

# MANITOWOC TOOL & MACHINING, LLC



*World-class performance that makes a world of difference.*

**Verisys**  
**Registrars®**  
ISO 9001  
Certified

ISO 9001 Registered

## FACILITY LIST

---

4211 Clipper Drive  
Manitowoc, WI 54220  
Phone: (920) 682-8825 Fax: (920) 682-4299

Email: [sales@mantool.com](mailto:sales@mantool.com) Website: [www.mantool.com](http://www.mantool.com)



# MANITOWOC TOOL & MACHINING, LLC

- Approximately 261,000 square feet of production machining and warehousing space.
- Entire plant centrally air-conditioned with special climate-controlled heating.
- Turnkey operations include:

Production Machining  
Production Part Washing  
Assembly  
Class 1000 Clean Room  
Honing Equipment

Fixtures  
Prototype Machining  
Vibratory  
Finishing Equipment  
Spot Welding

- Equipment and experience to machine all types of materials including aluminum, stainless steel, steel, die castings, forgings, plastics, alloys and exotic materials.
- Owns and operates a fleet of trucks for delivery.
- In-house Engineering Department for die and fixture design.
- Separate In-house Prototype Department dedicated for Prototyping.
- Software includes:
  - ERP - Infor Visual
  - Quoting - Micro Estimating
  - CAD - IronCAD, PTC Creo, AutoCAD
  - CAM - Mastercam
  - Quality Data Collection - Infor Visual Quality, Mitutoyo MeasurLink
  - Gage control - IndySoft



# Production Machining Equipment:

## CNC Horizontal Machining Centers

### 3 Mazak 650 ULTRA

Travel Limits:

X=40.00

Y=32.00

Z=31.00

Probe/coolant thru spindle

40 Pocket tool changer

### 1 Okuma MC-600

Travel Limits:

X=34.50

Y=32.50

Z=28.75

40 pocket tool changer

### 2 Mazak Nexus HCN - 6000 - 2

Travel Limits:

X=31.49

Y=31.49

Z=31.49

(1) w/ 120 pocket tool changer per machine

(1) w/ 80 pocket tool changer, 10,000 RPM

### 4 Mazak HCN - 6000 - 2

Travel Limits:

X=31.49

Y=31.49

Z=31.49

80 pocket tool changer per machine, 10,000 RPM

### 2 Mazak Nexus HCN - 6800

Travel Limits:

X=41.33

Y=35.43

Z=38.58

80 pocket tool changer per machine, 10,000 RPM

### 1 Mazak HCN - 6800 - 2

Travel Limits:

X=41.34

Y=35.48

Z=38.50

120 pocket tool changer, 8,000 RPM

### 2 Mazak FH-680

Travel Limits:

X=42.00

Y=32.00

Z=32.00

40 pocket tool changer, 10,000 RPM

Probe/coolant thru spindle

## CNC Horizontal Machining Centers

Continued

### 5 Mazak FH-6800

Travel Limits:

X=41.30

Y=31.50

Z=34.60

120 pocket tool changer, 10,000 RPM

### 1 Okuma MX-60HB

Travel Limits:

X=40.00

Y=32.00

Z=32.00

100 pocket tool changer per machine, 10,000 RPM

Probe/coolant thru spindle

### 3 Okuma MA-60HB

Travel Limits:

X=40.00

Y=32.00

Z=32.00

60 pocket tool changer, (2) w/ 10,000 RPM, (1) w/ 12,000 RPM

### 1 HAAS HSIR 4 AXIS

Travel Limits:

X=24.00

Y=20.00

Z=22.00

24 pocket tool changer, 7,500 RPM

### 2 Mori-Seiki NH-4000 DCG

Travel Limits:

X=22.00

Y=22.00

Z=24.80

40 pocket tool changer, Probe/coolant thru spindle

### 3 Mori-Seiki NH-5000 50 DCG

Travel Limits:

X=28.70

Y=28.70

Z=33.50

54 pocket tool changer, 8,000 RPM

Probe/coolant thru spindle

### 1 Mori-Seiki NH-6300 DCG II

Travel Limits:

X=41.34

Y=35.40

Z=38.60

100 pocket tool changer per machine, 10,000 RPM

Probe/Coolant thru spindle



## CNC Horizontal Machining Centers

Continued

### 4 Mitsui Seiki HJ63A

Travel Limits:

X=35.40

Y=31.50

120 pocket tool changer per machine

### 3 Mori NHX 5500

Travel Limits:

