

# LAVIGNE

MANUFACTURING INC.

## FACILITIES LIST



\*Pictured above is some of the latest equipment we've added to our lineup.  
April, 2023

## **CNC TURNING CENTERS**

### **Nakamura-Tome TW-20 MM**

- Dual spindles / dual 12 position turret
- 6 axis machine
- LNS bar feed
- 1000 psi high pressure coolant
- Auto parts catcher
- Chip conveyor

### **(5) Nakamura-Tome TW-20 MMY**

- Dual spindles / dual 12 position turret
- 7 axis machine
- LNS bar feed
- 1000 psi high pressure coolant
- Auto parts catcher
- Chip conveyor
- Y-axis

### **Nakamura-Tome SC-250**

- Dual spindles / 12 position turret
- LNS bar feed
- Auto parts catcher
- Chip conveyor

### **(2) Samsung SL-2000SY**

- Dual Spindles / 12 (24) Station Turret with Live Tooling
- Y-axis
- Auto parts catcher
- Ø2.99in Thru-Spindle dia.
- High Pressure Coolant with Coolant Chiller
- Chip conveyor

### **(2) Samsung SL-2500**

- Max Turning Length 21.81"
- Swing over bed 25.59"
- Chip conveyor

### **Samsung SL-2000**

- Max Turning Length 21.26"
- Swing over bed 22.44"
- Chip conveyor

### **Mori Seiki SL-25B/1000**

- Distance between centers 44.3"
- Swing over bed 20.5"

### **Samsung SL-25B/1000**

- Distance between centers 44.3"
- Swing over bed 20.5"
- Chip conveyor

### **Samsung SL-20/500**

- Distance between centers 23.4"
- Swing over bed 17.7"
- Chip conveyor

### **(2) Samsung SL-25/500**

- Distance between centers 24.6"
- Swing over bed 20.5"
- Chip conveyor

### **Yama Seiki GLS-150M**

- Swing over bed 15"
- 12 station turret, 6 are milling-capable

### **Yama Seiki GLS-150**

- Swing over bed 15"
- 12 station turret

### **Yama Seiki GLS-1500**

- Swing over bed 9"
- 12 station turret, all are milling-capable
- Auto parts catcher

## **CNC SWISS AUTOMATIC LATHES**

### **(2) Citizen Cincom M20**

- 20mm max raw material diameter thru 8000rpm spindle
- 2 live spindles, 13 axis simultaneous control
- 22 tool capacity:
  - 10 station turret, all live-tooling-capable
  - 9 station gang tool post (4 are live-capable)
  - 3 station back tool post
- 2000 PSI high pressure coolant system
- Cincom CAV20M-IS auto bar loader

### **Citizen Cincom M32**

- 32mm max raw material diameter thru 8000rpm spindle
- 2 live spindles, 14 axis simultaneous control (includes Y Axis)
- 22 tool capacity:
  - 10 station turret, all live-tooling-capable
  - 9 station gang tool post (4 are live-capable)
  - 3 station back tool post
- 2000 PSI high pressure coolant system
- Cincom CAV32-IS auto bar loader

### **Citizen Cincom M32**

- 32mm max raw material diameter thru 8000rpm spindle
- 2 live spindles, 13 axis simultaneous control
- 25 tool capacity:
  - 10 station turret, all live-tooling-capable
  - 10 station gang tool post (5 are live-capable)
  - 5 station back tool post
- 2000 PSI high pressure coolant system
- Cincom CAV32-IS auto bar loader

### **(2) Citizen Cincom A20-VII**

- 20mm max raw material diameter thru 8000rpm spindle
- 2 live spindles, 5 axis simultaneous control
- 21 tool capacity in total, 4 are live
- 2000 PSI high pressure coolant system
- Cincom C320 auto bar loader

### **Citizen Cincom A20-3F7**

- 20mm max raw material diameter thru 8000rpm spindle
- 2 live spindles, 5 axis simultaneous control
- 21 tool capacity in total, 4 are live
- 2000 PSI high pressure coolant system
- Cincom C320 auto bar loader

## **CNC MILLING CENTERS**

### **(M38) Fanuc $\alpha$ D21MiB5-ADV Robodrill with 5-Axis Milling**

- Kitagawa TT150AFR03 5<sup>th</sup> Axis Rotary Table
- 24,000 RPM spindle
- High pressure coolant through spindle
- Table size 25.6" X 15.7"
- 21 tool capacity

### **(M37) Quaser MV184E/15C**

- 15,000 RPM spindle
- High pressure coolant through spindle
- Table size 47.25" X 23.5"
- 48 tool capacity
- Kitagawa MR200R Rotary Table

### **(2) Fanuc $\alpha$ D21LiB5-ADV Robodrill**

- 24,000 RPM spindle
- High pressure coolant through spindle
- Table size 33.4" X 16.1"
- 21 tool capacity
- DDR Rotary Table
- Chip Conveyor

