COMPLETE BUSINESS SOLUTIONS

Heat Treatment Technologies

Atmospheric Heat treatment Vacuum Heat Treatment Plasma Nitriding / Gas - Nitriding Steam Treatment Sub Zero Treatment

Customer Contact Points

Sales & Marketing Engineering Quality Supply chain/Customer Service Support

Specialities

Plants at multiple locations Strong team of qualified metallurgists Customer Specific Solutions

Value Added Services

Shot Blasting Basic Final Inspection Customer Specific Packing Logistics Management

Quality Management

IATF 16949 Certified CQI-9 Certification (by Tier-1 & OEMs) Customer audits ISO: 14001 (Bengaluru)

Technical Support

Technical Recommendations Development and Qualifications New Products / Processes **Technical Seminars**

End Customers:



CATERPILLAR







CK BIRLA GROUP





























Non Automotive:













We will partner with global companies for introduction of state-of-art technologies in the domestic market

Pune Plant

Unitherm Engineers Limited Gat No.257, Village Kharabwadi, Post: Chakan, Taluka: Khed, Dist.: Pune, Maharashtra - 410501 Mobile: +91 8308847051

Bengaluru Plant

Unitherm Engineers Limited Plot No. 47E, Bommasandra Industrial Area, Road No.6, Off Hosur Road, Bengaluru -560099, Karnataka, India Mobile: +91 9008621009

Bhiwadi Plant

Unitherm Engineers Limited Plot No. E-43, G-2, Industrial Area, Khush Khera, Tehsil Tijeras, Bhiwadi, Dist., Alwar, Raiasthan - 301707 India. Mobile: +91 8308847051

Chennai Plant

Unitherm Engineers Limited Plot No L-7/1C & L-7/1D, SIPCOT Industrial Park. Aerospace, Vallam Vadagal. Sriperumbudur, Kancheepuram - 602105. Mobile: +91 8197647189

Group Companies

Indo-German Vacu Treat Pvt Ltd - Commercial Vacuum heat treater I www.igvtvacutreat.com Aichelin Unitherm Heat Treatment Systems India Pvt Ltd - Heat Treatment Furnace Manufacturer I www.au -india.com







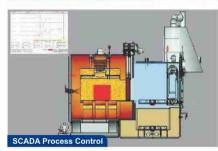




"We will be the leading service partner for our customers by providing complete Surface Treatment & Metallurgical Solutions"



Gas Nitriding Furnace





About Unitherm Engineers Ltd

Unitherm Engineers Limited is largest commercial heat treatment services provider in India. Four plants at Pune (West India), Bengaluru (South India), Bhiwadi (North India) and Chennai (South India) are strategically located close to automotive OEMs and component manufacturers in major automotive hubs in india

Unitherm has established itself as "One stop" heat treatment solutions provider for range of engineering products. Proven competence in providing heat treatment services!

Company employs highest number of metallurgists across all the operational departments. Experienced and qualified team of metallurgists ensures shorter process development time. Get it right first time!

Infrastructure

| Plant | Furnace Type | Make | No. of Furnaces | Gross Capacity |
|-----------|-----------------------|----------|--------------------|-------------------|
| Chennal | Sealed Quench Furnace | Unitherm | 2 | 2 x 600 Kg |
| | Sealed Quench Furnace | Unitherm | 1 | 1 x 1500 Kg |
| | Gas Nitriding | Unitherm | 4 | 1 x 1500 Kg |
| Pune | Sealed Quench Furnace | Unitherm | 9 | 9 x 600 Kg |
| | Sealed Quench Furnace | Unitherm | 6 | 6 x 1200 Kg |
| | Gas Nitriding | Unitherm | 1 | 1 x 1200 Kg |
| | Gas Nitriding | Unitherm | 3 | 3 x 1500 Kg |
| | Steam Treatment | Unitherm | 2 | 2×600 Kg |
| Bengaluru | Sealed Quench Furnace | Unitherm | 10 | 10 x 600 Kg |
| | Gas Nitriding | Unitherm | 3 | 3 x 1500 Kg |
| Bhiwadi | Sealed Quench Furnace | Unitherm | 4 | 4 x 1500 Kg |
| | Sealed Quench Furnace | Unitherm | 1 | 1 x 1200 Kg |
| | Gas Nitriding | Unitherm | 2 | 2 x 1500 Kg |

Services Offered

Gas Carburizing

Carbo-Nitriding

Gas Nitro-Carburizing / Gas - Nitriding & Post Oxidation

Hardening under Protective Atmosphere

Ancillary Services

Shot Blasting Steam Treatment Sub-zero Treatment

Laser Marking M/C Ultrasonic Cleaning M/C

Laboratory

Microscope with image analyzer Auto - Micro Vickers Hardness tester Digital Rockwell hardness tester

SCADA system - for real-time process monitoring & control

Certifications

All Plants are IATF 16949:2016 certified Compliance with CQI-9 heat treatment requirements All our plants are approved by major automotive OEMs -and tier 1 suppliers

USP

Experience and qualified team of metallurgists at all locations

Shorter development time & quick turnaround from concept to delivery

Large capacity availabe at all locations to cater to new/growing requirements

Flexibility of operations due to approval on multiple furnace & variety of quenching oils

Online automatic SCADA process control & monitoring for all processes Complience with CQI-9 heat treatment requirements

Joint venture partnership with leading European industrial furnace manufacturer Aichelin, Austria.



Bearing









| Steel Grades Processed / Applications | | | | |
|--|---|--|--|--|
| Heat Treatment / Applications | Grades | | | |
| Gas Carburizing Applications: Transmission Components (First, second and third stage gear, Pinion, input shaft, Output shaft, Balance Idler, Sprag Clutch, CV Cages, Gear Oil Pump Drive, Different Spider etc) Engine Components (Crank pin, Piston rockshaft, tappets, push rods etc) | 20MnCr5 16MnCr5 SAE 8620H SAE 8625H En353 25CrMo4 SCM 420 SCM 415 etc., | | | |
| Bearings (Inner ring, Outer ring, needle roller bearing, Plunger etc) Carbo-Nitriding Applications: Gears & Shafts Roller & Bearings, Synchro rings, | 16MnCr5 20MnCr5 SAE 52100 | | | |

Coupling Bolts, Head Machines, EN 24 Connecting rod/ Supporting rod, H-13 (PDC Dies) Crank shaft, Camshaft, PDC Dies, Plastic Moulds etc..., P-20, P-22 (Plastic Moulds) etc..,

Gas Nitro-Carburizing Applications: Gears & Pinions, Valve components, Dies & toolings

Sintered parts etc...

Applications: Gears

Gas Nitriding

42CrMo4 EN 19

En 24 etc.,

42CrMo4

EN 19

Sintered parts etc..,