PURIFICATION

6000 PSI STAINLESS STEEL CARTRIDGES & STAINLESS STEEL PURIFICATION SYSTEMS

No more corrosion problems!

High pressure air to be used for breathing purposes can be hazardous unless it is purified. Air produced by a high pressure air compressor is contaminated by moisture, oil mist, solid particles and often times, carbon monoxide and other noxious gases. Air purification systems offer a safe, dependable and reliable means of purifying high-pressure compressed air to a level of purity suitable for human respiration. Per NFPA, CGA & OSHA standards.

ALL Purification Systems ONLY filter moisture & carbon monoxide. ***Purifiers are only designed to remove contaminant gases by which the cartridge is designed.***

We carry Stainless Steel Purification Cartridges, Stainless Steel Purification Systems and Stainless Steel Chambers to meet your specifications. Call us for your Purification System needs.

HOW THE SYSTEM WORKS:

STAGE#1: Condensable Removal – Mechanical Cartridge Holder

MECHANICAL SEPARATORS - PARTS

90-SS-PLUG
Chamber Top Assy.

90-SS-14
SS Chamber (No ends) 14" Mechanical Separator

90-SS-BMECHK
Bottom Base, Mech. Sep.

6565
Spring for Mech. Sep.

6558
Separator Top Cap

20-M394K
Mechanical Separator Element Kit

6557
Separator Bottom Cap

6560
Brass Pipe 3/8" X 4"

6559
Vent Tube for Mechanical Separator

- Particles and droplets (water and oil) are squeezed from the gas.
- Fluid is drained off periodically via a manual or automatic valve.
- Relief Valve protects against over-pressurization/Final Stage of Compression.
- Check Valve prevents back flow of gas after leaving mechanical filter.

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HOW THE SYSTEM WORKS (CONT'D):

STAGE#2: Vapor Removal – Absorbent Cartridge Holder

- Gaseous contaminants (such as water, hydrocarbons, solvents, CO and CO2) are isolated and contained on various absorbents, desiccants and catalysts.
- Particles generated by absorbent chemicals, which may escape to the gas stream, are captured by barriers built into the cartridges.

STAGE#3: Discharge

- Final capture of fine particles is made by a sub-micron filter.
- Priority valve maintains constant pressure within the filters to prevent contamination of filter system. (Decompression of gas permits trapped particles to float beyond their chemical restraint.)
- Gauge indicates internal pressure.

Air enters mechanical separator. While in the chamber, particulate matter, oil and water droplets are removed.

The next 2 chambers contain desiccant cartridges, which absorb the vaporous oil and water vapor.

The last chamber cartridge absorbs oil and water vapor, eliminates noxious odors by activated carbon. Then converts LOW AMOUNTS of carbon monoxide to breathable levels of carbon dioxide by means of a catalyst.

If your Aluminum Mechanical Separator is over 10 years old, it is susceptible to load cracking and is in danger of volatile rupture.

The chambers are stainless steel material rated for 6000 PSI working pressure.

CO BEATS OXYGEN TO THE BLOOD

Carbon Monoxide's toxicity is a result of its affinity for hemoglobin, a blood protein that carries oxygen to the body's cells. CO binds to the hemoglobin 200 times more readily than oxygen, interfering with the blood's ability to provide sufficient fuel to the cells.

When CO binds with hemoglobin, it forms a compound called carboxyhemoglobin. When blood levels of this compound rise initially, the body reacts by increasing blood flow to the heart and the brain to compensate for the decreased oxygen levels. As exposure continues, it can lead to respiratory depression, irregular heartbeat and damage to the heart muscle. Eventually, the respiratory system fails, or the amount of oxygen in the blood decreases to the point where it cannot support life.

CO poisoning victims may also experience neurological problems that arise after an apparent recovery, including depression, disorientation, hearing or vision loss, gait disturbances, epilepsy, tremors or speech disturbances.

People rely too much on electronic devices for Air Purification. The most effective device to use is a CO Monitor, which is now required, by NFPA-1901 & CGA.

STAINLESS STEEL CHAMBERS

STAINLESS STEEL PURIFICATION CHAMBERS

No more corrosion problems!

