

Highway Roop Precision Technologies Ltd.

Your Trusted Partner for Precision Engineering Solutions

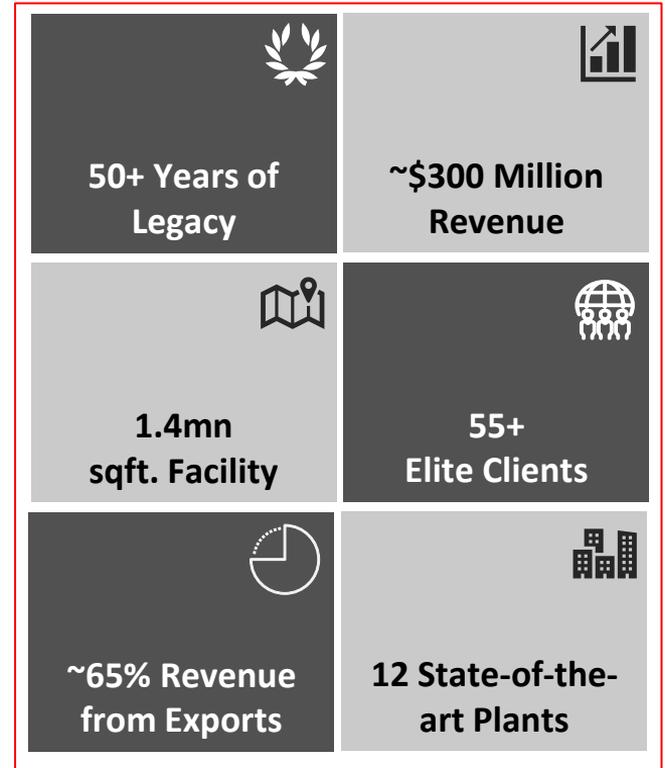


HIGHWAYROOP

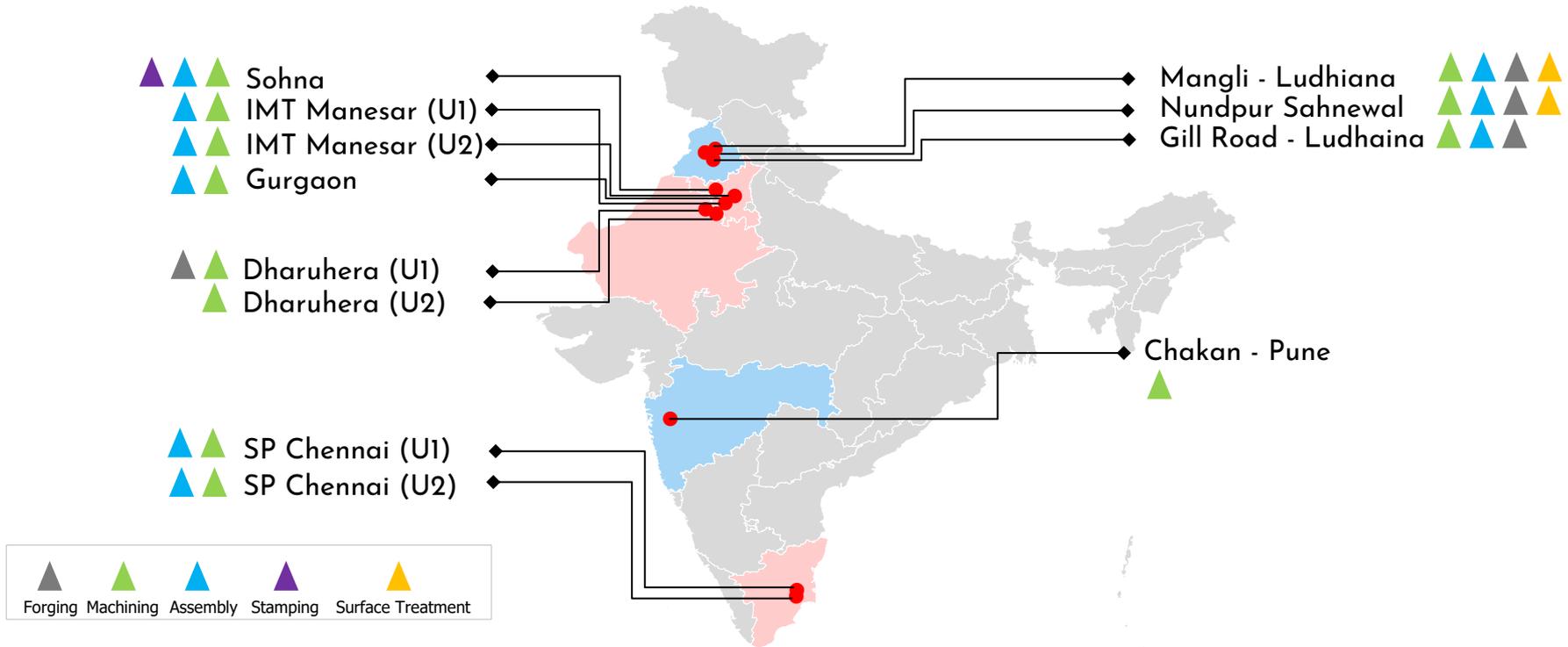
Overview

With over five decades of experience, Highway Roop continues to deliver excellence in the automotive component industry through

