



# Sullair Optimizer™

Air/Fluid Separator

*The separator that pays for itself*



## Key Benefits

- Low carryover reduces overall maintenance
- Low pressure drop contributes to more efficient compressor performance
- Superior design extends the life of the Optimizer™ separator
- Sullair guarantees the Optimizer™ against defects in materials and workmanship for one year or 8,000 hours, whichever occurs first

# The Sullair Optimizer™ Air/Fluid Separator

## Why a separator is needed

In a flooded rotary screw compressor, intake air is compressed by rotors turning in a flood of compressor fluid. The resulting air/fluid mixture is then discharged into a receiving sump tank. Here, gravity causes the fluid to settle in the tank's bottom. Before the compressed air is sent downstream, the fluid is separated from the air to:

1. avoid discharging valuable fluid downstream.
2. prevent damage or contamination to air-using equipment or processes by the entrained fluid.
3. keep the compressor operating economically.

The function of the air/fluid separator is to retain fluid in the system for re-use in the compressor unit. The Sullair Optimizer™ agglomerates and separates fluid aerosols from the compressed air. The fluid aerosols impinge on a layer of Micro Glass fibers, where coalescing and separation occurs. The fluid drains to the bottom of the separator and is removed by a return line resulting in less than 2 ppm fluid carryover downstream which represents best-in-class for the industry.



## The Optimizer™ media

The media is the most important part of the separator. All other components simply support and protect it.

The thickness and density of the fibers are closely controlled to improve coalescing. The complete media is a multi-layer "sandwich." Layers of wet laid glass are protected on each side with coated metal to provide structural support and prevent damage.

The media is deeply pleated to provide maximum surface to air flow. The more surface area available, the longer the life of the separator and the lower the pressure drop across the separator. A distinctive Sullair Optimizer™ logo is added to assure you that you're getting a genuine Sullair separator.

## 1-year or 8000 hour warranty

The Optimizer™ meets Sullair's strict criteria for quality and world class performance. Because of superior materials and construction, Sullair warrants the Optimizer™ against defects in materials and workmanship for 8000 hours or one year, whichever comes first.



# Why the Optimizer™ outperforms the others

## Pleated media

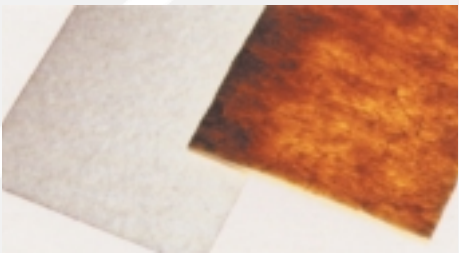
- More surface area.
- Less pressure drop.
- Longer separator life.

## Media seam

- Unique sealing method used to insure a leak-tight seam.

## Exclusive wet laid Micro Glass construction.

- Fiber thickness and density are closely controlled.
- Surface of fibers is sealed to improve coalescing.



Competitive fiberglass media.

- Formed by lofted process consisting of large diameter fibers.
- The quality of the media is construction grade.
- The forming process yields an inconsistent density and contributes to greater pressure drop and fluid carryover.

## Potting compound

- Tested and approved for O.E.M. equipment.
- Compatible with all rotary screw compressor fluids.
- Provides secure bond in this critical area.

## Scrim barrier

- Blocks media migration.
- The Optimizer™ is the only separator with a fiberglass medium to provide a scrim barrier.

## Support Tube

- Heavier gauge metal withstands greater unbalanced pressure surges.
- Resists collapse.

## Support screen

- Co-pleated with Optimizer™ wet laid Micro Glass media.
- Epoxy coating chemically inert and permanently bonded to prevent any material entrainment.
- Annealed steel helps resist fatigue. Aluminum support screens on other separators can flake off, enter the airstream and foul air-using tools and devices.

## Expanded metal outer wrap

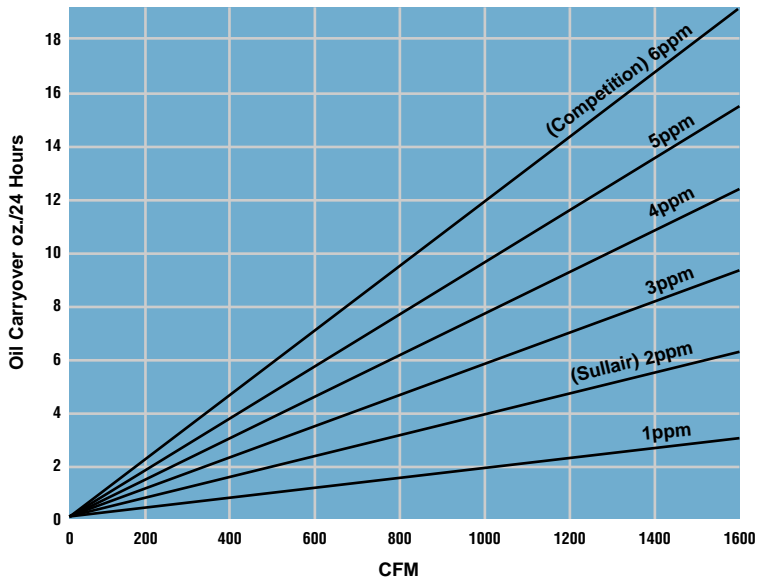
- First stage of separation.
- Protects media from accidental damage in shipping or handling.

## Grounding

- Internal and external.
- Reduces potential of static build-up.



## Oil Carryover Ounces per 24 Hours Conversion



## Weight of 1 Pint of Various Fluids at Room Temperature

Fluid	Sp. Gravity	Wt. (oz.)
Water	1.0	16.7 oz.
Sullube	0.98	16.4 oz.
SRF II/8000	0.86	14.4 oz.
SRF 1/4000	0.86	14.4 oz.
24KT	0.98	16.4 oz.
Sullair AWF	0.88	14.7 oz.

## Weight vs Liquid Calculation

$$\frac{\text{Oz. (weight)}}{\text{Oz./Pt.}} = \frac{\text{Pints}}{8} = \text{Gallons}$$


**Example: 2 Oz./24 Hrs x 300 Days (duty cycle) = 600 Oz./Yr.**

$$\frac{600 \text{ Oz.}}{16.7 \text{ Oz./Pt.}} = \frac{36 \text{ Pt.}}{8 \text{ Pt./Gal.}} = 4.5 \text{ Gallons}$$

For more information on Sullair products and services, please contact your local Sullair distributor.


## Low pressure drop

Upon installation, all separators have varying degrees of pressure drop. It is this pressure loss that determines relative power consumption over a period of time. For every additional psig of pressure required from the compressor, an additional 1/2% of power draw is required. The Optimizer™ is designed to reduce initial restriction, contributing to more efficient compressor performance.



*Your compressed air solutions made simple by SULLAIR*

*Sullair offers AirMetrix™ solutions that help reduce energy costs and improve productivity by analyzing, managing, and controlling the total compressed air system.*



**SULLAIR.**  
*Always air. Always there.*

www.sullair.com  
Sullair Corporation, 3700 East Michigan Boulevard  
Michigan City, IN 46360  
Telephone: 1-800-SULLAIR Or 1-219-879-5451

SM01E 0508A Specifications subject to change without notice.  
© Copyright 2005 Sullair Corporation. All rights reserved.  
The color green is a registered trademark of Sullair Corporation.  
Sullair Corporation, a Business Unit of Hamilton Sundstrand,  
a United Technologies Company.

