KINGFA

KINGFA
Driving the Future

Five Systems | Full Coverage | One-Stop Empowerment

The Most Trusted Materials Partner for the Global Automotive Industry Technologies

KINGFA's Total Solutions for the Automotive Industry
Empowering the Automotive Industry from Materials to Components



COMPANY OVERVIEW

No. 1 in China's Modified Plastics Industry for 21 Consecutive Years



Our Mission

Grow together with partners, share achievements, provide high-quality new material products for the society, and create a better life.

Our Vision

Become the industry highly respected, the world's best new materials enterprise.

Countries	Production bases
10	23
Employees	PhD / Master's degree holders
14,111	260/1,750
Modified Plastics Sales Volume	Sales Revenue
2.95 Million Tons	65.40 Billion (CNY)

Four Business Units

World's Largest Modified Plastics Supplier & Most Comprehensive Polymer Materials Provider

01 02 03 04

Petrochemicals

Homo-PP
Co-PP
Integrated Modification
ABS
Integrated Modification
PDH hydrogen gas
MMA
AN



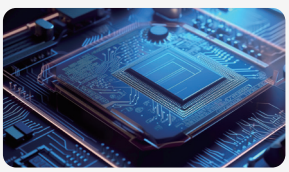
Compounds

PEEK
PPS, PPSU, PES, PA10T, LCP, PPA
PPO, PPO/PA, PA6, PA66,PET
PC, PC/ABS, PC/PBT, PBT,POM
ABS, AS, PMMA, PP, PE, PS, PVC/ABS, PVC



New Materials

Kingfa Biology: Bio-based SA, PBAT, PLA, BEP halogen-free flame retardant
Special engineering plastics: PPA, LCP, PPSU, LCPA, TPAE, TPI
Kingfa composite material: Continuous fiber reinforced thermoplastics (CFRTP)



Kingfa Medical

Personal Masks
Nitrile Gloves
Industrial Protective Products
Non-woven Materials



Global Footprint
Localized production layout across major global economies completed



The above capacities are only for modified plastics.

Kingfa's Factories	Alliance Coverage	Existing Capacity /Tons	Planned Capacity /Tons
China	China/Japan/ Europa/Mexico	3,280,000	174,000
India	India/North America	150,000	180,000
Europa	Europa	30,000	300,000
North America	North America, Mexico	30,000	300,000
Southeast Asia	Vietnam, Malaysia	140,000	/
		3,630,000	954,000

- **Kingfa has 10 major production bases in China, achieving full coverage of localized supply across key economic zones.**
- **Kingfa has established global production and R&D centers in North America, Europe, India, and Southeast Asia.**
- **Kingfa's overseas production bases enable it to adapt to global tariffs and trade policies, delivering optimal solutions for customers.**

AUTOMOTIVE INDUSTRY INNOVATION PLATFORM

Integrated Technical Solutions and Forward Design

Solution Provider: All-round Value-Added Services
Boasting a professional team for structural design and molding support, as well as industry-exclusive component testing centers and application evaluation centers in the materials sector.

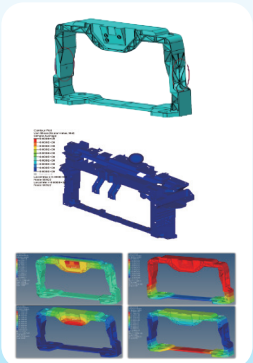
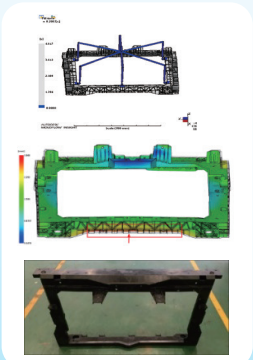
- Materials with superior cost-performance ratio
- Provision of material performance data

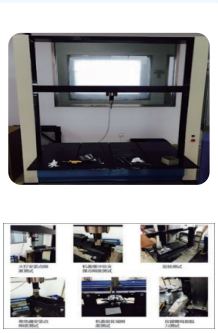
- Structural optimization design
- Application scenario simulation

