DES-CASE™

Pioneers in contamination control.

Why do the world's leading companies, distributors, and OEMs look to Des-Case? Because we understand the importance of fluid cleanliness and the role it plays in increased production, cost savings, and reliability. We've spent more than 25 years pioneering solutions specific to customer needs, helping improve lubricant quality, and maximizing equipment dependability.

Our comprehensive water and particulate contamination control products are used by hundreds of the world's top companies for a wide range of applications including gearboxes, reservoirs, and storage/process tanks.

From the time oil enters your facility to the end of its life, protecting it with Des-Case solutions will extend the life of your machinery, decrease your downtime, and could save you hundreds of thousands of dollars. Our innovative contamination control technology consists of rugged, high quality materials that are cost effective for nearly every application.

An imperative link in the reliability chain, Des-Case helps you effectively control contamination before it controls you.

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for contamination control products

Count on the performance of your industrial equipment.

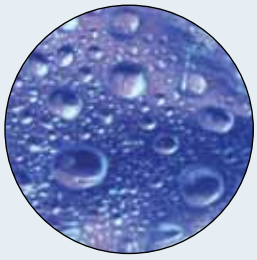
With increases in the cost of oil, greater desire to minimize usage and waste, and a compelling business case for prolonging equipment life, the economic and environmental reason for controlling contamination of lubricants – from the time oil enters a facility until it leaves – is stronger than ever. Maintaining clean oil is one of the best investments a company can make to keep equipment up and running, yet contamination often remains an overlooked factor behind premature machinery failure and diminished lubricant life.

Reduced downtime, less oil usage, and lower repair and recycling costs all add up to significant savings when solid reliability practices are in place.

Two Major Sources of Lubricant Contamination

Dirt

If the atmosphere is contaminated, oil will become dirtier and lubricant quality becomes compromised. Particulate contamination, once inside an operating system, will accelerate the generation of new contaminants. These contaminants damage critical components and act as a catalyst for oxidation, further degrading the condition of lubricants.



Water

If the atmosphere is particularly humid or has frequent temperature fluctuations, the oil is probably moisture-laden and lubricant quality is compromised. Often times, plant wash down activities are responsible for inducing conditions that lead to moisture ingression and corrosion.

The best and easiest way to prolong lubricant life is to avoid exposing lubes to contaminants. A multi-faceted program that includes some simple steps can keep your equipment running smoothly.

Detection

Des-Case's Equipment Reliability Services (ERS) are designed to help you critically evaluate an array of equipment information: the application, the industry, the environment the unit is in, the particular fluid used, the condition of the lubricant, et cetera. ERS can help you quickly identify the next steps you need to take, help your team learn the basics about contamination control, and perform cost-benefit analyses to help you in your implementation of best practices.

Prevention

As nearly all gearboxes, reservoirs and storage tanks are designed to breathe, allowing only clean, dry air to enter the system is at the top of the list of steps to take. Des-Case's desiccant breathers combine a drying media with a combination of filters to prohibit the entry of water and damaging particulates from entering the system.

Removal

Filtration devices should be used to remove particles and moisture, further preserving the working life of the oil. They are not just a tool for emergency remedial measures when dealing with contaminated lubricants and hydraulic fluids. Des-Case provides a wide array of customizable, quality filtration units that are quickly delivered to you for use in your program.

The Bottom Line

Now, implementing best practice contamination control techniques, maintaining clean, dry lubricants—and gaining the profitability that goes along with it—is easier than ever.

Des-Case's technical team can help you evaluate where you are, give you guidance on where to go, and provide the products to get you there.

where condition monitoring meets condition management

Des-Case offers a new level of products and services, providing even more tools for companies trying to keep contamination under control. Des-Case Equipment Reliability Services (ERS) are designed to:

- Critically evaluate an array of equipment information: the application, the industry, the environment the unit is in, the particular fluid used, the condition of the lubricant, and a variety of other factors
- Offer suggested procedures to use for your application and future actions to consider
- Help perform cost-benefit analyses for your applications to identify the most cost effective options for your situation
- Give access to a technical help desk with experienced advisors to discuss your issues and plan your next steps
- Provide proven next steps and recommended solutions based on industry best practices

Des-Case Equipment Reliability Services are divided into three main categories: Evaluation, Lubricant Sampling Products, and Analysis and Recommendations.

Each category of ERS can be used independently – but together help ensure that best practices are used from the time you begin to look at the equipment until the solution is deployed.

Evaluation

Identifying what to do and what step to take first is often the most difficult part. Each industry and machine is different, each company's program goals can vary, and every operating environment presents a different challenge.

While Des-Case has dozens of tools to assist you in your reliability program planning and implementation, a few of the main components of the identification phase of ERS are:

Quick Remote Diagnostic

Helps identify the current state of your reliability efforts and potential areas for improvement.

Cost Benefit Analysis

Incorporates your program goals with current equipment condition and reliability program costs to help further the case for contamination control within your company.

Equipment Surveys

Can be used by your team to perform specific checks on your machines to help determine the status of any particular piece of equipment.

Equipment Lubrication Evaluation

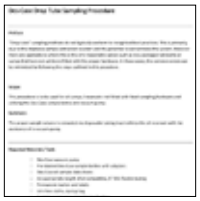
Des-Case partners and personnel can help perform an on-site assessment of your contamination control practices, providing general guidelines, targeted recommendations, and specific next steps.