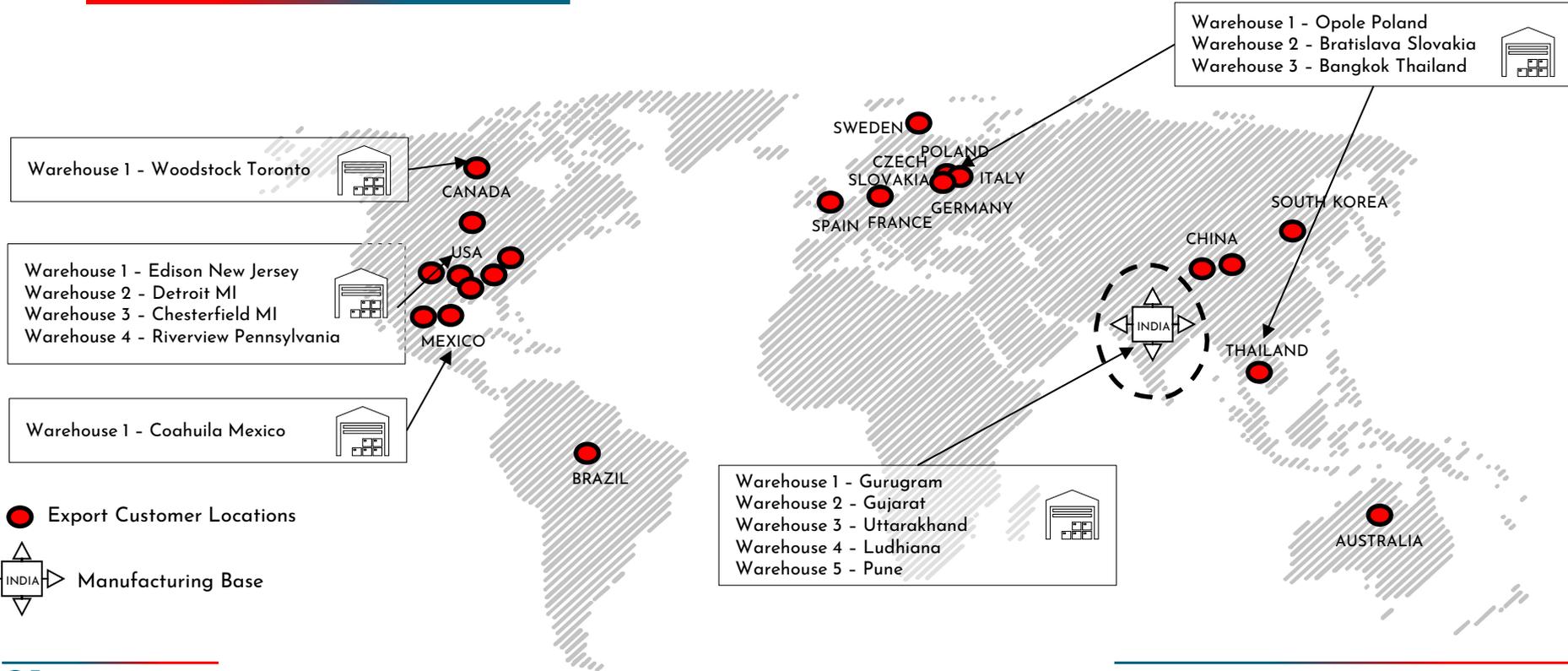
- **Comprehensive product range:** 1.5k+ products across 100+ categories, spanning critical automotive subsystems incl. steering, transmission and suspension
- **Global clientele:** 55+ global customers across 17 countries are supplied 135mn+ parts annually
- **Expansive footprint:** 12 manufacturing plants and 14 international warehouses across 7 countries
- **Advanced capabilities:** Cutting edge technologies in forging, machining, heat treatment, coating, & testing



12 manufacturing locations across India



Serving customers across 17 countries through 14 warehouses globally



Trusted by the Best : Blue Chip OEM & Tier 1 Customer Base

IMMEDIATE CUSTOMERS



END OEMs SERVED



Capablities & Technologies

Forging & Stamping
Capabilities across hot, warm and cold forging, and stamping

Machining
CNC Turning & Turn Mills, VMCs, HMCs, CNC Grinding Machines, Honning Machines, NC/CNC Broaching Machines, Spline rolling, Whirling, Hobbing, Gun drilling

Heat Treatment
Special heat treatment, GCN+O, Sealed Quench, Induction Hardening

Coating / Surface Treatment
Special Coating, Plasma Nitriding, Geomat & E-coat

Advanced capabilities
Leveraging the latest industry-leading technologies

Assembly
Steering system assemblies, differential assemblies, crankshaft assemblies

Testing
Advanced and automated in-house testing capabilities (CMMs, 3D scanners, Gear Testers, etc.)

