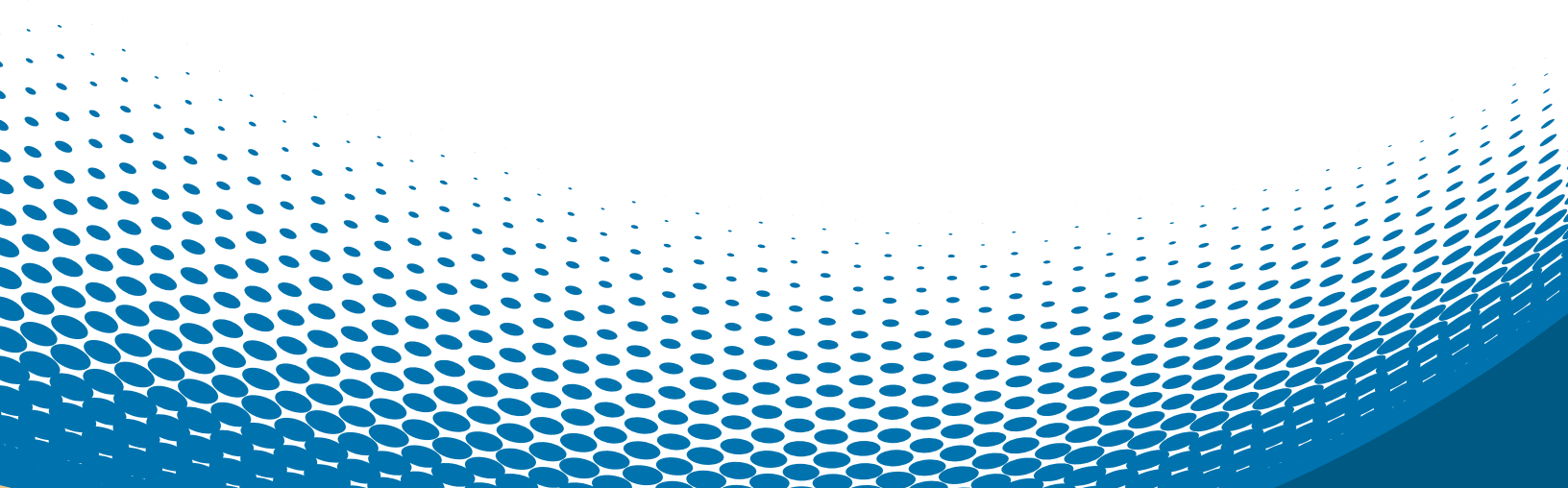




AHB Tooling & Machinery, Inc.
Complete Metalworking Solutions
Roseville Saginaw & Jackson, MI

ISO Certified
(800) 991-4225
www.ahbinc.com
customerservice@ahbinc.com

The background of this section features a stylized American flag.

Keeping contamination under control.®



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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Des-Case offers a full line of adaptable contamination control products.

Make us your definitive solution.

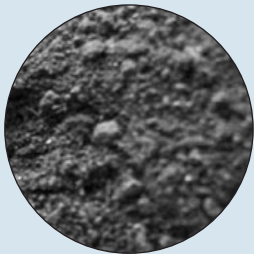
Contamination Control is Important

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.

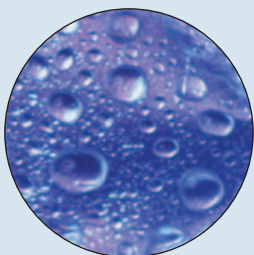
Reduced downtime, less oil usage, and lower repair and recycling costs all add up to significant savings when solid reliability practices are in place.

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 ingress and corrosion.

Des-Case products & services are the solution.

Des-Case products and services are designed to help companies achieve a new level of performance in maintenance and reliability. Combining unique services, a wide array of products, and solid support, Des-Case can help increase uptime, reduce costs, and gain greater efficiencies for your equipment.



Detection

Most people recognize that precision is an important part of a reliability driven maintenance program, but often struggle with how and where to start implementing changes. Des-Case's Lubrication TransformationSM Services are designed to help companies develop and deploy an executable plan to help them get to the next level. The Lubrication TransformationSM process can help you quickly identify the steps you need to take, help your team learn practical machinery lubrication, and perform cost-benefit analysis to assist you in your implementation.



Prevention

Getting clean, dry oil into machines (and keeping it that way) is one of the most fundamental elements of precision lubrication. Des-Case's lines of desiccant breathers, lubricant storage systems and oil transfer and filtration systems help plants meet or exceed the stringent contamination control targets necessary to achieve improved machine reliability and production uptime.



Removal

Filtration devices should be used to remove particles and water, further extending and 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, but are an integral component of proactive maintenance. Des-Case provides a wide array of customizable, quality filtration units, from small, portable devices to full-featured storage and vacuum dehydration systems.

The Bottom Line

Now, implementing lubrication best practices – including maintaining clean, dry lubricants—and gaining the profitability that goes 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 tools to get you there.

Breathers: Overview

Breathers:

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, contaminant ingress is greatly reduced.

Installation of Des-Case® breathers at critical ingress 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.

Breather Products

Des-Case invented the desiccant breather and continues to invent new solutions to keep moisture and contaminants out of an increasingly valuable asset – your oil.

<p>Standard Disposable Breathers</p> 	<p>Environment</p> <ul style="list-style-type: none"> • Intermittent operations • Transformers • Storage Tanks • Totes • Hydraulics
<p>Hybrid Breathers</p> 	<p>Environment</p> <ul style="list-style-type: none"> • Gearboxes and other low-flow applications • High-humidity applications
<p>Extreme Duty Breathers</p> 	<p>Environment</p> <ul style="list-style-type: none"> • Harsh environments • Mobile equipment • Nautical applications
<p>Rebuildable Steel Breathers</p> 	<p>Environment</p> <ul style="list-style-type: none"> • Hydraulic reservoir • Bulk oil storage • Diesel tank storage • Chemical/harsh environments • High-flow applications
<p>Non-Desiccant Breathers</p> 	<p>Environment</p> <ul style="list-style-type: none"> • Low humidity applications • Arid, high dust environments • Applications that create “oil misting”
<p>Customizable Desiccant Breathers</p> 	<p>Environment</p> <ul style="list-style-type: none"> • Intermittent operations • Transformers • Storage Tanks • Totes • Fumes

Standard Disposable Breathers



Environments

- Intermittent operations
- Transformers
- Storage Tanks
- Totes
- Hydraulics

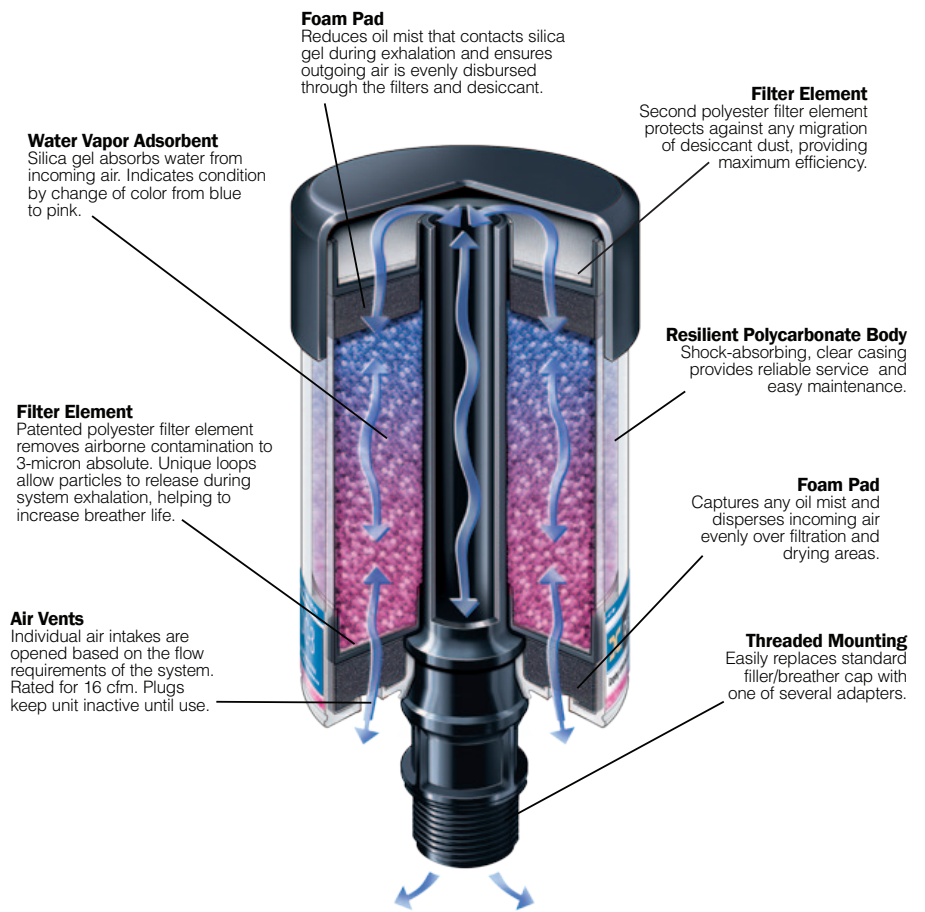
Every element of Des-Case's Standard Disposable Breathers have been designed to work in a wide variety of industries and applications. The breather's resilient, integrated nylon standpipe ensures that it can easily combat high vibration and volatile environments. Each breather is outfitted with a clear, rugged polycarbonate casing that allows easy view of color-indicating desiccant in order to monitor when the breather should be replaced.

With over 25 years of contamination control expertise, Des-Case breathers attack the source of contamination, making the products an affordable and cost effective solution to extend lubricant life and to increase equipment productivity.

How it Works

As wet contaminated air is drawn through the unit, multiple 3-micron polyester filter elements remove solid particulate and the color-indicating silica gel extracts moisture.

When air is expelled from the container, the top foam pad prevents oil mist from contacting the silica gel or entering the atmosphere.