X=31.50

Y=31.50

Z=34.66

60 pocket tool changer per machine, 8,000 RPM

## CNC Multiple Pallet Machining Centers

### 1 Mazak Nexus HCN 5000 (6 Pallet Pool)

Travel Limits:

X=28.70

Y=28.70

Z=33.50

160 pocket tool changer per machine, 18,000 RPM

### 1 Mori NHX 5500 (5 Pallet Pool)

Travel Limits:

X=31.50

Y=31.50

Z=34.66

180 pocket tool changer per machine, 15,000 RPM

### 4 Mitsui Seiki HJ80 (40 Pallet Fastem System)

Travel Limits:

X=47.20

Y=37.40

240 pocket tool changer per machine  
Coolant thru spindle

### Mazak 6000-2

#### 3 Machine - 20 Pallet Pallettech System

Travel Limits:

X=31.50

Y=31.50

Z=31.50

160 pocket tool changer per machine, 10,000 RPM

### Mazak FH-6800

#### 4 Machine - 30 Pallet Pallettech System

Travel Limits:

X=41.30

Y=31.50

Z=34.60

120 pocket tool changer per machine, 10,000 RPM

## CNC Multiple Pallet Machining Centers

Continued

### Mazak 6800

#### 4 Machine - 30 Pallet Pallettech System

(3) Mazak 6800

(1) Mazak MU-6800\*

Travel Limits:

X=41.30

Y=31.50

Z=34.60

(3) w/ 160, (1) w/ 120 pocket tool changer, 10,000 RPM  
Ultra-High Precision Machine\*

### Mazak 6800

#### 5 Machine - 38 Pallet Pallettech System

(4) Mazak 6800

(1) Mazak MU-6800\*

Travel Limits:

X=41.30

Y=31.50

Z=34.60

(3) w/ 330, (1) w/ 160, (1) w/ 120 pocket tool changer  
10,000 RPM per machine  
Ultra-High Precision Machine\*

### Mazak 6800

#### 6 Machine - 46 Pallet Pallettech System

(5) Mazak 6800

(1) Mazak MU-6800\*

Travel Limits:

X=41.30

Y=31.50

Z=34.60

(5) w/ 160, (1) w/ 120 pocket tool changer  
10,000 RPM per machine  
Ultra-High Precision Machine

## CNC Boring Bars

### 2 Toshiba BTD-13 R22

Travel Limits:

X=118.00

Y=91.00

Z=63.00

Table Dimensions: 71 x 87

Rotary indexable table, programmable

Max Weight Capacity: 24,000 lbs.

Spindle extension: 27



## CNC Vertical Machining Centers

### 2 Okuma MC-6VA

Travel Limits:  
X=60.00  
Y=25.00  
Z=25.00

32 pocket tool changer

### 1 Milltronics MB20

Travel Limits:  
X=38.00  
Y=20.00  
Z=24.00

### 1 HAAS VF-OE

Travel Limits:  
X=30.00  
Y=16.00  
Z=20.00

20 pocket tool changer

### 7 HAAS VF 3 SS

Travel Limits:  
X=30.00  
Y=16.00  
Z=20.00

24 pocket tool changer

### 1 Mazak VTC200C

Travel Limits:  
X=65.00  
Y=20.00  
Z=20.00

24 pocket tool changer

### 1 Okuma MF-46VA

Travel Limits:  
X=30.00  
Y=22.00  
Z=18.11

20 pocket tool changer, 15,000 RPM, Pallet Changer

### 1 Brother CNC Drilling/Tapping Center

Travel Limits:  
X=24.00  
Y=14.20  
Z=10.60

### 4 Fanuc Robodril

QT21 IDL – BTD 30 Plus

Travel Limits:  
X=27.56  
Y=15.75  
Z=13.00

21 pocket tool changer

## Five Axis CNC Machining Centers

### 6 Mazak Integrex 200

Mark III with Gantry Loaders  
10" Chuck

### 1 Mazak Integrex e-650H

Travel Limits:  
X=40.35  
Y=25.60  
Z=122.91

15-24" Chuck

### 1 Mazak I-500

Travel Limits:  
X=13.78  
Y=21.66  
Z=20.08

15" x 19" Table

## CNC Turning Centers

### 2 Okuma LB-3511

Maximum turning diameter: 19.40  
Distance between centers: 37.00  
RPM: 3200  
15" Chuck

