CUT & MOLDED PRODUCTS CATALOG
Whether you’re developing a prototype, need a production run or have a blanket order program, Apache provides high-quality products at competitive pricing.
CUT PARTS

At Apache, our experience and fabrication capabilities have made us the leader in the production of cut parts. Parts are processed to exact specifications using CAD files (.dxf, .dwg formats). If your files are not available, we can identify and replicate the part you need.

CUTTING PROCESSES

We produce our customers’ parts using one of four cutting processes: waterjet, flashcut, die-cut and hand-cut.

WATERJET

Waterjet cutting allows for the precision cutting of custom parts when extremely tight tolerances are critical or complicated patterns are called for. This CNC-controlled process produces parts with exceptional quality and clean cut edges without causing thermal damage. What’s more, the waterjet can be used to cut a wide range of materials and dimensions.

FLASHCUT

Die-less knife cutting offers the precision and tight tolerances of a waterjet without the use of water. The CNC controlled flashcut operates on AutoCAD files like a waterjet, and is ideal for cutting soft and semi-rigid materials without the mess and cleanup of water cutting.

DIE-CUT

Die-cutting results in very precise parts with tight tolerances. It can be used to produce both low- and high-volume production runs in a wide range of materials.

HAND-CUT

Hand-cutting is the right choice for certain limited quantity, lower tolerance and prototype parts. Our craftsmen have the skill to produce prototypes and low-volume production runs from a wide variety of materials and for a range of industries.

CUT PARTS

INDUSTRIAL GASKET AND SHEET PACKING MATERIALS

- Lightweight and heavy-duty rubber and PVC conveyor belt
- Lightweight thermoplastic belt
- Oil- and non-oil resistant rubber:
  - Diaphragm and cloth-inserted rubber sheet
  - Open and closed cell sponge and foam
  - Silicone rubber
  - Rubber sheet packing (all polymers)
  - Cork/rubber sheet
  - Masticated rubber
  - Pure gum (natural rubber)
  - White FDA food-grade rubber
  - Compressed non-asbestos sheet

We work with the top material suppliers in the business, so if we don’t happen to have it on the shelf, we can get it quickly.

SPECIALTY APPLICATION MATERIALS

- UHMW polyethylene (Ultra-High Molecular Weight)
- HDPE (High Density Polyethylene)
- LDPE (Low Density Polyethylene)
- Lining materials for abrasion and wear protection
- Electric transformer gaskets
- AASHTO shock and structural bearing material
- Military specifications
- Ballistic materials
- Various composite materials
- NSF/ANSI 61 gasket material
- Compressed non-asbestos sheet
- NSF/ANSI 61 gasket material
- (Cedar Rapids is a certified processing facility)

Our experience and fabrication capabilities have made us the leader in the production of cut parts. Parts are processed to exact specifications using CAD files (.dxf, .dwg formats). If your files are not available, we can identify and replicate the part you need.

We work with the top material suppliers in the business, so if we don’t happen to have it on the shelf, we can get it quickly.

Apache’s state of the art CNC controlled flashcutter eliminates the time and necessity of creating cutting dies. The projection system shows exactly where the parts will cut on the material. Projection can also be used to trace an irregular shaped piece of material to “create” a material perimeter and automatically nest within its boundaries. Capable of nesting multiple parts for simultaneous cutting, it offers time and material savings. Unlike a waterjet cutter, parts remain dry and clean, so they are ready to be packaged and shipped straight from the cutting table.
EXTRUDED / MOLDED RUBBER PARTS

Apache has the capability to create extruded parts from a wide variety of compounds. Customers can choose from a vast selection of extrusion die profiles, or our in-house die shop can rapidly create one for quick production.

### EXTRUSIONS

Extrusions can be processed into cut-to-length pieces, hot vulcanize spliced to specific lengths or preformed for un-split applications. We cure extruded parts using static vulcanization to a typical tolerance of RMA Commercial Class E3.