- Mold design optimization
- Molding simulation

- Molding process optimization
- Analysis and research on countermeasure of molding defects

- Component performance testing
- Tooling and design validation

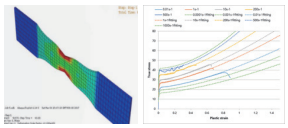






Material Selection → **Structural Design** → **Molding Simulation** → **Molding Processing** → **Application Evaluation**

From Material to Part

Material Benchmark

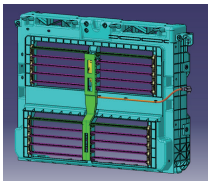


LS-DYNA | Digimat

Molding Simulation

- MAT-24, MAT-187L, MAT-187
- GISSMO, DIEM, DIGIMAT
- UDB, MTR, BRDF, ...

Structural Design

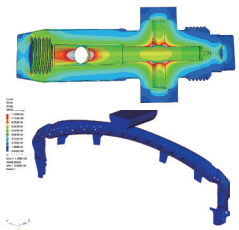


CATIA

Finite element analysis

- Plastic replace metal
- Lightweighting
- Component design of selected parts
- Topology optimization

Structural Analysis

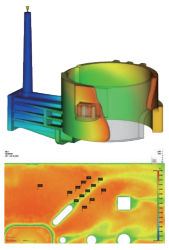


Altair® HyperWorks®

SIMULIA | SIEMENS

- Static Analysis
- Dynamic Analysis
- Co-Simulation
- NVH & Vibration Analysis
- Thermal Analysis
- CFD: Computational Fluid Dynamics (CFD)
- Multi-Physics Field
- Optical Performance Analysis

Processing Valuation



AUTODESK Moldflow

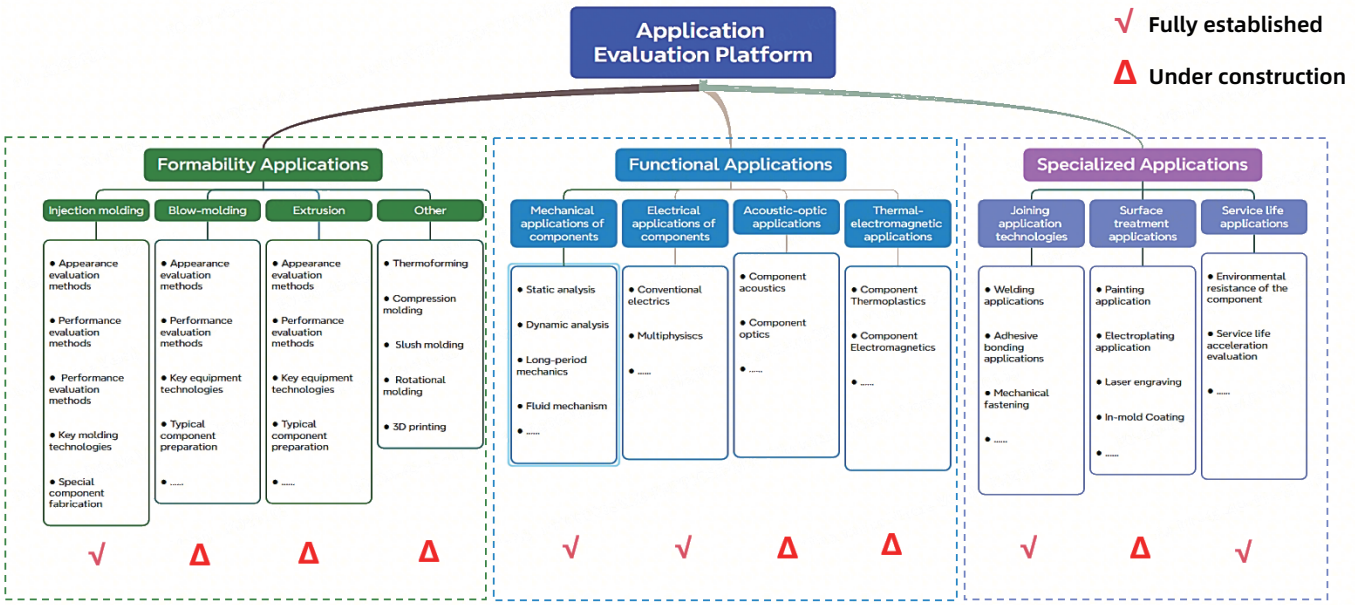
Moldex3D

Moldflow

- Insert Injection Molding
- Two-Color Injection Molding
- Foam Molding / Foaming Technology
- Core Shift
- Shrinkage Prediction
- Warpage Optimization
- Paint-Free Technology

Application Evaluation Platform

Application development focuses on moldability, functional and specialized applications, serving as a universal applied technology across the entire industry.

