



Acoustic & ^{M.R.}
Plastic
SOLUTIONS
driven by innovation



A&P Solutions Corporate Presentation

2022



1. About the Company

2. Locations

3. Key Data

4. Our plants

5. Customers

6. Our Portfolio



> Business Development Unit and R&D Offices

❖ A&P Solutions Logistics Center

❖ 2 Sales Representatives



Cd. Sahagún, Hidalgo / MEX

- Sales Manager NAFTA Region

Cuautlancingo, Puebla / MEX

- Sales Manager EUROPE Region

Business Development Unit and R&D Offices

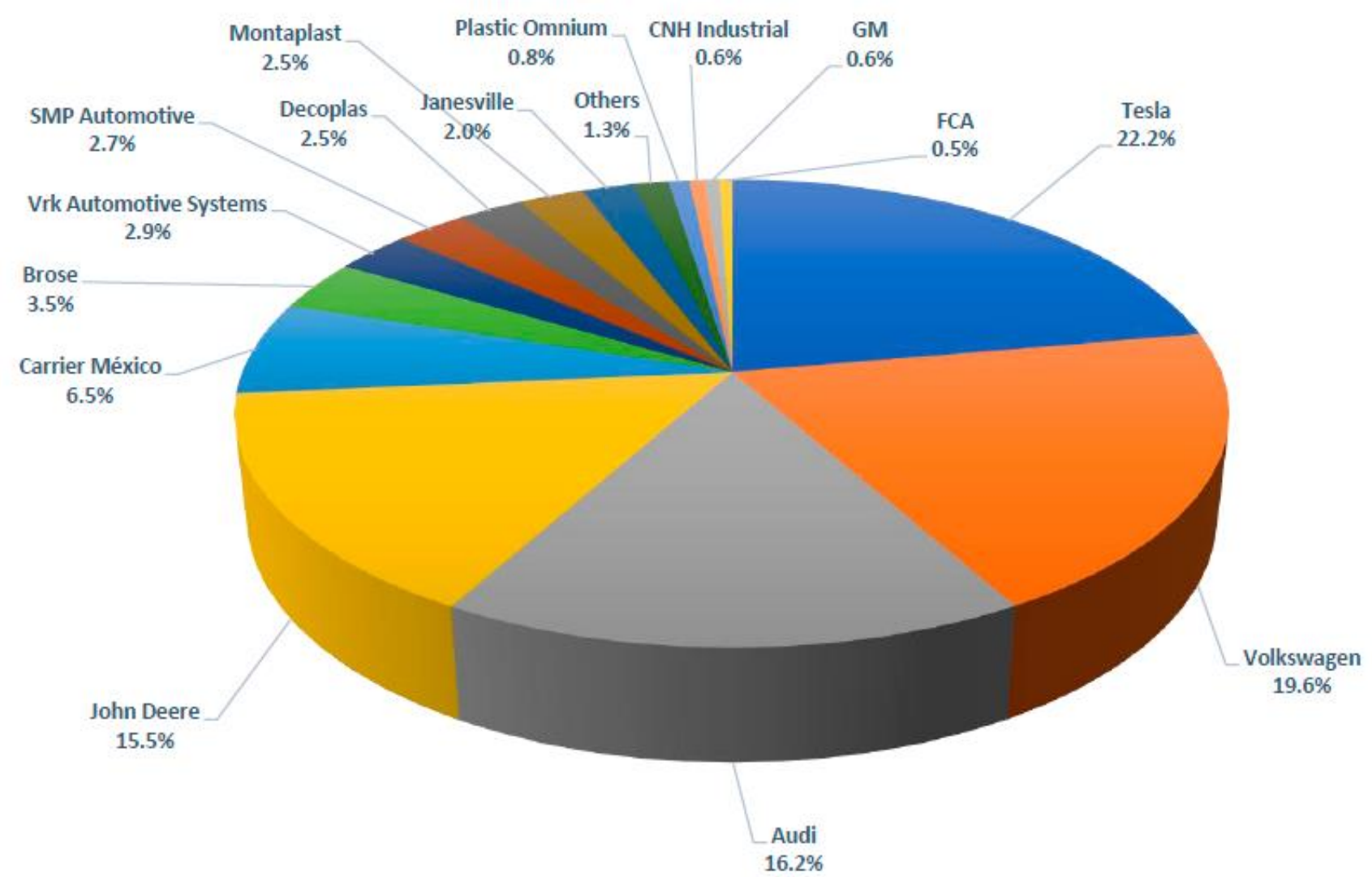
- 3 Quotation engineers
- 8 Project Leaders
- 2 Project Managers
- 1 Business Development Manager
- 2 Business Unit Managers
- 1 R&D Manager
- 4 R&D engineers