Education

Des-Case and its partners are able to offer a variety of one to four hour overviews for you and your team to help identify contamination control opportunities. We can also recommend more thorough training through a variety of well-established reliability experts.







Lubricant Sampling Products

From the sampling bottles to our patented sampling tools, our advanced line of lubricant sampling products incorporate unique features with widely accepted sampling best practices.

This easy-to-use system allows for sample integrity while making sample collection a more efficient, pleasant task. Compared to other sample extraction methods, our one-handed pump and snap-on ERS bottles make drawing oil samples a “snap.”

One-Handed Pump

This intuitive vacuum pump is powerful and sturdy. The pistol grip design allows for easy sample extraction and the interface easily connects to the patented, snap-on bottles.

Snap-on Connector

The unique design preserves sample integrity by minimizing atmospheric exposure. With the accompanying pump, the bottle is held firmly in place, freeing your other hand. The patented check valve system minimizes the chance of any spill, allowing the cap to remain firmly in place from receipt of the sampling system through receipt at the lab.

High-Quality Sample Bottles

Manufactured in a variety of sizes, these clear, PTE bottles allow for easy visual inspection of the sample and help maintain sample integrity.

Analysis and Recommendations

ERS focuses on the detection and more importantly, the correction of root causes. The program starts with quality sample collection and some basic knowledge of your machine, your industry, your operating environment, and your lubricant. While we recommend the use of Des-Case's ERS Lubricant Sampling System, our analysis services will work with any high quality oil sample.

With the proper information in place we will begin analyzing results and reporting on:

Fluid Condition

By effectively monitoring fluid condition, you will be able to maximize oil life and identify adverse conditions that affect fluid life.

Contamination

Our contamination analysis will not only identify and measure contamination but will identify the likely sources of common contaminants in your system … and what to do about them.

Wear Debris

Our standard oil analysis will trend and identify abnormal wear conditions. These may trigger more rigorous wear debris analysis to identify predominant wear mechanisms, their severity and allow us to offer specific recommendations to abate the problem in many cases.

Root Cause and Remediation

The primary value of oil analysis is its unique ability to identify and quantify the most common root causes of machine wear. By setting proper, machine-specific targets and limits for each asset, we will be able to help create a strategy for each machine to achieve proper fluid cleanliness conditions.

Long-Term Results

The process continues wth ongoing analysis, trending, and modifications to targets as needed. Any exceptional results will be verified and our data analyst will follow up with you to procure any necessary information and recommend corrective action.

the first line of defense against contamination

Desiccant breathers are a vital step in contamination control. Studies have shown 50 to 70 percent of lubricant contamination can come from outside the equipment. As most machines are designed to "breathe", protecting the source of air-flow from moisture and particulate contamination is extremely valuable for front-end protection and reliability optimization.

Des-Case desiccant breathers incorporate a high capture-efficiency filter to help sustain desired cleanliness levels by removing even minute particulate matter. They also create low relative humidity levels in the headspace, making condensation and absorption by the lubricant unlikely. When a system is properly fitted with a breather containing drying and filtration media, the contaminant ingression is greatly reduced.

Installation of Des-Case® breathers at critical ingression points is a cost-effective means to prevent contaminants from entering the fluid reservoirs as differential pressures occur.

Reverse flow through the breather allows for regeneration of the desiccant and prevents oil vapors from entering the work environment.

