

# Oil/Water Separators

88-2,100 scfm



- Single piece unit for reduced footprint
- Rugged corrosion-resistant housing
- Large easy to clean chambers
- Easy set up and connections

# Sullair Capabilities

## Sullair Leadership

Since 1965, Sullair has been recognized around the world as an innovator and a leader in rotary screw compression and vacuum technology. For more than 40 years, Sullair



has designed and manufactured its own rotors and air end assemblies at the corporate headquarters in Michigan City, Indiana.

The award-winning rotary screw design sets the industry standards and delivers the quality and reliability one expects from a leader.



## Sullair Technology

Utilizing the most modern technologies, equipment and advanced manufacturing techniques, Sullair designs, manufactures, assembles, and tests the most innovative compressed air and vacuum products in the industry. Sullair

products are known around the world for their universally applicable design, outstanding craftsmanship and superior quality.

## Sullair's Statistical Process Control

Sullair's Statistical Process Control (SPC) system monitors rotor quality standards to assure consistent compressor and vacuum performance.

## Sullair's Commitment to Innovation

Underlying Sullair's leadership is a dedication to excellence and a commitment to innovation. Sullair is constantly exploring new ideas and seeking new ways to meet industry's need for increasingly energy efficient compressed air and vacuum solutions.

## The Sullair Stationary Air Power System



### This System includes:

- rotary screw compressor
- wet storage
- refrigerated dryer
- filters to meet your requirement
- dry storage
- flow controller
- drains
- oil/water separator
- ethernet-based eConnect™ to monitor and control the entire system

# The Importance of Clean, Dry Compressed Air

## How much water is too much?

### Any amount of water is too much.

Water jeopardizes everything you want your compressed air system to do. It ruins product and fouls processes.

- Relative humidity is the amount of water vapor in air relative to what it could hold at a given temperature
- Moisture in compressed air remains in a vapor state through the compression cycle, so it is not a problem until it leaves the compressor
- Air discharged from a compressor is approximately 150°F to 450°F
- At 75°F and 75% relative humidity, a 75 hp compressor takes in 46 gallons of water vapor in 24 hours. When this air is cooled to approximately 35°F at 100 psig, the water vapor condenses into 46 gallons of liquid!



*Liquid remaining after the aftercooler: 14.7 gallons (32%)*



*Liquid remaining after a refrigerated dryer: 1.8 gallons (4%)*



*Liquid remaining after a desiccant dryer: .14 gallon (0.3%)*

## The Purpose and Performance of Sullair's Oil/Water Separators

Oil/Water Separator units effectively and efficiently separate oil from compressed air condensate.

The Sullair Oil/Water Separators are available in six models ranging from 88 to 2100 scfm.

Liquid condensate is generated at several points throughout a compressed air system, including the outlet of the compressors itself, within tanks, moisture separators, coalescing filters and refrigerated air dryers. This liquid must be removed and discharged in a manner that is both environmentally sound and economical.

The volume of condensate can be significant. For example, a 500 scfm system in ambient conditions of 60°F and 65% relative humidity can produce nearly 2 gallons of condensate per hour.

When oil is present, as with oil lubricated compressors, the condensate must be purified to legal levels of residual oil content before it can be discharged to public water treatment systems.

Typically, condensate will contain 5% contaminate fluids. That level must be reduced to 20 ppm or lower, depending on local ordinances.

The Sullair Oil/Water Separators use gravity to separate oil/water mixtures and purify the condensate to a residual oil content of 20 ppm or lower.



# Sullair's Oil/Water Separator Features

4 Condensate inlets  
(3 at OWS-88)

Document box for  
maintenance book and  
test and service log

Test valve makes  
sampling easy

Spare filter – one complete  
filter set for each type of  
separator

Test set contains oil test  
paper and test glass  
(OWS-88 contains only  
test glass)

Oil canister with extra  
overflow protection  
(OWS-880-1700-2100)

Heater optional for cold  
surroundings  
(not available on the  
OWS-88)



## The Sullair Warranty

### All Inclusive "Peace of Mind" Warranty

Sullair backs our commitment to quality with an unparalleled, non-prorated 5-year warranty (*parts and labor*) on the major components. No other manufacturer offers a warranty that is as all inclusive.