Product Specifications	DC-BB	DC-1	DC-2	DC-3	DC-4
Unit Height (in/mm)	3.90"/99.06 mm	5.31"/134.9 mm	6.125" / 155.6 mm	8.125" / 206.4 mm	10.125" / 257.2 mm
Unit Diameter (width in/mm)	2.52"/64.01 mm	2.52"/64.01 mm	4" / 101.6 mm	4" / 101.6 mm	4" / 101.6 mm
Shipping Weight (unit/case) (lbs/kg)	0.31 lbs/2.14 lb 0.14 kg/0.97 kg	0.51 lbs/3.32 lbs 0.23 kg/1.51 kg	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 Desiccant	0.13 lbs/58.6 g	0.28 lbs/ 125.3 g	0.66 lbs / 0.30 kg	1.22 lbs. / 0.56 kg	1.88 lbs. / 0.84 kg
Max. Adsorption Capacity (fl oz/ml)	0.79 fl oz/23.3 ml	1.68 fl oz/49.7 ml	4 fl. oz. / 118.2 mL	7.45 fl. oz / 220.3 mL	11.3 fl. oz. / 333 mL
Max. Flow Rate (cfm)	4.55 @ 1 psid	4.16 @ 1 psid	16 @ 1 psid	16 @ 1 psid	16 @ 1 psid
Max. Flow Rate (lpm)	128.84	117.8	453	453	453
Filtration	3μ absolute (β ₃ ≥ 200)	3μ absolute (β ₃ ≥ 200)	3μ absolute (β ₃ ≥ 200)	3μ absolute (β ₃ ≥ 200)	3μ absolute (β ₃ ≥ 200)
Operating Temp. Range (°F)	-20°F to 200°F	-20°F to 200°F	-20°F to 200°F	-20°F to 200°F	-20°F to 200°F
Operating Temp. Range (°C)	-29°C to 93°C	-29°C to 93°C	-29°C to 93°C	-29°C to 93°C	-29°C to 93°C
Hydrophilic Agent	Silica gel	Silica gel	Silica gel	Silica gel	Silica gel
Filter Media	Polyester	Polyester	Polyester	Polyester	Polyester
Connection Size	3/8" Multi-Fit (NPT, BSPP, BSPT)	3/8" Multi-Fit (NPT, BSPP, BSPT)	1" Multi-Fit (NPT, BSPT, NPSM)	1" Multi-Fit (NPT, BSPT, NPSM)	1" Multi-Fit (NPT, BSPT, NPSM)
Body Material	Polycarbonate, Nylon, Polypropylene, Polyester, Polyurethane, Silica, Buna-N, PVC				

Hydroguard™ Hybrid Breathers



Environments

- Gearboxes and other low-flow applications
- High-humidity applications

From the expansion chamber system to the check valves, Des-Case Hydroguard™ hybrid breathers are innovatively designed to perform in many different environments.

The breather is outfitted with an expansion chamber to isolate lubricants from all levels of ambient humidity. A clear, rugged polycarbonate casing allows for viewing desiccant as it changes color, indicating that the breather should be replaced. Check valves ensure no excess pressure/vacuum builds.

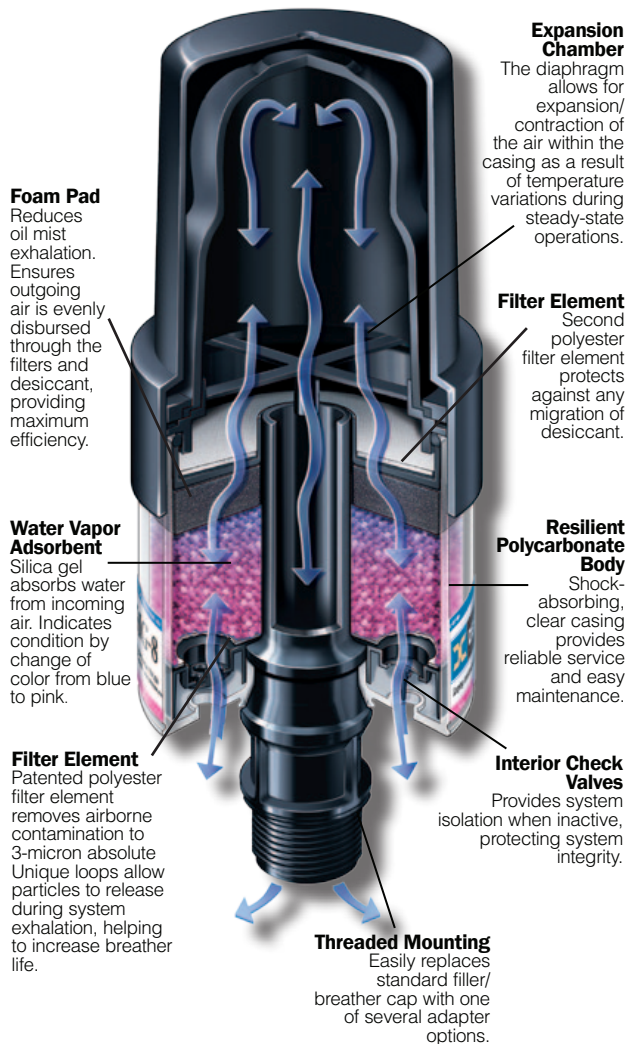
Des-Case hybrid breathers attack the source of contamination, allowing your equipment and lubricants to run longer and harder.

How it Works

As wet, contaminated air is drawn through the unit, multiple 3-micron polyester filter elements remove solid particulate and the color-indicating silica gel extracts moisture.

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

When air is expelled from the container, the top foam pad prevents oil mist from contacting silica gel or entering the atmosphere. The hydrophilic agent is partially reactivated by the dry air passing back through.



Product Specifications		DC-HG-1	DC-HG-8
Unit Height		7.22" / 183 mm	9.75" / 247.6 mm
Unit Diameter		2.52" / 64 mm	4.1" / 104.1 mm
Shipping Weight (unit/case)		0.58 lbs. / 3.75 lbs. 0.26 kg / 1.7 kg	1.81 lbs. / 11 lbs. 0.82 kg / 4.92 kg
Amount of Desiccant		0.28 lbs. / 125.1 g	0.65 lbs. / 0.24 kg
Max. Adsorption Capacity (fl. oz./mL)		1.68 fl. oz. / 49.6 mL	4.05 fl. oz. / 120 mL
Max. Flow Rate	(cfm)	1.41 @ 1 psid	2.5 @ 1 psid
	(lpm)	39.93	70.5
Filtration		3 μ absolute ($\beta_3 \geq 200$)	3 μ absolute ($\beta_3 \geq 200$)
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		3/8" Multi-fit (NPT, BSPP, BSPT)	1" Multi-fit (NPT, NPSM, BSPT)
Expansion Chamber Volume		1.935 in ³	15.66 in ³
Body Material		Polycarbonate, Nylon, Polypropylene, Polyester, Polyurethane, Buna-N, PVC	

Ventguard™ Hybrid Breathers



Environments

- Gearboxes and other low-flow applications
- High-humidity applications

VentGuard™ hybrid breathers virtually isolate equipment from surrounding particulate contamination.

The breather is outfitted with check valves to ensure no excess pressure/vacuum builds. A clear, rugged polycarbonate casing allows for viewing desiccant as it changes color, indicating that the breather should be replaced.

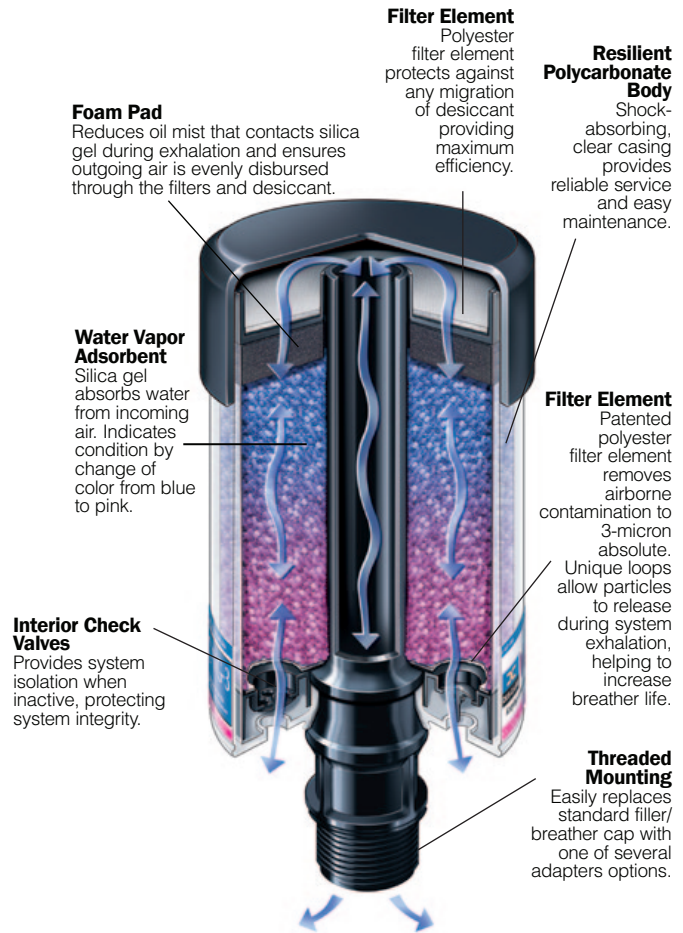
Des-Case hybrid breathers protect lubricant and equipment from contamination that can lead to production downtime and costly equipment repairs.

How it Works

As wet, contaminated air is drawn through the unit, multiple 3-micron polyester filter elements remove solid particulate and the color-indicating silica gel extracts moisture.

When air is expelled from the container, the top foam pad prevents oil mist from contacting silica gel or entering the atmosphere.

The breather is outfitted with a resilient nylon standpipe and a clear polycarbonate body which allows for easy monitoring of the high-contrast silica gel.



