



## PRODUCT PORTFOLIO

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# DARi

## DIGITAL CONNECTED

### DATA ACQUISITION FOR RAIL INFRASTRUCTURE

With GOLDSCHMIDT GOES DIGITAL we have created a completely new standard for quality, reliability, transparency and efficiency for the construction and maintenance of modern railways. These digital solutions evolved as a new industrial standard into a digital network of intelligent products: **DARi® BY GOLDSCHMIDT – the new dimensions of the track construction site.**

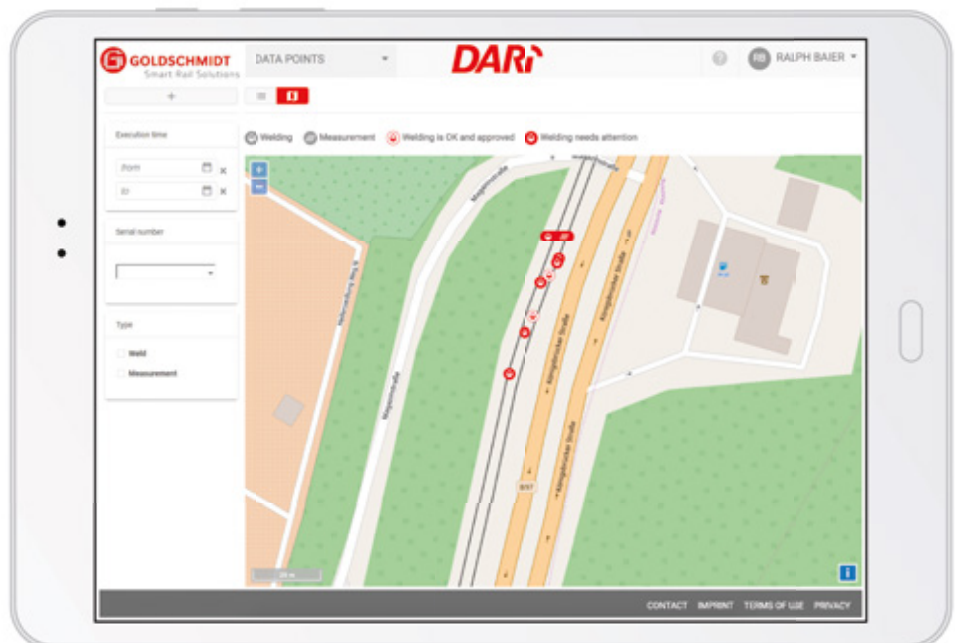
All DARi® compatible products from Goldschmidt, which in future will include many of these new functions, are still conveniently using the GOLDSCHMIDT DIGITAL APP. Modern, high performance stand-alone solutions create a digital network of intelligent DARi®

compatible products with completely new advantages and added value for your track construction site:

- DARi® – Data Acquisition for Rail Infrastructure – Centrally archives work and measurement data in real time.
- Linked measurement and control data allow immediate forecasts and automated inspection processes.
- Intelligently linked devices create a globally accessible network of knowledge and key figures.
- The always available track history, the “life story for the track”, enables a predictive supervision for tracks which are subject to intensive maintenance.

### WORLDWIDE ACCESSIBLE:

Digital data for inter-connected knowledge.



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**VISIONARY IDEAS.**

**POWERFUL SOLUTIONS.**

**DARI® BY GOLDSCHMIDT.**



ORIGINAL THERMIT®



## PREPARING

### RAIL ALIGNER RA 100 M

CC 09  
Drive: Manual



- Quickly positioning the ends of a rail for welding
- Help to eliminate the use of other methods that increase the likelihood of injuries
- Jack feet accommodate anchor plates in concrete ties and prevent movement from side to side

#### SPECIFICATIONS

|                         |  |
|-------------------------|--|
| Weight                  | 8 kg / 18 lb                           |
| Dimensions (L x W x H): | 457 x 152 x 127 mm / 18 x 6 x 5 inches |

### RAIL PULLER RP 210 H

CC 09  
Drive: Hydraulic



- Powerful tool which generates 120 tons of force without the use of a pressure intensifier
- Flexible use (tool for push and pull movement) at the construction site
- Fixed one piece frame construction ensures a long lifetime

#### SPECIFICATIONS

|                         |   |
|-------------------------|---|
| Weight                  | 521 kg / 1,146 lbs                          |
| Dimensions (L x W x H): | 2,819 x 762 x 483 mm / 111 x 30 x 19 inches |
| Max. flow               | 40 lpm / 10 gpm (US)                        |
| Max. pressure           | 140 bar / 2,000 psi                         |
| Quick couplers          | 3/8 HTMA (ISO 16028)                        |

#### POWER UNITS & ACCESSORIES

D-23, E-15, G-18, G-21, G-23, G-31  
Grip pads  
Hose set

### RAIL NOTCHER RN 110 H

CC 09  
Drive: Hydraulic



- Quick and efficient tool to notch the head of the rail for head repair welds
- Industry leading spark arrestor system protects user and environment
- Adjustable handle allows the user to find the optimal working position

#### SPECIFICATIONS

|  |  |
|--|--|
| Weight Tool and Clamp                    | 30 kg / 66 lbs                           |
| Weight Spark Guard                       | 8.6kg / 19 lbs                           |
| Dimensions assembled on rail (L x W x H) | 914 x 559 x 635 mm / 36 x 22 x 25 inches |
| Max. flow                                | 40 lpm / 10 gpm (US)                     |
| Max. pressure                            | 140 bar / 2,000 psi                      |
| Quick couplers                           | 3/8 HTMA (ISO 16028)                     |

#### POWER UNITS & ACCESSORIES

D-23, E-15, G-18, G-21, G-23, G-31  
Replacement grindstone  
Stone removal wrench  
Hose set

## SMARTWELD JET

CC 01



- Reduced transportation and logistics workload through elimination of the oxygen bottles
- Simplified handling, thus increased occupational safety
- Relief of the welders due to discontinuation of the setting and monitoring tasks
- Efficient quality control and documentation of construction and maintenance measures
- Complete evaluation of THERMIT® welding
- Thermal protection of the casting mould



### SPECIFICATIONS

|                        |   |
|------------------------|---|
| Weight                 | 23 kg / 50.7 lbs                                  |
| Dimensions (L x W x H) | 1,011 x 481 x 509 mm /<br>39.8 x 18.9 x 20 inches |
| Output                 | 150 kW / 204 hp                                   |
| Flame temperature      | > 1,000 °C / 538 °F                               |
| Propane-gas pressure   | 20 kPa  |

### SCOPE OF DELIVERY

- SMARTWELD JET device incl. nozzle
- Gas hose with quick release connector and pressure drop shut-off device
- Pressure regulator with Euro adapter set
- Power cord
- Free GOLDSCHMIDT DIGITAL APP on Google Play
- DARI® Basic package

## SMARTWELD PETROL

CC 01



- Preheat THERMIT® welds without the need to use technical gases, no need for gas bottles on the track
- Reduced preheating times compared to similar competitor products thanks to higher heat input
- Can be applied in all THERMIT® welding processes
- Alternative solution to conventional preheating, e.g. for working underground



### SPECIFICATIONS

|                        |   |
|------------------------|---|
| Empty weight           | 73.5 kg / 162 lbs   |
| Dimensions (L x W x H) | 926 x 404 x 615 mm / 36.5 x 15.9 x 24.2 inches<br>(excluding handle and wheels) |
| Engine                 | 4-stroke petrol / gasoline<br>4.2 kW / 5.7 hp at 4,000 min                      |
| Blower pressure        | max. 0.8 bar / 11.6 psi   |
| Blower tank            | 8 l / 2.1 U.S. gal  |

### SCOPE OF DELIVERY

- Set with 1 preheating blower, 1 complete set of petrol / gasoline and compressed air hoses, 1 preheating burner petrol / gasoline and air pressure type 30.594
- Includes torch



## SMARTWELD SPARK

CC 01



- Total elimination of hazardous goods declared igniters for import and transportation
- Significant increase of work safety due to omission of hot and open burning igniters
- Service life of one charged battery for at least 20 ignition processes, which means more than one shift per charging
- Cost saving consumables



### SPECIFICATIONS

|                        |   |
|------------------------|---|
| Weight                 | 1.8 kg / 4 lbs                            |
| Dimensions (L x W x H) | 340 x 220 x 75 mm / 13.4 x 8.7 x 3 inches |
| Protection class       | IP 44                                     |

### SCOPE OF DELIVERY

- Set with practical case including battery charger, one rechargeable battery, single use electrodes (10 pieces per pack)

## SAFE START

CC 07



- A safer method of initiating THERMIT® reactions
- Provides a safer work environment as it allows welders to stand clearly away from the THERMIT® reaction initiation
- Convenient, non-hazardous method of initiating THERMIT® reaction while utilizing starters
- Simplifies shipping, handling and storage of starters

### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 0.6 kg / 1.4 lbs                             |
| Dimensions (L x W x H) | 184 x 95 x 83 mm / 7.25 x 3.75 x 3.25 inches |
| Length of cable        | 7,500 mm / 294 inches                        |

### SCOPE OF DELIVERY

- Consists of the reaction initiator, cable with connectors & starters (available in boxes of 36)

## SMARTWELD ACE

CC 16



- Cooling of THERMIT® weld
- Saves overall standard joint weld time by up to 15 min
- Saves 30 minutes per HRW installation time
- Enables earlier application of force from hydraulic tensors and earlier release of the force (30 minutes time saving per closure rail installation)
- Cost savings as more welds can be completed in a set time frame
- High weld quality is maintained
- Enables safer welding of the 3rd and 4th leg end joint when welding crossing frogs



### SPECIFICATIONS

|   |  |
|---|--|
| Weight Pump / Control unit              | 10 kg / 22 lbs   |
| Weight Standard joint mist cooling head | 5.7 kg / 12.6 lbs                                      |
| Weight HRW quench cooling head          | 2.1 kg / 4.6 lbs                                       |
| Dimensions (L x W x H)                  | 374 x 260 x 154 mm / 14.7 x 10.2 x 6 inches            |
| Battery                                 | 12 v 20 Ah LiFe PO4                                    |
| Head Pressure                           | 6.89 bar / 100 psi                                     |
| Flow Rate                               | 5.3 litres/min (1.2 UK gal/min)<br>(when unrestricted) |

### SCOPE OF DELIVERY







- Control unit (in Pelicase)
- Cooling head
- 25 litre (5.5 UK gal) water container
- Charger

## HYDRAULIC WELD TRIMMER / WELD SHEARS

Drive: hydraulic



- The best, quickest and safest technical solution for trimming
- Ultra-light design
- Available for all rail profiles and all THERMIT® processes
- Long service life and low downtimes
- Light weight makes the work of the welder easier

| Product                     |   | WS 510 H  | TYPE U-L4   | TYPE U-LW   | TYPE U-LS  | TYP U-LRK   | LTS 2000  |
|-----------------------------|---|---|---|---|--|---|---|
| Manufacturer                |   | CC 09   | CC 01   | CC 01   | CC 01  | CC 01   | CC 14   |
| Number of down holders      |   | 4   | 4   | 4   | 2  | 4   | 2 or 4  |
| Weight (kg)                 |   | 43  | 30  | 35.5  | 28.5   | 42  | 60  |
| Weight (lbs)                |   | 95  | 66  | 78  | 63   | 92.5  | 132   |
| Dimensions (mm)             | L | 724   | 735   | 735   | 735  | 785   | 850   |
|                             | W | 432   | 380   | 450   | 352  | 452   | 453   |
|                             | H | 200   | 220   | 220   | 225  | 215   | 370   |
| Dimensions (inches)         | L | 28.5  | 29  | 29  | 29   | 31  | 33.5  |
|                             | W | 17  | 15  | 18  | 14   | 18  | 17.8  |
|                             | H | 8   | 9   | 9   | 9  | 8   | 14.6  |
| Compressive force (kN)      |   | 106   | 200   | 200   | 200  | 200   | 200   |
| Compressive force (lbf)     |   | 23,758  | 44,962  | 44,962  | 44,962   | 44,962  | 44,962  |
| Working pressure max. (bar) |   | 150   | 520   | 520   | 520  | 520   | 510   |
| Working pressure max. (psi) |   | 2,150   | 7,542   | 7,542   | 7,542  | 7,542   | 7,397   |
| Max. stroke (mm)            |   | 143   | 150   | 150   | 150  | 150   | 145   |
| Max. stroke (inches)        |   | 5.6   | 6   | 6   | 6  | 6   | 5.7   |
| Shear blade form            |   | A,B   | A,B   | A,B   | A,B  | B,C   |   |
| Rail type                   |   |  |  |  |  |  |  |
| Wide gap (75 mm / 3 inches) |   | ✓   | ✓   | ✓   | ×  | ✓   | ✓   |



