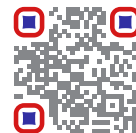


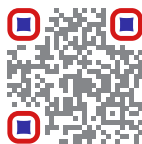
# ORBITAL WELDING SOLUTIONS

## MICROFIT CLOSED WELD HEAD SAMX-17

0.118 - 0.625" o/d / 3 - 17.2 mm o/d



SCAN QR CODE  
TO WATCH VIDEO



AN  GROUP BRAND

PRODUCT BROCHURE

[www.AXXAIR.COM](http://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.

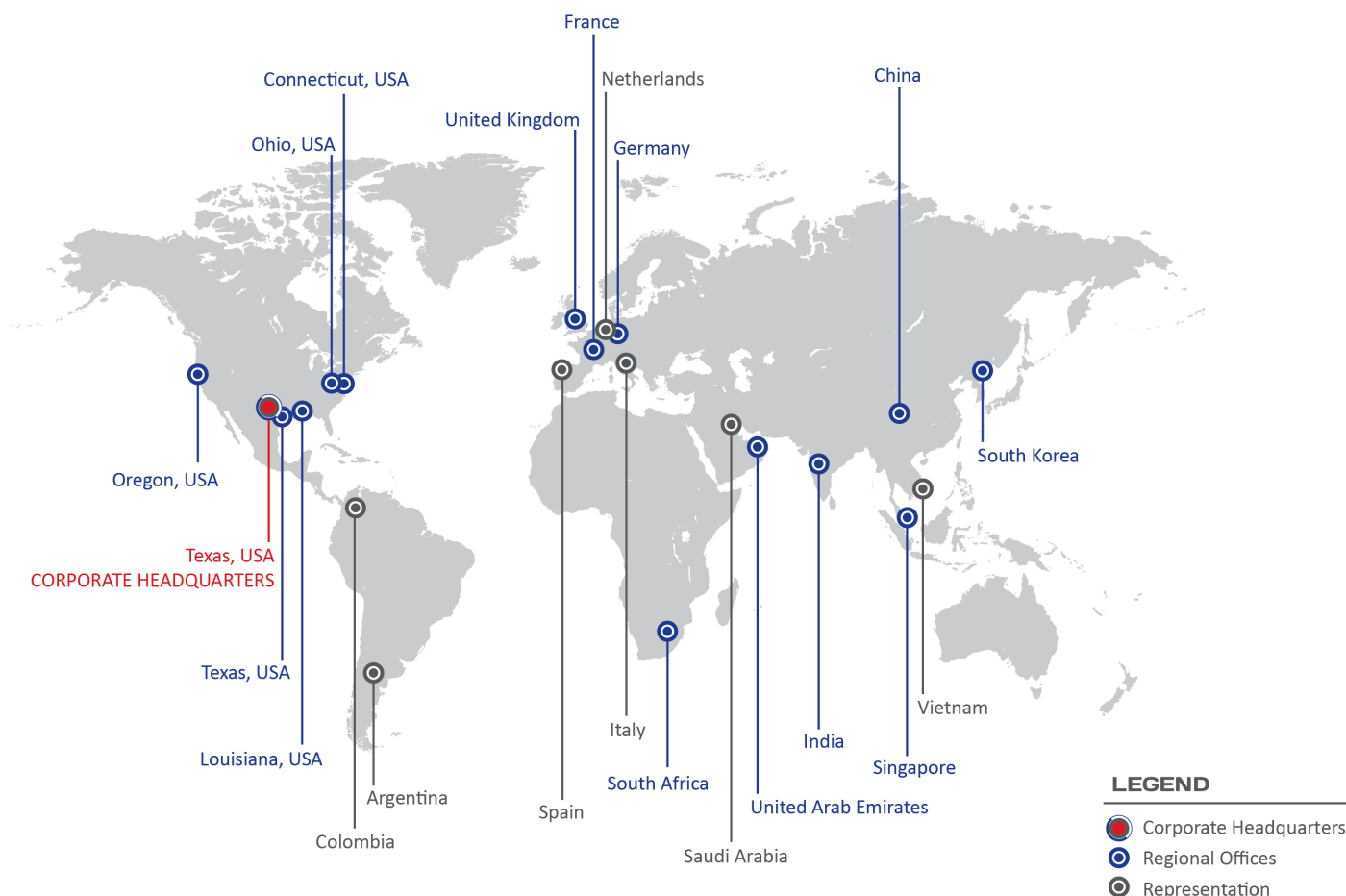
Leveraging over 200 years of combined experience in engineering, manufacturing, and field applications, the **S.F.E. Group** is committed to driving innovation. Through continuous product development and strategic acquisitions, the **S.F.E. Group** is actively growing its portfolio and expanding its 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](mailto:sales@sfe-brands.com)  
Contact International: [sales-int@sfe-brands.com](mailto: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.

