

Welcome to
DENO India

Inspired by precision

Overview

Some facts about DENO:

- A 100 % German Owned Subsidiary in India and the 5th of it's kind around the Globe
- 50 Years of Wisdom
- Technology Back up from Germany
- Automotive & Non-Automotive Experience
- Qty from 10 Pcs to 1 Million pcs / Month

DENO Shares:



Nosta GmbH, Germany - 95% Holding
Headed by Gregor Ludley
Managing Director



Dema GmbH, Germany - 5% Stake Holding
Headed by Frederik Ludley
Managing Director



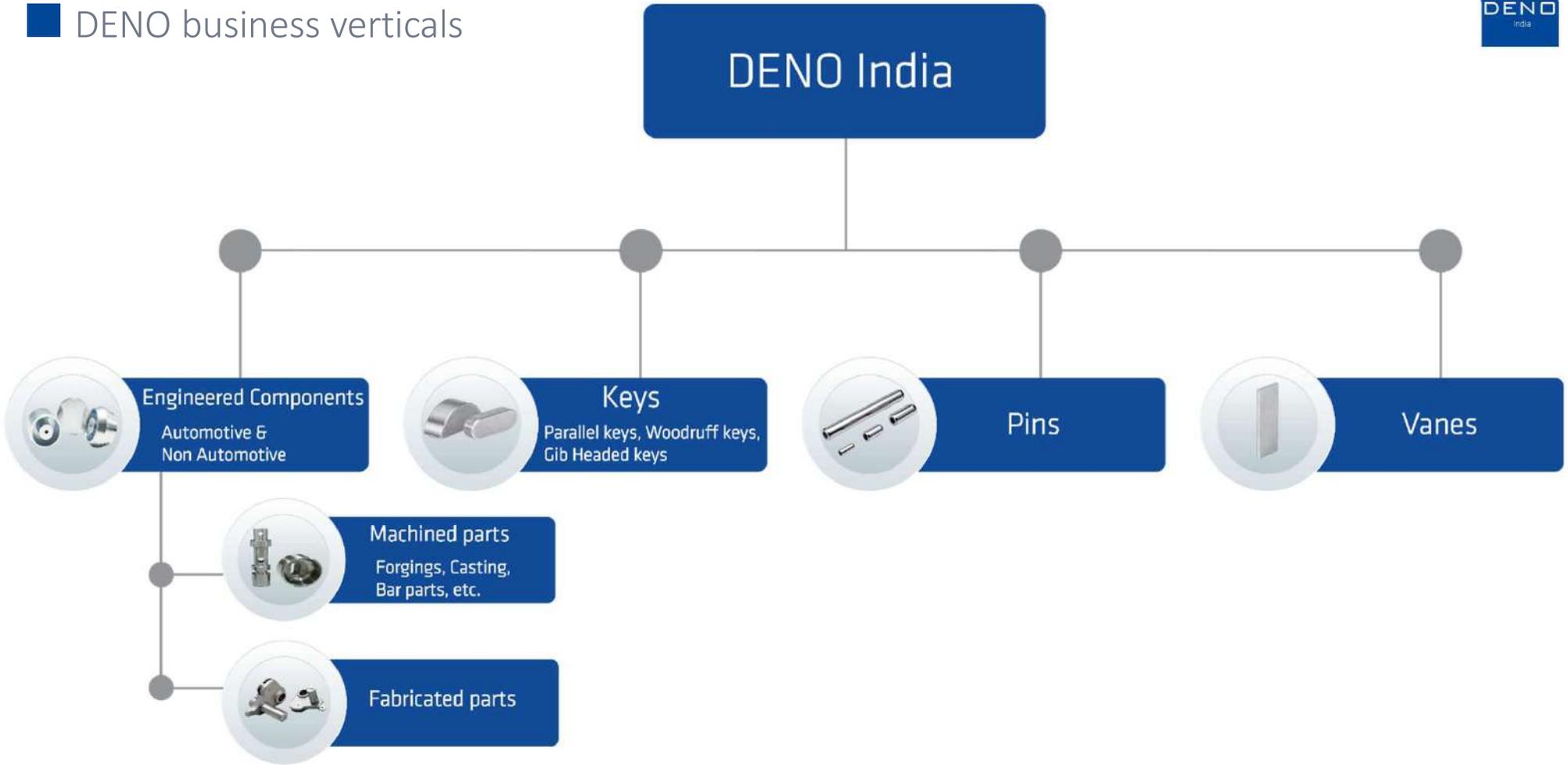
Deno India, India
Headed By Parthibhan S A
Executive Director

