

## M 85 / MM 85 Rod Breakdown Machine

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



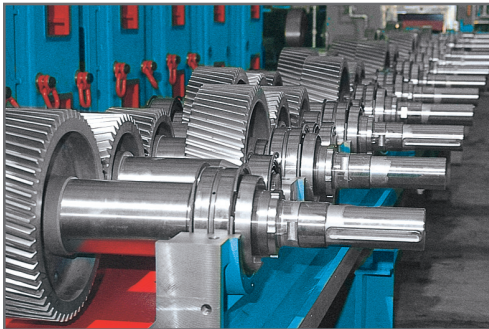
# M 85 / MM 85

## Design:

- optimized wire cooling/lubrication fully submerged drawing basin
- extremely smooth operation and uniform load transmission by helical precision gear
- vibration-damping grey cast iron housing for long service life
- highly reliable separation of drawing emulsion and gear oil via mechanical seal (long service intervals)
- user-friendly design

## Increase in quality:

- inclination of the gearing/drawing capstans for high surface quality of the wires due to the optimized wire path



## Increase in productivity:

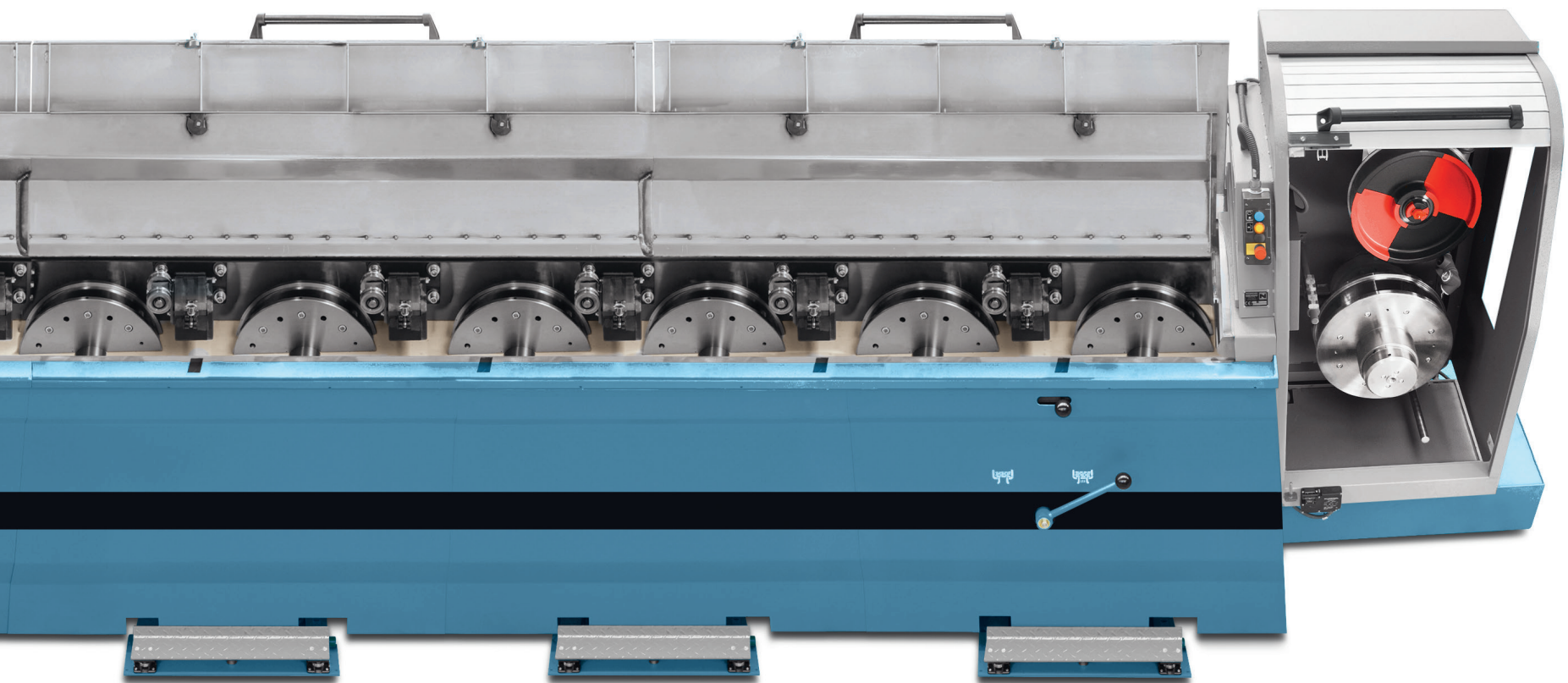
- reduced downtime when changing the machine setup for different dimensions via multi-motor drive technology (quick drawing die change system)
- NMI (NIEHOFF Machine Interface) color touchscreen for data entry, display of production parameters and maintenance instructions

