

company founded in 1971



experience & professionalism  
in CNC machine tools design,  
manufacturing, sales,  
commissioning & service



certified ISO 9001:2008



# WORLD MACHINERY WORKS

WORLD MACHINERY WORKS SA ranges among the top machine tool manufacturers worldwide. The company includes all production sectors needed for running its activities in optimal conditions: material cut-out, heat treatment, metal cutting, assemblage, painting, packing etc. The company also includes a design department, endowed with performance computers and programs for 3D design and analysis of parts and subassemblies, as well as a testing and calibration laboratory with a state-of-the-art endowment for high accuracy measurements of the work pieces and the machine tools of the current production.

Technical endowment and the high vocational level of the personnel are the main elements that lead to a permanent improvement of the products and services offered by the company to its customers, for continuously increasing their satisfaction. Quality is a basic criterion of the company activity at all levels. An efficient quality assurance system has been implemented, to provide the certitude that the World Machinery Works SA products are manufactured in compliance with the highest standards of quality. In this context, since 1996 the company is certified TÜV - ISO 9001 in designing and manufacturing machine tools for metal cutting. In 2009 the company was certified ISO 9001:2008.

We are proud of our company activity over the years and thank our business partners for their confidence and good collaboration, being convinced that the future will open new opportunities for prosperous business to all of us.

## technological capabilities



## Current operations performed in the special and heavy-duty machining workshops

### TURNING

#### - on horizontal lathes:

maximum diameter: 1250 mm 49.2 in  
maximum length: 3000 mm 118.1 in

#### - on vertical lathes:

maximum diameter: 4200 mm 165.4 in  
maximum height: 1800 mm 70.9 in



### Representative equipment

#### Vertical lathe, model SC 43 CNC

two turning heads on the cross rail

SIEMENS Sinumerik 802D CNC control

maximum machining diameter: 4200 mm 165.4 in

maximum machining height: 1800 mm 70.9 in



### MILLING

#### - cylindrical gears:

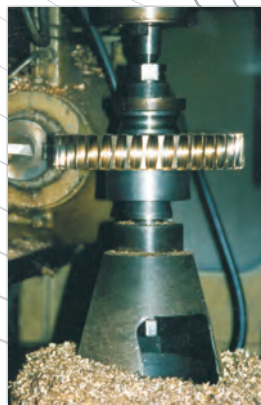
minimum diameter: 20 mm 0.8 in  
maximum diameter: 1200 mm 47.2 in  
minimum module: 1 mm 0.039 in  
maximum module: 12 mm 0.472 in

#### - wormed gears:

minimum diameter: 50 mm 2 in  
maximum diameter: 800 mm 31.5 in  
minimum module: 1.5 mm 0.059 in  
maximum module: 8 mm 0.315 in

#### - racks:

maximum length: 1000 mm 39.4 in



#### - tapered gears:

minimum diameter: 30 mm 1.2 in  
maximum diameter: 500 mm 19.7 in  
minimum module: 1.5 mm 0.059 in  
maximum module: 10 mm 0.394 in  
maximum length of the hub: 500 mm 19.7 in

#### - tapered gears with constant height of the tooth (KURVEX):

minimum diameter: 30 mm 1.2 in  
maximum diameter: 500 mm 19.7 in  
minimum module: 1.5 mm 0.059 in  
maximum module: 10 mm 0.394 in  
maximum length of the hub: 500 mm 19.7 in

#### - houses:

maximum length: 10,000 mm 394 in  
maximum width: 4000 mm 157.5 in  
maximum height: 3000 mm 118.1 in  
maximum diameter - boring: 800 mm 31.5 in  
maximum length - boring: 1600 mm 63 in

#### - beds, columns, saddles, slides:

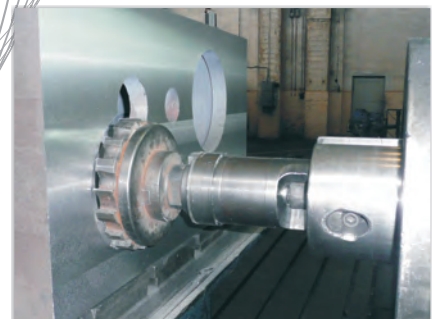
##### on conventional bridge type milling machines

maximum length: 10,000 mm 394 in  
maximum width: 3100 mm 122 in  
maximum height: 3600 mm 141.7 in