## HYDRAULIC WELD TRIMMER / WELD SHEARS

Associated power units can be found on page 30/31 onwards.

| Type  | Conveying capacity | Bayonet coupling | Separate floor-type unit | Weight (kg) |
|---|--------------------|------------------|--------------------------|-------------|
| Hand pump coupled                                     | Depends on user    |                  |                          | 10.5        |
|   |                    | ×                |                          | 10.8        |
| Type L with electric motor (0.55 kW, 230 V) coupled   | 0.85 l/min         |                  |                          | 19.3        |
|   |                    | ×                |                          | 19.6        |
| Type L with electric motor (0.55 kW, 230 V), separate | 0.85 l/min         | ×                | ×                        | 24          |
| Electric motor (1.5 kW, 230 V), separate              | 1.8 l/min          | ×                | ×                        | 38          |
| Three-phase motor (1.5 kW, 230/400 V), separate       | 1.8 l/min          | ×                | ×                        | 34          |
| 4-stroke motor Briggs-Stratton, separate              | 1.8 l/min          | ×                | ×                        | 31          |
| 4-stroke motor Honda, separate                        | 1.8 l/min          | ×                | ×                        | 34          |



Hand pump coupled



Hydraulic pump driven by 4-stroke engine type Briggs & Stratton



Hydraulic pump driven by 4-stroke engine type Honda



Hydraulic pump driven by electric motor 230 V AC



Hydraulic pump driven by electric motor 230\_400 V AC

## ETW 1

CC 02



- High safety through precise fitting ex works
- Highest tensile strength
- Proven solution: successful for many years and reliably installed
- Customized versions possible, length acc. to customer requirements
- High resilience, long life
- Also available as ETW I Heavy Haul for axle loads above 30 tonnes

### FEATURE

---

- Successfully used worldwide for more than 20 years and 100,000 produced joints
- Fishplates available in 4 or 6 holes variations, angled cuts and with new reinforced end-posts
- Available in a wide range of rail profiles
- Fishplates designed to accommodate different rail fastening systems
- Quality ensured through advanced testing techniques providing detailed reports of joint geometry
- Rail end hardening possible on request
- Application of weather resistant coating/adhesive after finishing assembly
- Tested at Brno University of Technology and Research Institute of Vienna University of Technology
- In accordance with ISO 9001, EN 1843, Czech Delivery Terms (TPD) and AREMA

## THERMABOND

CC 13



- Offered for a range of rail profiles and grades
- Able to incorporate varying lengths, versine measurements and joint positions
- Improved alignment from factory assembly
- Flexible: customized solutions possible (lengths according to customer demand)

### FEATURE

---

- Successfully used for more than 30 years with over 80,000 installations across Australasian railways
- Available in a wide range of profiles/grades
- Fish plates available in 4 or 6 hole variations
- Available in 90° or 15° angle cut
- Flame hardening of plain/standard carbon rail ends
- Fish plates designed to accommodate different rail fastening systems



**ETW 2**

CC 02



- Fast installation in track, train operation within 2 hours of installation
- Customized versions possible according to customer requirements
- Available for all common flat bottom 60 E1, 54 E1, 54 E2, 49 E1, R65 and grooved rail profiles
- Long-term experience with GIRJ production, technical and after sales support
- IRJ suitable for usage with various fastening systems (Pandrol, Vossloh etc.)
- After sales education and training
- Also available as ETW II Heavy Haul for axle loads above 30 tonnes

**FEATURE**

- Successfully used around the world for more than 20 years with more than 100,000 joints produced
- Fishplates available in 4 or 6 holes variations, new reinforced end-posts
- Available in a wide range of rail profiles
- Fishplates designed to accommodate different rail fastening systems
- Special adhesive and unique technology
- Kit equipment tailored to customers' request
- Technical support for kit assembling
- Tested at Brno University of Technology and Research Institute of Vienna University of Technology
- In accordance with ISO 9001, EN 1843, Czech Delivery Terms (TPD) and AREMA

**MT**

CC 02



- Ready for operation immediately after installation, no delay
- Reduced transportation costs through fitting directly to track
- Efficient through quick fitting in short breaks of rail operations
- Maximum safety and robust design
- High reliability, strength and long life

**FEATURE**

- Available for many profiles of flat-bottom rails and grooved rails
- Available as reinforced plate or fishplate
- Can be provided as 4 or 6-hole model
- Force- and form-fit load transmission
- Homologated at Deutsche Bahn since 1970 and used by nearly all major railways worldwide

### TORQUE WRENCH FOR MT JOINT

CC 02



#### SPECIFICATIONS

Weight 7,5 kg / 16.5 lbs

### SOCKET ET40

CC 02



#### SPECIFICATIONS

Weight 0,5 kg / 1.1 lbs

### CLAMPING DEVICE FOR ANGLE GRINDER

CC 02



#### SPECIFICATIONS

Weight 3,3 kg / 7.3 lbs

### TESTER FOR INSULATED RAIL JOINTS

CC 02



#### SPECIFICATIONS

Weight 1 kg / 2.3 lbs

### MIXING INSERT

CC 02



#### SPECIFICATIONS

Weight 0,1 kg / 0.2 lbs

### FISHPLATE CHAMFERING DEVICE FASET

CC 02



#### SPECIFICATIONS

Weight 3,9 kg / 8.6 lbs

### CHAMFERING CHISEL

CC 02



#### SPECIFICATIONS

Weight 0,3 kg / 0.7 lbs



## EQUIPMENT FOR IRJ-KITS

**MARKING TEMPLATE FOR CUTTING THE RAIL AND DRILLING THE WEB (MT JOINT STANDARD)**

CC 02

**SPECIFICATIONS**

Weight 3 kg / 6.6 lbs

**MARKING TEMPLATE FOR CUTTING THE RAIL AND DRILLING THE WEB (MT JOINT REINFORCED)**

CC 02

**SPECIFICATIONS**

Weight 3 kg / 6.6 lbs

**BOLT HOLE TEMPLATE**

CC 02

**SPECIFICATIONS**

Weight 0,6 kg / 1.3 lbs

**BULL NOSE GRINDER  
GB 105 H**

CC 09

Drive: Hydraulic



- Efficient tool for the deburring of drilled holes in preparation for rail joining or IRJ installation
- Low vibration transfer through anti-vibration handles and heat
- separation from operator hands guarantee high operational safety
- Robust design for long machine lifetime

**SPECIFICATIONS**

|                        |  |
|------------------------|--|
| Weight                 | 5 kg / 12 lbs                            |
| Dimensions (L x W x H) | 483 x 165 x 229 mm / 19 x 6.5 x 9 inches |
| Max. flow              | 20 lpm / 5 gpm (US)                      |
| Max. pressure          | 140 bar / 2,000 psi                      |
| Quick couplers         | 3/8 HTMA (ISO 16028)                     |

**POWER UNITS & ACCESSORIES**

- D-23, E-15, G-18, G-21, G-23, G-31
- Replacement grindstone
- Grindstone removal wrench
- Hose set

## RAIL DRILL RD 330 B

CC 02  
Drive: Battery



- The first machine of its kind with app connection for processing machine data (free GOLDSCHMIDT DIGITAL APP and DARI® basic package)
- Highly flexible on the construction site, battery operation enables self-sufficient work using an ULiB battery (incl. harness and charger)
- Can be used in tunnels and the underground as no emissions are caused
- Can be used during the night shift in towns thanks to a very low level of noise emission
- Easy handling and transport thanks to the low weight of the machine
- Low load on the operator due to extremely low hand-arm vibrations



### SPECIFICATIONS

Weight (machine | battery & harness)  
Dimensions (L x W x H)  
Electric Engine output

14.9 kg | 8.2 kg / 32.8 lbs | 18 lbs  
498 x 294 x 314 mm / 19.6 x 11.6 x 12.4 inches  
1.6 kW / 1.15 hp

ULiB battery  
Number of holes per charge cycle  
Drilling diameter

43.6 V  
100 (ø 32 mm) / 100 (ø 1.23 inches)  
6 ... 40 mm / 0.24 ... 1.58 inches

### ACCESSORIES

- Various drill bits in different sizes
- Quick release clamping units for flat-bottom and grooved rails
- Rail profile templates for all common rail profiles, special templates available on request
- Coolant tank with pressure pump
- Harness to use the battery comfortably
- Transport box

## RAIL DRILL RD 330 P

CC 02  
Drive: Petrol / Gasoline



- Special quick clamp device for quick positioning and removal
- One of the lightest petrol/gasoline driven machines on the market
- Quick and precise drilling of hole diameters from 6 ... 40 mm / 0.24 ... 1.57 inches
- Easy to handle because of the perfect centre of gravity
- Extensive range of accessories



### SPECIFICATIONS

Weight

18.0 kg / 39.7 lbs

Dimensions (L x W x H)  
Engine output  
Drilling diameter

583 x 341 x 395 mm / 23 x 13.4 x 15.6 inches  
1.5 kW / 2 hp  
6 ... 40 mm / 0.24 ... 1.57 inches

### ACCESSORIES

- Various drill bits in different sizes
- Quick release clamping units for flat-bottom and grooved rails
- Rail profile templates for all common rail profiles, special templates available on request
- Coolant tank with pressure pump
- Harness to use the battery comfortably
- Transport box

## TRACK MAINTENANCE / DRILLING

### TIE DRILL DT 210 H

CC 09

Drive: Hydraulic



- Ergonomic design which allows to drill holes from a standing position
- Lightweight design reduces back pain
- Telescopic drill bit guard with built-in depth stop for safe and accurate operation

#### SPECIFICATIONS

|                        |   |
|------------------------|---|
| Weight                 | 15 kg / 33 lbs                                  |
| Dimensions (L x W x H) | 127 x 540 x 870 mm /<br>5 x 16.5 x 34.25 inches |
| Max. flow              | 40 lpm / 10 gpm (US)                            |
| Max. pressure          | 140 bar / 2,000 psi                             |
| Quick couplers         | 3/8 HTMA (ISO 16028)                            |

#### POWER UNITS & ACCESSORIES

- D-23, E-15, G-18, G-21, G-23, G-31
- Replacement drill bits
- Drill guide
- Hose set

### IMPACT DRILL DI 105 H

CC 09

Drive: Petrol / Hydraulic



- Ideal for drilling into wooden poles and ties
- Lightweight design with standard 11.1 mm / 7 / 16" hex quick chuck
- High drilling torque with 678 Nm / 500 ft. lb
- Oversized feathering trigger

#### SPECIFICATIONS

|                        |                                       |
|------------------------|---------------------------------------|
| Weight                 | 4 kg / 8 lbs                          |
| Dimensions (L x W x H) | 229 x 76 x 254 mm / 9 x 3 x 10 inches |
| Max. flow              | 20 lpm / 5 gpm (US)                   |
| Max. pressure          | 140 bar / 2,000 psi                   |
| Quick couplers         | 3/8 HTMA (ISO 16028)                  |

#### POWER UNITS & ACCESSORIES

- G-05, G-09, G-18
- Replacement drill bits
- Drill guide
- Hose set

## RAIL SAW SR 210 H



CC 09

Drive: Hydraulic

- Improved ergonomics and personal safety through a bell-crank clamp which enables precise cutting from a standing position
- Free floating spark guard protects user and environment at all angles
- Over-speed valve protects motor and blade from excessive RPM

### SPECIFICATIONS

Weight rail saw | rail clamp  
Dimensions (L x W x H)  
Max. flow  
Max. pressure  
Quick couplers

