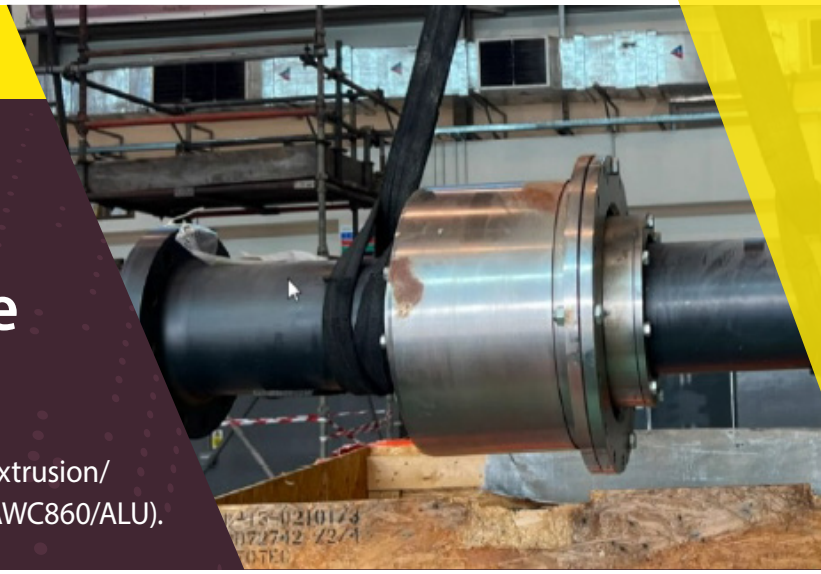
CASE STUDY

CHESTERTON
Global Solutions, Local Service.

ALUMINUM INDUSTRY



Polymer Seals

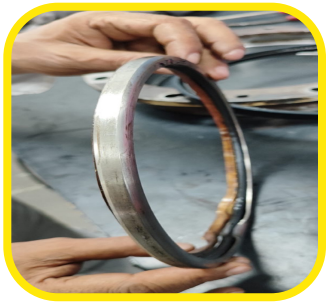
Improving Reliability and Reducing Downtime on Vibro Compactors

Product Solutions: Rod Seal (R22KN5 AWC860), Anti-Extrusion/ Distance Ring (R9K AWC665), and Wiper Seal (CW21KF AWC860/ALU).

Challenge

Operational Issues with OEM Seals

- Solid (non-split) cartridge seal required complete equipment disassembly
- >36 hours of labor per replacement
- Seal life less than 2 months
- Frequent leaks which led to production stoppages
- Heavy lifting equipment required for teardown
- Increased manpower cost, unplanned downtime, and safety exposure



Impact on Production

- Forced shutdowns and lost compactor availability
- High maintenance burden
- Significant delays in meeting output targets

Solution

Split stuffing box design with Polymer Split Seals

- Seal configuration: Rod Seal (R22KN5 AWC860), Anti-Extrusion/ Distance Ring (R9K AWC665), Wiper Seal (CW21KF AWC860)
- Sizes: Rod OD 200 mm, groove height 23 mm
- Arrow-cut split seals preloaded to maintain vacuum, prevent extrusion, and allow fast installation

Performance Improvements

- 3× longer service life vs. OEM
- Stable sealing under vibration and axial movement
- Equipment running within ideal parameters

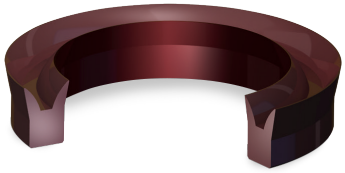
Maintenance and Operation Impact

- Replacements now take <5 hours
- No teardown of equipment
- Reduced manpower and maintenance load
- No unplanned stoppages
- Improved compactor availability
- Cleaner working environment

Solution Cont.