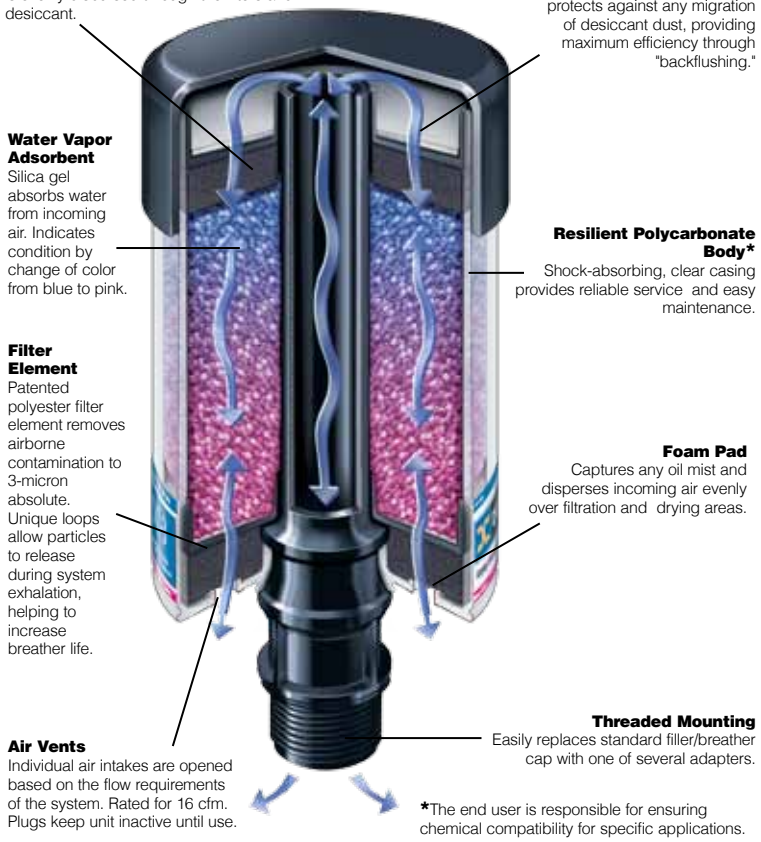
	Benefits	*Environment*
 Disposable Desiccant Breathers	Foam pad disperses air evenly over filter media and silica gel. Patented polyester filter captures particles at 3 micron absolute (β_3 >200). Silica gel desiccant removes moisture from incoming air, extending fluid and system life. Air intake plug ring allows for controlled breathing and easy activation of the unit without tools. Different sizes allow for adaptation to virtually any system.	Intermittent operations Gearboxes Hydraulic reservoirs Transformers Storage Tanks Totes
 Hydroguard VentGuard	Quad check valves provide a slight system pressurization, protecting system integrity. Patented polyester filter captures particles at 3 micron absolute (β_3 >200). Expansion chamber creates a nearly sealed system. Silica gel removes water from incoming air, extending fluid and system life. Foam pad stops oil mist during exhalation and disperses air evenly over filter media and silica gel. VentGuard offers similar benefits to the Hydroguard, but smaller footprint.	Thermal expansion / contraction only Gearboxes Washdown applications Pumps Closed loop systems Bearing houses Other low flow applications
 TRIPLE PLAY DOUBLE PLAY	Pleated filter element captures particles at 0.3 micron absolute ($\beta_{0.3}$ >1000). Oil-coalescing media (TriplePlay only) drains oil back to system, prevents contamination of work environment. Optional vacuum indicator actuates when maximum restriction is reached, protects system integrity. Hydrophobic media repels free water, yet permits humid air to escape.	Low humidity applications Arid, high dust environments Continuous operations with frequent washdowns Applications that create “oil misting”
 Extreme Duty Breathers	Automotive-grade molded housing for increased vibration resistance Filter captures particles at 0.3 micron absolute ($\beta_{0.3}$ > 200). Water-blocking filter media prevents free water from entering breather Dual clear windows for easy system monitoring Color-changing silica gel changes from blue to pink when breather needs replacing Check valve system extends product life even further	Harsh environments High temperature Mobile equipment Nautical applications High vibration

Disposable Standard Breathers

simple, dependable lubricant protection

Model Number	DC-2	DC-3	DC-4
Unit Height	6.125" / 155.6 mm	8.125" / 206.4 mm	10.125" / 257.2 mm
Unit Diameter	4" / 101.6 mm	4" / 101.6 mm	4" / 101.6 mm
Shipping Weight (unit/case)	1.21 lbs. / 7.73 lbs 0.55 kg / 3.51 kg	1.87 lbs. / 11.74 lbs. 0.85 kg / 5.32 kg	2.63 lbs. / 16.13 lbs 1.2 kg / 7.33 kg
Amount of Silica Gel	0.66 lbs / 0.30 kg	1.22 lbs. / 0.56 kg	1.88 lbs. / 0.84 kg
Adsorption Capacity	4 fl. oz. / 118.2 mL	7.45 fl. oz / 220.3 mL	11.3 fl. oz. / 333 mL
Max. Flow Rate (cfm)	16 @ 1 PSID	16 @ 1 PSID	16 @ 1 PSID
(lpm)	453	453	453
Filtration	3µ absolute (β_3 >200)	3µ absolute (β_3 >200)	3µ absolute (β_3 >200)
Operating Temp. Range	-20ºF to 200ºF / -29ºC to 93ºC	-20ºF to 200ºF / -29ºC to 93ºC	-20ºF to 200ºF / -29ºC to 93ºC
Hydrophilic Agent	Silica Gel	Silica Gel	Silica Gel
Filter Media	Polyester	Polyester	Polyester
Connection Size	1" threaded	1" threaded	1" threaded

- Resilient clear polycarbonate body
- Bi-directional, controlled airflow
- Multi-tiered filtration process
- Water vapor adsorbent
- 3-micron absolute particulate filter elements
- Color indicator for easy system monitoring



Miniature Disposable Breathers

diminutive design for confined areas

DC-1 DC-BB

Model Number	DC-BB	DC-1
Unit Height	3.9" / 99.06 mm	5.31" / 134.9 mm
Unit Diameter	2.52" / 64.01 mm	2.52" / 64.01 mm
Shipping Weight (unit/case)	0.31 lbs. / 2.14 lbs 0.14 kg / 0.97 kg	0.51 lbs. / 3.32 lbs. 0.23 kg / 1.51 kg
Amount of Silica Gel	0.13 lbs. / 58.6 g	0.28 lbs. / 125.3 g
Adsorption Capacity	0.79 fl. oz. / 23.3 mL	1.68 fl. oz. / 49.7 mL
Max. Flow Rate (cfm)	4.55 @ 1 PSID	4.16 @ 1 PSID
(lpm)	128.84	117.8
Filtration	3µ absolute (β_3 >200)	3µ absolute (β_3 >200)
Operating Temp. Range	-20°F to 200°F / -29°C to 93°C	-20°F to 200°F / -29°C to 93°C
Hydrophilic Agent	Silica Gel	Silica Gel
Filter Media	Polyester	Polyester
Connection Size (NPT)	3/8" (NPT)	3/8" (NPT)

Nondesiccant Disposable Breathers

nondesiccant filters

- Creates an impenetrable barrier against water droplets
- Pleated element provides a large surface area and filters at 0.3μ absolute ($\beta_{0.3}$ >1000)
- Oil coalescing layer (DC-SB-35)

