

ROTATIONAL MOLDING

In Gestión de Compras we provide to our customers personalized treatment to design, develop and manufacture desired parts by rotational molding.

PROCESS:

Rotational molding, also called as rotomolding or rotocasting, is a plastic moulding process to produce hollow parts. This molding process is carried out without pressure and the mould is slowly rotated, usually around two perpendicular axes, are the basic principles of the process.

This operation consist on four stages:

1. **Charging:** plastic material, normally in powder form, is placed into a mould. Then the mould is closed and rotated slowly on two axis.
2. **Heating:** The mould is then heated while rotating, until all the polymer has melted and adhered to the mold wall.
3. **Cooling:** usually with air and sometimes a fine mist of water.
4. **Demolding:** When the material has cooled sufficiently, the process is stopped and the product is taken out of the mould.

The main advantages of this process are:

- **Low tooling costs.** As this is a casting process there is no pressure. This means moulds are inexpensive and low volume can be economic.
- It's easy to make **complicated shapes.** Rotomoulding readily accommodates production complexities such as stiffening ribs, moulded inserts and different surface textures.
- **Uniform wall thickness.** Rotomoulding achieves consistent wall thickness with corners tending to be thicker. This increases product strength and integrity.
- Rotational moulding **machine costs** are **low** compared to other processes and the investment required is small.

PRODUCTION:

In Gestión de Compras we provide to our customers personalized treatment to design, develop and manufacture desired parts by rotational molding.

We manufacture standardized products and custom products according to customer requirements and guidelines on a wide range of materials and sizes.



MATERIALS AND PRODUCTS:

Rotational molding is used usually to manufacture thermoplastic polymers parts, but other kinds of materials can be used, such aluminium or inclusive eatable products as chocolate. The most used material made by this process is polyethylene.

The materials most common used by this industry are:

- Polyethylene (PE)
- Polypropylene (PP)
- Polyvinyl chloride (PVC)
- Nylon (PA)
- Polycarbonate (PC)

This method has the versatility to produce small parts to very large pieces. As could be:

- Tanks of water and chemicals (up to 50 m³).
- Kayaks, canoes and boats.
- Safety road products and urban furniture: litter bins, road cones, bollards, traffic dividers and road signs.
- Automotive industry: mudguards, diesel fuel tanks, tractor dashboards, etc.
- Toys and playground equipment.



TOLERANCES:

By this method is possible obtain good dimensional tolerances. Such tolerances depend on materials, size and shape of manufactured part. Also, if the mold is cooled with water spray, inaccuracies and defects due to uneven shrinkage and cooling on workpiece may occur.

STANDARD AND CERTIFICATES:

Our factories have the most demanding certifications for customers to ensure product quality as:

- ISO 9001, TS 16949 and ISO 14001.
- ISO 8062, ISO 286-2, DIN 2768, DIN 1697, etc.

CONTACT:

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