

Seybert Castings

We make the casting before the die is made.

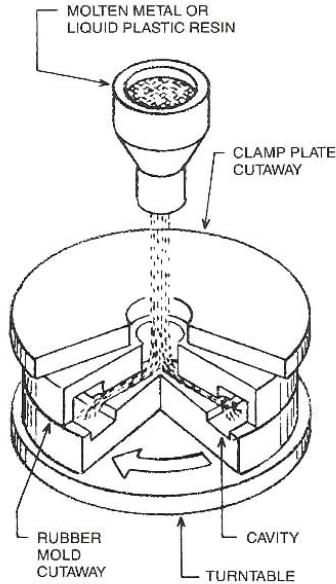


Seybert Castings

SPIN-CASTING

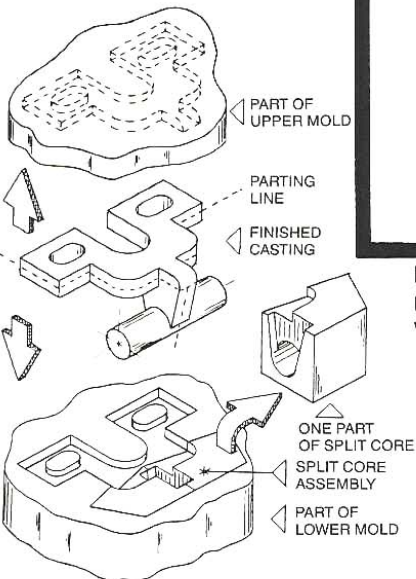
THE PROCESS

Schematic drawing of the spin-casting process.



SPLIT CORE RUBBER MOLD

Simulates 4 slide capabilities.



Specializing in prototype and short run castings, moldings, and encapsulations.

Obtaining prototype and short run castings can be a frustrating experience especially when considering conventional processes long lead times, high tooling costs, and inability to incorporate last minute design changes.

The spin-casting process uses vulcanized silicone rubber molds and centrifugal force to produce highly detailed castings in a variety of technical grade materials.

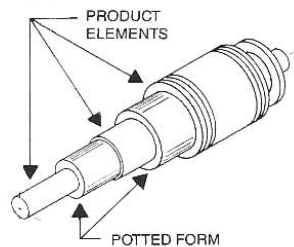
The molds used in the spin-casting process are round with cavities located around the perimeter. Essentially, it is a cope and drag arrangement. Liquid or molten materials are introduced into the center of the mold while it is rotating. This rotation creates centrifugal injection pressure which forces the material into the cavities. As a result, low porosity, medium density castings are produced.

As a prototyping and short run manufacturing procedure, spin-casting has few application limitations. Spin-cast parts are used in instruments, small mechanisms, electronic devices, and many other product areas. Most any part that is designed for other casting processes or machining can be produced by the spin-casting process in an inexpensive, timely fashion.

All information contained in this bulletin is of a general nature and is not intended for design limit purposes.

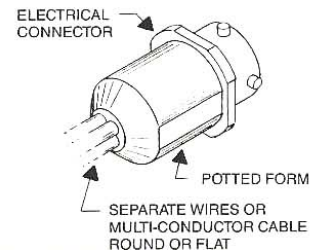
ENCAPSULATION

Electromechanical device potted with epoxy.



POTTED CABLE ASSEMBLY

Electrical connector potted with Mil Spec polyurethane.



Zinc Alloy* Spin-Casting Specifications

Maximum Part Size	3 x 4 x 2.500 in.
Minimum Wall Thickness	.078 in.
Maximum Wall Thickness	.200 in.
Ideal Wall Thickness	.090 in.
Tolerances	±.005 in./in.
Mold Life	25 to 50 shots/cavity

*see page 4 for specific data and properties of zinc based alloys.

Thermoset* and Thermoplastic* Casting Specifications

Maximum Part Size	
Thermoset	4 x 6 x 2.500 in.**
Thermoplastic	2 oz. max. shot size
Minimum Wall Thickness	.040 in.
Maximum Wall Thickness	.750 in.
Tolerances	±.005 in./in.
Mold Life	
Thermoset	up to 30 shots/cavity
Thermoplastic	varies

*Many Thermoset and Thermoplastic resins are available. Please consult **Seybert** for resin selection assistance and specifications.

**Larger parts are evaluated on an individual basis.

Encapsulations and Potted Assemblies

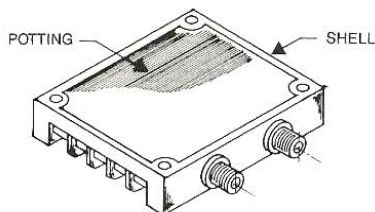
Seybert encapsulates and pots electronic, electrical, and mechanical assemblies with Mil Spec and certified commercial epoxy and polyurethane liquid plastic casting resins. **Seybert** can produce complex assemblies and creative designs for most environmental, dielectric, and mechanical requirements. Possible applications include but are not limited to the list below.

- | | |
|-------------------------------|---------------------------|
| —Printed Circuit Assemblies | —Flexible Circuits |
| —Cable Assemblies | —Fiber Optical Assemblies |
| —Electrical Assemblies | —Optical Assemblies |
| —Electromechanical Assemblies | —Strain Reliefs |
| —Electronic Assemblies | —Insert Molding |
| —Mechanical Assemblies | —and more... |

Seybert can provide design and resin selection assistance.

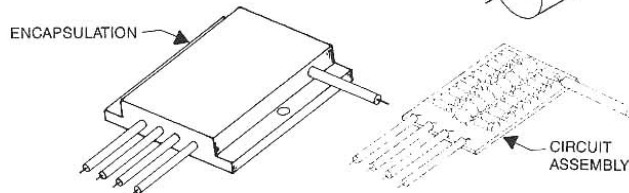
POTTED ASSEMBLY

Fiber optic device potted with epoxy.



ENCAPSULATION

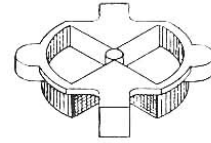
Printed circuit assembly encapsulated with polyurethane.



SOME APPLICATION IDEAS

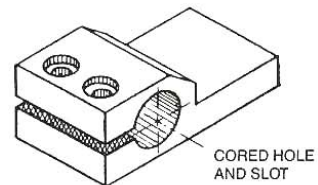
COMPLEX SHAPES

Produce shapes not easily machined such as inside square corners.



MOLD CORES

Cores can be used to produce internal features that reduce machining costs.



CORED MODEL FABRICATION

Manufacturing sequence to produce a cored hole through a casting.

