

AXXAIR Orbital cutting

AXXAIR
INNOVATIVE ORBITAL SOLUTIONS

A proper tube preparation is essential to produce a proper weld.

AXXAIR's orbital cutting machines feature stainless steel concentric jaws to prevent the deformation of the tubes, especially the one with thin walls, during clamping.

The perfect position of the tube within the machine also guaranty the perpendicularity of the cut as the saw travels around the tube and the consistency that perpendicularity cut after cut.



The precision of our cutting machine allow a perfect tube to tube alignment, with the smallest gap possible, removing the need to facing the tube therefore saving a significant amount of time and money.

AXXAIR's orbital cutting machines are an indispensable tool for any automatic and orbital welding.

AXXAIR offers the **largest orbital cutting range in the world !**

11 different models to cut tubes from diameter 5 to 1100 mm !



FLEXIBILITY, PRODUCTIVITY

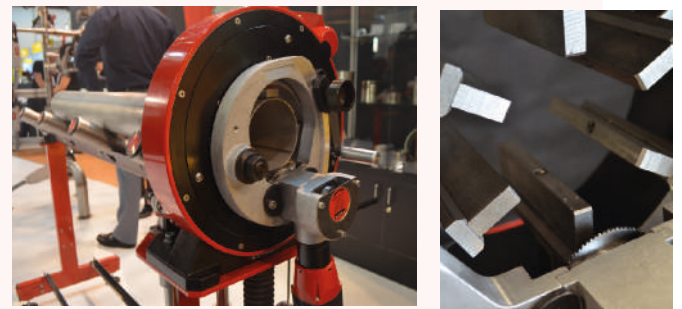
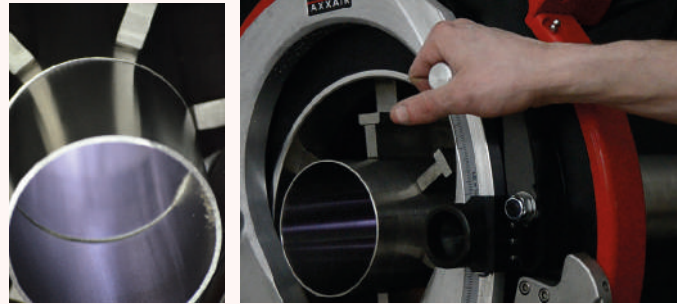
AXXAIR frames (except CC81, CC121ECO and 171ECO) are easily scalable for beveling and welding use.

QUALITY, GEOMETRIC PRECISION

Cutting with no tube distortion (multi-contacts concentric clamping) ideal for thin wall stainless steel tubes. Great perpendicularity (<0.25 mm) of the cut and superb surface finish (few burrs).

PORTABILITY

With the easy to remove sawing attachment, AXXAIR's cutting machines are easy to transport on site or move within a workshop.



Please do not hesitate to contact us for all enquiries relating to orbital cutting technology.

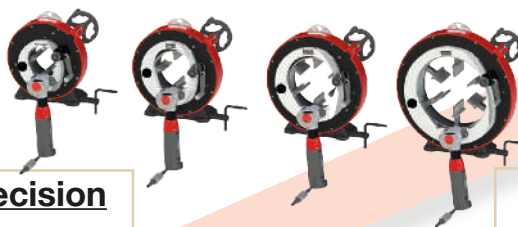
We are glad to share our decades long experience in orbital cutting and helping you to select the solution that fits your needs.



Join **experience**



122 - 172 - 222 - 322



No tube deformation

Concentric clamping



Basic and extra stainless steel jaws: no pollution of stainless steel tubes

Cutting precision

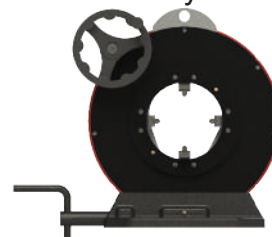
Perpendicularity of < 0.25 mm

Cutting quality

Rotation handle for controlled and continuous cutting speed

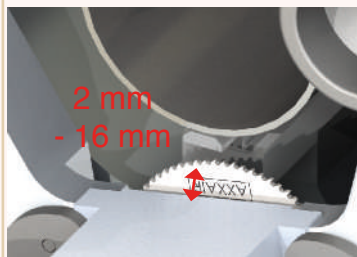
A perfect sealing against chips

All rotating parts are incorporated in the body



Reduced vibration and increased blade life

Optimised blade to jaw distance



Global Process

Can be transformed into an orbital bevelling and welding machine

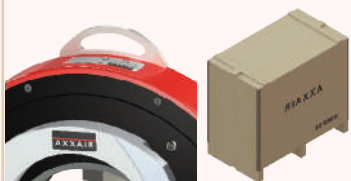
Uptake

feature a dual blade position allowing to cut elbows or flanges with no wasting of tube.

