

# PORTABLE LOCOMOTIVE WHEEL LATHE 1AK200 ZIP



for re-turning single wheel of the locomotive on the spot

## **Specification & instruction manual.**

### **1. About 1AK200 ZIP wheel lathe**

TURNING LLC in Russia is a manufacturer of patented mobile device 1AK200 for re-profiling locomotive wheels on the spot. The main advantages of this huge time saving device - is the simplicity, mobility and surprisingly low price compared to stationary wheel lathe machines.

1AK200 ZIP wheel lathe is designed to eliminate locomotive wheels defects without removing wheelset from under locomotive, saving both time and money.

First demonstration of the 1AK200 wheel lathe has been at the international exhibition in Brussels (2002), and for the invention of the device has been obtained the gold medal.

Further recognition was received at exhibitions in Moscow (ENEA, Archimedes 2003), Geneva (gold medal) and after certain modifications had received another gold medal at the "Eureka" in Belgium.

## **2. Description of 1AK200 ZIP locomotive wheel lathe**

Mobile device 1AK200 ZIP relates to devices for the repair and maintenance of railway transport, in particular to devices for locomotive wheel re-profiling and will be used to eliminate some wheel defects appear during exploitation of locomotive.

Known devices, wherein wheels eliminate defects railway rolling stock transportation requires mandatory lifting and roll-out wheel set from the locomotive and repair in rail depot.

Re-profiling of each wheel is made on a stationary machine or locomotive is required to drive in a special workshop for the wheels re-turning.

1AK200 ZIP locomotive wheel lathe allows eliminating wheels defects, appearing during exploitation of locomotives without rolling out wheel set from under the locomotive, saving lots of time and money. The 1AK200 ZIP locomotive wheel lathe can be used where is asphalt or concrete pad at the level of the rail head and the ditch.

## **3. Shipping contents 1AK200 ZIP**

1. Right stand - 1 pcs
2. Left stand - 1 pcs
3. Machining module - 2 pcs
4. Tool holder - 2 pcs
5. Turning inserts - 20 pcs
6. Hydraulic jack 30 ton - 2 pcs
7. Hydraulic jack saddle - 2 pcs
8. Combination wrench set - 1 set
9. Railcar wheel stops - 2 pcs
10. Digital tachometer - 1 pcs
11. Helmets - 2 pcs

## **4. The principle of operation 1AK200 ZIP**

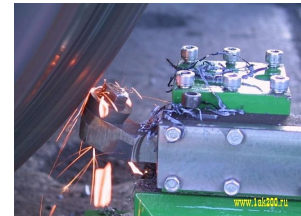
Device consists of two main elements: two stands with special machining modules and two hydraulic jacks. Special custom made machining module with tool post and tool holder consists two slides, allowing to move turning tool in two directions (XY) with feed about 1-4mm per revolution.

Using of 1AK200 ZIP lathe will help conduct parallel work on the wheelset turning and the locomotive maintenance that ensures the safety of the railway transport and reduced downtime vehicles in repair.

## 5. Operating Instructions 1AK200 ZIP

There are several options how you can rotate locomotive wheelset for re-profiling - by using welder inverter with remote amperage control, in some cases from locomotive battery or by using wheelset rotation module WRD-380 for locomotives (optional, ordered separately).

1. Fix locomotive with brake shoes
2. Place hydraulic jack with saddle under one side of locomotive wheel set
3. Place appropriate stand with machining module under another side of train wheelset
4. Simultaneously lift up wheelset about 15-20mm above the rail
5. Set optimal wheelset rotation speed (about 80m/ min, depends of turning insert) quickly eliminate train wheel defects on the spot
6. After wheel re-turning is done, after wheelset stop rotation, lower the jacks, remove hydraulic jacks with stands with machining module from under wheel set, remove brake shoes.



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