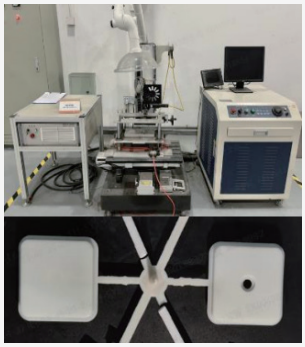


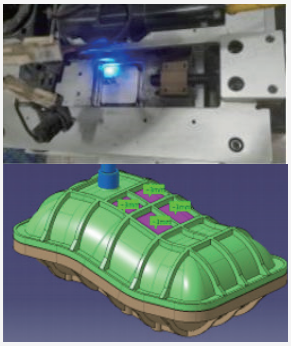
Focus on the full process from materials to component processing

Focus on multi-physics functional applications of components

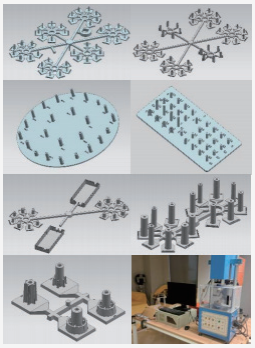
Focus on specialized application scenarios of components



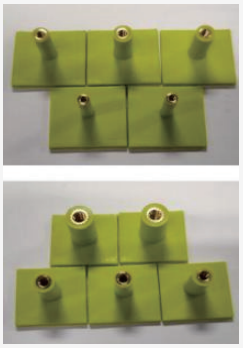




Welding Evaluation
(Lazer, ultrasonic, Vibration)



Screw Columns

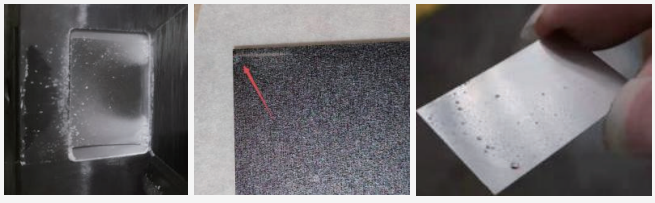


Copper Nuts



Insertion and Pull-out Force

Assessment for Nuts and Fasteners Evaluation



Die Deposit Evaluation

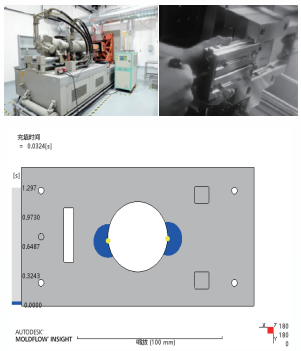
Automotive Industry Innovation Platform
Independent laboratory and testing & Component evaluation center



- Stress strain curve
- Poisson rate
- CLTE
- S~N curve
- Creep curve
- Multi-axial impact
- PVT Curve

Laboratory recognized by CNAS (ISO 17025)

Basic Data & Material testing



- Mold shrinkage
- Metal insert mold evaluation
- Mold release force
- Spiral flow
- Appearance defects assessment

Professional processing & simulation support

Part Forming Evaluation



- Welding simulation test
- Gas-tightness
- Burst test at high-low temp
- Program control pressure pulse test
- Thermal shock in oil & air
- Thermal aging test
- Falling ball impact test
- Shaker for comprehen-sive climatic test

Component testing

Parts Testing and Evaluation



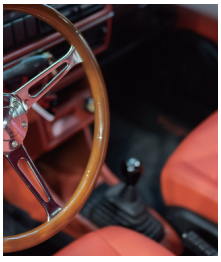
- SEM
- Metallographic microscope
- Thermal analysis
- Crystallization analysis
- Viscosity number
- Component analysis