### COMMON EXTRUSION MATERIAL OPTIONS

- Neoprene
- Natural rubber
- SBR
- Butyl (IR / isobuty=neoprene): Excellent weathering and dialectic properties with low air permeability. Good physical properties. Poor resistance to petroleum-based fluids. TEMP: -30°F to +212°F
- EPDM (ethylene-propylene diene): Excellent ozone, chemical, heat and aging resistance. Poor resistance to petroleum-based fluids. TEMP: -40°F to +250°F
- Hypalon (CSM / chlorosulfonated polyethylene): Excellent ozone, weathering, and acid resistance. Good abrasion and heat resistance. Fair resistance to petroleum-based fluids. TEMP: -20°F to +170°F
- Silicone (silicone): Excellent high and low temperature properties. Fair physical properties. TEMP: -60°F to +450°F
- SBR (Styrene Butadiene Rubber): Excellent abrasion resistance and low temperature properties. TEMP: -20°F to +160°F
- Urethane (polyurethane): Good aging and excellent abrasion, bear and solvent resistance. Poor high temperature properties. TEMP: -20°F to +160°F
- Viton® (FKM / Fluorocarbon - Elastomer Type A): Excellent oil and air resistance at both low and high temperatures. Very good chemical resistance. TEMP: -20°F to +450°F

Viton® is a registered trademark of DuPont Performance Elastomers

### SPECIALTY SERVICES

Have multi-component parts that need to be delivered ready to install? We offer sub-assembly services to save you time and money!

MOLDED RUBBER PARTS

Apache manufactures molded parts using modern computer-controlled and monitored presses. We offer both compression and transfer molding production processes, and we can help you determine which method is best for your application.

### COMPRESSION MOLDING

Compression molding is ideal for products with industrial tolerances (typically RMA Commercial-A3). This process produces less scrap material weight and the tooling typically costs less than other transfer molding. Product sizes range from very small to up to 12 feet long.

### TRANSFER MOLDING

Transfer molding can produce tighter tolerance parts than compression molding and generally leaves less flash on the mold parting line.

### COMMON MOLDING MATERIAL OPTIONS

- Neoprene
- Natural rubber
- SBR
- Butyl (IR / isobuty=neoprene): Excellent weathering and dialectic properties with low air permeability. Good physical properties. Poor resistance to petroleum-based fluids. TEMP: -30°F to +212°F
- EPDM (ethylene-propylene diene): Excellent ozone, chemical, heat and aging resistance. Poor resistance to petroleum-based fluids. TEMP: -40°F to +250°F
- Hypalon (CSM / chlorosulfonated polyethylene): Excellent ozone, weathering, and acid resistance. Good abrasion and heat resistance. Fair resistance to petroleum-based fluids. TEMP: -20°F to +170°F
- Silicone (silicone): Excellent high and low temperature properties. Fair physical properties. TEMP: -60°F to +450°F
- SBR (Styrene Butadiene Rubber): Excellent abrasion resistance and low temperature properties. TEMP: -20°F to +160°F
- Urethane (polyurethane): Good aging and excellent abrasion, bear and solvent resistance. Poor high temperature properties. TEMP: -20°F to +160°F
- Viton® (FKM / Fluorocarbon - Elastomer Type A): Excellent oil and air resistance at both low and high temperatures. Very good chemical resistance. TEMP: -20°F to +450°F

Viton® is a registered trademark of DuPont Performance Elastomers
OTHER SPECIALTY SERVICES

In addition to producing custom cut, molded and extruded parts, Apache has many years of experience with custom fabrication, vulcanization and bonding.

CUSTOM FABRICATIONS / SPECIALTY SERVICES
- Boots/sleeves
- Hole punching/perforating
- Laminating
- PSA application (pressure sensitive adhesive)
- Slitting
- Splicing
- Stripping
- Valving
- Sub-assembly
- Labeling
- Packaging
- Kitting

VULCANIZATION AND RUBBER-TO-METAL BONDING

Parts for vulcanization and rubber-to-metal bonding require specific preparation processes to ensure proper adhesion of the materials. The team at Apache will design a process for your parts that meet the requirements of your industry and application.

COMPOUNDING / BLENDING CAPABILITIES

Standard and custom blended compounds are produced to your requirements in specific batch sizes made for each application and production run. Small prototype or large production batch runs are available for almost any size, shape or quantity of extruded or molded product.

Our experienced team of product specialists and engineers are ready to help produce your custom parts. We’ll assist you in determining the material and process that makes the most sense for your application and help you stay cost effective and efficient.

IT’S TIME TO THINK FORWARD. IT’S TIME TO THINK APACHE.

CAD DRAWING OF THE PART WITH TOLERANCES. If material tolerances are not present, (and they frequently are not) inquire about the most critical dimensions. (R.M.A. Tolerances)

SAMPLE OF THE PART (IF AVAILABLE).

