm o/d

- **Function:** Orbital TIG welding
- **Materials:** Any kind of stainless steel and exotic alloys
- **Powered by the SAXX power source**

The SAMX-25 MicroFit head with cassette is the ideal solution for welding tubes with diameters of 6 mm and above, ensuring precision and reliability in every weld.

The machine is engineered to handle tubes and fittings, offering versatility in welding configurations. Whether it's tube-to-tube, tube-to-fitting, fitting-to-fitting, or any other combination, the SAMX-25 adapts seamlessly to meet the demands of your welding projects.



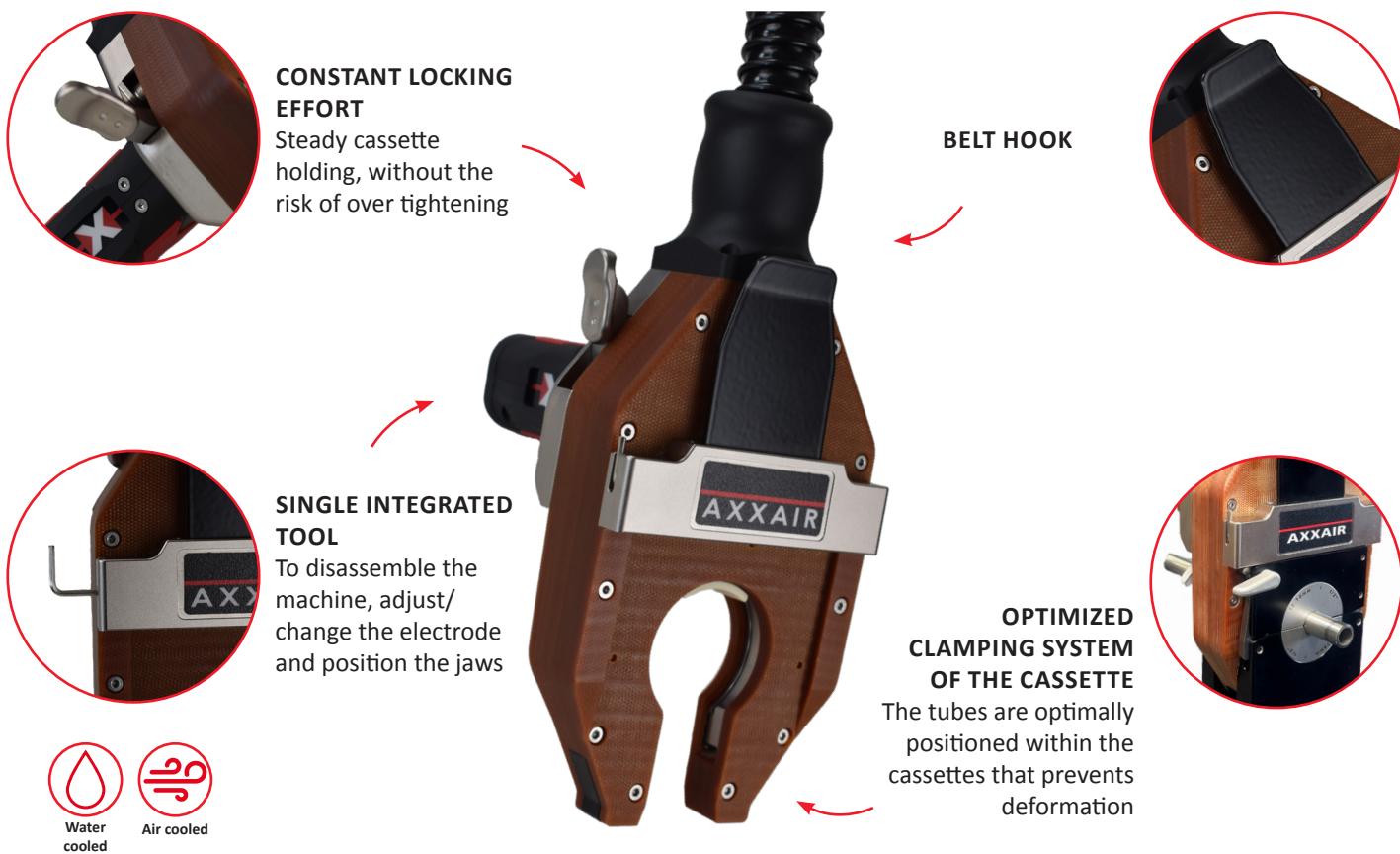
