

voestalpine AUTOMOTIVE COMPONENTS

Company Presentation
Jun 2023

voestalpine Automotive Components Aguascalientes S.R.L. de C.V.
www.voestalpine.com/ac

voestalpine
ONE STEP AHEAD.

INTRODUCTION

We are part of an internationally successful corporation

THE voestalpine GROUP



- » voestalpine is a leading technology group with combined material and processing expertise, holding global top positions in its business units.

BY 2021/22



500 companies &
locations

48,700 employees
globally

2.3 bn. EUR
EBITDA

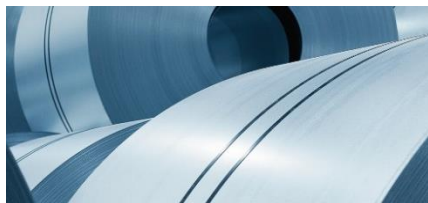
50 countries
on 5 continents

14.9 bn. EUR
revenue

4 strong
divisions

GROUP ORGANIZATION

As a publicly listed holding company, voestalpine AG manages four divisions that are each world market leaders or one of the leading global suppliers.



STEEL DIVISION

**Worldwide
quality leadership**
35% share of Group
consolidated revenue



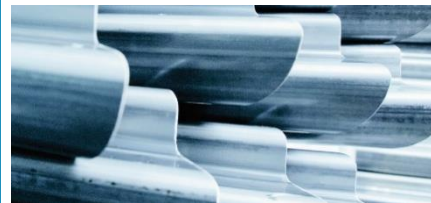
HIGH PERFORMANCE METALS DIVISION

**Global
market leader**
22% share of Group
consolidated revenue



METAL ENGINEERING DIVISION

**World
market leader**
22% share of Group
consolidated revenue



METAL FORMING DIVISION

**World's
leading supplier**
21% share of Group
consolidated revenue

METAL FORMING DIVISION



Tubes & Sections
Günther Felderer

- » **voestalpine Krems:** AUT
- » **voestalpine Rotec Group:** AUT, DEU, ESP, POL, GBR, USA, CAN, MEX
- » **voestalpine Sadef:** BEL
- » **voestalpine Profilafröid, SAP:** FRA
- » **voestalpine Präzisionsprofil:** DEU
- » **voestalpine Profilform China:** CHN
- » **voestalpine Metsec:** GBR
- » **voestalpine Profilform:** CZE
- » **voestalpine RFC:** USA
- » **voestalpine Meincol:** BRA



Automotive Components
Harald Traxler

- » **Coldstamping**
voestalpine Automotive Components Dettingen: DEU, ZAF, FRA, CHN, MEX
- » **Hotforming**
voestalpine Automotive Components Schwäbisch Gmünd: DEU, USA (**Cartersville**)
- » **After Sales**
voestalpine Automotive Components Bunschoten: NLD, USA (**Birmingham**)
- » **Tailored Blanks**
voestalpine Automotive Components Linz: AUT



Precision Strip
Peter Schwab

- » **voestalpine Precision Strip Group:** AUT, SWE, USA, CHN, MEX, ESP

Innovative lightweight components and assemblies with a global presence



Warehouse & Rack Solutions
Jürgen Resch

- » **voestalpine Krems Finaltechnik:** AUT
- » **Nedcon Group:** NLD, DEU, USA, FRA, CZE, BEL, POL