16 kg / 35 lbs | 11 kg / 24 lbs  
1,143 x 279 x 686 mm / 45 x 11 x 27 inches  
40 lpm / 10 gpm (US)  
140 bar / 2,000 psi  
3/8 HTMA (ISO 16028)

### POWER UNITS & ACCESSORIES

- D-23, E-15, G-18, G-21, G-23, G-31
- Replacement saw blades
- Hose set

## RAIL SAW SR 310 H



CC 09

Drive: Hydraulic



- Indexable swivel arm allows cutting from both sides of the rail in one clamping process
- Improved ergonomics and personal safety through a bell-crank clamp which enables precise cutting from a standing position
- Free floating spark guard protects user and environment at all angles
- Over-speed valve protects motor and blade from excessive RPM

### SPECIFICATIONS

Weight rail saw | rail clamp  
Dimensions (L x W x H)  
Max. flow  
Max. pressure  
Quick couplers

17 kg / 39 lbs | 11 kg / 24 lbs  
1,143 x 457 x 686 mm / 45 x 18 x 27 inches  
40 lpm / 10 gpm (US)  
140 bar / 2,000 psi  
3/8 HTMA (ISO 16028)

### ACCESSORIES

- D-23, E-15, G-18, G-21, G-23, G-31
- Replacement saw blades
- Hose set

## STRAIGHT HAND GRINDER GH 110 H



CC 09

Drive: Hydraulic



- Multi-purpose grinder used for top, face and side grinding as well as surface preparation or rail end finishing.
- Encompassing spark guard directs sparks and debris away from operator and improves operator safety
- Trigger that automatically stops tool operation when released increases operational safety
- Vibration-dampening grip which reduces vibration exposure

### SPECIFICATIONS

Weight  
Dimensions (L x W x H)  
Max. flow  
Max. pressure  
Quick couplers

7 kg / 16 lbs  
533 x 254 x 305 mm / 21 x 11 x 12 inches  
40 lpm / 10 gpm (US)  
140 bar / 2,000 psi  
3/8 HTMA (ISO 16028)

### ACCESSORIES

- D-23, E-15, G-18, G-21, G-23, G-31
- Replacement grindstone
- Grindstone removal wrench
- Hose set



# TRACK MAINTENANCE / GRINDING AND CUTTING

## **PROFILE GRINDER** **GP 110 H**

CC 09

Drive: Hydraulic



- Reprofile of rail heads and rail joints after rail joining and repair welding on rail surfaces and edges
- Convenient handle with trigger on/off operation which automatically stops tool operation when released
- Durable steel frame ensures long life and less downtimes
- Over-speed valve protects motor and grindstone from excessive RPM
- All-encompassing spark guard considerably reduces the number of sparks



### **SPECIFICATIONS**

|                        |  |
|------------------------|--|
| Weight                 | 43 kg / 95 lbs                               |
| Dimensions (L x W x H) | 1,156 x 406 x 889 mm / 45.5 x 16 x 35 inches |
| Max. flow              | 40 lpm / 10 gpm (US)                         |
| Max. pressure          | 140 bar / 2,000 psi                          |
| Quick couplers         | 3/8 HTMA (ISO 16028)                         |

### **POWER UNITS & ACCESSORIES**

- D-23, E-15, G-18, G-21, G-23, G-31
- Replacement grindstone
- Grindstone removal wrench
- Hose set

## **PROFILE GRINDER** **GP 210 H**

CC 09

Drive: Hydraulic



- Lightweight grinder which allows one operator to position the machine and grind both sides of the rail
- Reprofile of rail heads and rail joints after rail joining and repair welding on field and gauge sides of the rail
- Convenient handle with trigger on / off operation which automatically stops tool operation when released
- Powerful hydraulic engine which allows operator to put more force down on the machine and grind faster

### **SPECIFICATIONS**

|                        |  |
|------------------------|--|
| Weight                 | 30.5 kg / 67 lbs                               |
| Dimensions (L x W x H) | 908 x 464 x 861 mm / 35.8 x 18.3 x 33.9 inches |
| Max. flow              | 40 lpm / 10 gpm (US)                           |
| Max. pressure          | 140 bar / 2,000 psi                            |
| Quick couplers         | 3/8 HTMA (ISO 16028)                           |

### **POWER UNITS & ACCESSORIES**

- D-23, E-15, G-18, G-21, G-23, G-31
- Replacement grindstone
- Grindstone removal wrench
- Hose set

## **PROFILE GRINDER** **GP 1800 E**

CC 09

Drive: Electric



- Precision grinding of the entire flat-bottom rail head
- Grinding exposed deep-grooved rails
- Grinding paved deep-grooved and flat-grooved rails
- Suitable for crane rail profiles up to A 150
- Grinding of overhead crane rails, user-friendly
- Suitable for work in tunnels and confined spaces



### **SPECIFICATIONS**

|                        |  |
|------------------------|--|
| Weight                 | 21 kg / 46.3 lbs                               |
| Dimensions (L x W x H) | 815 x 530 x 500 mm / 32.1 x 20.9 x 19.7 inches |
| Output                 | 1.8 kW / 2.4 hp                                |
| Power (angel grinder)  | consumption 2.6 kW / output 1.8 kW             |
| Speed                  | n = 8500 rpm                                   |

### **POWER UNITS & ACCESSORIES**

- Protection cap
- Special rollers on request
- Other connection options on request

## PROFILE GRINDER GP 3200 P

CC 15

Drive: Petrol / Gasoline



- Easy handling and precise grinding because the grinding unit is separate from the power source
- Special positioning and protection of the grindstone and petrol/gasoline tank located in safe area far away from welding zone ensures an optimum working safety
- Flexible machine which can be used to reprofile flat-bottom, grooved and crane rails



### SPECIFICATIONS

### GRINDING UNIT

### FLEX SHAFT

### POWER UNIT

|                         |  |                             |   |
|-------------------------|--|-----------------------------|---|
| Weight                  | 17 kg / 37.5 lbs                                 | • 10 kg / 22 lbs            | • 55 kg / 121 lbs                                   |
| Dimensions (L x W x H)  | 1,200 x 170 x 480 mm /<br>47 x 6.7 x 18.9 inches | • L = 3,000 mm / 118 inches | • 1,100 x 500 x 700 mm /<br>43 x 19.7 x 27.6 inches |
| Motor                   | KOHLER 255 ccm / 15.6 cin,<br>4-stroke engine    |                             |   |
| Engine output           | 7 kW / 9.4 hp                                    |                             |   |
| Engine speed under load | 3,200 1/min/rpm                                  |                             |   |

## PROFILE GRINDER GP 4000 D

CC 02

Drive: Diesel



- Powerful diesel engine provides high performance rail grinding of flat-bottom rails
- Low downtimes are achieved by the automatic and maintenance-free belt tensioner and the possibility to quickly change the grindstone
- The safety concept with engine guard and spark guard ensures the safety of the operator during the grinding process
- The machine guarantees a high removal rate



### SPECIFICATIONS

### ACCESSORIES

|                                       |  |                                |
|---------------------------------------|--|--------------------------------|
| Tare weight                           | 79.5 kg / 175 lb                           | • Various types of grindstones |
| Dimensions (L x W x H) with framework | 1,240 x 715 x 916 mm / 49 x 28 x 36 inches | • Optional kickstand           |
| Engine output                         | 3.5 kW / 4.7 hp                            | • Optional engine protections  |
| Engine speed under load               | 3,600 1/min/rpm                            |                                |

# TRACK MAINTENANCE / GRINDING AND CUTTING

## **WEB GRINDER** **GW 110 H | GW 210 H**

CC 09

Drive: Hydraulic



- Designed for grinding the web of the rail after the welding process and for cleaning the side of the rail for preparation of rail joining
- Adjustable handle for comfortable and ergonomic use
- Roller bearings for smooth movement along the rail

### **SPECIFICATIONS**

|                                 |  |
|---------------------------------|--|
| Weight                          | 15 kg / 34 lbs   |
| Dimensions GW 110 H (L x W x H) | 1,115 x 737 x 686 ... 965 mm /<br>43.9 x 29 x 27 ... 38 inches |
| Dimensions GW 210 H             | 1,241 x 737 x 686 - 965 mm /<br>48.9 x 29 x 27 - 38 inches     |
| Max. flow                       | 40 lpm / 10 gpm (US)   |
| Max. pressure                   | 140 bar / 2000 psi   |
| Quick couplers                  | 3/8 HTMA (ISO 16028)   |

### **POWER UNITS & ACCESSORIES**

- D-23, E-15, G-18, G-21, G-23, G-31
- Replacement grindstone
- Grindstone removal wrench
- Hose set

## RAILSHAPE ECO

CC 04

Drive: Electric or Petrol / Gasoline



- The RAILSHAPE ECO is used in main networks, urban flat-bottom and grooved rail networks for deburring both sides of the rail, blade reprofiling and gauge-widening.
- One grinding disc to achieve the best deburring results
- Deburring of 60-120 rail meters per hour
- Deburring of up to 2 R190 switches within an 8-hour spark time shift
- Turning stand for quick turning the machine on track
- Manually operated
- Optional adapter for extending the track gauge to 900 ... 1,676 mm / 35.4 ... 66.0 inches



### SPECIFICATIONS

Weight  
Dimensions (L x W x H)

### ELECTRIC

505 kg / 1,113 lbs  
1,541 x 1,786 x 1,190 / 3,699\* mm /  
60.7 x 70.3 x 46.9 / 145.6\* inches  
15.0 kW / 20.1 hp  
2 km/h / 1.24 mph  
1,425 ... 1,485 mm / 56.1 ... 58.5 inches

### PETROL / GASOLINE

523 kg / 1,153 lbs  
1,541 x 1,685 x 1,190 / 3,699\* mm /  
60.7 x 66.3 x 46.9 / 145.6\* inches  
16.5 kW / 22.1 hp  
2 km/h / 1.24 mph  
1,425 ... 1,485 mm / 56.1 ... 58.5 inches

## RAILSHAPE PRO

CC 04

Drive: Petrol / Gasoline



- RAILSHAPE PRO, used in main networks, urban flat-bottom and grooved rail networks for reprofiling of the whole rail head, removal of corrugation and shallow rail defects.
- High level of flexibility on the construction site as well as self-driven rail- and road wheels
- Highest level of efficiency thanks to the excellent removal rate
- Precise adjustment of the pivoting angle of the grinding heads and the feed operated by a remote control
- Efficient grinding and shortening of the working time
- Minimal costs for approach, no low-level truck needed
- Quick rerailing within a few minutes guarantees minimal setup time
- Optional adapter for extending the track gauge to 1,000 ... 1,676 mm / 39.4 ... 66.0 inches



### SPECIFICATIONS

Weight  
Dimensions (L x W x H)

950 kg / 2,094 lbs  
1,329 x 2,267 x 1,312 / 2,962 mm\* /  
52.3 x 89.3 x 51.7 / 116.6 inches\*  
42.5 kW / 57 hp  
2 km/h / 1.24 mph  
1,415 ... 1,485 / 55.7 ... 58.5 inches  
-75° ... +50°

### SPECIAL EQUIPMENT

- Running board
- Suction unit

\* with rotating beacon







## LAG DRIVER DL 210 H

CC 09  
Drive: Hydraulic



- Multi-purpose tool allows loosening and tightening of lag bolts (dome, torx, square and rectangle lag bolts) while in a standing position to reduce back strain
- Fast and efficient so the job can be completed quickly
- Lightweight design allows one-man operation

### SPECIFICATIONS

|                        |   |
|------------------------|---|
| Weight                 | 18 kg / 40 lbs                              |
| Dimensions (L x W x H) | 127 x 419 x 737 mm / 5.0 x 16.5 x 29 inches |
| Max. flow              | 40 lpm / 10 gpm (US)                        |
| Max. pressure          | 140 bar / 2,000 psi                         |
| Quick couplers         | 3/8 HTMA (ISO 16028)                        |

