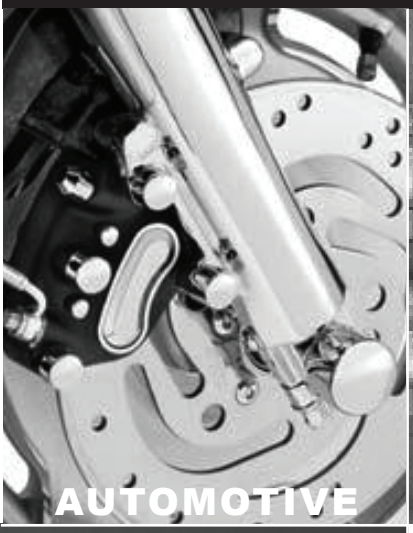
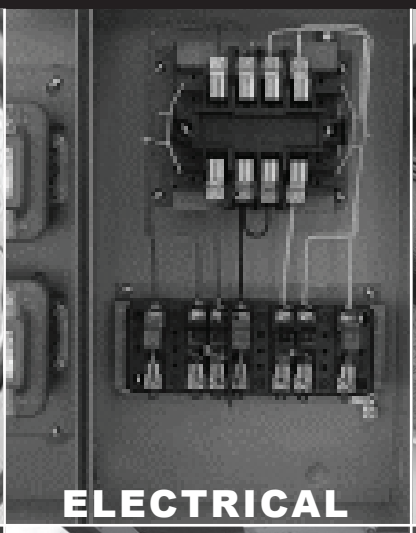
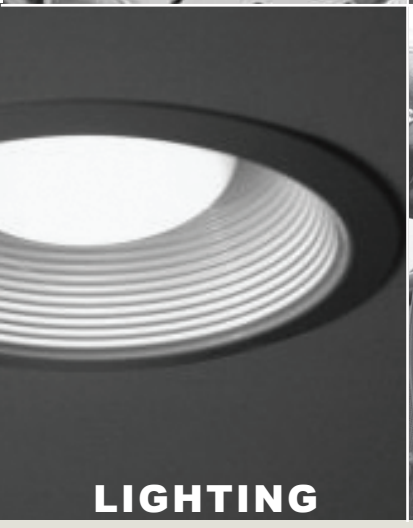
DAVIES MOLDING

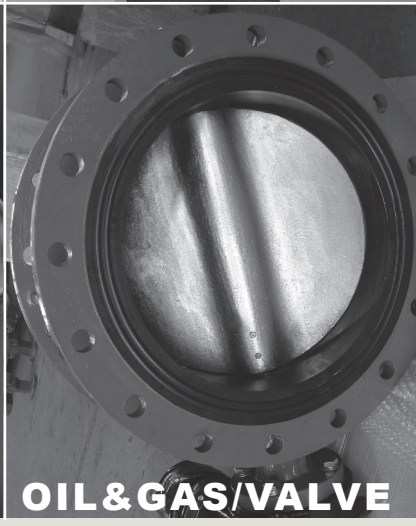
ISO 9001 : 2008 CERTIFIED

PRECISION THERMOSET & THERMOPLASTIC CUSTOM MOLDING









350 KEHOE BLVD, CAROL STREAM, IL 60188 (PH) 800-554-9208

WWW.PLASTIC-MOLDING/DAVIESMOLDING.COM

80 YEARS OF QUALITY MADE IN THE USA

Custom Molding History

For 80 years Davies' has been molding custom plastic components for all industries, including lighting, lawn & garden, industrial machinery, oil & gas, food service equipment and many more. Our compression, injection, and transfer molding capabilities provide tremendous flexibility in part design and production.

We've made thousands of parts in all different shapes and sizes, no project is too big or too small for us to handle. Not sure where to start? Our knowledgeable customer service department along with our extensive engineering capabilities can help you create the perfect plastic part for any application. Give us a call to find out how we can help you create your custom plastic molded part.

Thermoset Vs. Thermoplastic

A ***thermoplastic*** is a polymeric material or plastic that becomes soft and formable when heated and rigid when cooled. This process may be repeated a number of times without chemically altering the material.

A ***thermoset*** is a polymeric material that undergoes irreversible chemical changes when it is cured through heat, catalysts, or ultraviolet light: cross-linking prevents movement of molecular chains after curing. Once cured, the structure cannot be altered.