Model Number	DC-SB-25	DC-SB-35
Unit Height	5" / 127 mm	5" / 127 mm
Unit Diameter	5" / 127 mm	5" / 127 mm
Shipping Weight (unit/case)	1 lb. / 6 lbs. 0.45 kg / 1.38 kg	1 lb. / 6 lbs. 0.45 kg / 1.38 kg
Amount of Silica Gel	n/a	n/a
Adsorption Capacity	n/a	n/a
Max. Flow Rate (cfm)	40 @ 1 PSID	40 @ 1 PSID
(lpm)	1132	1132
Filtration	0.3µ absolute ($\beta_{0.3}$ >1000)	0.3µ absolute ($\beta_{0.3}$ >1000)
Operating Temp. Range	-20°F to 200°F / -29°C to 93°C	-20°F to 200°F / -29°C to 93°C
Hydrophilic Agent	n/a	n/a
Filter Media	ePTFE	ePTFE
Connection Size (NPT)	1"	1"

Hybrid Breathers

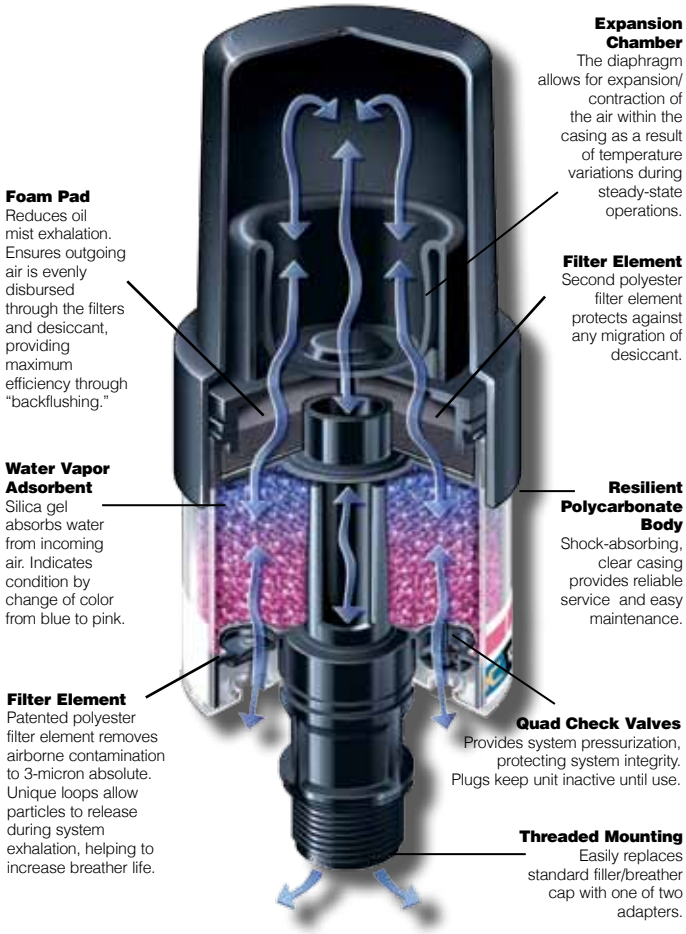
hybrid technology breathers for low-flow applications

DC-HG-8

Model Number	DC-VG-1	DC-HG-1	DC-HG-8
Unit Height	5.31" / 135 mm	7.22" / 183 mm	9.75" / 247.6 mm
Unit Diameter	2.52" / 64 mm	2.52" / 64 mm	4.1" / 104.1 mm
Shipping Weight (unit/case)	0.52 lbs. / 3.37 lbs. 0.24 kg / 1.53 kg	0.58 lbs. / 3.75 lbs. 0.26 kg / 1.7 kg	1.82 lbs. / 11 lbs. 0.82 kg / 4.92 kg
Amount of Silica Gel	0.28 lbs. / 125.1 g	0.28 lbs. / 125.1 g	0.65 lbs. / 0.24 kg
Adsorption Capacity	1.68 fl. oz. / 49.6 mL	1.68 fl. oz. / 49.6 mL	4.05 fl. oz. / 120 mL
Max. Flow Rate (cfm)	1.45 @ 1 PSID	1.41 @ 1 PSID	2.5 @ 1 PSID
(lpm)	41.06	39.93	70.5
Filtration	3µ absolute (β_3 >200)	3µ absolute (β_3 >200)	3µ absolute (β_3 >200)
Operating Temp. Range	-20ºF to 200ºF / -29ºC to 93ºC	-20ºF to 200ºF / -29ºC to 93ºC	-20ºF to 200ºF / -29ºC to 93ºC
Hydrophilic Agent	Silica Gel	Silica Gel	Silica Gel
Filter Media	Polyester	Polyester	Polyester
Connection Size	3/8" (NPT)	3/8" (NPT)	1"

- Ideal for washdowns and high humidity areas
- Desiccant and particulate filtration ensures incoming air is clean and dry
- Expansion chamber system isolates lubes from extreme ambient humidity (DC-HG-1 and DC-HG-8)
- Check valves ensure no excess pressure/vacuum builds
- DC-VG-1 incorporates advantages of Des-Case hybrid breathers in a smaller footprint optimized for use with pumps and smaller gearboxes

