Grind Master is a pioneer and leader in special purpose machine for Metal finishing, Deburring, Microfinishing, Dynamic Balancing and solutions including Robotic Automation and Abrasives and builds over 400 machines year.

With state of the art design and manufacturing facility spread over 100,000 sq ft, & motivated team with an infinite passion for building Solid solutions that exceed expectations, Grind Master is your trusted technology partner. Our dedicated R & D team has a track record of developing breakthrough technologies.

With Grind Master, you can always expect a commitment, a “Can and Will” attitude to deliver value for the customer by building hi-performance machines and solid partnerships.

Our alliances with worldwide leaders in technology, and a vast experience in building machines for global markets, make Grind Master solution trustworthy & reliable.

In collaboration with Impco USA, Grind Master has surged ahead in the field of microfinishing both in machine building capability & process knowledge. Grind Master offers complete solution the machine, the tools & the process.

We have constantly pushed boundaries of ideas and technologies. As part of our eternal quest to be the best that the industry has to offer, we continue to evolve to the absolute.
**Why Microfinish?**

Non-microfinished surface is like a snow-covered lake. A person’s weight will produce footprint in the snow whereas the ice will even provide support for the concentrated pressure of a person on ice skates.

**Microfinishing**
- Removes the unstable, amorphous surface
- Generates consistent part surface finish

**Methods of Microfinishing**

- **Contact Wheel and Platen Method**
  - Job is held between centers
  - Superfinish

- **Centreless Methods for Cylindrical short length parts, pins etc.**
  - Superfinish

- **Rigid shoes Method**
  - Microfinish

**The advantages of Microfinishing with film backed abrasive**

a. Specific & uniform surface finishes that are easy to repeat.
b. Consistency in finish (High CPK values).
c. High productivity due to
   - Faster operation as compared to conventional methods.
   - Quick tool changing & set ups.
d. No in process control required - user-friendly design.
Superfinish Automotive Transmission Parts
SMP300 /500 / 800 Series

Model: NanoFinish SMP 500E

Machine Specifications
● International Machine Build Standard
● Admit Between Center 500mm
● NANOFINISH Control system
● Energy Efficient, Space Saving
● Capability for Automatic Load/Unload
● Expansion to upto 3 Stations

Model: NanoFinish SMP 500/800_LS_CS

Machine Specifications
● Options for Full Enclosure/ Auto Door/ Localized Guarding
● Longitudinal And Cross Servo Axis for Versatile Use
● Optional: Size Control
Superfinish Automotive Transmission Parts
SMP300 /500 / 800 Series

Model: NanoFinish SMP 500_LM_CP

Machine Specifications
- Options for Full Enclosure/Auto Door/Localized Guarding
- Dedicated machine for Volume Production
- Manual Swivel Angle Adjustment

Case Studies

Synchro Cone
Input : Ground 0.6 Ra
Output : Below 0.7 Ra
Cycle Time : 40 sec./component

Steering Rack Bar
Input : 0.6 Ra Ground
Output : Below 0.15 Ra
Cycle Time : 50 sec./component

Idle Gear
Input : Ground 0.4 Ra, 3.4 Rt, 2.0 Rv
with pmr of 80% at 0.5 depth
Output : Below 2 Rz
Cycle Time : 60 sec./component

Main Shaft
Input : 0.6 to 0.8 Ra Ground
Output : Below 0.16 μRa
Cycle Time : 40 sec./step

Turbo Charger Shaft
Input : 0.25 μRa
Output : 0.12 μRa & below, 80% tp ratio
Cycle Time : 20 seconds/step
Superfinish SPMs
High Volume Production Machines

Model: NanoFinish SMP 300_S3
Superfinish of Gear Pump Shaft

Machine Specifications
- 3 station machine for Deburring & Polish Gear Face and Microfinishing of Bearing Diameters of Gear pump shaft
- Input finish: 0.4 Ra
- Output finish: Below 0.15 Ra
- Productivity: 60 to 120 components / hour

