

# PERFORMANCE STUDIES

Field Reports from Cook Compression

PISTON & RIDER  
RING UPGRADES  
REPORT# 108

## Beverage Producer Taps Into Cook Upgrade to Extend Piston Ring and Rider Life

### SCENARIO

When a large beverage producer in the Philippines needed more durable compressor components than their OEM supplier could offer, Cook Compression was ready to respond.

The customer wanted to increase the service life of piston and rider rings in a Broomwade VMD 1500 2-stage, 377 hp, non-lubricated, utility air compressor with final delivery pressure of 100 psig. The first stage cylinder bore is 203/8 inches and the second stage bore is 121/4 inches. The OEM rings they had been using were manufactured from glass-filled PTFE and needed replacement every 8 to 12 months.

### SOLUTION

Seeking increased reliability and improved technical support, the customer contacted Azeri Industrial Sales, the Cook Compression representative for the Philippines. The Cook representative compiled dimensional specifications from used pistons, as well as detailed operating parameters for the unit.

Cook engineers recommended rings produced with TruTechE 3210, a special polymer alloy that has demonstrated outstanding performance in a variety of lubricated and non-lubricated applications. TruTech 3210 has provided exceptional wear behavior with air, methane, propane, LNG and bone dry gases.

The customer installed the Cook rings in the first stage cylinder to test their service life with OEM rings in the second stage.

### RESULTS

The Cook rings were inspected after 6 months of operation and the customer found no significant wear. A second inspection 5 months later revealed equally impressive results. At this time, the Cook rings with 11 months of operation were compared to the OEM rings from the second stage with only 8 months of operation. Despite being in use 3 months longer, the Cook piston and rider rings had at least 1/4 inch more radial thickness than the OEM rings.

Based on these results, the customer installed Cook rings in the second cylinder and has achieved their goals of extended run times, reduced costs and increased productivity.

*For more details and information about innovative solutions for piston and rider rings, contact your Cook Compression representative or visit [cookcompression.com](http://cookcompression.com).*



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