Failure Analysis

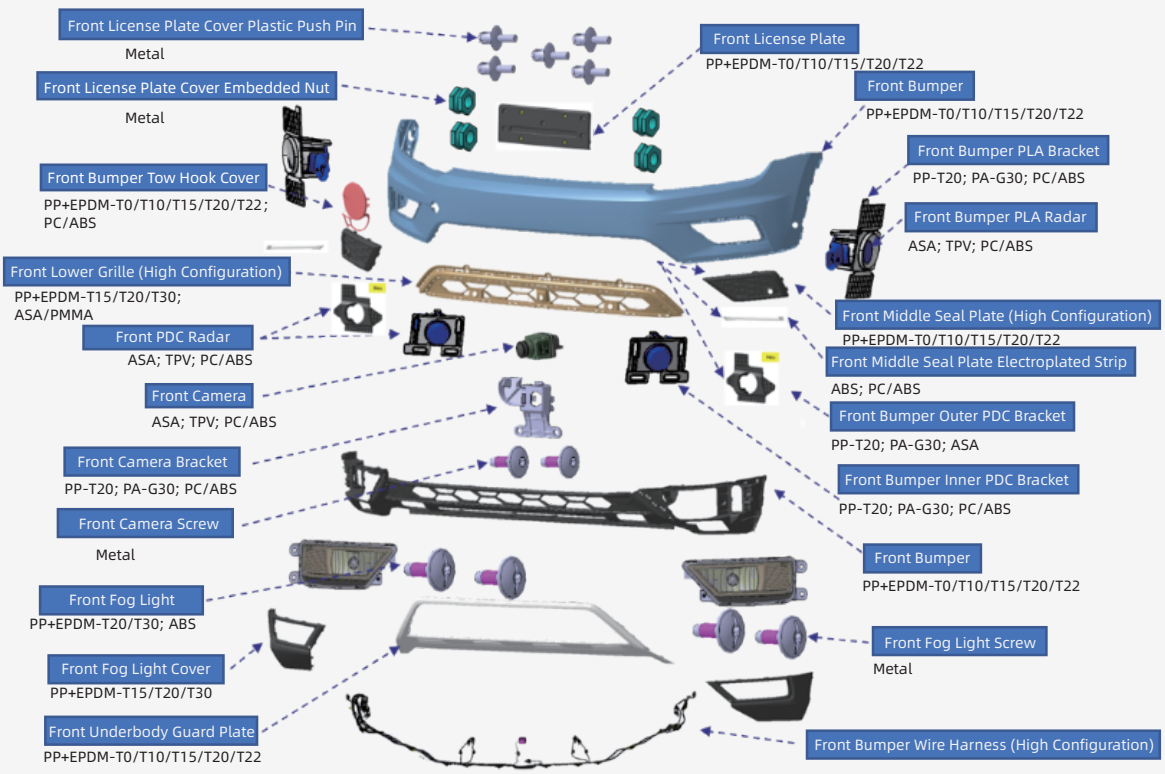
Failure Analysis

Automotive Component System Solutions
Five Major Systems

Exterior | Interior | Structure | Funcition | Electricity

Exterior System	Interior System	Structural System	Functional System	Electric System
Determines appearance and protection	Creates comfort and experience	Ensures strength and safety	Supports control and stability	Provides power and intelligence
				

Automotive Component System Solutions
Exterior System – Bumper



Front bumper

Automotive Component System Solutions
Exterior System – Bumper

Material Classification System

Polyolefin	APP	**Nylon**	AAB
PP+EPDM / PP-T20		PA-G30	
Styrene	APA	**Soft Elastomer**	RJ
ABS / PC/ABS / ASA		TPV	