We have Stainless Steel Purification Chambers. In the industry there are aluminum and steel chambers that become pitted over time caused by oxidation taking place from moisture and chemical reaction within the purifier. Aluminum and steel chambers also have a problem when dissimilar metals are present such as brass and tin from cartridges and the steel fittings connected to the chamber base.

Aluminum chambers have a shorter cycle life. Their threads will wear due to the frequent service intervals. Aluminum chambers can expand under pressure causing the end cap threads to become galled and stick; resulting in costly replacement of the chambers.

Steel chambers have a problem with rusting due to the water that is being removed from the air, as well as on the outside due to the elements.

If an auto drain failure occurs, excessive moisture builds up. When this takes place, the chemical reaction causes the cartridge to super heat, which in turn can ignite the charcoal within the cartridge. This can start an internal fire weakening the aluminum chamber wall and producing carbon monoxide within the purifier. Along with the pressure and the excessive heat, a blister forms and the chamber is susceptible to rupture.

Stainless Steel chambers remain cleaner and aesthetically presentable. They have a higher tensile strength than aluminum and steel. Their life cycle is much longer because they are not susceptible to corrosion (caused by dissimilar metals or moisture) and exposure to the elements.

STAINLESS STEEL CHAMBER - PARTS

90-SS-33 Stainless Steel Chamber 33" - Also Available in 14"

90-SS-PLUG
Chamber Plug Complete

90-SS-MBASEK
Chamber Base M Style
with Seals

(90-SS-33-M Stainless Steel Chamber Complete - Also Available)

PURIFICATION

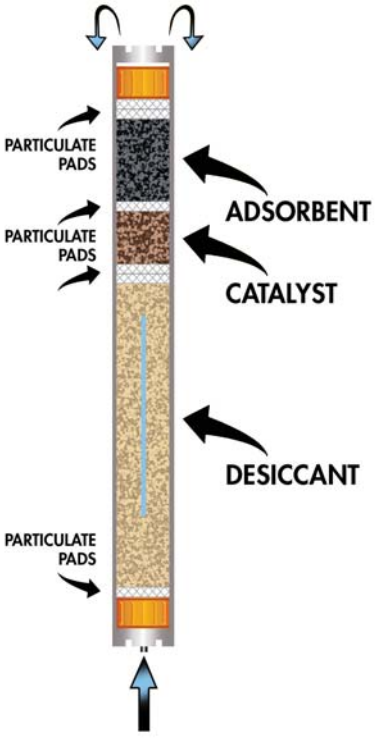
TYPICAL CARTRIDGE APPLICATIONS

Purification Cartridge W/Built-In Mechanical Separator Element for SCOTT TRAILER

Purification Cartridge for SCOTT AMERICAN BRISTOL

Purification Cartridge for POSEIDON

Purification Cartridge for MAKO



DESICCANTS

MOLECULAR SIEVE 13X - VAPORSHELL™

Vaporshell™ 13x is up to 4 times more powerful than other desiccants – especially at elevated (up to 120˚F) temperatures. It can absorb up to 23% of its own weight in water and reach down to -102˚F dewpoint.
WARNING: Some of the ingredients in Vaporshell™ are harmful and anyone handling this material must take proper measures to protect respiratory systems and avoid immediate contact with skin, eyes, and mouth. MSDS are available on request.

MOLECULAR SIEVE 3A

A highly powerful desiccant – best at absorbing water vapors and droplets – can soak up 20% of its' own weight in water and reach very low dewpoints with added capacities for hydrocarbons, carbon dioxide, and other organics.
TYPICAL APPLICATION:
CNGV, Industrial & Laboratory Gas Dehydration.
WARNING: Some of the ingredients in Molecular Sieves 3A are harmful and anyone handling this material must take proper measures to protect respiratory systems and avoid immediate contact with skin, eyes, and mouth. MSDS are available on request.

PURIFICATION

DESICCANTS (CONT'D)

MOLECULAR SIEVE 4A

A highly powerful desiccant – best at absorbing water vapors and droplets – can soak up 20% of its' own weight in water and reach very low dewpoints with added capacities for hydrocarbons, carbon dioxide, and other organics.

TYPICAL APPLICATION: Industrial & Laboratory Gas Dehydration.

WARNING: Some of the ingredients in Molecular Sieves 4A are harmful and anyone handling this material must take proper measures to protect respiratory systems and avoid immediate contact with skin, eyes, and mouth. MSDS are available on request.