1200W motor or pneumatic motor (as required)

Cutting capacity: Up to 5 mm wall thickness*

Easy handling and transportation



Continuous use

Anti-twist cable with bearings. Protects the electric cable from damage resulting from rotation around the tube.

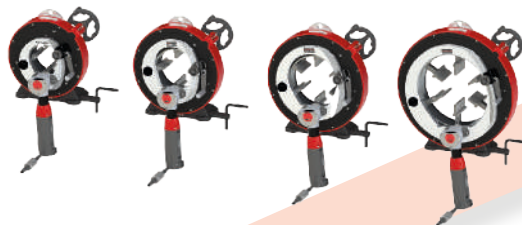
Opening capacity

122	ø5 - ø119 mm 0.25" - 4.5 "
172	ø16 - ø173 mm 0.625" - 6.625 "
222	ø55 - ø228 mm 2.375" - 8.625 "
322	ø141 - ø328 mm 5.563" - 12.750 "

*depending on the type of steel



122- 172 - 222- 322



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INNOVATIVE ORBITAL SOLUTIONS

Technical features:

- Fast speed motor:

120V or 230V, 1200W, electronic speed variator with cutting compensator
Vibration level according to EN 28662 norm : <math><2.5m/s^2</math>, protection class : IP 20
Rotation speed (6 speed variations): from 95 RPM to 280 RPM

- Pneumatic motor:

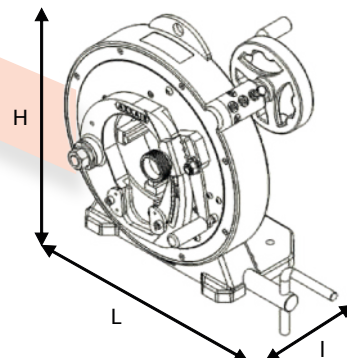
60 to 110 rpm, air flow rate 1500 l/min at 6 bar.

- Robustness:

Very efficient clamping system thanks to a screw without end directly engaged on the clamping cam.

- Easy maintenance and control:

Lubrication of the inner parts with the grease nipples



All motors are supplied in their own individual cases, including the necessary tools

	Product Code	Machine's jaw opening capacity in mm		Net weight	Dimensions (HxLxw in mm)
		With basic jaws	With extra jaws (included)		
120V 1200W fast motor	122FS19	Ø29 - Ø119	Ø5 - Ø99	44 kg	443 x 541 x 304
	172FS19	Ø74 - Ø173	Ø16 - Ø116	51 kg	493 x 566 x 304
	222FS19	Ø128 - Ø228	Ø55 - Ø155	59 kg	548 x 594 x 304
	322FS19	Ø230 - Ø328	Ø141 - Ø239	71 kg	649 x 644 x 304
230V 1200W fast motor	122FS29	Ø29 - Ø119	Ø5 - Ø99	44 kg	443 x 541 x 304
	172FS29	Ø74 - Ø173	Ø16 - Ø116	51 kg	493 x 566 x 304
	222FS29	Ø128 - Ø228	Ø55 - Ø155	59 kg	548 x 594 x 304
	322FS29	Ø230 - Ø328	Ø141 - Ø239	71 kg	649 x 644 x 304
Pneu- matic motor	122PD	Ø29 - Ø119	Ø5 - Ø99	44 kg	443 x 541 x 304
	172PD	Ø74 - Ø173	Ø16 - Ø116	51 kg	493 x 566 x 304
	222PD	Ø128 - Ø228	Ø55 - Ø155	59 kg	548 x 594 x 304
	322PD	Ø230 - Ø328	Ø141 - Ø239	71 kg	649 x 644 x 304



Join experience



The ECO Cutting range

81M - 121ECO - 171ECO



For more than 20 years AXXAIR has been developing scalable, flexible and reliable machines featuring our patented concentric clamping design and many other functions.

The frames of our cutting machines 122 - 322 can be fitted with a cutting motor, a bevelling motor or with a TIG welding torch.

Our ECO range differs from this concept and is specialized in cutting thin wall tubes. It offers the same quality of cut than the CC 122 - 322 range in a more affordable package for customers who do not need to bevel or weld with the same machine.

We developed the ECO cutting range in order to respond to these users looking simply for a cutting solution for thin tubes.

Machines dedicated to thin tubes < 5 mm wall thickness*

Easy to move around and lightweight

Attractive prices

AXXAIR choose Metabo to power our ECO range because of the large speed range and higher torque matching the requirements for cutting stainless steel thin wall tubes.

The handle of the Metabo power unit also makes easy and convenient to rotate the blade around the tube.