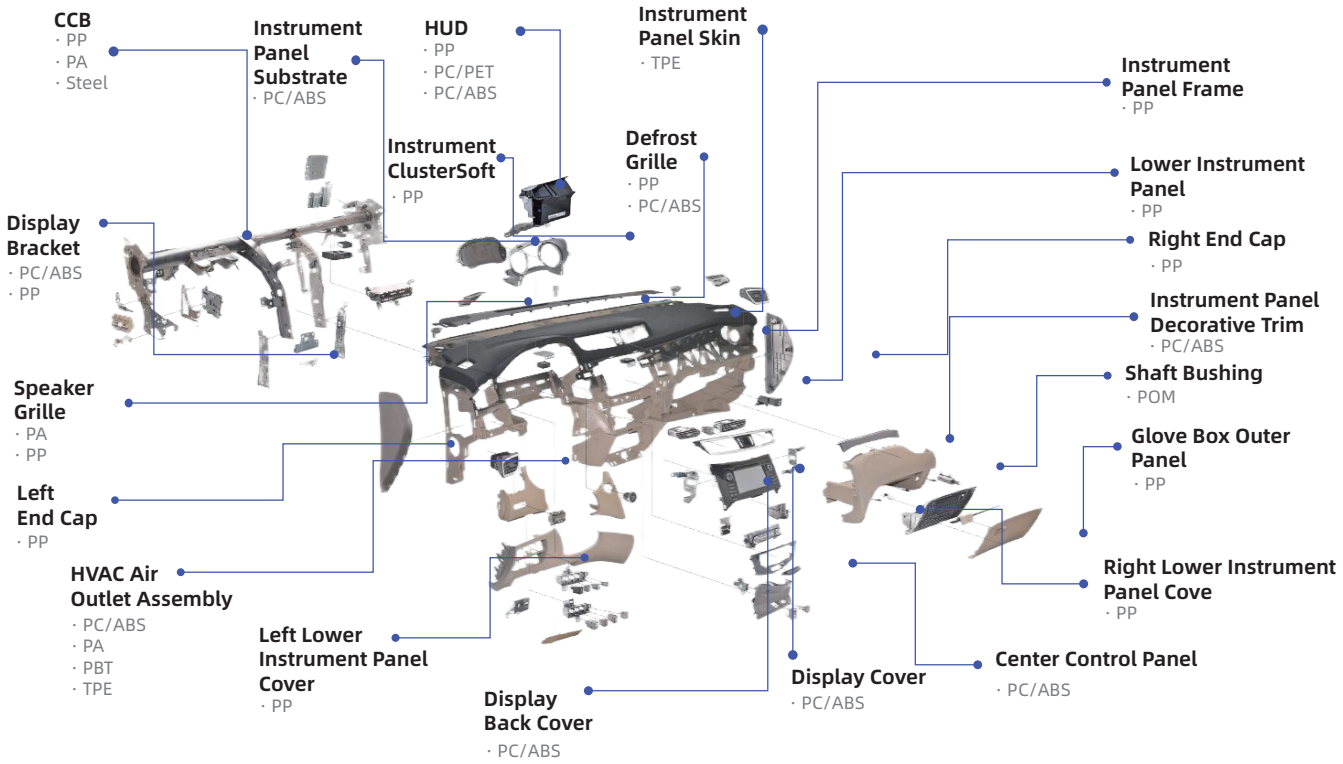


Industry Trend: Integrated Design- Integration of air intake grille, headlight, fog light, daytime running light, and sensors (millimeter-wave radar, camera, LiDAR).

