

Manfred Rudholzer

Robel Group & Plasser & Theurer Iberica,
S.A.U.

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ROBEL
GROUP

Plasser Ibérica



EU Light Rail Congress

Manfred Rudholzer | 2024-03-13

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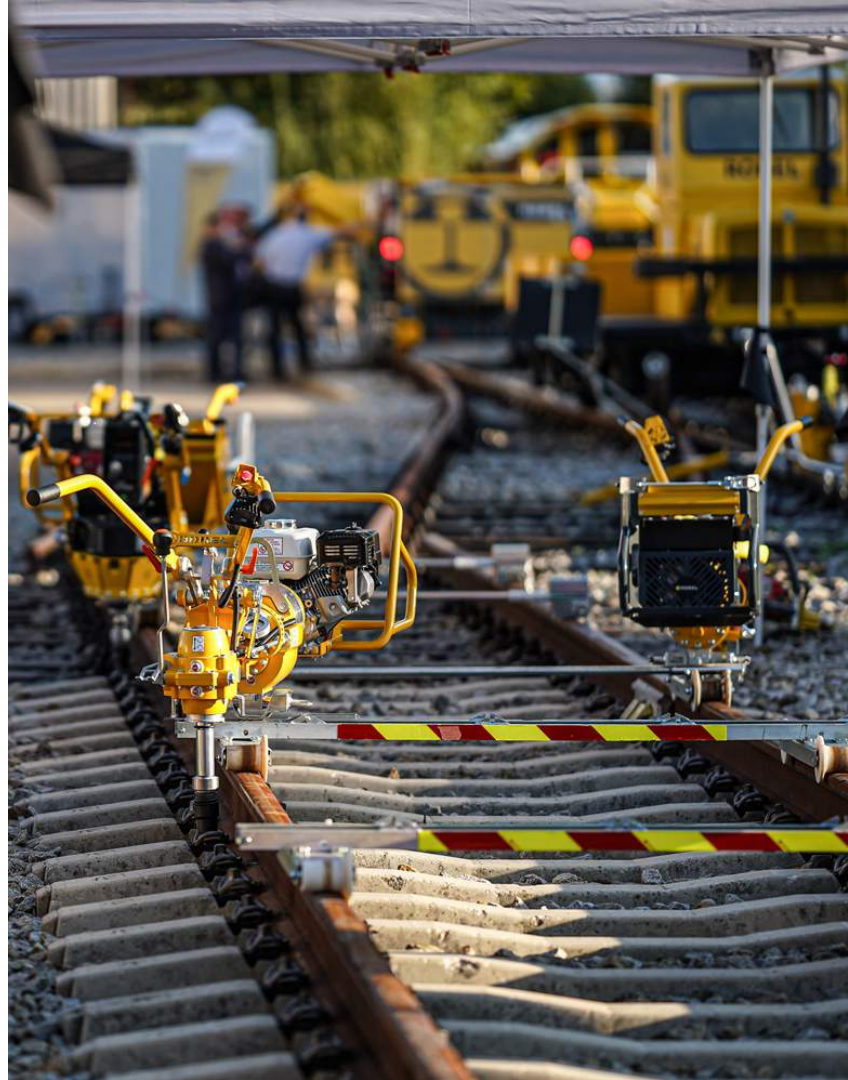


Plasser Ibérica

Agenda

Our planet needs a strong railway

- a) ROBEL in a glance
- b) All products for the right application
- c) E³ - Our battery driven machines
- d) Future applications