Product Specifications		DC-VG-BB	DC-VG-1	DC-VG-2	DC-VG-3	DC-VG-4
Unit Height		3.9" / 99.06 mm	5.31" / 135 mm	6.125" / 155.6 mm	8.125" / 206.4 mm	10.125" / 257.2 mm
Unit Diameter		2.52" / 64.01 mm	2.52" / 64 mm	4" / 101.6 mm	4" / 101.6 mm	4" / 101.6 mm
Shipping Weight (unit/case)		0.31 lbs. / 2.14 lbs 0.14 kg / 0.97 kg	0.52 lbs. / 3.37 lbs. 0.24 kg / 1.53 kg	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 Desiccant		0.13 lbs. / 58.6 g	0.28 lbs. / 125.1 g	0.66 lbs / 0.30 kg	1.22 lbs. / 0.56 kg	1.88 lbs. / 0.84 kg
Max.Adsorption Capacity		0.79 fl. oz. / 23.3 mL	1.68 fl. oz. / 49.6 mL	4 fl. oz. / 118.2 mL	7.45 fl. oz / 220.3 mL	11.3 fl. oz. / 333 mL
Max. Flow Rate	(cfm)	1.45 @ 1 psid	1.45 @ 1 psid	2.5 @ 1 psid	2.28 @ 1 psid	1.8 @ 1 psid
	(lpm)	41.06	41.06	70.5	64.5	50.9
Filtration		3µ absolute (β ₃ ≥ 200)	3µ absolute (β ₃ ≥ 200)	3µ absolute (β ₃ ≥ 200)	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	-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
Hydrophilic Agent		Silica gel	Silica gel	Silica gel	Silica gel	Silica gel
Filter Media		Polyester	Polyester	Polyester	Polyester	Polyester
Connection Size		3/8" Multi-fit (NPT, BSPP, BSPT)	3/8" Multi-fit (NPT, BSPP, BSPT)	1" Multi-fit (NPT, BSPT, NPSM)	1" Multi-fit (NPT, BSPT, NPSM)	1" Multi-fit (NPT, BSPT, NPSM)
Body Material		Polycarbonate, Nylon, Polypropylene, Polyester, Polyurethane, Buna-N, PVC				

Extreme Duty Breathers



Environments

- Harsh environments
- Mobile equipment
- Nautical applications

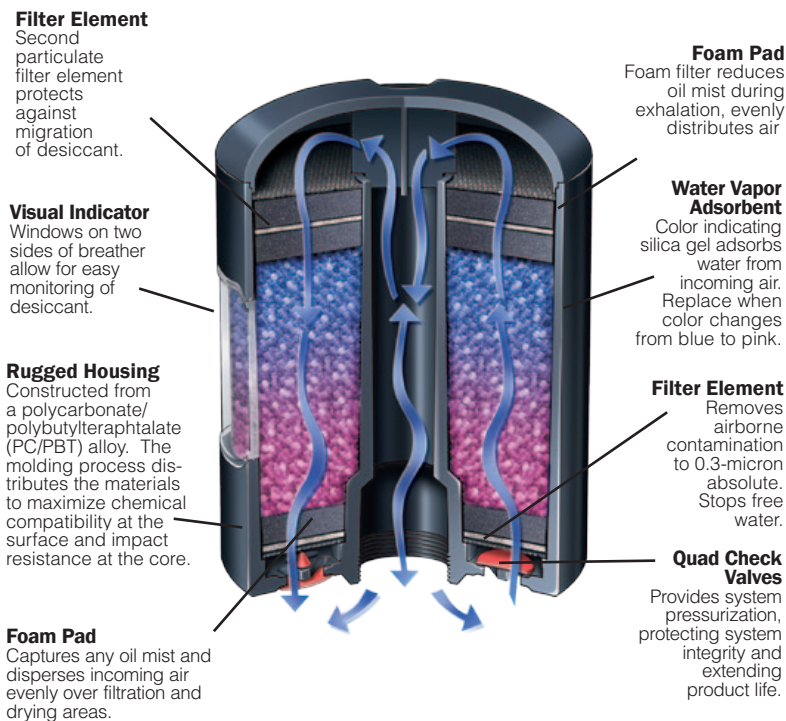
Extreme Duty Breathers are designed to take contamination control to an entirely new level of lubricant protection.

The breather is outfitted with a rugged housing and an integrated standpipe, allowing for decreased oil misting while offering improved vibration resistance. Visual indicator windows show the desiccant as it changes color, indicating that the breather should be replaced. Check valves keep out ambient humidity while the system is at rest.

An ideal solution for a variety of both stationary and mobile equipment applications, Des-Case's Extreme Duty Breather can combat the most unforgiving manufacturing environment.

How it Works

As wet, contaminated air is drawn through the unit, multiple 0.3 micron filter elements remove solid particulate and the color-indicating silica gel extracts moisture. When air is expelled from the container, the top foam pad prevents oil mist from contacting silica gel or entering the atmosphere. The hydrophilic agent is partially reactivated by the dry air passing back through.



Product Specifications		DC-XD-6
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 Desiccant		1.75 lbs. / 0.79 kg
Max. Adsorption Capacity		10.65 fl. oz. / 315 mL
Max. Flow Rate	(cfm)	16 @ 1 psid
	(lpm)	456
Filtration		0.3µ absolute ($\beta_{0.3} \geq 200$)
Operating Temp. Range		-40°F to 300°F -40°C to 148.89°C
Hydrophilic Agent		Silica gel
Filter Media		ePTFE
Connection Size		1 1/2" x 16 UN female thread
Body Material		Polycarbonate/ Polybutylteraphthalate (PC/PBT), Polytetrafluoroethylene, Aluminum, Polyurethane, Polycarbonate

Extreme Duty Breather Adapters

Adapter Part Number	Description	Application Connection Type/Size Number
DC-DSA-17	Connects Extreme Duty Breather to a 1 1/2" x 16 UN male threaded connection.	3/4" Threaded Female
DC-DSA-10	Connects Extreme Duty Breather to a 1 1/2" x 16 UN male threaded connection.	1" Threaded Female
DC-XDVA-12M	Vent Valve Adapter connects Extreme Duty Breather to a 1 1/2" x 16 UN male threaded connection.	3/4" Threaded Female
DC-XDVA-16M	Vent Valve Adapter connects Extreme Duty Breather to a 1 1/2" x 16 UN male threaded connection.	1" Threaded Female

Rebuildable Steel Breathers



Utilizing desiccant breathers can reduce the negative effects caused by contamination that result in millions of dollars spent annually. Contaminated lubricant and hydraulic fluid result in excess machine wear, production downtime, and repair costs.

Des-Case breathers reduce contamination, keeping dirt and water where it belongs—out of your equipment.

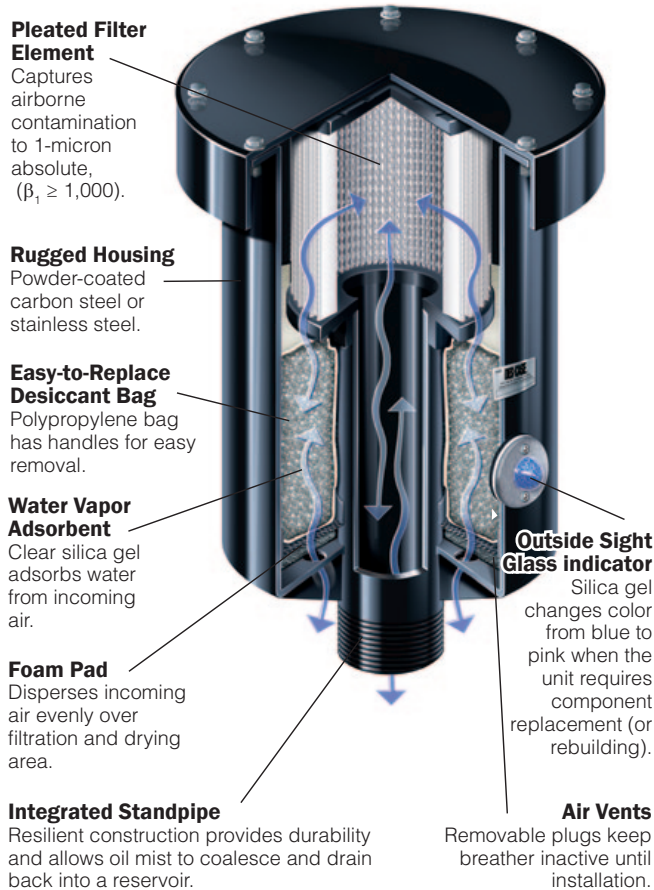
Environments

- Hydraulic reservoir
- Bulk oil storage
- Diesel tank storage
- Chemical/harsh environments
- High-flow applications

Product Specifications	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
Max. 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
Max. 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
Max. Operating Temp.	-20 to 220°F / -29 to 104°C									
Connection Size (NPT)	2"	2"	2"	3"	3"	3"	3"	4"	4"	4"
Body Material	Carbon steel, Polyurethane, Polypropylene, Microglass, Polycarbonate, Nomex, Buna-N (Silica gel as hydrophilic agent.)									

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

Rebuild Kits for Rebuildable Steel Breathers



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.

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.

Rebuild kits can be ordered in a variety of the below materials to meet chemical compatibility needs:

Steel Housings

Carbon Steel (Standard)
304 Stainless Steel
316 Stainless Steel

Gasket/Seal Material

Buna-N (Standard)
Viton
EPDM
SBR Rubber

Media

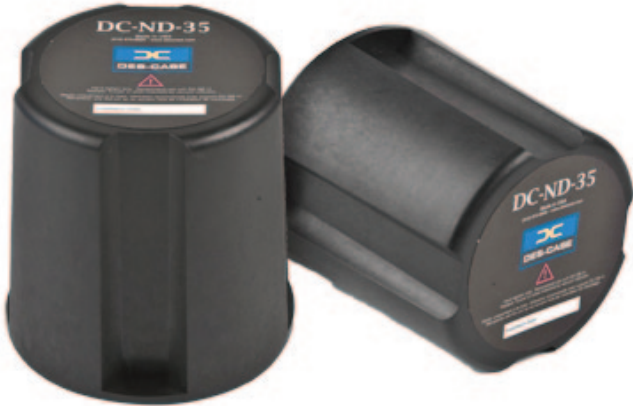
Silica Gel (Standard)
Activated Carbon
Molecular Sieve
Activated Alumina

Filter Material

Microglass/Polyurethane Filter (Standard)
Microglass/Plastisol Filter

Breathers: Non-Desiccant Breathers

Non-Desiccant Breathers: DC-ND-35



Benefits

- Low humidity applications
- Arid, high dust environments
- Applications that create “oil misting”

Des-Case Non-Desiccant Breathers, with oil coalescing filters, protect equipment and lubricant from harmful contamination. Contaminated lubricating oil and hydraulic fluid result in excess machine wear, production downtime, and higher repair costs.