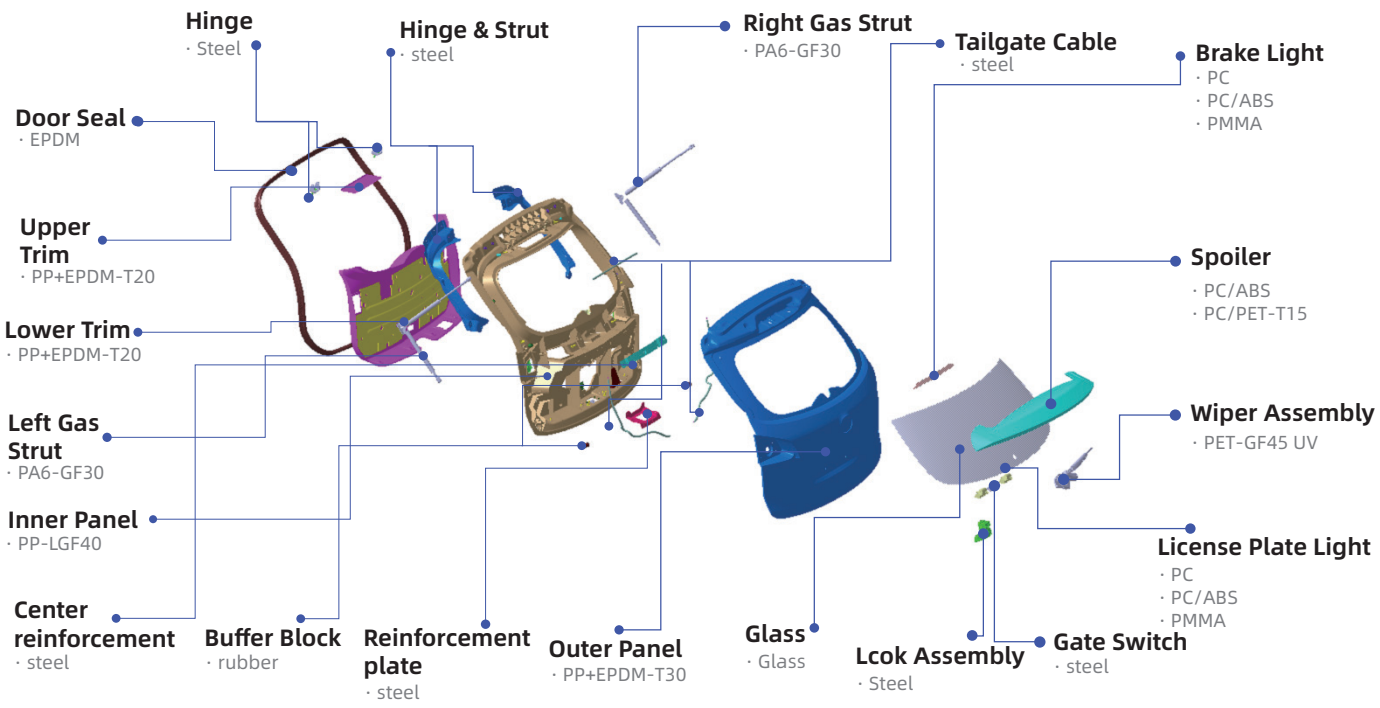
Material Application Overview

Material Type	Application Keywords	Typical Parts
PP/EPDM/TD	Main material (~70% of parts)	Bumper body, license plate holder, cover plate, grille, fog light
ABS，PC/ABS	eat resistance / Dimensional stability / Strength / Appearance / Plating	Radar cover, camera housing, electroplated trim strip
ASA	Weather resistance	Radar/camera outer cover
PA/GF	Strength, Structural support	Various brackets (radar/camera/PDC)
TPV	密封，线束	Sealing ring, wire harness sheath
金属	Fastening connection	Screw, nut, push pin

