



Structural Systems

Equipment List Updated 8/21/20

Equipment List

HYDRAULIC STRETCH FORMING PRESSES

Equipment Type:	Size:	Capacity:
Gardena		
Sheridan STC-1500	41 ft. between Jaws 24" Extrusion	1500 Ton
With Overhead	108" Die Table Stroke 144" Sheet	1500 Ton
Bulldozer Capability		



HPM 4 Post Press	152" x 48" Guerion Box	24" Stroke	2500 Ton
With Offset Jaw Capability	124" x 180" Sheet		
Cyril Bath Lead Edge	28 ft. between Jaws	48" Sheet Jaws	75 Ton
Ercco Stretch Press		72" Jaws	300 Ton
Sheridan Gray L-1000	40 ft. between Jaws	100" Sheet	1000 Ton
	36" Die Table Stroke		



Sheridan Gray T-500	15 ft. between Jaws	154" Sheet	500 Ton
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Equipment List

	80" Die Table Stroke	
Ercco Stretch Press	48" Jaws	100 Ton
Hufford A-12	14" x 24 ft. Extrusion	60 Ton
 Parsons		
Watson-Stillman Hot Jogging and Hydro Press		575 Ton

PRESS BRAKES & SHEARS

Equipment Type:	Size:	Capacity:
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Gardena

Cincinnati Press Brake	42 ft. Wide	1250 Ton
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Cincinnati Press Brake	26 ft. Wide	600 Ton
Lodge & Shipley Press Brake	10 ft. Wide	150 Ton
Chicago Press Brake	10 ft. Wide	100 Ton
Di-Arco Press Brake	8 ft. Wide	100 Ton
Lodge & Shipley Shear	12 ft. Wide	3/16" Steel

Orange

Wysong	20 ft. Wide	175 Ton
Chicago Press Brake	8 ft. Wide	50 Ton

Equipment List

THERMAL FORMING PRESSES & VACUUM BOXES

Equipment Type:	Size:	Capacity:
Gardena		
Hot Press (503)	25" x 17"	9 Ton
Hot Press (501)	102" x 40"	28 Ton
Parsons		
5 Bank Hot Press	60" x 48" (Each Bank)	14 Ton Ram
5 Bank Hot Press	60" x 240" max.	9 Ton Pusher
Hot Press Brake - 4 post side ram	100" x 30"	150 Ton/ 1500 degrees
Hot Press - Hannifin C-Frame	34" x 26"	75 Ton/ 1500 degrees
Hot Press - C-Frame side ram	50" x 38"	30 Ton/ 1500 degrees
SPF Press 4 post	58" x 42"	100 Ton/ 1750 degrees
SPF Press 4 post	58" x 42"	200 Ton/ 1750 degrees
SPF Press 4 post	72" x 48"	470 Ton/ 1750 degrees
SPF Press 4 post - with shuttle table	100" x 60"	1400 Ton/ 1750 degrees
Jumbo Press Hydraulic	96" x 144"	100 Ton/ 1500 degrees



Hot Form Press Piano – Hydraulic	41" x 101"	50 Ton/ 1500 degrees
Hot Form Vacuum Box	56" x 42" (2 boxes)	1500 degrees
Hot Form Vacuum Box	80" x 54"	1500 degrees
Hot Form Vacuum Box (Hydraulic ram optional)	84" x 100"	1500 degrees

Note: All Hot Presses & Vacuum Boxes maintain temperatures @ 1150 - 1500 degrees F +/- 25 degrees

Equipment List

WATERJET CUTTING

Equipment Type:

Size:

Parsons

Flow 5 Axis CNC Gantry Waterjet, ATA Certified (2 units)

6 ft. x 12 ft. x 24" Travel

Flow 2 Axis CNC Dual Waterjet, working beds

12 ft. x 6 ft.

Flow 2 Axis CNC Gantry Waterjet

4 ft. x 8 ft. x 12"

100 HP intensifier with 87,000 PSI

100 HP intensifier with 60,000 PSI (2 units)

25 HP intensifier with 50,000 PSI

MACHINING

Equipment Type:

Table Size:

Part Size:

Gardena

Henri Line, 5 Axis Gantry Router
Mills (2) With Fanuc 15 MB Control
On One Bed

96" X 60 ft.

96" x 60 ft x 54"
(One Machine Parked)

SNK 5 Axis Gantry With 3 Spindles
Fanuc 11 MB Control

160" x 42 ft.