Des-Case non-desiccant breathers are best suited for low humidity applications, arid/high-dust environments, and applications that create oil “misting”.

How it Works

As wet, contaminated air is drawn through the unit, the hydrophobic media repels water and the pleated oil coalescing particulate filter captures contamination, preventing both from entering the equipment.

Pleated Element

Pleated filter element protects against particulate contamination.

Rugged Exterior

Durable, shock absorbing housing.

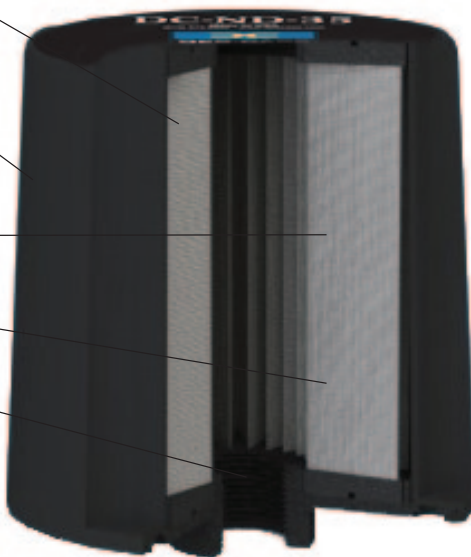
Hydrophobic Media

Hydrophobic media creates a water barrier.

Oil Coalescing

Threaded Mounting

Easily replaces standard filler/breather cap with adapter/reducer options.



Product Specifications	DC-ND-35
Unit Height (in/mm)	5 7/127 mm
Unit Diameter (width in/mm)	5 7/127 mm
Shipping Weight Dry Weight (unit/case)(lbs/kg)	1 lb/6 lbs 0.45 kg/1.38 kg
Amount of Desiccant	n/a
Max. Adsorption Capacity (gal/l)	n/a
Max. Flow Rate (cfm)	40 @ 1 psid
Max. Flow Rate (lpm)	1132
Filtration	0.3μ absolute ($\beta_{0.3} \geq 1000$)
Operating Temp. Range (°F)	-40 to 300
Operating Temp. Range (°C)	-40 to 149
Hydrophilic Agent	n/a
Filter Media	ePTFE
Connection Size (NPT)	1"
Body Material	Nylon 6/6 (33% glass filled), Plastisol, Polytetrafluoroethylene

Non-Desiccant Breathers: DC-ND-2



Benefits

- Low humidity applications
- Arid, high dust environments
- Applications that create “oil misting”

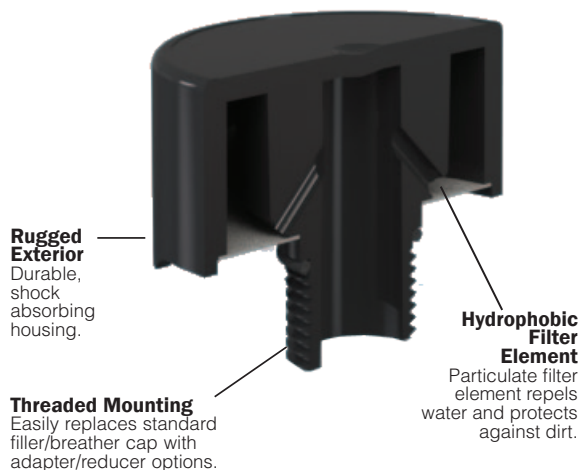
Industry spends millions of dollars annually treating the negative effects of contamination caused by wet, dirty air. Contaminated lubricating oil and hydraulic fluid result in excess machine wear, production downtime, and repair costs.

Des-Case non-desiccant breathers are best suited for low humidity applications, continuous operations with frequent washdowns, arid/high-dust environments, and low-flow applications.

Des-Case breathers attack the source of contamination, allowing your equipment and lubricants to run longer and harder.

How it Works

As wet, contaminated air is drawn through the unit, the hydrophobic media repels water and the oil coalescing particulate filter captures dirt, preventing both from entering the equipment.



Product Specifications		DC-ND-2
Unit Height		1.35" / 34.3 mm
Unit Diameter		1.80" / 45.7 mm
Shipping Weight per Unit		0.06 lbs. / 0.026 kg
Amount of Desiccant		n/a
Max. Adsorption Capacity		n/a
Max. Flow Rate	(cfm)	0.67 @ 1 psid
	(lpm)	19
Filtration		0.3 μ absolute ($\beta_{0.3} \geq 1000$)
Operating Temp. Range		-40°F to 300°F / -40°C to 149°C
Hydrophilic Agent		n/a
Filter Media		ePTFE
Connection Size (NPT)		3/8"
Body Material		Nylon 6/6 (33% glass-filled)

Customized Desiccant Breathers

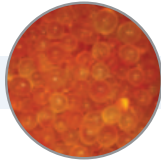


Des-Case's Customized Desiccant Breathers have been designed to work in a wide variety of industries. Des-Case offers several secondary agent media options that prevent fumes and other contaminants from entering equipment. The media in secondary agent breathers can be mixed to meet specific environmental and chemical needs.

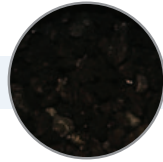
Each breather is outfitted with a clear, rugged polycarbonate casing and an integrated nylon standpipe that provides greater chemical compatibility and vibration resistance.

With over 25 years of contamination control expertise, Des-Case's innovative breathers are an affordable and cost effective solution to extend lubricant life and increase equipment productivity.

Customized Desiccant Options Include:



Orange Silica Gel



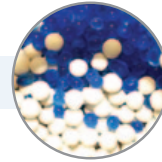
Activated Carbon



Molecular Sieve



Activated Alumina



Layered
(Blue Silica Gel
& Molecular Sieve)

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
Amount of Desiccant	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
	(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
Hydrophilic Agent	Silica Gel	Silica Gel	Silica Gel
Filter Media	Polyester	Polyester	Polyester
Connection Size	1" Multi-Fit (NPT, BSPT, NPSM)		
Body Material	Polycarbonate, Nylon, Polypropylene, Polyester, Polyurethane, Buna-N, PVC		

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 secondary agent. For example, DC-2SBNC25 is a DC-2 with 25% activated carbon.

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

Foam Pad

Reduces oil mist that contacts silica gel during exhalation and ensures outgoing air is evenly disbursed through the filters and desiccant.

Activated Carbon

Secondary adsorbent filters additional contaminants for your application. Can be added in 25% ratios.

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.

Air Vents

Individual air intakes are opened based on the flow requirements of the system. Rated for 16 cfm. Plugs keep unit inactive until use.

Filter Element

Second polyester filter element protects against any migration of desiccant dust, providing maximum efficiency.

Resilient Polycarbonate Body

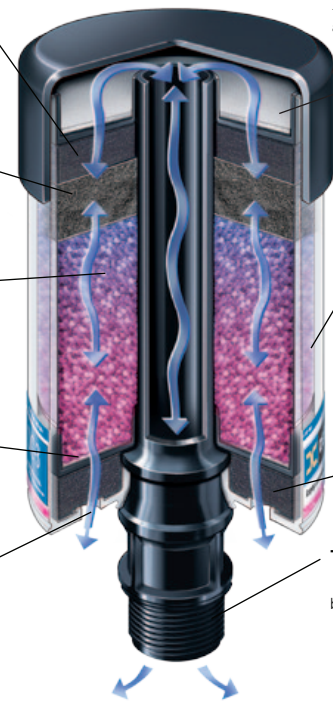
Shock-absorbing, clear casing provides reliable service and easy maintenance.

Foam Pad

Captures any oil mist and disperses incoming air evenly over filtration and drying areas.

Threaded Mounting

Easily replaces standard filler/breather cap with one of several adapters.



Example: 25% Activated Carbon Breather

Breathers: Breather Accessories & Adapters

Breather Accessories & Adapters



Des-Case's breather accessory and adapter products offer an optimum solution for various equipment connection needs. No matter the connection type and size, breather adapters provide a sealed system that will protect equipment from external moisture and harmful particle contamination. Choose from a variety of materials, connection port size, and thread requirements in order to properly outfit your equipment application.

Adapters & Accessories



DC-13-T

Breather Connection: Connects Standard Disposable (DC-2, DC-3, DC-4), Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8) breathers to 1" female NPT adapter

Equipment Connection Port/Size: 1" Male NPT

Breathers: Standard Disposable (DC-2, DC-3, DC-4), Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8)



DC-17-T

Breather Connection: Connects Standard Disposable (DC-2, DC-3, DC-4), Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8) breathers to 1" female NPT adapter

Equipment Connection Port/Size: 3/4" Female NPT

Breathers: Standard Disposable (DC-2, DC-3, DC-4), Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8)



DC-35

Breather Connection: Connects Standard Disposable (DC-BB, DC-1), Ventguard (DC-VG-BB, DC-VG-1), Hydroguard (DC-HG-1) breathers to 3/8" female NPT adapter

Equipment Connection Port/Size: 3/4" Female NPT

Breathers: Standard Disposable (DC-BB, DC-1), Ventguard (DC-VG-BB, DC-VG-1), Hydroguard (DC-HG-1)



DC-36

Breather Connection: Connects Standard Disposable (DC-BB, DC-1), Ventguard (DC-VG-BB, DC-VG-1), Hydroguard (DC-HG-1) breathers to 3/8" female NPT adapter

Equipment Connection Port/Size: 1" Female NPT

Breathers: Standard Disposable (DC-BB, DC-1), Ventguard (DC-VG-BB, DC-VG-1), Hydroguard (DC-HG-1)