Our 121 and 171ECO range share the same safe and efficient diameter setting and blade penetration unit than our CC range.

The ECO range comes in a more affordable package but still features most of the designs that made our more advanced CC ranges popular among the industry.

Because our ECO range is dedicated to cutting, some of the upgrades and accessories available on the CC range like automatic rotation or automatic clamping are not available for this type of cutting machines.

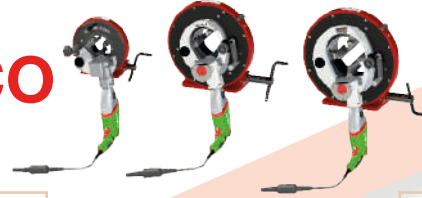
For more details, accessories and the references please see the following pages of this catalogue.



*depending on the type of steel

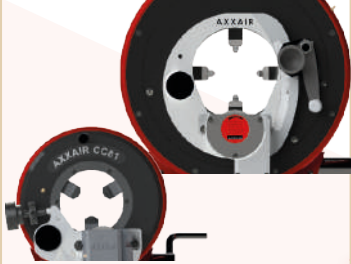


81M - 121ECO - 171ECO



No tube deformation

Concentric clamping system



Basic and extra stainless steel jaws: no pollution of stainless steel tubes

Cutting precision

Perpendicular cuts < 0.25 mm

Operator safety feature

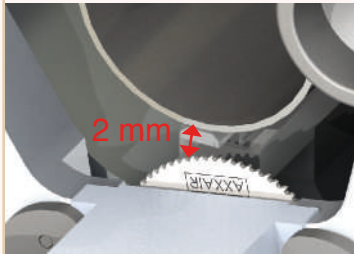
Penetration check feature

Uptake

121ECO +171ECO: feature a dual blade position allowing to cut elbows or flanges with no wasting of tube.

Limited vibration and tube distortion

Optimised blade to jaws distance



Motor 1300W

Speed adjustment through gearbox and electronic variator

Cutting capacity:

Up to 5 mm wall thickness*



Easy handling and transportation



Continuous use

Anti-twist cable with bearings. Protects the electric cable from damage resulting from rotation around the tube.

Opening capacity

81M	ø5 - ø78 mm 0.25 - 3 "
121ECO	ø5 - ø121 mm 0.25 - 4.5 "
171ECO	ø16 - ø170 mm 0.625 - 6.625 "

*depending on the type of steel



81M - 121ECO - 171ECO

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INNOVATIVE ORBITAL SOLUTIONS

Technical features :

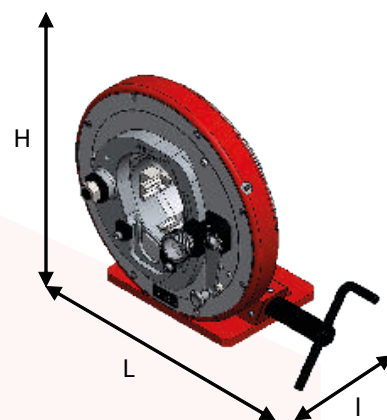
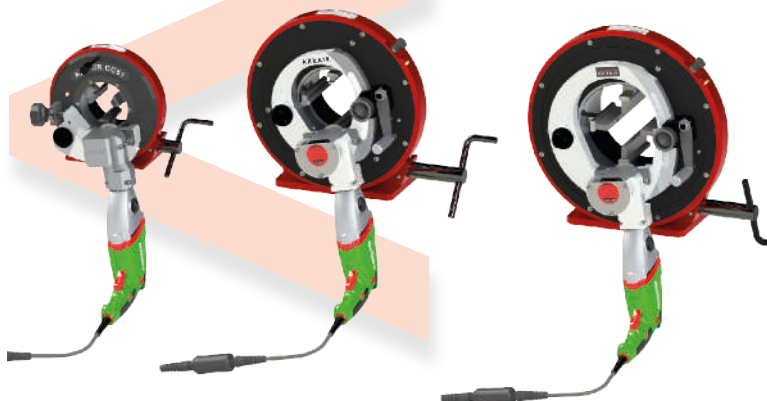
With the Metabo power unit, our ECO range features a large range of blade rotation speed and the right torque for cutting stainless steel thin wall tubes.

Electric motor 1300W:

- Mechanical gearbox and electric speed variator
- 50/60 HZ
- single-phase motor

Exept the 81M, all the machines' cutting motors are shipped in a convenient carrying case together with all necessary tools for operating the machine.

Because of it's small form and low weight, the 81M cutting motor and the tools are included in the machine's transport case.



