



R 603 Continuous Resistance Annealer

Expertise, Customer Driven, Service – in Good Hands with NIEHOFF



R 603

Design:

- continuous resistance annealer in the following versions:
1-wire (R 403 / R 503 / R 603)
2-wire (R 503 / R 603)
- 2-zone DC annealing principle (R 403)
- 3-zone AC annealing principle (R 503 / R 603)
- electrically neutral to the outside (no current flows to other machines)
- driven by own drive or individual drives
- freely accessible slip rings and carbon brushes
- contact pulley with inner cooling K2 / K3 (R 403)
- contact pulley with inner cooling K3 / K4 (R 503 / R 603)
- grease-lubricated contact roller bearings (R 403)
- oil-lubricated contact roller bearings (R 503 / R 603)
- single wire guidance without intersection

Increase in quality:

- digital annealing voltage control for uniformly annealed wires
- uniform wire annealing from a speed of 0 m/s
- effective single wire drying

Increase in productivity:

- increased production output thanks to the HEAT annealing principle
- coolant setting via recipe management, depending on the wire programme, using a frequency-controlled pump and magnetic valves

Energy and cost efficiency:

- reduced energy consumption thanks to the HEAT annealing principle
- ergonomic design, easy to maintain and operate
- reduced protective gas consumption due to a closed wire path

Optional:

- cleaning device on all contact pulleys
- flushing pipe at the return flows in the annealing zone
- additional guide pulleys in the annealing zone of the 2-wire version

Technical data

type	single-wire 8,000 A	two-wire 8,000 A
Cu-ETP		
max. individual wire dia.	mm 2.5 ... 5.5 6.0 6.5 6.8 7.35	2.5 ... 3.2 3.6 3.8 4.0 4.5
max. production speed	m/s 25 ... 8.2 6.9 5.9 5.0 3.7	25 ... 20.2 15.9 12.9 10.5 6.5
finished dia.	mm 2.5 ... 7.35	2.5 ... 4.5
EC-Al		
max. individual wire dia.	mm 2.5 ... 5.5 6.0 6.5 6.8 7.35	2.5 ... 3.2 3.6 3.8 4.0 4.5
max. production speed	m/s 25 ... 8.9 7.5 6.4 5.8 5.0	25 ... 23.1 18.2 16.3 14.7 10.1
finished dia.	mm 2.5 ... 7.35	2.5 ... 4.5
contact pulley dia.	mm 600	600
max. annealing power (depending on wire diameter/material)	kW 320	530
max. annealing current (depending on wire diameter/material)	A 8,000	8,000
max. annealing voltage (depending on wire diameter/material)	V 64	53
oil-cooled slip rings	standard	standard
machine dimensions (W x D x H)	m 6.95 x 1.70 x 2.60	6.95 x 1.70 x 2.60
weight (w/o transformer)	kg approx. 10,800	approx. 11,500

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