THERMOPLASTICS	THERMOSETS
Pros	Pros
High Impact Strength	Easy to process and laminate
Attractive Surface Finish	May not need pressure or heat to form
Recyclable / Scrap is Reusable	Typically inexpensive
No Emissions	Typically stronger than thermoplastics
Can bond to other thermoplastics	Better suited to higher temperatures
Can be molded or shaped by reheating	
Cons	Cons
Typically will soften with heat	Often release emissions known as volatile organic compounds (VOCs)
More difficult to prototype	Non-recyclable and cannot be reclaimed easily
Short workable pot life, with some exceptions	

Plastic Molding Capabilities

Our 99,000 square foot factory houses 72 presses ranging from 25 to 500 tons of clamp force. Molding capabilities include:

- Insert Molding
- Injection Molding
- Injection Compression Molding
- Rotary Injection Molding
- Shuttle Injection Molding
- Transfer Molding
- Compression Molding

Secondary Operations

We offer a wide arrary of secondary operations after molding your part to save time and costs of shipping your part to another vendor for the services. These services include:

- Drilling
- Hot Stamping
- Hydrographic printing
- Chrome Plating
- Silk Screen
- Machining

- Pad Printing
- Bagging
- Turning
- Packaging
- Laser Engraving
- Assembly
- Custom Color Matching
- Ultrasonic Welding
- Branding
- Kitting
- Buff and Polish
- Paint Fill
- Vacuum Metalizing
- Tapping
- Decorative Pointers
- Paint Coatings
- Sand Blasting
- 3-D CAD Imaging
- Decorative Inlays

CUSTOM MOLDING

For 80 years Davies' has been molding custom plastic components for all industries, including lighting, lawn & garden, industrial machinery, medical, oil & gas, and many more. Our compression, injection, and transfer molding capabilities provide tremendous flexibility in part design and production.

Concept

Every great idea, no matter how simple or complex, has to start somewhere. Whether you are looking for cost savings on an existing part, or have a brand new product idea, our engineers can make it happen. At Davies Molding, we are more than just molders - we are solution providers for all of your plastic component needs.

Design

Based on your input, our engineering staff will help you create the exact look, feel, and dimensions of your ideal plastic part. Utilizing the latest CAD and 3-D modeling software, we can easily make changes to be sure the part will meet your specifications. Our engineers will lead the design into production by ensuring that high quality molds and tools are created to produce the best custom molded part for your needs.

Prototype

Your concept will come to "life" as it is transformed into a 3-D image. By specifying colors, materials, drilling or other operations, you can digitally view the entire part from any perspective. We can provide rapid prototypes so that real examples of parts can be evaluated before cutting tool steel.

Production

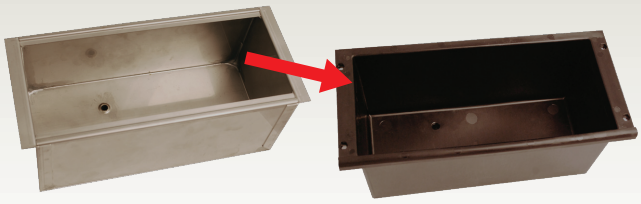
At Davies, we understand that quality and on-time delivery are essential to your business. We'll provide you with a first class product that will stay within your budget. After your product is finished, the service doesn't stop there. We can ensure that parts can be ordered at any time, at any quantity you choose. We will work with you to ensure that your product is made with the quality and care that is needed for continued success.

THERMOSET AS A METAL ALTERNATIVE

Thermoset plastics have been successful in replacing traditional metal materials where they can provide value through improved performance at a lower cost.

Thermoset Performance Benefits:

- **Less Weight**
- **Design flexibility**
- **Dent resistance**
- **Corrosion resistance**
- **Heat resistance**



WATER TANK CONVERSION
Significant cost savings were achieved by converting this stainless steel part to plastic. The part is used inside the steamer boxes of fast food steamers for food preparation.

Thermoset plastics are well suited to demanding requirements because they have the capability to withstand heat and pressure for long periods of time without failure, they are impact resistant, and they have exceptional electrical insulating properties. Their dimensional stability, creep resistance, chemical resistance, stiffness, and high temperature capabilities make them the preferred material where reliable performance in adverse conditions is imperative and can be used as a cost-savings alternative for metals.

