

ABIS Mold Marks 30th Anniversary With Focus on Precision Injection Molding

ABIS Mold marks 30 years in mold manufacturing, with tooling and molding services for automotive, EV, robotics, drone and outdoor product projects.

SHENZHEN, GUANG-DONG, GHANA, October 23, 2026 /EINPresswire.com/ -- ABIS Mold, a custom plastic injection mold manufacturer based in Shenzhen, China, marks its 30th anniversary in 2026 by highlighting the role of tooling, injection molding and assembly in automotive and electric vehicle (EV), robotics, drone and outdoor product development. Founded in 1996, the company brings research and development, mold making, production and assembly together for manufacturers sourcing custom tools or finished plastic components.

Across these four application areas, molding requirements are shaped by the component's function within the finished product. Its mating parts, operating environment and production volume determine which dimensions, surfaces and material properties need particular attention during tool development.

ABIS operates a 12,000-square-meter factory with equipment from Germany, Switzerland and Japan. Its injection molding machines have clamping forces ranging from 40 to 650 tons. The company reports annual production capacity exceeding 300 molds, with approximately 70% of its molds exported to Europe and North America. Equipment selection for an individual project depends on the proposed mold, component geometry, material and production requirements. The company's integrated service model allows a project to cover a mold for the customer's own



injection mold manufacturer



custom injection mold

facility, molded-part production at ABIS, or a broader scope that includes secondary operations and assembly. Establishing that scope early gives engineering and purchasing teams a common basis for discussing the design, evaluating a quotation and agreeing what constitutes an acceptable delivery.

Tooling for Automotive and Electric Vehicle Components

[Automotive & EV Injection Molds](#)

support applications ranging from charging connector shells and charging-port housings to small battery-related plastic components and automotive trim. The relevant details include locating features, joining interfaces and the appearance of visible surfaces within the larger assembly.

An EV charging connector mold may require a review of mating dimensions, terminal-retention features, latch movement and assembly sequence. A charging-port housing introduces a different combination of mounting points, cover interfaces and, where specified, sealing features. Identifying these functional surfaces helps the tooling team consider where parting lines, gates and ejection features can be placed.

Small automotive plastic parts also include clips, brackets, spacers, door-handle components, mirror housings and interior trim details. A visible trim component needs agreement on color, texture and permitted surface marks. A retaining clip requires a clear description of its movement and engagement. The importance of each feature should be reflected in the drawing and acceptance criteria.

Material selection follows the component's intended use. Electrical insulation, temperature exposure, contact with chemicals and any specified flame requirements need to be considered at the resin-grade level. Product teams and suppliers also need to agree which properties will be checked on samples or completed assemblies. The purchasing brief can then distinguish the tool itself from the evidence required to approve the part for its intended application.



Mould Exhibition



plastic mold manufacturer

Plastic Components for Robotics

[Robot Parts Injection Molding](#) involves components such as outer housings, joint covers, sensor mounts, control enclosures and internal routing parts. These components connect the robot's external form with its electronics and mechanical systems. Their tooling requirements depend on what each part protects, supports or locates, and on how it is assembled and serviced. For a robot housing injection mold, a useful engineering review includes the adjoining panels, mounting arrangement and space needed for cables and fasteners. A shell that matches its overall dimensions can still



Automotive injection molds

present assembly difficulties if access to a screw is restricted or an opening is poorly aligned.

Reviewing those relationships early makes the relevant inspection points easier to define.

Service access adds another consideration. A cover intended for repeated removal may need different fastening details from a permanently joined enclosure. Where metal inserts are specified, the insert dimensions, installation method and retention requirements should be included in the project brief. Decorative surfaces and functional attachment features also need to be considered together when the mold layout is developed.

Robotics projects can involve several related plastic parts with different functions. A protective shell, a sensor bracket and a cable guide may require different material properties or acceptance checks even when they belong to the same product. ABIS's combination of mold making, injection molding and assembly services provides a framework for discussing those parts as an assembly while retaining an individual specification for each component.

