

PHILLIPS PLASTICS CORPORATION®

# YOUR R&D PARTNER

Innovation is the lifeblood of today's enterprise because new and better products are crucial to maintaining and improving competitiveness. But for most organizations, it is a tremendous challenge to build and sustain the research and development (R&D) capacity needed to support real innovation.

## R&D Challenges

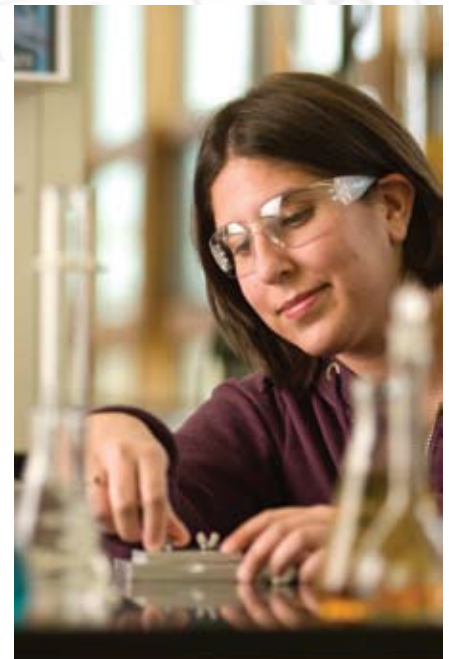
At Phillips, our interdisciplinary team is built around our Company's fundamental skills, which encompass many aspects of material science as well as practical manufacturing experience. The Phillips Technology Center opened in Prescott, Wisconsin in 1988 and has focused on examining new product and process opportunities, and evaluating, designing, and building automation systems and components. That skill set and track record means Phillips can not only help you push boundaries with polymers, ceramics, and metals but can also factor in economic issues.

We have a track record for developing new ways to mold and process plastics, metals, and ceramics. Depending on your requirements, Phillips can even help develop an entirely new process based on new materials.

In addition to a core team from Phillips, which includes chemists, physicists, and mathematicians, the Technology Center also works with a network of consultants and academic resources, which provide you with access to world-class experts and the most advanced research equipment available for your project. With these resources at your disposal, we can help move an idea to market more quickly and profitably.

## Phillips Plastics – the Rest of the Story

R&D is just the start of the Phillips Plastics Corporation® story. We are a high-tech custom injection molder of plastic, ceramic, and metal with annual sales of over \$260 million. The Company employs 1,600 people in 15 locations throughout the United States including design centers in Wisconsin and California and a medical campus with 176,000 square feet of FDA registered facilities dedicated to high volume medical and clean room manufacturing. The Company's medical operations are cGMP compliant and registered to 21 CFR parts 820, 210, and 211.





Phillips' dedicated research and development facility in Prescott, Wisconsin.

### Accelerating Innovation

Driven by the promise of growth that only a true dedication to innovation can provide, Phillips' research and development activities have, and will continue to influence a wide variety of products and processing technologies.

### Materials Advancement

Possessing an intimate knowledge of material science, as well as a strong respect for the innovation that can come from challenging the unknown, Phillips' research team continuously explores new applications for plastic, metal, and ceramics. Recent material innovations include:

- The development of porous ceramic beads for a diverse range of applications, from implantable spinal devices to filtration products for commercial kitchen ventilation systems
- Work with stem cell therapies and multi-ordered porous structures to stimulate bone growth for orthopedic applications
- The creation of differentiated additive technologies specifically designed for highly filled wood plastic composites. When added to thermoplastic composite systems, these foaming agents improve the overall uniformity and quality of foamed composites

### Medical Device Development

Working together with companies that range from new business start-ups to established medical device manufacturers, Phillips' research and development team has helped create innovative products for interventional cardiology, radiology, urology, neuroradiology, and gynecology applications.

### Process Development

Even before Phillips built the Technology Center, the Company has always dedicated resources to investigate new, and expand upon existing processing technology. Just two examples of success in this area are metal injection molding – a manufacturing process that can mold complex, precision-shaped metal parts with superior strength and surface finishes, and micro molding – a proprietary process that produces plastic and metal parts ranging in size from 0.003 cubic inches down to 0.000008 cubic inches and can hold tolerances to  $\pm 0.0003$  inches per-inch. Throughout the years, manufacturing processes developed and refined by Phillips have been incorporated into existing operations or gone on to become stand alone facilities within the Corporation.

For more information about how Phillips Plastics can be your R&D partner or our capabilities, go to [www.phillipsplastics.com](http://www.phillipsplastics.com) or call 877.508.0252