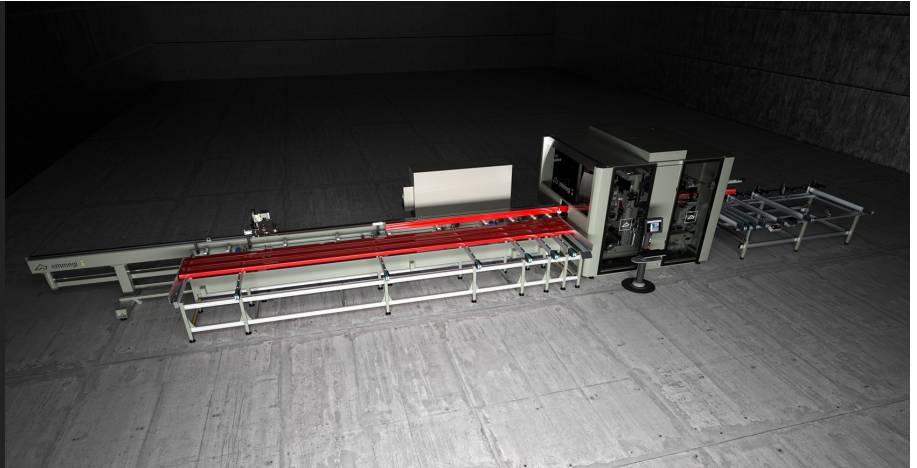


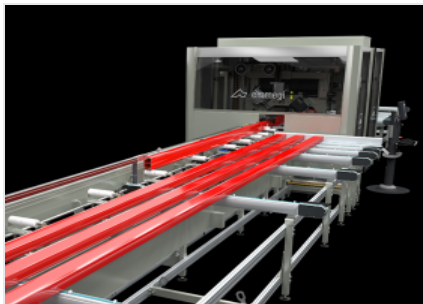


Quadra L1

CNC machining centres

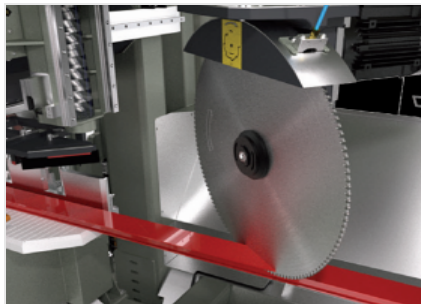


CNC 12-axis machining centre, designed to perform milling, drilling and cutting operations aluminium and light alloys in general. QUADRA L1 is made up of an automatic magazine and a thrust feed system for profile sizes up to 7500 mm complete with profile clamping gripper drive. Due to the movement of the collet, the feeder returns to its initial position thus allowing the loader to prepare the next profile at the same time. In the central part are situated the milling module and the cutting module. The CNC 4-axis milling module is equipped with 4 up to 6 electrospindles and enables the whole contour of the workpiece to be machined, however it is oriented. The CNC 3-axis cutting module is made up of a Ø 600 mm blade, with down stroking movement. QUADRA L1 also comprises an automatic outfeed unit leading from the cutting unit to the unloading magazine. The unit is made up of a magazine with transverse belts for unloading machined workpieces with a length of up to 4000 mm (7500 mm optional). The machining unit can be fitted with a cabin (optional) soundproofing the central operational part, which not only protects the operator but also reduces the acoustic impact on the environment.



Automatic bar feed and workpiece unloading

Numerically controlled, high precision and high speed bar positioning system. The system is complete with a gripper to block the profile with automatic horizontal and vertical position adjustment on two CN axes. To guarantee that each type of profile is grasped with no manual intervention, the numerical control of the gripper slewing axis is also available, which is otherwise handled manually.



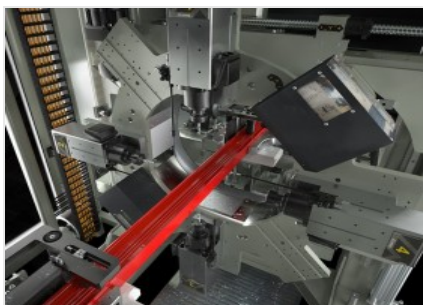
Vertical cutting module

The CNC-operated cutting module includes a 600 mm diameter circular blade with downward movement on 3 axes, with a range from -48° to $+245^{\circ}$, allowing a variety of extruded profile end milling types. The clamping and handling of the segments are done by means of two motorised vice units on CNC axes.



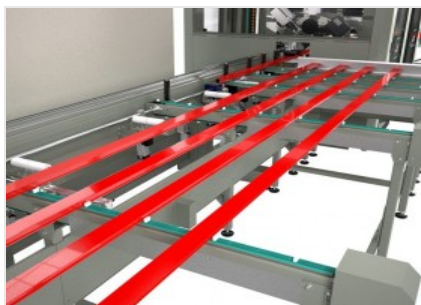
Bar positioning

Numerically controlled, high precision and high speed bar positioning system. The system is complete with a gripper to block the profile with automatic horizontal and vertical position adjustment on two CN axes. To guarantee that each type of profile is grasped with no manual intervention, the numerical control of the gripper slewing axis is also available, which is otherwise handled manually.



