

1 - Zeiss Eclipse ST3 4096-22 CNC Coordinate Measuring Machine with Calypso software and Dynamic Probe Head
40" X - axis movement
96" Y - axis movement
22.8" Z - axis movement

1 - Zeiss Eclipse CNC Coordinate Measuring Machine with Calypso software Full-D.C.C. Zeiss ST Head
28" X - axis movement
40" Y - axis movement
24" Z - axis movement

1 - Zeiss C-700 CNC Coordinate Measuring Machine with Calypso software Full-D.C.C. Zeiss ST Head
28" X - axis movement
40" Y - axis movement
24" Z - axis movement

1 - Starrett CNC Optical Comparator
32" screen
Magnification from 10x to 100x with surface illumination
660 lb. work piece capacity
10" X - axis movement
20" Y - axis movement

1 - Faro edge measurement system, Edge arm, 9', 7 - axis
Laser line scanning, 3-D modeling software
1 - Brown & Sharpe 12" Height Master
1 - Mitutoyo 18" Height Master
2 - Brown & Sharpe 18" Height Master
1 - Starrett 36" x 48" granite surface plate
22 - Granite surface plates of various sizes
1 - Set: gage ball cocks
3 - 81 piece Master gage blocks
1 - Optical comparator
1 - 8" cylindrical square
1 - 12" cylindrical square
Tenth dial bore gages to 16"
Davis roll-check gage
Pin gages from .011" to 1.0001" inclusive

HEAT TREAT

1 - MODEL QDS124 dual chamber heat treat furnace
1 - Toccotron 400 Induction Heat Treat system

JIG BORE

1 - Pratt & Whitney 18" x 35" jig bore with .0001" readouts

DRILL PRESS

1 - 3 Head Clausing drill unit
3 - Bux drills with portable magnetic base
1 - Delta 15" floor model
1 - Radial drill, Fosdick 4" variable speed
24" x 48" table
2 - Clausing 20" variable speed #3MT,
32" x 56" tables

WELDERS

1 - Miller 130 portable welder
2 - Acetylene welder equipment and cutting attachments
2 - Portable plasma cutters
2 - TIG welders
3 - Miller 250 MIG welders
2 - Miller 302 MIG welders

SAWS

1 - Marvel MK III Band Saw
1 - Do-All C-916
1 - Do-All 3G
1 - Marvel Series #8 MK I cut-off saw-18" max dia. cut
1 - Powermatic, 20" vertical band saw with blade welder

GENERAL SHOP EQUIPMENT

1 - Schenck Trebel Model H30BU Horizontal Dynamic Balancing Machine
60-15,000 rpm speed range
1,000 lb. maximum work piece weight
49" maximum work piece diameter
1 - Hansford Die Handler
72" bed, 36" Y bed, 30" Z movement
1 - Federal 80 ton press
54" x 34" bed
21.5 stroke 10" ram adjustment
60-120 strokes per machine
1 - Wilton power tapping arm
2 - 10" Turntables
1 - 10" Dividing head
1 - Ettco #1B tapper
1 - 11,000 lb. forklift
1 - 6,000 lb. forklift
1 - 5,000 lb. forklift
1 - 3,000 lb. forklift
1 - Troyke cross slide table
1 - Turntable, 12" new Troyke, right angle
1 - Turntable, 15" Bridgeport

GENERAL SHOP EQUIPMENT (CONT)

1 - Bridgeport Sine Plate
1 - Shaper attachment for Bridgeport
Belt sander, pedestal grinders,
Baldor & Craftsman
1 - Grieve pre-heat oven
2 - Baldor 2" belt sanders
1 - Wilton 6" belt and orbital sander
1 - Empire 48" x 35" x 36" sandblaster
1 - Clemco sandblaster
4 - Arbor presses
1 - Sun-tec Rockwell tester
2 - Hydraulic presses
1 - Hydraulic horizontal press 20 ton, 6' daylite
1 - Yuasa SUDX Programmable Indexer

DELIVERY EQUIPMENT

4 - Ford 1 ton vans
1 - Ford 1 ton box truck
1 - Ford 1 ton flat-bed
1 - Chevrolet 3/4 ton flat-bed
1 - 22' gooseneck trailer



STRENGTH THROUGH DIVERSITY



EQUIPMENT LIST

FACILITY

54,000 square foot building constructed in 1998
48,000 square foot shop area, totally air conditioned
6,000 square foot office area
2 - 5 Ton Overhead Bridge Cranes
38,000 square foot building addition constructed in 2009
with 2 - 5 Ton Overhead Cranes
6,000 square foot heated storage building constructed
in 2001

ENGINEERING DESIGN DEPARTMENT

3 - AutoCAD work stations with AutoCAD 2011 and
AutoDesk Inventor 2011
7 - Solidworks 2013 work stations
1 - VISI Series via 3-D design software
MasterCam - Multiple seats of MasterCam Cam offline
Programming software. Seats include Mill Levels
I & III, Wire EDM and Solids.