Automotive Components **Global Presence**



» 15 locations

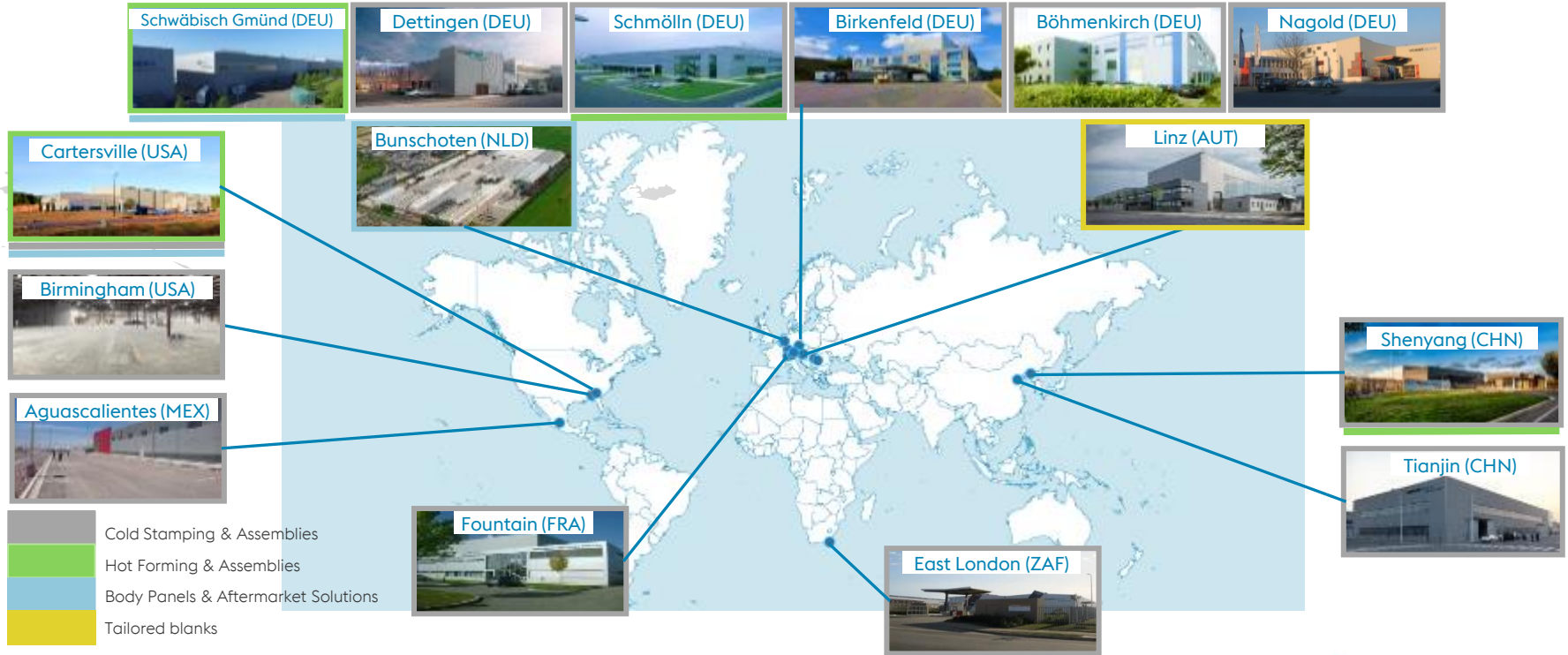
» 8 countries

» 4 continents

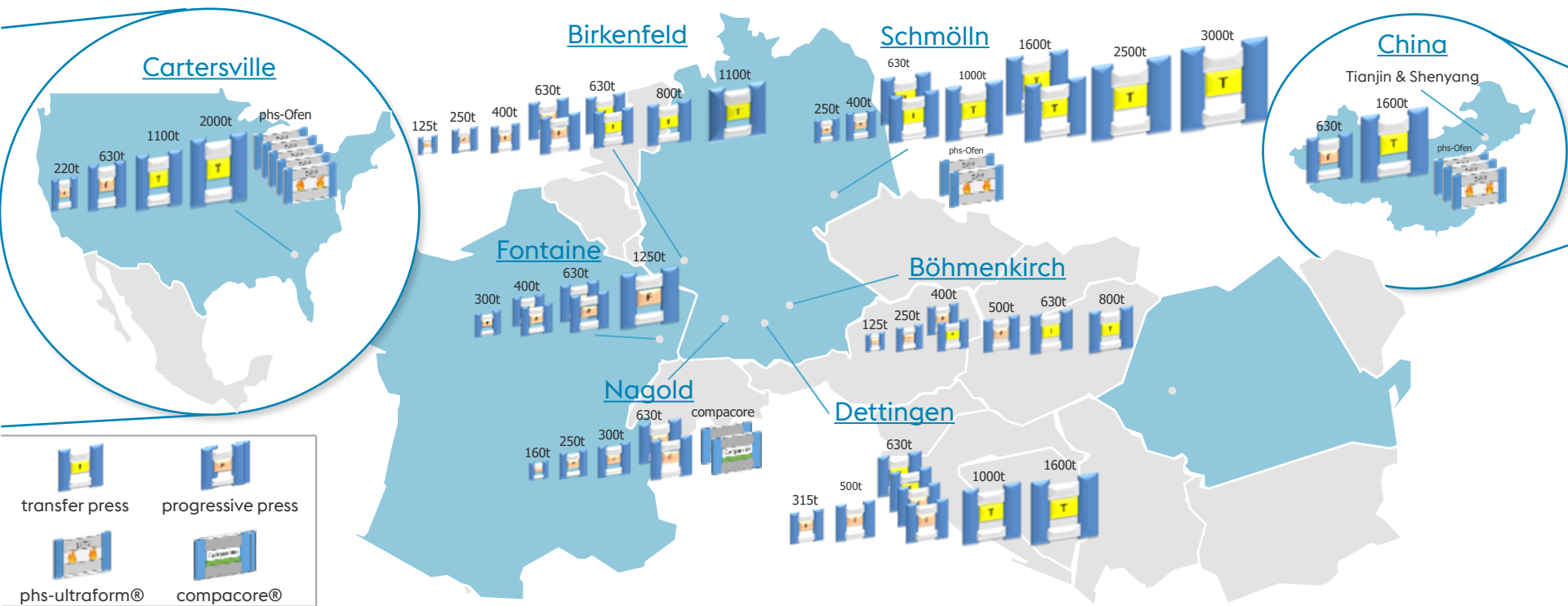
» Headquarters in Linz, AT

EXPERTISE AUTOMOTIVE COMPONENTS

LOCATIONS voestalpine AUTOMOTIVE COMPONENTS



PRESS PARK EUROPE, USA & CHINA



voestalpine Automotive Components

voestalpine

ONE STEP AHEAD.

Aguascalientes Plant

Introducing Aguascalientes

voestalpine Automotive Components Aguascalientes S.R.L. de C.V.
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voestalpine
ONE STEP AHEAD.

General Figures



» voestalpine is a leading company for high complexity assemblies for body in white components applying different joint technologies holding global top positions since 2017.

- **Assembly Technology:**
 - Spot & Projection Welding Processes
 - Glue Application
 - Crimping & Clinching

10,000 m²
Footprint

30 MUSD
Sales 2022/23

>30 MUSD
CAPEX Investment

7,000 m²
Expansion

IATF 16949
Certification

ISO 14001
Certification

IN-HOUSE EXPERTISE

Full service portfolio from a single source

ASSEMBLY TECHNOLOGY



10 Small assembly cells

- » 10 small assembly cells
- » 3 robots (Last generation - FANUC)
- » 2 high pressure servo guns
- » Projection Welding (4 manual stations +1 semi-automatic)
- » Clinching (1 manual stations)
- » Crimping (2 manual stations)
- » Adaptive welding control system



2 Medium assembly cells

- » 2 medium assembly cells
- » 6 robots (Last generation - FANUC)
- » 6 high pressure servo guns
- » Adaptive welding control system

2 Large assembly cells

- » 2 large assembly cells
- » +30 robots arms (Last generation - FANUC)
- » +30 high pressure servo guns (ARO)
- » State of the art autonomous vision systems for quality assurance of seal application
- » Adaptive welding control system (100% verification of welding process with Q-Inspectors)

