

ORBITAL WELDING

Microfit closed weld head X-500

0.118 - 1/2" o/d / 3 - 12.7 mm o/d



PRODUCT BROCHURE

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0.118 - 1/2" o/d / 3 - 12.7 mm o/d

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

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

The X-500 covers the size range of 3 - 12.7 mm (0.118" - 0.500") OD using diameter specific clamping cassettes. Air-cooled and water-cooled versions are available.

X-500 with cassette



MAIN FEATURES

- **High level of performance :** up to 20 welds per hour for the air-cooled machine and 30 welds for the water-cooled machine
- **Greaseless operation:** compatible with clean room standards
- **Optimized gas diffusion:** welds with very limited coloration
- **Easy maintenance and cleaning of the rotor :** with an integrated tool in the machine body
- **Compact and light:** 5.6kg (12.3 lbs) with 8 meters cable (26 ft)



Air or water-cooled

HOOK
allows to hang the machine on different supports

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

INTEGRATED REMOTE CONTROL
Start/stop, gas and electrode rotation

NARROW DESIGN
to weld microfittings or tubes with a straight length as short as 6.35mm (0.25")

QUICK SET UP OF THE CASSETTE
thanks to the quick-fit cassette mounting system delivered with the machine

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 your tube diameter

*** Available in AMI compatible version with automatic calibration**

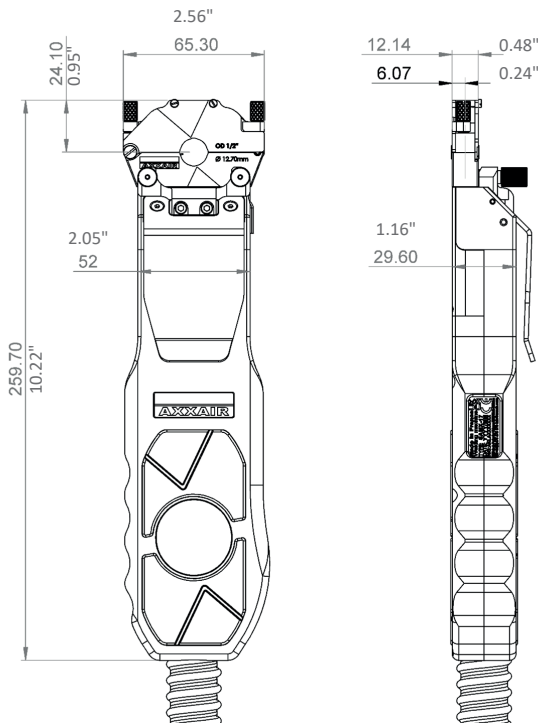


Machine compatible with AMI and MAGNATECH clamping cassettes, please contact us.

TECHNICAL FEATURES

PART NUMBER	X-500A	X-500E	X-500MIA	X-500MIE
DESCRIPTION	Microfit closed weld head with 8m (26ft) cable Air cooled	Microfit closed weld head with 8m (26ft) cable Water cooled	Microfit closed weld head with 8m (26ft) cable Air cooled Compatible with AMI power supply	Microfit closed weld head with 8m (26ft) cable Water cooled Compatible with AMI power supply
TUBE DIAMETER (O/D)	3 - 12.7 mm 0.118" - 1/2"	3 - 12.7 mm 0.118" - 1/2"	3 - 12.7 mm 0.118" - 1/2"	3 - 12.7 mm 0.118" - 1/2"
ELECTRODE DIAMETER	1.0 mm 0.039"	1.0 mm 0.039"	1.0 mm 0.039"	1.0 mm 0.039"
WEIGHT WITH CABLE	5.6 kg (12.3 lbs)	5.6 kg (12.3 lbs)	5.6 kg (12.3 lbs)	5.6 kg (12.3 lbs)
MAXIMUM NUMBER OF WELDS PER HOUR <i>on a 12.7 mm diameter, 1.24 mm thick stainless steel tube</i>	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)

DIMENSIONS (mm/inch)



POWER SUPPLY



The X-500A and X-500E are compatible with the SAXX range of power supplies

The X-500MIA and X-500MIE machines are compatible with the AMI power supplies with auto-calibration

DELIVERY AND STORAGE



Delivered in a shockproof case with a hook lead

Cassettes are not included and must be ordered separately according to your tube diameter (see accessories).