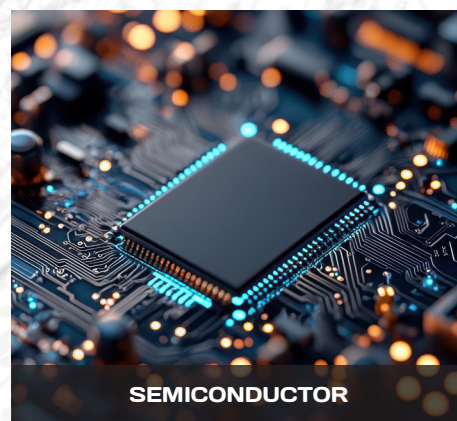
Within the **AXXAIR** range S.F.E. Group not only offers a standard range of products, but also customized solutions for specific target markets: the food and beverage industry, aerospace, pharmaceuticals, the manufacturing of semi-conductors, aeronautics, chemical and petrochemical industry as well 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](http://www.AXXAIR.com).

### INDUSTRIES SERVED



### 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.



0.118 - 0.625" o/d / 3 - 17.2 mm o/d

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

The SAMX-17 MicroFit head with cassettes is the ideal solution for welding tubes and fittings with diameters of 3 mm / 0.118" 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-17 adapts seamlessly to meet the demands of your welding projects.

## MAIN FEATURES

- High level of performance with a **duty cycle of 70A at 50% and 80A at 40%**
- **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
- **Air cooling :** aluminium side plates contribute to heat dissipation
- **Easy maintenance and cleaning :** thanks to a tool integrated in the machine body
- **Compact and light:** 5.5kg / 11 lbs with 8 meters cable (26ft)



**SAMX-17 with cassette**



Air cooled

## DELIVERY AND STORAGE



Delivered in a shockproof case  
Waterproof and dustproof



### CONSTANT EFFORT LOCKING LEVER

Steady cassette holding, without the risk of over tightening



### SINGLE INTEGRATED TOOL

For disassembling the machine, adjust/change the electrode and position the jaws



### BELT HOOK



### OPTIMIZED CLAMPING SYSTEM OF THE CASSETTE

The tubes are optimally positioned within the cassettes that prevents deformation



Machine compatible with Swagelok cassettes, please contact us.



### Complete configuration of a microfit closed head SAMX-17



Machine

+



Cassette standard, wide or thin side plates

+



Jaws



SAMX-17 with mounted cassette

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

### POWER SOURCE

#### SAXX-201



Orbital TIG welding power source  
200A, 110 - 220v  
with or without cooling system

#### SAXX-200



Orbital TIG welding power source  
200A, 110 - 220v  
with or without cooling system