DENO presence and definition



Precision and quality
in all parts - worldwide

DENO business verticals



DENO India history



Facility Profile



- **45,000 Sq. Feet Area (1 Acre)**
- **33,000 Sq Ft Built-up Area**
- **3 Buildings to Serve Customers**

Located at Veerasandra Industrial Area of Electronic City, Bangalore we have

- great access to all other service providers and ease of
- Accessibility for logistics
- 30 Minutes Drive to Hosur, the next Automotive Capital of Tamil Nādu spelt after Chennai



Inspired by Precision – our manufacturing techniques



From prototype to large series production:

- Processing of profile-drawn material, castings and forgings
- In-house development and construction of machinery
- Development of products and processes
- Fully automated testing processes



Cutting



Grinding



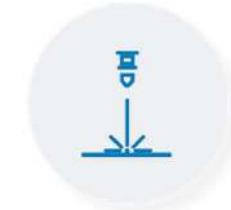
Milling



Turning



**Automated
manufacturing**



Welding



**Additional
services**



SPMs



Assembly

Manufacturing techniques

Cutting

High level of expertise in cutting:

- Sawing
 - Band, miter and circular saws
 - High-performance cutting materials such as HM + HSS
- Abrasive cutting
 - Cutting process by means of a grinding wheel
 - Combination of a 2-stage production process

Examples of customer solutions:



Spacer Bushing



Clamping components

Grinding

High level of expertise in the three grinding variants:

- Double face grinding
 - Low throughput times
 - High precision and plane parallelism
- Flat and profile grinding
 - Component-adapted grinding wheel contour
 - Component-dependent processes (pendulum grinding, plunge-cut pendulum grinding, creep feed grinding)
- Barrel finishing – Trowalizing
 - Increasing the surface quality, deburring, rounding, polishing
 - Maximum flexibility in component dimensions and batch sizes

Examples of customer solutions:



Brackets



Rocker Shaft

Manufacturing techniques



Complete machining on 3- to 5-axis machining centers

State-of-the-art machinery consisting of:

- 4- and 3-axis milling centers
- Adaptable 5-axis milling machines
- Poly-turn machines

supported by:

- Automated handling systems
- Product-specific feeding systems
- special clamping devices

Examples of customer solutions:



Positioning Housing



Fitting load securing



Turning and Milling

Turning and milling machining enables:

- precise combination of turned part and milling machining
- efficient production with high quality standards through the use of CAM systems

The machinery consists of:

- CNC lathes
- Multi-spindle systems with automatic bar loaders

Examples of customer solutions:



Eccentric component



Connector

Manufacturing techniques

Automated manufacturing

Ideal for:

- High quantities with very high repeat accuracy
- Combined processes such as turning, milling, drilling, notching, resistance welding and marking
- Automated 100% control

Supported by:

In-house mechanical engineering, which optimally aligns the production machines to the workpiece to be machined

Example of a customer solution:



Brake Padel



3 Way Union

Welding and Assembly

- Manufacturing of fabricating parts as per drawing including process & tool development
- Processing various material types from sheet metal, rods to formed materials.
- Production methodologies like turning, milling, laser cutting, fine blanking, piercing & welding
- Automated / semi-automated CO2 & MIG welding on standard machines and SPMs
- Automatic / semi-automatic / manual assembly lines according to customer requirements
- Outsourcing of additional services with qualified suppliers
- 100% inspection and quality-process development to ensure failure free supplies

Example of a customer solution:



Lever Gearshift



Decompression Component

Manufacturing techniques

Additional services

In addition to the various manufacturing processes, nosta offers additional services to ensure that you receive your component from a single source.