## Energy and cost efficiency:

- production of wires with different finished diameters
- reduced consumption of electric energy per ton of produced wire
- long service intervals and extended drawing tool service life minimize the requirement to stock and use spare parts
- reduced consumption of oil and drawing lubricant

Technical data									
type		M 85		MM 85		M 85		MM 85	
material		Cu		Cu		Al / Al-alloy		Al / Al-alloy	
max. production speed	m/s	38		38		38		25	
	fpm	7,480		7,480		7,480		4,921	
production output (7,000 h and 80 % utilization)	t/a	25,000		31,000		9,500/8,000		18,000/16,000	
		1		2		1		2	
max. inlet dia.	mm	8.0	10.0	8.0	10.0	12.5	9.5	12.5	9.5
	AWG	1	2/0	1	2/0	4/0	1/0	4/0	1/0
at max. inlet strength	N/mm <sup>2</sup>	450	250	450	250	120	220	120	220
finished dia.	mm	1.0 ... 4.5		1.0 ... 4.5		1.0 ... 5.5/1.2 ... 4.5		1.0 ... 5.5/1.2 ... 4.5	
	AWG	18 ... 5		18 ... 5		18 ... 4		17 ... 5	
number of drafts		7 ... 15		7 ... 15		7 ... 15		7/8 ... 15	
wire elongation per draft	%	55 ... 26 (tapered)		55 ... 26 (tapered)		33/26		33/26	
drive technology / AC motors		2 motors		2 motors		2 motors		2 motors	





## Overall integration for superior performance

The entire line delivers technically innovative solutions for your production tasks:

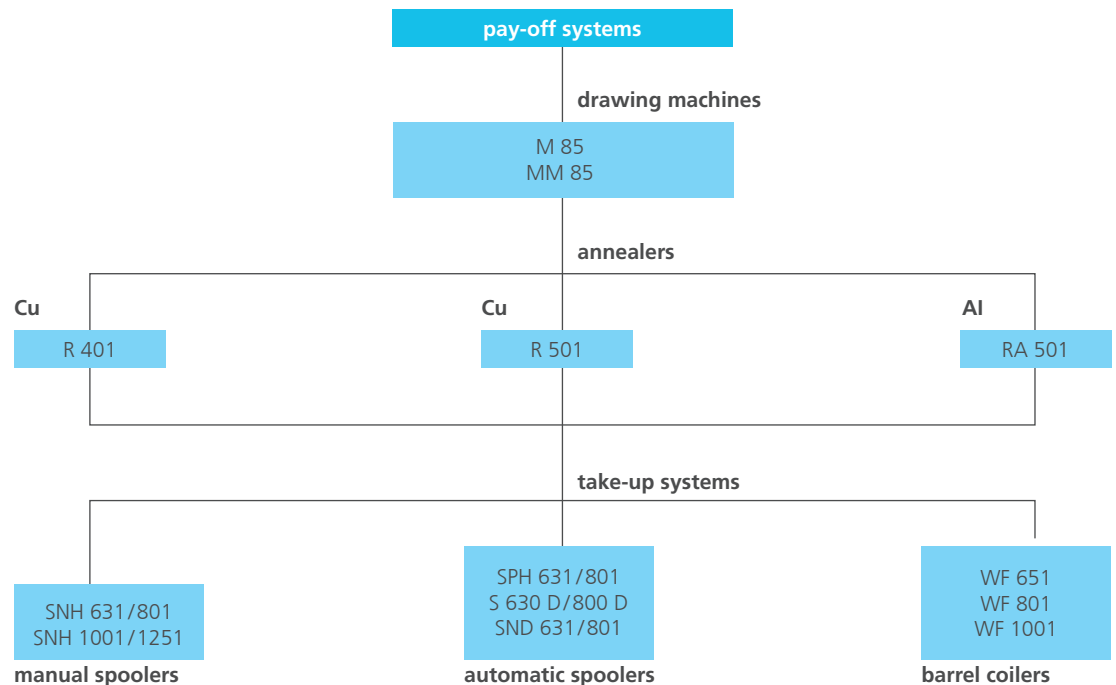
- convincing combinations of individual NIEHOFF components and the excellent quality standards guarantee superb line availability
- due to freely programmable control systems (PLCs) and standardized interfaces, the line can be combined very effectively with many spooling and coiling systems.

The M 85 line concept already incorporates the potential for future integration of NIEHOFF machine systems in overall production processes – i.e. the automation of different production areas, including:

- quality assurance
- operational data acquisition
- materials flow control

**All possible combinations will deliver the ultimate in terms of quality and performance!**

## Combination and integration capability

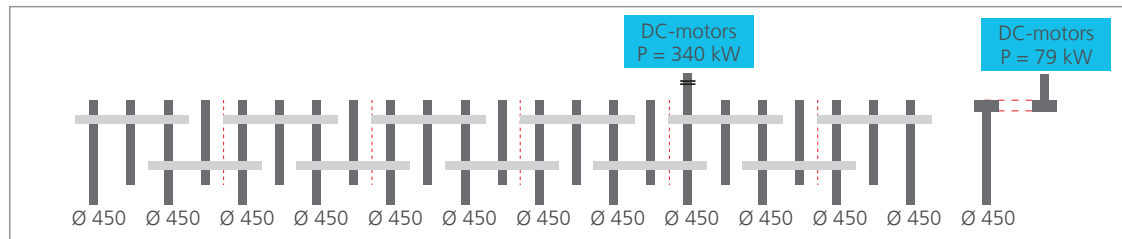


(Further pay-off systems on request)

## The modular NIEHOFF system

This drawing machine is designed for maximum flexibility – the modular system enables all variations required in practice.

Future-oriented machine building technology for optimized system availability and reliability.



### M 85 / version with 2 motors:

material: Cu (250 N/mm<sup>2</sup>)  
 max. inlet dia. (mm): 8.0  
 no. of drafts: 13  
 wire elongation: tapered

draft	1	2	3	4	5	6	7	8	9	10	11	12	recommended wire elongation (%)	
Ø (mm)	6.5	5.34	4.45	3.74	3.18	2.73	2.37	2.08	1.84	1.63	1.45	1.29	finished dia. v (m/s)	v* (m/s)
													1.15	38.0
													1.30	38.0
													1.45	38.0
													1.63	38.0
													1.83	33.0 (38.0)
													2.05	26.0 (36.0)
													2.30	21.0 (32.0)
													2.59	17.0 (28.0)
													2.90	13.5 (22.0)
													3.50	9.5 (15.0)
													4.11	7.0 (11.0)
													4.50	6.0 (9.0)

\* drafts 1 and 2 free on the inlet side

We reserve the right to modify technical specifications according to technical improvement and advances. 04.2014