### POWER UNITS & ACCESSORIES

- D-23, E-15, G-18, G-21, G-23, G-31
- Impact sockets
- Hose set

## IMPACT WRENCH WI 110 H

CC 09  
Drive: Hydraulic



- Enables the easy and fast loosening and tightening of sleeper screws and nuts
- More convenient use through a swing handle for use in a vertical and horizontal position
- Cushion grip for reduced vibration and increased operator comfort
- Efficient working through highly efficient hydraulic motor which produce up to 3,800 Nm / 2,800 ft lbs of torque



### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 12 kg / 26 lbs                         |
| Dimensions (L x W x H) | 356 x 178 x 229 mm / 14 x 7 x 9 inches |
| Max. flow              | 40 lpm / 10 gpm (US)                   |
| Max. pressure          | 140 bar / 2,000 psi                    |
| Quick couplers         | 3/8 HTMA (ISO 16028)                   |

### POWER UNITS & ACCESSORIES

- D-23, E-15, G-18, G-21, G-23, G-31
- Impact sockets
- Hose set

## DEAD HEAD DRIVER DH 105 H

CC 09  
Drive: Hydraulic



- The flexibility of the machine allows to drive broken spikes, screws through bolts and hook bolts
- Design allows standing operation and reduces back pain
- Eliminates the use of hand-held punches and hammers and increase operator safety thereby
- Can be fitted with additional bits for chipping ice or tie tamping



### SPECIFICATIONS

|                        |   |
|------------------------|---|
| Weight                 | 20 kg / 44 lbs                          |
| Dimensions (L x W x H) | 102 x 406 x 965 mm / 4 x 16 x 38 inches |
| Max. flow              | 20 lpm / 5 gpm (US)                     |
| Max. pressure          | 140 bar / 2,000 psi                     |
| Quick couplers         | 3/8 HTMA (ISO 16028)                    |

### POWER UNITS & ACCESSORIES

- G-05, G-09, G-18
- Dead head
- Ice breaker
- Tie tamper bits
- Hose set

# TRACK MAINTENANCE / FASTENING AND LOOSENING

## **SPIKE DRIVER** **DS 110 H**

CC 09  
Drive: Hydraulic



- One of the most efficient tools in the market with its 1050 blows per minute
- Anti-recoil technology and anti-vibration handles isolate the operator from the tool's vibration, thereby reducing operator fatigue
- High flexibility through 25.4 mm / 1" shank size
- Lightweight design allows one-man operation

### **SPECIFICATIONS**

|                        |   |
|------------------------|---|
| Weight                 | 30 kg / 67 lbs                          |
| Dimensions (L x W x H) | 152 x 406 x 965 mm / 6 x 16 x 38 inches |
| Max. flow              | 20 ... 32 lpm / 5 ... 8 gpm (US)        |
| Max. pressure          | 140 bar / 2,000 psi                     |
| Quick couplers         | 3/8 HTMA (ISO 16028)                    |

### **POWER UNITS & ACCESSORIES**

- D-23, E-15, G-18, G-21, G-23, G-31
- Hose set

## **SPIKE PULLER** **PS 210 H (SINGLE STAGE) | PS 310 H (TWO STAGE)**

CC 09  
Drive: Hydraulic



- Operator can select the most comfortable position to pull spikes through rotating handle
- 90-degree swivel hose connection protects the hydraulic hoses against kinking and breaking and improves safety
- Immediately ready for use after delivery, no need for set-up

### **SPECIFICATIONS**

|                        |   |
|------------------------|---|
| Weight                 | 21 kg / 46 lbs                          |
| Dimensions (L x W x H) | 102 x 406 x 914 mm / 4 x 16 x 36 inches |
| Max. flow              | 40 lpm / 10 gpm (US)                    |
| Max. pressure          | 140 bar / 2,000 psi                     |
| Quick couplers         | 3/8 HTMA (ISO 16028)                    |

### **POWER UNITS & ACCESSORIES**

- D-23, E-15, G-18, G-21, G-23, G-31
- Hose set

## **SPIKE SETTER** **SS 100 M**

CC 09  
Drive: Manual



- Designed for setting spikes into ties before driving
- Telescoping main tube enables work in a standing working position and increases user-friendliness
- Cushion grip allows the operator to set spikes with less fatigue
- Magnetic spike holder and slide hammer secures the spike for placement and increases user-friendliness

### **SPECIFICATIONS**

|                        |  |
|------------------------|--|
| Weight                 | 7 kg / 15 lbs                                |
| Dimensions (L x W x H) | 84 x 389 x 1,016 mm / 3.3 x 15.3 x 40 inches |

## SPIKE TESTER ST 1000 M

CC 09  
Drive: Manual



- Simplifies testing of spikes
- Operation and transport with ideal body posture through lightweight design
- Eliminates the use of heavy claw bar and improves the operator safety

### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 2 kg / 4 lbs                             |
| Dimensions (L x W x H) | 152 x 70 x 914 mm / 6 x 2.75 x 36 inches |

## E-CLIP INSTALLER EI 105 H | EI 205 H

CC 09  
Drive: Hydraulic



- Reduces back strain and less fatigue through stand-up operation
- Lightweight design allows one-man operation
- Eliminates manual e-Clip installation for increased safety and comfort

### SPECIFICATIONS

|                        |   |
|------------------------|---|
| Weight                 | 15 kg / 33.5 lbs                          |
| Dimensions (L x W x H) | 495 x 152 x 940 mm / 19.5 x 6 x 37 inches |
| Max. flow              | 20 lpm / 5 gpm (US)                       |
| Max. pressure          | 140 bar / 2,000 psi                       |
| Quick couplers         | 3/8 HTMA (ISO 16028)                      |

### ACCESSORIES

- G-05, G-09, G-18
- Hose set

## E-CLIP REMOVER ER 105 H

CC 09  
Drive: Hydraulic



- Designed to remove e-Clips from the anchor
- Reduces back strain and less fatigue through stand-up operation
- Lightweight design allows one-man operation
- Eliminates the manual use of clip removing for increased safety and comfort

### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 13 kg / 28 lbs                               |
| Dimensions (L x W x H) | 267 x 330 x 851 mm / 10.5 x 13 x 33.5 inches |
| Max. flow              | 20 lpm / 5 gpm (US)                          |
| Max. pressure          | 140 bar / 2,000 psi                          |
| Quick couplers         | 3/8 HTMA (ISO 16028)                         |

### ACCESSORIES

- G-05, G-09, G-18
- Hose set



# TRACK MAINTENANCE / FASTENING AND LOOSENING

## **E-CLIP REMOVER** **ER 205 H**

CC 09  
Drive: Hydraulic



- Easily remove e-Clips from Pandrol roll plates with auto return function
- Reduces back strain and less fatigue through stand-up operation
- Durable and robust steel construction ensures long life

### **SPECIFICATIONS**

|                        |   |
|------------------------|---|
| Weight                 | 15 kg / 33.5 lbs                          |
| Dimensions (L x W x H) | 495 x 152 x 991 mm / 19.5 x 6 x 39 inches |
| Max. flow              | 20 lpm / 5 gpm (US)                       |
| Max. pressure          | 140 bar / 2,000 psi                       |
| Quick couplers         | 3/8 HTMA (ISO 16028)                      |

### **POWER UNITS & ACCESSORIES**

- G-05, G-09, G-18
- Hose set

## **SAFELOK REMOVER** **LR 105 H**

CC 09  
Drive: Hydraulic



- Designed for the quick and easy removal of Safe Lok clips
- The lightweight tool assures an easy and comfortable use
- Eliminates the use of other methods that increases the likelihood of injury

### **SPECIFICATIONS**

|                 |                                       |
|-----------------|---------------------------------------|
| Weight          | 17 kg / 38 lbs                        |
| 305 x 254 x 940 | 305 x 254 x 940 / 12 x 10 x 37 inches |
| Max. flow       | 20 lpm / 5 gpm (US)                   |
| Max. pressure   | 140 bar / 2,000 psi                   |
| Quick couplers  | 3/8 HTMA (ISO 16028)                  |

### **ACCESSORIES**

- G-05, G-09, G-18
- Hose set

## **DUAL CLIP INSTALLER** **CI 105 H**

CC 09  
Drive: Hydraulic



- Multi-purpose tool (single or dual Safe Lok clips, type I and III) for flexible installation at the construction site
- Less effort moving the tool along the rail using a zero-gravity wheel kit
- Jaws open automatically when the trigger is released
- Eliminates the use of other methods that increases the likelihood of injury

### **SPECIFICATIONS**

|                        |  |
|------------------------|--|
| Weight                 | 24 kg / 52 lbs                             |
| Dimensions (L x W x H) | 584 x 711 x 1,143 mm / 23 x 28 x 45 inches |
| Max. flow              | 20 lpm / 5 gpm (US)                        |
| Max. pressure          | 140 bar / 2,000 psi                        |
| Quick couplers         | 3/8 HTMA (ISO 16028)                       |

### **ACCESSORIES**

- G-05, G-09, G-18
- Hose set

## FLANGEWAY CLEANER CF 110 H

CC 09

Drive: Hydraulic



- Twin flails and brushes act together for complete cleaning
- An adjustable handle ensures high comfort and ergonomics
- A folding frame allows compact storage and transportation

### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 15 kg / 34 lbs                             |
| Dimensions (L x W x H) | 1,194 x 737 x 965 mm / 47 x 29 x 38 inches |
| Max. flow              | 40 lpm / 10 gpm (US)                       |
| Max. pressure          | 140 bar / 2,000 psi                        |
| Quick couplers         | 3/8 HTMA (ISO 16028)                       |

### POWER UNITS & ACCESSORIES

- D-23, E-15, G-18, G-21, G-23, G-31
- Replacement flails and brushes
- Hose set

## FLANGEWAY CLEANER CF 137 P

CC 09

Drive: Hydraulic



- Twin flails and brushes act together for complete cleaning
- 4-stroke engine enable a higher flexibility
- A folding frame allows compact storage and transportation

### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 34.9 kg / 77 lbs                             |
| Dimensions (L x W x H) | 1,134 x 559 x 940 mm / 52.5 x 22 x 37 inches |
| Power                  | 5 hp   |





## POWER UNITS: PETROL / GASOLINE

### G-05

CC 09

Drive: Petrol / Gasoline



- Long life of HPU and tools through large capacity cooler
- Low engine oil protection ensures a long lifetime of the HPU
- Compact design with carrying handles
- Vibration absorber damp the vibration and reduces the noise emission

#### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 38 kg / 84 lbs                             |
| Dimensions (L x W x H) | 610 x 432 x 419 mm / 24 x 17 x 16.5 inches |
| Max. flow              | 20 lpm / 5 gpm (US)                        |
| Max. pressure          | 140 bar / 2,000 psi                        |
| Quick couplers         | 3/8 HTMA (ISO 16028)                       |

#### ACCESSORIES

- Filters and oil
- Pressure gauge
- Hose set

### G-09 / G-11 / G-13

CC 09

Drive: Petrol / Gasoline



- Easier maintenance through hour meter and oil level indicator help to extends life of components
- Long life of HPU and tools through large capacity cooler
- The folding handlebar and 10" OD pneumatic tires ensure power unit mobility in all situations

#### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 62 ... 65 kg / 136 ... 143 lbs               |
| Dimensions (L x W x H) | 673 x 508 x 699 mm / 26.5 x 20 x 27.5 inches |
| Max. flow              | 27 ... 36 lpm / 6 ... 8 gpm (US)             |
| Max. pressure          | 140 bar / 2,000 psi                          |
| Quick couplers         | 3/8 HTMA (ISO 16028)                         |

#### ACCESSORIES

- Filters and oil
- Pressure gauge
- Hose set
- Battery
- Flow meter

### G-18

CC 09

Drive: Petrol / Gasoline



- Low oil level shutdown protects the engine when oil level is too low
- 16" wheels ensure power unit mobility in all situations
- Long life of HPU and tools through large capacity cooler



#### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 106 kg / 233 lbs                         |
| Dimensions (L x W x H) | 991 x 737 x 813 mm / 39 x 29 x 32 inches |
| Max. flow              | 40 lpm / 10 gpm (US)                     |
| Max. pressure          | 140 bar / 2,000 psi                      |
| Quick couplers         | 3/8 HTMA (ISO 16028)                     |