#### SAXX-210



Orbital TIG welding power source  
210A, 110 - 220v

#### SAXX-300



Orbital TIG welding power source  
300A, 400v

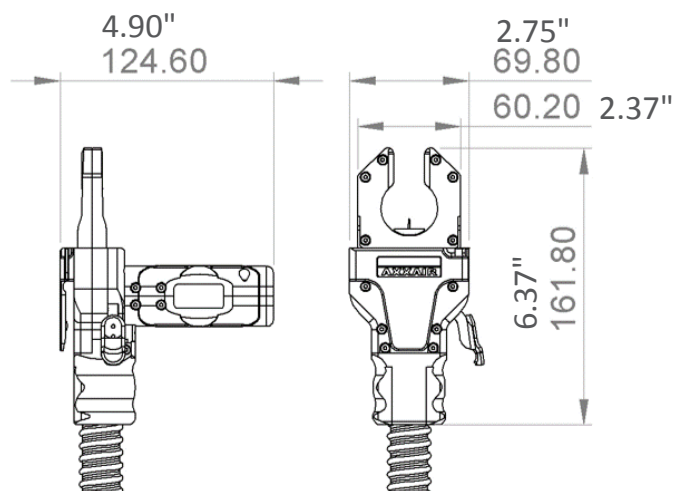
### ELECTRODES

PART NO.	DESCRIPTION	OUTSIDE DIAMETER OF THE TUBE TO BE WELDED (MIN - MAX)		PICTURE
SCE10-14.0	Pre-ground tungsten electrode diameter 1.0 mm, length 14.0 mm (per 10)	13.4 - 17.3 mm	0.527 - 0.681"	
SCE10-15.0	Pre-ground tungsten electrode diameter 1.0 mm, length 15.0 mm (per 10)	11.4 - 15.8 mm	0.449 - 0.622"	
SCE10-16.0	Pre-ground tungsten electrode diameter 1.0 mm, length 16.0 mm (per 10)	9.4 - 13.8 mm	0.370 - 0.543"	
SCE10-17.5	Pre-ground tungsten electrode diameter 1.0 mm, length 17.5 mm (per 10)	6.4 - 10.8 mm	0.252 - 0.425"	
SCE10-18.0	Pre-ground tungsten electrode diameter 1.0 mm, length 18.0 mm (per 10)	5.4 - 9.8 mm	0.213 - 0.386"	
SCE10-20.0	Pre-ground tungsten electrode diameter 1.0 mm, length 20.0 mm (per 10)	2.0 - 5.8 mm	0.079 - 0.228"	

### TECHNICAL FEATURES

PART NO.	SAMX-17
DESCRIPTION	Microfit closed welding head with 8m cable
TUBE DIAMETER	3 - 17.2 mm 0.118 - 0.625"
ELECTRODE DIAMETER	1.0 mm 0.04"
WEIGHT WITH CABLE	5.5 kg 12 lbs
DUTY CYCLE AT 50%	70 A
DUTY CYCLE AT 40%	80 A
MAX WELDING CURRENT	100 A
OPERATING TEMPERATURE	+0°C / + 40 °C (32°F / 104°F)

### DIMENSIONS (MM/INCH)



CASSETTE & SIDE PLATES

The standard cassette set is recommended for microfit welding. Subsequently, the thin or wide side plates can be ordered for specific welds.