#### - beds, columns, saddles, slides:

##### on CNC bridge type milling machines

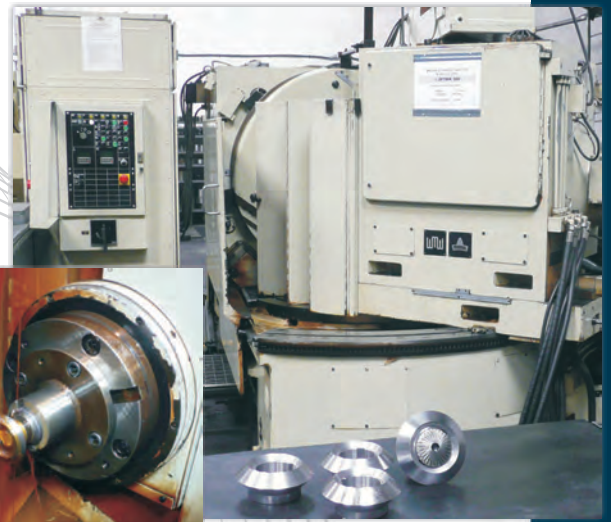
maximum length: 8000 mm 315 in  
maximum width: 2400 mm 94.5 in  
maximum height: 2400 mm 94.5 in



## Representative equipment

### KURVEX type gear cutting machine, model ZFTKK 500

maximum machining diameter: 500 mm 19.7 in  
maximum machining module: 10 mm 0.394 in



### Floor type horizontal boring and milling machine, model SKODA W 200

spindle diameter: 200 mm 7.9 in  
travels:  
column: 8000 mm 315 in  
headstock: 3150 mm 124 in  
spindle: 1600 mm 63 in

### Bridge type milling machine, model FLP 2200 CNC

SIEMENS Sinumerik 840D CNC control

travels:  
table: 9000 mm 354.3 in  
milling head  
on the cross rail: 2500 mm 98.4 in  
cross rail (vertically): 2150 mm 84.6 in



### Bridge type milling machine, model LINE 2500

travels:  
table: 8000 mm 315 in  
milling head  
on the cross rail: 3200 mm 126 in  
cross rail (vertically): 3000 mm 118.1 in

### Bridge type milling machine, model LINE 3100

travels:  
table: 10,400 mm 409.4 in  
milling head  
on the cross rail: 3500 mm 137.8 in  
cross rail (vertically): 3400 mm 134 in

## GRINDING

### - gears:

minimum diameter: 20 mm 0.8 in  
 maximum diameter: 1000 mm 39.4 in  
 minimum module: 1.5 mm 0.059 in  
 maximum module: 20 mm 0.787 in

### - grooves:

maximum diameter: 150 mm 5.9 in  
 maximum length of the shaft: 1500 mm 59.1 in

### - cylindrical grinding:

maximum diameter: 630 mm 24.8 in  
 maximum length: 3000 mm 118.1 in  
 maximum diameter (bore): 700 mm 27.6 in  
 maximum length (bore): 1000 mm 39.4 in

### - plane grinding:

maximum diameter: 1700 mm 66.9 in  
 maximum height: 700 mm 27.6 in

### - parts with guideways:

maximum length: 12,000 mm 472.4 in  
 maximum width: 2500 mm 98.4 in  
 maximum height: 2200 mm 86.6 in



### Representative equipment

#### Gear grinding machine, model ZSTZ 1000 (NILES)

maximum machining diameter: 1000 mm 39.4 in  
 maximum machining module: 20 mm 0.787 in

#### Bridge type grinding machine, WALDRICH COBURG

travels:

table:	9000 mm 354.3 in
grinding head on the cross rail:	2000 mm 78.7 in
cross rail (vertically):	1500 mm 59.1 in



#### Bridge type grinding machine, model SZ 12,000

travels:

table:	12,000 mm 472.4 in
grinding head on the cross rail:	2800 mm 110.2 in
cross rail (vertically):	2000 mm 78.7 in

