

COMMUTATOR UNDERCUTTING



Automatic Undercutting Machine

BETA U

Latest-generation automatic undercutting machine: the ideal mechanical solution for customers looking for perfection



Concept

This machine belongs to Rimac heavy series of undercutting machines, specifically conceived and built for the manufacturing of commutators with diameter up to 1500 mm. The variety of undercutting methods that can be performed, combined with all the different cutters' profiles and sizes that can be used, makes these machines unique in the market thanks to their precision, high operating speed and easiness of use.

Main Features

The armature can be placed between tailstocks or, alternatively, on rollers (support system suitable for armatures with damaged shaft center or remarkably long).

Tailstocks and undercutting head are mounted on independent ball bearing screws for a long, precise and smooth movement.

Remote control for an easy control and set-up of the machine when working in manual mode.

LASER UNIT

Bar-index carried out by means of a high-precision laser unit.



Armature rotation CNC controlled by means of a step motor with adjustable speed.

Automatic cutter lift during return phase.

Automatic diagnosis of faults for an easy troubleshooting.

ASPIRATION UNIT

Equipped with a powerful aspirator for vacuuming powders and dry materials generated by the undercutting process, guaranteeing a healthier work environment.



Possibility of choosing among several undercutting methods available: locked spindle undercutting mode; oscillating spindle undercutting mode; corridor program mode.

BAR CHAMFERING

Possibility of performing special undercutting procedures such as bar chamfering and deep bar chamfering at tops.



BRUSHING & DEBURRING UNIT

Possibility of mounting a brushing and deburring unit for the rounding off of the undercutting slot's edges. There is the possibility of using different typologies of brushing devices with different materials, according to the expected surface roughness and to the mechanical abrasion required.



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The machine is available in two main configurations:

The armature is supported between stock and tailstock



The armature is supported on rollers



The machine is available in 3 different sizes according to the maximum workable commutator diameter

Technical Specifications	<i>BETA 60 U</i>	<i>BETA 100 U</i>	<i>BETA 150 U</i>
Armature core diameter	100 - 600 mm	150 - 1000 mm	150 - 1500 mm
Commutator diameter	80 - 500 mm	80 - 900 mm	80 - 1300 mm
Max armature weight	2000 kg	5000 kg	6000 kg
Distance between centres/rollers	500 - 1500 mm	500 - 1800 mm	500 - 2300 mm
Cutter tool advance & return speed	0 - 50 mm/sec stepless		
Bar indexing speed	0 - 2 mm/sec		
Cutter rotation speed	1000 - 5500 rpm		
Machine weight	1900 kg	2500 kg	3000 kg
Overall dimensions (LxWxH)	300 x 200 x 220 cm	350 x 230x 220 cm	450 x 260 x 220 cm
Power	4 kW	5 kW	6 kW
Supply	V 400 3ph+N+G 50Hz or V 240 2ph+G 50Hz		
Pneumatic supply	compressed air 6 bar		