SPM

Sino Precision Manufacturing

1. COMPANY OVERVIEW & CAPABILITIES

Sino Precision Manufacturing (SPM) is a premier provider of high-precision CNC machining services. We specialize in complex geometries, tight tolerances, and rapid turnaround times for industries including Aerospace, Medical, Automotive, and Robotics.

CORE CAPABILITIES

CNC Milling (3/4/5-Axis)	High-speed milling for complex contours and prismatic parts.
CNC Turning	Live tooling capabilities for combined turning and milling operations.
Swiss Machining	High-volume, high-precision production for small diameter parts.
EDM (Wire & Sinker)	Electrical Discharge Machining for hardened steels and intricate details.

KEY PERFORMANCE METRICS

Standard Tolerance	±0.010 mm (ISO 2768-m)
Precision Tolerance	±0.005 mm (Upon request)
Max Part Size	1500 mm x 800 mm x 600 mm
Min Part Size	2 mm x 2 mm x 2 mm
Lead Time	Standard: 10-15 days | Expedited: 3-5 days

2. EQUIPMENT LIST & SPECIFICATIONS

CNC MILLING CENTERS

Model	Type	Travel (X/Y/Z)	Spindle
Haas VF-2SS	Super Speed Vertical Machining Center	762 x 406 x 508 mm	12,000 RPM
DMG MORI DMU 50	5-Axis Universal Milling Machine	500 x 450 x 400 mm	18,000 RPM
Mazak VCN-530C	Vertical Machining Center	1050 x 530 x 510 mm	15,000 RPM
Fanuc Robodrill	High-Speed Drilling/Tapping Center	700 x 400 x 330 mm	24,000 RPM

CNC TURNING CENTERS

Model	**Type**	**Capacity**
Mazak Quick Turn 250MY	**Turning Center with Milling**	**Max Dia: 380 mm**
Doosan Puma 2600	**High Performance Turning Center**	**Max Dia: 480 mm**
Citizen L20	**Swiss Type Automatic Lathe**	**Max Dia: 20 mm**

3. MATERIALS & FINISHES

METALS

Aluminum	6061-T6, 7075-T6, 5052, 6063, 2024, MIC6, 6082
Stainless Steel	303, 304/304L, 316/316L, 17-4PH, 15-5PH, 416, 420, 440C
Steel	Mild Steel (1018, 1045), Alloy Steel (4140, 4340), Tool Steel (A2, D2, H13, O1)
Titanium	Grade 2 (Pure), Grade 5 (Ti-6Al-4V)
Copper & Brass	C110, C101 (Oxygen Free), C360 (Free Machining Brass), C932 (Bronze)

PLASTICS

Engineering	PEEK, POM (Delrin/Acetal), Nylon 6/66, ABS, PC (Polycarbonate)
High Performance	Ultem (PEI), Torlon (PAI), PTFE (Teflon), PPS, PVDF
Transparent	Acrylic (PMMA), Polycarbonate (PC)

SURFACE FINISHES

Standard	As-Machined (Ra 1.6-3.2), Bead Blasting (Matte)
Chemical	Anodizing (Type II Clear/Color, Type III Hard), Passivation, Chromate Conversion
Mechanical	Polishing, Brushing, Tumbling, Grinding
Coating	Powder Coating, Painting, Black Oxide, Zinc Plating, Nickel Plating

4. QUALITY ASSURANCE

Quality is the cornerstone of SPM's manufacturing process. We adhere to strict ISO 9001:2015 compliant procedures to ensure every part meets your exact specifications.

INSPECTION EQUIPMENT

CMM	Hexagon Global S (Accuracy: 1.7 + L/333 µm)
Optical Measurement	Keyence IM-8000 Image Dimension Measurement System
Surface Roughness	Mitutoyo Surftest SJ-210
Hardness Tester	Rockwell & Brinell Hardness Testers
Manual Tools	Calibrated Micrometers, Calipers, Height Gauges, Pin Gauges, Thread Gauges

QUALITY CONTROL PROCESS

1. Raw Material Inspection (IQC): Verification of material grade and dimensions.
2. First Article Inspection (FAI): Detailed check of the first part before full production run.
3. In-Process Quality Control (IPQC): Regular checks during machining to monitor tool wear and drift.
4. Final Quality Control (FQC): 100% visual inspection and random dimensional sampling.
5. Pre-Shipment Inspection (OQC): Verification of packaging, quantity, and documentation.

DOCUMENTATION

- Certificate of Conformance (CoC)
- Material Test Reports (MTR)
- First Article Inspection Report (FAIR)
- Plating/Heat Treatment Certificates