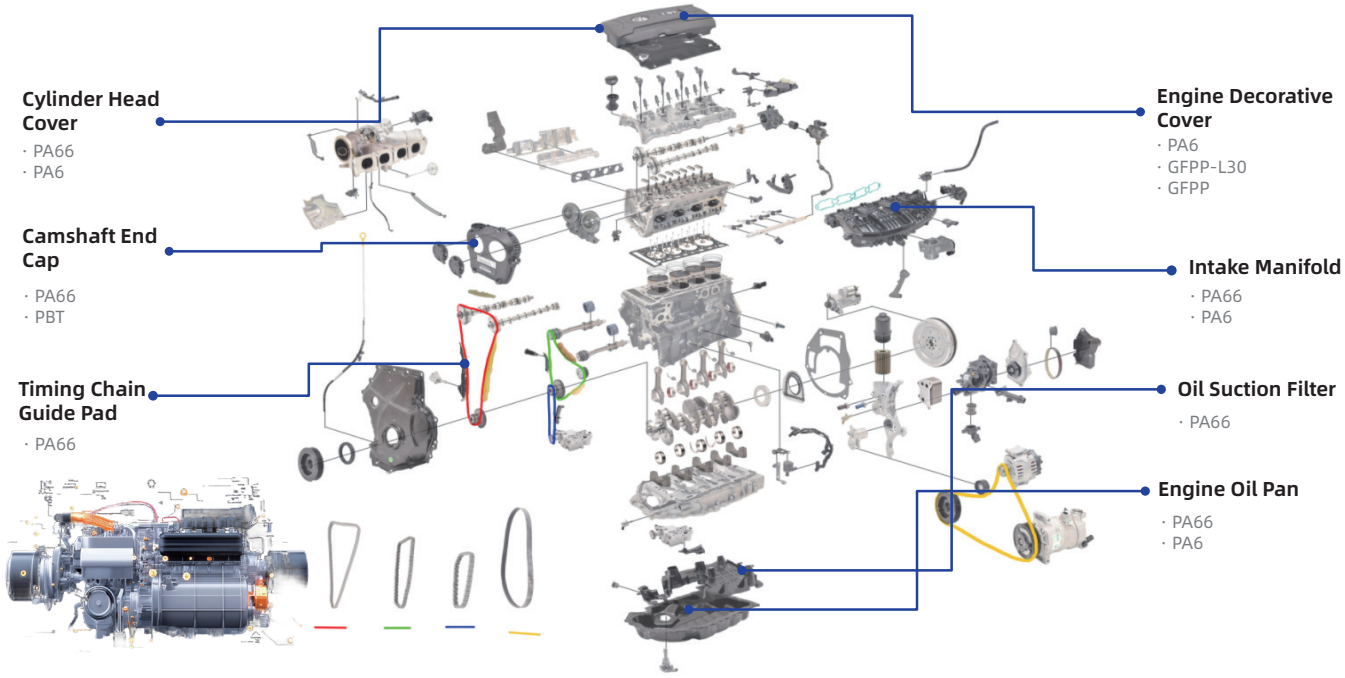
Automotive Component System Solutions
Instrument Panel System



Automotive Component System Solutions
Structural Parts System - Tailgate



Automotive Component System Solutions
Functional Parts System - Engine



Cylinder Head Cover
- PA66
- PA6

Camshaft End Cap
- PA66
- PBT

Timing Chain Guide Pad
- PA66

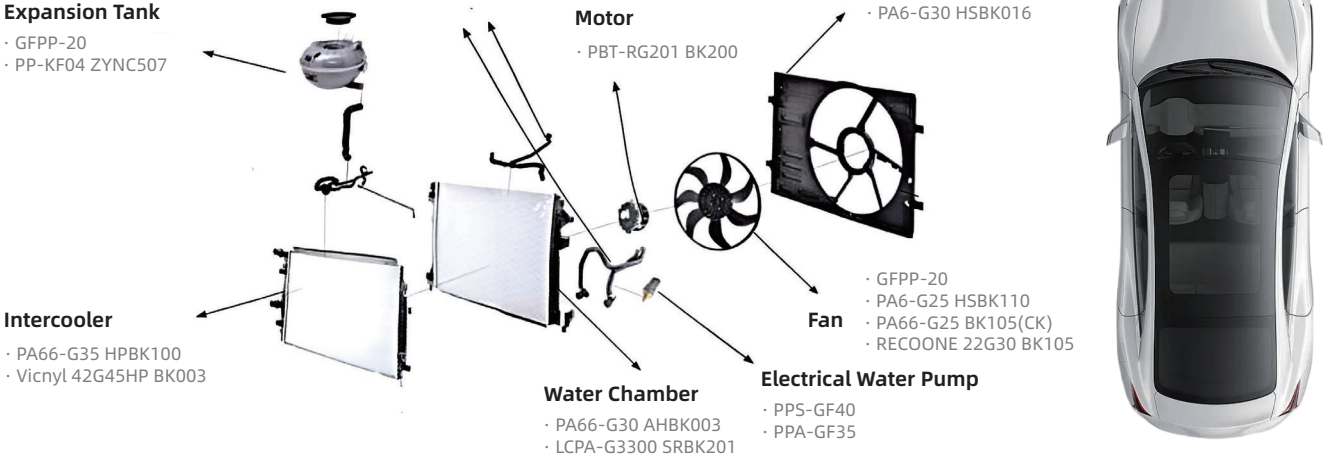
Engine Decorative Cover
- PA6
- GFPP-L30
- GFPP