ROBEL Holding
920*

Employees


167,5 Mio. €*

Turnover 2023



*December 2023

*preliminary, not consolidated


ROBEL
MANUFACTURING EQUIPMENT
Plasstor  **ROBEL**
SERVICES

 Vogel & Plötscher

 **ROBEL RAIL**
 AUTOMATION

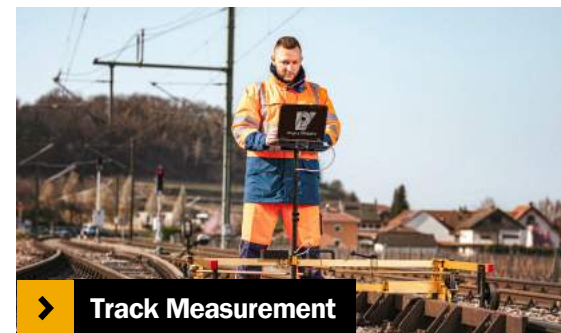

SCHWEERBAU
international
 **ROBEL**
 FRANCE

 **ROBEL**[®]
 NORTH AMERICA

 **ROBEL**
 CHINA

ROBEL End-to-End Solutions

The business units of the ROBEL Group



M&T Product Portfolio

For every application the right machine



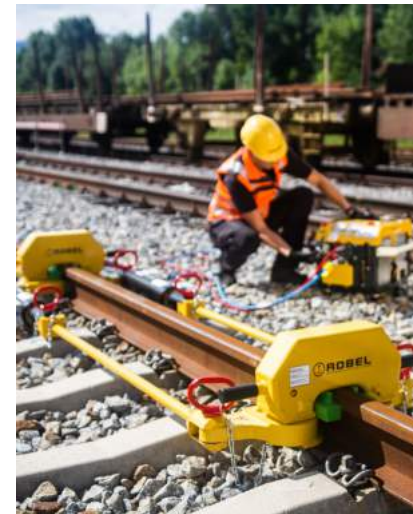
Drilling



Cutting



Grinding



Stressing/Pulling/Bending

M&T Product Portfolio

For every application the right machine



Wrenching/Clipping



Lifting/Loading/Transporting



Tamping



Power/Lighting

M&T Product Portfolio

For every application the right machine



Securing/Measuring



Equipment/Tools



Consumables/Spare Parts

E³

Our battery driven machines



RODRILL 10.20 E³

Battery Powered Rail Drilling Machine



ROBORE 11.20 E³

Battery Powered Sleeper Drilling Machine



ROSAW 12.20MSB E³

Battery Powered Rail Band Saw

E³

Our battery driven machines



ROGRIND 13.45MD E³
Welding Joint Grinding Machine



ROGRIND 13.49 E³
Hybrid Rail Head Profile Grinding Machine



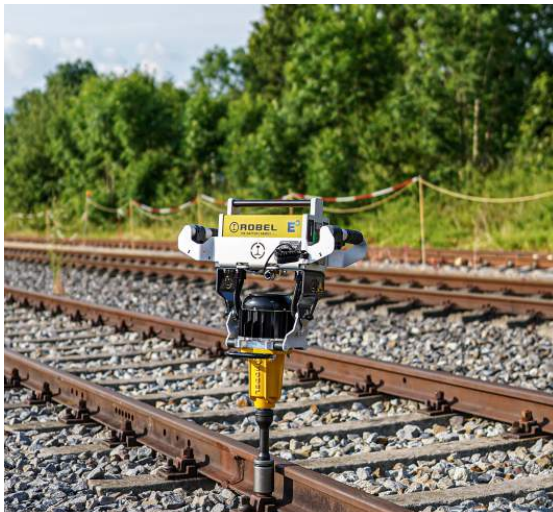
ROGRIND 13.63
Modular Rail and Switch Grinding Machine
with E³ modules