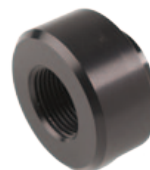
DC-37

Breather Connection: Connects Standard Disposable (DC-BB, DC-1), Ventguard (DC-VG-BB, DC-VG-1), Hydroguard (DC-HG-1) breathers to 3/8" female NPT adapter

Equipment Connection Port/Size: 1/2" Female NPT

Breathers: Standard Disposable (DC-BB, DC-1), Ventguard (DC-VG-BB, DC-VG-1), Hydroguard (DC-HG-1)

Bayonet Adapter



DC-15-T

Breather Connection: Connects Standard Disposable (DC-2, DC-3, DC-4), Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8) breathers to 1" female NPT adapter

Equipment Connection Port/Size: 1 1/2" Bayonet Style

Breathers: Standard Disposable (DC-2, DC-3, DC-4), Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8)

Flange Adapter



DC-12-T

Breather Connection: Connects Standard Disposable (DC-2, DC-3, DC-4), Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8) breathers to 1" female NPT adapter

Equipment Connection Port/Size:

6 bolt circular mounting (Ø 3.5")

Breathers: Standard Disposable (DC-2, DC-3, DC-4), Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8)

Vacuum Indicator Adapters



DC-13-T-VI

Breather Connection: Connects Standard Disposable (DC-2, DC-3, DC-4), Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8) breathers to 1" female NPT adapter, with single position vacuum indicator

Equipment Connection Port/Size: 1" Male NPT

Breathers: Standard Disposable (DC-2, DC-3, DC-4), Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8)



DC-SB-VI

Breather Connection: Connects Non-Desiccant Breather (DC-ND-35) to 1" male NPT adapter, with single position vacuum indicator

Equipment Connection Port/Size: 1" Female NPT

Breathers: Non-Desiccant Breather (DC-ND-35)



DC-OCM5-VI

Breather Connection: Connects Standard Disposable (DC-2, DC-3, DC-4), Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8) breathers to 1" female NPT adapter, with single position vacuum indicator and oil coalescing filter media

Equipment Connection Port/Size: 1" Male NPT

Breathers: Standard Disposable (DC-2, DC-3, DC-4), Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8)

Multiple Breather Adapters



DC-ME-2-T

DC-ME-3-T

DC-ME-4-T

Breather Connection: Connects two, three, or four Standard Disposable (DC-2, DC-3, DC-4), Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8) breathers to a 1" female NPT adapter

Equipment Connection Port/Size: 2" Female NPT

Breathers: Standard Disposable, Ventguard (DC-VG-2, DC-VG-3), Hydroguard (DC-HG-8)

Featured Above
DC-ME-3-T

Rebuildable Steel Adapters



DC-13-6C

Breather Connection: Connects Rebuildable Steel Breathers (DC-RS-3, DC-RS-5, and DC-RS-9) to 2" female NPT adapter

Equipment Connection Port/Size:

4 bolt circular mounting (Ø 6.0")

Breathers: Rebuildable Steel Breathers (DC-RS-3, DC-RS-5, DC-RS-9)

DC-13-10C

Breather Connection: Connects Rebuildable Steel Breathers (DC-RS-15, DC-RS-25, DC-RS-50, and DC-RS-75) to 3" female NPT adapter

Equipment Connection Port/Size:

4 bolt circular mounting (Ø 7.5")

Breathers: Rebuildable Steel Breathers (DC-RS-15, DC-RS-25, DC-RS-50, DC-RS-75)

DC-13-40C

Breather Connection: Connects Rebuildable Steel Breathers (DC-RS-100, DC-RS-150, and DC-RS-200) to 4" female NPT adapter

Equipment Connection Port/Size:

8 bolt circular mounting (Ø 9.0")

Breathers: Rebuildable Steel Breathers

(DC-RS-100, DC-RS-150, DC-RS-200)

Featured Above
DC-13-40C

Extreme Duty Breather Adapters



DC-XDVA-12M

Breather Connection: Vent Valve Adapter connects Extreme Duty Breather (DC-XD-6) to 1 1/2" x 16 UN male adapter

Equipment Connection Port/Size: 3/4" Female NPT

Breathers: Extreme Duty Breather (DC-XD-6)



DC-XDVA-16M

Breather Connection: Vent Valve Adapter connects Extreme Duty Breather (DC-XD-6) to 1 1/2" x 16 UN male adapter

Equipment Connection Port/Size: 1" Female NPT

Breathers: Extreme Duty Breather (DC-XD-6)



DC-DSA-17

Breather Connection: Connects Extreme Duty Breather (DC-XD-6) to 1 1/2" x 16 UN male adapter

Equipment Connection Port/Size: 3/4" Female NPT

Breathers: Extreme Duty Breather (DC-XD-6)



DC-DSA-10

Breather Connection: Connects Extreme Duty Breather (DC-XD-6) to 1 1/2" x 16 UN male adapter

Equipment Connection Port/Size: 1" Female NPT

Breathers: Extreme Duty Breather (DC-XD-6)

Fluid Handling Products

Fluid Handling a proactive approach to contamination control

Actively filtering lubricants can dramatically improve industrial equipment performance, preventing production downtime and high machinery repair costs. Taking a proactive approach to contamination control with Des-Case fluid handling products will ensure your equipment performs as it was designed to.

Des-Case provides a wide array of customizable, quality fluid handling solutions for every step of your contamination control program. The broad depth of products range from various sizes of offline filtration systems to ensure clean transfer of oil, dedicated filtration systems that perform around the clock, lubricant storage and handling systems, adapter kits for easy system connection, vacuum dehydration for water removal, and much more.

Portable Filtration



Portable filtration units are ideal tools to remediate contaminated systems, flush new equipment during commissioning, or periodically decontaminate systems that have inadequate on-board filtration to meet target cleanliness levels.

Dedicated Filtration



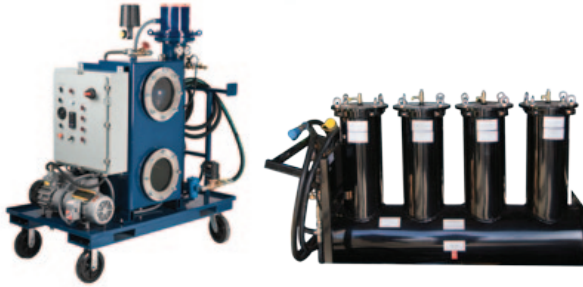
Whether you have an application that needs regular filtration, or a maintenance location where you bring equipment to be filtered, permanently-mounted filtration is usually the best choice for improving equipment reliability because it is continuous-duty, “always-on” filtration that cleans the oil and then keeps the oil clean.

Lubricant Storage & Filtration



Des-Case combines filtration, storage and breather technologies with its lubricant management systems to properly store and pre-filter lubricants. The simple, stackable design frees up valuable floor space in any lube room. Dedicated filtration per container ensures no cross-contamination of fluids, while disposable desiccant breathers prevent dirt and water ingress.

Water Removal



Actively filtering moisture from lubricants can prevent contamination-related problems such as oxidation, degradation, and corrosion. Des-Case provides solutions to remove both small and large quantities of free, emulsified and dissolved water to keep your lubricants clean and dry.

Adapter Kits



Adapter kits function as the connection between your application and filtration system. Pairing fluid handling filtration with breather protection allows for maximum system integrity – requiring less equipment and labor while reducing system contamination.

Filter Elements



Des-Case offers an array of filter elements to tackle water, particulate, varnish, sludge and acid removal in a wide variety of industrial applications.

FlowGuard™ Filter Cart Portable, offline filtration



Features

- Heavy duty cart with oil catch pan
- 12' long hose assemblies with various hose-end connections
- Filter bypass
- Dual-stage filtration
- Industrial powder-coated paint in customizable colors
- Various flow rates up to 10 gpm available in electric or pneumatic configurations

Benefits

- Easy transfer of clean oil
- Pneumatic wheels make mobile filtration easier

Performance

1. Operating Temperatures:
 - -40 °F to 150 °F (-40 °C to 66 °C) for standard unit with clear PVC hoses
 - -20°F to 212°F (-28 °C to 100 °C) for custom unit with hydraulic hoses and Viton or EPDM seals
2. Materials:
 - Frame: Carbon Steel
 - Paint: Industrial Powder Coat
 - Filter Heads: Aluminum
 - Fittings: Brass, and/or Zinc Plated Steel
 - Pumps: Aluminum/Steel
 - Hoses: Clear PVC with steel wire or hydraulic hose
3. Weight: Approximately 100-150 lbs (will vary depending on options selected)
4. Dimensions: 18.8" L x 21.5" W x 45.7" H
5. Viscosity Range: ISO 10-680 (55-4000 SUS at 100°F)

Applications

- Decontaminating systems
- Flushing new or repaired systems
- Dispensing new oil
- Pre-filtering new oil
- Evacuating used oil
- Reservoir top offs
- Flushing systems
- Collecting oil samples for analysis

Customize yours at
www.descase.com/flowguard

See pg **40** for filter element specifications

Top-Off Tank Kits Filtration and storage, together



Features

- 13-gallon (49.2 L) high density polyethylene tank
- Marked fill level indicators
- Built-in drain
- Fill and drain ports with your choice of connections
- DC-2 disposable standard desiccant breather
- Can be ordered with or without filter cart

FlowGuard™ Drum Filter Cart All-in-one convenience



The FlowGuard™ drum filter cart is a customizable, all-in-one cart that filters and transfers oil from a conveniently attachable, secured drum.

Features

- Rugged, powder-coated dolly
- Adjustable, heavy-duty straps with spring-loaded clips to secure drum
- 12' hose assemblies with various hose-end connections and hoses
- Filter bypass
- Dual-stage filtration
- Remote mounted power switch
- Removable plastic drip pan
- Weight: Approximately 175-225 lbs without drum (will vary depending on options selected)
- Dimensions: 30" L x 24.75" W x 57.85" H

TC Series (Filter Cart) High flow, high capacity, portable filtration



Features:

Canisters	Heavy-duty, industrial style with bolt-down lids and heavy gauge cylinder walls. These canisters can accept various size high-capacity microglass, depth, water removal and molecular sieve elements and can be changed very easily
Pump	Continuous-duty gear pump; 1-40 gpm flow rates available
Motor	Washdown, heavy duty
Switch	NEMA 4 industrial-duty
Viscosity Range	Up to ISO 680 (4000 SUS at 100°F)
Frame	Heavy-duty rectangular tubing
Lifting Eye Bolts	Allows for easy lifting and maneuverability
Hoses	Steel braid reinforced hydraulic hoses designed specifically for oil
Gauges	Pump pressure and differential pressure gauges
Wye Strainer	To protect the pump
Manual Bypass	To bypass filters during oil disposal
Wheels	16" solid rubber
Colors	Standard is black; customizable colors available at no extra charge



The TC Series can also be configured as a T-Stand for permanently-mounted, dedicated filtration.