Component assembly includes:

- Assembling sub-assemblies
- Completing packaging units

Surface treatment/surface coating:

- Galvanization
- Zink flake coating
- Duplex coating
- Anodizing
- Varnishing
- Physical vapor disposition
- and custom solutions on request

Cleaning of parts:

- according to residual dirt specification
- with liquids / ultrasonic
- with modified alcohol
- vacuum drying

Examples of customer solutions:



Assembly, functional tests



Hardening, Coating



Cleaning, oiling, special handling for sensitive parts

■ Manufacturing techniques

Further additional services

Heat treatment/ change of material properties

- Case hardening
- Induction hardening
- Quenching
- Nitriding
- Quenching and tempering
- and all other heat treatment methods

100 % final inspection with Auto Sorting Machine

100% tactile/optical inspection in accordance
with special agreements

Labelling in accordance with VDA/ Customer specification/Customer specification

- Laser marking, QR code, data matrix code,
consecutive serial number, etc. in a continuous
process, individually and also in blister packs –
depending on component quantity and size
- Stamping of components coating
- Labelling
- Custom solutions on request

Packaging according to customer specifications

Packaging according to customer
specifications: blisters, cardboard boxes, bags
or Euroboxes

Fabrication / Assembly / Welding

Automated attachment of restraint elements
such as balls and springs, tension and
compression springs as well as resistance
welding of leaf springs

Documentation / Certificates

- FMEA (Failure Modes and Effects Analysis)
- IMDS (International material data system)
- PPAP (Production part approval process)
- FAI (First article inspection)
- Material certificate

Machines in Operation



In-house VMC Machines

LMW & BFW-4-Axis



In-house VMC Machines

Fanuc Robo Drill



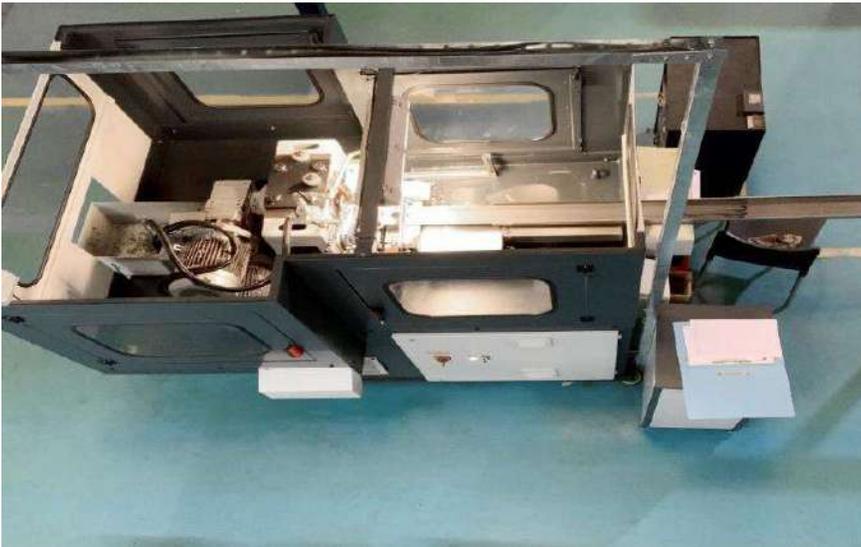
Pride Machines



In-house centerless grinding machines



■ In-house SPM Radius milling machine



■ In-house Welding setup



Deno India Glimpses



Our industry solutions

Public transport



- Automotive
- Agri Industry
- Gear Box and Transmission
- Wind Mill
- Defence

Individual transport



- Pump & Motor Industry
- Machine Building
- Electrical Appliances
- Machine Tools
- Cranes and Hoists