Comprehensive Product Range



Steering

Steering columns, I-Shafts, Universal Joints & Slip Shaft assemblies, Yokes, Key lock collars & Lock nut, Input Shafts, Tie rod End, Outer Ball joints, Steering pinion, Ball nuts, Single piece shaft yoke & yoke tube

Differential Parts

Bevel gear sets, Differential case assemblies, Pinion and spiders



Engine & Exhaust

Crank shaft, Con rod, Crank shaft assembly, Kick starter shaft, High Si-Mo exhaust flanges



Transmission & Powertrain

Axle shafts (input, output & intermediate shafts), Front axle shafts, Stub shafts, Spindle shafts, Propellor yokes, Flanges, Hub, transmission shafts, rotor shafts (EVs)



Constant Velocity Joints

Fixed outer race bell, Tulip & Bell



02

Our Capabilities & Technologies

Driven by Quality, Powered
by Innovation



Forging Capabilities

Hot and Warm Forging



Press Details

- 600T (x3)
 - 750T (x1)
 - 1000 T (x12)
 - 1600 T (x6)
 - 2500 T (x1)
- Billet Shearing: Manyo, Kurimoto
 - Circular Saws : ITL & Zeal Tech
 - Presses to detect the correct billet temperature to forge
 - Reduce Roll (x8) for yield improvements
 - In-house die designing and manufacturing

Cold Forging



Press Details

- 100 T (x3, 5 Stations)
- 250 T (x1)
- 400 T (x5)
- 630 T (x1)
- 1000 T (x1)
- Annealing Furnaces
- Phosphating Plant

Precision Machining

- 800+ CNC Turning & Turn Mill
- 90+ VMCs
- 25+ Honing Machines
- More than 250 Special Purpose Machines
- Over 100 General Purpose Machines
- 20 CNC Grinding Machines
- 40+ NC/CNC Broaching Machines
- Whirling Machine (Leistritz)
- Robotics Automation - Industry 4.0 with auto gauging and Auto compensation

Spline/ Thread Rack

- Ekin (Spain) - 2 nos.
- Profiroll (Germany) - 4 nos.
- Nachi (Japan) - 3 nos.
- NHK (Japan) - 1 nos.
- Waitai (Taiwan) - 2 nos.
- MTE (India) - 9 nos.

Gear Hobbing

- Liebherr (Germany) - 2 Nos.
- Gleason (USA) - 2 Nos.
- Nimble - 2 Nos.



Heat Treatment

Established infrastructure for treating materials to bring uniformity in structure, improvement in strength, refinement in grain structure



- Continuous Mesh Belt type furnace (x11)
- Normalizing Furnace (x5)
- Induction Hardening (x13)
- Ultrasonic Detector (x6)

- GCN+O (x1)
- Magnetic Crack Detector (x40)
- Spectrometer (Steel chemistry) (x2)
- Micro Hardness Testers (x5)
- Sealed Quench Furnace (SQF) (x10)