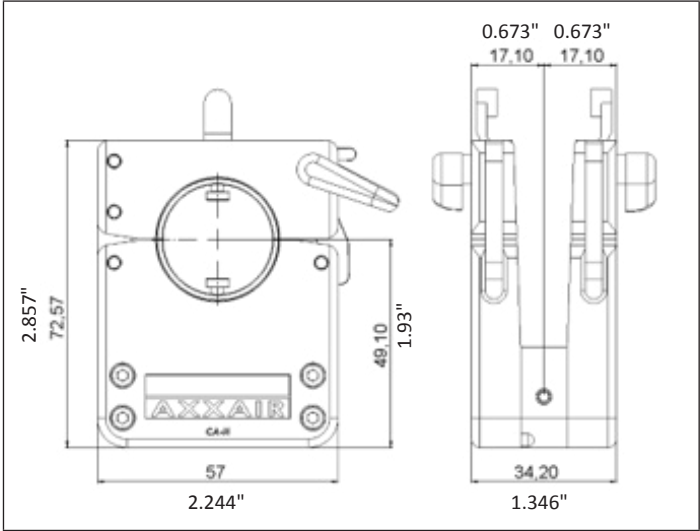
STANDARD CASSETTE



Complete kit

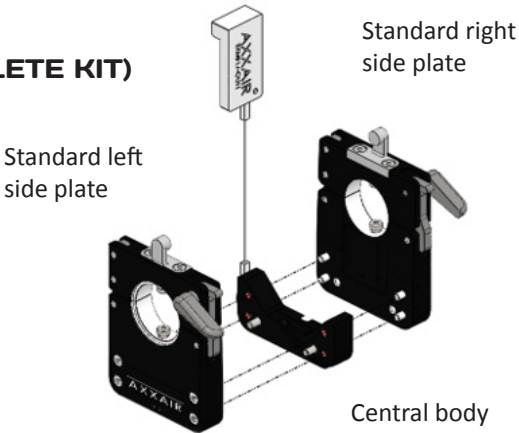
PART NO. SAMX17-CAB01





DIMENSIONS (MM/INCH)

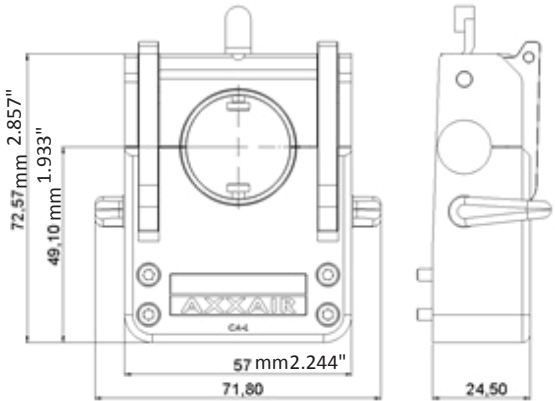
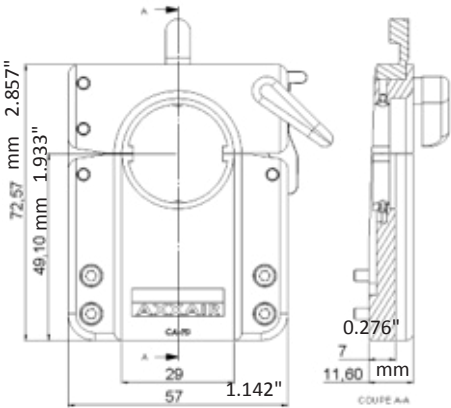


CONFIGURATION OF THE STANDARD CASSETTE (COMPLETE KIT)

PART NO.	DESCRIPTION
SAMX17-CADB01	Standard right side plate
SAMX17-CAGB01	Standard left side plate
SAMX17-CAMB01	Standard central body SAMX (common to all side plates)
It is possible to order the entire cassette assembly or only the right or left side plates with the center body for a customized configuration.	



THIN SIDE PLATES		CENTRAL BODY	WIDE SIDE PLATE
			
PART NO. SAMX17-CADB02	PART NO. SAMX17-CAGB02	PART NO. SAMX17-CAMB01	PART NO. SAMX17-CAGB03
Right thin side plate	Left thin side plate	Central body SAMX (common to all side plates)	Wide side plate (right and left)