ACTIVATED ALUMINA

Alumina is a mid-strength media best at sponging up water, condensables & vapors. It is good in applications operating at lower pressures & at temperatures below 100°F. Highly durable & resistant to liquid cracking. Preferred for use as a water buffer.

WARNING: Activated Alumina may cause irritation to eyes and upper respiratory tract due to dust exposure. MSDS are available on request.

DESICCANT BLEND

Designed as an economy product, it has carefully blended Molecular Sieves with Silica Gel desiccant. This results in a media that is excellent at absorbing water condensables, droplets and vapors at an economical cost.

WARNING: Some of the ingredients in Desiccant Blend are harmful and anyone handling this material must take proper measures to protect respiratory systems and avoid immediate contact with skin, eyes, and mouth. MSDS are available on request.

SILICA GEL

Robust and sturdy – terrific at squeezing water liquids, droplets and vapors from compressed gases. A workhorse at low temperatures and pressures.

TYPICAL APPLICATION: Industrial Gas Dehydration.

WARNING: Some of the ingredients in Silica Gel are harmful and anyone handling this material must take proper measures to protect respiratory systems and avoid immediate contact with skin, eyes, and mouth. MSDS are available on request.

CATALYSTS

MONOXYCON™

Where Carbon Monoxide is a concern, Monoxycon™ is the solution. At levels up to 300 ppm, this media will convert "deadly" carbon monoxide to less harmful Carbon Dioxide.

TYPICAL APPLICATION: Breathing Air Purification Gas Sweetening

USUAL CONDITIONS: Gas must be dried to -50°F dewpoint before using Monoxycon™.
High moisture levels deactivate catalyst.
Average compression 10-12 cfm has lower dwell for better Air quality. Higher cfm reduces dwell time for poor air quality.

WARNING: Some of the ingredients in Monoxycon™ are harmful and anyone handling this material must take proper measures to protect respiratory systems and avoid immediate contact with skin, eyes, and mouth. MSDS are available on request.

PURIFICATION

ADSORBENTS

ACTIVATED CARBON

For pollution control, this media is your choice for absorbing both condensable and vaporous hydrocarbons (lubricants). Carbon is also quite effective in cornering odors, organics, as well as halogenated solvents.

TYPICAL APPLICATION: Breathing Air Purification Gas Sweetening

WARNING: Some of the ingredients in Activated Carbon are harmful and anyone handling this material must take proper measures to protect respiratory systems and avoid immediate contact with skin, eyes, and mouth. MSDS are available on request.

PURIFICATION CARTRIDGES

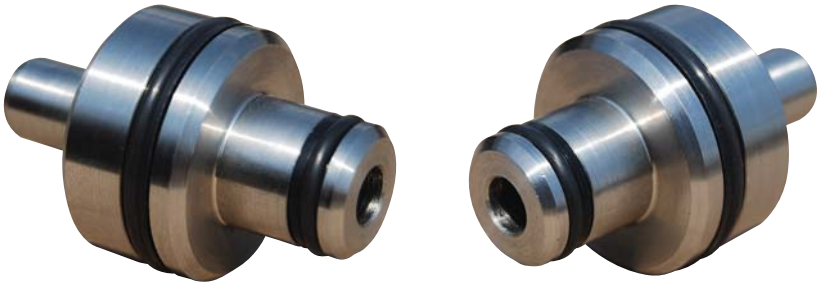
We offer cartridges for all makes and models of Purification Systems. Please call us with specific information. Including but not limited to:

- Air-Dry Corporation
- Alkin
- Allied Air Products, Inc.
- Bauer Compressors (OEM)
- Bristol Pneumatics
- Deltech Engineering
- Eagle Air Systems
- Fluid Concepts
- Hamworthy
- Ingersoll Rand
- Jordair
- Lawrence Factor (OEM)
- Mako
- Poseidon
- Robbins Aviation
- Scott

Please contact us for our full line of Purification products.

"M" STYLE ADAPTORS

Change those hard to fit "C" Style Filters to the most popular "M" Style and SAVE approximately $10.00 per cartridge. No more corrosion problems!



Please contact us for our full line of Mechanical Separator products.