- SCADA software enabled furnaces for data logging

Complex Automated Assembly

Steering system assemblies

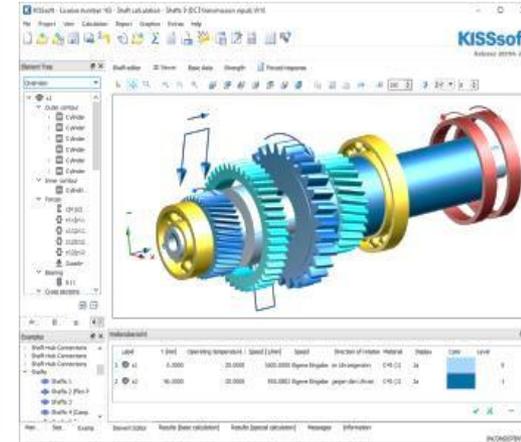
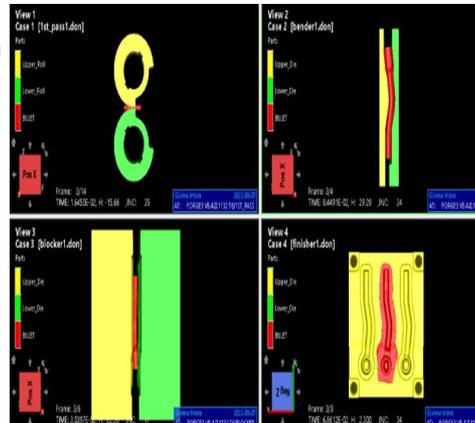
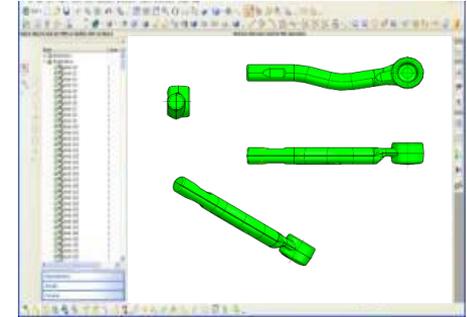
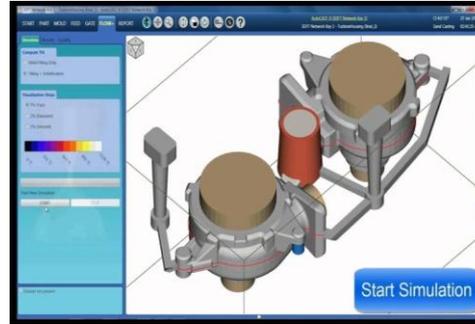


Crankshaft assemblies



Deep Product Engineering & Tooling Capabilities

- **Transvalor Forge XT** ver 2.1, Cold form (Simulation) & using FORGE 2011 forging simulation software for design validation and optimization in Hot forging
- State of the art 3-D Solid & Surface Modeling on **UNIGRAPHICS** (UG - NX7.5)
- **Auto Cast & Creo 3D** Software for Casting (Design & Simulation)
- **AUTOCAST** - complete solution for casting methods design, advanced simulation and complete optimization
- **Kiss soft** provides powerful analysis tools for Gear/Pinion manufacturing and inspection. The "Design-Manufacturing-Inspection Loop" integrates gear design, manufacturing and metrology into a holistic process
- **CAD- IDEAS, Solid Edge, Catia V5**
- **AutoCAD** for Drafting
- **Deckel Maho (x2) & Makino (x2)** (Die Sinking)
- **Other Tool Room VMC (x12) & CNC Lathe (x4)**
- **EDM and Wire-cut**
- **PLM - Windchill & FEA** (We have 70+ design experts)



Advanced Quality Control Capabilities

Metrology and metallurgy infrastructure equipped with latest instruments to ensure quality and fulfillment of drawing requirements

Key equipments

- Zeiss CMM's (Prismo, Contura)
- Renishaw equators
- Zeiss, Mitutoyo and Mahr form tracers
- Klingenberg gear tester
- Taylor Hobson Roundness tester
- Mitutoyo Roughness testers
- Millipore test apparatus
- Furnished labs and standard room
- Inhouse Calibration facilities
- Lash tester
- Impact tester
- Universal testing machine (5T & 15T)
- Flex torque tester
- Online steering link tester
- 7-step endurance tester