DC-HG-1 **DC-VG-1**

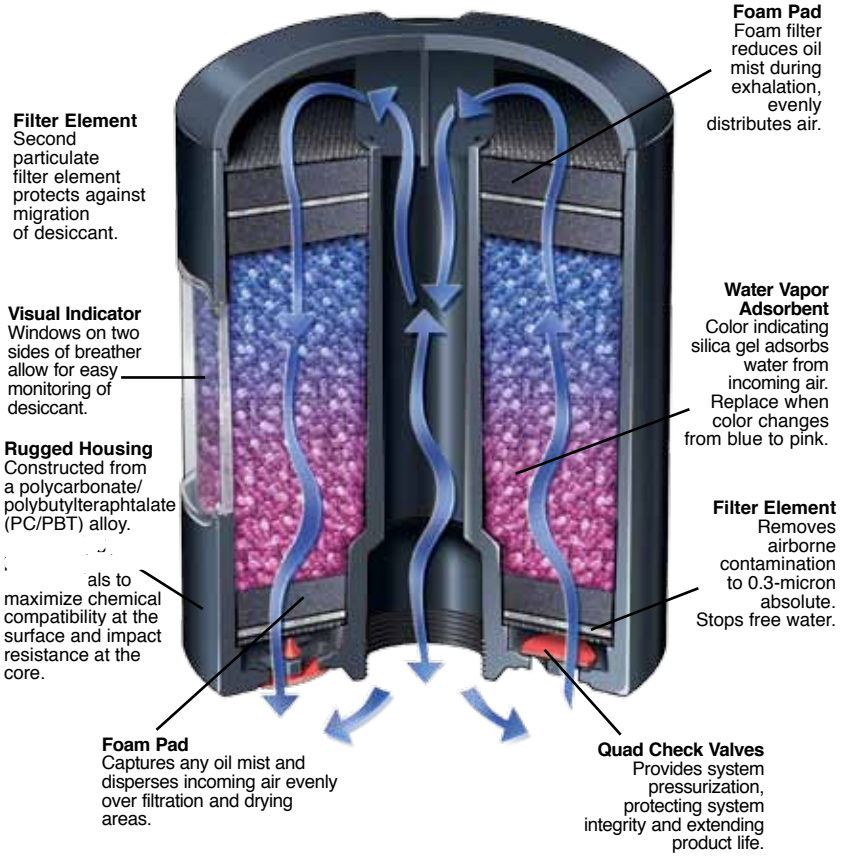


Extreme Duty Breathers

ideal for harsh environments

- Automotive grade molded housing for increased vibration resistance
- Ideal for harsh environments, high temperatures, and mobile and nautical applications
- Multi-tiered filtration process
- Water vapor adsorbent
- Check valve system extends product life even further

Model Number	DC-XD6
Unit Height	6.51" / 165.4 mm
Unit Diameter	5.1" / 129.5 mm
Shipping Weight (unit/case)	3.03 lbs. / 19.97 lbs. 1.37 kg / 9.06 kg
Amount of Silica Gel	1.75 lbs. / 0.79 kg
Adsorption Capacity	10.65 fl. oz. / 315 mL
Max. Flow Rate (cfm)	16 @ 1 PSID
(lpm)	456
Filtration	0.3µ absolute ($\beta_{0.3}$ >200)
Operating Temp. Range	-40°F to 300°F -40°C to 148.89°C
Hydrophilic Agent	Silica Gel
Filter Media	ePTFE
Connection Size	1 ½" x 16 UN female thread



Every element of Des-Case's extreme duty breather has been designed to stand up to a wide variety of applications in challenging environments.

Des-Case extreme-duty breathers attack the cause of contamination, keeping dirt and water where it belongs – out of your equipment.

Specialty Breathers

for various applications

Secondary Agent Breathers

Prevents fumes/other contaminants from entering reservoir, depending on additional adsorbent.

Example: Activated Carbon Breathers

Model No.	DC-2SBNCXX*	DC-3SBNCXX*	DC-4SBNCXX*
Unit Height	6.125" / 155.6 mm	8.125" / 206.4 mm	10.125" / 257.2 mm
Diameter	4" / 101.6 mm	4" / 101.6 mm	4" / 101.6 mm
Shipping Weight (unit/case)	1.21 lbs. / 7.73 lbs 0.55 kg / 3.51 kg	1.87 lbs. / 11.74 lbs. 0.85 kg / 5.32 kg	2.63 lbs. / 16.13 lbs 1.2 kg / 7.33 kg
Max. Amount of Silica Gel	0.66 lbs / 0.30 kg	1.22 lbs. / 0.56 kg	1.88 lbs. / 0.84 kg
Max. Adsorption Capacity**	4 fl. oz. / 118.2 mL	7.45 fl. oz / 220.3 mL	11.3 fl. oz. / 333 mL
Max. Flow Rate (cfm)	16 @ 1 PSID	16 @ 1 PSID	16 @ 1 PSID
Max. Flow Rate (lpm)	453	453	453
Operating Temp. Range	-20°F to 200°F / -29°C to 93°C	-20°F to 200°F / -29°C to 93°C	-20°F to 200°F / -29°C to 93°C
Body Material	Nylon & Polycarbonate	Nylon & Polycarbonate	Nylon & Polycarbonate
Hydrophilic Agent	Silica Gel	Silica Gel	Silica Gel
Filter Media	Polyester	Polyester	Polyester
Connection Size	1" threaded	1" threaded	1" threaded

The above specifications are for a silica gel-only hydrophilic agent breather. Some specifications for a breather containing a secondary agent would change.

