

EMISSIONGUARD™ ES³

Expandable Static Seal

The CPI EMISSIONGUARD™ ES³ expandable static seal is the first seal designed for optimum sealing when your compressor is not running and remains pressurized.

CPI, part of the Howden group, can supply a full control system which can interlock with the compressor controls to activate and deactivate the ES³ static seal only when the compressor is stopped.

DESIGN FEATURES

- EMISSIONGUARD ES³ seals are pneumatically actuated to create a zero leakage seal when the compressor is shut down. Prior to start-up the seal retracts to allow working clearance around the piston rod.
- Durable stainless steel ring housing
- Compact design allows it to fit with minimal modifications to the packing case



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Pneumatic seals are the easiest, safest and most effective technique to statically seal parts that are separated by clearance. Existing static sealing system designs are known to be problematic and unreliable due to the tight clearances and the larger space requirement can be challenging for installation.

CPI's EMISSIONGUARD™ ES³ expandable static seal solves both of these issues by using proven advanced elastomer technology seals which are expanded and retracted by a pneumatic process. This allows the correct working clearance around the piston rod when the compressor is running and an expanded reliable seal on the piston rod while the compressor stopped.

Use with CPI's EMISSIONGUARD TR² packing rings for the optimal combination of sealing performance when the compressor is running and when it is stopped.

TECHNICAL SPECIFICATIONS

Pressure Rating: 1 Bar to 70 Bar*

*Depending on pressure vs diametral clearance



CPI, part of the Howden group, is an industry-leading manufacturer of precision-engineered components for reciprocating compressors used in petrochemical, refining, natural gas, and offshore industries. The CPI product range includes packing, piston and rider rings and a complete line of compressor valves designed to provide each customer with maximum performance and reliability for their application. In addition, CPI offers the highest quality lubrication system technology for further compressor efficiency and protection.



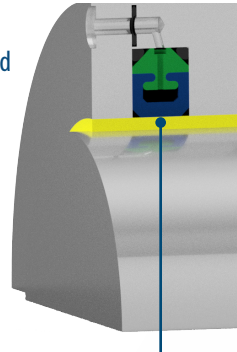
Exploded view of the EMISSIONGUARD™ ES³ seal



Example of control panel for the EMISSIONGUARD™ ES³ seal

Compressor Operating

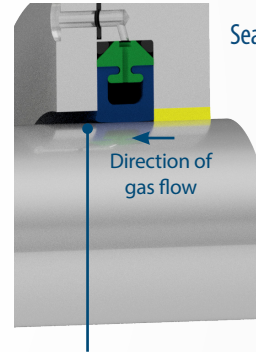
Seal NOT energized



The EMISSIONGUARD™ ES³ seal is clear of the piston rod allowing the rod to reciprocate and gas to flow.

Compressor Stopped

Seal energized



The EMISSIONGUARD™ ES³ seal is now in the expanded state creating a tight seal around the piston rod preventing any suction gas in the cylinder from leaking past the seal and out of the vent.