Klingenberg P 26 /
Gleason
Gear Tester



Carl Zeiss & Mitutoyo
CMM



SPECTRO
28 Elements



MAHR



Profile Projector



Contracer



Millipore Testing



Microscope
Olympus



MPI



Roughness Tester



03

Our Products

The Right Parts, The Right
Price, The Right Time

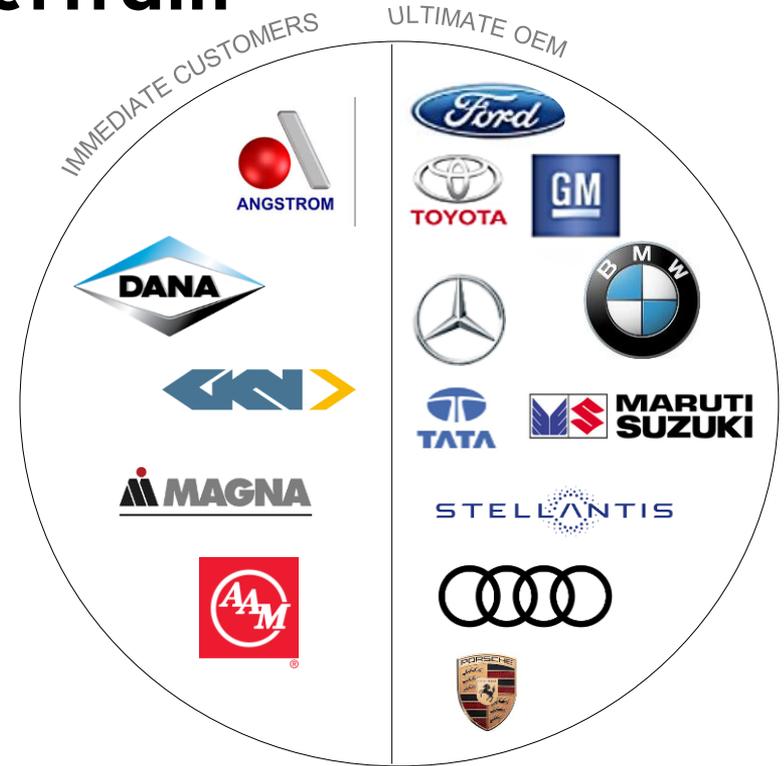
Transmission & Powertrain Components

Transmission & Powertrain System Applications



Key Product Facts

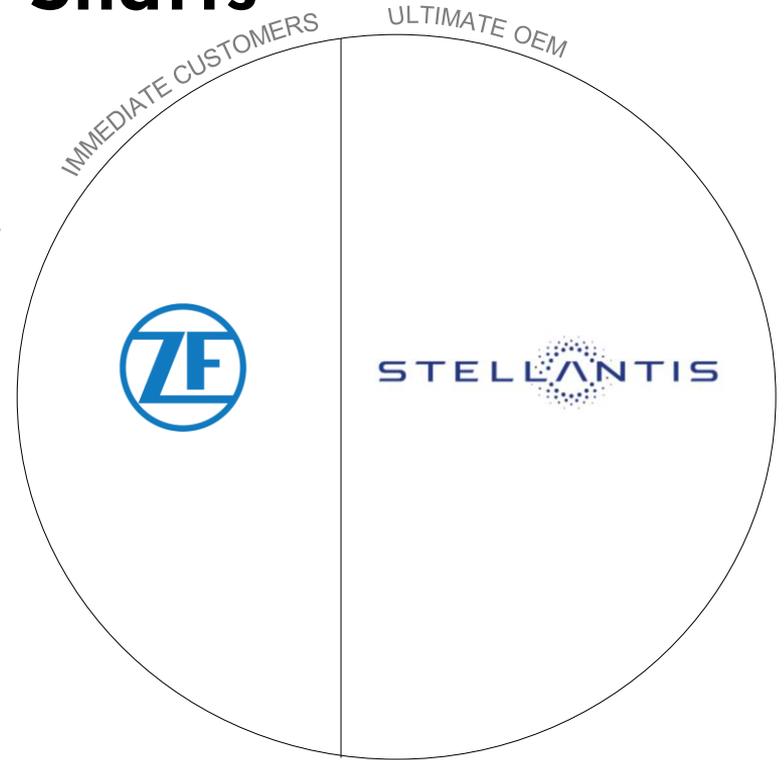
- Forged, machined flanges, shafts, profile components
- 150+ varieties
- Broaching, Grinding, IH, Spline Rolling
- Powder Coating (CED Coating)
- Exporting since 2010
- Assembly Tube and Yokes



Axle Drive/Bar Shafts

Key Product Facts

- Manufacturing since year 2019
- Over 2 million capacity per annum
- Producing more than 6 different designs
- Serving PV Segments
- All available steel grades
- Machined component weight range : 1000 - 6000gms
- 1st Export shipment in year 2019
- Produced out of India's first fully automated plant for axle drive shafts.



