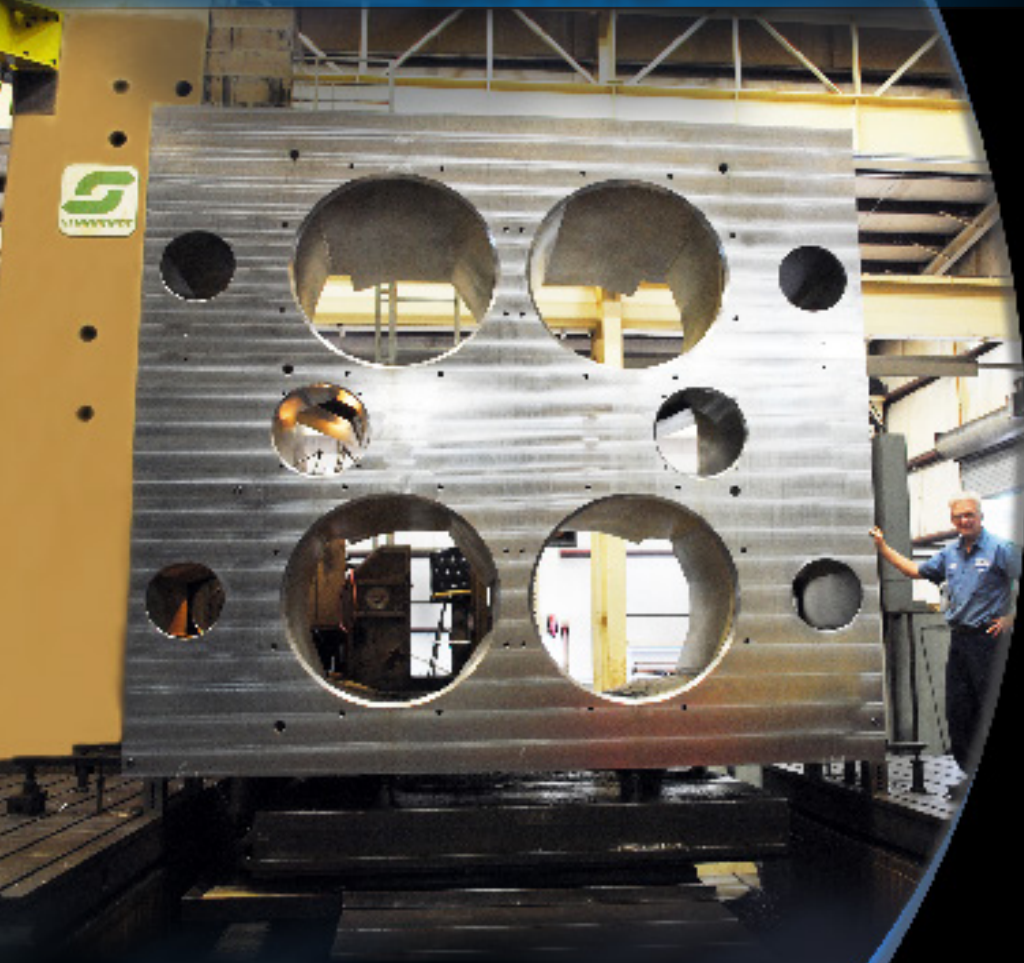




BRILEX
INDUSTRIES, INC.

FACILITIES & EQUIPMENT LISTING



Fabrication • Machining • Assembly • Rebuilding • Roll Forming

Version 10.4

CONTACT INFORMATION

Brilex Industries, Inc.

(P): (330) 744-1114 • (F): (330) 744-1125 • www.brilex.com

Additional Information & Inquiries: sales@brilex.com

Doyle Hopper

CEO

dhopper@brilex.com

Steve Davinsizer

President

sdavinsizer@brilex.com • x1253

Ryan Engelhardt

Plant Manager, Plant 1

rengelhardt@brilex.com • x1278

Mike Horne

Plant Manager, Plant 2

mhorne@brilex.com • x1239

Nic Bunker

Director of Quality

nbunker@brilex.com • x1281

Tim Orwig

Vice President

torwig@brilex.com • x1232

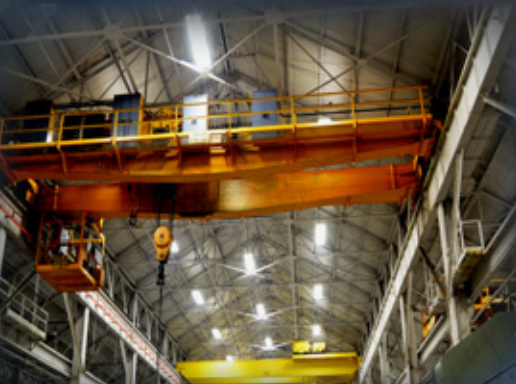
Thomas Benyo

Estimating Manager

tbenyo@brilex.com • x1271

Facility Pages

Brilex, Plant 1 - 1201 Crescent Street, Youngstown, OH 44502	3 - 9
Brilex, Plant 2 - 101 Andrews Ave., Youngstown, OH 44503	10 - 13
Inspection Equipment & Quality Certifications	14 - 15