Logistics center

- Located 5 minutes away from A&P Solutions Interiors & Powertrain Plant in San Lorenzo Almecatla, Puebla



A&P Solutions Division	Structurals	Exteriors	Interiors & Powertrain
Legal Entity	Plasticos Automotrices de Sahagun SA de CV	AKSYS de Mexico SA de CV	A&P Solutions SA de CV
DUNS #	811315332	812631786	816630438
Strong Competences in:	<ul style="list-style-type: none"> - HOODS - FENDERS - ROOF PANELS - DOOR CARRIERS - SPLASH SHIELDS 	<ul style="list-style-type: none"> - FRONT END CARRIERS - WHEEL LINERS - ENGINE ENCAPSULATION - UNDER-BODY PANELS - FRUNKS 	<ul style="list-style-type: none"> - HARD TRIM INTERIORS - PILLAR A, B, C, LOWER PILLAR - FAN & SHROUDS - SEAT PARTS - AIR INTAKE MANIFOLDS
Manufacturing Capabilities:	<ul style="list-style-type: none"> - IMC plastic Injection - SMC/BMC Compression - D-LFT Compression - 2K/1K Primer & Monocoat 	<ul style="list-style-type: none"> - IMC plastic Injection - 2K Injection - D-LFT Compression 	<ul style="list-style-type: none"> - Conventional Plastic Injection - 2K Injection
Typical Raw Materials used:	<ul style="list-style-type: none"> - DLFT 20, 30 and 40% GF - SMC Class "A" Finish - BMC/SMC Structural - PA6+GF40 - PP+GF20 - PP+GF30 - PP+GF40 	<ul style="list-style-type: none"> - PP+GF20 - PP+GF30 - PP+GF40 - PA6+GF40 - PP+EPDM+TD10 - PP+PE+TPO (EPDM+PP) - TPO 	<ul style="list-style-type: none"> - PC+ABS - PPTD20 ; PPTD20+TPV - PP, PPGF20 - PA6, PA66GF37, PA66+TPO - TPE - POM - PBT



Automotive Product Portfolio Overview







	IATF 16949	ISO 14001	Socially Responsible Company
Structurals			
Exteriors			
Interiors & Powertrain			

Structurals

- ✓ Recognition by **VW** for the **team work** in the development and launching of the KUMT VW361
- ✓ **Partner Level** with **John Deere** 2013, 2015, 2019 and 2020
- ✓ **KEY Supplier Level** with **John Deere** 2014, 2016 and 2017
- ✓ **Platinum** Supplier status **GM**
- ✓ **VW "Zero Defects"** Strategy Recognition

Exteriors

- ✓ 2012, 2014, 2015 and 2016 **GM Supplier Quality Excellence Award**
- ✓ 2016 **Scorecard Excellence Award** Janesville
- ✓ **Clean industry** Certification

Interiors & Powertrain

- ✓ 2013 **Volkswagen Group Award** (A&P Solutions, the only Mexican company to received this award)