E³

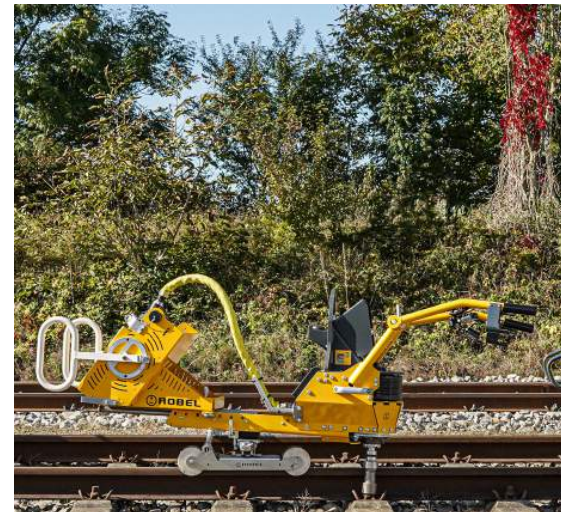
Our battery driven machines



ROBUT 13.90 E³
Electrical Rail Cutter



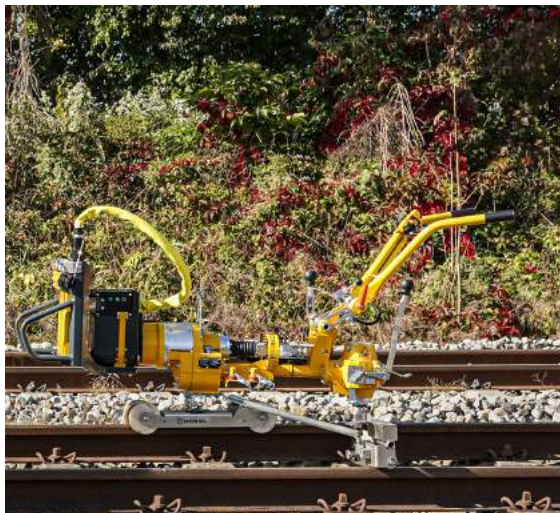
ROMPACT 30.20 E³
Battery Powered Impact Wrench



ROWRENCH 30.76 E³
Electric Precision Power Wrench

E³

Our battery driven machines



ROBENCH 30.82HKS E³

Battery Powered Universal Power Wrench



ROSPIKE 33.25 E³

Battery Powered Spike Driver

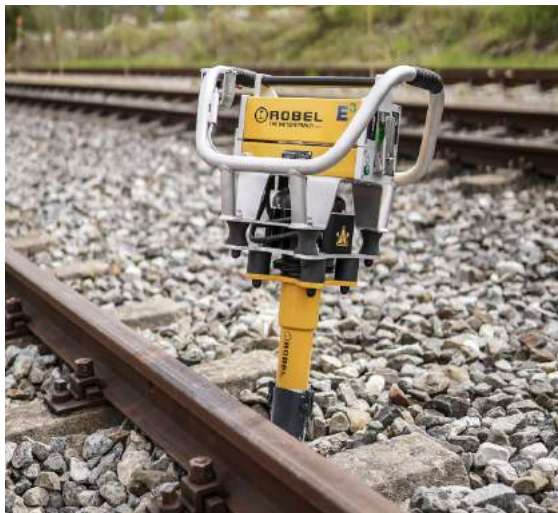


ROCLIP 34.01 E³

Battery Powered Clipping Machine

E³

Our battery driven machines



ROBAMP 62.20L E³

Battery Powered Vertical Tamper



ROCONVERT 72.01 E³

Battery Conversion Kit



ROPOWER 76.20 E³

High-Pressure Power Pack Battery

E³

Our batteries

**ROBATTERY 71.01**

Battery 400 Wh, 800 Wh

**ROBATTERY 71.02**

Battery 2300 Wh

**ROBEL Battery Family**

Batteries 400 Wh, 800 Wh, 2300 Wh

E³ Performance classes and CO₂ saving

TYPE	DESIGNATION	BATTERY PERFORMANCE CLASS			CO ₂ -SAVING (Compared with a conventional combustion engine)
		400 Wh	800 Wh	2300 Wh	
10.20 E ³	Battery Powered Rail Drilling Machine Number of Drilling operation Ø 32 mm per charge	✓	✓	✓*	0.85 kg/OpHr
11.20 E ³	Battery Powered Sleeper Drilling Machine Number of drilling operation Ø 18mm per charge	✓	✓	✓*	1.32 kg/OpHr
12.20MSB E ³	Battery Powered Rail Band Saw Number of cuts per charge	✓	✓	✗	0.85 kg/OpHr
13.45MD E ³	Welding Joint Grinding Machine Grinding time per charge in minutes	✗	✗	✓	3.93 kg/OpHr
13.49 E ³	Hybrid Rail Head Profile Grinding Machine Grinding time per charge in minutes	✗	✗	✓	4.5 kg/OpHr
13.63 E ³	Modular Rail and Switch Grinding Machine Grinding time per charge in minutes	✗	✗	✓	at least 3.26 kg/OpHr
13.90 E ³	Electrical Rail Cutter Number of cuts per charge	✗	✗	✓	4.21 kg/OpHr