#### ACCESSORIES

- Filters and oil
- Pressure gauge, flow meter
- Hose set, hose reel
- Battery
- Roll bar
- 12 V DC power port



## POWER UNITS: DIESEL / ELECTRIC / BATTERY

### D-23

CC 09  
Drive: Diesel



- Can be configured with fixed flow, variable flow and dual flow options
- Engine protection through low engine oil and high coolant temperature protection
- Increased user-friendliness enables the easy electric starting process compared to recoil starter
- Collapsible handles and large wheels ensures high flexibility on site

#### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 236 kg / 520 lbs                             |
| Dimensions (L x W x H) | 1,067 x 737 x 927 mm / 42 x 29 x 36.5 inches |
| Max. flow              | 54 lpm / 12 gpm (US)                         |
| Max. pressure          | 140 bar / 2,000 psi                          |
| Quick couplers         | 3/8 HTMA (ISO 16028)                         |

#### POWER UNITS & ACCESSORIES

- Filters and oil
- Battery
- Hose set, hose reel
- Pressure gauge, flow meter
- 12 V DC power port

### E-20

CC 09  
Drive: Electric



- Can be configured with many sizes of motors with voltage, frequency and starter options
- The power unit is also be customized for other flows and pressures by request
- Power unit mobile in all situations through telescoping handles and large wheels

#### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | Various (customized)                     |
| Dimensions (L x W x H) | 889 x 660 x 813 mm / 35 x 26 x 32 inches |
| Max. flow              | Various (customized)                     |
| Max. pressure          | Various (customized)                     |
| Quick couplers         | 3/8 HTMA (ISO 16028)                     |

#### ACCESSORIES

- Filters and oil
- Cord length and connections
- Hose set, hose reel
- Pressure gauge, flow meter

## MEASURING & TESTING SOLUTIONS

### LONGITUDINAL RAIL PROFILE



CC 01

- Complete electronic documentation with the free GOLDSCHMIDT DIGITAL APP on Google Play
- Quick evaluation and easy export of measurement results
- High track reliability through confirmation of precise track geometry
- For checking welding work (weld finish after final grind)
- Reduction of rail and wheel tire wear
- Reduction of maintenance costs



|  | <b>RAILSTRAIGHT COMPACT</b>   | <b>RAILSTRAIGHT WAVE</b>  | <b>RAILSTRAIGHT DUAL</b>  |
|--|---|---|---|
| Measuring length                               | 1 m / yd  | 1 m / yd  | 1 m / yd  |
| Horizontal resolution                          | 500 points  | 500 points  | 500 points  |
| Vertical resolution                            | 0.001 mm / 39.4 microinches   | 0.001 mm / 39.4 microinches   | 0.001 mm / 39.4 microinches   |
| Display resolution                             | 0.01 mm / 394 microinches   | 0.01 mm / 394 microinches   | 0.01 mm / 394 microinches   |
| Linearity error                                | ± 0,5 %   | ± 0,5 %   | ± 0,5 %   |
| Measuring range                                | max: +1,5 mm / 0,059 inches<br>min: -2,5 mm / 0.098 inches  | max: +1 mm / 0,039 inches<br>min: -2 mm / 0.079 inches  | max: +1 mm / 0,039 inches<br>min: -2 mm / 0.079 inches  |
| Measuring time                                 | 6 s   | 6 s   | 6 s   |
| Weight   | 5 kg / 11 lbs   | 8 kg / 17.6 lbs   | 5 kg / 11 lbs   |
| Dimensions (LxWxH)                             | 1,230 × 165 × 110 mm/<br>48.4 x 6.5 x 4.3 inches  | 1,330 × 192 × 95 mm/<br>52.4 x 7.6 x 3.7 inches   | 1,230 × 165 × 110 mm/<br>48.4 x 6.5 x 4.3 inches  |
| Operating time internal rechargeable batteries | 3 x 3.7V Li-Ion   3000mAh<br>operating time:<br>approx. 400 measurements<br>Charging time: approx. 7h | 3 x 3.7V Li-Ion   3000mAh<br>operating time:<br>approx. 400 measurements<br>Charging time: approx. 7h | 3 x 3.7V Li-Ion   3000mAh<br>operating time:<br>approx. 400 measurements<br>Charging time: approx. 7h |
| IP protective class                            | IP54  | IP54  | IP54  |
| Ambient temperature                            | -10 °C ... +50 °C<br>14 °F ... 122 °F   | -10 °C ... +50 °C<br>14 °F ... 122 °F   | -10 °C ... +50 °C<br>14 °F ... 122 °F   |
| Rail temperature                               | -20 °C ... +60 °C<br>- 4 °F ... 140 °F  | -20 °C ... +60 °C<br>- 4 °F ... 140 °F  | -20 °C ... +60 °C<br>- 4 °F ... 140 °F  |

## RAILPROFILE XY

CC 05



- Easy operation of the device during measurements
- 30,000 measured profiles
- Long working time, 20 h non-stop operation
- Operation during daytime and nighttime
- Geographical allocation of measuring points
- Software graphics enable features such as drawing dimensions, annotations, zooming, and others
- Measured profiles may be exported as files in TXT and DXF formats

| SPECIFICATIONS         | STANDARD   | COMPACT                       | SCOPE OF DELIVERY  |
|------------------------|--|-------------------------------|--|
| Weight                 | 7.1 kg / 16.3 lbs                                    | 6.4 kg / 15.7 lbs             | <ul style="list-style-type: none"> <li>• RAILPROFILE X-Y device</li> <li>• Transport box</li> <li>• Charger for the device</li> <li>• PC data analysis and reporting software</li> </ul> |
| Dimensions (L x W x H) | gauge 240 x 75 x 685 mm /                            | gauge 240 x 75 x 261 mm /     |  |
|                        | 9.4 x 3.0 x 27.0 inches                              | 9.4 x 3.0 x 10.3 inches       |  |
|                        | beam 165 x 225 x 1910 mm /                           | beam 150 x 125 x 1960 mm /    |  |
|                        | 6.5 x 8.9 x 75.2 inches                              | 5.9 x 4.9 x 77.2 inches       |  |
| Accuracy               | ±0.1 mm  | ±0.1 mm                       |  |
| Measurement ranges     | 110 x 575 mm / 4.3 x 22.6 inches                     | 110x144 mm/ 4.3 x 5,67 inches |  |
| Operating conditions   | • Temperature: -20 °C ... +45 °C / -4 °F ... +113 °F |                               |  |
|                        | • Humidity: 15 ÷ 85 %, no condensation               |                               |  |
|                        | • Rain and frost resistant                           |                               |  |

RAIL THERMOMETER

CC 01



- Magnetic mounted
- Exact temperature specification in °C

SPECIFICATIONS

|            |                       |
|------------|-----------------------|
| Weight     | 0.05 kg / 0.11 lbs    |
| Dimensions | Ø 40 mm / 1.57 inches |

RAIL THERMOMETER

CC 01



- Magnetic mounted
- Exact temperature specification in °C and F

SPECIFICATIONS

|            |                       |
|------------|-----------------------|
| Weight     | 0.05 kg / 0.11 lbs    |
| Dimensions | Ø 40 mm / 1.57 inches |

RAIL THERMOMETER

CC 01



- Magnetic mounted
- Exact temperature specification in °C

SPECIFICATIONS

|            |                       |
|------------|-----------------------|
| Weight     | 0.06 kg / 0.13 lbs    |
| Dimensions | Ø 63 mm / 2.48 inches |

RAIL THERMOMETER  
RAIL TEMP MO40LC

CC 01



- Digital and Magnetic mounted
- Exact temperature specification in °C

SPECIFICATIONS

|                        |   |
|------------------------|---|
| Weight                 | 0.34 kg / 0.75 lbs                          |
| Dimensions (L x W x H) | 40 x 50 x 17 mm / 1.57 x 1.97 x 0.67 inches |

RAIL THERMOMETER  
RAIL TEMP BT-11

CC 01



- Digital with Bluetooth® wireless technology
- Magnetic mounted
- Exact temperature specification in °C

SPECIFICATIONS

|                        |   |
|------------------------|---|
| Weight                 | 0.5 kg / 1.10 lbs                           |
| Dimensions (L x W x H) | 110 x 68 x 30 mm / 4.3 x 2.68 x 1.18 inches |

# RAIL AND TRACK GEOMETRY

## TRACKGAUGE SOLAR

CC 05



- Lightweight, fast, easy and accurate
- Immediate measurement result
- Presentation of values of all parameters in digital form on a large and legible display
- Solar battery for 24h non-stop operation
- Measurement data can be transferred to a PC via a USB pendrive in TXT format
- Available for all track gauges



### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 2.8 kg / 6.2 lbs   |
| Dimensions (L x W x H) | 1,647 x 115 x 240 mm / 64.8 x 4.5 x 9.4 inches   |
| Operating conditions   | <ul style="list-style-type: none"> <li>• Temperature: -20 °C ... +45 °C / -4 °F ... +113 °F</li> <li>• Humidity: 15 ÷ 85 %, no condensation</li> <li>• Rain and frost resistant</li> </ul> |

|                    | Accuracy                | Measurement ranges                    |
|--------------------|-------------------------|---------------------------------------|
| Track gauge        | ±0.3 mm / ±0.01 inches  | • -20 ... +50 mm / -0.8 ... +2 inches |
| Cant               | ±0.5 mm / ±0.02 inches  | • ±250 mm / ±9.8 inches               |
| Groove width (l/r) | ±0.4 mm / ±0.015 inches | • 26 ... 75 mm / 1 ... 3 inches       |

### SCOPE OF DELIVERY

- TRACKGAUGE SOLAR device
- Transport box

## TRACKGAUGE DIGITAL

CC 05



- User-friendly operation and measurement reports available immediately in PDF format
- Reliable measurement data acquisition and transfer
- Qualitative assessment of rail conditions is available
- Reduced transportation and logistical workload
- Reliable measurement data regardless of the actual ambient temperature
- Available for all track gauges



### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 2.6 kg / 5.7 lbs   |
| Dimensions (L x W x H) | 1,600 x 120 x 140 mm / 63.0 x 4.7 x 5.5 inches   |
| Operating conditions   | <ul style="list-style-type: none"> <li>• Temperature: -20 °C ... +45 °C / -4 °F ... +113 °F</li> <li>• Humidity: 15 ÷ 85 %, no condensation</li> <li>• Rain and frost resistant</li> </ul> |

|                    | Accuracy                | Measurement ranges                      |
|--------------------|-------------------------|---|
| Track gauge        | ±0.3 mm / ±0.01 inches  | • -20 ... +55 mm / -0.8 ... +2.1 inches |
| Cant               | ±0.5 mm / ±0.02 inches  | • ±225 mm / ±10 inches                  |
| Groove width (l/r) | ±0.4 mm / ±0.015 inches | • 26 ... 200 mm / 1 ... 7.9 inches      |

### SCOPE OF DELIVERY

- TRACKGAUGE DIGITAL device
- Free GOLDSCHMIDT DIGITAL APP on Google Play
- DARI® Basic package
- Transport box
- Charger for the device

## TRACKSCAN COMPACT

CC 05



- User-friendly operation and measurement reports available immediately in PDF format
- Reliable measurement data acquisition and transfer
- Ergonomic operation
- Rechargeable batteries at hand enable unlimited trolley operating time
- Available for all track gauges



### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 25.6 kg / 56.4 lbs   |
| Dimensions (L x W x H) | 1,050 x 870 x 1850 mm / 41.3 x 34.3 x 72.8 inches  |
| Operating conditions   | <ul style="list-style-type: none"> <li>• Temperature: -20 °C ... +45 °C / -4 °F ... +113 °F</li> <li>• Humidity: 15 ÷ 85 %, no condensation</li> <li>• Rain and frost resistant</li> </ul> |

|                    | Accuracy                | Measurement ranges                      |
|--------------------|-------------------------|---|
| Track gauge        | ±0.3 mm / ±0.01 inches  | • -20 ... +55 mm / -0.8 ... +2.1 inches |
| Cant               | ±0.5 mm / ±0.02 inches  | • ±225 mm / ±10 inches                  |
| Groove width (l/r) | ±0.4 mm / ±0.015 inches | • 26 ... 200 mm / 1 ... 7.9 inches      |