**130,000+ Square Feet of
Manufacturing Space**

Brilex- Plant 1
1201 Crescent St.

CRANE CAPACITY

Fabrication Bay

- (1) 50 Ton AC crane/ 10 ton aux., both with 23' hook height
- (3) 20 Ton AC cranes with 23' hook height

West Machining/Assembly Bay

- (1) 60 Ton overhead crane with 32' hook height
- (1) 72 Ton overhead crane with 32' hook height
- Up to 120 Ton max lift (conditionally)

East Machining/Assembly Bay

- (4) overhead cranes, 60 ton max lift with 30' hook height

FABRICATION

Stress Relieving

- Car style: 12' x 12' x 26'-5" thermal stress furnace with 1550 degree capacity. (5) Thermal couple chart recorders
- Vibratory Stress Relieving: (1) 2008 Meta-Lax Series 701 stress relieving and weld conditioning unit for stress relieving during and after welding. 40,000lb capacity transducer; unit has printer interface



Shot Blasting

- Car-style: 13' x 9' x 25' shot blast row with recycling system and bag house

FABRICATION CONTINUED...

Paint Booths

- 20' x 40' with air make-up unit & transfer car
- 12' x 12' x 28' with transfer car

Machined Steel Fitting & Layout Tables

- 10' x 20'
- (3) 8' x 15'
- (3) 6' x 12'



Welding Positioners

- 100,000lb capacity flat top turntable
- (4) sets of turning rolls up to 75,000lb capacity
- (8) welding positioners up to 70,000lb capacity



Welding Power Sources & Wire Feeders

- (24) Miller Dimension 652 power source, mostly supported by dual wire feeds with booms
- (2) Miller Access 452 with programmable feeds
- (4) Miller MaxStar 350 TIG machines

ROBOTIC WELDING STATION

2008 Motoman HP50-20 High Speed Robotic Welding Station

122.3" horizontal reach • 219.9" vertical reach • ± 0.006 " repeatability • Equipped with (1) Motoman MBC-2300M drop center positioner offering tilting & rotational axis with 5,000lb capacity. • Includes (1) Motoman HM1600 head stock/tail stock



MACHINE TOOLS & TOOLING

Miscellaneous Equipment

- 100,000lb capacity Reed turning roll
- 50 HP high and low pressure hydraulic power unit
- (4) 9,000lb - 30,000lb forklifts
- Carlton Radial Drill, 5' x 17"
- 1/2" x 10' initial pinch bending rolls
- Magnetic particle testing equipment
- Essab plasma cutting unit
- (2) 20' Man-lifts
- 1/2" x 10' shear
- Varian MR-15 vacuum tester



CNC HORIZONTAL BORING MACHINES

HNK HFB160 Horizontal Floor Type Boring & Milling Machine

Fanuc 31iA Control System • 6.3" spindle diameter
• X-axis 433" horizontal travel • Y-axis 157" vertical travel • W-axis 27.5" in/out spindle travel • 16.5" x 16.5" Ram with (Z-Axis) travel of 31.5" • Combined Z and W travel 59" • V axis cross slide travel of 90.5" • 98" x 118" integrated rotary table indexing to .001 degree • 66,000lb capacity • 90 position ATC • 3 position AAC
• (1) Universal head • (1) Right angle head



2008 Toshiba CNC Horiz. Boring & Milling Machine

Model BTH-130.R24 • 5.1" spindle diameter, 118.1" X-axis horizontal table travel • 90.5" Y-axis vertical head travel • 59" Z-axis in/out column travel • 27.5" W-axis spindle extension • 78.7" x 94.4" rotary table
• 44,000lb capacity • Tosnuc 999 control • (1) Right angle head attachment • 39" to center with spacer



CNC HORIZONTAL BORING MACHINES CONTINUED...

