

# Oil Wiper Rings

Oil wiper packing helps boost the reliability of reciprocating compressors by keeping lubricating oil where it is needed and preventing it from contaminating downstream components and processes. Properly functioning wiper packing also reduces oil consumption and costs, while protecting the environment from leakage.

- Stops crankcase oil loss
- Keeps oil away from the pressure packing and cylinder in non-lube applications
- Prevents cylinder oil from being carried into the crankcase

### **OPTIMAL PERFORMANCE**

Oil wiper rings are usually located near the crosshead assembly. They function by scraping the oil film from the compressor rod as it moves back and forth between the frame and cylinder. They also minimize the unintended flow of oil through the packing caused by the "pumping" action of the crosshead.

To be effective, wipers must remove oil from the entire circumference of the piston rod and have a drain profile that meets the specific needs of the machine. This requires wiper rings that are engineered for their application and made from materials that provide the optimum balance of strength, flexibility and durability.

# **ADVANTAGES**

- Improved compressor reliability; less downtime
- Protection of downstream equipment and processes
- Long wiper packing service life
- Reduced oil consumption and costs
- Improved environmental protection

#### **DESIGNS**

Cook RWS, RUG and 560 are the most common oil wiper ring sets. Cook Compression also offers patented RTV oil wipers for applications requiring a high-performance oil wiping and gas sealing solution.







## **RWS**

- Simple, proven design typically used in a two or three-ring arrangement
- Rings are radially cut with face drains
- Made from cast iron, bronze or non-metallic materials



## **RUG**

- More advanced design, typically used in a two or three-ring arrangement
- Rings are radially cut with face drains, as well as drilled holes for improved oil management
- Made from non-metallic materials



## 560

- Provides both wiping and gas sealing capabilities
- Typically used in a threering arrangement, with two radial-cut wiper rings and a butt tangent-cut seal ring
- Made from non-metallic materials



#### **MATERIALS**

Cook Compression manufactures wiper rings in a broad range of metallic and non-metallic materials. For exceptional performance and durability, Cook also offers engineered TruTech™ materials.

TruTech 3110 material was developed especially for the unique demands of oil wiper service. This PTFE-based compound provides a sharp wiping edge that retains its effectiveness over extended use. TruTech 3110 imparts flexibility, allowing wiper rings to tightly conform to the rod surface and eliminate potential leak paths. The properties of TruTech 3110 also make it exceptionally safe for contact with metal surfaces, avoiding wear to the compressor rod.

#### TruTech 3110 Results

Laboratory tests confirm that wiper rings made from TruTech 3110 are significantly more effective at stopping oil leakage compared to rings made from other materials.

TruTech 3110 rings remove 11% more oil from the rod than PEEK, the next-best wiper ring material. TruTech 3110 performs 64% better than bronze and 86% better than cast iron.

## Oil Leakage Past Wiper Rings



