

PROTEGO® ZETOP Technology

Zero Emission at Tank Operating Pressure



The extreme tightness of PROTEGO® Valves assures Zero Emission at Tank Operating Pressure.

EXTREME TIGHTNESS THANKS TO ADVANCED MANUFACTURING TECHNOLOGY

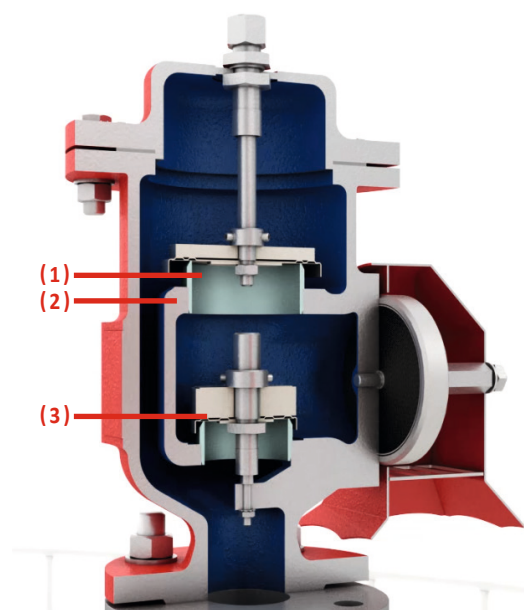
- Valve seats made of stainless steel or hastelloy **(1)**
- Valve seats are shrink fitted
- The right sealing variant for every application requirements (PTFE or Metallic) **(3)**
- Precisely manufactured valve seats ensure tightness beyond conventional standards

PROTEGO® Valves meet the requirements of EPA Method 21 and the PROTEGO® Standard PS001 (2):

- Measurement of leakage rates at 90% of the set pressure compared to the API standard of 75%
- PROTEGO® Valves exceed the stringent requirements of the EPA, API 2000, and EN ISO 28300



Measuring the emissions of the PROTEGO® VD/TS on a tank



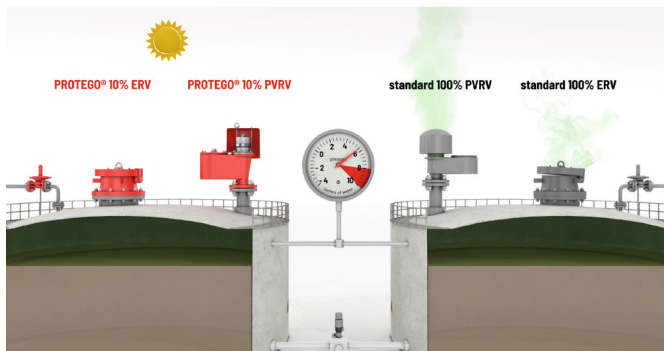
The **PROTEGO®** 10% Technology Saves Emissions and Costs



In the **PROTEGO®** Technology Center,
the closing and opening behavior of valves
is tested under near-real conditions.

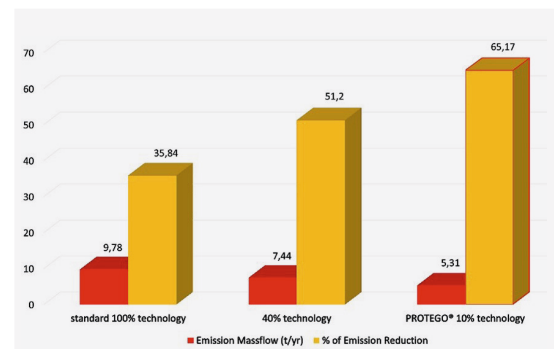
PROTEGO® 10% FULL LIFT TECHNOLOGY VENTS ARE A MAJOR BENEFIT TO EMISSION REDUCTION AND TO SAFE PROCESS PLANT OPERATION

- **PROTEGO®** full lift valves utilize 10% overpressure technology
- This technology provides very short opening and closing pressure ranges
- The valve only requires 10% over pressure to reach full lift
- 10% technology allows for maximum operating range without detectable emissions / leakage



EMISSION SAVING POTENTIAL FOR A TANK FARM

The graphic shows calculations based on the VDI 3479 guideline demonstrating the vapor saving potential comparing a 100%, 40% and 10% **PROTEGO®** full lift type technology.



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