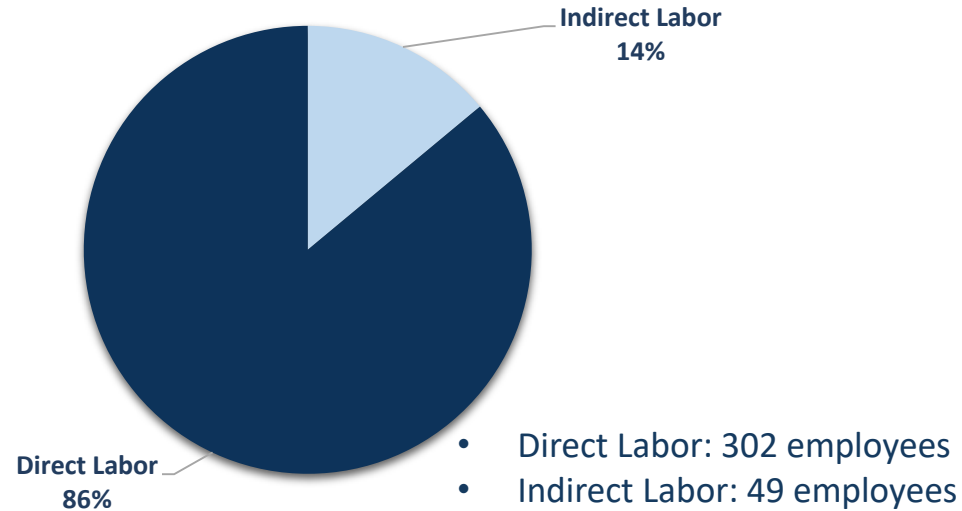
Location: Sahagún, Hidalgo

Manufacturing space: 25,000 m² (270,000 ft²)





Plant Employees



Quality PPMS 2020	
Customer	External PPM
General Motors	0
HBPO	0
Volkswagen	0
John Deere	125
Lear Corp	0
CSP	0
CNH	0
Tesla Motors	0
Stellantis	0
Brose	0

Facilities Info:

- ✓ R&D Offices
- ✓ Metrology laboratory

Capabilities

Plastic injection Molding

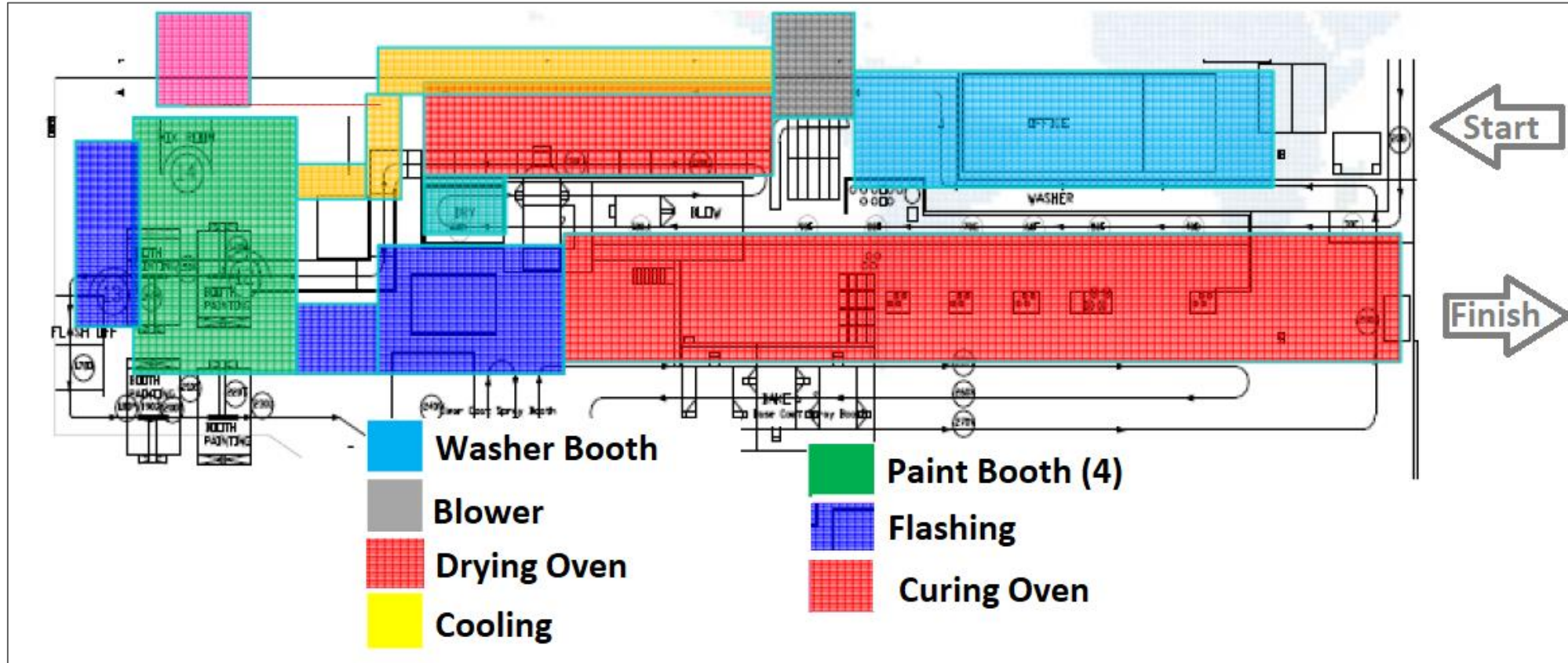
Machine	Type of Machine	Tonnage
Battenfeld	Conventional	1,000
KM-1600	IMC	1,600
KM-2300	IMC	2,300

