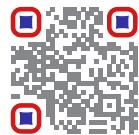


ORBITAL WELDING SOLUTIONS

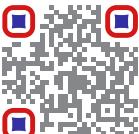
MICROFIT CLOSED WELD HEAD SAMX-17



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



SCAN QR CODE
TO WATCH VIDEO



PRODUCT BROCHURE

www.AXXAIR.com

AXXAIR

AN  GROUP BRAND



INTRODUCING THE S.F.E. GROUP



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.*

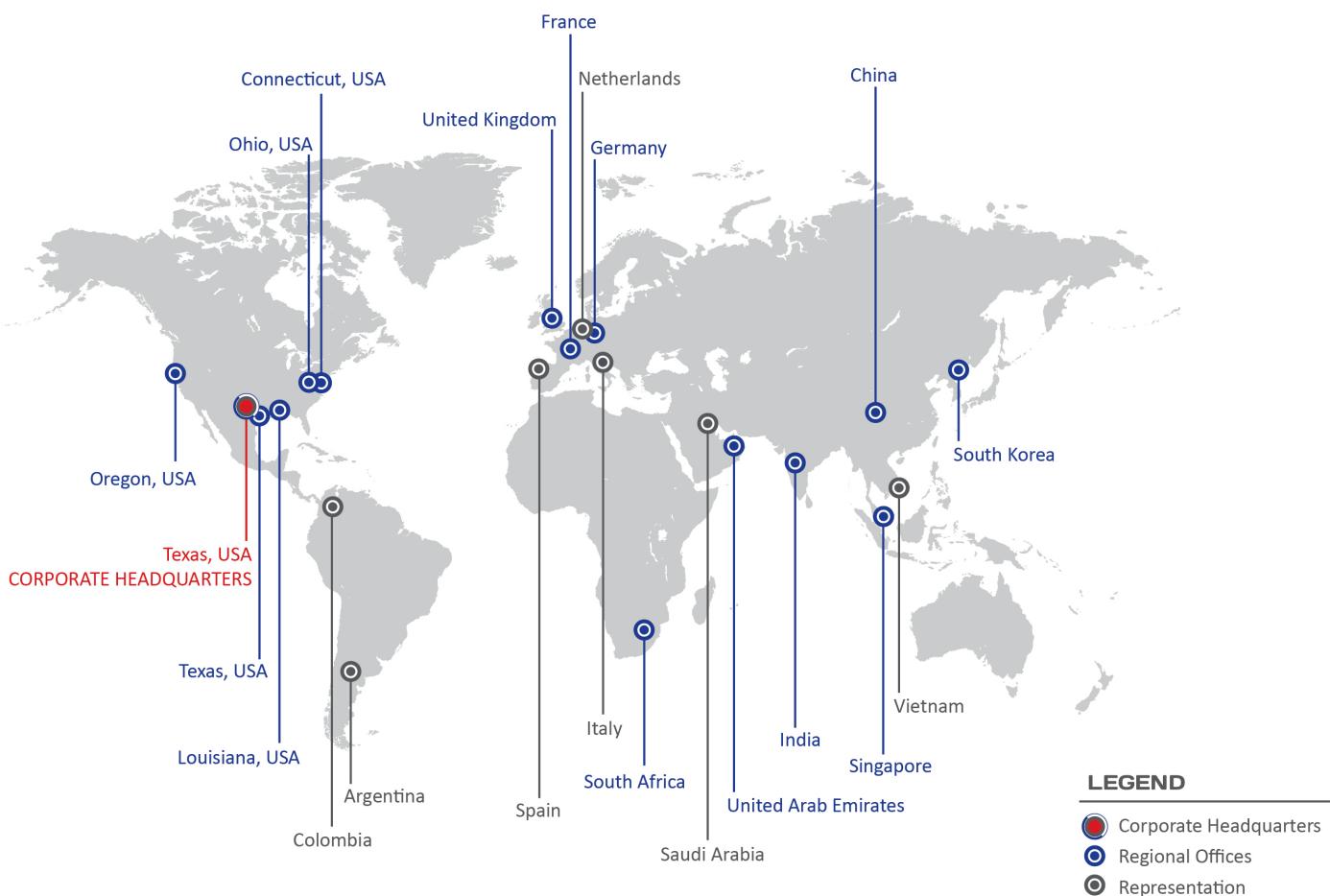
Leveraging over 200 years of combined experience in engineering, manufacturing, and field applications, the **S.F.E. Group** is committed to driving innovation. Through continuous product development and strategic acquisitions, the **S.F.E. Group** is actively growing its portfolio and expanding its 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.