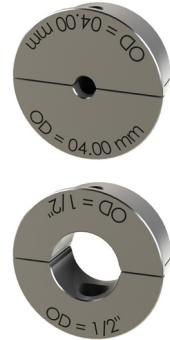


## JAWS FOR CASSETTES

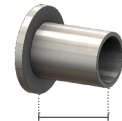
### JAWS FOR STANDARD CASSETTE

PART NO.	DESCRIPTION	OUTSIDE DIAMETER OF THE TUBE TO BE WELDED (INCH / MM)	
SMX17-03	Collets (pair) for standard cassette o/d = 3.00 mm (0.118")	0.118"	3.00 mm
SMX17-03.175	Collets (pair) for standard cassette o/d = 1/8" (3.175 mm)	1/8"	3.175 mm
SMX17-04	Collets (pair) for standard cassette o/d = 4.00 mm (0.157")	0.157"	4.00 mm
SMX17-04.763	Collets (pair) for standard cassette o/d = 3/16" (4.763 mm)	3/16"	4.763 mm
SMX17-05	Collets (pair) for standard cassette o/d = 5.00 mm (0.197")	0.197"	5.00 mm
SMX17-06	Collets (pair) for standard cassette o/d = 6.00 mm (0.236")	0.236"	6.00 mm
SMX17-06.35	Collets (pair) for standard cassette o/d = 1/4" (6.35 mm)	1/4"	6.35 mm
SMX17-07.938	Collets (pair) for standard cassette o/d = 5/16" (7.938 mm)	5/16"	7.938 mm
SMX17-08	Collets (pair) for standard cassette o/d = 8.00 mm (0.315")	0.315"	8.00 mm
SMX17-09	Collets (pair) for standard cassette o/d = 9.00 mm (0.354")	0.354"	9.00 mm
SMX17-09.525	Collets (pair) for standard cassette o/d = 3/8" (9.525 mm)	3/8"	9.525 mm
SMX17-10	Collets (pair) for standard cassette o/d = 10.00 mm (0.394")	0.394"	10.00 mm
SMX17-10.20	Collets (pair) for standard cassette o/d = 10.20 mm (0.402")	0.402"	10.20 mm
SMX17-11	Collets (pair) for standard cassette o/d = 11.00 mm (0.433")	0.433"	11.00 mm
SMX17-12	Collets (pair) for standard cassette o/d = 12.00 mm (0.472")	0.472"	12.00 mm
SMX17-12.70	Collets (pair) for standard cassette o/d = 1/2" (12.70 mm)	1/2"	12.70 mm
SMX17-13.50	Collets (pair) for standard cassette o/d = 13.50 mm (0.531")	0.531"	13.50 mm
SMX17-14	Collets (pair) for standard cassette o/d = 14.00 mm (0.551")	0.551"	14.00 mm
SMX17-14.287	Collets (pair) for standard cassette o/d = 9/16" (14.287 mm)	9/16"	14.287 mm
SMX17-15	Collets (pair) for standard cassette o/d = 15.00 mm (0.591")	0.591"	15.00 mm
SMX17-15.875	Collets (pair) for standard cassette o/d = 5/8" (15.875 mm)	5/8"	15.875 mm
SMX17-16	Collets (pairs) for standard cassette o/d = 16.00 mm (0.630")	0.630"	16.00 mm
SMX17-17.2	Collets (pair) for standard cassette o/d = 17.20 mm (0.677")	0.677"	17.20 mm

#### Jaws for standard cassette



- These jaws (sold as pair) are compatible only with the **standard** side plates
- 1 set of collets includes two half shells. 2 sets are required to cover both sides of the cassette (four half shells).



Minimum straight length of the tube:  
0.689" / 17.5 mm

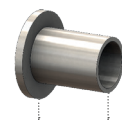
### JAWS FOR THIN SIDE PLATE

PART NO.	DESCRIPTION	OUTSIDE DIAMETER OF THE TUBE TO BE WELDED (INCH / MM)	
SMX17-F03	Collets (pair) for thin side plate o/d = 3.00 mm (0.118")	0.118"	3.00 mm
SMX17-F03.175	Collets (pair) for thin side plate o/d = 1/8" (3.175 mm)	1/8"	3.175 mm
SMX17-F06	Collets (pair) for thin side plate o/d = 6.00 mm (0.236")	0.236"	6.00 mm
SMX17-F06.35	Collets (pair) for thin side plate o/d = 1/4" (6.35 mm)	1/4"	6.35 mm
SMX17-F08	Collets (pair) for thin side plate o/d = 8.00 mm (0.315")	0.315"	8.00 mm
SMX17-F09.525	Collets (pair) for thin side plate o/d = 3/8" (9.525 mm)	3/8"	9.525 mm
SMX17-F12	Collets (pair) for thin side plate o/d = 12.00 mm (0.472")	0.472"	12.00 mm
SMX17-F12.70	Collets (pair) for thin side plate o/d = 1/2" (12.70 mm)	1/2"	12.70 mm
SMX17-F14	Collets (pair) for thin side plate o/d = 14.00 mm (0.551")	0.551"	14.00 mm
SMX17-F16	Collets (pair) for thin side plate o/d = 16.00 mm (0.630")	0.630"	16.00 mm

#### Jaws for thin side plate



- These jaws (sold as pair) are compatible only with the **thin** side plates
- 1 set of collets includes two half shells. 2 sets are required to cover both sides of the cassette (four half shells).