CNC MACHINING CENTERS

1 - Mazak FH-6800 high speed horizontal machining
center with 40 tool magazine and pallet changer
41" X - axis movement
31" Y - axis movement
35" Z - axis movement
30 HP variable speed spindle
Mazatrol Fusion 640M controls
Automatic tool length measurement
1 - Mazak FH-8800 high speed horizontal machining center
with 80 tool magazine and pallet changer
51.2" X - axis movement
43.3" Y - axis movement
39.4" Z - axis movement
40 HP variable speed spindle
Mazatrol Fusion 640M controls
Automatic tool length measurement
1 - Mitsubishi M-HT11 table type CNC horizontal
precision boring mill with 40 tool magazine
79" X - axis movement
60" Y - axis movement
50" Z - axis movement
20" W - axis movement
30 HP variable speed spindle
Compact pendant control box

1 - Viper G2000 vertical machining center with 30
tool magazine
78.25" X - axis movement
79" Y - axis movement
32" Z - axis movement
8,000 max. spindle rpm
25 HP variable speed motor
2 - Mori Seiki NVX 5100 high speed vertical
machining center with 30 tool magazine
41.3" X - axis movement
20.9" Y - axis movement
20.1" Z - axis movement
12,000 max. spindle rpm
1 - Haas VF-4 vertical machining center with 20
tool magazine
50.0" X - axis movement
20.0" Y - axis movement
25.0" Z - axis movement
8,100 max. spindle rpm
1 - Haas VM-3 vertical mold high speed
machining center with 24 tool magazine
40.0" X - axis movement
26.0" Y - axis movement
25.0" Z - axis movement
12,000 max. spindle rpm
4th axis servo rotary table

1 - Hurco VMX-42S high speed vertical machining
center with 24 tool magazine
42" X - axis movement
24" Y - axis movement
24" Z - axis movement
24 HP variable speed spindle
15,000 rpm max.
coolant thru 4th axis rotary table
3-D machining software
1 - Hurco VMX-50 high speed vertical machining
center with 24 tool magazine
50" X - axis movement
26" Y - axis movement
24" Z - axis movement
10,000 max. spindle rpm

1 - Hurco VMX-245 high speed vertical machining
center with 24 tool magazine
24" X - axis movement
20" Y - axis movement
23" Z - axis movement
20 HP variable speed spindle
15,000 rpm max.
3-D machining software

1 - Mazak VTC 300C vertical machining center
with 48 tool magazine
65" X - axis movement
30" Y - axis movement
26" Z - axis movement
Automatic tool length measurement
Rotary table package
Mazatrol Fusion 640M controls
2 - Hurco BMC-30 vertical machining centers with
24 tool magazine
30" X - axis movement
17" Y - axis movement
24" Z - axis movement
8,000 max. spindle rpm

2 - Hurco BMC-3017 vertical machining centers
with 24 tool magazine
30" X - axis movement
17" Y - axis movement
24" Z - axis movement
8,000 max. spindle rpm
2 - Hurco BMC 40/50 vertical bed-type machining
center with 30 tool magazine
52" X - axis movement
30" Y - axis movement
22" Z - axis movement
15 HP/AC variable speed spindle, floor
programmable dual screen controller
3-D contour software
4th axis rotary table

1 - Mazak Integrex i300R multi-axis CNC horizontal
turning & machining center
52.9" swing and cutting diameter
3.6" bore diameter
62.4" bed length
40 HP AC motor 4,000 RPM
Milling head with 36 tool magazine
12,000 RPM for milling head
1 - Mazak Integrex 300Y multi-axis CNC
horizontal turning & machining center
24" swing with a 24" cutting diameter
3.46" spindle bore

35 HP/AC motor 35-3,500 rpm
Milling head with 40 tool magazine
20 HP/AC motor
15-6,000 rpm for milling head
LNS steady rest
Mazatrol 640T controls
1 - Mazak Integrex 200-IV multi-axis CNC
horizontal turning & machining center
26" swing with a 26" cutting diameter
2.00" spindle bore

30 HP/AC motor 5,000 rpm
Milling head with 40 tool magazine
25 HP/AC motor
12,000 rpm for milling head
1 - Charmille 440 Wire EDM machine with FANUC
Controls
21" X - axis movement
13.77" Y - axis movement
15.75" Z - axis movement
Modified to cut 48" length submerged
Taper cutting +/- 30°
Automatic re-thread

1 - EZ Trak DX Bridgeport CNC 9" x 48" tables
with coolant

1 - Makino EDNC43 CNC ram EDM machine with
16 tool magazine
17.7" X - axis movement
13.7" Y - axis movement
13.7" Z - axis movement
1 - LeBlond Makino SNC 64 CNC graphite mill with
15 tool magazine
24" X - axis movement
15.7" Y - axis movement
15.7" Z - axis movement
15,000 max. spindle rpm

LATHES

1 - Mazak Mega Turn Nexus 900M vertical lathe
39.3" swing with a 36.2" cutting diameter
31.5" maximum machining height
40 HP spindle motor
12 tool magazine with milling spindle
Mazatrol 640T controls
1 - Mazak Super Quick-Turn 30-M Mazatrol
T32-2 CNC control
22" swing with 16.25" cutting diameter
3.46" spindle bore