Milling unit

QUADRA is fitted with an exclusive turntable system on which 4 to 6 work units interpolated on 4 axes can operate at the same time: X, Y, Z, A (360° slewing around the axis of the bar). The high-frequency electrospindles are air-cooled, and include an ER 32 toolholder with power up to 5.6 kW in S1. Each unit is equipped with a work area disengagement system by means of a slide on recirculating ball shoes.



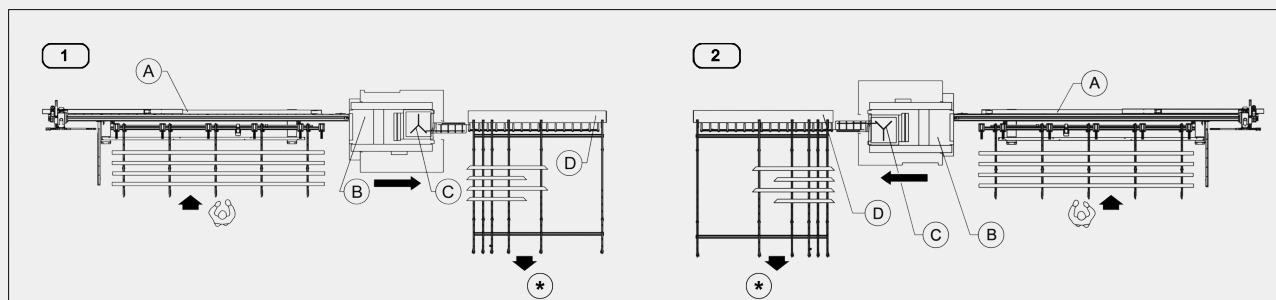
Loading magazine

Belt magazine to load large capacity profiles, available in a basic version for bars that do not exceed 60 kg and in an optional reinforced version for bars up to 120 kg. Max bar length: 7.5 m. In certain conditions, the profiles can be loaded while the machine is working, with respect to the positioning system. If necessary, during loading and unloading, an optional tilting system can automatically rotate the workpiece by 90° .



Unloading magazine

Belt magazine to discharge and store large capacity finished workpieces. Available in two versions: for processed workpieces up to 4.0 m and, as an alternative, up to 7.5 m. The unloading magazine is preceded by a swarf and short cut extraction system which can be optionally equipped with a conveyor belt and a lifting belt to the collection bag.


QUADRA L1 / CNC MACHINING CENTRES
LAYOUT


Loading and unloading on the same side

- 1 - Left feed
- 2 - Right feed

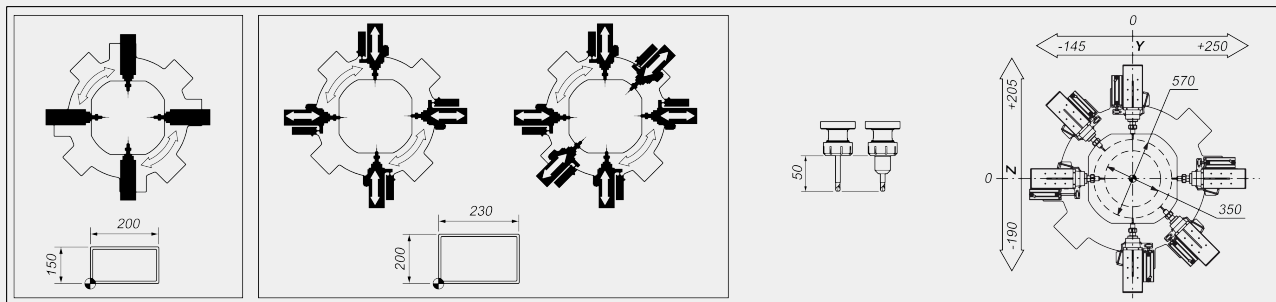
A - automatic magazine with thrust feed system L 7500 mm
 B - milling unit on rotary base
 C - cutting unit
 D - unloading unit
 * - finished workpieces

AXIS STROKES

X AXIS (longitudinal) (mm)	320
Y AXIS (transversal) (mm)	402
Z AXIS (vertical) (mm)	395
A AXIS (rotary base rotation)	0° ÷ 360°
U AXIS (bar positioning) (mm)	9.660
V AXIS (gripper transversal positioning) (mm)	138
W AXIS (gripper vertical positioning) (mm)	138
H AXIS (cutting unit vertical movement) (mm)	627
P AXIS (cutting unit transversal movement) (mm)	880
Q AXIS (cutting machine rotation)	293°
B AXIS (motorised vice movement) (mm)	790
C1 AXIS (pliers rotation)	0° ÷ 180°

MILLING UNIT

Electrospindles with air cooling	4
Electrospindle rotary unit on rotary base	0° ÷ 360°
Maximum power in S1 (kW)	5,6
Maximum speed (rpm)	24.000
Toolholder	ER 32
Maximum number of machining units	6
Disengagement from machining unit work area by means of recirculating ball slides (110 mm stroke)	○
Pressurised lubrication system	●

**MACHINING AREA OF THE MILLING UNIT****CUTTING UNIT**

Blade diameter at carbide-tipped (mm)	600
NC blade positioning	-48° ÷ 245°
Blade motor power (kW)	3
Maximum machinable profile height (mm)	266
Maximum machinable profile width (mm)	300

FUNCTIONS

Workpiece milling, drilling and cutting directly from the entire profile ●

WORKABLE SIDES

No. of faces (top, side, bottom)	1 + 2 + 1
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Included ● Available ○