30.20 E ³	Battery Powered Impact Wrenche Number of wrenching cycles per charge	✓ 300	✓ 550	✓* 1600	2.42 kg/OpHr
30.76 E ³	Electric Precision Power Wrench Number of wrenching cycles per charge	✗ -	✗ -	✓ 5000	3.26 kg/OpHr
30.82HKS E ³	Battery Powered Universal Power Wrench Number of wrenching cycles per charge	✗ -	✗ -	✓ 1000	at least 3.26 kg/OpHr
33.25 E ³	Battery Powered Spike Driver Number of spikes driven per battery charge	✓ 400	✓ 750	✗ -	-
34.01 E ³	Battery Powered Clipping machine Clipping time per charge in minutes	✗ -	✗ -	✗ 90	3.26 kg/OpHr
62.20L E ³	Battery Powered Vertical Tamper Tamping time per charge in minutes	✓ 25	✓ 45	✓* 120	1.32 kg/OpHr
72.01 E ³	Battery Conversion Kit Number of wrenching cycles per charge 30.82HKS	✗ -	✗ -	✓ 1000	3.26 kg/OpHr
76.20 E ³	High-Pressure Power Pack Battery Number of stressing operations per charge 24.70 Number of trimming operations per charge 14.10	✓ 7	✓ 14	✓* 40	2.34 kg/OpHr
		15-20	28-32	85	

Digitization

Status

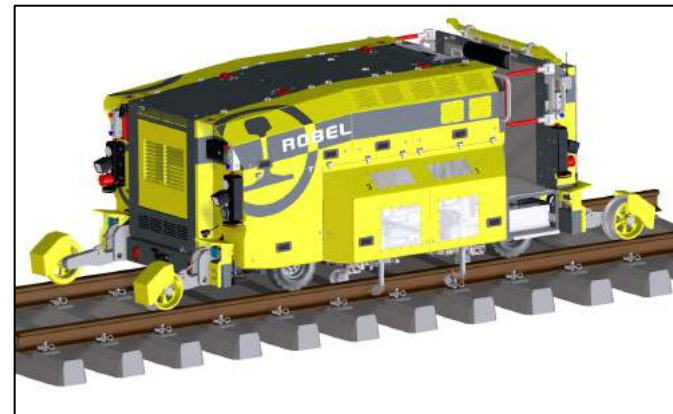
Data/ Product	Data for network operators			Data for user								
	GPS Data	Torque	Wrenching cycle	Operation hour	Charge indicator	Speed indication	Fault diagnosis	Preventive maintenance	Remote maintenance	Language adaption	Selflearning control	Remote control
12.20 E ³					✓	✓						
13.49 E ³				✓	✓		✓	✓	✓	✓		
13.90 E ³					✓	✓						
30.20 E ³			✓	✓	✓		✓					
30.73PSM	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	
30.76 E ³	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	
30.77	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
30.82RKS			✓	✓			✓			✓		
47.230				✓	✓		✓					✓
71.01					✓		✓					
71.02					✓		✓					

Future Applications

ROWRENCH 30.77 - Automated 8-Spindle Precision Power Wrench

Performance/application data:

- Executed for K-, KS-, W- superstructure
- Track gauge 1.435 mm - could be modified for each country
- Low personnel costs - only 1 operator with remote control is necessary instead of 8 operators
- Automated and fast tightening - up to 450 m/h with 250 Nm => 750 sleeper/hour
- Constantly high wrenching precision - accuracy +/- 5%
- Weight of machine approx. 4,5 t
- Speed of machine - 20 km/h for transfer travelling & 5 km/h with remote control
- Amortization within 2-3 years
- Optional with automatic spring clip insertion and extraction (W-type track)
- Recording of wrenching results and GPS data
- Machine designed for approval purposes according to EN 15746 (superstructure rail road machines)
- Optional with battery drive



ROWRENCH 30.77



Future Vision - Autonomous Machines