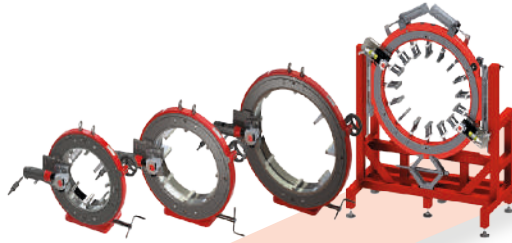
	Product Code	Machine's jaw opening capacity in mm		Net weight	Dimensions (HxLxw in mm)
		With basic jaws	With extra jaws (included)		
120V 1300W	81M11	Ø5 - Ø78	-	15 kg	263 x 346 x 236
	121ECO1	Ø24 - Ø121	Ø5 - Ø108	38 kg	432 x 520 x 297
	171ECO1	Ø70 - Ø170	Ø16 - Ø118	44 kg	453 x 550 x 307
230V 1300W	81M21	Ø5 - Ø78	-	15 kg	263 x 346 x 236
	121ECO2	Ø24 - Ø121	Ø5 - Ø108	38 kg	432 x 520 x 297
	171ECO2	Ø70 - Ø170	Ø16 - Ø118	44 kg	453 x 550 x 307



Join **experience**



421- 521-721-1100



No tube deformation

Concentric clamping



Basic and extra **stainless steel** jaws: no pollution of stainless steel tubes

Cutting precision

Perpendicular cuts < 0.4 mm

Uptake

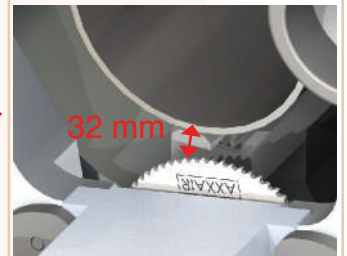
feature a dual blade position allowing to cut elbows or flanges with no wasting of tube.

Cutting quality

Rotation handle for controlled and continuous cutting speed

Reduced vibration and increased blade life

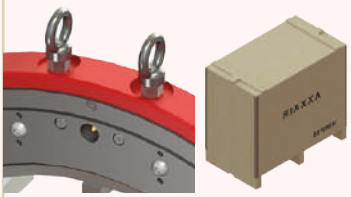
Optimised blade to jaw distance



Continuous use

Anti-twist cable with bearings. Protects the electric cable from damage resulting from rotation around the tube.

Easy handling and transportation



1200W motor or pneumatic motor (as required)

Cutting capacity: Up to a wall thickness of 5 mm*

Opening capacity

421	ø212 - ø422 mm 8.625 - 16 "
521	ø312 - ø522 mm 12.75 - 20 "
721	ø447 - ø725 mm 18 - 28"
1100	ø711 - ø1016 mm 28 - 40 "

*depending on the type of steel



421- 521-721-1100



Technical features:

- Fast motor:

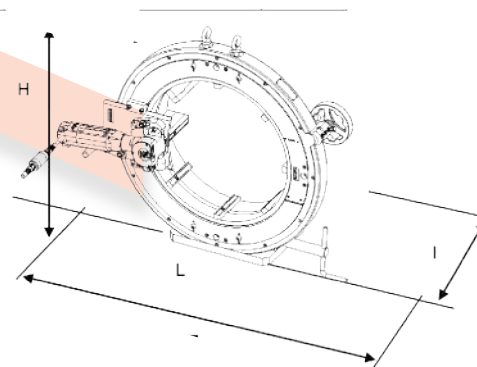
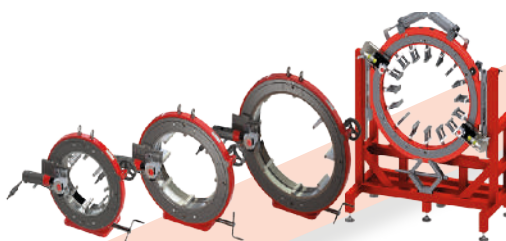
120V or 230V, 1200W, electronic speed variator with cutting compensator
 Vibration level according to EN 28662 norm : <math>< 2.5m/s^2</math>, protection class : IP 20

Rotation speed (6 speed variations): from 95 RPM to 280 RPM

- Pneumatic motor:

