

# MDD-2

## Wheel Diameter Measuring Device

Diameter Measuring Device MDD-2 measures wheel diameters quickly and accurately. No need to remove wheelsets, MDD-2 fits under locomotives, wagons and cars. The device can be used in field conditions as well as in workshops.

For trouble-free operating it is important that the wheel diameters on the same wheelset are as equal as possible. The more the diameter difference increases, the more slanted the bogie travels and the faster the wheel wears.

The MDD-2 has proved to be very useful for early detection of this kind of wear. It is an indispensable tool for every railway and metro company in pursuit of cost savings and good service.

The MDD-2 offers the possibility of checking the wheel diameter regularly.



### Operation

MDD-2 measures the wheel diameter using a three-point measurement. Two of the points being established by fixed hemispheres, the third point is measured with a sensor.

The device is attached to the wheel using two permanent magnets on the inner surface of the wheel; the two hemispheres rest on the wheel profile.

The distance to the central point of the rollers is then recorded via the contact of a metal sensor with the wheel profile with an accuracy of 0.2  $\mu\text{m}$ .



The measured diameter can be immediately read on the OLED display. The measurement result can be transferred via a software to an Android device, in which the measurement results can also be saved and assigned.

The data transfer will be done via an optional Android application in which the vehicle number, number of axles and orientation can be specified.

## Technical Data

The body of the device has been manufactured of silver anodised aluminium. The OLED display shows two lines. In the first line on the left is the measuring range base (150 or 300) and the charge status of the batteries. The second line shows the measurement result (depending on the selection: in mm or inches). With its optional backlight, it is perfectly readable in daylight, but also in dark environments.

The device is equipped with three rechargeable, removable batteries with capacity of approx. 10 hours' active operation.

A test piece for both diameter measuring ranges is included in the delivery.

## Measurement Ranges

Because of its design with two automatically detecting support points, the MDD-2 can cover a large measuring range. The MDD-2 automatically recognizes which measuring range is actively applied to the wheel and adjusts itself accordingly.

The total measuring ranges are the following:

Basis 1: between 330 and 750 mm,

Basis 2: between 750 and 1400 mm.

The standard distance between the reference plane, i.e. wheel inner side and the taping line, is 70 mm, but devices with different reference distances can be delivered at request.

## Accuracy

The reading accuracy shown on the display is 0.01 mm. The true measurement accuracy is in the range of 0.2 mm, if the wheel is round and has good reference plane and running surface.

## Measures

Length: 365 mm"

Height from the tread level: 215 mm

Depth: 110 mm

Weight: measuring unit 1.4 kg, total weight 5.5 kg

Operating temperature: -20 ... +50 °C

Storage temperature: -25 ... +55 °C

IP protection: IP40

Operating time: min. 10 hours



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Meßsysteme für die Qualitätssicherung



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