Model: NanoFinish SMP 300_S2
Superfinish of Output Shaft

Machine Specifications
- 2 station machine for Superfinishing diameter and Taper on Output Shaft
- Productivity: 60 to 120 components / hour
SuperFinish Heavy Components

Model: NanoFinish SMP_1500_Series
SuperFinish of Rotogravure Cylinder

Machine Specifications
- Admit between centre: 400mm - 1400 mm
- Diameter: Upto 385mm
- NANOFINISH Control system
Rotogravure Specific Application Suite:
- SuperFinish to high surface Finish
- Removal of Milky Layer
- Accurate Generation of Helical
- Engineered Software Functions for Rotogravure Industry

Model: NanoFinish SMP_3000_Series
SuperFinish of Hydraulic Piston Rod

Machine Specifications
- Admit between centre: 400mm - 3000 mm
- Input finish: 0.4 µ Ra
- Output Finish: 0.05 µ Ra
- NANOFINISH Control System

Optional:
- Machine with Gantry loading & unloading system
- Machine Enclosure
Centerless SuperFinishing

Model: NanoFinish SMP Plunge

Machine Specifications
- For finishing piston pins, cam follower rollers, piston rods etc.
- Input Finish: Ground to 0.2 Ra tp 0.4 Ra
- Output Finish 0.04 - 0.08 Ra
- Production: 60 to 80 pcs/hr

Model: NanoFinish SMP 300 AUT

Machine Specifications
- With Automatic Shuttle Loader/Unloader
- Input Finish: Ground to 0.2 Ra tp 0.4 Ra
- Output Finish 0.04 - 0.08 Ra
- Production: 120 parts/hour
Microfinishing Attachments

Applications

- Printing Rollers
- Paper Mill Rollers
- Rotogravure Cylinders
- Hardchrome Plated Cylinders
- Titanium Rolls for Copper & Foil Manufacture
- Ceramic Rolls
- Rollers for Aluminum and Brass Foil manufacture
- Rollers in Polyester Film Extrusion
- Rubber Rollers
- Skin Pass Mill Roll
- Tube Drawing Mandrels and Plug
- Oil Seal Mandrels
- Photo Copier Rollers

Accessories

- Coolant Filtration System
- Kit for Independent Attachments (Ideal for mounting on Lathe)
- Kit for Machine Integrated Attachments (for SPMs)
- Low Film Detection Sensing

MP25
- Film Width: upto 25mm
- Weight: 60 kgs
- Size: 650L X 300W

MP100
- Film Width: upto 100mm
- Weight: 100 kgs
- Size: 750L X 350W

MP200
- Film Width: upto 200mm
- Weight: 140 kgs
- Size: 750L X 400W

MP100E
- Film Width: upto 100mm
- Weight: 100 kgs
- Size: 750L X 350W

MP xx  yy zz aa

- xx: Nominal Width of Film: 25/100/200
- yy: Variants:
  - C: Compact Series
  - CS: Compact with Servo
  - E: Integrated
- zz: Mounting:
  - V: Compact, Vertical Mounting
- aa: Configuration:
  - LH: Left Handed (see images above)
  - RH: Right Handed

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SMP Platform Polishing Machine

Model: NanoFinish SMP800_LS_VS_POL

- Steering Rod: Linear Buffing
  - Special Auto Unload System
  - Automatic Wear Control

Model: NanoFinish SMP800_LS_CS_POL

- Steering Rod: Cylindrical Buffing
  - Special Auto Unload System
  - Automatic Wear Control
NANOFINISH Control System for Superfinishing Machines

Engineered Software for SMP Series Machine

- Touchscreen User-friendly HMI
- Machine Diagnostics
- Energy Saver Software
- Overview Screens to show exact Machine status and Parameters

Easy Recipe Programming for different Part Types
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NOTE: We reserve the right to change the design & specifications without notice. Accessories shown in photograph may not be a part of standard machine.