60 to 110 rpm, air flow rate 1500 l/min at 6 bar

All motors are delivered in their individual case, including the necessary tools



	Product Code	Machine's jaw opening capacity in mm		Net weight	Dimensions (HxLxw in mm)
		With basic jaws	With extra jaws (included)		
120V 1200W fast motor	421FS19	Ø350 - Ø422	Ø212 - Ø352	186 kg	802x838x315
	521FS19	Ø450 - Ø522	Ø312 - Ø452	223 kg	905x889x315
	721FS19	Ø653 - Ø725	Ø447 - Ø654	256 kg	1104x1077x315
230V 1200W fast motor	421FS29	Ø350 - Ø422	Ø212 - Ø352	186 kg	802x838x315
	521FS29	Ø450 - Ø522	Ø312 - Ø452	223 kg	905x889x315
	721FS29	Ø653 - Ø725	Ø447 - Ø654	256 kg	1104x1077x315
Pneu- matic motor	421PD	Ø350 - Ø422	Ø212 - Ø352	186 kg	802x838x315
	521PD	Ø450 - Ø522	Ø312 - Ø452	223 kg	905x889x315
	721PD	Ø653 - Ø725	Ø447 - Ø654	256 kg	1104x1077x315
	1100	On demand			



Orbital cutting - Accessories

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INNOVATIVE ORBITAL SOLUTIONS

Our support legs and stands have been designed to further facilitate cutting by ensuring that the machine is stable in different conditions: in a workshop or on site.

The great advantages of these products:

- lightness
- flexible handling
- easy to use



Product Code	Description	Net Weight	Dimensions (in cm)
CCPS21	Support feet	10 kg	103 x 32 x 11

Support legs for orbital cutting machine:

- quick assembling and dismantling
- storage box at the back
- height adjustment with screws
- optimum stability

81	✓121ECO	✓171ECO	✓122	✓172	✓222	✓322	421	521	721	1100
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Product Code	Description	Net Weight	Dimensions (in cm)
CCSER1	Simple stand	10 kg	60 x 26 x 10

Simple stand for supporting tubes with height adjustment:

- quick assembling and dismantling
- height adjustment

✓81	✓121ECO	✓171ECO	✓122	✓172	✓222	✓322	421	521	721	1100
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Product Code	Description	Net Weight	Dimensions (in cm)
CCSER2	Stand (with chrome steel bearings)	11 kg	60 x 26 x 10

Stand with chrome steel bearings for supporting tubes with height adjustment:

- easy assembling and dismantling
- facilitates tube feeding after each cut
- height adjustment

✓81	✓121ECO	✓171ECO	✓122	✓172	✓222	✓322	421	521	721	1100
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Join **experience**



Orbital cutting - Accessories



Our support benches help you to position and feed your tubes without the aid of stands. The height-adjustable table helps you easily and precisely set the height of your machine, for cutting tubes placed on the support bench.

The additional tube support bench allows you to position your longest tubes in a stable manner on all benches.

We also recommend that you support the cut section in front of your cutting machine using one or more additional benches, depending on the length of the tube.



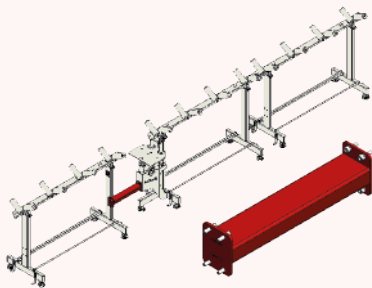
Product Code	Description	Net Weight	Dimensions (in cm)
CCBSB-X1	Bench with height adjustment	57 kg	184 x 95 x 51
Height-adjustable support bench, 1.5m - stainless steel rollers - handle for height adjustment - 1.5 m long - maximum load: 350 kg - ø min pipe: 5 mm - ø max pipe: 321 mm - compatible with machines 121 to 321			

81	✓ 121ECO	✓ 171ECO	✓ 122	✓ 172	✓ 222	✓ 322	421	521	721	1100
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Product Code	Description	Net weight	Dimensions (in cm)
CCBSB-X2	Additional 1.5 m bench	38 kg	150 x 95 x 51
Additional support bench: - stainless steel rollers - 1.5 m long - maximum load 350 kg uniformly distributed - ø min pipe : 5 mm - ø max pipe: 321 mm - compatible with machines 121 to 321			

81	✓ 121ECO	✓ 171ECO	✓ 122	✓ 172	✓ 222	✓ 322	421	521	721	1100
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Product Code	Description	Net Weight	Dimensions (in mm)
CCBSB-B005	Connection	3 kg	100 x 80 x 402
Connecting bar for CCBSB-X1 and CCBSB- X2: - Allows the height-adjustable table to be connected to a bench placed in front of the machine			

81	✓ 121ECO	✓ 171ECO	✓ 122	✓ 172	✓ 222	✓ 322	421	521	721	1100
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Orbital cutting - Accessories (End stop)

In addition to our CCBB-X1 and CCBB-X2 benches, we offer benches with an end stop system. These stops are very simple to use and avoid all measurement errors.

No pollution of the tube:

All parts that are in contact with the tube are made of stainless steel (the rollers but also the stop finger)

Retractable stop:

In order to facilitate the evacuation of the cut, the stop is manually retractable.