### SCOPE OF DELIVERY

- TRACKSCAN COMPACT trolley with 2 batteries (+ 2 add. batteries)
- Charger for the batteries
- Transport box
- Free GOLDSCHMIDT DIGITAL APP on Google Play
- DARI® Basic package
- 10" waterproof and dust-tight (IP65) tablet for outdoor operation



# RAIL AND TRACK GEOMETRY




- All trolleys measure track geometry and record results of visual track condition inspections
- User-friendly operation and measurement reports immediately available in xls, doc, pdf, and csv formats (partly also dxf)
- Data export via USB pendrive to the GeoTEC desktop software
- Reliable measurement data acquisition and transfer
- Available for track gauges from 914 – 1,676 mm / 36.0 – 66.0 inches for flat-bottom and grooved rails
- Operating conditions: -20 °C ... 45 °C / -4 ... +113 °F, humidity 15 – 85 %, rain and frost resistant

|   | <b>TRACKSCAN PROFILE</b><br>  | <b>TRACKSCAN PROFILE</b><br>  | <b>TRACKSCAN WITCH</b><br>   |
|---|--|---|---|
| Measuring increment                                 | 0.5 m / 19.7 inches  | 0.25m; 0.5 m / 9.8 inches; 19.7 inches  | 0.5 m; 0.031 m / 19.7 inches; 1.46 inches – switch mode   |
| Gauge (measured)                                    | Accuracy: $\pm 0.5$ mm / $\pm 0.02$ inches, resolution: 0.1 mm / 0.004 inches, measurement range: -15 ... + 50 mm / -0.59 ... +1.97 inches   |   |   |
| Cant (measured)                                     | Accuracy $\pm 1.5$ mm / $\pm 0.06$ inches, resolution 0.1 mm / 0.004 inches, measurement range $\pm 200$ mm / $\pm 7.87$ inches  |   |   |
| Twist (calculated)                                  | Accuracy $\pm 3.0$ mm / $\pm 0.12$ inches, a resolution 0.1 mm / 0.004 inches, measurement range $\pm 200$ mm / $\pm 7.87$ inches  |   |   |
| Gradient (calculated)                               | Accuracy $\pm 1.0$ mm / $\pm 0.04$ inches, resolution 0.1 mm / 0.004 inches, measurement range 0 ... 65 mm / 0 ... 2.56 inches   |   |   |
| Horizontal irregularities (extrapolated)            | Accuracy $\pm 0.2$ mm / 1 m / $\pm 0.01$ / 39.4 inches, resolution 0.1 mm / 0.004 inches, measurement range $\pm 5$ mm / $\pm 0.20$ inches   |   |   |
| Vertical irregularities (extrapolated)              | Accuracy $\pm 0.2$ mm / 1 m / $\pm 0.01$ / 39.4 inches, resolution 0.1 mm / 0.004 inches, measurement range $\pm 2.0$ mm / $\pm 0.08$ inches   |   |   |
| Rail cross-profile (measured)                       | Accuracy of $\pm 0.3$ mm / $\pm 0.01$ inches, resolution of 0.1 mm / 0.004 inches  |   | -   |
|   | Rail head profile: left  | Rail head profile: left and right   | -   |
| Left/right flangeways (groove) (measured)           | -  | -   | Accuracy $\pm 0.5$ mm / $\pm 0.20$ inches, resolution 0.1 mm / 0.004 inches, measurement range 35 ... 110 mm / 1.38 ... 4.33 inches   |
| Check rail gauge (calculated)                       | -  | -   | Accuracy $\pm 1.5$ mm / $\pm 0.06$ inches, resolution 0.1 mm / 0.004 inches, full measurement range   |
| Left and right check rail gauge (calculated)        | -  | -   | Accuracy $\pm 1.0$ mm / $\pm 0.04$ inches, resolution 0.1 mm / 0.004 inches, full measurement range   |
| Distance to objects (measured) e.g. track clearance | -  | -   | -   |
| Weight  | 30.0 kg / 66.1 lbs   | 35.0 kg / 77.2 lbs  | 26.6 kg / 58.6 lbs  |
| Dimensions (ready to use)                           | 1,050 x 870 x 1,850mm / 41.3 x 34.3 x 72.8 inches  | 1,300 x 870 x 1,850 mm / 51.2 x 34.3 x 72.8 inches  | 1,050 x 870 x 1,850 mm / 41.3 x 34.3 x 72.8 inches  |
| Scope of delivery                                   | <ul style="list-style-type: none"> <li>• Trolley with 2 batteries (+ add. 2 batteries + charger)</li> <li>• Transport box</li> <li>• Charger for the control unit</li> <li>• PC software GeoTEC, 1 licence</li> <li>• Boxes for storing and transporting laser head</li> </ul> | <ul style="list-style-type: none"> <li>• Trolley with 2 batteries (+ add. 2 batteries + charger)</li> <li>• Transport box</li> <li>• Charger for the control unit</li> <li>• PC software GeoTEC, 1 licence</li> <li>• Boxes for storing and transporting laser heads</li> </ul> | <ul style="list-style-type: none"> <li>• Trolley with 2 batteries (+ add. 2 batteries + charger)</li> <li>• Transport box</li> <li>• Charger for the control unit</li> <li>• PC software GeoTEC, 1 licence</li> </ul> |

\* All dimensions and weights have been specified for devices made for 1,435 mm track gauge. Devices are available for a certain range of further track gauges.

CC 05



| <b>TRACKSCAN TOTAL</b><br>   | <b>TRACKSCAN CLEARANCE</b><br>  | <b>TRACKSCAN INERTIAL</b><br>  |
|---|--|---|
| 0.5 m / 19.7 inches   | 0.5 m / 19.7 inches  | 0.25 m; 0.5 m / 9.8 ... 19.7 inches   |
| Accuracy: $\pm 0.5$ mm / $\pm 0.02$ inches, resolution: 0.1 mm / $\pm 0.004$ inches, measurement range: -15 ... + 50 mm / -0.60 ... 1.97 inches   |  |   |
| Accuracy $\pm 1.5$ mm / $\pm 0.06$ inches, resolution 0.1 mm / $\pm 0.004$ inches, measurement range $\pm 200$ mm / $\pm 7.9$ inches  |  |   |
| Accuracy $\pm 3.0$ mm / $\pm 0.12$ inches, a resolution 0.1 mm / $\pm 0.004$ inches, measurement range $\pm 200$ mm / $\pm 7.9$ inches  |  |   |
| Accuracy $\pm 1.0$ mm / $\pm 0.04$ inches, resolution 0.1 mm / $\pm 0.004$ inches, measurement range 0 ... 65 mm / 0 ... 2.56 inches  |  |   |
| Accuracy $\pm 0.2$ mm / 1 m / $\pm 0.01$ / 39.4 inches, resolution 0.1 mm / 0.004 inches, measurement range $\pm 5$ mm / $\pm 0.20$ inches  | Accuracy $\pm 1.0$ mm / 10 m / $\pm 0.04$ inches / 393.70 inches   |   |
| Accuracy $\pm 0.2$ mm / 1 m / $\pm 0.01$ / 39.4 inches, resolution 0.1 mm / 0.004 inches, measurement range $\pm 2.0$ mm / $\pm 0.08$ inches  | Accuracy $\pm 1.0$ mm / 10 m / $\pm 0.04$ inches / 393.70 inches   |   |
| -   | -  | -   |
| -   | -  | -   |
| -   | -  | -   |
| -   | -  | -   |
| -   | -  | -   |
| -   | Accuracy $\pm 5.0$ mm / $\pm 0.20$ inches, resolution 0.1 mm / 0.004 inches, up to 8 m / 315.0 inches measurement range  | -   |
| 28.0 kg / 61.7 lbs  | 27.6 kg / 60.8 lbs   | 26.0 kg / 57.3 lbs  |
| 1,050 x 1,300 x 1,850 mm / 41.3 x 51.2 x 72.8 inches  | 1,050 x 1,300 x 1,850 mm / 41.3 x 51.2 x 72.8 inches   | 1,050 x 870 x 1,850 mm / 41.3 x 34.3 x 72.8 inches  |
| <ul style="list-style-type: none"> <li>• Trolley with 2 batteries (+ add. 2 batteries + charger)</li> <li>• Transport box</li> <li>• Charger for the control unit</li> <li>• PC software GeoTEC, 1 licence</li> <li>• tripod for prism</li> </ul> | <ul style="list-style-type: none"> <li>• Trolley with 2 batteries (+ add. 2 batteries + charger)</li> <li>• Transport box</li> <li>• Charger for the control unit</li> <li>• PC software GeoTEC, 1 licence</li> <li>• tripod for laser rangefinder</li> <li>• laser rangefinder</li> </ul> | <ul style="list-style-type: none"> <li>• Trolley with 2 batteries (+ add. 2 batteries + charger)</li> <li>• Transport box</li> <li>• Charger for the control unit</li> <li>• PC software GeoTEC, 1 licence</li> </ul> |

## TRACKSCAN CADD-E

CC 05



- Measurement of track geometry and rail head wear (flat-bottom and grooved rails)
- Track safety systems treat the trolley as a train
- Autonomy of up to 60 km
- Operation during daytime and nighttime
- Geographical allocation of measuring points
- Measurement at speed of 16 km/h, moving forward or backward
- Measured rail head profiles may be exported as files in TXT and DXF formats
- Software graphics enable features such as drawing dimensions, annotations, zooming, and others

### SPECIFICATIONS

|                        |  |
|------------------------|--|
| Weight                 | 330 kg / 727.5 lbs   |
| Dimensions (L x W x H) | 2,000 x 1,950 x 1,000 mm /<br>78.7 x 76.8 x 39.4 inches  |
| Operating conditions   | <ul style="list-style-type: none"> <li>• Temperature: -20 °C ... +45 °C /<br/>-4 °F ... +113 °F</li> <li>• Humidity: 15 ÷ 85 %, no condensation</li> <li>• Rain and frost resistant</li> </ul> |

### POWER UNITS & ACCESSORIES

- TRACKSCAN CADD-E trolley
- Cant calibration gauge
- Transport crates
- Charger for the device
- PC data analysis and reporting software

|                              | Accuracy                                   | Measurement ranges                     |
|------------------------------|--|--|
| Track gauge                  | ±1 mm / ±0.04 inches                       | -15 ... 50 mm / -0.59 ... +1.97 inches |
| Cant (crosslevel)            | ±3 mm / ±0.12 inches                       | ±225 mm / ±8.86 inches                 |
| Vertical versines            | ±2 mm / 10 m / ±0.08 inches / 393.7 inches | ±20 mm / ±0.79 inches                  |
| Horizontal versines          | ±2 mm / 10 m / ±0.08 inches / 393.7 inches | ±70 mm / ±2.76 inches                  |
| Alignment (D1)               | ±1.5 mm / ±0.06 inches                     | ±50 mm / ±1.97 inches                  |
| Longitudinal level (D1)      | ±1 mm / ±0.04 inches                       | ±50 mm / ±1.97 inches                  |
| Railhead profile and wear    | ±0.3 mm / 0.012 inches                     | Flat-bottom, grooved rail              |
| Satellite localisation (GPS) | ±5 m / ±196.9 inches                       |  |

## RAIL TENSION

**RAIL TENSION**

We offer customers worldwide the only non-destructive and mobile measurement of the tensile and compressive stresses in railway tracks and the determination of the stress-free temperature. For this purpose our highly qualified employees are available around the world with special equipment developed by us and they can help to recognize critical stress states before distortion of the track occurs in the case of compressive stress or track fractures as a result of tensile stress.