## MAIN FEATURES

- High level of performance with a **high duty cycle**
- **Grease-free operation:** compatible with clean room standards
- **Integrated remote control:** start/stop, gas and electrode rotation
- **Optimized inert gas diffusion:** welds with very limited coloration
- **Easy maintenance and cleaning:** thanks to a tool integrated in the machine body
- **Compact and light:** 6.5kg / 13 lbs with 8 meters lead (26 ft)

## DELIVERY AND STORAGE

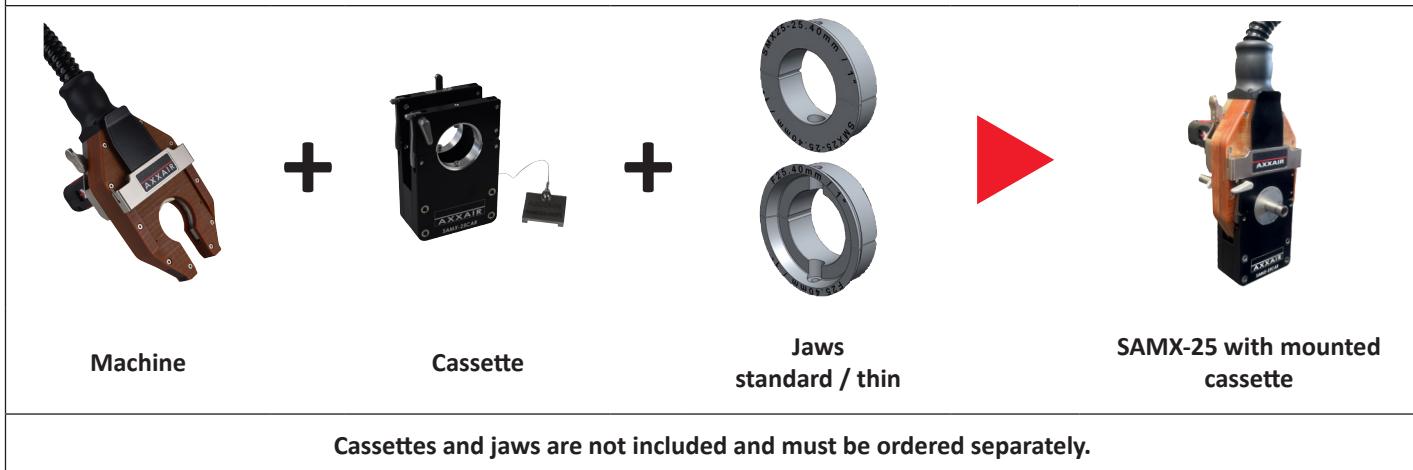


Delivered in a shockproof case  
with a hook lead



Machine compatible with the Swagelok cassettes, please contact us.