- Lengths available:
1500 - 3000 - 4500 - 6000 - 7500 and 9000 mm
- Working stroke: Length - 200 mm
- Delivered by module of 1500mm to be put together
- Max load per module: 350 kg (evenly distributed)
- Max push on the stop: 10 kg
- Operating temperature: 0 - 50 ° C
- Relative humidity: 35 - 85%

They can be assembled on the **feed-in or feed-out** section of the cutting machine

They are available **with a ruler or with an LCD display.**

Feed-in assembly



Feed-out assembly



LCD display

Possibility of selecting the direction of counting, the position of the decimal point, the unit of measurement (mm or inches), reset / preset of the measurement, absolute / relative dimension.

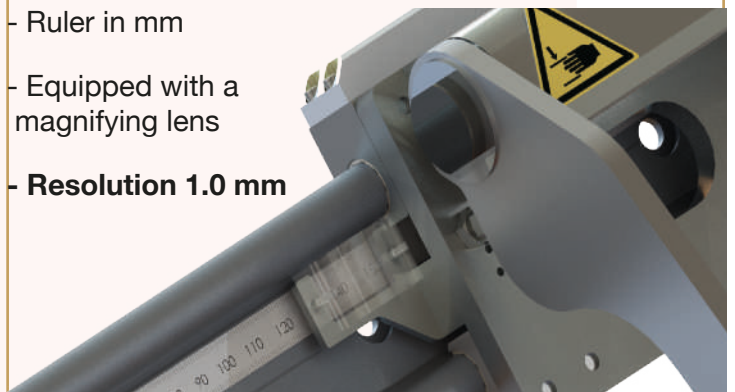
- Battery powered. Lifetime of about 4 years. The discharged battery icon appears when battery replacement is required. Replacement is easily done without loss of the value and configuration parameters.



- Resolution 0.1 mm

Ruler

- Ruler in mm
- Equipped with a magnifying lens
- Resolution 1.0 mm



81	✓121ECO	✓171ECO	✓122	✓172	✓222	✓322	421	521	721	1100
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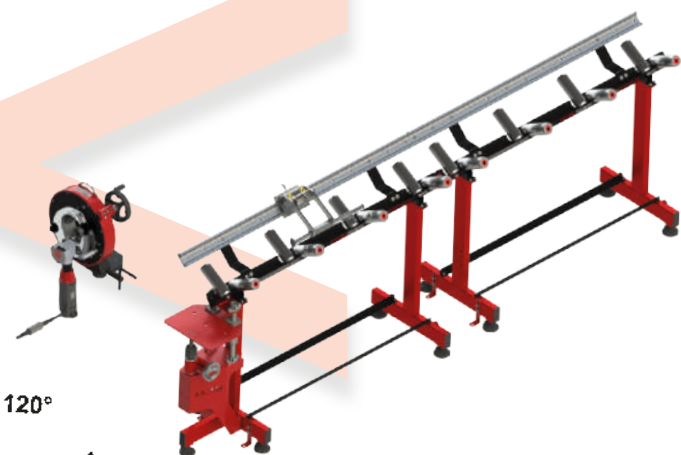
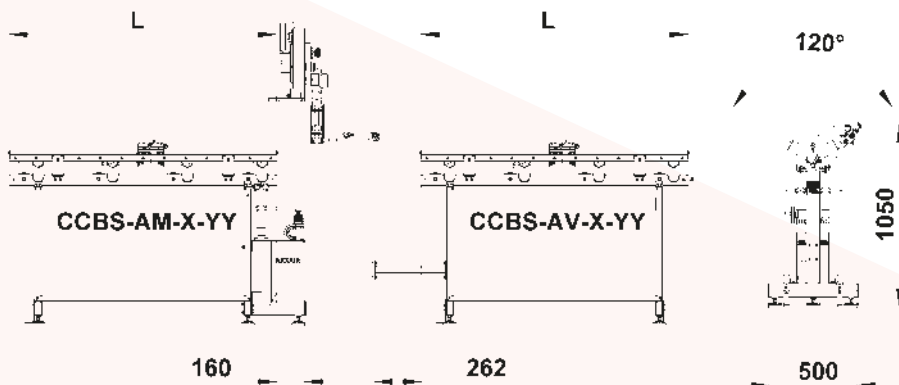
Orbital cutting - Accessories (End stop)



Feed-in assembly

The parts are delivered unassembled in transport boxes, per module of 1,5 m.

They must be assembled, aligned and fixed to the ground. The magnetic ruler (with LDC display) or the ruler must be glued at the end of the assembly.



The system is delivered with the height-adjustable support bench (CCBSB-X1), additional support benches, the starting end stop module and its extensions.