160" x 60 ft. x 34"

Henri Line, 9 Axis, Two Spindle
Gantry Macbormill
Fanuc 15 MB Control

160" x 50 ft.

104" x 50 ft. x 54"

Jobs 5 Axis Milling Machine
Siemens 840D Control

X-Axis 401.574 Y-Axis 116.141 Z-Axis 59.055
A-Axis +/- 110 deg. C-axis +/- 200 deg.

Zimmermann FZ30 Machine:
Model 30/I Control
5 Axis Portal milling machine.

X-Axis 196.85 Y-Axis 112.598 Z- Axis 59.055
A-Axis +/- 110 deg. C-Axis +/- 200 deg.

Mazak , 5 Axis Combination Mill/Turn Machining Center
Mazatrol Controler.

X-Axis 120.0" Y-Axis 80.0"
Z-Axis 80.0" A-Axis + 150 deg
B-Axis 360 deg. Continuous

Equipment List

Double Pallet, Max pallet load 11,000lbs

Max milling spindle RPM 10,000

Max turning Diameter 92.52"

Max Pallet height under spindle 84.84"



Mori Seiki, 3 Axis Machine Center
With Fanuc 18 MC Control

60" x 25"

60" x 25" x 25"

SNK-RB4N, 4 Axis Vertical Mill
With Fanuc 9 MB Control

132" x 96".

132" x 96" x 48"

Seaburg, 5 Axis Gantry Router
With Fanuc 15 MAMA Control

576" x 96".

576" x 96".x 64"

Fosdick, Fosmatic Radial
Drill Machine With 72" Arm

96" x 52"

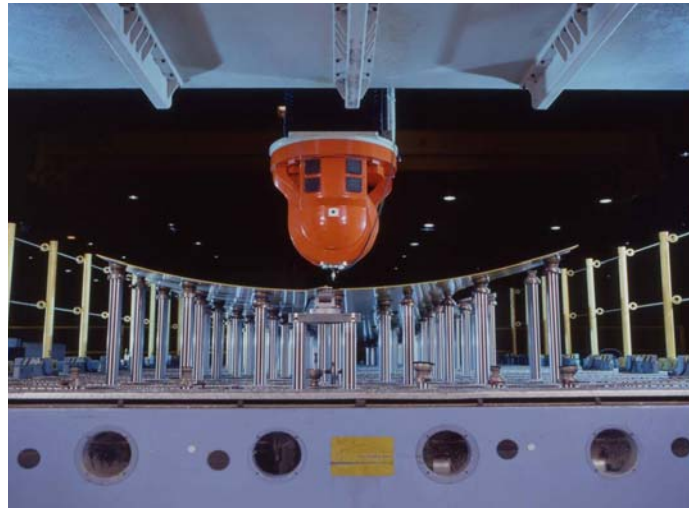
52" x 96" x 72"

Torres Router With
140 Station Pogo Table
Fanuc 15 MB / Torrestool Controls

480" x 138".

480" x 138" x 59"

Equipment List



Cincinnati, 3 Axis Tracer – Profiler	50" x 14 ft.	164" x 40" x 32"
AHF Open Side, 3 Axis Tracer – Profiler	40" x 14 ft.	142" x 40" x 48"

Orange

Shoda NC Router 3-axis, 2 spindle ATA Capable Renishaw Inspection Probe	8.5 ft. x 17 ft.	102" x 204" x 20"
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Parsons

SNK RB 2N Gantry 30 HP 24 Tool Vertical Machining Center ATA Certified	6 ft. x 10 ft.	118" x 67" x 55"
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SNK RB 2N Gantry 30 HP 24 Tool Vertical Machining Center ATA Certified	6 ft. x 10 ft.	118" x 67" x 55"
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OKK Horizontal True 4 axis 12000rpm Fanuc Series 310 160 Tool		40" x 43" x 40"
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YCM 3 axis 6000rpm Fanuc MXP-200i control		56" x 24" x 24"
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YCM 3 axis 6000rpm Fanuc MXP-200i control		56" x 32" x 28"
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Equipment List

Daewoo 3 axis 6000rpm Fanuc 18i Control	76" x 32" x 28"
Sigma 3 axis 6000rpm Fanuc 18i Control Attached 2 axis rotary table, enables true 5 axis cutting	120" x 69" x 37"
Makino FNC-106 CNC Vertical Machining Center 20 HP 30 Tool	42" x 24" x 22"
Hitachi Seiki 5000NE CNC Turning Center 30 HP 10 Tool	48" Centers