* Note: "XX" denotes percentage of activated carbon. For example, DC-2SBNC25 is a DC-2 with 25% activated carbon.

** Same as the equivalent standard desiccant breather at maximum.

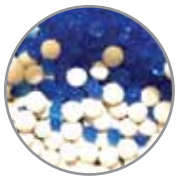
Secondary agent options include:

Orange Silica Gel

Activated Carbon

Molecular Sieve

Activated Alumina



Layered
(Blue Silica Gel and Molecular Sieve)

Breather Accessories

meeting your specific needs

Des-Case provides a wide range of disposable breather accessories for easy adaptation to your specific applications and working environment.

Model #	Description
DC-12-T	Connects standard breather or Hydroguard to 6-hole flange opening
DC-13-T	Connects standard breather or Hydroguard to 1" male threaded connection
DC-15-T	Connects standard breather or Hydroguard to 1½" bayonet-style opening
DC-17-T	Connects standard breather or Hydroguard to ¾" female threaded connection
DC-35	Connects DC-BB, DC-1 or VentGuard to ¾" female threaded connection
DC-36	Connects DC-BB, DC-1 or VentGuard to 1" female threaded connection
DC-37	Connects DC-BB, DC-1 or VentGuard to ½" female threaded connection
DC-DSA-10	Seats Extreme Duty breather on 1" female threaded connection
DC-DSA-17	Seats Extreme Duty breather on ¾" female threaded connection
DC-XDVA-12M	Vent valve adapter seats Extreme Duty breather on ¾" male threaded connection
DC-XDVA-16M	Vent valve adapter seats Extreme Duty breather on 1" male threaded connection
DC-13-T-VI	Standard breather to 1" male threaded connection adapter, with single-position vacuum indicator
DC-OCM5-VI	Standard breather to 1" male threaded connection adapter, with oil-mist coalescing media and single-position vacuum indicator
DC-SB-VI	Connects DoublePlay™ and TriplePlay™ to 1" female threaded connection with single-position vacuum indicator
DC-ME-2-T	Connects two standard breathers to 2" female threaded connection
DC-ME-3-T	Connects three standard breathers to 2" female threaded connection
DC-ME-4-T	Connects four standard breathers to 2" female threaded connection
DC-13-6C	Threaded Adapter for DC-RS-3, DC-RS-5, and DC-RS-7
DC-13-10C	Threaded Adapter for DC-RS-15, DC-RS-25, DC-RS-50, and DC-RS-75
DC-13-40C	Threaded Adapter for DC-RS-100, DC-RS-150, and DC-RS-200

Vacuum Indicator Adapter

Single position indicator actuates when maximum filter restriction has been reached.

DC-SB-VI

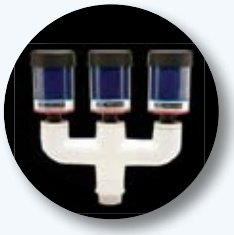
Oil Coalescing Adapter

Oil coalescing media captures oil mist, funnels back to system.

DC-OCM5-VI

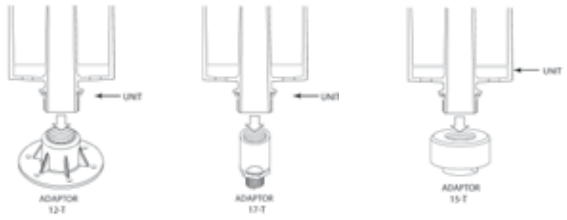
Breather Manifolds

Available in 2, 3 or 4 breather configurations to mount multiple disposable breather models.



