CIP Composites are laminated polymer materials made by impregnating textiles with thermoset resins. Solid lubricants are added to the resin to provide evenly dispersed lubrication throughout the material, providing smooth operation.

CIP custom composite wear rings are a superior alternative to commonly used cotton phenolic and glass filled nylon materials. They allow smooth operation and high side loads while protecting the sealing elements and preventing metal to metal contact in hydraulic cylinders. CIP wear rings are preferred where high performance, large diameters and/or high temperatures are required.

CIP Composite wear rings provide manufacturers and servicers alike with solutions to reduce overall maintenance and increase wear life. CIP offers short lead times, reducing the costs associated with equipment downtime and repairs. CIP Composites are manufactured in the United States using only the highest quality materials.

**Custom Wear Rings**

Suitable mating surfaces for CIP composite wear rings are hardened or stainless steel.

Columbia Industrial Products offers a fully equipped machine shop on location ready to meet your needs. Wear rings can be manufactured to customers’ specifications or our engineering department can provide recommendations. Designs are based on outside diameter (OD), thickness (T), and length (L) using inch units (metric units will be converted).

CIP wear rings are designed with a specific gap allowing the material to expand without seizing in the cylinder. The recommended gap takes into account the rate of thermal expansion and is best determined according to the OD of the wear ring. CIP recommends an angled cut to allow for continuous bearing support regardless of wear ring orientation.
Benefits to Using CIP Composite Wear Rings

- Self-lubricating
- Low coefficient of friction
- Protects the sealing elements and prevents metal to metal contact
- Excellent stability in water, corrosive fluids and chemical solutions
- Stable in elevated temperatures
- Capable of high loads
- Extended operating life
- Light weight
- Manufactured to specification
- Standard sizes 0.75 inch – 65.0 inch
- Environmentally friendly
- Made in the USA