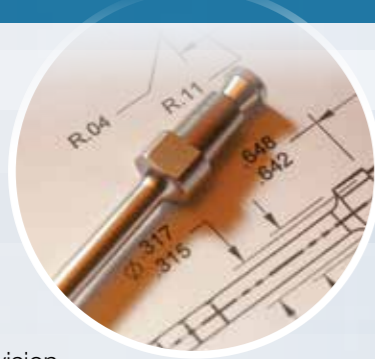


## ORCHID DESIGN

Complete development capability tied in with your manufacturing partner.



Our product design and development division provides access to design centers and a team of industry and clinically-experienced engineers and designers with diverse orthopedics backgrounds. A partnership with Orchid Design will provide the product development, regulatory and quality system resources you need to add valuable creativity and experience to the process.

## WHY ORCHID DESIGN

- **Innovative concept development and feasibility assessment:** Enhancing your competitive and IP positions
- **Comprehensive design services:** Using Computer Aided Engineering with the latest solid modeling and analysis software
- **Rapid prototyping:** 3-D additive manufacturing techniques and CNC fabrication capabilities produce functional prototypes that eliminate cost and risk from your project
- **Testing capabilities:** Including feasibility, design verification and validation
- **Design transfer:** A rapid transition to full-scale production
- **Extensive portfolio:** Our experience includes successful devices for the world's largest device manufacturers and the smallest innovative start-ups in a variety of joint reconstruction, trauma and spine products



WORLD-CLASS.  
YOUR STRATEGIC SOURCING PARTNER  
FOR ORTHOPEDIC DEVICE SOLUTIONS  
WORLDWIDE.

## CONTACT US TODAY

Make your ideas a reality.



### Corporate Headquarters

1489 Cedar Street  
Holt, MI 48842 USA  
Phone: +1 (517) 694-2300  
Fax: +1 (517) 694-2340

E-mail: [sales@orchid-ortho.com](mailto:sales@orchid-ortho.com)  
[www.orchid-ortho.com](http://www.orchid-ortho.com)



## Orchid Orthopedic Solutions

Providing the most orthopedic solutions under one roof



## PARTNER WITH US

Together, we can help people live a better life.



### Orchid is a worldwide leader of orthopedic medical device outsourcing services

providing unparalleled contract design and manufacturing services from concept through launch. We are a strategic sourcing partner that can handle your entire project or provide services at a Single Point in the process to quickly bring your product to market.

## WHY ORCHID

- **Broadest portfolio in the industry:** Ranging from design and development through finished goods manufacturing and packaging
- **Innovative solutions:** We continue to develop value-added technologies and services, simplifying your value streams and mitigating risk
- **Extensive medical device and clinical experience:** Each of our facilities has a rich history of manufacturing and design in the orthopedic industry
- **Proprietary bone in-growth technologies:** FDA registered processes for applying porous coatings to implants
- **Global presence:** Manufacturing facilities worldwide
- **ISO certified:** An ISO 13485:2003 quality system in every facility

# UNPARALLELED ORTHOPEDIC CONTRACT MANUFACTURING SERVICES AND SOLUTIONS

## SUPPLY CHAIN SOLUTIONS

- **Design to Manufacturing:** Orchid will partner in the early stages of your project, from concept through design transfer
- **Single Point:** Utilize any one of Orchid's manufacturing capabilities to meet your project goals
- **Orchid Supply+:** Orchid will manage the entire supply chain of a project utilizing a single purchase order

## Advanced Machining

- Swiss-style
- Conventional turning
- Multi-axis milling
- Grinding
- Gun drilling
- Electrical discharge machining (EDM)

## Forging and Casting

- Net and near-net forging of exotic alloys
- Investment casting of Co/Cr alloy and stainless steel, with more castings than any other global manufacturer
- Machining and finishing

## Coatings and Surface Treatments

- Proprietary hydroxylapatite (HA) coating on Ti, Co/Cr, stainless steel
- Best-in-class TPS coating
- Proprietary Ti coating on PEEK
- Proprietary Ti coating on UHMWPE
- Proprietary anti-wear ceramic coating
- Resorbable blast media (RBM) surface treatment
- Spherical and irregular bead porous coating
- Composite coatings
- Passivation
- Laser marking
- Polishing
- Heat-treating

## Plastics Manufacturing

- Medical grade plastics manufacturing, including PEEK, UHMWPE and PMMA
- CNC machining
- Portable ISO Class 8 clean rooms
- Lean, single piece flow cells
- Laser marking

## Surgical Instruments

- Standard, complex or custom for joint, spine, extremities and trauma surgery
- Complete prototyping
- Advanced machining and finishing

## Dental Instruments and Implants

- Advanced, CNC metal machining
- CNC plastics machining of a wide range of medical grade plastics
- Implant coatings and surface treatments
- Innovative design and development

Count on Orchid to add extra value to every project, including:

- Project management
- Design for manufacture
- Vertically integrated facilities
- Engineering support
- Lean manufacturing
- Process validation
- Quality and regulatory services

Learn more at [orchid-ortho.com](http://orchid-ortho.com)

## Sterile and Non-Sterile Packaging

- Contract or at the point of manufacture
- RediPak® off-the-shelf solutions
- Fixed and portable ISO Class 7 controlled environment rooms
- Pouch or blister sealing
- Boxing
- Labeling
- Shrink-wrapping
- Sterilization
- Validation services
- Package testing
- Accelerated aging
- Medical device assembly in ISO Class 7 clean room
- Packaging design

## Cutting Instrument Solutions

- Custom cutting instruments for specific implants and procedures
- Surgical drill bits, reamers and blades – for orthopedic, maxillofacial, cranial/neuro and ENT procedures
- Surgical cutting burs – for orthopedic, otology, podiatry, arthroscopy, neuro, maxillofacial and more