MANUAL MACHINES

Equipment Type:

Parsons

- CNC Break Press 10 FT 80 Ton
- CNC Break Press 3 FT 36 Ton
- Baykal CNC Shear 12 FT with 6 MM Capacity
- One Pass Roll Bending 19.250"
- Crob Hot/Cold 20-15,000FT/Min 45 Degree tilt
- Roll In Saw
- Sunnen Hone Machine
- Bridgeport Mill with Readout
- Bridgeport Vertical Mills
- Ikeda Radial Drill 4'

CORE MANUFACTURING

Equipment Type:

Size:

Monrovia

Thermwood CNC Router, Model 70, 5 Axis rotary spindle	10 ft. x 20 ft.
DMS Numerically controlled 5 axis Drill, Route and Mill/machine	10 ft. x 20 ft. x 6 ft.

Equipment List

PLY CUTTING

Equipment Type:

Size:

Monrovia

Gerber DSC 2500 Static Cutter

72" X 36 ft.

BONDING CAPABILITIES

Laser Projection Ply Positioning System:

Monrovia

Virtek Laser-Edge LPS-1 projectors, 8 projection heads

Virtek Laser-Edge LPS-7 projectors, 9 projection heads

7 control computers, with software & licenses



CHEMICAL MILLING TANKS

Aluminum:
Tank Size:
Orange

Tank 1
 Tank 3
 Tank 5

25 ft. x 10 ft. x 12 ft. deep
 55 ft. x 10 ft. x 12 ft. deep
 10 ft. x 20 ft. x 20 ft. deep

El Mirage

Tank
 Tank

30 ft. x 10 ft. x 24 ft. deep
 30 ft. x 6 ft. x 24 ft. deep

WELDING

Equipment Type:
Size:
Gardena:

Sciaky Electron Beam Welder Model VX.4-150x170x120 (with DM Capability)

- Chamber Size
 - 150" x 170" x 120"
- Working Envelope
 - 110" x 80" x 60"
- Power Supply
 - 42 KW D.C. rated for
 700 ma at 60 KV.
- Full 5 Axis
 Functionality



Equipment List

New York

Lincoln 355 Amp Tig Welders (3)

Size:

Parsons

Controlled Atmosphere Welding Chamber
 250 Amp Tig Welder (7)
 350 Amp Tig Welder (2)
 350 Amp Mig Welder (1)
 350 Amp inverter Aluminum Mig & Tig (1)
 350 Amp stick welding machine (1)
 Plasma cutter 1" thick (1)
 Plasma cutter 2" thick (1)

20"W x 24"H x 48"L

ROLLING MACHINES

Equipment Type:

Size:

Gardena

SIHR -17-17/3

165" X 63" X 71"

Orange

Farnham
Misc.

0.160" x 24 ft. Roll
¼" x 6 ft. Roll

PROCESSING

Equipment Type:

Tank Size:

Parsons

Chemical Clean, Descale, and Phosphate
Fluoride Treating of Titanium

36" x 144" x 60"

Prime and Paint Binks System

40 ft. Paint Booth

Equipment List

ASSEMBLY EQUIPMENT

Equipment Type:

Parsons

Chicago Pneumatic Hot Dimpler
 Chicago Pneumatic Compression Riveters (C-Squeeze)
 Baldor 3/4 H.P. Polishing Station
 Cleco Hand Held Air Riveters
 Jet 14M Drill Press
 Air Operated Sealer Dispensers

AGE / STRESS RELIEF OVENS

Equipment Type:

Oven (Inside) Size:

Capacity:

Gardena

Wisconsin Age Oven	14 ft. x 7 ft. x 25 ft.	500 degrees F 4 degrees F
Wisconsin Age Oven	10 ft. x 9 ft. x 30 ft.	375 degrees F 5 degrees F
Nafco Age Oven	8 ft. x 8 ft x 12 ft.	375 degrees F 5 degrees F

Parsons

Pacific / Stress Relief Oven (1)	40" x 44" x 72"	1385 degrees F
HTF / Stress Relief Oven (1)	40" x 44" x 72"	1385 degrees F
Small Stress Oven (1)	17" x 16" x 30"	1385 degrees F