### **Fanuc $\alpha$ D21LiB5-ADV Robodrill**

- 10,000 RPM spindle
- High pressure coolant through spindle
- Table size 33.4" X 16.1"
- 21 tool capacity
- DDR Rotary Table

### **Fanuc αD21MiB5-ADV Robodrill**

- 10,000 RPM spindle
- High pressure coolant through spindle
- Table size 25.6" X 15.7"
- 21 tool capacity
- DDR Rotary Table

### **DMG Mori DuraVertical DV5100**

- 12,000 RPM spindle
- High pressure coolant through spindle
- Table size 53.1" X 23.65"
- 30 tool capacity
- DDRT-200X Rotary Table

### **Mori Seiki NH4000DCG**

- Table size 16" X 16" square pallets, Automatic 2 pallet changer
- 30 tool capacity
- High pressure coolant through spindle
- Chip conveyor

### **Matsuura ES-450HII PC5**

- Table size 12" X 12" square pallets, Automatic 5 pallet changer
- 60 tool capacity
- High pressure coolant through spindle
- Chip conveyor

### **Matsuura MC-800VF**

- Table size 43.3" X 17.7"
- 4th axis RNCX-251 Tsudakoma Rotary Table
- 30 tool capacity
- High pressure coolant through spindle
- Chip conveyor

### **Mori Seiki SV-50**

- 4th axis RNCV-251R Tsudakoma Rotary Table
- Table size 43.3" X 17.7"
- 20 tool capacity

### **Mori Seiki MV-40E**

- 4th axis Tsudakoma indexer
- Table size 35.4" X 17.7"
- 20 tool capacity

### **Fanuc $\alpha$ T10B Robodrill**

- 8000 RPM spindle
- 4th axis Tsudakoma Indexer
- Table size 25.6" x 15"
- 10 tool capacity

### **Fanuc $\alpha$ T14iAL Robodrill**

- 8000 RPM spindle
- 4th axis Tsudakoma Indexer
- Table size 33.5" X 15.4"
- 14 tool capacity

### **(2) Fanuc $\alpha$ T14iA Robodrill**

- 8000 RPM spindle
- 4th axis Tsudakoma Indexer
- Table size 25.6" X 15"
- 14 tool capacity

### **(2) Fanuc $\alpha$ T21iEL Robodrill**

- 24,000 RPM spindle
- High pressure coolant through spindle
- Table size 33.5" X 16"
- 21 tool capacity
- Fanuc Robotics M-6ib 6 axis floor mounted robot with R-J3iB Controller

### **Fanuc $\alpha$ T21iEL Robodrill**

- 24,000 RPM spindle
- Table size 33.46" X 16"
- 21 tool capacity

### **Fanuc αT21iFa Robodrill**

- 10,000 RPM spindle
- High pressure coolant through spindle
- Table size 25.6" X 15.75"
- 21 tool capacity

### **Fanuc αT21iDs Robodrill**

- 10,000 RPM spindle
- Table size 24.8" X 13"
- 14 tool capacity

### **Fanuc αD21LiDs Robodrill**

- 10,000 RPM spindle
- Table size 33.5" X 16.1"
- 21 tool capacity
- Fanuc DDR Rotary Table
- High Pressure Coolant thru Spindle

## **ADDITIONAL ROBOTICS**

### **Universal Robots UR10 Collaborative Robot**



## **MANUAL MACHINERY**

### ***MANUAL LATHES***

#### **Clausing-Colchester 17" Lathe with Gap Bed**

- Distance between centers 80"
- Swing: over bed 17", in gap 25"
- Spindle bore 3 1/16"
- Accessories: 4 jaw chuck, Aloris quick change tool post with holders, follower rest, steady rest, 2-J collet chuck, 17" face plate

#### **(3) Clausing-Colchester 15" Lathe with Gap Bed**

- Distance between centers 55"
- Swing: over bed 15 1/2", in gap 22 1/2"
- Spindle bore 2 1/8"
- Accessories: 9" 3 jaw chuck, 12" 4 jaw chuck, Aloris quick change tool post with holders, follower rest, steady rest, 2-J collet chuck, 21" face plate, driving plate, 5-C collet closer with quick change draw bar, tool post grinder

### ***GRINDING MACHINES***

#### **K.O. Lee Universal & Tool Grinding Machine**

- Distance between centers 18"
- Swing over table 8 3/4"
- 2 cylindrical grinding I.D./O.D. work heads
- 5" O.D. adjustable 3 jaw chuck
- 5C collet attachment and various accessories

#### **Brown & Sharpe #13 Universal and Tool Grinding Machine**

- Distance between centers 28"
- Swing over table 8"