Injection Molded Components for UAV Projects

[Drone Injection Molds](#) cover applications such as unmanned aerial vehicle (UAV) housings, controller shells, battery compartments and selected frame components. These parts bring weight, packaging space, assembly fit and operating conditions into the tooling discussion. The requirements depend on the role of the component and the design of the complete aircraft or controller.

A drone housing injection mold must account for the joint between shell sections, fastening locations and clearances around electronics. Camera or sensor openings require defined positions relative to the enclosed hardware. Identifying the surfaces that control those relationships allows the sample review to address both individual dimensions and the fit of the assembled housing.

Weight targets need to be considered alongside strength and manufacturability. Reducing wall thickness changes how a part fills, cools and supports its fastening features. Ribs, bosses and local transitions should therefore be reviewed together. The objective is a geometry that can be

manufactured and evaluated against the agreed design, with the expected loads and operating conditions clearly identified.

For drone frame plastic parts, material discussions may include reinforcement, stiffness and dimensional stability. Glass-fiber-reinforced polyamides, for example, can show different shrinkage along and across the flow direction, while moisture affects their properties. The exact grade and evaluation conditions therefore matter. A material data sheet supports an engineering assessment, while tests on the actual component address its geometry and use. Any flight-related performance or service-life requirements should be addressed in the product-validation plan agreed for the specific project.

Molds and Plastic Parts for Outdoor Products

Outdoor Plastic Parts & Molds serve equipment housings, handles, connectors, protective covers and accessories for outdoor recreation and camping equipment. The operating environment is central to these projects. A component used occasionally and stored indoors may face different conditions from one exposed to sunlight and weather throughout the year.

The specification should describe the expected temperature range, moisture exposure and handling conditions. For visible parts, the desired color and surface appearance also matter. Customers can identify whether the main concern is appearance retention, impact behavior, deformation under load or the performance of a moving feature, allowing the material discussion to address the actual requirement.

Outdoor equipment often combines molded plastic with fasteners, seals or other components. Where a cover or housing needs to limit water entry, the review must include the mating geometry and the assembled product's test requirements. Handles and latches introduce their own questions about grip, engagement and repeated use. These details help define both tooling features and the inspection scope.

Finishing and assembly also deserve attention before a mold is approved. A textured grip, a decorated face or a protective cover that will be joined to another part can affect the sequence of manufacturing operations. ABIS's molding and secondary-processing services allow those requirements to be included in the project discussion, with the final process selected for the specified material, geometry and finish.

From Product Design to Production Tooling

Across the four sectors, ABIS combines its design and engineering resources with mold manufacturing. The company uses software including AutoCAD, UG, SolidWorks and Pro/E. The engineering brief establishes what the component must accomplish, while mold development translates the approved geometry into the tooling needed to produce it.

Design for manufacturability, or DFM, connects the part specification with molding requirements. The review can address wall transitions, draft for mold release, undercuts, gate positions and the removal of the finished part. It also provides an opportunity to distinguish features essential to the product's function from features that can be adjusted before tool manufacture.

ABIS manufactures high-precision, multi-cavity molds. Cavity count is a project decision linked to part size, expected demand and the proposed production arrangement. The review also considers the flow of material into the cavities, cooling and ejection. Buyers need a tool configuration that supports the agreed production requirement and can be maintained

throughout the intended manufacturing program.

Cooling and part release also influence how a tool performs during repeated production. Areas with different wall thicknesses can cool and shrink differently, while ejection must remove the component without damaging important surfaces or features. Reviewing these factors together keeps the discussion focused on the complete molding cycle.

The company uses mold bases from suppliers such as LKM and tool steels including ASSAB STAVAX, S136, S7, H13 and NAK80 for cavities and cores. Material selection for the tool should account for the molding resin, surface requirements, expected use and maintenance needs. Customer specifications can also identify preferred mold components and construction standards. Wear resistance, corrosion resistance, polishability, toughness and heat transfer are among the properties that can influence this choice.