New York

Oven # 1 (The Corl-mayer Corp.)		1843430
Oven # 13 (Blue M)	DC -1665F-X204	DC-286154787
Oven # 18 (Despatch)		
Oven # 3 (Egloff + Grader)		4060
Oven # 2 (Lonaire Limited)	TK100C204	27052
Walkin- Freezer # 6 (Bohn)		
Band Saw (Power matic)	143	9443003
Verson press (Wheelon)	10800R-36-120	10399
Press Brake (Di-acro)	Dynabend 3	JE-1070
Furnace (Oneida Royal)		
Punch (Whitney-Jensen)		

Equipment List

INSPECTION MACHINES

Equipment Type:	Table Size:	Part Size:
Gardena		
SNK CMM-1600 Coordinate Measuring Machine	Variable, As Required	63" x 157" x 39"
Leica Laser Tracker (Quantity = 2)	Not applicable	Infinite
ROMER Arm Coordinate	Not applicable	Infinite
Parsons		
Penetrant Inspection Booth		18 ft. x 14 ft. x 40 ft.
Surface Plates - Gage Blocks - Height - Gages - Optical Comparators		
L.K.	48" x 120" x 40"	48" x 120" x 40"
Coordinate Measuring Machine		
Mitutoya	28" x 60" x 18"	28" x 60" x 18"
Coordinate Measuring Machine		

All Facilities

All Hand Held Micrometers, etc. (All Calibrated and Certified to NBS Standards)

MODEL DATA MANAGEMENT

Software:

Parsons

CAD / CAM Software
Unigraphics NX5 Cad/Cam Software
Catia V5-R18 Cad Software

Gardena

Vericut
MSC Marc for FEA
Fastblank – for flatpatterns
Rhino
Geomagic – Laser scanner
Sigma Nest – Nesting software
Theorem – Catia to Ug translator

Equipment List

Unigraphics NX6, Catia V5R19, Catia V4R4.2.3
 CAE Software
 Valisys v8, Vericut v7.1.1
 CAD / CAM Hardware
 4 Dell Precision workstations, 2 IBM RS6000 workstations

Monrovia

NC PROGRAMMING / TOOL DESIGN
 (3) Seats CATIA Version 4 Release 2.4 R1
 (2) Full Seats of Design including Advanced Part Design & Detailing and
 (1) NCB/NC5 CATIA modules for NC Programming
 (5) seats CATIA Version 5 Release 19
 (1) Full Seat of Design including Advanced Part Design
 (1) Seat NC Programming module
 (2) Seat UNIGRAPHICS Version 19.0.1
 (2) Seats of Design including
 (2) Full CAM Packages
 (1) Qualified SNET / PGP V8.0 / PSN Encryption Capable Workstation
 (1) Seat Fibersim Version 4.0 Composite Engineering Environment Software
 (4) Seats SolideWorks 2009 with Photoworks, Featureworks, Animation, Cimlogic Toolbox and
 (1) seat COSMOSworks 2009 Statics Finite Element Analysis

TESTING

Equipment Type:	Size:
Parsons	
Hardness - Rockwell and Conductivity	
Penetrant Inspection	
Thickness Testing - Organic and Inorganic	
Adhesion Testing	
Abrasive Blasting	8' x 12'- Walk in
Abrasive Blasting	3' x 3'-2 stations combined

SHEET METAL EQUIPMENT

Equipment type:	Size (Inches):
Parsons	
Trumpf 5 axis Laser 2700 watt	112" x 54" x 23"
NTC 5 axis Laser 2500 watt	120" x 60" x 32"

Equipment List

New York

DiAcro Hydro-mechanical Brake Press (2)	48"
DiAcro Mechanical Brake Press	72"
Wysong Brake Press	72"
Verson Mechanical Brake Press (2)	120"



Trumpf TruBend 5085S CNC	108"
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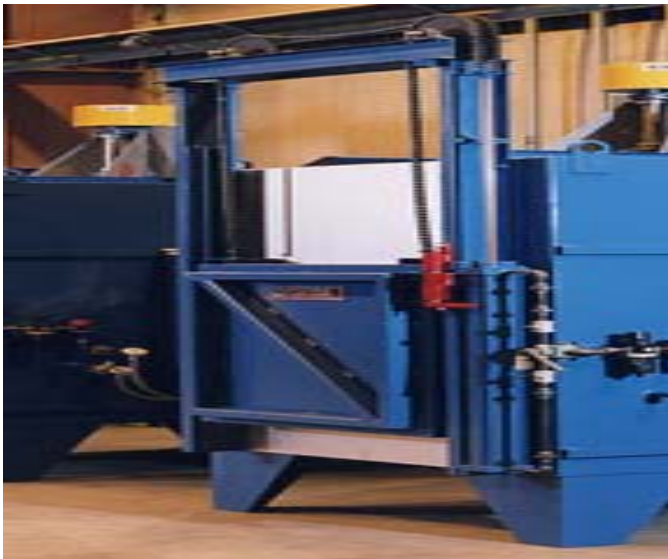
Accudyne	30" X 48"
DynaBil Industries	30" X 48"
K.R. Wilson	24" X 24"
Accudyne	60" X 40"