**BENEFITS**

- Quick and continuous measurement of stress-free temperature and inspection of the rail tension in your existing rail network
- Use of a unique system for the recognition of compressive stress and therefore the prevention of rail buckles
- Detection of tensile stress and therefore prevention of rail fractures
- Early recognition of the potential hazards on high-speed track sections
- Confirmation of correct neutral state with new sections of track
- No long track possession periods since no separation or cutting of the track required
- Direct display of the measurement results (including display of critical results) on site
- Creation of detailed measurement records according to applicable railway standards
- Complete service offer available from our experienced measurement technology experts
- Quick work with up to 16 stress-free temperature measurements per shift
- Performance and measurement results independent of time of day or weather conditions enable high planning reliability
- Measurement accuracy  $\pm 3^{\circ}\text{C}$
- Reliable results also on track bends



# RAIL DEFECTS




## RAIL DEFECTS

- Detection of head checks and squats by eddy current testing method
- Assessment of damage depth and frequency
- Advanced lightweight construction by using composite material
- Optimized for switches
- Low-wear single probe guidance
- Filter function against influences
- Opportunity of data post-assessment and data export
- Monitoring of inspection sensitivity



CC 08



|                    | WPG NT 40  | WPG NT 44  | WPG NT 80  |
|--------------------|--|--|--|
|                    | Inspection of one gauge corner   | Simultaneous inspection of both gauge corners  | Inspection of the gauge corner and the running surface   |
|                    |                 |                 |               |
| Data storage       | > 800 km / 500 mi  | > 500 km / 310 mi  | > 500 km / 310 mi  |
| Track gauge        | 1,000 – 1,435 mm /<br>39.4 ... 56.5 inches   | 1,000 – 1,435 mm /<br>39.4 ... 56.5 inches   | 1,000 – 1,435 mm /<br>39.4 ... 56.5 inches   |
| Testing angel      | 45° – 7°,<br>4 tracks simultaneously   | 45° – 7°, 4 tracks simultaneously<br>(each gauge corner)   | 45° – -3,2°,<br>8 tracks simultaneously  |
| Operation time     | 10 h   | 10 h   | 10 h   |
| Testing speed      | Sampling rate 1 mm / 0.04 inches<br>max. 10 km/h / 6.2 mph   | Sampling rate 1 mm / 0.04 inches<br>max. 10 km/h / 6.2 mph   | Sampling rate 1 mm / 0.04 inches<br>max. 10 km/h / 6.2 mph   |
| Protection class   | IP 65  | IP 65  | IP 65  |
| Dimensions (LxWxH) | 997 x 766 x 453 mm /<br>39.3 x 30.2 x 17.3 inches  | 997 x 766 x 453 mm /<br>39.3 x 30.2 x 17.3 inches  | 997 x 766 x 453 mm /<br>39.3 x 30.2 x 17.3 inches  |
| Weight             | 19 kg / 41.9 lbs   | 20.5 kg / 45.2 lbs   | 20.8 kg / 45.9 lbs   |
| Scope of delivery  | Laptop, software package, mechanical system, 4 probes, adjusting block, documentation, accessories | Laptop, software package, mechanical system, 8 probes, adjusting block, documentation, accessories | Laptop, software package, mechanical system, 8 probes, adjusting block, documentation, accessories |
| Options            | Desktop software, flight case, lightning   | Desktop software, flight case, lightning   | Desktop software, flight case, lightning   |



# RAIL DEFECTS

## SIS ET

CC 08



- Equipment of grinding, milling and inspection trains with eddy current testing systems
- Assessment of damage depth and frequency
- Low-wear single probe guidance
- Filter function against influences
- Opportunity of data post-assessment and data export
- Monitoring and documentation of testing sensitivity
- Analysis of proximity criteria
- Possibility of remote-maintenance

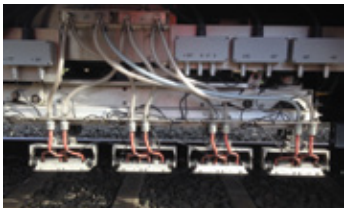


### SPECIFICATIONS

|                       |   |
|-----------------------|---|
| Data storage          | > 2,500 km / 1,553 mi data capacity   |
| Data transfer         | Removable disk  |
| Testing angle         | 45° – 7°, 4 tracks simultaneously   |
| Length of probe cable | Up to 60 m / 65.6 yd  |
| Testing speed         | Sampling rate 1 mm / 0.04 inches, max. 20 km/h / 12.4 mph (LS - Low Speed) and 80 km/h / 49.7 mph (HS - High Speed) |

## SIS UT

CC 08



- Equipment of inspection trains with ultrasonic testing systems
- Classification of indications based on neuronal networks
- Water-efficient probe coupling
- Filter functions against influences
- "Glassy rail" – 2D representation
- Monitoring and documentation of testing sensitivity
- Possibility of remote-maintenance

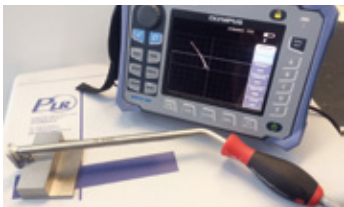


### SPECIFICATIONS

|                       |   |
|-----------------------|---|
| Data storage          | > 1,500 km / 932.1 mi data capacity                               |
| Data transfer         | Removable disk  |
| Testing angle         | 70°, 55°, 35°, 0° straight beam probe, 0° dual element transducer |
| Length of probe cable | Up to 60 m / 65.6 yd  |
| Testing speed         | Sampling rate 3 mm / 0.1 inches, max. 70 km/h / 43.5 mph          |

## EDDY CURRENT TESTING SYSTEM FOR SWITCH BLADE INSPECTION

CC 08



- Detection of rail defects in the switch blade
- Flexible and lightweight testing device
- Indications in phase plane
- Colour display
- Alarm functions: optical and acoustical



### SPECIFICATIONS

|                    |  |
|--------------------|--|
| Weight             | 1.1 kg / 2.4 lbs                           |
| Dimensions (LxWxH) | 236 x 167 x 70 mm / 9.3 x 6.6 x 2.8 inches |
| Data storage       | up to 200 traces                           |
| Operation time     | 8 h  |
| Protection class   | IP 54                                      |

### SCOPE OF DELIVERY

- Testing device
- Probes
- Reference block with 4 EDM notches
- Accessories

### OPTIONS

- Additional battery
- Carrier bag

## WHEEL MEASUREMENT

- All devices measure specific parameter of rolling stock wheels
- User-friendly operation and measurement reports immediately available in xls, doc, pdf, and csv formats
- high memory capacity and long autonomy (min. 20 h)
- Data export via USB pendrive to the RAPORT (or Profile Analyser) desktop software
- Reliable measurement data acquisition and transfer
- Ergonomic operation
- Operating conditions: -20 °C ... 45 °C, humidity 15 - 85 %, rain and frost resistant

CC 05



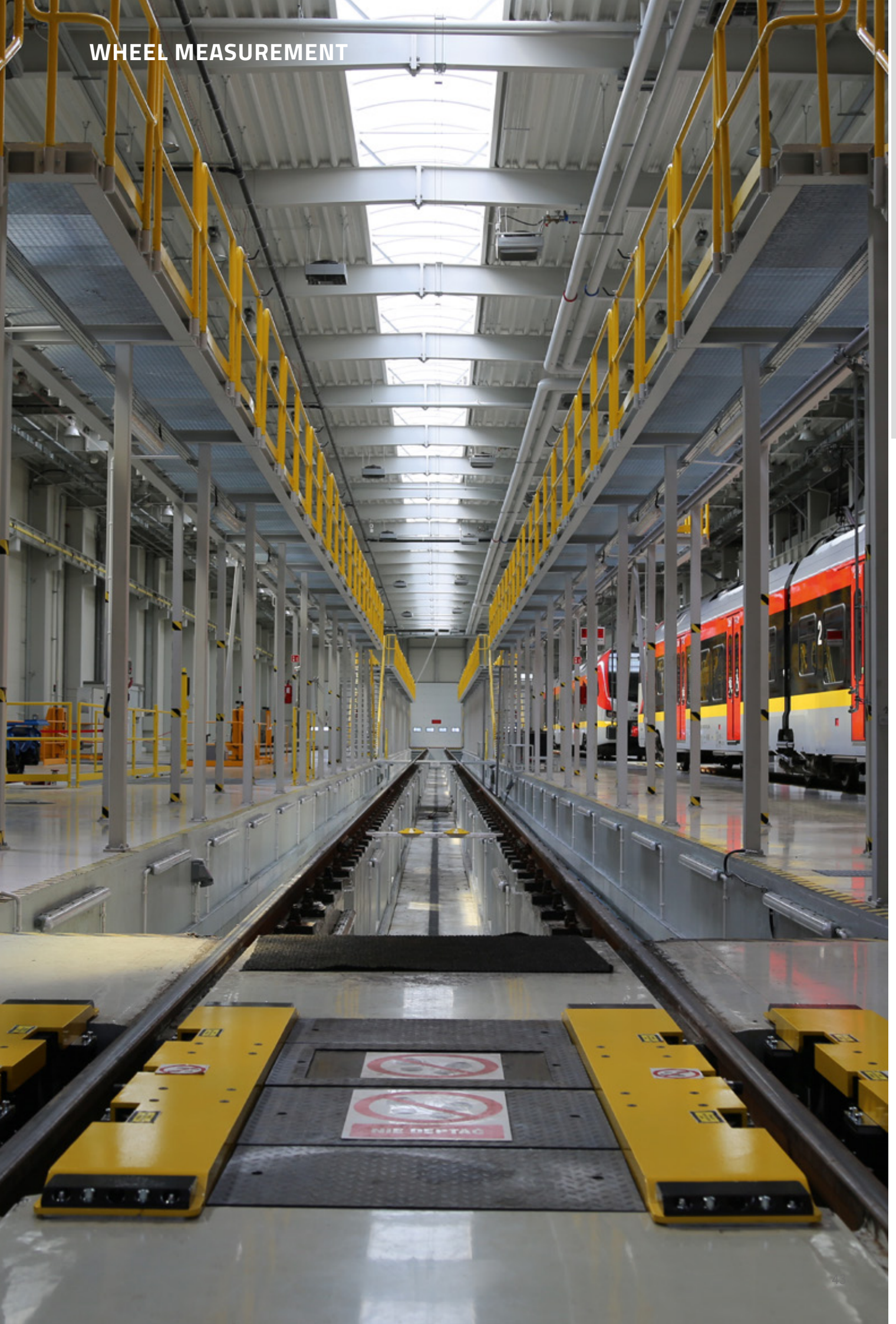
| Measuring device             | <b>WM-3</b>   | <b>WWC</b>  | <b>A-B</b>  | <b>Az</b>   |
|------------------------------|---|---|---|---|
|                              |   |   |   |   |
| Parameter                    | Wheel flange diameter*<br>calculated<br><br>Railway / metro   | Wheel flange wear<br>parameters measured<br><br>Railway / metro   | Wheel flange profile<br>measured<br><br>Railway / metro / tram  | Back-to-back distance<br>measured<br><br>Railway / metro / tram   |
| Accuracy                     | ± 0.1 mm  | ± 0.1 mm  | ± 0.1 mm  | ± 0.1 mm  |
| Resolution                   | 0.01 mm   | 0.1 mm  | 0.1 mm  | 0.1 mm  |
| Measurement range            | 600 to 1050 mm  | h 12.5 to 39.0 mm   | max profile height 37 mm  | -15 to + 50 mm  |
|                              | 650 to 1250 mm  | e1/e2 13.0 to 30.0 mm   | max profile width 145 mm  |   |
|                              |   | qR 0.0 to 27.0 mm   |   |   |
| Weight                       | 3.8 kg / 8.4 lbs  | 1.9 kg / 4.2 lbs  | 1.8 kg / 4.0 lbs  | 2.0 kg / 4.0 lbs  |
| Dimensions<br>(ready to use) | 130 x 180 x 505 mm /<br>5.1 x 7.1 x 19.9 inches   | 70 x 150 x 150 mm /<br>2.8 x 5.9 x 5.9 inches   | 100 x 140 x 170 mm /<br>3.9 x 5.5 x 6.7 inches  | 155 x 70 x 1405 mm /<br>6.1 x 2.8 x 55.3 inches   |
| Scope of delivery            | <ul style="list-style-type: none"> <li>• Gauge with control unit</li> <li>• Transport bag</li> <li>• Charger for the control unit</li> <li>• Connecting cable</li> <li>• PC software, 1 licence</li> <li>• Check-up template</li> </ul> | <ul style="list-style-type: none"> <li>• Gauge with control unit</li> <li>• Transport bag</li> <li>• Charger for the control unit</li> <li>• Charger for device</li> <li>• PC software, 1 licence</li> <li>• Check-up template</li> </ul> | <ul style="list-style-type: none"> <li>• Gauge with control unit</li> <li>• Transport bag</li> <li>• Charger for the control unit</li> <li>• Connecting cable</li> <li>• PC software, 1 licence</li> <li>• Check-up template</li> </ul> | <ul style="list-style-type: none"> <li>• Gauge with control unit</li> <li>• Transport bag</li> <li>• Charger for the control unit</li> <li>• PC software, 1 licence</li> <li>• Check-up template</li> </ul> |

\*Diameter is calculated using the 3-point principle, measured at 70 mm from wheel face

We do not provide diameter range in inches, as location of the measurement plane in the US / India, etc. is other than in the EU standard



## WHEEL MEASUREMENT



MEASURING & TESTING SOLUTIONS

# JOINT WELDING OF TRACKS AND SWITCHES

All over the world rails are welded using Goldschmidt expertise and new rails are weld tempered: for a long service life and to ensure that all types of trains and trams run quietly, safely and environmentally friendly.