#### **Brown & Sharpe Model 510 Surface Grinder**

- Magnetic chuck size 5" X 10"

### **Reid Precision Surface Grinder**

- Model 618 HR
- Magnetic chuck size 6" X 18"

### **Brown & Sharpe 612 Master Surface Grinder**

- Magnetic chuck size 6" x 12"
- Precision hand feed surface grinder with rapid height adjust

### **Brown & Sharpe 618 Micromaster Surface Grinder**

- Magnetic chuck size 6" x 18"
- Precision hand feed surface grinder with auto feed and rapid height adjust

## ***MANUAL MILLING MACHINES***

### **Sharp Vertical Miller with Acu-Rite MILLPWR 3-axis CNC**

- 3 hp
- Table size 10" X 50"
- Longitudinal travel 35"
- Fagor digital readout

### **Bridgeport Vertical Miller**

- 2 hp
- Table size 9" X 42"
- Longitudinal travel 16"
- Bridgeport power feed
- Acu-rite III digital readout

### **Bridgeport Vertical Miller**

- 1 ½" hp
- Table size 9" X 42"
- Longitudinal travel 16"
- Mitutoyo digital readout

## ***HONING MACHINES***

### **Sunnen Model ML-5000D**

- Millennium Machine 230V
- Automatic size control

### **Sunnen Model MBB-1660K**

- .060" – 6.500" diameter capacity
- .125" – 16.00" length capacity

### **SAWS**

#### **HemSaw H105A-C**

- 14" x 16" (W) Capacity
- 1-1/4" x 15' x .042" Blade
- 7.5HP Motor
- High speed production band saw
- Adjustable blade speed, clamping pressure, feed rate, and cutting pressure
- Computer-controlled feed system

#### **(3) Mastercut S-300HB Precision Automatic Band Saw**

- Cutting capacities:
  - Round: 13" diameter
  - Rectangular: 13" X 17"

#### **Kalamazoo Metal Cutting Saw**

- Cutting capacities:
  - Round: 9" diameter
  - Rectangular: 9" X 13 1/2"

#### **Delta Rockwell Vertical Band Saw**

#### **MetlSaw Systems Automatic Cutoff Saw**

- 36" x 8" cutting window
- 12' stock length maximum
- Allen-Bradley system PLC controls with panel-view screen
- Telescopic 7.5HP vacuum chip collection system

### ***DE-BURRING & FINISHING***

#### **Abtex 2000-FS-14**

- 4 3HP 1200 RPM brush motors
- Accommodates extrusions 1" to 3.75" wide and up to 4.75" high
- Bradex double head flow-through system
- Variable speed conveyor
- C5-2500 dust collection unit

**Bel Air two-bowl High Energy Centrifugal Disk Finisher**

**Clemco Blast Cabinet & DCM-161 Tumble Basket**

***HEAT TREATING***

**Radyne Flexitune**

- 10 kW induction heat treat system

***WELDING***

**Miller Dynasty 300DX**

- Stick and TIG AC/DC welding unit

***AIR COMPRESSORS***

**(C2) Kaeser ASD 40 T Compressor**

- Model ASD 40 T Rotary Screw (30 HP)

**(C1) Kaeser AS 30 Compressor**

- Model AS 30 Rotary Screw (30 HP)

**(C5) Kaeser SFC 18 T Compressor**

- Model SFC 18 T Rotary Screw (25 HP)

**(C4) Kaeser SM 15 T Compressor**

- Model SM15 T Rotary Screw (12 HP)

**Ingersoll-Rand SSR HP25 SE**

- Model SSR HP25/SE Rotary Screw (25 HP)

**Kaeser ABT 57 Drier**

**Kaeser ABT 37 Drier**

## INSPECTION EQUIPMENT [1]

### **Zeiss Contura CMM with RDS**

- 27.6" w. X 23.6" h. X 27.6" d. measuring volume
- Zeiss RDS articulating probe holder
- Driven by Calypso software
- Fully integrated CAD interface
- Extensive scanning capability
- Auto probe changer / Multiple probing styli for all product geometries



### **Brown & Sharpe Global A Image Coordinate Measuring Machine**

- 20"w. X 17" h. X 27" d. measuring volume
- Touch trigger probing w/ Renishaw 10M and TP200
- 360° rotational wrist indexing w/ scanning
- Fully integrated CAD interface
- Auto probe changer / Multiple probing styli for all product geometries

### **Mitutoyo Contracer CV-3200H4**

- Contour Measuring Machine with FormTracePak contour analysis software. Provides graphical display of geometries. Compares dimensional measurements, radii, angles, and contours to tolerances, nominal data, and deviations.
- 3.9" (100mm) X-axis measuring range, 2.4" (60mm) Z-axis measuring range
- Accurate to .000073" (1.9µm) over .500" of vertical travel
- Reads at .0000016" (.04µm) resolution

