

Efficient shaping of hairpin wires

NIEHOFF's new drawing and rolling machine type MRD 250



Wires with a rectangular cross-section are increasingly in demand on the market. Examples of applications include battery connections or the stator winding of electromotors, known as hairpins, where these wires offer a better fill factor than round wires. Wires with a rectangular cross-section can now be shaped on NIEHOFF's new MRD drawing and rolling machine, which transforms round wires into rectangular wires through a combined drawing and rolling process.

The forming process

The core elements of the device are a drawing die for reducing the wire size to the shape size, two dragged rolling stands, one horizontal and one vertical, and a calibrating die. The rolls of the rolling stands shape the incoming round wires into rectangular wires with a defined edge radius, which are given their finished dimensions and a high quality surface as they pass through the calibrating die.

Before extrusion or enameling lines

The MRD 250 is designed for round wires with an inlet diameter of up to 5 mm and is intended for use before extrusion or enameling lines. The machine can be completed with a preheating and a cleaning system to meet the requirements of the downstream process.

We reserve the right to modify technical specifications according to technical improvement and advances. 03.2026

Technical data MRD 250

Line speed	1-2 m/s (5 m/s is possible by modification of drive technology)
Product	
Rectangular wire (in mm ²)	1.54 x 2.98, r = 0.35 2.23 x 3.42, r = 0.30
(further dimensions upon request)	

MRD 250

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