

“FOR PRODUCTS OUT OF THIS WORLD”



MANUFACTURING & ENGINEERING



PRECISION MACHINED PRODUCTS



POWILL MANUFACTURING & ENGINEERING, INC.

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The Powill Tradition

Since 1959 Powill Manufacturing & Engineering has been at the forefront of technological developments in manufacturing. Our organization entered the field at a revolutionary time, marked by the first hypersonic flights of the North American X-15 and the first commercial trans-Pacific flights of the Boeing 707.

Today Powill proudly manufactures precision, world-class, built-to-order components for the modern commercial and military-grade aerospace industries.

Powill's machined products reflect over half a century of experience, acquired skill and increasing complexity. The technological spinoff of former aerospace giant Sperry Corporation, Powill has steadily grown from an initial staff of 12 to a staff of 102, 80% of which are manufacturing specialists.

Our certified engineering team operates cutting-edge equipment for turning, milling, gun drilling, honing, grinding and other machining procedures, both CNC and manual. Components are manufactured out of titanium, stainless steel and inconel alloys of virtually any hardness, as well as steel, aluminum and plastic.

AS9100-certified and backed by our Total Quality Department, which follows a product from concept to completion, Powill boasts of lean enterprise and highly variable manufacturing.

The team of management and employees at Powill Manufacturing & Engineering welcomes all inquiries and encourages both prospective and long-term clients to tour our facility at their convenience.

Facilities and Portfolio

Nearly 50000 square feet of climate-controlled warehouse, manufacturing and office space at Powill Manufacturing & Engineering house some of the world's most advanced CNC equipment and CAD/CAM technology. CNC turning and milling, CNC and manual gun drilling, high-performance honing, CNC wire EDM and OD grinding, and 4-axis mill/turn procedures are performed by experienced machinery operators.

The work floor has been designed and laid out for maximum flexibility, and to ensure a fluid flow of production. Strict access controls, comprehensive monitoring, entry prevention and fire suppression systems guarantee security and safety for employees and the components they manufacture.

Our portfolio ranges from components in F-22 Raptors to Apache Longbows to Virginia class submarines, and includes multiple projects for Boeing, Airbus, Lockheed, Honeywell and Parker Hannifin.

Powill specializes in gun drilling to depths of 30 inches for hole diameters ranging from 0.125 to 1.500 inches.

Process & Work Flow

The Total Quality Department at Powill Manufacturing & Engineering oversees all aspects of the manufacturing process to assure product specification and compliance. AS9100 certification guarantees rigid, end-to-end adherence to product quality and aerospace industry standards.

Production begins by accepting a built-to-order design. Our Engineering Department employs the latest CAD/CAM software – GibbsCAM, Autodesk Inventor, Virtual Gibbs – in designing machine-calibrated components to stringent specifications. The Manufacturing Department then shapes components, which may pass through any of the state-of-the-art small and large turning centers or grinding and CNC milling centers. The Total Quality Department performs a final precision inspection before delivery.

Powill abides by the 5S methodology, which results in quality, efficiency and rapid turnaround on project orders. Our facility takes pride in its stellar delivery record.

Service is paramount at Powill. We seek open communications and constructive feedback from clients to better meet their growing manufacturing needs.



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MANUFACTURING FACILITIES LIST

CNC 3 & 4 Axis MILLING / TURNING CENTERS

2	Doosan Puma VT1100M CNC Vertical Turning Center with live tooling, 39" max. Turning dia.	2019-2018
2	Haas ST20Y CNC Turning Center with live tooling and Y-axis, Programmable Tailstock, high pressure coolant	2019
1	Nakamura-Tome WT-300 8-Axis Precision Turning Center with 24 stations on Dual Turrets, live tooling, Y-axis, 2 ½" Diameter Bar with and LNS bar feed	2017
2	Mori-Seiki NLX2500SY/700 CNC Turning Center with live tooling and Y-axis, Sub-spindle, 3.1" Diameter Bar	2016
2	Mori-Seiki NL1500 CNC Turning Center with live tooling and Y-axis, Sub-spindle, 2" Diameter Bar and LNS bar feed	2008-2015
2	Mori-Seiki NL2500 CNC Turning Center with live tooling and Y-axis, Programmable Tailstock, 3" Diameter Bar and LNS bar feed	2007-2015
1	Nakamura-Tome WT-250 7-Axis Precision Turning Center with 24 stations on Dual Turrets, live tooling, 2 ½" Diameter Bar with and LNS bar feed	2004
1	Nakamura-Tome SC-450-M 3 axis (Full C-axis) CNC Turning Center 12 stations, live tooling, high pressure coolant	1999
1	Hardinge Conquest T-42SP 1 5/8" Twin Spindle with live tooling and Har-matic Bar Feed.	1996