Hot runner systems from suppliers including Mold-Masters, DME, HUSKY, Thermoplay, INCOE and YUDO are available according to customer requirements. The runner system forms part of the complete mold specification, alongside the steel, cavity arrangement and production interfaces. Confirming these choices during engineering review helps align the tool with the customer's manufacturing setup and expectations.

Production planning also involves a tradeoff between tooling investment and the cost of each finished component. A cavity arrangement suitable for initial demand may differ from one intended for a longer production program. Comparing proposals on a common basis requires the same assumptions for resin grade, part quantity, secondary work and inspection, so that the scope behind each price is visible.

Project Management and Quality Requirements

Once a purchase order is received, ABIS assigns a dedicated team to oversee the project from mold design and work cell assignment through the customer's first production run. This structure links the initial order to the practical stages of tool manufacture, sampling and production. It also provides a defined point of coordination when questions arise about the design or delivery scope.

Sample approval is most useful when the parties agree in advance what the samples are intended to demonstrate. Dimensions, appearance, assembly fit and any required functional checks should be tied to the approved drawing and material specification. A clear record of the revision under review helps separate a correction to the original requirement from a subsequent product-design change.

ABIS has obtained ISO 9001 certification and maintains relevant RoHS compliance documentation and SGS-issued reports or certifications. For a specific project, buyers should establish which documents apply, what they cover and what additional evidence the customer requires. This keeps the qualification discussion connected to the supplied product and the agreed manufacturing scope.

The same clarity is useful when planning a schedule. Mold design, tool manufacture, trial samples, revisions and production approval are distinct stages. Identifying the decisions and information needed at each stage gives both parties a practical basis for coordinating work. Lead times and delivery commitments can then be agreed for the actual component and tooling requirements.

Secondary Operations and Integrated Assembly

A molded component may still require further work before it is ready for the customer's assembly line or finished product. ABIS provides post-molding operations including CNC machining, decoration, ultrasonic welding, assembly and insertion operations. These services extend the project discussion beyond the mold to the condition in which the parts will be delivered.

Secondary operations are most effectively considered during product development. A surface that will be decorated, a joint intended for ultrasonic welding or a location receiving an inserted component can affect the part's geometry and acceptance requirements. The proposed material, fastening arrangement and finish should therefore be considered as part of the same manufacturing plan.

For buyers, an integrated scope can be defined around the required delivery: an individual molded part, a decorated component or an assembled subcomponent. The quotation should identify the included operations and inspection responsibilities. Clear boundaries make it easier to compare supplier proposals and to plan the remaining work at the customer's own facility. Delivery planning can extend to packaging as well as manufacturing. For cosmetic parts, protecting finished surfaces during transport is part of defining the required delivered condition. For assemblies, the order can specify whether components arrive separately or as an identified set. These details help the customer's receiving team check what has been supplied against the agreed order.

Supporting International Tooling and Parts Buyers

ABIS's export activity makes the distinction between mold supply and finished-part supply particularly relevant. An overseas customer purchasing a mold needs to communicate the receiving factory's equipment and tool requirements. A buyer ordering molded components needs to specify the approved design, material, quantities, secondary operations and delivery requirements.

A useful request for quotation includes available 3D models, dimensioned drawings and the current revision. Expected sample quantities, initial production needs and longer-term demand should be distinguished from one another. Where information remains provisional, identifying it gives the supplier a basis for explaining which assumptions affect the proposed tooling and production scope.

Tool ownership, maintenance responsibilities, sample deliverables and shipment arrangements also belong in the commercial discussion. Addressing these subjects before manufacture creates a clearer handover between engineering, purchasing and production teams. For companies considering an injection mold maker that also provides assembly services, the same discussion can define how the tooling and downstream operations will be coordinated.

About ABIS Mold

Established in 1996 in Shenzhen, China, adjacent to Hong Kong, ABIS Mold provides plastic mold manufacturing, injection molding and product assembly. Its services combine research and development with tooling, production and secondary processing. Additional capabilities include die casting, stamping, punching and blow mold manufacturing. As it marks 30 years in business, ABIS is presenting its manufacturing resources in the context of component requirements across automotive, EV, robotics, drone and outdoor product projects.

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