



**Manufacturer of  
Suspension & Steering,  
Gears and Machined Parts**

**for OEM, Tier 1, Tier 2 and  
Global Aftermarket**

# Disa History



**1968**: Founded by Mehmet Hilmi Kuru with 4 employees.

Turning, milling and welding operations of special parts.

**1972**: Automotive parts repair shop – American cars.

**1979**: Production of replacement parts (gears, flanges, etc.) for domestic vehicles – Fiat and Renault.

**1990**: **Disa Automotive** founded.

**1997**: Only suspension & steering parts production for domestic distributors selling into international markets.

**2002**: Direct sales to international markets with private branding.

# Disa History

2003: ISO9001 certified.

2010: New Production Factory Construction started.

2012: New Production Factory Construction completed and production moved into the new factory.

2014: ISO/TS 16949 certified.

2015: Initiated new investments for the production of machined parts and gears along with suspension & steering parts.

2018: Open regional office in Stuttgart, Germany to increase sales in gears.

2019: ISO 14001 certified.

2019: Continue investments for new machinery.



# Production Plant

Disa has its own production plant in Ergene-Corlu, Tekirdag, Turkey (Border town to Istanbul).

The production plant is located inside an Organized Industrial Zone.



Factory Space  
28.000 m<sup>2</sup>



170 employees  
Working 3 shifts

*As of December 2018*

# Production Plant Layout

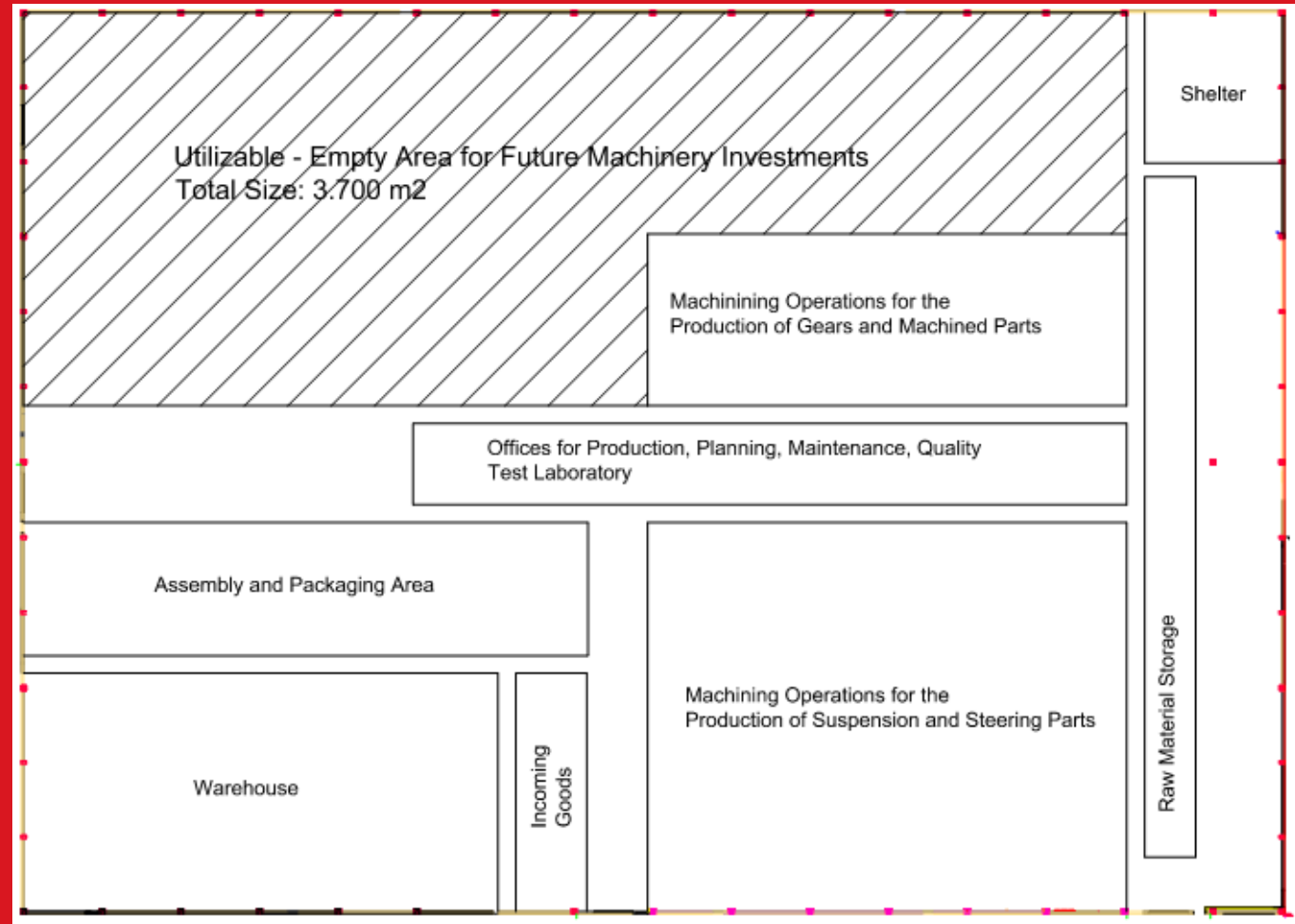
**Open Space:**  
28.000 m<sup>2</sup>

**Closed Area  
incl. Offices:**  
14.000 m<sup>2</sup>

**Area for  
Production:**  
12.500 m<sup>2</sup>

**Empty Area for  
Future Investments:**  
3.700 m<sup>2</sup>  
*(dashed area)*

**Expansion  
Capacity:**  
2.500 m<sup>2</sup>



# Main Markets and Customers

## EUROPE & N. AMERICA





# **DISA**

## **PRODUCTION PORTFOLIO**



**Production of  
Suspension &  