### Quality is Third Party Certified and Guaranteed.

Oil/Water Separators are manufactured in an ISO 9001 environment.

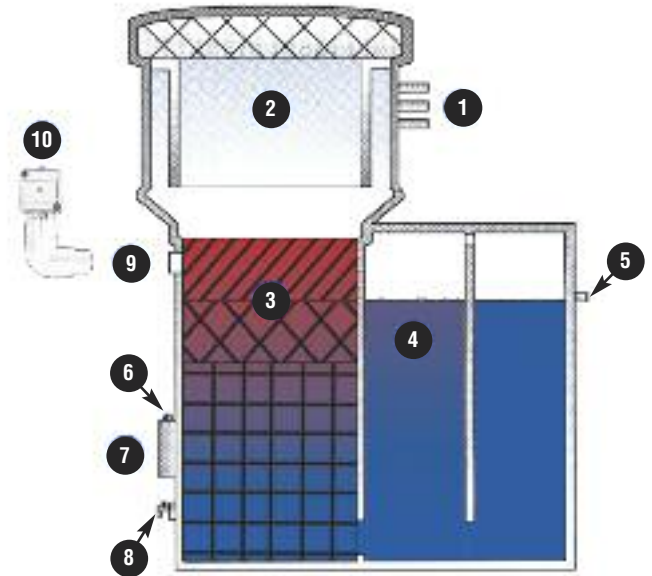


# Schematic of Sullair's Oil/Water Separators

## OWS-88-210-420

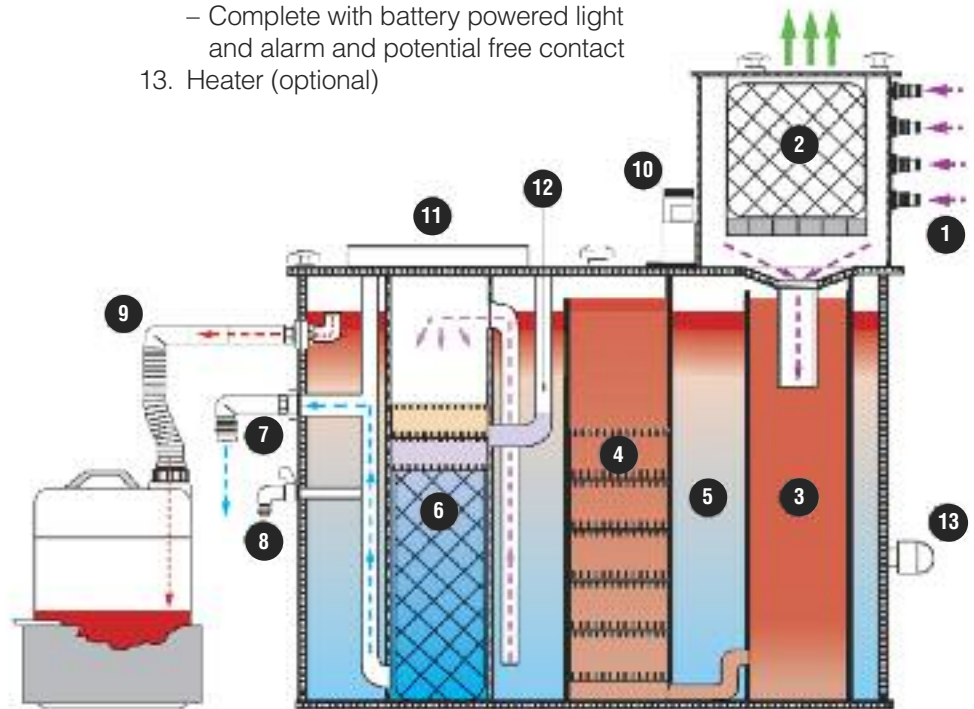
1. Condensate inlet
2. Expansion chamber with filter
3. 3-Stage comb filter
4. Safety chamber
5. Water discharge
6. Test set
7. Document pocket
8. Optical filter control standard with OWS-210-420 (optional with OWS-88)
9. Sample valve
10. Level switched – battery charged
  - Local alarm and distant contact
  - Field retrofittable

Heater option (available for OWS-210-420)