SMC, BMC & D-LFT Compression molding

Machine	Type of Machine	Tonnage
D-150-1	Press Daniels	150
D-150-2	Press Daniels	150
D-150-3	Press Daniels	150
F-200-1	Press Fluidica	200
D-500-1	Press Daniels	500
D-500-2	Press Daniels	500
D-500-3	Press Daniels	500
D-800-1	Press Daniels	800
D-1500-1	Press Daniels	1,500
FL-1500-1	Press Fluidica	1,500
HB-1800-1	Press Hepburn	1,800
D-3000-1	Press Daniels	3,000
WW-3000-1	Press Williams White	3,000

Paint Applications:

- ☐ Sealer –Primer
- ☐ 1K/2K Monocoat
- ☐ 2K Topcoat: Basecoat & Clearcoat




Capacity:

- ☐ Minimum Paint Area: 0.5 m²
- ☐ Maximum Paint Area: 1.8x1.8 m (3.2 m²)



No	Description	OEM	Process	EAU pc/year	Image	Vehicle
1	Outer Roof Panel		Molding, Primer & Monocoat	13,500		
2	Hood Assy		Molding, Bonding, Primer & Monocoat	2,500		
3	Outer Roof Panel		Molding, Bonding & Primer	500		



No	Description	OEM	Process	EAU pc/year	Image	Vehicle
4	Wheel Liners, Splash Shields, Door Frame & Windshield Surround		Molding	2,000		
5	Mid Gate & Tail Gate		Molding, Bonding, Primer, Topcoat & Assembly	120,000		
6	Under Hood Components P3-113		Molding	77,000		



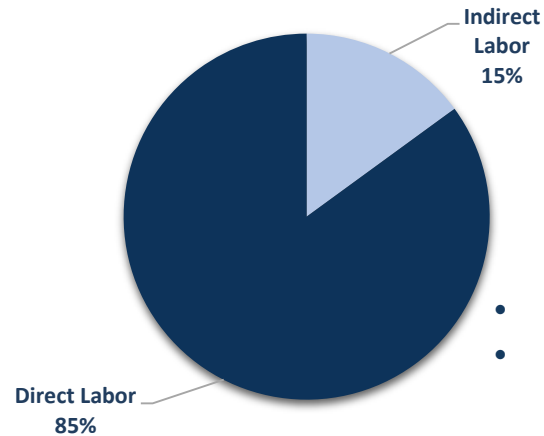
Location: Chachapa, Puebla

Manufacturing space: 17,350 m² (187,000 ft²)





Plant Employees



- Direct Labor: 159 employees
- Indirect Labor: 28 employees

Quality PPMS 2020

Customer	External PPM
January	0
February	0
March	0
April	0
May	0
June	0
July	0
August	0
September	0
October	0
November	0
December	0

Facilities Info

- ✓ R&D Offices
- ✓ Metrology laboratory

Capabilities

Plastic injection Molding

Machine	Type of Machine	Tonnage
KM1	Dual Shot (2K)	2,300
KM5	Dual Shot (2K)	2,300
KM6	IMC	2,300
KM2	IMC	2,000
KM3	Dual Shot (2K)	1,300
KM4	Conventional	1,000