Steering Parts**



**Production of  
Gears**



**Production of  
Precision Turned  
Machined Parts**

# Suspension and Steering Parts



**Link Stabilizers & Kits**

**Axial Joints (inner tie rod ends) & Outer Tie Rod Ends**

**Ball Joints**

**Cross Axis Joints**

**Track Control Arms, Wishbones**

**Control Arm Bushings (Silent Blocks)**

**European // Japanese // Korean // North American  
Passenger, SUV, Van & Light Commercial Vehicle applications**

**Over 4.000 items from 1980s to today.**



# Precision Turned/Machined Parts



## Production Range:

**Diameter:** 12mm to 320mm

**Length:** up to 600mm

## Production Quantities:

20.000 pcs/year to  
1.000.000+ pcs/year

State-of-the-art machinery handles 3-axis, 4-axis and 5-axis machining with single or multi spindle machines while attaining extremely low dimensional and geometric tolerances.

Machining services for made-to-order parts and components. **Turning, milling, drilling, hobbing, skiving, tapping, boring, slotting, reaming, broaching, threading and grinding.**

Materials include carbon and alloy bar stock, stainless steel, cast gray and ductile iron permanent mold and cast aluminum or aluminum injection parts, as well as forged and fabricated metal components.

**Deep experience in live tooling, cutting tools and equipment, tool design and production.**

# Gears

Bevel Gears, Pinion Gears, Straight Gears, Helical Gears, Internal Gears, Internal Helical Gears & Splines, Cluster Gears, Planetary Gears, Involute Splines, Serrations, Worm Gears, Rack Gears, Antibacklash Gears, Custom Gears, Gear Assemblies,



Ability to accommodate virtually any customer request, including internal or external straight, helical or bevel pinion gears.



Engineering Support and Capabilities for Reverse Engineering, Design for Manufacturability, Prototyping, Re-designing.