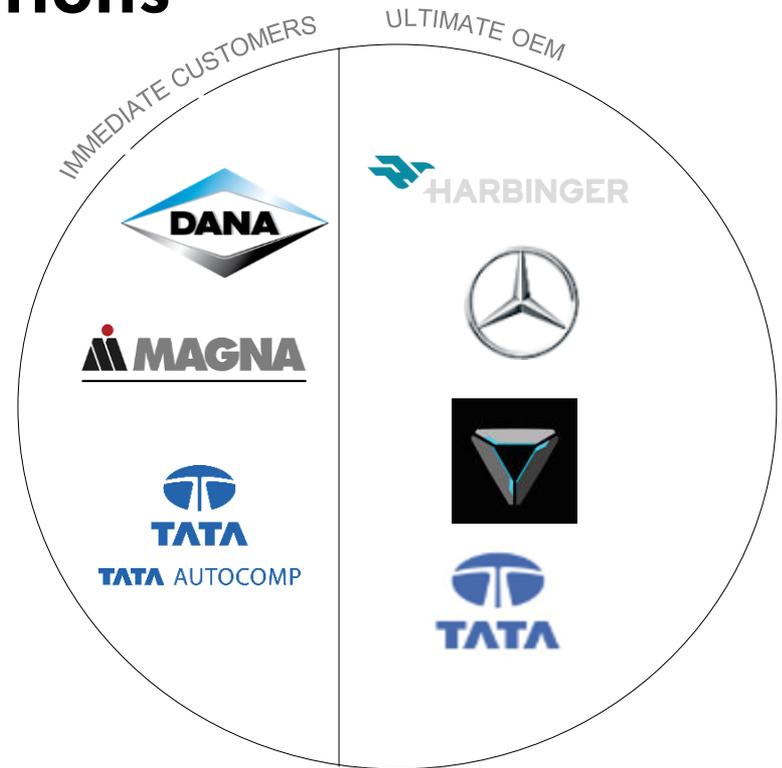
E-Drive Solutions

E-drive
Application



Key Product Facts

- Hollow Shaft for Light Weighting
- From Bar and Forging
- Turning, Broaching, Spline, IH
- Grinding with Lead Control
- More than 12 varieties
- Gear Blanks
- Exports and Domestic Supplies



Differential Gears & Assemblies

Differential Application



Key Product Facts

- Manufacturing since year 2008
- Over 2 million capacity per annum
- Producing more than 20 different designs
- Serving Agri tractor, off Highway and EV Vehicle Segments
- All available in 20 Mn and 16Mn Cr
- Machined component weight range : 500 - 7500gms
- Have Developed technology with Reverse Engg, CAD model and Kiss Soft Software
- Gear pro software on Zeiss CMM for Topography

OEM CUSTOMERS

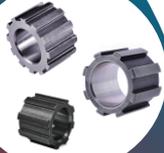


Pioneer of The Mini Tractor



Cold Forging Parts

Steering System & Transmission Applications



Key Product Facts

- Manufacturing since year 2018
- Splined Shafts (ID/OD) from tubes & bars
- Steering Input Shafts, Steering Collars, Gear Shafts etc.
- Over 3 million capacity per annum
- Producing more than 10 different designs
- Serving PV and CV Segments
- All available steel grades
- Forged component weight range : 180-3500gms

IMMEDIATE CUSTOMERS

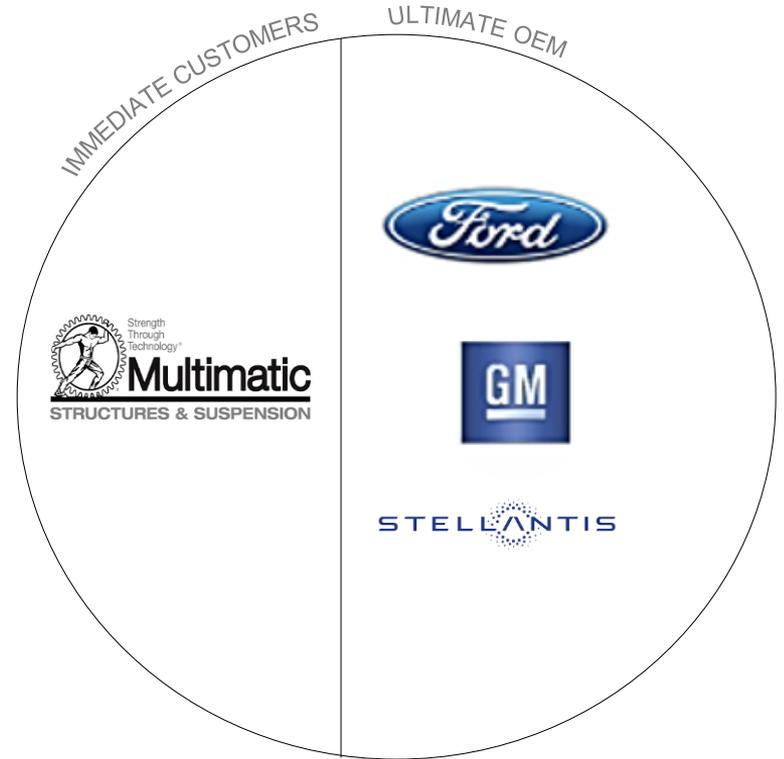
ULTIMATE OEM



Suspension System Parts

Key Product Facts

- Manufacturing since year 2008
- Over 3 million capacity per annum
- Producing more than 150 different designs
- Serving both PV and CV Segments
- All available steel grades
- Machined component weight range : 100 - 3500gms
- Micro Alloy Steel with Control Cooling having Perlite control



Constant Velocity Joint Parts

CV Joint
Application



Key Product Facts

- Manufacturing since year 2014
- Over 5 million capacity per annum
- Producing more than 30 different designs
- Serving both PV Segment
- Available in XC45, UC1 Grade
- Machined component weight range : 1200 - 2800gms
- Planning Warm Forging press for Precision Forged with Tracks Bell and Tulip



Steering Yokes

Key Product Facts

- Manufacturing since year 1992
- Producing in Hot Forging & Stamping
- Over 53 million capacity per annum
- Producing more than 150 different designs
- Serving both PV and CV Segments
- All available steel grades
- Machined component weight range : 80 - 2500gms
- Forged component weight range : 180- 3500gms
- 1st Export shipment in year 2000
- Currently World's Largest Manufacturer of this component.



