



**Aerospace**  
**Fluid Conveyance**

Aeroquip® Brand Rotational Molding

Rotomolding is ideal for producing complex geometry parts typically found in aircraft ducting systems, ram air inlets, avionics cooling systems, environmental control systems and aerodynamic components.



# High Performance Rotomold Parts

## Lower Costs

In many applications, rotationally molded products are significantly more cost effective than composites, metal, or other forms of thermo-plastic processing. Rotomold eliminates labor intensive hand operations and expensive tooling. Rotomolding can provide significant cost reduction. Traditional methods can cost up to three times more than rotomolding. With rotomolding, designers can easily incorporate molded-in threads or metal inserts at little or no added cost.

## Lightweight

Rotomolding makes it possible to cut part weight without sacrificing strength or durability. By using high performance materials, rotomolded parts can be made in wall thicknesses of 0.050" or less. As a result, parts can weigh up to 60% less than comparable metallic or composite parts.

## Rotation

In rotational molding, a loaded mold is rotated continuously on two axes through heating and cooling cycles. The result is an even distribution of the plastic compound within the mold providing uniform wall thicknesses and a virtually stress free part.

The rotomolding process provides a uniform thickness throughout the part, even when manufacturing complex geometry.

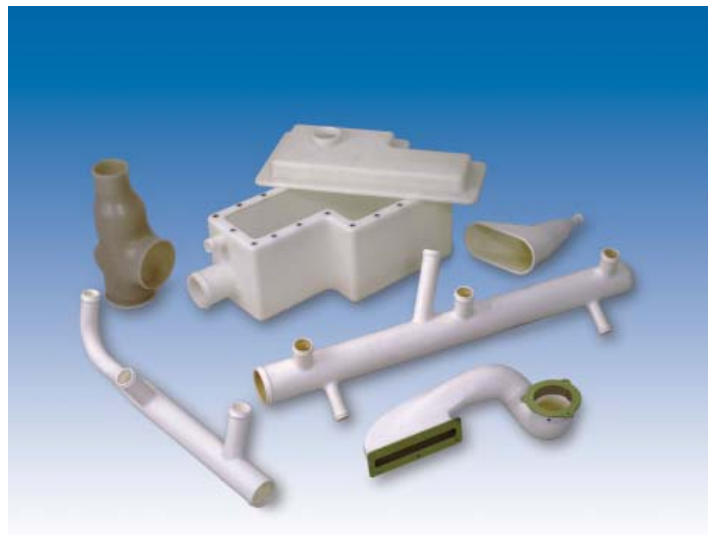
## Improved Durability

Uniform wall thickness ensures part integrity and provides a very smooth interior finish, an important factor in achieving superior air or fluid flow characteristics.

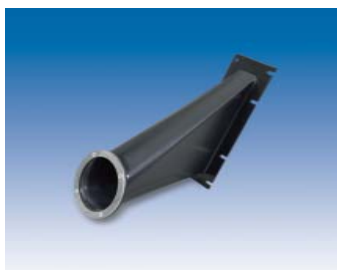
Unlike other plastic molding processes, rotomolded parts are virtually stress free. This increases part integrity and stress crack resistance.

## The Source for Rotomold Parts

Aerospace engineers and designers are continually challenged to cut costs, reduce weight, and improve product durability while increasing manufacturing flexibility. Eaton's Aeroquip® brand rotational molding capabilities are helping development teams meet these challenges by providing new options for the design, manufacturing and assembly of small or large complex parts.



# High Performance Rotomold Parts



The rotational molding process uses simple, low-pressure molds which keep tooling costs to a minimum. The low tooling costs make this process ideally suited for prototypes, small and large production runs, and for re-engineering existing parts in retrofit and replacement applications. A wide variety of high performance thermo-plastics can be used in rotational molding including: polyethylenes, PVC, nylon, and many other types of materials. These materials offer excellent chemical and environmental resistance, and can be compounded to meet F.A.A. part 25.853 for smoke and toxicity.

Eaton is an expert at applying rotomolding to meet your precise needs. As a vertically integrated supplier, Eaton is a one-stop source for concept development, integrated engineering, design, computer-based solids modeling, rapid prototyping, stress analysis, low-volume tooling, production tooling, and full scale production and assembly.

Eaton Aerospace can produce prototype plastic parts within three days or less through state-of-the-art CAD/CAM systems and rapid prototyping.

Eaton rotomolding capabilities can help you meet the challenge to reduce cost and weight while improving product durability, and increasing manufacturing flexibility. We would welcome the opportunity to work with your team to provide the best rotomolded solution for your application.

## Increased Manufacturing Flexibility

## Excellence from Design through Manufacturing

## Rotomold Parts

**Eaton Corporation**  
Fluid Conveyance  
2500 W. Argyle St.  
P.O. Box 1845  
Jackson, Michigan 49202-1845  
Phone: (517) 787-8121  
Fax: (517) 789-4716  
[www.aerospace.eaton.com](http://www.aerospace.eaton.com)

**Eaton Corporation**  
Fluid Conveyance  
300 South East Avenue  
Jackson, Michigan 49203-1972  
Phone: (517) 787-8121  
Fax: (517) 787-5758  
[www.aerospace.eaton.com](http://www.aerospace.eaton.com)

**Eaton Corporation**  
Fluid Conveyance  
Meadowbrook Road  
P.O. Box 819  
Toccoa, Georgia 30577-0819  
Phone: (706) 779-3351  
Fax: (706) 779-2638  
[www.aerospace.eaton.com](http://www.aerospace.eaton.com)

**Eaton LTD**  
Fluid Conveyance  
Postfach 1026  
Carl-Benz-Strasse 9  
D-82205 Gilching  
Germany  
Phone: 49 (0) 8105-750  
Fax: 49 (0) 8105-755  
[www.aerospace.eaton.com](http://www.aerospace.eaton.com)

**Eaton LTD**  
Fluid Conveyance  
Broad Ground Road  
Lakeside  
Redditch  
Worcs B98 8YS  
England  
Phone: (44) 152-751-7555  
Fax: (44) 152-751-7556  
[www.aerospace.eaton.com](http://www.aerospace.eaton.com)

**Eaton LTD**  
Fluid Conveyance  
Chemin De Pau  
64121 Serres-Castet  
France  
Phone: (33) 559-333-864  
Fax: (33) 559-333-865  
[www.aerospace.eaton.com](http://www.aerospace.eaton.com)