**Special expertise on machining and quality control of straight bevel gears and pinion gears.**

**Up to module 6  
Max diameter of 350mm  
Gearing Quality DIN 6-7**

# Different Products Manufactured

Brake disc



King pins



Wheel cylinder,  
brake piston



Starter pinion  
drive gear



Oil pump



Water pump



Drive  
transmission gear



Side/spider gear



Eccentric gear



Crankshaft gear



Spiders  
Cross Units/Joints



Shafts, splines,  
serrated parts



Flanges  
Spider flanges



Driveshafts  
Fork shafts and  
flanges



Clutch,  
transmission and  
powerline parts



Sliding sleeves



Wheel spindle  
assemblies



Housings, axle  
nuts



# Production and Machinery



**Latest technology CNC turning machines and machining centers; German, Japanese and Korean brands like DMG Mori Seiki, Miyano, Mazak, Studer, SMG, Klingelberg, Brother, IEMCA, FMB, Top Automazioni automatic bar feeders and other special purpose machines.  
high precision with over 1,67 Cpk**

# Production and Machinery



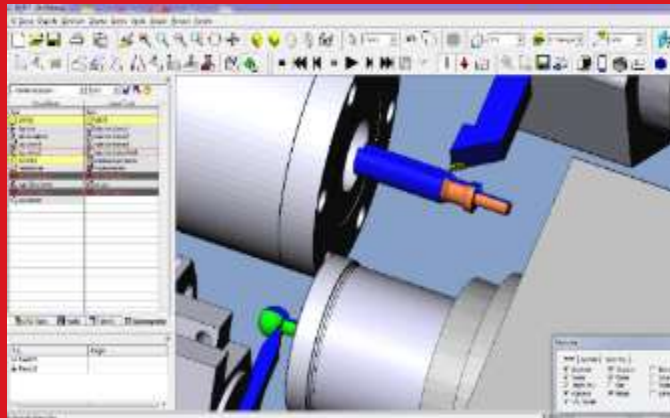
5S philosophy



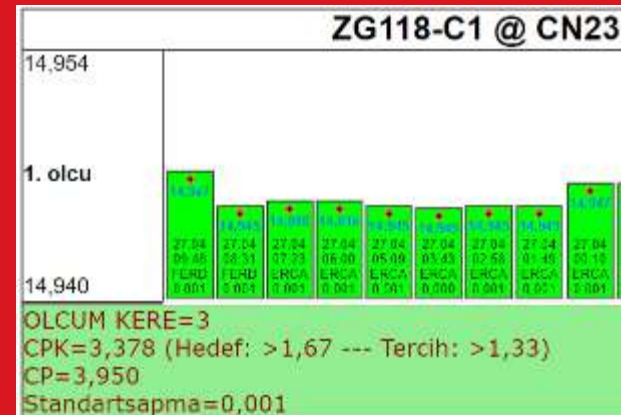
CNC Automation  
(loading unloading)



