



BERTRAND PRODUCTS

EQUIPMENT LIST

The following is a list of manufacturing equipment that enables Bertrand Products, Inc. to produce precision machined parts to your specifications. For your convenience in reviewing Bertrand's production capabilities, please note that the list is developed into seven sections as follows:

Section	Equipment Type
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A	CNC MACHINES
B	CONVENTIONAL MACHINES
C	MISCELLANEOUS EQUIPMENT
D	INSPECTION EQUIPMENT
E	NON-DESTRUCTIVE TESTING EQUIPMENT
F	SPECIAL PROCESSES APPROVAL
G	ENGINEERING

Precision Parts Since 1953

2323 Foundation Dr. South Bend, IN 46628 | 574.234.4181 | F. 574.234.9890

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Jan. 2018

SECTION A: CNC MACHINES

Type	Quantity	Manufacturer	Description
CNC Lathe	1	Doosan	Lynx 220 8" Chuck (Capacity: 10" x 20")
CNC Lathe	1	Doosan	Lynx 220L 8" Chuck (Capacity: 10" x 20")
CNC Lathe	1	Doosan	Lynx 300 10" Chuck (Capacity: 10" x 20")
CNC Lathe	1	Doosan	Puma 2600SY II C & Y Axis Mill\Turn 10" Chuck (Capacity: 14" x 20")
CNC Lathe	1	Doosan	Puma 240MS X Z\C Axis Mill\Turn 10" Chuck
CNC Lathe	1	Doosan	Puma 300 10" Chuck
Vertical Machining Center	1	Doosan	DNM 500 (Capacity: 40" x 20" x 20")
Vertical Machining Center	1	Doosan	DNM 650 (Capacity: 50" x 20" x 20")
Vertical Machining Center	1	HAAS	VF3 (Capacity: 40" x 20" x 20") (Capacity: 10" x 25")
Vertical Machining Center	1	OKK	5TS Twin Spindle (Capacity: 40" x 20" x 22")
Vertical Machining Center	1	Okuma	5V w/Indexer (Capacity: 41" x 20" x 22")
CNC Vertical Machining Center	1	Okuma	ES-V3016 w/4th Axis (Capacity: 30" x 16" x 20.6" - Travels)
CNC Vertical Machining Center	1	Okuma	ES-V4020 w/4th Axis (Capacity: 40" x 20" x 20")
CNC OD Grinder	1	Shigiya	Capacity: 8" Dia. x 30" length)



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SECTION B: CONVENTIONAL MACHINES

Type	Quantity	Manufacturer	Description
Milling:			
Vertical Mill	5	Bridgeport	Manual Milling Machines
Horizontal Mill	1	Cincinnati	Production Mill
Horizontal Mill	1	Kearney & Trecker	Production Mill
Turning:			
Precision Lathe	4	Hardinge	HC Chucking Lathes
Precision Lathe	1	Hardinge	Speed Lathe
Precision Lathe	1	Jet	Manual Production Lathe
Precision Lathe	1	Jet	Manual Lathe 10" Chucking
Grinding:			
Surface Grinder	1	Kent	Tool Room Grinder
Blanchard Grinder	2	Blanchard	22A - 42" and 18A - 36"
O.D. Grinder	1	Cincinnati	1 - 10" x 28"
Centerless Grinder	1	Cincinnati	#2 Centerless
Tool Grinders	26	Various	Universal Tool Grinders
Drilling	2	Clausing	6 Head Drill Press
Gun Drilling	1	Kansai Seisakusho	22" Stroke Gun Drill
Honing	1	Sunnen	Model 1800

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SECTION C: MISCELLANEOUS EQUIPMENT:

Ovens (5)
Fatigue Technologies Cold Expansion Hole system
Paint Spray Booth
Fly Wedge Urethane Machine
Wire Wrap Machines (2)
Riveter
Vibratory Finisher (2)
Bead Blasters
Marking Equipment
Forklift - 3000 lb Capacity
Scales
Buffing and Polishing Machines
Sander
Dust Collectors
Fellows Gear Shaper

SECTION D: INSPECTION EQUIPMENT

Mitutoyo - Calypso CMM
Digital Height Gages
Hardness Testers
Electrical Conductivity Measurement
Optical Gages
Optical Comparator/Shadow Graph
Federal Air Gages
Sunden Precision Bore gages
Gage Pins
Thread Plugs and Rings
Gage Blocks
Surface Profile Measurement
Coating Thickness Measurement
Mecmesin Load Test
Brown & Sharp Load Test
Johnson Tri-Roll Thread gages

SECTION E: NON-DESTRUCTIVE TESTING EQUIPMENT

Magnetic Particle Inspection Equipment: 52" Head Opening, 12" and 20" Coils, 600 Amps Maximum
Fluorescent Liquid Penetrant Equipment: 24" x 16" Tanks
Ultrasonic Testing Equipment (1 unit) - 14" Maximum Length, C-Scan and A-Scan
Surface Temperature Etch Equipment (Nital Etch): 12" x 16" x 16" Tanks



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SECTION F: SPECIAL PROCESSES APPROVAL

Ultrasonic Inspection

Magnetic Particle Inspection - Level III

Liquid Penetrant Inspection - Level III

Surface Temper Etch Inspection (Nital Etch)

Epoxy Resin Coat (Blue Coat)

Dry Film Lube

Clean Room

SECTION G: ENGINEERING

CAD: Modeling software Solid Works V2018

CAM: Programming software Master Cam V18

3D Printing: Visual Aid Prototyping Stratys

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