### Complete configuration of a microfit closed head SAMX-25



### POWER SOURCE



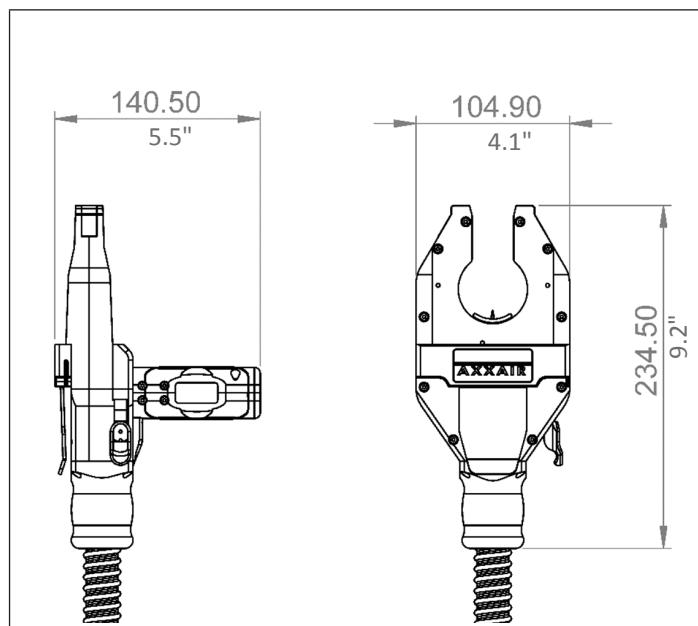
### ELECTRODES (SOLD BY PACK OF 10)

PART NO.	DESCRIPTION	OUTSIDE DIAMETER OF THE TUBE TO BE WELDED (MIN - MAX)		PICTURE
SCE16-28.5	Pre-ground tungsten electrode diameter 1.6 mm ( $\frac{1}{16}$ " length 28.5 mm (per 10)	0.236 - 0.618"	6 - 15.7 mm	
SCE16-23.5	Pre-ground tungsten electrode diameter 1.6 mm ( $\frac{1}{16}$ " length 23.5 mm (per 10)			

### SAMX-25 TECHNICAL FEATURES

PART NO.	SAMX-25A	SAMX-25E
DESCRIPTION	Microfit closed weld head with 8m / 26ft cable Air cooled	Microfit closed weld head with 8m / 26ft cable Water cooled
TUBE DIAMETER (O/D)	6 - 25.40 mm 0.236" - 1"	6 - 25.40 mm 0.236" - 1"
ELECTRODE DIAMETER	1.6 mm $\frac{1}{16}$ "	1.6 mm $\frac{1}{16}$ "
WEIGHT WITH CABLE	6.5 kg 14 lbs	6.5 kg 14 lbs
DUTY CYCLE	75A at 50%	100A at 80%
MAX WELDING CURRENT	100 A	120 A
OPERATING TEMPERATURE	+0°C / + 40 °C (32°F / 104°F)	+0°C / + 40 °C (32°F / 104°F)

### DIMENSIONS (MM/INCH)

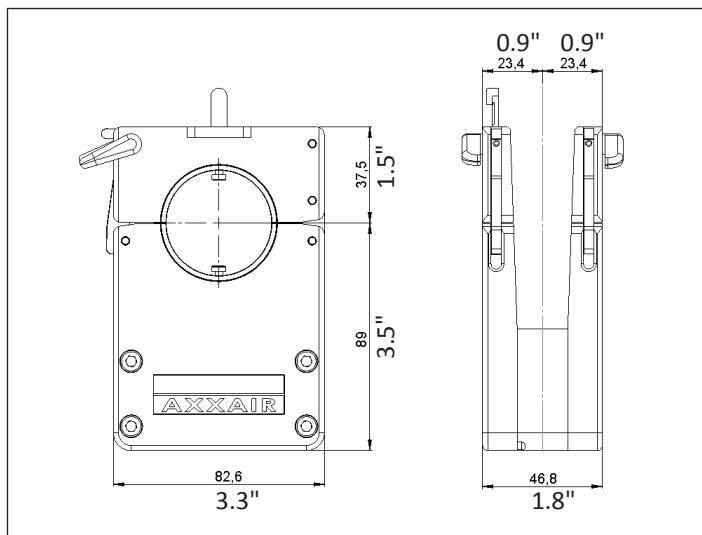


## CASSETTES

Cassettes and jaws are not included and must be ordered separately.