In Site Competence

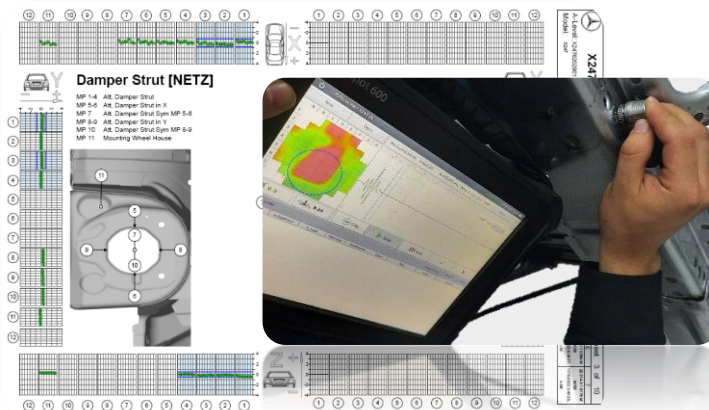
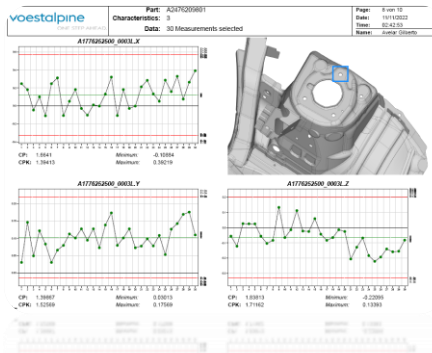
- » Measurement Equipment
 - » CMM (4m x 1.5m x 2m)
 - » 3D scanning capabilities
 - » Welding testing capabilities
 - » Destructive / Non Destructive
 - » Metallography lab

- » Engineering Competence
 - » Welding specialist
 - » Assembly specialist
 - » Maintenance Senior

- » Quality Competence
 - » VDA certified team
 - » Certified auditors
 - » CMM Programmer

Quality Assurance – Our competences

- » High quality culture
- » Climate controlled measurement room
- » CMM machine for large assemblies with touch probe and laser scanning capabilities (4200mm X, 1500mm Y, 2100mm Z)
- » Manual 3D scanning capabilities (Incoming Inspection)
- » Welding destructive and non-destructive testing capabilities
- » Metallography lab
- » PiWeb capabilities



Quality Assurance – Our performance

- » Close communication with our customers
- » Resident on-site at customer
- » Weekly assembly review with customer (KTMA)
- » SPC ports on CFX for critical characteristics on safety relevant products
- » 0.2 % Quality cost YTD
- » 3 PPM in BY 2022-2023
- » Good customer relationship – Last process assessment on Nov 2022 with green result (VDA 6.3)

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Subject: Final report VDA 6.3 Process audit (Edition 2016), P5 – P7, 14. November 2022 to 16. November 2022
Audit scope: X 247; A2476209801; DC3138 assemblies
Audited location: Aguascalientes

Dear Mr. Jesus Barba,

Thank you for the hospitality you showed our auditors. We would also like to thank you for the efforts made by you and your team and for the openness you showed in answering our questions.

On the basis of the conversations held and the impressions gained during our tour of the premises, we have come to the following audit result:

Calculated result 91.6 %, Overall result "A"