Agricultural and construction machinery



Mechanical and plant engineering



- Material Handling
- High Speed Trains
- Hand Tools
- Packaging
- Vehicle Body Building

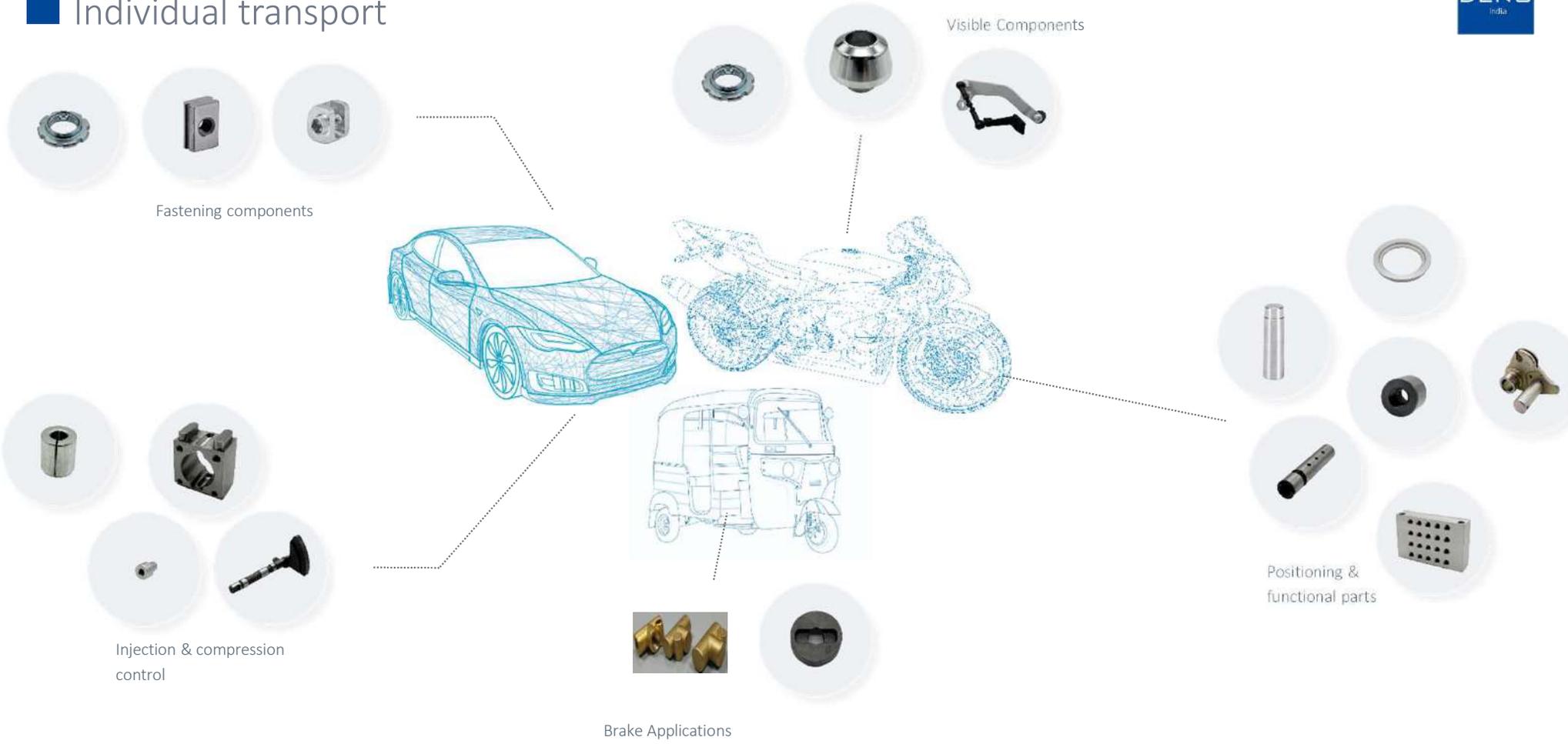
Aerospace



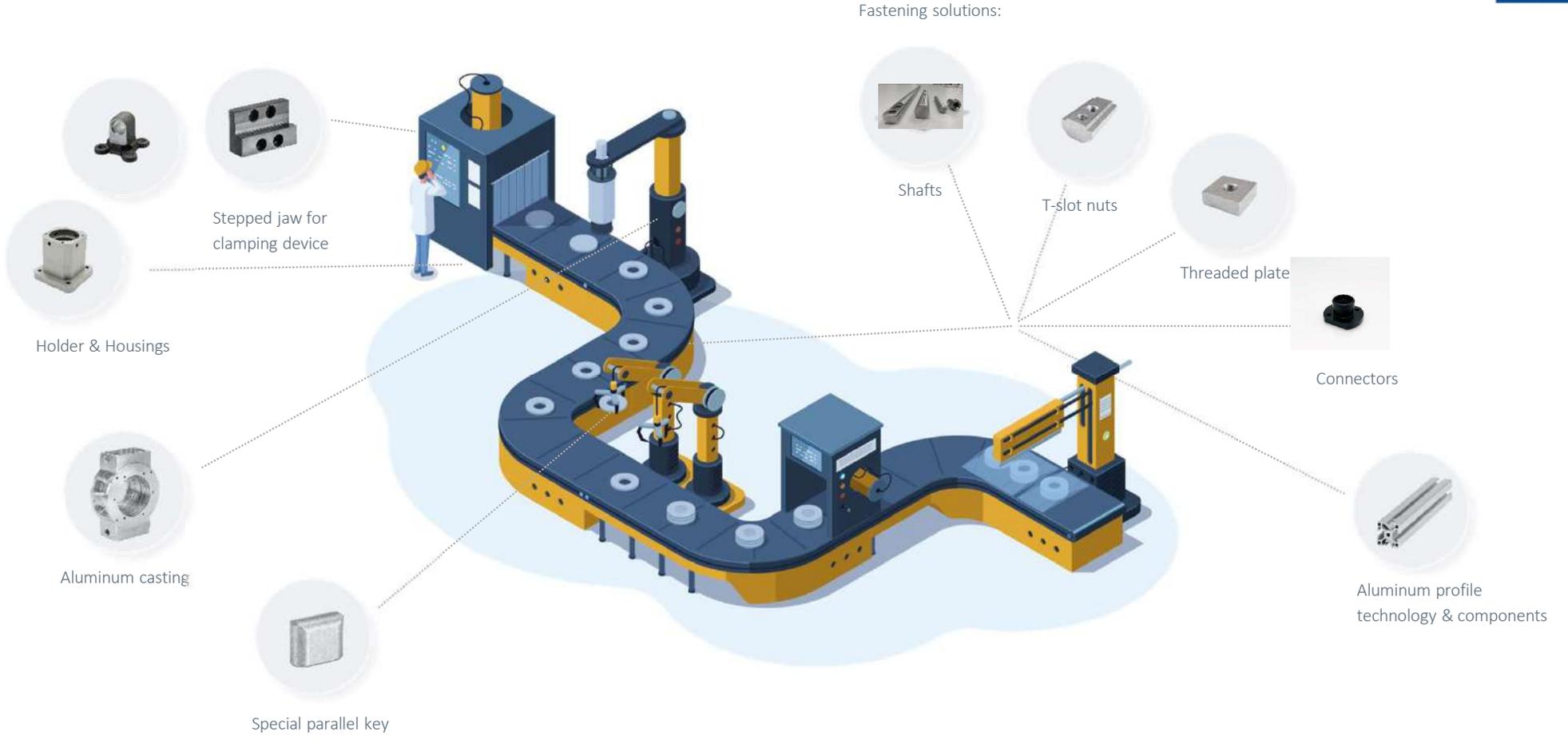
Medical engineering



Individual transport



Mechanical and plant engineering



DENO products for various industries



Deno Certifications



Quality management