## DIMENSIONS (MM/INCH)



## JAWS FOR CASSETTES: STANDARD CLAMPING JAWS

- Stainless steel jaws
- 1 set of collets includes: two half shells  
2 sets are required to cover both sides of the cassette (four half shells).



PART NO.	DESCRIPTION	OUTSIDE DIAMETER OF THE TUBE TO BE WELDED (INCH / MM)
SMX25-06.00	Jaws (pair) for standard cassette o/d = 6.00 mm (0.236")	0.236"    6.00 mm
SMX25-06.35	Jaws (pair) for standard cassette o/d = 1/4" (6.35 mm)	1/4"    6.35 mm
SMX25-07.93	Jaws (pair) for standard cassette o/d = 5/16" (7.938 mm)	5/16"    7.938 mm
SMX25-08.00	Jaws (pair) for standard cassette o/d = 8.00 mm (0.315")	0.315"    8.00 mm
SMX25-09.52	Jaws (pair) for standard cassette o/d = 3/8" (9.525 mm)	3/8"    9.525 mm
SMX25-10.00	Jaws (pair) for standard cassette o/d = 10.00 mm (0.394")	0.394"    10.00 mm
SMX25-12.00	Jaws (pair) for standard cassette o/d = 12.00 mm (0.472")	0.472"    12.00 mm
SMX25-12.70	Jaws (pair) for standard cassette o/d = 1/2" (12.70 mm)	1/2"    12.70 mm
SMX25-14.00	Jaws (pair) for standard cassette o/d = 14.00 mm (0.551")	0.551"    14.00 mm
SMX25-15.00	Jaws (pair) for standard cassette o/d = 15.00 mm (0.591")	0.591"    15.00 mm
SMX25-15.87	Jaws (pair) for standard cassette o/d = 5/8" (15.875 mm)	5/8"    15.875 mm
SMX25-16.00	Jaws (pair) for standard cassette o/d = 16.00 mm (0.630")	0.630"    16.00 mm
SMX25-18.00	Jaws (pair) for standard cassette o/d = 18.00 mm (0.709")	0.709"    18.00 mm
SMX25-19.00	Jaws (pair) for standard cassette o/d = 19.00 mm (0.748")	0.748"    19.00 mm
SMX25-19.05	Jaws (pair) for standard cassette o/d = 3/4" (19.05 mm)	3/4"    19.05 mm
SMX25-20.00	Jaws (pair) for standard cassette o/d = 20.00 mm (0.787")	0.787"    20.00 mm
SMX25-22.00	Jaws (pair) for standard cassette o/d = 22.00 mm (0.866")	0.866"    22.00 mm
SMX25-22.22	Jaws (pair) for standard cassette o/d = 7/8" (22.22mm)	7/8"    22.22 mm
SMX25-23.00	Jaws (pair) for standard cassette o/d = 23.00 mm (0.905")	0.905"    23.00 mm
SMX25-25.00	Jaws (pair) for standard cassette o/d = 25.00 mm (0.984")	0.984"    25.00 mm
SMX25-25.40	Jaws (pair) for standard cassette o/d = 1" (25.40 mm)	1"    25.40 mm



These jaws require a minimum straight lenght of the welding piece of 23.4 mm / 0.905"



23.40 mm / 0.905"

## JAWS FOR CASSETTES: THIN CLAMPING JAWS

- Thin clamping jaws are recommended to weld fittings
- 1 set of collets includes: two half shells  
2 sets are required to cover both sides of the cassette (four half shells).



