

## Equipment List

### HYDRAULIC STRETCH FORMING PRESSES

Equipment Type:	Size:	Capacity:
<b>Gardena</b>		
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
 <b>Parsons</b>		
Watson-Stillman Hot Jogging and Hydro Press		575 Ton

## PRESS BRAKES & SHEARS

<b>Equipment Type:</b>	<b>Size:</b>	<b>Capacity:</b>
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<b>Gardena</b>		
Cincinnati Press Brake	42 ft. Wide	1250 Ton



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

<b>Orange</b>		
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:
<b>Gardena</b>		
Hot Press (503)	25" x 17"	9 Ton
Hot Press (501)	102" x 40"	28 Ton
<b>Parsons</b>		
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)  
 Flow 2 Axis CNC Dual Waterjet, working beds  
 Flow 2 Axis CNC Gantry Waterjet  
 100 HP intensifier with 87,000 PSI  
 100 HP intensifier with 60,000 PSI (2 units)  
 25 HP intensifier with 50,000 PSI

6 ft. x 12 ft. x 24" Travel  
 12 ft. x 6 ft.  
 4 ft. x 8 ft. x 12"

### 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"

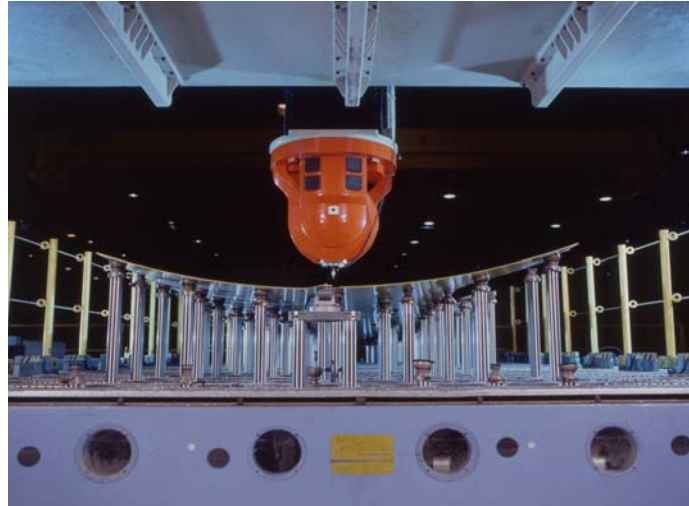
52" x 96" x 72"

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 &amp; licenses

**PAINT AND PAINT PREP****Equipment Type:****Size:****Guaymas**

Spray Tech paint and curing down draft booth

51' L X 14' W X 9' H





**Equipment List**

Dust Collection Sanding Booth back draft

15' L X 9' W X 8' H

**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**

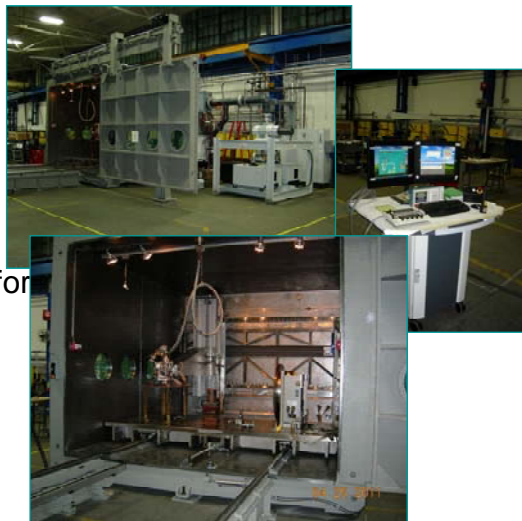
**Equipment Type:**

**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:
<b>Gardena</b>		
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
<b>Parsons</b>		
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		
<b>Guaymas</b>		
Faro Laser Tracker system		
<b>All Facilities</b>		
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  
 Abrasive Blasting

8' x 12'- Walk in  
 3' x 3'-2 stations combined

### SHEET METAL EQUIPMENT

**Equipment type:**

**Size (Inches):**

**Parsons**

Trumpf 5 axis Laser 2700 watt  
 NTC 5 axis Laser 2500 watt

112" x 54" x 23"  
 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"