Phenolic and Polyesters are the two most commonly used materials for metal replacement. The ability to mold these materials into complex shapes makes them cost effective and also eliminates the need to machine features of a design which allows for closer tolerances. Dimensional stability of these materials guarantees that close tolerances can be controlled and repeated continually within ten-thousandths of an inch.

CUSTOM PARTS BY INDUSTRY

AUTOMOTIVE

CHROME COVERS

Injection Molded Plateable ABS
Chrome Plating Secondary Finish, Kitting

AIR DEFLECTOR

Injection Molded Engineered Nylon
Kitting

SHOCK BOLT COVERS

Injection Molded Plateable ABS
Chrome Plating Secondary Finish, Kitting

ELECTRICAL

HEAT DISSIPATERS

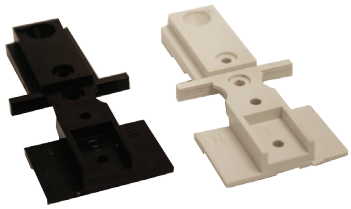
Specialty thermally-conductive liquid
crystalline plastic used for heat transfer

PANEL

Injection Molded Phenolic
Drilling and Pad Print Finish

CONNECTORS

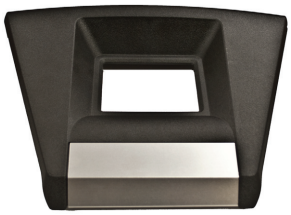
Injection Molded Polycarbonate



HVAC

BOILER BEZEL

Injection Molded ABS
Bezel Plate Added



BOILER BEZEL

Injection Molded ABS

SUMP PUMP

Compression Molded Phenolic

MACHINERY

SHIFTER

Compression Molded Phenolic
Laser Engraving Secondary Finish

CAP

Compression Molded Phenolic
Machine Insert Secondary Finish

COIL

Injection Molded Phenolic

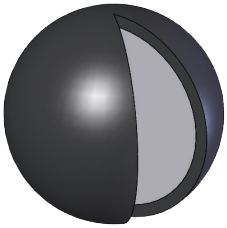
OIL & GAS

FRAC BALLS

Injection Molded Nylon, Torlon®, and
Compression molded Phenolic

PROPPANTS

Injection Molded with Thermoset Rubber
Overmold Proppant Plug



BUTTERFLY VALVE SEATS

Compression Molded Phenolic

CONSTRUCTION

GUN

Injection Molded Nylon
Thermoplastic Polyurethane Overmolded

CHISEL HOLDER

Injection Molded Thermoplastic Polyurethane

TRIGGER HANDLE

Injection Molded Phenolic

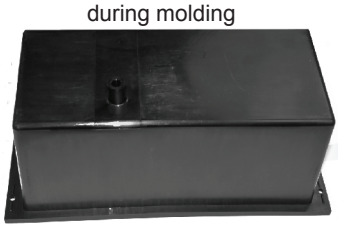
FOOD SERVICE

SERVICE TRAYS

Compression molded
Sheet Molding Compound

WATER TANK

Injection Molded Food-grade Nylon
Clamping Inserts and Roll Pins put in during molding



DRIP TRAYS

Compression Molded
Sheet Molding Compound

LIGHTING

BAFFLE

Compression Molded
Bulk Molding Compound

SWITCH

Injection Molded Nylon
Pad printing Secondary Finish

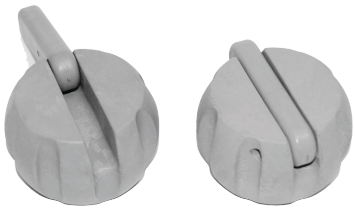
WIRE HOLDER

Injection Molded Nylon

MEDICAL

ER MONITOR PART

Injection Molded Nylon
Silicone Ball, Stainless Steel Insert



DENTAL TRAY

Injection Molded ABS

DENTAL PICK

Injection Molded Utem Resin
Ultrasonically Welded Secondary Finish

VALVE CONTROL

VALVE KNOB

Injection Molded Nylon

VALVE HANDLE

Injection Molded Nylon

HANDWHEEL

Injection Molded Nylon

THE DAVIES MOLDING ADVANTAGE

Best Fit Manufacturing. By choosing Davies as your manufacturing partner, you have one point-of-contact for all services in one vendor. Services such as mold design and development, production supervision and quality control can all be handled by Davies., making your project simple and easy to manage.