PART NO.	DESCRIPTION	OUTSIDE DIAMETER OF THE TUBE TO BE WELDED (INCH / MM)
SMX25-F06.00	Jaws (pair) for standard cassette o/d = 6.00 mm (0.236")	0.236"    6.00 mm
SMX25-F06.35	Jaws (pair) for standard cassette o/d = 1/4" (6.35 mm)	1/4"    6.35 mm
SMX25-F07.93	Jaws (pair) for standard cassette o/d = 5/16" (7.938 mm)	5/16"    7.938 mm
SMX25-F08.00	Jaws (pair) for standard cassette o/d = 8.00 mm (0.315")	0.315"    8.00 mm
SMX25-F09.52	Jaws (pair) for standard cassette o/d = 3/8" (9.525 mm)	3/8"    9.525 mm
SMX25-F10.00	Jaws (pair) for standard cassette o/d = 10.00 mm (0.394")	0.394"    10.00 mm
SMX25-F12.00	Jaws (pair) for standard cassette o/d = 12.00 mm (0.472")	0.472"    12.00 mm
SMX25-F12.70	Jaws (pair) for standard cassette o/d = 1/2" (12.70 mm)	1/2"    12.70 mm
SMX25-F14.00	Jaws (pair) for standard cassette o/d = 14.00 mm (0.551")	0.551"    14.00 mm
SMX25-F15.00	Jaws (pair) for standard cassette o/d = 15.00 mm (0.591")	0.591"    15.00 mm
SMX25-F15.87	Jaws (pair) for standard cassette o/d = 5/8" (15.875 mm)	5/8"    15.875 mm
SMX25-F16.00	Jaws (pair) for standard cassette o/d = 16.00 mm (0.630")	0.630"    16.00 mm
SMX25-F18.00	Jaws (pair) for standard cassette o/d = 18.00 mm (0.709")	0.709"    18.00 mm
SMX25-F19.00	Jaws (pair) for standard cassette o/d = 19.00 mm (0.748")	0.748"    19.00 mm
SMX25-F19.05	Jaws (pair) for standard cassette o/d = 3/4" (19.05 mm)	3/4"    19.05 mm
SMX25-F20.00	Jaws (pair) for standard cassette o/d = 20.00 mm (0.787")	0.787"    20.00 mm
SMX25-F22.00	Jaws (pair) for standard cassette o/d = 22.00 mm (0.866")	0.866"    22.00 mm
SMX25-F22.22	Jaws (pair) for standard cassette o/d = 7/8" (22.22mm)	7/8"    22.22 mm
SMX25-F23.00	Jaws (pair) for standard cassette o/d = 23.00 mm (0.905")	0.905"    23.00 mm
SMX25-F25.00	Jaws (pair) for standard cassette o/d = 25.00 mm (0.984")	0.984"    25.00 mm
SMX25-F25.40	Jaws (pair) for standard cassette o/d = 1" (25.40 mm)	1"    25.40 mm



These jaws require a minimum straight lenght of the welding piece of  
19.05 mm / 0.748"



19.05 mm /  
0.748"

## OTHER ACCESSORIES

### LEAD EXTENSION

The SAMX-25 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 lenght exceeds this maximum.



### FOR SAMX-25A - AIR COOLING

PART NO.	DESCRIPTION	WEIGHT		PACKAGING DIMENSIONS	
SAFS-05MAX	5 m / 16.4 ft extension cable air cooling - without wire	15.4 lbs	7 kg	16 x 23 x 10"	40 x 59 x 25 cm
SAFS-10MAX	10 m / 32.8 ft extension cable air cooling - without wire	28.7 lbs	13 kg	16 x 23 x 10"	40 x 59 x 25 cm

### FOR SAMX-25E - WATER COOLING

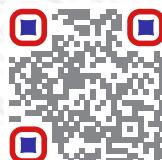
PART NO.	DESCRIPTION	WEIGHT		PACKAGING DIMENSIONS	
SAFS-05MX	5 m / 16.4 ft extension cable water cooling - without wire	18 lbs	8.2 kg	16 x 23 x 10"	40 x 59 x 25 cm
SAFS-10MX	10 m / 32.8 ft extension cable water cooling - without wire	35 lbs	15.9 kg	16 x 23 x 10"	40 x 59 x 25 cm



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**DPM**  
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**AXXAIR**

**FIT-UP PRO**  
By Mettley Daeman

**MAGNATECH**

**L SUMNER**  
MATERIAL LIFTS

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