

## Machining Capability Sheet – Chemicals, Petrochemicals & Plastics

(IndiaUnbox Verified Plants & Facilities)

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### Chemical Manufacturing Capabilities

- **Reactors:** Glass-lined, stainless steel, high-pressure, batch & continuous.
  - **Processes:** Distillation, crystallization, polymerization, emulsification.
  - **Capacity:** Pilot runs (10–100 kg) → commercial scale (1 MT – 10,000 MT).
  - **Utilities:** Steam boilers, cooling towers, effluent treatment (ETP/ZLD).
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### Petrochemical Production

- **Polymer Plants:** HDPE, LDPE, PP, PVC, PET, PS.
  - **Fiber Units:** Polyester, nylon, acrylic, rayon.
  - **Compounding Facilities:** Masterbatch, color concentrates, additives.
  - **Processes:** Cracking, reforming, extrusion, pelletizing.
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### Plastics Manufacturing

- **Injection Molding:** 50–2,000 ton machines for components & packaging.
  - **Blow Molding:** Bottles, containers, hollow parts.
  - **Extrusion:** Sheets, pipes, films, profiles.
  - **Thermoforming:** Disposable packaging, trays, clamshells.
  - **Recycling Lines:** PET recycling, granulation, biodegradable plastics.
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### Testing & Quality Control

- **Mechanical:** Tensile, flexural, impact strength.
  - **Thermal:** DSC, TGA, HDT, melt flow index (MFI).
  - **Chemical:** pH, purity, stability, resistance to solvents & UV.
  - **Certifications:** ISO 9001, ISO 14001, OHSAS 18001, GMP, FDA, BIS.
  - **Documentation:** MSDS, COA, regulatory compliance reports.
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### Sustainability & Compliance

- Green chemistry & bio-based polymers.

- Zero Liquid Discharge (ZLD) in effluent treatment.
  - Recycled & biodegradable plastics (PLA, PHA, starch blends).
  - Certifications: Responsible Care, REACH, RoHS, SEDEX.
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### Regional Strengths

- **Gujarat:** Petrochemicals, polymers, refineries.
  - **Maharashtra:** Specialty chemicals, paints, coatings.
  - **Tamil Nadu:** Plastic packaging, molded products.
  - **Punjab/UP:** Agrochemicals, fertilizers.
  - **Andhra Pradesh:** Bulk chemicals & intermediates.
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### IndiaUnbox Assures:

- Access to **certified plants & R&D labs**.
- **Scalability:** lab → pilot → industrial scale.
- **Strict compliance & export documentation.**
- On-time, global delivery.

 **Download Machining Capability Sheet (PDF)**