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Upper blade for a 12x3200 hydraulic guillotine – 9CrSi tool steel

Hardness HRC 55–60

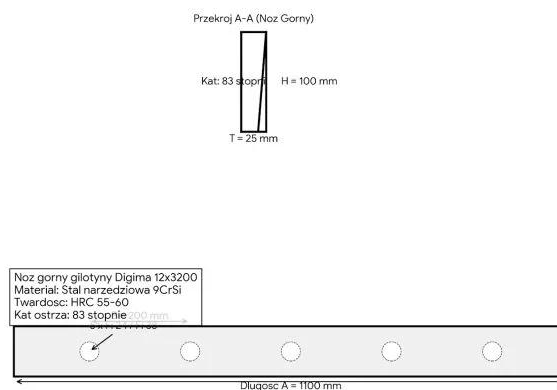
Characteristics and intended use of the 12x3200 top knife

Digima presents a powerful upper (movable) blade, designed for the most demanding cutting systems with dimensions of 12x3200. This is a key cutting element which, by moving along the blade beam guides, ensures a precise and clean cut of sheet metal across the entire working width of 3200 mm. Our Digima product features an extremely robust design, capable of withstanding the immense loads encountered when cutting materials up to 12 mm thick.

Detailed technical specifications of the Digima upper blade:

- **Blade type:** Upper blade, i.e. a movable blade mounted on the guillotine beam.
- **Intended use:** Industrial guillotines with a cutting capacity of up to 12 mm in thickness and 3200 mm in width.
- **Length of a single segment:** 1100 mm.
- **Set configuration:** A full 3.2 m wide cutting line consists of 3 precisely matched Digima segments.

RYSUNEK TECHNICZNY DIGIMA - NOZ GORNY 12x3200



Analysis of the technical specifications of the Digima 12x3200 top cutter

The upper blade in the 12x3200 system is a robustly constructed component, designed to cut sheets of considerable thickness (up to 12 millimetres). The increased cross-sectional dimensions and mounting hole diameters ensure the necessary mechanical strength. Below is a detailed summary of the technical parameters as shown in the drawing:



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- **Geometry and structural dimensions:**

Length of a single segment (A): 1,100 millimetres. A complete set for a 3,200-millimetre-wide machine consists of three such Digima segments.

Profile height (H): The blade is 100 millimetres high.

Blade thickness (T): The blade is 25 millimetres thick, which ensures stable operation under extreme loads.

Cutting edge angle: It is 83 degrees. This blade geometry ensures an optimal cutting process for thick sheet metal.

- **Digima mounting system:**

Number of holes (n): Each segment is fitted with 5 mounting holes.

Axial hole spacing (B): Exactly 200 millimetres between the centres of the holes.

Diameter of mounting holes: Through-holes with an enlarged diameter of 24 millimetres.

Screw sockets: They feature countersinks with a diameter of 38 millimetres, which allow the screw head to be completely concealed within the blade body.

- **Material properties and manufacturing standards:**

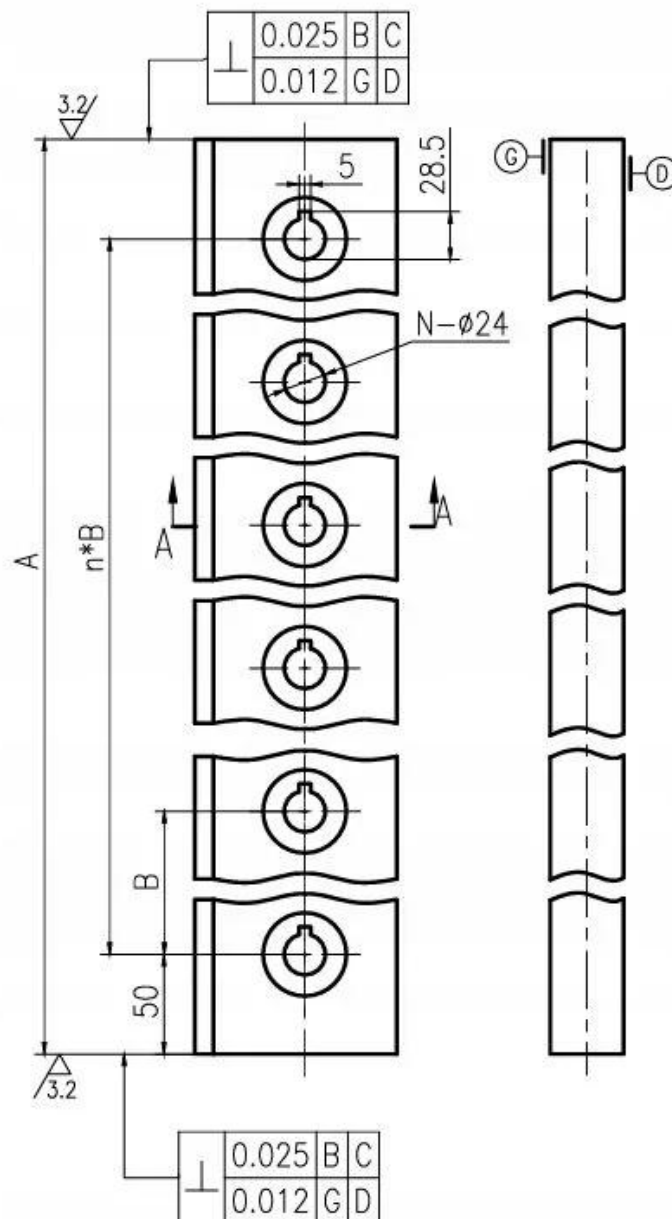
Material grade: 9CrSi high-alloy tool steel.