Intake Manifold
- PA66
- PA6

Oil Suction Filter
- PA66

Engine Oil Pan
- PA66
- PA6

Automotive Component System Solutions
Functional Parts System - Cooling System



Cooling Tube
- PP-KF164 BK301
- Vicnyl 2800ET
- MIC-2087A

Expansion Tank
- GFPP-20
- PP-KF04 ZYNC507

Motor
- PBT-RG201 BK200

Fan Shroud
- GFPP-30
- GFPP-L30 HSBK013
- PA6-G30 HSBK016

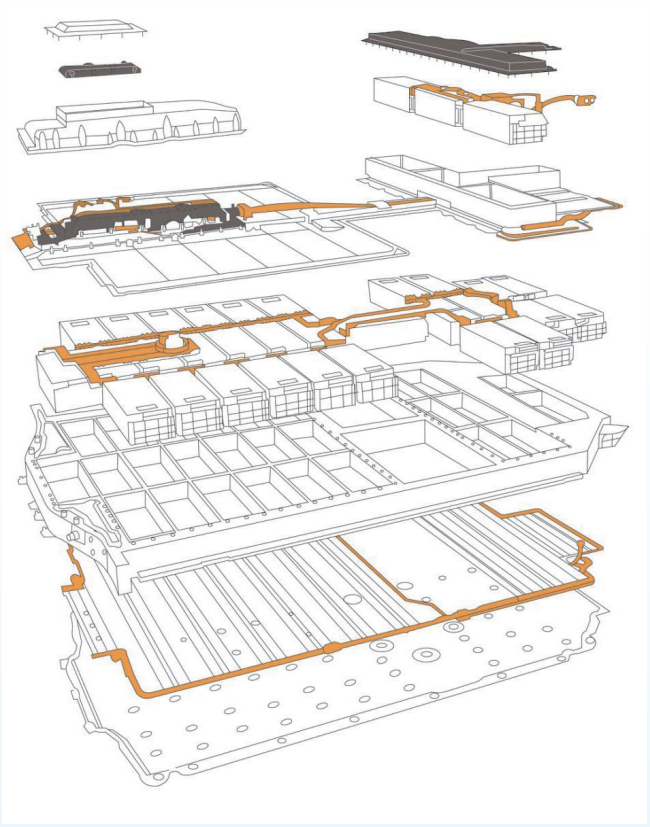
Intercooler
- PA66-G35 HPBK100
- Vicnyl 42G45HP BK003

Fan
- GFPP-20
- PA6-G25 HSBK110
- PA66-G25 BK105(CK)
- RECOONE 22G30 BK105

Water Chamber
- PA66-G30 AHBK003
- LCPA-G3300 SRBK201

Electrical Water Pump
- PPS-GF40
- PPA-GF35

Automotive Part System Solutions
Electrical Power System - Battery



Battery Pack Upper Cover (Body)

· Composite Material
· PPS
· PPE Alloy
· PC/ABS
· PA66
· PP, etc.

Underbody Shield

· Composite Material

Flexible Copper Busbar

· Extruded PA1213
· Extruded PA1012
· Extruded PVC

Wiring Harness Isolation Plate End Plate Bracket Terminal Post

· LCP
· PPS
· PA66
· PPE
· PC/ABS
· PP, etc.

Injection Molded Busbar

· PA66
· PBT

High-Voltage 、 Connector

· PA10T/6T
· PA66
· PBT
· BMS/BDU
· PBT、PA66

High-Voltage Cable & Components

· XLPO

Cooling Pipe or Fitting

· PA10T
· PA610/PA612
· PA66 AH
· PP
· TPV

KINGFA

Driving the Future of Automotive Lightweighting, Electrification, and Intelligence

From China to the World

Becoming the Most Trusted Material Partner in the Global Automotive Industry