2007 Toshiba CNC Horiz. Boring & Milling Machine

Model BP-130.P40 • 5.1" spindle diameter • 160" X-axis horizontal table travel • 100" Y-axis vertical head travel • 60" Z-axis in/out column travel • 28" W-axis spindle extension • 70" x 155" table working surface • 55,000lb capacity • Tosnuc 888 control • (1) right angle head attachment 27.559" to center



2000 Toshiba BP-130.R22 5-axis CNC Horizontal Boring Mill

130mm spindle • 2500 RPM max spindle speed • touch probing • 138" X-axis travel horizontal table travel • 89.409" Y-axis vertical head travel • 60" Z-axis travel in/out column travel • 28" W-axis spindle extension • 70.8" x 86.6" rotary table • 44,000lb capacity • Tosnuc 888 control

CNC PALLET TYPE HORIZONTAL MACHINING CENTERS

2020 Hyundai L300LMC

15" Power 3-jaw chuck • 29.5" maximum swing over bed • 18.9" maximum swing over carriage • 19.7" max turning/milling diameter • 13.2" X-axis travel • 53.1" Z-axis travel • 40HP x 3000RPM main drive motor • 7HP x 4000RPM Live Spindle • 12 station turret (All live tool capable) • .001 degree C-axis • Fanuc 32i controller with 10.4" color LCD display

2015 Doosan HM1250 Dual Pallet Horizontal Machining Center

6,000 RPM • 60HP spindle with thru tool coolant and air • 82" X-axis horizontal head travel • 59" Y-axis vertical head travel • 59" Z-axis, in/out head travel • 49.2" x 49.2" table • 10,000lb table capacity • 90 station automatic tool changer • Fanuc 31i-B Control • Renishaw RMP60 part probe • RTSSADIA Tool Presetter



2008 Kitamura Pallet Type Horizontal Machining Center

Model HX630i • 12,000 RPM • thru spindle coolant • 39.4" X-axis horizontal head travel • 31.5" Y-axis vertical head travel • 32.3" Z-axis in/out table travel • twin 24.8" square pallet tables • 50 station tool changer • 2,640 lb pallet capacity • Kitamura Fanuc 16imb control

2001 Toshiba BTD -110.R16 HBM

4.33" spindle • 3000 RPM • 78.74" X-axis • 59" Y-axis • 57" Z-axis • 20" W-axis (spindle extension) • 63" x 55.12" Table working surface • 14,000lb Table capacity (evenly distributed) • 38 pot ATC • Tosnuc 888 Control



CNC PLANER MILL TYPE VERTICAL MILLING MACHINES

2015 Mitsubishi MVR40ex Planer Type Vertical Bridge Mill with Movable Cross Rail

3600 RPM, 50 HP spindle with thru tool coolant • 244.1" X-axis travel • 157.5" Y-axis travel • 31.5" Z-axis vertical travel • 51.2" W-axis vertical travel • 118.11" x 236.2" table work space • 66,000lb table capacity • 147.6" between columns • 84.6" max height under rail • 13.8" Square Ram • 80 station automatic tool changer • Right angle head with 1° indexing and thru tool coolant • Ø8.66" x 13.5" spindle extension with thru tool coolant • 5-face machining software • Fanuc 31i-B control • Renishaw RMP60 Part Probe



2015 Mitsubishi MVR30ex Planer Type Vertical Bridge Mill with Movable Cross Rail

• 8000 RPM, 40HP spindle with thru tool coolant • 165.4" X-axis travel • 118.1" Y-axis travel • 31.5" Z-axis vertical travel • 43.3" W-axis vertical travel • 78.7" x 157.5" table work space • 55,000lb table capacity • 100.4" between columns • 65.0" max height under rail • 13.8" Square Ram • 80 station automatic tool changer • Right angle head with 1° indexing and thru tool coolant • 5-face machining software • Fanuc 31i-B control



CNC PLANER MILL TYPE VERTICAL MILLING MACHINES

1996 Butler CNC 5-Axis Gantry-Type Planer Mill

Joint 1, variable indexing spindle head every 2 1/2° • Joint 2, 90° indexing right angle head • 3,000 RPM spindle speed • 395" X-axis gantry travel • 144" Y-axis head travel • 44" Z-axis vertical head travel • 118.11" x 395" table work space • 144" distance between housings • 84" max height under rail • 40 station automatic tool changer • GE Fanuc 16 im control



CNC LIVE SPINDLE LATHES W/Y AXIS

2021 Hyundai KL7000LY

24" (Power 3-jaw) and 32" (Manual 4-Jaw) Chucks • 47.2" maximum swing over bed • 39.1" maximum swing over turret • 36.2" max turning/milling diameter • 19.7" X-axis travel • 128" Z-axis travel • 8.66" Y travel • 60HP x 1500RPM main drive motor • 15HP x 3000RPM Live Spindle Turret 12 stations (All live tool capable) • .001 degree C-axis • 3.5"-13.5" Hydraulic Programmable Steady Rest • Fanuc 32i controller with 10.4" color LCD display



