Casting Capabilities

Parameter	Capability
Sub-categories	Investment Casting, Sand Casting, Pressure Die Casting
Typical Weight Envelope	Few grams up to ~200 kg (investment); higher range for sand casting project-based
Standards	ISO 8062, ISO 2768, VDG P690, IS 11166
Surface Roughness	Investment ~Ra 1.6-6.3 µm; 63-250 RMS. Sand higher; machined surfaces lower as required
Materials	Carbon steel, Alloy steel, Stainless steel, SG iron, Grey iron, Aluminium, Copper alloys
Supply Condition	Raw, Shot blasted, Heat treated, Semi-machined, Fully machined, Assembly ready
Tooling Variables	Pattern / die development, Multi-cavity tools, Tool ownership models, Lifecycle support
Batch Size Flexibility	Prototype to low batch to repeat OEM production
Secondary Operations	CNC machining, Threading, Coating, Surface finishing, Assembly
Engineering Support	DFM feedback, Process selection support, Cost optimisation

Forging Capabilities

Parameter	Capability
Sub-categories	Closed die, Open die, Upset and Ring rolling
Typical Weight Envelope	Small precision forgings up to 100 kg; larger industrial sections project-based
Standards	IS 3469
Surface Roughness	As-forged surface improved via machining / grinding
Materials	Carbon steel, Alloy steel, Stainless steel, Aluminium, Project-based
Supply Condition	As forged, Heat treated, Rough machined, Fully machined
Heat Treatment	Normalising, Q&T, Annealing, Case hardening (project-based)
Tooling Variables	Die design, Preform design, Die life management
Batch Size Flexibility	Development runs, Medium batch, Repeat programs
Secondary Operations	CNC machining, Grinding, Thread rolling, Coating
Engineering Support	DFM feedback, Process selection support, Cost optimisation

Precision Machining Capabilities

Parameter	Capability
Sub-categories	CNC Turning, CNC Milling, Grinding, Multi-operation machining
Part Size Envelope	Small precision parts to medium/large industrial parts (machine envelope dependent)
Tolerance Range	Tight tolerance up to 10 microns (0.0004 inch) drawing defined
Surface Roughness	Fine finish achievable via grinding / finishing
Fixtures and Tooling	Custom fixtures, Repeat setups, Process planning
Production Scope	Prototype, Pilot batch, Serial production, Long-term programs
Batch Size Flexibility	Low volume to repeat serial production
Secondary	Honing, Slotting, Knurling, Grooving, EDM
Surface Finishing Options	Plating, Anodizing, Powder coating, Laser engraving
Engineering Support	DFM feedback, Process selection support, Cost optimisation

Quality and Inspection

Parameter	Capability
Inspection Approach	Stage inspection, In-process checks, Final inspection
Dimensional Inspection	CMM (project-based), Gauges, Surface roughness measurement
Material Testing	Chemical, Mechanical, Hardness, Metallurgical
NDT	UT, MPI, DP, Radiography (project-based)
Documentation	MTC, Dimensional report, CoC, Batch traceability
Traceability	Heat and batch traceability maintained across production
Program Support	Specification-driven manufacturing, Third-party inspection, Export packaging

For RFQ and technical discussions: export@medrincorp.com