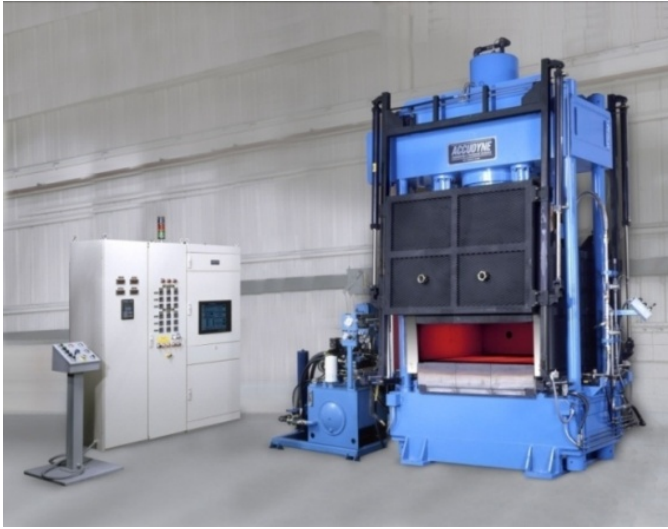


Trumpf TruBend 5085S CNC	108"
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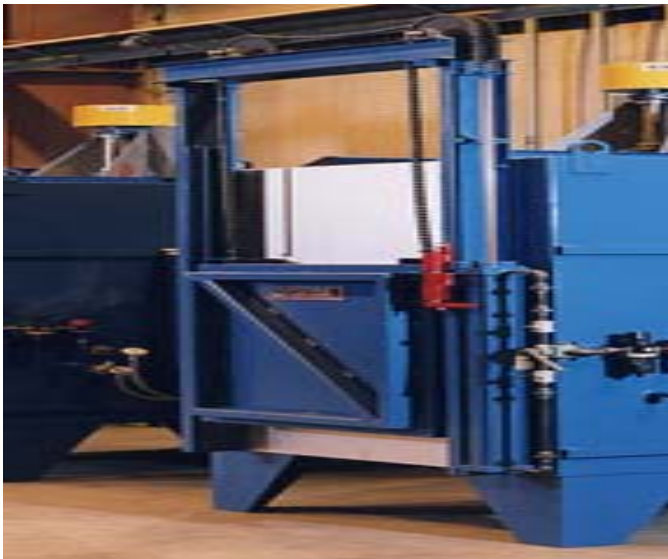
Accudyne	30" X 48"
DynaBil Industries	30" X 48"
K.R. Wilson	24" X 24"
Accudyne	60" X 40"

### 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"



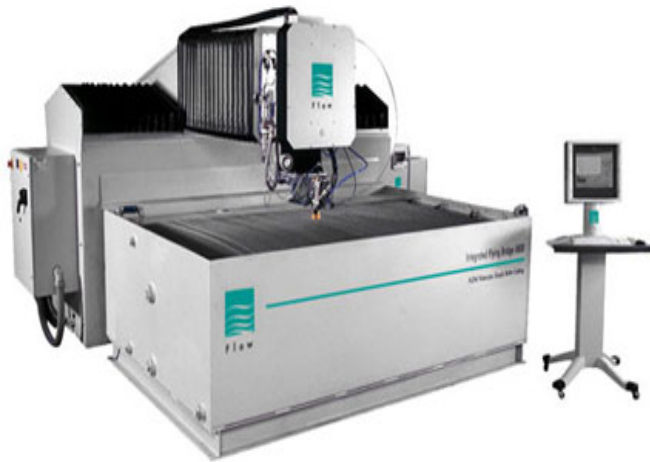
Hufford A-10  
Rudel Punch Press  
E.W. Bliss Co.  
Pyramid Roller  
Slip Rollers (5)  
Drophammers (3)  
Drop hammer press current large press  
Chambersburg, DH #1  
Chambersburg, DH#2  
Chambersburg, DH#3

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:
<b>New York</b>		
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