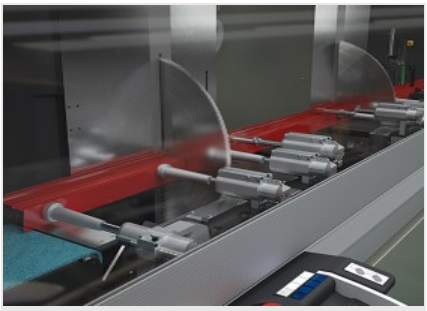
Compound Cut

Double-head cutting-off machines

Twin-head cutting-off machine with 9 controlled axes which include the automatic movement of the mobile head, electronic management of two rotation axes of the cutting units, blade feed and vertical translation of the cutting units to maximise the work area. It allows reaching angles from 45° (internally) to 22°30’ (externally) on horizontal axis and from 0 to 45° on vertical axis with decimal cutting precision. The feed of 600 mm widia blades can be carried out on two axes, optimising the cutting chart in the vertical direction, to cut profiles more than 500 mm in height and ensure an optimal adjustment of blade exit speed and stroke. The HS (High Speed) version has a higher speed X axis and all the protections required for automatic machining operations, also with the machine unattended.

Emmegi S.p.A.
Via Archimede, 10
41019 - Limidi di Soliera (MO)
ITALY

Tel +39 059 895411
Fax +39 059 566286
P.Iva/C.Fisc 01978870366
info@emmegi.com
www.emmegi.com



Profile clamping

The machine is equipped with a system with vices that swings horizontally and, by means of horizontal hold-down devices, clamps the profile for an extremely precise cut. For vertical clamping, particularly for special cuts, the machine can be equipped with a patented system of horizontal hold-down devices.

Control

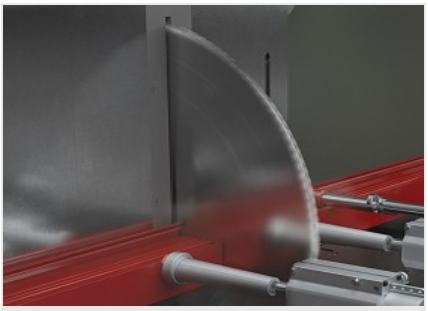
The ergonomic state-of-the-art control panel features a 10.4” touchscreen display and fully customised software and is packed with functions developed in the Microsoft Windows® environment specifically for this machine. The machining cycle can be optimised by creating cutting lists, thereby reducing scrap and cycle times for workpieces loading-unloading.

HS – High Speed

The HS – High Speed version is equipped with a faster X axis (mobile head positioning), and features an integral protection on the sides and at the back, to operate in complete safety, increasing productivity. The safety characteristics of this version, fully inaccessible during operation, allow using automatic cutting cycles, even not supervised, at maximum operational performance.

Combined cut

The inclination of each head, up to 22°30’ outwards, is obtained by means of a mechanical transmission with high-precision gear motor and brushless motor with absolute encoder. The tilting is performed by means of an electric actuator with recirculating ball screw and brushless motor. To ensure an optimal positioning, the positioning accuracy is checked upstream of the kinematic transmission chain, through a rotary absolute encoder.



Blade feed on 2 axes

The blade feed is carried out on two axes. The vertical translation, associated with the blade exit movement, increases the cutting diagram height dimension significantly, allowing for maximum use of the large diameter of the blade. The tool trajectory is managed by the software based on the cutting program, on the profile and on the head inclination.

Label printer (Optional)

The industrial label printer allows each cut profile to be identified with identifying features from the cutting list. In addition, barcode printing enables easy identification of the profile itself, which is particularly useful for subsequent machining steps on Machining Centres or assisted assembly lines.