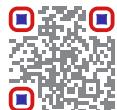
With offices and warehousing on 5 continents, 400+ employees and more than 500 partnerships and distributors worldwide, **S.F.E. Group** prides itself on consistently offering the highest standards of both product quality and service locally to all its customers.

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





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



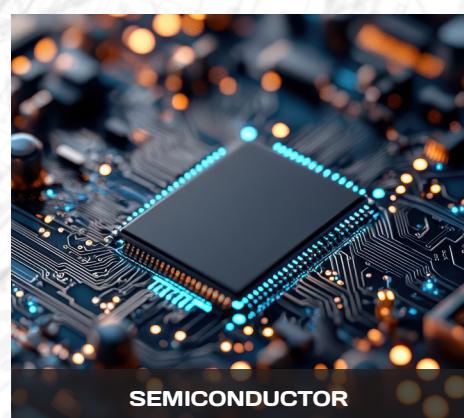
CHEMISTRY



FOOD & BEVERAGE



PHARMACEUTICAL



SEMICONDUCTOR

OUR BRANDS



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 :** aluminum 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)



Air cooled



CONSTANT EFFORT LOCKING LEVER

Stady 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

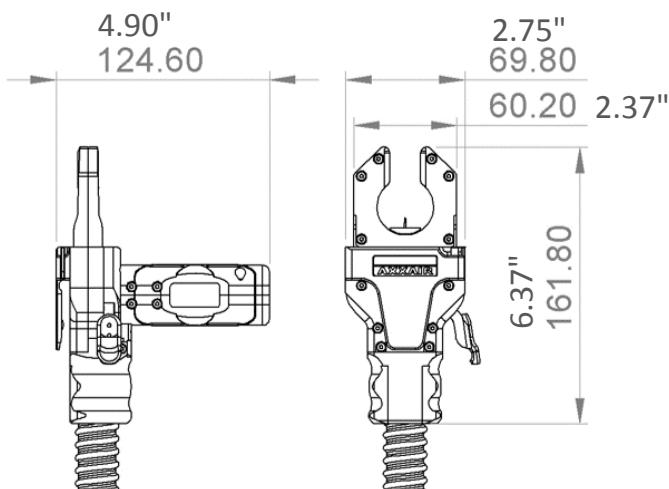
ELECTRODES

| 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 | |
| SCE10-15.0 | Pre-ground tungsten electrode diameter 1.0 mm, length 15.0 mm (per 10) | 11.4 - 15.8 mm | |
| SCE10-16.0 | Pre-ground tungsten electrode diameter 1.0 mm, length 16.0 mm (per 10) | 9.4 - 13.8 mm | |
| SCE10-17.5 | Pre-ground tungsten electrode diameter 1.0 mm, length 17.5 mm (per 10) | 6.4 - 10.8 mm | |
| SCE10-18.0 | Pre-ground tungsten electrode diameter 1.0 mm, length 18.0 mm (per 10) | 5.4 - 9.8 mm | |
| SCE10-20.0 | Pre-ground tungsten electrode diameter 1.0 mm, length 20.0 mm (per 10) | 2.0 - 5.8 mm | |

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)