See pg [28](#) for more information

See pg [41-44](#) for filter element

FlowGuard™ Drum Topper Compact, portable filtration



Features

- 45-50 lbs depending on options
- Filter bypass
- Dual-stage filtration
- Industrial powder-coated paint in customizable colors
- 6' hose assemblies with various hose-end connections
- 1 gpm for high viscosity oils and 3.5 for low viscosity oils in electric and pneumatic configurations

Benefits

- Easy transfer of clean oil
- Compact design allows for easy storage
- Sits securely atop an oil drum

Performance

1. Operating Temperatures:
 - -40 °F to 150 °F (-40 °C to 66 °C) for standard unit with clear PVC hoses
 - -20°F to 212°F (-28 °C to 100 °C) for custom unit with hydraulic hoses and Viton or EPDM seals
2. Materials:
 - Frame: Aluminum
 - Paint: Industrial Powder Coat
 - Filter Heads: Aluminum
 - Fittings: Brass, and/or Zinc Plated Steel
 - Pumps: Aluminum/Steel
 - Hoses: Clear PVC with steel wire or hydraulic hose
3. Weight: Approximately 45-50 lbs (will vary depending on options selected)
4. Dimensions: 23.9" L x 13" W x 14.9" H
5. Viscosity Range: ISO 10-680 (55-4000 SUS at 100°F)

Applications

- Decontaminating systems
- Flushing new or repaired systems
- Dispensing new oil
- Pre-filtering new oil
- Evacuating used oil
- Reservoir top offs
- Flushing systems
- Collecting oil samples for analysis

Customize yours at
www.descase.com/flowguard

See pg **40** for filter element specifications

TC Series (T-Stand) High flow, high capacity, dedicated filtration



Features:

Canisters	Heavy-duty, industrial style with bolt-down lids and heavy gauge cylinder walls. These canisters can accept various size high-capacity microglass, depth, water removal and molecular sieve elements and can be changed very easily
Pump	Continuous-duty gear pump; 1-40 gpm flow rates available
Motor	Washdown, heavy duty
Switch	NEMA 4 industrial-duty
Viscosity Range	Up to ISO 680 (4000 SUS at 100°F)
Frame	Heavy-duty rectangular tubing
Lifting Eye Bolts	Allows for easy lifting and maneuverability
Gauges	Pump pressure and differential pressure gauges
Wye Strainer	To protect the pump
Manual Bypass	To bypass filters during oil disposal — optional feature
Wheels	16" solid rubber
Colors	Standard is black; customizable colors available at no extra charge



The TC Series can also be configured as a Filter Cart for portable filtration.

See pg [26](#) for more information

See pg [42](#) for filter element specifications

FlowGuard™ Panel Unit Dedicated filtration



Features

- Filter bypass
- Dual-stage filtration
- Industrial powder-coated paint in customizable colors
- Various flow rates up to 10 gpm available in electric or pneumatic configurations
- Optional oil cooler and temperature gauge

Benefits

- Ideal for equipment that is difficult to access or for stationary maintenance locations where lubricants can be brought to be filtered

Performance

1. Operating Temperatures:
 - -40 °F to 150 °F (-40 °C to 66 °C) for standard unit with clear PVC hoses
 - -20°F to 212°F (-28 °C to 100 °C) for custom unit with hydraulic hoses and Viton or EPDM seals
2. Materials:
 - Frame: Carbon Steel
 - Paint: Industrial Powder Coat
 - Filter Heads: Aluminum
 - Fittings: Brass, and/or Zinc Plated Steel
 - Pumps: Aluminum/Steel
 - Piping Hose: Clear PVC with steel wire or hydraulic hose
3. Weight: Approximately 100-130 lbs (will vary depending on options selected)
4. Dimensions: 15.25" L x 23" W x 25.76" H
5. Viscosity Range: ISO 10-680 (55-4000 SUS at 100°F)

Applications

- Decontaminating systems
- Cooling systems
- Collecting oil samples for analysis



The FlowGuard™ Compact Panel Unit is 60% smaller than our standard panel unit. Learn more at www.descase.com/flowguard.

Customize yours at
www.descase.com/flowguard

See pg **40** for filter element specifications

Mobile Equipment - Engine Kits

Dedicated depth filtration where you need it most



Features

- Single & dual canister options
- Depth media for low ISO cleanliness levels
- Designed to prevent empty canisters at engine shut down
- 50 psi pressure relief valve

Benefits

- Dedicated depth filtration for constant contamination control
- Heavy duty, industrial designed canisters— ideal for harsh environments

How This System Works

The mobile equipment engine Kits work by taking small amounts of oil after the OEM full flow filter and directing it through the engine kit. Oil flows through the canisters at a set rate and is returned directly to the engine sump. The system is designed to prevent the canisters from being emptied when the equipment is shut down, while the small amount of oil directed through the engine kit at any given time ensures the engine is never starved of oil. A pressure relief valve is also installed to prevent accidental over pressuring of the canisters during cold cranking.



High pressure filter canisters, up to 300 psi, are also available for high pressure equipment and compressors.

See pg [41](#) for filter element specifications

Mobile Equipment - Hydraulic Kits

Dedicated depth filtration where you need it most



Features

- 0.5 gpm flow control valve
- 50 psi pressure relief valve
- Depth media for low ISO cleanliness levels

Benefits

- Dedicated depth filtration for constant contamination control
- Heavy duty, industrial designed canisters ideal for harsh environments

How This System Works

Oil flow will originate from a constant pressure point in the hydraulic system. A pressure compensated flow control valve is installed at the inlet of the filter canister to meter flow into the hydraulic system.

Oil will flow through the canister at the set rate and be returned to the reservoir. A pressure relief valve is also installed in the canister and returns to the reservoir to prevent accidental over pressuring of the canister.

See pg **41** for filter element specifications

Lubricant Management Systems

Multi-function contamination control



Features

- Dual-stage filtration
- Dedicated pump and motor per tank
- Filter bypass
- Stackable design
- Breather mounting kits to keep oil dry
- 75, 150 and 300 gallon steel tank options

Benefits

- Opens up valuable floor space
- Allows for use with many lubricant types
- Eliminates cross-contamination
- Easy to install

The Lubricant Management System (LMS) by Des-Case combines filtration and breather technologies to keep your lubricants clean and dry before they enter your equipment.

Combining easy storage with solid contamination control practices, the sturdy, stackable, and customizable pods free up valuable floor space. Features like dual-stage filtration, timers, quick disconnects, and desiccant breather filters make this all-in-one system ideal for any lube storage room.

See pg [40](#) for filter element specifications

LT Series Lubricant Management Systems

Simple, stackable
contamination control



The LT Series Lubricant Management System (LT-LMS) by Des-Case is a cost effective, simple way to keep your lubricants clean and dry before they enter your equipment.

Features

- Dedicated pump and motor per container
- Stackable design
- Desiccant breathers keep oil dry
- Sample ports
- Manual/gravity drain
- 12' hose assemblies with various hose-end connections
- Various flow rates up to 10 gpm available in electric and pneumatic configurations
- 75, 150 and 300 gallon steel tank options
- 80, 120, 180 and 240 high density polyethylene tank options

Benefits

- Eliminates cross-contamination
- Allows for many lubricant types
- Cost effective, simple way to store and filter oil
- Easy to install

See pg **40** for filter element specifications

VAC Series Vacuum Dehydrator

High-quality, rugged filtration for industrial oils



Low Maintenance System!

- No vacuum tower maintenance needed
- No replacement of coalescing filter elements needed
- Low maintenance pump utilized
- No water supply needed
- Electricity only

Typical Applications

- Purifying turbine lube oil systems
- Filtering hydraulic systems
- Almost any industrial equipment containing oil

Benefits

- Heavy duty
- Removes 100% of free and emulsified water, and at least 90% of dissolved water

Typical Industries Served

- Power generation/distribution
- Mining
- Paper manufacturing
- Food manufacturing
- Chemical manufacturing
- Municipal water treatment plants
- Auto manufacturing
- Steel rolling mills
- General industry

VAC Series Vacuum Dehydrator

High-quality, rugged filtration for industrial oils

Permanent Dispersion Media	Located in the vacuum tower to maximize water extraction rates and eliminate the need for costly replacement of coalescing filter elements, while enabling the system to operate effectively on high viscosity gear oils
Vacuum Pump	High quality, specialty pump pulls deeper vacuum, higher CFM and requires less maintenance than other conventional vacuum pumps
Variable Frequency Drive	Enables operator to dial in the optimal flow rate and enhances the system's overall performance during cold start-ups, on higher viscosity oils, or when a restricted inlet condition exists
Single Utility	Requires electric service only – not a chilled water supply
System View Windows	Enables operator to observe system operation and performance
Filter Indicator Light	Positive indication when the particulate removal filter element is plugged and needs to be changed
Flow Rates	3, 5, 10, 15, 20, 30, 50 gpm
On-Site Training	All prices include 1-day on-site training, installation and a leave-behind manual and video
Additional Options	Transformer oil filtration option available, low and high vacuum options, various mounts for portability, rental and leasing options

See pg [42](#) for filter element specifications

HiVAC Series Vacuum Dehydration Systems

Specifically designed for transformer oils



Low Maintenance System!

