




Turning of wheels in the field

Turning of wheels in the field reduces costs and stoppages



Wheel damages can imply stoppages, delays and substantial costs for freight traffic. Euromaint Rail offers a unique and cost-effective solution for turning wheels in the field so that wagons can be returned to service rapidly.



EM
EuroMaint

Unique portable wheel lathe

When a wagon is affected by a wheel damage out on the line, far from populated areas and service workshops, it has to be taken out of service, despite the fact that it is loaded, and regardless of what the cargo is. For the customer this leads to stoppages, delays and substantial costs, not least for reloading.

In order to meet the need for rapid, cost-effective turning of wheels in the field, Euromaint Rail, as part of its mobile maintenance concept, offers wheel turning using its inhouse-developed portable wheel lathe.

Euromaint Rail's mobile service team repairs the wheel damage at the site of the incident, thus avoiding the need for reloading and expensive, resource-heavy transport of the damaged wagon to a workshop. If necessary, Euromaint Rail's mobile service team can also replace a damaged wheel set with a new one.

Turning and brake inspection carried out trackside

Euromaint Rail's service team is quick to reach the damaged wagon. Our technicians measure the wheel damage and the wheel's diameter and profile, assemble the lathe and connect the hydraulics and control system. The correct turning program is then started. The program ensures that the wheel will be turned to the correct profile and diameter, and all the values are verified and documented.

Once the turning is completed, a brake inspection is if it is necessary/requested, including measurement of the brake function between the wheel track and the brake block. As soon as the brake inspection has been approved, the wagon is back in service again.

Rolling stock rapidly back in service

Rectifying wheel damages in the field increases the availability of the rolling stock and generates large savings for the customer. All the work, including the brake inspection, can often be completed in less than four hours.

Would you like to know more?

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Read more about mobile maintenance services at

www.euromaint.com



For operators and wagon owners with their own maintenance organisation

On markets where Euromaint Rail is not represented, we offer operators and wagon owners our portable wheel lathe as a standalone product. We will then design a product solution to suit each individual customer's requirements with respect to:

- demands on mobility
- transport solution
- access to electricity and compressed air
- type of vehicle as the lathe refers to be used on
- desired wheel profiles
- aftermarket

Turning wheels in the field:

- The equipment is mounted on site.
- The damaged wheel's diameter and profile are measured, as well as the wheel damage.
- The correct turning program is selected. The lathe is programmed for the most common wheel profiles.
- Turning is carried out.
- The wheel's profile and diameter are measured and documented.
- The lathe unit is unmounted and moved to the other wheel, which is turned to the same diameter and profile.
- If it is necessary/requested a brake inspection is carried out after the turning operation to verify brake status and to ensure that it is not a brake fault that caused the wheel damage.

Technical description

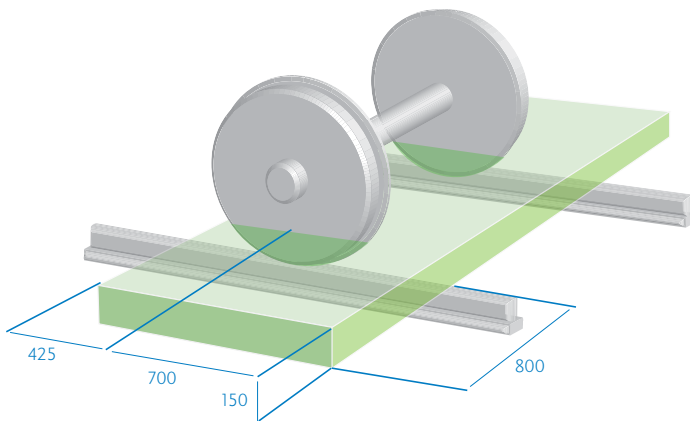
Functionality

Overview

- By turning damaged wheel sets on site, freight wagons and work machines does not need to be reloaded or towed to a workshop for turning
- The entire lathe equipment is transported in a container fitted on a load switch framework to be easily transported with a truck

Turning can be carried out on:

- Non-powered wheel sets, with a diameter of 700–1000 mm.
- Wheels on work machines may be turned if it is possible to disconnect the drive/propeller shaft



Necessary space

To be able to mount the lathe equipment on the tracks the required space in the diagram above is requested (mm):

Use

- The equipment is intended for outdoor use, but can be used indoors if electricity and compressed air are available

Services rendered

- Turning wheel profiles (both r and l wheels)
- Wheel profile, diameter, diameter difference and radial pitch are measured and documented in a lathe protocol
- Visual overview of the entire wheel set

Predefined wheel profiles

- The lathe is programmed with the most common wheel profiles for freight wagons, e.g: S 1002/h 28/e 32,5/6,7% due to DIN EN 13715 and Plasser UD00 1035 for work machines

Options

- Additional wheel profiles can be stored in the equipment upon request
- With a special fixture is possible to turn loose wheel sets

Technical Data

Power supply

- Diesel operation: 3 x 400 V, 32 A
- Petrol operation: 2 x 220 V, 16 A

Temperature

- The equipment is intended for temperatures between -20 to +30 °C

Noise emission

- The equipment's sound pressure level does not exceed 73 dB(A) in the work area

Calibration

- The equipment is CE-marked and calibrated by an authorised party

Dimensions and weight

- Container (m): 6.1 x 2.44 x 2.59
- Total weight excl. container approx. 2,800 kg (incl. fixed components of approx. 2,500 kg)
- Empty container: approx. 2,200 kg
- All portable components: < 50 kg

Operating data:

- Revolution range: 16–34 rpm
- Max cutting depth: 6 mm/cut
- Lifting capacity: 25 tonnes axle load, 15 tonnes/side

Tolerance Range Lathe Data, acc. EN15313

- Deviation from profile design: max 0.5 mm
- Radial pitch, tread: max 0.3 mm
- Diameter difference, r and l wheel: max 0.5 mm
- Tread, flange along the turning track: Ra ≤6.3

Euromaint offers qualified technical maintenance to meet customer requirements for well-functioning rolling stock fleets. The company's products and services guarantee the reliability and service life of track-mounted vehicles such as freight carriages, passenger trains, locomotives and work machines.