ISO 9001



QMA Automotive
IATF 16949

Deno Measuring Instruments

Video measurement



Digital height master



Coordinate measuring



Digital profile projector



Deno Measuring Instruments

Roughness Tester



Roundness Tester



Rockwell digital Hardness Tester



Contour Tester



Deno Measuring Instruments

UTM



Vickers Hardness Tester



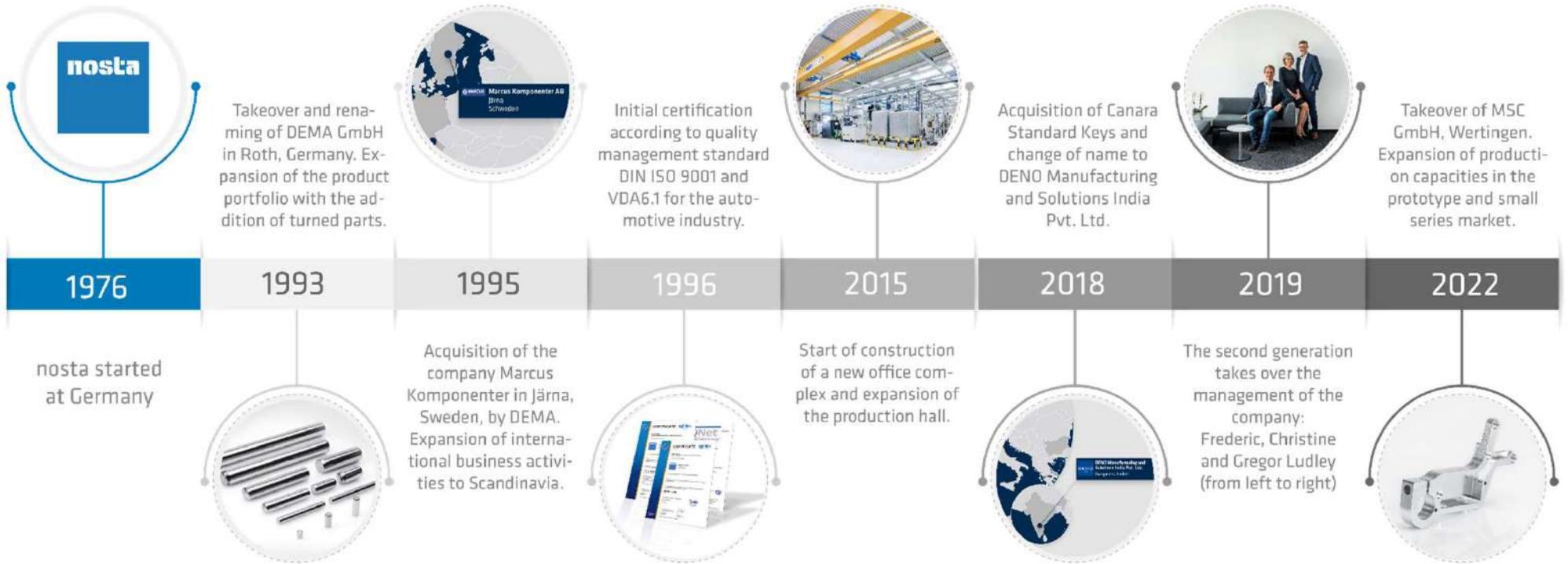
■ Deno Customers



Nosta Headoffice and Production site, Germany



Nosta history



■ Nosta Customers



Nosta Certifications



Quality management
ISO 9001



QMA Automotive
IATF 16949



QMA medical devices
DIN EN ISO 13485



Energy management
DIN EN ISO 50001



Environmental management
DIN EN ISO 14001



Occupational health and safety
management DIN ISO 45001



Thank you for your attention!

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