CNC TURNING CENTERS

2	Mori-Seiki NL1500 CNC Turning Centers, Programmable Tailstock, 2" Bar Capacity & 6" chucking.	2012
3	Hardinge GS 42 CNC Turning Centers 2 with Bar Feed 1-5/8 Bar Capacity & 10" chucking.	2010
1	Hitachi-Seiki Hitec-Turn 25G CNC Turning Center	1998
1	Hitachi-Seiki Hitec-Turn 30G Long Bed CNC Turning Center	1998
1	Nakamura - Tome Slant 4, CNC 3" Bar & 18" Chucking Cap.	1989
2	Hardinge Conquest T-42 CNC Turning Centers	1988

CNC HORIZONTAL MILLING MACHINE CENTERS

1	Matsuura H.Plus-300 19" x 22" x 19" CNC 60 Tool Changer w/automatic Pallet changer, full 4 axis, 15,000 RPM Spindle, High Speed Machining	2015
1	Matsuura ES-450HII 17" x 15" x 15" CNC 30 Tool Changer w/automatic Pallet changer, full 4 axis, 15,000 RPM Spindle, High Speed Machining	2000
3	Matsuura ES-450H 17" x 15" x 15" CNC 30 Tool Changer w/automatic Pallet changer	1997-2000

CNC VERTICAL MILLING MACHINE CENTERS

2	Haas VF-4SS, 50" x 20" x 25" CNC, 40 Tool Changer, full 4 th axis	2018
1	Mori Seiki NMV5000 full 5-Axis CNC, 28" x 20" x 20" High Speed Machining, 61 Tool Changer w/ High Pressure Coolant and 20,000rpm Spindle	2010

1	Fanuc Robodrill MATE, 16" x 12" x 12" CNC, 14 Tool Changer, indexing 4 th axis	2006
1	Fanuc Robodrill T14iB, 27" x 15" x 12" CNC, 14 Tool Changer, indexing 4 th axis	2002
1	Matsuura MC-510VG 20" x 14" x 18" CNC, 20 Tool Changer, full 4 th axis	1997
1	Matsuura MC-510VF 20" x 14" x 18" CNC, 20 Tool Changer, indexing 4 th axis	1996

CNC GUN-DRILLING MACHINES

1	Eldorado M75-30 ¾" Diameter x 24" depth Capacity Dual Spindle, CNC Control	2014
1	DeHoff Ø1.5" x 28" depth Capacity, CNC Control	1998

GUN-DRILL - DEEP HOLE DRILLING

1	DeHoff Ø¾" Capacity Gun-Drill 18" Depth	1981
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EDM

1	Accutex HP-350 ZNC Hole EDM w/ 50 Amp Power Supply	2016
1	Fanuc Alpha 1iB-S/AWF 12" with Fanuc 180is-WB CNC Control	2002

CNC OUTSIDE DIAMETER GRINDING MACHINES

1	Toyoda - Select G-100II - CNC O.D. Grinding Machine 11.8" dia. x 35" capacity	2007
1	Supertec - G32-60NC - CNC O.D. Grinding Machine 12" dia. x 24" capacity	2007
1	Kellenberger - Kel-Vision - CNC Angular O.D./I.D Grinding Machine 9.84" dia. x 17" Cap, URS 125/430 GE / FANUC 18-TB Graphics Control	2005
1	Kellenberger - Kel-Vision - CNC Angular O.D. Grinding Machine 9.84" dia. x 17" Cap, RS 125/430 GE / FANUC 18-TB Graphics Control	1998

MANUAL O.D., I.D. & SURFACE GRINDERS

1	Cincinnati #2 Centerless Grinder	2003
1	Cincinnati LTC 2 - OMV through Feed Centerless Grinder	2002
1	Kent Automatic Surface Grinder 12" X 24"	1988
1	Cincinnati Heald 276 I.D. Grinder, 16" Swing X 12" max. hole length	1986
3	K.O. Lee ID/OD Grinder	1985
2	Toyoda 8" X 16" Cap Fully Automatic O.D. Grinder	1981-1984
1	Boyer Schultz Surface Grinder	1974
1	Harig Surface Grinder	1974