AWC860 Cherry Polymer Rod Seals

- Low Friction
- High Wear Resistance
- Superior Mechanical Properties



AWC860 Cherry Polymer Wipers

- Positive, Sharp Lip
- Low Friction
- High Wear Resistance
- Superior Mechanical Properties

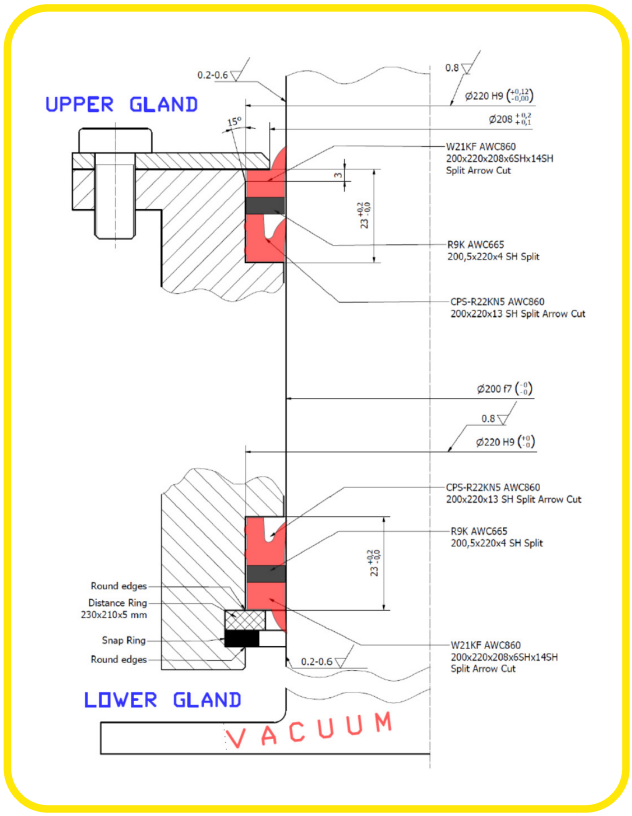
AWC665 – MoS2 filled Nylon

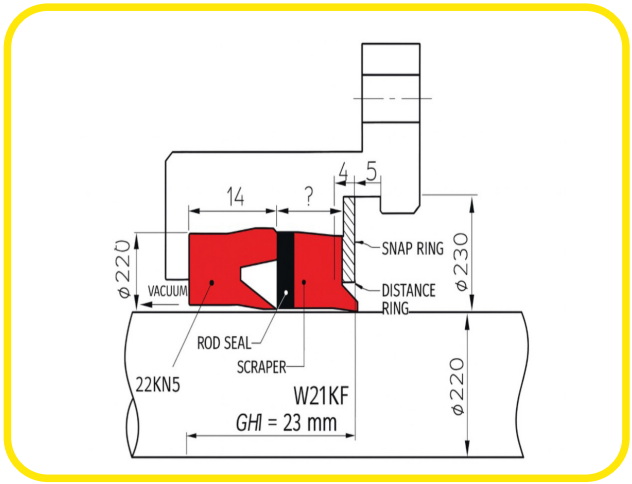
- Low Friction
- High Wear Resistance
- High Hardness, Robust Material

Results

Customer Value

- Success led to plant-wide expansion (6 more machines)
- Standardization lowers future operating cost





Technical data reflects results of laboratory tests and is intended to indicate general characteristics only. A.W. Chesterton Company disclaims all warranties expressed or implied, including warranties of merchantability and fitness for a particular purpose. Liability, if any, is limited to product replacement only. Any images contained herein are for general illustrative or aesthetic purposes only and are not intended to convey any instructional, safety, handling or usage information or advice respecting any product or equipment. Please refer to relevant Safety Data Sheets, Product Data Sheets, and/or Product Labels for safe use, storage, handling, and disposal of products, or consult with your local Chesterton sales representative. **A.W. Chesterton Company, 860 Salem Street, Groveland, MA 01834 USA** © 2026 A.W. Chesterton Company. ®Registered trademark owned by A.W. Chesterton Company in USA and other countries, unless otherwise noted. **CHESTERTON.COM** **EN602455 4/26**

CHESTERTON®
Global Solutions, Local Service.