CONSUMABLES

Electrodes

PART NUMBER	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)	11.8 - 12.7 mm	0.465 - 0.5"
SCE10-10.0	Tungsten electrode diameter 1.0 mm, length 10.0 mm (per 10)	9.8 - 12.2 mm	0.386 - 0.480"
SCE10-11.0	Tungsten electrode diameter 1.0 mm, length 11.0 mm (per 10)	7.8 - 10.2 mm	0.307 - 0.402"
SCE10-12.0	Tungsten electrode diameter 1.0 mm, length 12.0 mm (per 10)	5.8 - 8.2 mm	0.228 - 0.323"
SCE10-13.0	Tungsten electrode diameter 1.0 mm, length 13.0 mm (per 10)	3.8 - 6.2 mm	0.150 - 0.244"
SCE10-14.0	Tungsten electrode diameter 1.0 mm, length 14.0 mm (per 10)	2.0 - 4.2 mm	0.079 - 0.165"



ACCESSORIES

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 NUMBER	DESCRIPTION	Outside diameter of the tube to be welded (inch / mm)	
		inch	mm
X-500-CA03.00	Cassette for OD = 3.00 mm (0.118")	0.118"	3.00 mm
X-500-CA03.18	Cassette for OD = 1/8 inch (3.175 mm)	1/8"	3.18 mm
X-500-CA04.76	cassette for OD = 3/16 inch (4.763 mm)	3/16"	4.76 mm
X-500-CA06.00	cassette for OD = 6.00 mm (0.236")	0.236"	6.00 mm
X-500-CA06.35	cassette for OD = 1/4 inch (6,35 mm)	1/4"	6.35 mm
X-500-CA08.00	cassette for OD = 8.00 mm (0.315")	0.315"	8.00 mm
X-500-CA09.53	cassette for OD = 3/8 inch (9.525 mm)	3/8"	9.53 mm
X-500-CA10.00	Cassette for OD = 10.00 mm (0.394")	0.394"	10.00 mm
X-500-CA12.00	Cassette for OD = 12.00 mm (0.472")	0.472"	12.00 mm
X-500-CA12.70	Cassette for OD = 1/2 inch (12.70 mm)	1/2"	12.70 mm



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



Table mount

The machine is designed with a hook that allow to hang the machine on this table mount, as well as different supports up to 5 mm thickness.

PART NUMBER	DESCRIPTION
SATFX-PSUP	Table mount for the X-500 weld head



Lead extension

The X-500 machine is delivered with a 8 m (26 ft) lead. To increase the operating distance between the welding head and the SAXX power source, we offer cable extensions. We strongly advise to limit their use to one extension per head.

For X-500A - air cooling

PART NUMBER	DESCRIPTION	NET WEIGHT		PACKAGING DIMENSIONS	
		lbs	kg	inch	cm
SAFS-05MAX	5 m /16.4 ft extension cable Air cooling - without wire	15.4	7	16"x23"x10"	40x59x25 cm
SAFS-10MAX	10 m /32.8 ft extension cable Air cooling - without wire	28.7	13	16"x23"x10"	40x59x25 cm



To guarantee an optimal use of the machine it is recommended not to exceed 20m (60 ft) of extension or a maximum of 2 cable extensions. Please contact us if your required length exceed this maximum.

For X-500E - water cooling

PART NUMBER	DESCRIPTION	NET WEIGHT		PACKAGING DIMENSIONS	
		lbs	kg	inch	cm
SAFS-05MX	5 m /16.4 ft extension cable Water cooling - without wire	18	8.2	16"x23"x10"	40x59x25 cm
SAFS-10MX	10 m /32.8 ft extension cable Water cooling - without wire	35	15.9	16"x23"x10"	40x59x25 cm