Assembly	Reader	Length (in mm)	Working stroke (in mm)	Product code	Net weight					
on the feed-in section of the cutting line	Ruler	1500	1300	CCBSB-AM-R-15	65 kg					
		3000	2800	CCBSB-AM-R-30	104 kg					
		4500	4300	CCBSB-AM-R-45	143 kg					
		6000	5800	CCBSB-AM-R-60	163 kg					
		7500	7300	CCBSB-AM-R-75	200 kg					
		9000	8800	CCBSB-AM-R-90	238 kg					
	LCD display	1500	1300	CCBSB-AM-D-15	65 kg					
		3000	2800	CCBSB-AM-D-30	104 kg					
		4500	4300	CCBSB-AM-D-45	143 kg					
		6000	5800	CCBSB-AM-D-60	163 kg					
		7500	7300	CCBSB-AM-D-75	200 kg					
		9000	8800	CCBSB-AM-D-90	238 kg					
81	✓121ECO	✓171ECO	✓122	✓172	✓222	✓322	421	521	721	1100

You can add CCBSB-X2 modules to support the tube after the cutting process (in front of the cutting machine) with the CCBSB-B005 connecting bar (see previous pages).



Join experience





Orbital cutting - Accessories (End stop)

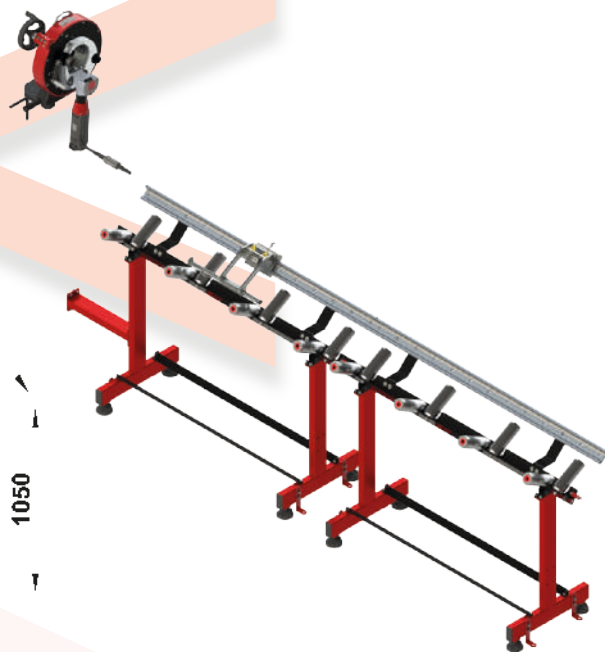
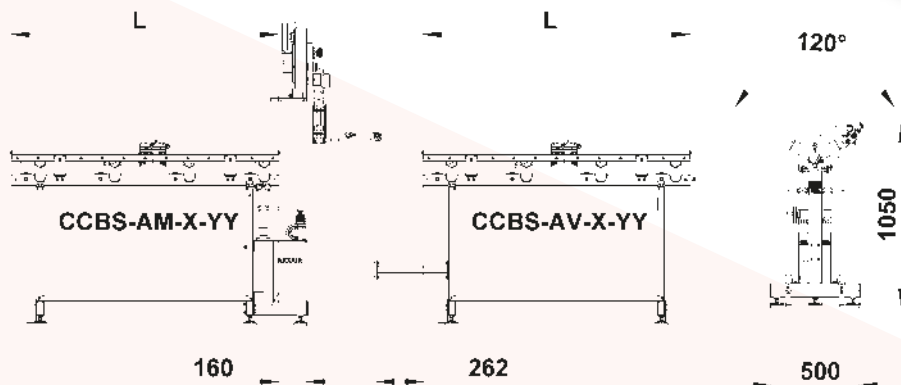
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Feed-out assembly

The parts are delivered unassembled in transport boxes, per module of 1,5 m.

They must be assembled, aligned and fixed to the ground. The magnetic ruler (with LDC display) or the ruler must be glued at the end of the assembly.



The system comes with: CCBSB-X2 support bench modules, the starting end stop module and its extensions, the CCBSB-B005 connecting bar.

Attention: For all references with AV (bench with end stop on the feed-out section) we must also deliver at least one CCBSB-X1 bench (height-adjustable support bench) to support the cutting machine.