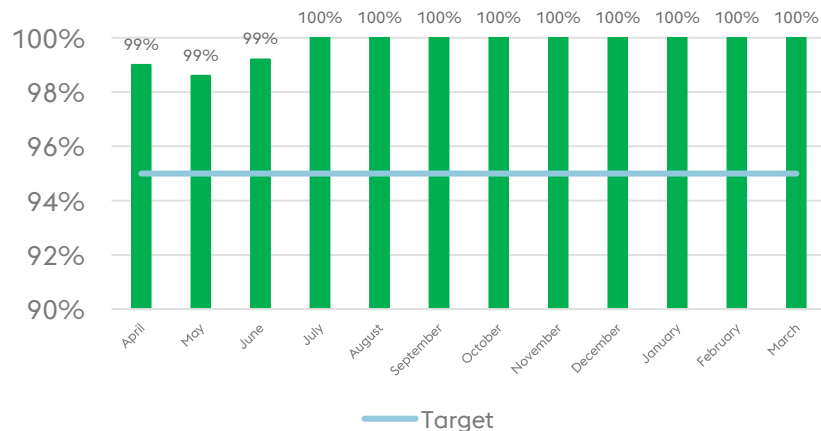
Logistics – Our competences



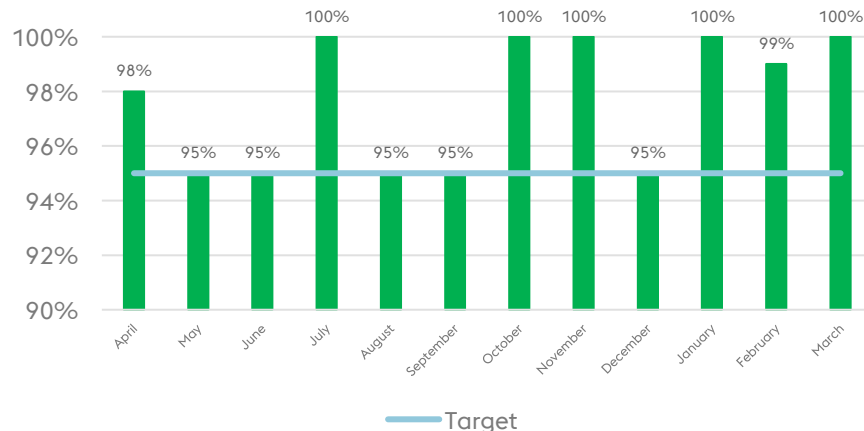
- SAP ERP
- SAP terminals connected to forklifts
- SAP FIFO
- EDI
- JIT Plant
- RFID System
- Warehouse logical material flow
- Chaotic storage system
- 23% Shipping dock utilization
- Our location in Aguascalientes gives us privileged access to the main OEMs in the region as well as access to the US market.
- Strategical location for international business with good access to harbor, railway etc.

Logistics – Our performance

OTD% - 2022 - 2023



Customer Scorecard - 2022 - 2023



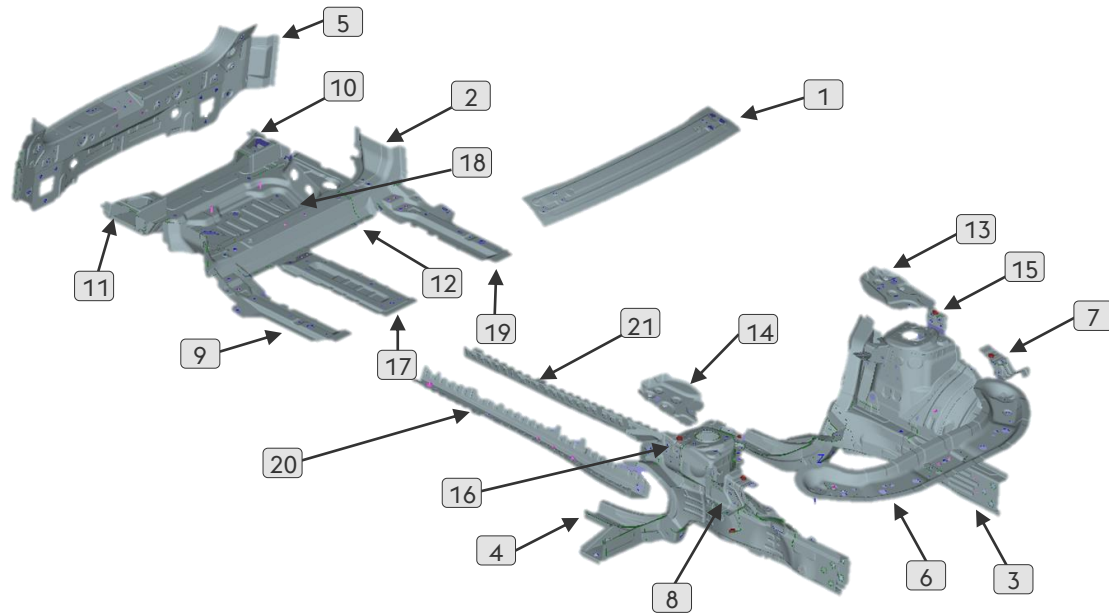
Criteria:

- On-time delivery
- ASN
- RDR – (Receiving report)
- Customer Service
- RIR – (Labeling quality)