With our various welding processes nearly all rails and switches of various profiles as well as grades worldwide can be continuously welded by our well-trained welding teams. This guarantees the safe joining of rails while at the same time increasing travel comfort and the lifetime of the rails. As an end-to-end supplier we develop, manufacture and supply all components for our different welding processes.

### THERMIT® WELDING

We continuously weld flat bottom rails, grooved rails and crane rails thanks to our ORIGINAL THERMIT® welding process.

### MAINTENANCE WELDING

Wheel-bearing rail elements on subway systems, tramways, light rail and mainline networks and in particular on curved rails are subject to high loads. As a result we are frequently commissioned to carry out maintenance work with welding. A large part of this welding work is the reconditioning of switches and frogs and the removal of operational damage. We use mobile working units to do the welding on existing rails and switches. This also allows work during normal operations without significant restrictions.

The following welding processes used to carry out the work on your tracks are constantly being improved:

- Submerged arc-welding
- Manual arc-welding
- Flux-cored wire welding
- Repair welding process THERMIT® HEAD REPAIR

Depending on your requirements, after the welding we use special machines to recreate the original profile or the profile you require on the welded rails.

### WELD TEMPERING OF NEW RAILS

Railway tracks subject to heavy loads experience high wear after just a short time. Our factory-tempered rails are perfectly prepared and last longer.

Highly wear-resistant materials are used to weld-temper new rails. The result is you receive a cost-efficient, comfortable and long-lasting product suitable for all new rail projects and renovation work. The reduced surface roughness of the used materials reduces wheel tire wear by up to 94 %. We offer running surface welding for use on tight bends in dense residential areas which substantially reduces noise emissions. This leads to long-term benefits with a longer service life for your rails, lower maintenance costs and lower noise emissions. The result is also improved travel comfort and long-term reliability of rail operations.

The weld-tempering of new rails is made according to your requirements.

#### Benefits

- Economic thanks to high wear resistance
- Longer service life for rails and wheels
- Improved rail surface
- Formation of short waves delayed
- Tempering of all common grooved, flat bottom and customized rail profiles
- Rails bent according to customer requirements
- Just-in-time delivery to the construction area





# MAINTENANCE OF RAILS AND TRACKS

Using grinding, reprofiling and deburring machines, semi automatic large grinding machines and road-rail grinding vehicles Goldschmidt maintains the quality of your railway tracks – quickly, efficiently and with precision. Well-trained, experienced grinding teams offer flexibility.

Use our professional grinding maintenance to considerably reduce the life cycle costs of your rails and lower noise emissions from train operations. We machine your rails and switches efficiently and precisely using manual grinding, reprofiling and deburring machines, semi automatic large grinding machines and modern road-rail vehicles. Our extensive fleet of vehicles allows us to process your orders quickly and efficiently.

### OUR RANGE OF SERVICES

- Grinding of new rails (removal of mill scale and damage from construction work)
- Removal of corrugations
- Deburring
- Re-profiling
- Removal of rail defects such as head checks, squats and wheel burns
- Acoustic grinding for considerably quieter train operations
- Switch grinding

### BENEFITS

- Longer rail service life
- Lower maintenance costs
- Improved wheel/rail contact for lower wear
- Lower noise emissions
- Preventive rail maintenance
- Flexible use of different grinding processes and devices
- High availability through excellent availability of grinding equipment and grinding trains
- Rail gauge variable depending on device







## ROAD-RAIL VEHICLES

- Patented road-rail system equipped with a hydrostatic drive
- Rapid transport to and from the work site
- The rail system requires only 3 ... 5 m / 3.3 ... 5.5 yd of a level crossing to transfer from the road to the track
- Fast and safe driving on and off the track in less than 2 minutes
- No risk of derailment at crossing points, wing rails and level crossings
- No special speed restriction requirements for curves, switches and at level crossings
- All vehicles are custom made to meet customer needs and specifications
- All vehicles comply with EN 15746/RIS1530
- The SRS service team ensures reliable operations and a long life for your vehicles

|   | Chassis in general  |
|---|---|
| Standard chassis types for SRS rail equipment:                          | Volvo, Mercedes, Scania, MAN, DAF, Ford, Isuzu, Hino, Weststar, Peterbilt, International  |
| All systems can be supplied for the following track gauges (mm/inches): | 891 / 35, 1,000 / 39, 1,067 / 42, 1,435 / 56, 1,524 / 60, 1,600 / 63 and 1,676 / 66   |
| Adjustable system for switching between two track gauges (mm/inches):   | 1000 ... 1435 / 39 ... 56   |
| Accessories:  | Access platform, scissor table, wire lifter, generator, length measurement, cranes, drum holders, snow sweeper, snow blower, tamping device, grass cutters/rotary impact cutters, lateral movement legs |









## TRACKSAFE BARRIER

CC 11



- Absolute safety for work on the tracks through patented track barrier
- Installation and removal up to 20 times quicker than conventional guards
- Cost and time savings through quick and easy installation and removal
- Easy, efficient and safe storage and transportation
- No damage to ballast or change to the required standard ballast profile or lateral movement resistance
- Available also for 3rd rail and switches
- Prevents rail crossing in stations



### SPECIFICATIONS

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- A holder equipped with a neodymium durable magnet made from hot-dip galvanized steel
- Weight of the holder 8 kg / 17.6 lb
- Weight of the tube 4 kg / 8.8 lb
- Plastic tube of 3 m / 3.3 yd with a diameter of 48 mm / 1.9 inches
- Tube has quick-fit mechanism
- The plastic of the tube is coloured, not stuck on
- Corresponds to European standard EN 13374, class A
- TÜV approved







### SMARTSWITCH **HEAT**

CC 15



- High safety through use of low voltage heating system
- Heating cable protected against overheating
- Quick, flexible and inexpensive installation
- Excellent economy through low running and maintenance costs
- Up to 30 % lower energy costs
- Easy to remove and refit



#### **SPECIFICATIONS**

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- Heating cable lengths up to 13 m / 43 ft
- Operating temperatures: -25 °C ... 80 °C / -13 °F ... 176 °F
- Low energy consumption
- Operating voltage range: 24 V ... 55 V
- Acts directly on the switchblade and stock rail
- No risk of cable overheating
- Protection for switch lubrication







## TRACKSAFE LUBE

CC 06



- Intelligent control unit with GSM interface can send and download data to webserver, which allows monitoring and configuration of TRACKSAFE LUBE from office
- Extension of rail service life (up to 5 times longer)
- Noise reduction by up to 20 dB
- Reduction of wheel and rail wear by up to 80 %
- Reduction of maintenance costs
- Increase in travel comfort
- High track reliability



### SCOPE OF DELIVERY

- Solar panel
- Cabinet with the control unit
- Lubricant container (4 l ... 25 l / 1.06 US gal ... 6.6 US gal)
- Pump with low level signaling
- Grease distributors
- Sensor, lubrication bars, tubes, fittings and mountings

### OPTIONS

- Notification and control via Webserver
- Vandal-proof cabinet
- Lubrication of switches
- Additional lubrication bars for lubrication of the whole circumference of the wheel

## FIBERGLASS HANDRAIL

CC 15



- Passenger safety in tunnels
- Easy to install
- Fire resistant
- Needs no ground wire
- Rust-proof thanks to coating film of quartz
- Lighter than conventional guardrails made of steel
- Wall mounting system with bows, setscrews and resin



### SPECIFICATIONS

- Tube designed in glass fiber reinforced plastic
- Modified acrylic resins filled with aluminum trioxide
- Self-extinguishing class M1 F0
- Breaking Load: 405 MPa / 58,740 psi
- Diameter (standard): 50.8 mm / 2.0 inches

## FRICTION BUFFER STOPS

CC 10



- Secure the track end, surrounding area and the rail vehicles
- Vehicles stop safely and controlled
- Installed on the running rail or the additional rail
- Without / with track reinforcement
- Without / with additional mechanical, hydraulic or hydrostatic buffers
- Without / with additional brakes or additional braking elements

### SPECIFICATIONS

| TYP                            | 4 ZEB/14 A<br>PASSENGER | 6 EB<br>PASSENGER | 8 LEB<br>GOODS | 10 EB<br>GOODS/<br>PASSENGER | 12 EB<br>PASSENGER | 16 ZEB<br>GOODS |
|--------------------------------|-------------------------|-------------------|----------------|------------------------------|--------------------|-----------------|
| • Rated force (kN)             | 1,280                   | 240               | 320            | 400                          | 480                | 640             |
| • Rated force (lbf)            | 287,755                 | 53,954            | 71,939         | 89,924                       | 107,908            | 143,878         |
| • Total weight (kg)            | 5,040                   | 1,360             | 950            | 1,250                        | 1,400              | 2,540           |
| • Total weight (lb)            | 11,088                  | 2,992             | 2,090          | 2,750                        | 3,080              | 5,588           |
| • Number of braking elements   | 32                      | 6                 | 10             | 10                           | 12                 | 16              |
| • Braking elements design type | 3 Bolts                 | 3 Bolts           | 3 Bolts        | 3 Bolts                      | 3 Bolts            | 3 Bolts         |
| • Tightening torque (Nm)       | 150                     | 150               | 150            | 150                          | 150                | 150             |
| • Tightening torque (ft-lb)    | 111                     | 111               | 111            | 111                          | 111                | 111             |

## FIXED BUFFER STOPS

CC 10



- Mark the end of track
- Mechanical or hydraulic braking devices can increase the efficiency
- Attachment on rail head (no drilling), rail web or concrete foundation
- Smaller footprint area
- Maintenance-free dampers

### SPECIFICATIONS

| TYP                             | GOODS TRAFFIC | PASSENGER TRANSPORT |
|---------------------------------|---------------|---------------------|
| • Working capacity (kJ/m)       | 568           | 1,735               |
| • Working capacity (ft-lb)      | 418,935       | 1,279,670           |
| • Rated force (kN)              | 1,560         | 1,130               |
| • Rated force (lbf)             | 350,702       | 254,034             |
| • Total weight (kg)             | 800           | 3,050               |
| • Total weight (lb)             | 1,760         | 6,710               |
| • Number of hydraulic cylinders | 2             | 2                   |
| • Cylinder stroke (mm)          | 400           | 1,400               |
| • Cylinder stroke (inches)      | 15.6          | 54.6                |

## SMART RAIL SOLUTIONS

Together with you, Goldschmidt masters all challenges of modern, railbound mobility – for safe, sustainable and long-lasting railways of premium quality. As with Thermit®, Goldschmidt is also a pioneer in maintenance, inspection and digitalization and continues to improve processes and extend the lifecycle of railways. Goldschmidt combines its extensive railway expertise and benefits from its global expertise and cross-disciplinary thinking to create tailor-made local solutions for you. The global presence of Goldschmidt gives you access to its whole portfolio – with one goal: to lead your railway infrastructure into the future.