DC-ME-3-T

Mounting Adapters



for high-flow or harsh environments

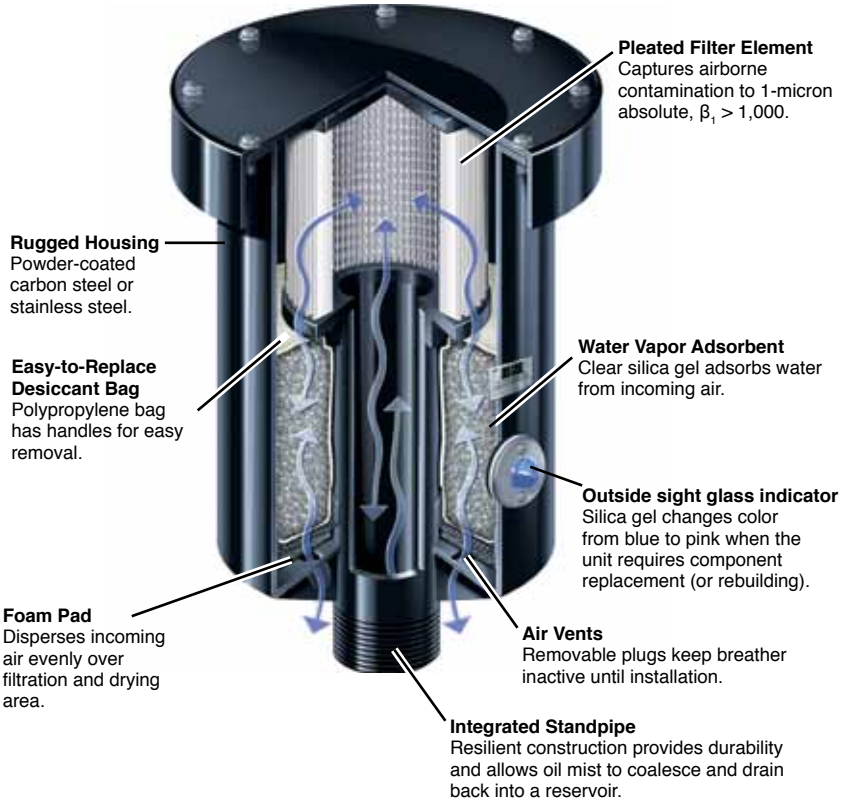
patent process underway

Model #	DC-RS-3	DC-RS-5	DC-RS-9	DC-RS-15	DC-RS-25	DC-RS-50	DC-RS-75	DC-RS-100	DC-RS-150	DC-RS-200
Height (in./mm.)	11.5/292	13.75/349	18.25/464	19.25/489	22.5/571	31.25/794	39.75/1010	31/787	36.75/933	42.75/1086
Width (in./mm.)	10.13/257.2	10.13/257.2	10.13/257.2	15.5/393.7	15.5/393.7	15.5/393.7	15.5/393.7	23.5/596.9	23.5/596.9	23.5/596.9
Approx. Dry Weight (lbs/kg)	16/7.26	20/9.07	27/12.25	49/22.23	64/29.03	100/45.36	144/65.32	190/86.18	253/114.76	315/142.88
Amount of Desiccant (lbs./kg)	3/1.36	5/2.27	9/4.08	15/6.80	25/11.34	50/22.68	75/34.02	100/45.36	150/68.04	200/90.72
Adsorption Capacity (gal/L)	0.14 / 0.54	0.24 / 0.9	0.43 / 1.62	0.71 / 2.7	1.19 / 4.5	2.38 / 9	3.57 / 13.5	4.75 / 18	7.13 / 27	9.51 / 36
Flow rate	85 @ 0.5 PSID 2407 Lpm	85 @ 0.5 PSID 2407 Lpm	80 @ 0.5 PSID 2265 Lpm	205 @ 0.5 PSID 5805 Lpm	140 @ 0.5 PSID 3964 Lpm	115 @ 0.5 PSID 3256 Lpm	80 @ 0.5 PSID 2265 Lpm	270 @ 0.5 PSID 7645 Lpm	250 @ 0.5 PSID 7079 Lpm	240 @ 0.5 PSID 6796 Lpm
Operating Temperature	-20 to 220ºF / -29 to 104ºC									
Connection Size (NPT)	2"	2"	2"	3"	3"	3"	3"	4"	4"	4"

How the Product Works

As wet, dirty air is drawn through the unit, the hygroscopic agent extracts moisture and a 1-micron microglass pleated filter element removes solid particulate.

When the air is expelled from the container, the foam pad cleans itself by releasing dirt back into the atmosphere. The hygroscopic agent is partially reactivated by the dry air passing back through, thereby permitting longer periods between replacing components (or rebuilding).



Parts and Accessories

Model #	Description
DC-RS-**X**-RK	Rebuildable Steel Breather Rebuild Kits
DC-RS-**X**-F1	Rebuildable Steel Breather Microglass Filter Elements
DC-RS-**X**-D1	Rebuildable Steel Breather Desiccant Bag Sets
DC-RS-**X**-SG1	Rebuildable Steel Breather Sight Glass Cartridges
DC-RS-**X**-P1	Rebuildable Steel Breather Foam Pad Inserts
DC-RS-**X**-G1	Rebuildable Steel Breather Gasket Seals

* For part codes containing **X**, substitute the appropriate RS model number. (Example: the part code for a sight glass cartridge for the DC-RS-150 would be DC-RS-**150**-SG1.)

Des-Case recommends use of a pressure/relief valve on any tank or storage system.

Steel Unit Adapters

There are several steel unit adapters available to meet your needs.

See page 17.

Rebuild Kit Components

Replacement Filter Element

Captures airborne contamination to 1-micron absolute.

Desiccant Bag Filter

Polypropylene bag has handles for easy removal and replacement.

Sight Glass Indicator

Silica gel changes color from blue to pink when the unit requires rebuilding.

Gasket

Seals breather at removable lid.

Foam Pad

Disperses incoming air evenly over filtration and drying areas.

a proactive approach to contamination control

Des-Case's fluid handling products offer economical solutions to offline filtration requirements. They are easily used in almost any application to filter fluids inside a reservoir. They can also be a means of transferring fluids cleanly from a drum to storage or an equipment reservoir.

To avoid cross-contamination of fluids, make sure there is a dedicated solution for every lubricant in use. Additionally, configure each fluid handling unit and equipment reservoir with quick disconnects. This can easily be done by customizing your solution on line and selecting adapter kits for each equipment type.

Des-Case® FlowGuard™ fluid handling systems incorporate smart technology to make fluid handling a simple task, requiring less equipment and labor while reducing system contamination.

Visit www.descase.com/flowguard to customize your own solution.

Lubrication Management and Storage

Lubricant Management System

Portable Filtration

Filter Cart

Drum Filter Cart

Top-Off Tank

Drum Topper

Permanently-Mounted Filtration

Panel Unit

Compact Panel Unit

Adapter Kits

Gearbox

Drum

Tote

Hydraulic

Over one million combinations … your customizable solution is just a click away!

descase.com/flowguard

Lubricant Management Systems

multi-function contamination control

FlowGuard™

The FlowGuard Lubricant Management System (LMS) combines filtration, storage, and breather technologies to keep your lubricants clean before they enter your equipment.