- No vacuum tower maintenance needed
- No replacement of coalesce filter elements needed
- Low maintenance pump utilized
- No water supply needed
- Electricity only

Typical Applications

- Specifically designed for transformer oils and energized equipment

Benefits

- Heavy duty
- Removes 100% of free gases and at least 90% of dissolved gases

Typical Industries Served

- Power generation/distribution
- Mining
- Paper manufacturing
- Food manufacturing
- Chemical manufacturing
- Municipal water treatment plants
- Auto manufacturing
- Steel rolling mills
- General industry

HiVAC Series Vacuum Dehydration Systems

Specifically designed for transformer oils

Designed for Energized Equipment	10 gpm and lower is designed to be safely used on energized transformers
Vacuum Pump	High quality, specialty pump pulls deeper vacuum (<.75torr), higher CFM and requires less maintenance than other conventional vacuum pumps
Permanent Dispersion Media	Located in the vacuum tower to maximize water extraction rates and eliminate the need for costly replacement of coalescing filter elements
Variable Frequency Drive	Enables operator to dial in the optimal flow rate and enhances the system's overall performance during cold start-ups or on small transformers
System View Windows	Enables operator to observe system operation and performance
Filter Indicator Light	Positive indication when the particulate removal filter element is plugged and needs to be changed
Flow Rates	3, 5, 10, 15, 20, 30, gpm (only use 10 gpm or less for energized equipment)
On-Site Training	All prices include 1-day on-site training, installation and a leave-behind manual and video.
Additional Options	Automatic foam control, optional moisture indicator, connection to customers SCADA system, optional fullers earth vessels

See pg [42](#) for filter element specifications

Point-of-Delivery Water Separators For use on diesel fuel and light oils



Features

- Pressure gauge (0-100 psi)
- 1" NPT water sight glass
- Industrial carbon steel construction
- Industrial powder-coated paint

Benefits

- Utilizes a coalescing chamber instead of costly coalescing elements that need replacing
- Can also be configured on a TC Series cart or T-Stand
- Provides optimal removal of free and emulsified water, while simultaneously removing contaminants with depth filtration
- Water removal efficiency of 99.9%

Des-Case point-of-delivery water separators effectively remove large quantities of free and emulsified water using centrifugal force and absorption, while simultaneously removing contaminants with depth filtration.

Water separators are ideal for Group I base oils. For Group II and Group III base oils or dissolved water removal solutions, see pages 34-37 for vacuum dehydrators.

See pg [41](#) for filter element specifications

Adapter Kits The connection between application and filtration system



Hydraulic Adapter



Drum Adapter



Tote Adapter



Gearbox Adapter

Features

- Replaceable breather with color-indicating desiccant
- Single-position vacuum indicator (Hydraulic and Gearbox Adapter Kits)
- Sample ports
- Quick connect plugs in various sizes
- Available in customizable colors to match your filtration system

Benefits

- Prohibits entry of dirt and moisture
- Allows for easy equipment adaptation and quick connection to a filtration system

To further enhance your lubrication standards, we recommend using Des-Case adapter kits. These kits incorporate quick connect fittings, desiccant breather filters and vacuum indicators, along with other customizable features, to function as the connection between your application and filtration system. Pairing fluid handling filtration with breather protection allows for maximum system integrity – requiring less equipment and labor while reducing system contamination.

FlowGuard™ Spin-On Filters

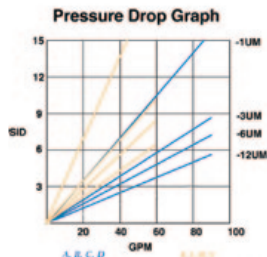


Features

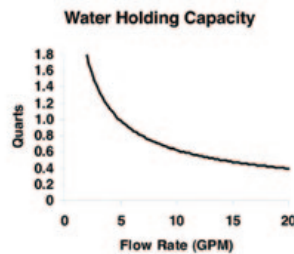
- Maximum working pressure of 200 psi
- Typical burst pressure of 290 psi
- Element collapse at 100 psid
- Buna-N nitrile seals in two sizes (Viton and EPDM also available)
- 1.5" - 16 UN mounting thread
- Spin-on design is compatible with Des-Case FlowGuard™ filtration products and lubricant storage systems, along with many other popular filtration products

Benefits

- Synthetic media offers widest chemical compatibility
- Steel wire construction maintains proper shape while lowering restriction
- Epoxy potting and seam seal allow for broad application use



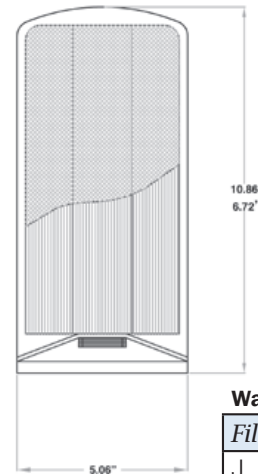
Pressure drops calculated with 150 SUS, 0.9 SG fluid. Pressure drop varies directly with absolute viscosity.



Performance will vary based on flow rate, viscosity, and water concentration.

Particulate Removal Filters

Absolute Filter Rating	Part #	µm Rating for Beta Value							Dirt Holding Capacity lbs. (g)
		ISO 4572			ISO 16889				
		$\beta_x > 200$	$\beta_x > 2$	$\beta_x > 10$	$\beta_x > 75$	$\beta_x > 100$	$\beta_x > 200$	$\beta_x > 1000$	
3µ	FC-AF	3	<2	<2	3.1	3.3	3.8	5	0.15 (68.03)
6µ	FC-BF	6	2.1	3.4	5	5.2	5.7	7	0.16 (72.57)
12µ	FC-CF	12	3.2	5.5	8.3	8.7	9.7	12	0.13 (58.96)
25µ	FC-DF	25	7.2	11	15.8	16.5	18.2	22	0.18 (81.64)
3µ	FC-KF	3	<2	<2	3.1	3.3	3.8	5	0.082 (37.42)
6µ	FC-LF	6	2.1	3.4	5	5.2	5.7	7	0.088 (39.91)
12µ	FC-MF	12	3.2	5.5	8.3	8.7	9.7	12	0.071 (32.73)
25µ	FC-NF	25	7.2	11	15.8	16.5	18.2	22	0.099 (44.90)



Water Removal Filters

Filter	Part #
J	FC-JF
W	FC-WF

Wound Cellulose Depth Media Filter Elements



Features

- Axial flow between the layers of the media
- Achieves particle removal below 1 micron
- Performance to $\beta < 3(c) = 1000$ (per ISO16889)
- High dirt holding capacity

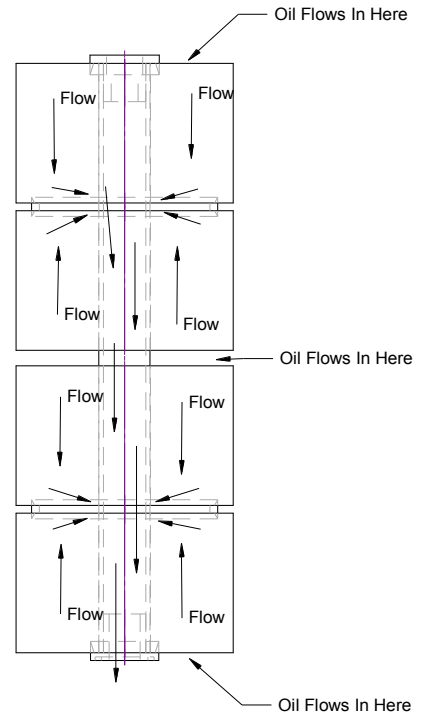
Benefits

- Works best slow
- Helps to clean the oil— not just screen the oil— by dislodging contaminants

The Des-Case wound cellulose depth media provides high efficiency filtration at very low ISO cleanliness levels.

Specifications

Media	Wound cellulose
End Cap Seals	Positive, deep penetrating seal to prevent oil from bypassing media— made of PPE for superior chemical resistance
Gaskets and O-Rings	Buna-N standard; viton optional
Micron Rating	3, 5, 10
Holds up to 10lbs of dirt per element	
Absorbs up to 1 gallon of water per element	
Can maintain moisture to levels below 50ppm	
<i>Interchangeable with all industry standard size depth media filter elements</i>	

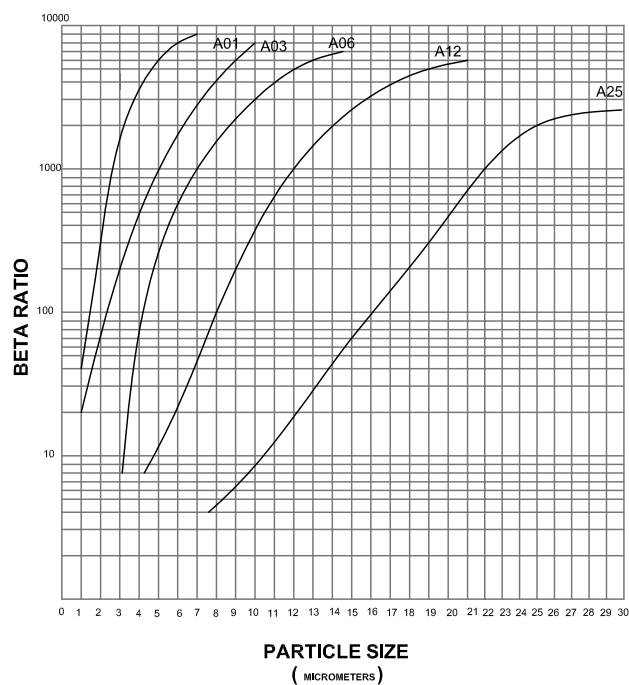


Full Flow Filter Elements



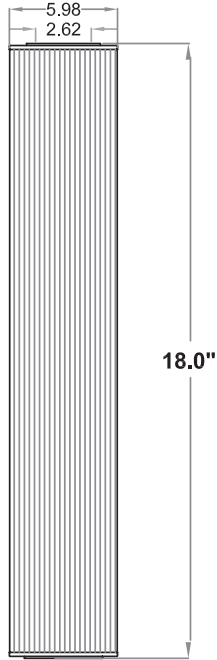
Features

- Media Type: microglass epoxy coated wire support
- Endcap & Center Tube: corrosion protected steel
- Flow Direction: outside In
- Gasket Material: nitrile
- Collapse Pressure Rating: 125 psid
- Temperature Range: Nitrile -45°F to 225°F
- Replacement Pressure: 25 psid