PRECISION HONING MACHINES

1	Sunnen ML-3500 Power Stroked Hone Machine High-performance & high-productions, super precision honing	2000
1	Sunnen Manual Hone	1970

MANUAL CHUCKERS

3 Hardinge Chuckers (1 with Automatic Thread Heads) 1972-1976-1980

MANUAL LATHES

1 17" Mori-Seiki Engine Lathe 1978
1 HLV-H Hardinge Tool Room Lathe 1978
1 27" Swing Tuda Engine lathe 1973

VERTICAL JIG BORER

1 #3 Moore Vertical Jig Borer 1985

VERTICAL MANUAL MILLS

1 Bridgeport 12/BR2J with Digital Readout 1994
1 Bridgeport 12/BR2J with riser 1978
2 Bridgeport 12/BR2J with Power Feed 1971-1975

DRILL PRESSES

2 Burgmaster (Bench) 1980
5 Pedestal & Bench Drill Presses 1978-1987
1 Rockwell 6 Spindle 1974

MISCELLANEOUS

1 HFA250W Amada Band Saw	1 Scherr Tumico Optical Comparator
1 Kalamazoo Cutoff Saw 12" Cap.	3 J & L Optical Comparators
1 Denison Multi-press 6 ton	3 Sweco Tumblers
1 Amada Auto. Cutoff Saw 1989	1 Ultra-Sonic Cleaning
3 Pedestal Grinders	1 4' Manual Shear

INSPECTION

All final inspection is done in our temperature and humidity controlled clean room. The below listed equipment is maintained in this room to ensure constant accuracy.

Federal Air Gages	K.O. Lee Bench Centers
5 Sunnen Hole Gages & Sunnen Setting Fixtures	Mitutoyo Master Cera Blocks
Sheffield Limit Gages	B & S Super Micrometer
Plug & Thread Gages	Meter-Surf #3 Profilometer
Scheer Tumico Height Gage	Granite Surface Plates
J & L Optical Comparator	Master Granite Angle Plates & Parallels
Gage Master Optical Comparator with Digital Read-out & Post Processor	Micrometers, etc.
Starrett HB400 Comparator with Quadra-Check Read Out.....	2010

COORDINATE MEASURING SYSTEM

1	Hexagon Metrology 7.10.7 SF 28"x40"x 26" Coordinate Measuring Machine	2014
1	Brown & Sharpe Tesa-Scan 50 Plus Non-Contact Measuring System	2012
1	Brown & Sharp Global Image 7107 DCC 28"x40"x 26" Coordinate Measuring Machine	2002

SUPPORT EQUIPMENT AND SYSTEMS

- 2 User Cybernetics total Calibration System & Gage Tracker
 - 1 Speroni CNC Tool Measurement & Presetting System
 - 1 Hofmann High Speed Toolholder Balancing Machine
 - 4 Seats of Virtual Gibbs CAD/CAM on PC (2 with Solid Surfacing)
 - 6 Seats of Autodesk Inventor solid modeling software
 - 1 DNC System - 48 machine capacity- Xpert CNC Technologies DNC software
- (All systems are integrated from the tool setter, CAD/CAM, Shop System, DNC, & Machine tools.)

OUR PRESENT FACILITIES ENCOMPASS THE FOLLOWING TYPES OF WORK:

- Small diameter CNC turning with automatic bar feeders on materials - up to 3" diameter.
- Large diameter CNC Turning/Milling - up to 39" diameter
- Deep hole drilling - 1/8" to 1 1/2" diameter x 28" deep
- Precision assembly / pressure test
- Complete tooling facilities
- Complete burring and cleaning equipment
- CNC Milling and Drilling of small and large production runs
- Precision ID honing
- Precision CNC ID/OD grinding (various sizes)
- Precision manual ID grinding
- Precision centerless through feed (3 1/2' max diameter)
- Precision centerless end feed (3' max length x 6' max diameter)
- Wire EDM
- Laser part mark
- Dot peen marking



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Precision Machining | CNC Milling | CNC Turning | CNC I.D. & O.D. Grinding
Honing | Prototype Wire EDM | Gun Drilling

Certified ISO 9001:2000 / AS9100



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