Our Lubricant Management System combines easy storage with solid contamination control practices. Sturdy, stackable tanks free up valuable floor space and features like dual-stage filtration, timers, quick disconnects, and desiccant breather filters help keep fluids clean and dry.

Let us help you design your solution. Contact us at (615) 672-8800.

Features	Benefits
Dual-stage filtration	Ensures optimal lubricant cleanliness
Customizable	Allows for use with many lubricant types
Self-contained pump and motor	Eliminates cross-contamination from using common pumps, motors or filters
Filter bypass	Facilitates easy transfer of clean oil
Stackable design	Stores up to 225 gallons (851 L) in less than 12 square feet (3.66 m^2)
Over a dozen options	Allows mixing/matching connections

Filter Carts

portable, offline filtration

Industry spends millions of dollars annually treating the negative effects of contamination caused by dirt and moisture. Contaminated lubricating oil and hydraulic fluid results in excess machine wear, production downtime, and repair costs.

Actively filtering lubricants can prevent contamination-related problems. Heavy duty, lots of options, exceptional value … our FlowGuard™ filter carts are uniquely yours. You can select from dozens of components with our online customizer at **www.descase.com/flowguard**.

FlowGuard™

Features	Benefits
Heavy duty cart with oil catch pan	Promotes safety and environmental cleanliness
Pneumatic wheels	Makes mobile filtration easier
12' (3.66 m^2) long hose assemblies	Allows greater flexibility of use
Filter bypass	Allows easy transfer of clean oil
Dual-stage filtration	Ensures optimal lubricant cleanliness
Industrial powder-coated paint	Provides durability
Customizable colors	Easily differentiate between assorted lubricants
Various hose end connections	Allows for adaptation to your specific applications

Our FlowGuard™ drum filter cart filters and transfers oil from a conveniently attachable, secured drum. Learn more at **www.descase.com/flowguard**.

Drum Toppers

compact, portable filtration

FlowGuard™

Contaminated lubricating oil and hydraulic fluid results in excess machine wear, production downtime, and costly repairs. Actively filtering lubricants can prevent contamination-related problems – and Des-Case allows you to take filtration to new places.

Compact, portable, and customized for your application, the FlowGuard™ drum topper is an option you can carry wherever you need to go.

Design your drum topper at **www.descase.com/flowguard**.

Features	Benefits
Compact design	Allows for easy storage and maintenance
Filter bypass	Allows easy transfer of clean oil
Dual-stage filtration	Ensures optimal lubricant cleanliness
Industrial powder-coated paint	Provides durability
Customizable colors	Makes it easy to differentiate between assorted lubricants by paint color selection
Various hose end connections	Allows for adaptation to your specific applications

Panel Units

fixed filtration

FlowGuard™

Whether you have an application that needs continuous filtration, or a maintenance location where you bring equipment to be filtered, our FlowGuard™ panel unit is a made-to-order solution which can be mounted where you need it most.

Customize your panel unit at **www.descase.com/flowguard**.

Features	Benefits
Filter bypass	Allows easy transfer of clean oil
Dual-stage filtration	Ensures optimal lubricant cleanliness
Industrial powder-coated paint	Provides durability
Customizable colors	Makes it easy to differentiate between assorted lubricants by paint color selection
Oil cooler and temperature gauge (optional)	Efficiently cool lubricants.

Our compact FlowGuard™ panel unit is 60% smaller than our standard panel unit. Learn more at **www.descase.com/flowguard**.

Adapter Kits

prohibit entry of dirt and moisture

Hydraulic Adapter Kit

Drum Adapter Kit

Gearbox Adapter Kit

Tote Adapter Kit

Easy-to-install FlowGuard™ adapter kits incorporate smart technology to make fluid handling a simple task, requiring less equipment and labor while reducing system contamination. Customize your adapter kit at **www.descase.com/flowguard**.

Top-Off Tank Kits

filtration & storage, together

FlowGuard™ top-off tank kits make filtration and storage easier, reducing contamination and the time it takes to get the job done.

Each kit includes a 13-gallon (49.2 L) polyethlene tank with marked fill level indicators and a built-in positive drain at the bottom. The kit also contains a DC-2 disposable standard breather and fill and drain ports with your choice of connections.

Top-off tank kits can be ordered with or without filter carts. Call customer support at (615) 672-8800 to find out if your existing filter cart is compatible.

Specialty Filtration

portable, offline filtration

Features
1.5” (38 mm) pump head
1.5-5 HP motor options in single and 3-phase
10’ (3 m) hose - intake and discharge
Self-priming
Engineered to operate dry
Self-adjusting spring-loaded wiper-blade technology
Capable of up to 45 GPM
Explosion proof (optional)
Dozens of optional features

FlowGuard™

While Des-Case’s FlowGuard standard line of fluid handling solutions can be easily customized and quickly delivered to meet a wide variety of applications, some situations demand even more. For those challenged with high flow, high viscosity, and/or explosion proof requirements, Des-Case specialty filtration units are more than up to the task.

As each of these applications presents a need for unique designs, we encourage you to contact Des-Case and speak to our highly trained technical support staff. They will be glad to discuss your specific situation and help engineer the right solution for your needs.

DES-CASE™