Equipment List



Wisconsin Die Pre-Heat Oven

60" X 36" X 42"



Curtis Machine Four Post Press

12" X 12"

Equipment List

Lake Erie

18" X 24"



SureForm 4 Post Press
Dake "H" Shape
EnerPak H Frame
Verson Wheelon 10800

24" X 42"
24" X 36"
12" X 24"
36" X 120" X 6"



Equipment List

Erco

80" X 72"



Hufford A-10
Rudel Punch Press
E.W. Bliss Co.
Pyramid Roller
Slip Rollers (5)
Drophammers (3)
Drop hammer press current large press
Chambersburg, DH #1
Chambersburg, DH#2
Chambersburg, DH#3

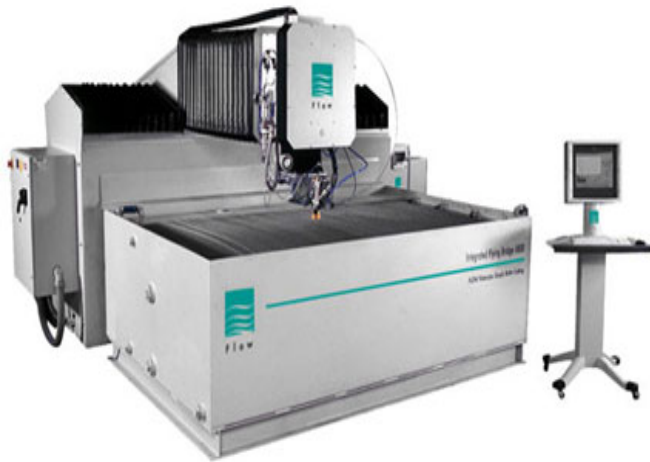
120"
6" Stroke
8" Stroke
60"
Various

63" X 48"
30" X 30"
63"X 48"
63"X 48"



Equipment List

Cincinnati	96" X .250"
2- Axis CNC Waterjet (Flow Intl)	48" X 96"
2- Axis CNC Waterjet (Flow Intl)	48" X 48"
2- Axis CNC Waterjet Dynamic (Flow Intl)	78" X 144"



5- Axis CNC Waterjet (Flow International)	60" X 108" X 24"
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5- Axis CNC Waterjet (PaR Systems)	60" X 120" X 20"
Waterjet, C- Frame	36" X 36"
Waterjet, C- Frame	36" X 36"
Waterjet, C- Frame	36" X 36"
Argon Weld Chamber	18" X 24" X 18"
Argon Weld Chamber	18" X 30" X 24"
Fusion Seam Welder	

Equipment List

MACHINED PARTS EQUIPMENT

Equipment type:

New York

Bridgeport Universal (V)
 Bridgeport Universal (V)
 LeBlonde Lathe
 Browne & Sharpe Micro Excel, CMM
 Haas TM-2 3-Axis CNC Milling
 Haas TM-2 3-Axis CNC Milling
 Haas TM-3 3-Axis CNC Milling
 Haas EC-1600 Horizontal 3 axis CNC millin

HEAT TREATING

Equipment Type:

Machine Description:	Tonnage:	Capacity:
New York		
Carl Mayer Corp Oven	200-400 deg F	44"W x 57"H x 32"D
Lunaire Limited 60kw Model TK100C204 Oven	200-1005 deg F	58"W x 45"H x 55"D
Egloff & Graper 45kw Oven	600-1400 deg F	35"W x 15"H x 45"D
Blue M Model DC-166SF-X204 Oven	200-400 deg F	13"W x 38"H x 20"D
Ducommun Custom Built Oven	1400-2000 deg F	33"W x 15"H x 30"D
Despatch 12kw Model V-31 Oven	250-300 deg F	25"W x 37"H x 21"D
Wisconsin 60kw Model EWN-66-8.5E Oven	500 deg F	60"W x 60"H x 90"D