### **Mitutoyo Contracer CV-3100S4**

- Contour Measuring Machine, as described above.
- 3.9" (100mm) X-axis measuring range, 1.97" (50mm) Z-axis measuring range
- Accurate to .00016" (4 µm) over .500" of vertical travel
- Reads at .0000020" (.05µm) resolution

### **Western Gage Micro Ili Air Gaging**

- 1 each of Single and Dual readout units with assorted gaging probes
- Accurate to .000002" (.00005mm)

### **(2) Vision Engineering Dynascope Stereo Microscope**

- Two axis non-contact measurement
- 20X and 50X magnification
- QC-200 microprocessor w/touch pads
- Dual fiber optic illumination

### **Vision Engineering Cobra Stereo Microscope**

- 40X magnification

### **(5) Vision Engineering Mantis Stereo Microscope**

- 2X-20X magnification

### **TESA- lite 600 Height Gage**

- 24" measurement height

### **Zoller "Smile" 400 Tool Presetter**

- Touchless, rapid tool presetter and measurement tool

### **Brown & Sharpe Reflex CMM**

- 18" w. X 15" h. X 21" d. measuring volume
- Reflex software w/ touchpad display
- Multiple probing styli



### **Jones & Lamson Optical Comparators**

- (3) Units with:
  - 20X, 31.25X, 50X magnification
  - 8.80" w. X 5.25" h. X 2" d. measuring volume (auto feed axes)
  - QC-200 microprocessor w/ geometric tolerancing
- (1) Unit with:
  - 31.25X magnification
  - 8.80" w. X 5.25" h. X 2" d. measuring volume (manual feed axes)

### **Clark Rockwell Hardness Tester**

- Regular and superficial Rockwell load testing, plus light load Brinell testing
- 2,000 data point memory for capability analysis
- Preset direct loads for correct linear displacement

### **Mahr-Federal Perthometer**

- Measures surface finish parameters
  - DIN/ EN/ ISO.
  - Ra, Rz, Rmax, R<sub>Pc</sub>, and JIS
- Graphic and text printout capable

## **ADDITIONAL INSPECTION EQUIPMENT [1]**

- Mitutoyo SurfTest-211 surface roughness measurement system
- (2) Federal .0001" resolution dial indicator on height comparator stands
- Jones & Lamson PC-14 optical comparator and measuring machine with surface illumination
- Brown & Sharpe Micro Val Model 454 System
- 4" Electronic Digital Tesa-Hite height gage
- 0-12" micrometers
- 0-1" & 1"-2" blade micrometers
- 48" X 120" inspection grade Ottavino surface plate
- 36" X 48" inspection grade Ottavino surface plate
- 24" X 36" inspection grade Ottavino surface plate
- (5) 18" X 24" inspection grade surface plates
- 0-1" outside disk micrometers
- (4) Mitutoyo 0-12" dial height gauges
- Mitutoyo 0-18" digital height gauge
- Assorted Mitutoyo dial indicators
- .011" - .75" Vermont plug gauges
- Grade "A" Starrett inspection gauge blocks (81 piece set)
- 0-6" Brown & Sharpe dial calipers
- 0-12" Mitutoyo dial calipers
- 0-24" Brown & Sharpe verniers
- 0-50" Starrett verniers
- 0-12" Scherr-Tumico I.D. micrometers
- 0-1" Mitutoyo pitch micrometers
- 1-2" Mitutoyo pitch micrometers
- 2-3" Mitutoyo pitch micrometers
- 3-4" Mitutoyo pitch micrometers
- 0-6" Brown & Sharpe depth micrometers
- .8-2" Alina dial bore gauges
- K.O. Lee bench centers
- Dial indicators
- Precision squares & knees
- Sheffield Style 2000 precision linear gage
- Starrett 12" Digi-Check height gage
- 5" precision hinged sine plate
- Federal groove gage series 99P-20
- Thread ring & thread plug gauges

**[1] Lavigne Manufacturing, Inc. will purchase and maintain additional inspection equipment as required to produce parts in compliance with customer specifications.**

## **OTHER NOTABLE EQUIPMENT & TOOLING**

- Cycle Solve parts cleaner
- Ultrasonic cleaning bath
- Lincoln AC-255-S welder
- Oxygen / acetylene torches
- (2) Yuasa 8" floatable index heads
- (2) 8" Kurt Anglock precision machining vises
- Precision toolmakers vises
- Dividing head
- Bowers inclinable rotary table with 9" diameter
- (2) Gorbelt overhead cranes for machine-loading (125lb and 220lb capacities)
- Hydraulic lifting hoist
- Carolina 60,000 lb heavy duty press
- Nissan 4000 fork-truck
- Nissan 5000 fork-truck