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COMPOUND CUT / DOUBLE-HEAD CUTTING-OFF MACHINES

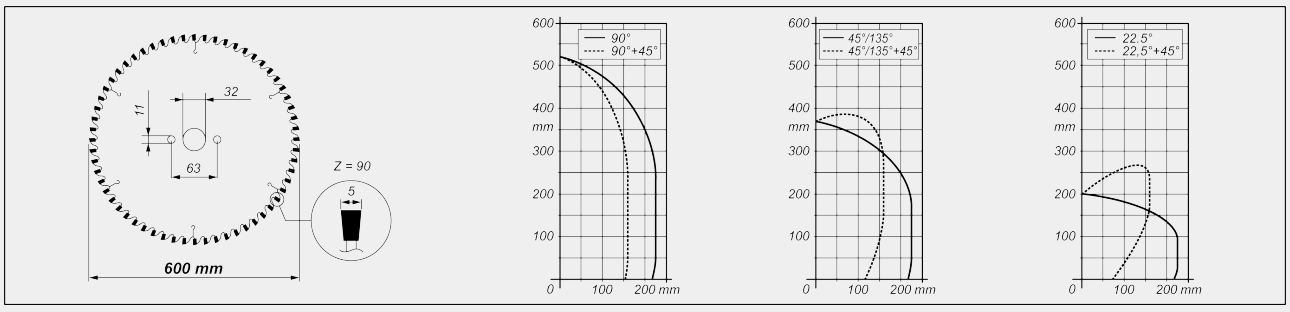
MACHINE CHARACTERISTICS

Electronic control of the X axis	●
X axis positioning speed (m/min)	20
HS version X axis positioning speed (standard) (m/min)	30
Y axis electronic control (blade feed)	●
Y axis stroke (mm)	225
Z axis electronic control (blade vertical movement)	●
Z axis stroke (mm)	160
Mobile head position reading with absolute magnetic strip direct measuring system	●
Cutting unit inclination detection with absolute encoder	●
Electronic control of intermediate angles	●

CUTTING UNIT

Cemented carbide blade	2
Blade diameter (mm)	600
Blade thickness (mm)	5
Blade motor power - L version (kW)	3,6
Blade motor power - H version (kW)	4,4
Electronic profile thickness gauge	○

CUTTING DIAGRAM



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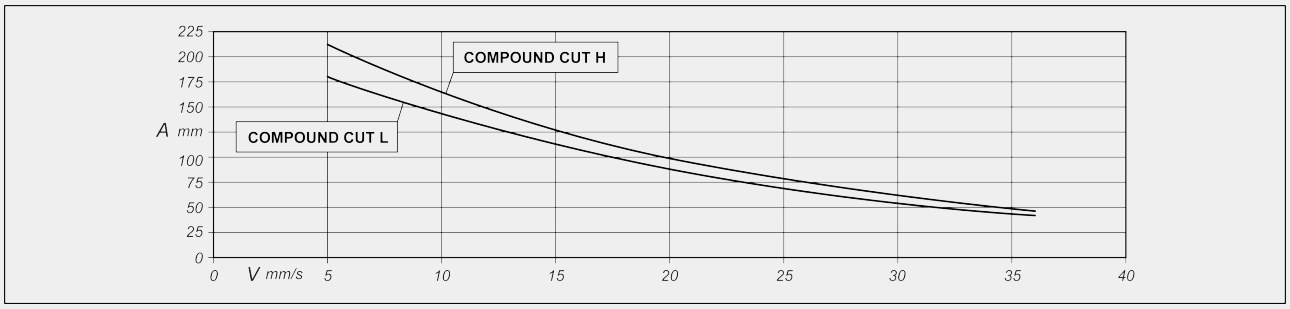
CONTACT ARC LENGTH

Maximum contact arc length to cut aluminium (mm) (L version)	180 (*)
Maximum contact arc length to cut aluminium (mm) (H version)	210 (*)



A = contact arc (mm) V = blade feed rate (mm/s)

(*) Data measured with a blade feed rate of 5 mm/s. Performances close to the limit must be verified by analyzing specific profiles

WORK AREA

Effective cut, according to model (mm)	5.000 / 6.000
Max internal tilting angle	45°
Maximum external inclination	22°30'
Maximum internal inclination	45°
Maximum profile width that can be clamped (mm)	225
Maximum profile height that can be clamped (mm)	180
Standard minimum cut with 2 heads at 90° (mm)	530
Standard minimum cut with 2 heads at 45° externally (mm)	560
Standard minimum cut with 2 heads at 22°30’ externally (mm)	640
Minimum cut with PRO software with 2 heads at 90° (mm)	340
Minimum cut with PRO software with 2 heads at 45° externally (mm)	370
Minimum cut with PRO software with 2 heads at 22°30’ externally (mm)	450

SAFETY DEVICES AND PROTECTIONS

Electrically operated fully enclosed front guarding	●
Soundproofed integral protection cabin with internal lighting	○

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PROFILE POSITIONING AND CLAMPING

Pair of horizontal pneumatic vices with "low pressure" device	2
Pair of horizontal offset vices for cut <45°	○
Pair of additional horizontal vices	○
Pair of horizontal vertical vices	○
Roller conveyor on the mobile head with servo-controlled pneumatically operated profile supports	●
Additional vice for profile support on roller conveyor	○
Conveyor belt for step-by-step or automatic cut (HS version only)	○
Auxiliary support surface on mobile head	●
Auxiliary support surface on fixed head	●

Included ● Available ○

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