Working hardness: Hardened to between 55 and 60 HRC.

Quality control: Every Digima blade segment undergoes non-destructive testing to rule out internal defects in the steel.

Technical recommendation: The cutting edge is ground to a sharp point and, in accordance with the documentation, it is prohibited to blunt or round it off.

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9CrSi high-alloy tool steel and the durability of Digima

At Digima, we prioritise uncompromising material strength, which is why this model is made from high-alloy silicon-chromium tool steel, designated 9CrSi. This steel is characterised by excellent dimensional stability and extreme resistance to abrasion and blunting, which is essential for the intensive processing of very thick sheet metal. Thanks to an advanced hardening process, Digima blades maintain their performance characteristics throughout an exceptionally long service life.

Material properties and quality processes:



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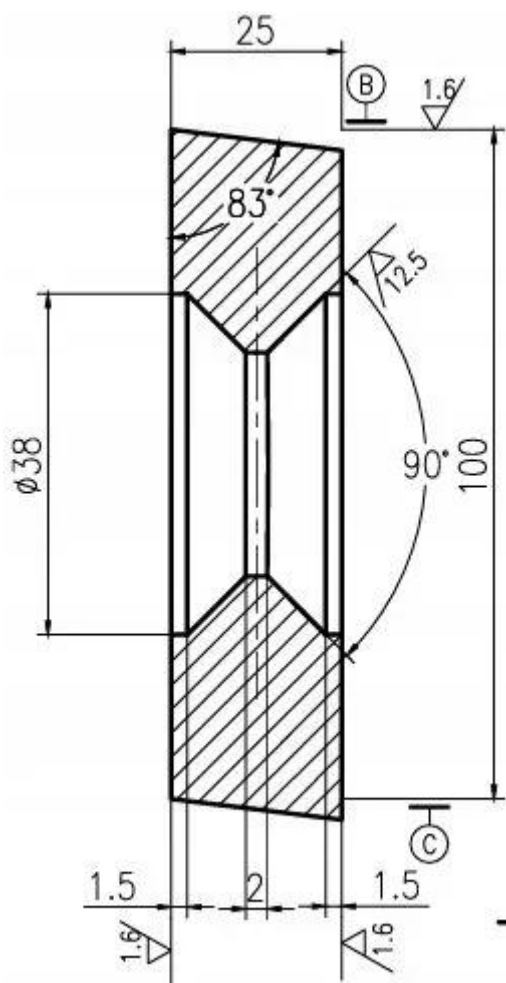
- **Steel grade:** Specialised 9CrSi tool steel with high hardenability.
- **Hardness after heat treatment:** A stable range of 55 to 60 HRC on the Rockwell scale.
- **Heat treatment:** A complete annealing and hardening process ensuring a uniform material structure throughout the entire cross-section of the blade.
- **Consistency guarantee:** Every Digima segment undergoes rigorous non-destructive testing to rule out any internal defects in the steel.

Digima assembly engineering and geometric precision

Every component of a Digima upper blade has been designed to facilitate its correct installation and calibration of the cutting gap when working with thick materials. A special cutting edge ground to an angle of 83 degrees allows for smooth entry into the material, which significantly reduces the load on the machine's hydraulic system. The system of mounting holes ensures the blade fits perfectly against the guillotine beam, eliminating the risk of vibration when operating under maximum load.

Fitting and dimensional specifications:

- **Number of mounting holes:** 5 holes per 1100 mm segment.
- **Axial spacing of holes:** Exactly 200 mm between the centres of adjacent holes.
- **Hole diameter:** Enlarged diameter of 24 mm to ensure stable fastening under high forces.
- **Recesses for bolt heads:** Special 38 mm diameter milled recesses, allowing the fasteners to be completely concealed within the blade body.



Cutting performance and professional service from Digima

Digima 12x3200 top blades are characterised by a substantial cross-section, which is essential for maintaining a straight cutting line when processing 12 mm thick sheet metal. The blade is ground to the highest precision and, in accordance with technical standards, must not be allowed to become blunt or have its edges rounded – it must remain perfectly sharp to ensure a clean cut without burrs. As Digima, we offer not only the product but also full technical support, including a professional blade replacement service for our customers.

Dimensions and quality requirements:

- **Blade thickness:** A solid 25 mm to ensure maximum rigidity under load.
- **Blade height:** 100 mm, guaranteeing resistance to powerful bending forces.
- **Cutting edge angle:** A precise 83 degrees for easier piercing of thick sheet metal

Please note that not only can you purchase top-class cutting components from our company, but we also



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offer a **professional blade replacement service**.