

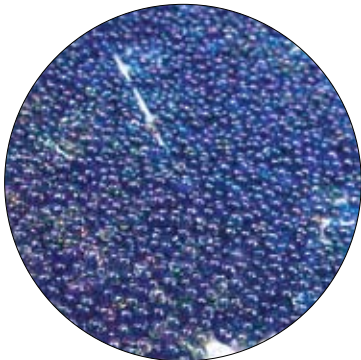
Challenges of High-Humidity Environments

Des-Case® Hydroguard™



Overview

Some of the more challenging environments to operate equipment involve constant high humidity or washdown areas. The need to consistently clean equipment (e.g. a food processing facility) or being in a naturally high humidity environment (as in a paper mill) requires additional considerations to protect equipment.



Why Extra Protection is Required

Silica gel is hydrophilic. If you place a bag of silica gel in normal atmospheric conditions, it will, over time, become saturated, unable to absorb any additional moisture.

Normal atmospheric humidity is filtered by a standard breather over the course of its normal operating life of 6 months to one year. However, the large amount of water present during washdown or in a constant environment of high humidity can quickly cause a breather to become “spent,” requiring the unit to be replaced as often as once per week. In these demanding conditions, the silica gel needs extra protection so that it is only being exposed to the air entering and exiting the equipment. Additional precautions are required to keep water (free water or humidity) from continually seeping into the breather’s air vents.



Keeping contamination under control.®

Des-Case Corporation
675 N. Main St.
Goodlettsville, TN 37072

Phone: (615) 672-8800
Fax: (615) 672-0701
<http://www.descase.com>
sales@descase.com

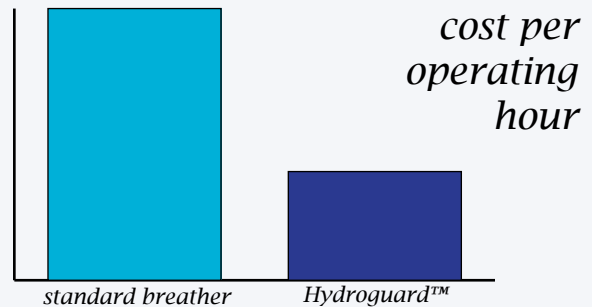


Challenges of High-Humidity Environments

Des-Case® Hydroguard™

Hydroguard™ Saves Time and Money

- Design significantly reduces exposure to ambient conditions
- Lasts four to eight times as long as standard desiccant breathers of similar size
- Less frequent replacement needed, reducing maintenance time
- Savings of up to 75%



Standard breathers offer basic protection against contaminants; Hydroguard™ takes contamination control to the next level.

Expansion Chamber

The diaphragm allows for expansion/contraction of the air within the casing as a result of temperature variations during steady-state operations.

Foam Pad

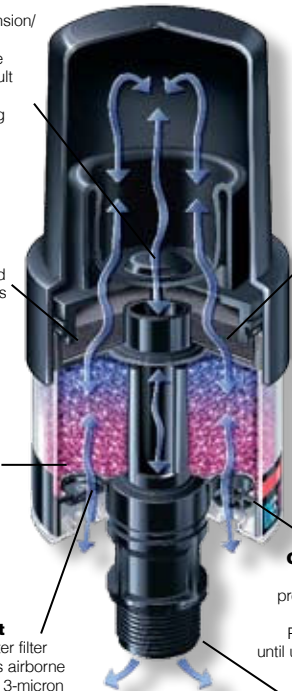
Reduces oil mist exhalation. Ensures outgoing air is evenly dispersed through the filters and desiccant, providing maximum efficiency.

Water Vapor Adsorbent

Silica gel absorbs water from incoming air. Indicates condition by change of color from blue to pink.

Filter Element

Patented polyester filter element removes airborne contamination to 3-micron absolute. Unique loops allow particles to release during system exhalation, helping to increase breather life.



Filter Element

Second polyester filter element protects against any migration of desiccant.

Resilient Polycarbonate Body*

Shock-absorbing, clear casing provides reliable service and easy maintenance.

Quad Check Valves

Provides system pressurization, protecting system integrity. Plugs keep unit inactive until use (**0.25 PSI cracking pressure**).

Threaded Mounting

Easily replaces standard filler/breather cap

How Hydroguard™ Protects Equipment

In high humidity or washdown areas, significant moisture will enter a standard breather, even with additional shielding (e.g. a protective shroud). Des-Case's Hydroguard™ hybrid approach incorporates all the advantages of standard Des-Case breathers along with check valves and a bladder system to virtually eliminate the breather's exposure to anything more than the air entering or exiting the equipment – keeping water out while allowing systems to breathe as designed.

Hydroguard's bladder system allows for the expansion and contraction of air within the casing as a result of temperature variations during steady state operations. This allows for efficient use of the air that has already been cleaned and dried, reducing the air flow volume entering and exiting the system (in some cases, virtually eliminating air venting to the atmosphere). The ring of four check valves ensures system pressurization and helps protect system integrity, opening only when the system needs to breathe.

Designed for systems requiring less than 2.5 cfm @ 1 PSID.

* The end user is responsible for ensuring chemical compatibility for specific applications.



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