D-LFT Compression molding

Machine	Type of Machine	Tonnage
DF-2500-1	Dieffenbacher Press	2,500
HB-2500-1	PRES Hepburn Press	2,500










Other Production capabilities

- ✓ 4 Punching Machines of 75 Tons.
- ✓ 5 PUR Foaming Machines of 40 Tons. (Open mold)
- ✓ 4 PUR Foaming Machines of 40 Tons. (Closed mold)
- ✓ 2 Water Jet Cutting of 32 and 37 kVA of power


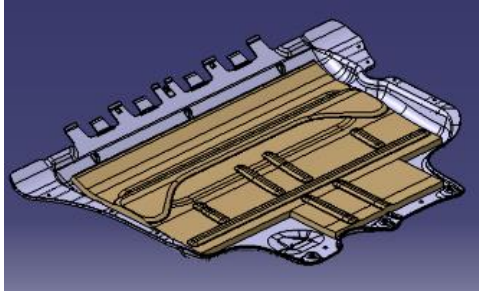








No	Description	OEM	Process	EAU pc/year	Image	Vehicle
1	Frunk Tub		Molding + Assembly	90,000		 
2	Underbody Cover line LH&RH		Molding + Assembly	330,000		
3	Engine Shielding		Molding + Assembly	330,000		



No	Description	OEM	Process	EAU pc/year	Image	Vehicle
4	Front End Carrier		Molding + Assembly	50,000		
5	Splash Shields		Molding	85,000		
6	Storage Bin		Molding + Bonding + Primer + Paint color	250,000		



No	Description	OEM	Process	EAU pc/year	Image	Vehicle
7	Engine Shielding		Molding + Assembly	180,000		
8	Front End Carrier		Molding + Assembly	330,000		
9	Outer Roof Panel		Molding + Bonding + Primer	500		

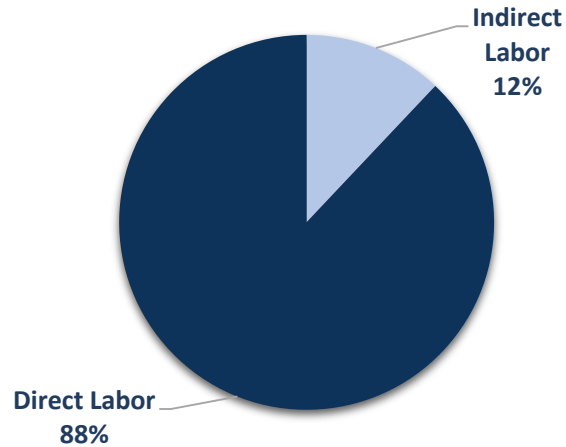


Location: Cuautlancingo, Puebla

Manufacturing space: 12,000 m² (130,000 ft²)



Plant Employees



- Direct Labor: 409 employees
- Indirect Labor: 56 employees

Quality PPMS 2020	
Customer	External PPM
January	130
February	5
March	61
April	102
May	3
June	188
July	1
August	3
September	61
October	0
November	0
December	0

Capabilities

Plastic injection Molding		
Tonnage	Type of Machine	Quantity/Tonnage
25	Conventional	1
50	Conventional	1
65	Conventional	3
80	Dual Shot (2K)	1
110	Conventional	1
130	Conventional	5
150	Conventional	3
180	Conventional	2
200	Conventional	1
270	Conventional	2
300	Conventional	1
350	Conventional	3
500	Conventional	2
650	Dual Shot (2K)	2
650	Conventional	2
850	Conventional	2
1,000	Conventional	2
1,300	Conventional	3
TOTAL MACHINES		37

Facilities Info

- ✓ Tool shop
- ✓ R&D Offices
- ✓ Metrology laboratory



No	Description	OEM	Part Size	Image
1	Lower A Pillar RHD LH / RH		970*450 mm	
2	Bottom B-Pillar LH & RH		900*900 mm	
3	Wheel Cover Front LH / RH		900*800 mm	

No	Description	OEM	Part Size	Image
4	Spoiler Trax		1710*680 mm	
5	Rear Quarter		1600*600 mm	
6	Outer Rocket Panel LH & RH		1,600*120 mm	



