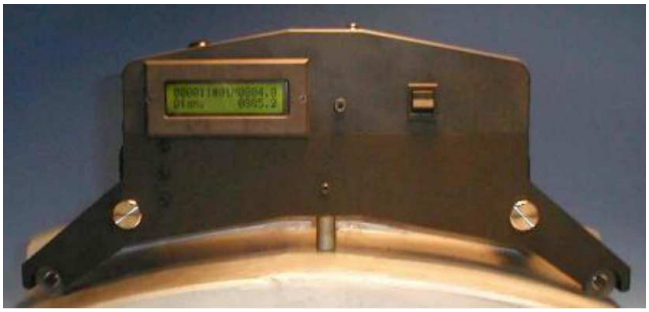
MDD

Wheel Diameter Measuring Device



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

MDD offers an opportunity to regular control of wheel diameters. The measuring results are stored in the memory of the device and they can be transferred to a PC and integrated in the Company's data system.

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. MDD 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.

Operation

MDD measures the wheel diameter using a three-point measurement. Two of the points being established by fixed rollers, the third point is measured with an inductive position transducer.

The measured diameter can directly be read on the two displays, one on each side. The measuring result can be stored in the memory of the device, together with the running ordinal number and the date. An eight-digit ID number allows the identification of the loco, wagon or car and of the wheel.

The memory has capacity for 1800 measurements. The data transfer from the device to the PC is made through a cable to the serial or USB port. The data are received in ASCII format and can easily be integrated in Company' s other programs.

Dr. D. Wehrhahn
Measuring Systems for Quality Assurance

Technical Data

The body of the device has been manufactured of black anodised aluminium. The device is attached onto the wheel by means of two permanent magnets (holding strength about. 70 N/each) and it lies on two support rollers of hard metal.

The distance of the centre points of the rollers is measured with an accuracy of 0.002 mm. The measuring is made by a transducer, which is furnished with a hard metal, r 7, measurement point. The maximum linear error of the transducer is 0.1 %. The device is equipped with three rechargeable, removable batteries with capacity of approx. 8 hours' active operation.

The black and white LCD screen displays two lines with 16 characters on each. With its optional back lightning it is perfectly visible in day light as well as in dark environment.

Individual calibration stand and calibration pieces, made of steel and precision cut on the calibration planes, are included in the delivery.

Measurement Ranges

The total measurement range is divided in four subranges, individually designed for each customer. The required position is adjusted on the calibration stand with a calibration piece.

MDD is manufactured in two types: MDD-350 for bigger wheels and MDD-315 for smaller ones.

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The total measuring ranges are the following:
MDD-350 between 1255 and 750 mm,
MDD-315 between 1050 and 590 mm.

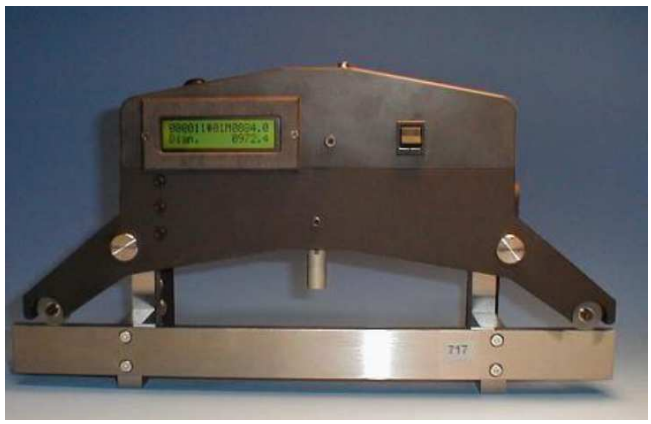
The standard distance between the reference plane, i.e. wheel inner side and the taping line, is 70 mm, but devices with different reference distances can be delivered at request.

Accuracy

The reading accuracy shown on the display is 0.1 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: "MDD-350" 380 mm, "MDD-315" 345 mm.
Height from the tread level: 151 mm.
Depth: 106 mm.
Weight: measuring unit 1.5 kg, total weight 6.5 kg.
Operating temperature -5 ...+45 C.



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