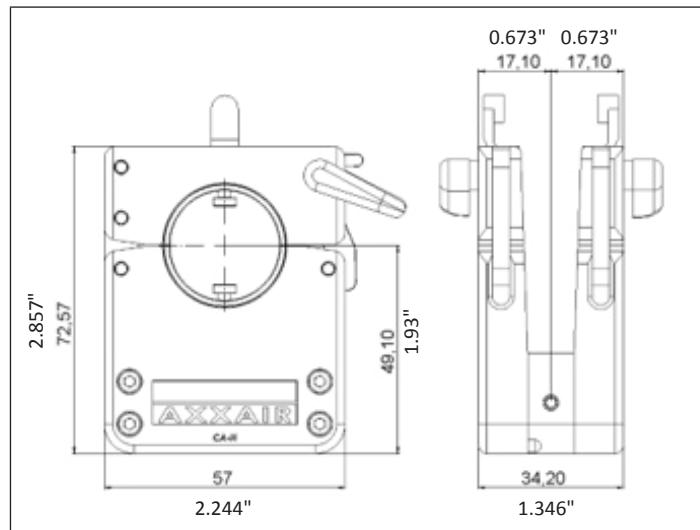


CASSETTE & SIDE PLATES

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



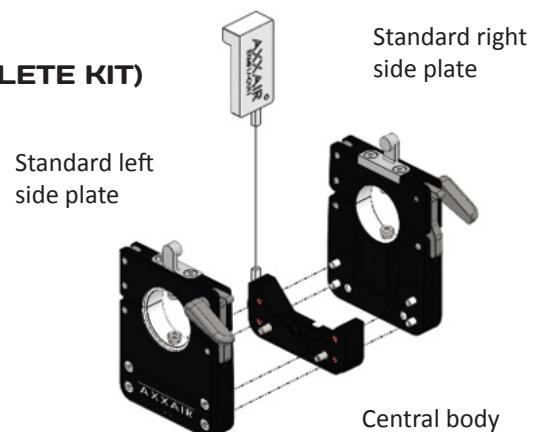
DIMENSIONS (MM/INCH)



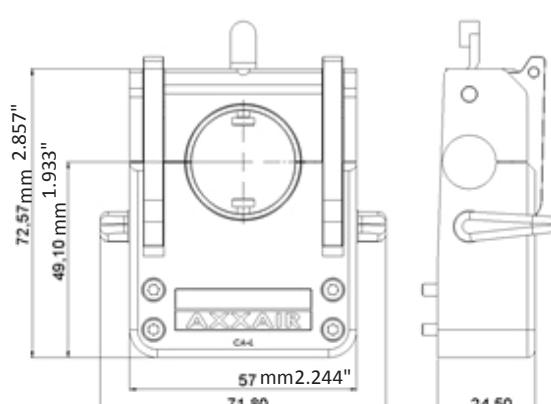
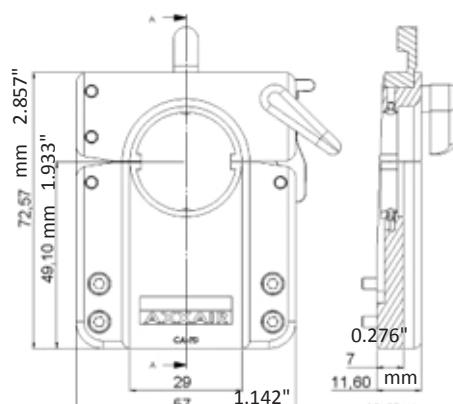
CONFIGURATION OF THE STANDARD CASSETTE (COMPLETE KIT)

| 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 |
| Right thin side plate | Left thin side plate | Central body SAMX (common to all side plates) |

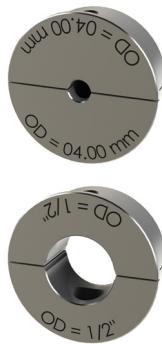


JAWS FOR CASSETTES

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

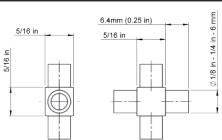
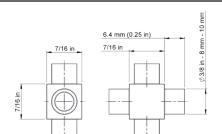
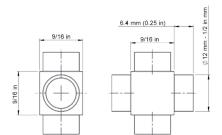


- These jaws (sold as pair) are compatible only with the **wide** side plates
- 1 set of collets includes two half shells. 2 sets are required to cover both sides of the cassette (four half shells).



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 lenght 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 |

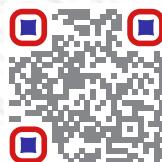


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