No	Description	OEM	Part Size	Image
7	Door trim LH & RH		900*600 mm	
8	Door Panel LH&RH		850*990 mm	
9	A-Pillar Upper LH & RH		800*200 mm	



SECONDARY OPERATIONS

- ✓ Die Piercing
- ✓ Hot & Cold Bonding Process
- ✓ Riveting
- ✓ Automated Drilling
- ✓ Water Jet Cutting
- ✓ Assembly Line

TOOLSHOP

- ✓ Penetration EDM
- ✓ Parallel Wheel
- ✓ Radial Drill
- ✓ Vertical Milling Machine
- ✓ Bench Drill
- ✓ Flat Surface Grinding
- ✓ CNC Machining Center
- ✓ Electric Saw

PART ANALYSIS

- ✓ Meltfixer MT
- ✓ Pendulum Impact Tester
- ✓ Universal Machine
- ✓ High temperature Oven
- ✓ Hardness Tester
- ✓ Cooling Chamber
- ✓ Oven
- ✓ CMM
- ✓ Digital Vernier
- ✓ Moisture Analyzer
- ✓ Flame Chamber
- ✓ Analytical Scale
- ✓ Humidity Chamber

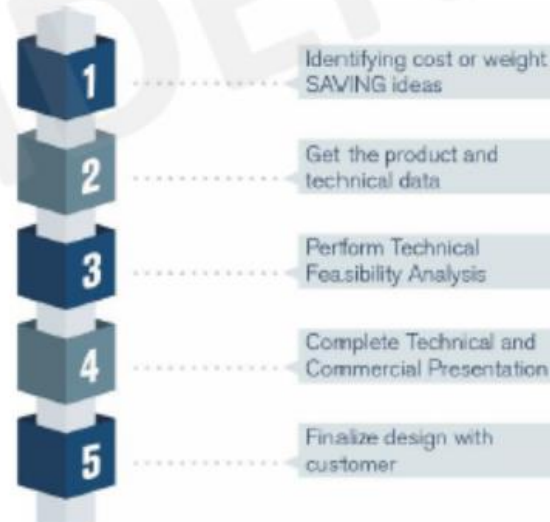
MATERIAL ANALYSIS

- ✓ Meltfixer MT
- ✓ Pendulum Impact Tester
- ✓ Universal Machine
- ✓ High temperature Oven
- ✓ Moisture Analyzer
- ✓ Flame Chamber
- ✓ Analytical Scale
- ✓ Humidity Chamber

A&P Solutions R&D office, is focused to collaborate with its customers to integrate the most innovative technology of thermoset and thermoplastic reinforced materials and process into interiors, exteriors and under hood vehicle body applications to provide the highest value added in terms of:

- 
- 1.** Reliable performance design.
 - 2.** Best weight saving solution
 - 3.** Most competitive commercial offer.

Metal conversion to composite technology



REQUIREMENTS

CONCEPT

DESIGN

VALIDATION

LAUNCH



> Competitive advantages



> Active contact

-  Electronic Data Interchange (EDI)
-  Processes and systems for production planning and material flow ensures undisturbed and safe supply processes to the customer
-  Transparency over all processes of production planning, manufacturing, warehousing, transport and capacities is given
-  Emergency concepts are available
-  Sub supplier management is implemented
-  Availability of contact persons and active communication



Automotive & Trucks



Agriculture



Home Appliances

Our clients



Tier 1



LUCID



KARMA



Automotive & trucks

Tier 2



Agriculture



JOHN DEERE



Urban Buses



Wagons



Industrial Applications



A&P Solutions Group acts as Tier 1 and Tier 2 supplier to many clients over different industries, which puts us in a competitive position over our competition.

Thank you very much for your
time and your attention.

We, at A&P Solutions, would be
very glad to work and provide
VALUE ADDED solutions for your
company's success.



Acoustic & Plastic ^{M.R.}
SOLUTIONS
driven by innovation



www.apsolutions.com.mx



<https://mx.linkedin.com/in/apsolutions>



A&P Solutions



@A_Polutions