PRODUCT PORTFOLIO

Our experience in producing complex parts and assemblies

Assembly Competence



1. ROOF FRAME FRT
2. REINFORCEMENT COMPL RR W. HOUSE
3. WHEEL HOUSE LEFFT
4. WHEEL HOUSE RIGHT
5. REAR APRON
6. CONSOLE ENG
7. BRACKET FENDER FRT LH
8. BRACKET FENDER FRT RH
9. REINFORCEMENT RH RR- SEAT
10. CONSOLE LH CROSS MEMBER RA
11. CONSOLE RH CROSS MEMBER RA
12. FLOOR CROSS MEMBER REAR SEAT RR
13. REINFORCEMENT LH HINGE
14. REINFORCEMENT RH HINGE
15. BRACKET FRT FRONT-PART LH
16. BRACKET FRT FRONT-PART RH
17. REINFORCEMENT CTR RR SEAT
18. LOAD COMPARTMENT WELL FRT
19. REINFORCEMENT LH RR- SEAT
20. REINFORCEMENT LWR LH CENT.TUNNEL
21. REINFORCEMENT LWR RH CENT.TUNNEL

Cartersville Plant

Introducing Cartersville

METAL FORMING DIVISION

- » Hot-formed structural components
- » Laser-welded blanks
- » Development and production of ready-to-install punched and formed components and assemblies
- » Safety and impact protection components
- » Outer panel body parts and chassis components
- » Complex spare parts strategies and lifecycle logistics
- » Metal and plastic hybrid components

THE COMPETENCE CENTERS			
COLD STAMPING & ASSEMBLIES	HOT FORMING & ASSEMBLIES	BODY PANELS & AFTER-MARKET	TAILORED BLANKS
Dettingen (D), Schmoelln (D), Birkenfeld (D), Nagold (D), Boehmenkirch (D), Fontaine (FR), East London (ZA), Shenyang (CN)	Schwaebisch Gmuend (D), Shenyang (CN), Cartersville (USA)	Bunschoten (NL), Birmingham (USA)	Linz (A)

voestalpine AUTOMOTIVE COMPONENTS CARTERSVILLE LLC.



- » New base for supplying ultra high-strength lightweight body parts for premium car manufacturers
- » First production site implementing phs-technology in NAFTA region
- » Cold stamping, hot forming, automotive components, aftermarket solutions
- » Customers: 100 % premium automotive manufacturers & suppliers



LOCATION

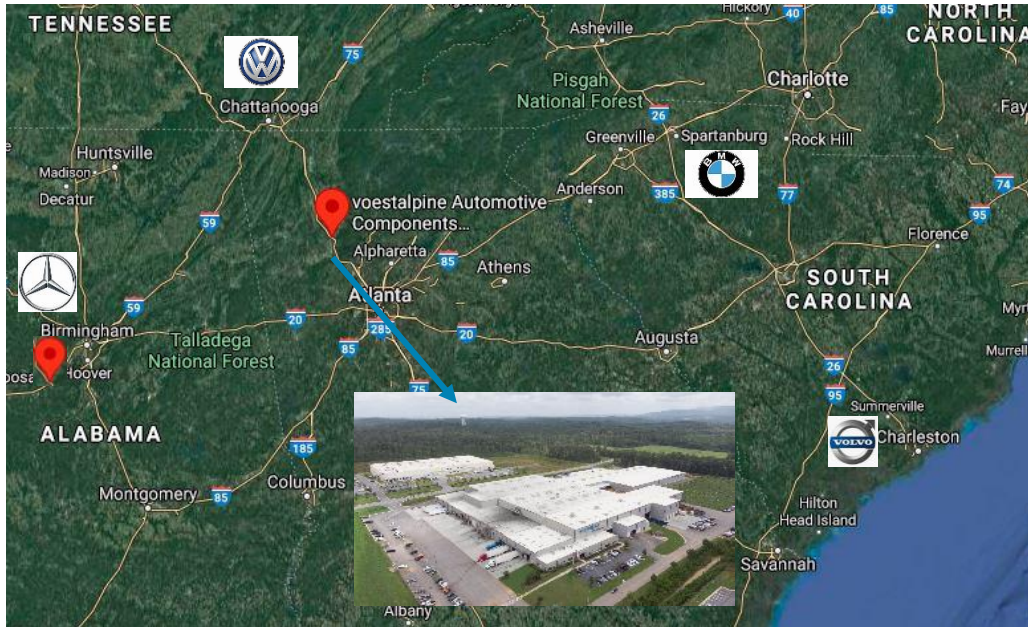
Cartersville,
White, Georgia

EMPLOYEES

2023 620 FTE



CARTERSVILLE LOCATION



- » Located within the metropolitan area of Atlanta
- » A central location close to important OEMs
- » Support for tools and equipment in the immediate vicinity
- » Groundbreaking in 2012
- » Series production operational since Q4/13
- » Production & warehouse area: 553,000 sq. ft.
- » Until 2020: 70 M USD invested