Assembly	Reader	Length (in mm)	Working stroke (in mm)	Product code	Net weight
on the feed-out section of the cutting line	Ruler	1500	1300	CCBSB-AV-R-15	46 kg
		3000	2800	CCBSB-AV-R-30	85 kg
		4500	4300	CCBSB-AV-R-45	124 kg
		6000	5800	CCBSB-AV-R-60	163 kg
		7500	7300	CCBSB-AV-R-75	201 kg
		9000	8800	CCBSB-AV-R-90	240 kg
on the feed-out section of the cutting line	LCD display	1500	1300	CCBSB-AV-D-15	46 kg
		3000	2800	CCBSB-AV-D-30	85 kg
		4500	4300	CCBSB-AV-D-45	124 kg
		6000	5800	CCBSB-AV-D-60	163 kg
		7500	7300	CCBSB-AV-D-75	201 kg
		9000	8800	CCBSB-AV-D-90	240 kg

81	✓121ECO	✓171ECO	✓122	✓172	✓222	✓322	421	521	721	1100
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Join **experience**



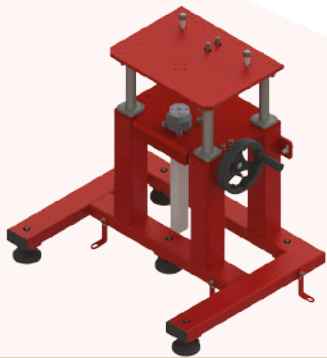
Orbital cutting - Accessories



Our support benches help you to position and feed your tubes without the aid of stands. The height-adjustable table helps you easily and precisely set the height of your machine, for cutting tubes placed on the support bench.

The additional tube support bench allows you to position your longest tubes in a stable manner on all benches. We also recommend that you support the cut section in front of your cutting machine using one or more additional benches, depending on the length of the tube.

These products are available on request



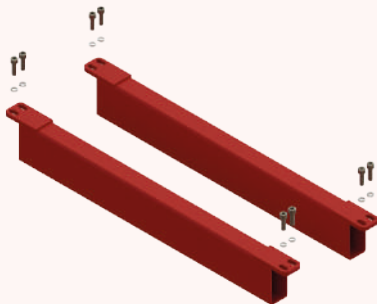
Product Code	Description	Net weight	Dimensions (in mm)
CCBSB2-003	Height-adjustable table	53.5 kg	75 x 73 x 54
<u>Height-adjustable table for 422 / 521 / 721:</u>			
- adjustable table height		- optimum stability	

81	121ECO	171ECO	122	172	222	322	✓421	✓521	✓721	1100
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Product Code	Description	Net Weight	Dimensions (in mm)
CCBSB2-004	Support bench	72.8 kg	97 x 71 x 150
<u>Tube support bench for 422 / 521 / 721:</u>			
- quick assembly and dismantling		- 1.5 m long	
- height adjustment		- optimum stability	

81	121ECO	171ECO	122	172	222	322	✓421	✓521	✓721	1100
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Product Code	Description	Poids net	Dimensions (en mm)
CCBSB2-005	Connecting bar	6.5 kg	8.5 x 4 x 65
<u>Connecting bar between two CCBSB2 support benches:</u>			
- quick assembly and dismantling		- ensures optimum stability	

81	121ECO	171ECO	122	172	222	322	✓421	✓521	✓721	1100
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Orbital cutting - Accessories



New autoline electric rotation:

- Measures and displays the cutting/bevelling motor's power consumption
- enables the motor and cycle to be stopped in the event of overconsumption
- protects the motor and frees the operator from watching the machine
- detects whether the motor is straining and whether the blade is worn

3.5 colour touch-screen allowing you to:

- enter the diameter and precisely adjust the feed speed in mm/min
- aid adjustment with a suggested motor speed and feed speed based on the type of material and the blade used
- perform quick and easy configuration
- display the cutting/bevelling motor's consumption
- display in English, French or German
- choose the unit of measure: mm or inch

Welding mode with prefab machine and SAXX power source : 4-button display (Start, Stop, Left, Right) with the addition of a power source connection cable

(Ref. SAEX-A02 for addition, more details in the "ORBITAL WELDING" section of this catalogue)

This rotation is compatible with our previous **121, 171, 221, 321, 421, 521 and 721** models.

The previous SAEP-00/000 rotation cannot be fitted to our new 122, 172, 222 and 322 models.



Product Code	Description	Net Weight	Dimensions (in mm)
SAEX-00	Autoline electric rotation	6.3 kg	320 x 261x 193

Autoline electric inverter for CC122 to 322:

- 110 V to 230 V
- even rotation
- easy to use
- precise adjustment

81	121ECO	171ECO	✓ 122	✓ 172	✓ 222	✓ 322	421	521	721	1100
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Product Code	Description	Net Weight	Dimensions (in mm)
SAEX-000	Autoline electric rotation	6.3 kg	320 x 261x 193

Autoline electric inverter for CC421 to 721:

- 110 V to 230 V
- even rotation
- easy to use
- precise adjustment

81	121ECO	171ECO	122	172	222	322	✓ 421	✓ 521	✓ 721	1100
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