### 3 Okuma LB-45

Maximum turning diameter: 25.50  
Distance between centers: 39.25  
15-24" Chuck

### 1 Okuma LB-45

Maximum turning diameter: 25.50  
Distance between centers: 75.75  
15-24" Chuck

### 1 Okuma Crown L1060E

W/ Fedek Hydro Dynamic Bar Feeder  
Multiple Bars 1-5/8" Diameter x 12' Long  
Maximum turning diameter: 10.63  
Distance between centers: 19.68  
W/ Fanuc (200-i) Robot 6 Axis  
8" Chuck

### 1 Clausing 24 x 40

Maximum turning diameter: 16.34  
Distance between centers: 40.00  
RPM: 2500  
8" Chuck

### 1 Mazak Multiplex 6200

Twin Spindle, twin turret  
6 Axis with Gantry Robot  
Maximum turning diameter: 12.50



8-10" Chuck

## **CNC Turning Centers**

Continued

### **1 Mazak Multiplex 6200YR**

Twin Spindle, twin turret  
6 Axis with Gantry Robot  
W/ Mazatrol Fusion Control  
Maximum turning diameter: 12.50  
8-10" Chuck

### **1 Mazak Megaturn Nexus 900M VTL**

Maximum machining diameter: 36.22  
Maximum height: 31.50  
24" Chuck  
12 pocket tool changer

### **2 Mazak Nexus QTN 250**

Chucker CNC turning center  
Maximum turning diameter: 13.80  
10" Chuck

### **2 Okuma Captain L-470**

Maximum turning diameter: 16.54  
Distance between centers: 25.59  
RPM: 3000  
12" Chuck

### **4 Mori-Seiki NL3000 MC700**

Maximum turning diameter: 16.50  
15" Chuck  
Distance between centers: 28.00

### **1 Milltronics ML 26**

Maximum turning diameter over the carriage: 16.00  
Maximum turning diameter over the ways: 26.00  
12" Chuck  
Distance between centers: 36.00



# Quality Control Equipment:

## Coordinate Measuring Machines

### 1 Brown & Sharpe GLOBAL IMAGE 12-15-10

DCC Coordinate Measuring Machine  
 SP-800 Scanning Probe  
 PC-DMIS

### 1 Brown & Sharpe GLOBAL IMAGE 9-20-8

DCC Coordinate Measuring Machine  
 SP-800 Scanning Probe  
 PC-DMIS

### 1 ZEISS UPMC 1200 CARAT

DCC Coordinate Measuring Machine  
 Zeiss Scanning Probe with Table Rotation Capability

### 1 ZEISS PRISMO ULTRA 12-24-10

One of only a few machines in the US with this accuracy  
 DCC Coordinate Measuring Machine  
 VAST Scanning Probe  
 Calypso Software

### 1 Brown & Sharpe CHAMELEON 9-15-9

DCC Coordinate Measuring Machine  
 PH10MQ Head/TP200 with SP600 Scanning Probe  
 PC-DMIS

### 1 Brown & Sharpe XCEL 9-15-9

DCC Coordinate Measuring Machine  
 PH10MQ Head/TP200  
 PC-DMIS

### 1 Starrett Coordinate Measuring Machine

IBM-AT compatible computer system  
 Statistical Process Control (SPC) readout capability

### 1 FARO Platinum CMM ARM

0.0005" Accuracy, 7 Axis, 8ft Measuring Range  
 SPC capability both through CMM and shop floor

1 Granite table (10" thick x 36 x 60)

1 Granite table (12" thick x 60 x 140)

### List of Certified Tools:

Dial Indicators	Taper Gages
Digital Readouts	Hole Micrometers
Surface Gages	Telescoping Gages
Height Gages	Inside & Outside Vernier Calipers
Inside & Outside Micrometers	Precision Squares
Surface Plates	Dial Bore Gages
Other Granite Tables	Profilometer
Gage Blocks	Rail Gages
Plug Gages	12x18x4 Granite Tri-Square
Depth Micrometers	Thread Plug Gages
Thread Micrometers	Master Setting Rings
Precision Protractors	42" Precision Granite Straight- Edge

### The Scope of Quality System Compliance Includes:

Manufacture of tools and dies, specialty machining,  
 stamping and production machining,  
 CNC boring and milling.

**MTM will furnish customers with a Quality Control Manual upon request.**





# Verisys Registrars®

*Helpful Auditing*

## **Certificate of Registration**

*The Management System of*

# **Manitowoc Tool & Machining**

4211 Clipper Drive Manitowoc, Wisconsin 54220 USA

has been assessed and certified by Verisys Registrars as meeting the requirements of

## ***ISO 9001:2008***

for the following scope of registration:

Production CNC machining, prototype machining, fabrication and assembly. Design and manufacture of tools and fixtures.