Series production facility in CARTERSVILLE, GA

- » 1st expansion phase (groundbreaking 2012)
- » Plant opening April 2014
 - » Four assembly lines, 220 and 1000 ton presses, spare parts
 - » Installation of PHS 1 (Q3/16)
- » 2nd expansion phase (SOP Q3/17)
 - » Installation of PHS 2, two further production halls, additional office building, second warehouse
- » 3rd expansion phase (SOP Q1/18)
 - » Installation of third phs-line (direct), hall expansions, expansion of press facilities, additional assembly lines
 - » Installation of fourth phs-line (indirect) (Q3/18)
 - » Investment volume 70 M USD
- » 4th expansion phase
 - » Semi-finished goods warehouse completed (Q3/20)



Cold forming & assembly

- » 2000 ton SOP Q2/18
- » 630 ton SOP Q2/18
- » 39 assembly cells (up to 6 robots/cell) Q3/19

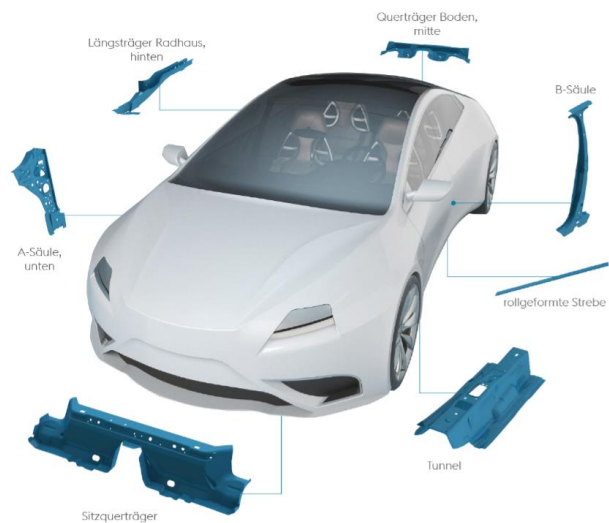


Aftermarket facility in BIRMINGHAM, AL



- » Location: Birmingham, Alabama
 - » Complex weld assemblies with multiple process steps
 - » 12,250 pcs out of each manual weld cell per year and shift
 - » 10,000 pcs out of automated weld cell per year
 - » Area: 138,000 sq. ft.
 - » 2 automated assembly cells
 - » Spot weld, roll hemming, ARPLAS weld
 - » 2 manual assembly cells
 - » Spot welding, riveting, cutting, stud welding, nut welding
- » Investment: 11 M USD (part of 3rd expansion phase)
- » SOP of the lines: Q1/2018
- » Jobs: 15 FTE in 2023

PRODUCT PORTFOLIO



» STRUCTURAL PARTS

- » Steel & aluminum structural parts & components
- » Mechanical presses going up to 2000 tons, handling mild steel and aluminum as well as high strength steel

» ASSEMBLIES

- » Pre-formed inner, outer and structural parts are assembled: doors, hoods, deck lids, tail-gates, etc.
- » Manual insertion processes combined with robotized automated assembly cells add value (e.g. clinching, pressing in nuts & bolts, etc.)

» POWERTRAIN

- » Engine and gearbox components made from sheet steel, aluminum or composed material

INHOUSE EXPERTISE PRESSES



ARISA SERVO PRESS (TRANSFER)

- » Power 630 tons
- » Table 4000 mm x 2000 mm
- » Strip 1340 mm x 4.5 mm
- » SOP Q2/2018

ARISA MECHANICAL PRESS (TRANSFER)

- » Power 2000 tons
- » Table 6000 mm x 2500 mm
- » Strip 1600 mm x 5 mm
- » SOP Q2/2018