2015 Samsung SL 35-750

23.6" swing over bed • 16.5" over cross slide • 30" centers • 30 HP with Fanuc 0I-TD Control



2011 Samsung SL35/1500 CNC Turning Lathe

23.6" swing over bed • 16.5" over cross slide • 60.24" centers • 30 HP with Fanuc 0I-TD Control

Manual Lathes

- Acer Engine Lathe- 24"/15" Swing x 60" centers.
- Jupiter 830 Lathe- 30"/ 20" Swing x 130" centers
- Warner Swasey 3A Turret Lathe

MANUAL HORIZONTAL BORING MACHINES

1998 4" Summit Table-Type Horizontal Boring Machine

Model HTM4 • Manual • Spindle Diameter 4" • taper in spindle 50lb
• 14-1400 RPM 15HP Spindle • X-axis 78" horizontal table travel • Y-axis 64" vertical head travel • Z-axis 27.5" spindle travel • W-axis 62" table saddle in/out • Rotary table size 48" x 60" • 11,000lb capacity

CNC VERTICAL TURNING LATHE

You-Ji YV 1600 ATC CNC VTL

63" table diameter • 78.74" maximum swing • 62" X-axis travel • 35.4" Z-axis travel • 59" maximum distance ram to table • 47.25" recommended part height • 2-250 RPM spindle speeds in 2 ranges



CNC VERTICAL MACHINING CENTERS

2021 Hyundai F960B Heavy Duty Vertical Machining Center

8,000 RPM, 30HP CAT50 Spindle • 96.5" X-axis travel • 37.8" Y-axis travel • 33.5" Z-axis travel • 106.3" x 37.4" table • 10,000 lb. table capacity • 30 tool automatic tool changer • 435 PSI Thru Spindle Coolant • Fanuc OiTF Control • Renishaw RMP60 part probe • RTSSA-DIA Tool Presetter

Haas VF-5/50 XT

60" X-axis • 26" Y-axis • 25" Z-axis • 7500 RPM Spindle • 50 Taper, 30HP

2005 Haas VF-3 Vertical Machining Center

40" X-axis • 20" Y-axis • 25" Z-axis • table size 48"x 18" • Fanuc M-13 control



OTHER MISC. MACHINES & TOOLING:

• Carlton Radial Drill. 5' x 17"

Brilex- Plant 2

101 Andrews Ave.



CRANE CAPACITY

Main Bay- 75' x 480'

- 50/10 ton overhead with pendant control
- 40/10 ton overhead with radio control
- 30/10 ton Fulton crane with radio control
- (2) Additional side bays with current lift capacity of 10 tons

Fabrication Bay and Plate Processing- 75' x 325'

- 30 ton with radio control
- 25/10 ton with radio control
- 10 ton with pendant control

Vessel Manufacturing Bay- 70' x 300'

- 25 ton overhead with radio control
- 10 ton overhead with pendant control



FABRICATION

125,000+ Square Feet of
Manufacturing Space

2012 CNC Oxyfuel Burning

45 CNC hi-def plasma/ oxy-fuel burning machine • hypertherm hi-def “true hole” technology, controlling (2) hypertherm 400XD amp plasma torches and (2) oxy-fuel torches • plasma is capable of production cutting up to 3.0” thick carbon material • production piercing up to 2” thick • water table supports a 161” wide x 502” long cutting area • linked to MTC Pro-Nest 2010 nesting/programming software



General Welding

- Multiple MIG and TIG welding stations and 40,000lb capacity positioner

Stress Furnaces

- Car Style: 14’ H x 18’ W x 33’ L thermal stress furnace with 1550° capacity

- Rifco preheat and stress relief furnace 7’ H x 13.6’ W x 16’ L



Shot/ Grit Blast Booths

- With Recovery system and bag house. 18’ wide x 30’ long x 14’ high

Paint Booths

- 20’ wide x 15’ long x 14’ high



Hydrotesting Station

- 4,000 gallon capacity capable of 10,000PSI testing pressure

Submerged ARC Welding Station

- Capable of welding 60” diameter x 41 feet long



CNC VERTICAL TURNING LATHES

2012 Phoenix VT-5218-5

Model VTMC 180/216 • (2) Live spindles • Table diameter 180" • Maximum swing 216" • Table power-132 HP continuous feed • Table speed 60 RPM • (2) Gear ranges both table and live ram • table capacity 100 tons • rail clearance 132" • (std) standard ram section 12" square • ram Z- axis, stroke 84" • (std) cross slide, X-axis, stroke 2" past center • Z -axis thrust 15,000lb • X-axis thrust 15,000lb • feed rates 250 IPM • rapid rates 300 IPM • 20 station automatic tool changer