## OWS-880-1700-2100

1. Condensate inlet
2. Expansion chamber
3. Settling and floating chamber
4. Pre-steaming filter
5. Settling and floating chamber
6. End stage filter
7. Water discharge
8. Test valve
9. Oil collect tank with overflow safe guard
10. Test set
11. Document compartment
12. Level switch and alarm (optional)
  - Level switch with potential free contact
  - Complete with battery powered light and alarm and potential free contact
13. Heater (optional)



# Specifications: Oil/Water Separators

	OWS-88	OWS-210	OWS-420	OWS-880	OWS-1700	OWS-2100
<b>Body material</b>	Polypropylene	Polypropylene	Polypropylene	Polypropylene	Polypropylene	Polypropylene
<b>Max. working temperature</b>	95°F	95°F	95°F	95°F	95°F	95°F
<b>Max. working pressure (psig)</b>	230	230	230	230	230	230
<b>Max. compressor capacity* in scfm</b>	88	210	420	880	1700	2100
<b>Dimensions:</b>						
<b>Width (in)</b>	11	17	24	24	33	33
<b>Depth (in)</b>	8	13	20	20	20	20
<b>Height (in)</b>	22	36	38	46	46	46
<b>Weight (lb)</b>	15	40	55	88	132	143
<b>Connections:</b>						
<b>Condensate inlet</b>	3 x 1/2"	4 x 1/2"	4 x 1/2"	4 x 1/2"	4 x 1/2"	4 x 1/2"
<b>Water discharge</b>	1"	1"	1"	1"	1"	1"
<b>Oil discharge</b>	—	—	—	1"	1"	1"
<b>Filter set</b>	Kit OWS-88	Kit OWS-210	Kit OWS--420	Kit OWS-880	Kit OWS-1700	Kit OWS-2100

\*Maximum capacity by using non-emulsifying compressor oils.

Notes:

ATF (Automatic Transmission Fluid) cannot be separated by the OWS oil/water separator.

Sullair Sullube is environmentally considerate and biodegradable. Additives blended into the lubricants to prevent bacterial growth, rusting, corrosion, and to promote emulsification, such as detergents etc., can have an impact on the separating process. Oil/Water Separators are unable to separate stable emulsions or oils that are miscible in water. Additionally, these units will not totally separate lubricants containing: Emulsifying agents; Glycol additives; or Polyglycol based coolants.

Capacity conditions can vary depending on compressor fluid used.

## Capacity of Oil/Water Separators in cfm of Installed Compressor Capacity

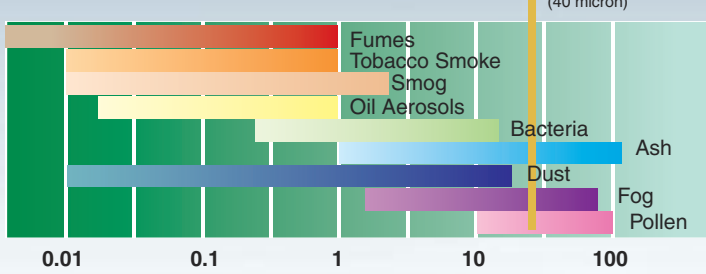
	OWS-88	OWS-210	OWS-420	OWS-880	OWS-1700	OWS-2100
<b>Screw compressor</b>						
Non-emulsified oils	88	210	420	880	1700	2100
<b>Rotation compressor</b>						
Non-emulsified oils	88	210	420	880	1700	2100
<b>Piston compressor (1 and 2 stage)</b>						
Non-emulsified oils	44	100	200	440	800	1000

Note:

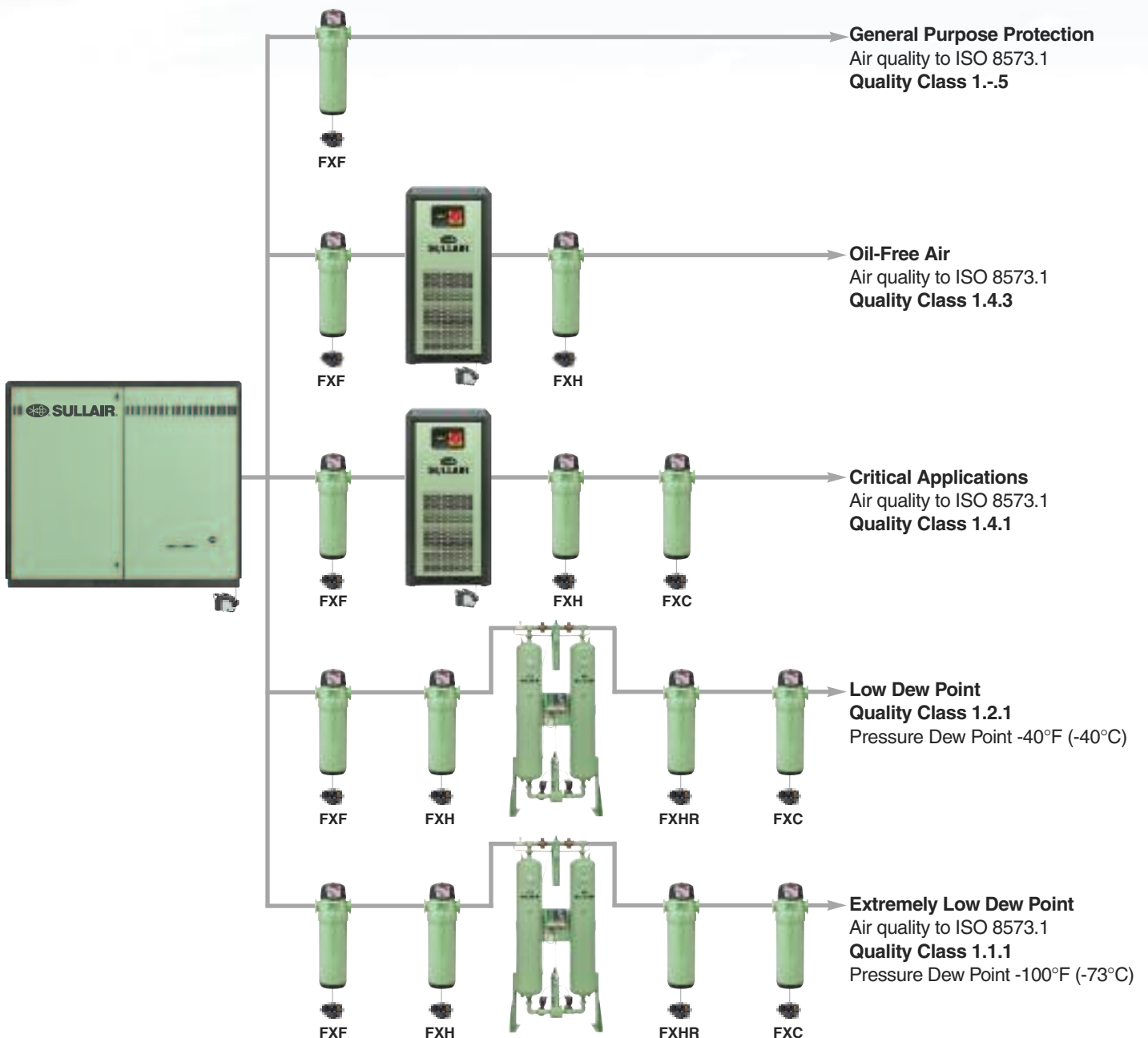
The capacity above are maximum figures.

# Air Quality Standards ISO 8573.1 Classes

Particle (micron) size of some common substances. Eye Sight Threshold (40 micron)



Class	Solid Particle Maximum number of particles per m <sup>3</sup>			Pressure Dew Point °F	Oil (incl. vapor) mg/m <sup>3</sup>
	0.1-0.5 micron	0.5-1 micron	1.0-5 micron		
1	100	1	0	-94	0.01
2	100,000	1,000	10	-40	0.1
3	-	10,000	500	-4	1.0
4	-	-	1,000	37	5.0
5	-	-	20,000	45	-
6	-	-	-	50	-



# Sullair's Compressed Air Products

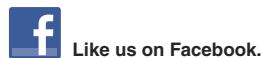
www.sullair.com



Fundamental to Sullair's leadership is a dedication to reduce not only the amount of natural resources consumed to create energy, but to minimize environmental impact, in both the manufacture and use of all our products. We are constantly exploring new ideas and seeking new technologies to meet the ever-increasing need for high quality, energy-efficient compressed air products and environmental sustainability.



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