Universal Joint Assemblies

Key Product Facts

- Manufacturing since year 2002
- Producing in Hot Forging & Stamping
- Over 2 million capacity per annum
- Producing more than 60 different designs
- Serving both PV and CV Segments
- All available steel grades
- Machined component weight range : 80 - 2500gms
- Forged component weight range : 180- 3500gms
- 1st Export shipment in year 2003
- Assembling serviceable and non serviceable, Painted/plated joints.



I-Shafts & Assemblies

Key Product Facts

- Manufacturing since year 2006
- Producing in Hot Forging & Stamping
- Over 2 million capacity per annum
- Producing more than 30 different designs
- Serving both PV and CV Segments
- All available steel grades
- Machined component weight range : 80 - 2500gms
- Forged component weight range : 180- 3500gms
- 1st Export shipment in year 2006
- I-Shafts with rigid, metal-metal telescopic, collapsible, Ball Slider (JV) Technologies

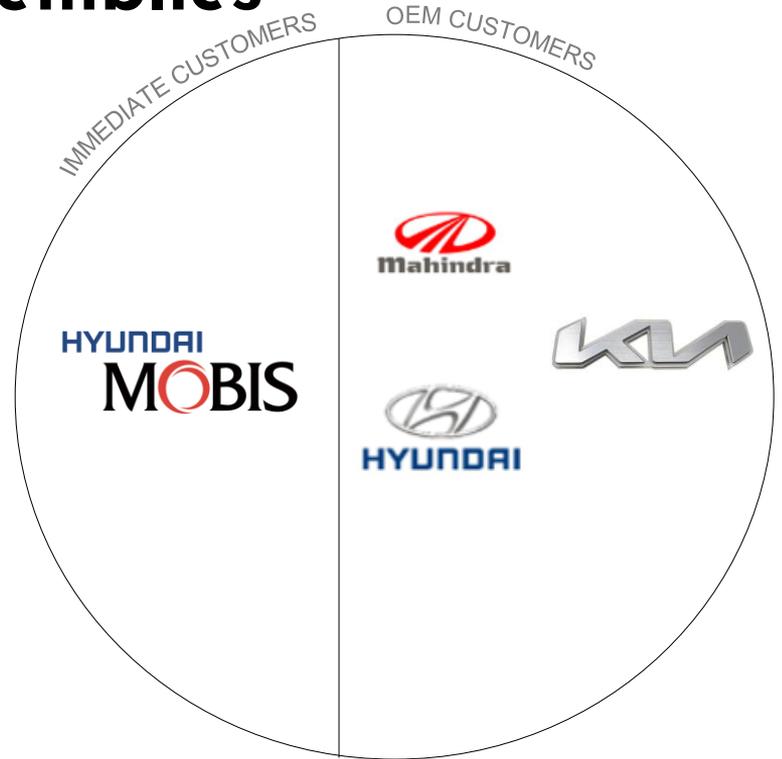


Columns & Assemblies

Key Product Facts

- Manufacturing since year 2015
- Over 1 million capacity per annum
- Producing more than 4 different designs
- Serving PV Segments
- All available steel grades
- Collapsible, Telescopic and tilt columns and assemblies through JV.

Steering
System
Applications



Complex Shafts

Key Product Facts

- Manufacturing since year 2006
- Producing in Hot/Cold Forging, Tubes & Bar route.
- Over 6 million capacity per annum
- Producing more than 60 different designs
- Serving both PV and CV Segments
- All available steel grades
- 1st Export shipment in year 2006
- Introducing threaded spindle shafts and Pinion shafts by 2025.

Steering System Applications



IMMEDIATE CUSTOMERS

JTEKT

MANDO

nexteer
AUTOMOTIVE



THK
RHYTHM



OEM CUSTOMERS



TESLA MOTORS



IVECO



TATA



VOLVO



Tie Rods, OBJs

Key Product Facts

- Manufacturing since year 1981
- Producing in Hot Forging
- Over 24 million capacity per annum
- Producing more than 100 different designs
- Serving both PV and CV Segments
- All available steel grades
- Machined component weight range : 200 - 2500gms
- Forged component weight range : 200-3000gms
- 1st Export shipment in year 2010
- Currently India's Largest Manufacturers of this component.