Supply-Chain Compression. Simply put, supply-chain compression is the elimination of unnecessary logistical steps in the process of manufacturing of your product. By having Davies handle your molding and manufacturing requirements, your quality assurance, inventory maintenance, and shipping costs can be reduced and time to market minimized.

Risk Mitigation. By partnering with Davies, you have access to a global operations network and a documented, thorough disaster recovery program that minimizes risk to any disruptive factors in producing your product.

IP Protection. For over 80 years, our customers have trusted us with their proprietary designs and ideas. We maintain a high level of controls throughout the development process to ensure your assets are protected.

Comprehensive QA. With end-to-end, single-source responsibility for manufacturing and delivery, Davies' strict quality auditing throughout the entire molding and manufacturing process, and adherence to REACH, ROHS, and Conflict Minerals requirements are all major advantages to make sure your part is produced right the first time.

Expertise in Tooling & Engineering

3-D & CAD Modeling

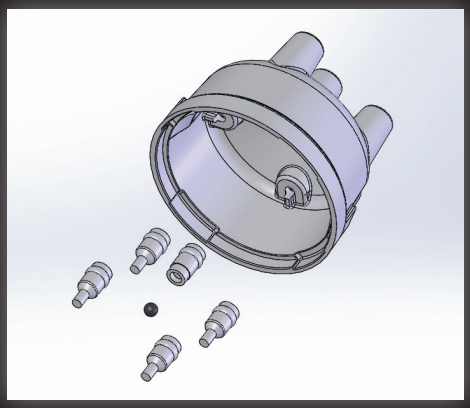
We have highly qualified engineers in-house that will take a personalized approach to each project. Coupling a wealth of experience with creative design advances, our engineering group will establish exact specifications for your particular application. Using computer-aided design (CAD) we'll combine our ideas with yours to develop viable, productive solutions to your performance criteria. In addition, we have complete tool room capabilities including state-of-the-art CNC equipment.

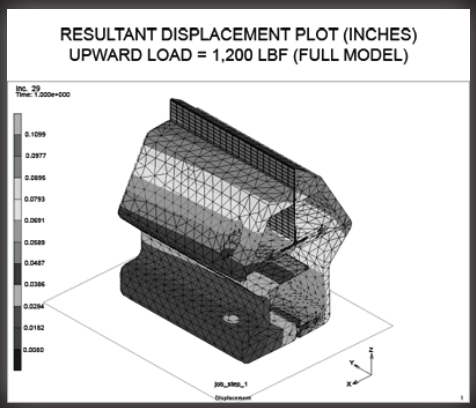
Finite Element Analysis (FEA)

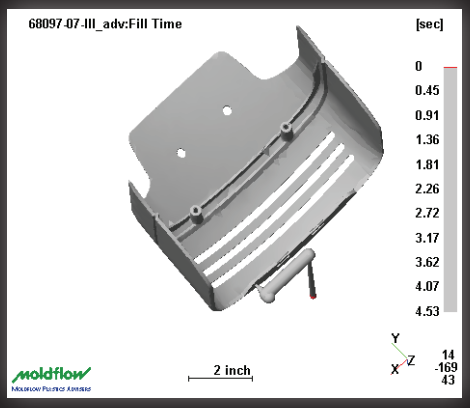
When modifying or designing a new part, Davies uses a computer model of a material or design that is stressed and analyzed for specific results. FEA uses a complex system of points called nodes that create a mesh and are programmed to contain the material and structural properties to define how the part will react under certain loading conditions. This allows Davies' engineers to verify whether or not a proposed design will perform to the client's specifications prior to molding the part, saving customers unnecessary expense and lost time.

Mold Flow Simulation

Plastics simulation software allows our engineers to determine the manufacturability of your part in the early stages of the design. This is beneficial because it helps prevent any potential problems such as air traps, weld lines, warpage, shrinkage, and sinks that can cause delays in production and also ensures that the material chosen will provide the best performance, longevity, and the highest cost savings for your project.







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