## Other operations performed by the company

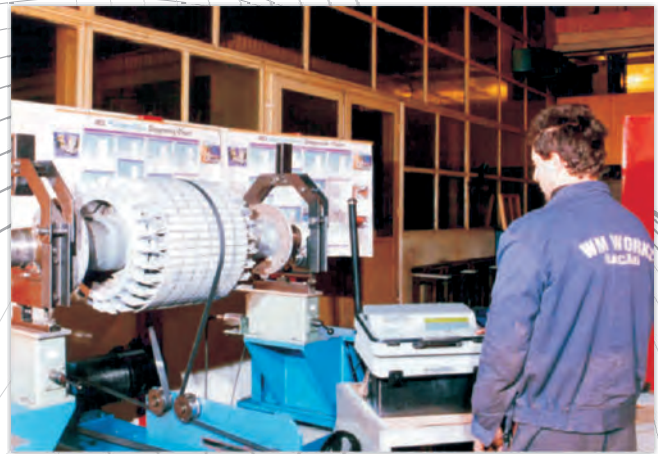
### HEAT TREATMENT

- **annealing, amelioration, stress relieving**  
maximum diameter: 1500 mm 59.1 in  
maximum length: 5000 mm 197 in
- **cementation**  
maximum diameter: 600 mm 23.6 in  
maximum length: 1100 mm 43.3 in
- **massive and surface hardening**  
with high frequency currents
- **iono-nitration**  
maximum diameter: 1000 mm 39.4 in  
maximum length: 3000 mm 118.1 in



### MATERIALS TESTING AND QUALITY CONTROL

mechanical and chemical testing



### DYNAMIC BALANCING

maximum diameter: 360 mm 14.2 in  
maximum length: 3500 mm 137.8 in  
maximum weight: 2000 kg 4409 lb



### METAL SHEET CONSTRUCTION

- **cutting-off:**  
maximum length: 2500 mm 98.4 in  
maximum thickness: 5 mm 0.2 in
- **bending:**  
maximum length: 3500 mm 137.8 in  
maximum thickness: 6 mm 0.24 in

### WELDING

carbon steel and stainless steel parts of maximum 15 tons, through coated electrodes welding and gas shielded arc welding (MIG-MAG)

### BLASTING

- **with shots**  
maximum size: 11,800x3800x2200 mm  
464.6 x 149.6 x 86.6 in

### PAINTING

### PACKING

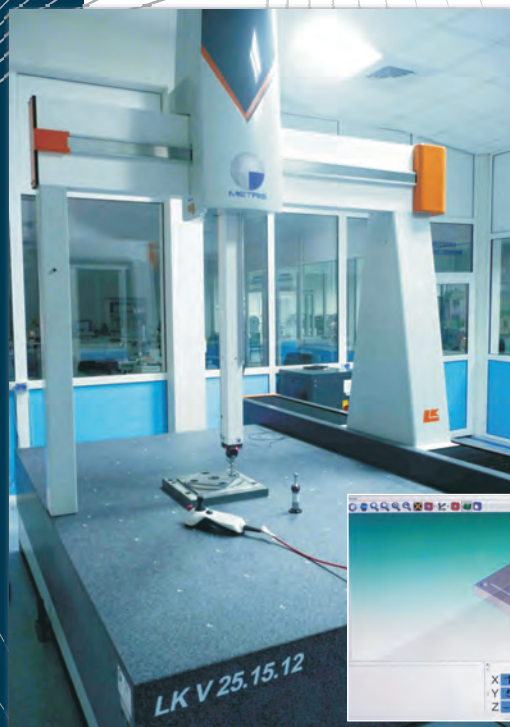




WORLD MACHINERY WORKS SA completed the implementation the "Endowment and modernization of the existing testing and calibration laboratory" project, financed through funds from the state budget within the Program for increasing the competitiveness of the industrial products.

## TESTS/HIGH ACCURACY ASSESSMENTS

- **straightness, perpendicularity, flatness**  
autocollimator  
laser interferometer (Renishaw)
- **positioning on linear and rotary axes**  
laser interferometer (Renishaw)
- **calibration for CNC machine tools**  
QC20-W Ballbar (Renishaw),  
including measuring adaptor for vertical lathes
- **geometric precision of machine tools**



### - machining accuracy

linear height gage LH-600D (Mitutoyo)  
maximum resolution: 0.0001 mm  
0.000004 in

coordinate measuring machine,  
model LK V 25.15.12 (Nikon)  
travels: 2500x1500x1200 mm  
98.4 x 59.1 x 47.2 in

volumetric accuracy:  
2.1 + L/375 mm  
0.083 + L/14.8 in

software: Camio Studio  
module for gear control



**WORLD MACHINERY WORKS SA**  
is also in process of authorization  
for manufacturing and repairing  
rolling stock for railways

## WORLD MACHINERY WORKS SA

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