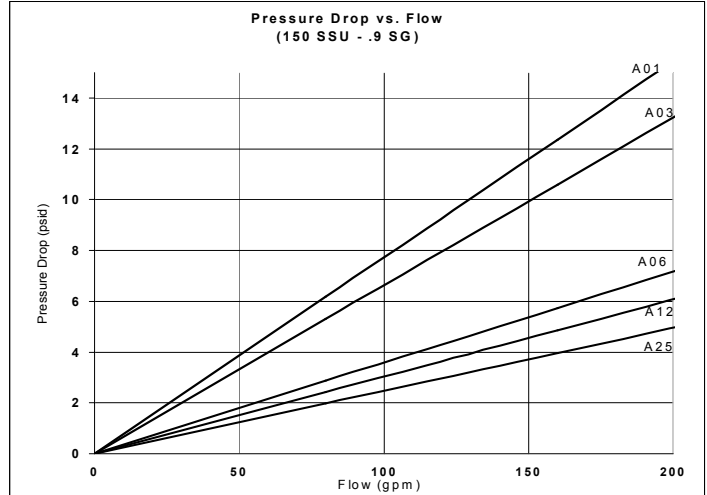
Specifications	Particulate & Water Removal	WRMS	ARAA	ARSX
Maximum Differential Pressure		150 psi		
Maximum Flow Rate		150 gpm		
Maximum Viscosity		ISO 1000		
Fluid Compatibilities	Synthetic fluids, water glycols, water/oil emulsions, petroleum-based fluids, high water content fluids	Transformer insulating fluids	Transformer insulating fluids	Phosphate ester fluids, synthetic fluids, petroleum-based fluids

Full Flow Filter Element—6" x 18" Size

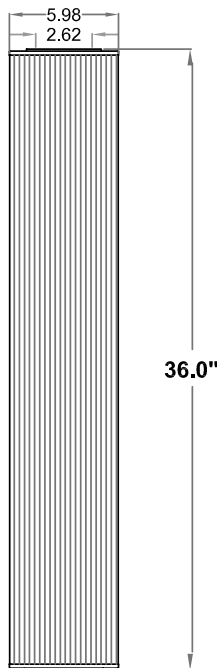


- Media Area: 3805 in²
- Weight: 6 lbs

Micron	Apparent 6x18
01	262
03	316
06	445
12	525
25	552

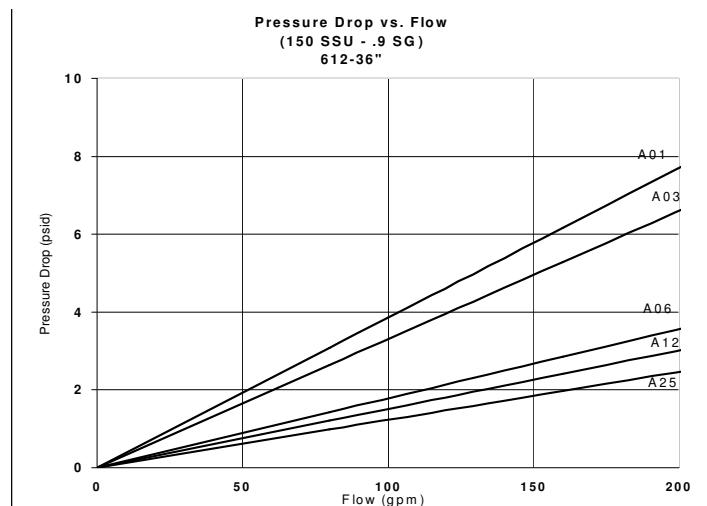


Full Flow Filter Element—6" x 36" Size



- Media Area: 7668 in²
- Weight: 12.5 lbs

Micron	Apparent 6x36
01	527
03	634
06	893
12	1054
25	1107



Bag Filters



Features

- Polypropylene (PPE), polyester felt, or Nomex® felt
- Singed or glazed surface to prevent fabric fibers from entering media

Benefits

- High solids retention capacity
- Compatible with most fluids

Bag filters provide good basic filtration and have a high solids retention capacity.

These elements are excellent pre-filtration solutions to catch large, harmful particulates that would otherwise damage or quickly plug primary filters.

Polypropylene (PPE) or Polyester Felt Bag Filters

- Maximum temperature capacity of 275° F (135° C)
- Compatible with most fluids except those that are strongly alkaline or acidic
- Efficiency of 85% at stated micron rating

Nomex® Felt Bag Filters

- Maximum temperature capacity of 400° F (204° C)
- Compatible with most fluids except those that are strongly alkaline or acidic
- Efficiency of 85% at stated micron rating

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 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.

Lubrication TransformationSM Services

Des-Case's Lubrication TransformationSM Services are designed to not only show you the path from where you are to where you want to be, they can give you the tools to get it done.



The process can start in any one of five distinct areas:

Educate

Practical machinery lubrication
ICML certification
Variety of on-demand education

Quantify

Benchmark assessments
Gap analysis
Cost-benefit analysis

Design

Lubricant storage and handling
Equipment modifications
Contamination control
Oil sampling & analysis
Lubrication PM optimization

Measure

Routine inspection services
Troubleshooting
Evaluation for continuous improvement opportunities

Execute

Storage and handling setup
Turn-key filtration installation
Reclamation and custom filtration

Educate:

Des-Case Practical Machinery Lubrication Courses



Des-Case now offers an ICML-based educational course designed to give you the theory and the practical tools you can use to transform your lubrication program

Instructors with decades of in-field experience provide “how-to” guides for each major area of lubrication best practices. You will complete the course knowing why the suggested changes work and how you can implement them in your organization.

Package that together with hands-on labs and demonstrations—and evening entertainment featuring a hit songwriter—and you’ll have a great experience while building your knowledge of practical machinery lubrication.

What the Course Delivers

- Understand how lubricants work, how to create lubricant specifications for different types of machines, and how to manage their condition.
- Learn how to select a grease, the most effective application method, and how to determine the optimum application amount and frequency.
- Learn how to identify, prevent, and remediate lubricant contamination.
- Learn how to design a world-class lubricant storage and handling system.
- Understand the key elements and uses of oil analysis.
- Learn how to modify equipment for lubrication, inspection, oil analysis, and contamination control.
- Learn how to identify gaps in your program and create a game plan for your next steps.
- Opportunity to certify for Machinery Lubrication Technician (MLT) or Machinery Lubricant Analyst (MLA) level I. More details at www.lubecouncil.org.

Day 1

- Role of Lubrication Machine Reliability
- Lubrication Theory and Fundamentals
- Lubricant Failure Modes
- Lubricating Oil Application Methods

Day 2

- Grease Application Methods
- Lubricant Selection and Lubrication Considerations
- Lubricant Contamination Control

Day 3

- Storage and Handling of New Lubricants
- Used Oil Analysis
- Oil Sampling Methods
- Equipment Modifications
- Lubrication Program Gap Analysis

Additional benefits:

- Post-class follow-up with your instructor
- ICML certification testing opportunity
- 100% money-back guarantee
- Over \$500 of product samples to get you started in your program

Quantify & Design: *Your Lubrication TransformationSM Program*

Des-Case offers several approaches to help you review the current state of your program and develop plans for moving forward.



Using this option, you are able to use Des-Case evaluation tools yourself to gain a better understanding of how you measure up against world-class lubrication programs. The materials give you specific areas to focus on, an estimation of current losses, and provide general recommendations for improvements. This option also includes a review of the results with Des-Case's technical team to help address any questions you may have along with implementation support.



This option is designed to support one plant, and includes a three-day site visit by Des-Case personnel to assist you in your assessment. Specific recommendations are then made for your particular circumstances. The final report includes photos of your equipment, detailed gap analysis and return on investment prioritization, a detailed project plan and implementation support.



This is most often a combination of the above, with specific types of plants first being assessed, and then applying those findings across the enterprise.

Lubrication TransformationSM Services

	<i>Assessment Lite</i>	<i>Full Assessment</i>	<i>Enterprise Assessment</i>
Benchmark Survey	Benchmark score in each of the ten key categories of precision lubrication based on a 50-question survey.	Benchmark score in each of the ten key categories of lubrication best practices based on 50-question survey. On-site personnel can help you complete this survey.	Benchmark scores in each of the ten key categories of lubrication best practices based on 50-question survey for each plant, plus a ranking of each plant relative to others in the same business unit.
Gap Analysis and Category Specific Recommendations	General recommendations for best practices in each of the ten categories of precision lubrication.	Customized recommendations for best practices in each of the ten categories of precision lubrication, including a plant-specific gap analysis.	Customized recommendations for best practices in each of the ten categories of precision lubrication, including a plant-specific gap analysis based on a representative sample of plants included in the enterprise assessment (lower quartile, average, and upper quartile performers).
Business Case Analysis	Estimation of current losses due to substandard lubrication practices.	Estimation of current losses due to substandard lubrication practices and investment analysis detailing return on investment for implementing specific action items.	Estimation of current losses due to substandard lubrication practices for each plant and business unit-wide investment analysis detailing return on investment for implementing recommended action items.
Project Plan and Action Item List	General list of recommended action items based on specific responses to the benchmark survey.	Specific list of recommended action items based on response to the benchmark survey, plus a detailed project plan including action items, timelines and implementation support.	List of recommended action items for each plants, based on response to the benchmark survey, plus a detailed project plan including action items, timelines, and implementation support.
Post-Survey Wrap Up and Support	Two hour teleconference with Des-Case project planner, plus ongoing implementation support.	Four hour post-survey report and strategy session, ongoing implementation support and monthly project review sessions via teleconference.	Four-hour post-survey business unit-wide report and strategy session, ongoing implementation support and monthly project review sessions via teleconference.

Lubrication



contact us

Thousands of satisfied Des-Case product users around the world enjoy an outstanding record of trouble-free service and quality product support. If you have questions regarding Des-Case products, one of our trained professionals will assist you in getting the information you need quickly.

For assistance, please call (800) 991-4225 or customerservice@ahbinc.com

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