Minimum straight length of the tube:  
0.5" / 12.70 mm

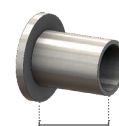
## TUBE JAWS FOR WIDE SIDE PLATE

PART NO.	DESCRIPTION	O/D OF THE TUBE TO BE WELDED (INCH / MM)	
SMX17-LT03	Tube collets (pair) for wide side plate - o/d 3.00 mm (0.118")	0.118"	3.00 mm
SMX17-LT03.175	Tube collets (pairs) for wide side plate - o/d 1/8" (3.175 mm)	1/8"	3.175 mm
SMX17-LT06	Tube collets (pair) for wide side plate - o/d 6.00 mm (0.236")	0.236"	6.00 mm
SMX17-LT06.35	Tube collets (pairs) for wide side plate - o/d 1/4" (6.35 mm)	1/4"	6.35 mm
SMX17-LT08	Tube collets (pair) for wide side plate - o/d 8.00 mm (0.315")	0.315"	8.00 mm
SMX17-LT09.525	Tube collets (pair) for wide side plate - o/d 3/8" (9.525mm)	3/8"	9.525 mm
SMX17-LT10	Tube collets (pair) for wide side plate - o/d 10.00 mm (0.394")	0.394"	10.00 mm
SMX17-LT12	Tube collets (pair) for wide side plate - o/d 12.00 mm (0.472")	0.472"	12.00 mm
SMX17-LT12.70	Tube collets (pair) for wide side plate - o/d 1/2" (12.7 mm)	1/2"	12.7 mm
SMX17-LT14	Tube collets (pair) for wide side plate - o/d 14.00 mm (0.551")	0.551"	14.00 mm
SMX17-LT15.875	Tube collets (pair) for wide side plate - o/d 5/8" (15.875 mm)	5/8"	15.875 mm
SMX17-LT16	Tube collets (pair) for wide side plate - o/d 16.00 mm (0.630")	0.630"	16.00 mm

### Tube jaws for wide side plate



- These jaws (sold as pair) are compatible only with the **wide** side plates
- 1 set of collets includes two half shells. 2 sets are required to cover both sides of the cassette (four half shells).

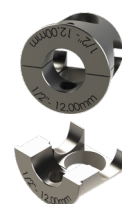


Minimum straight length of the tube:  
1.189" / 30.20 mm

## FITTING JAWS FOR WIDE SIDE PLATE

PART NO.	DESCRIPTION	FITTING BODY SIZE (INCH / MM)	FITTING BODY SIZE
SMX17-LRA	Fitting collets (pair) - 1/8" - 1/4" and 6 mm	1/8" - 1/4" - 6 mm	
SMX17-LRB	Fitting collets (pair) - 3/8" - 8mm and 10 mm	3/8" - 8 mm - 10 mm	
SMX17-LRC	Fitting collets (pair) - 1/2" - 12.7 mm	1/2" - 12.7 mm	

### Fitting jaws for wide side plate



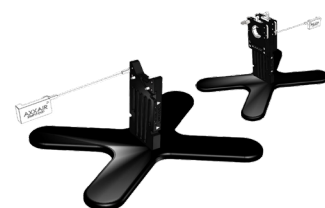
- These jaws (sold as pair) are compatible only with the **wide** side plates
- 1 set of collets includes two half shells. 2 sets are required to cover both sides of the cassette (four half shells).

## OTHER ACCESSORIES

### MACHINE SUPPORT

This bracket replaces the center part of the cassette (SAMX17-CAMB01). The use of this holder also allows the cassette to cool down quicker, improving the productivity.

PART NO.	DESCRIPTION
SAMX17-SUP	Cassette holder for SAMX-17 machine



### LEAD EXTENSION

The SAMX-17 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.

PART NO.	DESCRIPTION	NET WEIGHT		PACKAGING DIMENSIONS	
SAFS-05MAX	5m / 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







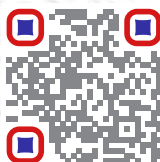


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**SUMNER**  
MATERIAL LIFTS

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