Precise measurement with  
high quality measuring gages  
and fixtures



CNC machining programs created  
by EspritCAM software

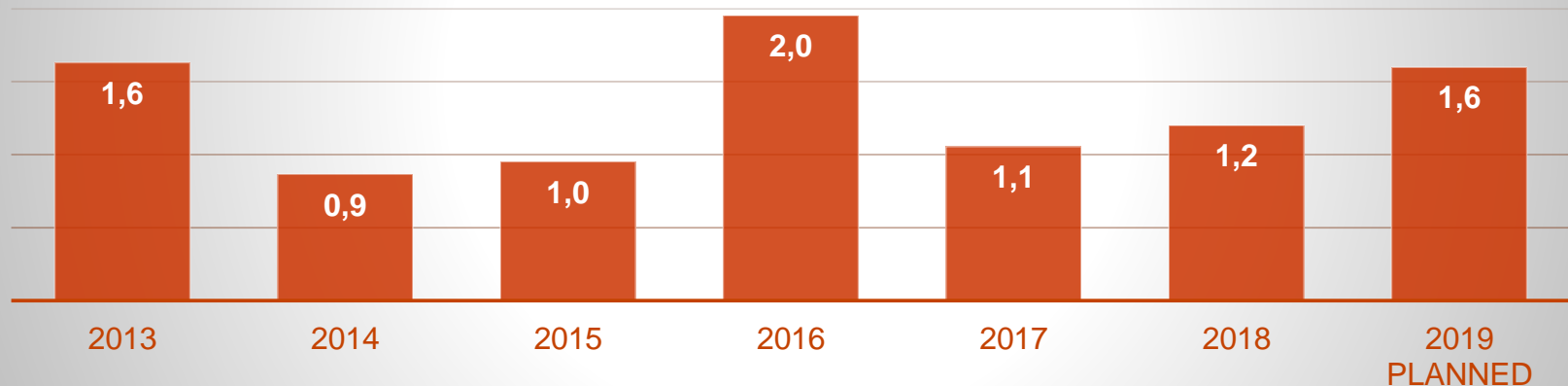


Industry 4.0 applications like  
iot, ERP integration, live SPC

# Production/Investments

Disa Automotive is always open and have financial strength to make new investments to increase its capacity according to its customer requests.

**Machinery and Quality Equipment Investments**  
*(million Euro's)*



# Quality Assurance



ISO 9001 since 2003.  
IATF 16949 since 2014.  
ISO 14001 since 2019.



Production, Quality and Project Management  
compliant with VDA 6.3 Process Audit requirements.

Statistical Process Control (SPC), Measurement System  
Analysis (MSA), Failure Modes and Effects Analysis (FMEA),  
Serial production process controls, Incoming goods control

# Test and Measuring Capabilities

## Metrology Tests

- Contour Measurement
- Roundness-Cylindricity Measurement
- 3D Coordinate Measuring (CMM)
- Gear Inspection
- 3D Scanning and Modelling
- Material Surface Crack
- Hardness
- Surface Coating Thickness
- Surface Roughness
- Gages, Fixtures, Masters
- Pneumatic Gauges

## Functional Tests

- Fatigue (Key Life) and Leakage
- Vibration
- Axial and Radial Spring Travel
- Initial Breakaway and Rotating Torque
- Welding Tensile Strength
- Ball Pin Breakaway
- Ball Pin Pull Out and Push Out
- Material Spectrometer
- Salt Spray (outsourced)
- Cleanliness Test (outsourced)





# Test and Measuring Capabilities



*Gear Inspection  
(Klingelnberg P26)*



*Contour Measuring Device  
(Mahr MarSurf XC2)*



*Roundness Cylindricity  
Measuring  
(Mitutoyo RA-1600)*



*Surface Roughness  
Tester (Mitutoyo SJ-410)*



*3D Coordinate Measuring  
Machine (CMM) (Mitutoyo M544)*



*Hardness  
Tester  
(Omog)*

# Test and Measuring Capabilities



*Material Test Machine  
- Static*



*Vibration Test  
Device*



*Servo Hydraulic Material  
Test Machine with  
Video and Magnetic  
Extensometer*



*Torque Testing Devices*

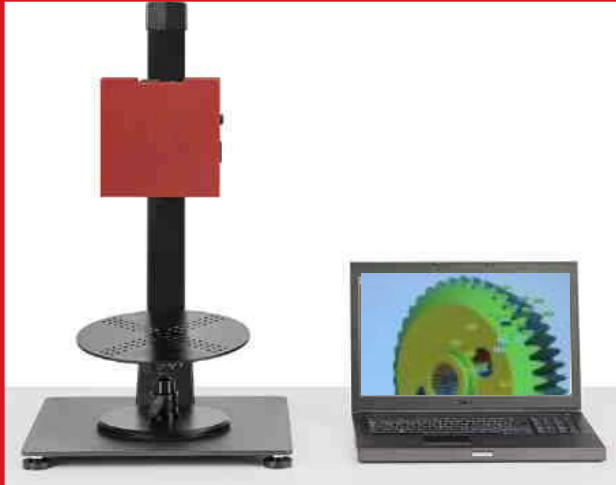


*Fatigue  
(Key Life)  
Test Device*



*Profile  
Projector*

# Test and Measuring Capabilities



*3D Scanner and Modelling  
(Atos GOM) (incl. Gear Inspection)*



*Technical Cleanliness Test\*  
(microscope analysis according to VDA 19)*



*Material  
microstructure analysis\**



*Material Spectrometer (SpectroMAXX)*



*Salt Spray Test\**

# Supplier Base and Other Services

## Heat Treatment:

Induction, Heat Treatment, Quench Hardening  
Nitriding, Oxi-Nitrocarburizing, Hard Chrome Plating