Suspension System Applications

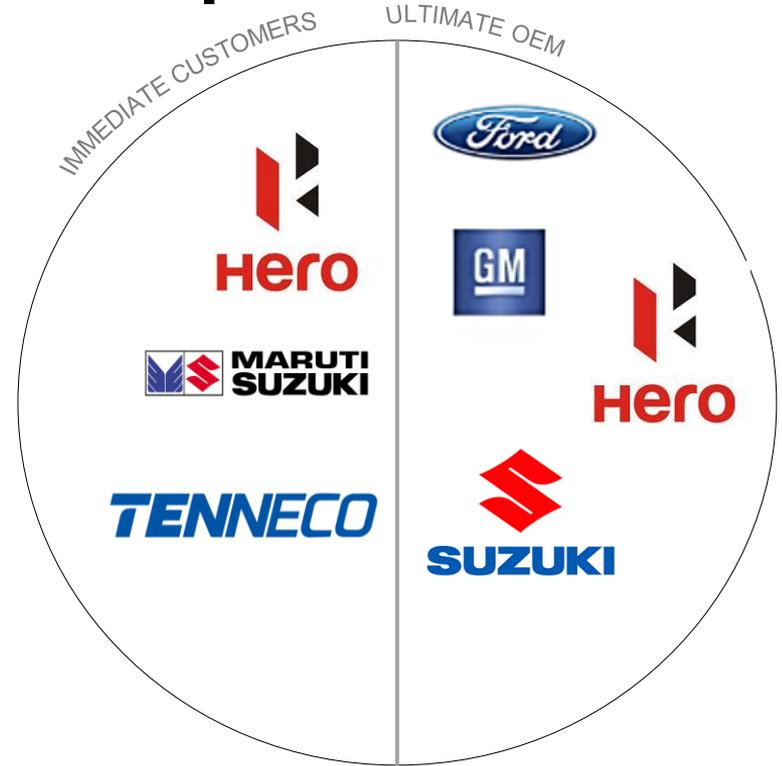


Engine & Exhaust Component



Key Product Facts

- Manufacturing 12 Mn Crank Shaft/annum
- Manufacturing 6 Mn Con Rods & Kick assemble/annum
- Added Crank Shaft Assemble to portfolio from 2024
- Machining Hi Silicon Moly casted components since 2022
- Capacity to machine 1 Mn Hi Silicon Moly/ casted components per annum



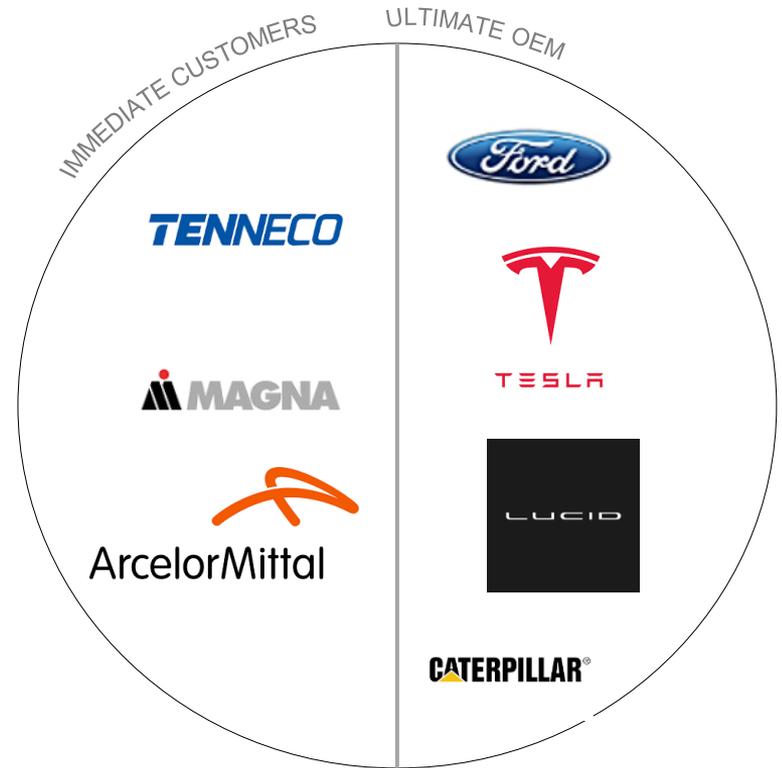
Body & Braking Components



Body &
Braking
System
Applications

Key Product Facts

- Hot Forging - Door Hinge
- **Bearing Housings**
- Brake Flanges
- Green Sand Casting and Compound angle Machining
- Majority Exporting since 2010
- Plating
- CED coating





04

CSR, Awards, Certificates

Awards & Certificates

Received several prestigious awards in the field of Quality, Human Resource, Safety, Sustainability, CSR, Exports, etc.



Certifications



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Thanks!

Do you have any questions?

info@highwayroop.com