MATERIAL SPECIFICATIONS OR POLYMER TYPE

- The full ASTM (American Society for Testing & Materials) call-out of the material is best
- If the ASTM is not available, please provide specifications for...
  - Material:
  - Closed or open cell:
  - Shore 00 Durometer:
  - Density:
  - Tensile (die A):
  - Tear strength (die C):
  - Elongation (die A):
  - Compression deflection:
  - Compression set:
  - UL recognition:
  - FDA (or other requirement):
  - PSA (pressure sensitive adhesive, rubber or acrylic based):
  - Color:

TELL US ABOUT THE APPLICATION AND ENVIRONMENT WHERE THE PART WILL BE USED:

- Service temperature:
- Chemical contact:
- Ozone resistance:
- Water absorption:
- Combustion characteristics:
- Application:

QUANTITY AND ESTIMATED ANNUAL USAGE:

- Do you require the parts all at once?
- Is this a blanket order with periodic releases? At what intervals?
- Is this a repetitive, ongoing order?

DELIVERY REQUIREMENTS:

- When do you need the first shipment?
- What is your preferred shipping method?

PACKAGING REQUIREMENTS OTHER THAN STANDARD BULK PACK:

- Labels (part number, UPC?)
- Bagged or boxed quantity?

TARGET:

- Current price and current supplier?
MOLDED & EXTRUDED PARTS WORKSHEET

Here's what we need from you.

- CAD DRAWING OF THE PART WITH TOLERANCES. If rubber tolerances are not present, please tell us about the most critical dimensions (.stp or .igs file for tooling).

- SAMPLE OF THE PART (IF AVAILABLE). The sample will help us to determine what method of manufacturing has been used in the past.

- MATERIAL SPECIFICATIONS OR POLYMER TYPE:
  - The full ASTM (American Society for Testing & Materials) call-out of the material is best
  - If the ASTM is not available, please provide specifications for:
    - Material:
    - Shore A durometer:
    - FDA (or other requirements):

- TELL US ABOUT THE ENVIRONMENT WHERE THE PART WILL BE USED:
  - Temperature:
  - Chemicals:
  - Ozone:
  - Application:

- HOW WILL THE PART BE USED? Statically, dynamically, for sealing, etc.? This is helpful in determining a part's critical features.

- QUANTITY AND ESTIMATED ANNUAL USAGE:
  - Do you require the parts all at once?
  - Is this a blanket order with periodic releases? At what intervals?
  - Or is this an repetitive, ongoing order?

- TOOLING:
  - For molded parts, does tooling already exist?
  - If yes, do you own the tooling?
  - What type is it? Compression, transfer or injection?
  - Can it be moved from your current supplier?

- DELIVERY REQUIREMENTS:
  - When do you need the first shipment?
  - What is your preferred shipping method?

- PACKAGING REQUIREMENTS OTHER THAN STANDARD BULK PACK:
  - Labels (part number, UPC)?
  - Bagged or boxed quantity?

Download worksheets at www.apache-inc.com/worksheets

CUT PARTS WORKSHEET

Here's what we need from you.

- CAD DRAWING OF THE PART WITH TOLERANCES. If material tolerances are not present, please tell us about the most critical dimensions (.dxf/.dwg file to cut from).

- SAMPLE OF THE PART (IF AVAILABLE). The sample will help us to determine what method of manufacturing has been used in the past.

- MATERIAL SPECIFICATIONS OR POLYMER TYPE:
  - The full ASTM (American Society for Testing & Materials) call-out of the material is best
  - If the ASTM is not available, please provide specifications for:
    - Material:
    - Shore A durometer:
    - Density:
    - Tensile:
    - Elongation:
    - Compression set:
    - UL recognition:
    - FDA (or other requirements):
    - Pressure sensitive adhesive type:
    - Color:

- TELL US ABOUT THE ENVIRONMENT WHERE THE PART WILL BE USED:
  - Temperature:
  - Chemicals:
  - Ozone:
  - Application:

- HOW WILL THE PART BE USED? This is helpful in determining the part's critical features.

- QUANTITY AND ESTIMATED ANNUAL USAGE:
  - Do you require the parts all at once?
  - Is this a blanket order with periodic releases? At what intervals?
  - Or is this an repetitive, ongoing order?

- DELIVERY REQUIREMENTS:
  - When do you need the first shipment?
  - What is your preferred shipping method?

- PACKAGING REQUIREMENTS OTHER THAN STANDARD BULK PACK:
  - Labels (part number, UPC)?
  - Bagged or boxed quantity?

Download worksheets at www.apache-inc.com/worksheets