## Coating – Plating:

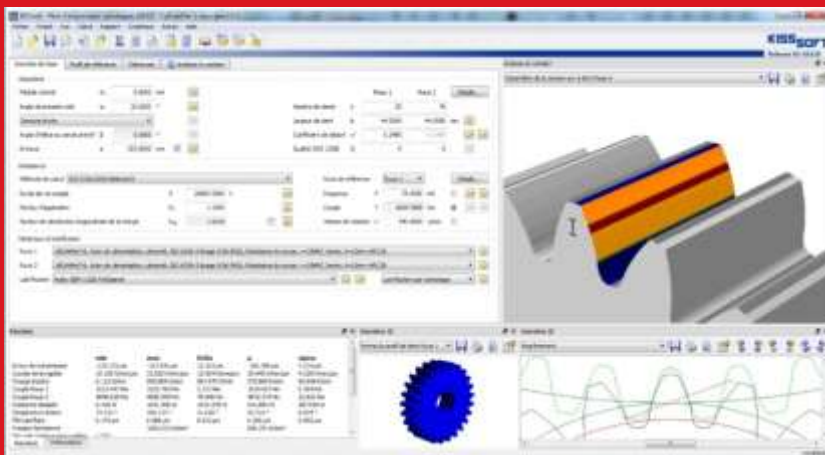
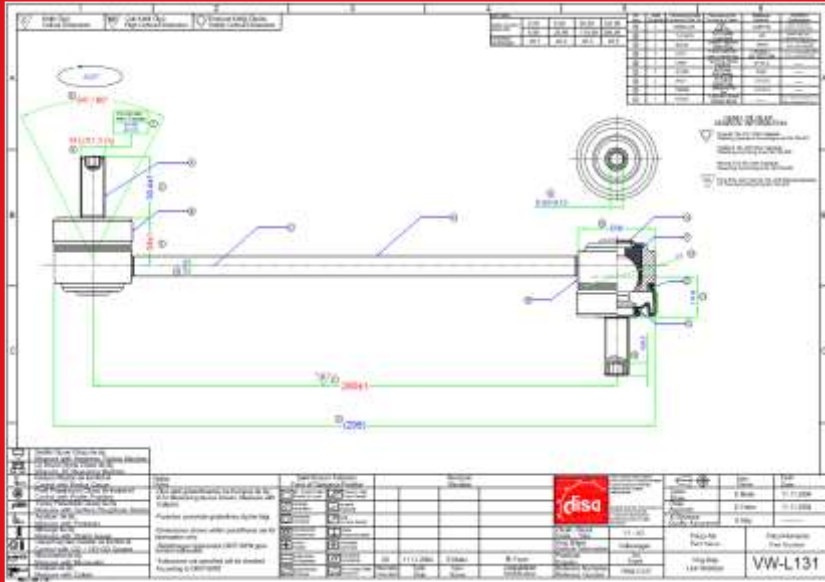
Zinc and Zinc Alloy (ZnNi, ZnFe) (alkali or acidic),  
Geomet or Deltaprotekt, Electrophoresis, Cataphoresis,  
Phosphating, Electrostatic Powder  
with coating barrels or hanging individual parts

## Forging and Casting:

Steel Hot and Cold Forging and Casting  
Aluminum Forging and Injection

# Product Development

Disa Automotive product development team, which consists of many experienced engineers and technicians, continuously develop new products around the clock by using state-of-the-art two and three dimensional mechanical design software and tools.



# Patent



US007862250B2

(12) **United States Patent**  
**Kuru**

(10) **Patent No.:** **US 7,862,250 B2**  
(45) **Date of Patent:** **Jan. 4, 2011**

(54) **DUST BOOT ASSEMBLIES AND APPARATUS FOR PROVIDING GREASE RELIEF FOR A DUST BOOT**

(73) **Inventor:** **Koray Kuru, Wayne, NJ (US)**

(73) **Assignee:** **Disa Automotive, Inc., Totowa, NJ (US)**

(\* ) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 77 days.