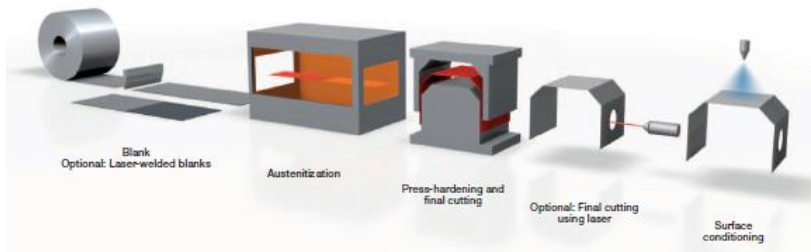
SEYI MECHANICAL PRESS (PROGRESSIVE)

- » Power 220 tons
- » Table 2400 mm x 1250 mm
- » Strip 609 mm x 6 mm
- » SOP Q4/2013

FAGOR SERVO PRESS (TRANSFER)

- » Power 1100 tons
- » Table 5000 mm x 2000 mm
- » Strip 1300 mm x 5 mm
- » SOP Q1/2014

INHOUSE EXPERTISE HOT FORMING LINES



DIRECT PROCESS

- » Optimized production process for simple component geometries
- » Steel blanks are heated to 900°C
- » Subsequently formed and hardened in a cooled tool until final geometry is achieved
- » Allows for short cycle times due to rapid cooling
- » AISi-coated material causes good lubricating action between component and shell die



INDIRECT PROCESS

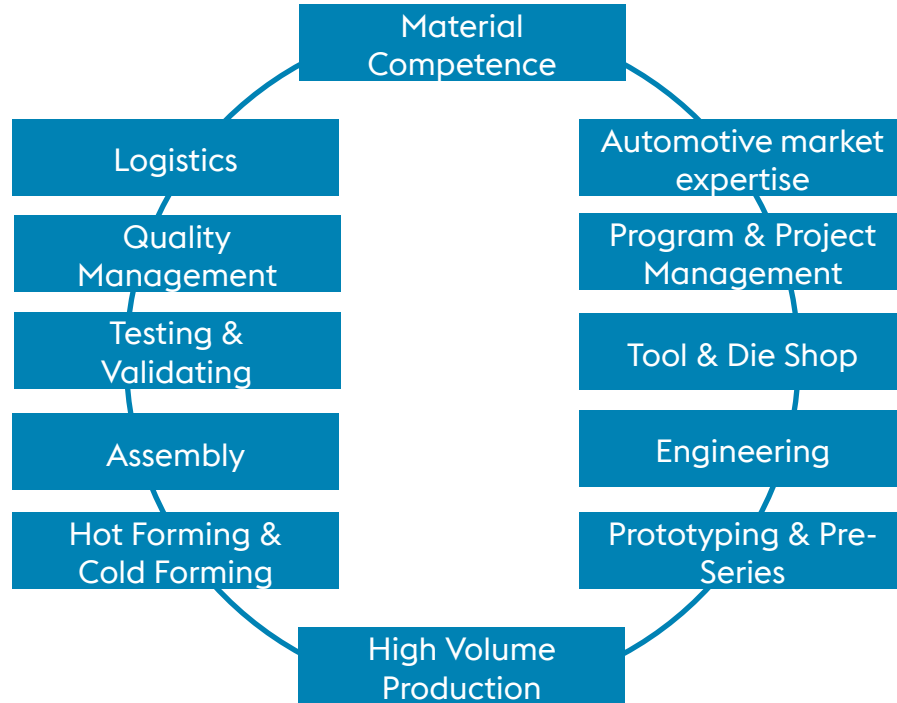
- » Optimized process: final cutting is performed prior to hot forming
- » Steel blanks made of phs-ultraform® are formed and cut to final geometry using cold-forming technologies
- » Cold-formed components are then heated up to 900°C
- » Annealed component in warm condition is shape-hardened and cooled in the press
- » Producing tailored-property parts without additional cycle time

INHOUSE EXPERTISE ASSEMBLY



- » Robotic welding and assembly cells
- » Spot and resistance welding (steel & aluminum)
- » Robotic glue application
- » Smaller and manual equipment (rivets, studs, nuts)

WE ARE A FULL-SERVICE PARTNER



THANK YOU!

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