60" maximum cutting length
35 HP/AC motor, 35-3,300 rpm
12 tool magazine with milling spindle
10 HP motor
1 - Mazak Quick Turn 15N Mazatrol T32-2
CNC control
17" swing with a 10" cutting diameter
2.44" diameter spindle

20" maximum cutting length
15 HP/AC motor, 45-4,500 rpm
8 tool magazine
1 - Romi M20 Lathe, GE FANUC controls,
12" 3-jaw chuck
1 - 22" South Bend Lathe with electric variable
speed 31" swing over the gap, 80" between
centers, 6 jaw chucks, steady rest and digital
readouts

1 - 20" South Bend Lathe
1 - 17" South Bend Lathe
1 - Acra-Turn, 14" x 48" engine lathe
1 - Colchester, 13" x 48" engine lathe
1 - 20" South Bend Lathe
1 - 17" South Bend Lathe
1 - Acra-Turn, 14" x 48" engine lathe
1 - Colchester, 13" x 48" engine lathe

MILLS

3 - Acra, 10" x 54" tables
1 - Atlas, 9" x 49" table
5 - EZ Trak DX Bridgeport CNC 9" x 48" tables
with coolant

1 - Mazak Integrex 100-II SY multi-axis CNC horizontal
turning & machining center with LNS barfeed
18.50" swing with an 18.50" cutting diameter
2.40" spindle bore
10 HP/AC motor 6,000 RPM
Milling head with 40 tool magazine
7.5 HP/AC motor 10,000 RPM milling head
Sub spindle 6,000 RPM
1 - Mazak Super Quick Turn 250M-Y
multi-tasking CNC turning center
20.6" swing with a 11" cutting diameter
Twin spindles with a 35-4,000 rpm
2.99" spindle bores

19.49" maximum cutting length
25 HP/AC main spindle motor
10 HP/AC second spindle motor
12 tool magazine with milling spindle
Mazatrol 640T controls
1 - Mazak Super Quick-Turn 30-M Mazatrol
T32-2 CNC control
22" swing with 16.25" cutting diameter
3.46" spindle bore

60" maximum cutting length
35 HP/AC motor, 35-3,300 rpm
12 tool magazine with milling spindle
10 HP motor
1 - Supertec STP328 ASP 32" x 80" surface
grinder with power feed and automatic
dresser, wet, variable speed motor

2 - Okamoto 12" x 24" with power feed &
hydraulic dressers, wet
1 - Okamoto 16" x 32" with power feed &
hydraulic dressers, wet
1 - Blanchard Model 18 Vertical Rotary Grinder
with 36" table
2 - Okamoto 6" x 12" hand feed
1 - Okamoto 6" x 18" hand feed
1 - Equiptop 6" x 18" hand feed
2 - Harig 3612 hand feeds with high speed
grinding attachment
1 - Kent 20" x 40" surface grinder

1 - Bridgeport, 12" x 42" with digital readouts
chrome ways with vises, boring heads
and collets
9 - Bridgeport, 12" x 42" with variable speed
head, chrome ways with digital readouts
3 - Sharp, 10" x 42" with Acu-rite controls
2 - Sharp, 10" x 50" 3-axis with Acu-rite control
1 - Chevalier, 14" x 25" with Anilam controls
1 - Kerney & Trecker vertical mill with 14" x 62"
table and #50 taper spindle
2 - Cincinnati horizontal with 12" x 54" table and
#50 taper spindle

O.D./I.D. GRINDERS

1 - Okamoto 06M 12-60 O.D./I.D. 12"x 60" grinder
1 - Brown & Sharpe O.D./I.D. 14" x 30" grinder
1 - Brown & Sharpe O.D./I.D. 14" x 40" grinder
1 - Brown & Sharpe O.D./I.D. 14" x 60" grinder
1 - Springfield vertical O.D./I.D. grinder
24" swing
20" Z - axis movement

SURFACE GRINDERS

1 - Supertec STP328 ASP 32" x 80" surface
grinder with power feed and automatic
dresser, wet, variable speed motor
2 - Okamoto 12" x 24" with power feed &
hydraulic dressers, wet
1 - Okamoto 16" x 32" with power feed &
hydraulic dressers, wet
1 - Blanchard Model 18 Vertical Rotary Grinder
with 36" table
2 - Okamoto 6" x 12" hand feed
1 - Okamoto 6" x 18" hand feed
1 - Equiptop 6" x 18" hand feed
2 - Harig 3612 hand feeds with high speed
grinding attachment
1 - Kent 20" x 40" surface grinder

OTHER GRINDING EQUIPMENT

2 - #3 Moore jig grinder with .0001 readouts
1 - Arter 20" rotary grinder
1 - Sunnen hone
1 - Ex-Cell-O Center Polisher 48" capacity
1 - Mitsui-Seiki CNC Jig Grinder Model 6GBN
with FANUC controls
24" X - axis
16" Y - axis
18" Z - axis