(21) **Appl. No.:** **12/047,556**

(22) **Filed:** **Mar. 13, 2008**

(65) **Prior Publication Data**

US 2009/0232519 A1 Sep. 17, 2009

(51) **Int. Cl.**  
**F16C 11/06** (2006.06)

(52) **U.S. Cl.** **403/134; 403/51; 277/635**

(58) **Field of Classification Search** **403/50; 403/51; 13-4; 277/674; 635**  
See application file for complete search history.

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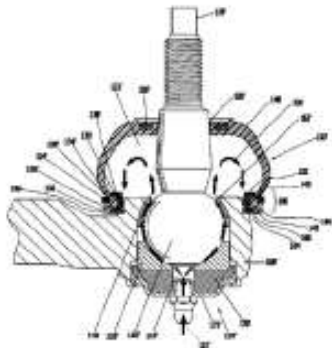
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*Primary Examiner*—Michael P. Ferguson  
(74) *Attorney, Agent, or Firm*—Law Offices of Rita C. Chipperon, P.C.

(57) **ABSTRACT**

Dust boot assemblies for providing grease relief while preventing or minimizing infiltration of contaminants into a cavity in the dust boot and between the surfaces of a greased joint adapted to the dust boot. Some such dust boot assemblies include two-piece grease relief inserts having a body and a shield, wherein the body includes grease relief route(s) and the shield prevents or minimizes infiltration of contaminants into the grease relief route(s). Other dust boot assemblies include one-piece grease relief inserts with integral body and shield components. Some grease relief routes include axial and radial channels. Grease relief inserts are inserted under an edge of a dust boot. A dust boot skirt covers grease relief ports through which excess grease is relieved to the external environment. The grease relief insert is located in a portion of the dust boot experiencing limited or zero movement.

10 Claims, 5 Drawing Sheets



**In 2007, Disa Automotive obtained a patent for its own design of**

**“Dust boot assemblies and apparatus for providing grease relief for a dust boot” from**

**United States Patent and Trademark Office (USPTO).**

# Samples

**Prototype samples or pre-series products can be provided upon request.**

**Technical drawings, test reports, PPAP (level 3 or 5) or PPA documentation, IMDS entry.**



# Logo on the Parts

**We can place customer logo, markings, production dates or batch numbers on the parts.**

**Stamping or Laser Engraving**





# Packaging



**Neutral plastic/poly bag.**

**VCI bags or papers.**



**Special design PET/PE reusable or disposable packaging.**



**Parts into customer boxes.  
Bag with customer logo.  
(Disa can print the boxes and bags.)**



**Any barcoded labels.  
(VDA4902, Galia, AIAG, Odette, etc.)**

**Euro pallet (120x80) | USA pallet (100x100).**

# **Delivery and Shipping**

**Current performance = %99+**

**Full delivery performance**

**Can sign contract for delivery performance**

**EDI connection capability  
via SupplyOn, TrueCommerce, and so on.**

**Exworks**

**FCA // FOB // CIF // CIP**

**DDU // DAP // DDP**

**via Air, Sea, Ground**

# Customer Service

**Response time of 24 hours for any inquiry comes to Disa.**



# Thank you for your time.

## Production Plant

### Disa Otomotiv A.S.

Ergene 2 OSB, D-100 Karayolu, No: 139/1  
Ergene, Tekirdag 59930 Turkey

Phone: +90 282 672 2525

Fax: +90 282 672 2001



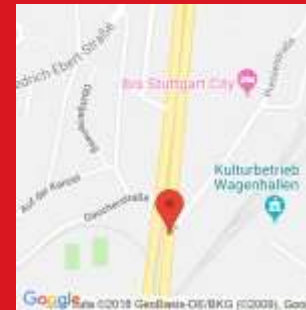
## Regional Office

### Disa Automotive GmbH

Heilbronner Strasse 150  
70191 Stuttgart, Germany

Phone: +49 711 490 04218

Fax: +49 711 490 04219



Web: [www.DisaAutomotive.com](http://www.DisaAutomotive.com)

Email: [disa@DisaAutomotive.com](mailto:disa@DisaAutomotive.com)