2009 Hankook VTC-160E

63" table diameter • 78.7" maximum swing • 75" X-axis travel • 35.4" Z-axis travel • 29.5" vertical cross rail • 60 HP AC main table drive motor • 25 HP Milling Motor High-Torque • 2-Range Geared table with C-axis • 24 station automatic tool changer (12 turning, 12 milling) • Fanuc 32 bit controller with 10.4" color LCD display



CNC HORIZONTAL BORING MACHINE

2005 Union CNC Floor Type Horizontal Boring Mill

Model PR160 • 6.3" spindle diameter with a #50 taper • X-axis 334" horizontal travel of column • Y-axis 196.85" vertical travel of head stock • Z2-axis 31.49" spindle travel • Z1- axis 59" travel of ram • combined Z1 and Z2 travel 90.49" • 118.11" x 118.11" Union DV40 rotary table 2 axis CNC with 118" in feed travel • 80,000lb capacity • Siemens 840D CNC controls • right angle head attachment



ROLL FORMING EQUIPMENT

Haeusler Rolling Machine:

CNC Controlled, Rolling up to 3.5" thick and up to 120" wide



Davi Rolling Machine:

CNC Controlled, Rolling up to 1" thick and widths of 120" wide

Press

Large Verson Press #87A The press proper is 12' front to back X 7'-6" wide X 14' floor to top of press (1) Vertical Ram with 48" of stroke and 65" clearance under the ram. This ram has a 420 Ton Capacity. (1) Horizontal ram with 30" of stroke at 270 Ton capacity



Small Sub Arc Welder:

17'-6" Long X 64" Wide X 16' (1) Tall with DC-1000 welder, (1) DC-650 Pro Welder, (1) Flux Vacuum Machine and (1) Airflow Smoke Hog



Large Subarc Welding Boom:

22' Long X 18' High with a 48" X 102" Base



Inspection Equipment

PORTABLE COORDINATE MEASURING MACHINES

FARO Arm Platinum

8' measuring range • 6° of Freedom Probe • .0014" volumetric accuracy • .0017" single point repeatability • adaptable 3D CAD • scanning and measurement technology • temperature sensing • SPC output • magnetic and vacuum bases

FARO Laser Tracker ION

180' measuring range • 270°x 125° measurement envelope • .0019" at 32' volumetric accuracy • adaptable 3D CAD • scanning and measurement technology • high performance, real time dynamic measurements • self-compensating for temperature, air pressure and humidity • SPC output



TESA-Hite 700

27' measuring range • parallelism, perpendicularity, and flatness measurements • .001" repeatability • SPC output

Hardness Testers

- **Equo-tip 2:** HL, HS, HV, HRB, and HRC hardness test ranges
- **Wilson:** RC and BHN hardness test ranges

Standard Test and Metrology Equipment

- **Granite Surface Plates:** 10' x 6' and 6' x 4'

• **Hand Tools:**

Comprehensive inventory of certified indicators, depth gauges, micrometers (ID, OD), calipers, bore gauges, height gauges, bar gauges, gauge blocks, line standards, thread gauges and isometric blocks

- **Magnetic Particle, Dye Penetrant & Weld Testing Gauges**

- ASME Section VIII D-1 U-Stamp (Pressure Vessels)
- AWS D1.1 Structural Welding Code
- ASME Section VIII D1 B&PV Code
- NAVSEA (Naval Sea Systems Command) Technical Publication Standards



The
Brilex
Group
of Companies



For fabrication, machining,
assembly, roll forming, up-
grades and rebuilding needs,
Please call or visit:
(330) 744-1114
www.brilex.com



Engineering, design, and
fabrication of natural gas
production equipment,
Please call or visit:
(330) 744-1114
www.brilexenergy.com



Engineering & equipment
design for heavy material
handling, extrusion, metal
shredders and turntables,
Please call or visit:
(330) 744- 1114
www.brilextechnical.com



For custom material joining
parts production machines
& systems, Please call or
visit: (330) 259-8500
www.taylor-winfield.com



For engineering and manufacturing of
rolling stock maintenance equipment,
Please call or visit:
(330)258-8555
www.bbm-railway.com