<b>Certificate Number:</b>	Original Approval	5/4/2016
	Certificate Issued	5/4/2016
	Certificate Expires	9/15/2018

**M050416**

The use of this certification mark indicates accreditation in respect to those activities covered by registration  
Certificate Number: M050416

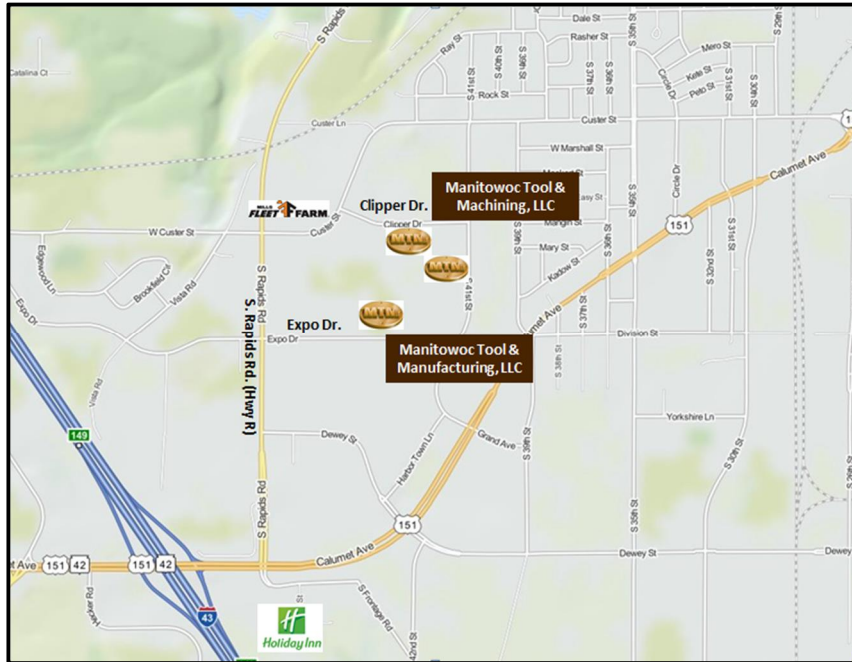
On behalf of Verisys Registrars – Rick Breden, President

This certificate is valid only if the company maintains its management system to the required standard and to conditions and schedules established by Verisys Registrars. In issuing this certificate Verisys Registrars assumes no liability to any party.





# DIRECTIONS



**DESTINATION – Manitowoc Tool & Machining, LLC:**

**FROM MILWAUKEE, WISCONSIN AIRPORT:** (Approximately 85 miles)

Take I-94 West (towards Madison) to I-43 North (towards Green Bay) to Manitowoc exit #149 (US Hwy 151 East).

- Upon exiting I-43, turn right On US 151 and immediately enter the left turn lane at the traffic light intersection of US 151 & Rapids Road (Hwy R) and then turn left and proceed North on Rapids Road (Hwy R).

**FROM GREEN BAY, WISCONSIN AIRPORT:** (Approximately 42 miles)

Take US 172 East to I-43 South (towards Milwaukee) to Manitowoc exit #149 (US Hwy 151 East).

- Upon exiting I-43, turn left On US 151 and immediately enter the left turn lane at the traffic light intersection of US 151 & Rapids Road (Hwy R) and then turn left and proceed North on Rapids Road (Hwy R).

Once traveling North on Rapids Road (Hwy R):

- In approximately 0.8 miles, proceed to the third set of traffic lights at the corner of Rapids Road and Custer Street.
- Turn right onto Custer Street (Fleet Farm is on the North East corner).
- Once on Custer Street, take the next right onto Clipper Drive.
- MTM is 0.3 miles East and is the second place of business on your right.
- Turn right into our parking lot and use the designated Visitor Parking.

<p><b><u>Manitowoc Tool &amp; Machining, LLC</u></b>  <i>(Machining Facility)</i>                  4211 Clipper Drive                  Manitowoc, Wisconsin, USA                  (920) 682-8825</p>		<p><b><u>Manitowoc Tool &amp; Machining, LLC</u></b>  <i>(Shipping &amp; Receiving)</i>                  1210 S. 41<sup>st</sup> Street                  Manitowoc, Wisconsin, USA                  (920) 682-8825</p>
--	---	--

